

CurvePilot 12.1.2

What’s New

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2 Import of Characterization data files (as Desired Printing Condition)

2.1.1 Description:

A PressSync curve set can be set up towards a specific desired printing condition. That desired printing condition can be expressed as a desired printing profile (ICC or Esko profile). Desired tone curves and gray balance aims are then extracted from that profile.

With this new function a user can now also select a specific characterization data file as desired printing condition.

Information about characterization data:

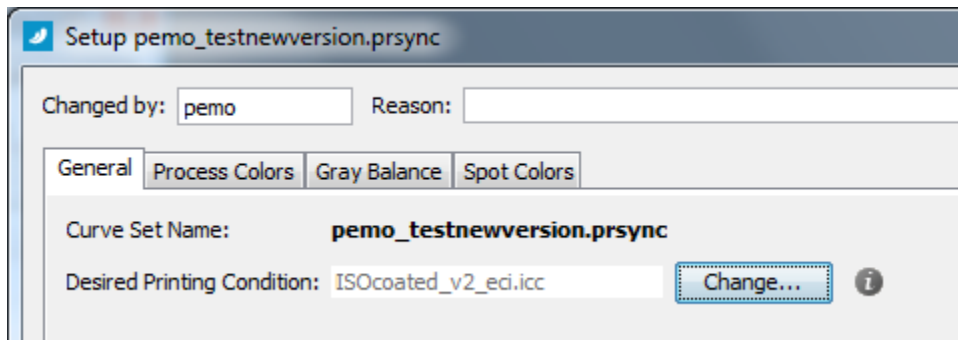
<http://www.fogra.org/en/fogra-standardization/fogra-characterizationdata/a-icc-en.html>

Requirements:

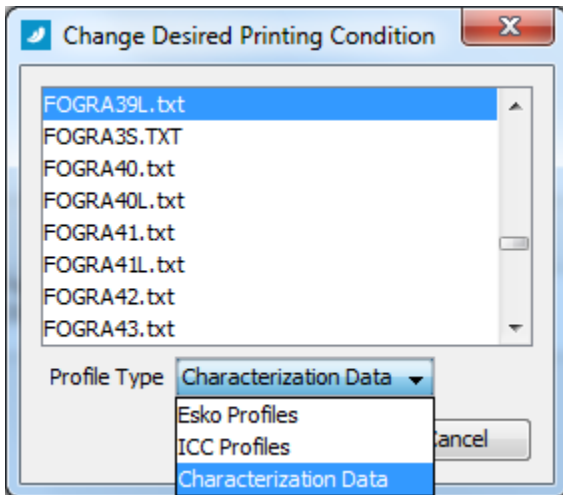
- This data uses CGATS file format, extended with ‘.txt’ (e.g. FOGRA39L.TXT).
- Characterization Data needs to be copied to the CurvePilot data folder.
- If not enough G7 CMY composed gray samples are available in this data, it is not advised to use characterization data as desired printing condition for 3ck type of curve sets (G7 method)

2.1.2 How to use:

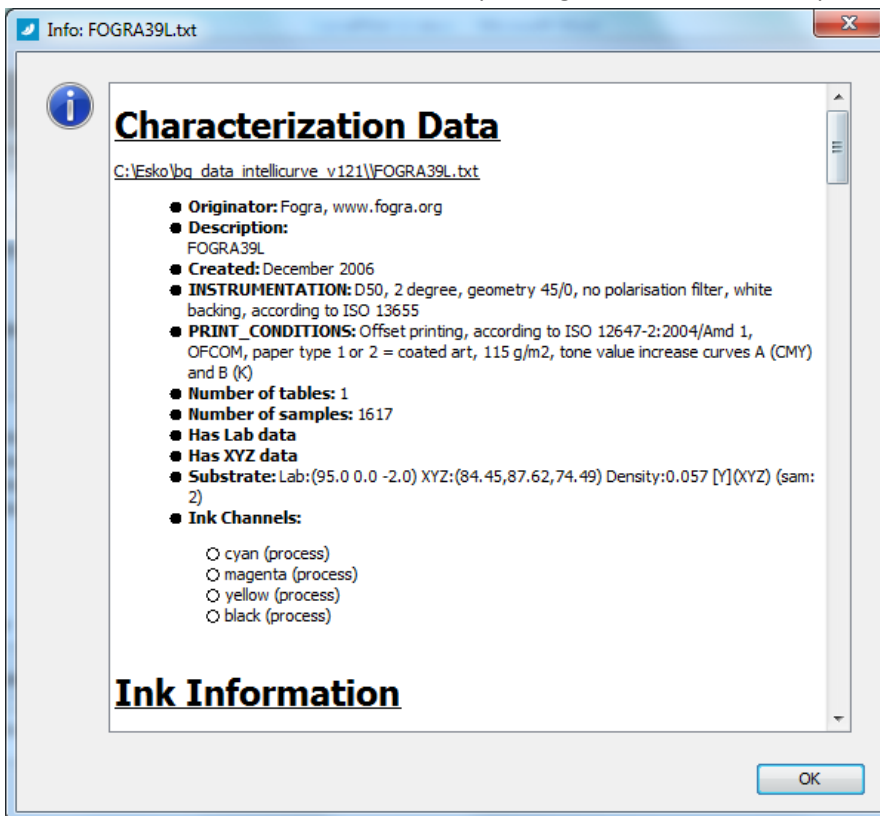
1. Create or open a curve set and click ‘Setup...’
2. Go to the general tab and click ‘Change...’ next to the desired printing condition.



