

REFERENCE OF TENDER	DESCRIPTION OF TENDER	TIME PERIOD OF TENDER	DEPARTMENT/DIVISION/ UNIT REQUESTING TENDER	FEES	CLOSING DATE NOT LATER THAN 2.00PM	FOCAL PERSON
KK/298/2022/DSS	TO SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION ONE (1) LOT OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) SYSTEM FOR FOOD CHEMISTRY SECTION, DEPARTMENT OF SCIENTIFIC SERVICES, MINISTRY OF HEALTH.	-	Department of Scientific Services	\$30.00	29 <sup>th</sup> November 2022	Dr. Hjh Noorhasifah binti Haji Tengah Food Chemistry Section Department of Scientific Services Ministry of Health Negara Brunei Darussalam e-mail: noorhasifah.tengah@moh.gov.bn

# SECTION 2

## SPECIFICATIONS AND REQUIREMENTS

TENDER REFERENCE NO: KK/298/2022/DSS

INVITATION TO TENDER  
TO SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION ONE (1) LOT OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) SYSTEM FOR FOOD CHEMISTRY SECTION, DEPARTMENT OF SCIENTIFIC SERVICES, MINISTRY OF HEALTH

NAME OF ITEM	HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) SYSTEM (1 lot)
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NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS
1	<b>GENERAL</b>
1.1	<p>The High Performance Liquid Chromatography (HPLC) System shall be designed for performing Total Sugar, Caffeine and Ascorbic Analysis for Food Products.</p> <p>The system shall comprise of the following:</p> <ul style="list-style-type: none"><li>• 2 units System Controller.</li><li>• 2 units Solvent Delivery System.</li><li>• 2 units Degassing unit.</li><li>• 2 units Auto-sample injector and Accessories.</li><li>• 2 units Column Oven.</li><li>• 1 unit Refractive Index Detector.</li><li>• 1 unit Photodiode Array Detector.</li><li>• Chromatographic Software (System software).</li><li>• Data Management and Acquisition System.</li><li>• Operating Accessories and Consumables.</li></ul>
1.2	The HPLC system shall allow individually stackable self-contained modules.
1.3	The launch year of the model offered MUST not exceed more than 5 years from date of current tender.
2	<b>SYSTEM CONTROLLER (2 UNITS)</b>
2.1	Direction system controller with PC operation.
2.2	Connection via Ethernet to system software.
2.3	Capable to connect up to 8 connectable modules including solvent delivery unit, auto sampler, column oven, degassing unit and detector.
2.4	It should function as a communication bus module with data buffering capability.
2.5	It should acquire up to 24 hours for one analysis, at 500 m/s sampling rate.
2.6	System is controllable from a web-based interface via a network.
2.7	It must have a function for automatic mobile phase purging if pressure falls below specified value.
3	<b>DEGASSING UNIT (2 UNITS)</b>
3.1	Up to 5 flow lines membrane degassing unit.

