SCIEX
The Power of Precision

BioPhase 8800 Driver for Empower™

Release Notes

RUO-IDV-03-10681-B

October 2023

This document is provided to customers who have purchased SCIEX equipment to use in the operation of such SCIEX equipment. This document is copyright protected and any reproduction of this document or any part of this document is strictly prohibited, except as SCIEX may authorize in writing.

Software that may be described in this document is furnished under a license agreement. It is against the law to copy, modify, or distribute the software on any medium, except as specifically allowed in the license agreement. Furthermore, the license agreement may prohibit the software from being disassembled, reverse engineered, or decompiled for any purpose. Warranties are as stated therein.

Portions of this document may make reference to other manufacturers and/or their products, which may contain parts whose names are registered as trademarks and/or function as trademarks of their respective owners. Any such use is intended only to designate such products as those manufacturers' products and does not imply any right and/or license to use or permit others to use such manufacturers' and/or their product names as trademarks.

SCIEX warranties are limited to those express warranties provided at the time of sale or license of its products and are the sole and exclusive representations, warranties, and obligations of SCIEX. SCIEX makes no other warranty of any kind whatsoever, expressed or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, whether arising from a statute or otherwise in law or from a course of dealing or usage of trade, all of which are expressly disclaimed, and assumes no responsibility or contingent liability, including indirect or consequential damages, for any use by the purchaser or for any adverse circumstances arising therefrom.

(GEN-IDV-09-10816-E)

For Research Use Only. Not for use in Diagnostic Procedures.

Trademarks and/or registered trademarks mentioned herein, including associated logos, are the property of AB Sciex Pte. Ltd., or their respective owners, in the United States and/or certain other countries (see sciex.com/trademarks).

AB Sciex™ is being used under license.

© 2023 DH Tech. Dev. Pte. Ltd.

EC Authorized Person

AB Sciex Netherlands B.V.
1e Tochtweg 11,
2913LN Nieuwerkerk aan den Ijssel
Netherlands

AB Sciex Pte. Ltd.
Blk33, #04-06 Marsiling Industrial Estate Road 3
Woodlands Central Industrial Estate, Singapore 739256

Contents

1 Introduction **4**

2 Requirements **5**
Operating System Requirements 5
Computer Requirements 5
Validated Computer Configuration 5
Required Software 6
Additional Software 6

3 Installation Instructions **7**
Download the Method and Project Files for the Waters Empower™ Software 7
Install the BioPhase 8800 Driver for Empower™ 8
Activate the License for the BioPhase 8800 Driver for Empower™ 9
Configure the Node 12
Add a Chromatographic System 18
Create a Project 23
Configure the System for the BioPhase 8800 Driver for Empower™ 29
Restore the Method Files for the Waters Empower™ Software 31

4 Known Issues in the BioPhase 8800 Driver for Empower™ **36**

Contact Us **39**
Customer Training 39
Online Learning Center 39
SCIEX Support 39
CyberSecurity 39
Documentation 39

Introduction 1

This guide provides information about, and procedures for, installing the BioPhase 8800 driver for Empower™. The BioPhase 8800 driver for Empower™ enables data acquisition from a BioPhase 8800 system that uses the Waters Empower™ software version 3 (FR5) or version 3.7. The BioPhase 8800 driver for Empower™ must be installed on the same computer as the Waters Empower™ software.

Note: Do not use the BioPhase 8800 driver for Empower™ on a BioPhase 8800 system that uses the BioPhase software. If the BioPhase 8800 driver for Empower™ and the BioPhase 8800 software are used at the same time, then problems with the software or the system can occur.

Requirements 2

Operating System Requirements

This version of the software is compatible with Microsoft Windows 10, 64-bit. For computer requirements, refer to the section: Computer Requirements.

Computer Requirements

The computer must meet the minimum requirements for Microsoft Windows 10, 64-bit software. For more information, refer to the documentation supplied by Waters.

For the configuration of the validated computer, refer to the section: Validated Computer Configuration.

Validated Computer Configuration

Table 2-1 Validated Computer Configuration for Waters Empower™ Software

Item	Specification
Operating system	Microsoft Windows 10
Additional software	Waters Empower™ software For Waters Empower™ software version 3 FR5: Oracle client version 18.3.0.0 for 32-bit For Waters Empower™ software version 3.7: Oracle client version 19.3.0.0 for 32-bit
Additional software	OS Windows Media .NET Framework version 4.7.2 or later
Free disk space	2 GB for Waters Empower™ software
Monitor	Minimum: 1024 × 768 resolution (except for LAC/E modules) Recommended: 1920 × 1080 resolution for client
CPU	Heatsink 5820 Tower

Table 2-1 Validated Computer Configuration for Waters Empower™ Software (continued)

Item	Specification
Random access memory (RAM)	32 GB 2 × 16 GB DDR4 3200 MHz RDIMM ECC memory
Solid-state drive	M.2 1 TB PCIe NVMe Class 40
Ethernet adapters	Ethernet port for network connectivity

Required Software

The Waters Empower™ software version 3 must be installed. The BioPhase 8800 driver for Empower™ was validated with the Waters Empower™ software version 3 FR5 and version 3.7.

Additional Software

For additional data-processing functions:

- To do qualitative and quantitative analysis calculations for CE-SDS, cIEF, and RNA applications, the Waters Empower™ GPC software is required.
- To do standard pharmacopoeia calculations such as resolution or noise and drift, the Waters Empower™ System Suitability software is required.

To purchase a license for either software, contact a Waters sales representative.

Installation Instructions 3

Note: Internet access is required to download the software. We recommend that all of the required software and materials be downloaded before the scheduled installation to decrease the time required for the installation.

Download the Method and Project Files for the Waters Empower™ Software

SCIEX supplies method and project files for use with the Waters Empower™ software. The files are compatible with Waters Empower™ software version 3 FR4 and later.

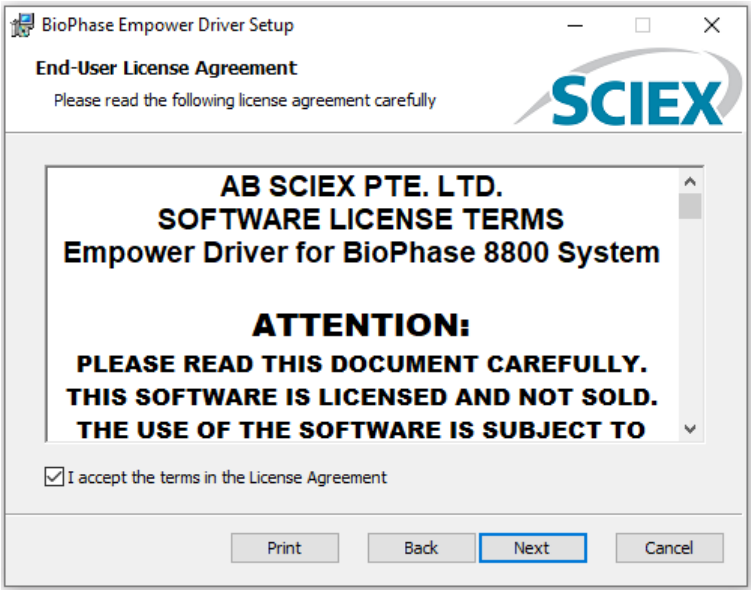
1. Go to sciex.com/software-support/software-downloads, and click **Download software**.
2. Download the method files:
   a. In the More software downloads section, click **BioPhase Driver Resources**, and then click `BioPhase-Empower-Method-Files-1.3.zip`.
   b. In File Explorer, browse to and then right-click the file: `BioPhase-Empower-Method-Files-1.3.zip`, and then click **Extract All**.
   c. Browse to the location to save the method files, click **Select Folder**, and then click **Extract**.
   The method files are extracted and copied to the selected location.
3. Download the project files:
   a. In the More software downloads section, click **BioPhase Driver Software**, and then click `BioPhase-Empower-Project-Files-1.3.zip`.
   b. In File Explorer, browse to and then right-click the file: `BioPhase-Empower-Project-Files-1.3.zip`, and then click **Extract All**.
   c. Browse to the location of the LAC/E acquisition server, click **Select Folder**, and then click **Extract**.
   The project files are extracted and copied to the selected location.

Note: For correct system operation, the .NET Framework version 4.7.2. or later must be installed. If the .NET Framework version 4.7.2 or later is not installed, then click the file: `ndp472-kb4054530-x86-x64-allos-enu.exe` in the `BioPhase-EmpowerDriver-Software-1.3.zip` and follow the on-screen instructions to install the .NET Framework version 4.7.2.

