Supporting information

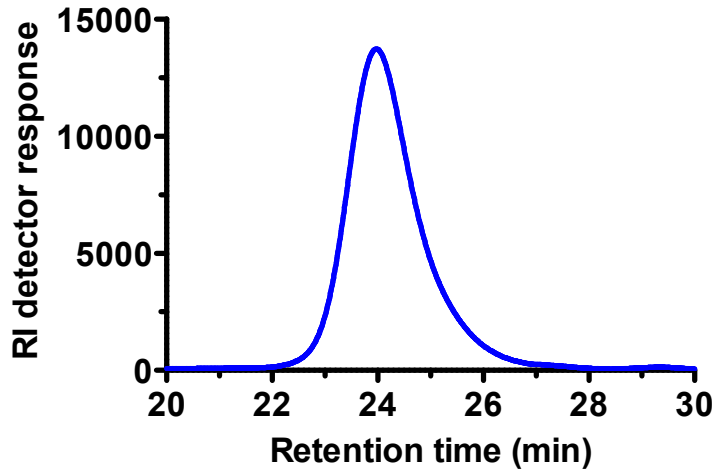


Figure S1. SEC-trace of poly(HEA)$_x$ macroCTA.

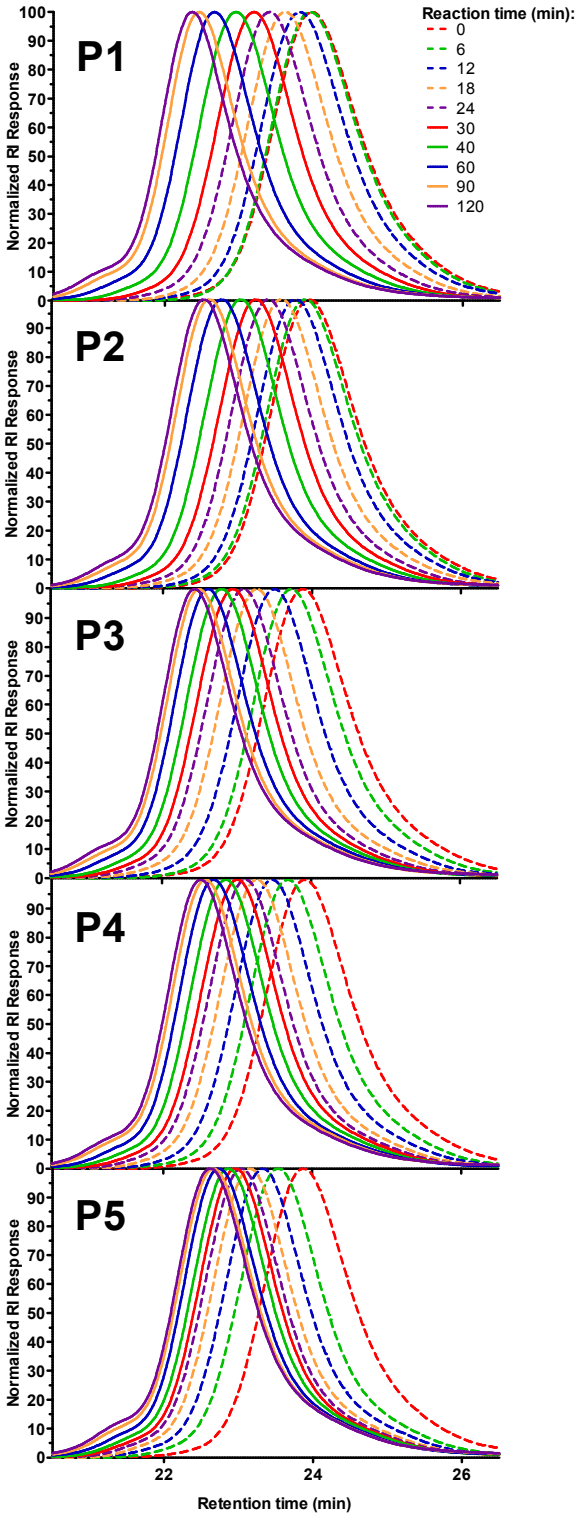


Figure S2. Kinetic SEC-traces for the synthesis of poly(HEA)$_x$-*b*-poly(HEA$_m$-*co*-DMDMA$_n$)$_y$.

