

राष्ट्रीय पादप जीनोम अनुसंधान संस्थान

NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

केंद्रीय उपकरण सुविधा

CENTRAL INSTRUMENTATION FACILITY

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Name of Instrument	Academic & Research Institutions /IITs/IISERs/Univ	Private Industries / For -Profit Laboratories
<p>FOSS - NIRS DS2500 Analyzer Near Infrared Reflectance spectrophotometer (NIRS) analyzer based on monochromatic technique (1100-2500 nm) for non-destructive determination of different constituents in solid, liquid and viscous samples. Rapid analysis (<1 min per sample) of protein, fat, fiber, moisture, fatty-acids, amino acids, fibers (crude/NDF/ADF), starch, colour etc. in ground and unground samples like soil, plant (including seeds), animal and microbes as well as testing of color parameters like pigment, astaxanthin, chlorophyll etc. The analyzer allows measurement of samples as low as 15 to 20 grains, which has been well calibrated for various primary and secondary metabolites of oilseed <i>Brassicas</i> at NIPGR.</p>	<p>₹50 per sample</p>	<p>₹100 per sample</p>
<p>Surface Plasmon Resonance (Biacore™ T200) It can be used to measure affinity and kinetics of protein-protein, protein-lipid, protein-sugar, protein-drug and other biomolecular interactions. Success of the experiment and analysis depend on the purity of protein and ligand. Users have to provide the chips for the experiment. The facility may provide regular buffers used in the experiment.</p>	<p>₹4200 per experiment</p>	<p>₹8500 per experiment</p>
<p>Agilent 2100 Bioanalyzer (Sizing, quantification and quality control of DNA and RNA) Consumables provided by facility:</p> <p>DNA High -sensitivity kit</p> <p>RNA Nano kit (Consumables mentioned above will be)</p>	<p>DNA High -sensitivity kit ₹ 8000 per chip (11 samples per chip)</p> <p>RNA Nano kit: ₹ 6000 per chip (12 samples per chip)</p>	<p>DNA High -sensitivity kit: ₹ 16000 per chip (11 samples per chip)</p> <p>RNA Nano kit: ₹ 12000 per chip (12 samples per chip)</p>

<p>LabChip GX (Caliper Life Sciences)</p> <p>The LabChip GX assays are based on traditional gel electrophoresis principles that have been transferred to a chip format. The chip format dramatically reduces separation time and provides automated sizing and quantitation information in a digital format.</p> <p>Charges for usage of the machine only. The chip and kits and other consumables will be arranged by the user.</p>	<p>₹ 1000 (96 well plate) ₹ 1500 (384 well plate)</p>	<p>₹ 2000 (96 well plate) ₹ 3000 (384 well plate)</p>
<p>SEM (Scanning Electron Microscope) EVO LS 10</p> <p>For morphological study of samples, Available mode High Vacuum, VPSE for life science samples</p>	<p>₹ 1100 Scanning/Viewing (up to 10 samples) Beyond 10 samples ₹200 per sample will be charged extra</p>	<p>₹3500 Scanning/Viewing (up to 10 samples) Beyond 10 samples ₹500 per sample will be charged extra</p>
<p>Critical Point Drying (CPD 3000, Leica)</p> <p>The SEM samples can be dried in the instrument and analyzed for morphological studies on Scanning Electron Microscope.</p>	<p>₹ 1000 (up to 10 samples) Beyond 10 samples ₹200 per sample will be charged extra</p>	<p>₹ 2000 (up to 10 samples) Beyond 10 samples ₹400 per sample will be charged extra</p>
<p>Sputter Coater</p> <p>Sputter Coater is a compact magnetron sputter and glow discharge coater, primarily designed for depositing thin conductive metal coatings on to Scanning Electron Microscopy (SEM) sample.</p>	<p>₹ 750 (up to 10 samples)</p>	<p>₹ 1500 (up to 10 samples)</p>
<p>High Performance Liquid Chromatography (Prominence Binary Gradient System Simadzu, Japan)</p> <p>Columns : Luna C18 150x4.6mm Luna C18 250x4.6mm</p> <p>Detectors: SPD-20A, RID-10A, SPD -M20A</p> <p>High-performance liquid chromatography (HPLC) is widely used in diverse fields such as pharmaceuticals, and biochemistry to chemistry, the environment, and food products.</p> <p>User will provide all the consumables on their end. Charges for usage of the machine only</p>	<p>₹ 2500 (per experiment)</p>	<p>₹ 5000 (per experiment)</p>

