

Electronic Supporting Information

Effect of Molar Mass of Poly(2-Oxazoline) Based Glycopolymers on Lectin Binding

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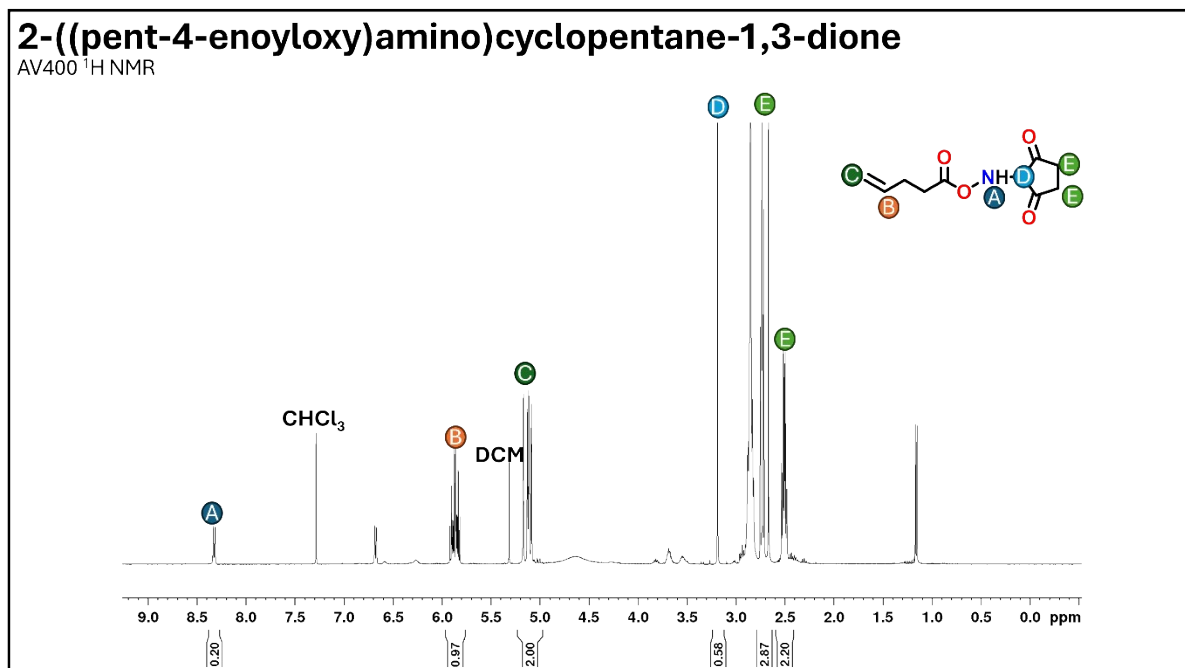


Figure S1: The assigned ¹H NMR of step one of the synthesis of 2-(3-butenyl-2-oxazoline) (CDCl₃, 400 MHz)

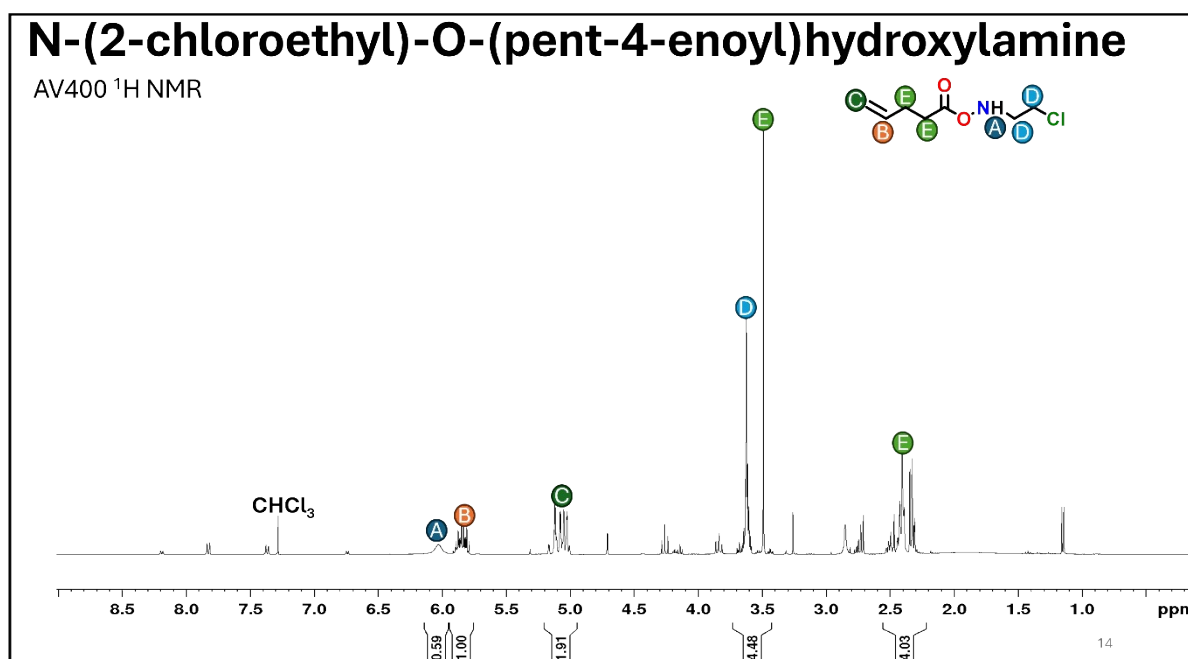


Figure S2: The assigned ¹H NMR of step two of the synthesis of 2-(3-butenyl-2-oxazoline) (CDCl₃, 400 MHz).

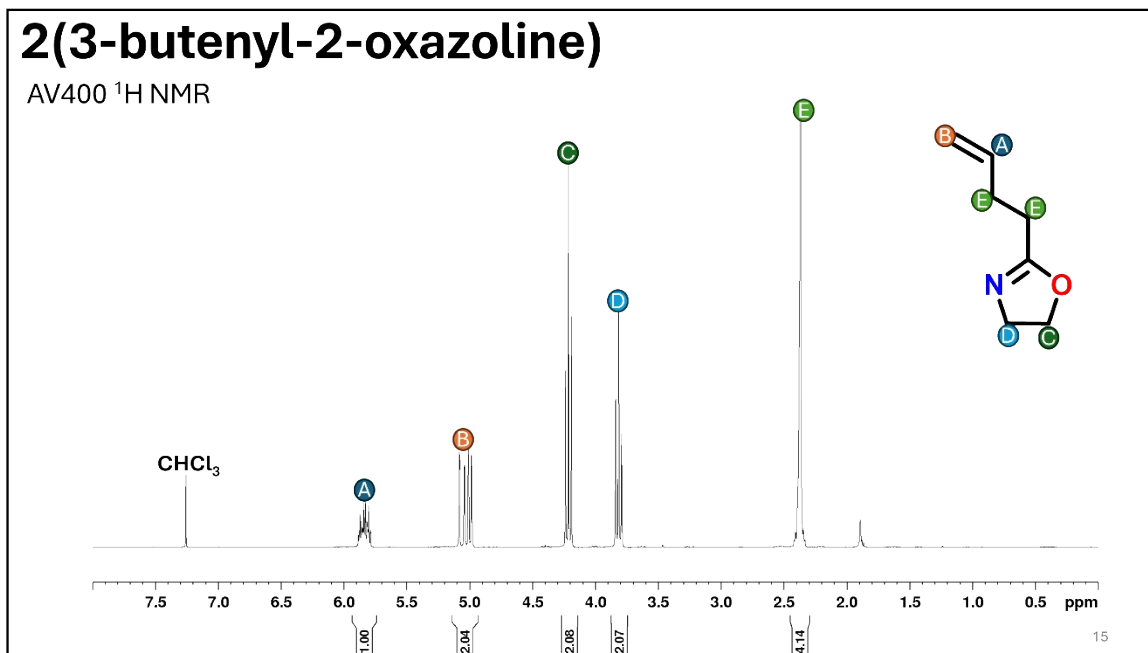


Figure S3: The assigned ¹H NMR of the purified 2-(3-butenyl-2-oxazoline) (CDCl₃, 400 MHz).

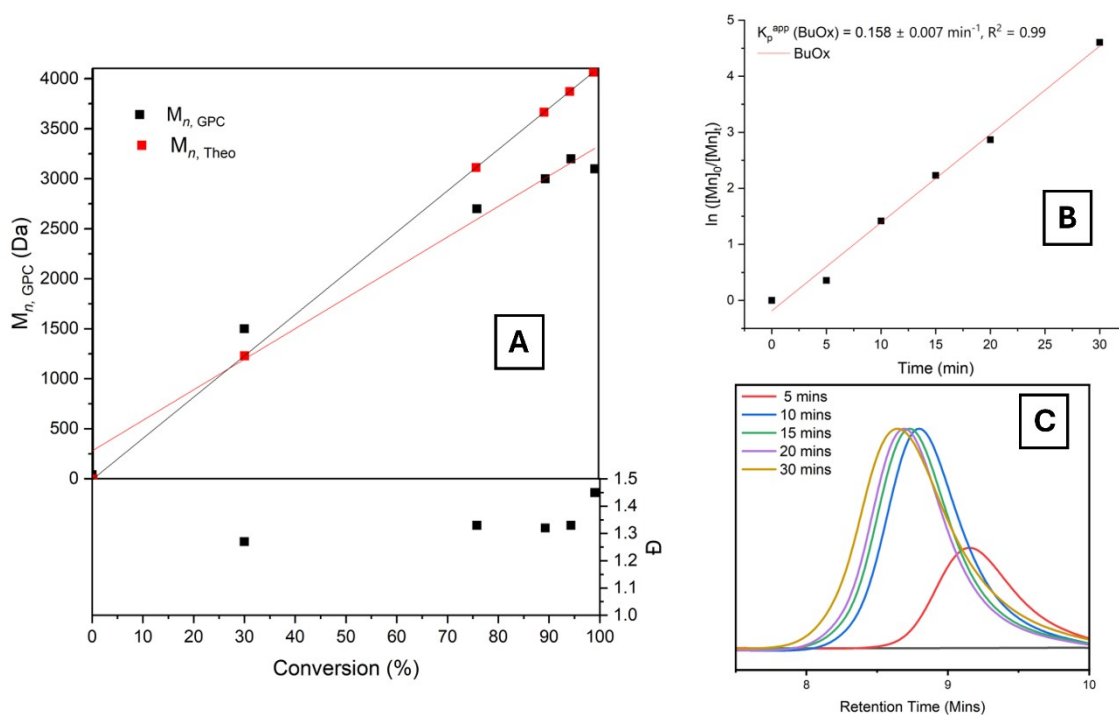


Figure S4: The kinetic plots of 2-(3-Butenyl-2-oxazoline) at 110 °C in acetonitrile. The plots demonstrate a linear first-order kinetic characteristic of living polymerisation. **(A)** Evolution of molecular weight and dispersity over conversion of the CROP reaction. **(B)** Semi-logarithmic plot of ButeneOx at 110 °C in acetonitrile. **(C)** Evolution of GPC traces over different time points measured (eluent: THF +2 % TEA +0.1 % BHT).

