

Zetasizer μ V Quick start guide

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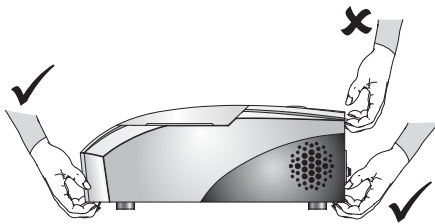
Part 1: Setting up the Zetasizer[®] μ V

1. Introduction

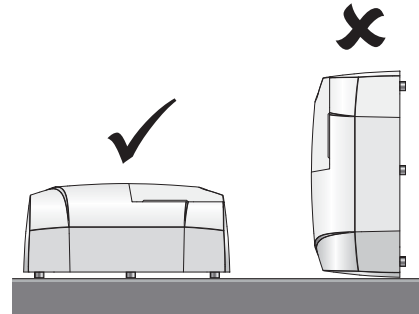
Work through this section to set up the instrument. The other section shows how to make an initial test measurement.

⚠ Never lift the instrument by its covers.

⚠ Always stand it on its feet, not its side.



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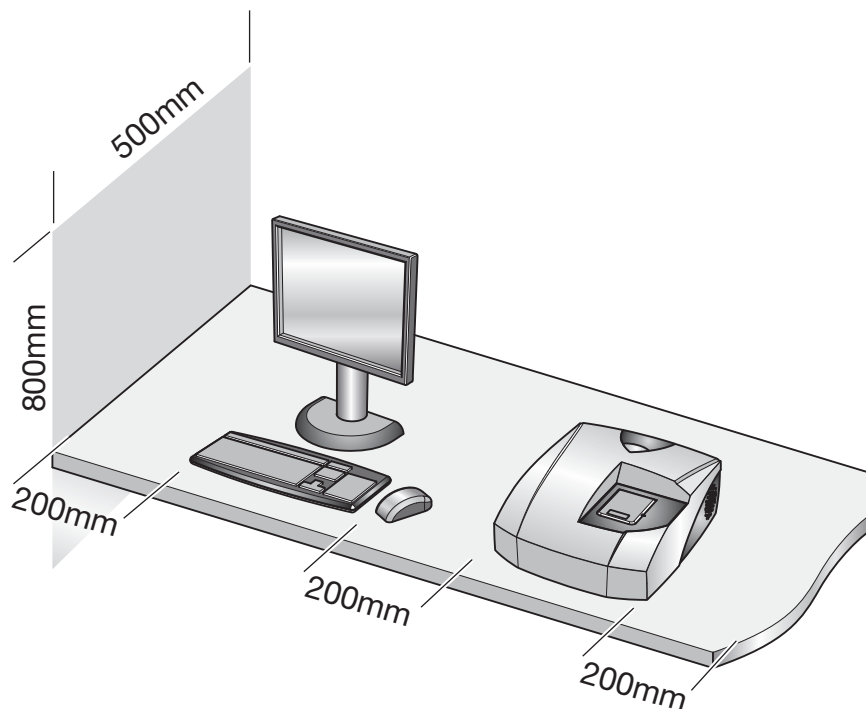
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2. Site requirements

The site must be:

- Indoors and away from strong light (avoid windows).
- Away from heat sources like radiators.
- On a horizontal vibration-free bench.
- Well ventilated (if measuring noxious materials).

Allow space for the instrument as shown below (the **Essentials Manual** gives the full requirements):

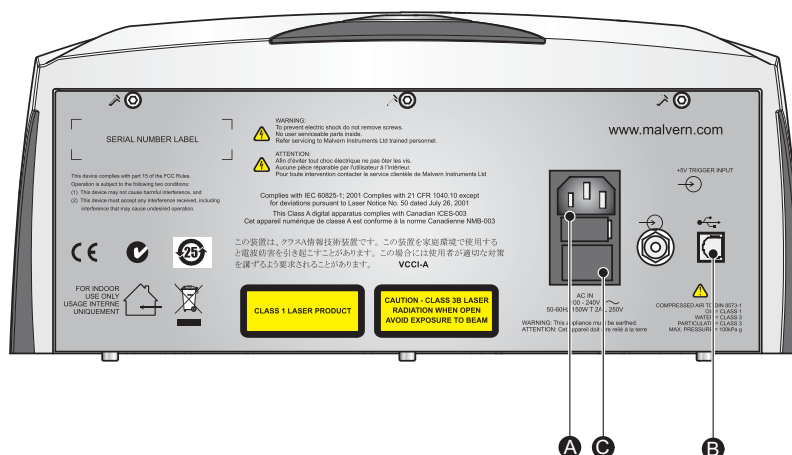


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3. Connecting up the system

Warning - This instrument must be connected to a protective earth!

- Unpack the cables from the “Installation Kit” pack.
- Connect the USB cable to the USB connectors on the instrument **B** and the computer.
- Connect the power cable to the power socket **A** on the back of the instrument.
- Make all computer connections (keyboard, power, etc.), following the maker's instructions.




