

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

Tender Notice# SP-2/16/04-06-011 (2nd Time)

Sealed Tenders are invited only from the Sales Tax and Income Tax Registered reputed suppliers for Purchase/ Import of the following Scientific Equipments for the project Entitled "Strengthening of H.E.J. Research Institute of Chemistry Phase-II".

S.No.	Name of Item	Qty.	Description/ Specification
1	DIAZOMETHAN GENERATOR ASSEMBLY	1	Glassware Set, Complete Addition funnel, 50 ml, with PTFE valve Distillation head.250 ml & Round Bottom Flask.
2	MELTING POINT EQUIPMENT WITH SAMPLE LOADER FOR EFFECTIVE PACKING OF SAMPLES INTO MELTING POINT CAPILLARIES	1	Temperature range from room temperature upto 400 °C <ul style="list-style-type: none"> • Temperature resolution 0.1 °C • Repeatability melting point at 0.5 °C/min : +/- 0.1 °C • Heat-up time (50 °C – 350 °C) at 25 °C : ~ 4 min
3	HYDROGENATION APPARATUS SHAKER TYPE	1	Shaker type hydrogenator.
4	OZONE GENERATOR SYSTEM COMPRESSED AIR OR OXYGEN FEED GAS	1	Ozone Module <ul style="list-style-type: none"> • Made of stainless steel. High-Tension Transformer <ul style="list-style-type: none"> • Resin-embedded high-tension transformer(s) protected against condensate water. Air Drying Unit <ul style="list-style-type: none"> • Integrated in ozone generator unit • Dew point – 70°C Automatic Ozone Production Control <ul style="list-style-type: none"> • Serial equipped with automatic ozone production control. • PI-Controller included.
5	ATOMIC FORCE MICROSCOPE	1	Multimode Atomic Force Microscope or alternative Operate in tapping/contact mode in air,force modulation in liquid should have STM converter,low-current STM converter:contact mode fluidcell.
6	DRY ICE MAKER	1	Capable of producing high density dry-ice pellets in any size from 1.7mm to 16mm, Requires only a source of liquid CO ₂ . Production rate:80 Kg/hr.
7	Nano-UPLC SYSTEM	1	1-UPLC Pump 2-AutoSampler 3-PDA Detector

8	FLOUSCENCE SPECTROPHOTOMETER	1	<ul style="list-style-type: none"> • Water Raman signal-to-noise ratio: 3000:1 • Photon Counting for Ultimate Sensitivity • Fast Scanning capability - up to 80 nm/second • Front Surface Detection Accessory • Fluorescence Microscope Accessory <p>Alongwith Accessories</p>
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The detailed specifications and the list of items can be downloaded from our website (www.iccs.edu), SPPRA website (www.ppra.org.pk) and (www.pprasindh.gov.pk). Tender Document with detailed description / specifications can be obtained from the date of publication in news papers from Project office during office hours on payment of Rs. 1000/- (non-refundable) in shape of Pay order/ Bank draft in favor of the "Director, H.E.J. Research Institute of Chemistry". Tender may be submitted along with 2% of the Bid Value as an earnest money in shape of Pay order in favor of the "Director, H.E.J. Research Institute of Chemistry" in the Project office latest by 11:00 a.m. on **June 04th, 2011** and will be opened at 11:30 a.m. on the same day at the meeting room of the H.E.J.R.I.C in presence of the bidders or their representatives. All bidders are requested to submit their proposal in Two Envelops marked as "Financial Proposal" and "Technical Proposal" in the light of Two Stage-Two Envelop Bidding Procedure. In first stage Technical Proposal will be discussed with bidders and in second stage revised Technical Proposal along with original and supplementary Financial Proposal will be opened. The Procuring agency may reject all or any bid subject to the relevant provisions of SPPRA rules. For any assistance or query please contact at Project Office (Phone # 99261680, 111-222-292 Ext 341 & 342).

