Electronic Supplementary Material (ESI) for Polymer Chemistry

Glycolipids as a source of polyols for the design of original linear and cross-linked polyurethanes

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Figure S1. ^{1}H and COSY spectra ($CDCl_3$) for **3** (racemic mixture of two diastereomers)

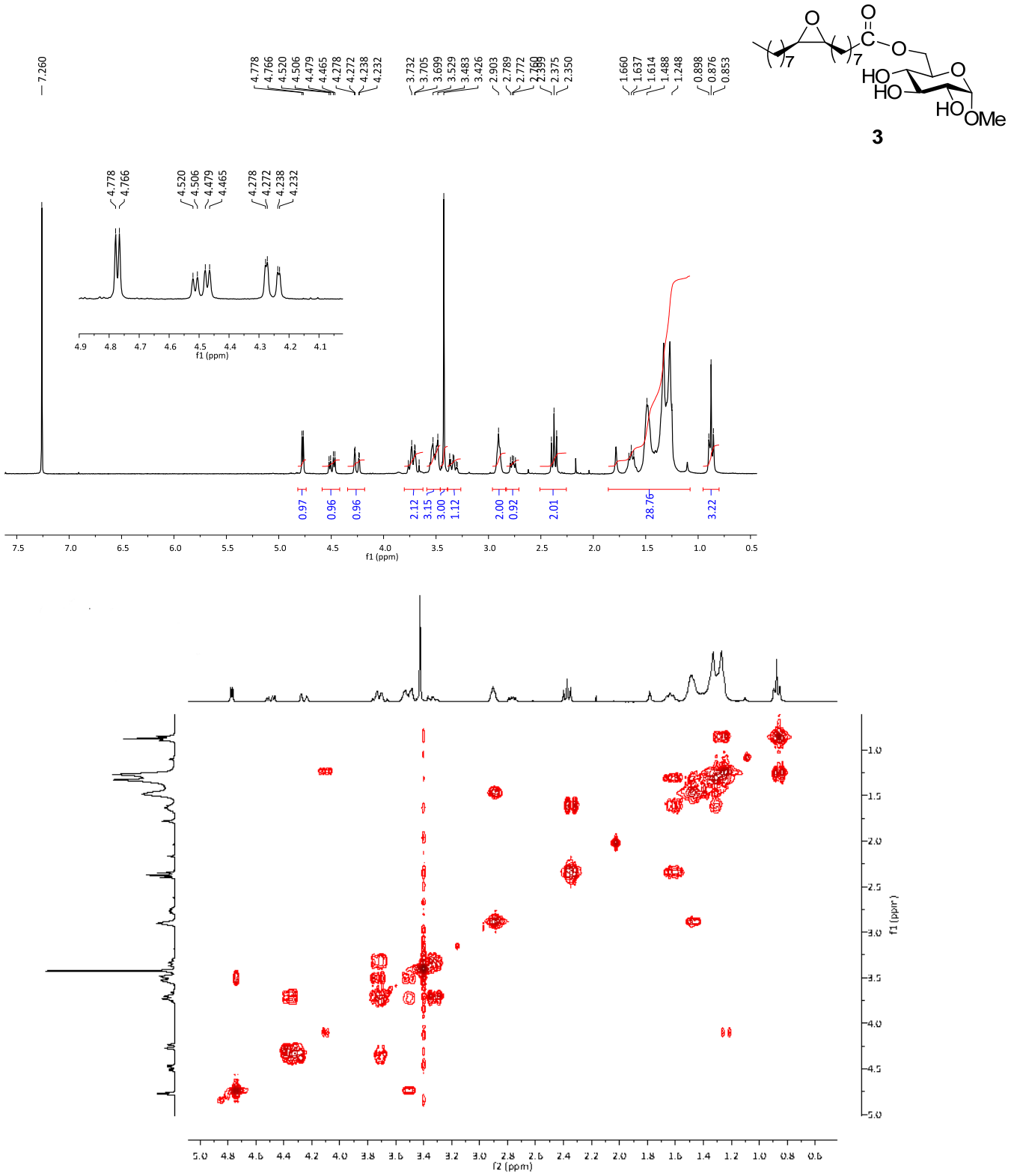
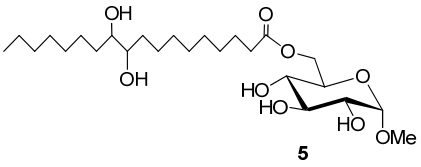


Figure S2. ^{1}H, ^{13}C, DEPT135 (CD_3OD) for **5** (mixture of diastereomers)



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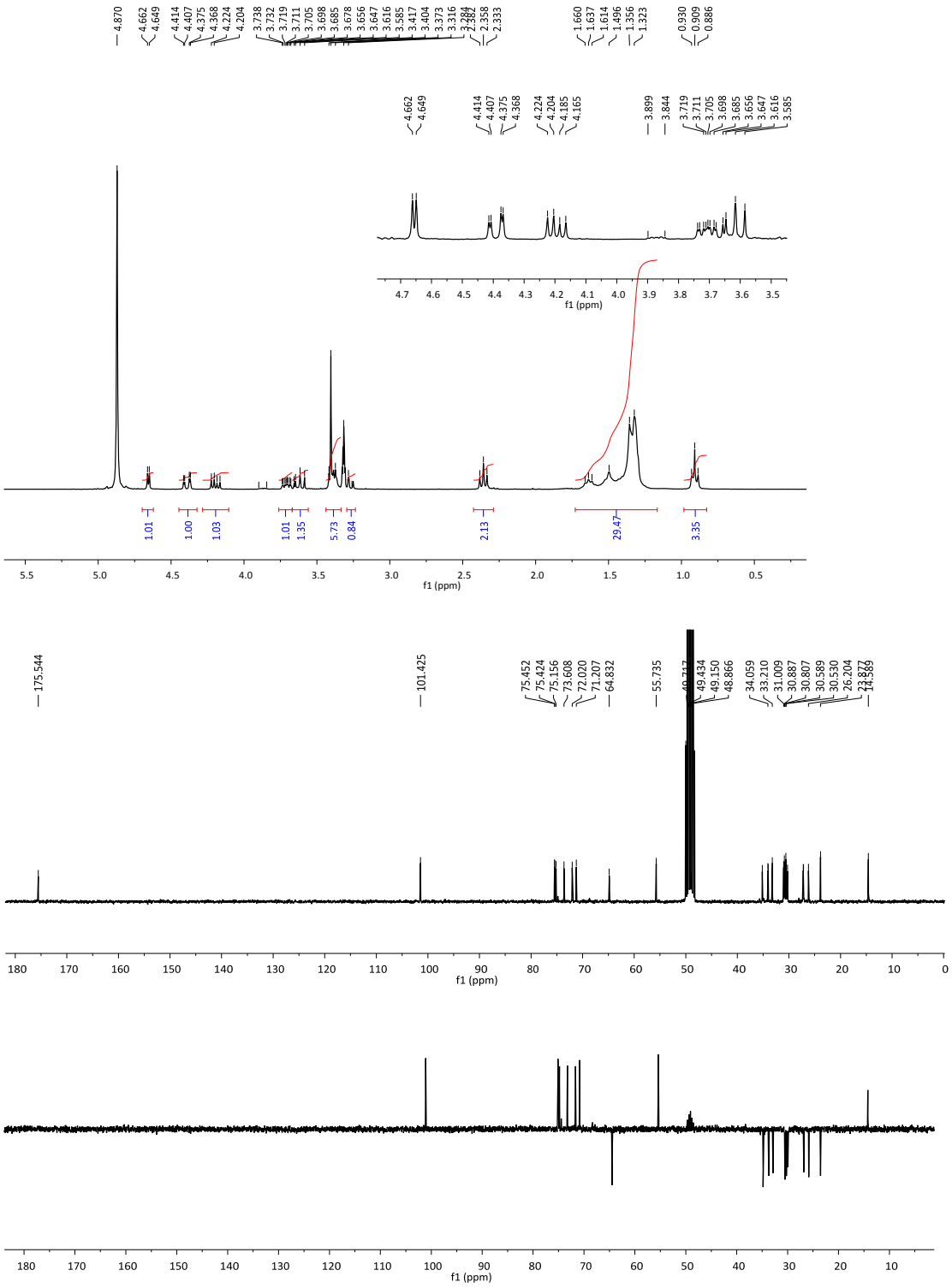


Figure S3. COSY (CD_3OD) for **5** (mixture of diastereomers)

