

ÄKTA pure™ 25 IC

Release notes and installation instructions

1 Introduction

This document describes the major implemented changes, improvements, and corrected issues in released versions of ÄKTA pure™ 25 Instrument Configuration (IC).

This document also describes how to install the IC, see [Installation instructions, on page 10](#).

Compatibility

For information about compatibility between different UNICORN™ versions and ICs, see the UNICORN compatibility matrix at <http://www.cytiva.com/UNICORNcompatibility>.

2 Release 2.4

New functionality

- Added support for new electronic components in the pumps and instrument control unit as part of the Cytiva Security of Supply initiative.



IMPORTANT

You must install **RTU Win 10 Image SP1** if both of the conditions below are true:

1. You install this IC on an instrument with a RTU.
2. You run UNICORN 7.6-7.10.

Refer to the Cytiva website to download **RTU Win 10 Image SP1**.

Corrected defects

- Defect correction for tables in phases **Column CIP**, **Column Preparation** and **Elution**.

3 Release 2.3

Corrected defects

- Peak fractionation source was not set correctly when opening a saved method created in an older IC. This issue is now resolved.
- Corrected issues that generated **Internal error (123)** when UV-instructions were sent to **UV monitor (U9-M)** during UV-lamp start up light optimization.
- Corrected issue when the accumulator wash of the **Fraction Collector (F9-C)** was paused.

Note: *Do not perform an accumulator wash at flow rates below 11 ml/min. This will cause issues, and the system will lose connection.*

- Corrected issue when setting **Start Position (Set position)** in the edit field for **Fraction Collector (F9-T)** in the phases.

4 Release 2.2

New functionality

- Support for **UV monitor (U9-T)** as both primary and secondary UV monitor

- Support for 0.4 mm flow cell for **UV** monitor **U9-L** and **U9-T**
- Breakthrough **UV** curve when having two **UV** monitors
- **Hold counted volume** count down volume option to keep track of remaining sample
- Support for column valve **V9-Cm**
- Support for 2nd conductivity monitor
- In **Outlet Fractionation**, it is now possible to define action (pause or continue) when out of fractions
- Improvements to avoid some disconnects due to firewall timeouts
- **Filter clamp**: Now mixer motor stops when mixer is below 0.1 ml
- **Fraction collector wash**: Bypass of **pH** cell to avoid too high pressure over **pH** cell
- **New functionalities in Phases**
 - **peak to loop**:
 - Optional wash inlet included
 - Possible to delay start of collection
 - **Sample application**: Reinject counted volume from **peak to loop** collection
 - **Peak fractionation** source signal made optional
 - **Conditional Fractionation**: Precondition to enable stop
 - **Column Performance Test**: Added support for Loop valve (**V9-L**)
 - **System CIP**: Support for possibility to clean the **pH** cell
 - **Elution**: Finalized gradient new default volume and recommended volumes for different mixer sizes in help text
- **Process picture**: Support for a set pressure limits from column list
- **System performance test U9-M** now supports all **UV** cell path lengths. Use 0.8 % acetone for the 10 mm UV flow cell

Corrected defects

- **Hold counted volume** can be interrupted with **Continue**
- Corrected a defect in **peak to loop** phase causing some of the loop wash solution directed onto the column



IMPORTANT

If the **U9-T** module is added to an ÄKTA pure system for the first time, an error message can appear. To avoid the error message, update to the new IC and connect to the system before adding the **U9-T** module to the ÄKTA pure system.

5 Release 2.1

Corrected defects

It was not possible to select 8 ml tube type when using the **Fraction collector (F9-C)**. This issue has been resolved.

6 Release 2.0

New functionality

- Support for **Fraction collector (F9-T)**
- Continue fractionation without interruption over several phases
- Option to reduce flow for cold room in **Method Settings** phase
- Optional Pump wash in **Equilibration** phase
- Optional Accumulator wash at the end of the **Equilibration** phase. Default enabled in last **Equilibration** phase for some of the predefined methods
- Watch counted volume. To be used in combination with **Start volume count**
- **Conditional Fractionation** and **Conditional Frac Stop** phases added. Supports customized watch based **Conditional Fractionation**
- For **U9-M** Ratio, **UV2/UV1** curve and watch function added
- Two system tests added and adapted for the micro kits: System test Micro kit (Blue tubing kit) and System test Micro kit (Red tubing kit)

Changed functionality

- Quicker flow ramp up time when using pressure control. Now it takes maximum 10 seconds to set flow rate.
- Added 0.13 mm tubing in **System settings** → **Tubing** → **Injection valve to column**
- Now it is possible to set **Max peak volume** in **Elution phase** → **peak to loop**
- Optional **Finalize gradient** and volume are possible to optimize in **Elution phase** → **Linear gradients**

- Possible to start %B as optional in **Elution phase** → **Linear and step gradients**

Corrected defects

An issue with incorrect unit when selecting **Time** as base has been corrected.

