



# **JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

## **BIDDING DOCUMENT FOR**

## **SUPPLY OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI.**

May, 2016

---

**Jinnah Sindh Medical University**  
Rafiqi H.J. Shaheed Road, Karachi. Postal Code# 75510  
[www.Jsmu.edu.pk](http://www.Jsmu.edu.pk) Tel: 35223812-15 (Ext- 350) Fax # 99201372

## LIST OF CONTENTS

<b>PART</b>	<b>DESCRIPTION</b>
Part-I	NOTICE INVITING TENDER
Part-II	INSTRUCTIONS TO BIDDERS
Part-III	GENERAL CONDITIONS OF CONTRACT
Part-IV	BID DATA SHEET
Part-V	SPECIAL CONDITIONS OF CONTRACT
Part-VI	SCHEDULE OF REQUIREMENT
Part-VII	SAMPLE FORMS
Part-VIII	TECHNICAL SPECIFICATION



**JINNAH SINDH MEDICAL UNIVERSITY KARACHI.  
PLANNING & DEVELOPMENT DEPARTMENT**

Ref: JSMU/P.D/NIT/

Dated: \_\_\_\_\_

**NOTICE INVITING TENDER**

Bids are invited on Single Stage Two Envelope procedure under sealed covered from **Reputable Firms** registration with G.S.T and Income Tax department having vast experience in Supply of Medical Equipments as per specifications given in the bid documents.

<b>Sr.#</b>	<b>Name of Work</b>	<b>Earnest Money/ Bid Security</b>	<b>Tender Fee</b>	<b>Completion Period</b>
1	<b>SUPPLY OF EQUIPMENTS &amp; INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI.</b>	@ 2% of Bid Amount	Rs. 3000/-	01 Month

<b>Purchasing date</b> From ___ - ___ -2016 till ___ - ___ -2016	<b>Submission date / time</b> ___ - ___ -2016 at 11:00 A.M	<b>Opening Date / Time</b> ___ - ___ -2016 at 11: 30 A.M
---	---	---

The Specifications are mentioned in the prescribed tender documents along with terms and conditions can be obtained from the office of the **Advisor P&D / Procurement, 3<sup>rd</sup> Floor, JSMU, Karachi** and download from the SPPRA website I.e. [www.pprasindh.gov.pk](http://www.pprasindh.gov.pk) or Jinnah Sindh Medical University website I.e. [www.jsmu.edu.pk](http://www.jsmu.edu.pk) the tender fee **Rs. 3000/- (Rupees Three Thousand) (Non refundable)** to be attached to tender form in the shape of Pay Order / demand draft in favor **Vice Chancellor, Jinnah Sindh Medical University, Karachi.** Tenders along with bid security of 2% sealed in Financial bid envelope separately, should be dropped in **tender box** kept in **Planning & Development Department, JSMU, Karachi.** Before **11:00 A.M** on \_\_ \_\_\_\_, 2016. The **Technical Proposals** of the bids shall be opened publically on the same day in the presence of bidders or their nominated representative who wish to attend at **11:30 A.M.** The **Procuring agency may cancel / delete any item or decrease or increase in quantity** as per relevant provisions of SPPRA Rules 2010 (amended 2013).

**Government Notified Blacklisted Firms / Suppliers** shall not be entertained. In case tenders are not opened on the schedule date due to unscheduled holiday or any other reason / reasons, the same shall be opened on the next working day. The other terms and conditions of the tenders however remain unchanged

**Advisor P&D / Procurement**  
Planning & Development Department

## **Part-II**

### **Instruction to bidders**

#### **Preparation of Bids**

- 1. Scope**
  - 1.1 The Jinnah Sindh Medical University, Karachi intend to Purchase OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES through National Competitive Bidding Single Stage Two Envelope Procedure as per SPPRA Rules-2010 (Amended 2013).
- 2. Language of Bid**
  - 2.1 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**
  - 3.1 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 goods 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 of the incidental services.
  - 4.3 Prices quoted by the 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**
  - 5.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.
- 6. Bid Currencies**
  - 6.1 Prices Shall be quoted in Pak Rupees.
- 7. Documents Establishing Bidder's**
  - 7.1 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, in the case of a Bidder offering to supply goods under the contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the good Manufacture or producer to supply the goods in the Islamic Republic of Pakistan.
- b) that the Bidder has the financial ,technical ,and production capability necessary to perform the contract;
- c) that the Bidders meets the qualification criteria listed in the Bid Data Sheet.

