

Supplementary Materials: Formulation, Preparation, Characterization, and Evaluation of Dicarboxylic Ionic Liquid Donepezil Transdermal Patches

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Standard ^1H NMR Chloroform-D (D , 99.8%) + 0.05 % TMS + silver foil (Cambridge Isotope Laboratories, Andover, MA, USA) solvent
 ^1H NMR spectra of DPZ ILs

CDCl₃_TMS

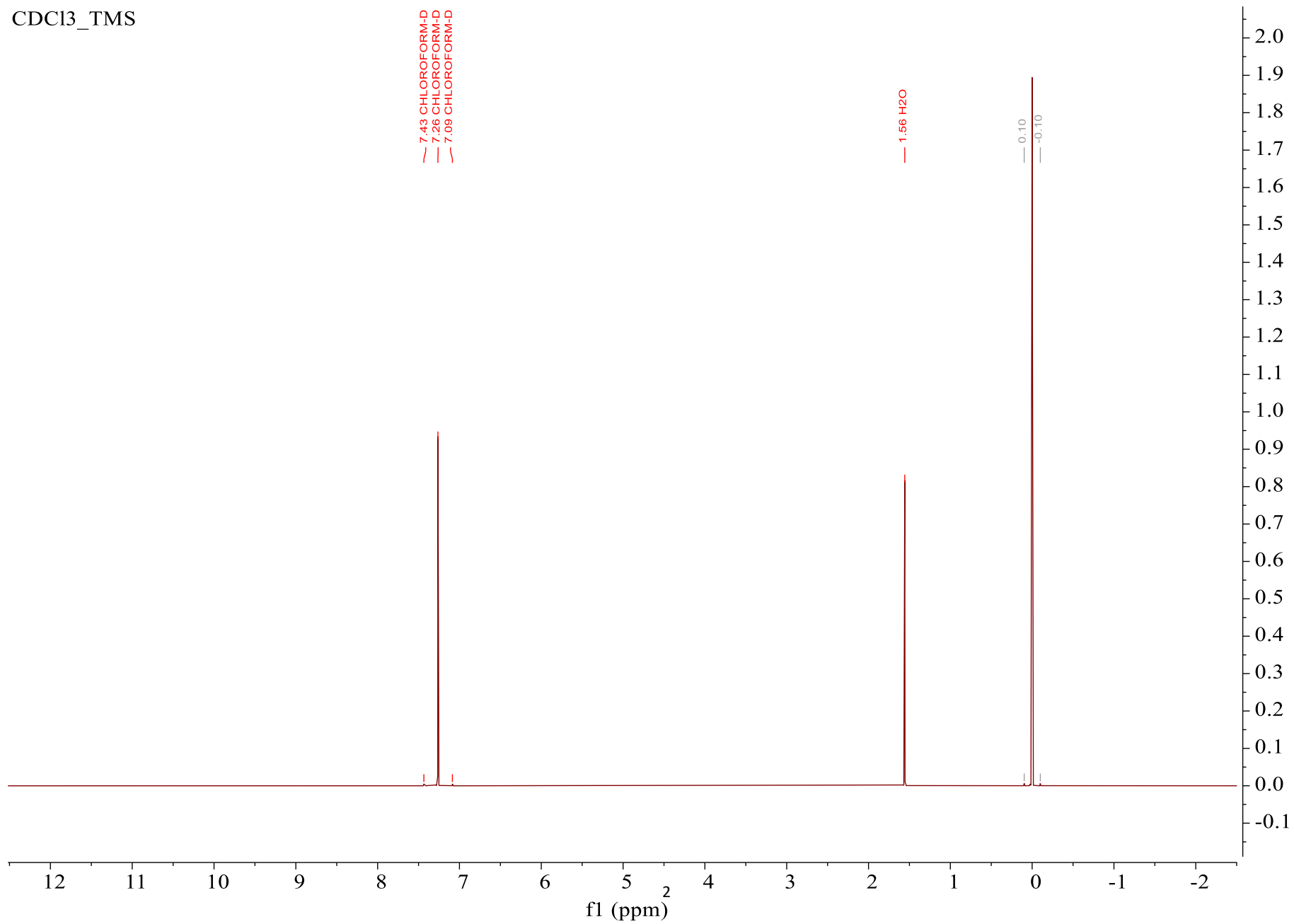
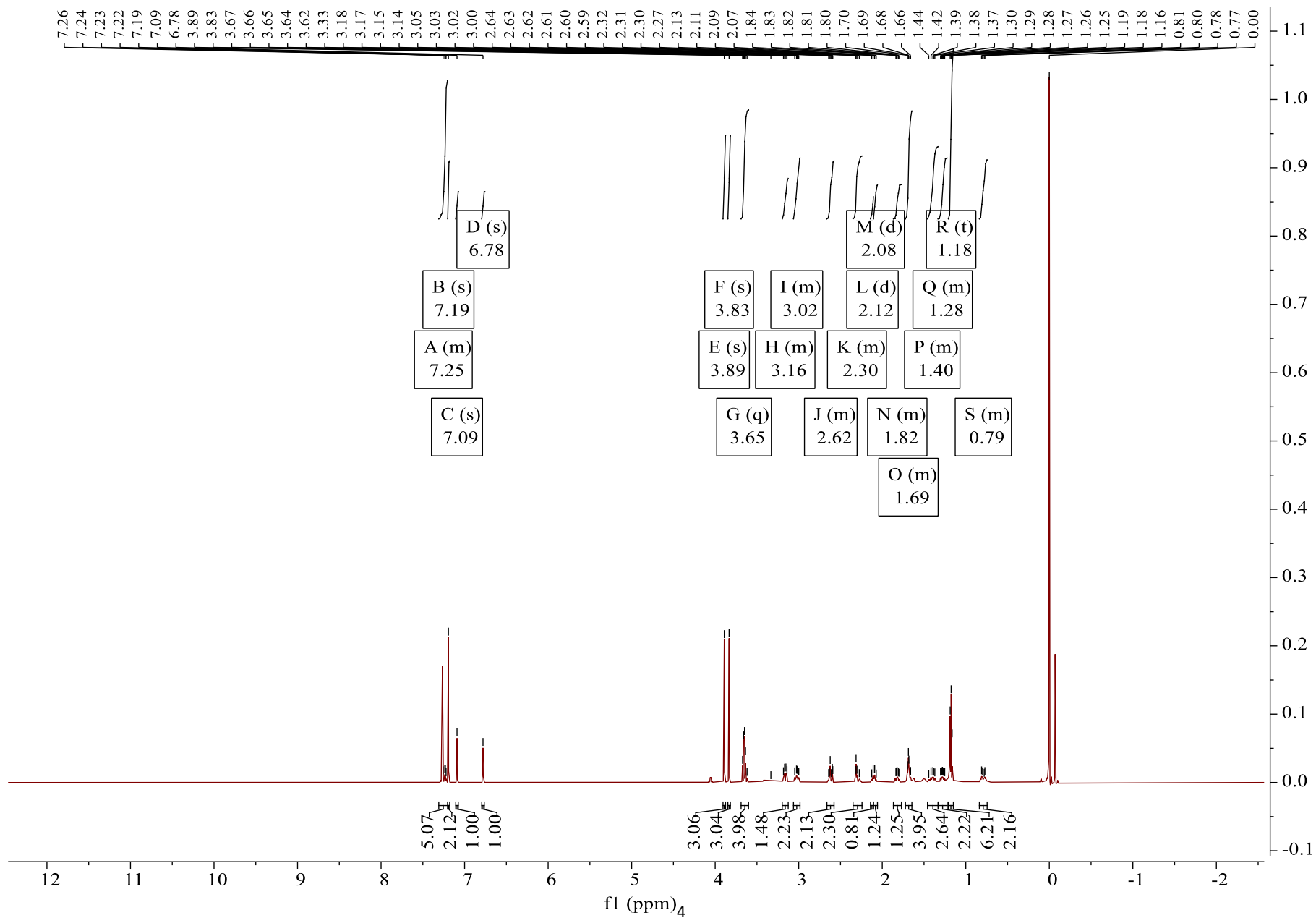
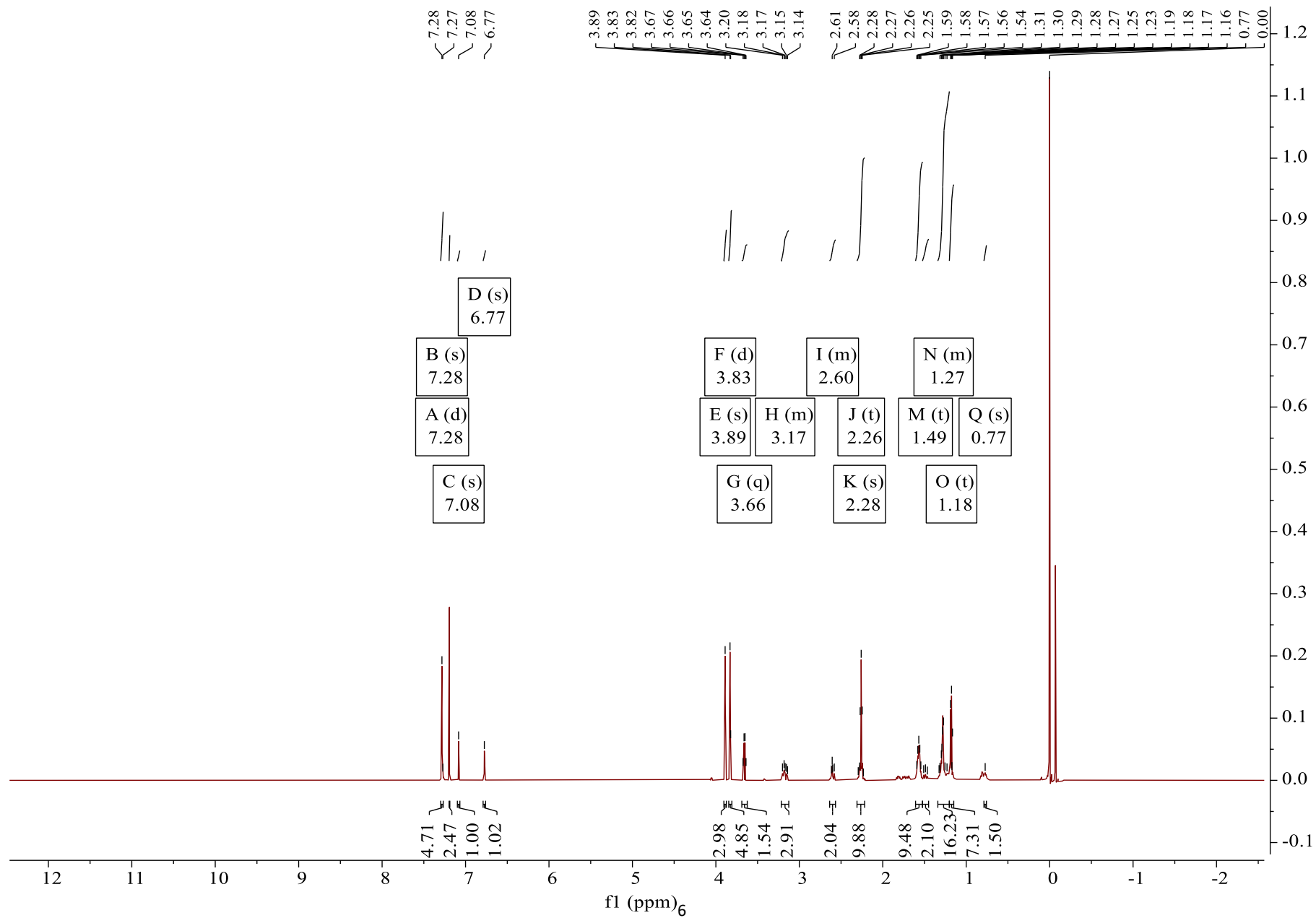


