Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Cationic and Reactive Primary Amine-Stabilised Nanoparticles via RAFT Aqueous Dispersion Polymerisation

M. Williams, N. J. W. Penfold, and S. P. Armes[a]

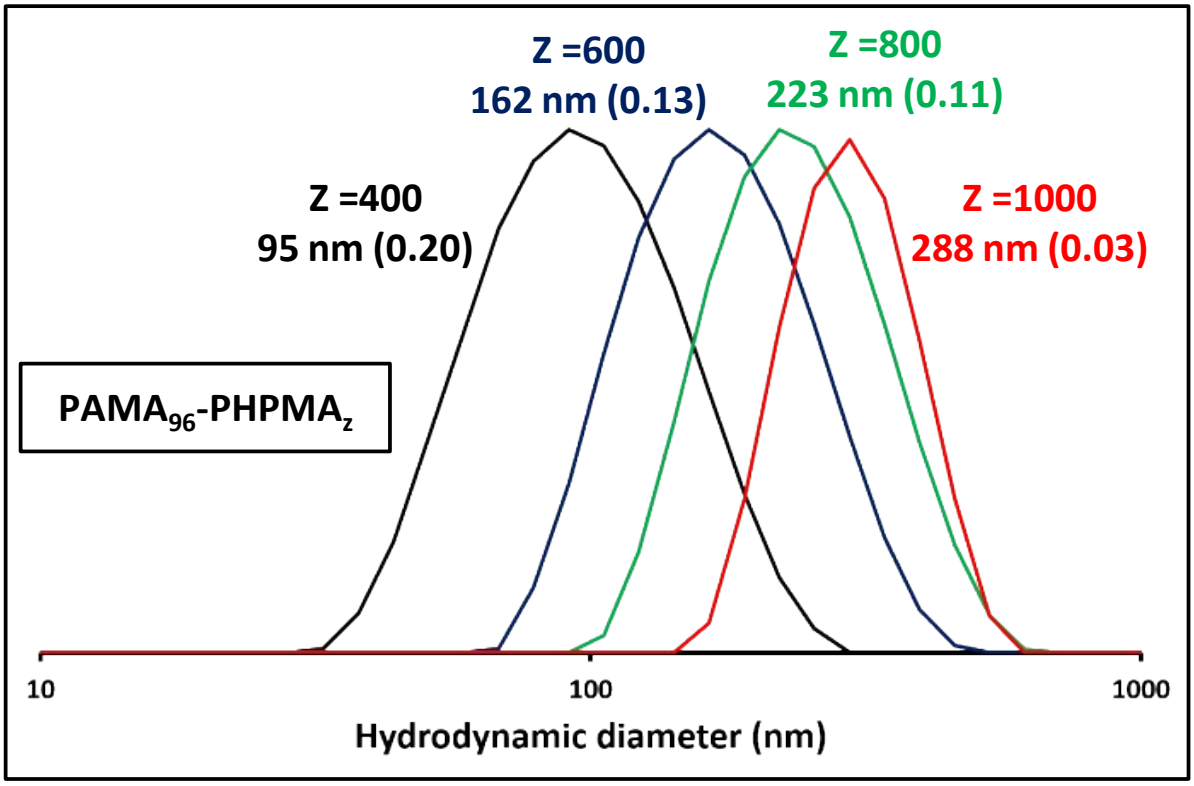

Figure S1: Hydrodynamic diameter, as measured by DLS, of a series of $PAMA_{96}$-$PHPMA_z$ (z = 400 – 1000) diblock copolymer particles synthesised at 10 % w/w by RAFT aqueous dispersion polymerisation.

