

# Certified Holmium and Neutral Density Glass Filter Set for the NanoPhotometer® NP80/C40

## 1. Check OF THE ACCURACY OF ABSORPTION with Neutral Density Glass Filter

### 1<sup>st</sup> step: Method and parameter selection

#### Option 1:



Open Stored Method

Select **NeutralDensityGlass\_Filter.json**

File can be downloaded:

[www.implen.de/download](http://www.implen.de/download)

OR

[www.implen.de/methods-holmium-neutralglass-filter](http://www.implen.de/methods-holmium-neutralglass-filter)

#### Option 2:



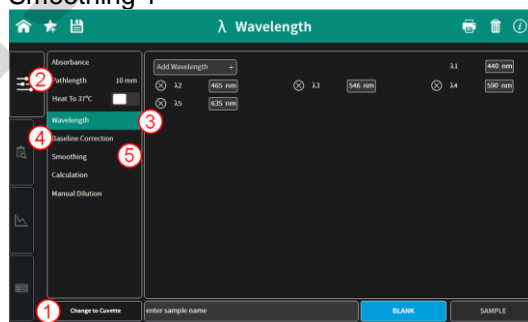
Open More Apps



Open Wavelength Method

Set the following parameter:

1. Activate Cuvette mode (NP80) Change to Cuvette
2. Pathlength 10 mm
3. Add five wavelengths: 440 nm, 465 nm, 546 nm and 635 nm
4. Baseline Correction Off
5. Smoothing 1



### 2<sup>nd</sup> step: Blank

Blank against air (empty cuvette holder)



### 3<sup>rd</sup> step: Sample Measurement

Put the certified Neutral Density Glass filter (3N) into the cuvette port. Light path is back to front. Place filter in correct position. Press Sample.



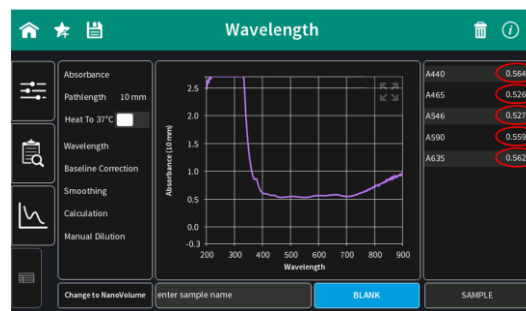
### 4<sup>th</sup> step: Check of Absorbance Accuracy

Compare results to the specified absorbances in the calibration certificate. Tolerance is  $\pm 0.015$  A

Certificate: scale within section Neutral Density Glass Filter:

Filter	Serial Number	Ordinate Reading (Absorbance) +/- MU(*) at the following wavelengths:				
		440 nm	465 nm	546.1 nm	590 nm	635 nm
Neutral Density Glass	96359	0.5586 $\pm 0.015$	0.5211 $\pm 0.015$	0.5230 $\pm 0.015$	0.5573 $\pm 0.015$	0.5651 $\pm 0.015$

(\*) MU: Measurement Uncertainty



# Certified Holmium and Neutral Density Glass Filter Set for the NanoPhotometer® NP80/C40

## 2. Check OF THE ACCURACY OF WAVELENGTHS with Holmium Glass Filter

### 1<sup>st</sup> step: Method and parameter selection

#### Option 1:



Open Stored Method

Select **HolmiumGlass\_Filter.json**

File can be downloaded:

[www.implen.de/download](http://www.implen.de/download)

OR

[www.implen.de/methods-holmium-neutralglass-filter](http://www.implen.de/methods-holmium-neutralglass-filter)

#### Option 2:



Open More Apps

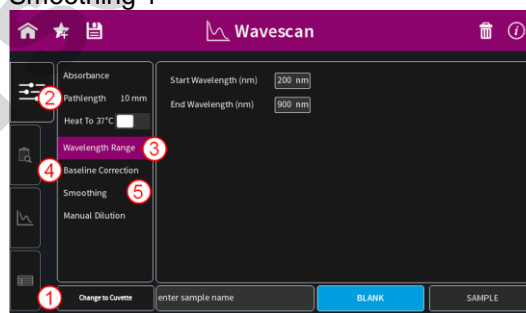


Open Wavescan Method

Set the following parameter:

1. Activate Cuvette mode (NP80)
2. Pathlength 10 mm
3. Wavelength range:  
start wavelength 200nm  
end wavelength 900nm
4. Baseline Correction Off
5. Smoothing 1

Change to Cuvette



### 2<sup>nd</sup> step: Blank

Blank against air (empty cuvette holder)

BLANK

### 3<sup>rd</sup> step: Sample Measurement

Put the certified Holmium glass filter (HG) into the cuvette port. Light path is back to front. Place filter in correct position. Press Sample.

SAMPLE

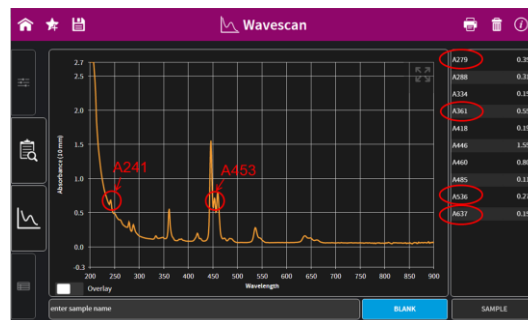
### 4<sup>th</sup> step: Check of Wavelength Accuracy

Check the appearing graph for the certified peaks. At the certified wavelengths a peak maximum should be displayed. Tolerance is +/- 2nm.

Certificate: scale within section Holmium Glass Filter:

Filter	Serial Number	Peak Positions +/- MU(*) at the following Wavelength:					
		241 nm	279 nm	361 nm	453 nm	536 nm	637 nm
Holmium Glass	94804	241.74 ± 2.0	279.44 ± 2.0	361.0 ± 2.0	453.63 ± 2.0	536.66 ± 2.0	637.98 ± 2.0

(\*) MU: Measurement Uncertainty



### Important:

Sometimes not all of the peaks in your certificate are automatically shown within the result table of your NanoPhotometer®. In such cases click on the peak and a pop up will be opened. The peak position can be verified by changing the wavelength around the expected peak position and comparing the absorbance values. If there is no peak visible in the Wavescan measurement screen within the desired area of interest, contact your Implen support team.