

**PIR MEHR ALI SHAH
ARID AGRICULTURE UNIVERSITY RAWALPINDI
(PMAS-AAUR)**



**BIDDING DOCUMENTS
FOR
PROCUREMENT OF
“PILOT CHEMICALS/FEEDSTOCK/UTILITY/REAGENTS AND KITS
FOR PSDP FUNDED PROJECT “ENCIB”**

**Establishment of National Center of Industrial Biotechnology for
Pilot Manufacturing of Bioproducts of Using Synthetic Biology
and Metabolic Engineering Technologies (ENCIB)**

**PMAS-AAUR,
MURREE ROAD, RAWALPINDI**

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Summary

Invitation for Bids

PART 1 – BIDDING PROCEDURES

Section I. Instructions to Bidders (ITB)

This Section provides information to help Bidders prepare their bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of Contracts. **Section-I contains provisions that are to be used without modification.**

Section II. Bid Data Sheet (BDS)

This Section includes provisions that are specific to each procurement and that supplement Section I, Instructions to Bidders.

Section III. Evaluation and Qualification Criteria

This Section specifies the criteria to determine the lowest evaluated bid and the qualifications of the Bidder to perform the contract.

Section IV. Bidding Forms

This Section includes the forms for the Bid Submission, Price Schedules, Bid Security, and the Manufacturer's Authorization to be submitted completed by the Bidder and submitted as part of his Bid.

Section V. Eligible Countries

This Section contains information regarding eligible countries.

PART 2 – SCHEDULE OF REQUIREMENTS

Section VI. Schedule of Requirements

This Section includes the List of Services, the Delivery and Completion Schedules and the Technical Specifications that describe the Related Services to be procured.

**PROCUREMENT OF
“PILOT CHEMICALS/FEEDSTOCK/UTILITY/REAGENTS
AND KITS” FOR PSDP FUNDED PROJECT ENCIB AT
PMAS-AAUR**

Project: Establishment of National Center of Industrial Biotechnology for Pilot Manufacturing of Bioproducts of Using Synthetic Biology and Metabolic Engineering Technologies (ENCIB)

Procuring Agency: PMAS-Arid Agriculture University Rawalpindi (PMAS-AAUR)

Country: PAKISTAN



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Establishment of National Center of Industrial Biotechnology for Pilot Manufacturing of Bioproducts using Synthetic Biology and Metabolic Engineering Technologies (ENCIB)

TENDER NOTICE

Sealed bids are invited on FOR University main campus basis from reputable and well established firms/companies/sole proprietor/general order suppliers/persons who are authorized partners (Distributors, Resellers or have Authorized Letter from mentioned Partners of reputable national/ international companies), having well past experience, financial position, registered with Sales Tax and Income Tax Departments for:

Procurement of Pilot Chemicals/Feedstock/Utility/Reagents and Kits under PSDP Funded Project "ENCIB"

The interested bidders shall submit their bids (Soft Form "on E-PAD System" & Hard Copy in the DPIC) comprise in single stage two envelope bidding procedure (lot-wise) according to PPRA rule 38 (2a). The firms/companies are requested to submit their offers with company profile and clients list with 02% Earnest Money of the estimated price in favor of Treasurer, Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, latest by 09-04-2025 by 1100 hours in the office of the Directorate of Procurement & Inventory Control (DPIC) of the University. The tender will be opened on the same day at 11:30 hours in the same office, in the presence of those bidders who may wish to participate. The bidder shall download the bidding documents from the website of the Authority ("www.uaaar.edu.pk), PPRA as well as EPAD" and participate in the procurement process without paying any cost or fee. In case of official holiday on the day of submission, next day will be treated as closing date. The successful bidder to furnish a performance security/performance guarantee which shall not exceed 10% of contract price as per Punjab PPRA Rule 56 in the form and period specified in the Bidding Document. The rates must be quoted strictly in accordance with specifications of Bidding Documents valid for 90 days. The conditional tender will not be accepted. **The firms/companies/sole proprietor/general order suppliers/persons have to submit along with tender bid an affidavit that the company is an active tax payer and not involved in litigation or black listed.** The University may reject all bids/proposals at any time prior to the acceptance of a bid or proposal as per PPRA Punjab rule 35, however upon bidder request the ground of rejection will be communicated to the concerned but no justification will be given as per PPRA rule 35 (2).

Chairman, Purchase Committee
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PART 1 – Bidding Procedures

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

A. General

- 1. Scope of Bid**
- 1.1 In connection with the Invitation for Bids, **specified in the Bid Data Sheet (BDS)**, the Procuring Agency, **as specified in the BDS**, issues these Bidding Documents for the provision of Goods, Equipment, and Services incidental thereto as specified in Section VI, Schedule of Requirements.
- 1.2 Throughout these Bidding Documents:
- (a) "Authority" means PMAS-Arid Agriculture University Rawalpindi.
 - (b) "Availability and Reliability" means the probability that an equipment/ component shall be operationally ready to perform its function when called upon at any point in time.
 - (c) "Bidder" means the Firm/Company/Supplier/Distributors fulfilling the eligibility criteria and participating in the bidding for provision of goods and equipment as per provision of bid document/ contract.
 - (d) "Contractor" means the person/firm/company whose Tender has been accepted and awarded letter of intent followed by the Contract by the Procuring Agency.
 - (e) "Procuring Agency" means PMAS-Arid Agriculture University Rawalpindi, for the purposes of the Contract.
 - (f) "Contract" means the agreement entered into between the Procuring Agency and the Contractor, as recorded in the Contract Form signed by the parties, including all Schedules and Attachments thereto and all documents incorporated by reference therein.
 - (g) "Defects Liability Period" means the warranty period following the taking over, during which the Contractor is responsible for making good, defects and damages in Goods, Equipment and Services provided, under the Contract.
 - (h) "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, wars, revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
 - (i) "Goods" & "Equipment" means equipment, machinery, and/or other materials which the Contractor is required to supply to the Procuring Agency under the Contract.

- (j) "Support Services" or "Services" means installation, configuration, deployment, commissioning, testing, training, support, after sale service, etc. of Goods & Equipment and other such obligations which the Contractor is required to provide to the Procuring Agency under the Contract.
- (k) "Origin" shall be considered to be the place where the Goods are produced or from where the Services are provided. Goods are produced when, through manufacturing, processing or assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components. The origin of Goods, Equipment and Services is distinct from the nationality of the Contractor.
- (l) "Delivery Acceptance Certificate" means the certificate to be issued by the Client to the Contractor, in accordance with the Contract.
- (m) "Works" means work to be done by the Contractor under the Contract.
- (n) "Inventory List" means a list of equipment/ supplies bearing details of make/ model/quantity/unit price/ warranty/location of supply/ installation/ manufacturer/authorized workshop, duly signed by the Contractor and verified by the Client.
- (o) the term "in writing" means communicated in written form (e.g. by mail, email, etc.) with proof of receipt.
- (p) if the context so requires, "singular" means "plural" and vice versa; and
- (q) "day" means calendar day.

- 2. Eligible Bidders**
- 2.1. A Bidder may be a firm that is a locally registered private entity, who itself is a Manufacturer/ Principal or an authorized representative of a Manufacturer/ Principal or any combination of such entities in the form of a Joint Venture (JV) or consortium under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a Joint Venture or Consortium, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV/ Consortium shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV/ Consortium during the bidding process and, in the event the JV/ Consortium is awarded the Contract, during contract execution. Unless specified in the BDS, there is no limit on the number of members in a JV/ Consortium.
 - 2.2. The Manufacturer/ Principal should be a registered business entity in any country eligible in accordance with Section V, Eligible Countries.

2.3. A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:

- (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
- (b) receives or has received any direct or indirect subsidy from another Bidder; or
- (c) has the same legal representative as another Bidder; or
- (d) participates in more than one bid in this bidding process. Participation by a bidder in more than one bid will result in the disqualification of all bids in which such bidder is involved; or
- (e) any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid; or
- (f) any of its affiliates has been hired (or is proposed to be hired) by the Procuring Agency for the contract implementation; or
- (g) has a close business or family relationship with a professional staff of the Procuring Agency who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract.

2.4. A Bidder shall not be eligible to participate if under suspension from bidding by the Procuring Agency as the result of previous contract or blacklisted by organizations **specified in the BDS**.

2.5. A bidder shall provide such evidence of eligibility satisfactory to the Procuring Agency, as the Procuring Agency shall reasonably request.

3. Eligible Goods, Equipment and Related Services

3.1 All the Goods, Equipment and Services to be delivered under the contract and financed by the Procuring Agency may have their origin in any country in accordance with Section V, Eligible Countries.

3.2 For purposes of this Clause, the term "goods", "equipment" and "services" includes as specified in the Schedule of Requirements.

3.3 The term "origin" means the country where the Goods, Equipment and Services have been grown, cultivated, produced, performed, manufactured, developed, assembled, integrated, or processed.

B. Contents of Bidding Document

- | | |
|---|---|
| <p>4. Sections of Bidding Document</p> | <p>4.1. The Bidding Documents consist of Parts 1 and 2, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 6.</p> <p style="margin-left: 40px;">PART 1 Bidding Procedures</p> <ul style="list-style-type: none"> • Section I. Instructions to Bidders (ITB) • Section II. Bidding Data Sheet (BDS) • Section III. Evaluation and Qualification Criteria • Section IV. Bidding Forms • Section V. Eligible Countries <p style="margin-left: 40px;">PART 2 Schedule of Requirements</p> <ul style="list-style-type: none"> • Section VI. Schedule of Requirements <p>4.2. The Invitation for Bids/ Tender Notice issued by the Procuring Agency is not part of the Bidding Document.</p> <p>4.3. Unless obtained directly from the Procuring Agency as specified in BDS, the Procuring Agency is not responsible for the completeness of the document, responses to requests for clarification, the Minutes of the pre-Bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 6. In case of any contradiction, documents obtained directly from the Procuring Agency shall prevail.</p> <p>4.4. The bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.</p> |
| <p>5. Clarification of Bidding Documents</p> | <p>5.1 A bidder requiring any clarification of the Bidding Document shall contact the Procuring Agency in writing at the Procuring Agency's address specified in the BDS. The Procuring Agency will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of request for clarification within a period specified in the BDS. The Procuring Agency shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 4.3, including a description of the inquiry but without identifying its source. Should the clarification result in changes to the essential elements of the Bidding Documents, the Procuring Agency shall amend the Bidding Documents following the procedure under ITB 6 and ITB 20.2.</p> |

- 6. Amendment of Bidding Document**
- 6.1 At any time prior to the deadline for submission of bids, the Procuring Agency may for any reason, whether at its own initiative or in response to a clarification requested by bidders, amend the Bidding Documents by issuing addenda.
- 6.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Procuring Agency in accordance with ITB 4.3.
- 6.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Procuring Agency may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 20.2.

C. Preparation of Bids

- 7. Cost of Bidding**
- 7.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Procuring Agency shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 8. Language of Bid**
- 8.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring Agency, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language **specified in the BDS**, in which case, for purposes of interpretation of the bid, such translation shall govern.
- 9. Documents Comprising the Bid**
- 9.1 The bid shall comprise the following:
- (a) letter of bid in accordance with ITB 10.
 - (b) completed schedules, in accordance with ITB 10 and 12
 - (c) bid security, in accordance with ITB 17.1.
 - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 18.2.
 - (e) affidavit confirming that the Goods, Equipment and Services to be provided by the bidder are of eligible origin in accordance with ITB 3; and conform to the Bidding Documents in accordance with ITB 14 and 28.
 - (f) documentary evidence in accordance with ITB 15 establishing the Bidder's qualifications to perform the contract if its bid is accepted.
 - (g) any other document **required in the BDS**.

- 9.2 In addition to the requirements under ITB 9.1, bids submitted by a JV/ Consortium shall include a copy of the Joint Venture Agreement/ Consortium Letter entered into by all members firms, signed by all authorized representatives of the member firms and indicating that JV Agreement is specifically for this bid. The lead bidder must ensure that the submitted JV Agreement remains valid for the Contract, if their bid is successful and awarded the contract.
- 9.3 Joint Venture/ Consortium deed and relevant documents regarding deed constituted prior to bid submission date will be submitted and entertained. The bidder should not subcontract any work as a part of this project after submission of bids, without prior written consent from the Procuring Agency.
- 9.4 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this bid.

10. Letter of Bid and Price Schedules

- 10.1 The Letter of Bid and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 18.2. All blank spaces shall be filled in with the information requested.

11. Alternative Bids

- 11.1 Unless otherwise **specified in the BDS**, alternative bids shall not be considered.

