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QUICK START GUIDE

CELLOMETER® X2

8001582 Rev G

For Research Use Only. Not for use in diagnostic procedures.

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Cellometer® X2 Quick Start Guide

8001582 Rev G

February 2024

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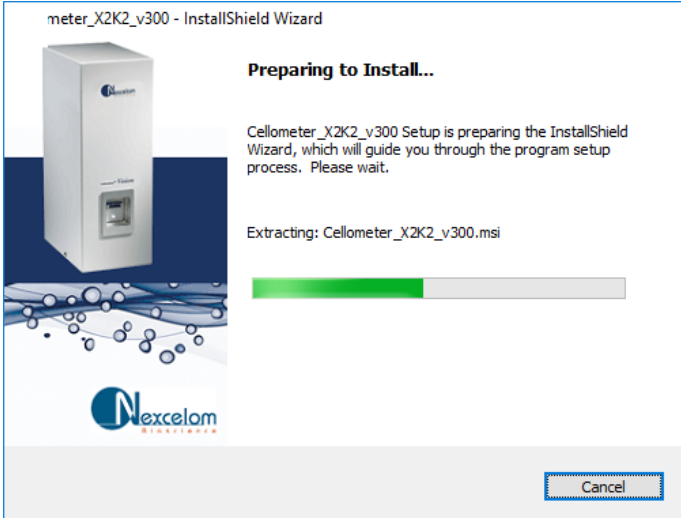
Unpack Checklist

- Cellometer X2 Instrument
- USB 2.0 Cable
- Power Supply & Power Cord
- Cellometer X2 Focus Guide
- Cellometer X2 Software USB
- Cellometer X2 K2 User Manual
- Cellometer X2 Quick Start Guide
- Cellometer X2 Simple Setup Guide
- Cellometer Fluorescence Beads Starter Pack
- Thank You Letter
- CHT4 Counting Chambers (Shipped Separately)
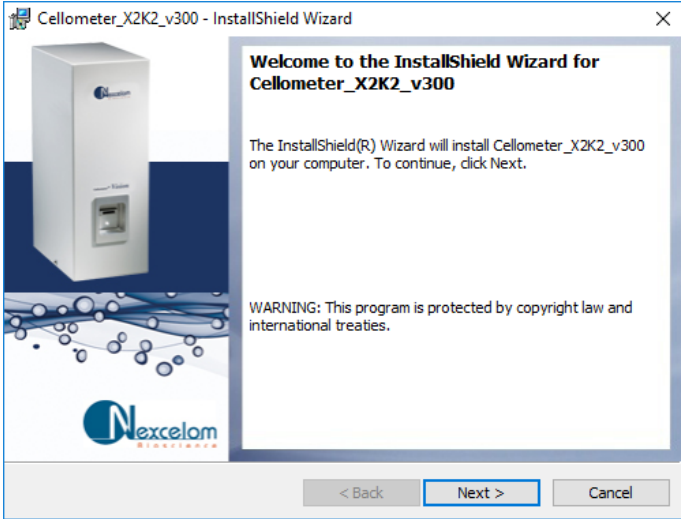
Software Installation

