

# **PHILIPPINE BIDDING DOCUMENTS**

Procurement of Biology Laboratory Equipment and  
Facilities for Research Engagement and Academic  
Learning of the University

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(Project Title)

**P11,240,000.00**

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(Approved Budget for the Contract)

**Sixth Edition**  
**July 2020**

**Preface**

These Philippine Bidding Documents (PBDs) for the procurement of Goods through Competitive Bidding have been prepared by the Government of the Philippines for use by any branch, constitutional commission or office, agency, department, bureau, office, or instrumentality of the Government of the Philippines, National Government Agencies, including Government-Owned and/or Controlled Corporations, Government Financing Institutions, State Universities and Colleges, and Local Government Unit. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract or Framework Agreement, as the case may be; (ii) the eligibility requirements of Bidders; (iii) the expected contract or Framework Agreement duration, the estimated quantity in the case of procurement of goods, delivery schedule and/or time frame; and (iv) the obligations, duties, and/or functions of the winning bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Goods to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Goods. However, they should be adapted as necessary to the circumstances of the particular Procurement Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or note in italics included in the Invitation to Bid, Bid Data Sheet, General Conditions of Contract, Special Conditions of Contract, Schedule of Requirements, and Specifications are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the Procurement Project, Project Identification Number, and Procuring Entity, in addition to the date of issue.

- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
  
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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# *Glossary of Acronyms, Terms, and Abbreviations*

**ABC** – Approved Budget for the Contract.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**CDA** - Cooperative Development Authority.

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**CIF** – Cost Insurance and Freight.

**CIP** – Carriage and Insurance Paid.

**CPI** – Consumer Price Index.

**DDP** – Refers to the quoted price of the Goods, which means “delivered duty paid.”

**DTI** – Department of Trade and Industry.

**EXW** – Ex works.

**FCA** – “Free Carrier” shipping point.

**FOB** – “Free on Board” shipping point.

**Foreign-funded Procurement or Foreign-Assisted Project**– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**Framework Agreement** – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**GPPB** – **Government** Procurement Policy Board.

**INCOTERMS** – International Commercial Terms.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national

buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**Supplier** – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

**UN** – United Nations.



# MARIANO MARCOS STATE UNIVERSITY

## *Section I. Invitation to Bid*

2021-037

### INVITATION TO BID FOR THE PROCUREMENT OF BIOLOGY LABORATORY EQUIPMENT AND FACILITIES FOR RESEARCH ENGAGEMENT AND ACADEMIC LEARNING OF THE UNIVERSITY

1. The **MARIANO MARCOS STATE UNIVERSITY**, through the Special Purpose Fund of 2021, intends to apply the sum of **Twelve Million Pesos only (PhP11,240,000.00)**, being the Approved Budget for the Contract (ABC), to payments under the contract of the above project. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **MARIANO MARCOS STATE UNIVERSITY** now invites bids for the above project. Delivery of the Goods is required within **60 calendar days** from receipt of Notice to Proceed. Bidders should have completed, within two (2) years from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in section II (Instruction to Bidders).
3. Bidding will be conducted through open competitive bidding procedures, using a non-discretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the "Government Procurement Reform Act,".

Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, in accordance with Republic Act 5183.

4. Prospective bidders may obtain further information from **MARIANO MARCOS STATE UNIVERSITY** and inspect the Bid Documents at the address below, during regular office hours.
5. A complete set of bid documents may be acquired by interested Bidders on **October 19, 2021** from the given address and website below upon payment of the corresponding fee in the amount of **Eleven Thousand Two Hundred Pesos (P11,200.00)**.
6. The MMSU shall allow the bidder to present its proof of payment for the fees in person and electronic means.



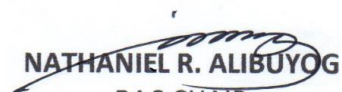
7. The **MARIANO MARCOS STATE UNIVERSITY** will hold a Pre-Bid Conference on **October 28, 2021** at 2:30 PM at the Conference Room, FEM Hall Extension Building, MMSU, City of Batac and/or through video conferencing or webcasting via Google Meet ([meet.google.com/qyb-uwcz-ozq](https://meet.google.com/qyb-uwcz-ozq)) which will be open to prospective bidders.
8. Bids must be duly received by the BAC Secretariat thru a) manual submission at the office address indicated below, b) online or electronic submission as indicated below, or both on or before **November 11, 2021 at 2:00 PM**. Late bids shall not be accepted.
9. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.
10. Bid opening shall be on **November 11, 2021; 2:00 PM** at the given address below and/or via e-mail [algabriel@mmsu.edu.ph](mailto:algabriel@mmsu.edu.ph). Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
11. The **MARIANO MARCOS STATE UNIVERSITY** *reserves* the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
12. For further information, please refer to:  
  
**Ms. AGNES L GABRIEL**  
Chief, BAC Secretariat  
Mariano Marcos State University  
City of Batac, Ilocos Norte  
Email: [algabriel@mmsu.edu.ph](mailto:algabriel@mmsu.edu.ph)
13. You may visit the following websites:

For downloading of Bidding Documents:

**<https://bac-admin.mmsu.edu.ph/bids>**

**<https://notices.philgeps.gov.ph>**

October 18, 2021

  
**NATHANIEL R. ALIBUYOG**  
BAC CHAIR

## ***Section II. Instructions to Bidders***

### **Notes on the Instructions to Bidders**

This Section on the Instruction to Bidders (ITB) 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, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

#### **1. Scope of Bid**

The Procuring Entity, Mariano Marcos State University wishes to receive bids for the **Procurement of Biology Laboratory Equipment and Facilities for Research Engagement and Academic Learning of the University with Identification Number ITB2021-037**, the details of which are described in Section VII (Technical Specifications).

#### **2. Funding Information**

2.1. The GOP through the Special Purpose Fund of 2021

2.2. The source of funding is: **Special Purpose Fund of 2021**

#### **3. Bidding Requirements**

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

#### **4. Corrupt, Fraudulent, Collusive, and Coercive Practices**

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. They or

through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

## 5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. Foreign ownership exceeding those allowed under the rules may participate pursuant to:
  - i. When a Treaty or International or Executive Agreement as provided in Section 4 of the RA No. 9184 and its 2016 revised IRR allow foreign bidders to participate;
  - ii. 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;
  - iii. When the Goods sought to be procured are not available from local suppliers; or
  - iv. When there is a need to prevent situations that defeat competition or restrain trade.
- a. Foreign ownership limited to those allowed under the rules may participate in this Project.
- 5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA’s CPI, must be at least equivalent to:
  - a. For the procurement of Non-expendable Supplies and Services: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC.
  - b. For the procurement of Expendable Supplies: The Bidder must have completed a single contract that is similar to this Project, equivalent to at least twenty-five percent (25%) of the ABC.
  - c. For procurement where the Procuring Entity has determined, after the conduct of market research, that imposition of either (a) or (b) will likely result to failure of bidding or monopoly that will defeat the purpose of public bidding: the Bidder should comply with the following requirements:
    - i. Completed at least two (2) similar contracts, the aggregate amount of which should be equivalent to at least *fifty percent (50%) in the case of non-expendable supplies and services or twenty-five percent*

(25%) in the case of expendable supplies] of the ABC for this Project; and

- ii. The largest of these similar contracts must be equivalent to at least half of the percentage of the ABC as required above.

- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

## 6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

## 7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

## 8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time through videoconferencing/webcasting and face-to-face at its physical address **MMSU, Brgy. Quiling Sur, City of Batac, Ilocos Norte** as indicated in paragraph 6 of the **IB**.

## 9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## 10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within **2 years** prior to the deadline for the submission and receipt of bids.

- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

## **11. Documents comprising the Bid: Financial Component**

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## **12. Bid Prices**

- 12.1. 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);
    - ii. The cost of all customs duties and sales and other taxes already paid or payable;
    - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
    - iv. The price of other (incidental) services, if any, listed in e.
  - b. For Goods offered from abroad:
    - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (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, as listed in **Section VII (Technical Specifications)**.

### **13. Bid and Payment Currencies**

- 13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. 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.
- 13.2. Payment of the contract price shall be made in:
  - a. Philippine Pesos.

### **14. Bid Security**

- 14.1. The Bidder shall submit a Bid Securing Declaration<sup>1</sup> or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 14.2. The Bid and bid security shall be valid for 120 days from the opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

### **15. Sealing and Marking of Bids**

Each Bidder shall submit three copies of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

### **16. Deadline for Submission of Bids**

- 16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

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<sup>1</sup> In the case of Framework Agreement, the undertaking shall refer to entering into contract with the Procuring Entity and furnishing of the performance security or the performance securing declaration within ten (10) calendar days from receipt of Notice to Execute Framework Agreement.

## 17. Opening and Preliminary Examination of Bids

- 17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

## 18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

## 19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.

- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

**Option 3 - One Project having several items, which shall be awarded as separate contracts per item.**

- 19.4. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

## **20. Post-Qualification**

- 20.2. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

## **21. Signing of the Contract**

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.



## ***Section III. Bid Data Sheet***

### **Notes on the Bid Data Sheet**

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

- a. Information that specifies and complements provisions of the ITB must be incorporated.
- b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

# Bid Data Sheet

ITB Clause	
5.3	For this purpose, contracts similar to the Project shall be: <ul style="list-style-type: none"> <li>a. <b><i>Supply and delivery of Laboratory Equipment</i></b></li> <li>b. completed within <i>two years</i> prior to the deadline for the submission and receipt of bids.</li> </ul>
7.1	<i>Sub-contracting is not allowed</i>
12	The price of the Goods shall be quoted DDP, <b>MMSU, City of Batac</b> or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts: <ul style="list-style-type: none"> <li>a. The amount of not less than <i>two percent (2%) of ABCJ</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</li> <li>b. The amount of not less than <i>five percent (5%) of ABCJ</i> if bid security is in Surety Bond.</li> </ul>
19.3	<i>No further instructions.</i>
20.2	<i>No further instructions.</i>
21.2	<i>No further instructions.</i>

## ***Section IV. General Conditions of Contract***

### **Notes on the General Conditions of Contract**

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Supplier, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.

