



Waters
THE SCIENCE OF
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Waters Driver Pack 2019 Release 1

Release Notes

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Version 02

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General information

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Waters Driver Pack 2019 Release 1

Driver Pack 2019 Release 1 (DP 2019 R1) supports instrument drivers for deployment of instrument control software (ICS) and firmware required to control Waters instruments. The instrument drivers and firmware in DP 2019 R1 support these products:

- Alliance HPLC system
- ACQUITY UPLC System
- ACQUITY UPLC H-Class Series System
- ACQUITY UPLC H-Class Bio Series System
- ACQUITY UPLC I-Class Series System
- ACQUITY Arc Systems for HPLC and UHPLC
- ACQUITY Advanced Polymer Chromatography (APC) System
- ACQUITY UPC² System

This release supports the new ACQUITY UPLC H-Class PLUS (Binary) system.

This release supports Empower 3, MassLynx with compatible SCNs, stand-alone console, and third-party chromatography data software. For details, see [Supported chromatography data software](#).

DP 2019 R1 supports the following operating systems:

- Windows 7, 64-bit
- Windows 10, 64-bit, Enterprise and Professional editions
- Windows Server 2008 R2 Standard edition
- Windows Server 2012 R2 Standard edition
- Windows Server 2016 Standard

Requirement: In an Empower enterprise environment, SQ, TQ, and SQD2 detectors must be installed on an acquisition client and cannot be run on a LAC/E module.

Restrictions:

- The following operating and data systems are not supported in this release: Windows XP, Windows 8.1, Windows Server 2003, and Empower version 2154 and earlier versions.
- The 2420 ELS detector will not operate after DP 2019 R1 is installed. The solution is to use a dedicated Empower workstation using version 1.40 of the ICS.

See also:

- For detailed installation instructions, see the *Waters Driver Pack 2019 Release 1 Installation and Configuration Guide*.
- For system configuration information, see the appropriate chromatography data software's installation guide, for example, the *Empower 3 Installation, Configuration, and Upgrade Guide*. For MassLynx, see the MassLynx 4.2 online Help and the appropriate SCN release notes.

What's new in this release

For a list of specific issues that were fixed in Driver Pack 2019 Release 1, see [Fixed issues in this release \(SCR and INS\)](#).

Backwards compatibility

Waters recommends that you run instruments at the most current firmware version and that the instrument firmware matches the driver pack.

To upgrade, install the new driver pack, and then update the firmware to the latest version.

Although not recommended, users can install the new driver pack without updating the instrument firmware, providing that the firmware version already installed is included in a driver pack released within 24 months of the newly installed driver pack. Exceptions are documented in the *Waters Driver Pack 2019 Release 1 Installation and Configuration Guide*.

Example: You can use DP 2019 R1 with an ACQUITY UPLC BSM with firmware version 1.65. Any features dependent on the new firmware are not supported. Waters recommends upgrading the BSM firmware to version 1.72 to enable the expected features.

System Startup



This release improves the System Startup procedure by replacing the tab-based interface with a wizard-based interface for the following modules:

- BSM
- CM
- SM-FL
- SM-FTN
- ISM
- QSM
- FTN-R
- QSM-R

- 2414
- 2424

The System Startup wizard simplifies the steps necessary to prepare the system for use by allowing you to choose whether you want to refresh the existing solvent or change to a different solvent. Using the wizard, you can modify the priming parameters of the solvent manager, and sample manager, and you can set the initial conditions for the flow, composition, temperature, and column position. A new Equilibration page enables you to set the amount of time to wait after final conditions are applied. A new Summary page displays the priming and equilibration steps, along with an estimate for how long startup takes to complete.

ISM degasser improvements

- A longer pump-down time addresses condensation issues that could trigger a failure. The pump-down time is now a maximum of 30 minutes. When no issue is encountered, it is less.
- Introduced a new diagnostic to inspect the health of the degasser and allow the user to clear any excessive condensate from the degasser vent line. Symbols in the control panel and console indicate when a health check is recommended () or running () .
- Improved diagnostics and error checking at initialization.
- Added new detailed degasser alarms.
- Priming is now possible when the degasser is in an error state.
- Increased the maximum allowed degasser pressure to 1.798 psia (from 1.547 psia).
- Improved error message and troubleshooting guidance in the online Help.
- ISM firmware version 1.72 is required for these enhancements.

FTN-R updates

This release improves the following diagnostic user interfaces:



- Replacing components
- Testing the syringe for leaks
- Parking the needle and inject valve
- Testing the needle seal readiness
- Calibrating the needle z axis
- Characterizing the needle seal
- Disabling the motors from the console

QSM-R updates

The console includes a wizard that guides you through the following maintenance procedures:

- Removing the pump heads
- Washing the plungers
- Testing the solvent manager for leaks

QSM-R degasser improvements

- A longer pump-down time addresses condensation issues that could trigger a failure. The pump-down time is now a maximum of 30 minutes. When no issue is encountered, it is less.
- Introduced a new diagnostic to inspect the health of the degasser and allow the user to clear any excessive condensate from the degasser vent line. Symbols in the control panel and console indicate when a health check is recommended () or running () .
- Improved diagnostics and error checking at initialization.
- Added new detailed degasser alarms.
- Priming is now possible when the degasser is in an error state.
- Improved diagnostic user interfaces for leak test and pump maintenance.
- QSM-R firmware version 1.72 is required for these new enhancements.

