



Chroma™ 2015.1

Important Changes to the Previous Version 2014.1

as at March 2016

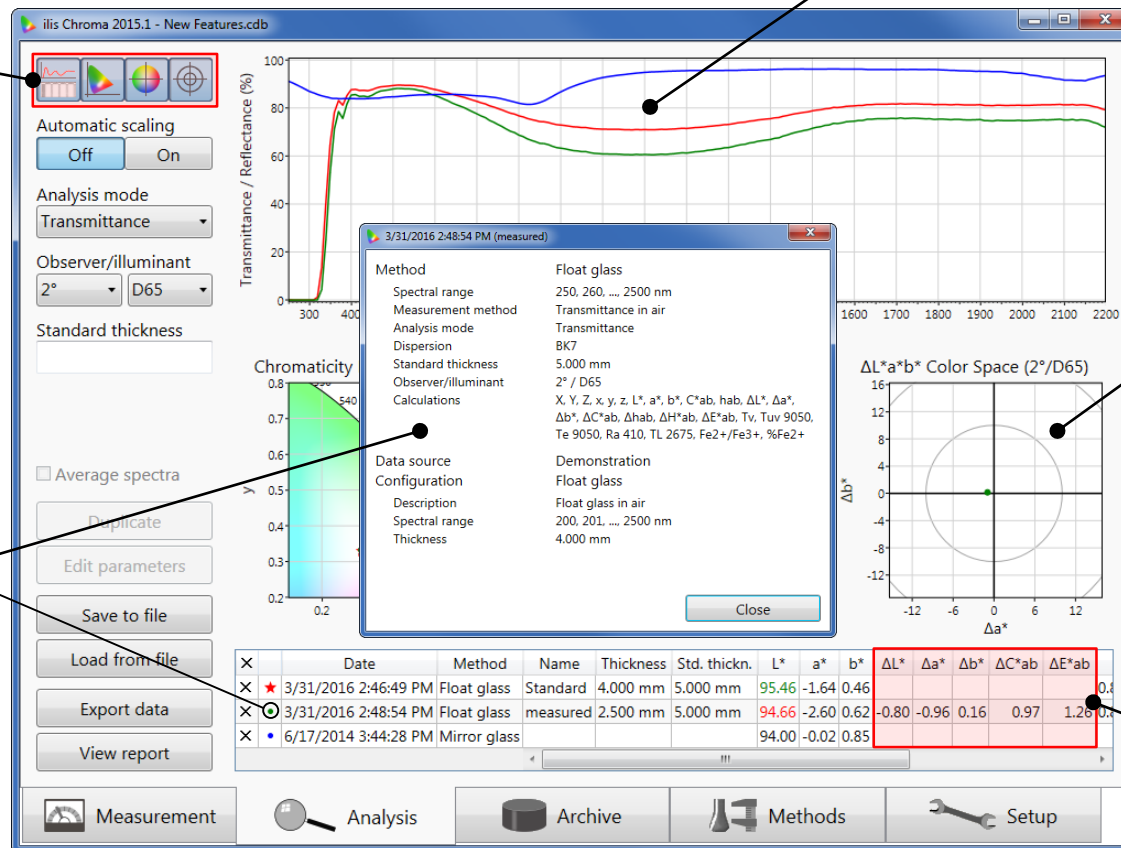
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Analysis