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS
3.2	Maximum operating flow rate: up to 10 ml/min per flow line.
3.3	Degassed flowline capacity of 400 µl per flow line.
3.4	It must have a leak sensor as a safety feature.
3.5	Error status monitoring through operating software.
3.6	Self-cleaning capability using air during pump operation.
3.7	The liquid contact surfaces of the module should make of special synthetic polymers for all solvents.
<b>4</b>	<b>SOLVENT DELIVERY SYSTEM (2 UNITS)</b>
4.1	The solvent delivery system can be configured to run isocratic, high pressure gradient (2 or 3 solvents) or quaternary low-pressure gradient modes.
4.2	Pumping method: parallel – type double plunger.
4.3	The maximum allowable pressure is between 60 MPa and 110 MPa.
4.4	The pump should have a feature that capable of carrying out auto-diagnostic on system status to detect air bubble formation, perform auto-purging to remove air bubble to restore system pressure and alert users of low solvent levels.
4.5	Flow rate settable from 0.0001 to 10 ml/min in 0.1µl/min
4.6	Flow rate accuracy: ± 1 % (under specified conditions).
4.7	Flow rate precision: ≤ 0.06 % RSD or 0.02 min SD whichever greater.
4.8	It should have active check valves allowing stable delivery of even non-polar organic solvents such as hexane.
4.9	The system should have a feature to increase the flow rate to the set point. This is to avoid column damage by sudden pump starts and stops.
4.10	Automated rinsing kit as standard supply.
4.11	Leak sensor as safety feature.
<b>5</b>	<b>AUTO SAMPLER (2 UNITS)</b>
5.1.	Variable total injection volume between 0.1 µl to 50 µl.
5.2	Injection volume repeatability: <ul style="list-style-type: none"> <li>• RSD ≤ 1.0 % (for 0.5 - 0.9 µL)</li> <li>• RSD ≤ 0.5 % (for 1.0 - 1.9 µL)</li> <li>• RSD ≤ 0.25 % (for 2.0 - 4.9 µL)</li> <li>• RSD ≤ 0.15% (for injections ≥ 5.0 µL).</li> </ul>
5.3	Injection volume accuracy of ≤ ±1 % for 5 µL injections (n = 20).
5.4	Injection linearity: ≥ 0.9999.
5.5	Carryover performance: ≤ 0.00015 %.
5.6	The maximum operating pressure must be between 60 MPa and 110 MPa.
5.7	Capable of high sample processing volume; > 100 samples using 1.5 ml vials. Racks for > 100 samples using 1.5 ml vials must be included.

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS
5.8	Temperature setting range: 4 to 45 °C, with air circulation cooling design.
5.9	Dip rinsing outside injector needle and injector port rinsing should come as standard. Pumping rinse outside the needle as standard.
5.10	Safety features like leak sensor, automatic rack and vial recognition and maintenance kit should be available
5.11	Dedicated operation function button for maintenance and validation.
<b>6</b>	<b>COLUMN OVEN (2 UNITS)</b>
6.1	Forced-air circulation type oven for uniform temperature distribution with a quick feedback mechanism to maintain constant temperature level even when power source voltage fluctuates.
6.2	The temperature range: ambient ± 10 °C to 100 °C.
6.3	Temperature control precision: ± 0.05 °C.
6.4	Temperature control accuracy: ± 0.5 °C.
6.5	The column oven compartment should have capacity to accommodate up to 6 units of 250 mm length column.
6.6	The oven should have temperature limit sensor and temperature fuse and a solvent leak sensor.
6.7	Capable of complex temperature programming in linear and step programs.
<b>7</b>	<b>REFRACTIVE INDEX DETECTOR (1 UNIT)</b>
7.1	Wide refractive index range (1 to 1.75 RIU).
7.2	High-sensitivity to general purpose analysis. (Noise level ≤ 2.5 x 10 <sup>-9</sup> AU)
7.3	Drift level ≤ 2x10 <sup>-9</sup> RIU/h
<b>8</b>	<b>PHOTODIODE ARRAY DETECTOR (1 UNIT)</b>
8.1	Light source from Deuterium (D2) Lamp and Tungsten Lamp
8.2	The detector able to control the temperature on the lamp, flow cell and spectrometer to maximise baseline stability.
8.3	Wavelength range 190 to 800nm.
8.4	Highly sensitive analyte detection (Noise level ≤ 4.5 x 10 <sup>-6</sup> AU)
8.5	Wide linear range (2.5 AU)
<b>9</b>	<b>DATA MANAGEMENT AND ACQUISITION SYSTEM</b>
9.1	<p>Two (2) sets of data management and acquisition system i.e. one (1) set for each HPLC system.</p> <p>Each system comprise of or include:</p> <ul style="list-style-type: none"> <li>• Desktop system with specifications following manufacturer's recommendations</li> <li>• Genuine latest Microsoft Windows software compatible for use with the HPLC software</li> <li>• Genuine latest Microsoft Office Software which should include Word, Excel and Powerpoint</li> <li>• Colour Laserjet printer</li> <li>• 3 toner cartridges for each colour (staggered delivery; upon request over the warranty)</li> </ul>

