thermo scientific

Instruction Sheet

Thermo Scientific Orion Star T900 Series Titrator Computer Software

Thermo Scientific™ Orion Star™ T900 series computer software is designed to work with Orion Star T910 pH, T920 redox, T930 ion and T940 all-in-one titrators. The computer software facilitates the transfer of method, titration, standardization, calibration and direct measure data from your Orion Star T900 series titrator to a computer for data viewing, data backup and report generation.

For comprehensive information on titrator setup, operation and advanced features, refer to the titrator user manual on www.thermofisher.com/titrator.

IS-T900PCSW-E Revision B
Revision Date: November 15, 2019

System Requirements

- The titrator must have software revision V3.3.0 or higher installed to communicate with the computer software
- Microsoft® Windows® 7 and higher computer operating systems are supported
- The computer should have the latest Windows updates installed
- The operator must have administrative computer access to use the computer software

Connecting Your Titrator to a Computer

The titrator connects to a computer via a virtual Ethernet over USB connection.

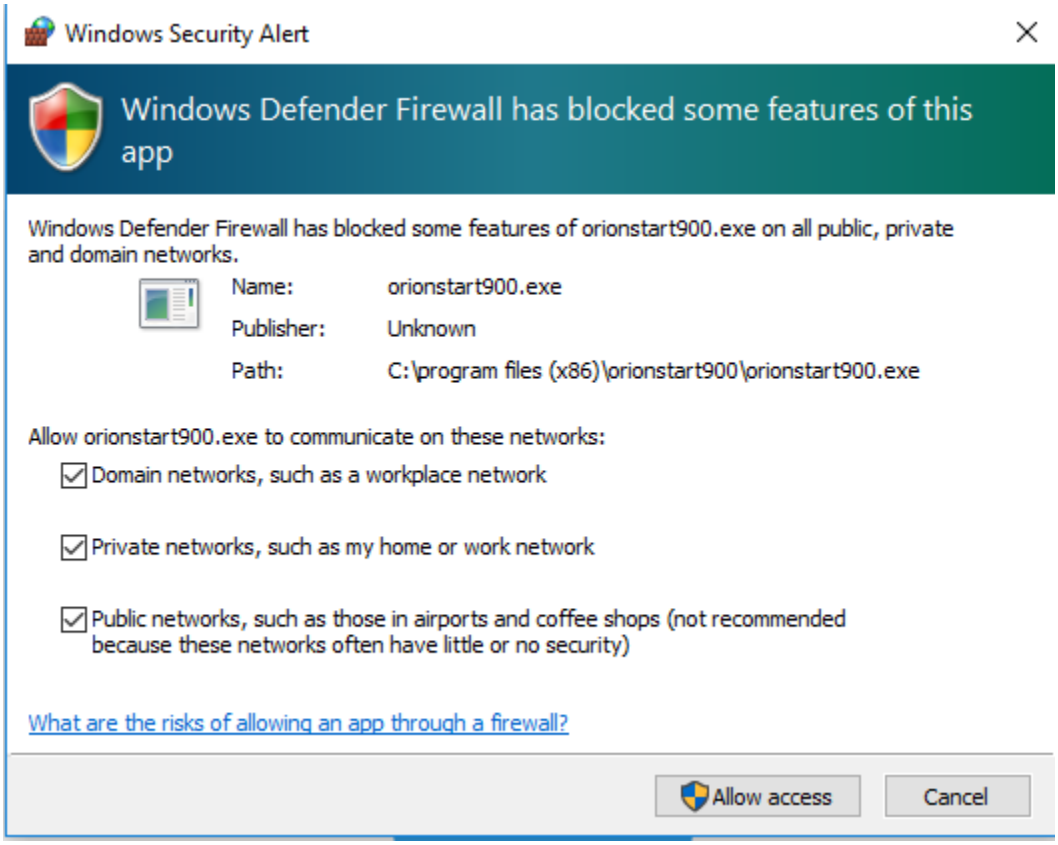
1. Ensure the titrator has the latest software revision and then power on the titrator.
2. Using the computer cable included with the titrator, connect the type B (square) end of the USB cable to the USB B connector on your titrator. Then connect the type A (rectangular) end to any available USB type A connector on your computer.

3. Windows should automatically detect the titrator and install the required driver, which may take a few minutes when you connect a titrator for the first time. You do not need to manually download or install any drivers, as the required RNDIS driver is included with Windows operating systems.

Installing the Computer Software

1. Download the computer software at www.thermofisher.com/orionsoftware, save the file to any convenient location on the computer and unzip/extract the folder to the same location on the computer.
2. Double click the **setup.exe** file to launch the installer.
3. If you have anti-virus software installed, it may not recognize the software. If any warnings appear, click to allow the files to install.
4. Follow the on-screen instructions to finish installing the computer software.
5. Once the software is installed, an OrionStarT900 icon will appear on your desktop. Double click this icon to launch the computer software.

6. When launching the software for the first time, you may see a message from the Windows firewall regarding what types of networks to allow. It is recommended that you select all network types before clicking “allow access”. The RNDIS network over USB connection is considered a “public” network by Microsoft and **the computer software must be allowed to access public networks to function**.
    a. See the following screenshot as an example:

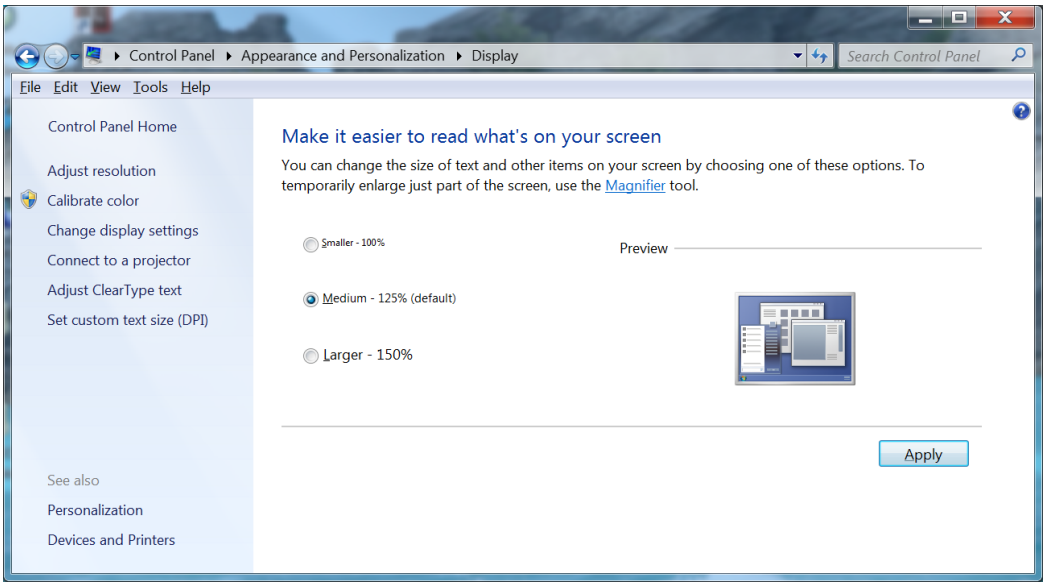


    b. If your company has 3rd party firewall software or other non-standard configuration, you may need to contact your IT department to make sure the connection is allowed. The software will not function if it cannot connect to the RNDIS network.

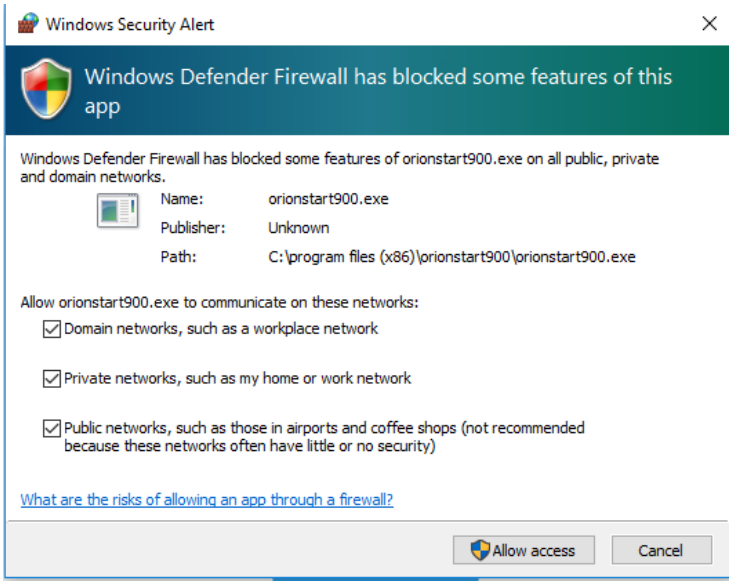
7. Restart your computer to ensure the Orion Star T900 series computer software is fully installed before opening the program.

Using the Computer Software

Note: The computer display size of text and other items on your screen must be set to the default percentage to properly view the computer software.