**8. Documents  
Establishing  
Goods'  
Eligibility  
and  
Conformity  
to Bidding  
Documents**

- 8.1 The documents evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and Data, and shall consist of:
- (a) a detailed description of the essential technical and performance characteristics of the goods;
  - (b) the Bidder shall note that standards for workmanship, material ,and equipment, as well as references to brand names or catalogue numbers designated by the Procuring agency in its Technical Specification are intended to be descriptive only and not restrictive :till stated otherwise in Technical Specifications or Bid Data Sheet .The Bidder may substitute alternative standards, brand names , and /or catalogue numbers in its bid , provided that demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the in the Technical Specifications

**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 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 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 opening 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 suitable extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required not be required nor permitted to modify its bid.
11. **Format and Signing of Bid**
- 11.1 The Bidder shall prepared 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 14-06-2016 at 11.30 AM”**
- 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 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.
- 14. Late Bids**
- 14.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribes 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 bidder's 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 presences or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening.
- 17. Clarification of Bids**
- 17.1 During evaluation of the bids, the Procuring agency may, at its discretion, 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 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 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 and shall exclude any allowance for price adjustment during the period of execution of the contract.
- 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 bid opening to the time the 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 decision on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.



## Award of contract

- |   |  |
|---|--|
| <b>21. Post – Qualification</b>   | <p>21.1 In the absence of prequalification, the procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluation responsive bid is qualified to perform the contract satisfactorily.</p> <p>21.2 The determination will take into account the Bidder’s financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB Claus-7 as well as such other information as the Procuring agency deems necessary and appropriate.</p> <p>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 perform satisfactorily.</p> |
| <b>22. Award Criteria</b>   | <p>22.1 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.</p>  |
| <b>23. Procuring agency’s Right to Accept any Bid and to Reject any or All Bids</b> | <p>23.1 Subject to relevant provisions of SPP Rules 2010 (Amended 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.</p> <p>23.2 Pursuant to Rule 45 of SPP Rules 2010 (Amended 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.</p>  |
| <b>24. Notification of Award</b>  | <p>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.</p>   |

- 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 discharge its 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 fourteen (14) days, or any other 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 seven (07) days, or any other 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;
- (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.

**Part – III**  
**General Conditions of Contract**

**1. Definitions**

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) **“The Contract”** means the agreement entered into between the Procuring agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- (b) **“The Contract Price”** means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) **“The Goods”** means all of the equipment, machinery, and/or other materials, which the Supplier is required to supply to the Procuring agency under the Contract.
- (d) **“The Services”** means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
- (e) **“GCC”** means the General Conditions of Contract contained in this section.
- (f) **“SCC”** means the Special Conditions of Contract.
- (g) **“The Procuring agency”** means the Sindh Public Procurement Regulatory Authority (SPPRA), Government of Sindh.
- (h) **“The Supplier”** means the individual or firm supplying the Goods and Services under this Contract.
- (i) **“SPP Rules 2010”** means the Sindh Public Procurement Rules 2010 (Amended 2013).
- (j) **“Day”** means calendar day.

**2. Standards**

The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods’ country of origin. Such

standards shall be the latest issued by the concerned institution.

### **3. Patent Rights**

The Supplier shall indemnify the Procuring agency against all third- party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Islamic Republic of Pakistan.