12. Bid Prices and Discounts

- 12.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.
- 12.2 All Goods, Equipment and Services must be listed and priced as per Price Schedules given in Section IV-Bidding Forms.
- 12.3 The price to be quoted in the Letter of Bid in accordance with ITB 10.1 shall be the total price of the bid, excluding any discounts offered.
- 12.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid, in accordance with ITB 10.1.
- 12.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, **unless otherwise specified in the BDS**.
- 12.6 Bids are invited for complete Goods, Equipment and Services mentioned in Section VI: Schedule of Requirements of the Bidding Document. Bids with selective items will not be entertained. Prices shall be quoted in format as specified in Price Schedule included in Section IV: Bidding Forms. The dis- aggregation of price components are required solely for the purpose of facilitating the comparison of bids by the Procuring Agency. This shall not in any way limit the Procuring Agency's right to contract on any of the

terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V, Eligible Countries.

- (i) the price of the Goods, Equipment & Services shall be quoted including GST/PST on the provision of such Goods & Equipment.
- (ii) the price for inland transportation, insurance, and other local services required to convey the goods & equipment to their final destination as **specified in the BDS**.

12.7 The Bidder is required to offer competitive price. All prices must include relevant taxes and duties, where applicable. If there is no mention of taxes, the offered/ quoted price shall be considered as inclusive of all prevailing taxes/duties. The benefit of exemption from or reduction in the GST or other taxes shall be passed on to the Procuring Agency.

13. Currencies of Bid and Payment

- 13.1 In case of CIF tender, the Prices shall be quoted in \$, £, €, ¥, CN¥ and CHF.
- 13.2 State Bank of Pakistan's foreign currency selling rate will be considered from the date of opening of financial bid for comparison purposes.
- 13.3 The price for each item, standard accessories; detail of which is already mentioned in the technical specifications will be considered for determining the lowest bidder. Optional items will not be considered while determining the lowest bidder.

14. Documents Establishing the Eligibility and Conformity of the Services & Products

- 14.1 To establish the conformity of the Goods, Equipment and Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods, Equipment and Services conform to the specifications and standards specified in Section VI: Schedule of Requirements.
- 14.2 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, components, etc., necessary for the proper and continuing functioning of the delivered Goods & Equipment during the period **specified in the BDS** following commencement of the use of the delivered goods and equipment by the Procuring Agency.
- 14.3 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Procuring Agency in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Procuring Agency's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VI, Schedule of Requirements.

**15. Documents
Establishing the
Eligibility and
Qualifications
of the Bidder**

15.1 To establish Bidder's eligibility in accordance with ITB 2, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.

15.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Procuring Agency's satisfaction:

- (a) that, if required in the BDS, a Bidder that does not manufacture or produce the Goods or Equipment it offers to supply shall submit the Manufacturer's/ Principal's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods/ Equipment to supply these Goods/ Equipment on behalf of Manufacturer/ Principal to the Procuring Agency.
- (b) that the Bidder and its Manufacturer/ Principal meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.
- (c) This Invitation for Bids is open to all original Manufacturers/authorized sole Agents of Foreign/ Local manufacturers in Pakistan for supply of goods.
- (d) Bidders should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by any Government (Federal, Provincial), a local body or a public sector organization.
- (e) The Procuring Agency requires that all Bidders/ Suppliers/ Contractors observe the highest standard of ethics during the procurement and execution of such Contracts. In pursuance of rule 2 (P) of PPRA 2014 and its subsequent amendments, if any, the Procuring Agency:
 - a. defines, for the purposes of this provision, the terms set forth below as follows:
 - i. **coercive practice** by 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** by 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, non-competitive levels for any wrongful gain.
 - iii. **corrupt practice** by 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** by 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.
- v. **obstructive practice** by 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.

- b. shall reject a proposal for Award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract in question; shall declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Contract.

16. Period of Validity of Bids

- 16.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Procuring Agency in accordance with ITB 20.1. A bid valid for a shorter period shall be rejected by the Procuring Agency as non-responsive.
- 16.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Procuring Agency may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 17, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 16.3.
- 16.3 If the award is delayed by a period exceeding 30 days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:
 - (a) In the case of fixed price contracts, the contract price shall be the bid price adjusted by the factor **specified in the BDS**.
 - (b) In the case of adjustable price contracts, no adjustment shall be made.

- (c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

17. Bid Security

- 17.1 The bidder shall furnish as part of its bid, a bid security, as **specified in the BDS**, in original form in the amount and currency **specified in the BDS**.
- 17.2 If a bid security is specified pursuant to ITB 17.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option:
- (a) CDR/ Pay Order in the name of Treasurer, PMAS-AAUR.
 - (b) an unconditional guarantee issued by any Scheduled Bank in Pakistan.
- 17.3 If a Bid Security is specified pursuant to ITB 17.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Procuring Agency as non-responsive.
- 17.4 If a Bid Security is specified pursuant to ITB 17.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 39.
- 17.5 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.
- 17.6 The Bid Security may be forfeited:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB38; or
 - (ii) furnish a performance security in accordance with ITB 39.
- 17.7 The Bid Security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the bid security shall be in the names of all future members as named in the letter of intent referred to in ITB 2.1 and ITB 9.2.

18. Format and Signing of Bid

- 18.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 9 and clearly mark it "ORIGINAL.". In addition, the Bidder shall submit copies of the bid, in the number **specified in the BDS** and

clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

- 18.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initiated by the person signing the bid.
- 18.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 18.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initiated by the person signing the bid.

D. Submission and Opening of Bids

19. Sealing and Marking of Bids

- 19.1 The Bidder shall enclose the original and all copies of the bid, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope/ package.
- 19.2 The inner and outer envelopes/ packages shall:
 - (a) bear the name and address of the Bidder.
 - (b) be addressed to the Procuring Agency in accordance with ITB 22.1.
 - (c) bear the specific identification of this bidding process indicated in ITB 1.1; and
 - (d) bear a warning not to open before the time and date for bid opening.
- 19.3 If all envelopes are not sealed and marked as required, the Procuring Agency will assume no responsibility for the misplacement or premature opening of the bid.

20. Deadline for Submission of Bids

- 20.1 Bids must be received by the Procuring Agency at the address and no later than the date and time **as specified in the BDS** through registered post or in person. In case of registered post, it is the responsibility of Bidder to assure the timely delivery of bid. Any bid received by the Procuring Agency after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- 20.2 The Procuring Agency may, as per Punjab PPRA Rules, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB 6, in which case all rights and obligations of the

Procuring Agency and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

21. Late Bids

21.1 The Procuring Agency shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 20. Any bid received by the Procuring Agency after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

22. Withdrawal, Substitution, and Modification of Bids

22.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB 18.2, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:

- (a) prepared and submitted in accordance with ITB 18 and 19 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION;" and
- (b) received by the Procuring Agency prior to the deadline prescribed for submission of bids, in accordance with ITB 20.

22.2 Bids requested to be withdrawn in accordance with ITB 22.1 shall be returned unopened to the Bidders.

22.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

23. Bid Opening

23.1 Except as in the cases specified in ITB 21 and 22, the Procuring Agency shall publicly open and read out in accordance with ITB 23.3 all bids received by the deadline at the date, time and place **specified in the BDS** in the presence of Bidders' designated representatives who choose to attend.

23.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened but returned to the Bidder. If the withdrawal envelope does not contain a copy of the "power of attorney" confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding bid will be opened. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution

and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only bids that are opened and read out at Bid opening shall be considered further.

- 23.3 The Procuring Agency shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record.

E. Evaluation and Comparison of Bids

- 24. Confidentiality**
- 24.1 Any effort by a Bidder to influence the Procuring Agency in the evaluation or contract award decisions may result in the rejection of its Bid.
- 24.2 Notwithstanding ITB 24.1, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Procuring Agency on any matter related to the bidding process, it should do so in writing.
- 25. Clarification of Bids**
- 25.1 To assist in the examination, evaluation, comparison of the bids, and qualification of the Bidders, the Procuring Agency may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Procuring Agency shall not be considered. The Procuring Agency's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Procuring Agency in the Evaluation of the bids, in accordance with ITB 29.
- 25.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Procuring Agency's request for clarification, its bid may be rejected.

- 26. Deviations, Reservations, and Omissions**
- 26.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Documents.
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) "Omission" is the failure to submit part, or all of the information or documentation required in the Bidding Documents
- 27. Determination of Responsiveness**
- 27.1 The Procuring Agency's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB 9.
- 27.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) if accepted, would
 - (i) affect in any substantial way the scope, quality, or performance of the Goods, Equipment and Services specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Procuring Agency's rights or the Bidder's obligations under the Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 27.3 The Procuring Agency shall examine the technical aspects of the bid submitted in accordance with ITB 14 and ITB 15, in particular, to confirm that all requirements of Section VI, Schedule of Requirements have been met without any material deviation or reservation, or omission.
- 27.4 If a bid is not substantially responsive to the requirements of Bidding Documents, it shall be rejected by the Procuring Agency and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 28. Non-conformities, Errors and Omissions**
- 28.1 Provided that a bid is substantially responsive, the Procuring Agency may waive any non-conformities in the Bid.
- 28.2 Provided that a bid is substantially responsive, the Procuring Agency may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure

of the bidder to comply with the request may result in the rejection of its bid.

28.3 Provided that a bid is substantially responsive, the Procuring Agency shall rectify quantifiable non-material non-conformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.

29. Correction of Arithmetical Errors

29.1 Provided that the Bid is substantially responsive, the Procuring Agency shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

29.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 29.1, shall result in the rejection of the Bid.

30. Margin of Preference

30.1 **Unless otherwise specified in the BDS**, a margin of preference shall not apply.

31. Evaluation of Bids

31.1 The Procuring Agency shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

31.2 To evaluate a bid, the Procuring Agency shall consider the following:

- (a) evaluation will be done for complete scope of Goods, Equipment and Services, as **specified in the BDS**; and the Bid Price as quoted in accordance with ITB 12.
- (b) price adjustment for correction of arithmetic errors in accordance with ITB 29.1.
- (c) evaluation factors are specified in Section III, Evaluation and Qualification Criteria;

- 32. Comparison of Bids** 32.1 The Procuring Agency shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 33.2 to determine the highest scoring evaluated bid.
- 33. Qualification of the Bidder** 33.1 The Procuring Agency shall determine to its satisfaction whether the Bidder that is selected as having submitted a technically qualified, financially compliant and substantially responsive bid meeting the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 33.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 15.
- 34. Procuring Agency's Right to Accept Any Bid, and to Reject Any or All Bids** 34.1 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, without thereby incurring any liability to Bidders according to PPRA Rule 35. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

- 35. Award Criteria** 35.1 Subject to ITB 34.1, the Procuring Agency shall award the contract to the bidder who's bid has been determined to be technically qualified, financially compliant lowest priced bid and is substantially responsive to the bidding documents, provided further that the bidder is determined to be qualified to perform the contract satisfactorily.
- 36. Procuring Agency's Right to Vary Quantities at Time of Award** 36.1 At the time of contract is awarded, the Procuring Agency reserves the right to increase or decrease the quantity of Goods, Equipment and Services originally specified in Section VI, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS**, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.
- 37. Notification of Award** 37.1 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. The notification letter called the "Letter of Acceptance" shall specify the sum that the Procuring Agency will pay the Supplier in consideration of providing the Goods, Equipment and Services.
- 37.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding contract.
- 38. Signing of Contract** 38.1 Promptly after notification, the Procuring Agency shall send the successful Bidder the Contract Agreement.

38.2 Within fifteen (15) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Procuring Agency **as specified in the BDS.**

38.3 Notwithstanding ITB 38.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Procuring Agency, to the country of the Procuring Agency, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Procuring Agency that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the contract.

39. Performance Security/ Performance Guarantee

39.1 Within fifteen (15) days of the receipt of notification of award from the Procuring Agency, the successful Bidder, if required, shall furnish, **as specified in the BDS**, the Performance Security/ Performance Guarantee (as per Clause 2(w) and Clause 56 of Punjab PPRA Rules) using the Performance Security Form included in Section IV, Bidding Forms, **OR** in another form acceptable to the Procuring Agency as mentioned in ITB 39.3.

39.2 Failure of the successful Bidder to submit the above-mentioned Performance Security/ Performance Guarantee or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Procuring Agency may award the contract to the next highest scoring evaluated Bidder, whose bid is substantially responsive and is determined by the Procuring Agency to be qualified to perform the contract satisfactorily.

39.3 In lieu of provision at ITB 39.1 above, the Procuring Agency can retain an amount as performance security/ performance guarantee from payment of every instalment made to the contractor according to PPRA Rules and **as specified in BDS.**

40. Payment Terms

40.1 Subject to ITB 38 and ITB 39, the payments will be made in instalments subsequent to fulfilment of codal formalities, as per the following tentative schedule:

40.2 First Instalment (*on delivery of all Goods/ Equipment specified in Schedule of Requirements, subject to compliance inspection by Procuring Agency*) = 70% of Total Contract Value

40.3 Second/ Final Instalment (*on acceptance of satisfactory performance of all Goods/ Equipment specified in Schedule of Requirements for a period of 2 weeks after inspection by the Procuring Agency and subsequent completion of all contractual obligations*) = 30% of Total Contract Value

Payment Terms and Schedule will, however, be finalized at the time of signing the Contract Agreement.