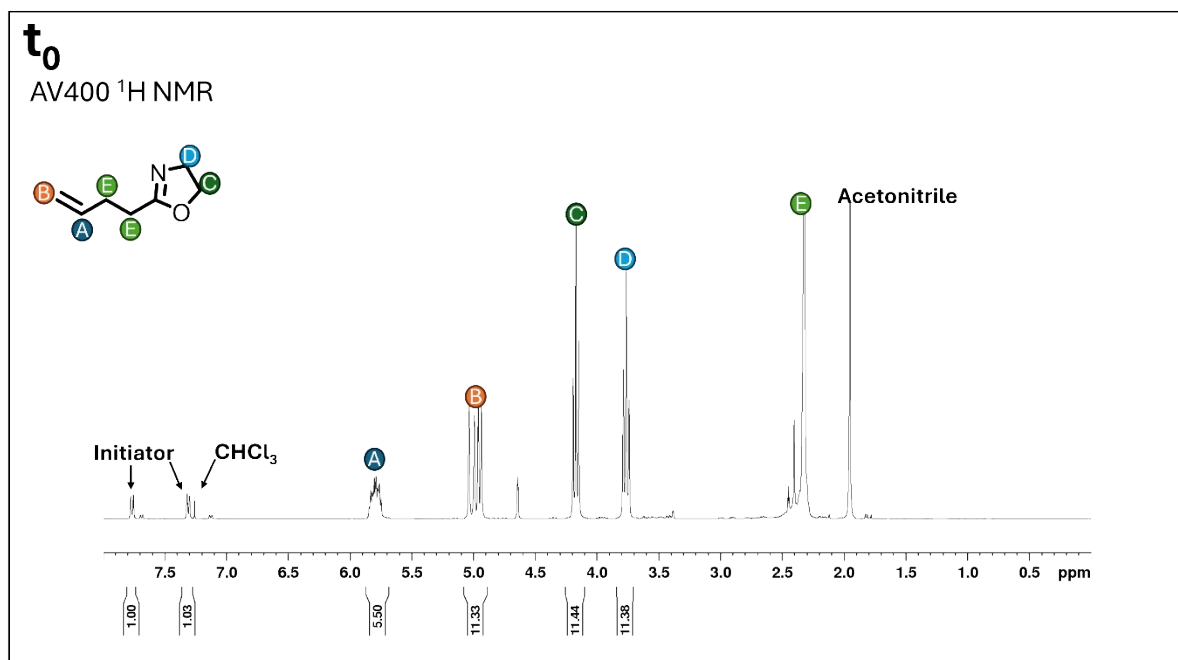


Figure S5: The assigned t₀ ¹H NMR spectrum of the stock solution used for each first block of **P1-P5** which include 2-(3-butenyl-2-oxaoline) and MeCN this was initiated with propargyl tosylate and after 22 mins EtOx was added in varying amounts depending on the chain length desired (CDCl₃, 400 MHz).

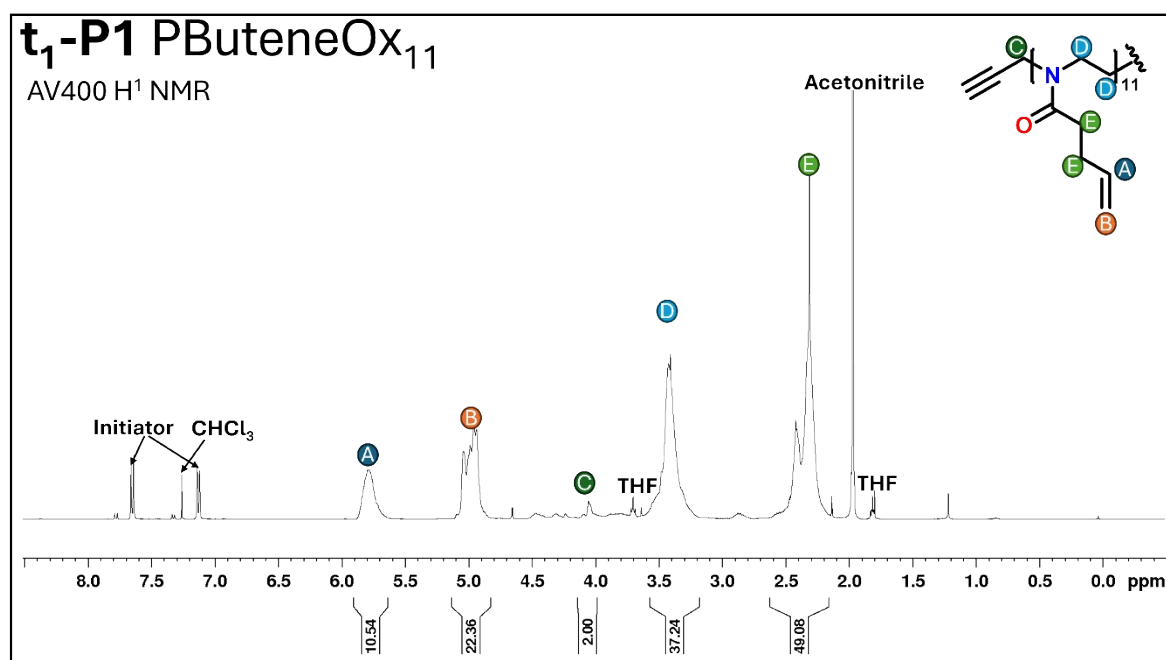


Figure S6: Example assigned t₁ ¹H NMR Spectrum of **P1** at the point before the addition of EtOx, (CDCl₃, 400 MHz).

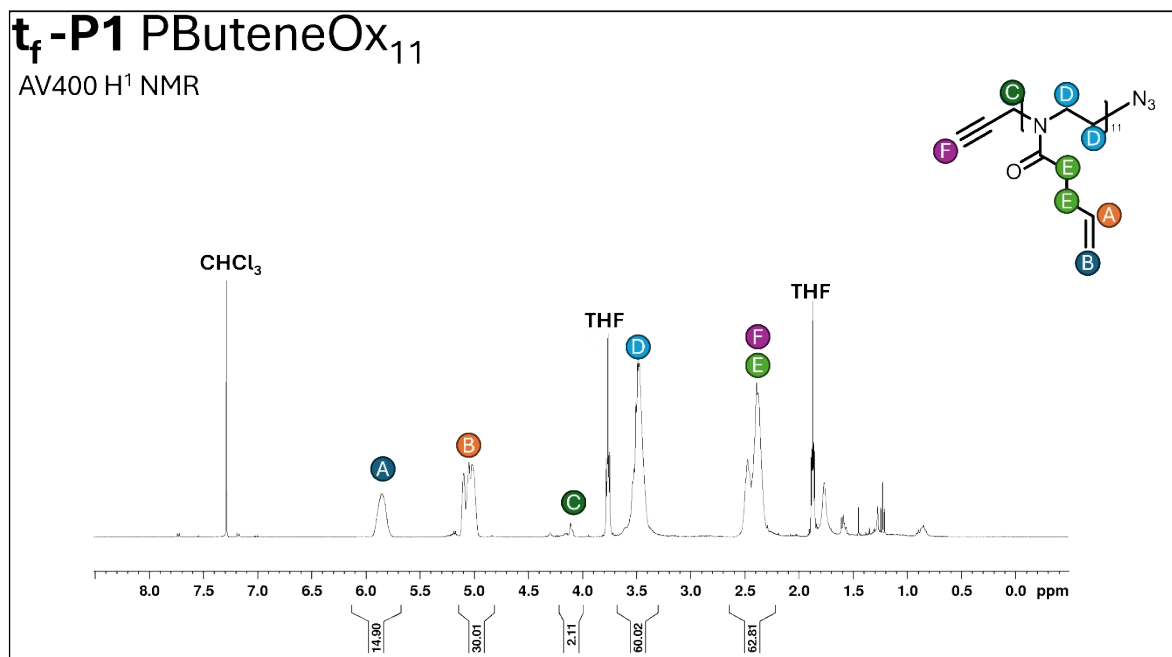


Figure S7: The assigned t_f ¹H NMR Spectrum of **P1** (CDCl₃, 400 MHz).

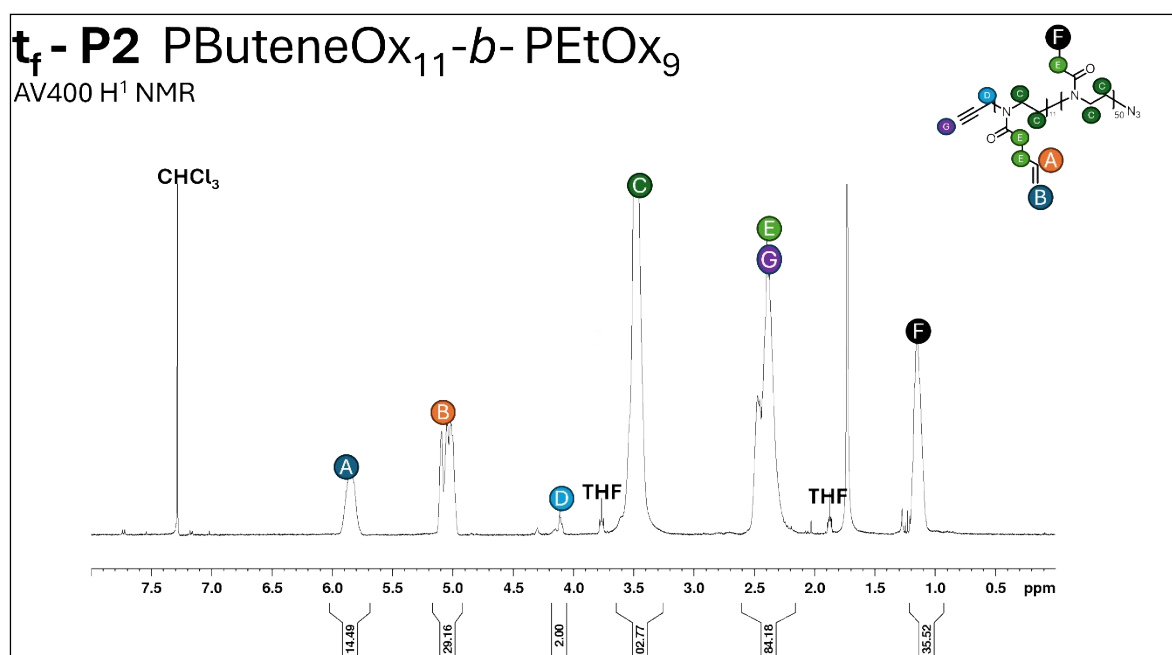


Figure S8: The assigned t_f ¹H NMR Spectrum of **P2**(CDCl₃, 400 MHz).

