



Government of the Republic of the Philippines

**DAVAO DEL SUR STATE COLLEGE**

**PHILIPPINE BIDDING DOCUMENTS**

**PROCUREMENT OF GOODS**

**For the**

**Supply, Delivery and Installation of Cacao Sensory  
and Isotope Laboratory Equipment**

**Sixth Edition**

**July 2020**



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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.



## *Section I. Invitation to Bid*



## **INVITATION TO BID FOR THE SUPPLY, DELIVERY AND INSTALLATION OF CACAO SENSORY AND ISOTOPE LABORATORY BUILDING**

1. The **Davao del Sur State College**, through the **Fund 101** intends to apply the sum of **Six Million Pesos (Php 6,000,000.00)** being the Approved Budget for the Contract (ABC) to payments under the contract for **DSSC PSU 2022-05-013**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The **Davao del Sur State College** now invites bids for the **“Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building”**. Delivery of the Goods is required **within 60 days from receipt of NTP**. Bidders should have completed, within **three (3) 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. Instructions 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, pursuant to RA 5183.

4. Interested bidders may obtain further information from **Davao del Sur State College** and inspect the Bidding Documents at the address given below from **08:00 A.M to 05:00 P.M (Monday to Friday)** except holidays.
5. A complete set of Bidding Documents may be acquired by interested Bidders on **May 26 to June 14, 2022** from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Five Thousand Pesos (Php 5,000.00)**.

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity, provided that Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids in any of the following payments options:

- Over-the-counter payment at DSSC-Cashier’s office, Brgy. Matti, Digos City, Davao del Sur;





- Over-the-counter deposit at Land Bank of the Philippines (LBP) Account No. – 0332-1103-65.

Prior to payment, bidders are advised to coordinate first with the BAC Chairperson, **Engr. Eduardo F. Aquino**, through mobile phone at (+63)998-885-2309 (Smart) for the issuance of the “Payment Order” and instructions.

6. The **Davao del Sur State College** will hold a Pre-Bid Conference on **June 02, 2022 (01:00 P.M.)** at **Davao del Sur State College, Brgy. Matti, Digos City, Davao del Sur**, which shall be open only to all interested parties who have purchased the Bidding Documents but limited to one (1) physically present representative per bidder only. The Pre-bid Conference is likewise accessible online via Zoom.
7. Bids must be delivered to the address below on or before **June 14, 2022 (01:00 P.M.)**. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB Clause 14.1**.

Bid opening shall be on **June 14, 2022 (01:00 P.M.)** at **Davao del Sur State College, Brgy. Matti, Digos City, Davao del Sur**, which shall be accessible also online via Zoom.

Bids will be opened in the presence of the bidders’ representatives who choose to attend at the address below. **Only one (1) representative of the Bidder shall be allowed to physically attend in the opening of bids.** Late bids shall not be accepted.

8. The **Davao del Sur State College** 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 Section 41 of RA 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.
9. For further information, please refer to:

**EDUARDO F. AQUINO, MS.**  
Chairperson, Bids and Awards Committee  
Brgy. Matti, Digos City, Davao del Sur  
Mobile No. (+63)998-885-2309  
E-mail Address: [psu@dssc.edu.ph](mailto:psu@dssc.edu.ph)

  
**EDUARDO F. AQUINO, MS**  
Chairperson, Bids and Awards Committee



## *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, **Davao del Sur State College** wishes to receive Bids for the **“Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building”**, with identification number **DSSC PSU 2022-05-013**.

*[Note: The Project Identification Number is assigned by the Procuring Entity based on its own coding scheme and is not the same as the PhilGEPS reference number, which is generated after the posting of the bid opportunity on the PhilGEPS website.]*

The Procurement Project (referred to herein as “Project”) is composed of **One (1) lot**, the details of which are described in Section VII (Technical Specifications).

## 2. Funding Information

2.1. The GOP through the source of funding as indicated below for **2022** the amount of **Six Million Pesos (Php 6,000,000.00)**.

2.2. The source of funding is:

**a. NGA, the General Appropriations Act or Special Appropriations.**

## 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 or 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.
- 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.
- 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 and either at its physical address Davao del Sur State College, Brgy. Matti, Digos City, Davao del Sur and/or through videoconferencing/webcasting 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 **three (3) 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 the **BDS**.
  - 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 the **BDS**.

## 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 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 until **120 calendar days** from 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 one copy 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**.

## **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**

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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.

- 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 Entity's 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.
  - a. In the case of single-year Framework Agreement, the Lowest Calculated Bid shall be determined outright after the detailed evaluation;
- 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 may be. In this case, the Bid Security as required by **ITB** Clause 14 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.
- 19.4. The Project shall be awarded as follows:

Option 1 – One Project having several items that shall be awarded as one contract.
- 19.5. 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**

- 20.1. 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: <ol style="list-style-type: none"> <li>a. <b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b></li> <li>b. Completed within <b>three (3) years</b> prior to the deadline for the submission and receipt of bids.</li> </ol>																		
7.1	Sub-contracting is not allowed.																		
12	The price of the Goods shall be quoted DDP <i>Davao del Sur State College</i> 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: <ol style="list-style-type: none"> <li>a. The amount of not less than One Hundred Twenty Thousand Pesos (Php 120,000.00) (2% of ABC), 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 Three Hundred Thousand Pesos (Php 300,000.00) (5% of ABC) if bid security is in Surety Bond.</li> </ol>																		
19.3	<p><i>[In case the Project will be awarded by lot, list the grouping of lots by specifying the group title, items, and the quantity for every identified lot, and the corresponding ABC for each lot.]</i></p> <p><i>[In case the project will be awarded by item, list each item indicating its quantity and ABC.]</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2" style="width: 10%;">Item/ Lot #</th> <th rowspan="2" style="width: 5%;">Unit</th> <th rowspan="2" style="width: 40%;">Item Description</th> <th rowspan="2" style="width: 5%;">Qty.</th> <th colspan="2" style="width: 40%;">Approved Budget of the Contract (ABC)</th> </tr> <tr> <th style="width: 15%;">Unit Cost</th> <th style="width: 25%;">Total Cost</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; vertical-align: middle;">1</td> <td style="text-align: center; vertical-align: middle;">lot</td> <td> <b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b>   <b>1. One (1) unit space-saving, foldable table with eight removable dividers and eight foldable chairs.</b>             Technical Specification and Description:           <ul style="list-style-type: none"> <li>• One (1) space-saving, foldable table equipped with removable dividers and 8 foldable chairs (space-saving): (See attached design picture)</li> </ul> </td> <td style="text-align: center; vertical-align: middle;"></td> <td style="text-align: center; vertical-align: middle;"> <b>Php 6,000,000.00</b> </td> <td style="text-align: center; vertical-align: middle;"> <b>Php 6,000,000.00</b> </td> </tr> </tbody> </table>					Item/ Lot #	Unit	Item Description	Qty.	Approved Budget of the Contract (ABC)		Unit Cost	Total Cost	1	lot	<b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b>  <b>1. One (1) unit space-saving, foldable table with eight removable dividers and eight foldable chairs.</b>  Technical Specification and Description: <ul style="list-style-type: none"> <li>• One (1) space-saving, foldable table equipped with removable dividers and 8 foldable chairs (space-saving): (See attached design picture)</li> </ul>		<b>Php 6,000,000.00</b>	<b>Php 6,000,000.00</b>
Item/ Lot #	Unit	Item Description	Qty.	Approved Budget of the Contract (ABC)															
				Unit Cost	Total Cost														
1	lot	<b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b>  <b>1. One (1) unit space-saving, foldable table with eight removable dividers and eight foldable chairs.</b>  Technical Specification and Description: <ul style="list-style-type: none"> <li>• One (1) space-saving, foldable table equipped with removable dividers and 8 foldable chairs (space-saving): (See attached design picture)</li> </ul>		<b>Php 6,000,000.00</b>	<b>Php 6,000,000.00</b>														

		<ul style="list-style-type: none"> <li>● Material: laminated wood; <b>does</b> not chip off and does not impart odor</li> <li>● Color: Off-matt white or wood finish</li> <li>● 8 seater</li> <li>● removable and fixable 8 dividers</li> <li>● design picture below</li> <li>● 8 ergonomic friendly and foldable chairs</li> <li>● each space for divider and height for divider should be designed for individual work</li> <li>● Recommended dimensions: <ul style="list-style-type: none"> <li>○ Table: (LxW: 3.60 meters x 1.85 meters with standard leg height for chairs <ul style="list-style-type: none"> <li>■ Divider thickness: 0.05 m</li> <li>■ Divider height from table: at least 0.70 m</li> <li>■ Width per space: 0.8 m</li> </ul> </li> <li>○ Chairs: shall follow dimensions of standard leg height</li> </ul> </li> </ul>			
		<p><b>2. one (1) unit of 5-in-1 space-saving chair with coffee table</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Can be fixed to one chair</li> <li>● With faux leather foam</li> <li>● Multiple colors</li> <li>● Coffee table shall be separate and shall conform with the design of chairs</li> <li>● Recommended dimensions : 0.45 m x 0.45 m</li> <li>● See attached design picture</li> </ul>			
		<p><b>3. Two (2) units 64"/65" smart television</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● HDR</li> <li>● with HDMI and other ports needed for compatibility during presentation and trainings</li> <li>● SMART TV</li> <li>● Resolution: 3840 x 2160</li> </ul>			

