

कृषि रसायन संभाग DIVISION OF AGRICULTURAL CHEMICALS  
भा.कृ.अनु.प.-भारतीय कृषि अनुसंधान संस्थान ICAR-INDIAN AGRICULTURAL RESEARCH INSTITUTE  
पूसा, नई दिल्ली- 110012 PUSA, NEW DELHI-110012  
# 25843588, Extn. 4643

मिसिल संख्या File No. Div.of Chemical/

दिनांक Dated: 19/10/2018

### निविदा-सूचना

निदेशक भा0कृ0अ0प0-भारतीय कृषि अनुसंधान संस्थान नई दिल्ली द्वारा निम्नलिखित वैज्ञानिक उपकरण / वस्तु की आपूर्ति एवं कार्य हेतु प्रतिष्ठित निर्माताओं/ अधिकृत डीलरों / आपूर्तिकर्ताओं से दो बोली प्रणाली (तकनीकी एवं वित्त बोली ) के अन्तर्ग सील बंद ऑनलाईन क्यूटेशन आमंत्रित की जाती है । क्यूटेशन /निविदा प्रस्तुत करने की अंतिम तिथि 15/10/2018 समय 01 बजे दोपहर तक । क्यूटेशन/निविदा को दिनांक 16/10/2018 को समय 14:30 बजे निर्धारित समिति के समक्ष खोली जाएगी । Online Quotations are invited from reputed Manufacture/Dealer/Supplier in Two Bid system (Technical bid & Financial bid) for purchase of following Scientific Equipment/Items on behalf of Director ICAR-Indian Agricultural Research Institute, New Delhi. The last date for submission of Bid 15/10/2018 at 1.00pm. The bid will be opened on dated 16/10/2018 at 14.30 hrs. By the prescribed committee.

विस्तृत नियम व शर्तों को भा0कृ0अ0सं0 की वेबसाइट [www.iari.res.in](http://www.iari.res.in) पर देखे एवं ऑनलाईन के लिए [www.eprocure.gov.in](http://www.eprocure.gov.in) देखा जा सकता है। Please visit [www.iari.res.in](http://www.iari.res.in) for Details Rules and Regulation and Log on [www.eprcure.gov.in](http://www.eprcure.gov.in) for online.

क्रम संख्या Sl. No.	वैज्ञानिक उपकरण / वस्तु का नाम Name of Scientific Equipment / Item	मात्रा Quantity
1	High Performance Liquid Chromatograph System	One

बोली लगाने के निर्देश और नियम एवं निविदा की शर्त Instruction to the bidder and terms & conditions of tender:

- 1) आपके द्वारा दी गयी मूल्य दर क्यूटेशन प्राप्ति हेतु निर्धारित अन्तिम दिन से कम से कम 180 दिनों तक मान्य होगी । यदि आपूर्तिकर्ता द्वारा 180 दिनों की न्यूनतम अवधि की वैधता के संबंध में कोई अन्तर हो तो उसका विषय रूप से उल्लेख होना चाहिए। The rates quoted shall be valid for a minimum period of 180 days from the last date fixed for submission of bid.
- 2) क्यूटेशन में दर्शायी गई दरों में भा0कृ0अ0सं0 नई दिल्ली के संभाग / कृषि रसायन संभाग, भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली-110012 में सामान / सामग्री की निःशुल्क आपूर्ति अथवा स्थापन शामिल होगा। हालांकि विदेशी मुद्रा में दर्शाए गए उपकरण को एफ0ओ0बी0/सी0आई0पी0 आधार पर दर्शाया जाए। The rates quoted shall be free of cost delivery and installation at the Division of Agricultural Chemicals, IARI, New Delhi-110012. However, equipment quoted in foreign currency must be quoted on FOB/CIP basis.
- 3) यदि सामान विदेश-निर्मित है और दर विदेशी मुद्रा में दिया गया है तो ऐसी परिस्थिति में कस्टम ड्यूटी छूट प्रमाणपत्र (सी0डी0ई0सी0) जारी किया जाएगा जो कि केवल भा0कृ0अ0सं0 के लिए ही मान्य होगा। Custom Duty Exemption Certificate (CDEC) will be issued only when the bid is quoted in foreign currency in case of foreign made items only and meant for IARI.
- 4) क्यूटेशन में संबंधित सामान का पूरा विवरण दिया जाएगा। Full specifications of the item/article quoted for shall be given in the quotation.

