

# ZS XPLOER SOFTWARE: v3.2.0 (PSS0048-17) SOFTWARE UPDATE NOTIFICATION

## Introduction

This document details the release of **Zetasizer XPLOER software version 3.2.0 (PSS0048-17)** for the Zetasizer Advance range of instruments. Here forward referred to as ZS XPLOER.

This release supports the Zetasizer Advance range of instruments only (including Pro (ZSU5800) and Ultra (ZSU5700) models).

ZS XPLOER is not compatible with the Zetasizer Nano series of instruments (Nano S90, Nano ZS90, Nano S, Nano ZS, Nano ZSE, Nano ZSP, Zetasizer  $\mu$ V and Zetasizer APS) nor can it read the \*.dts file format from the Classic Zetasizer series software 8.02 or earlier. However, it is possible to have both the ZS XPLOER software and the Zetasizer software 7.02 or above installed on the same computer.

For the latest version of this document please check our website at

<https://www.malvernpanalytical.com/en/support/product-support/software/zetasizer-ultra-pro-zs-xplorer-software-update-v3.20>

## 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. For ZS XPLOER software, Windows 10 and later 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.



### IMPORTANT:

Only Windows 10 64-bit Operating System is supported

Microsoft user accounts are not supported

Before installation of the software, the instrument should be switched off and disconnected.

Regulated Environment customers upgrading to ZS Xplorer V2.3.1 or later, will need to also upgrade to OmniTrail and OmniAccess V1.4.

In some cases, the installer will require the user to restart the PC, in this case it is required that the Administrator logs in to the PC for the first time, following the restart. Failure to do so may cause the software to crash. In this case reinstalling the software on the Administrator account will fix the issue.

## Recommended System Requirements

The recommended computer system requirements for running this software are highlighted in table 1 below.

*Table 1 Recommended system requirements for ZS Xplorer software.*

Feature	Specification
Processor Type	8th Gen+ Intel Core i7 Processor (or better)
Memory	16 GB RAM
Solid State Drive	512GB or greater
Display Resolution	1920 x 1080 full HD screen resolution minimum
Connectivity	2 free USB2.0 or higher ports
Operating System *	Windows 10 64 bit. * The ZS XPLOER software is not compatible with 32-bit Operating Systems

## Supported operating systems

ZS XPLOER is compatible with Windows 10 (tested on Windows 10 1909 version or later). Only 64-bit Professional versions are supported. Please note that ZS Xplorer is not as yet fully tested in Windows 11 versions and should be seen as unsupported on Windows 11 at the time of this release.

## Supported Languages

- English (US)
- Chinese (simplified)
- Japanese

## Installation Instructions

### Installation process

The software suite is available as a web download. The downloaded extractor contains the ZS XPLOER Setup, License Manager Setup and .NET Framework 4.8 Setup files. License Manager and .NET Framework 4.8 are prerequisites of ZS XPLOER. even if you are not using OMNITRUST regulated environment software suite.

When the extractor is run (see Figure 1) it will extract the required installers to a folder named 'MPInstallers' in the location the extractor is run, and the folder and a readme with important information will be opened (see Figure 2).

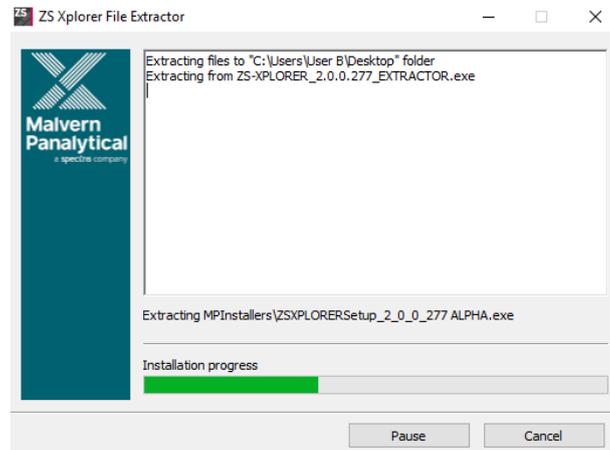


Figure 1 ZS Xplorer Self-Extracting Installation files

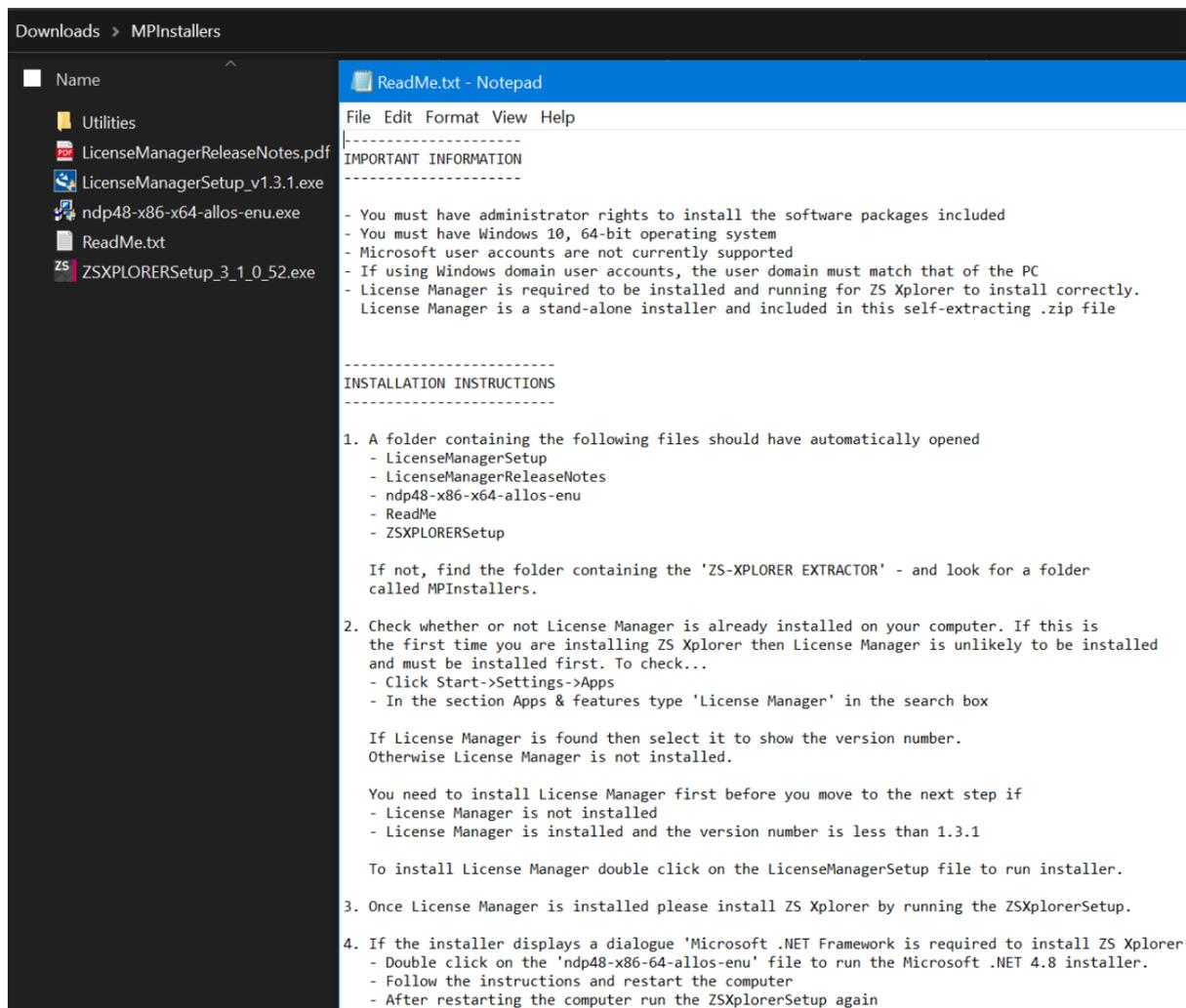


Figure 2 Extracted installation files and ReadMe file.

