

REQUIREMENT SPECIFICATIONS

SUPPLY, DELIVERY & INSTALLATION OF ONE (1) UNIT OF DESKTOP WORKSTATION FOR LABORATORY DATA PROCESSING

1. SCOPE OF QUOTATION

The quotation calls for supply, delivery and installation of one (1) unit of desktop workstation for processing data acquired on laboratory instrument Waters Xevo G2-S QTOF coupled with UPLC at PUB, Water Quality Laboratory, 82 Toh Guan Road East, WaterHub, Singapore 608576.

2. TECHNICAL SPECIFICATIONS

2.1 The desktop workstation shall fulfil the requirements specified below:

- a) Intel Xeon E5-1630 v4 3.7GHz 4c Processor, or equivalent
- b) On board Gigabit Network adapter
- c) Windows 7 Professional (64-bit)
- d) 64 GB (QTY 4 x 16 GB ECC DDR4 2133 MHz)
- e) NVIDIA K620 graphics card
- f) 1 x 512GB M.2 SATA Solid State Drive
- g) 2 x 4TB SATA 3.5" 7200 RPM 6GB/s Hard Drives
- h) 1x 6TB SATA 3.5" 7200 RPM 6GB/s Hard Drive
- i) 16x DVD +/- RW Dual Layer optical drive
- j) Intel 82574L Gigabit Ethernet Adapter, or equivalent
- k) PCI Wifi card
- l) Microsoft Office professional 2016
- m) Four (4) years on-site international warranty with Non-Return HDD

2.2 Data processing software shall fulfil the requirements specified below:

- a) The software shall be compatible with current Waters MassLynx software and process the data acquired with MassLynx software by Waters Xevo G2-S QTOF instrument.
- b) The software must be able to perform peak detection through componentization for all for MS^E data acquisition to provide cleaner spectra than traditional scan by scan peak detection.
- c) The software must demonstrate the identification of unknowns by searching for diagnostic fragments, common losses and neutral losses, minimizing the interference from non-related ions.
- d) The software must be capable of aligning MS^E data according to UHPLC retention time and then automatically associating the precursor ion for each sample component to its fragment ion spectrum. It must be possible to automatically interrogate the processed MS^E dataset.

- e) The software must be able to automate batch processing of unknowns by utilizing elemental composition, online or Scientific Library searching and MS^E high energy fragmentation data all in one process; return results based on evidence such as fragments matched/fragmentation coverage in high energy data; use scientific citations to restrict results (if using online ChemSpider)
- f) The software must be able to identify relevant components more easily with the inclusion of additional rich information in Review. Common Fragments and Neutral Losses can be stored in the Scientific Library and imported into an analysis method.
- g) The software must be capable of providing functions in filtering parameters for easier relevance match that was not screened for.
- h) The software should provide a quantitation package as standard which provides quantification of LCMS data. It should process groups of samples, providing automated peak detection, calibration and quantification.
- i) The software should use APEX Peak Tracking, which determines the location of the peak and the baseline through the use of at least the second derivative of the acquired data.
- j) The software shall include Pesticides Library with over 2,000 pesticides.
- k) The software shall include Pesticides Library Toxicology Library with over 1,000 toxicologically relevant compounds all complete with retention time information.
- l) One (1) year warranty to cover software and database update.
- m) Comprehensive training on utilizing the software must be provided.

2.3 The Contractor shall install, configure and commission the following software items with complete documentation:

- a) The software package and accompanying modules
- b) Operating system and necessary server components
- c) Antivirus software
- d) Backup software

3. SUPPLY OF ELECTRONIC MEDIA FREE FROM UNAUTHORISED CODE

- a. "Unauthorised Code" means any virus, Trojan Horse, worm logic bomb or other software routine or hardware components designed to permit unauthorised access, to

disable, erase, or otherwise harm software, hardware or data or to perform any such actions.

- b. The Contractor shall warrant that all storage media and software capable of being stored on electronic media supplied by the Contractor to the Board shall not contain any Unauthorised Code.
- c. The Contractor shall conduct a complete and thorough scan for Unauthorised Code using updated anti-virus software on all storage media and software capable of being stored on electronic media supplied by the Contractor to the Board.
- d. The Contractor shall be liable for and shall indemnify the Board fully against all costs and expenses incurred in the course of or incidental to removing the Unauthorised Codes, and recovering any lost or damaged data or software arising from the Unauthorised Code in the electronic media supplied by the Contractor.

4. VALIDITY OF QUOTATIONS

Quotations are to be **valid for a period of ninety (90) days** from the closing date of the quotation but the Board reserves the right to recall fresh quotations before the expiry of the validity period of the quotation.

5. AFTER SALES SERVICES

The Supplier may provide full details in his covering letter of after sales services, response time and price quoted in the supply, replacement, repair and servicing of the items supplied if applicable.

6. PLACE AND PERIOD OF DELIVERY

The supplier shall supply and install the desktop workstation complete with the requirements as specified in clause 2 to PUB, Water Quality Laboratory, 82 Toh Guan Road East, WaterHub, Singapore 608576 within 12 weeks from the date of Letter of Acceptance. The supplier shall also provide 3 years on-site warranty from the date of receipt of the desktop workstation.

PUBLIC UTILITIES BOARD
SUPPLY, DELIVERY & INSTALLATION OF ONE (1) UNIT OF DESKTOP WORKSTATION
FOR LABORATORY DATA PROCESSING

AOR No. : 44170194
Quotation Reference :
Closing Date : 13 Jun 2017

SCHEDULE OF PRICES

S/No	Description	Quantity	Unit	Rate (S\$)	Total (S\$)
1	SUPPLY, DELIVERY, & INSTALLATION OF ONE (1) UNIT OF DESKTOP WORKSTATION FOR LABORATORY DATA PROCESSING	1	SET		
Total Amount (excluding Singapore Goods and Services Tax)					

Singapore Dollars (In Words): _____

Name of Tenderer: _____

Date: _____

Name and Address of Company: _____

Tel & Fax No : _____

Note: (a) *Tenderers are required to price each and every item.*
(b) *Items not quoted in the offers should be clearly indicated.*
(c) *This copy is to be submitted together with your quotation through GeBIZ as an attachment file. Failure to submit this Schedule may preclude the quotation from consideration.*