- 5) उपरोक्त दिए गए दर में यदि किसी भी प्रकार का अतिरिक्त कर /टैक्स/ड्यूटी लगाया जाना है तो उसका संकेत स्पष्ट रूप से दिया जाना चाहिए **If taxes duties or any other charges over and above the rates quoted leviable, actual percentage of such taxes/duties/other chargbes should be clearly indicated.**
- 6) बोली के साथ बतौर बयाना राशि रु 125000/- ( एक लाख पच्चीस हजार केवल ) का डिमांड मॉग ड्राफ्ट/भुगतान आदेश/भियादी जमा रसीद/बैंक गारंटी को निदेशक, भा0कृ0अ0स0, नई दिल्ली 110012 के नाम किसी भी राष्ट्रीयकृत बैंक में देय हो, अवश्य संलग्न होना चाहिए। जिसके बिना, क्यूटेशन पर विचार नहीं किया जायेगा। बयाना राशि की मूल प्रति सीधे तौर पर संबंधित निविदा आमंत्रित अधिकारी को आखिरी तारीख तक या ऑफलाईन दर जमा करने से पहले पहुंच जानी चाहिए। डिमांड मॉग ड्राफ्ट/भुगतान आदेश/भियादी जमा रसीद/बैंक गारंटी से संबंधित सभी जानकारी व्यक्तिगत रूप से भेजी जानी चाहिए, इस संबंध में प्राप्त स्कैन कॉपी /या जो डाटा आपूर्तिकता द्वारा दर जमा करने के दौरान दिया गया है उससे मिलान किया जाएगा अन्यथा इस क्यूटेशन का रद्द माना जाएगा। **EMD of Rs.125000 One Lakh and twenty five thousand only should be in the from of D.D/Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of Director, IARI, payable at New Delhi. The original EMD should be submitted to the Tender Inviting Authority on or before the last date and time of online bid submission. The details of D.D./Pay Order/Fixed Deposit Receipt/Bank Guarantee physsically sent, should tally with the details available in the scan copy and the data enter during the bid submission time otherwise the uploaded bid will be rejected.**
- 7) इस संस्थान द्वारा निविदाकर्ता को किसी भी सुरक्षा जामा राशि और बयाना राशि पर ब्याज नहीं दिया जाएगा। **No interest on security deposit and earnest money deposit shall be paid by the Institute to tenderer.**
- 8) क्यूटेशन प्रक्रिया पूरी होने के पश्चात असफल बोलीदाताओं को उनकी जमा की गयी बयाने की राशि वापस कर दी, जायेगी जबकि सफलतम बोलीदाता के मामले में यह राशि नियम के अनुसार सुरक्षा जमा के रूप में समायोजित की जा सकती है, जो कि ऑर्डर के राशि की 5-10 प्रतिशत होगी और यह डिमांड मॉग ड्राफ्ट /भुगतान आदेश/भियादी जमा रसीद/बैंक गारंटी निदेशक, भा0कृ0अ0स0, नई दिल्ली 110012 के नाम किसी भी राष्ट्रीयकृत बैंक में देय हो, जिसकी वैधता सभी कार्य को पूरा करने के 60 दिनों, साथ के साथ उपकरण/सामान जिसकी कीमत (रु0 1.00 लाख या इससे अधिक) की गारंटी भी शामिल होगी। हालांकि जा उपकरण रु 1.00 लाख एक लाख से कम है उस परिस्थिति में किसी भी प्रकार का निष्पादन जमा राशि नहीं दी जाएगी। **The EMD shall be refunded to the unsuccessful bidders after finalization of the quotation. In case of successful bidder, it can be adjusted towards security deposit which is 5-10% of the order value in the form of D.D/Pay Order/Fixed Deposit Receipt/Bank Guarantee from commercial bank drawn in favour of Director, IARI, payable at New Delhi and shall remain valid for 60 days beyond the date of completion of all contractual obligation of supplier including warranty obligation for the equipment/goods costing Rs. 1.00 lakhs (Rs. One Lakh) or more. Here would however, be no performance security deposit for equipment/goods costing less than Rs. 1.00 lakh (One lakh).**
- 9) फर्म द्वारा एक वर्ष की वारंटी प्रदान की जाएगी। यदि सामान/उपकरण के विवरण में वारंटी की अवधि में किसी भी प्रकार परिवर्तन है, तो उस वारंटी को अंतिम माना जाएगा। **One year warranty has to be invariable provided by the firm. In case, there is any variation in the warranty period given in the specification of the item/equipment, the warranty period shall be the final as given in the specification.**
- 10) कार्य के पूरा होने के बाद फर्म / पूर्तिकता को तीन पूर्व रसीद बिल प्राप्त होने के बाद भुगतान e-payment के माध्यम से किया जाएगा। **Payment will be made by mode of e-payment to the supplier/firm after satisfactory completion of work and receipt of pre-receipt bill triplicate.**
- 11) निदेशक भारतीय कृषि अनुसंधान संस्थान, नई दिल्ली 110012 के पास बिना कारण बताये सभी क्यूटेशनओं को पूर्ण या आंशिक रूप से स्वीकार या अस्वीकार करने के अधिकार प्राप्त हैं। **The Director IARI, New Delhi reserves the right to accept or reject any or all the quotations either in full or in parts without assigning any reason.**
- 12) उपरोक्त शर्तों का पालन न करने वाली क्यूटेशनों को अस्वीकार करने के लिये उत्तरदायी होंगी। **Quotations not complying with the above conditions are liable to be rejected.**
- 13) **TIN/VAT/PAN/C.S.T. Nos. के स्कैन कॉपी को क्यूटेशन के साथ में संलग्न किया जाए। Scanned copy of TIN/VAT/PAN/C.S.T. Nos may be attached with the bid.**