		<ul style="list-style-type: none"> <li>● USB port available</li> </ul>		
		<p><b>4. three (3) units All-in-one desktop computers</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● CPU: 11th Generation / Intel Core i5-1135G7 Processor (8MB Cache, up to 4.2 GHz)</li> <li>● Storage: 256GB M.2 PCIe NVMe Solid State Drive (Boot) + 1TB 5400 rpm 2.5" SATA Hard Drive (Storage)</li> <li>● Memory: 8GB, 8Gx1, DDR4, 2666MHz</li> <li>● Display: 23.8-inch FHD (1920 x 1080) Anti-Glare Narrow Border Infinity Non-Touch Display</li> <li>● Wireless and Bluetooth: Intel Wi-Fi 6 2x2 (Gig+) and Bluetooth</li> <li>● With wireless keyboard and mouse</li> <li>● Operating System: Windows 10 Home (64bit) Single Language English</li> </ul>		
		<p><b>5. Six (6) units of computer tablets</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Display size: At least 7.0 inches; ideal 8.4 inches</li> <li>● Type: IPS</li> <li>● Processor: Qualcomm Snapdragon 435 Chipset or equivalent</li> <li>● Camera: Rear Camera :8 MP</li> <li>● Width: 12.42 cm</li> <li>● Battery: 4000 mAh to 5100 mAh</li> <li>● Memory (RAM &amp; ROM &amp; Expandable upto): 4GB LPDDR4 RAM + 32GB ROM</li> <li>● Android tablet</li> <li>● Connectivity: WI-FI and Bluetooth with bluetooth keyboard and mouse</li> </ul>		

		<p><b>6. Three (3) units stainless steel work table with cabinets and closed shelves, rollers and roller-lock for mobility; one (1) stainless steel (open)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two (2) units S/S work table with dimensions 1.10 meter by 0.70 meter; the top work area in direct contact with food shall be made of specific type 316 S/S</li> <li><input type="checkbox"/> One (1) unit S/S work table with dimensions 1.00 meter by 3.00 meter; the top work area in direct contact with food shall be made of specific type 316 S/S</li> <li><input type="checkbox"/> One (1) unit S/S shelf with three layers; Height: 1.2 meters, length: 1 meter, width; 0.5 meters</li> <li><input type="checkbox"/> All provided with under counter cabinets and shelves</li> <li><input type="checkbox"/> Rollers available for mobility</li> <li><input type="checkbox"/> Rollers should have lock-in-place mechanism</li> <li><input type="checkbox"/> Design follow minimum food hygiene standards; smooth edges</li> </ul>			
		<p><b>7. One (1) unit 10-cubic feet two door kitchen refrigerator with bottom freezer</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Door material: Steel silver</li> <li>● Color: Grey or black</li> <li>● Capacity: 322 L or at least 10 cu.ft</li> <li>● Inverter type</li> <li>● Ag Clean or other technology which prevents bacterial and odor</li> </ul>			
		<p><b>8. One (1) unit 11-cubic feet single door kitchen chiller</b></p> <p>Technical Specification and Description:</p>			

			<ul style="list-style-type: none"> <li>● Capacity: 11 cubic feet</li> <li>● adjustable levelling feet</li> <li>● 4 adjustable coated wire sleeves</li> <li>● Inverter type</li> </ul>		
			<p><b>9. Two (2) units kitchen food processors</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● One (1) unit of volume capacity: 830 mL to 1 Liters</li> <li>● One (1) unit of volume capacity: 3 to 5 Liters</li> <li>● base equipment: Kitchen aid or equivalent</li> <li>● Included components: blender/mixer</li> <li>● Material: stainless steel</li> <li>● Color: white preferred</li> <li>● Voltage: 120 V</li> <li>● Wattage: 750 W</li> <li>● Number of speeds: 1 to 3 depending</li> <li>● tight sealed lid</li> <li>● pulse control</li> <li>● automatic bowl locking</li> <li>● provide step down transformer for 110V electric supply</li> </ul>		
			<p><b>10. One (1) unit bowl lift kitchen stand mixers with attachments</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Heavy duty</li> <li>● Bowl lift</li> <li>● Large size around 16.5” tall</li> <li>● Bowl capacity: around 5.7 L or more</li> <li>● Color: white or black</li> <li>● Required attachments <ul style="list-style-type: none"> <li>○ Metal food grinder</li> <li>○ Stainless steel or nylon coated dough hook</li> <li>○ Stainless steel or nylon coated flat beater</li> <li>○ Wire elliptical whisk</li> </ul> </li> <li>● Optional attachments <ul style="list-style-type: none"> <li>○ Sifter +Scale attachment</li> <li>○ ice cream maker</li> </ul> </li> </ul>		

		<p><b>11. Two (2) units of microwave oven</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Microwave Power Levels: 5</li> <li>● Voltage: 230V / 60Hz</li> <li>● Defrost by Weight &amp; Time: Yes, turbo defrost preferred</li> <li>● Timer (Minutes): 35</li> <li>● Child safety lock: Preferred</li> <li>● Cooking end signal: Yes</li> <li>● Capacity: 30L</li> <li>● Output Power: 700W- 800W</li> <li>● Inverter type</li> </ul>			
		<p><b>12. One (1) unit of chamber-type (food) vacuum sealer</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Stainless steel body</li> <li>● Control panel- adjustable vacuum and seal time, digital time display and pressure indicator</li> <li>● Minimum chamber pouch size: 10" x 13"</li> <li>● Shall include filler plates and maintenance kit</li> <li>● at least 10 inch removal seal bar with double seal wire</li> <li>● Cycle time: 20-60 seconds</li> </ul>			
		<p><b>13. One (1) unit of 1-deck electric baking/roasting oven with 4-burner gas stove with roller for mobility</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Oven: 3 trays per deck</li> <li>● oven shall be electric while burners shall be gas</li> <li>● Material for food contact: stainless steel #304</li> <li>● Metal surfaces not in contact with food shall be non corrosive or non-rusting</li> <li>● Wattage: around 3200W</li> <li>● Independent temperature and timer control Temperature range:</li> </ul>			



		<p>50-300C</p> <ul style="list-style-type: none"> <li>● Time: maximum 99-180 minutes</li> <li>● Secured rollers for mobility with lock in place</li> <li>● Commercial kitchen capacity</li> <li>● Gas stove with 50 kls LPG tank with regulator</li> </ul>		
		<p><b>14. Two (2) Bean Magra cutter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Design following Swiss Magra 14 for 50 cocoa beans</li> <li>○ with 50 slots</li> <li>○ with central stainless steel cutter blade</li> <li>● Dimensions: 390 x 140 x 70 mm</li> <li>● See picture in the appendices for the design</li> </ul>		
		<p><b>15. One (1) unit of Toploading, timing control type Autoclave - 18L</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● suitable for sterilizing canned or packaged foods</li> <li>● Timing control type (preferred);</li> <li>● Capacity: 18 L</li> <li>● Time setting: 1- 99 mins</li> <li>● Temperature setting RT +5 to 126C</li> <li>● Material: Stainless steel</li> <li>● Working pressure: along with temperature change</li> <li>● Top loading</li> <li>● with over temperature and over pressure auto protection</li> <li>● for installation provide separate circuit breaker and magnetic switch for the equipment</li> </ul>		
		<p><b>16. One (1) unit of Seed oil Expeller (Screw type)Press for cocoa beans</b></p> <p>Technical Specification and Description:</p>		

			<ul style="list-style-type: none"> <li><input type="checkbox"/> Capacity in [kg] cocoa bean material/hour:3 to 5 kgs</li> <li><input type="checkbox"/> (depending on the type and bulk weight of the material to be pressed)</li> <li><input type="checkbox"/> Electrical power in [kW] = 1.1</li> <li><input type="checkbox"/> Weight in [kg] = 80</li> <li><input type="checkbox"/> Type: Screw type extrusion</li> <li><input type="checkbox"/> Approximate dimensions (flexible specification) : approximately 26"x22"x23"</li> </ul>			
			<p><b>17. One (1) unit of Benchtop Laser scattering (Wet Method) Particle Size Distribution Analyzer</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Measurement principle: Laser diffraction and Mie light scattering theory</li> <li>● Size Measurement range: 0.1-1,000 micrometer</li> <li>● Analysis materials: Powders, slurries, emulsions etc</li> <li>● Specific Products: cocoa powder, cocoa liquor</li> <li>● Measurement output: Particle size and size distribution, size related theoretical calculated values</li> <li>● Measurement method: Wet method: Liquid dispersed particles with flow sampling system</li> <li>● Required sample amount: 10 mg- 5 g (depending on the sample size, distribution and materials)</li> <li>● Operating conditions 15C to 35C, 85% RH or less (non-condensing)</li> <li>● Power: AC100/120/230V, 50/60Hz, 150VA</li> <li>● Optics: Light source: Laser diode 5mW, wavelength=650 nm</li> </ul>			
			<p><b>18. One (1) unit of Potentiometric automatic titrator</b></p> <p>Technical Specification and Description:</p>			