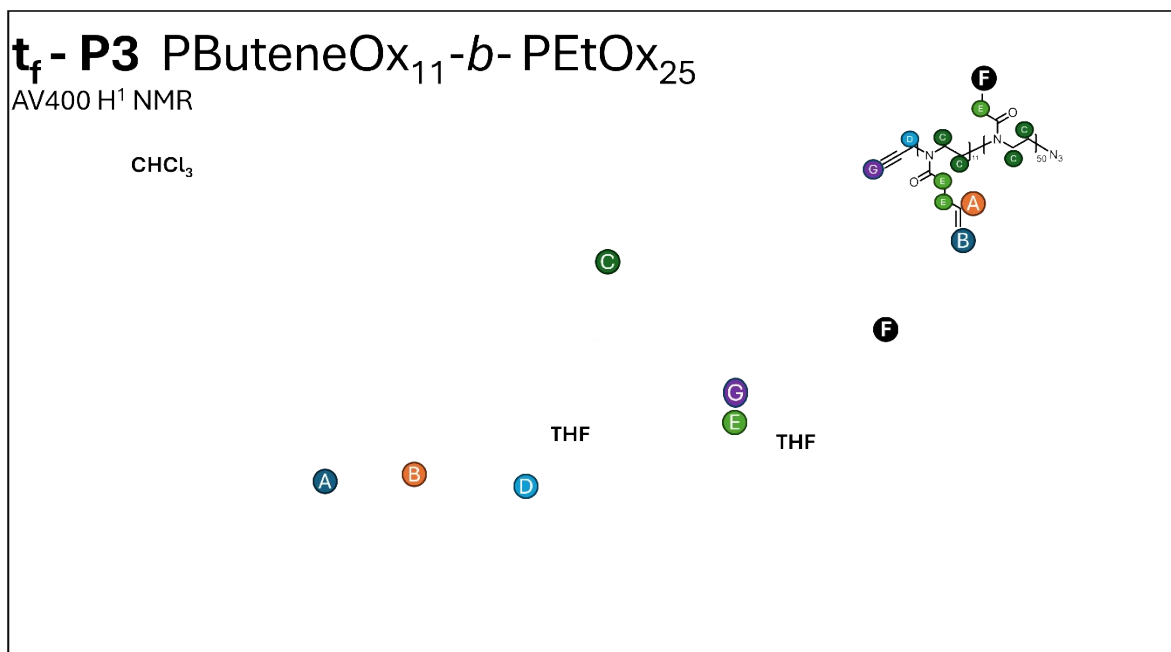


Figure S9: The assigned t_f ¹H NMR Spectrum of **P3**(CDCl₃, 400 MHz).

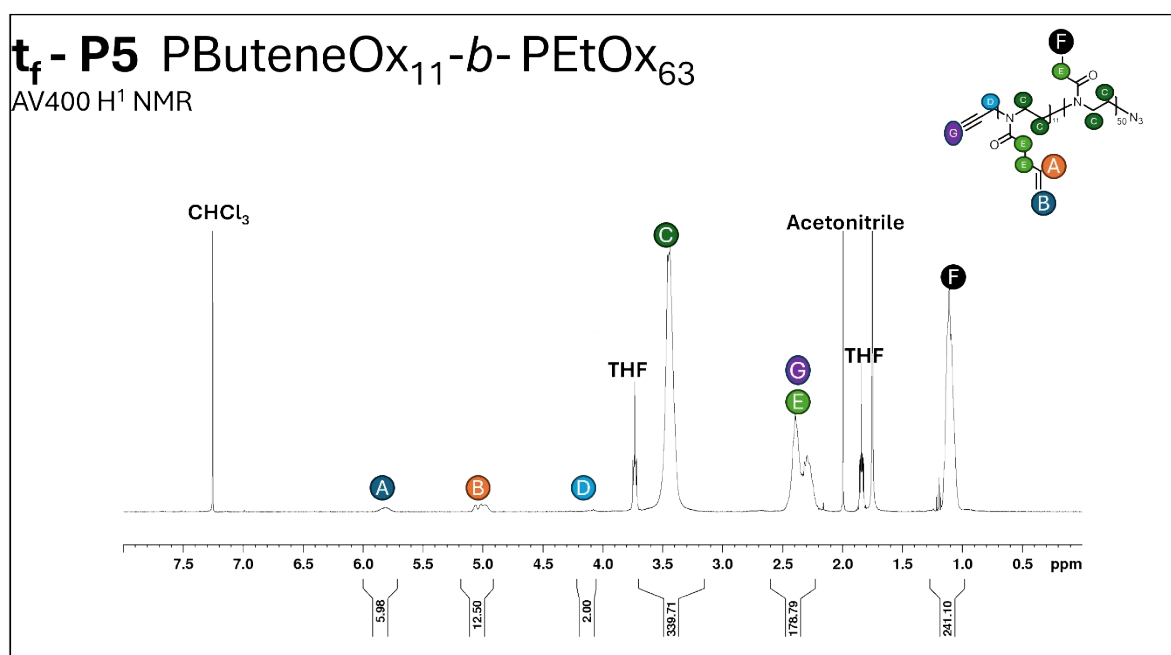


Figure S10: The assigned t_f ¹H NMR Spectrum of **P5**(CDCl₃, 400 MHz).

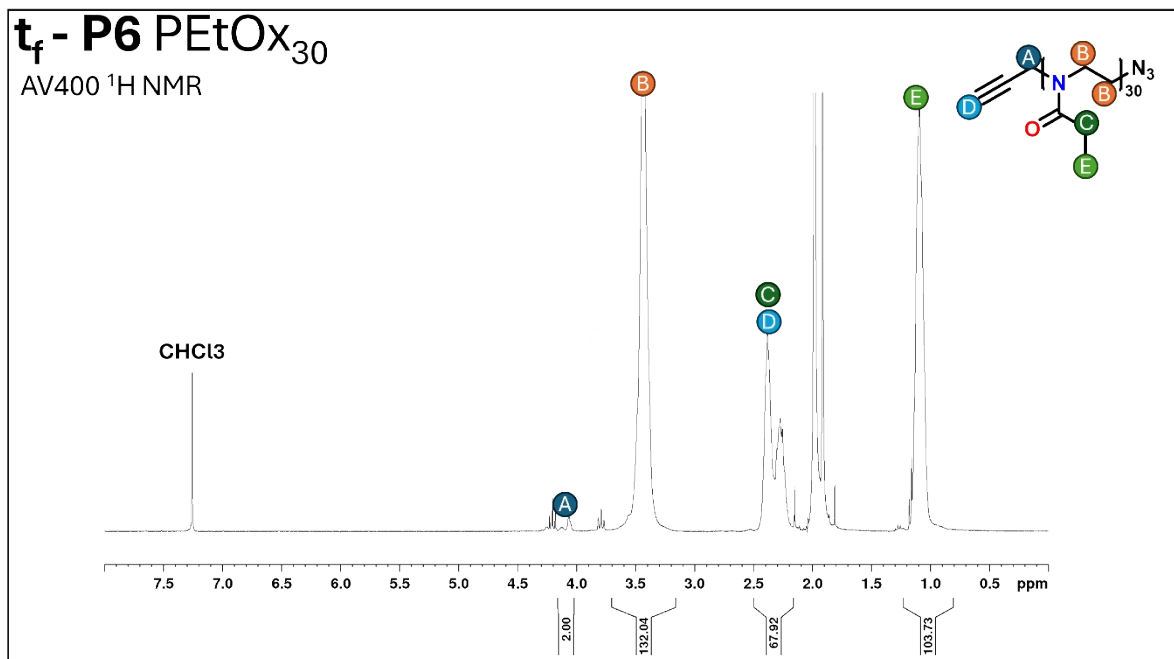


Figure S11: The assigned t_f ¹H NMR Spectrum of P6(CDCl₃, 400 MHz).

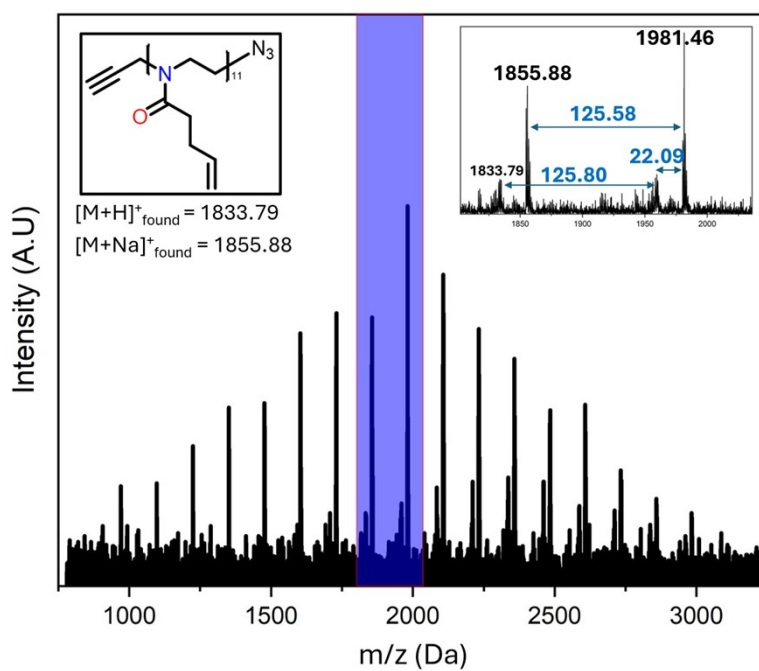


Figure S12: MALDI-ToF MS of P1. Confirming the telechelic structure.