Install the BioPhase 8800 Driver for Empower™

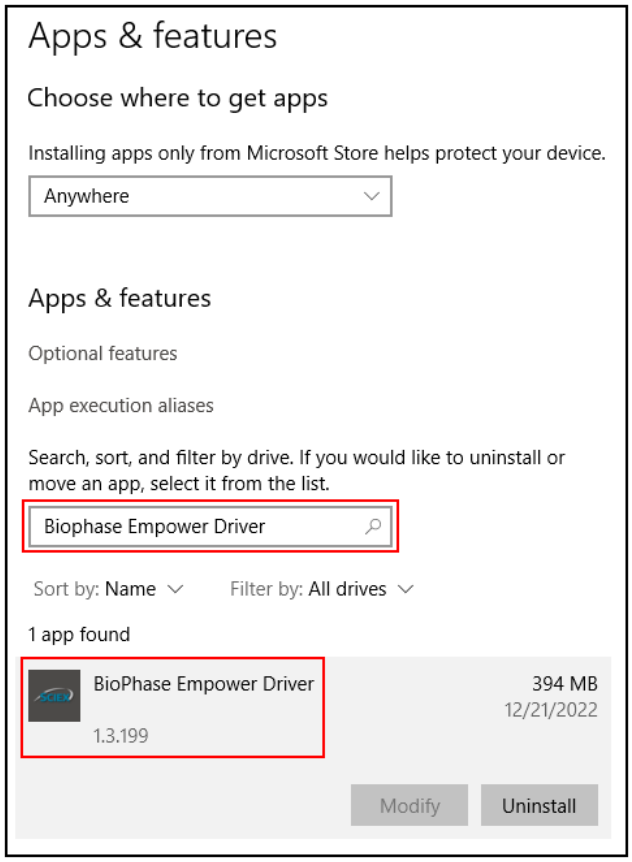
1. In File Explorer, browse to and then double-click the file: `BioPhase.Installer.Empower_Build_1.3.23.msi`.
   The Setup Wizard opens.
2. Follow the on-screen instructions to install the software.
3. On the End-User License Agreement page, click **I accept the terms in the License Agreement**, and then click **Next**.

Figure 3-1 End-User License Agreement Page



4. Click **Finish**.
5. Make sure that the driver is installed successfully:
   a. In the Windows search bar, type `Add or remove programs`.
   b. Click **Add or remove programs**.
   c. In the **Search this list** field, type `BioPhase Empower Driver`.

Figure 3-2 Apps & features Window



d. Make sure that the version number starts with 1.3.

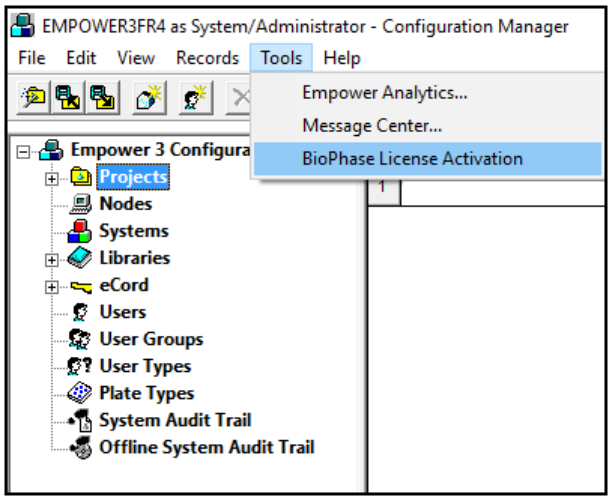
Note: If the BioPhase 8800 driver for Empower™ must be removed and installed again, then restart the system after the BioPhase 8800 driver for Empower™ is removed and before the installation is started.

Activate the License for the BioPhase 8800 Driver for Empower™

The license must be activated from the LAC/E acquisition server by a user with Administrator privileges. Do not activate the license with the Citrix software or on a client application.

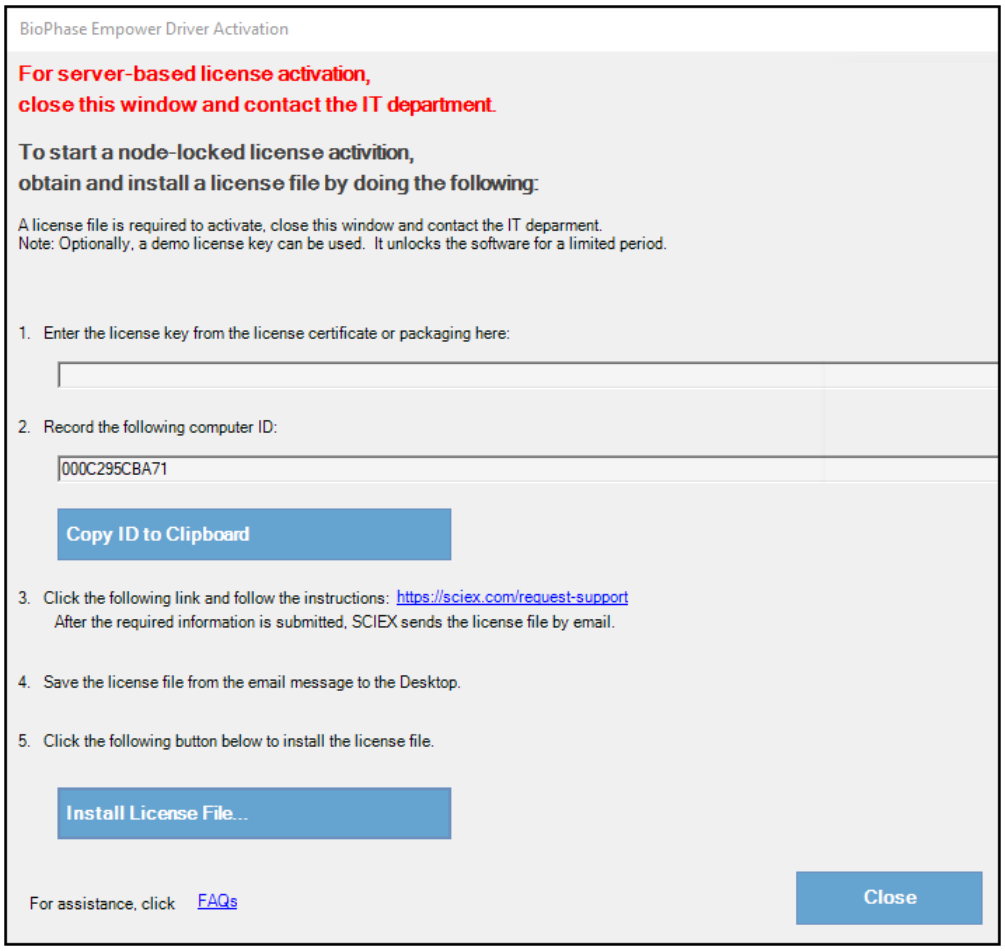
1. On the desktop, double-click the **Empower** icon, and then log on as a user with Administrator privileges.
2. Click **Configure the System**.
3. Click **Tools** > **BioPhase License Activation**.

Figure 3-3 BioPhase License Activation



4. Follow the on-screen instructions.

Figure 3-4 BioPhase Empower Driver Activation Dialog



5. In step 1 of the BioPhase Empower Driver Activation dialog, type the license key.

   The license key might be supplied on a printed activation certificate or in an e-mail from SCIEX Now. If the license key is missing, then contact a SCIEX sales representative.

   Note: The license key starts with *AID* and is followed by 32 characters, which are 8 segments of 4-digit codes, separated by hyphens.

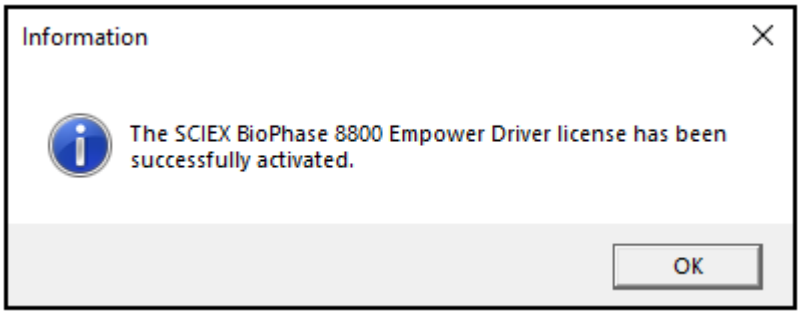
   After the license key entry is made, the **Copy ID to Clipboard** and **Install License File** buttons and the link in step 3 become available.

6. Click the link in step 3.
   The SCIEX Login web page opens.

7. To log on to an existing SCIEX account, click **Log In**, or click **Create an Account**.
   When account creation or log on is complete, the SCIEX software activation web page opens. The first name, last name, and e-mail address of the user show in the first three fields of the form. The value in the **License Key** field is supplied automatically.

8. (Optional) If a license is being activated for the BioPhase 8800 driver for Empower™ on a different computer, then type the computer ID, which is the MAC address of the network port used to connect the computer to the network, and the license key in the fields.
9. (Optional) If the **Computer ID** field is empty, then copy and paste the computer ID:
    a. In the BioPhase Empower Driver Activation dialog, click **Copy ID to Clipboard**.
    b. On the SCIEX software activation web page, paste the computer ID in the **Computer ID** field.
10. (Optional) In the **Nickname** field, type a name.
11. In the **Select Your Instrument** field, select and type the required information.
12. In the **Serial Number** field, type the serial number of the BioPhase 8800 system.
    The serial number is on the back panel.
13. Click **Submit**.
14. To download and save the license file, do one of the following:
    - In the dialog that opens, click **Download Now** to download the license file, and then save the file to a local file path.
    - In the e-mail that is sent, download the license file, and then save the file to a local file path.
15. In the BioPhase Empower Driver Activation dialog, click **Install License File**, and then select the location to save the license file.
    If the license file is valid, then the BioPhase Empower Driver Activation dialog closes and the following message shows.

Figure 3-5 Information Message



Configure the Node

Note: Before doing this procedure, configure the acquisition server in the Waters Empower™ software. For instructions, refer to the manufacturer documentation that came with the software.

Use the following procedure to configure the Waters Empower™ software to operate with the BioPhase 8800 system.