1. Installation supported in Windows 7 and 10.
2. Insert Cellometer X2 software USB into USB Port. Installer will auto run.
3. Open USB drive.
4. Double click on the Cellometer X2 software folder: **Cellometer_X2K2_vX.X.X.X**
5. Double click on the **Cellometer_X2K2_vX.X.X.X.exe** file.
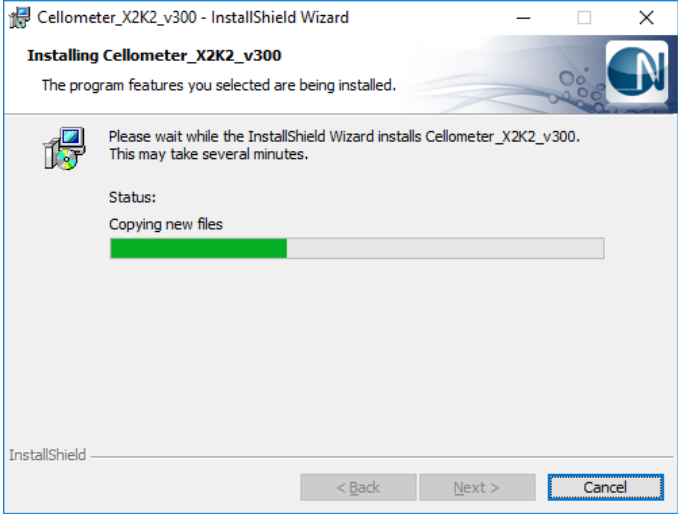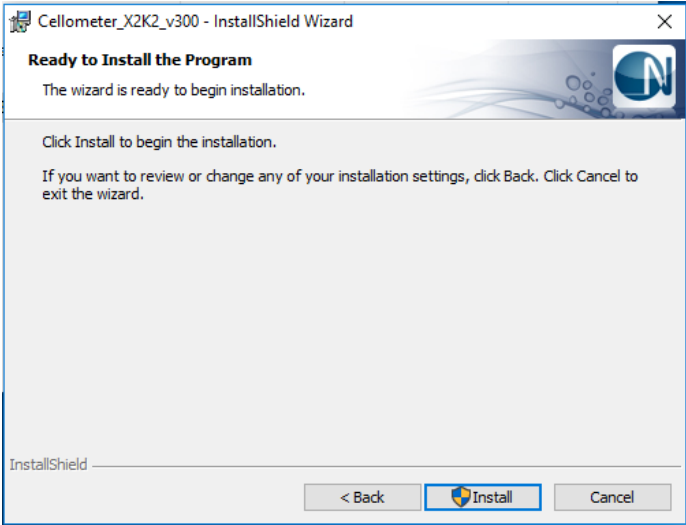6. Click "**Install**" (may see this step).
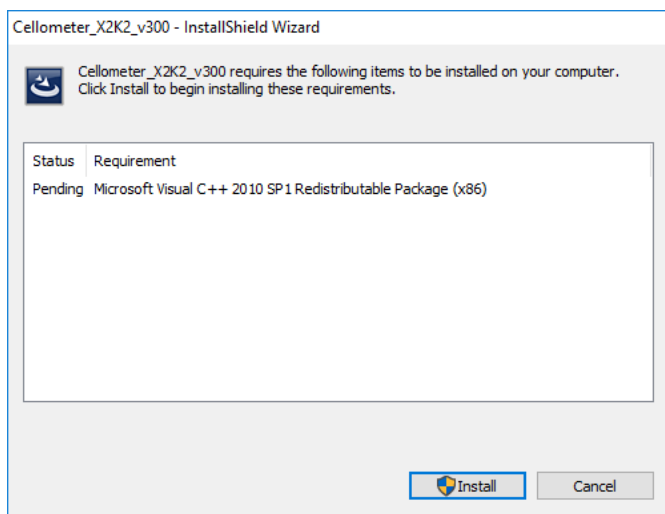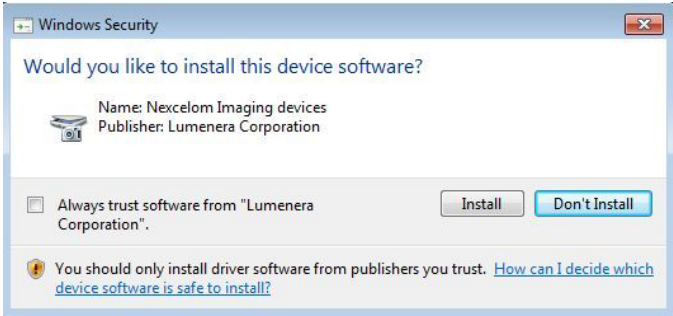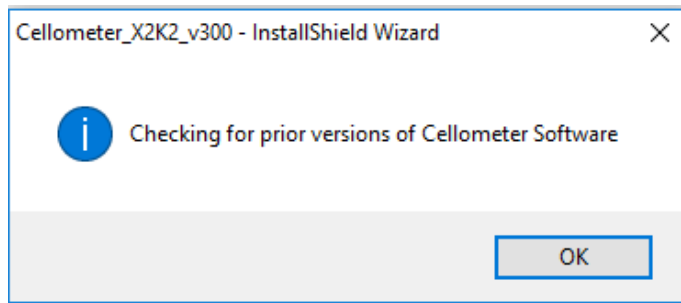
7. Installation will continue.

