केन्द्रीय औषधीय एवं सगंध पौधा संस्थान, लखनऊ
CENTRAL INSTITUTE OF MEDICINAL & AROMATIC PLANTS
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
(Council of Scientific & Industrial Research)
पोस्ट आफिस- सीमैप, लखनऊ
P.O. CIMAP Campus, Lucknow-226015

Date: 27.12.2016

Corrigendum

In continuation of our tender for procurement of HPLC PDA System, Gas Chromatographs & Scanning Electron Microscope dated 06.12.2016 and consequent upon the pre bid meetings held on 19.12.2016 & 21.12.2016, the competent authority has approved some modifications in the technical specifications of the tender. The last Date of submission of bids is extended till 16.01.2016, 2.00 PM. The Technical Bid for the above tenders will be opened on 16.01.16, 2.30 PM. For details please visit CIMAP website www.cimap.res.in.

The rest of the terms and conditions of the tender document remains unchanged.

Stores & Purchase Officer

Director - 0522-2357136, FAX 0522-342666/ COA 0522-342682 / SPO - 0522-2718613, FAX : 0522-2718613/ FAO 0522-359629 / CIMAP EPABX : 0522-2356382, 2356384, 2359626, 2717529
E-mail : director@cimap.res.in / spo@cimap.res.in / Website : www.cimap.res.in

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शुद्धिपत्र

एचपीएलसी पीडीए सिस्टम्स, गैस क्रोमैटोग्राफ एवं स्कैनिंग इलेक्ट्रान माइक्रोस्कोप के क्रय हेतु जारी निविदा दिनांक 06.12.2016 के क्रम में दिनांक 19.12.2016 एवं 21.12.2016 को आयोजित पूर्व बोली बैठक के संदर्भ में सक्षम प्राधिकारी ने तकनीकी विशिष्टताओं में कतिपय संशोधन अनुमोदित किया है। बिड जमा करने की अंतिम तिथि 16.01.16 अपराह्न 2.00 बजे तक होगी । तकनीकी बिड दिनांक 16.01.16 को अपराह्न 2.30 बजे खोली जाएगी। संबंधित विस्तृत विवरण सीमैप की बेबसाइट www.cimap.res.in पर उपलब्ध है।

निविदा की शेष नियम और शर्तें यथावत रहेंगीं।

भंडार एवं क्रय अधिकारी

Director - 0522-2357136, FAX 0522-342666/ COA 0522-342682 / SPO - 0522-2718613, FAX : 0522-2718613/ FAO 0522-359629 / CIMAP EPABX : 0522-2356382, 2356384, 2359626, 2717529
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Specs after Pre-bid

Specification for SEM and accessories

Digital scanning Electron Microscope latest model with state of art features (As per specification, Accessories, Attachments given blow) are required to investigate a wide variety of materials for analytical analysis of morphology, topography, elemental composition and crystallography. The SEM should provide flexibility and versatility to handle the challenges of today's wide ranging research needs of different scientific faculties. The system should be capable of analysing wide variety of samples i.e. Conductive, Non-conductive, contaminating, light emitting, delicate, hydrated, masked, dynamic, wet, oily, dirty & degassing type.
Complete installation and demonstration at onsite.

Essential specifications

	Criteria	Specifications
1.	Electron optics	High performance thermal emission SEM column with dual-anode source emission geometry, fixed objective aperture, through-the-lens differential pumping or through-the-lens pumping Magnification: 20x to 1000000x
2	Accelerating Voltage	200v to 30kv continuously adjustable
3	Probe current:	up to 2 μA or better, continuously adjustable , measurement and display the value when the user required.
4	Beam Deceleration Range	0 to 4 kV or Better, continuously variable and user selectable
5	Operational Mode & Resolution	**High vacuum Mode** 3.0 nm or better at 30 kV (Everhardt Thornley SED) 4.0 nm or better at 30 kV (BSE) 10.0nm or better at 3 kV (SE) 7.0 nm or better at 3 kV with beam deceleration & low voltage high contrast detector
		Low vacuum Mode 4.0 nm or better at 30 kV (Large Field Low vacuum SED) 4.0 nm or better at 30kV (BSE) 10 nm or better at 3 kV (SE)
		Extended vacuum Mode 4.0 nm or better at 30 kV (Secondary Electron detector for extended vacuum mode
6	Detectors	Everhardt Thornley SED (secondary electron detector); Low vacuum SED; Gaseous Secondary Electron detector or equivalent (for extended vacuum mode) High sensitivity low kV SS-BSED or equivalent, should work with all the three modes with sleeve/cone or similar for analytical and imaging. IR CCD camera
7		EDS Detector System with following configuration
		Liquid Nitrogen free Silicon Drift Detector (SDD type) Detecting Unit: Liquid Nitrogen free with integrated thermo electric cooling system Si_3N_4 window

