IMPLEN OD600 DiluPhotometer Protein Quantification Software User Manual

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Contents

SUMMARY OF FEATURES

- The OD600 DiluPhotometer™ Protein Quantification Software is an application running under Windows that enables one or more spectrophotometers to transfer data into a PC environment.
- From there the user has a selection of choices; the data can be both printed and saved.
- Creation of standard curves (single, double and triple measurements); calculation of Protein Concentrations (single, double, and triple measurements).

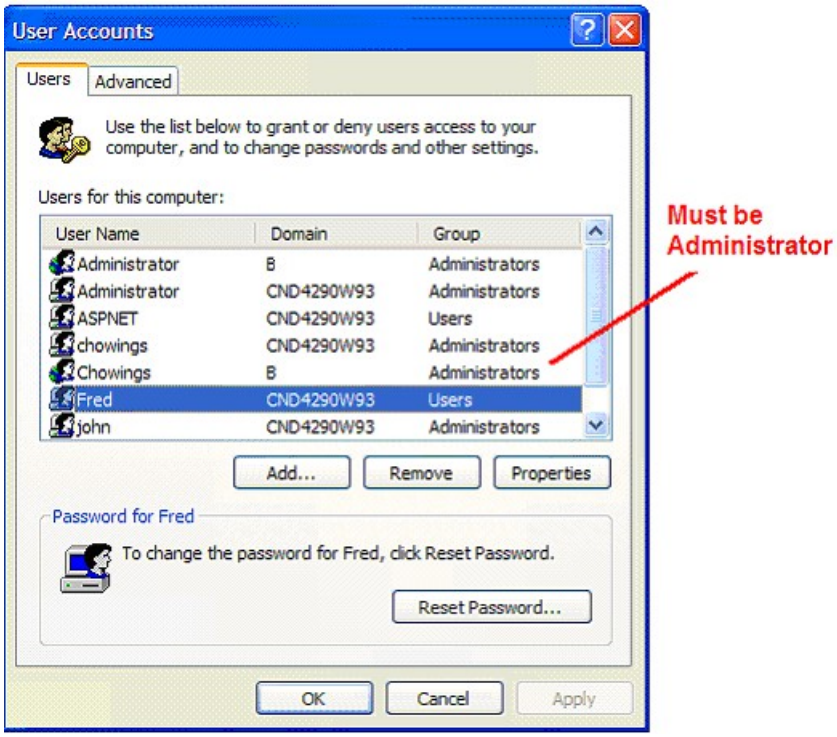
REQUIREMENTS

Before starting the installation process ensure the following requirements are met:

- PC must be running Windows 7, 8, 10, and Office 2010.
- A minimum of 100 MB hard drive space and 512 MB RAM are needed for the OD600 software.

- To install the OD600 software the installer should be logged in to Windows™ with full administration rights. If you have insufficient privileges, installation may fail. To check whether you have sufficient rights check the following screen. If in doubt consult your PC administrator.

Start >Control Panel > User Accounts.



INTRODUCTION

The OD600 software is designed to transfer data from the OD600 DiluPhotometer™ to a PC. For direct data transfer, the instrument can be linked to a computer via serial cable or a USB connection. The OD600 Software is necessary for setting up the connection.

- The OD600 Software is a small application running under Windows to enable the transfer of up to 99 measurements from an OD600 DiluPhotometer™ into a PC environment. From there the user has different choices; the data can be both printed and saved.
- The OD600 Software allows the creation of standard curves for colorimetric protein assays (e.g. Bradford) with up to 20 standards. The user can choose between single, double, and triple measurements, and change the type of standards and the unit.
- The user can calculate up to 99 protein concentrations by single measurements. Double and triple measurements are also possible.

