

Shaheed Benazir Bhutto University



TENDER DOCUMENTS

For

The Purchase/supply of Lab Equipments, Chemical & Glassware from HEC funded NRPU & SRGP Projects Account of Animal Sciences, Chemistry & Agriculture Departments, Shaheed BB University, Sheringal, Dir Upper.

**SHAHEED BENAZIR BHUTTO UNIVERSITY,
MAIN CAMPUS SHERINGAL, DIR UPPER**



SHAHEED BENAZIR BHUTTO UNIVERSITY
Sheringal, Dir Upper, Khyber Pakhtoonkhwa
Advertisement No. SBBU/Adv./Td/114-2019

TENDER NOTICE

(Lab Equipment, Chemical & Glassware)

Sealed Tenders are invited from the well established/reputed Firms/Companies/Suppliers, registered with Income Tax/Sales Tax Departments for the supply of Lab Equipment, Chemical & Glassware from HEC funded NRPU & SRGP Projects Account of SBB University, Sheringal, Dir Upper.

TERMS & CONDITIONS:

1. The detailed BOQ/Specifications along with the terms and conditions have been set forth in the tender documents.
2. Tender documents can be obtained from the office of the Deputy Director (Procurement) w.e.f. **01-04-2019 till 17-04-2019 (11:30 A.M.)** during office hours, on payment of non-refundable fee of **Rs. 1000/-** for each tender. The documents may also be downloaded from the web site of the university www.sbbu.edu.pk OR **PPRA Web Site "info@ppra.org.pk"**. In case of downloading the documents, the fee can be sent through bank draft from any HBL branch (ONLY), in favor of the Treasurer, Shaheed BB University, Sheringal or online deposit in Account # 18787100000103 (title receipt account SBBU) HBL Sheringal Branch, Dir Upper KP.
3. Tenders shall be opened on **17.04.2019 at 12.00 Noon**, (30 minutes after closing time) in the presence (not obligatory) of the interested companies/suppliers or their authorized agents in the office of the Convener, Purchase Committee of the University.
4. Only the manufacturers/firms/companies or its authorized distributors will be eligible to apply.
5. The quotations must be accompanied with a call deposit of 2% from schedule bank of the quoted amount/cost.
6. The suppliers/firms/manufacturers will not be allowed to sublet the work/contract/supply to another supplier/firm/manufacturer.
7. The University shall upon request, communicate the bidder the grounds of rejection, but it is not required to Justify those grounds.
8. Errors and omissions, if any, shall subject to rectification by the University.

Convener Purchase Committee

Shaheed Benazir Bhutto University, Sheringal, Dir Upper

Ph. No. 0944-885405/0302-8395028, Fax. 0944-885805, Email: dayan@sbbu.edu.pk

TENDER DOCUMENT

The Supply of Lab Equipment, Chemical & Glassware from HEC Funded NRPU & SRGP Projects Account of SBB University, Sheringal, Dir Upper.

The proposals will be opened on 17-04-2018 at 12:00 Noon sharp in the Office of Convener Purchase Committee in the presence of the Purchase Committee under the chairmanship of the Convener Purchase Committee, Shaheed Benazir Bhutto University, Sheringal, Dir Upper.

Name of the Company / Dealer:

Address of the Correspondent:

Date: _____

Signature and Seal

Telephone No: _____

Fax No: _____

E mail: _____

Tender Fee **Rs. 1000/- only**

Terms & Conditions of the Tender

Note:

- a. Tenderers should read these conditions carefully and comply strictly while sending their tenders.
- b. If any discrepancy, error, or omission found in the tender documents; please contact Deputy Director Procurement on or before the closing date for Tenders.
- c. Purchase Committee shall upon request, communicate the bidder the grounds of rejection, but it is not necessary to justify those grounds. The decision of the Purchase Committee shall be final.

