

Ms. Krista Ferrell
State of West Virginia
Purchasing Division
PO Box 50130
2019 Washington Street East
CHARLESTON, WV, 25305-0130
US

Telephone : 304 558 2596

Sales Proposal

Please reference this Quotation when Purchase Order is issued

Quotation No. 20394318 - Expiration Date : 06/13/2010

Bid# AGR1022 Due:05/13/2010 @01:30PM

Dear Ms. Krista Ferrell,

Thank you for your interest in Waters! Please find the enclosed Sales Quotation for the products you inquired about. We look forward to working with you and your team for all of your laboratory needs.

To place an order for products and services on this quotation, you may send your hard copy purchase order via email to waters_quotes@waters.com

You may also contact Waters Sales Support to place your order via telephone at 800 252 4752 Ext.8023, or fax your purchase order to 508 482 8532 or 508 482 8834.

If you have any questions regarding this quotation, please contact your local Account Representative: Larry Cadle. Larry may be reached by telephone at 800 252 4752 Ext.6272, or via Email at Larry_Cadle@Waters.com, or visit us online at www.waters.com.

Waters Sales Support
Tel: 800 252 4752 Ext.8023
Email: waters_quotes@waters.com

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PURCHASING DIVISION
STATE OF WV



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
AGR1022

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ADDRESS CORRESPONDENCE TO ATTENTION OF
KRISTA FERRELL 304-558-2596

RFQ COPY
 TYPE NAME/ADDRESS HERE

DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/05/2010				

BID OPENING DATE: 05/13/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	LOF	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		493-99	311,541.02	202,501.66
<p>LIQUID CHROMOTOGRAPH/MASS SPECTROMETER</p> <p>REQUEST FOR QUOTATION (RFQ)</p> <p>THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF AGRICULTURE, IS SOLICITING BIDS TO PROVIDE THE AGENCY WITH (1) LIQUID CHROMOTOGRAPH/MASS SPECTROMETER PER THE ATTACHED SPECIFICATIONS.</p> <p>NOTICE TO PROCEED: THE SYSTEM SHALL BE DELIVERED AND FULLY OPERATIONAL BY JUNE 30, 2010. WARRANTY/YEAR MAINTENANCE AND SUPPORT DATES SHALL BE ADDED TO THE CONTRACT BY CHANGE ORDER UPON THE SUCCESSFUL INSTALLATION AND ACCEPTANCE OF THE SYSTEM BY THE AGENCY.</p> <p>MAINTENANCE AND SUPPORT MAY BE RENEWED UPON MUTUAL WRITTEN CONCENT OF THE SPENDING UNIT AND THE VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO THE NUMBER OF YEARS SELECTED BY THE AGENCY IN THE ATTACHED PRICE SCENARIOS.</p> <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Krista Ferrell</i>	TELEPHONE 800-252-4752	DATE 05/11/2010
TITLE Bid Specialist	FEIN 04-3234558	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
AGR1022

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ADDRESS CORRESPONDENCE TO ATTENTION OF
KRISTA FERRELL 304-558-2596

RFQ COPY
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ZIP CODE

STREET

DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/05/2010				

BID OPENING DATE: **05/13/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: KRISTA FERRELL-FILE 21 RFQ. NO.: AGR1022 BID OPENING DATE: 05/13/2010</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS		
SIGNATURE <i>Krista Ferrell</i>	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
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 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
AGR1022

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3

ADDRESS CORRESPONDENCE TO ATTENTION OF
**KRISTA FERRELL
 304-558-2596**

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
05/05/2010				

BID OPENING DATE: **05/13/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME:				1:30 PM		
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: 508-482-8532						

CONTACT PERSON (PLEASE PRINT CLEARLY): Mike Brunelle						

***** THIS IS THE END OF RFQ AGR1022 ***** TOTAL:						202,501.66

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mike Brunelle</i>	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

Chromatograph/Mass Spectrometer (LC/MS) System

The West Virginia Department of Agriculture (WVDA) is soliciting responses for a Liquid Chromatograph/Mass Spectrometer (LC/MS) System for analysis of pesticides and antibiotics.

WVDA seeks to acquire the LC/MS system via a purchase with a Maintenance Agreement for a period of three to five years. Maintenance Agreement will go into effect after the initial first year warranty expires. Payments are yearly and will be paid in arrears on a quarterly basis for the agreed number of years. Effective dates for the warranty and first year's maintenance shall be added by change order upon the successful delivery, installation, training, and acceptance of the system by the agency. Subsequent year's maintenance selected by the agency shall be added to the contract on the anniversary of the effective date of the contract upon mutual written agreement of the vendor and the agency.

Vendor must provide data validating that their product meets the bid specifications, training, warranty, complete premium service for all equipment/instruments and software including all parts, repairs, labor, travel, special services, and preventative maintenance for the duration of the lease agreement / warranty period at no expense to the agency. References with point of contact verifying the product qualifications. Failure to provide documentation shall result in disqualification of the vendor's bid.

Vendor must provide 72-hour response time for on-site service/replacement.

Vendor must provide toll free telephone number for technical service/assistant.

Two (2) copies of all systems manuals (operations, training, technical, service maintenance, etc.) shall be included at no charge to the owner.

Vendor shall deliver and provide on-site installation (labor and supplies included) of the system at no charge to the purchaser.

Vendor will do on-site training (labor and non-consumable supplies included) for all instruments and software at no charge to the purchaser.

The following/attached specifications are to set the minimum standards of construction, performance, and test capability.

ADDITIONAL SPECIFICATIONS

Site Preparation: Vendor must provide documentation of recommended environmental conditions, power supplies and gas supplies that are required, and a list of samples and solvents required for installation. Operating the instrument in conformance with these conditions will enable the instrument to achieve its optimum performance. Failure to provide documentation shall result in disqualification of the vendor's bid.

Installation: The bid must include all parts and services necessary to render the system operational, including installation, calibration, basic hardware, software, troubleshooting and maintenance.

Warranty: The one year warranty must be complete premium service for all software/hardware, equipment/instruments including all parts, repairs, labor, travel, special services, and preventative maintenance at no expense to the agency. With the purchase you must provide warranty & maintenance.

Updates: Any and all updates that become available during the course of the purchase must be made available and properly installed along with additional on-site training at no cost to the agency.

Delivery Time Frame: It must be delivered and fully operational by June 30, 2010.

CUSTOMER SERVICE

- Manufacturer shall provide a 72 – hour or better on-site service response for the duration of the warranty/ maintenance.
- Lifetime 800 number for Technical Support.
- Technical Assistance for Methods Development must be available for the duration of the warranty/ maintenance.
- Vendor must be able to provide free method development assistance for new methodology for the duration of the warranty/ maintenance

TRAINING: Must provide a minimum of 5 days of On-site Training to cover methods set-up and fine tuning, quantization, report generation, Full Scan and SIM combined methods development.

**RFQ: AGR1022
COST SHEET**

Equipment	Cost
Mass Chromotograph System with installation and training <i>Equipment Includes 1 Year Warranty, Maintenance, and Support).</i>	\$ 202,501.66
Additional Maintenance	
Year 1	\$ 16,558.75
Year 2	\$ 16,558.75
Year 3	\$ 16,558.75
Year 4	\$ 16,558.75
Year 5	\$ 16,558.75
Price Scenario 1: Equipment plus Year 1, 2, and 3 of Additional Maintenance	\$ 252,177.91
Price Scenario 2: Equipment plus Year 1, 2, 3, and 4 of Additional Maintenance	\$ 268,736.66
Price Scenario 3: Equipment plus all 5 years of Additional Maintenance	\$ 285,295.41
<p><i>**The price scenarios listed above are for bid evaluation purposes only. Agency will award based on lowest cost for the scenario.</i></p> <p><i>If bidding an "or equal" product, please list below the manufacturer and model. Additionally, the vendor must provide documentation which demonstrates the adherence to the specifications contained within this RFQ.</i></p>	
Manufacturer:	Waters Corporation
Model:	Waters TQD with ACQUITY H Class

Sales Proposal
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Item	Product#	Qty	Description	Unit Price	Discount	Net Price
1	176850019	1	WATERS TQ DETECTOR <i>With the following configuration:</i>	301,886.02	- 105,660.11	196,225.91
	176001263	1	Waters TQ Detector			
	205000414	1	KIT, MAINS CORDS, US			
	186003887	1	Assy., Vacuum Roughing Pump			
	176001255	1	ML 4.1 & Standard PC for TQ			
	668000273	1	MONITOR, Lenovo ThinkVision Flat Panel			
	176002013	1	MS Ref Stds: ACQUITY/TQD Install			
			ACQUITY UPLC H-Class System			
	176015007	1	ACQUITY UPLC H-Class Core System			
			ACQUITY UPLC Columns			
	176000864	1	ACQUITY UPLC BEH C18 1.7µm 2.1x100mm 3pk			
			Installation, Training and Plans			
	741000321	1	TQD SYSTEM INSTALLATION CERT			
2	750000488	1	NA - On-Site Field Apps Ed Cert (3 days)	9,655.00	- 3,379.25	6,275.75

** Please note 2 additional days of service will be provided at no cost to the State of West Virginia to accomodate the 5 days required **

Total Quotation in USD **202,501.66**
 (Excludes Shipping and Applicable Taxes)

Waters Standard Terms & Conditions

Delivery: 60 Days
 Freight Terms: FOB Destination
 Absorbed Bids
 Payment Terms: NET 30 DAYS

ADDITIONAL NOTES:

The terms and conditions of purchase are in accordance with the WV-96 (Rev-4/09) Agreement Addendums executed previously by Dawn Warfield for the State of West Virginia and Waters Corporation in regards to Waters Sales Quotation terms and conditions.

Sales Proposal
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Optional Items and Service Plans

Product#	Qty	Description	Unit Price	Discount	Net Price
SERVICE PLANS					

** Year 1 after manufactures warranty below **

740002603	1	TAW TQ DETECTOR (1PM)	17,820.00	- 6,237.00	11,583.00
740002549	1	MassLynx Software 2 Year Plan	2,120.00	- 742.00	1,378.00
740001703	1	TAW ACQUITY SAMPLE MGR (1PM)	3,280.00	- 1,148.00	2,132.00
740003838	1	TAW ACQUITY QUATERNARY SOLV MGR (1PM)	2,255.00	- 789.25	1,465.75

** Years 2 through 5 after manufactures warranty below **

Waters is offering the following multi-year service plan contract at 35% off of list price. The 35% new multi-year service plan incentive is only available if the plan(s) are purchased with the instrument. A one time invoice for the multi-year service plan will be issued upon delivery of the instrumentation and is payable within 30 days from the date of invoice.

740002597	4	TAP TQ DETECTOR (1PM)	17,820.00	- 24,948.00	46,332.00
740002548	4	MassLynx Software 1 Year Plan	2,120.00	- 2,968.00	5,512.00
740001698	4	TAP ACQUITY SAMPLE MGR (1PM)	3,280.00	- 4,592.00	8,528.00
740003834	4	TAP ACQUITY QUATERNARY SOLV MGR (1PM)	2,255.00	- 3,157.00	5,863.00

** See Bid for breakdown of service costs per year **

SUBTOTAL

82,793.75

EXTEND YOUR COVERAGE NOW AND SAVE

The Waters Total Assurance Warranty (TAW) is available only during the first 90 days of system ownership for your Waters HPLC, UPLC®, mass spectrometry systems to give you full support coverage for a total of two years and a Performance Maintenance (PM) visit in year two, at significant saving.

Don't wait - Protect your technology investment now with a Total Assurance Warranty from Waters.

- o Ensure reliable operation and minimize unscheduled downtime

Account : State of West Virginia
Quotation number : 20394318
Creation date : 05/10/2010
Expiration date : 06/13/2010

Sales Proposal

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Optional Items and Service Plans

- o Guarantee a seamless continuation of full support after your limited warranty expires
- o Fix the cost of ownership for your mission critical instruments
- o Eliminate administrative costs of processing future multiple purchase orders

Sales Proposal

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Detail Product Description(s)

Part No.	Description
176001263	Waters TQ Detector

Waters TQ Detector

The Waters TQ Detector is a compact, benchtop tandem quadrupole API mass spectrometer. The system features new automated set-up technology and fast acquisition capability for simple, rapid LC/MS/MS.

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

Z SPRAY™ API interface. Dual orthogonal interface for robust LC/MS
IntelliStart™ fluidics. Automated tuning,
calibration and method development
Electrospray (ESI) inlet probe. for efficient ionisation of a wide range of compounds
ESCITM ionisation capability. rapid switching source for both ESI and APCI in the same run.

1. ZSpray API INTERFACE

Atmospheric pressure ionisation (API) LC interface including:

One easily dismountable ion source enclosure.

Cone gas facility for chemical noise reduction.

Electronic mass flow meters for drying gas and cone gas.

Tool free cone removal

Source isolation valve

Micrometer probe positioning

The source and spraying elements are visible through a transparent enclosure and are easily accessible via a quick-release door. 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 declustering ions formed at atmospheric pressure. Positive and negative capability is included. All source voltages and gases are under data system control.

IntelliStart fluidics: The system comprises an on-board infusion system capable of delivering solutions from 2 built-in vial locations to aid tuning, calibration and method development. The solutions are delivered via a switching valve for direct infusion to the probe or combined into an LC flow. The valve can be programmed from the software to function as a divert valve. The fluidics can be controlled manually via the system Console or automatically as part of the IntelliStart system check software.

2. TANDEM QUADRUPOLE ANALYSER

2x High performance quadrupole analysers with inter-element beam focusing and a mass range of 2-2000 amu.

Pre-filters maximise resolution and transmission especially at high mass and also to eliminate main filter cleaning.

All lens and analyser voltages are digitally controlled and recorded.

Analyser parameters may be programmed with respect to mass for optimal performance.

