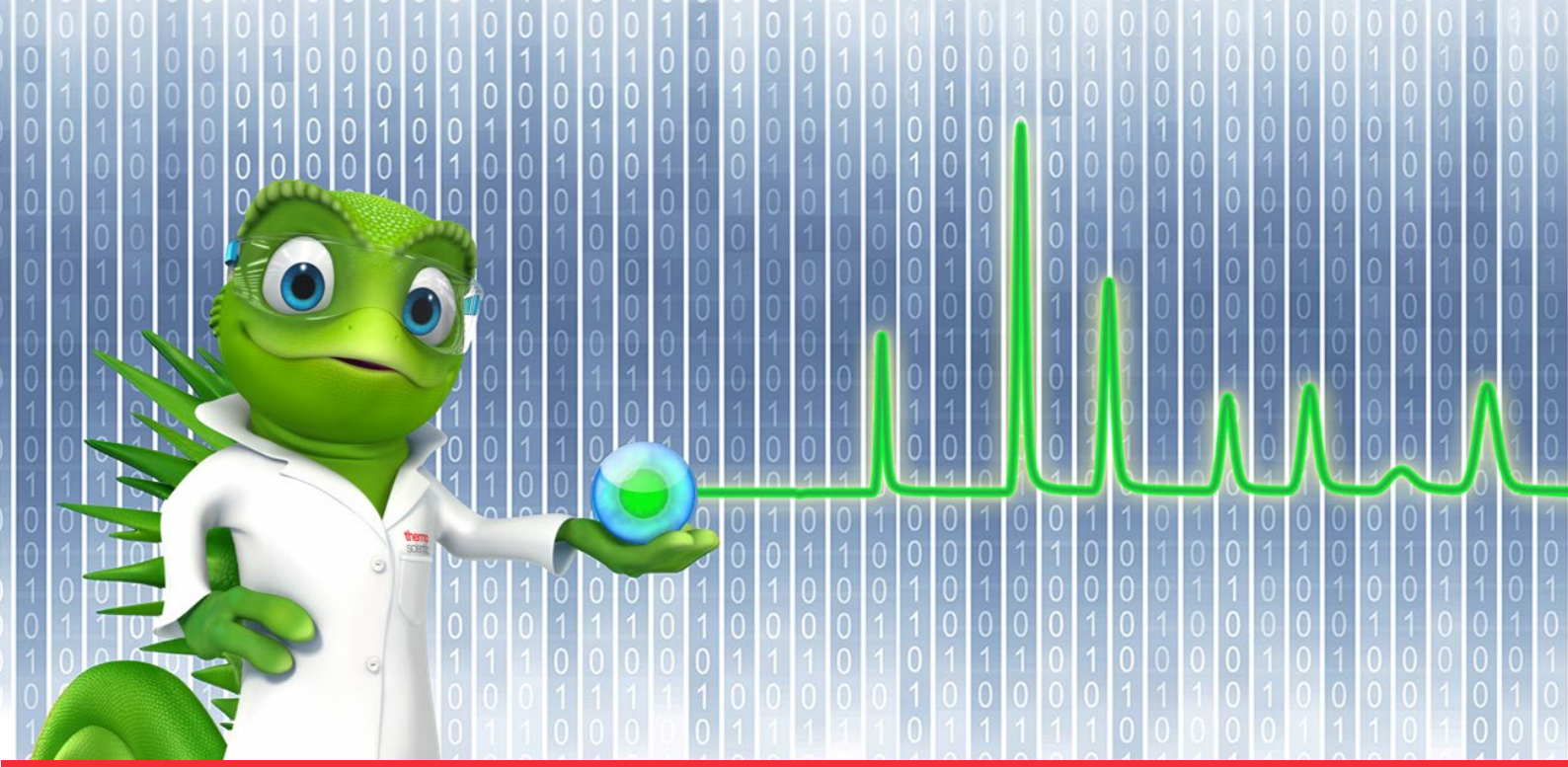

thermoscientific

PA 800 Plus Driver

Quick Start Guide

Software Version 1.1

thermoscientific

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1 About the Documentation

1.1 About this Document

The PA 800 Plus Driver provides an interface for controlling the SCIEX PA 800 Plus Capillary Electrophoresis system with the Chromeleon software.

This guide provides a quick reference to prepare for using the PA 800 Plus Driver.

1.2 Document Conventions

The following formatting is used throughout this document to indicate text with special importance.

Caution: Indicates text that must be followed carefully to avoid potential problems.

Note: Indicates information of special interest.

Tip: Indicates information that will help you to use the software more efficiently.

1.3 Related Documents

In addition to this quick start guide, the following documentation is available:

- *PA 800 Plus Driver Release Notes*
- *PA 800 Plus Driver Installation Guide*

The PA 800 Plus Driver PDF documents are provided on the PA 800 Plus Driver installation disk in the folder **Documents**, and also from the Windows start menu via **Start** > **SCIEX PA 800 Plus Driver** > **Documents**.

The following Chromeleon 7 documentation is available via **Start** > **Thermo Chromeleon 7** > **Documents**:

- *Chromeleon 7 Installation Guide*
- *Chromeleon 7 Quick Start Guide*
- *Chromeleon 7 Online Help*

2 Abbreviations / Glossary

The following abbreviations and terms are used throughout this document.

Chromeleon™ (CM)	Thermo Scientific Dionex Chromeleon Chromatography Data System.
Chromeleon ePanels	A collection of controls to show the most important parameters for a given combination of chromatography modules in Chromeleon.
Chromeleon Instrument Controller	This is the portion of Chromeleon that handles the data acquisition and communication with the connected chromatography modules.
Chromeleon Instrument Configuration Manager	This is the portion of Chromelon where the Instrument can be configured.
Instrument Method	A file that contains instrument commands – also referred to as *Method*.
Sequence (SEQ)	A set of samples to be analyzed.

3 Introduction

3.1 Scope

The Quick Start Guide explains how to get the PA 800 Plus Driver ready for usage.

3.2 Other Resources

Tip: For consulting, training, and implementation services, contact your local Thermo Fisher Scientific support and service center.

4 How To…

The sections below provide a step by step instruction how to prepare the PA 800 Plus Driver for usage after PA 800 Plus Driver was installed successfully (also see the PA 800 Plus Driver Installation Guide for details).