		<ul style="list-style-type: none"> <li>● Applicable for acid-base titrations, non-aqueous and redox titrations</li> <li>● Suitable for laboratory analysis</li> <li>● Can be used for free fatty acid analysis</li> <li>● Measuring range: 0-14 pH, 1800 mV</li> <li>● Measuring temperature: 5-105C</li> <li>● Measuring resolution: 0.01 pH , 0.1 mV , 0.1C</li> <li>● Repeatability titration analysis: 0.2%</li> <li>● Power: 110V/220V , 50/60Hz</li> <li>● integrated valve and burette</li> <li>● built-in stirrer</li> <li>● Stepdown transformer shall be provided for 110V</li> </ul>			
		<p><b>19. Two (2) laboratory stainless steel test sieves (5 mm and 10 mm) with catch basin and cover</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> One (1) sieve with round hole diameter of 5mm</li> <li><input type="checkbox"/> One (1) sieve with round hole diameter of 10 mm</li> <li><input type="checkbox"/> Frame diameter 450-500 mm</li> <li><input type="checkbox"/> Height: 80 mm</li> <li><input type="checkbox"/> Additional accessories included: catch basis and cover</li> </ul>			
		<p><b>20. One (1) Grain Moisture meter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Moisture range: 5-45% (depending on grain type)</li> <li><input type="checkbox"/> Grain temperature: 32-122F (0-50C)</li> <li><input type="checkbox"/> Grain type: whole grain, no sample preparation</li> <li><input type="checkbox"/> Sample size: at least 200 g</li> <li><input type="checkbox"/> Measured parameters: moisture, grain temperature, test weight</li> <li><input type="checkbox"/> Accuracy of grain temperature : 1F or 0.5C</li> <li><input type="checkbox"/> Test weight specifications</li> </ul>			

		repeatability: 0.5 lb/bu <input type="checkbox"/> Moisture repeatability: 0.3% moisture, depending on grain type in commercial trade range <input type="checkbox"/> Moisture resolution: 0.1% moisture <input type="checkbox"/> Operating temperature: 5-45C <input type="checkbox"/> Humidity: 5-95% non-condensing		
		<b>21. One (1) refrigerated/heated constant temperature water bath circulator</b>  Technical Specification and Description: <ul style="list-style-type: none"> <li>● Temperature range: -25C to 150C (ideal) ; -20C to 100 C (negotiated)</li> <li>● Capacity: 3L to 6L</li> <li>● Temperature stability” +/-0.1C</li> <li>● Stainless steel</li> <li>● Removable cover</li> </ul> Optional: <ul style="list-style-type: none"> <li>● With removable compartments : 4 to 8 slots</li> </ul>		
		<b>22. Two (2) undercounter or benchtop laboratory refrigerator, single door (base equipment: Biobase BPR-5V100G)</b>  Technical Specification and Description: <ul style="list-style-type: none"> <li>● base equipment: Biobase BPR-5V100G or equivalent</li> <li>● External size: approximate 495W*548D*934H mm</li> <li>● Internal size: approximate 415W*405D*706H* mm</li> <li>● Capacity: 100 L</li> <li>● Temperature range: 2C-8C</li> <li>● Temperature accuracy: 0.1C</li> <li>● Refrigeration type: forced air refrigeration system</li> <li>● Construction material: cold-rolled steel coated with anti-bacteria powder</li> </ul>		
		<b>23. One (1) unit of 23-L laboratory vacuum drying oven</b>		

		<p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: 23L</li> <li>● Temp. Range: 50-200C</li> <li>● Temp. fluctuation: +/-1C</li> <li>● Vacuum degree: &lt;133Pa</li> <li>● Internal size (W*D*H): approximate 296*300*270</li> <li>● External size (W*D*H): approximate 590*492*468</li> <li>● Temperature control with LED display</li> <li>● stainless steel chamber</li> <li>● vacuum degree is automatically controlled</li> <li>● silicon rubber seal ensuring high vacuum level</li> <li>● tempered double-layer glass to ensure safety</li> <li>● vacuum pump as part of standard accessory</li> <li>● inert gas can be filled in chamber</li> </ul>			
		<p><b>24. One (1) unit of 30L laboratory Drying oven/incubator (Dual-use)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: 30L</li> <li>● Temp. Range: <ul style="list-style-type: none"> <li>○ Ambient temperature 5-80C</li> <li>○ Drying oven: 80-200C</li> </ul> </li> <li>● Temp Precision: 0.1C</li> <li>● Temp fluctuation: 0-5C</li> <li>● Ambient temperature: 5-40C</li> <li>● Timing Range: 1-9999 min</li> <li>● Stainless steel inner chamber</li> <li>● Leakage protector</li> </ul>			
		<p><b>25. One (1) unit of Eight-chutes riffle type sample-splitter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Material size: 33.8mm to 42.3 mm</li> <li>● Chutes number: 8</li> <li>● Chutes Width: 50.8 to 63.5 mm</li> <li>● Including four (4) pans:</li> <li>● Material: stainless steel</li> </ul>			

		<ul style="list-style-type: none"> <li>● Color: grey</li> </ul>		
		<p><b>26. One (1) Laboratory precision analytical balance</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Max capacity: 4000 to 5000 g; 4500g or 4200 g are acceptable</li> <li>● Minimal load: 500 mg</li> <li>● Readability: 10 mg</li> <li>● Tare range: -4500 g</li> <li>● Linearity: +/-20mg</li> <li>● Repeatability: 10 mg</li> <li>● Pan size: ideal 195 x 195 mm</li> <li>● Stabilization time: ideal 1.5s</li> <li>● Sensitivity drift: ideal 2 ppm/Celcius in temperature +15 to 35C</li> <li>● Working temperature +10 to +40C</li> </ul>		
		<p><b>27. One (1) Benchtop Karl Fischer Automatic Titration Set up</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Applicable for low moisture products: fats, oils and chocolates where moisture content ranges from &lt;5%</li> <li>● Range: 1 ppm to 100%</li> <li>● Sensitivity: 0.1 ug</li> <li>● Precision: 0.3% to 0.5% at 1 mg</li> <li>● Single reagent or dual reagent systems available</li> <li>● Ambient conditions: Temperature 5 to 35 degree C, 85% RH or below</li> </ul>		
		<p><b>28. One (1) unit of Laboratory Digital Viscometer for chocolates</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product applicable for chocolate: HA (for higher viscosity materials than those with an RV* torque) <ul style="list-style-type: none"> <li>■ RV: creams,foods and paints</li> </ul> </li> </ul>		

		<ul style="list-style-type: none"> <li>● RPM: 5, 10, 20, 50, 100</li> <li>● with Spindle (Stainless steel #302,#316 or #314) applicable for shear rate: 0.34N and sample volume of 10.4 M approximate</li> <li>● with sample chamber</li> <li>● torque range : HA</li> <li>● repeatability: 0.2 % full scale range</li> </ul>			
		<p><b>30. One (1) unit of Benchtop Colorimeter (recommended or instrument with similar specification : Minolta CM-5, Hunterlab ColorFlex EZ)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product ranges: cocoa butter (clear), cocoa powder, cocoa liquor, cocoa cake (solid and liquid samples)</li> <li>Minimum specifications</li> <li>● recommended or instrument with similar specification: Minolta CM-5, Hunterlab ColorFlex EZ</li> <li>● Suitable for routine laboratory analysis</li> <li>● Integrating sphere size: Industry standard, barium coated Ø152 mm</li> <li>● wavelength range: ideal 360 nm-740 nm</li> <li>● Light source: Pulsed xenon lamp</li> <li>● Half bandwidth: Approx 10 nm</li> <li>● Inter-instrument agreement: Within <math>\Delta E^*ab</math> 0.15 (Typical)</li> <li>● Color space: CIE <math>L^*a^*b^*</math>, Hunter Lab, CIE <math>L^*C^*h</math>, CIE <math>Yxy</math>, CIE XYZ, Munsell (optional)</li> <li>● Color indices equation: E313 Whiteness and Tint (<math>C/2^\circ</math> or <math>D65/10^\circ</math>), E313 Yellowness (<math>C/2^\circ</math> or <math>D65/10^\circ</math>), D1925 Yellowness (<math>C/2^\circ</math>), Y</li> </ul>			

		<p>Brightness, Z%, 457 nm  Brightness, Opacity, Color  Strength (Average  and Single Wavelength), Gray  Change, Gray Stain, Metamerism  Index,  Shade Number</p> <ul style="list-style-type: none"> <li>● Standards conformance: CIE 15:2004, ISO 7724/1, ASTM E1164, DIN 5033, Teil 7, JIS Z 8722</li> <li>● Power: AC 100-240 V ; 50/60 Hz</li> <li>● Benchtop</li> <li>● Temperature: 13-33C or wider; Max RH: 20%-85% non condensing</li> <li>● Storage temperature: 0-40C, RH 80% or less at 35C non condensing</li> </ul>		
		<p><b>31. One (1) unit of Benchtop pH meter with accessories: probe, storage electrolyte and buffers for calibration</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Parameter: pH</li> <li>● pH measuring range: -2 -20</li> <li>● pH resolution: 0.001; 0.01; 0.1</li> <li>● pH accuracy (+/-): 0.002</li> <li>● Temperature range: -30C - 130C</li> <li>● Temperature resolution: 0.1C</li> <li>● Temperature accuracy (+/-): 0.1 C</li> <li>● Probe included: Yes; pH combination electrode <ul style="list-style-type: none"> <li>■ pH range: 0-14</li> <li>■ Temperature (Metric operating): 0C-100C</li> <li>■ Junction: platinum</li> <li>■ Material: glass shaft, platinum diaphragm</li> <li>■ easy to clean</li> <li>■ compatible with cocoa liquor (small residues and particles present)</li> </ul> </li> <li>● Benchtop</li> </ul>		
		<p><b>32. One (1) unit of cacao bean</b></p>		