3. T-WAVE COLLISION CELL

High efficiency gas cell for collision induced dissociation. Programmable software control of collision energy

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Detail Product Description(s)

Part No. Description
176001263 Waters TQ Detector - Continued

and gas pressure, including experimental record. The Travelling Wave (T-Wave) device enables rapid cell clearance and refill for fast MRM transition switching while maintaining optimum signal to noise.

4. 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.

And One Leybold rotary pump for backing of the turbo pump, (to be ordered separately 186003887).

5. DETECTOR

Dynolite photomultiplier detector. A High Voltage conversion dynode and phosphor are positioned at 90° off-axis to the analyser for the elimination of neutral noise. The photomultiplier is enclosed in its own vacuum envelope for long life.

The detector operates in both positive and negative ion modes, and can switch rapidly under software digital control.

186003887 Assy., Vacuum Roughing Pump

Assy Vacuum Roughing

Leybold rotary pump for backing of the turbo pump

176001255 ML 4.1 & Standard PC for TQ

ML 4.1 & Standard PC for TQ

MassLynx 4.1 Application Software

Multi-tasking suite of analytical applications and instrument management software operating in Microsoft Windows environment. MassLynx includes:

Mass Spectrometer Control Software

a) Data acquisition formats.

Scan data can be acquired to file in the following formats:

Centroided data acquisition.

Profile data acquisition.

Multi Channel Analysis (MCA) data acquisition.

b) MS and MS-MS acquisition functions.

The following data acquisition functions are available:

MS scanning.

MS selected ion recording.

MS-MS precursor ion scanning (parents).

MS-MS product ion scanning (daughters).

MS-MS neutral loss/gain scanning.

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Detail Product Description(s)

Part No. Description
176001255 ML 4.1 & Standard PC for TQ - Continued

MS-MS multiple reaction monitoring.
Data directed switching (automated MS to MS-MS scan function switching).
Polarity mode switching.
Ionisation mode switching (ESCI)
External contact start/stop/events.
Analogue channel acquisition via a SATIN module.

c) Tuning Utilities.

The system features easy-to-use automated and manual tuning and calibration software tools. Tuning parameters include:

Ionisation mode and polarity.
MS & MS/MS acquisition.
All ion source parameters.
All lens voltages.
MS1 and MS2 resolution.
MS1 and MS2 ion energy.
Photo-multiplier gain.

d) Inlet Control Software

Integrated control of specific Waters LC, autosampler and detector systems
Third party LC and autosampler systems from specified vendors

e) Data processing and review:

Spectrum Review and Processing
Chromatogram Review and Processing
3-D Contour plotting
Spectral library search facilities (user defined or commercial libraries)
Batch processing of qualitative and quantitative sample sets:

OpenLynx Application Manager

OpenLynx Processing provides summary reports for groups of samples. OpenLynx methods may be configured to include:

- 1) Analytes found/not found.
- 2) Purity,
- 3) Probable elemental composition (with Exact Mass Measurement Instrumentation),
- 4) Chromatograms,
- 5) Spectra. OpenLynx reports are portable and may be viewed (read-only) with optional Browser utility without MassLynx software.

QuanLynx Application Manager

QuanLynx provides quantification of MassLynx data. QuanLynx quickly processes groups of samples, providing automated peak detection, calibration and quantification. The QuanLynx Report provides facile online data review and report printing. QuanLynx operates within the MassLynx security system (where enabled); it includes tools to enable compliance with the FDA's guidelines on electronic records and electronic signatures (21 CFR Part 11). QuanLynx reports are

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Detail Product Description(s)

Part No. Description
176001255 ML 4.1 & Standard PC for TQ - Continued

portable and may be reviewed with optional Browser utility without MassLynx software.
The MassLynx Security Subsystem (where installed) provides a compliant-ready solution for US FDA GxP and 21 CFR 11 and other regulations.

License to operate software on one workstation.

MassLynx Security, when installed, provides a compliant-ready solution for US FDA GxP and 21 CFR 11 and other regulations. QuanLynx & TargetLynx are compliant-ready and include tools to enable compliance with the FDA's guidelines on electronic records and electronic signatures.

Other MassLynx Application Managers are compatible with MassLynx security but are not compliant-ready.

Lenovo ThinkCentre M58p E8400 with Windows XP Professional

Processor: Intel Core 2 Duo E8400 Processor (3.0 GHz 1333 MHz FSB 6MB L2); Operating system: Windows XP Professional; Form factor: Tower; Motherboard: Intel Q45 Chipset; Total memory: 2 GB PC3-8500 SDRAM (2 DIMMs); Maximum memory: 8GB;

Video adapter: Intel GMA 4500 (integrated); Audio adapter: Intel Q45 (integrated); First hard drive bay: 250GB Hard Disc Drive, 7200RPM SATA; Second hard drive bay: None; Diskette drive: Floppy Disk Drive; First optical device bay: DVD Recordable; Networking: Intel PRO 100/1000 Gigabit Ethernet (integrated); Keyboard: Preferred Pro Full-size Keyboard (Stealth Black) - US Euro; Pointing device: Optical USB wheel mouse;

System Warranty: Four Years Onsite International; Warranty with Non-HDD Return;

Expansion: 2 * PCI, 1 * PCI Expressx1, 1* PCI Expressx16; Ports: 1 Parallel, 1 * Serial, External microphone, External Display, Headphone, Line in, Line out, 8 USB 2.0 (2 front, 6 back); Additional Software: IBM RecordNow; Additional Network card: PCI Express 1x NetXtreme Gigabit Ethernet; National Instruments GPIB controller card; Monitor: None; Printer: None

668000273 MONITOR, Lenovo ThinkVision Flat Panel

22" Flat Panel Monitor

176015007 ACQUITY UPLC H-Class Core System

ACQUITY UPLC H-Class Core System.

1. Waters ACQUITY Ultra Performance LC Systems have been holistically designed to optimize the benefits of sub2 um particle chemistry delivering the efficiencies of UPLC separations to today's laboratory. The ACQUITY UPLC H-Class Core System is an integrated solvent and sample management instrument configured for quaternary solvent delivery and direct inject sample introduction. The system may be configured for a broad range of applications supported by UPLC optical and mass spectrometry detectors, with a choice of instrument control and data management software.

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

- ACQUITY UPLC H-Class Quaternary Solvent Manager
- ACQUITY UPLC H-Class Sample Manager -FTN
- ACQUITY UPLC Column Heater (CH-A) Module
- ACQUITY UPLC Solvent Tray Module
- ACQUITY UPLC System Test Mix

Sales Proposal

Please reference this Quotation when Purchase Order is issued

Detail Product Description(s)

Part No.	Description
176015007	ACQUITY UPLC H-Class Core System - Continued

- ACQUITY UPLC System Test Column 2.

2. Connections INSIGHT is provided at no charge during the first year.

3. Two hours application consultation with Waters Chemistry Specialist is provided at no charge

741000321	TQD SYSTEM INSTALLATION CERT
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Waters TQ Detector MS System Installation

Includes:

- System Set up and Specification Testing
- Product Familiarization Training
- 1 Year Manufacturers Warranty
- Insight Remote Intelligent Services

Account : State of West Virginia
Quotation number : 20394318
Creation date : 05/10/2010
Expiration date : 06/13/2010

Sales Proposal
Please reference this Quotation when Purchase Order is issued
Waters General Sales Terms and Conditions

THIS TRANSACTION IS EXPRESSLY CONDITIONED UPON AND SUBJECT TO ALL OF THE FOLLOWING TERMS AND CONDITIONS:

1. Acceptance - Buyer's acceptance of the offer to purchase the products and/or services set forth on the front page made by Waters Technologies Corporation d/b/a Waters Corporation (Waters) of this quotation shall create a contract subject to and expressly limited by the terms and conditions contained on this form. Acceptance of this quotation may only be made on the exact terms and conditions set forth on this quotation; if additional or different terms are proposed by Buyer, such additional or different terms shall not become a part of the contract formed by Buyer's acceptance of the quotation. Receipt of the products sold hereunder or commencement of the services provided hereunder shall be deemed acceptance of the terms and conditions of this quotation.
2. Taxes and Payment - Any tax, duty, custom or other fee of any nature imposed upon this transaction by any federal, state or local governmental authority shall be paid by Buyer in addition to the price quoted. In the event Waters is required to prepay any such tax or fee, Buyer will reimburse Waters. Payment terms shall be net thirty (30) days after shipment and are subject to credit approval. An interest charge equal to 1 1/2% per month (18% per year) will be added to quotations outstanding beyond 30 days after shipment. In addition, Waters reserves the right, in its sole discretion, to require C.O.D. payment terms from any Buyer. Waters may also refuse to sell to any person until all prior overdue accounts are paid in full.
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7. Waters Right of Possession, etc. - Buyer hereby grants Waters a purchase money security interest in the goods offered by this quotation to secure the due and punctual payment of the purchase price specified in this quotation. In the event of default by Buyer in any payment due Waters, Waters shall have the right, in addition to any other remedies it may have at law or in equity, to withhold shipment, to recall goods in transit and retake the same, to repossess any goods which may be stored with Waters for Buyer's account without the necessity of Waters initiating any other proceedings. In addition, Waters shall have all of the rights and remedies of a secured party under the Massachusetts Uniform Commercial Code and may exercise all such rights and remedies in accordance therewith. Buyer shall execute such documents as Waters may request to effectuate the foregoing security interest.
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9. Fair Labor Standards - The products or services provided hereunder were produced and/or performed in compliance with the requirements of all sections of the Fair Labor Standards Act of 1938 as amended.
10. Equal Employment - Waters is an Equal Opportunity Employer. It does not discriminate in any phase of the employment process against any person because of race, color, creed, religion, national origin, sex, age, veteran or handicapped status.
11. Modifications, Waiver, Termination - The contract formed by Buyer's acceptance of this quotation may be modified and any breach thereunder may be waived only by a written and signed document by the party against whom enforcement thereof is sought.
12. Governing Law - The contract formed by Buyer's acceptance of this quotation shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, U.S.A.
13. Compliance with Laws - Buyer shall at all times comply with all applicable federal, state and local laws and regulations, including, without limitation, the provisions of the United States Export Control Laws as may be in effect for any of the products or services, and, if products or services hereunder are used in clinical applications, all applicable rules and regulations of the United States Food and Drug Administration and/or other domestic or international agencies with respect to the application of, as the case may be, Good Clinical Practices ("GCP"), Good Laboratory Practices ("GLP") or good Manufacturing Practices ("GMP").
14. Additional Terms and Conditions - This quotation is also subject to any Waters Special Terms and Conditions applicable to the products or services offered by this quotation, which appear on the front of this quotation. Any variance from the terms and conditions of this quotation in any order or other written notification from Buyer, will be of no effect. Should Buyer order products or services through a Waters office located outside of the United States, the terms and conditions of the quotation issued by the office outside of the United States shall govern such order.
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TQ DETECTOR

The Waters® TQ detector is a compact, benchtop, tandem quadrupole mass spectrometer designed for UPLC®/MS/MS when configured as an ACQUITY™ TQD system. The TQ detector provides a simple, robust platform for quantitative LC/MS/MS enabled by hi-speed MRM (Multiple Reaction Monitoring) and ESCi® multimode ionization. The system also incorporates IntelliStart™ technology for automated system optimization and status monitoring. This ensures high quality data is routinely available to all levels of operators. The system is available on either MassLynx™ or Empower™ 2 software.

SYSTEM SPECIFICATIONS

IntelliStart technology	<ul style="list-style-type: none"> System parameter checking and alerts Integrated sample/calibrant delivery system & programmable divert valve Automated mass calibration Automated sample tuning Automated SIR and MRM method development LC/MS System Check – automated on-column performance test
API source	<ul style="list-style-type: none"> ZSpray™ dual-orthogonal source for robust sampling Vacuum isolation valve Tool-free sampling cone removal Plug and play probes De-clustering cone gas Software control of all gas flows
Ionization modes	<ul style="list-style-type: none"> Electrospray – included as standard ESCI multimode ionization – included as standard IonSABRE™ APCI – option Dual APCI/APPI – option
Ion source transfer optics	High efficiency hexapole ion guide
Mass analyzer	Two high resolution quadrupole analyzers (MS1/MS2), plus pre-filters to maximize resolution and transmission while preventing contamination of the main analyzers.
Collision cell	T-Wave™ collision cell for optimum ion transfer and confinement, allowing fast MS/MS acquisition. Software programmable gas flow.
Detector	<ul style="list-style-type: none"> Low noise, off axis, long life photomultiplier detector Digital dynamic range-up to 4×10^6
Vacuum system	Single, split flow air-cooled Pfeiffer Vacuum turbomolecular pump evacuating the source and analyzer. One Leybold Sogevac SV40BI rotary backing pump.
Software	Systems are supported on both Empower 2 and MassLynx 4.1 software or later. MassLynx includes OpenLynx™ and QuanLynx™ Application Managers as standard.
Dimensions	<ul style="list-style-type: none"> Width: 35.6 cm (14.0 in.) Height: 53.3 cm (21.0 in.) Depth: 84.8 cm (33.5 in.)
Regulatory approvals	IVD, NRTL, and CE

[INSTRUMENT SPECIFICATIONS]

PERFORMANCE SPECIFICATIONS

Acquisition modes	Full scan MS (MS1 or MS2) Selected ion recording (SIR) Product ion scan Precursor ion scan Constant neutral loss/gain Multiple reaction monitoring (MRM)
Mass range	2 to 2000 m/z
Scan speed	Up to 10,000 Da/s
Mass stability	<0.1Da over 8 hr
Linearity of response	The linearity of response relative to sample concentration, for a specified compound, is five orders of magnitude from the limit of detection.
Polarity switching	20 ms
MRM acquisition cycle time	Minimum dwell time of 5 ms per channel. Minimum inter-channel and inter-scan delays of 5 ms. Functions can be configured in retention windows, including mixed mode and overlapping, to optimize cycle time for each analyte.
Inter-channel cross talk	The inter-channel cross talk between two MRM transitions, acquired using an MRM dwell time of 10 ms and an inter-channel delay time of 10 ms, will be fewer than 0.02%.
Mass resolution	Tunable manually or automatically (IntelliStart) to desired resolution. The valley between the 2034.63 Da and 2035.63 Da peaks is <12% of the average height of the two peaks.
MRM sensitivity (ESI+)	For a direct loop injection of reserpine (5 pg) at a flow rate of 200 μ L/min the chromatographic signal to noise for the transition 609>195 m/z will be greater than 1000:1.
MRM sensitivity (ESI-)	For a direct loop injection of chloramphenicol (5 pg) at a flow rate of 200 μ L/min the chromatographic signal to noise for the transition 609>195 m/z will be greater than 180:1.
MRM sensitivity (APCI+)	For a direct loop injection of 17- α -hydroxyprogesterone (100 pg) at a flow rate of 1 mL/min the chromatographic signal to noise for the transition 609>195 m/z will be greater than 150:1.
MRM Signal to noise definition	Signal is defined as the height of the chromatographic peak of interest and noise is defined as the RMS of a continuous section of the mass chromatogram.