## .NET Framework 4.8 Installation

Microsoft .NET Framework 4.8 component is a requirement for ZS Xplorer software to run correctly and must be installed prior to the installation of ZS Xplorer. If you do not have the correct version installed the ZS Xplorer installer will warn you and won't proceed until the correct version of .NET Framework is installed. Windows 10 versions from 1903 include .NET 4.8 or higher and will not require updating.

## License manager Installation

The Malvern Panalytical license manager component is a requirement for the ZS XPLOER software to run correctly and must be installed prior to the installation of ZS XPLOER. Please note that users upgrading from 2.00 or later are not required to re-install License Manager. Those upgrading from ZS Xplorer vers.1.50 or earlier must install License manager.

## ZS XPLOER Installation

During the installation process, you will be prompted with the following message (Figure).

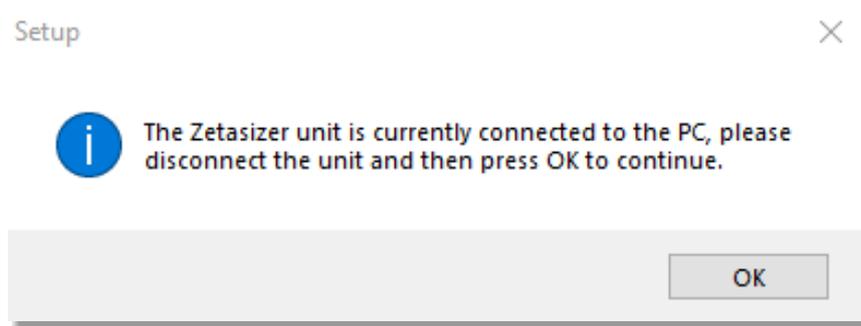


Figure 3 "Disconnect Zetasizer Unit" message

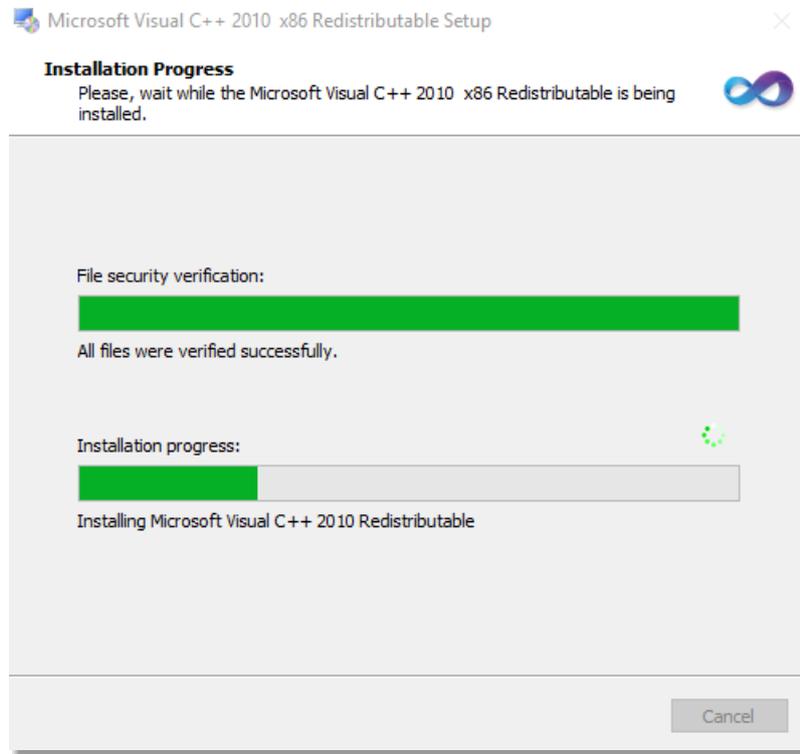


### Note:

You must unplug the USB cable from the computer or Zetasizer and then press OK. If you press the OK button without performing these previous steps, then the installation will not continue.

## Microsoft ASP.NET Core Runtime Hosting Bundle 6.0.5 and Microsoft C++ Redistributable

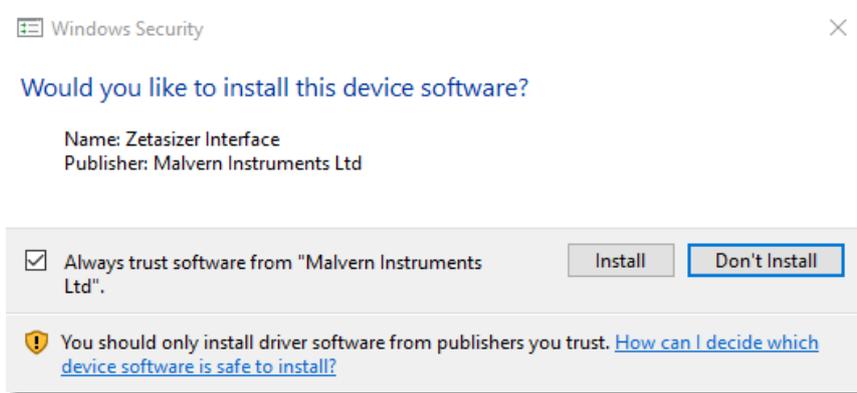
The Microsoft ASP.Net Core Runtime Hosting Bundle 6.0.5 and the Microsoft Visual C++ Redistributable must be installed for the ZS XPLOER software to run. These are installed during the ZS XPLOER software installation progress and under certain circumstances can involve the computer needing to restart. Completion of this stage of the installation can take a few minutes and may take over 10 minutes. Whilst these components are being installed a window such as below will be displayed, figure 4.



*Figure 4 Microsoft Visual C++ Redistributable Installation Window*

## USB Driver Installation

During the installation of the USB drivers you may be prompted several times with a message as shown in *Figure 5*.



*Figure 5 Install USB window*

This warning can safely be ignored as the software installation has been fully tested on Windows 10. Press **Install** to continue installation of the USB drivers.

## Connecting the Zetasizer to the computer

When the software has been installed and the instrument has been connected via the USB port, and switched on, the ZS XPLOER software may need to upgrade the firmware on the Zetasizer, in which case the status icon on the lower right of the software screen will indicate such (see *Figure 6*).



*Figure 6 instrument firmware updating status icon*

Users should not disconnect or power off their PC or instrument during normal firmware updating. In some rare occasions the firmware may fail to update correctly, in such circumstances a notification will be displayed indicating the issue – please restart the instrument and software to reset and repeat the firmware upgrade process.

