

Supporting information

Base stable quaternary ammonium ionic liquids

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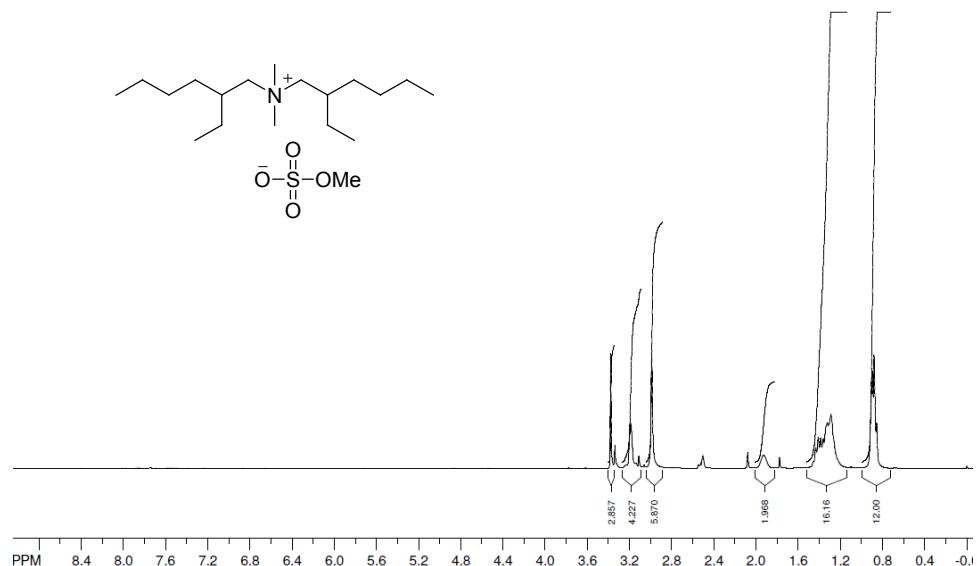


Figure S1. ^1H NMR spectrum of bis(2-ethylhexyl)dimethylammonium methylsulphate, [BEDMA][CH_3SO_4](300 MHz, DMSO).

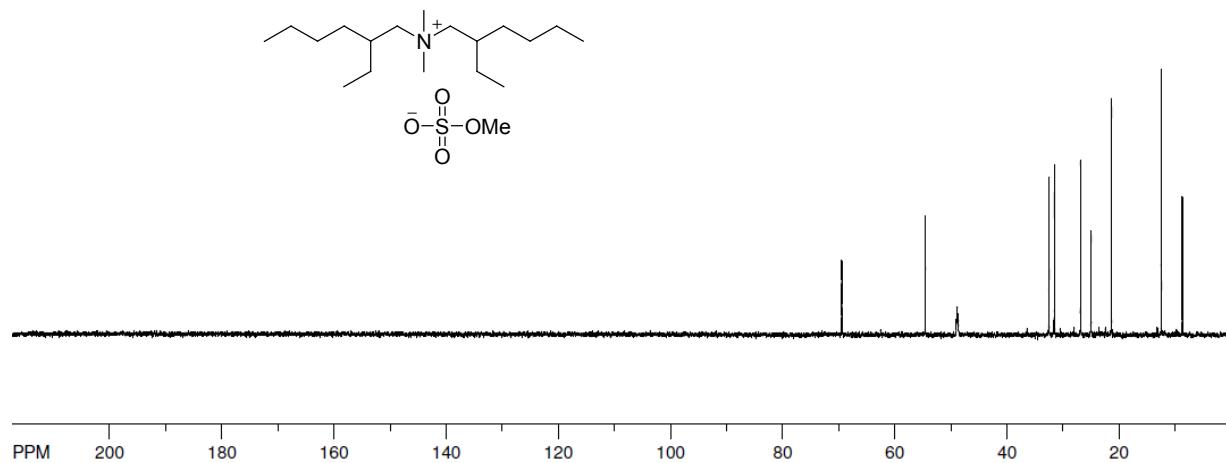


Figure S2. ^{13}C NMR spectrum of bis(2-ethylhexyl)dimethylammonium methylsulphate, [BEDMA][CH_3SO_4](75 MHz, D_2O).

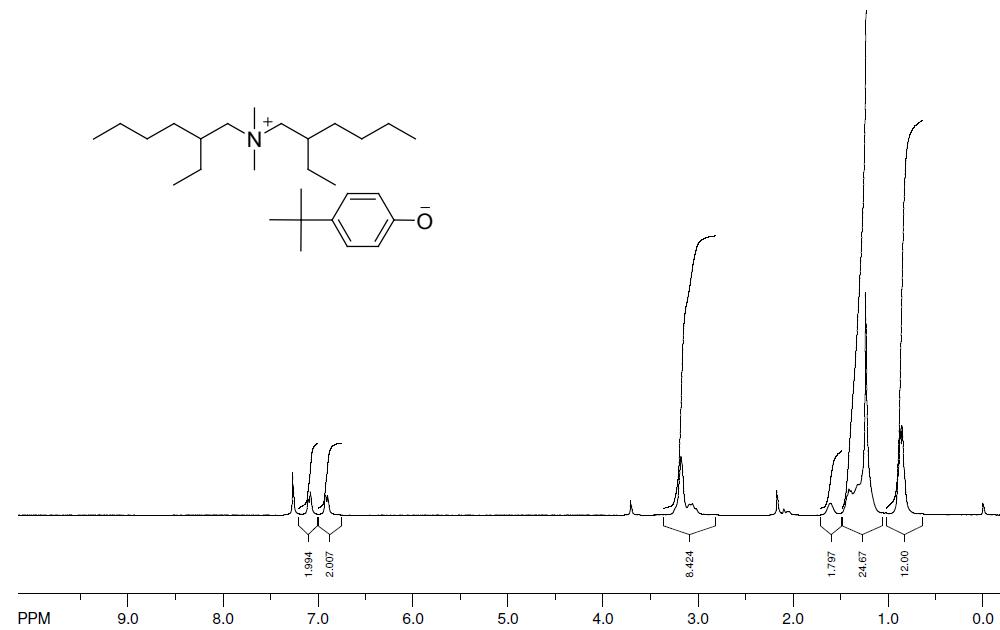


Figure S3. ^1H NMR spectrum of bis(2-ethylhexyl)dimethylammonium 4-*tert*-butylphenolate, [BEDMA][4-tBuPhen](300 MHz, CDCl_3).

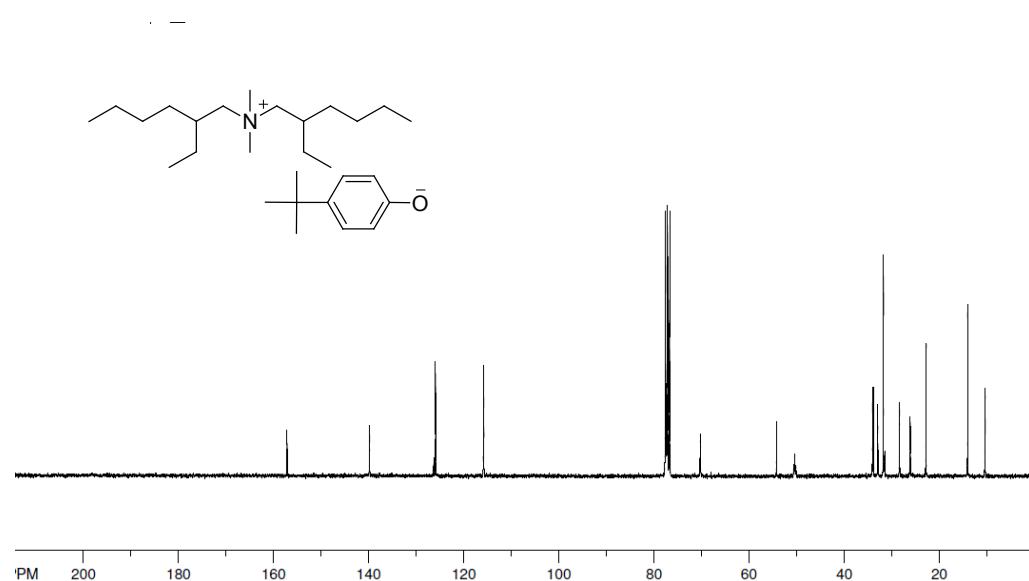


Figure S4. ^{13}C NMR spectrum of bis(2-ethylhexyl)dimethylammonium 4-*tert*-butylphenolate, [BEDMA][4-tBuPhen](75 MHz, CDCl_3).

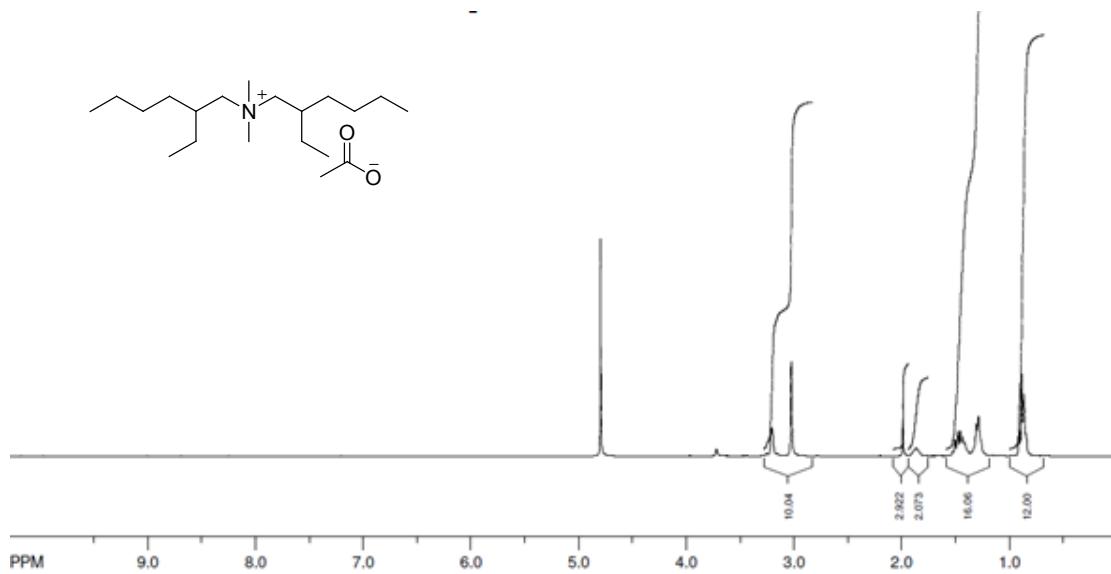


Figure S5. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium acetate, [BEDMA][CH₃COO](300 MHz, D₂O).