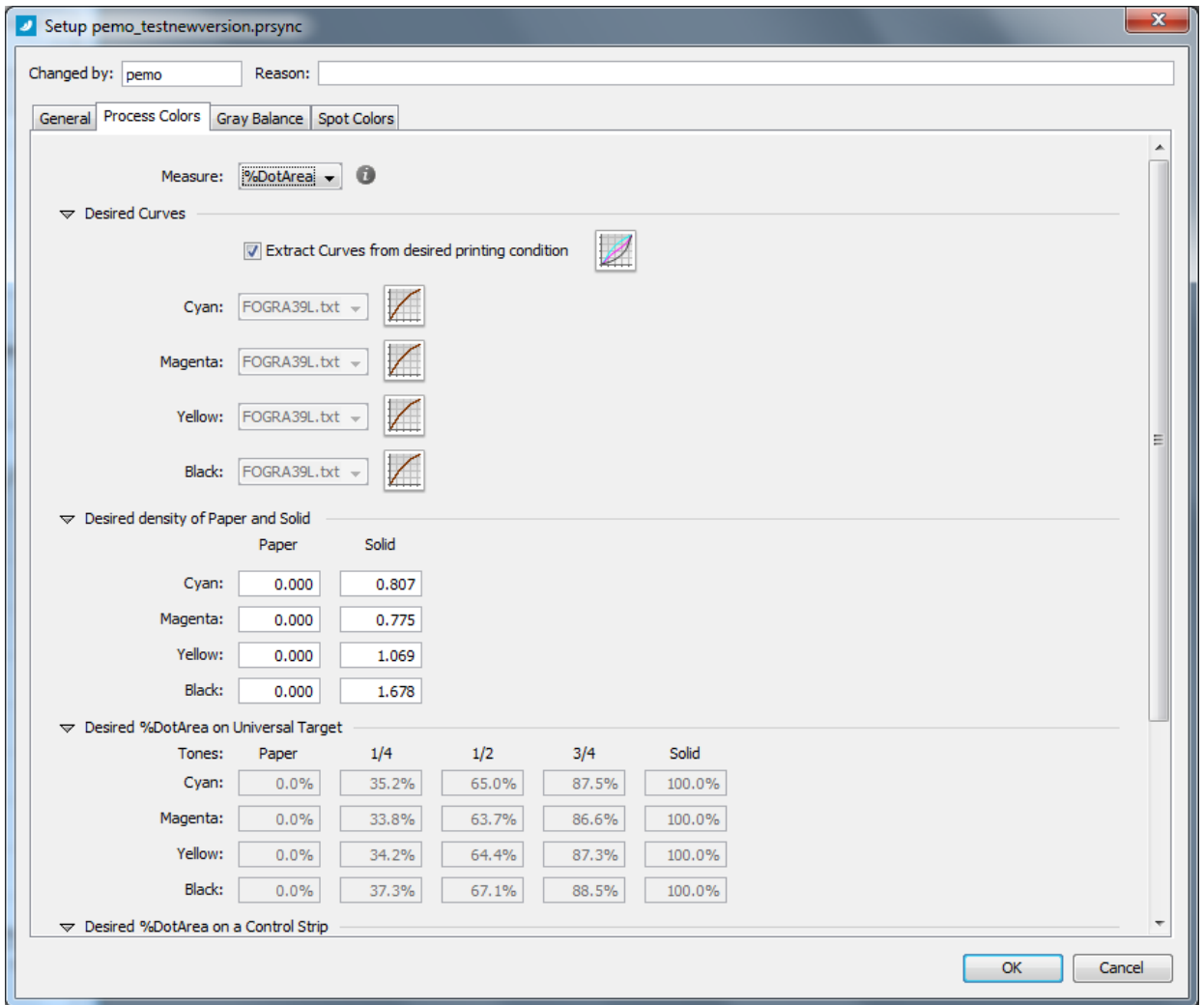
3. Select ‘Characterization Data’ as Profile Type, select a data file from the list, and click OK



- Information about the selected desired printing condition can be requested by clicking 



- Set the profile as desired values for tone or gray balance in ‘Process Colors’, ‘Gray Balance’ or ‘Spot Colors’ tab



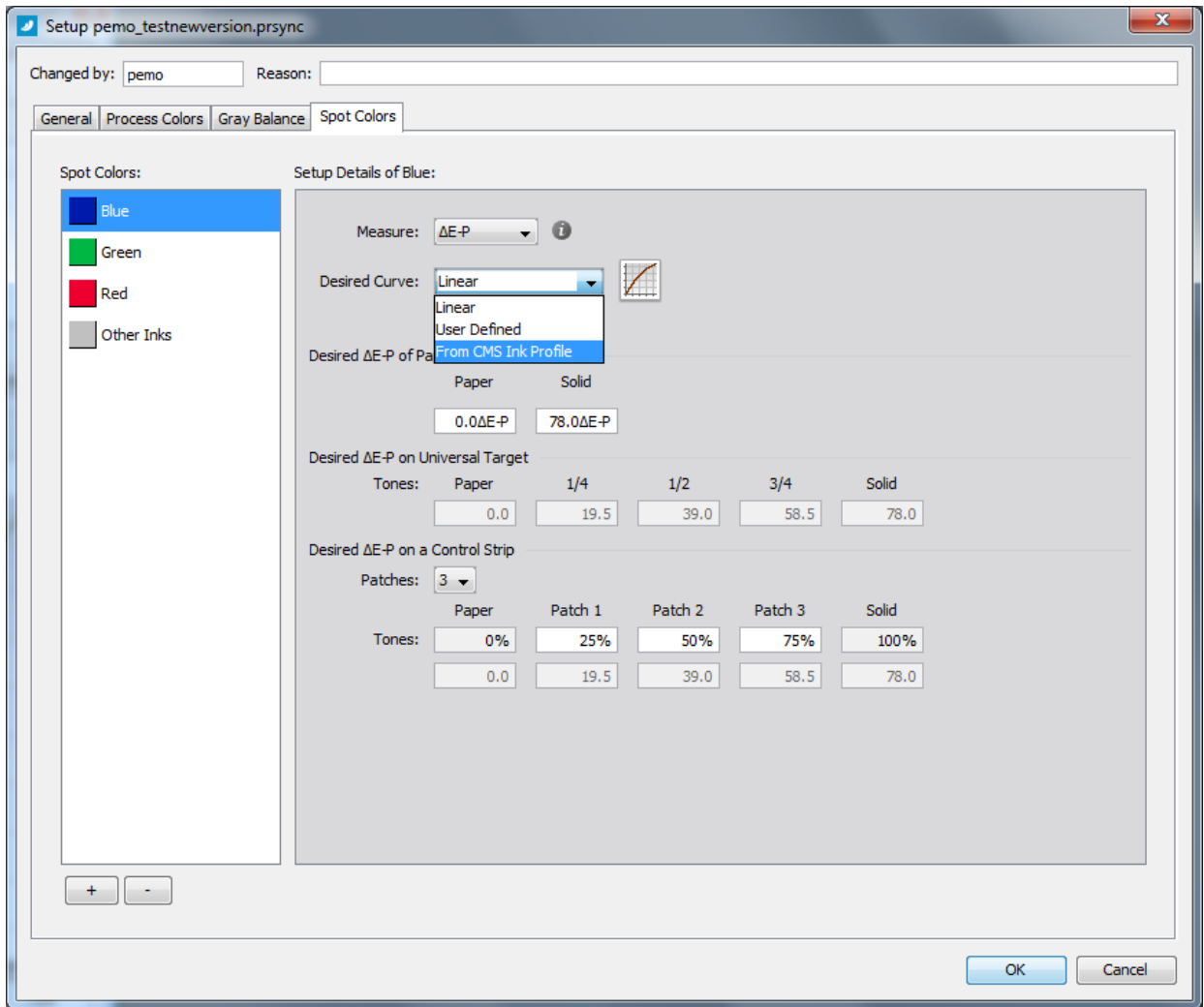
3 Using a CMS Ink profile to set the desired curve for spot colors

3.1.1 Description:

When an ink has been profiled in CMS, tone values can be derived for that ink. These values can be used as ‘desired values’ for calculating PressSync curves.

3.1.2 How to use:

From the curveset setup panel, select the ‘Spot Colors’ tab and select ‘From CMS Ink Profile’ as desired curve



4 Density and dot area from measured data: Densitometric versus Colorimetric values and filters.

4.1.1 Description:

When selecting a sample in the measurement panel values are displayed in all supported metrics: CIEL*a*b*, Density, %DotArea, ΔE_P , % ΔE_{PS} .

When measured data does not contain spectral data, the extracted density and %DotArea are values obtained from XYZ tri-stimuli calculations. The values are colorimetric.

In that case the density values will be post-fixed (XYZ).

When there is spectral data available, density and %DotArea are calculated from spectral data by holding it against a Red, Green or Blue filter. The measured values are densitometric: equal to measurements from a densitometer.

In that case the density values are post-fixed with the Status Response that is set in the Preferences. (ANSI A, ANSI T, DIN or DIN NB).

A density value is also post fixed with the filter that is used to calculate the value.

In case of colorimetric values, the postfix is X, Y or Z depending on the tri-stimuli that resulted in the largest value.

In case of densitometric values, this postfix is the R,G,B or K (Visual) filter whichever resulted in the largest density value.

E.g.

A measured sample for a specific Cyan tone shows a density value post fixed with [R](DIN):

Measurement with spectral data, Red filter used (Cyan tone determined from the amount of absorbed red light), and DIN is used as response filter.

A Magenta sample density post fixed with [y](XYZ): Measurement without spectral data, CIELab values are calculated to XYZ values, Y tri-stimuli is used to indicate the amount of absorbed light from Magenta.

5 Measured and desired values graphs

5.1.1 Description:

The result panel that shows measured and desired values in a tabular form now also shows these values in a graph.

Points on the graph indicate measured values while lines indicate desired values
Depending on the metric different scales will be used.

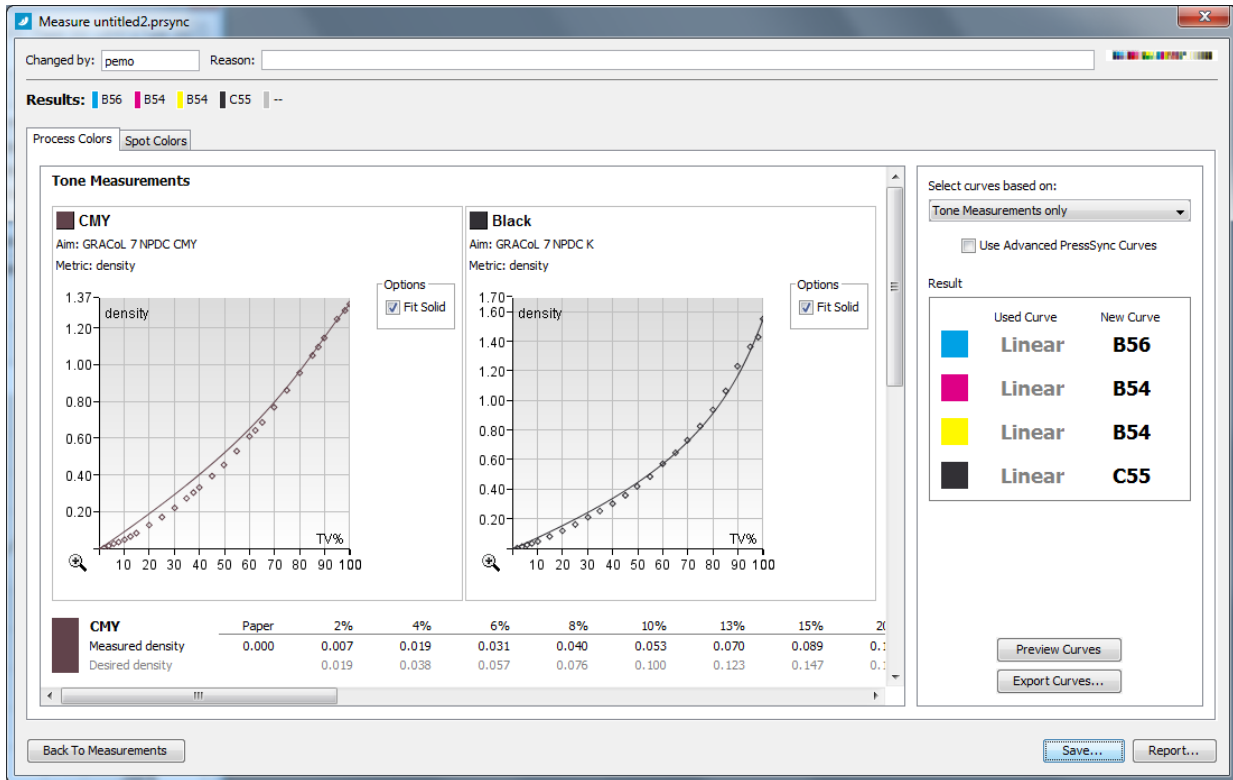
The same graphs are also included in the report.

Note: a report is generated from the results panel by clicking ‘report...’

Density:

The Y-axis is scaled to densitometric values. In case a G7 curveset is used (3ck_) the shape of the desired curve is equal to the G7 K or CMY FANGraph.

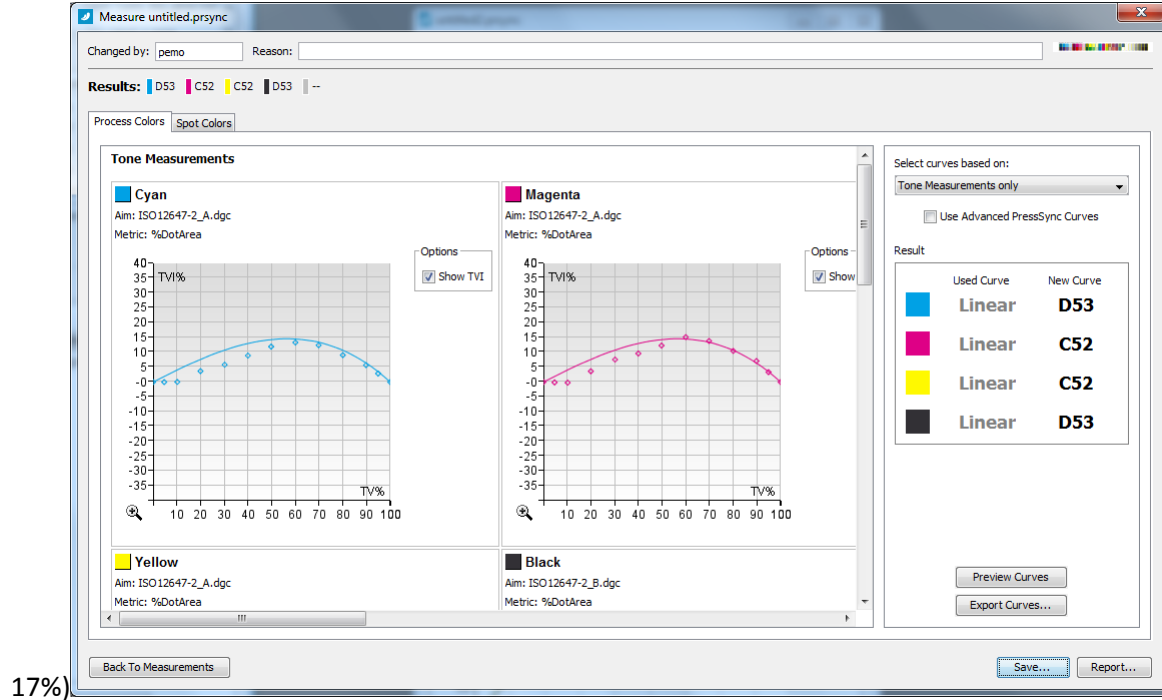
When the option ‘Fit Solid’ is checked, the desired curve is plotted normalized to the measured ink solid.



%DotArea:

The Y-axis is scaled to tone percentages.

When the option ‘Show TVI’ is selected, desired and measured values are plotted relative to tone value (E.g. If 50% measured 67%, it will be plotted as a point at 67%-50% =

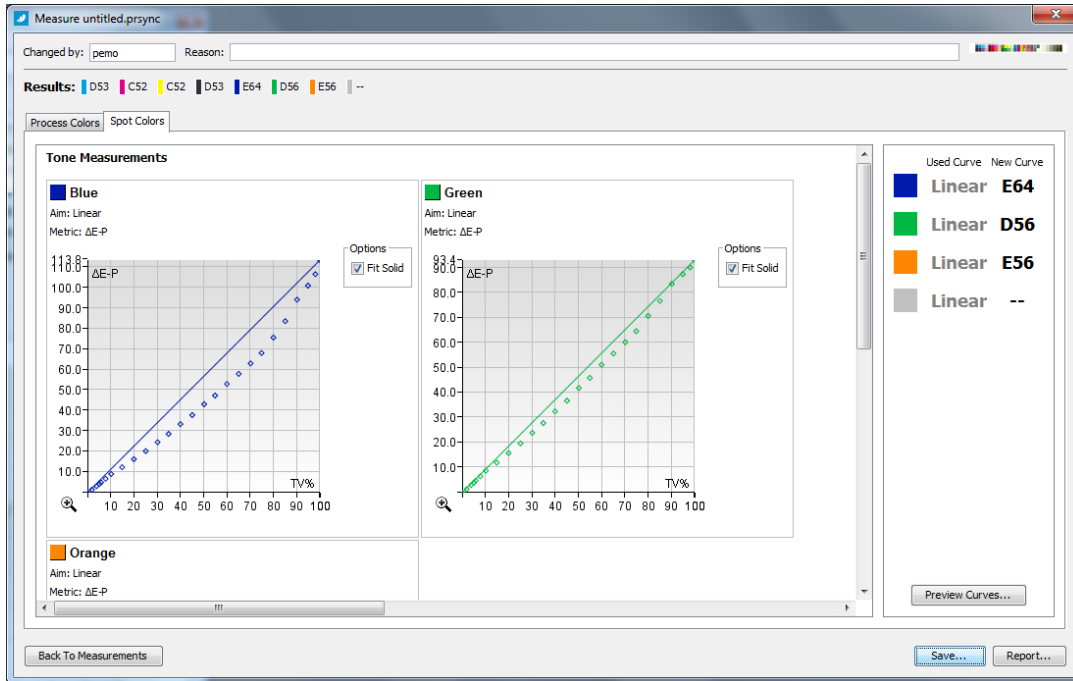


17%)

ΔE P

Y-axis is scaled to ΔE_P values.

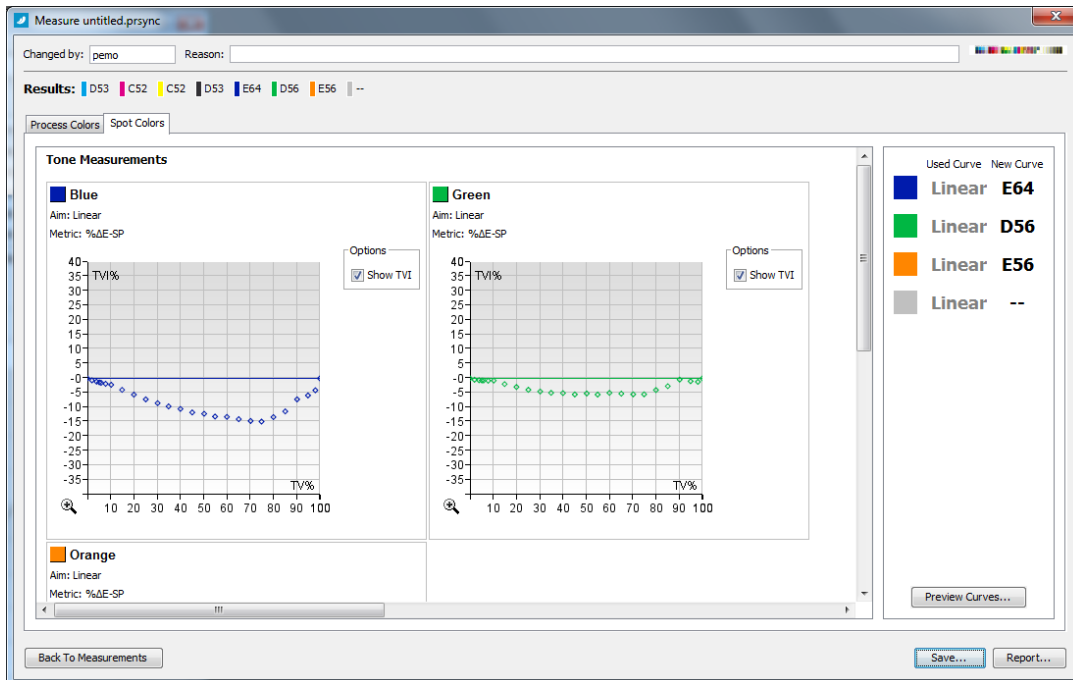
When the option ‘Fit Solid’ is selected, the desired curve is plotted normalized to the measured ink solid.



