INVITATION TO BID
2015-011

The UNIVERSITY OF THE PHILIPPINES VISAYAS, through its Bids and Awards Committee (BAC), invites qualified Suppliers/Contractors to bid on a per item basis for the hereunder projects:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>LOCATION</th>
<th>APPROVED BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>“Supply of various Laboratory Equipment for the School of Technology”</td>
<td>UP Visayas Miag-ao Campus</td>
<td>1,973,700.00</td>
</tr>
</tbody>
</table>

The BAC will use non-discretionary pass/fail criteria in the Eligibility Check/Screening as well as the Preliminary Examination of Bids. The BAC will conduct post-qualification of the lowest calculated bid. All particulars relative to Eligibility Statement and Screening, Bid Security, Performance Security, Evaluation of Bids, Post- Qualification and Award of Contract shall be governed by the pertinent provisions of RA 9184 and its Implementing Rules and Regulations (IRR), as amended.

A complete set of Bidding Documents may be acquired by interested bidders on May 12, 2015, 8:30 – 4:00 p.m., Bids and Awards Committee Secretariat Office, SPSO UPV, Iloilo City Campus and upon payment of a non-refundable fee for the Bidding Documents pursuant to the latest Guidelines (GPPB Resolution No. 04-2012) issued by the GPPB, in the amount of Two Thousand Pesos Only (Php 2,000.00).

All bidders are required to purchase the bid documents in order to participate in the Pre-Bid Conference.

The schedule of bidding activities is as follows:

<table>
<thead>
<tr>
<th>SCHEDULE OF ACTIVITIES</th>
<th>DATE AND TIME</th>
<th>VENUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule of Pre-Bid Conference</td>
<td>May 19, 2015</td>
<td>Tea Room, Cafeteria Bldg. UPV, Iloilo City Campus</td>
</tr>
<tr>
<td>Submission/Opening of Bids</td>
<td>June 1, 2015</td>
<td>Tea Room, Cafeteria Bldg. UPV, Iloilo City Campus</td>
</tr>
</tbody>
</table>

Request for clarification/s on any part of the bidding documents or for an interpretation must be in writing and submitted to the BAC Secretariat ten (10) calendar days before the deadline set for the submission and receipt of bids.

Late Bids shall not be accepted.

The University of the Philippines Visayas (UPV) reserves the right to reject any or all bids, declare a failure of bidding, without offering any reason, waive any defect therein and make an award to the bidder whose proposal is most advantageous to the University. The University likewise, assumes no obligation for whatever losses that may incurred by the bidders in the preparation of the bids nor does it guarantee that the award shall be made.

PROF. EMELIZA C. LOZADA
Chair, Bids and Awards Committee
Section II. Instructions to Bidders

Notes on the Instructions to Bidders

This section of the Bidding Documents provides the information necessary for Bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, opening, evaluation, and award of contract.

Section II contains provisions that are to be used unchanged. Section III consists of provisions that supplement, amend, or specify in detail, information or requirements included in Section II which are specific to each procurement.

Matters governing performance of the Bidder, payments, or those affecting the risks, rights, and obligations of the parties under the contract are not normally included in this section, but rather under Section IV General Conditions of the Contract. If duplication of a subject is inevitable in the other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.
A. General

1. Scope of Bid

1.1 The procuring entity named in the BDS (hereinafter referred to as the “Procuring Entity”) wishes to receive bids for supply and delivery of the goods as described in Section VII. Technical Specifications (hereinafter referred to as the “Goods”).

1.2 The name, identification, and number of lots specific to this bidding are provided in the BDS. The contracting strategy and basis of evaluation of lots is described in ITB Clause.

2. Source of Funds

The Procuring Entity has a budget or has applied for or received funds from the Funding Source named in the BDS, and in the amount indicated in the BDS. It intends to apply part of the funds received for the Project, as defined in the BDS, to cover eligible payments under the contract.

3. Corrupt, Fraudulent, Collusive, and Coercive Practices

3.1 Unless otherwise specified in the BDS, the Procuring Entity as well as the bidders and suppliers shall observe the highest standard of ethics during the procurement and execution of the contract. In pursuance of this policy, the Procuring Entity:

- (a) defines, for purposes of this provision, the terms set forth below as follows:

  - (i) “corrupt practice” means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the Government, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019.

  - (ii) “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.
(iii) “collusive practices” means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels.

(iv) “coercive practices” means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;

(v) “Obstructive practice” is

   (aa) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or

   (bb) acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein.

(b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in any of the practices mentioned in this Clause for purposes of competing for the contract.

3.2 Further, the Procuring Entity will seek to impose the maximum civil, administrative and/or criminal penalties available under applicable laws on individuals and organizations deemed to be involved in any of the practices mentioned in ITB Clause 3.1(a).

3.3 Furthermore, the Funding Source and the Procuring Entity reserve the right to inspect and audit records and accounts of a supplier or contractor in the bidding for and performance of a contract themselves or through independent auditors as reflected in the GCC Clause 3.

4. Conflict of Interest

4.1 All Bidders found to have conflicting interests shall be disqualified to participate in the procurement at hand, without prejudice to the imposition of appropriate administrative, civil, and criminal sanctions. A Bidder may be considered to have conflicting interests with another Bidder in any of
the events described in paragraphs (a) through (c) below and a general conflict of interest in any of the circumstances set out in paragraphs (d) through (f) below:

(a) A Bidder has controlling shareholders in common with another Bidder;

(b) A Bidder receives or has received any direct or indirect subsidy from any other Bidder;

(c) A Bidder has the same legal representative as that of another Bidder for purposes of this bid;

(d) A Bidder has a relationship, directly or through third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder or influence the decisions of the Procuring Entity regarding this bidding process. This will include a firm or an organization who lends, or temporarily seconds, its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for or implementation of the project if the personnel would be involved in any capacity on the same project;

(e) A Bidder submits more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid; or

(f) A Bidder who participated as a consultant in the preparation of the design or technical specifications of the Goods and related services that are the subject of the bid.

4.2 In accordance with Section 47 of the IRR of RA 9184, all Bidding Documents shall be accompanied by a sworn affidavit of the Bidder that it is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), members of the Technical Working Group (TWG), members of the BAC Secretariat, the head of the Project Management Office (PMO) or the end-user unit, and the project consultants, by consanguinity or affinity up to the third civil degree. On the part of the Bidder, this Clause shall apply to the following persons:

(a) If the Bidder is an individual or a sole proprietorship, to the Bidder himself;

(b) If the Bidder is a partnership, to all its officers and members;

(c) If the Bidder is a corporation, to all its officers, directors, and controlling stockholders; and

(d) If the Bidder is a joint venture (JV), the provisions of items (a), (b), or (c) of this Clause shall correspondingly apply to each of the members of the said JV, as may be appropriate.
Relationship of the nature described above or failure to comply with this Clause will result in the automatic disqualification of a Bidder.

5. Eligible Bidders

5.1 Unless otherwise provided in the BDS, the following persons shall be eligible to participate in this bidding:

(a) Duly licensed Filipino citizens/sole proprietorships;

(b) Partnerships duly organized under the laws of the Philippines and of which at least sixty percent (60%) of the interest belongs to citizens of the Philippines;

(c) Corporations duly organized under the laws of the Philippines, and of which at least sixty percent (60%) of the outstanding capital stock belongs to citizens of the Philippines;

(d) Cooperatives duly organized under the laws of the Philippines, and of which at least sixty percent (60%) belongs to citizens of the Philippines; and

(e) Unless otherwise provided in the BDS, persons/entities forming themselves into a JV, i.e., a group of two (2) or more persons/entities that intend to be jointly and severally responsible or liable for a particular contract: Provided, however, that Filipino ownership or interest of the joint venture concerned shall be at least sixty percent (60%).

5.2 Foreign bidders may be eligible to participate when any of the following circumstances exist, as specified in the BDS:

(a) When a Treaty or International or Executive Agreement as provided in Section 4 of the RA 9184 and its IRR allow foreign bidders to participate;

(b) Citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines;

(c) When the Goods sought to be procured are not available from local suppliers; or

(d) When there is a need to prevent situations that defeat competition or restrain trade.

5.3 Government corporate entities may be eligible to participate only if they can establish that they (a) are legally and financially autonomous, (b) operate under commercial law, and (c) are not dependent agencies of the GOP or the Procuring Entity.
5.4 Unless otherwise provided in the BDS, the Bidder must have completed at least one contract similar to the Project, the value of which, adjusted to current prices using the National Statistics Office consumer price index, must be at least equivalent to a percentage of the ABC stated in the BDS.

For this purpose, contracts similar to the Project shall be those described in the BDS, and completed within the relevant period stated in the Invitation to Bid and ITB Clause 12.1 (a) (iii).

5.5 The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC), which must be at least equal to the ABC to be bid, calculated as follows:

\[ \text{NFCC} = \left[ (\text{Current assets minus current liabilities}) \times (K) \right] - \text{value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.} \]

Where:

- \( K = 10 \) for a contract duration of one year or less, 15 for a contract duration of more than one year up to two years, and 20 for a contract duration of more than two years.

The value of the bidder’s current assets and current liabilities shall be based on the data submitted to the BIR, through its Electronic Filing and Payment System (EFPS).

6. Bidder’s Responsibilities

6.1 The Bidder or its duly authorized representative shall submit a statement, in the form prescribed in Section VIII. Bidding Forms as required in ITB Clause 12.1 (b)(iii).

6.2 The Bidder is responsible for:

(a) having taken steps to carefully examine all of the Bidding Documents;

(b) having acknowledged all conditions, local or otherwise, affecting the implementation of the contract;

(c) having made an estimate of the facilities available and needed for the contract to be bid, if any; and

(d) having complied with its responsibility to inquire or secure Supplemental/Bid Bulletin(s) as provided under ITB Clause 10.3.

(e) Ensuring that it is not “blacklisted” or barred from bidding by the GOP or any of its agencies, offices, corporations, or LGUs, including foreign government/foreign or international financing.
institution whose blacklisting rules have been recognized by the
GPPB;

(f) Ensuring that each of the documents submitted in satisfaction of
the bidding requirements is an authentic copy of the original,
complete, and all statements and information provided therein
are true and correct;

(g) Authorizing the Head of the Procuring Entity or its duly authorized
representative/s to verify all the documents submitted;

(h) Ensuring that the signatory is the duly authorized representative of
the Bidder, and granted full power and authority to do, execute
and perform any and all acts necessary and/or to represent the
Bidder in the bidding, with the duly notarized Secretary’s
Certificate attesting to such fact, if the Bidder is a corporation,
partnership, cooperative, or joint venture;

(i) Complying with the disclosure provision under Section 47 of RA
9184 in relation to other provisions of RA 3019; and

(j) Complying with existing labor laws and standards, in the case of
procurement of services.

Failure to observe any of the above responsibilities shall be at the risk of
the Bidder concerned.

6.3 The Bidder is expected to examine all instructions, forms, terms, and
specifications in the Bidding Documents

6.4 It shall be the sole responsibility of the Bidder to determine and to satisfy
itself by such means as it considers necessary or desirable as to all matters
pertaining to the contract to be bid, including: (a) the location and the nature
of this Project; (b) climatic conditions; (c) transportation facilities; and (d)
other factors that may affect the cost, duration, and execution or
implementation of this Project.

6.5 The Procuring Entity shall not assume any responsibility regarding erroneous
interpretations or conclusions by the prospective or eligible bidder out of the
data furnished by the procuring entity.

6.6 The Bidder shall bear all costs associated with the preparation and
submission of his bid, and the Procuring Entity will in no case be responsible
or liable for those costs, regardless of the conduct or outcome of the bidding
process.

6.7 Before submitting their bids, the Bidder is deemed to have become familiar
with all existing laws, decrees, ordinances, acts and regulations of the
Philippines which may affect this Project in any way.
6.8 The Bidder should note that the Procuring Entity will accept bids only from those that have paid the nonrefundable fee for the Bidding Documents at the office indicated in the Invitation to Bid.

7. Origin of Goods

Unless otherwise indicated in the BDS, there is no restriction on the origin of Goods other than those prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, subject to ITB Clause 27.1.

8. Subcontracts

8.1 Unless otherwise specified in the BDS, the Bidder may subcontract portions of Goods to an extent as may be approved by the Procuring entity and stated in the BDS. However, subcontracting of any portion shall not relieve the Bidder from any liability or obligation that may arise from the contract for the Project.

8.2 Subcontractors must comply with the eligibility criteria and the documentary requirements specified in the BDS. In the event that any subcontractor is found by the Procuring Entity to be ineligible, the subcontracting of such portion of the Goods shall be disallowed.

8.3 The Bidder may identify the subcontractor to whom a portion of the Goods will be subcontracted at any stage of the bidding process or during contract implementation. If the Bidder opts to disclose the name of the subcontractor during bid submission, the Bidder shall include the required documents as part of the technical component of its bid.

B Contents of Bidding Documents

9. Pre-Bid Conference

9.1 (a) If so specified in the BDS, a pre-bid conference shall be held at the venue and on the date indicated therein, to clarify and address the Bidders’ questions on the technical and financial components of this Project.

(b) The pre-bid conference shall be held at least twelve (12) calendar days before the deadline for the submission and receipt of bids. If the Procuring Entity determines that, by reason of the method, nature, or complexity of the contract to be bid, or when international participation will be more advantageous to the GOP, a longer period for the preparation of bids is necessary, the pre-bid conference shall be held at least thirty (30) calendar days before the deadline for the submission and receipt of bids, as specified in the BDS.
9.2 Bidders are encouraged to attend the pre-bid conference to ensure that they fully understand the Procuring Entity’s requirements. Non-attendance of the Bidder will in no way prejudice its bid; however, the Bidder is expected to know the changes and/or amendments to the Bidding Documents discussed during the pre-bid conference.

9.3 Any statement made at the pre-bid conference shall not modify the terms of the Bidding Documents unless such statement is specifically identified in writing as an amendment thereto and issued as a Supplemental/Bid Bulletin.

10. Clarification and Amendment of Bidding Documents

10.1 Bidders who have purchased the Bidding Documents may request for clarifications on any part of the Bidding Documents for an interpretation. Such a request must be in writing and submitted to the Procuring Entity at the address indicated in the BDS at least ten (10) calendar days before the deadline set for the submission and receipt of bids.

10.2 Supplemental/Bid Bulletins may be issued upon the Procuring Entity’s initiative for purposes of clarifying or modifying any provision of the Bidding Documents not later than seven (7) calendar days before the deadline for the submission and receipt of bids. Any modification to the Bidding Documents shall be identified as an amendment.

10.3 Any Supplemental/Bid Bulletin issued by the BAC shall also be posted on the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity concerned, if available. It shall be the responsibility of all Bidders who secure the Bidding Documents to inquire and secure Supplemental/Bid Bulletins that may be issued by the BAC. However, Bidders who have submitted bids before the issuance of the Supplemental/Bid Bulletin must be informed and allowed to modify or withdraw their bids in accordance with ITB Clause 23.

C. Preparation of Bids

11. Language of Bid

The bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Procuring Entity, shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation in English certified by the appropriate embassy or consulate in the Philippines, in which case the English translation shall govern for purposes of interpretation of the bid.

12. Documents Comprising the Bid: Eligibility and Technical Components

12.1 Unless otherwise indicated in the BDS, the first envelope shall contain the following eligibility and technical documents:
(a) Eligibility Documents –

Class “A” Documents:

(i) Registration certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives, or any proof of such registration as stated in the BDS;

(ii) Mayor’s permit issued by the city or municipality where the principal place of business of the prospective bidder is located.

