



अखिल भारतीय आयुर्विज्ञान संस्थान, गोरखपुर  
All India Institute of Medical Sciences, Gorakhpur

(स्वास्थ्य एवं परिवार कल्याण मंत्रालय भारत सरकार द्वारा स्थापित एक स्वायत्त निकाय)  
(An autonomous organization under the Ministry of Health & Family Welfare, Govt. of India)

No.: AIIMS/GKP/Admn/2026-27/635 (Comp: 5903)

Date: 23.05.2026

**Subject: Procurement of Sanger Sequencer (8 Capillary Genetic Analyzer) Platform for MRU unit, AIIMS Gorakhpur.**

The Department of M.R.U, unit AIIMS Gorakhpur, proposes the procurement of **Sanger Sequencer (8 Capillary Genetic Analyzer) Platform**, (Make: ThermoFisher Scientific,). The requested Equipment is propriatry equipment and are proposed to be procured under a Proprietary Article Certificate (PAC) through the authorized dealer, M/s Invitrogen Bio Services Pvt Ltd, 372, Udyog Vihar Phase-2, Gurgoan-122016. Haryana, India.as per Annexure-1 (PAC document and specifications).

The above-mentioned proposal/document is being uploaded for open information. Any firm or manufacturer having objections or comments regarding the proprietary nature of the equipment/accessories/items may submit the same within 14 days from the date of issue/uploading of this notification.

Comments/objections, if any, should be addressed to:

Administrative Officer  
AIIMS, Gorakhpur  
On or before 06<sup>th</sup> June. 2026 up to 17:00 Hrs  
Email:[procurementcell@aiimsgorakhpur.edu.in](mailto:procurementcell@aiimsgorakhpur.edu.in)  
[Aoofficeaiimgkp@gmail.com](mailto:Aoofficeaiimgkp@gmail.com)

Failing which, it will be presumed that there are no comments to offer, and the case will be decided on merits.

S/D  
Administrative Officer  
AIIMS Gorakhpur

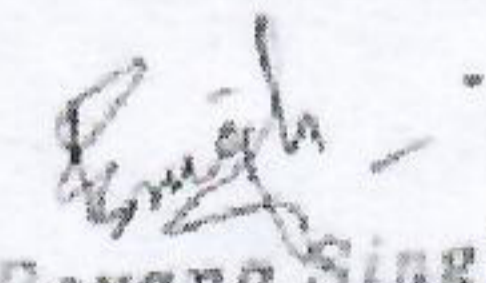
## SANGER SEQUENCER: 8 CAPILLARY GENETIC ANALYZER SPECIFICATIONS:

1. Instrument should be fully automated multi capillary, fluorescence-based genetic analysis system to process multiple samples in single run.
2. Instrument should be a bench top instrument to support various applications like: Genomic Sequencing, de novo/re-sequencing, Gene Expression, Targeted Sequencing (Variant Validation) and Microbial Identification, all application should be installed with the same system.
3. System should have 8 Capillaries operating in parallel and system should have feature to be upgraded with higher number of capillaries i.e., 24.
4. System should use same polymer for Sequencing and Fragment Analysis for ease of use and flexibility
5. System should be capable of supporting 4 plates; 96- well standard & fast plates; 8-strip standard & fast tubes
6. System should have Cooled CCD detection technology and a spectrograph for color separation
7. System should be enabled for remote monitoring via a mobile device or networked device & remote troubleshooting allows for remote monitoring and data visualization for faster resolution.
8. System should have Flexible connectivity via Local Area Network (LAN), Wi-Fi, USB.
9. The system must be able to detect and analyze 8 fluorescent dyes simultaneously
10. System should be enabled with one-button start up, auto spectral calibration, and onboard learning center
11. System should facilitate continuous plate loading and sample reprioritization feature with walkaway operations
12. The system to utilize a single line Solid-State long-life laser for multiple dye fluorescent utilizing a standard power supply and requires no heat removal ducting.
13. System or Software with the system should have the capability to generate "virtual filters" for fluorescence detection to readily accommodate new dyes and applications as they become available without requiring changes in the optical hardware.
14. System should be enabled with Radio-Frequency identification technology to track key consumables data without the use of any external Barcode reader.
15. Software for secondary data analysis should come from original equipment manufacturer.
16. System should be provided with one polymer and one array feature for sequencing and fragment analysis to enable both the applications on the same plate with walk away automation
17. System software should allow real-time data quality evaluation providing immediate access to base-called or size called data to make decision about the quality of data as it is generated.
18. System should have on-board computer and integrated touchscreen enable stand-alone instrument control, data collection, quality control monitoring and auto-analysis of data.
19. System should be compatible with a desktop or cloud application for creating and sending plate files directly to an instrument for enabling remote functionality.
20. Branded 42-inch Monitor with High performance Server for data storage and analysis as per below specs:
  - I. Intel® Xeon® Gold 5418Y 2G, 24C/48T, 16GT/s, 45M Cache, Turbo, HT (185W) DDR5-4400
  - II. Intel® Xeon® Gold 5418Y 2G, 24C/48T, 16GT/s, 45M Cache, Turbo, HT (185W) DDR5-4400
  - III. 64GB RDIMM, 4800MT/s Dual Rank