With the correct firmware version installed the Zetasizer will connect to the instrument. A successful connection is indicated with an icon in the corner of the software (see *Figure 7*) showing green and with a tick.



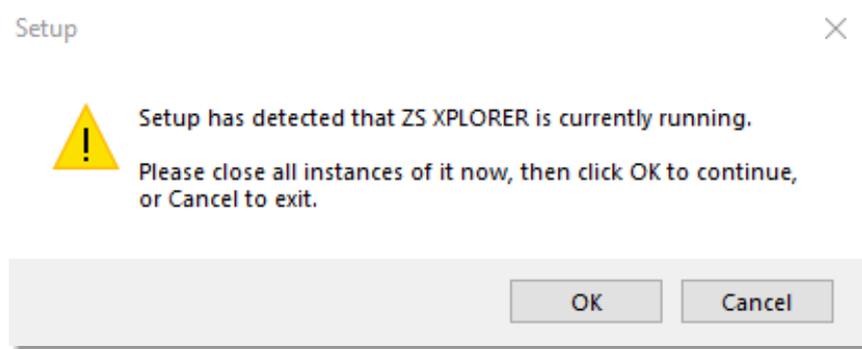
*Figure 7 Instrument connected icon*

## Uninstall Procedure

The software can be uninstalled using the standard Apps & Features panel in Windows Settings.

### Running the installer with the ZS XPLOER software running

If the installer is run whilst the software is running, the window in *Figure 8* will display.

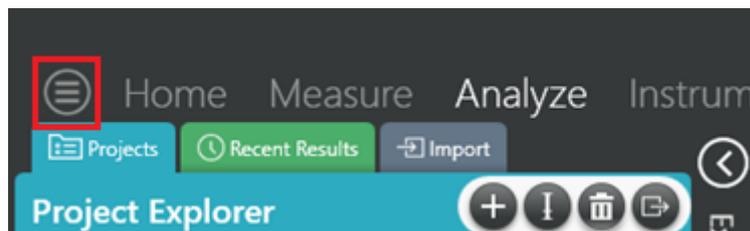


*Figure 8 Running installer with software open*

## Connecting the MPT-3 Titrator to the PC

Ensure the computer is turned on and connected to a Zetasizer Advance system.

Connect the MPT-3 Autotitrator to the computer using the USB cable provided, ensuring that it is turned on. Click on the settings button in the top left corner of the ZS XPLOER software. See *Figure 9*.



*Figure 9 Software options*

Click Options and navigate to the Titrator tab as seen in *Figure 10*.



## Options

Folders **Titration**

### Connection settings

*The titration connection settings allow configuration of how the titration connection is detected by the software.*

**Figure 10 Titrator options page**

On the COM Port drop down menu, select USB Serial Port (COMXX) as shown in figure 11. (Note that the COM port number and description may vary). If the titrator has been detected on this port, then a green tick will be visible See *Figure 11*.

Folders **Titration\***

### Connection settings

*The titration connection settings allow configuration of how the titration connection is detected by the software.*

COM Port: USB Serial Port (COM7)  **Titration detected.**

**Figure 11 Titrator successfully detected**

If the titrator is not detected on the selected COM port, then a red exclamation icon will be displayed with a message. See *Figure 12*.

### Connection settings

*The titration connection settings allow configuration of how the titration connection is detected by the software.*

COM Port: Communications Port (COM1)  **Titration not detected.**

**Figure 12 Unable to detect titration**

Once the titrator has been detected, click to save the settings.

Once the settings are saved an icon and a saved message will appear next to the saved COM port as shown in *Figure 13*.

## Folders **Titration**

### Connection settings

The titrator connection settings allow configuration of how the titrator connection is detected by the software.

COM Port: USB Serial Port (COM7)  Saved.

Figure 13 COM port saved

The titrator icon at the bottom right of the screen should turn green indicating that the titrator is successfully connected as shown in Figure 14.



Figure 14 Titrator successfully connected

## ZS Xplorer – Backup & Restore

### What to backup

By installation default, this version of ZS Xplorer application uses C:\ProgramData\Malvern Instruments\ZS XPLOER and its subfolders for configuration and user created output files. For ease, we would suggest this is the simplest folder to backup and restore.

To create a backup, we recommend that you consult your IT department to select the best method to achieve this. For pharmaceutical regulated environments, you should also consult your validation department - as they may have specific compliance requirements, and/or recommendations. Backup frequency and type e.g., full, incremental, or differential, along with consistency checking, should be considered when choosing the most appropriate backup methodology.

Table 2 provides information on the location and details of the important files and folders used by ZS Xplorer as well as our recommendations on backing up of data.

It is at the discretion of individual organization to define a backup process that is appropriate to their needs and the criticality of their data.

All file types used by ZS Xplorer can be copied to a secure location, we recommend that this be done at times when the system is not in use. Backups should be full backups (not differential) and a history of backups is retained to avoid overwriting a good backup with a corrupt version.

### How to restore

In this section we cover the two most likely reasons why you want to restore backup files. The first being accidental deletion of files, or to replacing corrupted files for a working installation of the ZS Xplorer application.

The second reason might be because the primary drive, on which the ZS Xplorer application was install upon, has been replaced or a fresh operating system has been installed, both of which requires the reinstallation of the ZS Xplorer application software.

It is important to note that when reinstalling the ZS Xplorer application, the version being installed must be same or later, as some files may not be backwards compatible with earlier versions of the application software.

Scenario 1 - restoring files to an existing installation:

1. Make sure the ZS Xplorer application is NOT running.
2. Restore/copy the required files from your backup to the destination folder, replacing the deleted or corrupted file/s.
3. Start ZS Xplorer and verify the recovered file/s are working as expected.

Scenario 2 – restoring files for a fresh reinstallation of ZS Xplorer.

1. If your backup contains the complete ZS Xplorer folder, subfolder, and files, simply restore/copy this folder to C:\ProgramData\Malvern Instruments\. This folder will need to be manually created.
2. Install your existing version of ZS Xplorer or later.
3. Start the application as normal and verify everything works as expected and that the software connects to the Zetasizer instrument.

*Table 2 - ZS Xplorer file structure*

File Name	File Extension	Location	Backup?
<b>Cells</b>	.data	%ProgramData%\Malvern Instruments\ZS XPLORER\Cells	Not required – auto-regenerated if deleted
<b>Materials &amp; Dispersants</b>	.data	Shared: %ProgramData%\Malvern Instruments\ZS XPLORER\Materials  Individual: %userprofile%\Documents\Malvern Instruments\ZS	Defaults are auto-regenerated, however can be user configured – backup recommended
<b>Measurement data (export location)</b>	.zmes	Location set via option in ZS Xplorer	This is a temporary export location only – so user discretion on importance of any files here
<b>Methods</b>	.zskd	Shared: %ProgramData%\Malvern Instruments\ZS XPLORER\Methods  Individual: %userprofile%\Malvern Instruments\ZS XPLORER\Methods	Recommended if custom methods used
<b>Reports</b>	.zrep	Shared: %ProgramData%\Malvern Instruments\ZSXPLORER\CustomReports  Individual: %userprofile%\Malvern Instruments\ZS XPLORER\Reports  For reports with custom headers or logos, there is an additional folder: %ProgramData%\Malvern	Default reports auto-regenerated on deletion – recommended if custom reports used
<b>pH probe calibration</b>	.cal	%ProgramData%\Malvern Instruments\ZS XPLORER\Titrator	Not necessary as can be re-calibrated

