



Cookbook – How to reprint with consistent colors on the same printer with the HP Latex 300 and 500 Printer Series

Good practices to ensure correct color consistency



Table of contents

- 1. Matching the color of the original plot 3
- 2. Color Calibration 4
 - 2.1 Keep your printer tuned to reproduce consistent colors 4
 - 2.2 How does it work? 4
- 3. Printing factory workflow 6
 - 3.1 Color consistency while reprinting 6
 - 3.1.1 Prepare the device 6
 - 3.1.2 Identify the scenario before running color calibration 6
 - 3.1.3 Perform the color calibration..... 8
- 4. Non-supported substrates 9
- 5. Useful links 10



1. Matching the color of the original plot

Reprints are one of the most common scenarios when printing: a print could get damaged during transportation or installation; customers might need more copies after some time...

Matching the color of the original plot is a must to avoid wasting time, media, and ink in unnecessary adjustments.

Printed on day 0

Printed on day 1

Printed on day n



With color calibration



Without color calibration

Do you want to reprint with consistent colors? Follow these recommendations to understand how.



2. Color Calibration

2.1 Keep your printer tuned to reproduce consistent colors

Printheads can degrade over time, leading to Image Quality issues. The color output of the printer can shift over the time of usage. You can prevent this with color calibration.

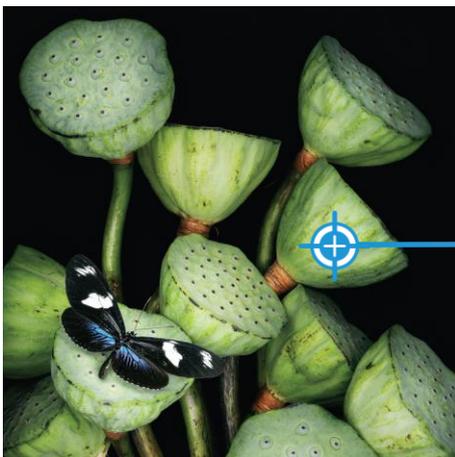
2.2 How does it work?

- When you use a new substrate in the printer, you must perform the first color calibration to set a reference. There is no factory reference, the first calibration sets the color reference for future calibrations.

NOTE: Media downloaded from the PrintOS Media Locator comes with a reference made in the best conditions.

- From then on, every time a new calibration is done the printer is calibrated to match that reference, keeping colors consistent.

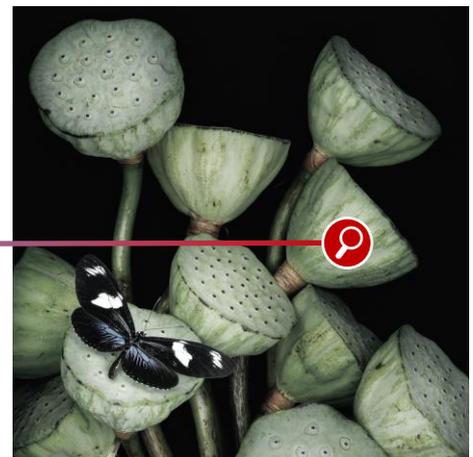
In other words, the color calibration reference is like taking a picture of the printer status. Later on, we will try to match to this picture when the color has shifted.



Set color reference

Causes:

- Obsolete CLC
- New Printhead
- Color deviation



Verify color reference

Color calibration is substrate dependent, so each substrate in the printer requires its own color calibration. Setting the reference or doing a color calibration does not affect all other substrates.

Depending on where the preset comes from, the reference is embedded or not.

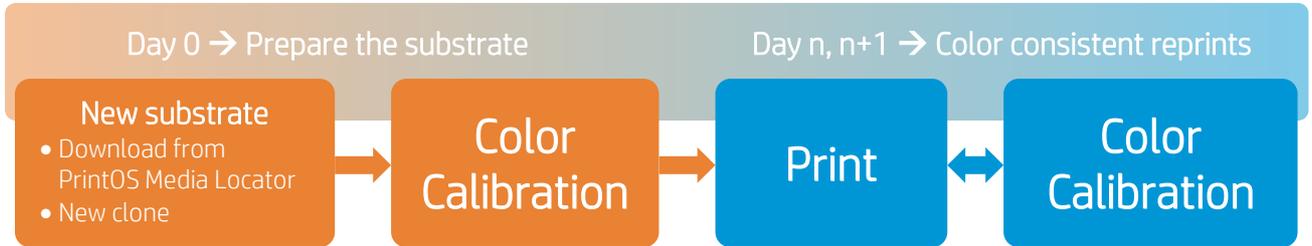
Generic preset	PrintOS Media Locator preset Exported preset (eg: third party)	Add media	Cloned preset*
<ul style="list-style-type: none"> • Cannot be modified • Needs to be cloned to perform the CLC • No CLC reference embedded 	<ul style="list-style-type: none"> • CLC reference embedded 	<ul style="list-style-type: none"> • No CLC embedded 	<ul style="list-style-type: none"> • Reference from original preset, if available • Necessary to run the CLC to verify / create reference

* **NOTE:** If you clone a preset that has been color calibrated, the reference is maintained in the new clone.

