SOFTWARE UPDATE NOTIFICATION (SUN) – VISCOTEK SOFTWARE: CPS0028-42

MOLECULAR WEIGHT

MOLECULAR SIZE

MOLECULAR STRUCTURE

Introduction

This document details the changes made to the OmniSEC software package in version 5.1. This release is a feature release which contains a small number of significant changes and improvements over version 5.02 as well as a selection of bug fixes.

Installation

It is assumed that you have authority to install or update software within your company's SOPs. If you do not have this authority please consult with your I.T. support department before proceeding.

It is assumed that you have Administrator rights for the computer. This is required by the installation process.

Minimum System Requirements

Intel Dual Core or hyper threaded processor, 2GB RAM, 150MB free hard disk space, 1024 x 768 screen resolution running in 16 bit color mode, CD-ROM drive, up to 3 serial ports and 1 free USB port depending on hardware configuration, Windows XP Pro (SP3 or later) operating system.

Recommended System Requirements

Intel Core 2 Duo, 2GB RAM, 160GByte hard disk drive, 1024 x 768 screen resolution running in 32 bit color mode, CD-ROM drive, up to 3 serial ports and 1 free USB port depending on hardware configuration, Windows 7 operating system.

Supported operating systems

OmniSEC 5.1 is compatible with Windows XP Pro (SP3) and Windows 7. Both the 32 bit and 64 bit versions of Windows 7 are supported.

Windows XP 'Home', Windows Vista, and Windows 8 are not supported.

Supported Languages

English

Installation Instructions

1. Windows XP

It is recommended that older versions of OmniSEC be uninstalled before version 5.1 is installed. This should be done following the uninstall procedure below. Double-click on the OmniSEC installer and follow the on-screen instructions.

When the Zetasizer µV is connected, the USB driver will be installed and the following message will appear twice:

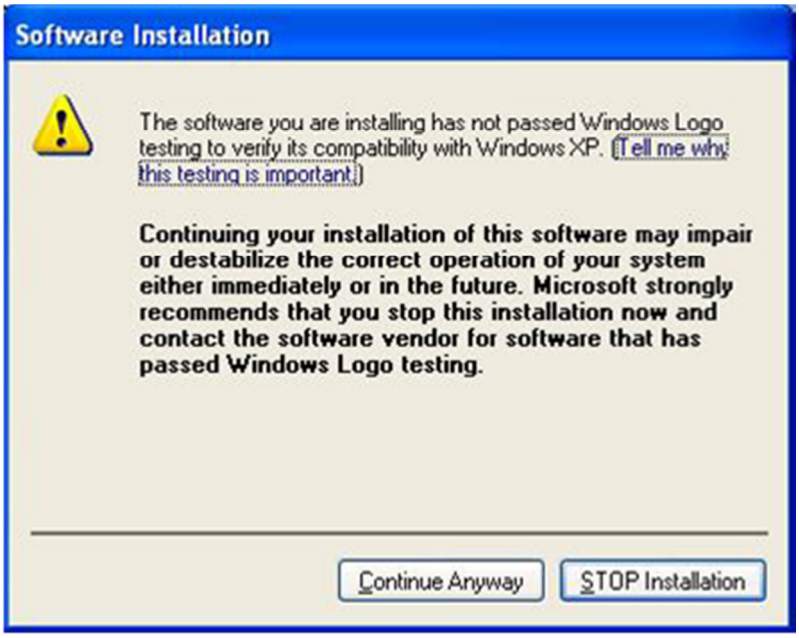

Figure1: Windows XP driver installation error message

This warning can safely be ignored as the software installation has been fully tested on Windows XP. If this warning is encountered the button, 'Continue Anyway' should be selected.

2. Windows 7

It is recommended that older versions of OmniSEC be uninstalled before version 5.1 is installed. This should be done following the uninstall procedure below. Double-click on the OmniSEC installer and follow the on-screen instructions.

Double-click on the OmniSEC installer and follow the on-screen instructions. When the Zetasizer µV is connected, the USB driver will be installed and the following message may appear twice:

Figure2: Windows 7 driver installation error message

This warning can safely be ignored as the software installation has been fully tested on Windows 7. If this warning is encountered, 'Install this driver software anyway' should be selected.

3. Connecting the Zetasizer to a PC

With the software installed the instrument should be connected via the USB port, and the system switched on.

The Found New Hardware Wizard should open to install the drivers for the Zetasizer µV. The name used to identify the hardware will be "Malvern Zetasizer".

This should be left with the default selection of 'Install the software automatically' and the 'Next' button should be selected so that file transfer begins. Once file transfer has completed the 'Finish' button should be selected to complete the installation.

You may see the same security warnings as described in the previous section. The warning can safely be ignored as the software installation has been tested on Windows XP and Windows 7. If the warning is encountered the 'Continue Anyway' or 'Install this driver anyway' option should be selected.

Windows will indicate that the new hardware is installed and ready to use.

Uninstall Procedure

The software can be uninstalled using the standard 'Add/Remove Programs' feature in the Windows XP 'Control panel' or in the 'Programs and Features' section of the Windows 7 'Control Panel'.