- 14) किसी कारण अनुबंध में कोई विवाद उत्पन्न होने पर भारतीय कानून और न्यायालय, नई दिल्ली की अधिकारिता के अधीन होगा। सचिव, भारतीय कृषि अनुसंधान परिषद द्वारा एकमात्र मध्यस्थ नियुक्त किया गया है, जिसका निर्णय दोनों पार्टियों (Supplier और Purchaser) पर अंतिम माना जाएगा। **In case, any dispute arising out of this contract shall be subject to the jurisdiction of Indian laws & Court at New Delhi. Sole arbitrator is appointed by the Secretary, ICAR, New Delhi. His decision will be final and binding on both parties (Supplier and Purchaser).**
- 15) सफल बोलीदाता को सौंपे गए कार्य को निर्धारित आपूर्ति आदेश के भीतर कार्य करना होगा जैसा आपूर्ति आदेश में दर्शाया गया होगा यदि ऐसा नहीं किया जाता तो कम से कम 2% तथा अधिकतम 10% की क्षति नष्ट कटौती के रूप में उनके बिल से काटी जाएगी। **The successful bidder has to execute the indented Job/Work as mentioned in the supply order place with them within the stipulated period as given in the supply order placed by this office failing with 2% per week and maximum of 10% deduction as liquidated damage charges will be made from the bill in case the job is not completed within the given stipulated period**
- 16) फर्म को इस कार्य/क्षेत्र में 3 वर्ष के अनुभव का प्रमाण पत्र संलग्न करना है। **Firms should 3 years experience in this line, proof should be enclosed.**

वैज्ञानिक उपकरण / वस्तु का नाम

Name of Scientific Equipment / Item

**Specification for HPLC**

An Automatic computer controlled High Performance liquid chromatograph system equipped with a quaternary pump, auto sampler, Column Compartment, UV and Fluorescence Detector and software with below specifications: -

**1. Pump: Quaternary Pump:**

Design: Hydraulic system: Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons.

Flow Range: Set Point from 0.001 to 10.0 ml/min in 0.001 ml/min increments.