		Resolution of 129 eV or better, measured at MnK, 60,000 cps Peak shift less than 2eV up to 100,000cps Capable of quantifying elements down to Boron; Sensor: 30mm² or better Peak to background >9000:1. Capable of handling input count rates >500Kcps and throughput of >100Kcps. The results and resolution should remain same at different count rates under different column environmental condition (HV, LV and extended vacuum) Latest EDS Analysis Software with advance features useful for data capturing and analysis, utility of spectrum, HPD or similar for visual peak confirmation, imaging/mapping , quantification , standardless quantification, live phase mapping, reporting in different formats, etc.
8	Chamber	284 mm size left to right or better 10 mm analytical WD
9	Vacuum system	TMP (turbo molecular pump/pumps) capable for Chamber vacuum (high) $< 10^{-4}$ Pa or better Chamber vacuum (low) < 10 to 130 Pa or better Extended vacuum < 10 to 2500 Pa or better, water system
10	Specimen Stage	X-Y = 50 mm or better Z = 35 mm or better T = - 10° to + 75° or wider R = 360° continuous Repeatability: 2 µm (x and y) Tilt- True eucentric at analytical height (10 mm)
11	Sample sizes	Maximum size > 100 mm diameter Maximum thickness 50 mm Weight 1000g (without tilt)
12	Sample Holders	Multi-stub holder Single stub mount, mounts directly onto stage Multiple specimen holder kit
13	System Control & Integrated Computer Peripheral:	Suitable State-of-the-art Windows Operating System, Compatible computer (preferably i7) with latest configuration, keyboard, Mouse, two 22" or higher LCD Monitors, Essential softwares (licensed), colour laser printer, etc.
14	Image processor	Up to 4096 x 3536 pixels (14 MP) File type: TIFF (8 or 16 bit), BMP or JPEG Single frame to 3-quads or 4-quadrant image display 3 or 4 quads live Live or static signal mixing in color or grayscale 256 frame average or integration Digital video recording (.avi) Image histogram and measurement software
15	Supporting software	Navigation , automated routine SW temperature control, Interval image acquisition in 1 to 3 quads or 4 quads Multiple image saving function Movie Creator Utility (custom .avi file creation from automatically acquired TIFF image series)

		Live images of different detector to be viewed simultaneously, graphical user interface , topographical information by reconstructing a complete 3D model of the surface from SEM's Detector signals, analysis and visualization software suitable for 3D data acquired by a variety of technologies including X-ray microscopy and SEM.
16		Manual user interface
17		Joystick
18	Dynamic Experimental accessories	Peltier /Heating Stage Control Kit SW controlled Peltier cooled specimen stage room temperature to ≤ -25°C SW controlled 850°C or more heating stage
19	Tool kits:	Suitable & essential Tool Kit is to be supplied with the main system as well as accessories for the day to day operations & required maintenance. The tools that are applicable to live images as well as saved images allowing for linewidth, angle and area measurement. At least set of 100 tungsten (W) filaments should be supplied. Stage and sample mounting stubs (including 45/90 degree SEM mount -10 nos. or more), stub holders 10 nos. or more.
20	Power Supply:	The complete system must be capable of running with Indian power standard: 230V AC, 50 Hz.
21	Ups	UPS (7.5 KVA or better with 60 MINUTES Back up with full load)
22	Warranty	3 year warranty (includes all spare parts). 3 year AMC charges after completion of warranty period should also be quoted.
23	Sputter Coater	1. Bench top model suitable for SEM applications and TEM coating applications: Metal sputtering, carbon evaporation. The unit should come with gold target. Warranty: Minimum 3 years. Power Supply: 230V AC, 50 Hz.
		Work chamber: Size 100 to 150 mm inside dia., 100 to 150 mm high (or equivalent) with integral implosion guard. Easy access, easy to maintain with no alignment problems. Height adjustable specimen stage capable of variable rotation speed and adjustable tilt.
		Touch screen user interface: Full graphical interface with touch screen buttons. Should Include features such as a log of the last ten coatings carried out and reminders for when maintenance is due.
		Vacuum: $2x10^{-2}$ mbar or better. Sputtering: To a pre-determined thickness (with optional FTM) or by the built-in timer.
		Argon gas cylinder with regulator. An extra Au/Pd alloy target, 200 or more numbers high purity carbon rods, spares

		kit(s) and oil for pump(s) suitable atleast for two years. Note: If re-circulating water chiller is needed for vacuum operation, the same should be quoted.
		Optional : Quote separately **1.** Film thickness measurement (FTM) system **2.** Power Supply for Carbon evaporation: A robust ripple free D.C. power supply featuring pulse evaporation for reproducible carbon evaporation from rod or fibre sources. Current pulse: 1-90 Amps.
24	Critical point dryer	Compact, bench top type. Reproducible & minimal user interaction. Minimum 3 years warranty
		Large chamber (150 - 200 mm dia.) or similar Filler concept to reduce chamber vol. to 30ml
		Precise control of pressure and temperature.
		Re-circulating heater/chiller, if needed to heat/cool the chamber should be quoted. CO_2 filled cylinder with regulator.
		Power Supply: 230V AC, 50 Hz.

General Condition:

All the specification(s) must be supported by technical documents/ brochure and the page no. must be indicated in the compliance chart.

3 year warranty (includes all spare parts, accessories and attachments). 3 year AMC charges after completion of warranty period should also be quoted.

All the essential consumables that need frequent changing (like filaments, O-rings, apertures/diaphragms, etc), chemicals, pump oils, carbon tapes (minimum 10 nos.), conducting tapes(minimum 10 nos.) and pastes (minimum 3 nos.), any other item(s) needed for at least 3 years of smooth operation should be supplied. Supply of spare parts should be guaranteed for atleast 10 years.

All softwares should be of the latest version, authentic, licensed and free software updates, if any.