		<p><b>winnower (cacao huller) compliant with PNS/BAFS PAES specification</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity:Min. 5 kg per batch</li> <li>● Material: steel bars, metal sheet or mild steel <ul style="list-style-type: none"> <li>■ Parts that are in direct contact to the cacao nibs shall be made of corrosion resistant and food grade materials in compliance to food safety standards including bolts and nuts, crews and bearings</li> </ul> </li> <li>● Rubber roles: white or light colored rubber for cracking mechanism</li> <li>● Hulling efficiency, percent minimum : 90%</li> <li>● cacao nibs recover index, decimal, minimum: 0.80</li> <li>● Purity, percent, minimum: 95</li> <li>● All moving parts shall be provided with cover or guard</li> <li>● Mechanism of immediate disengagement of power shall be provided</li> <li>● shall be free from sharp edges and surfaces that may injure the operator</li> <li>● warning notices shall be provided in accordance with PAES 101:2000</li> <li>● tested in accordance with PNS/BAFS PAES 254:2018 and shall have certification as needed</li> <li>● noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations</li> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul> <p><b>33. One (1) cacao roaster compliant with PNS/BAFS PAES specification</b></p>			
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		<p><b>34. One (1) cacao bean grinder compliant with PNS/BAFS PAES specification</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg batch</li> <li>● Grinding recovery, percent,minimum: 95</li> <li>● average particle size, microns, maximum: 50 microns</li> <li>● noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations</li> <li>● all metal surfaces free from rust</li> <li>● grinding chamber enclosed to prevent contamination</li> <li>● tested in accordance with PNS/BAFS/PAES 191:2016 agricultural machinery-cacao grinder-methods of test and provide certifications as deemed necessary</li> </ul>			

		<ul style="list-style-type: none"> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul>		
		<p><b>35. One (1) unit of conching machine for chocolate processing facility</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● roller type with tiltable discharge (ideal is four rollers)</li> <li>● Capacity: Min. 5 kgs per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 Food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Rotating circular tub with roller contact control</li> <li>● Power: 1.5HP, 220 V single phase electric motor</li> </ul>		
		<p><b>36. One (1) Chocolate tempering machine</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Power: 1.180 Kw, 220V/60 Hz, RPM: 1720</li> <li>● Capacity: Min. 5 kg/hr</li> <li>● with installed digital display of chocolate and water temperature</li> </ul>		
		<p><b>37. One (1) unit chocolate refiner</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● High resistant to abrasion materials</li> <li>● Food grade and high quality rolling stones or balls</li> </ul>		
		<p><b>Other Requirements:</b></p>		

			Installation, Commissioning and Onsite Training for the technical, scientific equipment must be provided.			
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 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. In addition to tests in the **SCC**, **Section VII (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	
	<p><b>Delivery and Documents –</b></p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p><i>[For Goods supplied from within the Philippines, state:]</i> “The delivery terms applicable to this Contract are delivered <b>Davao del Sur State College, Brgy. Matti, Digos City</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> <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 <b>Hazel Hannah J. Yuga</b></p> <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:</p> <ol 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> <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> </ol> <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>

**Spare Parts –**

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

1. 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
2. in the event of termination of production of the spare parts:
  - i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and
  - ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.

The spare parts and other components required are listed in **Section VI (Schedule of Requirements)** and the costs thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of two (2) years.

Spare parts or components shall be supplied as promptly as possible, but in any case, within two (2) months of placing the order.

**Packaging –**

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.

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>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 Suppliers 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>

	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.
2.2	The payment shall be upon completion of the delivery.
4	The inspection and test that will be conducted is: <i>Performance Testing</i>

## *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 /Lot #	Item Description	Qty.	Total	Delivered, Weeks/Months
<b>1</b>	<b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b>			
	<p><b>1. One (1) unit space-saving, foldable table with eight removable dividers and eight foldable chairs.</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● One (1) space-saving, foldable table equipped with removable dividers and 8 foldable chairs (space-saving): (See attached design picture)</li> <li>● Material: laminated wood; <b>does</b> not chip off and does not impart odor</li> <li>● Color: Off-matt white or wood finish</li> <li>● 8 seater</li> <li>● removable and fixable 8 dividers</li> <li>● design picture below</li> <li>● 8 ergonomic friendly and foldable chairs</li> <li>● each space for divider and height for divider should be designed for individual work</li> <li>● Recommended dimensions: <ul style="list-style-type: none"> <li>○ Table: (LxW: 3.60 meters x 1.85 meters with standard leg height for chairs <ul style="list-style-type: none"> <li>■ Divider thickness: 0.05 m</li> <li>■ Divider height from table: at least 0.70 m</li> <li>■ Width per space: 0.8 m</li> </ul> </li> <li>○ Chairs: shall follow dimensions of standard leg height</li> </ul> </li> </ul>	<b>1 LOT</b>	<b>Php 6,000,000.00</b>	<b>60 Days Upon Receipt of the NTP</b>
	<p><b>2. one (1) unit of 5-in-1 space-saving chair with coffee table</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Can be fixed to one chair</li> <li>● With faux leather foam</li> <li>● Multiple colors</li> <li>● Coffee table shall be separate and shall conform with the design of chairs</li> <li>● Recommended dimensions : 0.45 m x 0.45 m</li> <li>● See attached design picture</li> </ul>			
<p><b>3. Two (2) units 64"/65" smart television</b></p>				

Technical Specification and Description:

- HDR
- with HDMI and other ports needed for compatibility during presentation and trainings
- SMART TV
- Resolution: 3840 x 2160
- USB port available

**4. three (3) units All-in-one desktop computers**

Technical Specification and Description:

- CPU: 11th Generation / Intel Core i5-1135G7 Processor (8MB Cache, up to 4.2 GHz)
- Storage: 256GB M.2 PCIe NVMe Solid State Drive (Boot) + 1TB 5400 rpm 2.5" SATA Hard Drive (Storage)
- Memory: 8GB, 8Gx1, DDR4, 2666MHz
- Display: 23.8-inch FHD (1920 x 1080) Anti-Glare Narrow Border Infinity Non-Touch Display
- Wireless and Bluetooth: Intel Wi-Fi 6 2x2 (Gig+) and Bluetooth
- With wireless keyboard and mouse
- Operating System: Windows 10 Home (64bit) Single Language English

**5. Six (6) units of computer tablets**

Technical Specification and Description:

- Display size: At least 7.0 inches; ideal 8.4 inches
- Type: IPS
- Processor: Qualcomm Snapdragon 435 Chipset or equivalent
- Camera: Rear Camera :8 MP
- Width: 12.42 cm
- Battery: 4000 mAh to 5100 mAh
- Memory (RAM & ROM & Expandable upto): 4GB LPDDR4 RAM + 32GB ROM
- Android tablet
- Connectivity: WI-FI and Bluetooth with bluetooth keyboard and mouse

**6. Three (3) units stainless steel work table with cabinets and closed shelves, rollers and roller-lock for mobility; one (1) stainless steel (open)**

Technical Specification and Description:

- Two (2) units S/S work table with dimensions 1.10 meter by 0.70 meter; the top work area in direct contact with food shall be made of

specific type 316 S/S

One (1) unit S/S work table with dimensions 1.00 meter by 3.00 meter;

the top work area in direct contact with food shall be made of specific type 316 S/S

One (1) unit S/S shelf with three layers; Height: 1.2 meters, length: 1 meter, width; 0.5 meters

All provided with under counter cabinets and shelves

Rollers available for mobility  Rollers should have lock-in-place mechanism

Design follow minimum food hygiene standards; smooth edges

**7. One (1) unit 10-cubic feet two door kitchen refrigerator with bottom freezer**

Technical Specification and Description:

- Door material: Steel silver
- Color: Grey or black
- Capacity: 322 L or at least 10 cu.ft
- Inverter type
- Ag Clean or other technology which prevents bacterial and odor

**8. One (1) unit 11-cubic feet single door kitchen chiller**

Technical Specification and Description:

- Capacity: 11 cubic feet
- adjustable levelling feet
- 4 adjustable coated wire sleeves
- Inverter type

**9. Two (2) units kitchen food processors**

Technical Specification and Description:

- One (1) unit of volume capacity: 830 mL to 1 Liters
- One (1) unit of volume capacity: 3 to 5 Liters
- base equipment: Kitchen aid or equivalent
- Included components: blender/mixer
- Material: stainless steel
- Color: white preferred
- Voltage: 120 V
- Wattage: 750 W
- Number of speeds: 1 to 3 depending
- tight sealed lid
- pulse control
- automatic bowl locking
- provide step down transformer for 110V electric supply

**10. One (1) unit bowl lift kitchen stand mixers with attachments**

Technical Specification and Description:

- Heavy duty
- Bowl lift
- Large size around 16.5” tall
- Bowl capacity: around 5.7 L or more
- Color: white or black
- Required attachments
  - Metal food grinder
  - Stainless steel or nylon coated dough hook
  - Stainless steel or nylon coated flat beater
  - Wire elliptical whisk
- Optional attachments
  - Sifter +Scale attachment
  - ice cream maker

**11. Two (2) units of microwave oven**

Technical Specification and Description:

- Microwave Power Levels: 5
- Voltage: 230V / 60Hz
- Defrost by Weight & Time: Yes, turbo defrost preferred
- Timer (Minutes): 35
- Child safety lock: Preferred
- Cooking end signal: Yes
- Capacity: 30L
- Output Power: 700W- 800W
- Inverter type