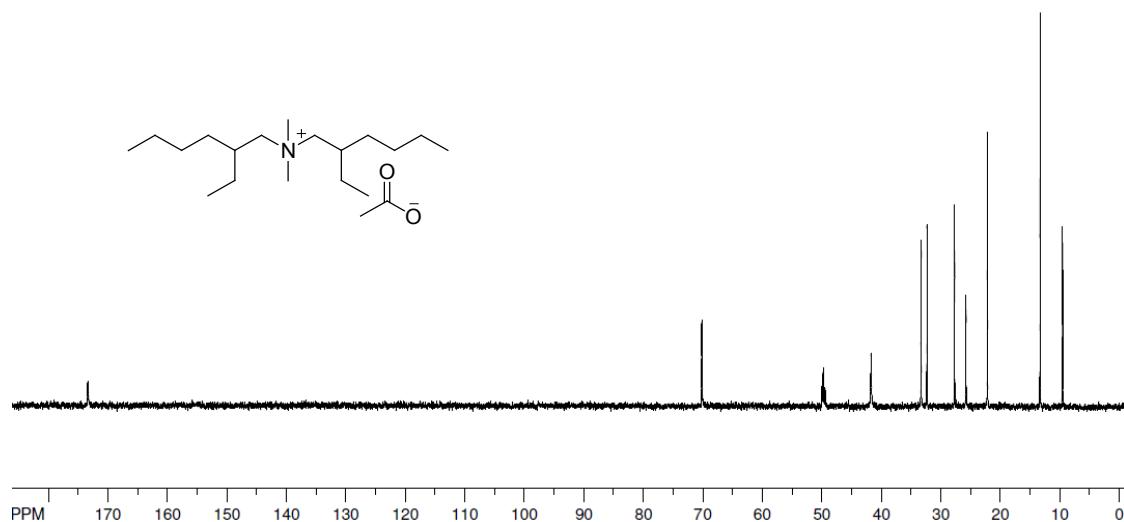


Figure S6. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium acetate, [BEDMA][CH₃COO](75 MHz, D₂O).

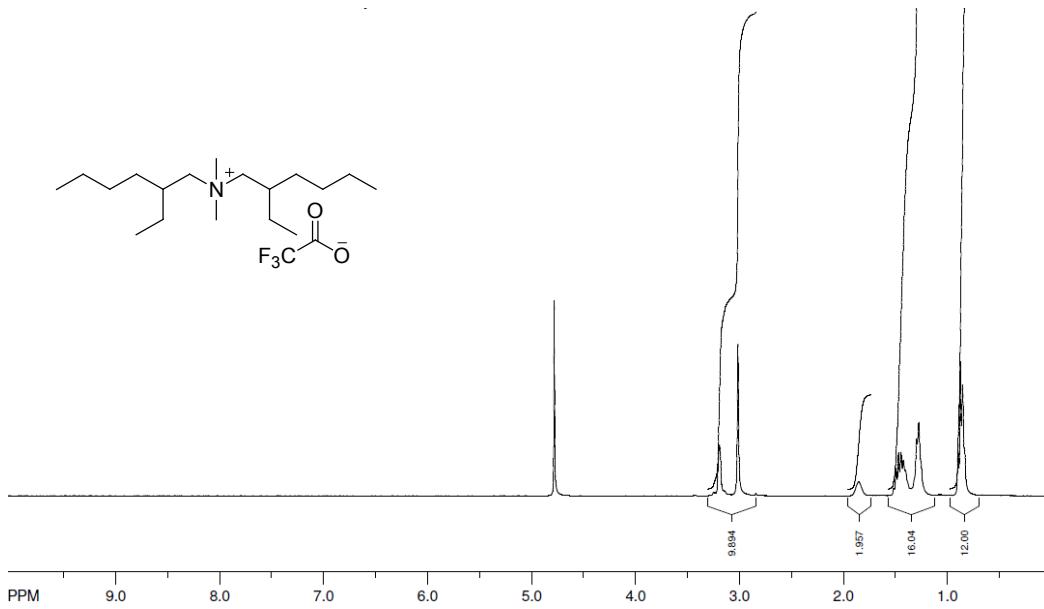


Figure S7. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium trifluoroacetate, [BEDMA][CF₃COO](300 MHz, D₂O).

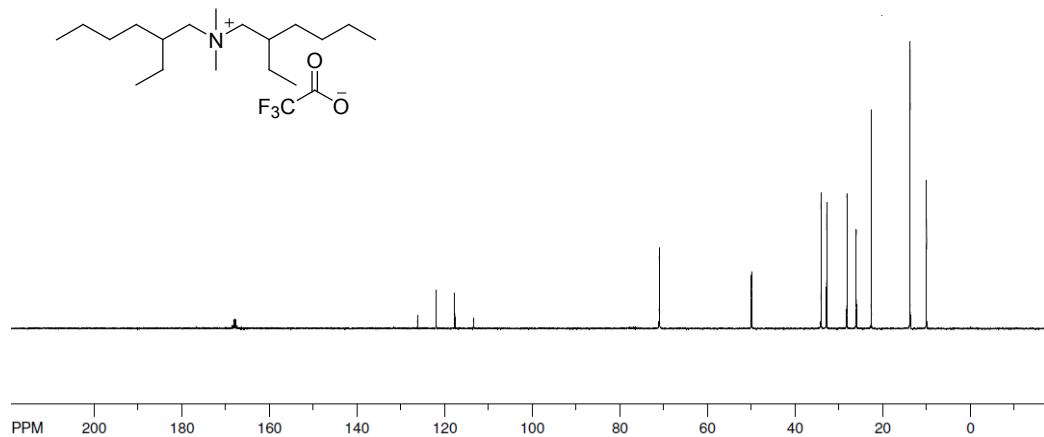


Figure S8. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium trifluoroacetate, [BEDMA][CF₃COO](75 MHz, D₂O).

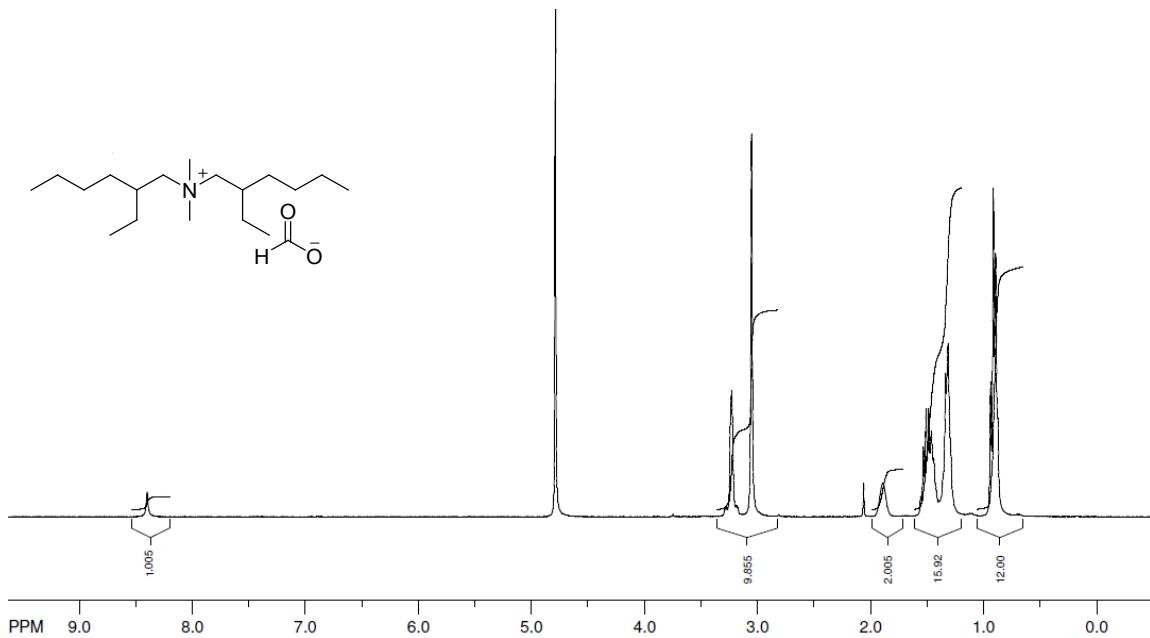


Figure S9. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium formate, [BEDMA][HCOO](300 MHz, D₂O).