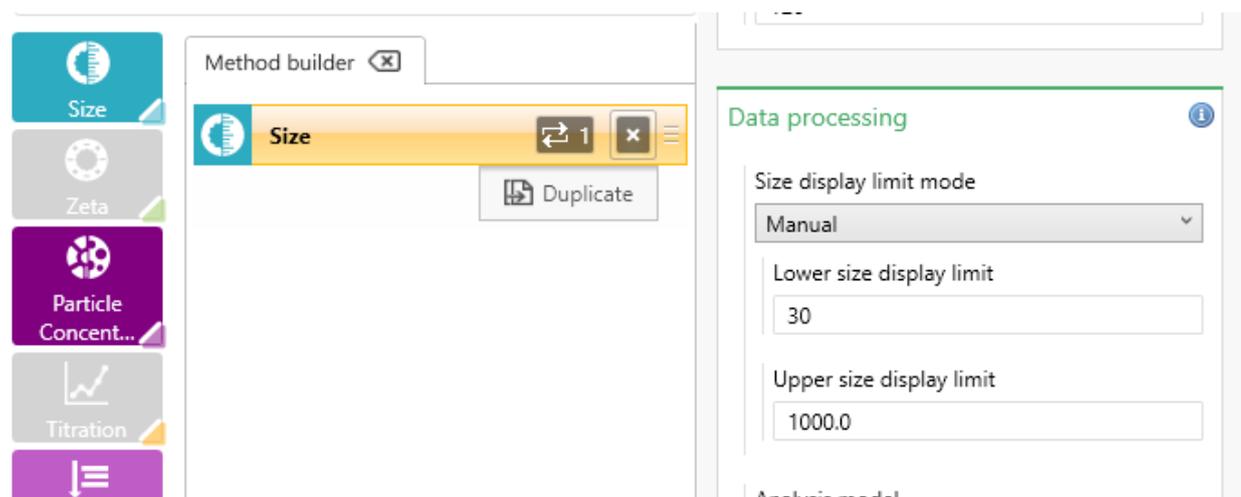
<b>Scattering standard</b>	.data	%ProgramData%\Malvern Instruments\ZS XPLORER\ScatteringStandards	Recommended
<b>Working file</b>	.db	Shared: %ProgramData%\Malvern Instruments\ZS XPLORER\Working File  Individual: %userprofile%\Malvern Instruments\ZS XPLORER\Working File	This is the main working database file that holds measurement records – highly recommended
<b>Program data folder</b>	various	%ProgramData%\Malvern Instruments\ZS XPLORER	This is the main programme data and can be restored by re-installation of the software
<b>Titrator configuration</b>	.xml	%ProgramData%\Malvern Instruments\ZS XPLORER\Titrator	Not required as can be readily set-up in ZS Xplorer
<b>Storage configuration</b>	.xml	%ProgramData%\Malvern Instruments\ZS XPLORER\WorkingFileSettings	Not absolutely required as can be set-up in ZS Xplorer
<b>Studies</b>	n/a	%ProgramData%\Malvern Instruments\TrendAnalysisData\data (MongoDB Instance – localhost:27020)	Backup if performing Studies type measurements – see <a href="https://www.mongodb.com/docs/manual/core/backups">https://www.mongodb.com/docs/manual/core/backups</a> for advice on backing up and restoring Mongo DB data

## New Features

### User configurable size display limit

For size, MADLS and Particle Concentration measurements it is now possible for users to select a custom upper and lower size limit (within reason) by selecting “manual” from the measurement properties/data processing pane. Users may choose to do so if for instance they are detecting scattering from small molecule adjuvants (sugars for instance) or large size peaks from static scattering. The ability to do so allows users to report peak data correctly without the influence of such peaks. The thresholds may also be changed post measurement via the edit results functionality.

Please note that results with differing size limits cannot be averaged. Please edit to set the limits to default or to be consistent between measurements to allow such results to be averaged.



### Extended localization support

Localization support has been extended to include the recently released Studies workspace as well as any recent text changes within the main application, ZS Xplorer. Particle size data quality advice, Zeta data quality advice and the new MADLS/Particle concentration (see below) data quality advice are now also translated.

As with ZS Xplorer the supported languages are:

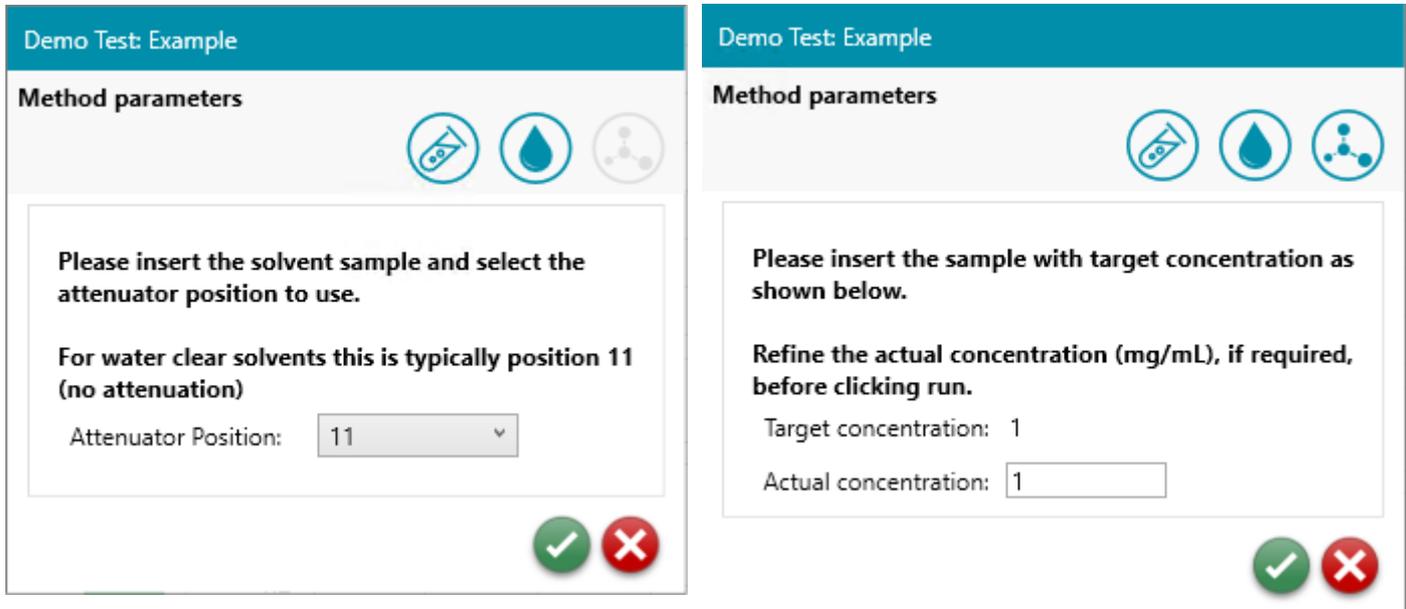
- English (US)
- Japanese
- Chinese (Simplified)

The studies workspace supports all region cultures, setting the region culture will predominantly affect whether Studies represents decimal numbers using a decimal comma or decimal point.