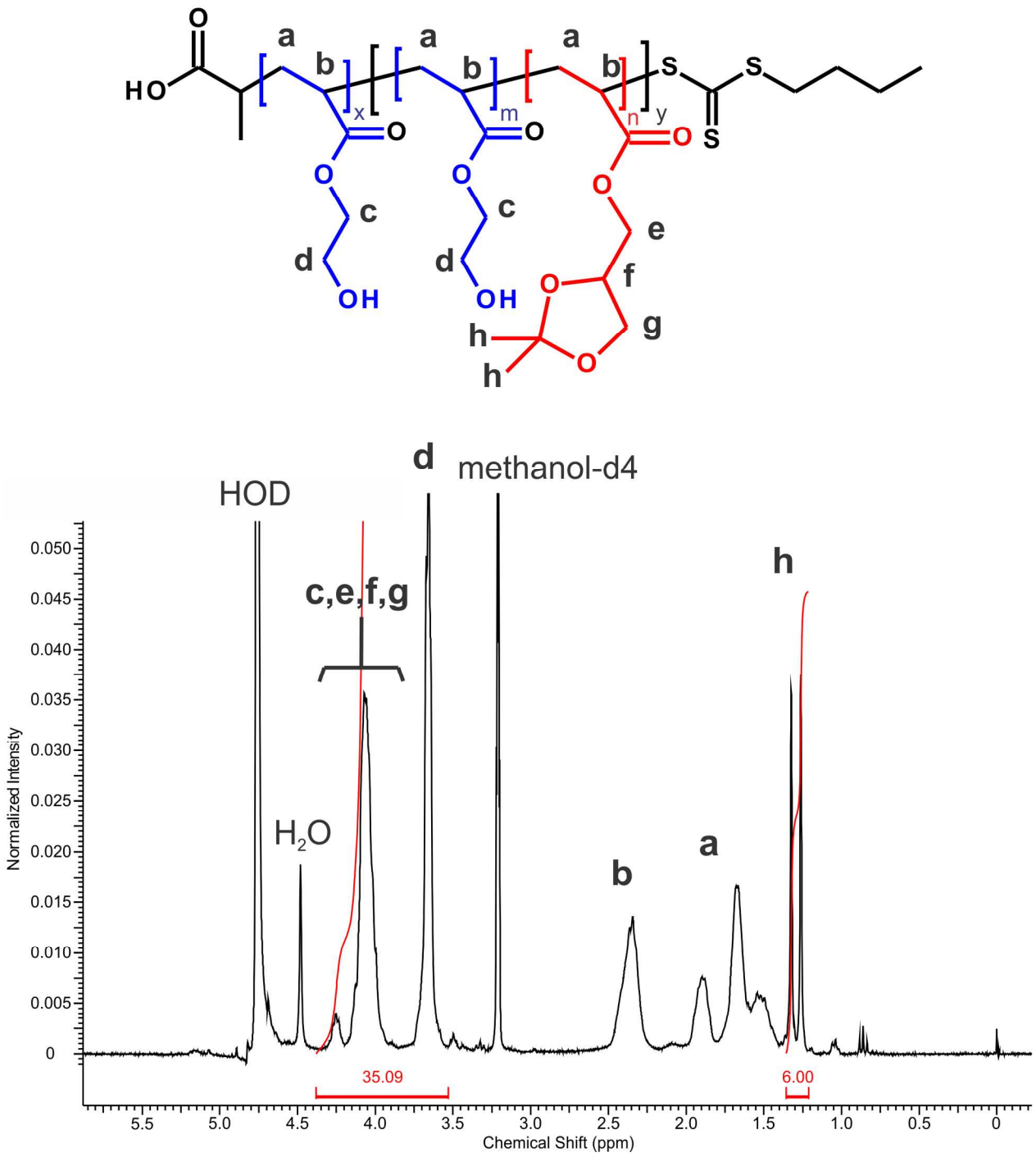


Figure S3. ^{1}H-NMR spectrum of P1 in methanol-d4.