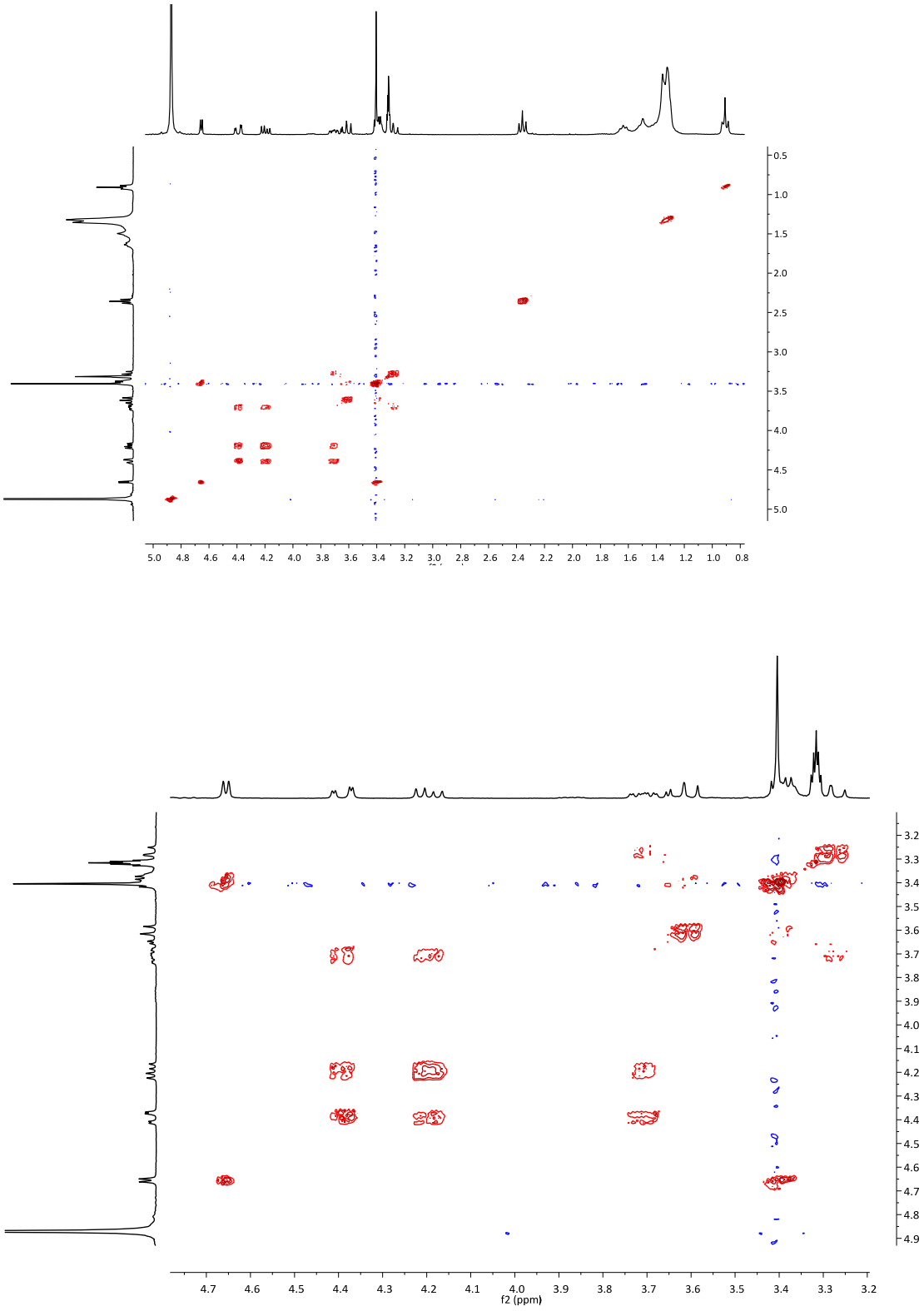
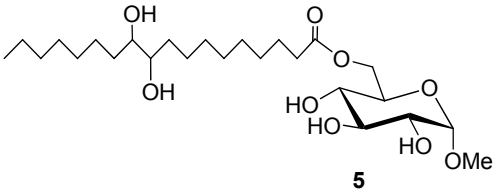


Figure S4 HSQC (CD_3OD) for **5** (mixture of diastereomers)



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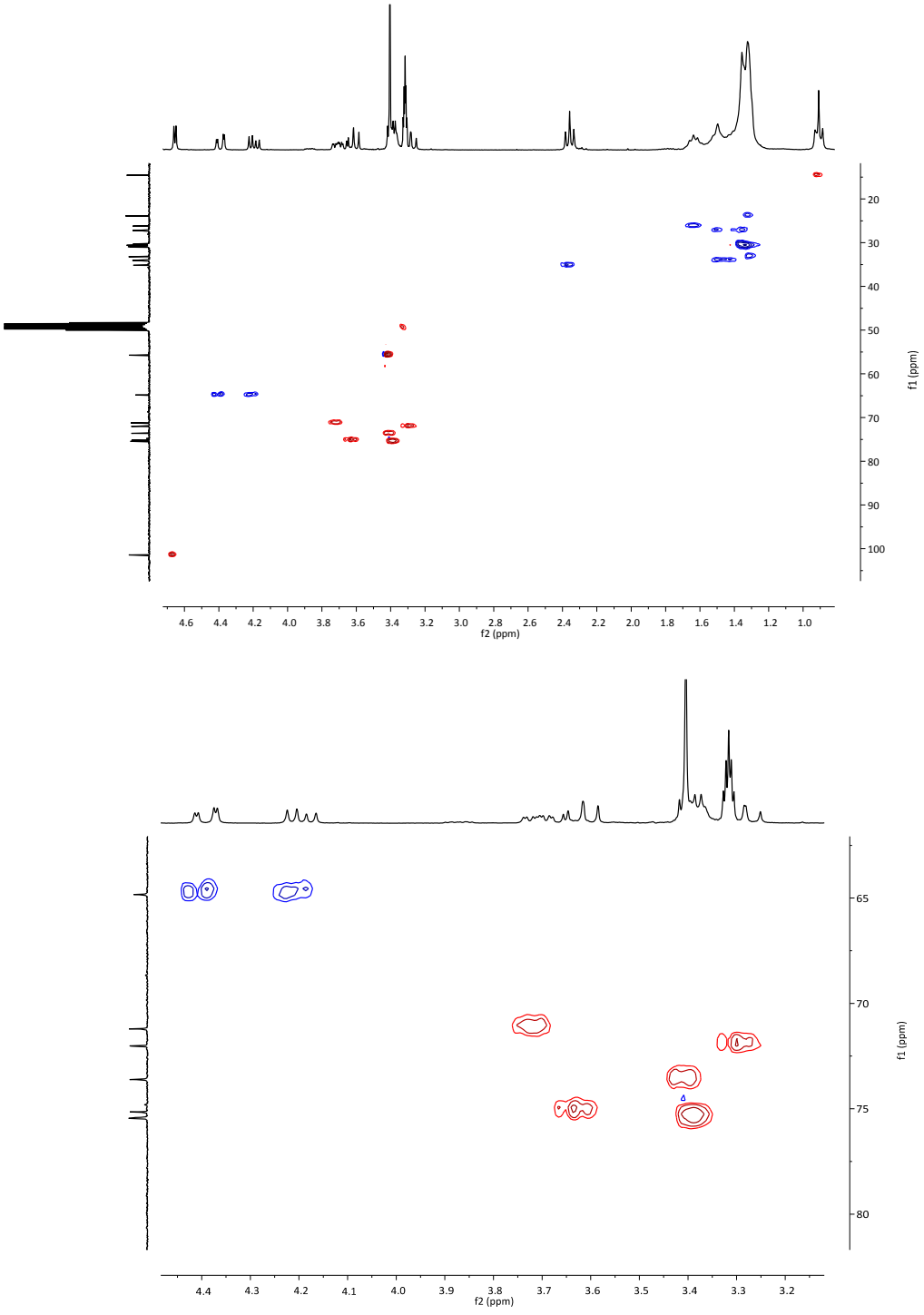

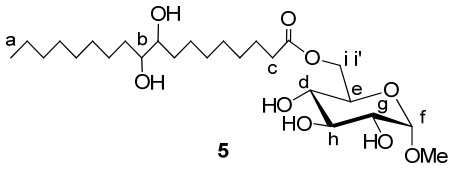

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Figure S5 ^{1}H, COSY (DMSO-d$_6$) for **5** (mixture of diastereomers)