8. Click "**Next >**".

9. Click "**Install**".

10. Click "**Install**".

11. Click "**OK**".

Cellometer_X2K2_v300 - InstallShield Wizard

ⓘ Checking for prior versions of Cellometer Software

OK

12. Click "**Finish**".

Cellometer_X2K2_v300 - InstallShield Wizard

InstallShield Wizard Completed

The InstallShield Wizard has successfully installed
Cellometer_X2K2_v300. Click Finish to exit the wizard.

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< Back   Finish   Cancel
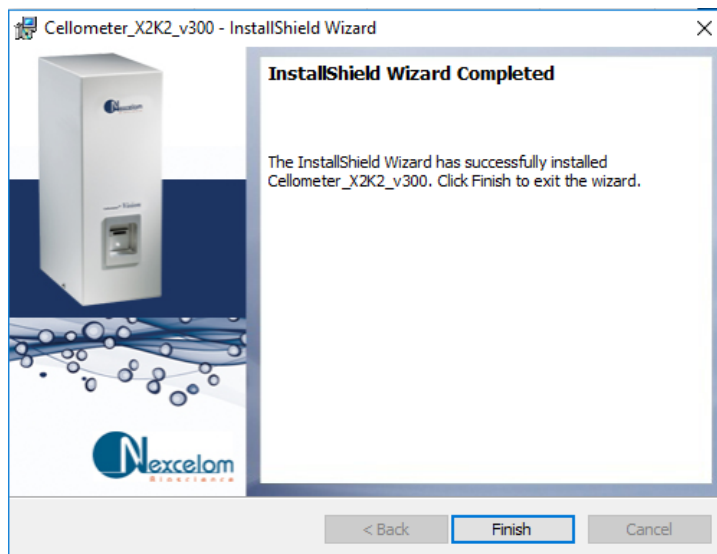
13. The Cellometer X2 icon will appear on your desktop.
14. Close the **Cellometer_X2K2_vX.X.X.X** folder.
15. Remove the USB drive from the USB port.

USB Driver Software Installation

1. Connect power to Cellometer X2 instrument located on the back of the unit.
2. Connect the USB 2.0 cable between Cellometer X2 instrument and a USB 2.0 port on the computer. (Make sure that Cellometer X2 software installation is complete before connecting the USB 2.0 cable.)
3. Windows OS will automatically install the USB drivers (This may take up to several minutes).
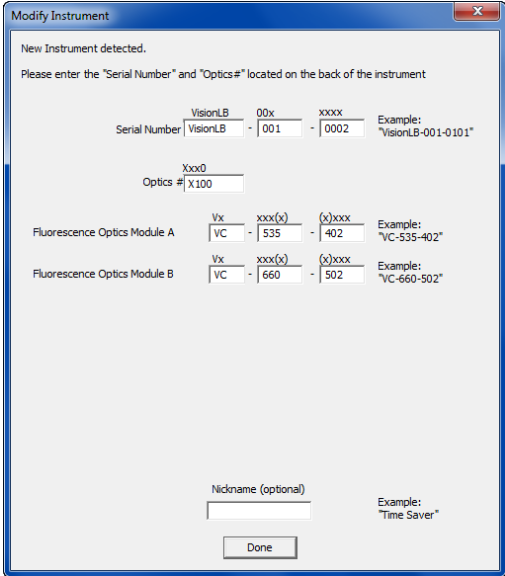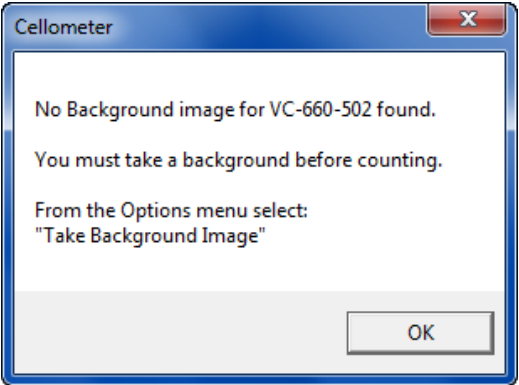
Starting the Cellometer X2

