

On-Chip Octanol-Assisted Liposome Assembly for Bioengineering

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Citation

 Chen, C., Ganar, K.A., Deshpande, S. On-Chip Octanol-Assisted Liposome Assembly for Bioengineering. *J. Vis. Exp.* (193), e65032, doi:10.3791/65032 (2023).

Date Published

March 17, 2023

DOI

10.3791/65032

URL

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Materials

Name	Company	Catalog Number	Comments
1-Octanol	Sigma-Aldrich	No. 297887	
1.5 mL tubes	Fisher scientific	10451043	Eppendorf 3810X Polypropylene microcentrifuge tubes
ATP	Sigma-Aldrich	No. A2383	
Biopsy punch	Darwin microfluidics	PT-T983-05	0.5 mm and 3 mm diameter
Citrate-base	Sigma-Aldrich	No. 71405	
Dextran	Sigma-Aldrich	No. 31388	Mr~6,000
Direct-write optical lithography machine	Durham Magneto Optics Ltd	MicroWriter ML3 Baby	setup and software
DOPC lipid	Avanti	SKU:850375C	
F68	Sigma-Aldrich	No. 24040032	
Glass cover slip	Corning	#1, 24 x 40 mm	
Glycerol	Sigma-Aldrich	No. G2025	
Hydrochloric acid	Thermo Scientific Acros	No. 124630010	
Liss Rhod PE lipid	Avanti	SKU:810150C	
Parafilm	Sigma-Aldrich	No. P7793	
Photoresist	Micro resist technology GmbH	EpoCore 10	
Photoresist developer	micro resist technology GmbH	mr-Dev 600	
Plasma cleaner	Harrick plasma	PDC-32G	
Polydimethylsiloxane	Dow	Sylgard 184	PDMS and curing agent
Poly-L-lysine	Sigma-Aldrich	No. P7890	
Poly-L-lysine-FITC Labeled	Sigma-Aldrich	No. P3543	
Polyvinyl alcohol	Sigma-Aldrich	no. P8136	molecular weight 30,000–70,000, 87%–90% hydrolyzed
Pressure controller	Elveflow	OBK1 Mk3+	Flow controller
Scotch tape	Magic Tape Invisible Matt Tape		
Silicon wafer	Silicon Materials	0620R16002	
Spin coater	Laurell Technologies Corporation	Model WS-650MZ-23NPP	

Stainless Steel 90° Bent PDMS Couplers	Darwin microfluidics	PN-BEN-23G	
Tris-base	Sigma-Aldrich	No. 252859	
Tygon tubing	Darwin microfluidics	1/16" OD x 0.02" ID	
UV laser			365 nm wavelength