Table 1 Parameters used in numerical simulations (Material properties are at $T = 25°\mathrm{C}$).

Water		
Density [1]	ρ_0	997 kg m^{-3}
Speed of sound [1]	c_0	1497 m s^{-1}
Shear viscosity [1]	η	0.890 mPa s
Bulk viscosity [2]	η'	2.47 mPa s
Compressibility [2]	κ_0	448 TPa^{-1}
Viscous boundary layer (@ 180 MHz)[a]	δ_v	39.7322 nm
Thermal conductivity [2]	k_{th}	0.603 W m^{-1} K^{-1}
Specific heat capacity [2]	C_p	4183 J kg^{-1} K^{-1}
Thermal expansion coefficient [2]	α_{th}	2.97×10^{-4} K^{-1}
Lithium Niobate (128° YX-cut $LiNbO_3$)		
Speed of sound	c_{LN}	3994 m s^{-1}
Density	ρ_{LN}	4700 kg m^{-}3
Poly-dimethylsiloxane (PDMS; 10:1)		
Density[b]	ρ_{PDMS}	1030 kg m^{-3}
Speed of sound [3]	c_{PDMS}	1076.5 m s^{-1}
SAW actuation parameters		
SAW wavelength	λ_{SAW}	21 μm
Excitation frequency[e]	f	190.19 MHz
Voltage potential	V_0	1 V

[a] Calculated as $\delta_v = \sqrt{\frac{2\eta}{\rho_0 \omega}}$.

[b] As provided by the supplier product data sheet (Sylgard® 184 Silicone Elastomer).

[c] As provided by the supplier product data sheet (Sigma-Aldrich®).

[d] Calculated as $\kappa_p = \frac{3(1-\sigma_p)}{1+\sigma_p} \frac{1}{(\rho_p c_p^2)}$

[e] Calculated as $f = \frac{c_{LN}}{\lambda_{SAW}}$

Note: The PDMS used experimentally consists of a 10:1 mixing ratio (i.e. 10 parts base and 1 part curing agent). The material properties used correspond to this mixing ratio.

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