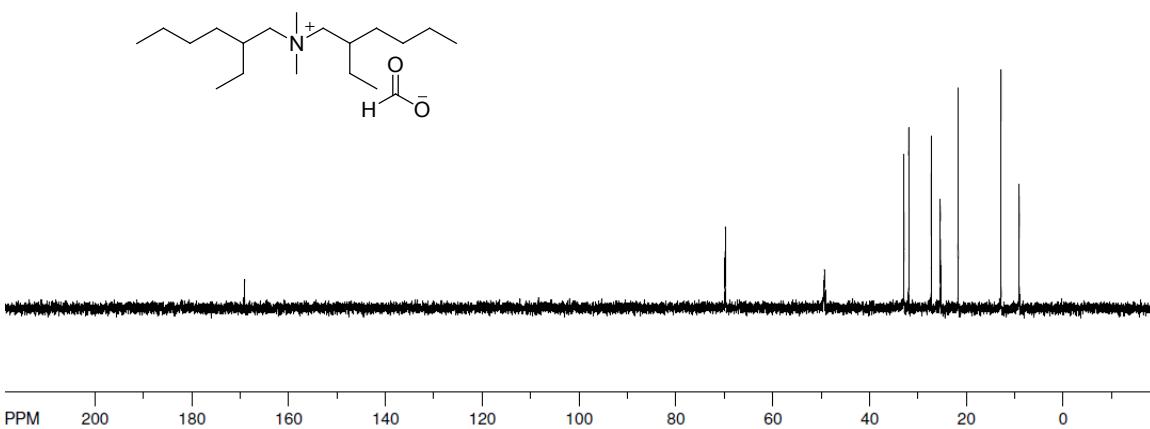


Figure S10. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium formate, [BEDMA][HCOO](75 MHz, D₂O).

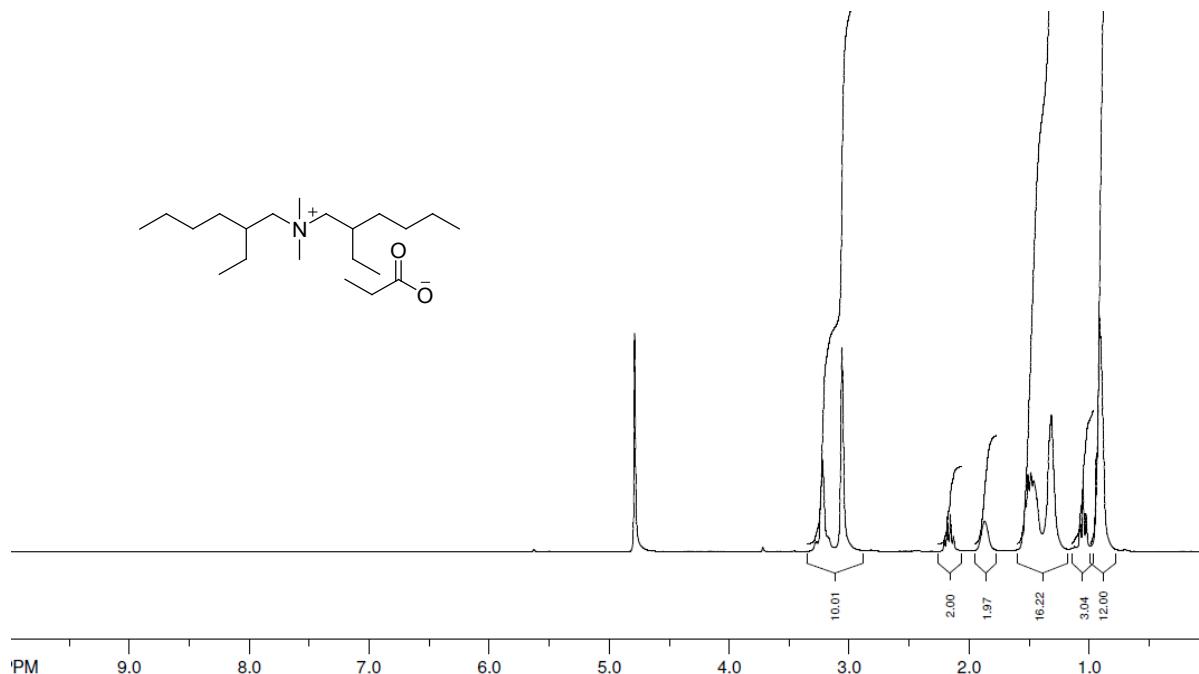


Figure S11. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium propionate, [BEDMA][CH₃CH₂COO](300 MHz, D₂O).

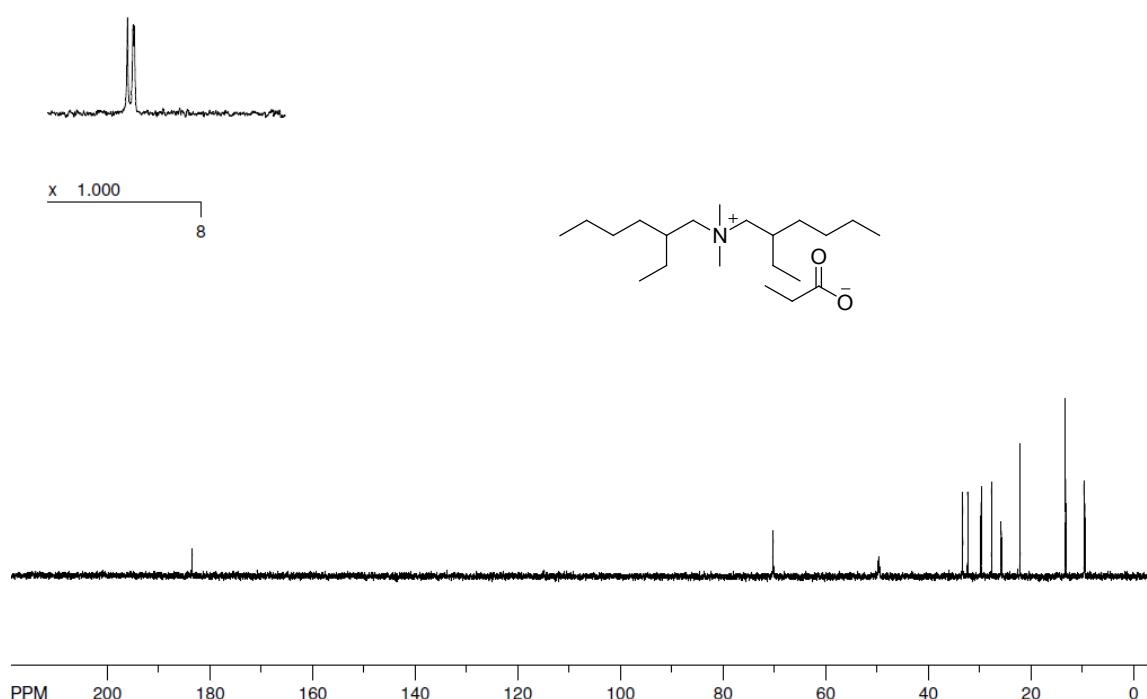


Figure S12. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium propionate, [BEDMA][CH₃CH₂COO](75MHz, D₂O).

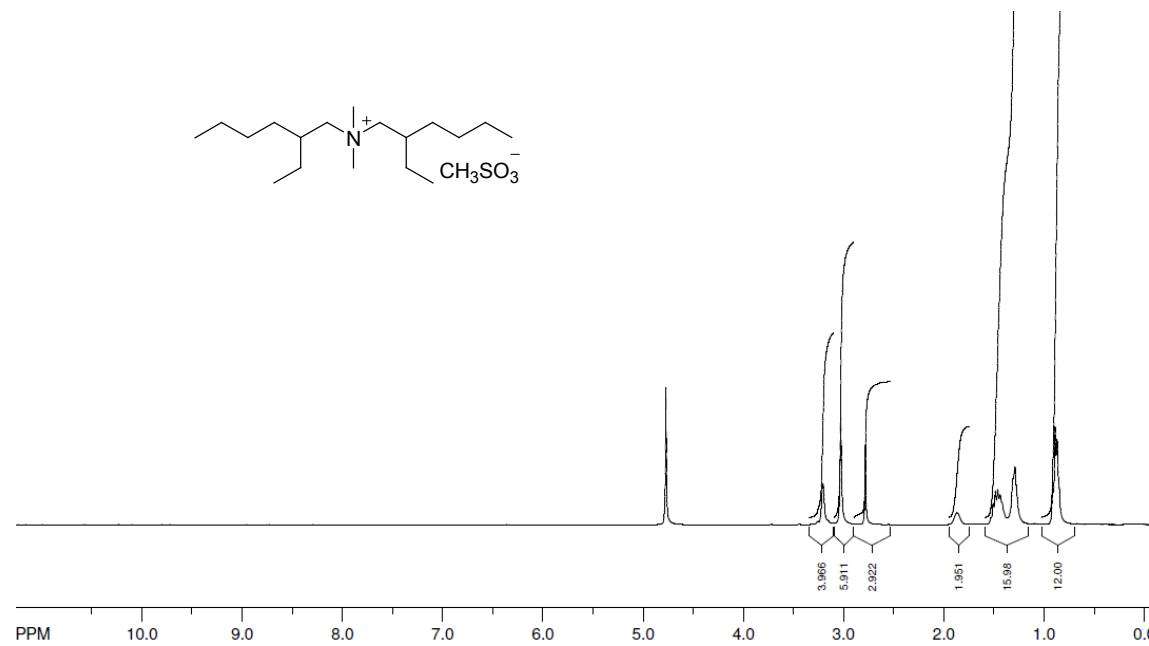


Figure S13. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium methanesulfonate, [BEDMA][CH₃SO₃](300 MHz, D₂O).

