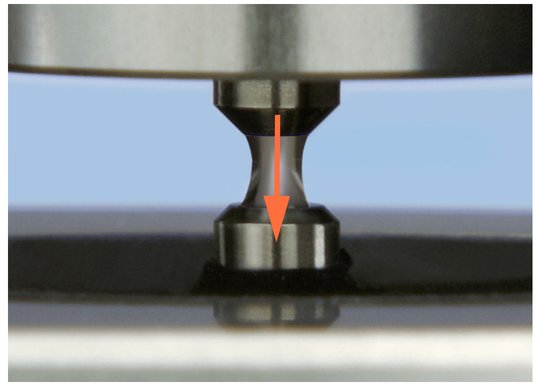
Measure a Micro-Volume Sample

The NanoDrop Ultra spectrophotometers and fluorometers use surface tension to hold a small volume of sample between two pedestals. The patented sample retention system enables the measurement of highly concentrated samples without the need for dilutions. Tap here for details.



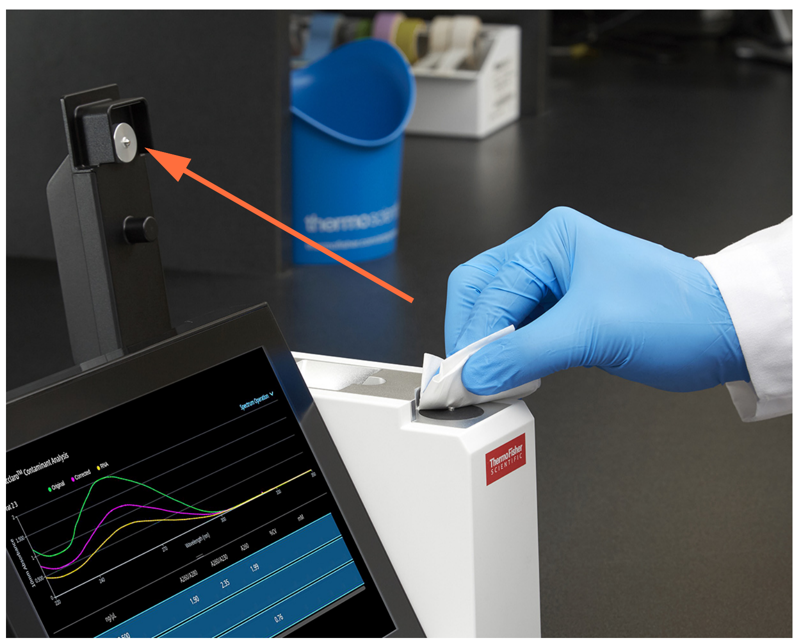
Supplies needed

- NanoDrop Ultra Spectrophotometer (Ultra, Ultra^{C}, Ultra FL, Ultra^{C} FL)
- lint-free laboratory wipes
- calibrated precision pipettor (0–2 µL)
- sample material resuspended in appropriate buffer solution (see Preparing Samples)
- pure buffer solution for blanking instrument (see Choosing and Measuring a Blank.

Best practices for micro-volume measurements

Cleaning pedestals for daily operation

- Before first measurement, clean both pedestals with a new laboratory wipe.
- Run a blanking cycle to verify pedestals are clean.
- After each measurement, clean both pedestals with new wipe to prevent carryover.
- After each set of measurements, clean pedestals with DI H_2O (see Clean pedestals between users)
- Recondition pedestals periodically to maintain their hydrophobic property.



Pipetting Samples

- Use recommended sample volumes to ensure proper liquid column formation.
- Use calibrated precision pipettor (0–2 µL volume range) with well-fitting, low-retention precision tips to apply sample material to instrument for measurement.

  If using low accuracy (0-10 µL) pipettor, use 2 µL sample volumes.
- Filter tips are not recommended as filter particulates can impact absorbance measurements at 230 nm
- Use new tip for each blank and sample aliquot.
- Use new aliquot of sample for each measurement.
- When the measurement is complete, open the sampling arm and wipe the samples from both the upper and lower pedestals using a soft laboratory wipe.
- If solvents are used, make sure they are compatible with the pedestals. (see "Compatible Solvents" in Hazardous Materials).

Recommended sample volumes

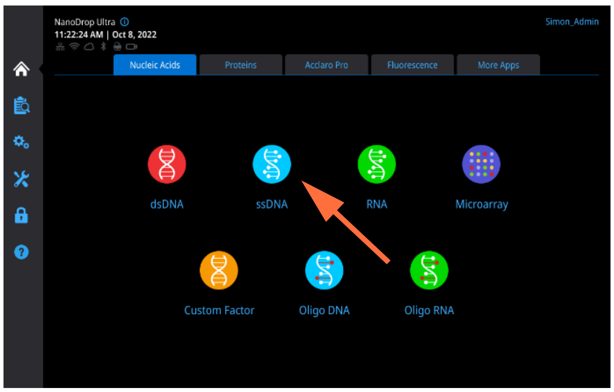
Application	Sample Volume
Nucleic acid (aqueous solution)	1 µL[a]
Purified protein	2 µL
Other protein applications such as Bradford or BCA	2 µL
Microbial cell suspensions	2 µL
Fluorescence	2 µL

[a] Use 2 µL for samples that contain materials that may reduce surface tension such as a surfactant.

To measure a micro-volume sample

NOTICE

- Do not use a squirt or spray bottle on or near the instrument as liquids will flow into the instrument and may cause permanent damage.
- Do not use hydrofluoric acid (HF) on the pedestals. Fluoride ions will permanently damage the quartz fiber optic cables.

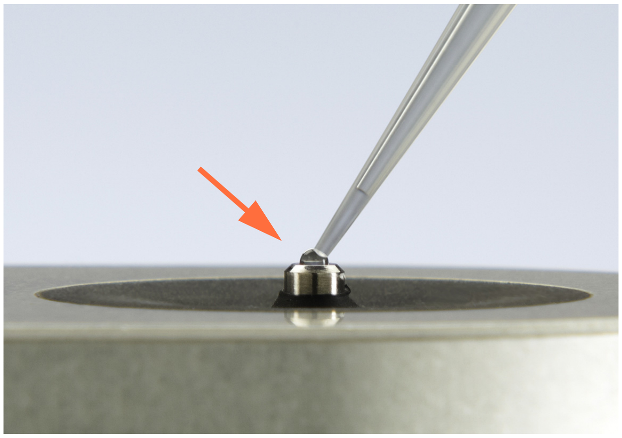


1. From the instrument home screen, select an application from one of the application categories, such as **dsDNA**.

2. Lift the instrument arm and clean the upper and lower pedestals with new laboratory wipe.

3. Measure a blank:
   - Pipette 1–2 µL blanking solution onto the lower pedestal and quickly lower the arm
   - Select **Blank** and wait for the measurement to complete

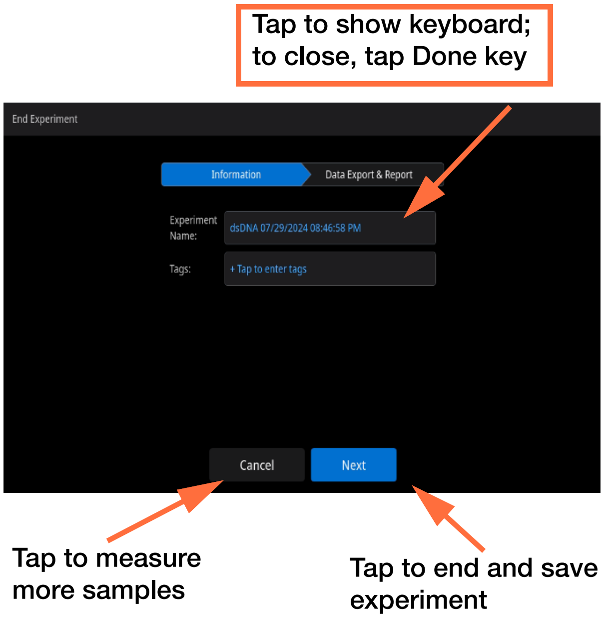
     Tip: If Auto-Blank is On, blank measurement starts automatically after you lower the arm.
   - Lift the arm and clean both pedestals with a new laboratory wipe



Tap to end experiment

4. Measure the first sample:
   - Pipette 1-2 µL sample solution onto the pedestal and quickly lower the arm (see Recommended Sample Volumes for more information)
   - Start the sample measurement:
     - if Auto-Measure is On, lower arm
     - if Auto-Measure is Off, lower arm and select **Measure**
   - When the sample measurement is completed, the spectra and reported values are displayed.
5. To measure another sample:
   - Lift the arm
   - Clean both pedestals with new wipe
   - Load the next sample and quickly lower the arm
   - Start the sample measurement
   - Wait for the measurement to complete

   The new spectrum replaces the previous one on the spectral display and the new reported values appear under the previous ones in the table. (When measuring many samples, press and hold the chart area while moving up or down to show information for samples that may be offscreen.)



6. When you are finished measuring samples:
   – Select End Experiment (see previous image)
   – Enter an experiment name (tap **Experiment Name** box to display keyboard), or leave the default experiment name
   – Select **Next**.
   – Lift the arm and clean both pedestals with a new wipe

     If finished with the instrument for the day, clean the pedestals with DI H2O (see Clean pedestals between users)

Acquired data are automatically saved in an experiment with the entered name. In the default configuration, experiments are stored in a database on the local instrument according to acquisition date, experiment name, application used and any assigned labels (see Manage identifiers on the instrument).

Measure a Sample Using a Cuvette

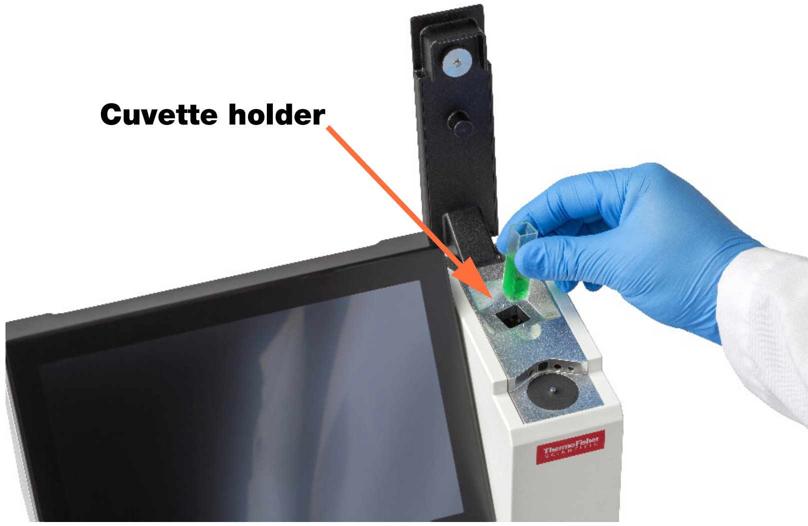
The NanoDrop Ultra^{C} or NanoDrop Ultra^{C} FL spectrophotometer models include a cuvette holder for measuring dilute samples, colorimetric assays, cell cultures and kinetic studies. The cuvette system offers an extended lower detection limit and an optional 37 °C heater and micro-stirrer.

Supplies needed

- NanoDrop Ultra^{C} or NanoDrop Ultra^{C} FL
- lint-free laboratory wipes
- two compatible cuvettes
- sample material resuspended in appropriate buffer solution (see Preparing Samples)
- pure buffer solution for blanking instrument (see Choosing and Measuring a Blank.)