INSTRUMENT CONNECTION:

Step 1: Create a new folder (Implant) on your hard disk (C) and copy the rxtx.dll into the folder:
Windows: C:\Implen

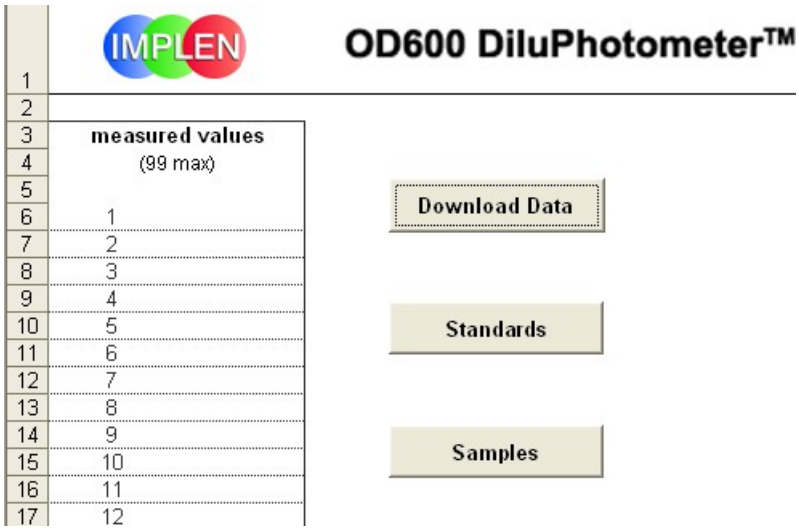
Step 2: Preparation of ports and connection of the OD600 DiluPhotometer™ This process is given as guidance only; it may need adaptation for other systems.
Attach the provided USB to RS232 adapter cable to your OD600 DiluPhotometer™ and to the COM port of your PC.

Step 3: Go to the control panel system→ hardware→ device manager and check the assigned COM-port ("USB Serial Port (COM)") for your OD600 DiluPhotometer™. The port should be in the range of 1 – 10. If a COM-port is assigned higher than 10 please change the COM-port to one in the range of 1 – 10.

DOWNLOAD DATA

Open the Protein Quantification Software and enable Macros. The software will be automatically ready for use.

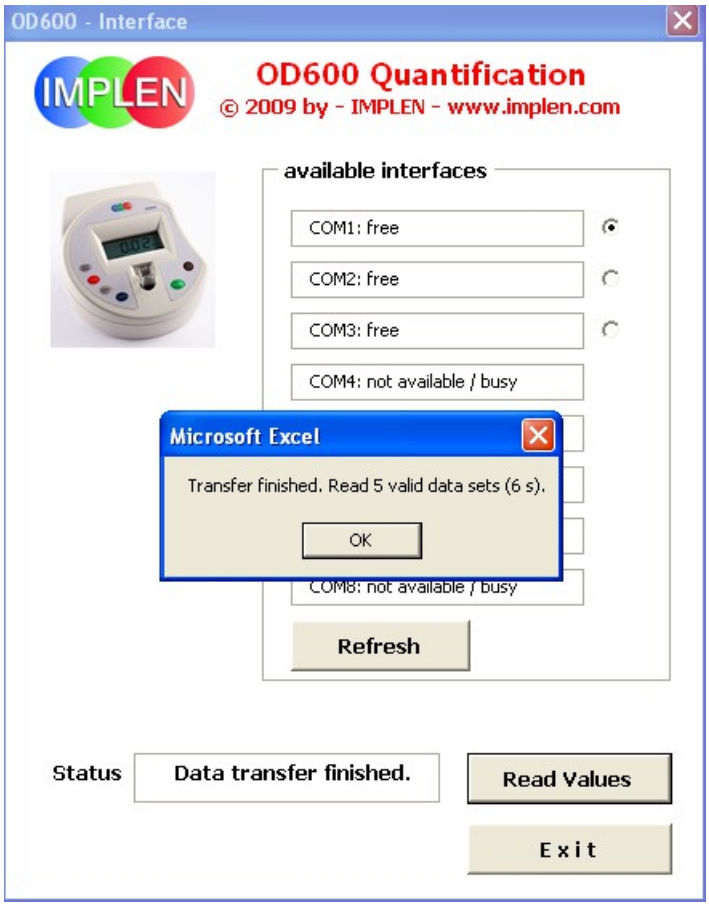
Step 1: Click the "Download Data" button.



Step 2: The window OD600 interface will be opened.
Step 3: Please select the defined COM-Port of your instrument depending on the connection you have chosen. With the Refresh button, you can actualize the status of the available interfaces e.g. if you change the connected port during the software is running.