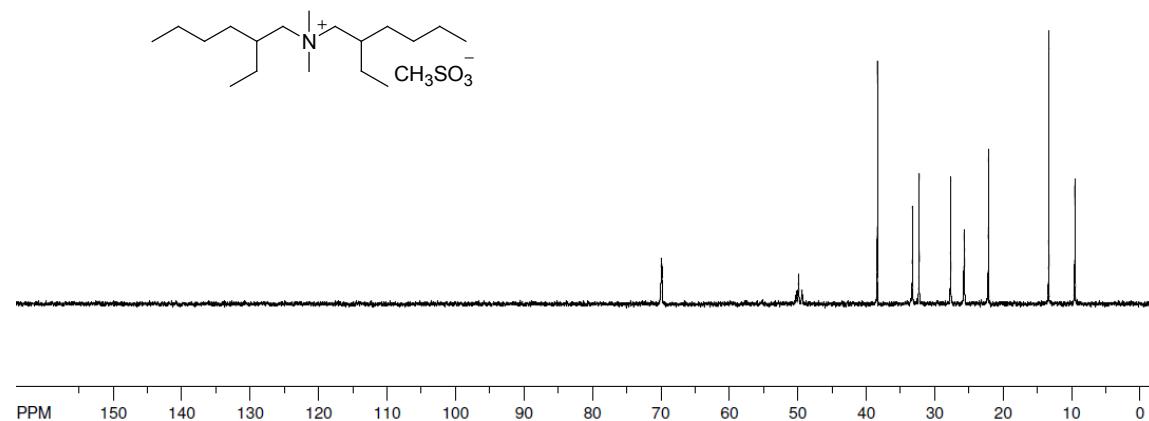


Figure S14. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium methanesulfonate, [BEDMA][CH₃SO₃](75 MHz, D₂O).

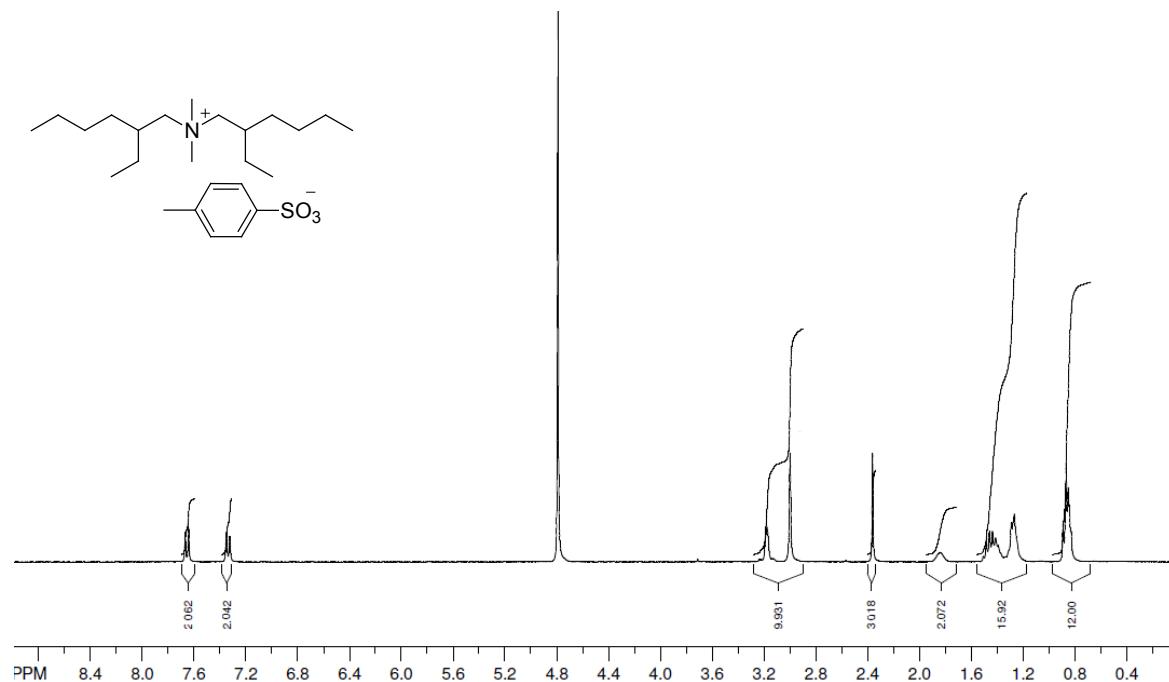


Figure S15. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium tosylate, [BEDMA][TsO](300 MHz, D₂O).

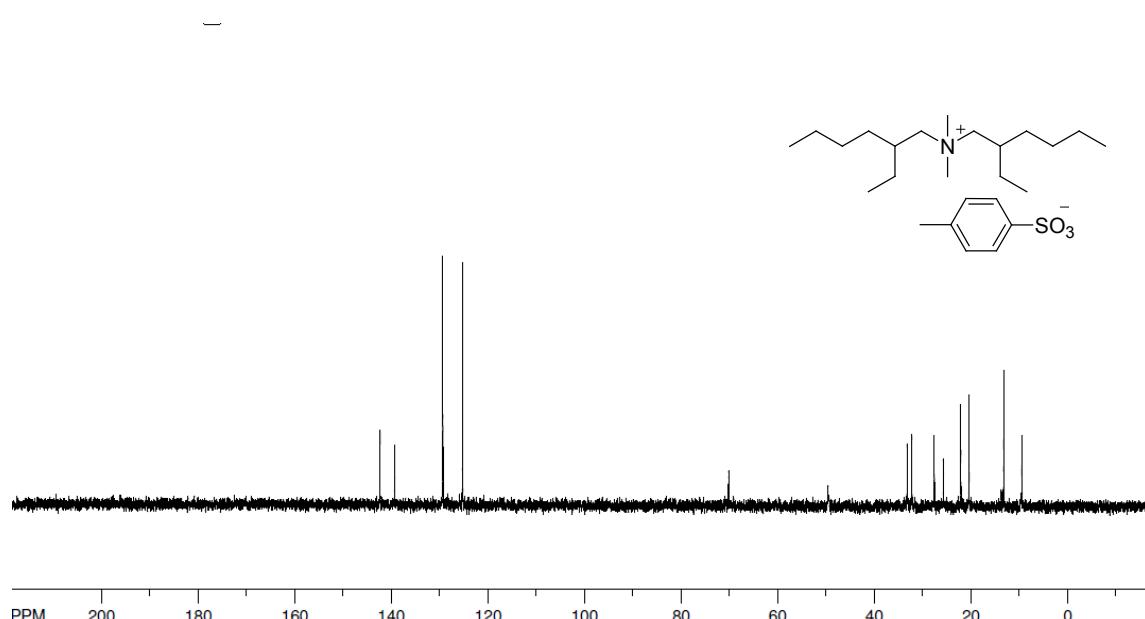


Figure S16. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium tosylate, [BEDMA][TsO](75 MHz, D₂O).

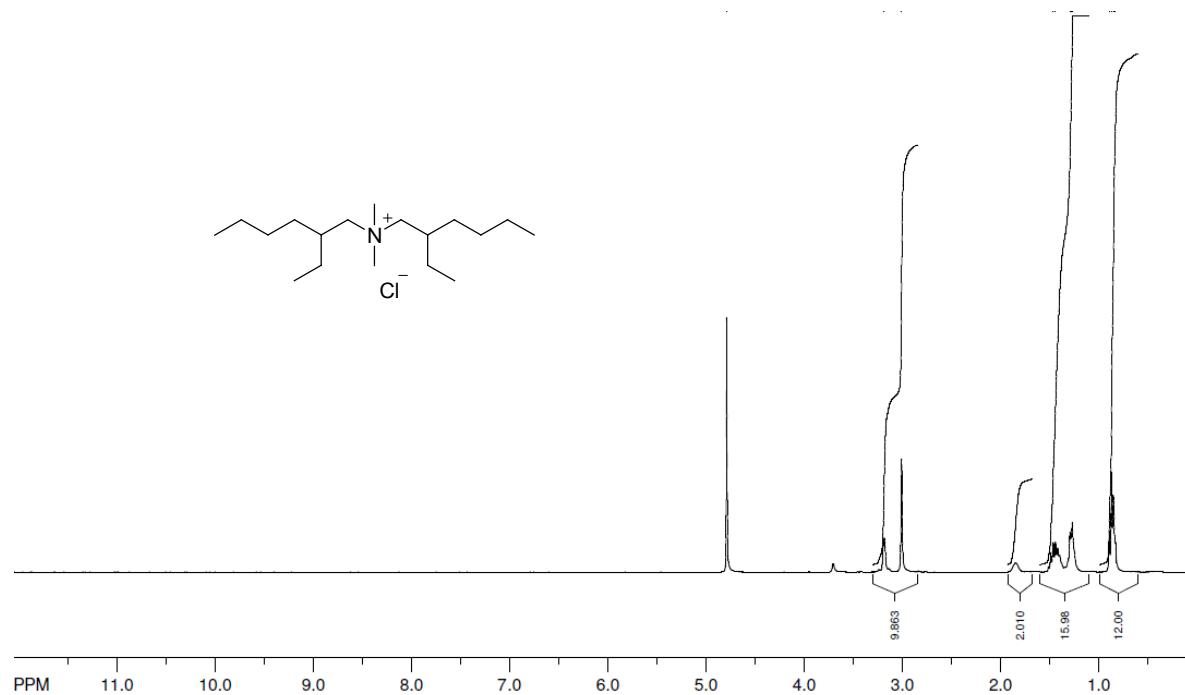


Figure S17. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium chloride, [BEDMA][Cl](300 MHz, D₂O).

