

### Centre for Advanced Research in Sciences (CARS) University of Dhaka, Dhaka 1000.

#### **Invitation for Tender (National)**

Ref No. CARS/ST/P-227/OTM/AQRML/RB/16-17.

Sealed Tenders are hereby invited from reputed supplier for Supply, Installation, Testing and Commissioning of Trinocular Microscope, Software and Image capture device for the Air Quality Research and Monitoring (AQRML) Laboratory at the Centre for Advanced Research in Sciences (CARS), University of Dhaka.

Date: \(\frac{59-02-5828 বঙ্গান্দ}{31-05-2017 খ্রিষ্টান্দ}

1.	Ministry/Division	Ministry of Education			
2.	Agency	University of Dhaka			
3.	Procuring Entity Name	Centre for Advanced Research in Sciences (CARS), University of Dhaka.			
4.	Procuring Entity Code	Not used			
5.	Procuring Entity District	Dhaka			
6.	Invitation for	Research based Trinocular Microscope, Sof	tware and Image capture device.		
7.	Invitation Ref No.	Ref. No. & Date: CARS/ST/P-227/OTM/AQF 31-05-2017 খ্রিষ্টাব্দ	RML/RB/16-17, Date: ১৭-০২-১৪২৪ বঙ্গান্দ/		
8.	Date :	১৭-০২-১৪২৪ বঙ্গান্দ 31-05-2017 খ্রিষ্টান্দ			
KEY	INFORMATION				
9.	Procurement Method	Open Tendering Method			
FUN	DING INFORMATION				
10.	Budget and Source of Funds	Revenue Budget (RB)			
11.	Development Partner (if	N/A			
	applicable)				
PAR	TICULAR INFORMATION				
12.	Project/Programme Code (if applicable)	Not used			
13.	Project/Programme Name (if applicable)	Not Applicable			
14.	Tender Package No.	As mentioned in clause 26			
		Supply, Installation, Testing and Commision	Supply, Installation, Testing and Commissioning of Trinocular Microscope, Software and		
15.	Tender Package Name	Image capture device for the Air Quality Research and Monitoring (AQRML) Laboratory at the CARS.			
16.	Tender Publication Date	\(5 - 0 \cdot - \delta 8 \cdot			
17.	Tender Last Selling Date	<u>০৫-০৩-১৪২৪ বঙ্গান্দ</u> Up to office hours. 19-06-2017 খ্রিষ্টান্দ			
		Date :	Time:		
18.	Tender Closing Date and Time	<u>০৬-০৩-১৪২৪ বন্ধান্দ</u> 20-06-2017 খ্রিষ্টাব্দ	12:00 Noon		
19.	Tender Opening Date and Time	০৬-০৩-১৪২৪ বন্ধান 20-06-2017 খ্রিষ্টান্দ	12:30 pm		