### **4. Performance Security**

- 4.1 Within seven (07) days, or any other duration as specified in SCC, of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.
- 4.2 The proceeds of the performance security shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 4.3 The performance security shall be denominated in the Pak rupees and shall be an unconditional bank guarantee, pay order, call deposit as, provided in the bidding documents or another form acceptable to the Procuring agency;
- 4.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

### **5 Inspections and Tests**

- 5.1 The Procuring agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring agency. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 5.2 Should any inspected or tested Goods fail to conform to the Specifications, the Procuring agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring agency.
- 5.4 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Manufacturer.
- 5.5 Nothing in GCC Clause 5 shall in any way release the Supplier from any warranty or other obligations under this Contract.

### **6. Packing**

The Supplier shall provide such packing of the Goods as is

required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage.

**7. Delivery and Documents**

Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping/ transportation and/or other documents to be furnished by the Supplier are specified in SCC.

**8. Insurance**

The Goods supplied under the Contract shall be delivered consignee's end under which risk is transferred to the Procuring agency after having been delivered; hence insurance coverage is Supplier's responsibility.

**9. Transportation**

The Supplier is required under the Contract to transport the Goods to a specified place of destination and shall be arranged by the Supplier, and related costs shall be deemed to have been included in the Contract Price.

**10. Incidental Services**

10.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

**11. Spare Parts**

11.1 The Supplier should provide any or all of the notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:

- (i) advance notification to the Procuring agency of the pending termination, in sufficient time to permit the Procuring agency to procure needed requirements; and
- (ii) following such termination, furnishing at no cost to the Procuring agency, the blueprints, drawings, and specifications of the spare parts, if requested.

## **12. Warranty**

- 12.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of desired models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 12.2 This warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract
- 12.3 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, within a reasonable period, the Procuring agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring agency may have against the Supplier under the Contract.

## **13. Payment**

- 13.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 13.2 The Supplier's request(s) for payment shall be made to the Procuring agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and upon fulfillment of other obligations stipulated in the Contract.
- 13.3 Payments shall be made promptly by the Procuring agency, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier.
- 13.4 The currency of payment is Pak. Rupees.

## **14. Prices**

Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid,

- 15. Contract Amendments** No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- 16. Delays in the Supplier's Performance**
- 16.1 Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring agency in the Schedule of Requirements.
- 16.2 If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.
- 16.2 Except as provided under GCC Clause 17 a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages unless an extension of time is agreed upon pursuant to GCC Clause 16.2 without the application of liquidated damages.
- 17. Liquidated Damages** Subject to GCC Clause 20, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring agency may consider termination of the Contract pursuant to GCC Clause 18.
- 18. Termination for Default**
- 18.1 The Procuring agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:
- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring agency pursuant to GCC Clause 16; or
  - (b) if the Supplier fails to perform any other obligation(s) under the Contract.



- (c) if the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

- 19. Force Majeure**
- 19.1 Notwithstanding the provisions of GCC Clauses 16, 17 and 18, the Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
  - 19.2 For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
  - 19.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 20. Resolution of Disputes**
- Resolution of dispute shall be through Mechanism for Redressal of Grievances as provided in the rules or through Arbitration Act 1942.
- 21. Governing Language**
- The Contract shall be written in English language all correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.
- 22. Applicable Law**
- The Contract shall be interpreted in accordance with the SPP Rules 2010 (amended 2013).
- 24. Taxes and Duties**
- Supplier shall be entirely responsible for all taxes, duties (including stamp duty), license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.
- 25. Overriding effect of Sindh Public Procurement Rules 2010 (Amended 2013)**
- In case of conflict or primacy of interpretation the provisions of SPP Rules 2010 (amended 2013) shall have an overriding effect notwithstanding anything to the contrary contained in these bidding documents

## Part-IV

### Bid Data Sheet

The following specific data for “SUPPLY OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI.” to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Part One. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