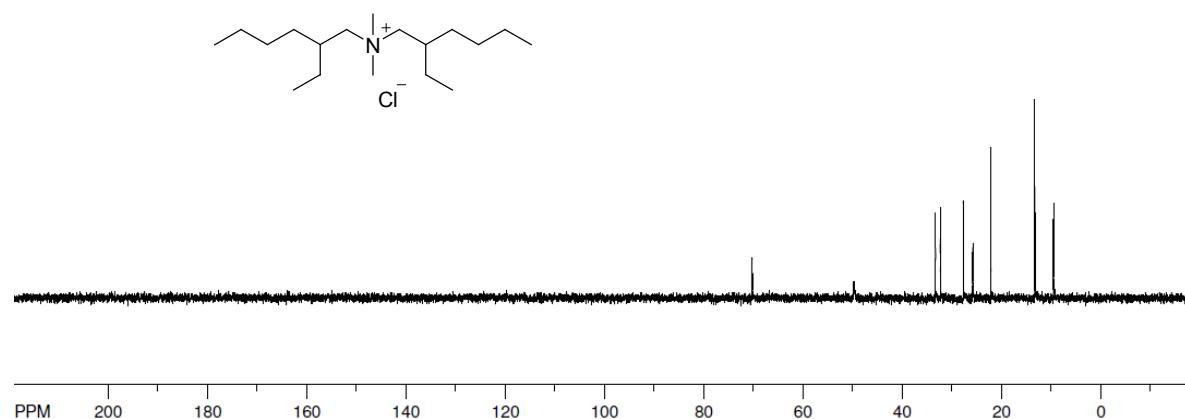


Figure S18. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium chloride, [BEDMA][Cl](75 MHz, D₂O).

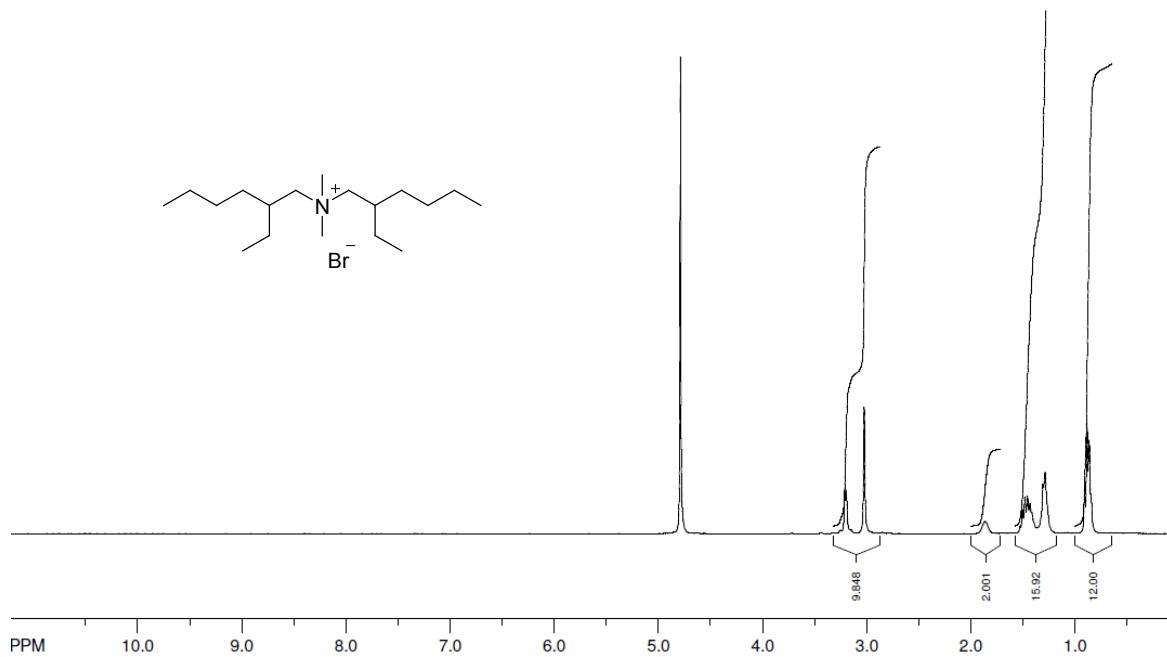


Figure S19. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium bromide, [BEDMA][Br](300 MHz, D₂O).

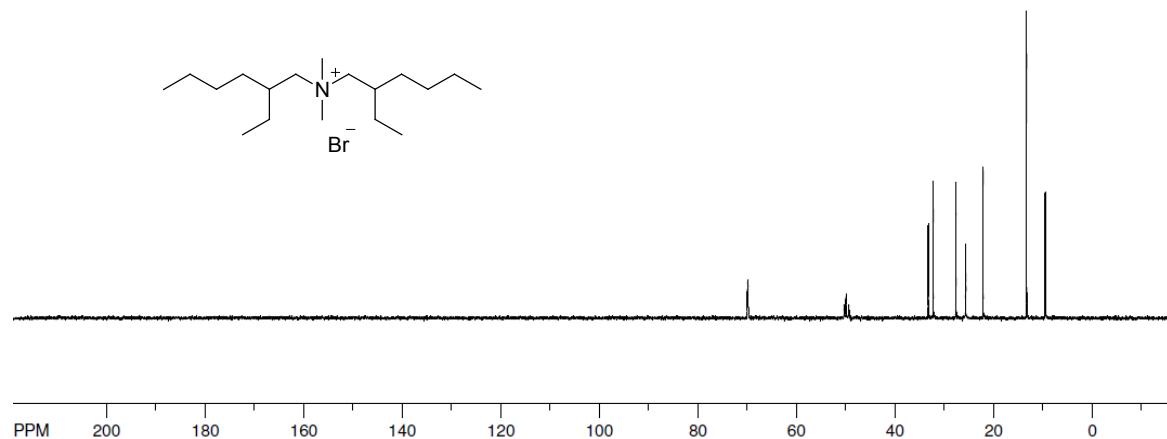


Figure S20. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium bromide, [BEDMA][Br](75MHz, D₂O).

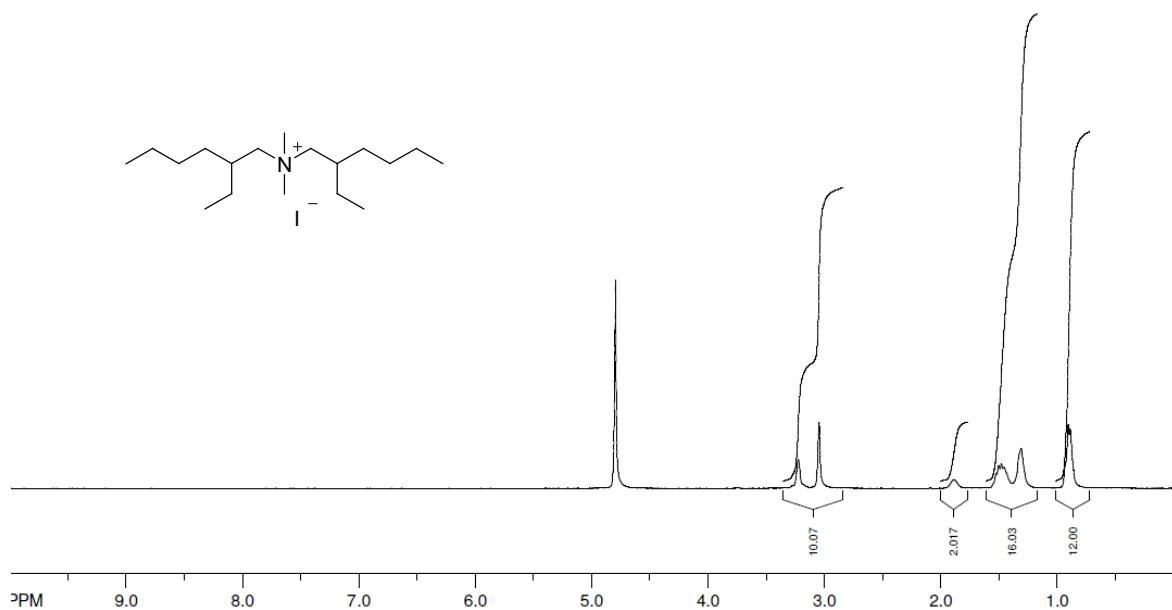


Figure S21. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium iodide, [BEDMA][I](300 MHz, D₂O).

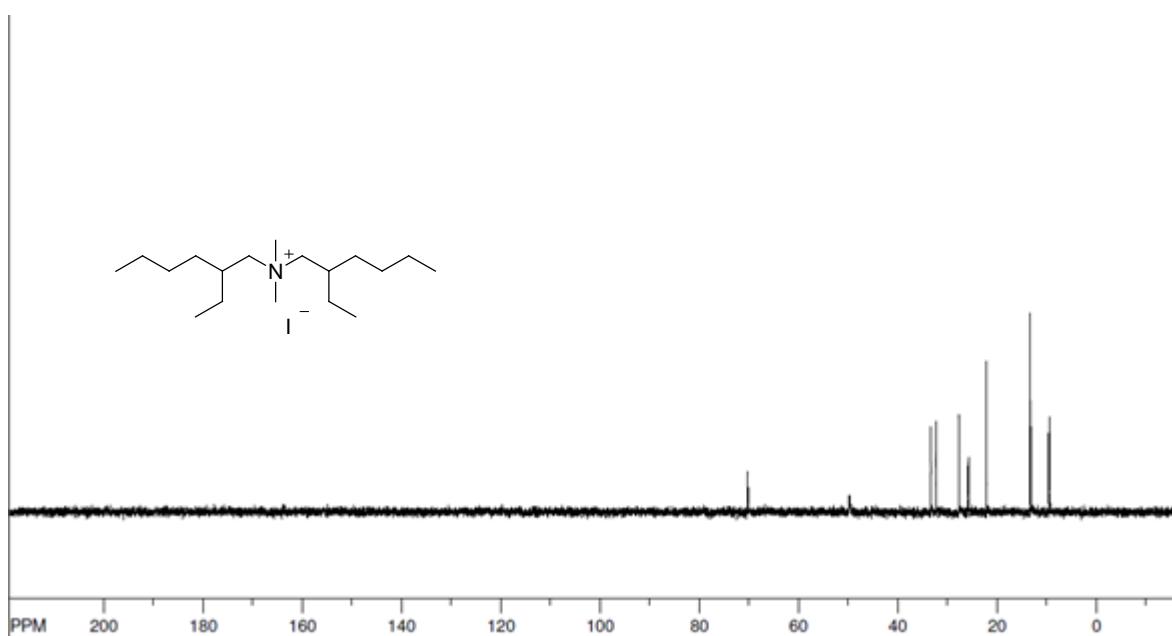


Figure S22. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium iodide, [BEDMA][I](75 MHz, D₂O).

