

# 1 Minimum system requirements

Please refer to the Empower® software documentation for information regarding the technical requirements for your computer (PC).

**Application software**

- Empower® 3 software

**Operating system**

All service packs or current updates must be installed.

**Feature Release 2**

- 64-bit version of Windows XP
- 64-bit version of Windows 7

**Feature Release 3**

- 64-bit version of Windows 7
- 64-bit version of Windows 8.1

**Feature Release 4**

- 64-bit version of Windows 7
- 64-bit version of Windows 10

**Feature Release 5**

- 64-bit version of Windows 10

**.NET Framework**

- 64-bit version of Microsoft .NET Framework 4.7.1 or higher

## Instruments supported

The Metrohm IC Driver 2.1 for Empower® supports the following instruments:

- **850 Professional IC**  
(version: 2.850.1010, 2.850.2010, 2.850.2030)
- **881 Compact IC pro**  
(version: 2.881.0010, 2.881.0020, 2.881.0030)
- **930 Compact IC Flex**  
(version: 2.930.1100, 2.930.1160, 2.930.1200, 2.930.1260, 2.930.1300, 2.930.1360, 2.930.1400, 2.930.1460, 2.930.1500, 2.930.1560, 2.930.2100, 2.930.2160, 2.930.2200, 2.930.2260, 2.930.2300, 2.930.2360, 2.930.2400, 2.930.2460, 2.930.2500, 2.930.2560)
- **940 Professional IC Vario**  
(version: 2.940.1100, 2.940.1110, 2.940.1200, 2.940.1300, 2.940.1400, 2.940.1410, 2.940.1440, 2.940.1500, 2.940.1540, 2.940.2100, 2.940.2400, 2.940.2500)
- **942 Extension Module Vario**  
(version: 2.942.0040, 2.942.1060, 2.942.0500)
- **858 Professional Sample Processor**  
(version: 2.858.0010, 2.858.0020)  
with Liquid Handling Station (6.5330.130)  
with Magnetic Stirrer (2.741.0010)
- **889 IC Sample Center**  
(version: 2.889.0010, 2.889.0020)
- **945 Professional Detector Vario**  
(version: 2.945.0010, 2.945.0020, 2.945.0030)
- **800 Dosino**  
(version: 2.800.0010)  
Can only be operated in combination with an IC instrument.
- **Remote Box MSB**  
(version: 6.2148.010)  
Can only be operated in combination with an IC instrument.
- **944 Professional UV/VIS Detector**  
(version: 2.944.0010)
- **941 Eluent Production Module**  
(version: 2.941.0010)
- **IC Amperometric Detector**  
(version: 2.850.9110)  
Can only be operated in combination with an IC instrument.
- **IC Conductivity Detector**  
(version: 2.850.9010)  
Can only be operated in combination with an IC instrument.

## Limitations

1 DHCP Configuration may maximally include the following modules:

- 1 Sample Changer (889 Sample Center or 858 Sample Processor)
- 1 Professional Detector Vario
- 1 Professional UV/VIS Detector
- 1 Eluent Production Module
- The number of MSB instruments (e.g. Dosinos) depends on the number of available ports (according to the system configuration).
- 1 IC instrument



### NOTICE

A high number of connections may downgrade the performance and cause problems in slow systems.

This also applies for systems which are powered down but configured in Empower.



### NOTICE

One License for the Metrohm IC Driver 2.1 for Empower® per Computer is required.

## Firmware requirements

- 850/881 instruments: version 5.850.0109 or higher
- 858 instruments: version 5.858.0010 or higher
- 930/940/942 instruments: version 5.940.0100 or higher
- 889 instruments: version 0840.100-1.30 or higher
- 944 instruments: version 5.887.0013 or higher
- 941 instruments: version 5.846.0022 or higher
- 945 instruments: version 5.940.0100 or higher



### NOTICE

Firmware Updates have to be executed by a service technician.



### NOTICE

The Windows user must have administrator rights in order to be able to install the software.

## 2 Preconditions

### Administrator rights

The user must have administrator rights to be able to install the software.

### Energy settings



#### CAUTION

Data loss may occur if the PC switches to sleep mode during a determination. Therefore, you should **disable** the **sleep mode** in the energy settings of the operating system and for USB.

## 3 Installation



#### NOTICE

The installation procedure differs whether you install the Metrohm IC Driver for the first time or you perform an upgrade from version 2.0. If you perform an upgrade, you first have to uninstall version 2.0 and afterwards install version 2.1. Do not install version 2.1 on top of version 2.0 or version 1.1!