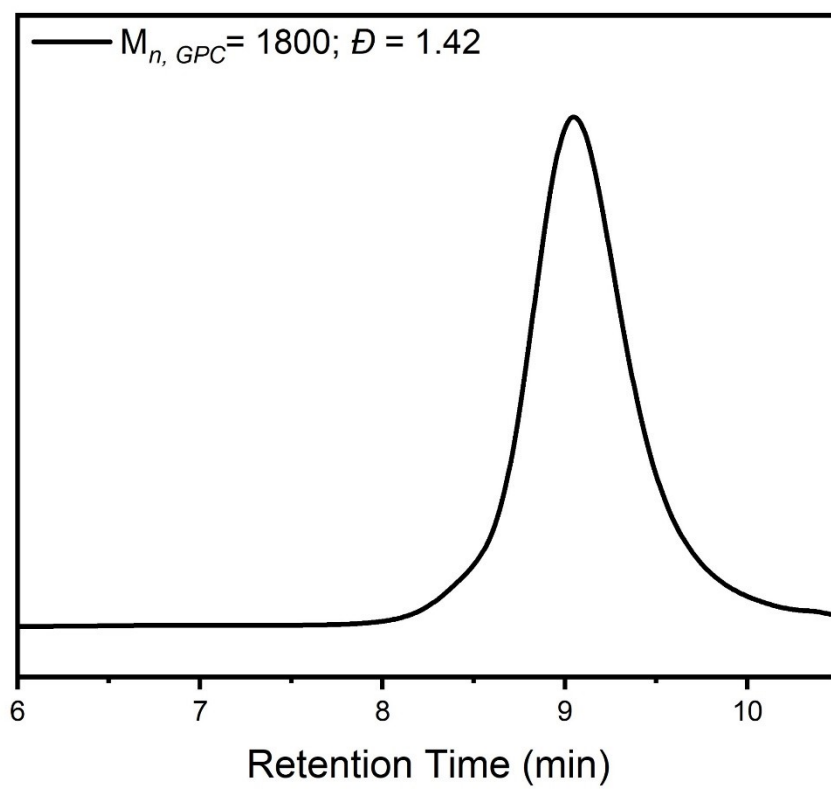


Figure S13: GPC chromatogram of **P1**. The GPC was carried out in THF.

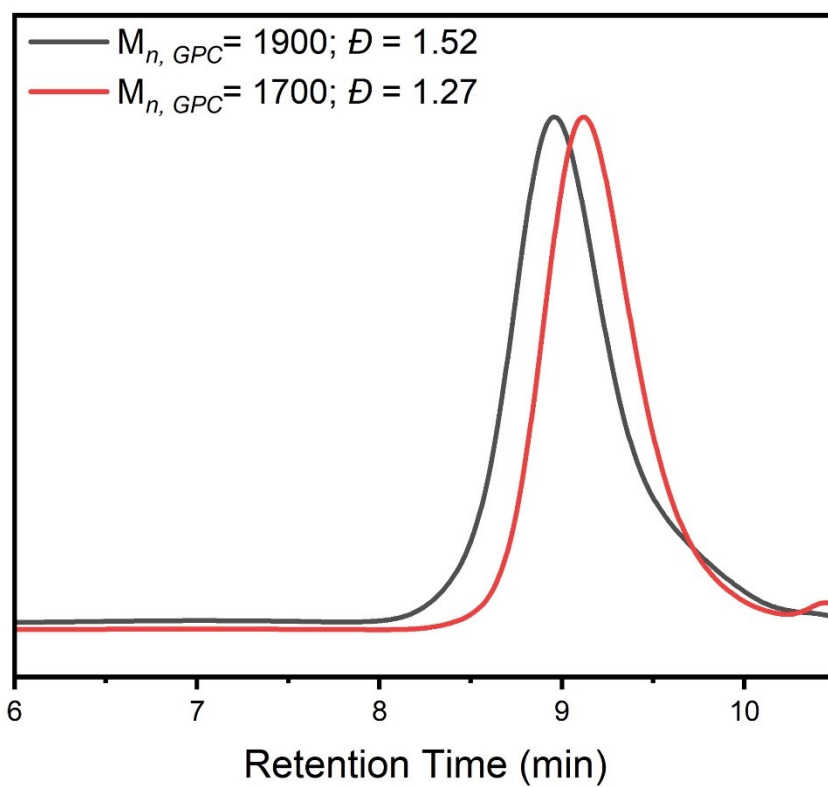


Figure S14: GPC chromatogram of **P2**. With the red trace showing the 1st block of the polymer and the black trace showing the addition of the 2nd block. The GPC was carried out in THF.

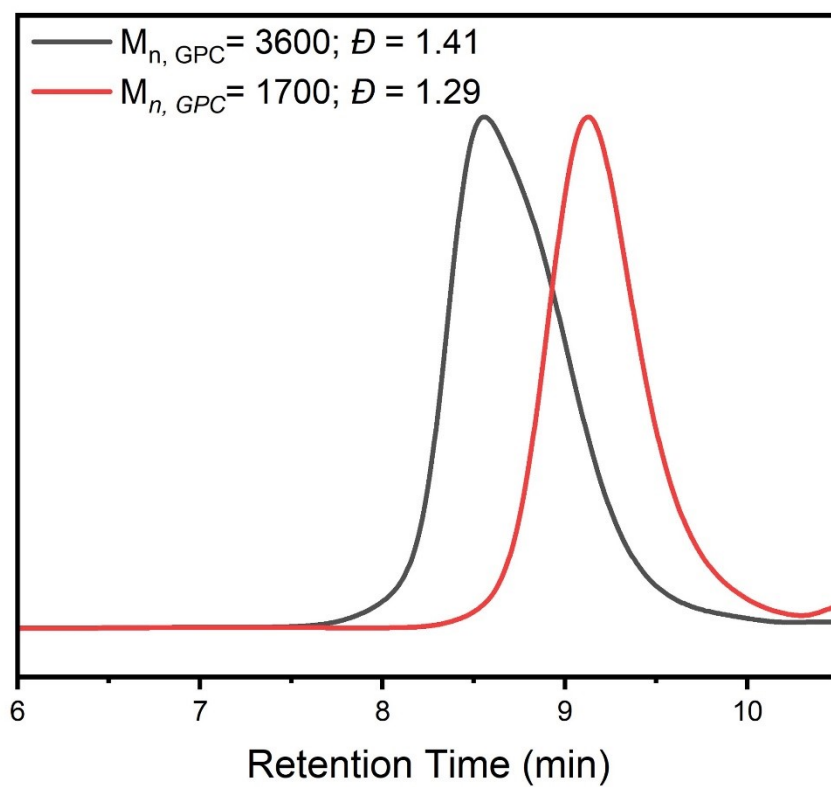


Figure S15: GPC chromatogram of **P3**. With the red trace showing the 1st block of the polymer and the black trace showing the addition of the 2nd block. The GPC was carried out in THF.

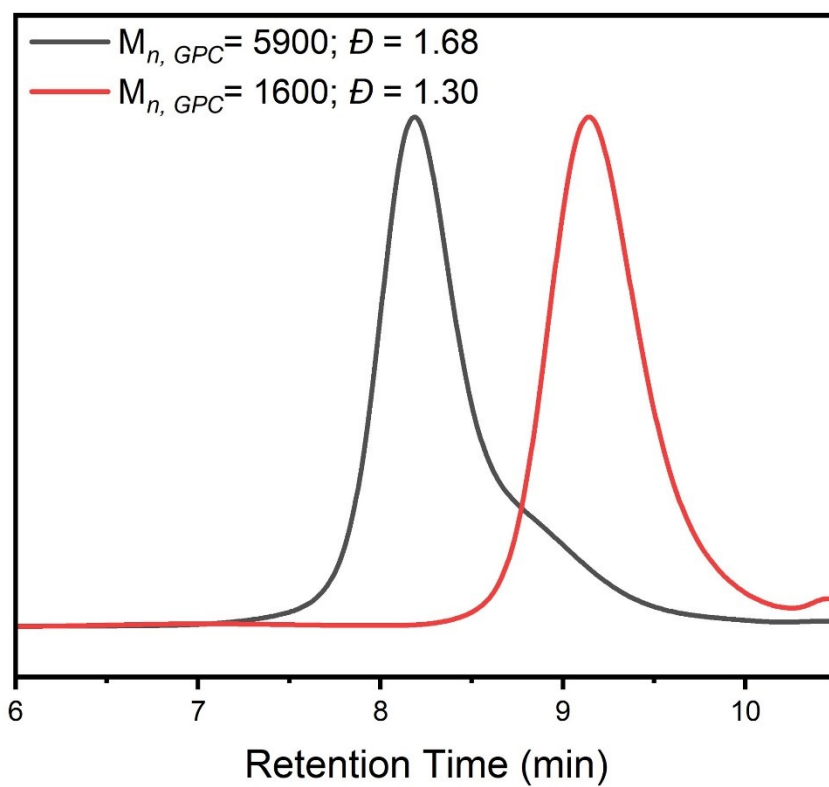


Figure S16: GPC chromatogram of **P4**. With the red trace showing the 1st block of the polymer and the black trace showing the addition of the 2nd block. The GPC was carried out in THF.