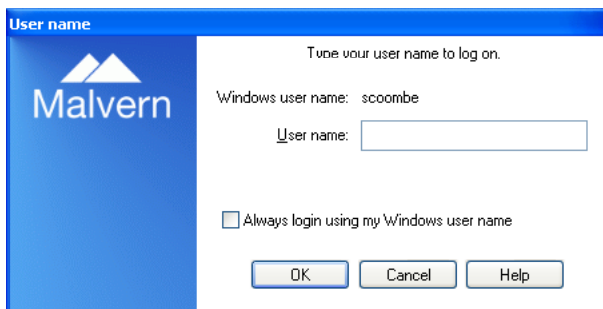
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4. Installing the software

- Insert the **Zetasizer Software** CD in the CD drive.
- If **Autorun** is enabled on the computer, the software will display an introductory screen. If **Autorun** is not enabled, double-click the file **Setup** on the CD to display this screen.
- Click the “Click here to install ...” link and follow all on-screen instructions to complete the installation.

5. Turning on the instrument and starting the software

- Turn on the instrument by pressing the power switch **C** on the back of the instrument.
- Start the software by double-clicking the  icon.



c. If this dialogue (left) is displayed, it will show your Windows login name. Click **OK**.

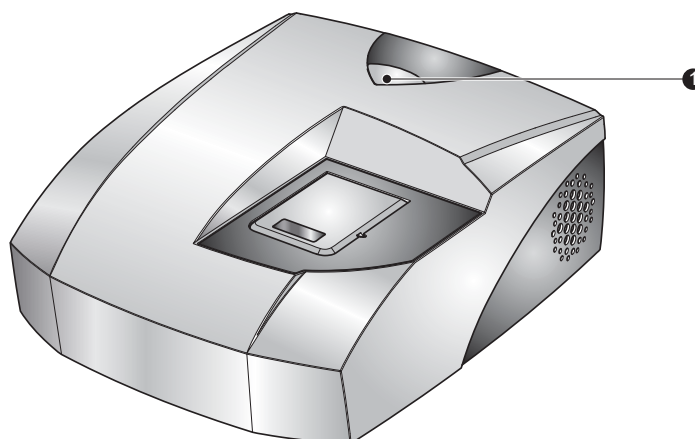
d. The instrument **must be powered up for 30 minutes before a measurement is made** to ensure its temperature has stabilised.

6. Checking the system

The operation light **1** is illuminated (blue) if the system has been connected up correctly. Proceed to Part 2 if so. If there is no illumination, check that:

- The power lead is connected.
- The instrument is switched on.

If the above suggestions do not help, replace the fuses as shown in the **Essentials Manual** (this is a task for the supervisor, not operators).



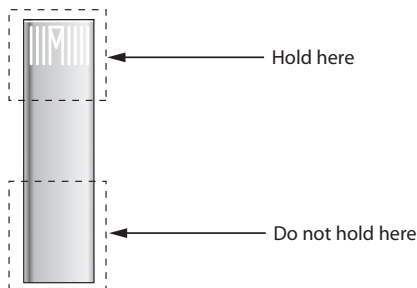
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Part 2: Making a measurement

Introduction

This section provides simple overview information on how to fill and insert a cell, and then run a measurement by using an SOP.

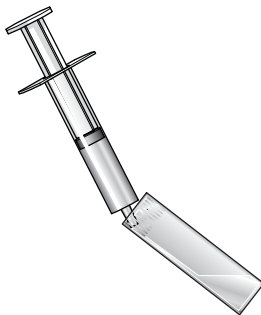
1. Prepare the sample cell:



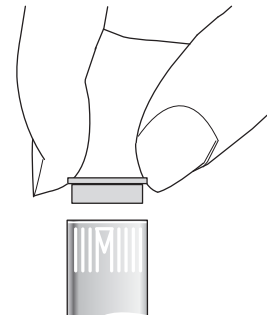
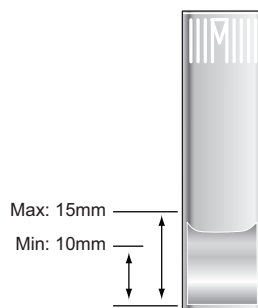
Important: Always hold the cell near its top, not the optical area near its base.

Fingerprints, grease or dust on the lower area will cause the test to fail.

- Take a square polystyrene cell from the consumables pack.
- Fill it with between 1.0mL and 1.5mL of the supplied **Sample** (DTS1230) from the syringe, as follows.
- Tilt the cuvette and allow it to fill slowly:
- The sample depth should be between 10 and 15 mm.
- Push the lid securely onto the cell:

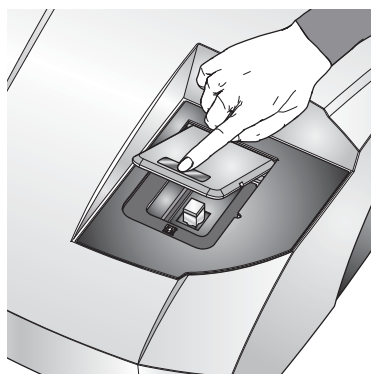
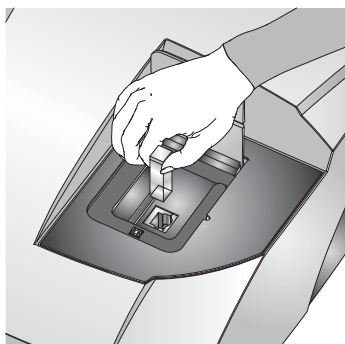


To stop bubbles forming, let the sample flow down the inside.



