

[2015 ■ 16]



WATERS QUALITY PARTS[®], CHROMATOGRAPHY
COLUMNS, AND SUPPLIES CATALOG

Waters

THE SCIENCE OF WHAT'S POSSIBLE.[®]



We are pleased to present the 2015/2016 Waters Quality Parts,[®] Chromatography Columns, and Supplies Catalog.

With over 50 years of market leadership, we remain committed to the development and manufacture of leading consumable products that solve today's most difficult challenges and enable our customers' successes. We are driven by our core mission: to provide enabling technologies in products that set the industry standard for performance and reproducibility.

Waters provides the industry's broadest and deepest product offering. Our products are manufactured to industry benchmark quality requirements by our world-class manufacturing organization and supported by our highly skilled sales and support teams. 2014 was an important year for Waters. We launched the new CORTECS[®] 2.7 μm Solid-Core Columns, leveraging the technology introduced with the award winning CORTECS UPLC[®] 1.6 μm Columns in 2013. With three phases to choose from, the CORTECS Columns offer both reversed-phase and orthogonal HILIC selectivity, with unmatched performance, giving you flexibility and the power to develop methods for challenging separations.

In addition, there were several new products including our ACQUITY UPC²[®] Trefoil[™] and Torus[™] Columns for chiral and achiral separations respectively, the groundbreaking iKey[™] Separation Device, the high performance capillary ACQUITY UPLC M-Class Columns, the XBridge[®] BEH SEC 200Å and 450Å Columns for protein separations, a new Beverage Analysis Kit, and the industry's highest performance columns for polymer separations, the ACQUITY APC[™] Columns.

We invite you to visit our online Order Center at www.waters.com/order. Our Order Center provides a convenient interface for both purchasing/procurement departments and scientific users to research, compare, obtain pricing and availability, and purchase consumables and spare parts online.

Our catalog is also available electronically and can be viewed or downloaded at www.waters.com/catalog.

To learn more about how we can help you achieve your objectives, contact one of our 54 worldwide offices and speak with our highly trained account specialists.

Michael J. Yelle
Vice President, Consumables Business Unit
Waters Corporation
Milford, MA, U.S.A.

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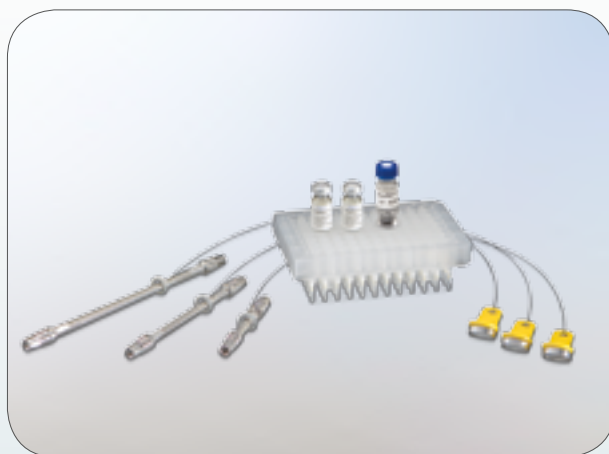
WHAT'S NEW

CORTECS 1.6 μm and 2.7 μm Solid-Core Particle Columns



Unleash the power of your laboratory's instrumentation with CORTECS® 1.6 μm and 2.7 μm Solid-Core Particle Columns. These high performance columns maximize efficiency and provide greater throughput and speed compared to fully-porous particle columns.

UPLC and HPLC Columns and Standards for Glycan Analysis



Waters now offers both UPLC® and HPLC, BEH-based columns and standards for analyzing labeled, N-linked glycans from biotherapeutic proteins. Chromatographers can now choose the most appropriate LC-based technology to address their specific released glycan analysis application needs and laboratory instrumentation.

iKey Separation Device



The iKey™ Separation Device is one of the enabling technologies behind the ionKey/MS™ System. The innovative iKey eliminates the need for traditional fittings and greatly simplifies the microflow-LC user experience. Available with an internal diameter of 150 μm and in 50 mm and 100 mm lengths, the iKey brings microflow LC into the mainstream of chromatographic laboratories.

ACQUITY UPLC M-Class Columns



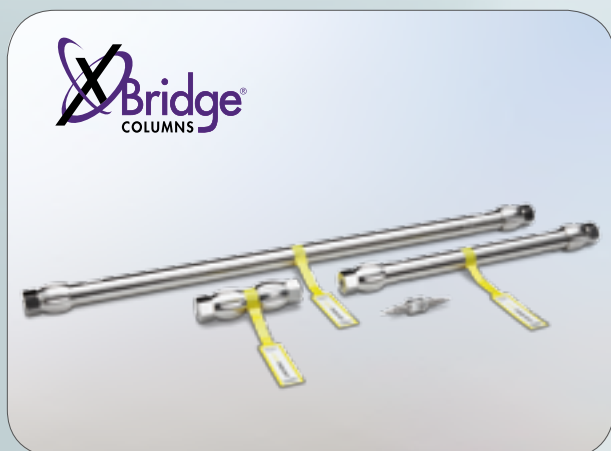
ACQUITY UPLC® M-Class Columns are designed specifically for the Waters ACQUITY UPLC M-Class System and used in nano- to microscale LC separations. These columns are optimized for maximum sample recovery and deliver superior chromatographic resolution through efficient use of sub-2- μm particles.

ACQUITY APC Columns



ACQUITY® Advanced Polymer Chromatography® (APC™) Columns deliver advanced sorbent technology for separating complex synthetic polymer and macromolecular species. They deliver superior performance and reliability for high resolution polymer characterization compared to conventional GPC Columns by improving bed stability, maximizing efficiency, and providing industry-leading reproducibility.