- IV. 7.68TB SSD SAS Read Intensive up to 24Gbps 512e 2.5in Hot-Plug 1DWPD, AG Drive
- V. 960GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD
- VI. NVIDIA L4, PCIe, 72W, 24GB Passive, Single Wide Full Height GPU

- 21. Sequencer Software should provide reference-based analysis of sequencing reactions for mutation detection and analysis, SNP discovery and validation, sequence confirmation. Software for variant analysis should be reference based and non-reference-based analysis of sequencing reactions for mutation detection and analysis, SNP discovery and validation, and sequence confirmation.
- 22. Fragment Analysis software should be a flexible genotyping software that enables DNA sizing and quality allele calls. This software should specialize in fragment analysis and sequencing applications like multi application functionality including Amplified Fragment Length Polymorphism (AFLP), Loss of Heterozygosity (LOH), microsatellite, SNP genotyping analysis.
- 23. Along with system a thermal cycler, 96 well for nucleic acid amplification and a Qubit Fluorometer which can accurately quantifies the concentration of DNA, RNA, or protein using fluorescent dyes.
- 24. System should have the capability of Security, Audit and Electronic signature features that assist with certain 21 CFR Part 11 requirements.
- 25. The vendor supplying the instrument should have own application support laboratory in India for local & efficient after sales service-support.
- 26. In-House Training and Continuing Education: The vendor must provide in-house training sessions for the laboratory's technical staff, tailored to the expertise level of the team. Further training, including refresher courses and onboarding of new staff, must be provided free of cost at the vendor's training facility.
- 27. Provision of Free Reagents (Sanger Sequencing Kit) for 200 RXN: The vendor must supply free reagent (including Big Dye terminator, Sequencing Buffer, POP-7 Polymer, Hi di Formamide, Anode -cathode buffer, DS-33 etc.) or equivalent during the system's standardization and demonstration phases. Reagent supply should be offered in a staggered manner, to accommodate different stages of the sequencing process (e.g., early-stage sequencing followed by fragment analysis).
- 28. System must have 5-year Comprehensive warranty along with the full maintenance of capillaries for 1 year if got nonfunctional.

The technical specification is hereby approved

  
Prof. Royana Singh  
Nodal Officer, MRUs  
**Professor Royana Singh**  
MRU Nodal officer,  
IMS BHU

## PROPRIETARY CERTIFICATE

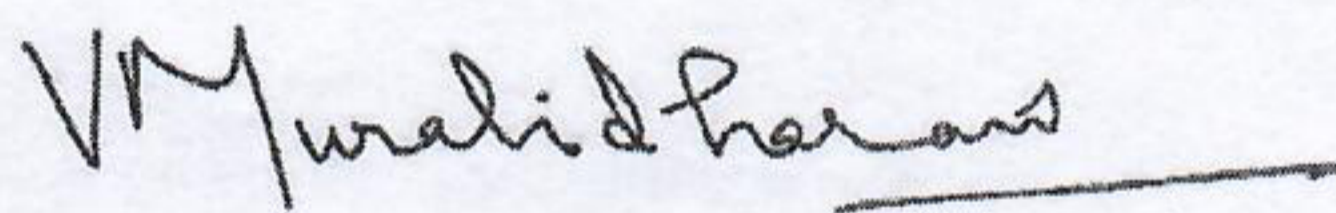
This letter is to certify that Applied Biosystems™, a part of Thermo Fisher Scientific, is the sole manufacturer and sole provider of the Applied Biosystems™ SeqStudio™ Flex 8-cap Genetic Analyzer (Part No. A53627, A53628, A53629), and SeqStudio™ Flex 8-cap Genetic Analyzer having US patent number 5171534, 5332666, 5567292, 5821058 has the following proprietary/unique features combined in a single instrument system:

1. The system uses internally uncoated capillaries (an array of 8 capillaries, 50 cm and 36 cm in length) with Performance Optimized Polymers, which enhance the capillary life and run time considerably. The capillary arrays have a unique built-in frame and retractable slider for easy installation.
2. The system has an optional provision to upgrade from 8 capillary to 24 capillary system to meet future throughput needs.
3. The system has 4-plate capacity, which can accommodate 96-well Standard and Fast plates or 8-tube Standard or Fast strips, and provides complete walk away automation.
4. The system is capable of continuous plate loading and sample reprioritization.
5. The system is built with a single-line 505 nm, solid-state long-life laser that utilizes a standard power supply and requires no heat removal ducting.
6. The detection system is composed of a spectrograph and a peltier-cooled charged coupled device (CCD) and provides multicolor detection. The system detects and analyzes 6 fluorescent dyes simultaneously.
7. The system is capable of running 6-dye chemistry for fragment analysis applications and uses the sixth-generation BigDye Terminator version 1.1 & 3.1 chemistries and BigDye Terminator Direct chemistry for sequencing applications.
8. Software generated "virtual filters" for fluorescent detection readily accommodate new dyes and applications as they become available without requiring changes in the optical hardware.
9. After initial manual spectral calibration, the system has an autospectral calibration algorithm that updates the dye matrix with every injection, as needed, allowing optimized deconvolution of the dye spectra (some exceptions may apply).
10. The system has an offscale peak recovery algorithm to recover data from saturated pixels for fragment analysis runs (some exceptions may apply).
11. The system is capable of running "one polymer one array" for both sequencing and fragment analysis applications, enabling the user to seamlessly switch between both applications, even in the same plate.
12. The on-board computer and integrated touchscreen enable stand-alone instrument control, data collection, quality control monitoring and auto-analysis of data.
13. The pre-packaged on-instrument consumables and capillary arrays are each designed with an RFID (Radio Frequency Identification) tag integrated into the label to track key consumables data.

14. The integrated barcode reader facilitates tracking of samples using barcoded plates, and auto-links plate files through the barcoded workflow.
15. (optional) The Plate Manager software – a desktop or cloud application for creating and sending plate files directly to an instrument.
16. (optional) Security, Audit and Electronic signature features that assist with certain 21 CFR Part 11 requirements.
17. The system generates files in industry standard ABI format for sequencing and FSA format for fragment analysis. Sample files are compatible with secondary analysis applications such as Sequencing Analysis Software, Variant Reporter™ Software, Minor Variant Finder Software, GeneMapper™ Software and SeqScape™ software programs. For online analysis ecosystem, sequencing files can be analyzed with the Applied Biosystems™ Analysis Modules powered by Thermo Fisher Cloud, including Quality Check, Variant Analysis and Next-generation Confirmation modules.
18. Remote monitoring via a mobile device or networked device allows for remote monitoring and data visualization.
19. Flexible connectivity flexibility via Local Area Network (LAN), Wi-Fi, USB, and is LIMS compatible.
20. A Digital Support Ecosystem which offers Smart Help and Remote Support features for fast and secure issue resolution in addition to traditional on-site service.

All the features mentioned above are incorporated in SeqStudio™ Flex 8-cap Genetic Analyzer. No Sanger Sequencer (DNA Sequencer) other than SeqStudio™ Flex 8-cap Genetic Analyzer offers all the unique features mentioned above in a single system.

For Thermo Fisher Scientific.



Murali Venkat  
Director (Product Mgmt), CE Instrument & SW