Step 4: Click the “Read Values” button. The message “Press ‘OK’ and then press ‘print’ on the device within 20 seconds” will appear. Press OK and then press the recall/print button on your OD600 DiluPhotometer™.
The memory (MEM) number on the display of your OD600 DiluPhotometer™ is flashing during data transfer.
Attention: Be sure that the memory number on the display of your OD600 DiluPhotometer™ is not flashing at the beginning of step 4. If it is flushing press the mem or blank button once.

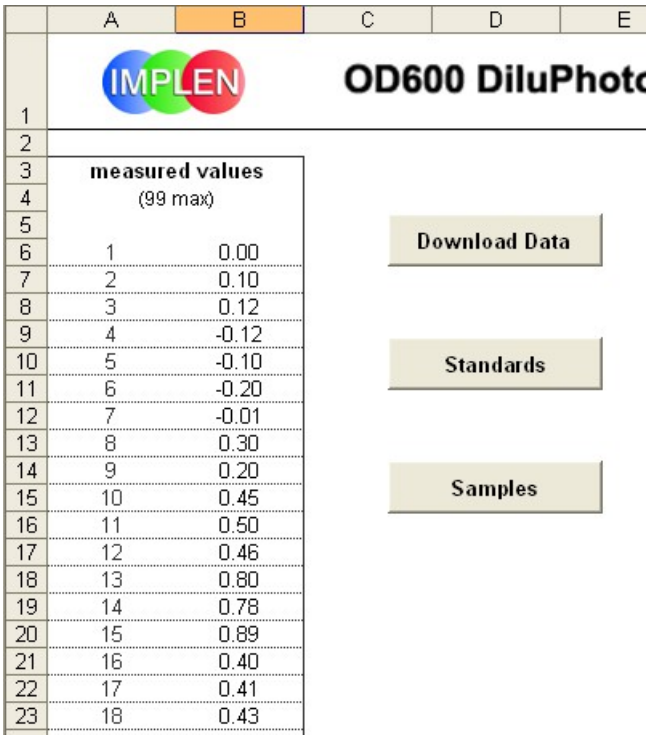
Step 5: Stored data will be transferred automatically into the measured values table. After transfer, the message “Transfer finished” appears. Click OK.
Step 6: Exit the OD600 Interface window by Exit.



STANDARD CURVE CREATION

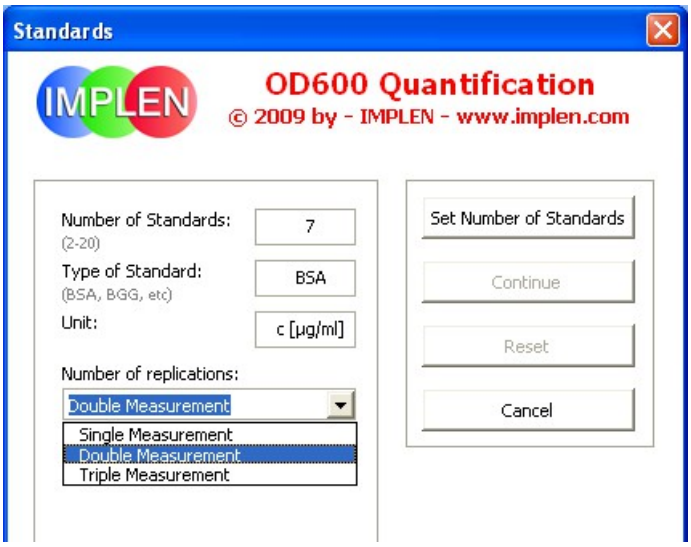
After completion of the data transfer into the Protein Quantification Makro, your standard curve can be created the following way:

Step 1 Press the Standards button and insert the number of standards.

