

Supporting Information for

AB-type Polyaddition Route to Thermoplastic Polyurethanes from Fatty Acid Derivatives

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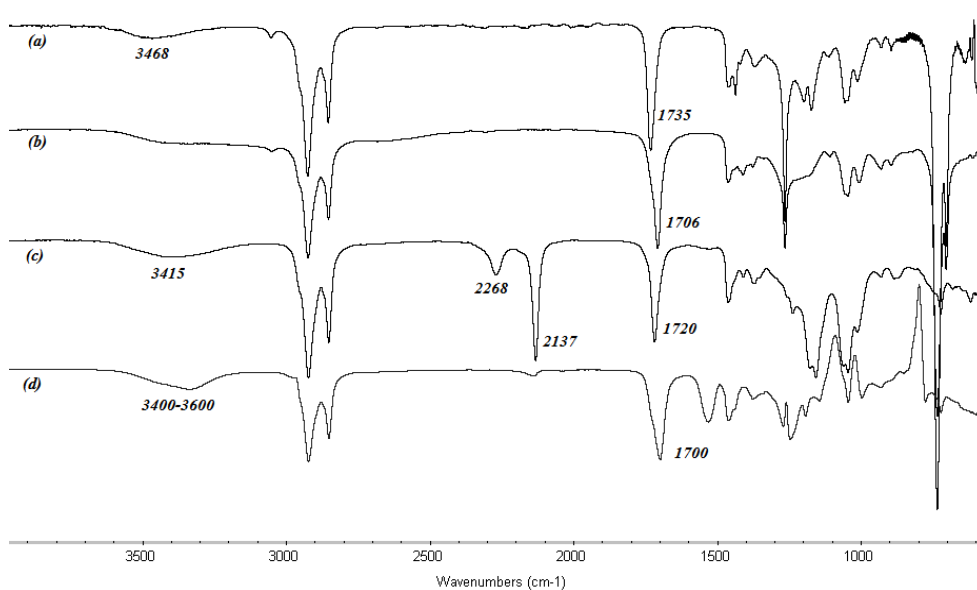


Figure S1. Stacked FTIR spectra of intermediates and monomers from MO: (a) MHETO (2), (b) HETOA (3), (c) HETOAz (4), (d) MHETHC (5)

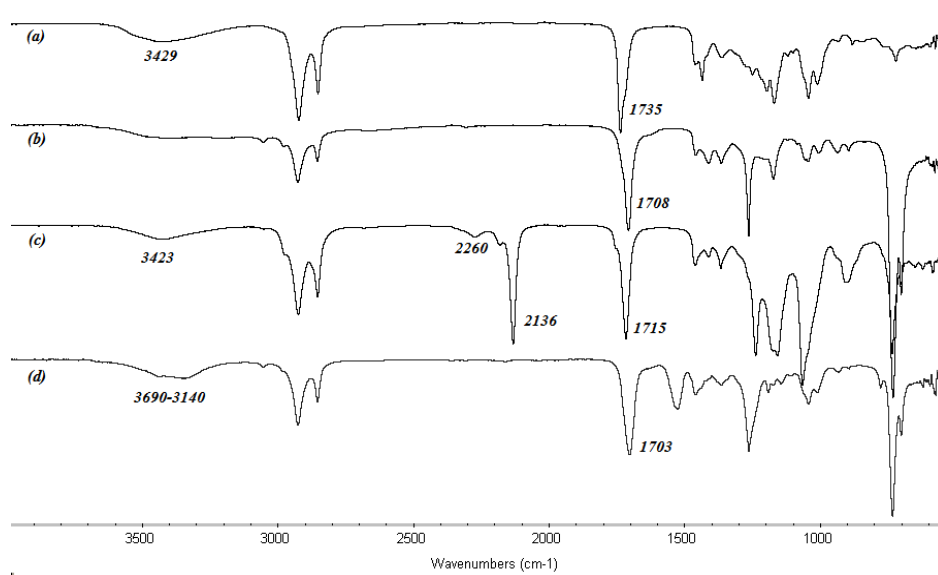


Figure S2. Stacked FTIR spectra of intermediates and monomers from MUD: (a) MHETU (7), (b) HETUA (8), (c) HETUAz (9), (d) MHETDC (10)