Known issues

For UNICORN 7.6:

- a **Fraction collector (F9-T)** instruction within a watch block will not be visible in the **Fraction collector (F9-T)** start protocol page.
- a **Fraction collector (F9-T)** plate information will not be shown properly in the run log when plate 2 is set to **Empty**.

7 Release 1.13

New functionality

- Support for micro injection valve **V9M-J**

Changed functionality

- Fraction size is changed to show decimal with three digits
- Default values are changed for system setting **Max flow during valve turn**
 - Injection valve V9-Inj and V9M-J: 0.75 mL/min
 - Outlet valve V9-Os: 0.25 mL/min

Corrected defects

N/A

Information

When selecting **Time** as base, the unit is incorrectly displayed as mL even if the setting is min. This is only a visual defect.

This defect is shown in the following user interface views in UNICORN:

- **System Control** → **Manual** → **Execute manual instructions** → **Fraction Collector**
 - **Fractionation**
 - **Peak fractionation**
- **Method Editor** → **Text Instructions** → **Instruction box** → **Fraction Collector**
 - **Fractionation**
 - **Peak fractionation**

8 Release 1.12

New functionality

- Added functionality to reset the auto zero of both **UV** detectors to factory default.
- Added instructions for triggers and support for triggers in **Watch** instruction.
- Added instructions for **Set counter** and **Update counter**.
- Added support for counters in **Watch** instruction.
- Added functionality to calibrate the temperature sensor in the conductivity monitor.
- Added a new predefined method for running **Fibro HiTrap Prisma**.



IMPORTANT

If using outlet peak fractionation with the predefined method for Fibro units, the default number of fractions is 1. As a result, once a peak is collected, a warning appears stating that no further peaks will be collected. This is the intended way of working for the Fibro methods and the warning will not affect the outcome of the run.

Changed functionality

- Updated air sensors with improved software for more sensitive air detection.
- Updated **Watch** and **Hold until** of pH with support for **Slope greater** than and **Slope less than**.
- Updated the **Sample application** phase with the possibility to change the volume used for **Finalize sample injection** and made it optional to include **Finalize sample injection** in the method. Also improved the default values for **Finalize sample injection**.

Corrected defects

- Fixed an issue where under certain circumstances the **Fraction collector (F9-C)** used the same tube twice.
- Improved help texts for several instructions.

9 Release 1.11

Not externally released.

10 Release 1.10

New functionality

The **Elution** phase has been updated with the support for automated multistep purification. A new option **peak to loop** in the **Fractionate** section is added which enables the collection of a peak in a loop, for storage between purification steps.



WARNING

Do not use a **Superloop**. The loop wash included in the method can cause overpressure and damage the **Superloop**.

11 Release 1.9

New functionality

- Support for UV lamp switch on/off when defining a method.
- Support for a second 5-column valve **V9-C2/V9H-C2**.
- The number of columns is extended to 10.

Note: A combination of single-column valve **V9-Cs/V9H-Cs** and **V9-C2/V9H-C2** is not supported.

12 Release 1.8

New functionality

A warning is issued when the instrument is switched-off. As a result, in the audit trail it is now possible to differentiate between a switch-off and a connection-lost event.

Changed functionality

- The printed report is not selected by default for system performance tests.
- For the **System performance test** → **System test with UV U9-M**, the allowed intervals for the UV Response test has been adjusted to align with ÄKTA avant.

Corrected defects

- The UV monitor U9-M firmware is updated with a smoother run profile for the motor. The new firmware is backward compatible and can be used for all older versions of UV monitor U9-M hardware.

- An issue with a method waiting to collect the delay volume between phases has been corrected to ensure the progression of the method. To correct this issue, the following settings are introduced in the sample application phase:
 - A system flow rate is set at the end of the phase when performing direct sample injection and fractionation.
 - A system flow rate is set at the fractionation start to enable the collection of the delay volume from the previous phase.

13 Release 1.7

New functionality

The UV monitor **U9-M** firmware is updated to be compatible with the updated hardware. The new firmware is backward compatible and can be used for all older versions of UV monitor **U9-M** hardware.

14 Release 1.6

New functionality

Added support for cassette for 5 ml fractionation tubes in **Fraction collector (F9-C)**.

