

UNIVERSITY OF PUNE



BOTANY DEPARTMENT

Ganeshkhind, Pune-411 007

Ref. : No. Quot./BOT/2014/193
To,
M/s.,

Date : 10/07/2014


Quotation are invited for the supply of following goods/carrying out the work, so as to reach this Office on or before 21/7/2014

Sr.No.	Description of the material/item/work/etc.to purchase	approx Quantity	Rate per Unit	Amount (Rs.)	Remarks
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Cryomicrotome
as per the
specifications
attached

01

- 1) Octroi Exemption certificate will be issued for the goods supplied from the places outside Pune Municipal Corporation Limit.
- 2) Excise Duty Exemption Certificate/Sale tax form will be issued if applicable.
- 3) Payment will be made by cheque after fulfillment of the Order/Installation of the equipment.

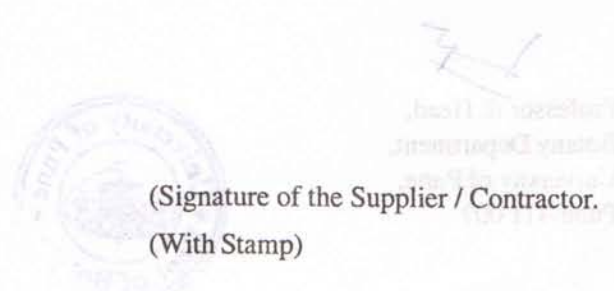

Professor & Head,
Botany Department,
University of Pune,
Pune-411 007



Signature of the Supplier
(Supplier (With Rubber Stamp))

TERMS AND CONDITIONS

1. Mention quotation No. On the envelop.
2. Quote rate per unit and date of validity, Date of validity should be minimum of 30 days from the last date of submitting the quotation.
3. Submit sample/Catalogue of the material with quotation if necessary.
4. Quotation must be sent along with the covering letter on your letterhead quoting your sales tax Registration number.
5. Conditional quotation will not be accepted.
6. Delivery within _____ days from the date of order at the Department of the University of Pune.
7. Work to be completed within _____ days from the date of order of the University of Pune.
8. Quotation will be rejected in case of even a single correction or overwriting.
Only Clear and uncorrected quotation will be accepted.
9. Payment as per actual measurements wherever applicable.
10. Payment will be made by cross cheque only.
11. Income tax will be deducted as per prevailing rule.
12. Water charges 2% will be recovered, if used.
13. In case of works and service contracts Security Deposit will have to be deposited by the contractor in following manner.
 - (A) 2.5% before commencing the work.
 - (B) 2.5% will be deducted from the R.A.Bill.
14. Electricity charges will be recovered as per rules if used.
15. The University of Pune will issue Octroi Exemption Certificate if applicable.
16. Excise duty exemption Certificate / Sales tax form will be issued, if applicable.
17. Rates quoted should be Inclusive of all taxes with Tax details e.g. Excise duty, Custom duty, sales tax, packing forwarding etc.
18. The above terms and conditions are acceptable.


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Technical Specifications For Cryomicrotome

1. Freestanding cryostat with encapsulated, splash-proof microtome.
 2. Stable, self-contained cryocabinet on casters.
 3. Cryochamber temperature selection from 0 °C to -30 °C, adjustable in 1K increments at ambient temperature of 20 °C.
 4. Cryochamber defrosting- manually or automatically.
 5. Section thickness selection from outside the cryochamber.
 6. Control panel with membrane-protected buttons
 7. Manufactured in compliance with c-CSA-US and CE standards. CFC-free.
- Accessories required to be quoted along with the instruments - 4 Specimen discs- 25 mm, 4 Specimen discs- 30 mm, 1 Section waste tray, 2 Storage shelves, 1 Brush shelf, 1 Cover for freeze shelf, 1 Transfer block for specimen discs, large, 1 Tool set.