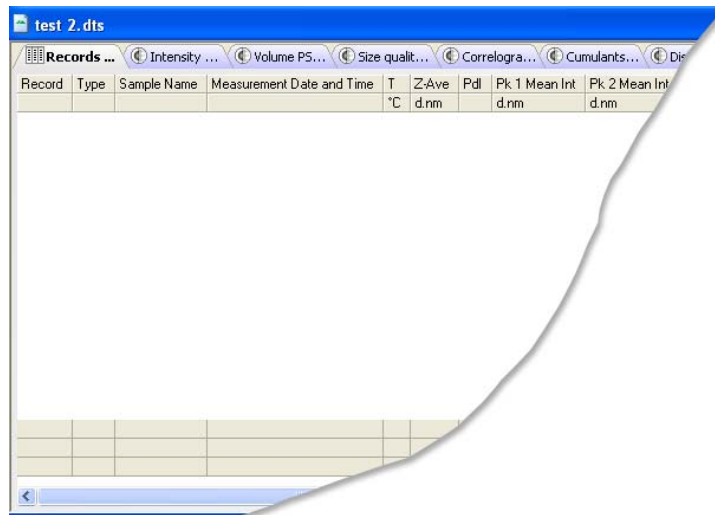
2. Load the cell into the instrument:

Press on the instrument cell lid where **Push** is indicated to raise the cell area lid, then insert the cell and close the lid.



3. Create a new measurement file:

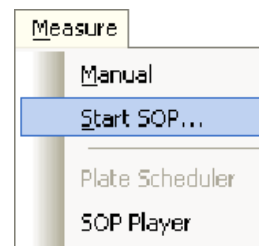
It is necessary to create a new measurement file into which measurement data can be saved. To do this, choose **File-New** from the menu and type a name for the new measurement file - in this example the file has been named “Test 2.dts” (measurement files all use the “.dts” file extension).



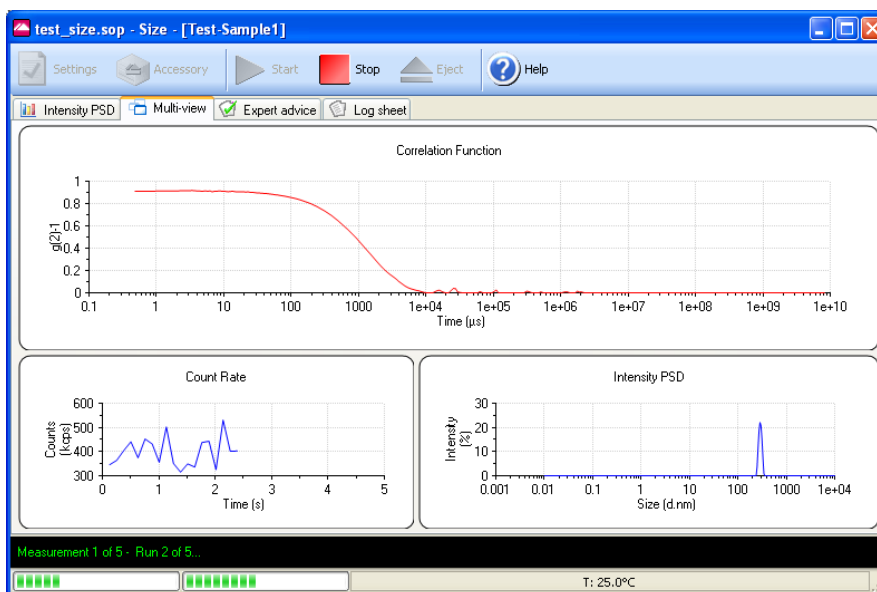
4. Run an SOP:


Once the instrument is set up, most measurements are made by running a **Standard Operating Procedure (SOP)**. Malvern Instruments supplies some default SOPs, others may be created by supervisors or advanced users.

1. Select **Measure-Start SOP** from the menu bar:
2. Available SOPs are listed in a dialogue. Select the SOP to use and click the **Open** button.
3. Enter any data required by the SOP, such as sample name, and then click **OK**.
4. Now follow the on-screen instructions shown in the black status bar area at the bottom of the measurement window to run the SOP.



5. As the SOP analysis runs, results will be displayed, as in the following example:



6. Further messages in the status bar show the progress of the measurement.
7. When the measurement has finished, close the window by clicking the  button.

5. Examine the measurement results:

The results will be stored as the latest record in the measurement file currently open. To view the result, select this record and then click one of the Report tabs.

The following example shows the Intensity PSD (M) report for a size test:

