

PRODUCT BULLETIN

Configuring Caldera to print on your HEXIS media

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www.hexis-graphics.com

Assistance contact: assistance@hexis.fr
Printing Division contact: profils@hexis.fr

On www.hexis-graphics.com, HEXIS provide you with free-download profiles for your printing media and your «printer's» configurations (printer-ink-colours and RIP).

A *media profile* contains:

- **Certain printer parameters adapted to the media, like heating temperature, suction, etc.**
- **A calibration of ink quantities applied to the printing media** which allows optimal use of the ink consumption while maintaining the largest possible reproducible range of colours.
- **An ICC profile** which characterises the **colorimetric response of the printing system**.

What to expect from this media profile?

- A media profile **optimises the printing quality** on a media to **accurately print colours** and to **control the quantity of inks used**.
- Caution! A media profile is only valid for a **given printing configuration RIP - Printer - Ink - Printing mode**.
- Certain media-related printer settings cannot be included in the media profile. It is **imperative to realise them to obtain a nice printing quality** (feed calibration, bidirectional adjustment). See Product Bulletin no.2.
- The profiles downloadable from our website are called «**generic**» because they were not realised directly on your printer. Even for an identical model, there are **differences** from one printer to another. For greater colorimetric accuracy, the profile must be realised **directly on your printer**, or at least be **relinearised**.

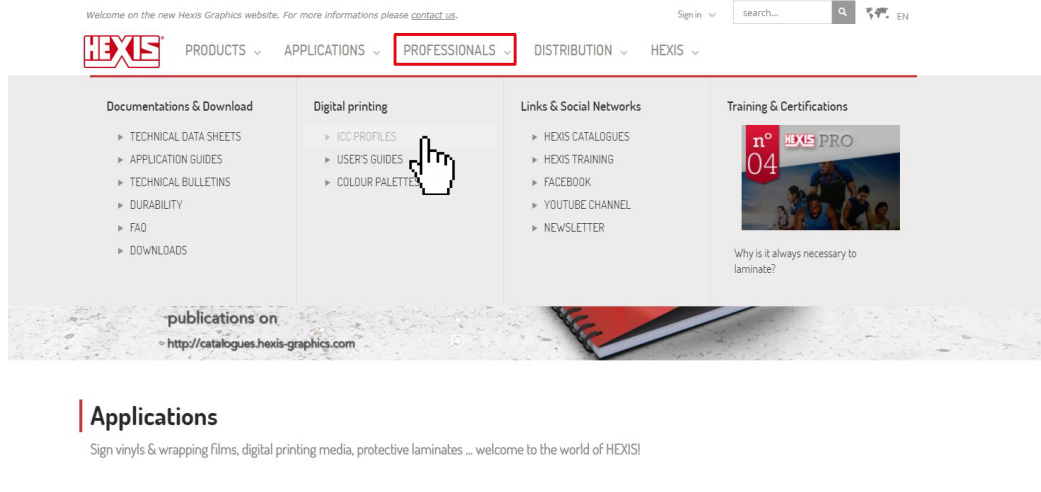
Product Bulletins already available:

- **FPT.IMN.001: How to carry out quality prints on your HEXIS digital printing media**
- **FPT.IMN.002: Setting up your printers according to your HEXIS media**
- **FPT.IMN.003: Introduction to colour management**

1. Installing a media profile suitable for your HEXIS printing media in Caldera

1.1. Downloading the media profile

1. Log in to our HEXIS website: <http://www.hexis-graphics.com/en>
2. Under the «**Professionals**» tab, select «**ICC profiles**».



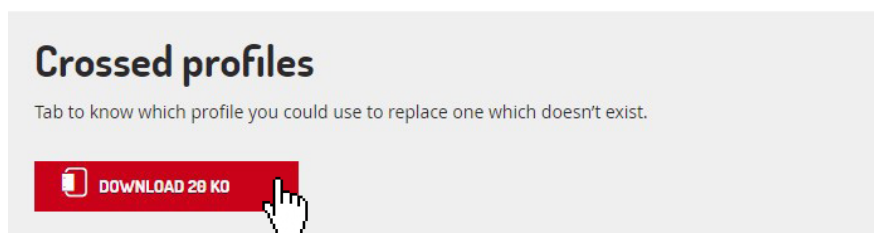
3. Fill in **the configuration of the printing system used** and then click SEARCH.
(The fields «Models», «Inks», «Colour code» and «RIP» are mandatory.)

If your printer's configuration is not listed, contact the Printing Division department at the following address:
<http://www.hexis-graphics.com/en/supports/impression-numerique/contact-support-technique/>

4. **Identify the media group** (200 series, 3000 series, etc.) for which you want an ICC profile or directly select the desired media from the drop-down list.

V200WG1	HX200WG2 HX201WG2 V201WG1 V211WG1 VCSR200WG1 V203EG	HX200NTWG2 V200WG1 V210WG1 VCSR201WG1 VCXR201WG1	+ DOWNLOAD ICC PROFIL
V240WG1	HX240WG2	V240WG1	+ DOWNLOAD ICC PROFIL

If the profile for your media is not listed, see the **Crossed profiles** tab to find a replacement profile.

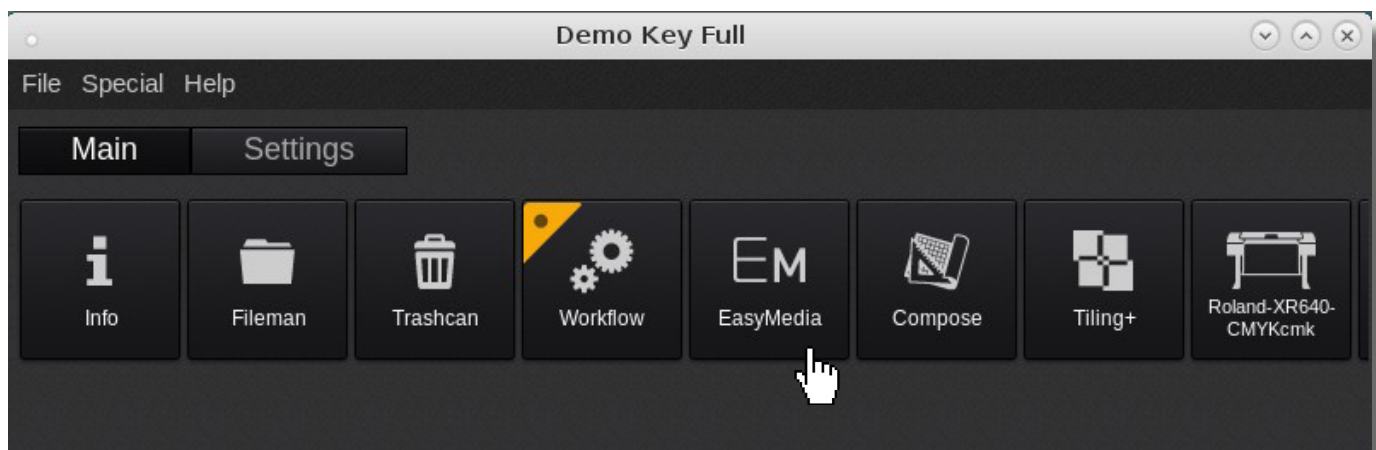


- Click the «**Download**» button.

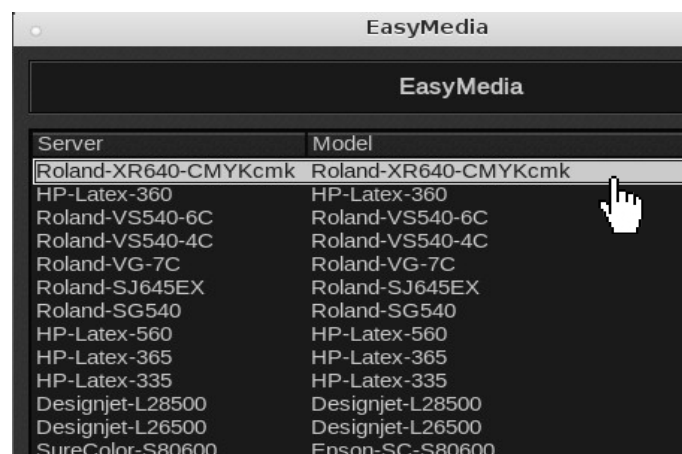
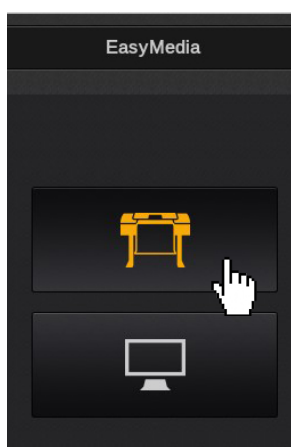
If you encounter any problems when downloading a HEXIS profile, please feel free to contact the assistance department by e-mail at the following address: assistance@hexis.fr