1. General

- All Quotations should reach the undersigned within due date as specified in the advertisement only through registered post/Courier.
- **The soft copy of quotations on a CD/Email must be provided along with Hard copy.**
- Any cutting/ correction in bid will make quotation invalid.
- In case of quoting alternate prices, separate tender shall be purchased.
- Tenders forms shall be filled in ink or typed. No tender filled in pencil shall be considered.
- The bidder shall sign and stamp each page of the Technical and Financial Proposal.
- Rates shall be written both in words and figures. There should not be errors and / or over-writings. Corrections if any should be made clearly and initiated with dates.
- Quotations must be valid for **03 months**.
- Only Manufacturers / distributors / bona fide dealers of the goods shall give tenders. They shall, therefore, furnish necessary declaration along with documentary proofs for the same.
- Supply order/ contract award will be issued to the successful bidders.

- **The single-stage –Single envelope procedure as per PPRA Rules, Govt. of Pakistan will be adopted. The interested parties should submit the bid(s) in a single package containing single envelope marked as Financial Proposal along with Technical specifications (if any), Financial, manpower, plant & machinery, past performance etc).**
- The contractor shall notify in written form to the purchase committee with any change in the constitution of the firm, etc. and such change shall not relieve any former member of the firm, etc., from any liability under the contract.
- The contractor, in respect of the contract, shall accept no new partner/ partners in the firm unless he / they agree to abide by all its terms, conditions and deposits with the purchase committee a written

agreement to this affect. The contractor's receipt for acknowledgement or that of any partners subsequently accepted as above shall bind all of them.

- The contractor shall not assign or sub-let his contract or any substantial part thereof to any other agency.
- The purchase committee reserves the right to accept any tender not necessarily the lowest, reject any tender without assigning any reasons and accept tender for all or anyone or more of the articles for which tender has been given or distribute items of stores to more than one firm/ supplier.
- The tender shall remove the rejected articles within 15 days of intimation of rejection, after which purchase committee shall not be responsible for any loss, shortage or damage and shall have the right to dispose of such articles as it thinks fit, at the tenderer's risk and cost.

2 Scope of supply

- The firm shall enter into a contract with Shaheed Benazir Bhutto University, regarding the repairs and maintenance of the Item / equipment(s) supplied and will be responsible for the arrangements of spare parts whenever needed.
- Although, specifications and accessories have been provided, yet the University will not accept any excuse for any missing part / item needed for its full working condition.
- The tenderer, whose tender is accepted, shall arrange to supply as per schedule to be provided by the university in supply order.

3. BID price

- The Bidder shall indicate in his offer, list of items with specifications, standard accessories, make and origin, the unit price and total Bid prices of the goods.
- Prices of the optional accessories should be quoted separately. Rates quoted should be on the basis of F.O.R, Shaheed Benazir Bhutto University, Main Campus Sheringal as mentioned in the B.O.Q.
- Taxes levied by the government, if any, shall be paid by the bidder and must be included in the quoted prices.
- Security @ 10% of the total bill will be deducted for a period of 12 months and will be released subject to receiving satisfactory report from the concerned office/end user.
- Sales Tax and Income Tax & other applicable Taxes/Levies will be deducted from the supplier's bill as per government rules.

4. Currencies of BID

- The prices shall be quoted in Pakistani rupees on F.O.R Sheringal basis,

5, BID validity

- The Bid shall remain valid and open for acceptance of the purchaser for a period **Three months** from the specified date of opening.

6. Earnest Money/Call Deposit

- The Quotation must be accompanied with a call deposit of 2% of the local quoted prices with their offer in the form of Bank CDR/Demand Draft/Pay order in favor, of the Treasurer Shaheed Benazir Bhutto University, Sheringal (refundable).
- The earnest money shall be denominated in Pakistani rupees and shall be in the form of demand draft, pay order or call deposit, issued by Pakistani bank or branch of a foreign bank, operating in Pakistan.
- In case of alternate prices, earnest money will be based on the maximum quoted price of the same items. The Demand Draft/CDR shall be returned to unsuccessful bidders on written request & to successful bidders on provision of 10% performance bond security.
- The earnest money may be forfeited in the following cases:
 - i. When Tenderer withdraws or modifies the offer, after opening of tender but before acceptance of tender,
 - ii. When Tenderer does not execute the agreement if any, prescribed within the specified time.
 - iii. When the Tenderer does not deposit the security money after supply order is given & accepted.
 - iv. When he fails to commence the supply of the items as per supply order within the time prescribed.

