

neoMatch

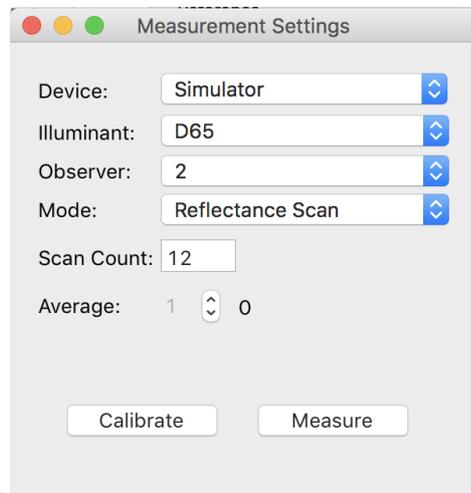
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1. Getting Started with neoMatch

How to connect the spectrophotometer to measure color

From the menu **Measure** | **Measurement Settings** you will reach Settings, where you can choose



spectrophotometers and set up different measurement settings.

- In Device, you can select the supported spectrophotometers.
- The Illuminant is the theoretical source of visible light with a profile. neoMatch provides the standard types. By default is used D50 and D65.
- Observer gives you two standard options that can be matched to the illuminants.
- The Mode gives you options to choose the mode corresponding to your media and spectrophotometer.
 - The Spot is to measure patch by patch.
 - The Scan is to measure through lines.
- Scan Count is used when the number of patches to read in the printouts matches with the Scan Count. The number can be changed during the matching process.
- The Average number allows you to set measurements when measuring one color with the spectrophotometer matching process. The number can be changed during the matching process. The maximum average is 3.
- Calibrate button will calibrate the spectrophotometer using its white calibration plate. Any changes in the color-matching process require a new calibration of the spectrophotometer.

Each supported spectrophotometer is managed with its own specific configuration and handling. Refer to the supported models' articles:

- [Measurements with X-Rite i1 Pro® models](#)
- [Measurements with X-Rite eXact®](#)
- [Measurements with Barbieri SpectroPad®](#)
- [Measurement with Barbieri Spectro LFP qb®](#)
- [Measurement with MYIRO-1®](#)
- [Measurement with CADDON®](#)

How to install and activate neoMatch

The process of neoMatch installation is very fast and easy. You may obtain the zipped installation file when purchasing the software, and receive it on a USB drive or from the homepage:

<https://www.inedit.com/en/descarga-producto/neomatch-accurate-calibration-of-your-color-libraries/>



neoCatalog

Ready to share?



neoMatch

Accurate calibration of your color libraries



neoStampa

RIP software for digital printing



neoTextil

Design plug-ins for Adobe Photoshop™

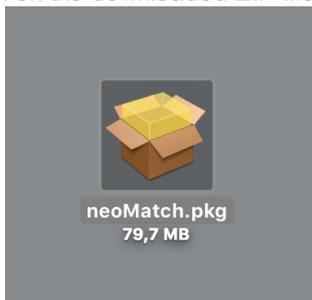
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Installation

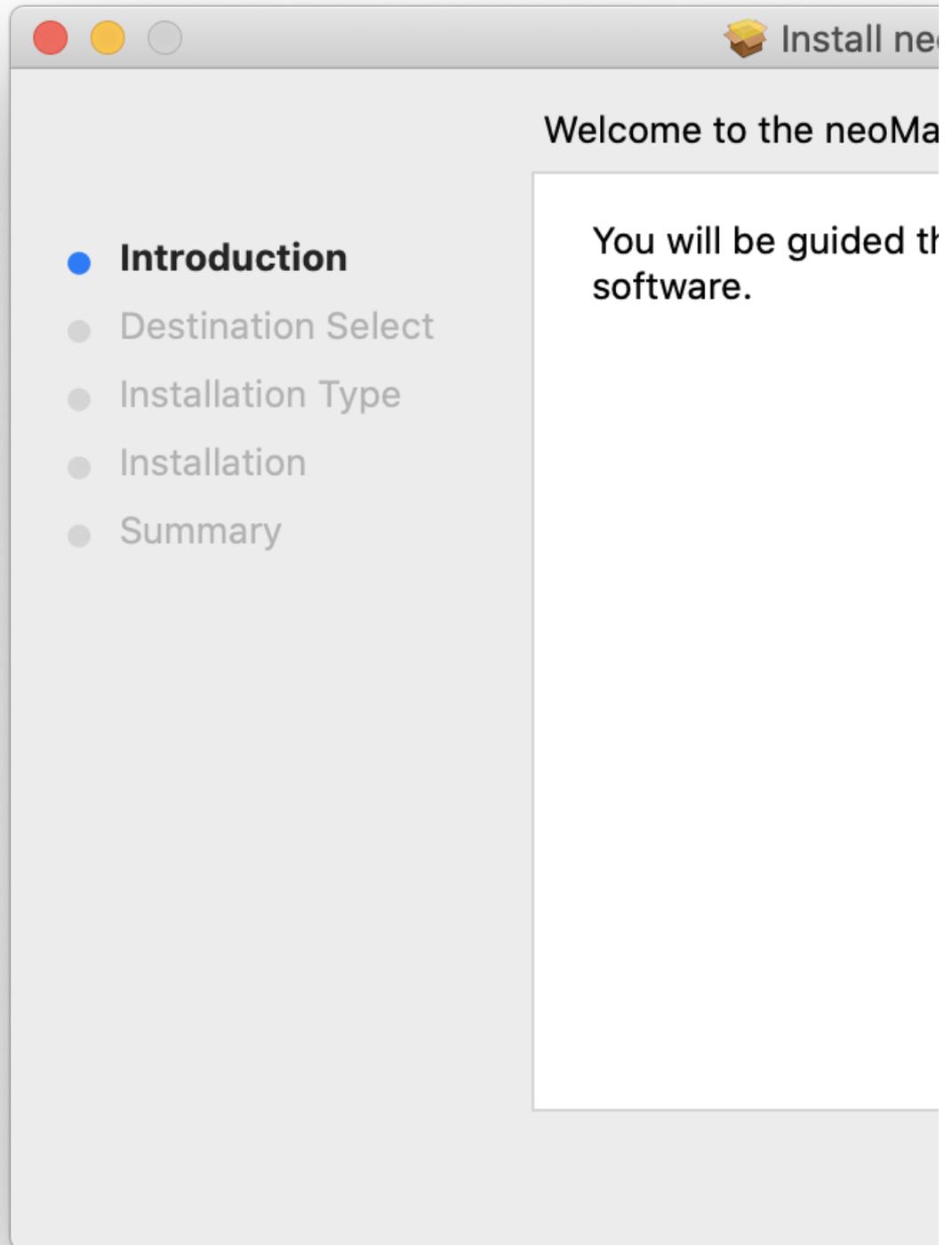
Watch Video: <https://player.vimeo.com/video/705663125>

1. Double-click on the downloaded ZIP file to uncompress the installer. Then, double-click on the .pkg file to start

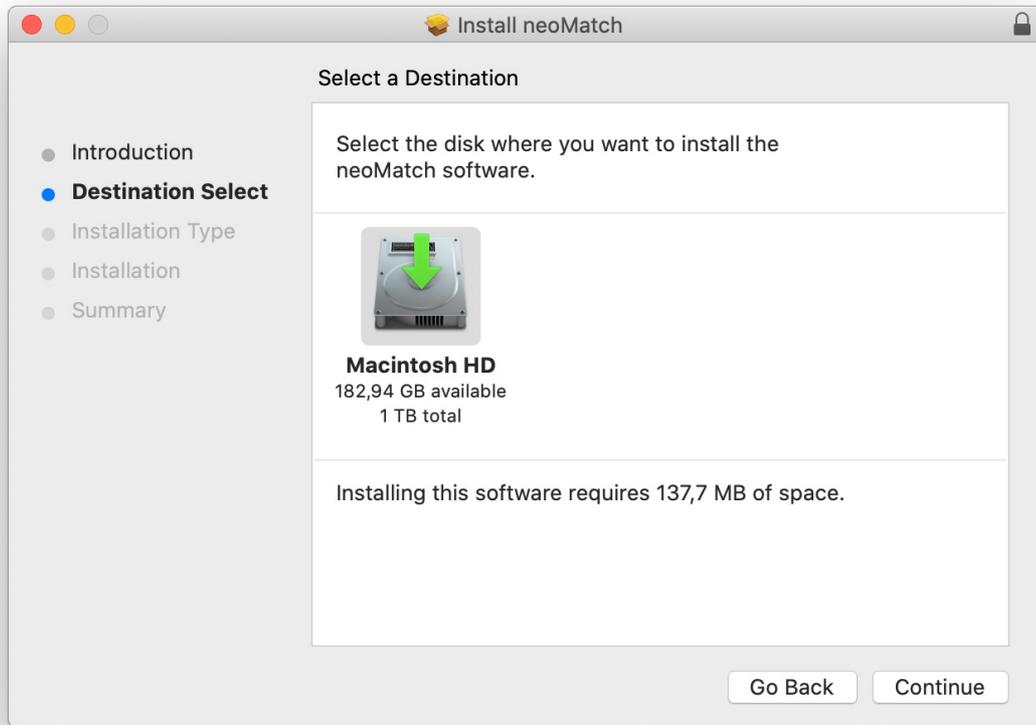


the installer.

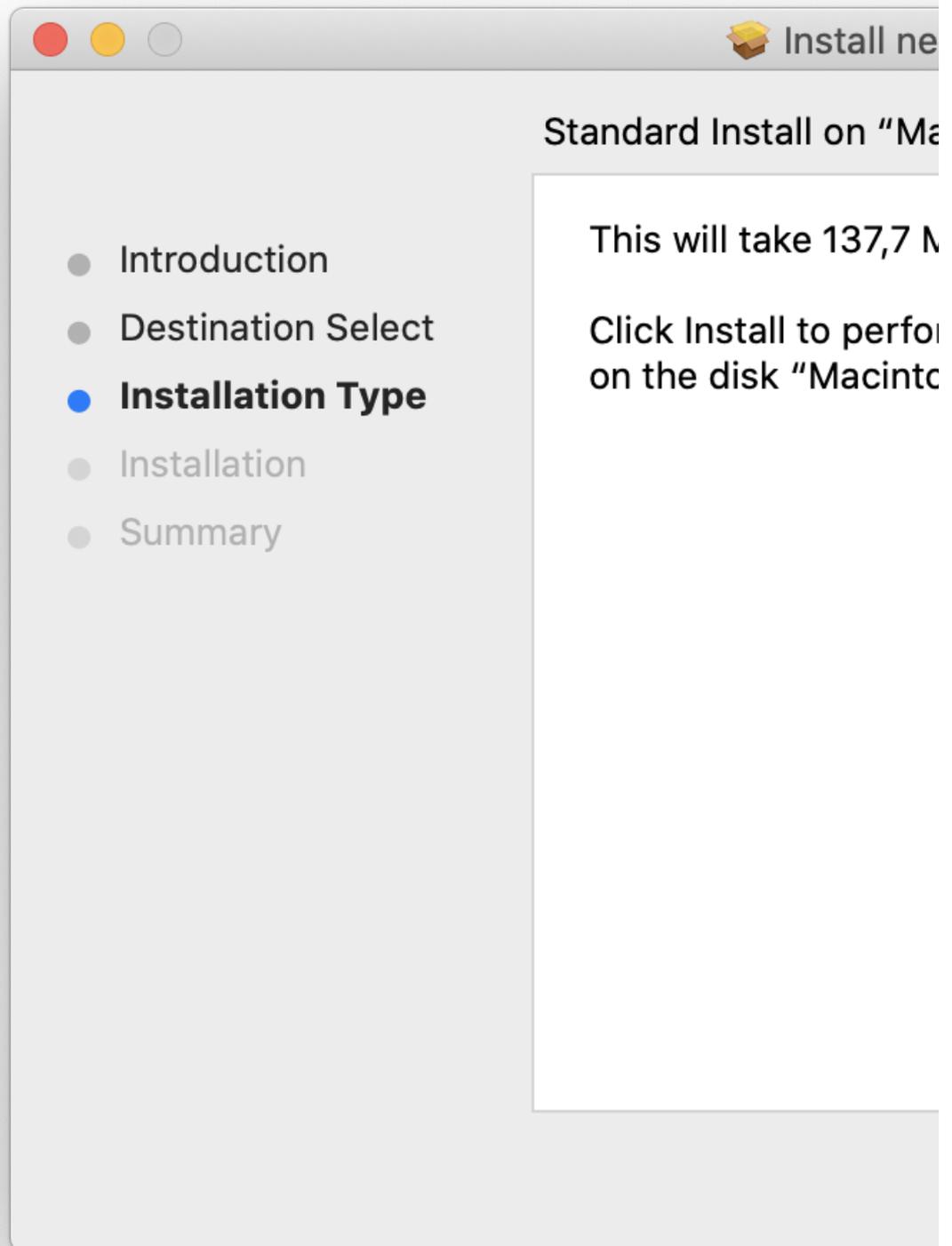
2. The installer opens. Click on 'Continue'.
- 3.



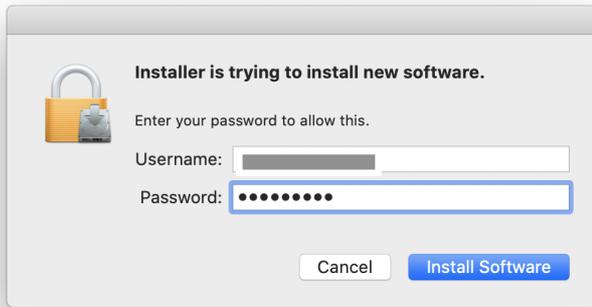
It will choose the Macintosh disk. Click on 'Continue'



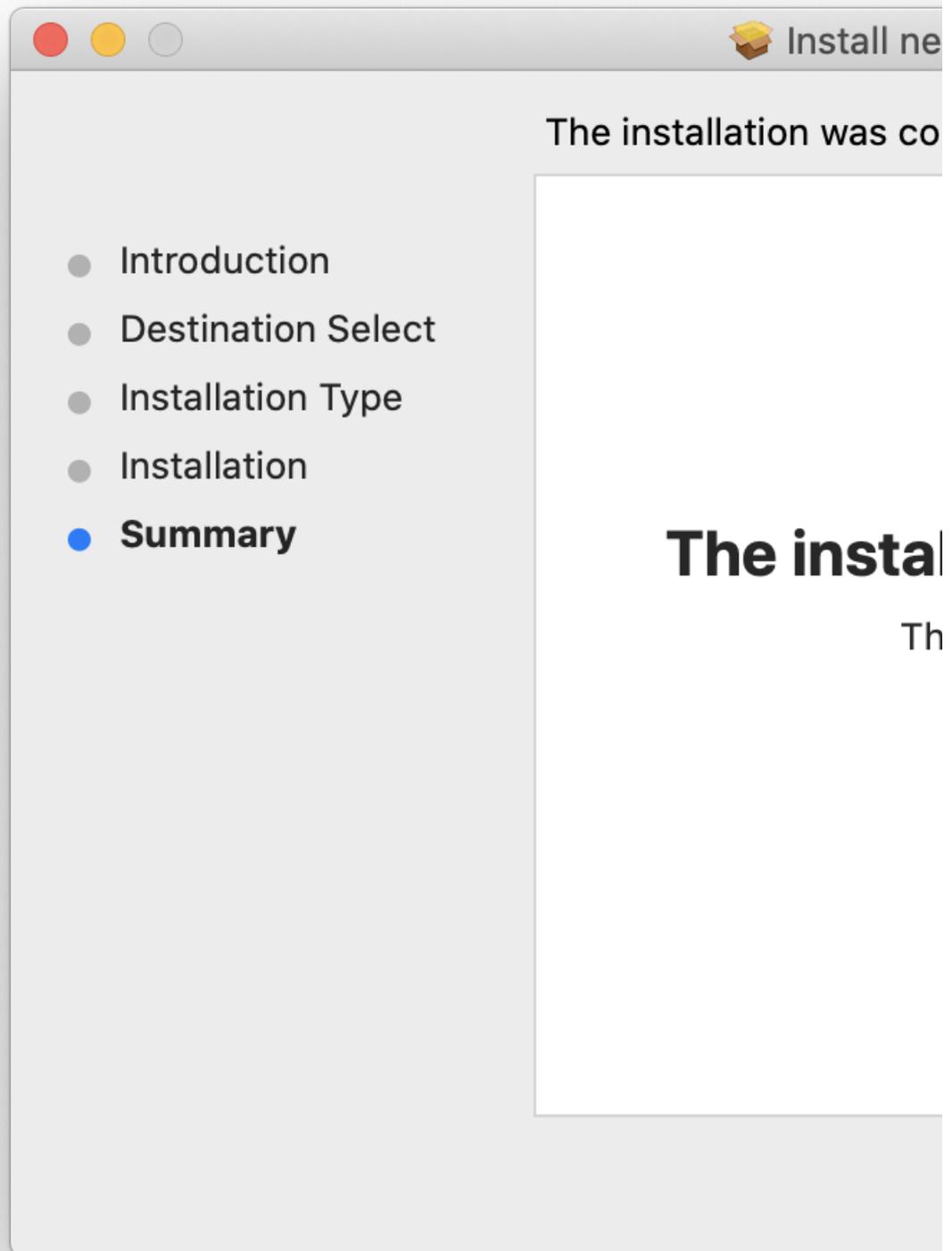
4. To start installation click on 'Install'.



5. You will be requested to enter the administrator password.



6. The app is installed in /Applications root. To uninstall neoColorBox go to the directory and remove the .app file



Previous version

until version 2.4.1

1. Download neoMatch according to the directions you received.
2. Double-click on the downloaded file to begin the installation.
3. By default, the program directories are /Applications or /Users/Home/Applications. Drag and drop the .app file in one of the directories. To uninstall neoMatch go to the directory and remove the .app file.



Activation

Inedit products support two types of activation: USB dongle protection and UUID. By default, when you install Inedit products, they apply for basic licenses with a 30-day expiration date. [Read how to register the dongle and request trials.](#)

The activation of all Inedit products, whether it is with a trial license or a purchased one, runs online by connecting the user's machine and dongle to our servers.

Converting your trial version of a single-user Inedit product to a fully licensed one does not require you to download the product again. There is no need to remove the trial version in order to use the fully licensed product.

Activation Manager

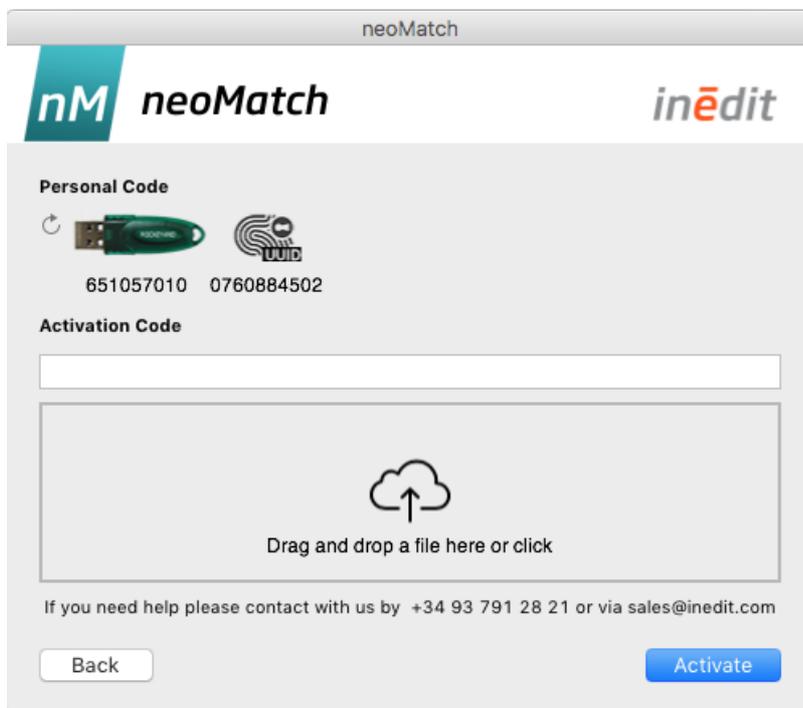
When the network conditions are different or it is not available so that our activator server cannot be reached, it's possible to activate all Inedit applications offline by means of a file that contains the activation code for the user's product and dongle number. This file has an XDAT extension and can be loaded through a dialog available in any of our applications.

In order to obtain the XDAT file you need to contact your local distributor. Check our distributor list to find it, <https://www.inedit.com/en/company/distributors> . If you found no distributors in your area then contact us, at <https://www.inedit.com/en/contact> .

Once you are provided with the XDAT file, the way to proceed varies depending on the application to activate.

Click the **Activate** button within your trial software to access the Activation Manager. Or else, open Activation Manager from the menu **neoMatch | Activation Manager...**

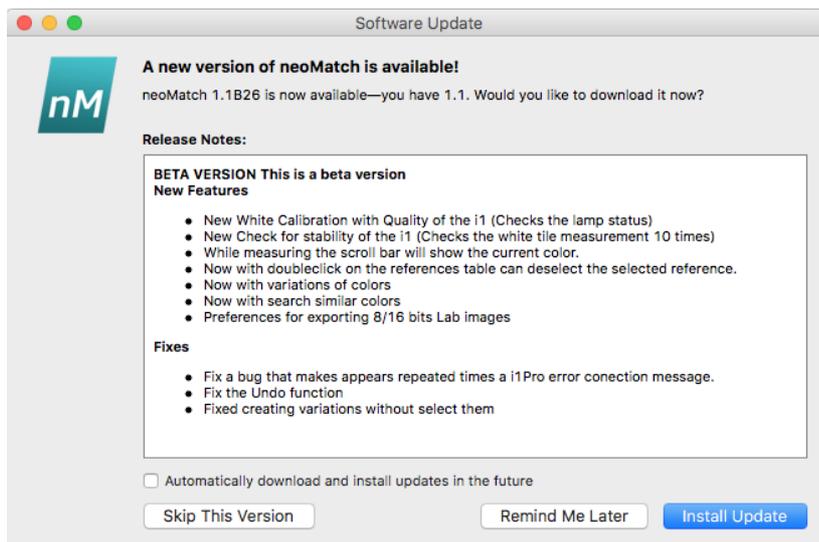
The Activation Manager window opens to apply the activation code or file that Inedit provides you via email or in a USB memory, together with the installer and documentation. Select the field in the center of the window, drag and drop/click for the activation XDAT. Optionally, if you have received the activation code you can type or copy-paste the code in the field of Activation code. Click on **Activate** button to proceed. Your product will be relaunched and fully licensed.



Update application

To update your version of neoMatch, open the program and choose the **neoMatch | Check for Updates...** command. This will launch the Internet Update program which will check Inedit's servers for any updates. If there is an update for a new version of neoMatch, you will be prompted to download it.

Also, you can check for BETA version updates when pressing alt + ⌘ while opening the **neoMatch** menu, and the command **Check for Beta Updates...** becomes available.

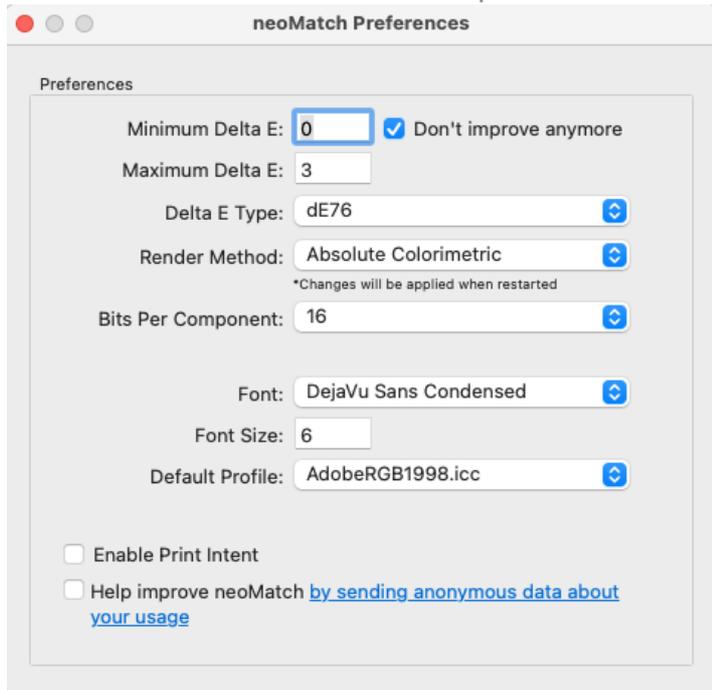


Preferences and Settings

Use the options in the dialog boxes to define if and how neoMatch may manage measurements done with a spectrophotometer.

Preferences

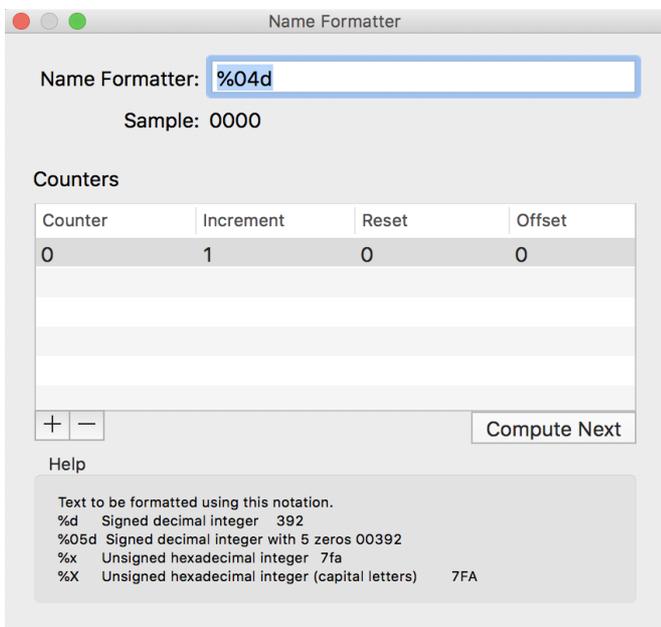
From the menu **neoMatch** | **Preferences...** you can open the preferences box.



- You can find settings for the minimum and maximum dE values in the color-matching process. We recommend a maximum of dE 3.
- DeltaE Type provides the CIE types: dE76, dE94 (Graphic Arts), dE94 (Textiles), dE2000, CMC (1:1), and CMC (2:1). By default is dE94 (Textiles). Delta E Type set at dE94 (Graphic Arts) or dE94 (Textiles) depending if our measurements are in D50 or D65 (respectively); or dE2000 (in both cases).
- The Render Method is using the default rendering intent method Perceptual. Other available methods: Absolute Colorimetric, Saturation, and Relative Colorimetric. Depending on the job we are doing, a different Render Method has to be set. If we're printing with neoStampa, we should choose the same one we use there. If we're matching colors for Photoshop or Illustrator it's generally Perceptual, if we're matching color libraries for neoStampa, Absolute Colorimetric.
- Bits Per Component gives you the option to export in LAB 8bits or LAB 16bits. Recommended Bits per Component are 16 bits. If we work with EPS or PDFs, we should also activate the High Precision option of neoStampa, either in Global Preferences or on the PDF rendering options of our color schemes.
- Font type and size selection which is used in the export image file. By default is 'Dejavu Sans Condensed' and size 8.
- Define the default embedded ICC profile for all documents.
- Enable Print Intent.
- Send anonymous usage data.

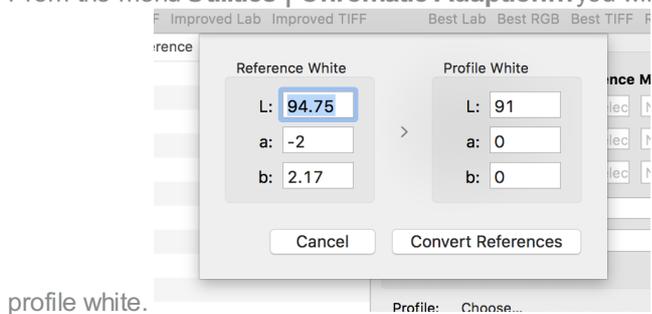
Name formatter

From the menu **Measure** | **Show Name Formatter...** you will reach a dialog to set up the formatter, with the help of the formatter text below.