## 1. Scope of Contract

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. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

## 2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex “D” of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

## 3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184.

## 4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project *{[Include if Framework Agreement will be used:] or Framework Agreement}* specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC, Section IV (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.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

## **5. Warranty**

- 5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.
- 5.2 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, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

## **6. Liability of the Supplier**

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## ***Section V. Special Conditions of Contract***

### **Notes on the Special Conditions of Contract**

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Goods purchased. In preparing this Section, the following aspects should be checked:

- a. Information that complements provisions of the GCC must be incorporated.
- b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

## Special Conditions of Contract

GCC Clause	
1	<p><b>Delivery and Documents</b></p> <p>The outer packaging of goods to be delivered shall indicate a legible label indicating there in the corresponding Purchase Order Number(s) and/or Contract Agreement Number(s) in each box.</p> <p style="padding-left: 40px;">Additional Documents to be included in the delivery of Equipment:</p> <ol style="list-style-type: none"> <li>1. Warranty Certificate</li> <li>2. Brochures</li> <li>3. Schedule of Preventive Maintenance</li> <li>4. Calibration Certificate (with measuring devices)</li> <li>5. Attendance – Product Demonstration</li> <li>6. Certificate of Training</li> <li>7. Service/Operations Manual</li> </ol> <p style="padding-left: 40px;">Additional Documents to be submitted – Semi-Expendable Items</p> <ol style="list-style-type: none"> <li>1. Warranty Certificate (if applicable)</li> <li>2. Brochures (if applicable)</li> <li>3. Calibration Certificate (with measuring devices)(if applicable)</li> <li>4. Service/Operations Manual</li> </ol> <p>Delivery of Goods shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are as follows:</p> <p>For Goods Supplied from Abroad, the delivery terms applicable to the Contract are DDP delivered to <b>MMSU, City of Batac</b>. In accordance with INCOTERMS.”</p> <p>For Goods Supplied from Within the Philippines, the delivery terms applicable to this Contract are delivered to <b>MMSU, City of Batac</b>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <p>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is <i>Supply Office Staff and the Inspection Team</i>.</p> </div> <p><b>Incidental Services –</b></p> <p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements: <i>Select appropriate requirements and delete the rest.</i></p>

	<ul style="list-style-type: none"> <li>a. performance or supervision of on-site assembly and/or start-up of the supplied Goods;</li> <li>b. furnishing of tools required for assembly and/or maintenance of the supplied Goods;</li> <li>c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;</li> <li>d. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and</li> </ul>
	<ul style="list-style-type: none"> <li>e. training of the Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.</li> </ul> <p>The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.</p> <p><b>Spare Parts –</b></p> <p>The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:</p> <p><i>Select appropriate requirements and delete the rest.</i></p> <ul style="list-style-type: none"> <li>a. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and</li> <li>b. in the event of termination of production of the spare parts: <ul style="list-style-type: none"> <li>i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and</li> <li>ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.</li> </ul> </li> </ul> <p>The spare parts and other components required are listed in <b>Section VI (Schedule of Requirements)</b> and the cost thereof are included in the contract price.</p> <p>The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of <i>[indicate</i></p>



	<p><i>here the time period specified. If not used indicate a time period of three times the warranty period].</i></p> <p>Spare parts or components shall be supplied as promptly as possible, but in any case, within [<i>insert appropriate time period</i>] months of placing the order.</p>
	<p><b>Packaging –</b></p> <p>The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods’ final destination and the absence of heavy handling facilities at all points in transit.</p> <p>The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows:</p> <p>Name of the Procuring Entity  Name of the Supplier  Contract Description  Final Destination  Gross weight  Any special lifting instructions  Any special handling instructions  Any relevant HAZCHEM classifications</p>
	<p>A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.</p> <p><b>Transportation –</b></p> <p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.</p>

	<p>Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.</p>
	<p>Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.</p> <p>The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Supplier's risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.</p> <p><b>Intellectual Property Rights –</b></p> <p>The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.</p>
2.2	<i>No further instructions.</i>
4	<p>The inspections and tests that will be conducted are:</p> <ol style="list-style-type: none"> <li>1. actual demonstration on-site and/or off-site for those who meet the minimum requirement for the post-qualification evaluation</li> <li>2. MMSU or its representative shall have the right to inspect and/or test the GOODS at any point during post-qualification evaluation.</li> </ol>

## *Section VI. Schedule of Requirements*

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item #	QTY	UNIT	Description	Unit	Total	Delivered,	Unit Cost	Total Amount
						Weeks/Months		
1	15	unit	BINOCULAR TRANSMITTED LIGHT MICROSCOPE, Technical data: Finite optical system (DIN) 4-fold lens revolving unit Siedentopf 30° inclined, 360° rotatable Dioptré compensation one-sided (for binocular and trinocular models) Overall dimensions WxDxH 320x180x365 mm OBE 112 The fully equipped all-round compound microscope for schools, training and laboratories Construction Colour temperature: 6000 K Dimensions (WxDxH): 320 mm x 180 mm x 365 mm Eye distance (max): 75 Eye distance (min): 50 Optical system: Finite Rotation of tube 360°: yes Tube: Binocular Tube angle: 30° Illumination Illumination: 3W LED (transmitted) Incident Illumination: None Transmitting illumination: LED Power supply Input voltage: 100 - 240 V Mains adapter/adaptor included: EURO Field of View: 1,800 cm Field width: HWF Magnification: 10 Objective: 4 x / 10 x / 40 x / 100 x (With 1 year warranty)				70,000.00	1,050,000.00
2	1	unit	DIGITAL MICROSCOPE WITH 5MP CAMERA, Technical data Microscope OBL-1 Infinity optical system 4-fold lens revolving unit Siedentopf 30° inclined, 360° rotatable Dioptré compensation one-				265,000.00	265,000.00

		<p>sided Overall dimensions WxDxH 394x185x377 mm Net weight approx. 6,188 kg Okulare: HWF 10x20 mm Objective quality: Infinity E-Plan Objectives: 4x/10x/40x/100x Illumination (OBL 135): 6V/20-halogen (transmitted light) Technical data:OBL 135T241 The digital laboratory assistant with infinity optical system and fixed, pre-centred illumination Construction Dimensions (WxDxH): 394 mm x 185 mm x 377 mm Eye distance (max): 75 Eye distance (min): 50 Optical system: Infinity Rotation of tube 360°: yes Tube: Trinocular Tube angle: 30° Illumination Incident Illumination: None Transmitting illumination: Halogen Power supply Input voltage: 100 - 240 V Optics Field of View: 2 cm Field width: HWF Magnification: 10 (With 2 years warranty)</p>			
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3	1	unit	<p>UV VIS SPECTROPHOTOMETER, perform routine measurements for quality control or teaching in the chemistry classroom and research, 50 UV-Visible a Spectrophotometer. With a single cell configuration, these instruments are designed with a sloping surface to shed spills and a washable sampling compartment for easy clean up. A 7-inch touchscreen interface, local control software (no PC needed) and optional Wi-Fi networking Dual Silicon Photodiodes Detector Type Display 7-inch color touchscreen, fixed, high definition, 800 x 1280 pixels Photometric <math>\pm 0.002A</math> at 0.5A Accuracy <math>\pm 0.004A</math> at 1.0A Instrument <math>\pm 0.008A</math> at 2.0A Printer Snap-on printer available Wavelength Accuracy <math>\pm 0.5</math> nm Baseline Flatness <math>\pm 0.002A</math> Compartment s Accessible from top, front or side Able to accommodate cells up to 100 mm cells Available accessory for test-tubes up to 25 mm diameter and 150 mm height Removable, washable sample compartment liner with magnetic placement and hold-down Connections Single USB-A supports flash memory devices for method and data storage Duplex USB-A on side supports connection to a Windows™ computer running optional remote-control software, keyboard, mouse Export data to network or PC (With 2 years warranty and demo upon delivery)</p>			560,000.00	560,000.00
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		<p>           USB, Ethernet, or Wi-Fi            USB adaptor, available            Print via USB, Ethernet or            Wi-Fi USB adaptor            available Description 50            UV-Vis Spectrophotometer            Dimensions (L x W) 35.5 x            38.5 x 19.5 cm Drift (At            500 nm after 1 hour            warmup) &lt;0.0005A/Hr            Electrical Requirements            External AC to DC            converter. Voltage and            Frequency (Hz) selected            automatically, 100-240            volts, 50-60 Hz. Keypad            Touchscreen Lamp Flash            Lamp (&gt;5 years typical, 3            years guaranteed) Noise            (RMS at 500 nm 60            consecutive            measurements) <math>\leq 0.00020A</math>            at 0A at 260 and 500 nm  <math>\leq 0.00030A</math> at 1A at 260            and 500 nm <math>\leq 0.00040A</math> at            2A at 260 and 500 nm            Optical Design Dual beam            Photometric Display -3A to            +5A Photometric Range -            2A to +3.5A Photometric            Repeatability <math>\pm 0.001A</math> at            1A measured at 1.0A at            546 nm Spectral            Bandwidth 2 nm Stray            Light &lt; 1.0%T 198 nm            (KCl) , &lt;0.05%T at 220 nm            (NaI), &lt;0.03%T at 340 nm            (NaNO<sub>2</sub>) Wavelength Data            Interval 0.2 nm, 0.5 nm, 1            nm, 2 nm, 5 nm            Wavelength Range 190 nm            - 1100 nm Wavelength            Repeatability &lt; <math>\pm 0.2</math> nm            Wavelength Scan Speed            Slow, medium and fast - up            to 1600 nm/min Weight            (Metric) 7.5 kg Includes: (2            pcs ) 5-100mm Path            Cylindrical Cell Holder for            GENESYS 50 ~ Holds one            cylindrical longpath cell 5 -            100mm pathlength ~            Comes assembled in a            removable sample            compartment liner            (With 2 years warranty)         </p>					
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4	2	sets	AUTOCLAVABLE MICROPIPETTE WITH RACK, Fully autoclavable 0.1-2.5µLL 0.5-10µLL 10-100µLL 20-200µLL 100-1000µL (With 2 years warranty)				100,000.00	200,000.00
5	1	unit	LABORATORY OVEN, Features: • Operating temperatures from 20° to 250°C • Automatic over-temperature alarm system • Low overall energy consumption • Built in timer • Corrosion-resistant stainless steel chambers with rounded corners • Large, easy to read vacuum fluorescent display • Easy to use, microprocessor-controlled touch button operation • Doors can be opened at over 180°C Amperage 11 A Controller Type Microprocessor control with vacuum fluorescent display Depth (English) Interior 23.2 in. Depth (Metric) Interior 59 cm Dimensions (L x W x H) 30.3 x 30.6 x 60.8 in. (77 x 77.8 x 154.5 cm) Frequency 60 Hz Height (English) 60.8 in. Height (English) Interior 51.5 in. Height (Metric) 154.5 cm Height (Metric) Interior 130.7 cm Length (English) 30.3 in. Length (Metric) 77 cm Temperature Stability ±0.5°C Timer ON / OFF Wattage 2640 w Width (English) Interior 21.4 in. Width (Metric) Interior 54.4 cm Temperature (Metric) 50°C to 250°C Voltage 208/240 V Capacity (Metric) 419 L Dimensions (D x W x H) Interior 23.2 x 21.4 x 51.5 in. (59 x 54.4 x 130.7 cm) Type Gravity Convection Electrical Requirements 208/240 V 60 Hz Width (English) 30.6 in. No. of Shelves 2 supplied/39 max. Width (Metric) 77.8 cm (wit AVR 2 years warranty)				500,000.00	500,000.00