7. Signing of BIDS

- The person signing the Bids shall initial/sign all the pages of the bid along with official seal/stamp where entries are made.

8. Dead Line for submission of Bids

- All Bids must reach and be received by the purchaser on or before the prescribed date line during the office hours.

9. Late BIDS

- Late bids will not be entertained and returned unopened to the Bidders.

10. Canvassing

- Counseling or canvassing staff or elected representatives by any Tenderer will become liable to disqualification.

11. Delivery of Equipment / Items

The tenderer, whose tender is accepted, shall arrange to supply as per schedule to be provided by the university in supply order (02 month for local items & 04 months for imported items with proof of import).

- The items/ equipment (s) will be supplied in packed form and opened in front of the Purchase Committee. The working manuals, circuit diagrams, related literature and computer programs, if any, must accompany the items/ equipment(s) in original.
- The tenderer shall be responsible for the proper packing, so as to avoid damage under normal conditions of transport by sea, rail and road or air and delivery of the material in the good condition to the consignee at destination.
- In the event of any loss, damage, breakage or leakage or any shortage the tenderer shall be liable to make good such loss and shortage found at the checking / inspection of the material by the consignee. No extra cost on such account shall be admissible.
- The goods will be delivered at the destination godown in perfect condition.
- The supplier, if he so desires may insure the valuable goods against lost by theft, destruction or damage, by fire, flood under exposure to whether or otherwise viz., (war, rebellion, riot, etc.,).
- The insurance charges will be borne by the supplier and tendering committee will not be required to pay such charges if incurred.

12. Performance Security

- Within **15 days** of issuance of the purchase/supply order successful bidders shall furnish to Shaheed Benazir Bhutto University, Sheringal Dir Upper the performance security bond equivalent to 10% of the supply order amount in the form of DD/CDR/PO/Bank Guarantee from any bank, the performance security shall be payable to Shaheed Benazir Bhutto University as compensation for any loss resulting from the suppliers failure to complete its obligations.
- The performance security will be discharged by the University and returned to the supplier after completion of the supplier's performance obligations under the contract.

13. Forfeiture of Security Deposit

- Security amount in full or part may be forfeited in the following cases:
 - i. When the terms and conditions of contract is breached.
 - ii. When the Tenderer fails to make complete supply satisfactorily.
 - iii. Notice of reasonable time will be given in case of forfeiture of security deposit. The decision of the Purchase Committee in this regard shall be final.

14. Mode of Payment

- Payment shall be made in the form of cheque which shall be issued after receipt of equipment / items, installation and inspection, according to the following schedule.
 - i. 90% payment will be made only after the equipment(s) is fully installed and comes in working condition.
 - ii. 10% as per schedule mentioned in Bid Price conditions from the date of commissioning/supply.

- No advance payment will be made. Payments will be made subject to the clearance of account and audit cells.
- The time specified for delivery in the tender form shall be deemed to be the essence of the contract and the successful tenderer shall arrange supplies within the specified period.
- If the supplier requires an extension of time in completion of contractual supply on account of occurrence of any hindrance, he shall apply in writing to the committee, which has placed the supply order, for the same immediately on occurrence of the hindrance but not after the stipulated date of completion of supply.

15. Prices

- Prices charged by the supplier for goods delivered & services performed under the contract shall not exceed the prices quoted by the supplier in its bids. The quantity of items to be purchased can be increased / decreased at the quoted/approved rates.
- The Purchase Committee reserves the right to consider a total package deal for all or group of some equipment with a total lowest quoted price for the package rather than lowest prices for the individual items.