%ΔE PS

Y-axis is scaled to %ΔE_PS values.

When the option ‘Show TVI’ is selected, desired and measured values are plotted relative to tone value (E.g. If 50% measured 67%, it will be plotted as a point at 67%-50% = 17%)



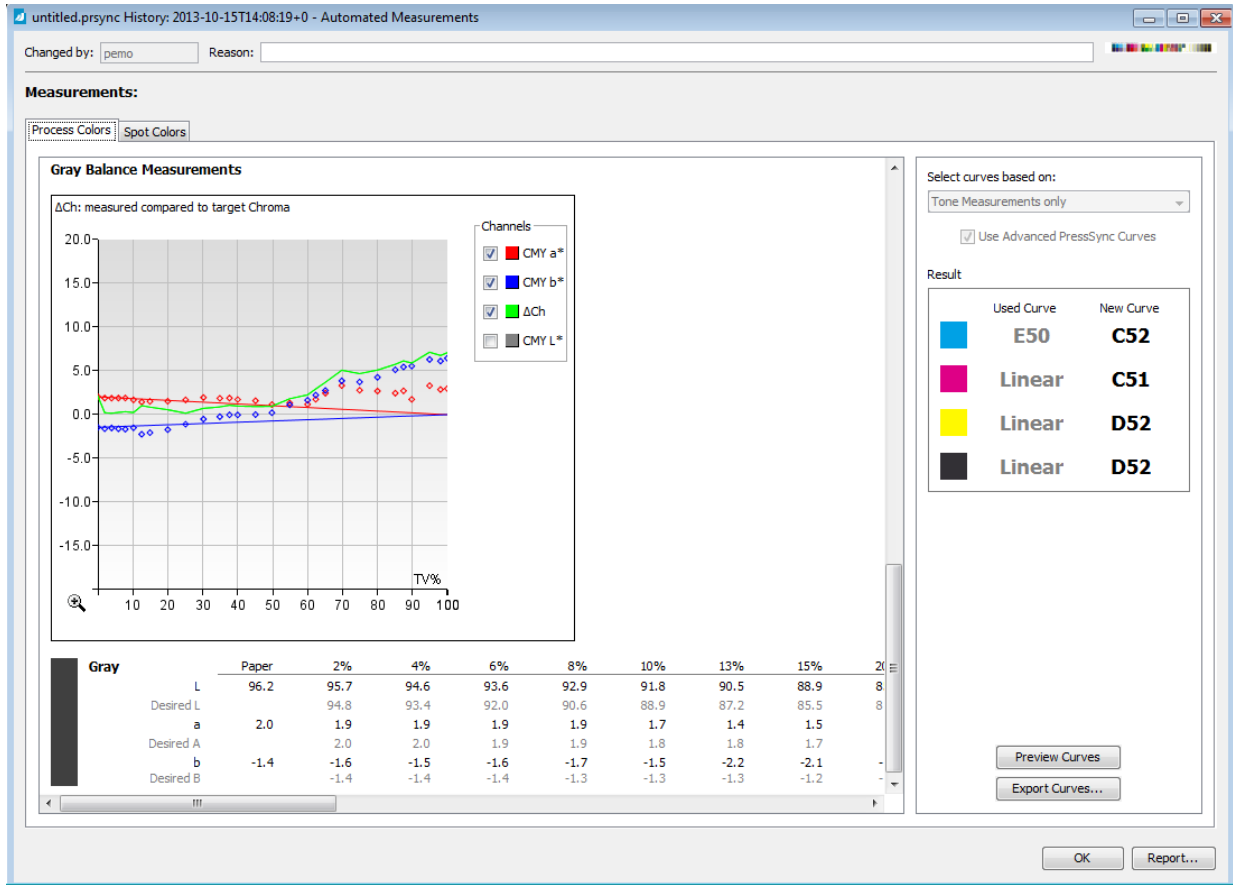
Gray sample measurements:

Measured gray samples are plotted with a* (red) and b* (blue) points.
 Desired gray a* and b* values are plotted with a red respectively blue line

ΔCh is plotted as a green line, with each point on the line expressing the difference between desired and measured chroma hue.

Formula:

$$\Delta Ch = \text{SQRT}((a_{\text{measured}}^* - a_{\text{desired}}^*)^2 + (b_{\text{measured}}^* - b_{\text{desired}}^*)^2)$$



6 Viewing external measurements

6.1.1 Description:

With this feature an imported measurement (CGATS file) can be viewed as an automatically measured measurement.

The layout used to visualize the measurement depends on the number of samples that are available. If a layout is not recognized from the number of samples, the measured samples will be shown in a square grid.

Currently only the following layouts are recognized:

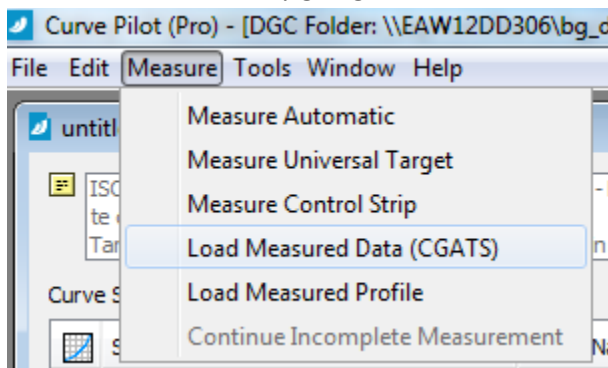
- IT8.7/4 (1617/1638 samples)
- P2P25 (300 samples)

