

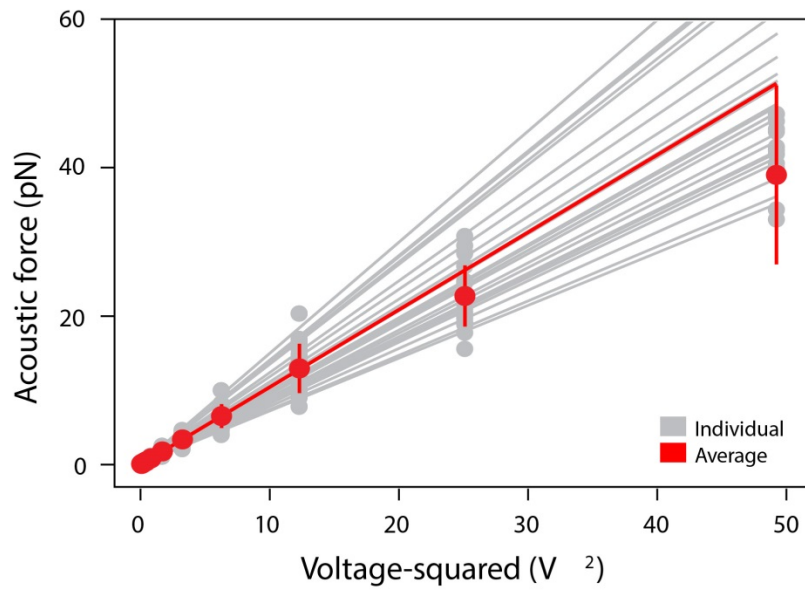
Supplementary Information for:

Quantitative acoustophoresis

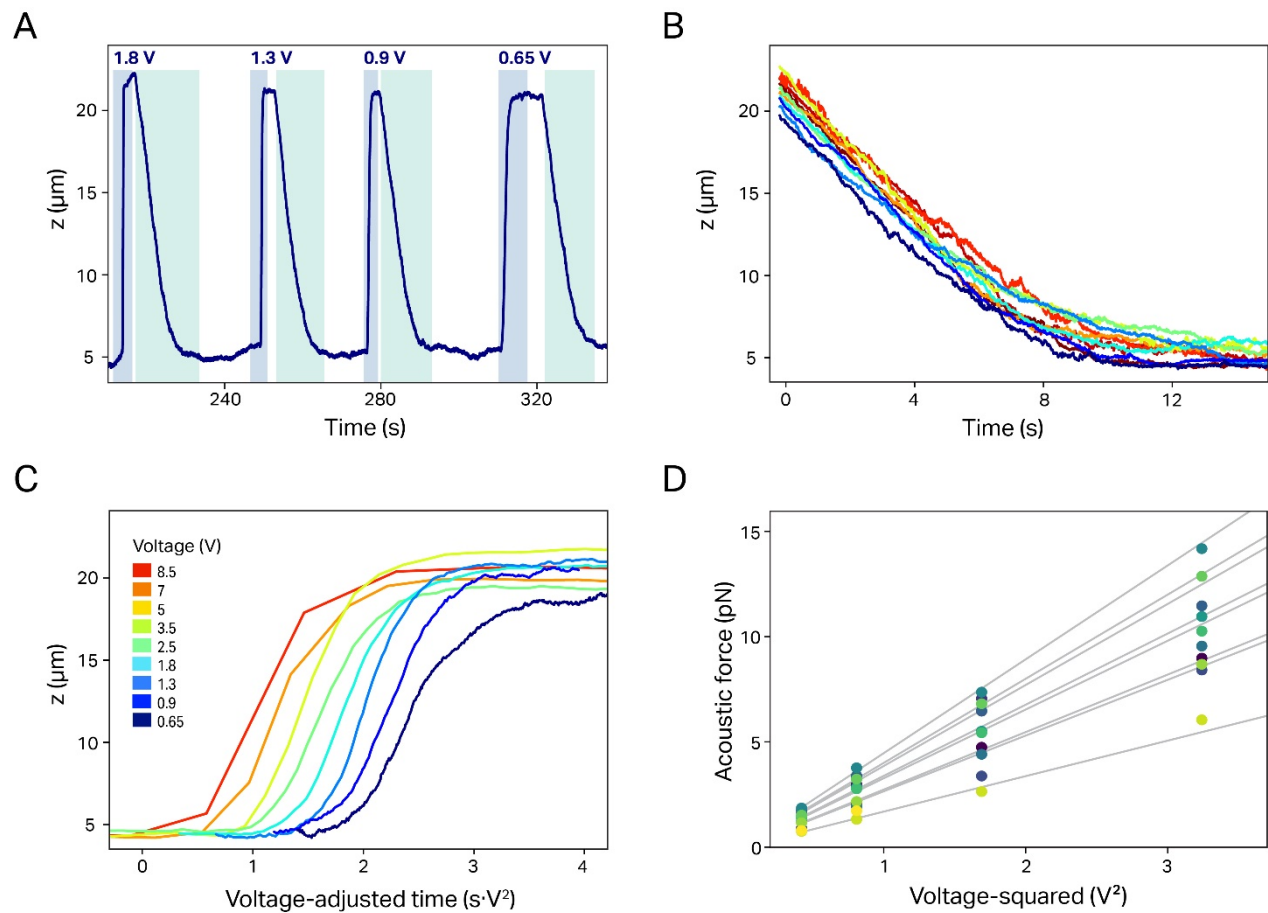
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Voltage, V	Standard deviation		STD ratio
	Average Calibration	Heatmap Calibration	
2.5	1.71	0.488	3.504
1.8	0.725	0.24	3.021
1.3	0.42	0.125	3.360
0.9	0.18	0.071	2.535
0.65	0.103	0.033	3.121
0.45	0.045	0.017	2.647
0.3	0.021	0.01	2.100