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS
	period) <ul style="list-style-type: none"> <li>• HPLC software licence</li> </ul>
9.2	Two (2) latest tablets must be supplied with the latest Windows operating system with standard accessories to be discussed and agreed with end user.
9.3	One (1) additional HPLC software license.
<b>10</b>	<b>OPERATING ACCESSORIES AND CONSUMABLES</b>
10.1	Two (2) units suitable power supply rating of uninterrupted power supply (UPS) must also be provided and connected to the instrument system and workstation.
10.2	Three (3) units of HPLC columns for total sugar analysis
10.3	Three (3) units of ODS HPLC columns for Caffeine Analysis
10.4	Three (3) units of ODS2 HPLC columns for Ascorbic Acid Analysis
10.5	TWO (2) sets of Caffeine Standards <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>
10.6	TWO (2) sets of Total Sugar Standards (Fructose/Glucose/Sucrose/ Maltose/Lactose) <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>
10.7	TWO (2) sets of Ascorbic Acid standards <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>
10.8	TWO (2) sets of Reference Material for Total Sugar Analysis. <ul style="list-style-type: none"> <li>• One (1) set beverage / liquid matrix</li> <li>• One (1) set biscuit / solid matrix</li> </ul>
10.9	TWO (2) sets of Reference Material for Caffeine Analysis. <ul style="list-style-type: none"> <li>• One (1) set beverage / liquid matrix</li> <li>• One (1) set coffee / solid matrix</li> </ul>
10.10	TWO (2) sets of Reference Material for Ascorbic Acid Analysis. <ul style="list-style-type: none"> <li>• One (1) set beverage / liquid matrix</li> <li>• One (1) set solid matrix</li> </ul>
10.11	8000 units of auto sampler vials (complete with septum and cap).
<b>11</b>	<b>SITE PREPARATION</b>
11.1	The tenderer shall ensure that the site preparation for the placement of the system taking into the consideration on the safety of the end user during operation of the instrument.  To design, supply, deliver and install for the operational use of HPLC, RI, PDA, UPS for Total Sugar Analysis, Caffeine and Ascorbic Acid Analysis.
11.2	It is <b>MANDATORY</b> for the tenderer to do site visit prior to tender submission to discuss site requirements. A site visit form will be provided during the visit as evidence. Non-attendance will be considered as non-compliance.
11.3	The site preparation details should be listed out in the quotation / document submitted.
11.4	All works involving additional electrical supply including wiring, outlets and isolators, fabrication and/or modification of work bench and any other deemed necessary to ensure successful and safe installation and operation of the system should be included.
<b>12</b>	<b>DOCUMENTATION</b>

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS
12.1	The tenderer must provide the mandatory operation, service and spare parts manual.
12.2	On-site validation and commissioning report.
<b>13</b>	<b><u>TRAINING</u></b>
13.1	On-site training for ALL staff members expected to handle the machine. Please ensure that adequate time is allocated such that training will take place in small groups to minimize staff shortage in the laboratory.
13.2	Certificate of training is to be issued to all trainees after completion of training.
13.3	The successful tenderer needs to ensure the key users are updated on the current or relevant information related to the system used. They should provide <b>ONE</b> (1) off-site benchwork training for <b>TWO</b> (2) key users for not less than five (5) days . All expenses for attending the benchwork training shall be borne by the vendor; full registration, air ticket, daily allowance, accommodation, insurance, transport to and from the airport and place of training.
<b>14</b>	<b><u>WARRANTY</u></b>
14.1	A minimum of one (1) year warranty for manufacturer's defect on the hardware, software and all cost of repairs and/or replacements should be included
14.2	After-sales services must be provided for the product after one (1) year
14.3	One-off preventive maintenance to be carried out just before or soon after the one-year warranty period. Scope of work to follow manufacturer's manual / recommendation specific for the equipment offered, which include: <ul style="list-style-type: none"> <li>• Supply, delivery and installation of preventive maintenance kits and/or consumables</li> <li>• Software update (to obtain prior authorization from user and BME)</li> <li>• Inspection</li> <li>• cleaning</li> <li>• alignment</li> <li>• calibration</li> <li>• any other related preventive maintenance works required</li> </ul>
<b>15</b>	<b><u>DELIVERY</u></b>
15.1	Items offered <b>MUST be delivered within six (6) months</b> from date of approval. (Vendor to indicate the delivery period.)
<b>16</b>	<b><u>PRICE VALIDITY</u></b>
16.1	Price validity <b>MUST NOT BE LESS THAN 90 days or three (3) months.</b>

