

Materials List for:

# Single-cell Microfluidic Analysis of *Bacillus subtilis*

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URL: <https://www.jove.com/video/56901>

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## Materials

Name	Company	Catalog Number	Comments
Sylgard 184 Silicone Elastomer Kit	Dow Corning	(240)4019862	This is referred to as PDMS in the protocol. There are 2 components that are mixed at a 10:1 ratio
0.75-mm biopsy punch	World Precision Instruments	504529	
22 x 40 mm No. 1.5 cover glass	VWR	48393 172	
Plasma Etch PE-50	Plasma Etch Inc.	PE-50	Instrument used to bond PDMS to glass using oxygen plasma treatment
Tygon flexible tubing ID 0.02", OD 0.06"	Saint-Gobain PPL Corp.	AAD04103	For the main part of the tubing, e.g. attached to the needles
Silicone Tubing, 0.04" ID, 0.085" OD	HelixMark Standard Silicone Tubing	60-795-05	For pinch valves and Y-junction connection
Bovine Serum Albumin	Sigma-Aldrich	A7906-100G	Used as passivation agent
ART Gel Pipet Tips (P200)	Molecular BioProducts	2155	For loading the device with medium and cells
Acrodisc 32-mm syringe filter with 5-µm Supor membrane	Pall Life Sciences	4560	For filtering cultures before device loading
21-ga blunt needles, 1"	McMaster-Carr	75165A681	
Y connector with 200-series barbs, 1/16" ID tubing, polypropylene	Nordson Medical	Y210-6005	The company is AKA Value Plastics
Eclipse Ti-E inverted microscope	Nikon		This unit has been discontinued by the manufacturer and is replaced by the Ti 2 E.
LB Lennox	Sigma-Aldrich	L3022	
Microfuge 18	Beckman Coulter	367160	
<i>Bacillus subtilis</i> strain NCIB3610	Bacillus Genetic Stock Center	3A1	wild-type parental strain modified for use in the experiments shown in this protocol
Gravity convection oven	VWR	414005-106	for curing PDMS and baking assembled devices
Scotch-Weld Epoxy Kit	3M	2216 B/A	may be used to bond a silicon wafer to an aluminum backing plate
Scotch Magic tape, 3/4" width	3M		to clean dust from PDMS devices and to place over features to increase visibility (denoted "office tape" or "adhesive tape" in protocol)
Stereomicroscope	Nikon	SMZ800N	listed here as an example; nearly any stereomicroscope will do
Isopropyl alcohol	Sigma-Aldrich	W292907	To clean cover glass

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Syring pump, 6 channel	New Era Pump Systems Inc.	NE-1600	
Kimwipes	Kimberly-Clark	34120	a brand of dust-free wipes