Best practices for cuvette measurements

- The instrument arm can be up or down for cuvette measurements.
- Use 10 mm, 5 mm, 2 mm or 1 mm cuvettes.
- Clean and dry cuvette after each measurement.
- Use cuvettes that are free of scratches and avoid fingerprints which may affect results.
- Use quartz cuvettes or UV-grade plastic cuvettes to measure samples with analysis wavelengths in the UV range (<340 nm).
- Micro, semi-micro, and ultra-micro cuvettes should be masked.
- Fill cuvettes with enough blanking or sample solution to cover instrument optical path (2 mm sample beam is 8.5 mm above cuvette bottom).
- Lift instrument arm and make sure cuvette holder is free of debris.
- When inserting quartz or masked plastic cuvettes, align cuvette light path with instrument light path.

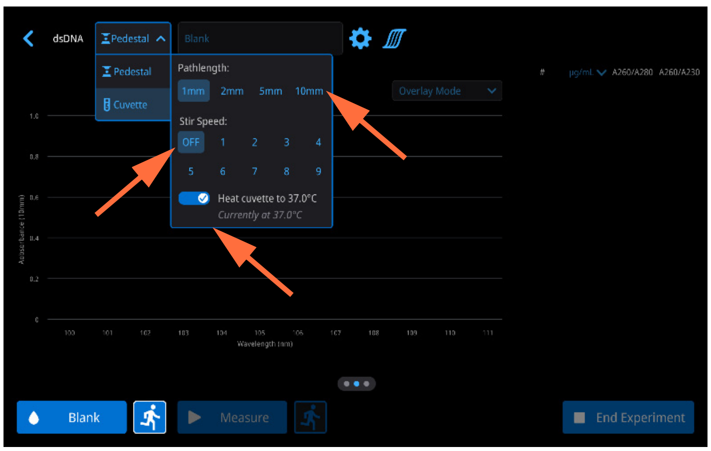


To measure a sample using a cuvette

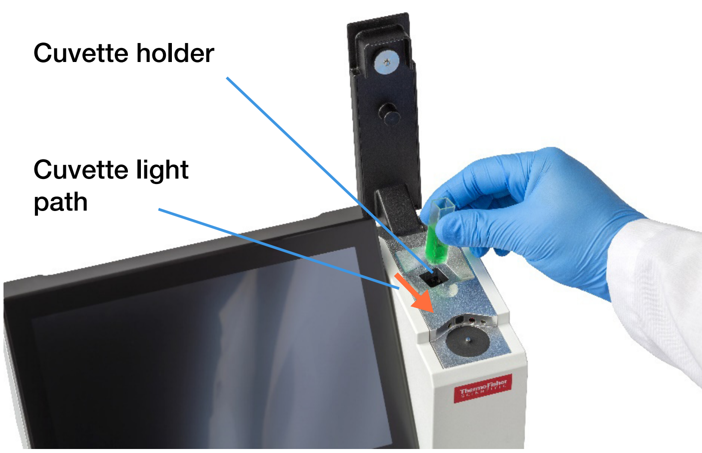
NOTICE

- To prevent damage from spills, keep containers of liquids away from the instrument.
- Do not use a squirt or spray bottle on or near the instrument as liquids will flow into the instrument and may cause permanent damage.

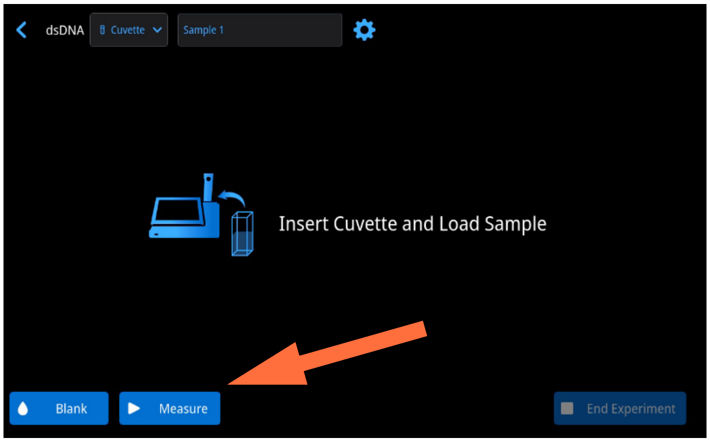
1. Open one of the applications and select **Save**.
2. The dropdown will default with **Pedestal** selected, open the dropdown and select **Cuvette** to switch to the Cuvette mode. The dropdown must then be closed for the change to take effect.



3. Specify the cuvette options:
   - Set Pathlength to pathlength (width) of cuvette (see cuvette manufacturer for specifications)
   - Set Stir Speed and heater if desired
   - Select anywhere outside of the box, to close the window



4. Measure a blank:
   - Fill clean, dry cuvette with enough blanking solution to cover instrument optical path
   - Lift instrument arm and insert blanking cuvette into cuvette holder, making sure to align light path of cuvette with light path of instrument
   - Select **Blank** and wait for the measurement to complete



5. Measure a sample:
   - Fill clean cuvette to same height with sample solution
   - Replace blanking cuvette with sample cuvette, making sure to align light paths
   - Select **Measure**
   - Wait for measurement to complete
   - Remove cuvette
   - Clean cuvette according to manufacturer specifications

Cuvette Settings

Select cuvette sampling mode. When selected, these additional options are available:

Pathlength: Enter cuvette pathlength (width) before taking blank or sample measurements with cuvettes (see cuvette manufacturer for cuvette specifications)

Stir Speed: If using automatic stirring, drop micro-stir bead into sample cuvette and set Stir Speed (levels 1 through 9 correspond with range from 10 RPM to 850 RPM with controlled ramping from zero)

Heat cuvette to 37 °C: Select this option if sample cuvettes require heating. Cuvette heater increases from room temperature to 37 °C at rate of 5 °C/minute.

Prepare Samples and Blanks

Preparing Samples

- Isolate and purify samples before measuring them with the instrument. Commercial sample isolation kits are available for these purposes, or use an in-house protocol. After purification, analyte of interest is typically dissolved in aqueous buffer solution before it is measured.

  Tip: Any molecule that absorbs light at analysis wavelength will contribute to total absorbance value used to calculate sample concentration.

- Ensure final analyte concentration is within instrument's absorbance detection limits.

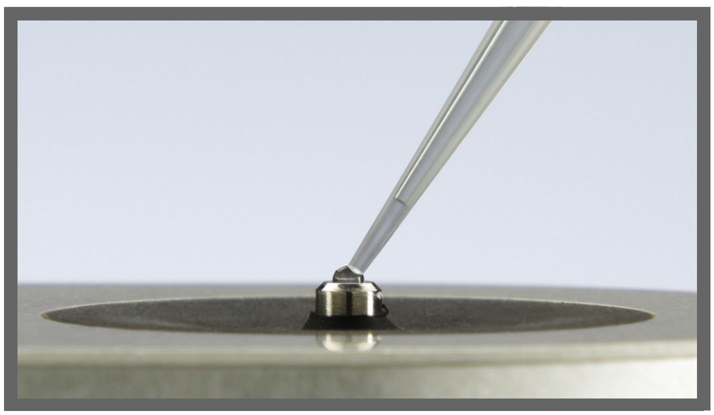
- For micro-volume measurements, gently (but thoroughly) vortex each sample before taking a measurement.

Avoid introducing bubbles when mixing and pipetting.

> **Note** Samples dissolved in extremely volatile solvent such as hexane may work best with cuvette sampling option (NanoDrop Ultra and NanoDrop Ultra^{C} FL instruments only).

Choosing and Measuring a Blank

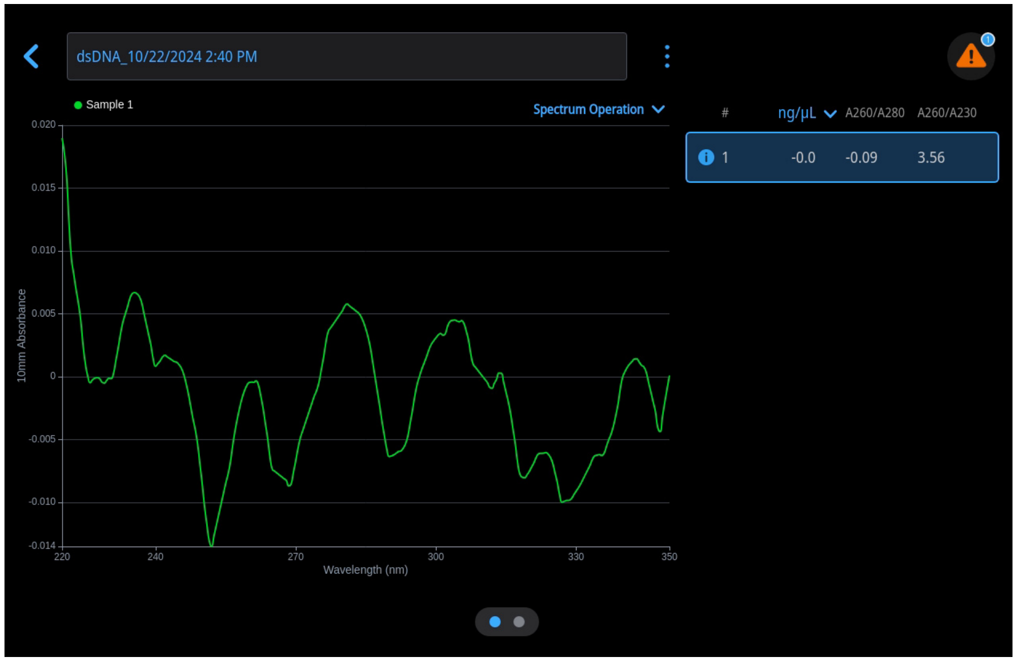
The buffer used to resuspend a sample analyte can contribute absorbance. Blanking minimizes any absorbance contribution due to the buffer components from the sample measurement. The resulting sample spectrum represents the absorbance of only the analyte of interest.



For best results:

- For most applications, blank with the same buffer solution used to resuspend the analyte of interest. The blanking solution should be a similar pH and ionic strength as the analyte solution.
- Measure new blank before each set of samples. It is not necessary to blank the instrument before each sample measurement unless the samples are dissolved in different buffer solutions.
- Measure a new blank every 30 minutes.
- Run a blanking cycle to assess the suitability of your blanking solution before using it to perform sample measurements.

The resulting spectrum should vary no more than 0.02 A or 0.4 A (10 mm equivalent) depending on the application across the spectrum, especially at the analysis wavelength as in the example below.

