Supporting Information for:

$H_2O_2$ enables convenient removal of RAFT end-groups from block copolymer nano-objects prepared via polymerization-induced self-assembly in water

C. P. Jesson et al.
Figure S1. (a) Integrated $^1$H NMR spectra and (b) DMF GPC chromatograms for $G_{52}$-TTC, $G_{52}$-DB, $G_{61}$-DB and $G_{104}$-DB macro-CTAs.
Figure S2. (a) Integrated $^1$H NMR spectra and (b) DMF GPC chromatograms for $G_{104}$-$H_X$ ($X = 300, 600, 900$) diblock copolymer spheres.
Figure S3. (a) Integrated $^1$H NMR spectra and (b) DMF GPC chromatograms for $G_{52}$-$H_{135}$-TTC and $G_{52}$-$H_{135}$-DB worms, $G_{61}$-$B_{100}$ spheres and $G_{52}$-$H_{400}$ vesicles
**Figure S4.** DMF GPC traces recorded for G_{52}-H_{135}-DB before (black) and after (red) H_{2}O_{2} treatment. Conditions: H_{2}O_{2}/dithiobenzoate molar ratio = 20 for 3 h at 70 °C.
Figure S5. Gel storage modulus ($G'$, closed symbols) and loss modulus ($G''$, open symbols) vs. temperature plots obtained for a $G_{52}$-$H_{135}$-DB worm gel before (black) and after (red) treatment with $H_2O_2$. Conditions: $[H_2O_2]/[DB] = 20$ for 3 h at 70 °C. Note that a weaker worm gel is obtained after $H_2O_2$ treatment ($G' = 71$ Pa, vs. $G' = 96$ Pa originally) and the critical gelation temperature (CGT) is raised from 19 °C to 21 °C.
Figure S6. DMF GPC chromatograms (UV detector) of $G_{104}$-$H_X$-DB spheres before end-group removal and after $H_2O_2$ treatment for 24 h (see arrows) using a $H_2O_2$/dithiobenzoate molar ratio of 5.0 at 70 °C. In each case at least 98 % of the original end-groups are removed.
Figure S7. GPC chromatograms recorded for the G$_{52}$-DB macro-CTA before (blue traces) and after (red traces) end-group removal via H$_2$O$_2$ treatment using a H$_2$O$_2$ / dithiobenzoate molar ratio of 5.0 at 70 °C: (a) minimal change in the molecular weight distribution as judged using a refractive index detector and (b) 97 % disappearance in the 309 nm signal associated with the RAFT end-group using the UV detector.
**Figure S8.** DMF GPC chromatograms (refractive index detector) of G$_{104}$-H$_X$-DB spheres before end-group removal and after H$_2$O$_2$ treatment for 7 h using a H$_2$O$_2$/dithiobenzoate molar ratio of 5.0 at 70 °C. Note that there is minimal change in the molecular weight distributions under these optimized end-group removal conditions.