<b>Introduction</b>	
<b>ITB 1</b>	<b>Name of Procuring Agency:</b> office of Planning & Development Department, Jinnah Sindh Medical University, Karachi. Telephone No. 021-35223812-15 Ext-350, Fax 021-99201372.
<b>ITB 1</b>	<b>Name of Contract.</b> “SUPPLY OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI”
<b>Bid Price and Currency</b>	
<b>ITB 4</b>	Prices quoted by the Bidder shall be “fixed” and in “Pak Rupees”
<b>Preparation and Submission of Bids</b>	
<b>ITB 7</b>	<i>Qualification requirements:</i> <ol style="list-style-type: none"><li>1. Bidders must be a direct authorized agent of the manufacturer of required items with a minimum of five (05) years of experience in manufacturing or supplies; as applicable.</li><li>2. Authorized agent should be in possession of a valid verifiable Authorization Certificate.</li><li>3. Bidder /Supplier should have a documented track of completing at least 3 similar assignments, during last 3 (three) years, involving the supply, installation, and after sale support.</li><li>4. They should have annual sale volume of at least Rs.03 (three) million in of last 3 years relevant documents should be provided.</li><li>5. Valid Registration with tax authorities is required</li></ol>
<b>ITB 9</b>	<b>Amount of bid security.</b> 2% of Bid Value
<b>ITB 10</b>	<b>Bid validity period.</b> 90 days
<b>ITB 11</b>	<b>Number of copies.</b> One original One Photo Copy
<b>ITB 13</b>	<b>Deadline for bid submission.</b> 14-06-2016 at 11.00 AM
<b>ITB 19.1</b>	<b>Bid Evaluation:</b> Lowest evaluated bid

## **Part-V**

### **Special Conditions of Contract**

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

#### **1. Definitions (GCC Clause 1)**

GCC 1 (g)—The Procuring Agency is: Office of the Planning & Development Department Jinnah Sindh Medical University, Karachi.

#### **2. Performance Security (GCC Clause 4)**

GCC 4—The amount of performance security, as a percentage of the Contract Price, shall be: 10%.

#### **3. Inspections and Tests (GCC Clause 5)**

Inspection of JSMU shall inspect the procured good and ensure that it meets the tender specifications before its acceptance

#### **4. Delivery and Documents (GCC Clause 7)**

GCC 10—Supplier shall supply and install the good within **30 Days** after signing the contract and shall submit the following.

- (i) Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- (ii) Packing List identifying the contents of Supply;
- (iii) Delivery note.
- (iv) Warranty and guarantee certificate;

#### **7. Warranty (GCC Clause 12)**

The equipment shall bear Standard warranty (with free parts & labor) from the date of installation / acceptance. Upon expiration of warranty, Purchaser at its option may enter into a Service Level Maintenance Agreement upon expiry of the warranty period in accordance with terms embodied in Appendix-A hereto

**8. Payment (GCC Clause 13)**

Hundred percent (100%) of the Contract Price shall be paid upon delivery, and satisfactory Installation, integration and testing of the products at the Project site (s), subject to the production of installation and Operational Acceptance certificates duly signed by authorized Inspection Committee of JSMU.

**9. Liquidated Damages (GCC Clause 18)**

If the Supplier fails to deliver the goods or perform the services within the time period(s) specified in the contract, the Purchaser shall, without prejudice to its other remedies under the contract deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.07 percent of the Contract Price for each day of delay until actual delivery or performance, up to a maximum deduction of 10% of the Contract Price. Once the maximum is reached, the purchaser may consider termination of the contract.

**10. Resolution of Disputes (GCC Clause 21)**

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to the dispute resolution mechanism as defined in rule 31, 32 and 34 of the (SPPR 2010) Amended 2013

**11. Applicable Law (GCC Clause 23)**

GCC 29.1 Contract shall be interpreted in accordance with the Sindh Public Procurement law of Sindh.

## **Part-VI**

### **SCHEDULE OF REQUIREMENTS**

The delivery schedule hereafter expressed the date of delivery required.

