Article:
Peyman, SA orcid.org/0000-0002-1600-5100, Mclaughlan, JR orcid.org/0000-0001-5795-4372, Abou-Saleh, RH orcid.org/0000-0002-8471-2659 et al. (6 more authors) (2016) On-Chip preparation of nanoscale contrast agents towards high-resolution ultrasound imaging. Lab on a Chip, 16 (4). pp. 679-687. ISSN 1473-0197

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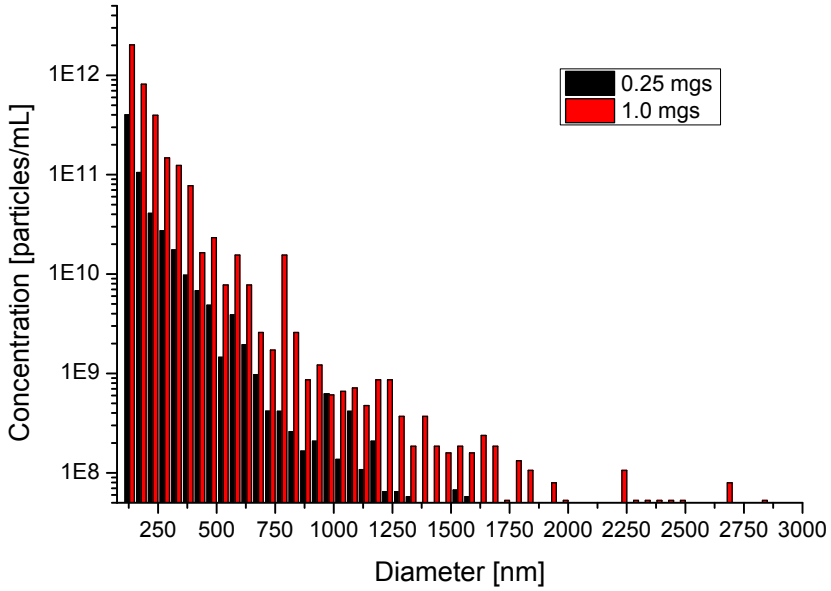
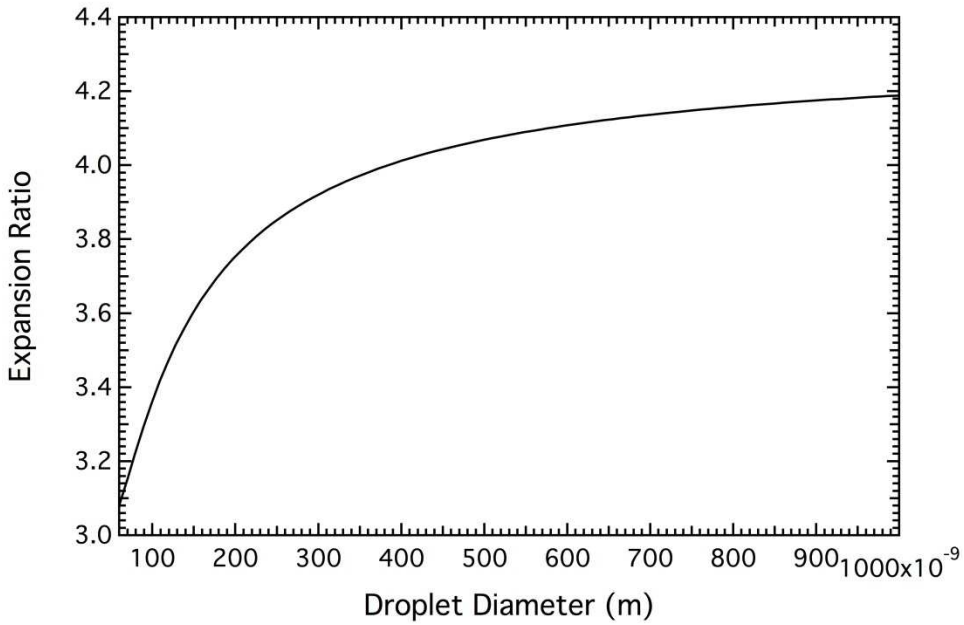
Electronic Supplementary Material (ESI) for Lab on a Chip.

Supporting information:

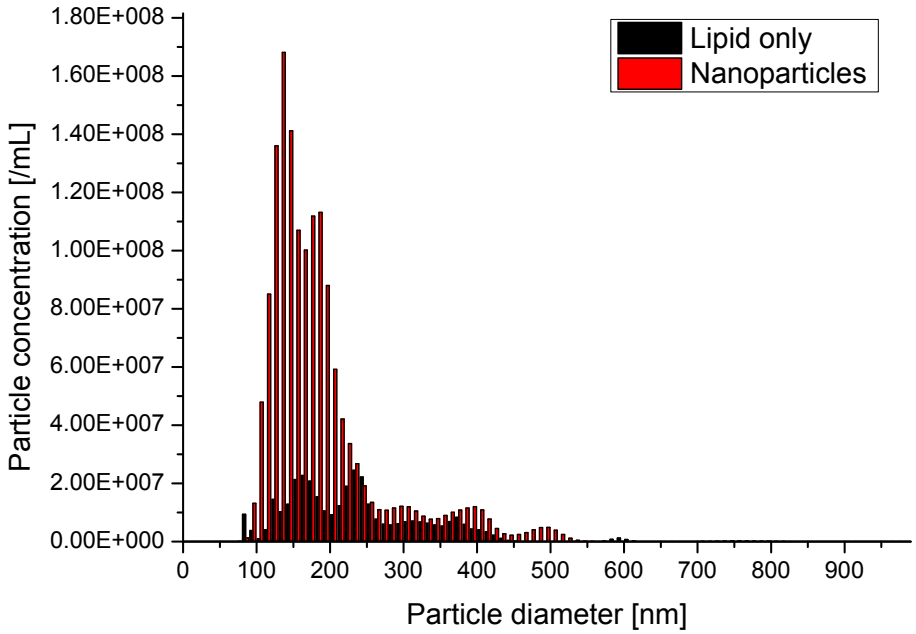
Supporting information S3. The effect of lipid concentration on the production of PFC nanoparticles. The two concentrations, 0.25 mg and 1 mg are above and below those described in the manuscript (0.5x and 1.5x, respectively). The higher concentration lipid shows a slightly higher concentration, but also appears to stabilise larger bubbles also. However neither shows a clear difference to particle concentration or size range.



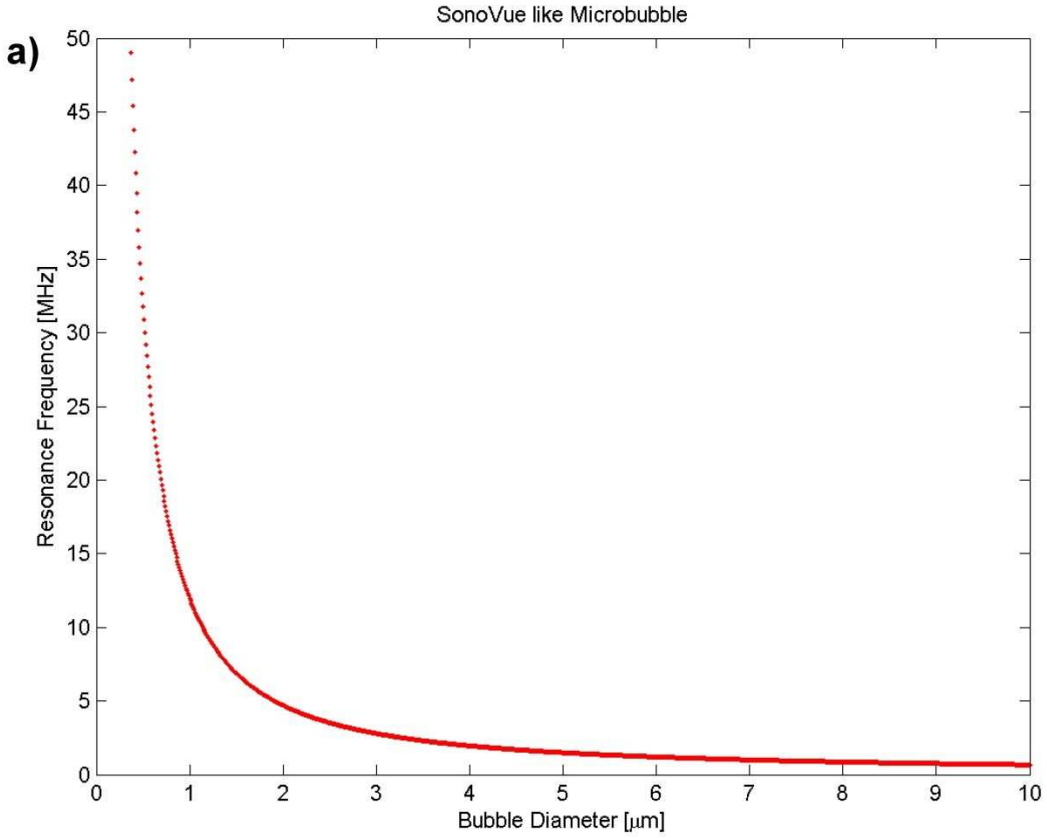
Supporting information S4. Expansion ratio model used to calculate the predicted increase in nanoparticle diameter on the increase of temperature in figure 4a from reference [42]



Supporting information S5. Lipid solution control showing lipid vesicle size range and concentration compared to nanobubbles/ droplets formed by the microfluidic device.



Supporting information S6. Plot to show the change in resonant frequency as a function of bubble size. As bubbles get smaller, the resonant frequency increases. Bubble size < 1 µm show a resonant frequency increase > 50 MHz.



Supporting information S7. Time vs intensity curves for microbubble only and nanoparticle only samples. The longevity of the nanoparticle sample compared to the microbubble only sample can clearly be seen, with contrast intensity at > 131 lasting 40 seconds post injection.