Software Update Notification

Zetasizer Software v 6.32

Product	Part No. - Issue
Software suite	PSS0012-28

Product	Part No. - Issue
Zetasizer series	PSW0085/6.32
Firmware	PFW0044/1.34.002

Manuals	Part No. - Issue
Zetasizer Nano series	MAN0317/5.0
MPT-2	MAN0318/3.00
Zetasizer APS	MAN0425/1.0
Zetasizer uV	MAN0428/1.0

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1. Overview

This document details the release of software PSS0012-28. This is the Zetasizer software version 6.32.

It covers software issues fixed and new features introduced. This release adds support for DTS1235, the latest zeta potential transfer standard. It also fixes a bug in the analysis settings for the folded capillary cell DTS1060.

2. Computer

2.1. Operating system support

Version 6.32 is compatible with Windows XP Pro (SP3) and Windows 7.

Note: Windows XP 'Home' and Windows Vista versions are not supported

2.2. Minimum computer requirements

Intel Dual Core or hyper threaded processor, 2GB RAM, 150MB free hard disk space, 1024 x 768 screen resolution running in 16 bit colour mode, CD-ROM drive, 1 free USB port, Windows XP Pro (SP2 or later) operating system.

The software and system can be used with a laptop computer with a free USB port.

2.3. Recommended computer requirements

Intel Core 2 Duo, 2GB RAM, 160GByte hard disk drive, 1024 x 768 screen resolution running in 32 bit colour mode, CD-ROM drive, 1 free USB port, Windows 7 operating system.

3. 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.

Installation of the software must be performed with the instrument switched off or not connected.

3.1. Windows XP

All DTS version 3.xx, 4.xx, 5.xx or 6.xx software must be uninstalled before version 6.32 is installed. The installer will ask you if you want to uninstall a previous version if it detects an older version is installed.

If the Zetasizer Nano is left connected to the PC during installation, you will be prompted with the following message.

SUN: Zetasizer series Application Software for use with
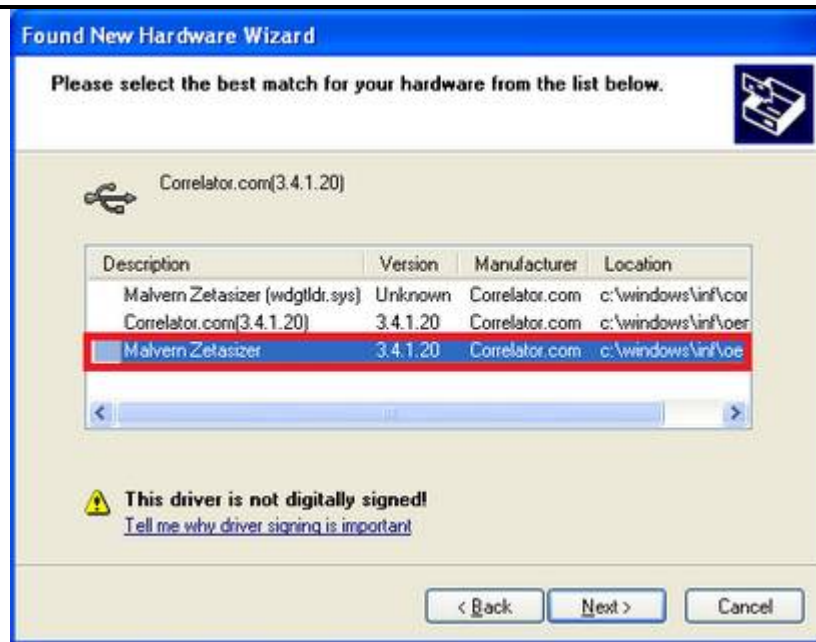Microsoft Windows XP Pro and Windows 7 (English and
Japanese)

You must either switch-off the Zetasizer Nano or unplug the USB cable from the PC
or Zetasizer Nano and then press OK. If you press the Cancel button the installation
will continue but the legacy USB driver will not be uninstalled.

When the new USB driver is installed the following message will appear twice:

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.

If the Zetasizer software is being installed on a PC that already contains the Viscotek
software OmniSEC version 4.7, the following message may appear:

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Japanese)

Select the 'Malvern Zetasizer' and click 'Next'. The 'Malvern Zetasizer (wdgtldr.sys)' must not be selected.

3.2. Windows 7

The software suite comes on an auto-loading CD-ROM. Inserting the CD into a system configured to Auto-run a CD will run the installation program automatically. If your system does not support this feature run the setup.bat program from the root directory of your CD drive.

Note: For Zetasizer Series software, Windows 7 will not allow an installation if the user does not have administrator access. This is in line with Microsoft's Logo policy and is standard practice.

