



Waters™

Alliance iS HPLC System 1.2 Instrument Software Release Notes

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1 General information

1.1 Copyright notice

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1.2 Trademarks

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All other trademarks are property of their respective owners.

1.3 About these release notes

This document contains information about the features and functions introduced, changed, or removed in this version of the product. It contains a list of major feature changes as well as descriptions of known defects, resolved defects, and observed product behaviors (concessions) that Waters deems of importance to customers. This document does not include:

- An exhaustive list of all changes to this version of the product
- Descriptions of defects that were not known to Waters at the time of the product's release
- Descriptions of defects that cannot be reproduced by Waters
- Information about customer requests for enhancements to the product
- Specific details of changes to proprietary aspects of product components, features, computational algorithms, and software code

The changes listed in this document are relative to the previous version of the product. If you are updating an older version of the product, review the release notes for all the intervening versions to ensure that you understand the cumulative impact of the product changes.

Carefully review the information in this document before the product is installed. If you have questions about how installing this product might affect your environment or if you need more information about this product, contact your Waters representative.

1.4 Contacting Waters

Contact Waters with technical questions regarding the use, transportation, removal, or disposal of any Waters product. You can reach us through the Internet, telephone, fax, or conventional mail.

Contact method	Information
www.waters.com	The Waters website includes contact information for Waters locations worldwide.
iRequest	iRequest is a secure Web service form that allows you to request support and service for Waters instruments and software or to schedule a planned service activity. These types of support and services may be included as part of your maintenance plan or support plan. You may be charged for the requested service if you do not have appropriate plan coverage for your product. Note: In areas managed by authorized distributors, iRequest may not be available. Contact your local distributor for more information.
Local office contact information	For worldwide locations, telephone, fax, and conventional mail information is available at the Local Offices website.
Corporate contact information	Waters Corporation 34 Maple Street Milford, MA 01757 USA From the USA or Canada, phone 800-252-4752 or fax 508-872-1990.

1.5 Additional resources

Waters provides the following additional resources to ensure your continued success with our products.

Knowledge base: Obtain quick answers to your troubleshooting questions. Access support articles on Waters instrumentation, informatics, and chemistry.

eLearning courses: Learn anytime, anywhere, and at your own pace with eLearning courses.

Customer education: Waters Educational services team is the leading training organization empowering scientists to maximize their skills in UPLC, HPLC, LC-MS, and data management.

Application notes: View our online digital library of Application notes for advanced analytical technologies including chromatography, mass spectrometry, columns and sample preparation, and data management software, demonstrating impactful scientific and operational benefits.

How-to video library: View/download the latest product how-to videos.

Graphical parts locator: Identify and order parts using an interactive graphical navigator. Access maintenance procedures and reference documents.

Product selection tools and resources: A collection of wizards that help you pick the correct chemistry consumables to meet your separation requirements, including vials, plates, filters, column selectivity charts, and more.

1.6 Updated information

Refer to the Waters website (www.waters.com) and click **Support > Support Documents and Downloads** for updates to this document.

2 Alliance iS HPLC System

2.1 Software version

The software version for the Alliance iS HPLC system is "Alliance iS ver 1.2, ICS".

2.2 Informatics compatibility

Informatics compatibility is enabled by Empower™ Chromatography Data System (CDS) (Feature Release 4 with Windows™ 10 operating system and later). Empower 3.8.0 is required for pre-run checks and column tracking to fully function.

2.3 Qualification

For information on qualification, contact your local Waters account manager.

2.4 Supported configurations

The Alliance iS HPLC System is supported on workstation, client/server, and Citrix. There is no acquisition client support. The Alliance iS has been tested with DP2023R1 and is supported on the same computer with any supported Windows 10 version (DP2017R1 and later).

2.5 Installation details

For detailed software installation instructions, see the *Alliance iS HPLC System ICS 1.2.0 Installation and Configuration Guide* (715009264), available on www.waters.com.

Note: The AiS port assignments for communicating with Empower have changed. The Installation and Configuration Guide specifies the software port requirements.

For driver pack installation instructions, refer to the Waters documentation for the driver pack version you are currently running—for example, the *Waters Driver Pack 2023 R1 Installation and Configuration Guide* (715006278), available on www.waters.com.

Note: Registered customers can obtain the latest instrument drivers from support.waters.com.

Note: Waters recommends installing the driver pack first, followed by Alliance iS ver. 1.2, ICS.

Note: Waters recommends using the **Typical** installation option. If you have specific questions, contact Waters Technical Service.