Flow Accuracy: +/-1% or 10 µl/min

Flow Precision: ≤ +/- 0.07% RSD

Pressure Range: 0-400 bar

Vacuum Degasser: Degasser should be available for solvent degassing.

Programming: It should provide error-free programming of pump parameters including flow rates, operating pressure limits, compressibility compensation, calibration and diagnostics.

**2. Auto sampler:**

Injection Range: 0.1 - 100 µL in 0.1 µL increments

Precision: Typically < 0.25 % RSD of peak areas from 5 µL to 100 µL.

Minimum sample volume: 1 µL

Carryover Typically: < 0.004 % or better

Sample capacity: 100 × 2 mL vials  
Needle flush Port: System should include a needle flush port for rinsing of outside needle to maintain lowest carryover during analysis.  
Safety feature: Safety features Leak detection and safe leak handling, low voltages in maintenance areas, error detection and display.  
GLP features: System should have Early maintenance feedback (EMF) to track instrument usage, electronic records of maintenance and errors.  
Pressure Operating range: 0 - 60 MPa.

3. **Column Compartment:**

Temperature Range: 5 degree to 50° C or better

4. **UV Detector:**

Light source: Deuterium lamp  
Wavelength range: 190nm-600nm or Better.  
Slit width: ≤ 8 nm  
Wavelength accuracy: +/- 1nm Max.  
Wavelength precision: 0.1 nm  
Noise:  $<0.3 \times 10^{-5}$   
Drift:  $<1 \times 10^{-4}$   
Linearity:  $> 2.5$  AU

5. **Fluorescence Detector**

**Detection type:** Programmable single wavelength (excitation and emission) fluorescence detector  
**Light source:** Xenon flash lamp  
**Step size:** 1-20 nm  
**Wavelength repeatability:** ± 0.2 nm  
**Wavelength accuracy:** ±3 nm or better  
**Operating Environment conditions:** 0 - 40 °C constant temperature at <95% humidity

6. **Columns:**

- a) C18 Columns. 4.6x150mm & 4.6x250mm (Qty.2 each)
- b) C8 Columns. 4.6x150mm & 4.6x250mm (Qty.1 each)
- c) Silica 4.6x150mm (Qty 1)

7. **Consumables:**

- a. Autos ampler 2ml vials: 100 Nos. extra.
- b. PEEK Ferrules: 40
- c. PEEK Tubing's: 6 m

8. **Computer:**

Processor Intel Core i7-4670 Processor (3.4GHz, 6M Cache), HDD 1TB 7200RPM, Graphics: Intel HD Integrated Graphics, Memory 4GB X 2 DIMM 1600MHz, Optical DVD Recordable, Wireless WiFi Operating System Window 7 or above, cordless mouse and Keyboard.  
3KVA on line UPS with 30 min back up. Must be quoted along with instrument.

9. **Software:**

Operation of the system should be very easy and intuitive via a state-of-the-art 32/64 bit Windows 7 or above based software

Software Should be 21 CFR Compliance

Software must be able to link with Windows Users or Active Directory Users

It should cover full one-point digital instrument control, qualitative and quantitative processing, report creation and self-diagnosis

Software must register all events (log files) audit trails for Data, Method, Batch, Report, System Policy and User Administration

System suitability, System security as well as System check functions must be provided which comply with Good Laboratory Practice (GLP) and Regulatory Conformity

10. **Warranty:**

3 years' comprehensive warranty should be provided on complete system.

11. **Training & Installation:**

Training & Installation at IARI Delhi should be given free of cost.

12. **Service Support:**

The certificate that all spares required for quoted instrument shall be available for next 10 years from date of installation should be provided.

**Important Note: -**

1. Vendor should have ISO 9001 Certification.
2. All the requirements laid down under the above specifications must carefully read and understood before claiming your instrument as "complied".
3. Please provide compliance statement sheet with technical bid and if there is any deviation in above mentioned specifications should be clearly highlighted in remarks.
4. User list should be attached along with literature.

(सहायक प्रशासनिक अधिकारी)

Asstt. Admn. Officer

## Specification for HPLC

An Automatic computer controlled High Performance liquid chromatograph system equipped with a quaternary pump, auto sampler, Column Compartment, UV and Fluorescence Detector and software with below specifications: -

### 1. Pump: Quaternary Pump:

Design: Hydraulic system: Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons.