Diagrams can be combined arbitrarily

Transmittance and reflectance spectra can be displayed simultaneously

Display of the method and data source parameters for each measurement



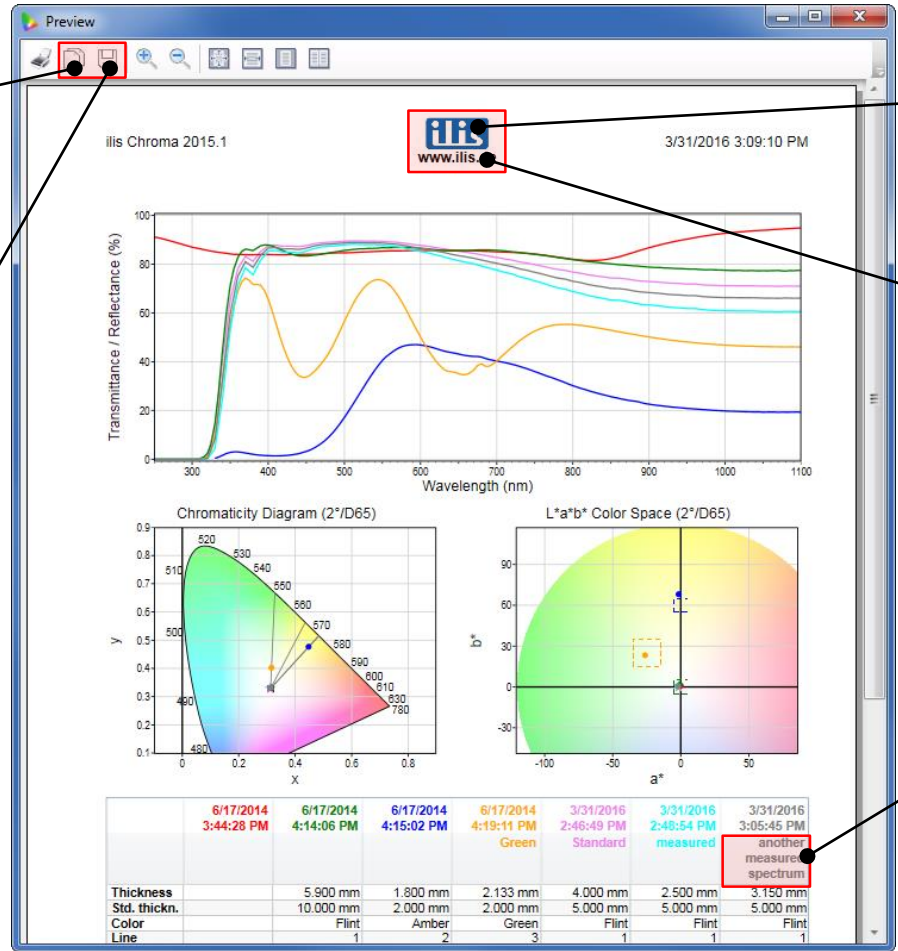
New CIE $\Delta L^*a^*b^*$ Color Space diagram

Calculation of CIE color differences

Reports

Copy reports to the Windows clipboard

Save report as file (XPS, PNG or JPG format)