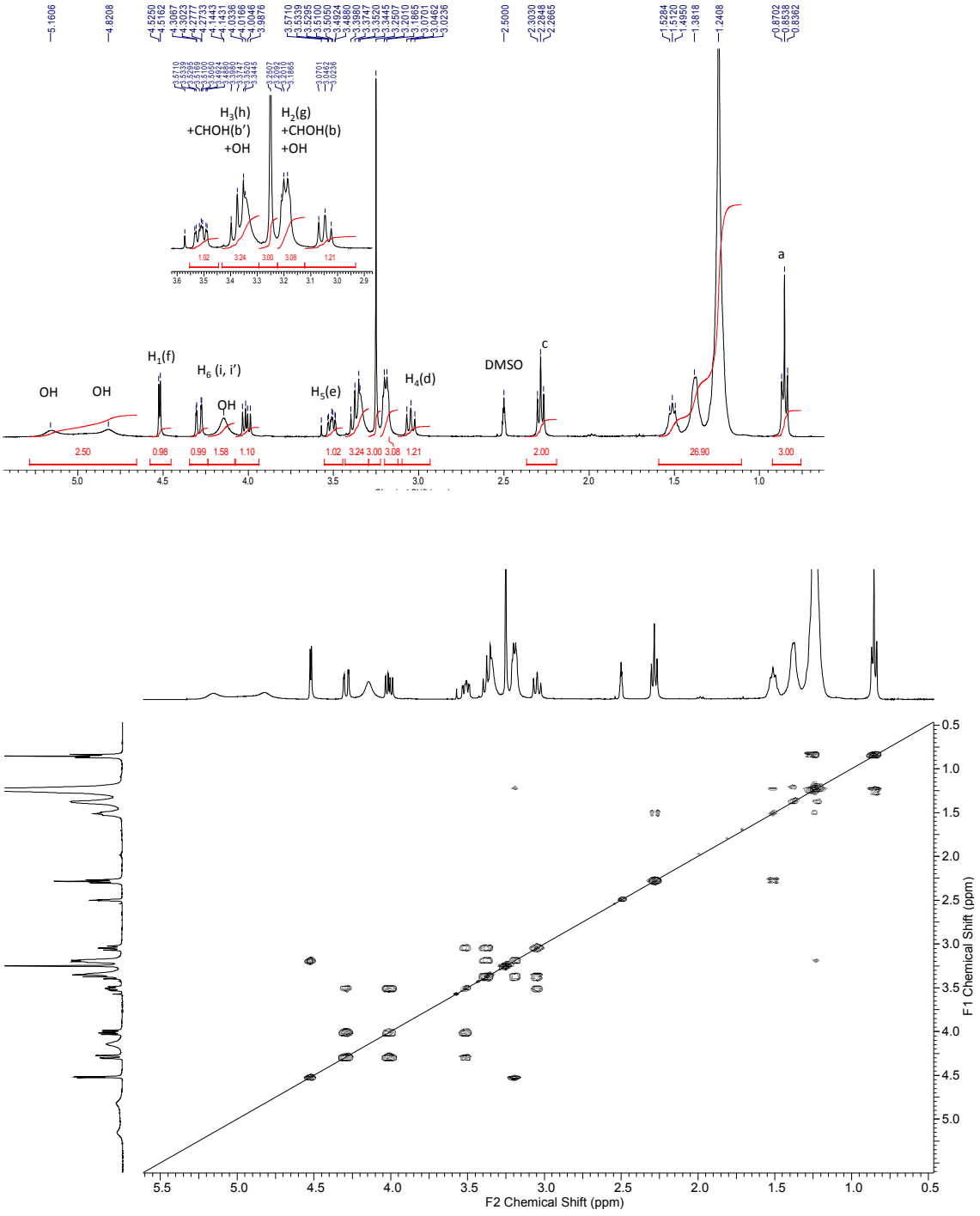


Figure S6 ^{13}C, DEPT135 (DMSO-d_6) for **5** (mixture of diastereomers)

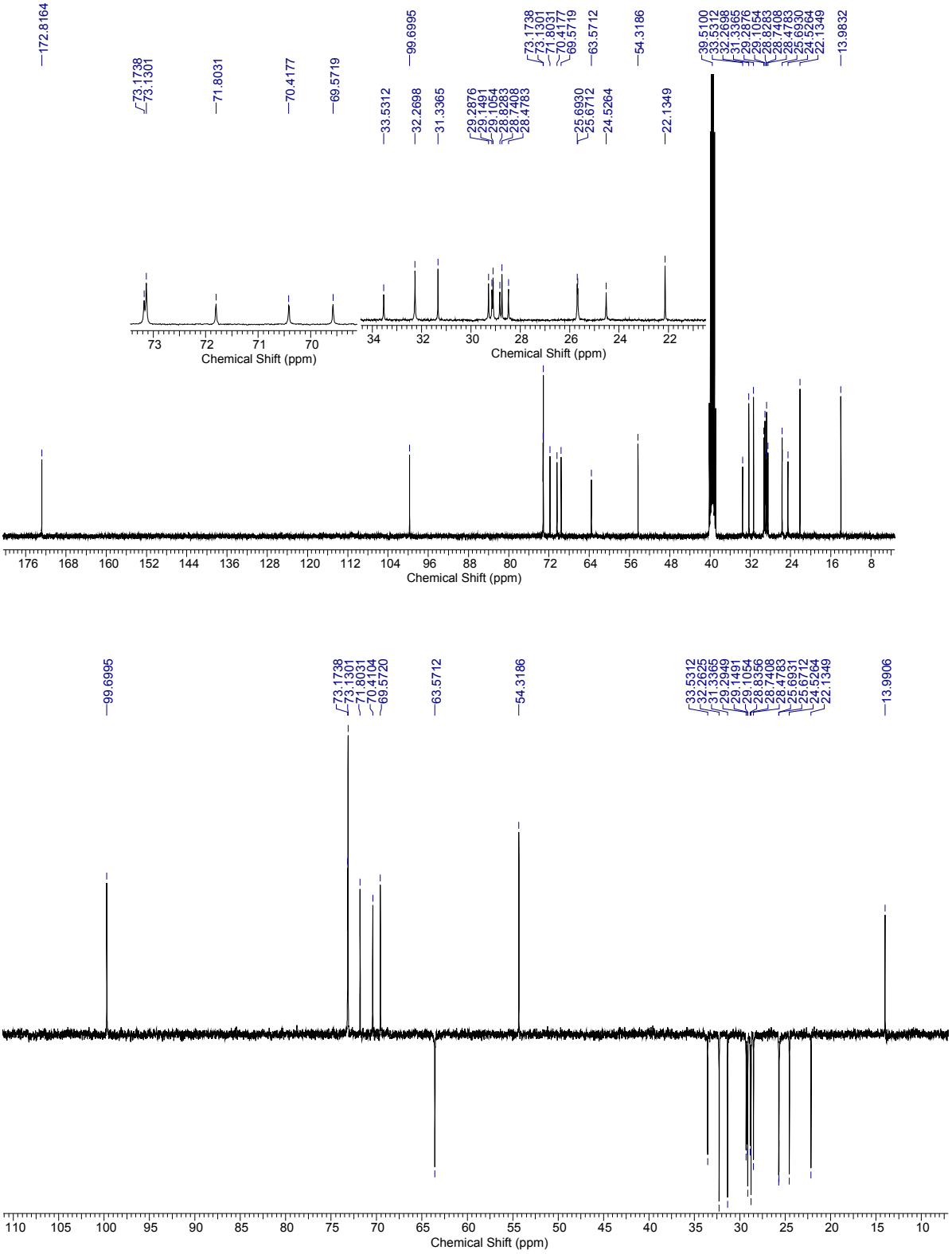


Figure S7 HSQC, HMBC (DMSO-d_6) for **5** (mixture of diastereomers)