- Base installation: *See chapter 3.2, page 7.*
- Upgrade: *See chapter 3.1, page 5.*



#### NOTICE

### Regulated operation (FDA)

In regulated operation, the current installation needs to be checked with the "Database Installation Verification Utility" in the start menu folder of Empower before installing the Metrohm IC Driver 2.1 for Empower®. Hereby a report is created that shows all the changes in the software Empower.

**Start ► All Programs ► Empower ► Verify Files**

## 3.1 Upgrade Installation

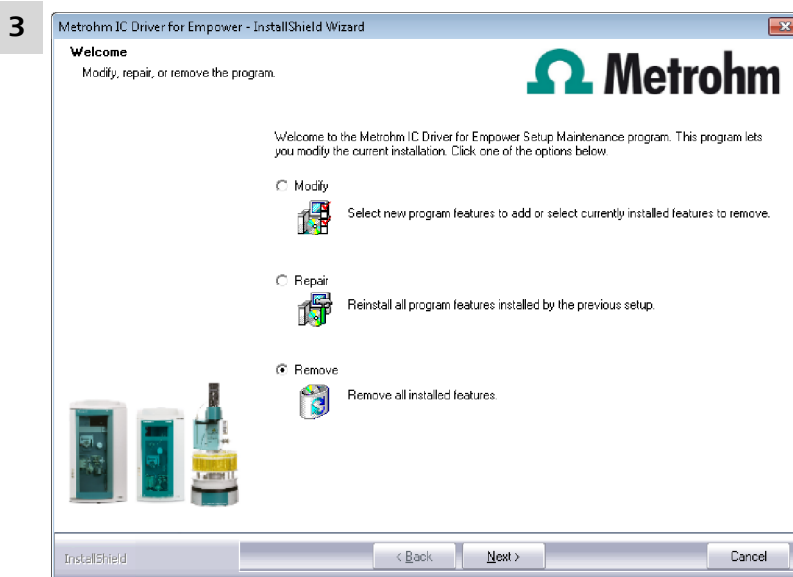
If you operate several systems, use a separate PC for the Metrohm IC System. We recommend this in order to avoid that other systems are affected by a reboot.

**1** Stop **Run Samples**, **Browse projects** and **Processing Server**.

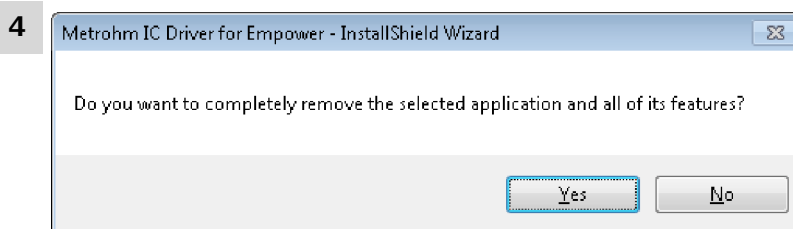
Switch off all instruments.

Reboot the computer.

**2** Before installing the Metrohm IC Driver 2.1 you first have to uninstall the previous version. For this purpose double-click on the file **setup.exe**.

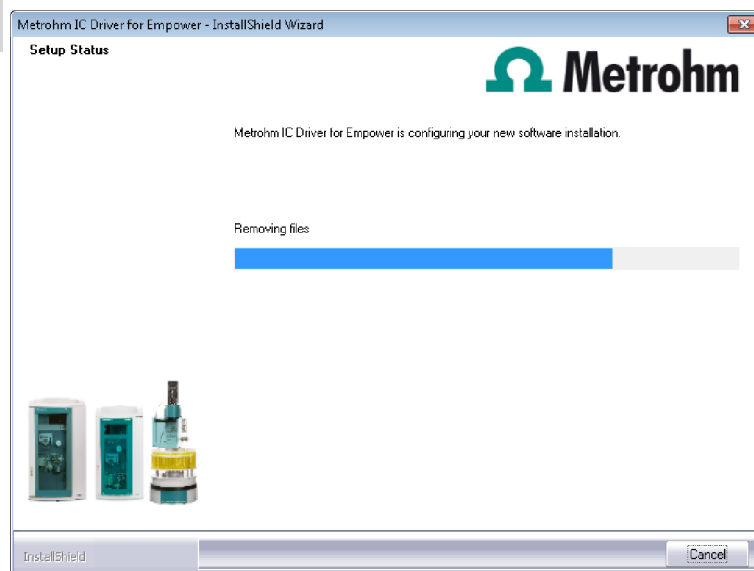


Select **[Remove]** and click on **[Next]**.