41. Warranty

- 41.1 **Warranty as per standard.** A Logbook for the equipment which needs regular after sales services (To be specified by the procuring agency in bidding document) shall be maintained by the Supplier Service Engineer in consultation with the end user department. This will include the name of the equipment, down time, preventive maintenance schedule, replacement of parts, down time etc.
- 41.2 The Warranty will start from the date of acceptance of equipment (properly installed, as per contracted specifications and handing over of related documents mentioned in GCC and will last for its warranty period at 95% uptime.
- 41.3 The maintenance will be the responsibility of the manufacturer / their agent. An annual optimal uptime of 95% is considered as acceptable level of performance.
- 41.4 Software and hardware up gradation of the computing system should be carried out as available during warranty period as recommended by the manufacturer.
- 41.5 Manufacturer / Supplier shall be responsible for rectifying with all possible speed at their own expense any defect or fault in the system which may develop at any time during installation, commissioning period.
- 41.6 Manufacturer will guarantee the availability of spare parts and accessories for the system for ten years.
- 41.7 Uptime shall be defined as the time available to the user for doing procedures/ data acquisition and processing during working hours throughout the year.
- 41.8 Manufacturer /Supplier shall check system performance during and after every 4-months. An "Optimal Percentage" will be calculated by dividing "System in Service" hours by hours available, both measured on the basis of working hours as detailed above.
- 41.9 If the uptime percentage for the measurement period (04-months) shall fall short of 95% following formula will be applied to determine additional days in the warranty / service contract period.
 - a. 100% - 95% No Penalty
 - b. 95% - 60% The warranty period will be extended by 2.0 times the number of days as extra down time.
 - c. 60% - 80% The warranty period will be extended by 3.0 times the number of days as extra down time
 - d. Below 80% The warranty period will be extended by 4.0 times the number of days as extra down time
- 41.10 Down time is defined as the failure in the equipment operation to acquire or process the data or procedure, resulting in inability to carry out the required procedure properly.
- 41.11 The firm will be bound to make arrangements for availability of qualified

technical staff in site for prompt execution/coordination of after sale services.

- 41.12 Down time will start when the end user/ Staff In-charge notifies the designated service facility verbally or in writing to qualified technical staff of the firm.
- 41.13 Down time will end once the repairs have been affected and the system is again available for use.
- 41.14 The firm will provide the recommended preventive maintenance schedule of each of the equipment at the time of delivery.
- 41.15 The firm will bound to execute the installation/ maintenance according to the installation/ service protocol and will replace the components/ kits recommended by the manufacturers for installation and Periodic Preventive maintenance.
- 41.16 The scheduled preventive maintenance shall be in accordance with Service Protocol recommended/ advised by the manufacturer.
- 41.17 Remote service via network/modem shall be preferred if provided by the manufacturer to pick- up early faults at no cost to the procuring agency for the high-tech equipment.
- 41.18 The manufacturer / supplier will be responsible for preventive maintenance of equipment as per manufacturers' Service Manuals and shall keep a check for electrical / magnetic/ temperature and humidity conditions. Such a check should be made monthly, and record should be maintained in the logbook.

Section II. Bid Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	The Procuring Agency is PMAS-AAUR represented by: Chairman Purchase Committee, PMAS-AAUR.
ITB 1.1	Procurement of Pilot Chemicals/Feedstock/Utility/Reagents and Kits under PSDP Funded Project "ENCIB"
ITB 2.3	Any company/ firm blacklisted by Federal or Provincial government or public sector enterprises are barred from participating in this Bid.
ITB 4.3	The Bidding Document should be downloaded free of cost from authorities' website: Directorate of Procurement& Inventory Control, PMAS-Arid Agriculture University, Shamsabad, Murree Road, Rawalpindi, Pakistan

B. Contents of Bidding Documents

ITB 5.1	For <u>Clarification of bidding document</u> only, Bidders may contact procuring agency through email or hand-delivered after the publishing of the tender before COB a day prior to opening of BIDs on the following address:
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The Procuring Agency's address for clarification purposes is:

**Technical Director (NCIB),
National Center of Industrial Biotechnology,
PMAS-Arid Agriculture University, Shamsabad, Murree Road,
Rawalpindi, Pakistan
Telephone: +92-51-9292246
Email address: ncib@uaar.edu.pk**

Clarifications of only written requests received in time will be responded by the Procuring Agency.

C. Preparation of Bids

ITB 8.1	The language of the bid is English . All correspondence exchange shall be in English language.
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- Language for translation of supporting documents and printed literature is English.
- ITB 9.1(i)** The Bidder shall submit the following additional documents with its bid:
1. The literature, catalogues/brochures and related documents of Goods, Equipment and Services including details of specifications, operating conditions, features, etc.
 2. Compliance Data Sheet/ Checklist.
- ITB 11.1** Alternative Bids shall not be considered.
- ITB 12.5** The prices quoted by the Bidder shall not be subject to adjustment during the performance of the Contract.
- ITB 12.6** Prices quoted for contract shall correspond to 100 percent of items mentioned in the Schedule of Requirements.
- ITB 12.6(ii)** The Goods, Equipment and Services shall be delivered at the PMAS-AAUR (*Project Sites as specified by the Procurer*), Rawalpindi.
- ITB 13.1** The prices shall be quoted by the bidder in: PKR.
- ITB 14.3** After-sales support/ service for 1 year is required subsequent to completion of standard warranty period.
- ITB 15.2 (a)** Manufacturer's/ Principal's Authorization is required.
- ITB 16.1** The bid validity period shall be 90 days.
- ITB 16.2** The bid price adjustment factor shall not be applicable
- ITB 17.1** A Bid Security shall be required. The amount of the bid security shall be Two percent (02%) of quoted price in the form of deposit at call in favour of Treasurer, PMAS-AAUR and in currency specified in BDS for Clause ITB 13.1.
- ITB 17.2 (a)** Pay Order or Call Deposit Receipt (CDR) in the name of Treasurer, PMAS-AAUR
- ITB 17.2 (b)** The Bid Security shall be in the form of Bank Guarantee issued by a Scheduled Bank in Pakistan
- ITB 18.1** In addition to the original of the bid, the number of copies is One (01).
- ITB 18.2** The written confirmation of authorization to sign on behalf of the bidder shall consist of written Power of Attorney attached to the Bid.

D. Submission and Opening of Bids

- ITB 20.1** For bid submission purposes only, the Procuring Agency's address is:
- Chairman Purchase Committee,
PMAS-Arid Agriculture University Rawalpindi, Shamsabad,
Murree Road, Rawalpindi, Pakistan.**
- The deadline for bid submission is mentioned, as follows:**
 Submission Date: April 09, 2025
 Submission Time: On or Before **11:00 Hours**
- ITB 23.1** The technical bid opening shall take place at:
- Directorate of Procurement & Inventory Control,
PMAS-Arid Agriculture University Rawalpindi, Shamsabad,
Murree Road, Rawalpindi, Pakistan.**
- Date: April 09, 2025
 Time: **11:30 Hours**
- The financial bid opening shall take place for only those bidders who qualify technical evaluation. The Procuring Agency shall communicate the date, time and venue to the qualifying bidders at an appropriate time subsequent to completion of technical evaluation process.
- ITB 23.2** The Letter of Bid and Price Schedules shall be initialled by the committee representatives of the Procuring Agency conducting bid opening.

E. Evaluation and Comparison of Bids

- ITB 30.1** A margin of domestic preference shall not apply.
- ITB 31.2(a)** Evaluation, as per Evaluation Criteria in Section III, will be done for complete goods, equipment and services.

F. Award of Contract

- ITB 36.1** The maximum percentage by which contract goods, equipment and services may be increased is NIL.
- ITB 38.2** The successful bidder shall sign, date and return the Contract Agreement made on stamp paper having a stamp duty of an amount as per government rules. The stamp duty shall be paid by the successful bidder.
- ITB 39.1** Performance Guarantee/ Performance Security in the form of Bank Guarantee shall be furnished by the successful bidder amounting to 10% of the Contract value.

ITB39.3

Instead of submission of Bank Guarantee as Performance Security/ Performance Guarantee by the successful Bidder, both parties (i.e., Procuring Agency and successful bidder) can mutually agree that the Procuring Agency can retain an amount of 10% as Performance Security/ Performance Guarantee from payment of every instalment made to the Contractor as per Punjab PPRA Rules. The aggregate amount so deducted shall be paid to the Contractor after satisfactory completion of all obligations under the contract within 30 days of issuance of Letter of Completion of Contractual Obligations.

Section III. Evaluation and Qualification Criteria

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1. Bidding Process

Single stage two envelopes bidding process will be adopted where bids will be selected for each item separately under Quality and Cost Based Selection (QCBS) System and procedures described in this Bid Document, in accordance with the PPRA Rules.

The bidding process will involve the steps along with timelines as mentioned in Bid Data Sheet.

1. To enable bidder to prepare the proposal, a list of attached document formats have been provided in Section-IV-Bidding Forms.
2. Any request for clarification should be initiated in writing and addressed as mentioned in ITB and specified in BDS.
3. At any time before the submission of proposals, the Procuring Agency may, for any reason, whether at its own initiative or in response to a clarification requested by any bidder, modify the documents by amendment. The clarification on bids or any amendments of the bid will be intimated to all Bidders listed with the Procuring Agency for this Bid in writing. The Procuring Agency may as per Punjab PPRA Rules extend the deadline for the submission of proposals as mentioned in ITB.

2. Bidding Procedure for Evaluation of Bids

The bid submitted by the Bidder will be evaluated as per the following procedure:

1. First level of evaluation will be based on mandatory criteria. Only those firms who fulfil mandatory criteria will qualify for next round of evaluation.
2. Second level of evaluation will be conducted on the basis of the Technical Bid, which will include compliance to technical specifications/ requirements of each item and other factors mentioned in this bid document.
3. Bids that pass technical evaluation will be opened for financial evaluation.

(i) Procedure for opening of Bids

Single stage two envelopes, procedure would be adopted for opening of bids. The detailed procedure and terms are as follows:

- a) The bid shall comprise a single package containing two separate envelopes. Each envelope shall contain separately the Financial Proposal and the Technical Proposal.
- b) The envelopes shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion.
- c) Initially, only the envelope marked "TECHNICAL PROPOSAL" shall be opened in front of the Purchase Committee members and representatives of bidders, who wish to attend the opening of technical bids.

- d) The Technical Proposals shall be evaluated for compliance to technical requirement of this document, without reference to the price and reject proposal which does not conform to the specified requirements as listed in said Sections of this Bid Document.
- e) The envelope marked as "FINANCIAL PROPOSAL" shall be opened in front of Purchase Committee members and the representatives of qualified bidders after the technical evaluation who have scored at least 70% aggregate marks.
- f) The Financial Proposal of bids found technically nonresponsive or unqualified shall be returned un-opened to the respective bidders.
- g) The opened financial proposals will be evaluated, and amount totals will be checked/ verified for correctness as well as other compliance requirements will be checked.
- h) The technical and financial evaluation scores will be added with a weightage of 80% for technical score and 20% for financial score. The total evaluation score will be calculated as per the formula given under "Formula for Total Evaluation Score Calculation".
- i) The bid scoring the highest total evaluation score and compliant in all respects will be considered for the award of procurement order.

3. Evaluation Procedure & Criteria

(i) Technical Evaluation

There would be a two-stage technical evaluation; Stage-1 technical evaluation of technical bids will be done as per information tabulated under the "Stage-1: List of Mandatory Documents". Detailed technical evaluation of those firms would be performed which would qualify the tabulated mandatory technical evaluation criteria. The Stage-2 detailed technical evaluation would then be performed by the Purchase Committee as per the scoring criteria laid out under "Stage-2: Detailed Technical Evaluation Scoring Criteria".

Stage-1: List of Mandatory Documents for Eligibility

Technical Bids must have the following documents attached to be considered as eligible for further technical evaluation:

S #.	Item Description	Documents
1	Company/Firm must be in operation minimum for 3 years.	Valid certificate from concerned regulator/ authority.
2	Registration of NTN with Federal Board of Revenue (FBR) and having Active Taxpayer status.	Valid NTN with Federal Board of Revenue (FBR). Having Active Taxpayer status.
3	Registration of General Sales Tax (GST)/ Provincial Sales Tax (PST) with relevant revenue authority(ies) and having Active Taxpayer status.	Valid status and registration with relevant revenue authority(ies) for GST/PST.

