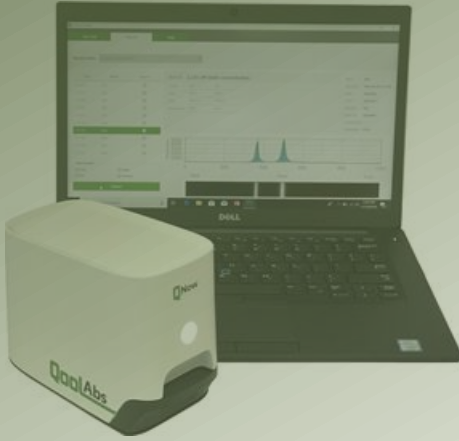


QNow Research Reader



User Guide

QoolAbs

Making Research Qool

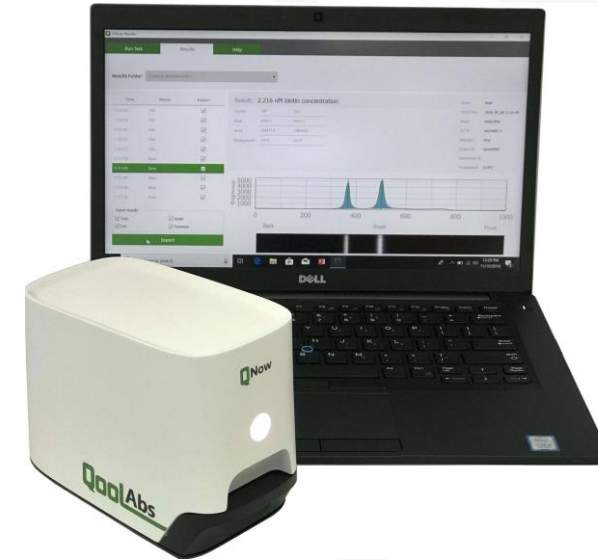
For research use only. Not for use in diagnostic procedures.

Version 1

November 16, 2018

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Reader Overview



Product Specifications

- **Assay Compatibility:** Qoolabs' QNow® Europium Fluorescence Assays
- **Detection Technology:** High sensitivity camera detection
- **Read Time:** Less than 5 seconds
- **Size:** W 80mm x L 160mm x H 120mm
- **Weight:** 1,150 grams
- **PC Connection:** USB 3 or greater
- **Power:** USB powered
- **Software:** QNow® Reader Software included. Requires Windows 8.0+

* For use by trained users only. For research use only. Not for use in diagnostic procedures.

* This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Reader Overview

USB
Communicates to QNow
software to control the unit

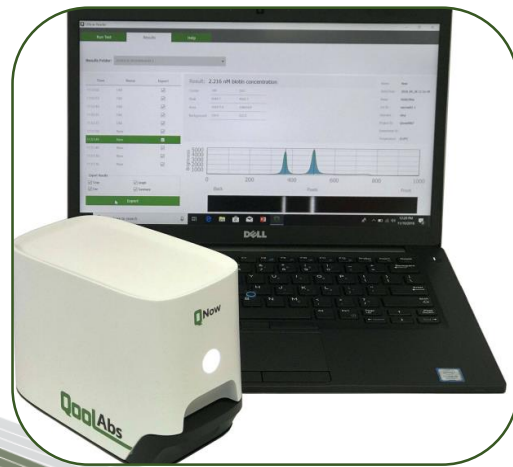


Status light

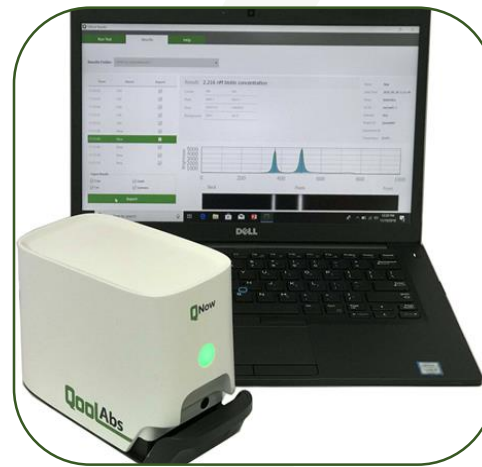
Drawer
Holds test cassettes

Reader Overview

Status light changes color:



Drawer closed



Drawer open

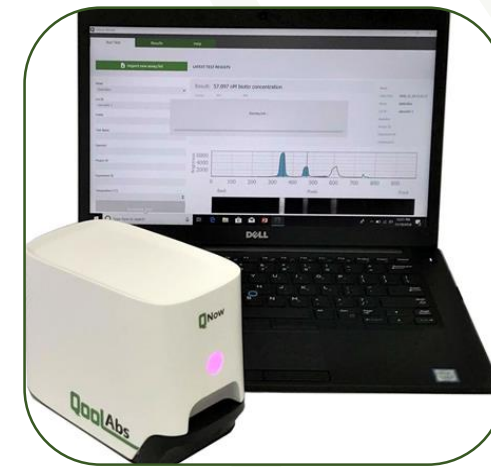


Image is being captured

Cleaning the Reader

If you wish to clean the reader, wipe down the external surfaces and drawer with lint free isopropyl wipes.

DO NOT USE BLEACH.



Scanning a Test



Software Overview

User Interface

Import a new assay settings

Assay and lot selection

Test and Folder Name

Name for the Test (Sample) and where to store the current batch of tests

The screenshot shows the QNow Reader software interface. At the top, there are three tabs: "Run Test", "Results", and "Help". Below the tabs, there is a green button labeled "Import new assay" and a section titled "LATEST TEST RESULTS" with a message: "No assay settings available. Import a new assay to get started." The interface is divided into two main columns. The left column contains several input fields: "Assay" (a dropdown menu), "Lot ID" (a dropdown menu), "Folder" (a text input field), "Test Name" (a text input field), "Operator" (a text input field), "Project ID" (a text input field), "Experiment ID" (a text input field), and "Temperature (°C)" (a dropdown menu). The right column contains a "Result:" section with a table of results. The table has the following columns: "Name", "Date/Time", "Assay", "Lot ID", "Operator", "Project ID", "Experiment ID", and "Temperature". At the bottom of the interface, there is a grey button labeled "RUN NEW TEST".

Results display

Capture and analyse the test image, calculate results based on assay settings

Scanning a Test

Each test kit is provided with a set of assay settings that are assay and lot specific.

- If it is the first time scanning a test of a specific assay/lot (or the correct Lot ID and assay are not available from the drop down list), click “**Import new assay**” and locate the “.asy” file provided with your tests.
- Select the Assay and Lot ID from the drop down list.

Assay
selection

The screenshot shows the QNow Reader software interface. At the top, there are tabs for 'Run Test', 'Results', and 'Help'. Below the tabs, there is a green button labeled 'Import new assay' and a message: 'No assay settings available. Import a new assay to get started.' The main area is divided into two columns. The left column contains several input fields: 'Assay' (a dropdown menu), 'Lot ID' (a dropdown menu), 'Folder', 'Test Name', 'Operator', 'Project ID', 'Experiment ID', and 'Temperature (°C)'. The right column is titled 'LATEST TEST RESULTS' and contains a 'Result:' section with 'Center', 'Peak', 'Area', and 'Background' options. To the right of the 'Result:' section is a table with the following columns: Name, Date/Time, Assay, Lot ID, Operator, Project ID, Experiment ID, and Temperature. At the bottom of the interface is a 'RUN NEW TEST' button. A green bracket on the left side of the 'Assay' and 'Lot ID' dropdown menus is labeled 'Assay selection'.

Scanning a Test

Enter a Folder Name – Tests performed under the same folder name on each day will be saved in the same folder

Enter a Test Name – this can be used to identify different samples.

Enter Operator, Project ID, Experiment ID and Temperature as desired.