(iii) Statement of all its ongoing and completed government and private contracts within the period stated in the BDS, including contracts awarded but not yet started, if any. The statement shall include, for each contract, the following:

(iii.1) name of the contract;

(iii.2) date of the contract;

(iii.3) kinds of Goods;

(iii.4) amount of contract and value of outstanding contracts;

(iii.5) date of delivery; and

(iii.6) end user’s acceptance or official receipt(s) issued for the contract, if completed.

(iv) Audited financial statements, stamped “received” by the Bureau of Internal Revenue (BIR) or its duly accredited and authorized institutions, for the preceding calendar year, which should not be earlier than two (2) years from bid submission;

(v) NFCC computation in accordance with ITB Clause 5.5; and

Class “B” Document:

(vi) If applicable, the JVA in case the joint venture is already in existence, or duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

(b) Technical Documents –

(i) The bid security in accordance with ITB Clause 18. If the Bidder opts to submit the bid security in the form of:
(i.1) a bank draft/guarantee or an irrevocable letter of credit issued by a foreign bank, it shall be accompanied by a confirmation from a Universal or Commercial Bank; or

(i.2) a surety bond, it shall be accompanied by a certification by the Insurance Commission that the surety or insurance company is authorized to issue such instruments.

(ii) Conformity with technical specifications, as enumerated and specified in Sections VI and VII of the Bidding Documents;

(iii) Sworn statement in accordance with Section 25.2(a)(iv) of the IRR of RA 9184 and using the form prescribed in Section VIII, Bidding Forms.

13. Documents Comprising the Bid: Financial Component

13.1 Unless otherwise stated in the BDS, the financial component of the bid shall contain the following:

(a) Financial Bid Form, which includes bid prices and the bill of quantities and the applicable Price Schedules, in accordance with ITB Clauses 15.1 and 15.4;

(b) If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification from the DTI, SEC, or CDA issued in accordance with ITB Clause 27; unless otherwise provided in the BDS; and

(c) Any other document related to the financial component of the bid as stated in the BDS.

13.2 (a) Unless otherwise stated in the BDS, all Bids that exceed the ABC shall not be accepted.

(b) Unless otherwise indicated in the BDS, for foreign-funded procurement, a ceiling may be applied to bid prices provided the following conditions are met:

(i) Bidding Documents are obtainable free of charge on a freely accessible website. If payment of Bidding Documents is required by the procuring entity, payment could be made upon the submission of bids.

(ii) The procuring entity has procedures in place to ensure that the ABC is based on recent estimates made by the responsible unit of the procuring entity and that the estimates reflect the quality, supervision and risk and inflationary factors, as well as prevailing market prices, associated with the types of works or goods to be procured.
(iii) The procuring entity has trained cost estimators on estimating prices and analyzing bid variances.

(iv) The procuring entity has established a system to monitor and report bid prices relative to ABC and engineer’s/procuring entity’s estimate.

(v) The procuring entity has established a system to monitor and report bid prices relative to ABC and procuring entity’s estimate. The procuring entity has established a monitoring and evaluation system for contract implementation to provide a feedback on actual total costs of goods and works.

14. Alternative Bids

Alternative Bids shall be rejected. For this purpose, alternative bid is an offer made by a Bidder in addition or as a substitute to its original bid which may be included as part of its original bid or submitted separately therewith for purposes of bidding. A bid with options is considered an alternative bid regardless of whether said bid proposal is contained in a single envelope or submitted in two (2) or more separate bid envelopes.

15. Bid Prices

15.1 The Bidder shall complete the appropriate Price Schedules included herein, stating the unit prices, total price per item, the total amount and the expected countries of origin of the Goods to be supplied under this Project.

15.2 The Bidder shall fill in rates and prices for all items of the Goods described in the Bill of Quantities. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, Bill of Quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the Government.

15.3 The terms Ex Works (EXW), Cost, Insurance and Freight (CIF), Cost and Insurance Paid to (CIP), Delivered Duty Paid (DDP), and other trade terms used to describe the obligations of the parties, shall be governed by the rules prescribed in the current edition of the International Commercial Terms (INCOTERMS) published by the International Chamber of Commerce, Paris.

15.4 Prices indicated on the Price Schedule shall be entered separately in the following manner:

(a) For Goods offered from within the Procuring Entity’s country:
(i) The price of the Goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable:

(i.1) on the components and raw material used in the manufacture or assembly of Goods quoted ex works or ex factory; or

(i.2) on the previously imported Goods of foreign origin quoted ex warehouse, ex showroom, or off-the-shelf and any Procuring Entity country sales and other taxes which will be payable on the Goods if the contract is awarded.

(ii) The price for inland transportation, insurance, and other local costs incidental to delivery of the Goods to their final destination.

(iii) The price of other (incidental) services, if any, listed in the BDS.

(b) For Goods offered from abroad:

(i) Unless otherwise stated in the BDS, the price of the Goods shall be quoted DDP with the place of destination in the Philippines as specified in the BDS. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.

(ii) The price of other (incidental) services, if any, listed in the BDS.

15.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the contract and not subject to variation or price escalation on any account. A bid submitted with an adjustable price quotation shall be treated as non-responsive and shall be rejected, pursuant to ITB.

All bid prices shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances. Extraordinary circumstances refer to events that may be determined by the National Economic and Development Authority in accordance with the Civil Code of the Philippines, and upon the recommendation of the Procuring Entity. Nevertheless, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GOP, promulgated after the date of bid opening, a contract price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.

16. Bid Currencies
16.1 Prices shall be quoted in the following currencies:

(a) For Goods that the Bidder will supply from within the Philippines, the prices shall be quoted in Philippine Pesos.

(b) For Goods that the Bidder will supply from outside the Philippines, the prices may be quoted in the currency(ies) stated in the BDS. However, for purposes of bid evaluation, bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

16.2 If so allowed in accordance with ITB Clause 16.1, the Procuring Entity for purposes of bid evaluation and comparing the bid prices will convert the amounts in various currencies in which the bid price is expressed to Philippine Pesos at the foregoing exchange rates.

16.3 Unless otherwise specified in the BDS, payment of the contract price shall be made in Philippine Pesos.

17. Bid Validity

17.1 Bids shall remain valid for the period specified in the BDS which shall not exceed one hundred twenty (120) calendar days from the date of the opening of bids.

17.2 In exceptional circumstances, prior to the expiration of the Bid validity period, the Procuring Entity may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. The bid security described in ITB Clause 18 should also be extended corresponding to, at least, the extension of the bid validity period. A Bidder may refuse the request without forfeiting its bid security, but his bid shall no longer be considered for further evaluation and award. A Bidder granting the request shall not be required or permitted to modify its bid.

18. Bid Security

18.1 The bid security in the amount stated in the BDS shall be equal to the percentage of the ABC in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Form of Bid Security</th>
<th>Amount of Bid Security (Equal to Percentage of the ABC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash or cashier's/manager's check, issued by a Universal or Commercial Bank;</td>
<td>Two percent (2%)</td>
</tr>
</tbody>
</table>
For biddings conducted by LGUs, the Bidder may also submit bid securities in the form of cashier’s/manager’s check, bank draft/guarantee, or irrevocable letter of credit from other banks certified by the BSP as authorized to issue such financial statement.

The Bid Securing Declaration mentioned above is an understanding which states, among others, that the bidder shall enter into contract with the procuring entity and furnish the performance security required under ITB Clause 33.2, from receipt of the Notice of Award, and committing to pay the corresponding fine, and be suspended for a period of time from being qualified to participate in any government procurement activity in the event it violates any of the conditions stated therein as provided in the guidelines issued by the GPPB.

18.2 The bid security should be valid for the period specified in the BDS. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

18.3 No bid securities shall be returned to bidders after the opening of bids and before contract signing, except to those that failed or declared as post-disqualified, upon submission of a written waiver of their right to file a motion for reconsideration and/or protest. Without prejudice on its forfeiture, bid securities shall be returned only after the bidder with the Lowest Calculated and Responsive Bid has signed the contract and furnished the performance security, but in no case later than the expiration of the bid security validity period indicated in ITB Clause 18.2.

18.4 Upon signing and execution of the contract pursuant to ITB Clause 32, and the posting of the performance security pursuant to ITB Clause 33, the successful Bidder’s bid security will be discharged, but in no case later than the bid security validity period as indicated in the ITB Clause 18.2.
The bid security may be forfeited:

(a) if a Bidder:

(i) withdraws its bid during the period of bid validity specified in ITB Clause 17;

(ii) does not accept the correction of errors pursuant to ITB Clause 28.3(b);

(iii) fails to submit the requirements within the prescribed period or a finding against their veracity as stated in ITB Clause 29.2;

(iv) submission of eligibility requirements containing false information or falsified documents;

(v) submission of bids that contain false information or falsified documents, or the concealment of such information in the bids in order to influence the outcome of eligibility screening or any other stage of the public bidding;

(vi) allowing the use of one’s name, or using the name of another for purposes of public bidding;

(vii) withdrawal of a bid, or refusal to accept an award, or enter into contract with the Government without justifiable cause, after the Bidder had been adjudged as having submitted the Lowest Calculated and Responsive Bid;

(viii) refusal or failure to post the required performance security within the prescribed time;

(ix) refusal to clarify or validate in writing its bid during post-qualification within a period of seven (7) calendar days from receipt of the request for clarification;

(x) any documented attempt by a bidder to unduly influence the outcome of the bidding in his favor;

(xi) failure of the potential joint venture partners to enter into the joint venture after the bid is declared successful; or

(xii) all other acts that tend to defeat the purpose of the competitive bidding, such as habitually withdrawing from bidding, submitting late Bids or patently insufficient bid, for at least three (3) times within a year, except for valid reasons.

(b) if the successful Bidder:

(i) fails to sign the contract in accordance with ITB Clause 32; or

(ii) fails to furnish performance security in accordance with ITB Clause 33
19. Format and Signing of Bid

19.1 Bidders shall submit their bids through their duly authorized representative using the appropriate forms provided in Section VIII, Bidding Forms on or before the deadline specified in the ITB Clauses 21 in two (2) separate sealed bid envelopes, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements under ITB Clause 12.1, and the second shall contain the financial component of the bid.

19.2 Forms as mentioned in ITB Clause 19.1 must be completed without any alterations to their format, and no substitute form shall be accepted. All blank spaces shall be filled in with the information requested.

19.3 The Bidder shall prepare and submit an original of the first and second envelopes as described in ITB Clauses 12 and 13. In the event of any discrepancy between the original and the copies, the original shall prevail.

19.4 The bid, except for unamended printed literature, shall be signed, and each and every page thereof shall be initialed, by the duly authorized representative/s of the Bidder.

19.5 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the duly authorized representative/s of the Bidder.

20. Sealing and Marking of Bids

20.1 Bidders shall enclose their original eligibility and technical documents described in ITB Clause 12 in one sealed envelope marked “ORIGINAL - TECHNICAL COMPONENT”, and the original of their financial component in another sealed envelope marked “ORIGINAL - FINANCIAL COMPONENT”, sealing them all in an outer envelope marked “ORIGINAL BID”

20.2 Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as “COPY NO. ___ - TECHNICAL COMPONENT” and “COPY NO. ___ – FINANCIAL COMPONENT” and the outer envelope as “COPY NO. ___”, respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

20.3 The original and the number of copies of the Bid as indicated in the BDS shall be typed or written in indelible ink and shall be signed by the bidder or its duly authorized representative/s.

20.4 All envelopes shall:

(a) contain the name of the contract to be bid in capital letters;

(b) bear the name and address of the Bidder in capital letters;
(c) be addressed to the Procuring Entity’s BAC in accordance with ITB Clause 1.1;

(d) bear the specific identification of this bidding process indicated in the ITB Clause 1.2; and

(e) bear a warning “DO NOT OPEN BEFORE…” the date and time for the opening of bids, in accordance with ITB Clause 21.

20.5 If bids are not sealed and marked as required, the Procuring Entity will assume no responsibility for the misplacement or premature opening of the bid.

D. Submission and Opening of Bids

21. Deadline for Submission of Bids

Bids must be received by the Procuring Entity’s BAC at the address and on or before the date and time indicated in the BDS.

22. Late Bids

Any bid submitted after the deadline for submission and receipt of bids prescribed by the Procuring Entity, pursuant to ITB shall be declared “Late” and shall not be accepted by the Procuring Entity.

23. Modification and Withdrawal of Bids

23.1 The Bidder may modify its bid after it has been submitted; provided that the modification is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids. The Bidder shall not be allowed to retrieve its original bid, but shall be allowed to submit another bid equally sealed, properly identified, linked to its original bid marked as “TECHNICAL MODIFICATION” or “FINANCIAL MODIFICATION” and stamped “received” by the BAC. Bid modifications received after the applicable deadline shall not be considered and shall be returned to the Bidder unopened.

23.2 A Bidder may, through a Letter of Withdrawal, withdraw its bid after it has been submitted, for valid and justifiable reason; provided that the Letter of Withdrawal is received by the Procuring Entity prior to the deadline prescribed for submission and receipt of bids.

23.3 Bids requested to be withdrawn in accordance with ITB Clause 23.1 shall be returned unopened to the Bidders. A Bidder may also express its intention not to participate in the bidding through a letter which should reach and be stamped by the BAC before the deadline for submission and receipt of bids. A Bidder that withdraws its bid shall not be permitted to submit another bid, directly or indirectly, for the same contract.
23.4 No bid may be modified after the deadline for submission of bids. No bid may be withdrawn 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 Financial Bid Form. Withdrawal of a bid during this interval shall result in the forfeiture of the Bidder’s bid security, pursuant to ITB Clause 18.5, and the imposition of administrative, civil and criminal sanctions as prescribed by R.A. 9184 and its IRR.

24. Opening and Preliminary Examination of Bids

24.1 The BAC shall open the first bid envelopes of Bidders in public as specified in the BDS to determine each Bidder’s compliance with the documents prescribed in ITB Clause 12. For this purpose, the BAC shall check the submitted documents of each bidder against a checklist of required documents to ascertain if they are all present, using a non-discretionary “pass/fail” criterion. If a bidder submits the required document, it shall be rated “passed” for that particular requirement. In this regard, bids that fail to include any requirement or are incomplete or patently insufficient shall be considered as “failed”. Otherwise, the BAC shall rate the said first bid envelope as “passed”.

24.2 Unless otherwise specified in the BDS, immediately after determining compliance with the requirements in the first envelope, the BAC shall forthwith open the second bid envelope of each remaining eligible bidder whose first bid envelope was rated “passed”. The second envelope of each complying bidder shall be opened within the same day. In case one or more of the requirements in the second envelope of a particular bid is missing, incomplete or patently insufficient, and/or if the submitted total bid price exceeds the ABC unless otherwise provided in ITB Clause 13.2, the BAC shall rate the bid concerned as “failed”. Only bids that are determined to contain all the bid requirements for both components shall be rated “passed” and shall immediately be considered for evaluation and comparison.

24.3 Letters of withdrawal shall be read out and recorded during bid opening, and the envelope containing the corresponding withdrawn bid shall be returned to the Bidder unopened. If the withdrawing Bidder’s representative is in attendance, the original bid and all copies thereof shall be returned to the representative during the bid opening. If the representative is not in attendance, the bid shall be returned unopened by registered mail. The Bidder may withdraw its bid prior to the deadline for the submission and receipt of bids, provided that the corresponding Letter of Withdrawal contains a valid authorization requesting for such withdrawal, subject to appropriate administrative sanctions.