Chromatic Adaption of White

From the menu **Utilities | Chromatic Adaption...** you will reach the dialog to set up the white reference to the ICC



2. Measurement Settings with Spectrophotometers

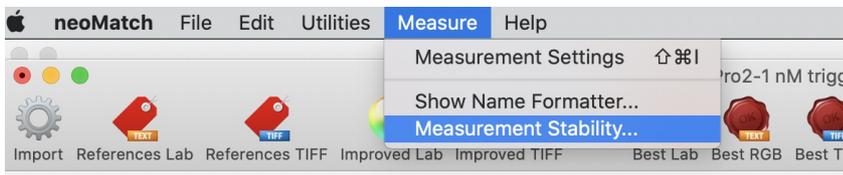
Device Stability test

This option allows make several measurements to export data to read the stability.

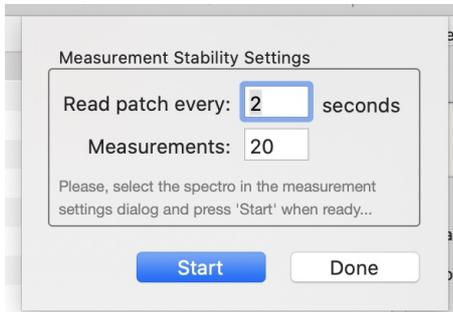
Step-by-Step

How to test?

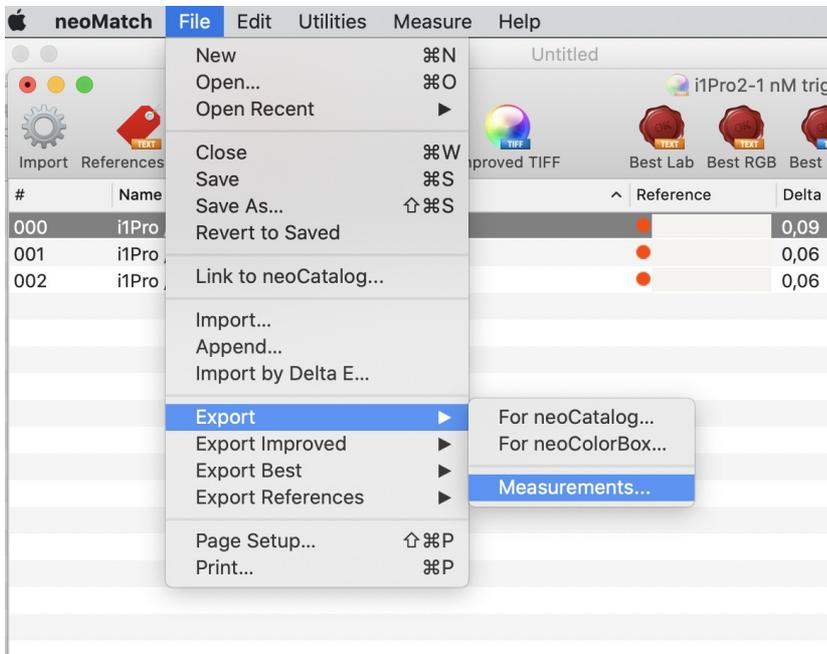
1. Take one device and process calibration on white reference.
2. Keep it on white reference and open the stability option.



3. Measure 1 patch every second (1000 measurements in total).



4. Export the data as CGATS from measurements.

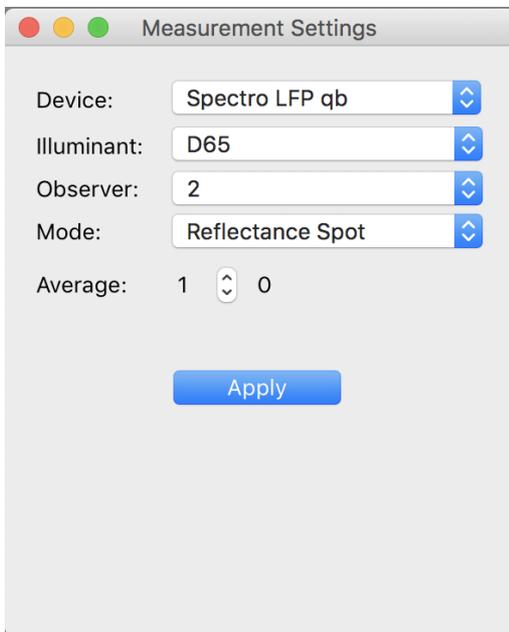


5. Repeat the same steps with all devices.

6. Compare measurement data between all devices.

Measurement with Barbieri Spectro LFP qb®

Connect the device to your computer when is off and turn it on at the bottom of the device. Start the neoMatch application and open Measurement Settings. Configure parameters and press on Apply button.

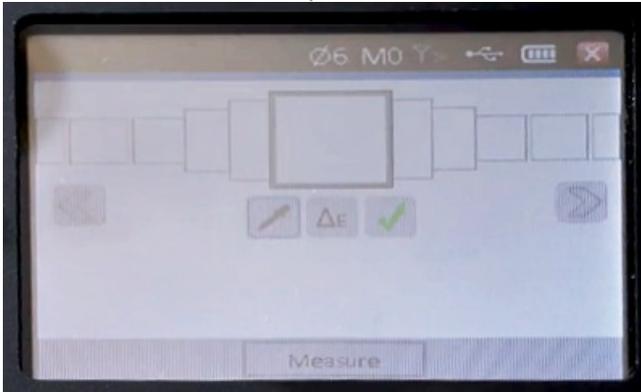


- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the mode Scan, with or without UV filter (requires device calibration). The measurements are in spot mode only supported.
- Use Average to render your measurements.

Device Calibration

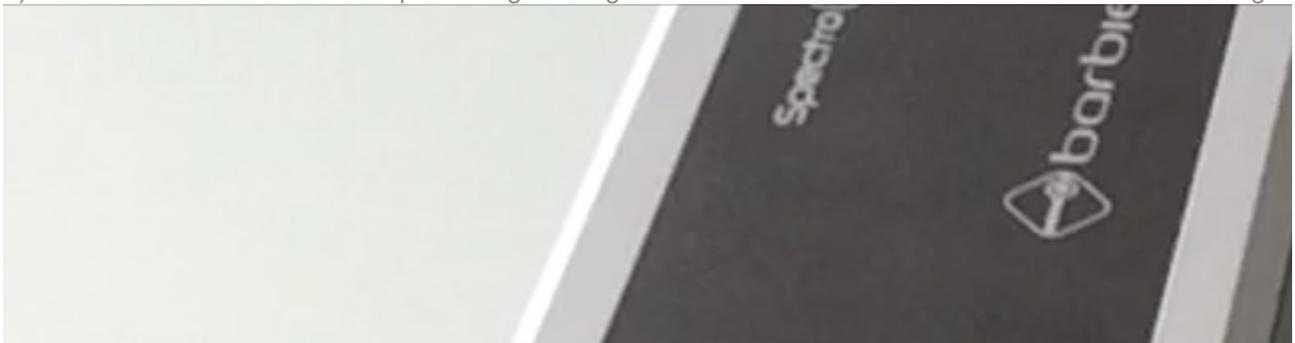
For accurate measurements, the device must be calibrated before use. The measuring head is equipped with a switch that allows manual insertion of the white reference. The calibration is required with each new measurement.

When this switch is operated, the instrument will automatically detect that it is being calibrated.



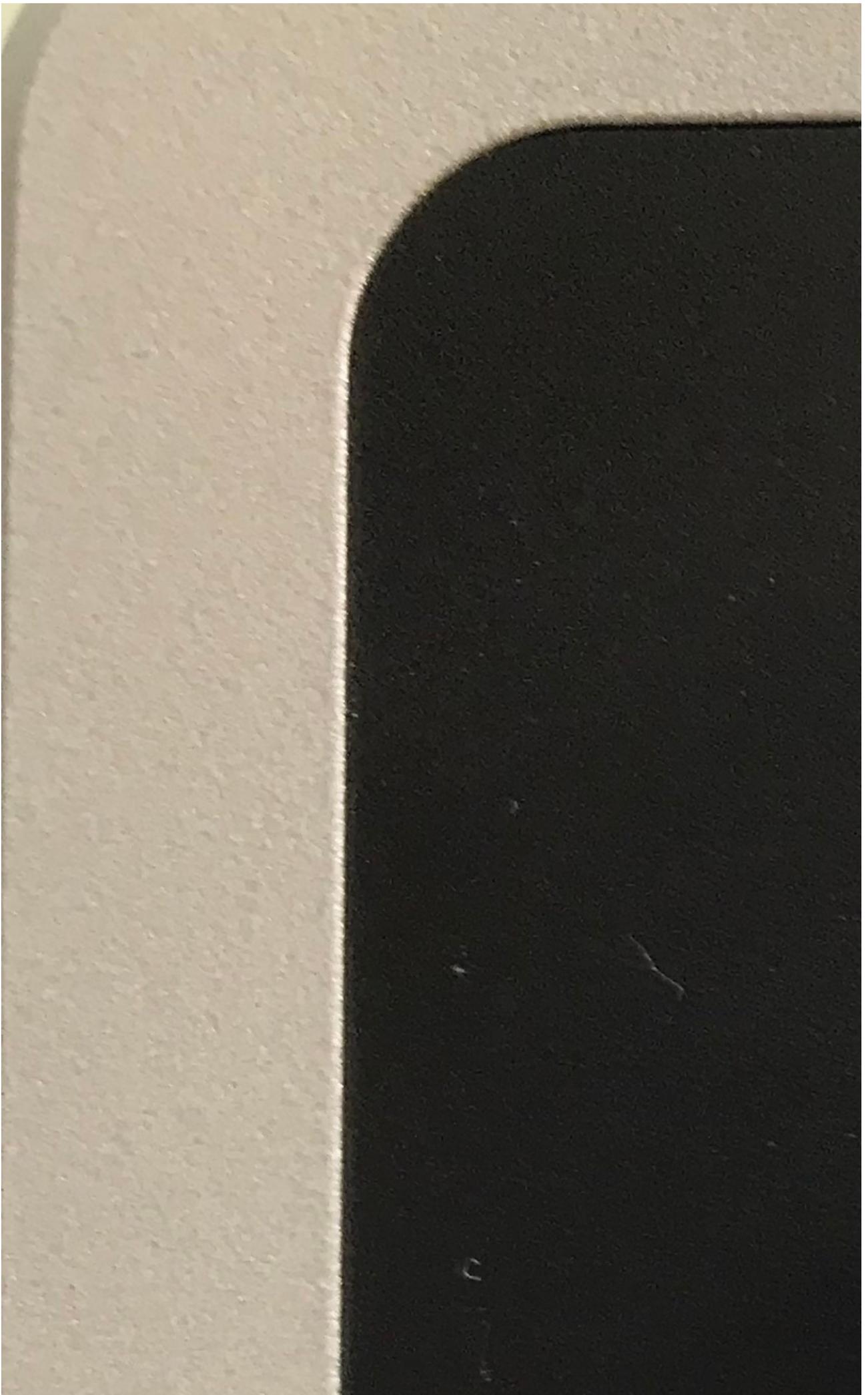
Spot Measurement

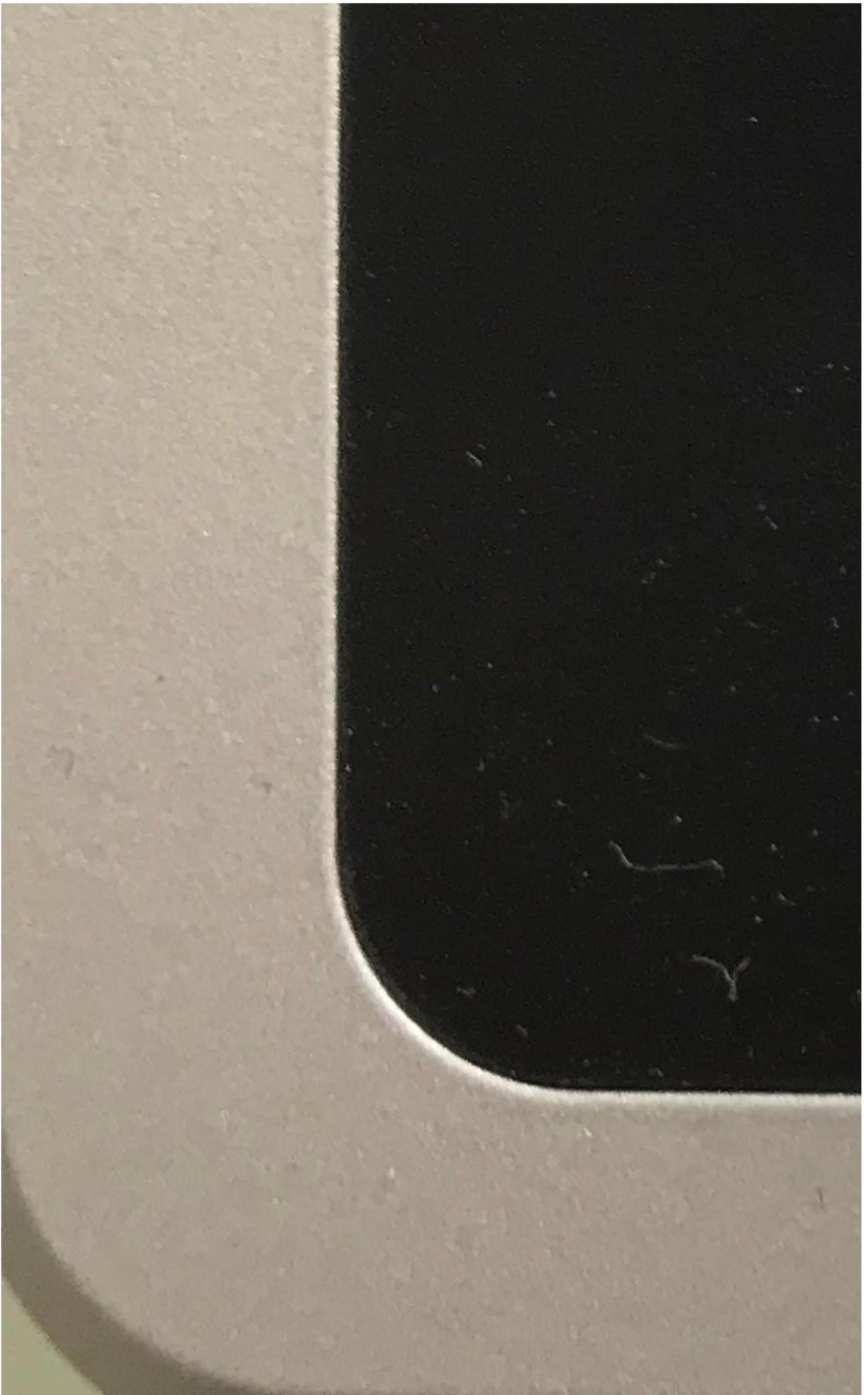
- 1) Make sure that your device is calibrated.
- 2) Select Spot Mode.
- 3) Place the color positioning target and device over the color target.

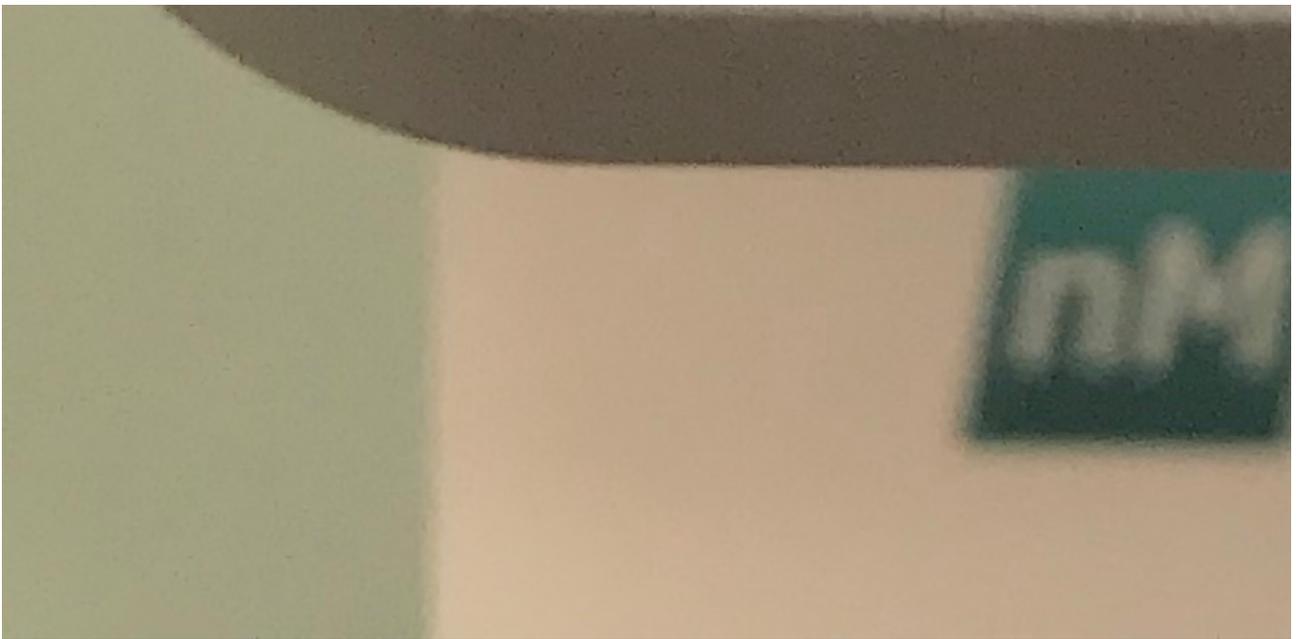




4) Press 'Measure' on the screen to measure colors and hold steady until the measurement is complete.







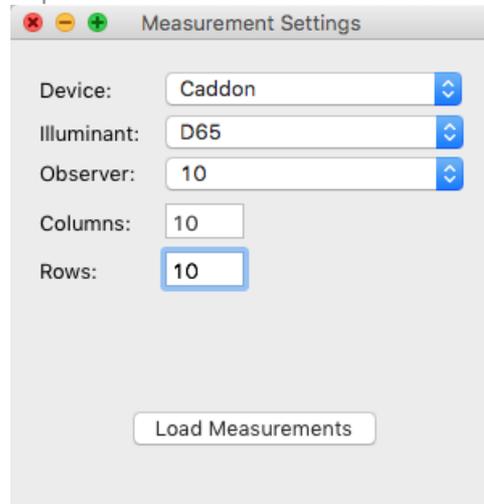
5) Release the device and move it patch by patch to measure all colors.



NOTE: Scan measurements is currently not supported in neoMatch.

Measurement with CADDON®

Different from other spectrophotometers, the CADDON option can load the measurements in neoMatch. Start th



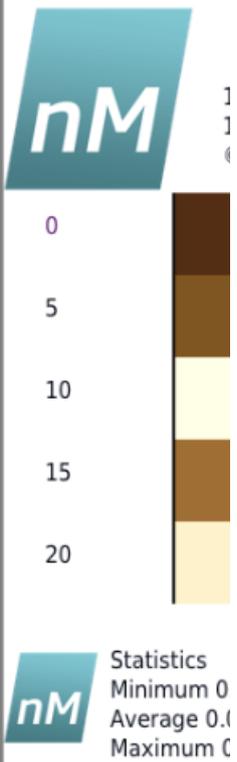
neoMatch application and open 'Measurement Settings'.

- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the Columns and Rows values that are used for the output references.

Load Measurement

- 1) Open a new window.
- 2) In 'Measurement Settings' click on 'Load Measurements' and select the CADDON CGATS file.
- 3) The full measurements will be loaded in neoMatch.
- 4) In 'Measurement Settings' the references for columns and rows are to set an output value for the print file. The modified values are dynamically and applied automatically.

#	Name	Reference		
000	1	●		
001	2	●		
002	3	●		
003	4	●		
004	5	●		
005	6	●		
006	7			
007	8			
008	9			
009	10			
010	11	●		
011	12	●		
012	13	●		
013	14			
014	15			
015	16			
016	17			
017	18			
018	19			
019	20			
020	21			
021	22	●		
022	23		0,00	0,00
023	24		0,00	0,00
024	25		0,00	0,00
025	26		0,00	0,00
026	27		0,00	0,00
027	28		0,00	0,00
028	29		0,00	0,00
029	30		0,00	0,00
030	31		0,00	0,00



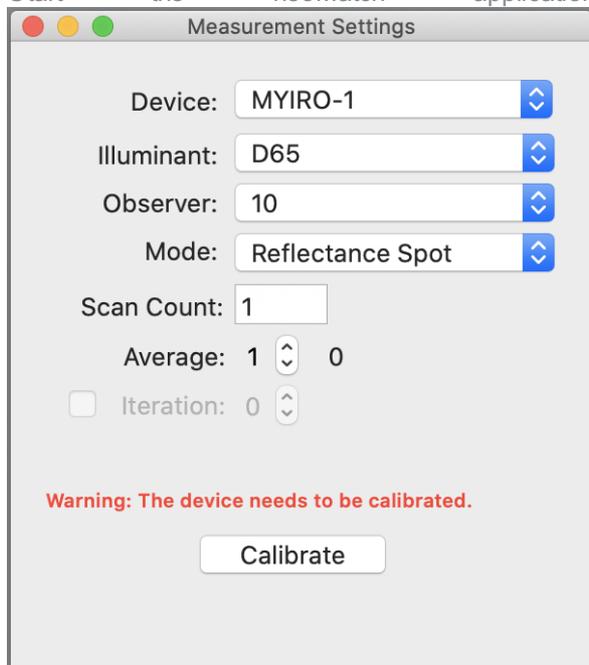
Columns: **Row**
Size: cm
Strip Line: Black White
 Export in Lab For
 Export in CGATS

Measurement with MYIRO-1®

Connect the device to your computer with the USB cable and turn it on at the bottom of the device until the blue light appears. Another option is to connect with the device using the device's WIFI connectivity. Refer to the device manufacturer user manual to configure the settings using MYIRO1_SpectrophotometerConfigurationTool. For information visit the manufacturer's webpage: <https://www.myiro.com/>



Start the neoMatch application and open Measurement Settings



Configure parameters:

- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the mode Scan, with or without UV filter (requires device calibration). The measurements are in spot mode only supported.
- Use Average to render your measurements.

Device Calibration

For accurate measurements, the device must be calibrated before use.

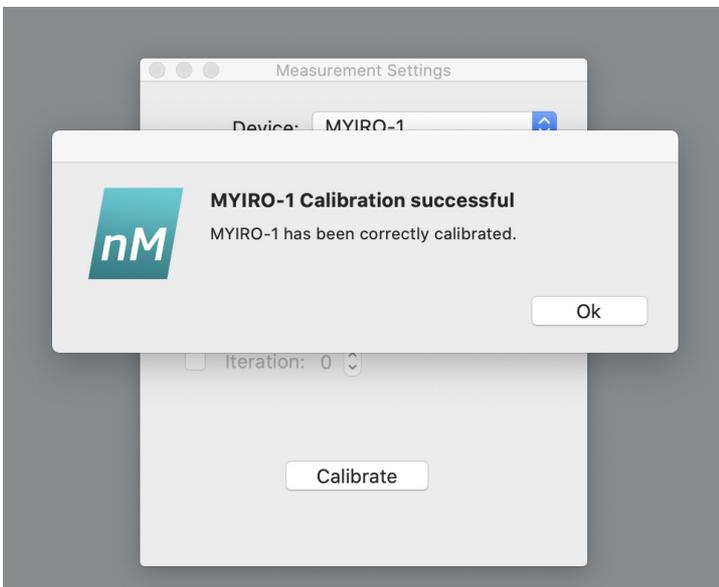
1) Remove the white reference from the device.



2) Place it the measuring head aligned to the marks and lock it moving the white reference clockwise.



3) In neoMatch click on the 'Calibrate' button until calibration is processed.

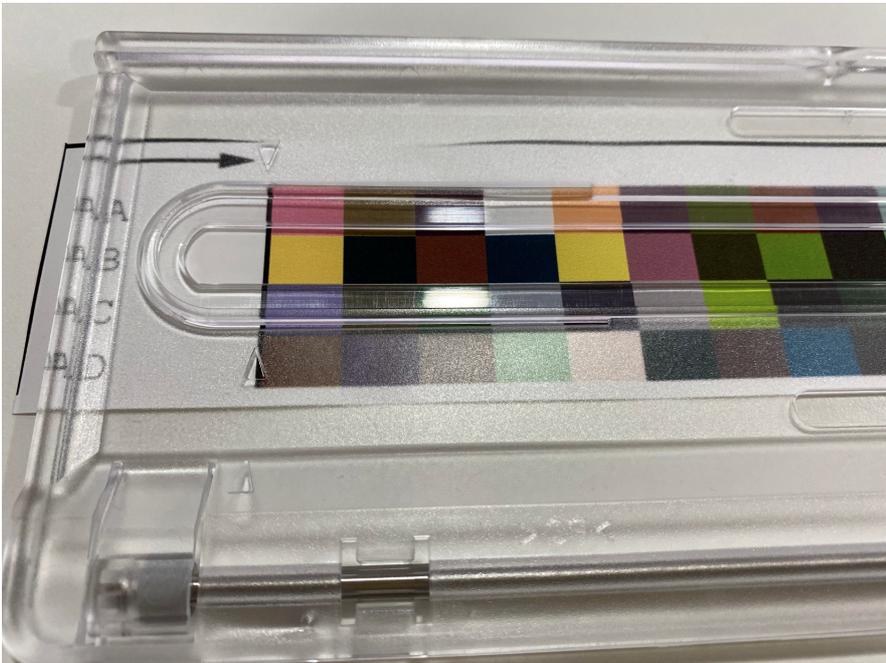


4) While calibrating the device will flash yellow light.

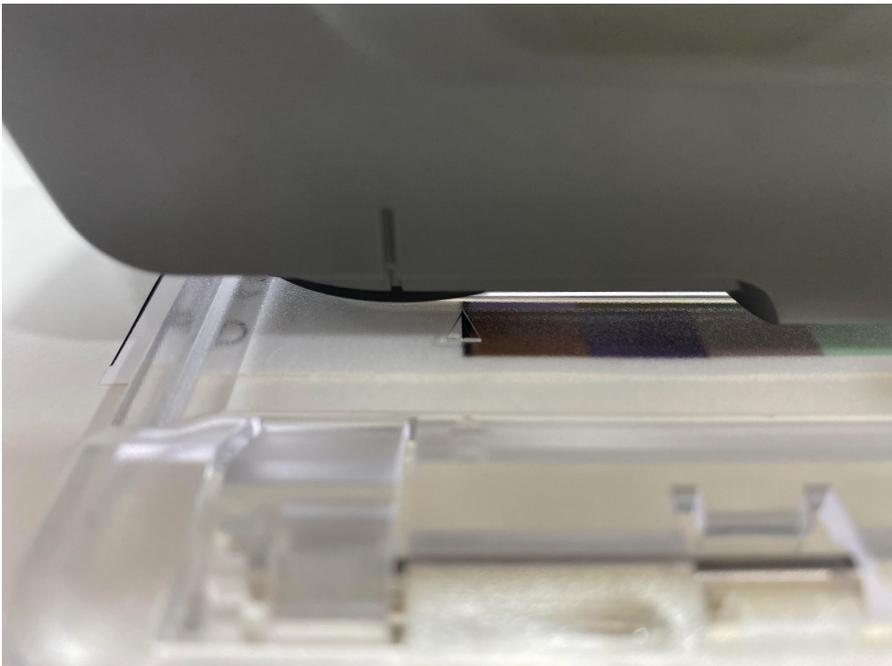


Spot Measurement

- 1) Make sure that your device is calibrated.
- 2) Select Scan Mode.
- 3) Enter scan count (number of the patches to measure).
- 4) Position the ruler on the media and align the marks of the ruler to the line of the first color patch of row #1 of your chart.



5) Lower the device to the target base and position the measurement head on the left before the marks start.



6) Press the device button, move to the right, and hold steady until the measurement is complete.



