

## 1 Purpose

This document describes new features and fixed bugs in the following new software version in comparison with the previous version.

- New version: 4.1.1.108
- Old version: 4.1.1.70

## 2 New features

Topic	Description
General user interface	An option to display larger buttons has been added. This improves the ease of use on touch screens.
General user interface	An option to display a navigation bar with tabs for the different modes has been added. The following modes can be accessed from the navigation bar: <ul style="list-style-type: none"><li>▪ Home, Data acquisition</li><li>▪ Configuration</li><li>▪ Qualitative analysis</li><li>▪ Quantitative analysis</li><li>▪ Routine analysis</li><li>▪ Instrument diagnostics</li></ul> Each tab contains icons. These icons are shortcuts to the options of each mode.
Unscrambler integration	The following Unscrambler models can be set up in the operation method of the routine analysis: <ul style="list-style-type: none"><li>▪ Quantification model</li><li>▪ Identification model</li><li>▪ Qualification model</li></ul>
Unscrambler integration	The file content of an Unscrambler model can be viewed.



Topic	Description
Unscrambler integration	The following Unscrambler models can be tested: <ul style="list-style-type: none"><li>▪ Quantification model</li><li>▪ Identification model</li><li>▪ Qualification model</li></ul>
Unscrambler integration	Routine analysis reports with error leverage calculation from Unscrambler PLC and PCR regressions can be created.
Instant preview of quantitative models	Saved quantitative models can be previewed in the <b>Quant model development mode</b> . A model can be previewed by double-clicking on the models name. It is not necessary to re-edit the parameters.
Sample naming	In the <b>Autosave</b> dialog window, the option to name samples by date and time has been added.  With this option, the sample name will be saved as yyyyymmdd-hhmmss.
Sample naming	In the routine analysis in the <b>Edit operation method</b> dialog window, the option to name samples by date and time has been added.  With this option, the sample name will be saved as yyyyymmdd-hhmmss.
Save SPC files	Spectra can be saved as SPC files during routine analysis.
Simulated instrument	A simulated driver has been added to simulate an instrument. This simulated instrument has been added to the instrument list in the <b>Configure data sources</b> window.
Operate XDS single point process instrument with Hellma MUX	A driver has been added to operate an XDS single point process instrument with an external MUX up to 16 channels.
Integration of B&W Tek Portable Raman Spectrometers	Drivers for B&W Tek portable Raman instruments have been added. Vision supports the following instruments with 785 nm laser excitation: <ul style="list-style-type: none"><li>▪ i-Raman Plus 785S Portable Raman Spectrometer</li><li>▪ i-Raman Plus 785H Portable Raman Spectrometer</li><li>▪ i-Raman Pro 785S Portable Raman Spectrometer</li><li>▪ i-Raman Pro 785H Portable Raman Spectrometer</li><li>▪ i-Raman Prime 785S Portable Raman Spectrometer</li><li>▪ i-Raman Prime 785H Portable Raman Spectrometer</li></ul>

Topic	Description
Integration of B&W Tek Portable Raman Spectrometers	<p>Vision supports the following functions regarding B&amp;W Tek Portable Raman Spectrometers:</p> <ul style="list-style-type: none"> <li>▪ Data collection method parameters <ul style="list-style-type: none"> <li>– Spectra averaging</li> <li>– Integration time</li> <li>– Laser power</li> </ul> </li> <li>▪ Instrument health check</li> <li>▪ Reference standardization (Raman relative intensity correction through ratio3 file)</li> <li>▪ Spectral acquisition</li> <li>▪ All spectral analysis tools with Vision</li> </ul>

### 3 Improvements

Topic	Description
General user interface	The icons have been updated to a more modern design.
General user interface	The icons colors have been changed to Metrohm green.
General user interface	The main color has been changed to a lighter shade of gray.
General user interface	The color of the product cuvette in the product tree has been changed to Metrohm green.
Ranges for the process XDS driver	<p>For the process XDS driver, in the <b>Edit data collection method</b> window, the number of selectable ranges has been reduced to 2 ranges:</p> <ul style="list-style-type: none"> <li>▪ 400-2200 nm for operation with Si-InGaAs</li> <li>▪ 800-2200 nm for operation with InGaAs</li> </ul>
MUX table	The MUX table has been expanded to 16 channels.
Improved import of NSAS and XML (Vision Air files)	During import of NSAS and XML files, the user has to define the data collection method and settings manually. This avoids wrong data collection method settings and provides more flexibility to the user. Products created during the import have the same name as the file name.
Wavelength precision	The wavelength precision for laboratory probe systems during performance test has been adjusted to 0.025 nm.
Updated documentation	Updated Vision manuals (Manual Reference and Tutorial Diagnostics) are available in the Vision software.
Library clustering	Library clustering has been removed from identification method development and from routine analysis.

