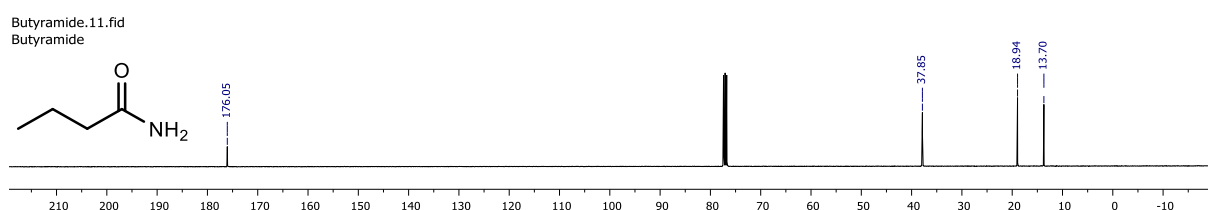
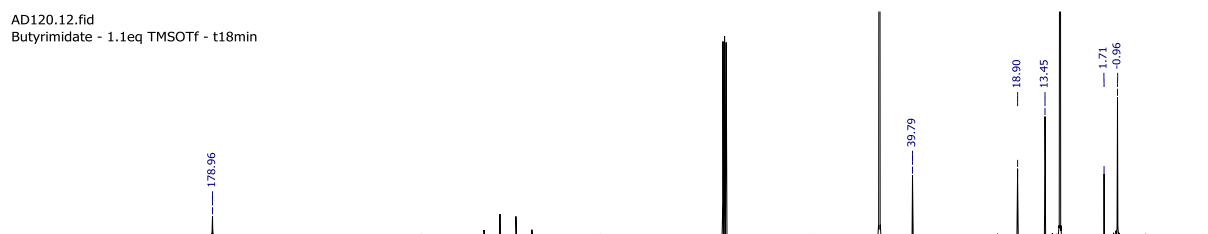
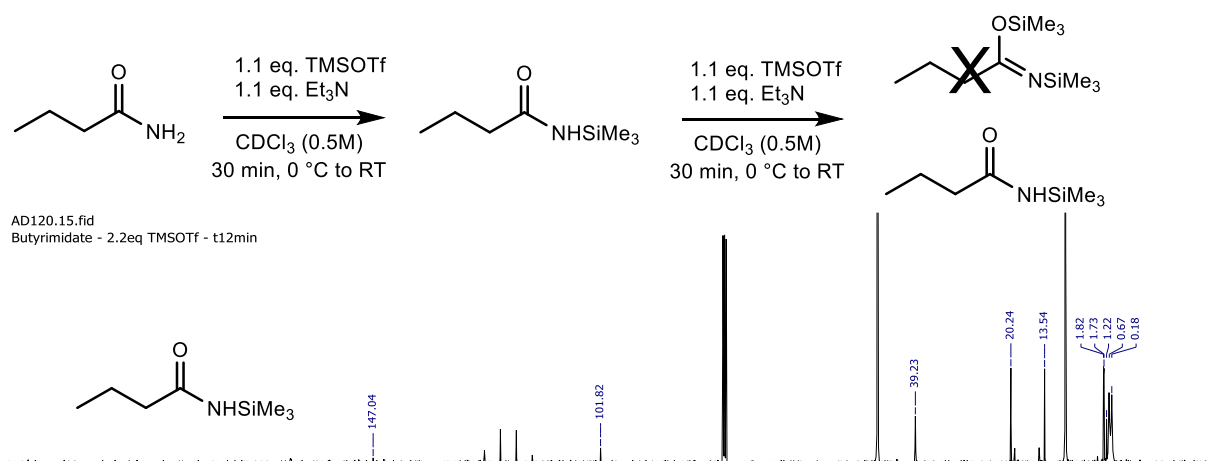
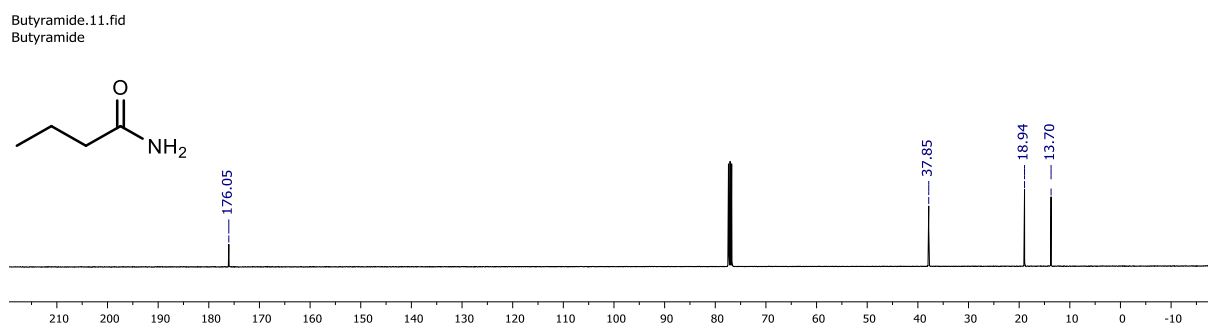
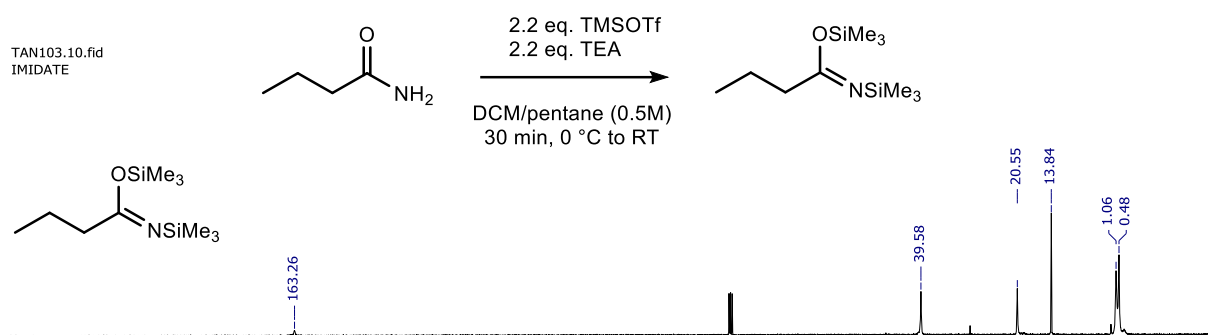


Synthesis of Aminobisphosphinates through a Cascade Reaction between Hypophosphorous Acid and Bis(trimethylsilyl)imidates Mediated by ZnI_2