<p>UPLC (Waters, UK) The ACQUITY UPLC I-Class System is optimized to preserve high-efficiency separations, making it able to realize the full benefits of sub-2-μm columns. The sensitivity of any detector will benefit from improved resolution when the total dispersion from the column and all system components is minimized.</p> <p>Columns : C18 1.7μm 2.1x50mm 2.1x100mm</p> <p>User will provide all other consumables on their end. Charges for usage of the machine only</p>	<p>₹ 3500 (per experiment)</p>	<p>₹ 7000 (per experiment)</p>
<p>FPLC (GE Healthcare) AKTA Pure M</p> <p>ÄKTA pure is a flexible and intuitive purification system for proteins, peptides, and nucleic acids from microgram levels to tens of grams of target product in research applications. grams) preparative purification.</p> <p>Columns : Superose 12 10/300GL Resource Q, 6ML</p> <p>User will provide all other consumables on their end. Charges for usage of the machine only</p>	<p>₹ 2500 (per experiment)</p>	<p>₹ 5000 (per experiment)</p>
<p>Gas Chromatography 2010 ATF (Simadzu, Japan)</p> <p>The GC-2010 is equipped with the tools for high speed analysis, providing labour savings and improving throughput.</p> <p>Introducing a new high-sensitivity FID, enabling the GC-2010 to conduct ultra trace analysis. The highest quality electrical connectors and cables inside of the FID-2010 have been employed to bring you a significant S/N improvement that is 2 times higher sensitivity than the previous model. Up to 4 detectors can be installed.</p> <p>Columns : CBXN-1000 60/80 6ft 2.0MM Capillary Column RTX 225 15MTR, 0.25 MMID, 0.25U Capillary Column RXI-1MS-30M, 0.25MMID, 0.25UM</p> <p>User will provide all other consumables on their end. Charges for usage of the machine only</p>	<p>₹ 700 (per samples)</p>	<p>₹ 1200 (per samples)</p>
<p>7900 HT Fast Real Time PCR System 96/384 Well Format</p> <p>For Relative Quantification, Absolute Quantification, Gene Expression Study etc.</p> <p>Consumables: SYBR Green, 96/384 Well Plate, Adhesive Film will be provided be provided by the facility)</p> <p>User will provide all other consumables on their end.</p>	<p>₹ 6000 (96 well plate) ₹ 11000 (384 well plate)</p>	<p>₹ 12000 (96 well plate) ₹ 22000 (384 well plate)</p>

<p>PDS 1000 Gene Gun (Bio Rad) For Gene Transformation</p> <p>User will provide all the consumables on their end. Charges for usage of the machine only</p>	<p>₹ 500 (per hour)</p>	<p>₹ 1200 (per hour)</p>
<p>Helios Gene Gun (Bio Rad) For Gene Transformation in Live Plants</p> <p>User will provide all the consumables on their end. Charges for usage of the machine only</p>	<p>₹ 500 (per hour)</p>	<p>₹ 1200 (per hour)</p>
<p>Polar Star Omega Spectrophotometer (BMG Labtech.)</p> <p>For Absorbance, Fluorescence, Luminescence Biochemical study)</p> <p>User will provide all the consumables on their end. Charges for usage of the machine only</p>	<p>₹ 400 (per experiment)</p>	<p>₹ 1000 (per experiment)</p>
<p>Gene Pulser Xcell System (Bio Rad)</p> <p>Gene Transformation Through High/Low voltage current</p> <p>User will provide all the consumables on their end. Charges for usage of the machine only</p>	<p>₹ 200 (per sample)</p>	<p>₹ 400 (per sample)</p>
<p>Typhoon 9210 Phosphor Imaging System (GE Healthcare)</p> <p>Phosphor Imaging, Blots, 1D Analysis etc.</p>	<p>₹ 400 (per scan)</p>	<p>₹ 800 (per scan)</p>
<p>Chemi Doc MP Imaging System (Bio Rad)</p> <p>For Scanning X-ray films, Blots, 1D Gel etc.</p>	<p>₹ 200 (per scan)</p>	<p>₹ 400 (per scan)</p>
<p>Confocal laser scanning microscope</p>	<p>₹ 3000/ 1.5 hour slot</p>	<p>₹ 6000/ 1.5 hour slot</p>

CIF In-charge