

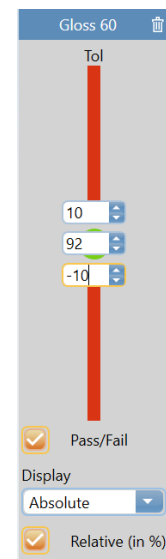
smart-chart 7.3.1

Released July 2021

smart-chart 7.3.1 is now using full functionality of a 64-bit software. Meaning when you are using a 64-bit operating system your computer allows smart-chart to access more RAM and thus to run more efficiently with higher performance. This improves speed when a large number of data is stored (standard database and measurement database) as well as for large project files in smart-lab. As a lot of software tools are no longer running under Windows 7 and Microsoft terminated their support for Windows 7, we cannot guarantee a flawless performance of smart-chart anymore. Thus, the minimum requirement as an operating system is Windows 10.

New Features for **spectro2guide** Family

- Support of spectro2guide Pro including Jetness and Greyness indices
- **smart-lab**
When project files saved on a shared drive are accessed by a second user they can be opened in read-only mode
- **smart-process**
Panel match added to Organizer
- **Standard Management**
 - New color equation: dEDIN6175-2019
 - Weighted color equations based on $L^*C^*H^*$ (e.g. dECMC, dE94):
Scaling factors can be manually switched to $L^*a^*b^*$ and edited
 - Gloss tolerances:
Relative input of tolerances and input of target value
(e.g. $\pm 10\%$ of target value 92)
- **Data Analysis**
Display of scaling factors in data table equal to BYK-maci



Standard Green				D65/10 d:8° spin				Gloss 60
	dE00	L*	C*	H*	dE00 FI			
Absolute Values	56.68	20.46	132.90	0.00	1.4			
Fail High	1.00	0.77	1.46	1.06	0.33			
Warning High	0.70	0.54	1.02	0.74	0.23			
Warning Low	-0.54	-1.02	-0.74					
Fail Low	-0.77	-1.46	-1.06					
Scaling factor	1.08	2.05	1.48					

Checkzone	Param1	Param5	Date	Status	D65/10 d:8° spin				ΔGloss 60	
					dE00	dL*	dC*	dH*	dE00 FI	
Match to Standard										
SAMPLE 001			20/05 18:22:03	●	0.99	1.03	-0.13	0.28	0.00	0.2
SAMPLE 002			20/05 18:22:12	●	1.03	0.49	0.62	1.04	0.00	-0.4

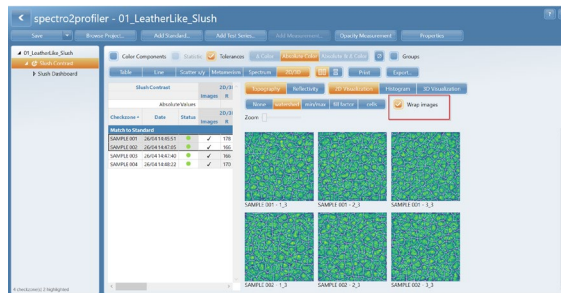
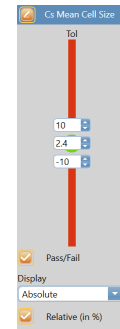
New Features for **BYK-mac i** Family

- Support of BYK-mac i Pro for color measurement. Sparkle ANO evaluation still has to be done with Flake Analyzer software
- **smart-lab**
When project files saved on a shared drive are accessed by a second user they can be opened in read-only mode
- **Standard Management**
 - New color equation for Chinese customer: D Nio based on dEAudi2000
 - Weighted color equations based on $L^*C^*H^*$ (e.g. DIN6175-2019):
Scaling factors can be manually switched to $L^*a^*b^*$ and edited
 - When measuring standards in SMC mode, the standard error is displayed in the result table
- **Bug fix smart-lab**
When displaying absolute values, the defined angle selection of the standard remains valid (before always all 6 angles were displayed)