XBridge Protein SEC, 200Å and 450Å, 3.5 µm Columns



XBridge® Protein BEH SEC, 200Å and 450Å, 3.5 µm Columns provide HPLC-based SEC resolution of proteins from 10–1,500 K Daltons with higher throughput capability. These new HPLC SEC Columns deliver superior performance compared to traditional, 100% silica-based SEC offerings allowing chromatographers to easily develop and/or transfer SEC methods based on laboratory instrumentation, required protein component resolution, and sample throughput requirements.

Quality Control Reference Materials and Certified Containers



Used regularly, Waters Quality Control Reference Materials (QCRMs) monitor system performance and identify system problems to bring confidence to your assay execution.

Waters Certified Containers prevent extraneous peaks and baseline noise stemming from high TOC and can be used on any LC system, including UPLC, LC-UV, and LC-MS, among others.

ACQUITY UPC² Trefoil and Torus Columns



ACQUITY UPC²® Trefoil™ and Torus™ Columns are designed for the ACQUITY UPC² System and enable separation scientists to better access the power of normal-phase chromatography with the ease and reliability of reversed-phase chromatography. The ACQUITY UPC² Trefoil and Torus column chemistries provide the ability to handle chiral and achiral separations with unequalled speed and unparalleled confidence.

Waters is committed to education and training. Learn from the best! Our expanding series of easy-to-read, well-illustrated, high-quality primers are written by experts, and introduce, inform, and explain the latest technologies in analytical science.



The Quest for Ultra Performance in Liquid Chromatography: Origins of UPLC Technology

From the dawn of LC to the present day, drawn almost entirely from original sources and first-person accounts, this text reviews the first century of LC, showing how early the concepts of ultra performance were recognized and how many decades it took to reduce them to practice. An extensive glossary is included.

Paperback, 54 pages ISBN: 978-1-879732-05-6

The Quest for Ultra Performance in Liquid Chromatography

Part No. [715002098](#)



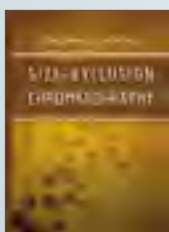
Beginner's Guide to Convergence Chromatography

This primer describes describes the fundamentals of convergence chromatography and reviews some of the many applications that makes UPC² an essential separation technique for modern laboratory analysis.

Paperback, 64 pages ISBN: 978-0-615-98496-4

Beginner's Guide to Convergence Chromatography

Part No. 715004472



Beginner's Guide to Size-Exclusion Chromatography

Learn the basic concepts of SEC, good operating practices, and discusses some examples that address the capability of SEC separations.

Paperback, 64 pages ISBN: 978-1-4675-9372-4

Beginner's Guide to Size-Exclusion Chromatography

Part No. [715004398](#)



Beginner's Guide to Liquid Chromatography

Offering an uncomplicated introduction to the technology of liquid chromatography (LC), with a focus on HPLC, this basic book uses clear language, colorful diagrams, and a full glossary to acquaint readers with basic concepts and terminology. This primer is suitable for younger science students as well as professionals new to LC.

Paperback, 52 pages ISBN: 978-1-879732-02-5

Beginner's Guide to Liquid Chromatography

Part No. [715001531](#)





Beginner's Guide to UPLC (Ultra-Performance Liquid Chromatography)

Success is assured once new, experienced, and potential UPLC users learn from this volume the 'why' and the 'how' of UPLC Technology principles. Scientists will gain the confidence to apply this knowledge in ways that enhance analytical productivity, streamline workflow, and advance scientific progress within their organizations.

Paperback, 52 pages ISBN: 978-1-879732-07-0

Beginner's Guide to UPLC (Ultra-Performance Liquid Chromatography)

Part No. [715002099](#)



Comprehensive Guide to HILIC (Hydrophilic Interaction Chromatography)

This technology primer is designed to provide the reader with the basic insight of how to be successful with hydrophilic interaction chromatography by understanding how the technique works, the parameters that impact retention and selectivity, as well as the practical considerations necessary to successfully implement HILIC within a chromatographic strategy.

Paperback, 72 pages ISBN: 978-1-879732-08-7

Comprehensive Guide to HILIC (Hydrophilic Interaction Chromatography)

Part No. [715002531](#)



The Mass Spectrometry Primer

A wide range of topics related to a broad spectrum of mass spectrometric techniques is covered in this volume. In it, many frequently asked questions about the principles and practice of MS are answered. An extensive glossary explains MS terminology, and the benefits of coupling MS with chromatography are amply described.

Paperback, 80 pages ISBN: 978-1-879732-04-1

The Mass Spectrometry Primer

Part No. [715001940](#)



Beginner's Guide to SPE (Solid-Phase Extraction)

Through the extensive use of diagrams and clearly explained text, readers will understand how the power and usefulness of solid-phase extraction can help solve routine or complex sample preparation challenges. The book covers many topics including SPE device formats, sorbent considerations, mobile phase selection, and troubleshooting. The Beginner's Guide to SPE is a must read for anyone starting out in analytical chromatography or seasoned chemists looking to add solid-phase extraction to their skill set.

Paperback, 212 pages ISBN: 978-1-467539-20-3

Beginner's Guide to SPE (Solid-Phase Extraction)

Part No. [715003405](#)

LITERATURE REFERENCES

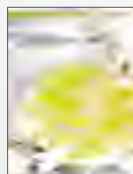


SAMPLE PREPARATION

BROCHURES



Bioanalysis Solutions
720003692EN



Developing Liquid Chromatography Methods for Food Analysis
720004541EN



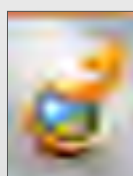
DisQuE Dispersive Sample Preparation
720003048EN



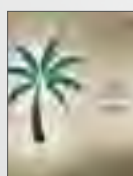
Environmental Analysis Solutions
720002766EN



Food Safety Solutions
720002287EN



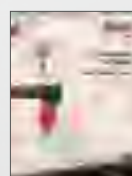
Food Testing Solutions
720002544EN



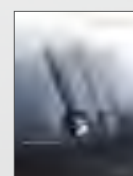
Oasis Sample Extraction Products
720001692EN