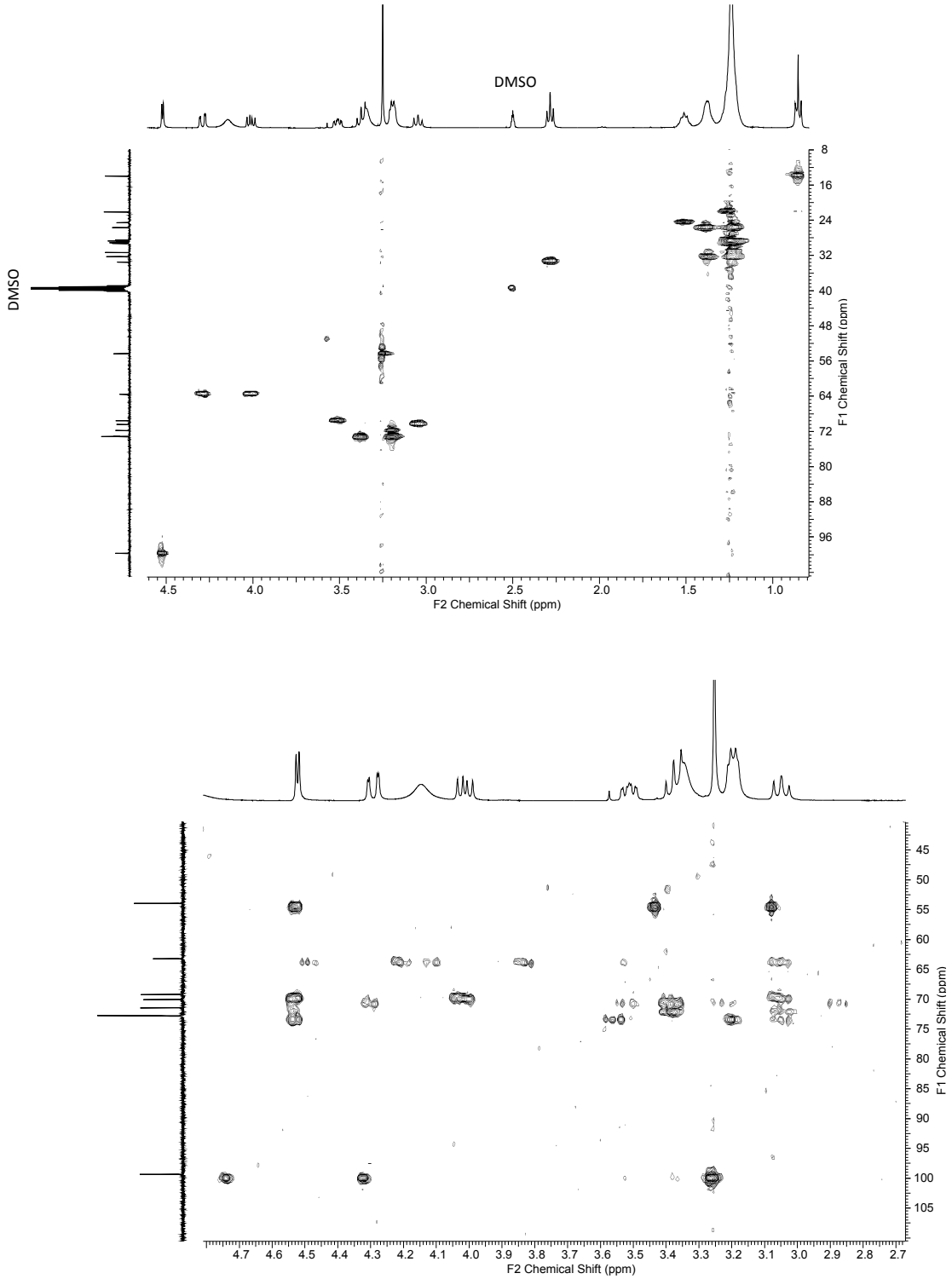
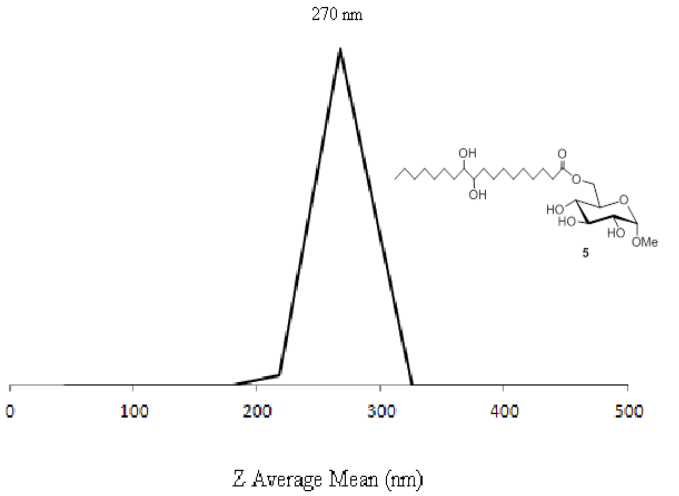


Figure S8. Particle size distribution of 5 and 7 in THF at the concentration of 5 g.L^{-1} measured by DLS.



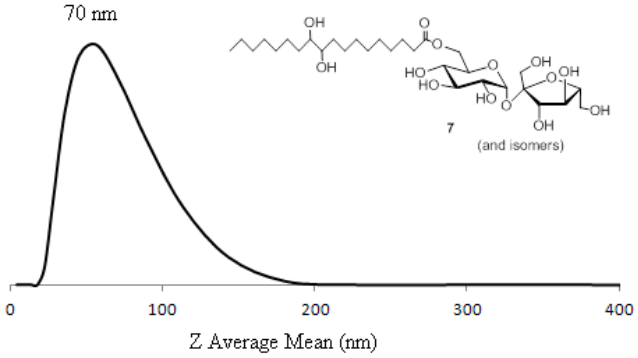


Figure S9. ^{1}H, ^{13}C, DEPT135 ($CDCl_3$) for **6** (racemic)

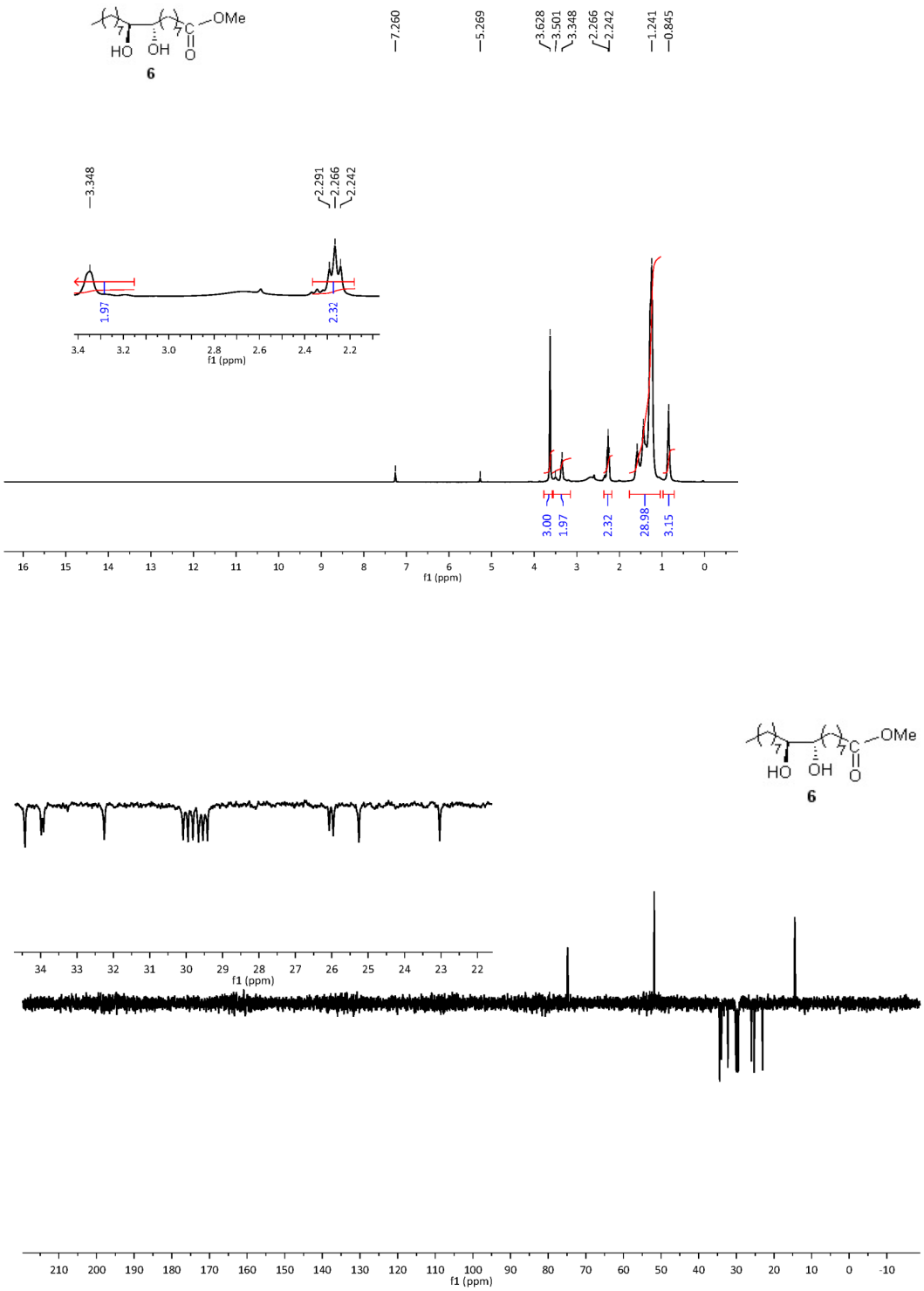


Figure S10 ^{1}H, ^{13}C, DEPT135 (CD_3OD) for **7** (mixture of diastereomers and regioisomers)