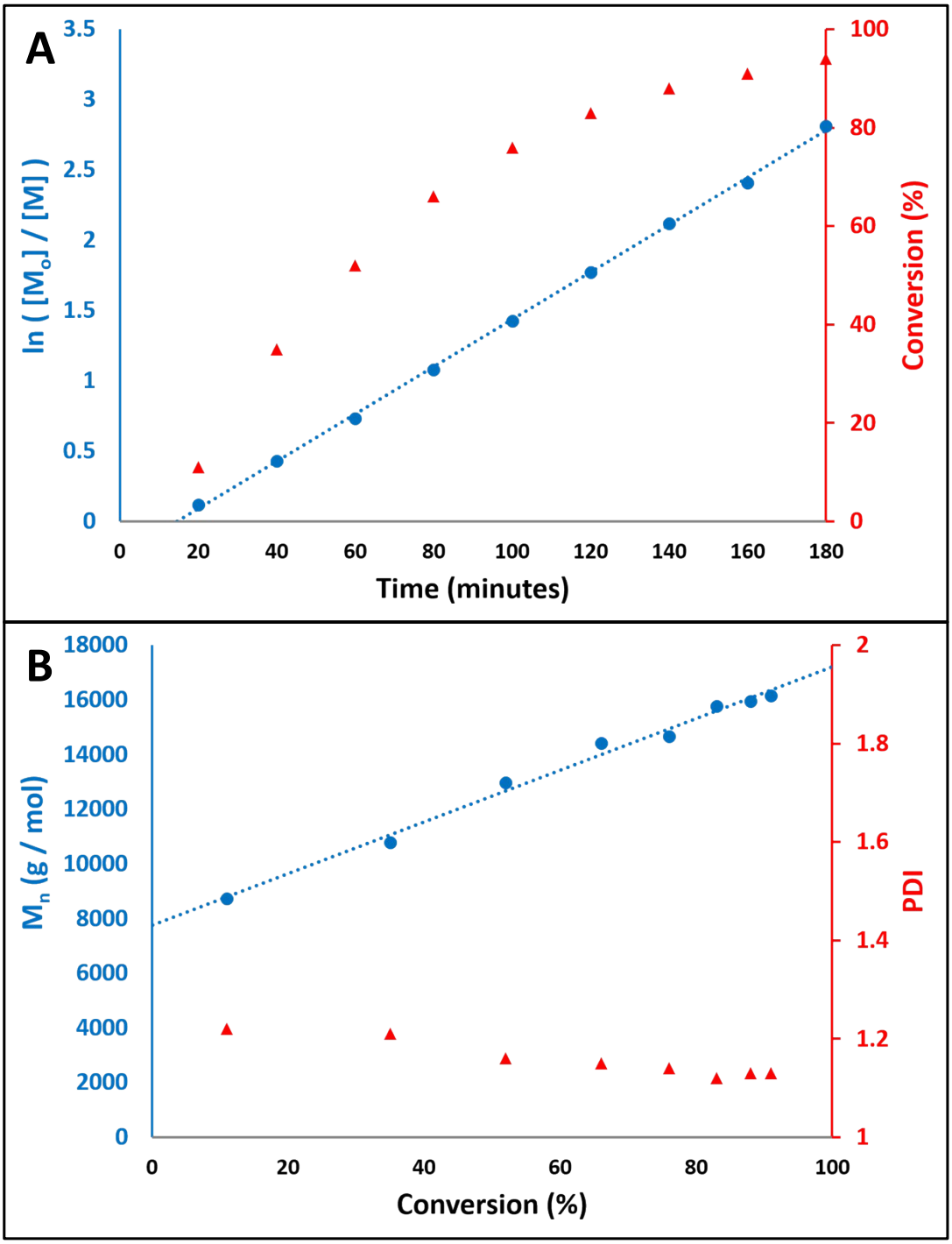

Figure S2: **(A)** Conversion vs time data derived from 1H NMR spectroscopy studies and **(B)** evolution of the number-average molecular weight and polydispersity (Mw/Mn) with conversion of a RAFT solution polymerisation of glycerol monomethacrylate (GMA) at 60 °C in water using MPETTC CTA and AIBA initiator at 30 % w/w with a CTA/initiator molar ratio = 5.