#### **LIST OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI.**

<b>S.No.</b>	<b>Product</b>	<b>Quantity</b>	<b>Required Delivery Schedule from the Date of Contract Award</b>	<b>Location</b>
1.	Analytical Balance	01 No.	Delivery within 30 Days	Store Section, JSMU.
2.	Ball Mill	01 No.	DO	DO
3.	Roller Mill	01 No.	DO	DO
4.	Sieve Shaker	01 No.	DO	DO
5.	V-Blender	01 No.	DO	DO
6.	Planetary Mixer	01 No.	DO	DO
7.	Manual Capsule Filling Machine	01 No.	DO	DO
8.	ECCENTRIC PRSSS	02 Nos.	DO	DO
9.	Disintegration Tester	01 No.	DO	DO
10.	Dissolution Tester	01 No.	DO	DO
11.	Friability Tester	01 No.	DO	DO
12.	Vernier Caliper	05 Nos.	DO	DO
13.	Homogenizer	01 No.	DO	DO
14.	Coating Pan	01 No.	DO	DO
15.	Polishing Drum	01 No.	DO	DO
16.	Spray Gun	01 No.	DO	DO
17.	Hot Air Gun	01 No.	DO	DO
18.	Pressure Pump	01 No.	DO	DO
19.	Roller Compactor	01 No.	DO	DO
20.	pH Meter	02 Nos.	DO	DO

21.	Sonicator	01 No.	DO	DO
22.	Magnetic Stirrer Hot Plate	01 No.	DO	DO
23.	Water Bathes	02 Nos.	DO	DO
24.	Stereo Microscope	05 Nos.	DO	DO
25.	ROTA VAPOR	01 No.	DO	DO
26.	Vacuum Controller	01 No.	DO	DO
27.	Vacuum Pump	01 No.	DO	DO
28.	Chiller	01 No.	DO	DO
29.	Spectrophotometer	02 Nos.	DO	DO
30.	Heating Mental 500ml round bottom	02 Nos.	DO	DO
31.	Heating Mental 250ml round bottom	02 Nos.	DO	DO
32.	HPLC	01 No.	DO	DO

**Note:** Specifications of above items are attached

**Part-VII**

**SAMPLE FORMS**

**Form-I**

**Letter of Acceptance**

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

To:

Advisor Planning & Development Department,  
Jinnah Sindh Medical University,  
Karachi,

Dear Sir:

Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the required item 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 deliver the goods 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 15 days from the date fixed for Bid opening under Clause 10 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 \_\_\_\_\_ 2014\_\_\_\_\_.

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

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

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







**Contract Form**

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between *Jinnah Sindh Medical University, Karachi*. (hereinafter called “the Procuring agency”) of the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) of the other part:

WHEREAS the Procuring agency invited bids for certain goods and ancillary services, viz., **SUPPLY OF EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES, J.S.M.U, KARACHI**. has accepted a bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications.
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and
  - (f) the Procuring agency’s Notification of Award.
3. In consideration of the payments to be made by the Procuring agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring agency to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract
4. The Procuring agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Procuring agency)

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Supplier)

**Performance Security Form**

To:

**Planning & Development Department  
Jinnah Sindh Medical University,  
Karachi.**

WHEREAS *[name of Supplier]* (hereinafter called “the Supplier”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated \_\_\_\_\_ 2014\_\_\_\_\_ to supply *[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 \_\_\_\_\_ 20\_\_\_\_\_.

Signature and seal of the Guarantors

---

*[name of bank or financial institution]*

---

*[address]*

---

*[date]*

**Manufacturer's Authorization Form**

To:

**Planning & Development Department  
Jinnah Sindh Medical University,  
Karachi.**

WHEREAS *[name of the Manufacturer]* who are established and reputable manufacturers of *[name and/or description of the goods]* having factories at *[address of factory]*

do hereby authorize *[name and address of Agent]* to submit a bid, and subsequently sign the Contract with you against NIT No. *[reference of the Invitation to Bid]* for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 12 of the General Conditions of Contract for the goods offered for supply by the above firm against this Invitation for Bids.