1.2.Importing the media profile into Caldera

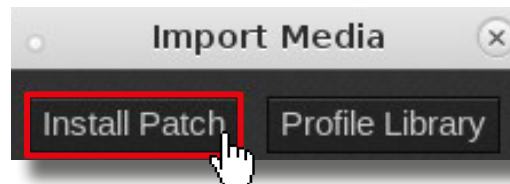
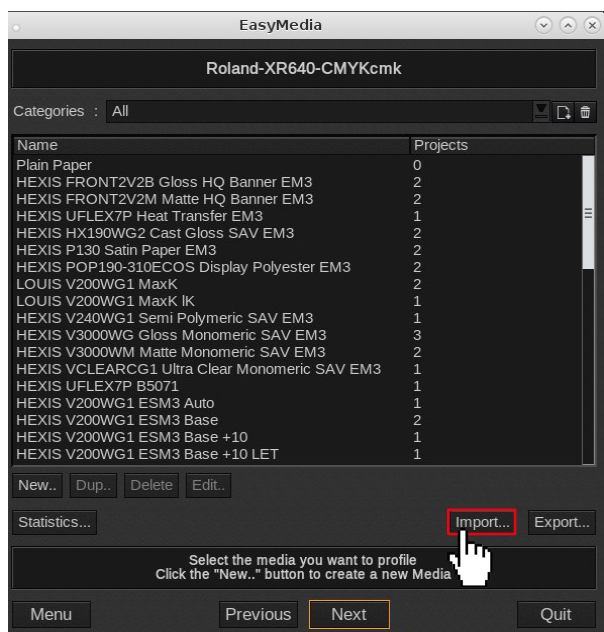
- Open **EasyMedia** or **EasyMediaLight** and then select your printer.



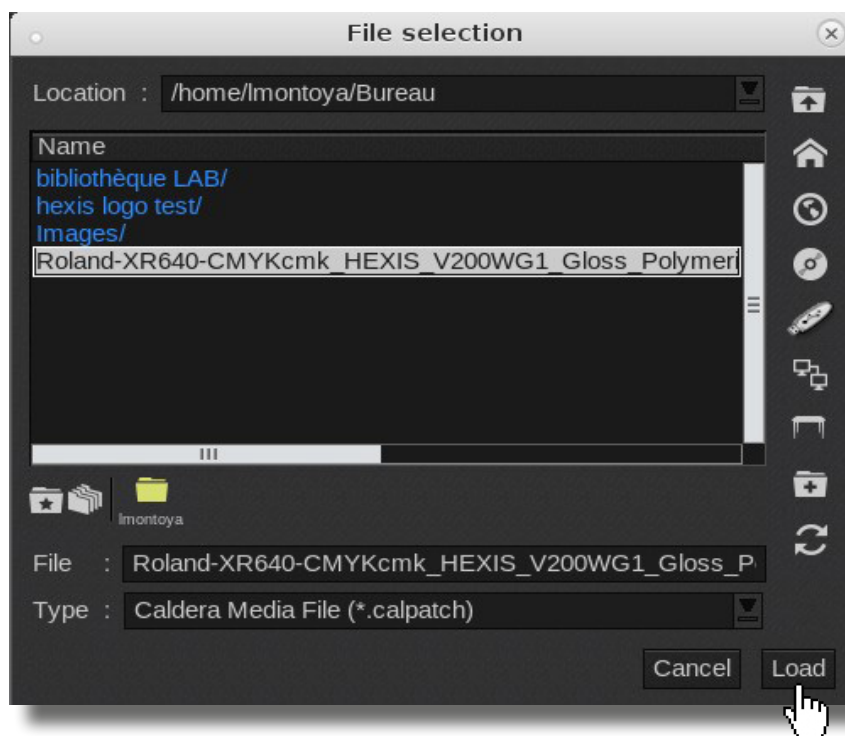
- Click «Select the printer» and then select your machine model.



- Click the «**Import**» icon, then «**Install patch**».

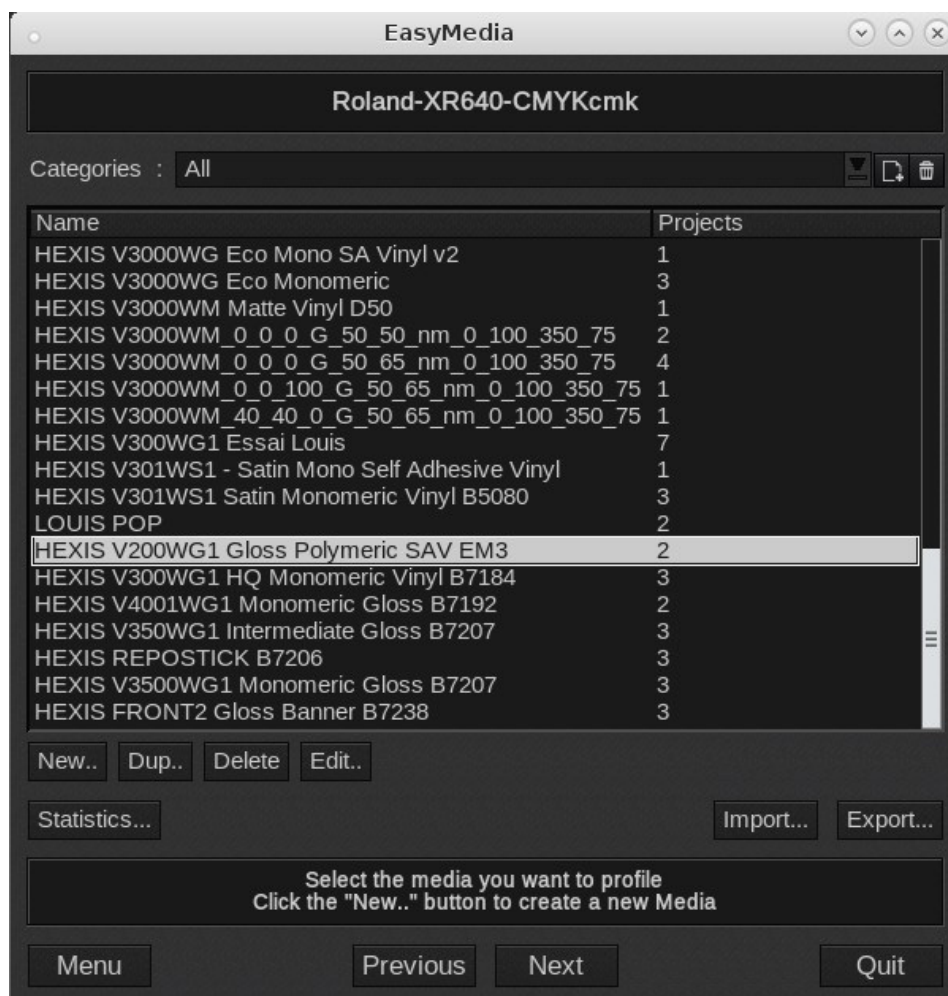


- Select the file obtained** from the HEXIS site (profile format: .oms or .calpatch). In order to make the download easier, the downloaded item is maybe compressed. In this case, **decompress** it.



- Click the «**Open**» button.

