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**NATIONAL COFFEE RESEARCH, DEVELOPMENT AND EXTENSION CENTER**

**SUPPLY, DELIVERY, AND INSTALLATION OF VARIOUS EQUIPMENT FOR THE NCRDEC  
 PRODUCT DEVELOPMENT FACILITY**

**ABC: Php 2,720,000.00**


<b>Item No.</b>	<b>Qty./ Unit</b>	<b>Item Description</b>	<b>Specifications</b>	<b>Function</b>	<b>Unit Price (Php)</b>	<b>Total Price (Php)</b>
1	1 unit	Laboratory Roaster	<ul style="list-style-type: none"> <li>• 2 horizontal drum design</li> <li>• 80-100 grams capacity per drum</li> <li>• Heat type: electric</li> <li>• 220V, 50/60hz, 1.0KW</li> </ul>	For roasting of coffee samples for cupping and sensory analysis.	160,000.00	160,000.00
2	1 unit	Coffee grinder	<ul style="list-style-type: none"> <li>• Average grinding capacity: 1400 g/min</li> <li>• Voltage: 220V</li> <li>• Frequency: 50/60 Hz</li> <li>• Single-phase</li> <li>• Burr material: Stainless Steel</li> <li>• Heavy Duty</li> <li>• Commercial Scale</li> </ul>	For grinding of roasted coffee beans.	100,000.00	100,000.00
3	1 unit	Coffee Roast Color Analyzer	<ul style="list-style-type: none"> <li>• Analytical Methodology: Near Infrared (NIR)</li> <li>• Can measure a very light to a very dark degree of roast (whole beans and grind beans)</li> <li>• *Follow SCA Agtron scale: Gourmet (0-150); Commercial (0-100)</li> <li>• Display: Digital LCD/ LED</li> <li>• Power supply: 220V</li> <li>• Frequency: 50/60 Hz</li> <li>• Heavy duty</li> <li>• At least 99% accuracy</li> </ul>	For color analysis (light, medium, dark, very dark) of roasted coffee beans.	700,000.00	700,000.00

			<ul style="list-style-type: none"> <li>• Equipped with self-calibration tool</li> </ul> <p><i>Note: *Specialty Coffee Association (SCA) Agron Scale is the standard measurement used to determine the roast color/ degree of coffee</i></p>			
4	1 unit	Electronic nose	<ul style="list-style-type: none"> <li>• Analysis Time: 10-60 seconds</li> <li>• Precision and Accuracy: Standard deviation (SD) of at least less than 2%</li> <li>• Sensitivity: Can analyze vapors in at least 10 seconds with sensitivity in parts-per-billion for many compounds</li> <li>• Operating temperature range: 0-45 degrees Celsius</li> <li>• Portable with rechargeable battery pack</li> <li>• Charger Power: 220V, 50/60 Hz</li> </ul>	Device for measuring the sensorial properties of the developed products (aroma).	800,000.00	800,000.00
5	1 unit	Electronic tongue	<ul style="list-style-type: none"> <li>• Can analyze liquid products or solids dissolved in a liquid</li> <li>• Fully automated sensor analysis procedure</li> <li>• Can detect taste profiles/ characteristics such as saltiness, sweetness, sourness, acidic bitterness, bitterness aftertaste</li> <li>• Analysis run: at least 3 minutes/ measurement</li> <li>• Power supply: 220V</li> <li>• Operating conditions: 15 to 25°C ±3°C</li> </ul>	Device for measuring the taste profile of the product to be developed.	800,000.00	800,000.00
6	1 unit	Coffee Aroma Kit	<ul style="list-style-type: none"> <li>• Kit of 44 coffee aromas in glass vials</li> </ul>	To be used for coffee cupping.	40,000.00	40,000.00


			<ul style="list-style-type: none"> <li>• 44 aromas (11 categories): Herb &amp; Flower / Citrus &amp; others / Tropical Fruit / Stone Fruit / Berry-like / Cereal &amp; Nut / Caramel &amp; Chocolate / Spice / Vegetable / Savory / Defects</li> <li>• With 44 aroma cards</li> </ul>			
7	1 unit	Refrigerator	<ul style="list-style-type: none"> <li>• 20 cubic ft.</li> <li>• Two-door, side-by-side</li> <li>• Inverter technology</li> <li>• No frost</li> <li>• Power supply: 220V</li> </ul>	Needed to prolong the shelf life of raw materials (i.e. milk).	50,000.00	50,000.00
8	1 unit	Autoclave	<ul style="list-style-type: none"> <li>• Vertical</li> <li>• At least 20L capacity</li> <li>• Power supply: 220V</li> <li>• Temperature: 105-130 degrees Celsius</li> </ul>	For the sterilization of laboratory glasswares and glass containers.	70,000.00	70,000.00
<b>GRAND TOTAL</b>						<b>2,720,000.00</b>


\* With presentation/ demo (on-site/ virtual) before acceptance, and user's training prior to final acceptance of the product. Must have at least one year of calibration and preventive maintenance services and at least a two-year warranty on parts and services

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