Peptide Analysis Solutions Brochure
720004563EN



PoraPak Rxn Cartridges
720002747EN



Sample Prep Solutions
720000848EN



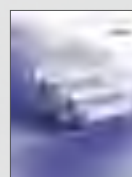
Sample Preparation Solutions For Positron Emission Tomography
720004648EN



Sample Preparation and Liquid Chromatography Solutions for Quantitative Bioanalysis
720003931EN



Vitamin Analysis Solutions
720004386EN



Waters Sep-Pak Sample Extraction Products
720000860EN



Water Testing Solutions
720003379EN

Title

Literature Code

APPLICATION NOTEBOOKS

Environmental Application and Method Compendium

720004905EN

Environmental Chromatography Methods Guide

720002543EN

Food Testing Applications Notebook

720002565EN

Oasis Applications Notebook

720000609EN

Title	Literature Code
APPLICATION NOTES	
Advancing Endocrine Disrupting Compound Analysis Through Integrated Technology and Workflow Solutions	720003013EN
A Novel Sample Preparation Device for Improved Phospholipid Removal in Bioanalytical Assays	720003730EN
A Rapid Method for the Screening and Confirmation of over 400 Pesticide Residues in Food	720002628EN
An Improved SPE-LC-MS/MS Platform for the Simultaneous Quantitation of Multiple Amyloid β Peptides in Cerebrospinal Fluid for Preclinical or Biomarker Discovery	720003860EN
Certified Sep-Pak Florisil for Sample Cleanup Organochlorine Pesticides and PCBs	720003169EN
Determination of PAH in Seafood: Optimized Sample Preparation Procedures for LC/Fluorescence Screening and GS-MS(MS) Confirmation	720004126EN
Drugs in Edible Muscle Tissue	720004144EN
Eliminating Phospholipids in Drug Discovery Extractions Using a Fast, Generic Sample Clean-Up Method	720004046EN
Improving the Cleanliness of DBS Extracts Using the Ostro 96-Well Sample Preparation Plate and Single Step Method	720004047EN
LC-MS Determination of Sudan Dyes in Chili Oleoresin Using the CORTECS C ₁₈ , 2.7 μ m Column	720005070EN
Multi-Residue Pesticide Analysis in Dried Chili Powder: Optimized Cleanup After QuEChERS Extraction for UPLC-MS/MS and GC-MS/MS Analysis	720005142EN
Multi-Residue Pesticide Analysis in Tea: Optimized Cleanup After QuEChERS Extraction for UPLC-MS/MS and GC-MS/MS Analysis	720004819EN
Multi-Residue Pesticide Analysis in Ginseng Powder: Optimized Cleanup After QuEChERS Extraction for UPLC-MS/MS And GC-MS/MS Analysis	720005006EN
Multiresidue LC-MS/MS Screening of Veterinary Drugs in Milk Using the Ostro Sample Preparation Plate	720005053EN
Optimized Extraction and Cleanup Protocols for LC-MS/MS Multi-Residue Determination of Veterinary Drugs in Edible Muscle Tissue	720004144EN
Optimized Extraction and Cleanup Protocols for LC-MS/MS Multi-Residue Determination of Veterinary Drugs in Milk	720004089EN
Ostro vs. SLE	720005199EN
Polar Basic Drugs in Environmental Samples; Improved Analysis Using a New High Efficiency UPLC Column for HILIC	720005141EN
Providing a Universal, One-Step Alternative to Liquid-Liquid Extraction in Bioanalysis	720004051EN
Removal of Polyethylene Glycol 400 (PEG 400) from Plasma Samples Using Mixed-Mode Solid-Phase Extraction	720004127EN
Removal of Triton X-100 from Plasma Samples Using Mixed-Mode Solid-Phase Extraction (SPE)	720004157EN
PRODUCT SOLUTIONS	
Certified Sep-Pak Solid-Phase Extraction Cartridges	720002806EN
Waters Positive Pressure-96 Processor	720003453EN
WHITE PAPERS	
QuEChERS Procedure for Multi-Residue Pesticide Analysis	720003643EN
Topics in Solid-Phase Extraction. Part 1: Ion Suppression in LC-MS Analysis	720001237EN
WALL CHART	
Bioanalysis Method Development Wall Chart	720004873EN
Sorbent Selection Guide for SPE Wall Chart	720002007EN
BOOKS	
Beginner's Guide to SPE (Solid-Phase Extraction)	715003405
REFERENCE CARD	
Environmental SPE Quick Reference Card	720004836EN



SAMPLE VIALS AND ACCESSORIES

BROCHURES



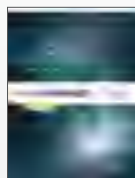
Sample Vials
and Accessories
720001818EN

Title	Literature Code
PRODUCT SOLUTIONS	
Certified Containers Product Solution	720004631EN
TruView LCMS Certified Vials Product Solution	720004096EN
WHITE PAPERS	
TruView LCMS Certified Sample Vials	720004097EN
Waters LCMS Certified Sample Vials	720001517EN
Waters Certified Sample Vials	720001303EN
TOOLS	
96-well Collection Plate Options for the Waters Extraction Plate Manifold	720001263EN
ONLINE TOOLS	
Vial Selector	www.waters.com/vialsselector
Plate Selector	www.waters.com/plateselector
Filter Selector	www.waters.com/filterselector
iPad APPS	
Waters Part Selector	www.waters.com/apps