16. Standard

- The equipment supplied must be tropicalized and it must be capable of functioning under the climatic conditions of Sheringal, Dir Upper.
- There shall be no deviation from specification and country of make as provided with each item. In case of any ambiguity in specification/accessories needed for the full functioning of the equipment, the firm must clear it with the Purchase Committee. However, the decision of the Purchase Committee will be final.
- The goods with standard accessories supplied under this contract shall conform to the standard maintenance in the technical specification along with the set of operational and maintenance manual it will be responsibility of the supplier to quote equipment in complete package.

17. Training

- The firm supplying the item/ equipment(s) will demonstrate the operation / working of the equipment(s) to the satisfaction of the quarter concerned and provide training if needed.

18. Calibration of item/equipment

- The approved firm will install the equipment(s) in the presence and to the satisfaction of the Purchase Committee. In case of any defect in the supplied equipment(s) or if it is not in accordance with the desired specification, the item will be changed at the cost of the supplier.

19. Guarantee / Warranty

The tenderer would give comprehensive onsite warranty / guarantee that the goods / stores / articles would continue to conform to the description and quality as specified for a period of **twelve months** (exemption for consumables) from the date of delivery of the said

goods/stores/articles to be purchased and that notwithstanding the fact that the purchaser may have inspected and/or approved the said goods/stores/article, if during the aforesaid period of one year, the said goods/stores/articles, be discovered not to conform to the description and quality aforesaid or have determined (and the decision of the Purchase Committee in that behalf will be final and conclusive), the purchaser will be entitled to reject the said goods/stores/articles or such portion thereof as may be discovered not to conform to the said description and quality, on such rejection the goods/articles/stores will be at the seller's risk and all the provisions relating to rejection of goods etc. shall apply.

- The tenderer shall, if so called upon to do, replace the goods etc., or such portion thereof as is rejection by Purchase Committee, otherwise the tenderer shall pay such damage as may arise by the reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the Purchase Committee in that behalf under this contract or otherwise.
- The tenderer shall also replace machinery and equipments, in case it is found defective which cannot be put to operation due to manufacturing defect, etc. In case of machinery and equipment specified by the purchase Committee, the tenderer shall be responsible from carrying out annual maintenance and repairs on the terms and conditions as may be agreed. The tenderer shall also be responsible to ensure adequate regular supply of spare parts needed for a specific type of machinery and equipments whether under their annual maintenance and repairs rate contract or otherwise. In case of change of model he will give sufficient notice to the Purchase Committee who may like to purchase spare parts from them to maintain the machinery and equipments in perfect condition.
- The firm must have a representative office in Peshawar/Islamabad/Lahore, which can be contacted in case of any problem encountered during the working of equipment(s).

20. Conforming Tender

- A conforming tender is defined as follows:
 - i. It is submitted on time.
 - ii. It is lodged at the nominated place.
 - iii. All required forms are completed.
 - iv. Documents are properly signed.
 - v. It complies with the tender conditions.
 - vi. There are no commercial and contractual qualifications to the tender.
- A non-conforming tender is one, which does not satisfy the above requirements and it may be rejected.

21. Disqualification of Tender

- The tenderer shall observe all relevant statutory and legal requirements when complete the tender. Any Tenderer engaged in collusion with other tenderers shall be disqualified from tendering.

22. Delivery Schedule

- For all items Delivery Schedule should be **Two (2) months** from the signing of Contract within 15 days after issuance of Supply Order. (Proof of import is required if tax exemption is claimed under import rules)
- Keeping in view the actual problems/delays in delivering of the respective items, Delivery Schedule can be relaxed with the approval of the Competent Authority on solid grounds.

23. Delay in Delivery

- In case of delay in the delivery, the recovery shall be made on the basis of following percentages of value of goods stores / work completion which the tenderer has failed to supply / complete the work.

Conditions with Percentage

- a. Delay up to one fourth period of the prescribed delivery period.

2.5 %

- b. Delay exceeding one fourth but not exceeding half of the prescribed period.

