INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION

PR NO. 1000047199

Technical specifications for Fully Automatic Random Access Auto Analyzer

Sr. No.	Description	Value / Range	Technical Compliance (YES/ NO)	Additional Information (if any)
1	Fully automated, latest and floor based analyzer to perform the analysis of substrates, enzymes and special parameters from whole blood, serum, plasma, CSF, hemolysate and urine samples.			
2	System should be Discrete, fully selective random access with a provision to test STAT samples.			
3	System should have four different on-board technologies (Photometry, Potentiometric, and Kinetic Immuno Turbidimetry and Turbidimetric Immunoinhibition assays) to measure substrates, enzymes, Homogeneous immunoassays, Therapeutic Drug Monitoring & Drugs of Abuse assays.			
4	ISE measurement (Na, K, Cl) should be with Ion Selective Electrode Technology.			
5	System should have facility for measuring HbA1c from whole blood.			
6	System should be CE or Equivalent Approved.			
7	System should have facility of validating serum indices for each test.			
8	Throughput of the System should be 300 tests / hr without ISE and 450 Tests/Hr with ISE.			
9	Onboard sample capacity should be at least 100 or more.			
10	User definable STAT positions is mandatory.			
11	Sample volumes should be 1 - 40 ul per test for routine chemistries and 10 ul for ISE measurements.			
12	Reagent pipetting volume should be 1 – 200 ul in 1 ul increments.			
13	Analysis time should be less than 10 minutes / test.			
14	Onboard sample and calibrator dilution should be available (1 – 100 times).			
15	Facility to keep reagents bottles / cassettes for at least 40 common tests with on board refrigeration.			
16	Flexibility to use different sample containers like primary tubes			

	with different sizes, sample cups, micro cups and cup on tube for easy processing.		
17	System must have on board washing facility with onboard reusable cuvettes. Water consumption per hour should not be more than 12 – 14 L / hour.		
18	Mixing of sample and reagents should be with non-contact ultrasonic mixing for carryover-free mixing and reduce water consumption.		
19	Detection of sample clogging should be with pressure sensitive clot detection and liquid level sensing should be with capacitance sensing technology.		
20	System should have minimum 12 wavelength (340, 376, 415, 450, 480, 505, 546, 570, 600, 660, 700, 800 ± 2 nm) spectrophotometer for mono and bi-chromatic measurements.		
21	Light source should be with 20 W / 50 V halogen lamp having lamp save feature.		
22	System should have Windows based operations having 15' TFT color monitor for programming the tests and entering the patient data.		
23	System should have built in Barcode scanner for sample and reagents.		
24	System should have onboard data storage for 10,000 samples and quality control data for 2500 data points per test		
25	Onboard storage for 100 calibrator and 100 control data is must.		
26	System should have external printer to take printout of patient results and QC reports.		
27	System should have 1 x RS 232 bidirectional interface and in-built modem for remote diagnostics.		
28	System should have the facility to perform Tele services to ensure prompt servicing and uptime.		
29	Power supply – 220 V / 50 Hz. Suitable online UPS with 30" back up should be supplied along with the system.		
30	Mixing of sample and reagents should be with non contact ultrasonic mixing for carryover-free mixing and reduce water consumption.		
31	On-board reagent stability should be for at least 6 –8 weeks and calibration of the parameter should be typically with lot. No daily calibration should be re-quired by the system to save the reagents.		
32	5 years warranty from the date of installation		