3. Printing factory workflow

3.1 Color consistency while reprinting

Reprinting while maintaining consistent colors can be easily achieved by following a simple workflow:



Prepare the substrate

3.1.1 Prepare the device

Before doing a color calibration, it is necessary to ensure good image quality. Make sure that:

- Printheads have good nozzle health.
- Printheads are correctly aligned.
- Substrate is advancing correctly.
- Printheads are as new as possible (use new printheads for best performance).
- Environmental conditions are within printer specifications.

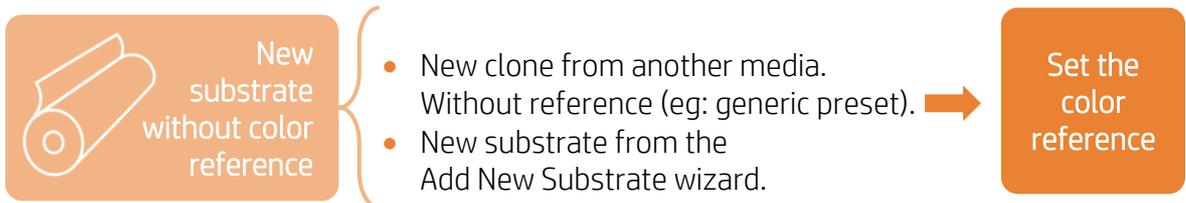
NOTE: Check the user guide for your printer if you have doubts about any of the previous verifications.

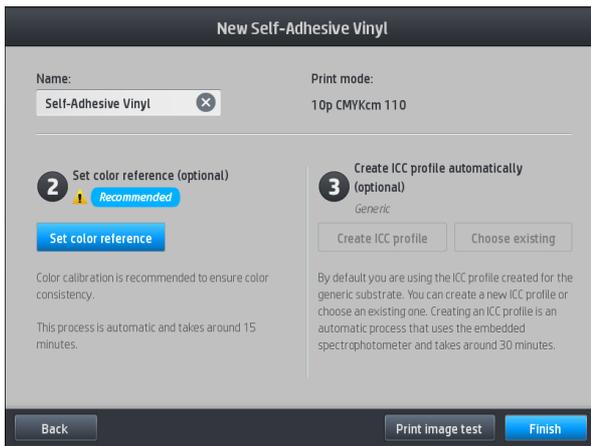
3.1.2 Identify the scenario before running color calibration

When you download a new media from the **PrintOS Media Locator**, or when you create a **new substrate clone** from a generic media, color calibration must be done.

There are two possible scenarios:

- **New substrate without color reference**



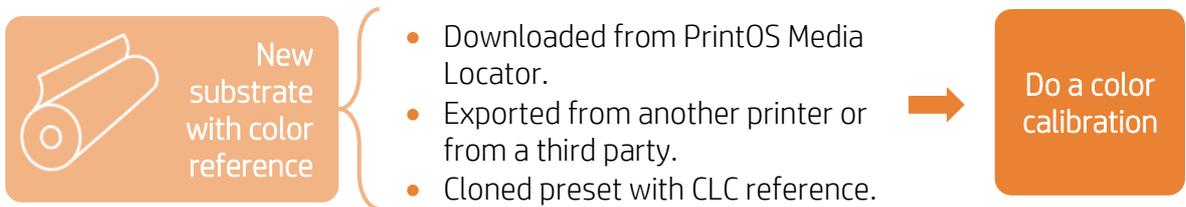


When creating a substrate preset from scratch, the substrate creation wizard will recommend you set a color reference with that specific substrate.

