

Materials List for:

An Ultrahigh-throughput Microfluidic Platform for Single-cell Genome Sequencing

Benjamin Demaree^{1,2}, Daniel Weisgerber¹, Freeman Lan^{1,2}, Adam R. Abate^{1,2,3}

¹Department of Bioengineering and Therapeutic Sciences, California Institute for Quantitative Biosciences, University of California, San Francisco

²UC Berkeley-UCSF Graduate Program in Bioengineering, University of California, San Francisco

³Chan Zuckerberg Biohub

Correspondence to: Adam R. Abate at adam@abatelab.org

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Materials

Name	Company	Catalog Number	Comments
3" silicon wafers, P type, virgin test grade	University Wafers	447	
SU-8 3025 photoresist	Microchem	17030192	
Spin coater	Specialty Coating Systems	G3P-8	
Photomasks	CadArt Servcies	(custom)	See Supplemental Files for mask designs
PGMEA developer	Sigma-Aldrich	484431	
Isopropanol	Sigma-Aldrich	109827	
Sylgard 184 silicone elastomer kit	Krayden	4019862	
Degassing chamber	Bel-Art	42025	
0.75 mm biopsy punch	World Precision Instruments	504529	
Glass microscope slides (75 mm x 50 mm)	Corning	294775X50	
Aquapel (hydrophobic glass treatment)	Pittsburgh Glass Works	47100	
PE-2 polyethylene tubing	Scientific Commodities	B31695-PE/2	
1 mL syringes	BD	309628	
27 gauge needles	BD	305109	
Syringe pump	New Era Pump Systems	NE-501	
Novec HFE-7500 fluorinated oil (HFE)	3M	98-0212-2928-5	
FC-40 fluorinated oil	Sigma-Aldrich	F9755	
PEG-PFPE surfactant	Ran Biotechnologies	008-FluoroSurfactant	
Space heater	Lasko	CD09250	
Agarose, low gelling temperature	Sigma-Aldrich	a9414	
TE (10X)	Rockland	mb-007	
PBS 1X, pH 7.4	E&K Scientific Products	EK-65083	
OptiPrep (density gradient medium)	Sigma-Aldrich	d1556	
1H,1H,2H-Perfluoro-1-Octanol (PFO)	Sigma-Aldrich	370533	
Span 80 (sorbitane monooleate)	Sigma-Aldrich	s6760	
Hexane	Sigma-Aldrich	139386	
Tween 20 (polysorbate 20)	Sigma-Aldrich	p2287	
Lysozyme Type IV	MP Biomedicals	195303	

Mutanolysin	Sigma-Aldrich	M9901	
Zymolyase (yeast lytic enzyme)	Zymo Research	e1004	
Lysostaphin	Sigma-Aldrich	L7386	
Sodium chloride	Sigma-Aldrich	S9888	
EDTA	Sigma-Aldrich	E6758	
Tris-HCl, pH 7.5, 1M	Invitrogen	15567-027	
Dithiothreitol (DTT)	Teknova	d9750	
Lithium dodecyl sulfate	Sigma-Aldrich	L9781	
Proteinase K	New England Biosciences	P8107S	
Ethanol, 200 Proof (100%)	Koptec	V1001	
SYBR Green I (nucleic acid stain)	Invitrogen	S7563	
PEG 6k	Sigma-Aldrich	81260	
Triton X-100 (octylphenol ethoxylate)	Sigma-Aldrich	t8787	
Nextera DNA Library Prep Kit	Illumina	FC-121-1030	
Phusion Hot Start Flex Master Mix (High-Fidelity Hot Start Master Mix)	New England Biosciences	m05365	
Platinum Multiplex PCR Master Mix (Taq Master Mix)	Applied Biosystems	4464263	
Warmstart 2.0 Bst Polymerase (isothermal polymerase)	New England Biosciences	m0538m	
NT buffer from Nextera XT kit (neutralization buffer)	Illumina	FC-131-1024	
Cold cathode fluorescent inverter	(custom)	(custom)	
DC power supply	Mastech	HY1503D	
Zerostat 3 anti-static gun	Milty	5036694022153	
3D-printed centrifuge syringe holder	(custom)	(custom)	See Supplemental Files for 3D print file
Zymo DNA Clean & Concentrator-5	Zymo Research	D4003	