The following steps, described in detail in the following sections, must be performed to run an injection:

1. Initiate the connection between the instrument and the National Instruments driver (4.1.1)
2. Create a SCIEX PA 800 Plus system in the Chromeleon Instrument Configuration Manager (4.1.2)
3. Create Custom Variables (4.1.3)

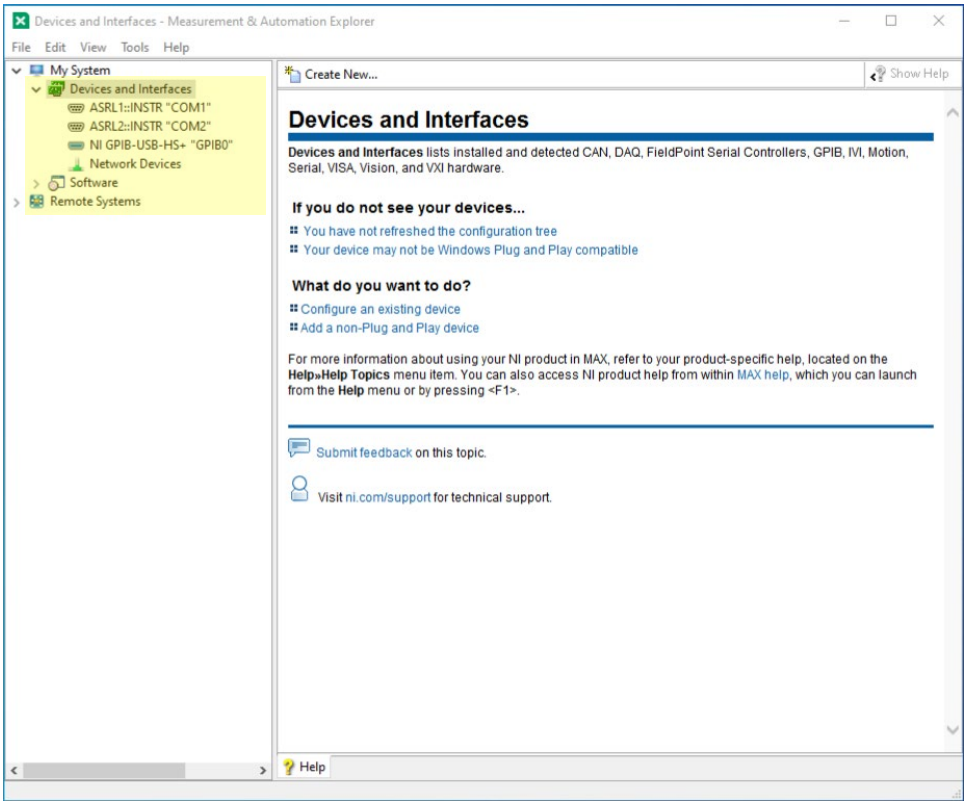
4.1 Instrument Configuration in PA 800 Plus Driver

4.1.1 Connect SCIEX PA 800 Plus Systems

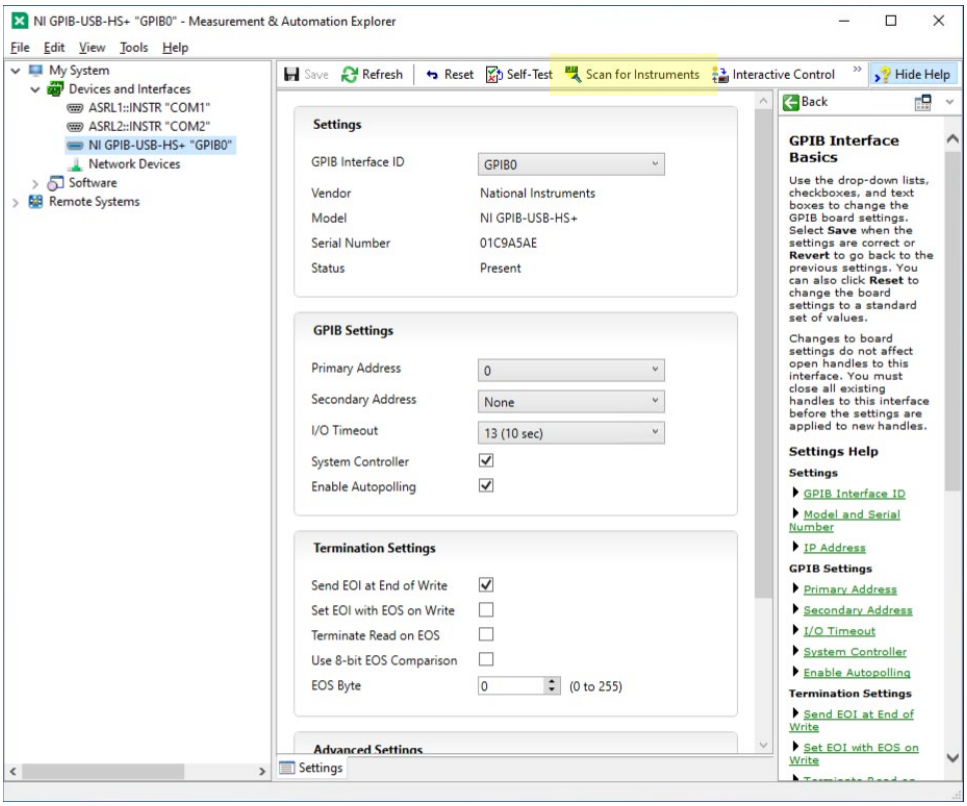
After successful installation of PA 800 Plus Driver, connect all instruments and related interface adapters to your PC as described in the Operating Instructions of the instrument(s). Ensure all modules are properly installed.

Caution: Do not connect new instruments/modules via USB to your PC until the PA 800 Plus Driver installation has finished, and the Installation Qualification (Station IQ) has completed and passed.