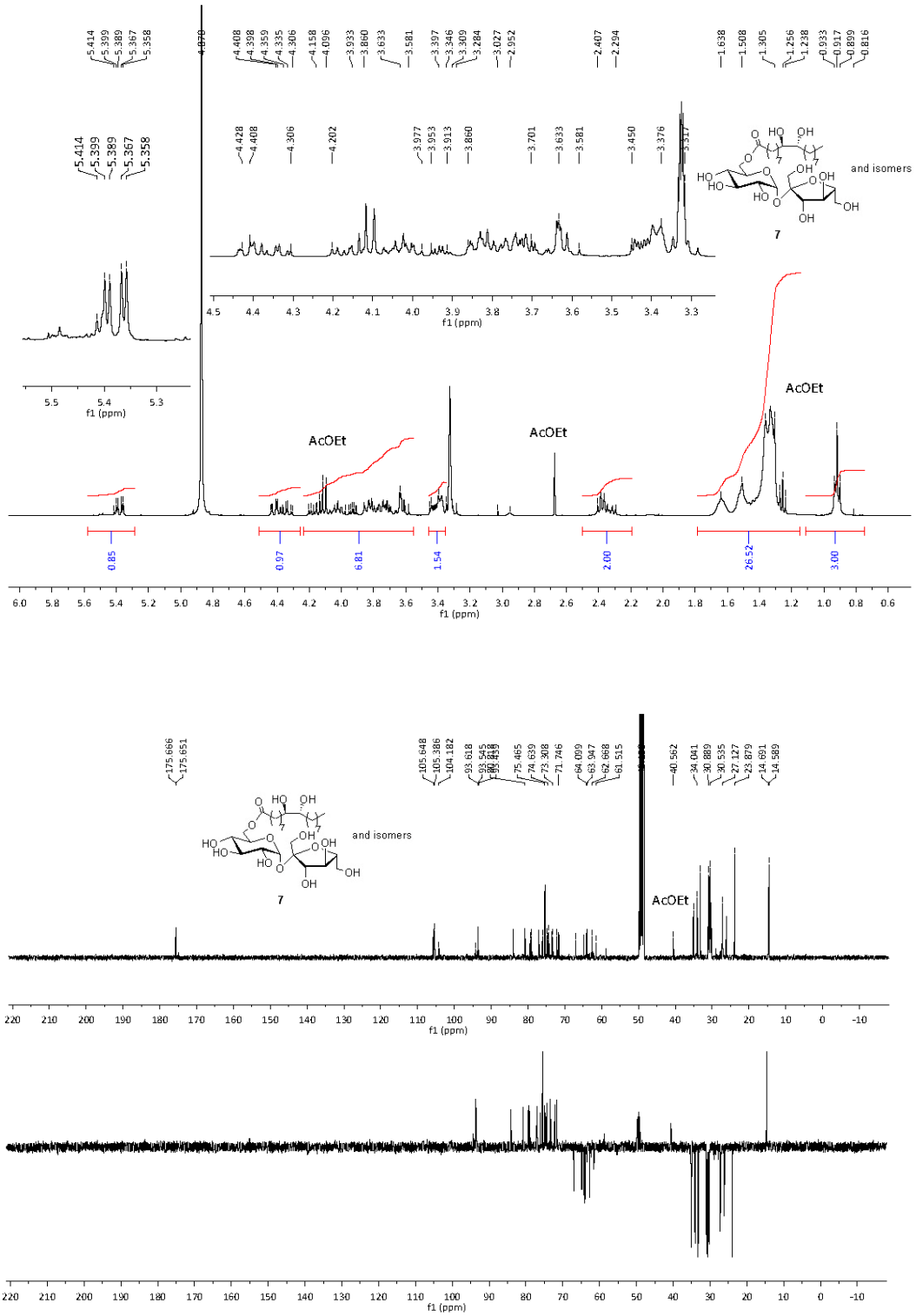


Figure S11 COSY (CD_3OD) for **7**

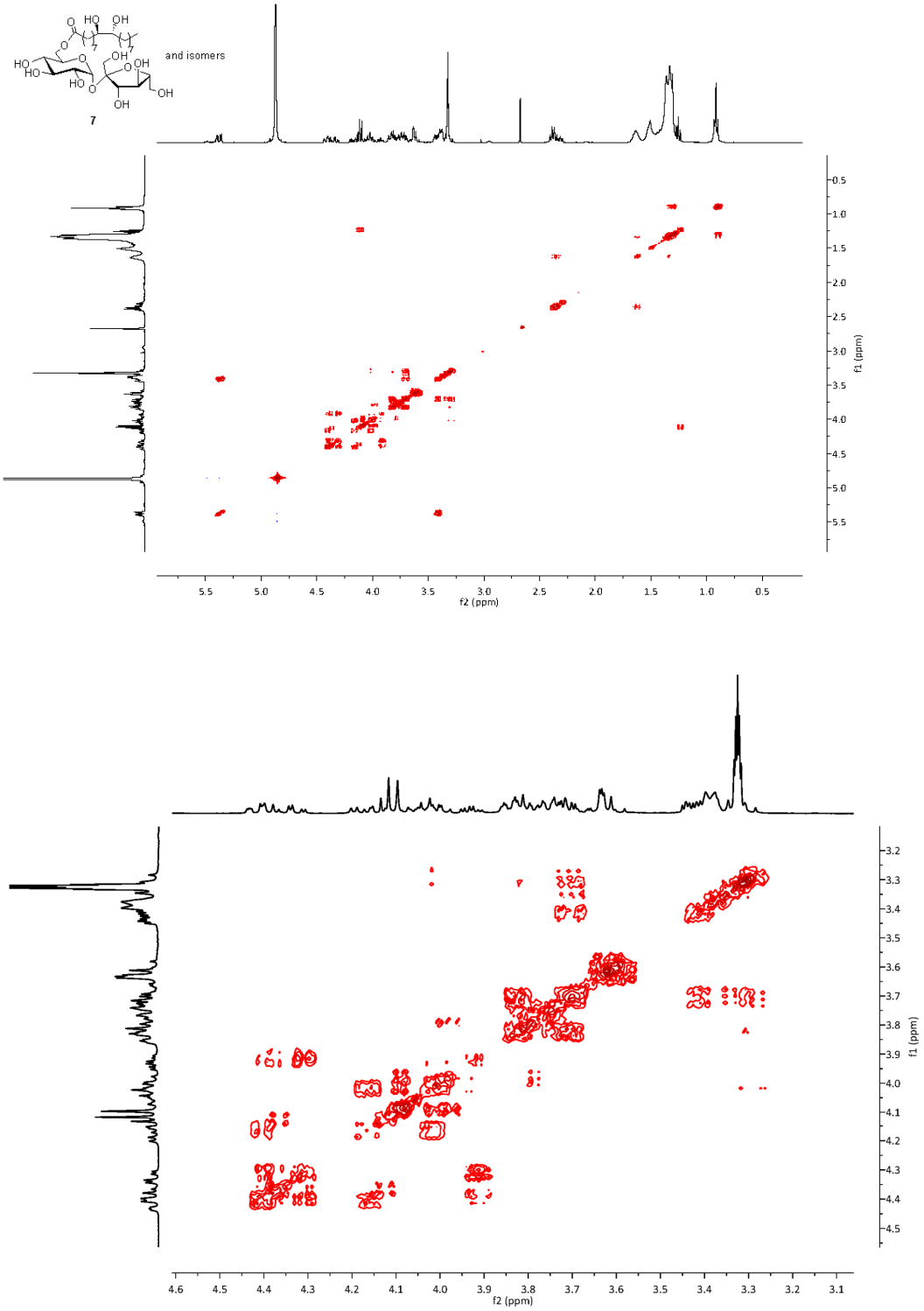
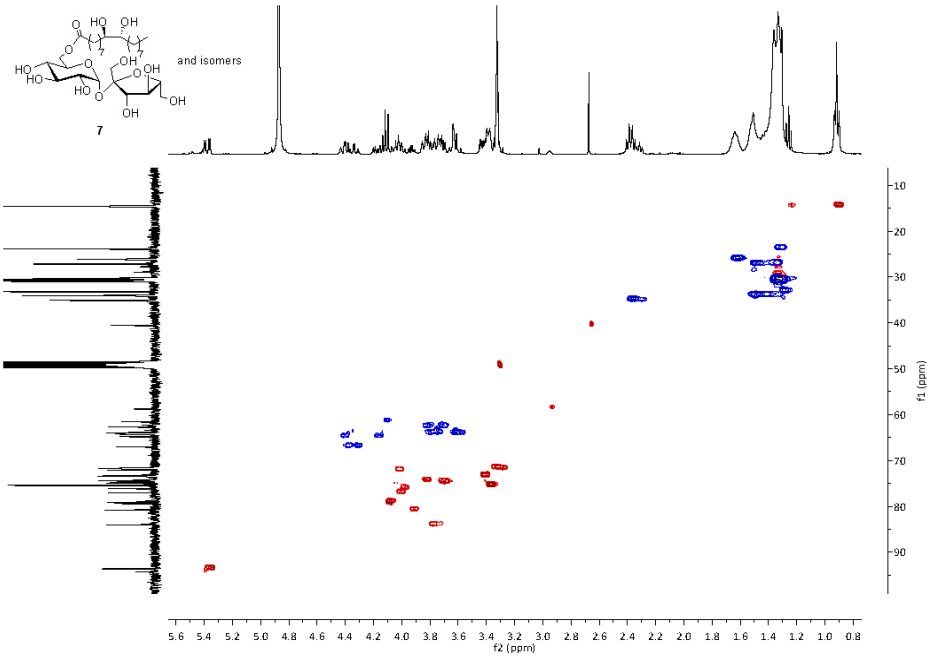