6	1	unit	DIGITAL PEN TYPE SALINITY METER SALINOMETER SALT ANALYZER, Features: Pen type digital salinity meter °C/°F switchable temperature unit Data HOLD function Low battery indicator Calibration function Auto power off function With ATC (Automatic Temperature Compensation) Specifications: Measurement Range: 0.00~9.99ppt/10~50ppt Accuracy: 3%F.S.±1 digit Resolution: 0. 01ppt / 0. 1ppt / 0.1°C Temperature Range: 0~60°C (32~140°F) Accuracy: ±1Å°C Power supply: 4 x LR44 1.5V battery Dimension: 180 x 25 x 45mm Set Includes: 1 x Salinity Meter Black Pouch Standard factory packaging (With 2 years warranty)			30,000.00	30,000.00
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7	1	unit	<p>ANALYTICAL BALANCE,  Construction Dimensions  draft shield (WxDxH): 201  mm x 220 mm x 256 mm  Dimensions housing  (WxDxH): 214 mm x 340  mm x 330 mm Level  indicator: yes Material  weighing plate: stainless  steel Revolving screw feet:  yes Weighing space  (WxDxH): 174 mm x 162  mm x 227 mm Weighing  surface (d): 91 mm Display  Display digit height: 14 mm  Technical data about  verification Minimum load  [Min]: 10 mg Periodic  Verification for Italy: 969-  112 Verification approval  conforming to 2014/31/EU:  yes Verification by KERN  possible: yes Verification  class: I Verification value  [e]: 1 mg Power supply  Input voltage: 110 V - 230  V AC Mains adapter:  Mains adapter external  Mains adapter/adaptor  included: CH EURO UK  US Functions Counting  function: yes Function to  save totals: yes  Percentage determination:  yes Standby function: yes  Weighing with tolerance  range: yes Measuring  system Adjustment  options: Internal calibration  (auto) Internal calibration  (manual) Linearity: 0,300  mg Minimum weight (USP):  400 mg Readability [d]:  0,100 mg Repeatability:  0,200 mg Resolution:  2.200.000 Stabilisation  time under laboratory  conditions: 3 s Warm up  time: 8 h Weighing  capacity [Max]: 20 g  Weighing units: ct g mg  Environmental conditions  Maximum humidity: 85 %  Maximum operating  temperature: 30 °C  Minimum ambient  temperature: 10 °C  Minimum humidity: 20 %  (With 2 years warranty)</p>			130,000.00	130,000.00
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8	1	unit	SHAKING WATERBATH, Amperage 9.0-10.5 / 4.3- 5.0 (120V/230V) Chamber Material 304 Stainless Steel Controller Type Digital Description 15L Shaking Water Bath Dimensions (L x W x H) 15.5 x 24.9 x 9.8 in. (394 x 632 x 249 mm) Display Monochrome LCD Electrical Requirements Global Voltage 100/115 V 200/230 V 50/60 Hz Includes Stainless Steel Gable Cover and Rubber Duck Material Epoxy Powder-coated Cold Rolled Steel Model Precision SWB 15 Temperature Presets 4 Temperature Stability ±0.1Å°C Temperature Uniformity ±0.05°C Capacity (Metric) 15 L Certifications/Compliance UL, CE Heating Capacity 1200 w Temperature Range Ambient +5Å° to 100°C Unit Size Each (With 2 years warranty)				400,000.00	400,000.00
9	1	unit	5 MULTI-POSITION MAGNETIC HOTPLATE STIRRER, Max. volume per position: 400ml Total max. volume: 2000ml Variable speed: 300 to 1500 rpm, in 10 rpm increments Run time: 1 to 999 minutes and infinite mode Digital display: yes Pulse display: yes No. of PTFE Coated Stir Bars included (25 x 8mm): 5 Motor type: BLDC Plate material: Corrosion resistant, stainless Steel with silicone sheet Dimensions (LxWxH) : 562x136x25mm Protection class: IP 65 Heater Temp. Range: Ambient to 120oC (With 2 years warranty)				160,000.00	160,000.00
10	1	unit	CO2 INCUBATOR, Feature Description Temperature Control Direct heat, 6 sides, 4 independently controlled heaters, 73 meters of heating elements Temperature range 10°- 50°C, in 0.1 increments ( minimum setting: ambient + 1° C) Temperature measurement 7 RT curve				380,000.00	380,000.00

		<p>             matched thermistors Temperature Control +/- 0,1°C Temperature Accuracy +/- 0,1°C Temperature Uniformity Better than +/- 0,3°C Temperature recovery About 5 minutes following a 15 seconds door opening Over Temperature Protection Independent, inhibits all heaters above 1.0° C over set temp. value (in the unlikely event of a control system failure) Co2 Sensor Solid State IR Sensor, automatic atmospheric CO2 zeroing. Measurement is independent from chamber humidity level Range 0.5 to 20 % CO2, in steps of 0.1% Control +/- 0,1% Uniformity Better than +/- 0,1 % Accuracy +/- 0,2% at 5% CO2 set point Recovery rate About 5 minutes following a 15 seconds door opening Relative Humidity System Reservoir 2.5 litres, 304 Stainless Steel electro-polished humidity tray RH level Minimum 95% Decontamination cycle Decontamination cycle type Fully automatic, 125° C cycle, Validated Temperature ramp up time 1,5- 2,5 hours Exposure time 4 hours Temperature ramp down time 5-7 hours Total cycle time 10,5 - 13,5 hours Constructive Details Sturdiness. Simple and effective. Feature Description Inner Chamber 304 Stainless Steel, totally seamless, electro-polished Chamber volume (gross /usable) 188.6 litres/140 litres Exterior Powder painted mild steel with ABS plastic outer door cover Interior access Heated outer door with direct chamber access or sealed inner glass door (with optional 4/8 inner glass doors) Door swing Right side opening with optional left side door swing (factory fitted) Shelving System Shelf racks Easy to assemble , 304 stainless steel construction, with high temperature plastic spacers Shelf type Solid (non perforated) stainless steel shelves ( perforated available as option) Shelf dimensions (W x D) mm 510x 455 mm, with 150 mm height above each shelf Shelf surface area, Sq meter: 0,23 m2 Capacity: standard: - maximum 4-8 Alarm System Chamber status alarm: Fully programmable, audio-visual, auto reset when chamber conditions resume Incubator function alarm: Fully automatic alarms to advise failure in heaters or sensors (with AVR and With 2 years warranty)           </p>									
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11	1	unit	<p>DIGITAL EGG INCUBATOR, WITH 100 CAPACITY AND WITH TRANSPARENT DOOR; Digital Cabinet Egg Incubator- incubator offers an accurate digital thermostat with LCD display of Temperature and Humidity. Thermostat operating range between 60 and 103 degrees F. depending on room temperature. 220 VAC, 50/60 Hz, 325 Watts. TUV Listed. This incubator includes: - Digital Command Center thermostat - 3 turning racks &amp; 1 plastic hatching tray - 1 moisture pan with 2 wick pads - Instruction booklet. Total Capacity with plastic trays: 1368 Quail Eggs, 354 pheasant eggs, 270 chicken eggs, 198 turkey or duck eggs, and 36-45 larger eggs such as goose, peafowl, and emu. Actual capacity may depend on egg size. Hatching capacity is limited to the hatching drawer which is approximately 72 medium size or 250 quail size eggs at a time. DIMENSIONS: 30 1/4" Front to Back, 15 3/4" Wide, 31 3/4" High. (With 2 years warranty)</p>			50,000.00	50,000.00
12	1	unit	<p>1-LITER LABORATORY BLENDERS WITH TIMER, Capacity: 1 Liter/1.2 Liter Switch Settings: Two Speed, 60 Second Mechanical Timer Base: Epoxy Coated Motor Housing Container: Stainless steel with handle and two-piece vinyl and styrene lid. Heat resistant glass with handle and two-piece vinyl and styrene lid. • Overall Height: 15 inches/16 inches Weight: 11 lbs./13 lbs./13lbs. Listing: UL Two-speed blenders with timer offer a mechanical 1-minute timer that allows automatic</p>			180,000.00	180,000.00

			shutoff and a push-button speed control for 18,000 and 22,000 rpm operation.;240V, 50/60Hz (With 2 years warranty)					
13	1	unit	<p>PCR MACHINE THERMAL CYCLER (PCR), With: 1 - Automatic Voltage Regulator (AVR)</p> <p>Specifications Features</p> <p>Specifications Connections</p> <p>USB A Instrument dimensions 260 mm x 430 mm x 210 mm; with open lid 260 mm x 430 mm x 385 mm Noise level Very low, max. 45 dB Number of preps per run 96 x 0.2 ml tubes, 1 x 96-well microplate, 12 x 8-well strips Operating temperature 15°C to 35°C; max. 2,000 m above sea level Power consumption 550 W Relative humidity 70 % air humidity Software User-specific quick start option for 5 recent programs; program preview before start; option for toggling between programming table and graph programming mode; Linear Gradient Tool, service info file (SINF) generation; expanded self-test; adjustable ramp rates; gradient temperature diagram view. Program memory: total capacity of 350 programs in up to 90 user directories Special components/features High Performance Smart Lid with lid temperature range: 30°C to 110°C Special feature Automatic restart after power failure Thermal cycler Block material: Aluminum; Block coating: Special alloy Thermal performance Ramping: 95°C: ±0.6°C after 15 s; 72°C: ±0.3°C after 15 s; 55°C: ±0.2°C after 15 s; Range: 3°C to 99°C Measured inside the block; Control accuracy: <math>\hat{A}\pm 0.1^\circ\text{C}</math>; Gradient range: 20°C to</p>				570,000.00	570,000.00

