

Materials List for:

A Microfluidic-based Hydrodynamic Trap for Single Particles

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Materials

| Name | Company | Catalog Number | Comments |
|--|-----------------------------------|--------------------------------|---|
| 21 gauge blunt needle | Zephyrtronics | ZT-5-021-1-L | For punching port holes in PDMS |
| 3 ml plastic syringe | BD Biosciences | 309585 | For filling valve with oil |
| Si wafers | University Wafer | | 3" P(100) single side polished 380 μm test grade |
| Cover glass | VWR international | 48404-428 | 24 x 40 mm #1.5 |
| DAQ card | National Instruments | PCI 6229 | |
| Fluorescent beads | Spherotech, Inc. | FP-2056-2 | 2.2 μm Nile red |
| Fluorinert | 3M | FC 40 | Fluorinated carrier oil |
| Inverted Microscope | Olympus Corporation | IX-71 | |
| LabVIEW | National Instruments | Version 9.0f3 (32bit) | |
| Stereo Microscope | Leica Microsystems | MZ6 | For aligning PDMS control layer to fluidic layer. |
| Mechanical Convection Oven | VWR international | 1300U | For baking devices to create monolithic PDMS slabs with two layers. |
| Microfluidic tubing and connectors | Upchurch Scientific | | 1/16 x .020 PFA tubing and super flangeless fittings |
| PDMS | GE Healthcare | RTV 615 A&B | |
| Plasma Chamber | Harrick Scientific Products, Inc. | PDC-001 | |
| Pressure Transducer | Proportion Air | DQPV1 | |
| Spin Coater | Specialty Coating Systems | G3P-8 Spin Coat | |
| Photoresist | MicroChem Corp. | SU 8 2050 | |
| Syringe Pump | Harvard Apparatus | PHD 2000 Programmable | |
| Terminal Block | National Instruments | BNC 2110 | For analog output to pressure regulator and read out. |
| UV Collimated Light Source and Exposure System | OAI | Model 30 Enhanced Light Source | |