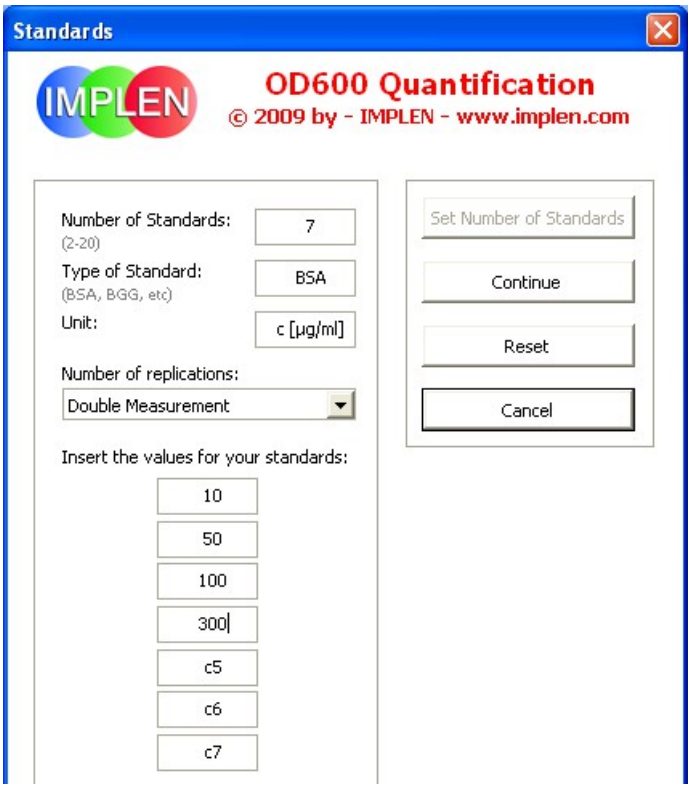


1	0.00
2	0.10
3	0.12
4	-0.12
5	-0.10
6	-0.20
7	-0.01
8	0.30
9	0.20
10	0.45
11	0.50
12	0.46
13	0.80
14	0.78
15	0.89
16	0.40
17	0.41
18	0.43

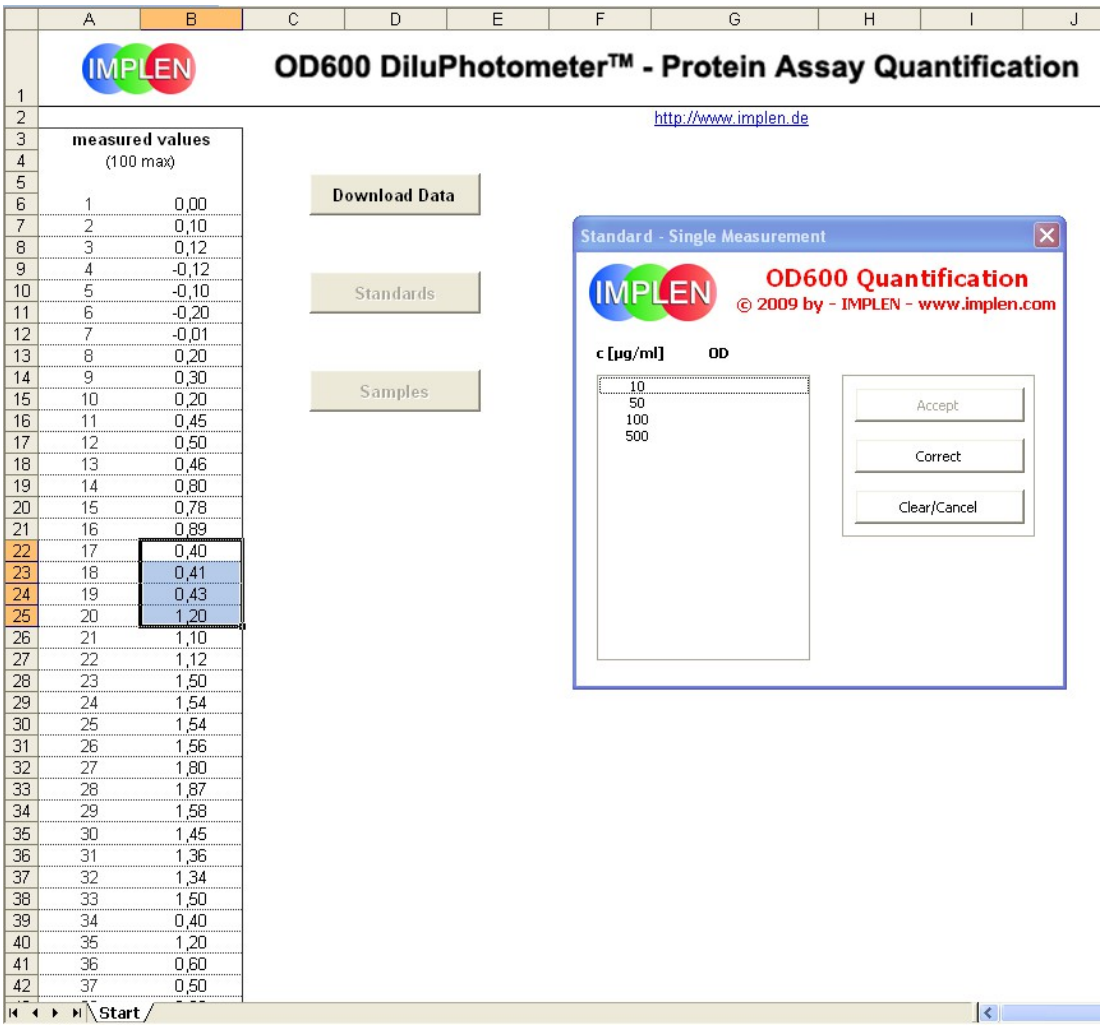
Step 2 Insert the Type of your standard like BSA, IGG, etc.
Step 3 Insert the Unit of your standard.
Step 4 Choose the possible Number of replications which are: single/double/triple measurements.
Step 5 Click Set Number of Standards to continue.