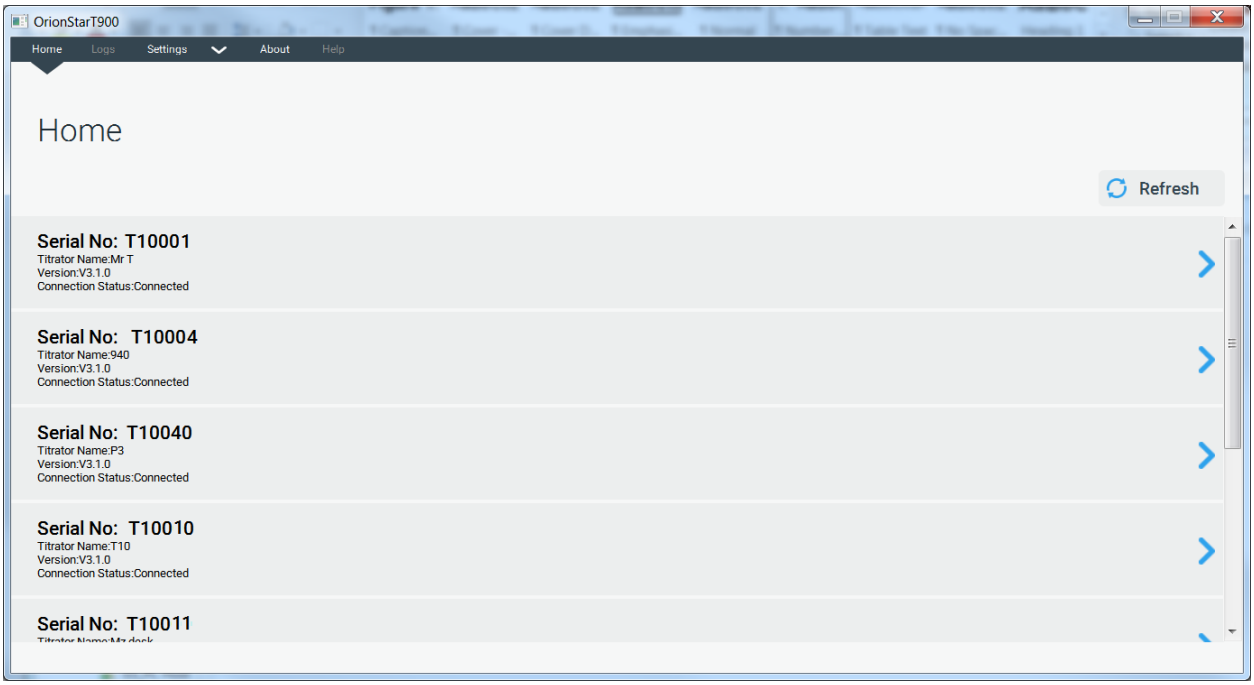
1. Double click the OrionStarT900 icon on your desktop to launch the computer software.
    a. When launching the software for the first time, you may see a message from the Windows firewall regarding what types of networks to allow. It is recommended that you select all network types before clicking “allow access”. The RNDIS network over USB connection is considered a “public” network by Microsoft and **the computer software must be allowed to access public networks to function**. See the following screenshot as an example:



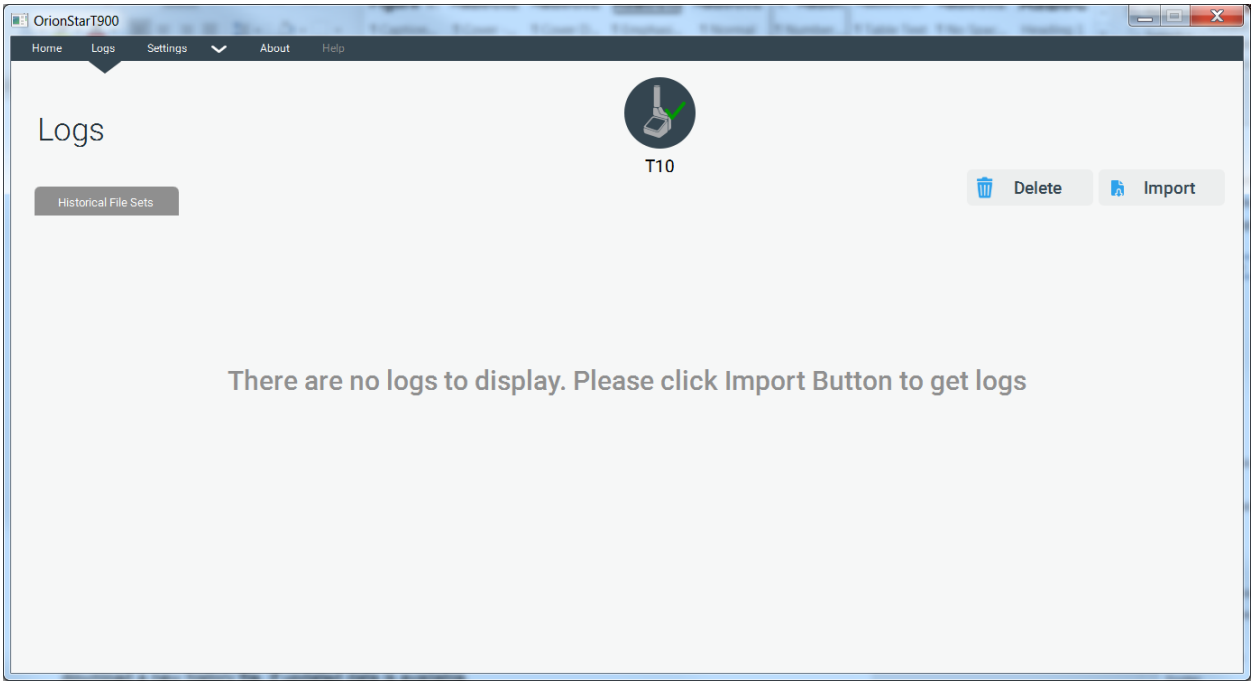
b. If your company has 3rd party firewall software or other non-standard configuration, you may need to contact your IT department to make sure the connection is allowed. The software will not function if it cannot connect to the RNDIS network.

2. Once you select your language, the software will open to the “home” screen. The home screen shows a list of all titrators you have previously connected to, along with their serial number, instrument name and connection status.

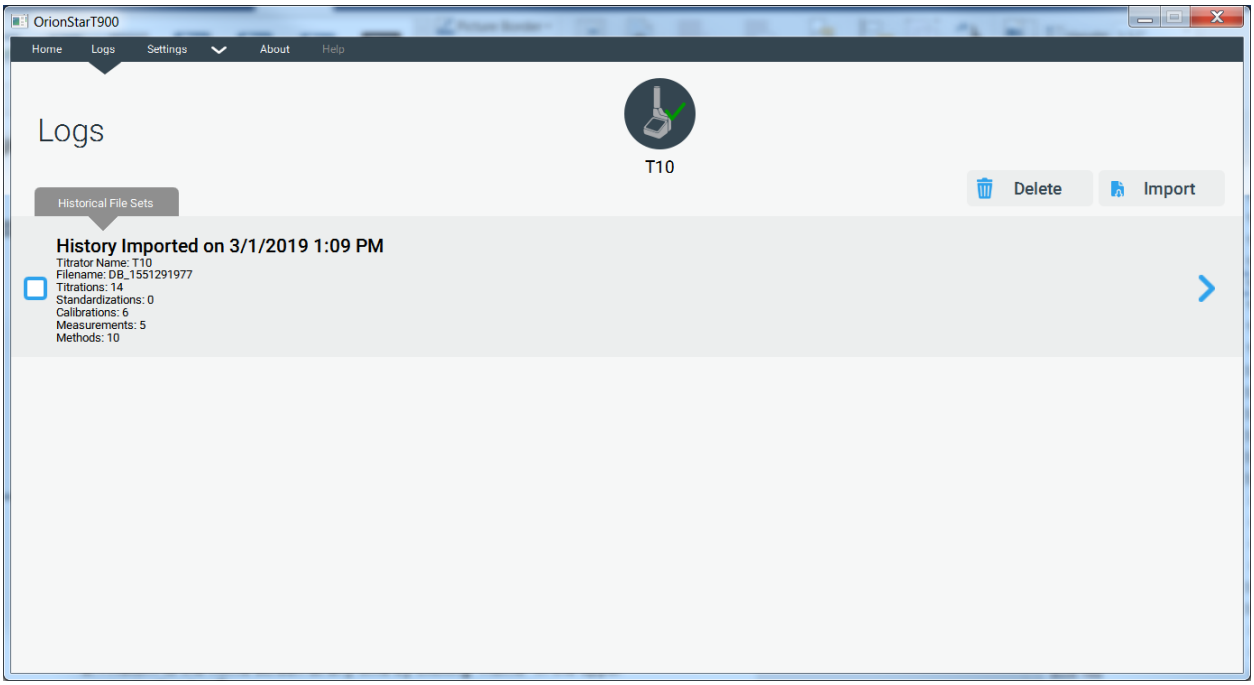
   a. It takes a few moments for newly connected titrators to be visible on the network. Wait a few moments and then press the “Refresh” icon.



