

Customer:

Mr. Nyuk Han Chin
Public Utilities Board
Water Research Analytical Lab
82 Toh Guan Road East
#C2-22 Waterhub
Singapore 608575

Email : chin_nyuk_han@pub.gov.sg
Tel : 92222511

Xevo TQ-S micro System

Quotation No. 22071351 - Expiration Date : 24.08.2019

General information

228171/11951379

Provider:

Waters Pacific Pte Ltd
Joanna Ang
1 Science Park Road
#02-1/06 The Capricorn
Singapore Science Park II
Singapore 117528

Email : Joanna_Ang@Waters.com

Quotation

Xevo TQ-S micro System

Price Details in SGD

Please reference this quotation when purchase order is issued

Itm	Part No.	Description	Unit Price	Qty	Gross Price	Disc %	Net Price
Xevo TQ-S micro System							
With the following configuration:							
1	176003468	Xevo TQ-S micro	474,392.00	1	474,392.00	-55.00%	213,476.40
2	176003469	MS Ref Stds Xevo TQ-S micro	1,600.00	1	1,600.00	-55.00%	720.00
3	176002526	MassLynx Workstation with TL	25,487.00	1	25,487.00	-55.00%	11,469.15
4	668000419	Monitor, 27"	1,856.00	1	1,856.00	-55.00%	835.20
5	176002669	Scroll Pump Option	17,665.00	1	17,665.00	-55.00%	7,949.25
6	186005588	Nitrogen Generator NM32LA 230v	33,425.00	1	33,425.00	-55.00%	15,041.25
7	176015111	ACQ. I-Class PLUS Sys. (CM-A) w/SM-FTN-I	149,295.00	1	149,295.00	-55.00%	67,182.75
8	176015129	ACQUITY UPLC PLUS Column Heater CH-30A	7,956.00	1	7,956.00	-55.00%	3,580.20
9	430002012	ASSY, EXTENSION LOOP, 50uL	269.00	1	269.00	-55.00%	121.05
10	700002570	SYRINGE, 100 ul, HP	470.00	1	470.00	-55.00%	211.50
11	205001802	Kit, ACQ UPLC Column Module Switchbox	932.00	1	932.00	-55.00%	419.40
12	741000321	TQD SYSTEM INSTALLATION CERT	20,170.00	1	20,170.00	-55.00%	9,076.50
13	750000529	On-Site MS/App Training -ROW (2 Days)	13,893.00	1	13,893.00	-55.00%	6,251.85
14	750000608	Maintaining the ACQUITY I-Class System	1,542.00	1	1,542.00	-55.00%	693.90
15	176003950	Analytical LC-MS Solvent Install Kit	2,592.00	1	2,592.00	-55.00%	1,166.40
16	186007949	VanGuard Cartridge Holder	272.00	1	272.00	-55.00%	122.40
17	186008484	CORTECS T3 2.7µ 2.1x100 Col	1,190.00	2	2,380.00	-55.00%	1,071.00
18	186006103	XSelect CSH C18 2.5µm 2.1x100mm XP col	1,508.00	2	3,016.00	-55.00%	1,357.20
19	186007949	VanGuard Cartridge Holder	272.00	1	272.00	-55.00%	122.40
20	186007817	XSelect CSH C18 V-Gd Cart 2.5µ 2.1X5 XP	732.00	1	732.00	-55.00%	329.40
21	186002352	ACQUITY UPLC BEH C18 1.7µm 2.1x100mm Col	1,504.00	2	3,008.00	-55.00%	1,353.60
22	186003975	ACQUITY BEH C18 1.7µM VANGUARD Pre-Col	1,279.00	1	1,279.00	-55.00%	575.55
23	186002353	ACQUITY UPLC BEH C18 1.7µm 2.1x150mm Col	1,576.00	2	3,152.00	-55.00%	1,418.40
24	JWSG01235	Laser Printer	800.00	1	800.00		800.00
25	JWSG01235	Microsoft Office	400.00	1	400.00		400.00
Total					766,855.00		345,744.75