Step 6 Insert the concentration values of your standard (c1, c2, c3…). Press Enter to confirm each value or use the arrow buttons to choose the next standard.
You can always return to the main page by pressing the button Cancel.
Step 7 Press Continue to select the OD-standard-values from the transferred data list.



Step 8 For standard single measurement: select all values at once.

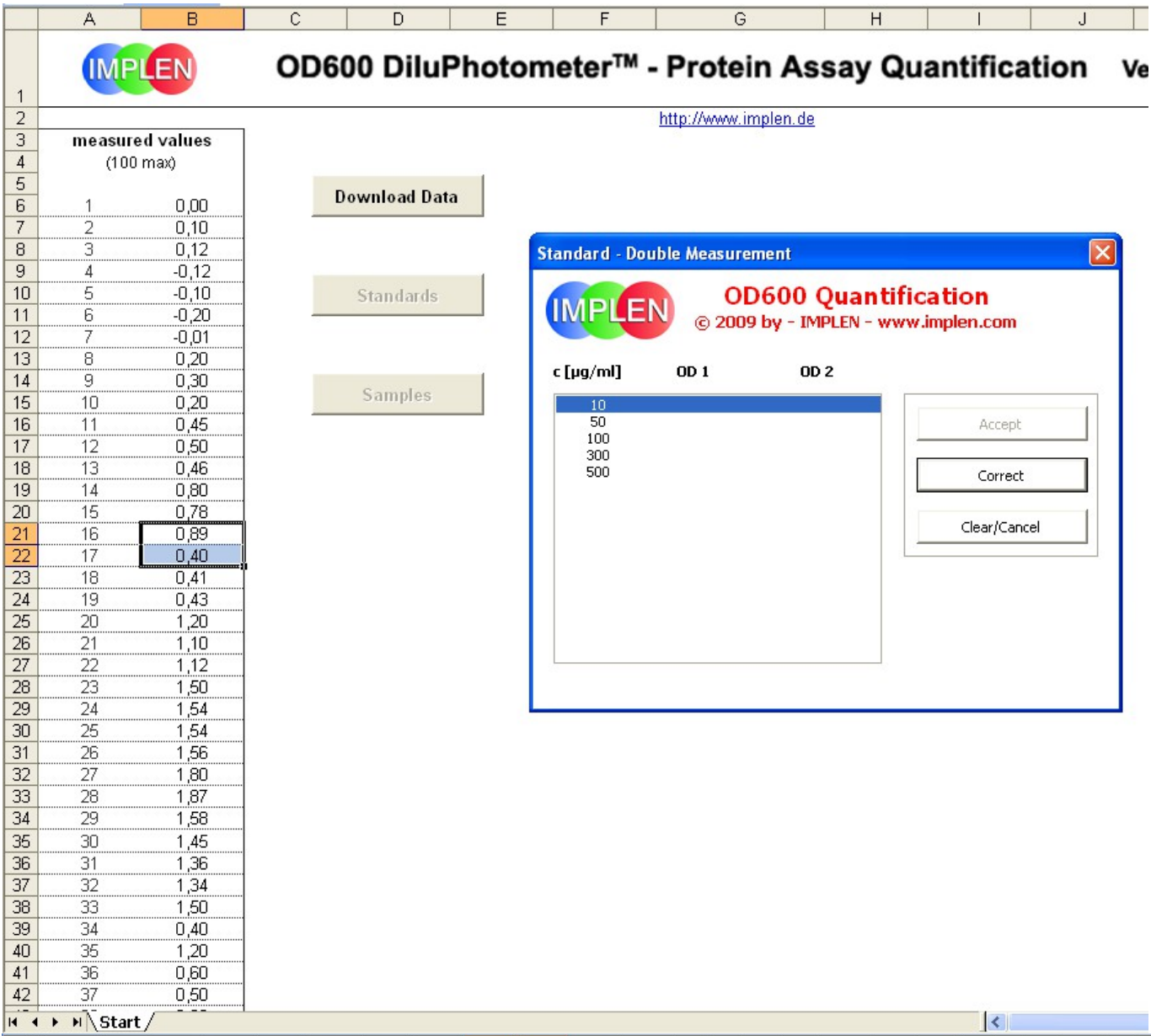


Step 9 For standard double/ triple measurement: select the values for each standard concentration one after the other.

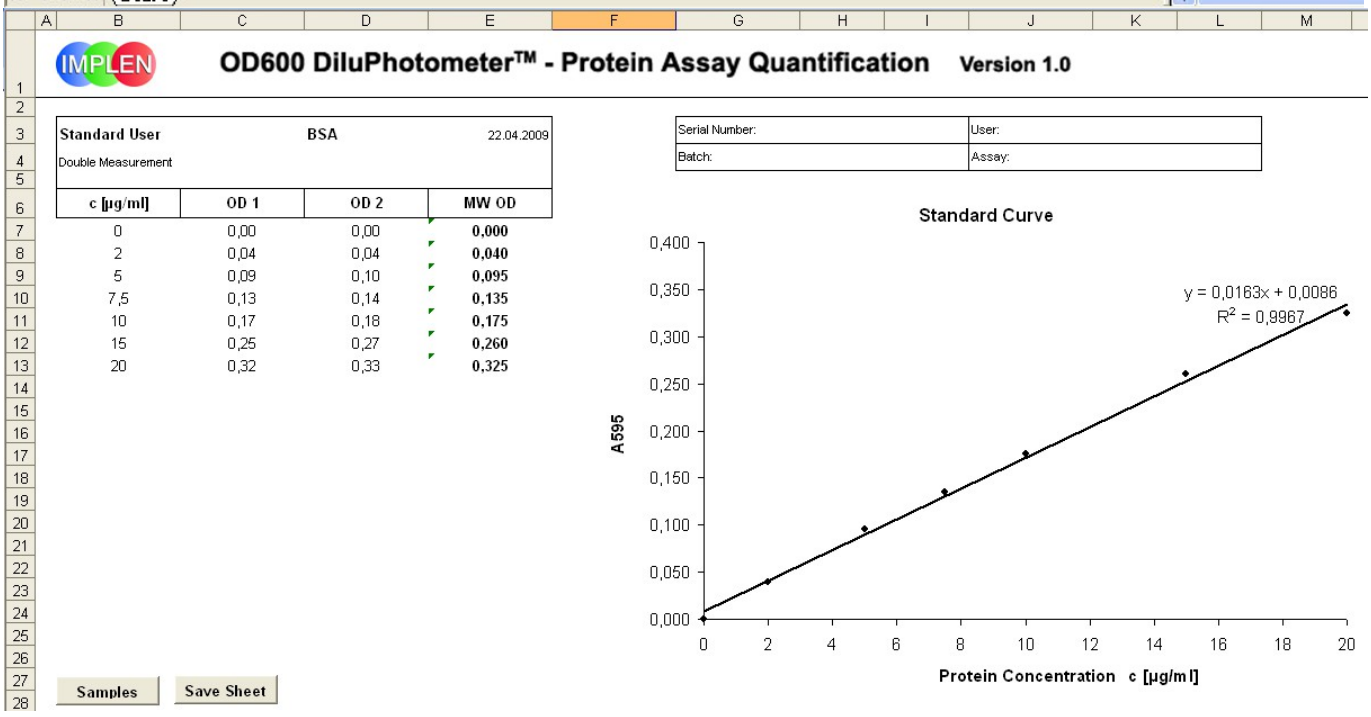
Step 10 For all: the absorbance values can be selected in free or direct order. For the selection of non-neighboring values use the control button. Press Enter to transfer the data in the standard table.