---

*[signature for and on behalf of Manufacturer]*

*Note:* This letter of authority should be on the letterhead of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer. It should be included by the Bidder in its bid.

**TECHNICAL SPECIFICATION**  
**FOR**  
**EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES,**  
**JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

**ANALYTICAL BALANCE (01)**

- Min 0.1mg
- Max 520g

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**BALL MILL (01)**

- The balls are made of porcelain and have a diameter of 30 to 50 mm.
- The drum is made of stainless steel, sealed airtight with a lid and is delivered incl. frame for drive unit.
- Drum and balls are washable.
- A drive support is needed for using ball mill.
- The ball mill is attached to the drive unit via the Gear.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**ROLLER MILL (01)**

- The drum is available with 0.5, 5 l volume.
- The rollers are made of porcelain or stainless steel.
- Each roller has a diameter of 50 mm.
- The rollers are spring loaded to prevent damage.
- The space between the rollers is adjustable by a screw.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**SIEVE SHAKER (01)**

- Sieve set with 9 sieves 31 cm, made of phosphor bronze
- Sieves made of stainless steel

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**V BLENDER (01)**

- V-shaped mixing vessel made of stainless steel.
- Rotatry motion up to 140 RPM
- Equipped with 3 capacious openings for easy filling, emptying and cleaning.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**PLANETARY MIXER (01)**

- Mixing Vessel made of stainless steel.
- Capacity: 2.5 L volume
- Supplied with kneading hook, mixing paddle, whisk and scraper for removing any product adhering to the side of the bowl.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**TECHNICAL SPECIFICATION**  
**FOR**  
**EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES,**  
**JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

**MANUAL CAPSULE FILLING MACHINE (01)**

- Holes: 100-300
- Loading plate: 25 x 12 = 300 holes
- Capsule Sizes: 00, 0, 1, 2, 3, 4, 5
- For any size two loading trays and one powder tray.
- Net weight: 2-4 kg

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**ECCENTRIC PRSSS (02)**

- Automatic i.e. the tablets are filled, pressed and ejected continuously.
- Press speed infinitely variable
- Max. tablet diameter 20mm
- Max. filling depth 17mm
- Max. compression force 3t
- Max. tablet output 60 tablets/min
- Power supply 230V/50-60Hz
- Electrical load 2.2 kVA
- Measurement and display of compression force
- Support table in stainless steel
- Single punch and die set, 4.0 mm to 20.0 mm diameter,
- Transformer for EP-1 (from 110V to 230V)
- All components are either covered with hard chrome, or made of stainless steel.
- 425 x 386 mm (length x width) and a height of 640 mm so it can easily sit on a workbench.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**DISINTEGRATION TESTER (01)**

- 6 test racks
- 30 ± 1 strokes/min.
- 55 ± 2 mm stroke height
- Integrated flow-through heating system (accuracy ± 0.2°C)
- Temperature range 30-50°C
- Function keys and LE display for entering nominal bath temperature and required run-time
- Starts/stops to count run-time automatically when basket rack is lowered
- Manual lift-in and -out of the Baskets
- Moulded one-piece water bath and water bath cover as standard.
- Media pre-heat and disintegration rack storage container located in the water-bath Quick-Clean-Basket (100% USP compliant) for fast cleaning of the test stations.
- No tools required for disassembly and assembly of the Basket
- Acoustic alarm on the completion of the pre-set run-time
- Water Stabiliser
- Immersion thermometer
- Basket with 6 test-stations with an inner diameter of 30 mm;
- Glass tubes (6) and Mesh 40 sieves for standard disintegration rack assembly

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**TECHNICAL SPECIFICATION**  
**FOR**  
**EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES,**  
**JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