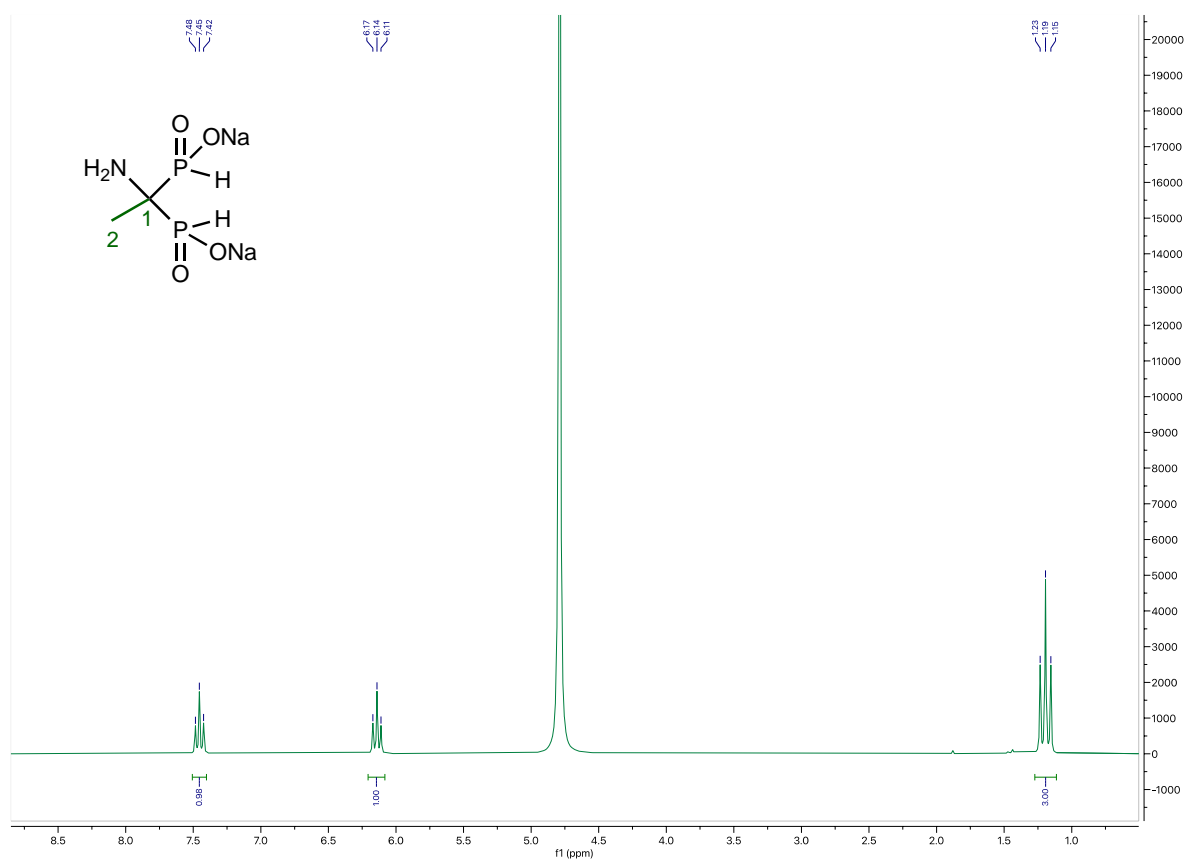
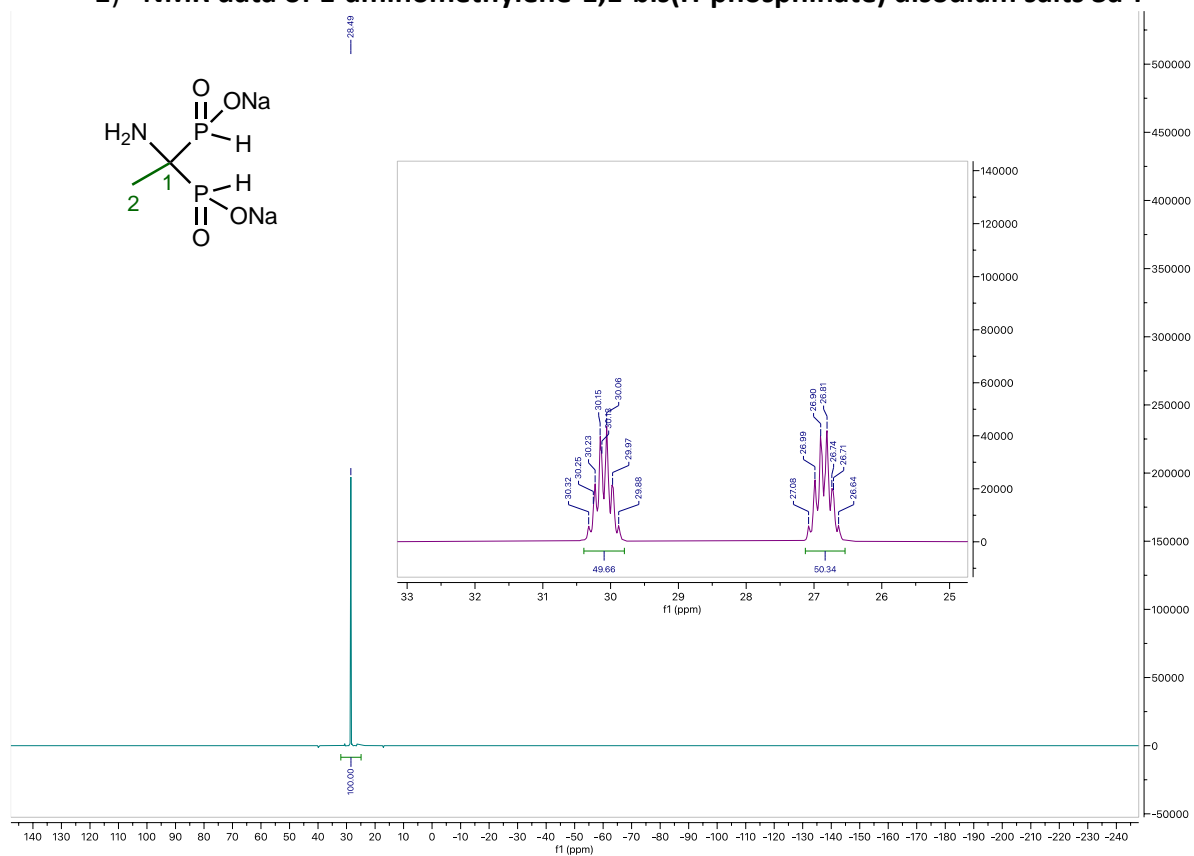
.Supporting Information

- 1) NMR monitoring of imidate formation 2b 2
- 2) NMR data of 1-aminomethylene-1,1-bis(H-phosphinate) disodium salts 3a-l.....3

1) NMR monitoring of imidate formation 2b



2) NMR data of 1-aminomethylene-1,1-bis(H-phosphinate) disodium salts 3a-l



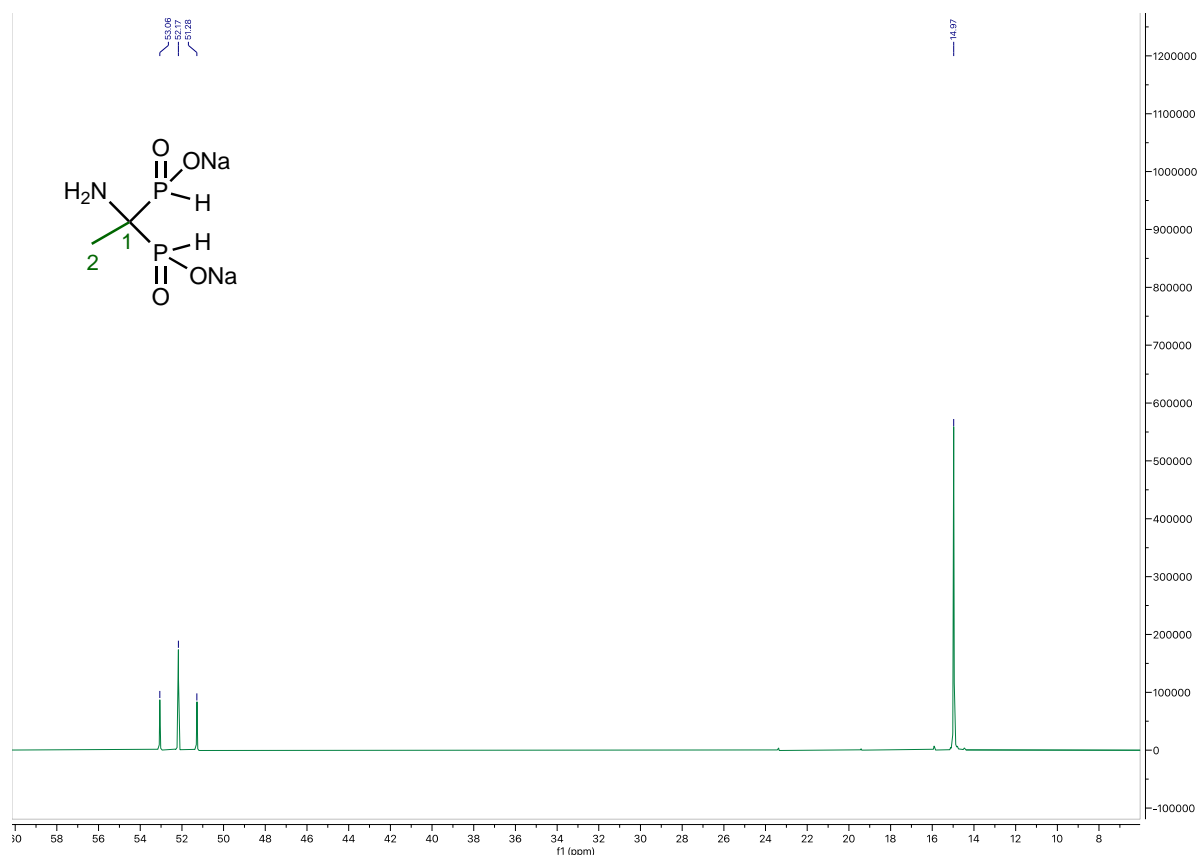
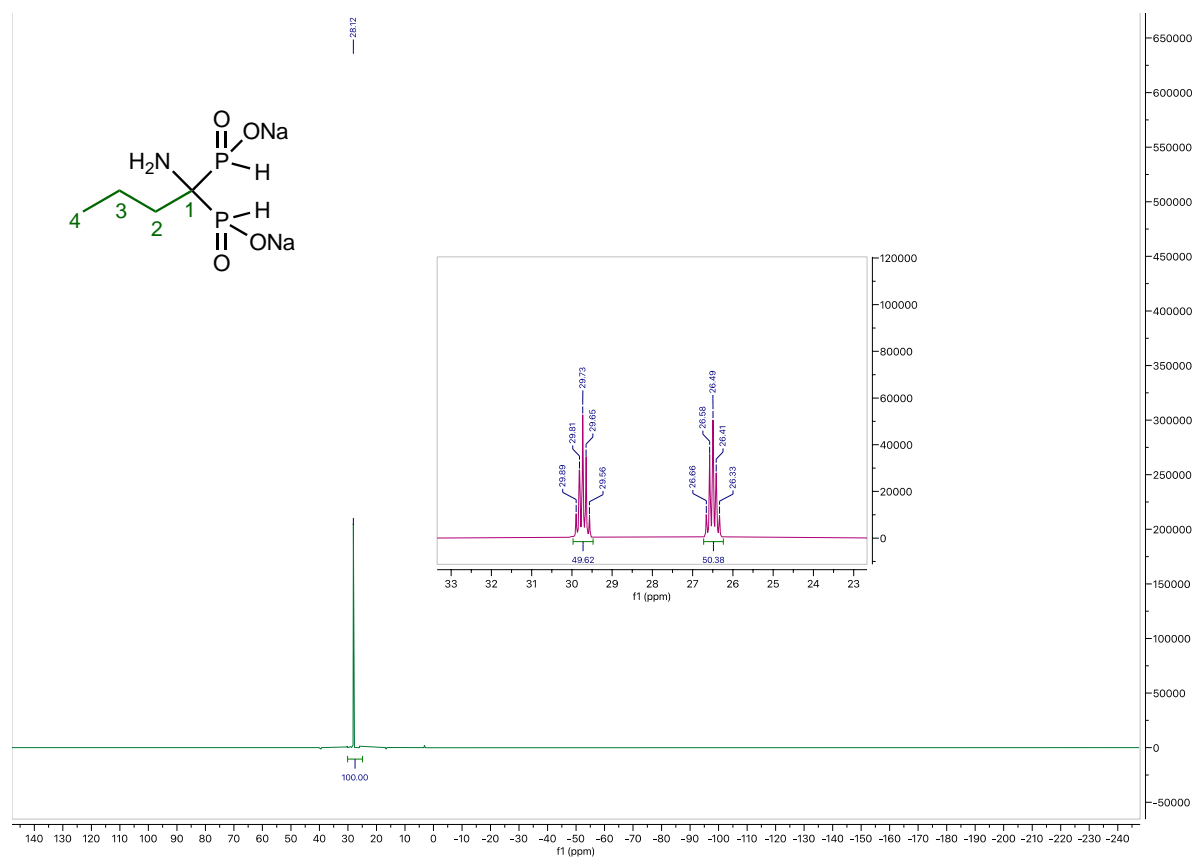


Figure S1. ³¹P NMR spectrum (162 MHz, D₂O), ¹H NMR spectrum (400MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-aminoethane-1,1-bis(H-phosphinate) disodium salts **3a**.