Step 11 After selecting all necessary data press Accept.

An appropriated result sheet with the chosen user values of the standard will be opened automatically, including the selected data in a table form and the standard curve itself as a graph. For sample analysis press the Sample button to return to the main page.



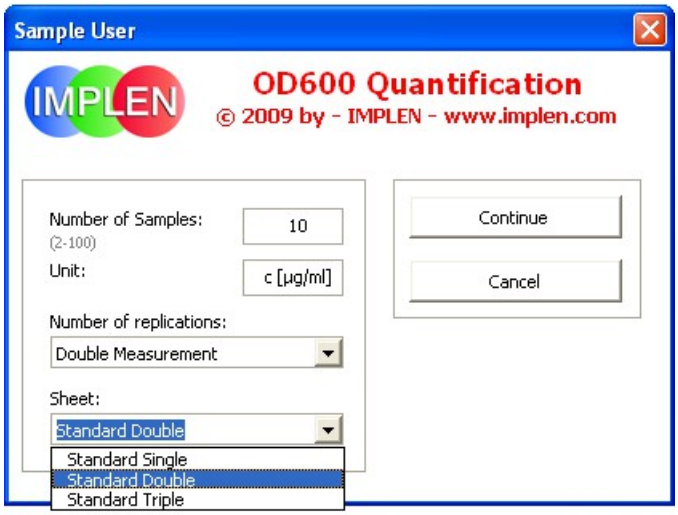
	measured values (100 max)
1	0,00
2	0,10
3	0,12
4	-0,12
5	-0,10
6	-0,20
7	-0,01
8	0,20
9	0,30
10	0,20
11	0,45
12	0,50
13	0,46
14	0,80
15	0,78
16	0,89
17	0,40
18	0,41
19	0,43
20	1,20
21	1,10
22	1,12
23	1,50
24	1,54
25	1,54
26	1,56
27	1,80
28	1,87
29	1,58
30	1,45
31	1,36
32	1,34
33	1,50
34	0,40
35	1,20
36	0,60
37	0,50