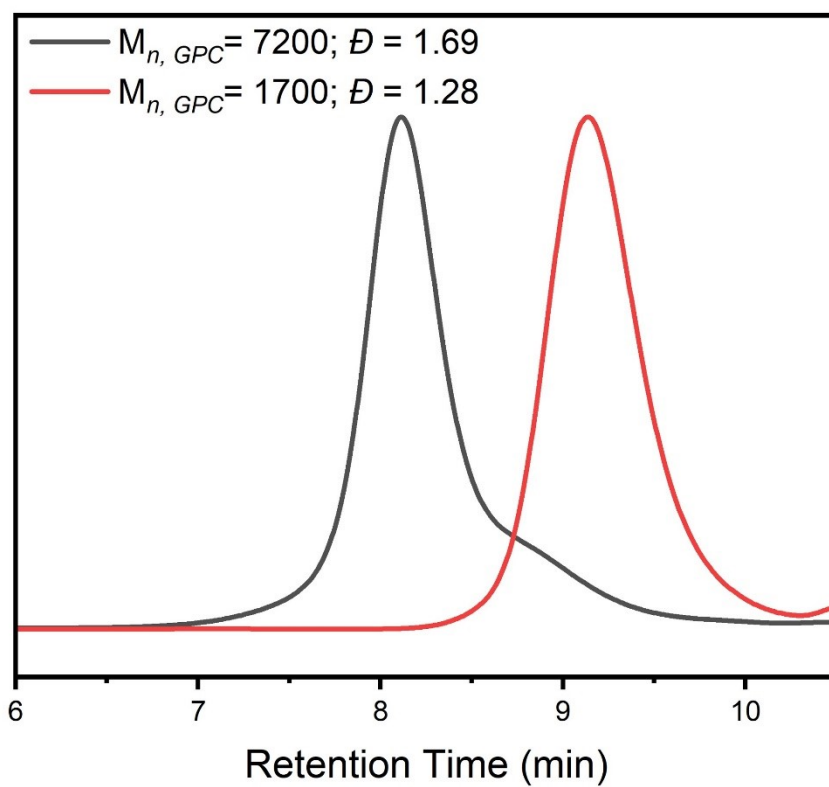


Figure S17: GPC chromatogram of **P5**. With the red trace showing the 1st block of the polymer and the black trace showing the addition of the 2nd block. The GPC was carried out in THF.

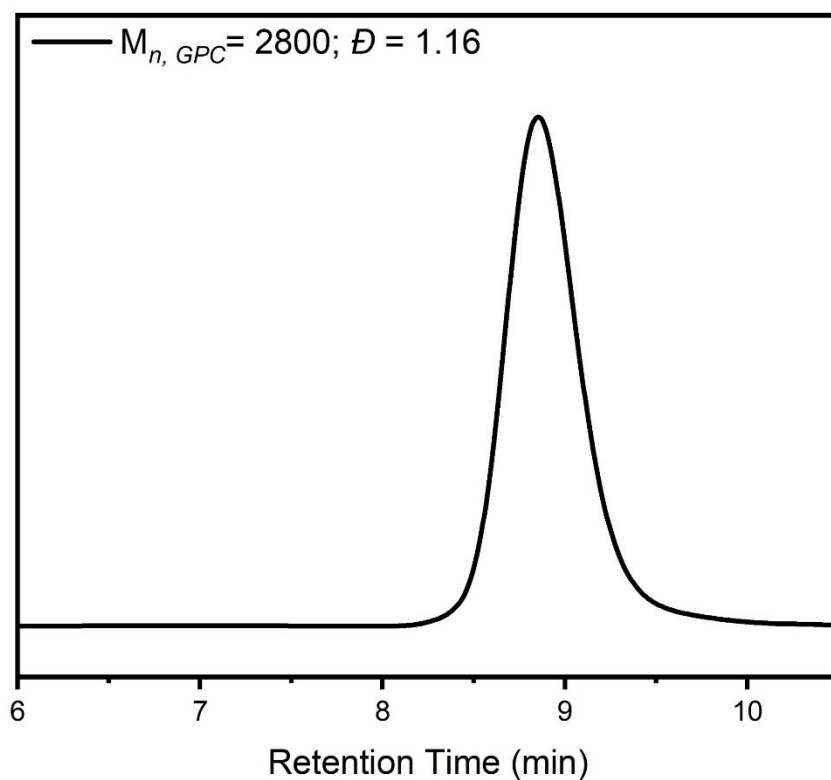


Figure S18: GPC chromatogram of **P6**. The GPC was carried out in THF.

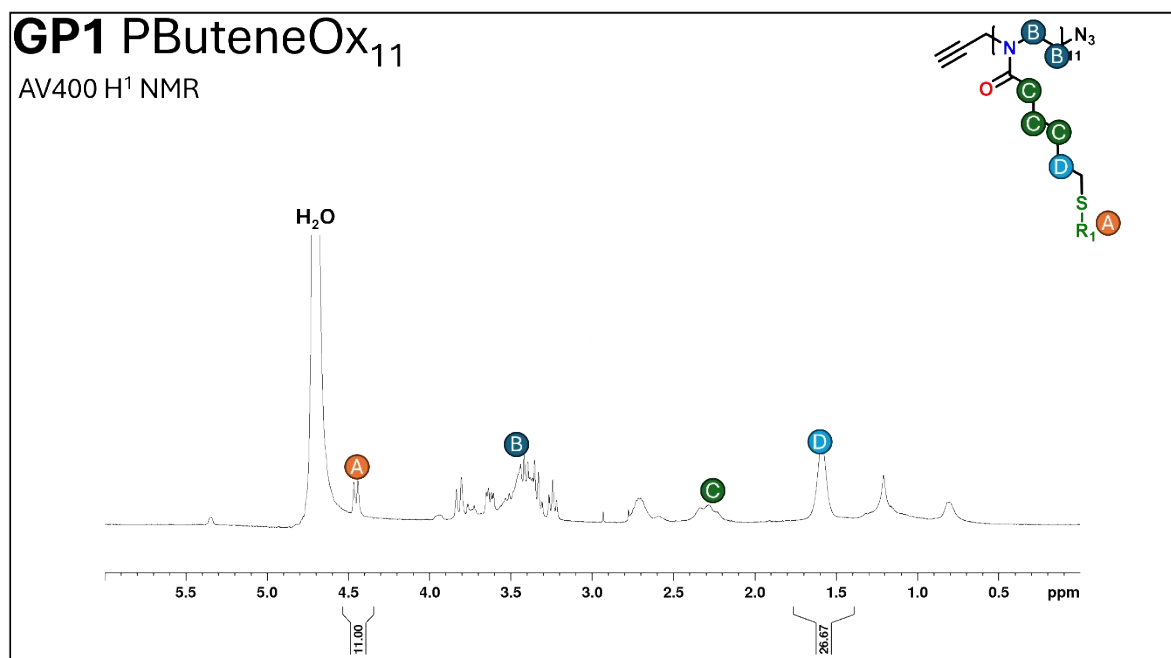


Figure S19: The assigned final ¹H NMR Spectrum of **GP1** (D₂O 400 MHz).

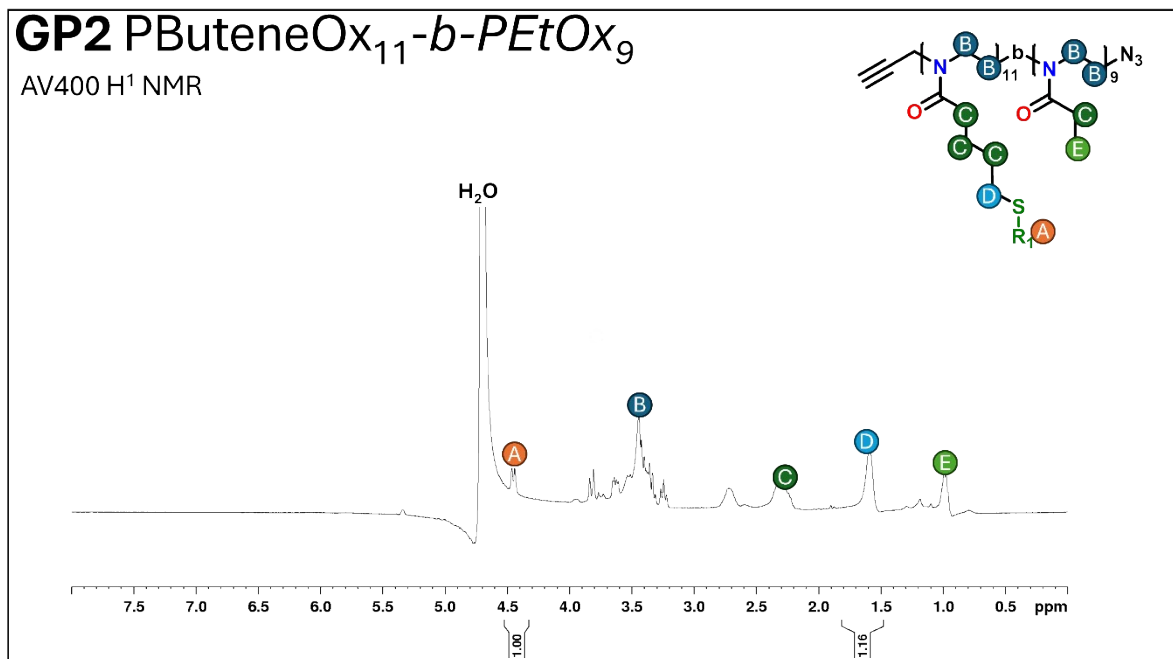


Figure S20: The assigned final ¹H NMR Spectrum of **GP2** (D₂O 400 MHz).

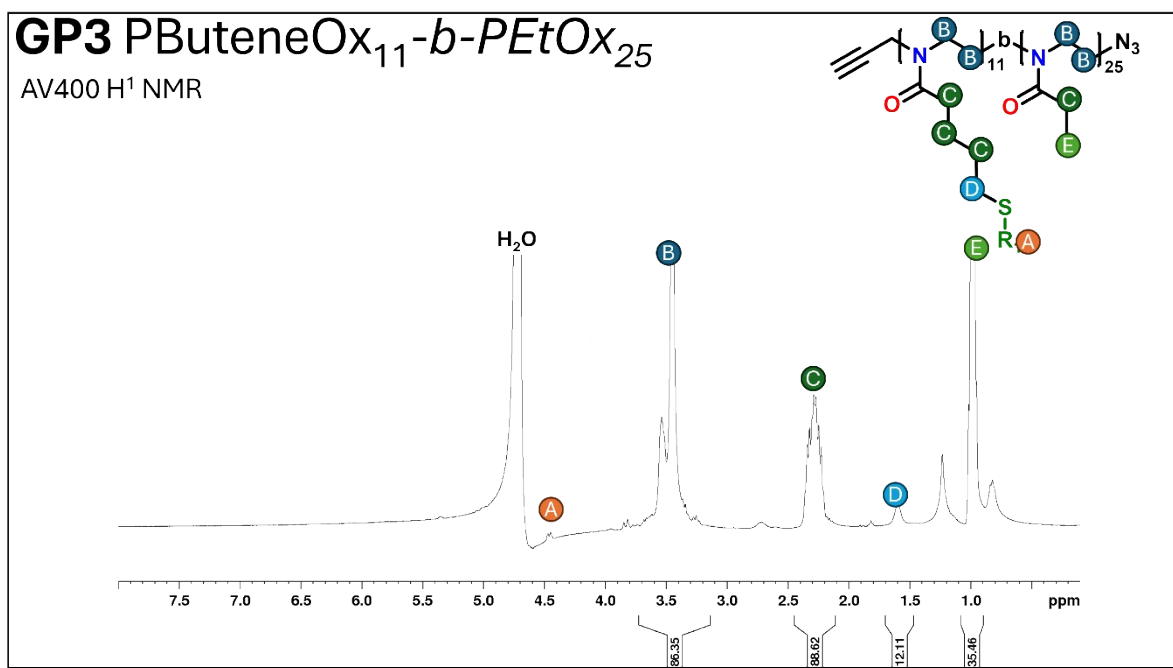


Figure S21: The assigned final ¹H NMR Spectrum of **GP3** (D₂O 400 MHz).

