



ColorCert[®]: X-Rite Edition Startup & Configuration Guide

Contents

- Introducing ColorCert®: X-Rite Edition 4**
 - ColorCert Desktop Solutions4
 - Server Solutions.....5
 - Structure of a ColorCert Job and its Assets5
- Installing ColorCert 6**
 - System Requirements6
 - Supported Platforms6
 - Recommended Computer Specifications6
 - Remote access through TeamViewer®:6
 - Access to ColorCert Scorecard Server or ColorCert Repository Server:.....6
 - Operating System.....6
 - X-Rite Measuring Instrument Support.....7
 - Measurement Devices with Serial/Com Port Connection.....7
- Installation 8**
 - Installing the ColorCert Application.....8
 - Installing the HASP Dongle Driver11
 - Installing a PDF Reader for Documentation and Reports.....13
- ColorCert License Activation 14**
- Initial Setup 16**
 - Setting System Preferences.....16
- ColorCert Software 19**
 - The Chooser.....19
 - Editors 20
 - Job, Application, Mediastrip 20
 - Profile Editor 20
 - Rules Editor 20
 - ColorCert Library Editor 21
 - Pressroom Tools..... 21
 - Inkroom Tools 21
 - Dot Gain Tools 21
 - Feedback 21
- Step by Step Guide: An Overview of How ColorCert Works 22**
 - Measuring Patch-By-Patch using an existing Job.....22
 - Measuring a Mediastrip using an existing Job.....26
 - Measurement and Data Review..... 28
- Creating ColorCert Standards, Profiles, Rules, and Jobs 35**

- Loading files into ColorCert35**
 - PantoneLIVE Cloud database: 35**
 - Adding PantoneLIVE login info to ColorCert:..... 35
 - Selecting a PantoneLIVE palette: 35
 - Selecting colors from a library (CxF, MIF, XTF, ColorCert Library,PantoneLIVE): 37**
- Creating Standards38**
 - Backing Material Tab..... 39**
 - SpotColor Tab 40**
 - Measure SpotColors..... 40
 - Adjustment of Measured SpotColor 41
 - Manual Entry of SpotColors..... 42
 - Saving Colors..... 42
 - Substrate Tab..... 43**
 - Measure Substrates 43
 - Adjustment of Measured Substrate Color 44
 - Saving Substrates 45
 - Ink Tab..... 45**
 - Step 1: Conditions..... 46
 - Step 2: Substrate..... 46
 - Step 3: Color Shades 47
 - Plate Curve Modes 47**
 - Linear Mode:..... 47
 - Non-Linear Mode | Preserve Dot Gain:..... 48
- Creating a Profile49**
 - Substrate 49**
 - Primaries 50
 - Load SpotColors and Inks..... 50
 - Other Primary Settings 51
 - SpotColors..... 52
 - Measurement Conditions 52
- Loading a profile from ICC or CGATS.....53**
- Creating Rules.....54**
 - Settings 1 Tab 55**
 - Settings 2 Tab 57**
 - Settings 3 Tab 58**
 - Settings 4 Tab 59**
 - Settings 5 Tab 60**
- Creating a Job..... 61**
- NetProfiler 66**
 - Working with X-Rite NetProfiler66**
- Getting Help: Remote Assistance 67**
- Terminology 67**

Introducing ColorCert®: X-Rite Edition

ColorCert is a modular job-based color workflow solution that enables the creation of color specifications and provides a reporting scorecard by applying a grade or score to a job, site or client based on tolerances.

- It enables color standardization for packaging and removes subjectivity in quality control with a simple score
- It can be used to link stakeholders in a complete supply chain or within a single production site
- Its comprehensive reporting capability provides insight into areas of opportunity to identify, evaluate and correct



ColorCert Desktop Solutions

The software installer is the same for all Desktop Solutions; the functionality is linked to the purchased license. The following Desktop solutions are available for ColorCert:

ColorCert Manager: Full Desktop module used to capture all printing quality parameters like target colors and tolerances into jobs to be used by other ColorCert desktop modules for quality control and reporting.

ColorCert Inkroom: Client Desktop module used to evaluate color quality based on jobs created by ColorCert Manager or self-created color standard definitions. Supports file formats such as .CXF and .MIF as input and enables reporting via PDF or Microsoft Excel.

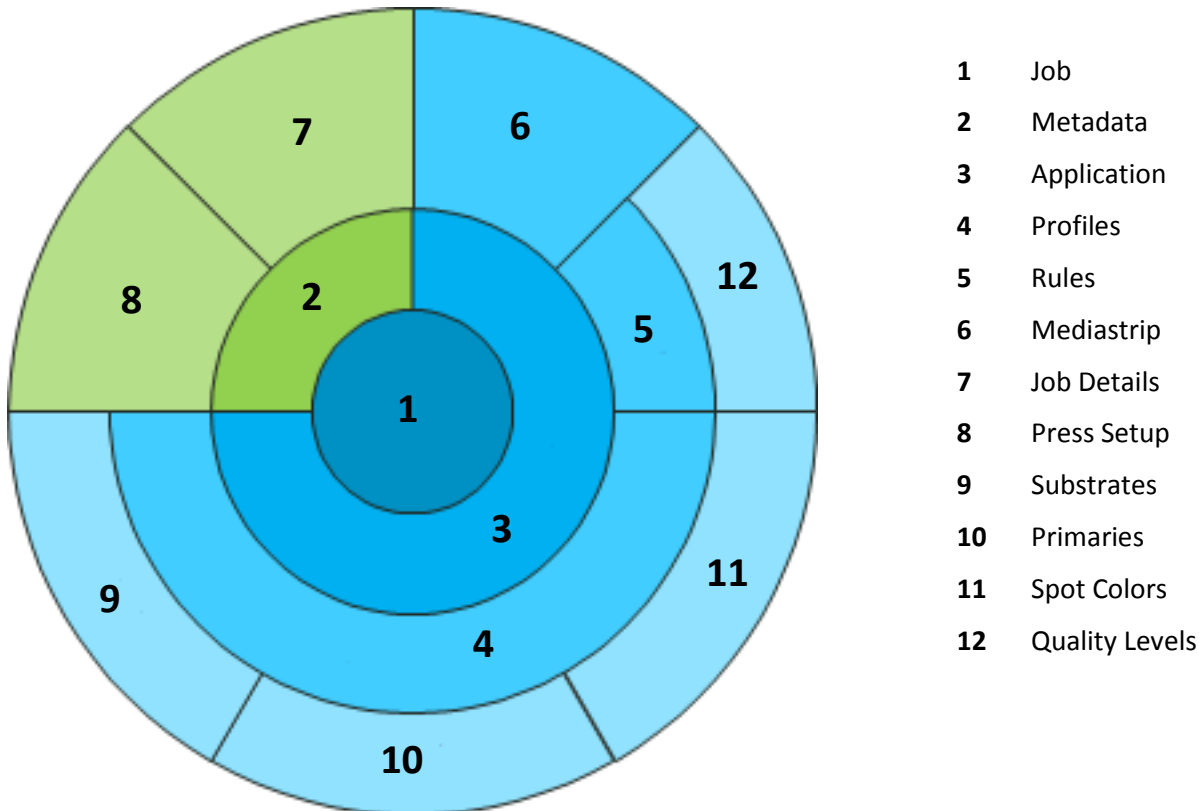
ColorCert Pressroom: Client Desktop module used at press-side for print quality control and reporting. Enables quick job set up based on templates created by ColorCert Manager as well as ability to make quick checks and reports of individual ink colors using the Basic version of the ColorCert Inkroom Tools module included in the main toolbar.

ColorCert Pressroom Essential: Client Desktop module used at press-side for print quality control and reporting based on supplied jobs.

Server Solutions

ColorCert Repository server: Cloud-based portal used to fully manage and deploy color assets across locations and users. Manage access to all ColorCert and many other file formats based on user type, location, brand, workflow stage or other parameters. Full ColorCert Repository functionality is also part of the PantoneLIVE Portal offering.

ColorCert Scorecard server: Cloud-based portal providing at-a-glance view of quality scorecard as part of a print quality control program. Summarize overall quality levels and also consolidate metrics using customizable filters based on plant, machine, customer, work type, or other job parameters.



Structure of a ColorCert Job and its Assets

Target values for Substrate, Primaries and Spot Colors are saved in ColorCert as a Profile, Tolerances are saved as Rules. With both information you automatically have the definition of the Mediastrip. All three components together can be saved as an Application, which can then be used as a template for Job creation with the ColorCert Pressroom Client.

To be able to save a ColorCert Job you need to have an Application and the minimum Job Details, i.e. Job name and Job number. Jobs and all other assets are file based and can be distributed globally. Jobs can contain additional Metadata grouped under Job Details as well as Press Setup.

Installing ColorCert

System Requirements

This section provides the minimum requirements to run the ColorCert modules on your computer, the installation settings, and the supported measurement instruments.

Supported Platforms

- PC: Windows® 7, Windows® 8, Windows® 10
- Mac: OS X 10.7, OS X 10.8, OS X 10.9, OS X 10.10

Recommended Computer Specifications

- Free Memory: 512 MB [1024 MB]
- Processor: 1 GHz 32 Bit [2 GHz 64 Bit]
- Display: 1440 x 900 Pixel or higher
- Free Hard Disk Space: 1 GB
- Free Ports: 2 Powered USB ports, 1 or 2 serial ports [depends on device selection]
- Broadband Internet Connection: No [Yes for online services and databases]

Remote access through TeamViewer®:

- Allow port 80/443 http communication (via proxy)

Access to ColorCert Scorecard Server or ColorCert Repository Server:

- Allow port 80/443 http communication (via proxy)
- Allow access to domain “colorcert.com” (trusted domain)
- Data is encrypted, therefore no https/SSL needed

Operating System

- Allow ColorCert write access to “User/Shared Users” directories or “ProgramData” directory.
- Ensure the following files allow write access:
 - com.nc.ColorCert.Labelprefs
 - com.nc.ColorCert.pref
 - com.nc.ColorCert_Connection.plist
 - DGCPatches.txt

- Provide option (e.g. user account) to install software/patches/drivers
- Provide option (e.g. user account) to adjust software and system settings
- Allow access to jump drives (e.g. USB flash drives)

X-Rite Measuring Instrument Support

- ColorCert: X-Rite Edition supports the following X-Rite instruments:
 - eXact/eXact Scan
 - 530
 - 939
 - SP62/SP64
 - Ci5x/Ci6x
 - SpectroEye
 - In addition to direct instrument support, measurement data from X-Rite IntelliTrax may be used via a drop folder. See specific documentation for setup.

Measurement Devices with Serial/Com Port Connection

If the computer does not provide a com/serial port, use a Tripp-Lite Keyspan USA 19HS serial to USB converter.

Installation

This section describes how to install the application, drivers and other third party software that is required to use ColorCert and its features.

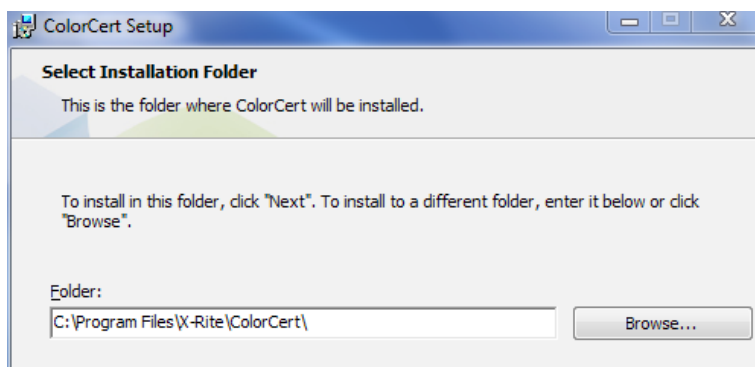
Installing the ColorCert Application

The following example shows the installation on Windows 7. These steps vary slightly on Mac OS.

1. Log into Windows with administrator privileges.
2. Temporarily turn off any active virus detection software.
3. Download the latest ColorCert release from <http://www.xrite.com/colorcert-support>. Download the PC or Mac installer by clicking the appropriate link. Browse to the location of the downloaded file on your computer and launch the installer for your operating system.
4. The Setup Wizard will launch. Click Next.



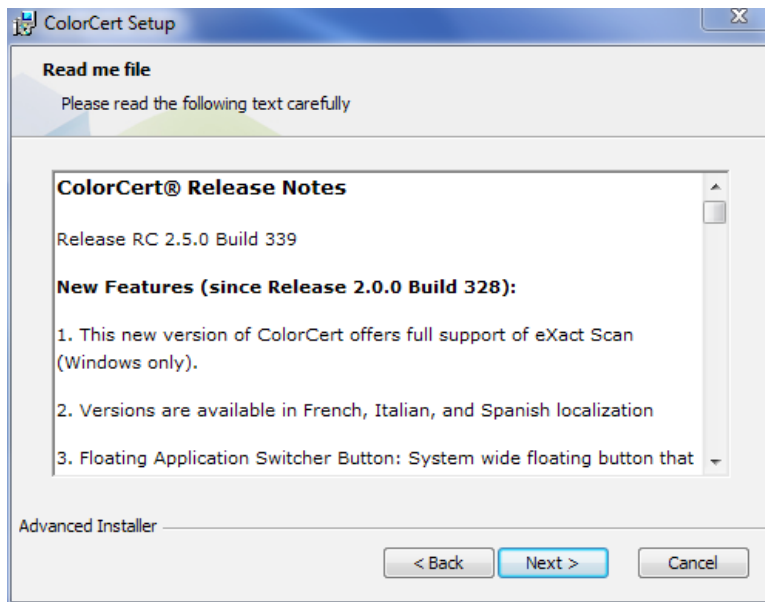
5. Select your Installation Folder. The default destination is C:\Program Files (x86)\X-Rite\ColorCert. Click Next.



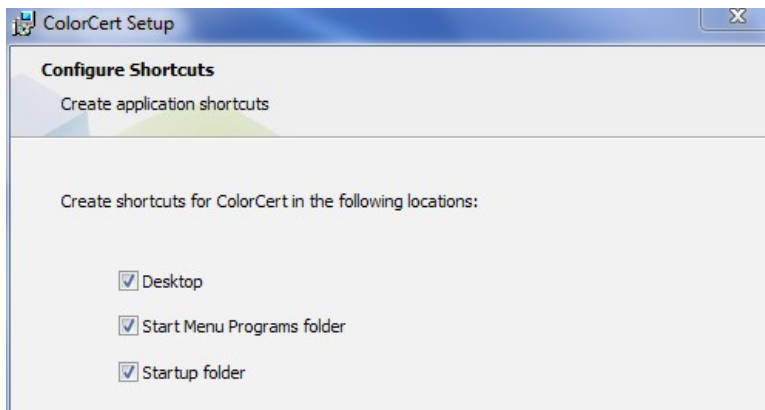
6. Read the End-User License Agreement. Accept the terms and click Next.



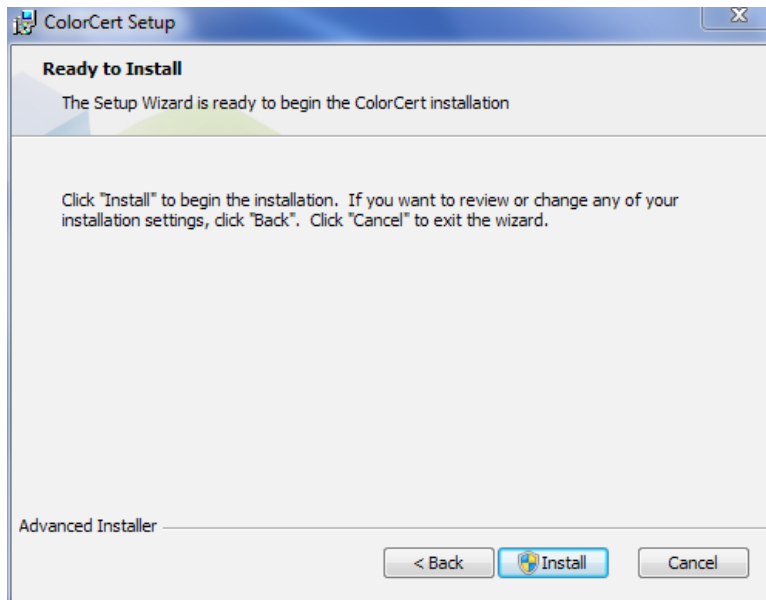
7. Read the System Requirements and click Next.



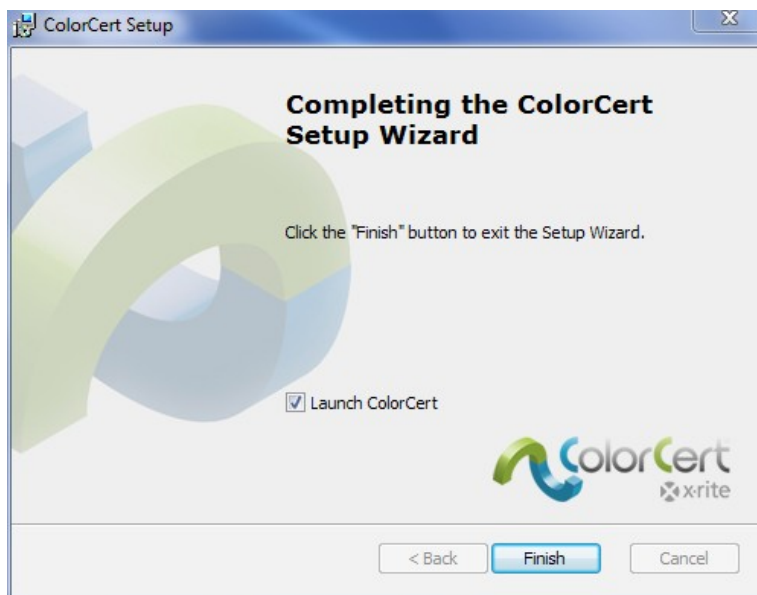
8. Select any shortcuts you do or do not want and click Next.



9. Click Install.



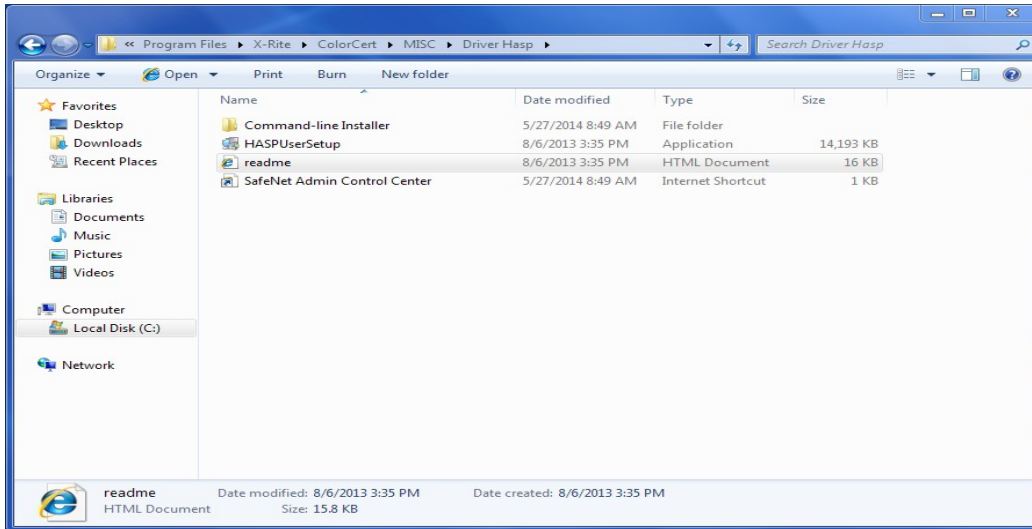
10. After the ColorCert application is finished installing, click Finish.



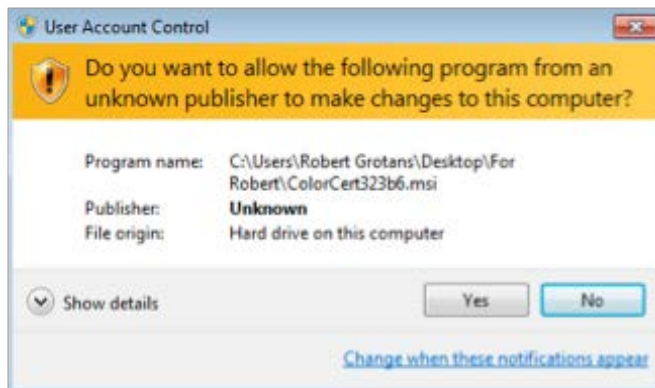
Installing the HASP Dongle Driver

To properly enable the dongle, you must install the software drivers on your system. They will be copied in the system folder, which usually is C:\Windows\System32.

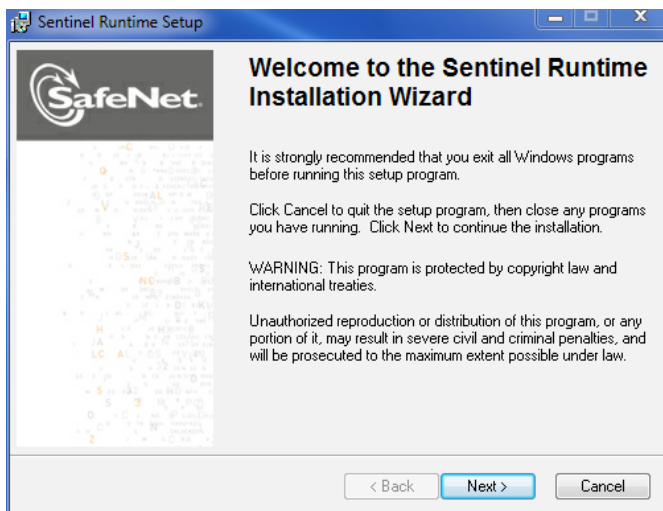
1. Open My Computer and browse to C:\Program Files (x86)\X-Rite\ColorCert\MISC\Driver Hasp.



2. Double-click the application HASPUserSetup.exe. Click Yes if prompted by the Windows User Account Control.



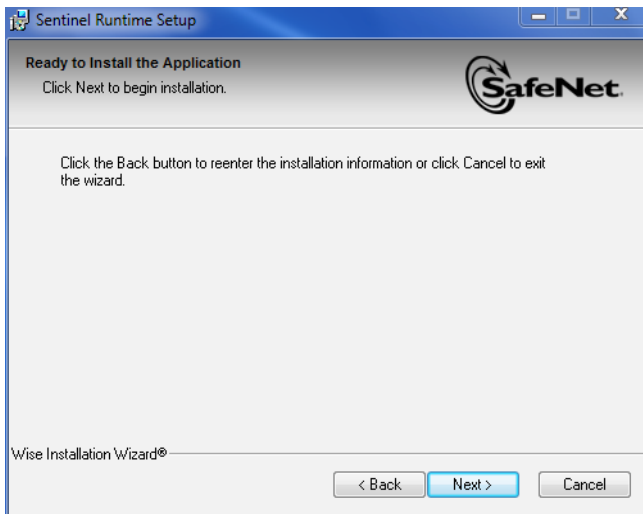
3. The Sentinel Runtime Installation Wizard will be displayed. Click Next.



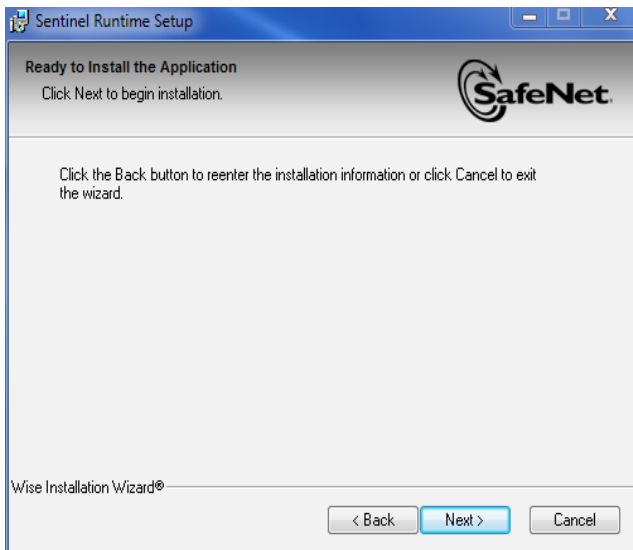
4. Read and accept the License Agreement and click Next.

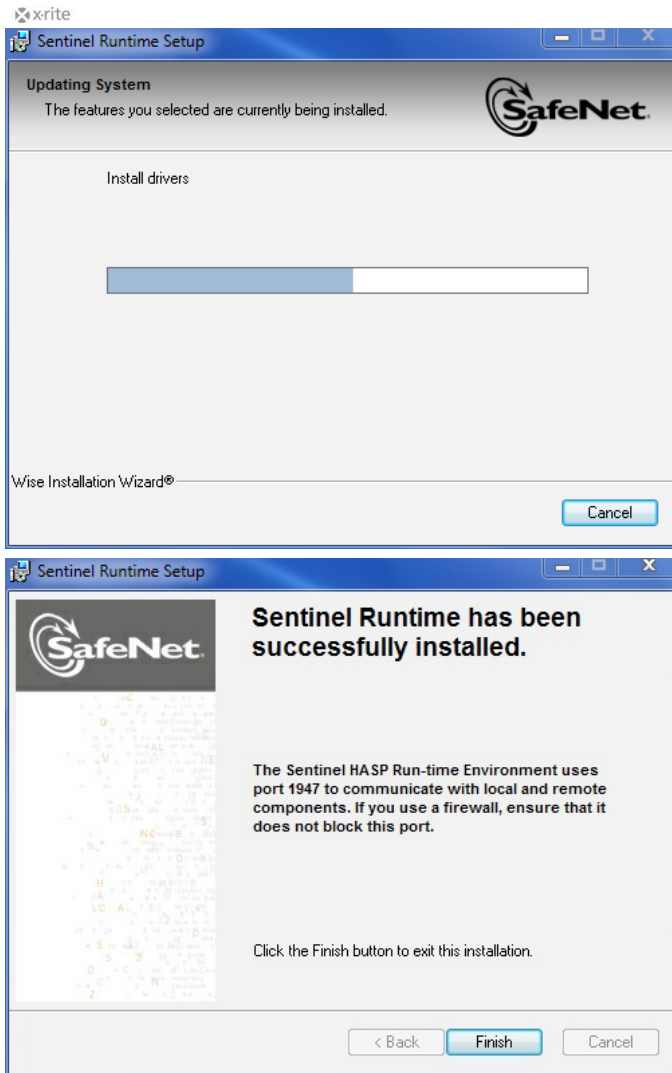


5. Click Next.



6. It may take a few minutes for the driver to install. Press Finish when it is done.





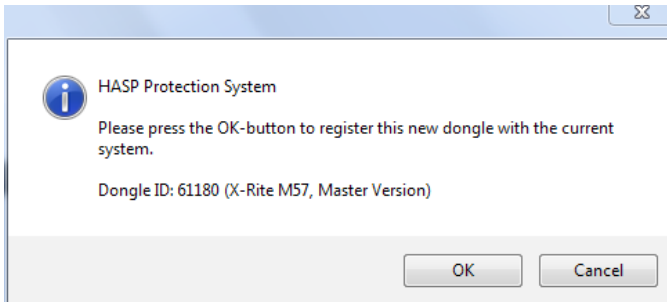
Installing a PDF Reader for Documentation and Reports

If you do not have a pdf reader, such as Adobe® Reader, you must install one. Adobe Reader is available at get.adobe.com/reader.

