

Materials List for

Mechano-Node-Pore Sensing: A Rapid, Label-Free Platform for Multi-Parameter Single-Cell Viscoelastic Measurements

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Materials

Name	Company	Catalog Number	Comments
Acetone	J.T. Baker	5356-05	Purity (GC) ≥ 99.5% (https://us.vwr.com/store/product/6057739/acetone-99-5-vlsi-j-t-baker)
Aluminum Foil	n/a	n/a	
Analog Low-Pass Filter	ThorLabs	EF504	≤240 kHz Passband, Coaxial BNC Feedthrough (https://www.thorlabs.com/thorproduct.cfm?partnumber=EF504#ad-image-0)
Biopsy Punch	Integra Miltex	33-31AA-P/25	1mm, Disposable, with Plunger (https://mms.mckesson.com/product/573313/Miltex-33-31AA-P25)
Blade	n/a	n/a	
BNC Cable	Pomona Electronics	2249-C-12	https://www.digikey.com/en/products/detail/pomona-electronics/2249-C-12/603323?utm_adgroup=Coaxial%20Cables%20%28RF%29&utm_source=google&utm_medium=cpc&utm_campaign=Shopping_Product_Cable%20Assemblies_NEW&utm_term=&utm_content=Coaxial%20Cables%20%28RF%29&gclid=Cj0KCQjwIK-WBhDjARIsAO2sErQqnVJpj5OXVOBuTI8ZUf1Zeln7zvzGnxmCWdePrG6SdEJMF3X6ubUaAsw-EALw_wcB
Cleanroom Polyester Swab	Thermo Fisher Scientific	18383	https://www.fishersci.com/shop/products/texwipe-cleanip-alpha-polyester-series-swabs-6/18383
Current Preamplifier	DL Instruments	1211	https://www.britest.com/index.php?main_page=product_info&products_id=1419

Custom PCB (w/ components)	n/a	n/a	see Supplemental files 4 and 5
DAQ Terminal Block	National Instruments	BNC-2120	https://www.ni.com/en-in/support/model.bnc-2120.html
DAQ to BNC-2110 cable	National Instruments	SHC68-68-EPM	https://www.ni.com/en-in/support/model.shc68-68-epm.html
Data Acquisition Board (DAQ)	National Instruments	PCI-6251	https://www.ni.com/docs/en-US/bundle/pci-6251-feature/page/overview.html
Dessicator	Thermo Fisher Scientific	5311-0250	https://www.thermofisher.com/order/catalog/product/5311-0250
Female BNC To Banana Plug Adapter	Pomona Electronics	72909	https://www.digikey.com/en/products/detail/pomona-electronics/72909/1196318
Fetal Bovine Serum (FBS)	VWR	89510-186	https://us.vwr.com/store/product/18706419/avantor-seradigm-select-grade-usda-approved-origin-fetal-bovine-serum-fbs
Glass Cutter	Chemglass	CG-1179-21	https://chemglass.com/plate-glass-cutters-diamond-tips
Gold Etchant TFA	Transene	NC0977944	https://www.fishersci.com/shop/products/NC0977944/NC0977944
Hot Plate	Thermo Fisher Scientific	SP131825	
Isopropyl Alcohol	Spectrum Chemical	I1056-4LTPL	Purity (GC) ≥99.5% (https://www.spectrumchemical.com/isopropyl-alcohol-99-percent-fcc-i1056)
Metal Hardware Enclosure	Hammond Manufacturing	EJ12126	https://www.digikey.com/en/products/detail/hammond-manufacturing/EJ12126/2423415
Methanol	Sigma-Aldrich	34860	Purity (GC) ≥99.8% (https://www.sigmaaldrich.com/IN/en/substance/methanol320467561)
MF-321 Developer	Kayaku Advanced Materials	n/a	https://kayakuam.com/products/mf-321/
MICROPOSIT S1813 Positive Photoresist	DuPont	n/a	https://kayakuam.com/products/microposit-s1800-g2-series-photoresists/
Phosphate Buffered Saline (PBS)	Thermo Fisher Scientific	10010049	https://www.thermofisher.com/order/catalog/product/10010049?SID=srch-hj-10010049
Photomask	Fineline Imaging	n/a	Photomask are custom ordered from our CAD designs (https://www.fineline-imaging.com/)
Plain Glass Microscope Slide	Fisher Scientific	12-553-5B	Material: Soda Lime, L75 x W50 mm, Thickness: 0.90–1.10 mm
Plasma Cleaner	Harrick Plasma	PDC-001	https://harrickplasma.com/plasma-cleaners/expanded-plasma-cleaner/
Plastic Petri Dish	Thermo Fisher Scientific	FB0875712	100 mm (https://www.fishersci.com/shop/products/fisherbrand-petri-dishes-clear-lid-raised-ridge-100-x-15mm/FB0875712)
Pressure Controller	Fluigent	MFCS-EZ	https://www.fluigent.com/research/instruments/pressure-flow-controllers/mfcs-series/
Pressure Controller Software	Fluigent	MAESFLO	
Programming & Computation Software	MATLAB	R2021b	for data acquisition and analysis (https://www.mathworks.com/products/matlab.html)
PTFE Tubing	Cole Parmer	06417-31	0.032" ID x 0.056" (https://www.coleparmer.com/i/masterflex-

			transfer-tubing-microbore-ptfe-0-032-id-x-0-056-od-100-ft-roll/0641731)
Scepter 2.0 Handheld Automatic Cell Counter	Millipore Sigma	PHCC20060	https://www.sigmaaldrich.com/IN/en/product/mm/phcc20060
Silicon Wafer	Wafer World	2885	76.2 mm, Single Side Polished (https://www.waferworld.com/product/2885)
Spin Coater	n/a	n/a	
SU-8 3025 Negative Photoresist	Kayaku Advanced Materials	n/a	https://kayakuam.com/products/su-8-2000/
SU8 Developer	Kayaku Advanced Materials	n/a	https://kayakuam.com/products/su-8-developer/
Sygard 184 Polydimethylsiloxane	Dow Chemical	4019862	https://www.ellsworth.com/products/by-market/consumer-products/encapsulants/silicone/dow-sylgard-184-silicone-encapsulant-clear-0.5-kg-kit/
Tape	Scotch	810-341296	https://www.staples.com/Scotch-Magic-Tape-810-3-4-x-36-yds-1-Core/product_130567?cid=PS:GS:SBD:PLA:OS&gclid=Cj0KCQjwIK-WBhDjARIsAO2sErRwzrrgjU0NjFkDkne1xmVT7ekS3tdzvAgiMDwPoxocgHVTQZi7vJgaAvQZEALw_wcB
Titanium, Platinum, Gold	n/a	n/a	
Triple Output Power Supply	Keysight	E36311A	https://www.newark.com/keysight-technologies/e36311a/dc-power-supply-3o-p-6v-5a-prog/dp/15AC9653
UV Mask Aligner	Karl Suss America	MJB3 Mask Aligner	