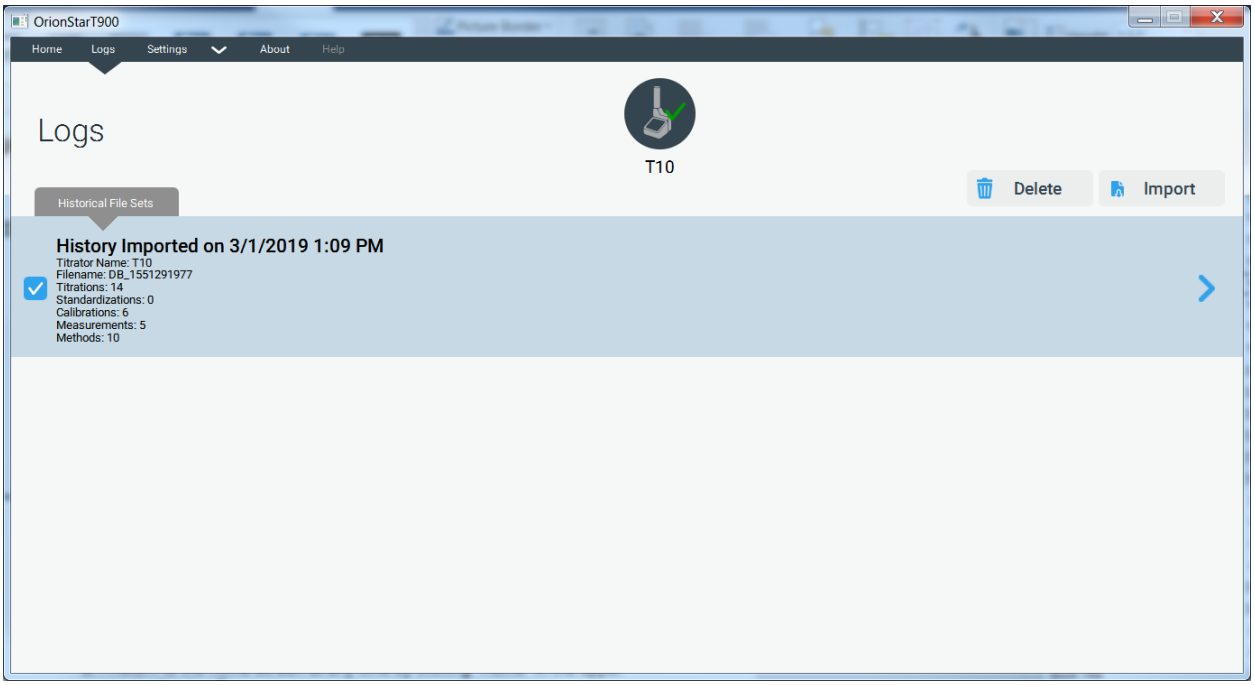
3. Click on the desired titrator to access its Logs screen.



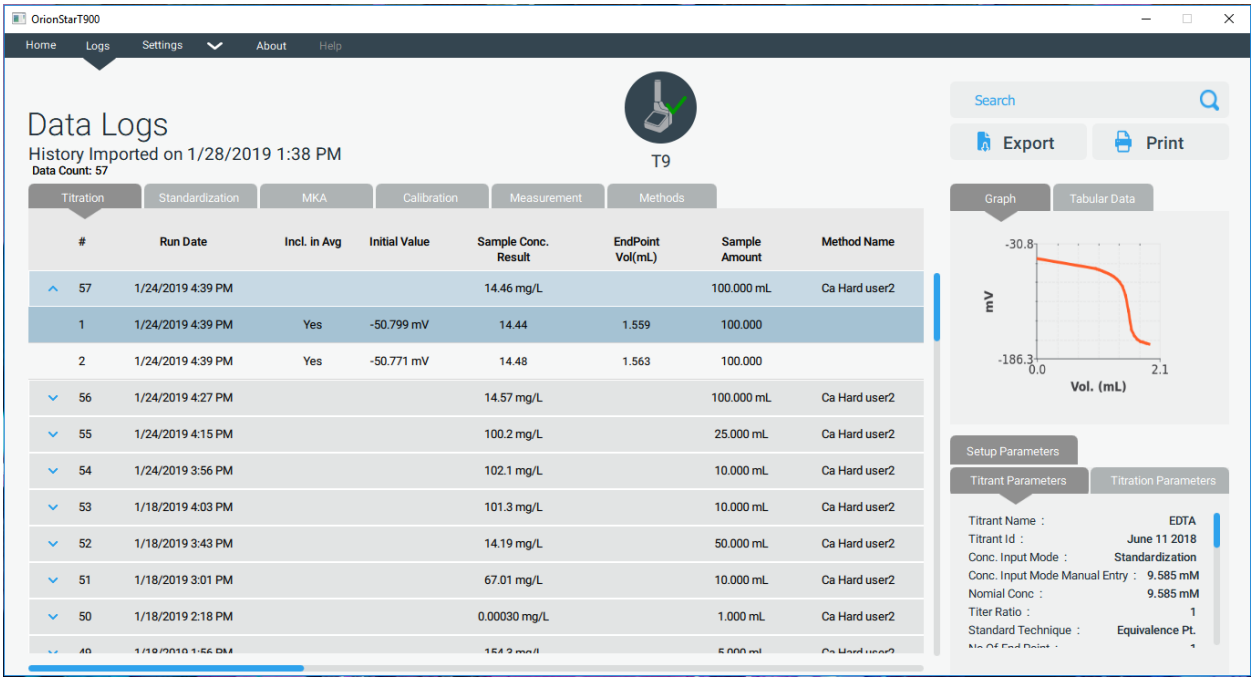
4. Click the “Import” button to download the selected titrator’s data as a history file. Once a history file has been downloaded, you can view it again at any time without connecting to the titrator.
    a. Press the “Import” button again to download a new history file when updated data is available on the titrator.

