

Name of equipment: DNA sequencer

Make: Applied Biosystems

Model: 3130xl Genetic analyzer (16 capillaries); 3730 DNA analyzer (48 capillaries).

Working Principal:

Genetic analyzer/DNA analyzer uses capillary electrophoresis to separate DNA fragments. The fragments of DNA are attracted to the platinum cathode electrode attached to the end of the capillary, which is open and filled with Performance Optimized Polymer (POP). When current is applied, the DNA fragments are attracted to the capillary and travel through the polymer to the detection window. As the fragments pass through a clear area in the capillary, the fluorophores are excited by a laser and emission is detected and recorded by a CCD camera. Each of the four types of dideoxynucleotides (ddATP,ddCTP,ddGTP,ddTTP) is tagged with different fluorophore. The ability to detect multiple fluorophores enables detection of a larger number of similar size DNA fragments.

Applications of the equipment:

1. Genotyping.
2. Sequencing of clones.
3. Analysis of mutations in drug resistance markers (genes).
4. SNP typing.

Instruction for Use:

Fees for Use: (Please put tentative fees for use we may have to approach ICMR for approval)

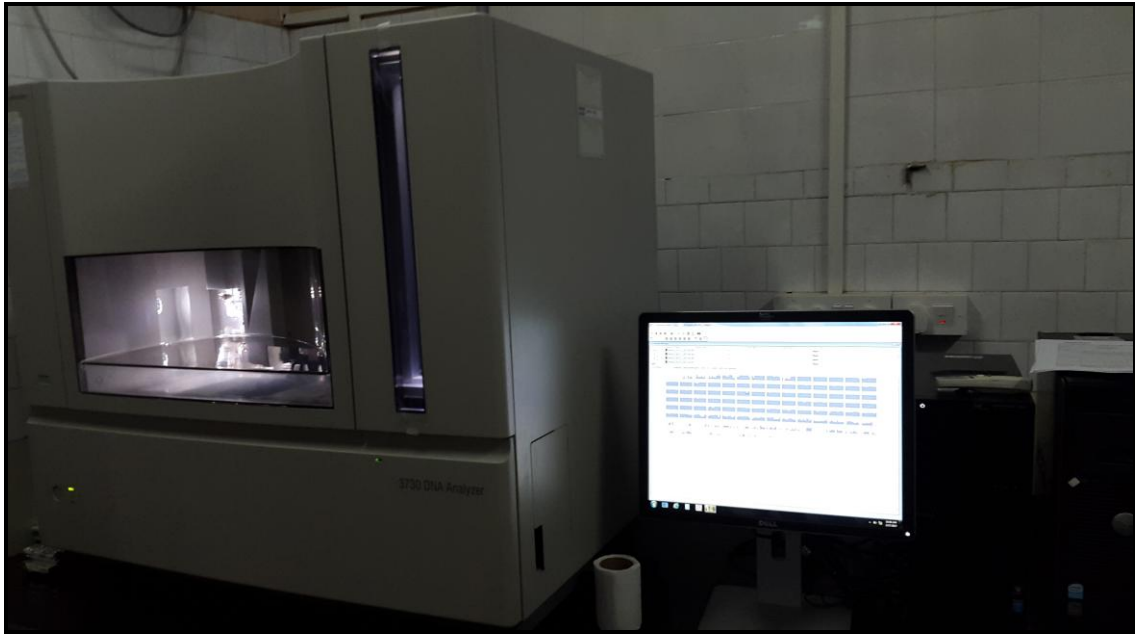


Figure: 3730 DNA analyzer.



Figure: 3130xl genetic analyzer.