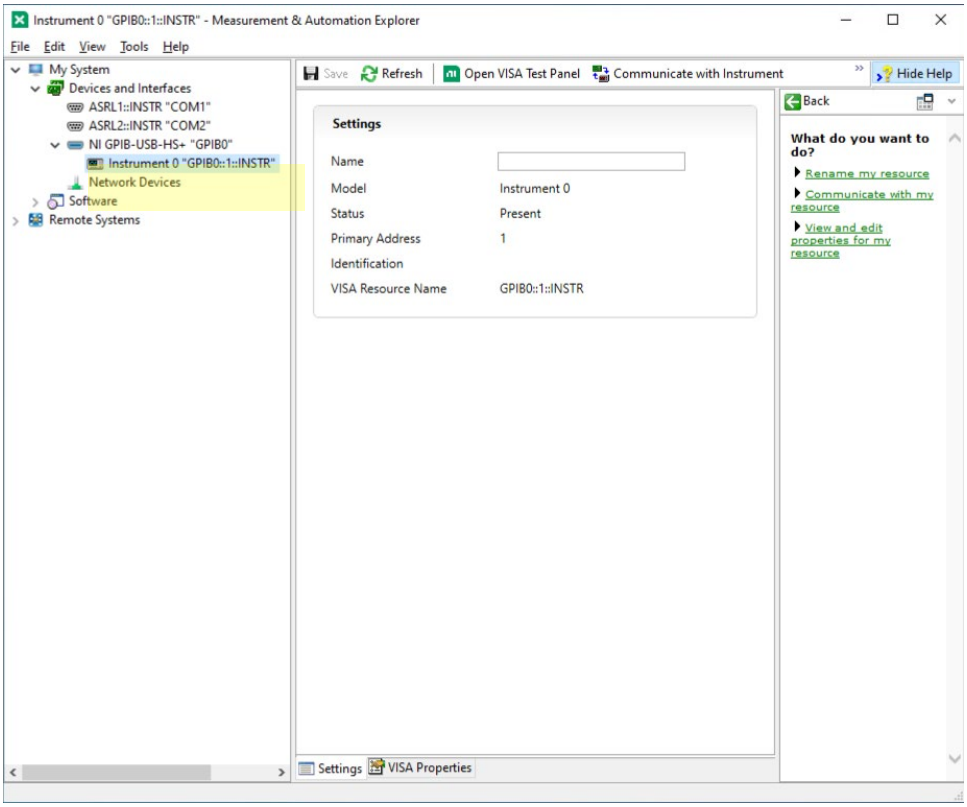
1. Start **NI MAX:**



2. Expand **“Devices and Interfaces”**
3. Select node **GPBI-USB-HS+ “GPIB0”**



4. Click **“Scan for Instruments”:**



5. Connected instrument(s) are displayed under interface. If two instruments are displayed on the same interface while only one instrument is connected, select the first instrument (**Instrument 0**).
6. Note the GPIB address from the **VISA Resource Name**.
   The GPIB-address is the number in the middle of the name. So GPIB0::**1**::INSTR means that the GPIB address is **1.**
7. Close **NI MAX**

4.1.2 Starting the Chromeleon Instrument Controller

The Instrument Controller Service controls the exchange of data between Chromeleon and the analytical system.

TO START THE INSTRUMENT CONTROLLER SERVICE

Right-click the Chromeleon tray icon in the notification area of the Windows taskbar and click **Start Chromeleon Instrument Controller**. The icon changes to gold to indicate that the service is starting, and then to gray when the service is running (idle).

–OR–

If the Chromeleon tray icon is not on the Windows taskbar, click **Start > Thermo Chromeleon 7 > Services Manager** and then click **Start Instrument Controller**.

4.1.3 Creating an instrument for a SCIEX PA 800 Plus System

To create an instrument for a SCIEX PA 800 Plus System:

- Open the Chromeleon Services Manager (section 4.1.2).
- Ensure that Chromeleon Instrument Controller is running (section 4.1.2).
- Open the Chromeleon Instrument Configuration Manager (section 4.1.4)
- Create a new instrument by adding the corresponding SCIEX module (section 4.1.4).

4.1.4 Add and Configure Instruments and Modules

To install and configure modules in the Instrument Configuration Manager program proceed by following the instructions below.

To start the Chromeleon Instrument Configuration Manager

1. Start the Chromeleon Instrument Configuration Manager by choosing one of the following options:
   - Right-click the Chromeleon tray icon and click **Configure Instruments**.

     -OR-
   - Click **Configure Instruments** in the Services Manager.

Note: You can close the **Services Manager** window if it is open. If you close the window, the Instrument Controller Service is not stopped.

2. You can click the plus sign next to the PC name to display the items underneath (Figure 1A below).

To add a chromatography module to an instrument

1. Select the instrument to which the module will be assigned, or create a new instrument:
   - To create a new instrument, on the **Edit** menu, click **Add instrument**, or click the corresponding icon in the toolbar (Figure 1B).
2. Click **Add Module** on the **Edit** menu, or click the corresponding icon in the toolbar (Figure 1C).
3. On the **Manufacturers** list (Figure 1D), click **SCIEX.** On the **Modules** list (Figure 1E), click the module.
4. Chromeleon connects to the module, transfers the settings from the module to Chromeleon, and automatically sets the options on the configuration dialog pages (Figure 1F) by clicking the “Get Configuration” button (Figure 1H). Confirm the related message with **OK**.

