Electronic Supplementary Information for

Synthesis of thiolated and acrylated nanoparticles using thiol-ene click chemistry: towards novel mucoadhesive materials for drug delivery

by

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Table 1S. Reaction conditions and resulting products

Solvent	Concentration of the solution,%	Reaction mixture, mL	Ratio, mL/mL	Product
DMF	50	2mL PEMP + 2mL PETA	1:1	gel
DMF	50	4mL PEMP + 2mL PETA	2:1	gel
DMF	50	2mL PEMP + 4mL PETA	1:2	gel
DMF	50	1.5mL PEMP + 0.5mL PETA	3:1	gel
DMF	50	0.5mL PEMP + 1.5mL PETA	1:3	gel
DMF	50	4mL PEMP + 1mL PETA	4:1	sol
DMF	50	1mL PEMP + 4mL PETA	1:4	sol
DMF	50	5mL PEMP + 1mL PETA	5:1	sol
DMF	50	1mL PEMP + 5mL PETA	1:5	sol
DMF	40	2mL PEMP + 2mL PETA	1:1	gel
DMF	40	4mL PEMP + 2mL PETA	2:1	gel
DMF	40	2mL PEMP + 4mL PETA	1:2	gel
DMF	40	3mL PEMP + 1mL PETA	3:1	gel
DMF	40	1mL PEMP + 3mL PETA	1:3	gel
DMF	40	4mL PEMP + 1mL PETA	4:1	sol
DMF	40	1mL PEMP + 4mL PETA	1:4	sol
DMF	40	5mL PEMP + 1mL PETA	5:1	sol
DMF	40	1mL PEMP + 5mL PETA	1:5	sol
DMF	30	2mL PEMP + 2mL PETA	1:1	gel

DMF	30	4mL PEMP + 2mL PETA	2:1	gel
DMF	30	2mL PEMP + 4mL PETA	1:2	gel
DMF	30	3mL PEMP + 1mL PETA	3:1	sol
DMF	30	1mL PEMP + 3mL PETA	1:3	gel
DMF	30	4mL PEMP + 1mL PETA	4:1	sol
DMF	30	1mL PEMP + 4mL PETA	1:4	sol
DMF	30	5mL PEMP + 1mL PETA	5:1	sol
DMF	30	1mL PEMP + 5mL PETA	1:5	sol
DMF	20	2mL PEMP + 2mL PETA	1:1	gel
DMF	20	4mL PEMP + 2mL PETA	2:1	gel
DMF	20	2mL PEMP + 4mL PETA	1:2	gel
DMF	20	3mL PEMP + 1mL PETA	3:1	sol
DMF	20	1mL PEMP + 3mL PETA	1:3	gel
DMF	10	4mL PEMP + 2mL PETA	2:1	sol
DMF	10	2mL PEMP + 4mL PETA	1:2	gel
DMF	10	2mL PEMP + 2mL PETA	1:1	gel
DMF	10	3mL PEMP + 1mL PETA	3:1	sol
DMF	10	1mL PEMP + 3mL PETA	1:3	sol
DMF	10	4mL PEMP + 1mL PETA	4:1	sol
DMF	10	1mL PEMP + 4mL PETA	1:4	sol
DMF	5	4mL PEMP + 2mL PETA	2:1	sol
DMF	5	2mL PEMP + 4mL PETA	1:2	sol
DMF	5	0.5mL PEMP + 0.5mL PETA	1:1	sol
DMF	5	4mL PEMP + 1mL PETA	4:1	sol
DMF	5	1mL PEMP + 4mL PETA	1:4	sol
DMF	5	5mL PEMP + 1mL PETA	5:1	sol
DMF	5	1mL PEMP + 5mL PETA	1:5	sol
DMF	1	2mL PEMP + 2mL PETA	1:1	sol
DMF	1	4mL PEMP + 2mL PETA	2:1	sol
DMF	1	2mL PEMP + 4mL PETA	1:2	sol
DMF	1	3mL PEMP + 1mL PETA	3:1	sol
DMF	1	1mL PEMP + 3mL PETA	1:3	sol
DMF	1	5mL PEMP + 1mL PETA	5:1	sol
DMF	1	1mL PEMP + 5mL PETA	1:5	sol