NO.	GENERAL SPECIFICATIONS
A	Total Price: B\$
B	Delivery Period:
C	Model & Brand:
D	Country of Origin:
E	Where marketed:
F	Year of Manufacture:
G	Warranty:
H	Power Requirement:
I	Battery Back-up:
J	International Safety Standard:
K	Technical Support:
L	Equipment Whole Life Support:
M	Dimensions (WxHxD) cm:
N	User Manuals:
O	Service Manuals:
P	Spare-parts & Consumables Listing:
Q	Technical Training On-Site:
R	Site Requirements:

\*To all participating companies, please fill in the table above along with your other documents during submission of tender.

Bahagian/Unit:	Bahagian Kimia Makanan	
Bil. Rujukan Bahagian/Unit:	FORD / 2022 / 021	
Pegawai di rujuk:	Nama : Dr Hjh Noorhasifah Hj Tengah	
	E-mail : noorhasifah.tengah@moh.gov.bn	
	Tel.No.: 8882555	Fax No. : -

# SECTION 3

## TENDER FORM

TENDER REFERENCE NO: KK/298/2022/DSS

### INVITATION TO TENDER

TO SUPPLY, DELIVER, INSTALL, TEST AND COMMISSION ONE (1) LOT OF HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) SYSTEM FOR FOOD CHEMISTRY SECTION, DEPARTMENT OF SCIENTIFIC SERVICES, MINISTRY OF HEALTH