Figure S12 HSQC (CD_3OD) for **7**



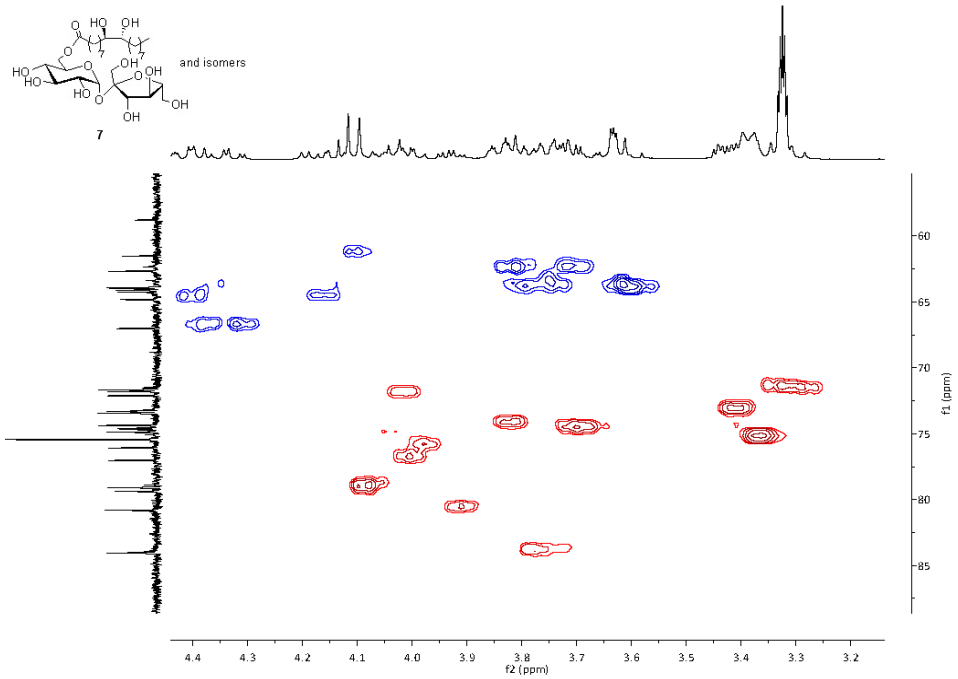


Figure S13. ^{1}H, ^{13}C, DEPT135 (DMSO-d_6) for **7**

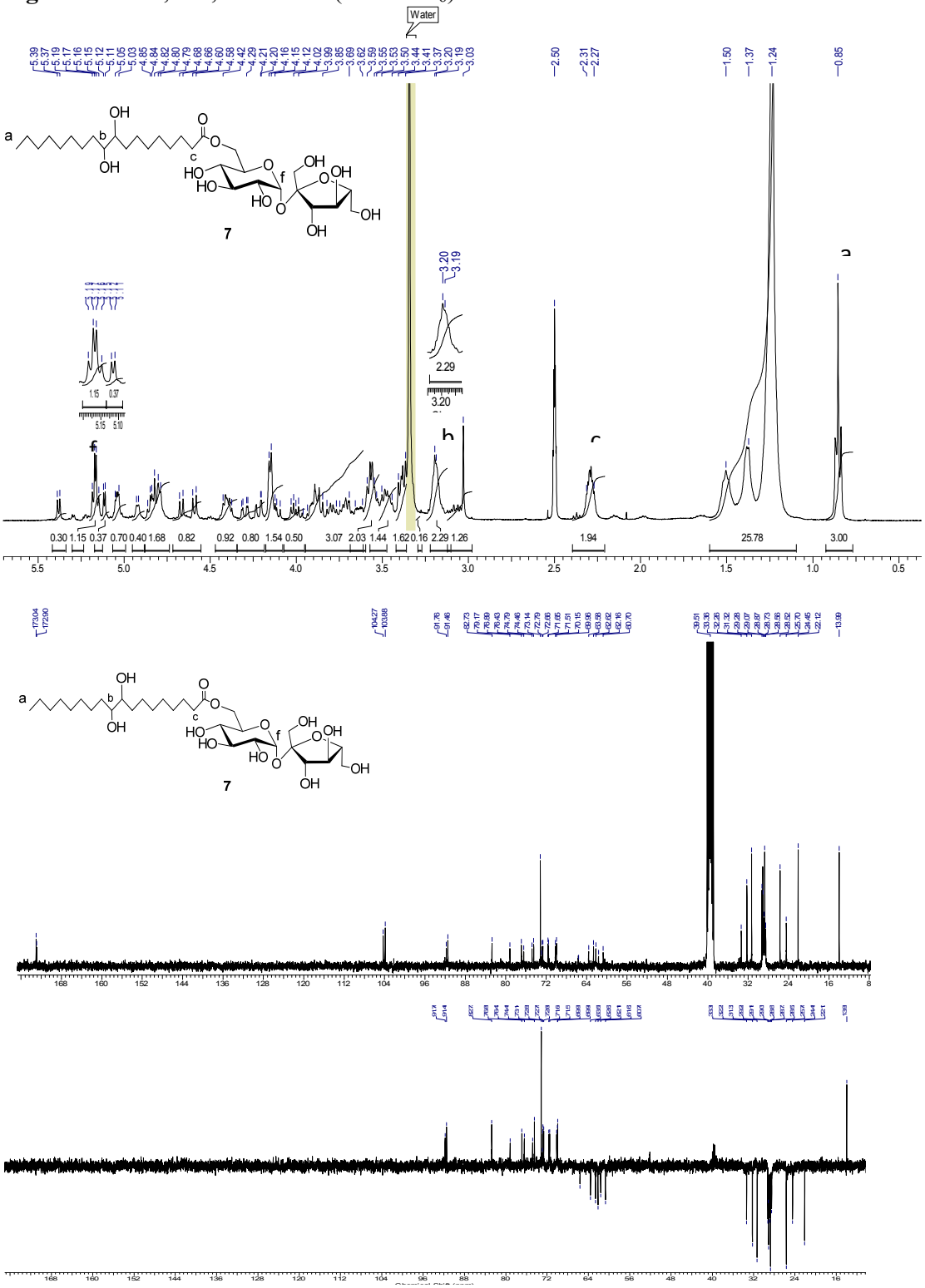


Figure S14 COSY, HSQC (DMSO-D_6) for **7**

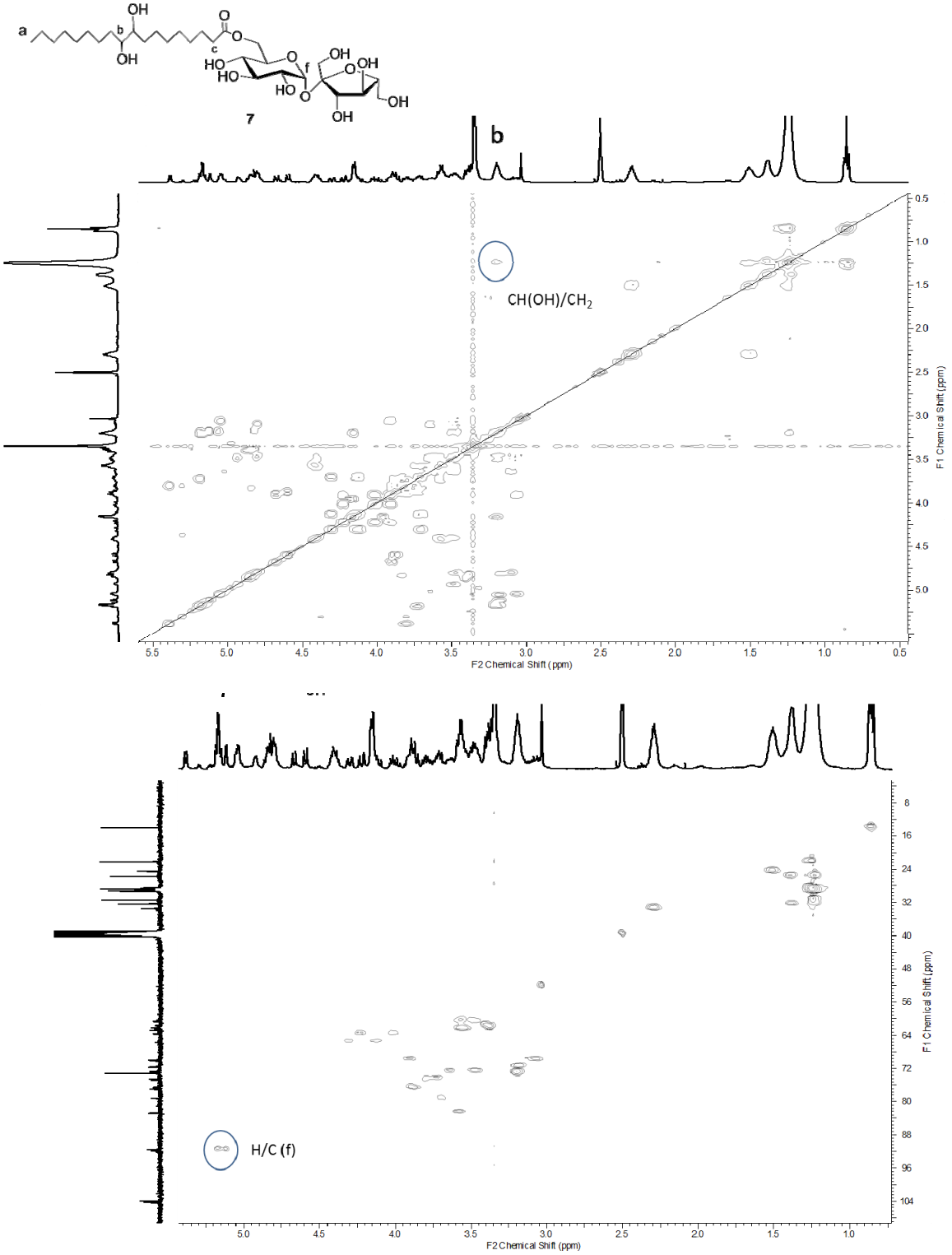


Figure S15: HSQC experiments before and after polymerization of **5**