6. Check if the media has been **correctly imported**.

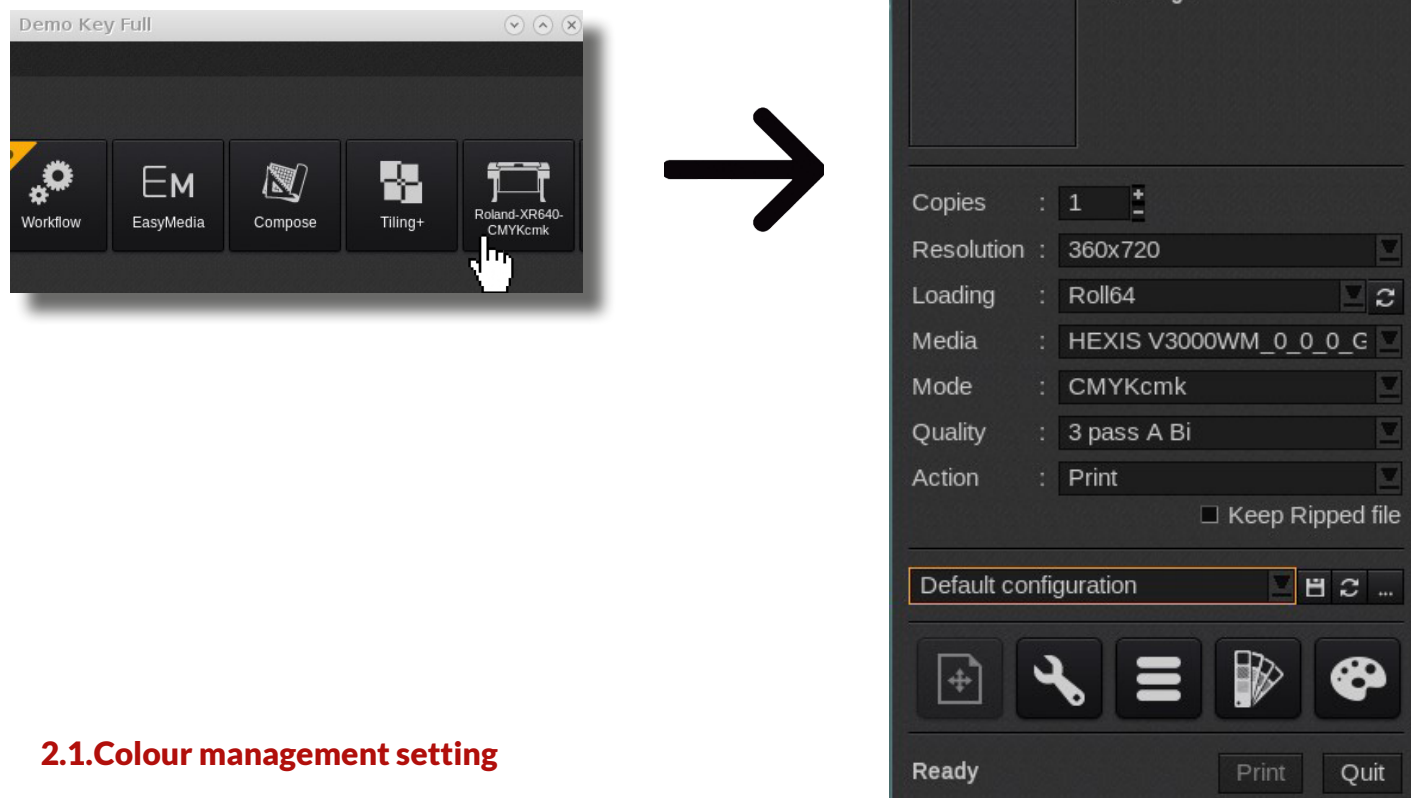


In the case of **importing problems**, please refer to the **Digital Printing F.A.Q.**, available on the HEXIS website at the following address:

<http://www.hexis-graphics.com/en/supports/>

2. Default setting of a configuration

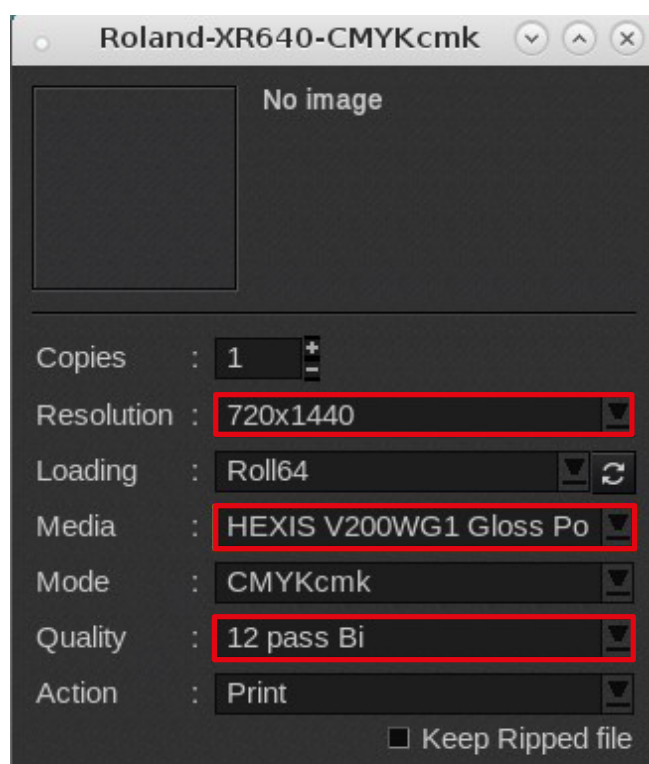
Open the printer's command window.



2.1.Colour management setting

2.1.1. Selecting the media profile

Identify the printing media which matches your **main HEXIS media used** in the drop-down list of the «**Media**» setting.



2.1.2. Selecting the printing quality

Select **the resolution, printing direction** and **number of runs** that best suit your printing constraints **in terms of productivity and quality**. In Caldera, «**quality**» setting covers the printing direction and number of runs.

Resolution	Advantages	Disadvantages
Low	<ul style="list-style-type: none"> High printing speed Low ink consumption 	<ul style="list-style-type: none"> Limited colour range Poor quality of flat tints Low detail accuracy Poor printing stability
High	<ul style="list-style-type: none"> Maximum colour range High quality of flat tints <ul style="list-style-type: none"> Detail accuracy High printing stability 	<ul style="list-style-type: none"> High ink consumption Low printing speed



Printing in
540x720



Printing in
720x1440

Number of runs	Advantages	Disadvantages
Few	<ul style="list-style-type: none"> Higher printing speed 	<ul style="list-style-type: none"> Poor quality of flat tints Limited colour range
Many	<ul style="list-style-type: none"> High quality of flat tints Accuracy of the colorimetric rendering Drying time more adapted 	<ul style="list-style-type: none"> Lower printing speed



Printing in
six runs

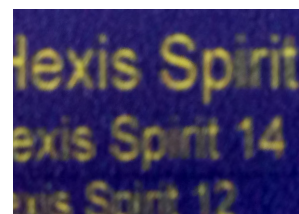


Printing in
twelve runs

Printing direction	Advantages	Disadvantages
Unidirectional	<ul style="list-style-type: none"> Detail accuracy (text, etc.) High quality of flat tints Drying time more adapted 	<ul style="list-style-type: none"> Printing speed approximately divided by 2
Bidirectional	<ul style="list-style-type: none"> High printing speed 	<ul style="list-style-type: none"> Require a precise bidirectional alignment of the heads Sensitivity to media buckling Quality almost always lower than that of the unidirectional one



Unidirectional
printing



Bidirectional
printing

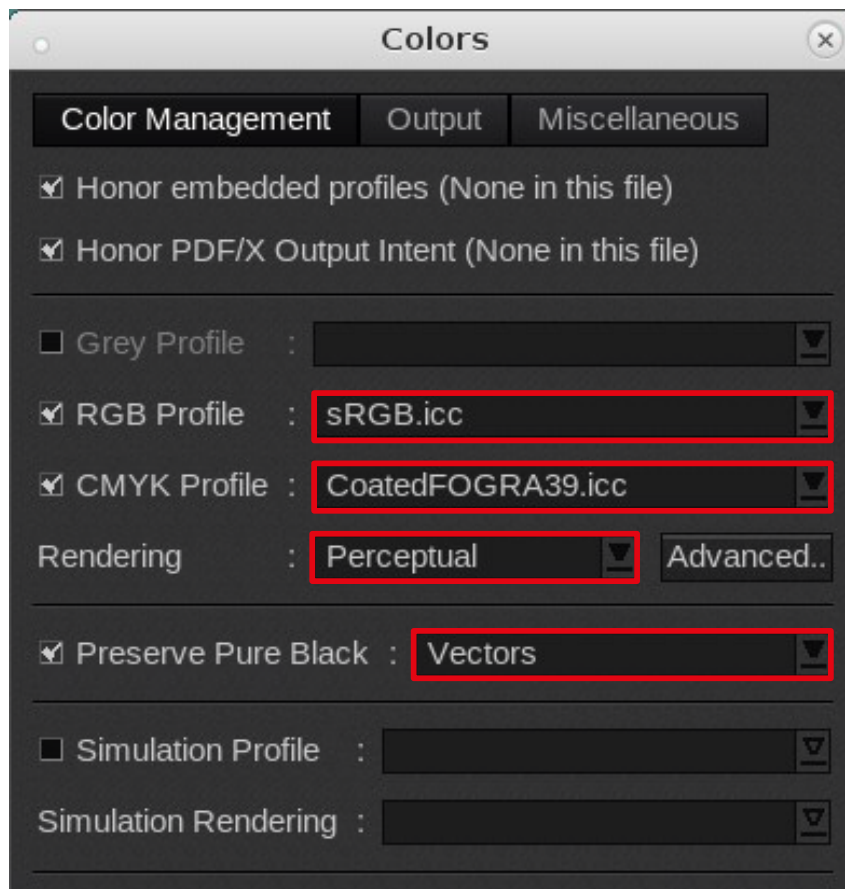
A **low-quality fast printing** will further promote **the appearance and perception of defects related to the state and setting of the machine** (clogged nozzles, bad print heads' alignment, etc.) than a **high-quality slow** printing.

If there is no profile for the configuration, the modes are highlighted in **red**. The values of the «Quality» menu highlighted in another colour **can be used**, but the colorimetric accuracy will not be optimised.

2.1.3. Configuring the input ICC profiles and colorimetric rendering

Click the  icon.

Select the input ICC profiles and colorimetric rendering intents according to your work habits.



By default, HEXIS recommend to use the **sRGB** in RVB and **CoatedFOGRA39** in CMJN because these are **the most current standard profiles**. In the «**Colour Management**» tab, HEXIS further recommend to print with the «**Perceptual**» Rendering.

Additional options

When configuring the input ICC profiles, Caldera presents two additional options:

Function «Preserve Pure Black»

When this box is checked, **the pure black colour** of your file is excluded from the colorimetric ICC conversion. Example: 100 % black will only be printed with black ink.

This can be particularly useful for **delicate letterings** and **barcodes** when you want to **avoid lags between cyan, magenta, yellow and black**.

Function «Honor embedded profiles»

Check the «**Honor embedded profiles**» case in order to **preserve the input profile contained in the original image** to the detriment of the settings carried out in the «**Colour Management**» section. The advantage of this tool is to **preserve the colorimetry of the original file** by avoiding an erroneous interpretation of the numerical values of the file.

For more information on these options, please refer to the Product Bulletin No.3: «Introduction to colour management».