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick ✓) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
1	<b>GENERAL</b>				
1.1	<p>The High Performance Liquid Chromatography (HPLC) System shall be designed for performing Total Sugar, Caffeine and Ascorbic Analysis for Food Products.</p> <p>The system shall comprise of the following:</p> <ul style="list-style-type: none"> <li>• 2 units System Controller.</li> <li>• 2 units Solvent Delivery System.</li> <li>• 2 units Degassing unit.</li> <li>• 2 units Auto-sample injector and Accessories.</li> <li>• 2 units Column Oven.</li> <li>• 1 unit Refractive Index Detector.</li> <li>• 1 unit Photodiode Array Detector.</li> <li>• Chromatographic Software (System software).</li> <li>• Data Management and Acquisition System.</li> <li>• Operating Accessories and Consumables.</li> </ul>				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
1.2	The HPLC system shall allow individually stackable self-contained modules.				
1.3	The launch year of the model offered MUST not exceed more than 5 years from date of current tender.				
<b>2</b>	<b>SYSTEM CONTROLLER (2 UNITS)</b>				
2.1	Direction system controller with PC operation.				
2.2	Connection via Ethernet to system software.				
2.3	Capable to connect up to 8 connectable modules including solvent delivery unit, auto sampler, column oven, degassing unit and detector.				
2.4	It should function as a communication bus module with data buffering capability.				
2.5	It should acquire up to 24 hours for one analysis, at 500 m/s sampling rate.				
2.6	System is controllable from a web-based interface via a network.				
2.7	It must have a function for automatic mobile phase purging if pressure falls below specified value.				
<b>3</b>	<b>DEGASSING UNIT (2 UNITS)</b>				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
3.1	Up to 5 flow lines membrane degassing unit.				
3.2	Maximum operating flow rate: up to 10 ml/min per flow line.				
3.3	Degassed flowline capacity of 400 µl per flow line.				
3.4	It must have a leak sensor as a safety feature.				
3.5	Error status monitoring through operating software.				
3.6	Self-cleaning capability using air during pump operation.				
3.7	The liquid contact surfaces of the module should make of special synthetic polymers for all solvents.				
<b>4</b>	<b>SOLVENT DELIVERY SYSTEM (2 UNITS)</b>				
4.1	The solvent delivery system can be configured to run isocratic, high pressure gradient (2 or 3 solvents) or quaternary low-pressure gradient modes.				
4.2	Pumping method: parallel – type double plunger.				
4.3	The maximum allowable pressure is between 60 MPa and 110 MPa.				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick $\checkmark$ ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
4.4	The pump should have a feature that capable of carrying out auto-diagnostic on system status to detect air bubble formation, perform auto-purging to remove air bubble to restore system pressure and alert users of low solvent levels.				
4.5	Flow rate settable from 0.0001 to 10 ml/min in 0.1ul/min				
4.6	Flow rate accuracy: $\pm 1$ % (under specified conditions).				
4.7	Flow rate precision: $\leq 0.06$ % RSD or 0.02 min SD whichever greater.				
4.8	It should have active check valves allowing stable delivery of even non-polar organic solvents such as hexane.				
4.9	The system should have a feature to increase the flow rate to the set point. This is to avoid column damage by sudden pump starts and stops.				
4.10	Automated rinsing kit as standard supply.				
4.11	Leak sensor as safety feature.				
<b>5</b>	<b>AUTO SAMPLER (2 UNITS)</b>				
5.1.	Variable total injection volume between 0.1 $\mu$ l to 50 $\mu$ l.				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick $\checkmark$ ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
5.2	Injection volume repeatability: <ul style="list-style-type: none"> <li>• RSD <math>\leq</math> 1.0 % (for 0.5 - 0.9 <math>\mu</math>L)</li> <li>• RSD <math>\leq</math> 0.5 % (for 1.0 - 1.9 <math>\mu</math>L)</li> <li>• RSD <math>\leq</math> 0.25 % (for 2.0 - 4.9 <math>\mu</math>L)</li> <li>• RSD <math>\leq</math> 0.15% (for injections <math>\geq</math> 5.0 <math>\mu</math>L).</li> </ul>				
5.3	Injection volume accuracy of $\leq \pm 1$ % for 5 $\mu$ L injections (n = 20).				
5.4	Injection linearity: $\geq 0.9999$ .				
5.5	Carryover performance: $\leq 0.00015$ %.				
5.6	The maximum operating pressure must be between 60 MPa and 110 MPa.				
5.7	Capable of high sample processing volume; > 100 samples using 1.5 ml vials. Racks for > 100 samples using 1.5 ml vials must be included.				
5.8	Temperature setting range: 4 to 45 °C, with air circulation cooling design.				
5.9	Dip rinsing outside injector needle and injector port rinsing should come as standard. Pumping rinse outside the needle as standard.				
5.10	Safety features like leak sensor, automatic rack and vial recognition and maintenance kit should be available				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick $\checkmark$ ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
5.11	Dedicated operation function button for maintenance and validation.				
<b>6</b>	<b>COLUMN OVEN (2 UNITS)</b>				
6.1	Forced-air circulation type oven for uniform temperature distribution with a quick feedback mechanism to maintain constant temperature level even when power source voltage fluctuates.				
6.2	The temperature range: ambient $\pm$ 10 °C to 100 °C.				
6.3	Temperature control precision: $\pm$ 0.05 °C.				
6.4	Temperature control accuracy: $\pm$ 0.5 °C.				
6.5	The column oven compartment should have capacity to accommodate up to 6 units of 250 mm length column.				
6.6	The oven should have temperature limit sensor and temperature fuse and a solvent leak sensor.				
6.7	Capable of complex temperature programming in linear and step programs.				
<b>7</b>	<b>REFRACTIVE INDEX DETECTOR (1 UNIT)</b>				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick $\checkmark$ ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
7.1	Wide refractive index range (1 to 1.75 RIU).				