Quotation

Xevo TQ-S micro System

Price Details in SGD

Please reference this quotation when purchase order is issued

Total excluding GST		345,744.75
GST	7.00 %	24,202.13
Total		369,946.88

Joanna Ang
Account Manager

Julius Hiu
Sales Manager, Singapore

Terms of Payment

30 Days - document date

Shipping Information

DDP

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Item	Part No.	Description
------	----------	-------------

1	176003468	Xevo TQ-S micro
---	-----------	------------------------

The Xevo® TQ-S micro is a sensitive but compact tandem quadrupole mass spectrometer featuring reliable performance with a wide dynamic range and high rates of data acquisition. Robust sensitivity is enabled by proven ZSpray™ and StepWave™ which facilitate the detection of analytes at low concentrations in complex matrices and enable low volume injections with consistent, precise and accurate results. Xtended dynamic range™ (XDR) technology provides accessible sensitivity and method transfer. The Xevo® TQ-S micro makes it easier to confidently quantify more analytes using reproducible high acquisition rates with Xcellerated Ion Transfer™ (XIT). Using RADAR, which enables rapid switching between MS full scan and MS/MS acquisition modes, analysts can understand sample complexity and improve method development.

The following items are included as part of the standard system:

Z SPRAY™ API interface#Dual orthogonal interface for robust LC/MS

Electrospray (ESI) inlet probe#for efficient ionisation of a wide range of compounds

ESCI™ ionisation capability#rapid switching source for both ESI and APCI in the same run

IntelliStart™ fluidics#Automated tuning, calibration and method development

TargetLynx XS™ #Application manager (requires license as provided with PC, below)

OpenLynx™ #Application manager (requires license as provided with PC, below)

The standard system does not include the following items, which must be specified separately:

Additional inlet probes and ion source options (detailed below).

Acquisition PC data system and monitor

Additional Workstation data system terminals.

Printers.

Additional MassLynx™ options (detailed below).

Vacuum backing pump options (rotary or oil-free combinations)

HPLC systems or other inlet options.

1. Z SPRAY™ API INTERFACE

This instrument is equipped with an atmospheric pressure ionisation (API) LC interface. The source and spraying elements are visible through a transparent window in the enclosure and are easily accessible via a quick-release mechanism. The source elements may be wiped clean in situ or removed for cleaning without the need for tools and without breaking vacuum. The nebulized spray is orientated orthogonally and positioned off axis for maximum source longevity and analyser protection against 'dirty' samples. The source also includes facilities for de-clustering ions formed at atmospheric pressure. Positive and negative capability is included. Positive ion, negative ion and ESCI™ capability is available as standard (allowing rapid switching between ESI and APCI, positive and negative in the same run). All source voltages and gases are under data system control.

2. INTELLISTART™ FLUIDICS

The instrument is equipped with an on-board infusion system capable of delivering reference solutions from 3 built-in vial locations. The on-board fluidics system is controlled by the IntelliStart software to provide automated instrument setup, mass calibration and method development. The reference solutions are delivered via switching valves for either direct or combined (into an LC flow) infusion into the API source. The valves can in addition be programmed from the software to function as an LC flow divert. If required, the fluidics can be controlled manually via the system Console.

3. TANDEM QUADRUPOLE ANALYSER

The instrument is equipped with two high performance quadrupole mass analysers with inter-element beam focusing and a

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Itm	Part No.	Description
-----	----------	-------------

mass range of 2-2000 amu. Pre-filters are fitted to the mass analysers to maximise resolution and transmission. The pre-filters also eliminate the need for cleaning of the quadrupole mass analysers. All lens and analyser voltages are digitally controlled. Analyser parameters may be programmed with respect to mass for optimal performance. Analyser parameters used for data acquisition are automatically recorded and appended to the relevant data file.

3. StepWave" ION TRANSFER OPTICS

This instrument is equipped with patented, off-axis StepWave " ion transfer optics. Uniquely the StepWave technology both dramatically increases the efficiency of ion transfer from the ion source to the quadrupole MS analyser at the same time as efficiently eliminating undesirable neutral contaminants. The technology employed allows Xevo TQ-S micro to deliver unprecedented levels of sensitivity, speed, and selectivity.