Figure S1. ^1H NMR spectrum of DPZ-adipic acid IL. ^1H NMR (600 MHz, CHCl_3 - d_3) δ 7.31 – 7.20 (m, 5H), 7.19 (s, 2H), 7.09 (s, 1H), 6.78 (s, 1H), 3.89 (s, 3H), 3.83 (s, 3H), 3.65 (q, $J = 7.1$ Hz, 4H), 3.20 – 3.13 (m, 1H), 3.06 – 2.98 (m, 2H), 2.66 – 2.58 (m, 2H), 2.35 – 2.24 (m, 2H), 2.12 (d, $J = 10.6$ Hz, 1H), 2.08 (d, $J = 10.8$ Hz, 1H), 1.87 – 1.77 (m, 1H), 1.72 – 1.65 (m, 4H), 1.46 – 1.33 (m, 3H), 1.33 – 1.22 (m, 2H), 1.18 (t, $J = 7.0$ Hz, 6H), 0.84 – 0.74 (m, 2H).



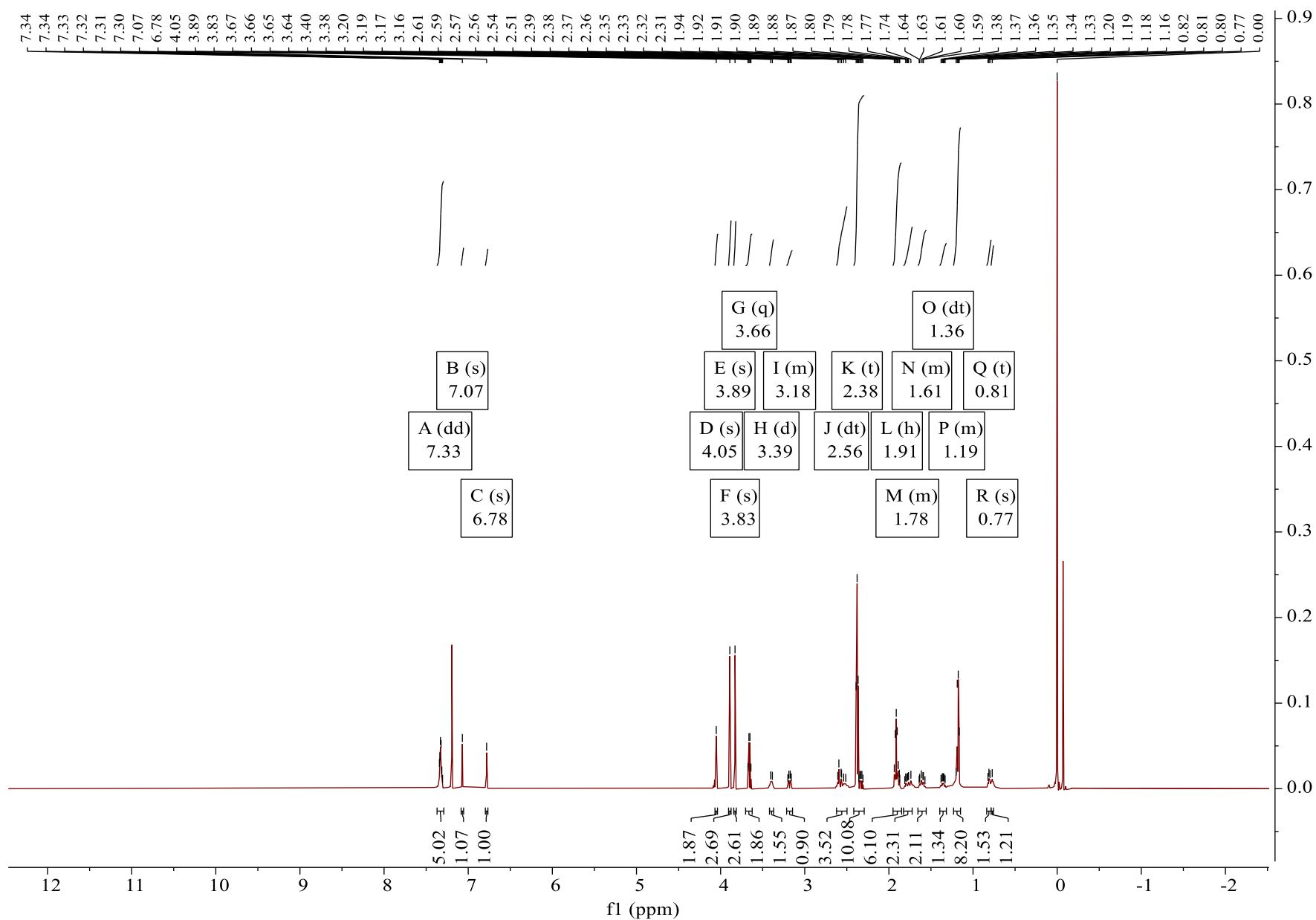
DPZ-adipic acid IL

Figure S2. ^1H NMR spectrum of DPZ-azelaic acid IL.



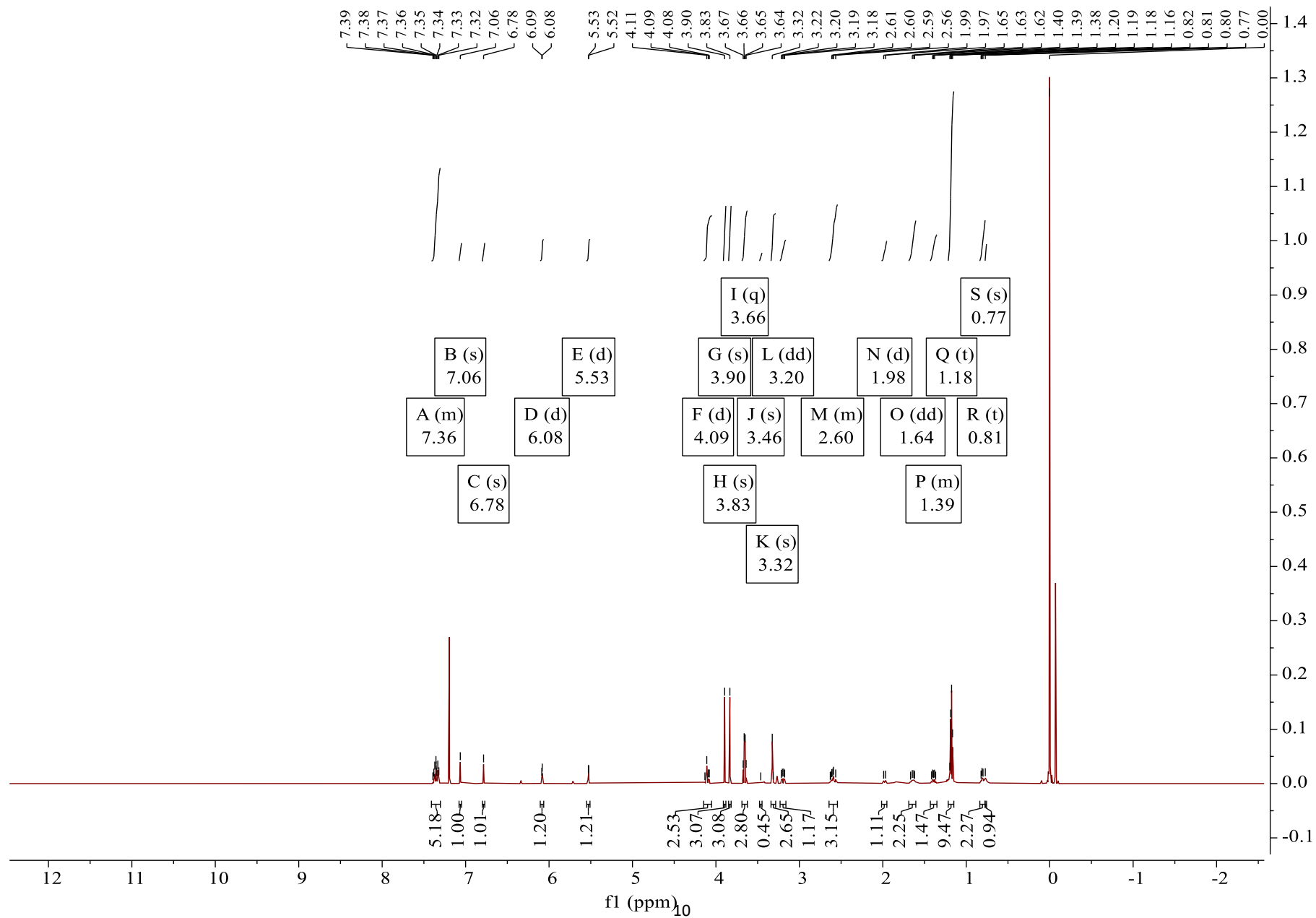
DPZ-azelaic acid IL

Figure S3. ^1H NMR spectrum of DPZ-glutaric acid IL.