20.	Name & Address of the Office(s)	Address(s)				
	-Selling Tender Document (Principal)	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.				of Dhaka.
	-Receiving Tender Document	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.				
	-Opening Tender Document	Centre for Advanced Research in Sciences (CARS), University of Dhaka.				
21.	Place/Date/Time of Pre-Tender	Name/Addr		Date:	Time	
	Meeting	-,			_	
INFC	DRMATION FOR TENDERER			L.	<u>l</u>	
22.	Eligibility of Tenderer's	<ul> <li>(i) Trade License</li> <li>(ii) VAT Registration Certificate</li> <li>(iii) Income Tax Clearance Certificate</li> <li>(iv) Experience Certificate in similar supply and works of comparable value in a single tender in last five years as mentioned in TDS</li> <li>(v) Bank solvency Certificate as mentioned in TDS</li> <li>(vi) Competency certificate of after sale service as mentioned in the TDS</li> <li>(vii) Manufacturer Authorization for suitable Lot or Item only.</li> <li>(viii) Applicant must be owner of the firm or Representative of the firm will be authorized by the owner of the Firm with seal of the owner.</li> </ul>				
23.	Brief Description of Goods	Supply, Inst	allation, Tes		oning of Trinocular I	
24.	Brief Description of Related Services	Supply, Installation, Testing and Commisioning of Trinocular Microscope, Software and Image capture device for the Air Quality Research and Monitoring (AQRML) Laboratory at the CARS.				
25.	Tender Document Price TK <b>2,000.00</b>	The Price of Tender Schedule as mentioned is to be deposited in A/C No. 36000392 -Janata Bank, T.S.C branch, Dhaka University. Tender schedule and terms and conditions may be collected on submission of the deposit receipt from the above mentioned offices on all working days except on the date fixed for submitting the tender.				
26.	Identification/Name of Equipment	Location		Tender Secur	itv	Completion Time
	4.4			Amount in T	-	
	"Supply, Installation, Testing and		Item-1 : Tr	inocular	8,800.00	90 days from the
	Commissioning of Trinocular Microscope,	CARS, DU.	Microscop	e.	,	date of issuance
	Software and Image capture device"	,	Item-2 : So	ftware and	5,600.00	of Purchase order
			Image cap	ture device.		
PRO	CURING ENTITY DETAILS					
27.	Name of Official Inviting Tender	Prof. Dr. Gol	am Mohami	med Bhuiyan		
28.	Designation of Official Inviting Tender	Director				
29.	Address of Official Inviting Tender	Centre for Advanced Research in Sciences (CARS), University of Dhaka.				
30.	Contact details of Official Inviting Tender		xt. 4616/ 46		•	
31.	The procuring entity reserves the right to accept or reject any or all tenders without assigning any reason whatsoever. The procuring authority also reserves the right to omit, increase and/or decrease the quantity of any Lot/item/items from the Tender. The suppliers must abide by the decision of the University authority. Tender form, schedule of items of supply, tender notice and terms and conditions etc. will form the integral part of the tender. The suppliers should write the <b>name of the Lot and Lot No and the name of the firm on the envelope clearly</b> . Vat, Income Tax and other Taxes, if any, imposed by the Govt. will be deducted from their bills as per Govt. rules.					



## Section 6. Schedule of Requirements

This Section provides the List of Goods and Delivery Schedule and List of Related Services and Completion Schedule and must be carefully prepared by a Procuring Entity for each object of procurement.

Invitation for Tender No :	Date :	
Tender Package No :		

## A. List of Goods & Related services and Delivery Schedule

Item No.	Description of Item	Unit of Measure ment	Quantity	Point of Delivery	Delivery Period Required
1	2	3	4	5	6
Iten	n-1 :Trinocular Microscope.				
01	Trinocular Microscope:  Particle size analysis System with C Mount adaptor and High resolution Integrating Camera with the following feature.  Microscope Specification: Objectives  All models are standard equipped with achromatic corrected 4x/0.13, 10x/0.25, S40x/0.65 objectives. The 20x/40, S60x/0.85 and S100x/1.25 objectives are also available. All optical parts are anti-fungus treated and are anti-reflection coated  Stage  Plain 123 x 119 mm stage with 2 object clamps except for the EC.1x5x models which are equipped with an integrated mechanical X-Y stage. Polarization models with a 360° rotatable 129 mm round stage and 2 object clamps  Condenser  In height adjustable Abbe condenser  Illumination	No's	1	CARS, DU	90 days from the date of issuance a purchase order.
	1 W intensity adjustable LED illumination with				

