

Article

Retinol-Containing Graft Copolymers for Delivery of Skin-Curing Agents

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Table S1. Data for synthesis of P(HEMA-*co*-MMA) copolymers by ATRP^a.

M ₁ /M ₂	Time [h]	Conversion (%)				DP _{n,GC}	M _{n,GC} (g/mol)	GPC ^b		CMC (mg/mL)	
		NMR		GC				M ₁ (g/mol)	M _n (g/mol)		
		M ₁	M ₂	M ₁	M ₂						
VII	25/75	4.5	21	16	18	18	73	8 200	24 300	1.42	0.0016/0.0057
VIII	50/50	2.7	32	24	31	37	136	15 900	17 200	1.70	0.0182
IX	75/25	0.25	28	41	26	32	122	13 700	nd	nd	0.0433

[HEMA+MMA]₀/[RET-Br]₀/[CuBr]₀/[dNdpv]₀ = 400/1/0.75/1.5; anisole 10 vol. % of mon., 60°C; ^adata presented in ref. [44]; ^b THF; nd – not determined;

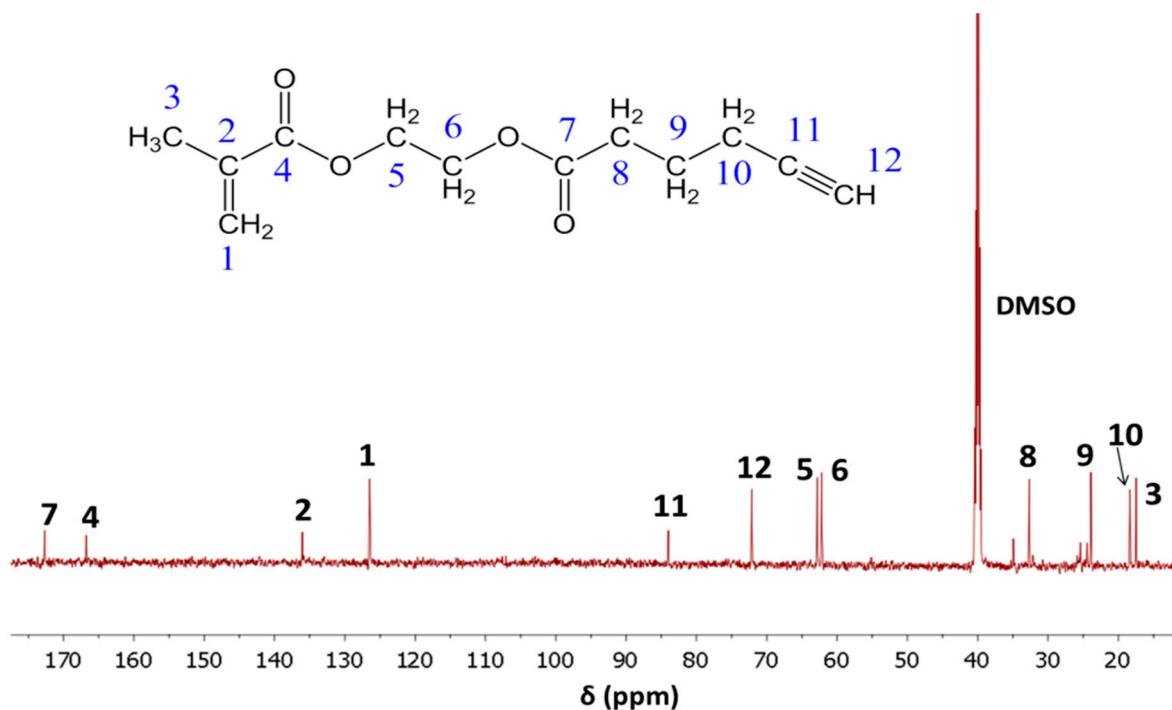


Figure S1. ¹³C NMR spectra of AIHEMA.

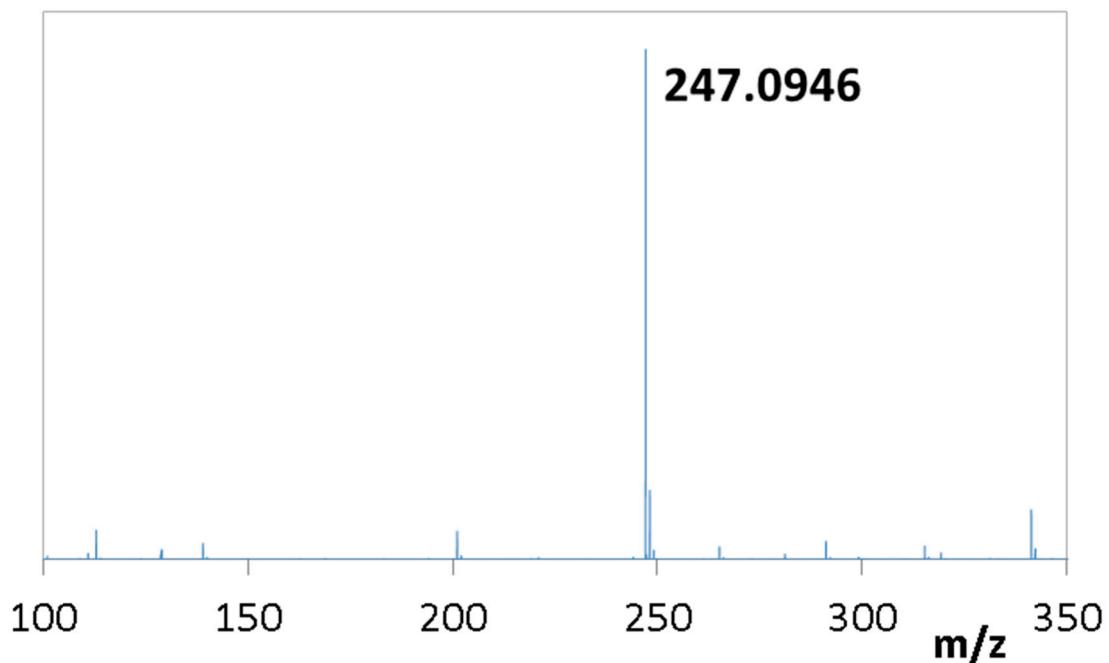


Figure S2. ESI-MS spectra of AlHEMA.