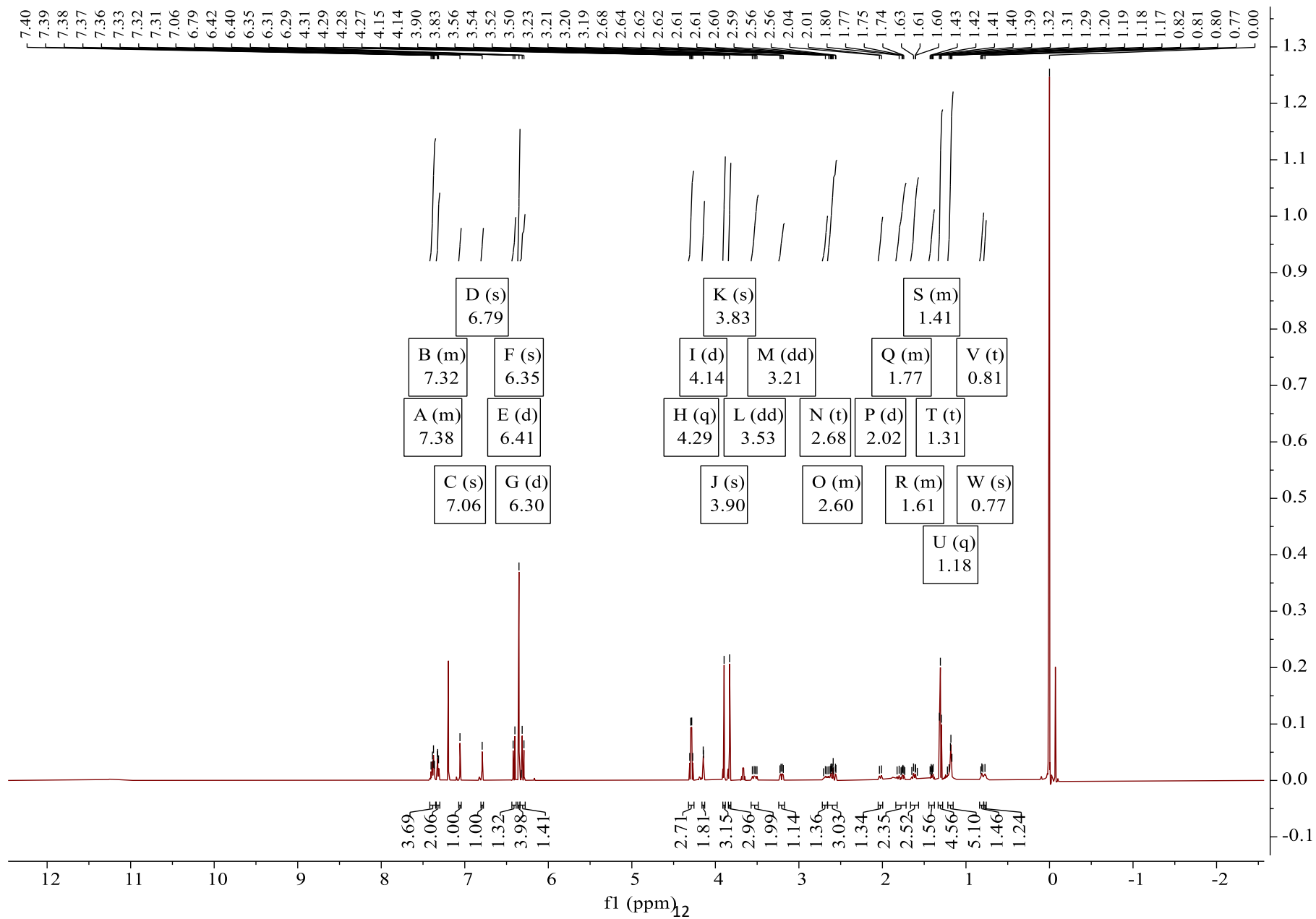
DPZ-glutaric acid IL

Figure S4. ^1H NMR spectrum of DPZ-itaconic acid IL.



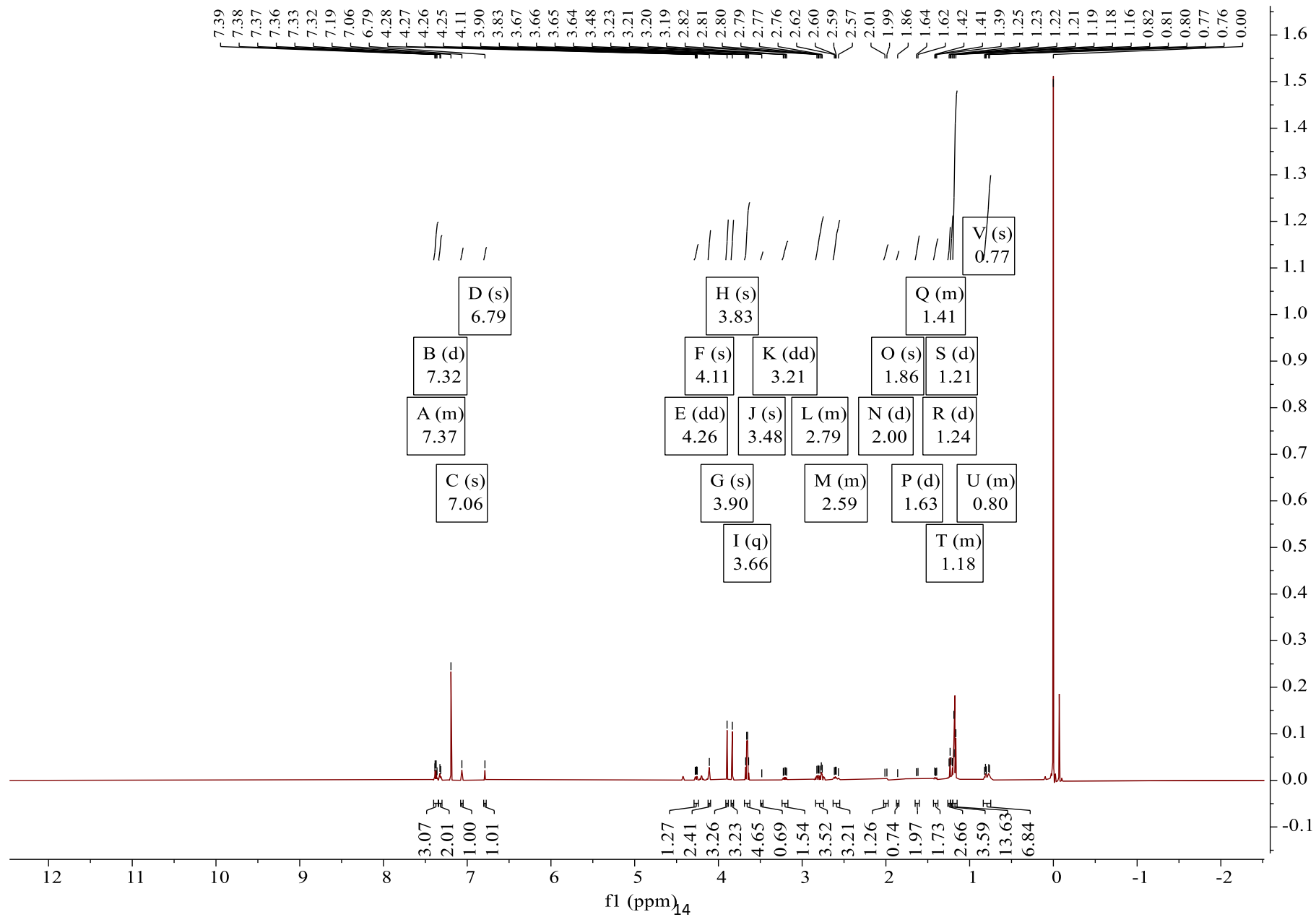
DPZ-itaconic acid IL

Figure S5. ^1H NMR spectrum of DPZ-maleic acid IL.