2.6 What's new in Alliance iS 1.2

The Alliance iS 1.2 release addresses defects that affected data integrity in the Alliance iS 1.1 system. The following section summarizes the defect resolutions.

In addition, several defects that affected data integrity were identified and resolved during the Alliance iS 1.2 cycle. They include the following:

INSSYS-220

The system exhibits retention time drift of several seconds over the course of several days of instrument uptime.

INSSYS-291

Data could be missing from Empower acquisition and diagnostic channels within a running sample set.

INSSYS-307

During data collection, the timing of some injections was incorrect and the data for some injections was incomplete.

INSSYS-308

Data could be missing from Empower acquisition and diagnostic channels within a running sample set.

INSSYS-345

Data collection did not stop at the specified run time.

2.7 Issues resolved in this release

This section lists the problems resolved in this release. The numbers identify issues that Waters personnel monitor within a system change request tracking tool.

2.7.1 INSSYS-28 (INS-34429)

Previously, it was possible for the system to become unresponsive because of a communication error between the TUV and the system controller. This issue is resolved.

2.7.2 INSSYS-116 (INS-32642)

Previously, the text in the gradient table field incorrectly stated that flow rates ranging from 0.0 to 10.0 mL/min were valid. The text now correctly states that the valid range is 0.001 to 10.000 mL/min. Note that it is still necessary to enable **Gradient End Stop Flow**.

2.7.3 INSSYS-142 (INS-32903)

Previously, you could not specify a dwell volume greater than 1.5 mL in the **Dwell Volume** field on the touchscreen. This issue is resolved.

2.7.4 INSSYS-161 (INS-34477)

The system sometimes stopped acquiring data when it should not have and reported only an `Instrument Failure` or `Instrument Communication Failure` event in the Empower message center. This issue is resolved.

2.7.5 INSSYS-233

In Alliance iS 1.1, a leak detected in the FTN halted injections but mobile phase delivery continued until the QSM leak sensor also tripped. The system now stops the QSM flow as soon as the FTN leak sensor trips.

2.7.6 INSSYS-242 (CRI-6674)

In Alliance iS 1.1, the TUV filter time constant did not work properly in single-wavelength mode when sampling rates of 1 Hz, 2 Hz, or 5 Hz were selected, but it did work properly in dual-wavelength mode. The expected results are now obtained in single-wavelength mode.

2.8 Known issues in this release

This section lists the known issues and solutions for this release. The numbers identify issues that Waters personnel monitor within a system change request tracking tool.

2.8.1 INSSYS-181

It is possible for the system to become unresponsive because of a communication error between the TUV and the system controller.

Workaround: Power-cycle the system.

2.8.2 INSSYS-219

The Column Compartment Temperature Test and the Sample Compartment Temperature Test, which run from the **Health > Troubleshooting > Diagnostics** screen, can terminate abnormally if after 20 minutes the measured final temperature remains outside 1 °C of the ambient temperature. The ambient temperature is measured at the intake vent on the back of the sample manager.

Workaround: Analyze the location of the sample manager intake in relation to hot or cold air sources.

2.8.3 INSSYS-231

The system cannot execute pre-run checks when an external detector is configured. The notification `Execution error for Sample Set PreRun Check Test: Instrument Method is not valid for system. Unknown field: clientContext` appears in the Empower message center.

Workaround: Disable pre-run checks.

2.8.4 INSSYS-297

It is possible for the touchscreen display to become blank after a sample set launches. Empower collects data as expected and the status bar changes color to green and then to blue, yet the screen remains blank.

Workaround: Power-cycle the instrument.

2.8.5 INSSYS-304

If the Alliance iS system state is `Running` (green, for any activity) and an Empower user starts running a sample, Empower displays the notification `run aborted - instrument already in use`. The Empower console becomes `Idle` but the touchscreen still shows `Running`. Executing the **Reset** command from the touchscreen frees up the system for use.

Workaround: Before running a sample from Empower, ensure that the touchscreen shows `Idle` (blue) status.

2.8.6 INSSYS-320

If different versions of Alliance iS system software and ICS software are installed, Empower's post-run report is unable to load instrument setup information.

Workaround: Ensure that the installed versions of Alliance iS system software and ICS software are the same.

2.8.7 INSSYS-323 (CRI-7035)

Empower can set up an injection whose method uses the minimum sample manager temperature tolerance of 0.5 °C without error, but submitting the injection results in instrument failure because of a communication issue. Failure occurs after approximately one minute, which is less time than it would take to warm up to the set point.