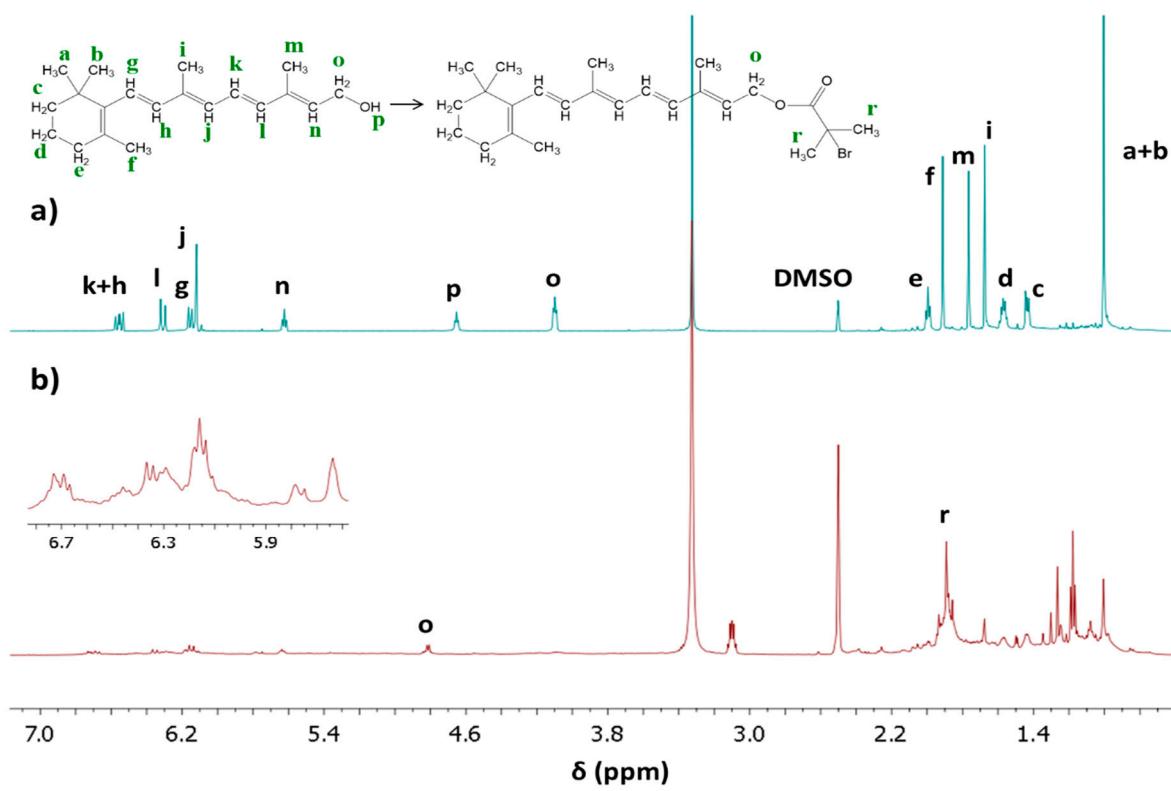


Figure S3. ^1H NMR spectra in DMSO of a) RET, and b) RET-Br.

