The Rhode Island Genomics and Sequencing Center (RIGSC) was established to provide technical and analytical support for molecular biology and genomics research at the University of Rhode Island and all of URI’s affiliated institutions. The mission of the RIGSC is to deliver fast, cost-effective, and accurate sequencing services and valuable genomic data to researchers, and to provide young students training opportunities by providing researchers access to cutting-edge tools and facilities. The RIGSC utilizes state-of-the-art equipment and trained personnel to perform high quality and accurate sequencing analysis and provides a comprehensive range of services, including DNA sequencing, genotyping, expression analysis, Proteomics, and molecular biology. It is equipped with the latest platform technologies and automated machines to ensure maximum accuracy and consistency in the research projects. The RIGSC offers two platforms with different capabilities, the Illumina MiSeq and the Next Generation Sequencing (NGS) system, both of which are equipped with high-throughput sequencing technology.

**Applications:**
- **DNA sequencing/base calling**: Uses sequencers such as the Illumina MiSeq Next Generation Sequencer and the Next Generation Sequencing (NGS) system for high-throughput sequencing.
- **Automated delivery system for Next Generation Sequencing**: Offers fast and automated separation, purification, and concentration of nucleic acids.
- **Software for DNA sequencing/base calling (Sequencing Analysis)**: Provides tools for analyzing and interpreting sequencing data.
- **Software for DNA sequencing/base calling (Sequencing Analysis)**: Specializes in software for DNA sequencing and base calling.
- **Software for DNA sequencing/base calling (Sequencing Analysis)**: Supports analysis and interpretation of sequencing data.
- **Software for DNA sequencing/base calling (Sequencing Analysis)**: Offers tools for analyzing and interpreting sequencing data.
- **Sample volumes from 50 µl to 1 ml**: Supports a wide range of sample volumes for sequencing.
- **Read lengths greater than 900 bases**: Supports long read lengths for sequencing.
- **Labware database**: Maintains a database of labware for efficient management.
- **Editing methods as well as printing and archiving program**: Supports editing methods and printing and archiving.
- **Genetic database**: Maintains a genetic database for researchers.
- **Heating rate: 96°C to 100°C**: Offers a programmable heating rate.
- **Linear dynamic range: 10 orders of magnitude, standard deviation of 0.1%**: Supports a linear dynamic range with high precision.
- **Detector: Photomultiplier tube (PMT)**: Uses PMTs for detection.
- **Excitation range: 350 to 750 nm**: Supports a wide excitation range.
- **Digital UV light timer 0 to 24 hours**: Offers a digital timer for UV light.
- **Minimum chamber temperature: 10°C**: Provides a minimum temperature range.
- **Vibratome UltraPro 5000 Cryostat**: Offers a cryostat for sample preparation.
- **Axio Imager M2**: Supports a microscope for detailed analysis.
- **Cell density measurements**: Supports cell density measurements.
- **Cost: $500,000 to $1 million**: Offers a cost range for various equipment.
- **Cooling to maintain enzyme stability for optimal performance**: Maintains enzyme stability for optimal performance.
- **Open top cryostat has a comprehensive specification and offers the ultimate in tissue tissue-freezing**: Offers a comprehensive cryostat specification.
- **3130xl & 3500xl automated from Agilent/Stratagene Mx3005P**: Uses automated systems for efficiency.
- **Detection of RNA probes specific for this sample. Image courtesy of PWJ419**: Provides an image for visual reference.
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