### Improvements to concentration trend workflow

The solvent measurement prompt requesting users to select the attenuator position has been moved to the start of the measurement. Previously this dialog showed after the equilibration process had already completed, with this change, users can insert their sample and select the attenuator position before the equilibration period.

The wording on the two measurement prompts have also been updated to be more informative, as shown below:



## New Studies Notification system

A notification system has been added to the studies service, this is currently used to display system errors that weren't triggered by a user request. Previously such errors would go into the Windows Event Viewer and the system didn't provide a mechanism to recover from the situation.

When a notification occurs, a toast style notification will display in the top right corner of the screen, an example of this can be seen as follows:



The notifications consist of several parts

- Notification type text  
The studies service currently only shows error notifications, so this value will always show as `Error` or the selected languages equivalent.

- Notification type icon  
The studies service currently only shows error notifications, so this will always show as a red exclamation mark.
- Notification description  
This shows a brief summary of the notification that occurred, in the user's selected language.
- Retry button  
Some notifications provide the ability to retry the operation that, in the case of errors, failed. This is typically only used for system errors where there was no user interaction, such as if the initial load of the studies data fails as shown in this case.

Not all notifications are able to be retried, so this button will not always be present.

- Close button  
This button, in the form of an 'X', closes the notification.

## Post-analysis editing of trend meta-data

The studies service now allows for trends to be edited after they have had measurements ran and results collected. This change only allows users to edit the trend name and description, all the other inputs will show as disabled.

This functionality is used in the same way you would edit a trend without measurements or results, by clicking the edit button whilst accessing a study.

## Changes to decimal precision for Studies/Trends

Inconsistencies were noticed with how the studies service was displaying various numerical values to different degrees of decimal precision. These inconsistencies have been addressed as part of this release, some decimal point inputs have been unified to use the same degree of decimal precision, while other inputs that only support whole integers, have been modified to not allow decimal input.

In the cases where decimal precision has been reduced, existing data will be rounded when edited or displayed, notably this will occur:

When running measurements

The target concentration display only prompt

The actual concentration edit prompt

When editing existing concentrations on the analysis page

The changes are as follows:

#### Trend Edit Screen

Field	Previous precision	New precision
dn/dc	2	3
Minimum Concentration	3	2
Maximum Concentration	3	2
Number of points	Any	None
Number of repeats	Any	None
Manual count rate	1	2
Equilibration time	Any	None

#### Overview Screen

Field	Previous precision	New precision
Actual concentration	3	2

#### Analysis screen – edit concentration dialog

Field	Previous precision	New precision
Edit concentration	3	2

## Added Intercept and Cell Positioning Factor (CPF) to measurement logs

The Intercept and CPF calculations obtained during size optimization have been added to the measurement logs and output window.

```
[14:32:15.6] Seeking the best attenuator for position 0.85 mm
[14:32:15.6] Collecting 2 seconds of data at attenuator 6.
[14:32:19.5] Recorded a count rate of 123.50 kcps.
[14:32:19.1] Set attenuator to 7.
[14:32:19.1] Collecting 2 seconds of data at attenuator 7.
[14:32:22.9] Recorded a count rate of 370.40 kcps.
[14:32:22.9] Correlating for 10 at attenuator 7 and position 0.85.
[14:32:23.0] Waiting for run to complete...
[14:32:24.1] Run Complete.
[14:32:24.1] Intercept = 0.91
[14:32:24.1] CPF = 41.65
[14:32:24.1] The cell positioning factor difference is 0%.
[14:32:24.1] The intercept difference is 0%.
```

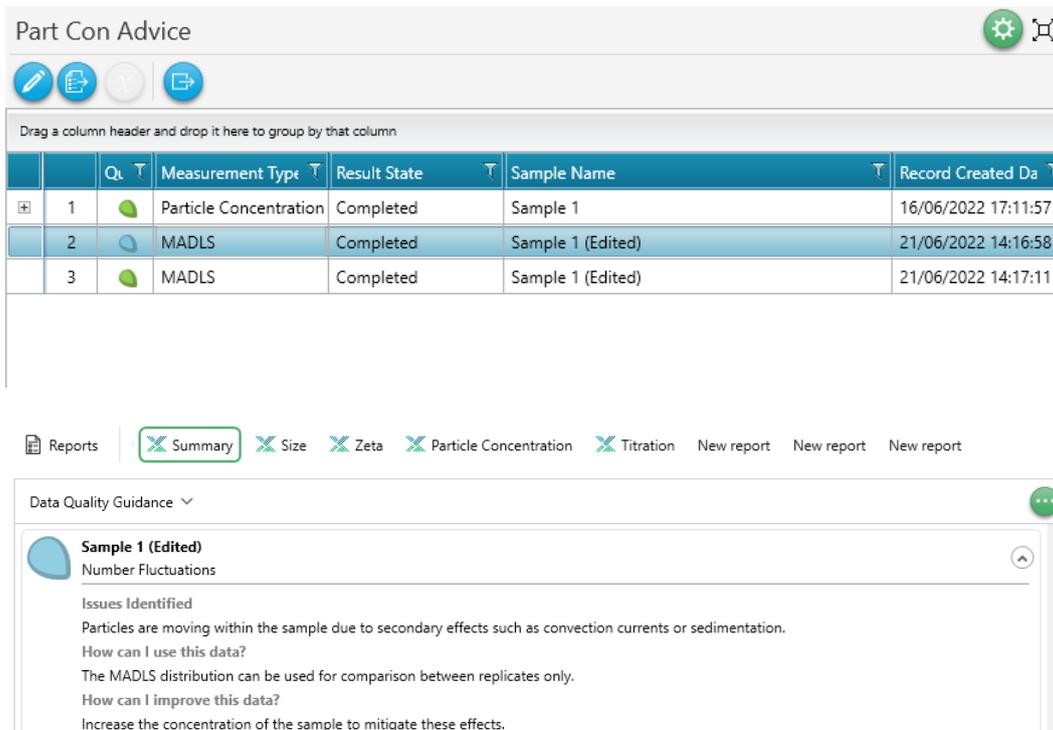
## Corrected software version display for OmniTrail Users

The ZS Xplorer software version number displayed in OmniTrail has been fixed to show the correct software version number. In the 3.1 edition of the software this was displayed as 3.1.64, whereas it should have been showing 3.1.0. This has been corrected as part of this release, which will now show 3.2.0 (Major, Minor, Revision) instead of (Major, Minor, Build).

11/08/2022 17:02 +01:00	Application started	OmniTrail - 1.4
11/08/2022 17:00 +01:00	Application stopped	ZS XPLOERER - 3.2.0
11/08/2022 17:00 +01:00	User logged out	ZS XPLOERER - 3.2.0
11/08/2022 17:00 +01:00	User logged in	ZS XPLOERER - 3.2.0
11/08/2022 17:00 +01:00	Application started	ZS XPLOERER - 3.2.0
11/08/2022 16:54 +01:00	System audit trail started	System Audit Service - 4.1
11/08/2022 16:54 +01:00	Unexpected system shutdown	System Audit Service - 4.1
24/06/2022 15:44 +01:00	Electronic record created	ZS XPLOERER - 3.1.64

## MADLS and particle concentration data quality advice

We have added data quality advice text and indicators for MADLS and Particle Concentration measurements.