**12. One (1) unit of chamber-type (food) vacuum sealer**

Technical Specification and Description:

- Stainless steel body
- Control panel- adjustable vacuum and seal time, digital time display and pressure indicator
- Minimum chamber pouch size: 10” x 13”
- Shall include filler plates and maintenance kit
- at least 10 inch removal seal bar with double seal wire
- Cycle time: 20-60 seconds

**13. One (1) unit of 1-deck electric baking/roasting oven with 4-burner gas stove with roller for mobility**

Technical Specification and Description:

- Oven: 3 trays per deck
- oven shall be electric while burners shall be gas
- Material for food contact: stainless steel #304



- Metal surfaces not in contact with food shall be non corrosive or non-rusting
- Wattage: around 3200W
- Independent temperature and timer control  
Temperature range: 50-300C
- Time: maximum 99-180 minutes
- Secured rollers for mobility with lock in place
- Commercial kitchen capacity
- Gas stove with 50 kls LPG tank with regulator

#### **14. Two (2) Bean Magra cutter**

Technical Specification and Description:

- Design following Swiss Magra 14 for 50 cocoa beans
  - with 50 slots
  - with central stainless steel cutter blade
- Dimensions: 390 x 140 x 70 mm
- See picture in the appendices for the design

#### **15. One (1) unit of Toploading, timing control type Autoclave -18L**

Technical Specification and Description:

- suitable for sterilizing canned or packaged foods
- Timing control type (preferred);
- Capacity: 18 L
- Time setting: 1- 99 mins
- Temperature setting RT +5 to 126C
- Material: Stainless steel
- Working pressure: along with temperature change
- Top loading
- with over temperature and over pressure auto protection
- for installation provide separate circuit breaker and magnetic switch for the equipment

#### **16. One (1) unit of Seed oil Expeller (Screw type)Press for cocoa beans**

Technical Specification and Description:

- Capacity in [kg] cocoa bean material/hour:3 to 5 kgs
- (depending on the type and bulk weight of the material to be pressed)
- Electrical power in [kW] = 1.1
- Weight in [kg] = 80
- Type: Screw type extrusion
- Approximate dimensions (flexible specification) : approximately 26"x22"x23"

**17. One (1) unit of Benchtop Laser scattering (Wet Method) Particle Size Distribution Analyzer**

Technical Specification and Description:

- Measurement principle: Laser diffraction and Mie light scattering theory
- Size Measurement range: 0.1-1,000 micrometer
- Analysis materials: Powders, slurries, emulsions etc
- Specific Products: cocoa powder, cocoa liquor
- Measurement output: Particle size and size distribution, size related theoretical calculated values
- Measurement method: Wet method: Liquid dispersed particles with flow sampling system
- Required sample amount: 10 mg- 5 g (depending on the sample size, distribution and materials)
- Operating conditions 15C to 35C, 85% RH or less (non-condensing)
- Power: AC100/120/230V, 50/60Hz, 150VA
- Optics: Light source: Laser diode 5mW, wavelength=650 nm

**18. One (1) unit of Potentiometric automatic titrator**

Technical Specification and Description:

- Applicable for acid-base titrations, non-aqueous and redox titrations
- Suitable for laboratory analysis
- Can be used for free fatty acid analysis
- Measuring range: 0-14 pH, 1800 mV
- Measuring temperature: 5-105C
- Measuring resolution: 0.01 pH , 0.1 mV , 0.1C
- Repeatability titration analysis: 0.2%
- Power: 110V/220V , 50/60Hz
- integrated valve and burette
- built-in stirrer
- Stepdown transformer shall be provided for 110V

**19. Two (2) laboratory stainless steel test sieves (5 mm and 10 mm) with catch basin and cover**

Technical Specification and Description:

- One (1) sieve with round hole diameter of 5mm
- One (1) sieve with round hole diameter of 10 mm
- Frame diameter 450-500 mm
- Height: 80 mm

- Additional accessories included: catch basin and cover

**20. One (1) Grain Moisture meter**

Technical Specification and Description:

- Moisture range: 5-45% (depending on grain type)
- Grain temperature: 32-122F (0-50C)
- Grain type: whole grain, no sample preparation
- Sample size: at least 200 g
- Measured parameters: moisture, grain temperature, test weight
- Accuracy of grain temperature : 1F or 0.5C
- Test weight specifications repeatability: 0.5 lb/bu
- Moisture repeatability: 0.3% moisture, depending on grain type in commercial trade range
- Moisture resolution: 0.1% moisture
- Operating temperature: 5-45C
- Humidity: 5-95% non-condensing

**21. One (1) refrigerated/heated constant temperature water bath circulator**

Technical Specification and Description:

- Temperature range: -25C to 150C (ideal) ; -20C to 100 C (negotiated)
- Capacity: 3L to 6L
- Temperature stability” +/-0.1C
- Stainless steel
- Removable cover
- Optional:
  - With removable compartments : 4 to 8 slots

**22. Two (2) undercounter or benchtop laboratory refrigerator, single door (base equipment: Biobase BPR-5V100G)**

Technical Specification and Description:

- base equipment: Biobase BPR-5V100G or equivalent
- External size: approximate 495W\*548D\*934H mm
- Internal size: approximate 415W\*405D\*706H\* mm
- Capacity: 100 L
- Temperature range: 2C-8C
- Temperature accuracy: 0.1C
- Refrigeration type: forced air refrigeration system
- Construction material: cold-rolled steel coated

with anti-bacteria powder

**23. One (1) unit of 23-L laboratory vacuum drying oven**

Technical Specification and Description:

- Capacity: 23L
- Temp. Range: 50-200C
- Temp. fluctuation: +/-1C
- Vacuum degree: <133Pa
- Internal size (W\*D\*H): approximate 296\*300\*270
- External size (W\*D\*H): approximate 590\*492\*468
- Temperature control with LED display
- stainless steel chamber
- vacuum degree is automatically controlled
- silicon rubber seal ensuring high vacuum level
- tempered double-layer glass to ensure safety
- vacuum pump as part of standard accessory
- inert gas can be filled in chamber

**24. One (1) unit of 30L laboratory Drying oven/incubator (Dual-use)**

Technical Specification and Description:

- Capacity: 30L
- Temp. Range:
  - Ambient temperature 5-80C
  - Drying oven: 80-200C
- Temp Precision: 0.1C
- Temp fluctuation: 0-5C
- Ambient temperature: 5-40C
- Timing Range: 1-9999 min
- Stainless steel inner chamber
- Leakage protector

**25. One (1) unit of Eight-chutes riffle type sample-splitter**

Technical Specification and Description:

- Material size: 33.8mm to 42.3 mm
- Chutes number: 8
- ChutesWidth: 50.8 to 63.5 mm
- Including four (4) pans:
- Material: stainless steel
- Color: grey

**26. One (1) Laboratory precision analytical balance**

Technical Specification and Description:

- Max capacity: 4000 to 5000 g; 4500g or 4200 g

<p>are acceptable</p> <ul style="list-style-type: none"> <li>● Minimal load: 500 mg</li> <li>● Readability: 10 mg</li> <li>● Tare range: -4500 g</li> <li>● Linearity: +/-20mg</li> <li>● Repeatability: 10 mg</li> <li>● Pan size: ideal 195 x 195 mm</li> <li>● Stabilization time: ideal 1.5s</li> <li>● Sensitivity drift: ideal 2 ppm/Celcius in temperature +15 to 35C</li> <li>● Working temperature +10 to +40C</li> </ul>	
<p><b>27. One (1) Benchtop Karl Fischer Automatic Titration Set up</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Applicable for low moisture products: fats, oils and chocolates where moisture content ranges from &lt;5%</li> <li>● Range: 1 ppm to 100%</li> <li>● Sensitivity: 0.1 ug</li> <li>● Precision: 0.3% to 0.5% at 1 mg</li> <li>● Single reagent or dual reagent systems available</li> <li>● Ambient conditions: Temperature 5 to 35 degree C, 85% RH or below</li> </ul>	
<p><b>28. One (1) unit of Laboratory Digital Viscometer for chocolates</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product applicable for chocolate: HA (for higher viscosity materials than those with an RV* torque) <ul style="list-style-type: none"> <li>■ RV: creams,foods and paints</li> </ul> </li> <li>● RPM: 5, 10, 20, 50, 100</li> <li>● with Spindle (Stainless steel #302,#316 or #314) applicable for shear rate: 0.34N and sample volume of 10.4 M approximate</li> <li>● with sample chamber</li> <li>● torque range : HA</li> <li>● repeatability: 0.2 % full scale range</li> </ul>	
<p><b>30. One (1) unit ofBenchtopColorimeter (recommended or instrument with similar specification : Minolta CM-5, HunterlabColorFlex EZ)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product ranges: cocoa butter (clear), cocoa powder, cocoa liquor, cocoa cake (solid and liquid samples)</li> </ul> <p>Minimum specifications</p>	