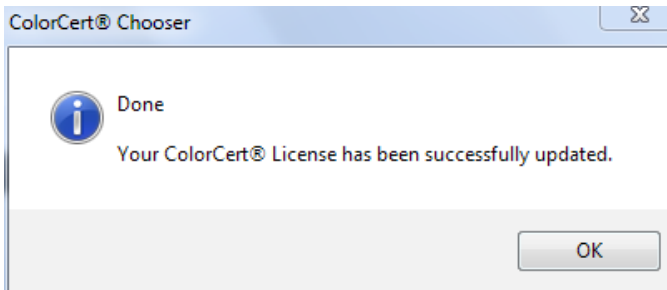
ColorCert License Activation

ColorCert dongle activation is for permanent use on only one computer. The first time you launch ColorCert, you will need to link your license file to your dongle and computer. If you need to move the software to a new computer in the future, contact X-Rite for cost and procedure to permanently move to another system.

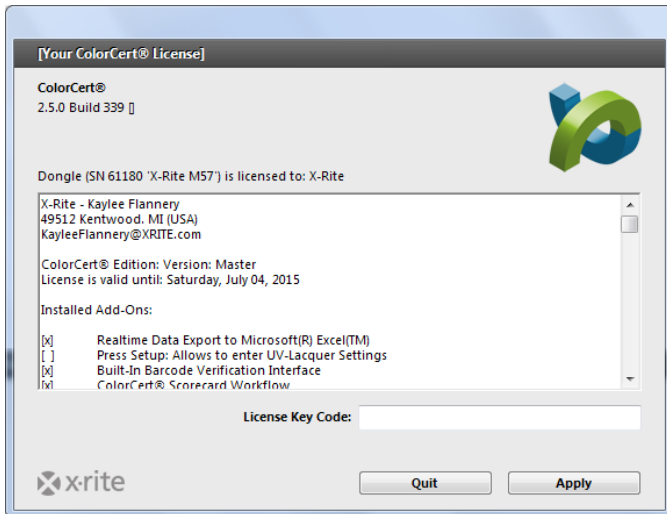
1. Copy the CC License you received via email to your computer's desktop.
2. Plug the dongle into your USB port.
3. Launch ColorCert.
4. Click OK to register your dongle with the current system.



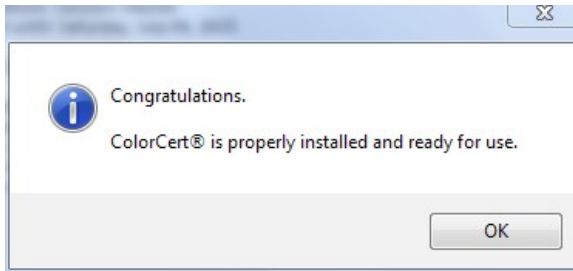
5. Click OK again once the license has been successfully updated.



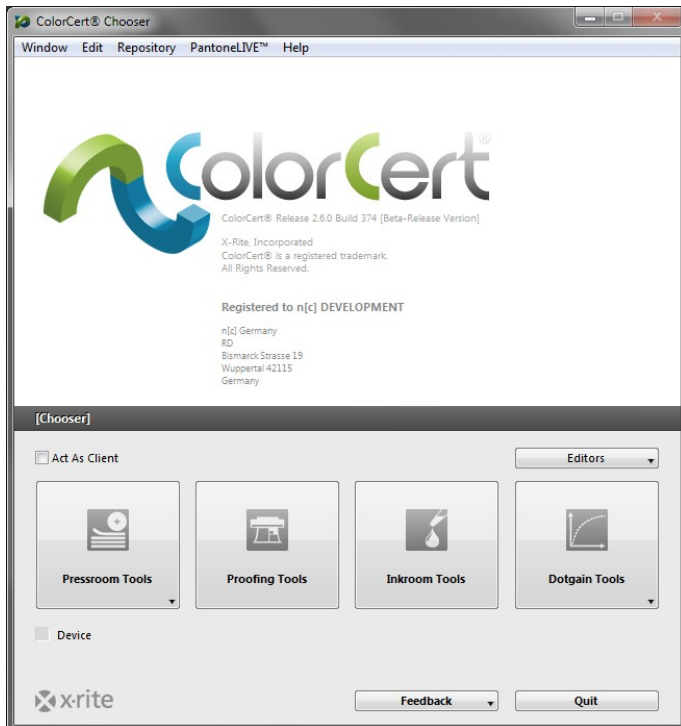
6. Enter the license key you received and click Apply.



7. ColorCert is now ready to be configured for use. Click OK.



8. The application launches with the ColorCert Chooser.



Initial Setup

Next you must review the Preferences for your initial setup. There are a number of items you can set up later, but this section explains how to configure your spectrophotometer.

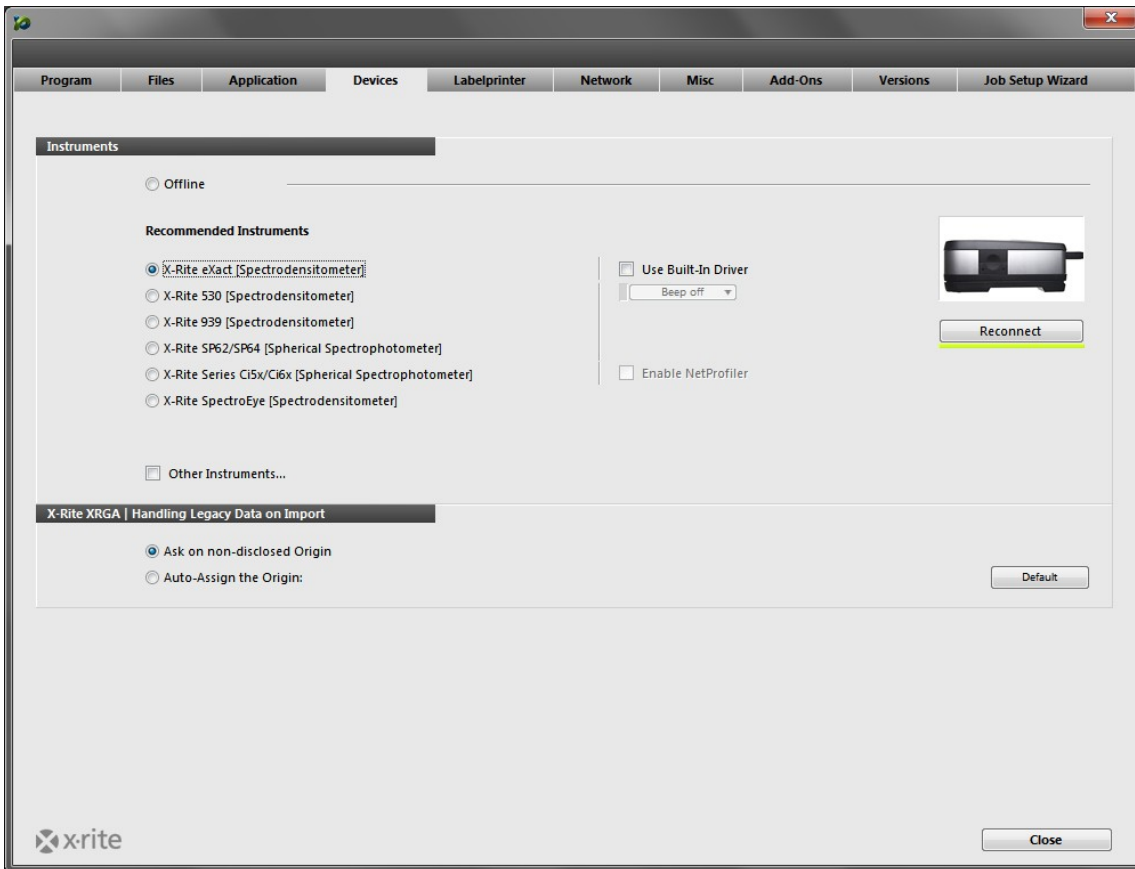
Setting System Preferences

1. Begin by connecting your X-Rite measurement device to your computer.
 - Note that all measurements taken within ColorCert will use your ColorCert settings, not the settings from your measurement device. The only setting that must be made on the instrument is the switch for measurement mode.
 - On the eXact, if this is set to 1, the software will be limited to M1 measurements. If it is set to 0, the software will be able to measure in M0, M2, or M3 modes.



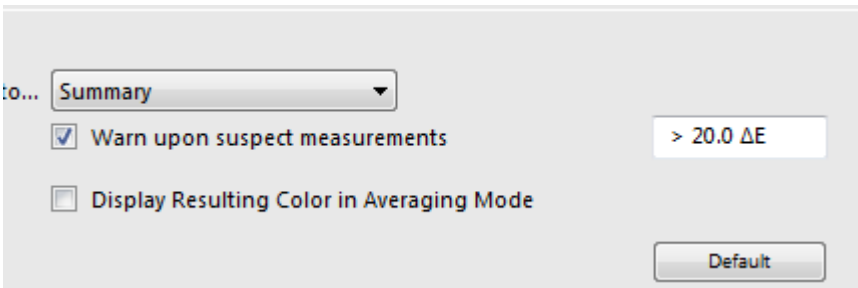
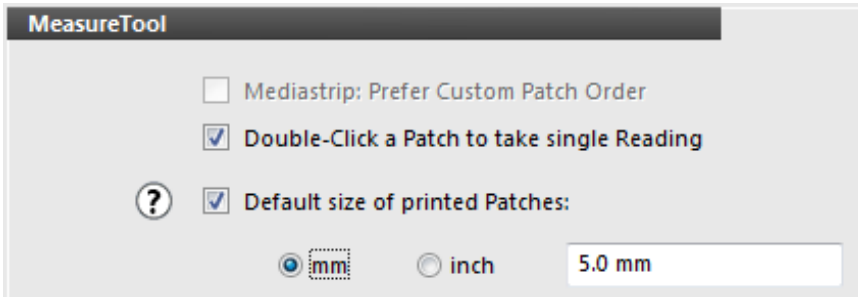
2. When using the Windows version, go to the File menu and select Preferences. On the Mac, go to the ColorCert menu and select Preferences.

3. Select the Devices tab and choose your spectrophotometer from the list.



4. Click the Reconnect button.
5. A dialog box informing you that your device is connected will appear. You should see a green indicator next to the reconnect button indicating that you have a connection. You will see this indicator, along with a button, in other windows of the application where you will use the instrument. If this is red, the instrument has lost connection. You can click the button to reestablish the connection.
 - If there is an error, click OK, then check your connections and try again.
 - If it says that the device was connected, click OK to close the dialog.

6. Select the Workflow tab and enter the default length of your patches under MeasureTool. To follow the step by step guide later in this StartUp Guide, enter a patch size of 5 mm. Please also change Warn upon suspected measurements to 15. This allows you to automatically accept your measurements even with a badly printed copy of the sheet that the step by step guide refers to.



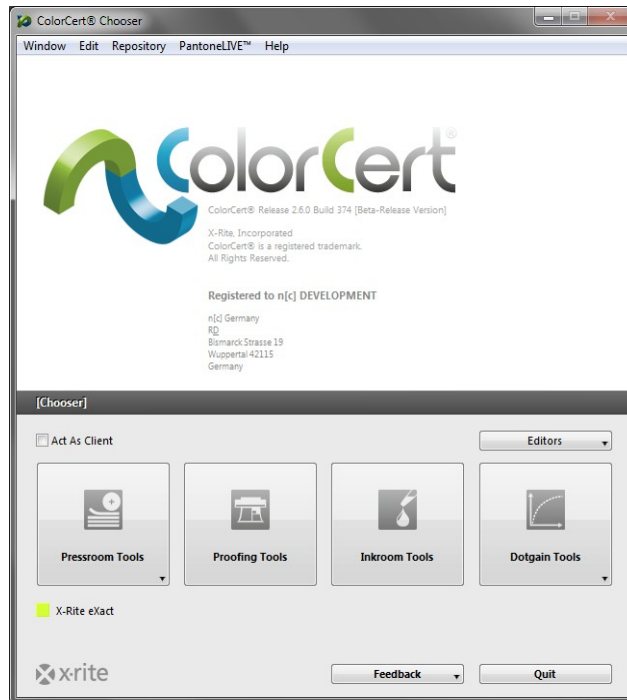
7. Click the Close button. You are done.

ColorCert Software

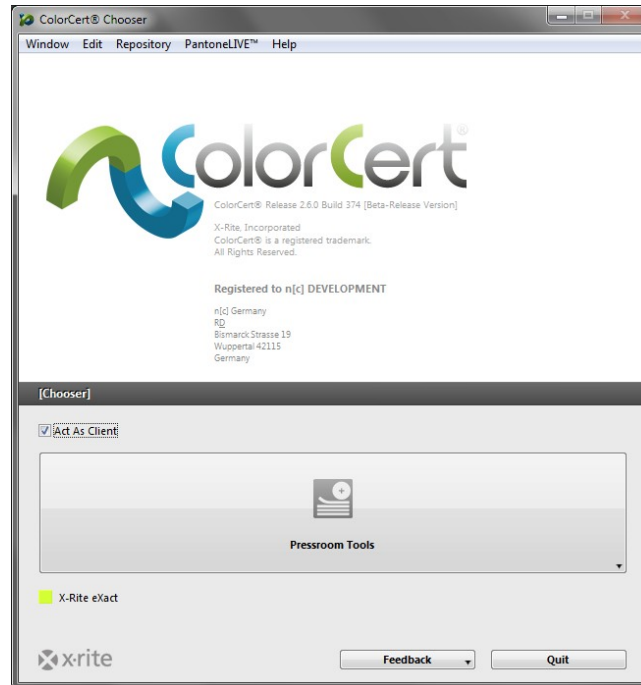
This section discusses the software interface and provides an overview of the tools, their uses and a step by step guide of measuring a sample sheet for an existing job.

The Chooser

The main window is called the Chooser. This will look different based on the license you purchased. The Manager is used to define Jobs, Profiles, Rules, Applications, Substrates, Inks, Tolerances. It includes all available Tools.



The Pressroom Client has access to Pressroom Tools to load existing Jobs to monitor production and generate Scorecards.



Editors

The first step of the process is to create the Profile (color references) and Rules (tolerances). Some colors can also be sorted into Libraries. Use the Editors to define Profiles, Rules and ColorCert Libraries.

Job, Application, Mediastrip

Here you can combine predefined profiles and rules into an application. You can create jobs or build a custom Mediastrip.

Profile Editor

A ColorCert Profile is a set of color references. The color references include Inks, SpotColors, Substrates and Backing Material. A ColorCert Ink includes tint values and may or may not be included in the process builds of a color in the Job. A ColorCert SpotColor defines only a single value of a color that will be used in the Job. It may be the result of a “real ink” such as a formulated PANTONE Ink run at 100%, it may be a single screened tint value of a formulated PANTONE Ink, or it may even be a build of a color from Process Inks. A ColorCert SpotColor simply represents an important Brand Color in the Job, no matter how it is produced. This will be explained in more detail later. Backing Material is used under non-opaque Substrates to help standardize the measurement process for media that is not completely opaque. A Profile also includes information about the measurement and press conditions.

Rules Editor

This editor is used to create Rules that define what will be evaluated or measured and the tolerances that will be used. Different levels of tolerance can be applied to different classifications of importance of inks and SpotColors. Proofing tolerances can be established at a more critical level than the production work. Tolerances can be established for a variety of items including solids, dot gain values, minimum dot, substrate, and visual characteristics.

ColorCert Library Editor

ColorCert Libraries are collections of Ink, SpotColors, Substrates, and/or measured Backing Materials. This is useful for sorting colors for different types of printing. NOTE: PantoneLIVE Colors cannot be stored in ColorCert Libraries.

Pressroom Tools

In the Pressroom Tools you can load individual and multiple Jobs. Jobs can be created in two different ways. Select the Job Setup Wizard from this tool or use Jobs, Applications, Mediastrips from the Editors menu. Use the Jobs to measure and score production work. The completed Jobs can be uploaded automatically to a Scorecard Server.

Proofing Tools are very similar to Pressroom Tools, except you can only open individual Jobs, and you can define narrower tolerances in the Rules for proofing.

Inkroom Tools

For information and troubleshooting ink color and density on press, the Inkroom Tools provide color comparisons of stored or measured standards to the press samples. Feedback includes suggestions on parameters that can be changed on press to fix the problem, or if an ink cannot be adjusted to match, to reformulate it. This tool can be accessed in the Manager version of the Chooser or in the Pressroom Tools (if enabled in the Preferences) with limited functionality.

Dot Gain Tools

Dot Gain Tools are used to calibrate the press or proofer dot gain characteristics. To do this, a printing chart will be generated and run on press or the proofer, then measured to generate a calibration curve. The curve can be exported for use in the platesetter RIP or can be applied to an ICC profile.

Feedback

In the Feedback menu, you can Suggest a Feature, Report a Bug, or Contact a support or sales representative from xrite.com.

Step by Step Guide: An Overview of How ColorCert Works

This section walks you through examples of how ColorCert can be used in a production environment. To follow this step by step guide please download the ColorCert® ColorBasics Sample Data from:

<http://www.xrite.com/colorcert/Library>

The sample data are based on the hardcopy sample sheet called Color Basics for Pressroom that you received with your the eXact device. If you do not have that sheet you can download it from the above location.

NOTE: Please make sure to print the sheet in the correct size. Your print result will vary from the original sheet and your measurements might not stay within the tolerances for this job, but it will help you to follow the steps.

Unzip the file and copy the contents to the folders of the same names in the following directory:

- Mac OSX: Macintosh HD/Users/Shared/ColorCert Data/
- Windows: C:\Users\Public\Documents\ColorCert Data

During production you will need to know how to load a Job and how to measure Samples in the Pressroom Tool. This is possible with the Client as well as with the Manager license.

This step by step guide first shows you the workflow when working with an existing Job. This is the typical operator's task using the Pressroom Client.

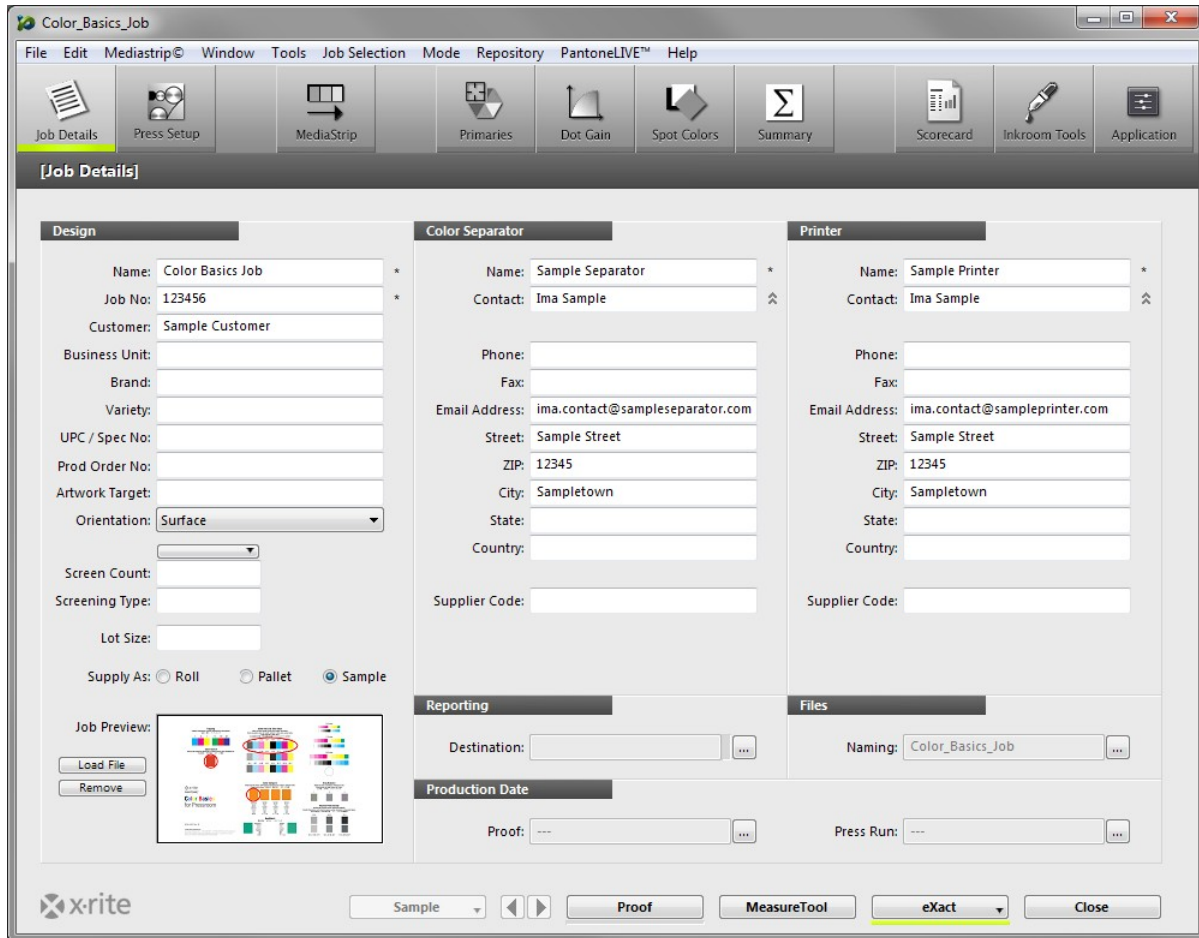
The second half of this step by step guide you will show you how to setup Jobs. This function is only available in the Manager version.

Measuring Patch-By-Patch using an existing Job

eXact and other Measurement Devices

1. Connect your X-Rite spectrophotometer.
2. Launch the ColorCert software.
3. Click on Pressroom Tools, and select Load Job.
4. Select the sample Job Color_Basics_Job.ccj.

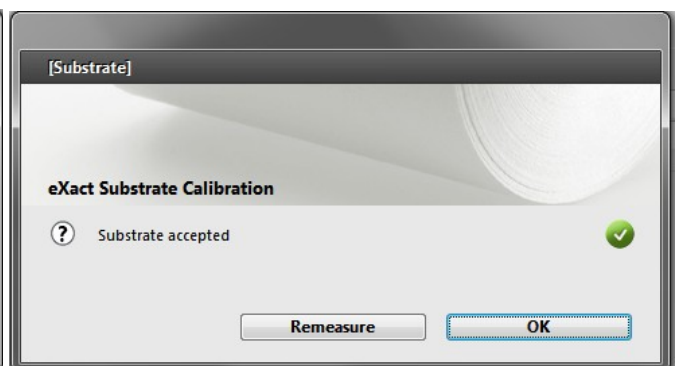
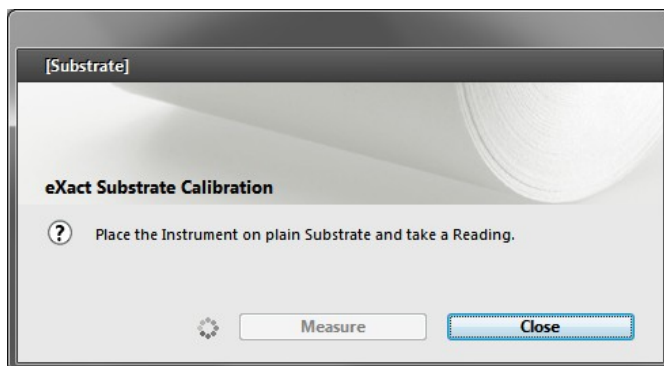
5. This opens the Job Details.



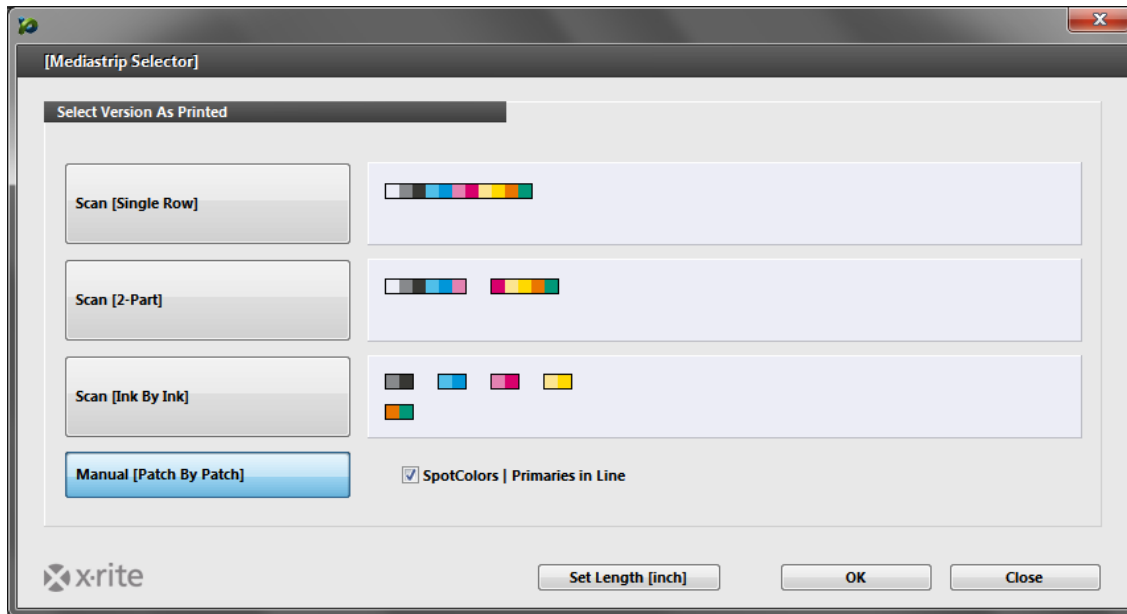
6. Click MeasureTool at the bottom of the window.

