

#6 Data Management

Introduction

The NanoPhotometer® family of UV/Vis spectrophotometers provides a well-structured data management portfolio to store different kinds of file formats in dedicated folders on different devices. Data saved on the internal NanoPhotometer® memory of up to 8 GB can easily be shared or transferred to computers or data devices by using a LAN or password secured WiFi connection. Furthermore, all data are automatically stored after each reading to prevent data loss.

File Formats

Measured data can be saved in IDS, Excel or PDF format. The proprietary IDS (Implen Document Source) format contains an encrypted copy of all readings from a run and is optimized to archive data for documentation purposes. IDS files cannot be altered or changed, however data can be exported to Excel and PDF at any time for further data analysis or archiving. Excel files are listing a summary of all results and method settings when opened. All absorbance readings for each sample from 200 - 900 nm and the corresponding graph are included in individual tabs named after the sample (see Figure 1).

PDF files are read-only, they cannot be changed or altered and are optimized for data documentation and data archiving. PDF files are listing measurement parameters, results in table format as well as the graphs from all readings in one overlay graph window.

Data Storage

The NPOS operating system offers multiple data storage options depending on the available control devices. Data can always be saved on the internal 8 GB instrument memory or to a connected USB flash drive. If a control device like a computer, tablet or smartphone is used, data can be stored directly on the control device for easy data access, transfer, and downstream data analysis.

Autosave

To prevent data loss, all measurements are automatically stored as IDS file on the internal memory of the NanoPhotometer® right after each reading. These backup copies can be found in the Autosave folder on the device (StoredResults/NanoPhotometer/Autosave) for up to eight days. Files contain the base name Backup, the method name, and a time/date stamp.

Data Transfer

All data saved on the NanoPhotometer® can easily be accessed from and transferred to a computer within the lab through LAN, a USB cable or a password secured WiFi connection.

To access/transfer data from the NanoPhotometer® Network Drive via LAN connection, the serial number or the NanoPhotometer® IP needs to be entered in the address bar of the Windows Explorer (e.g. \\M80798\ or \\Assigned IP Address\). Using a USB cable connection \\192.168.7.1\ will provide access and for password secured WiFi connections \\192.168.8.1\ will need to be entered in the address bar to show the NanoPhotometer® drive within Windows File Explorer.

For Mac OS X open the "Connect to Server" dialog in the "Go" menu of the MAC OS X Finder. With a LAN connection enter the instrument serial number or the active NanoPhotometer® IP address in the server address field to connect. For USB cable or WiFi connection use \\192.168.7.1\ or \\192.168.8.1\, respectively.

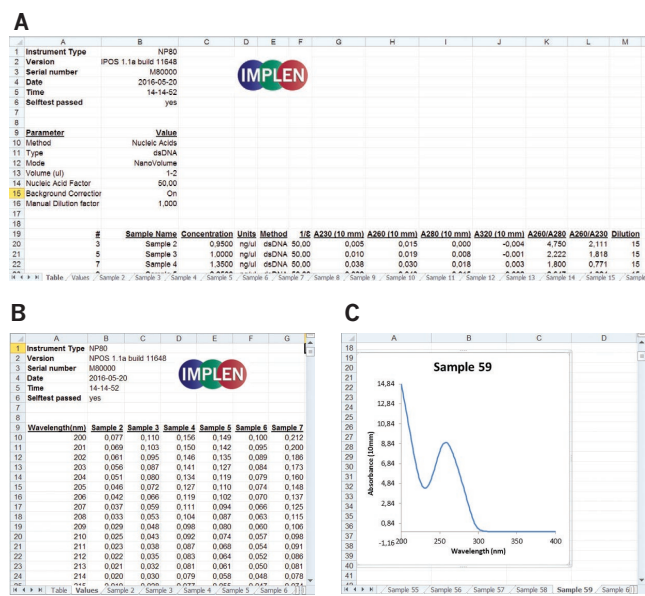


Figure 1: Single spreadsheets for (A) results in table format, (B) all absorbances in 1 nm steps and (C) for each graph.