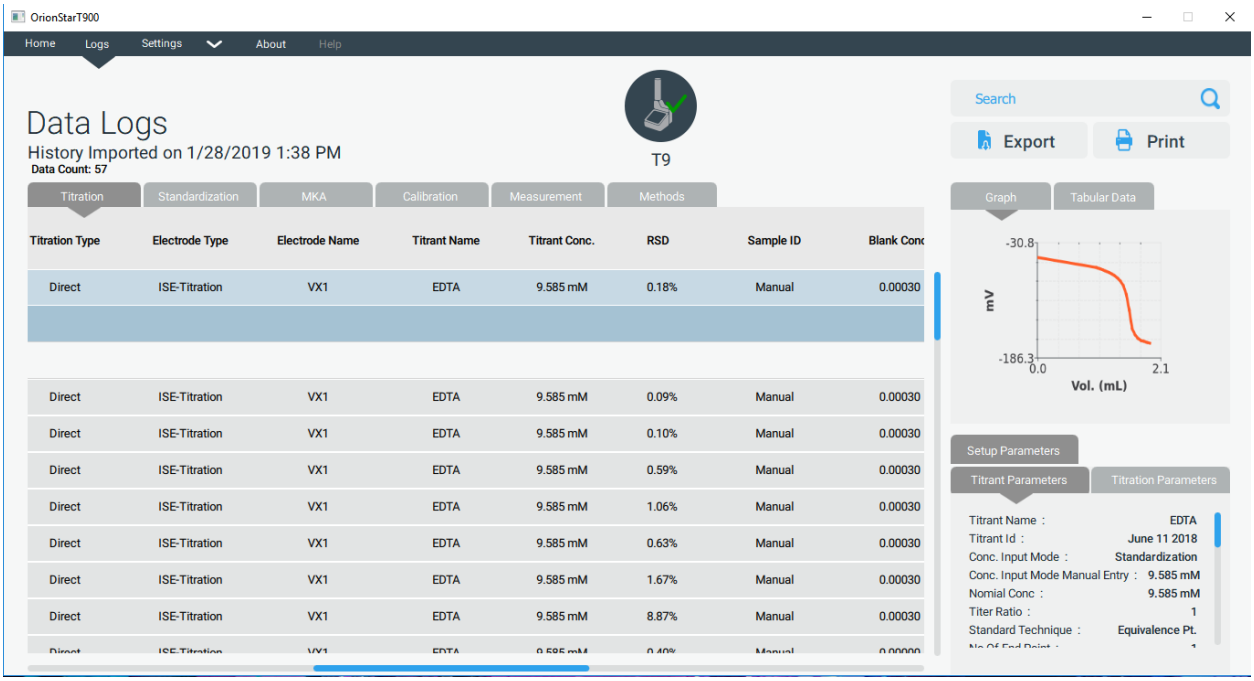


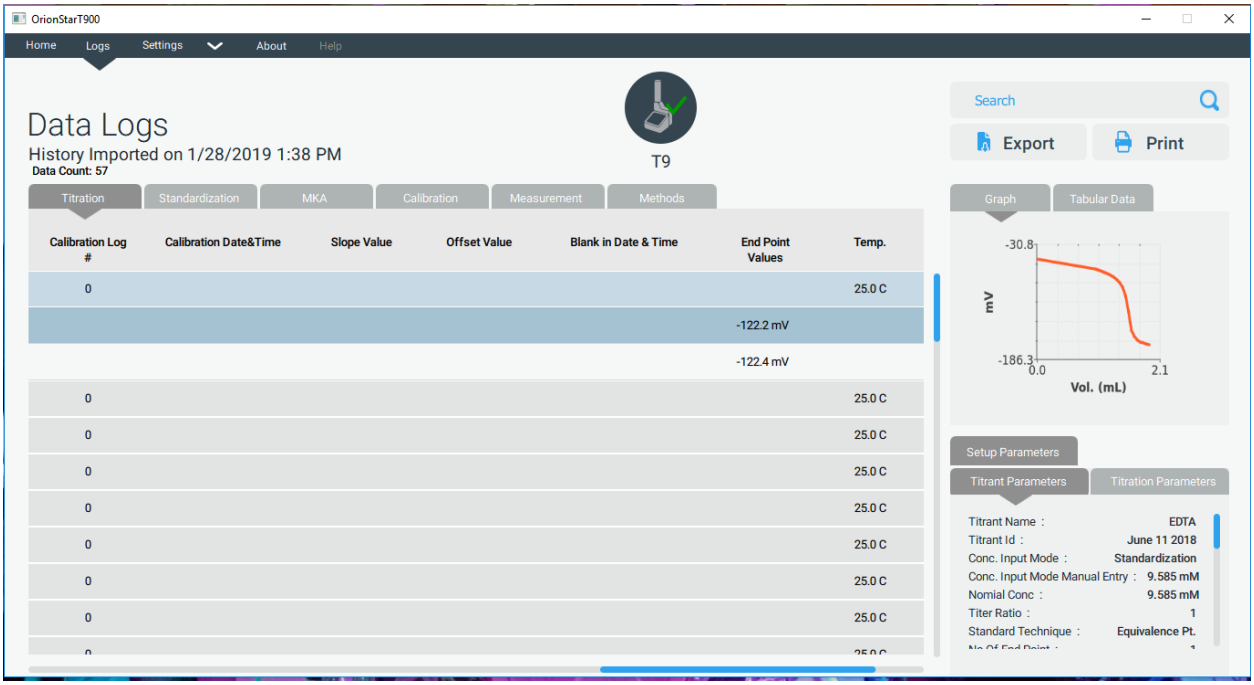
5. Click on a history file to open it and browse the titrator data. You can return to the home screen at any time by clicking “Home” in the upper navigation bar.



6. Click the Titration tab to view the titration data. Expand the summary line to view the individual cycle data. Click on an individual cycle data line to view its data, graph results and setup parameters.
    a. Scroll right to view all data associated with the individual cycle data lines.




OrionStarT900
Home
Logs
Settings
About
Help
Data Logs
History Imported on 1/28/2019 1:38 PM
Data Count: 57
T9
Search
Export
Print
Titration
Standardization
MKA
Calibration
Measurement
Methods
Graph
Tabular Data
Titration Type
Electrode Type
Electrode Name
Titrant Name
Titrant Conc.
RSD
Sample ID
Blank Conc
Direct ISE-Titration VX1 EDTA 9.585 mM 0.18% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 0.09% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 0.10% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 0.59% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 1.06% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 0.63% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 1.67% Manual 0.00030
Direct ISE-Titration VX1 EDTA 9.585 mM 8.87% Manual 0.00030
-30.8
mV
-186.3
0.0
2.1
Vol. (mL)
Setup Parameters
Titrant Parameters
Titration Parameters
Titrant Name : EDTA
Titrant Id : June 11 2018
Conc. Input Mode : Standardization
Conc. Input Mode Manual Entry : 9.585 mM
Nomial Conc : 9.585 mM
Titer Ratio : 1
Standard Technique : Equivalence Pt.


OrionStarT900
Home
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History Imported on 1/28/2019 1:38 PM
Data Count: 57
T9
Search
Export
Print
Titration
Standardization
MKA
Calibration
Measurement
Methods
Graph
Tabular Data
Calibration Log #
Calibration Date&Time
Slope Value
Offset Value
Blank in Date & Time
End Point Values
Temp.
0 25.0 C
-122.2 mV
-122.4 mV
0 25.0 C
0 25.0 C
0 25.0 C
0 25.0 C
0 25.0 C
0 25.0 C
0 25.0 C
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mV
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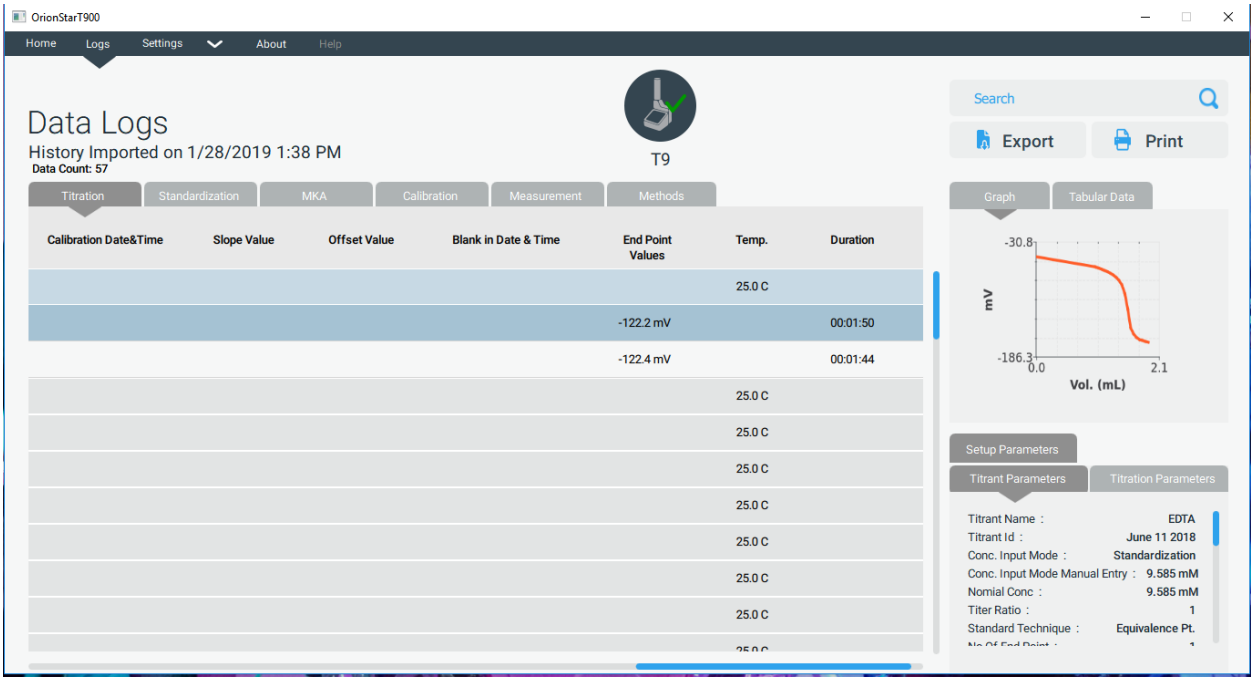
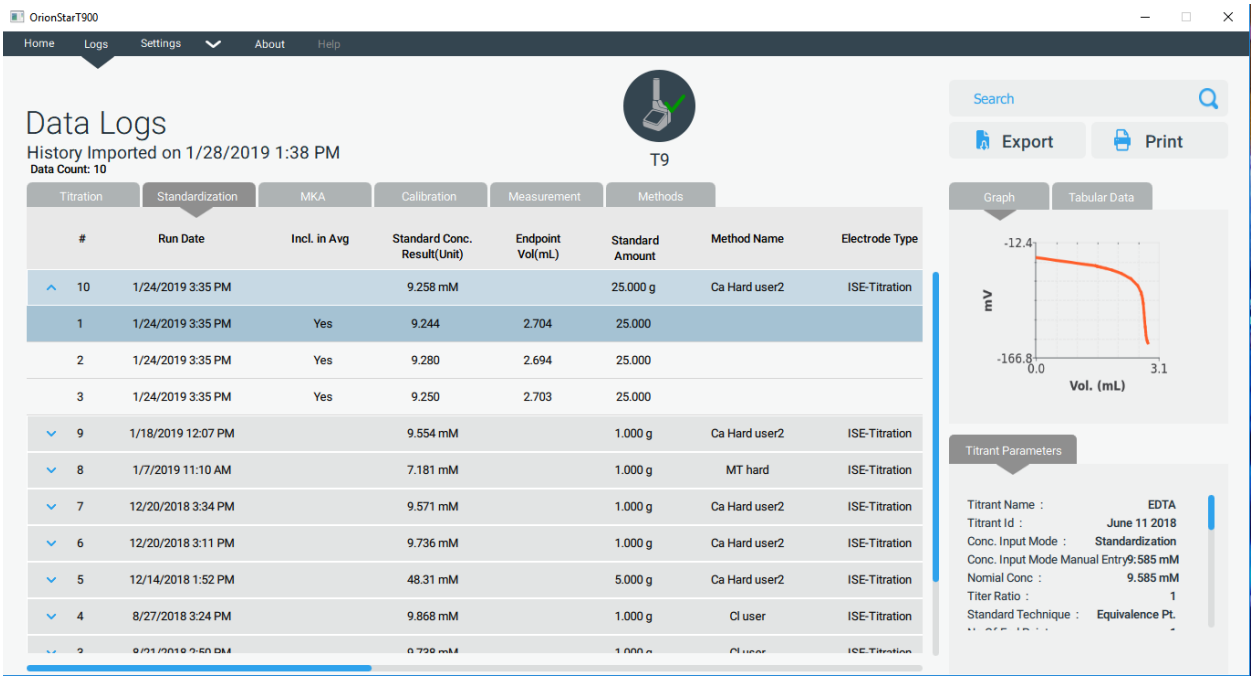
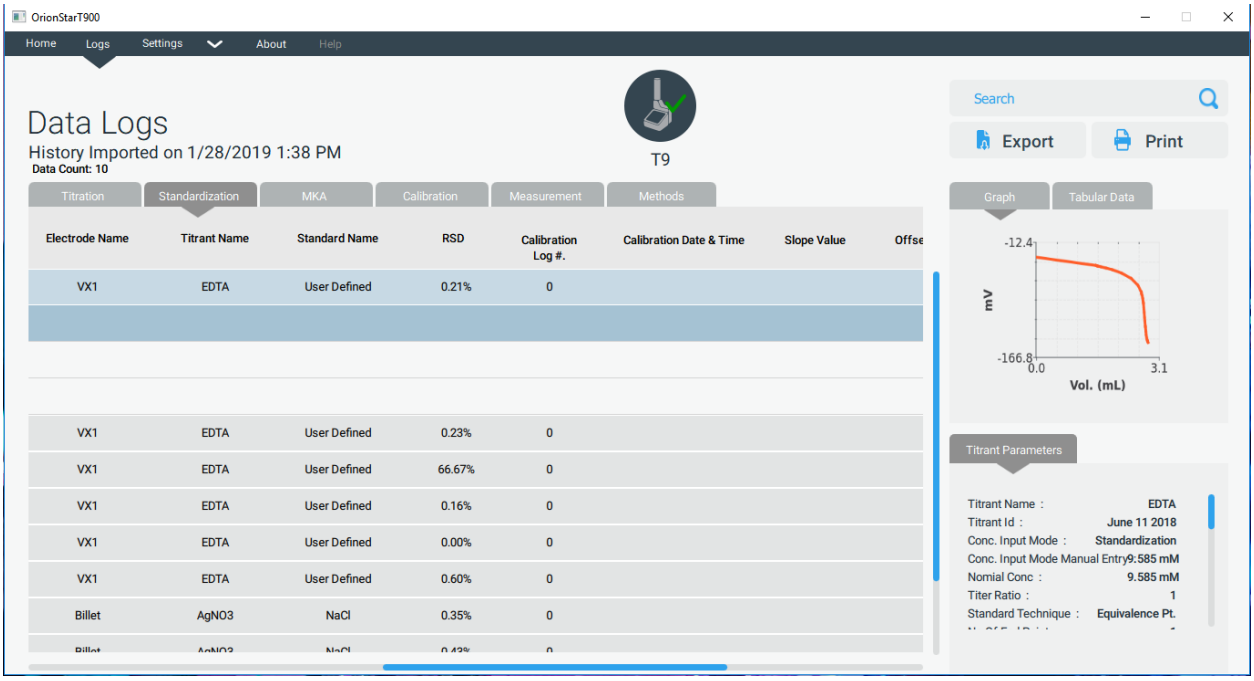