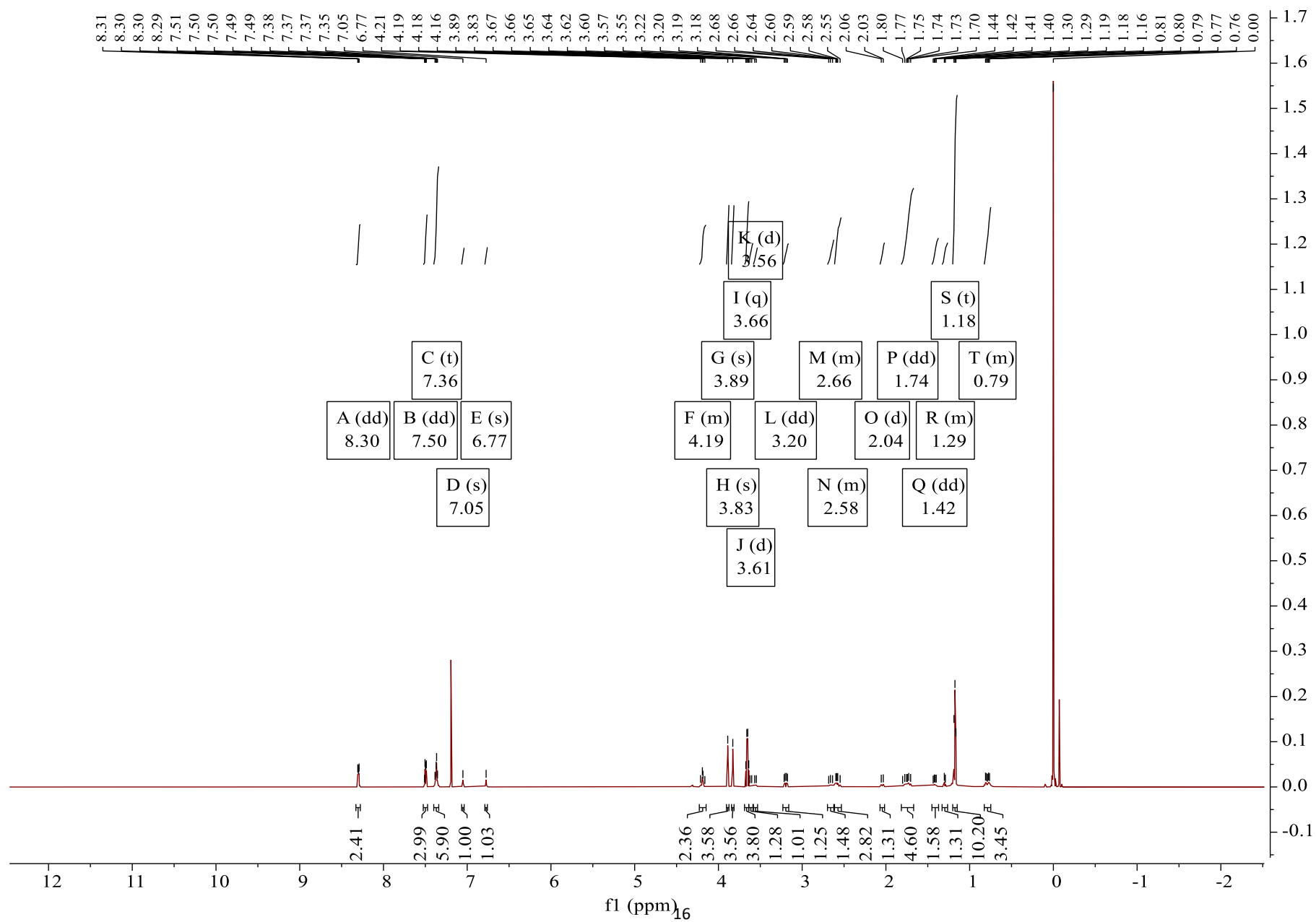
DPZ-maleic acid IL

Figure S6. ^1H NMR spectrum of DPZ-malic acid IL.