24.4 If a Bidder has previously secured a certification from the Procuring Entity to the effect that it has previously submitted the above-enumerated Class “A” Documents, the said certification may be submitted in lieu of the requirements enumerated in ITB Clause 12.1 (a), items (i) to (v).
24.5 In the case of an eligible foreign Bidder as described in ITB Clause 5, the Class “A” Documents described in ITB Clause 12.1(a) may be substituted with the appropriate equivalent documents, if any, issued by the country of the Bidder concerned.

24.6 Each partner of a joint venture agreement shall likewise submit the requirements in ITB Clauses 12.1(a)(i) and 12.1(a)(ii). Submission of documents required under ITB Clauses 12.1(a)(iii) to 12.1(a)(v) by any of the joint venture partners constitutes compliance.

24.7 Decision of the procuring entity at any stage of procurement process may be questioned in accordance with Section 55 of the revised Implementing Rules and Regulations of Republic Act 9184.

24.8 The Procuring Entity shall prepare the minutes of the proceedings of the bid opening that shall include, as a minimum: (a) names of Bidders, their bid price, bid security, findings of preliminary examination; and (b) attendance sheet. The BAC members shall sign the abstract of bids as read.

E. Evaluation and Comparison of Bids

25. Process to be Confidential

25.1 Members of the BAC, including its staff and personnel, as well as its Secretariat and TWG, are prohibited from making or accepting any kind of communication with any bidder regarding the evaluation of their bids until the issuance of the Notice of Award, unless otherwise allowed in the case of ITB Clause 26.

25.2 Any effort by a bidder to influence the Procuring Entity in the Procuring Entity’s decision in respect of bid evaluation, bid comparison or contract award will result in the rejection of the Bidder’s bid.

26. Clarification of Bids

To assist in the evaluation, comparison, and post-qualification of the bids, the Procuring Entity may ask in writing any Bidder for a clarification of its bid. All responses to requests for clarification shall be in writing. Any clarification submitted by a Bidder in respect to its bid and that is not in response to a request by the Procuring Entity shall not be considered.

27. Domestic Preference

27.1 Unless otherwise stated in the BDS, the Procuring Entity will grant a margin of preference for the purpose of comparison of bids in accordance with the following:

   (a) The preference shall be applied when (i) the lowest Foreign Bid is lower than the lowest bid offered by a Domestic Bidder, or (ii) the
lowest bid offered by a non-Philippine national is lower than the lowest bid offered by a Domestic Entity.

(b) For evaluation purposes, the lowest Foreign Bid or the bid offered by a non-Philippine national shall be increased by fifteen percent (15%).

(c) In the event that (i) the lowest bid offered by a Domestic Entity does not exceed the lowest Foreign Bid as increased, or (ii) the lowest bid offered by a non-Philippine national as increased, then the Procuring Entity shall award the contract to the Domestic Bidder/Entity at the amount of the lowest Foreign Bid or the bid offered by a non-Philippine national, as the case may be.

(d) If the Domestic Entity/Bidder refuses to accept the award of contract at the amount of the Foreign Bid or bid offered by a non-Philippine national within two (2) calendar days from receipt of written advice from the BAC, the Procuring Entity shall award to the bidder offering the Foreign Bid or the non-Philippine national, as the case may be, subject to post-qualification and submission of all the documentary requirements under these Bidding Documents.

27.2 A Bidder may be granted preference as a Domestic Entity subject to the certification from the DTI (in case of sole proprietorships), SEC (in case of partnerships and corporations), or CDA (in case of cooperatives) that the (a) sole proprietor is a citizen of the Philippines or the partnership, corporation, cooperative, or association is duly organized under the laws of the Philippines with at least seventy five percent (75%) of its interest or outstanding capital stock belonging to citizens of the Philippines, (b) habitually established in business and habitually engaged in the manufacture or sale of the merchandise covered by his bid, and (c) the business has been in existence for at least five (5) consecutive years prior to the advertisement and/or posting of the Invitation to Bid for this Project.

27.3 A Bidder may be granted preference as a Domestic Bidder subject to the certification from the DTI that the Bidder is offering unmanufactured articles, materials or supplies of the growth or production of the Philippines, or manufactured articles, materials, or supplies manufactured or to be manufactured in the Philippines substantially from articles, materials, or supplies of the growth, production, or manufacture, as the case may be, of the Philippines.

28. Detailed Evaluation and Comparison of Bids

28.1 The Procuring Entity will undertake the detailed evaluation and comparison of bids which have passed the opening and preliminary examination of bids, pursuant to ITB Clause 24, in order to determine the Lowest Calculated Bid.

28.2 The Lowest Calculated Bid shall be determined in two steps:
(a) The detailed evaluation of the financial component of the bids, to establish the correct calculated prices of the bids; and

(b) The ranking of the total bid prices as so calculated from the lowest to the highest. The bid with the lowest price shall be identified as the Lowest Calculated Bid.

28.3 The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all bids rated “passed,” using non-discretionary pass/fail criteria. Unless otherwise specified in the BDS, the BAC shall consider the following in the evaluation of bids:

(a) Completeness of the bid. Unless the ITB specifically allows partial bids, bids not addressing or providing all of the required items in the Schedule of Requirements including, where applicable, bill of quantities, shall be considered non-responsive and, thus, automatically disqualified. In this regard, where a required item is provided, but no price is indicated, the same shall be considered as non-responsive, but specifying a "0" (zero) for the said item would mean that it is being offered for free to the Procuring Entity; and

(b) Arithmetical corrections. Consider computational errors and omissions to enable proper comparison of all eligible bids. It may also consider bid modifications, if allowed in the BDS. Any adjustment shall be calculated in monetary terms to determine the calculated prices..

28.4 Based on the detailed evaluation of bids, those that comply with the above-mentioned requirements shall be ranked in the ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, to identify the Lowest Calculated Bid. Total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications, which exceed the ABC shall not be considered unless otherwise indicated in the BDS.

28.5 The Procuring Entity’s evaluation of bids shall only be based on the bid price quoted in the Financial Bid Form..

28.6 Bids shall be evaluated on an equal footing to ensure fair competition. For this purpose, all bidders shall be required to include in their bids the cost of all taxes, such as, but not limited to, value added tax (VAT), income tax, local taxes, and other fiscal levies and duties which shall be itemized in the bid form and reflected in the detailed estimates. Such bids, including said taxes, shall be the basis for bid evaluation and comparison..

29. Post-Qualification

29.1 The Procuring Entity shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid complies
with and is responsive to all the requirements and conditions specified in ITB Clauses 5, 12 and 13.

29.2 Within a non-extendible period of three (3) calendar days from receipt by the bidder of the notice from the BAC that it is the Lowest Calculated Bid, the Bidder shall submit the following documentary requirements:

(a) Tax clearance per Executive Order 398, Series of 2005;

(b) Latest income and business tax returns in the form specified in the BDS;

(c) Certificate of PhilGEPS Registration; and

(d) Other appropriate licenses and permits required by law and stated in the BDS.

Failure of the Bidder declared as Lowest Calculated Bid to duly submit the requirements under this Clause or a finding against the veracity of such shall be ground for forfeiture of the bid security and disqualification of the Bidder for award.

29.3 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted pursuant to ITB Clauses 12 and 13, as well as other information as the Procuring Entity deems necessary and appropriate, using a non-discretionary “pass/fail” criterion.

29.4 If the BAC determines that the Bidder with the Lowest Calculated Bid passes all the criteria for post-qualification, it shall declare the said bid as the Lowest Calculated Responsive Bid, and recommend to the Head of the Procuring Entity the award of contract to the said Bidder at its submitted price or its calculated bid price, whichever is lower.

29.5 A negative determination shall result in rejection of the Bidder’s Bid, in which event the Procuring Entity shall proceed to the next Lowest Calculated Bid to make a similar determination of that Bidder’s capabilities to perform satisfactorily. If the second Bidder, however, fails the post qualification, the procedure for post qualification shall be repeated for the Bidder with the next Lowest Calculated Bid, and so on until the Lowest Calculated Responsive Bid is determined for contract award.

29.6 Within a period not exceeding seven (7) calendar days from the date of receipt of the recommendation of the BAC, the Head of the Procuring Entity shall approve or disapprove the said recommendation. In the case of GOCCs and GFIs, the period provided herein shall be fifteen (15) calendar days.

30. Reservation Clause

30.1 Notwithstanding the eligibility or post-qualification of a Bidder, the Procuring Entity concerned reserves the right to review its qualifications at
any stage of the procurement process if it has reasonable grounds to believe that a misrepresentation has been made by the said Bidder, or that there has been a change in the Bidder’s capability to undertake the project from the time it submitted its eligibility requirements. Should such review uncover any misrepresentation made in the eligibility and bidding requirements, statements or documents, or any changes in the situation of the Bidder which will affect its capability to undertake the project so that it fails the preset eligibility or bid evaluation criteria, the Procuring Entity shall consider the said Bidder as ineligible and shall disqualify it from submitting a bid or from obtaining an award or contract.

30.2 Based on the following grounds, the Procuring Entity reserves the right to reject any and all bids, declare a Failure of Bidding at any time prior to the contract award, or not to award the contract, without thereby incurring any liability, and make no assurance that a contract shall be entered into as a result of the bidding:

(a) If there is prima facie evidence of collusion between appropriate public officers or employees of the Procuring Entity, or between the BAC and any of the bidders, or if the collusion is between or among the bidders themselves, or between a bidder and a third party, including any act which restricts, suppresses or nullifies or tends to restrict, suppress or nullify competition;

(b) If the Procuring Entity’s BAC is found to have failed in following the prescribed bidding procedures; or

(c) For any justifiable and reasonable ground where the award of the contract will not redound to the benefit of the Government as follows:

(i) If the physical and economic conditions have significantly changed so as to render the project no longer economically, financially or technically feasible as determined by the head of the procuring entity;

(ii) If the project is no longer necessary as determined by the head of the procuring entity; and

(iii) If the source of funds for the project has been withheld or reduced through no fault of the Procuring Entity.

30.3 In addition, the Procuring Entity may likewise declare a failure of bidding when:

(a) No bids are received;

(b) All prospective bidders are declared ineligible;

(c) All bids fail to comply with all the bid requirements or fail post-qualification; or
(d) The bidder with the Lowest Calculated Responsive Bid refuses, without justifiable cause to accept the award of contract, and no award is made.

F. Award of Contract

31. Contract Award

31.1 Subject to ITB Clause 29, the Procuring Entity shall award the contract to the Bidder whose bid has been determined to be the Lowest Calculated Responsive Bid.

31.2 Prior to the expiration of the period of bid validity, the Procuring Entity shall notify the successful Bidder in writing that its bid has been accepted, through a Notice of Award received personally or sent by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the Bidder with the Lowest Calculated Responsive Bid and submitted personally or sent by registered mail or electronically to the Procuring Entity.

31.3 Notwithstanding the issuance of the Notice of Award, award of contract shall be subject to the following conditions:

(a) Submission of the valid JVA, if applicable, within ten (10) calendar days from receipt by the Bidder of the notice from the BAC that the Bidder has the Lowest Calculated and Responsive Bid;

(b) Posting of the performance security in accordance with ITB Clause 33;

(c) Signing of the contract as provided in ITB Clause 32; and

(d) Approval by higher authority, if required.

31.4 At the time of contract award, the Procuring Entity shall not increase or decrease the quantity of goods originally specified in Section VI. Schedule of Requirements.

32. Signing of the Contract

32.1 At the same time as the Procuring Entity notifies the successful Bidder that its bid has been accepted, the Procuring Entity shall send the Contract Form to the Bidder, which contract has been provided in the Bidding Documents, incorporating therein all agreements between the parties.

32.2 Within ten (10) calendar days from receipt of the Notice of Award, the successful Bidder shall post the required performance security and sign and date the contract and return it to the Procuring Entity.
32.3 The Procuring Entity shall enter into contract with the successful Bidder within the same ten (10) calendar day period provided that all the documentary requirements are complied with.

32.4 The following documents shall form part of the contract:

(a) Contract Agreement;

(b) Bidding Documents;

(c) Winning bidder’s bid, including the Technical and Financial Proposals, and all other documents/statements submitted;

(d) Performance Security;

(e) Credit line in accordance with ITB Clause 5.5, if applicable;

(f) Notice of Award of Contract; and

(g) Other contract documents that may be required by existing laws and/or specified in the BDS.

33. Performance Security

33.1 To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.

33.2 The performance security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount equal to the percentage of the total contract price in accordance with the following schedule:

<table>
<thead>
<tr>
<th>Form of Performance Security</th>
<th>Amount of Performance Security (Equal to Percentage of the Total Contract Price)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash or cashier’s/manager’s check issued by a Universal or Commercial Bank;</td>
<td></td>
</tr>
<tr>
<td>Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank</td>
<td>Five percent (5%)</td>
</tr>
<tr>
<td>Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security; and/or</td>
<td>Thirty percent (30%)</td>
</tr>
<tr>
<td>Any combination of the foregoing.</td>
<td>Proportionate to share of form with respect to total amount of security</td>
</tr>
</tbody>
</table>
33.3 Failure of the successful Bidder to comply with the above-mentioned requirement shall constitute sufficient ground for the annulment of the award and forfeiture of the bid security, in which event the Procuring Entity shall initiate and complete the post qualification of the second Lowest Calculated Bid. The procedure shall be repeated until the LCRB is identified and selected for contract award. However if no Bidder passed post-qualification, the BAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement.

34 Notice to Proceed

34.1 Within three (3) calendar days from the date of approval of the contract by the appropriate government approving authority, the Procuring Entity shall issue its Notice to Proceed to the Bidder.