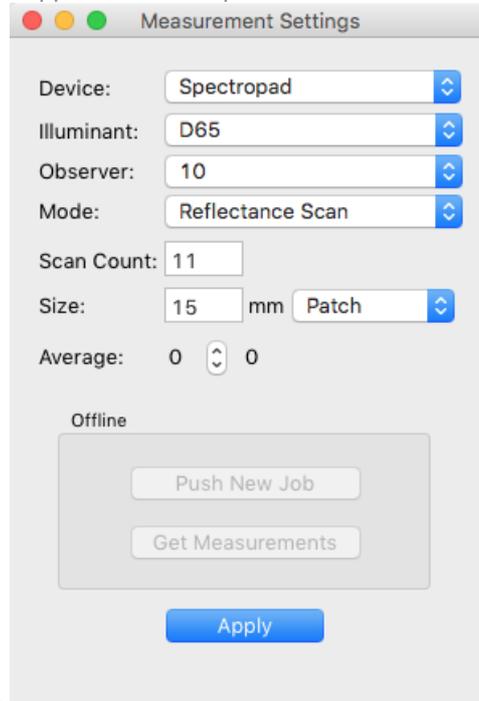
Spot Measurement

- 1) Make sure that your device is calibrated.
- 2) Select Spot Mode.
- 3) Place the color positioning target and device over the color target.
- 4) Press the device button to measure colors and hold steady until the measurement is complete.
- 5) Release the device and move it patch by patch to measure all colors.

Measurements with Barbieri SpectroPad®

Connect the device to your computer when is off and turn it on. Internal device calibration will start and you should

wait until is completed. Start the neoMatch application and open 'Measurement Settings'. Configure the following

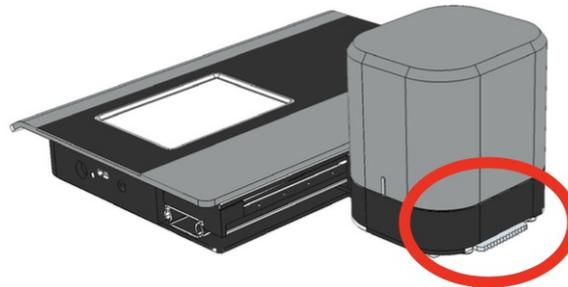


parameters and press on the 'Apply' button.

- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the mode Spot/Scan, with or without UV filter (requires device calibration). The Spot mode allows scan count 1. More than 1 will switch to Scan mode and vice versa.
- Select the size types, patches, or lines, and enter the size of the selected type.
- Use Average to render your measurements.

Device Calibration

Place the device over the printed chart. For accurate measurements, the device must be calibrated before use. The measuring head is equipped with a switch that allows manual insertion of the white reference. The calibration is



required with each new measurement.

When this switch is operated, the instrument will automatically detect this and inform you that it is being calibrated. Release the switch when calibration is terminated.

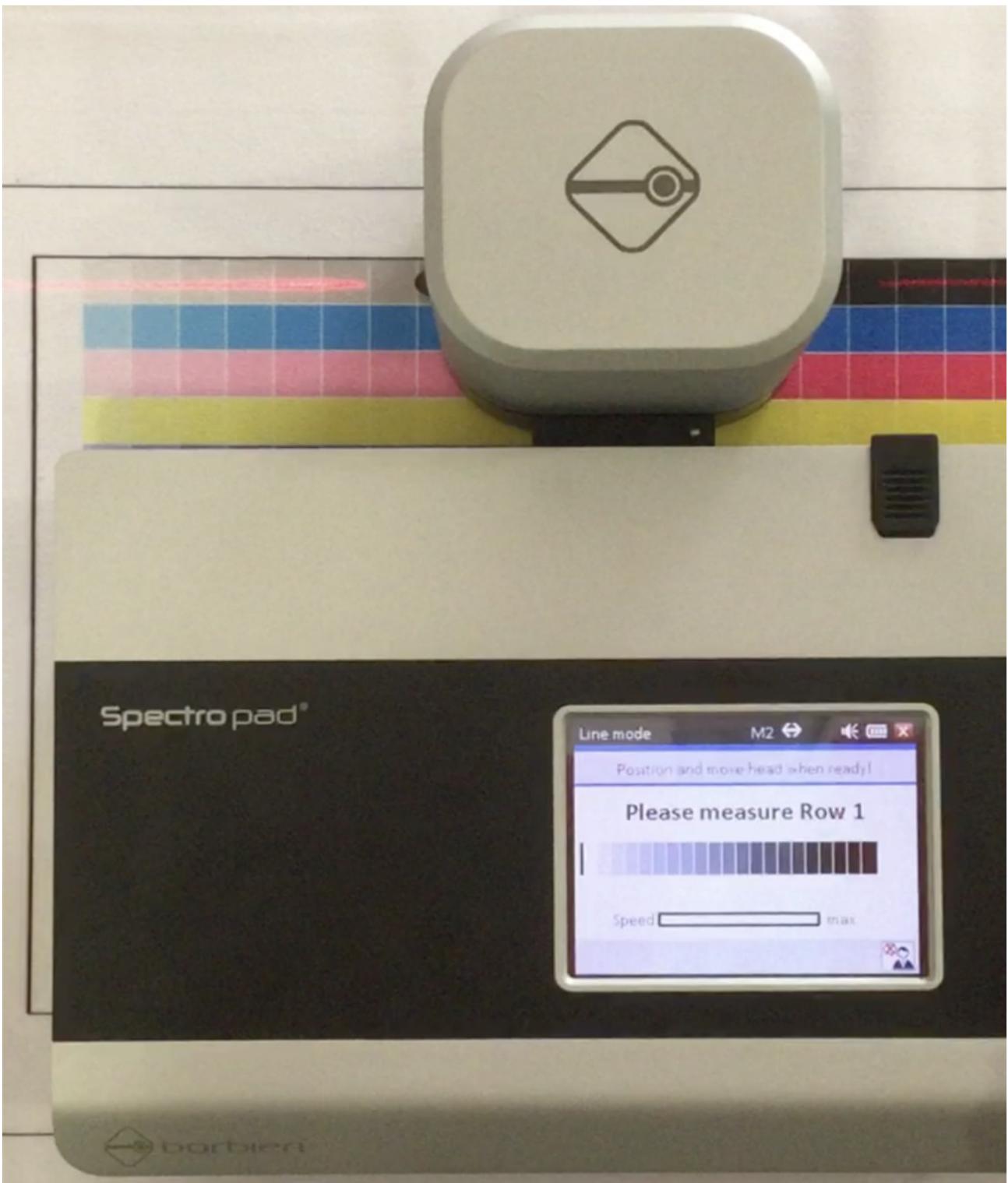


Spot Measurement

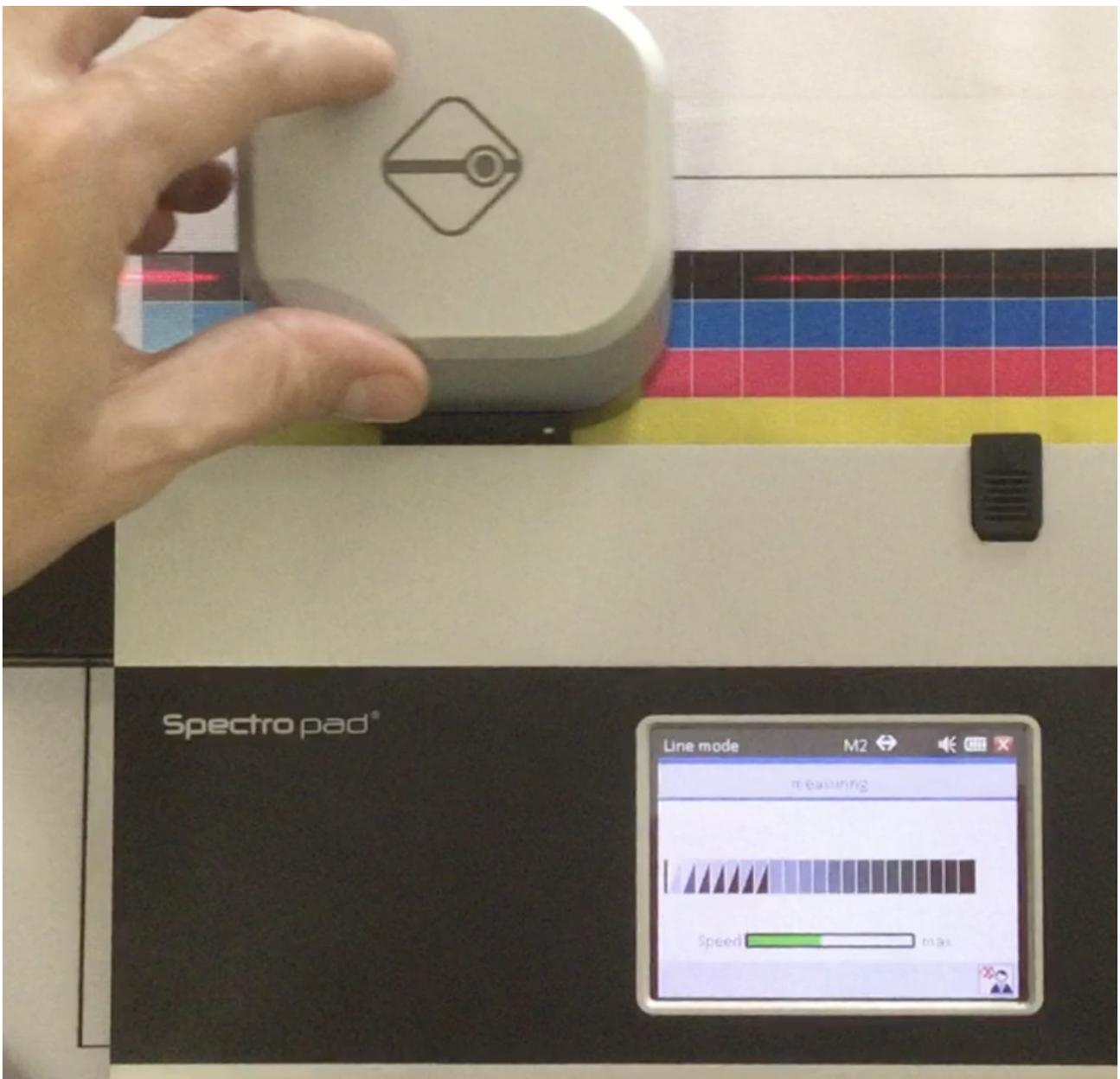
- 1) Make sure that your device is calibrated.
 - 2) Select Spot Mode.
 - 3) Position the device on the patch you would like to measure. Scan chassis remains on the device during a spot measurement.
 - 4) Lower the device to the target base and hold steady until the measurement is complete.
 - 5) Release the device.
-

Scan Measurement

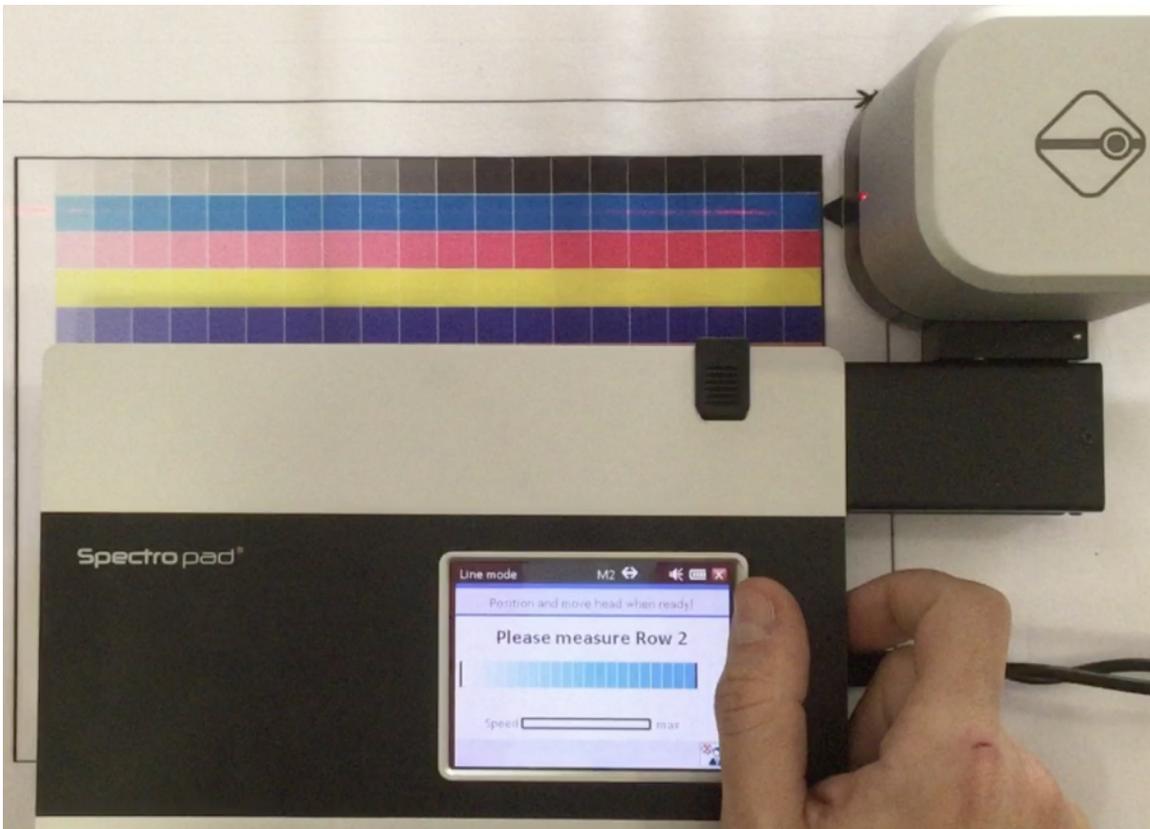
- 1) Make sure that your device is calibrated.
- 2) Select Scan Mode.
- 3) Enter scan count (number of the patches to measure).
- 4) Position the device in the center of the media above row #1 of your chart by centering the two laser beams. When this is done, keep the device and move the measuring head to the beginning of the chart row.



5) Start the measurement. The device supports Bi-directional measurements. Lines can be measured in direction from left to right and from right to left.



6) When the last patch is passed release the device, move the device to the next line, and keep measuring, until you have measured all lines in the chart.



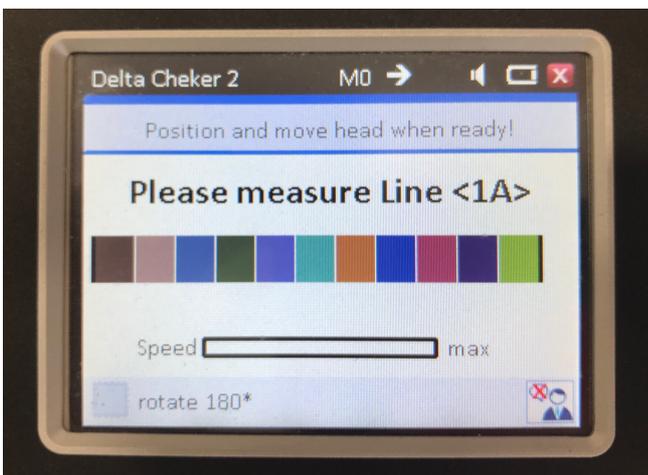
Offline Measurements

neoMatch supports offline device measurements. Before starting the offline measurements flow, consider the following steps.

1) To work with offline measurements you need to create the measurement target. This has to be done in neoMatch. Set your settings, scan count, and patch size corresponding to your printed measurement target in 'Measurement Settings'. Start reading it line for line until the full target is completed. Press 'Apply' before reading every line. Once completed, send the measurements with 'Push new Job' to the SpectroPad device to create the target. Before you will be asked to name the target. If the device is not connected, the measurements will be saved in /Users/<USER>/Documents/neoMatch/...

INFO: The measurements can be removed from Barbieri Gateway Measurement Software only when connected to the device.

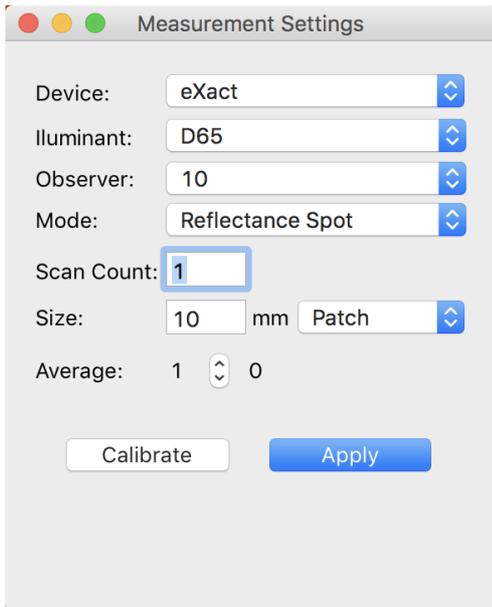
2) In the device you can measure your colors with the transferred target, selected in 'Chart Mode'. Once the target is ready in the device, start reading it line for line until the full target is completed.



3) To receive the targets, from 'Measurement Settings' press 'Get Measurements', select the target from the list and the measurements will be loaded in a new window in neoMatch from the device.

Measurements with X-Rite eXact®

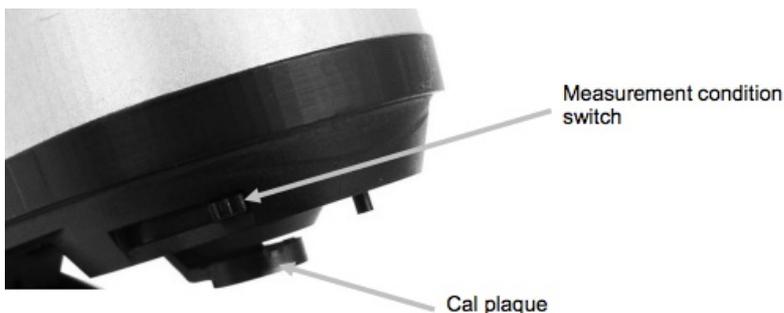
In Measurement Settings, from Device select eXact, connect the device to your computer, and press the power button to turn on the device. Configure the following parameters and press on Apply button.



- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the mode Spot/Scan, with or without UV filter (requires device calibration). The Spot mode allows scan count 1. More than 1 will switch to Scan mode and vice versa.
- Select the size types, patches, or lines, and enter the size of the selected type.
- Use Average to render your measurements.

Device Calibration

Before starting to use the device, it must be calibrated. The device has an integrated calibration plaque and will calibrate automatically when required. The calibration plaque is located directly below the optics when the device is in the open position (not locked).



Click on Calibrate button to make the action and follow the steps on the device display. Locate the device on a flat surface and tap the START button on the display. It will display a countdown screen and then perform the calibration.



Spot Measurement

- 1) Make sure that your device is calibrated.
- 2) Select Spot Mode.
- 3) Position the device on the patch you would like to measure. Scan chassis remains on the device during a spot measurement.
- 4) Lower the device to the target base and hold steady until the measurement is complete.
- 5) Release the device.

Scan Measurement

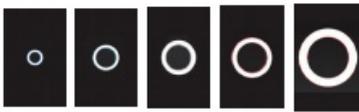
- 1) Make sure that your device is calibrated.
- 2) Select Scan Mode.
- 3) Enter scan count (number of the patches to measure).
- 4) Position the ruler with the device on the media above the first patch of row #1 of your chart.
- 5) Lower the device to the target base and hold steady until the measurement is complete.



- 6) In one continuous motion, roll the device across the color bar without stopping. Use the black scribe line on the edge of the chassis to align the device during the scan, and view the device display for scan speed indication. One of the circles appears on the device to provide feedback on your scanning speed.



Scanning the color bar too fast or too slow for an extended period of time may produce inaccurate measurement results. Always try to maintain a steady scanning speed with the white circle showing as much as possible for the



best results.

7) When the last patch is passed release the device.

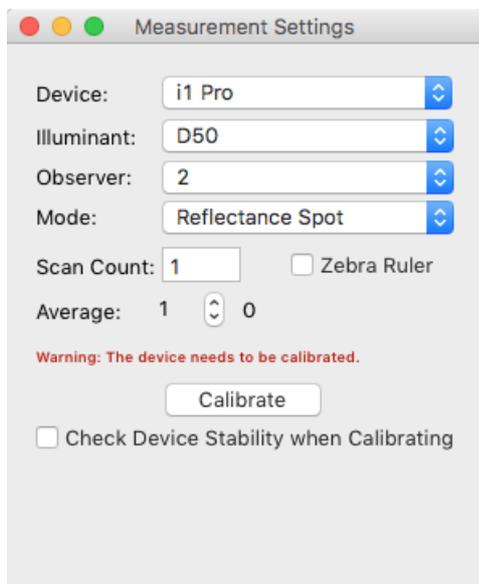


8) Position the ruler with the device in front of the next row of your test chart and measure the next row



Measurements with X-Rite i1 Pro® models

Measurement Settings, from Device, select i1 Pro and connect the device to your computer. The dialog shows parameters to set for the measurement.



- Make your selection for Illuminant.
- Make your selection for Observer.
- Select the mode Spot/Scan, with or without UV filter (requires device calibration). The Spot mode allows scan count 1. More than 1 will switch to Scan mode and vice versa.
- Enable or disable Zebra Ruler support for spectrophotometer X-rite i1 Pro2. Note, for device X-rite i1 Pro this option is disabled.
- Use Average to render your measurements.

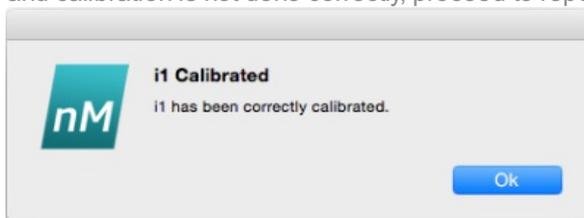
Device Calibration

Before starting to use the device, it must be calibrated. Place the device on its white reference calibration plate and click on Calibrate button to make the action.



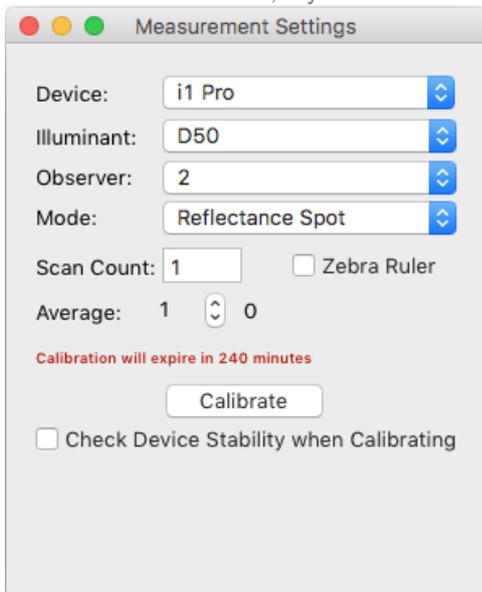
The device is equipped with device light indicators on its top housing, that provides feedback on the status of the device. (off) The device is either not connected to your computer. (solid white) The device is connected but needs calibration. (pulsating white) The device is connected and ready for measurement. (solid red) The calibration of the device failed due to a hardware problem. To avoid interference of the device status indicators with the measurement process, the device status indicators are switched off during the measurement.

When the connection with the device and calibration is done correctly, a dialog will pop up. When the connection with the device and calibration is not done correctly, proceed to repeat the connection and calibration, until the calibration

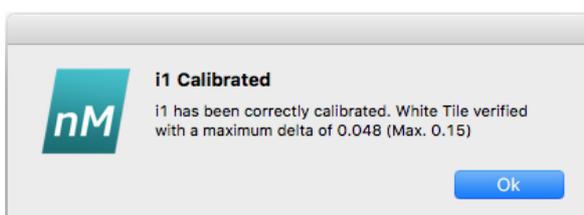


succeeds.

After the calibration, you can see when the calibration will expire and must be renewed.



The option "Check Device Stability when Calibrating" is verifying the white reference of the device and its stability. When the calibration succeeded, the response tells you the delta E of the device white reference which should not go beyond delta E 0.15.



Spot Measurement

- 1) Make sure that your device is calibrated and the status indicators are pulsating white.
- 2) Select Spot Mode.
- 3) Position the device on the patch you would like to measure.
- 4) Press the measurement button on the device. Status indicator lights switch off during measurement and pulsate green once the measurement has been successfully finished.

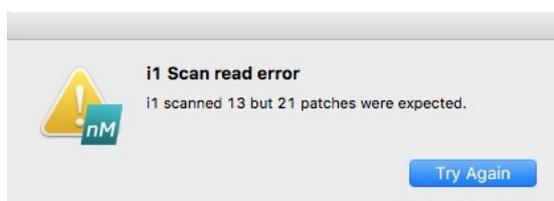


Scan Measurement

- 1) Make sure that your device is calibrated and the status indicators are pulsating white.
- 2) Select Scan Mode.
- 3) Enter scan count (number of the patches to measure).
- 4) Position the ruler with the device on the media in front of row #1 of your chart. It does not matter if you scan the row from left to right or right to left.
- 5) Press the measurement button on the device and wait one second before you start moving the device to the opposite side of the ruler. Hold the measurement button pressed until you have reached the far end of your test chart.

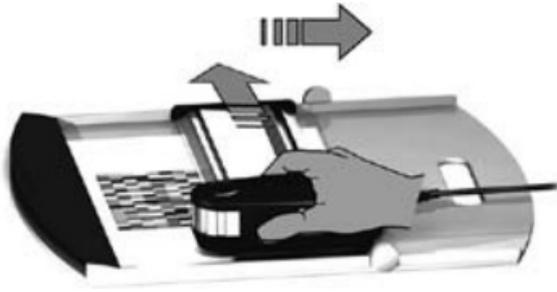


If you release the button before you reached the measurement of the full line, repeat from the beginning.



The status indicators on the device provide feedback if the measurement was successful: (2x green flash) the row was measured successfully. (2x red flash) the row was not measured successfully because not all patches could be recognized. Measure the row again, but reduce your measurement speed and make sure that the device starts and ends the measurement before and after the patches of the chart. (4x red flash) the row was not measured successfully because you started reading the patches too early without giving the tungsten filament lamp enough time to warm up. Measure the row again but allow the lamp time to heat up before you start moving the i1Pro device.

6) Position the ruler with the device in front of the next row of your test chart and measure the next row.



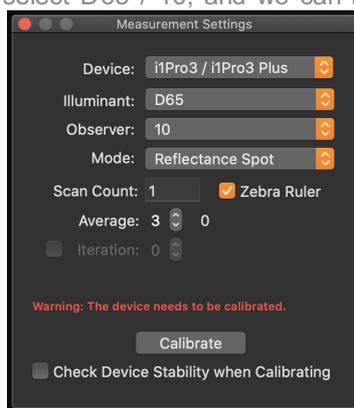
3. Creation of Color Libraries

Calibrate a color library for neoStampa

Using a color library either with a few selected colors or a large reference library (PANTONE® or similar), neoMatch is able to calibrate and match their colors as close as possible to the reference.

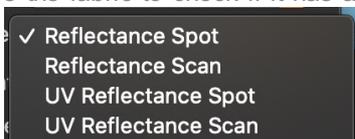
1. First of all, we have to make sure that neoMatch Preferences are set at ΔE_{94} (Textile) or ΔE_{2000} ; and that the Rendering Method is Absolute Colorimetric. On the other hand, we also have to make sure that the neoStampa Colour Scheme has the Rendering Intent for Spot Color also set as Absolute Colorimetric (it's the default value).

2. We create a new document on neoMatch and we open the Measurement Settings to set up the spectrophotometer. We have to select D65 / 10, and we can make more than one reading on Average so our



measurements are more precise.

3. We can measure the fabric to check if it has an optic whitener (OBA). If so, we can use the UV filter for more

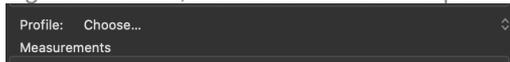


accurate readings.

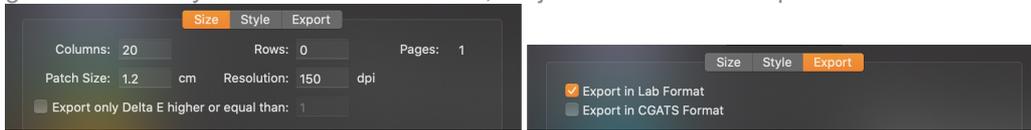
4. We measure each and all the colors we want to match and we name them. We have to be careful to use the same

naming convention we use on our design program (either Illustrator, Photoshop, InDesign, or CorelDraw). If we have a long list, we can Create a list and import it beforehand.