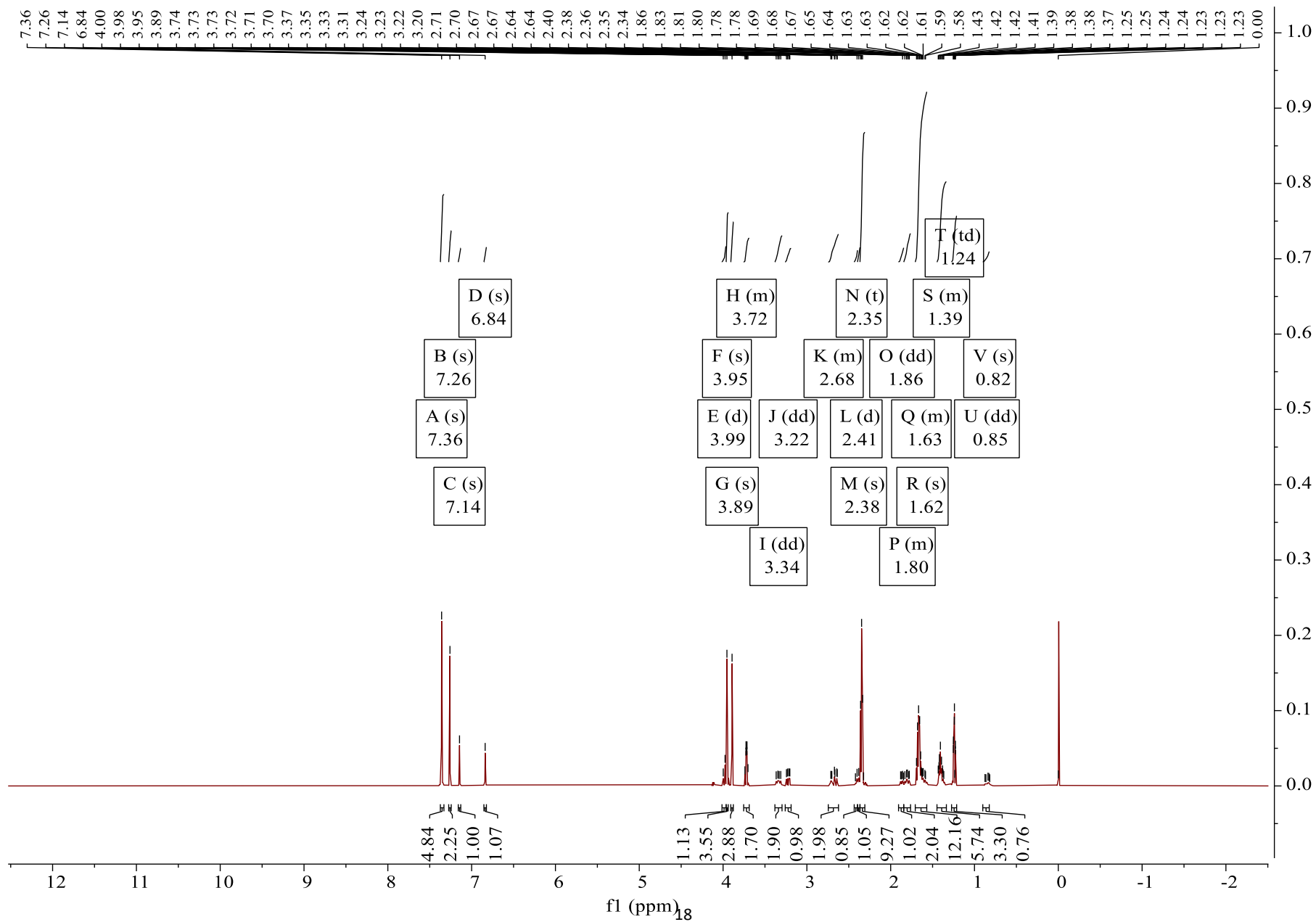
DPZ-malic acid IL

Figure S7. ^1H NMR spectrum of DPZ-phthalic acid IL.



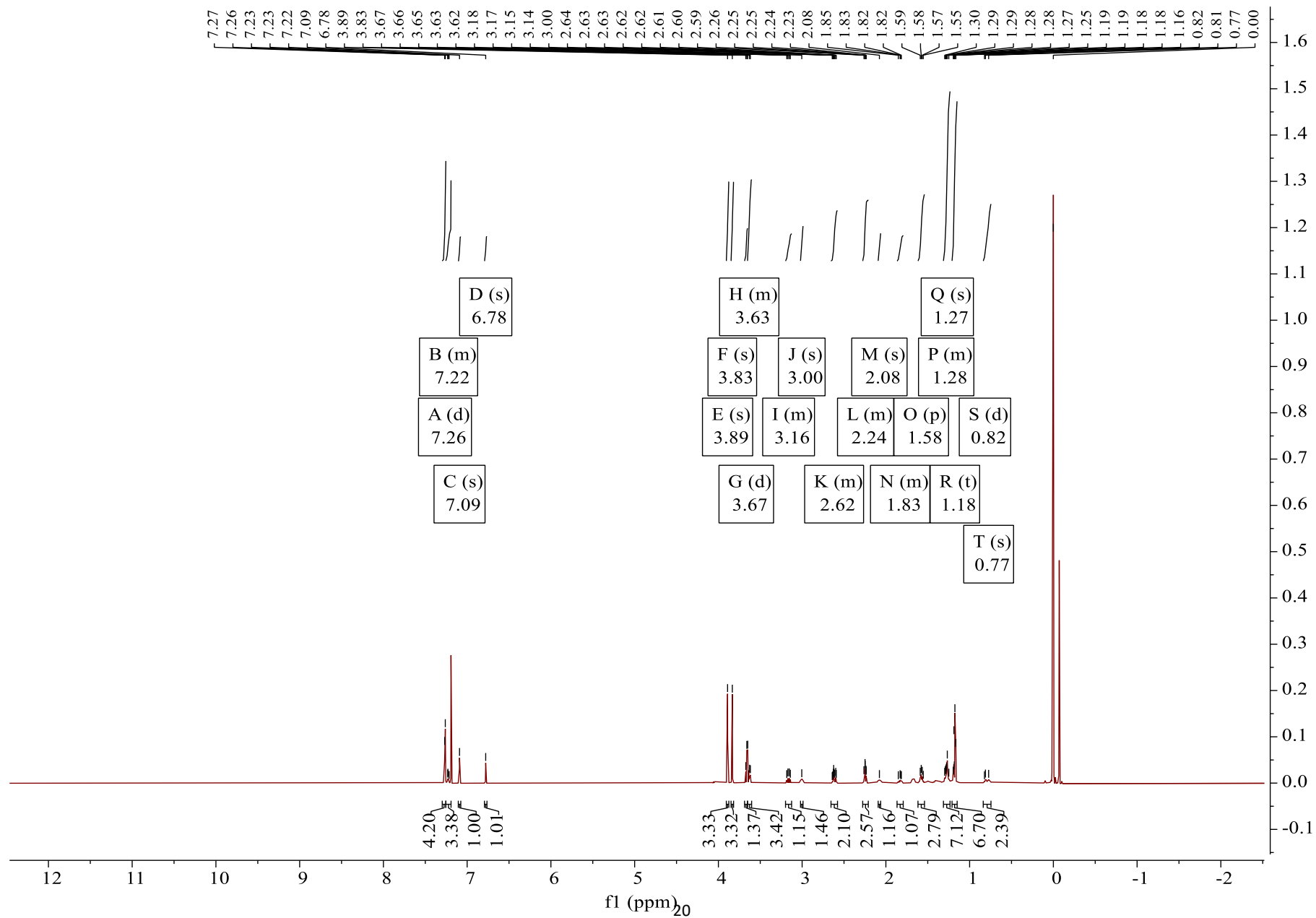
DPZ-phthalic acid IL

Figure S8. ^1H NMR spectrum of DPZ-pimelic acid IL.