34.2 The contract effectivity date shall be provided in the Notice to Proceed by the Procuring Entity, which date shall not be later than seven (7) calendar days from the issuance of the Notice to Proceed.
<table>
<thead>
<tr>
<th>ITB CLAUSE</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>The PROCURING ENTITY is: UNIVERSITY OF THE PHILIPPINES VISAYAS (UNIVERSITY)</td>
</tr>
<tr>
<td>1.2</td>
<td>The lot(s) and reference is/are: Invitation To Bid</td>
</tr>
<tr>
<td>2.0</td>
<td>The Funding Source is: UPV Reprogrammed Funds – GF 1294TH BOR Meeting</td>
</tr>
<tr>
<td>3.1</td>
<td>No further instructions.</td>
</tr>
<tr>
<td>5.1</td>
<td>No Further instructions</td>
</tr>
<tr>
<td>5.2 &amp; 5.4</td>
<td>No further instructions</td>
</tr>
</tbody>
</table>
| 5.5        | The Bidder must submit a computation of its Net Financial Contracting Capacity (NFCC), which must be at least equal to the ABC to be bid, calculated as follows: 
\[ \text{NFCC} = [(\text{Current assets} - \text{current liabilities}) \times (K)] - \text{the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.} \]

Where:

\[ K = 10 \text{ for a contract duration of one year or less, 15 for a contract duration of more than one year up to two years, and 20 for a contract duration of more than two years.} \]

The values of the bidder’s current assets and current liabilities shall be based on the data submitted to the BIR, through its Electronic Filing and Payment System (EFPS) |
<p>| 6.2        | No further instructions. |
| 7.0        | No further instructions |</p>
<table>
<thead>
<tr>
<th>8.1 &amp; 8.2</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.1</strong></td>
<td><strong>The place of Pre-Bid Conference is:</strong></td>
</tr>
</tbody>
</table>
|  | **Tea Room, Cafeteria Building**  
|  | **University of the Philippines Visayas**  
|  | **Iloilo City Campus**  
|  | **The time and date of Pre-Bid Conference is:**  
|  | **2:00 P.M.**  
|  | **MAY 19, 2015** |
| **10.1** | **The PROCURING ENTITY’S address is:** |
|  | University of the Philippines Visayas  
|  | New Administration Building  
|  | UP Visayas, Miagao Campus  
|  | Tel. No.: (033) 315-98-58/ 315-81-41; (033) 315-96-32 local 180 / 247  
|  | E-mail Address: supply_property@yahoo.com  
|  | PROF. EMELIZA C. LOZADA  
|  | Chair, Bids and Awards Committee  
|  | MRS. ESTERLINA I. GAMEZ  
|  | Head, BAC Secretariat |
| **12.1** | **See checklist for Eligibility and Technical Requirements** |
| **13.1** | **No further instructions.** |
| **13.2** | **The total ABC is** **P1,973,700.00**  
|  | Any Bid with a total financial proposal exceeding this amount shall not be accepted. |
| **15.4(a)(iii)** | **No further instruction** |
| **15.5** | **Bid Prices:**  
|  | Bid prices shall be fixed. Adjustable price proposals shall be treated as non-responsive and shall be rejected. |
| **16.1(b)** | **For GOODS and services that will be supplied from outside of the Philippines:**  
<p>|  | The Bid prices for GOODS and Services that will be supplied from outside of the Philippines shall be quoted in Philippine Pesos based on the exchange rate prevailing on the day of the Bid Opening. |
| <strong>16.3</strong> | <strong>No Further Instructions</strong> |</p>
<table>
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</table>
| **17.1** | Period for Validity of Bids  
Bids will be valid until 120 days from the date of the opening of Bids. |   |
| **18.1** | **Bid Security**  
Bid Security shall be in any of the following:  
- a) Cashier’s / manager’s check issued by a Universal or Commercial Bank = 2% of ABC in the amount of: **P39,474.00**  
- b) Bank draft/guarantee or Irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank = 2% of ABC in the amount of: **P39,474.00**  
- c) Bid Securing Declaration  

**NOTE:**  
**CASH AND SURETY BOND ARE NOT ACCEPTABLE**  
**All checks must be payable to:** **“U.P. VISAYAS”** |   |
| **18.2** | Bid Security Validity  
Bids Security will be valid until 120 days from the date of the opening of Bids. |   |
Bidders shall fasten securely their original eligibility and technical documents described in ITB Clause 12 & 13, in a folder and enclose it in one sealed envelope marked “ORIGINAL - TECHNICAL COMPONENT”, and the original of their financial component shall likewise be fastened in a folder and enclose in another sealed envelope marked “ORIGINAL - FINANCIAL COMPONENT”, sealing them all in an outer envelope marked “ORIGINAL BID”.

Each copy of the first and second envelopes shall be similarly sealed duly marking the inner envelopes as “COPY NO. ___ - TECHNICAL COMPONENT” and “COPY NO. ___ – FINANCIAL COMPONENT” and the outer envelope as “COPY NO. ___”, respectively. These envelopes containing the original and the copies shall then be enclosed in one single envelope.

All folders and envelopes shall:

(a) contain the name of the contract to be bid in capital letters;

(b) bear the name and address of the Bidder in capital letters;

(c) be addressed to the Procuring Entity’s BAC identified in BDS Clause 10.1;

(d) bear the specific identification of this bidding process indicated in the Invitation to Bid; and

(e) bear a warning “DO NOT OPEN BEFORE 2:00 P.M., June 1, 2015” the date and time for the opening of bids, in accordance with ITB Clause 21.

If bids are not sealed and marked as required, the Procuring Entity will assume no responsibility for the misplacement or premature opening of the bid.

In relation to Items 12 and 13 of the Instruction to Bidders, all prospective bidders are required to submit the original copy of the Eligibility, Technical and Financial Documents.

Bidders may submit either an original copy or a certified true copy of the following documents:

1. All class “A” Legal Documents such as Certificate of Registration from SEC, DTI, CDA, Mayor’s permit from city of municipality;

2. Class “A” Financial Documents of the prospective bidder’s audited financial statements, stamped “received” by the Bureau of Internal Revenue;


All other provisions of the Eligibility Requirements Checklist and Forms are not mentioned here must prevail.
21. The Address for Submission of Bids is:

Tea Room, Cafeteria Building
University of the Philippines Visayas
Iloilo City Campus

The deadline for Submission of Bids is:

2:00 P.M. JUNE 1, 2015

22. Late bids are not accepted.

24.1 The place of Bid opening is:

Tea Room, Cafeteria Building
University of the Philippines Visayas
Iloilo City Campus

The time and date of Bid opening is:

2:00 P.M. JUNE 1, 2015

24.2 No further instructions.

27.1 No further instructions.

28.3, 28.3(b), 28.4 No further instructions

29.2(b), 29.2(d) Post-Qualification:

Within a non-extendible period of three (3) calendar days from receipt by the Bidder of notice from the BAC that it is the Lowest Calculated Bid, the Bidder shall submit the following documentary requirements:

- Tax Clearance Certificate
- Latest Income and Business Tax Returns
- Certificate of PhilGEPS Registration
- Other appropriate licenses and permits required by law

34.2 The effective date of the Contract is upon receipt of the Notice of Award/Purchase Order
Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

The GCC in Section IV, read in conjunction with the SCC in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

The GCC herein shall not be altered. Any changes and complementary information, which may be needed, shall be introduced only through the SCC in Section V.
.1 Definitions

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

(a) “The Contract” means the agreement entered into between the Procuring Entity and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

(b) “The Contract Price” means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.

(c) “The Goods” means all of the supplies, equipment, machinery, spare parts, other materials and/or general support services which the Supplier is required to provide to the Procuring Entity under the Contract.

(d) “The Services” means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.

(e) “GCC” means the General Conditions of Contract contained in this Section.

(f) “SCC” means the Special Conditions of Contract.

(g) “The Procuring Entity” means the organization purchasing the Goods, as named in the SCC.

(h) “The Procuring Entity’s country” is the Philippines.

(i) “The Supplier” means the individual contractor, manufacturer distributor, or firm supplying/manufacturing the Goods and Services under this Contract and named in the SCC.

(j) “Funding Source” means the organization named in the SCC.

(k) “The Project Site,” where applicable, means the place or places named in the SCC.

(l) “Day” means calendar day.

(m) The “Effective Date” of the contract will be the date of receipt by the Supplier of the Notice to Proceed or the date provided in the Notice to Proceed. Performance of all obligations shall be reckoned from the Effective Date of the Contract.

(n) “Verified Report” refers to the report submitted by the Implementing Unit to the Head of the Procuring Entity setting forth its findings as to the existence of grounds or causes for termination and explicitly stating its recommendation for the issuance of a Notice to Terminate.
2. **Corrupt, Fraudulent, Collusive, and Coercive Practices**

2.1: Unless otherwise provided in the SCC, the Procuring Entity as well as the bidders, contractors, or suppliers shall observe the highest standard of ethics during the procurement and execution of this Contract. In pursuance of this policy, the Procuring Entity

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves, others, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; entering, on behalf of the Government, into any contract or transaction manifestly and grossly disadvantageous to the same, whether or not the public officer profited or will profit thereby, and similar acts as provided in Republic Act 3019.

(ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Procuring Entity, and includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the Procuring Entity of the benefits of free and open competition.

(iii) “collusive practices” means a scheme or arrangement between two or more Bidders, with or without the knowledge of the Procuring Entity, designed to establish bid prices at artificial, non-competitive levels.

(iv) “coercive practices” means harming or threatening to harm, directly or indirectly, persons, or their property to influence their participation in a procurement process, or affect the execution of a contract;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to an administrative proceedings or investigation or making false statements to investigators in order to materially impede an administrative proceedings or investigation of the Procuring Entity or any foreign government/foreign or international financing institution into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the administrative proceedings or investigation or from pursuing such proceedings or investigation; or
acts intended to materially impede the exercise of the inspection and audit rights of the Procuring Entity or any foreign government/foreign or international financing institution herein

(b) will reject a proposal for award if it determines that the Bidder recommended for award has engaged in any of the practices mentioned in this Clause for purposes of competing for the contract.

2.2 Further the Funding Source, Borrower or Procuring Entity, as appropriate, will seek to impose the maximum civil, administrative and/or criminal penalties available under the applicable law on individuals and organizations deemed to be involved with any of the practices mentioned in GCC Clause 2.1(a).

3. Inspection and Audit by the Funding Source

The Supplier shall permit the Funding Source to inspect the Supplier’s accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the Funding Source, if so required by the Funding Source.

4. Governing Law and Language

4.1 This Contract shall be interpreted in accordance with the laws of the Republic of the Philippines.

4.2 This Contract has been executed in the English language, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. All correspondence and other documents pertaining to this Contract exchanged by the parties shall be written in English.

5. Notices

5.1 Any notice, request, or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request, or consent shall be deemed to have been given or made when received by the concerned party, either in person or through an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the SCC, which shall be effective when delivered and duly received or on the notice’s effective date, whichever is later.

5.2 A Party may change its address for notice hereunder by giving the other Party notice of such change pursuant to the provisions listed in the SCC for GCC Clause 5.1.

6. Scope of Contract
6.1 The GOODS and Related Services to be provided shall be as specified in Section VI, Schedule of Requirements.

6.2 This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. Any additional requirements for the completion of this Contract shall be provided in the SCC.

7. **Subcontracting**

7.1 Subcontracting of any portion of the Goods, if allowed in the BDS, does not relieve the Supplier of any liability or obligation under this Contract. The Supplier will be responsible for the acts, defaults and negligence of any subcontractor, its agents, servants or workmen as fully as if these were the Supplier’s own acts, defaults or negligence or those of its agents, servants or workmen.

7.2 Subcontractors disclosed and identified during the bidding may be changed during the implementation of this Contract, subject to compliance with the required qualifications and the approval of the Procuring Entity.

8. **Procuring Entity’s Responsibilities**

8.1 Whenever the performance of the obligations in this Contract requires that the Supplier obtain permits, approvals, import, and other licenses from local public authorities, the Procuring Entity shall, if so needed by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

8.2 The Procuring Entity shall pay all costs involved in the performance of its responsibilities in accordance with GCC Clause 6.

9. **Prices**

9.1 For the given scope of work in this Contract as awarded, all bid prices are considered fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances and upon prior approval of the GPPB in accordance with Section 61 of R.A. 9184 and its IRR or except as provided in this Clause.

9.2 Prices charged by the Supplier for Goods delivered and/or services performed under this Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any change in price resulting from a Change Order issued in accordance with GCC.

10. **Payment**
10.1 Payments shall be made only upon a certification by the Head of the Procuring Entity to the effect that the Goods have been rendered or delivered in accordance with the terms of this Contract and have been duly inspected and accepted. Except with the prior approval of the President no payment shall be made for services not yet rendered or for supplies and materials not yet delivered under this Contract. Ten percent (10%) of the amount of each payment shall be retained by the Procuring Entity to cover the Supplier’s warranty obligations under this Contract as described in GCC Clause 17.

10.2 The Supplier’s request(s) for payment shall be made to the Procuring Entity in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and/or Services performed, and by documents submitted pursuant to the SCC provision for GCC Clause 6.2, and upon fulfillment of other obligations stipulated in this Contract.

10.3 Pursuant to GCC Clause 10.2, payments shall be made promptly by the Procuring Entity, but in no case later than sixty (60) days after submission of an invoice or claim by the Supplier.

10.4 Unless otherwise specified in the SCC, the currency in which payment is made to the Supplier under this Contract shall be in Philippine Pesos.

11. Advance Payment AND Terms of Payment

11.1 Advance payment shall be made only after prior approval of the President, and shall not exceed fifteen percent (15%) of the Contract amount, unless otherwise directed by the President or in cases allowed under Annex “D” of RA 9184.

11.2 For Goods supplied from abroad, the terms of payment shall be as follows:

(a) On Contract Signature: Fifteen percent (15%) of the Contract Price shall be paid within sixty (60) days from signing of the Contract and upon submission of a claim and a bank guarantee for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII. Bidding Forms.

(b) On Delivery: Sixty-five percent (65%) of the Contract Price shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the SCC provision on Delivery and Documents.

(c) On Acceptance: The remaining twenty percent (20%) of the Contract Price shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity’s authorized representative. In the event that no inspection or acceptance certificate is issued by the Procuring Entity’s authorized representative within forty five
(45) days of the date shown on the delivery receipt the Supplier shall have the right to claim payment of the remaining twenty percent (20%) subject to the Procuring Entity’s own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents.

11.3 All progress payments shall first be charged against the advance payment until the latter has been fully exhausted.

12. Taxes and Duties

The Supplier, whether local or foreign, shall be entirely responsible for all the necessary taxes, stamp duties, license fees, and other such levies imposed for the completion of this Contract.

13. Performance Security

13.1 Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any the forms prescribed in the ITB Clause 33.2.

13.2 The performance security posted in favor of the Procuring Entity shall be forfeited in the event it is established that the winning bidder is in default in any of its obligations under the contract.

13.3 The performance security shall remain valid until issuance by the Procuring Entity of the final Certificate of Acceptance.

13.4 The performance security may be released by the Procuring Entity and returned to the Supplier after the issuance of the Certificate of Final Acceptance subject to the following conditions:

   (a) There are no pending claims against the Supplier or the surety company filed by the PROCURING ENTITY;

   (b) The Supplier has no pending claims for labor and materials filed against it; and

   (c) Other terms specified in the SCC.

13.5 In case of a reduction of the contract value, the Procuring Entity shall allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.

14. Use of Contract Documents and Information
14.1 The Supplier shall not, except for purposes of performing the obligations in this Contract, without the Procuring Entity’s prior written consent, disclose this Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Entity. Any such disclosure shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

14.2 Any document, other than this Contract itself, enumerated in GCC Clause 14.1 shall remain the property of the Procuring Entity and shall be returned (all copies) to the Procuring Entity on completion of the Supplier’s performance under this Contract if so required by the Procuring Entity.

15. Standards

The Goods provided under this Contract shall conform to the standards mentioned in the Technical Specifications; and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods’ country of origin. Such standards shall be the latest issued by the institution concerned.

16. Inspection and Tests

16.1 The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring Entity. The SCC and Technical Specifications shall specify what inspections and/or tests the Procuring Entity requires and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

16.2 If applicable, the inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the goods’ final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring Entity. The supplier shall provide the Procuring Entity with results of such inspections and tests.

16.3 The Procuring Entity or its designated representative shall be entitled to attend the tests and/or inspections referred to in this Clause provided that the Procuring Entity shall bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

16.4 The Procuring Entity may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Procuring Entity, and shall repeat the test and/or inspection, at no cost to the Procuring Entity, upon giving a notice pursuant to GCC Clause 5.
16.5 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Procuring Entity or its representative, shall release the Supplier from any warranties or other obligations under this Contract.

17. Warranty

17.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials except when the design and/or material required by the Procuring Entity provides otherwise.

17.2 The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

17.3 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier for a minimum period specified in the SCC. The obligation for the warranty shall be covered by, at the Supplier’s option, either retention money in an amount equivalent to at least ten percent (10%) of the final payment, or a special bank guarantee equivalent to at least ten percent (10%) of the Contract Price or other such amount if so specified in the SCC. The said amounts shall only be released after the lapse of the warranty period specified in the SCC; provided, however, that the Supplies delivered are free from patent and latent defects and all the conditions imposed under this Contract have been fully met.