5.0 %

- c. Delay exceeding half but not exceeding three fourth of the prescribed period.

7.5 %

- d. delay exceeding three fourth of the prescribed period.

10.0 %

- Fraction of a day in reckoning period in supplies shall be eliminated if it is less than half a day. The maximum amount shall be 10%.
- The 10% Security money shall be refunded immediately after expiry of warranty period provided there is no breach of contract by the supplier and provided there is no outstanding against the tenderer.

24. Recoveries

Recoveries of liquidated damages, short supply, breakage, rejected articles shall ordinarily be made from bills.

Contract Agreement

This agreement is made this day date-month-2019 between the **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** (hereinafter called as Party One which shall include the successors and assignees in the Board/Centre) and the Tenderer/Contractor, M/S XYZ (hereinafter called as Party Two which includes its successors and assignees)

Whereas the Party One having invited tender, **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** decided to accept the tender of **M/S XYZ**

The detail of items is as under for the supply of (quoted items in tender)

SUPPLY ORDER FOR THE PURCHASE OF =====, TENDER # 00/2018, Supply Order NO # SBBU/Proc/000 DATED 00-00-2018, amounting to Rs-000,000/- Rupees

Now this deed witnessed as follows:

(a) The SBBU Dir Upper hereby appoints M/S XYZ for the work/items mentioned in **S.O NO #**

SBBU/Proc/000 DATED 00-00-2018, TENDER # 00/2018, & SBBU agrees to pay the amount mentioned in S.O NO # SBBU/Proc/000 DATED 00-00-2018, TENDER # 00/2018

1. The work/items will be supplied to **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** as per specifications mentioned in the supply order and tender documents as well as warranty.
2. Delivery of work/items and relevant bill(s) to **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** will be completed within the specified period from the date of contract as per supply order conditions.
3. All the items will be delivered at **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** at the cost of the firm/supplier.
4. The function and operation of the equipments/items will be demonstrated at **SHAHEED BENAZIR BHUTTO UNIVERSITY SHERINGAL, DIR UPPER, KHYBER PAKHTUNKHWA** by the firm/supplier.
5. Sub-standard or not according to specification, the items will be rejected and returned on the expenses of the firm/supplier.
6. A performance bond @ 10% (Rs-00,000) of the S. Order amount in the shape of bank draft/call deposit/D.D./Bank Guarantee will be submitted to **Treasurer Shaheed Benazir Bhutto University Sheringal, Dir Upper** at the time of contract. The performance bond security will be returned after completion of supply order.
7. Failure in supply of items within stipulated period shall entail forfeiture of earnest money & performance bond.
8. The Party Two agrees for completion of the job according to the designs and samples approved by the SBBU within specified period from the date of contract. In case of delay, the SBBU reserves the right to impose a penalty up to 10% of the total amount of the contract as per tender terms & conditions.

Signature: _____

Name: **M/S XYZ**

Seal of the firms: _____

Treasurer

SBBU Sheringal, Dir Upper

Witness # 1

Witness # 2

**List of Lab Equipments, Chemical & Glassware for Department of Chemistry from NRP
Project Account (1125) Retender of NRP Items**

S.#	Name of Item	Specification	Quantity
1	Basic Flash Pump System for Isocratic Separations	Basic Flash Pump System for Isocratic Separations Pump of continuous flow of solvent up to 250ml/min at max 10 bar (150PSI), Chemically resistant and biocompatible. Comfortable and easy adjustment of flow rate with LCD display, adapter sets, all tubing fittings and ferrules included for quick installation, Injection valve for sample, cartridge adaptor etc. Manufacturer : Switzerland, Germany, USA, China, Japan or equivalent	01 No:
2	Melting point apparatus	Melting point apparatus, high resolution images of sample during analysis, digital with high accuracy, Made in U.S.A, UK, Germany, Japan or equivalent	01 No:
3	Hot Air Guns	Hot Air Guns for TLC, Made in (USA, UK, Germany or China, local with best quality or equivalent)	02 Nos.
4	TLC Sheets	TLC Silica gel 60, 50 or more Aluminium sheets 5 x 10 cm packet	08 Pkts.
5	Glass columns	Made of purely Pyrex, imported or locally manufactured (Prices shall be quoted with stop cock & without stop cock separately)	12 Nos.
6	TLC handling+ cutting tools,	TLC Plate Cutter, Made in USA, China, Pakistan or equivalent	01 Complete Set
7	Ethanol	(commercial grade) Local distillery(duty free) or imported	200 Liters
8	Methanol	(commercial grade) Local distillery(duty free) or imported	200 Liters
9	HCL	Made in Germany, China, UK or Equivalent	05 Liters
10	Ammonia (NH ₃)	Made in Germany, China, UK or Equivalent	2.50 Liters