Note: You must either switch-off the Zetasizer or unplug the USB cable from the PC or Zetasizer before installing the software.

During the installation of the new USB drivers you'll be prompted with the following message twice.

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Japanese)

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.

3.3. .Net Framework 4 Client

Microsoft .Net Framework 4 Client must be installed for the Zetasizer software to run. This is installed during the Zetasizer software installation progress. Completion of this stage of the installation can take a few minutes, and in the case of Windows 7 64 bit can take over 10 minutes. When the following message appears, the 'Install' button must be clicked and installation must be allowed to proceed.
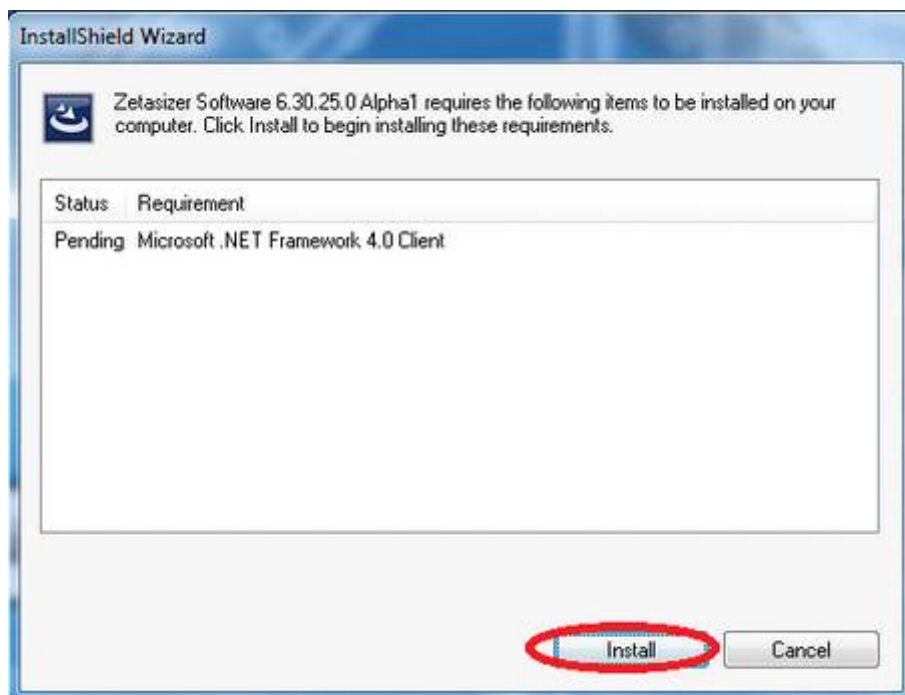
3.4. Connecting the Zetasizer to the PC

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

If you are connecting to a Zetasizer APS or Zetasizer μV, the name used to identify the hardware will be displayed as "Malvern Zetasizer" rather than "Malvern Instruments Nano".

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 warning as described in the previous section. The warning can safely be ignored as the software installation has been tested on Windows 7. If the warning is encountered the 'Continue Anyway' should be selected.

Windows will indicate that the new hardware is installed and ready to use.
In Windows 7, when the Zetasizer Nano is installed, it is possible that the message 'Device driver software was not successfully installed' in the message in the bottom-right hand corner of the screen, as in the image below.
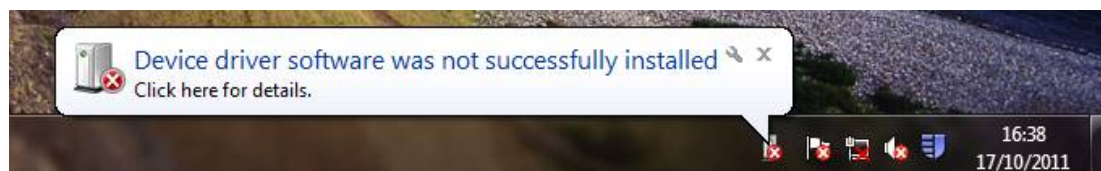
This message can be safely ignored as long as, when the Zetasizer software is started, the 'Nano' icon is enabled as in the image below.

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Japanese)

3.5. Zetasizer APS and µV users

The New Hardware Wizard will appear a second time as these instruments require two drivers to be installed. Use the steps described above to install the second driver.

3.6. Running the software

When the software is started the first time, the following dialog box will appear. Click on the appropriate system to select it. This dialog will not appear the next time the software is started.

The instrument type can be changed at any point by selecting the menu item; 'Tools', 'Options', 'Instrument type'. Once the instrument type has been changed the software must be restarted for the change to take effect.