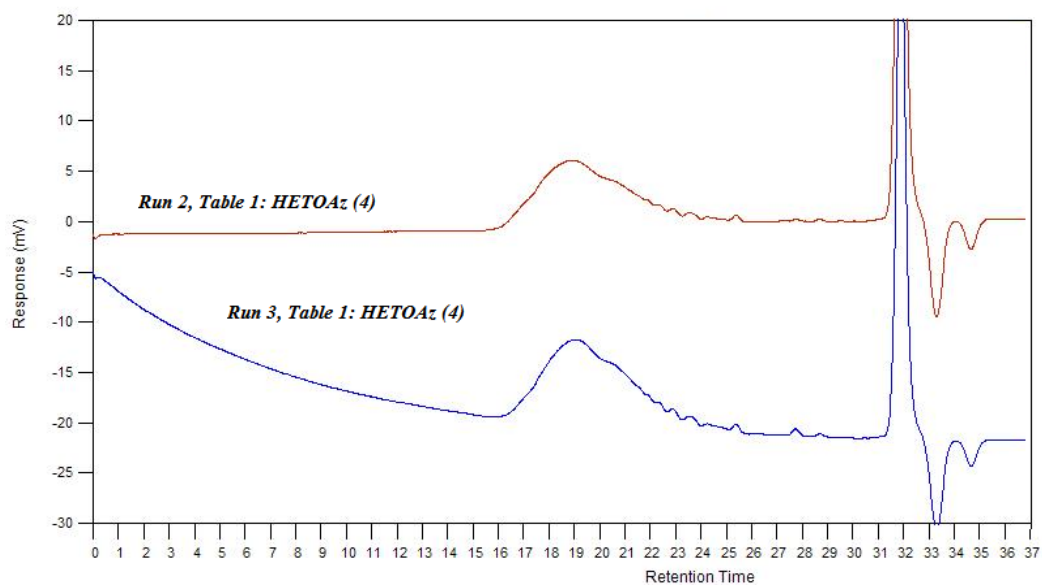


Figure S3. SEC traces of HETOAz (4) polymerization samples

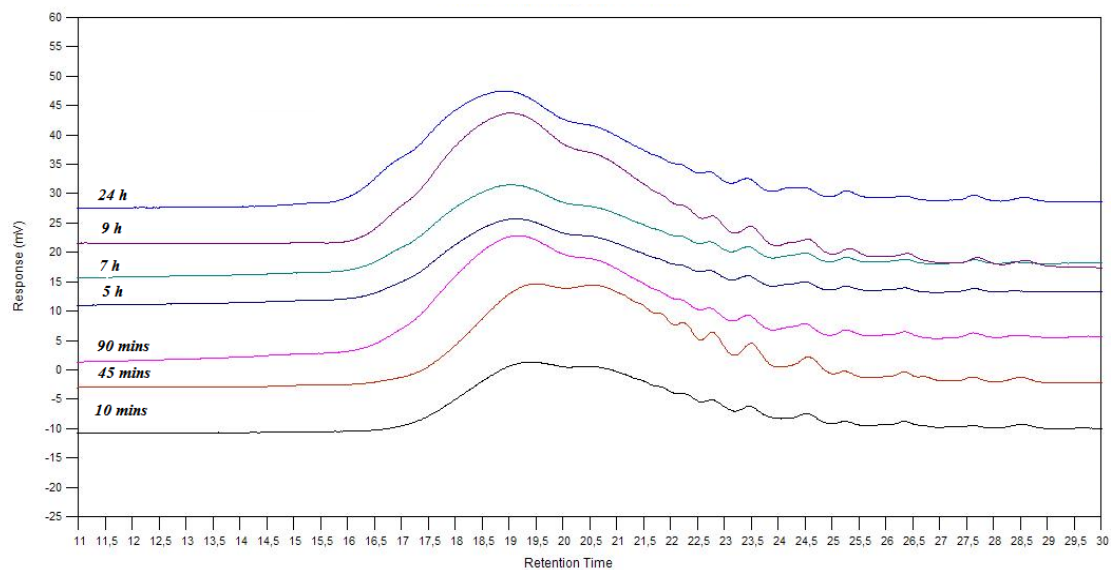


Figure S4. SEC traces of HETOAz (4) polymerization samples as a function of time: Reaction was conducted at 80 °C, in bulk and without catalyst, DBTDL