UPLC COLUMNS AND CONSUMABLES

BROCHURES



ACQUITY UPLC Columns
720001140EN



CORTECS Columns
720004675EN

Title	Literature Code
APPLICATION NOTEBOOKS	
ACQUITY UPLC BEH Amide Columns Applications Notebook	WA64081
ACQUITY UPLC CSH Columns Applications Notebook	720003537EN
CORTECS Columns Applications Notebook	720004739EN
APPLICATION NOTES	
A HILIC-Based UPLC-MS Method for the Separation of Lipid Classes from Plasma	720004048EN
Analysis of Free Bromate Ions in Tap Waters Using an ACQUITY UPLC BEH Amide Column	720004197EN
Analysis of Synthetic Cannabinoids from Urine for Forensic Toxicology Using Oasis HLB μ Elution Plates and CORTECS UPLC Columns	720004780EN
A Quality by Design (QbD) Based Method Development for the Determination of Impurities in a Peroxide Degraded Sample of Ziprasidone	720004072EN
A Quality by Design (QbD) Based Method Development for the Determination of Impurities in a Peroxide Degraded Sample of Ziprasidone	720004072EN
Determination of Soy Isoflavones in Foods and Dietary Supplements by UPLC	720004253EN
Development of a Quantitative UPLC/MS/MS Assay for the Simultaneous Quantification of Acetylcholine, Histamine, and their Metabolites in Human CSF Using a CORTECS UPLC HILIC Column to Improve Peak Resolution, Sensitivity, and Speed of Analysis	720004722EN
Improved Analysis of Goldenseal Root Extract Using Charged Surface Hybrid (CSH) Column Technology	720004098EN
Improved Resolution for Paraquat and Diquat: Drinking Water Analysis Using the CORTECS UPLC HILIC Column	720004732EN
Rapid Method Development Through Proper Column Selection	720004353EN
Simultaneous Analysis of Intact Human Insulin and Five Analogs in Human Plasma Using μ Elution SPE and a CORTECS UPLC Column	720004727EN
UPLC vs. UHPLC: Comparison of Loading and Peak Capacity for Small Molecule Drugs	720003869EN
Validation of a Method for the Separation of Ziprasidone and its Degradants Using Empower 2 with Method Validation Manager (MVM)	720004077EN



UPLC COLUMNS AND CONSUMABLES *continued*

Title	Literature Code
PRODUCT SOLUTIONS	
ACQUITY UPLC Amide Columns Product Solution	720003122EN
ONLINE TOOLS	
Waters Carbohydrate Method Selection Tool	www.waters.com/amidemethod
Waters Column Advisor	www.waters.com/columnadvisor
Waters Reversed-Phase Column Selectivity Chart	www.waters.com/selectivitychart
WALL CHARTS	
Analytical Columns and Standards	720002241EN
BOOKS	
Beginner's Guide to UPLC (Ultra-Performance Liquid Chromatography)	715002099
Comprehensive Guide to HILIC (Hydrophilic Interaction Chromatography)	715002531
Quest for Ultra Performance in Liquid Chromatography: Origins of UPLC Technology	715002098



ACQUITY UPC² COLUMNS AND CONSUMABLES

BROCHURES



ACQUITY UPC² Columns
720004275EN



ACQUITY UPC² System
720004225EN

Title	Literature Code
APPLICATION NOTES	
Analysis of Fat-Soluble Vitamin Capsules Using UltraPerformance Convergence Chromatography (UPC ²)	720004394EN
Chromatography Purity of Estradiol Using the ACQUITY UPC ² System	720004243EN
Analysis of Organic Light Emitting Diode Materials by UltraPerformance Convergence Chromatography Coupled with Mass Spectrometry (UPC ² /MS)	720004305EN
Chromatographic Assay of Dapsone Tablets Using the ACQUITY UPC ² System	720004241EN
Chromatographic Assay of Tolbutamide Using the ACQUITY UPC ² System	720004247EN





HPLC COLUMNS AND CONSUMABLES

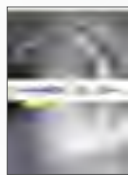
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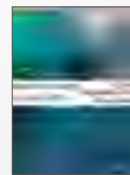
Atlantis HPLC Columns
720002861EN



CORTECS Columns
720004675EN



eXtended Performance
[XP] 2.5 µm Columns
720004195EN



HPLC Columns Brochure
720003995EN



SunFire HPLC Columns
720000875EN



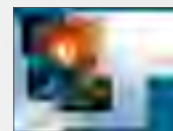
Symmetry Columns
720000454EN



XBridge HPLC Columns
720001255EN



XSelect HPLC Columns
720004178EN



XTerra Columns
720000424EN

Title

Literature Code

APPLICATION NOTEBOOKS

Atlantis HPLC Columns Applications Notebook	720000472EN
CORTECS Columns Applications Notebook	720004739EN
Intelligent Speed (IS) Columns Applications Notebook	720000737EN
Symmetry Columns Applications Notebook	720000593EN
XBridge Amide HPLC Columns Applications Notebook	720003438EN
XTerra Columns Applications Notebook	WA20738

APPLICATION NOTES

A Quality by Design (QbD) Based Method Development for the Determination of Impurities in a Peroxide Degraded Sample of Ziprasidone	720004072EN
A Sensitive Method for the Determination of Endocrine Disrupting Compounds in River Water by LC-MS/MS	720001296EN
Determination of Soy Isoflavones in Foods and Dietary Supplements by UPLC	720004253EN
Extract Using Charged Surface Hybrid (CSH) Technology	720004098EN
Improving LC-MS Analysis of Basic Impurities Using CORTECS C ₁₈ +, 2.7 µm Solid-Core Particle Columns	72000506EN