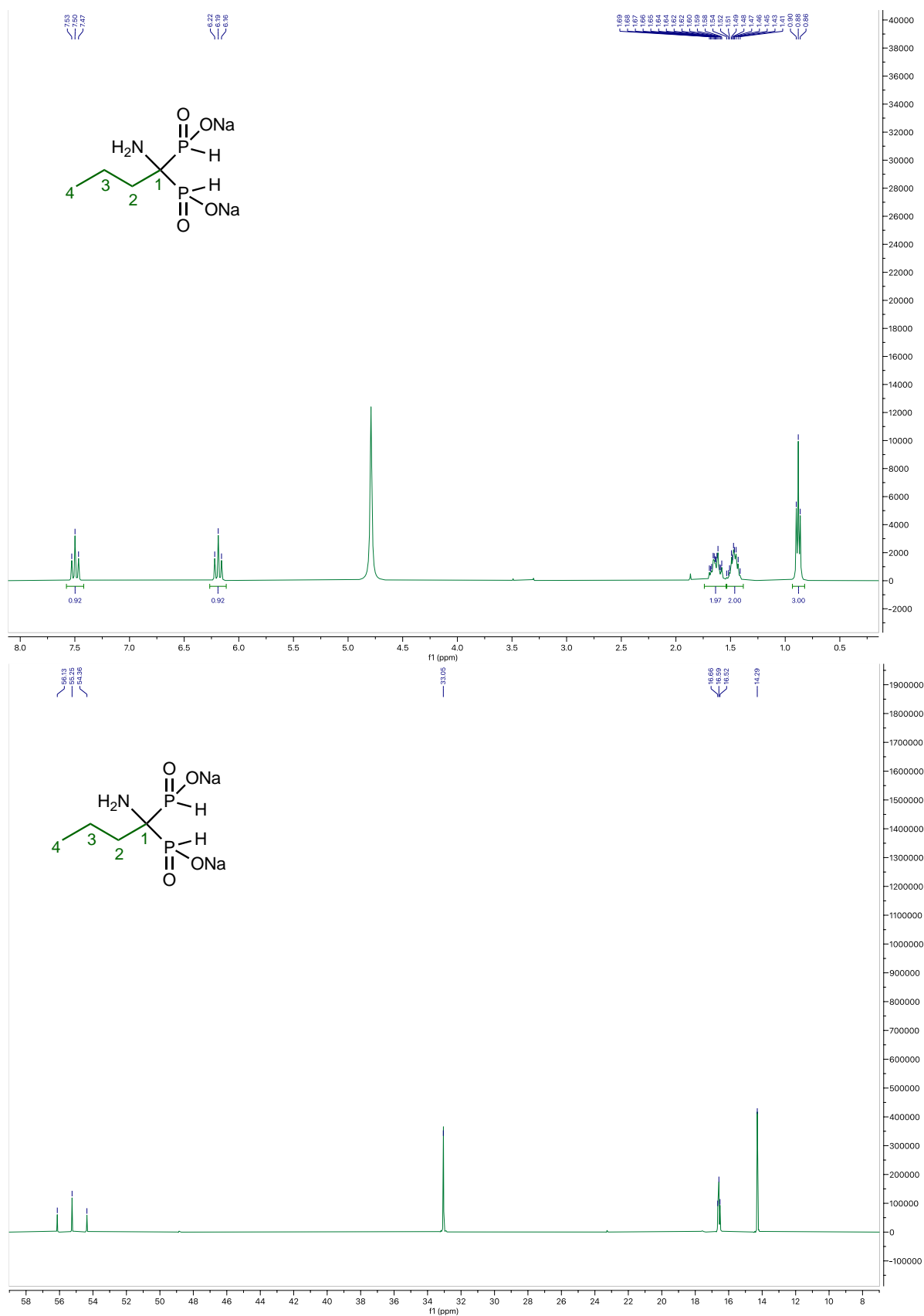
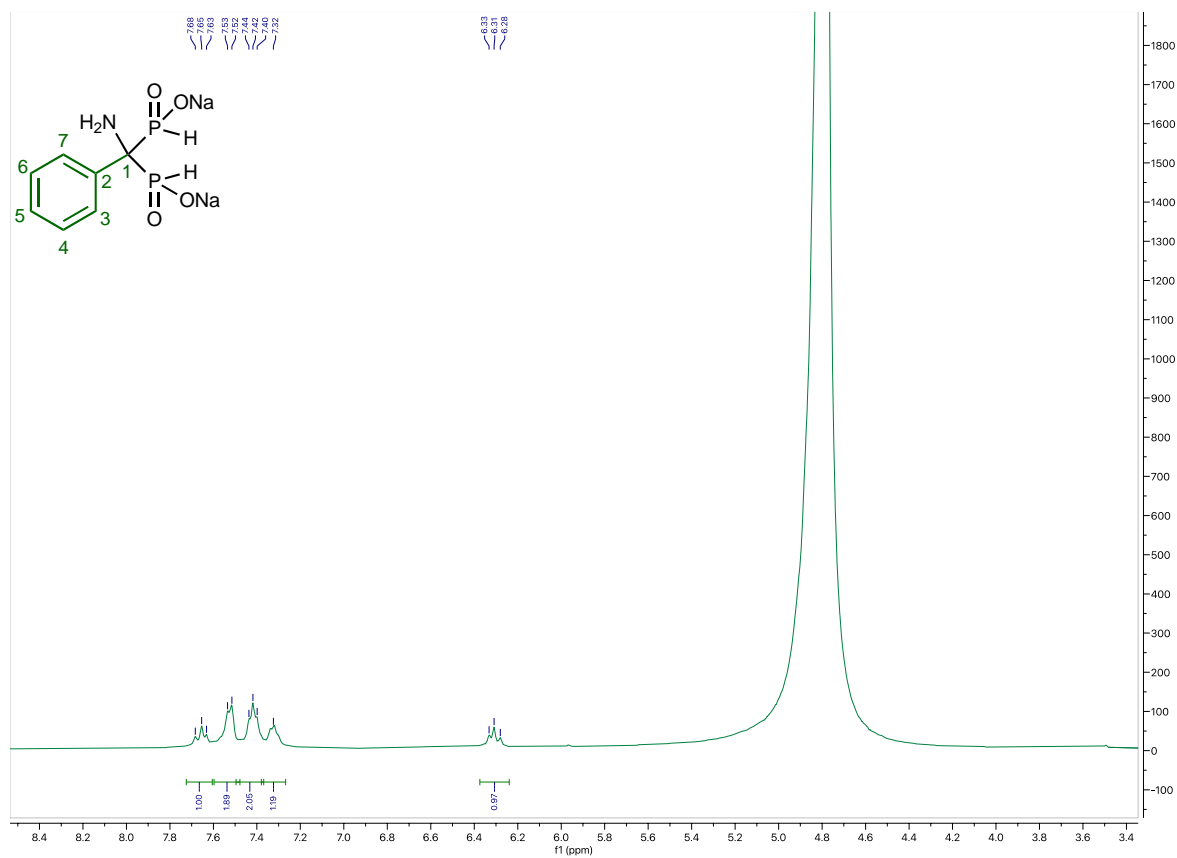
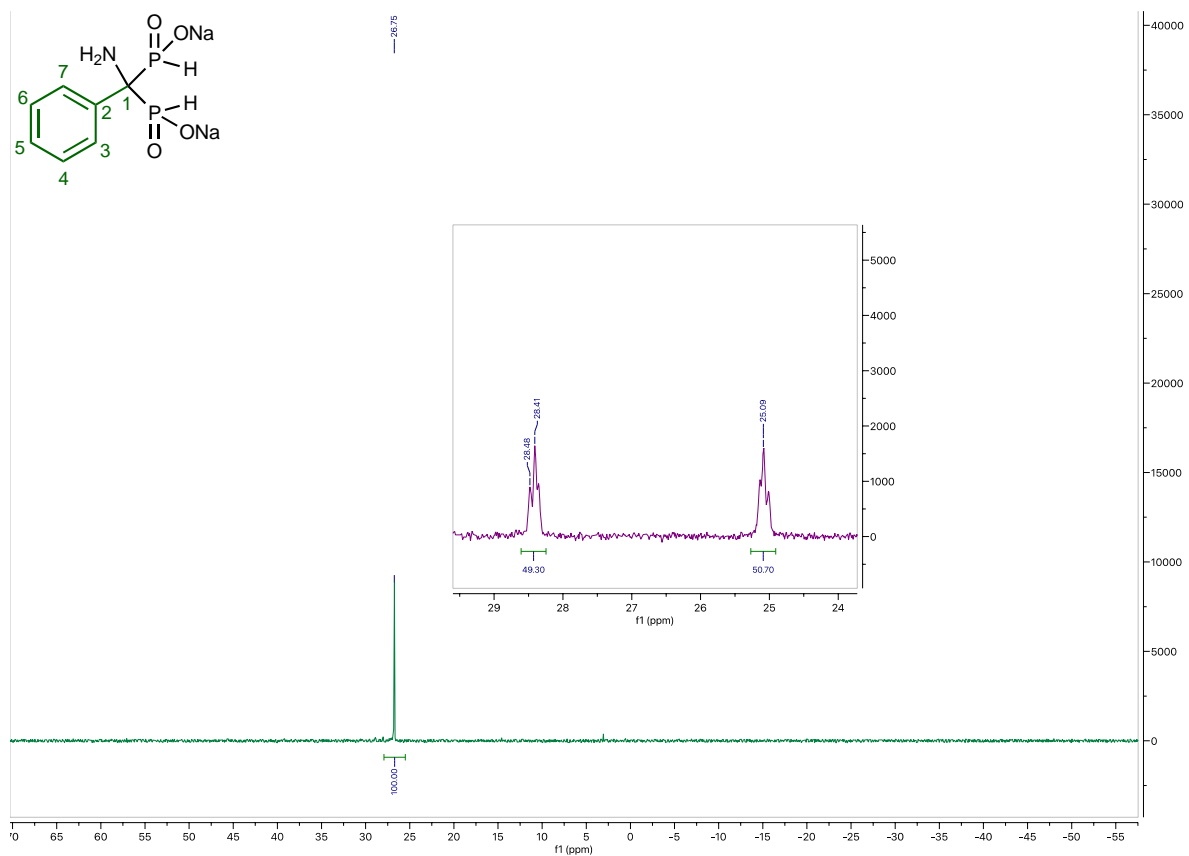
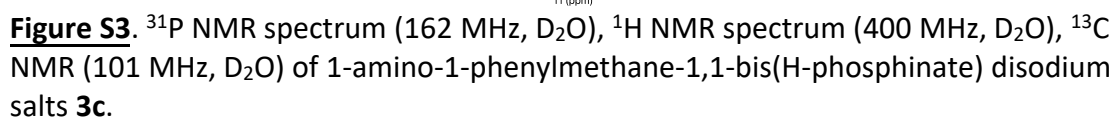