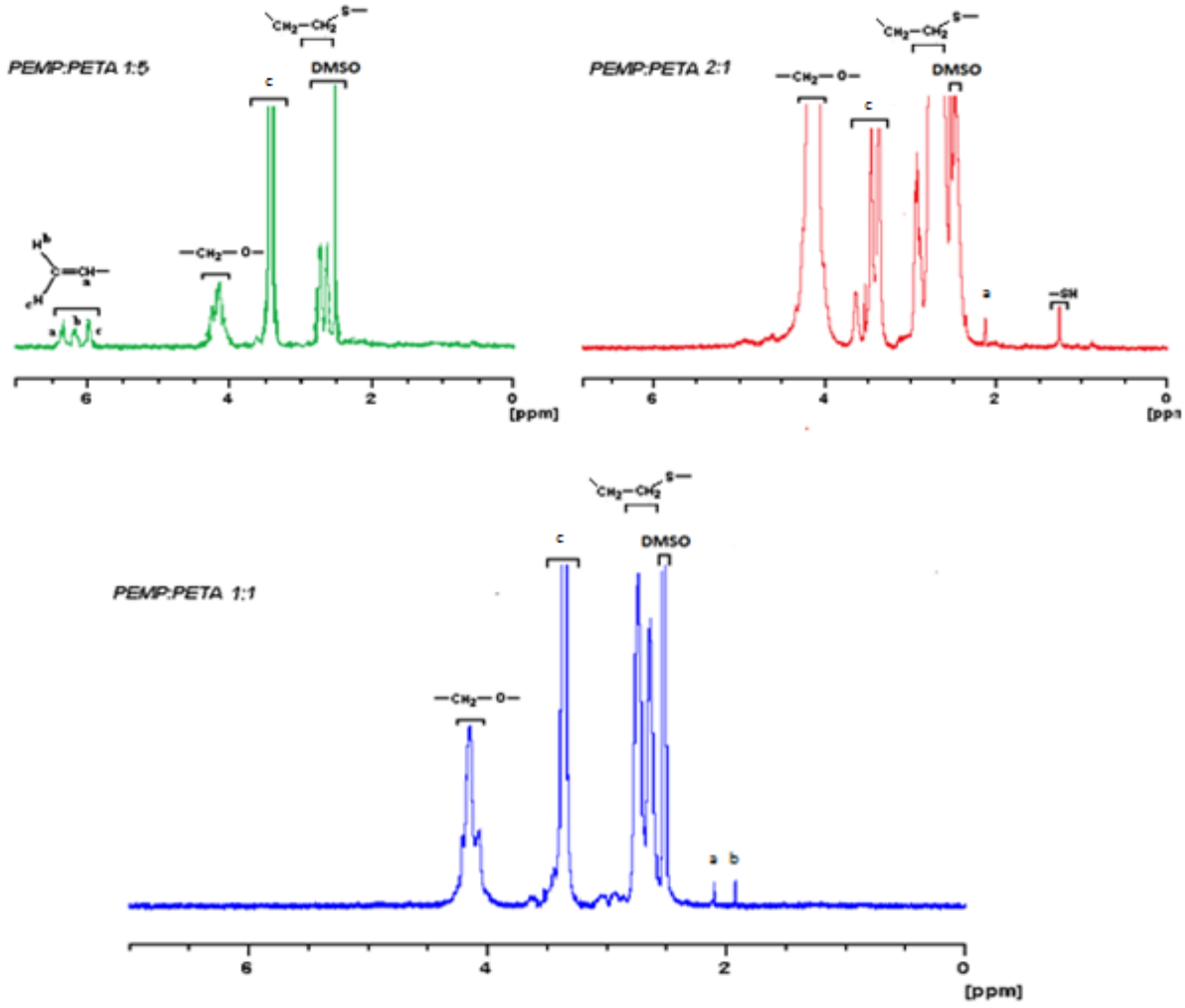

Figure 1S. ^{1}H NMR spectra of selected nanoparticles prepared with different PEMP/PETA ratios. Peaks a and b are unidentified and possibly related to side reaction byproducts (e.g. hydrolysis of ester bonds). Peak c is possibly related to the presence of water in the samples.

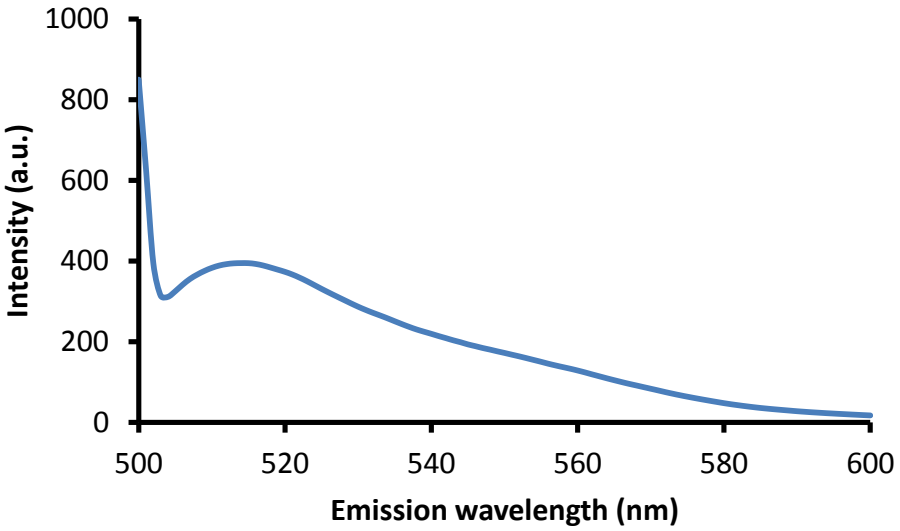

Figure 2s. Fluorescent spectra of nanoparticles labelled with fluorescein-5-maleimide (λ_{ex}=492 nm)

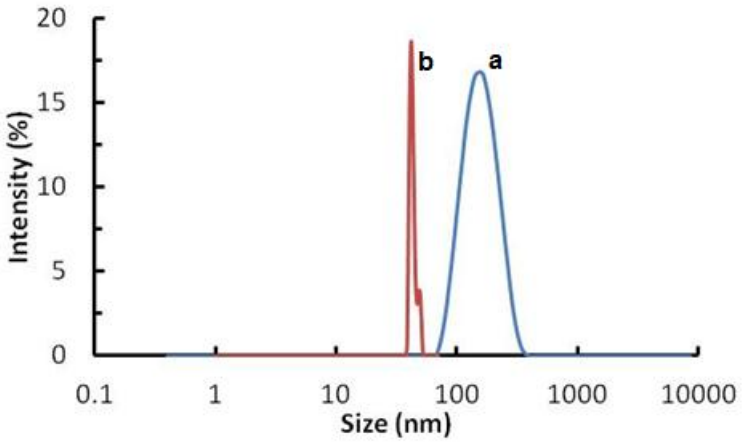

Figure 3S. DLS size distributions for PEMP/PETA (1:1) nanoparticles as synthesized (a) and 90 days after the synthesis (b)