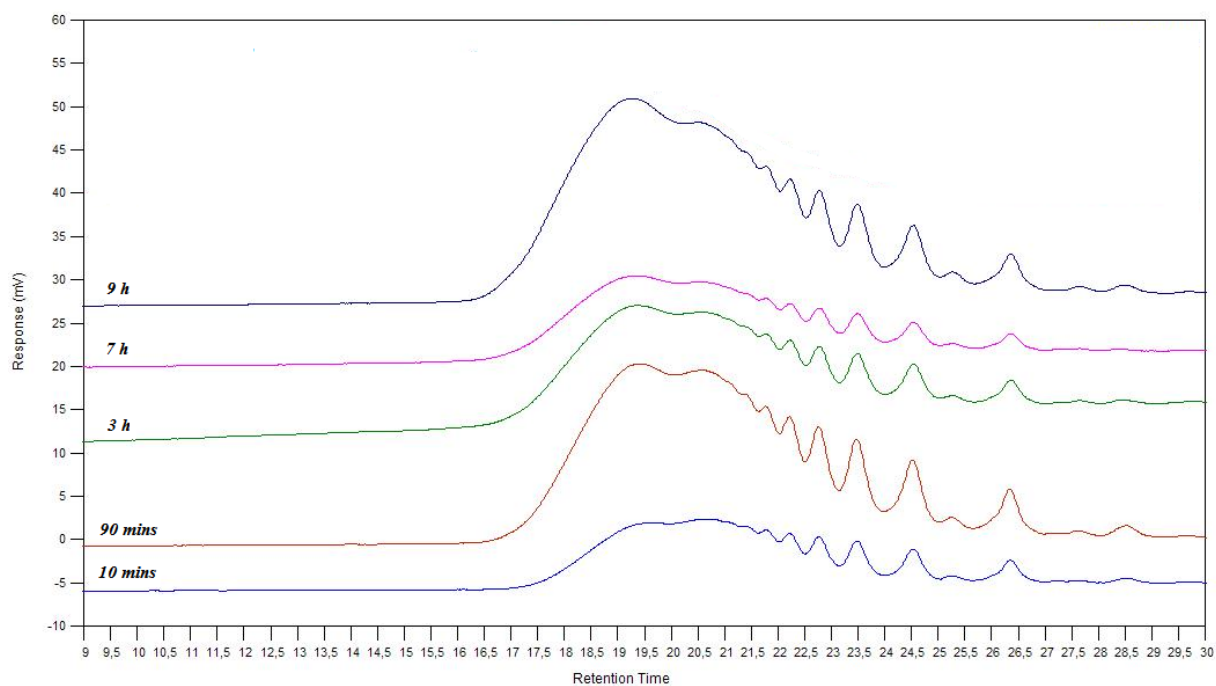


Figure S5. SEC traces of HETOAz (**4**) polymerization samples as a function of time: Reaction was conducted at 80 °C, in bulk and with catalyst, DBTDL

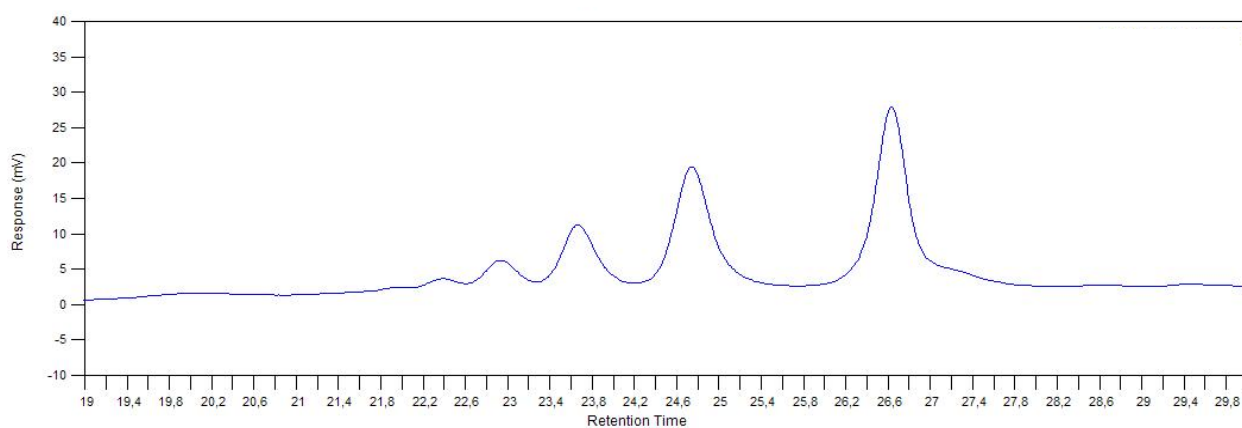


Figure S6. SEC traces of MHETHC (**5**) polymerization sample in oligomer stage: Reaction was conducted by melt-transurethane method

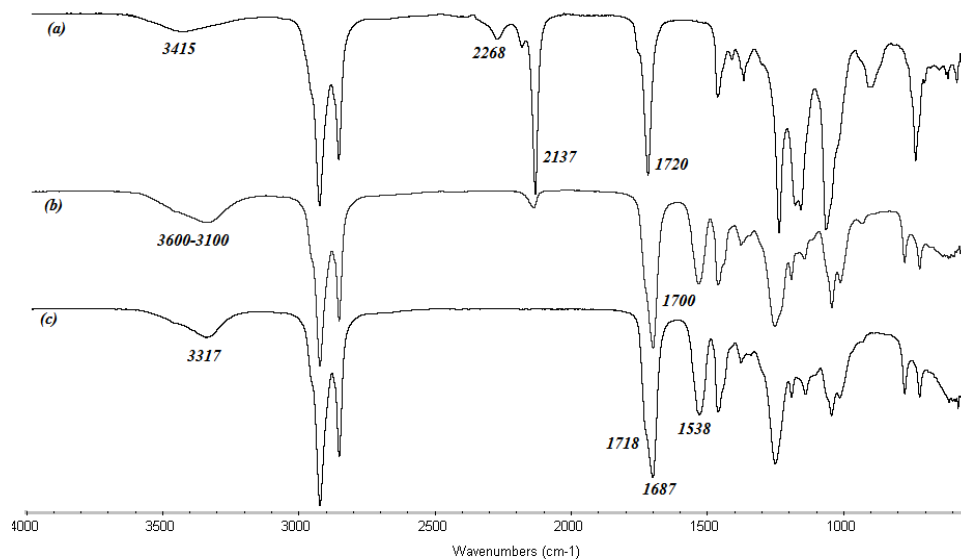


Figure S7. Stacked FTIR spectra of (a) HETOAz (**4**), (b) MHETHC (**5**), (c) PU by melt-transurethane method