4	The bidder should have fully operational office/ Head office in Islamabad/Rawalpindi. Company with International office will have an edge.	Address to be indicated on firm's letterhead
5	Affidavit, on Rs.100/- judicial stamp paper, that Bidding firm is not Blacklisted and involved in any active litigation against Pakistan anywhere.	Affidavit
6	Similar completed and on-going procurements of quoted goods/ equipment for the last three years	List of Clients
7	Bidder has technical personnel to provide services during active period of Contract.	List of technical personnel in the firm.
8	Authorization Certificate, in case of Bidding Firm represents some Manufacturer/ Principal for the goods, equipment & services required by the Procuring Agency in this Bidding Document.	Authorization Certificate of Manufacturer/ Principal
9	Compliance Data sheet/ Checklist shall be provided in the format specified in Section IV: Bidding Forms. Unless the submission of the same, bid shall be considered rejected straight away.	Compliance Data Sheet/ Checklist

The Bid that does not fulfil mandatory requirements shall not be eligible for further evaluation process and they will be given ZERO marks for entire Stage-2 of Technical Evaluation, irrespective of their proposal contents.

Stage-2: Detailed Technical evaluation scoring criteria

The Stage-2 detailed technical evaluation would be based on bidder's experience and capability to perform the contractual obligations as per the schedule of requirements. The detailed technical evaluation will be performed by the Procurement Committee and marks will be given as per the following scoring criteria:

Detailed Technical Evaluation Scoring Matrix

Sr.#	Scoring Criteria for Bidder	Max. Marks
1	Experience	40
(i)	Relevant experience in providing, installation and configuration of goods & equipment of similar nature & size for clients in Public, Private or Corporate Sector organizations - Each Project: 2 Marks (Maximum 10 Marks)	10
(ii)	Experience of installation, configuration, calibration, availability of local lab/expertise for error solving, maintenance. Proof of handling the clients Each Project: 2 Marks (Maximum 10 Marks)	10
(iii)	Financial Capability/ Strength/ Annual Turnover - Annual Turnover of Company for the last 2 years o More than PKR 100 Mill. = 10 Marks	10

	○ Between PKR 50Mill. and PKR 100 Mill. = 7 Marks ○ Between PKR 10Mill. And PKR 50 Mill. = 3 Marks OR Number of Clients in Public and Private Sector • Number of Clients below 10 :3 Marks • Number of Clients 10-20 : 7 Marks • Number of Clients 20-30 :10 Marks	
(iv)	Manufacturer Authorization Certificate (Mandatory) = 10 Marks	10
2	Technical Resource Capability	10
(i)	Technical Resource Strength Technical Staff strength (5 or above) employees = 10 Marks Technical Staff strength between 2 and 5 employees = 07 Marks Technical Staff strength less than 2 employees = 05 Marks	10
3	Technical Bid Response	50
(i)	Technical Proposal/ Bid Response (Max. 50 marks) - Specification compliance of quoted goods/equipment= (Max 30 Marks) ○ Full compliance = 30 marks ○ Partial compliance = 15 marks ○ Non-compliance = 0 marks - Project Timeline for installation/ commissioning = (Max 10 marks) ○ For less than 6 weeks = 10 marks ○ Between 6-8 weeks = 7 marks ○ Above 8 weeks = 0 marks - Support Service (warranties, response time, onsite maintenance & technical support) = (Max 10 marks) ○ Warranties = 5 marks ○ Response Time for Support Service = 5 marks	50
	TOTAL TECHNICAL EVALUATION SCORE	100

The Bidders whose Total Technical Evaluation Score is 70% or above will qualify for opening of financial bids.

- **PROVISO:** Provided that if NONE or ONLY ONE (single) bidder exceeds the 70% pass mark, then the Procuring Agency SHALL decrease the mandatory requirements' Pass Mark limit to 60%. In other words, if TWO or more bidders exceed 70%, then the Pass Mark will NOT be decreased to 60%.
- If Pass Marks are decreased to 60%, then ALL bidders with scores greater than or equal to 60% shall be considered as qualified for Stage 2 of Technical Evaluation.

(ii) Financial Evaluation

Financial bids of only those bidders who qualify/ pass Stage-1 and score at least 70% (or as per PROVISO) in Stage-2 of technical evaluation would be opened before the bidders' representatives who wish to attend the financial proposal opening. All amounts and total price calculations will be checked for correctness. In case of any

discrepancy in calculations, the corrections in totals will be made as per mentioned in ITB

Decision of the Procurement Committee will be binding on all concerned and in no case will be challengeable at any forum.

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Letter of Bid

The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

Date: **[insert date (as day, month and year) of Bid Submission]**

To: **[insert complete name of Procuring Agency]**

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 6).
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 2.
- (c) We have not been suspended nor declared ineligible by the Procuring Agency.
- (d) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods, Equipment & Services: **[insert a brief description of the Goods, Equipment and Services].**
- (e) Our bid shall be valid for a period of **[specify the number of calendar days]** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (f) If our bid is accepted, we commit to obtain a performance security/ performance guarantee in accordance with the Bidding Documents.
- (g) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 2.3(d).
- (h) We, including any of our subcontractors or manufacturers or suppliers or Principals for any part of the contract, have not been declared ineligible by the Procuring Agency, under the Procuring Agency's country laws.
- (i) We are not a government owned entity.
- (j) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

- (k) We understand that you are not bound to accept the highest scoring or lowest cost evaluated bid or any other bid that you may receive.
- (l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.
- (m) We also declare that the Government of Pakistan or Provincial Governments have not declared us ineligible on charges of engaging in corrupt, fraudulent, collusive, or coercive practices.

Name of the Bidder* **[insert complete name of person signing the Bid]**

Name of the person duly authorized to sign the Bid on behalf of the Bidder** **[insert complete name of person duly authorized to sign the Bid]**

Title of the person signing the Bid **[insert complete title of the person signing the Bid]**

Signature of the person named above **[insert signature of person whose name and capacity are shown above]**

Date signed **[insert date of signing]** day of **[insert month]**, **[insert year]**

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

Affidavit

I/We, the undersigned solemnly state that:

- 1) We have read the contents of the Bidding Document and have fully understood it.
- 2) The Bid being submitted by the undersigned complies with the requirements enunciated in the bidding documents.
- 3) The Goods, Equipment and Services that we propose to provide under this contract are eligible Goods, Equipment and Services within the meaning of Clause 2 and Clause 3 of the ITB.
- 4) The Goods, Equipment and Services that we propose to provide under this contract conform to the specifications and standards specified in Section VI, Schedule of Requirements.
- 5) The undersigned are solvent and competent to undertake the subject contract under the Laws of Pakistan.
- 6) The undersigned have not paid nor have agreed to pay, any Commissions or Gratuities to any official or agent related to this bid or award or contract.
- 7) The undersigned are not blacklisted or facing debarment from any Government, or its organization or project.
- 8) The undersigned has no dispute anywhere in the country regarding supplies & services.

We affirm that the contents of this affidavit are correct to the best of our knowledge and belief.

Signed

Note: The affidavit must be on judicial stamp paper (Rs. =500/-) by the Executive of the Firm & attested by Oath Commissioner.

Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

1. Bidder's Name <i>[insert Bidder's legal name]</i>
2. Bidder's year of registration: <i>[insert Bidder's year of registration]</i>
3. Bidder's Address: <i>[insert Bidder's legal address]</i>
4. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
5. Manufacturer/ Principal's Information (if different from Bidder) Name: <i>[insert Manufacturer/ Principal's name]</i> Address: <i>[insert Manufacturer/ Principal's Address]</i>
5. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Letter of Bid on Letterhead ☐ Registration Certificate, NTN, GST, ATL status as proof of the legal entity named above, in accordance with ITB 2. ☐ Letter of Manufacturer/ Principal's Authorization. ☐ Affidavit (non-blacklisted). ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 2.1.

Bidder's JV Members Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. Following table shall be filled in for the Bidder and for each member of a Joint Venture. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

Page _____ of _____ pages

1. Bidder's Name <i>[insert Bidder's legal name]</i>
2. Bidder's JV Member's name: <i>[insert JV's Member legal name]</i>
3. Bidder's JV Member's country and year of registration: <i>[insert Bidder's country and year of registration]</i>
4. Bidder's JV Member's Address: <i>[insert Bidder's legal address]</i>
5. Bidder's JV Member's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
6. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Registration Certificate, NTN, GST, ATL status as proof of the legal entity named above, in accordance with ITB 2. ☐ Affidavit (non-blacklisted). ☐ List of Director(s) and beneficial ownership.

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods, Equipment and Services specified by the Procuring Agency in the Schedule of Requirements.]*

Price Schedule: Goods, Equipment & Services

User Note: This form is to be filled by the Bidder and shall submit with Financial Proposal.

Name of the Firm:

Bid. Ref.:

Date of opening of Bid.

S. No.	Name of the Goods, Equipment or Service	No. of Units	Unit Price	Total Quoted Price	Applicable GST/ PST	Total Price (Inclusive of GST/PST)
1	2	3	4	5	6	7
				3x4		5+6
1						
2						
3						
4						
	GRAND TOTAL:					

A) FINAL TOTAL QUOTED PRICE: -----
(Both in figures and words)

Signature: -----

Designation: -----

Date: -----

Official Stamp: -----

Form of Bid Security

(Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Guarantor letterhead]

Beneficiary: *[Procuring Agency to insert its name and address]*

Bid Reference: *[Procuring Agency to insert reference number/name for the Invitation for Bids/ Tender Notice]*

Date: *[Insert date of issue]*

BID GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[insert name of the Bidder]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of _____ *[insert brief description of Goods, Equipment and Services]* under Invitation for _____ *[Insert name of the Bid]*

Furthermore, we understand that, according to the Beneficiary's conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- (a) has withdrawn its Bid during the period of bid validity set forth in the Applicant's Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security/ performance guarantee, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security/ performance guarantee issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful bidder, upon the thirty days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

[Signature(s)]

Note: *All italicized text is for use in preparing this form and shall be deleted from the final product.*

Manufacturer/ Principal's Authorization

*[The Bidder shall require the Manufacturer/ Principal to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer/ Principal and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer/ Principal. The Bidder shall include it in its bid, if so, indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

Bid Ref: *[insert number/name of bid document]*

To: *[insert complete name of Procuring Agency]*

WHEREAS

We *[insert complete name of Manufacturer/ Principal]*, who are official Manufacturer/Principal of*[insert type of Goods/ Equipment manufactured]*, having factories/ facilities at *[insert full address of Manufacturer/ Principal's factories/facilities]*, do hereby exclusively authorize *[insert complete name of Bidder]* to submit a bid, the purpose of which is to provide the following Goods, Equipment and Services manufactured by us *[insert name and or brief description of the Goods and Equipment]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and support in accordance with respect to the Goods and Equipment offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer/ Principal]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer/ Principal]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Performance Security/ Performance Guarantee

Bank Guarantee

[This Form, when required, shall only be completed by the successful Bidder after contract award.]

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Procuring Agency]*

Date: *_ [Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *_ [insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[Insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of *_ [insert name of contract and brief description of Goods, Equipment and Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

[signature(s)]

Note: *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.*

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance and denominated in the currency of the Contract acceptable to the Beneficiary.

² Insert the date thirty days after the expected completion date as per the Contract. The Procuring Agency should note that in the event of an extension of this date for completion of the Contract, the Procuring Agency would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Procuring Agency might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to an extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Compliance Data Sheet/ Checklist

S. No.	Description of Item/ Document Title	Compliance Status	Page No. in Bid/Proposal

Note: List all documents/ required information that are attached with both Technical & Financial Proposals. This Compliance Data Sheet/ Checklist should be attached with the Technical Proposal.

Section V. Eligible Countries

Eligibility for the Provision of Goods/ Equipment, Works and Services

As an exception, firms of a Country or goods/ equipment manufactured or works and services performed in a Country may be excluded if:

- 1) As a matter of law or official regulation, **the Procuring Agency's Country prohibits commercial relations with that Country**, provided that the Procuring Entity is satisfied that such exclusion does not preclude effective competition for the supply of the Goods/ Equipment or Services/ Works required, or
- 2) By an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Procuring Agency's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.
- 3) For the information of Procuring Agency's and bidders, at the present time firms, goods, equipment, works and services from the ***following countries are excluded*** from this bidding:
 - **Israel**
 - **India**
- 4) The bidder shall provide all the goods/ equipment/ deliverables/ services mentioned in Schedule of Requirements of made in the country of origin (Country of Manufacturer/ Principal) of the offered / quoted goods, works, services, equipment & all allied accessories/ deliverables. Goods, Equipment Services, Works or any of its unit components/ deliverables quoted by the bidders must not be rendered from or manufactured in Israel or India. Furthermore, the Bidder / Principal must not have any linkages with Israel or India regarding ownership, sponsoring and financing. In case any item/ deliverable may not confirms its country of origin, the bidder will provide the relevant documents to confirm the make and manufacturer. (if any item/ deliverable during course of execution may not confirm about its make then bidder shall provide an affidavit in this regard).
- 5) The bidder shall provide Undertaking of no business relations, manufacture, technical assistance etc. from Israel & India pertaining.

