

	Standard Operating Procedure		SOP Number <b>D-811</b>	Revision <b>4</b>
	<b>Creating Instrument Method Files using Chromeleon Series 7.X Series Software</b>		Effective Date <i>04/02/21</i>	Page Page 1 of 4
Written by/ Date <i>Jm 02/18/21</i>		Reviewed by/ Date <i>SAS 02/18/21</i>		Approved by/ Date <i>SS 02/22/21</i>
Title: Analytical Development Manager		Title: Analytical Development Scientist		Title: QC Laboratory Director

## 1.0 Purpose

The purpose of this procedure is to provide general guidelines for creating a new HPLC instrument method file.

## 2.0 Scope

This procedure applies to instrument method files created, stored or altered on lab computer(s) dedicated to Dionex HPLC system(s). This procedure applies specifically to the Chromeleon Series 7.X software. This procedure is limited to the use of the Instrument Method Wizard for use in creating instrument method files. See Chromeleon Series 7.X electronic Help for details on creating program files manually.

## 3.0 Responsibility

- 3.1 It is the responsibility of QC and Analytical Chemists to follow this procedure.
- 3.2 It is the responsibility of QC Laboratory Management to implement this procedure and to ensure that the procedure is being followed.
- 3.3 It is the responsibility of QC Laboratory Management to keep the SOP current with the latest Ion Labs practices.

## 4.0 Definitions

- 4.1 **QC** – Quality Control
- 4.2 **3-D** – Three Dimensional
- 4.3 **AD** – Analytical Development

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4.4 **D-XXX** – Designation for the SOP with which the instrument method is associated

## **5.0 References**

5.1 Chromeleon Series 7.Xelectronic Help

## **6.0 Procedure**

6.1 Instrument method files contain the operating instructions for each piece of the HPLC system which include the pumps, auto-sampler, column compartment and detector(s).

6.2 Common Program Parameters:

6.2.1 Detector signal to be recorded and parameters of the signal.

6.2.2 Flow rate and solvent composition (gradients will have multiple timed steps).

6.2.3 Injection command

6.2.4 Column oven temperature

6.2.5 Start / End of data acquisition

6.2.6 End of the program

6.3 The Create Instrument Method Wizard

6.3.1 The options listed here are starting points, if the method calls for different setting, they override the conditions labeled below.

6.3.2 From within the Chromeleon Console, select Instrument Method from the Create pull-down menu.

6.3.3 The Instrument Method wizard opens and displays the available instruments. Select the instrument where the method will be run, then select Next >.

<p style="text-align: center;">Standard Operating Procedure  <b>Creating Instrument Method Files using Chromeleon  Series 7.X Software</b></p>	<p style="text-align: center;"><b>SOP No  D-811</b></p>	<p style="text-align: center;"><b>Rev  4</b></p>	<p style="text-align: center;"><b>Page 3 of 4</b></p>
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- 6.3.4 This next page lists the general settings for the system. Enter the method run time. Deselect diagnostic channels 1 (ColumnOven\_Temp) and 3 (Temp\_Lamphouse). Keep diagnostic channel 2 (Pump\_Pressure) checked, then click Next >.
- 6.3.5 This next page displays the general pump settings. Name the solvents used. Accept the default pressure limits and flow acceleration / deceleration conditions and click Next >. Set the flow gradient and flow rate.
- 6.3.6 This next page displays general settings for the autosampler. Accept the default settings for all parameters except the draw speed. Using the method injection volume, set the draw speed such that the draw time is equal to 10 seconds. (e.g. use a draw speed of 2µl/sec for a 20µl injection volume.) Click Next >.
- 6.3.7 This next page provides additional auto-sampler settings. Select partial loop for the inject mode unless using the maximum setting (FullLoop). Accept the remaining default settings and click Next >. Alternatively, select Normal from the Inject Mode drop-down menu, accept the remaining default settings and click Next >. Some autosamplers are equipped to control sample vial temperature. If so equipped and required, check the Use Temperature Control box and set the Temperature. Accept the default settings for the remaining parameters and click Next >.
- 6.3.8 This next page sets the column oven temperature. If temperature control is required, check the Use Temperature Control box and enter the temperature. Accept the remaining default settings and click Next >.
- 6.3.9 This next page sets channel settings for the UV detector. Enter the desired wavelength(s) and check the channel boxes to enable acquisition. If 3D spectral data is to be collected, keep the corresponding box checked, enter the wavelength range, accept the remaining default values and click Next >. (Note: It is also possible to edit acquisition times for individual lamp channels. If required, check the Edit acquisition times box and enter the desired time

<b>Standard Operating Procedure</b> <b>Creating Instrument Method Files using Chromeleon</b> <b>Series 7.X Software</b>	<b>SOP No</b> <b>D-811</b>	<b>Rev</b> <b>4</b>	<b>Page 4 of 4</b>
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intervals.) Click the electronic Help button for specific details on programming collection of 3-D spectra.

6.3.10 The final page provides space for a comment as well as a description. The comment should be descriptive and include the analyte(s) analyzed. The description is optional and can be used to capture helpful information related to the content and intended use of the method.

6.3.11 The file name is generated in the following format:

6.3.11.1 D-XXX\_analyte(s).

6.3.12 Click Finish to open the instrument method in the Chromatography Studio. Review the method components for accuracy and completeness.

6.3.13 At this time, shutdown or standby parameters may optionally be set.

## 7.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	08/02/11	New	-	-
1	02/26/13	Reformatted SOP.	13-123	B. Johns
2	02/19/15	Biennial review. Reformatted SOP.	15-0174	B. Johns
3	07/25/17	Biennial review. Revised to reflect software upgrade.	17-0828	C. Perry
4	02/02/21	Scheduled Review – Fixed a few typos, Added some clarification	CC-21-0032	J. Maignan