7. Click the Standardization tab to view the titrant standardization data. Expand the summary line to view the individual cycle data. Click on an individual cycle data line to view its data, graph results and setup parameters.

   a. Scroll right to view all data associated with the individual cycle data lines.




OrionStarT900
Home
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History Imported on 1/28/2019 1:38 PM
Data Count: 10
T9
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Export
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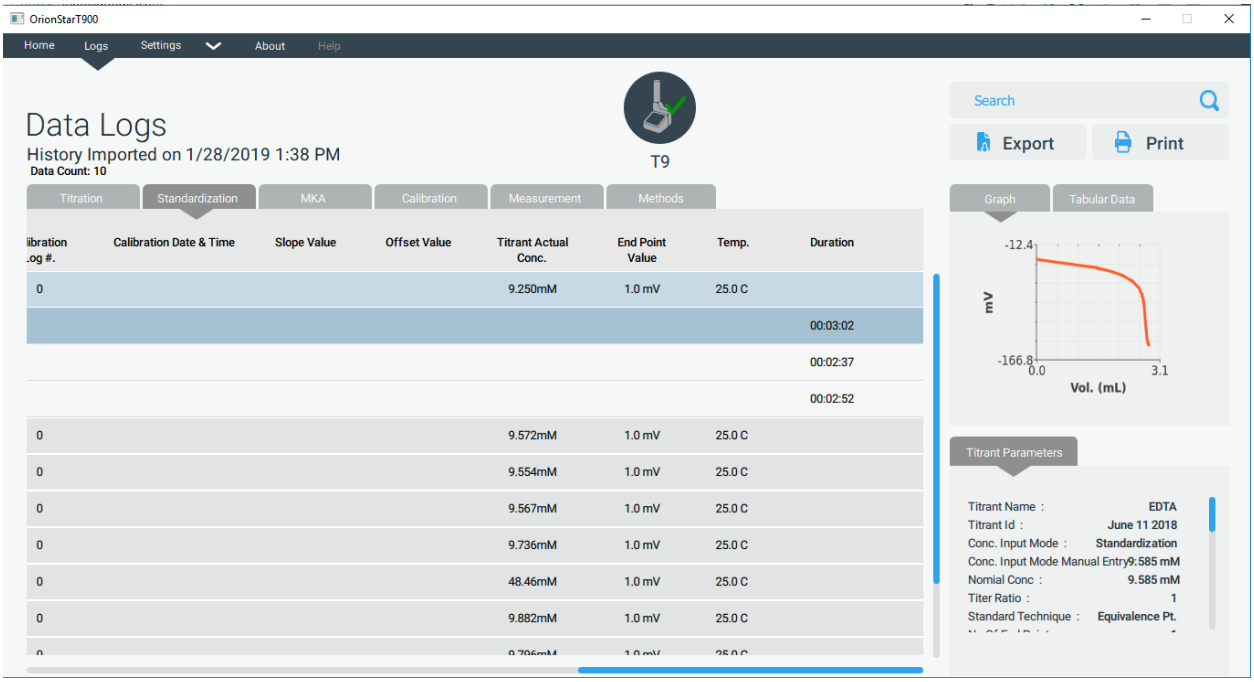
Titration
Standardization
MKA
Calibration
Measurement
Methods
Graph
Tabular Data
Electrode Name
Titrant Name
Standard Name
RSD
Calibration Log #.
Calibration Date & Time
Slope Value
VX1 EDTA User Defined 0.21% 0
VX1 EDTA User Defined 0.23% 0
VX1 EDTA User Defined 66.67% 0
VX1 EDTA User Defined 0.16% 0
VX1 EDTA User Defined 0.00% 0
VX1 EDTA User Defined 0.60% 0
Billet AgNO3 NaCl 0.35% 0
-12.4
mV
-166.8
0.0
3.1
Vol. (mL)
Titrant Parameters
Titrant Name : EDTA
Titrant Id : June 11 2018
Conc. Input Mode : Standardization
Conc. Input Mode Manual Entry9.585 mM
Nomial Conc : 9.585 mM
Titer Ratio : 1
Standard Technique : Equivalence Pt.