Title	Literature Code
APPLICATION NOTES <i>continued</i>	
Modernization of the USP Assay for Clarithromycin Using eXtended Performance [XP] Column Technology	720004461EN
Performance Stability of CORTECS 2.7 µm Columns Following Repeated Injections of Precipitated Plasma	720005082EN
Practical Applications of Charged Surface Hybrid (CSH) Technology	720003720EN
Rapid, Reliable Metabolite Ratio Evaluation for MIST Assessments in Drug Discovery and Preclinical Studies	720004453EN
Transferring HPLC Gradient Methods Using CORTECS Solid-Core Particle Columns	720005104EN
Utilizing XBridge HPLC Columns for Method Development at pH Extremes	WA43181
Validation of a Method for the Separation of Ziprasidone and Its Degradants Using Empower 2 with Method Validation Manager (MVM)	720004077EN
PRODUCT SOLUTIONS	
XSelect HSS Cyano Columns Product Solution	720004108EN
XSelect HSS PFP Columns Product Solution	720004128EN
WHITE PAPERS	
A Review of Waters Hybrid Particle Technology Part 2. Ethylene-Bridged (BEH Technology) Hybrids and Their Use in Liquid Chromatography	720001159EN
Charged Surface Hybrid (CSH) Technology and Its Use in Liquid Chromatography	720003469EN
Topics in Liquid Chromatography: Part 1. Designing a Reversed-Phase Column for Polar Compound Retention	720001889EN
ONLINE TOOLS	
Waters Column Advisor	www.waters.com/columnadvisor
Waters Reversed-Phase Column Selectivity Chart	www.waters.com/selectivitychart
WALL CHARTS	
Analytical HPLC Columns and Standards Wall Chart	720002241EN
Efficient HILIC Method Development Strategy	720003484EN
BOOKS	
Beginner's Guide to Liquid Chromatography	715001531
Comprehensive Guide to HILIC (Hydrophilic Interaction Chromatography)	715002531
HPLC Columns — Theory, Technology, and Practice	WATO38216



PREPARATIVE LC COLUMNS AND CONSUMABLES

BROCHURES



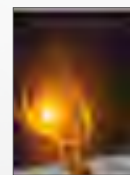
HPLC Columns
Capabilities Brochure
720003995EN



Atlantis HPLC
Columns
720002861EN



Preparative Optimum Bed
Density (OBD) Columns
720002336EN



SunFire HPLC
Columns
720000875EN



XBridge HPLC
Columns
720001255EN



XSelect HPLC
Columns
720004178EN

Title	Literature Code
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APPLICATION NOTES

Practical Applications of Charged Surface Hybrid (CSH) Technology	720003720EN
Preparative Scale Chromatography of a Commercially-Available Sweetener Using Hydrophilic Interaction Chromatography	720004284EN
Preparative Scale Chromatography of a Hydrophilic Peptide Using Hydrophilic Interaction Chromatography Convergence Chromatography Coupled with Mass Spectrometry (UPC ² /MS)	720004283EN
Transfer of a UPLC Screening Method to Preparative HPLC Purification Using CSH Column Technology and Focused Gradients	720004228EN

WHITE PAPERS

A Review of Hybrid Particle Technology: BEH Hybrids and Their Use in Liquid Chromatography	720001159EN
Charged Surface Hybrid (CSH) Technology and Its Use in Liquid Chromatography	720003469EN
Optimum Bed Density (OBD) Columns: Enabling Technology for Laboratory-Scale Isolation and Purification	720001939EN

ONLINE TOOLS

Preparative OBD Columns Calculator	www.waters.com/prepcalculator
Waters Column Advisor	www.waters.com/columnadvisor
Waters Reversed-Phase Column Selectivity Chart	www.waters.com/selectivitychart

WALL CHARTS

Preparative OBD Columns Wall Chart	720002117EN
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SUPERCritical FLUID CHROMATOGRAPHY (SFC) COLUMNS AND CONSUMABLES

BROCHURES



Viridis SFC Columns
720003326EN

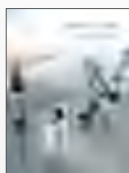
Title	Literature Code
APPLICATION NOTEBOOKS	
SFC Application Notebook	720003771EN
APPLICATION NOTES	
Basic Principles for Large-Scale Supercritical Fluid Chromatography	720003711EN
Expediting Achiral SFC Method Development Using a Multi-Channel SFC System with MS Detection	720003683EN
Improving Productivity in Purifying Antraquinone Using UltraPerformance Convergence Chromatography (UPC ²) and Preparative Supercritical Fluid Chromatography (Prep SFC)	720004789EN
Low Level Enantiomeric Impurity Analysis Using the ACQUITY UPC ² System	720004245EN
Mass-Directed Preparative SFC with Open-Bed Fraction Collection	720003468EN
UPC ² Strategy for Scaling from Analytical to Preparative SFC Separations	720004818EN
UPC ² Strategy for Scaling SFC Methods: Applications for Preparative Chromatography	720005064EN
Waters Solutions for Traditional Medicine	720003870EN





BIOSEPARATIONS AND ANALYSES

BROCHURES



Bioseparations and
Analyses Brochure

720002148EN

Title	Literature Code
APPLICATION NOTEBOOKS	
Application Solutions for Biopharmaceuticals Waters Application Solutions for Biopharmaceuticals	720002487EN
APPLICATION NOTES	
ACQUITY UPLC BEH SEC, 200Å, 1.7 µm Columns	720003398EN
ACQUITY UPLC for the Rapid Analysis of Amino Acids in Wine	720002044EN
Amino Acid Analysis of Pure Protein Hydrolysates with Application of Waters UPLC Amino Acid Analysis	720002404EN
HPLC and UPLC Columns for the Analysis of Oligonucleotides	720002376EN
A Generic On-Line UPLC-SEC/UV/MS Method for the Analysis of Reduced Monoclonal Antibodies	720004018EN
Improving the Lifetime for UPLC Size-Exclusion Chromatography Columns Using Short Guard Columns	720004034EN
Increasing Peak Capacity in Reversed-Phase Peptide Separations with CSH C ₁₈ , 130Å Columns	720004568EN
Method Development for Size-Exclusion Chromatography of Monoclonal Antibodies and Higher Order Aggregates	720004076EN
Monitoring Cell Culture Media with the Waters Amino Acid Analysis Solution	720002381EN
Oligonucleotide Separation Technology: Synthesis Challenges and HPLC Isolation Options	720002386EN
Peptide Mapping and Small Protein Separations with CSH C ₁₈ , 130Å and TFA-Free Mobile Phases	720004571EN
UPLC Amino Acid Analysis Solution	720001683EN
Size-Exclusion Ultra Performance Liquid Chromatography for the Analysis of Covalent High Molecular Weight Insulin	720004271EN
Advances in Size-Exclusion Chromatography for the Analysis of Small Proteins and Peptides: Evaluation of Calibration Curves for Molecular Weight Estimation	720004412EN
Analysis of Proteins by Size-Exclusion Chromatography Coupled with Mass Spectrometry Under Non-Denaturing Conditions	720004254EN
PRODUCT SOLUTIONS	
Accessory Products for CSH C ₁₈ , 130Å Columns	720001849EN
ACQUITY UPLC SEC System Solution	720003398EN
BioSuite HPLC Columns for Bioseparations	720000578EN
CSH C ₁₈ , 130Å Columns for Peptide Separations	720004543EN
ProteinPak Hi Res Ion Exchange (IEX) Columns for ACQUITY UPLC Applications Solution	720003346EN
Synthetic Peptide Purification Solutions	720002965EN
UPLC Amino Acid Analysis Solution	720001873EN
XBridge Protein BEH SEC Columns For HPLC-Based Separations	720005205EN