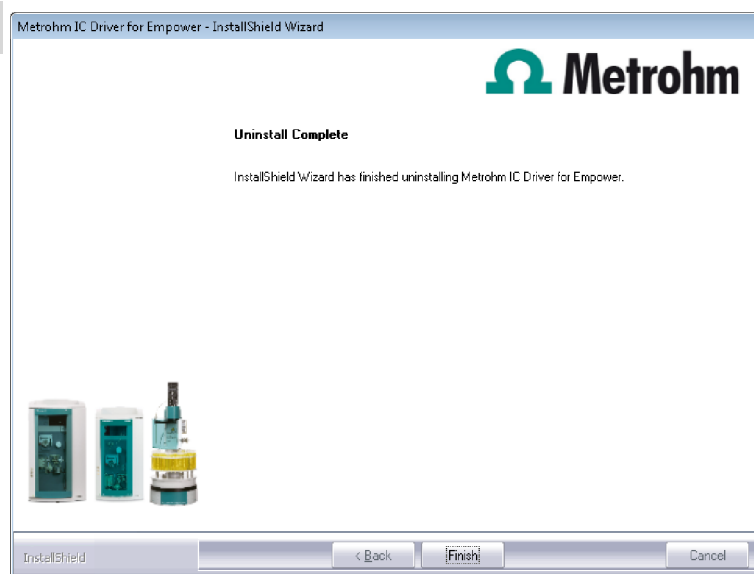
Confirm the message with **[Yes]**.

5



Wait for the uninstallation to complete.

6



Click on **[Finish]**.



#### NOTICE

Make sure that all files were removed.

Therefore, open the following path: C:\Program Files (x86)\Metrohm\IC Driver for Empower

If the folder **IC Driver for Empower** contains remaining files, delete them by hand.

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Go to *chapter 3.2, page 7* and install the Metrohm IC Driver 2.1 as described.

- 8 Turn on all instruments.

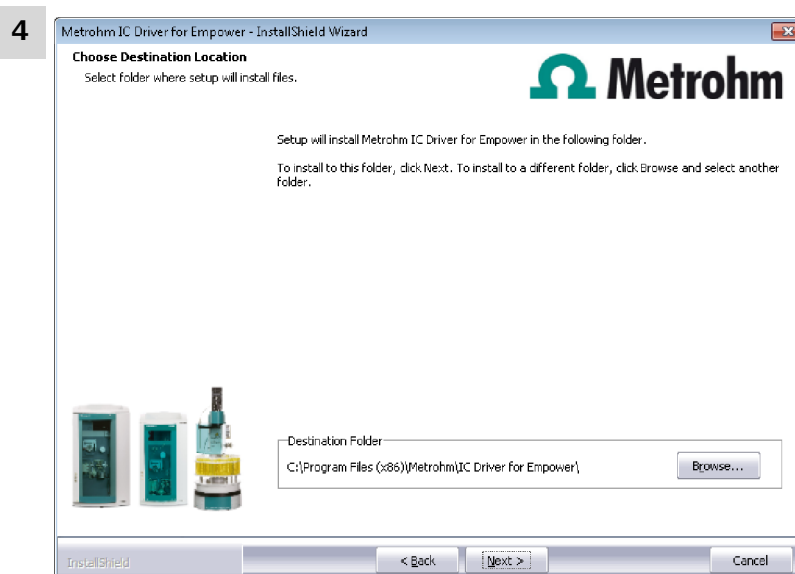
## 3.2 Base Installation

- 1 Prior to the installation, switch off all modules.
- 2 The installation process starts automatically when you insert the CD into the drive. If this option is disabled on your computer, double-click on the file **setup.exe**.

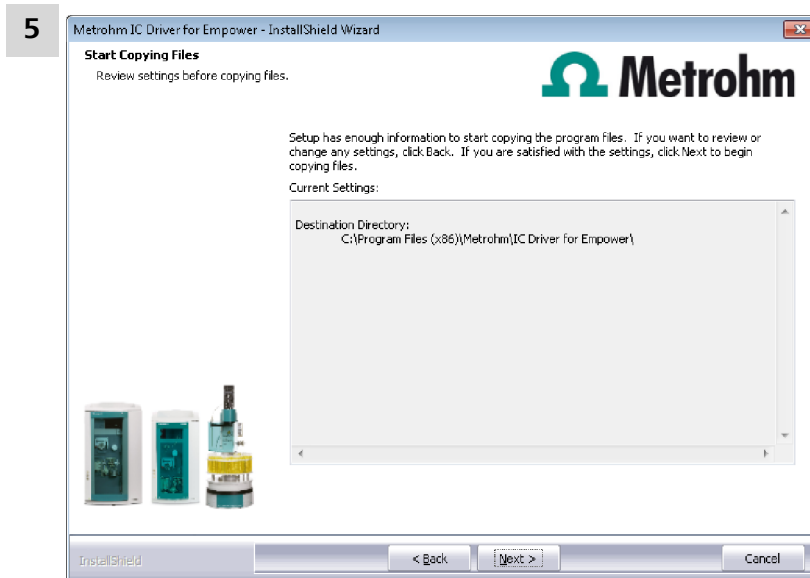
Afterwards, click on **[Next]**.