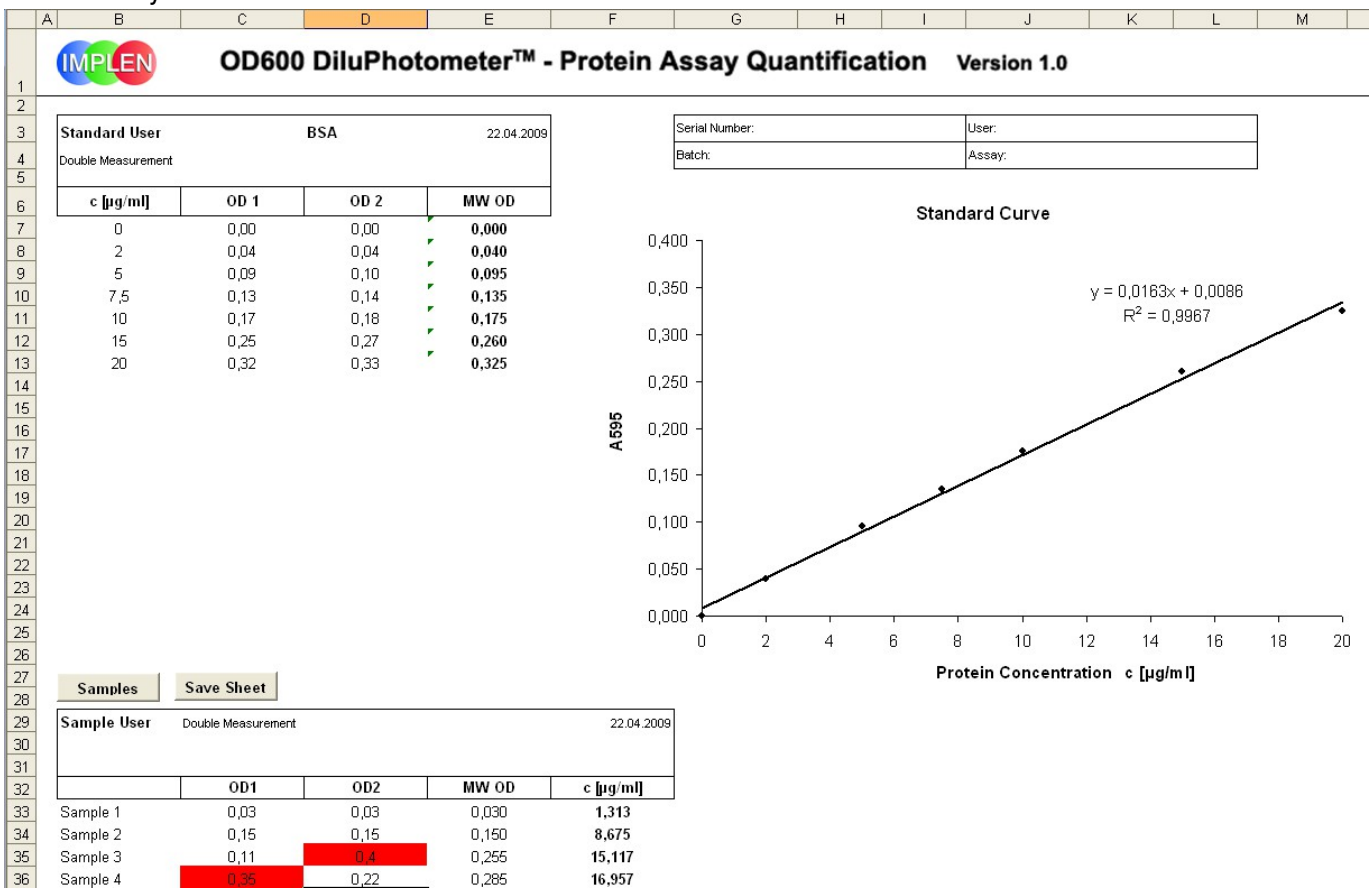
Standard User	BSA	22.04.2009	
Double Measurement			
c [µg/ml]	OD 1	OD 2	MW OD
0	0,00	0,00	**0,000**
2	0,04	0,04	**0,040**
5	0,09	0,10	**0,095**
7,5	0,13	0,14	**0,135**
10	0,17	0,18	**0,175**
15	0,25	0,27	**0,260**
20	0,32	0,33	**0,325**

SAMPLE ANALYSIS

Step 1 Press the Samples button and insert the Number of samples.
Step 2 Insert the Unit of your standard if necessary.
Step 3 Select the possible Number of replications: single/double/triple measurement.
Step 4 Select the previously calculated Standard sheet (standard single/double/triple) in the list.
Step 5 Press Continue to select the OD-sample values from the transferred data list.



Select and transfer data according to the standard-curve creation (see page 9). After selecting all necessary data press Accept. An appropriate result sheet with the calculated sample concentrations of the user will be opened automatically in table form.



Sample values that are out of the standard curve (MW OD) range will be marked red in the results sheet and can be deleted. If you want to save your results sheet please press Save Sheet. Then your data can be saved as an Excel file in the appropriate folder inside your system.

Documents / Resources

	**IMPLEN OD600 DiluPhotometer Protein Quantification Software** [pdf] User Manual OD600, DiluPhotometer Protein Quantification Software, OD600 DiluPhotometer Protein Quantification Software, OD600 software