2.2.«Machine» settings

Some printer settings can be **controlled at the RIP level**. You can choose which settings are used: those set on the **printer** or those originated from the **media profile**; otherwise you can directly **customise** them.

Click the  button, then «Media».

The printer setting values on this window (feed, suction, heating temperature, etc.) **can be changed** by checking the boxes related to these settings.

When printing, **the entered data will be taken into account for the benefit of those originated directly from the machine**.

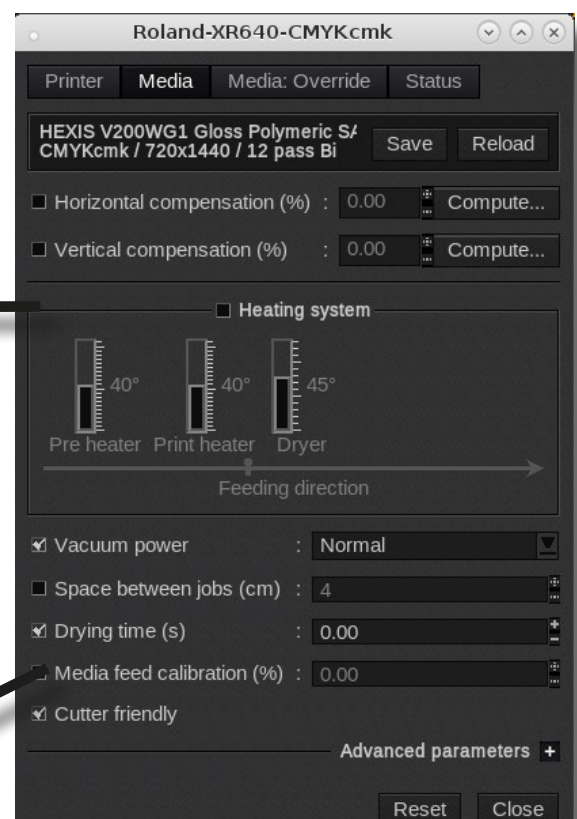
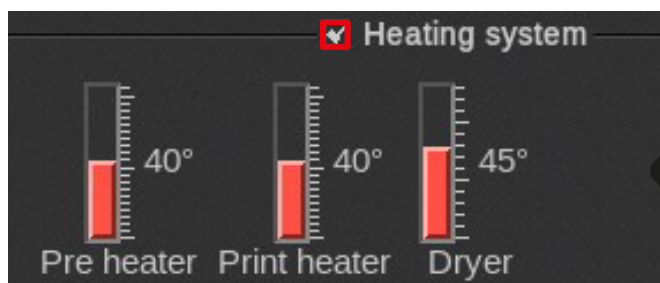
For more information on the setting up of a printer, please refer to the Product Bulletin No.2.

2.2.1. Heater Control

When downloading the media profile on the HEXIS website, **the temperatures corresponding to the media are entered**.

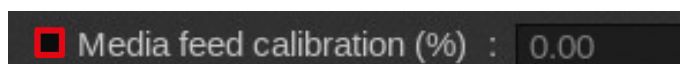
HEXIS recommend using the heating temperatures of the profile by checking the «**Heating system**» box.

However, these temperatures can be modified by the user depending on the surrounding temperature and humidity conditions.



2.2.2. Feed Calibration Control

Since the feed value is different at the beginning and at the end of the roll, HEXIS recommend to calibrate this setting directly on your machine, and to verify that the «**Media feed calibration**» command is unchecked.



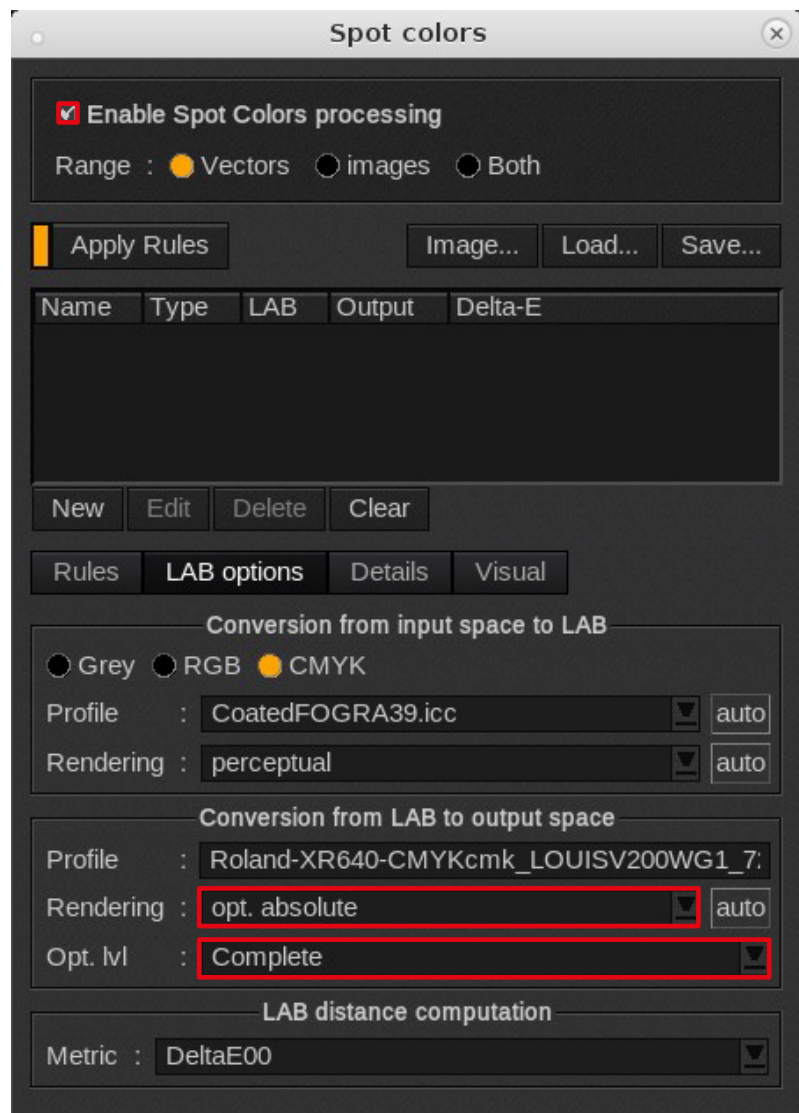
2.3. Using spot colours

Click the  icon.

Spot colours are used to print **the colours of an image related to certain references colorimetrically as close as possible**.

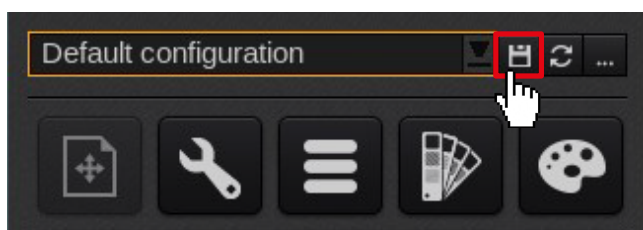
To **activate this option and the printing of referenced colours** on your image in spot colours, check the case «**Enable Spot Colours processing**» and select in the «Conversion from LAB to output space» section under tab «LAB options» **colorimetric rendering opt. absolute**.

For more information, please refer to the Product Bulletin No.3: «Introduction to colour management».



Saving the configuration

Click the «**Save**» icon. Name the current configuration.



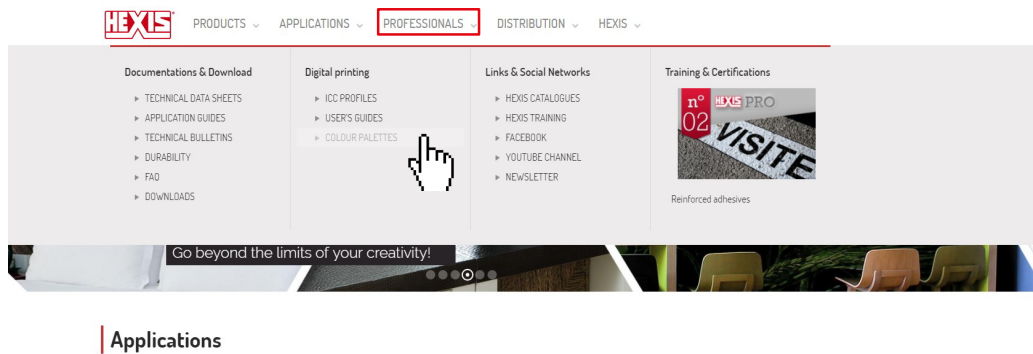
The setting carried out above will be applied by default to any image inserted in the queue. When using another HEXIS printing media for example, you can easily change the media profile and adjust the resolution, number of runs and printing direction according to your printing purposes.