NOTE: The X-Rite eXact Scan scans multiple patches on Mediastrips, while all other supported X-Rite instruments measure individual color patches. The following steps may vary depending on which X-Rite device you are using. To complete these steps successfully, follow the instructions for your device. For the eXact Scan, follow the instructions under Scanning a Mediastrip using an existing Job. For the eXact and other device, use the following instructions.

When using an eXact with Scan functionality enabled: A window appears asking for a measurement of the substrate. Use your eXact instrument to measure the Substrate. A message confirms that the Substrate has been accepted.

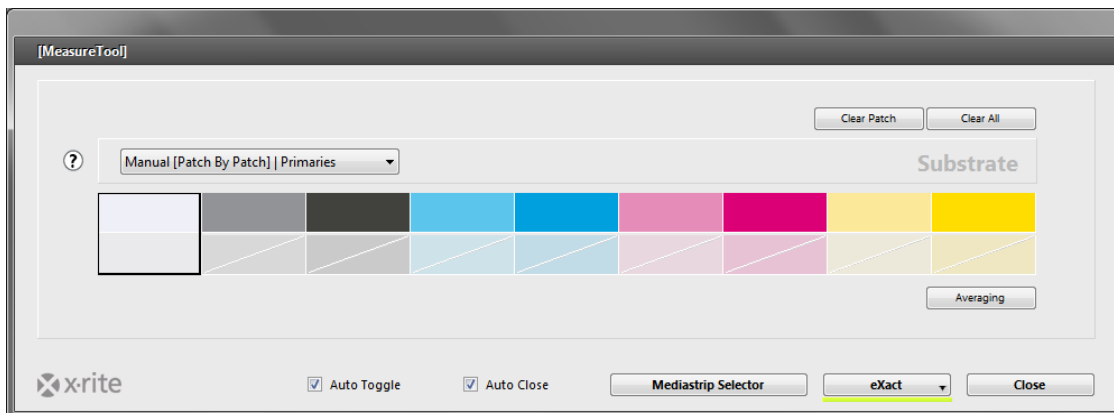


7. The Mediastrip Selector opens. Click Manual [Patch By Patch].



8. Click OK. The MeasureTool opens.

- You can now measure the individual patches as indicated in the MeasureTool.



NOTE: The order in this window does not correspond to the order of patches on the sheet. Since this is not a scan measurement, the patch order does not matter.

Trapping

Trapping. Farbannahme. Trapping. Registrazione. Intercepação.
疊印 . 疊印 . トラッピング

C M Y Y/C Y/M M/C

Color Search

Buscar color. Farbsuche. Recherche de couleur. Ricerca colore. Pesquisar Cor.
色彩搜索 . 色彩搜索 . カラーの検索

Solid Inks and Tone Value

Tintas de colores sólidos y Valor tonal. Vollton und Tonwert.
Encres en aplat et valeur de tonalité. Inchiostri a tinta unita e valore tonale.
Tintas Chapadas e Valor Tonal.
实地油墨和音量 . 實地油墨和音量 . ベタおよびアミ点測定

50 K 50 C 50 M 50 Y 100 K 100 C 100 M 100 Y

25 K 25 C 25 M 25 Y 75 K 75 C 75 M 75 Y

40 K 40 C 40 M 40 Y 80 K 80 C 80 M 80 Y



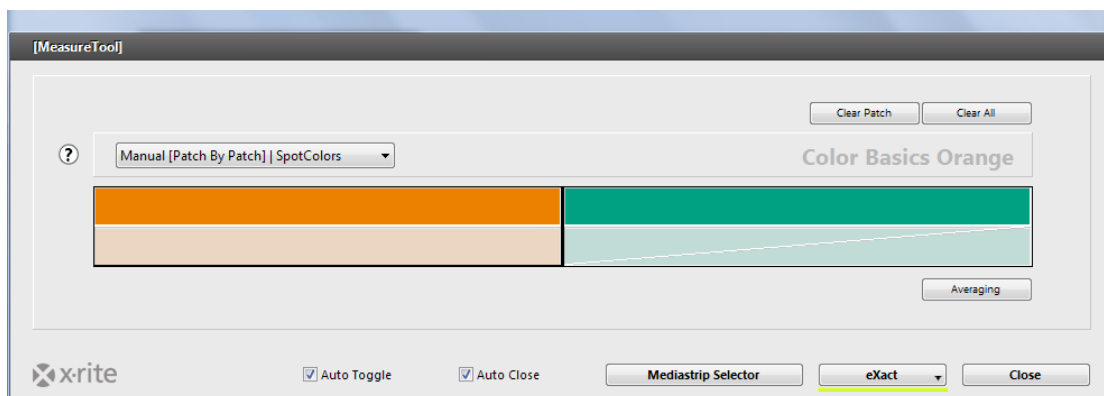
Color Compare

Comparación de colores. Farbvergleich. Comparaison de couleurs. Confronto colori.
Comparação de Cores. 色彩比较 . 最佳匹配 . カラーの比較

Reference Muestra Muestra Muestra
Referencia Muestra Muestra Muestra
Référence Échantillon Échantillon Échantillon
Referencia Amostra Amostra Amostra
参考 样品 样品 样品
基準色 サンプル色 サンプル色 サンプル色

Densité d'i

- After the primary colors are measured, the next window shows the SpotColors. Locate the orange and green patches on your Color Basics sheet and repeat the process.

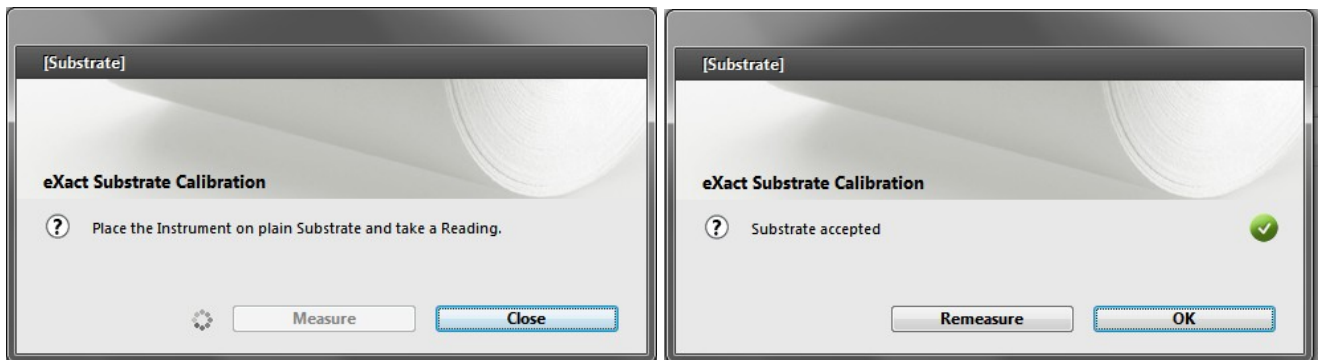


9. Please continue with the section Measurement and Data Review.

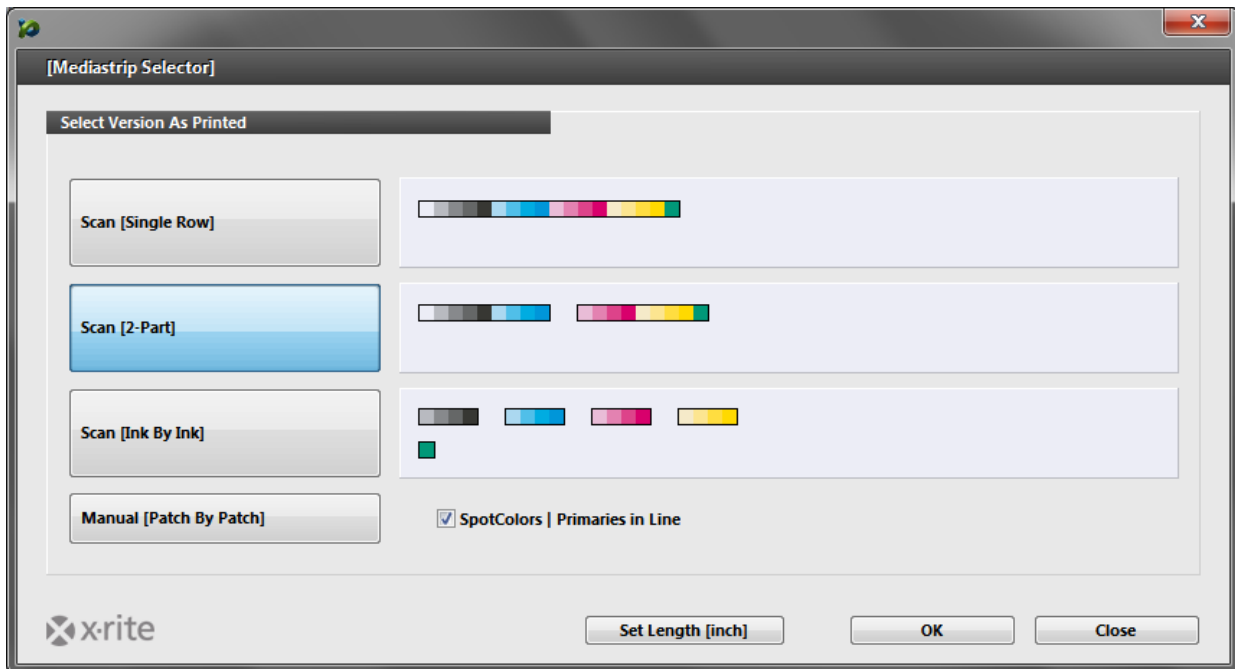
Measuring a Mediastrip using an existing Job

For eXact Scan

1. Connect your X-Rite eXact Scan spectrophotometer.
2. Launch the ColorCert software.
3. Click on Pressroom Tools, and select Load Job.
4. Select the sample Job Color_Basics_Scan_Job.ccj.
5. This opens the Job Details.
6. Click MeasureTool at the bottom of the window. A window appears asking for a measurement of the substrate. Use your eXact instrument to measure the Substrate. A message confirms that the Substrate has been accepted.

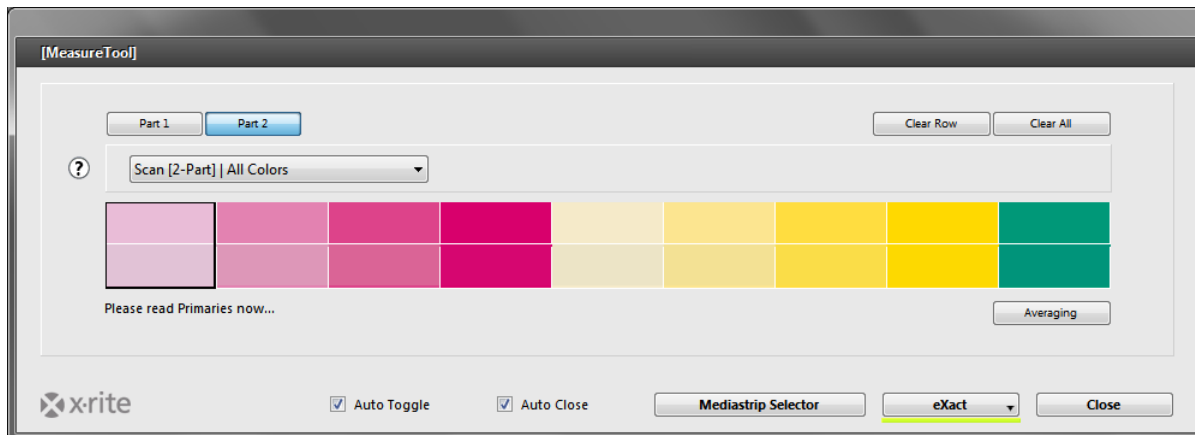
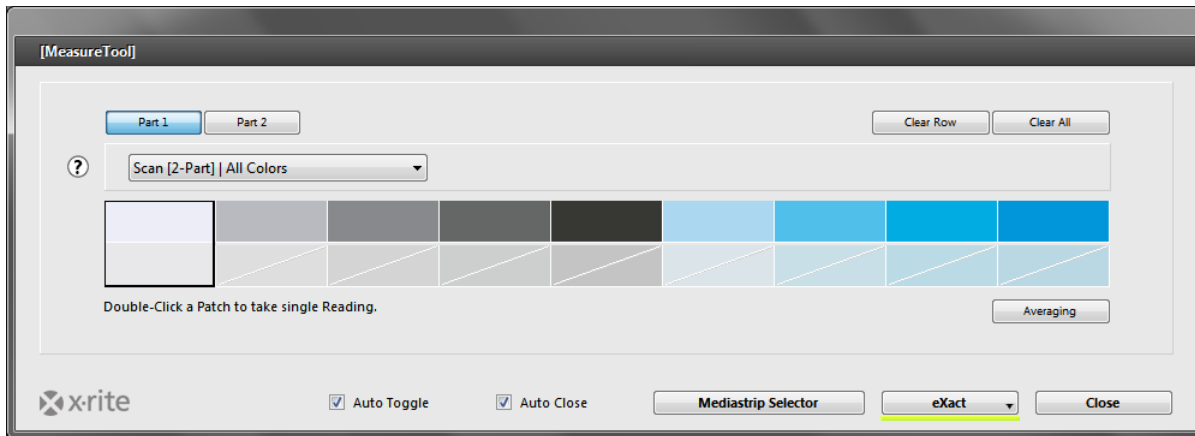


7. The Mediastrip Selector opens. Click Scan [2-Part].



8. Click OK.

9. The MeasureTool opens. Scan the Mediastrip as indicated in the MeasureTool.

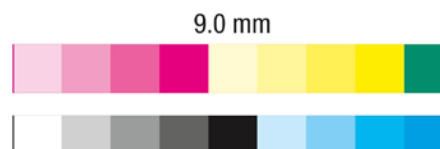
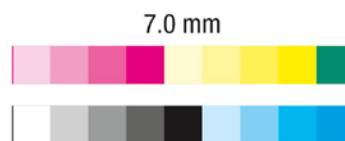


Solid Inks and Tone Value

3 colores sólidos y Valor tonal. Vollton und Tonwert.
 at valeur de tonalité. Inchiostri a tinta unita e valore tonale.
 Tintas Chapadas e Valor Tonal.

音量・實地油墨和音量・ベタおよびアミ点測定

50 M	50 Y	100 K	100 C	100 M	100 Y
25 M	25 Y	75 K	75 C	75 M	75 Y
40 M	40 Y	80 K	80 C	80 M	80 Y



Measurement and Data Review

Once finished, the MeasureTool closes. As you look across the top of the window, items that have a green dot have been completed successfully. Any items with a red dot are areas that have measurements that have failed.

1. Click on the Primaries tab. You will see which primaries passed and which failed. The ΔE indicates the size of the error, and the tolerance shows the amount of error that is acceptable.

Ink Name	ΔE	Tolerance	Quality Level	Result	[Density]
<input checked="" type="radio"/> Color Basics Black	0.60	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.01]
<input type="radio"/> Color Basics Cyan	4.07	4.00	<div style="width: 10%; background-color: red;"></div>	FAILED	[-0.11]
<input type="radio"/> Color Basics Magenta	0.48	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.02]
<input type="radio"/> Color Basics Yellow	1.03	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.02]

Substrate Name	ΔE	Tolerance	Quality Level	Result
<input type="radio"/> Color Basics Paper	1.10	3.00	<div style="width: 20%; background-color: green;"></div>	PASSED

Unit	Target	Sample	Diff	[ΔE_{cmc} (2:1)]	ΔE	Tolerance	Result
L	19.00	18.84	-0.16	[0.84]	0.60	4.00	PASSED
a	0.00	-0.50	-0.50				
b	1.00	1.29	0.29				
c	1.00	1.38	0.38				
h	89.90	111.19	21.29				
Density Status T	1.56 [Black]	1.57 [Black]	+0.01				

2. Click on the button next to Quality Level to set the tolerance bar to the middle. The longer the green bar to the right of the tolerance bar the closer the result is to the target. The longer the red bar is to the left the further away the result is from the tolerance.

Ink Name	ΔE	Tolerance	Quality Level	Result	[Density]
<input type="radio"/> Color Basics Black	0.60	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.01]
<input checked="" type="radio"/> Color Basics Cyan	4.07	4.00	<div style="width: 10%; background-color: red;"></div>	FAILED	[-0.11]
<input type="radio"/> Color Basics Magenta	0.48	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.02]
<input type="radio"/> Color Basics Yellow	1.03	4.00	<div style="width: 15%; background-color: green;"></div>	PASSED	[+0.02]

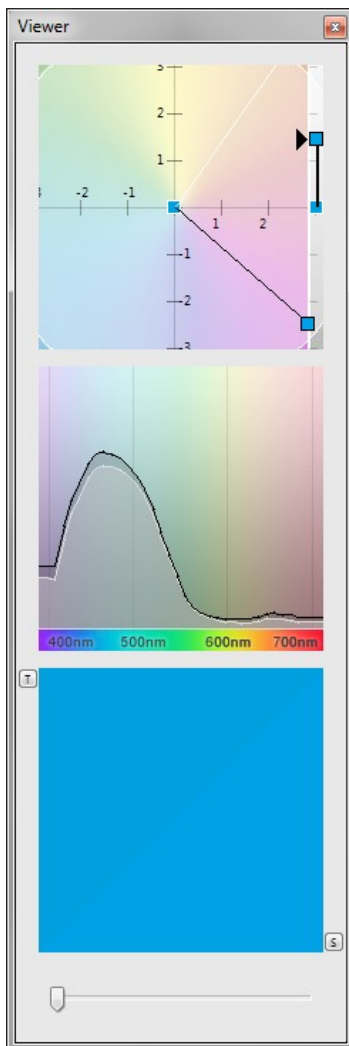
3. The tab Numbers shows the details for the selected color. If you are using a Manager license you can temporarily adjust some of the calculations.

- The Viewer window will show the selected color in the graphs. The top graph shows the target value and the measured value with in L*a*b* Color Space. The second window shows the spectral curve of the measured color. The bottom window shows a relative comparison of the colors. These graphs can help you visualize the difference in the colors to assist in troubleshooting the Job.

If the curves are very similar in shape but at different levels, you may be able to get a better match by adjusting the density on press. However, if the curves are very different, this may mean that you cannot match the color with any press adjustments.

If your Viewer doesn't open when selecting a color, select File from the menu bar and select Auto Show Color Viewer.

- Click on each of the Primaries in the list and observe the graphs.



6. Click on the DotGain tab.

Ink Name	ΔDot Gain	25%	50%	75%	Quality Level	Result
Color Basics Black	+1.9%	+2.5%	+0.7%			PASSED
Color Basics Cyan	+0.6%	+1.3%	+1.5%			PASSED
Color Basics Magenta	-7.1%	-8.7%	-5.5%			FAILED
Color Basics Yellow	-1.4%	-3.7%	-2.7%			PASSED

Unit	Dot Area	Target	Sample	ΔDot Gain	Tolerance	Result [out]
Dot Gain	@ 25.0%	15.0%	7.9%	-7.1%	± 4.0%	-3.1%
Dot Gain	@ 50.0%	20.0%	11.4%	-8.7%	± 4.0%	-4.7%
Dot Gain	@ 75.0%	15.0%	9.5%	-5.5%	± 4.0%	-1.5%

7. You can see the pass/fail status of the dot gain patches. Use the drop down list Mode to change the mode of the displayed values from delta to absolute Dot Value, or to highlight which results are how far out on the quality level.

Ink Name	Dot Coverage	25%	50%	75%	Quality Level	Result
Color Basics Black	41.9%	70.5%	87.7%			PASSED
Color Basics Cyan	38.8%	66.5%	88.3%			PASSED
Color Basics Magenta	32.9%	61.4%	84.5%			FAILED
Color Basics Yellow	33.3%	62.9%	88.4%			PASSED

Ink Name	[out]	25%	50%	75%	Quality Level	Result
Color Basics Black	---	---	---			PASSED
Color Basics Cyan	---	---	---			PASSED
Color Basics Magenta	-3.1%	-4.7%	-1.5%			FAILED
Color Basics Yellow	---	---	---			PASSED

8. Now click the SpotColors tab. This is very similar to the Primaries tab.

NOTE: your window may show orange and red if you have opened the Color Basic Job

The screenshot shows the ColorCert software interface with the 'SpotColors' tab selected. The main window displays a table for 'SpotColor' with the following data:

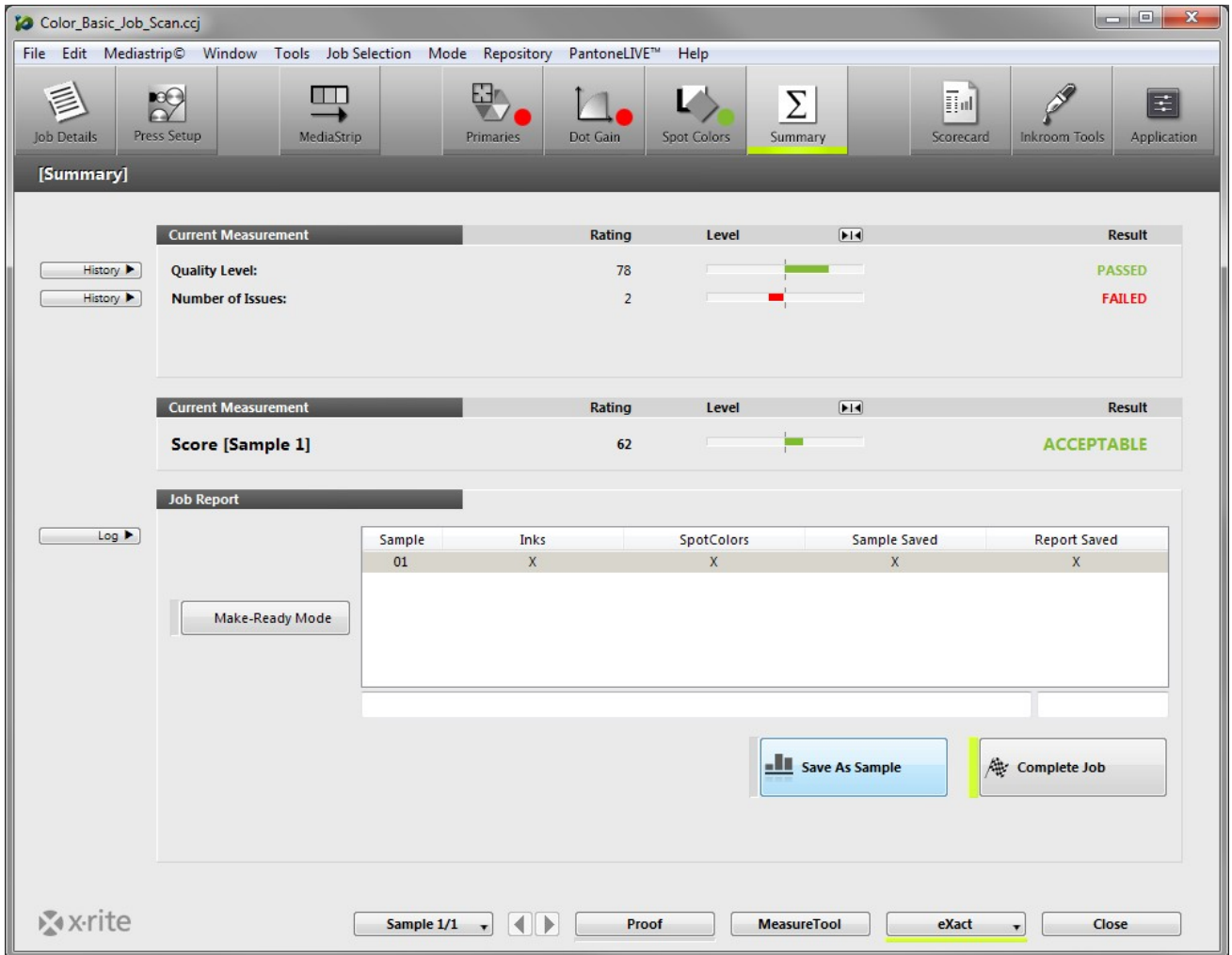
SpotColor	$\Delta E00$ (1:1:1)	Tolerance	Quality Level	Result
Color Basics Green	0.29	2.00		PASSED

Below this table is a detailed data table with the following columns: Unit, Target, Sample, Diff, $[\Delta E_{cmc} (2:1)]$, $\Delta E00$ (1:1:1), and Tolerance.

Unit	Target	Sample	Diff	$[\Delta E_{cmc} (2:1)]$	$\Delta E00$ (1:1:1)	Tolerance
L	54.00	53.76	-0.24	[0.18]	0.29	2.00
a	-63.00	-63.00	0.00			
b	-0.00	0.32	0.32			
C	63.00	63.00	-0.00			
h	180.00	179.71	-0.29			
Density Status T	1.33 [Cyan]	+1.33 [Cyan]	0.00			

The 'Viewer' window on the right shows a color chart with a green spot and a spectral curve graph below it. The graph has a wavelength axis from 400nm to 700nm. At the bottom of the viewer, there is a 'T' label and a 'S' label next to a green color patch.

- Click the Summary tab. You will see how well this Job scored, based on the requirements defined in the Rules that were included in the Application that you loaded at the beginning of this step by step guide. The Job Report will include the data from several samples or measurements through a run. Click Save As Sample to add these measurements to the Job Report.