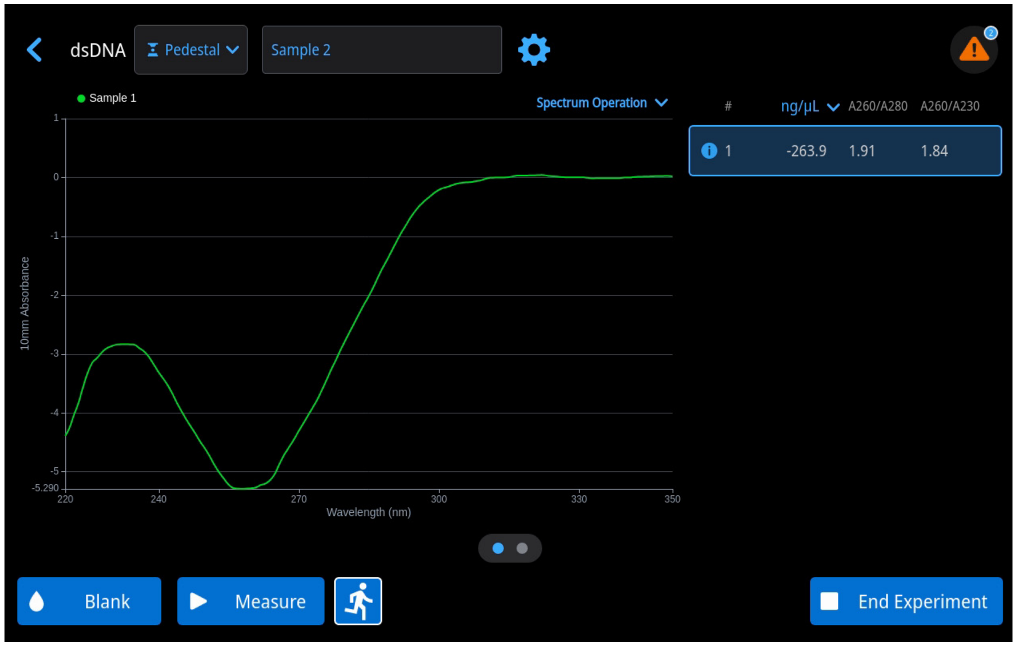


Good blanking buffer (measured abs < 0.02)

If the resulting spectrum is greater than 0.02 A or 0.4 A (10 mm equivalent) depending on the application around the analysis wavelength, that buffer solution may interfere with the sample analyses, especially for low concentration samples. See below for details.

Problems associated with blanking

- Residual sample was left on pedestal or in cuvette before blank measurement was performed. (Resulting sample spectra may exhibit negative absorbance values, indicating blank had more absorbance than sample in that region of spectrum.)
- Blank measurement exhibits higher absorbance than unknown sample at analysis wavelength. (If buffer used as blank differs in composition from that used to resuspend sample, measurement results will be incorrect.)
- Sample was inadvertently used to blank instrument. (Resulting sample spectra may exhibit negative absorbance values or, in some cases, resemble a mirror image of a typical pure nucleic acid or protein spectrum as in example below.)



Nucleic acid sample solution used to blank instrument results in "mirror image" spectrum

Solutions for blanking problems

- Thoroughly clean and/or recondition both pedestals and then:
  - rerun blanking cycle, or
  - measure new blank using new aliquot of appropriate buffer solution, then measure new aliquot of unknown sample

For most applications, blank with the same buffer solution used to resuspend the analyte of interest. The blanking solution should be a similar pH and ionic strength as the analyte solution.

Run a Blanking Cycle

Run a blanking cycle to verify the following:

- instrument is operating normally (with flat baseline)
- pedestals are clean (i.e., no dried-down sample material on pedestals)
- absorbance contribution of buffer solution you plan to use for sample analyses

Supplies needed

- lint-free laboratory wipes
- 0–2 µL calibrated precision pipettor (low retention tips)
- buffer solution for evaluation

To run a blanking cycle

NOTICE

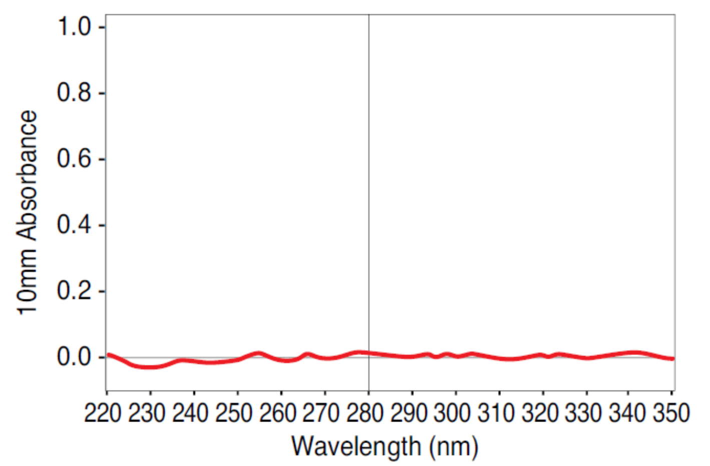
- Do not use a squirt or spray bottle on or near the instrument as liquids will flow into the instrument and may cause permanent damage.
- Do not use hydrofluoric acid (HF) on the pedestals. Fluoride ions will permanently damage the quartz fiber optic cables.

1. From the home screen, select an application and save the settings.
2. Lift the instrument arm and clean the upper and lower pedestals with new laboratory wipe.
3. Measure a water blank:
   - Pipette exactly 1 µL deionized water (DI H_2O) onto the lower pedestal and lower the arm.
   - Select **Blank** and wait for the measurement to complete.
   - Lift the arm and clean both pedestals with new laboratory wipe.
4. Measure the buffer solution:
   - Pipette 1-2 µL buffer solution onto the pedestal and lower the arm.
   - Start the sample measurement:
     - if Auto-Measure is On, lower arm
     - if Auto-Measure is off, lower arm and select **Measure**
   - Wait for measurement to complete.

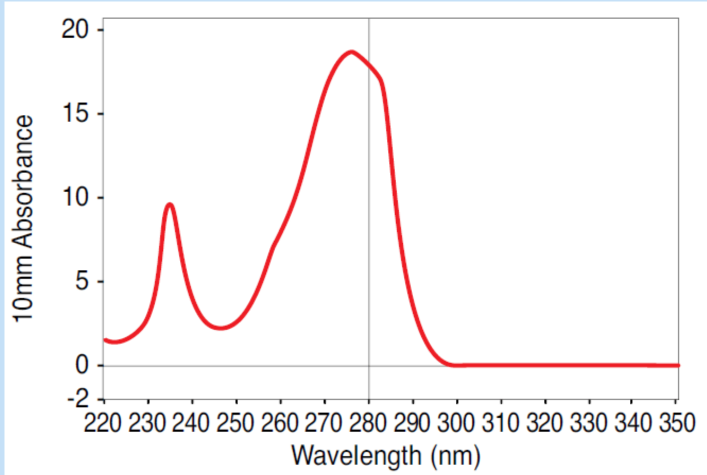
   The resulting spectrum should vary no more than 0.02 A (or 0.04 depending on the application used) from the baseline at the analysis wavelength.

   If your spectrum does not meet these criteria, repeat steps 2–4.

   If spectrum is still outside specifications, see Solutions for Blanking Problems.
5. When you are finished with the blanking cycle, select **End Experiment**.
6. Lift the arm and clean both pedestals with a new wipe.



Example spectrum of buffer suitable for Protein A280 protein quantification

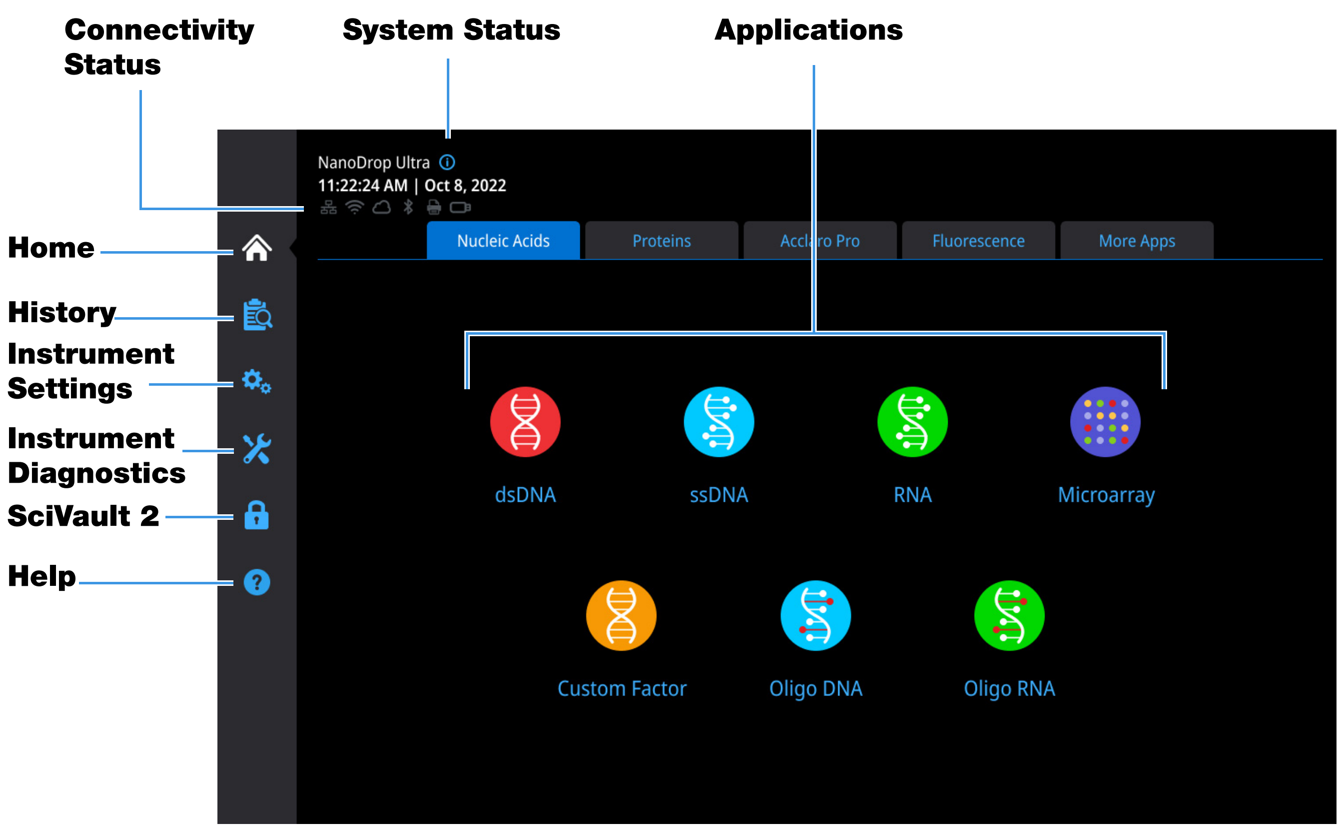


Example spectrum of buffer unsuitable for Protein A280 protein quantification

Basic Instrument Operations

NanoDrop Ultra Home Screen

These operations are available from the NanoDrop Ultra home screen.

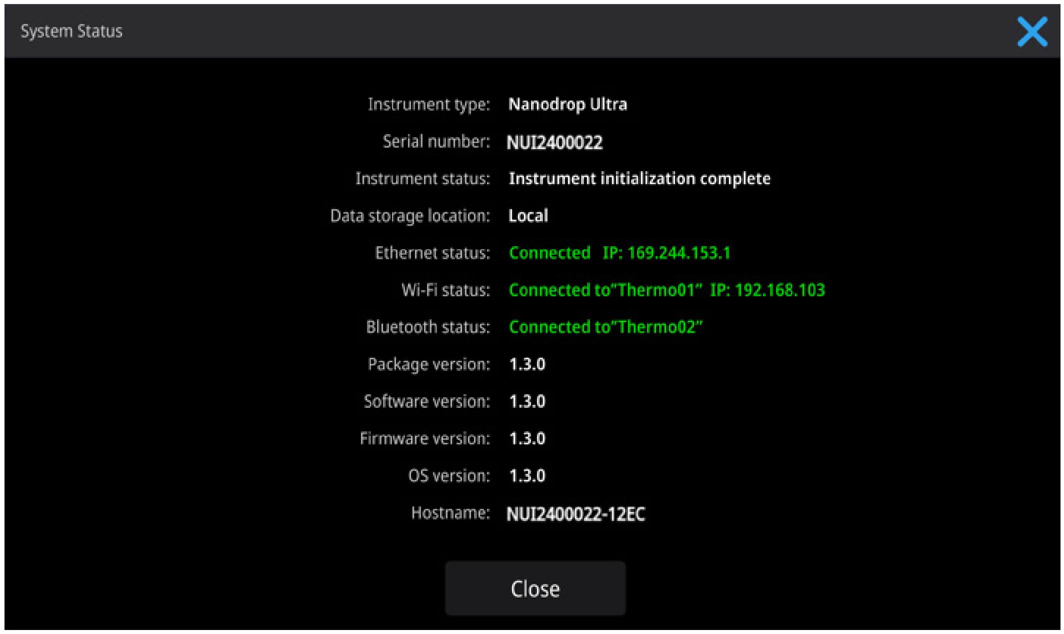


Applications

The NanoDrop Ultra software offers several configurable applications, which gives users full control of the measurement.

