



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

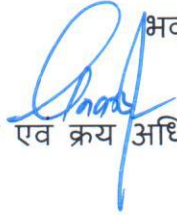
शुद्धिपत्र

No- 75(2)/2015-क्रय-T16

दिनांक- 09.12.15

अल्ट्रा परफारमेंस एचपीएलसी (यूएचपीएलसी) सिस्टम की क्रय हेतु जारी समसंख्यक निविदा दिनांक 20.11.15 के क्रम में दिनांक 03.12.15 को आयोजित पूर्व बोली बैठक के संदर्भ में सक्षम प्राधिकारी ने तकनीकी विशिष्टताओं में संलग्नक-1 के अनुरूप संशोधन अनुमोदित किया है।

निविदा की शेष तकनीकी विशिष्टतायें, नियम और शर्तें यथावत रहेंगीं।


भवदीय,
भंडार एवं क्रय अधिकारी



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Corrigendum

No- 75(2)/2015-pur-T16

Date 09.12.15

In continuation of our tender for procurement of Ultra-performance HPLC (UHPLC) System of even number dated 20.11.15 and consequent upon the pre bid meeting held on 03.12.15, the competent authority has approved the modifications in the technical specification of the tender as per the annexure-1.

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

Yours faithfully,


Stores & Purchase Officer

Ultra-performance HPLC (UHPLC) System-Technical Specifications

Computer controlled **Ultra-performance HPLC (UHPLC) System**: Technical and functional features of different modules of UHPLC system are as follows -

Technical and operational features of different modules:

1. Pump

- Number of solvent: 04
- Gradient formations: low pressure quaternary gradient pump to blend at a time 1 to 4 solvents with auto compressibility compensation
- Degasser: Four channel vacuum degasser with additional for needle/purge wash
- System Delay Volume: *minimum 400 μ L (inclusive of mixer) or less*
- Gradient formation: *10 or more different compositions formation (solvent elution pattern) and execution ability*
- Pump Seal Wash: Active, Integral and Programmable
- Wet Prime: Automatic
- Maximum operating pressure: greater or equal to 15,000 psi at 1ml/min
- Flow rate range: 0.010 to 2.000 mL/min in 0.001mL/min increment.
- Composition Accuracy: $\pm 0.5\%$ or less
- Flow Accuracy: $\pm 1.0\%$ or less
- pH Range : 2 to 10 or more efficient at both end
- Solvent blending: Automated, on-line pH, ionic strength, and organic modifier blending from pure solvents
- Safety Feature: Leak Sensors & safe leak handling.
- *System should be capable of carrying out all general applications of different modes alongwith, without changing the basic structure and accessories. Compatible to the samples of biological origin*

2. Auto Sampler

- No. of Sample Plates: 2 x 40/100/400 vials of 1.5mL or 1.8mL or 2mL
- Sample Capacity : 1 to 96 sample or more with minimum 04 positions for dilution function
- Injection volume range: 0.1 to 10 μ L as standard
- Number of injections: 1- 99 per samples
- Linearity: > 0.999
- Sample delivery precision: 0.5% RSD or better
- Sample Thermostat: 4°C to 35°C, or more
- Sample Carryover: <0.004% or better for standard phytochemical (caffeine) under UV detection
- Injection Needle Wash: Integral, Active and Programmable
- Safety Feature: Leak Sensors
- Minimum Sample Required: 3 μ L residual,
- Sample Manager Capability: Advance feature of auto dilution and auto addition

3. UPLC Column Oven/Compartment

- Column Temp Control: 5°C above ambient to 80°C (below ambient temp model should be quoted as optional)
- Column Temp Stability: $\pm 0.3^\circ\text{C}$
- Column holding Capacity: minimum 04 columns to be accommodated with temperature control (heating and cooling) facility.
- Column Tracking: column information and management of tracks and archive of usage history should be based on advanced electronic technology

4. Photo Diode Array (PDA) Detector

- Wavelength range: 190-500nm or higher with an optical resolution of 1.2 nm or better and should be able to perform simultaneous 2D and 3D operation.
- Wavelength Accuracy: $\pm 1\text{nm}$
- Optical Resolution : 1.2 nm
- Linearity: Deviation at 2.0 AU $\leq 5\%$
- Baseline Noise: $\pm 3.5 \times 10^{-6}$ AU or better

- Drift: $\leq 1.0 \times 10^{-3}$ AU/hour/°C or better
- Path cell volume: 8mm/10mm
- Flow Cell Volume: 500nL or less
- Digital Resolution: 0.6 nm/pixel or better
- Light source: Deuterium lamp with latest and intelligent technology
- Other feature: leak sensor, auto-calibration, and full diagnostic data capturing

5. Software

- Suitable software to control complete UPLC system in various format viz. ANDI/chromatography/ ASCII text format/Excel file format/Adobe acrobat file format etc. to acquire and processing of data.
- Premade templates, customizable data reports, online help and answer wizard embedded *advanced, structured and relational* database, report publisher, versatility for multitasking without multiple software package.
- The software should have required regulatory compliance such as GLP, GMP and 21CFR Part 11 etc.
- Method transfer kit from HPLC to UPLC as auto transfer to UPLC file.
- Software should be capable to compute the method validation parameters as per current international guidelines such as USP, ICH etc.
- Should provides real-time monitoring , automatic notification of instrument performance and diagnostic instructions for problem resolution

6. Computer/Work station

- Suitable branded latest computer: min 8GB RAM, 1TB HDD, RWDVD Drive with licensed operating (latest and compatible) and updated MS office software; 21" monitor of latest technology.
- Branded duplex laser printer of standard quality.

7. Columns and other Consumable Accessories

- RP –UPLC column-One (for the analyses of alkaloids):- C18, Sub-2 μ m, 2.1 x 50 mm with suitable guard column/cartridge -02
- HILIC- UPLC column ((for the analyses of ionizable polar phytochemicals)-One: Sub-2 μ m, 2.1 x 50 mm with suitable guard column/cartridge -02
- Guard column/cartridge holder-One
- Number of vials: 500 total recovery vials with extra 500 caps/snap plug
- Pump Check valve: 02

8. Optional accessories

- Fluorescence detector for the UPLC based quantitation of microbial toxins such as aflatoxins (B1, B2, G1& G2) in stored raw plant drugs. Required appropriate UPLC column should also be quoted.
- SEC-UPLC column-One (for the analyses of biomolecules): 300 Å, sub-2 μ m (Optional)
- ELS detector for the quantitations of sugars and other compounds.
- Any other optional accessories required for the system should be quoted separately
- On-line UPS of 3KVA capacity or as per requirement with 60 minutes battery backup at full load (Preferably of UPS/Numeric or any standard brand). Price should be quoted separately

INSTALLATION, SERVICE & GENERAL CONDITIONS

- Necessary tubings and tools must be supplied.
- Supporting document for claim must be submitted for the equipment.
- **Warranty:** Compressive warranty (Standard 1 year from date of installation & commissioning); additional warranty for 2 years (price should also be quoted separately)
- **Compliance:** IQ at the time of installation and OPV in every year.
- **User list:** Should provide more number of recent installations of quoted UPLC system along with similar application
- **On-site Training & Demonstration:** Operational training & demonstration programme with the application of natural product (analysis of polar and alkaloid). Demonstration of the method transition (HPLC to UPLC) to be conducted at CSIR-CIMAP, Lucknow.
- Bidder should provide all pre-installation requirements of the system.