3. How to print Pantone, Ral or HEXIS colours.

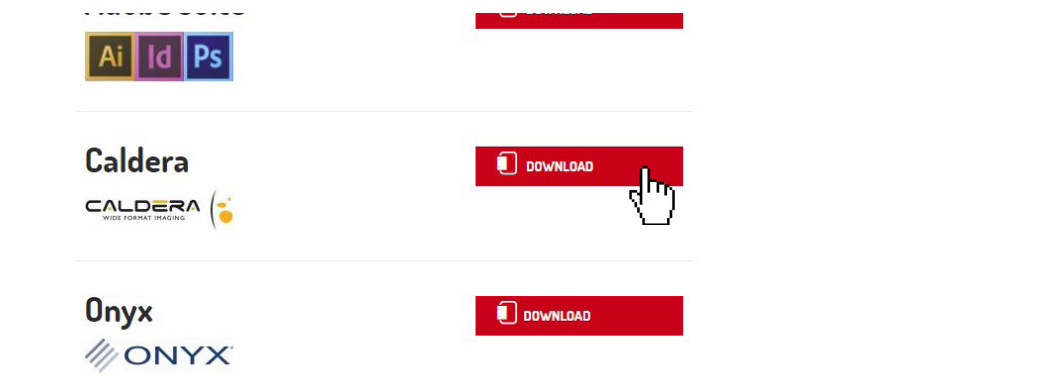
Some libraries are already embedded in Caldera, but other ones can be added.

3.3.1. Importing the HEXIS colour library into Caldera

1. Go to the HEXIS website: <http://www.hexis-graphics.com>
2. Under the «**Professionals**» tab, select «**Colour Palettes**».



3. Download the HEXIS library for Caldera.

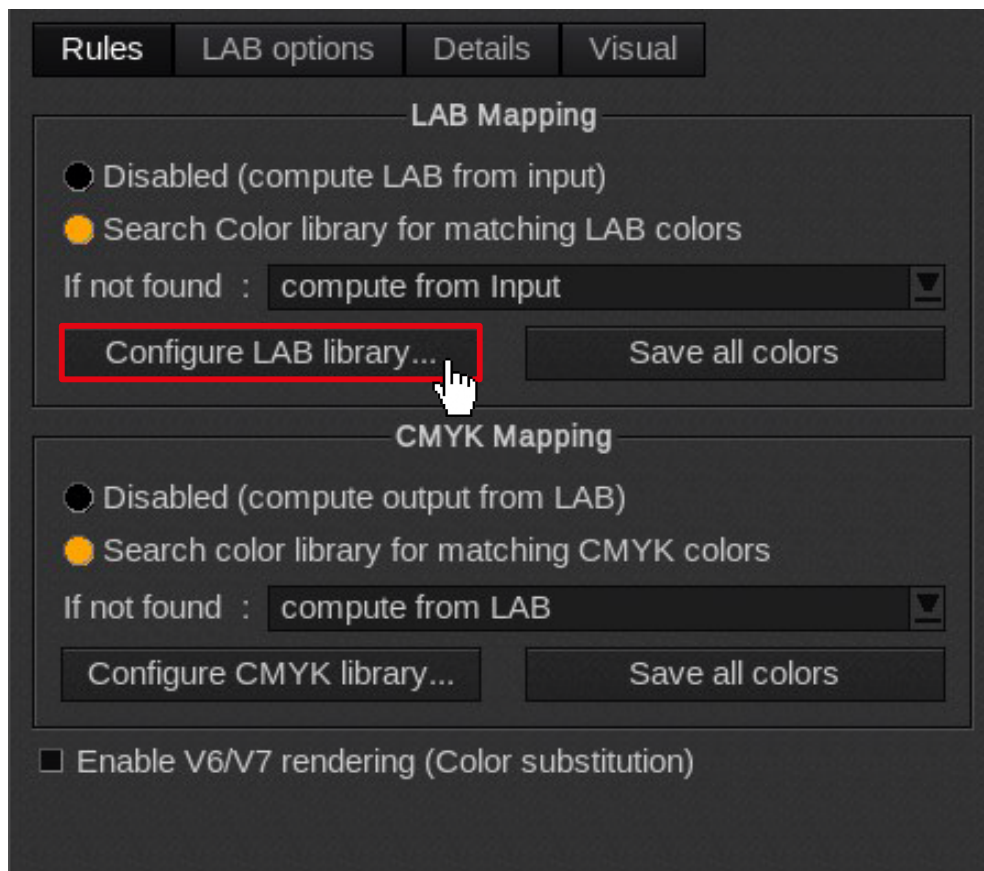


4. Launch Caldera.
5. Open the printer's command window.

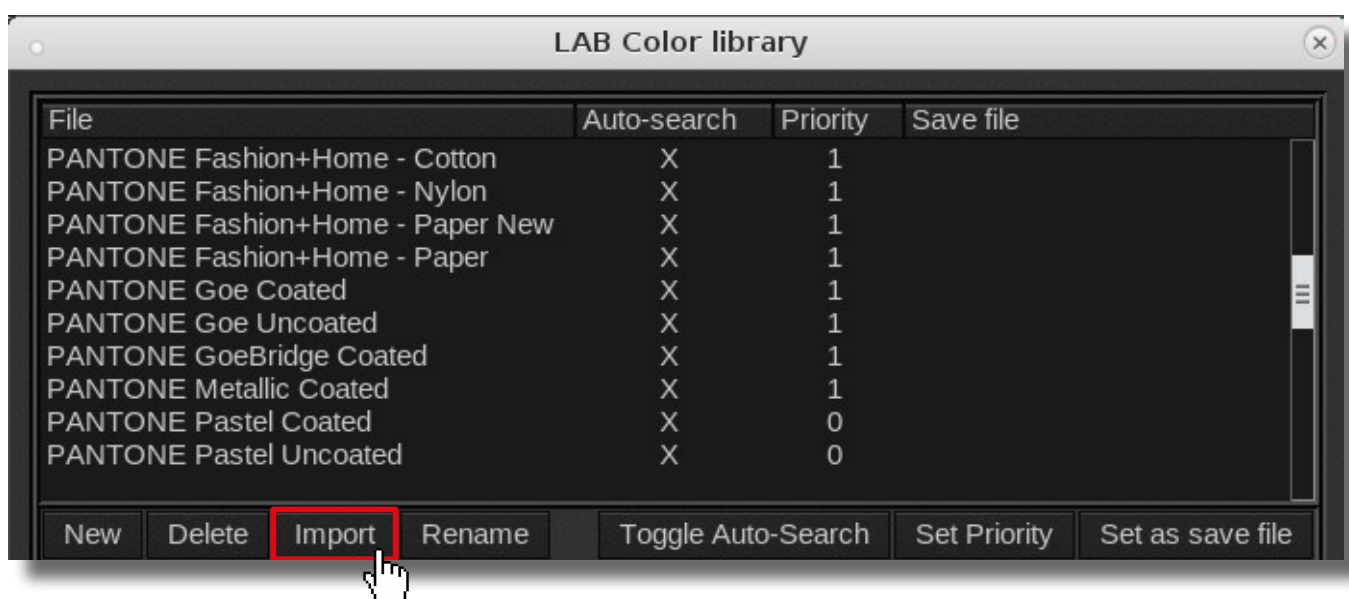


6. Click the  icon.

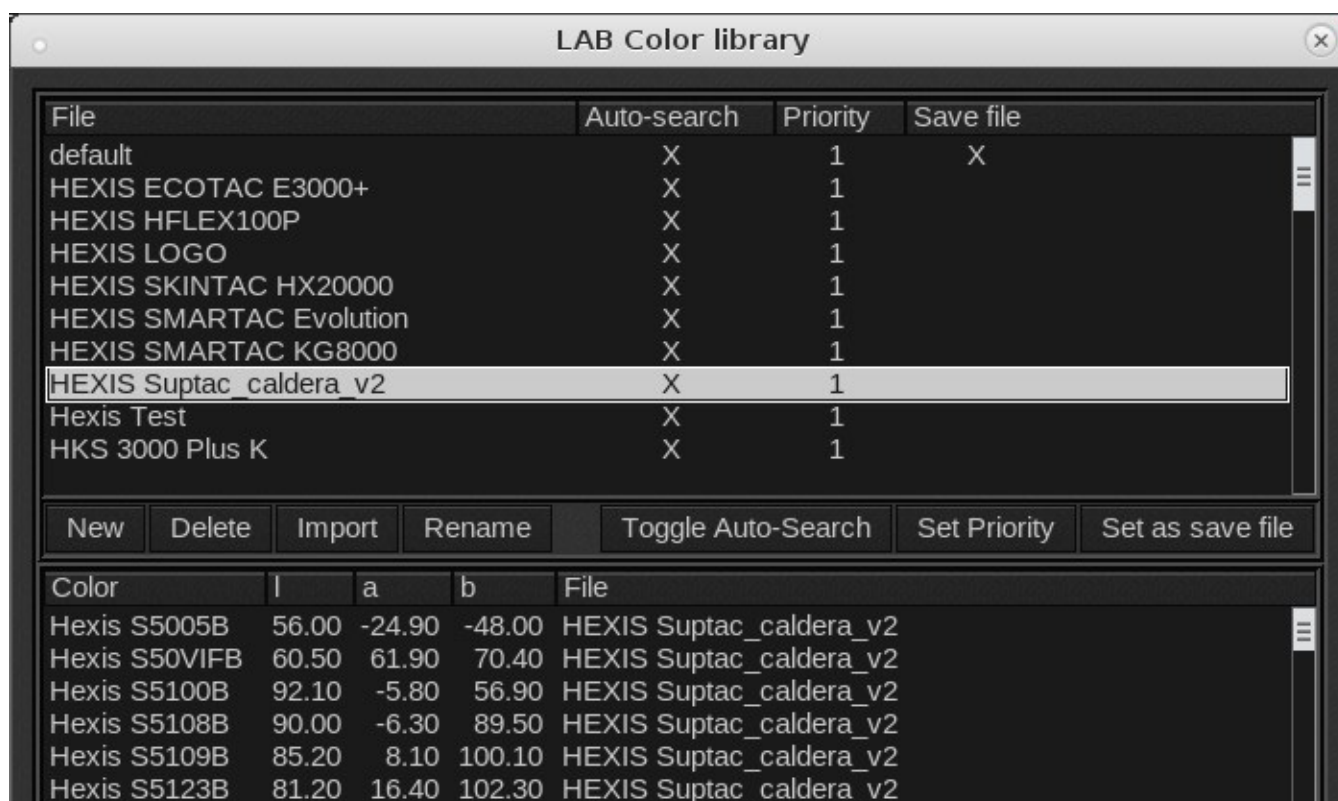
7. Under the «Rules» tab, click «Configure LAB library».