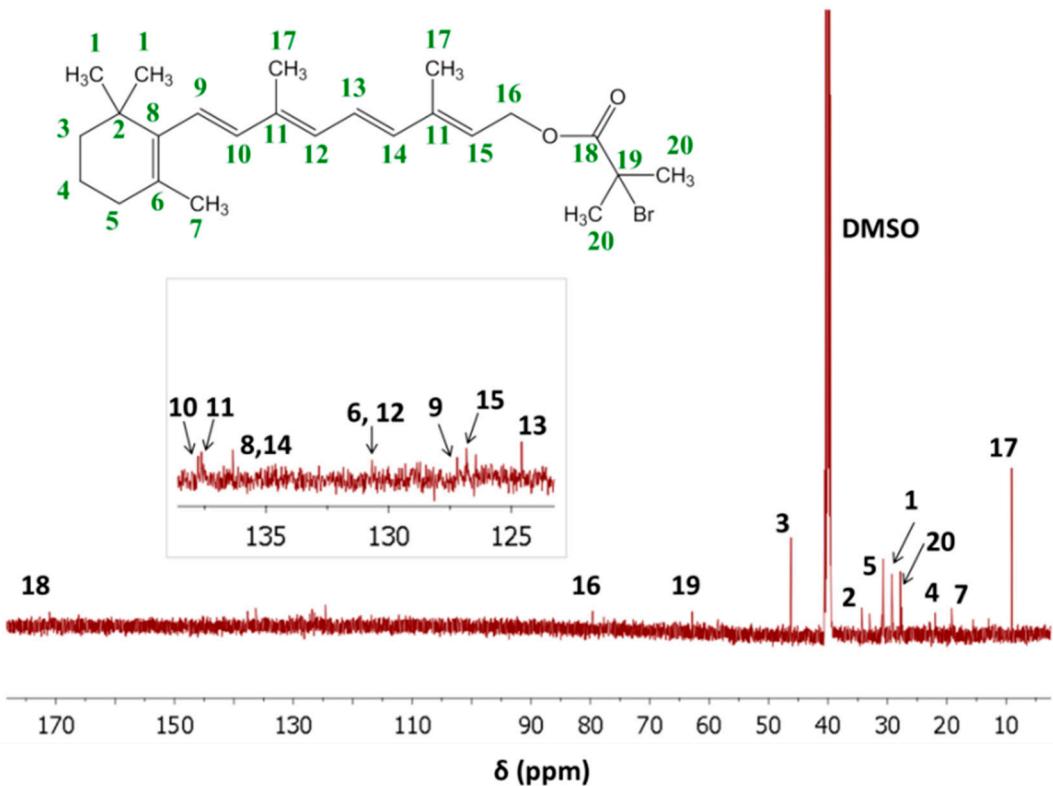


Figure S4. ^{13}C NMR spectra of RET-Br.

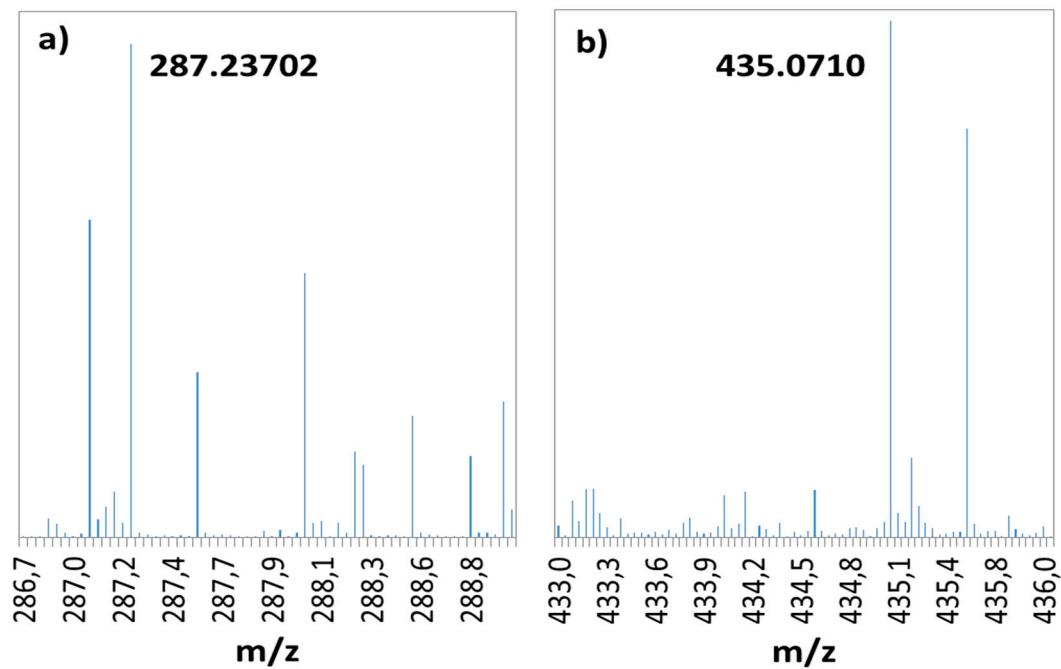


Figure S5. ESI-MS spectra of a) RET, b) RET-Br. calculated for RET: $\text{C}_{20}\text{H}_{30}\text{O}$ 286.0, found for $[\text{M}+\text{H}]^+$ 287.2.

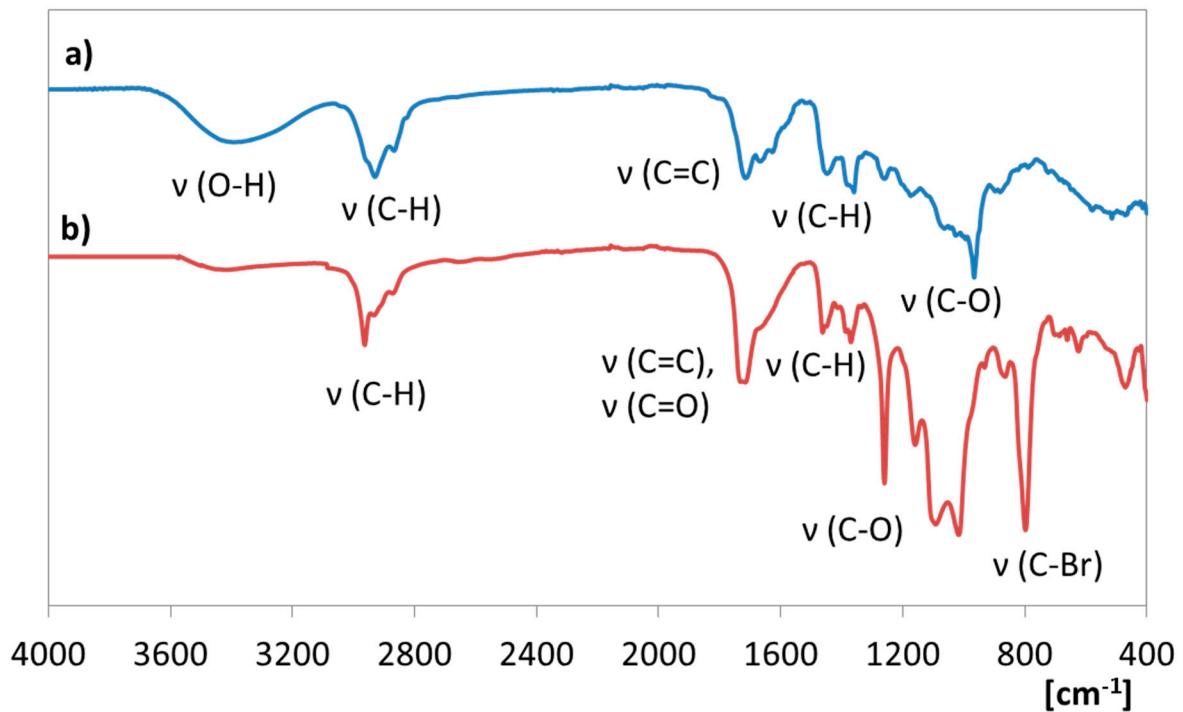


Figure S6. FT-IR spectra of a) RET, b) RET-Br.