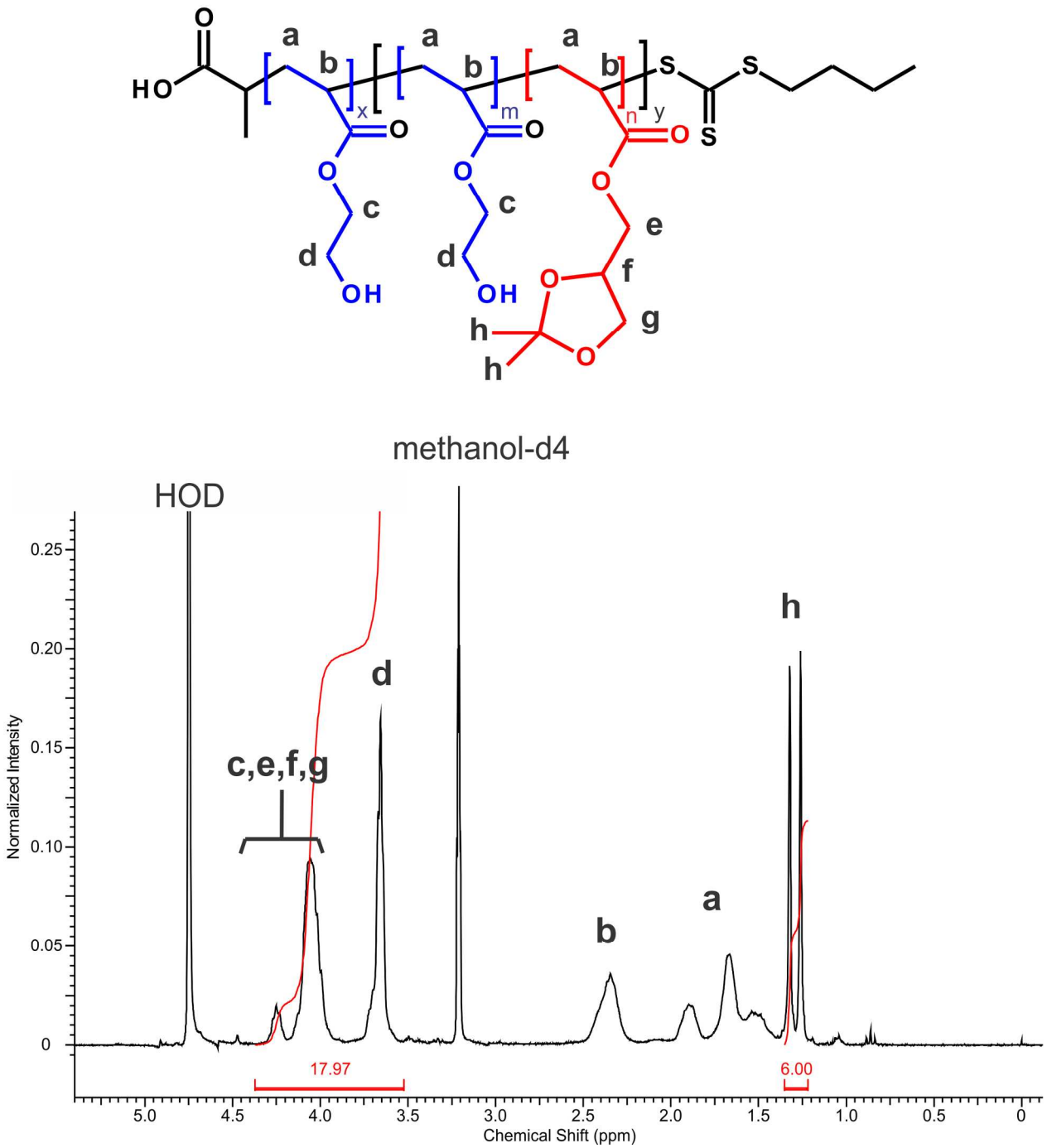
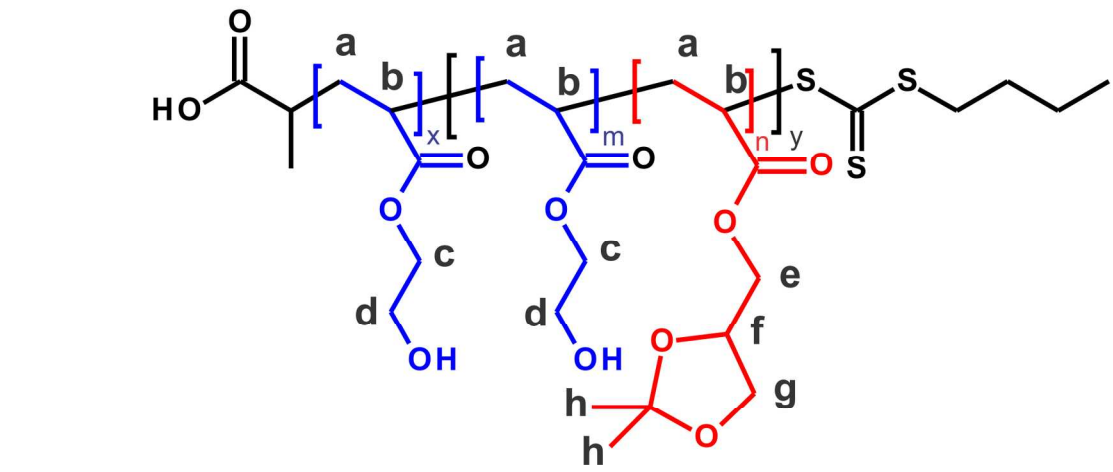