- recommended or instrument with similar specification: Minolta CM-5, HunterlabColorFlex EZ
- Suitable for routine laboratory analysis
- Integrating sphere size: Industry standard, barium coated Ø152 mm
- wavelength range: ideal 360 nm-740 nm
- Light source: Pulsed xenon lamp
- Half bandwidth: Approx 10 nm
- Inter-instrument agreement: Within  $\Delta E^*_{ab}$  0.15 (Typical)
- Color space: CIE L\*a\*b\*, Hunter Lab, CIE L\*C\*h, CIE Yxy, CIE XYZ, Munsell (optional)
- Color indices equation: E313 Whiteness and Tint (C/2° or D65/10°), E313 Yellowness (C/2° or D65/10°), D1925 Yellowness (C/2°), Y Brightness, Z%, 457 nm Brightness, Opacity, Color Strength (Average and Single Wavelength), Gray Change, Gray Stain, Metamerism Index, Shade Number
- Standards conformance: CIE 15:2004, ISO 7724/1, ASTM E1164, DIN 5033, Teil 7, JIS Z 8722
- Power: AC 100-240 V ; 50/60 Hz
- Benchtop
- Temperature: 13-33C or wider; Max RH: 20%-85% non condensing
- Storage temperature: 0-40C, RH 80% or less at 35C non condensing

**31. One (1) unit of Benchtop pH meter with accessories: probe, storage electrolyte and buffers for calibration**

Technical Specification and Description:

- Parameter: pH
- pH measuring range: -2 -20
- pH resolution: 0.001; 0.01; 0.1
- pH accuracy (+/-): 0.002
- Temperature range: -30C - 130C
- Temperature resolution: 0.1C
- Temperature accuracy (+/-): 0.1 C
- Probe included: Yes; pH combination electrode
  - pH range: 0-14
  - Temperature (Metric operating): 0C-100C
  - Junction: platinum
  - Material: glass shaft, platinum diaphragm
  - easy to clean

- compatible with cocoa liquor (small residues and particles present)
- Benchtop

**32. One (1) unit of cacao bean winnower (cacao huller) compliant with PNS/BAFS PAES specification**

Technical Specification and Description:

- Capacity: Min. 5 kg per batch
- Material: steel bars, metal sheet or mild steel
  - Parts that are in direct contact to the cacao nibs shall be made of corrosion resistant and food grade materials in compliance to food safety standards including bolts and nuts, crews and bearings
- Rubber roles: white or light colored rubber for cracking mechanism
- Hulling efficiency, percent minimum : 90%
- cacao nibs recover index, decimal, minimum: 0.80
- Purity, percent, minimum: 95
- All moving parts shall be provided with cover or guard
- Mechanism of immediate disengagement of power shall be provided
- shall be free from sharp edges and surfaces that may injure the operator
- warning notices shall be provided in accordance with PAES 101:2000
- tested in accordance with PNS/BAFS PAES 254:2018 and shall have certification as needed
- noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations
- Voltage: 220-240V, AC 50/60Hz

**33. One (1) cacao roaster compliant with PNS/BAFS PAES specification**

Technical Specification and Description:

- Capacity: Min. 5 kg batch
- Roasting efficiency, percent, minimum :95
- Roasting temperature, minimum 120C
- Shall be provided with cooling trays and dashers
- steel bars, metal sheet or plate and mild steel for

<p>most components except for the ones in contact of cacao beans which should be made of corrosion resistant and food grade materials</p> <ul style="list-style-type: none"> <li>● Cacao roaster sampled for testing in accordance with PAES 103:2000 , PNS/BAFS PAES 256.2016; provide certification as necessary</li> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul>	
<p><b>34. One (1) cacao bean grinder compliant with PNS/BAFS PAES specification</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg batch</li> <li>● Grinding recovery, percent, minimum: 95</li> <li>● average particle size, microns, maximum: 50 microns</li> <li>● noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations</li> <li>● all metal surfaces free from rust</li> <li>● grinding chamber enclosed to prevent contamination</li> <li>● tested in accordance with PNS/BAFS/PAES 191:2016 agricultural machinery-cacao grinder-methods of test and provide certifications as deemed necessary</li> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul>	
<p><b>35. One (1) unit of conching machine for chocolate processing facility</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● roller type with tiltable discharge (ideal is four rollers)</li> <li>● Capacity: Min. 5 kgs per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 Food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Rotating circular tub with roller contact control</li> <li>● Power: 1.5HP, 220 V single phase electric motor</li> </ul>	
<p><b>36. One (1) Chocolate tempering machine</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Power: 1.180 Kw, 220V/60 Hz, RPM: 1720</li> </ul>	



<ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg/hr</li> <li>● with installed digital display of chocolate and water temperature</li> </ul>			
<p><b>37. One (1) unit chocolate refiner</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● High resistant to abrasion materials</li> <li>● Food grade and high quality rolling stones or balls</li> </ul>			
<p><b>Other Requirements:</b>  Installation, Commissioning and Onsite Training for the technical, scientific equipment must be provided.</p>			



## ***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

<p><b>ESTABLISHMENT OF COMMUNITY RADIO STATION IN DAVAO DEL SUR STATE COLLEGE, DIGOS CITY, DAVAO DEL SUR</b></p>	<p style="text-align: center;"><b>Statement of Compliance</b></p> <p><i>[Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]</i></p>
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Technical Specifications	Qty	ABC	
<p><b>Supply, Delivery and Installation of Cacao Sensory and Isotope Laboratory Building</b></p>			
<p><b>1. One (1) unit space-saving, foldable table with eight removable dividers and eight foldable chairs.</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● One (1) space-saving, foldable table equipped with removable dividers and 8 foldable chairs (space-saving): (See attached design picture)</li> <li>● Material: laminated wood; <b>does</b> not chip off and does not impart odor</li> <li>● Color: Off-matt white or wood finish</li> <li>● 8 seater</li> <li>● removable and fixable 8 dividers</li> <li>● design picture below</li> <li>● 8 ergonomic friendly and foldable chairs</li> <li>● each space for divider and height for divider should be designed for individual work</li> <li>● Recommended dimensions:               <ul style="list-style-type: none"> <li>○ Table: (LxW: 3.60 meters x 1.85 meters with standard leg height for chairs                   <ul style="list-style-type: none"> <li>■ Divider thickness: 0.05 m</li> <li>■ Divider height from table: at least 0.70 m</li> <li>■ Width per space: 0.8 m</li> </ul> </li> </ul> </li> </ul>	<b>1 Lot</b>	<b>Php 6,000,000.00</b>	

<ul style="list-style-type: none"> <li>○ Chairs: shall follow dimensions of standard leg height</li> </ul>			
<p><b>2. one (1) unit of 5-in-1 space-saving chair with coffee table</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Can be fixed to one chair</li> <li>● With faux leather foam</li> <li>● Multiple colors</li> <li>● Coffee table shall be separate and shall conform with the design of chairs</li> <li>● Recommended dimensions : 0.45 m x 0.45 m</li> <li>● See attached design picture</li> </ul>			
<p><b>3. Two (2) units 64"/65" smart television</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● HDR</li> <li>● with HDMI and other ports needed for compatibility during presentation and trainings</li> <li>● SMART TV</li> <li>● Resolution: 3840 x 2160</li> <li>● USB port available</li> </ul>			
<p><b>4. three (3) units All-in-one desktop computers</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● CPU: 11th Generation / Intel Core i5-1135G7 Processor (8MB Cache, up to 4.2 GHz)</li> <li>● Storage: 256GB M.2 PCIe NVMe Solid State Drive (Boot) + 1TB 5400 rpm 2.5" SATA Hard Drive (Storage)</li> <li>● Memory: 8GB, 8Gx1, DDR4, 2666MHz</li> <li>● Display: 23.8-inch FHD (1920 x 1080) Anti-Glare Narrow Border Infinity Non-Touch Display</li> <li>● Wireless and Bluetooth: Intel Wi-Fi 6 2x2 (Gig+) and Bluetooth</li> <li>● With wireless keyboard and mouse</li> <li>● Operating System: Windows 10 Home (64bit) Single Language English</li> </ul>			
<p><b>5. Six (6) units of computer tablets</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Display size: At least 7.0 inches; ideal 8.4 inches</li> <li>● Type: IPS</li> <li>● Processor: Qualcomm Snapdragon 435 Chipset or equivalent</li> <li>● Camera: Rear Camera :8 MP</li> <li>● Width: 12.42 cm</li> </ul>			

<ul style="list-style-type: none"> <li>● Battery: 4000 mAh to 5100 mAh</li> <li>● Memory (RAM &amp; ROM &amp; Expandable upto): 4GB LPDDR4 RAM + 32GB ROM</li> <li>● Android tablet</li> <li>● Connectivity: WI-FI and Bluetooth with bluetooth keyboard and mouse</li> </ul>			
<p><b>6. Three (3) units stainless steel work table with cabinets and closed shelves, rollers and roller-lock for mobility; one (1) stainless steel (open)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two (2) units S/S work table with dimensions 1.10 meter by 0.70 meter; the top work area in direct contact with food shall be made of specific type 316 S/S</li> <li><input type="checkbox"/> One (1) unit S/S work table with dimensions 1.00 meter by 3.00 meter; the top work area in direct contact with food shall be made of specific type 316 S/S</li> <li><input type="checkbox"/> One (1) unit S/S shelf with three layers; Height: 1.2 meters, length: 1 meter, width; 0.5 meters</li> <li><input type="checkbox"/> All provided with under counter cabinets and shelves</li> <li><input type="checkbox"/> Rollers available for mobility <input type="checkbox"/> Rollers should have lock-in-place mechanism</li> <li><input type="checkbox"/> Design follow minimum food hygiene standards; smooth edges</li> </ul>			
<p><b>7. One (1) unit 10-cubic feet two door kitchen refrigerator with bottom freezer</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Door material: Steel silver</li> <li>● Color: Grey or black</li> <li>● Capacity: 322 L or at least 10 cu.ft</li> <li>● Inverter type</li> <li>● Ag Clean or other technology which prevents bacterial and odor</li> </ul>			
<p><b>8. One (1) unit 11-cubic feet single door kitchen chiller</b></p> <p><b>Technical Specification and Description:</b></p> <ul style="list-style-type: none"> <li>● Capacity: 11 cubic feet</li> <li>● adjustable levelling feet</li> <li>● 4 adjustable coated wire sleeves</li> <li>● Inverter type</li> </ul>			
<p><b>9. Two (2) units kitchen food processors</b></p>			