Workaround: Set the minimum tolerance to ± 2 °C in the instrument method.

2.8.8 INSSYS-324

Data collection for an injection can start when the temperature of the sample manager is within 1 °C of the tolerance setting. For example, if the range is 20 ± 1 °C, data acquisition can start when the temperature is 21.9 °C.

Workaround: None.

2.8.9 INSSYS-327

Lamp hours display as a negative number on the touchscreen and the Empower control panel.

Workaround: Replace the lamp.

2.8.10 INSSYS-373

The Empower Post Run Report lists the same value for TUV Lamp Minutes for every injection, and the reported value does not match the value shown on the touchscreen for the most recently completed injection.

Workaround: Consult the touchscreen for the correct value.

2.8.11 INSSYS-375

Following post-failure initialization and instrument reset, the Sample Manager temperature set point viewed by clicking **Setup** from Empower's Run Samples interface shows `off` in the Empower console, which is incorrect. The actual temperature reading is correct.

Workaround: Power-cycle the computer and the instrument.

2.8.12 INSSYS-378

The TUV is not visible in the Empower Instrument Configuration Manager after upgrading to Alliance iS 1.2 firmware.

Workaround: Release all systems' IPs by clearing the DHCP server, and then power-cycle the connected instruments.

2.8.13 INSSYS-389 (CRI-6401)

If someone is logged in to Empower as System and attempts to launch the Method Translator app, the notification `You are using the Empower system account which is incorrectly configured. Please edit the system account so it's correctly configured or use another Empower account.` appears and they are unable to proceed.

Workaround: Log out of the System account and log back in using a different Empower account.

2.8.14 INSSYS-391

The Empower installation verifiably includes the Intelligent Method Translator app, but the installation wizard for the Sample Set Generator toolkit removes the app without reinstalling it.

Workaround: Uninstall Alliance iS ICS, reinstall the tool kits, and reinstall Alliance iS ICS.

2.8.15 INSSYS-396

When the Startup workflow launches with **Set Final Conditions** set to **Not Selected**, the system ignores the setting and starts the flow using the conditions set by the previous method.

Workaround: Set the final conditions explicitly.

2.8.16 INSSYS-399

Resetting an instrument that encountered an error can produce the message `System reset: Reset terminated abnormally` in the Empower error logs. Additional false errors can occur.

Workaround: Power-cycle the instrument.

2.8.17 INSSYS-400

After the process of upgrading the instrument to Alliance iS 1.2 runs to completion, it is possible for the notification `ERROR Check health hub or reset system` to appear at the top of the touchscreen, even though the **System > About > SW Version** screen shows version 1.2.

Workaround: Reset the instrument to clear the error state.

2.8.18 INSSYS-401

Empower allows the submission of sample sets with injection volumes that exceed the needle volume when no extension loop is installed and the extension loop capability is disabled at the touchscreen. The first injection that requires an extension loop triggers messaging indicating that the injection volume exceeds the maximum allowed volume.

Workaround: Verify that injection volumes require an extension loop and install and enable the required loop before submitting a sample set.

2.8.19 INSSYS-406

It is possible for the flow to display as 0.00 mL/min and the pressure to display as 0 psi on the touchscreen, control panel, and console even though the pump is audible and the flow rate data channel shows 1.00 mL/min.

Workaround: Shut down Empower, power-cycle the system, and restart Empower.

2.8.20 INSSYS-470

If the Alliance iS system state is `Idle` (blue, with an hourglass implying setup) and an Empower user submits a sample set, Empower displays the notification `run aborted - instrument already in use` and becomes locked. To unlock, it is necessary to close all Empower windows, log out, and execute Empower's **StopProcesses** command from File Explorer.

Workaround: Before running a sample from Empower, ensure that the touchscreen shows `Idle` status without an hourglass.

2.8.21 INSSYS-475

Data acquisition can stop in between sample sets because of a method setup failure associated with a sample set in the systems qualification test (SQT). The system reverts to `Idle` state and the Empower message center reports the `Instrument failure - Method setup failed` notification.

Workaround: Restart injections.

2.8.22 INSSYS-487

If the detected pressure is above the upper limit for the method, which typically occurs because of a partial physical obstruction (clog), Empower logs the `QSM: Accumulator hardware over xxxx psi at y.y ml/min` message. It is possible for the reported value to be below the upper limit because the pressure decays in the interval between when the plungers stop and when the system reads the pressure and generates the message.

Workaround: Clear the obstruction and restart the system.