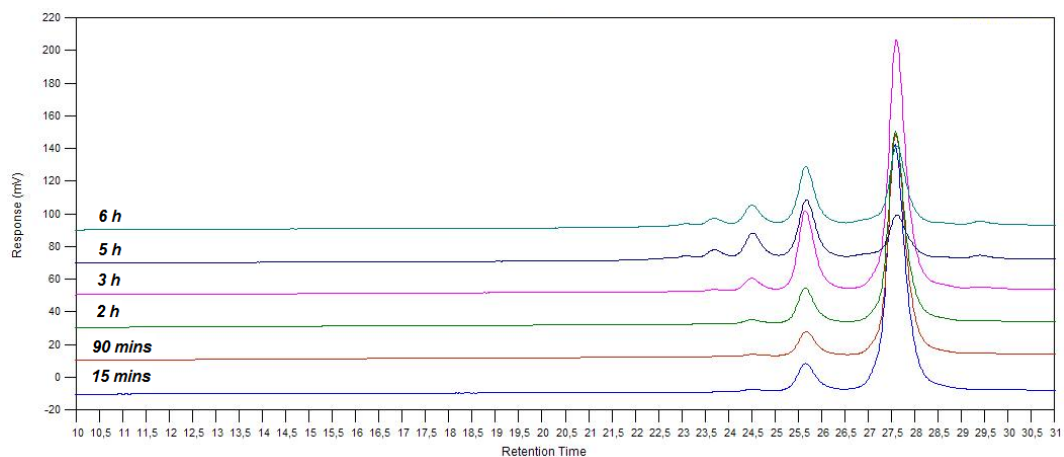


Figure S8. SEC traces of HETUAz (**5**) polymerization samples as a function of time: Reaction was conducted at 60 °C, in THF

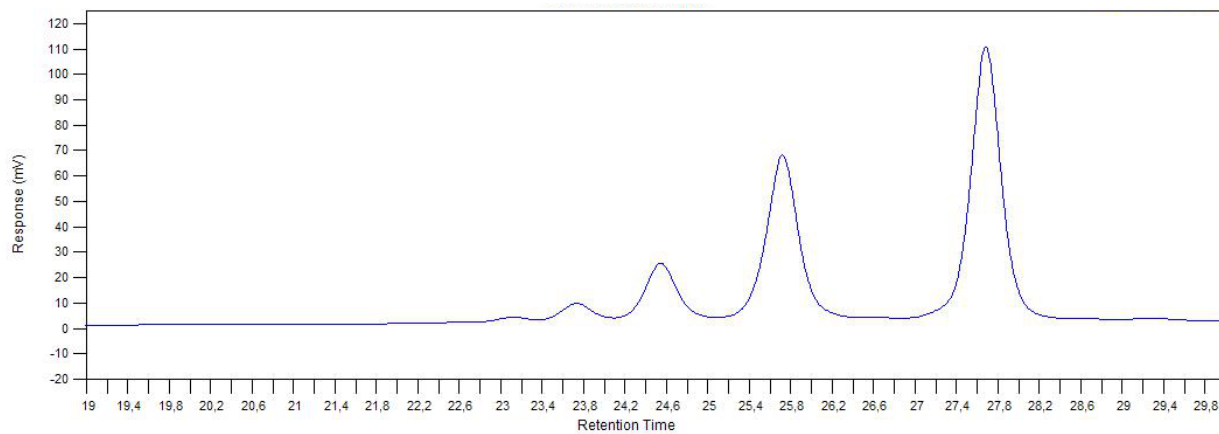


Figure S9. SEC traces of MHETDC (**10**) polymerization sample in oligomer stage: Reaction was conducted by melt-transurethane method

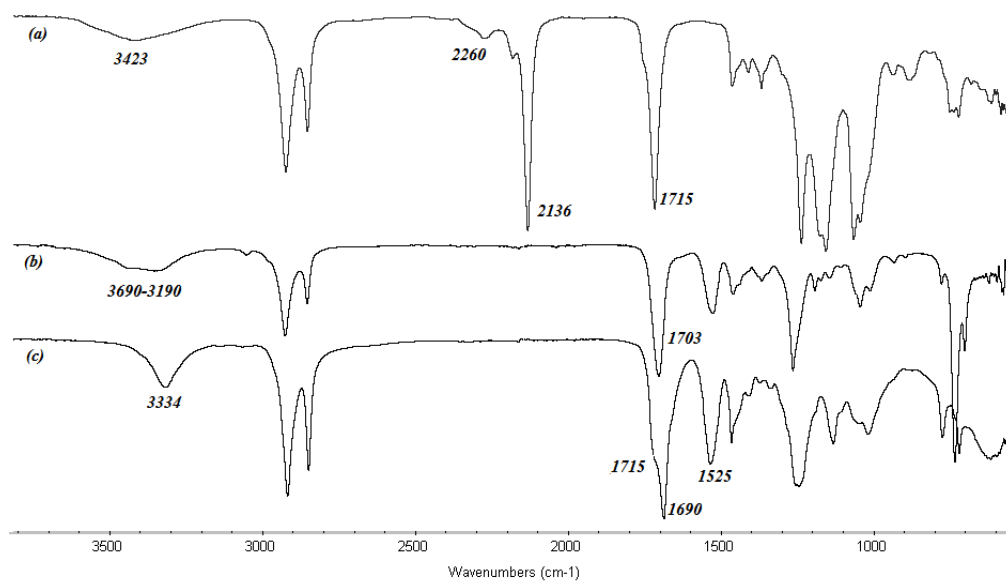


Figure S10. Stacked FTIR spectra of (a) HETUAz (**9**), (b) MHETDC (**10**), (c) PU by melt-transurethane method