PART 2 – Schedule of Requirements

Section VI. Schedule of Requirements

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GENERAL REQUIREMENTS

1. Introduction

PMAS-AAUR is Public Sector University with its main campus at Rawalpindi. It is in the process of establishing a state-of-the-art National Centre for Industrial Biotechnology (NCIB). NCIB will conduct advanced research that would enable the industry to produce marketable innovative bio-products indigenously that are used for cancer treatments as well as other commercial uses.

For this purpose, procurement, **PILOT CHEMICALS/FEEDSTOCK/UTILITY/REAGENTS AND KITS for PSDP funded Project "ENCIB"** the university's main campus in Rawalpindi.

2. General

All goods mentioned below should be brand new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided for otherwise in the contract. The bidder shall get the approval for the quality of the goods from the Procuring Agency, where applicable. For the specialized items (i.e., Analytical Standards, HPLC grade, MS grade), the bidder shall provide the Certificate of Authenticity from the manufacturer as well as accredited laboratory.

3. Standards

The quoted goods at the time of technical evaluation and on delivery, shall conform to the standards as prescribed in specifications, prior approval and in the Technical Evaluation Criteria. The said conformance shall lead to subsequent issuance of the Acceptance Certificate to the Supplier by the Procuring Agency.

4. Packing

The Supplier shall provide such packing/ protection of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing/ protection shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

5. Spare Parts/ After Sales Service

- 5.1. During warranty period, replacement/ provision of spare parts shall be free of cost for each item from the Contractor (where applicable)
- 5.2. Post-warranty/ After sale service with spare parts shall be 12 months for each item from the Contractor, subsequent to period mentioned in para 5.1 above. (Where applicable).

LIST OF GOODS, EQUIPMENT& SERVICES INCLUDING TECHNICAL SPECIFICATIONS

NOTE: items must be quoted as LOT wise and Copy Paste of specification of Tender Documents will not be entertained

LOT-A		LIST OF CHEMICALS FOR MICROBIAL CULTURING			
Fermentation					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	Agar powder	Technical bacteriological grade, microbiology tested, suitable for plant cell culture, granular	KemicaS/ PhytoTech Labs/ BioWORLD / Equivalent	500g	8
2.	Bacteriological peptone	Suitable for Microbiology, Grade 200	BD Biosciences/ PhytoTech Labs/ BioWORLD /equivalent	500g	6
3.	Casein Hydrolysate	General Lab grade, suitable for microbiology, Nitrogen source in culture media	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	4
4.	Cell Haemocytometer	for microbial cell counting, Standard Slide	Bio-Rad/ Fisher Chemical scientific/equivalent	1	5
5.	Corn Steep Liquor	For biological fermentation	Gulshan polyols limited / equivalent	250kg	20
6.	D- (+)-Glucose (Dextrose)	Anhydrous, 96%	KemicaS/ PhytoTech Labs / BioWORLD/equivalent	1Kg	8
7.	Dextrose powder	Commercial grade for industrial setup	PhytoTech/Oxoid/ Equivalent	25kg	20
8.	LB Agar (Miller)	Highly referenced nutrient-rich microbial growth powder medium with Agar, suitable for microbial culture.	BD Biosciences/ PhytoTech Labs/ BioWORLD/ Equivalent	500g	10
9.	LB broth (Lennox)	Highly referenced microbial growth powder medium, low salt, suitable for salt-sensitive E. coli culture	BD Biosciences/ PhytoTech / Oxoid / Equivalent	1kg	4
10.	LB Broth (Miller)	Highly referenced nutrient-rich microbial growth powder medium, suitable for microbial culture.	BD Biosciences/ PhytoTech Labs/ BioWORLD/ Equivalent	500g	10
11.	Monobasic potassium phosphate	Powder, suitable for cell culture, suitable for insect cell culture, suitable for plant cell culture, ≥99.0%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	3
12.	Nutrient agar	Suitable for microbiology, non-sterile, Powder	BD Biosciences/ PhytoTech/ Avantor/VWR/ Equivalent	1kg	6
13.	Nutrient broth	Microbiologically tested, non-sterile, Powder	BD Biosciences/ PhytoTech/ Avantor/VWR/ Equivalent	500g	3
14.	Potato dextrose agar	Microbiological grade, powder	BD Biosciences/ PhytoTech/ Avantor/VWR/ Equivalent	500g	2
15.	Potato dextrose broth	Microbiological grade, powder	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	4
16.	Sucrose	For molecular biology, ≥99.5%(GC)	PhytoTech/Avantor/VWR/ Equivalent	500g	3
17.	Trypticase, soy broth, TSB	Microbiological culture suitable, Suitable for use in Halal certified processes	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500g	2
18.	Yeast extract	for use in microbial growth medium, for technical purposes	BD Biosciences/ PhytoTech Labs/ BioWORLD/ Equivalent	500g	10
19.	Hydrogen peroxide for catalase test	3%, suitable for microbiology	TCI Chemicals / PhytoTech/Avantor/VWR/ equivalent	100ml	1

LOT-B		LIST OF CHEMICALS FOR PLANT/ANIMAL CELL CULTURING			
General Purpose Chemicals					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	Bovine Serum Albumin (BSA)	≥98% (purity) lyophilized powder	Roth / VWR/ Fisher/ equivalent	100g	2
2.	Fetal Calf Serum (FCS/FBS)	USDA approved, sterile-filtered, suitable for cell culture	TCI Chemicals/ Life technologies / Equivalent	500ml	5
3.	Hanks Balanced Salt Solution (HBSS)	Modified, with sodium bicarbonate, without phenol red, liquid, sterile-filtered, suitable for cell culture	Cassion Lab/ Equivalent	500ml	3
4.	Heat Inactivated FBS	From USDA approved countries, Heat Inactivated, sterile-filtered, suitable for cell culture	PhytoTech/Avantor/VWR/ life technologies/ Equivalent	500ml	3
5.	HEPES Buffer	≥99.5% (titration), suitable for cell culture	Gibco life technologies / Equivalent	500g	3
6.	PBS tablets	For molecular biology, suitable for cell culture,	Calbiochem/Avantor/VWR/ equivalent	100 tablets	4
7.	RPMI 1640 media	With L-glutamine and sodium bicarbonate, liquid, sterile-filtered, suitable for cell culture	Gibco life technologies / Equivalent	100ml	5
8.	Trypsin EDTA	Cell culture mammalian: suitable	TCI Chemicals / PhytoTech/ Avantor/VWR/ equivalent	100ml	2
9.	2-Naphthaleneacetic acid	Crystals, For Plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500mg	2
10.	Peat moss	For tissue culture plants	TCI Chemicals / PhytoTech/ Avantor/VWR/ equivalent	1kg	5
11.	6-Benzylaminopurine	Powder, Plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500 mg	1
12.	Absciscic acid	BioReagent, suitable for plant cell culture	TCI Chemicals /PhytoTech/ Avantor/VWR/ Equivalent	1g	1
13.	Amino acid complex	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	100 ml	1
14.	coronatine	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1 mg	1
15.	Dichlorophenoxyacetic acid (2,4-D)	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	100g	1
16.	Gibberellic acid	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	5g	1
17.	Indole-3-butyric acid	BioReagent, suitable for plant cell culture	TCI Chemicals /PhytoTech/ Avantor/VWR/Equivalent	5g	1
18.	Kinetin	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	5g	1
19.	Magnesium stearate	BioReagent, suitable for plant cell culture	TCI Chemicals/ PhytoTech /Equivalent	1 kg	2
20.	Methyl jasmonate	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	5 ml	1
21.	MS Basal Medium	For Plant Tissue Culture	Fisher/ PhytoTech/ equivalent	1 Kg	10
22.	Naphthalene acetic acid	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	25g	1
23.	Oxalic Acid Dihydrate	General Lab grade, Suitable for purification process	TCI Chemicals/ Equivalent	1 kg	2
24.	Picloram	Powder/ Plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500mg	2
25.	Salicylic acid	Suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	90ml	1

26.	Sodium tripolyphosphate	General Lab grade, Suitable for purification of clay	TCI Chemicals/ Scharlau/ Equivalent	500 g	2
27.	Sorbitol	BioReagent, suitable for plant cell culture	TCI Chemicals/ PhytoTech Equivalent	1 kg	2
28.	Stearic Acid	BioReagent, suitable for plant cell culture	TCI Chemicals/ PhytoTech Equivalent	1 kg	2
29.	TDZ	BioReagent, suitable for plant cell culture	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1g	1

LOT-C		LIST OF CHEMICALS FOR Specialized Grade			
Specialized Grade Chemicals					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	ABTS/ 2,2'-azino-bis-(3-ethylbenzothiazoline-6-sulfonic) acid	Bioreagent, For enzyme assay,	Macklin/VWR/equivalent	1 g	1
2.	Ammonium sulphate	for molecular biology, ≥99.0%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	4
3.	CMC Carboximethyl cellulase	Enzyme Substrate	VWR/BioWORLD / Equivalent	250g	1
4.	Crystalline phenol	Microbiological grade	VWR/VWR/BioWORLD / Equivalent	1 kg	1
5.	DMSO	for molecular biology, ≥99.9%, Liquid	BioWORLD/PhytoTech/Avant or/VWR/ Equivalent	1.5L	3
6.	DNS (3,5-dinitrosalicylic acid)	Bioreagent, For enzyme assay,	Macklin/VWR/BioWORLD / Equivalent	1g	1
7.	EDTA tetrasodium salt	BioUltra, ≥99.0% (KT)	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	5
8.	Ethanol, Absolute	Molecular biology grade	KemicaS/ PhytoTech Labs/ BioWORLD/Equivalent	2.5L	10
9.	Fructose	≥99%, Powder, HPLC suitable	TCI Chemicals / PhytoTech/Oxoid / Equivalent	500g	4
10.	Glycerol	For molecular biology, ≥99.0%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	2.5L	12
11.	Isopropanol	Bioreagent, For molecular biology, ≥99.5%	KemicaS/ PhytoTech Labs/ BioWORLD/equivalent	2.5L	10
12.	Magnesium chloride	Anhydrous, ≥98%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	3
13.	Magnesium sulfate (MgSO4)	Anhydrous, reagent grade, ≥97%	TCI Chemicals / PhytoTech/ Avantor/VWR/ equivalent	500g	2
14.	Methanol	Anhydrous, 99.8%	KemicaS/ PhytoTech Labs/ BioWORLD/equivalent	2.5L	16
15.	Pectin	Enzyme Substrate	Macklin/VWR/BioWORLD / Equivalent	25g	1
16.	Phytohemagglutinin (PHA)	Lyophilized powder	TCI Chemicals /Biowest Germany/ equivalent	5ml	3
17.	pNPG (p-nitrophenyl-beta-glucopyranoside)	Enzyme Substrate	Macklin/VWR/BioWORLD / Equivalent	500mg	1
18.	Potassium chloride	ACS reagent, 99.0-100.5%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	500g	2
19.	Salicin	Enzyme Substrate	Macklin/VWR/BioWORLD / Equivalent	1ml	1
20.	Sodium Chloride	For molecular biology, DNase, RNase, and protease free, ≥99%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	3

21.	Sodium dodecyl sulphate	Bioreagent, suitable for electrophoresis, for molecular biology, $\geq 98.5\%$ (GC)	KemicaS/ PhytoTech Labs/ BioWORLD / equivalent	500g	1
22.	TEMED	Bioreagent, suitable for electrophoresis, for molecular biology, $\geq 99\%$ (GC)	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	50mL	3
23.	Triton X100	Non-ionic, for molecular biology	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	500ml	2
24.	Tween 20	For molecular biology, viscous liquid	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	100ml	2
25.	Tween 80	PROTEIN GRADE Detergent, 10% Solution, Sterile Filtered. Non-ionic detergent	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	100 ml	4
26.	Veratryl alcohol	Microbiological grade	BioWORLD / Equivalent	100g	1

LOT-D		LIST OF CHEMICALS FOR GENERAL LAB GRADE			
General Lab Grade Chemicals					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	Alginate acid sodium salt	General Lab grade, Algae (marine)	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	6
2.	Avicel	General Lab grade	Megazyme/milesienftific / Equivalent	10 g	1
3.	Benzoyl peroxide	General Lab grade, crystals	TCI Chemicals / PhytoTech / Avantor/VWR/ Equivalent	50g	2
4.	BioChar	General Lab grade	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	4
5.	Caprylyl glycol (1,2-Octanediol)	General Lab grade, 98%, Solid	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500g	2
6.	Ferric Chloride	Reagent grade, 97%	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	2
7.	Manganese sulfate	General Lab grade	VWR/ BioWORLD / Equivalent	500g	1
8.	o-phosphoric acid	General Lab grade, 85%,	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500ml	2
9.	p NP / 4-Nitrophenol	General Lab grade	Macklin/VWR/BioWORLD / Equivalent	25g	1
10.	Picric acid	moistened with water, ≥98%, powder or crystals (with a top layer of Liquid)	TCI Chemicals / PhytoTech/ Avantor/VWR/equivalent	100g	5
11.	p-nitrophenyl – Palmitate	General Lab grade	Macklin/VWR/BioWORLD / Equivalent	1g	1
12.	Potassium phosphate dibasic (K2HPO4)	Reagent grade, ≥98.0%	TCI Chemicals / PhytoTech/ Avantor/VWR/ equivalent	1kg	3
13.	Potassium sodium tartrate)	General Lab grade	Macklin/VWR/Equivalent	1 kg	1
14.	Sodium acetate	General Lab grade	VWR/Macklin/ equivalent	1kg	1
15.	Sodium carbonate	Powder, ≥99.5%, ACS reagent	KemicaS/ PhytoTech Labs/BioWORLD/ Equivalent	1kg	3
16.	Sodium Hydroxide	Reagent grade, ≥98%, pellets (anhydrous)	KemicaS/ PhytoTech Labs/ BioWORLD/ equivalent	1kg	3
17.	Sodium malonate	General Lab grade	Macklin/VWR/ equivalent	100g	1
18.	sodium sulphite	General Lab grade	VWR/BioWORLD / Equivalent	1 kg	1
19.	Sodium tartrate	General Lab grade	VWR/BioWORLD / Equivalent	500g	1
20.	Tryptophan	Reagent grade, ≥98% (HPLC)	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500g	3
21.	Calcium phosphate	General Lab grade	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	250g	1