Figure S2. ³¹P NMR spectrum (162 MHz, D₂O), ¹H NMR spectrum (400 MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-amino-1-propylmethane-1,1-bis(H-phosphinate) disodium salts **3b**.





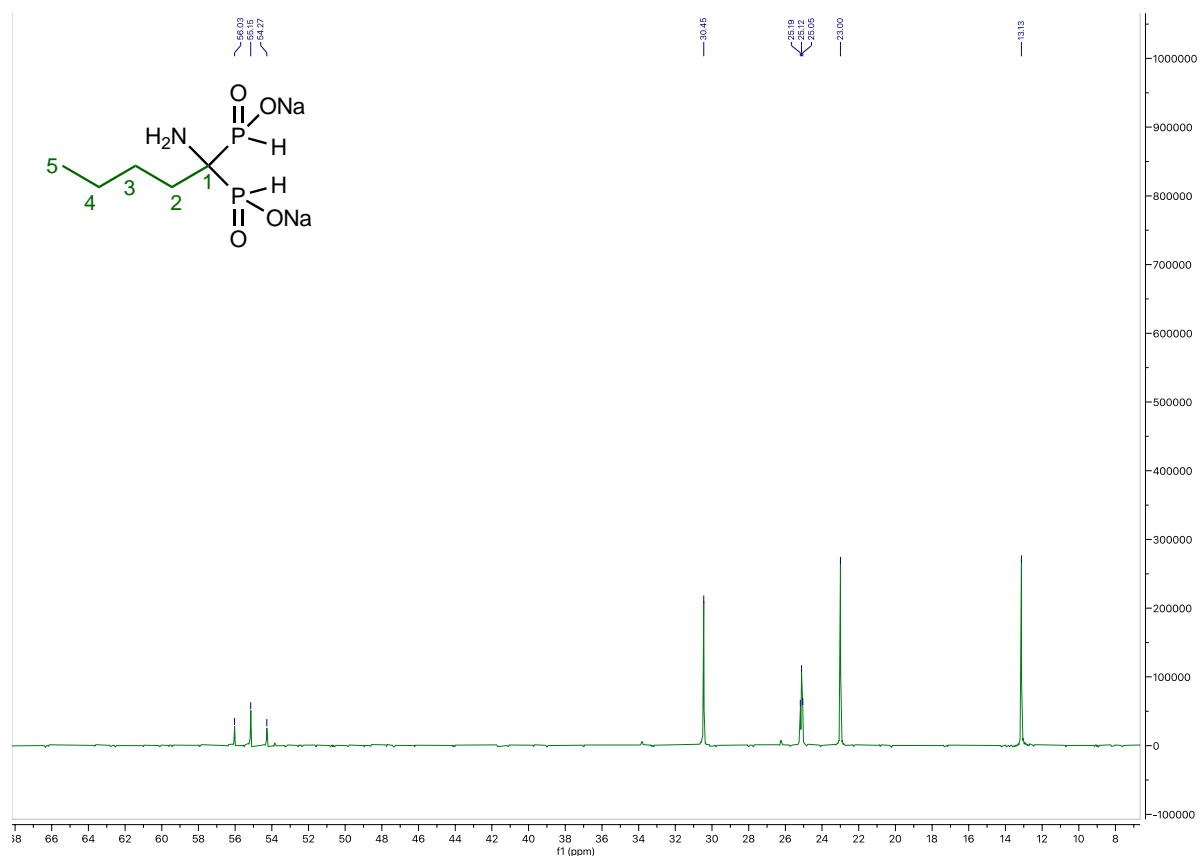
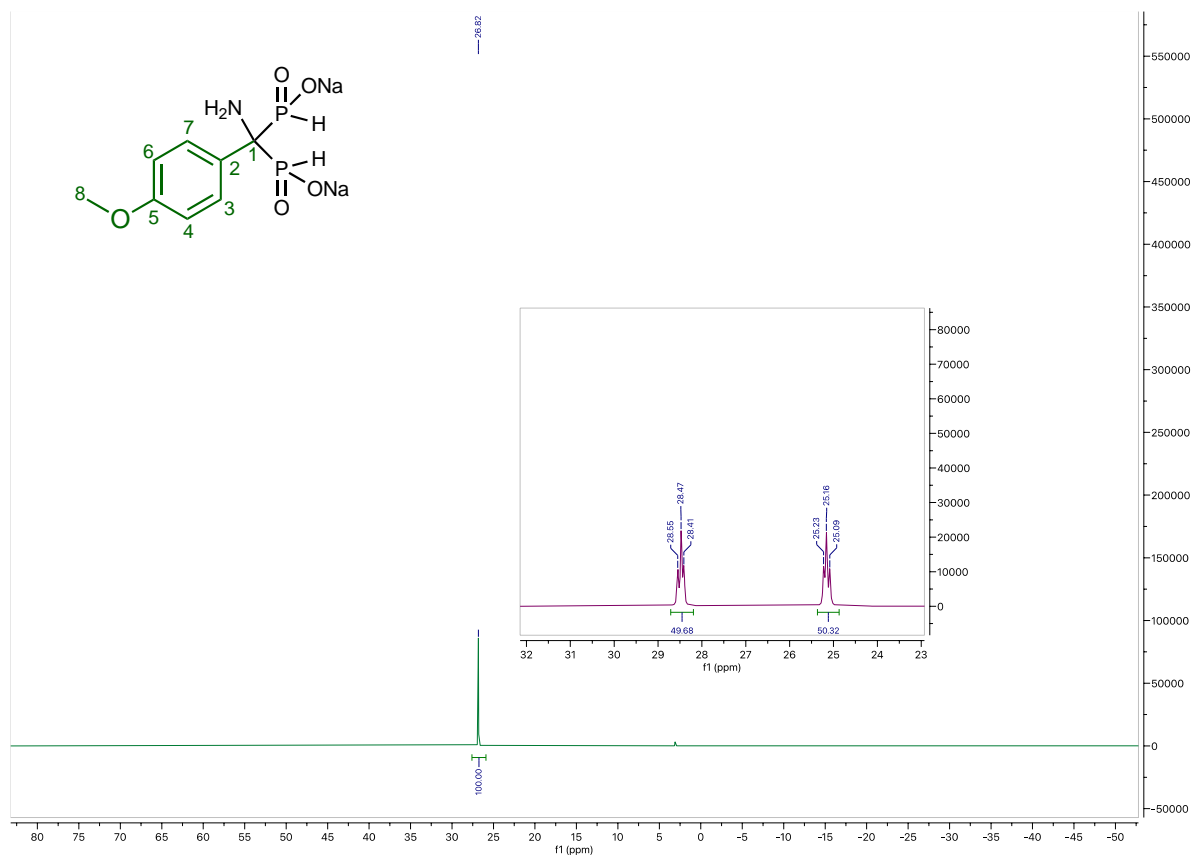


Figure S4. ^{31}P NMR spectrum (162 MHz, D_2O), ^1H NMR spectrum (400 MHz, D_2O), ^{13}C NMR (101 MHz, D_2O) of 1-amino-1-butylmethane-1,1-bis(H-phosphinate) disodium salts **3d**.