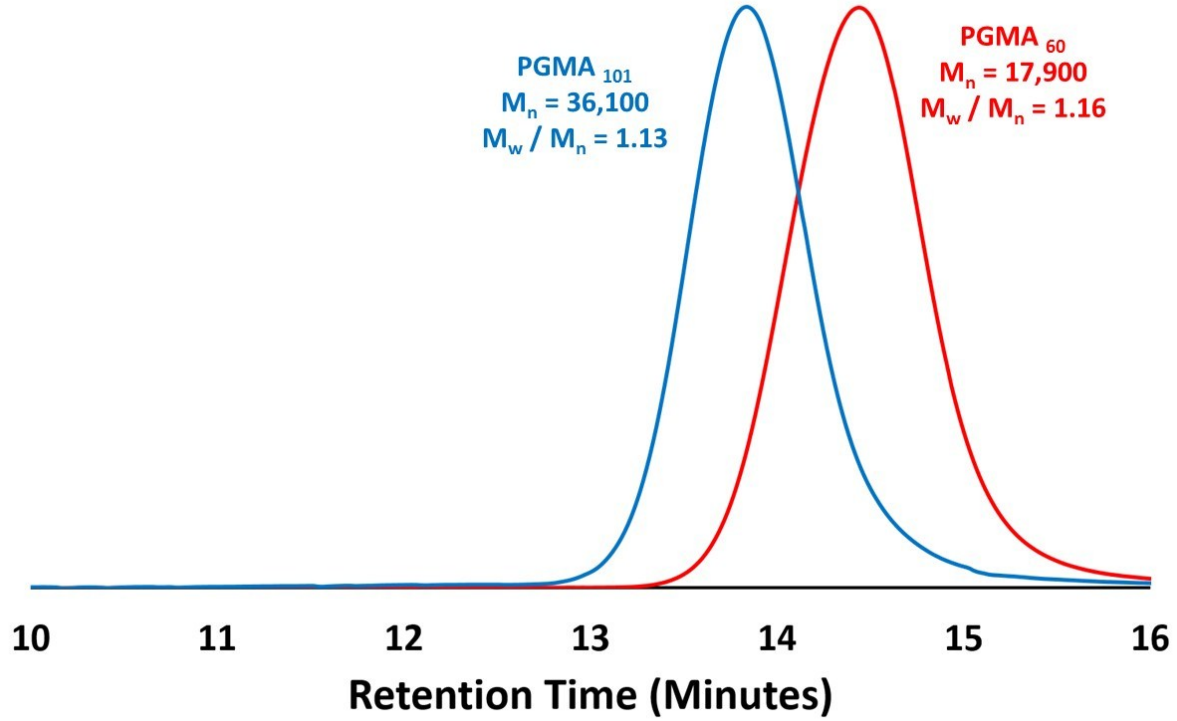

Figure S3: DMF gel permeation chromatograms obtained for a series of poly (glycerol monomethacrylate) (PGMA) macro-CTAs.