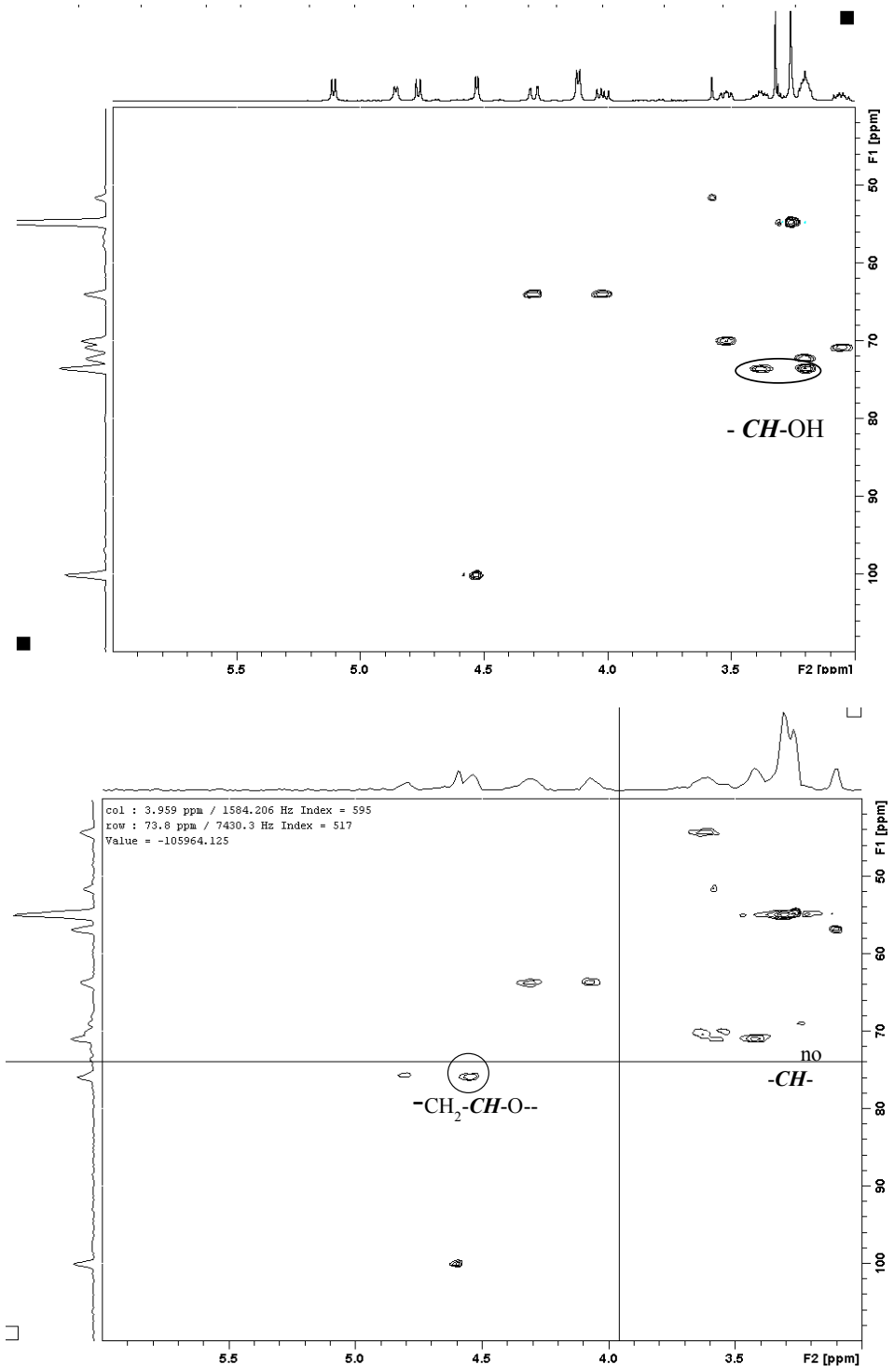


Figure S16: SEC traces as a function of time of PUs from polyol **5** and IPDI

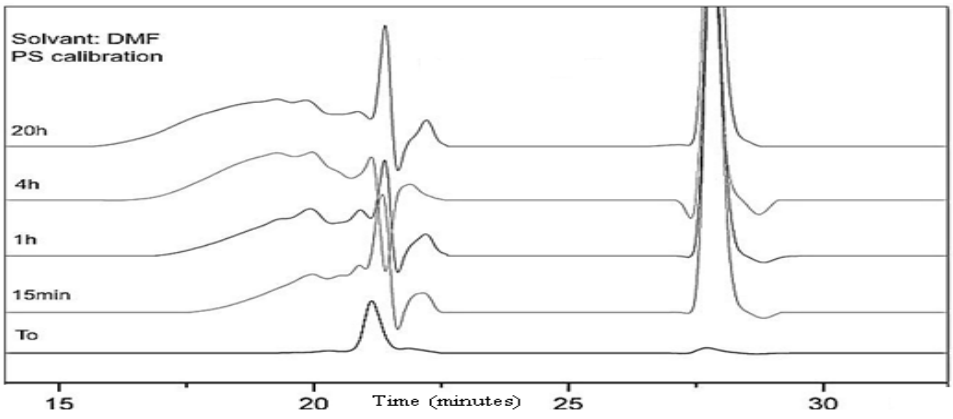


Figure S17. ^{13}C DEPT spectra in DMSO-d_6 of PUs obtained from **6,** from **7** and from a mixture of **6** and **7** as polyols and IPDI (*CH_2*>0 and *CH_3, CH*<0)