4. Uninstall procedure

The software can be uninstalled using the standard Add/Remove feature in the Windows' Control panel'.

5. Main feature additions

5.1. DTS1235 compatibility

A new zeta potential transfer standard, DTS1235 has been released and this software version has been released to add functionality for the standard. This includes a new installation test macro for use with the new standard. Two installation macros are now included. The first, 'Installation Test_0230.zmac' should be used with the old zeta potential transfer standard, DTS1230. The second, 'Installation

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Japanese)

Test_0235_v105.zmac' should be used with the new zeta potential transfer standard,
DTS1235.

When measuring the new zeta potential transfer standard, DTS1235 as part of daily
use or regular validation, a new standard SOP has been provided. This SOP is
named 'Zeta potential test sample V2.SOP' and should be used for all measurements
of standard DTS1235. This SOP has the change related to the bug in section 6.1

6. Bug fixes

6.1. Folded capillary cell analysis

A bug has been found that affects the analysis of measurements made using the
folded capillary cell DTS1060. This bug changes the first point used in the analysis
of the zeta potential phase plot from the first to the eighth. This bug has been fixed
so that the first point is used for measurements made using the folded capillary cell.
This will be fixed in all newly created SOPs; however, SOPs that have been
previously saved by the user will keep the old analysis settings for continuity of
results.

6.2. Protein utilities

A bug has been found where the protein utilities will not launch on model x64
systems. This has been fixed so the protein utilities work on all sytems

7. Known Issues

7.1. Workspaces

A new workspace has been created to support the surface zeta potential cell.
However, due to the way the software is updated, this will not appear if a current
Zetasizer user is having their software upgraded. In order to install the surface zeta
potential workspace, the user should select 'import workspace' from the tools –
settings – configure workspace menu. Browse to the location of the surface zeta
potential workspace file, which is in:

C:\program files\malvern instruments\Zetasizer\Export Data

Select the surface zeta potential workspace and click 'ok'.

7.2. Zetasizer APS and Zetasizer µV drivers

The new drivers for the Zetasizer APS and Zetasizer µV are incompatible with some
of the earliest instruments. This is expected to affect only Zetasizer µV. This issue
manifests as an inability to connect to the instrument. These issues will be handled
on a case by case basis and if identified, should be referred to Product Management
via the Helpdesk.

7.3. PCs with single core CPUs may lock up when connected to an APS or µV

Some PCs, running the Zetasizer software, may lock-up or freeze when connected to
an APS or µV. The APS and µV both require a PC with at least two cores or
alternatively, a CPU that is Hyper-threading (HT) enabled. Therefore, it is advisable
to run the software on a PC that meets the recommended specification detailed

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earlier in this document if the PC is to be connected to either a Zetasizer APS or
Zetasizer µV. The Zetasizer Nano is not affected by this issue.

7.4. Zetasizer APS and Zetasizer µV drivers and their compatibility with the Windows XP operating system

Version 6.32 of the Zetasizer software has updated the USB driver for the Zetasizer
APS instrument from version 13.3.0.0 to 15.3.0.1, due to a problem relating to Core
i3, i5 and i7 processors. However it has been noticed that this new driver is not fully
compatible with Windows XP. If the Zetasizer software is closed, but the instrument
is on and connected and the computer is shutdown then it will restart instead. The
solution to this problem is to turn off or disconnect the instrument before shutting
down the computer.

7.5. USB detection

USB detection occurs automatically on new computers. On older computers the
instrument is not always detected automatically and the instrument icon in the bottom
right-hand corner of the status bar will remain greyed-out. This is fixed by closing the
application, restarting the computer and restarting the software.

7.6. Missing parameters in user reports

The parameter dictionary has been updated for this version of the software and some
of the parameters have changed. For reports that the user may have created
containing the affected parameters, the parameters will become undefined. This can
be seen when a report is opened and the parameter displays the text 'No parameter
has been selected' or if the nothing is shown next to the text label (i.e. the value
appears blank). To fix this problem for each parameter carry out the following steps:-

1) Double-click on the affected parameter to bring up its property dialogue.
2) Click the 'Select' button to display the 'Select a parameter' dialogue.
3) Select the relevant parameter.