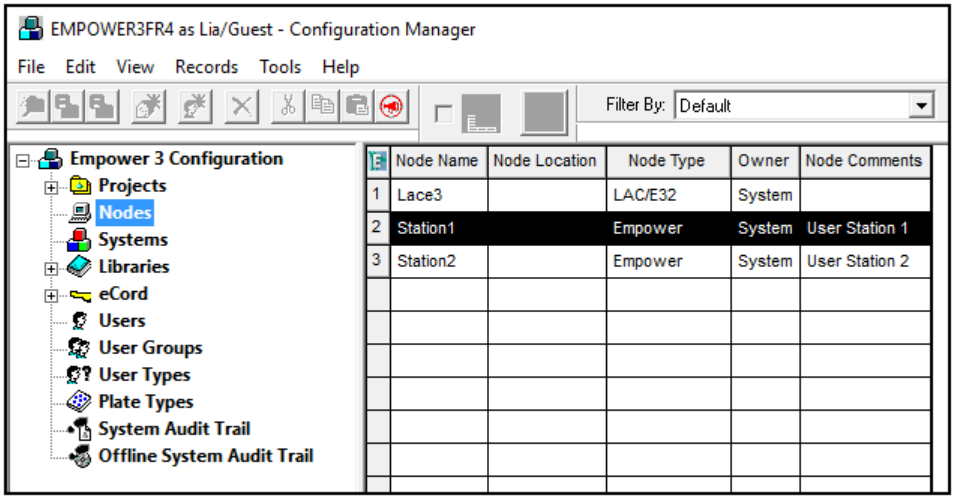
1. On the desktop, double-click the **Empower** icon, and then log on as a user with Administrator privileges.

Figure 3-6 Waters Empower™ Start Dialog

2. Click **Configure the System**.
3. In the Configuration Manager window, in the Navigation panel, click **Nodes**.

Note: The list of nodes in the following figure will show the local Waters Empower™ software configuration.

Figure 3-7 Configuration Manager Window



4. In the table, right-click the node to be configured and then click **Properties**.

Note: If the node is not in the table, then right-click the table, and type the name of the LAC/E acquisition server to create a node. To find the name of the LAC/E acquisition server, in the Windows search bar, type `System Information`, open the application, and look for the **System Name**.

Figure 3-8 System Information Window

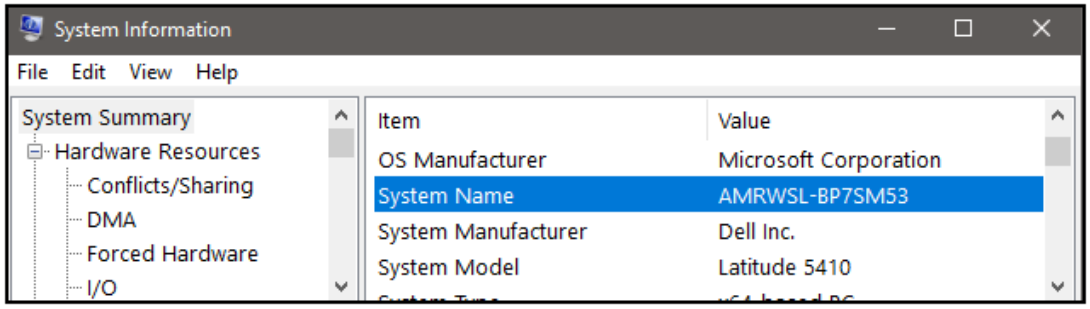
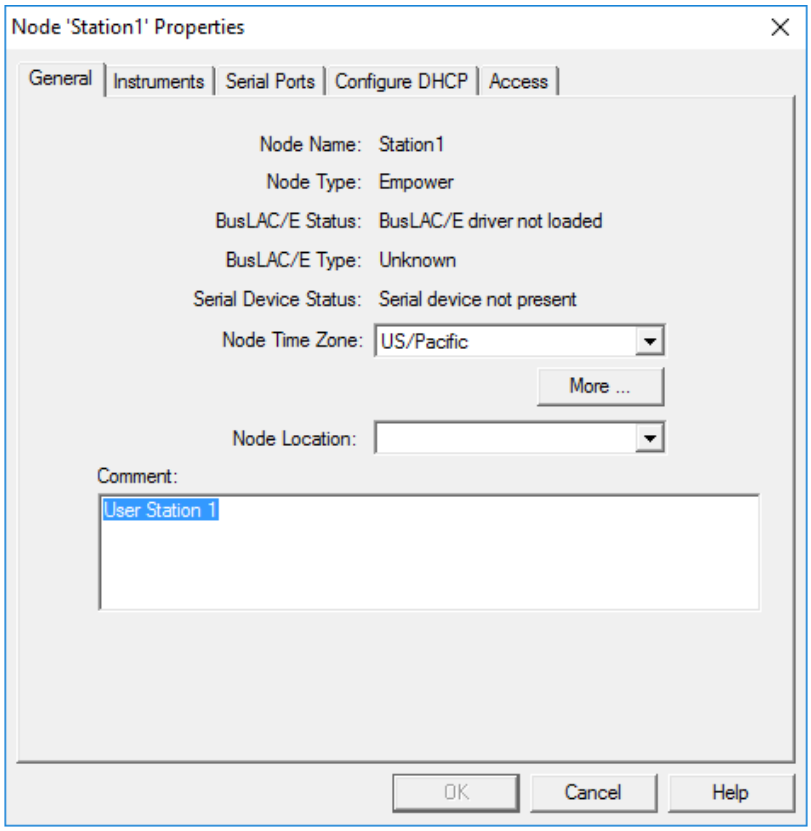
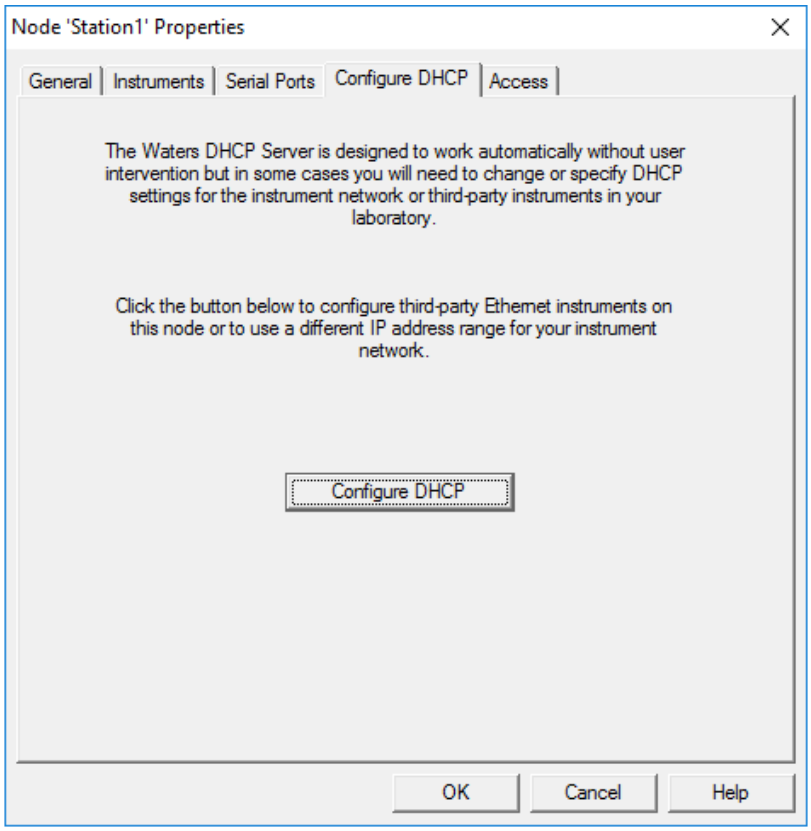


Figure 3-9 Node Properties Dialog: General Tab



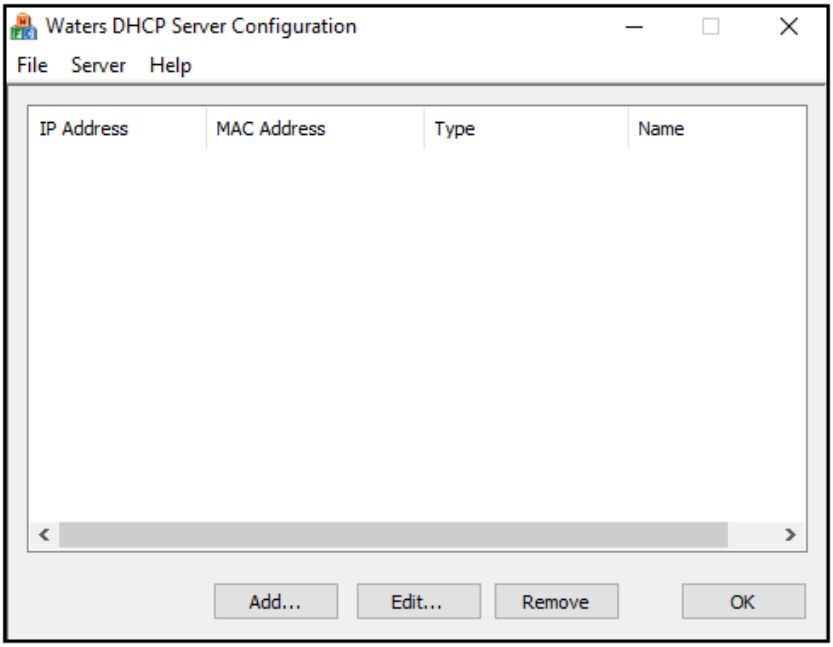
5. Open the Configure DHCP tab, and then click **Configure DHCP**.

