



KERALA AGRICULTURAL UNIVERSITY
RICE RESEARCH STATION, MONCOMPU, THEKKKARA P.O.,
ALAPPUZHA 688 503
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No.B/2812 /2018

Moncompu, Dated 29th December 2019

TENDER NOTICE

Sealed tenders are invited for the Purchase of High Performance analytical Chromatography system (HPCL) at RRS, Moncompu as per the specifications and terms & conditions detailed below.

High Performance analytical Chromatography system (HPCL)
(Detailed specification attached)

Cost of Tender Forms

Particulars	Original (Rs.)	Duplicate (Rs.)
Supplies costing above Rs.50,000/- and upto Rs.10 lakhs.	0.2% of the quoted amount rounded to the nearest multiple of 100, subject to a minimum of Rs.400 and maximum of Rs.1500+12% GST as applicable	50% of the cost of the original upper rounded to the nearest multiple of Rs.100+12% GST as applicable
Supplies costing more than Rs. 10 lakhs	0.15% of the cost of the items rounded to the nearest multiple of 100, subject to a maximum of Rs.25,000+12% GST as applicable	50% of the cost of the original, upper rounded to the nearest multiple of Rs.100+12% GST as applicable

(Tender cost and GST amount should be specified while submitting tender.)

Last Date of Receipt of Tender : 25.01.2019 3:00 pm

Date and Time of opening of Tender : 25.01.2019 3:30 pm

Specifications:

1. Quaternary Solvent Delivery System

- The flow rate should be set between 0.001 to 10 ml/min, or better for full operating pressure range
- Flow rate accuracy : $\pm 0.1\%$ or $\pm 1 \mu\text{l}/\text{min}$ or better

- Flow rate precision should be less than $\pm 0.050\%$ RSD or better.
- Maximum Pressure setting range : 9000 psi or more.
- The standard gradient mixer should have delay volume of 700 μ l or less
- The composition accuracy should be below 0.5%
- The composition precision should be below 0.15% RSD
- Maintenance kit, reservoir tray (with 4 solvent bottles complete with fittings)
- automated seal wash facility.
- built in seal wash facility.
- It must have a leak sensor as safety feature
- It should have functions for maintenance and validation which are accessible by software

2. Degassing Unit

- On line Membrane degassing unit should have four flow lines
- Maximum operating flow rate should be up to 10mL/min or more per flow line

3. Diode Array Detector

- Photodiodes: 1024 diodes
- The Bandwidth should be 4nm
- Light source: Deuterium and Tungsten
- Wavelength range must be from 190nm to 800nm
- The flow cell must be temperature controlled from ambient + 5°C to 40°C
- Wavelength accuracy must be ± 1 nm maximum
- Wavelength reproducibility must be ± 0.1 nm
- Drift should be less than 1×10^{-4} AU/Hour
- Noise level : $< \pm 10 \mu$ AU at 254 nm
- Data Collection Rate: 100 Hz or better

4. Manual Injector Kit

- S-S manual injector valve, mounting bracket for valve as well as for columns, 100 microlitre injection syringe, Rheodyne 7725 injector

5. Auto-Sample Injector

- The autosampler design should be a flow through design with variable injection volume.
- Sample injection volume should be variable between 0.1 µL to 50 µL.
- Loop injection using fixed loop [5 µL] should be available as an option for reducing the delay volume.
- Injection system should be variable injection volume type with zero sample loss during injection
- It must be capable of very fast injection time of 15 S/sample
- The maximum operating pressure must be upto 9000Psi (60MPa)
- Flow line rinse capability both before and after sampling should be possible
- Temperature setting range should be from 4 to 40°C or better
- The Carry over must be below 0.005 % or better
- Injection volume accuracy must be below 1% or better
- The injection precision should be less than 0.25% of RSD or better
- Number of samples to be processed automatically, random access minimum 100 positions for different volume vial
- Safety features like leak sensor and automatic rack and vial recognition.
- Maintenance kit should be available
- It should have functions for maintenance and validation which are accessible by software.