5. Once we have all the names and readings introduced, we load the machine profile we use on the neoStampa scheme and we can start matching colors.



6. We click on the Reference TIF icon to export a file we can print on neoStampa and read later. If we want to generate a library with LAB values instead, we just have to check Export in LAB values and print the generated file



7. Once we have the print, we can set the spectrophotometer to (UV) Reflectance Scan with the same Scan Cour (20), select the first file of values (000), and start reading. A blue column of numbers will appear indicating the values

#	Name	Reference	Delta	Last
0000	1 PANTONE Yellow C		0,00	0,00
0001	2 PANTONE Yellow 012 C		0,00	0,00
0002	3 PANTONE Orange 021 C		0,00	0,00
0003	4 PANTONE Warm Red C		0,00	0,00

we are reading (nM 2.4 onwards).

8. Once we're finished reading all the values, we click on Improved TIF to generate a new set of colors, closer to the original readings. If we check Export only ΔE higher or equal than [1], only these values will be exported. We can print this file, select again the first line and start reading the improved values. Since the closest values are not exported, each iteration has fewer and fewer readings. You can see which colors you are reading in the blue column.

9. Usually, improving the values in two or three iterations is enough to get a good match and we can export our Best RGB or Best LAB (only if we're generated our printed files in LAB).

10. We can Import the CSV table into the neoStampa library and print a PDF file with the matched colors to check the results.

Please be aware that some PANTONE color libraries (Solid Coated, for example) are designed for mixed offset inks, so some of the colors are not achievable in digital printing and have an ΔE between 2 and 5 (usually around 1/5 of them).

Calibration of new color libraries

The process we are going to describe next is a practical example of how to match color references from color libraries with the printed results, obtained with a particular profile, media, inks, or printer. As seen, when opening neoMatch, an untitled job window opens. Also, any new job can be opened, imported, and saved from the File option on the top menu with **New**.

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- (A) Measure Colors with the Device
- (B) Import Colors from text format files
- (C) Import Colors from ACO/ACB and ASE
- Name Colors
 - New from measurement
 - Color Gradient identification
- Select ICC Profile
- Export Colors
- Measure Colors
- Improve Colors
- Best Colors
- Measure colors out of gamut

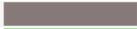
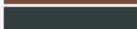
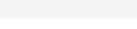
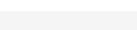
Import colors

To load a selection of colors you want to check, you can either load them by measuring (option A) directly from their support or import them (options B and C) from the file.

TIP: It is always recommended to save documents as we move along. The used format in neoMatch is .mtx.

(A) Measure Colors with the Device

To measure the colors, you will have to connect the spectrophotometer. Go to **Measure | Measurement Settings**, and make the configuration of the device and parameters, as described above. Select the new job window, place the spectrophotometer over the color reference that you want to match, and then measure the color. You can carry on measuring the color(s) without stopping. Each measured color will be listed in the new job. Afterward, you can name your colors on the list.

#	Name	Reference	Delta	Last
000	0000		0,00	0,00
001	0001		0,00	0,00
002	0002		0,00	0,00
003	0003		0,00	0,00
004	0004		0,00	0,00
005	0005		0,00	0,00
006	0006		0,00	0,00
007	0007		0,00	0,00
008	0008		0,00	0,00
009	0009		0,00	0,00
010	0010		0,00	0,00

Reference

Reference	Measured	dE	Printed
	L: 63.66	No Selc	No Selc 63.66
	a: 27.07	No Selc	No Selc 27.07
	b: 46.34	No Selc	No Selc 46.34

Name: 0000

Profile: Choose...

Measurements

Measure	L*	a*	b*	New	Delta

Statistics Spectral Data

Maximum	0,00	Zero Error	0
Average	0,00	Perfect	0
Minimum	0,00	Good	0
		Not Very Good	0
		Bad	0

Default Recalculate

(B) Import Colors from text format files

To open a color library from a text file, click on **File | Open** and choose the color library text file. Or else, click on the **Import button** or from the File menu, choose the color library file, and confirm with Open. After the importation, the colors are listed orderly in your new job.

Supported are color libraries in LAB format. Supported formats:

- CSV
- CGATS
- CXF
- QTX

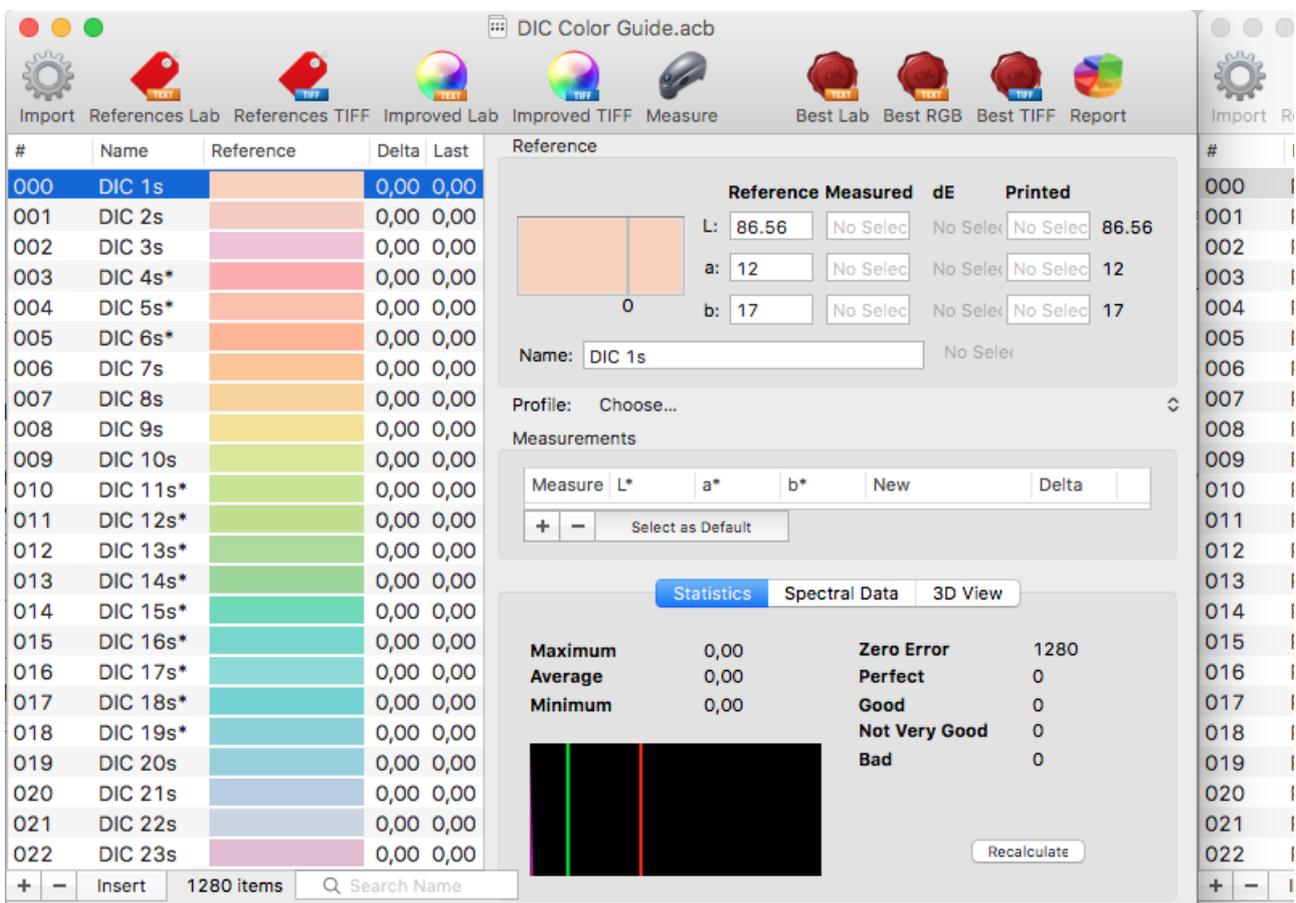
NOTE: Bear in mind to use the CSV ("Comma Separated Value") file format to import the colors.

(C) Import Colors from ACO/ACB and ASE

Supported are Color Books and Color Swatches in LAB format. To open aco/acb colors, click on **File | Open** and choose the file with extension .aco or .acb. Default Photoshop Swatches and Books are located (in macOS):

- /Applications/Adobe Photoshop CC 2018/Presets/Color Books/
- /Applications/Adobe Photoshop CC 2018/Presets/Color Swatches/

NOTE: ACO/ACB color libraries in CMYK, RGB and in version 1 are not supported.



Name Colors

Once colors are imported or measured, you can rename them for further color indications in the color library.

TIP: It is always recommended to save documents as we move along. The used format in neoMatch is .mtx.

New from measurement

By default the automatically created names from measurement using 4 characters with order 0000, 0001, 0002, etc. Just click on the name in column 'Name', then type the name. until the name is Select the new job window, place the

spectrophotometer over the color reference that you want to match, and then measure the color. Or else from the 'Reference' field, you can change the name in the related field.

#	Name	Reference	Delta	Last
000	0000		0,00	0,00
001	0001		0,00	0,00
002	0002		0,00	0,00
003	0003		0,00	0,00
004	0004		0,00	0,00
005	0005		0,00	0,00
006	0006		0,00	0,00

Reference

Reference Measured



0

L:

a:

b:

Name:

Color Gradient identification

To work with gradient colors and get gradient identification it is required to rename the gradient colors corresponding to the color percentage. neoMatch allows two ways for the gradient name calculation. By percentage or by RGB index number (number 0-255). Both options will not affect any color change.

By Percentage:

1. The 100% color name has to remain without percentage. Select the 90% gradient color and add '%90' (**303%90**) to the name. It will change the name to '90%' in the row.
2. Keep adding each gradient color until you reach the end of the gradient. The gradient color can not contain the order number (#001, #002, etc.) and must be removed. Only the next new colors have to use the order numbers

#	Name	Reference	Delta	Last
000	303		0,00	0,00
	90%		0,00	0,00
	80%		0,00	0,00
	70%		0,00	0,00
	60%		0,00	0,00
	50%		0,00	0,00
	40%		0,00	0,00
	30%		0,00	0,00
	20%		0,00	0,00
	10%		0,00	0,00

Reference

Reference Measured



L:

a:

b:

Name:

Profile: Choose...

Measurements

#001, #002, etc.

By RGB index number :

1. The 100% color name has to remain without percentage. Select the 90% gradient color and add '@25' (**303@25**) to the name. It will change the name to '90%' in the row. This is the number of 255 RGB colors that calculate 90% of the color. The comparison to percentage is 90% - 25, 80% - 50, 70% - 76, 60% - 101, 50% - 128, 40% - 152, 30% - 178, 20% - 203, and 10% - 230.
2. Keep adding each gradient color until you reach the end of the gradient. The gradient color can not contain the order number (#001, #002, etc.) and must be removed. Only the next new colors have to use the order numbers

#	Name	Reference	Delta	Last
000	303		0,00	0,00
	90%		0,00	0,00
	80%		0,00	0,00
	70%		0,00	0,00
	60%		0,00	0,00
	50%		0,00	0,00
	40%		0,00	0,00
	30%		0,00	0,00
	20%		0,00	0,00
	10%		0,00	0,00

Reference

Reference Measured



L:

a:

b:

Name:

Profile: Choose...

Measurements

#001, #002, etc.

Select ICC Profile

The ICC profile you can select from the list of installed ICC profiles in your system or insert the ICC profile from the upload icon to match the colors with the RGB color space of the profile. When saving the document then the selected

profile will be embedded in the .mtx document. If you want to use one and the same profile in all new documents, then in preferences you can choose the ICC.



Export Colors

In the color-matching process, we're going to show up to 3 trials. This is to reach the best-improved color with the colors we have imported. Sometimes though, some colors may increase their dE instead of getting it reduced, and therefore the color match would become less accurate.

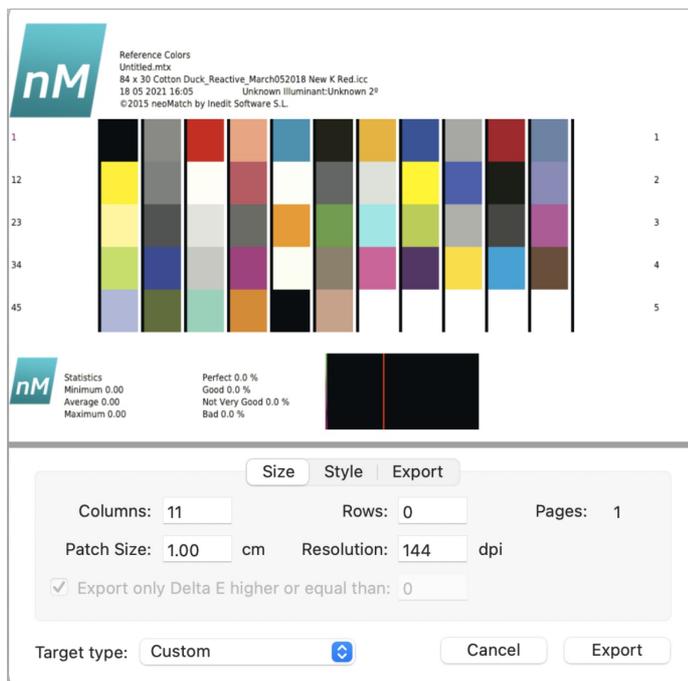
In the case of measured colors, the first step is to export the lab values references to keep the starting point of the color matching. Use the header menu options or the file menu File | Export References and select one of the options

- References LAB
- References Image
- References ACO
- References ACB
- References CGTAS
- References CXF
- References ASE

In order to export such colors using a specific profile, media, and inks in your printer, which we will read or measure later on, press the References TIFF button or from the File menu. Modify parameters and press 'Export' to save the TIFF image file, to print with your printer. In the TIFF file the statistics and color conception quality are included.

Size :

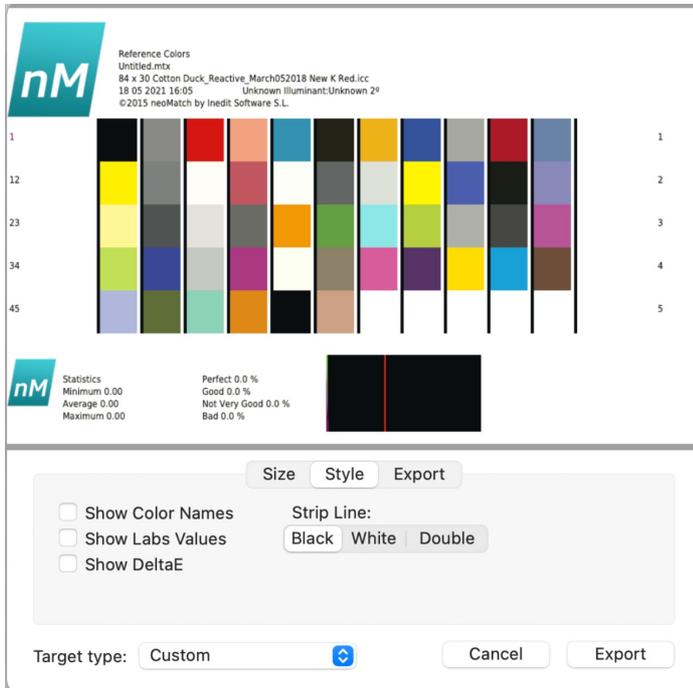
- Number of Columns or Rows
- Size of the patches
- Resolution of the Print
- Target type: Custom or Barbieri



Style :

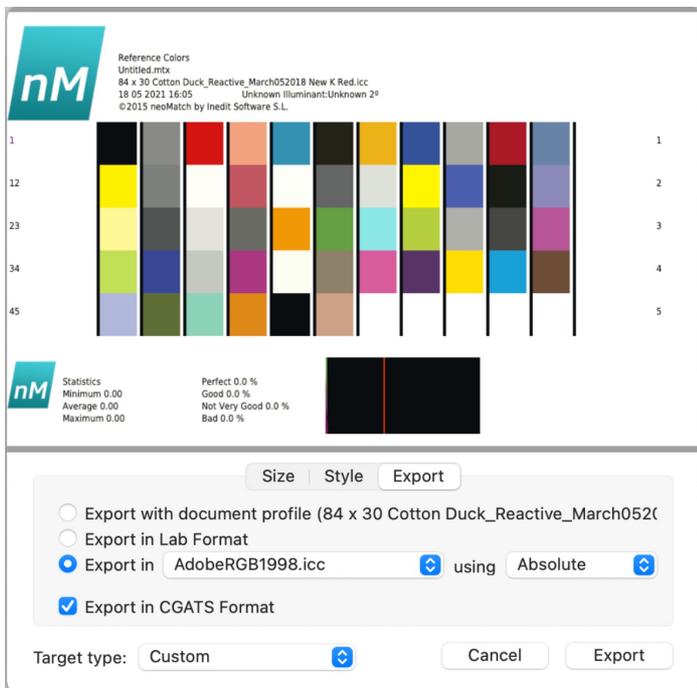
- Strip Lines between the patches

- Black 
- White 
- Double 
- Inclusion of Names or Values of the colors.
- Additional exportation file in Lab Format.
- Additional exportation file in CGATS Format (to read measurements from other spectrophotometers which aren't supported by neoMatch).



Export :

- Export with the document profile.
- Export in different profiles (RGB, CMYK) and rendering Intent.
- Additional exportation file in Lab Format.
- Additional exportation file in CGATS Format (to read measurements from other spectrophotometers which aren't supported by neoMatch).



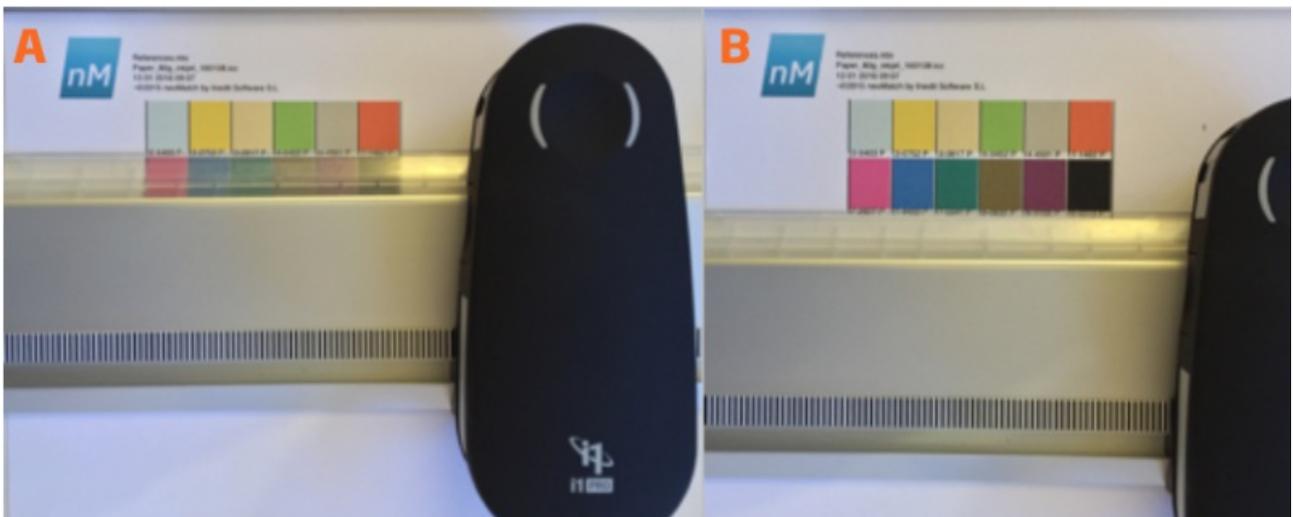
Measure Colors

Make sure to open Measurement Settings to select the required options and calibrate the spectrophotometer. It is important to verify that the number of patches to read matches the Scan Count, as seen in the example 6 columns.

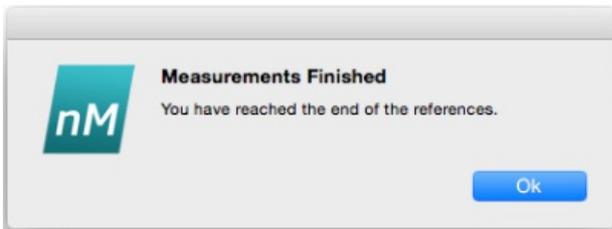
Step-by-Step

1. Once your TIFF file is printed, select the first color in the list and proceed to read the patches with the spectrophotometer. The scan counts configuration in measurement settings will maintain the reading in rows. If the window doesn't open automatically, because neoMatch was closed between the steps exporting and measuring, load the .ref text format file, which is exported together with the TIFF file.

2. Proceed to read the patches in rows, from first to last, in the scan or spot mode. Start and stop to measure from white media. The next patch to scan will be indicated automatically until the reading is finished. Measure in the first row from left to right (A) and in the second row from left to right (B).



3. When the process is finished, another dialog indicates you so.



4. With the next window the first part of the process is over, as we see what are the different values between your Color Library references and those with their actual print.

#	Name	Reference	Delta	Last
000	12-5403 P		1.97	1.97
001	13-0752 P		4.63	4.63
002	13-0917 P		1.81	1.81
003	14-0452 P		5.55	5.55
004	14-4501 P		4.23	4.23
005	17-1462 P		7.59	7.59
006	17-2627 P		4.54	4.54
007	17-4433 P		2.23	2.23
008	17-5641 P		6.89	6.89
009	18-0832 P		6.41	6.41
010	19-3336 P		6.76	6.76
011	19-4013 P		5.61	5.61

Reference	Reference Measured	dE	Printed
L: 82	85.6	-3.6	82
a: -5	-4.1	0.9	-5
b: -3	-3.18	-0.18	-3

Measure	L*	a*	b*	New	Delta
001	85.60	-4.10	-3.18		1.97

	Maximum	Average	Minimum	Zero Error	Perfect	Good	Not Very Good	Bad
	7.59	4.85	1.81	0	0	3	0	9

Result

DeltaE values show the deviation between references. The smaller the DeltaE Value is, the closer is to the colors which have been read. Although this DE value can be set in the program's Preferences, by default, a difference of 3 is understood as acceptable, and further than that is not. This is why we see some of the references with a warning

#	Name	Reference	Delta	Last
000	12-5403 P		1.97	1.97
001	13-0752 P		4.63	4.63
002	13-0917 P		1.81	1.81
003	14-0452 P		5.55	5.55
004	14-4501 P		4.23	4.23
005	17-1462 P		7.59	7.59
006	17-2627 P		4.54	4.54
007	17-4433 P		2.23	2.23
008	17-5641 P		6.89	6.89
009	18-0832 P		6.41	6.41
010	19-3336 P		6.76	6.76
011	19-4013 P		5.61	5.61

symbol, as they are over 3.

On the right of the window, we can compare the differences in the Lab values of references, print, and measurements of the color.

Reference

	Reference Measured	dE	Printed
L:	78	85.04	-7.04
a:	6	3.78	-2.22
b:	73	59.87	-13.13

Name: 13-0752 P 4.63

Profile: Paper_80g_inkjet_160108.icc

Measurements

Measure	L*	a*	b*	New	Delta
001	85.04	3.78	59.87		4.63

In case of joining 2 or more measurements in one using 'Average', Median, or other methods, then you can do this from the Edit | Merge Measurements..., which opens a dialog in the document to select an average method or delta range.

Untitled

Import References Lab References TIFF Improved Lab Improved TIFF Best Lab Best RGB Best TIFF Report

#	Name	Reference	Delta	Last
0000	0000		6,06	10,41
0001	0001		0,02	0,22
0002	0002		0,01	0,01
0003	0003		0,04	0,04
0004	0004		0,09	0,14
0005	0005		0,05	0,06
0006	0006			
0007	0007			
0008	0008			
0009	0009			
0010	0010			
0011	0011			
0012	0012			
0013	0013			
0014	0014			
0015	0015			
0016	0016			
0017	0017			
0018	0018			
0019	0019			

Reference

	Reference Measured	dE	Printed
L:	94,4	86,22	8,18
a:	0,4	-0,73	-1,13
b:	29,77	28,86	-0,92

Name: 0000 8,31

It will merge last measurements in one using average method.

Merge options

- Average of measurements
- Median of measurements
- Select the highest delta
- Select the lowest delta

Merge last **2** measurements

Cancel Merge

Statistics Spectral Data 3D View

Maximum	6,06	Zero Error	0
Average	1,45	Perfect	0
Minimum	0,01	Good	14
		Not Very Good	1
		Bad	5

Recalculate

20 items Search Name

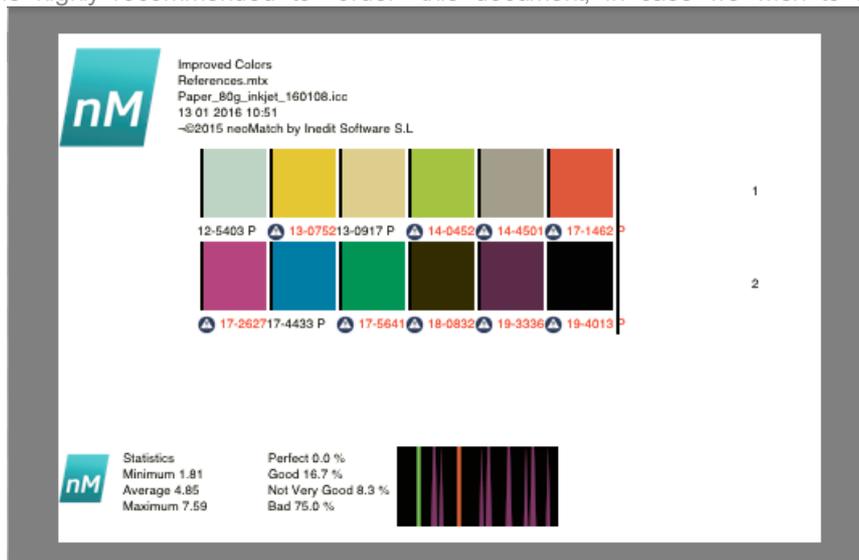
Improve Colors

neoMatch will calculate an improved version of the measured colors, taking into account all the values. We will print this new version with improved colors by clicking on the **Improved TIFF button**.

We recommend you export the improved lab values references to keep the progress point of the color matching. Use the header menu options or the file menu **File | Export Improved** and select one of the options:

- Improved LAB
- Improved RGB
- Improved Image
- Improved ACO
- Improved ACB
- Improved CGTAS
- Improved CXF
- Improved ASE

The next print layout is shown, with colors over the maximum DeltaE in red, and we will follow the same exportation process that we have described previously. A document will be generated, which we are asked to save on our computer. It is highly recommended to "order" this document, in case we wish to make a second DeltaE



improvement.

After the printing, we will follow the same reading process that we have described previously. Remember to calibrate the spectrophotometer before you start to measure. Just as before, new measurements are generated, shown in the next window. Repeating the steps two more times, we finally have the results of 3 improved trials.

The screenshot shows the 'References.mtx' software interface. On the left is a list of 12 color references, each with a name, reference image, and Delta values. On the right, the 'Reference' panel shows detailed measurements for the selected reference (12-5403 P), including L*, a*, and b* values for both the reference and the printed sample, along with dE and Delta values. Below this is a 'Measurements' table showing the results for all 12 references. At the bottom right, there is a 'Statistics' panel with a bar chart and a quality assessment table.

#	Name	Reference	Delta	Last
000	12-5403 P		0.56	1.64
001	13-0752 P		4.16	4.30
002	13-0917 P		0.85	1.66
003	14-0452 P		4.92	4.92
004	14-4501 P		0.69	1.54
005	17-1462 P		6.97	9.98
006	17-2627 P		3.43	3.78
007	17-4433 P		1.77	1.77
008	17-5641 P		1.63	1.63
009	18-0832 P		4.38	4.45
010	19-3336 P		6.76	7.17
011	19-4013 P		5.61	7.07

Measure	L*	a*	b*	New	Delta
001	85.60	-4.10	-3.18		1.97
002	83.08	-5.28	-3.57		0.75
003	82.43	-5.23	-3.57		0.56
004	82.33	-5.41	-1.27		1.64

Maximum	6.97	Zero Error	0
Average	3.48	Perfect	3
Minimum	0.56	Good	2
		Not Very Good	0
		Bad	7

Moving through the references one by one, we see which ones have improved and which ones have not. The improved color is the color with the lowest dE values. If the resulting measurements had been generally improved, we could do a fourth trial. If the bad references did not improve, therefore it is not worth performing a fourth trial.

