ACQUITY UPLC Systems June 2010

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## New features in this release

ACQUITY UPLC H-Class Sample Manager–FTN

* Added support for the ACQUITY 30-cm Column Heater/Cooler.
* Added support for the 1000-L extension loop and the 250-L sample syringe.

ACQUITY UPLC H-Class Quaternary Solvent Manager

* Added Auto•Blend Plus™ software feature.

With this feature, you can blend liquid mobile phases (acid, base, aqueous, and salt solution) of known composition and concentration. Select individual steps with a specified pH and/or salt concentration at a particular time and enter one of 11 predefined functions to transition between these times and conditions. The Auto•Blend Plus technology then automatically calculates the percent acid, percent base, percent salt, and percent solvent required to deliver the specified pH and salt conditions at a given time.

See also: ACQUITY Console online Help for information on Auto•Blend Plus.

* Added a graphical display of gradient composition to the method editor.

See also: ACQUITY Console online Help for information.

## Contents of ACQUITY UPLC Systems June 2010 Driver Pack DVD

Recommendation: Install this update on all ACQUITY UPLC® Systems, to ensure features and capabilities are current. See “Reason for installing this software release” on page 4.

These items are on the DVD:

* Software for the ACQUITY UPLC H-Class system, the ACQUITY UPLC H-Class Bio System, and the ACQUITY UPLC System
* ACQUITY UPLC Columns Calculator (for methods transfer)
* Required software change note (SCN) 733 (for the MassLynx 4.1 data application)
* All current instrument drivers for ACQUITY UPLC H-Class, ACQUITY UPLC H-Class Bio, and ACQUITY UPLC instrument modules. The H-Class and H-Class Bio modules are version 1.46 (excluding the new column manager, which is at version 1.45); the ACQUITY UPLC modules remain at version 1.40.

See also: *Column Compartments Operator’s Overview and Maintenance Information* on the ACQUITY UPLC H-Class (and H-Class Bio) System Documentation CD for information on column compartment modules and abbreviations.

Note: This release is tested only for ACQUITY UPLC H-Class and ACQUITY UPLC H-Class Bio system configurations that include these modules:

* Sample Manager-FTN (SM-FTN), including Column Heater (CH-A)
* Quaternary Solvent Manager
* Column Manager (CM-A)
* Auxiliary Column Manager (CM-Aux)
* 30-cm Column Heater (CH-30A)
* ACQUITY 30-cm Column Heater/Cooler
* All existing and supported ACQUITY UPLC System LC detectors
* SQ and TQ mass spectrometers

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|  | **Caution:** To avoid introducing incompatible versions of drivers, install older drivers before newer drivers and install at least one driver from the June 2010 Driver Pack DVD as the final step in *all* installation processes. |

Example: If an earlier ACQUITY UPLC CD or DVD (or a non-ACQUITY CD or DVD) is used to install an instrument driver, use the June 2010 DVD to reinstall at least one driver to reconcile any incompatibility you might have introduced.

ACQUITY UPLC H-Class System software

| Module | Firmware Version | Firmware Checksum |
| --- | --- | --- |
| ACQUITY UPLC H-Class Quaternary Solvent Manager | 1.46 | 0xA78D6E52 |
| ACQUITY UPLC H-Class Sample Manager - FTN with CH-A | 1.46 | 0x54C884A9 |
| ACQUITY UPLC H-Class Column Manager (CM-A)  Note: This installer deploys two firmware files – one for CM-A and one for the ACQUITY UPLC Column Manager (classic column manager, without a preheater) | 1.45 | 0x36E73CB9 |
| MassLynx™ data application, v4.1, SCN 733 | Not applicable | Not applicable |

ACQUITY UPLC H-Class Bio System software

| Module | Firmware Version | Firmware Checksum |
| --- | --- | --- |
| ACQUITY UPLC H-Class Bio Quaternary Solvent Manager | 1.46 | 0xA78D6E52 |
| ACQUITY UPLC H-Class Bio Sample Manager – FTN, with  BioCH-A | 1.46 | 0x54C884A9 |
| ACQUITY UPLC H-Class Bio Column Manager (BioCM-A) | 1.45 | 0x36E73CB9 |