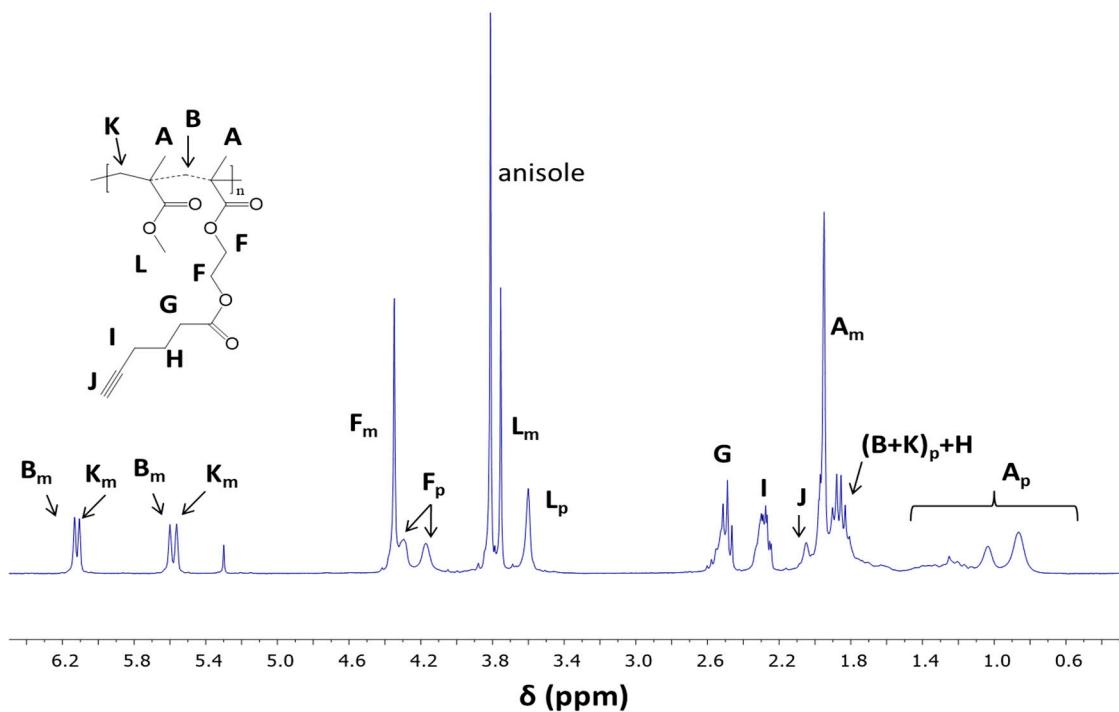


Figure S7. ¹H NMR spectra (CDCl₃) of the sample taken from the reaction mixture for EiB-Br initiated copolymerization of AlHEMA/MMA: 50/50 (II), where signals with indices *m* and *p* are related to monomer and polymer, respectively.

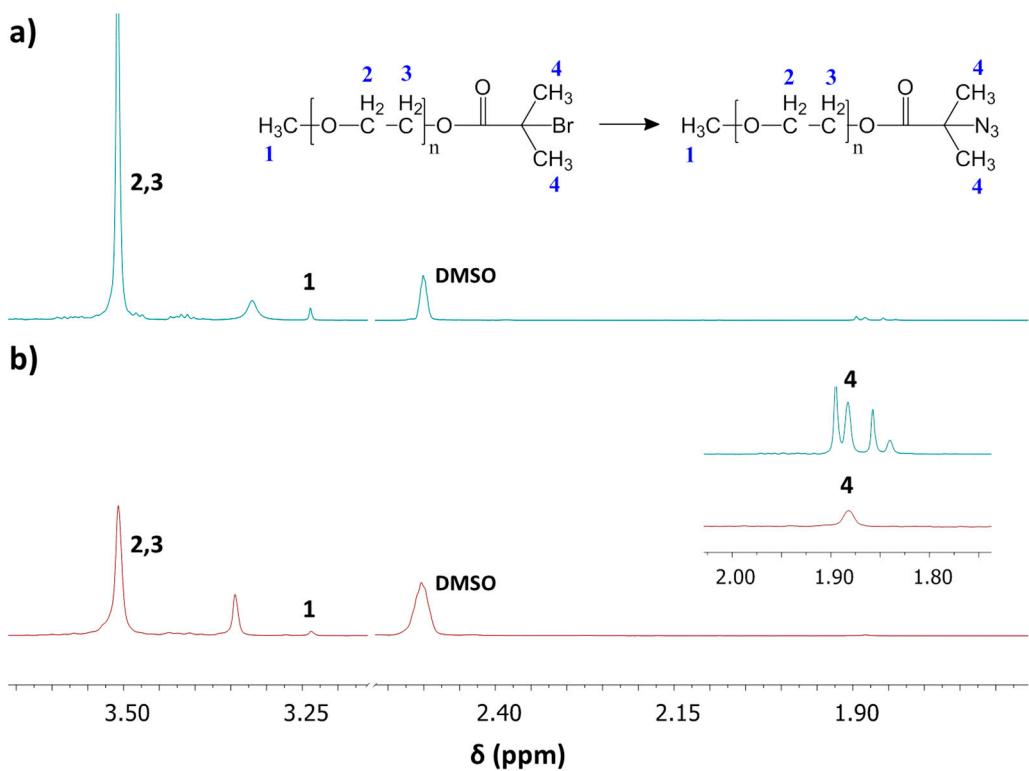


Figure S8. ^1H NMR spectra of a) PEG-Br, b) PEG-N₃.