Figure 3-10 Configure DHCP Tab



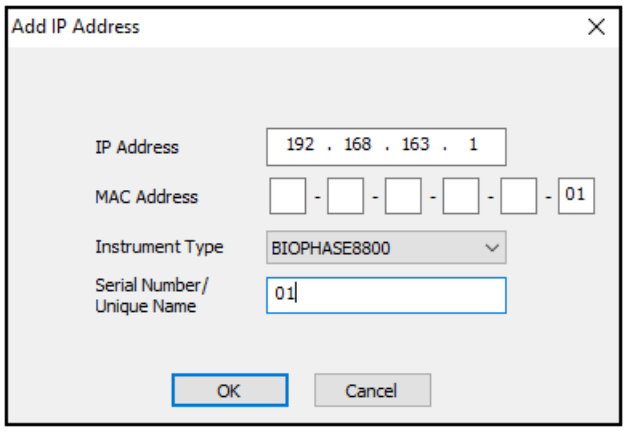
The Waters DHCP Server Configuration dialog opens.

Figure 3-11 Waters DHCP Server Configuration Dialog



6. Click **Add**.

Figure 3-12 Add IP Address Dialog



7. Update the fields in the dialog:
   a. In the **IP Address** field, type `192.168.180.XX`, where *XX* is that last two digits of the system serial number, plus 10. For example, if the system serial number is 50835900**12**, then the IP address is 192.168.180.**22**.
   b. In the **MAC Address** field, type a unique MAC address.
   c. From the **Instrument Type** list, select **BIOPHASE8800**.

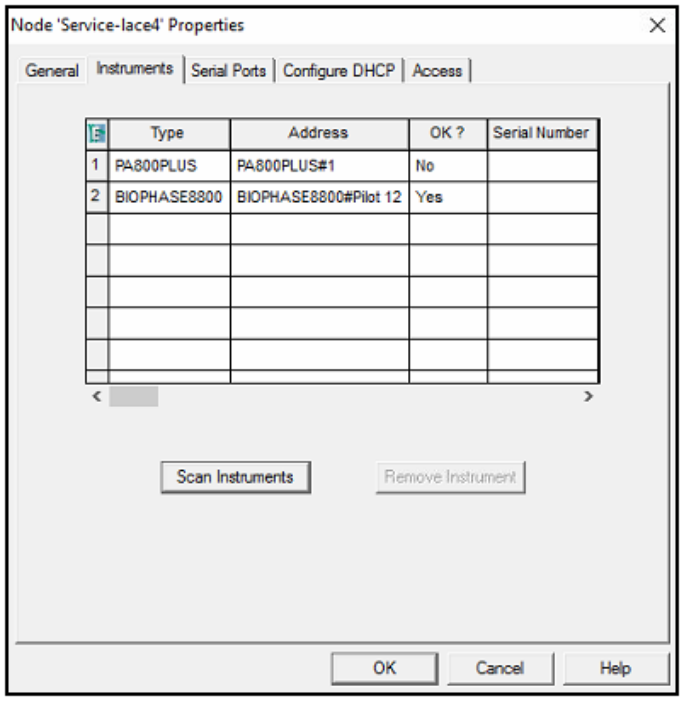
d. In the **Serial Number/Unique Name** field, type a unique serial number.

e. Click **OK** twice.

If a message about the MAC address is shown, then close the message, type any number in the **MAC Address** field, and click **OK**.

8. Open the Instruments tab.

Figure 3-13 Instruments Tab



9. Scroll to the bottom of the table, and then click **Scan Instruments**.
The BioPhase 8800 system should show at the bottom of the table.

10. In the **Serial Number** column, type the serial number for the BioPhase 8800 system, and then click **OK**.

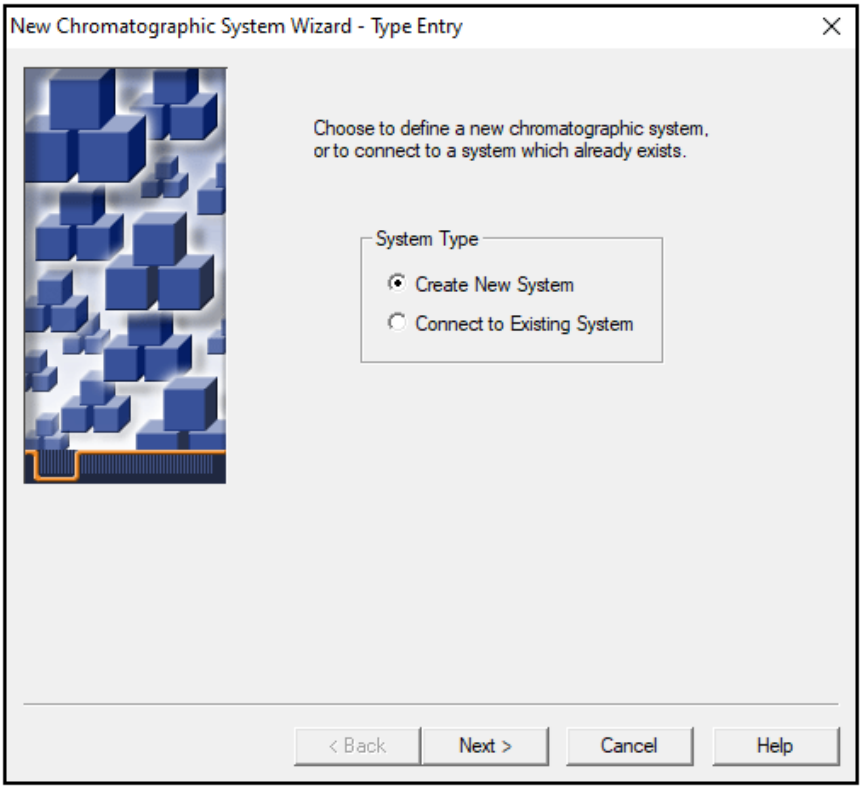
Add a Chromatographic System

The Waters Empower™ software is used to do chromatography. Any instrument that is connected to the software is referred to as a *chromatographic system*. Before the BioPhase 8800 system can be used, it must be configured as a chromatographic system.

1. In the Configuration Manager window, in the Navigation panel, click **Systems**.

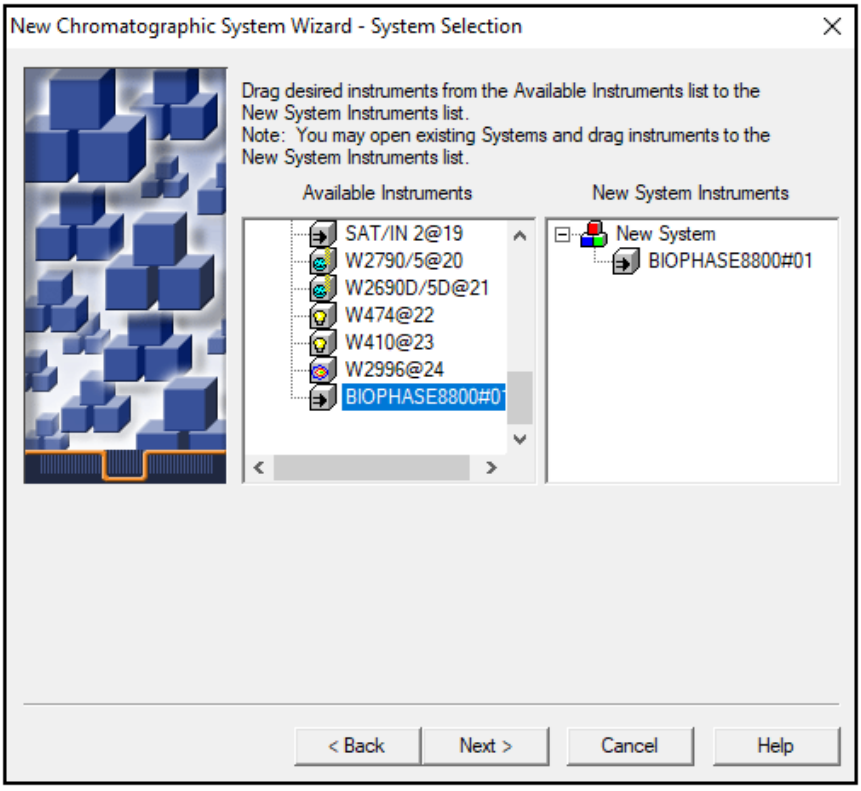
2. Right-click the table, and then click **New**.

Figure 3-14 New Chromatographic System Wizard - Type Entry Page



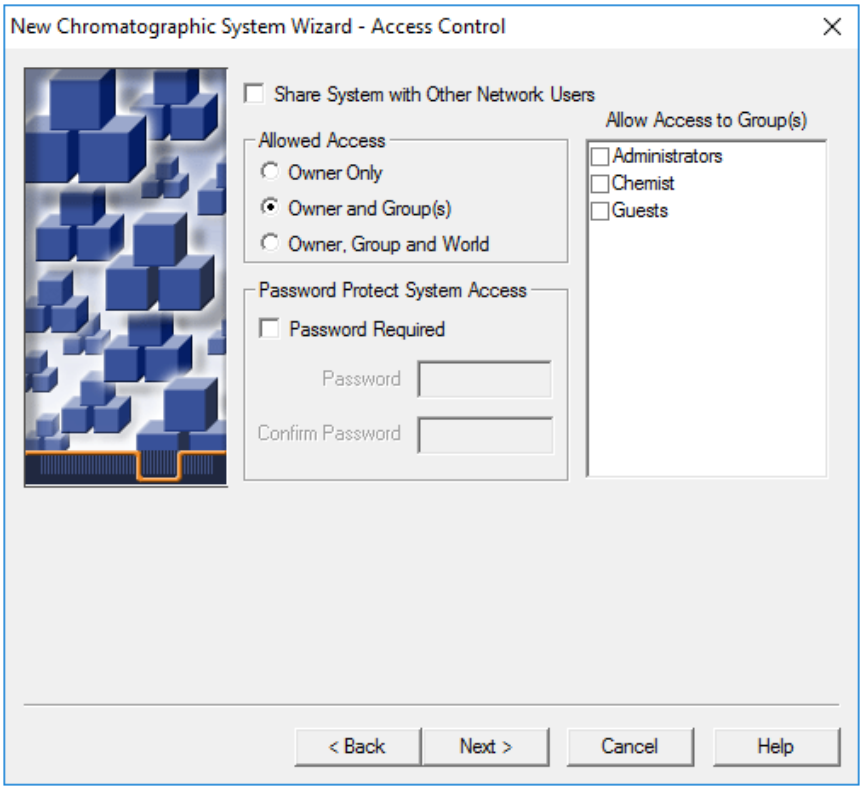
3. Click **Create New System**, and then click **Next**.