Detector and other software

| Module | Firmware Version | Firmware Checksum |
| --- | --- | --- |
| ACQUITY UPLC Columns Calculator | Not applicable | Not applicable |
| ACQUITY UPLC Local Console Controller | Not applicable | Not applicable |
| ACQUITY UPLC Photodiode Array Detector (PDA) and PDA edetectors | 1.40 | 0x19FB8350 |
| ACQUITY UPLC Tunable UV Detector (TUV) | 1.40 | 0xE45CD0C3 |
| ACQUITY UPLC Fluorescence Detector (FLR) | 1.40 | 0xDFF5C6F9 |
| ACQUITY UPLC Evaporative Light Scattering Detector (ELS) | 1.40 | 0x216F9370 |
| Waters® SQ Detector (controlled by Empower software) | 1.40 | Not applicable |
| Waters TQ Detector (controlled by Empower software) | 1.40 | Not applicable |

Note: The 3100 Mass Detector is supported with ACQUITY UPLC H-Class systems, but its software is not included on this DVD. Refer to the 3100 Mass Detector installation media for details.

See also:

* ACQUITY UPLC H-Class System Documentation Set CD (part number 715002124)
* ACQUITY UPLC Console Online Help
* ACQUITY UPLC System Driver Version 1.40 Release Notes
* *Controlling Contamination* in Ultra Performance LC/MS and HPLC/MS Systems

Limitations:

* This release does not apply to nanoACQUITY® systems.
* The ACQUITY UPLC H-Class and H-Class Bio systems are supported with SQ and TQ Mass Detectors. The ACQUITY UPLC H-Class system is also supported with 3100 Mass Detectors.

### Reason for installing this software release

You must install this software if you intend to use the ACQUITY UPLC Column Manager (CM‑A) with H-Class systems. You must also install this software on an ACQUITY UPLC H-Class Bio System. Otherwise, the installation is optional.

Installing v1.40, included with this software release, is optional for standard ACQUITY UPLC systems that have previous versions installed.

Install this software release for these reasons:

* To operate the new ACQUITY UPLC Column Manager (CM-A or BioCM-A) with an H-Class or H-Class Bio system
* To access Auto•Blend Plus software
* To use the revised Waters Columns Calculator for transferring methods between UPLC and HPLC

This release also corrects some issues affecting the performance of the ACQUITY UPLC H-Class Quaternary Solvent Manager and ACQUITY UPLC H-Class Sample Manager – FTN (configured with the CH-A) since their January 2010 release. A list of issues fixed in this release appears later in this document.

### Installation method

You can install this software release by one of these methods:

* The DVD provided with this document.
* Downloading from the Waters Web site. Visit http://www.waters.com/waters/home.htm, and click Services & Support > Support > Software Downloads (support plan required).

## Hardware and software requirements for ACQUITY UPLC H-Class and H-Class Bio systems

### Supported Waters software for ACQUITY UPLC H-Class and H-Class Bio systems

This release supports MassLynx, Empower™ 1154 (English and Japanese), and Empower 2 data system software (English, Chinese, Japanese, and Korean language versions). It also supports the following Waters applications:

* MassLynx 4.1 SCN 714 with SCN 733
* Empower 1154: ACQUITY service pack (SP) to Service Pack M (standard H-Class only)
* Empower 2: base release to Service Pack G

Requirement: If an SQ, TQ, or 3100 detector is part of the system, you must install, at a minimum, Empower 2 Feature Release 4. Note that the Empower2 System Suitability option is required.

Exception: The ACQUITY UPLC H-Class Bio system does not support Empower 1154.

### Backward Compatibility

Note: There are no prior releases of the H-Class Bio system.

This release supports the use of up to six columns and six independent temperature zones in a system configured with an ACQUITY UPLC Column Manager (CM-A) and Auxiliary Column Manager (CM-Aux) modules.

Important: All firmware versions prior to this release support the use of up to four columns with a single temperature zone. If you use a software version prior to this release (version 1.40, for example) to control the new CM-A and CM-Aux, you can use up to 4 columns with a single temperature zone.

See also: *Column Compartments Overview and Maintenance Information* on the system documentation CD

### Supported computers and operating systems for ACQUITY UPLC H-Class and H-Class Bio systems

This software update is supported on Windows Vista Business, with Service Pack 1; Windows Vista Enterprise, with Service Pack 1; and Windows XP, with Service Pack 2 and 3, for personal workstations and clients.