4. COLLISION CELL

The collision cell can be operated as a high efficiency travelling wave (T-Wave) device for collision induced dissociation. The travelling wave enables rapid cell clearance and refill for fast MRM transition switching while maintaining optimum signal to noise.

T-Wave" :

The cell can be operated as a high efficiency travelling wave (T-Wave) device for collision induced dissociation. The travelling wave enables rapid cell clearance and refill for fast MRM transition switching while maintaining optimum signal to noise.

RADAR" :

An information-rich acquisition approach that allows you to collect highly specific quantitative MRM data for target compounds while providing additional spectral data to help visualize all other components in the sample.

5. VACUUM SYSTEM

Clean, differentially pumped, automated vacuum system comprising:

Air-cooled Pfeiffer splitflow turbomolecular drag pump evacuating both the source & analyser.

Vacuum read backs and system vent/pump cycles are digitally monitored and controlled, to provide total software control and ensure fail-safe operation in the event of power failure.

The backing option must be ordered separately (See Backing Pump Options for part numbers and descriptions)

6. DETECTOR - Xtended Dynamic Range" (XDR)

The instrument is equipped with a low noise dynolite photomultiplier detector. The detector is positioned after the second analyzer. A High Voltage conversion dynode and phosphor are positioned at 90° off-axis to the analyser for the elimination of neutral noise. The detector features novel, integral focusing optics, which provides a detection efficiency approaching 100% for single ions. New XDR electronics incorporate 40 MS/s and 16 bit ADC to increase the dynamic range. The photomultiplier is enclosed in its own vacuum envelope for long life. The detector operates in both positive and negative ion mode, which can be switched rapidly under software digital control.

7. MASSLYNX" SOFTWARE / MS Workstation

The MS Workstation and MassLynx" 4.1 License for the application software for instrument control, data acquisition and processing must be ordered separately (See MS Workstation Variant Configurator section for part numbers and descriptions) Post acquisition processing and general data manipulation can be carried out by an additional computer workstation and software installation (See the MassLynx" Process-only Workstations section of the MassLynx Variant configurator 176706000).

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Itm	Part No.	Description
2	176003469	MS Ref Stds Xevo TQ-S micro
3	176002526	MassLynx Workstation with TL MassLynx" Workstation with License MassLynx Application Software License includes key discs for TargetLynx" and OpenLynx" Lenovo ThinkStation P520 Series with Windows 10 Enterprise LTSB Processor: Intel® Xeon® W-2125 Processor (4.0 GHz 4c); Operating system: Windows 10 Enterprise LTSB (US English); Form factor: Tower 4x6 Mechanical; Motherboard: P520 - TPM Enabled; Total memory: 64 GB; Video adapter: NVIDIA Quadro P1000 4GB 4mDP HP; Audio adapter: Integrated Audio; RAID: Internal RAID - Not Enabled; Flash: 1x 512GB SSD M.2 PCIe OPAL; Hard drive: 1x 10TB SATA3 3.5" Hard Drive - 7200 rpm; First optical device bay: Lenovo 16x DVD +/- RW Dual Layer (Windows 10); Networking: Integrated Ethernet 10/100/1000, 1x Intel i210-t1 Ethernet 10/100/1000; Keyboard: Lenovo USB Preferred Pro Full Size Keyboard - US Euro; Pointing device: Lenovo Optical Wheel Mouse - USB Primax 400 DPI; Line Cord: US; Language Pack: English; System Warranty: Non-Return HDD - 4 Year Warranty US/EMEA/AP, Four year on-site warranty (parts and labour); Monitor: None; Printer: None
4	668000419	Monitor, 27"
5	176002669	Scroll Pump Option
6	186005588	Nitrogen Generator NM32LA 230v Nitrogen Generator NM32LA 230v The Peak Scientific NM32LA is a self-contained Nitrogen Generator with built-in Air Compressor. No additional equipment is required. Quiet in operation, the NM32LA utilizes membrane technology to selectively remove oxygen, moisture and other gases to leave clean, dry, phthalate free nitrogen. Note this option will only run a single Mass Spectrometer.
7	176015111	ACQ. I-Class PLUS Sys. (CM-A) w/SM-FTN-I ACQUITY UPLC I-Class PLUS Column Manager System (CM-A) with SM-FTN-I The ACQUITY UPLC I-Class PLUS Column Manager System has integrated solvent, sample and column heating configured for binary solvent delivery and sample introduction via a Flow-Through Needle sample manager (SM-FTN-I). The system may be configured with UV-based UPLC optical detectors and any currently supported Waters#mass detector, with a choice of instrument control and data management software. The following items are included as part of the column manager system: # ACQUITY UPLC I-Class PLUS Binary Solvent Manager (BSM) # ACQUITY UPLC I-Class PLUS Sample Manager # Flow-Through-Needle (SM-FTN-I) # Column Manager (CM-A) configured with two (2) 0.003#/0.076 mm I.D. ActivePre-Heaters, additional tubing and 18K PSI