8. Click «Import», then select the Suptac library for example, followed by a click on «OK».

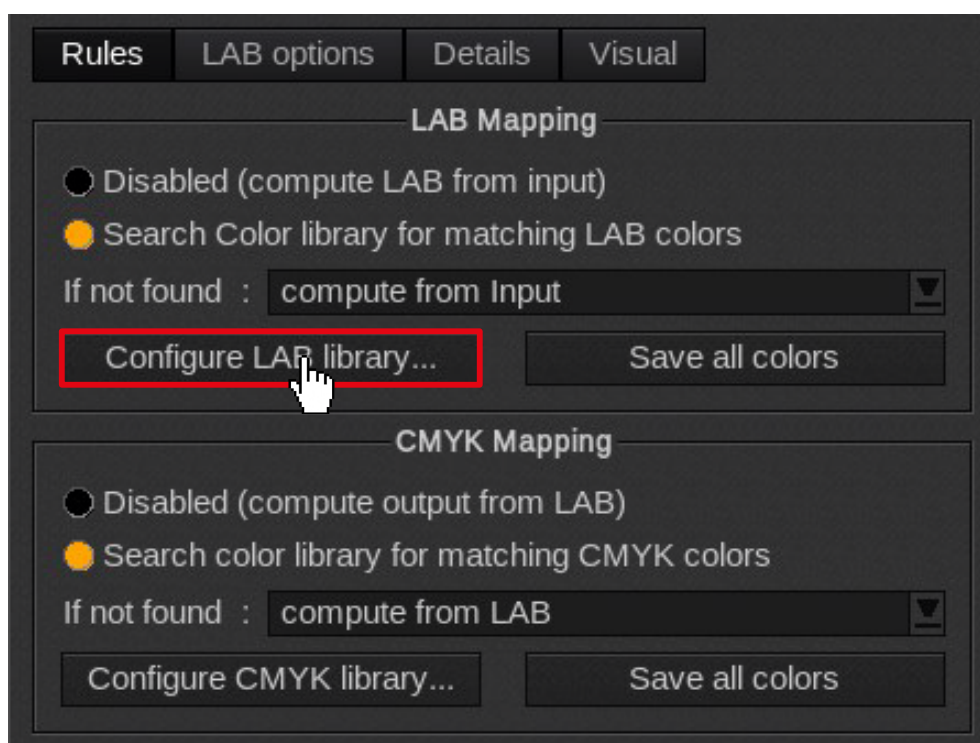


9. Check if the Suptac library is taken into account.

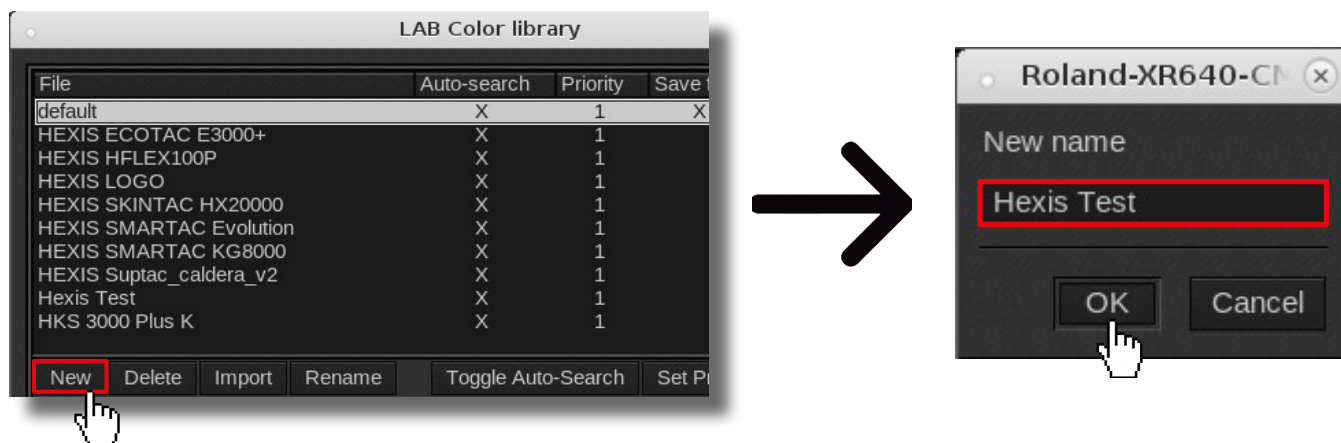


3.3.2. Creating a colour library in Caldera

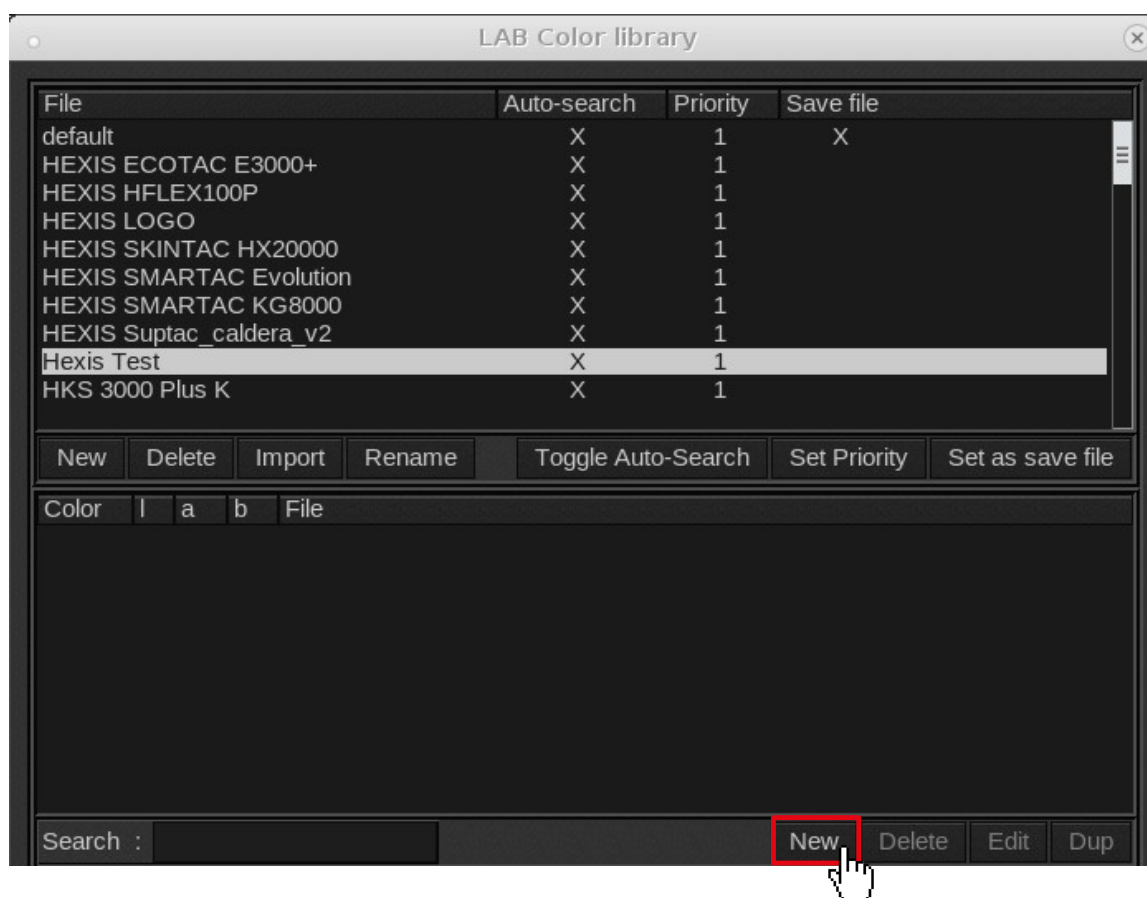
1. Click the  icon.
2. Under the «Rules» tab, click «Configure LAB library».