Figure 3-15 New Chromatographic System Wizard - System Selection Page



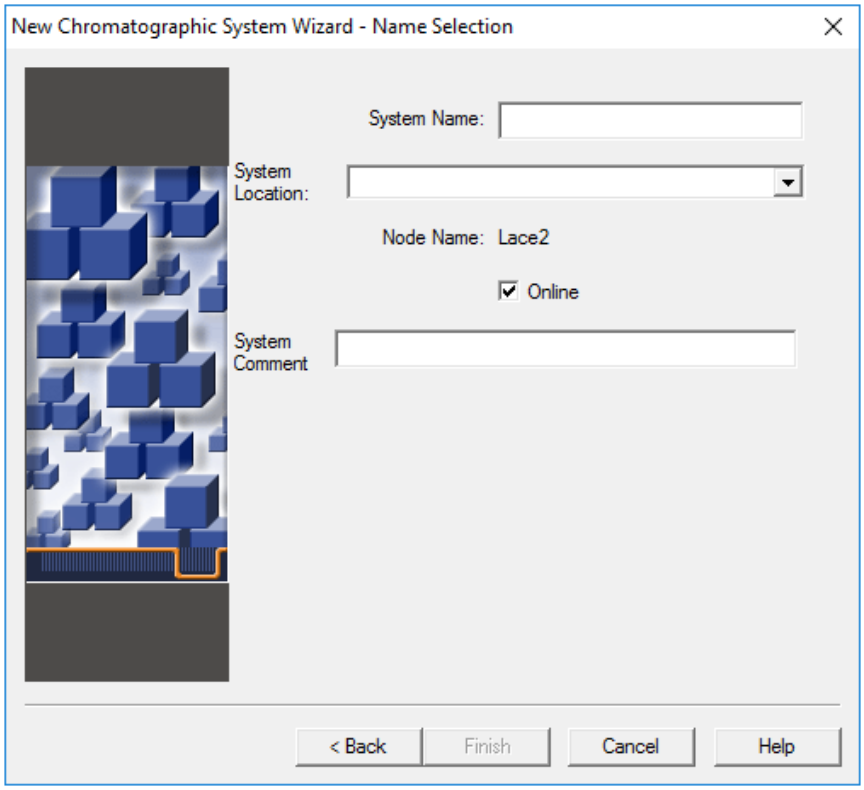
4. In the **Available Instruments** list, double-click the node with the BioPhase 8800 system. The BioPhase 8800 system shows in the **New System Instruments** list.
5. Click **Next**.

Figure 3-16 New Chromatographic System Wizard - Access Control Page



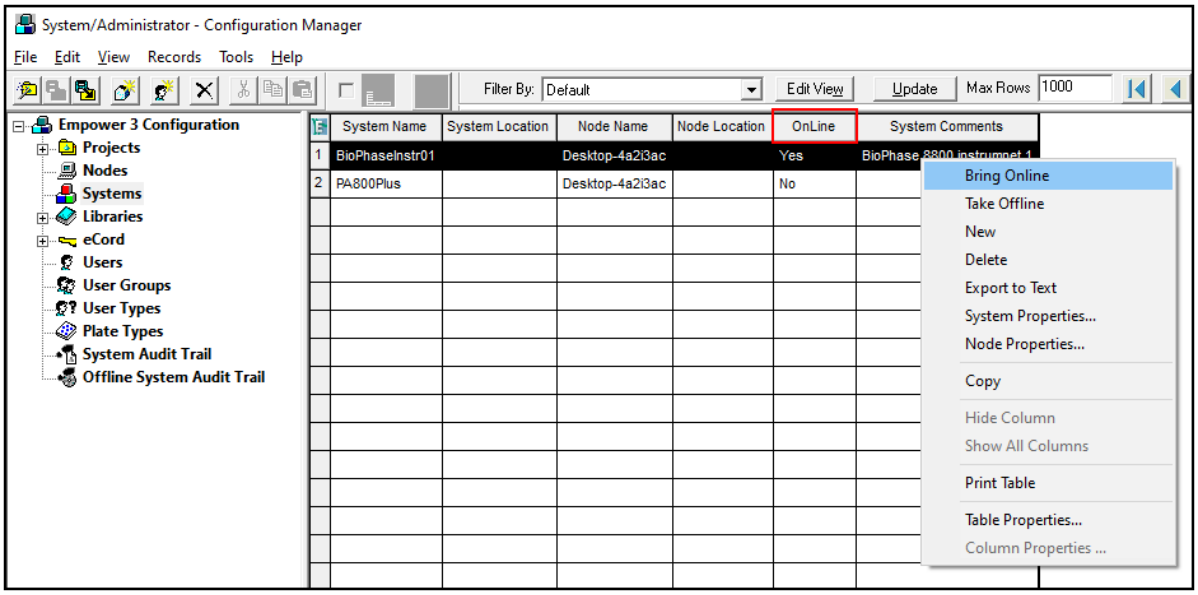
6. Update the fields in the Access Control page:
   a. Select the **Share System with Other Network Users** check box to give other network users access to the system.
   b. In the Allowed Access section, click the types of users to be given access to the system.
   c. If access will be given to **Owner and Group(s)** or **Owner, Group, and World**, then select the applicable check boxes in the Allow Access to Group(s) pane on the right.
      At least one group must be selected.
   d. To require a password, select the **Password Required** check box.
      The **Password** and **Confirm Password** fields become available.
   e. In the **Password** and **Confirm Password** fields, type a password, up to 30 characters.
7. Click **Next**.

Figure 3-17 New Chromatographic System Wizard - Name Selection Page



8. Update the fields on the Name Selection page:
   a. In the **System Name** field, type the name of the system, up to 30 characters.
      The name is used in the Empower database and the Configuration Manager window.
   b. Click the **Online** check box to bring the new system online.
   c. (Optional) In the **System Comment** field, type comments or other identifying information for the system, up to 250 characters.
9. Click **Finish**.
   If a message about an existing system configured in another online system is shown, then click **OK**.
10. If the BioPhase 8800 system is not online, then in the Configuration Manager window, right-click the BioPhase 8800 system and click **Bring Online**.

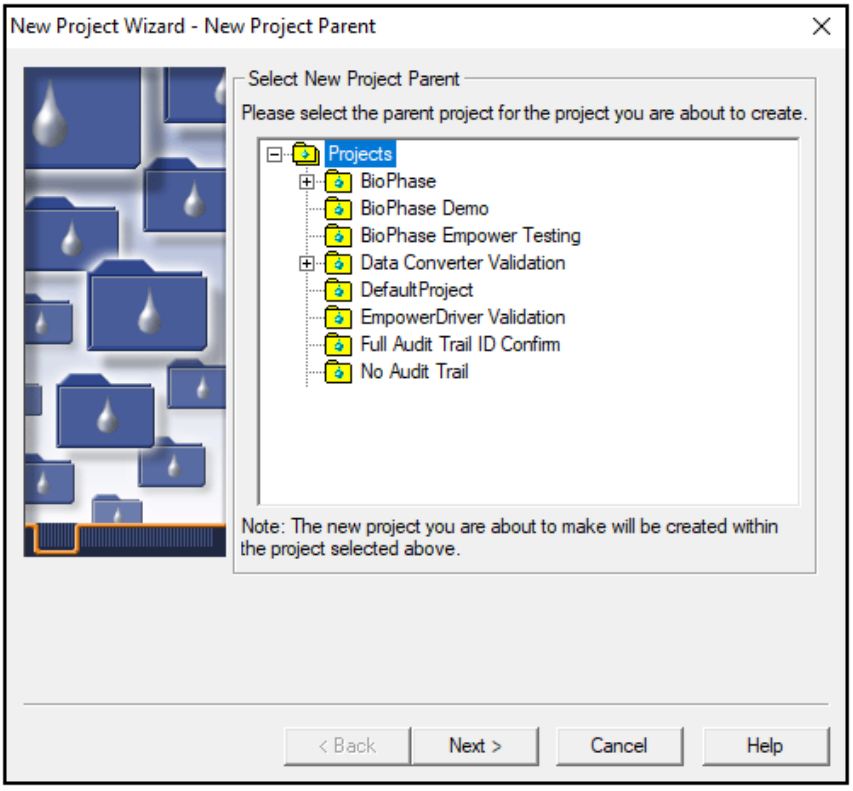
Figure 3-18 Configuration Manager Window