QSM-R alarm updates

This release reports alarms when the degasser experiences any of the following conditions:

- Motor and fan fuse fail.
- Transducer fuse fails.
- Transducer is out of range.
- No vacuum.
- Pressure is not met.
- Pressure exceeds the limit.

This release also provides an informational alarm that reports the leak rate.

QDa updates

This driver pack includes several enhancements and fixed issues. The numbers identify issues that Waters personnel monitor in the legacy system change request tracking tool (marked with TGR) and in the new issue tracking tool (marked with INS-).

Enhancements:

- The calibration check masses now provide a more equal mass scale distribution (INS-2946).
- The calibration check routine now fails when two consecutive peaks are missed (INS-2947).

Fixed issues:

- The calibration setup report now records all constants of a calibration polynomial (TGR 5).
- The System Standby health check is now reported correctly in all cases (TGR 544).
- A Calibration check no longer extends the expiration date of an instrument calibration (TGR 112).

LAC/E³² support

Empower installations now support a maximum of three 3D data-generating Ethernet detectors per LAC/E³² module, with the following restrictions:

- No more than one is an ACQUITY QDa Mass Detector
- No more than two are PDA detectors

The ACQUITY QDa Mass Detector is the only mass detector you can connect to a LAC/E³² module.

WAN improvements

DP 2019 R1 delivers performance improvements for the following detectors when operating in a WAN environment:

- 2998 Photodiode Array (PDA)
- 2489 UV/Visible
- 2475 Fluorescence (FLR)
- 2414 Refractive Index (RI)
- 2424 Evaporative Light Scattering (ELS)

Supported chromatography data software

DP 2019 R1 supports and has been tested with the following software:

- Empower 3 Feature Release 5.
- Empower 3 Feature Release 4 with Service Release 3.
- MassLynx software with compatible SCNs (see [MassLynx supported MSs with M-Class](#)).
- Stand-alone console.

- Microsoft .NET Framework versions 4.72 and 4.8.

Note: DP 2019 R1 uses Microsoft .NET 3.5 Framework, minimum.

- AB Sciex Analyst, version 1.6.3, 1.7, 1.7 Hot Fix 3, and v1.7.1TF.

Note: Third-party chromatography data software is tested and supported by the manufacturer.

MassLynx supported mass spectrometers

The following table lists the mass spectrometers tested with this release. Waters expects that other mass spectrometers that were not tested are compatible with this release, meaning that they will function as expected after you install the appropriate SCNs.

Mass spectrometers supported	Systems	Operating system ^a
QDa	<ul style="list-style-type: none"> • Alliance HPLC • ACQUITY UPLC • ACQUITY UPLC H-Class • ACQUITY UPLC H-Class PLUS • ACQUITY UPLC H-Class Bio • ACQUITY UPLC H-Class PLUS Bio • ACQUITY UPLC H-Class PLUS Binary • ACQUITY UPLC I-Class • ACQUITY UPLC I-Class PLUS • ACQUITY Arc • ACQUITY Arc Bio 	Windows 7 64-bit Windows 10 64-bit

Mass spectrometers supported	Systems	Operating system ^a
SQD2	<ul style="list-style-type: none"> • ACQUITY UPLC • ACQUITY UPLC H-Class • ACQUITY UPLC H-Class PLUS • ACQUITY UPLC H-Class Bio • ACQUITY UPLC H-Class PLUS Bio • ACQUITY UPLC H-Class PLUS Binary • ACQUITY UPLC I-Class • ACQUITY UPLC I-Class PLUS 	<p>Windows 7 64-bit Windows 10 64-bit</p>
SQ	<ul style="list-style-type: none"> • ACQUITY UPLC • ACQUITY UPLC H-Class • ACQUITY UPLC H-Class PLUS • ACQUITY UPLC H-Class Bio • ACQUITY UPLC H-Class PLUS Bio • ACQUITY UPLC H-Class PLUS Binary • ACQUITY UPLC I-Class • ACQUITY UPLC I-Class PLUS 	<p>Windows 7 64-bit</p>

Mass spectrometers supported	Systems	Operating system ^a
TQ	<ul style="list-style-type: none"> • ACQUITY UPLC • ACQUITY UPLC H-Class • ACQUITY UPLC H-Class PLUS • ACQUITY UPLC H-Class Bio • ACQUITY UPLC H-Class PLUS Bio • ACQUITY UPLC H-Class PLUS Binary • ACQUITY UPLC I-Class • ACQUITY UPLC I-Class PLUS 	Windows 7 64-bit

a. For details, refer to the release notes for the version of MassLynx installed on your system.

Instrument drivers

The tables in this section list the software and firmware drivers included in DP 2019 R1.