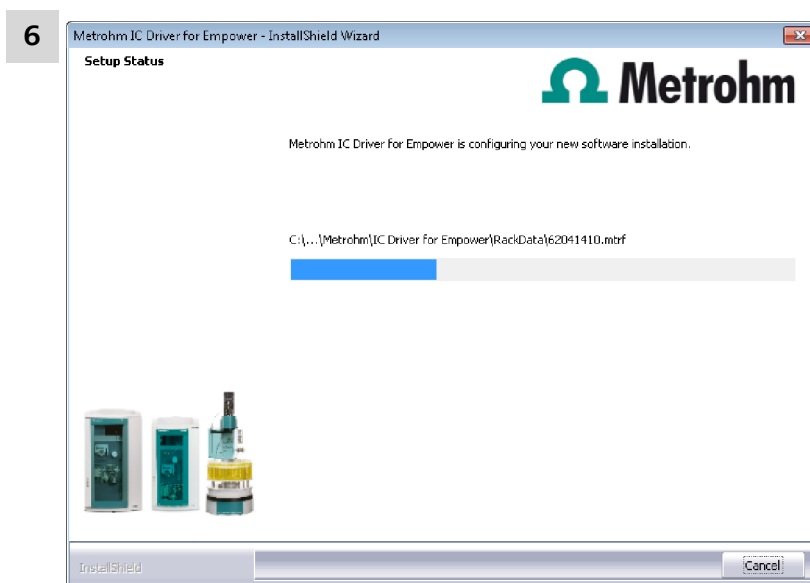
During the installation process, the Welcome screen appears first. Click on **[Next]** to install the software.



Now confirm the target folder for the **Metrohm IC Driver 2.1 for Empower®** installation with **[Next]** or select a different target folder with **[Browse...]**.



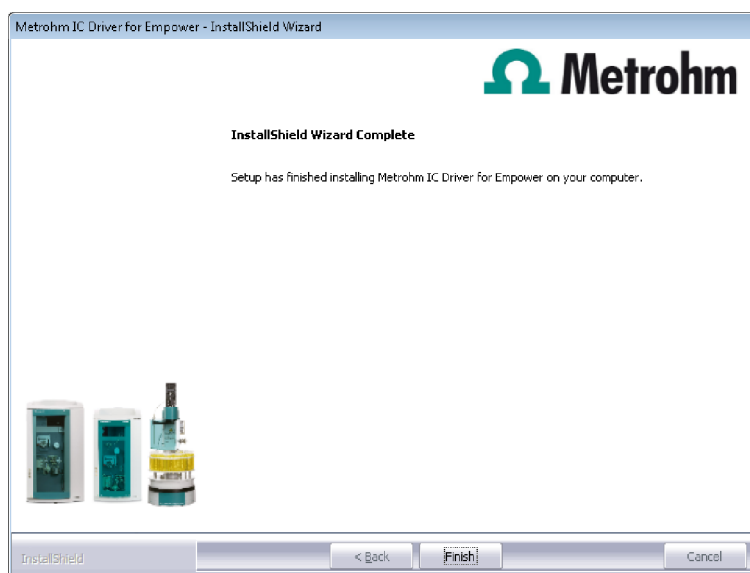
Click on **[Next]**.



Wait for the installation to complete.



7



Click on **[Finish]**.

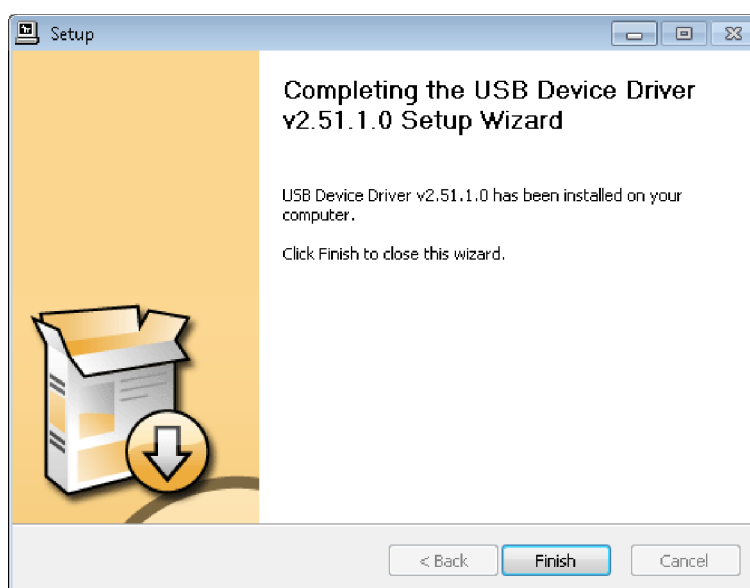
At the end of the installation, the file **Empower.log** is created. This file contains all relevant information concerning your current **Empower** installation. Save this file on your hard drive for future reference and print it (add to IQ).