Create a Project

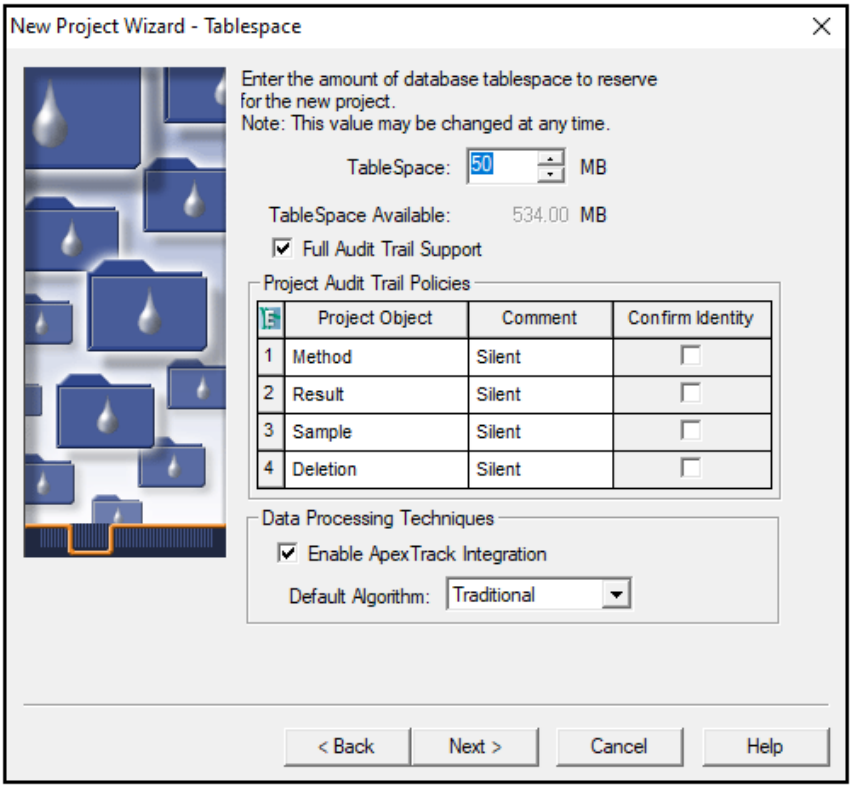
1. In the Configuration Manager window, in the Navigation panel, click **Projects**.
2. Right-click the table, and then click **New**.

Figure 3-19 New Project Wizard - New Project Parent Page



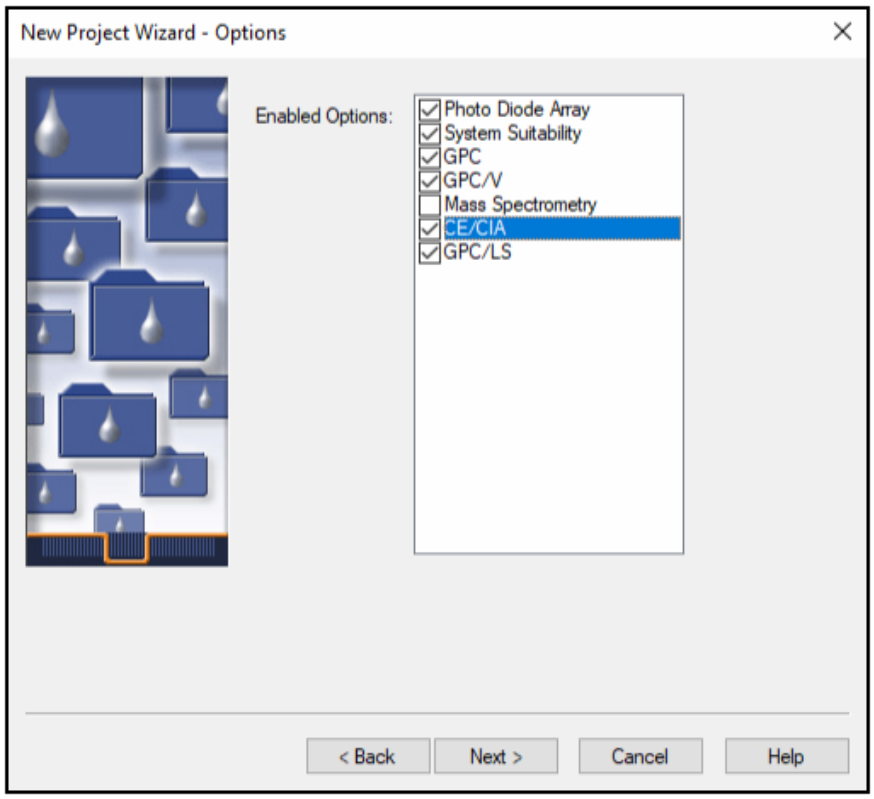
3. Click the applicable parent project, and then click **Next**.

Figure 3-20 New Project Wizard - Tablespace Page



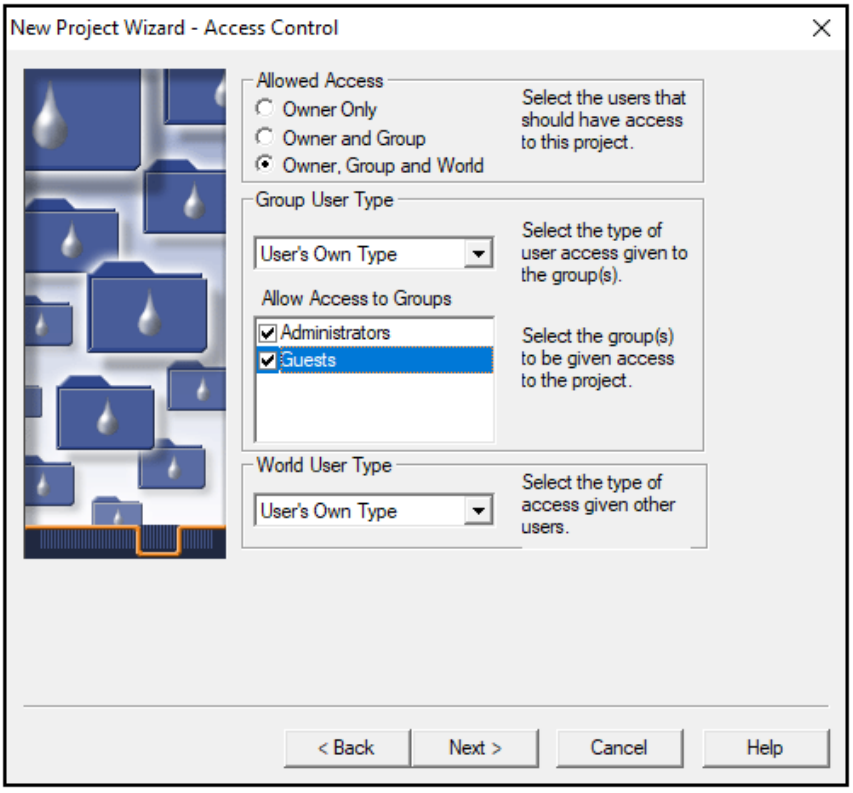
4. Make the applicable selections, and then click **Next**.

Figure 3-21 New Project Wizard - Options Page



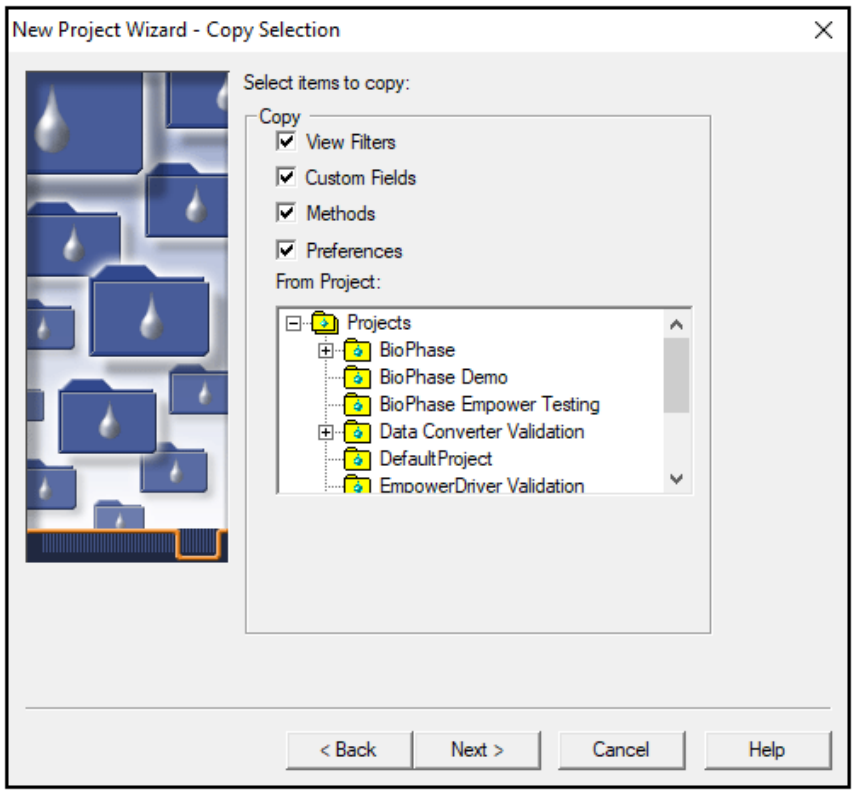
5. Make the applicable selections, and then click **Next**.