22.	chitosan	General Lab grade salt	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	2
23.	copper chloride	General Lab grade salt	KemicaS/PhytoTech Labs/ BioWORLD/ Equivalent	25g	4
24.	Ferrous sulphate	General Lab grade	KemicaS/PhytoTech Labs/ BioWORLD/ Equivalent	500g	1
25.	Glass Beads, (500 to 750um)	Acid-washed	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	500g	6
26.	Gold (III) chloride trihydrate	General Lab grade salt	TCI Chemicals / PhytoTech/ Avantor/VWR / Equivalent	5g	2
27.	Iron (III) chloride	General Lab grade salt	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	5g	10
28.	Magnesium Sulphate	Anhydrous Powder	TCI Chemicals / PhytoTech/ jk enterprises/ Avantor/VWR/ Equivalent	1kg	4
29.	Manganese sulphate	General Lab grade	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	1kg	1
30.	PEG (High molecular weight)	General Lab grade salt	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	2
31.	PEG (Low molecular weight)	General Lab grade salt	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	2
32.	Potassium chloride	General Lab grade	KemicaS/PhytoTech Labs/ BioWORLD/ Equivalent	1kg	1
33.	Silver nitrate	General Lab grade salt	KemicaS/PhytoTech Labs/BioWORLD/Equivalent	100g	3
34.	Zinc acetate dihydrate	General Lab grade salt	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	25g	4

LOT-E		LIST OF CHEMICALS FOR ANALYTICAL STANDARDS			
Analytical Standards					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	6-Gingerol	Analytical standard, ≥94.0% (HPLC), suitable for gas chromatography (GC) and HPLC (Long Expiry)	Cayman Chemical/ equivalent	25mg	2
2.	6-Shogaol	analytical standard, ≥90.0% (HPLC), suitable for gas chromatography (GC) and HPLC (Long Expiry)	Cayman Chemical/ equivalent	5mg	2
3.	Ajoene	Analytical standard, Purity:>98% HPLC grade (Long Expiry)	Cayman Chemical/ fisher scientific/ Pharm affiliates/ equivalent	1 mg	2
4.	Allicin	Analytical standard, Purity:>98% HPLC grade (Long Expiry)	VWR/ Fisher Chemical / equivalent	1mg	2
5.	Alliin	analytical standard, ≥90.0% (HPLC), suitable for gas chromatography (GC) and HPLC (Long Expiry)	VWR/ Fisher Chemical / equivalent	10mg	2
6.	Bisdemethoxycurcumin-curcumin	analytical standard, ≥95.0% Suitable for gas chromatography (GC) and HPLC	Cayman Chemical/ equivalent	20 mg	2
7.	Cannabidiol (CBD)	1.0 mg/mL in methanol, analytical standard, HPLC grade (Long Expiry)	Cayman Chemical/ equivalent	1 mL	4
8.	Cannabigerolic acid. (CBGA)	Reference Substance, Analytical standard, HPLC grade (Long Expiry)	Cayman Chemical/ equivalent	5 mg	2
9.	Curcumin	analytical standard, ≥94.0% (HPLC), suitable for gas chromatography (GC) and HPLC (Long Expiry)	Cayman Chemical/ equivalent	10mg	10
10.	Desmethoxycurcumin (DMC)	≥98%, HPLC grade, powder, Analytical standard	Cayman Chemical/equivalent	20 mg	2

11.	ICP multi-element standard solution IV	Certified Reference Material, Element standard solutions, high precision ICP-OES grade	Cayman Chemical/ equivalent	100 ml	2
12.	Kaempferol	≥97%	Cayman Chemical/ Calbiochem/equivalent	25 mg	2
13.	Limonene	≥97% (HPLC), Analytical standard, (Long Expiry) HPLC grade	Cayman Chemical/ equivalent	50ml	2
14.	Menthol	Analytical standard, ≥96.0% (HPLC) (Long Expiry)	Cayman Chemical/equivalent	100 mg	2
15.	Olivetolic Acid	Analytical standard, Polar Lipids, powder (Long Expiry)	Cayman Chemical/ equivalent	5 mg	2
16.	Quercetin	≥95% (HPLC), solid	VWR/Cayman Chemical/ equivalent	10 g	2
17.	Sennosides A	Analytical standard, ≥96.0% (HPLC) (Long Expiry)	Cayman Chemical/ equivalent	25 mg	2
18.	Sennosides B	Analytical standard, ≥96.0% (HPLC) (Long Expiry)	Cayman Chemical/ equivalent	25 mg	2
19.	Tetrahydrocannabinol (THC)	1 mg/mL (Degassed Methanol), certified reference material, Analytical standard, HPLC grade	Cayman Chemical/ equivalent	1 mL	3
20.	Thymol	≥97% (HPLC), Analytical standard, (Long Expiry)	Cayman Chemical/ equivalent	100 grams	2
21.	Vinblastine	≥97% (HPLC), Analytical standard, (Long Expiry)	Cayman Chemical/ equivalent	5 mg	2
22.	Vincristine	Analytical standard/Reference Material, 95% (HPLC), powder or crystals (Long Expiry)	Cayman Chemical/ equivalent	1 mg	2

LOT-F		LIST OF CHEMICALS FOR HPLC, GC-MS, LC-MS, & ICP-MS GRADE			
HPLC, GC-MS, LC-MS, & ICP-MS Grade Reagents					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	Acetic acid	≥99.8% (acidimetric), Suitable for LCMS	VWR/ Fisher Chemical / KemicaS/equivalent	1 L	4
2.	Acetic acid glacial	ACS reagent, ≥99.7% Suitable for HPLC	Fisher Chemical / Cayman Chemical/ KemicaS/equivalent	2.5 Liter	1
3.	Acetone	HPLC Plus, for HPLC, GC, and residue analysis, ≥99.9%	Fisher Chemical / Cayman Chemical/ KemicaS/ equivalent	1.0 L	5
4.	Acetonitrile	suitable for HPLC, ≥99.9%	VWR/ Fisher Chemical /KemicaS/equivalent	4L	6
5.	Acetonitrile	LC-MS grade	VWR/ Cayman Chemical/ Fisher Chemical / equivalent	2.5L	10
6.	Ammonium acetate	LC/MS grade	VWR/ Fisher Chemical / equivalent	1 kg	3
7.	Butan-1-ol,	Suitable for GC-MS	VWR/ Fisher Chemical / equivalent	4L	1
8.	Chloric acid (HClO ₃)	Suitable for ICP	VWR /PhytoTech/ equivalent	500ml	1
9.	Chloroform	Suitable for GC-MS	VWR/ Fisher Chemical / equivalent	2.5 L	3
10.	Cyclohexane	Suitable for GC-MS	VWR/ Fisher Chemical /equivalent	2.5L	5
11.	Diethyl Ether	Suitable for GC-MS	VWR/Cayman Chemical/ equivalent	2.5 L	5
12.	Ethanol	suitable for HPLC & MS, ≥99.9%,	VWR/Cayman Chemical/ equivalent	2.5L	20

13.	Formic acid	99.0+%, Suitable for LC-MS	Fisher Chemical / Cayman Chemical/ equivalent	2.5 L	3
14.	Hexane	suitable for HPLC, ≥97.0%	VWR/ Fisher Chemical / equivalent	2.5 L	5
15.	Hydrochloric acid	for analysis HPLC grade	Sharlu, Fisher Chemical / Cayman Chemical/ equivalent	4 L	3
16.	Hydrochloric acid (HCL)	Suitable for LC MS	VWR/PhytoTech/ equivalent	2.5 L	3
17.	Hydrogen peroxide (H₂O₂)	30%, Stabilized	VWR/BioWORLD equivalent	2.5L	3
18.	Isopropanol	suitable for HPLC, 99.9%	VWR/ Fisher Chemical / equivalent	4 L	6
19.	Isopropanol, Optima®	suitable for LC/MS, 99.9%	Fisher Chemical / Cayman Chemical/equivalent	2.5L	10
20.	Methanol	≥99.9%, suitable for LC/MS & GCMS	VWR/ Fisher Chemical/ Cayman Chemical/ equivalent	2.5L	30
21.	Nitric acid (HNO₃)	Suitable for GCMS	VWR/Sharlu / equivalent	2.5L	5
22.	Orthophosphoric acid,	suitable for HPLC, 85%	VWR/Cayman Chemical/ equivalent	1L	1
23.	Petroleum ether	Suitable for GCMS, ACS reagent,	VWR/ Fisher Chemical / equivalent	4L	3
24.	Potassium dihydrogen orthophosphate	certified reference material, For HPLC	Fisher Chemical /Cayman Chemical / equivalent	1 kg	1
25.	Potassium sulfate	ACS reagent, ≥99.0%, powder, For HPLC,	Fisher Chemical /Cayman Chemical/ equivalent	500 grams	1
26.	Sodium dihydrogen orthophosphate dihydrate	Suitable For HPLC,	Fisher Chemical / Cayman Chemical/ equivalent	500 grams	1
27.	Sodium hydroxide	46-51 % solution, HPLC,	VWR/Cayman Chemical/ equivalent, Sharlu	2.5 L	3
28.	Sodium sulfate anhydrous	99+%, extra pure, For HPLC,	Fisher Chemical/ Cayman Chemical/ equivalent	1KG	1
29.	Water, for HPLC	Contains 0.1 % (v/v) formic acid, for UHPLC, HPLC, LC-MS grade,	VWR/Cayman Chemical/ equivalent	4L	25
30.	Water, for ICP-MS	Suitable for ICPMS	VWR/ equivalent	2.5L	10

LOT-G		LIST OF CHEMICALS FOR COSMECEUTICAL GRADE			
Cosmeceutical Grade Chemicals					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	Bentonite	Powder	TCI Chemicals / Avantor/VWR/ Equivalent	1 kg	5
2.	Bleach	General Lab grade		5L	5
3.	Cellulose	Cotton linters/ 500m, filaments	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500g	10
4.	Clinical Sprit	General Lab grade		1Ltr	20
5.	Ethanol	Analytical grade	Avantor/VWR/ Equivalent	1L	20
6.	Mannitol	D-Mannitol white powder, ≥98%pure	Oxoid/TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	1kg	5
7.	Methyl cellulose	Powder	Oxoid / Avantor/VWR/ Equivalent	1kg	5
8.	Polypropylene G800-200µm	Pellets for making Fibers	TCI Chemicals /Avantor/VWR/ Equivalent	1kg	10
9.	Polyvinyl pyrrolidone	Powder or crystals (or flakes), water soluble polymer	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	500g	1

10.	Starch	Soluble Powder	Lori industry/ TCI Chemicals/ Avantor/VWR/ Equivalent	1kg	10
11.	Whatman filter paper size 42	Circles, Cotton filters, diam. 47mm, pack of 100	VWR/ Tisch scientific	1 pack	3
12.	Gum Arabic	Powder	TCI Chemicals / Avantor/VWR/ Equivalent	1kg	5
13.	Ethanol USP	Food Grade	KemicaS/PhytoTech Labs/BioWORLD/ Equivalent	2.5L	10
14.	Rosemary oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	20ml	25
15.	Lavender oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceuticals	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	20ml	25
16.	Peppermint oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceuticals	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	20ml	25
17.	Eucalyptus oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/ Aroma Pharmacy/ Equivalent	20ml	25
18.	Jjoba oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/ Aroma Pharmacy/ Equivalent	140ml	15
19.	olive oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	500ml	15
20.	Orange oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	20ml	20
21.	Lemon oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	200ml	15
22.	Coconut oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/Aroma Pharmacy/ Equivalent	140ml	20
23.	Almond oil	Steam Distilled, essential oil, pharmaceutical grade, suitable for cosmeceutical formulations	Chiltan Pure/Go Natural/ Aroma Pharmacy/ Equivalent	140ml	20
24.	Bees wax	Subtle, Clean, Without smell yellow blocks	Chiltan Pure/ Equivalent	500g	15
25.	Xanthum gum	white or yellowish-white, free-flowing powder, soluble in water, suitable for cosmeceutical formulations	Abbioco Foods/ Equivalent	500g	6
26.	Petroleum Jelly	White Or Faintly Yellowish translucent soft odourless, Insoluble in water semisolid, Translucent,	Commercial Grade	1kg	100
27.	Black Salt	food grade	Himalayan pak mines/ equivalent	1kg	10
28.	Crude seed gum	Pharmaceutical disintegrant for tablets	altrafine gums/ equivalent	1kg	5
29.	Aloe vera gel	Cosmetic grade, transparent to Yellow-Green gel	Chiltan Pure/ Equivalent	100ml	100
30.	Glycerin	Industrial Grade, sweet and colourless, suitable for cosmeceutical formulations	Chiltan Pure/ Equivalent	150ml	30
31.	Vitamin E (400 mg)	Clear, colourless, viscous, oily liquid capsules, suitable for cosmeceutical formulations	Martin Dow/ Equivalent	100's	40

