# DataApex

# Clarity™

## CHROMATOGRAPHY SOFTWARE

# 8.5 VS 8.3

Clarity (Lite)                    ENG

Sections of the manual connected only to the **Clarity Full** version are marked with the ✓Full version icon.

# Contents

To facilitate the orientation in the **8.5 vs 8.3** manual and **Clarity** chromatography station, different fonts are used throughout the manual. Meanings of these fonts are:

Instrument (blue text) marks the name of the window to which the text refers.

*Open File* (italics) describes the commands and names of fields in **Clarity**, parameters that can be entered into them or a window or dialog name (when you already are in the topic describing the window).

WORK1 (capitals) indicates the name of the file and/or directory.

*ACTIVE* (capital italics) marks the state of the station or its part.

The bold text is sometimes also used for important parts of the text and the name of the **Clarity** station. Moreover, some sections are written in format other than normal text. These sections are formatted as follows:

*Note:*          Notifies the reader of relevant information.

*Caution:*      Warns the user of possibly dangerous or very important information.

▌**Marks the problem statement or trouble question.**

*Description:*   Presents more detailed information on the problem, describes its causes, etc.

*Solution:*      Marks the response to the question, presents a procedure how to remove it.

# 1 Preamble

This document will guide you through the news and improvements in the **Clarity** Chromatography Station version **8.4** and **8.5** compared to version **8.3**.

**The most interesting features of versions 8.4 and 8.5 include:**

- Tablet mode
- Chromatogram - method info is divided into acquisition and processing method
- Chromatogram - Opening chromatogram outside of current project only with stored or none calibration
- Corrupted audit trails can be now opened for inspection
- Some options now can be added or amended before AIA file import
- New and updated control modules

# 2 Clarity

## 2.1 Tablet mode ✓Full version

Touchscreens are more and more common and we are adapting. Clarity has this new feature since Clarity **8.5**.

It is a special windows layout dedicated to simulate one window application. It is designed for devices with small tablet size monitor that enables their control. In default layout, Instrument window is narrower than in standard Clarity and is positioned to the upper left corner of the monitor, other windows are opened one over another and fill the remaining space on the monitor.

All windows remain fully resizable and customizable. Default layout can be restored by reactivating the Tablet Mode. Tablet Mode allows to use at higher general scales in Windows (up to 200 %) which improves handling of the software and parameters readability.
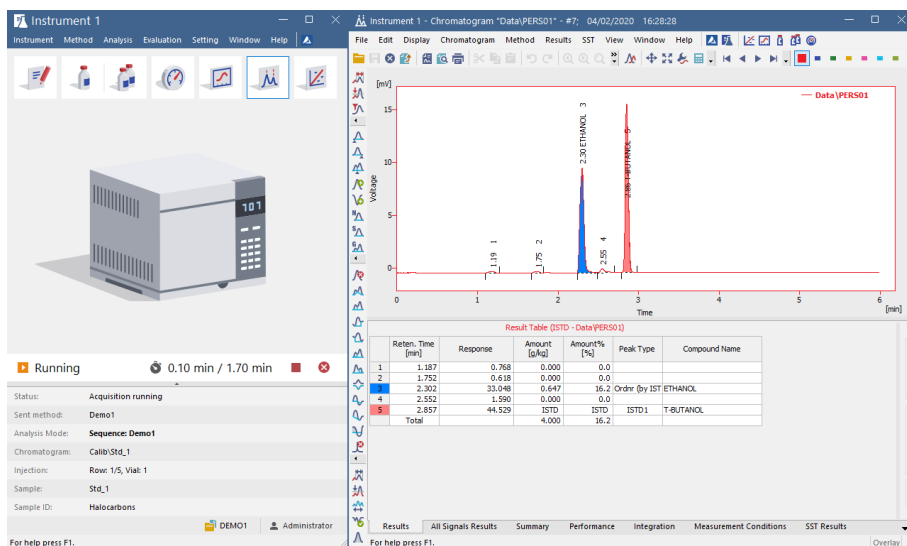


*Fig 1: Tablet Mode - Instrument and Chromatogram window*

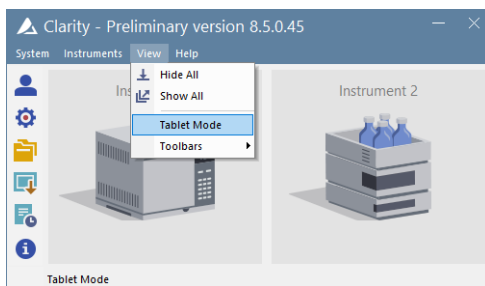The *Tablet Mode* can be switched on and off in the main window - menu *view*.