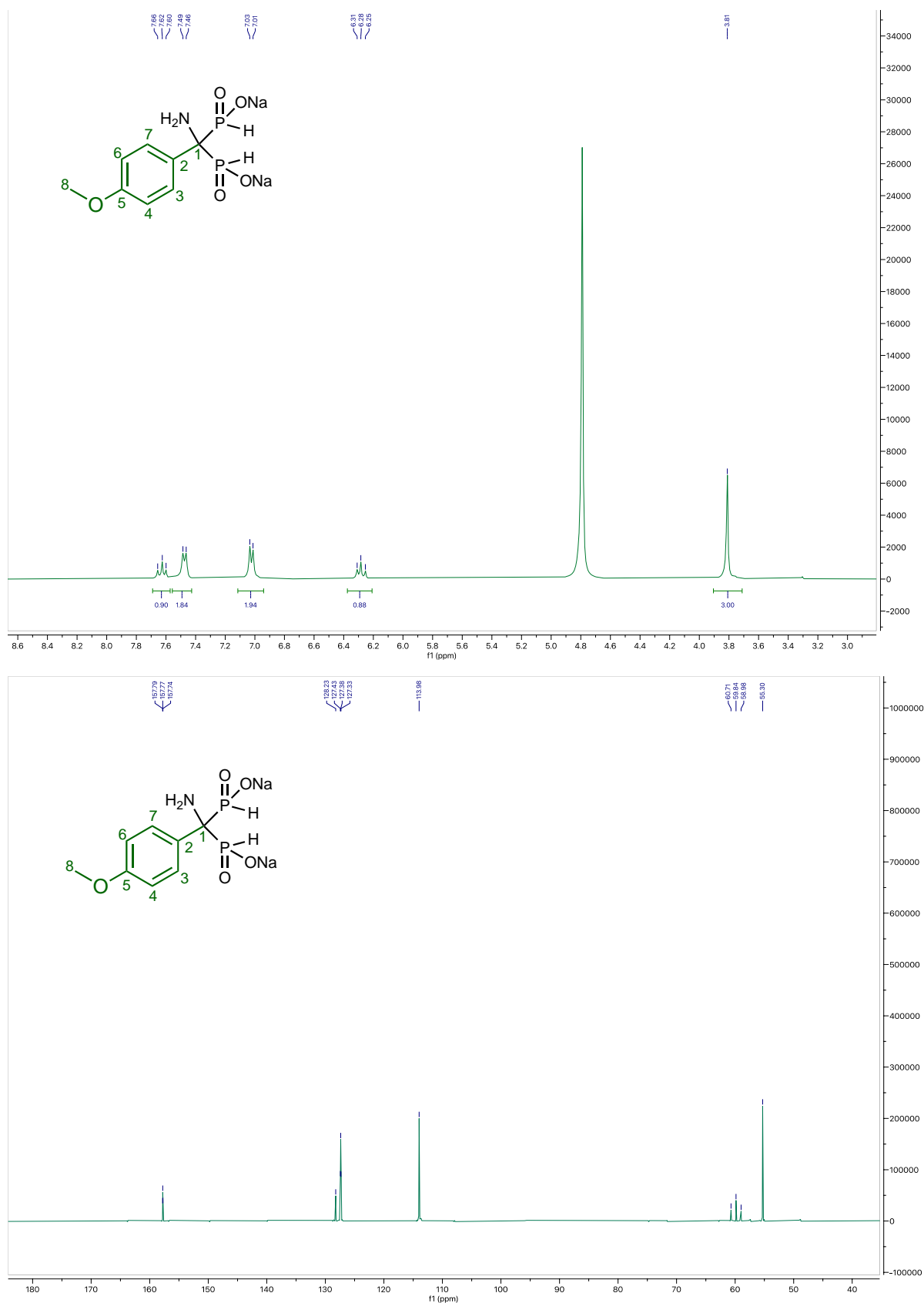
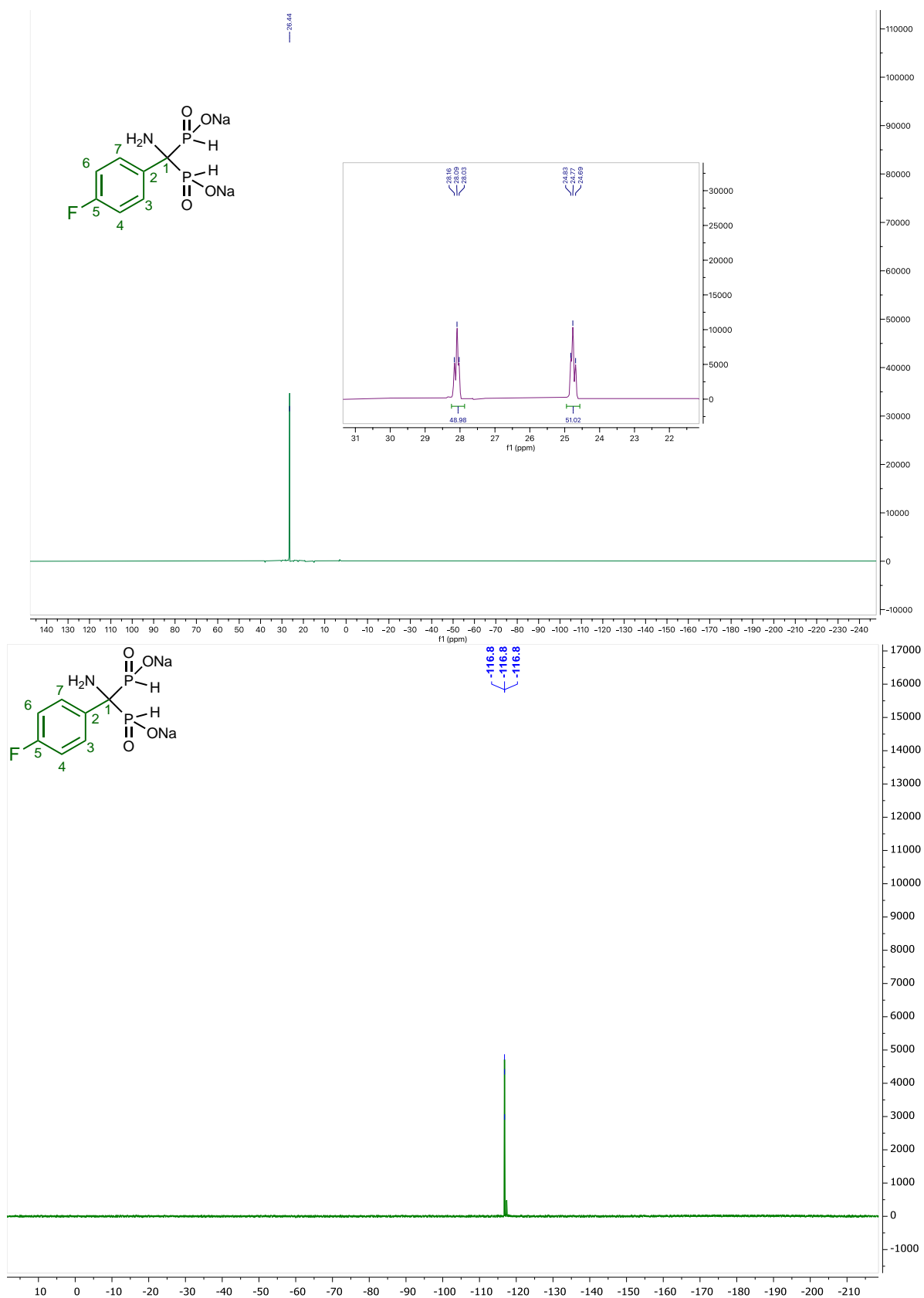


Figure S5. ³¹P NMR spectrum (162 MHz, D₂O), ¹H NMR spectrum (400 MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-amino-1-(4-methoxyphenyl)methane-1,1-bis(H-phosphinate) disodium salts **3f**.



