

Electronic Supplementary Information

Doxorubicin loaded dual pH- and thermo-sensitive magnetic nanosystem for combined magnetic hyperthermia and targeted controlled drug delivery applications

A. Hervault,^{abc} M. Lim,^d C. Boyer,^e A. E. Dunn,^d D. Mott,^c S. Maenosono^{*c} and N. T. K. Thanh^{*ab}

^a Department of Physics & Astronomy, University College London, Gower Street, London, WC1E 6BT, UK.
E-mail: ntk.thanh@ucl.ac.uk

^b UCL Healthcare Biomagnetic and Nanomaterials Laboratories, 21 Albemarle Street, London W1S 4BS, UK

^c School of Materials Science, Japan Advanced Institute of Science and Technology, 1-1 Asahidai, Nomi, Ishikawa 923-1292, Japan. E-mail: shinya@jaist.ac.jp

^d ARC Centre of Excellence for Functional Nanomaterials, School of Chemical Engineering, The University of New South Wales, Sydney, NSW2052, Australia

^e Australian Centre for Nanomedicine and Centre for Advanced Macromolecular Design, School of Chemical Engineering, The University of New South Wales, Sydney, NSW2052, Australia

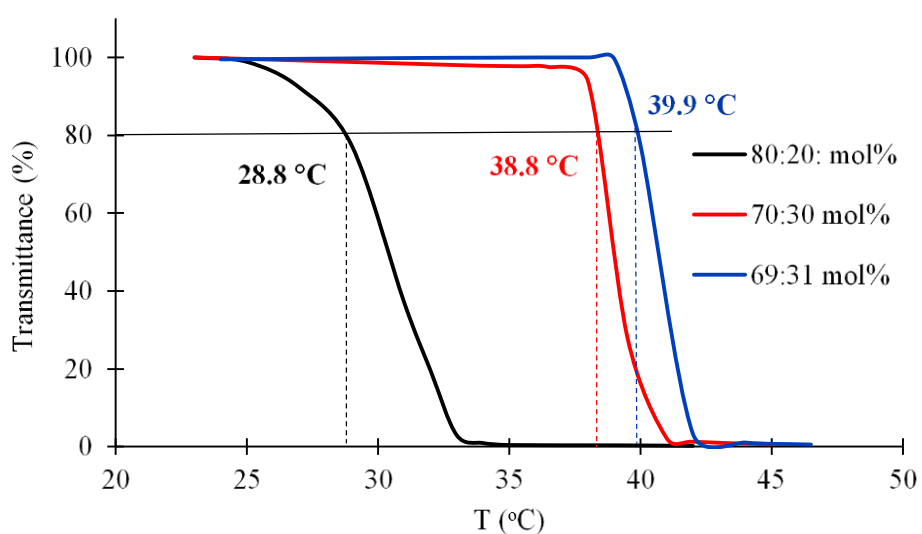


Fig. S1 LCST of P(DEGMA-co-PEGMA-b-[TMSPPMA-co-VBA]) as measured by UV-Vis spectroscopy at 540 nm depending on the DEGMA:PEGMA molar ratio.