You can determine the currently installed ICS and firmware versions on a system from the Waters Console. From the **Help** menu, select **About Console**. In an Empower Enterprise environment, the About Console dialog box shows the ICS versions on the client and the LAC/E module.

Tip: To confirm that the firmware files were installed correctly, compare the checksum values in the table below to the checksum values displayed in the console. You can do this by selecting the module in the system tree, and then selecting **Configure > View Module Information**.

Solvent managers

Table 1–1: Solvent managers

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Binary Solvent Manager (BSM), ACQUITY UPLC Binary Solvent Manager (BSM) PLUS	186015001, 186015000, 186015082	ACQUITY UPLC and ACQUITY UPLC I-Class Series, ACQUITY UPLC H-Class Series	Binary Solvent Manager	1.73	Binary Solvent Manager [V1.72]	0x19251B64
ACQUITY UPC ² Binary Solvent Manager (ccBSM)	186015036	ACQUITY UPC ²	ACQUITY UPC ² Binary Solvent Manager	1.50	ACQUITY UPC2 Binary Solvent Manager [V1.50]	0x1090528B

Table 1–1: Solvent managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPC ² Convergence Manager (ccM)	186015037	ACQUITY UPC ²	ACQUITY Convergence Manager	1.50	ACQUITY Convergence Manager [V1.50]	0x72815285
ACQUITY UPLC Quaternary Solvent Manager (QSM), bioQSM, QSM PLUS, bioQSM PLUS, QSM-XR PLUS, and bioQSM-XR PLUS	186015018 (QSM), 186015041 (bioQSM), 186015080 (QSM PLUS), 186015081 (bioQSM PLUS), 186015083 (QSM-XR PLUS), 186015084 (bioQSM-XR PLUS)	ACQUITY UPLC H-Class Series and ACQUITY UPLC H-Class Bio Series	Quaternary Solvent Manager	1.73	Quaternary Solvent Manager [V1.72]	0x93EFE762
ACQUITY Arc Quaternary Solvent Manager- R (QSM-R), Arc Bio Quaternary Solvent Manager- R (bioQSM-R)	186017000, 186015041	ACQUITY Arc	Quaternary Solvent Manager- R	1.73	Quaternary Solvent Manager- R [V1.72]	0x897ACE21

Table 1–1: Solvent managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Isocratic Solvent Manager (ISM) and ACQUITY APC Isocratic Solvent Manager (p-ISM)	186015019, 186015050	All ACQUITY UPLC and ACQUITY Advanced Polymer Chromatography	Isocratic Solvent Manager	1.73	Isocratic Solvent Manager [V1.72]	0x9AF42CBA

Sample managers

Table 1–2: Sample managers

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Sample Manager (SM)	186015005, 186015006	ACQUITY UPLC	Sample Manager	1.73	Sample Manager [v1.65]	0x42C0E8CB

Table 1–2: Sample managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Sample Manager – Flow Through Needle (SM-FTN, bioSM-FTN, SM-FTN PLUS, and bioSM-FTN PLUS)	186015017, 186015040, 186015046, 186015085 (H-Class PLUS), 186015086 (H-Class Bio PLUS), 186015088 (I-Class PLUS)	ACQUITY UPLC H-Class Series, H-Class Bio Series, and I-Class Series	Sample Manager-FTN	1.73	Sample Manager-FTN [v1.71]	0x285858D7
ACQUITY UPLC Sample Manager – Fixed Loop Series (SM-FL and SM-FL PLUS) and ACQUITY UPC ² Sample Manager – Fixed Loop (ccSM-FL)	186015060, 186015035, 186015087 (SM-FL PLUS)	ACQUITY UPLC I-Class Series and ACQUITY UPC ²	Sample Manager	1.73	Sample Manager-FL [v1.70]	0x30B5761D
ACQUITY Arc Sample Manager – Flow Through Needle-R, with or without heating/cooling (SM FTN-R)	186017001, 186017007	ACQUITY	Sample Manager FTN-R	1.73	Sample Manager FTN-R [v1.71]	0xA7F6FD36

Table 1–2: Sample managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY APC Sample Manager – Flow Through Needle (SM-pFTN)	186015051	ACQUITY Advanced Polymer Chromatography	Sample Manager-FTN	1.73	Sample Manager APC [v1.60]	0x31502C7A
Waters 2707 Autosampler, with or without Cooler	186004462 or 186004463 (w/ Cooler)	HPLC	W2707	1.30	W2707 Autosampler	0xE020ED1E
ACQUITY UPLC Sample Organizer (SO) and ACQUITY UPLC Sample Organizer for rotary tray-style sample managers	186015020, 186015021, 186015014	All ACQUITY UPLC, H-Class Series, H-Class Bio Series, I-Class Series, and Arc	N/A	Controlled by the Sample Manager	Sample Organizer [v1.60]	0x96FA9AB0