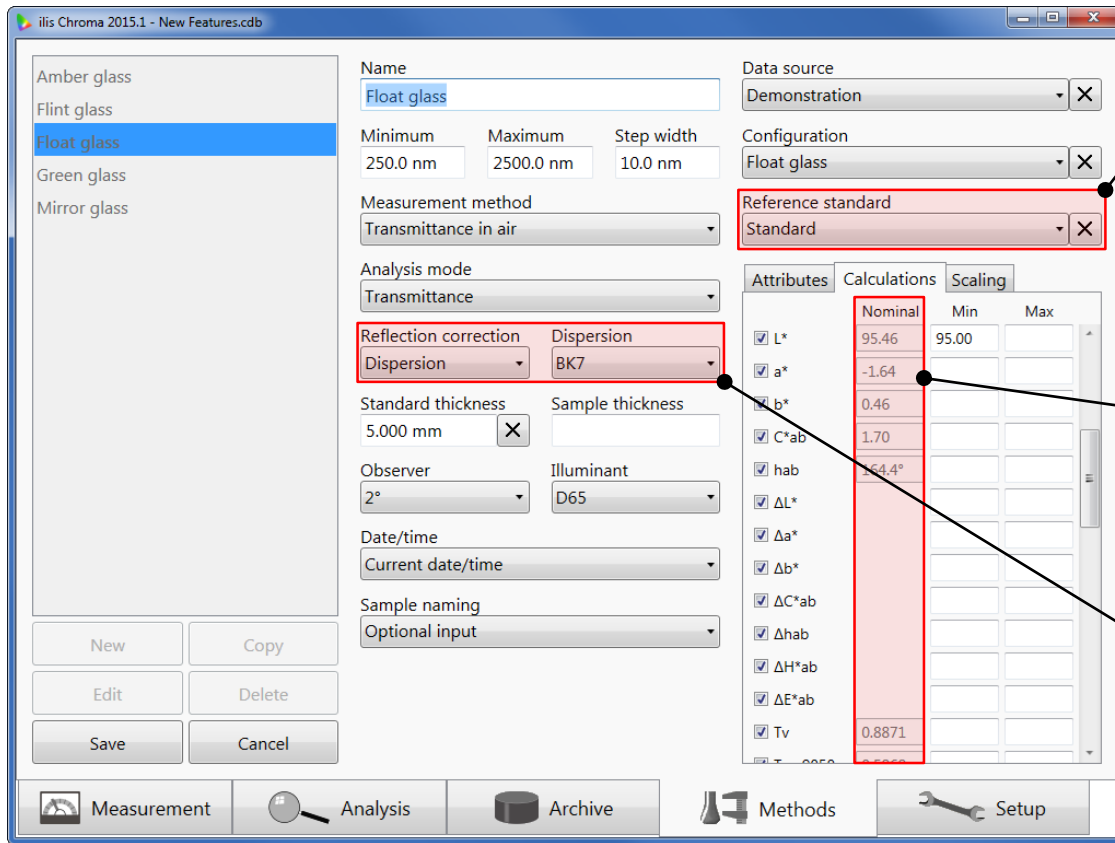


Integrate company logo

Bold headline if desired

Long texts are word-wrapped automatically

Methods

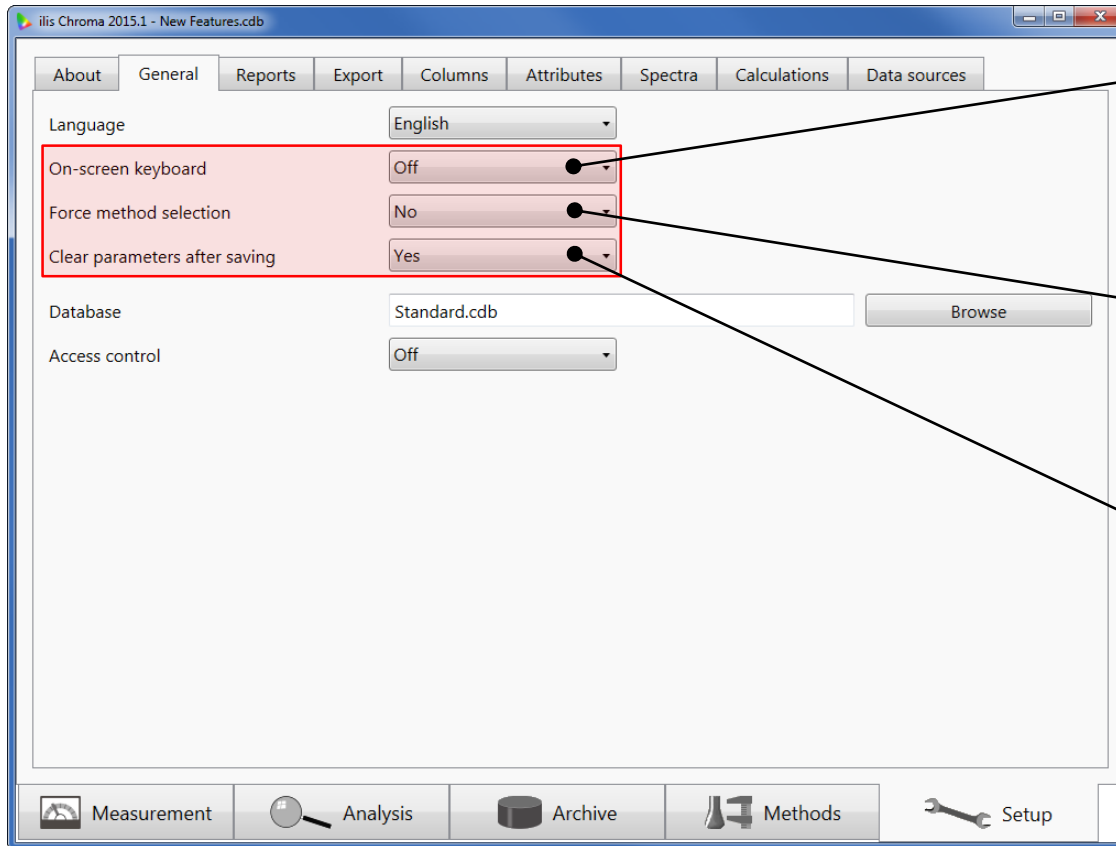


Measurement against a selectable reference standard

Definition of nominal values for the measurement (manual input or copied from the selected reference standard)