Figure S4. ^{1}H-NMR spectrum of P2 in methanol-d$_4$.



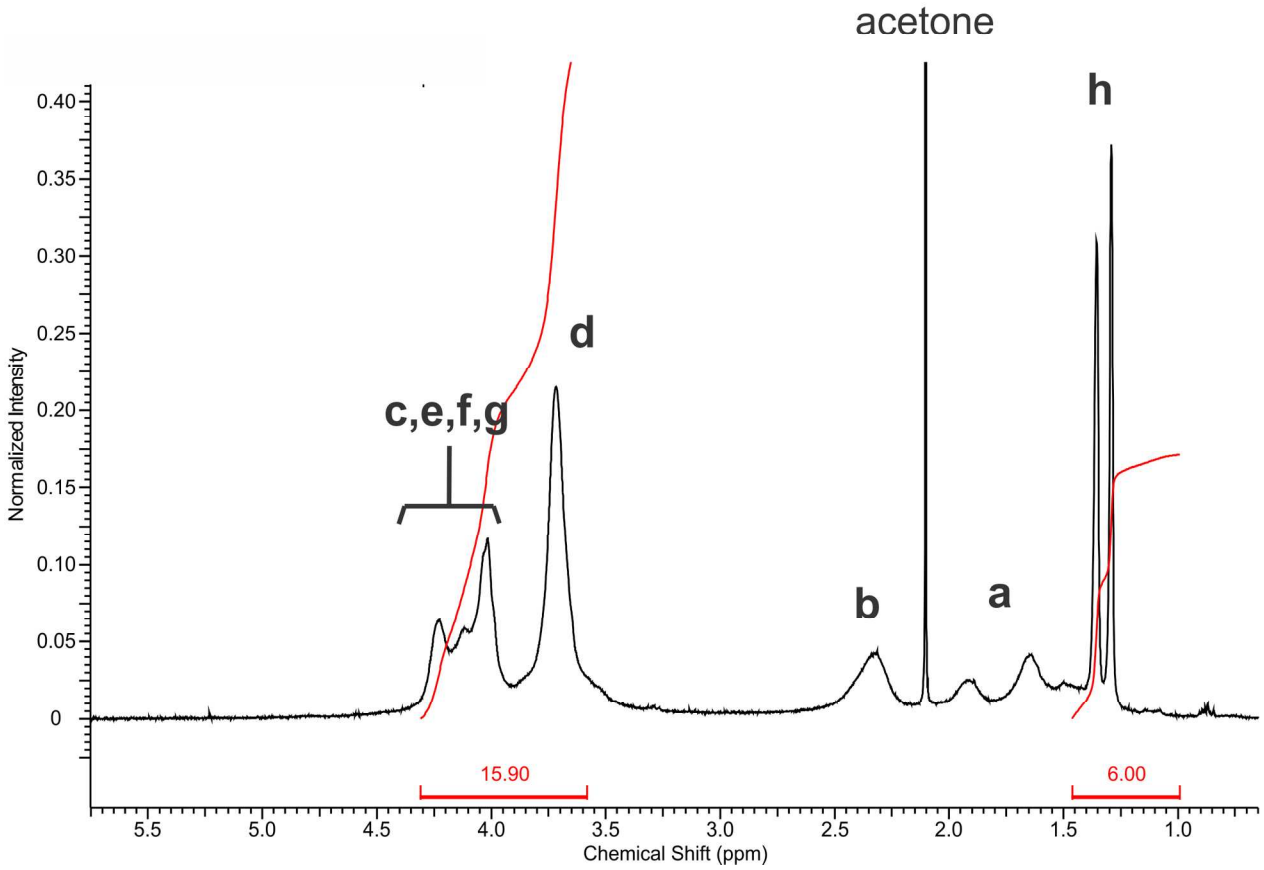


Figure S5. ^{1}H-NMR spectrum of P_3 in chloroform-d.