Column modules

Table 1–3: Column heaters

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Column Heater	N/A	ACQUITY UPLC	N/A	Controlled by the sample manager	Controlled by the sample manager	N/A
ACQUITY UPLC Column Heater/ Cooler (CHC)	186015008	ACQUITY UPLC	Column Manager	Controlled by the sample manager	Controlled by the sample manager	0x8E9D1DC0
ACQUITY UPLC Column Heater, Active (CH-A)	186015042	ACQUITY UPLC H-Class Series and H-Class Bio Series, ACQUITY UPLC I-Class Series	N/A	Controlled by the sample manager	Controlled by the sample manager	N/A
ACQUITY UPLC High-Temperature Column Heater (HTCH)	186015010	ACQUITY UPLC	N/A	Controlled by the sample manager	Controlled by the sample manager	N/A

Table 1–4: Column managers

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Column Manager	186015007, 186015009	ACQUITY UPLC	Column Manager	1.73	Column Manager [V1.40.74]	0x8E9D1DC0

Table 1–4: Column managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC Column Manager, Active (CM-A)	186015043, 186015038	ACQUITY UPLC H-Class Series and H-Class Bio Series, ACQUITY UPLC I-Class Series, ACQUITY UPC ²	Column Manager	1.73	Column Manager (Active) [V1.69]	0x17AC4A76
ACQUITY UPLC Column Manager Auxiliary (CM-AUX)	186015049, 186015039	ACQUITY UPLC H-Class Series and H-Class Bio Series	N/A	Controlled by the Column Manager, Active (CM-A)	Controlled by the Column Manager, Active (CM-A)	N/A
ACQUITY Single-Zone Column Manager (CM-S)	186015054	ACQUITY Advanced Polymer Chromatography	Column Manager	1.73	Column Manager (Active-S) [V1.62]	0xC1CCF89D

Table 1–5: 30-cm Column heaters and managers

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC 30-cm Column Heater (30-cm CH)	186017008	ACQUITY Arc	N/A	Controlled by the Sample Manager	Controlled by the Sample Manager	N/A

Table 1–5: 30-cm Column heaters and managers (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY UPLC 30-cm Column Heater/Cooler (30-cm CHC)	186015011, 186017009	All ACQUITY UPLC and ACQUITY Arc	N/A	Controlled by the Sample Manager	Controlled by the Sample Manager	N/A
ACQUITY UPLC 30-cm Column Heater with Active Solvent Preheating (CH-30A)	186015045	ACQUITY UPLC H-Class Series and H-Class Bio Series, ACQUITY UPLC I-Class Series, and Arc	N/A	Controlled by the Sample Manager	Controlled by the Sample Manager	N/A
ACQUITY UPLC 30-cm Single-Zone Column Manager (CM-30S)	186015056	ACQUITY Advanced Polymer Chromatography	Column Manager	1.73	Column Manager (30S) [V1.62]	0xBED9D41A

Detectors

Table 1–6: Detectors

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY TUV	186015028	All ACQUITY UPLC	TUV Detector	1.70	TUV Detector (1) [V1.70]	0xB9E50966
ACQUITY TUV, thermally enhanced	186015031	All ACQUITY UPLC	TUV Detector	1.70	TUV Detector (2) [V1.70]	0XDF9B3A2E
ACQUITY PDA	186015026	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (1) [V1.65] ^a	0xF7835E17
ACQUITY PDA, thermally enhanced	186015032	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (2) [V1.70] ^a	0XDF9B3A2E
ACQUITY PDA e λ	186015030	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (1) [V1.65] ^a	0xF7835E17
ACQUITY PDA e λ, thermally enhanced	186015033	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (2) [V1.70] ^a	0XDF9B3A2E
ACQUITY PDA TS	186015053	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (2) [V1.70] ^a	0XDF9B3A2E
ACQUITY UPC ² PDA	186015034	All ACQUITY UPLC	PDA Detector	1.70	PDA Detector (2) [V1.70] ^a	0XDF9B3A2E
ACQUITY FLR	186015029	All ACQUITY UPLC	FLR Detector	1.69	FLR Detector [V1.69]	0xD99F06EF

Table 1–6: Detectors (continued)

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY RI	186015070	All ACQUITY UPLC	RI Detector	1.40	RI Detector [1.40]	0xAA39BF4C
ACQUITY ELS	186015027	All ACQUITY UPLC	ELS Detector	1.69	ELS Detector [1.40] ^b	0x216F9370
2489 UV-Vis	186002487, 186248900, 186017002	Alliance HPLC and ACQUITY Arc	2489 UV/Vis Detector	1.73	2489 Detector [V1.69]	0xBAB5BE45
2998 PDA	186002998, 186299800, 186017003	Alliance HPLC and ACQUITY Arc	2998 PDA Detector	1.73	2998 Detector [V1.70] ^a	0xED702600
2475 FLR	186002475, 186247500, 186017006	Alliance HPLC and ACQUITY Arc	2475 FLR Detector	1.73	2475 Detector [V2.20]	0xDBCEAB47
2414 RI	186241400, 186241401, 186017004	Alliance HPLC and ACQUITY Arc	2414 RI Detector	1.73	2414 Detector [V2.10]	0x5038C65E
2424 ELS	186002424, 186242400, 186017005	Alliance HPLC and ACQUITY Arc	2424 ELS Detector	1.73	N/A ^c	0x123F2F1E

a. Do not downgrade PDA firmware if it is at version 1.69 or higher. Contact Technical Service.

b. Contact Waters Technical Service for the latest ELS firmware, version 1.65.

c. Contact Waters Technical Service for the latest 2424 ELS firmware, version 1.65.