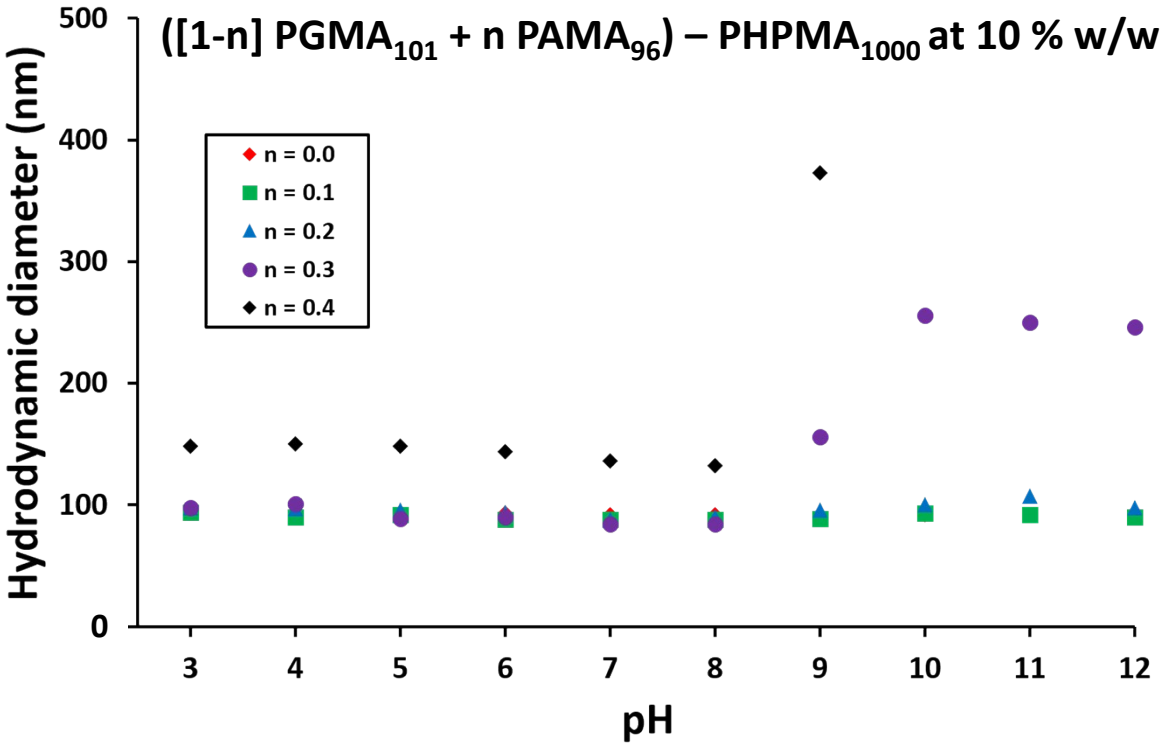

Figure S4: Hydrodynamic diameter vs pH for a series of diblock copolymer particles with the formula ([1-n] $PGMA_{101}$ + n $PAMA_{96}$) – $PHPMA_{1000}$. When n = 0.3, slight aggregation at pH 9 is seen. When n = 0.4, appreciable flocculation is detected.