OrionStarT900
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Data Count: 10
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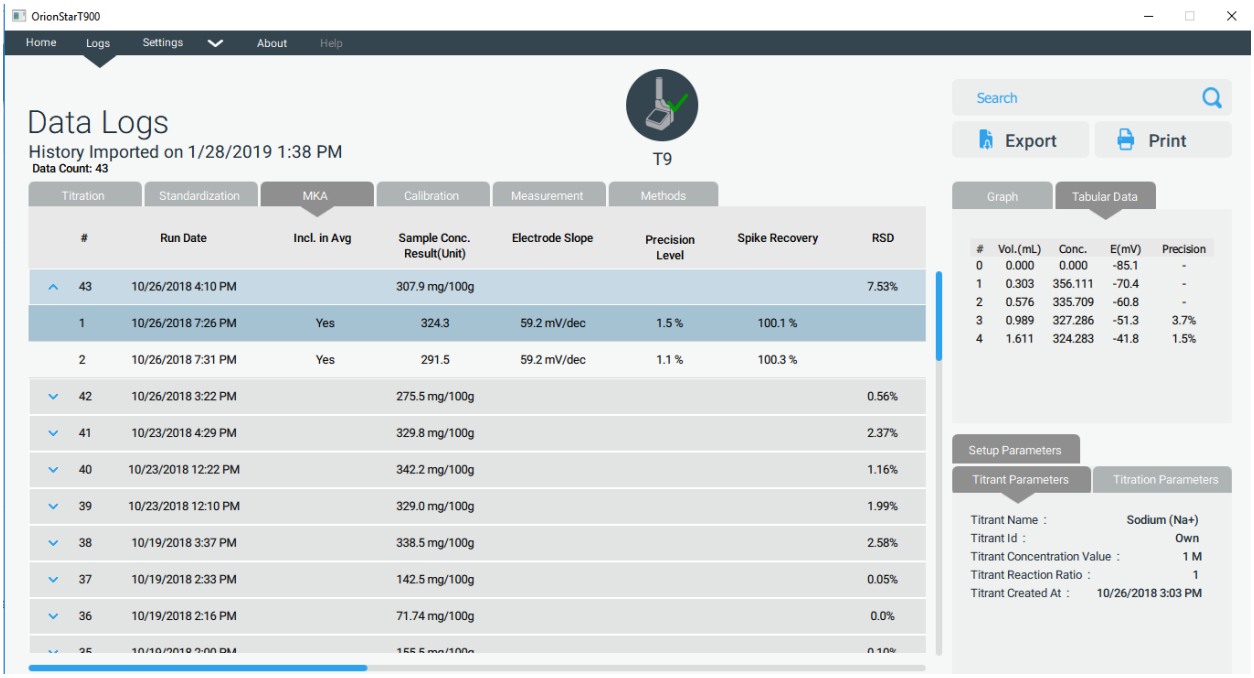
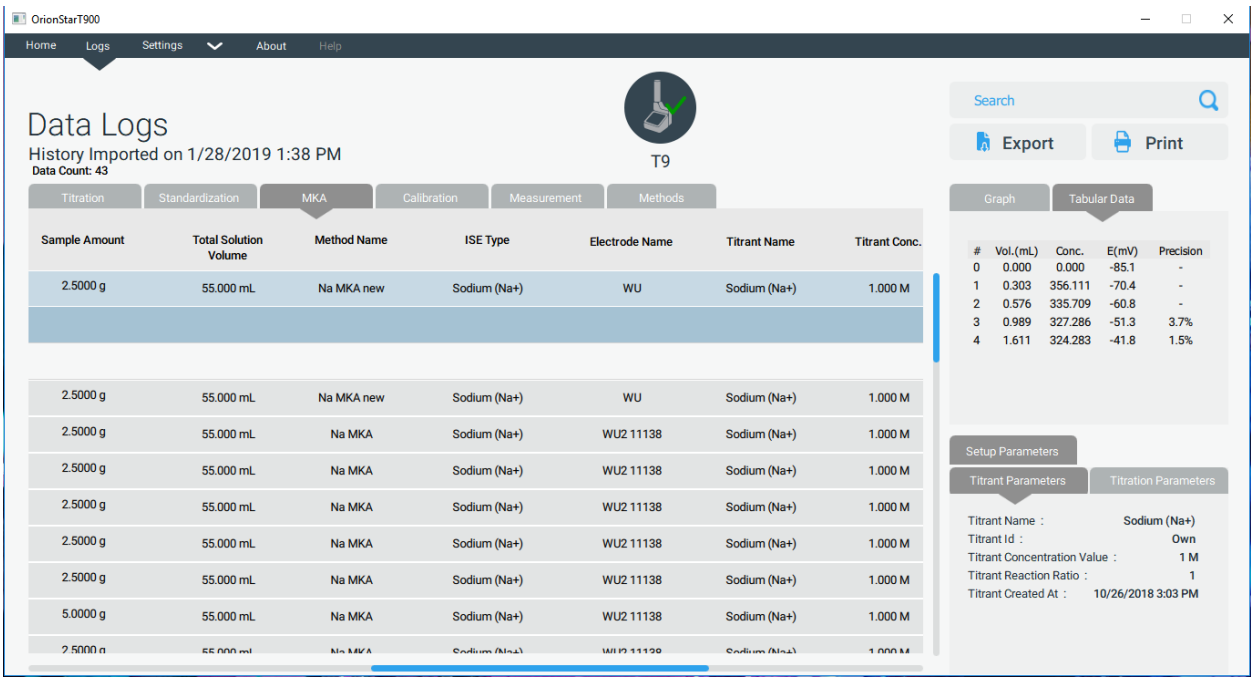
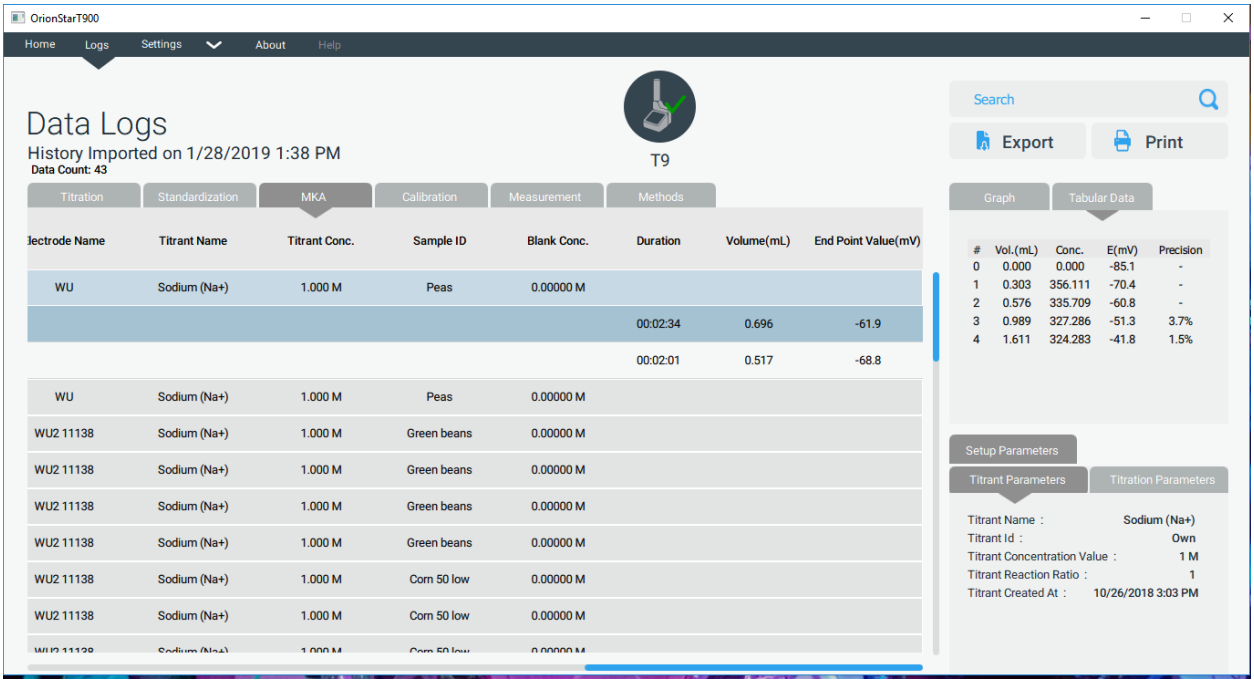
Titration
Standardization
MKA
Calibration
Measurement
Methods
Graph
Tabular Data
Calibration Date & Time
Slope Value
Offset Value
Titrant Actual Conc.
End Point Value
Temp.
Duration
0 9.250mM 1.0 mV 25.0 C
00:03:02
00:02:37
00:02:52
0 9.572mM 1.0 mV 25.0 C
0 9.554mM 1.0 mV 25.0 C
0 9.567mM 1.0 mV 25.0 C
0 9.736mM 1.0 mV 25.0 C
0 48.46mM 1.0 mV 25.0 C
0 9.882mM 1.0 mV 25.0 C
-12.4
mV
-166.8
0.0
3.1
Vol. (mL)
Titrant Parameters
Titrant Name : EDTA
Titrant Id : June 11 2018
Conc. Input Mode : Standardization
Conc. Input Mode Manual Entry9.585 mM
Nomial Conc : 9.585 mM
Titer Ratio : 1
Standard Technique : Equivalence Pt.

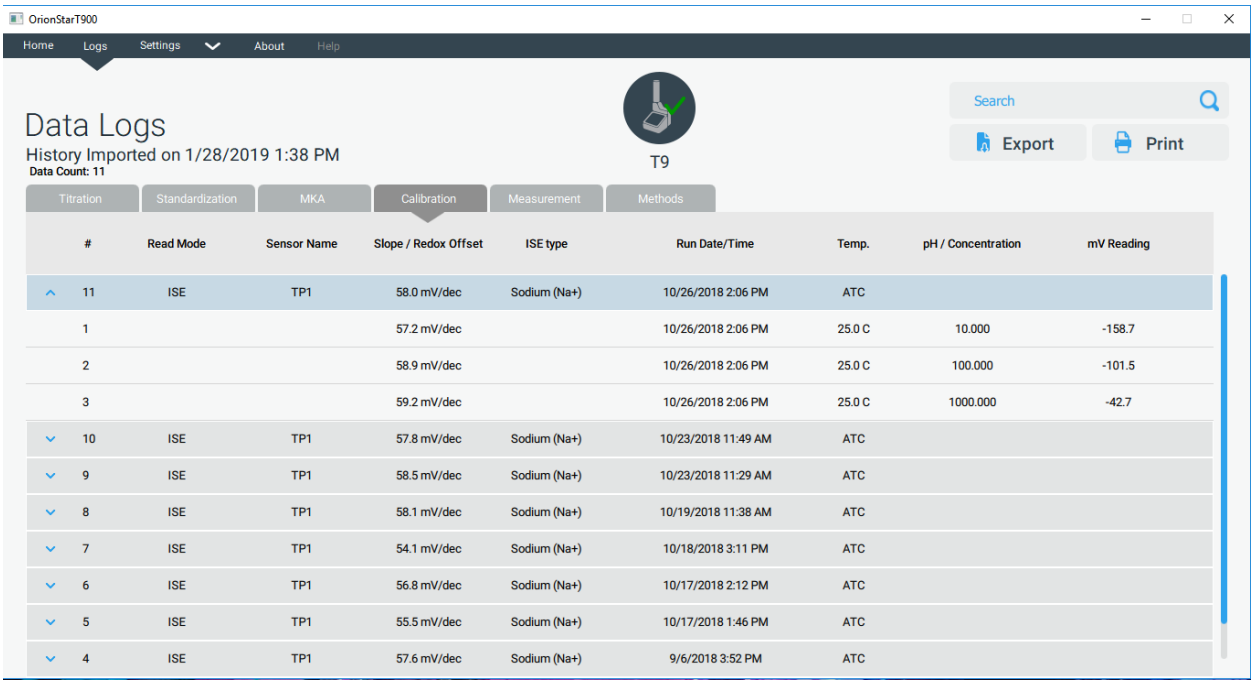
8. Click the MKA tab to view the multiple known addition data. Expand the summary line to view the individual cycle data. Click on an individual cycle data line to view its data, tabular results and setup parameters.
    a. Scroll right to view all data associated with the individual cycle data lines.