17.4 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, within the period specified in the SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring Entity.

17.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in the GCC Clause 17.4, the Procuring Entity may proceed to take such remedial action as may be necessary, at the Supplier’s risk and expense and without prejudice to any other rights which the Procuring Entity may have against the Supplier under the Contract and under the applicable law.

18. Delays in the Supplier’s Performance

18.1 Delivery of the Goods and/or performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Entity in the Schedule of Requirements.

18.2 If at any time during the performance of this Contract, the Supplier or its Subcontractor(s) should encounter conditions impeding timely delivery of the Goods and/or performance of Services, the Supplier shall promptly notify the
Procuring Entity in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier’s notice, and upon causes provided for under GCC Clause 22, the Procuring Entity shall evaluate the situation and may extend the Supplier’s time for performance, in which case the extension shall be ratified by the parties by amendment of Contract.

18.3 Except as provided under GCC Clause 22, a delay by the Supplier in the performance of its obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 19, unless an extension of time is agreed upon pursuant to GCC Clause 29 without the application of liquidated damages.

19. **Liquidated Damages**

Subject to GCC, if the Supplier fails to satisfactorily deliver any or all of the Goods and/or to perform the Services within the period(s) specified in this Contract inclusive of duly granted time extensions if any, the Procuring Entity shall, without prejudice to its other remedies under this Contract and under the applicable law, deduct from the Contract Price, as liquidated damages, the applicable rate of one tenth (1/10) of one (1) percent of the cost of the unperformed portion for every day of delay until actual delivery or performance. The maximum deduction shall be ten percent (10%) of the amount of contract. Once the maximum is reached, the Procuring Entity shall rescind the Contract pursuant to GCC, without prejudice to other courses of action and remedies open to it.

20 **Settlement of Disputes**

20.1 If any dispute or difference of any kind whatsoever shall arise between the Procuring Entity and the Supplier in connection with or arising out of this Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

20.2 If after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Procuring Entity or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

20.3 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under this Contract.

20.4 In the case of a dispute between the Procuring Entity and the Supplier, the dispute shall be resolved in accordance with Republic Act 9285 (“R.A. 9285”), otherwise known as the “Alternative Dispute Resolution Act of 2004.”
20.5 Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and the Procuring Entity shall pay the Supplier any monies due the Supplier.

21. **Liability of the Supplier**

21.1 The Supplier’s liability under this Contract shall be as provided by the laws of the Republic of the Philippines, subject to additional provisions, if any, set forth in the SCC.

21.2 Except in cases of criminal negligence or willful misconduct, and in the case of infringement of patent rights, if applicable, the aggregate liability of the Supplier to the Procuring Entity shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

22. **Force Majeure**

22.1 The Supplier shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that the Supplier’s delay in performance or other failure to perform its obligations under the Contract is the result of a force majeure.

22.2 For purposes of this Contract the terms “force majeure” and “fortuitous event” may be used interchangeably. In this regard, a fortuitous event or force majeure shall be interpreted to mean an event which the Contractor could not have foreseen, or which though foreseen, was inevitable. It shall not include ordinary unfavorable weather conditions; and any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor. Such events may include, but not limited to, acts of the Procuring Entity in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

22.3 If a force majeure situation arises, the Supplier shall promptly notify the Procuring Entity in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Entity in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure.

23. **Termination for Default**

23.1 The Procuring Entity shall terminate this Contract for default when any of the following conditions attends its implementation:

(a) Outside of force majeure, the Supplier fails to deliver or perform any or all of the Goods within the period(s) specified
in the contract, or within any extension thereof granted by the Procuring Entity pursuant to a request made by the Supplier prior to the delay, and such failure amounts to at least ten percent (10%) of the contract price;

(b) As a result of *force majeure*, the Supplier is unable to deliver or perform any or all of the Goods, amounting to at least ten percent (10%) of the contract price, for a period of not less than sixty (60) calendar days after receipt of the notice from the Procuring Entity stating that the circumstance of force majeure is deemed to have ceased; or

(c) The Supplier fails to perform any other obligation under the Contract.

23.2 In the event the Procuring Entity terminates this Contract in whole or in part, for any of the reasons provided under GCC Clauses 23 to 26, the Procuring Entity may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Entity for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of this Contract to the extent not terminated.

23.2.1 In case the delay in the delivery of the Goods and/or performance of the Services exceeds a time duration equivalent to ten percent (10%) of the specified contract time plus any time extension duly granted to the Supplier, the Procuring Entity may terminate this Contract, forfeit the Supplier's performance security and award the same to a qualified Supplier.

24. **Termination for Insolvency**

The Procuring Entity shall terminate this Contract if the Supplier is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Entity and/or the Supplier.

25. **Termination for Convenience**

25.1 The Procuring Entity may terminate this Contract, in whole or in part, at any time for its convenience. The Head of the Procuring Entity may terminate a contract for the convenience of the Government if he has determined the existence of conditions that make Project Implementation economically, financially or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and national government policies.

25.2 The Goods that have been delivered and/or performed or are ready for delivery or performance within thirty (30) calendar days after the Supplier’s receipt of Notice to Terminate shall be accepted by the Procuring Entity at the
contract terms and prices. For Goods not yet performed and/or ready for
delivery, the Procuring Entity may elect:

(a) to have any portion delivered and/or performed and paid at the
contract terms and prices; and/or

(b) to cancel the remainder and pay to the Supplier an agreed
amount for partially completed and/or performed goods and for
materials and parts previously procured by the Supplier.

25.3 If the Supplier suffers loss in its initial performance of the terminated
contract, such as purchase of raw materials for goods specially manufactured for
the Procuring Entity which cannot be sold in open market, it shall be allowed to
recover partially from this Contract, on a quantum meruit basis. Before recovery
may be made, the fact of loss must be established under oath by the Supplier to
the satisfaction of the Procuring Entity before recovery may be made.

26. **Termination for Unlawful Acts**

26.1 The Procuring Entity may terminate this Contract in case it is determined
prima facie that the Supplier has engaged, before or during the implementation of
this Contract, in unlawful deeds and behaviors relative to contract acquisition and
implementation. Unlawful acts include, but are not limited to, the following:

(a) Corrupt, fraudulent, and coercive practices as defined in ITB
Clause 3.1(a);

(b) Drawing up or using forged documents;

(c) Using adulterated materials, means or methods, or engaging in
production contrary to rules of science or the trade; and

(d) Any other act analogous to the foregoing.

27. **Procedures for Termination of Contracts**

27.1 The following provisions shall govern the procedures for termination of this
Contract:

(a) Upon receipt of a written report of acts or causes which may
constitute ground(s) for termination as aforementioned, or upon
its own initiative, the Implementing Unit shall, within a period
of seven (7) calendar days, verify the existence of such
ground(s) and cause the execution of a Verified Report, with all
relevant evidence attached;

(b) Upon recommendation by the Implementing Unit, the Head of
the Procuring Entity shall terminate this Contract only by a
written notice to the Supplier conveying the termination of this
Contract. The notice shall state:
(i) that this Contract is being terminated for any of the ground(s) afore­mentioned, and a statement of the acts that constitute the ground(s) constituting the same;

(ii) the extent of termination, whether in whole or in part;

(iii) an instruction to the Supplier to show cause as to why this Contract should not be terminated; and

(iv) special instructions of the Procuring Entity, if any.

(c) The Notice to Terminate shall be accompanied by a copy of the Verified Report;

(d) Within a period of seven (7) calendar days from receipt of the Notice of Termination, the Supplier shall submit to the Head of the Procuring Entity a verified position paper stating why this Contract should not be terminated. If the Supplier fails to show cause after the lapse of the seven (7) day period, either by inaction or by default, the Head of the Procuring Entity shall issue an order terminating this Contract;

(e) The Procuring Entity may, at anytime before receipt of the Supplier’s verified position paper to withdraw the Notice to Terminate if it is determined that certain items or works subject of the notice had been completed, delivered, or performed before the Supplier’s receipt of the notice;

(f) Within a non­extendible period of ten (10) calendar days from receipt of the verified position paper, the Head of the Procuring Entity shall decide whether or not to terminate this Contract. It shall serve a written notice to the Supplier of its decision and, unless otherwise provided, this Contract is deemed terminated from receipt of the Supplier of the notice of decision. The termination shall only be based on the ground(s) stated in the Notice to Terminate;

(g) The Head of the Procuring Entity may create a Contract Termination Review Committee (CTRC) to assist him in the discharge of this function. All decisions recommended by the CTRC shall be subject to the approval of the Head of the Procuring Entity; and

(h) The Supplier must serve a written notice to the Procuring Entity of its intention to terminate the contract at least thirty (30) calendar days before its intended termination. The Contract is deemed terminated if it is not resumed in thirty (30) calendar days after the receipt of such notice by the Procuring Entity.
28. **Assignment of Rights**

   The Supplier shall not assign his rights or obligations under this Contract, in whole or in part, except with the Procuring Entity’s prior written consent.

29. **Contract Amendment**

   Subject to applicable laws, no variation in or modification of the terms of this Contract shall be made except by written amendment signed by the parties.

30. **Application**

   These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of this Contract.
### SPECIAL CONDITIONS OF CONTRACT (SCC) (GOODS)

<table>
<thead>
<tr>
<th>GCC Clause</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1.1.(g)</td>
<td>The PROCURING ENTITY is: UNIVERSITY OF THE PHILIPPINES VISAYAS</td>
</tr>
<tr>
<td>1.1.(i)</td>
<td>The Supplier is:</td>
</tr>
<tr>
<td>1.1.(j)</td>
<td>The Funding Source: UPV Reprogrammed Funds – GF 1294&lt;sup&gt;TH&lt;/sup&gt; BOR MEETING</td>
</tr>
<tr>
<td>1.1.(k)</td>
<td>The project site (place of delivery) is indicated in the Schedule of Requirements</td>
</tr>
<tr>
<td>2.1</td>
<td>No further instructions</td>
</tr>
<tr>
<td>5.1</td>
<td>The University’s address for Notices is:</td>
</tr>
<tr>
<td></td>
<td>University of the Philippines Visayas</td>
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<tr>
<td></td>
<td>New Administration Building</td>
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<td></td>
<td>UP Visayas, Miagao Campus</td>
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<tr>
<td></td>
<td>Tel. No.: (033) 315-98-58/ 315-81-41; (033) 315-96-32 local 180 / 247</td>
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<tr>
<td></td>
<td>E-mail Address: <a href="mailto:supply_property@yahoo.com">supply_property@yahoo.com</a></td>
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<td></td>
<td>PROF. EMELIZA C. LOZADA</td>
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<tr>
<td></td>
<td>Chair, Bids and Awards Committee</td>
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<tr>
<td></td>
<td>MRS. ESTERLINA I. GAMEZ</td>
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<tr>
<td></td>
<td>Head, BAC Secretariat</td>
</tr>
</tbody>
</table>
### 6.2 Delivery and Documents -

For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:

For foreign Suppliers, state “The delivery terms applicable to the Contract is DDP delivered at the U.P. Visayas, Iloilo City Campuses. In accordance with INCOTERMS.”

For domestic Suppliers, state “The delivery term applicable to this Contract is to be delivered at the U.P. Visayas, Iloilo City Campuses.

Delivery of the GOODS shall be made by the Supplier in accordance with the terms specified in Section VI, Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are as follows:

- For GOODS supplied from within the Philippines or by domestic suppliers:
  - Upon delivery of the GOODS, the Supplier shall notify the University and present the following documents to the Supply & Property Services Office, U.P. Visayas, Iloilo City Campus:
    - Original copy of the Supplier’s invoice showing GOODS’ description, Quantity, unit price, and the total amount
    - Original Supplier’s factory inspection report;
    - Original copy of the Manufacturer’s and/or Supplier’s warranty certificate;
    - Certificate of Acceptance/Inspection Report signed by the University’s representative at the Project Site

### 10.4 No further instructions

### 13.1 Form of Performance Security

- Cash or Cashier’s/Manager’s Check issued by a Universal or Commercial Bank **Five Percent (5%)**
- Bank draft/guaranteed or Irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank **Five Percent (5%)**
- Surety Bond Callable On Demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security **Thirty Percent (30%)**

### 13.4(c) Performance Security shall be released within thirty (30) days after delivery and performance of the items ordered and receipt of request for refund.

### 16.1 Please refer to the Schedule of Requirements
<table>
<thead>
<tr>
<th>17.3</th>
<th>Warranty Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier for a minimum period specified in the SCC. The obligation for the warranty shall be covered by, at the Supplier’s option, either retention money in an amount equivalent to at least ten percent (10%) of the final payment, or a special bank guarantee equivalent to at least ten percent (10%) of the Contract Price or other such amount if so specified in the SCC. The said amounts shall only be released after the lapse of the warranty period specified in the SCC; provided, however, that the Supplies delivered are free from patent and latent defects and all the conditions imposed under this Contract have been fully met.</td>
<td></td>
</tr>
</tbody>
</table>

| 17.4 | No further instructions. |
| 21.1 | No additional provisions |
## THERMAL CONDUCTIVITY DETECTOR

**Purpose**
Measurement of thermal conductivity of insulation materials (solids)

**Type**
Bench top model; digital readout

**General Description**
The apparatus consists of a vertical stack of specimens clamped between an electrically heated source at the top and a water cooled base, all contained within a Dewar vessel and furnished with a radiation shield and anti-convection baffle.

The specimens are fitted with very small thermocouples at known distances apart and connected via a selector switch to a digital temperature readout.

The heating current is supplied from a variable voltage power pack and displayed on a digital ammeter.

The water cooled base is designed as a calorimeter to measure the heat flow and fitted with very accurate thermometers in the water circuit.

Cooling water is supplied from the constant head water tank mounted above the Dewar vessel.

**Specifications**
- electrically heated self clamping specimen stack
- calorimeter base
- Dewar vessel and cooling water supply mounted on instrument case
- Front panel to carry a thermocouple selector switch, variable voltage power supply and digital ammeter and temperature meter
- Two high accuracy thermometer
- four NiCr/NiAl thermocouples
- six various metal specimens comprising of mild steel, copper (2), aluminum (2) and stainless steel
- Instruction manual

### Schedule of Requirements

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
<th>ABC (Per unit)</th>
<th>Total ABC</th>
<th>Delivery Period</th>
<th>Place of Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>THERMAL CONDUCTIVITY DETECTOR</td>
<td>1</td>
<td>unit</td>
<td>275,500.00</td>
<td>275,500.00</td>
<td>Forty Five (45) calendar days</td>
<td>SPSO U.P. VISAYAS Miag-ao Campus</td>
</tr>
</tbody>
</table>

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**UNIVERSITY OF THE PHILIPPINES VISAYAS**
BIDS AND AWARDS COMMITTEE
Miagao, Iloilo, Philippines 5023

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52
### Purpose
For experiments in separating liquid mixtures made up of individual liquids that are soluble in one another

### Type
Benchtop model

### General Description
It is basically composed by a boiler on which two types of interchangeable columns will be adapted (plate columns and Raschig Rings column), a reflux system and a tank for the distillation. The steam that goes to the head of the column is sent to a total condenser. The cooling water flow that crosses the condenser is regulated and indicated in a flow meter. The pressure loss in the column can be measured with a manometer. The temperatures of the system are measured by temperature sensors placed in strategic positions.