Two side-by-side 'Measurements' tables are shown. The left table is labeled 'Improved' and shows the results for references 001-004. The right table is labeled 'NOT improved' and shows the results for references 001-004. In both tables, the 'Delta' column is highlighted in green, and the lowest Delta value is circled in orange.

Measure	L*	a*	b*	New	Delta
001	53.00	-31.64	-4.04		6.89
002	52.93	-33.57	2.31		2.81
003	52.53	-33.60	2.05		2.95
004	52.97	-34.31	5.52		1.63

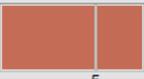
Improved

Measure	L*	a*	b*	New
001	44.89	27.72	-12.25	
002	39.20	18.61	-5.51	
003	39.50	18.19	-6.82	
004	39.44	16.44	-9.85	

NOT improved

In some cases, you might want to select manually the best measurement color. Select your color and click 'Select as Default' to set the new default measurement and it will be used as the new improved color (dE 0.99) marked as Default. If you click once again on 'Select as Default', the color with the lowest dE (dE 0.06) will be used as usual.

Reference



	Reference	Measured	dE	Printed	
L:	55.71	54.97	0.73	55.87	56.61
a:	35.24	34.7	-0.54	36.25	36.79
b:	30.59	29.07	-1.52	32.89	34.41

Name: 0005 0.99

Profile: Choose... ↕

Measurements

Measure	L*	a*	b*	New	Delta
001	55.76	35.16	30.42		0.09
002	55.81	35.18	30.41		0.13
003	55.78	35.34	30.62		0.08
004	55.81	35.38	30.63		0.12
005	55.75	35.23	30.52		0.06
006	55.79	35.19	30.51		0.09
007	55.80	35.05	30.41		0.12
008	55.76	35.13	30.43		0.08
009	55.84	35.20	30.92		0.24
010	54.81	34.58	28.68		1.23
Default	54.97	34.70	29.07		0.99

+ - Select as Default

Best Colors

The last step in this process is to export the Best Lab references/Best RGB references to keep a record of the final and best values. Use the header menu options or the file menu **File | Export Best** and select one of the options:

- Best LAB
- Best RGB
- Best Image
- Best ACO
- Best ACB
- Best CGTAS
- Best CXF
- Best ASE

With the **Best TIFF button**, you can export the print files with the best colors in RGB and LAB (optional). neoMatch will choose and export the best values of all printed measurements to give the best final result. This new and best color references can be used now for the creation of new colorways.



Best Colors

IneditGenericRGB-Default.icm
22 02 2018 17:15
©2015 neoMatch by Inedit Software S.L



Purplish Blue	Purple	Pure Black
40.06	30.81	0.00
13.50	23.17	0.00
-43.09	-22.62	0.00

8

0



Statistics
Minimum 0.00
Average 0.00
Maximum 0.00

Perfect 0.0 %
Good 0.0 %
Not Very Good 0.0 %
Bad 0.0 %



Stat
Mini
Aver
Max

With the **Report** button, you can export the print files with the not improved colors.



Best Colors
Colors2.mtx
IneditGenericRGB-Default.icm
22 02 2018 17:17
©2015 neoMatch by Inedit Software S.L



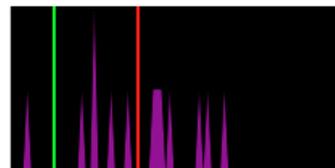
0000	0003	0004	0005	0008
16.38	37.65	12.69	56.61	77.52
9.20	-48.94	15.60	36.79	-0.37
15.93	26.65	-30.66	34.41	0.24

0



Statistics
Minimum 0.48
Average 3.13
Maximum 5.12

Perfect 7.7 %
Good 7.7 %
Not Very Good 30.8 %
Bad 53.8 %



Measure colors out of gamut

This functionality prints colors out of the color range. It will print only colors that are out of the ICC to improve them. To start using the functionality, make sure the minimum and maximum Delta E are defined in [Preferences](#) and the option 'Don't improve anymore' is enabled.

Export and print your references, and measure your printed reference. With the next print with the **Improved TIFF**

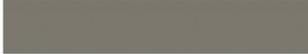
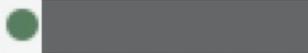
button of 'Improved Colors', in the dialog that opens the option to export only dE higher or equal to the minimum dE value defined in the preferences. neoMatch will take only the colors that are out of gamut or equal to be improved in the first iteration. Repeating the steps two more times, we finally have the results of 3 improved iterations.

The screenshot shows the neoMatch software interface. At the top, there are icons for 'Import', 'References Lab', 'References TIFF', 'Improved Lab', and 'Improved TIFF'. Below these is a table with 27 rows, each representing a color patch. The table has two columns: '#', which lists patch numbers from 000 to 026, and 'Name', which lists corresponding names from 0000 to 0026. A detailed view of patch 007 is shown on the right side of the interface. This view includes the 'nM' logo, the text 'Improved Colors Iteration: 1', the file name '133-72_reactive_16s_600_2P_M_special_141105.ic', the date and time '12 12 2019 09:52', and the text 'Unknown illuminant: ©2015 neoMatch by Inedit Software S.L.'. Below this information is a color bar with several color swatches. Further down, there is a 'Statistics' section with a table of values:

Statistics	
Minimum	0.08
Average	0.59
Maximum	2.16
Perfect	83.3 %
Good	16.7 %
Not Very Good	0.0 %
Bad	0.0 %

At the bottom of the interface, there is a dialog box with a 'Size' button. It contains the following settings:

- Columns: 11
- Patch Size: 1.00 cm
- Export only Delta E higher or equal to the minimum dE value defined in the preferences.

027	0027		0,66	0,66
028	0028		0,50	0,50
029	0029		1,28	1,28
030	0030		0,21	0,21
031	0031		0,92	0,92

+	-	Insert	36 items	Q Search Name
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Create Color World library

Color World is one option to create a color library using the full-color profile gamut with different gradient steps.

Generate Color World

1. When opening neoMatch, an untitled job window opens, otherwise open it from File | New. It is always recommended to save documents as we move along. Insert the ICC profile to be able to generate the color work within the profile.

2. Select Utilities | Generate Color World... and a new dialog pops up, with default values for Steps between Colors Blacks, and Whites. The values are set at 20, 10, and 10 respectively. Increasing or reducing such numbers will vary the total number of colors, as you add or remove steps in between the colors. Press Generate to proceed with the generation of the color world.

Untitled 2

Import References Lab References TIFF Improved Lab Improved TIFF Measure Best Lab Best RGB Best TIFF Report

#	Name	Reference	Delta	Last
000	LAB 38.26 -15.55 -70.74		0,00	0,00
001	LAB 43.75 -25.76 -67.40		0,00	0,00
002	LAB 49.81 -33.76 -62.67		0,00	0,00
003	LAB 55.93 -37.56 -56.23		0,00	0,00
004	LAB 61.90 -36.80 -48.59		0,00	0,00
005	LAB 67.76 -32.97 -40.67		0,00	0,00
006	LAB 73.14 -27.76 -33.13		0,00	0,00
007	LAB 78.41 -21.69 -25.93		0,00	0,00
008	LAB 83.79 -14.70 -18.40		0,00	0,00
009	LAB 89.05 -7.32 -10.83		0,00	0,00
010	LAB 94.36 0.10 -3.00		0,00	0,00
011	LAB 35.06 -18.79 -63.02		0,00	0,00
012	LAB 40.85 -29.00 -59.76		0,00	0,00
013	LAB 47.21 -36.26 -55.49		0,00	0,00
014	LAB 53.66 -38.78 -49.42		0,00	0,00
015	LAB 60.07 -36.76 -42.47		0,00	0,00
016	LAB 66.33 -32.11 -35.46		0,00	0,00
017	LAB 72.20 -26.35 -28.76		0,00	0,00
018	LAB 77.76 -20.15 -22.49		0,00	0,00
019	LAB 83.28 -13.48 -16.16		0,00	0,00
020	LAB 88.78 -6.62 -9.71		0,00	0,00
021	LAB 94.36 0.10 -3.00		0,00	0,00
022	LAB 31.61 -19.15 -57.11		0,00	0,00
023	LAB 38.15 -29.66 -53.80		0,00	0,00
024	LAB 44.82 -36.44 -49.32		0,00	0,00
025	LAB 51.69 -37.77 -43.47		0,00	0,00
026	LAB 58.62 -34.68 -36.60		0,00	0,00
027	LAB 65.36 -29.65 -29.93		0,00	0,00
028	LAB 71.52 -23.93 -24.09		0,00	0,00
029	LAB 77.16 -18.28 -18.96		0,00	0,00

+ - Insert 7260 items Q Search Name

Reference

Reference Measured	dE	Printed
L: No Selec No Selec	No Sel	No Selec No Sel
a: No Selec No Selec	No Sel	No Selec No Sel
b: No Selec No Selec	No Sel	No Selec No Sel

Name: No Selection No Sel

Profile: Paper_80g_inkjet_160108.icc

Measurements

Measure	L*	a*	b*	New	Delta

+ -

Statistics Spectral Data

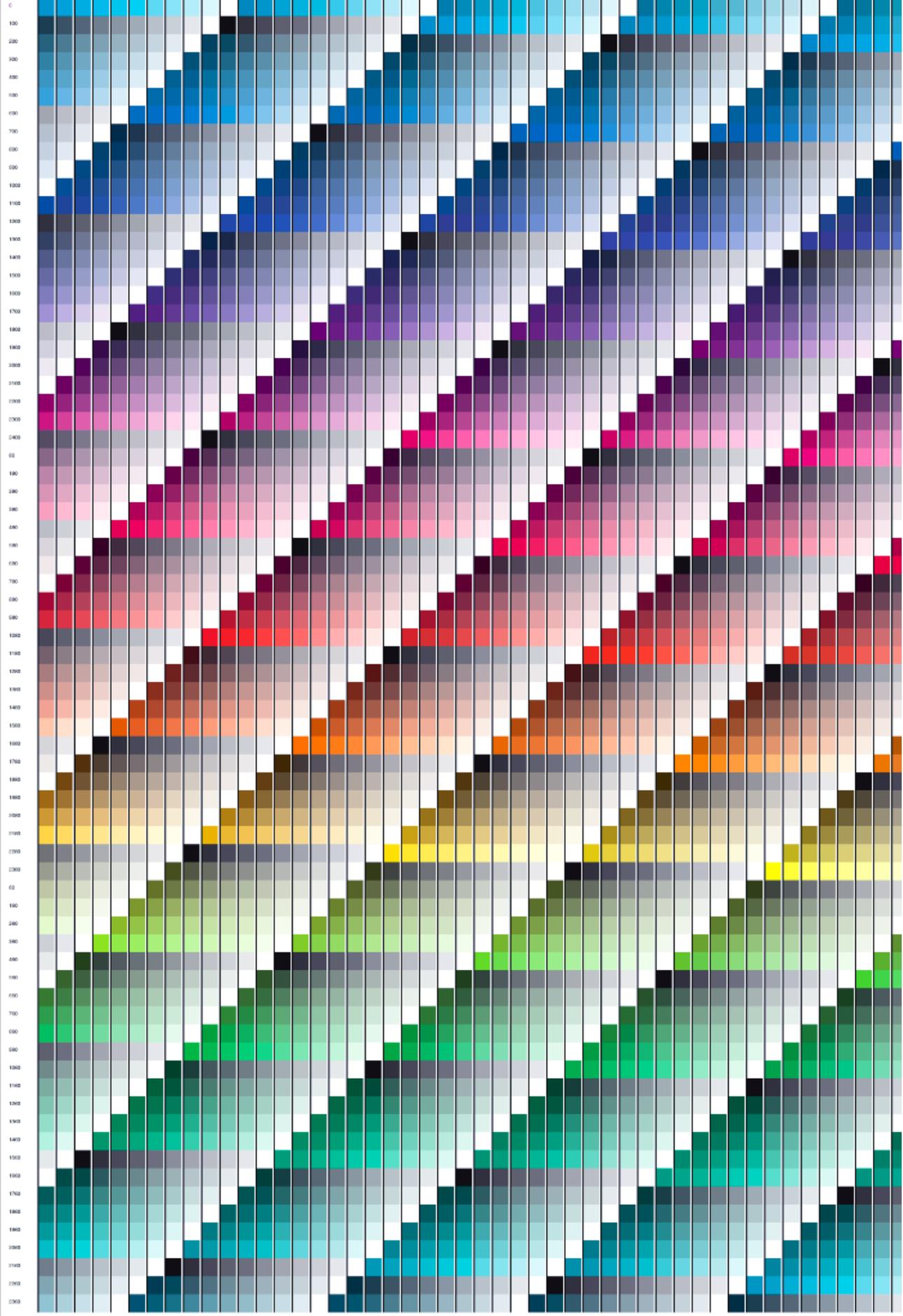
Maximum	0,00	Zero Error	0
Average	0,00	Perfect	0
Minimum	0,00	Good	0
		Not Very Good	0
		Bad	0

Default Recalculate

Export Color World

1. The first step is to export the lab values references as CSV to keep the starting point of the color matching or use it as a global custom color library for supported Inedit applications. In order to export such colors using a specific Profile, media, and inks in your printer, which we will read or measure later on, press the References TIFF button o from the File menu.

2. New dialog with the Print Layout will be shown. Press Export to save the TIFF image file, to print with your printe The exported TIFF image file (rotated view) is showing an order of colors among the image file.



Measure Color World colors

1. New dialog with the Print Layout will be shown. The print layout parameters can be modified as explained here 2.6 Export Colors. Press Export to save the TIFF image file, to print with your printer. The exported TIFF image file (rotated view) is showing an order of colors among the image file.

2. Once your .TIFF file is printed, proceed to read the patches with the spectrophotometer. Select the first color in the colors list and proceed to read the patches in rows, from first to last, in the scan or spot mode. Start and stop to



measure from white media.

3. The measured colors will be added automatically to the corresponding color in the color library:

#	Name	Reference	Delta	Last
000	LAB 65.05 -22.33 -40.46		2.41	2.41
001	LAB 65.91 -22.04 -39.72	⚠	3.31	3.31
002	LAB 67.29 -21.41 -38.48	⚠	4.55	4.55
003	LAB 69.36 -20.30 -36.59		1.02	1.02
004	LAB 71.78 -18.81 -34.39		0.82	0.82
005	LAB 74.42 -16.93 -31.80		0.94	0.94
006	LAB 77.41 -14.40 -28.28		1.17	1.17
007	LAB 80.74 -11.27 -24.26		1.22	1.22
008	LAB 84.51 -7.39 -19.74		0.89	0.89
009	LAB 88.86 -2.60 -14.30		1.07	1.07
010	LAB 93.51 2.70 -8.26		0.15	0.15
011	LAB 65.44 -27.15 -31.92	⚠	3.59	3.59
012	LAB 66.62 -26.19 -31.70	⚠	4.10	4.10
013	LAB 68.19 -24.99 -30.63		0.52	0.52
014	LAB 70.08 -23.48 -29.54		0.99	0.99
015	LAB 72.29 -21.85 -28.26		0.88	0.88
016	LAB 74.78 -19.80 -26.75		0.48	0.48
017	LAB 77.67 -16.71 -24.39		0.54	0.54
018	LAB 80.91 -12.55 -21.56		0.48	0.48
019	LAB 84.53 -7.44 -18.05		0.53	0.53
020	LAB 88.81 -2.25 -13.49		0.85	0.85
021	LAB 93.51 2.70 -8.26		0.15	0.15
022	LAB 64.10 -30.06 -26.27		2.26	2.26
023	LAB 65.74 -29.07 -26.02		1.42	1.42
024	LAB 67.57 -27.72 -24.34	⚠	8.92	8.92
025	LAB 69.56 -25.97 -23.87		2.84	2.84
026	LAB 71.88 -24.26 -23.30		1.21	1.21
027	LAB 74.54 -21.97 -22.34		0.99	0.99
028	LAB 77.54 -18.33 -20.98		0.86	0.86
029	LAB 80.85 -13.49 -19.04		0.58	0.58

Reference

	Reference	Measured	dE	Printed
L:	65.05	68.01	-2.96	65.05 62.1
a:	-22.33	-21.63	0.7	-22.33 -23.04
b:	-40.46	-35.36	5.11	-40.46 -45.57

Name: LAB 65.05 -22.33 -40.46 2.41

Profile: Paper_80g_inkjet_160108.icc

Measurements

Measure	L*	a*	b*	New	Delta
001	68.01	-21.63	-35.36		2.41

+ -

Statistics
 Spectral Data

Maximum	0,00	Zero Error	0
Average	0,00	Perfect	0
Minimum	0,00	Good	0
		Not Very Good	0
		Bad	0

Default
 Recalculate

4. DeltaE values show the deviation between references. The smaller a DeltaE Value is, the closer is to the color which has been read. Although this value can be set in the program's Preferences, by default, a difference of 3 is understood as acceptable, and further than that is not. This is why we see some of the references with a warning symbol, as they are over the maximum of 3. On the right of the window, we can compare the differences in the Lab values of references, print, and measurements of the color.

#	Name	Reference	Delta	Last	Reference
000	LAB 65.05 -22.33 -40.46		2.41	2.41	
001	LAB 65.91 -22.04 -39.72	▲	3.31	3.31	
002	LAB 67.29 -21.41 -38.48	▲	4.55	4.55	
003	LAB 69.36 -20.30 -36.59		1.02	1.02	
004	LAB 71.78 -18.81 -34.39		0.82	0.82	
005	LAB 74.42 -16.93 -31.80		0.94	0.94	
006	LAB 77.41 -14.40 -28.28		1.17	1.17	

Reference Measured	dE	Printed
L: 65.05 68.01	-2.96	65.05 62.1
a: -22.33 -21.63	0.7	-22.33 -23.04
b: -40.46 -35.36	5.11	-40.46 -45.57

Name: LAB 65.05 -22.33 -40.46 2.41

TIP: As seen before, neoMatch can calculate an improved version of the measured colors taking all the values into account. You can forward to print this new version with improved colors by clicking on the Improved TIFF button and matching the colors during the calibration of color libraries. Or you can erase the colors with Delta E higher than 3 from the library list, and work without them.

Best Colors of Color World

The last step in this process is to export the .CSV file with the Best Lab references/Best RGB references to keep record of the final and best values. Those color references can be used now for the creation of new colorways.

ORDER	NAME	L	A	B	DELTA_E
0	LAB 65.05 -22.33 -40.46	65.051	-22.335	-40.463	2.41
1	LAB 65.91 -22.04 -39.72	65.907	-22.043	-39.720	3.31
2	LAB 67.29 -21.41 -38.48	67.286	-21.412	-38.482	4.55
3	LAB 69.36 -20.30 -36.59	69.358	-20.304	-36.591	1.02
4	LAB 71.78 -18.81 -34.39	71.781	-18.809	-34.389	0.82
5	LAB 74.42 -16.93 -31.80	74.417	-16.926	-31.798	0.94
6	LAB 77.41 -14.40 -28.28	77.414	-14.405	-28.284	1.17
7	LAB 80.74 -11.27 -24.26	80.743	-11.268	-24.257	1.22
8	LAB 84.51 -7.39 -19.74	84.508	-7.385	-19.743	0.89
9	LAB 88.86 -2.60 -14.30	88.856	-2.599	-14.300	1.07
10	LAB 93.51 2.70 -8.26	93.513	2.704	-8.265	0.15
11	LAB 65.44 -27.15 -31.92	65.441	-27.148	-31.922	3.59
12	LAB 66.62 -26.19 -31.70	66.624	-26.187	-31.704	4.10

Related articles:

[How to calibrate new color libraries](#)

Create and import a list of colors

When reading a long list of colors, introducing all the names one by one might be a lot of work. One of the options we have is to write down beforehand this list and import it into neoMatch, which is quite easy.

We can only import a list of names when there are no readings on neoMatch, once there are any readings the names must be introduced manually one by one.

1. Using a text editor, we create a new list with the following format. If we're using a spreadsheet (Microsoft Excel, for example) the ; is unneeded, we only have to make sure it's on the exported format (some formats use , instead of ; for column separation).

L; A; B; NAME

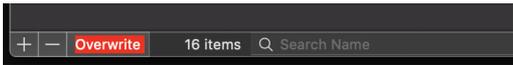
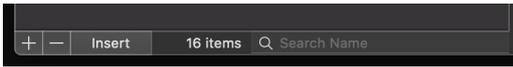
50; 0 0 COLOUR 01

50; 0 0 COLOUR 02

50; 0 0 COLOUR 03

2. We save this document into a .csv file and import it or drag it into a neoMatch document.

3. We click on Insert (at the bottom of the window) so it's changed to Overwrite so neoMatch overwrites the reference colors and we can start reading the references. When we finish, we click again so it's changed back to Insert and we can start the matching process.



We have to make sure that the names we're using on this library and the names we'll use on our design program (Illustrator, Photoshop, InDesign, or Corel) are the same, so neoStampa is able to change their values. Please check .PDF and .csv attached to this documentation for an example.

This workflow only works with PDF documents with spot colors.

Attachments:

[COLOUR LIST.csv](#)

[COLOUR LIST.pdf](#)

How to find similar colors to one color reference

Once you have your colors imported, printed, and measured in multiple documents there is the moment to search for the most similar measured color corresponding to color reference. You can find it from **Utilities | Find Similar Colors / Find All Similar Colors** .

This option will search for similar colors for the color selected in the actual document. In this search, we have a limit of deltaE. It will not give a valid similar color if the deltaE is bigger than the maximum deltaE selected in Preferences. If the color has other measurements with better deltaE, it will not give a similar color if the deltaE is bigger than the deltaE of the original color/measurement.

Step-by-Step

1. One document having colors imported/created that use a printer profile.

2. Looking for similar colors printed, that are created by variations, color world, or any color library using the same printer profile in two other documents.

#	Name	Reference	Delta	Last
000	68.54 -33.88 -1.10		0.20	0.20
001	68.54 -33.88 -0.10		0.25	0.25
002	68.54 -33.88 0.90		0.24	0.24
003	68.54 -33.88 1.90		0.23	0.23
004	68.54 -32.88 -1.10		0.16	0.16
005	68.54 -32.88 -0.10		0.20	0.20
006	68.54 -32.88 0.90		0.21	0.21
007	68.54 -32.88 1.90		0.19	0.19
008	68.54 -31.88 -1.10		0.14	0.14
009	68.54 -31.88 -0.10		0.17	0.17
010	68.54 -31.88 0.90		0.17	0.17
011	68.54 -31.88 1.90		0.15	0.15
012	68.54 -30.88 -1.10		0.13	0.13
013	68.54 -30.88 -0.10		0.16	0.16
014	68.54 -30.88 0.90		0.16	0.16
015	68.54 -30.88 1.90		0.13	0.13
016	69.54 -33.88 -1.10		0.15	0.15
017	69.54 -33.88 -0.10		0.18	0.18
018	69.54 -33.88 0.90		0.17	0.17
019	69.54 -33.88 1.90		0.17	0.17
020	69.54 -32.88 -1.10		0.13	0.13
021	69.54 -32.88 -0.10		0.16	0.16
022	69.54 -32.88 0.90		0.15	0.15
023	69.54 -32.88 1.90		0.13	0.13
024	69.54 -31.88 -1.10		0.10	0.10
025	69.54 -31.88 -0.10		0.12	0.12
026	69.54 -31.88 0.90		0.12	0.12
027	69.54 -31.88 1.90		0.10	0.10
028	69.54 -30.88 -1.10		0.10	0.10
029	69.54 -30.88 -0.10		0.11	0.11

#	Name	Reference	Delta	Last
1576	12-5407 TC		2.59	2.59
1577	12-5406 TC		1.38	1.38
1578	12-5506 TC		1.67	1.67
1579	14-5711 TC		0.51	0.51
1580	14-5413 TC		0.12	0.12
1581	14-5713 TC		0.24	0.24
1582	15-5711 TC		0.07	0.07
1583	12-5808 TC		3.08	3.08
1584	13-6009 TC		2.88	2.88
1585	13-5714 TC		3.77	3.77
1586	14-5714 TC		2.09	2.09
1587	14-5718 TC		2.80	2.80
1588	15-5718 TC		1.90	1.90
1589	15-5819 TC		0.10	0.10
1590	12-5408 TC		3.31	3.31
1591	12-5507 TC		3.92	3.92
1592	13-5409 TC		2.37	2.37
1593	13-5412 TC		4.20	4.20
1594	13-5414 TC		3.68	3.68
1595	14-5420 TC		2.26	2.26
1596	15-5416 TC		0.29	0.29
1597	14-5416 TC		2.01	2.01
1598	14-5721 TC		1.67	1.67
1599	15-5421 TC		1.71	1.71
1600	16-5427 TC		0.07	0.07
1601	16-5533 TC		0.17	0.17
1602	17-5430 TC		0.14	0.14
1603	17-5633 TC		0.12	0.12
1604	15-5728 TC		1.10	1.10
1605	16-5424 TC		0.27	0.27

3. Select a color and with Utilities | Find Similar Color search for colors in all open documents. It will search only similar colors from colors that have measurements and the same profile. Colors without measurements will be skipped. If the document with the original colors does not have a profile selected, then it will search for similar colors in all documents without a profile.

#	Name	Reference	Delta	Last
001	Dark Skin		0,00	0,00
002	Light Skin		0,00	0,00
003	Blue Sky		0,00	0,00
004	Foliage		0,00	0,00
005	Blue Flower		0,00	0,00
006	Bluish Green		0,00	0,00
007	Orange		0,00	0,00
008	Purplish Blue		0,00	0,00
009	Moderate Red		0,00	0,00

Reference Measured	dE	Printed
L: 70.54	No Selec	No Selec 70.5
a: -31.88	No Selec	No Selec -31.8
b: 0.9	No Selec	No Selec 0.9

Name: No Selec

Profile: 133-72_reactive_16s_600_2P_M_special_141105.icc

4. When a similar color measurement is found, the reference will appear under the name. The words 'Reference Color' with the name of the similar color, the order and index of the measurement of this similar color. Inside the parenthesis "(" will appear the name of the document. For example: Reference Color: #001 0005 - 001 (TF> Library).

The screenshot shows the Munsell Color Services Lab software interface. The main window is titled 'Untitled'. The top menu bar includes 'Import', 'References Lab', 'References TIFF', 'Improved Lab', 'Improved TIFF', 'Measure', 'Best Lab', 'Best RGB', 'Best TIFF', and 'Report'. The main area is divided into two panes. The left pane is a table of color references:

#	Name	Reference	Delta	Last
001	Dark Skin		0,00	0,00
002	Light Skin		0,00	0,00
003	Blue Sky		0,00	0,00
004	Foliage		0,00	0,00
005	Blue Flower		0,00	0,00
006	Bluish Green		2.33	2.33
007	Orange		0,00	0,00
008	Purplish Blue		0,00	0,00
009	Moderate Red		0,00	0,00
010	Purple		0,00	0,00
011	Yellow Green		0,00	0,00
012	Orange Yellow		0,00	0,00
013	Blue		0,00	0,00
014	Green		0,00	0,00
015	Red		0,00	0,00
016	Yellow		0,00	0,00
017	Magenta		0,00	0,00
018	Cyan		0,00	0,00
019	White		0,00	0,00

The right pane is titled 'Reference' and shows a detailed view of the selected 'Bluish Green' color. It includes a color swatch, a table of 'Reference Measured' values, and a 'Measurements' table. The 'Reference Measured' table is as follows:

Reference	Measured	dE	Printed
L: 70.54	70.26	0.28	70.54 70.8
a: -31.88	-26.26	5.62	-31.88 -37.5
b: 0.9	1.02	0.12	0.9 0.78

The 'Measurements' table is:

Measure	L*	a*	b*	New	Delta
001	70.26	-26.26	1.02		2.33

5. The similar color (measurement) will be in the measurements table of the original color and the index will be correlative, not the index of the similar color. This index it will appear in bold indicating that this measurement comes from a reference color.