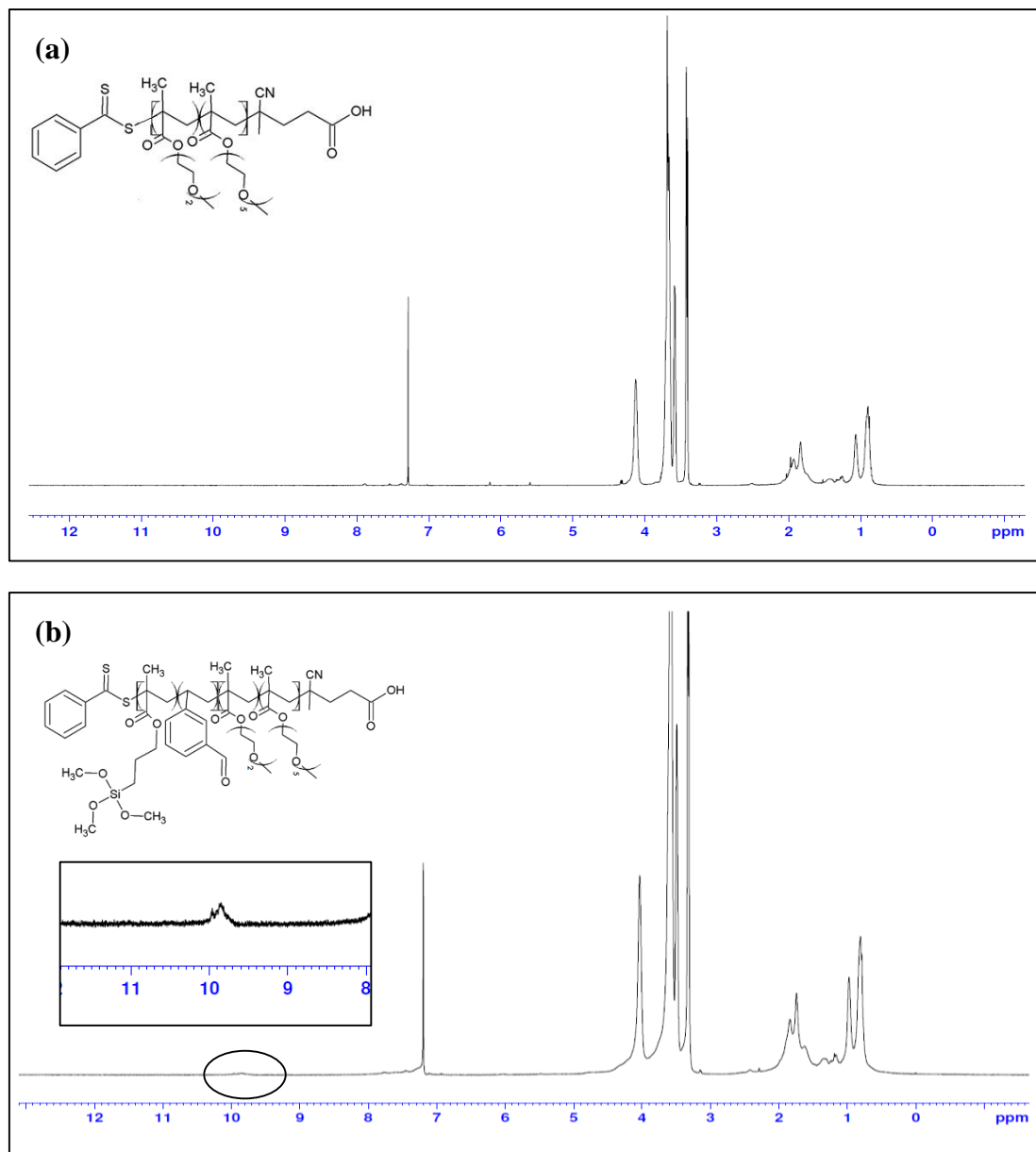


Fig. S2 ¹H-NMR spectra of (a) P(DEGMA-co-PEGMA) and (b) the polymer chain extended P(DEGMA-co-PEGMA-b-[TMSPMA-co-VBA]).

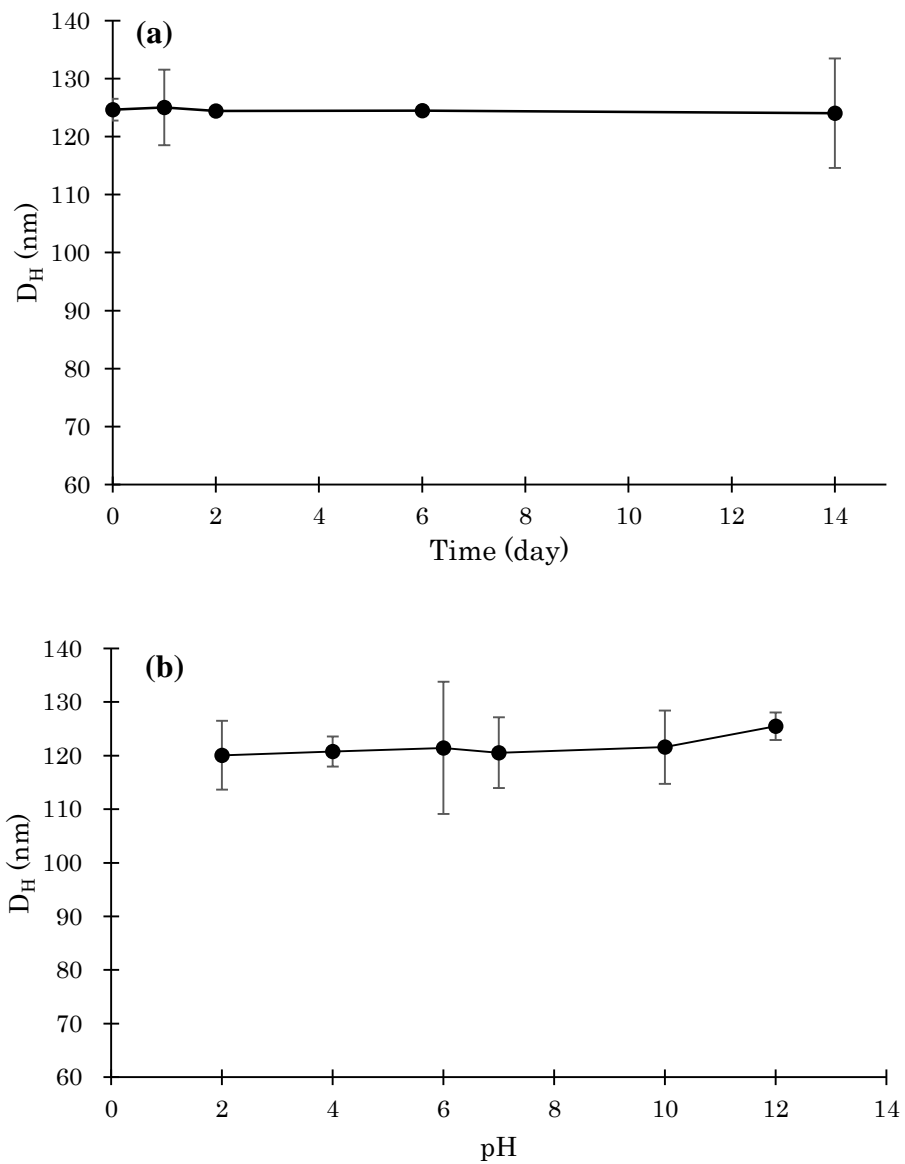


Fig. S3 Hydrodynamic diameter of MNCs (a) as a function of time and (b) as a function of pH.