Director

**H.E.J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi,
Karachi - 75270,
Pakistan.**

Project Title:

**STRENGTHENING OF H.E.J. RESEARCH INSTITUTE OF
CHEMISTRY (PHASE II)**

Tender Notice No SP-2/16/04-06-011(Second Time)

Tender# Tender Notice No SP-2/16/26-05-011(Second Time)

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

ITEM #	BID VALUE	FOREIGN CURRENCY	CONVERSION RATE	PRICE IN PKR	ITEM #	BID VALUE	FOREIGN CURRENCY	CONVERSION RATE	PRICE IN PKR
1					5				
2					6				
3					7				
4					8				

Bidders Identification (Name of Bidder)		Total Bid Value in PKR	
		Earnest Money @ 2% of Total Bid Value in PKR	
Signature		Amount of Pay order/ Bank Draft	
		Pay Order or Bank Draft#/ Date	
Seal		Name/ Branch of Bank	
		Date of Bid Submission	

** All freight and other charges must be included in Bid Value*

Terms and Conditions

1. While quoting, kindly relate to the items by clearly indicating / mentioning the **Tender document number, serial number and page number** of the quoted item(s).
2. The tender / bid envelop must have the following information on it:
 - a) Tender / Bid Number.
 - b) Items Tendered (Serial Number / Reference #).
 - c) Bidders name and telephonic contact
 - d) Summary of bid value should be given as mentioned below:
 - i) Total bid value on C & F (in any foreign currency) @ Rs. _____ (U.S. \$, €, £, ¥ etc)
 - ii) Amount of Pak Rupees of bid value _____
 - iii) Earnest money @ Rs. 2% of the bid amount _____
 - iv) Pay order No (enclosed with bid) _____
 - e) Tender / bid for equipment should be submitted two envelop procedure (1 envelop for technical information and other for financial information).
3. Tender documents can be obtained on payment of **Rs. 1000** in the form of pay order / bank draft. Please write on the back of the payorder the tender number and bidder's name.
4. **Alternate / optional price shall not be considered without its earnest money / bid security.**
5. Earnest money only will be accepted in the form of pay order / bank draft. Please write on back of payorder the name of company bidding and tender number.

6. The Bidder(s) are required to submit invariably summary of the total cost in case of unit price of detailed items, given in the tender. In case of default, the offer(s) shall not be entertained and liable to be rejected without any further reference in the matter.
7. Letter of Credit will be allowed to be amended only once in special circumstances after the approval of the Director International Center for Chemical and Biological Sciences.
8. The bid price will be inclusive of all government taxes where applicable with the validity period of their offer at least from 90 days.
9. In case of delayed shipment or non-supply of the items through Letter of Credit, a penalty, equivalent to the earnest money of the item ordered will be charged from the local agent.
10. Performance bond in shape of bank draft, bank Guarantee @ 2% of the order value should be submitted. The money will not be released till the commissioning, installation, and training of staff concern and issuance of certificate of acceptance of the equipments.
11. All clearing and bank charges will be borne by the Center.
12. The acceptance of the order will need to be confirmed on a form **within six working days** from the date of issue of the purchase order.
13. The bid value of the stores / item shall be on **C & F basis** for the “International Center for Chemical and Biological Sciences (ICCBS)”, as per purchase order and no other goods will be imported in the same consignment.
14. The invoice should mention the words “Scientific Equipments / Apparatus / Glass wares / Chemicals / Consumables” (name of the equipment, chemicals, **trade name, country of origin, model, Cat No. and complete description of the goods**).**Along with Certificate of Origin of Goods quoted in the Bid.**

15. One set of the shipping documents should be sent immediately to the consignee (ICCBS), so the necessary documentation for its clearance from the Pakistan Customs can be promptly arranged.
16. An agreement will be signed between the Institute and the local agent of ordered goods, wherever applicable.
17. All local bidders (manufacturers and suppliers) should submit their offers with 2.0% earnest money of the total offer in the form of bank draft / pay order in favor of Director, International Center for Chemical and Biological Sciences.
18. The supply / shipments should be made as per your offer strictly, if delayed the shipment, penalty will be imposed as per rules @ Rs. 0.50% per day. Delay in shipment without proper justification will not be accepted.
19. The contractors / suppliers which refuse to pay penalty / liquidated damages shall be removed from the list of approved suppliers / contractors.
20. In all cases where technical points are involved on which the advice of technical committee is required, the tenders will be referred to that committee before an order is actually placed.
21. The Bid should be submitted in order as prescribed by the project office of HEJ Phase-II / Purchase office (ICCBS) and any deviation could result in rejection of the offer.
22. All the supplier should mention the duration of delivery from the date of purchase order.
23. Validity period of proforma invoice should be 90 days.