Flow Range: Set Point from 0.001 to 10.0 ml/min in 0.001 ml/min increments.

Flow Accuracy: +/-1% or 10  $\mu$ l/min

Flow Precision:  $\leq$  +/- 0.07% RSD

Pressure Range: 0-400 bar

Vacuum Degasser: Degasser should be available for solvent degassing.

Programming: It should provide error-free programming of pump parameters including flow rates, operating pressure limits, compressibility compensation, calibration and diagnostics.

### 2. Auto sampler:

Injection Range: 0.1 - 100  $\mu$ L in 0.1  $\mu$ L increments

Precision: Typically < 0.25 % RSD of peak areas from 5  $\mu$ L to 100  $\mu$ L.

Minimum sample volume: 1  $\mu$ L

Carryover Typically: < 0.004 % or better

Sample capacity: 100  $\times$  2 mL vials

Needle flush Port: System should include a needle flush port for rinsing of outside needle to maintain lowest carryover during analysis.

Safety feature: Safety features Leak detection and safe leak handling, low voltages in maintenance areas, error detection and display.

GLP features: System should have Early maintenance feedback (EMF) to track instrument usage, electronic records of maintenance and errors.

Pressure Operating range: 0 - 60 MPa.

### 3. Column Compartment:

Temperature Range: 5 degree to 50<sup>o</sup> C or better

4. UV Detector:

Light source: Deuterium lamp  
Wavelength range: 190nm-600nm or Better.  
Slit width:  $\leq 8$  nm  
Wavelength accuracy: +/- 1nm Max.  
Wavelength precision: 0.1 nm  
Noise:  $< 0.3 \times 10^{-5}$   
Drift:  $< 1 \times 10^{-4}$   
Linearity:  $> 2.5$  AU

5. Fluorescence Detector

**Detection type:** Programmable single wavelength (excitation and emission) fluorescence detector  
**Light source:** Xenon flash lamp  
**Step size:** 1-20 nm  
**Wavelength repeatability:**  $\pm 0.2$  nm  
**Wavelength accuracy:**  $\pm 3$  nm or better  
**Operating Environment conditions:** 0 - 40 °C constant temperature at  $< 95\%$  humidity

6. Columns:

- b) C18 Columns. 4.6x150mm & 4.6x250mm (Qty.2 each)
- b) C8 Columns. 4.6x150mm & 4.6x250mm (Qty.1 each)
- c) Silica 4.6x150mm (Qty 1)

7. Consumables:

- d. Autosampler 2ml vials: 100 Nos. extra.
- e. PEEK Ferrules: 40
- f. PEEK Tubing's: 6 m

8. Computer:

Processor Intel Core i7-4670 Processor (3.4GHz, 6M Cache), HDD 1TB 7200RPM, Graphics: Intel HD Integrated Graphics, Memory 4GB X 2 DIMM 1600MHz, Optical DVD Recordable, Wireless WiFi Operating System Window 7 or above, cordless mouse and Keyboard.  
3KVA on line UPS with 30 min back up. Must be quoted along with instrument.

9. Software:

Operation of the system should be very easy and intuitive via a state-of-the-art 32/64 bit Windows 7 or above based software  
Software Should be 21 CFR Compliance  
Software must be able to link with Windows Users or Active Directory Users  
It should cover full one-point digital instrument control, qualitative and quantitative processing, report creation and self-diagnosis  
Software must register all events (log files) audit trails for Data, Method, Batch, Report, System Policy and User Administration  
System suitability, System security as well as System check functions must be provided which comply with Good

Laboratory Practice (GLP) and Regulatory Conformity

10. **Warranty:**

3 years' comprehensive warranty should be provided on complete system.

11. **Training & Installation:**

Training & Installation at IARI Delhi should be given free of cost.

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The certificate that all spares required for quoted instrument shall be available for next 10 years from date of installation should be provided.

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8. User list should be attached along with literature.

(सहायक प्रशासनिक अधिकारी)  
Asstt. Admn. Officer