The screenshot shows a software interface with a 'Part Con Advice' window. The window contains a table with the following data:

	Qc	Measurement Type	Result State	Sample Name	Record Created Date
1	Green dot	Particle Concentration	Completed	Sample 1	16/06/2022 17:11:57
2	Blue dot	MADLS	Completed	Sample 1 (Edited)	21/06/2022 14:16:58
3	Green dot	MADLS	Completed	Sample 1 (Edited)	21/06/2022 14:17:11

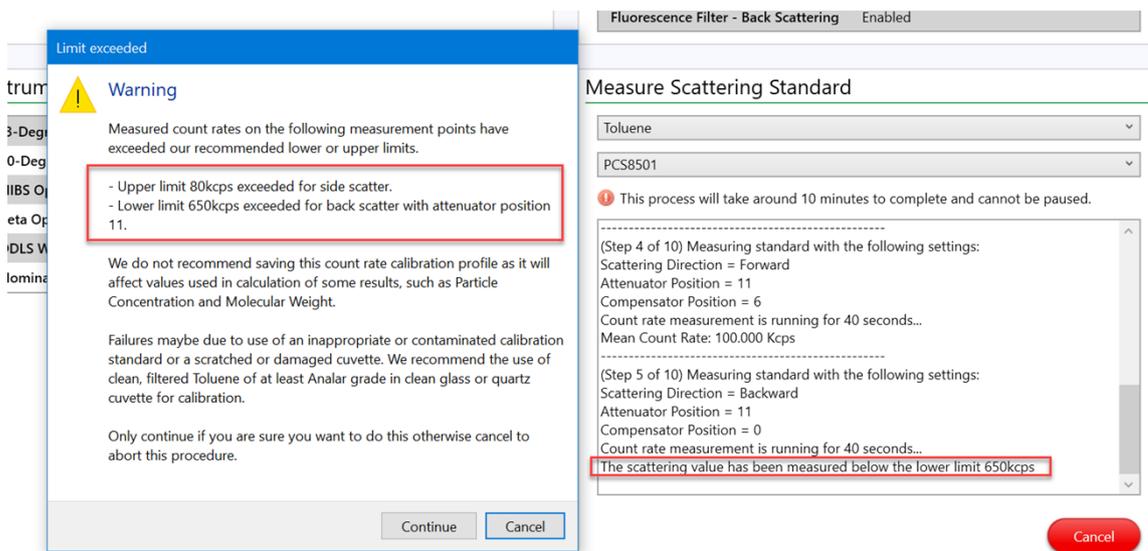
Below the table, there is a navigation bar with 'Reports' and several report types: Summary (highlighted), Size, Zeta, Particle Concentration, and Titration. Below this, a 'Data Quality Guidance' window is open for 'Sample 1 (Edited)'. It shows a section for 'Number Fluctuations' with the following text:

**Issues Identified**  
 Particles are moving within the sample due to secondary effects such as convection currents or sedimentation.  
 How can I use this data?  
 The MADLS distribution can be used for comparison between replicates only.  
 How can I improve this data?  
 Increase the concentration of the sample to mitigate these effects.

## Scattering standard measurement process changes

We have reduced the time needed to make a scattering standard measurement by reducing individual measurements from 120 seconds to 40 seconds. Additional measurement steps have also been added for attenuator positions 6 & 7 to improve measurements, such as molecular weight, that may rely on these values.

In order to help prevent measurement and saving of poor scattering standard measurements, that would affect subsequent measurements for particle concentration or molecular weight for instance, we have added upper and lower threshold count rate checks. The measurement process can now also be cancelled in the event of a failure or continued. The user is warned of any failures and the measurement may be cancelled or saved upon completion. We do not recommend saving of a failed scattering standard measurement without full understanding as to why the measurement has failed and the consequences of doing so. Please talk to your Malvern Panalytical representative if in any doubt.



**Warning**

Measured count rates on the following measurement points have exceeded our recommended lower or upper limits.

- Upper limit 80kcps exceeded for side scatter.
- Lower limit 650kcps exceeded for back scatter with attenuator position 11.

We do not recommend saving this count rate calibration profile as it will affect values used in calculation of some results, such as Particle Concentration and Molecular Weight.

Failures maybe due to use of an inappropriate or contaminated calibration standard or a scratched or damaged cuvette. We recommend the use of clean, filtered Toluene of at least Analar grade in clean glass or quartz cuvette for calibration.

Only continue if you are sure you want to do this otherwise cancel to abort this procedure.

Continue Cancel

**Fluorescence Filter - Back Scattering** Enabled

### Measure Scattering Standard

Toluene

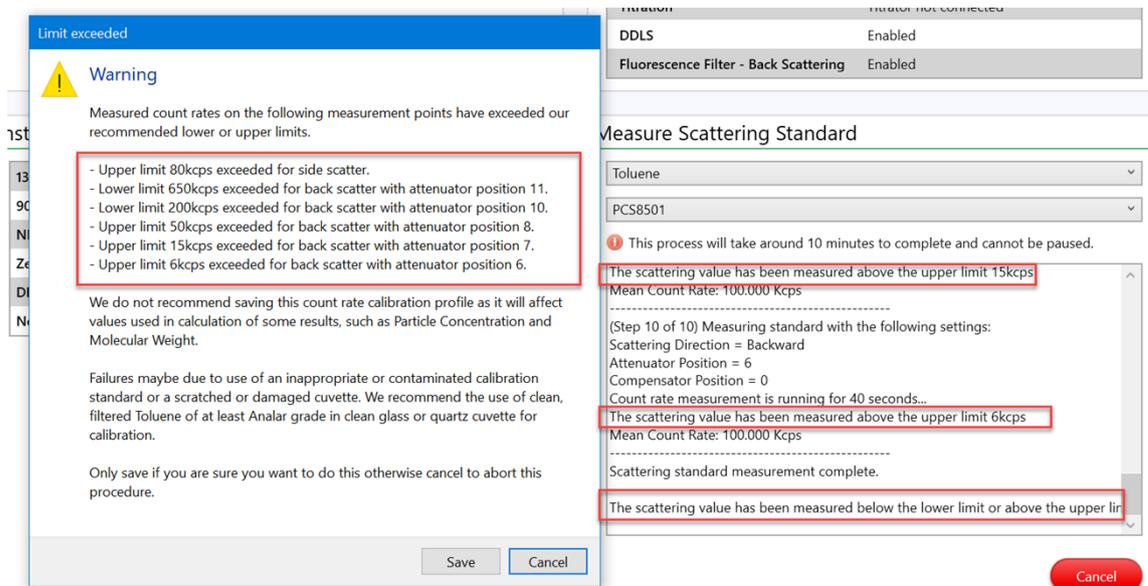
PCS8501

This process will take around 10 minutes to complete and cannot be paused.

(Step 4 of 10) Measuring standard with the following settings:  
Scattering Direction = Forward  
Attenuator Position = 11  
Compensator Position = 6  
Count rate measurement is running for 40 seconds...  
Mean Count Rate: 100.000 Kcps

(Step 5 of 10) Measuring standard with the following settings:  
Scattering Direction = Backward  
Attenuator Position = 11  
Compensator Position = 0  
Count rate measurement is running for 40 seconds...  
The scattering value has been measured below the lower limit 650kcps

Cancel



**Warning**

Measured count rates on the following measurement points have exceeded our recommended lower or upper limits.