*Fig 2: Tablet Mode - how to turn on*

## 2.2 Chromatogram

### 2.2.1 Method info divided into acquisition method and last processing method

**Clarity** allows to reprocess the method either with different method or with method from another chromatogram. All info on used methods can be found in the Chromatogram Audit Trail , but the method used for acquisition and last processing method can be now found on the Measurement Conditions tab of each Chromatogram. This has been implemented in the **Clarity 8.4**.
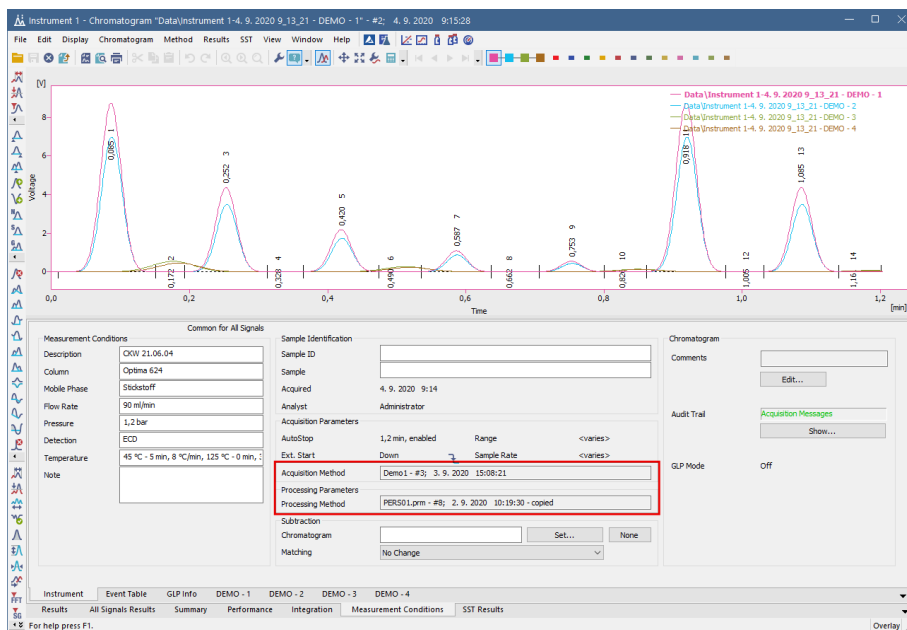


*Fig 3: Chromatogram - Acquisition and Processing method*

### 2.2.2 Mathematical operations do not require Overlay mode

*Mathematical operation*s option is not disabled, when the overlay mode is off. Now The Mathematical Operations dialog can be opened and if any action is applied, the overlay mode is turned on automatically. This is implemented in **Clarity 8.5**.
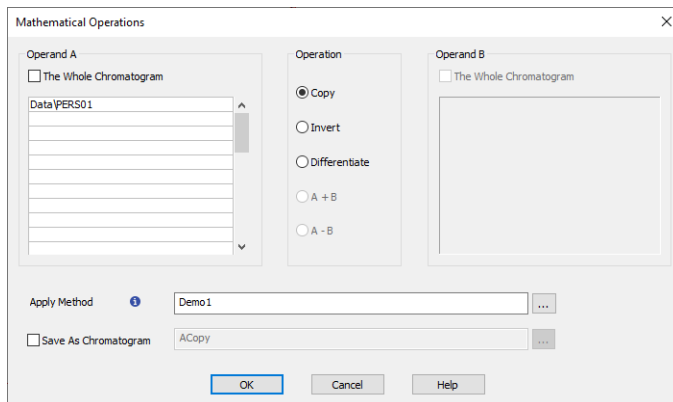
*Fig 4: Chromatogram - Mathematical Operations*

## 2.2.3 Opening chromatogram outside of current project only with stored calibration

Opening chromatogram with linked calibration outside of current project could cause problems when more calibrations with same name existed. Since Clarity **8.5** only stored or none calibration may be used to open such chromatogram.