System Status

Select on the instrument home screen to open the system status box.



The available information is described below.

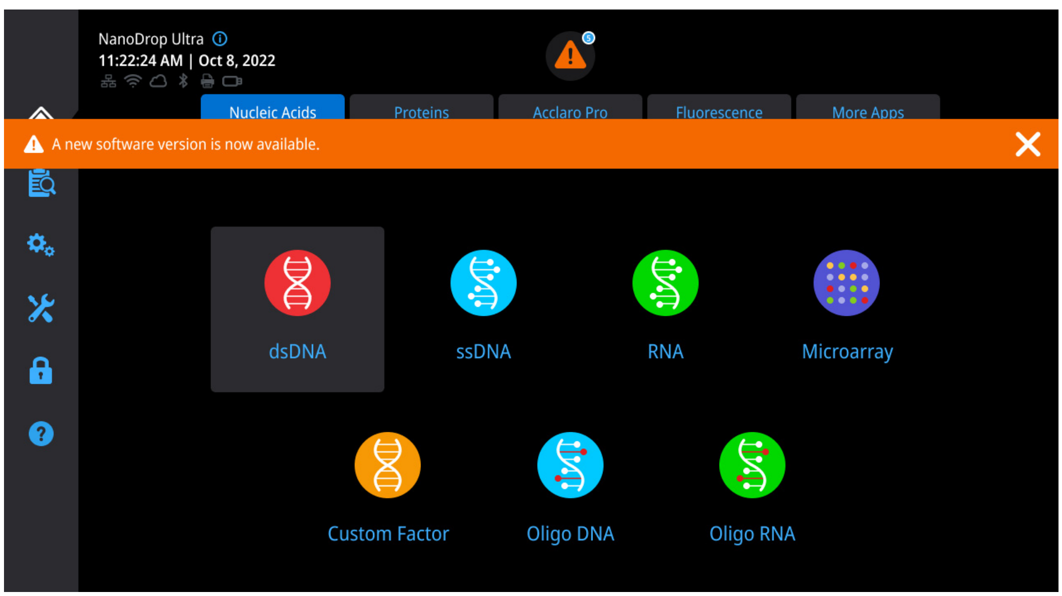
Instrument type	Instrument model (NanoDrop Ultra)
Serial number	Instrument serial number
Instrument status	Current status of the instrument
Data storage location	Indicates location of database set where instrument is currently storing data.
Ethernet status	Status of Ethernet connections for the instrument (“Connected to…”, or “Not connected”)
Wi-Fi status	Status of WiFi connections for the instrument (“Connected to...”, “Enabled and not connected”, or “Disabled”)
Bluetooth status	Status of Bluetooth connections for the instrument (“Connected to...”, “Enabled-[list of any paired devices]”, or “Disabled”)
Package version	Version of entire package that is installed on the system. Helps manage dependencies and ensures compatibility between firmware, OS, and software versions
Software version	Version of instrument operating software installed
Firmware version	Version of instrument firmware installed

OS version	Version of customized Linux operating system software installed
Hostname	Unique identifier of instrument including serial number and last 4 digits of MAC address

Connectivity Status

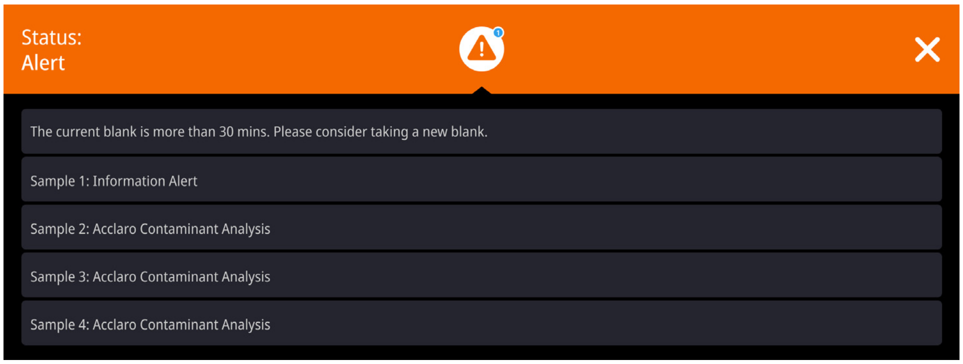
Ethernet Connectivity		Shows that the instrument is successfully connected to an Ethernet network.
Wi-Fi Connectivity		Shows that the instrument is successfully connected to a Wi-Fi network.
Bluetooth Connectivity		Shows that the instrument is successfully connected to a Bluetooth device.
Printer Connectivity		Shows that the instrument is successfully connected to a printer.
USB Connectivity		Shows that the instrument is successfully connected to a USB device.

System Alarms and Alerts



The NanoDrop Ultra software will alert users of any potential issues, available software updates, or if any Acclaro Sample Intelligence information is available during an experiment. Depending on the severity of the notification, either the alert icon or the alarm icon will be displayed at the top of the screen. Both icons contain a blue circle with a number indicating the amount of alert or alarm messages that are available. A detailed explanation will appear of all status alerts or alarms by selecting their respective icon. Selecting some individual alerts or alarms may prompt additional information.

The software will also display a banner that provides additional information about the alert or alarm at the time it was triggered. Selecting the banner will provide you additional information.



The alert and alarm banners can be minimized by selecting to the right of the message.

The alert for software updates will only occur if the instrument is connected to a network with internet access.

Navigation Bar

The following options makeup the Navigation Bar. The Navigation Bar can be found on the left side of the screen at various times in the software including on the home screen.

Home Screen

Select to return to the home screen.

History

Select to view any data acquired earlier today, last week, last month, last six months, last year or in a specific date range. See "View History" on page 315 for more information about the History feature on the instrument.

Instrument Settings

Select to access instrument settings for software updates, cuvette sampling, networking and more. See "Instrument Settings" on page 338 for detailed information about all available instrument settings.

Instrument Diagnostics

Select  to verify instrument operation. Instrument diagnostics should be run periodically according to the recommended maintenance schedule. See “Instrument Diagnostics” on page 363 for information about how to run the available instrument diagnostics.

SciVault 2

Select  to open the optional add-on Thermo Scientific™ SciVault™ 2 software. This companion software allows users to operate their NanoDrop Ultra instrument in a manner that complies with US FDA 21 CFR Part 11. When purchased, the SciVault 2 software and activation key is shipped to you on a USB stick and integrates directly into the NanoDrop Ultra software user interface. For more information, visit thermofisher.com/nanodrop.

Help

Select  to launch the interactive help guide.

NanoDrop Ultra Measurement Screens

These operations are available from any measurement screen within an Application.

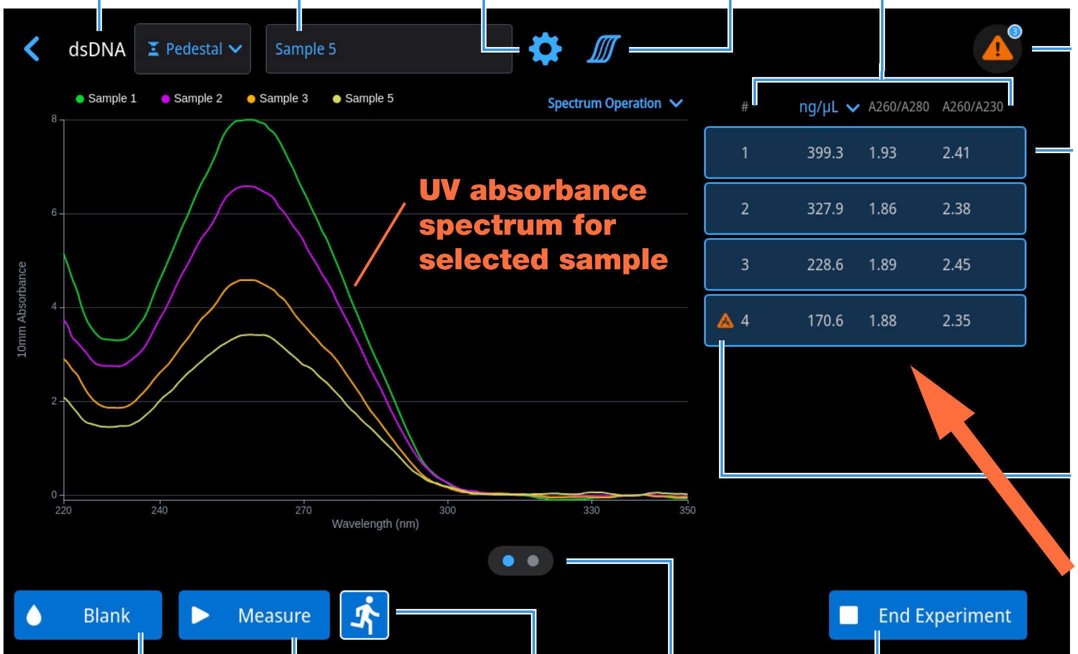
Application

Sample name; tap to edit

Settings

qPCR Kit Data

Measurement results; see Applications for details



Sample alert

Tap row to select sample and update spectrum; tap more rows to overlay up to five spectra. Press and hold sample row to view sample details.