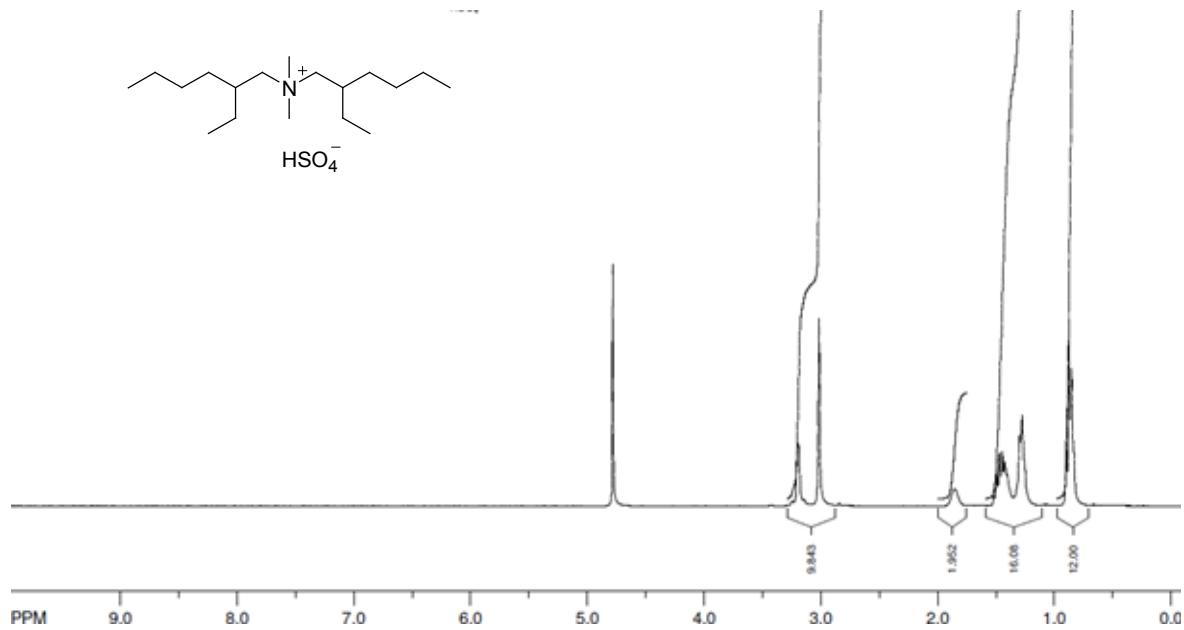


Figure S23. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium hydrogensulfate, [BEDMA][HSO₄](300 MHz, D₂O).

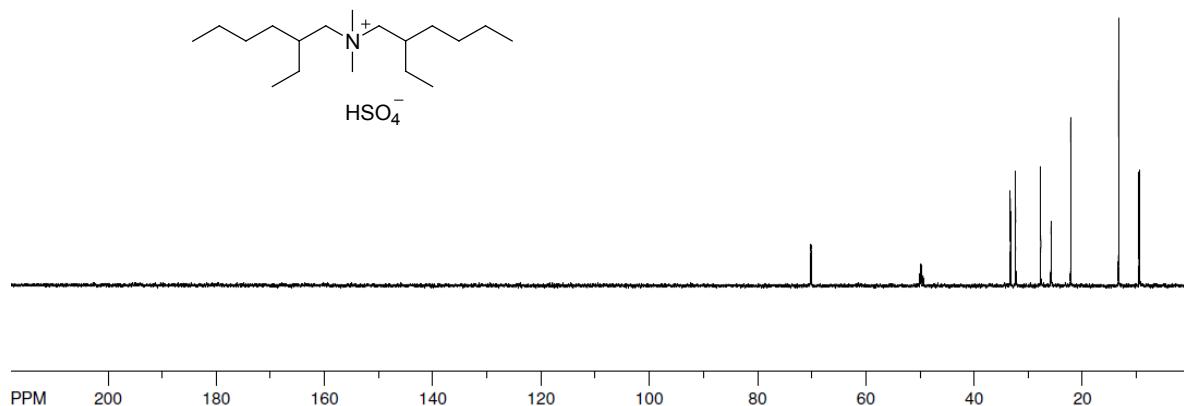


Figure S24. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium hydrogensulfate, [BEDMA][HSO₄](75 MHz, D₂O).

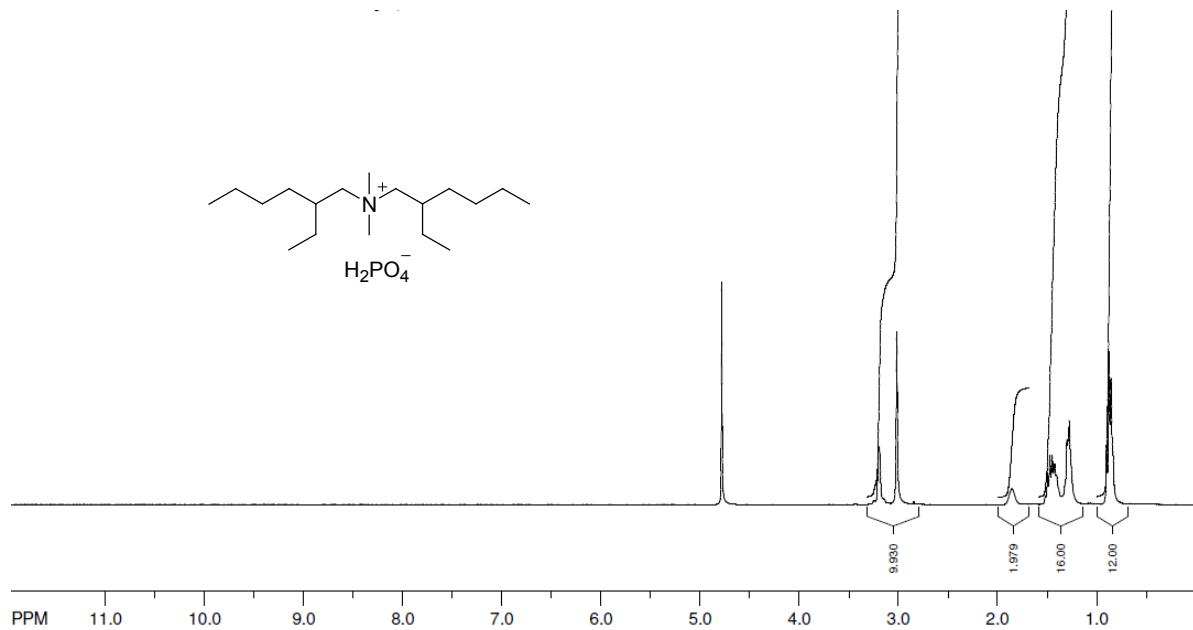


Figure S25. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium dihydrogenphosphate, [BEDMA][H₂PO₄](300 MHz, D₂O).

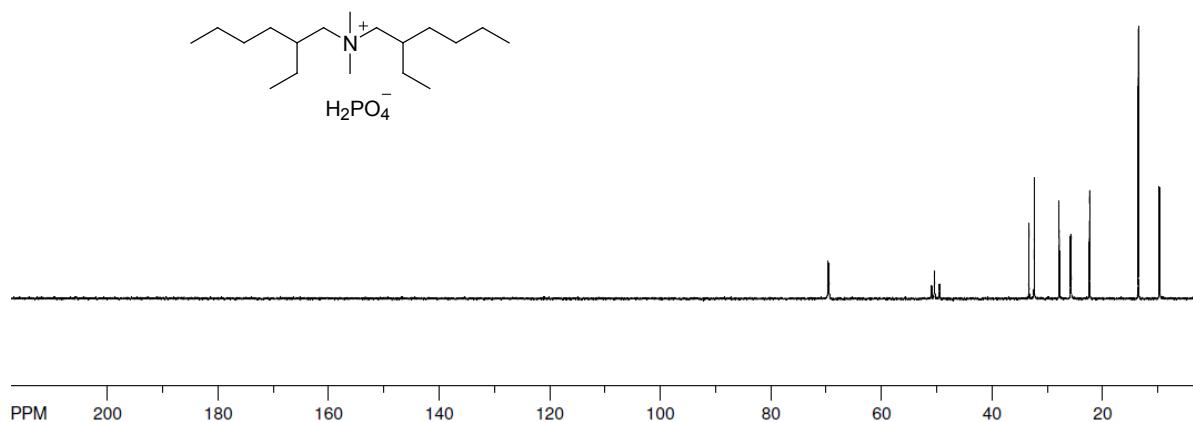


Figure S26. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium dihydrogenphosphate, [BEDMA][H₂PO₄](75 MHz, D₂O).