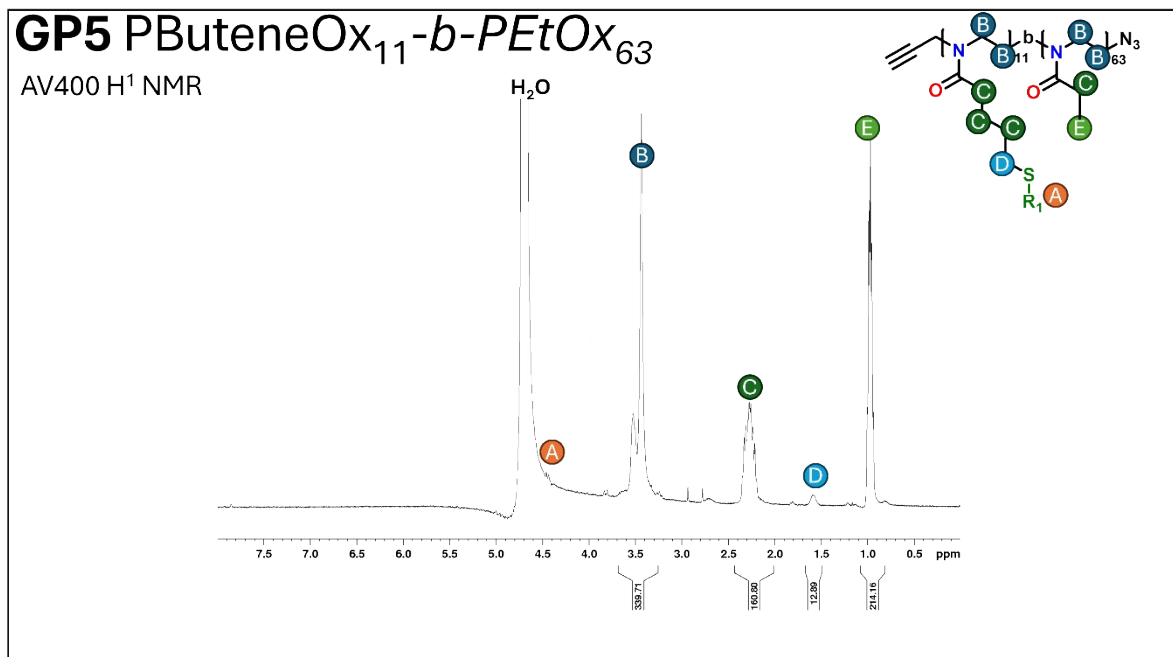


Figure S22: The assigned final ¹H NMR Spectrum of **GP5** (D₂O 400 MHz).

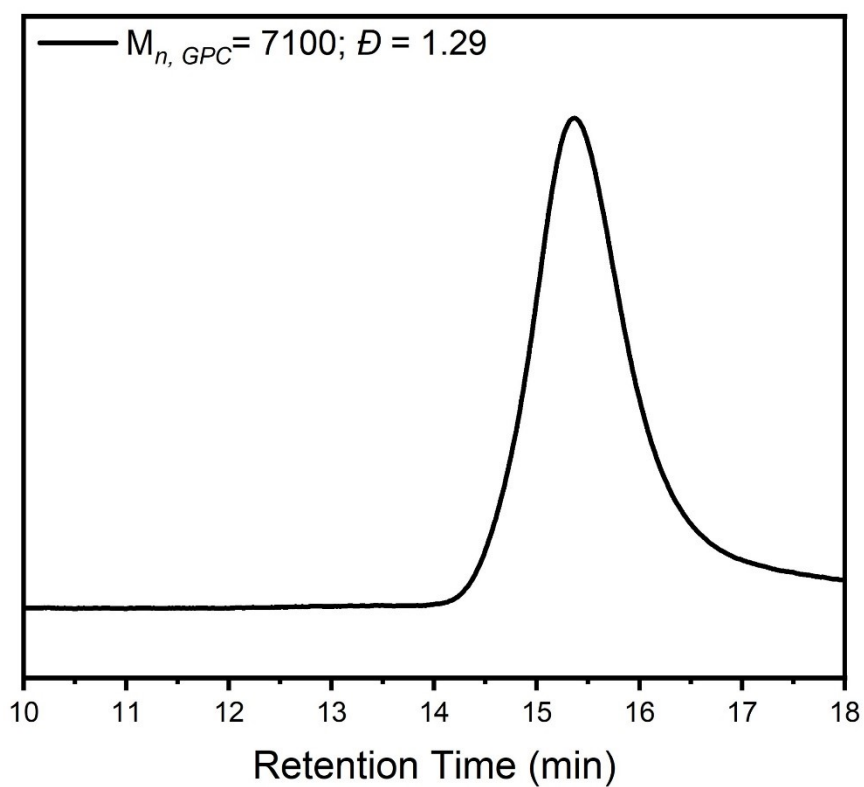


Figure S23: GPC chromatogram of the final **GP1**. The GPC was carried out in DMF.

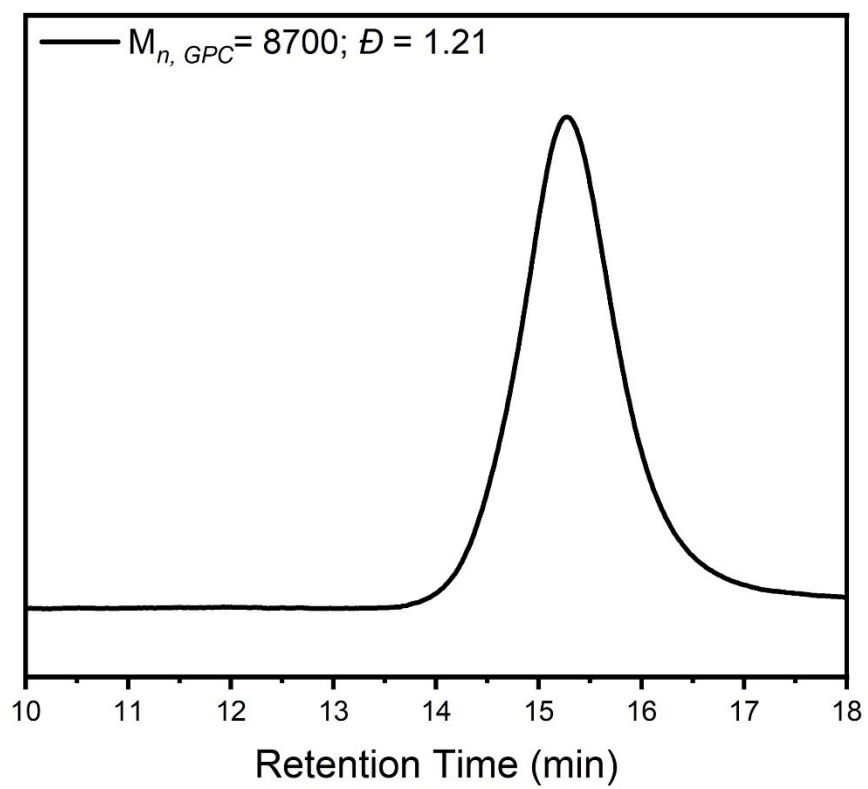


Figure S24: GPC chromatogram of the final **GP2**. The GPC was carried out in DMF.

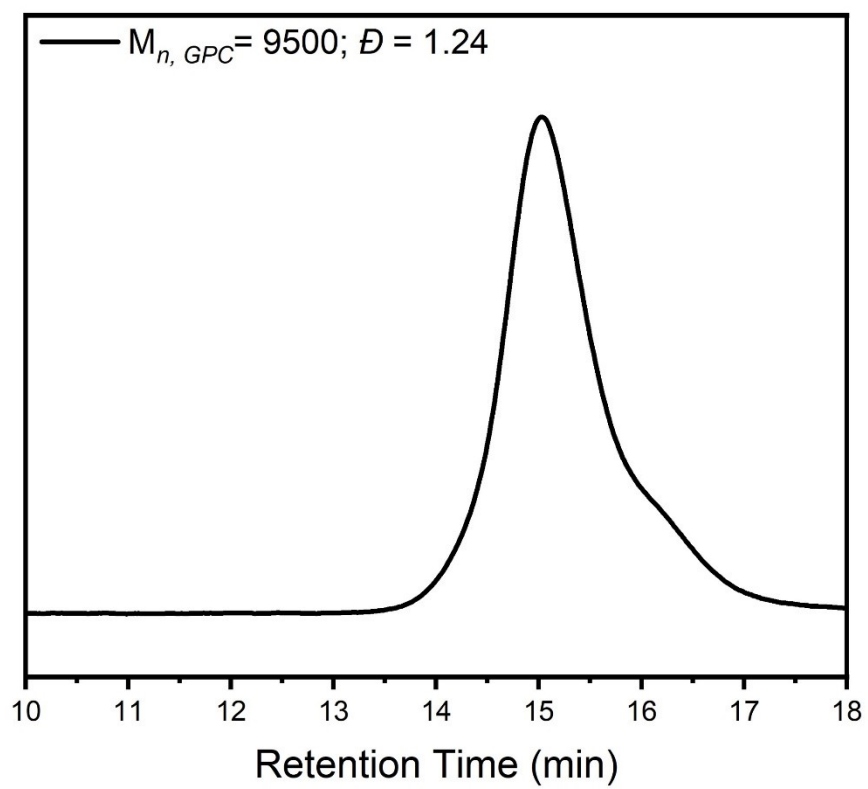


Figure S25: GPC chromatogram of the final **GP3**. The GPC was carried out in DMF.

