

Materials List for

Microfluidic Acoustophoresis for Flowthrough Separation of Gram-Negative Bacteria using Aptamer Affinity Beads

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Citation

Choi, H.J., Kim, B.W., Lee, S., Jeong, O.C. Microfluidic Acoustophoresis for Flowthrough Separation of Gram-Negative Bacteria using Aptamer Affinity Beads. *J. Vis. Exp.* (188), e63300, doi:10.3791/63300 (2022).

Date Published

October 17, 2022

DOI

10.3791/63300

URL

jove.com/video/63300

Materials

Name	Company	Catalog Number	Comments
1 µm polystyrene microbeads	Bang Laboratories	PS04001	Cell size beads
10 µm Streptavidin-coated microbeads	Bang Laboratories	CP01007	Aptamer affinity beads
4-inch Silicon Wafer/SU-8 mold	4science	29-03573-01	Components of chip
Aptamer	Integrated DNA Technologies	GN3-6'	RNA for bacteria conjugation
Borosilicate glass	Schott	BOROFLOAT 33	Components of chip
Centrifuge	Daihan	CF-10	Wasing particles
Cyanoacrylate glue	3M	AD100	Attach PZT to microchip
Escherichia coli DH5α	KCTC	KCTC2571	Target bacteria
Functional generator	GW Instek	AFG-2225	Generate frequency
High-speed camera	Photron	FASTCAM Mini	Observation of separation
Hot plate	As one	HI-1000	Heating plate for curing of liquid PDMS
KOVAX-SYRINGE 10 mL Syringe	Koreavaccine	22G-10ML	Fill the microfluidic acoustophoresis channel with bubble-free demineralized water.
Liquid polydimethylsiloxane, PDMS	Dow Corning Inc.	Sylgard 184	Components of chip
LB Broth Miller	BD Difco	244620	Cell culture (Luria-Bertani medium)
Microscope	Olympus Corp.	IX-81	Observation of separation
PBS buffer	Capricorn scientific	PBS-1A	Wasing bacteria
PEEK Tubes	Saint-Gobain Ppl Corp.	AAD04103	Inject or collect particles
Piezoelectric transducer	Fuji Ceramics	C-213	Generate specific wave in channel
Power amplifier	Amplifier Research	75A250A	Amplify frequency
Pressure controller/µflucon	AMED	AMED-µflucon	Control of air pressure/flow controller
Tris-HCl buffer	invitrogen	15567027	Wasing particles
Tube rotator	SeouLin Bioscience	SLRM-3	Modifying aptamer and bead