SUBMISSION OF BID

The bid should be submitted in the following sequence:

1. Covering letter
2. Price Summary
3. Earnest Money / Bid Security
4. Performa Invoice
5. Company Profile

A sample bid document can be obtained from the project office.

Further information can be obtained by contacting the Purchase Office on: 111 222 292 - Ext 341 & 342

S.No.	Items	Description/ Specification	Quantity
1	DIAZOMETHAN GENERATOR ASSEMBLY	<p>Glassware Set, Complete Addition funnel, 150 ml, with PTFE valve Distillation head PTFE inlet adapter, for 8 mm tubing PTFE inlet adapter, for 13 mm tubing PTFE vacuum adapter, for 10 mm tubing Round bottom flask, 250 ml Solid-top cap, with PTFE liner, 25 mm Solid-top cap, with PTFE liner, 32 mm Quick-disconnect fittings, w/ 1/4in. hose fitting O-ring, Viton, size 2-011 for use with quick-disconnect fittings, Ether trap</p>	1
2	MELTING POINT EQUIPMENT WITH SAMPLE LOADER FOR EFFECTIVE PACKING OF SAMPLES INTO MELTING POINT CAPILLARIES	<p>Temperature range from room temperature upto 400 °C Large illuminated magnification lens Heating block protective coating allows for easy cleaning and extended lifetime.</p> <ul style="list-style-type: none"> • Sample loader for homogenous sample loading. • Position for melting capillaries = 3 • Magnification of lens – 2.5 X • Magnification of display – 6X • Temperature resolution 0.1 °C • Repeatability melting point at 0.5 °C/min : +/- 0.1 °C <ul style="list-style-type: none"> • Accuracy boiling point at 1.0 °C/min upto 400 °C : +/- 0.5 °C • Temperature gradients, °C/min : 0.1, 0.2, 0.5, 1, 2, 3, 5, 10, 20 • Heat-up time (50 °C – 350 °C) at 25 °C : ~ 4 min 	1

3	HYDROGENATION APPARATUS SHAKER TYPE	Shaker type hydrogenator provides compact and easily operated systems for treating chemicals with hydrogen in the presence of a catalyst at pressures up to 5 atmospheres (60 psig) and temperatures to 80 °C.	1
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4	<p>OZONE GENERATOR SYSTEM COMPRESSED AIR OR OXYGEN FEED GAS</p>	<p>TECHNICAL FEATURES</p> <p>Ozone Module</p> <ul style="list-style-type: none"> • Made of stainless steel • Cooling water side pressure-proof up to 10 bar • gas side pressure proof up to 3 bar • Thermal isolated cooling water jacket against formation of condensate water • <p>High-Tension Transformer</p> <ul style="list-style-type: none"> • Resin-embedded high-tension transformer(s) protected against condensate water. • <p>Air Drying Unit</p> <ul style="list-style-type: none"> • Integrated in ozone generator unit • Dew point – 70°C <p>Automatic Ozone Production Control</p> <ul style="list-style-type: none"> • Serial equipped with automatic ozone production control Serial frequency converter from a leading European manufacturer • PI-controller included • No moving parts • <p>Electrical Control</p> <ul style="list-style-type: none"> • Siemens PLC • Text display for indication of operating status 	1
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5	<p style="text-align: center;">ATOMIC FORCE MICROSCOPE</p>	<p>The below specifications are for reference, understanding and guidance only. Alternatives are acceptable and encouraged</p> <p>SPM Controller Heads NanoScope V or Alternative Standard Application module ready</p> <p>Scanners Two number of each scanner will be required. AS-0.5 scanner=02 AS-12 scanner=02 AS-12VLR scanner=02 AS-130VLR scanner=02 AS-12NM scanner=02 AS-130NM scanner=02 PicoForce scanner=02 MMAFMXYZ=02</p> <p>Full system and few Accessories The below specs are just for reference. Alternative is acceptable and encouraged. Environmental Chamber with electrochemical STM/AFM package, Should have nonmagnetic option as well, OMV, Optical microscope with 10X objective for viewing tip, sample, and laser; – Probe holder for most imaging applications in air, includes tip bias connection; – Probe holder for torsional resonance mode (TR mode); – MFM starter kit with probes and training sample;</p>	1
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- Calibration grating for scanner calibration;
- Probe holder for most imaging applications in liquids;
- Peak Force QNM technology for quantitative mapping of material properties;
- Sample heater with ambient to 60°C range (compatible with all scanners above);
- Sample heater-cooler with -35 to 250°C range (includes integrated scanner with 125µm x 125µm XY and 5µm Z range);
- Environmental control hood for imaging in inert gases or under controlled humidity;
- STM head, standard and ultra-low current versions;
- Universal bipotentiostat for electrochemistry applications (ECAFM and ECSTM);
- Conductive AFM (CAFM) application module;
- Tunneling AFM (TUNA) application module;
- Scanning Spreading Resistance Microscopy (SSRM) application module;
- Scanning Capacitance Microscope (SCM) application module;
- Nano-indentation with diamond indenter probe;
- Force modulation probe holder for force modulation imaging in air;
- Signal Access Module for