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Itm	Part No.	Description
-----	----------	-------------

		valve kit
		# ACQUITY UPLC I-Class PLUS Column Manager System Start Up Kit
		# Total of 4 Leak Sensors
		# ACQUITY UPLC Absorbance Start-Up Solution
		# Information Set
		# ACQUITY UPLC Solvent Tray Module
		# ACQUITY UPLC I-Class PLUS System Start Up Kit
		# ACQUITY UPLC BEH C18 Column, 2.1 x 50 mm, 1.7 µm
		# Vials
		Replaces 176015074

8	176015129	ACQUITY UPLC PLUS Column Heater CH-30A
----------	------------------	---

ACQUITY UPLC PLUS Column Heater 30-A

The 30cm Column Heater (CH-30A) insulates the column from ambient environmental variations. The CH-30A supports a single column having dimensions up to 4.6 mm I.D. and 300 mm length (including guard column). Temperature control is maintained for the range of 20°C (or 5 degrees above ambient) to 90°C. The CH-30A comes standard with a biocompatible active pre-heater (APH) enabling active solvent conditioning, prior to the column, improving chromatographic separations.

ACQUITY UPLC Columns, equipped standard with eCord Information Management Technology, interface with a communications reader in the column heater module to enable bidirectional communication of column manufacturing information and time-based usage of the column. All information is stored in the eCord device, and is accessible through the Waters Console.

Note: this assembly has replaced the original p/n 176015046.

9	430002012	ASSY, EXTENSION LOOP, 50uL
----------	------------------	-----------------------------------

Assy, Extension Loop, 50uL

10	700002570	SYRINGE, 100 uL, HP
-----------	------------------	----------------------------

Syringe, 100 uL, HP

11	205001802	Kit, ACQ UPLC Column Module Switchbox
-----------	------------------	--

CHA/30 cm Column Mgr Switchbox Kit

For FTN-Style injectors only. Allows CH-A and CH-30A/CHC 30cm to be connected simultaneously.

12	741000321	TQD SYSTEM INSTALLATION CERT
-----------	------------------	-------------------------------------

Waters TQ Detector MS System Installation

Includes:

-System Set up and Specification Testing

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Itm	Part No.	Description
-----	----------	-------------

-Product Familiarization Training
-1 Year Manufacturers Warranty
- Insight Remote Intelligent Services

13	750000529	On-Site MS/App Training -ROW (2 Days)
-----------	------------------	--

On-Site MS/Application Training - ROW (2 Days)

14	750000608	Maintaining the ACQUITY I-Class System
-----------	------------------	---

15	176003950	Analytical LC-MS Solvent Install Kit
-----------	------------------	---

Analytical LC-MS Solvent Install Kit

The Analytical LC-MS Solvent Install Kit is intended to assist in effectively installing new LC-MS systems by minimizing sources of possible contamination. This kit includes the LC-MS Grade Solvent Kit (186008715) as well as the Waters Certified Container Kit (186007088). Additional kit components also include a formic acid additive, aqueous ammonia additive and nitrile gloves.

Note: Because this is a hazardous material and GHS requirements vary from country to country, Waters Corporation is only able to ship this item to specific countries worldwide. If the destination for this order (i.e. the ship to country) is changed to a non-permitted country at any point after this quote was generated, this item will be excluded from the final order.