1. Start Cellometer X2 software by clicking the icon on your desktop.
2. Enter instrument serial number which is located on the back of the Cellometer X2.
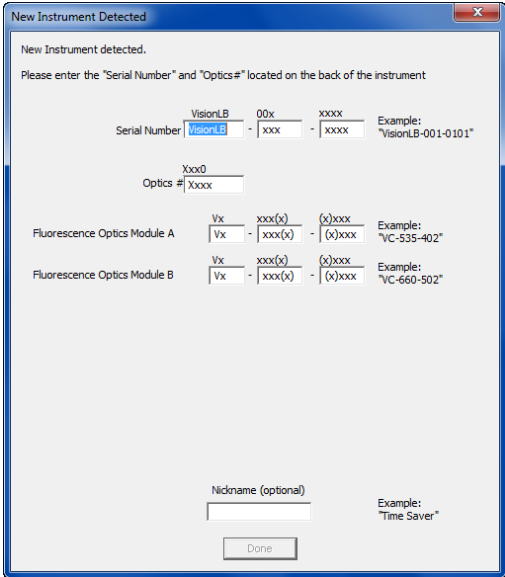
3. Enter in Optics # and Fluorescence Optics Module A and Fluorescence Optics Module B information.

4. Click "Done".

5. You will see two warnings that a background image must be taken if this is the first time the instrument has been connected to the computer. Click "OK" for both.