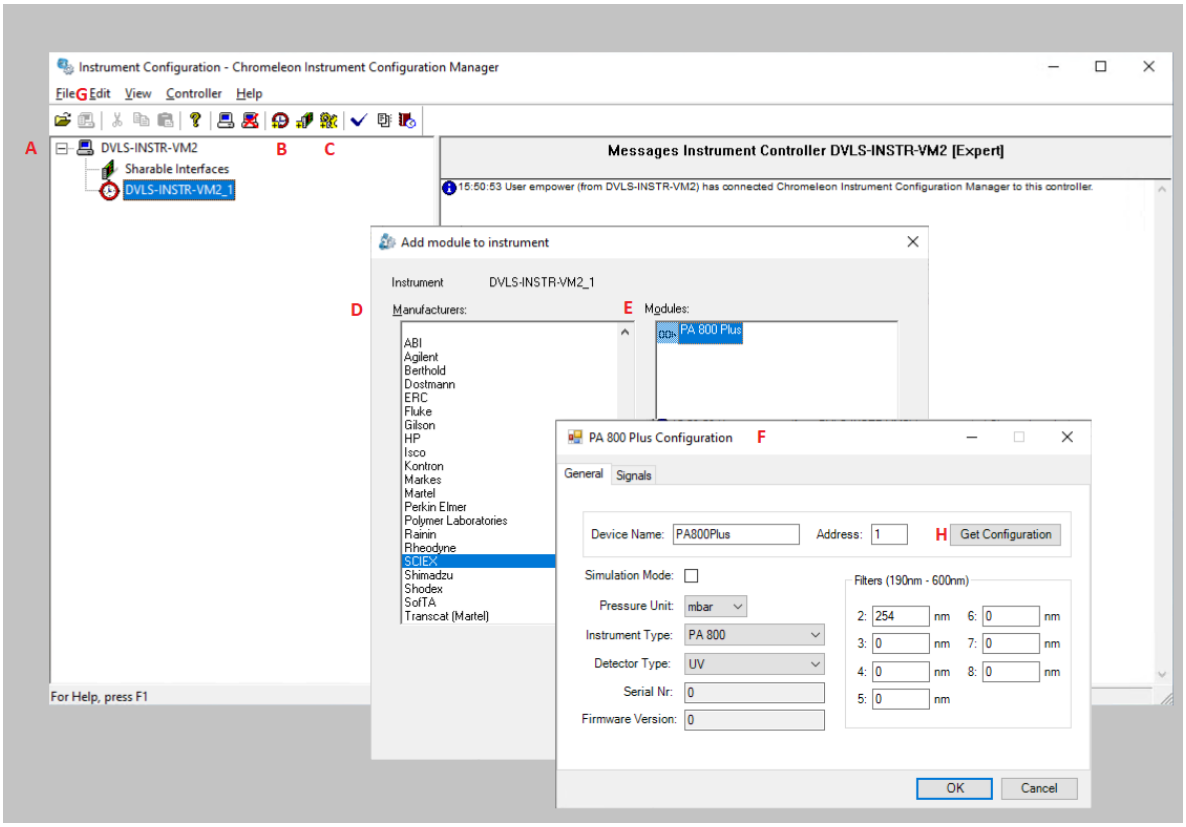


Figure 1: Using the Instrument Configuration Manager

5. On each configuration page, verify that the settings are correct and define additional settings if needed. For assistance, click **Help** (or press **F1**)

6. On the **File** menu, click **Save Instrument Configuration**, or click the corresponding icon in the toolbar, Figure 1G. Close the Instrument Configuration Manager.

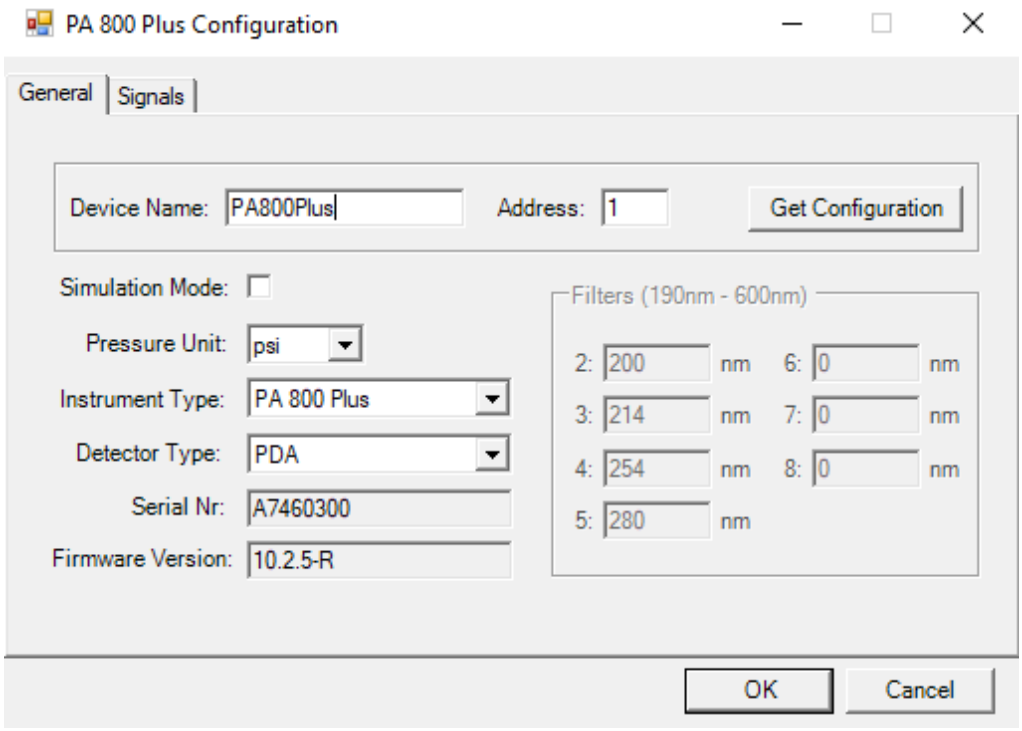


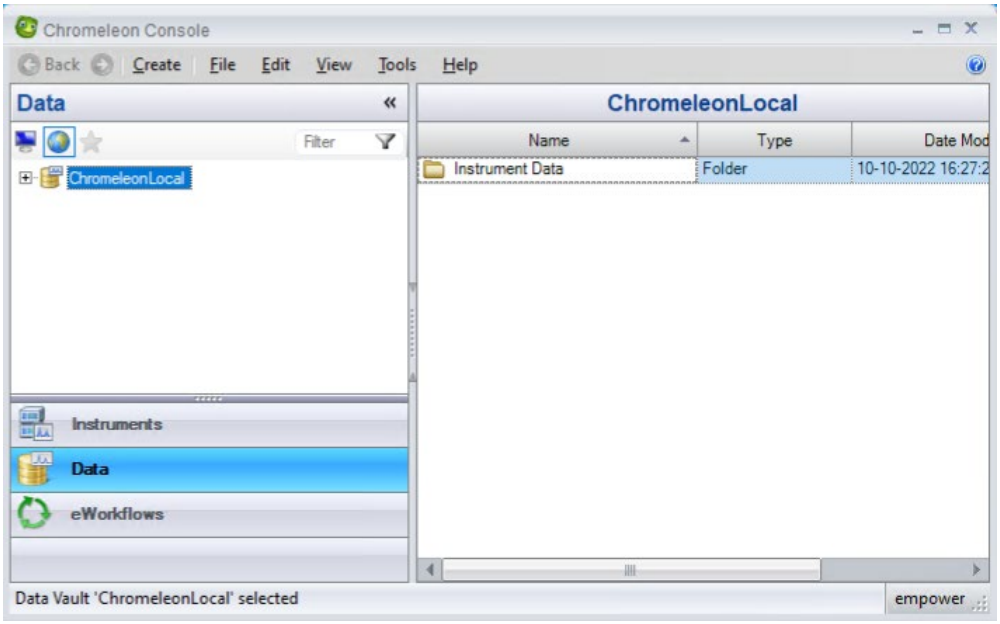
Figure 2: PA 800 Plus System Configuration

