



Notice Inviting e-Tender

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Supply and Commissioning of Five Different Medical Equipment for the Department of Clinical Immunology and Rheumatology, IPGME&R-SSKM Hospital
(Submission of Bid through *online*)

Bid Reference No.: WBMSCL/NIT-334/2025

Dated-24.04.2025

Amendment-I

Technical Specification

Schedule-I

Nano-Drop Spectrophotometer

1. The instrument should have photometric reading capability and be able to read 6-48(optional) 96 & 384 microwell plate format & cuvette.
2. Should work as a standalone system without a computer and be able to run with computer-controlled software.
3. Analysis Software supplied should be supplied with an unlimited user license.
4. Should be able to read endpoint, kinetics, spectral scanning and Kinetic spectral scan.
5. The system should be able to run in stand-alone mode using 7-inch or more touch screen for quick usage.
6. The instrument can provide a wavelength range from 200nm to 1000nm with 1 nm steps.

7. Spectral scanning speed: 10 sec from 200 to 1000 nm with 1 nm steps per sample.
8. Performance Specifications: Bandwidth: < 2.5 nm or better and Xenon flash lamp life should be for 10 million 96 well microplates.
9. The instrument should have inbuilt incubation and shaking options for longer kinetic assays etc.
10. Spectral scanning speed of 200 to 1000nm should be 10 sec. or less.
11. Measurement speed should be 6 sec. for 96 wells or less
12. Visualize data in both numerical mode and heat-map/virtual image of the plate.
13. The instrument should be able to read at least 32 low-volume samples of 2µl using a volume analysis plate in case of DNA/RNA purity & concentration check-in directly with standalone mode to quantify DNA/ RNA integrity & Quality fluorometrically.
14. Software should allow multiple absorbance reading steps within the same program i.e. in case of two sets of readings before and after adding the compounds.
15. Database-based software to run backups of all data and restore backup data (in case of hardware failure of an original computer).
16. Should have an area selection option, for different measuring parameters for various areas in the same plate.
17. Data export should be pdf, excel, XML and note format.
18. One data handling system compatible with the system should be provided.

Schedule - II

Pure & Ultrapure Water Purification System (Water plant (Type-I/Type-III)

Part 1: High-Quality Pre Filter Before Main Unit to counter the feed water contamination
Manufactured by the same equipment manufacturer

1. High-quality Prefilter with Low-pressure switch cuts off system which can able to take care of high TDS up to 5000 ppm and high SDI up to 50 having 5 Micron and 1 Micron with DC diaphragm pump to boost water pressure from 0 to minimum 2.5 bar at approximately 120 L/Hr with noise levels of Less than 50 Db.
2. 40 litre/hr RO system with 100-liter tank.
3. Two separate Units should be there for Type-I and TYPE-III systems

Part 2: Main Unit Lab Grade Water Purification System (Type III)

Feed water acceptance capability Specifications for the main unit-

Conductivity: < 2000 μ S/cm, Fouling Index (SDI): up to 5, TOC< 2000 ppb, LSI< 0.3

Product Water and main unit should meet or exceed Type III water quality

- Pure water production rate should be equals or more then 20 Ltrs/Hr; Having 60 litter or more tank capacity with recirculation facility.
- Organics and particulates > 99% rejection
- RO recovery loop.
- Rinsing valve
- Twist and lock mechanism for all the cartridges, so that the user itself can replace it.

Part 3: Ultra-Pure Water (Type I) should meet:

Ultrapure (Type 1) water:

Typical Water Delivery Flow Rate (L/min)drop by drop to 1.6L/min

Ultrapure Water Resistivity ($M\Omega$.cm at 25°C)..... 18.2

Microorganisms/bacteria (cfu/L) – < 1

Particulates < 0.22 μ m (/mL) – None

Pyrogen Levels (EU/mL) –< 0.001

RNase Level (pg/mL) –< 1

DNase Level (pg/mL) –..... < 5

Proteases < 0.15 μ g/mL

TOC (ppb) $\leq$ 5 ppb

- Twist and lock mechanism for all the cartridges, so that user itself can replace it.
- UV lamp- 185 nm and no need to replace this lamp for the lifetime of machine.
- In build ultra filter must be provided
- Should have TOC monitor

Product Certification: The quoted model should have CDSCO certification.

Mandatory Requirement:

One set of cartridges along with a machine for both Type-I and Type-III water systems.