Table 1–7: Empower only Mass Detectors and Spectrometers

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
ACQUITY QDa	186008511, 186006511	Alliance HPLC, All ACQUITY UPLC, and ACQUITY Arc	QDa Detector	1.72	N/A	N/A
ACQUITY TQ	176001263	All ACQUITY UPLC	Waters TQ Detector	1.44	N/A	N/A
ACQUITY SQ	176000872	All ACQUITY UPLC	Waters SQ Detector	1.44	N/A	N/A
ACQUITY SQD2	186005832	All ACQUITY UPLC	Waters SQ Detector 2	1.52	N/A	N/A

Fraction collector

Table 1–8: Fraction collector

Module name	Part number	Systems	ICS name in Deployment Manager	ICS version	Firmware name in Deployment Manager	Checksum
Waters Fraction Manager – Analytical	186006857	HPLC and UPLC	Fraction Manager – Analytical	1.66	Fraction Manager – Analytical [V1.60].sft	0x31d1e50e

Accessories

Module name	Systems	ICS name in Deployment Manager	ICS version	Checksum
Local Console Controller	All ACQUITY UPLC	Local Console Controller	1.60	N/A
Connections INSIGHT	All Waters instrument drivers fully support Connections INSIGHT	Connections INSIGHT	3.2.82.0	N/A
Columns Calculator	HPLC and UPLC	Columns Calculator	2.00	N/A
nanoACQUITY Switch Utility ^a	ACQUITY M-Class	N/A	N/A	N/A
Waters Pump Control Software	Waters ACQUITY solvent managers, Waters 25X5 Quaternary Gradient modules	Waters Pump Control Software	3.10	N/A
e-SAT/IN	All ACQUITY UPLC	Waters Empower e-SAT/IN Software	1.3	N/A
Deployment Manager	N/A	N/A	3.1.243.5	N/A

a. For more information, refer to the *ACQUITY UPLC M-Class Driver Pack Installation and Configuration Guide*.

Fixed issues in this release (SCR and INS)

This section lists the problems resolved in this release. The numbers identify issues that Waters personnel monitor in the legacy system change request tracking tool (marked with SCR) and in the new issue tracking tool (marked with INS-).

General

INS-3036 (SCR 35701)

Instrument or software component: M-Class system

When an M-Class system has two μ BSMs, the Console retains their configuration correctly.

Fixed in: DP 2019 R1

Column modules

INS-5

Instrument or software component: CM-A

In the Console, the **Column Manager > Care and Use** page now includes a link to the Waters home page.

Fixed in: DP 2019 R1

Detectors

INS-817 (SCR 35536, 35447)

Instrument or software component: PDA

When using SCIEX Analyst, the PDA operates as expected when running a method that collects a large amount of data.

Fixed in: DP 2019 R1

INS-1153

Instrument or software component: 2424 with an I-Class system

Previously, when multiple systems were running simultaneously and a 2424 detector encountered an error, the flow on all systems stopped. Now, if the 2424 detector encounters an error, the flow stops on the system with the 2424 detector, while the other systems continue to run.

Fixed in: DP 2019 R1

INS-2946

Instrument or software component: QDa

The masses used by the Check Calibration feature were updated to provide a more equal mass scale distribution of the QDa mass range.

Fixed in: DP 2019 R1

INS-2947

Instrument or software component: QDa

Previously, the Calibration check routine completed successfully when two consecutive peaks were missed. The routine now fails when two consecutive peaks are missing.

Fixed in: DP 2019 R1

INS-2986 (SCR 35090)

Instrument or software component: QDa

Previously, in the Chinese, Japanese, and Korean versions of the Instrument Method Editor, the mass range default values were always the same. The mass range values are now the last values you set.

Fixed in: DP 2019 R1

INS-2988 (SCR 35605)

Instrument or software component: QDa

Previously, when your instrument system included a QDa detector and you clicked **Abort Now!** while acquiring a new sample set or single injection, the instrument system would remain in a `setting up` state indefinitely. Now, the **Abort Now!** function completes correctly.

Fixed in: DP 2019 R1

INS-4616 (SCR 34369)

Instrument or software component: 2414 RI

Previously, on systems running MassLynx, when the detector lamp was powered-on, the **Ready** button was red and the tooltip stated that the lamp was off. Now, when the detector lamp is powered-on, the **Ready** button is green and the tooltip states that the lamp is on.

Fixed in: DP 2019 R1

35085, 35341

Instrument or software component: SQD2

This release supports the Windows 10 operating system.

