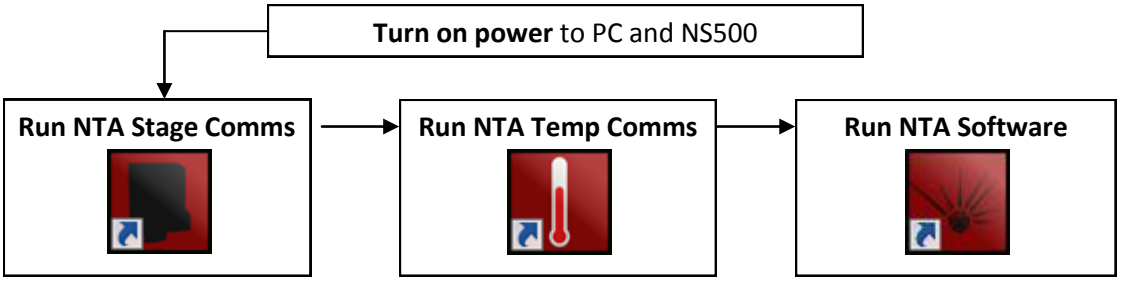
NanoSight NS500

Quick Start Guide

P571B – NanoSight NS500 Quick Start Guide

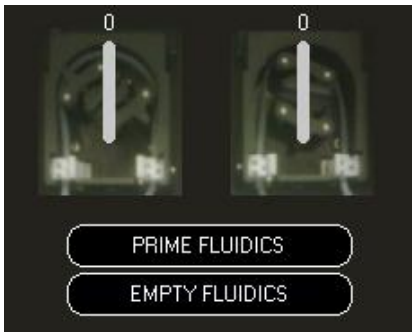
NanoSight Ltd., Minton Park, Amesbury, Wiltshire SP4 7RT, UK

Instrument Initialisation



After loading the NTA software, allow 5 seconds for the stage / temperature communications to connect

Prime fluidics



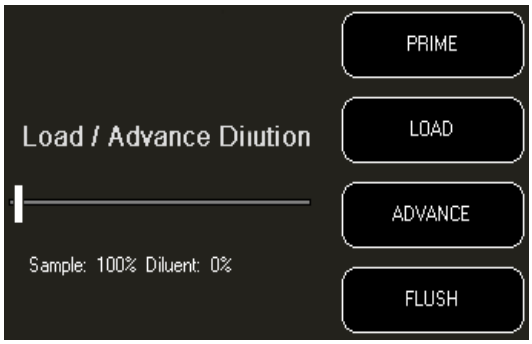
The diluent bottle should be filled with clean diluent and connected to the right-hand pump tubing. The sample tube should be placed into the waste port at the back of the sprung tray holder.

Click **PRIME FLUIDICS** to fill the system with diluent. This takes 5 minutes.

The cleanliness (with respect to particle content) of the diluent should be checked by inspecting the field of view at a high camera level. If particles are present you may need to **FLUSH** the system or replace the diluent.

Sample loading

Clean the outside of the sample tube with a wet tissue to avoid cross-contamination and put the tube into the sample container in the sprung tray holder.



Set the **Load/Advance Dilution** and click **LOAD**.

For high dilutions, click on **PRIME** first to pump the undiluted sample up to the t-piece before loading.

Click on **ADVANCE** to move further sample through the viewing chamber, in order to present a fresh sample for analysis.

Sample flushing

To clean between samples, remove the sample tube from the sample container and place it into the waste port

Click on **FLUSH** to run a cleaning sequence. This takes around 90 seconds.
Repeat if necessary until only one or two particles are present in the field of view (assuming clean diluent)

Capture set-up

Click on **SCATTER** to go to the optimal capture region; next to where the laser first emerges into the sample (the 'thumbprint').

The thumbprint should be centred and in focus at the zero position (click **GOTO ZERO** to confirm this is set correctly).

Focus can be fine adjusted using the wheel on the NS500 control window or by using CTRL + up/down arrows

Basic capture and analysis

Please refer to document ***P560 NanoSight NTA Quick Start Guide***. This can be found in the NTA **Help** menu.

Scripted capture/experiment

The **Script Control** capability**,** found in the **Advanced** menu, enables you to set up procedures or 'scripts' for the instrument to follow. Possibilities include:

- Capturing multiple videos at particular time intervals
- Capture videos of the sample at different temperatures
- Setting up SOP-like procedures for other users to follow

Commands can be added using the buttons in the Script Control window, manually typed or copy and pasted in. A base name and location should be selected using **Set Base File Name**. Videos will then be saved as BASENAME01, BASENAME02 etc… Scripts can be saved for re-use.

An example of a basic script to capture three 60 second videos with an advance between captures:

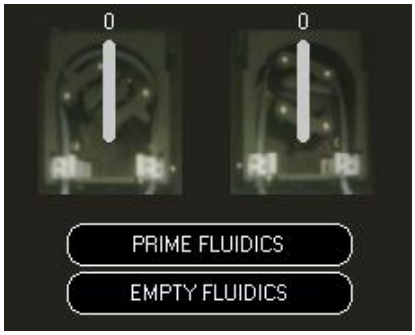
```
REPEATSTART     // Start position for a sequence to be repeated
ADVANCE         // Push more sample through
DELAY 5         // Delay for 5 seconds to allow the sample to stabilise
CAPTURE 60      // Capture a 60 second video
REPEAT 2        // Repeat the sequence an additional 2 times
```

Videos captured with **Script Control** can be analysed as normal or by using **Batch Process** under the **Advanced** menu.

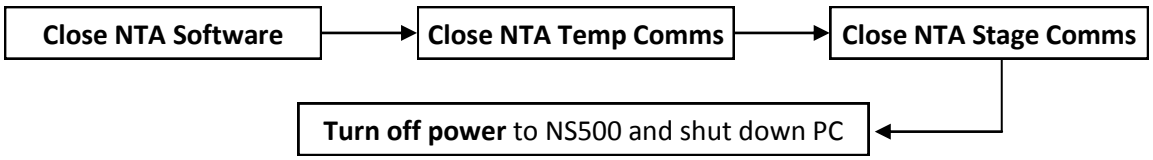
Empty fluidics

At the end of the sample measurement session, the diluent bottle tubing should be disconnected from the bottle cap. The sample tube should be placed into the waste port at the back of the sprung tray holder.

Click **EMPTY FLUIDICS** to dry out the system. This takes 5 minutes.



Instrument Shutdown



For more detailed information on usage of the NS500 instrument please refer to the NanoSight NS500 Operation Manual.

Quick start guides are also available for capture and analysis in NTA and zeta potential analysis using the NS500; these can be found in the help menu of the NanoSight NTA software.

NanoSight Technical Support Contact Details

Telephone: +44 (0)1980 676060
Email: support@nanosight.com