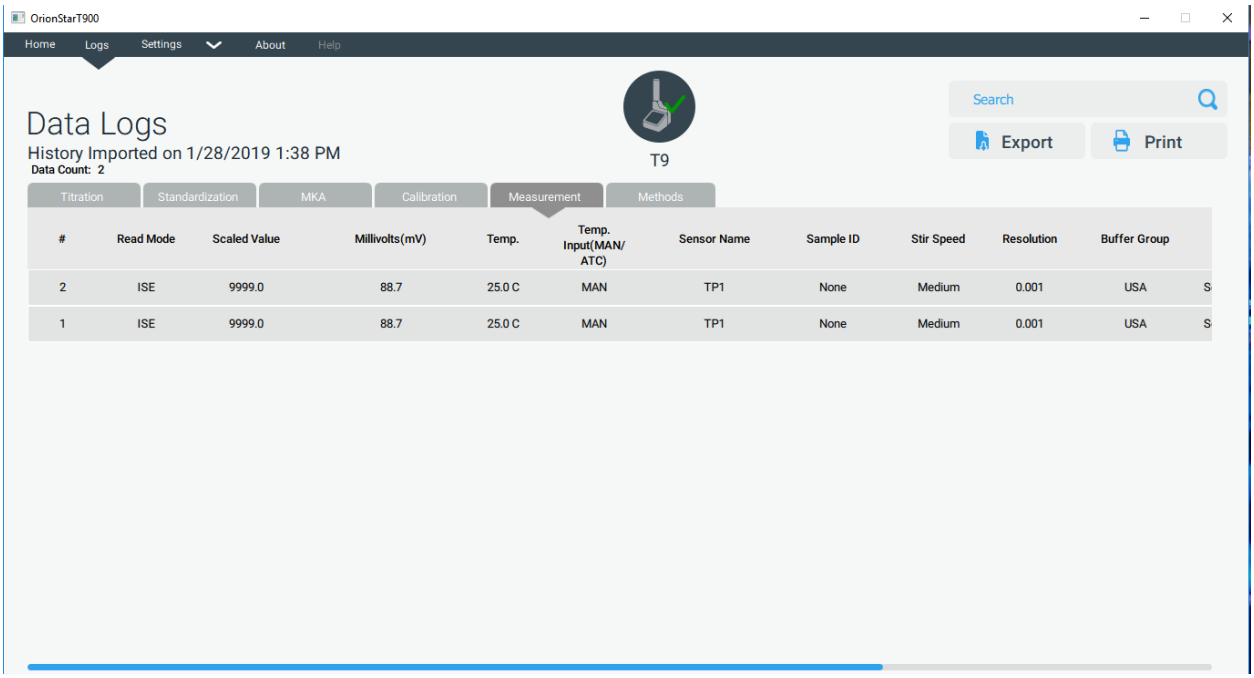


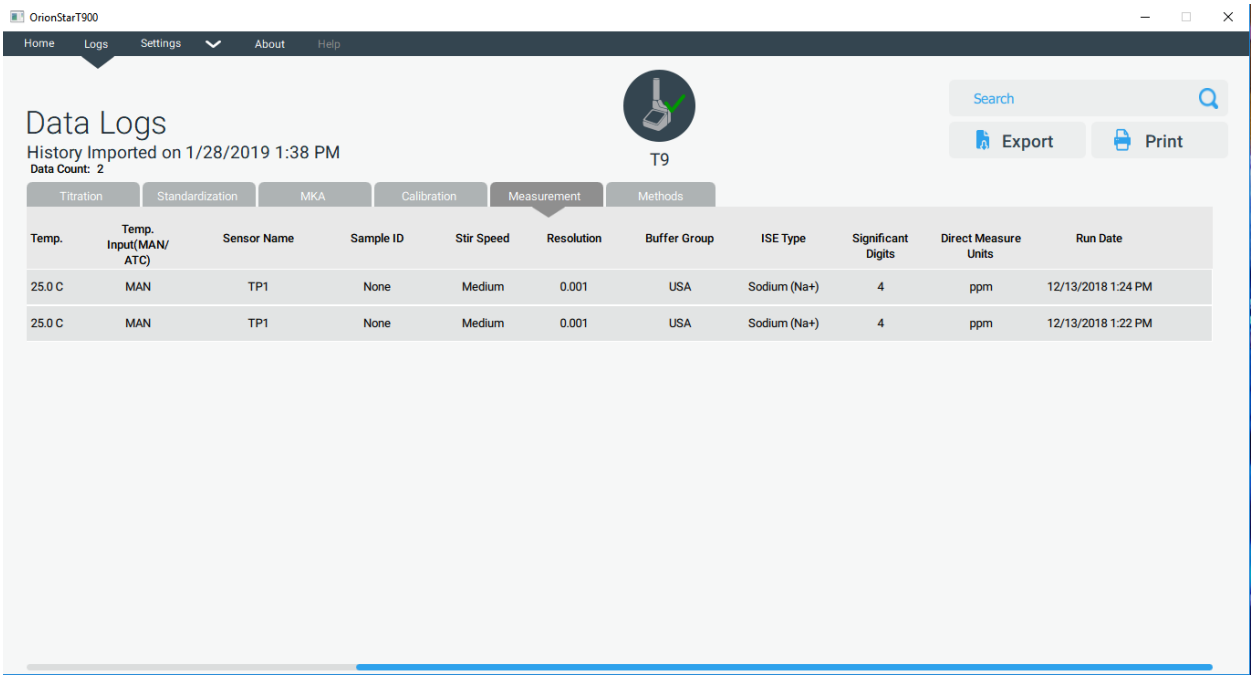


9. Click the Calibration tab to view the calibration data. Expand the summary line to view the individual calibration point data.

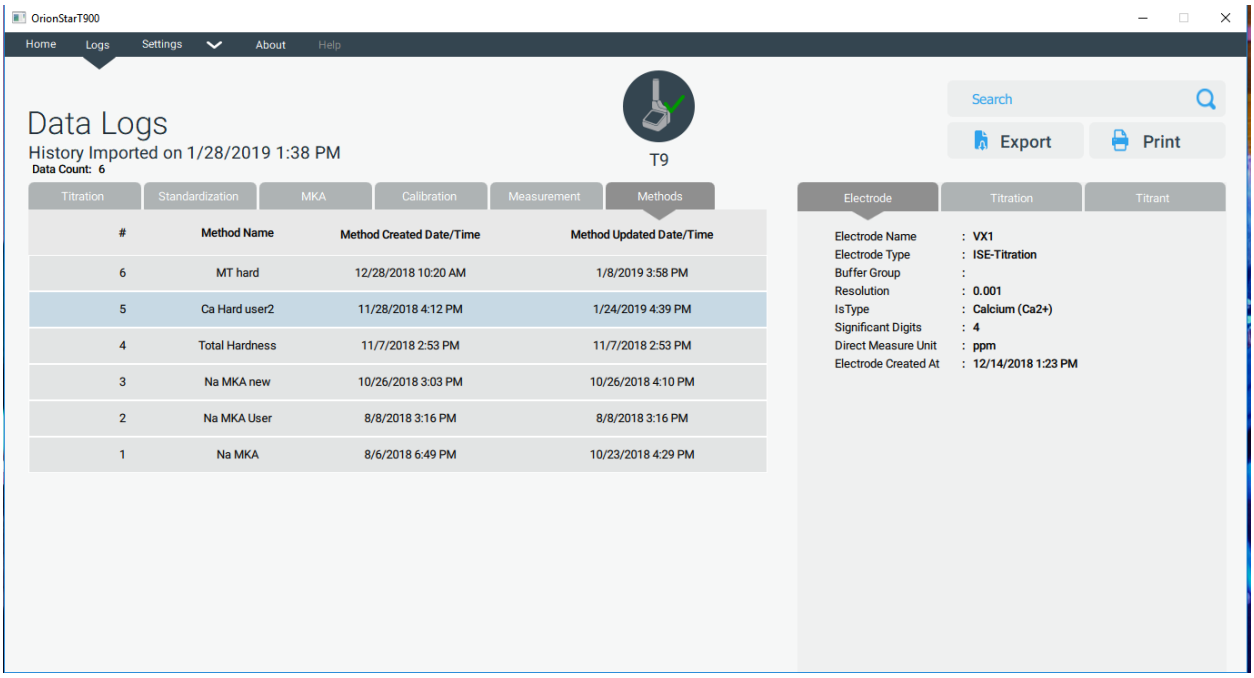


10. Click the Measurement tab to view the direct measure data. Scroll right to view all data associated with the direct measure data lines.

