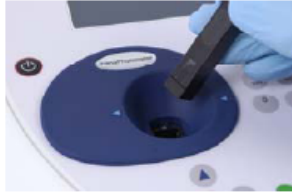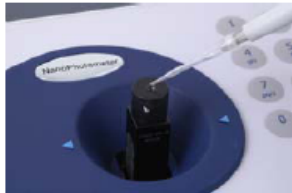## Nanophotometer

(extracted from Implen Nanophotometer manual)
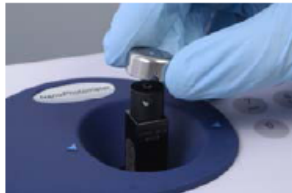
Technical instructions

Step 1   Insert the LabelGuard™ Microliter Cell into the cell holder with the cell windows facing the light beam.

Step 2   Pipette 0.7 to 4 µl (0.2 mm lid) or 3 to 5 µl (1 mm lid) or 6 to 10 µl (optional: 2 mm lid) of sample onto the centre of the measuring window. **Warning!!** Do not overfill the well.

Step 3   Fit lid for the measurement. Make sure that the lid fits exactly onto the positioning supports mounted to the body of the cell. Take measurement. **Note:** Remember to consider the Lid Factor in the NanoPhotometer™ software.

Lid Factor	Sample volume	Pathlength	Dilution
50	0.7 – 4 µl	0.2 mm	1:50
10	3 – 5 µl	1 mm	1:10
5 (optional)	6 – 10 µl	2 mm	1:5
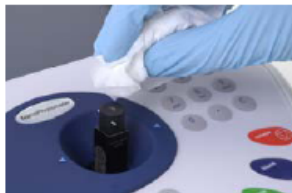
Step 4   Take lid off and retrieve sample with a pipette. Clean well with a fluff free tip or Kimwipe. Use water, ethanol or isopropanol to clean well and cell body. Do not use aggressive solvents like strong acids or bases or organic solvents at any time.

Important Note: Residual fluffs must be removed for optimum performance - use dry pressurized air (oil free) if needed.

Step 5   Remove sample residues from the mirror by utilizing a fluff free tip or Kimwipe. Use dry pressurized air to remove residual fluffs if needed. Your cell is ready for the next sample.

How to run an UV absorbance measurement between two wavelengths and saving data in excel file.

1) Turn on PC next to Nanophotometer.
2) Click on PVC icon on the deskstop on the top left
3) Turn On the power button of the Nanophotometer.

An absorption spectrum can be obtained from your instrument, enabling simple identification of peak height and position.
The procedure is as follows:

Parameter Screen


Parameter Screen

Step 1 Press 3 to select *Functions.*
Step 2 Press 3 to select *Wavescan.*
Step 3 Set *Start Wavelength* by using keypad numbers or left and right arrows.
Step 4 Set *End Wavelength* by using keypad numbers or left and right arrows.
Step 5 Select the *Mode*, *Absorbance* or *%Transmission*, using the left and right arrows.
Step 6 Select the *Pathlength* using the left and right arrows. Options are 0.2, 1 and 2 mm for LabelGuard applications and 5 or 10 mm for cuvette applications.
Step 7 To enter the measurements screen with the selected parameters press OK ◇ OR cancel the selections and return to the *Functions* folder by pressing Cancel ⊘.
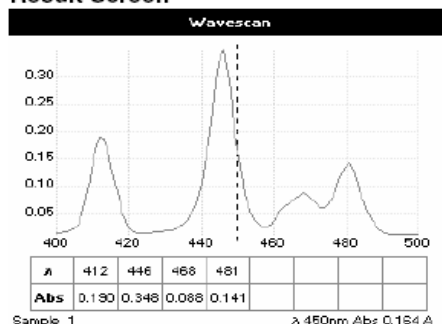
Measurement Screen
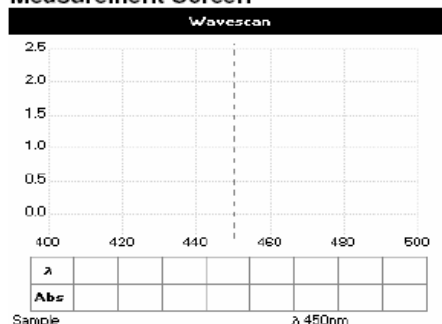
Measurement Screen

Step 8 Insert the reference sample. Press **Blank** key. This will be used for all subsequent samples until changed.
Step 9 Insert sample and press ◇.
Step 10 Repeat for all samples.

Result Screen

Result Screen

A graph of the wavescan is displayed, along with a table of Absorbance/%T at each peak. Use the left and right arrows to move the cursor along the graph. When it reaches a peak the peak height and width of the peak is displayed at the top of the screen. To zoom in on the wavelength scale, use the up arrow. This auto-scales on the Absorbance/%T scale (dependent on the Graph Scale option) and this is retained for subsequent measurements. To zoom out again, use the down arrow.

Step 11 Press **Options** to display available Options which are described next.

Step 12 Press ⊘ to return to the *Function* folder.

4) Save data as *[date]n[nanophotometer][no.of spectra]* eg first spectrum run on 15/1/10 would be saved as 150110n01 in pvc and excel if required on the PC. Excel file can be imported in any user spreadsheet software.