The screenshot shows the Munsell Color Services Lab software interface. The main window is titled 'Untitled 3'. The main area is divided into two panes. The left pane is a table of color references:

#	Name	Reference	Delta	Last
1582	15-5711 TC		0.07	0.07
1588	15-5718 TC		1.90	1.90
1604	15-5728 TC		1.10	1.10
1612	15-5706 TC		0.13	0.13
1651	15-5704 TC		0.19	0.19

The right pane is titled 'Reference' and shows a detailed view of the selected '15-5711 TC' color. It includes a color swatch, a table of 'Reference Measured' values, and a 'Measurements' table. The 'Reference Measured' table is as follows:

Reference	Measured	dE	Printed
L: 70.22	70.26	-0.04	70.22 70.1
a: -26.23	-26.26	-0.03	-26.23 -26.0
b: 1.09	1.02	-0.07	1.09 1.16

The 'Measurements' table is:

Measure	L*	a*	b*	New	Delta
001	70.26	-26.26	1.02		0.07

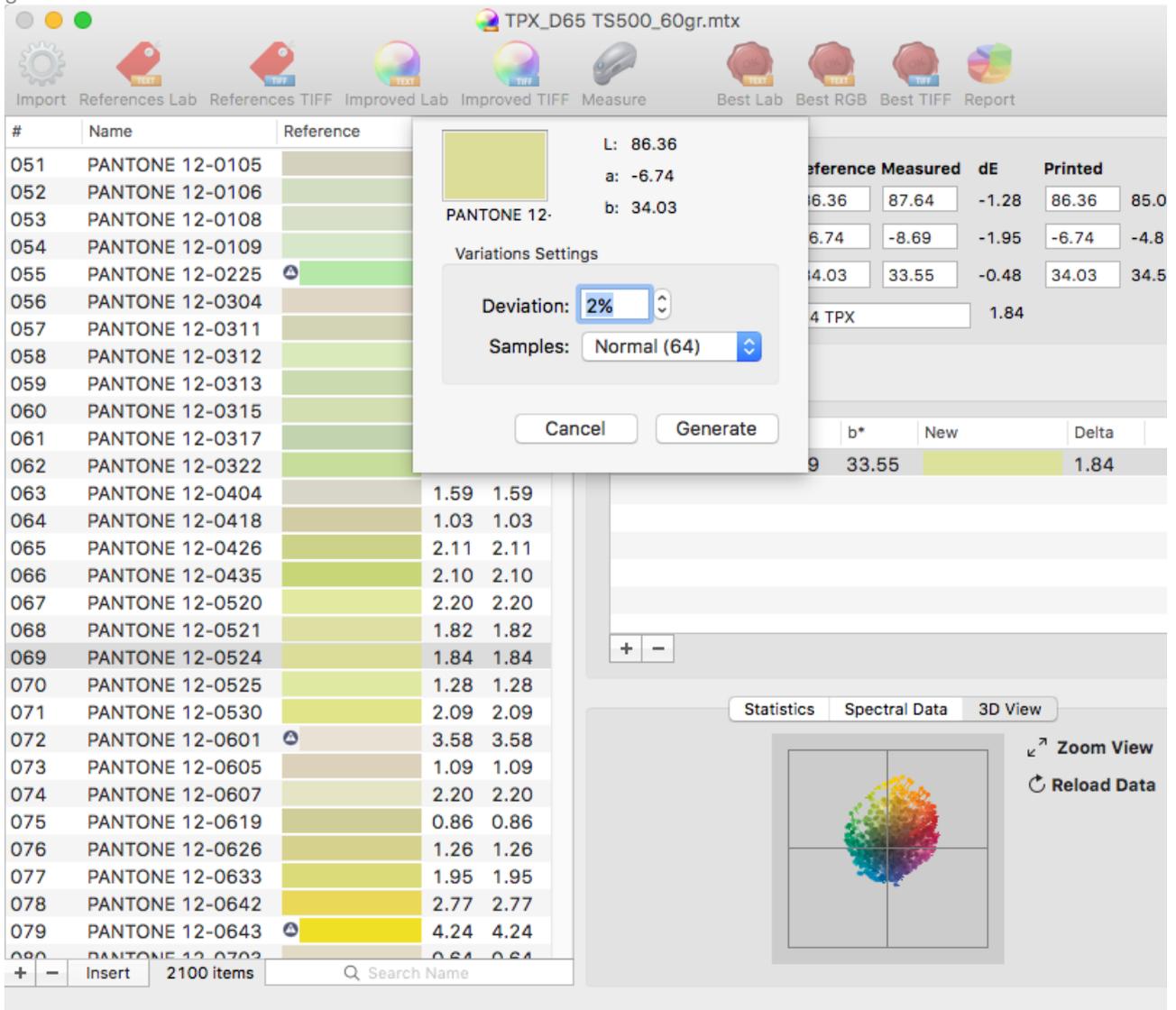
How to generate color variations

Color Variations is one option to create own color library from selected color using LAB or RGB color in different deviation and samples count.

Generate Variations

When opening neoMatch, an untitled job window opens, otherwise open it from **File | New**. It is always recommended to save documents as we move along. Insert the ICC profile to be able to generate the color work within the profile.

From open job windows with colors select the color you want to get the color variations. Choose **Utilities | Generate Variations...** and a new dialog pops up, with a default deviation of 2% and 64 samples of the selected color. Increasing or reducing such numbers will vary the total number of colors. Press 'Generate' to proceed with the generation of the color world.



The variations have 64 color references, which are generated in a few seconds.

The screenshot shows a software interface titled "Untitled 4". At the top, there are several icons and labels: "Import", "References Lab", "References TIFF", "Improved Lab", "Improved TIFF", "Measure", "Best Lab", "Best RGB", "Best TIFF", and "Report".

The main area is divided into two panels. The left panel is a table with the following columns: "#", "Name", "Reference", "Delta", and "Last". It contains 29 rows of data, with the "Reference" column highlighted in green. The "Delta" column shows values of 0,00 for all rows.

The right panel is titled "Reference" and contains several sub-sections:

- Reference Measured**: A grid of buttons for L, a, and b channels, each with "No Selec" and "No Selec" options.
- dE**: A dropdown menu with "No Selec" selected.
- Printed**: A grid of buttons for L, a, and b channels, each with "No Selec" and "No Selec" options.
- Name**: A text input field with "No Selection" selected.
- Profile**: A dropdown menu with "Choose..." selected.
- Measurements**: A table with columns "Measure", "L*", "a*", "b*", "New", and "Delta".
- Statistics**: A section with tabs for "Statistics", "Spectral Data", and "3D View". It displays:
 - Maximum: 0,00
 - Average: 0,00
 - Minimum: 999.00
 - Zero Error: 0
 - Perfect: 0
 - Good: 0
 - Not Very Good: 0
 - Bad: 0
- Recalculate**: A button at the bottom right.

Generate Multiple Variations

This multiple option is generating variations of all colors in the colors list. From open job windows choose **Utilities | Generate Multiple Variations...** and a new dialog pops up, with minimum dE, deviation of 2%, and 64 samples of all colors. Increasing or reducing such numbers will vary the total number of colors. Press Generate to proceed with the generation of the color world.

The screenshot shows a dialog box titled "Will generate variations of all colors with a Delta E greater than selected Delta E". The dialog box has the following settings:

- Delta E**: 3
- Deviation**: 2%
- Samples**: Normal (64)

The dialog box also has "Cancel" and "Generate" buttons. In the background, the software interface is visible, showing the "Reference Measured" and "Printed" sections from the previous screenshot.

The minimum dE will discard all colors that are below the dE value to create variations of colors that are out of dE

#	Name	Reference	D... ^	Last
045	17.70 0.10 -3.80	●▲		3.28 3.28
052	18.70 -1.90 -4.80	●▲		3.39 3.39
053	18.70 -1.90 -3.80	●▲		3.40 3.40
059	18.70 -0.90 -1.80	●▲		3.47 3.47
054	18.70 -1.90 -2.80	●▲		3.47 3.47
010	91.16 -0.40 0.13	●▲		3.48 3.48
006	91.16 -1.40 0.13	●▲		3.51 3.51
063	18.70 0.10 -1.80	●▲		3.53 3.53
040	17.70 -0.90 -4.80	●▲		3.57 3.57
002	91.16 -2.40 0.13	●▲		3.59 3.59
041	17.70 -0.90 -3.80	●▲		3.65 3.65
014	91.16 0.60 0.13	●▲		3.66 3.66
055	18.70 -1.90 -1.80	●▲		3.67 3.67
046	17.70 0.10 -2.80	●▲		3.67 3.67
027	92.16 -0.40 1.13	●▲		3.68 3.68
023	92.16 -1.40 1.13	●▲		3.83 3.83
042	17.70 -0.90 -2.80	●▲		3.88 3.88
021	92.16 0.60 1.13	●▲		3.95 3.95

Reference

Reference Measured	dE	Printed
L: 18.7 20.47	-1.77	18.7 16.93
a: 0.1 1.71	1.62	0.1 -1.52
b: -4.8 -5.27	-0.47	-4.8 -4.33

Name: 18.70 0.10 -4.80 2.35

Profile: 133-72_reactive_16s_600_2P_M_special_141105.icc

Measurements

Measure	L*	a*	b*	New	Delta
001	20.47	1.71	-5.27		2.35

+ - Select as Default

Import customized color libraries

Customers often provide color libraries in different extensions and data formats, which have been used in different coloring systems and now should be used by Inedit products.

Example:

NUMPAGES=120	NUMROWS=16	NUMCOLS=16	
--------------	------------	------------	--

CODE	L	a	b
A1.1.1	40.58	61.97	-11.33
A1.2.1	39.05	59.08	-11.15
A1.3.1	37.43	55.91	-10.97

A1.4.1	35.71	52.43	-10.79
--------	-------	-------	--------

It is required to modify those color libraries in format and structure to be compatible with Inedit applications.

Format specifications of the CSV for neoMatch

- In order to import a color library, you have to create and prepare the CSV file format.
- NOT supported .vdb, .excel.
- Supported color values are LAB only.
- Dot decimal separator in CSV.
- No limit on color number (having low memory can fail importation).

When converting the customer library.

NUMPAGES=120	NUMROWS=16	NUMCOLS=16	
--------------	------------	------------	--

CODE	L	a	b
A1.1.1	40.58	61.97	-11.33
A1.2.1	39.05	59.08	-11.15
A1.3.1	37.43	55.91	-10.97

A1.4.1	35.71	52.43	-10.79
--------	-------	-------	--------

to be compatible neoMatch library, please follow the column descriptions:

A. neoMatch and neoCatalog:

ORDER (required content)	L (required content)	A (required content)	B (required content)	NAME (required content)	COMMENT (optional content)
column 1 ORDER number	column 2-4 are used for the LAB values			column 5 for the color name	column 6 for comments as page

B. neoMatch only:

NAME (required content)	L (required content)	A (required content)	B (required content)	COMMENT (optional content)
column 5 for the color name	column 2-4 are used for the LAB values			column 6 for comments as page

Format for 100% color values

Using the 100% color value of a color name.

Example using customer library:

ORDER	L	A	B	NAME	COMMENT
1	40.580	61.970	-11.330	A1.1.1	

2 39.050 59.080 -11.150 A1.2.1
 3 37.430 55.910 -10.970 A1.3.1
 4 35.710 52.430 -10.790 A1.4.1

NAME L A B
 A1.1.1 40.580 61.970 -11.330
 A1.2.1 39.050 59.080 -11.150
 A1.3.1 37.430 55.910 -10.970
 A1.4.1 35.710 52.430 -10.790

*Sample CSV attached.

Color gradient identifications

To work with gradient colors and identifications it is required to rename the gradient colors (percentage or RGB index number) corresponding the to color gradient. You can apply the gradient in the CSV file.

Example using customer library by percentage:

ORDER	L	A	B	NAME	COMMENT
1	40.580	61.970	-11.330	A1.1.1%100	
	39.050	59.080	-11.150	A1.1.1%90	
	37.430	55.910	-10.970	A1.1.1%50	
2	35.710	52.430	-10.790	A1.2.1%100	

#	Name	Reference	Delta	Last
0000	A1.1.16		0,00	0,00
0001	A1.1.15		0,00	0,00
0002	A1.1.14		0,00	0,00
0003	A1.1.13		0,00	0,00
0004	A1.1.12		0,00	0,00
0005	A1.1.11		0,00	0,00
0006	A1.1.10		0,00	0,00
0007	A1.1.1		0,00	0,00
0008	90%		0,00	0,00
0009	50%		0,00	0,00
0010	A1.2.16		0,00	0,00
0011	A1.2.15		0,00	0,00

Reference

Reference	Measured	dE	Printed
L: 40,58	No Selec	No Selec	No Selec
a: 61,97	No Selec	No Selec	No Selec
b: -11,33	No Selec	No Selec	No Selec

Name: A1.1.1%90 No Selec
 Comment:

Profile: AdobeRGB1998.icc

Measurements

neoMatch allows to define the [gradient colors by percentage or RGB index number \(0-255\)](#) .

Related articles:

Working with neoCatalog? [This is how you import color libraries in neoCatalog](#) .

Attachments:

[nM_ColorLibraryFormat_Gradient.csv](#)
[nM_ColorLibraryFormat.csv](#)

Match gradients between printers

Even when color libraries are perfectly matched between machines, sometimes there is not an exact match on the progression and/or tone of the gradients. To this end, neoMatch and neoStampa are now also able to also match mid-points on the curve of a color.

The process is quite simple and very similar to [how to calibrate a color library](#) :

1. We print a PDF with some steps of the color gradient we want to match on the *Reference machine* (see example SPOT COLOR.pdf file below).
2. We set up neoMatch with the same configuration we would for a color library.
3. We read some of the mid-steps and we introduce the name and the value as **COLOUR NAME%value** (see SPOT COLOR.csv as reference).

Usually, only 3 or 4 values are enough to calculate a perfectly matched color curve. [70 - 40 - 20 - 10] or [50 - 25 - 15] are some good mid-points recommendations (more on lighter tones). <sublimation>

Depending on the darkness of a color, we need more control points than lighter colors. So for very dark colors, we recommend [100%, 90%, 75%, 50%, 25%, 10%], for medium colors [100%, 75%, 50%, 25%, 10%], and for lighter colors [100%, 50%, 25%] were enough. This is especially visible/necessary if you have to match output systems with different ink sets or processes. <Joe>

4. We [match the samples](#) like a normal library on the *Matched machine/s* .
5. We export the results (**Best RGB** or **Best LAB**) and [import them](#) into the color library of neoStampa.
6. We print the same PDF we printed on the *Reference Machine* to check the results.

For more information, please consult the [neoMatch manual](#) on our website.

In case of doubt or for further information, please contact [Inédit Technical Support](#) .

Attachments:

[SPOT COLOR.csv](#)
[SPOT COLOR.pdf](#)

4. Color accuracy

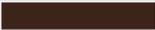
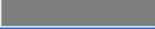
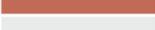
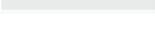
How to convert CIE of colors

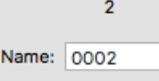
neoMatch provides possibilities to convert any color measurements to different light. The CIE Conversion is possible in four light illuminants and observers:

- D50/2
- D50/10
- D65/2
- D65/10

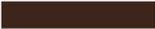
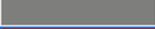
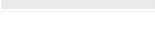
When having one measurement job window opened, go to **Utilities | CIE Conversion...** and select the illuminant with the observer in which you want to convert and the spectral data of the color will be converted.

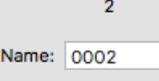
From D65/10:

#	Name	Reference	Delta	Last
000	0000		0,00	0,00
001	0001		0,00	0,00
002	0002		0,00	0,00
003	0003		0,00	0,00
004	0004		0,00	0,00
005	0005		0,00	0,00
006	0006		0,00	0,00

Reference	Reference Measured	dE	Printed
	L: 36.47 No Selec	No Selec	No Selec
	a: 52.34 No Selec	No Selec	No Selec
	b: 50.29 No Selec	No Selec	No Selec
Name: 0002		No Selec	

Conversion to D50/10:

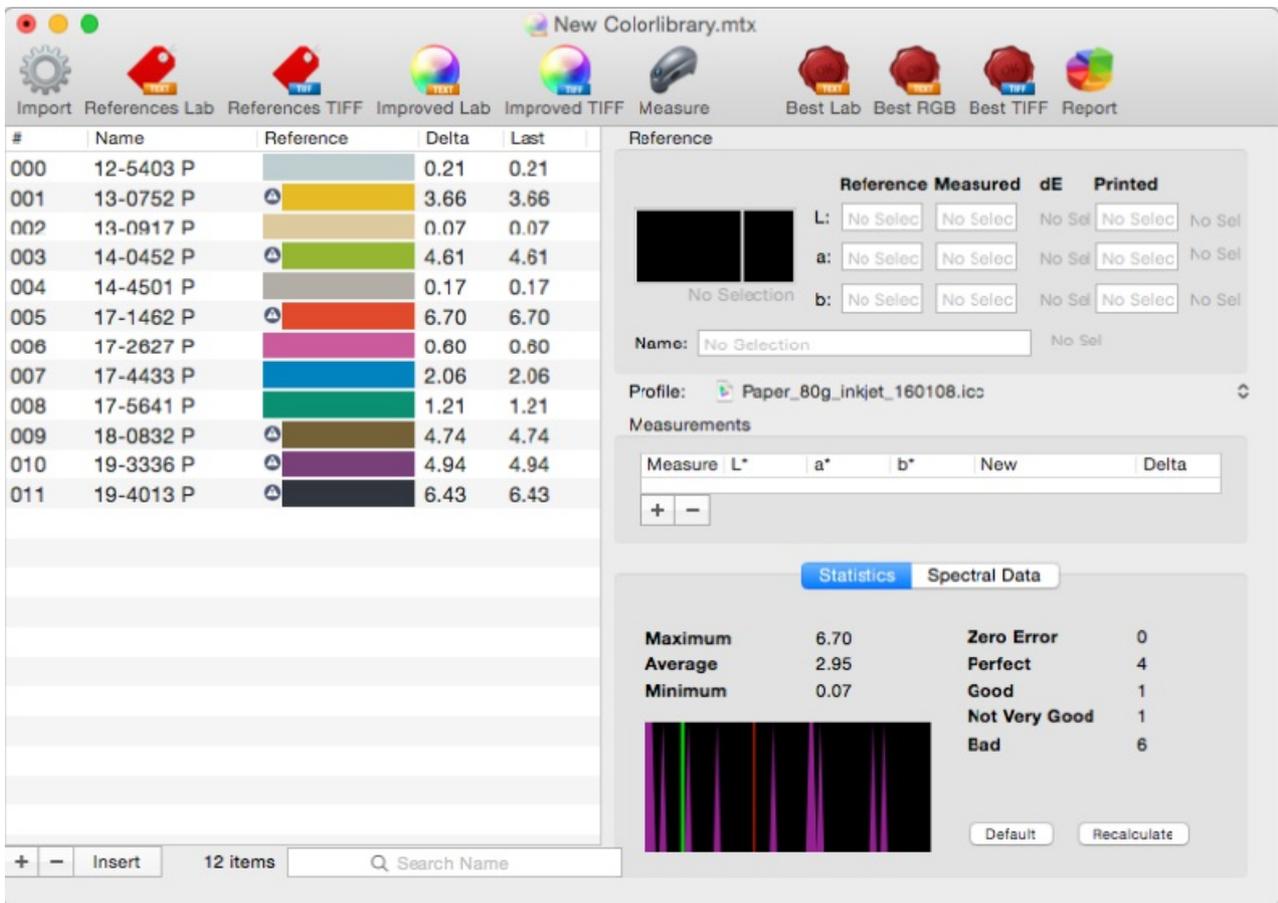
#	Name	Reference	Delta	Last
000	0000		0,00	0,00
001	0001		0,00	0,00
002	0002		0,00	0,00
003	0003		0,00	0,00
004	0004		0,00	0,00
005	0005		0,00	0,00
006	0006		0,00	0,00

Reference	Reference Measured	dE	Printed
	L: 38.41 No Selec	No Selec	No Selec
	a: 54.13 No Selec	No Selec	No Selec
	b: 53.55 No Selec	No Selec	No Selec
Name: 0002		No Selec	

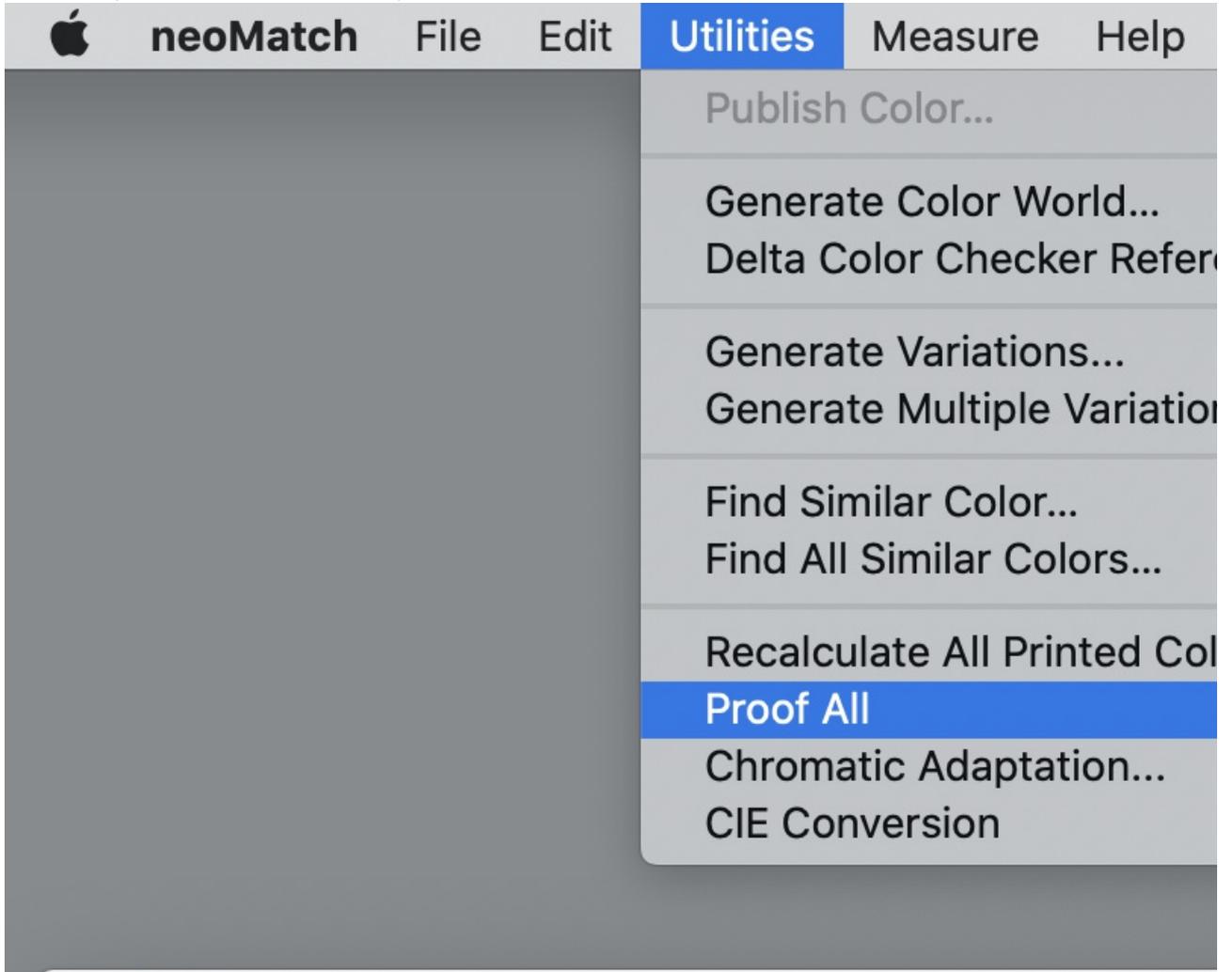
How to proof one ICC profile

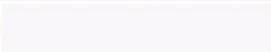
neoMatch is defined to be able to check measured or imported colors in the ICC profile without printing. In case you have one job window with measured or loaded colors open, and the ICC Profile is inserted.

From **Utilities | Proof All** you can activate the function, and neoMatch will calculate the difference in Delta E between the inserted values and the ICC profile.



In the sub option you can choose in which rendering intent method the color should be proofed: Perceptual, Saturation, Relative, or Absolute Colorimetric



#	Name	Reference	Delta	Last
000	0000	 	0,00	0,00
001	0001		0,00	0,00
002	0002		0,00	0,00
003	0003		0,00	0,00
004	0004	 	0,00	0,00
005	0005	 	0,00	0,00
006	0006	 	0,00	0,00
007	0007	 	0,00	0,00
008	0008		0,00	0,00
009	0009		0,00	0,00
010	0010		0,00	0,00

Inedit Test and Delta Checker Colors

neoMatch is defined to be used as a calibration tester with a selection of colors, which grants the possibility of printing a predetermined combination of colors, to know if a calibration serves different media and to control after-printing processes such as washing or steaming.

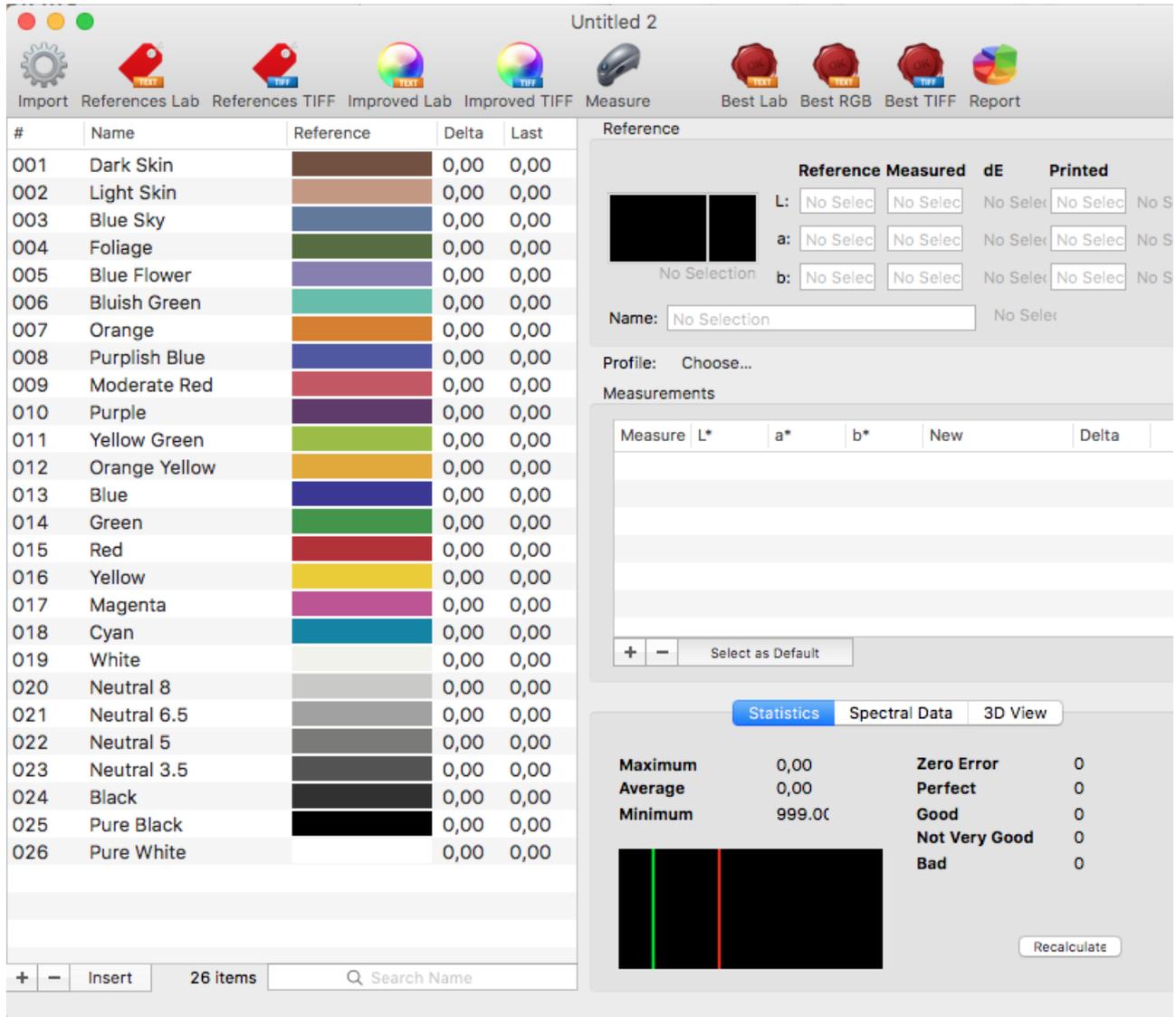
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- [Inedit test colors](#)

Delta Checker Colors

1. Import Delta Checker Colors

When opening neoMatch, an untitled job window opens, otherwise open it from **File | New**. It is always recommended to save documents as we move along. **From Utilities | Delta Color Checker References..**the color references will be loaded in the job window. As mentioned before, you need to insert the ICC profile to match the colors with the color space of the profile.