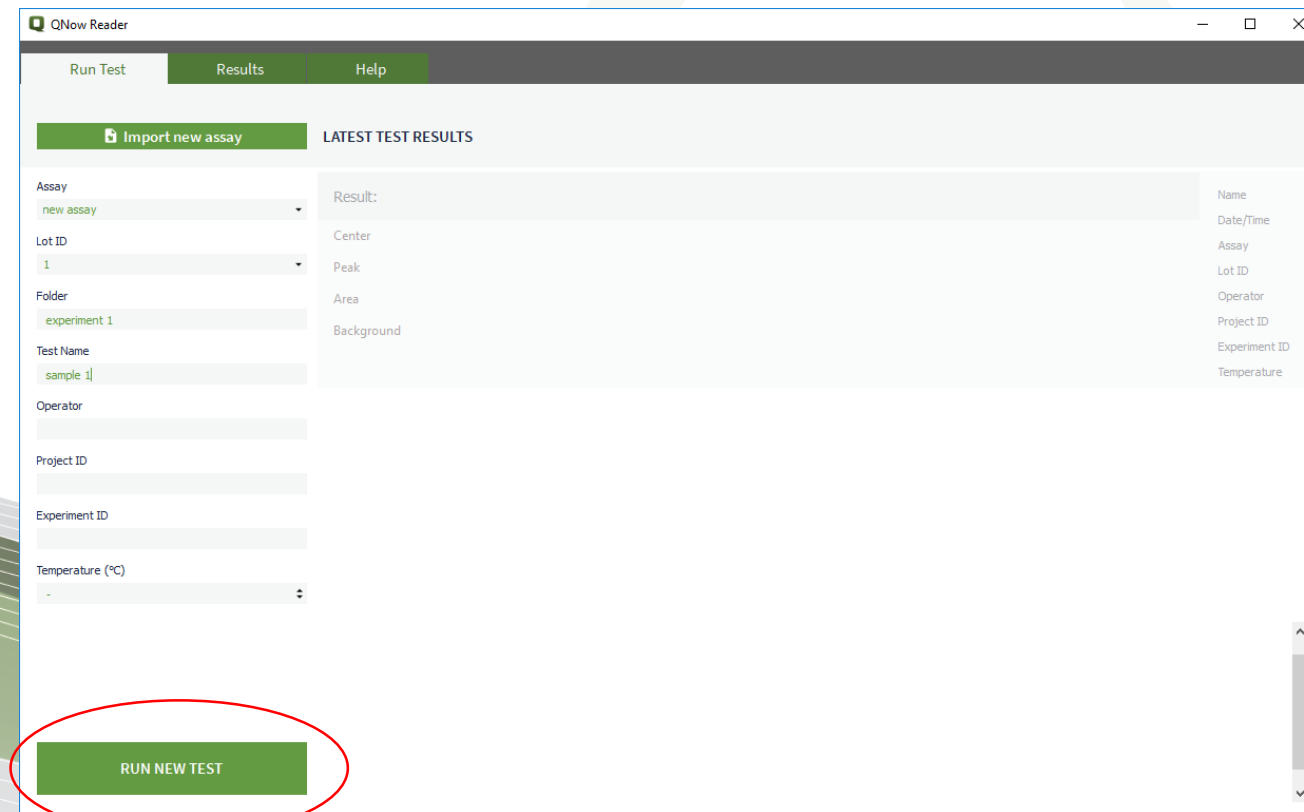
Test and Folder Name

The screenshot shows the QNow Reader software interface. At the top, there are three tabs: "Run Test", "Results", and "Help". Below the tabs is a green button labeled "Import new assay". The main area is divided into two columns. The left column contains input fields for "Assay" (set to "new assay"), "Lot ID" (set to "1"), "Folder" (set to "experiment 1"), "Test Name" (set to "sample 1"), "Operator", "Project ID", "Experiment ID", and "Temperature (°C)". The right column is titled "LATEST TEST RESULTS" and contains a "Result:" section with a table of results. The table has columns for "Name", "Date/Time", "Assay", "Lot ID", "Operator", "Project ID", "Experiment ID", and "Temperature". The "Result:" section is currently empty. At the bottom of the interface is a green button labeled "RUN NEW TEST".

