

**SPECIFICATIONS FOR HIGH PERFORMANCE LIQUID CHROMATOGRAPH  
(HIGH PRESSURE GRADIENT SYSTEM WITH PDA)**

**SHIMADZU Lc-20A series OR equivalent – 01 No.**

**COMPRISING OF:**

**Pump Unit:**

Double reciprocating plunger pump with constant flow delivery and constant pressure delivery.

**Constant Flow Pumping**

**Flow Rate Setting Range:** 0.001-5mL/min [1.0-40MPa]  
5.001-10mL/min [1.0-20MPa]

**Flow Rate Accuracy:**  $\pm 2\%$  or  $\pm 2\mu\text{L}/\text{min}$ , whichever is the greater.

**Flow Rate Precision:** 0.3% (RSD 0.1% and below)

**Constant Pressure Pumping:**

**Pressure Setting Range:** 1.0-40MPa [0.1MPa steps]

**Pressure Accuracy:**  $\pm 10\%$  or 1.0MPa, whichever is the greater.

**Pressure limits function:** Upper and lower limits

**Liquid-contacting part materials:** SUS316L, PEEK, PTFE, Ruby,  
Sapphire, HastelloyC®

**Suction Filter:** 10 $\mu\text{m}$

**Line Filter:** 5 $\mu\text{m}$  mesh, capacity 30 $\mu\text{L}$

**Time Program:**

Commands for flow rate, pressure, EVENT functions, LOOP (for program repetition), 10 files, total 320 steps.

**Pressure Display Accuracy:**  $\pm 2\%$  or  $\pm 0.5\text{MPa}$ , whichever is the greater.

**Plunger Rinsing Line:** Automatic rinsing possible through connecting syringe and rinsing pump

**Size:** W 260 × H 140 × D 420mm, excluding protruding parts

**Operating Temperature Range:** 4-35 °C

**Power Supply:** AC 220-240V ( 220-240 ~) power Consumption 150VA, 50/60Hz

02.

Gradient mixer      01

**PHOTODIODE ARRAY DETECTOR**

01

**Performance Specifications:**

**Photodiode array elements:** 512 elements

**Light source:** D2 lamp, W lamp

**Measurement wavelength range :** 190 to 800nm

**Wavelength accuracy:** ±1nm

**Element resolution:** 1.2nm / element

**Slit width:** 1.2nm, 8nm slit switching possible

**Spectral resolution:** 1.4nm or less (using 253.7nm low voltage Hg (Mercury) lamp emission line, 1.2nm slit).

**Noise level:**  $\pm 0.3 \times 10^{-3}$  AU/hour or less\*1

**Drift :**  $0.5 \times 10^{-3}$  AU/hour or less\*1

**Temperature coefficient:**  $0.5 \times 10^{-3}$  AU/°C or less (250nm, 600nm, air cell, time constant 2sec)

**Standard Flow Cell:**

**Optical path length:** 10mm

**Cell volume:** 10µl

**Pressure resistance:** 12MPa (120kgf/cm<sup>2</sup>)

**Liquid contact materials:** SUS316L, quartz glass

**Inlet tubing:** I.D. 0.25mm × length 550mm

**Outlet tubing:** I.D. 0.25mm × length 250mm

**Cell temperature controller**

**Cell temperature control settings:** OFF, 9°C to 50°C, 1°C steps (Set at ambient + 5°C or above).

**Cell temperature control precision :** 0.1°C 01

Reservoir Tray 01

GSKit 01; Comprising of :

- |   |  |    |
|---|--|----|
| 1 | C18, 5µm, 4.6mm x 150mm                          | 01 |
| 2 | 2.0mL Clear, Screw top Vials with caps and septa | 01 |
| 3 | 1 pack Nylon, 0.45µm, 25mm                       | 01 |
| 4 | Solvent Safety Bottle Caps Kit                   | 01 |

Sample Injector 01

100uL Micro Litre Syringe 01

Injector and Column Holder 01

**SOFTWARE WORKSTATION/ INTEGRATING**

LC Workstation 01

System Controller 01

<b>ESTIMATED COST: Rs. 3.0 MILLION</b>
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# Instruction to Bidders

## Preparation of Bids

1. **Scope of Work** The *International Center for Chemical and Biological Sciences* plans to develop / acquire a comprehensive integrated solution for all the functional needs and requirements of *Supply and Installation of High Performance Liquid Chromatograph* as described in later pages.
2. **Method and procedure of Procurement** National Competitive Bidding Single Stage *Single Envelope* Procedure as per SPP Rules 2010 (updated 2013)
2. **Language of Bid** The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring agency , shall be written in the English language
3. **Documents Comprising the Bid** The bid prepared by the Bidder shall comprise the following components:
  - (a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6.
  - (b) Bid security furnished in accordance with ITB Clause 9.
4. **Bid Prices**
  - 4.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the *Supply and Installation of High Performance Liquid Chromatograph* it proposes to supply under the contract.
  - 4.2 the prices shall be quoted on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location specified in the Schedule of Requirements. No separate payment shall be made for the incidental services.
  - 4.3 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet.
  - 4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.
5. **Bid Form** The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the *Supply and Installation of High Performance Liquid Chromatograph* to be supplied, description of the Supply and Deployment of Video Conferencing System with Other Equipments, and prices.
6. **Bid Currencies** Prices Shall be quoted in Pak Rupees.
7. **Documents Establishing Bidder's** The Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the contract if its bid is accepted.