16	186007949	VanGuard Cartridge Holder
-----------	------------------	----------------------------------

VanGuard Cartridge Holder, 1/pkg

17	186008484	CORTECS T3 2.7µ 2.1x100 Col
-----------	------------------	------------------------------------

CORTECS Solid Core T3 Column, 120Å, 2.7 µm, 2.1 mm X 100 mm, 1/pk

18	186006103	XSelect CSH C18 2.5µm 2.1x100mm XP col
-----------	------------------	---

XSelect CSH C18 XP Column, 130Å, 2.5 µm, 2.1 mm X 100 mm, 1/pk

20	186007817	XSelect CSH C18 V-Gd Cart 2.5µ 2.1X5 XP
-----------	------------------	--

XSelect CSH C18 XP VanGuard Cartridge, 130Å, 2.5 µm, 2.1 mm X 5 mm, 3/pk

21	186002352	ACQUITY UPLC BEH C18 1.7µm 2.1x100mm Col
-----------	------------------	---

Quotation

Xevo TQ-S micro System

Detail Product Descriptions

Itm	Part No.	Description
		ACQUITY UPLC BEH C18 Column, 130Å, 1.7 µm, 2.1 mm X 100 mm, 1/pk
22	186003975	ACQUITY BEH C18 1.7µM VANGUARD Pre-Col ACQUITY UPLC BEH C18 VanGuard Pre-column, 130Å, 1.7 µm, 2.1 mm X 5 mm, 3/pk
23	186002353	ACQUITY UPLC BEH C18 1.7µm 2.1x150mm Col ACQUITY UPLC BEH C18 Column, 130Å, 1.7 µm, 2.1 mm X 150 mm, 1/pk
24	JWSG01235	Laser Printer
25	JWSG01235	Microsoft Office