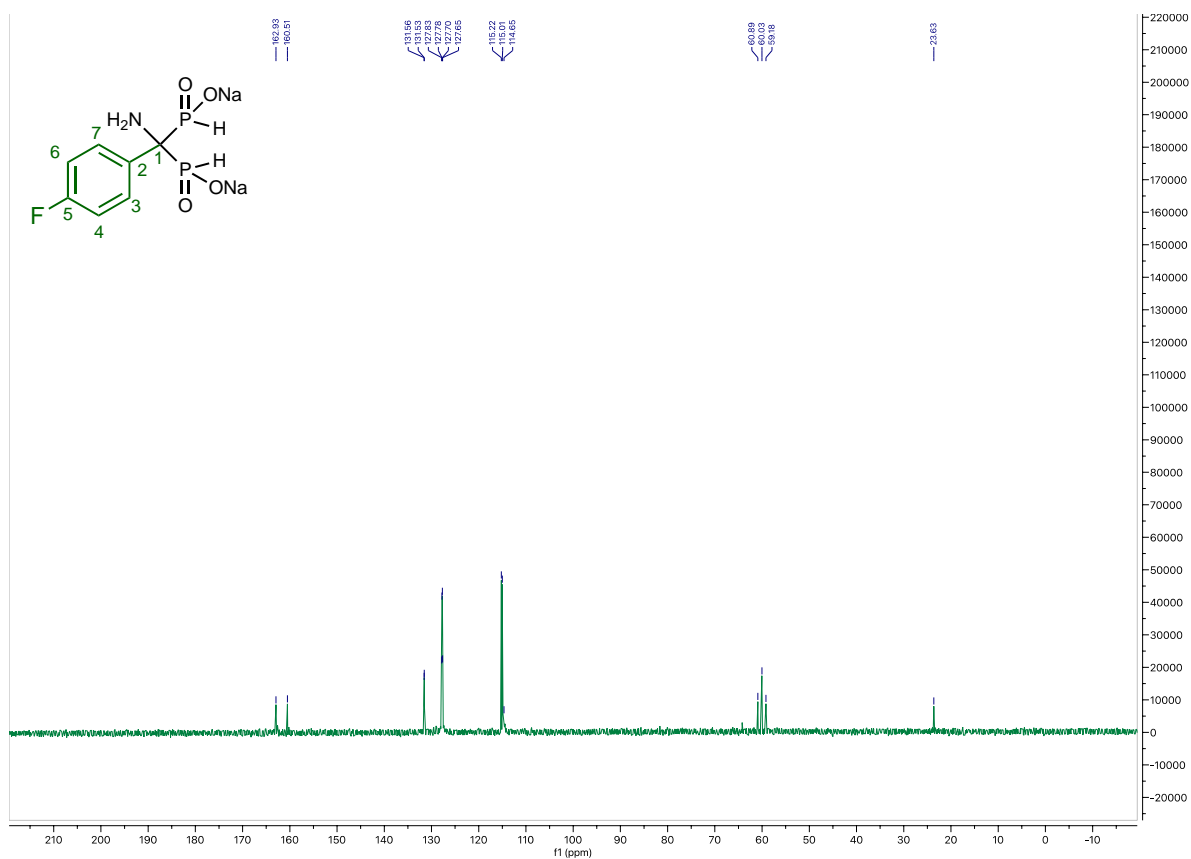
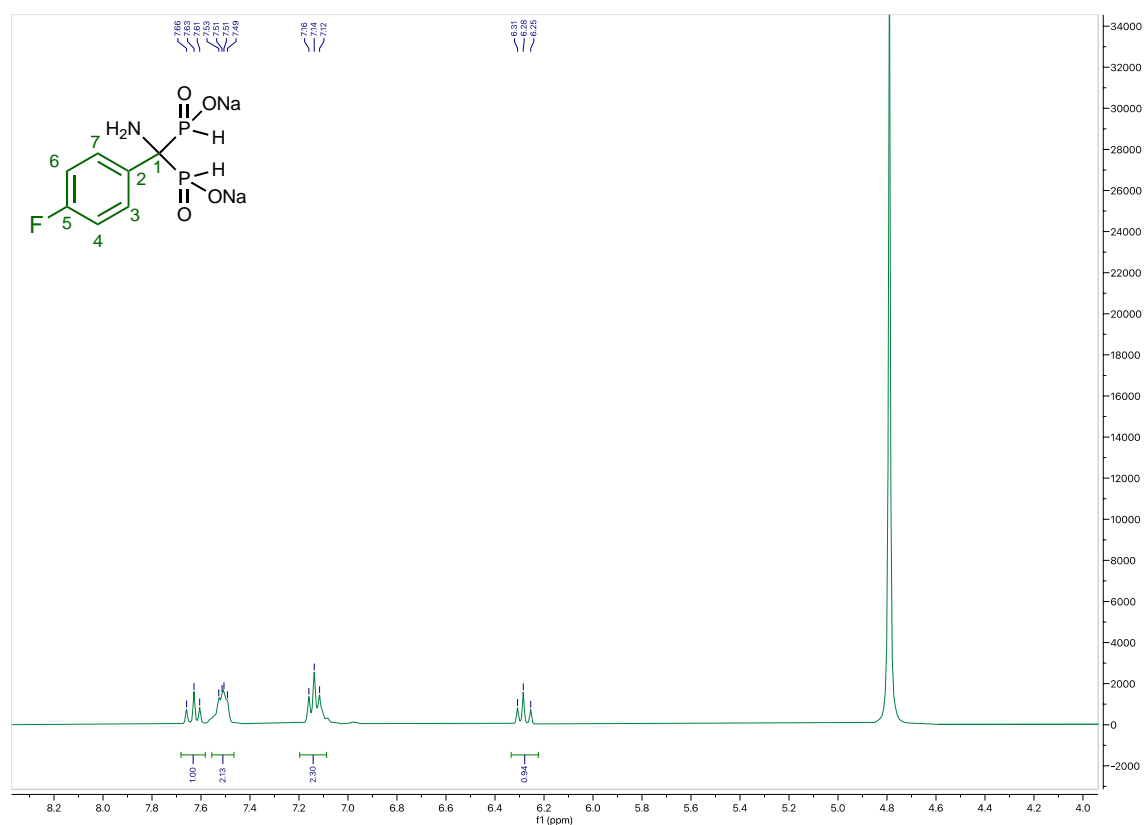
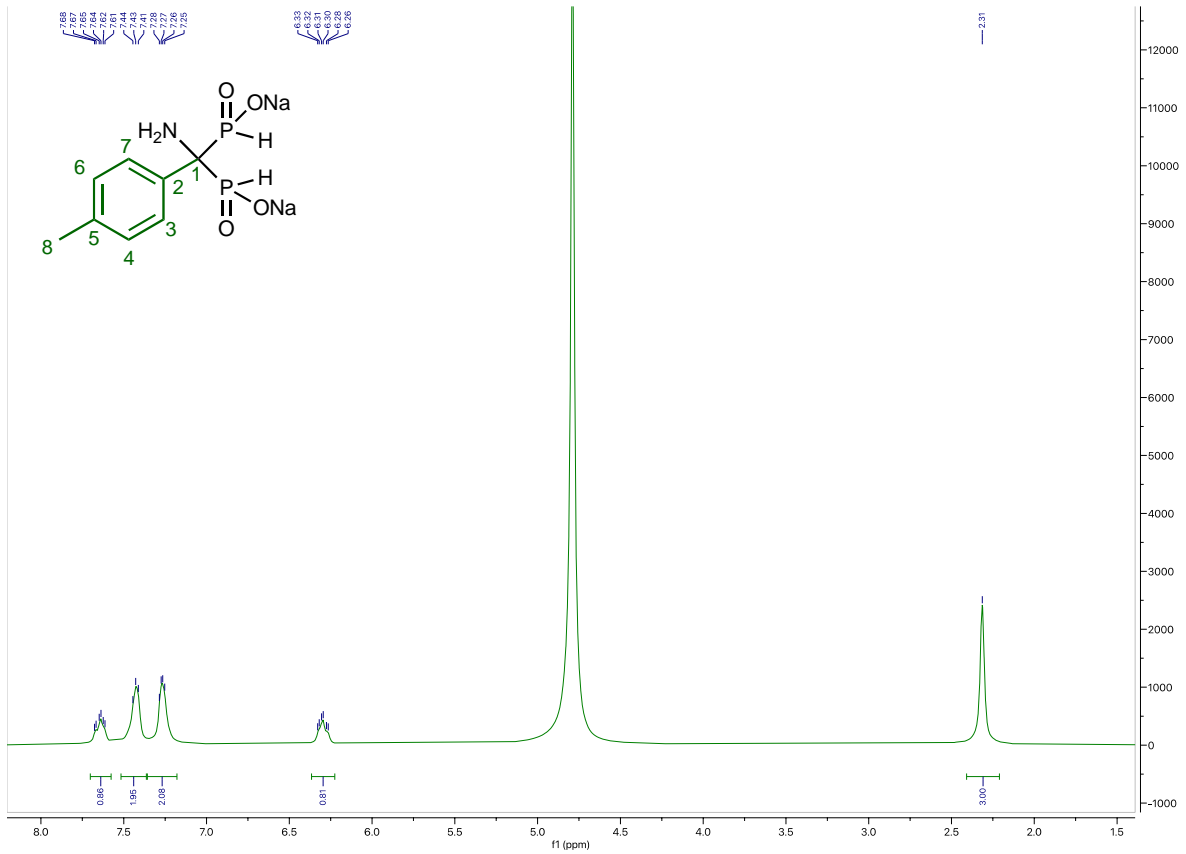
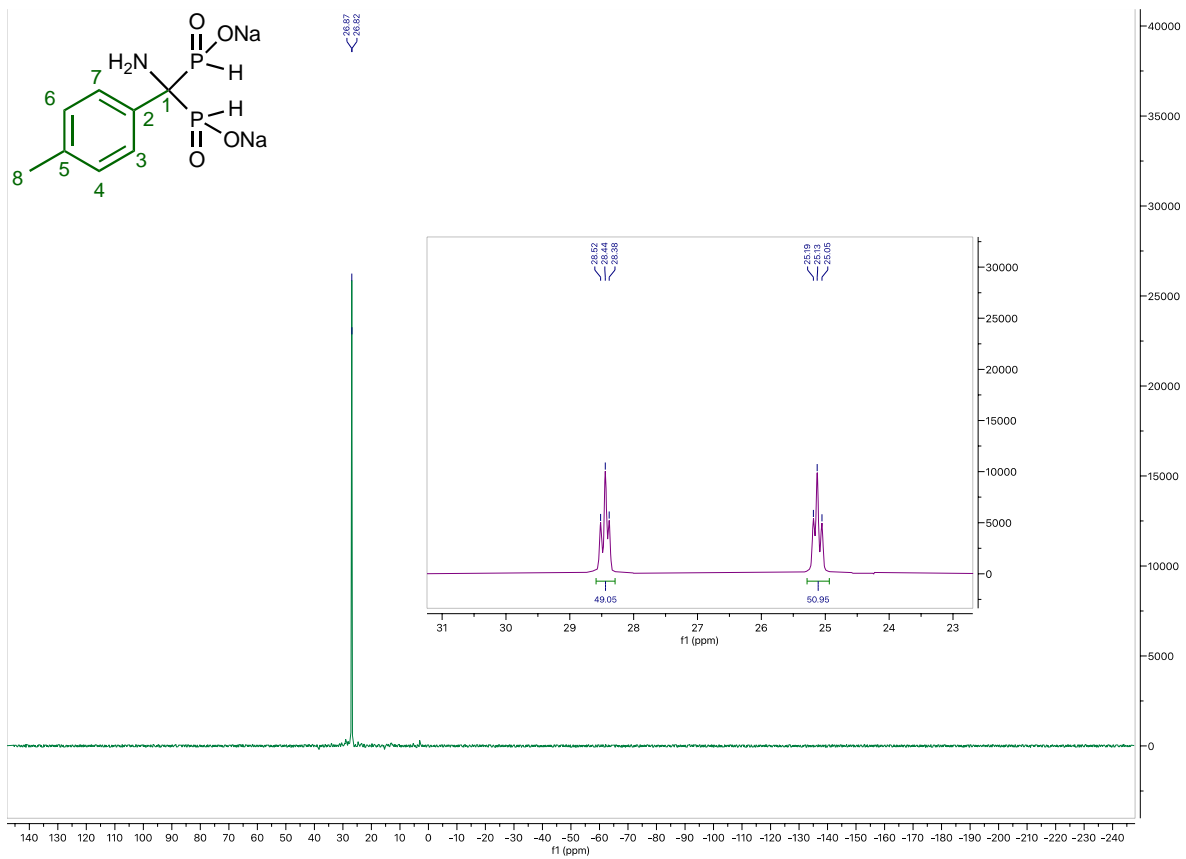