Figure 3-22 New Project Wizard - Access Control Page



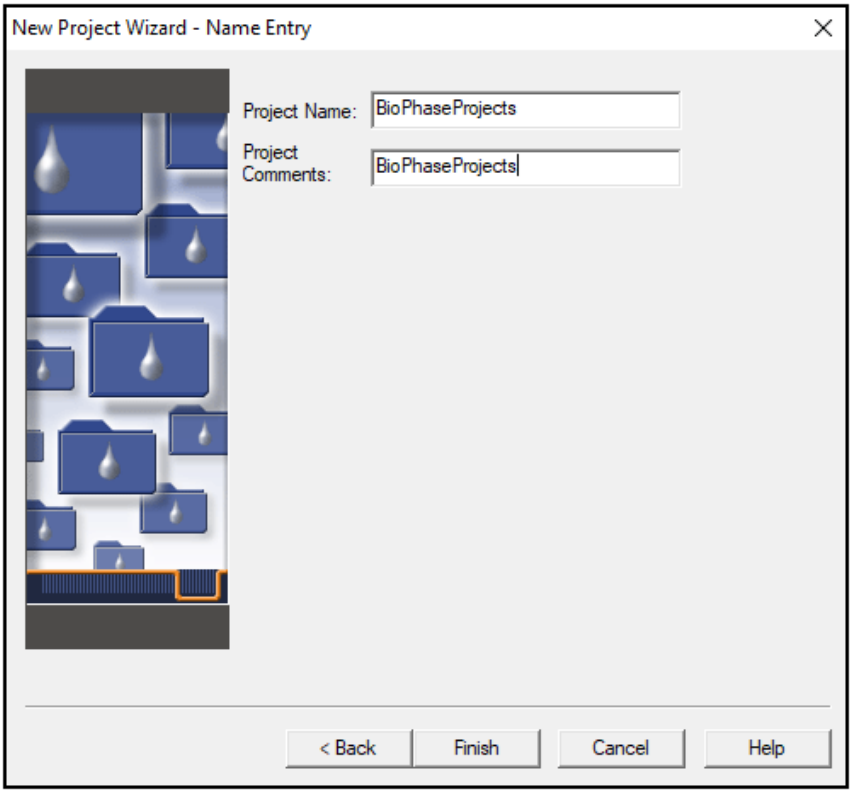
6. Make the applicable selections, and then click **Next**.

Figure 3-23 New Project Wizard - Copy Selection Page



7. Make the applicable selections, and then click **Next**.
   If there are no items to copy, then click the **Projects** folder.

Figure 3-24 New Project Wizard - Name Entry Page



8. Type a project name and, if applicable, project comments, and then click **Finish**.

Configure the System for the BioPhase 8800 Driver for Empower™

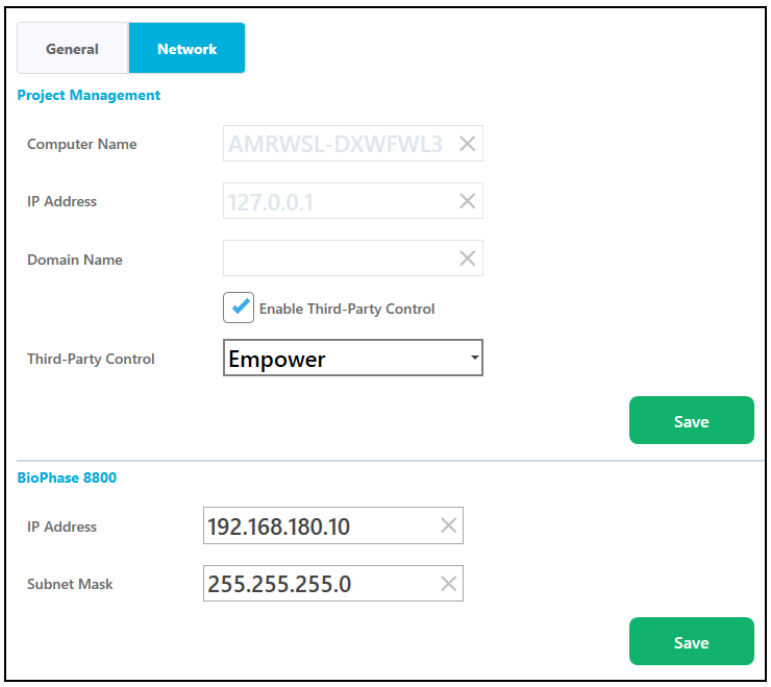
By default, the BioPhase 8800 system is configured for use with the BioPhase software. Use the following steps to configure the system for use with the BioPhase 8800 Driver for Empower™.

Note: The user name and pass code given below are the defaults. They might have been changed.

1. On the Front Panel of the BioPhase 8800 system, in the Login dialog, log on as a user with Administrator privileges:
   a. In the **Username** field, type `admin`.
   b. In the **Passcode** field, type `password`.
   c. Touch **Log In**.
2. Touch **Configuration**.

3. Touch **Network**.
4. In the Project Management section, do the following steps:
   a. Select the **Enable Third-Party Control** check box.
   b. In the **Third-Party Control** list, select **Empower**.
   c. Touch **Save**.
5. In the BioPhase 8800 section, do the following steps:
   a. In the **IP Address** field, type the same IP address that was used when the node was configured in the Waters Empower™ software.
   Refer to the section: Configure the Node.
   b. In the **Subnet Mask** field, type `255.255.255.0`.
   c. Touch **Save**.

Figure 3-25 Network Settings for the BioPhase 8800 Driver for Empower™



6. Turn off and then turn on the BioPhase 8800 system:
   a. In the top left corner of the touchscreen, touch (**System** icon).
   b. Touch **Power Off**.
   c. Press the power button on the front of the system.

Restore the Method Files for the Waters Empower™ Software

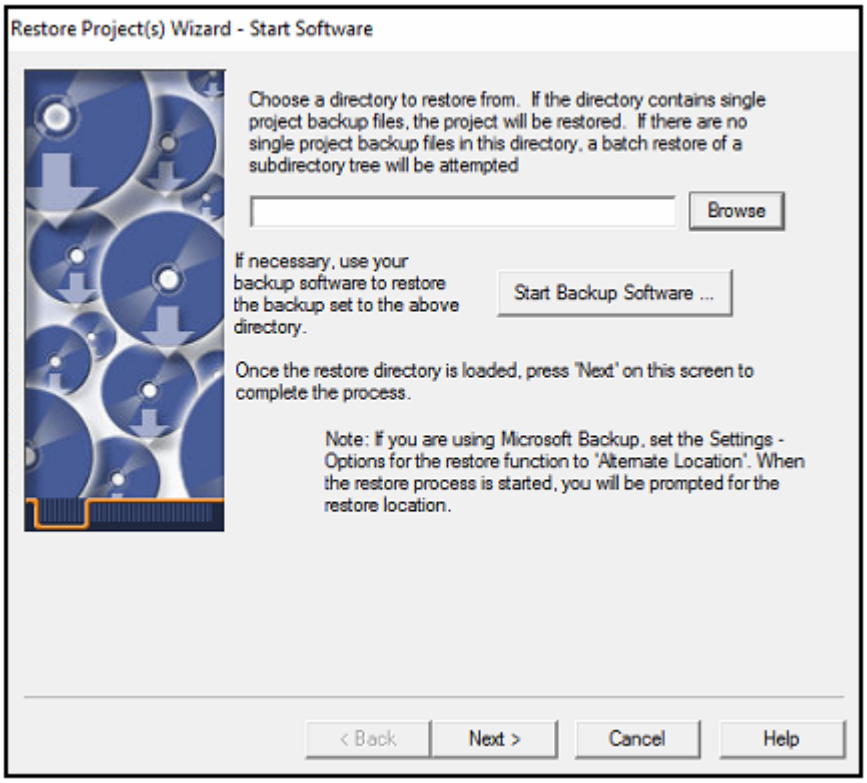
If the method files that were originally downloaded cannot be used, then do this procedure to restore the method files for use with the Waters Empower™ software. The method files are compatible with Waters Empower™ software version 3 FR4 and later.

1. Download the method files. Refer to the section: Download the Method and Project Files for the Waters Empower™ Software.
2. On the desktop, double-click the **Empower** icon, and then log on as a user with Administrator privileges.

Figure 3-26 Waters Empower™ Start Dialog

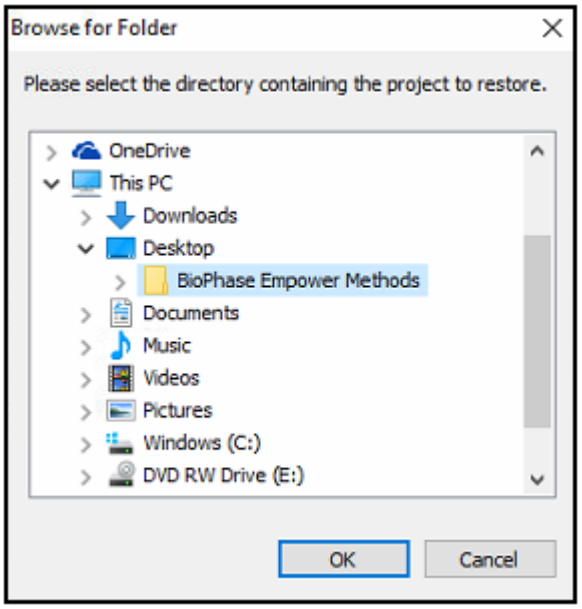
3. Click **Configure the System**.
4. Click **File** > **Restore Project**.

Figure 3-27 Restore Project Wizard - Start Software Page



5. Click **Browse**, browse to the location where the method files were saved originally, click the `BioPhase Empower Method` folder, and then click **OK**.

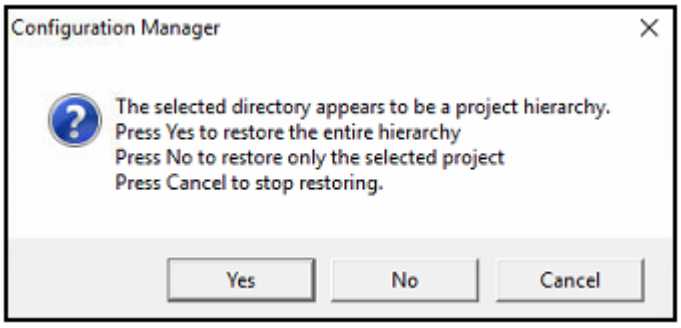
Figure 3-28 Browse for Folder Dialog



The files are added to the Empower database and are available to all Waters Empower™ software clients.