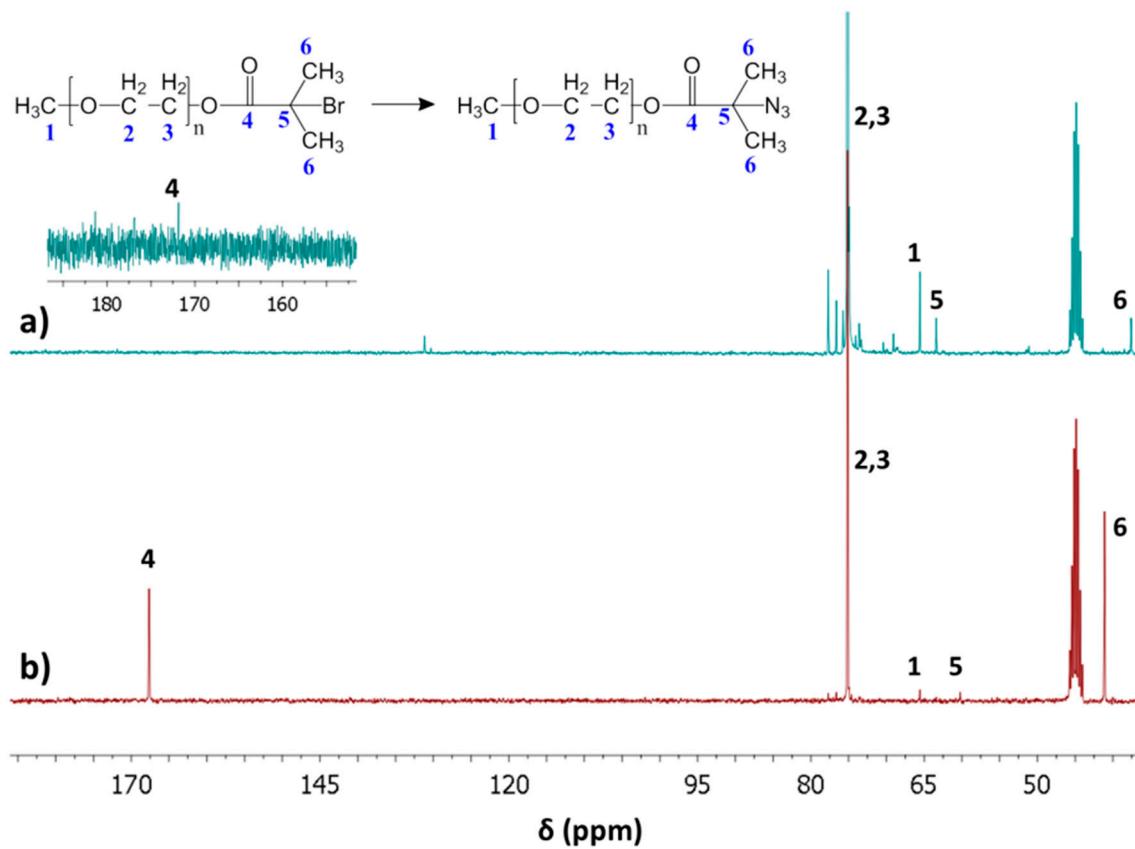


Figure S9. ^{13}C NMR spectra of a) PEG-Br, b) PEG-N₃.

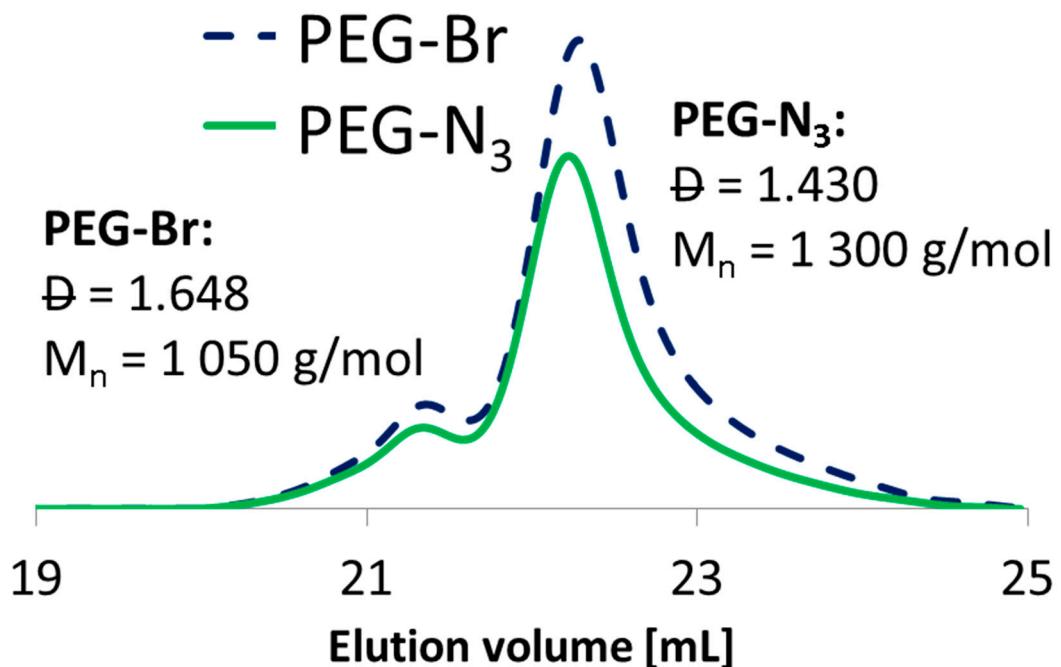


Figure S10. GPC traces of PEG-Br and PEG-N₃.