Fixed in: SQD2 ICS 1.52

35271

Instrument or software component: SQD2

The software opens successfully when the Tune method name exceeds 21 characters.

Fixed: SQD2 ICS 1.52

35273

Instrument or software component: SQD2

When the Acquisition client begins buffering mode, the user-defined tune settings are active and listed in the post run report.

Fixed in: SQD2 ICS 1.52

Sample managers

INS-149, INS-421 (SCR 35006, 35370)

Instrument or software component: SM-FTN

Using the Auto Addition feature, when you add samples from sample plates of different types, the injections complete successfully.

Fixed in: DP 2019 R1

INS-494 (SCR 30953)

Instrument or software component: SM

The Air Sensor LED image no longer appears on the Sample Manager Interactive Display page.

Fixed in: DP 2019 R1

INS-1794

Instrument or software component: SM-FTN

You can now set the extended loop size using the Replace Components wizard.

Fixed in: DP 2019 R1

INS-2272 (SCR 35388)

Instrument or software component: SM-FTN

When you print an Empower instrument method, the Loop Offline parameter lists the correct setting.

Fixed in: DP 2019 R1

INS-2282

Instrument or software component: SM-FL

In the Console, the Park needle feature is now "Park needle and injection valve" as the feature moves both the needle and injection valve to their default positions.

Fixed in: DP 2019 R1

Solvent managers

INS-1440

Instrument or software component: QSM, QSM-R

The Close button on the degasser health check diagnostic window is unavailable while the health check is running. To interrupt the health check, click **Stop**, and then click **Close**. The Close button is available after the health check completes.

Fixed in: DP 2019 R1

INS-1827

Instrument or software component: BSM

The method editor now calculates the high-pressure limit correctly.

Fixed in: DP 2019 R1

INS-2344

Instrument or software component: BSM

In the Chinese and Japanese language versions of the interactive display, changing the solvent select valve causes the solvent selection dialog to stop responding. This issue is resolved.

Fixed in: DP 2019 R1

INS-2863, INS-2866

Instrument or software component: QSM, BSM

Previously, when running a Degasser Health Check, the Console page displayed the status as priming, after priming completed. The Console now displays the status correctly.

Fixed in: DP 2019 R1

INS-2874, INS-2875

Instrument or software component: BSM and QSM

When a degasser health check fails with a `pressure not met` alarm condition while in the `running` state, and you inspect the log, the reason field is either blank or it lists a code value. Now, the log defines the reason for failure correctly.

Fixed in: DP 2019 R1

INS-2926, INS-2927

Instrument or software component: BSM, QSM

Previously, you could close the health check diagnostic window while running a health check. The Close button on the degasser health check diagnostic window is now unavailable while the health check is running. To interrupt the health check, click **Stop**, and then click **Close**. The Close button is available after the health check completes.

Fixed in: DP 2019 R1

INS-4041

Instrument or software component: BSM

When using a BSM client running version 1.71 (DP 2018 R1) connected to a LAC/E module running 1.70 (DP 2017 R2), you can now set the flow rate through the Control Panel or Console.

Fixed in: DP 2019 R1

INS-6142

Instrument or software component: QSM, QSM-R

Previously, when a system had two QSM-R modules, the control panel displayed the same values for both modules, representing the condition of only one QSM-R module. Now, the control panel displays the values for each QSM-R module.

Fixed in: DP 2019 R1

Known issues in this release

For a comprehensive list of all known issues since Driver Pack 4, see *Waters Driver Pack Known and Fixed Issues* (715005660).

Opening Help in Windows 10

Some Windows Updates prevent the correct Help topic from appearing when you open Help from the Console and instrument control panels. A message stating that the page cannot be displayed appears. The most recent Windows Updates correct the issue.

If a subsequent Windows Update prevents the correct Help topic from appearing, you can search for topics by opening the Help window, and then use the **Search** tab in the left-hand pane.

Installation

INS-4833

Instrument or software component: Installer

On a computer running the Windows 10 operating system, a push install fails with an `Access denied` message.

Reported in: DP 2019 R1

Solution: Contact Waters Technical Service.

INS-4895, INS-4897, INS-4898, INS-4899, INS-4901

Instrument or software component: Installer

When you uninstall DP 2019 R1, some instrument drivers are not removed completely.

Reported in: DP 2019 R1

Solution: Re-install DP 2019 R1, and then uninstall the driver pack again.

INS-5142

Instrument or software component: Installer

On a system running Windows 7 and MassLynx 4.2 SCN 962 with Driver Pack 4 Service Release 1, when you upgrade to DP 2019 Release 1, some instrument drivers are not installed correctly.

Reported in: DP 2019 R1

Solution: Restart the computer, and then re-install DP 2019 Release 1.

INS-5169

Instrument or software component: Installer

After upgrading the driver pack of a system installed with MassLynx, Driver Pack 4 Service Release 1 and configured with a TUV detector, the TUV detector server fails when AutoLoader opens.

Reported in: DP 2019 R1

Solution: Restart the computer, and then manually open **AutoLoader**.