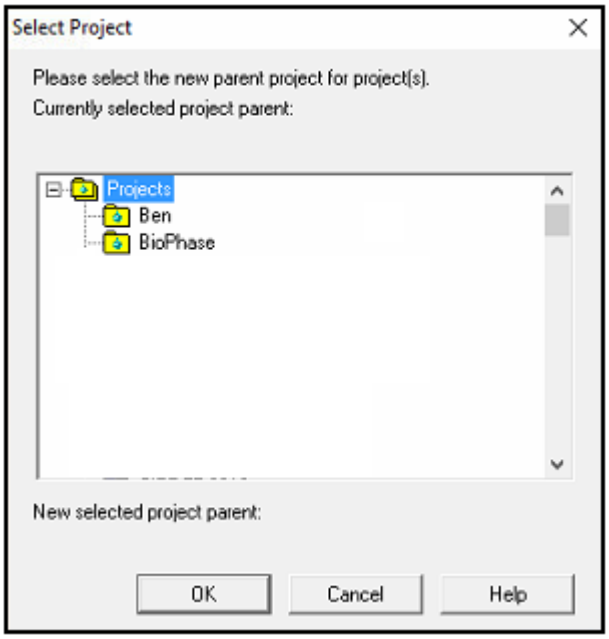
6. Click **Next**.

Figure 3-29 Configuration Manager Message



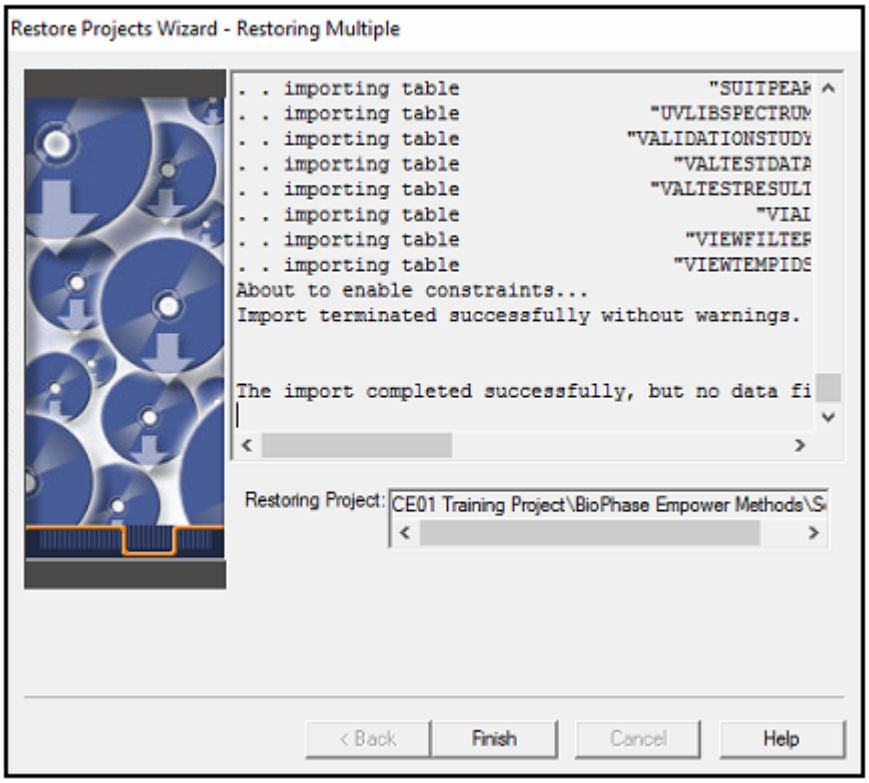
7. Click **Yes**.

Figure 3-30 Select Project Dialog



8. Select the parent project in which to save the method files, and then click **OK**.
9. Click **Next**.
10. When the file restoration is complete, click **Finish**.

Figure 3-31 Restore Project Wizard - Restoring Multiple Page



Known Issues in the BioPhase 8800 Driver for Empower™ 4

Note: The numbers in parentheses are reference numbers for each issue or feature in the SCIEX internal tracking system.

Issue	Notes
If the BioPhase 8800 driver for Empower™ and the BioPhase software are used at the same time, then issues with the software or the BioPhase 8800 system can occur. (BRKSW-2802)	Use either the BioPhase 8800 driver for Empower™ or the BioPhase software. Do not use both at the same time.
The .NET Framework version 4.7.2 must be installed before the BioPhase 8800 driver for Empower™ can be installed. (BRKSW-2878)	Install the .NET Framework 4.7.2 before the BioPhase 8800 is installed. Refer to the section: .
If the sample set is long, then the error message does not automatically scroll to the correct error. (BRKSW-2904)	In the validation panel on the right, click the error. If the error does not show in the view, then scroll to the highlighted error.
If the user touches on the Front Panel, then the system actions stop, but the sample set method that is running in the Waters Empower™ software does not stop. (BRKSW-2922)	To stop both system operation and the sample set method that is running, in the Waters Empower™ software, click (**Abort**). As an alternative, on the Front Panel of the BioPhase 8800 system, touch to stop system operation, and then in the Waters Empower™ software, click (**Abort**) to stop the sample set method.
If the user clicks **Set Up** in the Instrument Method tool bar in the Run Samples window, then the Waters Empower™ software stops responding. (BRKSW-2974)	Do not click **Set Up** in the Instrument Method tool bar in the Run Samples window. Use the status panel at the bottom of the BioPhase 8800 driver for Empower™ Direct Control pane to do manual equilibration or set up the system.

Issue	Notes
If the actual injection time is longer than the injection time specified in the **Run Time** column, then an error might occur. (BRKSW-2978)	1. Before a run is started, use Direct Control to prepare the system: • On the System Status tab for the applicable detector, click **Turn On**, and then wait for the detector to warm up. • On the Temperature tab, in the **Set to** fields for the cartridge and sample storage, set the temperature, click **Accept**, and then wait for the compartment to get to the specified temperature. 2. For shutdown methods, in the BioPhase Instrument Method Editor, on the Method Settings tab, clear the **Wait** check boxes for **Capillary Cartridge**, **Sample Storage**, and the detector.
If the Citrix software is in use, then the Reagent File Editor does not show the reagent files. (BRKSW-3006)	Import an instrument method, and change the reagents directly in the instrument method.
Regardless of the actual system connectivity, the Instruments tab in the Node Properties dialog shows that the system is set up and ready to use the Waters Empower™ software. (BRKSW-3008)	The correct status of system connectivity shows on the status panel at the bottom of the Direct Control pane.
The system status on the status panel at the bottom of the Direct Control pane shows an error but the Empower Run Samples window shows `System Idle`. (BRKSW-3015)	Use the status panel at the bottom of the Direct Control pane or the Empower Message Center to see the correct system status.
There is no option to initialize the system from the Run Samples window when the system is in the Error state. (BRKSW-3016)	At the bottom right of the Front Panel of the BioPhase 8800 system, touch the red exclamation mark to open the Events Log, and then click **Initialize System**.
If the user starts an action that will require a long time to complete, such as loading a large sample set method, before the user interface (UI) has had time to update, then the UI stops responding. (BRKSW-3046)	Before an on-screen action is selected, wait for the UI to load fully.

Issue	Notes
Reagent files are available only on computers where the BioPhase 8800 driver for Empower™ has been installed. Reagent files are not shared with other computers. If the Citrix software is in use, then the reagent files might not be available. (BRKSW-3048)	If the reagent set is not available, then add the reagents on the Reagent Plate Setup tab in the Method Editor when the instrument method is created. To use the same reagents for a different method, open the method and then click **SAVE AS** to save the method with a different name.
Only **psi** is available for units of pressure. Options for **bar** and **kPa** are not available. (BRKSW-3068)	Use psi.
(LIF) In the Peak Results table, the heading for the **Area** column shows **(µV*sec)** but the values in the column are in RFU. (BRKSW-3069)	Ignore the column heading.
If a user with Administrator privileges does not log off but applies the screen lock, then a second user can log on and see the last screen that was opened by the user with Administrator privileges. (BRKSW-3101)	A user with Administrator privileges must log off fully.
If the user clicks **Alter Running Samples** to pause and update the sample set, then an injection occurs when the sample set resumes. (BRKSW-3127)	Only click **Alter Running Samples** to start the next injection.

Contact Us

Customer Training

- In North America: NA.CustomerTraining@sciex.com
- In Europe: Europe.CustomerTraining@sciex.com
- Outside the EU and North America, visit sciex.com/education for contact information.

Online Learning Center

- SCIEX Now Learning Hub

SCIEX Support

SCIEX and its representatives maintain a staff of fully-trained service and technical specialists located throughout the world. They can answer questions about the system or any technical issues that might arise. For more information, visit the SCIEX website at sciex.com or contact us in one of the following ways:

- sciex.com/contact-us
- sciex.com/request-support

CyberSecurity

For the latest guidance on cybersecurity for SCIEX products, visit sciex.com/productsecurity.

Documentation

This version of the document supercedes all previous versions of this document.

To see this document electronically, Adobe Acrobat Reader is required. To download the latest version, go to https://get.adobe.com/reader.

The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

Note: To request a free, printed version of this document, contact sciex.com/contact-us.