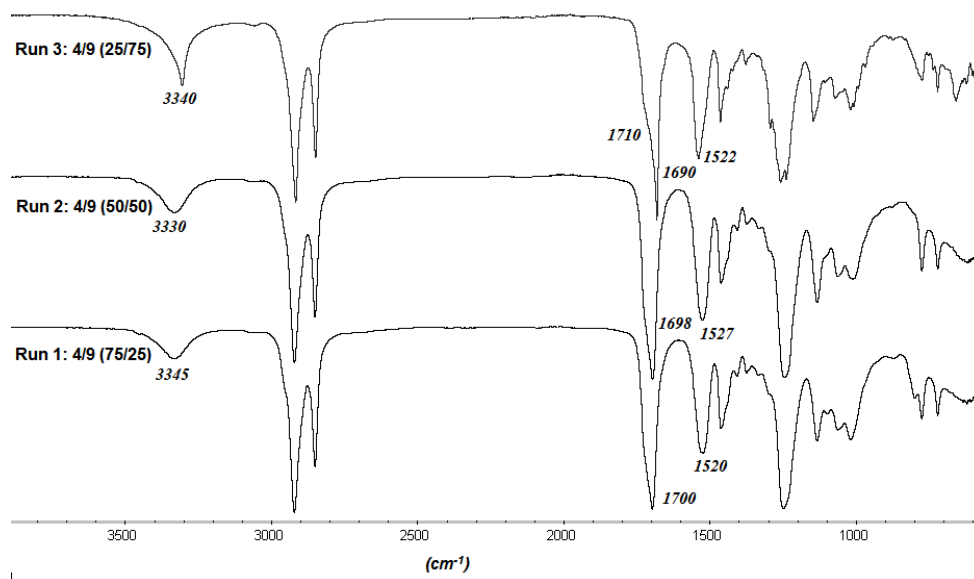


Figure S11. Stacked FTIR spectra of PUs from varying compositions of HETOAz (**4**) and HETUAz (**9**)

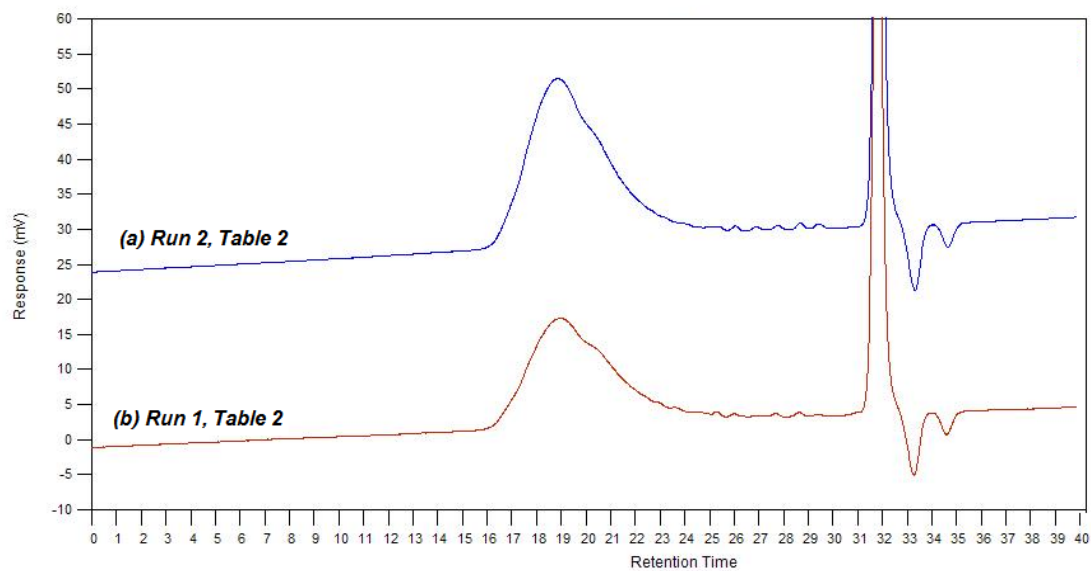


Figure S12. SEC traces of PUs : (a) **4/9** : 50/50; (b) **4/9** : 75/25.

