

**INTERNATIONAL CENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES
H.E.J. RESEARCH INSTITUTE OF CHEMISTRY
UNIVERSITY OF KARACHI
KARACHI-75270**

Contact Person for Technical Information

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DESCRIPTION OF ITEM

S.No.	Item	Estimated Cost in Rs.
1.	Supply & Installation of FT-NIR Spectrophotometer and FT-IR Spectrophotometers including detail specifications on the following pages	Rs. 9.50 million

**Speciation for FT-IR Spectrophotometer
(Dedicated Research Grade Machine)**

Item	Description
Main	The equipment must be research purpose come from a reputable brand in the market with direct manufacturer support - engineer, application and logistics locally. It must have a strong track record for reliability, robustness and reproducibility. The FT-IR Spectrometer should be the latest technology All Spares parts & Optics should be available and non hygroscopic, FT-IR Spectrometer should be equip with two types of sampling modes which includes transmission, ATR (Diamond) . Instrument Software should be licensed & capable of Validation with built in filters wheel installed in it.
Specification	
Interferometer.	Permanently aligned, high stability of Interferometer.
Beam Splitter.	(Non Hygroscopic).
Resolution.	Less Than 0.5 cm^{-1}
Wavelength Accuracy.	$\pm 0.03 \text{ cm}^{-1}$
Wavelength Reproducibility.	Better than 0.05 cm^{-1}
Spectral Range.	$7500 - 600 \text{ cm}^{-1}$
Sealed and Desiccated.	Instrument should be Sealed and Desiccated.
Purge.	Instrument should be with an option of purge with inert gas.
Source.	Long-life, high intensity IR source.
System Status Indicators.	Indicator lights report scan, laser, power, and source status continuously.
Sampling Techniques.	Transmission Mode and ATR (Diamond).
Detector.	High Sensitivity DTGS detector.
Sampling Window.	Chemically resistant, Non-hygroscopic.
Instrument Qualification.	IQ, OQ, PQ & DQ should be given at the time of installation.

Accessories.	ATR (diamond) for Solid and Liquid sample. Transmission for solid & liquid.
Spares.	Spares Source x 2 & Pack of 10 transmission sampling Currettes.
Library.	Required Complete library for the petroleum, pharmaceuticals (Active & In active), pesticides, polymer, narcotics and other materials.
Communication	USB, LAN and Any.
Data station.	Core I 3, 4 GB DDR III, 500 GB Hard disk, DVD RW, LCD 19 "Keyboard Mouse.
Printer.	HP Laser jet compatible with PC.
Training.	The supplier must provide training for the users of the instruments at site, after installation and commissioning.

**Speciation for FT-NIR Spectrophotometer
(Dedicated Research Grade Machine)**

Item	Description
Main.	The equipment must be research purpose, come from a reputable brand in the market with direct manufacturer support - engineer, application and logistics locally. It must have a strong track record for reliability, robustness and reproducibility. The FT-NIR Spectrometer should be the latest technology All Spares parts & Optics should be available as user-exchangeable and non hygroscopic, FT-NIR Spectrometer should be equip with two types of sampling modes includes transmission and Integrating Sphere with InGaAs detectors working individually for different sampling techniques & Instrument Software should be licensed & capable of Validation with built in filters wheel installed in the instrument.
Specification	
Interferometer	Permanently aligned, high stability of Michelson Interferometer.
Beam Splitter	Non Hygroscopic.
Resolution	2 cm ⁻¹ (0.3 nm at 1250 nm).
Laser	Helium, Neon Laser tube.
Wavelength Accuracy.	± 0.03 cm ⁻¹ (0.005 nm at 1250 nm).
Wavelength Reproducibility	Better than 0.05 cm ⁻¹ (.008 nm at 1250 nm).
Spectral Range.	14000 – 2000 cm ⁻¹ (833 – 2630 nm).
Sealed and Desiccated	Instrument should be Sealed and Desiccated.
Purge.	Instrument should be with a option of purge with inert gas.
Source.	Long-life, high intensity halogen NIR source; spare source should included with system, guaranteed filament image alignment
System Status Indicators	Indicator lights report scan, laser, power, and source status continuously.
Sampling Techniques	Transmission Mode and Integrating Sphere.