4.1.5 Creating Custom Variables

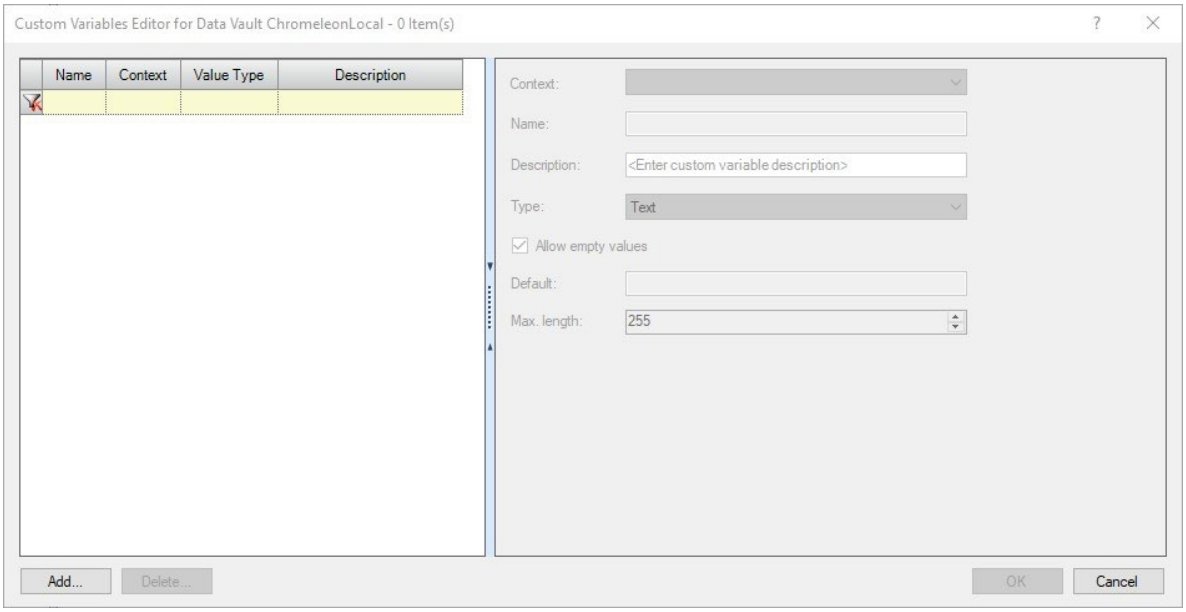
Custom Sequence variables can be used to set the Injection Outlet Position and Injection Duration in a sequence line.

To create custom variables in Chromeleon proceed by following the instructions below.

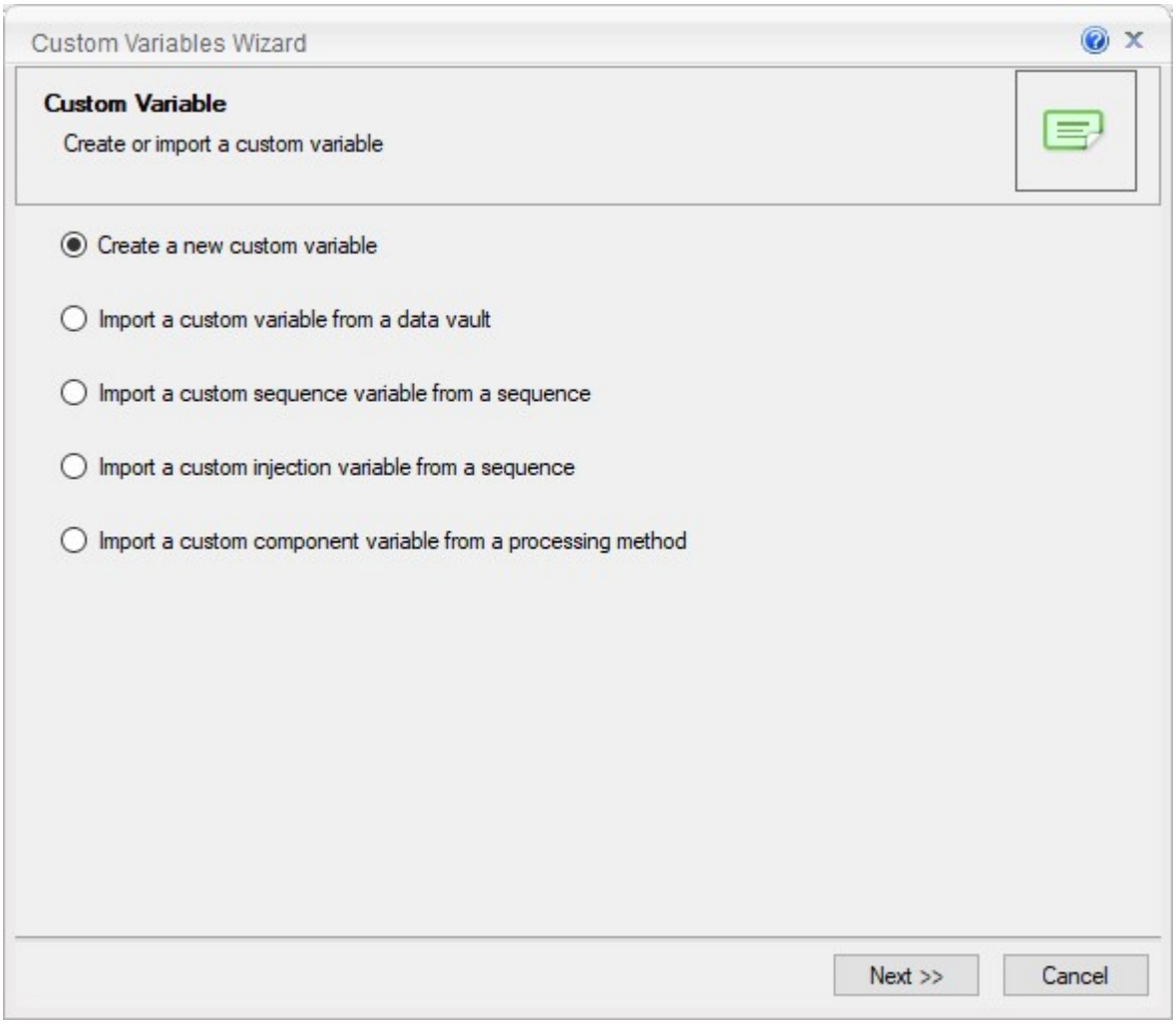
1. Open **Chromeleon 7.**
2. Open the **Data** panel.