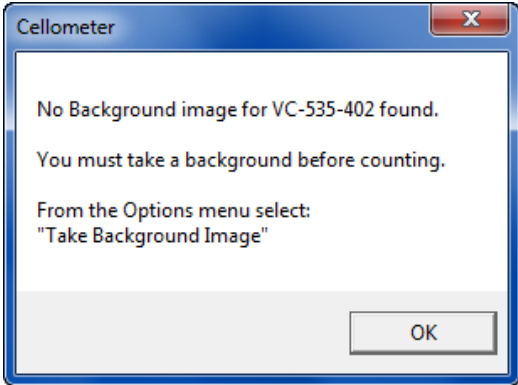
Taking a Background Image
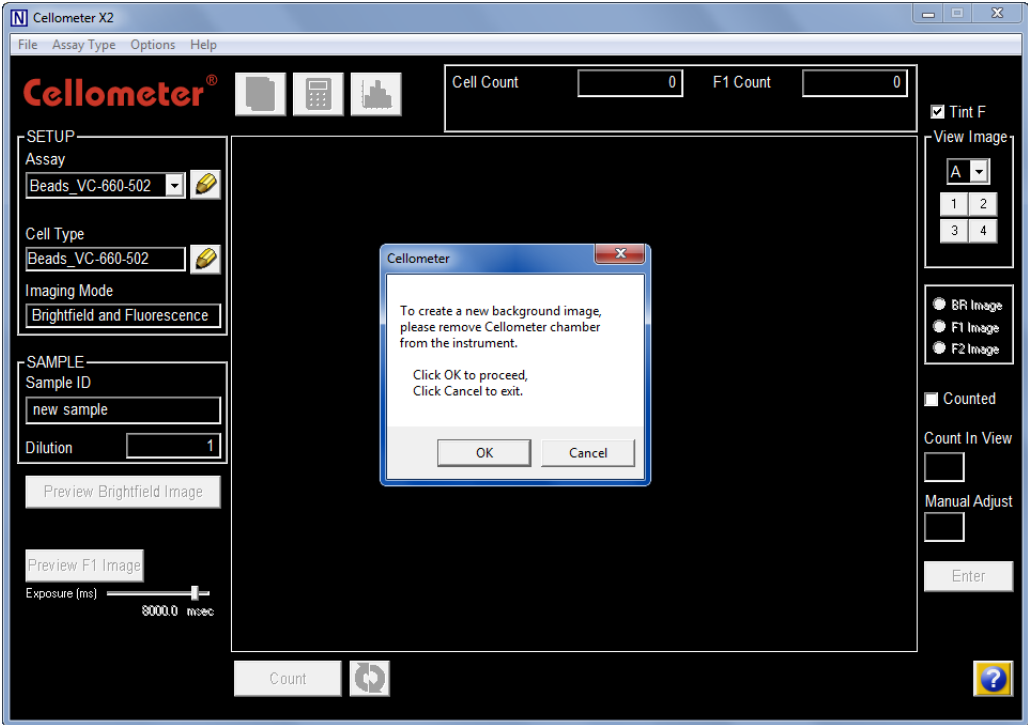
1. When using the Cellometer X2 for the first time, a background image should be taken. This step does not need to be repeated unless the instrument is moved.
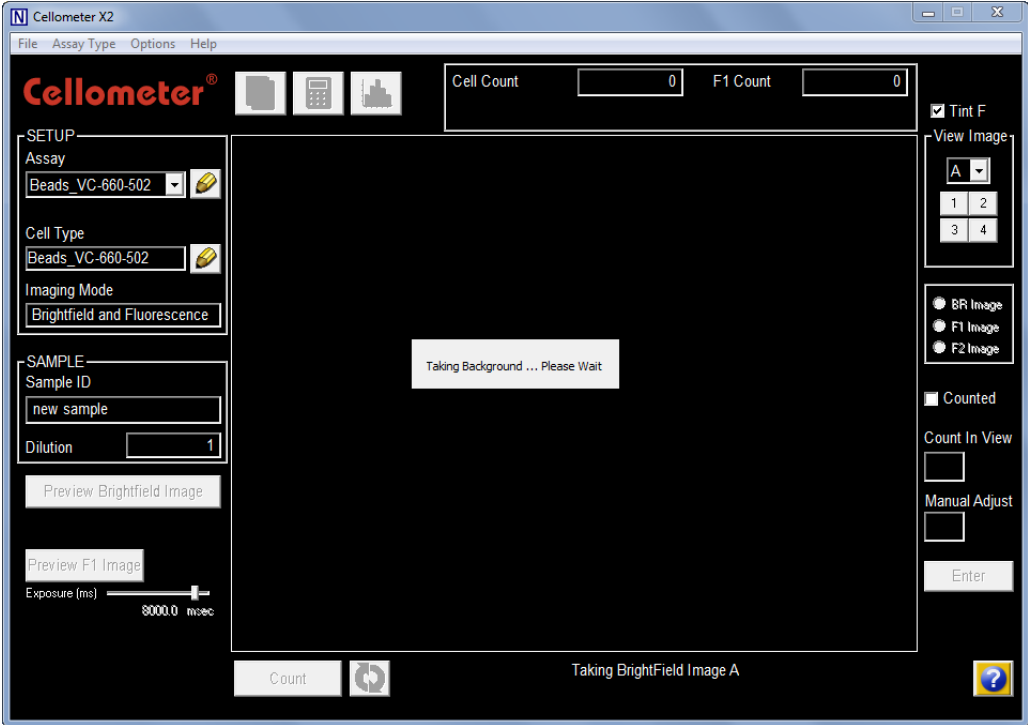2. Click on menu item "Options", then "Take Background Image."
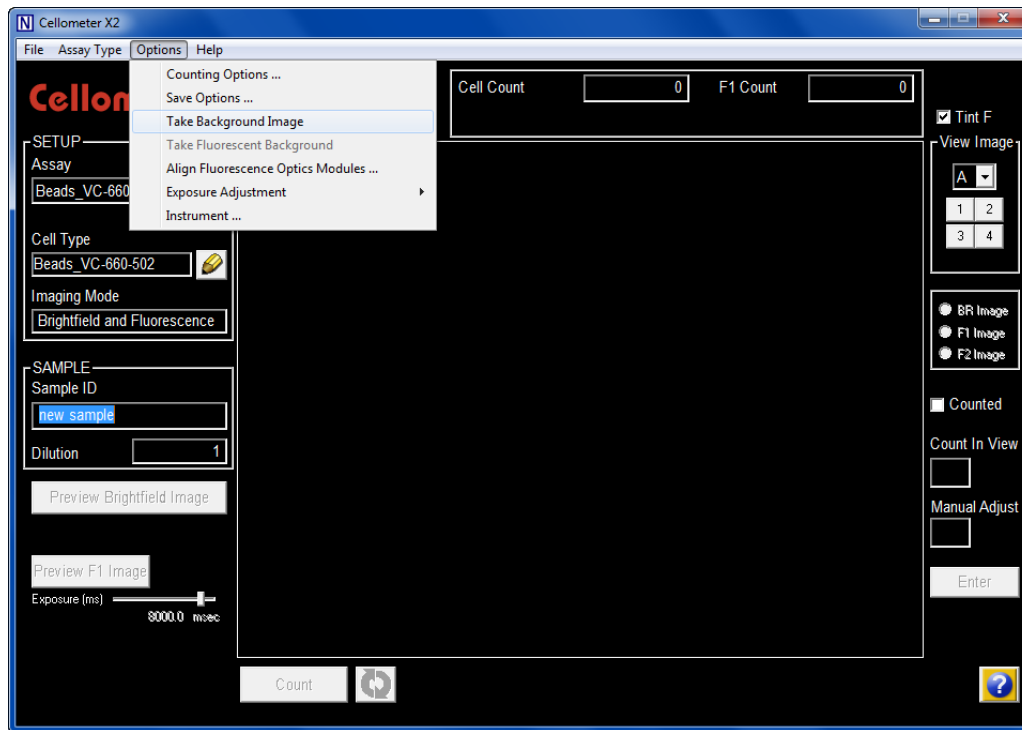
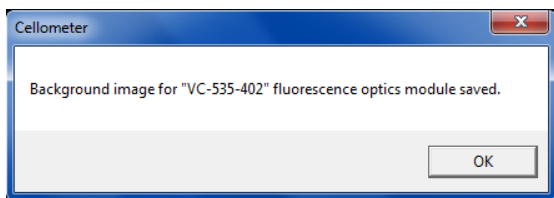3. Confirm that there is no slide in the Cellometer X2 instrument.