#### NOTICE

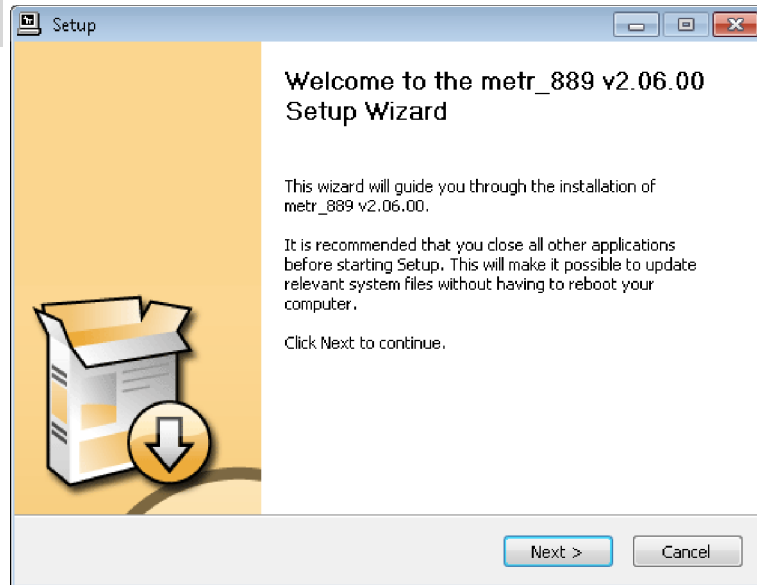
You find the **InstallLog** file in the **Windows** folder under the name **Empower.log**. The **InstallLog** file contains a listing of all files copied to your computer during the installation and a confirmation that the installation has been successfully completed.

8



Click on **[Finish]** to complete the installation.

9



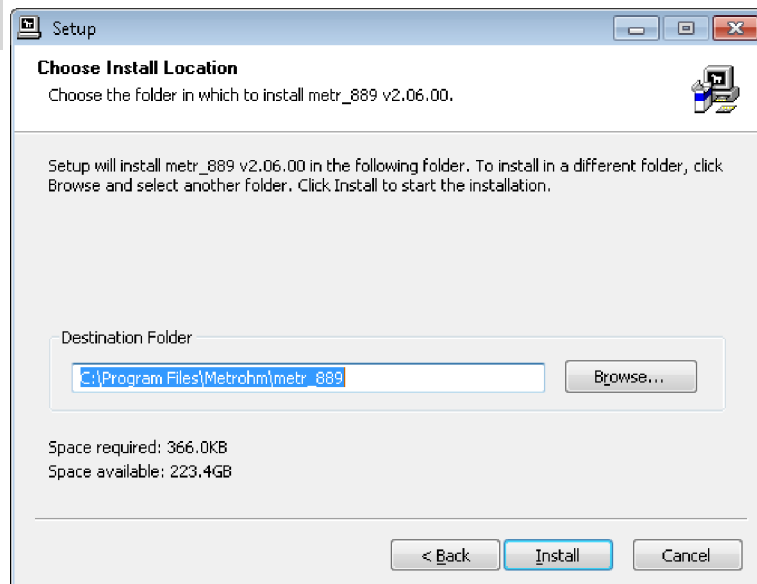
Next you have to install the 889 IC Sample Center driver. For this purpose click on **[Next]**.



#### NOTICE

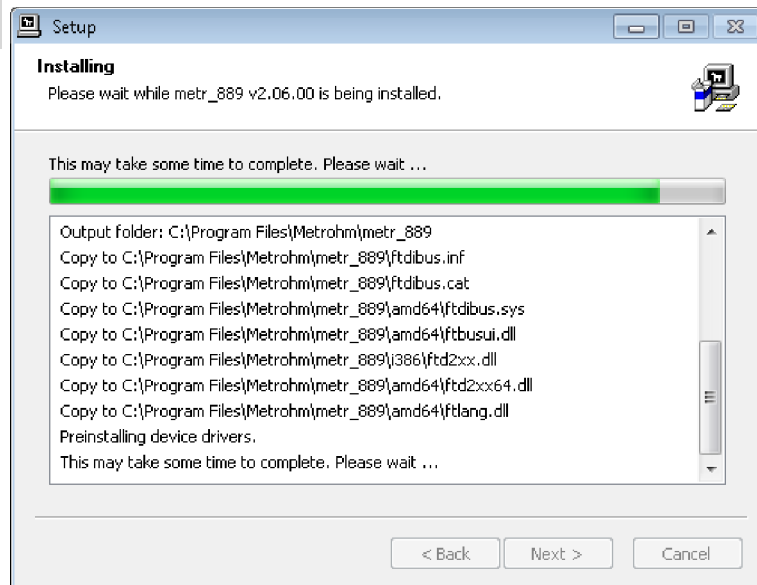
If you use Windows 10, the installation of the 889 IC Sample Center driver does not work as described in the following steps. To install 889 IC Sample Center driver on Windows 10, proceed as described in *Installation of drivers, chapter 5, page 14*.