Scanning a Test

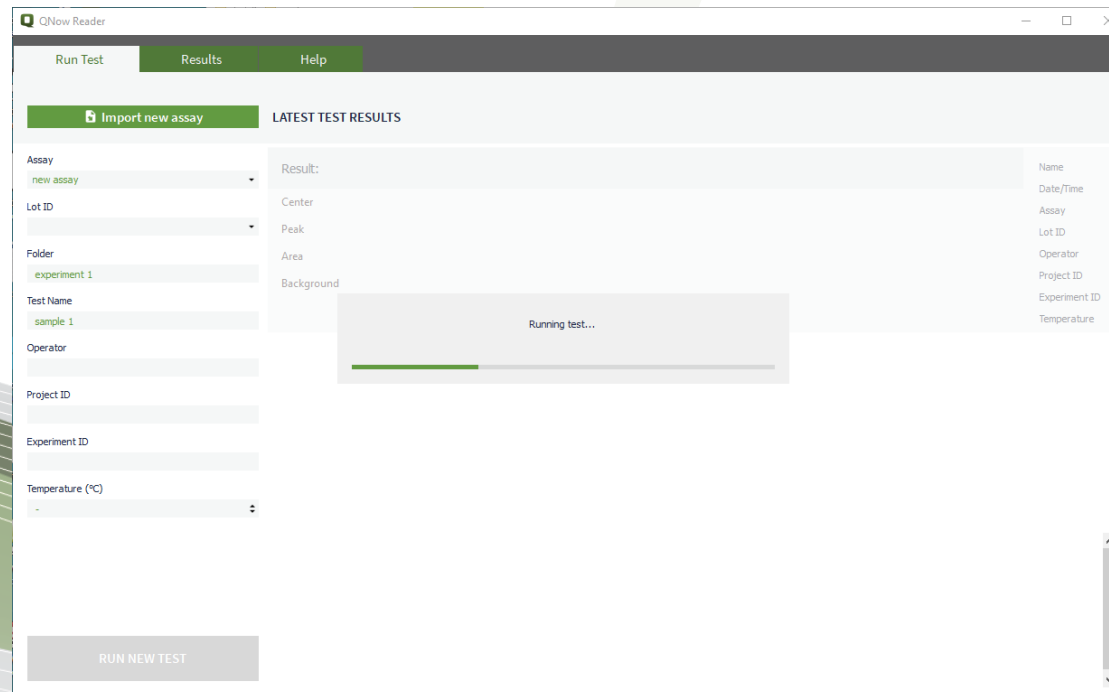
After a test is complete (consult individual assay for timing), place the test cassette in the drawer with the sample port on the cassette toward the front of the reader.

Click “***RUN NEW TEST***” to scan a test.