4. Click "OK".
5. Cellometer X2 software will now take a new Background Image for Optics Module A.
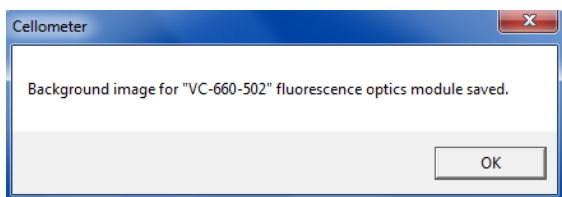
6. When done click "OK".

Background image for "VC-535-402" fluorescence optics module saved.

OK

7. Cellometer X2 software will now take a new Background Image for Optics Module B.

8. When done click "OK".

Background image for "VC-660-502" fluorescence optics module saved.

OK

Preparing Reference Beads

1. Though the Cellometer X2 instrument does not require any routine testing or calibration, reference beads are available.
2. Cellometer Check Reference Bead Mixture, product number CCBM-011-2ML, is recommended for use with the Cellometer X2.
3. Invert the reference bead solution a total of ten times.
4. Vortex the bead solution for ten seconds.
5. Set pipette to 20 µl.
6. Pipette bead solution up and down ten times to break up any bead clumps.

Counting Reference Beads

1. Peel plastic off of both sides of the Cellometer slide. *For PD100 slides, the plastic has already been removed.*
2. Place cell counting chamber on a fresh Kimwipe.
3. Load 20 µl of mixed Reference Bead Solution into the Cellometer Counting Chamber.