7.2	High-sensitivity to general purpose analysis. (Noise level $\leq 2.5 \times 10^{-9}$ AU)				
7.3	Drift level $\leq 2 \times 10^{-9}$ RIU/h				
<b>8</b>	<b>PHOTODIODE ARRAY DETECTOR (1 UNIT)</b>				
8.1	Light source from Deuterium (D2) Lamp and Tungsten Lamp				
8.2	The detector able to control the temperature on the lamp, flow cell and spectrometer to maximise baseline stability.				
8.3	Wavelength range 190 to 800nm.				
8.4	Highly sensitive analyte detection (Noise level $\leq 4.5 \times 10^{-6}$ AU)				
8.5	Wide linear range (2.5 AU)				
<b>9</b>	<b>DATA MANAGEMENT AND ACQUISITION SYSTEM</b>				
9.1	Two (2) sets of data management and acquisition system i.e. one (1) set for each HPLC system.				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
	Each system comprise of or include: <ul style="list-style-type: none"> <li>• Desktop system with specifications following manufacturer's recommendations</li> <li>• Genuine latest Microsoft Windows software compatible for use with the HPLC software</li> <li>• Genuine latest Microsoft Office Software which should include Word, Excel and Powerpoint</li> <li>• Colour Laserjet printer</li> <li>• 3 toner cartridges for each colour (staggered delivery; upon request over the warranty period)</li> <li>• HPLC software licence</li> </ul>				
9.2	Two (2) latest tablets must be supplied with the latest Windows operating system with standard accessories to be discussed and agreed with end user.				
9.3	One (1) additional HPLC software license.				
<b>10</b>	<b>OPERATING ACCESSORIES AND CONSUMABLES</b>				
10.1	Two (2) units suitable power supply rating of uninterrupted power supply (UPS) must also be provided and connected to the instrument system and workstation.				
10.2	Three (3) units of HPLC columns for total sugar analysis				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
10.3	Three (3) units of ODS HPLC columns for Caffeine Analysis				
10.4	Three (3) units of ODS2 HPLC columns for Ascorbic Acid Analysis				
10.5	TWO (2) sets of Caffeine Standards <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>				
10.6	TWO (2) sets of Total Sugar Standards (Fructose/Glucose/Sucrose/ Maltose/Lactose) <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>				
10.7	TWO (2) sets of Ascorbic Acid standards <ul style="list-style-type: none"> <li>• Primary standard or secondary standard traceable to primary standard.</li> <li>• Supplied with CoA. Must contain uncertainty value.</li> <li>• Expiration date: Minimum 2 years upon delivery.</li> </ul>				
10.8	TWO (2) sets of Reference Material for Total Sugar Analysis. <ul style="list-style-type: none"> <li>• One (1) set beverage / liquid matrix</li> </ul>				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
	<ul style="list-style-type: none"> <li>One (1) set biscuit / solid matrix</li> </ul>				
10.9	TWO (2) sets of Reference Material for Caffeine Analysis. <ul style="list-style-type: none"> <li>One (1) set beverage / liquid matrix</li> <li>One (1) set coffee / solid matrix</li> </ul>				
10.10	TWO (2) sets of Reference Material for Ascorbic Acid Analysis. <ul style="list-style-type: none"> <li>One (1) set beverage / liquid matrix</li> <li>One (1) set solid matrix</li> </ul>				
10.11	8000 units of auto sampler vials (complete with septum and cap).				
<b>11</b>	<b>SITE PREPARATION</b>				
11.1	The tenderer shall ensure that the site preparation for the placement of the system taking into the consideration on the safety of the end user during operation of the instrument.  To design, supply, deliver and install for the operational use of HPLC, RI, PDA, UPS for Total Sugar Analysis, Caffeine and Ascorbic Acid Analysis.				
11.2	It is <b>MANDATORY</b> for the tenderer to do site visit prior to tender submission to discuss site requirements. A site visit form will be provided during the visit as evidence. Non-attendance will				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
	be considered as non-compliance.				
11.3	The site preparation details should be listed out in the quotation / document submitted.				
11.4	All works involving additional electrical supply including wiring, outlets and isolators, fabrication and/or modification of work bench and any other deemed necessary to ensure successful and safe installation and operation of the system should be included.				
<b>12</b>	<b>DOCUMENTATION</b>				
12.1	The tenderer must provide the mandatory operation, service and spare parts manual.				
12.2	On-site validation and commissioning report.				
<b>13</b>	<b><u>TRAINING</u></b>				
13.1	On-site training for ALL staff members expected to handle the machine. Please ensure that adequate time is allocated such that training will take place in small groups to minimize staff shortage in the laboratory.				
13.2	Certificate of training is to be issued to all trainees after completion of training.				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
13.3	The successful tenderer needs to ensure the key users are updated on the current or relevant information related to the system used. They should provide <b>ONE</b> (1) off-site benchwork training for <b>TWO</b> (2) key users for not less than five (5) days . All expenses for attending the benchwork training shall be borne by the vendor; full registration, air ticket, daily allowance, accommodation, insurance, transport to and from the airport and place of training.				
<b>14</b>	<b><u>WARRANTY</u></b>				
14.1	A minimum of one (1) year warranty for manufacturer's defect on the hardware, software and all cost of repairs and/or replacements should be included				
14.2	After-sales services must be provided for the product after one (1) year				
14.3	One-off preventive maintenance to be carried out just before or soon after the one-year warranty period. Scope of work to follow manufacturer's manual / recommendation specific for the equipment offered, which include: <ul style="list-style-type: none"> <li>• Supply, delivery and installation of preventive maintenance kits and/or consumables</li> <li>• Software update (to obtain prior authorization from user and BME)</li> <li>• Inspection</li> </ul>				