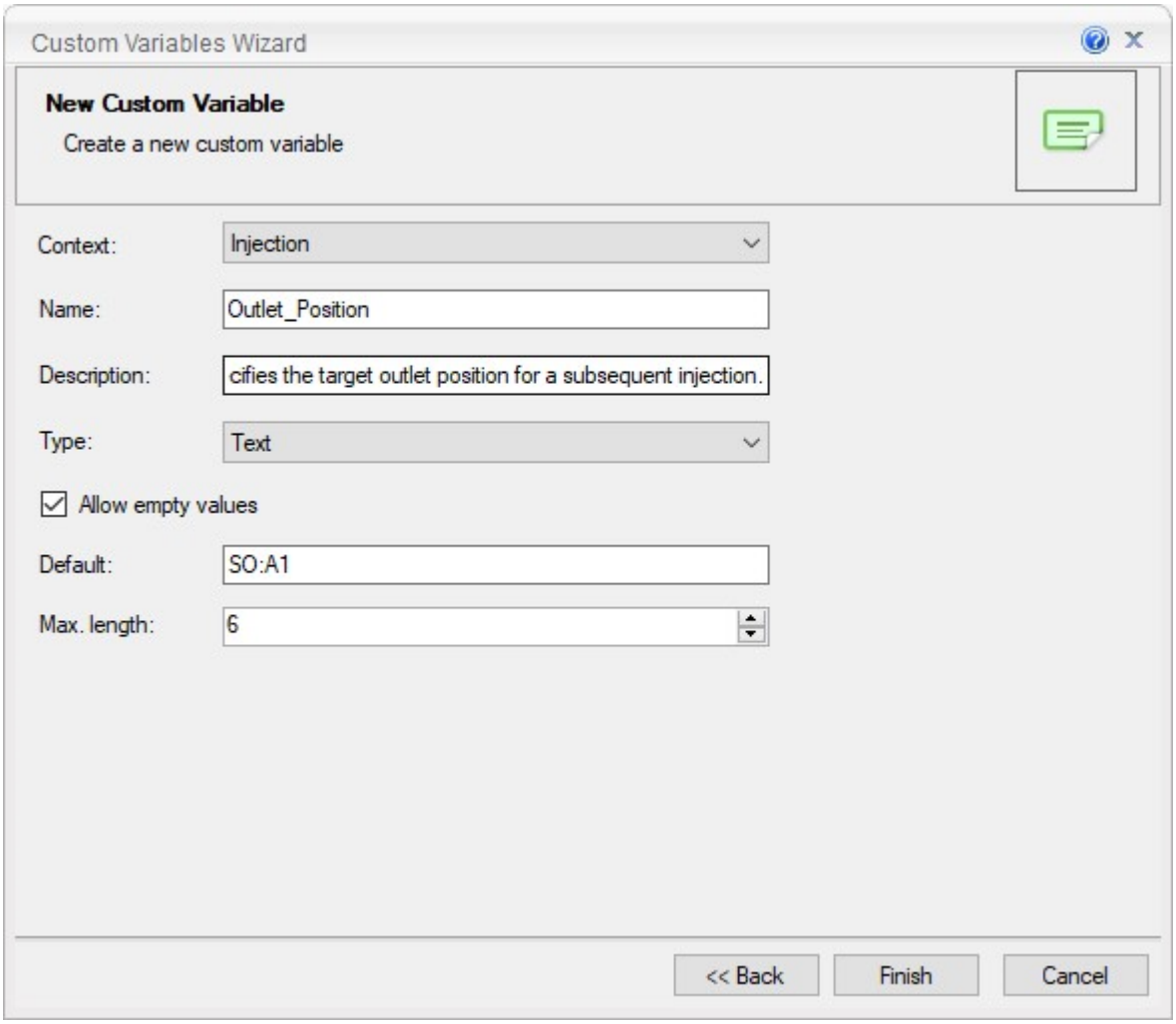
3. Right-click the **ChromeleonLocal** node and click **“Custom Variables Editor”.**
   The **Custom Variables Editor** will open:



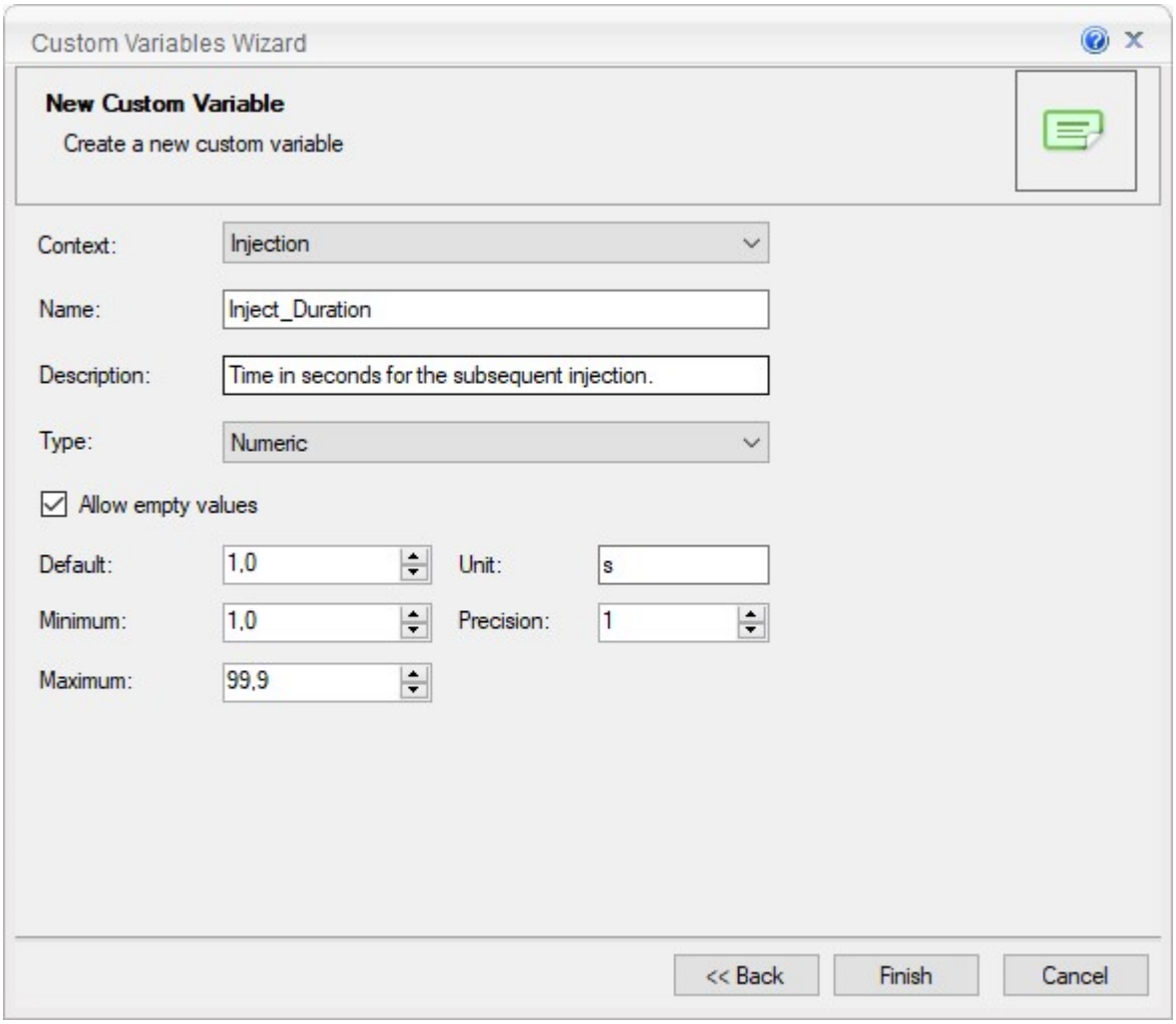
4. Click **Add…**



5. Select **“Create a new custom variable”** and click **Next>>:**



6. Define the new custom variables exactly as displayed in the figure above and click **Finish.**

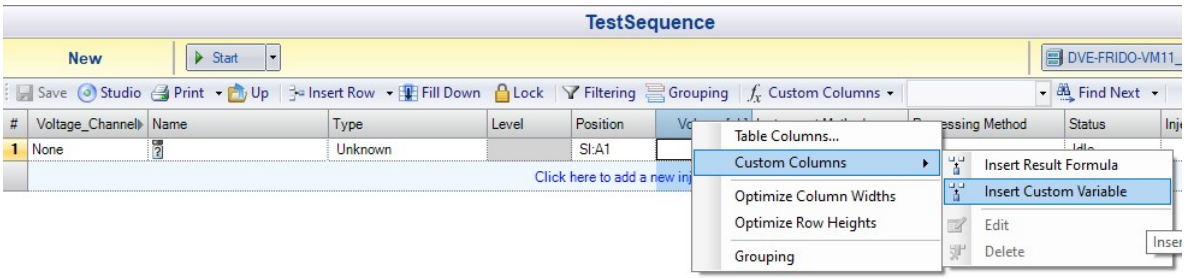


7. Now repeat step 4 to 6 for the custom variable displayed in the figure above.

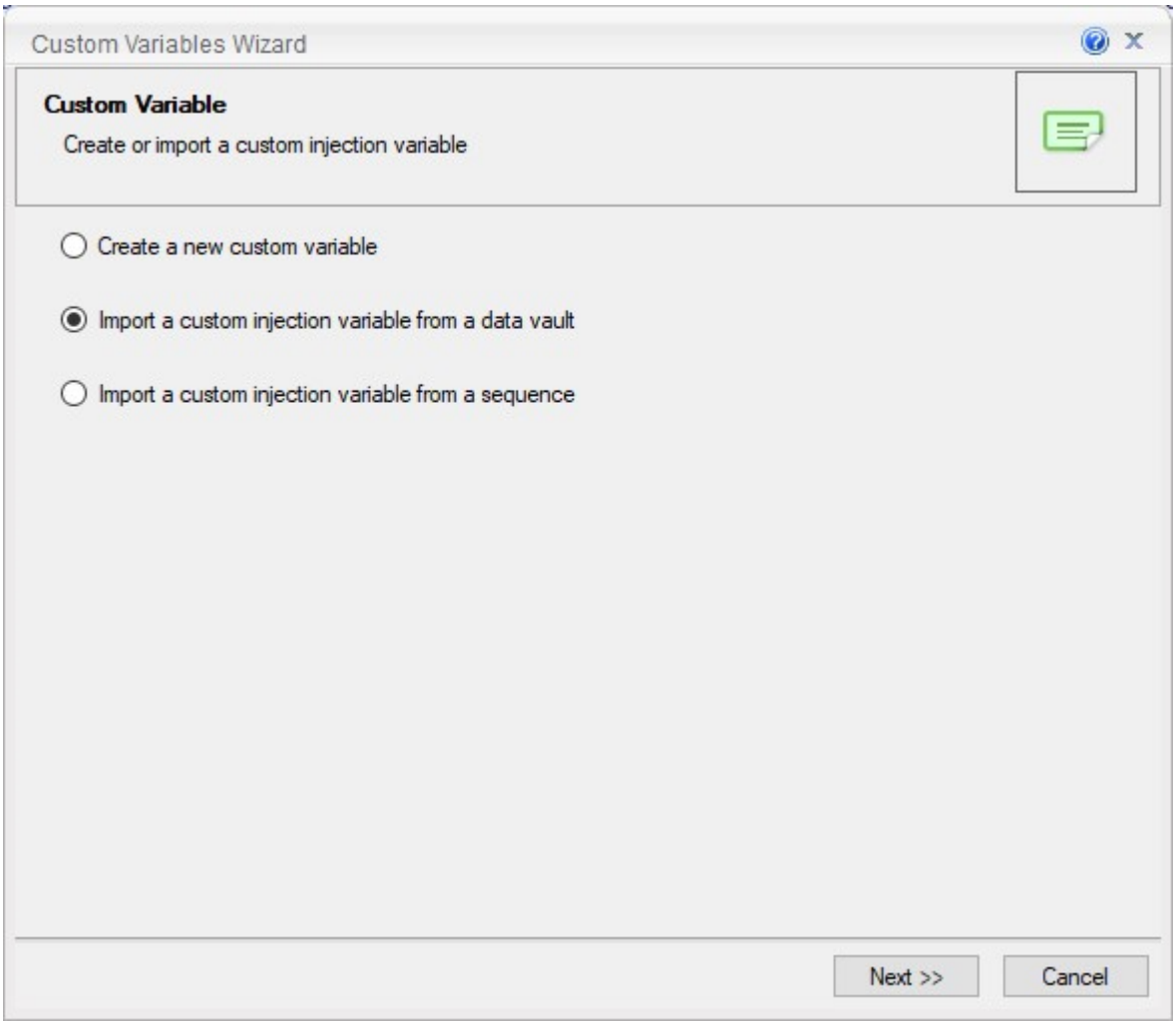
4.1.6 Using Custom Variables

The Custom Sequence variables created in the previous paragraph can be used to set the Injection Outlet Position and Injection Duration in a sequence line.
Here's how you add the custom variables as columns to a sequence:

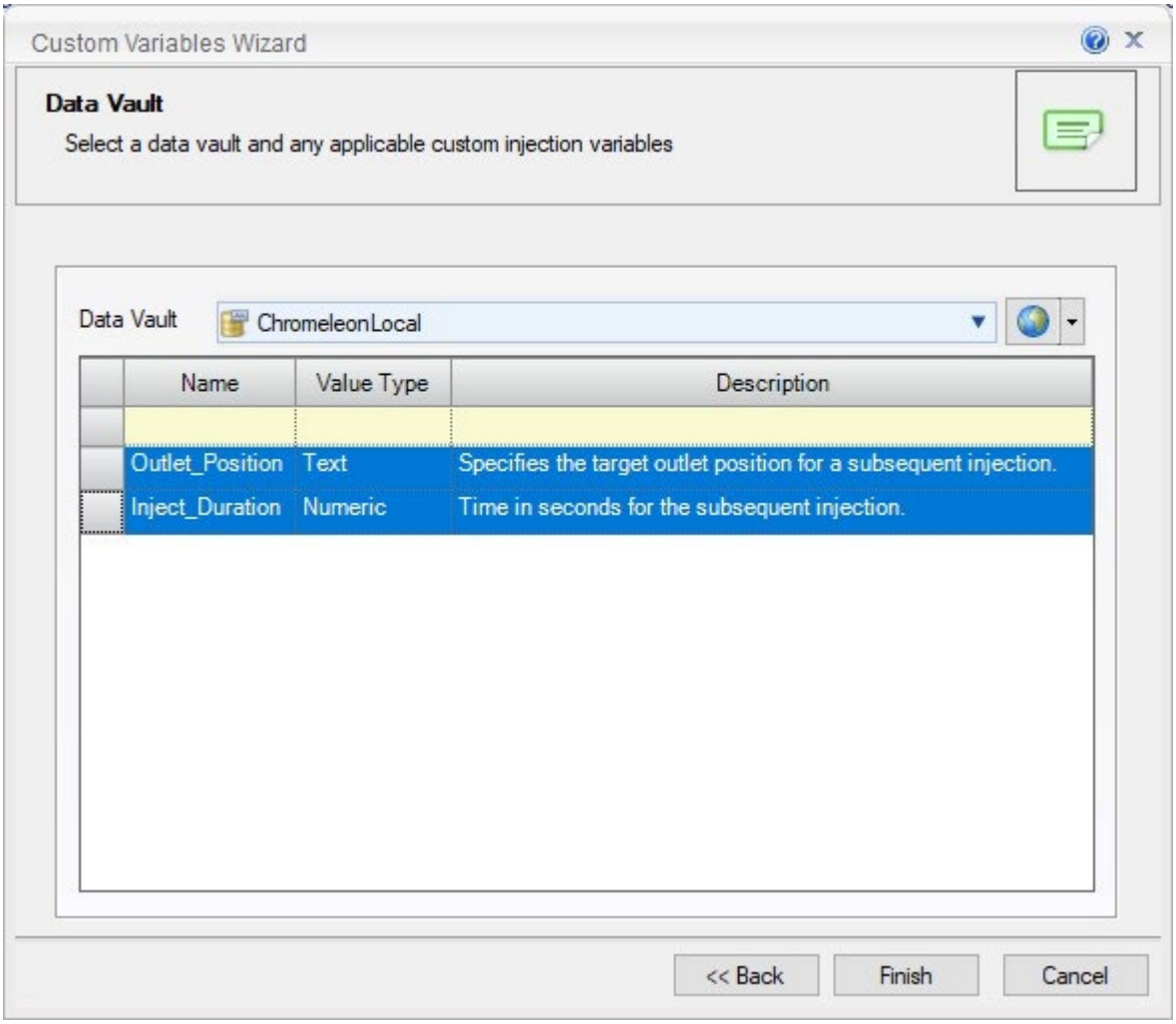
