

2D-LC Method Transfer from OpenLab ChemStation to OpenLab CDS

Technical Note

This Technical Note describes how to import OpenLab ChemStation 2D-LC methods from an existing 2D-LC Workstation System to a 2D-LC System controlled by OpenLab CDS 2.7.

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Introduction

Features of the 2D-LC Method Import Plug-In

- Experience seamless method transfer by the using Method Import Plug-In.
- Accelerate your instrument method transfer to the OpenLab CDS platform.

Compatibility Matrix

The compatibility matrix provides information about installation and execution prerequisites concerning hardware, firmware, and the operating system. Confirm that the instrument models and hardware pass the hardware and software verification of the OpenLab CDS. Check the documents on the installation media.

Supported Operating Systems

The following operating systems are supported:

- Windows 10 (32-Bit/64-Bit)
- Windows 11 (64-Bit)

Supported LC & CE Drivers

This version of the Agilent 2D-LC Software is supported with:

- LC & CE Drivers Revision 3.5

The Agilent LC and CE Drivers have been optimized for the Windows default font size (100 %). Larger font sizes may require increasing the window size or may cause truncations.

Supported Chromatographic Data Systems

The following combination of OpenLab CDS and Agilent 2D-LC Software is supported:

Table 1 Supported chromatographic data systems

Chromatographic Data System	Version
OpenLab CDS	2.7
2D-LC Software	1.1

2D-LC Method Import Plug-In for OpenLab

Recommended Firmware

Use the following firmware revisions with 2D-LC Software Version 1.1:

Table 2 Recommended firmware

Instrument	Recommended Firmware
Agilent 1100 Series, 1200 Series, and 1200 Infinity	A.07.01 or later
Agilent 1200 Series, 1200 Infinity, and 1120 Compact LC	B.07.35 or later
Agilent 1200 Infinity Hosted Modules	C.07.30 or later
Agilent 1260/1290 Infinity II Modules	D.07.35 or later

NOTE

A firmware update within set A/B/C/D.07.01 is required for all modules in that stack, not only for new modules, as, for example, the fraction collector uses new detector features.

Firmware Compatibility

If you require a firmware version that has a version number lower than the compatible revision, we assure, that this newer firmware is 100 % backwards compatible to earlier firmware versions. Therefore, will not have an impact on your CDS. The firmware update does not require requalification of the LC module/system. See our firmware compatibility statements within the firmware release documents available on <https://www.agilent.com>.

NOTE

See the corresponding release note of the LC & CE drivers and the CDS for further details.

2D-LC Method Import Plug-In for OpenLab

The plug-in is available on the 2D-LC Software installation media.

For information about defect fixes, please see the additional documents Software Status Bulletin (SSB) and Software Release Bulletin (SRB) in folder \OpenLab\Docs\EN.

Prerequisites

- Install 2D-LC Software for OpenLab CDS (minimum versions: 2D-LC Software for OpenLab CDS 1.1 and OpenLab CDS 2.7) on a PC.
- Connect and configure 2D-LC system in the software as described in the *Agilent 1290 Infinity II 2D-LC Solution OpenLab CDS and MassHunter Acquisition for TOF and Q-TOF User Guide*
- Store a backup copy of the 2D-LC ChemStation data and transfer data to the computer that has the OpenLab CDS 2.7 installed.

Installation of the 2D-LC Method Import Plug-In

- 1 Browse and navigate to folder \OpenLab\MethodImport on the data media of the 2D-LC Software for OpenLab CDS and MassHunter.
- 2 Double click **Agilent2D-LCMethodImportPlugInForOpenLab.msi** in the Install folder.
- 3 Accept the terms in the license agreement, click **Install**, and follow the instructions provided by the installation procedure of the software.
- 4 To confirm the installation, click **Finish**.

Under **Start >Settings >Apps >Apps and Features**, you will find the information about the new installed application.