It should be noted that the above are not standard installation specifications. All TQ detector instruments will be installed and tested in accordance with standard performance tests as detailed in Waters document 715001460. Test criteria are routinely reviewed to ensure quality is maintained and are therefore subject to change without notice. See Site Preparation guide and Product Release Notes for additional product and specification information.

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Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A
T: 1 508 478 2000
F: 1 508 872 1990
www.waters.com



[ACQUITY TOB WITH THE TO DETECTOR]

NEXT-GENERATION
LC/MS/MS FOR
UNPRECEDENTED
PRODUCTIVITY
AND EASE.



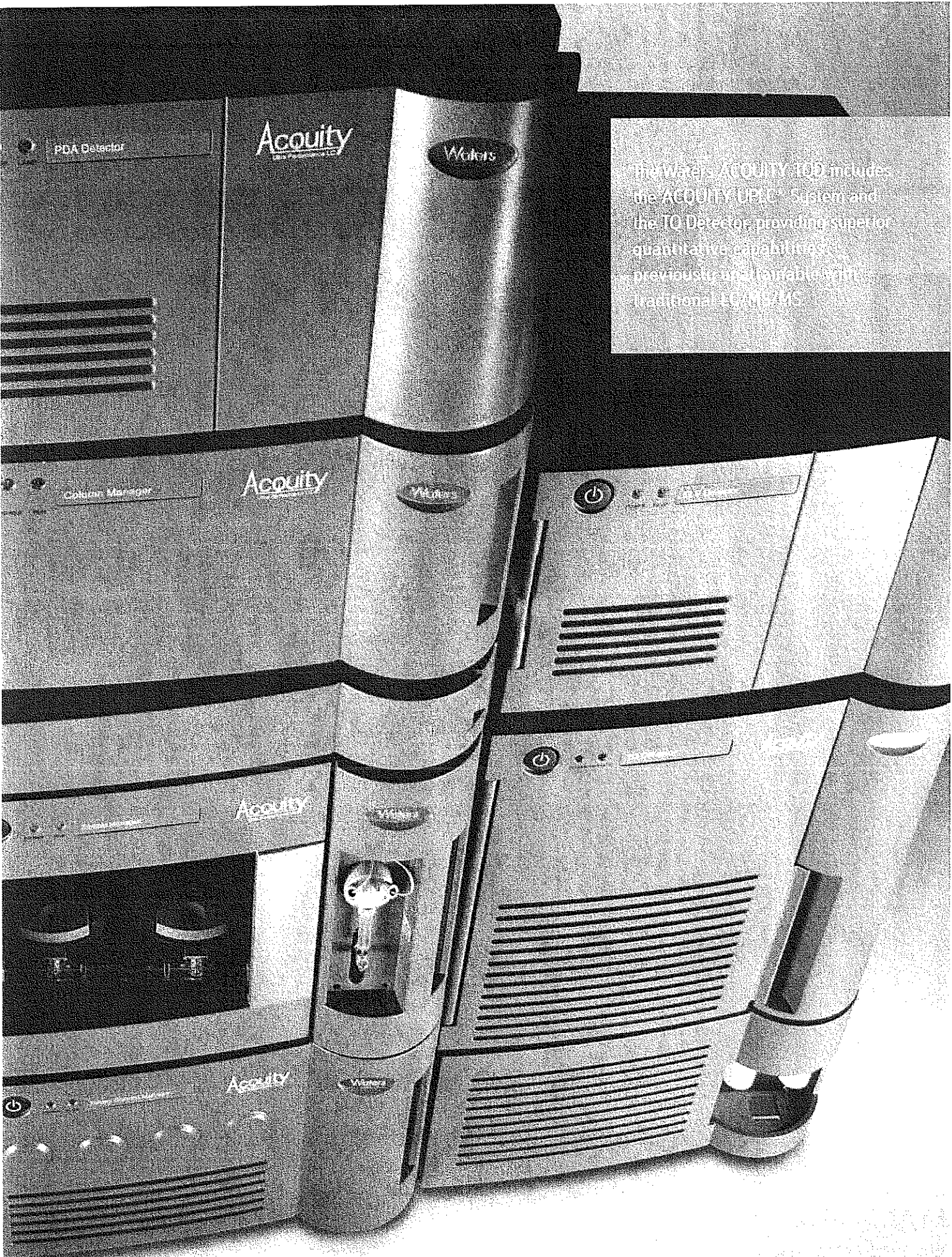
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RAPID QUANTITATION WITH UPLC/MS/MS.

Maximize throughput and minimize downtime with the ACQUITY TQD.

At Waters, the leader in innovations for chromatography and mass spectrometry, we know you are challenged every day to get more information from your analytical data; to maximize throughput and minimize downtime. ■ Our next generation of ACQUITY® mass spectrometric detection leverages the power of UltraPerformance LC® to give you the high-quality analytical information you need – without complicated operation, time-consuming troubleshooting and upkeep, or bulky instrumentation. ■ The Waters® ACQUITY TQD offers a simple LC/MS/MS system solution for fast-paced, multi-user laboratory environments. ■ You can rely on robust and reliable performance as well as walk-up operation for any level of expertise. ■ You get superior quantitative results, quickly and easily, every time. ■ All from the solutions provider you know and trust.



The Waters ACQUITY 100 includes the ACQUITY UPLC[®] System and the TO Detector, providing superior quantitative capabilities previously unavailable with traditional LC/MS/MS.

PDA Detector

Acquity
Ultra Performance LC

Waters

Column Manager

Acquity

Waters

Power button

Power button

Acquity

Waters

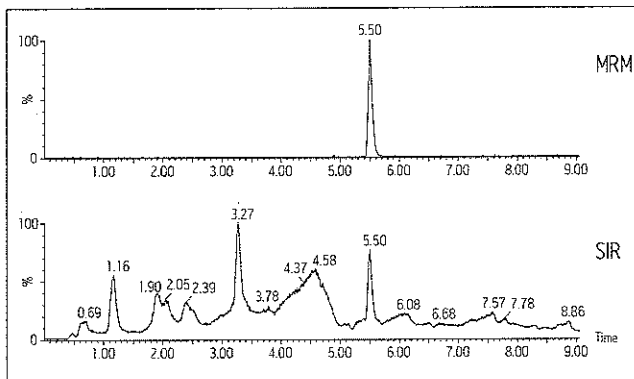
Acquity

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MS/MS FOR THE MASSES

As analyzing pharmaceutical, food, clinical, chemical, and environmental samples becomes more challenging, matrices become more complex. Concentration levels widen and high throughput becomes the norm; LC/MS detection techniques are becoming increasingly inefficient.

Liquid chromatography, when combined with tandem quadrupole mass spectrometry (LC/MS/MS), allows you to obtain accurate quantitative information that increases confidence in your results. With the ACQUITY TQD, you can vastly expand the scope of your analytical capabilities—all with enhanced selectivity, sensitivity, and linearity. With the power of analytical information, you are able to quickly and easily quantify and confirm trace components in complex matrices with speed and accuracy.

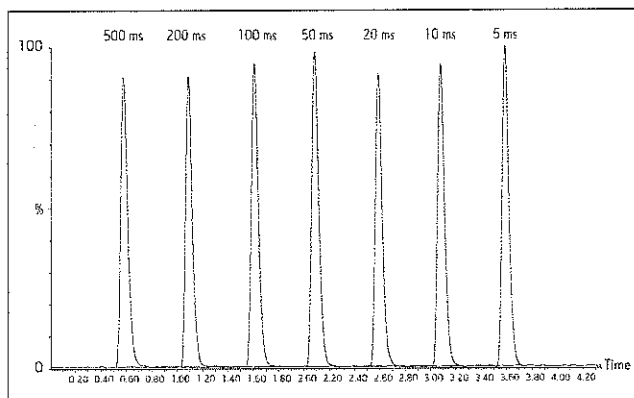


Multiple Reaction Monitoring (MRM) with the ACQUITY TQD adds selectivity to quantitative analyses in complex matrices, lowering LoQs.

UPLC/MS/MS – MAXIMIZE PRODUCTIVITY

The ACQUITY TQD delivers comprehensive, system-level productivity. The TQ Detector's fast acquisition capabilities are complemented by a full suite of ACQUITY UPLC technologies – hardware, software, columns, and chemistries – designed to work together to give you more than you've ever experienced from traditional LC/MS/MS systems. UPLC[®] employs novel small column particles, very low system volumes, and greater throughput to detect more peaks in faster runs – adding significant value to the power of the high-speed TQ Detector.

The results are narrow UPLC peaks and superb spectral quality for easy identification of all of the compounds in your sample. The detector is additionally able to cycle through ESCI[®]-enabled multiple ionization modes (ESI and APCI) and any combination of full scan, MRM, polarity switching, and T-Wave^{™1} enabled high-speed MS/MS. With these all occurring within rapid UPLC run-time windows, the ACQUITY TQD is a highly efficient UPLC/MS/MS platform that is adaptable to a variety of applications. Your lab benefits with the ultimate in productivity and flexibility.

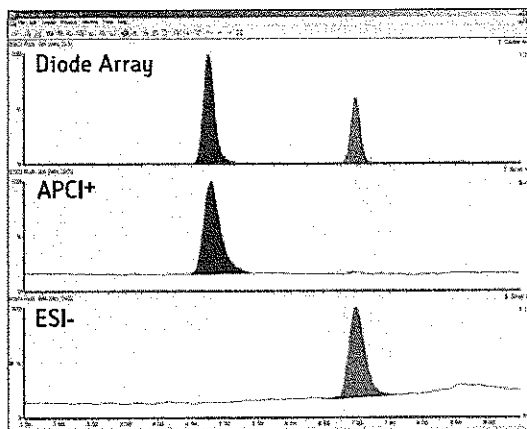


High-Speed Quantitation

Accurate quantitation of the narrow peaks widths typical of UPLC (two to three seconds) demands fast acquisition speeds to provide sufficient data points per peak. The use of a T-Wave collision cell provides maximum signal in MRM mode, even at dwell times as short as five milliseconds.

Multi-Mode Ionization

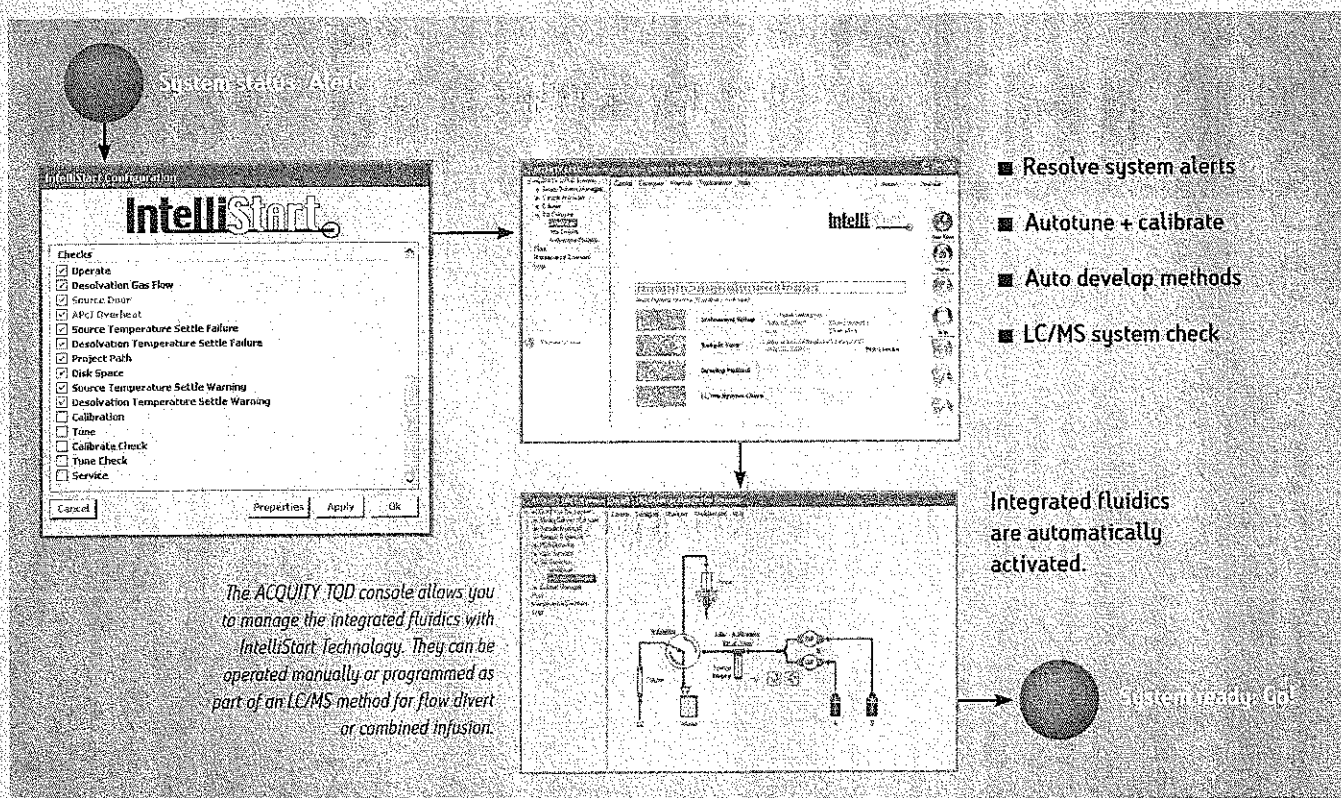
Collect APCI and ESI data in the same run using the ESCI multi-mode ionization source. Rapid polarity switching further enhances your system's versatility. Discrete data channels are recorded for each mode, enabling optimized method development and screening of multiple compound classes.