Acclaro Contaminant alert; Tap to learn more

Drag tab down/up to see more/less sample data

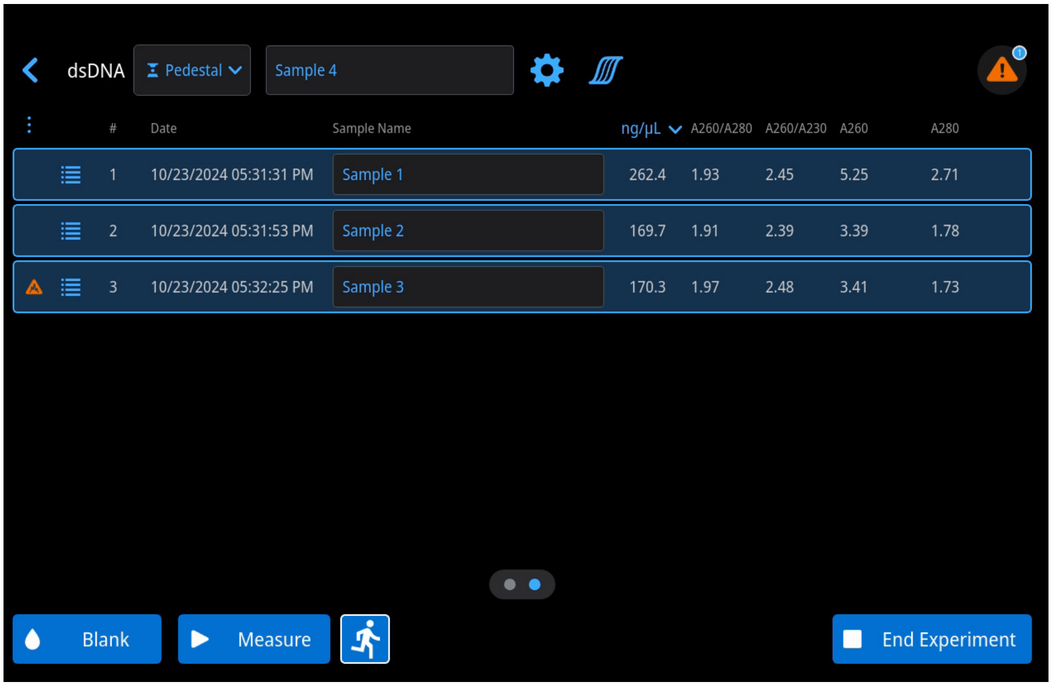
Tap to measure blank solution

Tap to measure sample solution

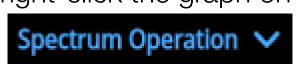
Auto-Measure

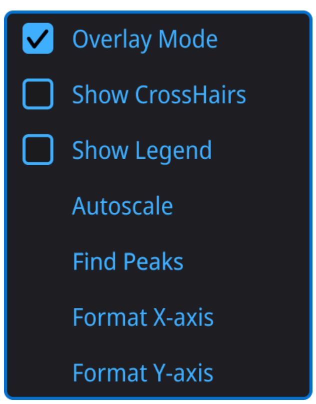
Tap to end experiment and export data

Page control; swipe screen left to view table with more measurement results



Measurement Screen Display Options

When performing measurements, right-click the graph on the measurement screen or select the Spectra settings icon  to bring up the following display options:



Display multiple samples in overlay.

Hover spectrum to see plot data

Display graph legend

Scale axes to fit spectra measurement

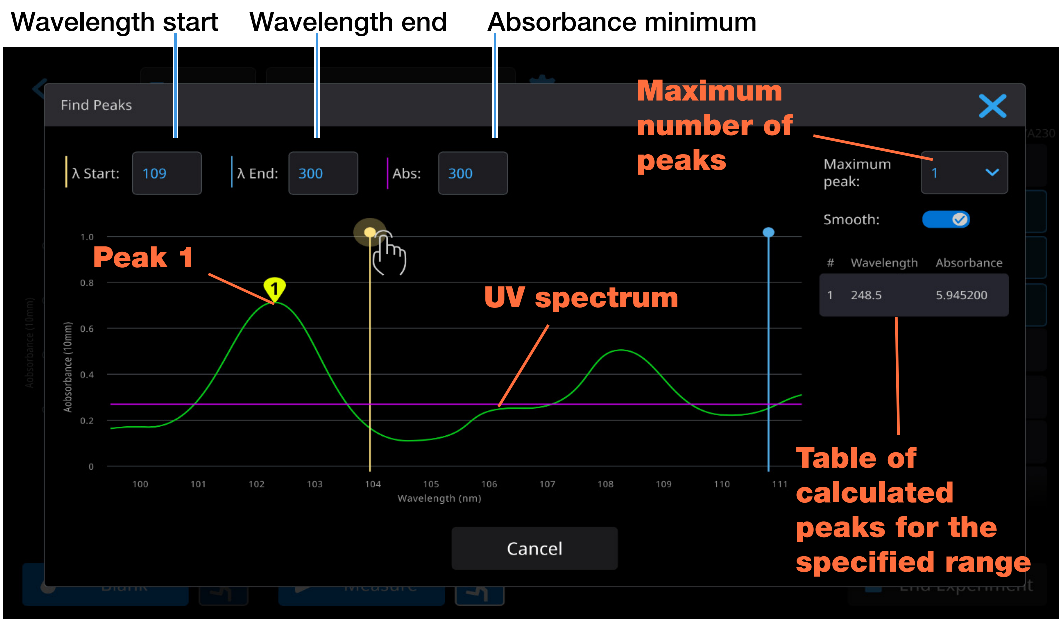
Calculate peaks for specified range

Select to manually enter x-axis range

Select to manually enter y-axis range

Find Peaks

Select **Find Peaks** to view calculated peaks for specified range. You can enter the range by dragging the color-coded limit lines, or enter values into the fields at the top of the spectrum. Found peaks for the defined range are listed in the table below the spectrum.



Setup

Select ⚙ in any measurement screen to see the available setup options for that application.

The types of setup options that appear in the setup screen depend on the selected application. For details, see the settings section of that application in this guide:

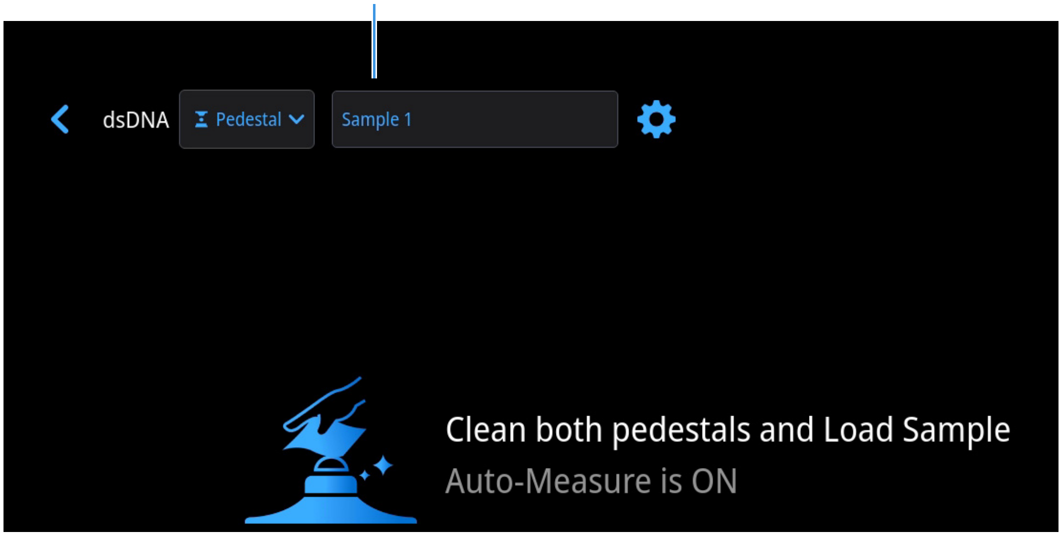
Applications > [application group] > Settings

Sample Name

Select the **Sample Name** field in any measurement screen to edit the sample name.

When Auto-Naming is enabled in the application setup screen, each sample is automatically assigned a sample name using the default base name followed by a unique number starting with “1.” The first time this appears is after the first blank measurement and before the first sample measurement in each experiment as shown below.

Default sample name; tap to edit



In this example, the first sample would be named “Sample 1” followed by “Sample 2,” etc. You can edit the default base name and overwrite any sample name.

> **Note** If you edit the sample base name during an experiment when Auto-Naming is selected, the assigned sample ID numbers restart.

Edit default sample base name

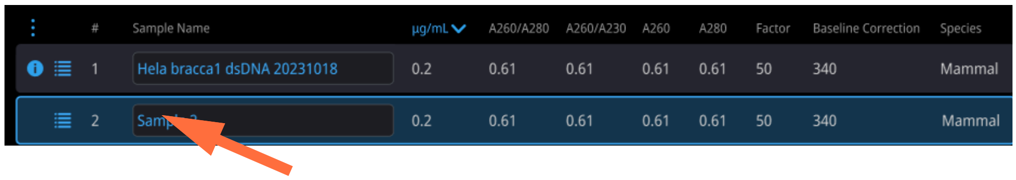
After you measure a blank and before the first sample is measured:

1. Select **Sample Name** field to display keyboard
2. Enter new base name
3. Select **Done** key

Edit sample name

1. From home screen, select  to open History

2. Select experiment
3. **Swipe left** to show data table
4. Select the **Sample Name** field to display keyboard



5. Enter new sample name
6. Select **Done** key to close keyboard

Measurement Results

The types of results that appear in the measurement screens depend on the selected application. For details, see the reported results section of that application in this guide:

Applications > [application group] > Measure [application name] > Reported Results

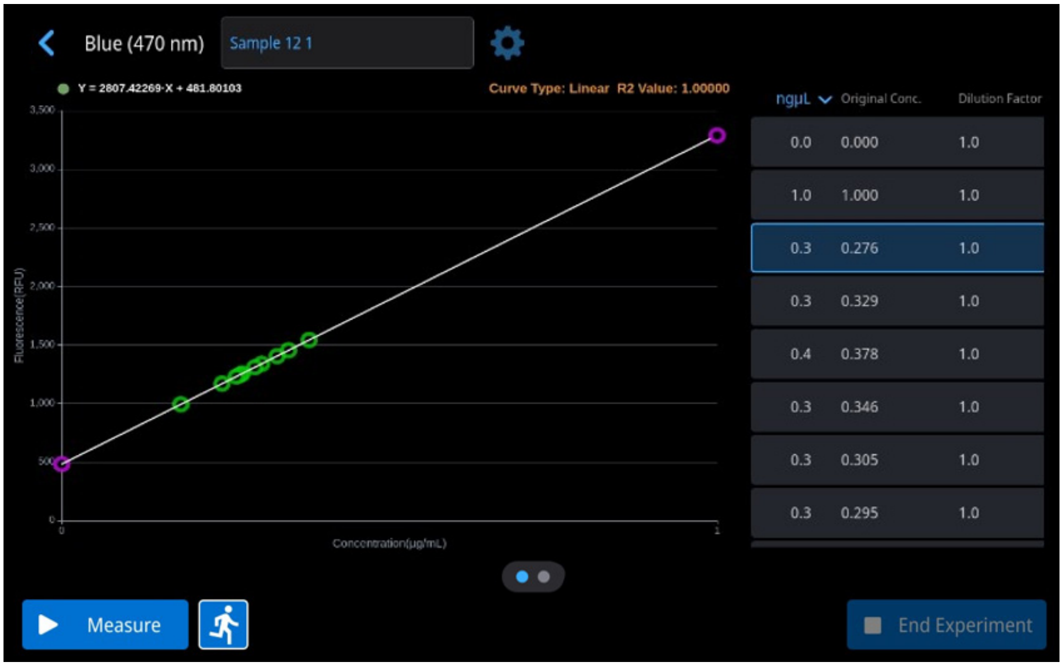
Absorbance Spectrum

For each measured sample taken in one of the applications (Fluorescence applications not included), the UV or UV-Visible absorbance spectrum and a summary of the results is shown. The vertical axis shows absorbance in absorbance units (A). The horizontal axis shows wavelength in nm. Here is an example for a UV-Vis method.

All absorbance-based applications display the sample pathlength along the spectrum's vertical axis. Micro-volume absorbance measurements and measurements taken with nonstandard cuvettes are normalized to a 10.0 mm pathlength equivalent. Here is an example.

