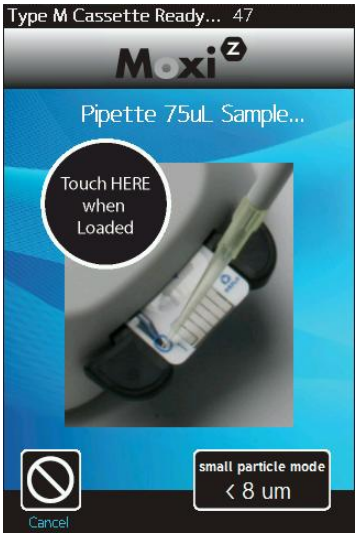
Moxi Z - System Check Bead Protocol

Materials required

- Moxi Z System Check Beads: Cat # MXA005
- Cassettes: Type M (Cat # MCX001) or Type S (Cat # MXC002)

Running a test



1. Ultrasonicate beads for 60 seconds at room temperature (22.5°C)
2. Vortex the beads at the highest speed setting for 30 seconds.
3. Mix beads by slowly inverting the bottle 10x initially (3x between runs)
4. Turn Moxi Z unit on and insert cassette.
5. Pipette 75 – 85 µL of bead solution into the loading port in one fluid motion.
6. Touch the screen to start the test in Normal Mode (touch anywhere **except** the black box that says "small particle mode").

Analyzing results

1. After the test is complete, rescale the x-axis to 3-18 µm (for the Type S cassette) or 4-18 µm (Type M cassette). Note: The rescale option will not be available after the test is saved.
2. To get the concentration and diameter of the beads, toggle to the Curve-Fit Mode.
3. Verify the reported concentration and size to the expected values on the specification sheet (contact tech_support@orflo.com for the detailed Bead Specification Certification). The margin of error should be ±10% for the bead size (at 22.5˚C) and ±10% for the mean concentration value.

Factors that can affect the results

1. Temperature of the bead solution or environment can slightly affect reported bead diameter. The values are inversely correlated (temperatures > 22.5˚C will progressively lower the reported bead volume/diameter). Bead solution and environment should be within 20-25˚C.
2. Microbial contamination of the bead solution can also affect the reported diameter. Avoid contamination by handling the beads aseptically whenever possible (e.g. using a clean pipette to aliquot the solution). Store the beads at 2-8˚C when not in use. Avoid using a water bath to bring the solution up to temperature.
3. Improper mixing can affect the reported concentration. Sonicating does not evenly disperse the beads, it only detaches from the walls of the bottle. Slow inversion of the bottle after sonicating or vortexing is key to ensuring a homogenous suspension.