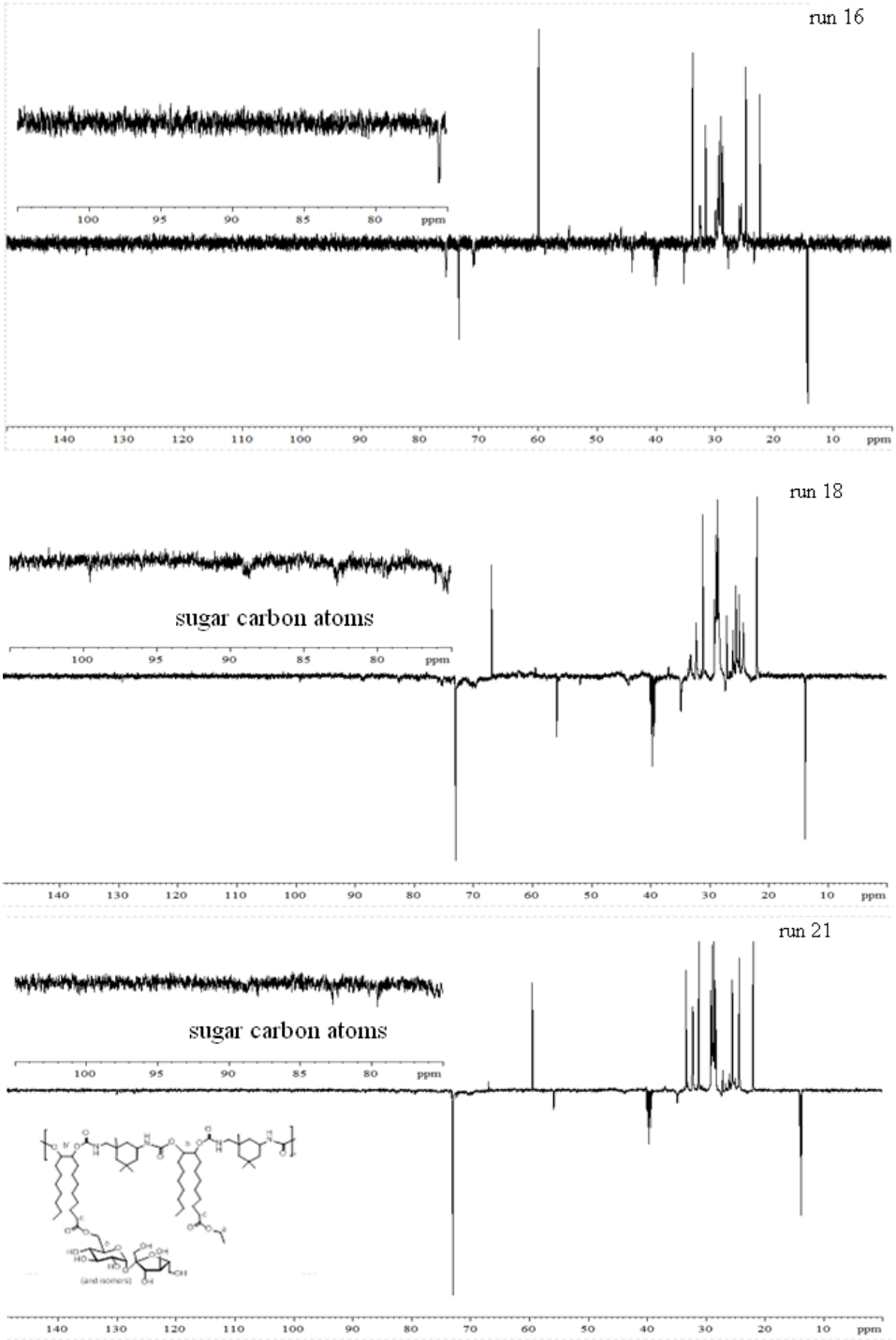


Figure S18: DSC traces of cross-linked PUs from mixture of polyols **5** and **8** and IPDI (Table 1 run 9 Table 2 runs 13-16)

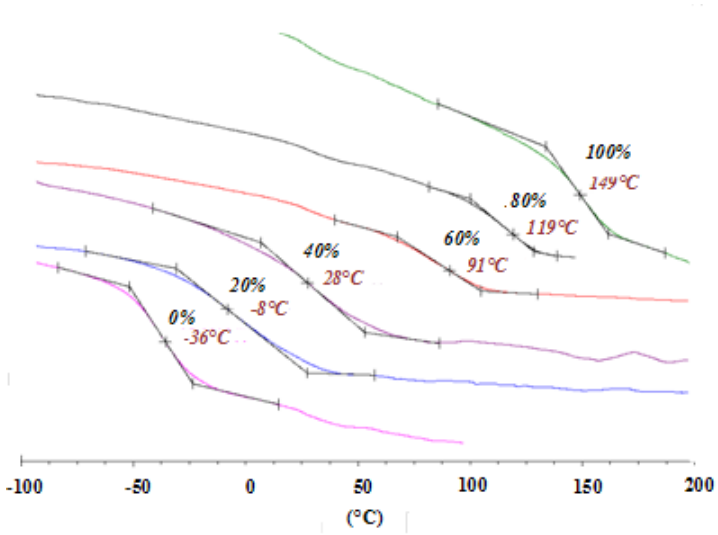


Figure S19: DSC traces of linear PUs from different mixtures of polyols **5** and **8** and IPDI (increasing % of monomer **5**) (Table 1 run 9 + Table 2 runs 10-12)

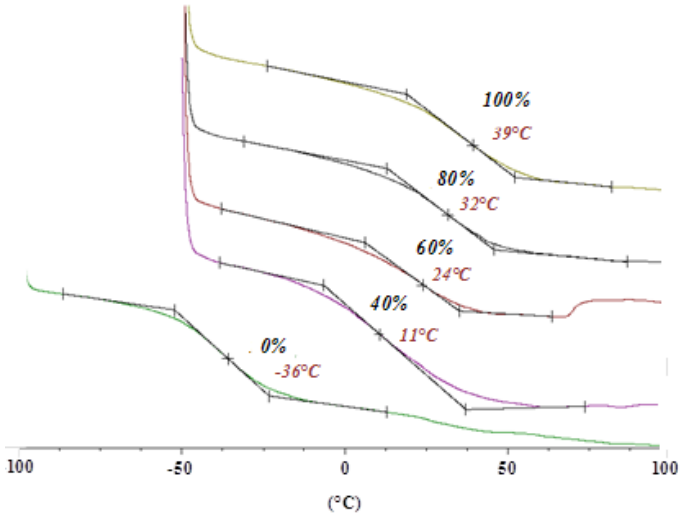


Figure S20: DSC traces of linear PUs from mixture of polyols **7** and **6** and IPDI

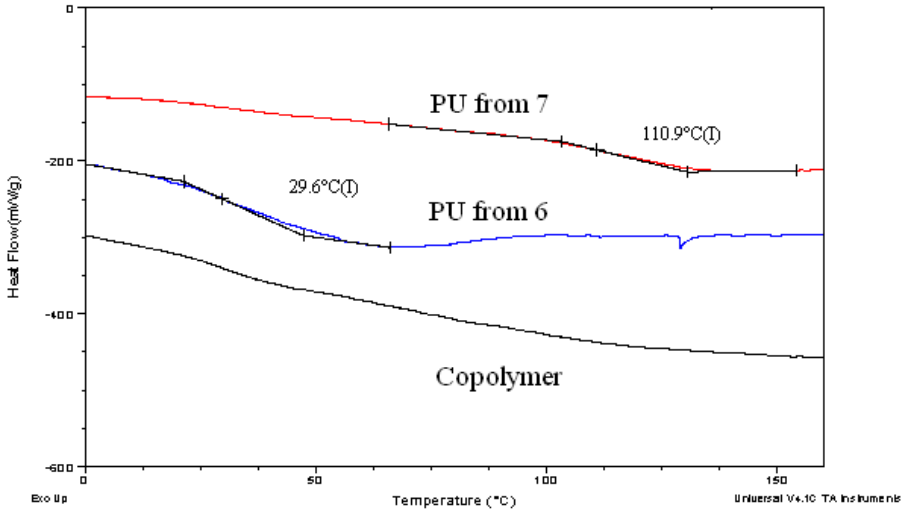


Figure S21: Weight loss traces and their corresponding derivatives curves for several glycopolyurethanes (heating rate, 10°C/min).