- Upper limit 80kcps exceeded for side scatter.
- Lower limit 650kcps exceeded for back scatter with attenuator position 11.
- Lower limit 200kcps exceeded for back scatter with attenuator position 10.
- Upper limit 50kcps exceeded for back scatter with attenuator position 8.
- Upper limit 15kcps exceeded for back scatter with attenuator position 7.
- Upper limit 6kcps exceeded for back scatter with attenuator position 6.

We do not recommend saving this count rate calibration profile as it will affect values used in calculation of some results, such as Particle Concentration and Molecular Weight.

Failures maybe due to use of an inappropriate or contaminated calibration standard or a scratched or damaged cuvette. We recommend the use of clean, filtered Toluene of at least Analar grade in clean glass or quartz cuvette for calibration.

Only save if you are sure you want to do this otherwise cancel to abort this procedure.

Save Cancel

**Fluorescence Filter - Back Scattering** Enabled

### Measure Scattering Standard

Toluene

PCS8501

This process will take around 10 minutes to complete and cannot be paused.

The scattering value has been measured above the upper limit 15kcps  
Mean Count Rate: 100.000 Kcps

(Step 10 of 10) Measuring standard with the following settings:  
Scattering Direction = Backward  
Attenuator Position = 6  
Compensator Position = 0  
Count rate measurement is running for 40 seconds...  
The scattering value has been measured above the upper limit 6kcps  
Mean Count Rate: 100.000 Kcps

Scattering standard measurement complete.

The scattering value has been measured below the lower limit or above the upper limit

Cancel

## Installer – folder structure auto-creation

The installer will now create all necessary shared folders in the default ProgramData directory. These folders are used to persist data such as cell, materials and working file repositories. This change has been made to overcome issue where folders/files could be made with different user accounts and hence access rights.

## GAMP 5 Software categorization

In its standard mode of operation, the Zetasizer Xplorer software provides users with a series of standard interfaces and functions that enable the software to be configured to meet specific user business requirements. These interfaces include the ability to define Standard Operating Procedures (SOPs) for sample measurement and create report definitions using pre-defined functions. If users apply these functions, then the software can be considered to be a Category 4 product.

## Security Advisories

The following section and table 3 details any security updates that have been addressed in this release, including fixes for identified vulnerabilities.



**Note:**

We always recommend updating to the latest software version which will provide you with new features, bugfixes and most importantly, security updates.



**Note:**

Other products may also be affected by any issue described here. We recommend you regularly check the Software Updates Notifications (SUNs) for all your Malvern Panalytical products, and register on our website to receive updates.

*Table 3 Security updates*

Reference	Description	Recommendation
HEN-1042	Version 2.00 and earlier of the ZS XPLOER software contains a vulnerability which could allow an attacker to craft malicious measurement (.zmes) and schedule (.zskd) files. Loading one of these malicious files could result in arbitrary code execution. Version 2.10 introduces a fix to completely mitigate this vulnerability.	Upgrade to version 2.10 or later of the software. Never open files from an untrusted source, even if they appear to be non-executable.
HEN-572	Version 1.50 and earlier of the ZS XPLOER software contains a vulnerability in the reports feature which could allow an attacker to craft a malicious report file. Loading a malicious report file could result in arbitrary code execution. Version 2.00 introduces a fix to completely mitigate this vulnerability.	Upgrade to version 2.00 or greater of the software. Never open files from an untrusted source, even if they appear to be non-executable.

## Changes and fixed issues

The main changes and issues fixed in this release of the software are listed in table 4.

*Table 4 changes and fixed issues in version 3.1.0 ZS Xplorer software*

Issue key	Summary	Issue Type
<b>HEN-2283</b>	Missed translations	Bug
<b>HEN-2273</b>	Error notification displayed on trends startup	Bug
<b>HEN-2262</b>	Test implementation of CPF and intercept values into log sheet	Story
<b>HEN-2232</b>	Add user instruction to change cell	Story
<b>HEN-2229</b>	Add configurable Upper/Lower DisplayRange for Size/MADLS/PC	Story
<b>HEN-2226</b>	Word wrapping problem in non-English post-Analysis	Bug
<b>HEN-2195</b>	Trends analysis page rounds too many digits for displayed doubles	Bug
<b>HEN-2194</b>	CT - Text doesn't go back to English	Bug
<b>HEN-2193</b>	CT - Input boxes won't allow commas	Bug
<b>HEN-2190</b>	Update configurable Upper/Lower Size Display Limit interactions with Averaging	Story
<b>HEN-2187</b>	Add Intercept and CPF to measurement logs	Story
<b>HEN-2181</b>	Test size peak filtering in ZS Xplorer	Story
<b>HEN-2180</b>	Test MADLS/Particle Conc DQG in ZS Xplorer	Story
<b>HEN-2179</b>	Chart axis are not in correct format when displayed as scientific notation	Story
<b>HEN-2177</b>	Omnitrust shows v3.1 release as v3.1.64	Story
<b>HEN-2176</b>	Solvent scatter styling incorrect	Bug
<b>HEN-2175</b>	Strings switch languages when performing measurements	Bug
<b>HEN-2171</b>	System error handling component	Story
<b>HEN-2165</b>	Trends - Graph tooltips only show 3dp	Bug
<b>HEN-2164</b>	CT - Navigation tooltips not translating	Bug
<b>HEN-2151</b>	Extract and translate trends related strings in ZSX	Story
<b>HEN-2144</b>	Trends - JSDisconnectedException thrown after refreshing a page	Bug
<b>HEN-2143</b>	CT - Browser locale on installation	Story
<b>HEN-2130</b>	CT - Refactor charts to remove any hardcoded strings	Story
<b>HEN-2126</b>	Inconsistent styles across Import/Export	Bug
<b>HEN-2123</b>	CT - Move necessary string into resource file	Story

<b>HEN-2121</b>	Intermediate localization testing	Story
<b>HEN-2119</b>	All pending measurements set to failed on session expired	Bug
<b>HEN-2107</b>	Create Browser Locale	Story
<b>HEN-2106</b>	Send out translations to be verified	Story
<b>HEN-2105</b>	Perform auto-translation pass of trends to specified languages	Story
<b>HEN-2104</b>	Ensure string are formatted using CultureInfo.CurrentCulture	Story
<b>HEN-2103</b>	Ensure numbers are formatted with CultureInfo.CurrentCulture	Story
<b>HEN-2102</b>	Ensure no strings are in resources that shouldn't be	Story
<b>HEN-2100</b>	Fix grammar, spelling and formatting issues	Story
<b>HEN-2082</b>	Scattering standard - User feedback	Story
<b>HEN-2080</b>	Scattering standard - Add upper & lower limits	Story
<b>HEN-2078</b>	Scattering standard - Add backscatter attenuation 6 and 7	Story
<b>HEN-2077</b>	Reduce scattering standard measurement time	Story
<b>HEN-2064</b>	ZSX Installer must create all shared folder structure	Story
<b>HEN-2063</b>	ZSX software must not change permissions	Story
<b>HEN-2036</b>	CT - Edit trend post analysis	Story
<b>HEN-2022</b>	CT - publishing results from a previously run measurement to a renamed project causes crash	Bug
<b>HEN-1990</b>	CT - Solvent scatter measurement position altered by count rate meter	Bug
<b>HEN-1979</b>	MADLS/CONC measurements display expert advice	Story
<b>HEN-1946</b>	Crash - Copy data to clipboard sometimes crashes software	Bug
<b>HEN-1819</b>	CT - Zero is accepted in the concentration entry dialog during a measurement	Bug
<b>HEN-1762</b>	CT - Trends not available when running ZS Xplorer as a different user	Bug
<b>HEN-1565</b>	Localisation - Date and time format not shown correctly	Story
<b>HEN-1260</b>	Extract data quality into resources	Story
<b>HEN-564</b>	Crash (System.OutOfMemoryException) - Run measurement (Size) using Attenuator 1	Bug