32.	Titanium di oxide	White colour powder, food additive, water soluble	Food Grade	25kg	1
33.	Gelatin	Stabilizer, gelling agent, coarse to fine powder, amber or white in colour	Jelly Wax/ equivalent	1kg	1
34.	Corn Strach	Food Grade, white powder no added colours, plant based	commercial Grade	1kg	20
35.	Isopropyl alcohol (99%)	FCC Grade	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	2.5L	5
36.	Citric Acid	Food Grade/ industrial grade		1kg	5
37.	Benzoyl peroxide [Gel 5 %w/w]	Pharmaceutical grade for cosmeceutical formulations	GlaxoSmithKline/Glitz Pharma/ Equivalent	40g	40
38.	Retinol	Pharmaceutical grade for cosmeceutical formulations	VWR/equivalent	1	2
39.	Salicylic acid	Pharmaceutical grade for cosmeceutical formulations	TCI Chemicals /PhytoTech/ Avantor/VWR/ Equivalent	90ml	1
40.	Caprylyl Glycol	Pharmaceutical grade for cosmeceutical formulations	Making Cosmetics/ Equivalent	500g	10
41.	Ammonium Chloride	food grade	daixichemicals/ equivalent	1kg	5
42.	Talc	White, Fine powder	Venator materials PLC/ TCI Chemicals /Fisher Scientific/ Equivalent	500g	10
43.	Talcum	White microfine powder	Venator materials PLC/ Avantor/VWR/ Equivalent	1kg	7
44.	Tween 20	Emulsifying agent	Lori industry/Refine chemical/PhytoTech/VWR/ Equivalent	2.5L	1

LOT-H		LIST OF KITS / UTILITY / REAGENTS FOR GENERAL PURPOSE			
General Purpose Kits and Reagents					
#	Chemicals	Specification	Brand	Unit Size	Qty.
1.	25 bp primer	used to identify specific sequences of DNA or RNA.	Avantor/VWR/ VWR/ Equivalent	25 bp	1000
2.	Acridine orange dye	Dye	KemicaS/fisher chemical / Equivalent	10g	1
3.	Acrylamide +C5:C5:H46	For Molecular Biology Grade, 37:1 (ratio) Powder	Qiagen /Fisher/Roth / equivalent	1kg	2
4.	Agarose	Low melting For Molecular Biology, Grade, Powder	Fisher/Cayman Chemical/ equivalent	500g	4
5.	Ammonium per sulphate	for molecular biology, ≥99.0%	Alpha/Fisher/Roth/equivalent	100g	3
6.	Ammonium sulphate	for molecular biology, ≥99.0%	Fisher/Alpha/Roth / equivalent	1kg	3
7.	Analytical Balance	Fully automatic internal calibration system • weighing capacity between 0.1 to 120g, • Line voltage 100 – 240 V, 50 – 60 Hz, •Repeatability 0.1 mg• The instrument must include LCD graphic display,	Bio-Rad/ Fisher Chemical scientific/ equivalent	1	1
8.	Annexin V-FITC Apoptosis Staining / Detection Kit	FITC Apoptosis Staining / Detection Kit 100 tests	Fisher scientific / Abcam/ Equivalent	1	2
9.	Antibiotics disk	Kanamycin	Commercially available	10 Vails /pack	10
10.	Antibiotics disk	ciprofloxacin,	Commercially available	10 Vails /pack	10
11.	Antibiotics disk	ampicillin,	Commercially available	10 Vails /pack	10

12.	Antibiotics disk	Streptomycin,	Commercially available	10 Vails /pack	10
13.	Antibiotics disk	Carbapenems,	Commercially available	10 Vails /pack	10
14.	Beta marcaptoethanol	molecular biology grade	KemicaS/fisher chemical /Equivalent	500mL	1
15.	Bisacrylamide	for molecular biology, 97%, Solid	Fisher/VWR/Roth / equivalent	25g	3
16.	Bromophenol blue	General Lab grade, Powder	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	5g	1
17.	Calcium chloride dihydrate (CaCl₂.2H₂O)	for molecular biology, ≥99.0%, Powder	VWR/ Fisher Scientific/ Roth equivalent	500g	3
18.	Cell viability assay kits	100 tests	VWR/ Abcam/ Equivalent	1	2
19.	Cellulose Dialysis Membrane	(10-14kDa)	Roth / Fisher Scientific/equivalent	1 Role 10 foot	3
20.	Chloroform	Anhydrous ≥99.0% Liquid	VWR/Honywell / equivalent	2.5 L	3
21.	Coumarin	Substrate for detecting enzyme activity in cells	Fisher scientific / Abcam/ Equivalent	250g	2
22.	Crystal violet	General Lab grade, for microscopy (Bact., Bot., Hist., Vit.), indicator (pH 0.1-2.0), Powder	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	100g	10
23.	CTAB Buffer	For Plant DNA Extraction	Roth / Fisher/ equivalent	250 g	5
24.	Cyclophosphamide	amino suppressant	Cyclophosphamide (cyclophosphamide monohydrate; CP; CAS # 6055 19 2/ equivalent	1g	1
25.	DAPI	DAPI Staining Solution/Kit	VWR/ Abcam / Equivalent	250 tests	1
26.	DMEM (powder)	growth medium	Avantor/VWR/ VWR/ Equivalent	1	20
27.	DNA Gel Loading Dye (6X)	for molecular biology, Liquid	VWR/ Fisher Scientific /equivalent	5 x 1.0 mL	5
28.	DNA Ladder	100bp	Fisher Scientific/Fermentas / equivalent	300 µL	5
29.	DNase	Molecular biology grade	KemicaS/ PhytoTech Labs / BioWORLD/ Equivalent	1000U	2
30.	Dream Taq Green PCR Master MIX(2X)	for molecular biology, Liquid	Cayman Chemical/ Avantor/VWR/ equivalent	200 Reaction	10
31.	EDTA tetra sodium salt	Anhydrous ≥99.0% Powder	VWR/Invitrogen / equivalent	1kg	3
32.	Eosin Stain	Blood cells Staining	KemicaS/fisher chemical /Equivalent	10mg	1
33.	Ethidium Bromide	for molecular biology, Powder	VWR/ Fisher Scientific/ equivalent	25g	4
34.	Ficol reagent	inert and hydrophilic polysaccharide with high molecular weight, that allows PBMCs to be isolated from whole blood	KemicaS / PhytoTech / Equivalent	25g	1
35.	FITC (fluorescein isothiocyanate)	used to label proteins, antibodies, peptides, hormones	KemicaS/fisher chemical /Equivalent	250mg	1
36.	Glacial Acetic Acid	for inorganic trace analysis, ≥99.8% (acidimetric)	VWR/ Fisher Scientific/ equivalent	2.5L	3
37.	HPLC LC-20AD/T Accessory	HPLC Guard Column	Shimadzu scientific/equivalent	1 unit	1
38.	Hydrochloric acid (HCL)	36.5-38.0%, for molecular biology grade Liquid	VWR/ BioWORLD/ equivalent	500ml	2
39.	Iodine solution/Gram's Iodine	General Lab grade, for microscopy	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	25g	1
40.	Isoamyl alcohol	For DNA Extraction ≥98% (GC), Liquid	VWR/Fisher/ equivalent	1 L	5

41.	Isopropanol	for molecular biology, ≥99.0%, Liquid	VWR/Fisher/ equivalent	2.5L	5
42.	Lactophenol cotton blue	Microbiological grade, for microscopy, for staining molds	TCI Chemicals / PhytoTech/ Avantor/VWR/ Equivalent	30ml	1
43.	Mini Gel Electrophoresis	Mini gel electrophoresis• Safe Lid with Attached Power Supply Leads• U.V. Transmissible (UVT) Gel casting Tray •at least 2 combs with varying well, 1.5 mm thick• Comb slots to allow two, three or four sample sets to be run on the same gel	Bio-Rad/ Fisher Chemical scientific/equivalent	1	1
44.	Mitomycin MMC	tumour causing agent	KemicaS/fisher chemical /Equivalent	2mg	1
45.	NAP-5 Column	for Purification	Fisher scientific / Abcam/ Equivalent	20 columns	3
46.	pH measurement tools	Measuring Parameter: pH / ORP / °C / °F, pH Range: 2.00 to 16.00 pH, pH Resolution: 0.01 pH, pH Accuracy: ±0.01 pH, Along with buffer and auto calibration	Bio-Rad/ Fisher Chemical scientific/equivalent	1	1
47.	Phenol	for molecular biology grade, ≥99.0% (GC), Powder	Fisher/ Merk/ Roth /equivalent	100g	3
48.	Phusion High fidelity DNA polymerase	DNA polymerase	KemicaS/ fisher chemical / Equivalent	500U	5
49.	Phycoerythrin dye fph (P.E)	Florence based detection in flow cytometry	Fisher scientific/ Abcam/ Equivalent	25uL	2
50.	Ponceau Solution	molecular biology grade	KemicaS/ fisher chemical / Equivalent	1L	1
51.	Potassium phosphate monobasic	for molecular biology grade, ≥98.0%, Powder	VWR/Fisher/ BioWORLD/ equivalent	1kg	2
52.	Precision balance	weighing capacity between 22 - 3200 g, Increments = 0.01g, Platform 130x 130 mm• Internal automatic calibration. Readability of 0.001 to 0.1g. Reproducibility of 0.01 g Linearity of +0.01 g	Scitek/Bio-Rad/ Fisher Chemical scientific/ equivalent	1	1
53.	Protein Ladder	10 to 180 kDa	Fisher Scientific / Fermentas/ equivalent	500 µL	5
54.	RNAse A	Molecular biology grade	KemicaS/ PhytoTech Labs/ BioWORLD/ Equivalent	5ml	2
55.	Safranin (secondary stain)	Microbiological grade, indicator (pH 0.3-1.0), for microscopy (Bact., Bot., Hist.)	TCI Chemicals / PhytoTech / Avantor/VWR / Equivalent	250ml	1
56.	Sanger Sequencing	To determine the DNA sequence		1 Rxn	100
57.	Sodium Acetate	Anhydrous, For molecular biology grade, ≥99.0% Solid	Alpha/ VWR/ Fisher/ equivalent	1kg	2
58.	Sybr Green	Real time PCR master mix	KemicaS/fisher chemical /Equivalent	200rxn/kit	7
59.	Trizma Base	for molecular biology grade, useful in the pH range of 7.0-9.0. ≥99.0% White Solid	Fisher/ Invitrogen / equivalent	500g	6
60.	Trypan blue	stain to selectively colour dead tissues or cells blue	KemicaS/fisher chemical /Equivalent	25g	1
61.	Urea	for molecular biology grade, ≥98.0% Powder	Alpha/ Cayman Chemical/ Roth/ equivalent	1kg	2

62.	Versetly shaking platform	• Digital control • Clear cover • Versatile Platform to accommodate flasks up to 3 L as well as test tube racks and microplate holders • Speed Range: 15 to 500 $\pm$ 1 rpm • Orbit Diameter: 0.75 Inches, (1.9) cm • Temperature Range and Accuracy: 5°C above ambient to 80°C; $\pm$ 0.1°C in flask • Automatic power failure restart	Bio-Rad/ Fisher Chemical scientific/ equivalent	1	1
63.	Water bath for cell culture	General Purpose with shaking Temperature Range: Ambient to 100°C • With a Cover • Digital display • Quick Connect Drain Connection with Concealed Hose•	Bio-Rad/ Fisher Chemical scientific/ equivalent	1	1