Wavelength-related reflection correction (dispersion)

General Settings



Activate on-screen keyboard (for touch screens and tablets)

Reselect measuring method after each measurement

Optionally do not reset parameters after saving

Report Configuration

All report-related settings are summarized on a new page

Selection of a company logo for the report header with preview

The screenshot displays the 'Reports' configuration window in the 'ilis Chroma 2015.1 - New Features.cdb' application. The window has tabs for 'About', 'General', 'Reports', 'Export', 'Columns', 'Attributes', 'Spectra', 'Calculations', and 'Data sources'. The 'Reports' tab is active, showing the following settings:

- Header for reports: Bold
- Logo for reports:
- Logo size: 75%
- Show color gradients in reports:

A red box highlights the 'Logo for reports' and 'Logo size' settings. Below the configuration window, a 'Preview' window is open, showing a report header with the 'ilis' logo and the URL 'www.ilis.de'. The main report area contains a grid with 'Absorbance (%)' on the y-axis and a 'Browse' button on the right. At the bottom of the main window, there are 'Methods' and 'Setup' buttons.

Spectra

The screenshot shows the 'Spectra' tab in the 'ilis Chroma 2015.1 - New Features.cdb' application. The interface includes a menu bar (About, General, Reports, Export, Columns, Attributes, Spectra, Calculations, Data sources) and a list of materials on the left: Dimethyl phthalate (Transmittance), Monochlorobenzene (Transmittance), 0.5% (Reflectance), and PTFE (Reflectance). The main area displays a table with columns for Name, Type, Method, and several numerical parameters. The 'Method' dropdown is set to 'Sellmeier equation'. Below the table are 'Export spectrum' and 'View spectrum' buttons. A separate window titled 'Spectrum' shows a graph of Refractive index vs. Wavelength (nm) with a blue curve.

Name	Type	Method	Parameter 1	Parameter 2	Parameter 3	Parameter 4	Parameter 5	Parameter 6
BK7	Dispersion	Sellmeier equation	1.039612120000	0.231792344000	1.010469450000	0.060006990000 μm^2	0.020017914000 μm^2	0.0008560653000000 μm^2
B1								
B2								
B3								

Definition of transmittance, reflectance and refractive index spectra for use in methods

Calculation of refractive index curves via linear interpolation or according to the Sellmeier, Schott or Cauchy formula