### Specifications
- Anodized aluminum structure and panel of painted steel
- Main metallic elements in stainless steel
- Diagram in the front panel with similar distribution to the elements in the real unit
- Sieve Plates Column with 8 plates with one temperature taking and sample, 50 mm. internal diameter and 1000 mm. length. Vacuumed, silverplated and double transparent band for vision.
- Column head with temperature taking and conical output for distilled product.
- Column head with a valve for the steam distribution.
- 2 l. Boiler (with sample outputs) with heating mantle.
- 2 l. Distillation collector of graduated glass.
- Refrigerator.
- Temperature measurement system.
- 7 Temperature sensors "J" type.
- Working temperature: ambient temperature up to 125 °C.
- Flow meter, range: 0.2 - 2 l./min.
- Manometer tubes.
- Solenoid valve.
- Columns: Raschig Rings Column.
- 8 Plates Type Column (8 Temperature points).
- Cables and Accessories, for normal operation. Manuals: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals.
- Preferably with training for start-up of equipment with

<table>
<thead>
<tr>
<th>2. BATCH DISTILLATION WITH PACKED ABSORPTION TOWER SET-UP</th>
<th>1</th>
<th>217,000.00</th>
<th>217,000.00</th>
<th>Forty Five (45) calendar days</th>
<th>SPSO U.P. VISAYAS Miag-ao Campus</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Type</th>
<th>General Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch distillation with packed absorption tower setup</td>
<td>Benchtop model</td>
<td>Facilities composed of a boiler, interchangeable columns, reflux system, and tank for distillation.</td>
<td>Anodized aluminum structure, stainless steel elements, diagram similar to real unit, sieve plates column, temperature taking, column head, boiler, distillation collector, refrigerator, temperature measurement system, 7 temperature sensors, working temperature up to 125 °C, flow meter, manometer tubes, solenoid valve, electronic console, cables and accessories, manuals, and training for start-up.</td>
</tr>
</tbody>
</table>
3. **pH/Ion METER**
- Temperature Compensation: Automatic (5 to 40°C)
- Calibration up to 3 pH points
- Buffer recognition pH 4, 7, and 10
- Dimensions: (L x W x H) 5 ½" x 1 1/8" x 5/8"
- Range pH: 1.0 to 12.0
- pH resolution: 0.1
- pH accuracy: 0.1
- 2 years warranty with after sales service

4. **ANALYTICAL BALANCE**
- Chamber Size: (W x H x D): 7 5/8" x 9 ¼" x 7 5/8"
- Housing Size: (W x H x D): 8 7/8" x 12 7/8" x 12 5/8"
- Capacity: 100g maximum
- Readability: 0.0001g
- Repeatability; 0.1mg
- Linearity: 0.2mg
- Pan Size: 3" diameter
- Calibration mass 100g

5. **AIR FLOW METER**
   **Purpose:** Measurement of air flow, air velocity and air pressure
   **Type:** Portable, handheld and digital display
   **Accessories:** rubber hoses, wrist strap, Pitot tube, hanging kit, hard carry case, Batteries and instruction manual

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Pressure</strong></td>
<td>± 4000 Pascals</td>
<td>1 Pascal</td>
<td>± 1 % + 1 Pascal</td>
</tr>
<tr>
<td></td>
<td>± 16 in H2O</td>
<td>0.001 in H2O</td>
<td>± 1 % + 0.01 in H2O</td>
</tr>
<tr>
<td></td>
<td>± 400 mm H2O</td>
<td>0.1 mm H2O</td>
<td>± 1 % + 0.1 mm H2O</td>
</tr>
<tr>
<td></td>
<td>± 40 mbar</td>
<td>0.01 mbar</td>
<td>± 1 % + 0.01 mbar</td>
</tr>
<tr>
<td></td>
<td>± 0.6 PSI</td>
<td>0.0001 PSI</td>
<td>± 1 % + 0.0001 PSI</td>
</tr>
<tr>
<td><strong>Air Velocity</strong></td>
<td>250 → 16,000 fpm</td>
<td>1 fpm</td>
<td>± 2.5 % of reading at 2000 fpm (10.00 m/s)</td>
</tr>
<tr>
<td></td>
<td>1 to 80 m/s</td>
<td>0.001 m/s</td>
<td></td>
</tr>
<tr>
<td><strong>Air Flow (Volume)</strong></td>
<td>0 → 99,999 cfm</td>
<td>1 cfm</td>
<td>Accuracy is a function of velocity and duct size</td>
</tr>
<tr>
<td></td>
<td>0 → 99,999 m³/hr</td>
<td>m³/hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 → 99,999 l/s</td>
<td>1 l/s</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>0 °C → +50 °C</td>
<td>1°C</td>
<td>± 1 °C</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>0 °C → +50 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Max Port Pressure</strong></td>
<td>10 PSI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### GAS ANALYZER

#### Purpose
Measurement of O\(_2\), CO and NO (NO\(_x\)); stack and ambient temperatures, stack pressure and draft

#### Type
Portable; handheld and digital readout

#### Specifications
- With 2-3 gas sensors for O\(_2\), CO and NO (NO\(_x\)); stack and ambient temperatures, stack pressure and draft
- Should also calculate CO\(_2\), efficiency, losses, excess air
- On-board data storage
- With sample conditioning system consists of high flow pump and radiant gas cooler with moisture trap
- Automatic shut-off activates once gas cooler filter is saturated
- With automatic and manual bypass functions for sensor protection

#### Accessories
- Probe
- Sample line (flex hose with thermocouple wire)
- Batteries
- Pump (flowrate of 1.5+ lpm)
- Condensate/Particulate filters
- Refillable calibration gas bottles
- Instruction manual
### HEAT CONDUCTION APPARATUS

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Measurement of thermal conductivity of fluids (liquids such as water, oil and gases such as air) and studying heat conduction in fluids using Fourier's law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Benchtop model</td>
</tr>
</tbody>
</table>
| General Description | Generally consists of:  
- Display and control unit  
- Experimental Unit (Heat exchanger with heated inner cylinder and water cooled Jacket)  
- Valves for fluid and cooling water  

The core element of the experimental unit is a cylindrical heat exchanger with a heated inner cylinder made of aluminium and a water cooled jacket. There is a ring-shaped gap between the inner cylinder and the jacket, which is completely filled with the fluid to be examined. The width of the gap is such that the heat transfer by convection is negligible. Due to the low temperature level and polished surfaces, radiation is also negligible. Sensors record the temperatures and the consumed heating power at all relevant points. The measured values can be read on digital displays. |
| Specifications |  
- experimental set-up consisting of experimental unit and display and control unit  
- heat exchanger with heated inner cylinder and water-cooled jacket  
- the fluid to be examined is in the ring-shaped gap between inner cylinder and jacket  
- heat transfer by convection and radiation negligible due to small gap dimensions, low temperatures and polished surfaces  
- adjustable electric heater  
- valves for adjusting the flow rates in the cooling water and in the fluid  
- sensors for temperatures and electric heating power digital display  

### Technical Data

| Heat exchanger |  
- effective heat transfer area: 1500cm²  
- mean effective diameter: 39.6mm  
- gap width: 0.4mm  
| Heater |  
- max. power consumption 160W  
- switch-off: at 95°C  
- Measuring ranges – temperature: 0 – 100°C Power: 0 – 600W  

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Price</th>
<th>Payment Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 unit</td>
<td>357,500.00</td>
<td>357,500.00</td>
</tr>
</tbody>
</table>

Forty Five (45) calendar days  
SPSO U.P. VISAYAS Miag-ao Campus
### 8. SIEVE SHAKER

<table>
<thead>
<tr>
<th>Purpose</th>
<th>For particle size analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Benchtop model</td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
<tr>
<td>Feed material</td>
<td>powders, bulk and coarse materials</td>
</tr>
<tr>
<td>Measuring range</td>
<td>20 µm - 25 mm</td>
</tr>
<tr>
<td>Sieving motion</td>
<td>horizontal circular motion with taps</td>
</tr>
<tr>
<td>Max. batch / feed capacity</td>
<td>3 kg</td>
</tr>
<tr>
<td>Max. number of fractions</td>
<td>7 / 13</td>
</tr>
<tr>
<td>Max. mass of sieve stack</td>
<td>6 kg</td>
</tr>
<tr>
<td>Speed</td>
<td>280 min(^{-1})</td>
</tr>
<tr>
<td>No. of taps</td>
<td>150 min(^{-1})</td>
</tr>
<tr>
<td>Time display</td>
<td>digital, 1 - 99 min</td>
</tr>
<tr>
<td>Suitable for dry sieving</td>
<td>Yes</td>
</tr>
<tr>
<td>Serial interface</td>
<td>Yes</td>
</tr>
<tr>
<td>Suitable sieve diameters</td>
<td>200 mm / 203 mm (8&quot;)</td>
</tr>
<tr>
<td>Max. height of sieve stack</td>
<td>350 mm</td>
</tr>
<tr>
<td>Electrical supply data</td>
<td>different voltages</td>
</tr>
<tr>
<td>Power connection</td>
<td>1-phase</td>
</tr>
</tbody>
</table>

### Accessories
- instruction manual
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Price</th>
<th>Payment Terms</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td><strong>STOMACHER</strong></td>
<td>1 unit</td>
<td></td>
<td>300,000.00</td>
<td>Forty Five (45) calendar days</td>
<td>SPSO U.P. VISAYAS Miag-ao Campus</td>
</tr>
<tr>
<td></td>
<td>Dimensions (W x H x D): 11.5 in x 7.5 in x 12.75 in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 ml to 80 ml sample capacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000 fold improvement in cell recovery and viability from traditional methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diluent free sample processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No cross contamination between samples</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adjustable processing time and paddle speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 years warranty with after sales service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td><strong>TEXTURE ANALYZER</strong></td>
<td>1 unit</td>
<td></td>
<td>300,000.00</td>
<td>Forty Five (45) calendar days</td>
<td>SPSO U.P. VISAYAS Miag-ao Campus</td>
</tr>
<tr>
<td></td>
<td>Choice of five load ranges up to 50kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variety of probes and accessories for new application opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two adjustable base tables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attached to computer with programs available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 available test modes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stores up to 10 additional customized test methods</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speed: 0.01 – 0.1mm/s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accuracy: +0.1% of speed set</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Position Range: 0-101.6mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resolution: 0.1mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accuracy: 0.1mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 years warranty with after sales services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TUBULAR HEAT EXCHANGER

| **Purpose** | To carry out experiments concerning the main techniques of heat transfer for small scale versions |
| **Type** | Benchtop model |
| **Main parts** | Consists of bench top service unit and the shell and tube heat exchanger |

#### Specifications

**For Bench top service unit:**
- Water feed tank, complete with an electric heater, main switch and thermostat as a safety device (max temperature 85°C)
- Variable speed water pump
- Flowmeter to measure the flow of hot water
- Adjustable flowmeter to measure and control the flow of cold water
- Connections to the heat exchangers
- Thermoresistances
- Electric control box
- Safety devices

**For Shell and tube heat exchanger:**
- Stainless steel pipes (hot side); heat exchange surface 0.02 m² approx.
- Outer tube – shell – made of transparent PVC (cold side).
- End caps made of transparent acrylic plastic and gaskets.
- Support frame.
- Thermoresistances wells to measure: Hot fluid inlet temperature, Hot fluid outlet temperature, Cold fluid inlet temperature, Cold fluid outlet temperature.
- Connections to couple the heat exchanger to the service unit. Electrical power supply: 110/220V, single-phase, 50/60 Hz; 2kW

#### Other needs

Preferable a demonstration of the use of equipment and instruction manuals

| **1** | **unit** | **32,500.00** | **32,500.00** | **Forty Five (45) calendar days** | **SPSO U.P. VISAYAS Miag-ao Campus** |

**GRAND TOTAL**

1,973,700.00
CHECKLIST OF ELIGIBILITY REQUIREMENTS

Class “A” Legal Documents

1. Registration certificate from SEC, Department of Trade and Industry (DTI) for sole proprietorship, or CDA for cooperatives, or any proof of such registration as stated in the Bidding Documents

2. Mayor’s permit issued by the city or municipality where the principal place of business of the prospective bidder is located

Class “A” Technical Documents

1. Statement of the prospective bidder of all its ongoing and completed government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid, within the relevant period as provided in the Bidding Documents. The statement shall include all information required in the BDS prescribed by the GPPB

Class “A” Financial Documents

1. The prospective bidder’s audited financial statement’s showing among others, the prospective bidder’s total and current assets and liabilities, stamped “received” by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from date of bid submission

2. The prospective bidder’s computation for its Net Financial Contracting Capacity (NFCC)

Class “B” Documents

1. If applicable, Valid joint venture agreement (JVA), in case the joint venture is already in existence. In the absence of a JVA, duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful shall be included in the bid. Failure to enter into a joint venture in the event of a contract award shall be ground for the forfeiture of the bid security. Each partner of the joint venture shall submit the legal eligibility documents. The submission of technical and financial eligibility documents by any of the joint venture partners constitute compliance.

2. Questionnaire for prospective bidders (duly accomplished and notarized)

Note: Any missing document in the above-mentioned checklist is a ground for outright rejection of the bid.
CHECKLIST OF TECHNICAL DOCUMENTS

The Technical Component shall contain the following:

1. Bid Security in the prescribed form, amount and validity period

2. Technical specifications which may include production/delivery schedule, manpower requirements/key personnel, and/or after-sales service/parts, if applicable

4. Authority of the Signatory
   The signatory is the duly authorized representative of the prospective bidder, and granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the prospective bidder in the bidding, with the duly notarized Secretary’s certificate attesting to such fact, if the prospective bidder is a corporation, cooperative, or a joint venture
   
   If the person attending the bidding is not the signatory, an authorization for the concerned person to attend the bidding must be executed by the prospective bidder.

5. Omnibus Sworn Statement

Note: Any missing document in the above mentioned checklist is a ground for outright rejection of the bid.
Republic of the Philippines
Department of Trade and Industry
Region VI, Iloilo City

CERTIFICATE OF REGISTRATION
OF
BUSINESS NAME

THIS IS TO CERTIFY THAT:

___________________________________________________________________________

as a business name, or firm or style was registered in this office on

____________________________by:


which will expire on ____________________________, in accordance with the provisions of Act No. 3883 of the Philippine Legislature approved on November 14, 1931 as amended by Act. No. 4147, approved November 28, 1934, and Republic Act No. 863, approved June 16, 1953, and in compliance with the rules and regulations prescribed by the Department of Trade and Industry.

IN TESTIMONY WHEREOF, I have hereunto set My hand caused the seal of the DEPARTMENT OF TRADE AND INDUSTRY to be affixed at ________________, Philippines, this _______day of____________________, in the year of our Lord, ________________________.

______________________________
Name of Director
Director DTI
MATALASTAS NG LAHAT:  
(KNOW ALL MEN BY THESE PRESENTS:)

Na Si/Ang:  
(That:)

_________________________________________________________________  
(Name of Bidder)

na matatagpuan at may pahatirang sulat sa  
(with postal address at)

____________________________________________________________

(Address of the Bidder)

na itinatag ng may buong karapatan at umiiral sa ilalim ng mga batas ng  
(duly organized and existing under the laws of the)

Bagong Republic ng Pilipinas, ay pinagkakalooban ng pahintulot na mangangalakal bilang  
(New Republic of the Philippines, is hereby granted the permit to operate as)

________________________________________________________

ngayong ika- ng  
(on this)  
(day of)

Ang pahuntilot na ito ay matatapos sa ika-  
(This permit expires on)

_________________________________________________________________  
(malibang ito'y maagang bawiin at walaing bisa.  
(unless sooner revoked.)