N.B. Remember to correct the affected parameters on both the screen and page
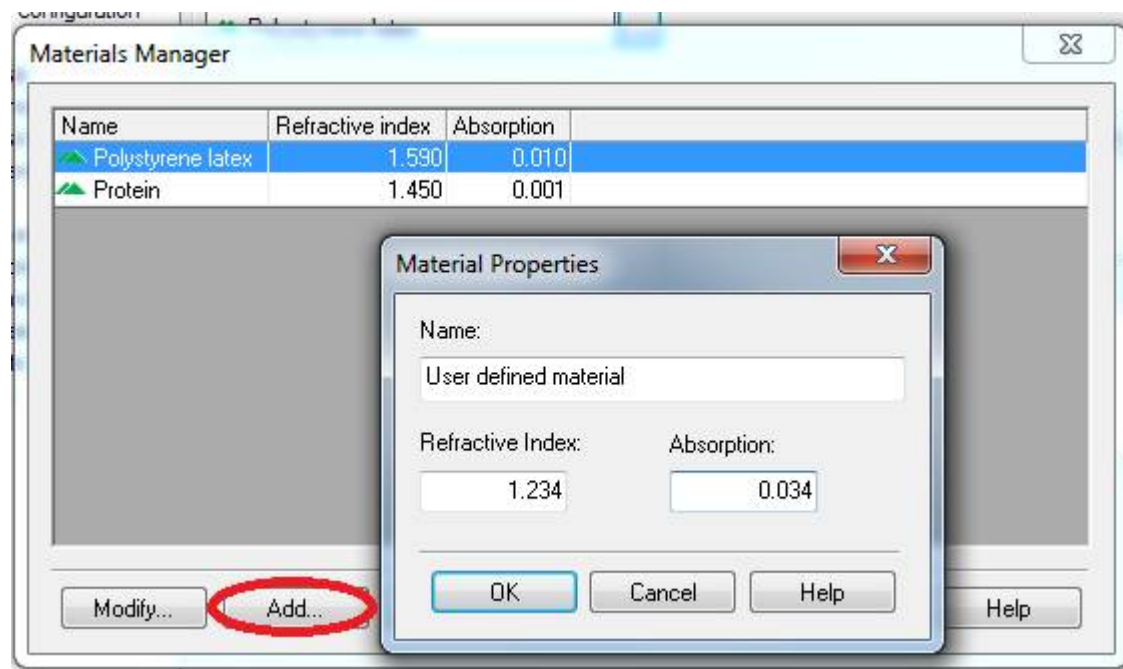layout views

7.7. Results

The analysis algorithms for the calculation of size, zeta potential and molecular
weight, including data filtering, are being continually improved. The effect of this is
that if data taken from a previous version of software is edited, the result may
change, even if only the sample name is edited. This is because the algorithms
themselves are not stored with the record. This does not apply to parameters stored
with the record such as the viscosity, and refractive index etc. as the same
parameters are always used in the recalculation of the edited result.
This does not of course change the result of the stored record, as after editing a new
record is created. To tell if a record is the original or has been edited, the parameter
'Is edited' can be added to a report or the record view. This can be found in the
measurement audit information section of the parameters list. It will display 'False' if
the record has not been edited.

7.8. SOP sample settings can be lost on software upgrade

In the SOP sample settings it is possible to add new materials, dispersants,
standards, complex solvents and complex ionic dispersants, e.g.:

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Any user defined sample properties are not integrated into a new version of the software when moving from an old version of the software to a new one. In order to incorporate these settings the relevant files need to be manually copied by the user to the correct location to replace the installed files.

To do this the following steps need to be followed:

1. Ensure that you are logged onto the computer as an administrative user
2. Run the Zetasizer software once then close it down so there are no copies of it running.
3. Use Windows Explorer to copy the files:

- SampleProperties.cfg
- CompoundProperties.cfg
- IonicSpecies.cfg

to the relevant location. The locations of the files depend on the operating system:

Windows XP
Copy from *C:\Documents and Settings\All Users\Application Data\Malvern Instruments\Zetasizer backup630* to overwrite files in *C:\Documents and Settings\All Users\Application Data\Malvern Instruments\Zetasizer*

Windows 7
Copy from *C:\ProgramData\Malvern Instruments\Zetasizer backup630* to overwrite files in *C:\ProgramData\Malvern Instruments\Zetasizer*

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N.B. The *Application Data* folder is a hidden folder. To view it on Windows XP you need to access the Control Panel then select *Folder options->View* and then enable the option *to Show hidden files and folders*.

N.B. The *ProgramData* folder is a hidden folder. To view it on Windows 7 you need to access the Control Panel then select *Appearance and Personalization->Folder Options->Show Hidden files and folders* and then enable the option to *Show hidden files, folders and drives*.

8. Customer deliverables

8.1. Application software suite

The software is contained on one CD-ROM. The disk is labelled PSS0012/28

8.1.1. Disk contents

- Operating software
- Zetasizer User manual
- MPT-2 manual
- Firmware
- USB drivers
- Software Update Notification (SUN) with changes from previous software version
- Adobe Acrobat Reader