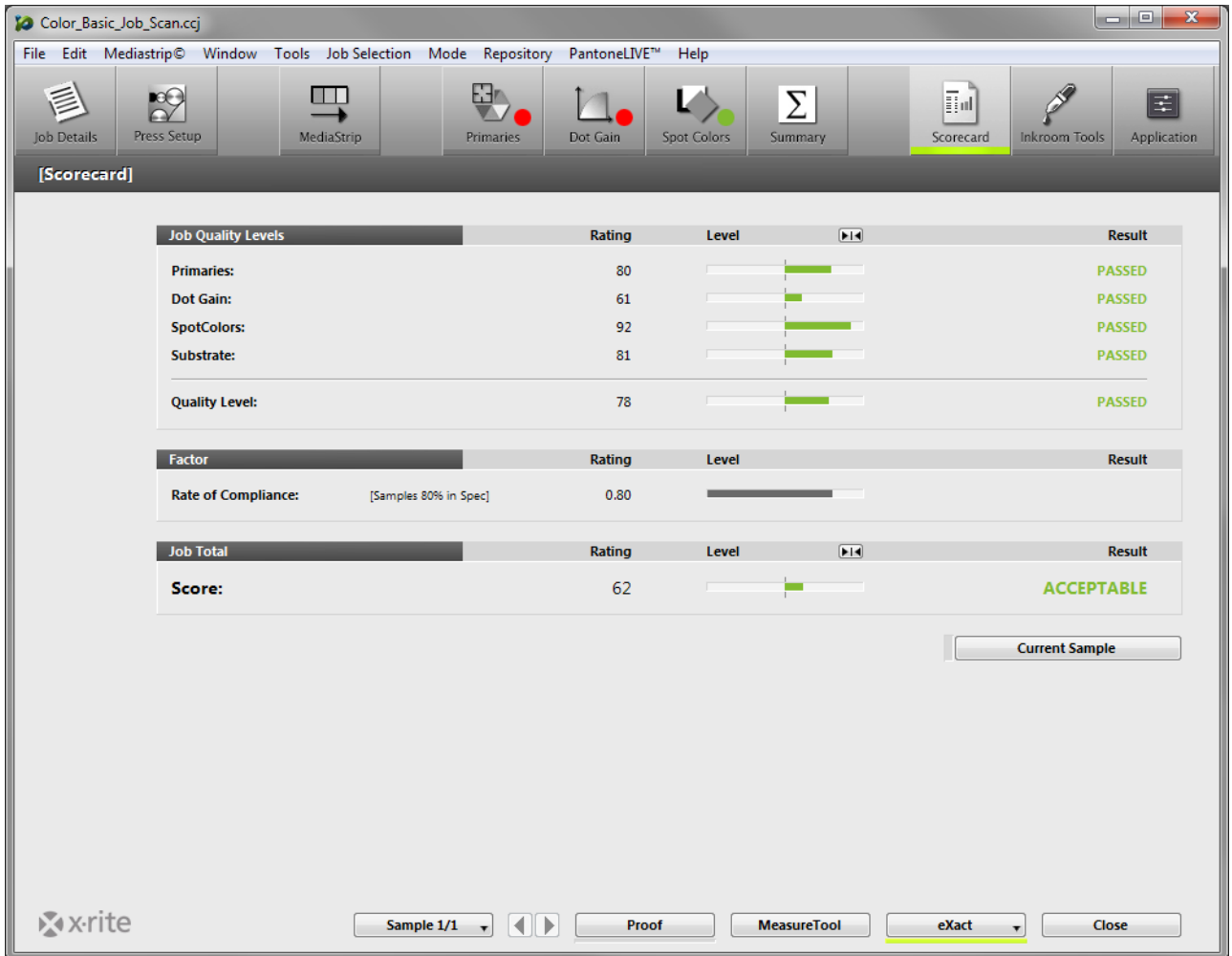


- To continue reading additional measurements simply continue measuring. After each measurement, you can view the results to help improve the production.

11. After you have saved a few sets of measurements as samples, click on the Primaries tab.
12. At the bottom of this page, click on the History tab to see the Quality Level of the selected color in the order the measurements were measured. After selecting a sample number from the bar graphs, all of the displayed measurements will be presented for that sample.



13. You can also use the navigation on the bottom to move between the Samples of each selected color. If you are using a Manager license, you also have access to the Trend Show.
14. You can click through different tabs and colors to see all of the results from that specific saved sample.
15. You can also see the Viewer window changes to show the selected measurement for the selected sample.
16. At any time during the run, you can see your Scorecard results. Click on the Scorecard tab.



Job Quality Levels	Rating	Level	Result
Primaries:	80	<div style="width: 80%;"></div>	PASSED
Dot Gain:	61	<div style="width: 61%;"></div>	PASSED
SpotColors:	92	<div style="width: 92%;"></div>	PASSED
Substrate:	81	<div style="width: 81%;"></div>	PASSED
Quality Level:	78	<div style="width: 78%;"></div>	PASSED

Factor	Rating	Level	Result
Rate of Compliance: [Samples 80% in Spec]	0.80	<div style="width: 80%;"></div>	

Job Total	Rating	Level	Result
Score:	62	<div style="width: 62%;"></div>	ACCEPTABLE

17. This will show the results of the run. If you would like to see the results of the last sample measured, click on Current Sample. This can be used to see if your current production is conforming against the average of the whole run.
18. The overall score is a calculation using a combination of all measurements rated against the target and the rate of compliance. See separate documentation for more details.
19. After you have completed all measurements and have reviewed your data, return to the Summary tab, and click Complete Job to save all of the data. Depending on how the system is configured, the report will be sent to a printer, and/or an email will be sent.
20. Once you have completed the Job, no other measurements will be accepted in this Job. Close the Job.

This is just one way that ColorCert can be used in Production. Since every workflow varies, you can customize the process to fit your needs. Next we will look at how an Administrator can use ColorCert to set up and oversee the workflow.

Creating ColorCert Standards, Profiles, Rules, and Jobs

This section describes tools that are available when using the ColorCert Manager license to configure the print standards, tolerances and other quality control checks with ColorCert. Although your workflow may vary, this provides a good starting point for developing your own Rules, Standards, and Profiles.

Normally, some of the steps for creating Color Standard target values will require measurement of a customer approved color sample, perhaps a press sheet. If you wish to practice these steps on your own before creating standards to be used in production, you can use the Color Basics for Pressroom sheet that comes with the X-Rite eXact.

In many cases, you can load various files into the application instead of manually entering data. Before continuing, please familiarize yourself with the process of loading different file types from various available locations.

Loading files into ColorCert

PantoneLIVE Cloud database:

If you want to use colors from PantoneLIVE, you first have to setup the PantoneLIVE connection and select a required color pallet, you want to use.

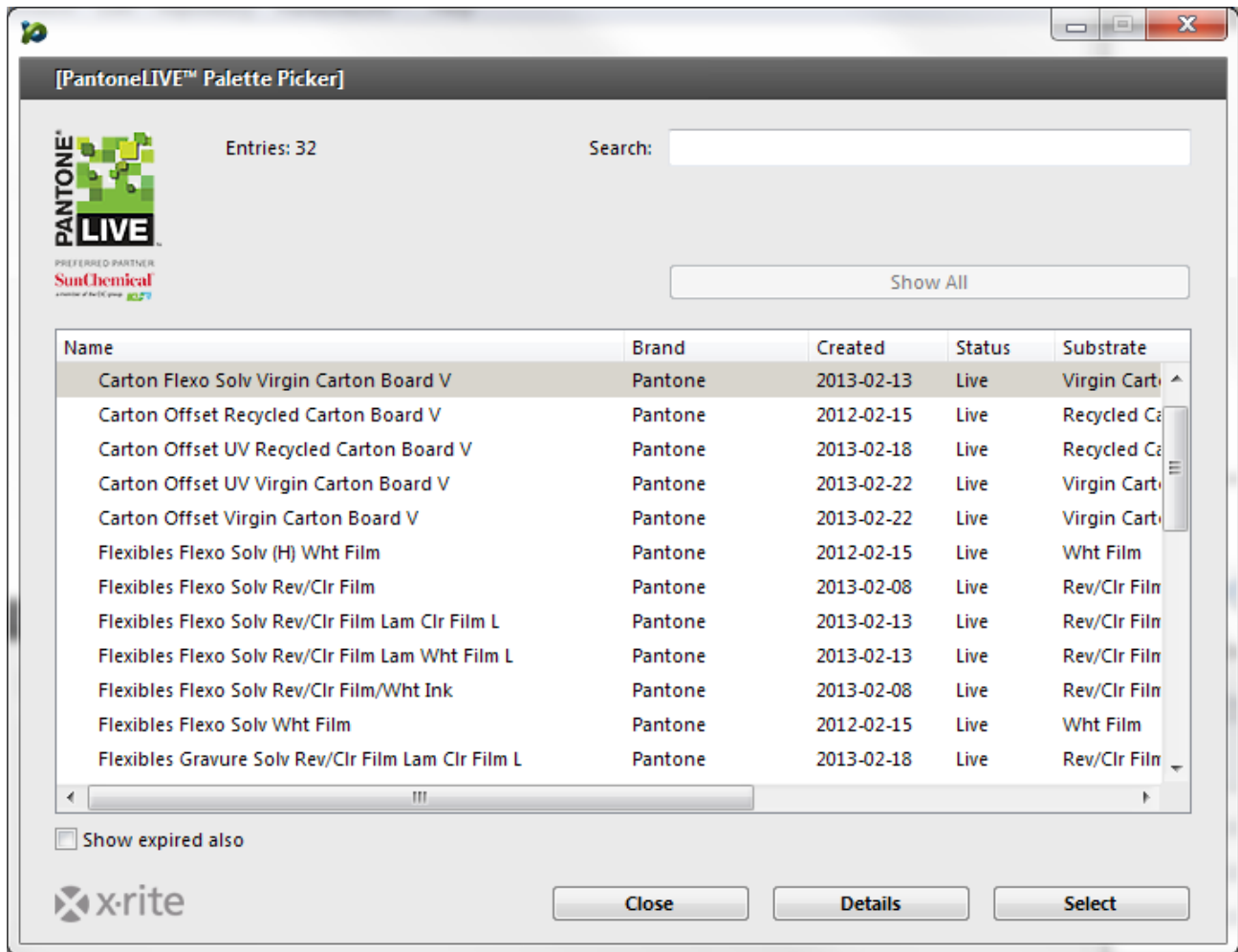
Adding PantoneLIVE login info to ColorCert:

1. In the ColorCert Chooser, select PantoneLIVE from the main menu and then User Login.
2. Enter the following server: <https://ws.pantone.live.com>.
3. Enter your My X-Rite username and password into the appropriate fields.
NOTE: Make sure this is the login that is associated with the ColorCert PantoneLIVE license.
4. Click Log In.

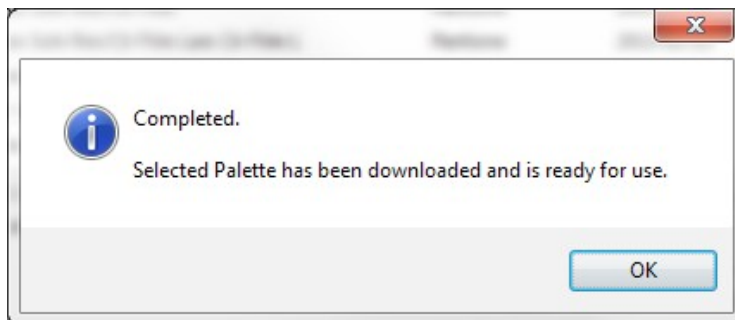
Selecting a PantoneLIVE palette:

1. In the Main Menu, click on Select Palette under the PantoneLIVE menu.
2. You see a list of palettes that you have access to, including any standard PANTONE Fandeck palettes and other reference palettes that you are authorized to access.

3. Double-click the required palette for the Substrate that you need, or highlight it and click Select.



4. A dialog will display to let you know that the palette is ready for use. You can close the window, or leave it open if you need it again.

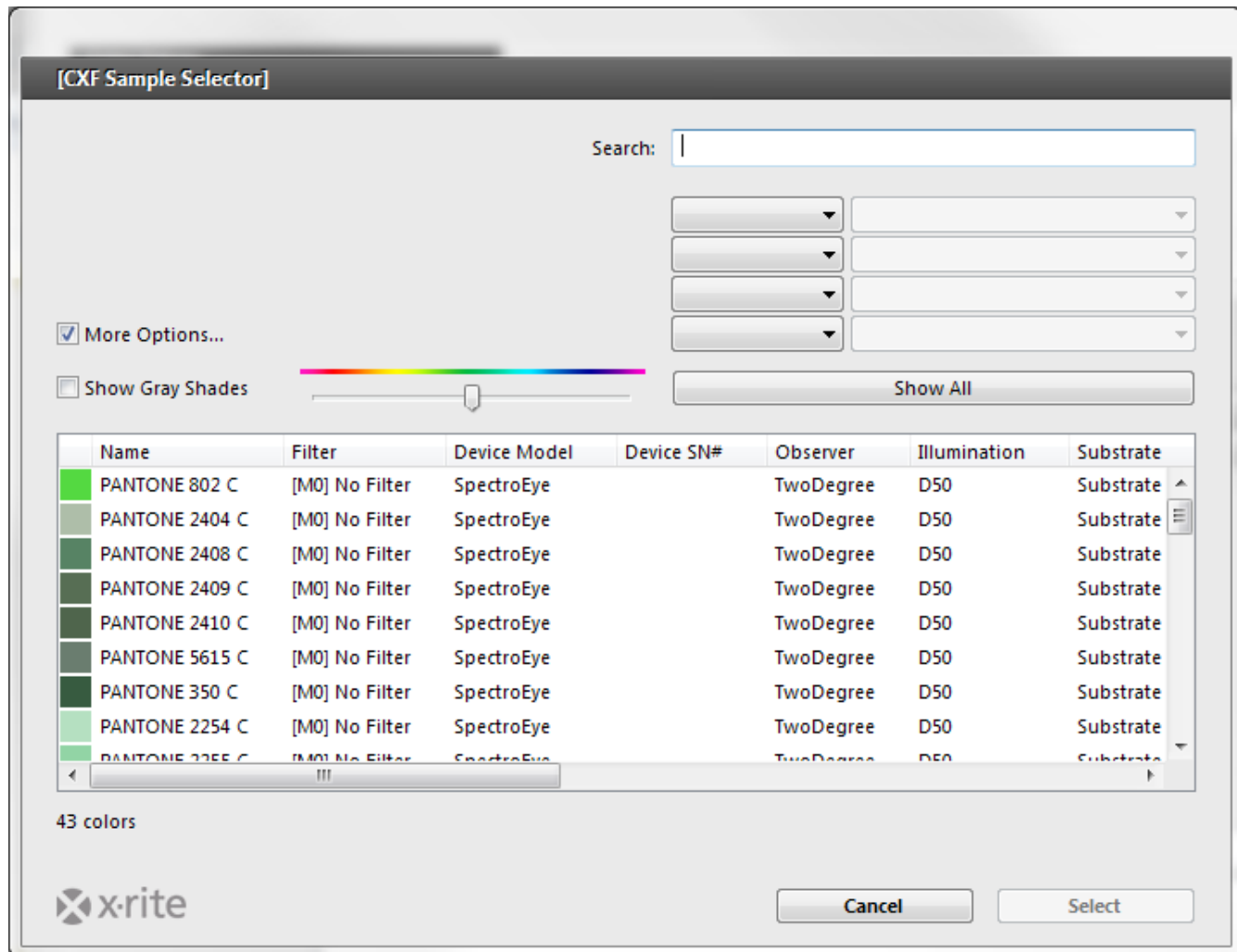


Selecting colors from a library (CxF, MIF, XTF, ColorCert Library, PantoneLIVE):

In the next chapter we will explain how to set up a Profile in ColorCert. On several places you will have the possibility to load colors from a digital library into your profile. This can be from external sources like a CxF, MIF, XTF files or a ColorCert Library that you can navigate to and open or it can be from the preselected PantoneLIVE palette:

- Load from ColorCert Library...
- Load from CxF Library...
- Load from MIF Library...
- Load from XTF Library...
- Load from PantoneLIVE™ ...

Once you have loaded a library from any of the external sources you are able to select a color from the Sample Selector Window like below. You can search after parts of the Color Name or you can use the drop down menus to filter the results. Click on More Options and you will see a lever that helps you to scroll to the relevant color shade or you can select Show Only Gray Shades.

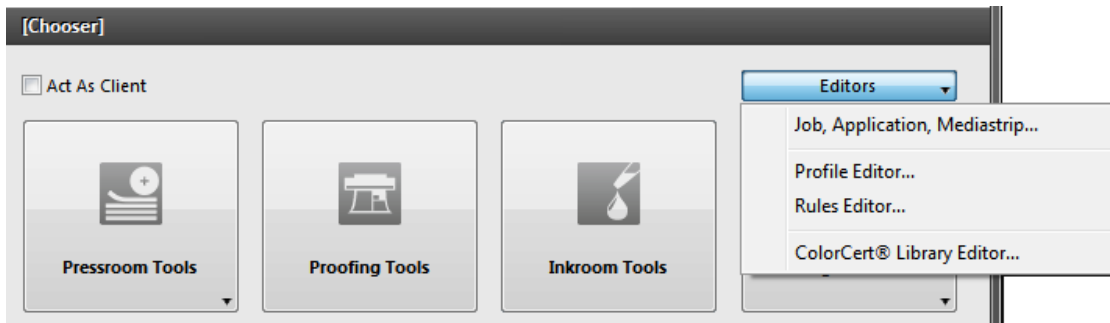


Creating Standards

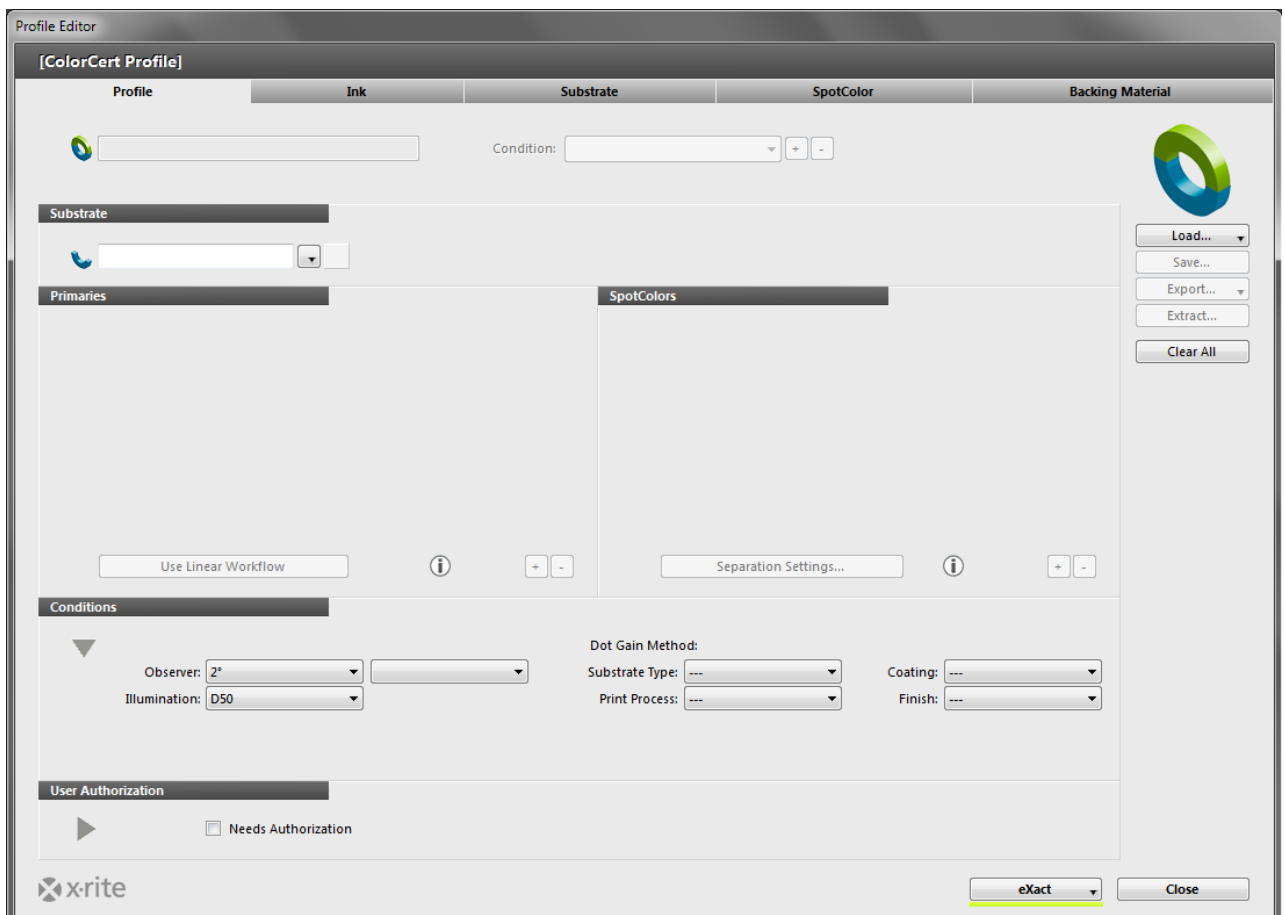
Before you can create a Profile, you need to have color standards. This section will guide you through the steps to measure your standards in ColorCert.

If you have Standards available, for example in CxF or MIF format, or if you are working with data from palettes in PantoneLIVE, you can continue with Building a Profile.

1. From the Chooser, click on Editors, and select Profile Editor.

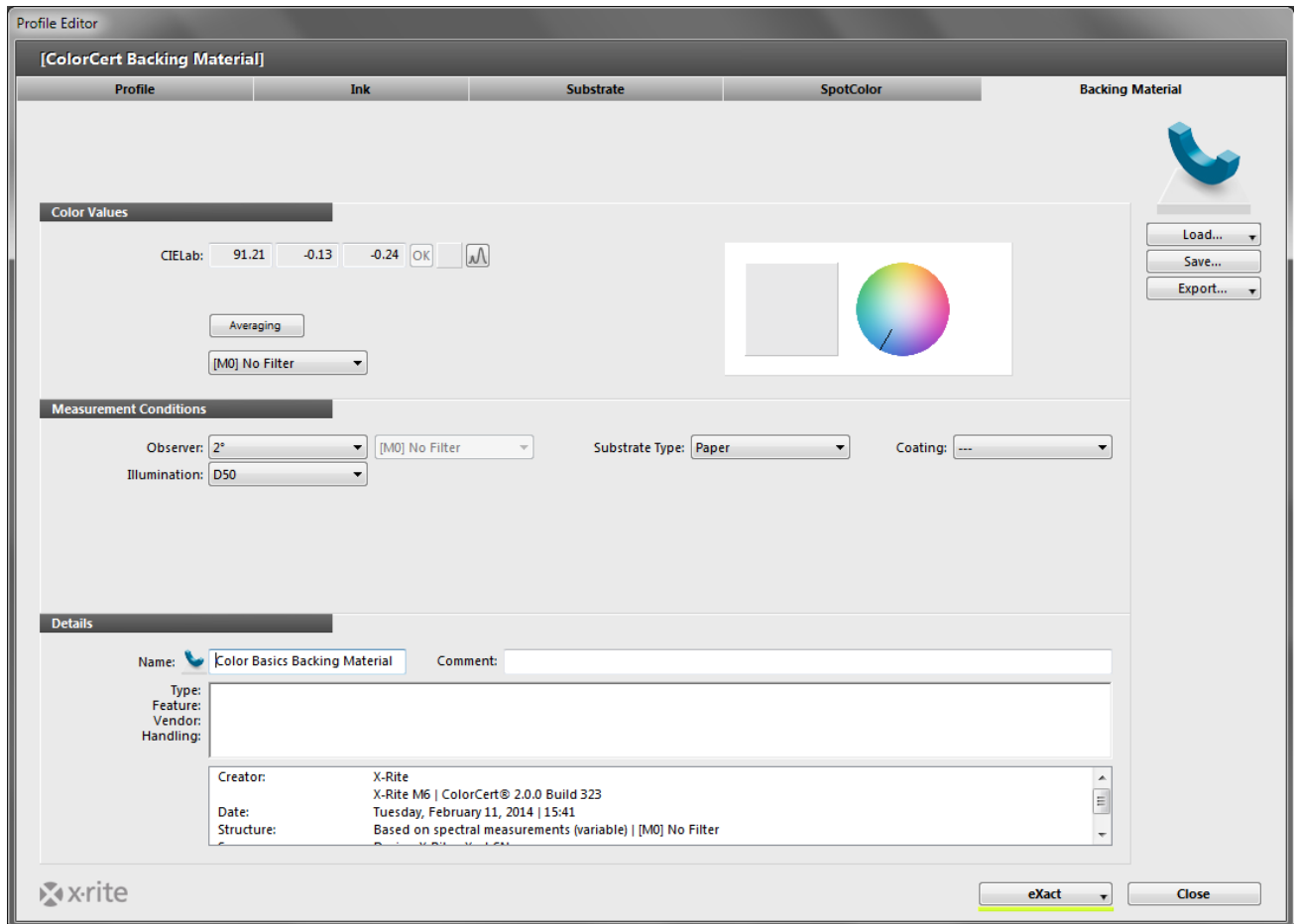


2. The first tab displays an empty Profile. The other tabs are for creating standards for Inks, Substrates, Spot Colors that will be used in Profiles, and Backing Materials that will be used in Rules. These colors must be created locally in these tabs. As we go through these standards we will start on the right tab, and work our way left.