New Features

The new features added to the software are shown in table 1:

Table 1: New features added to OmniSEC 5.1

Reference(s)	Feature	Comment
PBI36868	OmniSEC now has the ability to query Waters® Empower™ software. For projects and sequences. Using an Empower™ username and password, it is possible to login, browse for projects and sequences and select a "Sample Set Method" to run. Sample Set Methods are loaded into OmniSEC's sequence editor.	New feature

PBI36883	OmniSEC now installs two startup shortcuts. The first is the regular complete version of the software. The second is OmniSEC BIO. This version of the software runs with a significant number of polymer-focused features hidden. Methods types have been renamed to more generic or protein-focused names. Methods and settings contain a number of defaults which are all protein-orientated. This version is expected to be used by customers making measurements of proteins and is intended to improve the software's accessibility for these users.	New program
PBI36885	The Results View has been updated to use templates created in the Report Designer. Every Calculation Method creates a Results View based on a template of the same name. The Report Designer can be used to modify any of these reports to display the desired information by the user.	Updated feature
PBI36902	The Report Designer has been updated to include extra information. It is now possible to report the 90° detector peak area for the SEC-MALS; input sample concentration; the Molecular weight calculation basis.	Updated feature
PBI36906	The Peak Retention Volume Calculation has been updated. The new calculation gives more accurate results, particularly for wide peaks from polydisperse samples. Newly created calculation methods will use the new calculation by default. Old methods are not affected. The old calculation can be selected from within the Calculation Options in the Method editor.	Improved calculation
PBI36900	The injection method used for the HT-GPC injection process has been updated. The new method back-flushes the in-line sample filter after every injection and should improve the life of the filter and the repeatability of results.	Updated feature
PBI36907	The software will no longer permit calculations using a RALS/LALS detector if the method was calibrated with a MALS detector or vice versa. It will show an error message requiring the method to be re-calibrated. Switching between RALS/LALS and MALS detectors invalidates one of the calculations in the method which can lead to errors in the result if the method is not recalibrated.	Improved usability
PBI38110	The default SEC-MALS laser power has been reduced to 80% to extend general laser life. This has minimal impact on sensitivity.	Improved SEC-MALS laser life expectancy
PBI38106	A feature has been added to subtract a reference UV wavelength from the measured UV wavelength in the calculation options within the calculation method. This is deigned to account for non-specific absorbance of samples when making UV-based concentration measurements.	New feature

Fixed issues

The main issues fixed in OmniSEC 5.1 are listed in table 2.

Table 2: bug fixes implemented in OmniSEC 5.1.

Reference(s)	Issue	Comment
Bug 36903	For a method using DLS and MALS data, the molecular weight calculation basis (RALS or MALS) was not selectable meaning it was not possible to analyze molecular weight by MALS and Rh by DLS in the same method. This is now possible.	Fixed
Bug 36905	After clicking the "Latest Results" button, the "Close & Next" function was disabled.	Fixed

Bug 36904	The "Turn laser off at end of sequence" option in the sequence editor was disabled for all systems that did not include SEC-MALS. This has now been re-enabled for all systems where the software has control over the laser.	Fixed
Bug 36907	The software would crash if the injection volume was set to zero.	Fixed
Bug 37096	The smoothing settings in the report designer smoothed the peak to a flat line. Smoothing (de-spiking) is now appropriately applied.	Fixed
Bug 36916	Analogue detector signals fed through the SEC-MALS were reported in OmniSEC at 1/10th of their true value. They are now properly scaled.	Fixed
Bug 37026	Recalculating data with autobaselines changes result	
Bug 36908	The degree symbol (°) was not correctly displayed on PC's where the language setting was not English. This has now been fixed for Japan and China.	Fixed
Bug 36909	In the report designer, the MALS colours shown in the chromatogram object legend did not match the chromatogram. They now do.	Fixed
Bug 36911	Under some circumstances, the calibration report showed a calibration standard concentration of 0. This now shows the correct concentration.	Fixed
Bug 36922	In the distribution object in the report designer, the 7th molecular weight distribution to be displayed was displayed upside down.	Fixed
Bug 36921	The software would crash if more than 12 samples were loaded into the report designer.	Fixed
Bug 38106	When SEC-MALS is used as an add-on detector, to a TDA302, 270 Dual Detector or OmniFACE, autosampler trigger signals were not properly processed.	Fixed

Known Issues

The following software bugs have been discovered within the software, and will be investigated as part of a future release. Please follow the suggested work-around.

Table 3: known issues in OmniSEC software.

Reference(s)	Issue	Workaround
Bug 37192	Result certification does not work. This feature was disabled in version 4.7.	Do not upgrade the software beyond version 4.6 if this feature is required.
Bug 36913	If results including a MALS detector are processed for conventional calibration, a baseline must still be set on the MALS detector channel.	Set a baseline on the MALS channel
Bug 36904	The calculated concentration when running a copolymer analysis will be reported as the input concentration unless the input concentration is set to zero, in which case, the calculated value is reported correctly	Set the input concentration to zero for copolymer sample analysis
Bug 37004	In the report designer, Rg(z) is incorrectly reported as zero.	There is currently no workaround for this bug

Bug 36918	In the report designer, if two detector channel line styles are modified at the same time, only one of them will be refreshed in the image	Modify one channel at a time
N/A	If the GPCmax is not connected to COM1 or one of the ports on the 6-way multi-COM port and the GPCmax toolpad is opened, the software can crash to windows with no error message.	THE GPCmax must be connected to COM1 or one of the ports on the 6-way multi-COM serial-to-USB converter.
N/A	False positives on the vapor sensor can occur if the threshold in the SEC-MALS settings is set too low.	The threshold should be set to a high enough level that false positives do not occur. The default value is 3000
N/A	When running the Zetasizer µV with a computer on windows XP and certain processors, if the PC is shutdown, it will not shutdown but re-start.	The Zetasizer µV should be turned off before the PC is shutdown.
N/A	MALS data from v5.00 re-calculated with 5.01 or 5.02 or 5.1 will be incorrect.	Any MALS data collected will need to be re-calibrated and re-calculated to obtain the correct answer.

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