		<p>input/output access to analog control and data signals</p> <p>-Camera, monitor and whole viewing system.</p> <p>Accessories</p> <p>contact mode fluid cell=02</p> <p>electrochemistry AFM or STM fluid cell=02</p> <p>electrochemistry tapping mode fluid cell=02</p> <p>Optical viewing system with CCD camera and color monitor=01</p> <p>Sample heater=02</p> <p>Fluid Cell - O-Rings=02</p> <p>Cantilever Holder - Contact Mode=02</p> <p>Cantilever Holder - Force Modulation=02</p> <p>MFM Starter Kit=02</p> <p>Cantilever Holder - Application Module=02</p> <p>Cantilever Holder - Fast Scanning=02</p> <p>Cantilever Holder - Electric Field=02</p> <p>Cantilever Holder – Tapping Mode=02</p> <p>Heater/Cooler Fluid Cell Kit=02</p> <p>Cantilever Holder – Nano-indenting & Scratching=02</p> <p>Fluid Cell-Tapping Electrochemistry=02</p> <p>Cantilever Holder-TR Mode=02</p> <p>AFM Cantilever and Wafer Toolkit=02</p> <p>Cantilever Epoxy=02</p> <p>SPM Sample Mounting Disk=100</p> <p>SPM Sample Holder=05</p> <p>Fluid Cell - Accessory Kit=04</p> <p>Cross-Sectional Sample Holder=02</p> <p>Sample Adhesive Pads=100</p> <p>=10Tip Storage Kit.</p>	
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		<p>HOPG (Highly Oriented Pyrolytical Graphite) 3.5°, 10X10X 2 mm= 50 HOPG (Highly Oriented Pyrolytical Graphite) 3.5°, 20X20X1 mm= 50 HOPG (Highly Oriented Pyrolytical Graphite) 3.5°, 10X10X 1 mm= 50 HOPG (Highly Oriented Pyrolytical Graphite) 0.8°, 10X10X 2 mm= 50 HOPG (Highly Oriented Pyrolytical Graphite)0.4°, 10X10X 2 mm= 50 AFM Mica Disks, 9.9 mmθ=200 AFM metal disc 12 mmθ=200 Adhesive taps double side adhesion set =100 set Conductive adhesive taps double side adhesion set, 12 mmθ =100 sets</p> <p>Training Operational and application training at manufacture site is compulsory</p> <p>Installation Installation from the manufacture`s engineer is also compulsory</p> <p>Vibration Isolation Chamber Vibration Isolation which don`t require compressed air</p>	
6	DRY ICE MAKER	<p>Capable of producing high density dry-ice pellets in any size from 1.7mm to 16mm, i.e. micropellets, cleaning pellets and cooling nuggets can be manufactured. Requires only a source of liquid CO₂.</p> <p><u>Technical Specification :</u></p>	1