4. Insert the loaded chamber into the Cellometer X2 sample slot and gently push the slide to the stop.

5. Select the Beads_VC-660-502 assay.
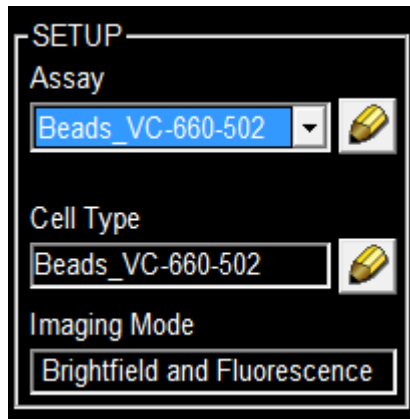
6. Click on "Preview Brightfield Image".
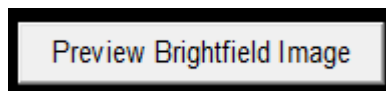
7. Adjust the focus if necessary until the best bead counting focus is achieved. The beads should appear as dark circles with sharp edges.
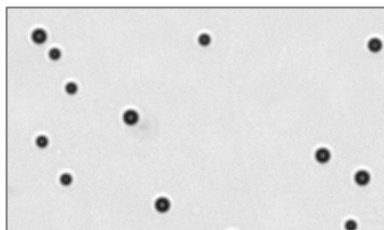
8. Click the **Count** button at the bottom of the screen.

9. When counting is complete the result screen will appear with bead *Count*, *Concentration* and *Mean Diameter*.

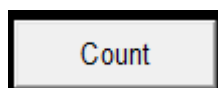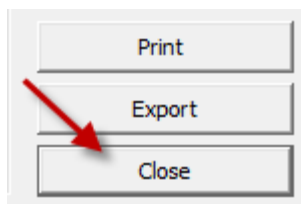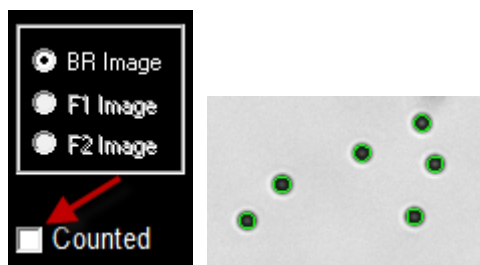10. Click on "Close" to return to main screen.

11. Click on "Counted" button to view which beads have been counted (indicated by green outlines).

Comparing Viability Methods

Comparing Methods: When evaluating different viability methods, it is critically important to use one aliquot from the stock cell culture to perform all testing. The cell sample should be evaluated for concentration on the Cellometer X2 prior to staining.

Propidium Iodide (PI) Viability: For yeast cells, bright field imaging with PI viability using fluorescence imaging may be used to determine the number, concentration, and percentage of live cells.

Preparing Cell Sample for PI Viability Determination

1. A yeast cell concentration of 5.0 x 10^5 to 1.0 x 10^7 cells/mL can be analyzed on Cellometer X2.
2. Invert the tube containing cells ten times and pipette up and down ten times to generate a homogeneous cell sample and reduce cell clumps. Do not shake or vortex the sample! This will generate bubbles.
3. For viability measurement, stain cells by combining 20 μl of cell sample with 20 μl of PI staining solution (CS1-0109-5ML). Gently mix by pipetting up and down ten times.

Contacting Support

If there is a technical issue with your instrument, contact Support by visiting https://www.revvity.com/contact-us/instrument-support-and-service or by sending email to: CellC-support@revvity.com

Trained specialists are available to assist your team with sample analysis and optimization of assay/cell type imaging parameters.

When reporting a technical issue, it is recommended that you record any error messages generated, the sequence of steps leading up to the error, and the Serial Number of the instrument *prior* to contacting Support.

See the following documentation for additional instrument information:

- *8001563 Cellometer X2 K2 User Manual* for instrument operation, care and maintenance details (available as a PDF file on the USB Drive)
- *8001585 Cellometer X2 Focus Guide* for assistance with optimal focus