			99°C; Max./Min. gradient: 20°C/0.1°C; Max. heating rate: 4.0°C/s; Av. heating rate: 3.7°C/s; Max. cooling rate: 3.3°C/s; Av. cooling rate: 3.0°C/s Touchscreen 7-inch color touchscreen Voltage 115, 230 Volt, 50/60 Hz Weight 11.5 kg (With AVR and 2 years warranty and demo upon delivery)					
14	1	unit	MICRO VOLUME SPECTROPHOTOMETER, Technical Details Display None 5.7"• colour capacitive touchscreen Minimum Volume (dsDNA) 0.5 µLL Maximum Concentration (dsDNA) 2,500 ng/µLL Detection Limit (dsDNA) 1ng Detector 1024 element CCD array Light Source Pulsed lamp with 3 year warranty Spectral Bandwidth 5 nm Wavelength Range 190 - 1100 nm Wavelength Accuracy ± 2 nm Wavelength Reproducibility ± 1 nm Stray Light <0.5%T at 220 nm and 340 nm using NaNO2 Absorbance Range - 0.3A to 2.5A, 0 to 199%T Absorbance Accuracy ±0.005A or 1% of the reading, whichever is the greater at 546 nm Absorbance Reproducibility ±0.003A (0 to 0.5A), ±0.007A (0.5 - 1.0A) Noise 0.005A peak to peak 0.002A RMS Output USB port for USB memory stick USB port for PC connection Power input 90-250 V, 50/60 Hz, Max 30 VA Dimensions 420 x 260 x 185 mm Weight approx. 3 kg Life Science PC Software DNA, RNA, oligo, dye labelling, Tm calculation, direct UV and colorimetric protein methods (with AVR and 2 yrs warranty and demo upon delivery)				1,000,000.00	1,000,000.00
15	1	unit	BEAD MILL HOMOGENIZER, SPECIFICATIONS Processing Range: 25 micro-liters to 5.0 mL Power Rating: 100-230 VAC/ 50-60Hz Dimensions:L: 15in(38.1cm), W: 17in(43.18cm), H: 13in(33.0cm) Product Weight: 65 lbs. (30kg) Compliance: CE Compliance Run Time: 1 sec to 9:59 min Performance Range: 0.8m/s - 6m/s in				410,000.00	410,000.00

			increments of 0.8m/s Number of Cycles: 1-10 (With 2 years warranty and demo upon delivery)					
16	1	unit	<p>INVERTED MICROSCOPE, Inverted tissue culture microscope with camera, digital camera; Condenser type: 40 mm, 4 P/S40, Magnification: 4 objectives (N plan 5X PHO, Hi Plan10X PH1, 20X PH1, 40X PH1) Specifications Optical system</p> <ul style="list-style-type: none"> <li>• Infinity corrected (HCS)</li> <li>Power • Input: 100 - 240V AC, 50 / 60Hz • Output: 5V DC Contrast methods • Transmitted light: Brightfield, Phase Contrast Transmitted light axis • Integrated 5W LED Illumination manual adjustment of - Brightness - Aperture diaphragm - Automatic power shutoff (adjustable) Tube • With fixed eyepieces FOV 18 • For exchangeable eyepieces FOV 20 Focus • Coarse and fine focusing, travel range 9 mm, min. adjustment: 2 µm Objective nosepiece • Manual, 4 position, for objectives with M25 thread Stage • Fixed stage: (L x W) 262 mm x 212 mm • Attachable object guide for fixed stage (option) Condenser • S80 / 0.30 condenser or • S40 / 0.45 condenser (interchangeable) Phase contrast slider • 2 position slider (BF / PH1) for S40 or for S80 condenser • 4 position slider (BF / PH0 / PH1 / PH2) for S40 or for S80 condenser Camera • Leica MC120 (2.5 megapixels) • MC170 (5.0 megapixels) (With 2 years warranty and demo upon delivery)</li> </ul>				1,500,000.00	1,500,000.00
17	1	unit	<p>WATERPROOF II DISSOLVED OXYGEN METER, Features Oxygen level displayed as % Saturation or Concentration (mg/L [ppm]) Adjustable Altitude Compensation (0-20,000ft in 1,000ft increments) Adjustable Salinity Compensation from 0 to 50ppt Analog bar graph indicates trends Memory stores up to 25 data sets</p>				80,000.00	80,000.00

			with DO and Temperature reading Self calibration on power up Data Hold, Auto power off, Low battery indicator, with callibration probe. (With 2 years warranty)					
18	1	unit	PH METER, Product Features Oversize screen with large fonts yet compact - the new pH 2700 offers an easy to read screen that says more! View pH or ORP readings, with temperature, electrode status, calibration points, date and time all at once! :: Up to 6-point calibration with auto-buffer recognition :: Quick, easy electrode diagnosis with multiple pH slopes and offset display :: Non-volatile memory holds up to 500 data points - time and date-stamped for GLP compliance :: Calibrate with up to 5 custom pH buffers - use any pH values that are $\geq 1.0$ pH unit apart :: Cal-due alarm - no more out-dated calibrations! :: Auto-logging function for convenient continuous monitoring :: Password protection for setup and calibration Specifications Product Specification Description pH Range -2.000 to 20.000 pH Resolution 0.1 / 0.01 / 0.001 pH Accuracy $\pm 0.002$ pH + 1 LSD Cal. Points Up to 6 preset or 5 custom Buffer Sets USA, NIST, DIN, User 1, User 2, Custom ORP Range $\pm 2000.0$ mV Rel. mV Range $\pm 2000.0$ mV Resolution 0.1 mV Accuracy $\pm 0.2$ mV Temperature Range (Meter) 0.0 to 100.0 °C / 32.0 to 212.0 °F Resolution 0.1 °C / 0.1 °F Accuracy $\pm 0.3$ °C / $\pm 0.5$ °F Compensation ATC / MTC Power Requirements 9 V DC adapter, 1.3 A				110,000.00	110,000.00



			(100/240 VAC, SMPS) (With 2 years warranty)					
19	1	unit	<p>WATERPROOF PH/CONDUCTIVITY METER, Measures 5 parameters including Conductivity, TDS, Salinity, pH, and Temperature using one electrode 9 units of measure: pH, <math>\mu\text{S}/\text{cm}</math>, <math>\text{mS}/\text{cm}</math>, ppm, ppt, <math>\text{mg}/\text{L}</math>, <math>\text{g}/\text{L}</math>, <math>^{\circ}\text{C}</math>, <math>^{\circ}\text{F}</math> Analog bar graph indicates trends Memory stores up to 25 labeled readings Adjustable Conductivity to TDS ratio from 0.4 to 1.0; 0.5 fixed Salinity ratio RENEW feature alerts user when electrode needs replacement Specifications Range pH 0.00 to 14.00pH Conductivity 0 to 199.9<math>\mu\text{S}</math>, 200 to 1999<math>\mu\text{S}</math>, 2.00 to 19.99mS TDS/Salinity/Fluoride TDS/Salinity: 0 to 99.9ppm (<math>\text{mg}/\text{L}</math>), 100 to 999ppm (<math>\text{mg}/\text{L}</math>), 1.00 to 9.99ppt (<math>\text{g}/\text{L}</math>) Temperature 23<math>^{\circ}</math> to 194<math>^{\circ}\text{F}</math> (-5 to 90<math>^{\circ}\text{C}</math>) Max. Resolution 0.1<math>\mu\text{S}</math>, 0.1ppm (<math>\text{mg}/\text{L}</math>), 0.01pH, 0.1<math>^{\circ}\text{F}/^{\circ}\text{C}</math> Basic Accuracy <math>\pm 2\%</math>FS, <math>\pm 0.01\text{pH}</math>, <math>\pm 1.8^{\circ}\text{F}/1^{\circ}\text{C}</math> Dimensions 1.4x6.8x1.6" (35.6x172.7x40.6mm) Weight 3.8oz (110g) Order Conductivity standards and pH buffers separately Complete with meter and electrode, protective cap, sample cup, four 3V CR-2032 batteries, and 48" (1.2m) neckstrap (With 2 years warranty)</p>				30,000.00	30,000.00

20	1	unit	LAMINAR FLOW CABINET, Microprocessor Controller displays all safety information on one screen. Spill-retaining worktop design will ensure containment of accidental liquid spills. Powder Coat (silver-impregnated) that inhibits microbial growth to improve safety. Nominal Size 0.9 m (3 ft.) External Dimensions (W x D x H) 1035 x 784 x 1270 mm (40.8" x 30.8" x 50.0") Internal Work Area (W x D x H) 965 x 739 x 689 mm (38.0" x 29.1 x 27.1") Airflow Velocity 0.45 m/s (90 fpm) at initial set point (With 2 years warranty)				300,000.00	300,000.00
21	1	unit	LABORATORY MICROCENTRIFUGE, Description Refrigerated High Speed Micro Centrifuge for micro tubes and PCR tubes with rotor speed up to 17,000rpm (106,814.2 rad.min <sup>-1</sup> ). Supplied with 24 x 1.5/2.0ml autoclavable corrosion free rotor with snap fit cover, anti-vibration running and auto-lid lock with auto-lid release once rotor stops. Teflon PTFE coated centrifuge bowl for corrosion free chamber. Fast cooling function to 4°C in 5 minutes for fast cooling of samples. The refrigeration compressor switches off when the lid is opened saving energy and excessive frosting. Wipe clean easy to use touch button controls for speed and time setting, time mode can be selected to start at set speed, lid opening, pulse for quick spins, acceleration and deceleration and start/stop function.; 220V (With AVR and 2 years warranty and demo upon delivery)				250,000.00	250,000.00

22	1	unit	GEL DOCUMENTATION SYSTEM, Gel imaging system, includes 5MP camera, pre-focused lens orange filter, 302nm UV transilluminator, image capture software (With AVR and 2 years warranty and demo upon delivery)				450,000.00	450,000.00
23	2	unit	GEL ELECTROPHORESIS, Horizontal electrophoresis system includes 15 - and 20- well combs, 15x10cm (WxL), UV transparent tray; base buffer volume ~1000ml (With 2 years warranty)				80,000.00	160,000.00
24	1	unit	LABORATORY MICROWAVE OVEN, 30L Electric control, LCD display, 900W microwave power, 9 Auto cook functions, 3 defrosts functions, 95 minutes timer, Child lock, Mirror Glass Door, Silver finish, 200-220V (With 2 years warranty)				40,000.00	40,000.00
25	1	set	1 set PowerLab Animal Teaching System POWER LAB,  1. with 1 unit PowerLab 15T 2. Nerve & Muscle Kit III 3. Pulse Transducer, 4. Stimulating Bar Electrode, 5. Shielded Bio Amp Cable, 6. Shielded Lead Wires (5) 7. Lt Labstation with One Year Lt Online licenses for 25 students 8. Branded Laptop with AVR  (With 2 years warranty and actual demonstration/training upon delivery)				1,500,000.00	1,500,000.00

		<p>1. with 1 unit PowerLab 15T TECHNICAL DATA</p> <p>Compatible Software LabChart 8, Lt LabStation or Lt Data communication USB 2.0 Mains Powered Option Yes Analog input channels 2 Single ended inputs 2 Built in Differential inputs 2 Input voltage range <math>\pm 20\text{mV}</math> to <math>\pm 10\text{V}</math> Data Resolution 16 bit Min sampling rate 1 S/10 min Max sampling rate per channel 100kS/s Input crosstalk &gt;90 dB Frequency response - 3dB(37kHz,10V) CMRR &gt;95 dB @100 Hz, 20- 100 mV Input impedance 1M<math>\Omega</math> Output amplifier Yes Output channels 1 Output resolution 16 bit Output voltage ranges <math>\pm 200\text{mV}</math> to <math>\pm 10\text{V}</math> Built-in bio-amplifier Yes Safety rating IEC60601-1 Built in Bio-amplifier channels 2 Amplification range <math>\pm 200\mu\text{V}</math> to <math>\pm 20\text{mV}</math> Bio-amplifier CMRR 110dB Isolated stimulator current range 0-20mA Pulse duration 50–200<math>\mu\text{s}</math> Pulse rate Software selectable 2. With 1 set Nerve &amp; Muscle Kit with the following specific features: Suitable for conducting experiments using isolated non- human animal nerve, skeletal, smooth and cardiac muscle preparations. Capable of performing experiments including but not limited to earthworm action potentials, contractile force of smooth, cardiac, and skeletal muscle, stimulation and drug influences on sciatic- gastrocnemius neuromuscular junction, as well as compound and extracellular actions potentials of insect sensory and ventral nerves. The system includes: Teaching Force Transducer (0-500mg) Animal Nerve Stimulating Electrode:Nerve Chamber, Stimulator Cable, Differential Pod Input Cables (2), Shielded Lead</p>					
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		<p>Wires (5 Micro-Hooks, 25cm).          Needle Electrodes (5), 29 gauge, Muscle Holder, Manipulator with Stand          Prepared experiment that can be perform with Powerlab:  <b>1.</b>Frog Skeletal Muscle:( 1.1. Twitch Recruitment 1.2. Effect of Stretch 1.3. Summation 1.4. Tetanus 6 1.5. Fatigue)  <b>2.</b>Frog Heart :( 2.1. Baseline Data 2.2. Temperature Effects 2.3. Starling's Law of the Heart 2.4. Drug Effects 2.5. Refractory Period 2.6. Vagal Escape) <b>3.</b>Frog Neuromuscular Junction :(3.1. Twitch Recruitment – Nerve 3.2. Twitch Recruitment – Muscle 3.3. Muscle Fatigue 3.4. Tubocurarine Effects)  <b>4.</b>Cockroach Sensory Nerve :(4.1. Exploring Different Stimuli 4.2. Stimulating Different Sensory Spines 4.3. Angle of Deflection 4.4. Sensory Adaptation)  <b>5.</b>Cockroach Ventral Nerve Cord :(5.1. Spontaneous Activity 5.2. Evoked Response 5.3. Sound Detection 5.4. Conduction Velocity ) <b>6.</b> Earthworm Action Potential: (6.1. Evoked Action Potentials 6.2. Lateral Axon Recruitment 6.3. Conduction Velocity 6.4. Refractory Period 6.5. Action Potential Bidirectionality ) <b>7.</b> Earthworm Smooth Muscle :(7.1. Baseline Movement 7.2. Temperature Effects 7.3. Extracellular Ions Effects 7.4. Neurotransmitter Effects )</p>			
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		<p>3. 1 unit Finger Pulse Transducer</p> <p>4. 1 unit Stimulating Bar Electrode</p> <p>5. 1 unit 5 Lead Shielded Bio Amp Cable</p> <p>6. 1 set Shielded Lead Wires (5)</p> <p>7. 1 unit Lt Labstation with Lt Online licenses for 25 students</p> <p>Lt LabStation is a laboratory-based education platform designed to be used with PowerLab. It enables educators to create their own experiments for their students to complete in the lab. Lt LabStation also allows educators access to an online library of high- quality lessons that can be edited to suit their laboratory course.</p> <p>Lt Online Lt Subscription Access allows access to all Lt software features, including standard lesson templates, authoring tools for content creation, and analytics and assessment tools for evaluating and documenting student progress. Access to Lt is governed by the terms and conditions detailed in the Framework Subscription Agreement and Subscription Form.</p> <p>Lt Physiology content pack gives you access to the ADI Physiology content in Lt, including the Animal Physiology, Exercise Physiology, Human Physiology, Neuroscience, Pharmacology, and Psychophysiology collections.</p> <p>8. 1 unit Branded Laptop with AVR</p> <p>Processor : 11th Generation, i7</p> <p>Memory : 4GB, DDR4</p> <p>Storage : 256 Solid State Drive</p> <p>Display : 15.6 inch</p> <p>Ports : USB, Headset Jack, HDMI</p> <p>Wireless : 80211 ac WIFI &amp; Bluetooth</p> <p>OS : Windows 10 Home</p> <p>With two years warranty and with free demonstration training.</p>				
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26	1	set	<p>PROTEIN ELECTROPHORESIS STARTER EQUIPMENT SETS, 2) Basic Power Supplies; (11) Professional Adjustable-volume Micropipettes [(9x) 2 to 20µl, (1x) 20 to 200µl, (1x) 100 to 1000 µl]; (1) Digital Dry Bath; (8) Mini-PROTEAN Tetra Cell 2-gel systems; (8) 10-well sample loading guides; (4) Gel staining trays. (With 2 years warranty and demo upon delivery)</p>				200,000.00	200,000.00
27	1	unit	<p>TLC UV CHAMBER, Two wavelengths, 254 and 366 nm, 2 light tubes 8 W each</p> <ul style="list-style-type: none"> <li>• Shock resistant housing 442 x 76x43 mm</li> <li>• Powered with 12 V AC from the mains adapter supplied or via an optional connecting cable from 12 V DC</li> <li>• Instantaneous ignition without flickering and optimum light efficiency due to operation on 25–30 KHz</li> <li>• Automatic switch off by timer after 10 min to reduce risk of exposure to UV radiation</li> <li>• Base measures 400 x 260 mm, 490 x 350 x 290 mm outside dimensions. (With 2 years warranty and demo upon delivery)</li> </ul>				80,000.00	80,000.00
28	1	unit	<p>TISSUE PROCESSOR, Semi-benchttop tissue processor with both vacuum and fume control. Gentle specimen processing and a high level of specimen safety at all stages of the processing run supported by the robust design based on precision mechanics in conjunction with a modern user interface. Carousel lid 820 mm Ø Height 595 - 780 mm Diameter of rollers 610 mm Dry weight (including accessories) 60 kg Wax baths 2 (3 optional) Wax baths capacity 1.8</p>				655,000.00	655,000.00

		<p>Liters</p> <p>Wax baths temperature range 45 °C - 65 °</p> <p>Standard tissue basket capacity max 100 cassettes</p> <p>Nominal voltage 100/120/230/240 V AC ± 10%</p> <p>Nominal frequency 50/60 Hz</p> <p>Excess temperature cutout 75 °C ± 4 °C</p> <p>Reagent containers 10 (9)</p> <p>Reagent container capacity 1.8 liters</p> <p>Standard tissue baskets 1 (2 optional)</p> <p>Programs 9, freely selectable</p> <p>Programmable infiltration time per station 99 h 59 min</p> <p>Delayed start 9 days</p> <p>Drain time 60 s</p> <p>Vacuum device pressure difference max 500 hPa (approx. 0.5 bar)</p> <p>(With 2 years warranty and demo upon delivery)</p>				
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# *Section VII. Technical Specifications*

## **Notes for Preparing the Technical Specifications**

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying their Bids. In the context of Competitive Bidding, the specifications (*e.g.* production/delivery schedule, manpower requirements, and after-sales service/parts, descriptions of the lots or items) must be prepared to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of transparency, equity, efficiency, fairness, and economy in procurement be realized, responsiveness of bids be ensured, and the subsequent task of bid evaluation and post-qualification facilitated. The specifications should require that all items, materials and accessories to be included or incorporated in the goods be new, unused, and of the most recent or current models, and that they include or incorporate all recent improvements in design and materials unless otherwise provided in the Contract.

Samples of specifications from previous similar procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the goods and the repetitiveness of the type of procurement, it may be advantageous to standardize the General Technical Specifications and incorporate them in a separate subsection. The General Technical Specifications should cover all classes of workmanship, materials, and equipment commonly involved in manufacturing similar goods. Deletions or addenda should then adapt the General Technical Specifications to the particular procurement.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized Philippine and international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the Special Conditions of Contract or the Technical Specifications.

### **Sample Clause: Equivalency of Standards and Codes**

Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest edition or revision of the relevant standards and codes shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

Reference to brand name and catalogue number should be avoided as far as possible; where unavoidable they should always be followed by the words "*or at least equivalent.*" References to brand names cannot be used when the funding source is the GOP.

Where appropriate, drawings, including site plans as required, may be furnished by the Procuring Entity with the Bidding Documents. Similarly, the Supplier may be requested to provide drawings or samples either with its Bid or for prior review by the Procuring Entity during contract execution.

Bidders are also required, as part of the technical specifications, to complete their statement of compliance demonstrating how the items comply with the specification.

**Technical Specifications**

Item #	QTY	UNIT	Description	Compliance to
				Tech. Specifications
1	15	unit	<p><b>BINOCULAR TRANSMITTED LIGHT MICROSCOPE,</b>            Technical data: Finite optical system (DIN) 4-fold lens revolving unit Siedentopf 30° inclined, 360° rotatable Dioptre compensation one-sided (for binocular and trinocular models)            Overall dimensions WxDxH 320x180x365 mm OBE 112 The fully equipped all-round compound microscope for schools, training and laboratories Construction Colour temperature: 6000 K Dimensions (WxDxH): 320 mm x 180 mm x 365 mm Eye distance (max): 75 Eye distance (min): 50 Optical system: Finite Rotation of tube 360°: yes Tube: Binocular Tube angle: 30° Illumination Illumination: 3W LED (transmitted) Incident Illumination: None Transmitting illumination: LED Power supply Input voltage: 100 - 240 V Mains adapter/adaptor included: EURO Field of View: 1,800 cm Field width: HWF Magnification: 10 Objective: 4 x / 10 x / 40 x / 100 x            (With 1 year warranty)</p>	
2	1	unit	<p><b>DIGITAL MICROSCOPE WITH 5MP CAMERA,</b> Technical data Microscope OBL-1 Infinity optical system 4-fold lens revolving unit Siedentopf 30° inclined, 360° rotatable Dioptre compensation one-sided Overall dimensions WxDxH 394x185x377 mm Net weight approx. 6,188 kg Okulare: HWF 10x20 mm Objective quality: Infinity E-Plan Objectives: 4x/10x/40x/100x Illumination (OBL 135): 6V/20-halogen (transmitted light) Technical data:OBL 135T241 The digital laboratory assistant with infinity optical system and fixed, pre-centred illumination Construction Dimensions (WxDxH): 394 mm x 185 mm x 377 mm Eye distance (max): 75 Eye distance (min): 50 Optical system: Infinity Rotation of tube 360°: yes Tube: Trinocular Tube angle: 30° Illumination Incident Illumination: None Transmitting illumination: Halogen Power supply Input voltage: 100 - 240 V Optics Field of View: 2 cm Field width: HWF Magnification: 10            (With 2 years warranty)</p>	

3	1	unit	<p>UV VIS SPECTROPHOTOMETER, perform routine measurements for quality control or teaching in the chemistry classroom and research, 50 UV-Visible a Spectrophotometer. With a single cell configuration, these instruments are designed with a sloping surface to shed spills and a washable sampling compartment for easy clean up. A 7-inch touchscreen interface, local control software (no PC needed) and optional Wi-Fi networking Dual Silicon Photodiodes Detector Type Display 7-inch color touchscreen, fixed, high definition, 800 x 1280 pixels Photometric <math>\pm 0.002A</math> at 0.5A Accuracy <math>\pm 0.004A</math> at 1.0A Instrument <math>\pm 0.008A</math> at 2.0A Printer Snap-on printer available Wavelength Accuracy <math>\pm 0.5</math> nm Baseline Flatness <math>\pm 0.002A</math> Compartment s Accessible from top, front or side Able to accommodate cells up to 100 mm cells Available accessory for test-tubes up to 25 mm diameter and 150 mm height Removable, washable sample compartment liner with magnetic placement and hold-down Connections Single USB-A supports flash memory devices for method and data storage Duplex USB-A on side supports connection to a Windows™ computer running optional remote-control software, keyboard, mouse Export data to network or PC (With 2 years warranty and demo upon delivery)</p> <p>USB, Ethernet, or Wi-Fi USB adaptor, available Print via USB, Ethernet or Wi-Fi USB adaptor available Description 50 UV-Vis Spectrophotometer Dimensions (L x W) 35.5 x 38.5 x 19.5 cm Drift (At 500 nm after 1 hour warmup) <math>&lt; 0.0005A/Hr</math> Electrical Requirements External AC to DC converter. Voltage and Frequency (Hz) selected automatically, 100-240 volts, 50-60 Hz. Keypad Touchscreen Lamp Flash Lamp (&gt;5 years typical, 3 years guaranteed) Noise (RMS at 500 nm 60 consecutive measurements) <math>\leq 0.00020A</math> at 0A at 260 and 500 nm <math>\leq 0.00030A</math> at 1A at 260 and 500 nm <math>\leq 0.00040A</math> at 2A at 260 and 500 nm Optical Design Dual beam Photometric Display -3A to +5A Photometric Range -2A to +3.5A Photometric Repeatability <math>\pm 0.001A</math> at 1A measured at 1.0A at 546 nm Spectral Bandwidth 2 nm Stray Light <math>&lt; 1.0\%T</math> 198 nm (KCl) , <math>&lt; 0.05\%T</math> at 220 nm (NaI), <math>&lt; 0.03\%T</math> at 340 nm (NaNO<sub>2</sub>) Wavelength Data Interval 0.2 nm, 0.5 nm, 1 nm, 2 nm, 5 nm Wavelength Range 190 nm - 1100 nm Wavelength Repeatability <math>&lt; \pm 0.2</math> nm Wavelength Scan Speed Slow, medium and fast - up to 1600 nm/min Weight (Metric) 7.5 kg Includes: (2 pcs ) 5-100mm Path Cylindrical Cell Holder for GENESYS 50 ~ Holds one cylindrical longpath cell 5 - 100mm pathlength ~ Comes assembled in a removable sample compartment liner (With 2 years warranty)</p>	
4	2	sets	<p>AUTOCLAVABLE MICROPIPETTE WITH RACK, Fully autoclavable 0.1-2.5<math>\mu</math>LL 0.5-10<math>\mu</math>LL 10-100<math>\mu</math>LL 20-200<math>\mu</math>LL 100-1000<math>\mu</math>L (With 2 years warranty)</p>	

5	1	unit	<p>LABORATORY OVEN, Features: • Operating temperatures from 20° to 250°C • Automatic over-temperature alarm system • Low overall energy consumption • Built in timer • Corrosion-resistant stainless steel chambers with rounded corners • Large, easy to read vacuum fluorescent display • Easy to use, microprocessor-controlled touch button operation • Doors can be opened at over 180°C Amperage 11 A Controller Type Microprocessor control with vacuum fluorescent display Depth (English) Interior 23.2 in. Depth (Metric) Interior 59 cm Dimensions (L x W x H) 30.3 x 30.6 x 60.8 in. (77 x 77.8 x 154.5 cm) Frequency 60 Hz Height (English) 60.8 in. Height (English) Interior 51.5 in. Height (Metric) 154.5 cm Height (Metric) Interior 130.7 cm Length (English) 30.3 in. Length (Metric) 77 cm Temperature Stability ±0.5°C Timer ON / OFF Wattage 2640 w Width (English) Interior 21.4 in. Width (Metric) Interior 54.4 cm Temperature (Metric) 50°C to 250°C Voltage 208/240 V Capacity (Metric) 419 L Dimensions (D x W x H) Interior 23.2 x 21.4 x 51.5 in. (59 x 54.4 x 130.7 cm) Type Gravity Convection Electrical Requirements 208/240 V 60 Hz Width (English) 30.6 in. No. of Shelves 2 supplied/39 max. Width (Metric) 77.8 cm (with AVR 2 years warranty)</p>	
6	1	unit	<p>DIGITAL PEN TYPE SALINITY METER SALINOMETER SALT ANALYZER, Features: Pen type digital salinity meter °C/°F switchable temperature unit Data HOLD function Low battery indicator Calibration function Auto power off function With ATC (Automatic Temperature Compensation) Specifications: Measurement Range: 0.00~9.99ppt/10~50ppt Accuracy: 3%F.S.±1 digit Resolution: 0. 01ppt / 0. 1ppt / 0.1°C Temperature Range: 0~60°C (32~140°F) Accuracy: ±1Â°C Power supply: 4 x LR44 1.5V battery Dimension: 180 x 25 x 45mm Set Includes: 1 x Salinity Meter Black Pouch Standard factory packaging (With 2 years warranty)</p>	

7	1	unit	<p>ANALYTICAL BALANCE, Construction Dimensions draft shield (WxDxH): 201 mm x 220 mm x 256 mm Dimensions housing (WxDxH): 214 mm x 340 mm x 330 mm Level indicator: yes Material weighing plate: stainless steel Revolving screw feet: yes Weighing space (WxDxH): 174 mm x 162 mm x 227 mm Weighing surface (d): 91 mm Display Display digit height: 14 mm Technical data about verification Minimum load [Min]: 10 mg Periodic Verification for Italy: 969-112 Verification approval conforming to 2014/31/EU: yes Verification by KERN possible: yes Verification class: I Verification value [e]: 1 mg Power supply Input voltage: 110 V - 230 V AC Mains adapter: Mains adapter external Mains adapter/adapter included: CH EURO UK US Functions Counting function: yes Function to save totals: yes Percentage determination: yes Standby function: yes Weighing with tolerance range: yes Measuring system Adjustment options: Internal calibration (auto) Internal calibration (manual) Linearity: 0,300 mg Minimum weight (USP): 400 mg Readability [d]: 0,100 mg Repeatability: 0,200 mg Resolution: 2.200.000 Stabilisation time under laboratory conditions: 3 s Warm up time: 8 h Weighing capacity [Max]: 20 g Weighing units: ct g mg Environmental conditions Maximum humidity: 85 % Maximum operating temperature: 30 °C Minimum ambient temperature: 10 °C Minimum humidity: 20 % (With 2 years warranty)</p>	
8	1	unit	<p>SHAKING WATERBATH, Amperage 9.0-10.5 / 4.3-5.0 (120V/230V) Chamber Material 304 Stainless Steel Controller Type Digital Description 15L Shaking Water Bath Dimensions (L x W x H) 15.5 x 24.9 x 9.8 in. (394 x 632 x 249 mm) Display Monochrome LCD Electrical Requirements Global Voltage 100/115 V 200/230 V 50/60 Hz Includes Stainless Steel Gable Cover and Rubber Duck Material Epoxy Powder-coated Cold Rolled Steel Model Precision SWB 15 Temperature Presets 4 Temperature Stability <math>\pm 0.1^{\circ}\text{C}</math> Temperature Uniformity <math>\pm 0.05^{\circ}\text{C}</math> Capacity (Metric) 15 L Certifications/Compliance UL, CE Heating Capacity 1200 w Temperature Range Ambient <math>+5^{\circ}</math> to <math>100^{\circ}\text{C}</math> Unit Size Each (With 2 years warranty)</p>	
9	1	unit	<p>5 MULTI-POSITION MAGNETIC HOTPLATE STIRRER, Max. volume per position: 400ml Total max. volume: 2000ml Variable speed: 300 to 1500 rpm, in 10 rpm increments Run time: 1 to 999 minutes and infinite mode Digital display: yes Pulse display: yes No. of PTFE Coated Stir Bars included (25 x 8mm): 5 Motor type: BLDC Plate material: Corrosion resistant, stainless Steel with silicone sheet Dimensions (LxWxH) : 562x136x25mm Protection class: IP 65 Heater Temp. Range: Ambient to 120oC (With 2 years warranty)</p>	