LOT-I		LIST OF SPECIAL CHEMISTRY KITS		
Special Purpose Kits and Reagents				
#	Chemicals	Brand	Unit Size	Qty.
1.	Tina Quant Albumin	Cobas/ Abbott /BSA15/Equivalent	200	5
2.	ALB	Cobas/ Abbott /BSA15/Equivalent	400	5
3.	Alk. Phosphatase	Cobas/ Abbott /BSA15/Equivalent	200	5
4.	a-Amylase	Cobas/ Abbott /BSA15/Equivalent	200	5
5.	Bicarbonate	Cobas/ Abbott /BSA15/Equivalent	200	5
6.	Cholesterol	Cobas/ Abbott /BSA15/Equivalent	400	10
7.	Calcium	Cobas/ Abbott /BSA15/Equivalent	400	5
8.	Creatinin Jaffe	Cobas/ Abbott /BSA15/Equivalent	400	10
9.	CK	Cobas/ Abbott /BSA15/Equivalent	200	5
10.	CK-MB	Cobas/ Abbott /BSA15/Equivalent	100	5
11.	ALT	Cobas/ Abbott /BSA15/Equivalent	400	10
12.	AST	Cobas/ Abbott /BSA15/Equivalent	400	5
13.	Glucose	Cobas/ Abbott /BSA15/Equivalent	400	15
14.	GGT	Cobas/ Abbott /BSA15/Equivalent	200	5
15.	HDL	Cobas/ Abbott /BSA15/Equivalent	200	5
16.	LDL Cholesterin	Cobas/ Abbott /BSA15/Equivalent	100	5
17.	Triglycerides	Cobas/ Abbott /BSA15/Equivalent	200	10
18.	Urea	Cobas/ Abbott /BSA15/Equivalent	400	10
19.	UA plus	Cobas/ Abbott /BSA15/Equivalent	400	5
20.	Total Bilirubin	Cobas/ Abbott /BSA15/Equivalent	400	5
21.	Total Protein	Cobas/ Abbott /BSA15/Equivalent	400	10
22.	HbA1c	Cobas/ Abbott /BSA15/Equivalent	400	15
23.	Billirubin Direct	Cobas/ Abbott /BSA15/Equivalent	100	10
24.	Phospor	Cobas/ Abbott /BSA15/Equivalent	100	5
25.	LDH	Cobas/ Abbott /BSA15/Equivalent	100	5
26.	Tina Quant	Cobas/ Abbott /BSA15/Equivalent	200	5
27.	CRP	Cobas/ Abbott /BSA15/Equivalent	100	5
28.	Iron	Cobas/ Abbott /BSA15/Equivalent	100	5
29.	Homocysteine	Cobas/ Abbott /BSA15/Equivalent	200	5
30.	MG	Cobas/ Abbott /BSA15/Equivalent	100	5
31.	Hemolyzing Reagent	Cobas/ Abbott /BSA15/Equivalent	400	5
32.	Lactate	Cobas/ Abbott /BSA15/Equivalent	100	5
33.	NH3L	Cobas/ Abbott /BSA15/Equivalent	100	5
34.	D-Dimer	Cobas/ Abbott /BSA15/Equivalent	200	5
35.	Consumables, Controls, & Standards	Cobas/ Abbott /BSA15/Equivalent	For each of the above tests	

LOT-J		LIST OF GLASSWARE / PLASTICWARE & UTILITY		
#	Items	Specification	Pack	Qty.
1.	Screw Cap Reagent Bottles	Screw Cap Reagent Bottles Graduated, Autoclavable 1L, Borosilicate	Each	36
2.		Screw Cap Reagent Bottles Graduated, Autoclavable 2L, Borosilicate	Each	20
3.		Screw Cap Reagent Bottles Graduated, Autoclavable 500ml, Borosilicate	Each	36
4.	Syringes 10ml	BD/ Equivalent	Box	10
5.	Cryo Storage Box	Corning/ Cayman Chemical/ Equivalent	Each	50
6.	50ml glass centrifuge tube	Pyrex/ Equivalent	Each	500
7.	Self-standing centrifuge tubes	Corning/ BD/ Falcon/ Equivalent Autoclavable 50 ml, 25 pieces bags (high-clarity polypropylene (PP) Self-standing centrifuge tubes, sterile tubes)	25 pcs / bag	20
8.	5L glass conical flask	Pyrex/Equivalent	Each	5
9.	Beaker	Beaker 1000 ml borosilicate glass, autoclave able	Each	48
10.		Beaker 250 ml borosilicate glass, autoclave able	Each	24
11.	Conical flask	Conical flask 1000ml borosilicate glass, autoclave able	Each	24
12.		Conical flask 500ml borosilicate glass, autoclave able	Each	24
13.		Flask duran narrow neck 250ml borosilicate glass, autoclave able	Each	24
14.	Glass Filtration assembly	• Coarse fritted glass support base, • a graduated glass funnels 330 and 1000-mL capacity, an anodized aluminium clamp, • 47mm diameter • #8 silicone stopper with 9/16" hole Vacuum Pump • Should maintain continuous vacuum for filtration • Oil free operation to minimize aerosol contamination • Maximum pressure 0.41 MPa (60 psi) • Maximum vacuum 81kPa (24Hg") \Required with two 2 litre flasks and 1 pack filter paper for filtration	1	1
15.	Pipettes (Disposable)	Glass pipette serological 5 ml (polystyrene)	Each	24
16.		Glass pipette serological 20 ml (polystyrene)	Each	24
17.	Pipette (Autoclavable)	Volume 2 - 20 µl • Autoclavable • Volume Adjustment Control Button • Piston highly resistant to heat, acid, alkalis, bleach, and abrasions	Each	2
18.		Volume 100-1000 µl • Autoclavable • Volume Adjustment Control Button • Piston highly resistant to heat, acid, alkalis, bleach, and abrasions	Each	2
19.		Glass pipette holder (Pipette stand)	Each	5
20.	Reagent bottle	Reagent bottle polypropylene screw cap Simax 500ml borosilicate glass	Each	36
21.		Reagent bottle polypropylene screw cap Simax 100ml borosilicate glass	Each	36
22.		Reagent bottle polypropylene screw cap Simax 1000ml borosilicate glass	Each	36
23.	Funnel	Funnel glass 100mm diameter borosilicate glass	Each	12
24.		Funnel glass 75mm diameter borosilicate glass	Each	12
25.		Separating funnel with PTFE Stopper Valve, borosilicate glass, 1000ml	Each	12
26.		Separating funnel with PTFE Stopper Valve, borosilicate glass, 2000ml	Each	12
27.		Separating funnel stand (Iron stand with clamp)	Each	4
28.	Test tube	Glass tube 15ml, 10 pcs per box test tube, 12 box	10 pcs/ pk	15
29.		Glass vial 20 ml with screw cap	Each	360
30.	Glass slide	Glass slide 1mm-1.2mm Thick (65 pcs per pack) 1*3 inch	65pcs/ pk	10
31.	Plastic Water Gallon	Plastic Water Gallon Bottle Cane Container Dispenser - 10 L	Each	10
32.	Plastic Bucket with Lid	Plastic Bucket with Lid 5 L	Each	5

33.	Plastic Bucket Container with Lid	Food Grade Clear 5 Liter Plastic Bucket Container with Lid	Each	10
34.	Power Supply	• Max Voltage Output: 300V • Max Current: 400 mA • Max Power: 75 W • No. of Jacks: 3 output jacks • Constant voltage, current, or power settings • No load detection • Built-in timer • Alarm at end of program • Up to 10 custom programs with 10 steps each	Each	1
35.	Rubber Head Shaker	•Adjustable shaking frequency from 600 to 2700 rpm •Orbit: 6mm with interchangeable Rubber heads for falcons, PCR tubes and eppendrops, Operating Mode: Continuous / Touch • Power: 220 – 240V, 50/60Hz	Each	1
36.	Spray pump bottles	Plastic bottles, Spray pump bottles 250 mL	Each	300
37.	Glass bottles with dropper cap	Glass bottles 15mL with dropper cap	Each	500
38.	Glass containers with cap	Glass containers 50ml with cap	Each	400
39.	Glass bottles with dropper cap	Glass bottles 30mL with dropper cap	Each	500
40.	Magnetic stirrer	• Digital Display Stir Range: 50-1500 RPM • Operating Temperature Range: 340°C • Heating Surface area: minimum 22 x 22 cm • Electrical: 220-240 Volts, (50/60 Hz) • Top plate: ceramic or aluminium • LED display for heating and stirring • Raised display design to protect from spills	each	1
41.	Bar Magnets	Bar size 60* 8mm	Each	6
42.	Cryo vials	Cryo vials 50 pcs/pack, required 2 packs	50pcs/pk	5
43.	Petri plates	Petri plates Glass (100*15mm) Borosilicate glass, autoclavable, 10 pcs per pack (10 packs needed)	10 pcs/pk	15
44.	Cylinder	Plastic Graduated Cylinder 1000ml graduated cylinder (Autoclavable)	Each	12
45.		Plastic Graduated Cylinder 100ml graduated cylinder (Autoclavable)	Each	6
46.	Pipette tips	Pipette tips Blue (100-1000 µL 500 per bags) (Autoclavable)	500 pcs/pk	24
47.		Pipette tips Yellow (20-200µL 1000 per bags) (Autoclavable)	1000 pcs/pk	24
48.		Blue Tips with box (Autoclavable) 96 tips per box	Each	24
49.		Micro Pipette Stand	Each	3
50.		Yellow Tips with box (Autoclavable)	Each	12
51.	Eppendorf tubes	Eppendorf tubes 1.5ml (pack of 500 tubes)	500 pcs/pk	10
52.		Eppendorf tubes 2ml (pack of 500 tubes)	500 pcs/pk	10
53.		Eppendorf Tube Rack (for 1.5-2ml Tubes)	Each	12
54.	PCR tube centrifuge	•clear lid and electronic safety cut-off •maximum speed (6,600 rpm / 2,200 rcf) •All centrifuges include a round rotor with capacity for six standard microtubes (1.5ml to 2.0ml) as well as a strip tube rotor for 2 x 8 PCR strips or sixteen individual 0.2ml tubes	1	1
55.	Falcons Tubes	Falcons Tubes autoclave able 50 ml, 25 pieces bags (high-clarity polypropylene (PP) conical centrifuge tubes, sterile tubes)	25 pcs/pk	20
56.		Falcons Tubes autoclave able 15 ml 25 pieces bags (high-clarity polypropylene (PP) conical centrifuge tubes, sterile tubes)	25 pcs/pk	15
57.		Falcon tube racks plastic 2 in 1 (15/50 ml)	Each	12
58.	Syringe filter	Sterile Syringe filter 0.22µm (50-unit pack)	50 pcs/pk	5
59.		Syringe filter 0.22µm (100-unit Pack) nylon	100 pcs/pk	5
60.	Whatman's filter paper	Whatman's filter paper (100 Sheets/Pack)	100 pcs/pk	3
61.	test tube rack	Steel test tube rack 24x15ml	Each	12
62.	Disposable Petri Dish	Disposable Petri Dish 90mm (Pack of 250)	250 pcs/pk	5
63.	Aluminium Foil	24 inch wide	Each	12
64.	Cotton Rolls	General grade	Each	12

65.	Tissue rolls	General grade	Each	24
66.	Cheese cloth	10 meters	Each	10
67.	Large plastic Buckets	10liter	Each	10
68.	Plastic Tubs	3 Liter	Each	6
69.	Parafilm	Parafilm 5 inch wide	Each	6
70.	Sprit lamp	Sprit lamp	Each	10
71.	Spray bottle	Spray bottle	Each	10
72.	Nitrile Gloves	Nitrile Gloves Medium 100/pack	Box	20
73.		Nitrile Gloves Large 100/pack	Box	20

DELIVERY & IMPLEMENTATION SCHEDULE

6. Delivery and Documents

6.1. Delivery of all intended items shall be at NCIB, PMAS-AAUR, Rawalpindi and it shall be maximum **Six (06) to Eight (08) Weeks**.

6.2. *Applicable Delivery Mode:* Delivered Duty Paid (**DDP**) of Incoterms 2011

6.3. Purchase order can be cancelled in case of delay exceeding max. delivery period as mentioned in para 6.1 above.

7. Acceptance of Goods, Equipment and Works

The required deliverables mentioned under the List of Goods, Equipment and Services will be considered accepted on issuance of Letter of Completion/ Letter of Acceptance by PMAS-AAUR.

The procedure to be adopted to check conformance will be finalized by the Procuring Agency at the time of Contract Agreement.

8. Expected Time Duration for Delivery and Completion of Contract

The estimated time duration for completion of the above Goods, Equipment and Works is as following:

8.1. **Goods:** Time for delivery of goods is maximum Eight (08) to Twelve (12) weeks from the issuance of Purchase Order.

8.2. **Works:** Installation, Commissioning, Testing, and Operationalization of Goods/ Equipment/ Machinery at the site is maximum Two (02) to Three (03) weeks after delivery of goods or as per timeline stated in bid.

8.3. **Services:** As mentioned in Technical Specifications Table above. A Service Level Agreement (SLA) will also be signed in this regard. Post-installation/ post-commissioning/ post-warranty services shall be for a period of 12 months after equipment has become operational.