Liquid Sampling.	Should be designed for quality control testing of raw materials, food chemicals, polymers, surfactants and formulations, the transmission module provides quick analysis of liquid samples in standard-sized currettes. With temperature controlled currettes holder.
Sample Transmission. Positioning	Should be two and Automated software controlled Two sample positions plus background Automatic reference material background position.
Background Handling.	Automatic and internal with samples in place; no operator Intervention required
Detector Transmission.	High Sensitivity InGaAs detector.
Solid Sampling.	The instrument should be equipped with Integrating Sphere for measuring solids and powders quickly and reproducibly by diffuse reflectance integrating sphere. It should works well for a variety of materials including food ingredients or powdered chemicals in vials or bottles.
Solid sample type.	Instrument should equip with multiple sample holder with rotation homogenizer.
Background Handling.	Automatic and internal with samples in place; no operator Intervention required.
Integrating Sphere.	High throughput Integrating Sphere with greater than 95% collection Efficiency at collecting scattered energy.
Sampling Window.	Chemically resistant sapphire.
Detection.	High sensitivity InGaAs, offset for baffle-free design.
Instrument Qualification.	IQ, OQ, PQ & DQ should be given at the time of installation.
Spares.	Spares Source x 2 & Pack of 10 transmission sampling Currettes.
Library. Optional	Complete library for the petroleum, pharmaceuticals (Active & In active), pesticides, polymer, narcotics and other materials. OR NIR Complete Collection (6049 spectra) This collection includes all NIR spectra collected within this project. Those are organic and inorganic chemicals, pharmaceutical excipients, drugs, polymers, additives, coatings, dyes, pigments, toxic substances, hazardous substances like explosives, agrochemicals and other types of materials. This collection should be chosen by customers with broad range of analytical applications.
Communication.	USB or LAN.
Data station.	Core i3, 4 GB DDR III, 500 GB Hard disk, DVD RW, LCD 19 "Keyboard Mouse

Printer.	HP Laser jet.
Training.	The supplier must provide training for the users of the instruments at site, after installation and commissioning
Accessories.	Smart accessory, ATR (diamond).Solid and Liquid sample
Applications Required.	<p>Following application is should be include with the system cost.</p> <ol style="list-style-type: none"> 1. Multiple starter calibration packages for Meat Industry Consists of methods for multiple applications. With calibration standard. 2. Multiple starter calibration packages for Dairy Industry Consists of methods for multiple applications. With calibration standard. 3. Multiple starter calibration packages for Edible Oil Industry Consists of methods for multiple applications. With calibration standard. 4. Multiple starter calibration packages for the analysis of feed ingredients for requirement, swine and poultry Industry Consists of methods for moisture, fats, protein, fiber and ash. With calibration standard.

Instructions to bidders

Preparation of Bids

- 1. Scope of Work** The, I.C.C.B.S., plans to develop / acquire a comprehensive integrated solution for all the functional needs and requirements of scientific equipment, as described in later pages.

- 2. Method and procedure of Procurement** National Competitive Bidding **Single Stage Two 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 equipment 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. The conversion of the foreign currency currency in Pak rupees should be mentioned in case of C&F prices.

- 5. Bid Form** The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating chemicals to be supplied, description of the chemicals and prices.
- 6. Bid Currencies** Prices Shall be quoted in Pak Rupees or equivalent to Pak rupees in case when the prices are being quoted on C&F basis
- 7. Documents Establishing Bidder's Eligibility and Qualification** 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.
- (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.
- The documentary evidence of conformity of the equipments to the bidding documents may be in the form of cat number, part number etc., and shall consist a detailed description of the essential technical and performance characteristics of the systems.
- 8. Documents' Eligibility and Conformity to Bidding Documents**
- 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 security 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 unamended 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 3.00 P.M. on 17-02-2015.
- 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.
- 17. Clarification of Bids**
- 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.
- 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**
- 19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.

Bids

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 thereunder:

- (a) **“Corrupt and Fraudulent Practices”** means either one or any combination of the practices given below;
 - (i) **“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;
 - (ii) **“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;
 - (iii) **“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;
 - (iv) **“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 chemicals and consumables 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.

Introduction	
ITB 1	Name and address of Procuring Agency: International Center for Chemical and Biological Sciences, University of Karachi Karachi-75270.
ITB 1	Name of Contract. <i>Supply & Installation of FT-NIR and FT-IR Spectrophotometers at the Center.</i>
Bid Price and Currency	
ITB 4	Prices quoted by the Bidder shall be <i>“fixed” and in” Pak rupees in F.O.R. prices and in foreign currency in case of C&F prices.”</i>
Preparation and Submission of Bids	
ITSB 19	Qualification requirements: 1. Complete Company profile 2. Valid Registration with tax authorities is required 3. Authorized dealers/distributors/sole agents
ITB 7	Amount of bid security. 2 % of Bid
ITB 8	Bid validity period. 90 days
ITB-9	Performance Guarantee 5% of the P.O. Value
ITB 10	Number of copies. One original One copy
ITB 19.1	Deadline for bid submission. 17-02-2015 at 2.30 p.m.

ITB 20	Bid Evaluation: Lowest evaluated bid
	Under following conditions, Bid will be rejected: <ol style="list-style-type: none">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

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

Total Bid Value in PKR		
Earnest Money @ ___ % in PKR		
Pay Order/Demand Draft No:		Date:

SCHEDULE OF REQUIREMENTS

S.No.	Description of service / goods	Quantity	Required Delivery Schedule in Days from the Date of Contract Award	Location
1	Supply and Installation of FT-NIR and FT-IR Spectrophotometers at the Center.	As per tender document	12 weeks	I.C.C.B.S., Karachi
2				
3				

Date: _____

To:

International Center for Chemical and Biological Sciences
University of Karachi,
Karachi-75270.

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 (5) 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 _____

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 _____ 2014 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]