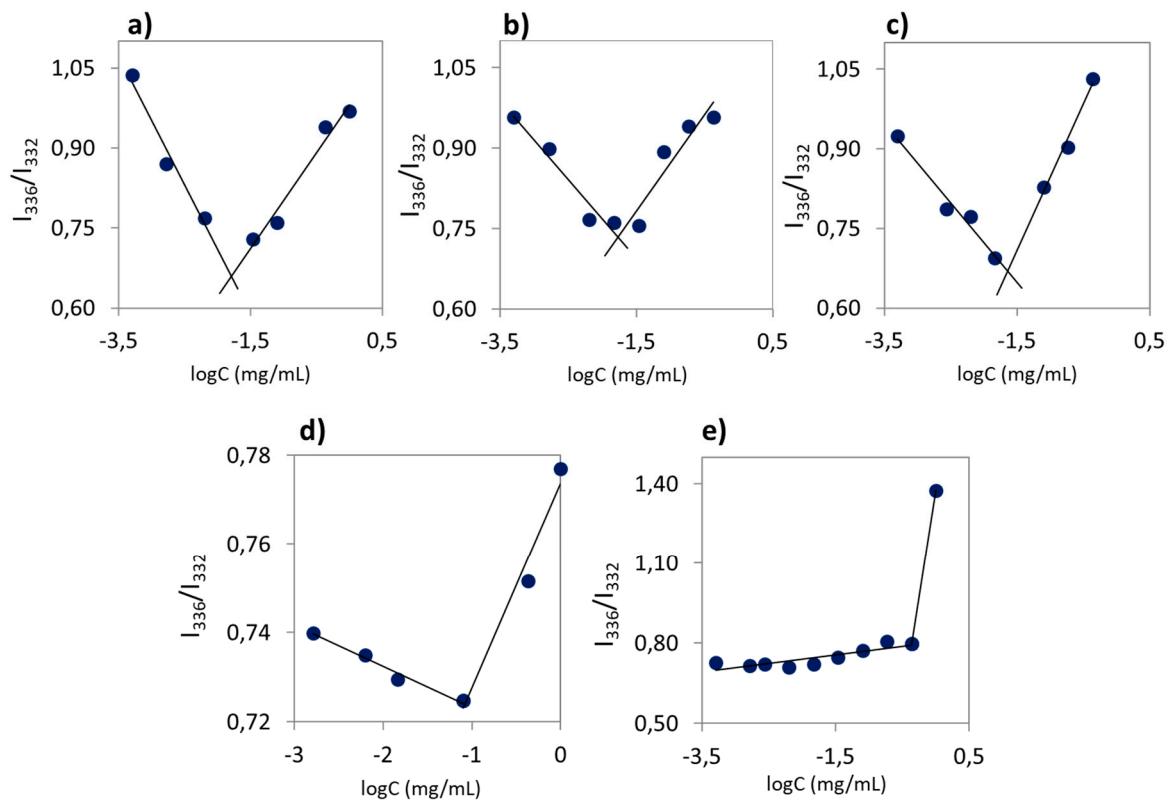


Figure S11. Plots of intensity I_{336}/I_{332} ratio as a function of the logarithm of copolymers concentration in aqueous solution for series Ic-IIIc (a-c), and RET series IVc, VIc (d-e).