<p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● One (1) unit of volume capacity: 830 mL to 1 Liters</li> <li>● One (1) unit of volume capacity: 3 to 5 Liters</li> <li>● base equipment: Kitchen aid or equivalent</li> <li>● Included components: blender/mixer</li> <li>● Material: stainless steel</li> <li>● Color: white preferred</li> <li>● Voltage: 120 V</li> <li>● Wattage: 750 W</li> <li>● Number of speeds: 1 to 3 depending</li> <li>● tight sealed lid</li> <li>● pulse control</li> <li>● automatic bowl locking</li> <li>● provide step down transformer for 110V electric supply</li> </ul>			
<p><b>10. One (1) unit bowl lift kitchen stand mixers with attachments</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Heavy duty</li> <li>● Bowl lift</li> <li>● Large size around 16.5” tall</li> <li>● Bowl capacity: around 5.7 L or more</li> <li>● Color: white or black</li> <li>● Required attachments <ul style="list-style-type: none"> <li>○ Metal food grinder</li> <li>○ Stainless steel or nylon coated dough hook</li> <li>○ Stainless steel or nylon coated flat beater</li> <li>○ Wire elliptical whisk</li> </ul> </li> <li>● Optional attachments <ul style="list-style-type: none"> <li>○ Sifter +Scale attachment</li> </ul> </li> <li>○ ice cream maker</li> </ul>			
<p><b>11. Two (2) units of microwave oven</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Microwave Power Levels: 5</li> <li>● Voltage: 230V / 60Hz</li> <li>● Defrost by Weight &amp; Time: Yes, turbo defrost preferred</li> <li>● Timer (Minutes): 35</li> <li>● Child safety lock: Preferred</li> <li>● Cooking end signal: Yes</li> <li>● Capacity: 30L</li> <li>● Output Power: 700W- 800W</li> <li>● Inverter type</li> </ul>			
<p><b>12. One (1) unit of chamber-type (food) vacuum sealer</b></p> <p>Technical Specification and Description:</p>			



<ul style="list-style-type: none"> <li>● Stainless steel body</li> <li>● Control panel- adjustable vacuum and seal time, digital time display and pressure indicator</li> <li>● Minimum chamber pouch size: 10” x 13”</li> <li>● Shall include filler plates and maintenance kit</li> <li>● at least 10 inch removal seal bar with double seal wire</li> <li>● Cycle time: 20-60 seconds</li> </ul>			
<p><b>13. One (1) unit of 1-deck electric baking/roasting oven with 4-burner gas stove with roller for mobility</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Oven: 3 trays per deck</li> <li>● oven shall be electric while burners shall be gas</li> <li>● Material for food contact: stainless steel #304</li> <li>● Metal surfaces not in contact with food shall be non corrosive or non-rusting</li> <li>● Wattage: around 3200W</li> <li>● Independent temperature and timer control</li> <li>Temperature range: 50-300C</li> <li>● Time: maximum 99-180 minutes</li> <li>● Secured rollers for mobility with lock in place</li> <li>● Commercial kitchen capacity</li> <li>● Gas stove with 50 kls LPG tank with regulator</li> </ul>			
<p><b>14. Two (2) Bean Magra cutter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Design following Swiss Magra 14 for 50 cocoa beans <ul style="list-style-type: none"> <li>○ with 50 slots</li> <li>○ with central stainless steel cutter blade</li> </ul> </li> <li>● Dimensions: 390 x 140 x 70 mm</li> <li>● See picture in the appendices for the design</li> </ul>			
<p><b>15. One (1) unit of Toploading, timing control type Autoclave -18L</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● suitable for sterilizing canned or packaged foods</li> <li>● Timing control type (preferred);</li> <li>● Capacity: 18 L</li> <li>● Time setting: 1- 99 mins</li> <li>● Temperature setting RT +5 to 126C</li> <li>● Material: Stainless steel</li> <li>● Working pressure: along with temperature change</li> <li>● Top loading</li> <li>● with over temperature and over pressure auto protection</li> <li>● for installation provide separate circuit breaker and magnetic switch for the equipment</li> </ul>			

**16. One (1) unit of Seed oil Expeller (Screw type) Press for cocoa beans**

Technical Specification and Description:

- Capacity in [kg] cocoa bean material/hour: 3 to 5 kgs
- (depending on the type and bulk weight of the material to be pressed)
- Electrical power in [kW] = 1.1
- Weight in [kg] = 80
- Type: Screw type extrusion
- Approximate dimensions (flexible specification) : approximately 26"x22"x23"

**17. One (1) unit of Benchtop Laser scattering (Wet Method) Particle Size Distribution Analyzer**

Technical Specification and Description:

- Measurement principle: Laser diffraction and Mie light scattering theory
- Size Measurement range: 0.1-1,000 micrometer
- Analysis materials: Powders, slurries, emulsions etc
- Specific Products: cocoa powder, cocoa liquor
- Measurement output: Particle size and size distribution, size related theoretical calculated values
- Measurement method: Wet method: Liquid dispersed particles with flow sampling system
- Required sample amount: 10 mg- 5 g (depending on the sample size, distribution and materials)
- Operating conditions 15C to 35C, 85% RH or less (non-condensing)
- Power: AC100/120/230V, 50/60Hz, 150VA
- Optics: Light source: Laser diode 5mW, wavelength=650 nm

**18. One (1) unit of Potentiometric automatic titrator**

Technical Specification and Description:

- Applicable for acid-base titrations, non-aqueous and redox titrations
- Suitable for laboratory analysis
- Can be used for free fatty acid analysis
- Measuring range: 0-14 pH, 1800 mV
- Measuring temperature: 5-105C
- Measuring resolution: 0.01 pH , 0.1 mV , 0.1C
- Repeatability titration analysis: 0.2%
- Power: 110V/220V , 50/60Hz
- integrated valve and burette
- built-in stirrer
- Stepdown transformer shall be provided for 110V

<p><b>19. Two (2) laboratory stainless steel test sieves (5 mm and 10 mm) with catch basin and cover</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> One (1) sieve with round hole diameter of 5mm</li> <li><input type="checkbox"/> One (1) sieve with round hole diameter of 10 mm</li> <li><input type="checkbox"/> Frame diameter 450-500 mm</li> <li><input type="checkbox"/> Height: 80 mm</li> <li><input type="checkbox"/> Additional accessories included: catch basin and cover</li> </ul>			
<p><b>20. One (1) Grain Moisture meter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Moisture range: 5-45% (depending on grain type)</li> <li><input type="checkbox"/> Grain temperature: 32-122F (0-50C)</li> <li><input type="checkbox"/> Grain type: whole grain, no sample preparation</li> <li><input type="checkbox"/> Sample size: at least 200 g</li> <li><input type="checkbox"/> Measured parameters: moisture, grain temperature, test weight</li> <li><input type="checkbox"/> Accuracy of grain temperature : 1F or 0.5C</li> <li><input type="checkbox"/> Test weight specifications repeatability: 0.5 lb/bu</li> <li><input type="checkbox"/> Moisture repeatability: 0.3% moisture, depending on grain type in commercial trade range</li> <li><input type="checkbox"/> Moisture resolution: 0.1% moisture</li> <li><input type="checkbox"/> Operating temperature: 5-45C</li> <li><input type="checkbox"/> Humidity: 5-95% non-condensing</li> </ul>			
<p><b>21. One (1) refrigerated/heated constant temperature water bath circulator</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Temperature range: -25C to 150C (ideal) ; -20C to 100 C (negotiated)</li> <li>● Capacity: 3L to 6L</li> <li>● Temperature stability” +/-0.1C</li> <li>● Stainless steel</li> <li>● Removable cover</li> </ul> <p>Optional:</p> <ul style="list-style-type: none"> <li>● With removable compartments : 4 to 8 slots</li> </ul>			
<p><b>22. Two (2) undercounter or benchtop laboratory refrigerator, single door (base equipment: Biobase BPR-5V100G)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● base equipment: Biobase BPR-5V100G or equivalent</li> <li>● External size: approximate 495W*548D*934H mm</li> <li>● Internal size: approximate 415W*405D*706H* mm</li> <li>● Capacity: 100 L</li> <li>● Temperature range: 2C-8C</li> </ul>			