				1
capt	internal power supply.  Eyepiece: Secured DIN WF 10x/18 mm with pointer  Camera Spec: Interface: USB2.0  Shutter Type: Global hutter  Optical Format: 1/2 inch  Active Pixels: 2048 (H)x1536 (V)  Active Imager Size: 6.55(H)x4.92(V)mm  Pixel Size: 3.2(H)x3.2(V) um  Sensitivity: 1.0/Lux-sec(550nm)  Color Filter Array: RGB Bayer Pattern  Lens Mount: C-Mount(Lens is not attached)  Frame Rate: 6fps  Trigger: External Trigger  Shutter Speed: 1/9760 to 6.71(sec)  1-2: Software and image ture device for Particles plus automatic particle sizing and			
	asurements.			
01	<ul> <li>Advanced processing algorithms for detecting different type of particles.</li> <li>Standard and user definable method files to handle different sample types.</li> <li>Advanced macro builder.</li> <li>Over 50 measurements for area, size, shape and intensity.</li> <li>Detected particles can be grouped in user definable classes using a combination of any measurement parameters.</li> <li>Can process a batch of greater than 1000 images at a time for automatic multiple field analysis.</li> <li>All data/results can be transferred to Ms Excel.</li> <li>In built report generator for generating custom reports complete with Data tables, histograms and images</li> <li>All data stamped with date, time, magnification and calibration information.</li> </ul>	No's	01	
02	Image capture device: Built in Hi-res megapixel CCD Camera with USB interface for live image preview and capture. Calibration of the System with Traceability	No's	01	

	1	1	1
Certificate using UKAS Calibration Slide			
Validation of the System using NIST certified			
20 μ Microsphere Beads			

Country of Origin: USA/UK/EU/Germany/Japan/Australia/Canada/Equivalent.

# Section 7. Technical Specifications.

The Goods and Related Services shall comply with following Technical Specifications:

Item No	Name of Item or Related Service	Technical Specification and Standards
»	CARS	Supplier
tem	-1 :Trinocular Microscope.	
	Particle size analysis System with C Mount adaptor and High resolution Integrating Camera with the following feature.  Microscope Specification: Objectives All models are standard equipped with achromatic corrected 4x/0.13, 10x/0.25, S40x/0.65 objectives. The 20x/40, S60x/0.85 and S100x/1.25 objectives are also available. All optical parts are anti-fungus treated and are anti-reflection coated Stage Plain 123 x 119 mm stage with 2 object clamps except for the EC.1x5x models which are equipped with an integrated mechanical X-Y stage. Polarization models with a 360° rotatable 129 mm round stage and 2 object clamps Condenser In height adjustable Abbe condenser Illumination 1 W intensity adjustable LED illumination with internal power supply. Eyepiece: Secured DIN WF 10x/18 mm with pointer Camera Spec: Interface: USB2.0 Shutter Type: Global hutter Optical Format: 1/2 inch Active Pixels: 2048 (H)x1536 (V) Active Imager Size: 6.55(H)x4.92(V)mm Pixel Size: 3.2(H)x3.2(V) um Sensitivity: 1.0/Lux-sec(550nm) Color Filter Array: RGB Bayer Pattern Lens Mount: C-Mount(Lens is not attached) Frame Rate: 6fps Trigger: External Trigger Shutter Speed: 1/9760 to 6.71(sec)	

Iter	Item-2 : Software and image capture device				
for	Particles plus for automatic particle sizing				
and	measurements.				
01	<ul> <li>Advanced processing algorithms for detecting different type of particles.</li> <li>Standard and user definable method files to handle different sample types.</li> <li>Advanced macro builder.</li> <li>Over 50 measurements for area, size, shape and intensity.</li> <li>Detected particles can be grouped in user definable classes using a combination of any measurement parameters.</li> <li>Can process a batch of greater than 1000 images at a time for automatic multiple field analysis.</li> <li>All data/results can be transferred to Ms Excel.</li> <li>In built report generator for generating custom reports complete with Data tables, histograms and images</li> <li>All data stamped with date, time, magnification and calibration information.</li> </ul>				
02	Image capture device:  Built in Hi-res megapixel CCD Camera with USB interface for live image preview and capture.  Calibration of the System with Traceability Certificate using UKAS Calibration Slide  Validation of the System using NIST certified 20 µ  Microsphere Beads				