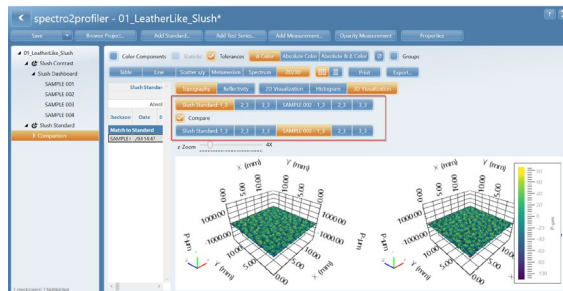


New Features for **spectro2profiler**

- **smart-lab**
When project files saved on a shared drive are accessed by a second user they can be opened in read-only mode
- **smart-process**
Panel match added to Organizer
- **Standard Management**
 - New color equation: dEDIN6175-2019
 - Weighted color equations based on L*C*H* (e.g. dECMC, dE94):
Scaling factors can be manually switched to L*a*b* and edited
 - Gloss and 2D/3D scales tolerances:
Relative input of tolerances and input of target value (e.g. ± 10% of cell size target value 2.4)
- **Data Analysis**
 - Wrap function to automatically align images of one sample in one row



- Compare function for 3D Visualization with same zooming being applied to height map of standard and sample



New Features for **wave-scan** Family

- **smart-process**
 - Panel match added to Organizer
 - Improved history function including tolerance limit



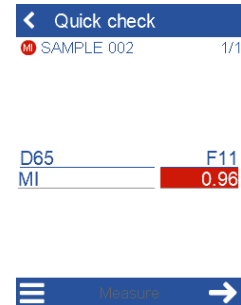
Checkzone	Date	Status	DOI	R	B	Wd
Match to Standard						
door left	17/02 14:03:06	●	82.0	6.8	-2.6	23.2
door right	17/02 14:04:23	●	79.4	6.1	0.4	29.0
fender left	17/02 14:02:52	●	80.9	7.3	-0.6	21.6
fender right	17/02 14:04:39	●	81.9	7.7	-0.8	18.0
hood left front	17/02 14:02:26	●	82.7	9.6	-0.1	9.9
hood left top	17/02 14:02:40	●	82.9	9.6	0.6	9.1
hood right front	17/02 14:02:12	●	77.7	6.2	4.3	25.4
hood right top	17/02 14:01:58	●	80.2	7.9	1.2	22.2
quarter left	17/02 14:03:21	●	82.5	7.5	-2.8	18.3
quarter right	17/02 14:04:08	●	82.3	7.8	0.6	17.0
trunk	17/02 14:03:41	●	80.7	7.2	3.0	16.2
Groups						
horizontal	17/02 14:09:24	■	80.0	7.9	1.8	16.7
vertical left	17/02 14:09:24	■	81.8	7.2	-2.0	21.0
vertical right	17/02 14:09:24	■	81.2	7.2	0.1	21.3
Panel Match - all scales Δ						
door left - door right	17/02 14:09:24	==	2.6	0.7	-3.0	-5.8
fender left - fender right	17/02 14:09:24	==	-1.0	-0.3	0.2	3.6
hood left front - hood right front	17/02 14:09:24	==	9.0	3.4	-4.4	-15.5
hood left top - hood right top	17/02 14:09:24	==	2.6	2.6	0.6	-13.6
quarter left - quarter right	17/02 14:09:24	==	0.2	-0.3	-3.4	1.3



New Firmware included with smart-chart 7.3.1

spectro2guide: Version 2.2.0.28864

- Support of spectro2guide Pro including Jetness and Greyness indices
- New color equation: dEDIN6175-2019
- Weighted color equations based on L*C*H* (e.g. dECMC, dE94): Scaling factors can be manually switched to L*a*b* and edited
- Gloss tolerances: Relative input of tolerances and input of target value
- Metamerism Index:
 - A status dot is added when the metamerism index limit is exceeded.
 - The limit can be set in smart-chart standard management
 - For standards measured directly on the instrument the default limit is 0.7
 - Prerequisite: MI index must be selected as an index and at least two illuminants have be activated
- Bug fix: When selecting dE99o the respective color components L99o, a99o, b99o are displayed



BYK-mac i: Version 9.65

- New color equation for Chinese customer: D Nio based on dEAudi2000
- Weighted color equations based on L*C*H* (e.g. DIN6175-2019): Scaling factors can be manually switched to L*a*b* and edited
- Optimized firmware update program to avoid false selection of display type causing a freeze of the display

spectro2profiler: Version 1.3.1.28735

- All solid color related new features (same as spectro2guide)
 - New color equation dEDIN6175-2019
 - Metamerism index status dot
 - Relative input of gloss tolerances
- Relative input of 2D/3D scales tolerances
- Bug fix: When selecting dE99o the respective color components L99o, a99o, b99o are displayed

New wave-scan 3: Version 1.2.0

- Updated translations
- Optimization of internal production processes

wave-scan dual/II: Version 5.78

- Reactivation of "Hada Scale" for Suzuki