Backing Material Tab

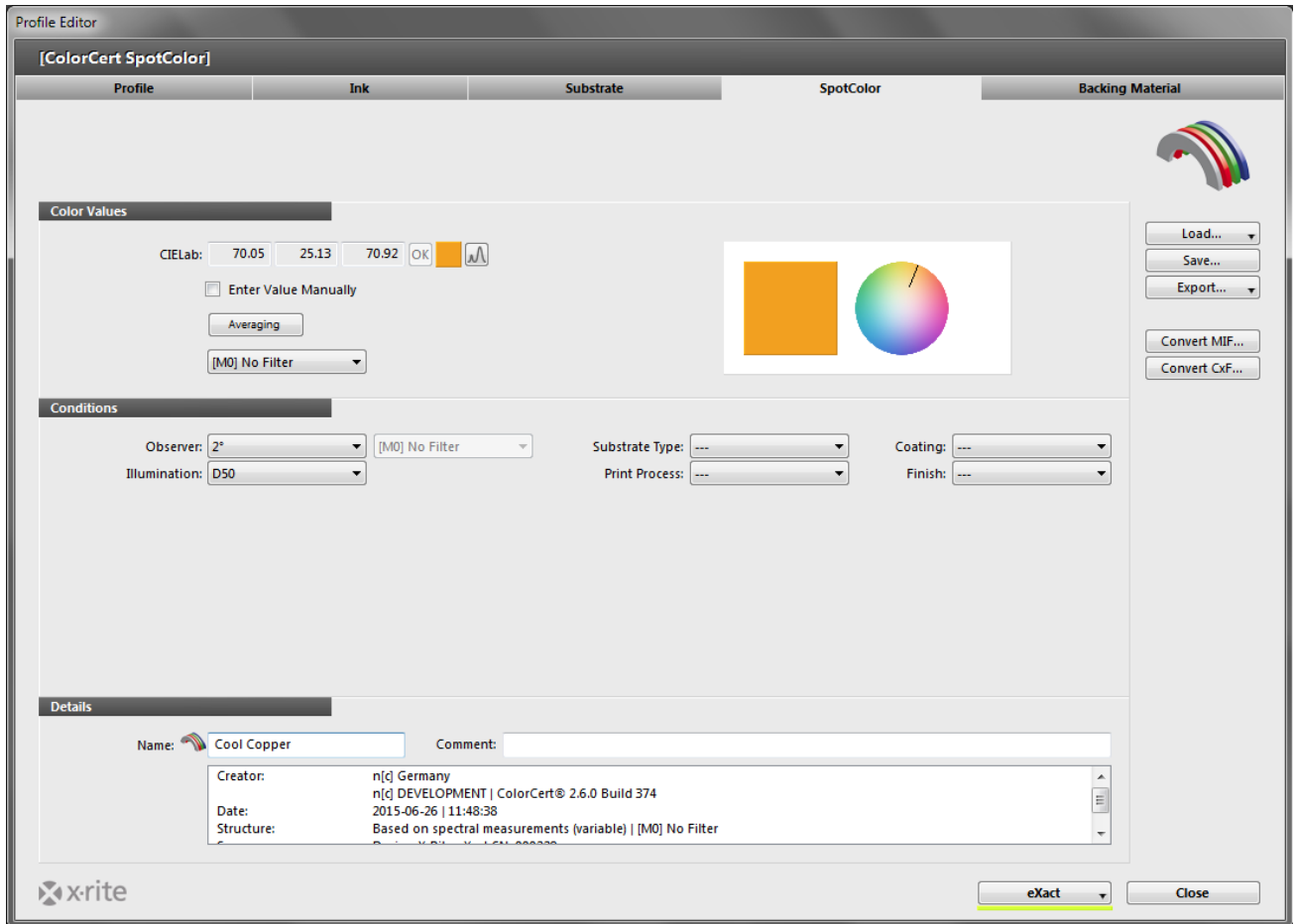
When measuring with a Substrate that is not opaque, the backing material will greatly influence the color readings. In some cases the Brand Owner will specify a backing material to be used. In others, you will need to provide this information. In many cases this will be a specified white backer as defined by ISO 13655. Munsell produces an ISO WHITE BACKING SHEET, part number ISO-N925/M12, for this purpose. Contact your X-Rite dealer for more information.



1. To measure a backing material, select the Backing Material tab.
2. Take a measurement with your spectrophotometer and the values will show up under Color Values. If your instrument supports different measurement conditions, you should select the condition that you are using for your production measurements.
3. While the backing should be uniform in color, you can use the Averaging button to trigger multiple measurements for an averaged value, then use the up and down arrows to select the number of measurements to average.
4. Take the required number of measurement for your averaged reading.
5. Under Measurement Conditions, check the Observer Angle and the Illumination that will be used in production.
6. Optional: Select the appropriate Substrate Type and Coating that will be used.
7. In the Details section, you must add the Name of your backer and any other Comments or information that you require.
8. Use the Save button to store this standard for future use in Rules.
9. Once the backing has been saved, you can create additional backings following the same steps.

SpotColor Tab

In ColorCert, a SpotColor represents any important Brand Color in the Job, no matter how it is produced. This is a single value of a color that will be used in the Job, such a product package that contains a Brand Logo color. The Brand Owner may only be concerned with the specific color value of this Brand Logo, not whether it is produced with a solid PANTONE Color, or a tint of a PANTONE Color, or Process Colors. It is important is that the printed Logo Color is correct. These Spot Colors may also represent build colors, such as red, green, and blue overprints or gray balance patches.



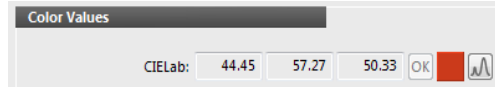
Measure SpotColors

1. Under the Color Values, if your instrument supports different measurement conditions, you should select the condition that you are using for your production measurements.
2. While the physical standard may look uniform in color, you can get better results if you use the Averaging button to trigger multiple measurements for an averaged value, then use the up and down arrows to select the number of measurements to average. Three is recommended.
3. Take the required number of measurement for your averaged reading.

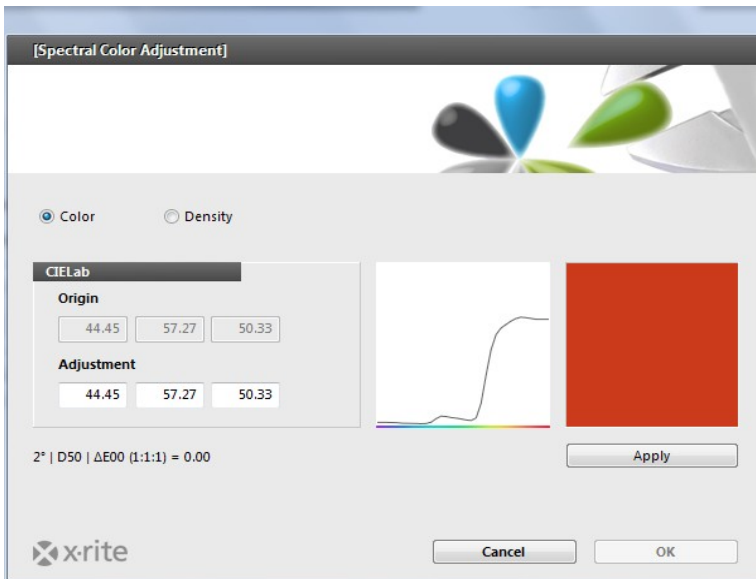


Adjustment of Measured SpotColor

If your measured color is intended to match a standard color and is very close, you can enter adjustments to the color. This will still provide spectral data, but the software will calculate an adjusted theoretical curve. This should only be used for small adjustments in the L*a*b* values because it is not as accurate as spectral data.



1. In the Color Values section, click this button:
2. Key in the specified L*a*b* values.
3. The software will calculate a curve and display a green checkmark. If the values are very different, the calculation will fail to provide a good curve, and the software will display a red exclamation mark.



Manual Entry of SpotColors

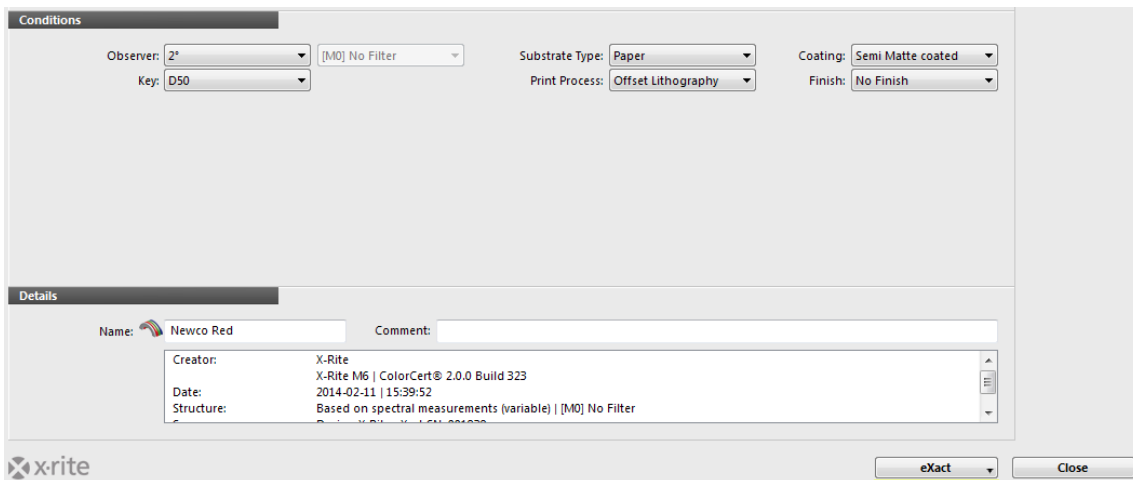
Colors can also be entered in the form of L*a*b* values. This option does not provide any of the benefits of spectral data.

1. Check the box next to Enter Value Manually.
2. Key in the values exactly as they are specified by the Brand Owner.

Saving Colors

Before you save the SpotColors for use in your Profiles, you will need to provide some additional information.

1. Under Measurement Conditions, check the Observer Angle and the Illumination that will be used in production.
2. Optional: Select the appropriate Substrate Type, Print Process, Coating, and the Finish that will be used.
3. In the Details section, add the Name of the SpotColor and any other Comments that you require.
4. Use the Save button to store this SpotColor standard for future use in Profiles.
5. Once your SpotColor has been saved, you can create additional SpotColors if desired.



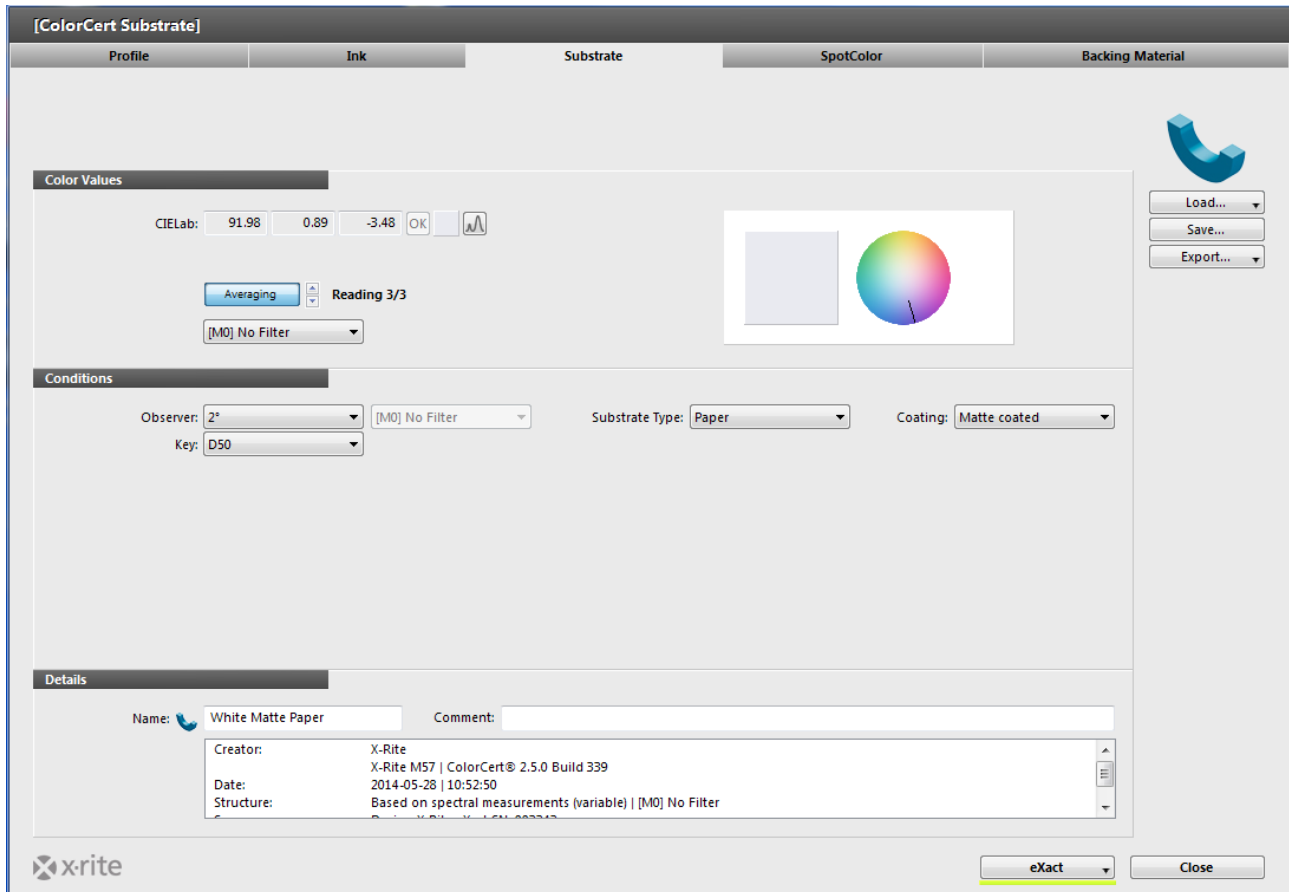
The screenshot shows the 'Conditions' and 'Details' sections of the ColorCert software interface. The 'Conditions' section includes dropdown menus for Observer (2°), Key (D50), Substrate Type (Paper), Print Process (Offset Lithography), Coating (Semi Matte coated), and Finish (No Finish). The 'Details' section includes a Name field (Newco Red), a Comment field, and a metadata table.

Field	Value
Creator:	X-Rite
Date:	X-Rite M6 ColorCert® 2.0.0 Build 323
Structure:	2014-02-11 15:39:52
	Based on spectral measurements (variable) [M0] No Filter

At the bottom of the interface, there is an 'eXact' dropdown menu and a 'Close' button.

Substrate Tab

The importance of the Substrate Color should not be overlooked. Some say that the Substrate is the fifth color of 4-Color Process Printing, while others call it the first color of printing! The color of the Substrate has an impact on all colors, even solid 100% coverage areas. Most ink is not completely opaque, so the paper color is always affecting the final printed color. Each Substrate sample can vary, in fact on each sample there can be significant variation across the sample.



Measure Substrates

1. Under the Color Values, if your instrument supports different measurement conditions, you should select the condition that you are using for your production measurements.
2. While the Substrate sample may look uniform in color, you can get better results if you use the Averaging button to trigger multiple measurements for an averaged value, then use the up and down arrows to select the number of measurements to average (three is recommended).

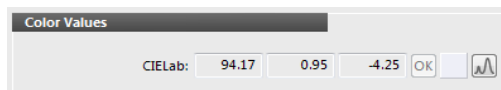
3. Take the required number of measurement for your averaged reading.



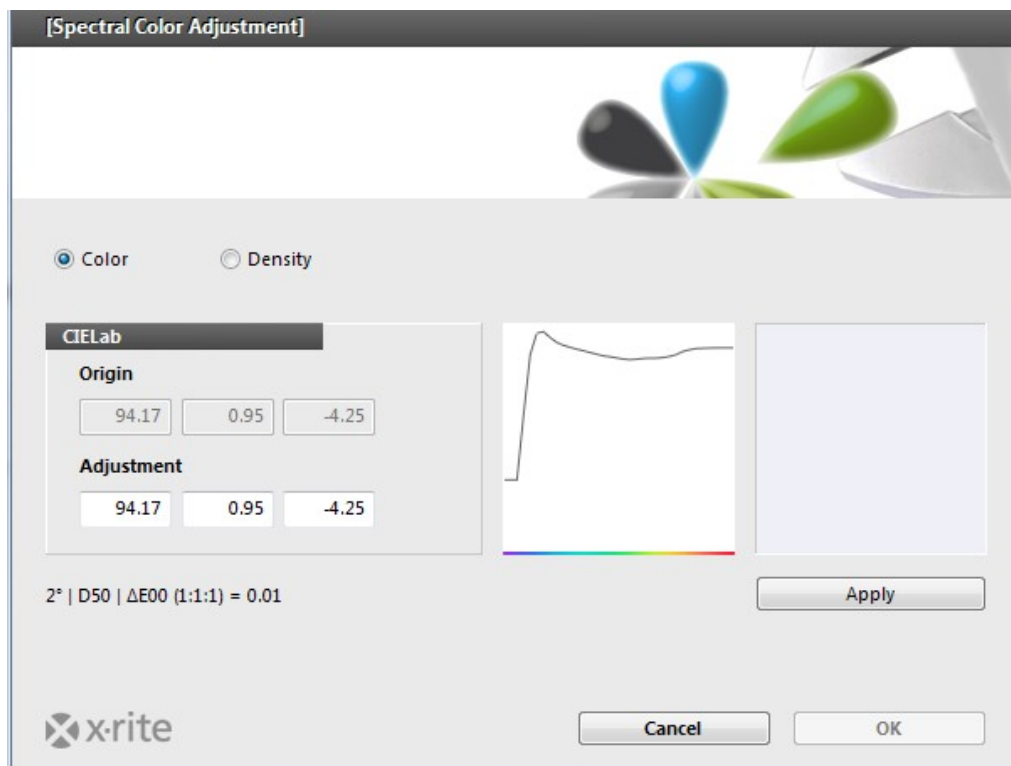
Adjustment of Measured Substrate Color

If your Substrate is intended to match a standard paper color and is very close, you can key in adjustments to the color. This will still provide spectral data, but the software will calculate an adjusted theoretical curve.

1. In the Color Values section to the right of the CIE Lab values, click this button:



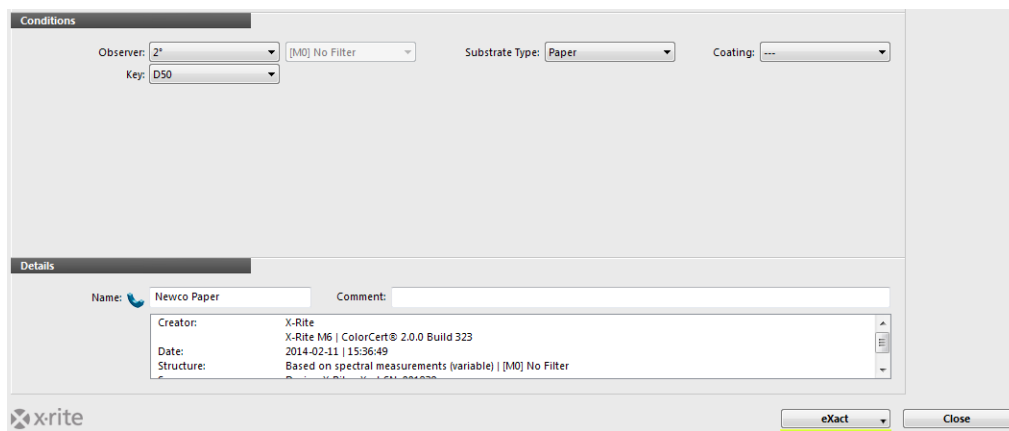
2. Key in the specified Substrate values.
3. The software will calculate a curve and display a green checkmark. If the values are very different, the calculation will fail to provide a good curve, and the software will display a red exclamation mark.



Saving Substrates

Before you save the Substrates for use in your Profiles, you will need to provide some additional information.

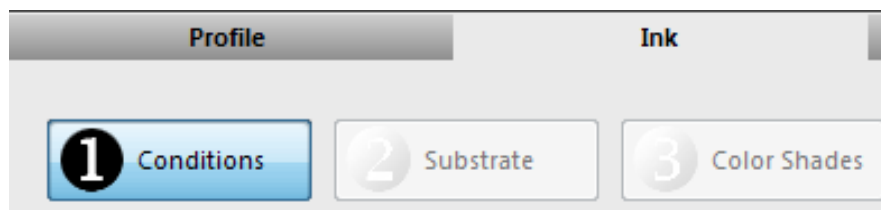
1. Under Measurement Conditions, check the Observer Angle and the Illumination that will be used in production.
2. Optional: Select the appropriate Substrate Type and Coating that will be used.
3. In the Details section, you must add a Name of your Substrate, and any other Comments that you require.
4. Use the Save button to store this Substrate standard for future use in Profiles.
5. Once your Substrate has been saved, you can create additional Substrates if desired.



Ink Tab

A ColorCert Ink includes tint values and may or may not be included in process builds of color in the Job. This is different than a ColorCert SpotColor that only represents one color value. Therefore, you will need to provide more information for an ink. Inks include the solid color and the tint percentage values. These colors can be Process Colors of cyan, magenta, yellow and black. If you also want to check the tints of your spot color, you should create it as a ColorCert Ink instead of a ColorCert SpotColor. It is assumed that you have calibrated your printing plates, and that you have good press samples to measure for each of the 25%, 50%, and 75% tint values of each of your colors.

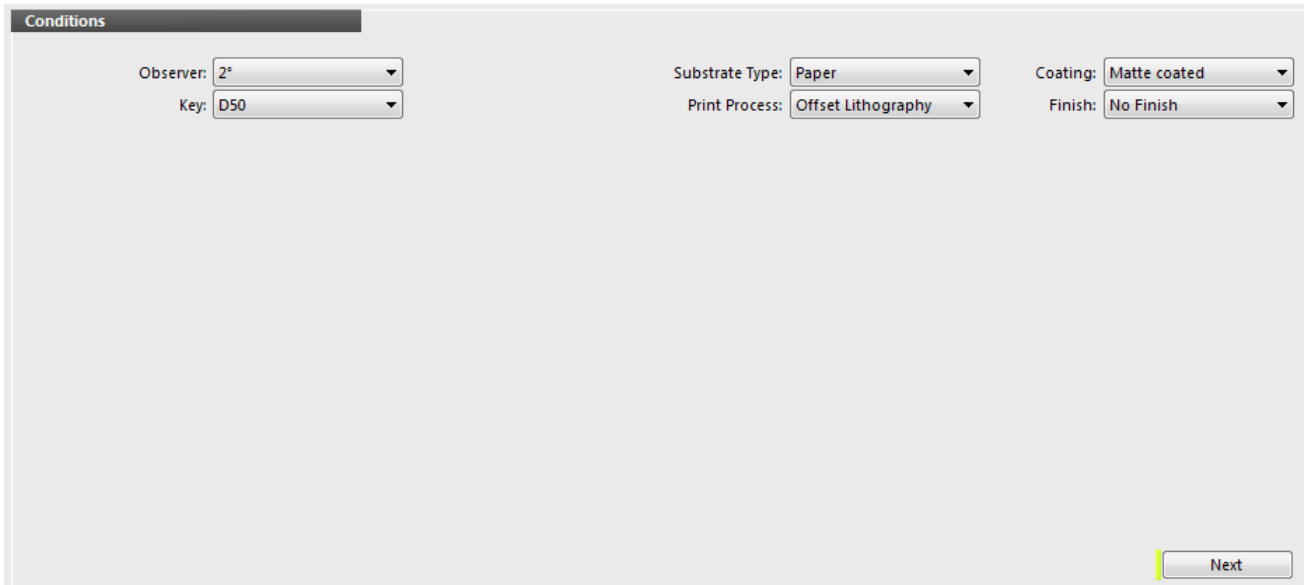
Inks are created in three steps: Define conditions, select the Substrate, and then provide the color shades. These steps are represented by the buttons near the top of the ink window.



Step 1: Conditions

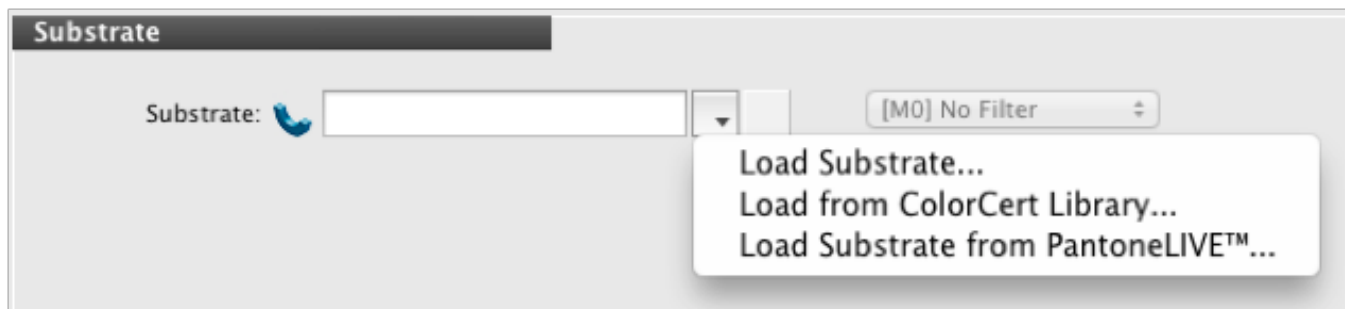
On the first step, you will need to provide some information about your ink.

1. Under Measurement Conditions, check the Observer Angle and the Illumination that will be used in production.
2. Optional: Select the appropriate Substrate Type, Print Process, Coating, and the Finish that will be used.
3. Click Next to go to the next step.



Step 2: Substrate

1. Click on the down arrow button to the right of the Substrate name field.
 - If you want to Load a Substrate from a standard that you have created, the software will take you to the default location for storing your Substrate files. Select your Substrate and click Open.
 - If you wish to Load from ColorCert Library, see the “Load Substrate from Local Libraries” instructions in the “Substrate Tab” section.
 - If you would like to Load a Substrate from PantoneLIVE, see the “Load Substrates from the PantoneLIVE Cloud Database” instructions in the “Substrate Tab” section.



2. After you select your Substrate Color, the software will automatically advance to the next section.

Step 3: Color Shades

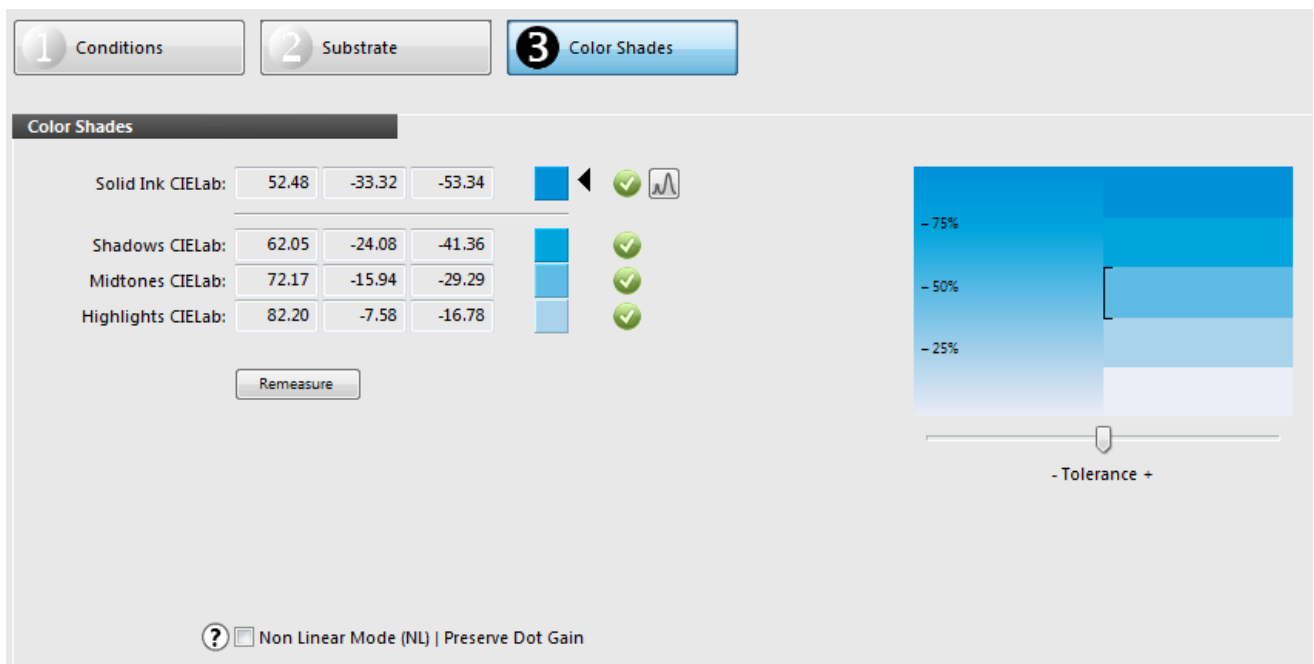
Inks include the solid color and the tint percentage values. There are two different ways to capture the Color Shades for an Ink.