Fluorescence Standard Curve

For each measured sample taken in one of the Fluorescence applications, a standard curve and a summary of the results is shown. The vertical axis shows fluorescence in relative fluorescence units (RFU). The horizontal axis shows concentration in ng/µL. Here is an example from the dsDNA Fluorescence application.



ngµL	Original Conc.	Dilution Factor
0.0	0.000	1.0
1.0	1.000	1.0
0.3	0.276	1.0
0.3	0.329	1.0
0.4	0.378	1.0
0.3	0.346	1.0
0.3	0.305	1.0
0.3	0.295	1.0

Acclaro Measurement Alerts

#	ng/µL	A260/A280	A260/A230
36	257.8	1.82	1.49
37	198.0	1.72	1.22
38	198.5	1.72	1.20

#	ng/µL	A260/A280	A260/A230
9	190.7	1.80	2.30
10	190.2	1.80	2.29
11	191.5	1.79	2.29

The Acclaro Sample Intelligence technology built into the NanoDrop Ultra instruments provides important features to help you assess sample integrity. Tap or click a Sample Intelligence icon in the software to view its associated information.

contaminant analysis is available to help qualify a sample before use in downstream applications

on-demand technical support is available for measurements that are atypical or very low concentrations

Blank Button

Select **Blank** to measure a blank for the selected experiment.

A blank must be measured before each group of similar samples. The blank solution is typically the pure buffer that was used to resuspend the sample. For more information, see Choosing and Measuring a Blank.

Measure Button

Select **Measure** to measure a sample for the selected experiment.

Samples must be properly isolated and prepared before they can be measured with the instrument and the concentration must be within the instrument's absorbance detection limits. For more information, see Preparing Samples. and Measure a Micro-Volume Sample or Measure a Cuvette Sample and Detection Limits.

> **Note** The **Measure** button is enabled after a valid blank measurement is completed.

Auto-Measure and Auto-Blank Options

Speed up sample analysis with the NanoDrop Ultra Auto-Measure and Auto-Blank features, which cause the instrument to start the measurement immediately after you lower the instrument arm. These options eliminate the need for repetitive Measure or Blank operations for large batches of samples.

> **Note** Auto-Measure and Auto-Blank are available for micro-volume measurements only.

Auto-Measure

To select or deselect Auto-Measure, from any sample measurement screen, select the **On** or **Off** button at the right of the Measure button.

Auto-Blank

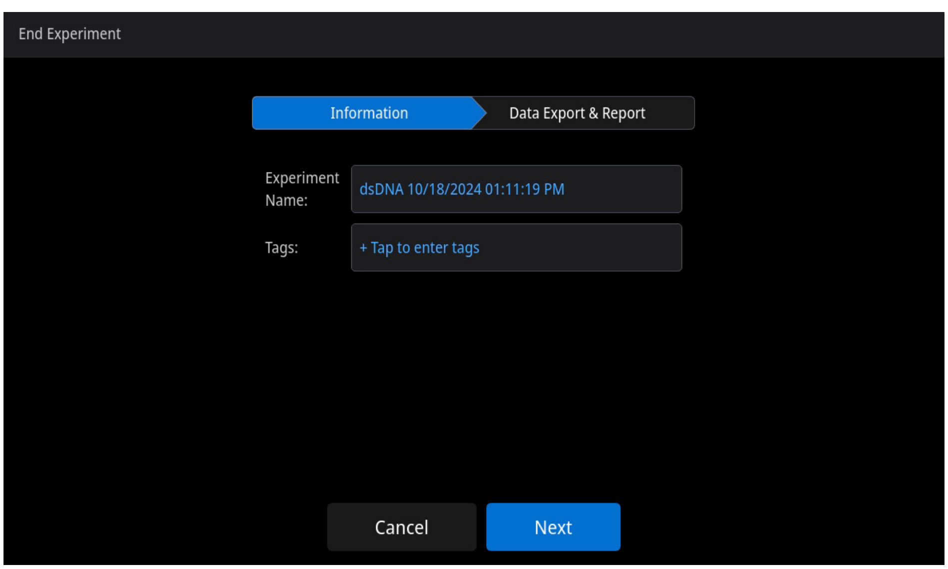
To select or deselect Auto-Blank, from any blank measurement screen, select the **On** or **Off** button at the right of the Blank button.

End Experiment Button

Select **End Experiment** when you are ready to name and save your experiment, add a label to help you locate the experiment later, print, or export the data. Depending on the administrative settings, you may be prompted to sign the experiment upon ending the experiment.

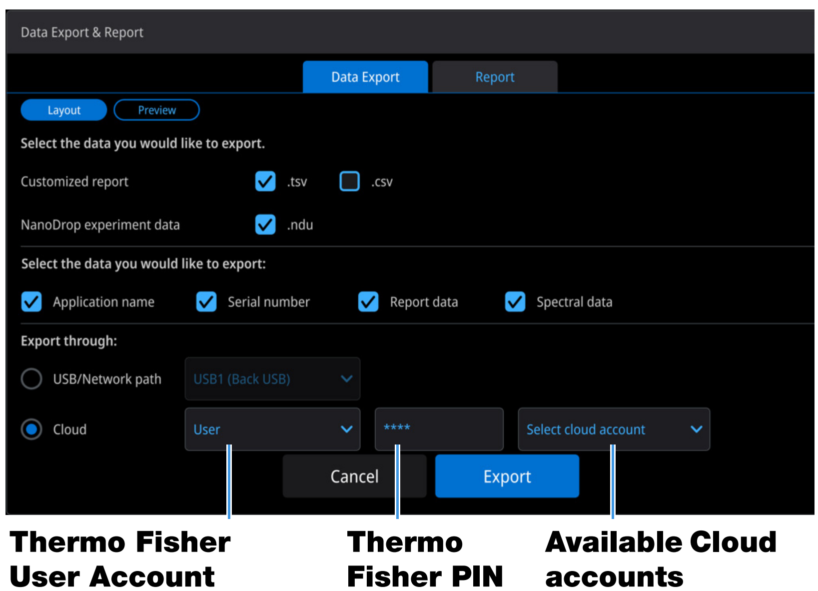
Note The **End Experiment** button is enabled after the first sample measurement is completed.

After you select End Experiment, the information tab within the End Experiment box is displayed:



Available options:

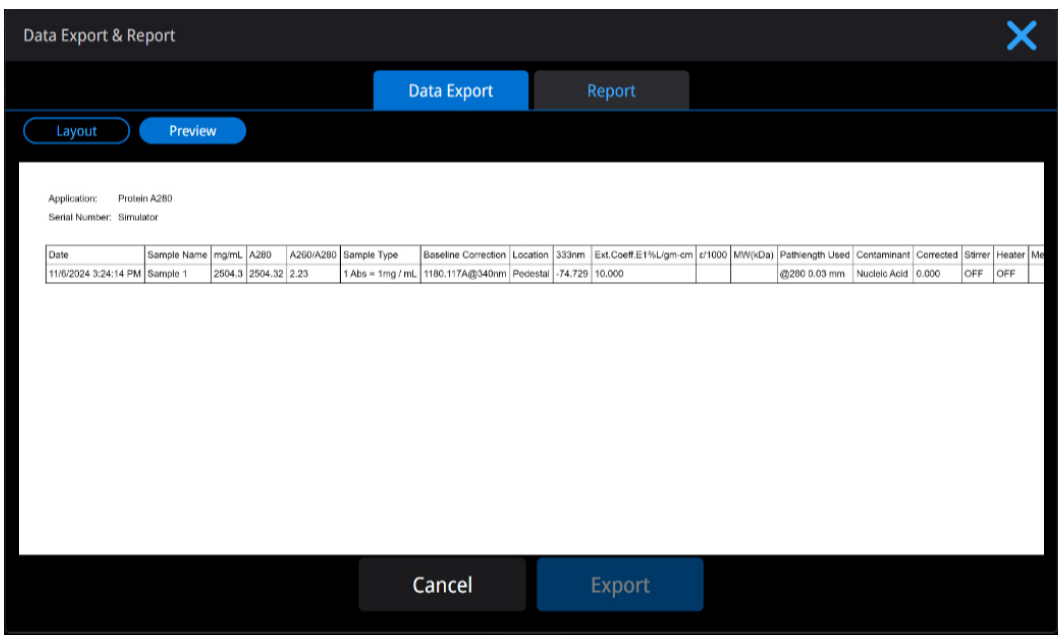
Experiment Name	Enter a name for this group of measurements. The measurement results are saved in the selected database location using the entered experiment name.
Tags	Enter a descriptive label to help you find this experiment later or to associate it with another experiment (see Manage identifiers on the instrument for details). When using the local control software, Tap the **Tags** box to display a keyboard to enter the label text. Press the enter key (PC control) or **Done** (local control) to add the label.
Export Data	Select **Next** to move to the Data Export & Report tab within the End Experiment window. Select **Continue** to open the Data Export & Report window

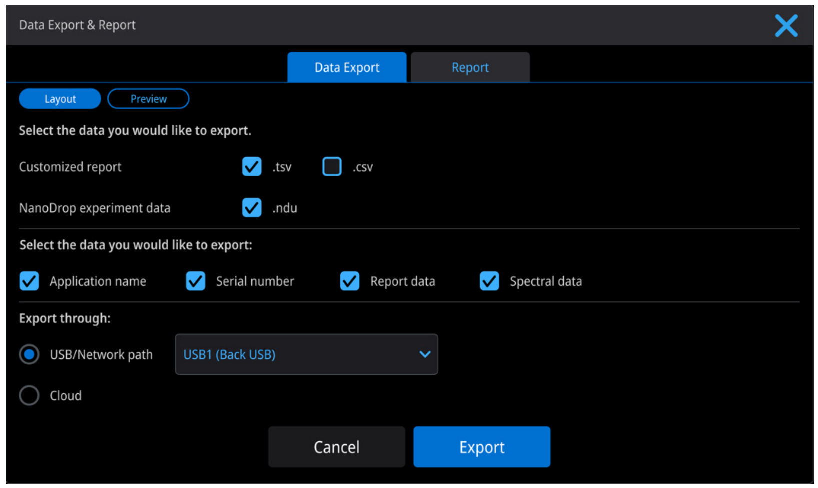


Available options (Data Export):

Export File Type	The first section allows you to select a file format for exporting the measurements in this experiment. Available export file formats: • Customized report – comma-separated values spreadsheet (.csv) file – tab-separated values spreadsheet (.tsv) file (spectral data only) • NanoDrop Ultra experiment data (.ndu) file – tab-separated values spreadsheet "TQ Analyst" (TQ) file used for troubleshooting purposes The filename is the entered experiment name (see above). The file is stored in a folder named "NanodropUltra" followed by the instrument serial number. (Use **System Status** to view your instrument serial number.)
Customized Report Options	The second section is dedicated to what information will appear within one of the customized report options (.csv or .tsv). Available customizable options: • Application name - when enabled will include the name of the application used. • Serial number - when enabled will include the serial number of the instrument that was used during the experiment. • Report data - when enabled will include information from all columns currently displayed in the report table" • Spectral data - when enabled will include absorbance data for displayed spectrum in 0.5 nm increments.