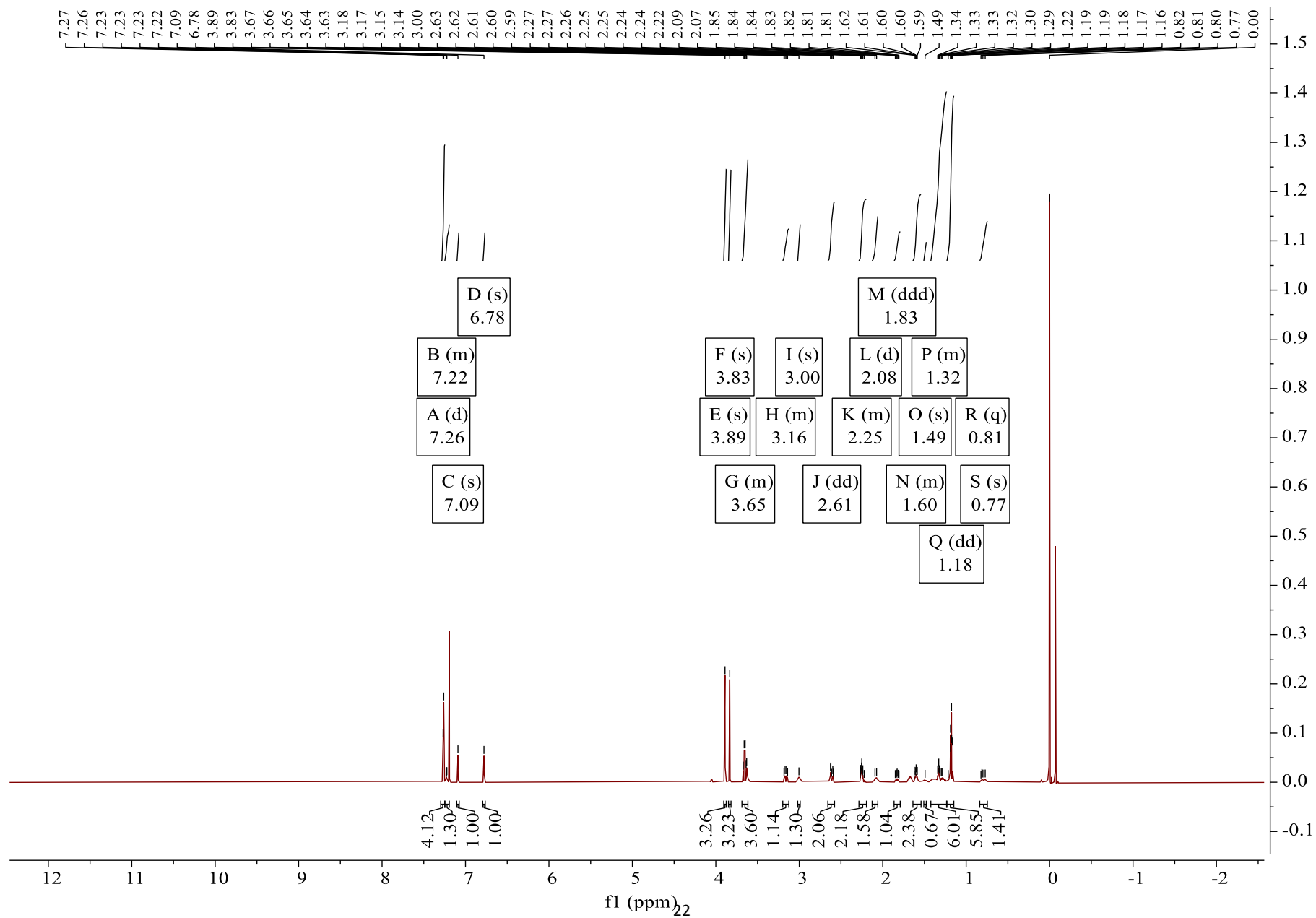
DPZ-pimelic acid IL

Figure S9. ^1H NMR spectrum of DPZ-sebacic acid IL.



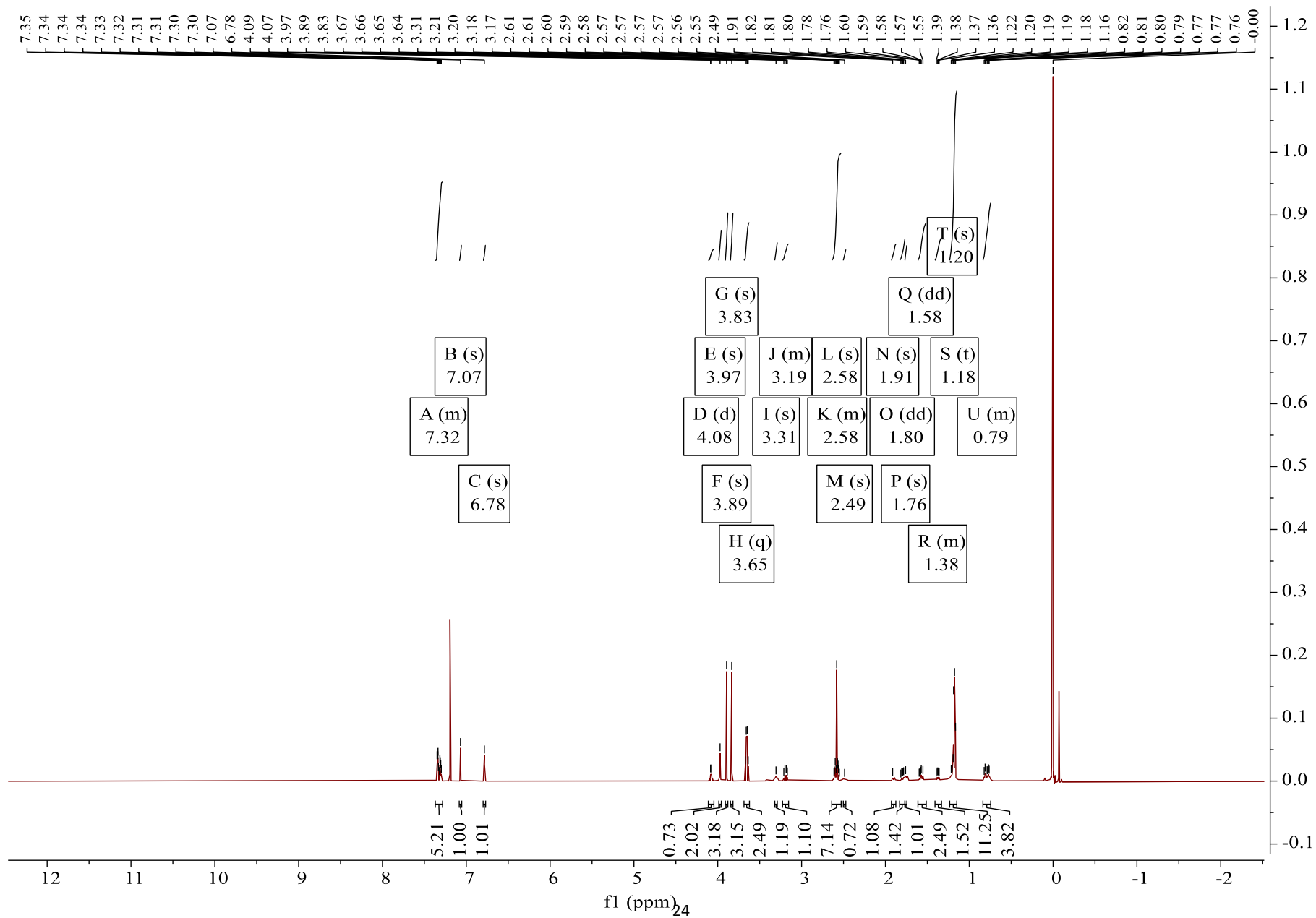
DPZ-sebacic acid IL

Figure S10. ^1H NMR spectrum of DPZ-suberic acid IL.



DPZ-suberic acid IL

Figure S11. ^1H NMR spectrum of DPZ-succinic acid IL.



DPZ-succinic acid IL

Figure S12. ^1H NMR spectrum of DPZ-tartaric acid IL.