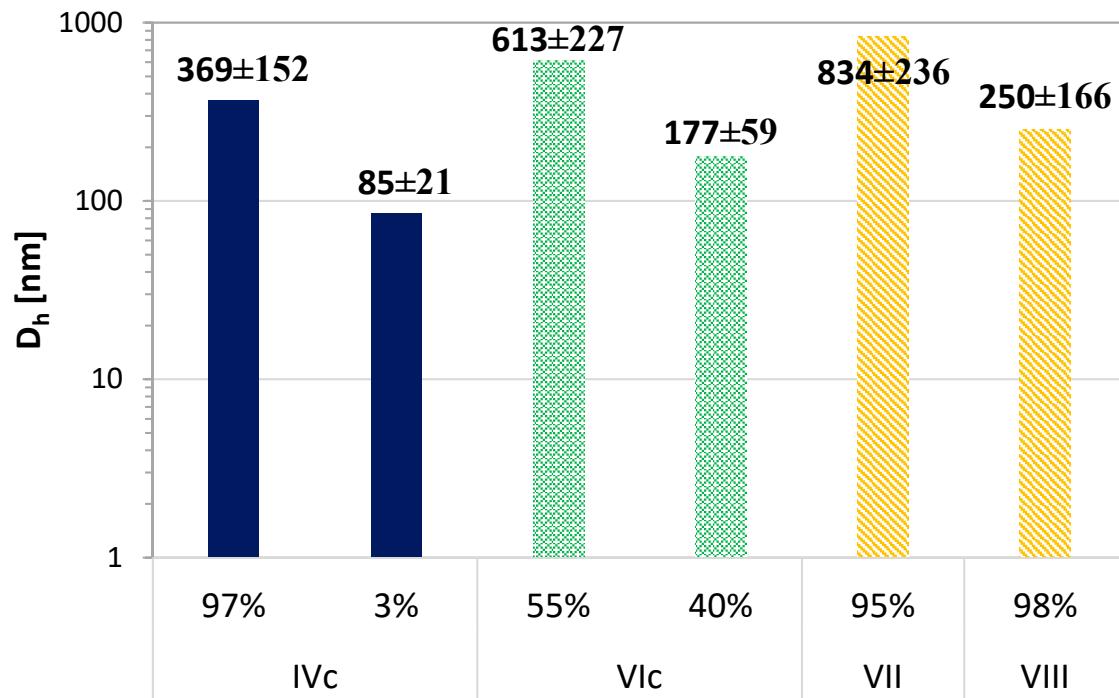
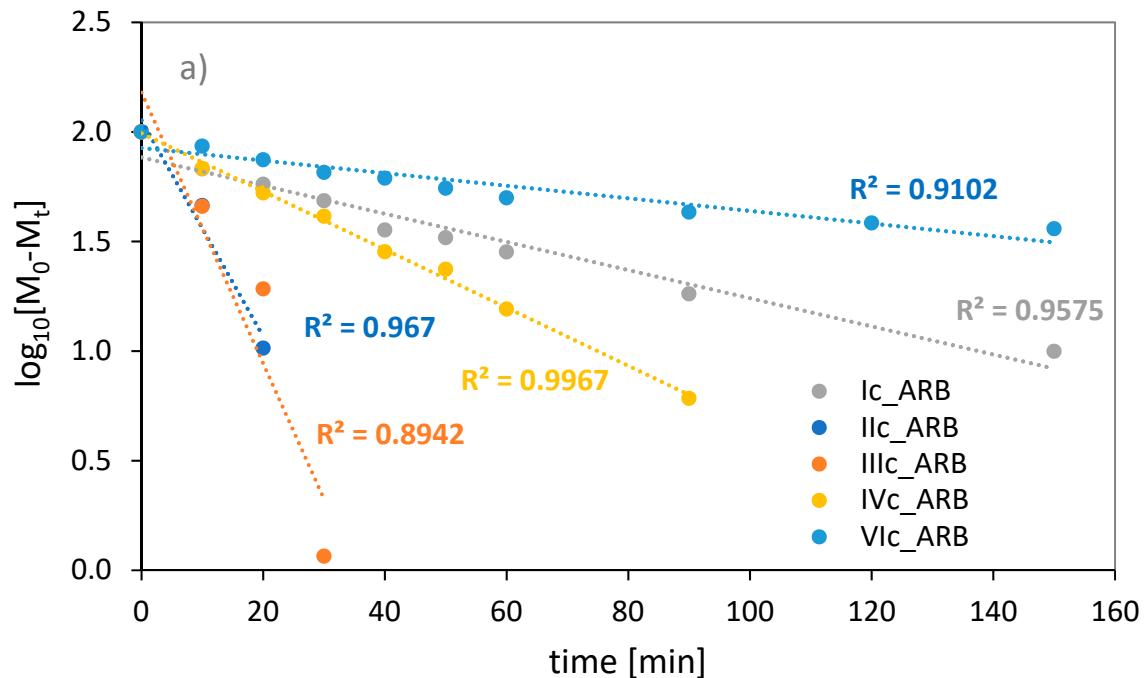


Figure S12. Particle size distribution data for VitC loaded micellar systems based on intensity calculation method.



