

Materials List for:

On-chip Isotachophoresis for Separation of Ions and Purification of Nucleic Acids

Giancarlo Garcia-Schwarz¹, Anita Rogacs¹, Supreet S. Bahga¹, Juan G. Santiago¹

¹Mechanical Engineering, Stanford University

Correspondence to: Juan G. Santiago at juan.santiago@stanford.edu

URL: <https://www.jove.com/video/3890>

DOI: [doi:10.3791/3890](https://doi.org/10.3791/3890)

Materials

Name	Company	Catalog Number	Comments
Distilled water	GIBCO, by Life Technologies	10977	RNase/DNase free
Clorox Ultra	Clorox	02489CT	
sodium hydroxide (NaOH)	Mallinckrodt Baker Inc.	7708	
hydrochloric acid (HCl)	EMD Millipore	HX0603-4	
Trizma base (tris)	Sigma-Aldrich	T6066	
polyvinylpyrrolidone (PVP)	Polysciences, Inc.	06067	MW 1,000,000
HEPES	Sigma-Aldrich	H-4034	
Alexa Fluor 488 carboxylic acid	Invitrogen	A20000	
tricine	Sigma-Aldrich	T-9784	
bis-tris	Sigma-Aldrich	B4429	
EDTA	GIBCO, by Life Technologies	AM9260G	
Triton-X 100	Sigma-Aldrich	X100	
lysozyme	Sigma-Aldrich	L6876	
SYBR Green II	Invitrogen	S7564	
ethanolamine	Sigma-Aldrich	411000	
Rhodamine 6G	Acros Organics	CAS 989-38-8	
L-Amino Acids	Sigma-Aldrich	LAA21	
<i>Power SYBR Green RNA-to-C_T 1-Step Kit</i>	Applied Biosystems	4389986	
PCR primers	Integrated DNA Technologies		
Borosilicate microfluidic chip	Caliper Life Sciences	NS12A	Supplied with or without plastic caddy
Vacuum pump	Gast Manufacturing, Inc.	DOA-P104-AA	
Sourcemeter	Keithley	2410	Constant current and constant voltage operation modes
Inverted epifluorescent microscope	Olympus Corporation	IX70	Use mercury lamp (Olympus) or LED (Thorlabs) for illumination
Filter cube	Omega Engineering, Inc.	XF115-2	Excitation/emission: blue/green
Safe-lock microcentrifuge tubes	Eppendorf	022363204	1.5mL capacity
Centrifuge	Eppendorf	5417C	

Table 3. Specific reagents and equipment.