See also:

* The Waters web site for release notes that include details on test configurations, operating systems, service Packs, and hotfixes.
* Empower 2 Feature Release 5 and MassLynx SCN 714 Release Notes for additional information on supported operating systems for servers in workgroup/enterprise environments
* Empower Service Packs and Feature Releases
* MassLynx service Packs and software change notes

| Empower 2 Feature Release or Service Pack | Supported Operating Systems |
| --- | --- |
| Feature Release 5 to SP G (Personal) | Windows® Vista Business with Service Packs 1 and 2  Windows XP Professional with Service Packs 2 and 3 |
| Feature Release 5 to SP G (Acquisition Client) | Windows Vista Enterprise with Service Packs 1 and 2  Windows XP with Service Pack 2 and 3 |
| Empower 2 (base) to Service Pack G | Windows XP with Service Pack 2 |

Recommendation: Upgrade your Instrument LAN network card drivers to the most recent version when running this software on a supported Empower workstation. Consult the network card's manufacturer for the most up-to-date network card drivers.

Notes:

* For this release, a standalone or acquisition client workstation is supported only with a single MS-based system.
* Waters publishes incremental information on operating system and hotfix support to the Services and Support area of its Web site.

### ACQUITY UPLC minimum hardware requirements and maximum detector data rates

For Intel Pentium IV 2.8 GHz Processor, with 800 MHz FSB and 1 GB of RAM, one of the following sets of specifications can apply:

* 2 PDAs at 80 Hz, 210-400 nm, 4.8 nm, normal (0.05 sec), 2-Absorbance or Fluorescence 2D channels, 2-MBF 2D channels, 30 minutes run time; Empower's Run and Report Mode.
* 2 PDAs at 40 Hz, 210-400 nm, 1.2 nm, normal (0.10 sec), 2-Absorbance or Fluorescence 2D channels, 2-MBF 2D channels, 30 minutes run time, Empower's Run and Report Mode.

For Intel Pentium IV 1.7 GHz Processor with 400 MHz FSB and 1 GB of RAM, one of the following sets of specifications can apply.

* 2 PDAs at 20 Hz, 210-400 nm, 1.2 nm, normal (0.20 sec), 2-Abs 2D channels, 2-MBF 2D channels, 30 minutes run time, Empower's Run and Report Mode.
* 4 TUVs at 80 Hz, MBF enabled, 60 minutes run time, Empower's Run and Report Mode.

## Installing the ACQUITY UPLC Systems June 2010 Driver Pack Release

Requirements:

* If you want to run the ACQUITY UPLC Systems June 2010 Driver Pack release with any version of ACQUITY UPLC prior to v1.40, contact Waters Technical Service.

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|  | **Caution:** To avoid damaging the needle, recalibrate the seal and z-axis of the SM-FTN after installing this release. |

Recommendation: Remove the Internet Information System (IIS) for the Local Console Controller when upgrading from firmware version 1.00 to this release (the default Web site has been disabled).

To install or upgrade the ACQUITY UPLC Systems June 2010 Driver Pack:

1. Exit all applications, and restart the computer.
2. Run Setup.exe on the DVD.
3. On the Welcome page of the setup wizard, select Install / Upgrade, and then click Next.

Result: The Deployment Manager - Option page for your system appears.

Tip: For a MassLynx-controlled ACQUITY UPLC system, the SQ and TQ detectors do not appear in the deployment manager. Instead, select the instruments during MassLynx installation.

1. Select the drivers for the instruments that you want to install, and then click Next.
2. Click Yes, and then wait for the process to finish.
3. Click Finish.

Result: The Waters Autoloader, which selects the instruments or devices that require firmware upgrades, is automatically launched.

**Tips:** To see versions and checksums, scroll to the right. To see where, on a hard drive, the firmware is installed, hover the pointer over the instrument or device name.

1. Click Load Firmware, to start the autoloader loading all selected firmware.

Tip: The Waters Autoloader simplifies installing the release software. It automatically detects the presence of compatible software and installs the appropriate support for your ACQUITY® configuration. By default, the installer appears in the language of your workstation settings.

Note: The CM-A control panel contains the same fields and right-click functions as the classic ACQUITY UPLC Column Manager control panel. The information displayed corresponds to the currently running (or selected) column and the temperature zone of the selected column.

For Empower installations, ACQUITY instrument support is installed in C:\Empower\Instruments.

For all other installations, ACQUITY instrument support is installed in C:\Program Files\Waters Instruments.

Result: When the status is Cycle Power, the firmware is installed.

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|  | **Caution:** Do not cycle power on any instruments or devices until firmware for all instruments is installed. |

1. When the status of all instruments and devices is Cycle Power, restart each instrument or device.
2. When the status of all instruments and devices is Load Complete, click OK, and then restart the computer.