Plate Curve Modes

Linear Mode:

This process assumes you don't have a plate curve for your spot color yet and you want to capture the behavior of the color shades from full tone to the substrate. At the end of the process you'll have captured the ideal visually equal distant 75%, 50% and 25% tints as spectral data. This can be captured from a drawdown with a vignette or a color bar with some screen patches. As you take measurements of the sample, the software will alert you if the tint percentage value is too high or too low and will not proceed unless you measure a value that helps to interpolate the correct required shade.

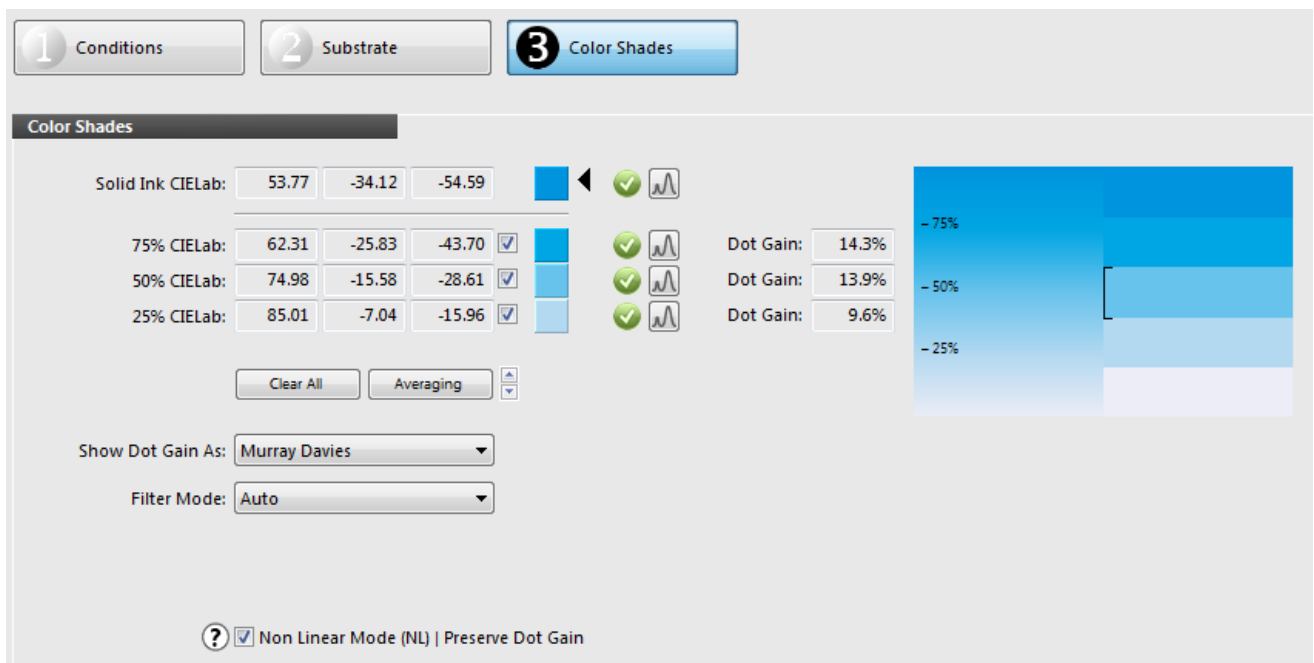
1. Measure the Solid.
2. For the Shadows measure a Tint close to a visual 75% shade. As you measure you will see a colored arrow pointing up or down to indicate that the visually correct 75% shade is darker or lighter.
3. Measure as indicated a tint level higher or lower to allow the Software to interpolate the correct shade.
4. Repeat this with the Midtones and Highlights.
5. In the Details section add a Name of your Ink and any other Comments that you require.
6. Click Save. This will prompt you with the name of the file and the default location to save it. Click Save again.



Non-Linear Mode | Preserve Dot Gain:

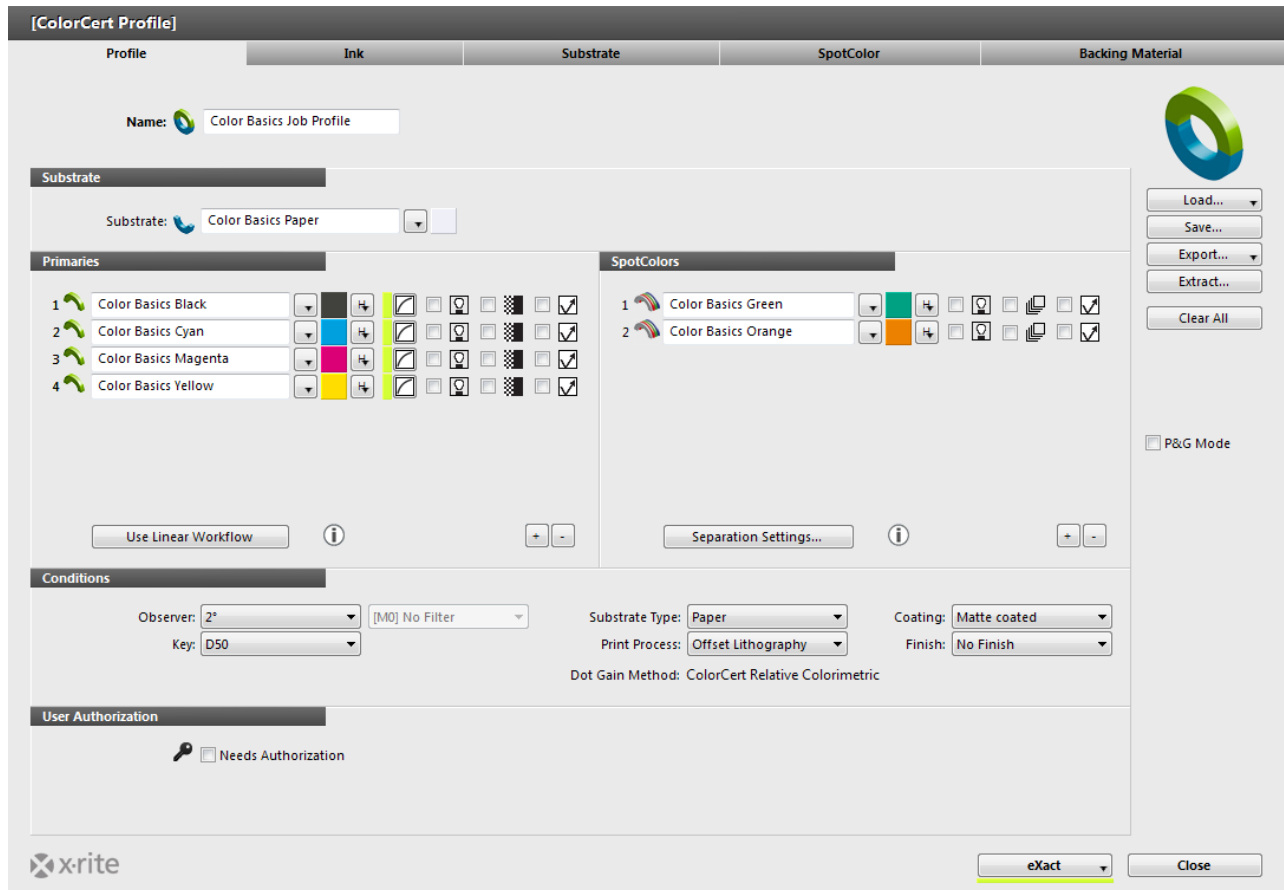
This process allows you to capture a specific dot gain that you want to replicate on press. This should be captured from an approved fingerprint or print sample with screen values for 75%, 50%, 25%.

1. Put a check in the box marked Non-Linear Mode (NL). This will preserve the dot gain values of the patches and use them as your target values.
2. If you would like to average your measurements from multiple press sheets, click on the Averaging button, and select the number of readings you would like to average.
3. Measure the Solid and Tints in order that they appear on screen. If you are averaging, you will be prompted to take the selected number of readings.
4. Your measured print dot gain values will be displayed to the left of the color preview. This is using the dot gain calculation method that is listed under Show Dot Gain As. You have three choices:
 - Murray Davies: Dot Gain based on density, typically used for CMYK and predefined target dot gain values like ISO or G7. Not recommended for Spot Colors.
 - Relative Colorimetric: Dot Gain based on the spectral data with the target to have visually equally stepped shades.
 - ColorCert Relative Colorimetric: based on Relative Colorimetric but with a further improved calculation. If you have 0.0% Dot Gain shown as ColorCert Relative Colorimetric you have the same result as the linear Mode and visually ideally stepped shades.
5. In the Details section add a Name of your Ink and any other Comments that you require.
6. Click Save.



Creating a Profile

To build your Profile, select the Profile tab. A Profile can be built directly from data in palettes in the PantoneLIVE cloud, or from the standards that you create locally, as described in the previous section “Creating Standards.” As you can see in the screen below, a Profile is made up of standards for Substrate, Primaries and SpotColors, as well as the measurement and print conditions.



Substrate

When you click on the button next to the Substrate name field, you will have three options:

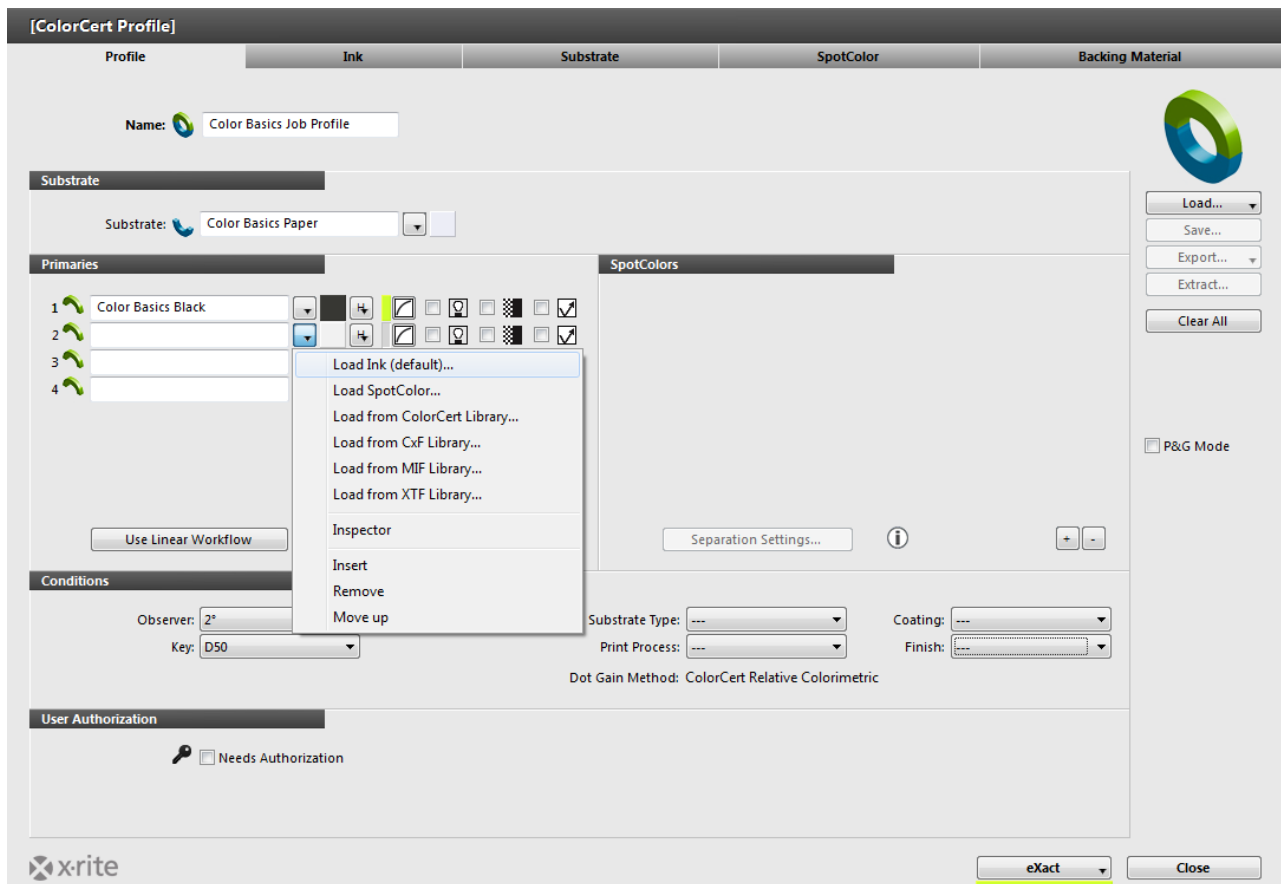
1. Select a Substrate Color that you created and saved in ColorCert.
2. Select a ColorCert library that has a Substrate Color, and navigate to the library file.
3. Select a PantoneLIVE palette to retrieve the Substrate Color.

The different ways are described in the section Loading Files into ColorCert.

Primaries

Primaries are the colors in your production that will be printed with tints. These may be used in Process Color Solid Colors, or simply in Single-Color Tints and Gradients. You can load colors from several sources.

- To set the number of primaries, click the + button near the blank list of Primaries. Each click will add a field to add a primary ink in this Job.
- To remove a color from the list, use the – button.
- For each Primary in the list, click on the button to the right of the Primary name field to see the list of options for loading a Primary Ink.
- NOTE: Every Profile must have at least one Primary Color defined, or you will not be able to save it.



Load SpotColors and Inks

The different ways of loading color files are described in the section Loading Files into ColorCert.

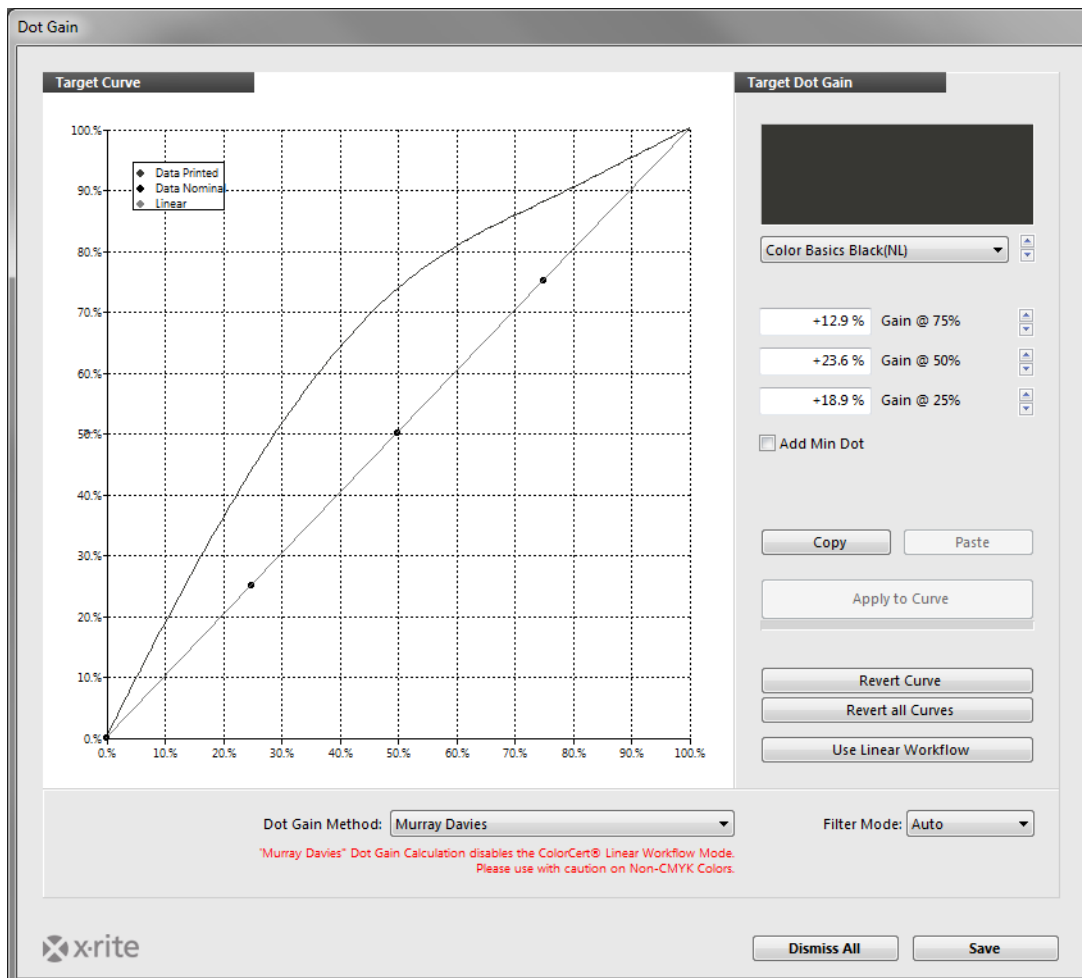
Other Primary Settings

Next to the ink colors are drop down lists for Priority [H]. This is where you will select tolerances for colors. In the Rules, these were identified as high, medium, or low importance.

- For critical colors that must be have the highest importance, you will assign a high priority (H). This has a lower ΔE tolerance number in your Rule. Colors with a medium level (M) of importance will get a higher ΔE number. The lowest priority (L) colors will receive the highest ΔE number.
- In some cases these numbers may come from a print standard, but other times it is a value negotiated between Print Supplier and the Brand Owner.
- You will want to make note of the tolerance values assigned to L, M and H for use in your Profiles that will be used with this set of Rules.

Next to the Priority, you can amend the Dot Gain curves. You can also change the Dot Gain Method here.

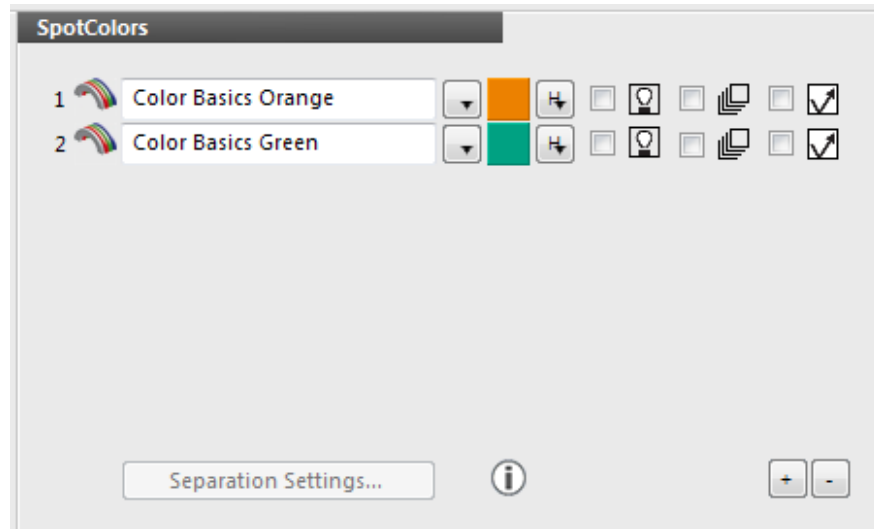
- Murray Davies: Dot Gain based on density, typically used for CMYK and predefined target dot gain values like ISO or G7. Not recommended for Spot Colors.
- Relative Colorimetric: Dot Gain based on the spectral data with the target to have visually equally stepped shades.
- ColorCert Relative Colorimetric: based on Relative Colorimetric but with a further improved calculation. If you have 0.0% Dot Gain shown as ColorCert Relative Colorimetric you target to have visually ideally stepped shades.



Further icons refer to a secondary lighting condition [2LC], Combo Plate Support [M], and Metallic Ink. These will be discussed in the Rules Section.

SpotColors

SpotColors can be added exactly as you added Substrates and Inks: use the + button to add a field, and the – button to remove one. The difference is that these colors will not include a range of tints and a solid. They can only have one value. Any colors loaded that have tints and solids will only be used as a solid.



Measurement Conditions

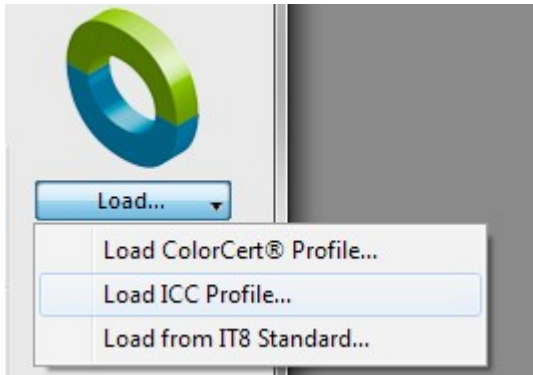
1. Under Measurement Conditions, select the Observer Angle and the Illuminant Observer that will be used in production.
2. Select the appropriate Substrate type, Print Process, Coating, and Finish that will be used. These settings will be used in reports and Scorecards and they will help when setting up Rules.
3. Use the Save button to store this Profile for future use in Jobs.

You can also load existing Profiles using the Load... button to edit them and save them with new names as needed, such as adding SpotColors or primaries. Once your Profile is finished click Close.

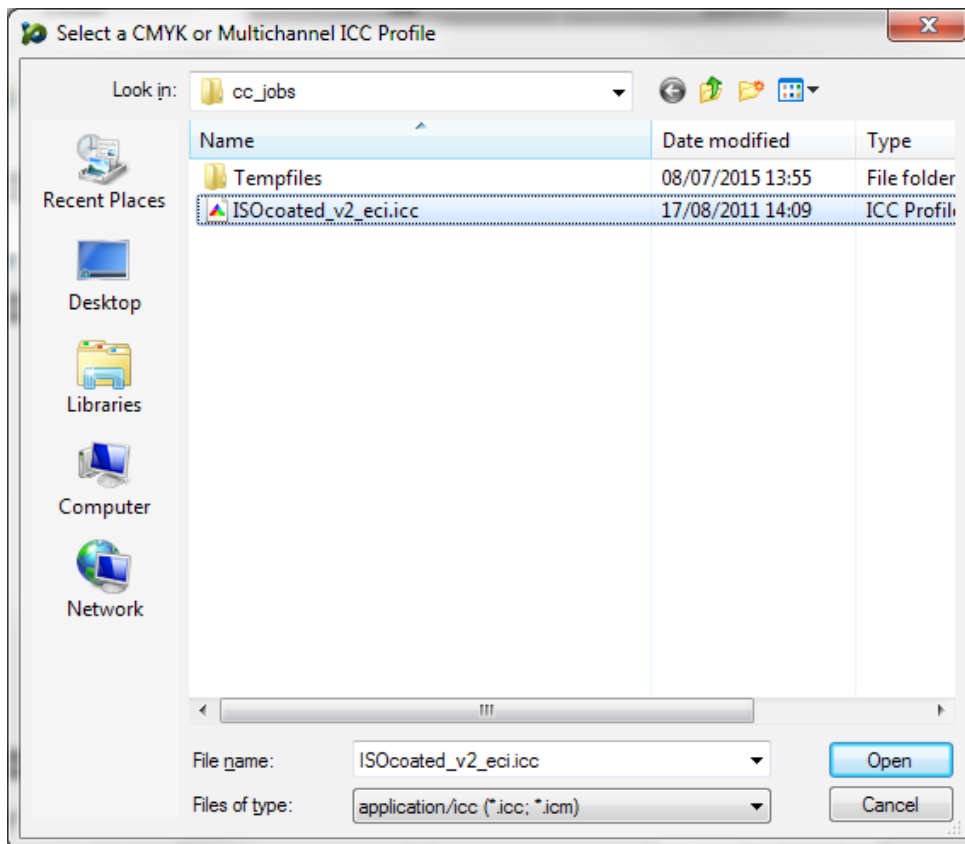
Loading a profile from ICC or CGATS

Instead of creating a profile from scratch, you can use ICC Profiles or IT8/CGATS files as a base for your Profile. Loading an ICC Profile or an IT8 Standard/CGATS file:

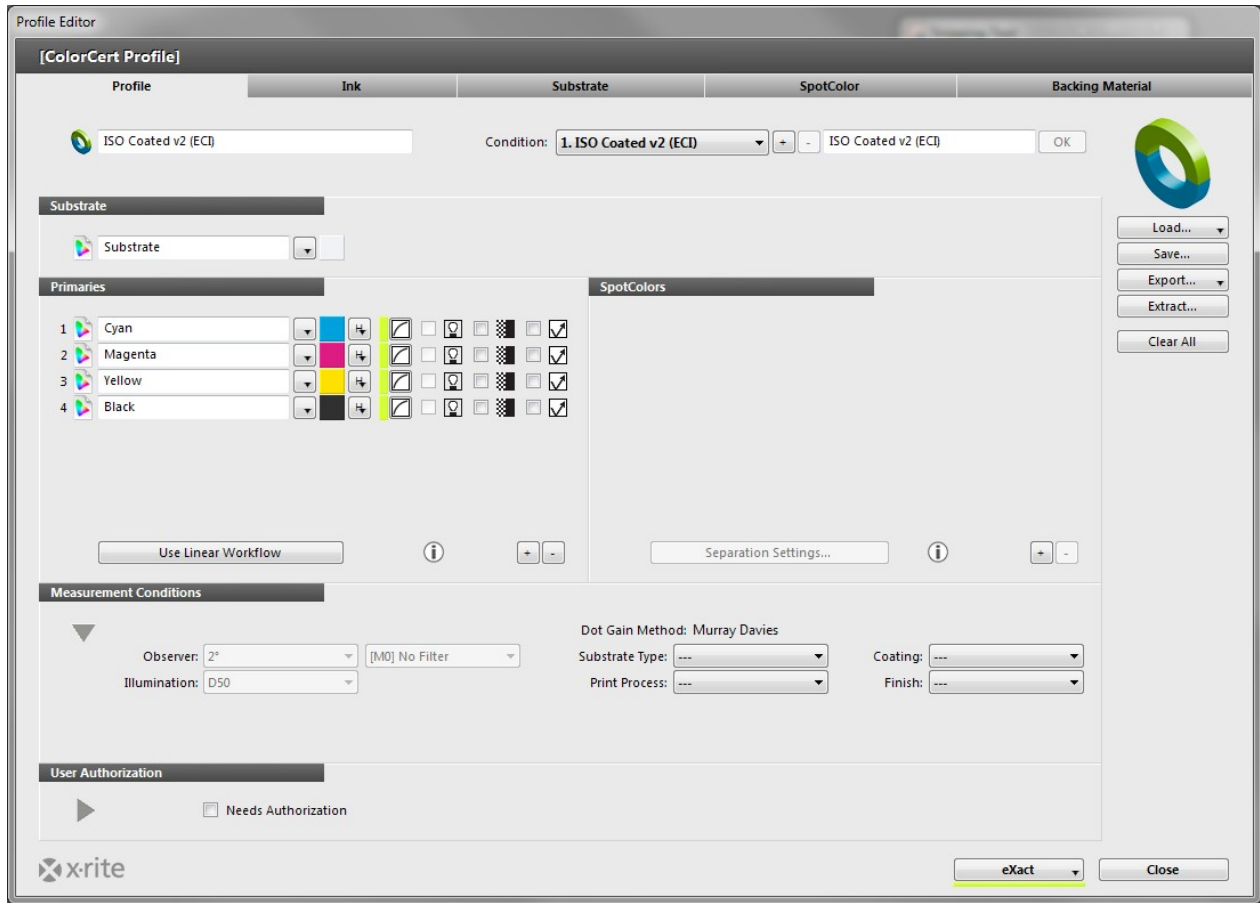
1. Click on Load and select Load ICC Profile.