EASE-OF-USE: INTELLISTART

First-of-its-kind IntelliStart™ Technology automates system set-up. It enables users, who do not have extensive expertise with operating MS instruments, to acquire data with confidence that the system is operating with optimum performance.

An integrated system of fluidics, electronics, and software continually monitors system performance. Through a series of diagnostic checks, the system can report when it is ready for use. Any failures will result in a red-light warning that action may be required before analysis can proceed. IntelliStart enables system alerts to be flagged and automates routine tasks, including Autotune, Autocalibration, MRM Method Development, and LC/MS system performance check. These are driven by integrated system fluidics.



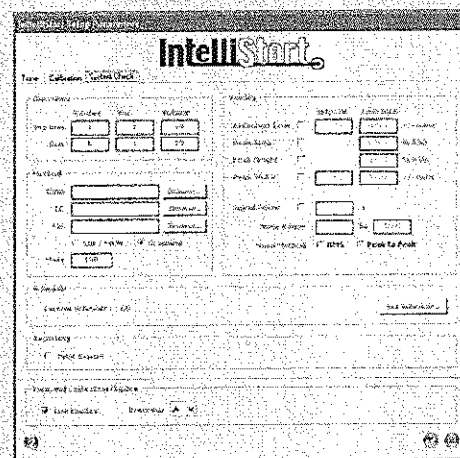
System performance confidence

IntelliStart Technology enables automated, routine reporting of total LC/MS/MS system performance.

Customizable LC/MS/MS methods allow the system to inject a diagnostic sample on-column. This helps the user identify any issues with the configured system by providing an automated report that indicates:

- Sensitivity (S/N)
- Response (peak area, peak height)
- Chromatographic performance (peak width, retention time)

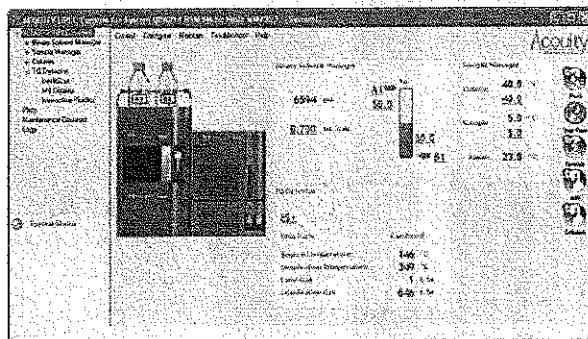
System Check can be easily customized for scheduled reporting on any specified compound and method.



ROBUST PRODUCTIVITY

- **IntelliStart Technology** – automated system set-up with integrated fluidics device gives the user the green light
- **ZSpray™ Interface** – industry leading dual orthogonal LC/MS interface
- **T-Wave collision cell** – for UPLC compatibility
- **High-Speed MS/MS** – fastest MRM capability for rapid accurate quantitation
- **ESCI Multi-Mode Ionization Source** – ESI and APCI in the same run
- **IonSABRE™ APCI source and APPI probe** – high performance probe options for chemical and photo ionization
- **Rapid polarity switch** – double productivity by acquiring both modes in the same run
- **Empower™ or MassLynx™ Software** – flexible software solutions to suit your environment
- **System integration** – fully designed as an integral component of the ACQUITY UPLC System solution
- **Connections INSIGHT® Intelligent Services** – proactive online service support

FLEXIBILITY: YOUR LABORATORY, YOUR CHOICE



ACQUITY TQD system console

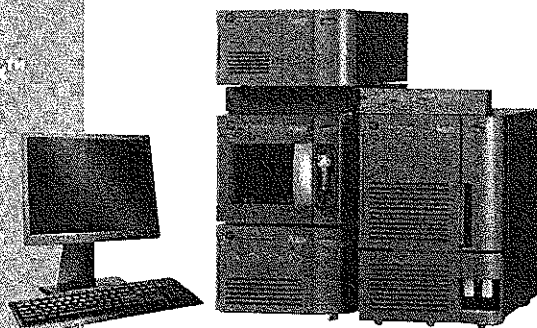
- Simple plug-in to Empower or MassLynx Software
- IntelliStart system set-up
- MRM method developer
- Connections INSIGHT
- System diagnostics
- System service history

MassLynx Software

- Flexible and sophisticated instrument control and data acquisition
- Batch quantification, QC checking, and rapid results review with dedicated Application Managers
- Automated system performance check and reporting
- Automated batch method development and analysis with QuanOptimize™ Application Manager
- Walk-up quantitation with the open access Application Manager for UPLC/MS/MS

Empower 2 Software

- Quick and easy storage and retrieval of UPLC/MS/MS data using an embedded relational database
- Scalable, modular architecture easily converts from a single workstation environment to an enterprise-wide system
- Built-in support for a data-secured regulatory laboratory environment
- Full system suitability reporting
- Method Validation Manager (MVM) for automation of the entire chromatographic method validation process, from planning experiments to generating final reports



WALK-UP MS/MS

IntelliStart Technology makes it easy to acquire UPLC/MS/MS data with confidence. For those wanting to go a step further, complete open access MS and MS/MS quantitation are available. Develop methods for new compounds using the simple MRM method developer, or select a method for a known compound from the method library.

Open access quantitation uses the OpenLynx™ Application Manager sample login feature to enable chemists to simply walk up to the system and submit their compounds for analysis. Results are processed in QuanLynx™ Application Manager and can be emailed directly to the chemist, exported to LIMS, or presented as a printed report.

MassLynx Software

The ability to accurately and rapidly reduce raw data to useful information is as important as the analytical technology employed. MassLynx Software is available with a range of application-specific data processing tools to simplify raw data analysis.

■ **QuanLynx Application Manager** provides accurate quantitative results from LC/MS/MS data and is a standard feature of MassLynx Software

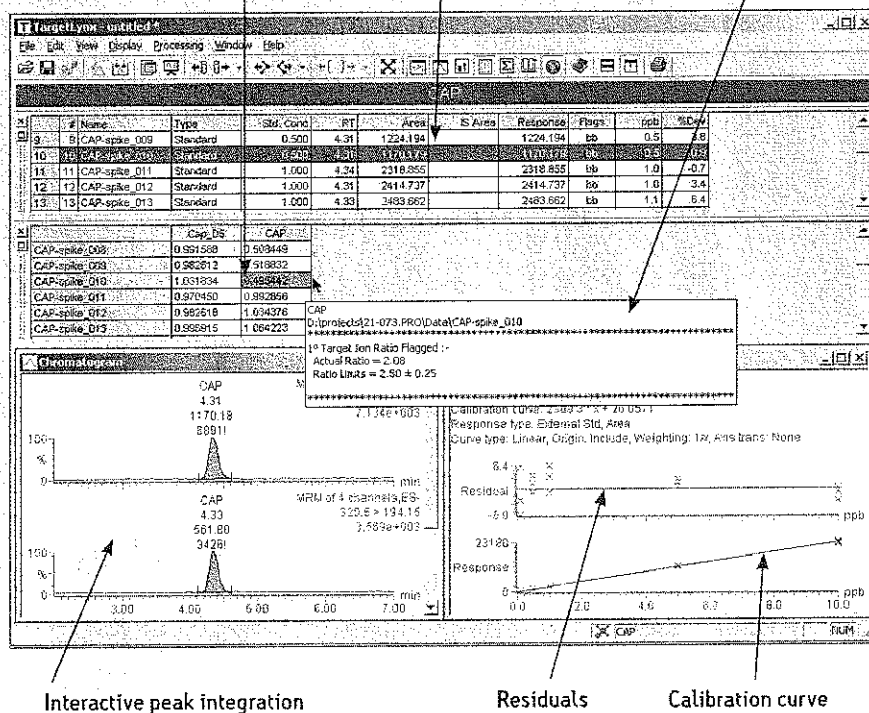
■ **TargetLynx™ Application Manager** offers advanced quantitation of target compounds, featuring automated QC checks and confirmatory ion measurements

■ **QuanOptimize Application Manager** is a software plug-in that enables high-throughput LC/MS/MS method development and quantitation

QC parameters flagged when out of limits

Sample summary table

Ion ratio information displayed



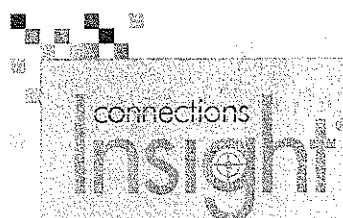
In TargetLynx, automated QC checks flag results that are outside defined tolerances.

Laboratory informatics

Waters is committed to providing powerful software solutions for scientific data management, network integration, compliance management, and laboratory productivity.

■ **NuGenesis® SDMS** – information management that stores and manages all scientific information

■ **Analytical Workflow Manager software** – tracks all analytical lab tasks while providing fast and secure data handling



Connections INSIGHT is revolutionizing the way laboratory instruments are serviced, by using Intelligent Device Management technology to provide diagnostic information for the ACQUITY TQD. Through a secure internet connection, Connections INSIGHT creates a virtual and proactive support presence in your lab. It monitors your ACQUITY TQD's key performance parameters, enabling predictive system maintenance and helping you achieve greater productivity.

Connections INSIGHT is available at no additional cost for all UPLC systems covered under a Waters Total Assurance Warranty or Support Plan.

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UK 44 208 238 6100
US 1 800 252 4752

Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A.
T: 508 478 2000
F: 508 872 1990
www.waters.com

References

1. The traveling wave device described here is similar to that described by Kirchner in US Patent 5,206,506 (1993).

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July 2007 720001767EN LB-CP



ACQUITY UPLC H-CLASS SYSTEM

The Waters® ACQUITY UPLC® H-Class System delivers the flexibility of quaternary solvent blending with the advanced performance of UPLC® separations. The system's holistic design is targeted for routine analysis and method development use and is perfectly suited for running both HPLC and UPLC applications while still realizing the improved resolution and sensitivity of UPLC separations. The system is comprised of a Quaternary Solvent Manager (QSM), a Sample Manager with Flow-Through Needle (SM-FTN) design and offers a choice of column compartment products.

ACQUITY UPLC H-CLASS SYSTEM FEATURES

Dwell volume (total system)	< 400 μ L
Integrated leak management	Leak sensors, as standard, and safe leak handling
Quantum synchronization	Injection synchronization between pump and sample manager enhances retention time reproducibility
Operating flow rate range	0.010 to 2.000 mL/min, in 0.001 mL increments
Maximum operating pressure	15,000 psi up to 1 mL/min, 9,000 psi up to 2 mL/min
pH range	2 to 12
Unattended operation	Leak sensors, full 96-hour diagnostic data display through console software
Cycle time	< 30 s inject-to-inject (see ACQUITY UPLC H-Class System Specifications Guide for conditions)

QUATERNARY SOLVENT MANAGER (QSM)

Number of solvents	One to four, in any combination as standard. Up to nine total with optional solvent select valve.
Solvent conditioning	Integrated vacuum degassing, four chambers One additional for the SM-FTN needle wash
Gradient formation	Low-pressure mixing, quaternary gradient
Gradient profiles	11 gradient curves [including linear, step (2), concave (4), and convex (4)]
Primary check valve	Intelligent Intake Valve (<i>i²Valve</i>)
Flow accuracy	\pm 1.0% at 0.5 to 2.0 mL/min using 100% A Back pressure 600 to 1000 psi with degassed H ₂ O
Flow precision	0.075% RSD or \pm 0.02 min SD, whichever is greater, based on six replicates (same conditions as composition precision with premixed H ₂ O/MeOH (60:40))
Composition ripple (baseline noise)	< 1.0 mAu (< 0.1 mAU with optional 250 μ L mixer) A: H ₂ O + 0.1%, TFA, B: ACN + 0.1%, TFA, 0.5 mL/min, ACQUITY BEH C ₁₈ 1.7 μ m 2.1 x 50 mm UV @ 214 nm, 10 mm analytical flow cell.
Composition accuracy	\pm 0.5% absolute (full scale) from 5% to 90% from 0.5 to 2.0 mL/min Degassed ACN/H ₂ O (90:10), ACN/H ₂ O (90:10) with caffeine at 12 mg/L concentration, back pressure 2000 psi, step gradient method, UV at 273 nm

[INSTRUMENT SPECIFICATIONS]

Composition precision	< 0.15% RSD or \pm 0.04 min SD, whichever is greater, based on six replicate injections 60:40 H ₂ O/MeOH via Auto•Blend™ 0.5 mL/min, alkylphenone mix (5.0 μ L injection volume), ACQUITY BEH C ₁₈ , 1.7 μ m, 21. x 50 mm, 35 °C \pm 0.3 °C, UV @ 254 nm
Compressibility compensation	Automatic and continuous
Priming	Wet priming can run at flow rates up to 4 mL/min
Pump seal wash	Equipped with a wash system to flush the rear of the high pressure seal and the plunger.
Flow ramping	Range: 0.01 to 30.00 min to reach 2.0 mL/min Default: 0.45 min to reach 2.0 mL/min
Primary wetted materials	316 L stainless steel, PPS, fluoropolymer, fluoroelastomer, UHMWPE blend, sapphire, ruby, zirconia, Nitronic 60, DLC, PEEK and PEEK blend, titanium alloy