6.1.2 How to use:

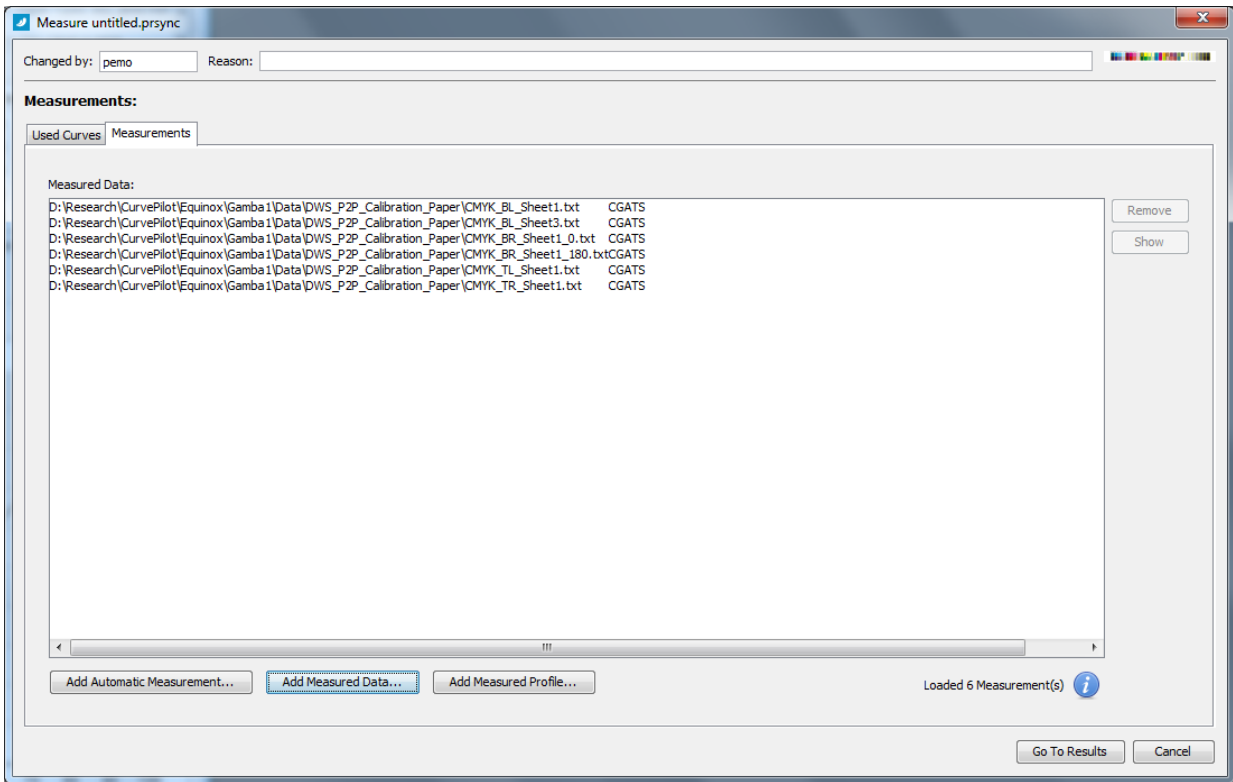
Load external measurements file from the Measurement panel, select a measurement that you want to view, and click ‘Show’ on the left side of the ‘Measured Data’ list box.

6.1.3 Steps to test:

1. Open or create a PressSync curveset
2. Load a measurement by going to the **Measure** menu, and selecting ‘**Load Measured Data (CGATS)**’.



3. Select one or more external CGATS files
The file will appear in the ‘Measured Files’ list.
In this example 6 data files are loaded.

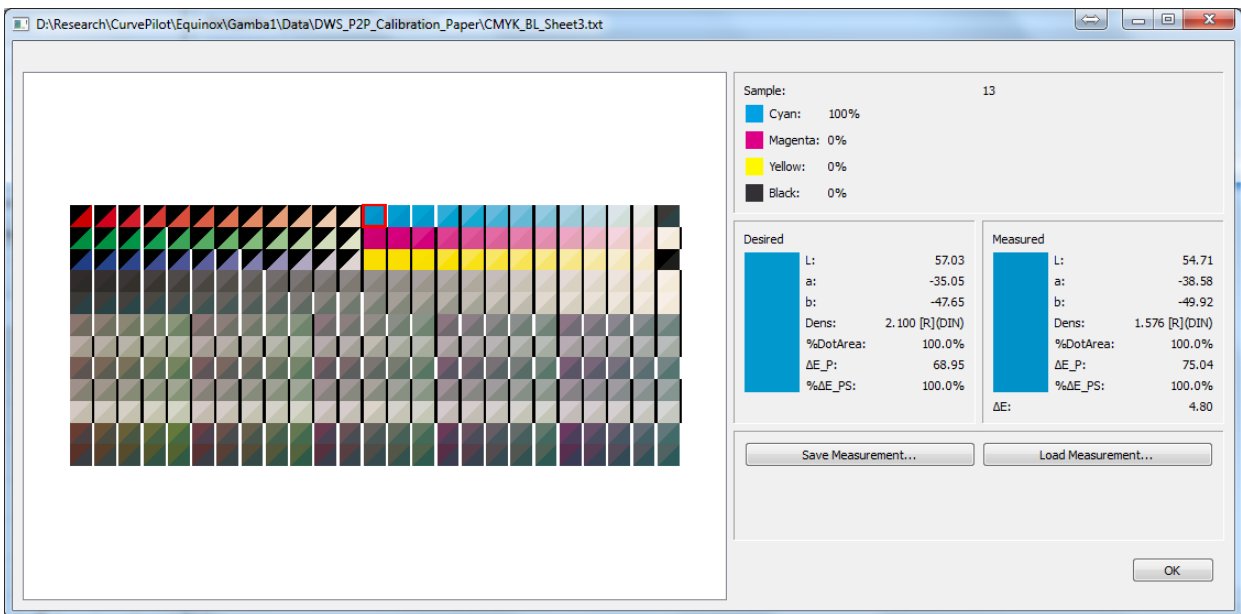


4. Select one of the files and click 'Open'.

In this example, the data file contains 300 samples so the measured data is viewed with the P2P25 layout.

Note:

Samples that are painted with a black triangle are samples that are not used to calculate curves from.



7 Support for Multi-section CGATS files

7.1.1 Description:

Most standard charts contain measurement for CMYK composed patches. (e.g. IT8.7/4, P2P25, ...).

These charts cannot be used for setting up curves for other than CMYK inks.

With this feature, standard CMYK charts can be set up to be used for other inks, by replacing one or more of the CMY inks by another ink.