Quotation

Xevo TQ-S micro System

General Sales Terms and Conditions

1. General
Waters Pacific Pte Ltd ("Seller") hereby agrees to sell the products to buy upon the terms and conditions set forth herewith. Seller shall not be bound by any standard or printed terms furnished by the Buyer in any of its documents, unless the Buyer specifically states in writing separately from such terms that it intends such terms to apply and the Seller acknowledges such notification in writing.
2. Price
 - a. Unless otherwise agreed at the time of sale, the price stated is ex-works and exclusive of Goods & Services Tax which shall be chargeable in addition upon supply of goods.
 - b. All quotations and estimates used by Seller are, unless otherwise stated, based on current costs and are subject to amendment on or after acceptance of order by Seller to meet any rise in such costs.
 - c. Any variation to prices quoted as a result of government taxes and levies will be for the Buyer's accounts.
 - d. Written quotations automatically expire 30 calendar days from the date issued and are subject to termination by notice within that period. All orders based on written quotations are subject to Seller's acceptance at its office in 1 Science Park Road #02-01 The Capricorn, Singapore Science Park II, Singapore 117528.
3. Delivery
 - a. Stock items are processed for prompt delivery. Whilst there is no minimum order value there is a minimum charge in respect of packing, handling and delivery. Details of these charges are available on request.
 - b. Notwithstanding that the Seller and the Buyer may agree to deliver the goods at some specified place the delivery of goods to a carrier for the purpose of transmission to the Buyer is deemed to be a delivery of the goods to the Buyer and risk in the goods shall pass accordingly at the moment of delivery to the carrier.
 - c. Inspection and testing and/or installation of the goods is not provided by Seller unless otherwise agreed at the time of sale.
 - d. Seller retains ownership of the goods the property in which shall not pass to Buyer and Buyer shall keep any goods delivered to it as bailee for and on behalf of Seller until Seller has received payment of the price of all the goods (whether or not the goods are delivered in instalments and some have been paid for by Buyer pursuant to these terms) and until such time the Buyer shall store the goods separately or in some other way ensure that the goods are readily identifiable as the property of Seller and at Seller's request either shall deliver up to the goods to Seller or shall permit Seller to enter Buyer's business or other premises to repossess the goods and subsequently re-sell them.
 - e. The provisions of this clause 3(d) shall survive the determination of the contract for whatever reason.
4. Payment
 - a. Payment terms are strictly Net Cash 30 days after delivery of the goods, provided Buyer's credit has been approved or specified in the quote. If the Buyer's credit had not been established with Seller, terms are payment in advance.
 - b. All payments made by Buyer shall be made without any deduction of deferment in respect of any disputes or claims whatsoever and/or in respect of any taxes imposed by or under the authority of any government or public authority.
 - c. Where Seller does not receive payment of any of its invoices within 30 days of the date thereof interest shall thereafter accrue on the sum due and owing to Seller at the rate of 2% per month calculated on a daily basis without prejudice to Seller's right to receive payment within such 30 day period.
 - d. Time for payment shall be of the essence.
5. Confidentiality/Intellectual Property
 - a. Any order received by Seller will be treated as confidential and will not be disclosed or publicised to any third party for any reason without the prior written consent of Buyer. Neither shall Seller use Buyer's name or other identify for advertising or publicity purposes without Buyer's prior written consent.
 - b. The sale of the goods by Seller to Buyer does not confer any right or license upon buyer to use, exploit or otherwise utilise any intellectual property rights subsisting in or relating to the goods of which Seller is a proprietor or to which Seller is otherwise entitled.
6. Specifications
The characteristics and specifications of Seller's products are documented in Seller's technical literature and are approximately only Seller reserves the right to change product specifications without prior notice.
7. Cancellation
An order accepted by Seller may be cancelled only before delivery of the goods and only with the consent of Seller upon terms that Buyer will indemnify Seller against any loss incurred.
8. Return
In no case are products to be returned without first obtaining the consent of the Seller. Only unused products as currently manufactured which have been invoiced by the Seller within 30 days will be considered for return. Products accepted for credit are subject to a 20 per cent service charge plus all transportation charges. Products built to order or not of the original manufacturer of the Seller are not subject to return for credit under any circumstances. Products must be securely packed to reach the Seller without damaged. No returns shall be authorised after 90 days following shipment to buyer.
9. Warranty
The Products and/or services shall be covered by the applicable Waters' standard warranty, a copy of which is supplied with the Products and/or services or upon request. NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE PRODUCTS AND/OR SERVICES. WATERS EXPRESSLY EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. Any model or sample furnished to the Buyer is merely illustrative of the general types and quality of goods and does not represent that the Products will conform to Waters applicable standard warranty. WATERS SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL OR ANY OTHER INDIRECT DAMAGES RESULTING FROM ECONOMIC LOSS OR PROPERTY DAMAGE SUSTAINED BY BUYER FROM THE USE OF ITS PRODUCTS OR SERVICES.
10. Termination
 - a. It prior to the delivery of the goods (or any instalment thereof) Seller has reason to believe that Buyer is unable to pay its debts or if Buyer enters into liquidation (other than for the purpose of effecting a reconstruction or amalgamation) whether compulsory or voluntary or compounds with or conveys a meeting of its creditors or has a receiver appointed over all or any part of its assets or takes or suffers any similar action in consequence of a debt or ceases for any reason to carry on business, Seller may terminate the contract by notice in writing to Buyer.
 - b. Termination of the contract personate to Clause 10(a) shall not effect the accrued rights of the parties arising in any way out of such contract as of the date of termination.
11. Variation
Neither Seller or Buyer shall be bound by any variation, waiver of or an addition to, those terms and conditions except as agreed by both parties in writing.
12. Time
Seller will endeavour to dispatch the products on the promised delivery date but does not guarantee to do so.
13. Force Majeure
Waters shall have no liability for failure to perform or delay in performance, in the delivery of any and all equipment manufactured or sold by Waters including instruments, supplies, components, systems, chemistry, accessories, replacement spare parts, or any and all services provided by Waters, caused by circumstances beyond its reasonable control including, but not limited to, acts of God, acts of nature, floods, fire, explosions, war or military mobilisation, United States governmental action or inaction, request of governmental authority, delays of any kind in transportation or inability to obtain material or equipment, acts of other governments, strikes or labour disturbances.
14. Law
The contract shall be deemed to have been made in Singapore and the Parties to the contract hereby submit to the jurisdiction of Singapore courts. Singapore law shall be the proper law of the contract.