<ul style="list-style-type: none"> <li>● Temperature accuracy: 0.1C</li> <li>● Refrigeration type: forced air refrigeration system</li> <li>● Construction material: cold-rolled steel coated with anti-bacteria powder</li> </ul>			
<p><b>23. One (1) unit of 23-L laboratory vacuum drying oven</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: 23L</li> <li>● Temp. Range: 50-200C</li> <li>● Temp. fluctuation: +/-1C</li> <li>● Vacuum degree: &lt;133Pa</li> <li>● Internal size (W*D*H): approximate 296*300*270</li> <li>● External size (W*D*H): approximate 590*492*468</li> <li>● Temperature control with LED display</li> <li>● stainless steel chamber</li> <li>● vacuum degree is automatically controlled</li> <li>● silicon rubber seal ensuring high vacuum level</li> <li>● tempered double-layer glass to ensure safety</li> <li>● vacuum pump as part of standard accessory</li> <li>● inert gas can be filled in chamber</li> </ul>			
<p><b>24. One (1) unit of 30L laboratory Drying oven/incubator (Dual-use)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: 30L</li> <li>● Temp. Range: <ul style="list-style-type: none"> <li>○ Ambient temperature 5-80C</li> <li>○ Drying oven: 80-200C</li> </ul> </li> <li>● Temp Precision: 0.1C</li> <li>● Temp fluctuation: 0-5C</li> <li>● Ambient temperature: 5-40C</li> <li>● Timing Range: 1-9999 min</li> <li>● Stainless steel inner chamber</li> <li>● Leakage protector</li> </ul>			
<p><b>25. One (1) unit of Eight-chutes riffle type sample-splitter</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Material size: 33.8mm to 42.3 mm</li> <li>● Chutes number: 8</li> <li>● ChutesWidth: 50.8 to 63.5 mm</li> <li>● Including four (4) pans:</li> <li>● Material: stainless steel</li> <li>● Color: grey</li> </ul>			
<p><b>26. One (1) Laboratory precision analytical balance</b></p> <p>Technical Specification and Description:</p>			

<ul style="list-style-type: none"> <li>● Max capacity: 4000 to 5000 g; 4500g or 4200 g are acceptable</li> <li>● Minimal load: 500 mg</li> <li>● Readability: 10 mg</li> <li>● Tare range: -4500 g</li> <li>● Linearity: +/-20mg</li> <li>● Repeatability: 10 mg</li> <li>● Pan size: ideal 195 x 195 mm</li> <li>● Stabilization time: ideal 1.5s</li> <li>● Sensitivity drift: ideal 2 ppm/Celcius in temperature +15 to 35C</li> <li>● Working temperature +10 to +40C</li> </ul>			
<p><b>27. One (1) Benchtop Karl Fischer Automatic Titration Set up</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Applicable for low moisture products: fats, oils and chocolates where moisture content ranges from &lt;5%</li> <li>● Range: 1 ppm to 100%</li> <li>● Sensitivity: 0.1 ug</li> <li>● Precision: 0.3% to 0.5% at 1 mg</li> <li>● Single reagent or dual reagent systems available</li> <li>● Ambient conditions: Temperature 5 to 35 degree C, 85% RH or below</li> </ul>			
<p><b>28. One (1) unit of Laboratory Digital Viscometer for chocolates</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product applicable for chocolate: HA (for higher viscosity materials than those with an RV* torque) <ul style="list-style-type: none"> <li>■ RV: creams,foods and paints</li> </ul> </li> <li>● RPM: 5, 10, 20, 50, 100</li> <li>● with Spindle (Stainless steel #302,#316 or #314) applicable for shear rate: 0.34N and sample volume of 10.4 M approximate</li> <li>● with sample chamber</li> <li>● torque range : HA</li> <li>● repeatability: 0.2 % full scale range</li> </ul>			
<p><b>30. One (1) unit ofBenchtopColorimeter (recommended or instrument with similar specification : Minolta CM-5, HunterlabColorFlex EZ)</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Product ranges: cocoa butter (clear), cocoa powder, cocoa liquor, cocoa cake (solid and liquid samples)</li> </ul>			

<p>Minimum specifications</p> <ul style="list-style-type: none"> <li>● recommended or instrument with similar specification: Minolta CM-5, HunterlabColorFlex EZ</li> <li>● Suitable for routine laboratory analysis</li> <li>● Integrating sphere size: Industry standard, barium coated Ø152 mm</li> <li>● wavelength range: ideal 360 nm-740 nm</li> <li>● Light source: Pulsed xenon lamp</li> <li>● Half bandwidth: Approx 10 nm</li> <li>● Inter-instrument agreement: Within <math>\Delta E^*ab</math> 0.15 (Typical)</li> <li>● Color space: CIE L*a*b*, Hunter Lab, CIE L*C*h, CIE Yxy, CIE XYZ, Munsell (optional)</li> <li>● Color indices equation: E313 Whiteness and Tint (C/2° or D65/10°), E313 Yellowness (C/2° or D65/10°), D1925 Yellowness (C/2°), Y Brightness, Z%, 457 nm Brightness, Opacity, Color Strength (Average and Single Wavelength), Gray Change, Gray Stain, Metamerism Index, Shade Number</li> <li>● Standards conformance: CIE 15:2004, ISO 7724/1, ASTM E1164, DIN 5033, Teil 7, JIS Z 8722</li> <li>● Power: AC 100-240 V ; 50/60 Hz</li> <li>● Benchtop</li> <li>● Temperature: 13-33C or wider; Max RH: 20%-85% non condensing</li> <li>● Storage temperature: 0-40C, RH 80% or less at 35C non condensing</li> </ul>			
<p><b>31. One (1) unit of Benchtop pH meter with accessories: probe, storage electrolyte and buffers for calibration</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Parameter: pH</li> <li>● pH measuring range: -2 -20</li> <li>● pH resolution: 0.001; 0.01; 0.1</li> <li>● pH accuracy (+/-): 0.002</li> <li>● Temperature range: -30C - 130C</li> <li>● Temperature resolution: 0.1C</li> <li>● Temperature accuracy (+/-): 0.1 C</li> <li>● Probe included: Yes; pH combination electrode <ul style="list-style-type: none"> <li>■ pH range: 0-14</li> <li>■ Temperature (Metric operating): 0C-100C</li> <li>■ Junction: platinum</li> <li>■ Material: glass shaft, platinum diaphragm</li> </ul> </li> </ul>			

- easy to clean
- compatible with cocoa liquor (small residues and particles present)
- Benchtop

**32. One (1) unit of cacao bean winnower (cacao huller) compliant with PNS/BAFS PAES specification**

Technical Specification and Description:

- Capacity: Min. 5 kg per batch
- Material: steel bars, metal sheet or mild steel
  - Parts that are in direct contact to the cacao nibs shall be made of corrosion resistant and food grade materials in compliance to food safety standards including bolts and nuts, crews and bearings
- Rubber roles: white or light colored rubber for cracking mechanism
- Hulling efficiency, percent minimum : 90%
- cacao nibs recover index, decimal, minimum: 0.80
- Purity, percent, minimum: 95
- All moving parts shall be provided with cover or guard
- Mechanism of immediate disengagement of power shall be provided
- shall be free from sharp edges and surfaces that may injure the operator
- warning notices shall be provided in accordance with PAES 101:2000
- tested in accordance with PNS/BAFS PAES 254:2018 and shall have certification as needed
- noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations
- Voltage: 220-240V, AC 50/60Hz

**33. One (1) cacao roaster compliant with PNS/BAFS PAES specification**

Technical Specification and Description:

- Capacity: Min. 5 kg batch
- Roasting efficiency, percent, minimum :95
- Roasting temperature, minimum 120C
- Shall be provided with cooling trays and dashers
- steel bars, metal sheet or plate and mild steel for most components except for the ones in contact of cacao beans which

<p>should be made of corrosion resistant and food grade materials</p> <ul style="list-style-type: none"> <li>● Cacao roaster sampled for testing in accordance with PAES 103:2000 , PNS/BAFS PAES 256.2016; provide certification as necessary</li> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul>			
<p><b>34. One (1) cacao bean grinder compliant with PNS/BAFS PAES specification</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg batch</li> <li>● Grinding recovery, percent, minimum: 95</li> <li>● average particle size, microns, maximum: 50 microns</li> <li>● noise level shall comply with requirements of occupational safety and health center, DOLE throughout the duration of operations</li> <li>● all metal surfaces free from rust</li> <li>● grinding chamber enclosed to prevent contamination</li> <li>● tested in accordance with PNS/BAFS/PAES 191:2016 agricultural machinery-cacao grinder-methods of test and provide certifications as deemed necessary</li> <li>● Voltage: 220-240V, AC 50/60Hz</li> </ul>			
<p><b>35. One (1) unit of conching machine for chocolate processing facility</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● roller type with tiltable discharge (ideal is four rollers)</li> <li>● Capacity: Min. 5 kgs per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 Food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Rotating circular tub with roller contact control</li> <li>● Power: 1.5HP, 220 V single phase electric motor</li> </ul>			
<p><b>36. One (1) Chocolate tempering machine</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● Power: 1.180 Kw, 220V/60 Hz, RPM: 1720</li> <li>● Capacity: Min. 5 kg/hr</li> <li>● with installed digital display of chocolate and water temperature</li> </ul>			



<p><b>37. One (1) unit chocolate refiner</b></p> <p>Technical Specification and Description:</p> <ul style="list-style-type: none"> <li>● Capacity: Min. 5 kg per batch</li> <li>● Food contact surfaces shall be stainless steel type 316 food grade; if type 316 is not available, type 314 is acceptable</li> <li>● High resistant to abrasion materials</li> <li>● Food grade and high quality rolling stones or balls</li> </ul>			
<p><b>Other Requirements:</b>  Installation, Commissioning and Onsite Training for the technical, scientific equipment must be provided.</p>			

## ***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.