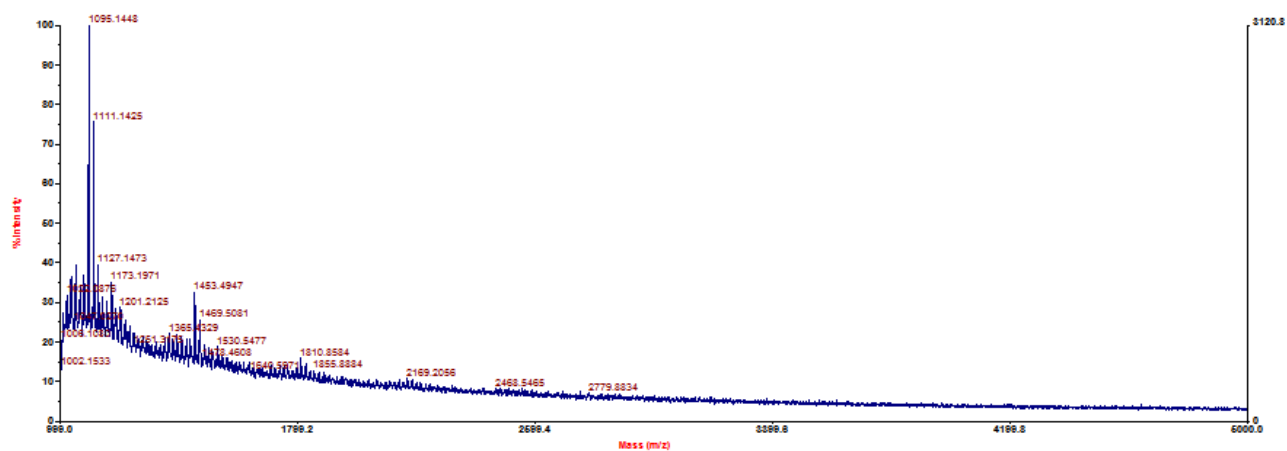


Figure S13. MALDI-TOF spectrum of PU obtained from HETOAz (4) (Table 1, Run 1)

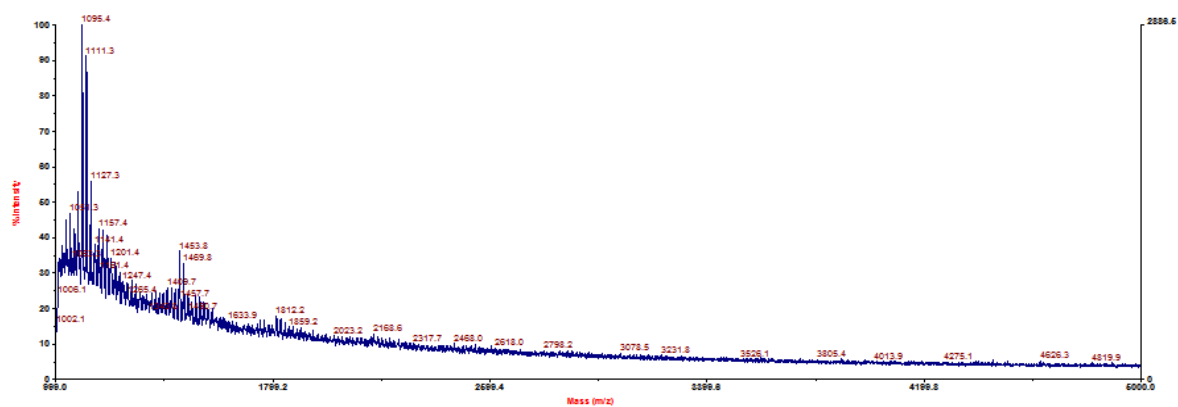


Figure S14. MALDI-TOF spectrum of PU obtained from HETOAz (4) (Table 1, Run 3)

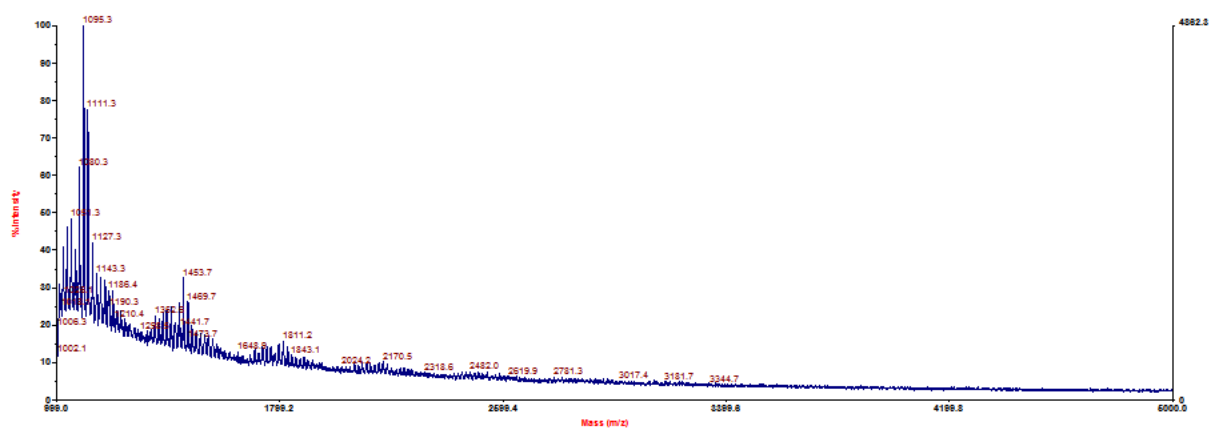


Figure S15. MALDI-TOF spectrum of PU obtained from HETOAz (**4**) (Table 1, Run 4)