E.g. if Orange is used instead of Cyan in a IT8.7/4 chart, by renaming the cgats measurement file to ‘file_**Omyk**.it8’, CurvePilot will be able to calculate curves for Orange instead of Cyan.

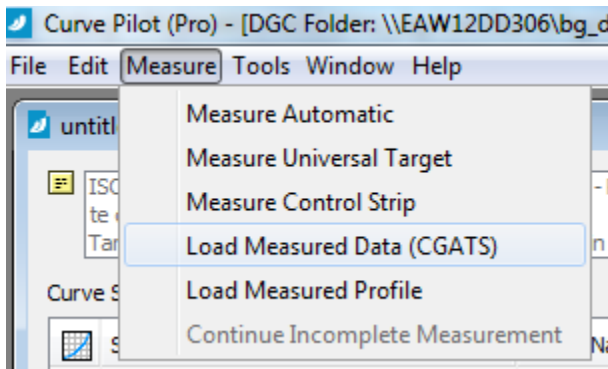
7.1.2 How to use:

If a CGATS measurement file has one of the CMYK inks mapped to another ink, postfix the file name of the cgats file with `_cmyk` and one of the process inks changed to the used ink.

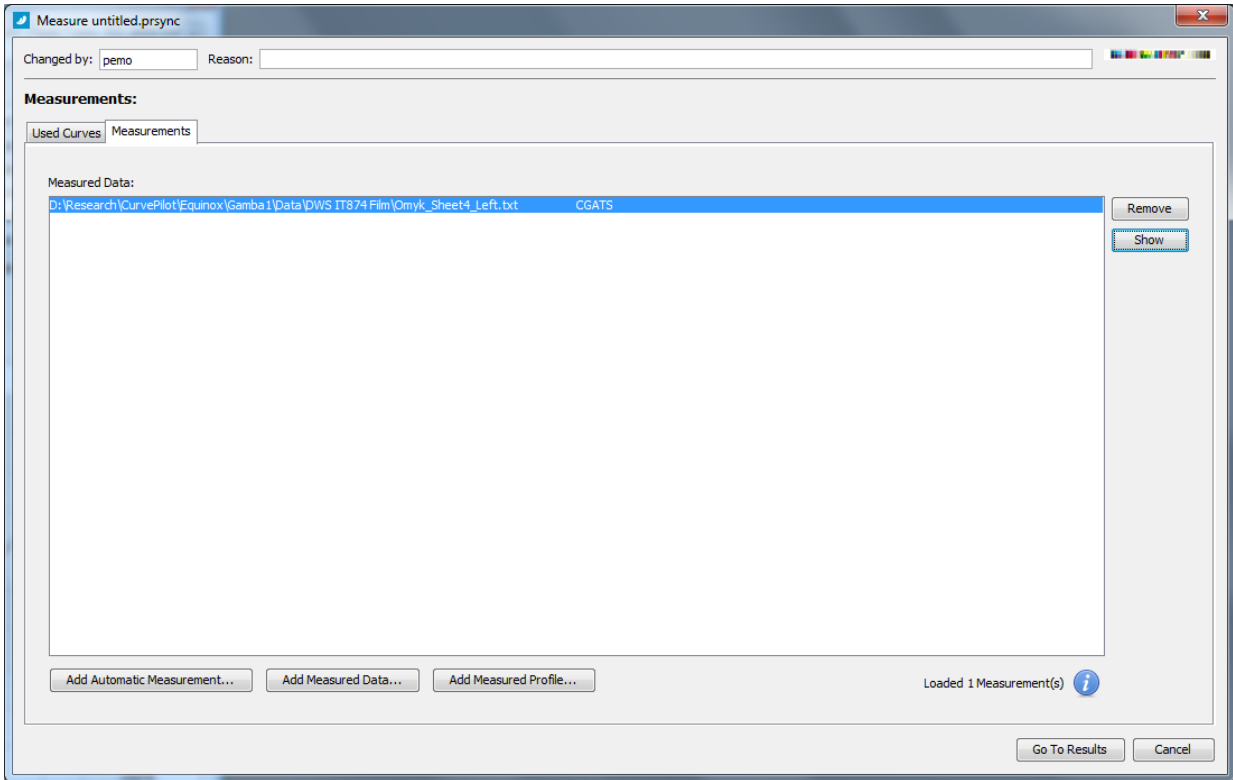
Note: the postfix is not case sensitive.

7.1.3 Steps to test:

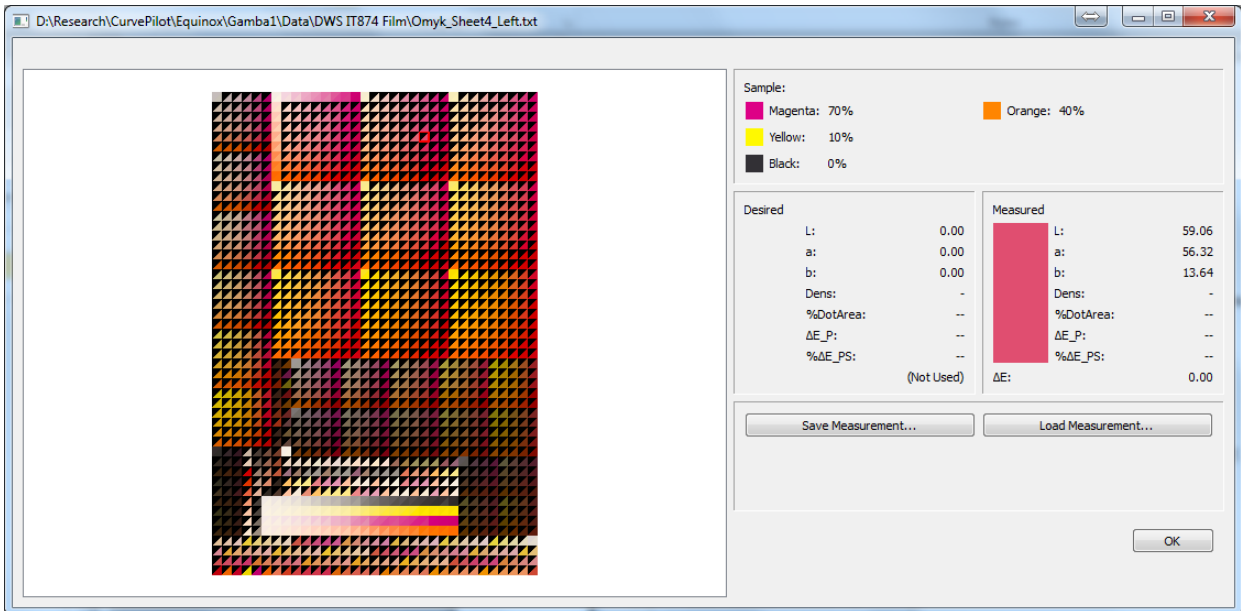
1. Open or create a PressSync curveset that contains multiple colors (e.g. from an Equinox curveset template)
2. Load a measurement by going to the **Measure** menu, and selecting ‘**Load Measured Data (CGATS)**’.