**DISSOLUTION TESTER (01)**

- USP apparatus I (Basket) & II (Paddles)
- 100% USP compliant
- 6 / 8 test stations.
- 1000ml vessels for manual sampling with vessel covers.
- Rotation speed 20 - 220 rpm
- Fixed drive head (high-head) with easy access to vessels
- High-head mode for easy access to the vessels and manual sampling
- Shafts with paddles for USP Method 2 Paddles
- Easy cleaning of the water bath and the set-up area
- External flow through heater reduces influence of external vibrations and ensures constant temperature
- Simple control using symbol keypad with LED display for temperature and RPM.
- One piece moulded Water bath equipped with the water outlet for easy cleaning.
- Temperature Sensor.
- Function keypad with individual UP/DOWN keys for each test parameter
- Evaporation less than 1% during 24 h (37 °C / 50 rpm / 1000 ml)
- External high power heater; heating range: 20-50°C, even distribution of temperature
- Dimensions (DT 126): 510-642 (width) / 450-482 mm (depth) / 660 mm (height) / 34-38 kg (weight)

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**FRIABILITY TESTER (01)**

- USP compliant.
- Rotation speed 20 – 100 rpm
- Available for 1 or 2 drums
- DC frequency motor with constant actual/ nominal adjustment for adjustable speed
- Built-in timer
- Membrane function keys for pre-selection of the test run-time in either number of turns or time and rotation speed
- LE display
- Switching leg for 10° adjustment
- Friability Drum with opening

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**HARDNESS TESTER (01)**

- Measuring range 10 – 500 Newton
- Tests samples up to 28 mm diameter
- LE display with function keys
- Electronic load cell
- Measuring units in Newton, Strong Cobb and Kilopond
- 100% USP compliant

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**TECHNICAL SPECIFICATION**  
**FOR**  
**EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES,**  
**JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

**VERNIER CALIPER (05)**

- Material: Stainless steel
- Range: 0-2000 mm
- Big screen with buttons
- Thumb roller
- Metric/inch conversion
- Zero setting at any position
- Four way measurement

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**HOMOGENIZER (01)**

- Stainless steel hopper 1.5 liters.
- Stainless steel piston
- Maximum output 500 g/ min

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**COATING PAN (01)**

- Stainless steel pan, volume 9.5 -15 l, max. capacity 30%, 275-350 mm outside diameter
- Gear to attach coating pan with the motor drive.

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**POLISHING DRUM (01)**

- Stainless steel polishing drum (2 l volume, working capacity max. 40%).
- The cover has 120 mm opening for observation and further addition.
- Drum is attached to the drive unit via the universal gear in a similar manner as the coating pan.
- Pan speed 40-60 revolution / min

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**SPRAY GUN (01)**

- Air pressure (Bar-Psi): 3.5 Bar (50 Psi).
- Air Inlet: G 1/4".
- Air Consumption (CFM): 6-7, 5-9, 5-11 CFM
- Capacity of cup (ml): 500 ml
- Feed Type: Gravity
- Fluid Nozzle (mm): 1 mm-1.3mm-1.5mm-1.8 mm

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**HOT AIR GUN (01)**

**PRESSURE PUMP (01)**

**ROLLER COMPACTOR (01)**



**TECHNICAL SPECIFICATION**  
**FOR**  
**EQUIPMENTS & INSTRUMENTS FOR PHARMACEUTICAL SCIENCES,**  
**JINNAH SINDH MEDICAL UNIVERSITY, KARACHI**

**pH METER (02)**

- Electronic
- Bench Top

Complete with standard accessories  
GERMANY/USA/JAPAN/ OR EQUIVALENT

**SONICATOR (01)**

**MAGNETIC STIRRER HOT PLATE (01)**

**WATER BATHES (Grant) (02)**

**Stereo Microscope----- 05**

**ROTA VAPOR R-120 (01)**

**Vacuum Controller (V-850) (01)**

**Vacuum Pump (V-700) (01)**

**Chiller F-105 (01)**

**Spectrophotometer----- (02)**

**Heating Mantle 500ml round bottom----- (02)**

**Heating Mantle 250ml round bottom----- (02)**

**HPLC----- (01)**