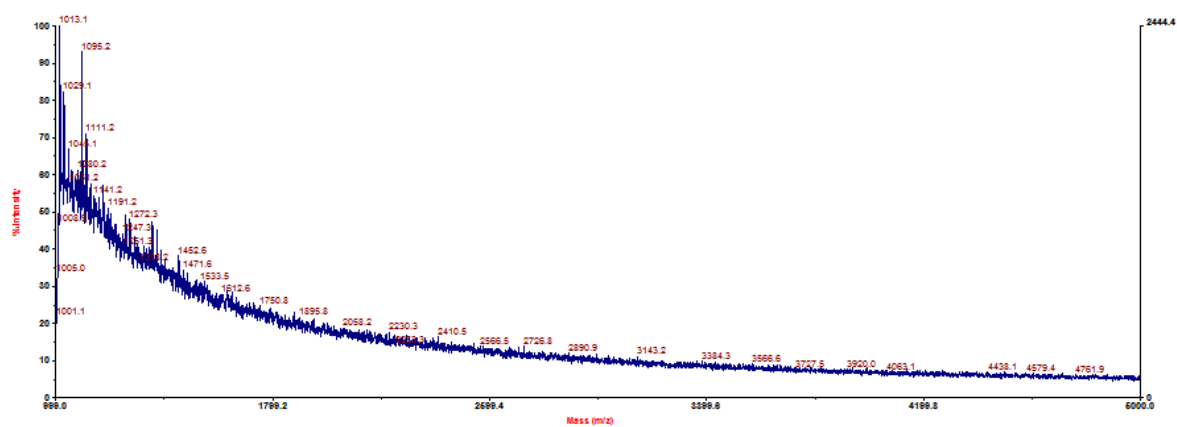


Figure S16. MALDI-TOF spectrum of PU (Run 1: **4/9** 75/25, Table 2).

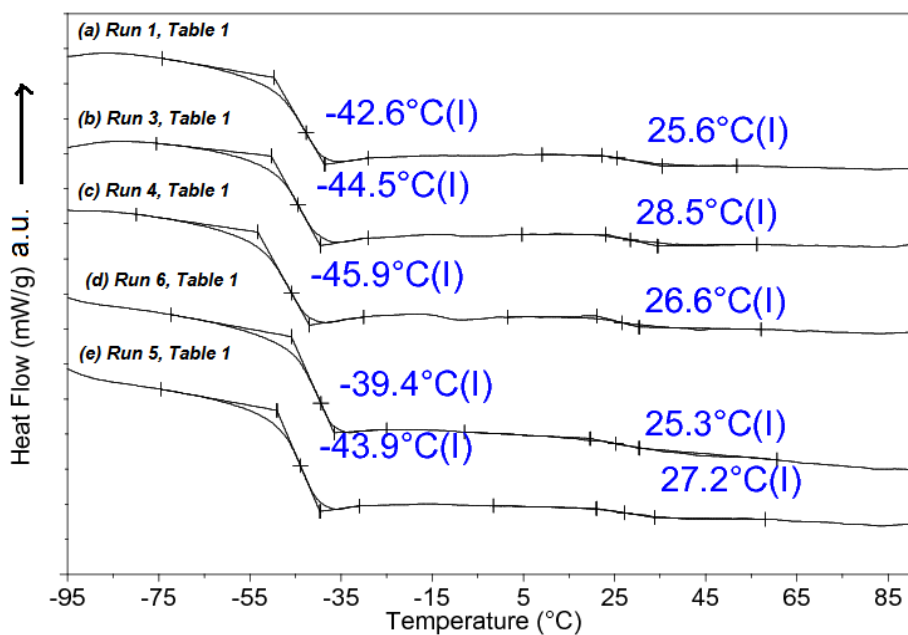


Figure S17. DSC curves of PUs obtained from HETOAz (4) and MHETHC (9)

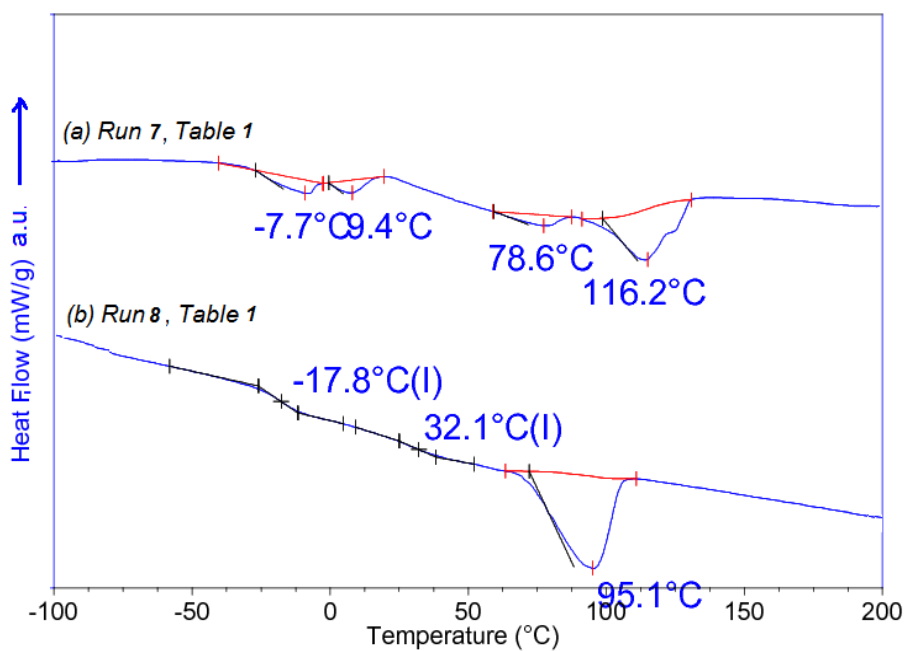


Figure S18. DSC curves of PUs obtained from HETUAz (9) and MHETHC (10)