While opening, message about opening with stored calibration pops up. Stored Calibration will open the chromatogram with results according to the calibration file at the moment the chromatogram was saved. Otherwise the chromatogram will be opened as if there is no linked calibration. However opening files from directories out of current project is not recommended workflow.
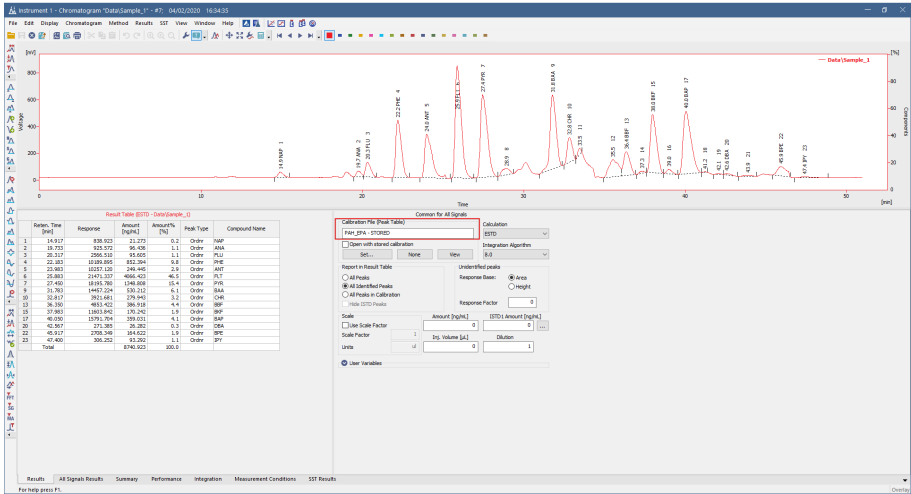
*Fig 5: Chromatogram - Stored Calibration*

## 2.3 Audit Trail ✓Full version

Audit Trail serves as a log of individual operations of the station. It is also useful for onsite troubleshooting and technical support where we can see what was happening on the station. Unfortunately AUDIT TRAIL file can be corrupted on rare occasions (mostly by unauthorized actions in the Audit Trail directory).

Since **Clarity 8.4** it is possible to open corrupted audit trail for inspection to ease any troubleshooting. Each row of corrupted file is highlighted and the description begins with "*Data from corrupted file*".



*Fig 6: Audit Trail*

## 2.4 Import of AIA File

The import of AIA file occasionally failed due to incompatible format (missing or out of range obligatory values). Since version **8.5** selected parameters now can be added or amended before the import (e.g detector maximum and minimum value, detector unit, retention unit,..).
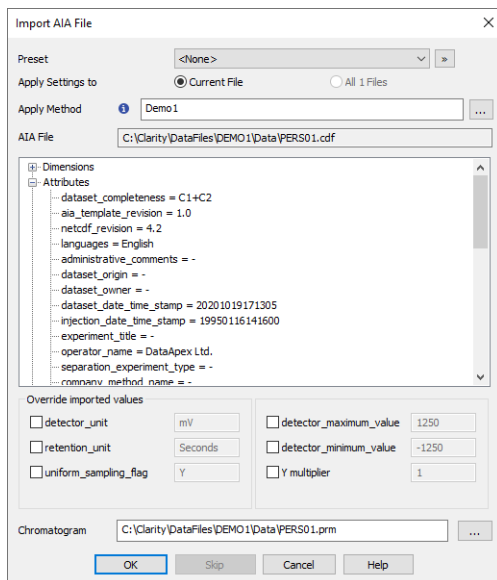


*Fig 7: Chromatogram - Import AIA File*

Some of the newly added options are:

- In the *detector_maximum_value* & *detector_minimum_value* the range of detector signal can be set.
- Signal values can be set in the *detector_unit*.
- *Retention_unit* determines the units in which time values are stated.

## 2.5 Other changes

### 2.5.1 Clarity 8.4

- "Modified" indication of unsaved changes is now in the Spectral Library in PDA extension.
- Delete commands in the Chromatogram Integration table were unified for easier use.
- Set model function in the Chromatogram window has been improved.
- Report printing is now recorded in Daily Audit Trail.
- Logging of Sequence Options has been improved in the sequence Audit Trail.

### 2.5.2 Clarity 8.5

- New option for command line parameter Enable_asserts =2 (create a dump, but do not offer to send it).
- Single Analysis window is now resizable.
- System Configuration window is now resizable.
- Agilent ICF libraries have been updated to version 3.0.
- A lot of fixed bugs.

# 3 New and updated control modules ✓Full version

This section contains new and updated control modules introduced in Clarity **8.4** and **8.5**.

Testing state is dedicated for new control modules.

Ready state is dedicated for existing control modules that have been updated or somehow improved.

## 3.1 Clarity 8.4

### 3.1.1 Apix

**New:**

- Apix ChromPix2 control module is now in the Testing state.

### 3.1.2 CTC

**Updated:**

- PAL3 ICF control module updated to version 1.5.1.0.

### 3.1.3 Dani

**Removed:**

- Dani Master TOF control module removed from installation.

### 3.1.4 Ecom

**Updated:**

- Iota control module updated to version 2.8.0.0.

**Changed:**

- Sapphire detector control module developed by DataApex has been replaced by control module developed by Ecom.