Figure S6. ³¹P NMR spectrum (162 MHz, D₂O), ¹⁹F NMR spectrum (377 MHz, D₂O), ¹H NMR spectrum (400 MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-amino-1-(4-fluorophenyl)methane-1,1-bis(H-phosphinate) disodium salts **3g**



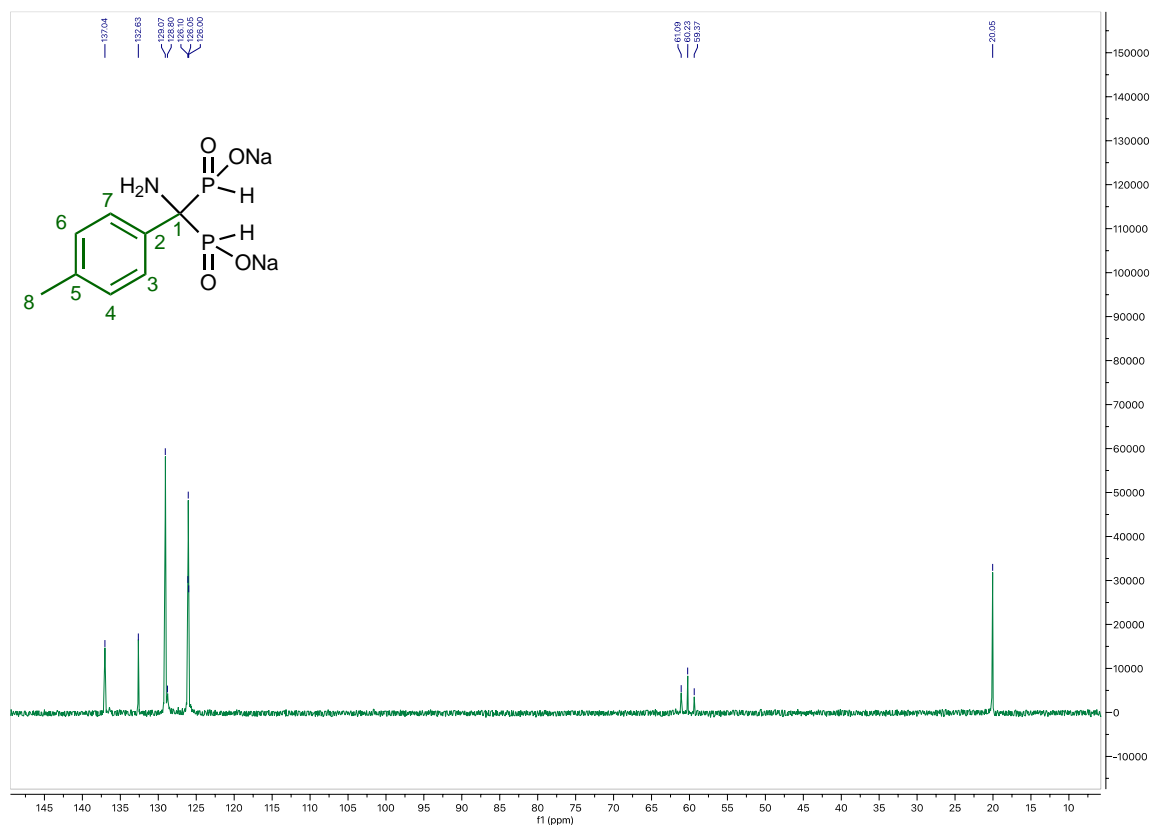
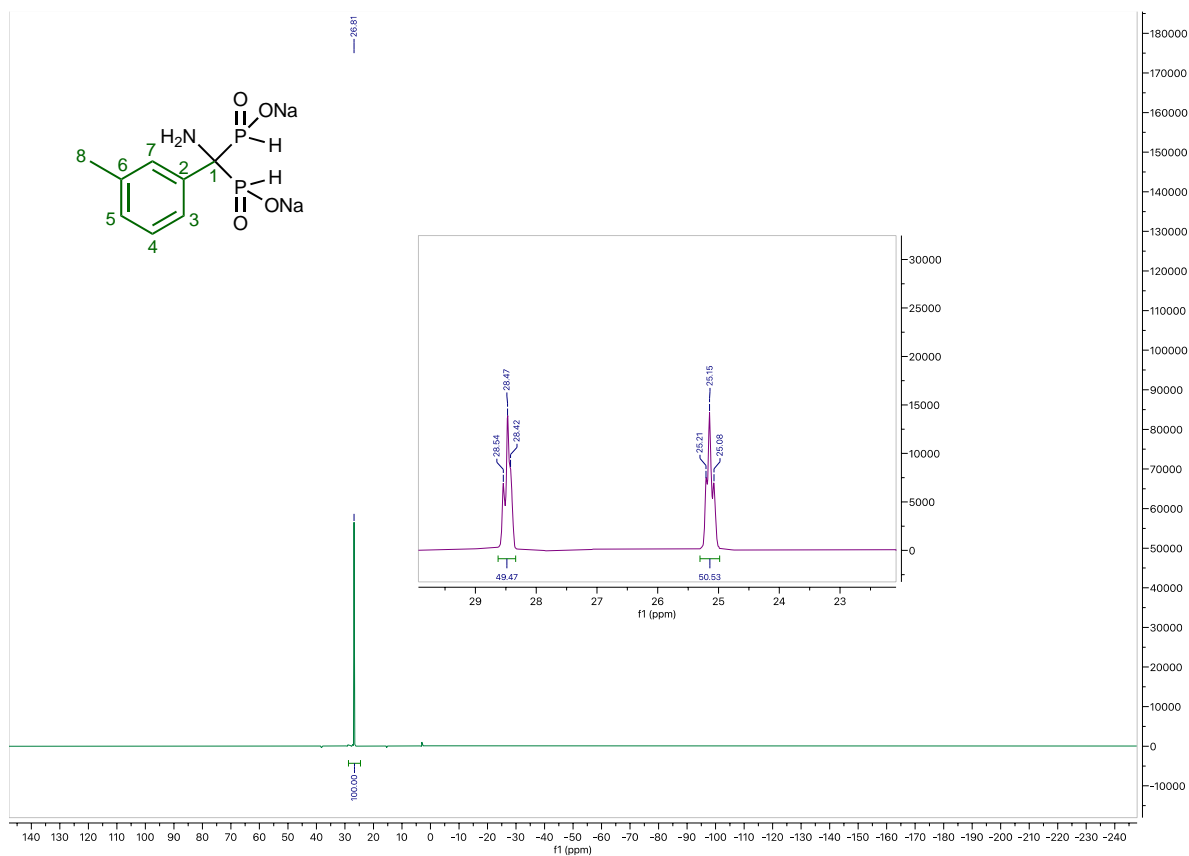


Figure S7. ^{31}P NMR spectrum (162 MHz, D_2O), ^1H NMR spectrum (400 MHz, D_2O), ^{13}C NMR (101 MHz, D_2O) of 1-amino-1-(4-tolyl)methane-1,1-bis(H-phosphinate) disodium salts **3i**