**Eligibility  
and  
Qualification**

- (a) that the Bidder has the financial and technical capability necessary to perform the contract;
- (b) that the Bidder meets the qualification criteria listed in the Bid Data Sheet.

**8. Documents**  
*"Supply and Installation of High Performance Liquid Chromatograph"*  
**Eligibility  
and  
Conformity to  
Bidding  
Documents**

The documentary evidence of conformity of the *Supply and Installation of High Performance Liquid Chromatograph* systems to the bidding documents may be in the form of literature, drawings, and data, and shall consist a detailed description of the essential technical and performance characteristics of the systems;

**9. Bid Security**

9.1 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct, which would warrant the security's forfeiture

The bid security shall be denominated in the currency of the bid:

- (a) at the Bidder's option, be in the form of either demand draft/call deposit or an unconditional bank guarantee from a reputable Bank ;
- (b) be submitted in its original form; copies will not be accepted;
- (c) remain valid for a period of at least 14 days beyond the original validity period of bids, or at least 14 days beyond any extended period of bid validity

9.2 bid securities shall be released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.

9.3 The successful Bidder's bid security shall be discharged upon the Bidder signing the contract, and furnishing the performance security.

9.4 The bid security may be forfeited:

- (a) if a Bidder withdraws its bid during the period of bid validity or
- (b) in the case of a successful Bidder, if the Bidder fails:
  - (i) to sign the contract in accordance or
  - (ii) to furnish performance security

**10. Period of  
Validity of  
Bids**

10.1 Bids shall remain valid for the period specified in the Bid Data Sheet after the date of bid submission prescribed by the Procuring agency. A bid valid for a shorter period shall be rejected by the Procuring agency as non responsive.

10.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses

thereto shall be made in writing. The bid security shall also be suitably extended as per Rule-38 of SPP Rules, 2010 (updated 2013). A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid.

**11. Format and Signing of Bid**

- 11.1 The Bidder shall prepare an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall govern.
- 11.2 The original and the copy or copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

**Submission of Bids**

**12. Sealing and Marking of Bids**

- 12.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL BID" and ONE COPY. The envelopes shall then be sealed in an outer envelope. The inner and outer envelopes shall be addressed to the Procuring agency at the address given in the BDS, and carry statement "DO NOT OPEN BEFORE [30.06.2015]."
- 12.2 If the outer envelope is not sealed and marked as required, the Procuring agency shall assume no responsibility for the bid's misplacement or premature opening.

**13. Deadline for Submission of Bids**

- 13.1 Bids must be received by the Procuring agency at the address specified in BDS, not later than the time and date specified in the Bid Data Sheet.
- 13.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents. In such case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

**14. Late Bids**

Any bid received by the Procuring agency after the deadline for submission of bids prescribed by the Procuring agency shall be rejected and returned unopened to the Bidder.

**15. Modification and Withdrawal of Bids**

- 15.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification, including substitution or withdrawal of the bids, is received by the Procuring agency prior to the deadline prescribed for submission of bids.
- 15.2 No bid may be modified after the deadline for submission of bids.
- 15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security.

## Opening and Evaluation of Bids

- 16. Opening of Bids by the Procuring agency**
- 16.1 The Procuring agency shall open all bids in the presence of bidders' representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/attendance sheet evidencing their attendance.
- 16.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Procuring agency may consider appropriate, will be announced at the opening. During evaluation of the bids, the Procuring agency may ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.
- 17. Clarification of Bids**
- 18. Preliminary Examination**
- 18.1 The Procuring agency shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 18.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If the Supplier does not accept the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 18.3 Prior to the detailed evaluation, the Procuring agency will determine the substantial responsiveness of each bid to the bidding documents. A substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 18.4 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.
- 19. Evaluation and Comparison of Bids**
- 19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.
- 19.2 The Procuring agency's evaluation of a bid will be on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location.
- 20. Contacting the Procuring agency**
- 20.1 No Bidder shall contact the Procuring agency on any matter relating to its bid, from the time of the bid opening to the time of announcement of Bid Evaluation Report. If the Bidder wishes to bring additional information to the notice of the Procuring agency, it should do so in writing.
- 20.2 Any effort by a Bidder to influence the Procuring agency in its decisions on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