10



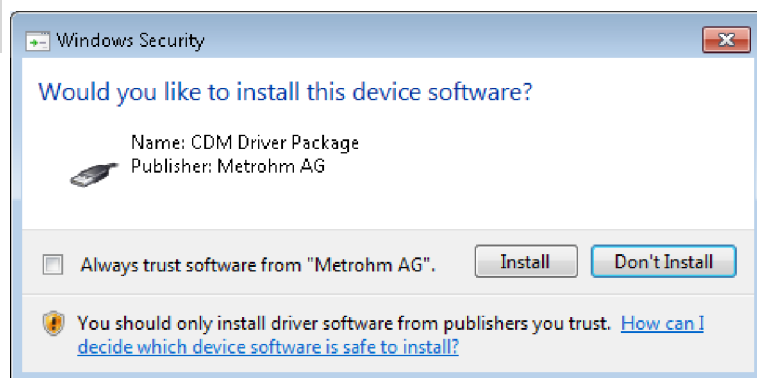
Confirm the target folder with **[Install]** or select a different target folder with **[Browse...]**.

11



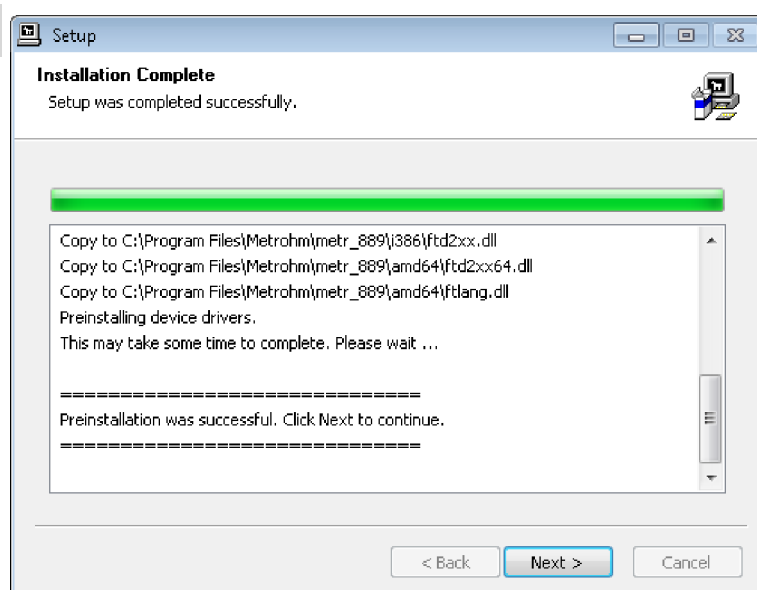
Wait for the installation to complete. Afterwards click on **[Next]**.

12



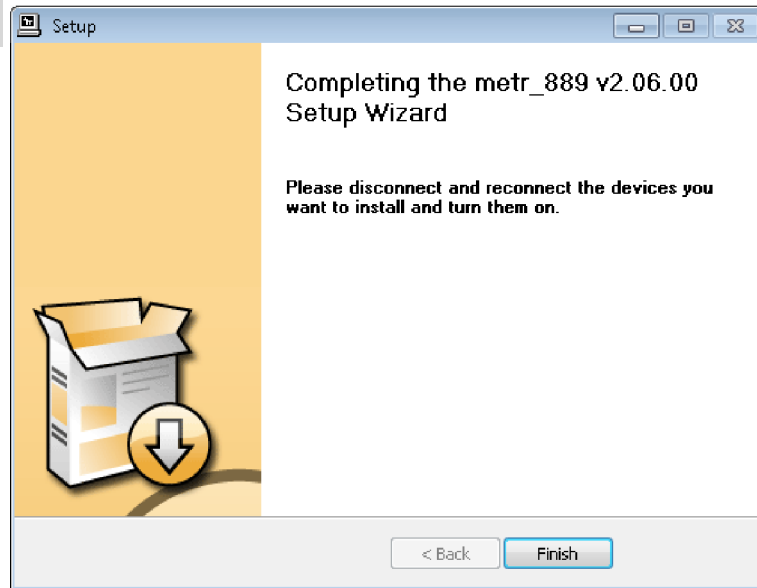
Click on **[Install]** to install the CDM driver package.