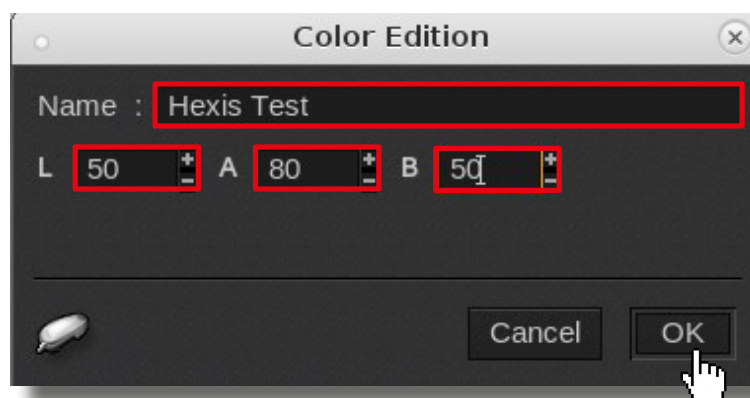
3. Click «New» and then enter a name.



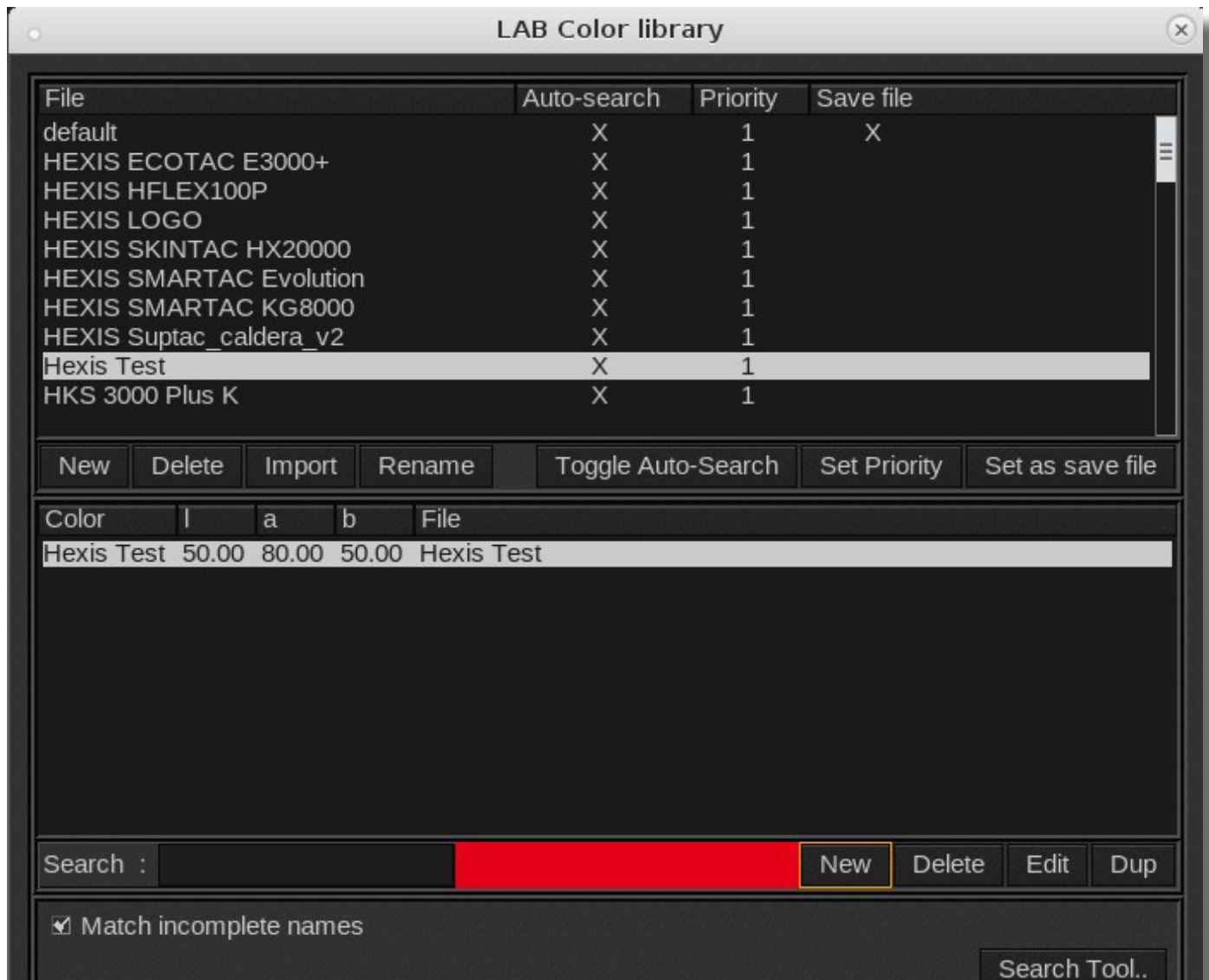
4. In the frame below, create a colour by pressing «New».



5. Enter the name and LAB values of this swatch. Measure the reference colour to be reproduced using a spectrophotometer.