General

INS-5118, INS-6345

Instrument or software component: Online Help

Some Windows Updates prevent the correct Help topic from being displayed. A message stating that the page cannot be displayed appears when you open the Help from the Console and instrument control panels. The most recent Windows Updates correct the issue.

Reported in: DP 2019 R1

Solution: In the Help window, search for topics using the **Search** tab in the left-hand pane.

INS-5200 (PCS 56598)

Instrument or software component: Multiple instruments, Empower software only

For any Alliance system, when you create and save an instrument method, and then open a new instrument method without closing the instrument method window, the detector parameters are not updated to reflect the settings in the recently opened method.

Reported in: DP 2019 R1

Solutions:

- Ensure that the Alliance module is the last instrument added when configuring the system, and that it appears as the last tab in the instrument window.
- Close the Instrument Method window, and then open the second instrument method.

INS-1571, INS-1572, INS-1573, INS-1574, INS-1575, INS-7285 (SCR 34378)

Instrument or software component: ACQUITY Convergence Manager, ACQUITY UPC2 Binary Solvent Manager, eSAT/IN, Waters Pump Control, 2414 RI detector, Fraction Manager

The IQ Report records an error when you install any of the instruments listed above.

Reported in: DP 2016 R1, DP 2019 R1

Solution: None.

Detectors

INS-2976 (SCR 34033)

Instrument or software component: QDa

When the detector is operating in a WAN environment, some logs are not displayed in the Console. User log entries are displayed.

Reported in: DP 2019 R1

Solution: None.

INS-2977 (SCR 34859)

Instrument or software component: QDa

During acquisition, opening the detector door causes an error message to appear in the Empower Message Center. If you open the detector door more than once, subsequent messages do not appear in the Message Center.

Reported in: DP 2019 R1

Solution: None.

INS-4846 (SCR 34173)

Instrument or software component: QDa

The calibration routine completes successfully even when two consecutive reference peaks are missing.

Reported in: DP 2019 R1

Solution: Review the calibration results in the console log and contact Waters Technical Service if multiple peaks are missing in the calibration report.

INS-7157

Instrument or software component: ACQUITY ELS

During data acquisition, the detector stops acquiring data after one minute. The sample set completes, but each injection contains only one minute of data.

Reported in: DP 2019 R1

Solution: None.

35519

Instrument or software component: SQD2

On the **System Startup > Equilibrate to Method > Other** tab, when **Lamp On** is enabled, the system remains in standby mode with the gas flow off.

Reported in: SQD2 ICS 1.52

Solution: Manually turn on the API gas, and then set the SQD2 detector into Operate mode, either before or after you run the system startup.

35689

Instrument or software component: SQD2

On an Empower base installation, when you install ICS 1.52, an error message appears stating that the installation program cannot unregister the type library.

Reported in: SQD2 ICS 1.52

Solution: To continue the installation, click **OK**.

35713

Instrument or software component: SQD2

You can change the Analysis Type while IntelliStart is running resolution and calibration. Changing the analysis type during resolution and calibration can cause inaccurate resolution and calibration results.

Reported in: SQD2 ICS 1.52

Solution: Do not change the Analysis Type while IntelliStart is running. If you do change the Analysis Type, rerun IntelliStart.

35716

Instrument or software component: SQD2

When using the ASAP mode on the SQD2, IntelliStart can present the `Probe temperature failed to settle` error during data acquisition. This error aborts data acquisition and puts the SQD2 into an error state.

Reported in: SQD2 ICS 1.52

Solution: When using the ASAP mode, disable the **Probe temperature settling failure** health check in the IntelliStart Configuration settings within the System Console.

To disable the **Probe temperature settling failure** health check:

1. Open the System Console, and then in the left pane, click **Waters SQ Detector 2**.
2. Click **Configure IntelliStart Configuration** from the **Configure** menu.
3. Clear the **Probe temperature settling failure** check box, and then click **OK**.

Note: If you use the system with a probe other than the ASAP probe, re-enable the health check.

35720

Instrument or software component: SQD2

On a computer running the Windows 10 operating system, the SQD2 detector stops working after the operating system updates to version 1803.

Reported in: SQD2 ICS 1.52

Solution: Remove and reinstall all instrument drivers, installing SQD2 version 1.52 last.

Recommendation: When you configure a new computer, install all Windows updates before installing any instrument drivers.

Sample managers

INS-2535

Instrument or software component: SM-FTN

When using an SM-FTN and a switch box configured with a CH-A and CHC, the software does not inform you when you select the CHC while the unit is disconnected or powered-off. An alarm appears when you attempt to set a temperature or run samples.

Reported in: DP 2019 R1

Solution: Confirm the connection and verify that the power switch on the right side of the CHC is in the on position.

INS-10026

Instrument or software component: SM-FTN

When you view an instrument method that includes an H-Class or I-Class FTN module, the following parameter values on the **General** tab display the default values rather than the values stored in the saved instrument method:

- Column temperature and sample temperature alarm bands
- Loop offline
- Load ahead
- Active preheater
- Comments

When acquiring data, the software uses the values stored in the saved method.