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Fluorescent Microscope
 with camera & software 01
 as per specifications
 attached

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Specifications for research fluorescence microscope with camera and software

- Research grade automated Microscope with transmitted light LED illumination, with 6-fold automated nosepiece with DIC slot, automatic adjustment of light intensity, with height adjustability of focus knobs, integrated LED and stage carrier, with automated condenser top for PH,DIC Achr.apl. A 0.9. Infinity Corrected/ (HC) Optical System. Transmitted light 3 filters with Daylight filter, Green filter pan achromatic/pan apochromatic & Neutral density should be there with microscope.
- Trinocular tube with 3 beam splitter positions vis/phot:0/100%;50/50%;100/0%
- A 100W Fluorescence attachment with all Band pads filters for DAPI, FITC & TRITC with zero pixel shift technology. Filter turret should move both clockwise & anti clockwise.
- High resolution and anti-fungus treated Fluotar / Neo Fluor Objectives 5x/0.12, 10x/0.25 , 20x/0.40 ,40x/0.65 and 100x/1.25 (OIL) .Programmable multiple touch buttons to change objectives and other components should be offered.
- Camera & Software details
High sensitive and high speed Cooled CCD Color and gray scale mode digital camera with 36bit fire wire interface and 2/3 CCD sensor with 5 million pixels,full resolution speed should be 9fps or higher with binning should reach minimum 30fps or higher.Pixel size 3.4 μm x 3.4 μm or higher. The Cooling should be absolute and minimum -20° below ambient. Specify cooling mechanism, stabilized temperature a. The camera, microscope and software should be a single manufacturer for better compatibility.
- Suitable branded PC /work station to be provided for operating the camera & software system.

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GC=MS system
 as per specifications
 attached 01

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Specifications for the GC-MS

GC-MS consists of the following units:

GC	One Unit
Capillary columns	Two units (one chiral and one HP 5)
MS	One Unit [both EI and CI]
Autosampler	One Unit
N2 Generator	One Unit
UPS	One unit

MS Specifications

- ❖ LAN based quadrupole system with Non-coated Inert source,
- ❖ Dedicated electron ionization (EI) and chemical ionization (CI) source
- ❖ ≥ 262 L/sec turbo pump with Inert EI ion source and CI ion source.
- ❖ Mass range of 2-1000 amu in 0.1 amu steps
- ❖ With mass axis stability
- ❖ With high scan speed
- ❖ Ion source temp - upto 350 °C for better sensitivity for active compounds and it should be programmable
- ❖ Electronic dynamic range -10eV
- ❖ Ionization current range 15-220eV
- ❖ Ionization current range - 1-315 μ
- ❖ EI source should be inert to active compounds and should be programmable.
- ❖ EI scan sensitivity : 1 ul of 1 pg/ul
- ❖ PCI scan sensitivity : 125:1 S/N with Methane and 500:1 with Ammonia at nominal m/z 183 ion for 1- μ L injection
- ❖ Automatic Tuning, calibration and snapshot capabilities
- ❖ Electron Multiplier Detector for Mass Spectrometer
- ❖ User friendly software to control GC, MS and Auto sampler, Qualitative and quantitative data analysis and automatic report generation
- ❖ Additional Features SIM/Scan Automated SIM setup and high performance synchronous SIM/scan operation
- ❖ Application autotunes One-click autotune for BFB, DFTPP
- ❖ Spectral libraries

GC specifications

- ❖ Solvent Bypass - Eliminate early peaks.
- ❖ Lower detector maintenance costs.
- ❖ Find trace levels in a complex matrix.
- ❖ Backflush- Eliminate later/post-run peak.
- ❖ Shorten cycle times, eliminate sample carryover, less column usage & lower detector maintenance cost.
- ❖ Split- Send all peaks to multiple detectors- Obtain more information during each run.
- ❖ Operating temp range from near ambient to 450 °C.
- ❖ Possible to program for 15 temp ramps or more.

- ❖ Capillary and injection port should be operating split as well as split-less mode
- ❖ Should provide head Space auto sampler and auto injector.
- ❖ Full electronic Pneumatic Control
- ❖ The pressure set points should be adjustable by increments of 0.001 psi up to 100 psi
- ❖ System should have capability of adjusting the retention time
- ❖ Area reproducibility - 0.3 RSD, injection volume Linearity - over 98% correlation.

Autosampler

It should have over 100 vials capacity with EPC

FID

Minimum detectable level (for tridecane): < 1.8 pg C/s
Should have EPC Data acquisition rate of upto 500 Hz

Software

Microsoft Windows NT based operating system for instrument control, data acquisition, data analysis, library search, quantitation, automation & customization with online and offline sessions provided

Should have facility to lock retention time of analytes and should quote some databases based on RT and spectra. Customer should be able to make databases based on Retention time. This is a desired feature.

Computer & Laser printer should be provided with the system.