ACQUITY UPLC H-CLASS SAMPLE MANAGER-FLOW THROUGH NEEDLE (SM-FTN)

Injection volume range	0.1 to 10.0 μ L as standard. Up to 250.0 μ L with optional extension loops.
Accuracy (aspiration)	10.0 μ L \pm 0.2 μ L
Linearity	> 0.999 (standard needle) caffeine 0.03 mg/mL, ACN/H ₂ O (10:90), isocratic 0.6 mL/min, 0.2 to 10.0 μ L, 1 to 70% needle volume
Precision	< 1% RSD 0.2 to 1.9 μ L < 0.5% RSD 2.0 to 10.0 μ L Six replicates, ACN/H ₂ O (10:90), isocratic, 0.6 mL/min
Number of sample plates	Any two of the following: <ul style="list-style-type: none">• 96 and 384 microtiter plates• 48 position 2.00-mL vial plates• 48 position 0.65-mL micro-centrifuge tube plates• 24 position 1.50-mL micro-centrifuge tube plates
Maximum sample capacity	768 in two 384-well plates or, 96 in 2 mL vial holders. Additional positions for dilution functions.
Sample compartment temperature range	4.0 to 40.0 °C, settable in 0.1 °C increments (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Temperature accuracy	\pm 0.5 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Temperature stability	\pm 1.0 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)

[INSTRUMENT SPECIFICATIONS]

Injection needle wash	Integral, active, programmable
Minimum sample required	3 µL residual, using total recovery 2-mL vials (zero offset)
Sample carryover	< 0.004% caffeine (UV) < 0.005% sulphadimethoxine (MS)
Advanced Sample Manager capabilities	Auto-dilution and transfer
Primary wetted materials	316L stainless steel, gold plated stainless steel, Vespel SCP, PEEK blend, DLC

ACQUITY UPLC H-CLASS COLUMN HEATER (CH-A)

Column capacity	Single column, up to 4.6 mm internal diameter (I.D.), up to 150 mm in length with filter or guard column
Column compartment temperature range	20.0 to 90.0 °C, settable in 0.1 °C increments (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Column compartment temperature accuracy	± 0.5 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Column compartment temperature stability	± 0.3 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Solvent conditioning	Active pre-heating, as standard. Passive pre-heating (also accommodated for legacy support).
Column tracking	eCord™ Technology column information management tracks and archives column usage history

ACQUITY UPLC H-CLASS COLUMN MANAGER (CM-A)

Column capacity	Two columns, up to 4.6 mm internal diameter (I.D.), up to 150 mm in length with filter or guard column. Stackable (up to 3 units) for up to six column support.
Switching valves	Two injector-style, seven-port, six-position valves. Provides programmable, automatic, random access switching, waste and bypass positions for rapid solvent changeover.
Column compartment(s) temperature range	4.0 to 90.0 °C, settable in 0.1 °C increments. Two independent heat/cool zones. (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Column compartment(s) temperature accuracy	± 0.5 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Column compartment(s) temperature stability	± 0.3 °C (see ACQUITY UPLC H-Class System Specifications Guide for conditions)
Solvent conditioning	Active pre-heating, as standard
Column tracking	eCord Technology column information management tracks and archives column usage history

[INSTRUMENT SPECIFICATIONS]

ACQUITY UPLC H-CLASS INSTRUMENTAL CONTROL

External control	Empower™ Software, MassLynx™ Software, or standalone through console software
External communications	Ethernet interfacing via RJ45 connection to host PC
Event inputs/outputs	Rear panel contact closure and/or TTL inputs/outputs
Connections INSIGHT®	Provides real-time monitoring and automatic notification of instrument performance and diagnostic information allowing for quicker problem resolution
Local control	ACQUITY UPLC Local Console Controller (LCC)

ENVIRONMENTAL

Acoustic noise	< 65 dBA, system
Operating temperature range	4.0 to 40.0 °C (39.2 to 104.0 °F)
Operating humidity range	20% to 80%, non-condensing

POWER REQUIREMENTS

Voltage range	90 to 264 Vac
Frequency	47 to 63 Hz

PHYSICAL DIMENSIONS

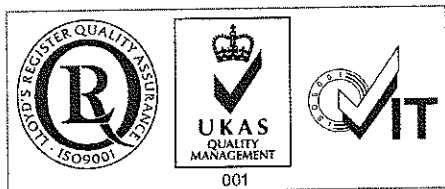
ACQUITY UPLC H-Class System: Quaternary Solvent Manager, Sample Manager with Flow-Through Needle, Column Heater, and Solvents Tray	Width: 34.3 cm (13.5 in.) Height: 71.1 cm (28.0 in.) Depth: 71.2 cm (28.0 in.)
ACQUITY UPLC H-Class System: Quaternary Solvent Manager, Sample Manager with Flow-Through Needle, Column Manager, and Solvents Tray	Width: 34.3 cm (13.5 in.) Height: 79.6 cm (31.4 in.) Depth: 71.2 cm (28.0 in.)

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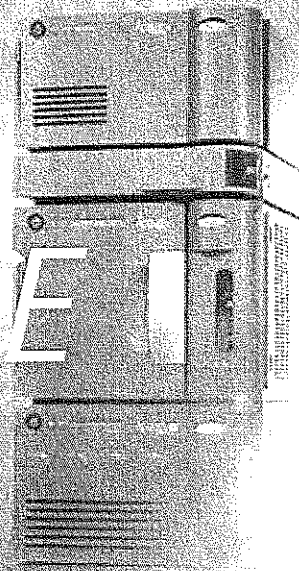
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Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A.
T: 1 508 478 2000
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[ACQUITY UPLC H-CLASS SYSTEM]



ULTRA PERFORMANCE

PERFORMANCE THAT ADVANCES YOUR LAB

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THE SCIENCE OF WHAT'S POSSIBLE

If you are performing routine analyses or developing methods, or just prefer the flexibility of multi-solvent capabilities in a quaternary-based system, the only choice has been HPLC.

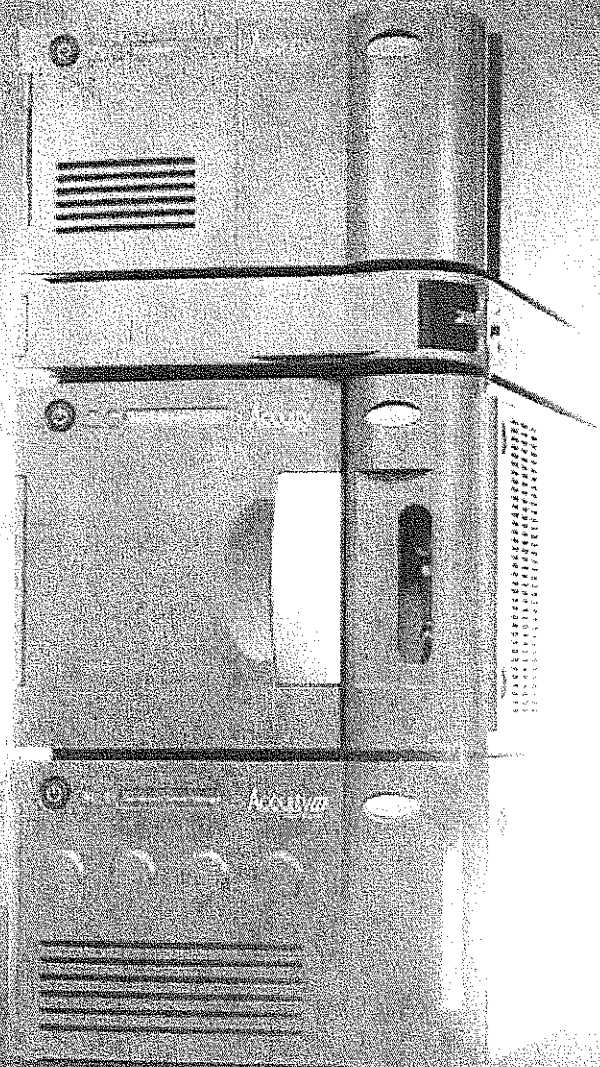
Until now.

Introducing ACQUITY UPLC® H-Class from Waters.

Now your laboratory can access the market-leading performance of Waters UltraPerformance Liquid Chromatography, known as UPLC®. Choosing the ACQUITY UPLC H-Class System enables you to continue running your existing HPLC methods on a forward-looking LC platform that allows you to confidently and seamlessly transition to UPLC separations, when you're ready, using integrated system tools and reliable column kits that simplify migration.

Waters ACQUITY UPLC Systems have been revolutionizing laboratories for more than six years. Scientists all over the world rely on UPLC because it provides the ultimate in chromatographic resolution and sensitivity and the best analytical throughput, accelerating laboratory workflow and delivering business benefits that continue to drive productivity.

ACQUITY UPLC H-CLASS SYSTEM



In addition to superior performance, UPLC uses less bench space, less energy, and up to 95% less solvent. It's been proven to do the work of three HPLC instruments, and to dramatically improve LC/MS experiments.

You can see why thousands of laboratories have adopted UPLC. And now you can adopt it yourself.

HPLC principles, but UPLC performance

When we created ACQUITY UPLC, we created a new category of performance. While UPLC applies the same principles of separation science as HPLC, the difference is our use of sub-2- μm particle columns in a system holistically designed to maximize the advantages of these columns, creating a powerful, robust, and reliable solution that only Waters provides.

After more than six years of scientific success with our ACQUITY UPLC System, Waters has redefined the category again. The ACQUITY UPLC H-Class System is the direct result of understanding the needs of customers who wanted a streamlined system that offers the flexibility of a quaternary-based HPLC, yet delivers the same performance advantages that customers have come to expect with ACQUITY UPLC – best-in-class chromatographic results.

The principles are the same. The performance is not.

Get UPLC-quality separations without changing the way you work. The familiar design of the ACQUITY UPLC H-Class's Quaternary Solvent Manager (QSM) and Sample Manager (SM-FTN), with flow-through needle design, gives you all the flexibility and usability of your current HPLC while still achieving the highly efficient separations that only UPLC can provide.

HPLC to UPLC: We've made the move even easier!

With the ACQUITY UPLC H-Class System, you won't have to think twice about transferring methods to and from any LC instrument. You can upgrade your chromatographic capabilities without risking your validated methods. Whether you are new to UPLC or a veteran user, our method transfer kits make scaling from HPLC to UPLC, and back, a straightforward process.

A breadth and depth of columns that no one else can offer.

With three UPLC particle substrates in 11 chemistries, Waters has the necessary selectivities to support your application needs. Our versatile, four-pack method development kits offer the column choices you need to develop methods efficiently and effectively. And Waters' state-of-the-art manufacturing process assures consistency of your results through batch-to-batch and column-to-column reproducibility.

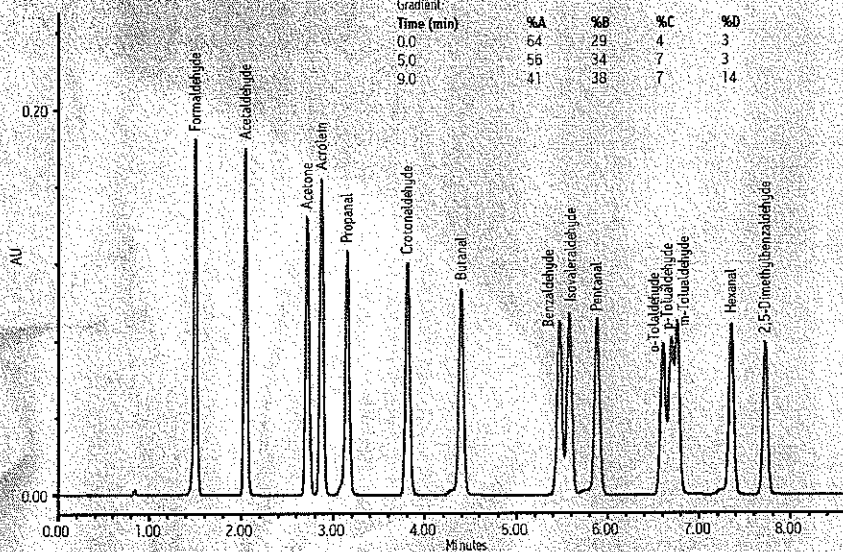
[ACQUITY UPLC H-CLASS SYSTEM]

Whether you're developing a pharmacopeia method or implementing an environmental or food safety testing method, you'll be working with a familiar quaternary-based system founded on the principles of UPLC, the best separation technology available.

Why settle for anything less?

System: ACQUITY UPLC H-Class
 Column: ACQUITY UPLC BEH Phenyl 1.7 µm, 2.1 x 100 mm
 Sample: AccuStandard DNPH Option 2 Mix diluted 5:1 in 60:40 Acetonitrile/Water
 Injection vol.: 3 µL
 Flow rate: 750 µL/min
 Eluent A: Water
 Eluent B: Acetonitrile
 Eluent C: Tetrahydrofuran
 Eluent D: Methanol
 Temp.: 50 °C
 Detection: 360 nm @ 5 Hz normal
 Needlewash: Default with 50:50 Water/Acetonitrile

Gradient Time (min)	%A	%B	%C	%D
0.0	64	29	4	3
5.0	56	34	7	3
9.0	41	38	7	14



The ability to form a quaternary gradient on the ACQUITY UPLC H-Class System improves the critical resolution for EPA Method 8315 Option 2, for the analysis of 15 aldehydes and ketones as 2,4 dinitrophenylhydrazine (DNPH) derivatives, with a UPLC separation in less than 10 minutes.