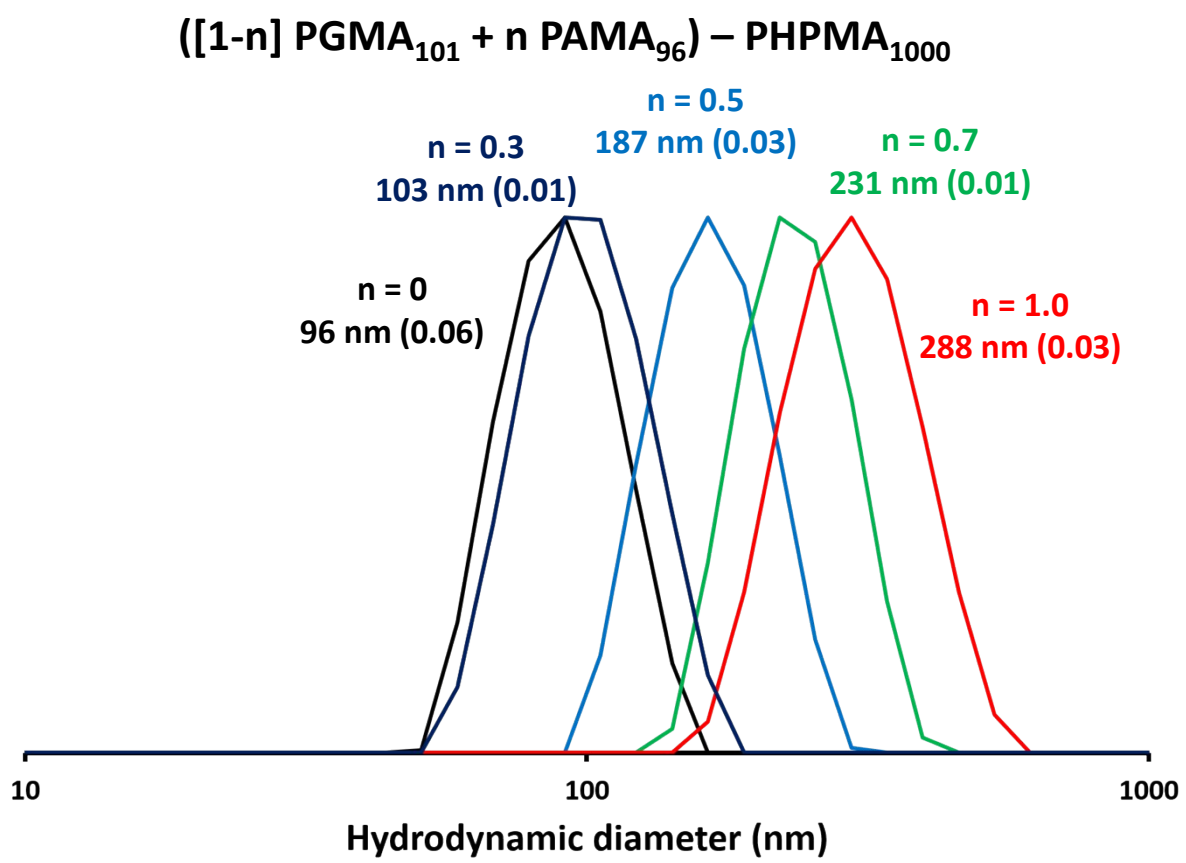

Figure S5: Hydrodynamic diameter, as measured by DLS, of a series ([1-n] $PGMA_{101}$ + n $PAMA_{96}$) – $PHPMA_{1000}$ diblock copolymer particles synthesised at 10 % w/w by RAFT aqueous dispersion polymerisation.