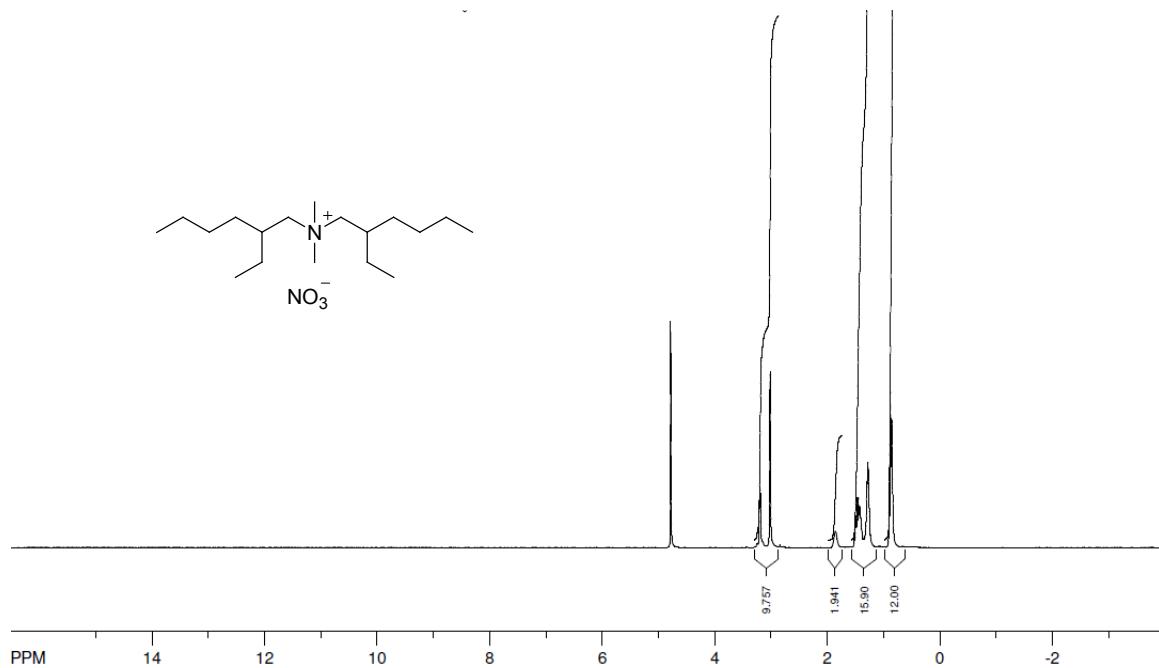


Figure S27. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium nitrate, [BEDMA][NO₃](300 MHz, D₂O).

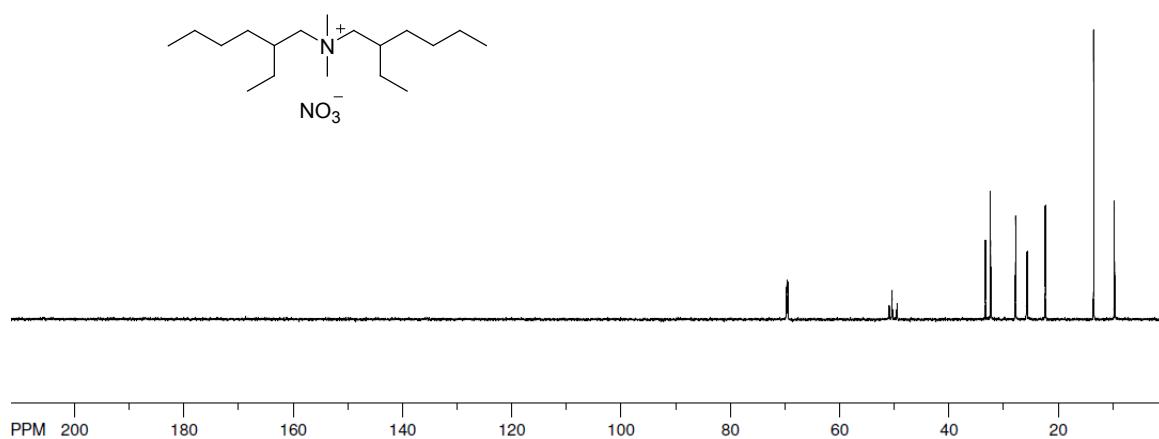


Figure S28. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium nitrate, [BEDMA][NO₃](75 MHz, D₂O).

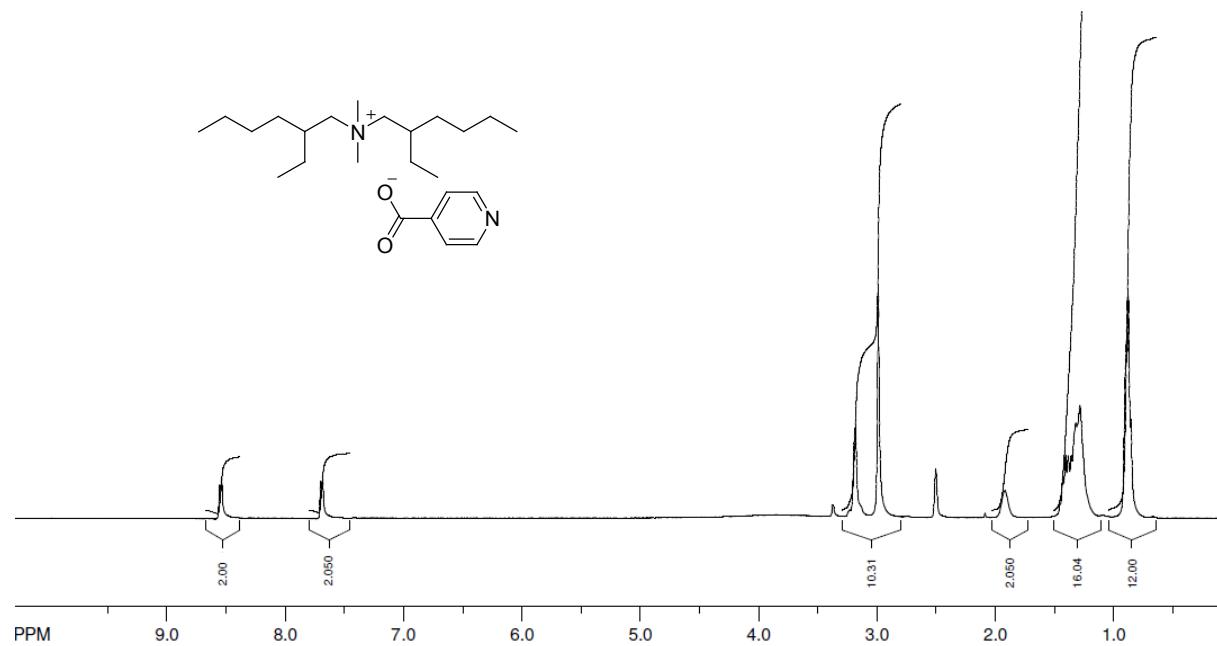


Figure S29. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium isonicotinate, [BEDMA][Isonic](300 MHz, D₂O).

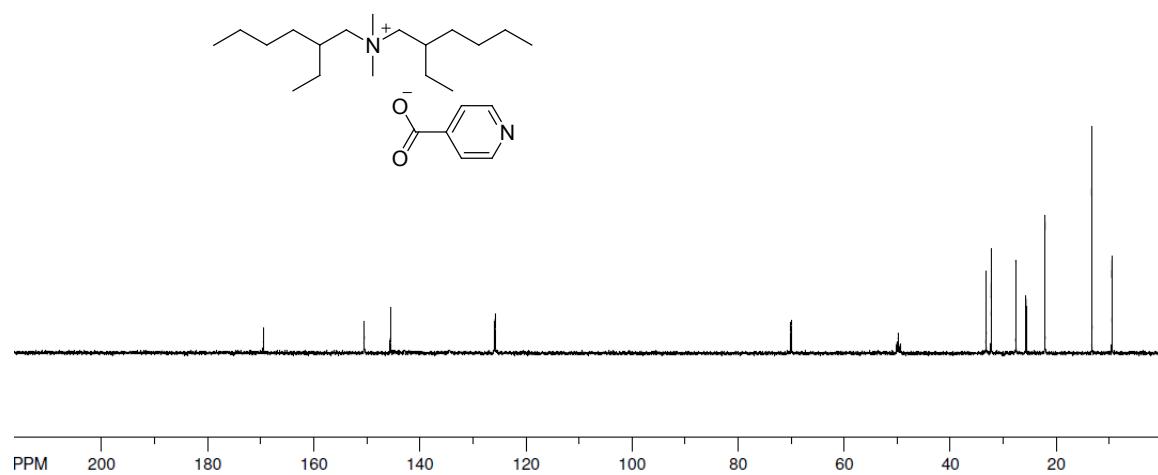


Figure S30. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium isonicotinate, [BEDMA][Isonic](75 MHz, D₂O).