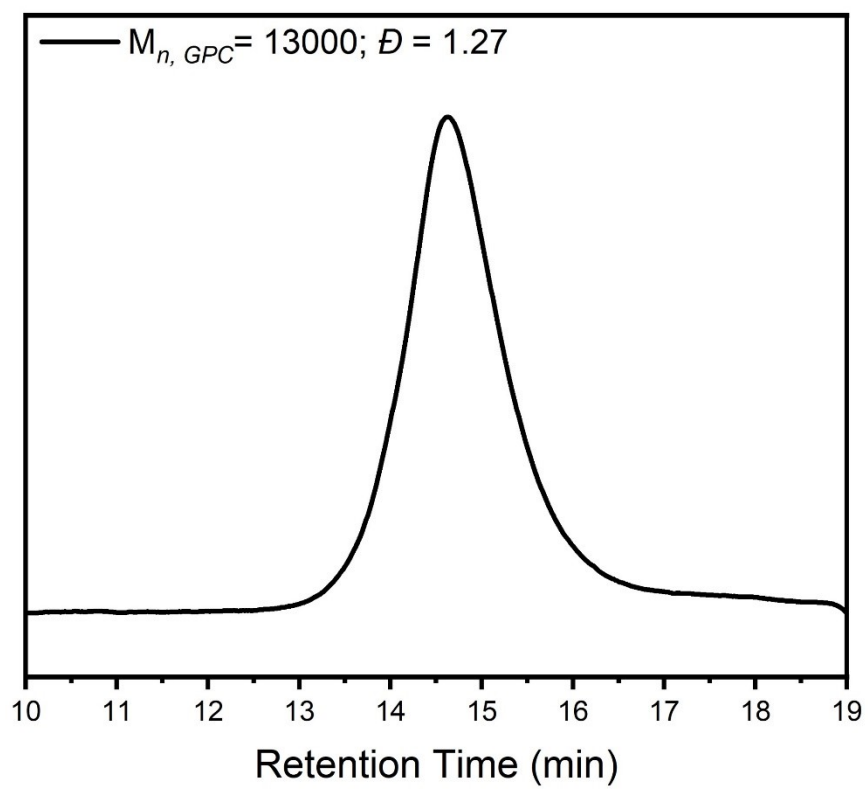


Figure S26: GPC chromatogram of the final GP4. The GPC was carried out in DMF.

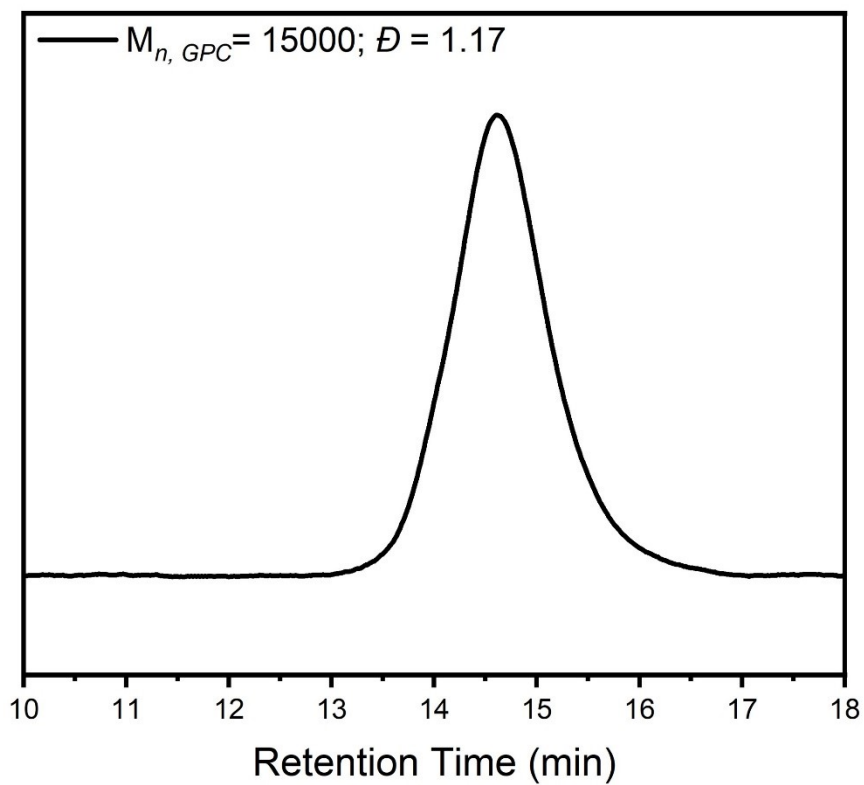


Figure S27: GPC chromatogram of the final **GP5**. The GPC was carried out in DMF.

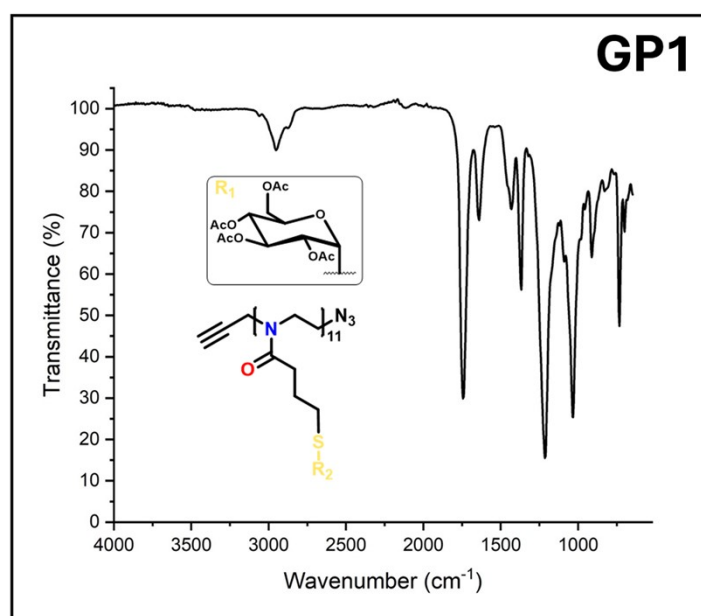


Figure S28: FT-IR spectrum of **GP1** before deacetylation.

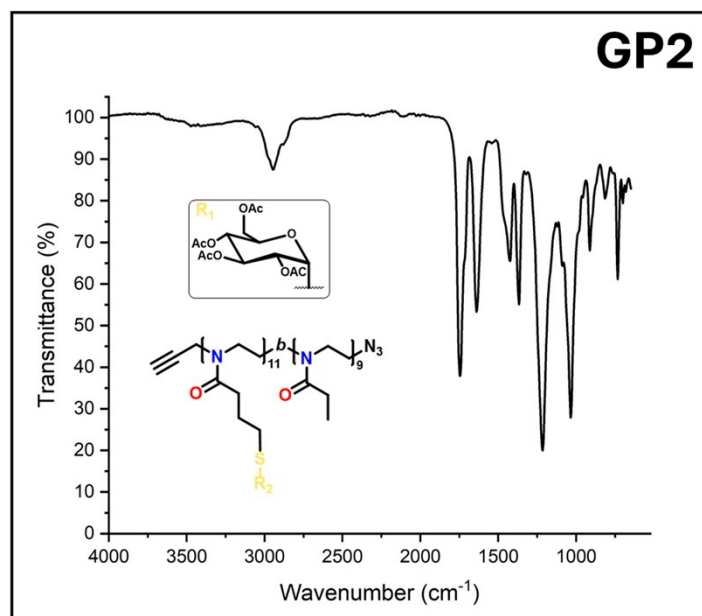


Figure S29: FT-IR spectrum of **GP2** before deacetylation.

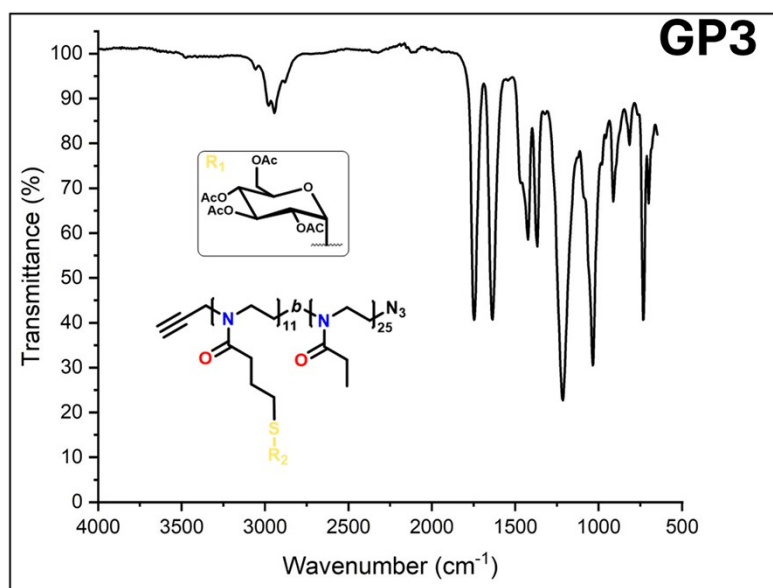


Figure S30: FT-IR spectrum of **GP3** before deacetylation.

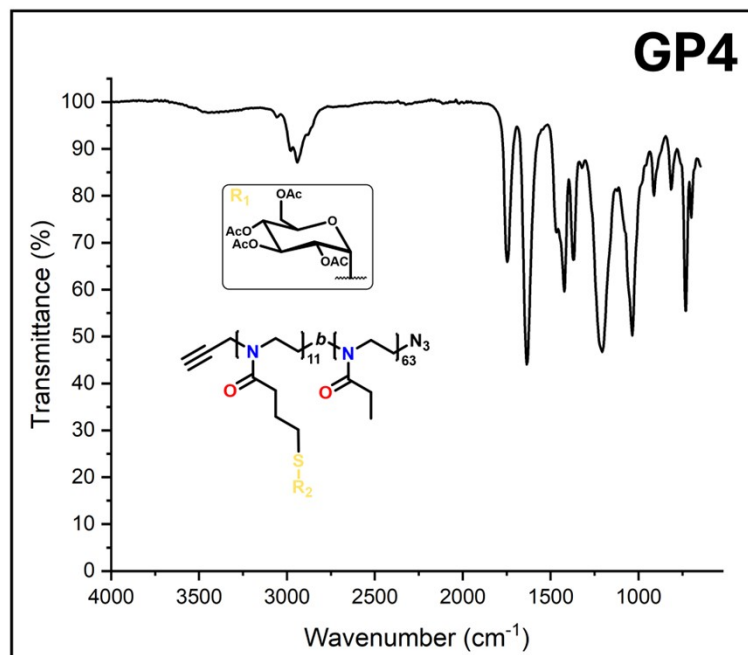


Figure S31: FT-IR spectrum of **GP4** before deacetylation.

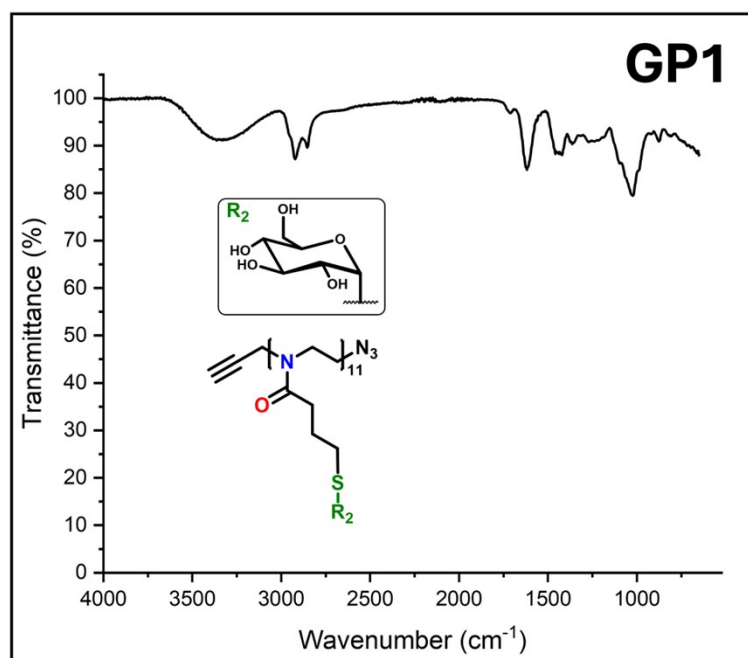


Figure S32: FT-IR spectrum of **GP1** after deacetylation.

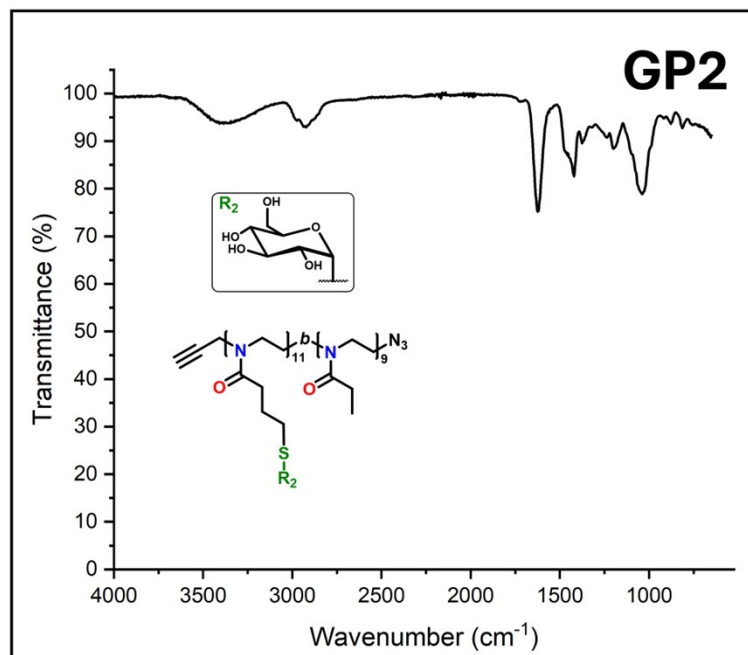


Figure S33: FT-IR spectrum of **GP2** after deacetylation.

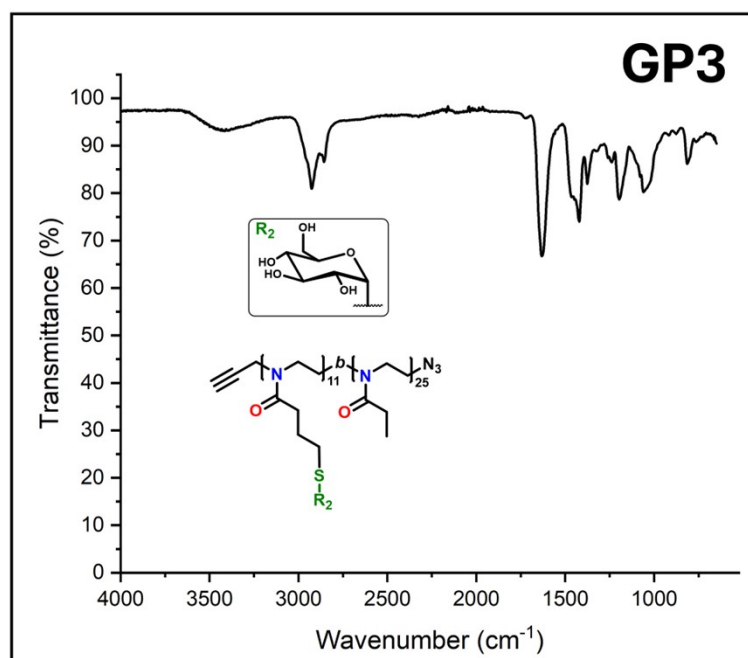


Figure S34: FT-IR spectrum of **GP3** after deacetylation.

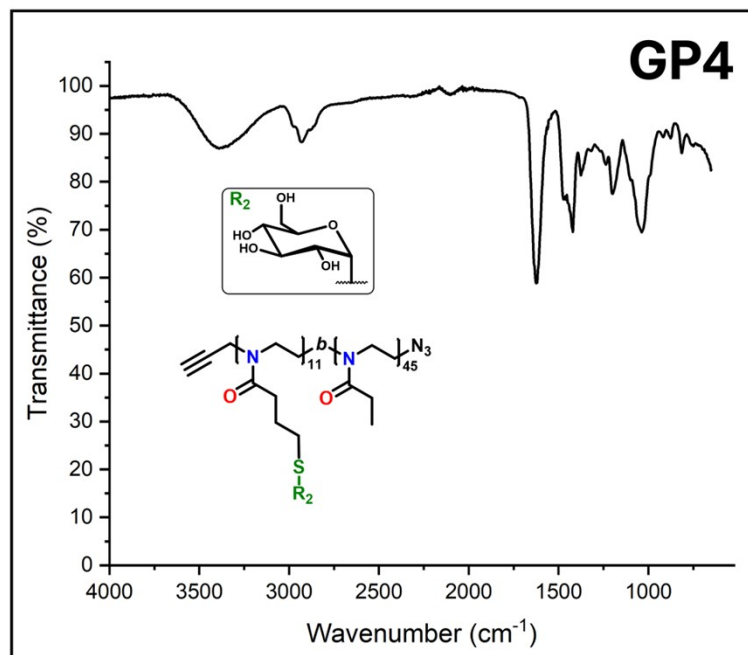


Figure S35: FT-IR spectrum of **GP4** after deacetylation.

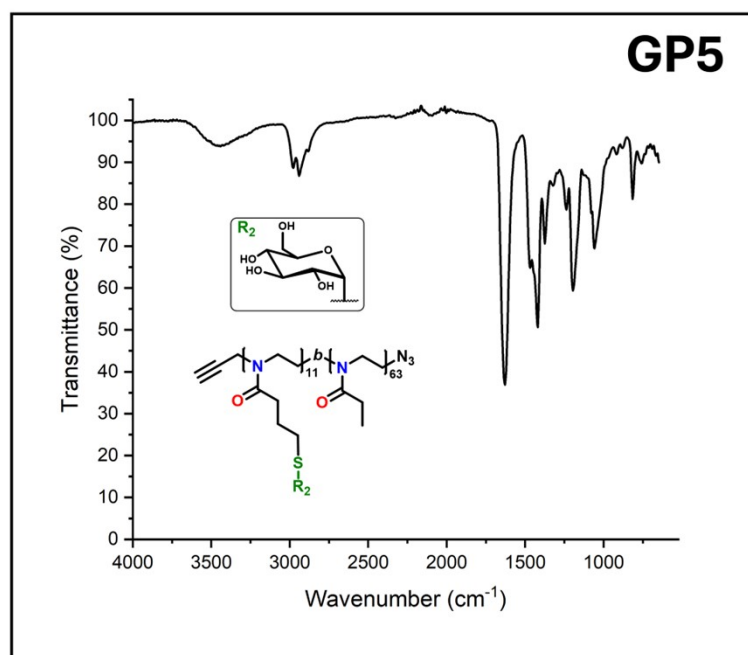


Figure S36: FT-IR spectrum of **GP5** after deacetylation.

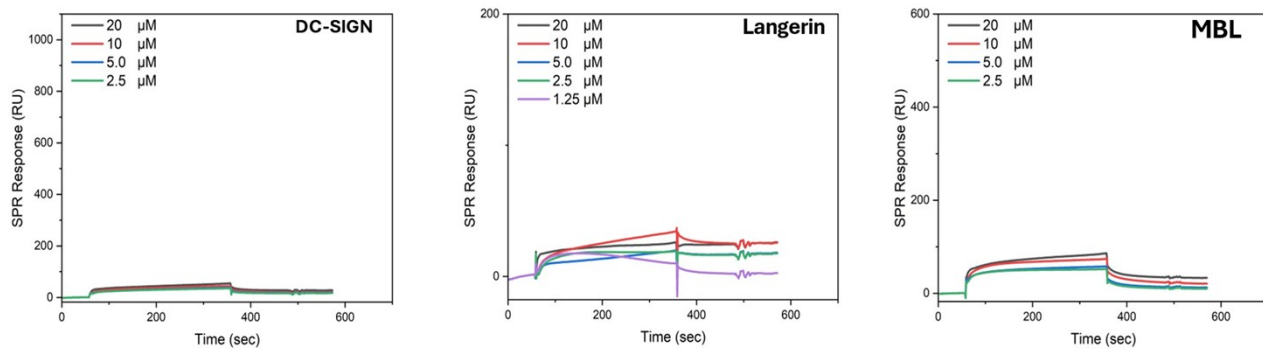


Figure S37: SPR binding curves of the negative control **P6** against the lectins DC-SIGN, MBL and Langerin.