List of Lab Equipments, Chemical & Glassware for Department of Chemistry from NRP Project Account (6840)

A. Permanent Apparatus

S.#	Name of Item	Specification	Quantity
1	Magnetic Stirrer and hot plate	Magnetic Stirrer and hot plate (01) Specifications: Temperature range up to = 550 °C, Stirring Speed = 1500 rpm, Stirring volume = 14 L, Digital display LCD	01 No:
2	Thermostatic water baths	Thermostatic water baths Specifications: Temperature range=200 °C Capacity= 20 L, Stainless steel inner chamber, LED display	01 No:

3	VLC columns (glass)	VLC columns (glass). Compatible with elution pump.	01 No:
4	Vacuum assembly (filtration)	Vacuum assembly (filtration): Specifications: Oil free vacuum pump: max. vacuum= 680 mmHg; Motor rotation= 1300 rpm; Filter flasks; 500 ml; silicon rubber stopper; vacuum hose; porcelain Buchner funnel; 24/40 heavy wall 600mL glass Buchner Funnel;	01 No:
5	Vacuum pumps	Vacuum pumps for column elution (compatible with VLC columns).	01 No:
6	PC system/ Printer/ Scanner	Laptop: Core i5/ i3/, Pinter laser jet, Scanner	01 No:
7			

B. Chemicals

S.#	Item Name	Specification	Quantity
1	<i>n</i> -Hexane	<i>n</i> -Hexane (Analytical Grade; (Merck or equivalent)	05.00 Liters
2	Dichloromethane	Dichloromethane (CH ₂ Cl ₂) (Analytical Grade)	08.00 Liters
3	Acetone	Acetone (Analytical Grade)	02.50 Liters
4	Ethanol	Ethanol (EtOH) (Analytical Grade; (Merck/Sigma or equivalent)	08.00 Liters
5	Methanol	Methanol (MeOH) (Analytical Grade; Merck/Sigma or equivalent)	05.00 Liters
6	Diethyl ether	Diethyl ether (Et ₂ O) (Merck/Sigma or equivalent)	02.50 Liters
7	N,N'-Diisopropyl-1	N,N'-Diisopropyl-1,3-propanediamine (Sigma/TCI or equivalent)	15.00 Grams
8	5-Methyl-2	5-Methyl-2-Thiophenecarboxaldehyde (Sigma/TCI or equivalent)	25.00 Grams
9	5-Chloro-2	5-Chloro-2-thiophenecarboxaldehyde (Sigma/TCI or equivalent)	10.00 Grams
10	5-Bromo-2	5-Bromo-2-thiophenecarboxaldehyde (Sigma/TCI or equivalent)	25.00 Grams
11	2,2-Dimethyl-1	2,2-Dimethyl-1,3-propanediamine (Sigma/TCI or equivalent)	25.00 Grams
12	5-Bromo-2	5-Bromo-2-furaldehyde (Sigma/TCI or equivalent)	25.00 Grams
13	5-Chloro-2	5-Chloro-2-furaldehyde (Sigma/TCI or equivalent)	08.00 Grams
14	1,3-Diaminopropane	1,3-Diaminopropane (Sigma/TCI or equivalent)	25.00 Grams
15	5-Methylfurfural	5-Methylfurfural (Sigma/TCI or equivalent)	20.00 Grams
16	6-Bromo-2	6-Bromo-2-pyridinecarboxaldehyde (Sigma/TCI or equivalent)	25.00 Grams