Method transfer in 3 steps

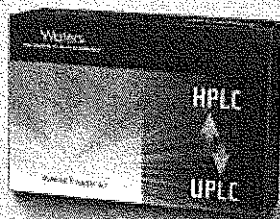
1. Select an ACQUITY UPLC Column that is comparable to your HPLC column, using our Reversed-Phase Column Selectivity Chart.

2. Enter your existing HPLC conditions into the ACQUITY UPLC Columns Calculator.

The tool will guide you step-by-step to either scale your gradient, or to choose a separation that is optimized for speed or resolution. Then select the best column dimensions from the menu, and enter the suggested method conditions.

3. Run.

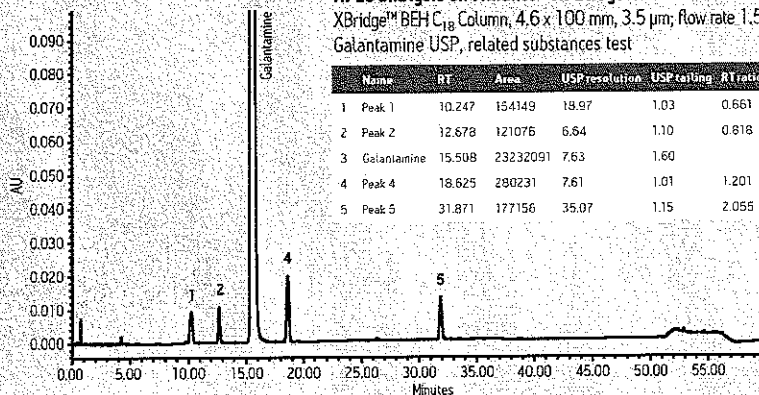
With unprecedented selectivity and reproducibility across batches and particle sizes, Waters Method Transfer Kits preserve the integrity of a separation as it is transferred between HPLC and UPLC platforms. And choosing the right UPLC columns and conditions couldn't be easier with the method transfer guidelines provided by the ACQUITY UPLC Columns Calculator.



Method Transfer Kit.

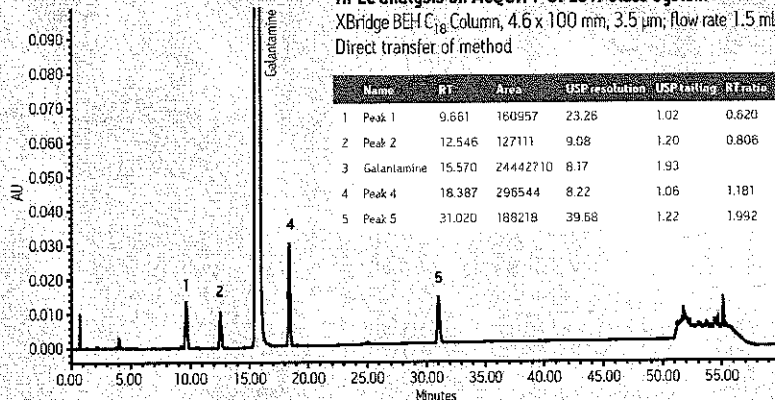
HPLC analysis on Alliance® HPLC System

XBridge™ BEH C₁₈ Column, 4.6 x 100 mm, 3.5 µm; flow rate 1.5 mL/min
Galantamine USP, related substances test



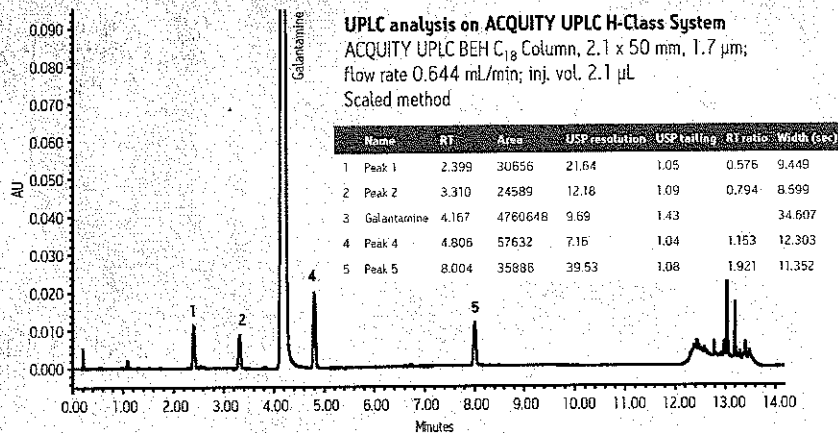
HPLC analysis on ACQUITY UPLC H-Class System

XBridge BEH C₁₈ Column, 4.6 x 100 mm, 3.5 µm; flow rate 1.5 mL/min
Direct transfer of method



UPLC analysis on ACQUITY UPLC H-Class System

ACQUITY UPLC BEH C₁₈ Column, 2.1 x 50 mm, 1.7 µm;
flow rate 0.644 mL/min; inj. vol. 2.1 µL
Scaled method



In this method transfer example using the related substances test for galantamine, used in the treatment of Alzheimer's disease, the USP method (monograph: USP32-NF27 Supplement: No. 2, Page 4245) is demonstrated first using an HPLC system. The method is directly transferred to the ACQUITY UPLC H-Class System using an HPLC column, maintaining selectivity and resolution, then scaled to UPLC using the Columns Calculator and optimized for the shortest analysis time at equal peak capacity. The run time decreased by 46 minutes.

Transform standard procedures into extreme performance

Next-generation column compartments

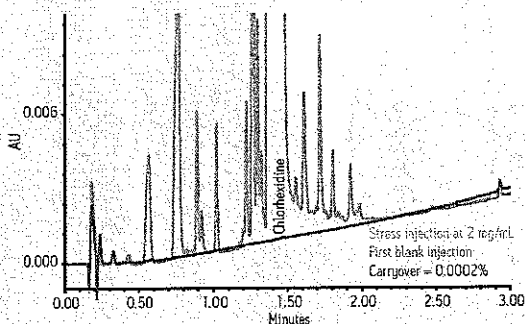
Our new column heaters and managers are standardized with easy-to-access, low-volume, active solvent pre-heaters, resulting in the same efficiency system to system.

- Pre-heaters ensure consistent thermal performance from system to system, further enabling seamless method transfer and accurate results
- Column manager can be stacked, offers multi-zone thermal flexibility, and has an extended temperature range of 4 to 90 °C for optimal method development performance
- Extended support for columns up to 300 mm in length is also available

Intuitive and precise sampling

The needle-in-flow path design of the new Sample Manager (SM-FTN) delivers high-precision injections with excellent sample recovery.

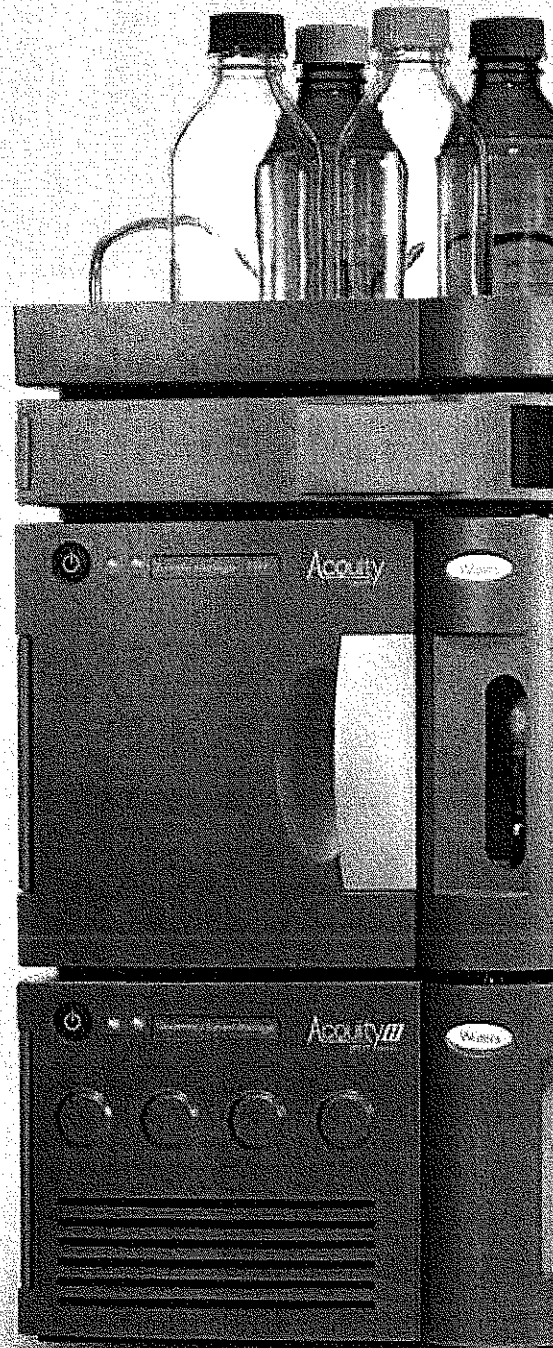
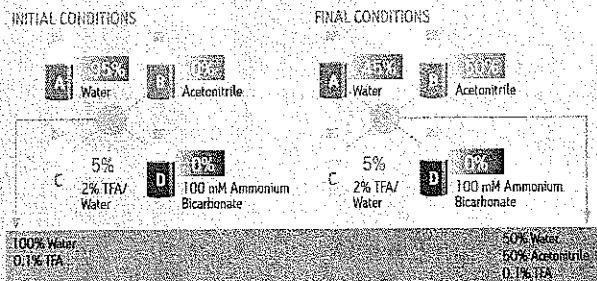
Innovative, patent-pending Smart Seal Optimization technology ensures an accurate needle seal, even at the highest UPLC pressures.



The SM-FTN provides excellent carryover performance, shown here at 0.0002% for chlorhexidine, a chemical antiseptic that is basic and difficult to remove.

Multi-solvent blending

The ACQUITY UPLC H-Class System, with its Quaternary Solvent Manager and Auto•Blend™ Technology, dynamically blends four solvents in any combination or proportion saving you time previously spent pre-blending. What's more, you can expand to up to nine solvent choices with the system's optional internal solvent-select valve for infinite method flexibility.



[ACQUITY UPLC H-CLASS SYSTEM]

The most comprehensive line of UPLC detectors available

The efficient separations achieved by UPLC require innovative ultra-low-dispersion detectors that maintain peak integrity. Only Waters can offer the widest range of UPLC-optimized detectors on the market, delivering the highest sensitivity to your applications.

- Photodiode array (PDA), extended wavelength PDA (PDA e λ), tunable ultra-violet (TUV), evaporative light scattering (ELS), and fluorescence (FLR)
- Single (SQ) and tandem (TQ) quadrupole mass detectors

Intelligent management of system overhead

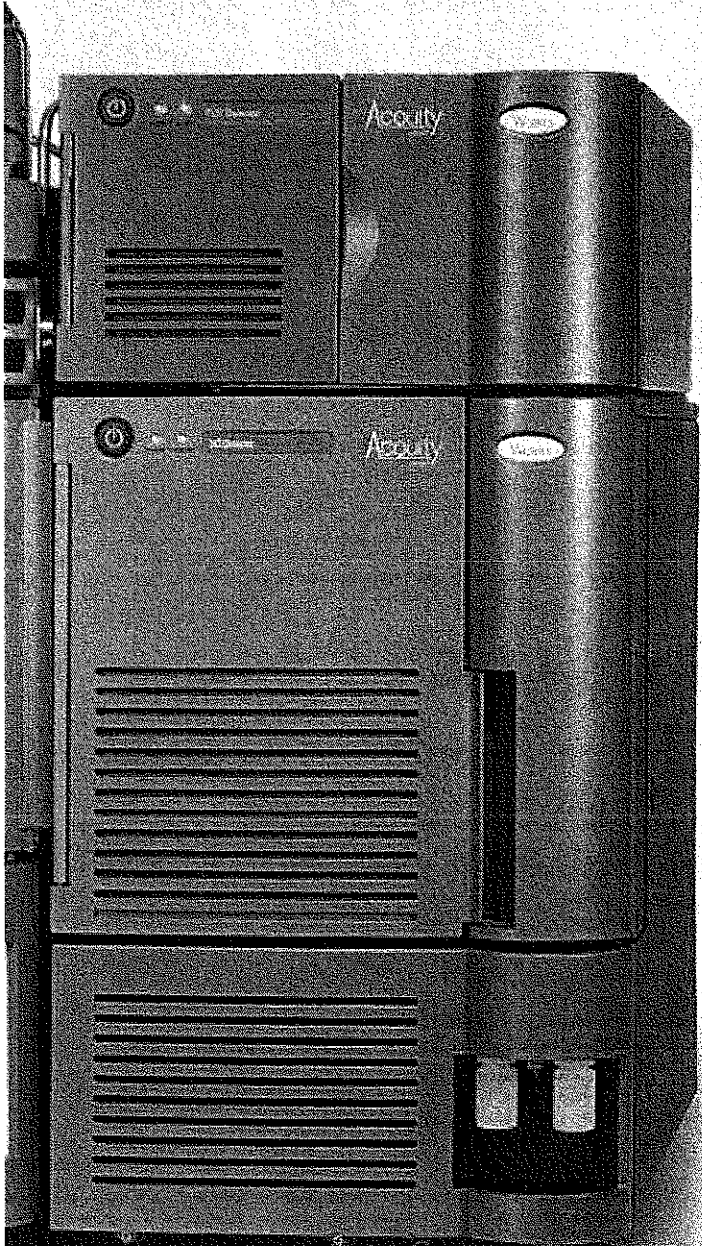
New patent-pending SmartStart Technology works to intelligently determine when the gradient needs to start, while managing pre-injection steps in parallel. By overlapping these typically serial processes, SmartStart minimizes cycle time to maximize sample throughput.