## **Award of Contract**

- 21. Post-qualification**
- 21.1 In the absence of prequalification, the Procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluated responsive bid is qualified to perform the contract satisfactorily.
- 21.2 The determination will take into account the Bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 7 as well as such other information as the Procuring agency deems necessary and appropriate.
- 21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
- 22. Award Criteria**
- The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.
- 23. Procuring agency's Right to Accept any Bid and to Reject any or All Bids**
- 23.1 Subject to relevant provisions of SPP Rules 2010 (updated 2013), the Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award.
- 23.2 Pursuant to Rule 45 of SPP Rules 2010 (updated 2013), Procuring agency shall hoist the evaluation report on Authority's web site, and intimate to all the bidders seven days prior to notify the award of contract.
- 24. Notification of Award**
- 24.1 Prior to the expiration of the period of bid validity, the Procuring agency shall notify the successful Bidder in writing, that its bid has been accepted.
- 24.2 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 26, the Procuring agency will promptly notify each unsuccessful Bidder and will release their bid security.
- 25. Signing of Contract**
- 25.1 At the same time as the Procuring agency notifies the successful Bidder that its bid has been accepted, the Procuring agency will send the Bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 25.2 Within the period specified in BDS, of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.
- 26. Performance Security**
- 26.1 Within the period specified in BDS, of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.

26.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 25 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

**27. Corrupt or Fraudulent Practices**

27.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2009 and Rules made there under:

- (a) **"Corrupt and Fraudulent Practices"** means either one or any combination of the practices given below;
  - a. **"Coercive Practice"** means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
  - b. **"Collusive Practice"** means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;
  - c. **"Corrupt Practice"** means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
  - d. **"Fraudulent Practice"** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (b) **"Obstructive Practice"** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.



## Bid Data Sheet

The following specific data for the *Supply and Installation of High Performance Liquid Chromatograph* to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

<b>Introduction</b>	
<b>ITB 1</b>	<b>Name and address of Procuring Agency:</b> <i>International Center for Chemical and Biological Sciences,</i> University of Karachi, Karachi.
<b>ITB 1</b>	<b>Name of Contract.</b> <i>"Supply and Installation of High Performance Liquid Chromatograph"</i>
<b>Bid Price and Currency</b>	
<b>ITB 4</b>	Prices quoted by the Bidder shall be <i>"fixed" and in "Pak Rupees"</i>
<b>Preparation and Submission of Bids</b>	
<b>ITSB 19</b>	<i>Qualification requirements:</i>  1. Complete Company profile 2. Valid Registration with tax authorities is required
<b>ITB 7</b>	<b>Amount of bid security.</b> 2 % of Bid
<b>ITB 8</b>	<b>Bid validity period.</b> 90 days
<b>ITB 9</b>	<b>Performance Guarantee :</b> 5% of Bid
<b>ITB 10</b>	<b>Number of copies.</b> <i>One Original and One Copy</i>
<b>ITB 19.1</b>	<b>Deadline for bid submission.</b> <i>30-06-2015 at 2.30 hours</i>
<b>ITB 20</b>	<b>Bid Evaluation:</b> Lowest Evaluated Bid
	<b>Under following conditions, Bid will be rejected:</b> 1. Conditional and Telegraphic tenders/bids; 2. Bids not accompanied by bid security (Earnest Money); 3. Bids received after specified date and time; 4. Bidder submitting any false information; 5. Black Listed Firms by Sindh Government or any Entity of it

**SUMMARY SHEET**  
**TENDER NOTICE NO. ICCBS/HEJ/EQPT-300615**

The tender will liable to be rejected, if this form will not accompany the tender bid / quote

S. No.	Bid Value	Foreign Currency (If applicable)	Conversion Rate (If applicable)	Price in PKR

<b>Total Bid Value in PKR</b>		
<b>Earnest Money @ 2% in PKR</b>		
<b>Pay Order/Demand Draft No:</b>		<b>Date:</b>
<b>Signature :</b>	<b>Seal :</b>	

## SCHEDULE OF REQUIREMENTS

S. No.	Description of Service / Goods	Quantity	Required Delivery Schedule in Days from the Date of Contract Award	Location
1				
2				
3				

**Sample Forms**

Date: \_\_\_\_\_

To:

**International Center for Chemical and Biological Sciences,  
University of Karachi, Karachi.**

Dear Sir:

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to develop and deliver the required system in conformity with the said bidding documents for the sum of *[total bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to develop the system in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to **Five (05) Percent** of the Contract Price/Pay order for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this Bid for a period of 90 days from the date fixed for Bid opening under Clause 16 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2015.

\_\_\_\_\_  
*[signature]*

\_\_\_\_\_  
*[in the capacity of]*

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_

#### 4. Performance Security Form

To: *[name of Procuring agency]*

WHEREAS *[name of Supplier]* (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated \_\_\_\_\_ 2015 to deploy *[description of goods and services]* (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the \_\_\_\_\_ day of \_\_\_\_\_ 2015.

Signature and Seal of the Guarantors

\_\_\_\_\_  
*[name of bank or financial institution]*

\_\_\_\_\_  
*[address]*

\_\_\_\_\_  
*[date]*