Reported in: DP 2019 R1

Solution: When viewing the instrument method without making changes, the Save dialog box appears when you close the instrument method from the **General** tab only. Select **No** in the Save dialog box to retain the correct parameter values for the fields listed above.

When you save the instrument method from the **General** tab, ensure that the parameter values listed above are correct. Follow these guidelines:

- To have a record of the stored parameter values listed above, add the instrument method to a report that you can view or print.
- Ensure that the parameter values listed above are correct, based on the report. Make the desired modifications, and then save the method.
- To avoid the defect, you can uninstall Driver Pack 2019 Release 1 and install Driver Pack 2019 Release 2. This defect is fixed in DP 2019 R2.

Solvent managers

INS-61 (SCR 34860)

Instrument or software component: ISM

For systems that include both an ISM and SM-FTN, when you click **Stop Flow** while system startup is running, the ISM continues to run.

Reported in: DP 2019 R1

Solution: Confirm that all other modules in the system have stopped, and then click **Stop Flow** again to stop the ISM.

INS-2899

Instrument or software component: QSM

When an error occurs during the degasser health check, the Console page displays the error description briefly, but then the description changes to `Error`.

Reported in: DP 2019 R1

Solution: View the log for a description of the alarm.

Anti-virus considerations

Some real-time virus scanners mistake normal data acquisition and instrument control for virus activity, and thus interfere with proper operations. Full-system scans and live updates can be network-intensive, disk-intensive, and CPU-intensive, and they can also interfere with normal data acquisition. Schedule scans and updates for idle times when data acquisition does not occur.

Certain anti-virus program features like "intrusion prevention" and "tamper protection" can also interfere with normal operation. Disable them as well.

Empower installations

For Empower software installations, exclude the Empower installation folder (usually `C:\Empower`) and its sub-folders.

MassLynx installations

For MassLynx installations, exclude these folders:

- For 64-bit computers: `C:\Program Files (x86)\Waters Instruments`, and its sub-folders.
- The MassLynx installation folder, usually `C:\Masslynx`, and its sub-folders.

Stand-alone installations

For stand-alone console software installations, exclude these folders:

- For 64-bit computers: `C:\Program Files (x86)\Waters Instruments`, and its sub-folders.
- For 32-bit computers: `C:\Program Files\Waters Instruments`, and its sub-folders.

Compliance recommendations

Any time you install, change, or uninstall software or system modules in a regulated environment, Waters recommends that you follow your organization's approved standard operating procedures.

A risk-based review may assist you in a regulated environment to evaluate changes detailed in the release notes. Using company SOPs, determine if any documentation updates and requalification of the system modules, chromatographic system, or chromatographic data system (CDS) are required.

Instrument update classification (minor update)

Waters considers this update to be a minor change from previous versions. This update is designed to not alter the physical specifications of instruments or systems. Waters expects that methods run and data generated on instruments before and after the update will be consistent. As with any change, you should evaluate the impact of this update to your instruments or systems.

Software requalification options

Consider using the requalification options outlined below to verify software installation and correct operation:

- To confirm that the new files loaded properly, consider performing a software installation qualification.
- To confirm the operation of the newly loaded software, consider performing an operational qualification (user or vendor) for the updated software installation.
- To determine if additional testing is required, consider evaluating the changes in the software release, to assess the risk associated with the installation. Depending on the risk, it may be appropriate to perform existing, updated, or new software tests. These tests may be known as performance qualification tests, user acceptance tests, verification tests, or validation tests.

To assist you, if required, Waters provides various levels of Qualification (or Compliance) Services and validation consultancy through our Professional Services organization.

When multiple, identical systems are involved, consider a risk-based approach to qualification activities.

Instrument requalification options after software or firmware change

Consider using the requalification options outlined below to verify hardware installation and correct instrument operation:

- To confirm that the firmware files on the system modules were installed correctly, compare the checksum values in the product release notes to the checksum values displayed in the console.
- To confirm instrument system operation with any newly loaded software, driver, or firmware, consider performing an operational qualification for the updated instrument system.
- To confirm performance, control, and communications of the instrument system, consider conducting a performance qualification (user or vendor) or system suitability test.

Requalification with Waters' Total Assurance Plans

The Waters' Total Assurance Plan (TAP) with System Qualification Option covers upgrades and requalification of the instrument driver, software, firmware, or hardware in these cases:

- During yearly requalification, as provided in the plan.
- If installing this release is required for operation of a new module or system, where qualification of the new module or system is covered by the plan.

Requalification of the CDS software and computers after a driver upgrade may or may not be included in your TAP.

Review your TAP to determine which services are covered and which are not covered. For situations not covered by the plan, Waters can perform the qualification, but additional charges will apply.

Contact Waters Technical Service

If you are located in the USA or Canada, report malfunctions or other problems to Waters Technical Service (800 252-4752). If you are located elsewhere, phone the Waters corporate headquarters in Milford, Massachusetts (USA), or contact your local Waters subsidiary. The Waters' Web site includes phone numbers and e-mail addresses for Waters locations worldwide.