(This permit expires on)

O.R. BILANG ________________  
(OR No.)

HALAGA ________________  
(Amount)

(Name of Head)

Business Permit Office

(Name of Mayor)

Punong Lungsod

(Mayor)

PETSA ________________  
(Date)
Statement of all Completed Government & Private Contracts which are similar in nature

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<th>Government</th>
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Submitted by: ____________________________________________
(Printed Name & Signature)

Designation: ____________________________________________

Date: ________________________________________________
List of Ongoing Government & Private Contracts including contracts awarded but not yet started

<table>
<thead>
<tr>
<th>Business Name</th>
<th>Business Address</th>
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Note: This statement shall be supported with:

Notice of Award and/or Contract

Submitted by: ________________________________ (Printed Name & Signature)

Designation: ________________________________

Date: ________________________________

Total Cost
Name of the Procuring Entity: UNIVERSITY OF THE PHILIPPINES VISAYAS

**FINANCIAL DOCUMENTS FOR ELIGIBILITY**

A. Summary of the Applicant Supplier’s/Distributor’s/Manufacturer’s assets and liabilities on the basis of the attached income tax return and audited financial statement, stamped “RECEIVED” by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

<table>
<thead>
<tr>
<th></th>
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<th>Year 20__</th>
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<tbody>
<tr>
<td>1</td>
<td>Total Assets</td>
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<tr>
<td>2</td>
<td>Current Assets</td>
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<tr>
<td>3</td>
<td>Total Liabilities</td>
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<tr>
<td>4</td>
<td>Current Liabilities</td>
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<tr>
<td>5</td>
<td>Total Net Worth (1-3)</td>
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<tr>
<td>6</td>
<td>Current Net Worth or Net Working Capital (2-4)</td>
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</table>

B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

An NFCC that is at least equal to the approved budget for the contract to be bid, calculated as follows:

NFCC= [(Current assets minus current liabilities) (K)] minus the value of all outstanding projects under ongoing contracts, including awarded contracts yet to be started.

Where:

K= 10 for a contract duration of one year or less, 15 for a contract duration of more than one year up to two years, and 20 for a contract duration of more than two years.

<table>
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<th>Current Asset:</th>
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<td>Less:</td>
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<td>Current Liabilities:</td>
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<td>x 10</td>
<td>(for a contract duration of one year or less)</td>
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<td>Less:</td>
<td>(value of all outstanding projects under ongoing contracts, including awarded contracts yet to be started)</td>
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<tr>
<td>TOTAL:</td>
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</table>

Submitted by:  
Name of Supplier/Distributor/Manufacturer  
Signature of Authorized Representative  
Date:

NOTE:  
*If Partnership or Joint Venture, each Partner or Member Firm of Joint Venture shall submit the requirements.*
JOINT VENTURE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

That this JOINT VENTURE AGREEMENT entered into By and Between ____________________________, of legal age, ____________________________

Name

Designation

Owner/proprietor of ________________________________________________________________________

Name of Company

And a resident of ___________________________________________________________________________

Address of the Bidder

and

_________________________________________________________________________________________

Name

Civil Status

Owner/proprietor ____________________________, a resident of ________________________________________________________________________

Name of Company

That both parties agree to join together their capital, manpower, equipment and other resources and efforts to enable the Joint Venture to participate in the Eligibility Check, Bidding and Undertaking of the hereunder stated Contract of the (Name of the Procuring Entity).

<table>
<thead>
<tr>
<th>NAME OF THE PROJECT</th>
<th>CONTRACT AMOUNT</th>
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That both parties agree to be jointly and severally liable for their participation in the Eligibility Check, Bidding and Undertaking of the said contract.

That both parties agree that ____________________________ and/or ____________________________

Shall be the official Representative of the Joint Venture, and are granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Joint Venture in the Eligibility Check, Bidding and Undertaking of the said contract, as fully and effectively and the Joint Venture may do and if personally present with full power of substitution and revocation.

That this Joint Venture Agreement shall remain in effect only for the above stated Contracts until terminated by both parties.

Done this _______ day of ______________________ 2015.

If the bidder is a joint venture, one of the requirements for Eligibility is the submission of a valid joint venture agreement.
QUESTIONNAIRE FOR PROSPECTIVE BIDDERS
(additional requirement for eligibility)

1. Have you ever participated in any bidding in the University of the Philippines System?

<table>
<thead>
<tr>
<th>Consistent University/UP Campus</th>
<th>Name of Project</th>
<th>Amount of Project</th>
<th>Duration Start/End</th>
<th>Status (On-going/completed)</th>
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If YES, fill up the table below. Use additional pages if necessary.

2. Has your company ever been suspended or blacklisted by the University of the Philippines System?

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<thead>
<tr>
<th>Consistent University/UP Campus</th>
<th>Name of Project</th>
<th>Amount of Project</th>
<th>Duration Start/End</th>
<th>Status (On-going/lifted)</th>
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If YES, fill up the table below. Use additional pages if necessary.

3. Has your company ever been suspended or blacklisted by any government agency or private company?

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<th>Yes</th>
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If YES, fill up the table below. Use additional pages if necessary.

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<th>Consistent University/UP Campus</th>
<th>Name of Project</th>
<th>Amount of Project</th>
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4. Has there ever been any project of your company in the University of the Philippines that was terminated by Administration?

If YES, fill up the table below. Use additional pages if necessary.

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<thead>
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<th>Consistent University/UP Campus</th>
<th>Name of Project</th>
<th>Reason for termination</th>
<th>Date of Termination</th>
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5. Do you certify that all documents submitted by your company and personnel are authentic?

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6. Is there any pending investigation and/or case filed against your company or your personnel to any court or any similar institutions in relation to any government contracts awarded to your company? In relation to practice of profession of any personnel?

If YES, fill up the table below. Use additional pages if necessary.

For Company

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<tr>
<th>Case Filed</th>
<th>Where Filed</th>
<th>Data Filed</th>
<th>Status (On-going/resolved)</th>
<th>Remarks</th>
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For Personnel

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<tr>
<th>Name of Personnel &amp; Designation</th>
<th>Case Filed</th>
<th>Where Filed</th>
<th>Data Filed</th>
<th>Status (On-going/resolved)</th>
<th>Remarks</th>
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I hereby certify that all statements and information provided herein are complete, true and correct.

Name & Signature of Bidder’s: ______________________________________

Authorized Representative: ______________________________________

Official Designation: ______________________________________

Company: ______________________________________

Date: ______________________________________

ACKNOWLEDGEMENT

SUBSCRIBED AND SWORN to before me this ____________ day of ____________, 2015, affiant exhibited to me his/her Community Tax Certificate No. ________________________ issued on ________________________ at ________________________, Philippines.

Notary Public
Until 31 December 2015
PTR No.: ______________
Issued at: ______________
Issued on: ______________
TIN No.: ______________
REPUBLIC OF THE PHILIPPINES
CITY OF _______________________

BID-SECURING DECLARATION
Invitation to Bid/Request for Expression of Interest No. 1: [Insert reference number]

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.

2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, if I/we have committed any of the following actions:
   (i) Withdrawn my/our Bid during the period of bid validity required in the Bidding Documents; or
   (ii) Fail or refuse to accept the award and enter into contract or perform any and all acts necessary to the execution of the Contract, in accordance with the Bidding Documents after having been notified of your acceptance of our Bid during the period of bid validity.

3. I/We understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
   (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
   (b) I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
   (c) I am/we are declared as the bidder with the Lowest Calculated and Responsive Bid/Highest Rated and Responsive Bid, and I/we have furnished the performance security and signed the Contract.

____________________________

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER'S
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

SUBSCRIBED AND SWORN to before me this __ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. ______ and his/her Community Tax Certificate No. ______ issued on ______ at ______.

Witness my hand and seal this ___ day of [month] [year].

NAME OF NOTARY PUBLIC
Serial No. of Commission _____
Notary Public for ______until ______
Roll of Attorneys No. ______
PTR No. ___, [date issued], [place issued]
IBP No. ___, [date issued], [place issued]

Doc. No. ___
BID SECURITY: BANK GUARANTEE

WHEREAS, _____________________________________________________________
(hereinafter called “the Bidder”) has submitted his bid dated ____________________________
for the above-mentioned projects of the University.

KNOW ALL MEN by these presents that we ____________________________________________
(Name of the Bank)
of _____________________________________________ having our registered office at ____________________
____________________________________________ (hereinafter called “the Bank”) are bound
unto UNIVERSITY OF THE PHILIPPINES VISAYAS (hereinafter called the “Entity”) in the sum of
___________________________________________ for
which payment well and truly to be made to the said UNIVERSITY, the Bank binds himself, his
successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of______________, 2015.

THE CONDITIONS of this obligation are that:

if the Bidder withdraws his Bid during the period of bid validity specified in the Form of Bid; or
if the Bidder does not accept the correction of arithmetical errors of his bid price in accordance
with the Instructions to Bidder; or
if the Bidder having been notified of the acceptance of his bid and award of contract to him by
the Entity during the period of bid validity:
   a. fails or refuses to execute the Form of Contract in accordance with the Instruction to
      Bidders, if required; or
   b. fails or refuses to furnish the Performance Security in accordance with the Instructions
to Bidders;

we undertake to pay to the UNIVERSITY OF THE PHILIPPINES VISAYAS up to the above amount
receipt of his first written demand, without the UNIVERSITY OF the PHILIPPINES VISAYAS having
to substantiate its demand, provided that in his demand the UNIVERSITY will note that the amount
claimed by it is due to the occurrence of any one or the combination of the three (3) conditions stated
above.

The Guarantee will remain in force up to and including the date ____________________________
  days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders
or as it may be extended by the UNIVERSITY, notice of which extension to the Bank is hereby
waived. Any demand in respect of this Guarantee should reach the Bank not later than the above
date.

Date: ____________________________ Signature of the Bank: ____________________________

WITNESS ____________________________ SEAL ____________________________

____________________________________________________________
(Signature, Name and Address)
AUTHORITY OF SIGNATORY
SPECIAL POWER OF ATTORNEY

I, ____________________________, President of _____________________________, a corporation incorporated under the laws of _____________________________ with its registered office at _____________________________, by virtue of Board Resolution No. ___________ dated _________________, has made, constituted and appointed __________________________________________________________ true and lawful attorney, for it

(Name of the Authorized Representative)

and its name, place and stead, to do, execute and perform any and all acts necessary and/or represent __________________________________________________________________________

(Name of the Company)

in the bidding of the project:

as fully and effectively as corporation might do if personally present with full power of substitution and revocation and hereby confirming all that said representative shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand this ___ day of ________________, 2015 at __________________.

Signed in the Presence of,

______________________________

ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)

_____________________________) S.S.

BEFORE ME, a Notary Public for and in ________________, Philippines, this ___ day of ________________, 2015, personally appeared:

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<th>NAME</th>
<th>CTC NO.</th>
<th>ISSUED AT/ON</th>
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</table>

known to me and to me known to be the same person who executed the foregoing instrument consisting of _________ ( ) pages, including the page whereon the acknowledgments is written and acknowledged before me that the same is his free and voluntary act and deed and that of the Corporation he represents.

WITNESS MY HAND AND NOTARIAL SEAL, at the place and on the date first above written.

Notary Public

Doc. No._____
Page No. _____
Book No. _____
Series of ____.
Note: The Authority of the Signature is a requirement in the Technical Envelope. For Single Proprietorship, there must be an affidavit of the owner or a Special Power of Attorney; for Partnership, a partnership resolution from the General Manager or President; for Corporation, a board resolution with secretary's certificate; for Joint Venture, a resolution signed by all the joint-venture partners.
AUTHORITY OF SIGNATORY
SECRETARY’S CERTIFICATE
(For Corporation)

I, __________________________________________, a duly elected and qualified Corporate
Secretary of ________________________________________, a corporation duly organized and
existing under and by virtue of the law of the ________________________________, DO
HEREBY CERTIFY, that:

I am familiar with the facts herein certified and duly authorized to certify the same:

At the regular meeting of the Board of Directors of the said Corporation duly convened and
held on ________________________ at which meeting a quorum was present and
acting throughout, the following resolutions were approved, and the same have not been annulled,
revoked and amended in any way whatever and are in full force and effect on the date hereof:

RESOLVED, that ____________________________________________ be, as it hereby is,

________________________________________, acting as duly

authorized to participate in the bidding of the project:

by the University of the Philippines Visayas; and that if awarded the Contract shall enter into a
contract with the University of the Philippines Visayas; and in connection therewith hereby
appoints __________________________________________, acting as duly

authorized and designated representative of ________________________________________, are

granted full power and authority to do, execute and perform any and all acts necessary and/or to
represent __________________________________________ in the bidding as fully and
effectively as the __________________________________________ might do if personally

present with full power of substitution and revocation and hereby satisfying and confirming all that my
said representative shall lawfully do or cause to be done by virtue hereof;

RESOLVED FURTHER THAT, the Board hereby authorizes its President to:

execute a waiver of jurisdiction whereby the __________________________________________

hereby submits itself to the jurisdiction of the Philippine Government and hereby waives its
right to question the jurisdiction of the Philippine courts;
execute a waiver that the ____________________________ shall not seek
(Name of the Bidder/Company)

and obtain writ of injunctions or prohibition or restraining order against the AFP or any other agency in connection with this Contract to prevent and restrain the bidding procedures related thereto, the negotiating of and award of a contract to a successful bidder, and the carrying out of the awarded contract

WITNESS the signature of the undersigned as such officer of the said ____________________________ this _______ day of ____________________, 2015.

_____________________
Corporate Secretary

ACKNOWLEDGMENT

SUBSRIPTION AND SWORN to before me this ___day of ___________, 2015 affiant exhibited to me his/her Community Tax Certificate No. ________ issued on ____________ at ____________________, Philippines.

Notary Public

Doc. No. ________;
Page No. ________;
Book No. ________;
Series of ________.

Note: The Authority of the Signature is a requirement in the Technical Envelope. For Single Proprietorship, there must be an affidavit of the owner or a Special Power of Attorney; for Partnership, a partnership resolution from the General Manager or President; for Corporation, a board resolution with secretary's certificate; for Joint Venture, a resolution signed by all the joint-venture partners.
Omnibus Sworn Statement

REPUBLIC OF THE PHILIPPINES  
CITY/MUNICIPALITY OF _____  
) ) S.S.

AFFIDAVIT

1. [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. Select one, delete the other:

   If a sole proprietorship: I am the sole proprietor of [Name of Bidder] with office address at [address of Bidder];

   If a partnership, corporation, cooperative, or joint venture: I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. Select one, delete the other:

   If a sole proprietorship: As the owner and sole proprietor of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to represent it in the bidding for [Name of the Project] of the [Name of the Procuring Entity];

   If a partnership, corporation, cooperative, or joint venture: I am granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the [Name of Bidder] in the bidding as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary’s Certificate issued by the corporation or the members of the joint venture)];

3. [Name of Bidder] is not “blacklisted” or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. Select one, delete the rest:

   If a sole proprietorship: I am not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
If a partnership or cooperative: None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

If a corporation or joint venture: None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. [Name of Bidder] complies with existing labor laws and standards; and

8. [Name of Bidder] is aware of and has undertaken the following responsibilities as a Bidder:

a) Carefully examine all of the Bidding Documents;

b) Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;

c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and

d) Inquire or secure Supplemental/Bid Bulletin(s) issued for the [Name of the Project].

9. [Name of Bidder] did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this ___ day of ___, 2015 at __________________________, Philippines.