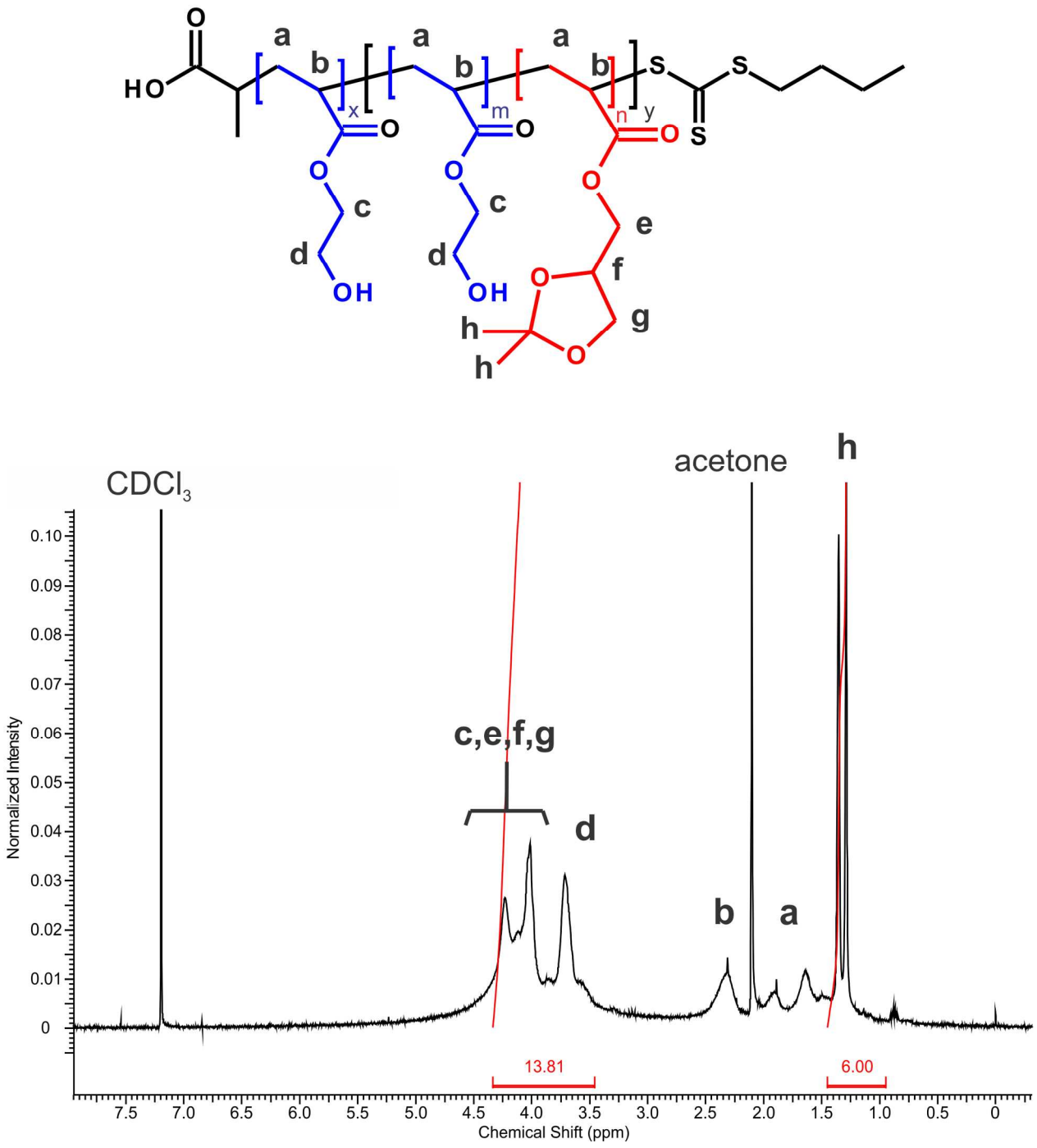


Figure S6. ^{1}H-NMR spectrum of P_4 in chloroform-d.