13



Wait for the installation to complete. Afterwards click on **[Next]**.

14



Disconnect and reconnect the instruments you want to install. Afterwards click on **[Finish]** to end the installation.

**15** If you are asked to restart your PC, shut down your PC and restart it again.

**16** In regulated operation, start the program "Database Installation Verification Utility" in the start menu.

**Start ► All Programs ► Empower ► verify files**

The result list shows all changes to the current Empower installation. Usually the Metrohm IC driver software does not cause any changes in Empower.

When using a special sample rack, the adjusted rack data is saved in the file „RackCodeMapping.html“. When performing the „verify files“ function, this file is shown as changed.

Print out the list with the record of changes and add to the IQ documents.

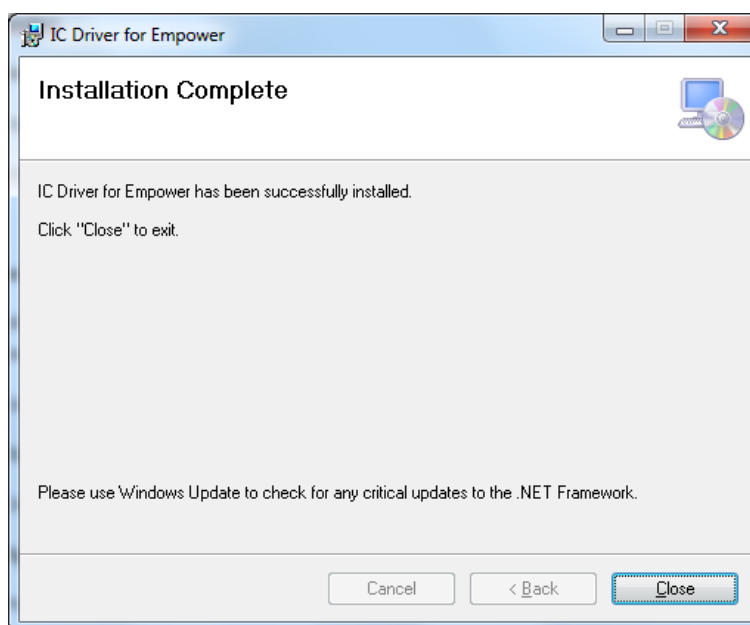
### 3.3 Installation in a Citrix environment

To install the **Metrohm IC Driver 2.1 for Empower®** in a Citrix environment, the following preconditions must be met:

- Empower® must be installed according to the Waters instructions.
- Empower® must be configured in a Citrix Xen App Server 6.5 environment. For minimum system requirements, refer to the Waters instructions.

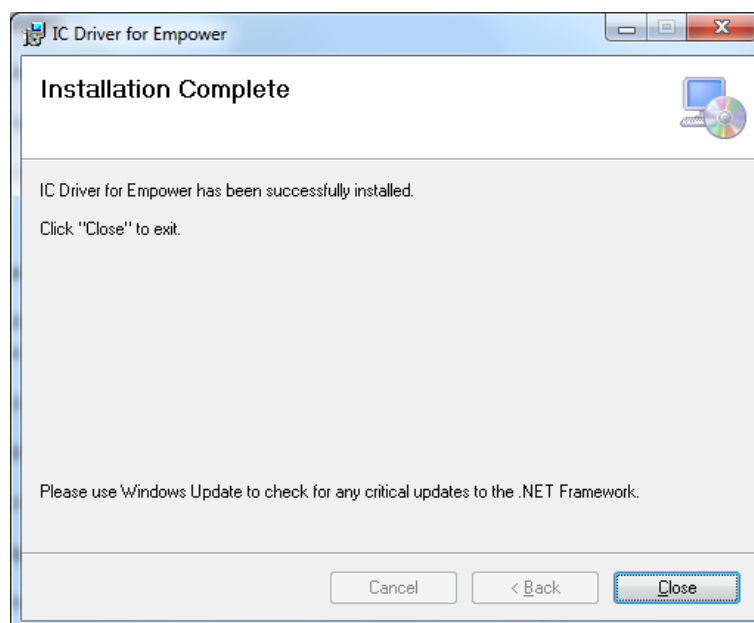
- 1** Install the Metrohm IC Driver 2.1 for Empower® on the Citrix Server.

Follow the instructions given in *chapter 3.2, page 7*.



- 2** Install the Metrohm IC Driver 2.1 for Empower® on every client (LAC/E or computer) to which a Metrohm IC instrument is connected.