10	1	unit	<p>CO2 INCUBATOR, Feature Description Temperature Control Direct heat, 6 sides, 4 independently controlled heaters, 73 meters of heating elements Temperature range 10°- 50°C, in 0.1 increments ( minimum setting: ambient + 1° C) Temperature measurement 7 RT curve matched thermistors Temperature Control +/- 0,1°C Temperature Accuracy +/- 0,1°C Temperature Uniformity Better than +/- 0,3°C Temperature recovery About 5 minutes following a 15 seconds door opening Over Temperature Protection Independent, inhibits all heaters above 1.0° C over set temp. value (in the unlikely event of a control system failure) Co2 Sensor Solid State IR Sensor, automatic atmospheric CO2 zeroing. Measurement is independent from chamber humidity level Range 0.5 to 20 % CO2, in steps of 0.1% Control +/- 0,1% Uniformity Better than +/- 0,1 % Accuracy +/- 0,2% at 5% CO2 set point Recovery rate About 5 minutes following a 15 seconds door opening Relative Humidity System Reservoir 2.5 litres, 304 Stainless Steel electro-polished humidity tray RH level Minimum 95% Decontamination cycle Decontamination cycle type Fully automatic, 125° C cycle, Validated Temperature ramp up time 1,5- 2,5 hours Exposure time 4 hours Temperature ramp down time 5-7 hours Total cycle time 10,5 - 13,5 hours Constructive Details Sturdiness. Simple and effective. Feature Description Inner Chamber 304 Stainless Steel, totally seamless, electro-polished Chamber volume (gross /usable) 188.6 litres/140 litres Exterior Powder painted mild steel with ABS plastic outer door cover Interior access Heated outer door with direct chamber access or sealed inner glass door (with optional 4/8 inner glass doors) Door swing Right side opening with optional left side door swing (factory fitted) Shelving System Shelf racks Easy to assemble , 304 stainless steel construction, with high temperature plastic spacers Shelf type Solid (non perforated) stainless steel shelves ( perforated available as option) Shelf dimensions (W x D) mm 510x 455 mm, with 150 mm height above each shelf Shelf surface area, Sq meter: 0,23 m2 Capacity: standard: - maximum 4-8 Alarm System Chamber status alarm: Fully programmable, audio-visual, auto reset when chamber conditions resume Incubator function alarm: Fully automatic alarms to advise failure in heaters or sensors (with AVR and With 2 years warranty)</p>	
11	1	unit	<p>DIGITAL EGG INCUBATOR, WITH 100 CAPACITY AND WITH TRANSPARENT DOOR; Digital Cabinet Egg Incubator-incubator offers an accurate digital thermostat with LCD display of Temperature and Humidity. Thermostat operating range between 60 and 103 degrees F. depending on room temperature. 220 VAC, 50/60 Hz, 325 Watts. TUV Listed. This incubator includes: - Digital Command Center thermostat - 3 turning racks &amp; 1 plastic hatching tray - 1 moisture pan with 2 wick pads - Instruction booklet. Total Capacity with plastic trays: 1368 Quail Eggs, 354 pheasant eggs, 270 chicken eggs, 198 turkey or duck eggs, and 36-45 larger eggs such as goose, peafowl, and emu. Actual capacity may depend on egg size. Hatching capacity is limited to the hatching drawer which is approximately 72 medium size or 250 quail size eggs at a time. DIMENSIONS: 301/4" Front to Back, 153/4" Wide, 313/4" High. (With 2 years warranty)</p>	
12	1	unit	<p>1-LITER LABORATORY BLENDERS WITH TIMER, Capacity: 1 Liter/1.2 Liter Switch Settings: Two Speed, 60 Second Mechanical Timer Base: Epoxy Coated Motor Housing Container: Stainless steel with handle and two-piece vinyl and styrene lid. Heat resistant glass with handle and two-piece vinyl and styrene lid. • Overall Height: 15 inches/16 inches Weight: 11 lbs./13 lbs./13lbs. Listing: UL Two-speed blenders with timer offer a mechanical 1-minute timer that allows automatic shutoff and a push-button speed control for 18,000 and 22,000 rpm operation.;240V, 50/60Hz (With 2 years warranty)</p>	

13	1	unit	<p>PCR MACHINE THERMAL CYCLER (PCR), With: 1 - Automatic Voltage Regulator (AVR) Specifications Features Specifications Connections USB A Instrument dimensions 260 mm x 430 mm x 210 mm; with open lid 260 mm x 430 mm x 385 mm Noise level Very low, max. 45 dB Number of preps per run 96 x 0.2 ml tubes, 1 x 96-well microplate, 12 x 8-well strips Operating temperature 15°C to 35°C; max. 2,000 m above sea level Power consumption 550 W Relative humidity 70 % air humidity Software User-specific quick start option for 5 recent programs; program preview before start; option for toggling between programming table and graph programming mode; Linear Gradient Tool, service info file (SINF) generation; expanded self-test; adjustable ramp rates; gradient temperature diagram view. Program memory: total capacity of 350 programs in up to 90 user directories Special components/features High Performance Smart Lid with lid temperature range: 30°C to 110°C Special feature Automatic restart after power failure Thermal cycler Block material: Aluminum; Block coating: Special alloy Thermal performance Ramping: 95°C: ±0.6°C after 15 s; 72°C: ±0.3°C after 15 s; 55°C: ±0.2°C after 15 s; Range: 3°C to 99°C Measured inside the block; Control accuracy: ±0.1°C; Gradient range: 20°C to 99°C; Max./Min. gradient: 20°C/0.1°C; Max. heating rate: 4.0°C/s; Av. heating rate: 3.7°C/s; Max. cooling rate: 3.3°C/s; Av. cooling rate: 3.0°C/s Touchscreen 7-inch color touchscreen Voltage 115, 230 Volt, 50/60 Hz Weight 11.5 kg (With AVR and 2 years warranty and demo upon delivery)</p>	
14	1	unit	<p>MICRO VOLUME SPECTROPHOTOMETER, Technical Details Display None 5.7"• colour capacitive touchscreen Minimum Volume (dsDNA) 0.5 µLL Maximum Concentration (dsDNA) 2,500 ng/µLL Detection Limit (dsDNA) 1ng Detector 1024 element CCD array Light Source Pulsed lamp with 3 year warranty Spectral Bandwidth 5 nm Wavelength Range 190 - 1100 nm Wavelength Accuracy ± 2 nm Wavelength Reproducibility ± 1 nm Stray Light &lt;0.5%T at 220 nm and 340 nm using NaNO2 Absorbance Range - 0.3A to 2.5A, 0 to 199%T Absorbance Accuracy ±0.005A or 1% of the reading, whichever is the greater at 546 nm Absorbance Reproducibility ±0.003A (0 to 0.5A), ±0.007A (0.5 - 1.0A) Noise 0.005A peak to peak 0.002A RMS Output USB port for USB memory stick USB port for PC connection Power input 90-250 V, 50/60 Hz, Max 30 VA Dimensions 420 x 260 x 185 mm Weight approx. 3 kg Life Science PC Software DNA, RNA, oligo, dye labelling, Tm calculation, direct UV and colorimetric protein methods (with AVR and 2 yrs warranty and demo upon delivery)</p>	
15	1	unit	<p>BEAD MILL HOMOGENIZER, SPECIFICATIONS Processing Range: 25 micro-liters to 5.0 mL Power Rating: 100-230 VAC/ 50-60Hz Dimensions:L: 15in(38.1cm), W: 17in(43.18cm), H: 13in(33.0cm) Product Weight: 65 lbs. (30kg) Compliance: CE Compliance Run Time: 1 sec to 9:59 min Performance Range: 0.8m/s - 6m/s in increments of 0.8m/s Number of Cycles: 1-10 (With 2 years warranty and demo upon delivery)</p>	

16	1	unit	<p>INVERTED MICROSCOPE, Inverted tissue culture microscope with camera, digital camera; Condenser type: 40 mm, 4 P/S40, Magnification: 4 objectives (N plan 5X PHO, Hi Plan10X PH1, 20X PH1, 40X PH1) Specifications Optical system • Infinity corrected (HCS) Power • Input: 100 - 240V AC, 50 / 60Hz • Output: 5V DC Contrast methods • Transmitted light: Brightfield, Phase Contrast Transmitted light axis • Integrated 5W LED Illumination manual adjustment of - Brightness - Aperture diaphragm - Automatic power shutoff (adjustable) Tube • With fixed eyepieces FOV 18 • For exchangeable eyepieces FOV 20 Focus • Coarse and fine focusing, travel range 9 mm, min. adjustment: 2 µm Objective nosepiece • Manual, 4 position, for objectives with M25 thread Stage • Fixed stage: (L x W) 262 mm x 212 mm • Attachable object guide for fixed stage (option) Condenser • S80 / 0.30 condenser or • S40 / 0.45 condenser (interchangeable) Phase contrast slider • 2 position slider (BF / PH1) for S40 or for S80 condenser • 4 position slider (BF / PH0 / PH1 / PH2) for S40 or for S80 condenser Camera • Leica MC120 (2.5 megapixels) • MC170 (5.0 megapixels) (With 2 years warranty and demo upon delivery)</p>
17	1	unit	<p>WATERPROOF II DISSOLVED OXYGEN METER, Features Oxygen level displayed as % Saturation or Concentration (mg/L [ppm]) Adjustable Altitude Compensation (0-20,000ft in 1,000ft increments) Adjustable Salinity Compensation from 0 to 50ppt Analog bar graph indicates trends Memory stores up to 25 data sets with DO and Temperature reading Self calibration on power up Data Hold, Auto power off, Low battery indicator, with callibration probe. (With 2 years warranty)</p>
18	1	unit	<p>PH METER, Product Features Oversize screen with large fonts yet compact - the new pH 2700 offers an easy to read screen that says more! View pH or ORP readings, with temperature, electrode status, calibration points, date and time all at once! :: Up to 6-point calibration with auto-buffer recognition :: Quick, easy electrode diagnosis with multiple pH slopes and offset display :: Non-volatile memory holds up to 500 data points - time and date-stamped for GLP compliance :: Calibrate with up to 5 custom pH buffers - use any pH values that are &gt;=1.0 pH unit apart :: Cal-due alarm - no more out-dated calibrations! :: Auto-logging function for convenient continuous monitoring :: Password protection for setup and calibration Specifications Product Specification Description pH Range -2.000 to 20.000 pH Resolution 0.1 / 0.01 / 0.001 pH Accuracy ±0.002 pH + 1 LSD Cal. Points Up to 6 preset or 5 custom Buffer Sets USA, NIST, DIN, User 1, User 2, Custom ORP Range ±2000.0 mV Rel. mV Range ±2000.0 mV Resolution 0.1 mV Accuracy ±0.2 mV Temperature Range (Meter) 0.0 to 100.0 °C / 32.0 to 212.0 °F Resolution 0.1 °C / 0.1 °F Accuracy ±0.3 Å°C / ±0.5 °F Compensation ATC / MTC Power Requirements 9 V DC adapter, 1.3 A (100/240 VAC, SMPS) (With 2 years warranty)</p>
19	1	unit	<p>WATERPROOF PH/CONDUCTIVITY METER, Measures 5 parameters including Conductivity, TDS, Salinity, pH, and Temperature using one electrode 9 units of measure: pH, µS/cm, mS/cm, ppm, ppt, mg/L, g/L, °C, °F Analog bar graph indicates trends Memory stores up to 25 labeled readings Adjustable Conductivity to TDS ratio from 0.4 to 1.0; 0.5 fixed Salinity ratio RENEW feature alerts user when electrode needs replacement Specifications Range pH 0.00 to 14.00pH Conductivity 0 to 199.9µS, 200 to 1999µS, 2.00 to 19.99mS TDS/Salinity/Fluoride TDS/Salinity: 0 to 99.9ppm (mg/L), 100</p>