3. Select a CGATS measurement file with the adapted name. The file will appear in the ‘Measured Files’ list. In this example, the file ‘Omyk_Sheet4_Left.txt is opened.



4. Select the file and click 'Show' to open and inspect the measurement.
In this example, you can see that 'Cyan' is replaced by 'Orange'



8 Support for P2P25 Equinox OGB charts

8.1.1 Description:

The test chart layout “EquinoxChart_OGB.it8”, which is available in CurvePilot, is used to calculate curves for OGB inks (or equivalent). It has the same layout as the P2P25 chart but with CMY inks replaced by OGB and the chart has no gray patches.

With this feature, all measured data files with their name postfixed with ‘OGB’ (or equivalent color) will be loaded with the layout file ‘EquinoxChqrt_OGB.it8’.

8.1.2 How to use:

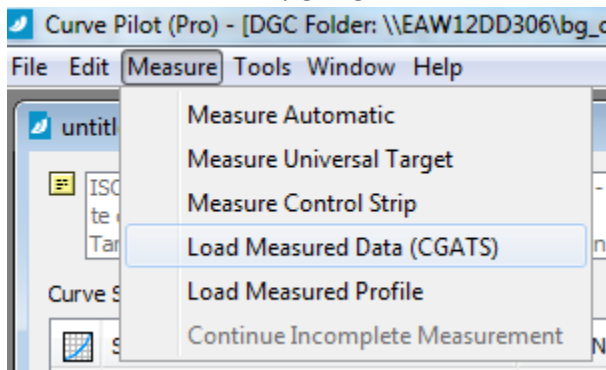
If a cgats data file is a measurement from the EquinoxChart_OGB chart, postfix that file with _OGB (or equivalent color).

Supported post-fixes are (case insensitive):

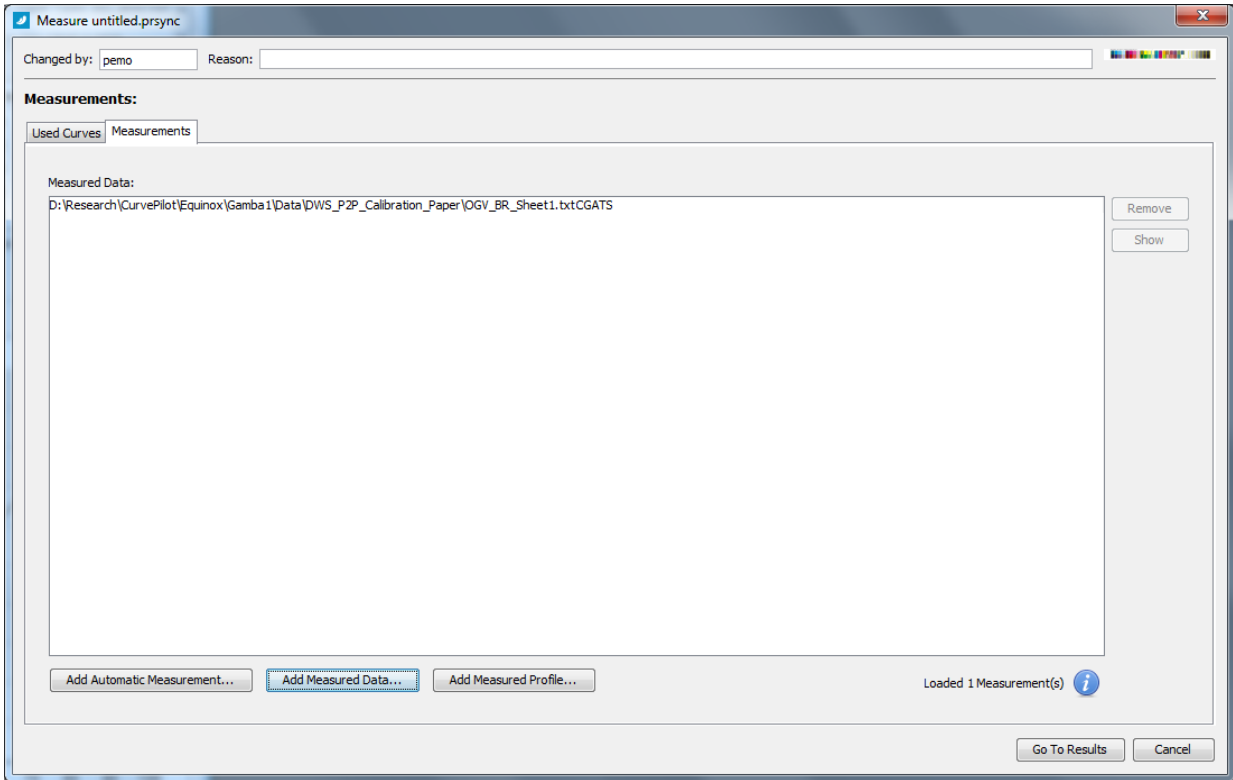
- OGB (Orange, Green, Blue)
- RGB (Red, Green, Blue)
- OGV (Orange, Green, Violet)
- RGV (Red, Green, Violet)

8.1.3 Steps to test:

1. Open or create a PressSync curveset that contains multiple colors (e.g. from Equinox curveset template)
2. Load a measurement by going to the **Measure** menu, and selecting ‘**Load Measured Data (CGATS)**’.



3. Select a CGATS file that is a measurement from the EquinoxChart_OGB (with postfix OGB or similar). The file will appear in the ‘Measured Files’ list.
In this example, the file ‘OGV_BR_Sheet1.txt’ is selected, which is the measurement from the EquinoChart_OGB chart with Orange, Green and Violet used.



4. Select the file and click ‘Show’ to open and inspect the measurement.

Note:

In this example, you can see that ‘Violet’ ink measurements are seen as ‘Blue’ ink measurements.

That is because the curveset is set up with Blue ink i.s.o. Violet.

An ink used in a cgats file but not set up in a curveset will be mapped to the closest free ink (closest hue) that is setup in the curveset.