Follow the instructions given in *chapter 3.2, page 7*.



## 4 Uninstalling

- 1 In order to uninstall the **Metrohm IC Driver 2.1 for Empower®**, start the file **setup.exe** on the installation CD or go to:
  - in Windows XP - **Control Panel ► Software**
  - in Windows 7 / Windows 8.1 / Windows 10 - **Control Panel ► Programs and Features**
- 2 Click on **Metrohm IC Driver 2.1 for Empower®**.
- 3 Select **Change/Remove**.

## 5 Installation of drivers

In normal cases, the installation routine of **Metrohm IC Driver 2.1 for Empower®** automatically installs all the drivers necessary for controlling the supported devices. If you use Windows 10, it is necessary to manually install the driver for the 889 IC Sample Center.



### NOTICE

The following description applies for Windows 10.

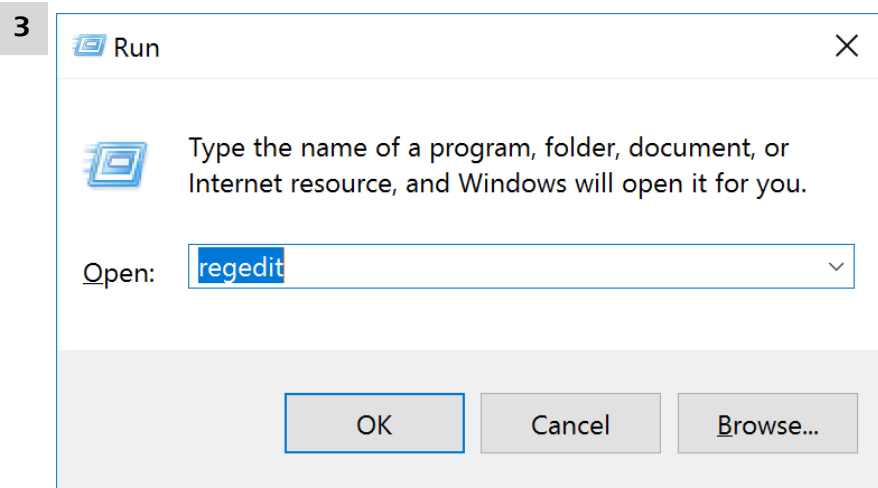
- 1 Open the Windows Device Manager. The corresponding device can be found under **Other devices**.
- 2 Right-click on the device. The context menu opens.

- 3 In the context menu, select **Update driver software....** A dialog window opens.
- 4 Select **Browse my computer for driver software.** The file selection dialog opens.
- 5 Navigate to the installation medium (e.g. USB flash drive or CD drive).
- 6 On the installation medium, open the folder **Metrohm IC Driver 2.1 for Empower.** Choose the subfolder **889Driver.** It contains the driver for the 889 IC Sample Center.
- 7 Apply the selection with **[OK]**. A Windows safety prompt is displayed. In order to install the driver, click on **[Install]**.
- 8 After successful installation, close the Device Manager.

## 6 Downgrading from Metrohm IC Driver 2.1 to Metrohm IC Driver 2.0

Besides uninstalling Metrohm IC Driver 2.1 and installing Metrohm IC Driver 2.0, it is necessary to delete some registry keys manually.

- 1 Uninstall Metrohm IC Driver 2.1 for Empower® (see chapter 4, page 14).
- 2 Open the **Run** dialog.
  - Windows 10, Windows 8.1, Windows 7:  
Press **Windows logo key + R.**
  - Windows XP:  
Find the **Run** dialog in the start menu.



Type **regedit** in the text box.

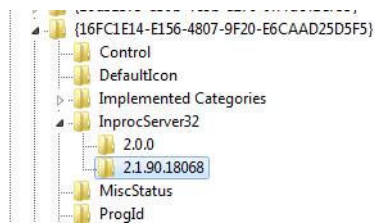
**4** Click on **[OK]**.

**5** Delete all keys higher than 2.0.0 in the following folders.

- HKEY\_CLASSES\_ROOT\Wow6432Node\CLSID\{4F8B6669-3A56-491D-B6B6-6E4B8064BCBD}\InprocServer32
- HKEY\_CLASSES\_ROOT\Wow6432Node\CLSID\{DA0745A9-7FB2-4F39-85E0-7DD12905E449}\InprocServer32
- HKEY\_CLASSES\_ROOT\Wow6432Node\CLSID\{16FC1E14-E156-4807-9F20-E6CAAD25D5F5}\InprocServer32

Delete the keys with right-click, click **delete**.

Example:



**6** Install Metrohm IC Driver 2.0 for Empower™. For further information, refer to the installation guide for Metrohm IC Driver 2.0 for Empower™ (8.102.8068EN).