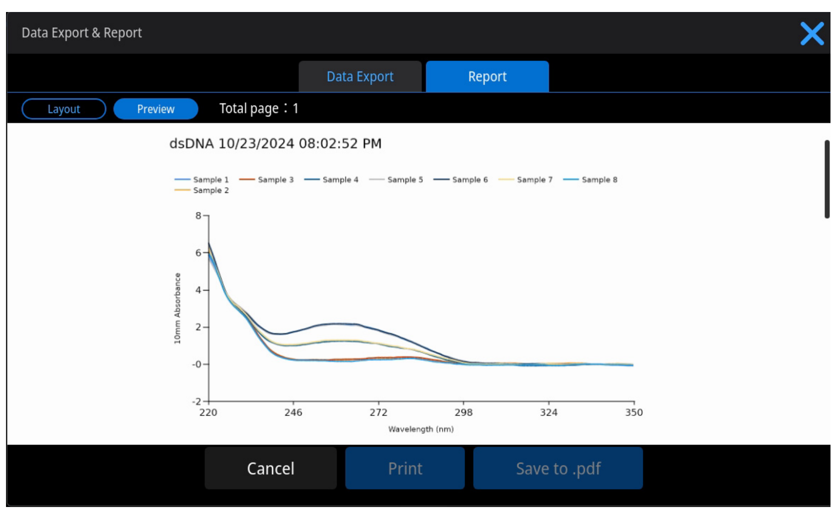
Export Location	The last section is dedicated to where the export file will be saved. **USB/Network Path–** Select the USB/Network path radio button to export to a USB device connected to any USB port on the local instrument (front, back-left or back-right), or to a network location. When using the NanoDrop Ultra PC control software, use the Browse option to select a File Path to export to. **Cloud–** Select the Cloud radio button to export to one of the available Cloud options: Thermo Fisher Cloud Connect™, Google Drive, or Microsoft OneDrive (see Cloud for more details). The Thermo Fisher Scientific Cloud Connect™ username and PIN will need to be selected/entered before finally selecting the available Cloud location to export to.
Export Preview	Select the **Preview** tab to see what the exported file will look like including any customization that was selected. This feature will not work for the .ndu export file type.



Cancel (Return to Experiment)	Close the **End Experiment** box and display the results for the most recent measurement. From there you can add measurements to the current experiment and save it later.
Export Button	Export measurement results for current experiment. 

Available options (Report)

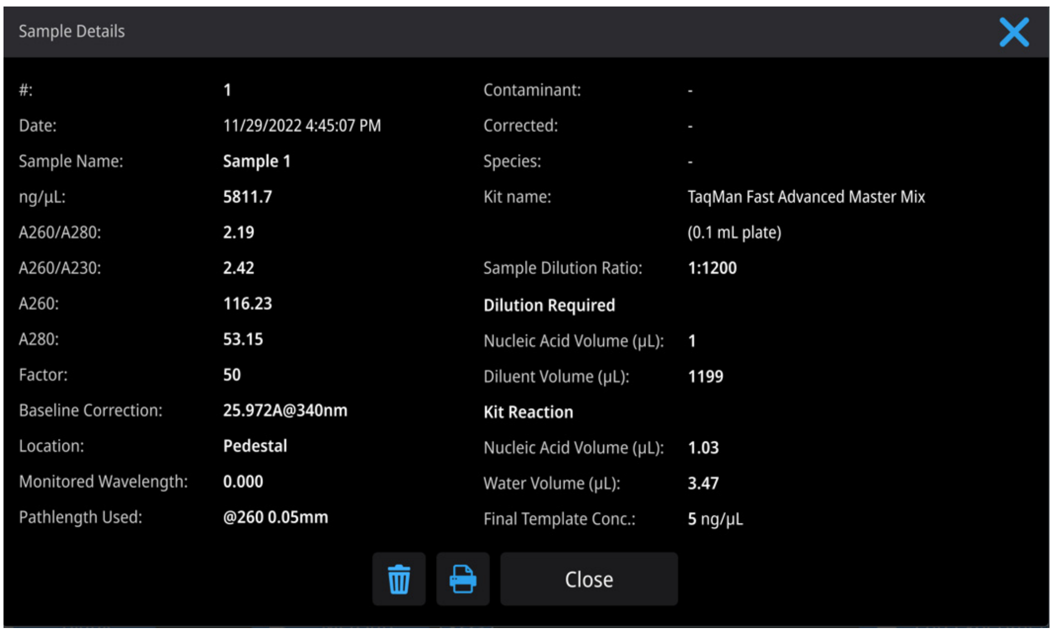
Customized Report Options	Section dedicated to what information will appear within the printable report. Available customizable options: • Sample Spectra Display - option to overlay all sample spectra or display up to 4 sample spectra per page. • Header/Footer Display - option to input a title and sub-title on the report to appear on all pages as well as enter any notes to appear at the end of the report. • Report data - option to include information from specific columns currently displayed in the report table
Print to PDF Location	Section dedicated to where the export file will be saved. Select the USB/Network path radio button to export to a USB device connected to any USB port on the local instrument (front, back-left or back-right), or to a network location. When using the NanoDrop Ultra PC control software, use the Browse option to select a File Path to export to. Select the Cloud radio button to export to one of the available Cloud options: Thermo Fisher Cloud Connect™, Google Drive, or Microsoft OneDrive (see Cloud for more details). The Thermo Fisher Scientific Cloud Connect™ username and PIN will need to be selected/entered before finally selecting the available Cloud location to export to.
Print Preview	Select the **Preview** tab to see what the printable report file will look like including any customization that was selected.



Cancel (Return to Experiment)	Close the **End Experiment** box and display the results for the most recent measurement. From there you can add measurements to the current experiment and save it later.
Print button	Select printer to print from and print measurement results for current experiment.
Save to .pdf button	Export the .pdf report for measurement results for current experiment.

Sample Details

Press and hold a **sample row** in any measurement screen or data table to show the sample details, which include all available measurement results and associated details for the selected sample. Here is an example:

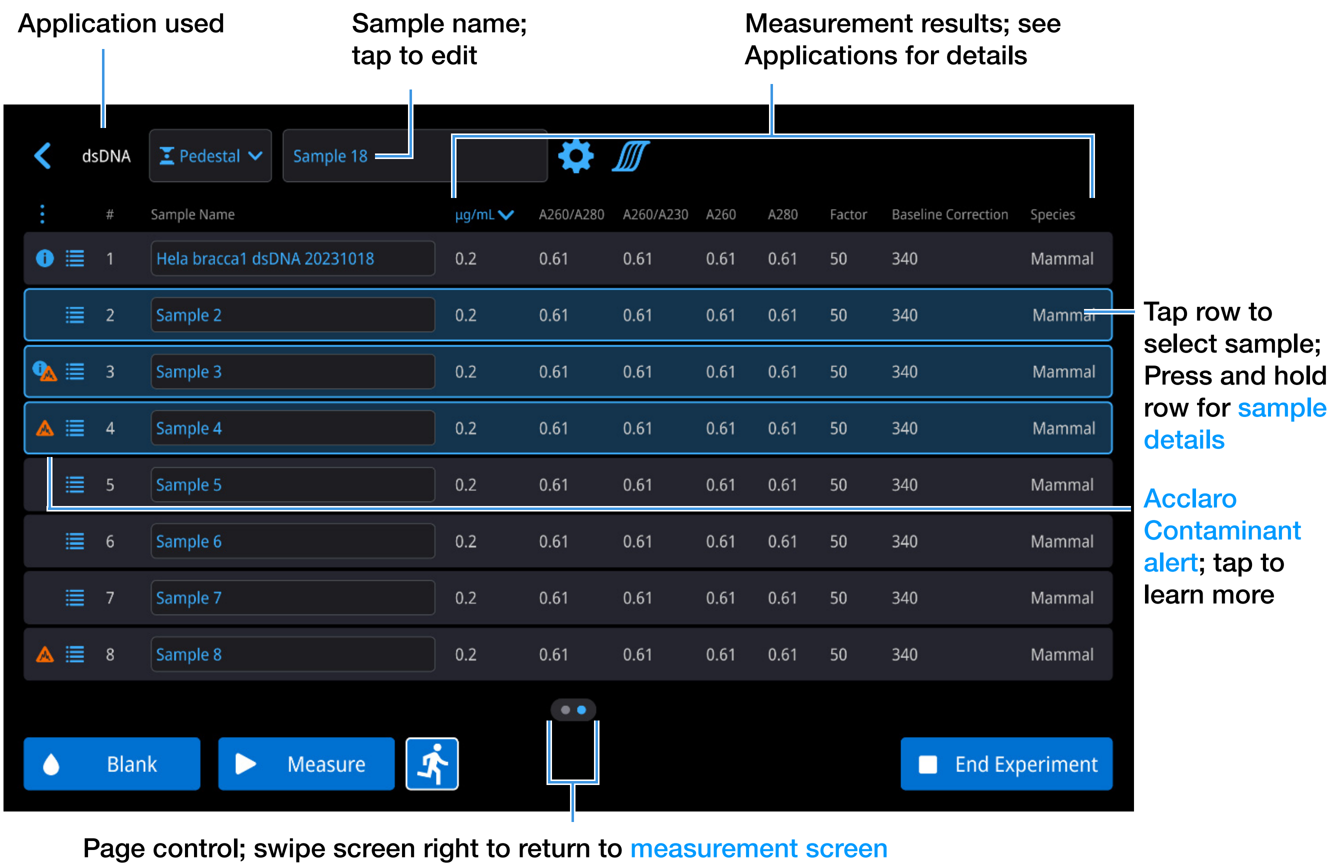


Information about the measured values displayed in Sample Details is provided in this Help system, under the application used to acquire the data.

Note You can also edit the sample name from the Sample Details box.

Data Table

Swipe left in any measurement screen to see the data table for the current experiment. The data table contains the measurement results for all samples in the experiment. The image below highlights the available features.



View History

Whether you collect one sample or many in a row, after you choose End Experiment, the acquired data are automatically saved in an experiment with an experiment name. In the default configuration, experiments are stored in the NanoDrop Ultra database on the local instrument according to acquisition date, experiment name, application used and any assigned labels.

Use the History feature to open the database in order to view acquired spectra and associated data from any experiment at any time.

Open instrument database of measurement results

To open NanoDrop Ultra database on instrument, tap (History) on instrument home screen.

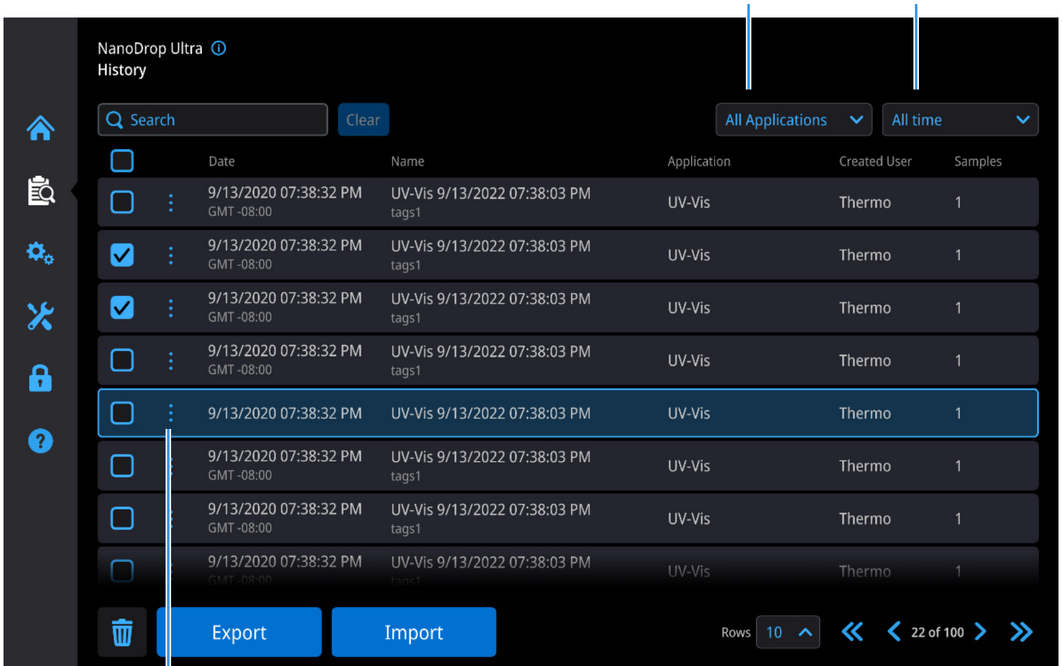
History Menu

Available options:

Delete	Delete the experiment
Import	Import data from a USB flash drive or folder on your computer or network hard drive (NanoDrop Ultra PC control software only)
Export	Export the experiment

Search Experiment Database

Use the **Search** feature in History to search the selected database for an experiment or to change the time range or other search filters. The database is filtered using the current settings in the Search box. Filters include time range, application type and any user-defined labels (see Manage Identifiers for information about adding and deleting labels). Here is an example:

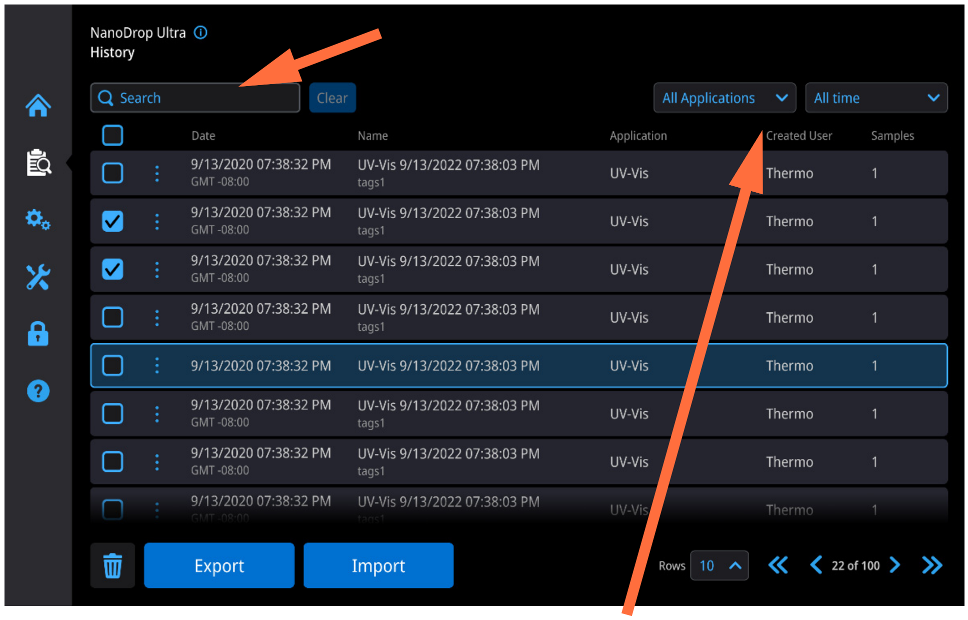


Export Selected Experiments

To the left of each experiment an empty checkbox will appear. Select one or more checkboxes in History to select experiments to be exported.

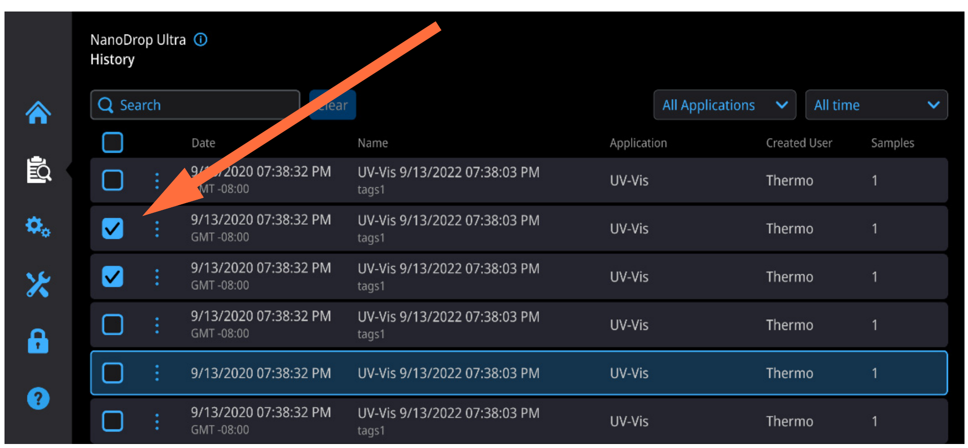
Export selected experiments

– Within History, filter using the **Search** feature to find the desired experiment

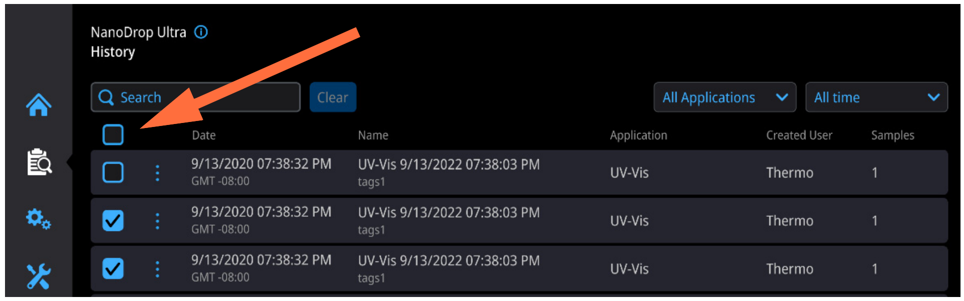


Change a filter to display updated list of experiments

– Click or tap the checkbox to select the row or rows containing the desired experiment(s) to be exported (click or tap again to deselect an experiment)

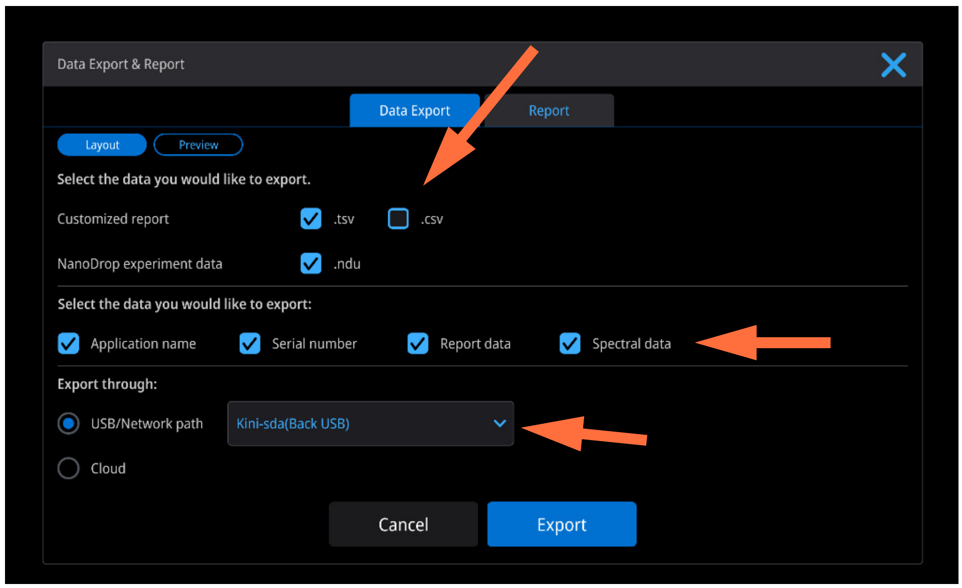


– To select or deselect all experiments in database, click or tap on the checkbox directly below the Search window



– Click or tap **Export**

– Select one or more formats to export to (see “Export Selected Experiments” on page 324)



– Select the applicable details to appear in the exported file

– Designate the export location and select **Export**.

– After "Export Completed" message, select **OK**

Delete Selected Experiments

Select experiments to be deleted.

Delete selected experiments

– Within History, filter using the **Search** feature to find the desired experiment

– Click or tap the checkbox to select the row or rows containing the desired experiment(s) to be deleted (click or tap again to deselect an experiment)

– Select  and **Yes**

Note Deleted data cannot be recovered.

Open Experiment and View Associated Data

Use  (History) to locate and open any experiment to see the measurement data it contains.

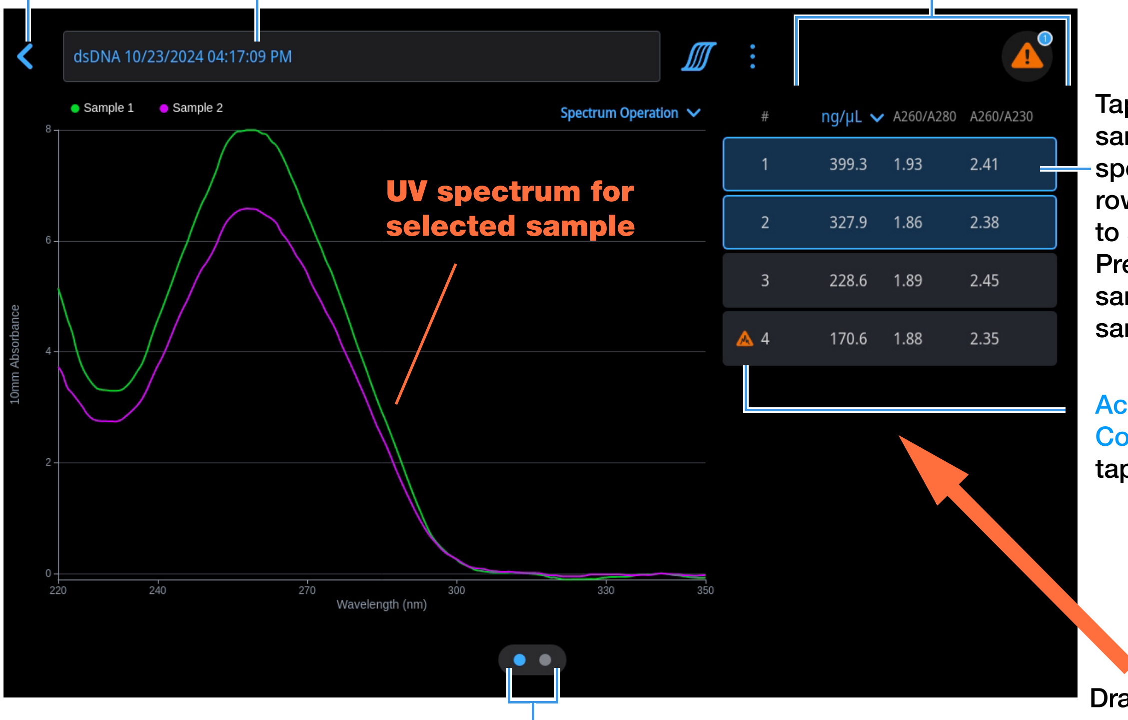
Open an experiment

- Within History, if you don't see the experiment you want to open, you can use the Search feature to find the desired experiment
- Double click or tap the experiment name to open the experiment

The History provides measurement data as spectral data, standard curve data, and data tables, similar to what you see after you complete a measurement.

Note The data shown are dependent upon the application used to measure the samples (nucleic acids in these examples). For more information, see the application details.

Spectral data—
After you open an absorbance-based experiment, the software shows the UV or UV-visible absorbance spectrum and a summary of the associated data for the first sample measurement, much like it appears during a measurement. The image below describes the available features.



Standard curve data—
After you open a fluorescence-based experiment, the software shows the fluorescence standard curve and a summary of the associated data for the first sample measurement, much like it appears during a measurement.