2. Export Delta Checker Colors

In order to export such colors using a specific profile, media, and inks in your printer, which we will read or measure later on, press the **References TIFF button** or from the File menu. A new dialog with the Print Layout will be shown. The print layout parameters can be modified. Press Export to save the TIFF image file, to print with your printer.

3. Measure Delta Checker Colors

Make sure to open Measurement Settings to select the required options and calibrate the spectrophotometer. It is important to verify that the number of patches to read matches the Scan Count and has 13 columns in measurement settings. Once your TIFF file is printed, select the first color in the list and proceed to read the patches with the spectrophotometer. If the window doesn't open automatically, because neoMatch was closed between the steps exporting and measuring, load the .ref text format file, which is exported together with the TIFF file.

Proceed to read the patches in rows, from first to last, in the scan or spot mode. Start and stop to measure from white media. The next patch to scan will be indicated automatically until the reading is finished. Measure in the first row from left to right (A) and in the second row from left to right (B). When the process is finished, another dialog indicates you so.



With the next window, the Delta Checker process is over, as we see what are the different Delta E values between your ICC Profile and Delta Checker print.

#	Name	Reference	Delta	Last
001	Dark Skin		1.51	1.51
002	Light Skin		1.02	1.02
003	Blue Sky		0.58	0.58
004	Foliage		1.40	1.40
005	Blue Flower		1.86	1.86
006	Bluish Green		0.63	0.63
007	Orange		0.37	0.37
008	Purplish Blue		2.36	2.36
009	Moderate Red		1.16	1.16
010	Purple		0.69	0.69
011	Yellow Green		1.95	1.95
012	Orange Yellow		1.79	1.79
013	Blue		5.68	5.68
014	Green		1.92	1.92
015	Red		1.86	1.86
016	Yellow		2.33	2.33
017	Magenta		2.24	2.24
018	Cyan		3.11	3.11
019	White		2.16	2.16
020	Neutral 8		2.25	2.25
021	Neutral 6.5		0.85	0.85
022	Neutral 5		2.45	2.45
023	Neutral 3.5		1.85	1.85
024	Black		2.29	2.29
025	Pure Black		10.21	10.21
026	Pure White		3.64	3.64

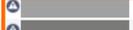
Reference Measured	dE	Printed
L: 37.75	0.75	37.75
a: 13.15	-0.81	13.15
b: 15.62	1.85	15.62

Measure	L*	a*	b*	New	Delta
001	37.00	12.34	17.47		1.51

	Maximum	Average	Minimum	Zero Error	Perfect	Good	Not Very Good	Bad
	10.21	2.24	0.37	0	5	10	7	4

Two conclusions can be drawn from these DeltaE readings:

- If ALL the values were high, we could conclude that the printer is not properly calibrated.

#	Name	Reference	Delta	Last
001	Dark Skin		4.79	4.79
002	Light Skin		5.11	5.11
003	Blue Sky		6.37	6.37
004	Foliage		5.41	5.41
005	Blue Flower		4.44	4.44
006	Bluish Green		4.59	4.59
007	Orange		8.77	8.77
008	Purplish Blue		7.68	7.68
009	Moderate Red		5.53	5.53
010	Purple		8.23	8.23
011	Yellow Green		5.07	5.07
012	Orange Yellow		6.55	6.55
013	Blue		14.15	14.15
014	Green		9.06	9.06
015	Red		9.21	9.21
016	Yellow		4.60	4.60
017	Magenta		5.47	5.47
018	Cyan		7.67	7.67
019	White		2.16	2.16
020	Neutral 8		2.25	2.25
021	Neutral 6.5		4.72	4.72
022	Neutral 5		5.73	5.73
023	Neutral 3.5		3.20	3.20
024	Black		4.34	4.34
025	Pure Black		14.32	14.32
026	Pure White		3.64	3.64

- If only certain references have high DeltaE values, it could mean that such colors cannot be reproduced with the

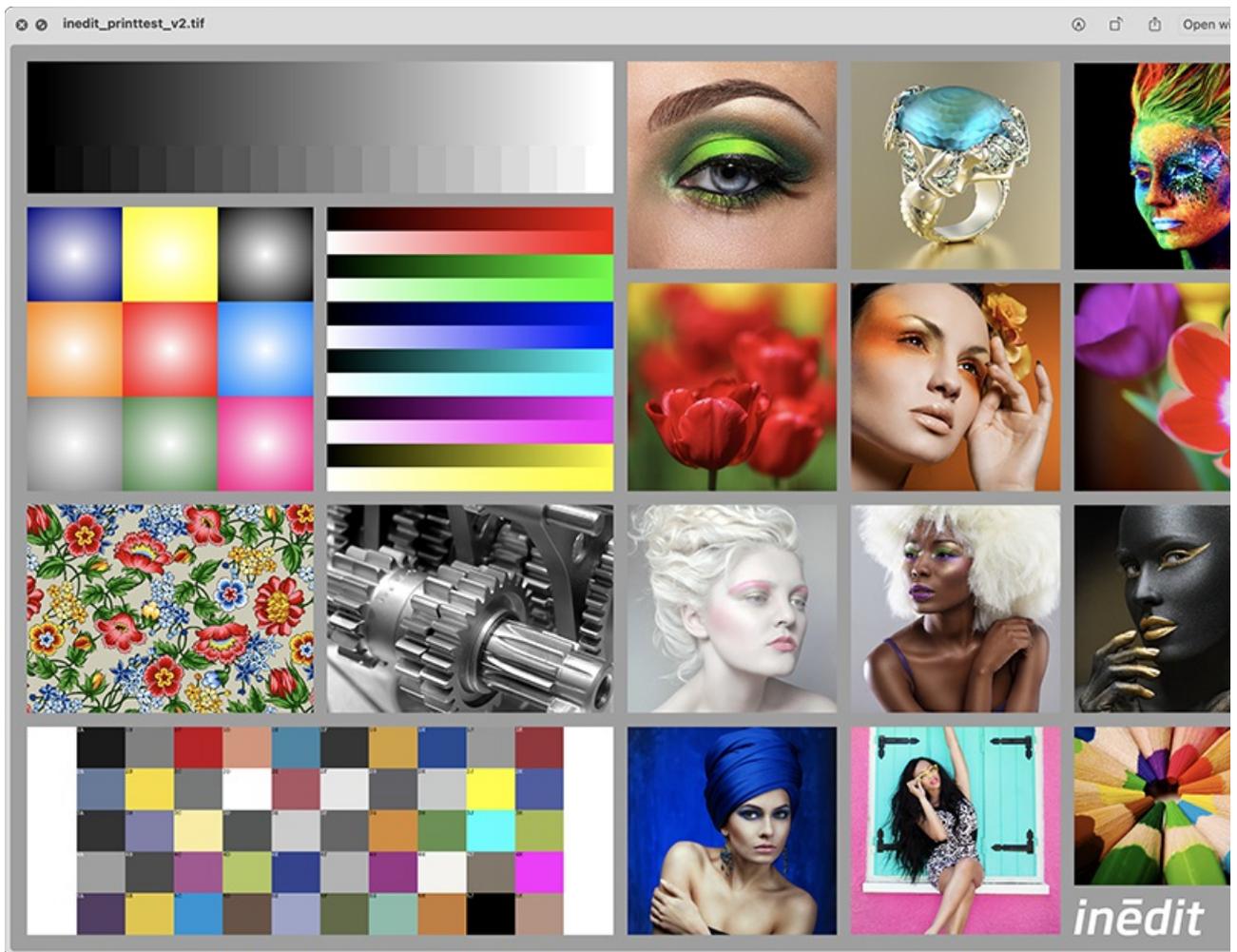
#	Name	Reference	Delta	Last
001	Dark Skin		4.79	4.79
002	Light Skin		5.11	5.11
003	Blue Sky		6.37	6.37
004	Foliage		5.41	5.41
005	Blue Flower		4.44	4.44
006	Bluish Green		4.59	4.59
007	Orange		8.77	8.77
008	Purplish Blue		7.68	7.68
009	Moderate Red		5.53	5.53
010	Purple		8.23	8.23
011	Yellow Green		5.07	5.07
012	Orange Yellow		6.55	6.55
013	Blue		14.15	14.15
014	Green		9.06	9.06
015	Red		9.21	9.21
016	Yellow		4.60	4.60
017	Magenta		5.47	5.47
018	Cyan		7.67	7.67
019	White		2.16	2.16
020	Neutral 8		2.25	2.25
021	Neutral 6.5		4.72	4.72
022	Neutral 5		5.73	5.73
023	Neutral 3.5		3.20	3.20
024	Black		4.34	4.34
025	Pure Black		14.32	14.32
026	Pure White		3.64	3.64

ICC profile, materials or printer used.

Watch Video: <https://www.youtube.com/embed/mGBVrSjYbw4?&wmode=opaque>

Inedit test colors

When printing with neoStampa's test file *inedit_printtest_v2.tif* in neoStampa (path to file in neoStampa installation C:\Program Files\Inedit\neoStampa 10\Color\TestFiles\Test\), then the color reference of the color patches in that image can be added in neoMatch from **Utilities | Inedit Test V2 References** :



Import References Lab References TIFF Improved Lab Improved TIFF

#	Name	Reference	Delta	Last
0001	1A		0,00	0,00
0002	1B		0,00	0,00
0003	1C		0,00	0,00
0004	1D		0,00	0,00
0005	1E		0,00	0,00
0006	1F		0,00	0,00
0007	1G		0,00	0,00
0008	1H		0,00	0,00
0009	1J		0,00	0,00
0010	1K		0,00	0,00
0011	2A		0,00	0,00
0012	2B		0,00	0,00

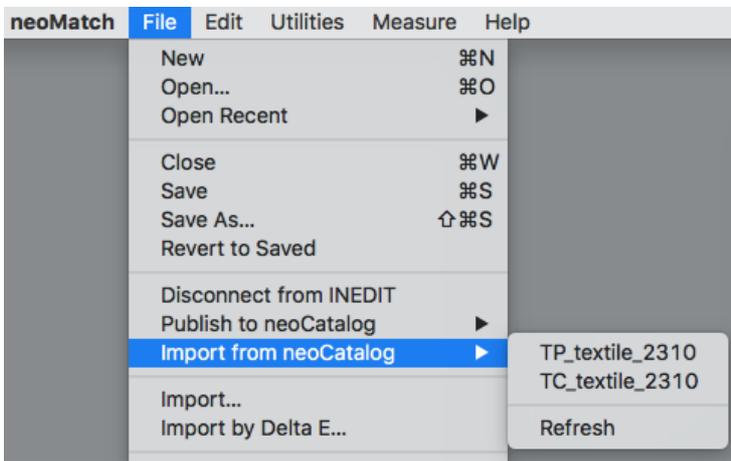
0013	2C		0,00	0,00
0014	2D		0,00	0,00
0015	2E		0,00	0,00
0016	2F		0,00	0,00
0017	2G		0,00	0,00
0018	2H		0,00	0,00
0019	2J		0,00	0,00
0020	2K		0,00	0,00
0021	3A		0,00	0,00
0022	3B		0,00	0,00
0023	3C		0,00	0,00
0024	3D		0,00	0,00
0025	3E		0,00	0,00
0026	3F		0,00	0,00
0027	3G		0,00	0,00
0028	3H		0,00	0,00
0029	3J		0,00	0,00
0030	3K		0,00	0,00
0031	4A		0,00	0,00
0032	4B		0,00	0,00
+ -	Insert	50 items	Q Search Name	

5. neoMatch connected with neoCatalog

How to import neoCatalog color libraries

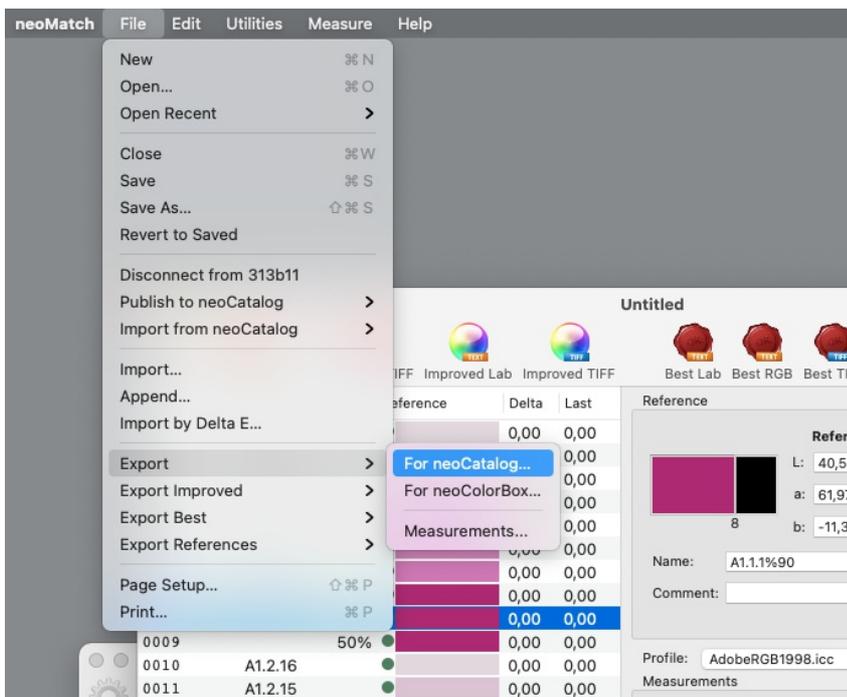
Option 1: Import & Export

Open a new job window. From the File | Import from neoCatalog option you can select the color libraries. The libraries will be imported in the new job window.



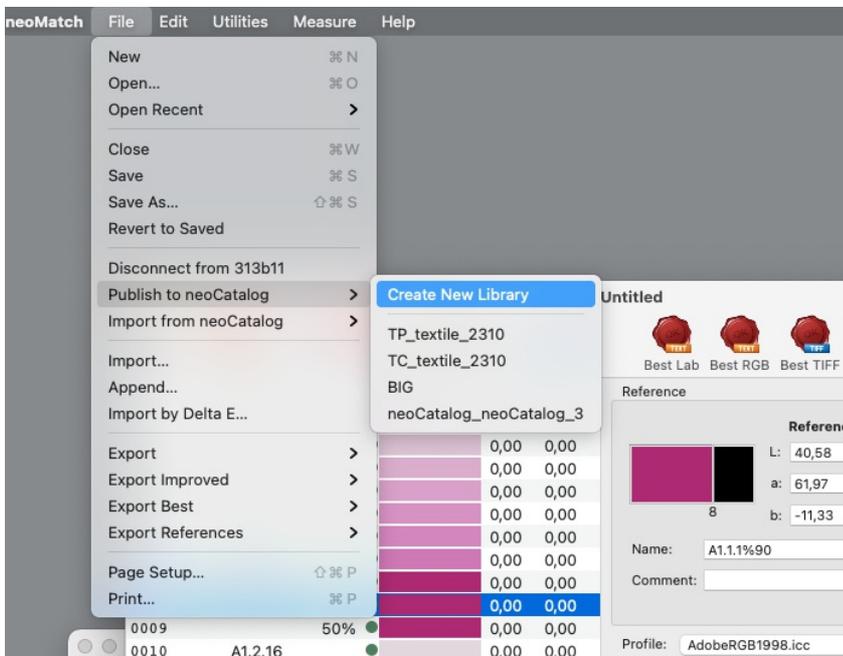
NOTE: neoCatalog's RGB color libraries are not supported in neoMatch. Only CIE Lab color libraries can be imported.

Once you have the color in neoMatch, modify customer libraries in neoMatch and then export CSV for neoCatalog (File > Export) to import in neoCatalog.

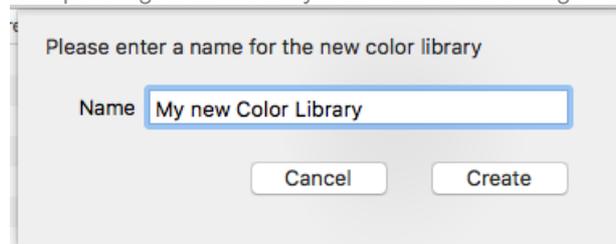


Option 2: Import & Publish

Using a neoCatalog connection linked with neoMatch you can create new color libraries in neoMatch and publish them to neoCatalog. Once the [connection](#) to neoCatalog is established, go to File | Publish Library to create a new library.

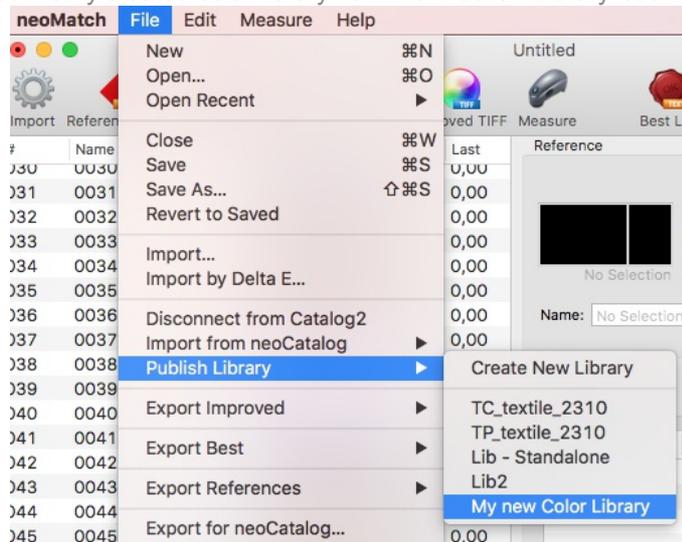


To create a new color library, click on the 'Create New Library' from the 'Publish Library' sub-list. A new dialog opens to enter the new name and to create with the corresponding button. Now you can start measuring and creating new



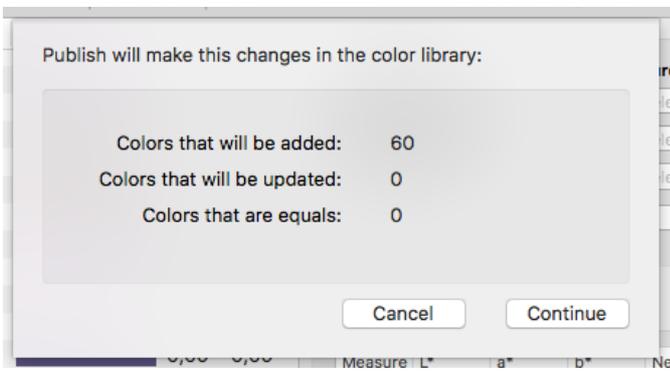
colors in a window to develop your color library.

After the color creation, select your newly created color library from the 'Publish Library' sub-list to publish the colors



to the color library in neoCatalog.

Before the colors are going to be published you can view how many colors will be added. This information is most useful when updating colors in existing color libraries. Click on 'Continue' to complete the publishing process.



Related articles:

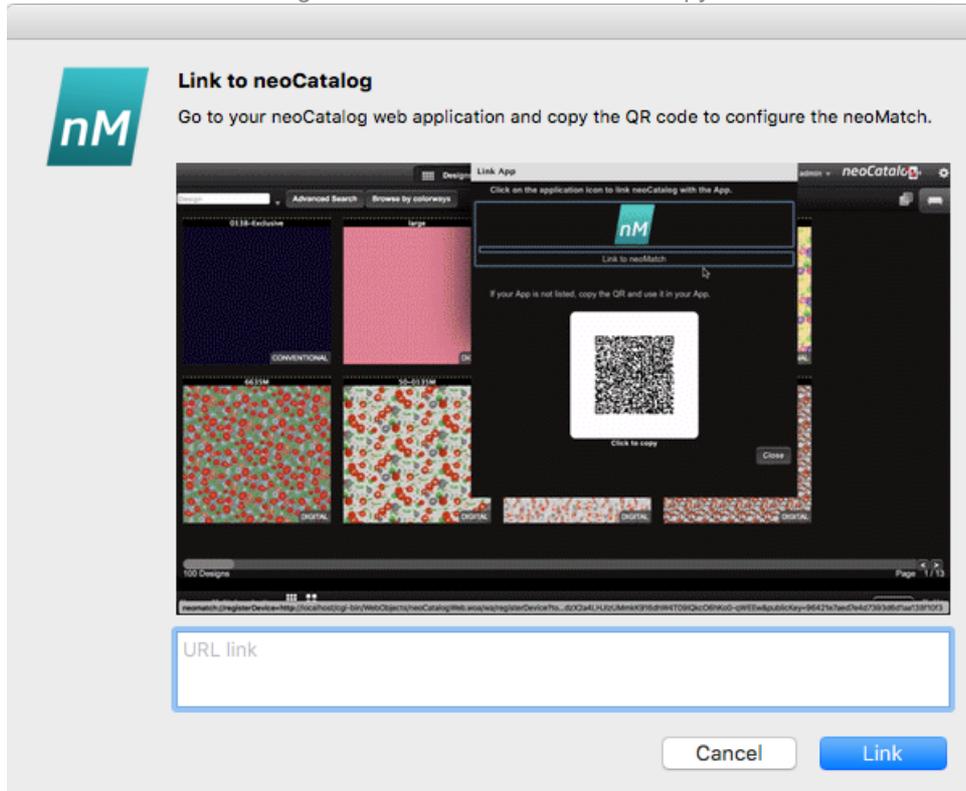
[How to import custom libraries](#)

[How to publish colors to neoCatalog libraries](#)

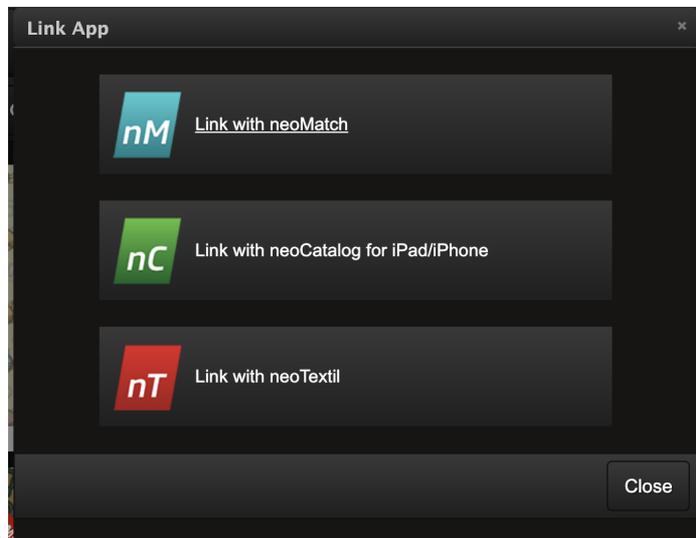
How to link neoMatch with neoCatalog

Step-by-Step

1. From **File | Link to neoCatalog...** connect neoMatch with neoCatalog. A window pops up with a reference to go to neoCatalog and copy the QR code

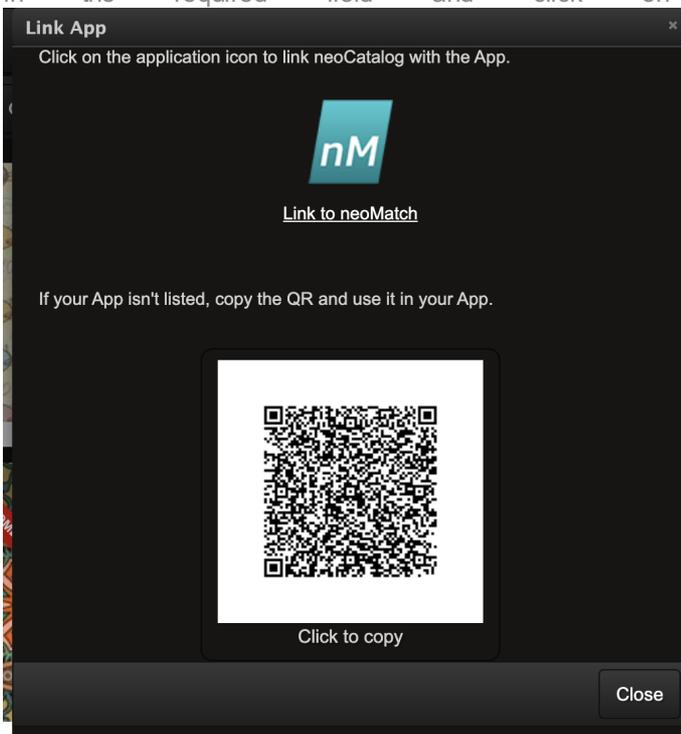


2. Go to neoCatalog and log in with your username and password. Click on the wheel button next to the user logir

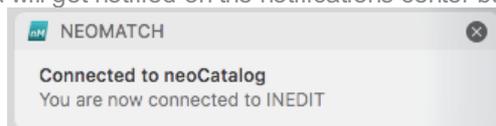


and select 'Link App' and then 'Link with neoMatch'.

3. New dialog opens giving two options to click on the application icon and to link with neoMatch, or if your app is not listed copy the QR to paste it into your neoMatch. If you click on the application icon to link with neoMatch, it will establish a connection immediately. The option to copy the content of the device connection QR code on the click. It copies the URL to your clipboard. When you press ctrl + V, it pastes the URL. Back in neoMatch, paste the QR code in the required field and click on Link to establish the connection.



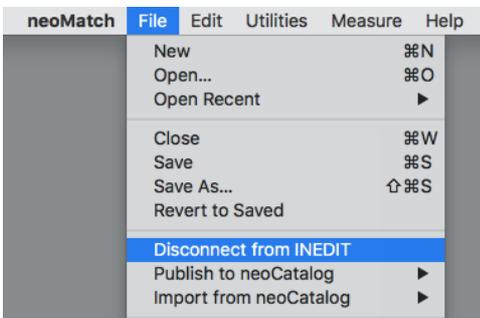
4. With a successful connection you will get notified on the notifications center banner or from the File menu you can



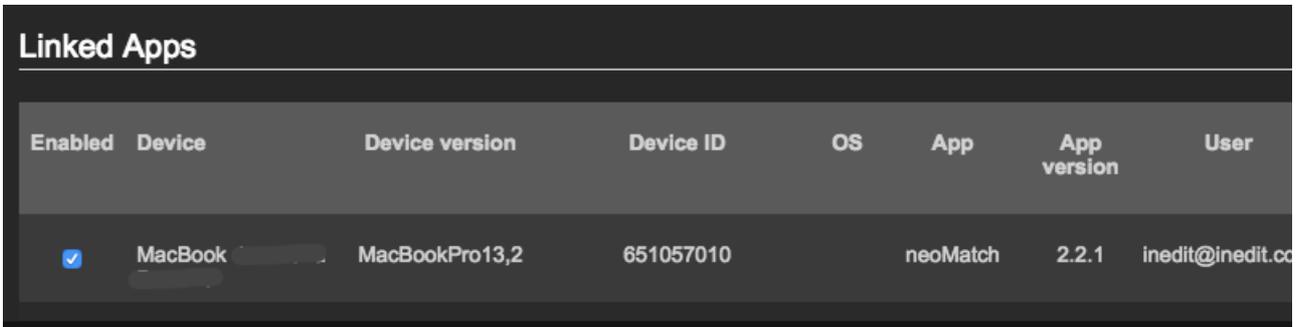
see if the connection is established.

TIP: If the connection fails, verify if the network connection or neoCatalog service is working.