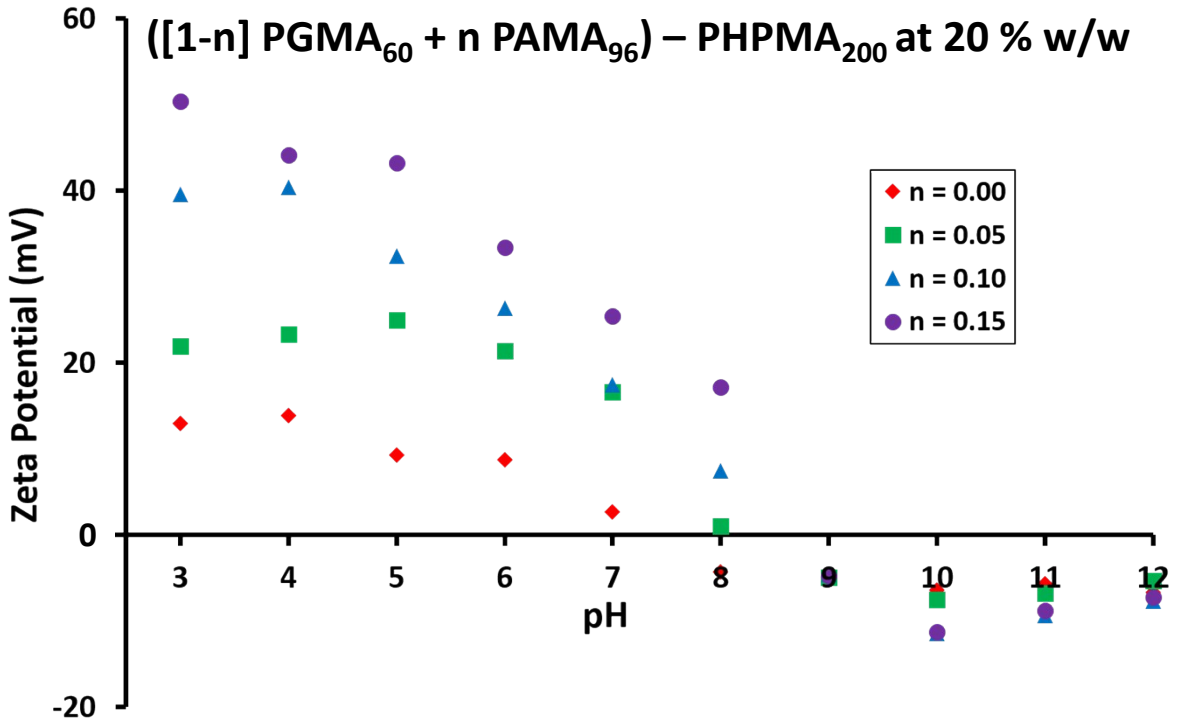

Figure S6: Zeta potential vs pH curves for diblock copolymer particles synthesised at 20 % w/w with the formula ([1-n] $PGMA_{60}$ + n $PAMA_{96}$) – PHPMA200 where n = 0 – 0.20.

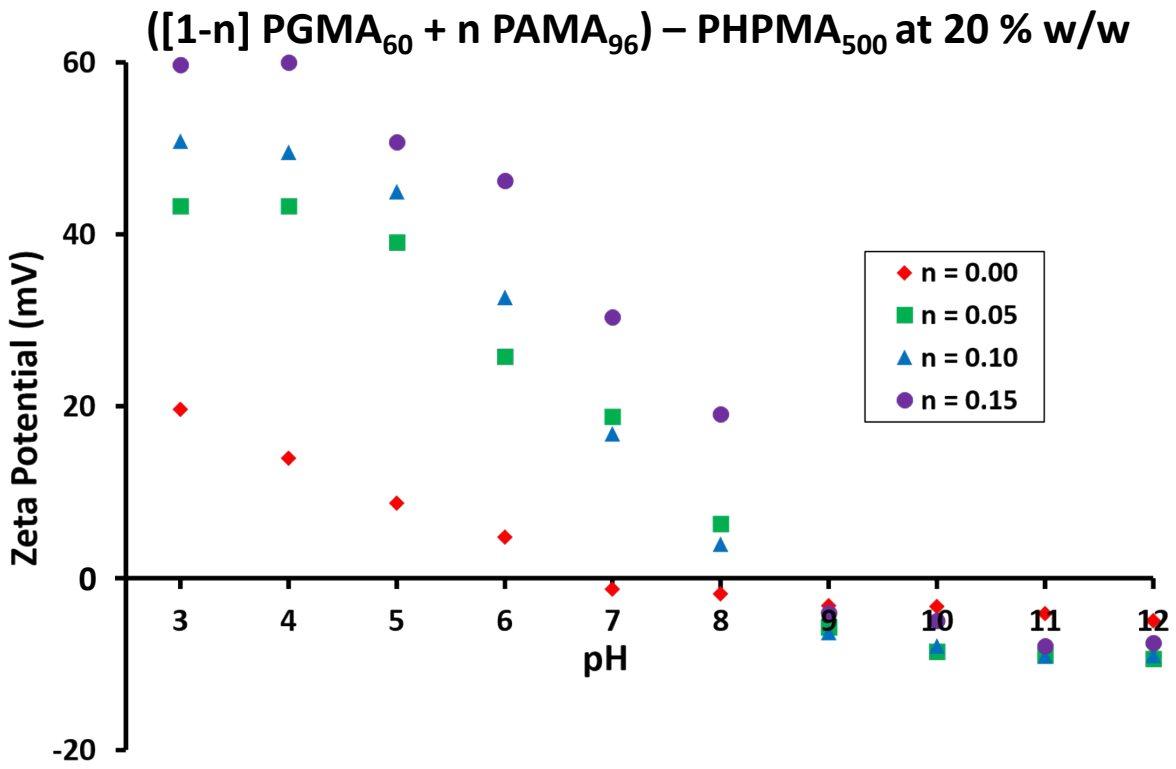

Figure S7: Zeta potential vs pH curves for diblock copolymer particles synthesised at 20 % w/w with the formula ([1-n] $PGMA_{60}$ + n $PAMA_{96}$) – PHPMA500 where n = 0 – 0.20.