Import of 2D-LC ChemStation Acquisition Method

- 1 Make sure that the ChemStation acquisition method that you wish to transfer is available in one of the following:
 - On the USB drive where you copied your method files from ChemStation,
 - In a folder in the file system of the computer on which OpenLab CDS is installed.
- 2 From the OpenLab CDS Control Panel, configure the 2D-LC instrument. To ensure migration of all acquisition parameters, make sure that the configuration exactly matches the original configuration of the instrument in ChemStation. Otherwise, OpenLab CDS adapts the acquisition method to the current instrument configuration. For more information, see *How Method Resolution Works* in the online help.
- 3 Launch the instrument via the Control Panel.
- 4 Navigate to OpenLab CDS Acquisition.
- 5 Import the method either via the **File** tab at the top-left side, or directly in the method acquisition window via the symbol.



New Method from ChemStation or from EZChrom



Create new Acquisition Method by importing instrument settings from the ChemStation method
Create new Acquisition Method by importing instrument settings from the EZChrom method

- 6 Choose **New Method from ChemStation**.
- 7 When the **Select Directory** dialog box is displayed, use it to navigate to your USB drive or computer file system, where your methods are located, and open the desired method file (.M).
The file is imported.

NOTE

If the instrument configuration in OpenLab CDS is not the same as in ChemStation, method resolution will be triggered, and the required choices must be selected. Read the online help for information on how to import a ChemStation method and method resolution.

NOTE

If one of the transferred parameters is invalid, all parameters will be set to default values provided by the target system.

NOTE

In cases, listed in “[Limitations and Required Manual Actions for Method Migration](#)” on page 5, parameters are not transferred completely to OpenLab CDS. In any case, it is recommended to always review method parameters. Verify, if a run of the migrated method creates matching results.

NOTE

Any warning info will be found in the Activity log.

Limitations and Required Manual Actions for Method Migration

There are some differences in the implementation of features in the new OpenLab CDS platform compared to the 2D-LC Software for ChemStation that the user must be aware of. Features that the new platform does not support, cannot be transferred, e.g. dynamic run time extension.

The major differences are listed in this section:

- As explained above, the new system and its configuration should match the original system. If there is no matching module in the ChemStation instrument, default method parameters will be set for OpenLab driver. Watch out for method resolution errors and warnings and review your migrated method. Also check the logbook / Activity Log for errors, warnings, and hints regarding method migration.
- **Run time extension** is not supported in OpenLab CDS.
In a peak-based method generated by ChemStation, the run time is automatically extended for analyzing all parked cuts. In OpenLab CDS, the user must calculate and set the run time of the migrated peak-based method. Do this calculation, for example, by estimating the run time based on a reference measurement.
For a time-based method, OpenLab CDS can verify and calculate the run time.
- **Flush Gradient:** In ChemStation, the duration of the flush gradient can be set as a function of the 2D column volume. This information is not available in OpenLab CDS, such that the duration needs to be set manually such that the time is sufficient for flushing and equilibrating the 2D column.
The initial solvent composition of the analytical gradient is set as the initial solvent composition for the flush gradient.
The user needs to verify the solvent composition as well.

- **Shifted Gradients:** The definition and behavior of shifted gradients have changed. In OpenLab CDS upper, and lower start points are related to time zero. If a method is migrated, the first shifted gradient time points are therefore set to time = 0 without changing composition. As this automatic setting will change slope, the user is advised to verify shifted gradients after migration.

Before the transfer of a shifted gradient, the following message will pop up: **The shifted gradient in this method has been slightly modified for the new 2D-LC software. Please validate, if method runs give expected results.**

- An import of the MSD-part of ChemStation Methods into OpenLab CDS is not supported. **MSD method parameters** are initialized with default settings. MSD can be set up only as a second dimension detector in OpenLab.
- The **External solvent selection valve** (Pump Valve Cluster (PVC)) is only supported in ¹D. A ChemStation method using PVC in the second dimension cannot be mapped to a ²D pump in the OpenLab CDS driver. So, the ²D pump driver will use default method parameters.
- The **Peak detector signal** will be set by default to Signal A. If it should be a different signal, the user is advised to manually adjust it.
The peak detector must be selected manually.
- The **Peak-based comprehensive 2D-LC (LCxLC)** is not available in the 2D-LC software for OpenLab CDS and therefore, such methods cannot be migrated.