____________________________________
Bidder's Representative/Authorized Signatory

SUBSCRIBED AND SWORN to before me this ____________ day of ____________, 2015, affiant exhibited to me his/her Community Tax Certificate No. ____________ issued on ____________ at__________________________, Philippines.

__________________________________________________________________________________
Notary Public
Until 31 December 2015
PTR No. : ____________
Issued at : ____________
Issued on: ____________
TIN No. : ____________
CHECKLIST OF FINANCIAL REQUIREMENTS

The Financial Component shall contain the following:

- Bid Proposals to be typed in the prescribed UPV Bid Form
- Bill of Quantities

Note: Any missing document in the above-mentioned checklist is a ground for outright rejection of the bid.
BID TENDER FORM

Total Bid Amount in Figures: ________________________________________________

Total Bid Amount in Words: ________________________________________________

______________________________________
Bidder's Signature

______________________________________
Printed Name

______________________________________
Name of Company

______________________________________
Address

______________________________________
Telephone Number
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Total Price</th>
<th>Delivery Period</th>
<th>COMPLYING / NON COMPLYING</th>
</tr>
</thead>
</table>


1. **THERMAL CONDUCTIVITY DETECTOR**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Measurement of thermal conductivity of insulation materials (solids)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Bench top model; digital readout</td>
</tr>
</tbody>
</table>

**General Description**

The apparatus consists of a vertical stack of specimens clamped between an electrically heated source at the top and a water cooled base, all contained within a Dewar vessel and furnished with a radiation shield and anti-convection baffle.

The specimens are fitted with very small thermocouples at known distances apart and connected via a selector switch to a digital temperature readout.

The heating current is supplied from a variable voltage power pack and displayed on a digital ammeter.

The water cooled base is designed as a calorimeter to measure the heat flow and fitted with very accurate thermometers in the water circuit.

Cooling water is supplied from the constant head water tank mounted above the Dewar vessel.

**Specifications**

- electrically heated self clamping specimen stack
- calorimeter base
- Dewar vessel and cooling water supply mounted on instrument case
- Front panel to carry a thermocouple selector switch, variable voltage power supply and digital ammeter and temperature meter
- Two high accuracy thermometer
- four NiCr/NiAl thermocouples
- six various metal specimens comprising of mild steel, copper (2), aluminum (2) and stainless steel
- Instruction manual
### Batch Distillation with Packed Absorption Tower Set-Up

<table>
<thead>
<tr>
<th>Purpose</th>
<th>For experiments in separating liquid mixtures made up of individual liquids that are soluble in one another</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Benchtop model</td>
</tr>
<tr>
<td>General Description</td>
<td>It is basically composed by a boiler on which two types of interchangeable columns will be adapted (plate columns and Raschig Rings column), a reflux system and a tank for the distillation. The steam that goes to the head of the column is sent to a total condenser. The cooling water flow that crosses the condenser is regulated and indicated in a flow meter. The pressure loss in the column can be measured with a manometer. The temperatures of the system are measured by temperature sensors placed in strategic positions.</td>
</tr>
</tbody>
</table>
| Specifications | Anodized aluminum structure and panel of painted steel  
Main metallic elements in stainless steel  
Diagram in the front panel with similar distribution to the elements in the real unit  
Sieve Plates Column with 8 plates with one temperature taking and sample, 50 mm. internal diameter and 1000 mm. length.  
Vacuumed, silverplated and double transparent band for vision.  
Column head with temperature taking and conical output for distilled product.  
Column head with a valve for the steam distribution.  
2 l. Boiler (with sample outputs) with heating mantle.  
2 l. Distillation collector of graduated glass.  
Refrigerator.  
Temperature measurement system.  
7 Temperature sensors "J" type.  
Working temperature: ambient temperature up to 125°C.  
Flow meter, range: 0.2 - 2 l./min.  
Manometer tubes.  
Solenoid valve.  
Electronic console: Metallic box. Temperature sensors connections.  
Digital display for temperature sensors. Selector for temperature sensors. Heating element (heating mantle) temperature control.  
Solenoid valve switch. Solenoid valve timer controller.(Solenoid valve reflux time control).  
Columns:  
- Raschig Rings Column.  
- 8 Plates Type Column (8 Temperature points).  
Cables and Accessories, for normal operation. Manuals: Required Services, Assembly and Installation, Starting-up, Safety, Maintenance & Practices Manuals. |
| Other Needs | Preferably with training for start-up of equipment with recommended reagents (Water/Methanol; Heptane/Methylcyclohexane; |
3. **pH/Ion METER**

- Temperature Compensation: Automatic (5 to 40°C)
- Calibration up to 3 pH points
- Buffer recognition pH 4, 7, and 10
- Dimensions: (L x W x H) 5 ½” x 1 1/8” x 5/8”
- Range pH: 1.0 to 12.0
- pH resolution: 0.1
- pH accuracy: 0.1
- 2 years warranty with after sales service

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>unit</td>
<td></td>
</tr>
</tbody>
</table>

4. **ANALYTICAL BALANCE**

- Chamber Size: (W x H x D): 7 5/8” x 9 ¼” x 7 5/8”
- Housing Size: (W x H x D): 8 7/8” x 12 7/8” x 12 5/8”
- Capacity: 100g maximum
- Readability: 0.0001g
- Repeatability: 0.1mg
- Linearity: 0.2mg
- Pan Size: 3” diameter
- Calibration mass 100g

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>unit</td>
<td></td>
</tr>
</tbody>
</table>

5. **AIR FLOW METER**

- Purpose: Measurement of air flow, air velocity and air pressure
- Type: Portable, handheld and digital display
- Accessories: rubber hoses, wrist strap, Pitot tube, hanging kit, hard carry case, Batteries and instruction manual

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Pressure</td>
<td>± 4000 Pascals</td>
<td>1 Pascal</td>
<td>± 1 % + 1 Pascal</td>
</tr>
<tr>
<td></td>
<td>± 16 in H2O</td>
<td>0.001 in H2O</td>
<td>± 1 % + 0.01 in H2O</td>
</tr>
<tr>
<td></td>
<td>± 400 mm H2O</td>
<td>0.1 mm H2O</td>
<td>± 1 % + 0.1 mm H2O</td>
</tr>
<tr>
<td></td>
<td>± 40 mbar</td>
<td>0.01 mbar</td>
<td>± 1 % + 0.01 mbar</td>
</tr>
<tr>
<td></td>
<td>± 0.6 PSI</td>
<td>0.0001 PSI</td>
<td>± 1 % + 0.0001 PSI</td>
</tr>
<tr>
<td>Air Velocity</td>
<td>250 → 16,000 fpm</td>
<td>1 fpm</td>
<td>± 2.5 % of reading at 2000 fpm (10.00 m/s)</td>
</tr>
<tr>
<td></td>
<td>1 to 80 m/s</td>
<td>0.001 m/s</td>
<td></td>
</tr>
<tr>
<td>Air Flow (Volume)</td>
<td>0 → 99.999 cfm</td>
<td>1 cfm</td>
<td>Accuracy is a function of velocity and duct size</td>
</tr>
<tr>
<td></td>
<td>0 → 99.999 m3/hr</td>
<td>m3/hr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 → 99.999 l/s</td>
<td>1 l/s</td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>0 °C → +50 °C</td>
<td>1°C</td>
<td>± 1 % + 2 °C</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 °C → +50 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max Port Pressure</td>
<td>10PSI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. **GAS ANALYZER**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Measurement of $O_2$, CO and NO (NO$_2$); stack and ambient temperatures, stack pressure and draft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Portable; handheld and digital readout</td>
</tr>
</tbody>
</table>

**Specifications**

- With 2-3 gas sensors for $O_2$, CO and NO (NO$_2$); stack and ambient temperatures, stack pressure and draft
- Should also calculate CO$_2$, efficiency, losses, excess air
- On-board data storage
- With sample conditioning system consists of high flow pump and radiant gas cooler with moisture trap
- Automatic shut-off activates once gas cooler filter is saturated
- With automatic and manual bypass functions for sensor protection

**Accessories**

- Probe
- Sample line (flex hose with thermocouple wire)
- Batteries
- Pump (flowrate of 1.5+ lpm)
- Condensate/Particulate filters
- Refillable calibration gas bottles
- Instruction manual

<table>
<thead>
<tr>
<th>MEASUREMENT [KEY]</th>
<th>RANGE</th>
<th>ACCURACY</th>
<th>RESOLUTION</th>
<th>SENSOR LIFE</th>
<th>SENSOR TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen ($O_2$)</td>
<td>0-21% vol.</td>
<td>± 2% Measured</td>
<td>0.1% vol.</td>
<td>2 Years</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>Carbon Monoxide (C)</td>
<td>0-4,000 ppm</td>
<td>± 2% Measured</td>
<td>1 ppm</td>
<td>3 Years</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>Carbon Monoxide (V)</td>
<td>0-40,000 ppm</td>
<td>± 2% Measured</td>
<td>1 ppm</td>
<td>3 Years</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>Nitric Oxide (N)</td>
<td>0-4,000 ppm</td>
<td>± 2% Measured</td>
<td>1 ppm</td>
<td>3 Years</td>
<td>Electrochemical</td>
</tr>
<tr>
<td>Gas Temperature</td>
<td>32-1800 F</td>
<td>± 2% Measured</td>
<td>1 deg F</td>
<td>10 Years</td>
<td>NiCrNi</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>0-250 F</td>
<td>± 2% Measured</td>
<td>1 deg F</td>
<td>10 Years</td>
<td>Semi-conductor</td>
</tr>
<tr>
<td>Draft / Pressure</td>
<td>± 40° H$_2$O</td>
<td>± 2% Measured</td>
<td>0.1% H$_2$O</td>
<td>10 Years</td>
<td>DMS</td>
</tr>
<tr>
<td>D$_2$ Correction</td>
<td>0-20% O$_2$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO$_2$ Calculated NO$_2$ by programming NO$_2$ factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide CO$_2$</td>
<td>0-CO$_2$ max of fuel</td>
<td>Calculated</td>
<td>Calculated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>0-99.9%</td>
<td>Calculated</td>
<td>Calculated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess Air (Lambda)</td>
<td>1-infinity</td>
<td>Calculated</td>
<td>Calculated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### HEAT CONDUCTION APPARATUS

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Measurement of thermal conductivity of fluids (liquids such as water, oil and gases such as air) and studying heat conduction in fluids using Fourier’s law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Benchtop model</td>
</tr>
</tbody>
</table>

#### General Description

- Generally consists of:
  - Display and control unit
  - Experimental Unit (Heat exchanger with heated inner cylinder and water cooled Jacket)
  - Valves for fluid and cooling water

  The core element of the experimental unit is a cylindrical heat exchanger with a heated inner cylinder made of aluminium and a water cooled jacket. There is a ring-shaped gap between the inner cylinder and the jacket, which is completely filled with the fluid to be examined. The width of the gap is such that the heat transfer by convection is negligible. Due to the low temperature level and polished surfaces, radiation is also negligible. Sensors record the temperatures and the consumed heating power at all relevant points. The measured values can be read on digital displays.

#### Specifications

- Experimental set-up consisting of experimental unit and display and control unit
- Heat exchanger with heated inner cylinder and water-cooled jacket
- The fluid to be examined is in the ring-shaped gap between inner cylinder and jacket
- Heat transfer by convection and radiation negligible due to small gap dimensions, low temperatures and polished surfaces
- Adjustable electric heater
- Valves for adjusting the flow rates in the cooling water and in the fluid
- Sensors for temperatures and electric heating power digital display

#### Technical Data

- **Heat exchanger**
  - Effective heat transfer area: 1500cm²
  - Mean effective diameter: 39.6mm
  - Gap width: 0.4mm

- **Heater**
  - Max. power consumption: 160W
  - Switch-off: at 95°C

- Measuring ranges – temperature: 0 – 100°C Power: 0 – 600W

#### Other Needs

- Instruction Manual
### SIEVE SHAKER

**Purpose**
For particle size analysis

**Type**
Benchtop model

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed material</td>
<td>powders, bulk and coarse materials</td>
</tr>
<tr>
<td>Measuring range</td>
<td>20 µm - 25 mm</td>
</tr>
<tr>
<td>Sieving motion</td>
<td>horizontal circular motion with taps</td>
</tr>
<tr>
<td>Max. batch / feed capacity</td>
<td>3 kg</td>
</tr>
<tr>
<td>Max. number of fractions</td>
<td>7 / 13</td>
</tr>
<tr>
<td>Max. mass of sieve stack</td>
<td>6 kg</td>
</tr>
<tr>
<td>Speed</td>
<td>280 min⁻¹</td>
</tr>
<tr>
<td>No. of taps</td>
<td>150 min⁻¹</td>
</tr>
<tr>
<td>Time display</td>
<td>digital, 1 - 99 min</td>
</tr>
<tr>
<td>Suitable for dry sieving</td>
<td>yes</td>
</tr>
<tr>
<td>Serial interface</td>
<td>yes</td>
</tr>
<tr>
<td>Suitable sieve diameters</td>
<td>200 mm / 203 mm (8”)</td>
</tr>
<tr>
<td>Max. height of sieve stack</td>
<td>350 mm</td>
</tr>
<tr>
<td>Electrical supply data</td>
<td>different voltages</td>
</tr>
<tr>
<td>Power connection</td>
<td>1-phase</td>
</tr>
</tbody>
</table>

### Accessories

- instruction manual
<table>
<thead>
<tr>
<th></th>
<th><strong>STOMACHER</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (W x H x D): 11.5 in x 7.5 in x 12.75 in</td>
<td></td>
<td></td>
<td>1 unit</td>
</tr>
<tr>
<td>1 ml to 80 ml sample capacity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5000 fold improvement in cell recovery and viability from traditional methods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diluent free sample processing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No cross contamination between samples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustable processing time and paddle speed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years warranty with after sales service</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>TEXTURE ANALYZER</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice of five load ranges up to 50kg</td>
<td></td>
<td></td>
<td>1 unit</td>
</tr>
<tr>
<td>Variety of probes and accessories for new application opportunities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two adjustable base tables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attached to computer with programs available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 available test modes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stores up to 10 additional customized test methods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed: 0.01 – 0.1mm/s</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy: +0.1% of speed set</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position Range: 0-101.6mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution: 0.1mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy: 0.1mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years warranty with after sales services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td>To carry out experiments concerning the main techniques of heat transfer for small scale versions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Benchtop model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main parts</td>
<td>Consists of bench top service unit and the shell and tube heat exchanger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specifications</td>
<td>For Bench top service unit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water feed tank, complete with an electric heater, main switch and thermostat as a safety device (max temperature 85°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Variable speed water pump</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flowmeter to measure the flow of hot water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adjustable flowmeter to measure and control the flow of cold water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connections to the heat exchangers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thermoresistances</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electric control box</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety devices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specifications</td>
<td>For Shell and tube heat exchanger:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stainless steel pipes (hot side); heat exchange surface 0.02 m² approx.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outer tube – shell – made of transparent PVC (cold side).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End caps made of transparent acrylic plastic and gaskets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support frame</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thermoresistances wells to measure: Hot fluid inlet temperature. - Hot fluid outlet temperature. - Cold fluid inlet temperature. - Cold fluid outlet temperature.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connections to couple the heat exchanger to the service unit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrical power supply: 110/220V, single-phase, 50/60 Hz; 2kW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other needs</td>
<td>Preferable a demonstration of the use of equipment and instruction manuals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GRAND TOTAL**