## 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 where they are provided.

*Table 5 Known issues in ZS Xplorer version 3.2.0*

Reference	Severity	Issue	Workaround
NA	Normal	Regulated Environment customers upgrading to ZS Xplorer v3.2.0 may need to also upgrade to OmniTrail and OmniAccess V1.4 if previous ZS Xplorer version earlier than v2.3.0	Check or Install Omnitrail V1.4 and OmniAccess V1.4 when using ZS Xplorer v3.1.0 in a regulated environment if upgrading from ZS Xplorer versions 2.3.0 or earlier
HEN-1971	Normal	Concentration Trends - After selecting multiple measurements, starting the measurement, accepting the solvent scatter dialog, and leaving the confirmation dialog alone while the scattering count measurement completes, the concentration dialog is modal and blocks the confirmation dialog but if you try to abort the concentration dialog, nothing happens.	Accepting the concentration point and then clicking the OK will abort the trend
HEN-377	Normal	Software locks-up if you cancel a measurement during the enable for size step	None- force close the application
HEN-1894	Normal	Edit study button may not reactivate at the end of a measurement	Navigate to an intermediate page to refresh the status
HEN-1866	Normal	Concentration trends - Can't see count rate trace during solvent scattering measurement	If you are in doubt about the cleanliness of solvent or buffer, then run the count rate tool and record the attenuation and count rate and use these as manual inputs.
HEN-1922	Normal	In some edge circumstances user can edit study whilst measurement in progress – this is a bug in an underlying component	Do not edit studies whilst measurements in progress
HEN-1899	Normal	Studies not in order	No workaround
HEN-1876	Normal	Some parameters display too many decimal places	No workaround – improved with this release but may occur in some circumstances

HEN-1615	Normal	ZS Xplorer hamburger menu can become obscured when in trends tab – issue with underlying component	No workaround
HEN-1866	Normal	Count rate live display is not showing during Concentration Trend measurements	No workaround
HEN-2140	Normal	Studies wont load – opening ZS Xplorer and going straight to Studies tab may prevent loading of any saved studies	Click retry and if this fails re-start ZS Xplorer
HEN-2026	Normal	Whilst a measurement is running UI can become slow if user navigates to study selector	Avoid using study selector whilst measurements are proceeding
HEN-2093	Normal	If a user includes a custom dispersant in a study and then updates the dispersant the change is not pulled into the open study until a new study is created or ZS Xplorer is restarted	Avoid editing custom dispersants during creation or measurement of a study without restarting software first
HEN-2095	Normal	Aborting a concentration trend measurement and then selecting all measurement points and re-running will cause the trend to start at the previously aborted measurement point and not the first	All measurement points are measured but may be confusing to users so be aware of issue.
HEN-2288	Normal	Crash after publishing studies measurements after renaming a study if the study name is changed between measurements	Clearing the method list in Measure tab after renaming a Study will prevent the crash/do not rename incomplete Studies
HEN-2297	Normal	Printing a custom report from Report Designer will only show graphs with single color	Print reports from Analyze-Reports tab to ensure correct behavior

## Error Reporting

Should persistent problems occur contact the local Malvern Panalytical Helpdesk. To speed up response time include all the following.

A full-screen screen shot of any error message and everything behind it.

Full description of what was happening at time of issue and ideally leading up to it.

Instrument serial number (e.g. MAL1060289), instrument serial number can be found inside the sample cell basin and on the instrument back panel.

The software version, which can be found as described in a section below.

The log information described below.

And, if relevant and possible, export the relevant measurement data as described in the last section below.

## Extracting log information

If an error occurs, further information about the error can be found from the Windows Event Viewer.

Click the Windows Start Button.

Type Event Viewer and press enter.

Navigate to Applications and Service Logs/Zetasizer All Events.

The window will display the most recent errors that have occurred with the ZS XPLOER software.

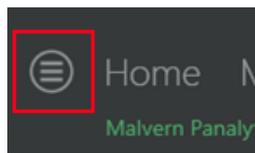
Error information can be selected and then exported with the Save selected Events button allowing this information to be passed to the Malvern Panalytical team for troubleshooting.

The contents of the measurement log window are logged to file at *Documents\Malvern Instruments\ZS XPLOER\logs*

## Software version

The Software Version is vital to determining the cause of problems. To retrieve the version number:

Click on **Application Menu** button (*Figure 19*)



*Figure 19 Application Menu button*

Click on the **About** button

Read version number (Figure 20)

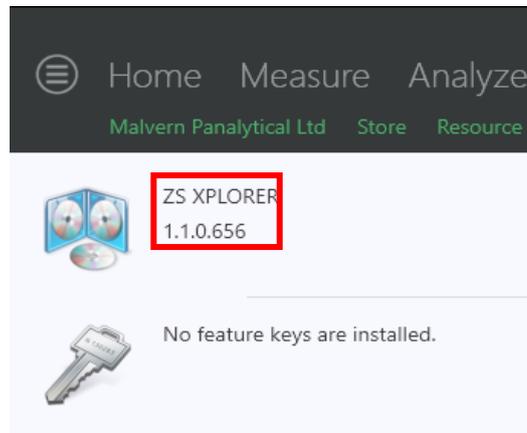


Figure 20 Software Version Number

## Extracting measurement data to send

In situations where the errors appear to be related to a specific record or records, the affected records can be exported from the software by selecting them and pressing the export icon, see Figure 21, and send the \*.zmes file to the Malvern Panalytical team for investigation.

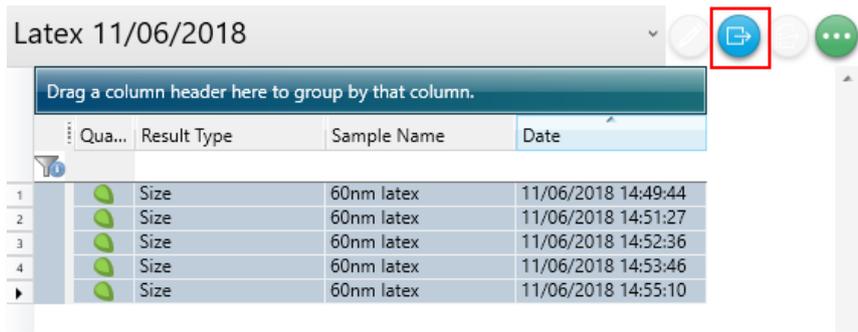


Figure 21 Exporting selected record

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