2. Browse to the folder containing your ICC Profile, select the profile and click Open.

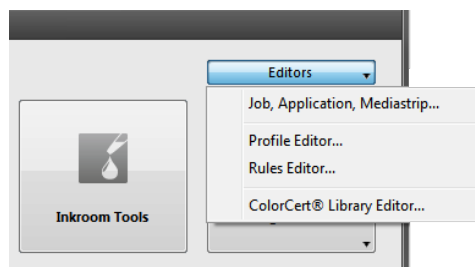


3. The ColorCert Profile Editor opens, and shows the selected profile data.



Creating Rules

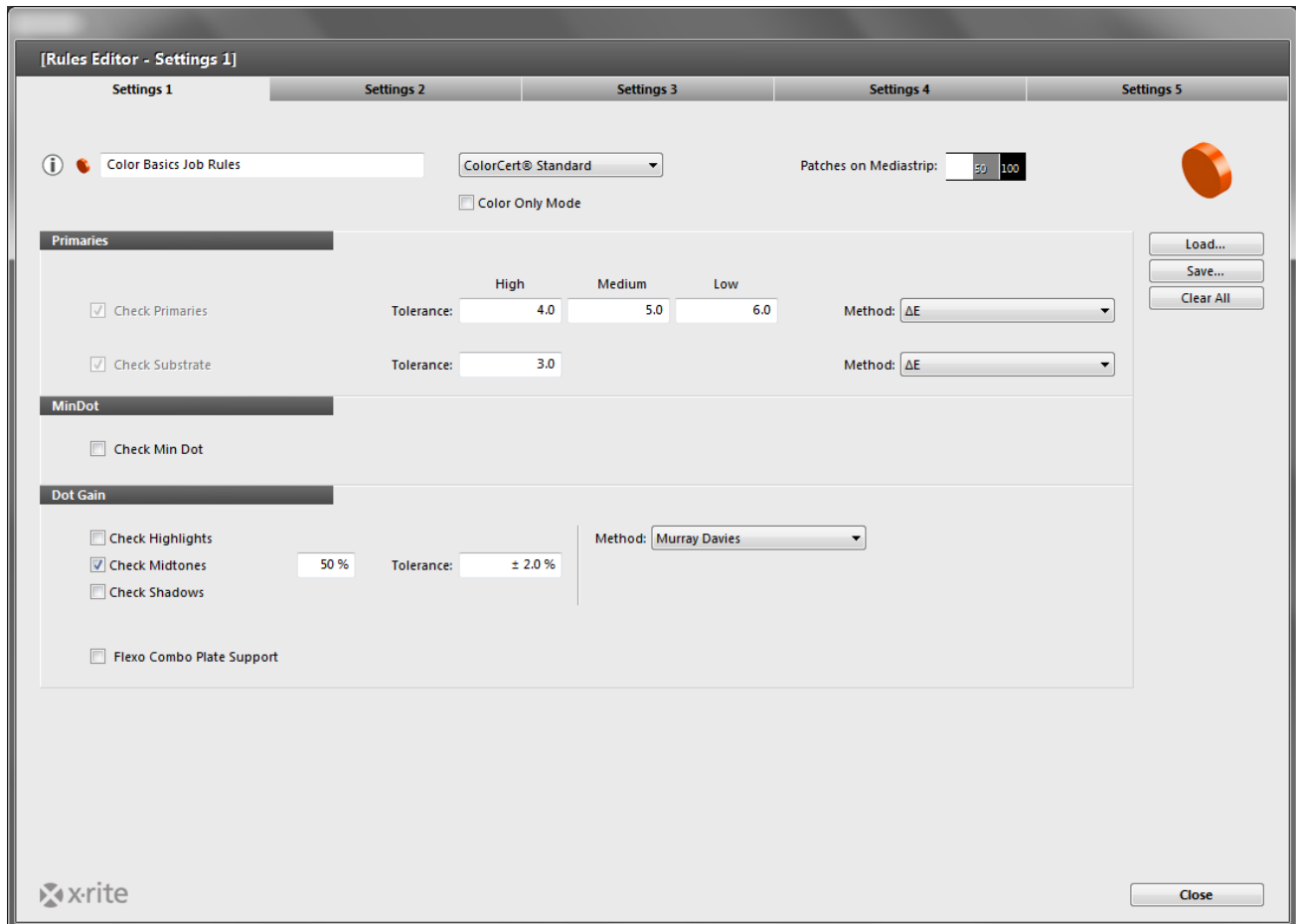
Rules define tolerances for production. In this section we will look at how to create a set of Rules. Launch the Rules Editor from the Editor menu. Let's look at what is found behind each of the tabs.



Settings 1 Tab

The Settings 1 tab is selected by default.

1. Type in a meaningful name so that operators will be able to recognize the purpose of this set of Rules.
2. In the upper right corner, Patches on Mediastrip will show a preview of the patches that will be produced for a Job using this set of Rules. This will change dynamically as you select patch options in the Rules.



3. Primaries are the colors in your production that may be printed with tints. These may be used in Process Color solids and their tints, or this might be a spot color printed in solids and tints.
4. Tolerance: This is where you will establish the tolerances for colors that will be identified as high, medium, or low importance. These levels of importance can be assigned to individual colors in your profile.
 - For critical colors that must have the highest importance, you will assign a lower ΔE tolerance number. Colors with a medium level of importance will get a higher number. The lowest Priority Colors will receive the highest ΔE number.
 - In some cases these numbers may come from a print standard, in other cases it is a value negotiated between Print Supplier and the Brand Owner.
 - Method. This is where you will select the ΔE calculation method to be used. In 4-Color Process, this is usually defined in the print standard. For Brand Colors, Brand Owners may specify their own choice in the ΔE method.
 - Substrate. Set the tolerance and the method values that you want to target. These may be described in the print standard that you are printing to, or may be defined by a client's requirements.

5. MinDot

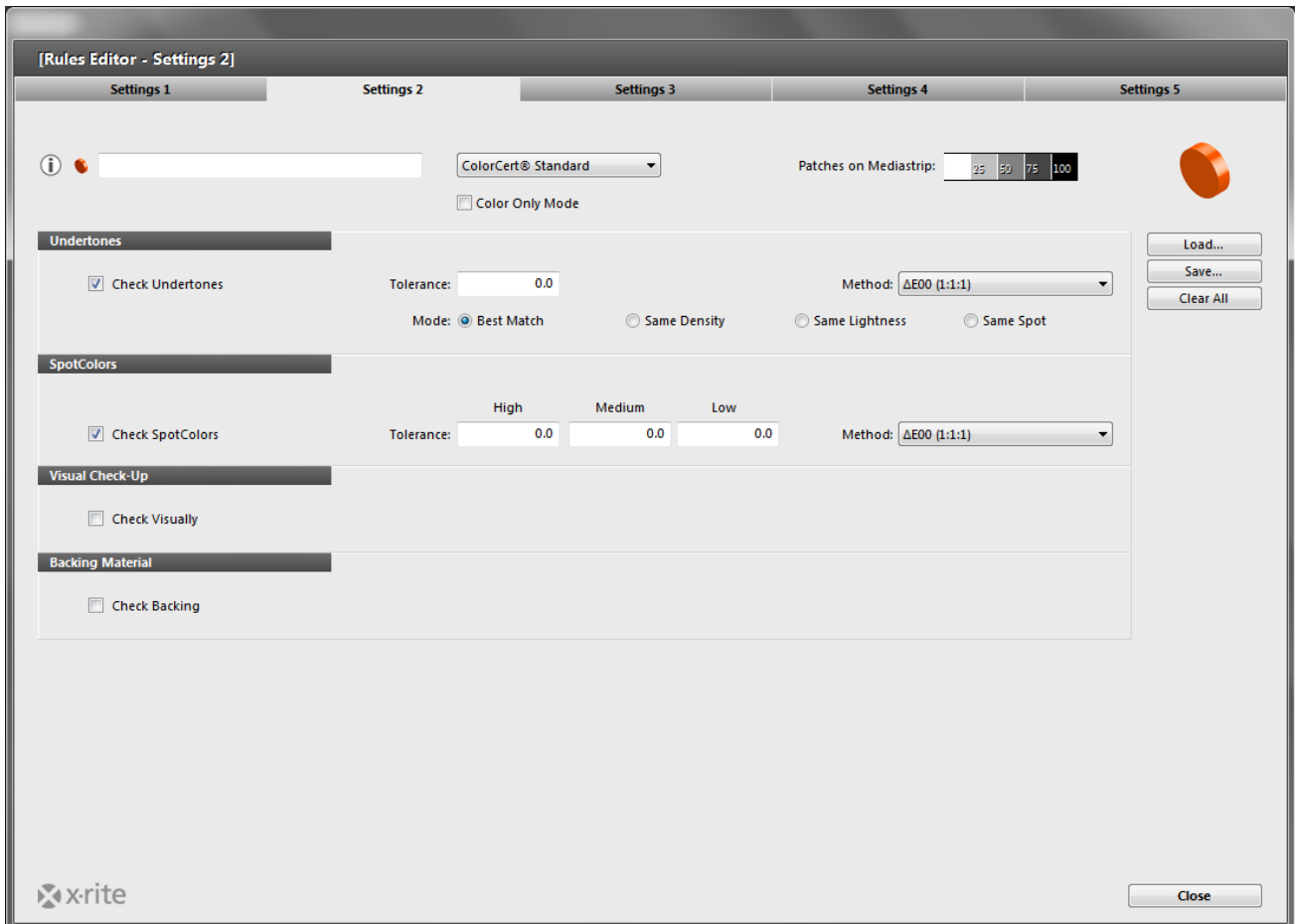
- Nominal Min Dot is the minimum dot as defined in the digital file used to make the plate.
- Min Dot Printed is the minimum dot that can be printed well.
- Tolerance Δ Gain is the % amount of gain that is acceptable in the minimum dot.
- Tolerance Δ Loss is the % amount of loss that is acceptable in the minimum dot.

6. Dot Gain allows for the tolerancing of the dot gain in the highlights, midtones and shadows. In North America this can be 25%, 50% and 75%; or in many cases, just 50%. In Europe this is often 40% and 80%.

- Put a check in the boxes next to the print tones that you wish to measure. Notice that the number of patches previewed in the upper right will change with the number of Dot Gain values selected.
- Make sure the values are set to the percentage that you need to measure, and enter a value that you are willing to accept as your dot gain tolerance for those percentage values.
- The Dot Gain Methods refer to the methods that are used to calculate the dot gain of the print. Murray-Davies is typically used with 4-Color Process Inks, and the ColorCert Relative Colorimetric is recommended for Spot-Color Inks.

Settings 2 Tab

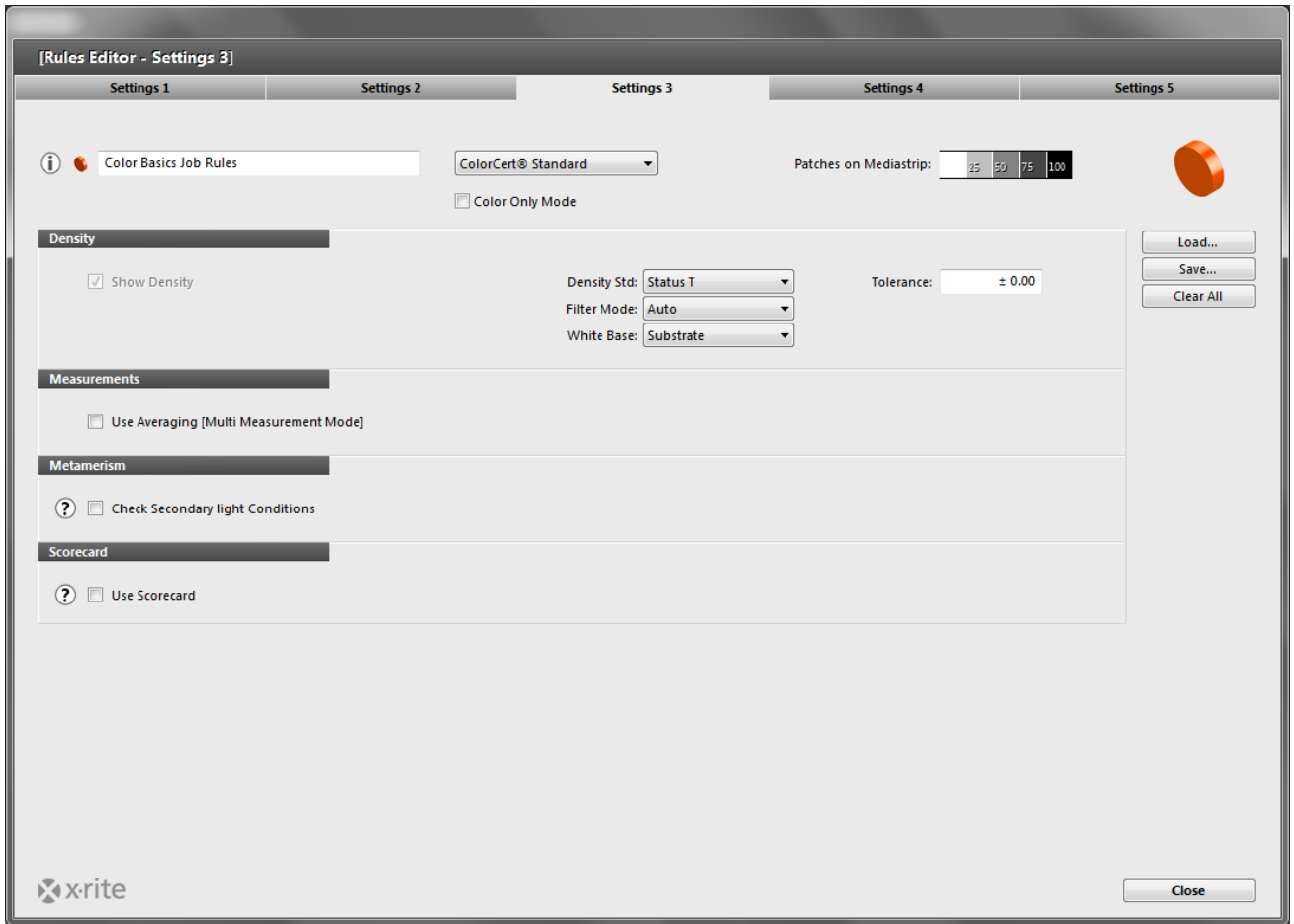
1. Next, click on the Settings 2 tab.



2. If you need to determine the undertone color independent from the dot gain, check the Undertone box. This will allow ColorCert to measure and judge undertone colors even if the dot gain values are very incorrect.
 - Best Match Mode: Compare best matching color within whole Target Tint Range.
 - Same Density Mode: Compare Color at same Target Density.
 - Same Lightness Mode: Compare Color at same Lightness (CIE Lab L*).
 - Same Spot Mode: Compare Color at same Nominal Input (ie: 50% vs. 50%).
3. ColorCert SpotColor
 - Select the priorities as you did in the Primaries. Keep in mind that a color that is created with a single ink on press can have a tighter tolerance because it involves the control of only one ink, whereas a color that is built from 2 or more Process Colors is harder to control and is typically given a higher tolerance.
 - Remember, SpotColor tolerances are not established by industry standards; they are agreed upon by the Print Provider and the Brand Owner.
4. Visual Check-up allows you to require visual inspections of print quality with each Measurements. The Verify Barcode Quality selection will require that a barcode quality test be performed with a barcode reader.
5. Check the Backing Material box if you require the Press Operator or QC inspector to measure the backing with each Mediastrip.

Settings 3 Tab

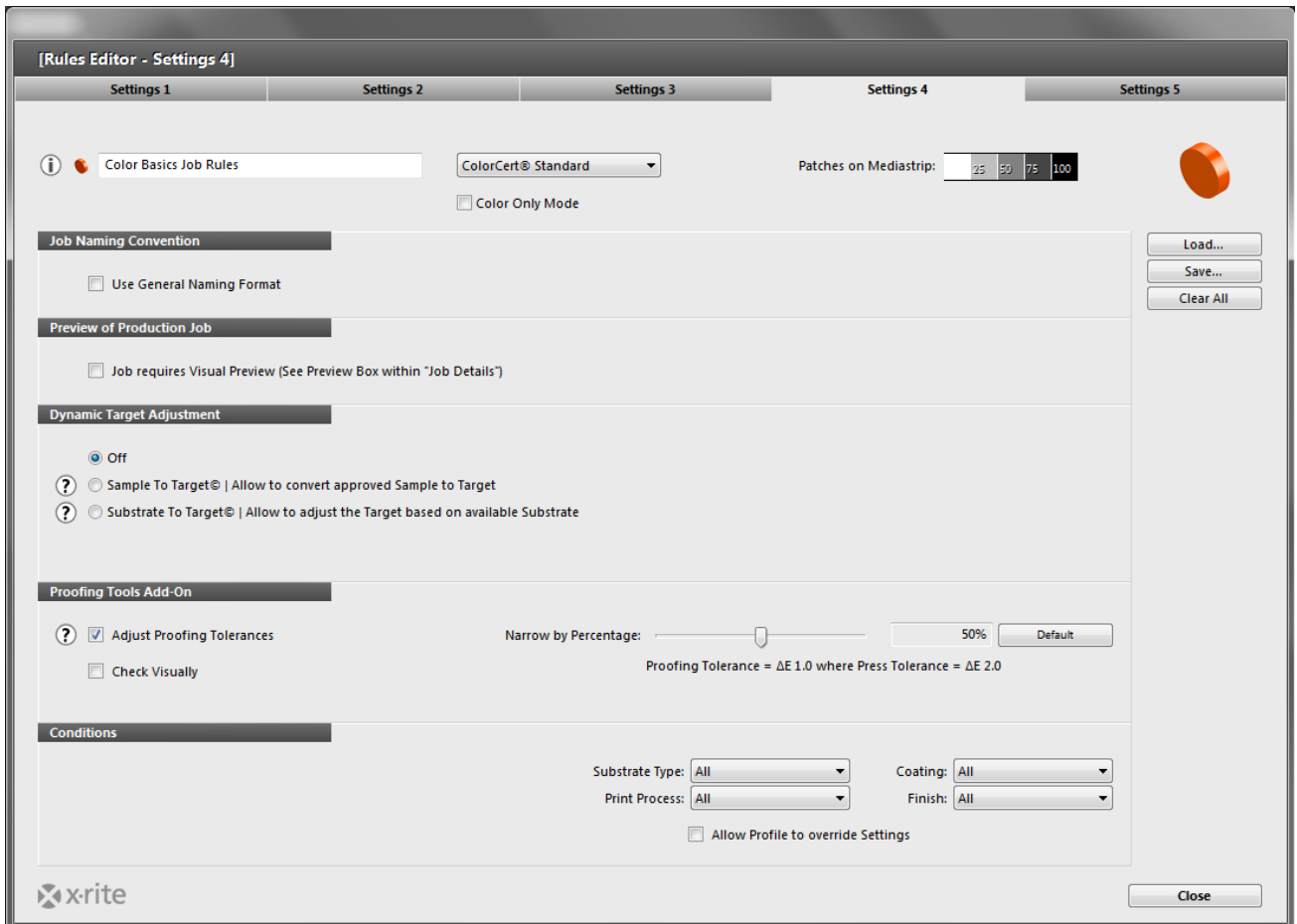
- Next, click on the Settings 3 tab.



- Density. Enter the settings for your densitometer configuration, which are determined by your print specifications. For example in North America, the print specifications require Status T, while in Europe the print specifications use Status E.
- Measurements. If your print conditions are not very uniform, then it may be necessary to measure more than one sample and average the results. This is where you enable this and set the number of measurements to average.
- Metamerism. If you would like to evaluate the color under illuminants in addition to the standard D50, you can select the other illuminants here. This is usually something that a Brand Owner would request to ensure, for example, that the product looks correct under daylight (D50) as well as store light.
- Scorecard. Enable the Scorecard to trigger a print of a summary report of the Job. ColorCert includes a PDF Template of this Scorecard. You can manage the use of the Template with the Load and Remove PDF Template buttons. The default Scorecard Template is located in the Application folder.
 - If you have access to a Scorecard Server, you can enter the URL and Password in this window to set it up.

Settings 4 Tab

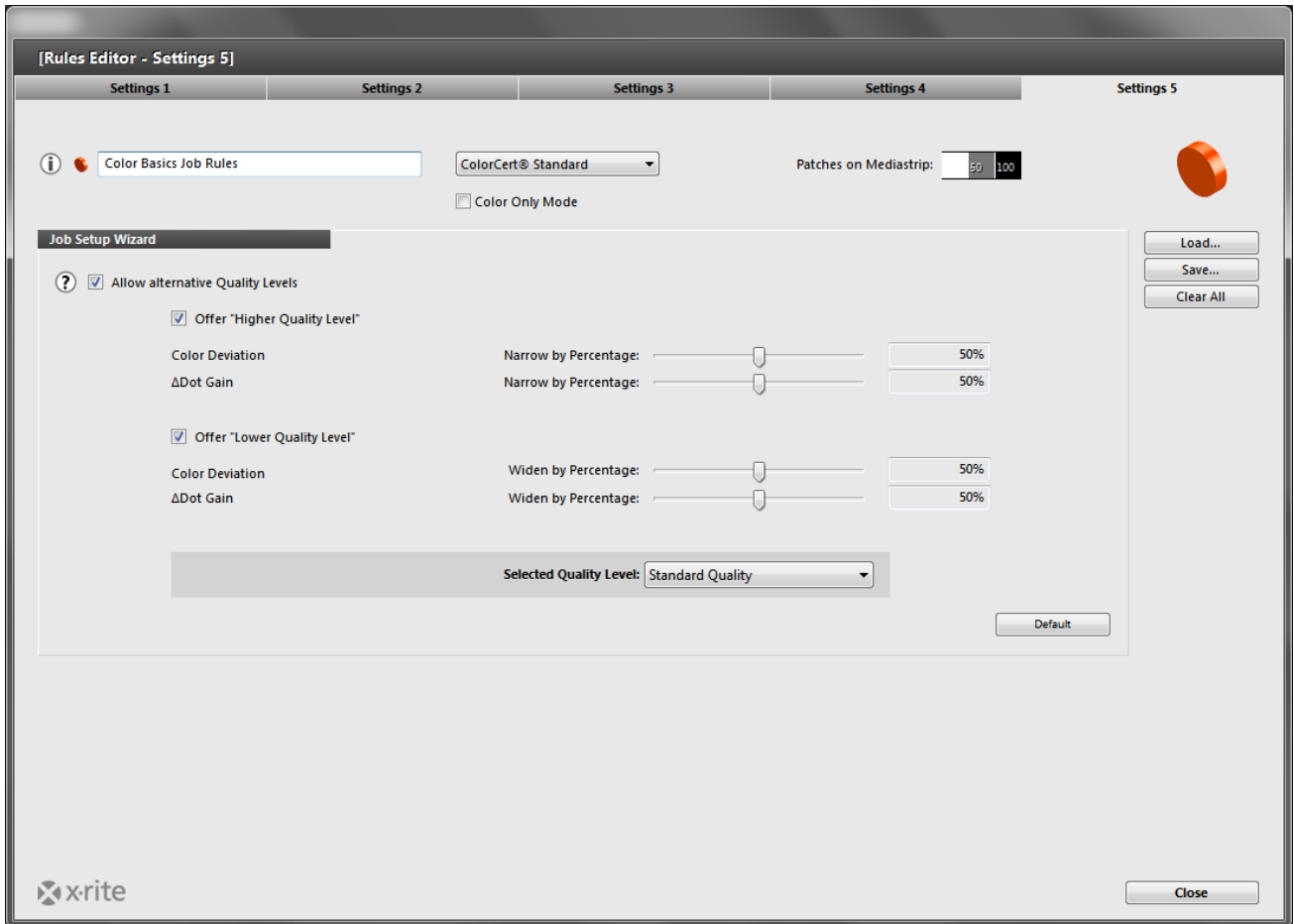
1. Click on the Settings 4 tab.



2. If you want to specify a naming convention based on the job information, you can add a code created out of an existing job. See separate information when creating a job.
3. Preview of Production can be enabled to remind you to add a preview of the printed work (any file that contains the preview of your job) in the Job. This can assist in properly associating the correct ColorCert Job with the associated press run.
4. You can also use a ColorCert job to check the Proof. If you prefer tighter tolerances when checking the Proof, you don't need to create a new Rule, you can just click Adjust Proofing Tolerance and define a percentage. This percentage is then applied to the tolerance values when checking the Proof.
5. Conditions allows the user to limit the use of these Rules to only the selected conditions.