Informatics solutions that adapt to your lab's needs

The ACQUITY UPLC H-Class System is fully compatible with Empower™ Software, our industry-leading chromatography data software platform, as well as MassLynx™ Software and its suite of data processing Application Managers. Waters' own unique eCord™ Technology records the usage and history of your UPLC columns.

Superior installations and services you can rely on

Our dedicated system experts will get you up and running quickly – for a 100% seamless transition to ACQUITY UPLC H-Class. As your laboratory grows and expands, so does ACQUITY UPLC H-Class.



Method development that's robust, reliable – and predictable

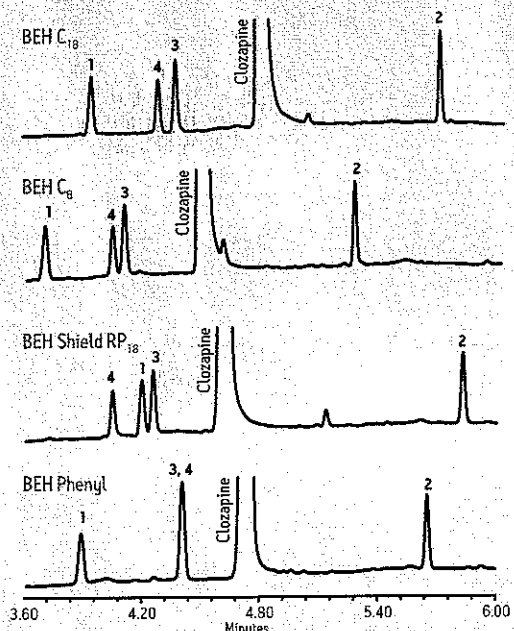
With the ACQUITY UPLC H-Class System, method development turns from a tedious and time-consuming process with HPLC, to a versatile and productive workflow with UPLC. The system features a variety of components to improve data quality, increase sample throughput, and reduce cost per analysis for timely and predictable results.

Separation of clozapine from four structurally-related impurities using BEH Column Technology

These columns can be quickly screened over a wide range of temperature, mobile phase pH, and pressure to maximize selectivity and produce a successful result.

System: ACQUITY UPLC H-Class with PDA
 Columns: ACQUITY UPLC 2.1 x 50 mm (all)
 Injection vol.: 5 µl
 Flow rate: 0.5 mL/min
 Temp.: 30 °C
 Detection: UV 257 nm, 20 Hz, Tc = 0.1 s

Eluent A: Water
 Eluent B: Acetonitrile or Methanol
 Eluent C: 200 mM NH₄COOH, pH 3 with HCOOH
 Eluent D: 200 mM NH₄COOH, pH 10 with NH₄OH
 Needle, Purge, and Seal wash lines in 50:50 ACN/H₂O
 Gradient from 5 to 90% MeOH in 5 min (10 mM, pH 10 buffer)



ACQUITY UPLC Method Development Kits offer combinations of different column chemistries to accommodate your method development approach, enabling methods to be developed efficiently and effectively.

Combine column managers to accommodate multiple columns with active pre-heating and independent heating/cooling zones.

Employ Empower 2 Method Validation Manager (MVM) to perform chromatographic method validation, from protocol planning to final reporting, in one application.

Simultaneous method development for morphine-related compounds using reversed-phase and HILIC chromatography

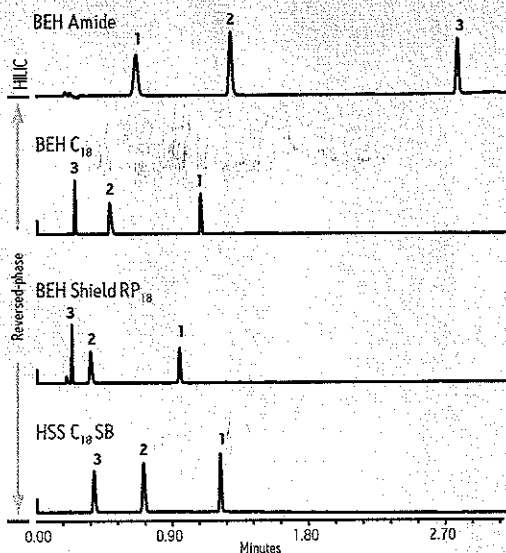
New system capabilities inherent to the ACQUITY UPLC H-Class enable the sequential development of methods for compounds with a broad range of polarity and chemical properties.

Compounds:

(1) 6-acetylmorphine, (2) morphine, (3) morphine-3β-D-glucuronide

System: ACQUITY UPLC H-Class with PDA
 Columns: ACQUITY UPLC 2.1 x 50 mm (all)
 Injection vol.: 5 µl
 Flow rate: 0.6 mL/min
 Temp.: 30 °C
 Detection: UV 280 nm, 20 Hz, Tc = 0.1 s

Eluent A: Water
 Eluent B: Acetonitrile
 Eluent C: 200 mM NH₄COOH, with 2.5% HCOOH, pH 3
 Eluent D: 200 mM NH₄COOH, with 0.8% NH₄OH, pH 9
 Needle, Purge, and Seal wash lines in 50:50 ACN/H₂O
 Gradient: HILIC: 95 to 50% ACN in 5 min (10 mM pH 3 buffer)
 RP: 5 to 95% ACN in 5 min (10 mM pH 3 buffer)



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Milford, MA 01757 U.S.A.
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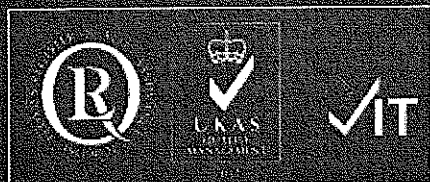
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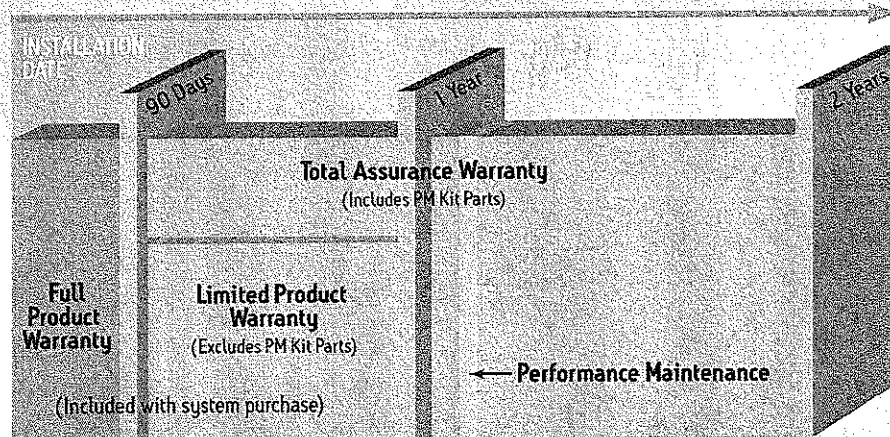
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Protect your investment for two full years

EXTEND YOUR COVERAGE NOW AND SAVE

The Waters Total Assurance Warranty (TAW) is available only during the first 90 days of system ownership for your Waters HPLC, UPLC®, and mass spectrometry systems to give you full support coverage for a total of two years and a Performance Maintenance visit in year two, at significant savings.

- Ensure reliable operation and minimize unscheduled downtime
- Guarantee a seamless continuation of full support after your limited warranty expires
- Fix the cost of ownership for your mission critical instruments
- Eliminate administrative costs of processing future multiple purchase orders



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Don't Wait

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Are you challenged to

- Drive laboratory productivity?
- Speed time-to-market?
- Maximize uptime?
- Control maintenance costs?
- Meet GxP regulations?



For the seventh consecutive year, an independent quality auditing firm ranked Waters Global Services best-in-class in providing expert technical knowledge, quick resolution of system issues, and process support.

Achievement in Customer Excellence Award, CustomerSat, Inc., 2007; NorthFace ScoreBoard Award,™ Omega Management Group Corporation, 2000-2006.

[SERVICE SOLUTION]

Be assured. Choose Waters Global Services

For nearly 50 years, Waters Global Services has focused exclusively on optimizing Waters products with superior service, support, upgrades, training, and Waters Quality Parts.®

Only the Waters service team has the most in-depth and up-to-date knowledge of the advanced science and technologies that provide the foundation for Waters systems. This enables Waters to help you

maximize system uptime, increase laboratory productivity, and meet compliance requirements.

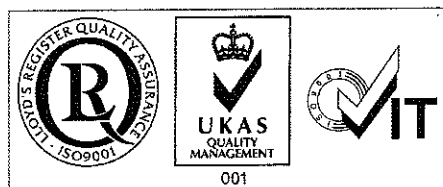
With more than 94 offices in 50 countries, Waters maintains a strong global presence. Whether your company is a single-location lab or a large multinational organization, Waters Global Services provides you with the expertise and responsiveness you need.

TOTAL ASSURANCE WARRANTY COMPARED TO WATERS PRODUCT WARRANTIES*			
Parts & Service Feature	Full Product Warranty (First 3 Months)	Limited Product Warranty (Last 9 Months)	Total Assurance Warranty (24 Months)
Performance Maintenance			✓
Labor and Travel	✓	For covered parts only	✓
Price Lock			✓
Gear Trains and Motors	✓	✓	✓
Power Supplies	✓	✓	✓
Printed Circuit Boards	✓	✓	✓
Vacuum Pumps	✓	✓	✓
Lasers	✓	✓	✓
MCPs	✓	✓	✓
Lamps	✓		✓
Plungers	✓		✓
Seals and O-Rings	✓		✓
Seal Packs	✓		✓
Firmware	✓		✓
Capillary Tube	✓		✓
Additional Performance Maintenance			Optional
Ion Source Cleaning			Optional
Qualification Services			Optional

Waters Full Product Warranty and Limited Product Warranty are included with your system purchase.

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The Waters Total Assurance Plan is a complete system package designed for the laboratory where instrument uptime is important.

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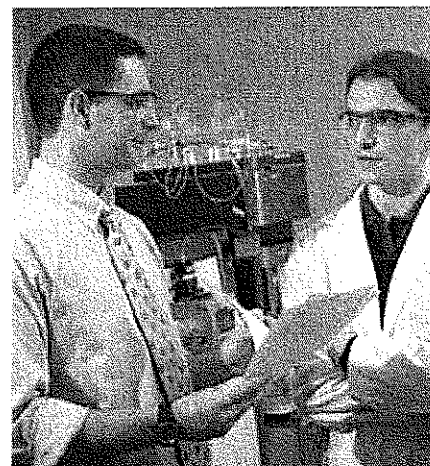
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ADD A GXP COMPLIANCE OPTION TO YOUR PLAN

A Waters Compliance Service Plan Option helps you achieve and maintain the regulatory compliance of your LC and MS instruments and software, with a combination of expertise and compliant-ready systems and software, to ensure that you have quality data, consistently.

Are you challenged to

- Drive laboratory productivity?
- Speed time-to-market?
- Maximize uptime?
- Control maintenance costs?
- Meet GxP regulations?



For the sixth consecutive year, an independent quality auditing firm ranked Waters Global Services best-in-class in providing expert technical knowledge, quick resolution of system issues, and process support.

2006 Omega NorthPac ScoreBoard Award™
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[SERVICE SOLUTION]

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Italy 39 02 265 0983

Japan 81 3 3471 7191

Korea 82 2 820 2700

Mexico 52 55 52 00 1860

The Netherlands 31 76 508 7200

Norway 47 6 384 6050

Poland 48 22 833 4400

Puerto Rico 1 787 747 8445

Russia/CIS 7 495 727 4490 / 290 9737

Singapore 65 6273 1221

Spain 34 93 600 9300

Sweden 46 8 555 115 00

Switzerland 41 62 889 2030

Taiwan 886 2 2543 1898

UK 44 208 238 6100

US 1 800 252 4752

**BE ASSURED. CHOOSE WATERS
GLOBAL SERVICES.**

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Only the Waters Service team has the most in-depth and up-to-date knowledge of the advanced science and technologies that provide the foundation of Waters systems. This knowledge enables us to help you maximize system uptime, increase laboratory productivity, and meet stringent compliance requirements.

Waters offers a range of service plans that meet your needs and provide the lowest cost-of-ownership.

With 94 offices in more than 50 countries, Waters maintains a strong global presence. Whether your company is a single-location lab or a large multinational organization, Waters Global Services provides you with the expertise and responsiveness that you need.

Waters

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March 2008 720002456EN PC-PC



Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A.
T: 1 508 478 2000
F: 1 508 872 1990
www.waters.com



Waters Licenses, Warranties, and Support Services

Waters
34 Maple Street
Milford, MA 01757
71500029510, Revision D

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Customer Comments

Your comments help us improve the quality, accuracy, and organization of our documentation. Please enlighten us with questions, observations, suggestions, and reporting of any errors you encounter in this document. Our email address is tech_comm@waters.com.

Standard Product Limited Warranty Information

Software license and instrumentation warranty

All use of Waters® Software shall be governed by the following terms and conditions.

The term "Software" includes the object code version of the Millennium®32 Software, MassLynx™ Software, Breeze™ Software, Empower™ Software, Waters eLab Notebook™ Software, Waters Q-DIS/R™ Software, Waters Q-DIS/QM™ Software, Waters Q-DIS/AQV™ Software, and Waters NuGenesis SDMS™ Software, licensed to you (the Customer) by Waters Corporation. The Software is comprised of the computer programs, magnetic media containing the computer programs, user documentation, and any updates that Waters may provide to you.