1. Create a sequence as described in the Chromeleon help.
2. Right-click a column of the sequence**:**



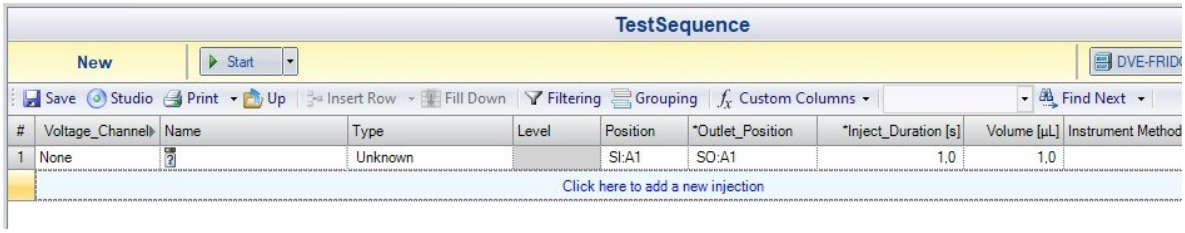
3. Select **Custom Columns, Insert Custom Variable:**



4. Select **“Import a custom injection variable from a data vault”** and click **Next >>:**



5. Select both custom variable by click one custom variable, holding the Shift-key and clicking the other custom variable.
6. Click **Finish.** The custom variables are now available in the sequence:



Caution: There's no validation on column "Outlet_Position", so take care to enter a position in range SO:A1 – BO:F6, depending on the outlet tray types.

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