		<p>Production rate: 80 kg/hr. Power consumption: 3 KW</p> <p>Source: Liquid CO₂</p> <p>Length: 1000 mm Width: 600 mm Height: 1360 mm Weight: 203 kg</p> <p>Voltage: 3x220V AC-60 Hz</p>	
7	Nano-UPLC SYSTEM	<p>1-UPLC Pump: Able to process up to 700 bar or above Ability to process one dimensional separation in a single run with splitless mode and have binary gradient pump and have an ability to desalting the samples separately. <i>Flow Rate Ranges: 500 nL/min to 20 nL/min, (Have on line degasser facility).</i></p> <p>2-AutoSampler Autosampler with thermostat facility (cooling range up to 4 C) and fully compatible with <i>nano</i>-flow system and have an ability to inject 50 nl sample volume. Column compartment: have a temperature control and two columns connection facility</p> <p>3-PDA Detector Have an ability to work at various wavelengths in a single run, and should be compatible with nano flow.</p> <p>A branded PC with software to control the UPLC operation and compatible with existing mass instruments (Q-STAR XL, Applied Biosystem) Accessories: On line desalting columns compatible with nano system= 10 UPLC <i>nano</i>-columns with finger tight zero dead volume</p>	1

		<p>capability (RP-18, 2-1.7 μm particle size) = 10 Sample vials to handle low volume= 10 packs Foreign engineer required to install the system with IQ and OQ validation and need to couple with the existing mass instruments smoothly. Two weeks company training (abroad) of two persons will be required in the technical and applications side, respectively. The earnest money will only be released when the system showed smooth coupling with the above mentioned mass spectrometers.</p>	
8	<p>FLOUSCENCE SPECTROPHOTOMETER</p>	<p>Specifications for Spectrophotometer</p> <ul style="list-style-type: none"> • Water Raman signal-to-noise ratio: 3000:1 • Photon Counting for Ultimate Sensitivity • Fast Scanning capability - up to 80 nm/second • Method Files to recall complete experiment parameters • Front Surface Detection Accessory • Fluorescence Microscope Accessory • Polarization and Anisotropy Accessory • Remote Measurement Capability using optical fibers • Time-correlated single-photon counting (TCSPC) accessory for lifetime determinations • Phosphorimeter accessory for long-lived luminescence determinations <p>Accessories</p> <ol style="list-style-type: none"> 1. LAMP, xenon replacement, 150 W ozone-free =02 2. CUVETTE, 4 mL, quartz, capped =05 3. CUVETTE, 4 mL, quartz, stoppered =05 	1

		<ol style="list-style-type: none"> 4. HOLDER for solid samples =05 5. FILTERS, 1" X 2" (5 cm X 5 cm), cut-on, set =02 sets 6. FILTERS, 2" X 2" (5 cm X 5 cm), cut-on, set =05 sets 7. CELL, HPLC flow =10 8. TEMPERATURE BATH =02 9. PELTIER DRIVE, sample heater/cooler =02 10. INJECTOR, autotitration =02 11. QUANTUM-YIELD accessory =02 sets 12. 250 μL reduced volume cell =05 13. Adapter for F-3012 =05 14. Janis Cryostat =02 15. Fiber optic adapter =05 16. HOLDERS (2) for filters =05 17. CELL-HOLDER, automated four-position thermostated, with magnetic stirrer =03 18. CELL-HOLDER, automated dual-position thermostated, with magnetic stirrer =03 19. LIQUID-NITROGEN DEWAR assembly =03 20. PORT, injector =02 	
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		<p>21. CELL-HOLDER, single-position thermostatted, with magnetic stirrer =02</p> <p>22. POLARIZER, automated L-format =02</p> <p>23. PHOSPHORIMETER upgrade =02</p> <p>24. WINDOWS for the sample compartment</p> <p>25. Filter Holder =02</p> <p>26. Time-correlated single-photon counting (TCSPC) accessory for lifetime determinations =02</p> <p>27. MICROSCOPE INTERFACE, MicroMax 384 PLATE-READER, Microwell QC-SK CELL, reduced volume 500 μL, with adapter, STOPPED-FLOW accessory, TRIG-15/25 TRIGGER accessory, external</p>	
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