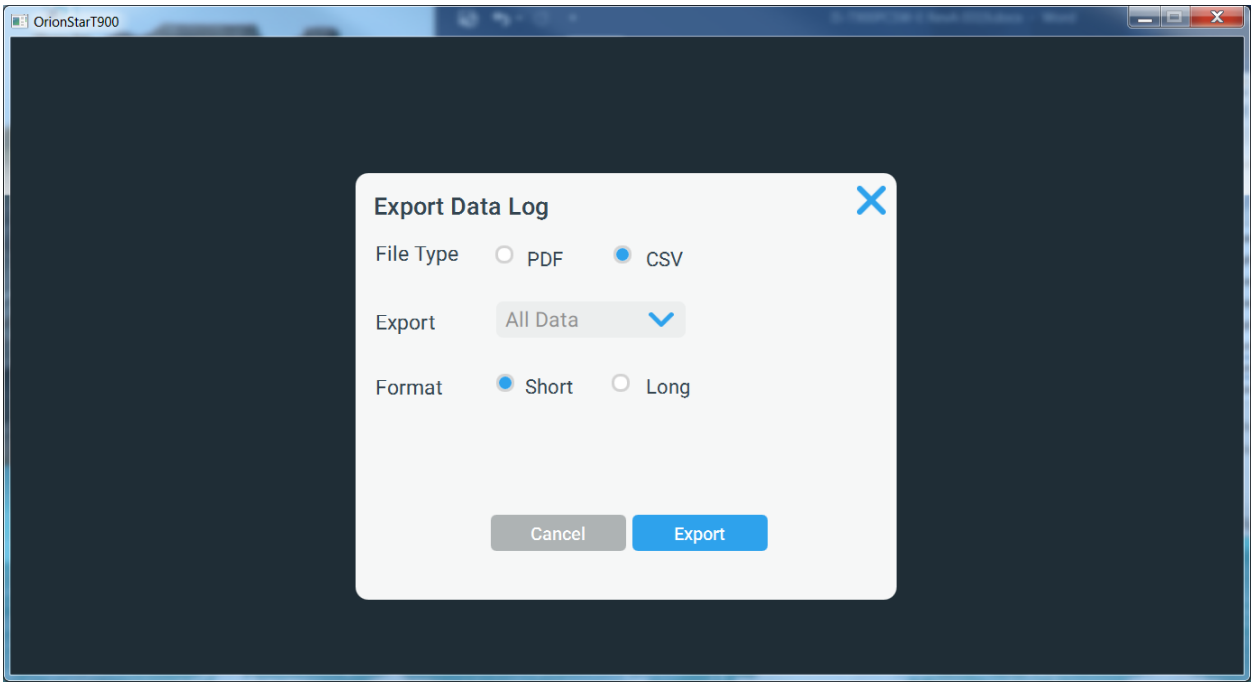


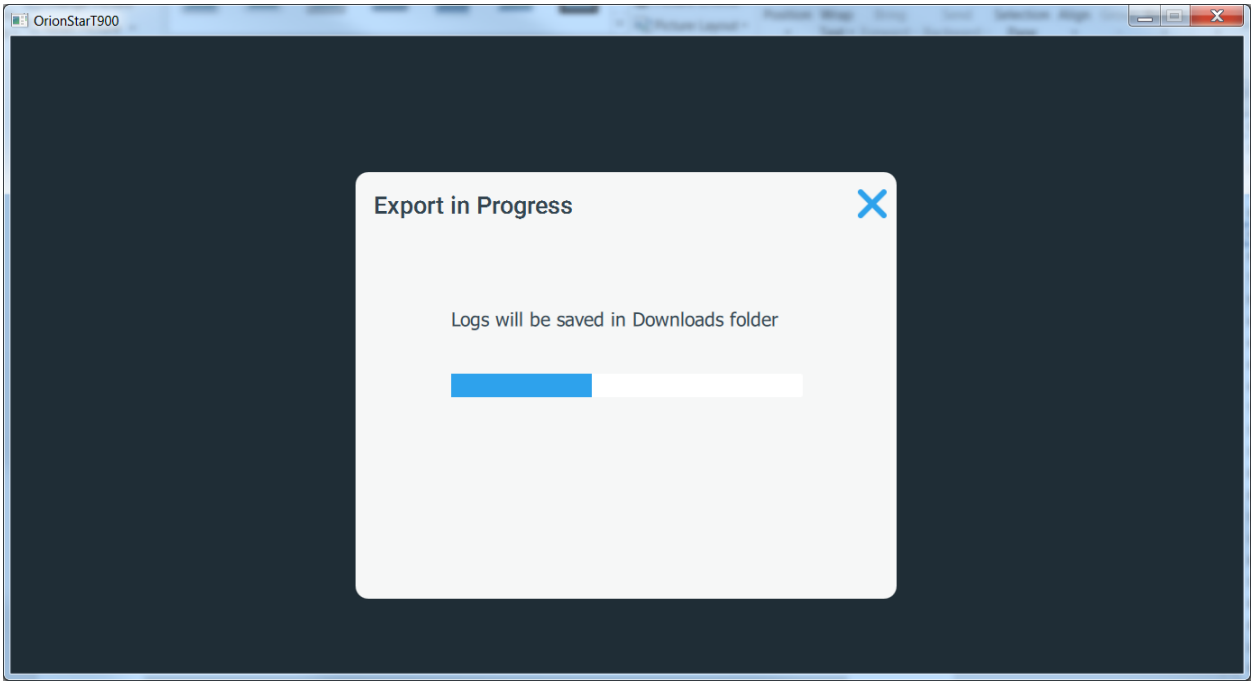


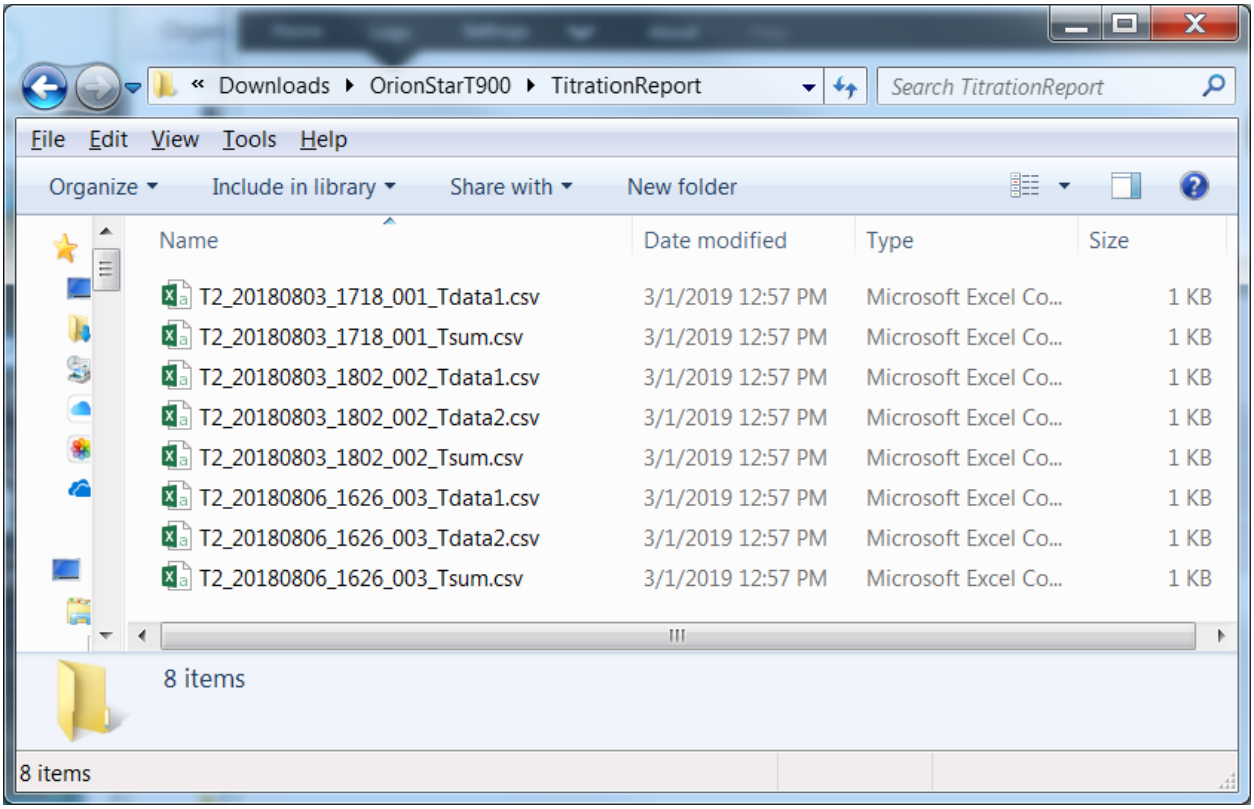
11. Click the Methods tab to view the methods data. Click on an individual method line to view its electrode, titrant and titration setup parameters data.



12. Click the “Export” button to save the data to your computer as a PDF or CSV file.







13. Click the “Print” button to print the data to your default network printer.

Technical Support

For any questions or if you require assistance, please contact your local Technical Sales Representative, Product Specialist or Technical Support Team.

Americas Technical Support Team

1-978-232-6000

1-800-225-1480 (US toll-free)

wlp.techsupport@thermofisher.com

Europe Middle East Africa Technical Support Team

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