NO.	ITEM DESCRIPTIONS AND SPECIFICATIONS	VENDOR'S OFFER			
		COMPLY (Please tick <input checked="" type="checkbox"/> ) (Provide evidence for compliance(s))		ITEM DESCRIPTIONS AND SPECIFICATIONS	PRICE (\$)
		YES	NO		
	<ul style="list-style-type: none"> <li>• cleaning</li> <li>• alignment</li> <li>• calibration</li> <li>• any other related preventive maintenance works required</li> </ul>				
<b>15</b>	<b>DELIVERY</b>				
15.1	Items offered <b>MUST be delivered within six (6) months</b> from date of approval. (Vendor to indicate the delivery period.)				
<b>16</b>	<b>PRICE VALIDITY</b>				
16.1	Price validity <b>MUST NOT BE LESS THAN 90 days</b> or three (3) months.				
<b>TOTAL PRICE (B\$)</b>					

NO.	GENERAL SPECIFICATIONS	VENDOR'S OFFER
A	Total Price: B\$	
B	Delivery Period:	
C	Model & Brand:	
D	Country of Origin:	
E	Where marketed:	
F	Year of Manufacture:	
G	Warranty:	
H	Power Requirement:	
I	Battery Back-up:	
J	International Safety Standard:	
K	Technical Support:	
L	Equipment Whole Life Support:	
M	Dimensions (WxHxD) cm:	
N	User Manuals:	
O	Service Manuals:	
P	Spare-parts & Consumables Listing:	
Q	Technical Training On-Site:	
R	Site Requirements:	

1. We offer and undertake on your acceptance of our Tender to provide the above mentioned services in accordance with your Invitation To Tender.
2. Our Tender is fully consistent with and does no contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.
3. OUR OFFER IS VALID FOR **TWELVE (12)** CALENDAR MONTHS FROM THE TENDER CLOSING DATE.
4. When requested by you, we shall extend the validity of this offer.
5. We further undertake to give you any further information which you may require.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
**[Signature of authorised officer of Tenderer]**  
Name:  
Designation:

Tenderer's official stamp