			to 999ppm (mg/L), 1.00 to 9.99ppt (g/L) Temperature 23° to 194°F (-5 to 90°C) Max. Resolution 0.1µS, 0.1ppm (mg/L), 0.01pH, 0.1°F/°C Basic Accuracy ±2%FS, ±0.01pH, ±1.8Å°F/1°C Dimensions 1.4x6.8x1.6" (35.6x172.7x40.6mm) Weight 3.8oz (110g) Order Conductivity standards and pH buffers separately Complete with meter and electrode, protective cap, sample cup, four 3V CR-2032 batteries, and 48" (1.2m) neckstrap (With 2 years warranty)	
20	1	unit	LAMINAR FLOW CABINET, Microprocessor Controller displays all safety information on one screen. Spill-retaining worktop design will ensure containment of accidental liquid spills. Powder Coat (silver-impregnated) that inhibits microbial growth to improve safety. Nominal Size 0.9 m (3 ft.) External Dimensions (W x D x H) 1035 x 784 x 1270 mm (40.8" x 30.8" x 50.0") Internal Work Area (W x D x H) 965 x 739 x 689 mm (38.0" x 29.1 x 27.1") Airflow Velocity 0.45 m/s (90 fpm) at initial set point (With 2 years warranty)	
21	1	unit	LABORATORY MICROCENTRIFUGE, Description Refrigerated High Speed Micro Centrifuge for micro tubes and PCR tubes with rotor speed up to 17,000rpm (106,814.2 rad.min <sup>-1</sup> ). Supplied with 24 x 1.5/2.0ml autoclavable corrosion free rotor with snap fit cover, anti-vibration running and auto-lid lock with auto-lid release once rotor stops. Teflon PTFE coated centrifuge bowl for corrosion free chamber. Fast cooling function to 4°C in 5 minutes for fast cooling of samples. The refrigeration compressor switches off when the lid is opened saving energy and excessive frosting. Wipe clean easy to use touch button controls for speed and time setting, time mode can be selected to start at set speed, lid opening, pulse for quick spins, acceleration and deceleration and start/stop function.; 220V (With AVR and 2 years warranty and demo upon delivery)	
22	1	unit	GEL DOCUMENTATION SYSTEM, Gel imaging system, includes 5MP camera, pre-focused lens orange filter, 302nm UV transilluminator, image capture software (With AVR and 2 years warranty and demo upon delivery)	
23	2	unit	GEL ELECTROPHORESIS, Horizontal electrophoresis system includes 15 - and 20- well combs, 15x10cm (WxL), UV transparent tray; base buffer volume ~1000ml (With 2 years warranty)	
24	1	unit	LABORATORY MICROWAVE OVEN, 30L Electric control, LCD display, 900W microwave power, 9 Auto cook functions, 3 defrosts functions, 95 minutes timer, Child lock, Mirror Glass Door, Silver finish, 200-220V (With 2 years warranty)	

25	1	set	<p>1 set PowerLab Animal Teaching System POWER LAB,</p> <ol style="list-style-type: none"> <li>1. with 1 unit PowerLab 15T</li> <li>2. Nerve &amp; Muscle Kit III</li> <li>3. Pulse Transducer,</li> <li>4. Stimulating Bar Electrode,</li> <li>5. Shielded Bio Amp Cable,</li> <li>6. Shielded Lead Wires (5)</li> <li>7. Lt Labstation with One Year Lt Online licenses for 25 students</li> <li>8. Branded Laptop with AVR (With 2 years warranty and actual demonstration/training upon delivery)</li> </ol> <p>1. with 1 unit PowerLab 15T TECHNICAL DATA</p> <p>Compatible Software LabChart 8, Lt LabStation or Lt Data communication USB 2.0 Mains Powered Option Yes Analog input channels 2 Single ended inputs 2 Built in Differential inputs 2 Input voltage range <math>\pm 20\text{mV}</math> to <math>\pm 10\text{V}</math> Data Resolution 16 bit Min sampling rate 1 S/10 min Max sampling rate per channel 100kS/s Input crosstalk &gt;90 dB Frequency response -3dB(37kHz,10V) CMRR &gt;95 dB @100 Hz, 20-100 mV Input impedance <math>1\text{M}\Omega</math> Output amplifier Yes Output channels 1 Output resolution 16 bit Output voltage ranges <math>\pm 200\text{mV}</math> to <math>\pm 10\text{V}</math> Built-in bio-amplifier Yes Safety rating IEC60601-1 Built in Bio-amplifier channels 2 Amplification range <math>\pm 200\mu\text{V}</math> to <math>\pm 20\text{mV}</math> Bio-amplifier CMRR 110dB Isolated stimulator current range 0-20mA Pulse duration 50–200<math>\mu\text{s}</math> Pulse rate Software selectable</p>
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			<p>2. With 1 set Nerve &amp; Muscle Kit with the following specific features:          Suitable for conducting experiments using isolated non-human animal nerve, skeletal, smooth and cardiac muscle preparations. Capable of performing experiments including but not limited to earthworm action potentials, contractile force of smooth, cardiac, and skeletal muscle, stimulation and drug influences on sciatic-gastrocnemius neuromuscular junction, as well as compound and extracellular actions potentials of insect sensory and ventral nerves. The system includes:          Teaching Force Transducer (0-500mg) Animal Nerve Stimulating Electrode:Nerve Chamber,Stimulator Cable,Differential Pod Input Cables (2),Shielded Lead Wires (5 Micro-Hooks, 25cm). Needle Electrodes (5), 29 gauge,Muscle Holder,Manipulator with Stand          Prepared experiment that can be perform with Powerlab:  <b>1.</b>Frog Skeletal Muscle:( 1.1. Twitch Recruitment 1.2. Effect of Stretch 1.3. Summation 1.4. Tetanus 6 1.5. Fatigue)  <b>2.</b>Frog Heart :( 2.1. Baseline Data 2.2. Temperature Effects 2.3. Starling's Law of the Heart 2.4. Drug Effects 2.5. Refractory Period 2.6. Vagal Escape) <b>3.</b>Frog Neuromuscular Junction :(3.1. Twitch Recruitment – Nerve 3.2. Twitch Recruitment – Muscle 3.3. MuscleFatigue 3.4. TubocurarineEffects) <b>4.</b>Cockroach Sensory Nerve :(4.1. Exploring Different Stimuli 4.2. Stimulating Different Sensory Spines 4.3. Angle of Deflection 4.4. Sensory Adaptation) <b>5.</b>Cockroach Ventral Nerve Cord :(5.1. Spontaneous Activity 5.2. Evoked Response 5.3. Sound Detection 5.4. Conduction Velocity ) <b>6.</b> Earthworm Action Potential: (6.1. Evoked Action Potentials 6.2. Lateral Axon Recruitment 6.3. Conduction Velocity 6.4. Refractory Period 6.5. Action Potential Bidirectionality ) <b>7.</b> Earthworm Smooth Muscle :(7.1. Baseline Movement 7.2. Temperature Effects 7.3. Extracellular Ions Effects 7.4. Neurotransmitter Effects )</p>	
			<p>3. 1 unit Finger Pulse Transducer          4. 1 unit Stimulating Bar Electrode          5. 1 unit 5 Lead Shielded Bio Amp Cable          6. 1 set Shielded Lead Wires (5)          7. 1 unit Lt Labstation with Lt Online licenses for 25 students          Lt LabStation is a laboratory-based education platform designed to be used with PowerLab. It enables educators to create their own experiments for their students to complete in the lab. Lt LabStation also allows educators access to an online library of high- quality lessons that can be edited to suit their laboratory course.          Lt Online          Lt Subscription Access allows access to all Lt software features, including standard lesson templates, authoring tools for content creation, and analytics and assessment tools for evaluating and documenting student progress. Access to Lt is governed by the terms and conditions detailed in the Framework Subscription Agreement and Subscription Form.          Lt Physiology content pack gives you access to the ADI Physiology content in Lt, including the Animal Physiology, Exercise Physiology, Human Physiology, Neuroscience, Pharmacology, and Psychophysiology collections.          8. 1 unit Branded Laptop with AVR          Processor : 11th Generation, i7          Memory : 4GB, DDR4          Storage : 256 Solid State Drive          Display : 15.6 inch          Ports : USB, Headset Jack, HDMI          Wireless : 80211 ac WIFI &amp; Bluetooth          OS : Windows 10 Home</p>	
			<p>With two years warranty and with free demonstration training.</p>	
26	1	set	<p>PROTEIN ELECTROPHORESIS STARTER EQUIPMENT SETS, 2) Basic Power Supplies; (11) Professional Adjustable-volume Micropipettes [(9x) 2 to 20µl, (1x) 20 to 200µl, (1x) 100 to 1000 µl]; (1) Digital Dry Bath; (8) Mini-PROTEAN Tetra</p>	

			Cell 2-gel systems; (8) 10-well sample loading guides; (4) Gel staining trays. (With 2 years warranty and demo upon delivery)
27	1	unit	TLC UV CHAMBER, Two wavelengths, 254 and 366 nm, 2 light tubes 8 W each <ul style="list-style-type: none"> <li>• Shock resistant housing 442 x 76x43 mm</li> <li>• Powered with 12 V AC from the mains adapter supplied or via an optional connecting cable from 12 V DC</li> <li>• Instantaneous ignition without flickering and optimum light efficiency due to operation on 25–30 KHz</li> <li>• Automatic switch off by timer after 10 min to reduce risk of exposure to UV radiation</li> </ul> Base measures 400 x 260 mm, 490 x 350 x 290 mm outside dimensions. (With 2 years warranty and demo upon delivery)
28	1	unit	TISSUE PROCESSOR, Semi-benchttop tissue processor with both vacuum and fume control. Gentle specimen processing and a high level of specimen safety at all stages of the processing run supported by the robust design based on precision mechanics in conjunction with a modern user interface. Carousel lid 820 mm Ø Height 595 - 780 mm Diameter of rollers 610 mm Dry weight (including accessories) 60 kg Wax baths 2 (3 optional) Wax baths capacity 1.8 Liters Wax baths temperature range 45 °C - 65 ° Standard tissue basket capacity max 100 cassettes Nominal voltage 100/120/230/240 V AC ± 10% Nominal frequency 50/60 Hz Excess temperature cutout 75 °C ± 4 °C Reagent containers 10 (9) Reagent container capacity 1.8 liters Standard tissue baskets 1 (2 optional) Programs 9, freely selectable Programmable infiltration time per station 99 h 59 min Delayed start 9 days Drain time 60 s Vacuum device pressure difference max 500 hPa (approx. 0.5 bar) (With 2 years warranty and demo upon delivery)

## ***Section VIII. Checklist of Technical and Financial Documents***

### **Notes on the Checklist of Technical and Financial Documents**

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. Any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary “pass/fail” criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class “A” Documents*

#### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);  
**or**
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document,  
**and**
- (c) Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;  
**and**
- (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

#### Technical Documents

- (e) Statement of the prospective bidder of all its ongoing 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; **and**
- (f) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**
- (g) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;  
**or**  
Original copy of Notarized Bid Securing Declaration; **and**
- (h) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; **and**
- (i) Original duly signed Omnibus Sworn Statement (OSS);  
**and** if applicable, Original Notarized Secretary’s Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

#### Financial Documents

- (j) The Supplier’s audited financial statements, showing, among others, the Supplier’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 the date of bid submission; **and**

- (k) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);  
**or**  
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

***Class "B" Documents***

- (l) If applicable, a duly signed joint venture agreement (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.

**II. FINANCIAL COMPONENT ENVELOPE**

- (m) Original of duly signed and accomplished Financial Bid Form; **and**
- (n) Original of duly signed and accomplished Price Schedule(s).

*Other documentary requirements under RA No. 9184 (as applicable)*

- (o) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- (p) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