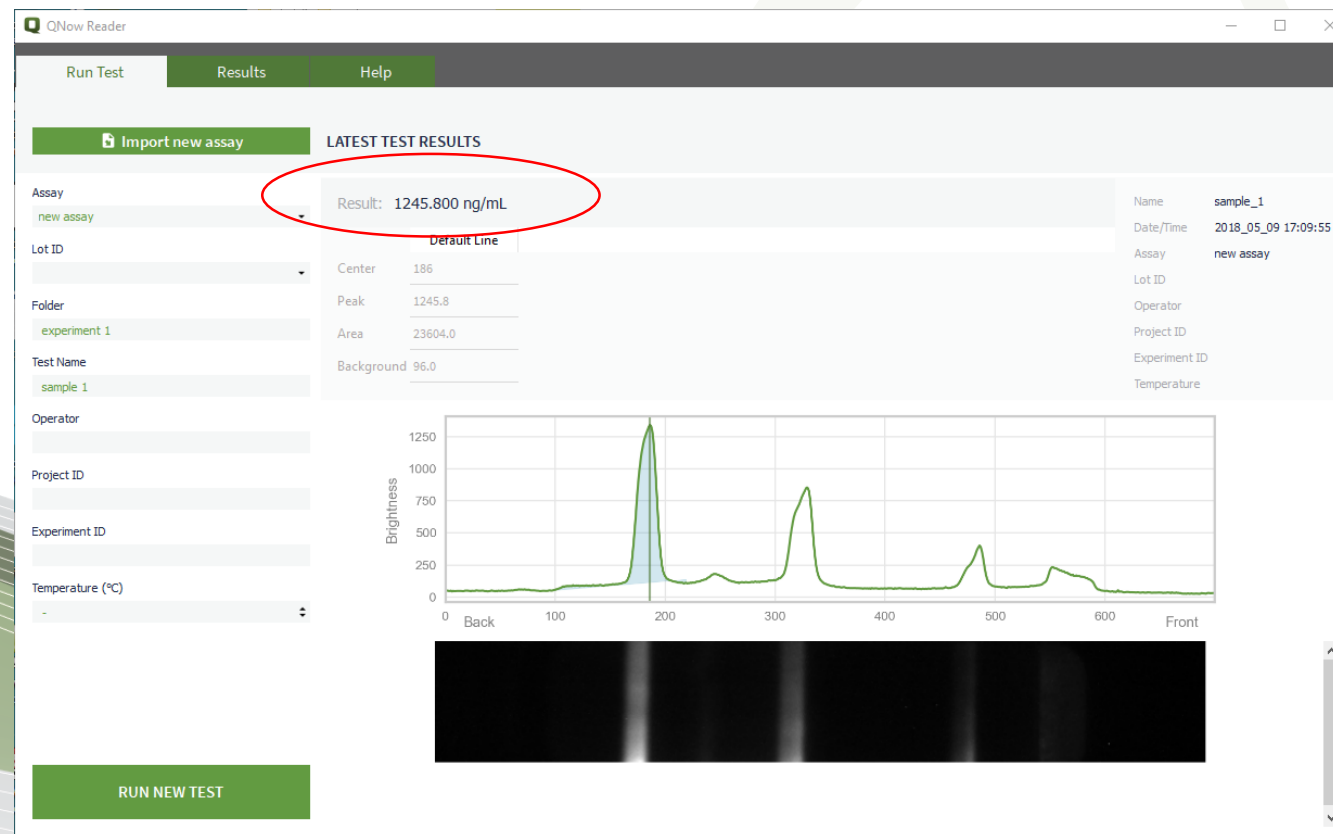
Scanning a Test

- A progress box will appear on the screen.
- The reader status light will turn purple while the reader is capturing an image of the test – do not open the drawer when the light is purple.
- The reader status light will turn white after the image is captured. The progress box may stay for a few more seconds during data transfer.



Scanning a Test

Once scanning is complete, the software will analyse the results which will be displayed on the screen.



Reviewing Results



Reviewing Results

You can quickly review results from the results tab.

Select a results folder from the drop down menu

Click on a test to display the result, crop and graph for the selected test

The screenshot shows the QNow Reader software interface. At the top, there are tabs for 'Run Test', 'Results', and 'Help'. Below the tabs, a 'Results Folder' dropdown menu is set to '20180509_experiment_1'. A table lists test results with columns for 'Time', 'Name', and 'Export'. The first row is selected, showing a time of 17:09:55 and a name of 'sample_1'. To the right of the table, a 'Result' box displays '1245.800 ng/mL'. Below this, a 'Default Line' table lists various parameters: Center (186), Peak (1245.8), Area (23604.0), and Background (96.0). To the right of these tables, a metadata section lists: Name (sample_1), Date/Time (2018_05_09 17:09:55), Assay (new assay), Lot ID, Operator, Project ID, Experiment ID, and Temperature. Below the metadata, a chromatogram plot shows 'Brightness' on the y-axis (0 to 1250) and 'Front' on the x-axis (0 to 600). A prominent peak is visible at approximately 186 units. Below the chromatogram, a 'Crop' image shows a dark background with a bright vertical band corresponding to the peak. At the bottom left, an 'Export Results' section has checkboxes for 'Crop', 'Graph', 'Csv', and 'Summary', all of which are checked. An 'Export' button is located at the bottom center.

The assay results, crop and graph image are displayed here.