Spectra can be exported or shown in a diagram

Calculations

CIE color differences
acc. to ISO 11664-4

Skin damage factor
acc. to ISO 9050

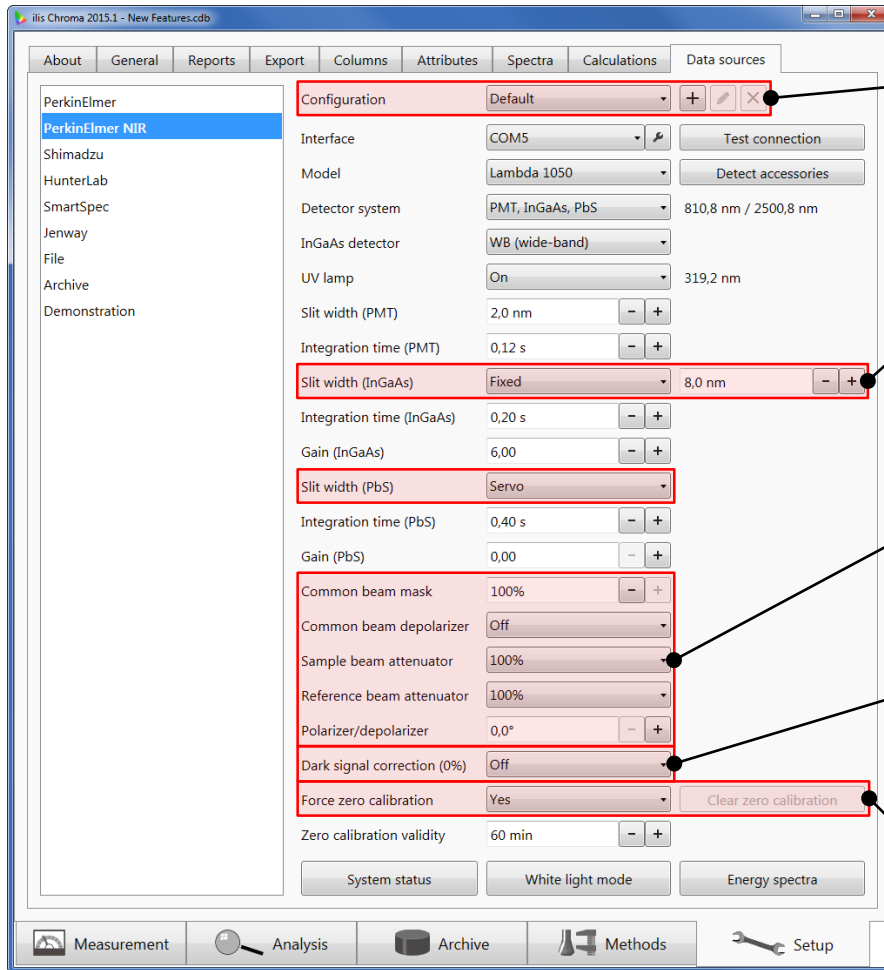
Special parameters for
automotive glass

Name	Description	Group	Unit	Decimals	WL min	WL max	P
ΔL^*	Lightness difference (ISO 11664-4:2008)	Color analysis		2	380 nm	780 nm	
Δa^*	Green/red difference (ISO 11664-4:2008)	Color analysis		2	380 nm	780 nm	
Δb^*	Blue/yellow difference (ISO 11664-4:2008)	Color analysis		2	380 nm	780 nm	
ΔC^*_{ab}	Chroma difference (ISO 11664-4:2008)	Color analysis		2	380 nm	780 nm	
Δh_{ab}	Hue angle difference (ISO 11664-4:2008)	Color analysis	°	1	380 nm	780 nm	
ΔH^*_{ab}	Hue difference (ISO 11664-4:2008)	Color analysis		1	380 nm	780 nm	
ΔE^*_{ab}	Color difference (ISO 11664-4:2008)	Color analysis		2	380 nm	780 nm	
Fe3+	Fe3+ concentration (Lambert-Beer)	Glass analysis	%	3	380 nm	380 nm	
Fe2+/Fe	Fe2+ percentage of total iron (Lambert-Beer)	Glass analysis	%	1	1000 nm	1000 nm	
Fe3+/Fe	Fe3+ percentage of total iron (Lambert-Beer)	Glass analysis	%	1	380 nm	380 nm	
Tdf 9050	CIE damage factor (ISO 9050:2003)	Glass analysis		4	300 nm	600 nm	
Fsd 9050	Skin damage factor (ISO 9050:2003)	Glass analysis		4	300 nm	400 nm	
Y A/2	Tristimulus value Y for illuminant A/2° observer	Automotive		1	380 nm	780 nm	
Y D65/10	Tristimulus value Y for illuminant D65/10° observer	Automotive		1	380 nm	780 nm	
$\Delta L/2^*$	Halved lightness difference	Automotive		2	380 nm	780 nm	
$\Delta E^*_{ab L/2}$	Color difference with half lightness difference	Automotive		2	380 nm	780 nm	
Tnir	NIR transmittance for AM 1.5	Automotive		4	780 nm	2500 nm	
Tuva	UVA transmittance for AM 1.5	Automotive		4	320 nm	380 nm	
Tuvb	UVB transmittance for AM 1.5	Automotive		4	300 nm	315 nm	

Wavelength list: 380 nm, 450 nm, 650 nm, 1050 nm

Decimals (transmittance/absorbance) 2 / 4

PerkinElmer NIR Driver



Multiple combinations of settings can be saved and managed as "Configurations"

Fixed slit width in the NIR range possible (InGaAs and PbS detector)

Support of commonly used accessories (including OMT LSRT)

0% calibration in addition to the 100% baseline during zero calibration

Storage of multiple zero calibrations (depending on the settings) with automatic monitoring