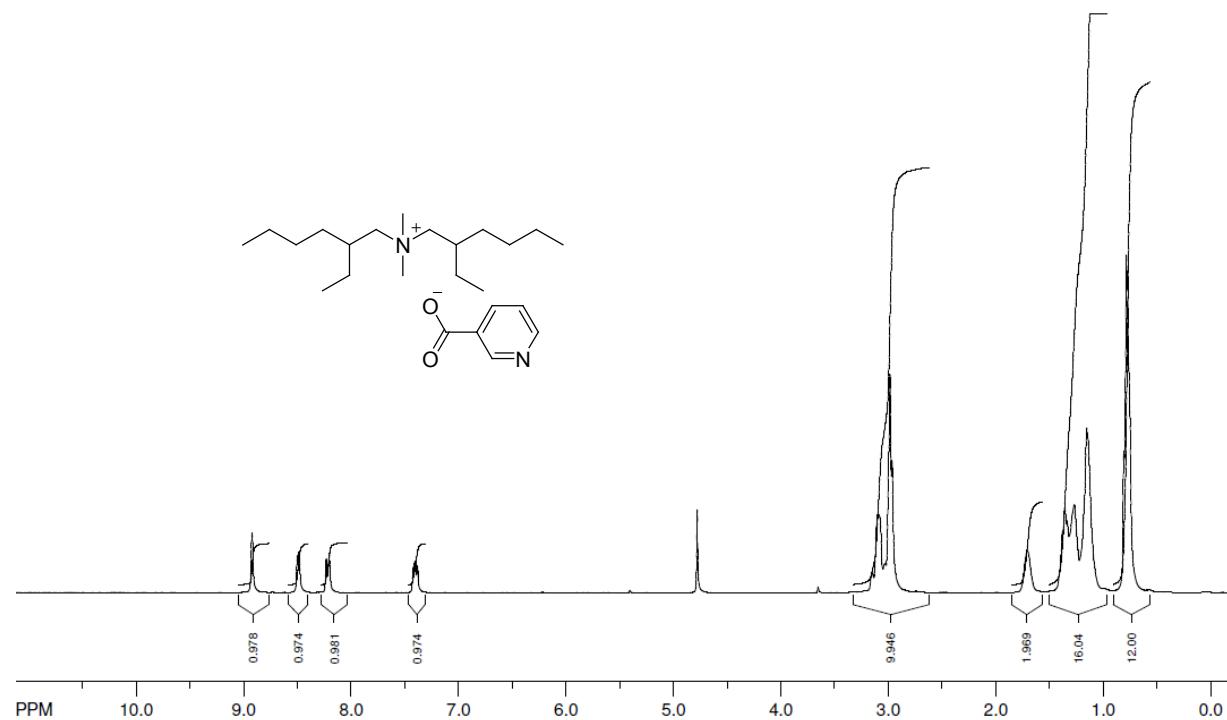


Figure S31. ${}^1\text{H}$ NMR spectrum of bis(2-ethylhexyl)dimethylammonium nicotinate, [BEDMA][Nic] (300 MHz, D_2O).

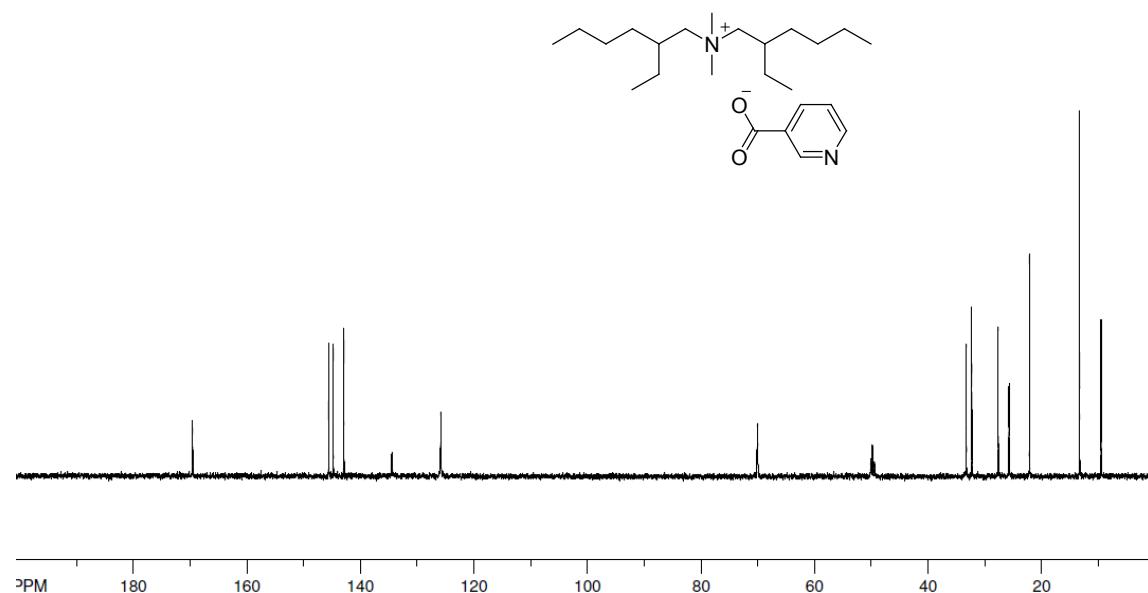


Figure S32. ${}^{13}\text{C}$ NMR spectrum of bis(2-ethylhexyl)dimethylammonium nicotinate, [BEDMA][Nic] (75 MHz, D_2O).

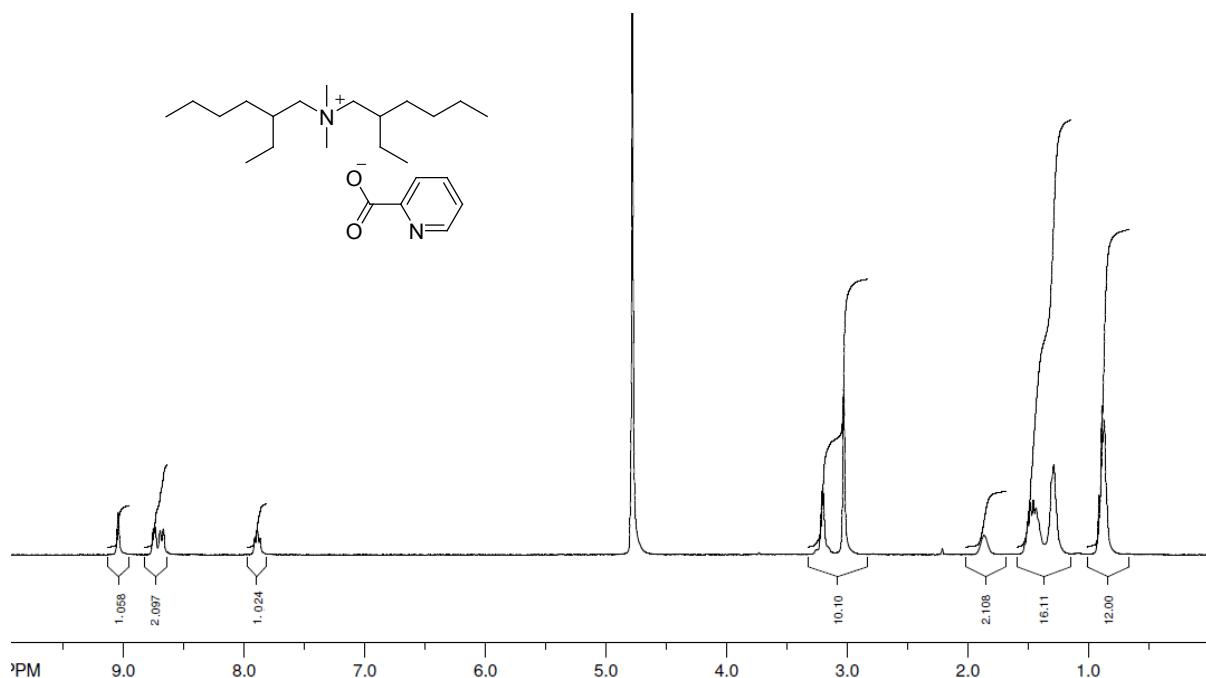


Figure S33. ¹H NMR spectrum of bis(2-ethylhexyl)dimethylammonium picolinate, [BEDMA][Pic](300 MHz, D₂O).

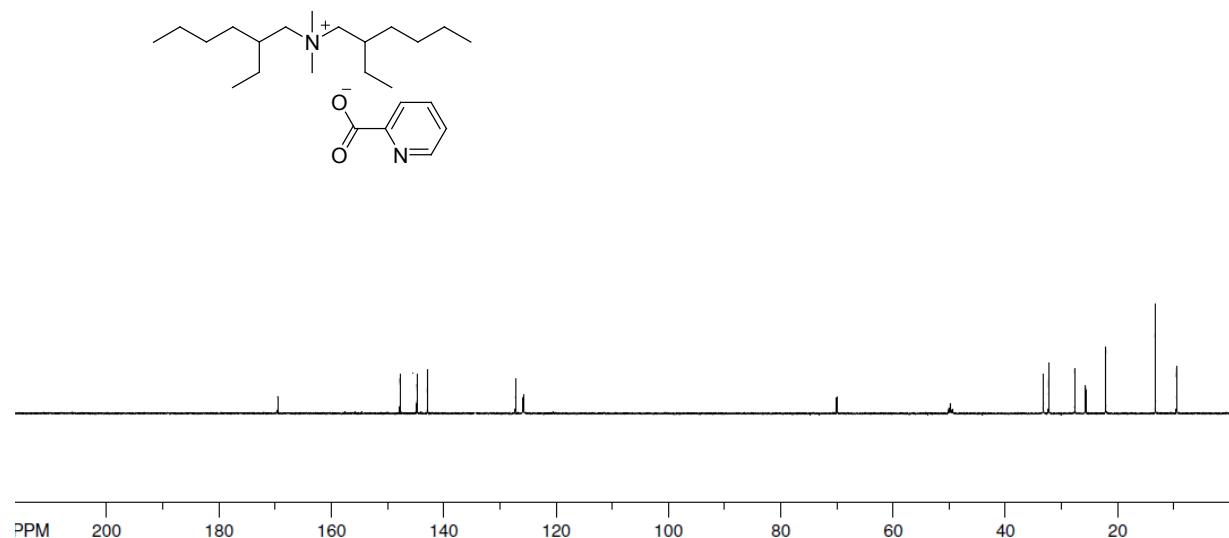


Figure S34. ¹³C NMR spectrum of bis(2-ethylhexyl)dimethylammonium picolinate, [BEDMA][Pic](75 MHz, D₂O).