BIOSEPARATIONS AND ANALYSES *continued*

Title	Literature Code
CATALOGS	
Bioseparations and Analyses Catalog	720002148EN
WHITE PAPERS	
CSH Technology and Its Use in Liquid Chromatography	720003929EN
EXTERNAL PUBLICATIONS	
A Review: Size-Exclusion Chromatography for the Analysis of Protein Biotherapeutics and Their Aggregates	720004595EN
WALL CHARTS	
Bioseparations Columns Wall Chart	720004232EN



GEL PERMEATION CHROMATOGRAPHY (GPC) COLUMNS AND CONSUMABLES

BROCHURES



GPC Capabilities
720004331EN

Title	Literature Code
BOOKS	
Beginner's Guide to Liquid Chromatography	715001531
Beginner's Guide to Size-Exclusion Chromatography	715004398



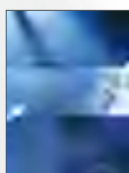
ADVANCED POLYMER CHROMATOGRAPHY (APC) COLUMNS AND CONSUMABLES

Title	Literature Code
APPLICATION NOTEBOOKS	
ACQUITY APC Columns Application Notebook	720004649EN
PRODUCT SOLUTION	
ACQUITY APC Columns Product Solution	720004580EN



STANDARDS FOR SYSTEM PERFORMANCE

BROCHURES



Waters Analytical
Standards and Reagents
Brochure

720004230EN

Title	Literature Code
CATALOGS	
Waters Analytical Standards and Reagents Catalog	asr.waters.com
Bioseparations and Analyses Catalog	720002148EN
WALL CHART	
Analytical HPLC Columns and Standards	720002241EN



WATERS QUALITY PARTS AND SUPPLIES

BROCHURES



Laboratory Analytics
Solutions Brochure
720004900EN

Title	Literature Code
PRODUCT SOLUTIONS	
Compliance, Maintenance, and Repair Services for Agilent HPLC and GC Systems	720003322EN
Empower SystemsQT Automated Qualification Tool for Waters and Agilent Systems	720004982EN
Using Empower SystemsQT Qualification Tool for Agilent 1100 and 1200 Series HPLC Systems	720003400EN
Waters Empower SystemsQT Qualification Tool for Empower 3 Software	720004869EN
CATALOGS	
Waters Educational Services Course Catalog (English) For other catalogs and translations, visit www.waters.com/training	720000508EN
WHITE PAPERS	
The Benefits of Purchasing Original Equipment Manufactured Parts from Waters	720003912EN
The Impact of Spare Parts Design and Manufacturing on ACQUITY UPLC System Performance	720003856EN
Using Empower SystemsQT Qualification Tool for Agilent 1100, 1200, and 1260 HPLC Systems	720003400EN
DATA SHEETS	
Waters PerformancePLUS Cartridge Check Valve System Data Sheet	720000141EN
TECHNOLOGY BRIEFS	
Improved MALDI Imaging Quality and Speed Using the MALDI SYNAPT G2-Si HDMS	720004791EN

WATERS ONLINE ORDER CENTER



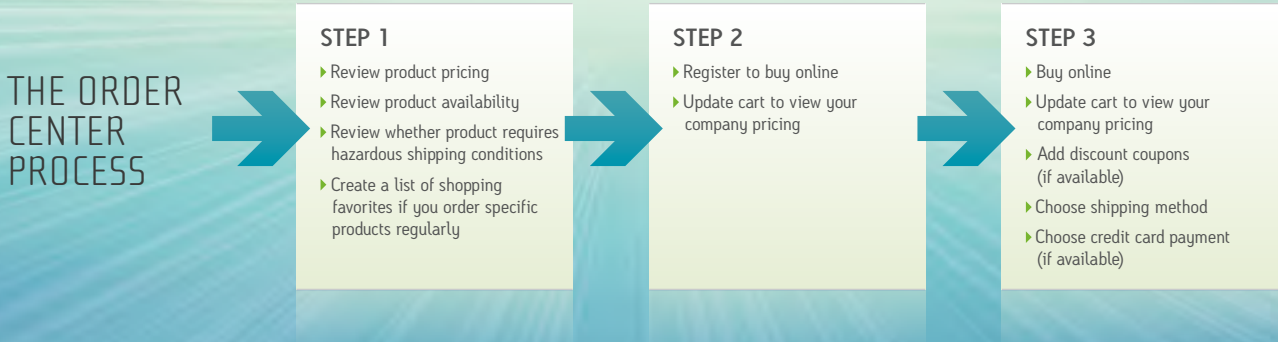
www.waters.com/order

An Improved Online Shopping Experience at Waters.com

Waters.com is a convenient interface for both purchasing/procurement departments and scientific users to research, compare, and purchase consumables and spare parts online. Waters website features an Order Center which centralizes all aspects of online shopping as well as options for easier connection to Enterprise Resource Planning (ERP) systems, or Spend Management Software packages.