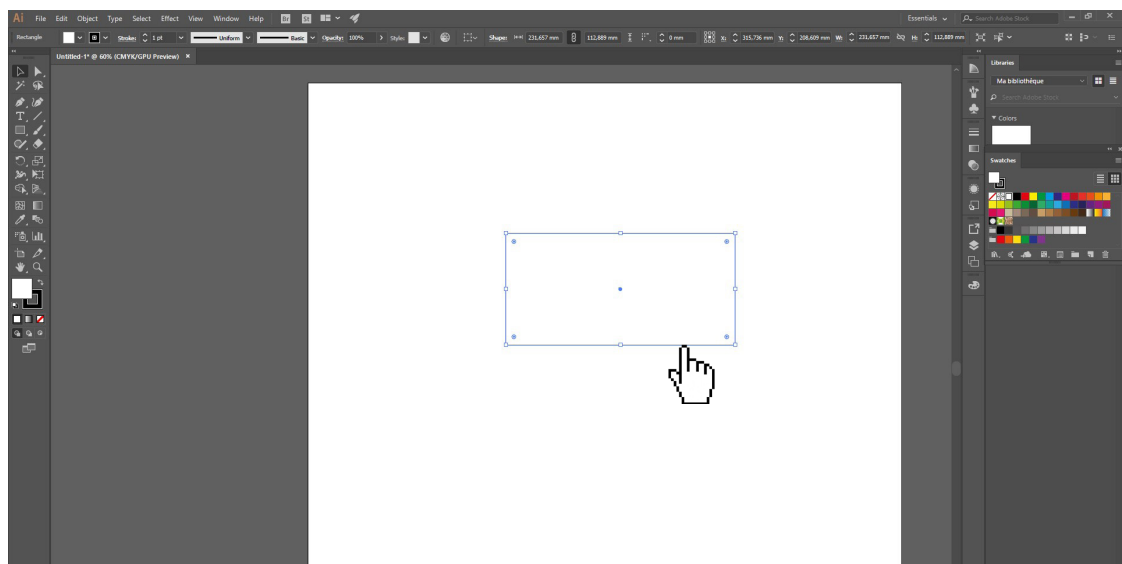


6. Click «OK».

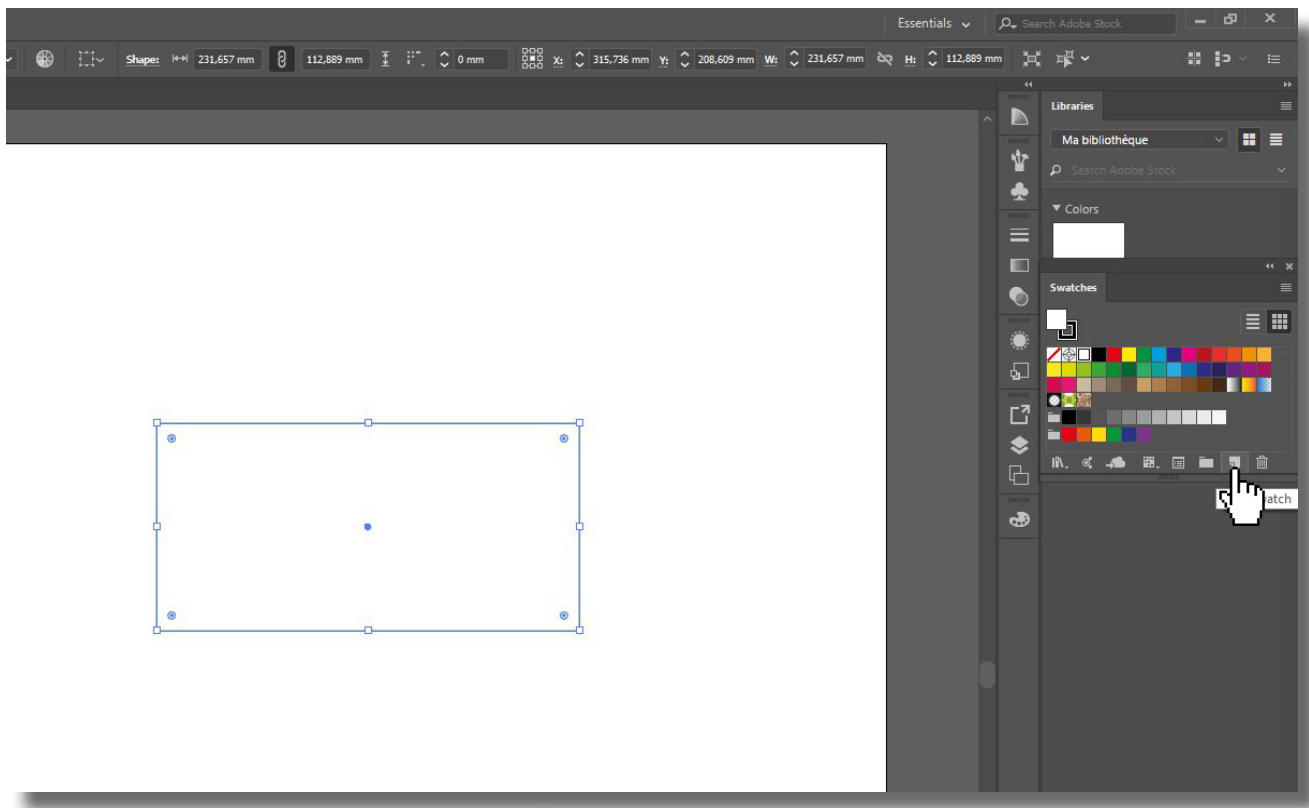


3.3.3. Creating a colour that matches a referenced value in Caldera under Illustrator

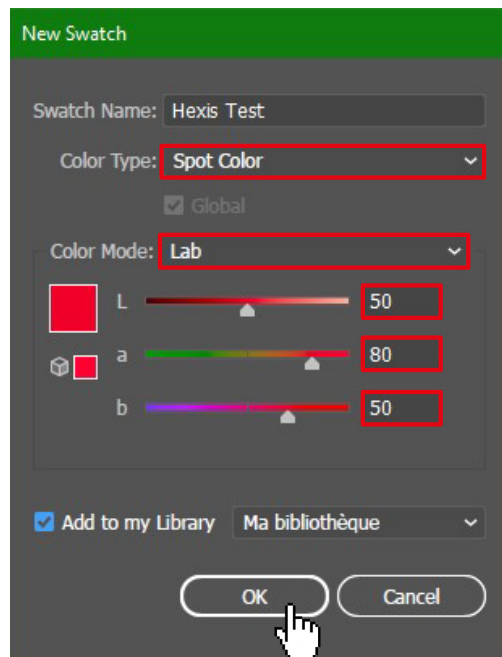
1. Select **the image**.



2. Click the «**New Swatch**» button.

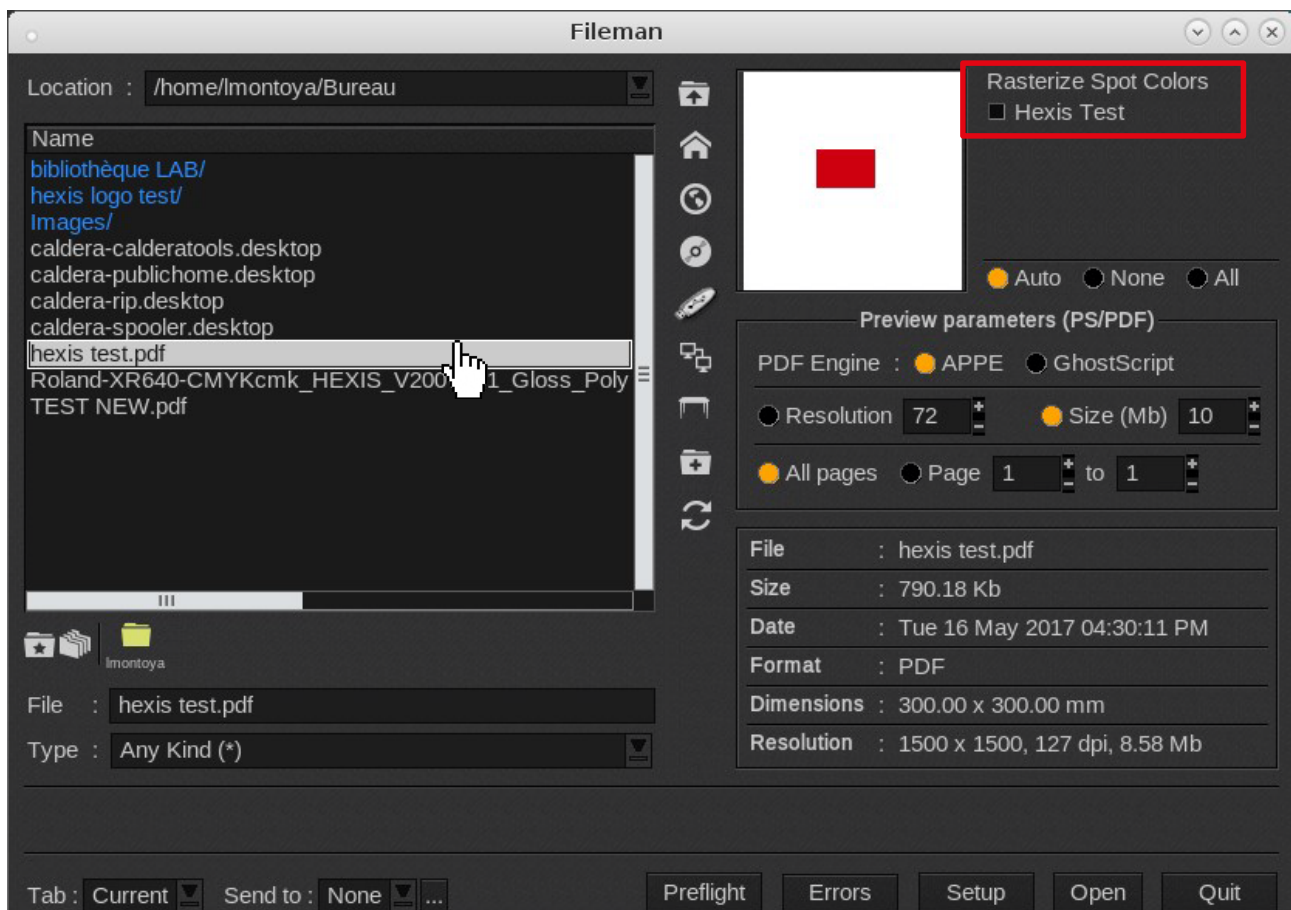


3. Enter exactly **the same swatch name** than that in Caldera.
4. Select «**Spot Colour**».
5. Reference **the LAB values** matching the desired visualisation colour.
6. Click «**OK**».

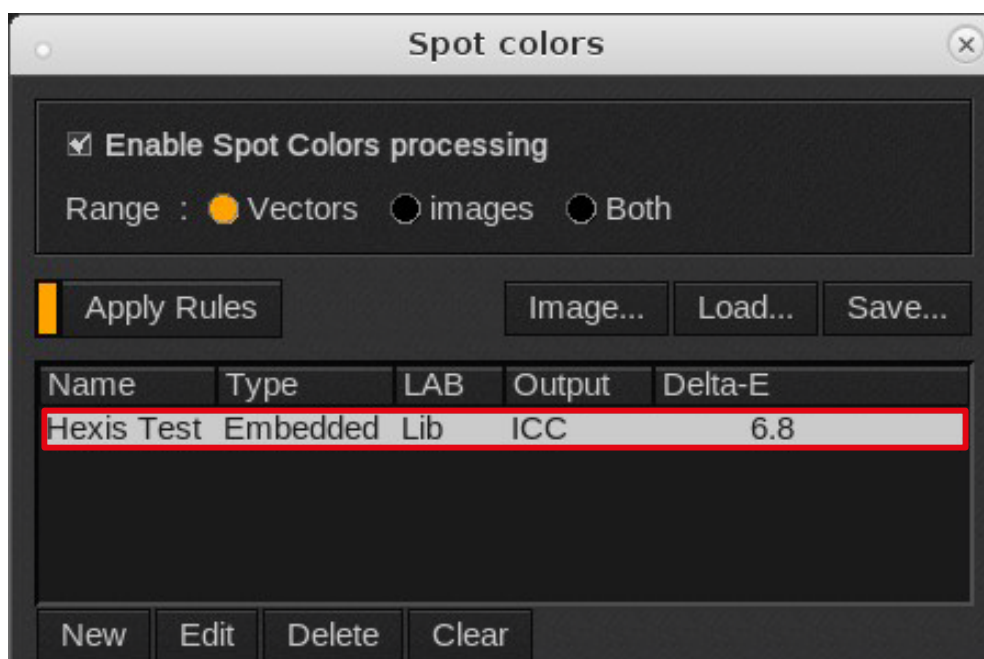


7. Save the file.

8. Open **the image** in Caldera.



9. Check if the colours are taken into account in the Spot colours window.
 10. Control the printing accuracy of your spot colour using Delta E.



Delta E is a value which expresses the colour lag perceived between two coloured swatches. The smaller the displayed value, the lower the colour difference perceived between the two swatches.

Delta E Value	Correspondence between two colours
dE<1	very close
1<dE<2.5	acceptable
dE>2.5	distanced

Some spot colours are not printable by your machine (outside the gamut). For example, the Delta E Value shown here is 4.9. This means that the printed colour using the above setting will be different from the referenced colour.