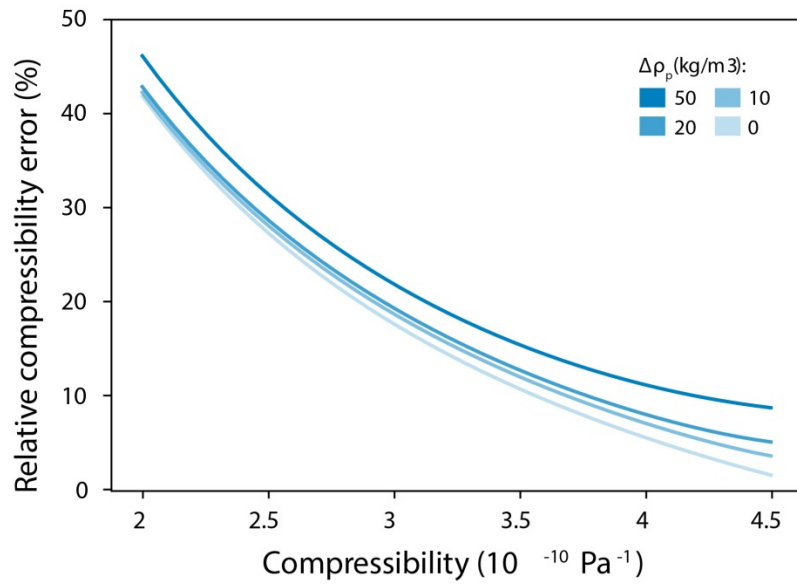
Supplementary Table 1: Comparison of standard deviations of the 5.31 μm PS particles response depending on the calibration method used: average (Fig. 3A) and heatmap (Fig. 3C)



Supplementary Fig. 1: Dependence of acoustic force on applied squared voltage for full voltage range (same data as in Fig. 3A). Note that for the two highest voltages, there is a notable decrease from the predicted linear dependence which we attribute to insufficient time resolution to deduce the proper particle velocity in the ‘shooting-up’ trajectories (Fig. 2D).



Supplementary Fig. 2: Experimental raw data for human neutrophil cells (PMN). (A) Exemplary shooting-up and sinking-down traces for an exemplary PMN cell. (B) Aligned sedimentation trajectories for the same cell. (C) Voltage-adjusted shooting-up trajectories showcasing consistent response of the same cell at different voltages. (D) Linear dependency of acoustic force vs voltage-square visualized for exemplary of PMN cells.



Supplementary Fig. 3: Dependence of $\delta\beta_p$ on β_p shown for four different particle densities errors. This demonstrates that the precision of the particle density has little influence on the overall precision of the compressibility measurement, at least in the biorelevant data range considered here.