Ordering consumables and spare parts is quick and easy.

<p>→ QUICK ORDER/VIEW Excellent starting point if you know the part numbers that need to be ordered.</p>	<p>→ HOW TO BUY SERVICE PLANS, INSTRUMENTS, OR SOFTWARE Options available for pricing and quotations.</p>	<p>→ ORDERING FAQS Frequently asked questions explain all the new changes to the Order Center. Start here.</p>
<p>→ CERTIFICATE OF ANALYSIS (COA) Request a Certificate of Analysis for consumable products.</p>	<p>→ MATERIAL SAFETY DATA SHEET (MSDS) Safety precaution information on various products.</p>	<p>→ SHOPPING CART Order multiple products easily, check real-time availability, and view your company prices.</p>
<p>→ FREIGHT POLICY Delivery time options and freight charges in each country.</p>	<p>→ OFFERS AND DISCOUNTS Look through all offers and discount codes available before you buy.</p>	<p>→ TECHNICAL SUPPORT (iREQUEST™) Online support for technical queries on instrument/software.</p>
<p>→ GRAPHICAL PARTS LOCATOR Exploded instrument diagrams help you locate specific spare parts quickly.</p>	<p>→ ORDER HISTORY Find previous ordering information.</p>	<p>→ FAVORITES LIST Add part numbers for future projects and store frequently bought part numbers for easy repeat buying.</p>



BENEFITS OF E-COMMERCE

- ▶ Account specific pricing
- ▶ Stock availability in real-time
- ▶ Lower transaction costs
- ▶ Shorter order cycle time
- ▶ High compliance levels
- ▶ Ease of finding products
- ▶ Reduction of paper transactions
- ▶ Multiple payment options
- ▶ Streamline internal process
- ▶ e-Order/e-Invoice



www.waters.com

Waters e-Commerce

Purchasing professionals regularly analyze their ordering and supply chains, seeking improved efficiencies, reduced costs, and/or increased profitability achievable through more effective procurement processes.

If you are already using a Spend Management Solution or Internal ERP System, you can leverage your investment by automating Waters product purchases.

Waters supports:

1. Waters eBusiness team has years of experience in setting up punchout catalogs. This approach, strongly recommended and supported by Waters, displays accurate and up-to-date pricing and product availability. Punchout catalogs can be connected directly with internal purchasing software and support many file formats such as EDI (X12), cXML, xCBL (XML), etc.
2. B2B e-procurement integration with spend management systems such as Ariba,[®] SciQuest,[®] SAP,[®] Oracle,[®] Perfect Commerce,[®] Point Systems,[™] ReQlogic,[™] Direct Commerce, Tungsten network (OB10), etc.
3. Access to product information with catalogs hosted in your IT environment using various business automation solutions.
4. Several communication capabilities such as cXML, EDI, AS2, HTTP, HTTPS, FTP, etc. We use Seeburger[®] as the middleware to support electronic communications for B2C connections.
5. Posting electronic catalogs, such as PunchOut (real-time pricing, availability, product pictures, and specifications) or CIF (Catalog Interchange Format), TXT (Text Format), and XLS (Excel Format).
6. Electronic catalogs can be provided in a timely manner. Please allow up to 90 days for implementation of electronic solutions (e-Orders/e-Invoices).
7. To request information on integration with procurement solutions or for an electronic catalog, please email **ebusiness@waters.com**

Frequently Asked Questions about Ordering Online

Whether researching product information or making online purchases, shopping on the Waters website has never been easier. The Waters Quality Parts[®], Chromatography Columns and Supplies Catalog is integrated into the product pages on the site, where you can see a list of available catalog items including current list price, and product number. Let Waters continue to be your online resource for the best chromatography columns, sample preparation products, accessories, and Waters Quality Parts. For your shopping convenience, please find our online shopping FAQ's below.

HOW DO I GET STARTED?



You may search for, see local list pricing, and add products to your shopping cart without logging in. Login is only required when you are ready to check out. If you have previously registered and have a login ID, you may log in at any time.

1. If you have not logged in but added products to your cart, you will be prompted to log in when you proceed to check out.
2. If you have previously registered and have a login ID, you may log in at any time using the **'Login/Register'** link located at the top of the page.
3. If this is your first time logging in, you will be asked to register. The registration form is located on the top of the login page. Registering allows ongoing access to your company pricing (if applicable) and Waters events, shopping, and support.

HOW DO I FIND CHEMISTRY-RELATED CONSUMABLE PRODUCTS WHEN I DON'T KNOW WHAT I AM LOOKING FOR?



There are two ways to find consumable products:

1. With your cursor, hover over the **'Products'** tab on the upper left corner and move down to select either **'Columns'**, **'Sample Preparation'** or **'Analytical Standards and Reagents'**. On the right, a list of options will appear to select from.

Once you click on the option that interests you, you will be able to look for specific products and prices using the **'Buy Now'** tab. Continue to select values from the various menus to refine the results until you locate the desired product, click on the product header for more details or simply fill in a **'Quantity'** and click **'Add to Cart'**.

2. Click in the **'Search'** field located at the top of the page, type in a search term i.e.; ACQUITY UPLC or a product part number and press enter or click on the magnifying glass.



HOW DO I FIND INSTRUMENT SPARE PARTS WHEN I DON'T KNOW WHAT I AM LOOKING FOR?



There are two ways to find instrument spare parts:

Using the Graphical Parts Locator:

1. Move your cursor over the **'Services and Support'** tab and select the link to the **'Graphical Parts Locator'**.
2. Select a product from one of the dropdown lists, and select **'Waters Quality Parts Locator'**.
3. Move your cursor over the picture of the instrument to discover orderable parts, or select a part from the displayed list. Continue to explore and drill down through the photos and graphics until you find the part you need. Click the part description, fill in a **'Quantity'** and click **'Add to Cart'**.