6. COLUMN OVEN:

- Temperature range : 5 to 50 deg or better
- Should be able to accommodate Standard HPLC columns

7. COLUMNS

- C 18 Column 250mmX4.6mmX5u- with guard column 1 No
- C 8 Column 250mmX 4.6mmX5 u with guard column 1 No

8. Software

- Operation of the system should be easy and intuitive via a state-of-the-art 32 bit Windows 7 software with Graphical User Interface
- Security features of software must comply fully with FDA 21 CFR Part 11

- It should cover full digital instrument control, qualitative and quantitative processing, report creation, self-diagnosis and auto-tuning
- The self-diagnosis feature of the software should enable diagnosis of all detectors and all connected LC units
- The software must have 'column management' system for recording the column details and column usage.
- The software should perform customised continuous analyses according to the conditions specified for each sample. Priority samples may be inserted in the queue during automated run.
- The software should be capable to perform overlapping injections
- The software should be able to monitor and quantitate 8 different wavelengths simultaneously
- There should be an on-line help function available for users.
- Method file should be capable to save all analysis parameters, data processing parameters and report format.
- The reporting format should be flexible and easy to use in any desired format
- The data can be converted to other formats. Spread Sheet software and word-processing software can be readily employed to provide data in tables or graphs through industry standard protocols
- Software must have its own log files for complete audit trails
- The software must have a safety feature where in when the mobile phase level
- System suitability as per USP/BP, System security as well as System check functions must be provided which comply with Good Laboratory Practice (GLP) and Regulatory Conformity.
- It should have the capacity to control multi-vendor GC & HPLC.

9. Should quote for latest PC(Dell or Hp core i7 Desktop) with All in one Laser Printer

10. Warranty for 5 years

Sd/-
PROFESSOR & HEAD

Terms and conditions

1. Tender should be submitted in the prescribed forms which can be downloaded from the website : www.kau.edu/tenders.
2. Sealed cover containing the tender should be super scribed “**Tender for the Purchase of High Performance analytical Chromatography system (HPCL)** and should be addressed to **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, PIN : 688 503.**
3. Each tender should be accompanied by **Tender fee and Earnest Money Deposit (EMD) of 1%** of the total rupee equivalent cost of the quoted items (subject to minimum of Rs.200/-) by way of **two crossed Demand Drafts separately** for tender fee and EMD drawn in favour of **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, Pin : 688 503** payable at State Bank of India, Thekkekkara Branch (code : 71084). Late and incomplete tenders and tender without EMD and agreement will not be accepted.
4. The tender should be accompanied by an agreement in Kerala stamp Paper worth Rs.200/- (Rupees Two hundred only) and format can be downloaded from the above website. Withdrawal of tender should after its acceptance or failure to supply the equipment or not according to the specifications will entail cancellation of the tender.
5. The successful tender should execute an agreement in Kerala Stamp Paper worth Rs.200/- (Rupees Two hundred only) and furnish a **Security deposit of 5%** of the cost of the equipment quoted in the form of term deposit/bank guarantee/demand draft drawn in favour of **The Professor and Head, Rice Research Station, Moncompu, Thekkekkara.P.O, Alappuzha District, Pin : 688 503** payable at the State Bank of India, Thekkekkara Branch(Code:71084), when directed from this office. The format for the agreement can be downloaded from the above website. Firms who are exempted from the payment of EMD should furnish copy of the currently valid certificates from store purchase departments, Govt. of Kerala.
6. The cost of the item, tax and other charges should be separately stated.
7. The exact specifications, details of make, model, name of manufacturer, warranty details etc. of the items must be clearly specified. Copies of detailed technical literature and illustrated brochures of the units quoted are to be included along with the offer. Details of maintenance service contract offered after expiry of normal warranty, spare-parts availability and after-sale-service facilities available should be indicated. Offers without these are liable to be rejected.
8. In the case of electrically operated equipments the circuit diagram will have to be supplied.
9. The decision of the undersigned in finalizing the tenders will be final and binding.
10. Prices quoted should be valid up to 30.04.2019 or beyond.

11. If any Bandh/Harthal/Strike/any unexpected holidays occurs on the date of opening of tender, the tender will be opened at the same time on the next working day.
12. On acceptance, the supply order will placed and invoice should be addressed to The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P O, Alappuzha District, PIN : 688 503. The payment will be effected only after the satisfactory supply, installation and commissioning of the item at RRS Moncompu in working condition and necessary demonstration by authorized service personnel.
13. The successful tenderer should supply the items to The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha District, PIN : 688 503 within one month from the date of receipt of the supply order. The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P.O, Alappuzha reserves the right to remove the defaulted name from the list of suppliers permanently or for a specific period.
14. Tenders insisting payment in advance either full or part releasing the documents through bank are liable for rejection.
15. List of users giving the exact address of the contact persons and the model number of the units available at these locations have to be provided. Evidence of exclusive/authorized distributorship from foreign principals should be provided along with the offers for overseas product.
16. The Professor and Head, Rice Research Station, Moncompu, Thekkekkara P. O, Alappuzha has the right to accept or reject any or all of the offers without assigning any reason.
17. All the rules and regulations applicable to Government tenders will be applicable to this tender also.

Sd/-
Professor & Head