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Title and full ownership rights to the Software remain with Waters and with the manufacturers of any third-party software included with the Software. The Software contains trade secrets of Waters and any third-party manufacturers and in order to protect them, you may not modify, adapt, translate, reverse engineer, decompile, disassemble, or otherwise reduce the Software to a human-perceivable form, or create derivative works of the Software. This license is effective for as long as you are not in violation of any of the material terms of this License Agreement. You may terminate this license at any earlier time by destroying the Software and removing it from all computers. The license will also terminate if you fail to comply with any material term or condition of the license. You agree upon termination to discontinue the use of the Software and to destroy, or return to Waters, the Software, together with all backup, disaster recovery, or archival copies. The Software is not specifically developed or licensed for use in inherently dangerous applications. Waters shall not be liable for any claims or damages arising from such use, and you hereby agree to indemnify and hold Waters and any third-party manufacturers harmless from any claims for losses, costs, damages, or liability arising out of or in connection with any such inherently dangerous use of the Software. You agree to comply fully with all relevant export laws and regulations of the United States ("Export Laws") to ensure that the Software is (a) not exported directly or indirectly in violation of Export Laws and (b) not intended to be used for any purposes prohibited by the Export Laws. If you are a branch of the United States government, you shall have

"restricted rights" to use, duplicate, or disclose the Software as set forth in subdivision (c)(1)(ii) of Rights in Technical Data and Computer Software Federal Acquisition Regulations Supplement (DFARS) 252.227-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software-Restricted Rights at 48 CFR 52.227_19.

Limited warranty: instrumentation

Waters Technologies Corporation, d/b/a Waters Corporation ("Waters") warrants from the date of shipment for the applicable Warranty Period that its instrumentation identified and/or marketed as Waters or Micromass® Technology products shall be free from defects in design, material, and workmanship and shall conform to and perform materially in accordance with the specifications set forth in the applicable operator or user manual when used in the proper operating environment under normal use and service. This warranty covers all new instrumentation products manufactured by Waters. Any warranty that may be applicable to Third-Party instrumentation products and accessories shall be provided by the respective manufacturers or suppliers of such Third-Party components.

Any Waters instrumentation product that is classified as a Class I or Class II medical device under 21 CFR 862.2260, 21 CFR 862.2860, or 21 CFR 862-1555 is for use only by properly qualified personnel and not for home use, as indicated in the Intended Use statement provided in the product literature. Waters instruments are for general purpose use and/or in vitro diagnostic procedures, unless specifically expressed otherwise in the product literature. Waters systems provide a measurement used for the purpose of screening for a human disease in a clinical application and are not intended to result in a medical diagnosis of any human disease. Any such diagnosis must be made by a qualified health care professional. This instrumentation limited warranty is subject to the conditions set forth below.

Exclusions

The foregoing limited warranty does not apply to any material deviation from the specifications by any instrumentation product that results from (a) use of the instrumentation for any purpose other than general purpose use and/or in vitro diagnostic procedures, unless specifically expressed otherwise in the product literature; (b) use of the instrumentation products for investigational use with or without confirmation of diagnosis by another, medically established diagnostic product or procedure; (c) errors or defects in any Third-Party Component; (d) modification of the instrumentation products by anyone other than Waters; (e) failure by Customer to install any standard enhancement or update in accordance with an update procedure or release of firmware or any operating system release; (f) any willful or negligent action or omission of Customer; (g) any misuse, or incorrect use, of the instrumentation product; (h) any malfunction of any information system or instrument with which the instrumentation product may be connected; or (i) failure to establish or maintain the operating environment for the instrumentation product in accordance with the applicable operator or user manual.

Exclusive remedy

In the event of any failure of an instrumentation product to perform in accordance with the foregoing limited warranty, Waters' sole liability and Customer's sole and exclusive remedy, shall at Waters' sole discretion be the repair or replacement of the instrumentation product or refund of amounts paid by Customer for the instrumentation product that does not meet the limited warranty.

Warranty service: instrumentation

Warranty service is performed at no charge and at Waters' option and in Waters' sole discretion in one of three ways:

- A service representative is dispatched to the customer facility.
- The instrumentation product is returned for repair at a Waters facility.
- Replacement parts with appropriate installation instructions are sent to the customer.

Warranty service is performed only if the customer notifies Waters during the applicable warranty period.

Unless otherwise agreed in writing at the time of sale, if the instrumentation product for which warranty service is sought has been removed from the initial installation geographic site, no warranty service will be provided.

Warranty service is provided during normal business hours (8 AM to 5 PM, Monday through Friday). Service is not available when Waters offices are closed in observance of legal holidays.

Warranty service exceptions for instrumentation

Warranty service is not performed on any instrumentation product or part that has been repaired by others, improperly installed, altered, or damaged in any way.

- any instrumentation product or parts not manufactured by Waters.
- any instrumentation product that malfunctions because the customer has failed to perform maintenance, calibration checks, or observe good operating procedures.
- any instrumentation product that malfunctions due to the use of unapproved maintenance, or repair parts, or operating supplies and computers not meeting minimum hardware requirements, or as a result of network-related problems.

Repair or replacement is not made

- for expendable items such as filament devices, panel lights, fuses, batteries, filters, and seals, when such items were operable at the time of initial use.
- because of decomposition due to chemical action.
- because of poor facilities, operating conditions, or inadequate utilities.

Limited warranty: software

Waters Technologies Corporation, d/b/a Waters Corporation ("Waters") warrants for a period of ninety (90) days from the date of shipment that the software products ("Software") will, when used in the designated operating environment, perform substantially in accordance with the operating specifications set forth in the user manual as amended by any release notes issued during the Warranty Period and that the Software physical magnetic media will be free of defects in materials and workmanship. The foregoing warranty shall apply only to the most current version of the Software that was supplied to the customer by Waters. The limited warranty is subject to the conditions set forth below:

1. The Customer must give written notice to Waters during the Warranty Period with an explanation of the circumstances of any claim that the Software fails to conform to this limited warranty.
2. The Customer's sole and exclusive remedy in the event of any such failure is expressly limited to the correction or replacement of the defective Software or the refund of the fees paid for the defective Software.
3. Waters does not warrant that the operation of the Software will be uninterrupted or error-free.
4. This limited warranty is for the benefit of and applies only to the Customer.
5. The limited warranty shall not apply to any Software delivered to the Customer that has been improperly installed or modified or that has been the subject of neglect, misuse, abuse, misapplication or alteration.
6. No representative of Waters is authorized to commit Waters to any warranty other than the warranty contained herein.

Limited warranty: repair and maintenance service

Waters Technologies Corporation, d/b/a Waters Corporation ("Waters") warrants repairs and maintenance services for a period of ninety (90) days from the date of delivery of such services. Waters also warrants the parts used shall be free from defects in design, material and workmanship and shall conform to and perform materially in accordance with the specifications set forth in the applicable operator or user

manual when used in the proper operating environment under normal use and service. In addition, Waters warrants the service workmanship used to complete a repair or maintenance event will result in the return of the serviced component or instrument back to its original performance specifications.

Repair and maintenance warranty service is not provided for

- any instrument, maintenance or repair part that has been repaired by others, improperly installed, altered, or damaged in any way.
- any instrumentation product that malfunctions because the customer has failed to perform maintenance, calibration checks, or observe good operating procedures.
- any instrumentation product that malfunctions due to the use of unapproved maintenance or repair parts or operating supplies and computers not meeting minimum hardware requirements or as a result of network related problems.
- any system component or assembly that falls outside the scope of the repair or maintenance service that fails either during or within ninety (90) days of the service event.

Repair or replacement is not made

- for expendable items such as filament devices, panel lights, fuses, batteries, filters, and seals if such items were operable at the time of initial use.
- because of decomposition due to chemical action.
- because of poor facilities, operating conditions, or inadequate utilities.

Warranty disclaimers: instrumentation and software

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Transfer of warranty

The warranty is not transferable from the original owner or original installation site to another geographic location without the written consent of Waters. In the event that the instrument(s) must be relocated within the same company and country during the warranty period, Waters offers relocation services to

ensure proper care is taken when de-installing, packing and re-installing in order to maintain the warranty coverage.

Product warranty periods

Note that warranty periods begin when products are shipped.

Instrumentation

Warranted Item	Component(s)	Warranty Period
Electronic and mechanical assemblies	Entire instrument, except for maintenance parts, operating supplies, and expendable components	<p>One year (13 months) from the date of shipment, unless otherwise stated in the instrument's accompanying user documentation as in the case of the Waters 2695 Separations Module, whose documentation specifies that a two-year warranty applies to the instrument's sample manager and solvent manager drive mechanism.</p> <p>A ninety (90) day warranty accompanies instruments that have served as demonstration models or that have been otherwise used when purchased (i.e., they are not in new condition). For such instruments, a nine-month, extended warranty can be purchased at the point of sale and thus provide a full, one-year (12-month) warranty.</p>
Normal wear and maintenance parts	As defined in the instrument Performance Maintenance Kit, if available	Ninety (90) days from date of shipment
Operating supplies and expendables	Autosampler vials, solvent and sample filters, and fuses.	Warranted to function properly when delivered

Software

Warranted Item	Component(s)	Warranty Period
Media	Compact discs (CDs) and diskettes	Ninety (90) days from date of shipment
Performance		Ninety (90) days from date of installation

Service

Warranted Item	Component(s)	Warranty Period
Parts installed during a demand service repair	Mechanical and electronic assemblies	Ninety (90) days from date of shipment
Service labor	Service workmanship	Ninety (90) days from date of service delivery

Warranty returns

No returns may be made without prior notification of, and authorization from, Waters. If it is necessary to return products to Waters, contact Waters Customer Service, the Waters subsidiary nearest you, or your Waters representative for a return merchandise authorization (RMA) number and forwarding address. Extended and enhanced warranty coverage is available for instrumentation and software products under the applicable service and support plan. Contact your local Waters office for more information.

Warranties: non-Waters hardware

Waters does not assemble, configure, or install software on any computer or computer peripheral that has not been purchased from Waters. The warranty for hardware not manufactured by Waters Corporation follows the warranty, if any, of the original equipment manufacturer.

Waters' USA and Canadian customers seeking service and support may contact Waters Technical Service (800 252-4752). Others may phone their local Waters subsidiary or Waters corporate headquarters in Milford, Massachusetts (USA), or they may visit the Waters Website (<http://www.waters.com>) and click Support. Optional installation services are available to purchasers of Workstation Add-On Kit software products. The services consist of up to one day of software installation, system configuration, and primary operator familiarization training. During this day of system installation service, a certified Waters field service technician will configure the Customer's computer, load software, and interface the computer with the system.

Training and extended support

Instrument startup and training

Waters offers optional instrument startup and familiarization training for a single, designated primary operator of a purchased and configured system.

Instrument startup consists of these procedures:

- Assembling computer hardware and connecting the printer
- Connecting computer hardware to the system instruments
- Configuring and testing a system for proper instrument function and data collection

Extended training

Connections® University provides software training beyond that which is provided at startup. Courses are available at the World Wide Training Center in Milford Massachusetts, regionally, or on-site. On-site courses let you tailor the content and length of training to suit your needs.

System updates and support are available through a Connections Total Assurance Warranty or Total Assurance Plan. A Total Assurance Plan is renewable annually and provides scheduled performance maintenance visit(s), valuable software upgrades and instrument upgrades, telephone support, priority service response, unlimited system repair services and other value-added options to update your system and keep it operating at optimum performance.

For details about the training and extended support programs, Waters' USA and Canadian customers may contact Waters Technical Service (800 252-4752). Others may phone their local Waters subsidiary or Waters corporate headquarters in Milford, Massachusetts (USA), or they may visit the Waters Website (<http://www.waters.com>) and click Support.

Shipments, damages, claims, and returns

All shipments are made free on board (FOB) shipping point. Waters suggests that you authorize insurance for all shipments. Instruments and major components are packed and shipped via ground transportation unless otherwise required. Supplies and/or replacement parts are packed and shipped via a ground courier, air parcel post, or parcel post, unless otherwise requested.

Damages

The U.S. Interstate Commerce Commission (ICC) has determined that carriers are as responsible for concealed damages that occur during transit as they are for obvious damages. Concealed damage is damage that occurs to the contents of a shipping package where the package exterior remains apparently undamaged. Therefore, unpack the instrument or component promptly after receiving it, aware that it may have sustained concealed damage while in transit.

Claims

If you discover the item shipped has sustained concealed damage, do not continue to unpack it. Instead, request the local agent or carrier to immediately inspect the unit, and secure a written (inspection) report of his or her findings to support the claim. You must make this request within 15 days of receiving the damaged unit, otherwise, the carrier will not honor the claim. Do not return damaged goods to Waters without first securing the inspection report and contacting Waters for a return merchandise authorization (RMA) number.

Ensure the shipment is protected and secure after you receive it. Components removed from the shipment, or damaged while awaiting installation, are the responsibility of the Customer.

After a damage inspection report is secured, Waters cooperates fully in supplying replacements and handling a claim, which either party may initiate.

Returns

No returns may be made without prior notification and authorization. If for any reason it is necessary to return material to Waters, contact Waters Customer Service, the Waters subsidiary nearest you, or your local Waters representative for a return merchandise authorization (RMA) number and forwarding address.

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. Application is made for 2.5% resident vendor preference for the reason checked:

____ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

____ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,

____ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. Application is made for 2.5% resident vendor preference for the reason checked:

____ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. Application is made for 2.5% resident vendor preference for the reason checked:

____ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. Application is made for 5% resident vendor preference for the reason checked:

____ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

____ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

____ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Waters Corporation

Signed: 

Date: 5/11/2010

Title: Bid Specialist

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Waters Corporation

Authorized Signature: *[Signature]* Date: 5/11/2010

State of Massachusetts

County of Worcester, to-wit:

Taken, subscribed, and sworn to before me this 12th day of May, 2010.

My Commission expires July 6th, 2012.

AFFIX SEAL HERE

NOTARY PUBLIC *Kristen A. Arakelian*