Changed functionality

The **Fraction collector** wash instruction is changed so that the first part of the wash is led to **Fraction collector** waste before washing the accumulator.

Corrected defects

- Improvements made regarding ending run after fractionation with **Fraction collector (F9-R)**.
- An issue with scaling of temperature values from the I/O-box is corrected.
- An issue in the Loop wash instruction is corrected.

Compatibility

This release is compatible with UNICORN version 6.3.2 and higher on operating system Windows 7 Professional, 32-bit or 64-bit, with Service Pack 1.

15 Release 1.5

New functionality

No new functionality is added in this release.

Corrected defects

- Delta column pressure (**DeltaC pressure**) is enabled in all predefined methods by default. This option is active only when column valve **V9-C** is installed on the system.
- When column valve **V9-C** is not installed and the pre-column pressure (**PreC pressure**) limit for the selected column is > 1 MPa, the value of delta column pressure limit is used as pre-column pressure limit in the method.

Note: *The correction is implemented only when the user creates new methods. Previously created methods are not automatically modified. The users must themselves update the existing methods with the new pressure settings.*

16 Release 1.4

New functionality

No new functionality is added in this release.

Corrected defects

- A filter is implemented in the software to avoid false pressure spikes.
- The software in the conductivity monitor(**C9**) is updated to support different versions of integrated electronics.
- It is now possible to use delta column pressure for column pressure control. The following features are added:
 - The **Pressure limit delta-column** option is available in **Method Settings** phase in the **Method Editor** module.
 - The column pressure control automatically uses delta column pressure for pressure regulation, if the actual column pressure approaches the pre-column pressure limit.
- A tooltip explaining pressure limits is added to the **Method Settings** phase in the **Method Editor** module.
- Help texts for the **Method Settings** phase were updated.

Compatibility

This release is compatible with UNICORN version 6.3.2 and higher.

17 Release 1.3

Not externally released.

18 Release 1.2

New functionality

No new functionality is added in this release.

Corrected defects

Process Picture function has been made compatible with .NET 4.5 Framework.

19 Release 1.1

New functionality

- Added support for Sample pump (**P9-S**).
- Added support for Sample inlet (**V9-IS**).
- Added support for **Fraction collector (F9-C)**.
- Added support for Versatile valves 3 and 4 (**V9-V**).
- Added support for 1 mm flow path tubing when using virtual pressure.
- Improved graphics in **Process Picture** pane.
- Added a tooltip explaining **Up flow** in **Elution** phase of **Method Editor** module.

20 Installation instructions

Check before installation

Check which IC versions are installed in UNICORN:

1. Open the **Administration** module, then click the **System Properties** button to open the **System Properties** dialog box.
2. Click **Instrument Configurations** to view all current versions.

If the IC version is older than version 2.2, the IC must be updated (see the *Installation instructions* below).

If version 2.2 is already installed, make sure that it is also selected in the list in **System Properties**.

Restart UNICORN after the new IC has been selected.

Installation instruction

UNICORN 7.6 or higher is required to install IC version 2.0 and later. Contact the local Cytiva representative for UNICORN software update.

Tip: Make a note of the **Component selection** for each component in the list before changing the IC.

Follow the instructions to install the IC.

Step	Action
1	Open UNICORN.
2	From Administration , click System Properties , and then select your system from the System Properties dialog box.
3	Click Edit .
4	Click Import .
5	Locate the file on your computer and click Open .
6	When the import is completed, select the new IC in the list.
7	Verify that all components have the correct check marks in the Component selection list and click OK . <i>Result:</i> The instrument is restarted.
8	Restart UNICORN. The new IC is now in use.
9	Open the System Control module, click Connect to Systems and select your system.
10	After connecting to the system for the first time after updating the IC, restart the instrument by using the power switch.

More information

See *UNICORN Administration and Technical Manual* for more information about ICs.



cytiva.com/akta

Cytiva and the Drop logo are trademarks of Life Sciences IP Holdings Corporation or an affiliate doing business as Cytiva.

ÄKTA, ÄKTA pure, and UNICORN are trademarks of Global Life Sciences Solutions USA LLC or an affiliate doing business as Cytiva.

Windows is a trademark of Microsoft group of companies.

Any other third-party trademarks are the property of their respective owners.

© 2020-2024 Cytiva

UNICORN © 2020-2024 Cytiva

Any use of software may be subject to one or more end user license agreements, a copy of, or notice of which, are available on request.

For local office contact information, visit cytiva.com/contact

29142406 AP V:13 01/2024