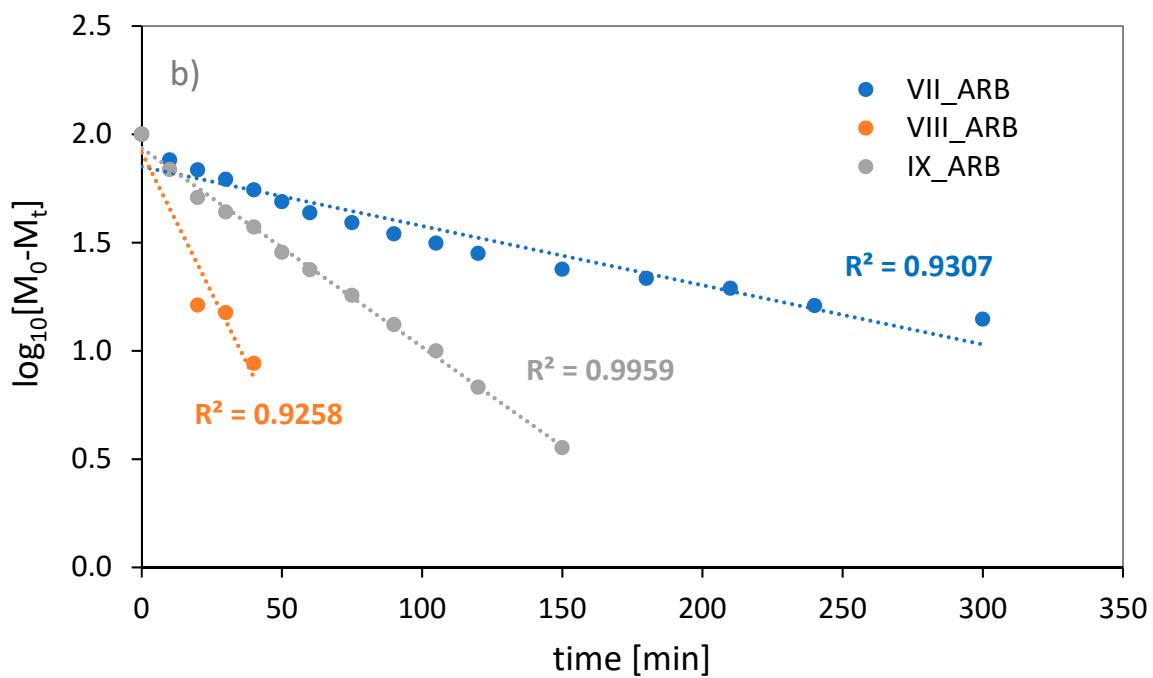
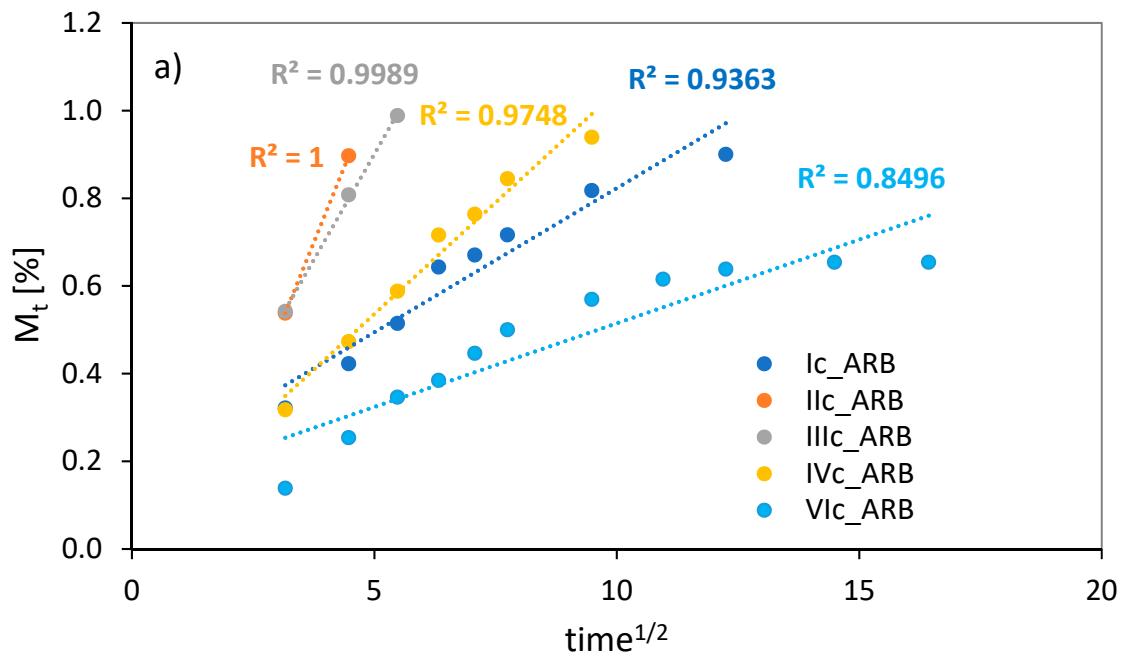


Figure S13. First order kinetic model of ARB release: (a) graft copolymers (b) linear copolymers.



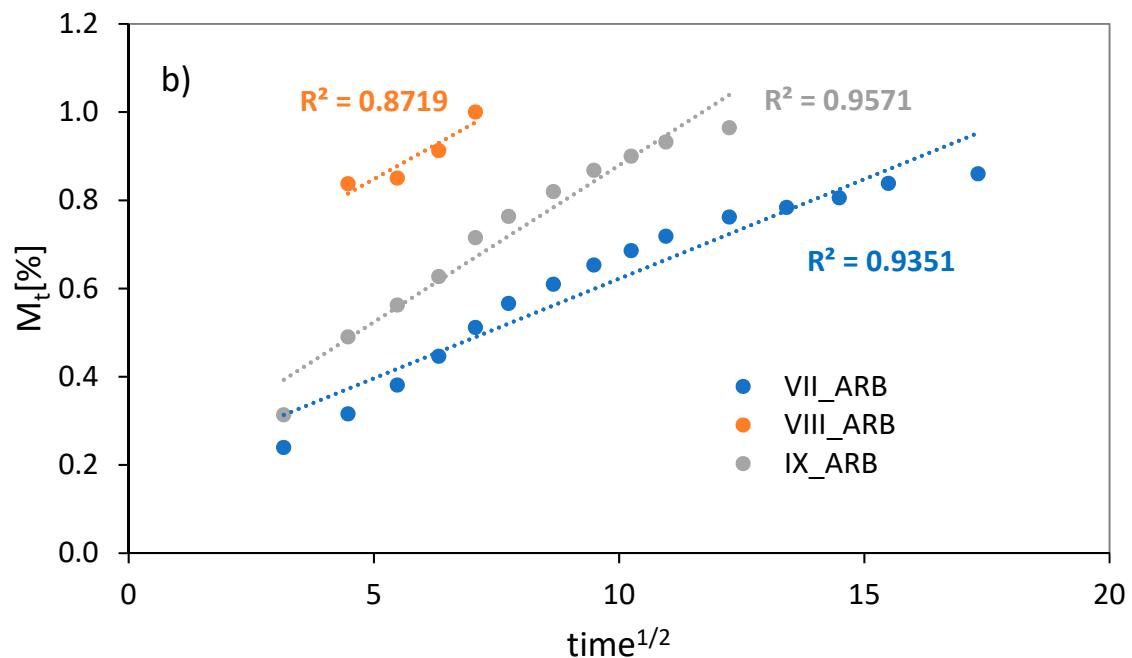


Figure S14. Higuchi kinetic model of ARB release: (a) graft copolymers (b) linear copolymers.



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