Exporting Results

To export results, select the checkboxes for the results you would like to export, and click “*Export*”.

The screenshot shows the QNow Reader software interface. The 'Results' tab is active, displaying a table of results and a graph. The 'Export Results' section at the bottom left has four checkboxes: 'Crop', 'Csy', 'Graph', and 'Summary', all of which are checked. The 'Export' button is circled in red.

Time	Name	Export
17:09:55	sample_1	<input checked="" type="checkbox"/>
17:08:52	sample_1	<input checked="" type="checkbox"/>
17:02:53	sample_1	<input checked="" type="checkbox"/>
17:02:38	sample_1	<input checked="" type="checkbox"/>
17:02:30	sample_1	<input checked="" type="checkbox"/>
17:02:21	sample_1	<input checked="" type="checkbox"/>

Result: 1245.800 ng/mL

Parameter	Value
Center	186
Peak	1245.8
Area	23604.0
Background	96.0

Graph: Brightness vs. Position (Back to Front). The graph shows a prominent peak at approximately 186 units.

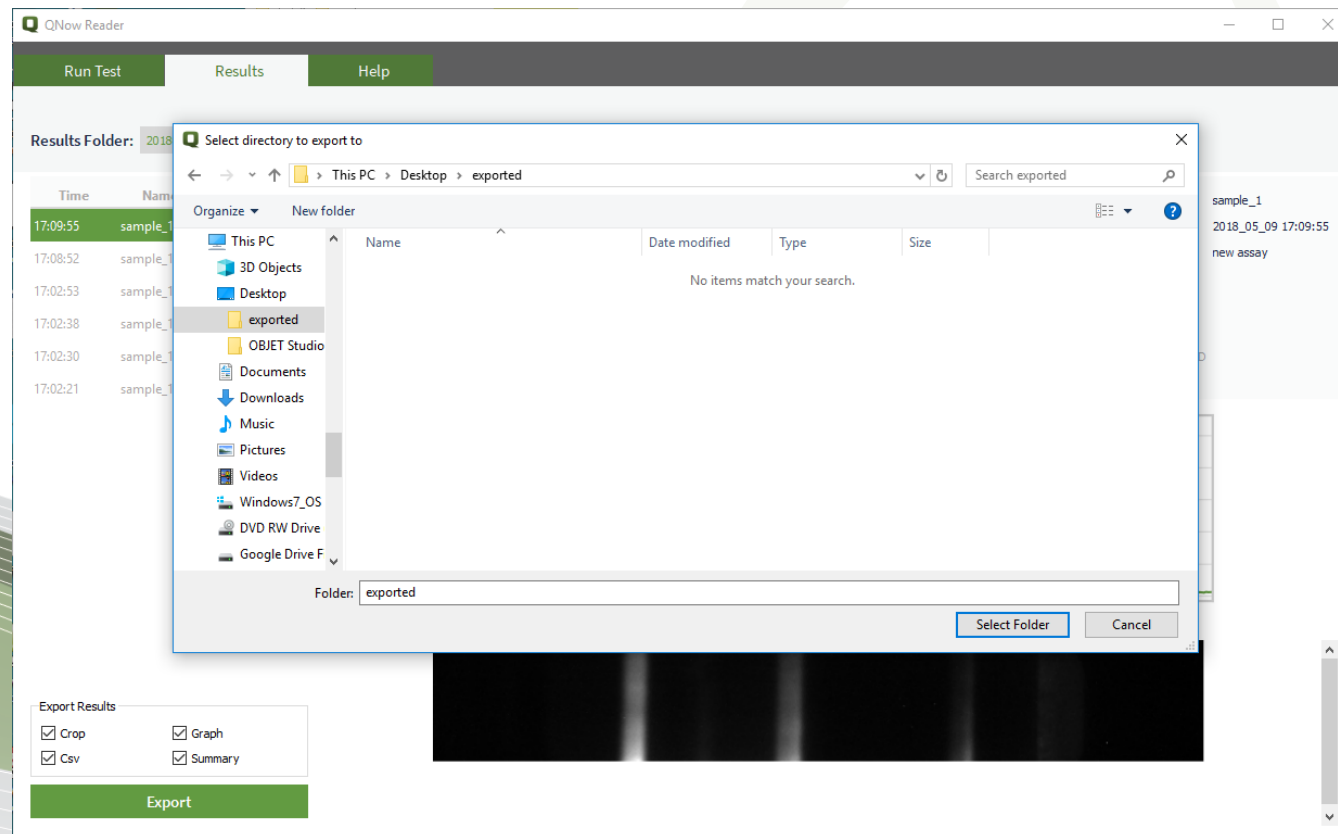
Export Results:

- Crop
- Csy
- Graph
- Summary

Export

Exporting Results

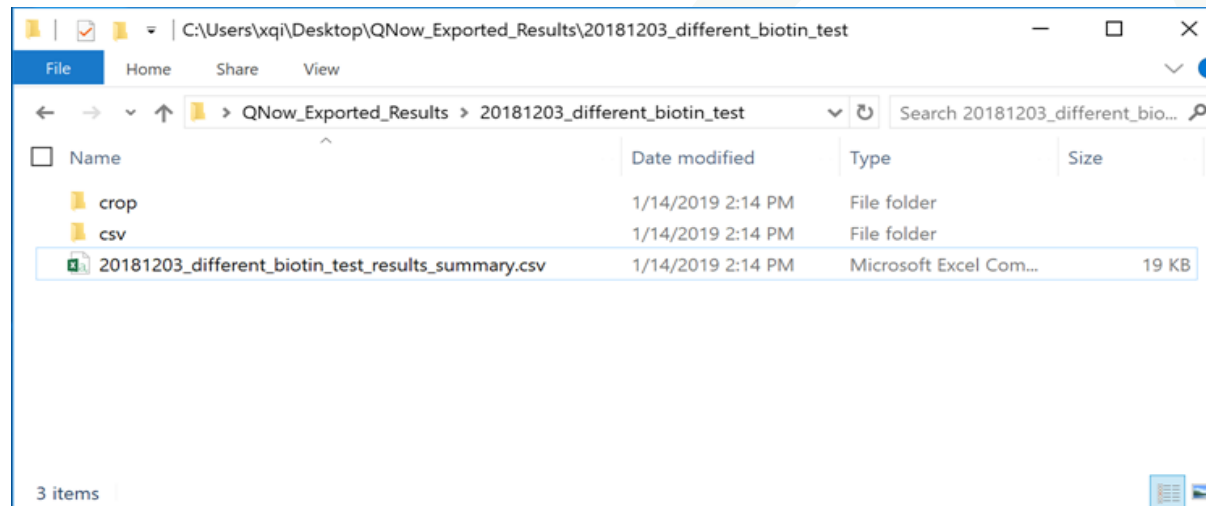
You will be prompted to select a location to export the results to. Navigate to the desired location/folder for storing exported results.



Exporting Results

Once the results are exported, the folder will automatically open in the explorer:

In the exported folder, you'll see a crop folder, a csv folder, and a results summary file:



Folder	Description
Crop	Crop and graph images, for quick results review
Csv	The raw plot data
Results summary	The numerical test results

Summary Spreadsheet

Numerical results and raw data are stored in the summary csv file.

Text Field	Properties
date	Experiment related information, input by user
time	
strip name	
lot ID	
assay name	
overall result	
experiment id	
project id	
operator	
temperature (Å°C)	
filename	Parameters for processing image, product specific, pre-set by the manufacturer
exposure(ms)	
crop_offset	
crop_height	
reader_serial	
software version	Qnow software version

Text Field	Properties
analyte_name_1	Sample (Analyte) related information, Test results are calculated with pre-set formula.
analyte_units_1	
analyte_text_result_1	
analyte_numerical_result_1	
analyte_result_type_1	
analyte_prejudgement_result_1	

Text Field	Properties
line_name_1	Results for each line on test strip (numbered by line position)
line_centre_1	
line_peak_above_background_1	
line_background_1	
line_area_1	
line_polarity_1	
line_offset_1	
line_background_offset_1	

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