Settings 5 Tab

1. Finally, click on the Settings 5 tab.



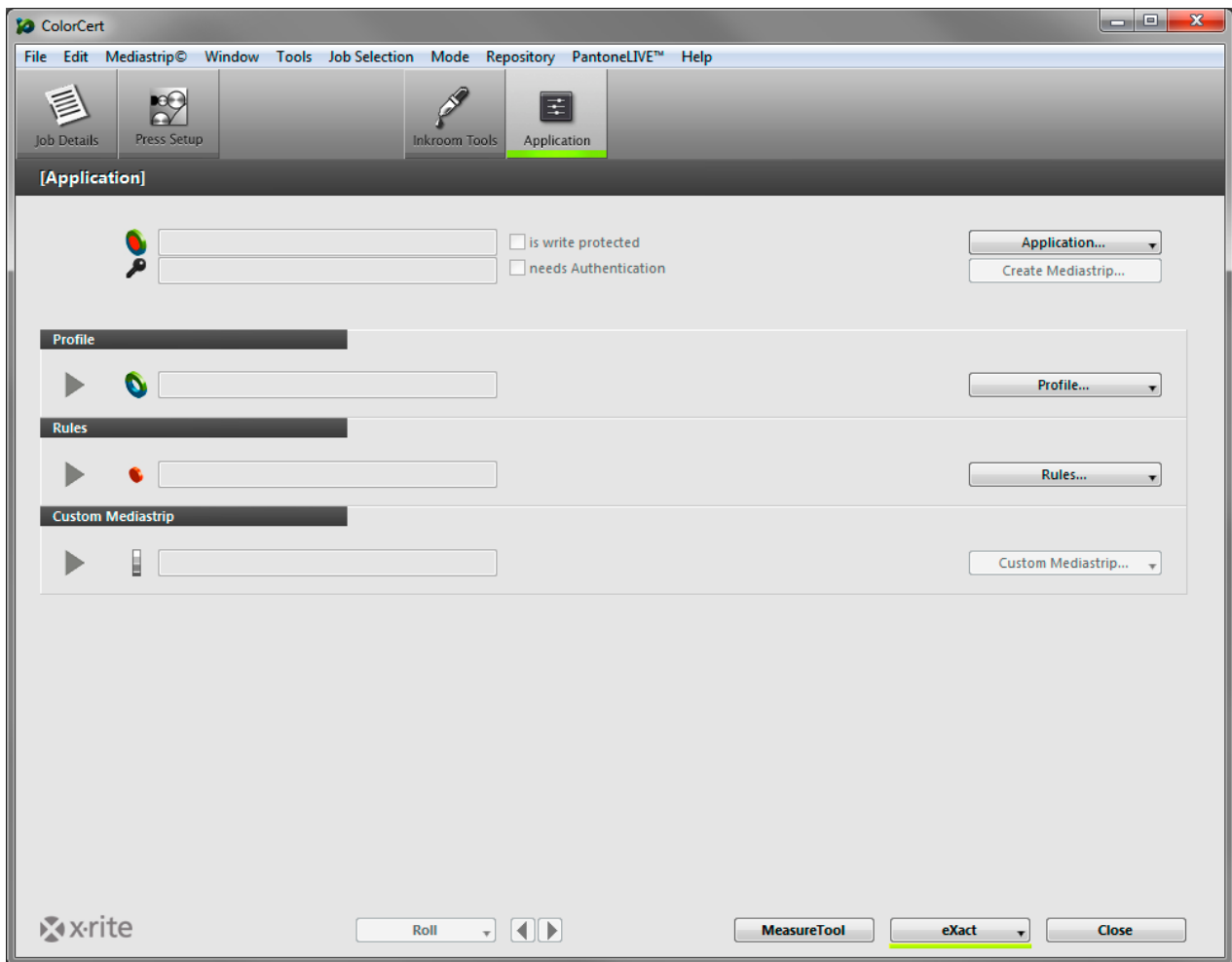
2. Quality Level: These Settings are only required when using the Job Setup Wizard. Please find detailed information in the separate Job Setup Wizard document.
3. When you are finished, click the Save button to save the Rules, then click Close.

Creating a Job

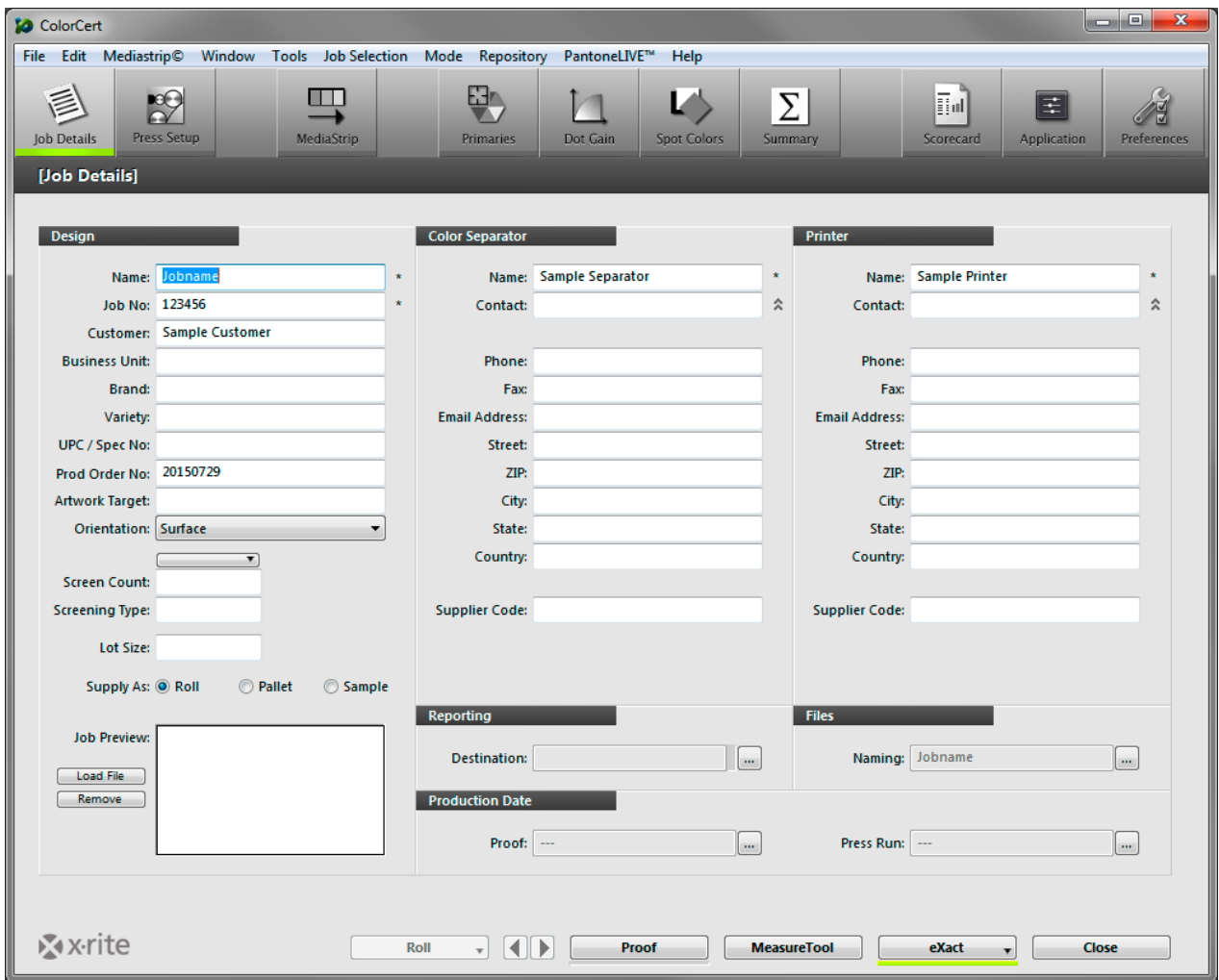
After a Profile and a set of Rules have been created, they can be used in a Job. This section explains how to create a Job. This is only available when using a Manager license, usually for an administrative user from prepress or quality control.

This is used to create a new Empty Job that has no Data, Rules or Profile. With an Empty Job, you can select a Rule and Profile, or an Application file that contains the Job Profile and Rules. Then you can modify any needed settings and fill in certain details about the client or printing conditions. This user can either start measuring the Job, or save the Job for another user to continue later.

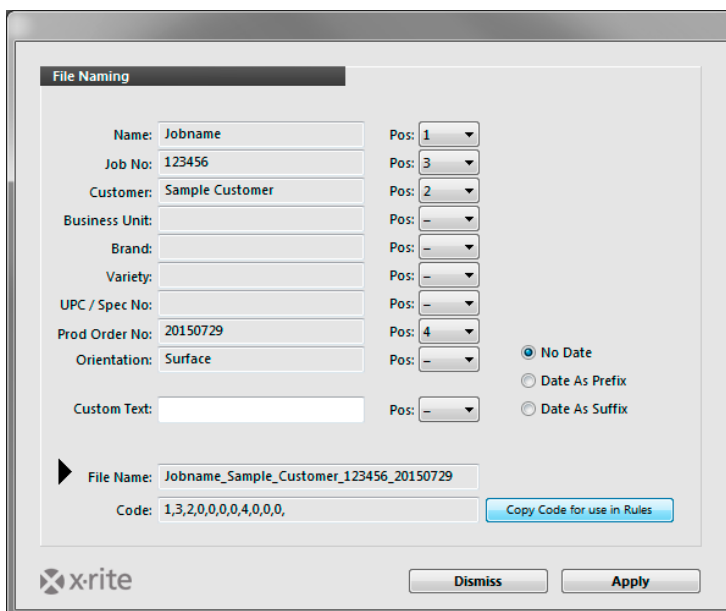
1. In the ColorCert Chooser click Editors and select Job, Application, Mediastrip.



- Click Job Details, and enter necessary information. You must complete all fields marked with an asterisk (*). Other fields are intended to be used as needed in the Design, Color Separator and Printer sections.

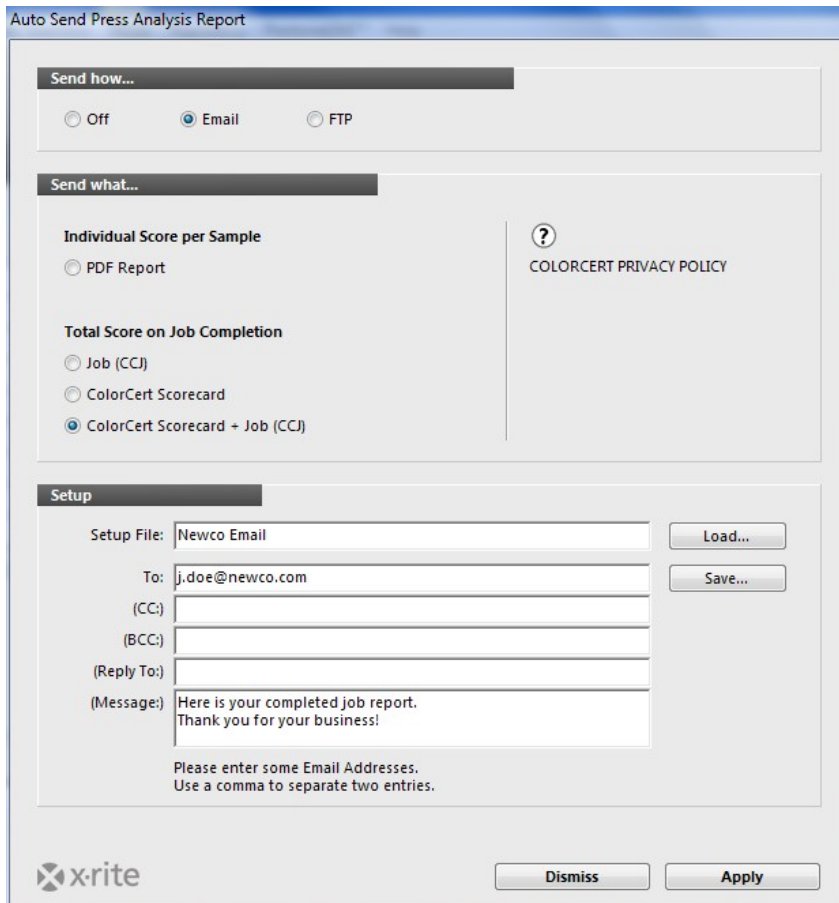


- Optional: Click Naming to define naming Convention.

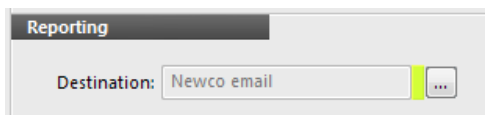


Select the information you want to add to your job name. Use the drop down list with numbers to define the order. Code shows the order of positions and can be entered in the Rules Settings 3 Tab.

4. Optional: Click Reporting to open a window to configure how the report should be formatted and sent. Reports can be sent through email or FTP. They can be formatted as a simple Scorecard, a more detailed CC Job Report, or both.



- Enter a name for the setup and the appropriate email addresses along with a message if you like.

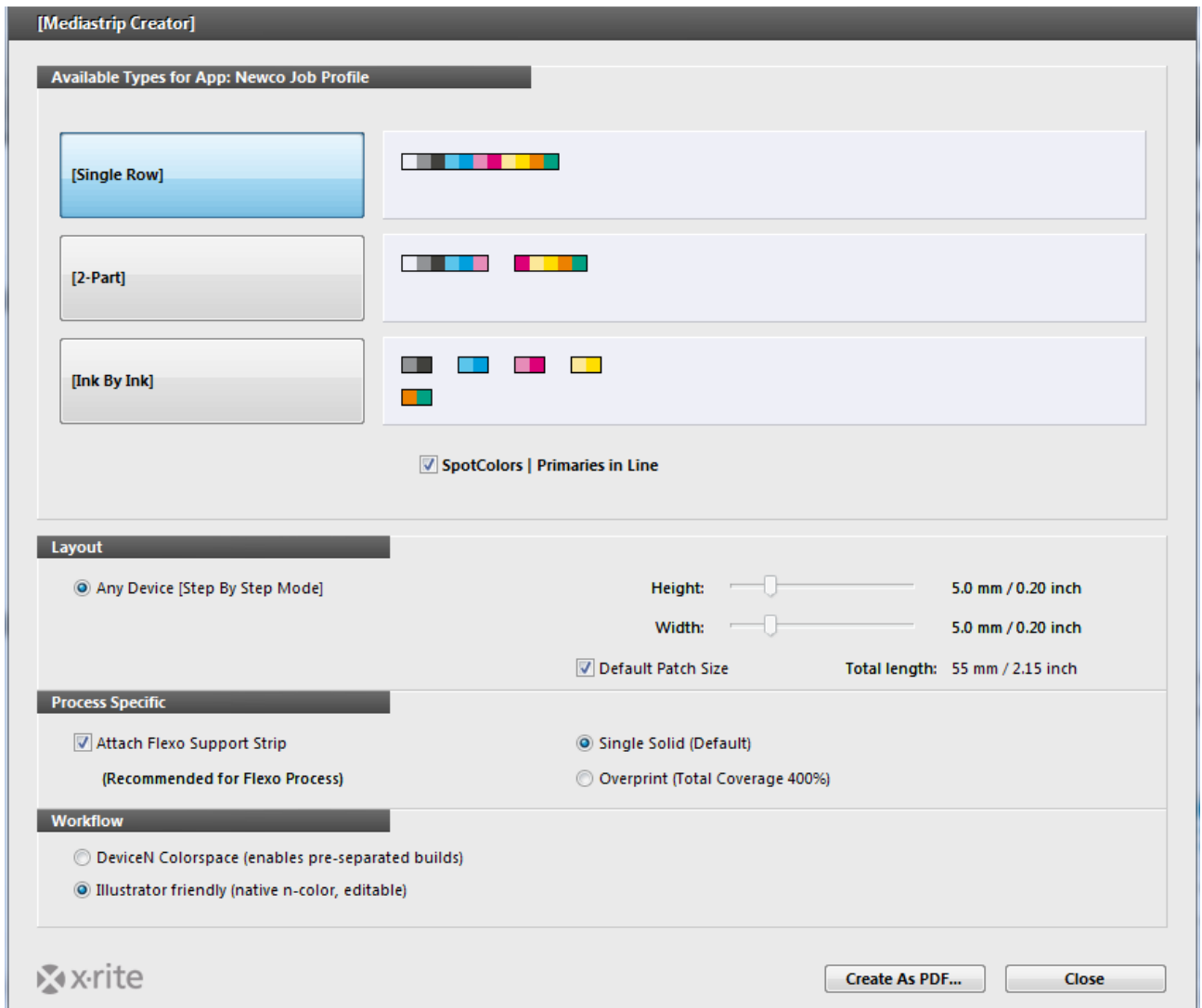


- Click Apply to save and select this setup in the Job.

5. Return to the Applications tab.

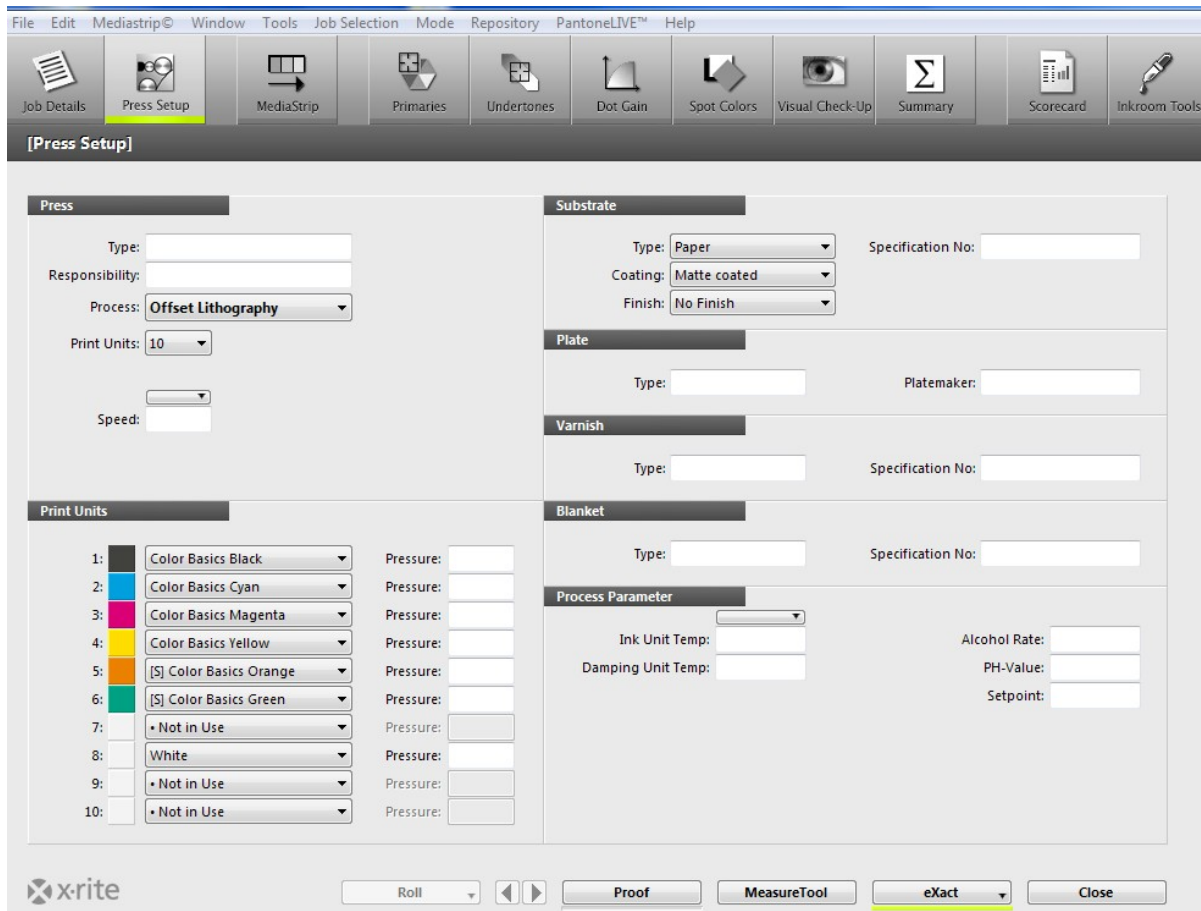
- Load Profile: opens the default folder for stored Profiles that you have created. To load a ColorCert Profile, select Load ColorCert Profile, and select the Profile that has the colors for this Job. NOTE: You can also load ICC Profiles or IT8/CGATS files as your Profile.
- Load Rules: select the Rules to be used with this Job that you previously created.
- Use the Save Application button to save the combination of the Rule and Profile in one file that can be loaded in the future using the Load Application button.

6. Click on Create Mediastrip to generate a PDF of the color patches in the proper layout for your spectrophotometer.



- Select the target that has the patch arrangement that you require: Single Row, 2-Part, or each patch group by ink color.
 - If you have a check in the box labeled SpotColors Primaries in Line, this will include your SpotColors in the same line as the primaries.
 - If not, the SpotColors will be placed in a separate line.
- Select your device and patch sizes in the Layout section. This will change the format of the patches to conform to your device requirements.
- Process Specific includes an option to Attach Flexo Support Strip to your patches. Selecting this option adds a key line around the control strip to make it easier for reading.
- Workflow provides settings for your Mediastrip file.
 - DeviceN setting will generate the ColorCert Mediastrips as a pre-separated PDF, based on the user-supplied settings. Check with your prepress workflow software for required file separation settings.
 - Illustrator Friendly setting will create ColorCert Mediastrips in an Adobe Illustrator compatible file that is not pre-separated.

- Click on Create As PDF to save a PDF file to the cc_Mediastrips folder inside the Application folder.
 - Open this file in Illustrator to copy and paste the Color Bars into the waste area of the printing plate.
 - Reporting allows the configuration of reports should be formatted and sent. Reports can be sent through email or FTP.
 - If you are only setting up the Job for a future press run, you can save it now by clicking Close. ColorCert will direct you to save the file in the cc_jobs folder in your Applications folder.
7. Press Setup includes all of the press parameters for this press run.

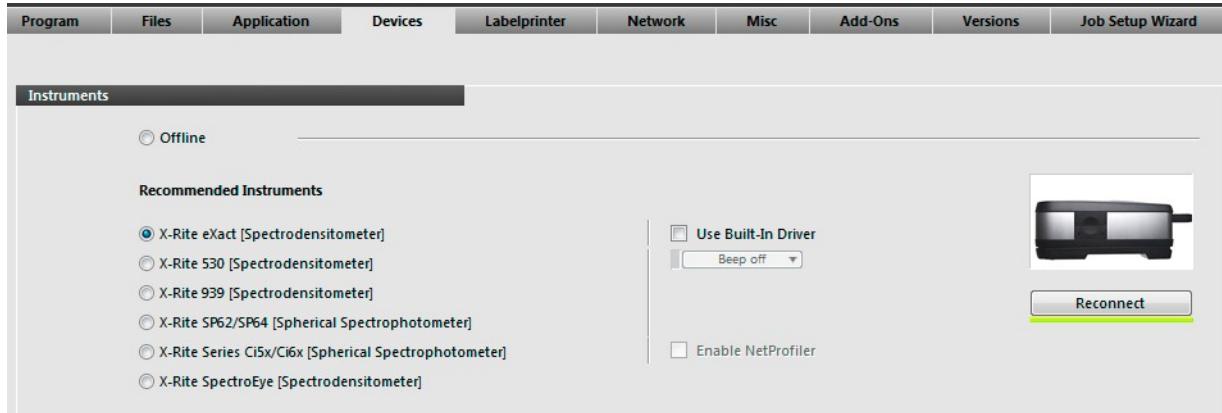


- Press Information can be entered for informational purposes. Each process will change the related fields to match the parameters for that print process.
- Print Units will list all colors that are included in the selected Profile. Users can rearrange ink colors in the print units if needed by clicking on the color next to the unit number and selecting the ink that will be run on that unit.
- All other data is used for informational purposes only.
- After you have entered the required data, click on the MeasureTool button at the bottom of the screen.

NetProfiler

Working with X-Rite NetProfiler

To track the NetProfiler status for your device you have to select it in the Preferences of ColorCert under Devices.



When you connect your device to the software, one of the following icons appear next to the instrument name:



The gray icons mean the device has an active and valid Profile. The red icon means the device is out of specification and needs to be NetProfiled.

These icons can appear in multiple locations in the application. For example, when you initially connect to the device in Preferences/Devices, it appears next to the device name and indicates that NetProfiler is valid on the device and it is alright to continue taking measurements.

Another example is when you begin to take a measurement in a Job, as illustrated below.



The NetProfiler option cannot be switched On or Off by a user or administrator.

Getting Help: Remote Assistance

If you require support for your ColorCert application, use the Contact button to locate the support phone number for your region. Your X-Rite support technician may ask to have access to your computer system to diagnose the problems. Team Viewer is installed automatically when you install ColorCert.

1. In the Windows Start menu is a link to the Teamviewer application. Launch it.
2. To grant remote access to your windows computer, quote the ID that pops up to the ColorCert service engineer.
3. You can terminate a session at any time by closing the Teamviewer client application.

Terminology

- PantoneLIVE: A cloud-based spectral color platform that enables sharing of digital standards globally.
- Application: Applications are created by merging Rules and Profiles. These can be saved and reloaded into Jobs.
- Job: Jobs are used during production and QC to measure, monitor and report on the color and print quality of each press run. Jobs are based on the applications that include the targets set in the Profiles, and the tolerances set in the Rules.
- Metadata: Additional Information about the Job, the Separator or Printer as well as Press Setup Details you want to capture in a ColorCert job.
- Rules: Rules define the range of tolerances that are applied to certain types of work. For example, you may have a set of Rules that is used for your shop's general CMYK Process Color work. You may have another set of Rules that contain the specific tolerances and requirements that are defined by a Brand Owner for print production. You may also have different set of Rules designed around the capabilities and expectations of a type of press.
- Profiles: Profiles contain all of the specific colors that will be measured. These can be a set of CMYK Process Colors and a Substrate that is used in general production, or you may have a set of Rules for production of many different Jobs that share the same specific set of Brand Colors on the same Substrate. A set of Rules may also be created for a single specific Job.
- Measurement Condition: Settings for your Spectrophotometer for the Measurement Mode (or Filter) as well as the Illumination and Observer. For Example M0 D50/2°.
- Scorecard: Scorecards are generated from Jobs based on the weighted scores of print quality in several selected areas, as defined by the Rules and Profiles, to generate an overall Job Score. This gives the Production Team, Supervisors, and Brand Owners a simple way to evaluate the overall quality of the Job, and shows areas to focus on for improvement.