Should have Auto SIM Facility to save time to setup SIM manual Method. Should have databases with RT & Spectra. Should have Gain normalization (user selectable Autotune). Should have Trace ion detection in Complex matrices and it should reduce false negatives and this technology also ensures more reproducible baseline, dramatically reducing the number of manual interventions during peak integration.

Tuning

System should include a variety of autotune algorithms to tune the instruments for maximum sensitivity or for specific target compounds.

Libraries

- latest versions of NIST and Wiley spectra & Structure libraries. Also should include Flavour and Fragrance library

Essential Accessories require to operate GCMS

No. of columns -2. One chiral and one HP 5.

Should include metal plate spittler to split sample in between FID & MSD. Should tolerate more than 350 °C temperature and should have three EPC channel. It should have capillary flow with inert, low-mass, low dead volume. It should do back flush and can be changed column without venting MS vacuum.

Should include all the gas tubing and connections with installation of required gas lines at the installation site. Also should provide required number of regulators for various gases used for the GCMS system.

Should provide minimum three years warranty.

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HPLC system
as per specifications
attached

01

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HPLC System should consist of

System should include,

HPLC system:	One Unit
UV detector:	One Unit
Fluorescence detector:	One Unit
PC and Printer:	One Unit
Soft ware (Licensed):	One set
De-gasser:	One Unit
Autosampler	One Unit

This system will be used for both analytical separations as well as for preparative purification of small molecules.

LC Pump Module:

- Quaternary gradient solvent delivery unit
- Isocratic and Gradient capability,
- Built-in spurge degassing,
- Flow range of 0 to 1 ml/minute with 0.01 ml increments.
- Flow precision of $\leq 0.01\%$ RSD,
- Operating Pressure: 600 bar
- Gradient Operation: It includes step, linear and exponential.
- Permanently plumbed for preparative chromatography, fraction collector

Columns: - 01 no. each

- Methyl Hybrid Column for 10mg loading-minor component 3.9 x 150/ 300 mm(5/10 μm)
- Methyl Hybrid Column for complex mixture 4.6 x 150, 250 mm (5/10 μm)

Manual Injector - 01

- Injection volume range: 0.1 – 100 micro liter standard
- Advanced Operation: Priority Samples, Auto additions and Auto standards.

Autosampler:

- Autosampler should have Sample capacity of minimum 100 vials having 600 bar operating pressure.

Dual Wavelength UV/VIS Detector - 01

- Wavelength range 190 - 900nm,
- Light sources - Deuterium (190 - 900 nm)
- It should have built in Analytical cum Preparative Flow Cell.
- It must function for all Analytical to Prep application without changing the Flow Cell
- Wavelength accuracy: ± 1 nm
- Wavelength precision: ± 0.1 nm
- Automatic wavelength adjustments/programming with Dual Path Flow Cell
- Operation mode: Single, dual, MaxPlot and RatioPlot

- Standard analytical Taper Slit flow cell
- Lamp Optimization Software
- Integral Cuvette Holder
- Wavelength Verification
- Wavelength calibration

Fluorescence Detector - 01

Dual wavelength operation: Raman (H₂O) > 300 Ex 350 nm, Em 397 nm and Ex 350 nm, Em 450 nm, standard flow cell. Light source: Xenon flash lamp, normal mode (20 W), economy mode (5 W), life time 4000 hours.

Original Manufacturer's Licensed Software

- Chromatography software with integrated database
- Easy tracking and trending-Instrument Method, Processing Method, Report Method, etc.
- Custom field / Custom calculations.
- Each injection is time and date stamped for easy archiving, retrieval of data.
- Report publisher facility for customized reports.
- Custom reporting with view filters for easy retrieval.
- Scale from a single workstation to an wide network.
- Software should offer multiple levels of password, security to ensure the integrity of all your raw data and results and extensive audit trail.
- Security of data, custom reporting with view filters for easy retrieval.
- Report publisher facility for customized reports.
- It should be up gradable for Automated Method development Software.
- Should be able to control PDA/Fluorescence Detectors / Size Exclusion Chromatography.
- It should be operated with Preparative system along with analytical.

Thermostatted Column Compartment-01

Fraction Collector-01

- Fraction Collector
- Three new rack options are available
- Multipurpose Rack

Autosampler -01

- Autosampler should have Sample capacity of minimum 100 vials having 600 bar operating pressure.

Accessories:

Prep Funnel (32 positions, 2ea. /set)
 Prep Funnel Rack (holds up to 4 prep funnels)
 Multipurpose Rack
 Multipurpose Rack Adapter

Three years warranty must be provided