### 3.1.5 EST Analytical

**New:**

- AS120/Cobra control modul is now in the Testing state.

### 3.1.6 Fuli

**Updated:**

- Fuli GC 9720 Plus control module updated to version 1.0.1.6.
- Fuli GC 9790 Plus control module updated to version 1.0.0.12.

### 3.1.7 HTA

**Updated:**

- HT800L sampler control module now maintained by DataApex (versioned with Clarity).

### 3.1.8 ICF drivers

**Updated:**

- New options for Turn OFF on Instrument closing or Shutdown for selected devices (pumps, detectors, Shimadzu GC-2030, ...).

### 3.1.9 Interlab

**Updated:**

- Interlab MAESTRO HPLC control module is now in the Ready state.

### 3.1.10 Knauer

**Updated:**

- Knauer HPLC control module updated to version 8.3.0.6042.

### 3.1.11 Marion Research

**New:**

- Fixed Wavelength detector control module is now in the Testing state.

### 3.1.12 Microsaic

**Updated:**

- Microsaic MiD-4500 now displays N2 flow in the Device Monitor window and it also displays whether the spraychip current is healthy or not.

### 3.1.13 Separlab

**New:**

- Separtrix PP03 pump control module is now in the Testing state.

### 3.1.14 Young In Chromass

**Updated:**

- Young In Chromass YCChroZenGC control module updated to version 1.0.1.14.
- Young In Chromass YL9110 control module updated to version 4.0.4.15.
- Young In Chromass YL9120 control module updated to version 4.0.4.20.
- Young In Chromass YL9130 control module updated to version 4.0.2.15.

- Young In Chromass YL9150Plus control module updated to version 1.0.1.10.
- Young In Chromass YL9160 PDA control module updated to version 4.0.1.3.

## 3.2 Clarity 8.5

### 3.2.1 Advion

**New:**

- Advion Avant HPLC and UHPLC system control module is now available in the Ready state.

**Updated:**

- Fixed crash after changing Manual Tune from Device Monitor.

### 3.2.2 Agilent

**Updated:**

- ICF libraries have been updated to version A.03.00.U1. The IQ is now performed using the new SVT Tool.

### 3.2.3 Apix

**Updated:**

- Apix ChromPix2 control module updated to version 2.5.0.512.

### 3.2.4 CTC

**Updated:**

- CTC - PAL3 RC.NET control module for ICF updated to version 1.6.0.1.
  - The control module now supports activation of the GC Prep Run by a digital output.

### 3.2.5 Ecom

**Updated:**

- ECOM Toy control module is now in the Ready state.
- ECOM ECP2000 control module updated to version 3.7.0.0.

### 3.2.6 Knauer

**Updated:**

- Knauer HPLC control module updated to version 8.5.0.6051.

### 3.2.7 PerkinElmer

**Updated:**

- PerkinElmer NexION control module updated to version 1.2.0.90 and now supports also NexION 300, 350 and 5000 models.

### 3.2.8 Runge

**New:**

- Runge Mikron 81 control module is now in the Testing state.
- Runge Mikron 31 control module is now in the Testing state.

### 3.2.9 Separlab

**New:**

- Separflow FC fraction collector control module is now in the Testing state.

### 3.2.10 Sykam

**Updated:**

- Sykam S150 control module updated to version 2.1.0.7.
- Sykam S1130 control module updated to version 2.0.1.17.
- Sykam S4120 control module updated to version 1.0.8.0.
- Sykam S5300 control module updated to version 2.0.0.17.

### 3.2.11 Teledyne

**Updated:**

- Foxy-200 now supports firmware 2135-063 (CombiFlash).

### 3.2.12 Young In Chromass

**New:**

- Young In Chromass YCChroZen AS control module is now in the Testing state.
- Young In Chromass YCChroZen Column control module is now in the Testing state.
- Young In Chromass YCChroZen PDA control module is now in the Testing state.
- Young In Chromass YCChroZen Pump control module is now in the Testing state.
- Young In Chromass YCChroZen RID control module is now in the Testing state.
- Young In Chromass YCChroZen UVD control module is now in the Testing state.

**Updated:**

- Young In Chromass YCChroZenGC control module updated to version 1.0.1.19.
- Young In Chromass YL9110 control module updated to version 4.0.4.17.
- Young In Chromass YL6500 GC control module updated to version 1.0.1.14.
- Young In Chromass YL9130 control module updated to version 4.0.2.16.
- Young In Chromass YL9150Plus control module updated to version 1.0.1.11.
- Young In Chromass YL9160 PDA control module updated to version 4.0.1.4.
- Young In Chromass YL6900 control module replaced with ChroZen GC/MS.