Using the Spare Parts Catalog:

1. Move your cursor over the **'Services and Support'** tab. The link to the Spare Parts Catalog will appear below.
2. Select a value from one of the menus (i.e. Parts Category) to begin.
3. Continue to select values from the various menus to refine the results until you locate the desired part. Fill in a quantity and click **'Add to Cart'**.

HOW DO I ORDER ONLINE IF I ALREADY KNOW MY PART NUMBER?



1. Click the **'Cart'** icon in the upper right corner of the website.
2. Using the **'Add to Cart'** box: enter the product number, quantity and click **'Add to Cart'**. Your items are added directly to the shopping cart.

HOW DO I USE SHOPPING FAVORITES?



You can add frequently ordered products to a **'Favorites List'** to expedite ordering of future orders.

To manage (add/modify/delete) your shopping favorites, you first need to register or login, click on your name at the top of the page, the **'My Account'** option will appear on the drop down. Select **'Shopping Favorite'** on the left hand side of the page. From here you may create, delete, and rename multiple lists.

HOW DO I ADD A PRODUCT FROM MY SHOPPING CART TO MY FAVORITES LIST?



1. Click on the **'Cart'** icon at the top of the page to display your shopping cart.
2. Place a check mark next to the product name and click **'Add to Favorites List'**. If you have created multiple lists, select the list you would like to add the product to and click **'Add to Favorites List'**.

HOW DO I REMOVE AN ITEM IN MY FAVORITES LIST?



You first need to register or login, click on your name at the top of the page, the **'My Account'** option will appear on the drop down. Select **'Shopping Favorite'** on the left hand side of the page. Place a check mark next to the **'Product Name'** and click **'Remove'**. You may also copy the selected item to other lists by clicking on **'Copy to List'** and selecting the list to which you would like to copy the selected product.

HOW DO I ORDER USING MY FAVORITES LIST?



1. You first need to register or login, click on your name at the top of the page, the **'My Account'** option will appear on the drop down. Select **'Shopping Favorite'** on the left hand side of the page. If you have multiple wish lists, choose a list from the **'View List'** drop down.
2. Place a check mark in the box next to the **'Product Name'** and click **'Add to Cart'**. A message displays: Items added to cart.
3. Click the **'Close'** button then **'Cart'** to return to your shopping cart.

HOW DO I CHECK OUT?



Step 1:

Click on the **'Cart'** icon located at the top of the page when you have finished shopping. Review cart content, add web promotion codes in the promotion code box, and click **'Proceed to Checkout'**.

Step 2: Shipping, Billing, and Payment

Select a shipping address from your stored address list (if applicable). If a new address is required and you are a registered user, select the **'Enter a New Address'** button, and complete the new address form*. Next, select your preferred shipping method,** add attention line and/or special instruction information if appropriate. Then verify your billing address information following the same step noted above for a new address. Next, select a payment choice and complete the required payment method fields. Click **'Continue Checkout'**.

* New addresses may take up to 24 hours for account information verification and processing. During this time you may still submit an order for processing.

** Products containing hazardous materials may be shipped separately and incur additional shipping costs.

Step 3: Order Review

Review your order detail for completeness. Discount amounts that appear in the discount per item column are representative of web promotion codes you may have entered while viewing your shopping cart. (These discounts may also be added to your order here in Step 1). Invalid promotion codes may be the result of ineligibility, or an expired promotion.

If your company has a contractual discount with Waters or your order is eligible for other promotions, these discounts may already be automatically applied to your order during Step 2 (Order Review) of our check out process. The highest discount available will always be applied to your order.

Accept Waters Standard Terms and Conditions by selecting the Terms and Conditions **'I Agree'** box and click the **'Place Order'** button.

Step 4: Order Confirmation

You may print a copy of your order confirmation by clicking on the **'Print'** button once an order number has been created. An email confirmation will automatically be sent to the email address provided during the check out process.

WHAT IF I AM UNABLE TO PURCHASE ONLINE OR HAVE A PURCHASE APPROVAL PROCESS?



You can email a copy of your cart contents to someone else with your comments using our **'Share Cart'** feature. Sending this information is especially helpful for those who do not have the ability to directly purchase online. You can inform your purchasing department, local distributor, or Waters Representative of your interest or need. It should not be considered an ordering process but may help you to expedite your order. To use this feature:

1. Click on the **'Cart'** icon at the top of the page.
2. Add selected products to the cart.
3. Click **'Share Cart'** button located beneath the cart; enter the email address and a brief message if desired.
4. Click **'Send'**.

HOW DO I SEE RELATED ITEMS?



Related products (if applicable) can be found on the product description page.

Note: Not all products have related products.

HOW DO I VIEW MY ORDER HISTORY?



To access your order history, from the Waters Home Page:

1. If you are not logged in click on the **'Login/Register'** button located at the top of the page. Enter your username and password and click **'OK'**.
2. Move the cursor to your name at the top of the page and click on the **'My Account'** button which will appear at the top of the page. Select the **'Order History'** link located on the left hand side.
3. Find your orders by indicating one of the following: Date Range (from/to), Waters Order Number or your Purchase Order Number, then click **'Search'**.
4. Click on the **'Order Number'** link to display specific order detail.

I WOULD LIKE TO ORDER AN ENTIRE SYSTEM/ INSTRUMENT/SOFTWARE/SERVICE PLANS BUT DON'T SEE THESE OPTIONS.



At this time, Waters does not offer these products for purchase online. Please visit www.waters.com/purchasing to request pricing and a local Waters sales representative will contact you shortly.

COMMON TERMINOLOGY AND DEFINITIONS



Not Available Online

This part is not available for direct sale to customers. Please contact your local Waters representative for more information.

Orderable Part

This part is available and may be ordered online.

Obsolete Part with No Replacement

An obsolete part is no longer manufactured, has no replacement and may not be ordered from Waters. Please contact your local Waters office or representative for further details.

Discontinued Part with Replacement

This message shows the part number you should order in place of an obsolete or discontinued part number. The original part number has changed but the replacement part may be used in the same application.