17	<i>N,N'</i> -Dimethyl-1	<u><i>N,N'</i>-Dimethyl-1,3-propanediamine (Sigma/TCI or equivalent)</u>	10.00 Grams
18	6-Methylpyridine-2	6-Methylpyridine-2-carboxaldehyde (Sigma/TCI or equivalent)	10.00 Grams
19	1,2-Diaminopropane	<u>1,2-Diaminopropane (Sigma/TCI or equivalent)</u>	25.00 Grams
20	TLC grade flesh	TLC grade flesh Silica Gel (mesh 70 – 230) (Local)	2.00 Kg
21	MgSO ₄	MgSO ₄ (Anhydrous) (Sigma/TCI or equivalent)	1.00 Kg
22	Zinc Chloride	Zinc Chloride (ZnCl ₂) (Sigma/TCI or equivalent)	50.00 Grams
23	Zinc oxide	Zinc oxide (ZnO) (Sigma/TCI or equivalent)	100.00 Grams
24	Copper Chloride	Copper Chloride (Sigma/TCI or equivalent)	50.00 Grams
25	Cadmium Bromide	Cadmium Bromide (Sigma/TCI or equivalent)	10.00 Grams
26	Sodium borohydride	Sodium borohydride (Sigma/TCI or equivalent)	50.00 Grams

C. Glassware

S.#	Item Name	Specification	Quantity
1	R. B. Flasks	R. B. Flasks (Single neck;24/29) 250 ml	05 Nos.
2	R. B. Flasks	R. B. Flasks (Single neck;24/29) 100 ml	05 Nos.
3	Two neck R.B. Flask	Two neck R.B. Flask (24/29 and 19/26) 250 ml	05 Nos.
4	Graduated Dean stark apparatus	Graduated Dean stark apparatus (24/29)	01 No:
5	Reflux Condensers	Reflux Condensers (24/29)	03 Nos.
6	Columns (Bulb columns)	Columns (Bulb columns) (for CC, medium, 100 ml)	03 Nos.
7	Separating funnels	Separating funnels (250 ml, 100 ml, 50 ml)	05 Nos.
8	Vials	Vials (10 ml, 25 ml)	1000 Nos.
9	Adopters	Adopters (24/29:14/23), (24/29: 19/26)	Miscellaneous
10			

List of Lab Equipments, Chemical & Glassware for Department of Agriculture from NRPB Project Account (6842)

A. Permanent Apparatus

S.#	Name of Item	Specification	Quantity
1	Analytical Balance	Analytical Balance 0.0001 g	01 No:
2	Refrigerator	Refrigerator 10 cft Dawlance or equivalent	01 No:
3	Laptop	Laptop Core i3 / i5 of any renowned brand	01 No:
4	Oven	Oven Haier HMN-45110 (45 Liter) or equivalent	01 No:
5	Scanner	Ordinary Scanner of any renowned brand for office use	01 No:

B. Chemicals/Reagents

S.#	Item Name	Specification	Quantity
1	Dichloromethane	Dichloromethane (CH ₂ Cl ₂)(Analytical Grade)	08.00 Liters
2	Acetone	Acetone (Analytical Grade)	02.50 Liters
3	Ethanol	Ethanol (EtOH)(Analytical Grade; (Merck/Sigma or equivalent)	08.00 Liters
4	Methanol	Methanol (MeOH) (Analytical Grade; (Merck/Sigma or equivalent)	05.00 Liters
5	Diethyl ether	Diethyl ether (Et ₂ O) (Merck/Sigma or equivalent)	02.50 Liters
6	Tris	Tris (C ₄ H ₁₁ NO ₃) (Merck/Sigma or equivalent)	500 Grams
7	2-Mercaptoethanol	2-Mercaptoethanol (Merck/Sigma or equivalent)	100 ml
8	Bovine Serum Albumin	Bovine Serum Albumin (Merck/Sigma or equivalent)	10.00 Grams
9	Sodium dodecyl sulfate	Sodium dodecyl sulfate (Merck/Sigma or equivalent)	100.00 Grams
10	Gel Filtration Markers Kit	Gel Filtration Markers Kit for Protein Molecular Weights 12,000-200,000 Da (Merck/Sigma or equivalent)	01 No:
11	Tetra bromophenol	3',3'',5',5''-Tetrabromophenolsulfonephthalein, Bromophenol Blue (BPB) (Merck/Sigma or equivalent)	25.00 Grams
12	Folin & Ciocalteu's phenol reagent	Folin & Ciocalteu's phenol reagent (Merck/Sigma or equivalent)	100.00 ml
13	Trimethylethyl	N,N,N'-trimethylethyl-1,2-diamine(Sigma/TCI or equivalent)	25.00 Grams
14	Copper Sulfate	Copper Sulfate	25.00 Grams

--	--	--	--

C. Glassware

S.#	Item Name	Specifications	Quantity
1	R. B. Flasks	R. B. Flasks (Single neck;24/29) 250 ml	05 Nos.
2	R. B. Flasks	R. B. Flasks (Single neck;24/29) 100 ml	05 Nos.
3	Vials	Vials (10 ml, 25 ml)	1000 Nos.
4	Magnetic bar retrievers	Magnetic bar retrievers	05 Nos.
5	Magnetic egg bars	Magnetic egg bars (various sizes)	12 Nos. each
6	Beakers Glass	Beakers Glass of various sizes, 10 ml, 20 ml, 50 ml, 100 ml, 250 ml, 500 ml, 1000 ml	03 Nos. each
7	Micropipette	Micropipette of various sizes up to 5000 μ l	02 Nos. each
8	Separating funnels	Separating funnels (250 ml, 100 ml, 50 ml)	03 Nos. each
9	Test tubes	Test tubes of various sizes, 5 ml, 10 ml	05 Packs each
10			

List of Lab Equipments, Chemical & Glassware for Department of Animal Sciences from SRGP Project Account (1588)

A. Equipment/Chemicals/Glassware

S.#	Item Name	Specification	Quantity
1	Petroleum Ether	Petroleum Ether (40-60 Merck or Equivalent) 2.5 liter packing	03 Nos.
2	Sulphuric Acid	Sulphuric Acid (Merck or Equivalent) 1 liter packing	03 Nos.
3	Ethyl Alcohol	Ethyl Alcohol (Merck or Equivalent) 1 liter packing	03 Nos.
4	Cetyltrimethyl ammonium bromide	Cetyltrimethyl ammonium bromide (CTAB) 500 gram packing	03 Nos.
5	K ₂ HPO ₄	(1 Kg packing)	03 Nos.
6	Sodium Hydroxide	(1 Kg packing)	03 Nos.
7	Mercuric Oxide	(1 Kg packing)	01 No;
8	Urea		500 grams

9	Beakers	100ml, 250ml, 500ml	10 Nos. each
10	Graduated Cylinders	100ml, 500ml	05 Nos. each
11	Funnels	50ml, 75ml, 90ml	06 Nos. each
12	Conical Flasks	50ml, 100ml, 250ml, 500ml	05 Nos. each
13	Blue Tips		05 Nos.
14	Yellow Tips		05 Nos.
15	Aluminum Foil		01 Packet
16	Filter Papers	42*12.5 what man 250 ml/ 24 h	05 Packets
17	Vortex Mixture		01 No;
18	Microwave Oven		01 No;
19	Analytical Balance	Accuracy of 0.0001 g	01 No;
20	Digital Weight Balance	5-10 Kg	01 No;
21	Micropipette	(1 ml-5 ml) UK or Equivalent	01 No; each
22	Laptop	Laptop Core i3 / i5/ i7 of any renowned brand	