DPZ-tartaric acid

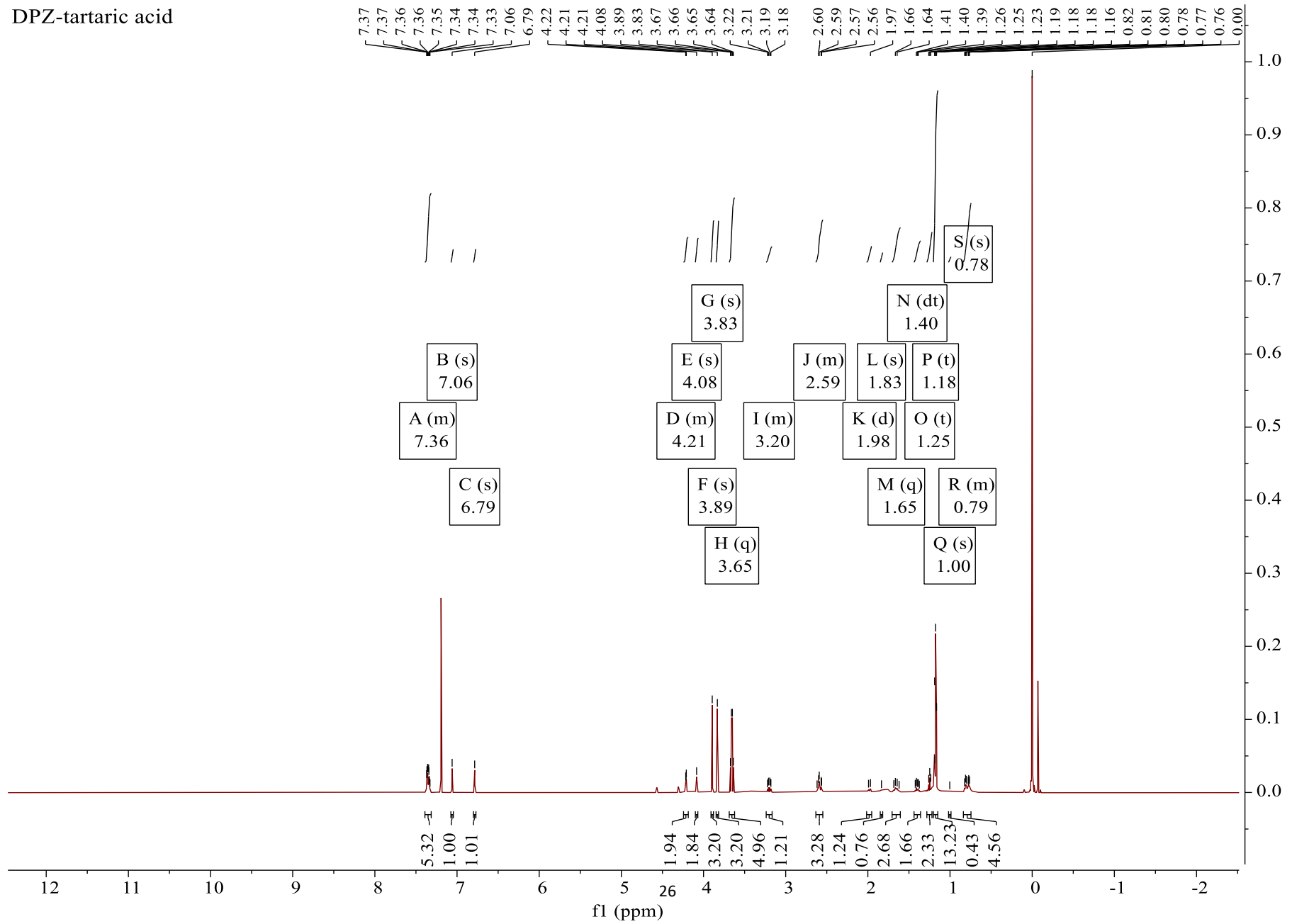
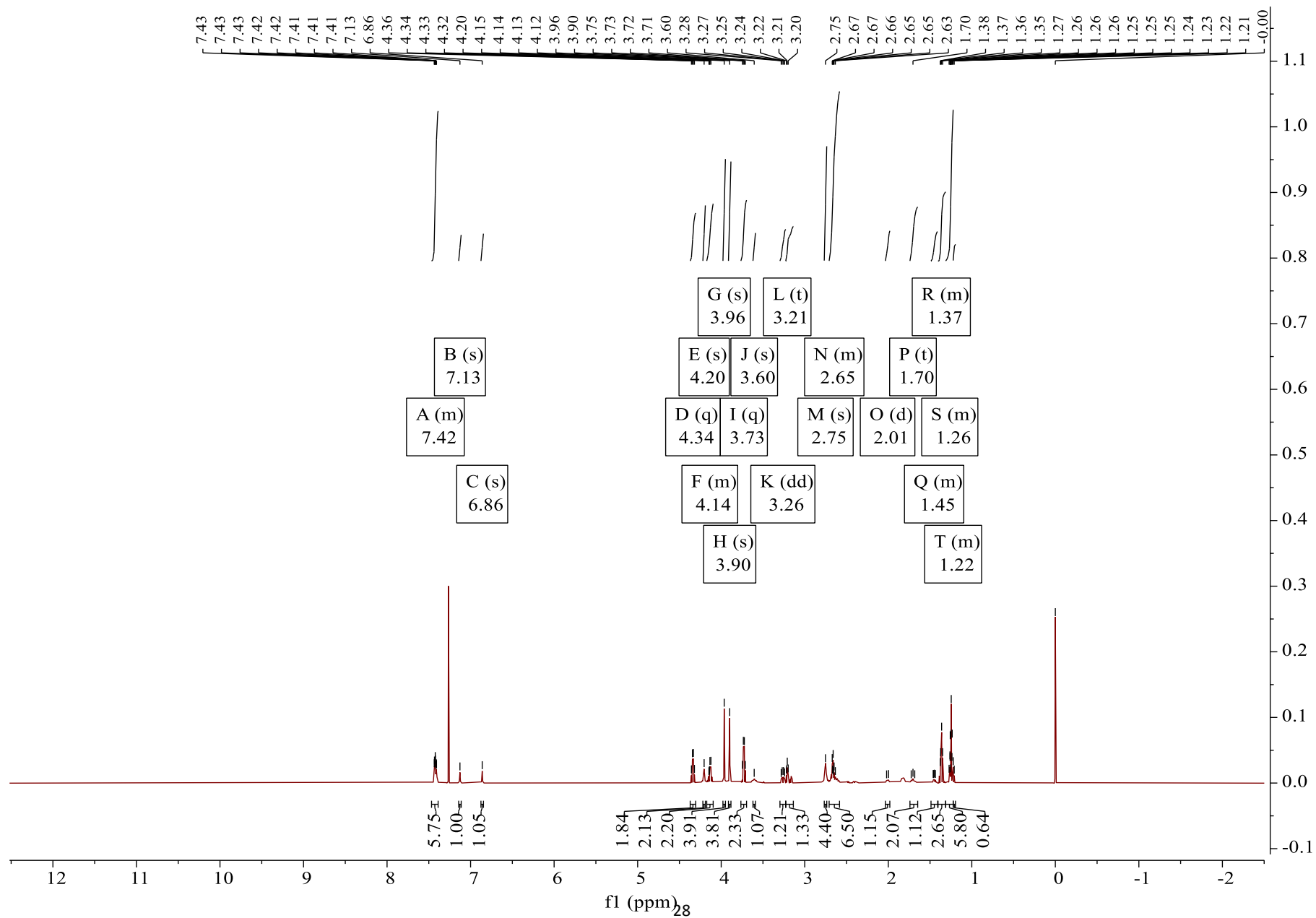


Figure S13. ^1H NMR spectrum of DPZ- α keto glutaric acid IL.



DPZ-alpha-keto glutaric