# LeviCell System Installation Test

## A. Prepare Reagents

1. **Prepare Bead Mixture**
   a. Vortex bead tubes thoroughly immediately before pipetting to avoid sedimentation.
   b. In new 1.5 mL tube, prepare bead mixture as shown in Table 1.
   c. Pellet the beads by centrifuging tube at 300 RCF for 3 min.
   d. Carefully remove supernatant using a P200 set to 45 µL.
2. **Prepare Levitation Buffer**
   a. In new 1.5 mL tube, prepare Levitation Buffer as shown in Table 2 (final conc. = 125 mM).
   b. Vortex mixture well to completely mix the Levitation Buffer.
3. **Resuspend Beads in Levitation Buffer**
   a. Resuspend beads in 240 µL of Levitation Buffer.
   b. Save 10 µL for bead counting on hemocytometer (input beads).

| Reagent | Volume |
|---|---|
| LeviCell Install Bead Mix 1 | 15 µL |
| LeviCell Install Bead Mix 2 | 30 µL |
| **TOTAL** | **45 µL** |

**TABLE 1**

| Reagent | Volume |
|---|---|
| LeviCell Install Buffer | 262.5 µL |
| Levitation Agent | 37.5 µL |
| **TOTAL** | **300 µL** |

**TABLE 2**

## B. Run LeviCell Instrument

1. Follow instructions in User Interface under System Tools, Install Test.
2. Use run parameters as shown in Table 3.
3. Pipette mix sample thoroughly. Add sample to cartridge and start run.
4. Transfer Top and Bottom well outputs to separate 1.5 mL tubes. Measure each output volume with pipette.

## C. Count Beads

1. Count 10 µL aliquots of input beads and Top and Bottom output wells on a hemocytometer.

| | |
|---|---|
| **Levitation Agent Concentration** | 125 mM |
| **Split Settings** | 0 |
| **Brightfield Exposure** | 100-200 µs |
| **Ex474/Em524 Exposure** | 1,000-2,000 µs |
| **Ex560/Em628 Exposure** | 5,000-10,000 µs |
| **Total flow rate (preset)** | 100 µL/min |

**TABLE 3**