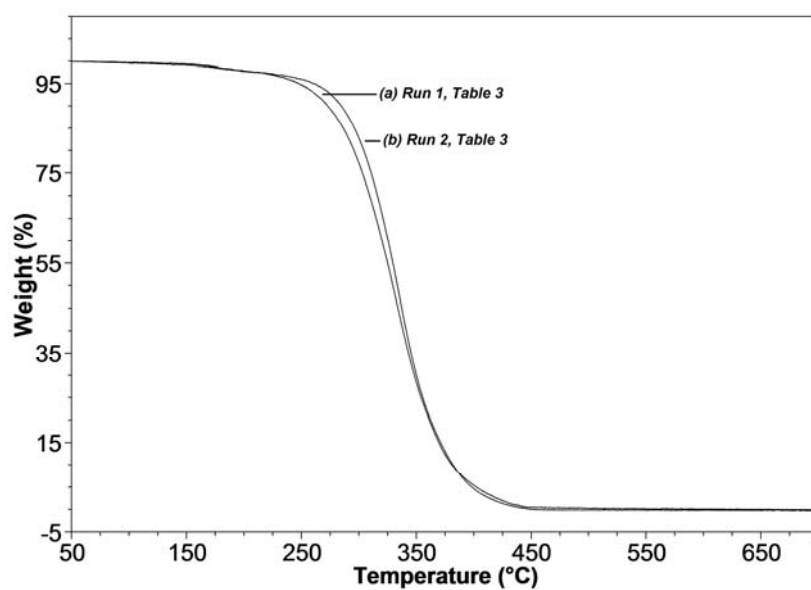


Figure S19. TGA curves of PUs obtained from HETOAz (**4**) and MHETHC (**9**)

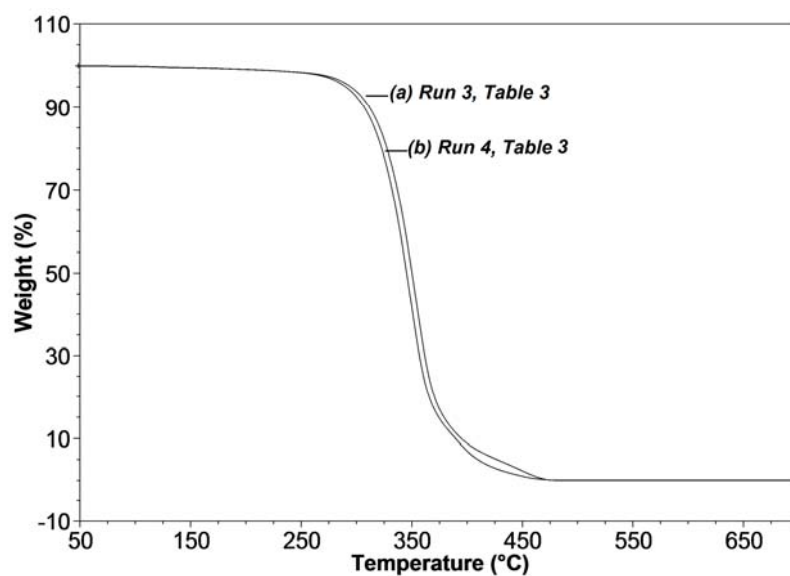


Figure S20. TGA curves of PUs obtained from HETUAz (**9**) and MHETHC (**10**)

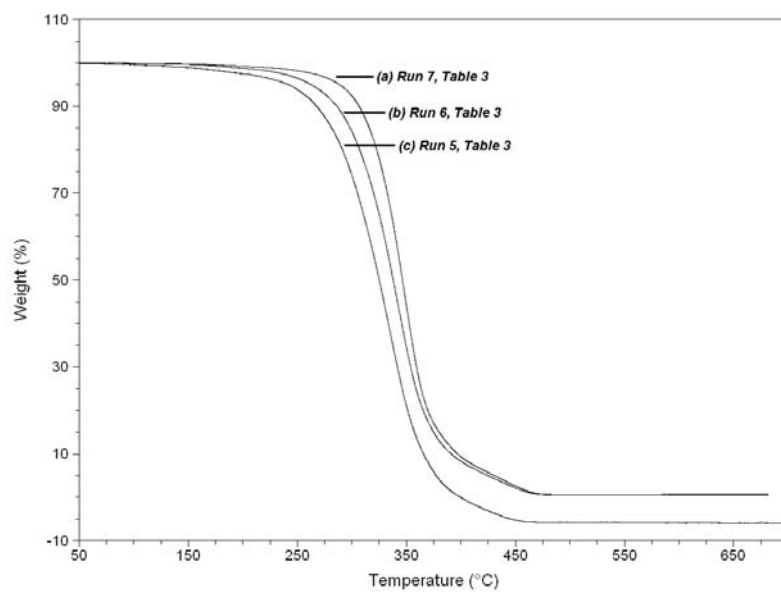


Figure S21. TGA curves of PUs obtained from varying compositions of HETOAz (**4**) and HETUAz (**9**):
(a) **4/9** 25/75; (b) **4/9** 50/50 and (c) **4/9** 75/25