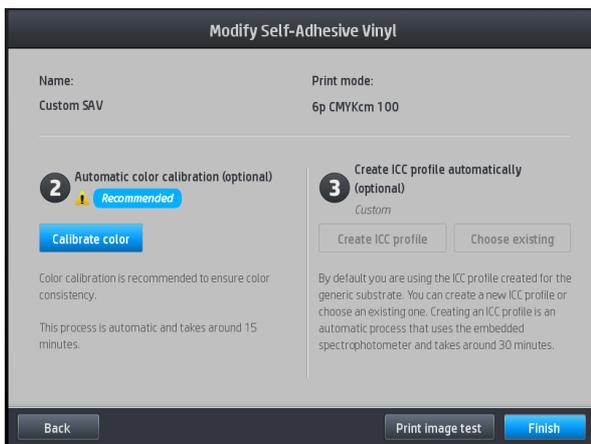
After setting the reference, the color will not change. As there is no factory reference, the first calibration sets the color reference for future calibrations. That is why it is important to make sure that the printer is in optimal printing conditions before setting the reference.

• **New substrate with color reference**

What if the substrate you're using already **has a color reference**?
Do a color calibration to match the reference.



In this case, if you printed something before calibrating, the color may change, since the printer will be calibrated to match the reference.



When cloning a substrate with an existing color reference, the substrate creation wizard will recommend you run a color calibration.

You can check the color calibration status of your substrate by pressing



on the front panel. The calibration status can be:

- **Recommended:** Indicates that this substrate has never been calibrated. Either a color reference has yet to be created or calibration is needed to match an existing reference.
- **OK:** Indicates that a color calibration has been performed successfully at least once on this substrate, and therefore a color reference state is defined.
- **Obsolete:** Indicates that the last color calibration may be out of date.
- **N/A:** Indicates that this substrate cannot be color-calibrated. Either the substrate is a generic preset, it has a preset that is not editable, or the substrate is not suitable for color calibration.

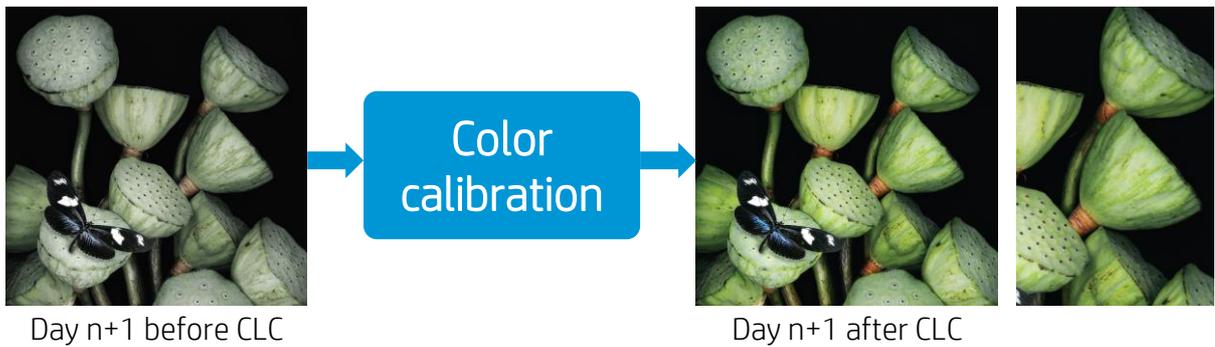
After running the color calibration your substrate is now prepared to print while keeping colors consistent. **Print!**



Color consistent reprints



The substrate was prepared on day 0 and it is only necessary to do a color calibration to continue printing with consistent colors.



3.1.3 Perform the color calibration

Color calibration should be done when:

- There is a visible color shift.
- A printhead is replaced.
- The color calibration status changes to **Obsolete** on the front panel.

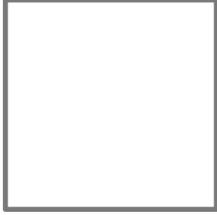
NOTE: Remember to verify good IQ conditions before running the color calibration. If it is necessary to do a color calibration, go to **Settings > Image quality maintenance > Color Calibration > Calibrate**.

After the completion of the calibration process, the printer will be ready to **reprint with consistent colors**.

4. Non-supported substrates

Some substrates cannot be read by the embedded spectrophotometer or line sensor.

This is the case for:

Porous textiles substrates	Backlit substrates	Transparent substrates	Colored substrates
			

NOTE: In some of those cases, the color calibration is disabled from the Front Panel.

5. Useful links

User manuals:

- <http://www.hp.com/go/latex300/manuals/>
- <http://www.hp.com/go/latex560/manuals/>
- <http://www.hp.com/go/latex570/manuals/>

PrintOS Media Locator:

- <https://www.printos.com/ml/#/homeMediaLocator>

Further information:

- <http://www.hp.com/supportvideos>
- <http://www.youtube.com/HPsupportAdvanced>