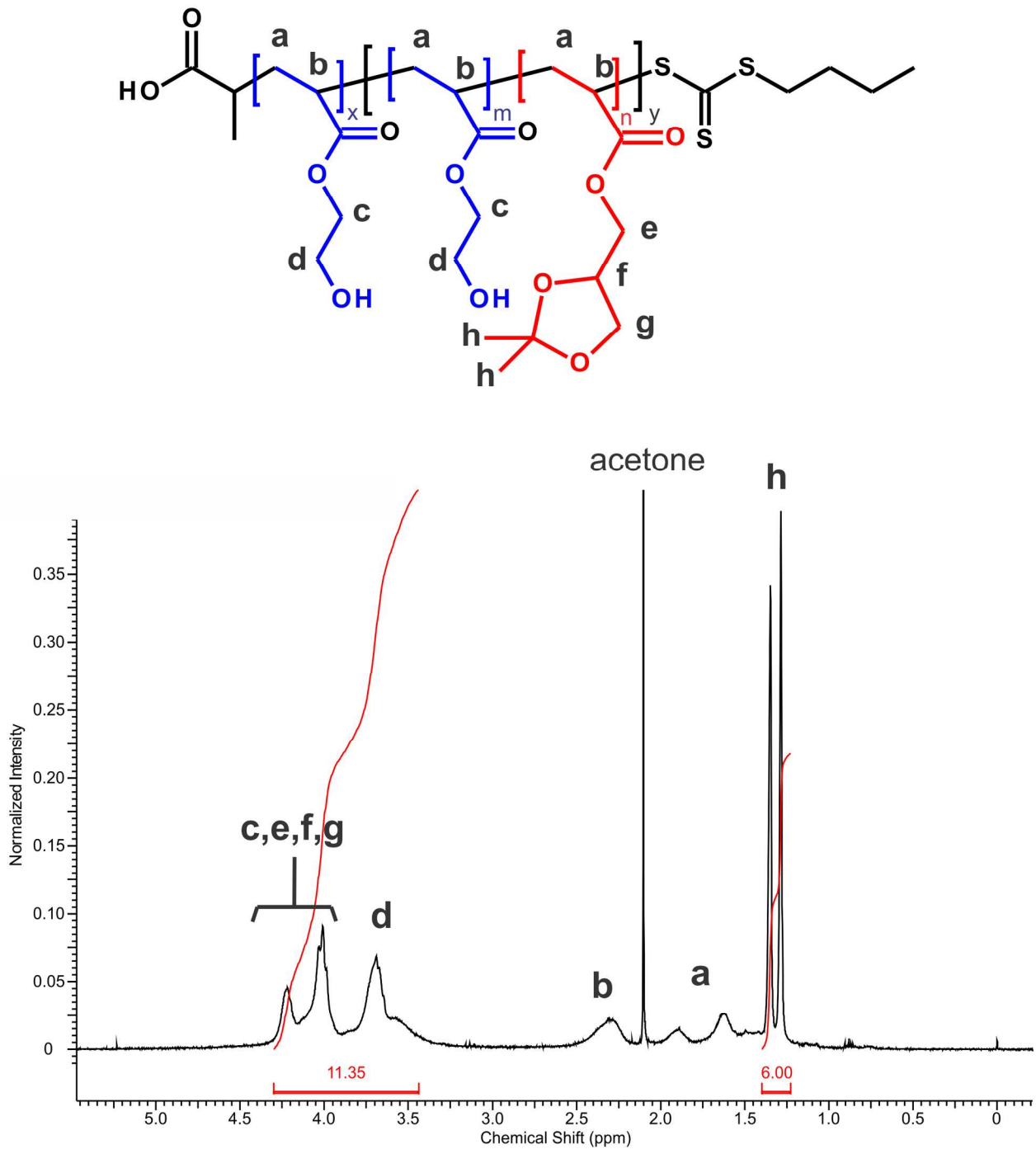


Figure S7. ^{1}H-NMR spectrum of P5 in chloroform-d.

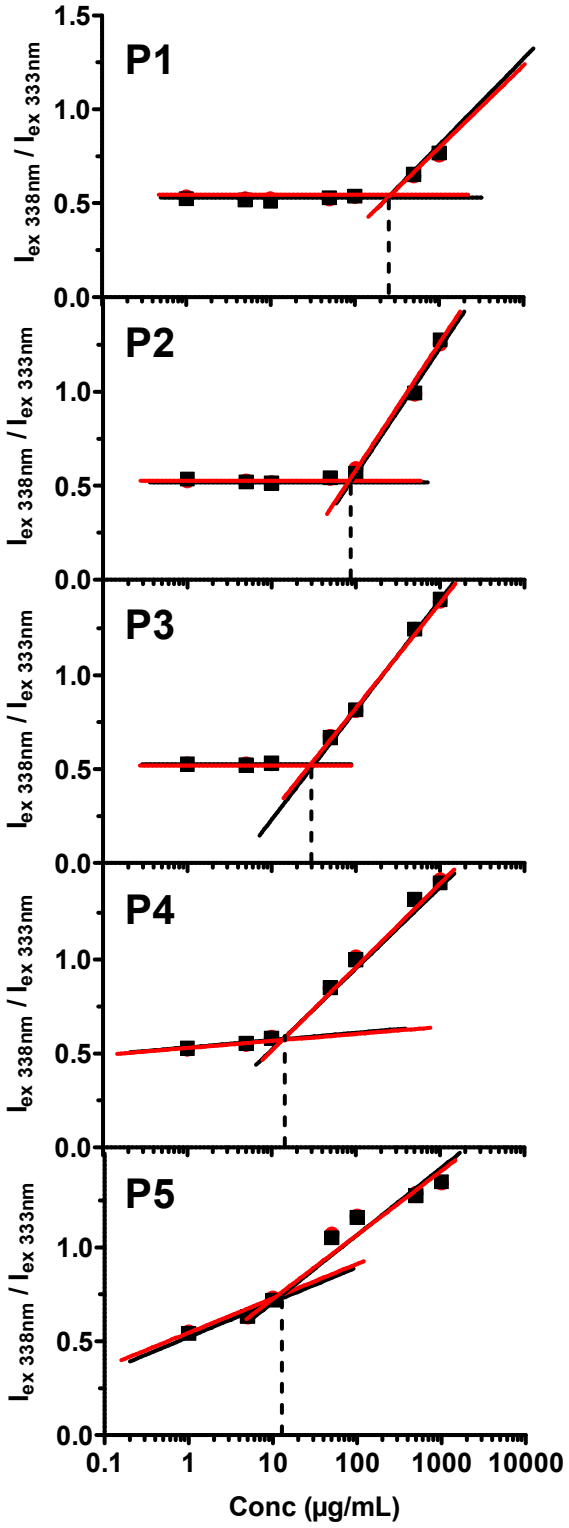


Figure S8. CAC fitting parameters (n = 2) of poly(HEA)$_x$-*b*-poly(HEA$_m$-*co*-DMDMA$_n$)$_y$.