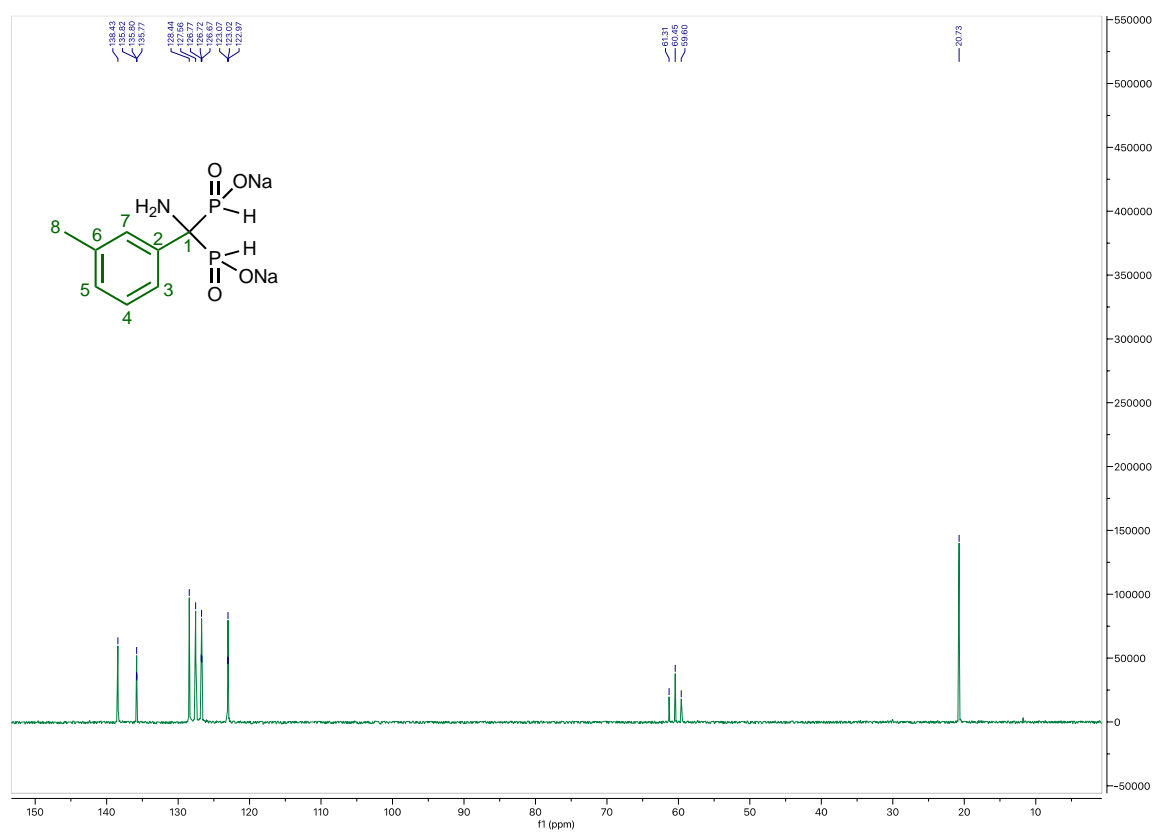
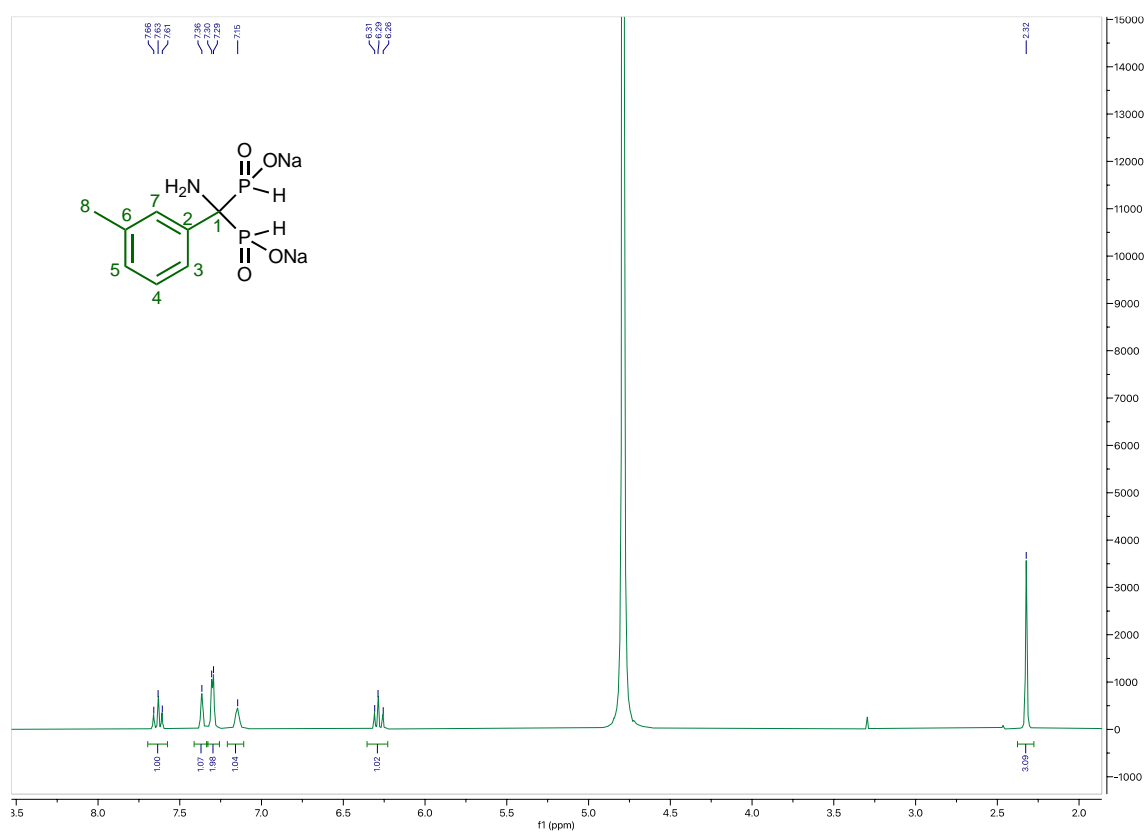


Figure S8. ³¹P NMR spectrum (162 MHz, D₂O), ¹H NMR spectrum (400 MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-amino-1-(3-tolyl)phenyl)methane-1,1-bis(H-phosphinate) disodium salts **3j**

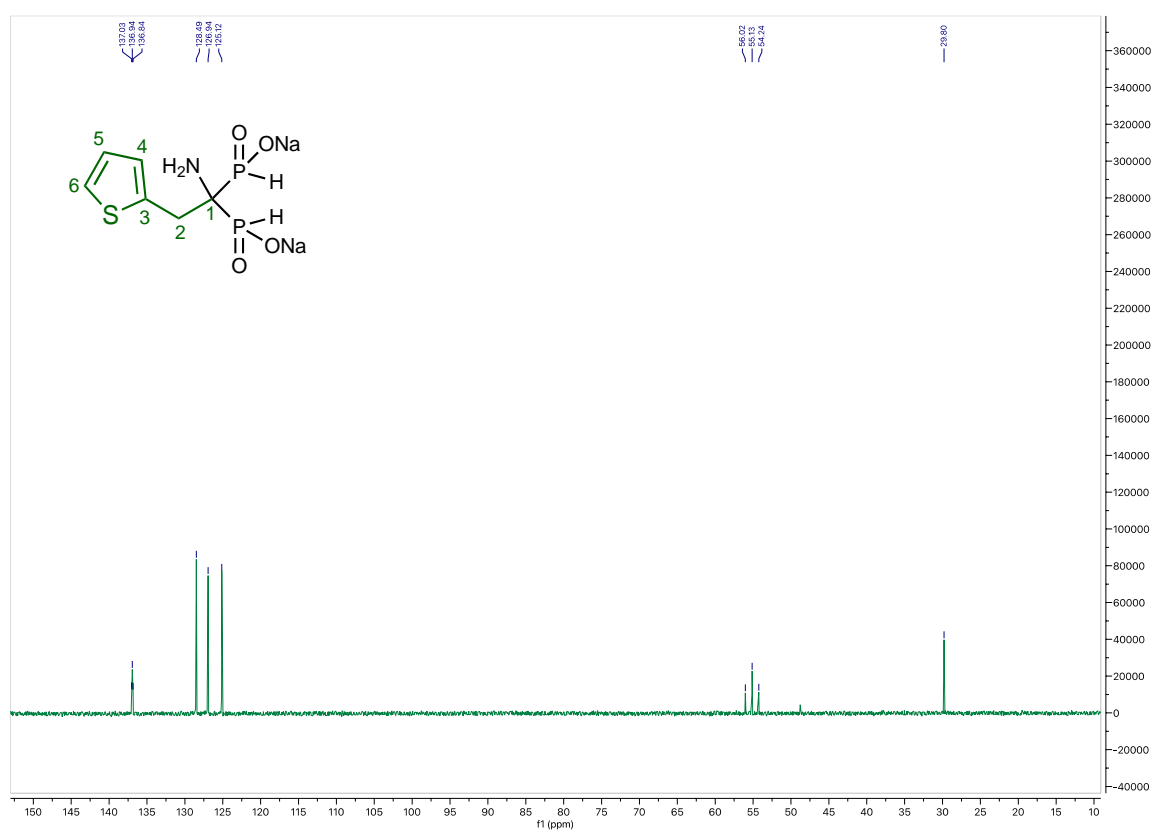


Figure S9. ³¹P NMR spectrum (162 MHz, D₂O), ¹H NMR spectrum (400 MHz, D₂O), ¹³C NMR (101 MHz, D₂O) of 1-amino-1-(2-thienyl)ethane-1,1-bis(H-phosphinate) disodium salts **3l**.