Schedule – III

CO₂ Incubator

1. One chamber CO₂ Incubator with work chamber volume approx. 150 liters
2. Air jacketed heating system with temp Control by microprocessor
3. Temp. Range from ambient 5°C to +50°C
4. Temp. Deviation with respect to time is $\pm 0.1K$.
5. CO₂ Control by Microprocessor based & by heat resistant Thermal Conductivity / IR detector to withstand heat of decontamination.
6. CO₂ Range 0 to 20% or better and CO₂ accuracy $\pm 0.1\%$ by volume.
7. System should have Interactive Control with Touch screen.
8. Fast Recovery time for Temp. CO₂ And Humidity should be available for good culture growth. Temp. Recovery time at 37°C: less than 10 min. CO₂ recovery time 5% CO₂ : less than 5 min. Humidity recovery at 95% rH (Humidity loss during door opening 30 seconds) not more than 20 minutes.
9. System should have built-in automatic decontamination facility to remove bacteria. Fungi, spores, mycoplasma etc. without removing sensor fan or any other fitting. The system should employ automatic decontamination routine at dry heat of 180 deg C.
10. At least 3 nos stainless steel perforated shelves should be supplied.
11. It should be supplied with access port to allow any cable, plug or tubing to be easily inserted into or out of the chamber.
12. Interior chamber should be made of stainless steel with electro polish finish to have highest quality of inner surface with rounded corners on all sides for easy cleaning. The shelves and fan impeller also should be made of stainless steel and should not have nuts or bolts for shelf supports to reduce the scope of growth of contamination. No plastic should be inside to avoid VOC.
13. Built-in audible and visual water level alarm should be available when the water reservoir needs to be refilled to ensure a constant high level of humidity and to prevent cultures from drying out.
14. Independent electronic over temp. Protection with separate sensor should be available for sample protection.
15. The system should have large digital display for both temp. & CO₂ simultaneously.
16. System should have one main door and three separate glass doors for three shelves.
17. Suitable for 230V single phase 50Hz operation.
18. Suitable servo voltage stabilizer with high voltage low voltage cut off circuit auto reset with delay timer and spike eliminator etc & Double stage CO₂ pressure regulator with stainless steel diaphragm & 18Kg CO₂ Cylinder filled with CO₂ gas 99.5% or better purity required for operation of CO₂ Incubator should also be quoted.
19. Product Certification. The quoted model should have CDSCO certification.

Schedule - IV

Type II Biosafety Cabinet

1. The biological safety cabinet should be of Class II (A2), designed in compliance with International Standards.
2. It must utilize DC motor technology to ensure lower levels of energy consumption and heat emission.
3. It should have a dual blower system for independent control of inflow and down flow velocities.
4. The motor must automatically adjust the airflow speed without the use of a damper, ensuring continuous safe working conditions, even without maintenance adjustments.
5. The internal dimensions (approx.): (W x H x D): 1200 x 780 x 495 mm.
6. Airflow direction should be Vertical Laminar Flow, with air intake across the front opening.
7. Filter: High Performance Particulate Air (HEPA) filter with 99.995% filtering efficiency at 0.3 micron particle size.
8. A pressure sensor should be in-built for exact airflow measurement.
9. A performance monitor should display inflow/down flow velocities, hours of use, etc., to verify proper cabinet operation.
10. The UV light must be quoted and should be programmable to shut off automatically. The settings must allow the user to program the timer in one-hour increments from 0 to 24 hours.
11. The overall cabinet height should not be higher than 220 cm, to ensure proper airflow clearances over the bio safety cabinet.
12. The front window sash must be angled 8° to 10° to reduce glare for users who wear glasses and to allow for more comfortable posture.
13. The cabinet noise level must be less than 55 dB(A), as measured in a soundproof room, to promote a more comfortable and safer working environment.
14. The microprocessor controller must be located on a slanted front panel, making it easy to view from a seated working position.
15. The microprocessor must display the inflow and downflow air velocities in real-time on an LED display, ensuring the user can verify safe operating conditions.
16. The microprocessor must display the number of hours of use on the HEPA filters, to help the user determine when to replace the filters for continued safety.
17. The interior of the front window must be accessible for cleaning without requiring the user to manually hold the window.
18. The drain pan beneath the work surface must be negatively pressurized, ensuring contaminants are quickly trapped and filtered by the HEPA system.
19. An armrest should be provided for operator comfort, without disturbing the airflow.
20. The work area should be illuminated with a switchable fluorescent lamp, providing lighting power greater than 1200 lux.
21. It should be quoted with a floor stand.
22. A service tap for combustible gas with a safety valve should be quoted optionally.
23. Electrical supply available: 230V AC, single phase, 50 Hz.
24. Prompt and efficient after-sales service should be available from Kolkata.
25. A set of castors should be provided.
26. Product Certification. The quoted model should have CDSCO certification.

Schedule – V

Refrigerated centrifuge with swing-out rotter for 50/15 ml tubes
(5000 rpm) (Mini cooling centrifuge)

Temperature range from -9°C to 40°C

Basic instrument should be quoted with a 4X100 ml swing bucket rotor in which

40 no's of 1.5/2ml can be accommodated at 4100xg force

8 no's of 15ml falcon tube can be spin at 4300 x g force

4 no's of 50 ml falcon tube can be spin at 4300xg force.

Fast temperature function for rapid cooling of the centrifuge

Centrifuge timer should start after the set RPM reached

Short spin key with selectable rotational speed.

Standby Refrigeration for maintaining temperature when not in use

Values can be changed as increments of 10 rpm during centrifugation.

Speed should be set from 200 rpm to maximum speed in increments of 10 RPM.

Ten acceleration and deceleration rates for sensitive samples.

Instrument should be equipped with automatic rotor recognition system.

Product Certification. The quoted model should have CDSCO certification.