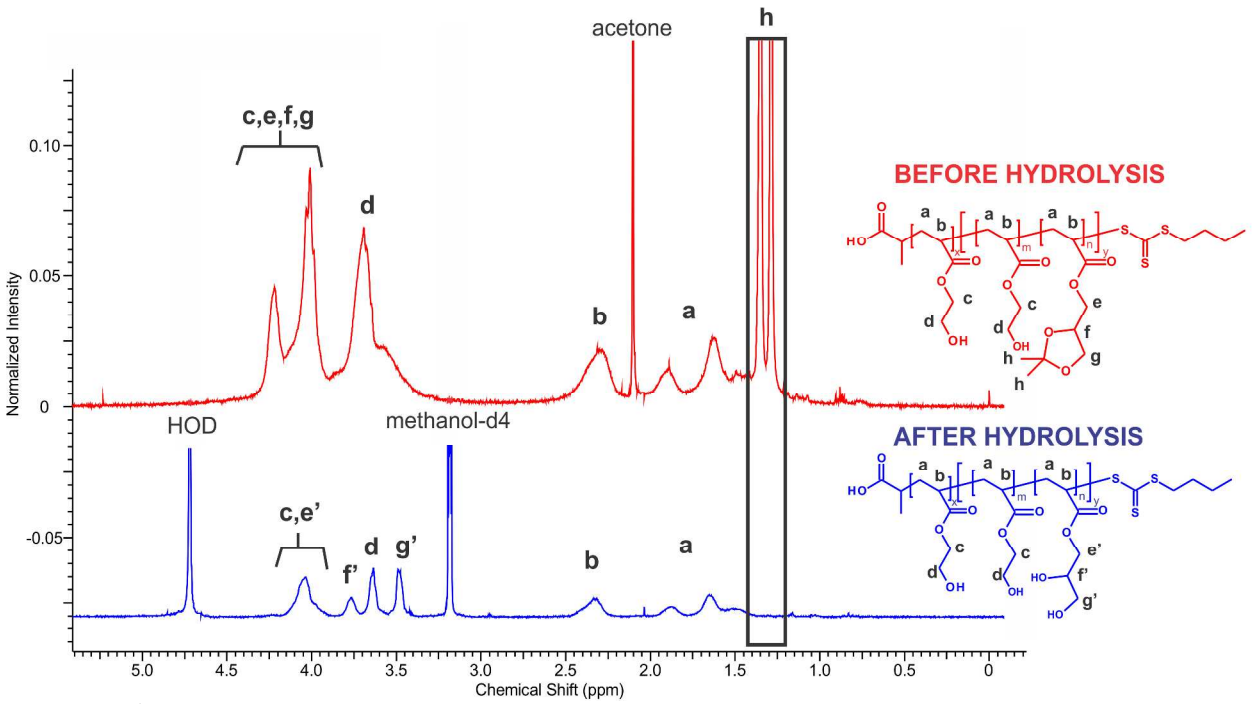


Figure S9. ^{1}H-NMR spectrum of P5 (45 mol% DMDMA) before (red, solvent: chloroform-d) and after (blue, solvent: methanol-d4) hydrolysis.

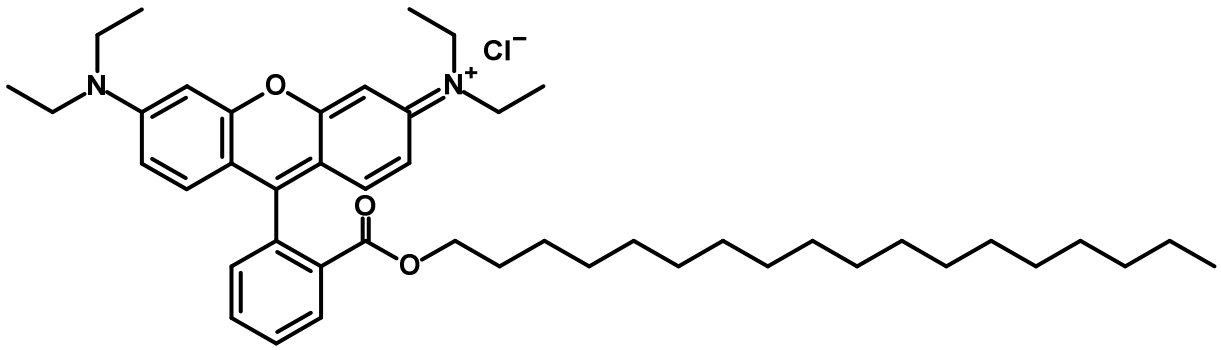


Figure S10. Molecular structure of octadecyl rhodamine B chloride (R18).