5. neoMatch can be disconnected at any time from **File | Disconnect** from 'Name of neoCatalog',



or else from the neoCatalog Licensing page from Administration in the section Linked Apps.



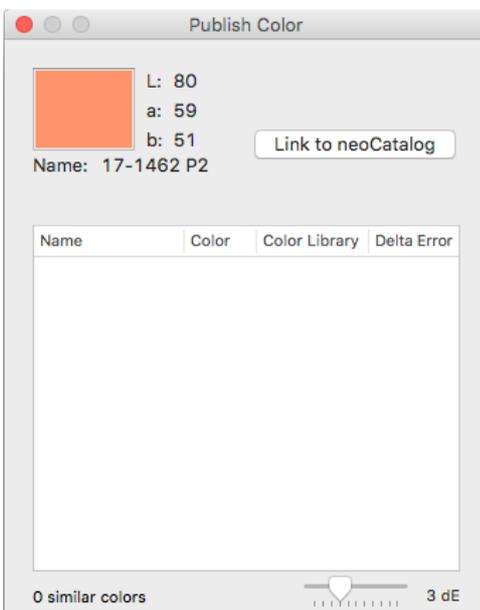
Once neoMatch is disconnected from neoCatalog, the link must be established again using the QR code as described in the first step.

How to publish colors to neoCatalog libraries

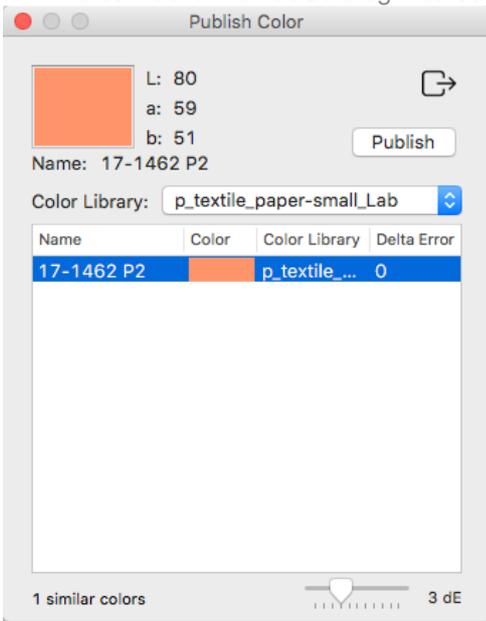
Using a neoCatalog connection linked with neoMatch the creation and modifications of colors can be published to neoCatalog. This feature comes available only when a color is selected in the colors list and a connection with neoCatalog is established. Select one color and go to Utilities | Publish Color... to open the 'Publish Color' dialog.

Step-by-Step

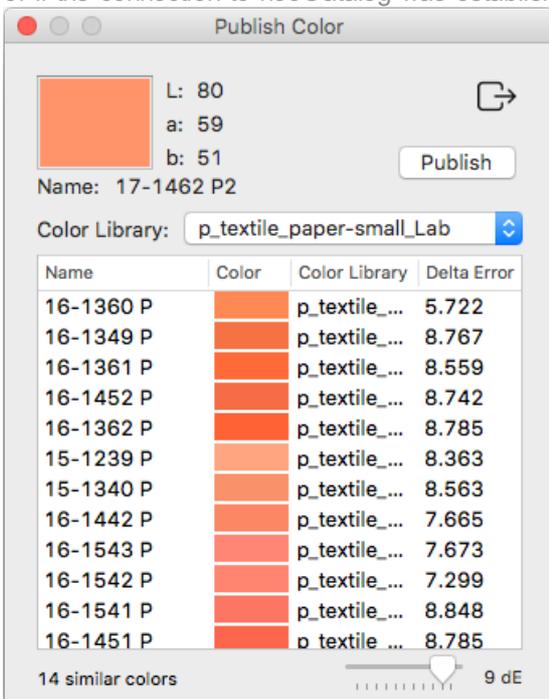
1. The dialog opens showing the color and its information. If not linked to neoCatalog yet, here is the option to do it.



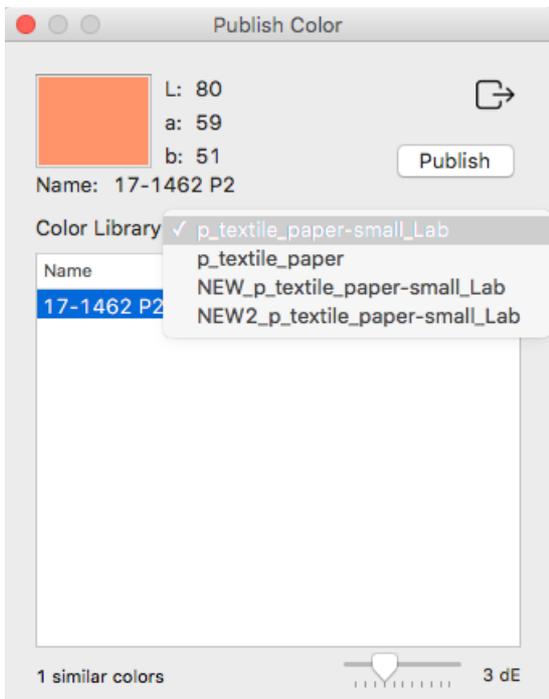
2. If the connection to neoCatalog was established before, you will see similar colors in neoCatalog listed below.



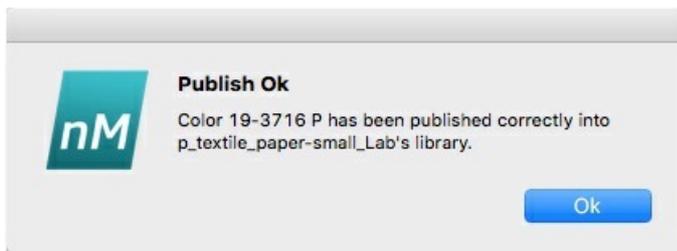
3. If the connection to neoCatalog was established before, you will see similar colors in neoCatalog listed below.



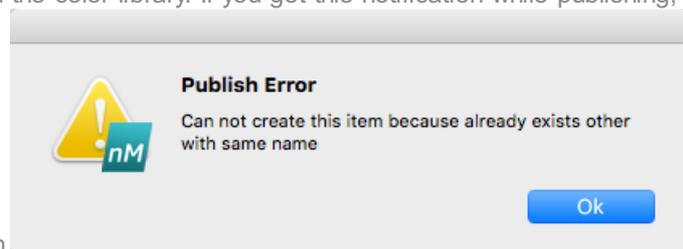
4. In the tab Color Library you are able to select neoCatalog's color library where you want to publish the color



5. After all filters and selections, click on the button Publish to publish the color. With success, the notification pops up.



This message indicates color name duplicates in the color library. If you get this notification while publishing, then



change the name of the color and repeat the action.

Related articles:

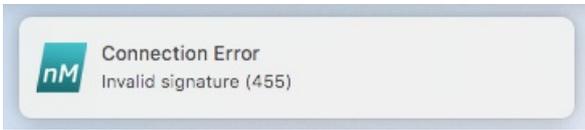
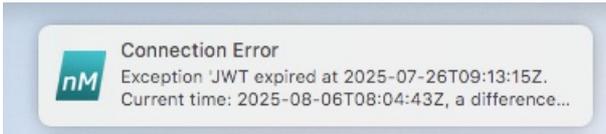
[How to import neoCatalog color libraries](#)

neoMatch Connection Error with neoCatalog: JWT expired/Invalid signature (455)

Problem

When starting neoMatch that was previously connected to a neoCatalog, the following errors may appear:

- "JWT expired at time"
- "Invalid signature (455)"



Cause

The connected neoCatalog license has a limited number of allowed device connections. The neoMatch client is no longer authorized because the maximum number of devices has been exceeded or invalid devices are linked.

Solution

Navigate to [neoCatalog Administration > Licenses > Registered Devices](#) and from there, either:

- Disable another device to free up a slot, or
- Purchase an additional license to support more devices.

Activat	Device	Device version	Device Id	OS	App name	App version	User	Data ultima conn	Data alta
<input checked="" type="checkbox"/>	Milena's iPad	iPad5,1	B1E822A3-9AF6-4879-9BD3-EA083F7D9011	9.3.2	neoCatalog iOS	5.3.3 (3)	Milena(admin)	21/06/2016 11:52	20/06/2016
<input type="checkbox"/>	Milena's iPad	iPad5,1	E99859E7-7501-474F-A2B3-584A2864ED67	9.3.2	neoCatalog iOS	5.3.3 (1)	admin	17/06/2016 13:26	17/06/2016
<input type="checkbox"/>	Milena's iPad	iPad5,1	4AC77561-C4AF-41AB-AF38-7C65753B1676	9.3.2	neoCatalog iOS	5.3.3 (1)	admin	17/06/2016 12:00	17/06/2016
<input type="checkbox"/>	Milena's iPad	iPad5,1	EA1B3988-75B2-4051-A78A-FEB956A27E35	9.3.2	neoCatalog iOS	5.3.3 (1)	admin	17/06/2016 11:07	17/06/2016

4 Devices

6. Troubleshooting

Sending neoMatch crash logs to Support

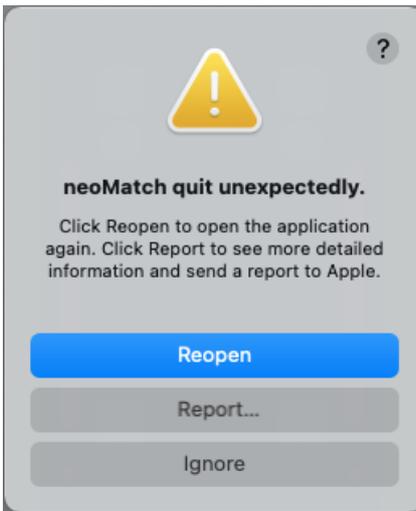
Applications crashing can be frustrating, but we will do everything we can to try and help you out. To help get to the root cause, we may ask you to send us the crash logs from your computer.

Complete these steps in macOS:

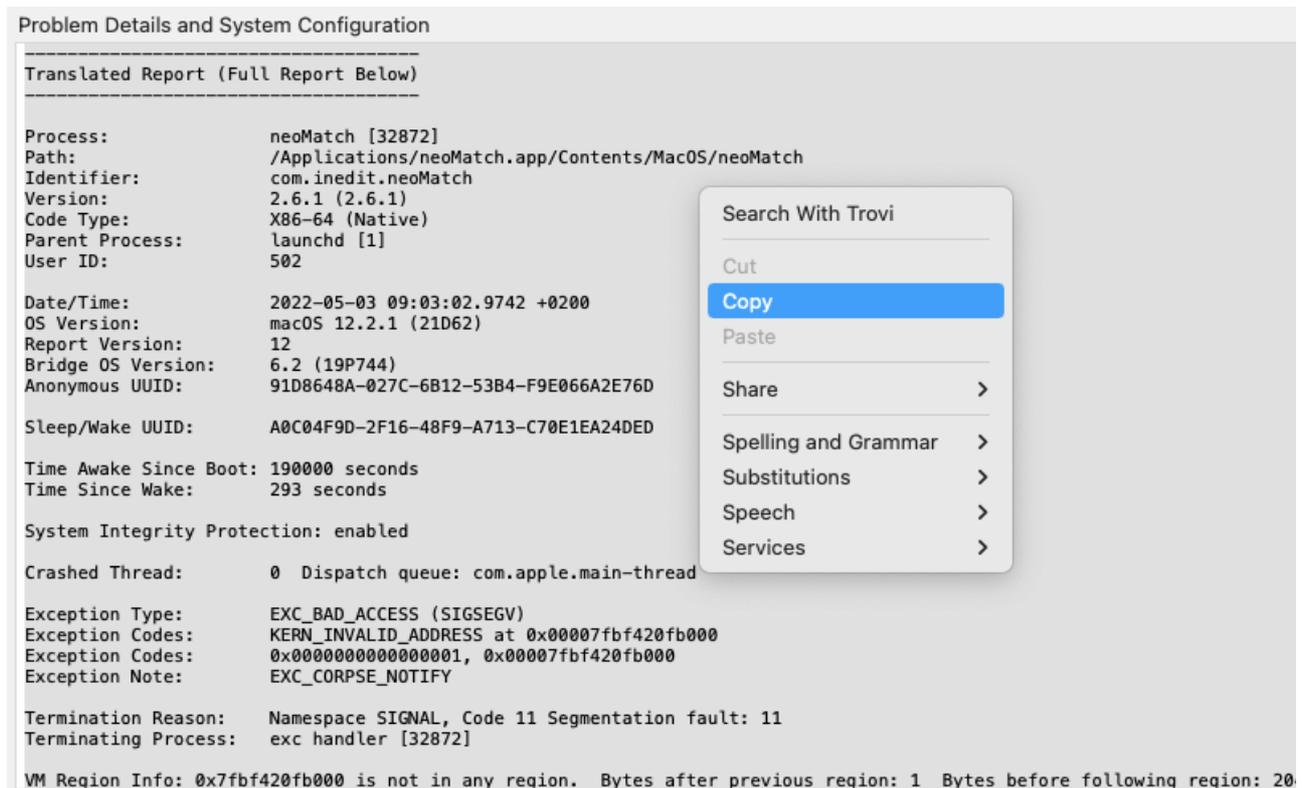
Crash Error Screen is Still Open

If the application just crashed and the Crash Error window is still open, follow these steps:

1. In the Crash Error window, select 'Report'.



2. Inside the report, copy the text.



3. Create a text document and name it 'Crash Log Report'.

- Paste the diagnostic report into the text document.
- Save the Crash Log Report document to your computer.
- Send the report document to our Support team, and we will take it from there!

Crash Error Screen is Closed

If you closed the crash report or just missed it the first time, complete these steps:

- Select the Spotlight Search bar icon in the top right corner of your screen.
- When the Spotlight Search bar loads, type 'Console'.
- Select Console in your search results.
- When the Console window loads, select 'Crash Reports'.

The screenshot shows the macOS Console application window. The left sidebar is open to 'Reports' > 'Crash Reports'. The main pane shows a table of crash reports with the following data:

Process Name	Date
neoMatch	3/5/22, 09:03
UVCAssistant	29/4/22, 13:42

Below the table, a 'Translated Report (Full Report Below)' is displayed for the neoMatch process:

```

Process:                neoMatch [32872]
Path:                   /Applications/neoMatch.app/Contents/MacOS/neoMatch
Identifier:             com.inedit.neoMatch
Version:                2.6.1 (2.6.1)
Code Type:              X86_64 (Native)
Parent Process:         launchd [1]
User ID:                502

Date/Time:              2022-05-03 09:03:02.9742 +0200
OS Version:              macOS 12.2.1 (21D62)
Report Version:         12
Bridge OS Version:      6.2 (19P744)
Anonymous UUID:         91D8648A-027C-6B12-53B4-F9E066A2E76D

Sleep/Wake UUID:        A0C04F9D-2F16-48F9-A713-C70E1EA24DED

Time Awake Since Boot:  190000 seconds
Time Since Wake:        293 seconds

System Integrity Protection: enabled

Crashed Thread:         0  Dispatch queue: com.apple.main-thread

Exception Type:         EXC_BAD_ACCESS (SIGSEGV)
Exception Codes:        KERN_INVALID_ADDRESS at 0x00007fbf420fb000
Exception Codes:        0x0000000000000001, 0x00007fbf420fb000
Exception Note:         EXC_CORPSE_NOTIFY
  
```

- Select the app at the date and time of your crash.
- Inside the report, copy the text.
- Create a text document and name it 'Crash Log Report'.

8. Paste the diagnostic report into the text document.
9. Save the Crash Log Report document to your computer.
10. Send the report document to our Support team, and we will take it from there!

7. Release Notes

Release Notes nM v24

neoMatch v24.9

September 2024

What's New

not included.

Bug Fixes

Resolved an issue that caused errors when importing CGATS files, specifically at line 2. CSV imports now work correctly.

neoMatch v24.7

July 2024

We are changing the versioning of neoMatch to Calendar Numbering. This means our users will see a significant jump in the version numbering of the new release, from neoMatch 2.7.1 to neoMatch v24.7 (Year and month of the release).

Some details about the semantics of our numbering system: we are using two digits for the year, one or two digits for the month (Depending on the current month), and the last digit for the release updates.

- v24.7
- v24.7.1

What's New

- Apple silicon compatible.
- Added support to [publish color gradient colors](#) when linked to neoCatalog.

Bug Fixes

Solved crashes with Barbieri Spectrophotometers connections in Measurements settings.

Release Notes nM v25

neoMatch v25.4

May 2025

What's New

not included.

Bug Fixes

Fixed the issue preventing ASE color names from being read correctly in neoMatch during import.

Release Notes nM v.2

neoMatch 2.7.1

February 2024

What's New

not included.

Bug Fixes

Version 2.7.0 experiences a crash when dragging and dropping .mtx files, as well as when importing .ASE files.

neoMatch 2.7.0

January 2024

What's New

- Updated requirement for the layout in the QTX format. Previously starting with '0' ([STANDARD_DATA 0]), now aligns with QTX requirements, beginning with '1' ([STANDARD_DATA 1]).
- The neoMatch file generation process is now twice as fast.

Bug Fixes

We have addressed an issue where TIFF generation failed for a customer library and when exporting TIFF (Re Improved, or Best), the export page failed to open.

neoMatch 2.6.2

March 2023

What's New

Added new SDK for MYIRO-1 spectro compatible with M1.

Bug Fixes

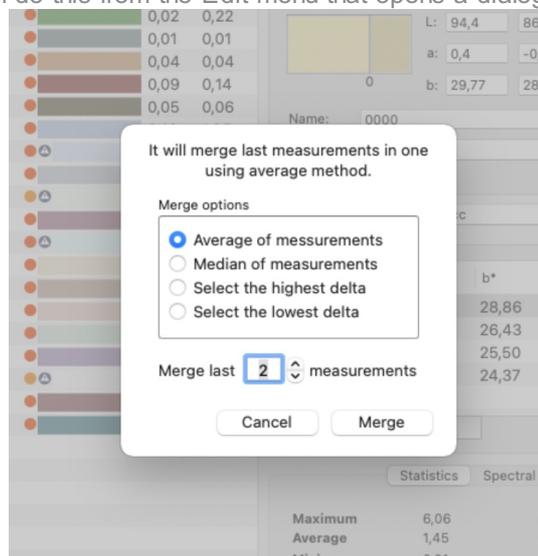
- Problem reading with eXact.
- Create a colorful world with negative values.
- The crash that occurs when connecting iPro2 to Apple with an M1 chip with incompatible USB-C adapters.
- Opening some QTX files.
- Fix importing ASE files that do not have Color Mode info data.

neoMatch 2.6.1

April 2022

What's New

- Merge measurements in case of joining 2 or more measurements in one using 'Average', Median, or other methods, then you can do this from the Edit menu that opens a dialog in the document to select an average



method or delta range.

- Added option to read the same references all time.

Watch Video: <https://player.vimeo.com/video/705700288>

- neoRipEngine 2.10.0.24

Bug Fixes

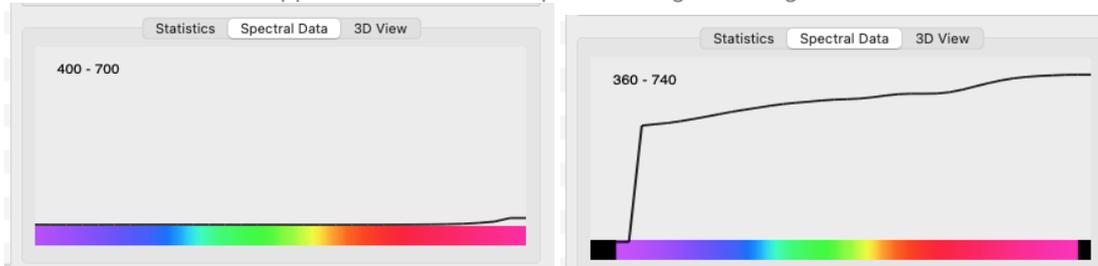
- Fixed a crash when opening a CSV from the 'Open with' entry in the right-click menu.
 - Fixed importing QTX files crash with symbols in the name of the color (encoding problem).
 - Fixed output reference tiff in Barbieri format is wrong.
 - Fixed some issues in dark mode with macOS Monterey.
 - Fixed importing XML files from the nS scheme showing colors in a wrong order.
 - Fix not being able to open a new window on macOS Sierra.
-

neoMatch 2.6.0

October 2021

What's New

- Added support for M3 measurements with i1Pro3 Plus.
- Now neoMatch supports different spectral light ranges in the same document.



- Now Print Intents functionality is optional and can be disabled in preferences.
- neoRipEngine 2.10.0.24

Bug Fixes

- Fixed a crash at exporting Reference CGATS and Reference TIFF with CGATS.
 - Fixed that "only print deltaE bigger than" is disabled if print intent is disabled (in preferences).
 - Resolved issue with i1Pro by adding more margin for custom targets.
 - Fixed that when using export only dE values bigger than, in the preview was printing all colors.
 - Fixed issues when importing and publishing color libraries to neoCatalog.
-

neoMatch 2.5.2

June 2021

Bug Fixes

- Fixed an error generating Barbieri previews. Only generates the first page.
 - Fixed an error that makes that first-time user who wants to print Barbieri's target do not have valid defaults values and then show many error messages.
 - Fix a bug that makes all system freezes when printing tiff targets.
-

neoMatch 2.5.1

May 2021

What's New

- Added CMYK output support in the export dialog.
- Added default profile in [Preferences](#) .
- New profile selector.



- neoRipEngine 2.10.0.24

Bug Fixes

- Fixes a crash open documents with Mojave.
 - Fixed issue when the default profile has been deleted (from disk) the application cannot create new documents.
 - Resolved crash that occurs when using search similar color functionality.
 - Fixed that when reaching the iteration limit new measurements are added to the reference list.
-

neoMatch 2.5.0

March 2021

What's New

- Now you can work with ASE formats in neoMatch.
- Support for Barbieri SpectroSwing.
- CGATS supports gradient colors.
- neoRipEngine 2.7.0.17

Bug Fixes

- Fixed a crash exporting References as CGATS when some references have no % in the name.
 - Fixed a problem importing CSV files and then making non-correlative order numbers.
 - Fixed problem with ACB files. In Photoshop do not let open a file if use an ACB color from neoMatch.
 - Fixed error-making proofing of colors not using Absolute when coming back.
 - Fixed when no device spectrophotometer connected the first time does not show the image of the device.
-

neoMatch 2.4.3

September 2020

What's New

- Added Sentry for data usage.
-

neoMatch 2.4.2

September 2020

What's New

- New [installer](#) pkg.
- Now ICC profile is embedded in the document.
- Added a new export menu for measurements that have been measured with time trigger.
- Added a new function to [measure the stability](#) between supported spectrophotometers.
- neoRipEngine 2.4.0.41

Bug Fixes

- Fixed the issue that does not load the embedded profile if the profile is not found in the local macOS files.
- Fix an issue when creating measurements with Simulator Spectro.
- Fix a bug with Big Sur Beta (reference color bigger than its field).
- Fixed a crash that occurs when calibrating the Barbieri Spectro LFPqp.
- Fix issue "Cells on order column non-excitable after item edition".

neoMatch 2.4.0

March 2020

What's New

- While measuring colors, the measured rows are indicated with blue marks which should help to locate the

#	Name	Reference	Delta	Last
000	0000		0,08	0,13
001	0001		0,04	0,20
002	0002		0,04	0,25
003	0003		0,03	0,15
004	0004		0,07	0,15
005	0005		0,03	0,03
006	0006		0,04	0,05
007	0007		0,04	0,13
008	0008		0,01	0,06
009	0009		0,02	0,02
010	0010		0,06	0,06
011	0011		0,07	0,07
012	0012		0,07	0,09
013	0013		0,05	0,06
014	0014		0,20	0,20
015	0015		0,14	0,14
016	0016		0,06	0,32
017	0017		0,07	0,49
018	0018		0,14	0,53
019	0019		0,09	0,59
020	0020		0,08	1,11
021	0021		0,06	0,07
022	0022		0,07	0,39
023	0023		0,06	0,35
024	0024		0,11	0,37
025	0025		0,10	0,43
026	0026		0,08	0,20
027	0027		0,11	0,20
028	0028		0,04	0,04
029	0029		0,13	0,23
030	0030		0,10	0,68
031	0031		0,36	0,39
032	0032		0,29	0,29
033	0033		0,15	0,15
034	0034		0,10	0,10
035	0035		0,13	0,13
036	0036		0,10	0,10
037	0037		0,22	0,22
038	0038		0,07	0,16
039	0039		0,25	0,25
040	0040		0,12	0,12
041	0041		0,36	0,43
042	0042		0,05	0,05

measured colors visually.

- Now when [proofing](#) you can choose in Utilities menu in which rendering intent method the color should be proofed: Perceptual, Saturation, Relative, or Absolute Colorimetric.
- Support for [spectrophotometer MYIRO-1®](#) .
- Added new i1Pro framework compatible with macOS Catalina.

Bug Fixes

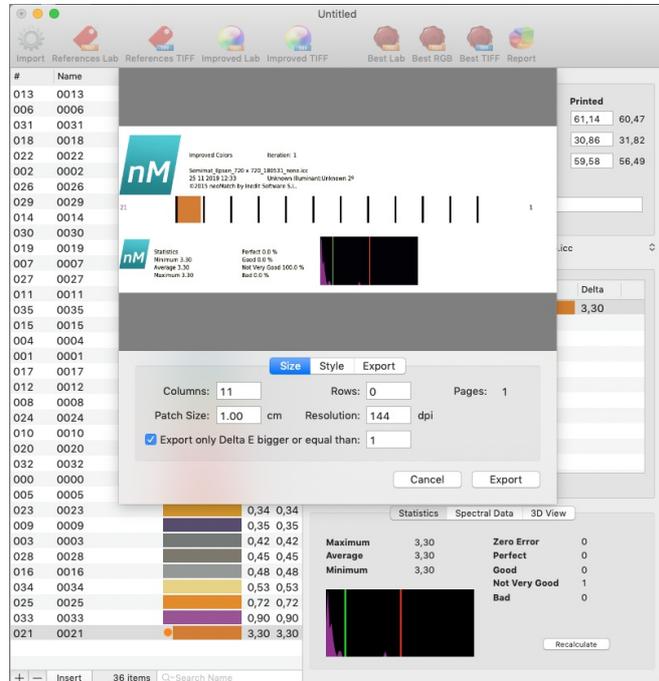
- Fixed issue exporting CGATS and CXF file from .mtx measured with eExact, have wrong spectrum values.
 - Fixed that when generating the CXF file, the illuminant, and the observer are from the document not from the selected spectrum.
 - Fixed connection with neoCatalog.
-

neoMatch 2.3.1

January 2020

What's New

- New functionality to print colors out of color range. It will print only colors that are out of the ICC to improve them. To start using the functionality, make sure the minimum and maximum Delta E are defined in [Preferences](#) and



the option 'Don't improve anymore' is enabled.

- New [license activation manager](#) .
- Added support for i1Pro3 Plus.
- Now it is possible to insert a new reference before or after a selected one.
- New option for [generate multiple variations of colors](#) .
- neoRipEngine 2.4.0.20

Bug Fixes

- Fixed importing CSV with COMMENT.
- Fixed exporting ACB adds prefix for color names with '.' on the name (TC.).
- Fixed issue LAB value different in ACB in Adobe® Photoshop®.
- Fixed issue that when user makes 'Clean All Measurements' or 'Clean Last Measurement' the print intents was not updated.

neoMatch 2.2.0

June 2019

What's New

- New option for [publishing color libraries](#) to neoCatalog.
- New option for [generate multiple variations](#) of colors.

Bug Fixes

- Fixed white tiles when exporting labs or 16-bit images.

neoMatch 2.1.0

March 2019

What's New

- Apply different fonts in [preferences](#) in the print page.
- Now you can [find similar colors](#) in the among the documents.

Bug Fixes

- Fixed wrong font size calculation when exporting Lab.
-

neoMatch 2.0.0

April 2018

What's New

- We added option to export color libraries in format ACO and ACB.
- Now you can do CIE Conversion on color to multiple illuminant and observers (if you have spectral data).

Bug Fixes

- Fixed error remembering observer for i1 devices (10 degrees).