2.8.23 INSSYS-489

A shutdown method may not work properly when the pump stroke volume setting is 132 μ L, the flow rate in the gradient table is low (<0.5 mL/min), and the shutdown delay (gradient end stop flow time) setting is less than two minutes. The instrument shuts down but remains in the `BUSY`

state, and Empower reports an instrument failure error. (Acquired data is unaffected.) Empower cannot load another method because of the instrument's state.

Workaround: Tap **Stop Running**, and then reset the instrument.

2.8.24 INSSYS-490 (CRI-6963)

The touchscreen displays the warning `Lifetime lamp hours exceeded` before the value of **Lamp Hours** exceeds the recommended maximum number of hours.

Workaround: None.

2.8.25 INSSYS-495

The touchscreen instructions for resolving a wavelength calibration error after power-cycling the instrument call for calibrating the detector after flushing the flow cell. However, after flushing the flow cell the instrument remains in an error state that makes **Maintain > Calibrate Detector** unavailable.

Workaround: Flush the flow cell and reset the instrument by running **Commands > Reset**. Then run **Maintain > Calibrate Detector > Calibrate Wavelengths**. If the problem persists, contact Waters field service personnel.

2.8.26 INSSYS-496

If **Automatic Vial Bottom Detection** is enabled in the Instrument Method Editor for injections that use the auxiliary vial positions, the system presents the `FTN or needle foot move out of range` error and it is possible for the instrument to lift a vial in the auxiliary position out of its place as the injection needle retracts.

Workaround: When using auxiliary vial positions, disable automatic vial bottom detection.

2.8.27 INSSYS-511

Empower displays actual run-time values in fields for which the touchscreen displays inaccurate values, including the following:

- The touchscreen shows 0 completed injections when Empower shows the running count.
- The current injection number at the touchscreen is not synchronized with Run Samples.
- The touchscreen displays `0 min left` but the values of **Sample Set Time Remaining** and **Total Samples Time Remaining** are different in Run Samples.

Workaround: Refer to Empower for the correct values.

2.8.28 INSSYS-522

If the last line of the gradient table is less than or greater than (not equal to) the Empower run time and Gradient End Stop Flow is enabled, the system flow can stop before or after the expected time. If the last line of the gradient table is less than the specified run time, data acquisition continues in Empower with zero flow until the injection is complete.

Workaround: If the gradient end stop flow is enabled, ensure that the time in the last line in the gradient table matches the Empower run time.

2.8.29 INSSYS-523

Method setup fails when consecutive lines in an Empower sample set use an instrument method with a dual wavelength with filter step followed by an instrument method with a single wavelength without filter step.

Workaround: Insert an injection that uses an instrument method with a single wavelength with filter step in between the injections that use the dual wavelength with filter step and the single wavelength without filter step.

2.8.30 INSSYS-525 (CRI-7002)

Empower and the touchscreen can display the ambient (room) temperature instead of the column heater's actual temperature even though the column heater is warmed to the set temperature.

Workaround: Turn the column temperature setting off and on at the touchscreen using the **Set Column Temperature** command. If that does not synchronize the actual temperature and the readings, power-cycle the instrument.

2.8.31 INSSYS-533

If you tap **Back** from the **Calibrate Wavelengths** screen or the **Verify Calibration** screen, the instrument status bar changes from green to blue and the **Calibrate Detector** workflow cannot start running. The console and control panel also show Idle status but display the `System is operating` notification.

Workaround: Instead of backing out, cancel the workflow and restart by tapping **Maintain > Calibrate Detector > Calibrate Wavelengths** or **Verify Calibration**.

2.8.32 INSSYS-557

When a method that includes a linear or curve flow gradient runs, its linear and curve gradients increase or decrease in a stepwise manner.

Workaround: None.

2.8.33 INSSYS-559

The needle seal readiness test can stop running approximately 30 seconds after initiation for troubleshooting a leak. The touchscreen notification is `workflow stopped unexpectedly` and the Empower message center logs `SystemNeedleSealReadiness : Needle Seal Readiness terminated abnormally`.

Workaround: Identify and repair any visible leaks and rerun the test.

2.8.34 INSSYS-560

The Empower Node Properties sheet shows that the value of **OK?** is No after resetting the system from the touchscreen or console. In this state, the Post-Run and System reports show not the current system values but values entered at the touchscreen before the reset.

Workaround: Reboot the computer.

2.9 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 change control procedure.

You should assess the impact of the changes described in the release notes on the qualification status and validation for the intended use of your system, including any impact on personnel, methods, laboratory workflows, or connected equipment, and scale your activities accordingly.