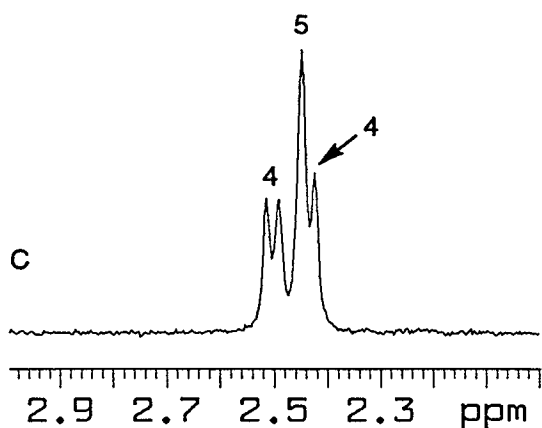
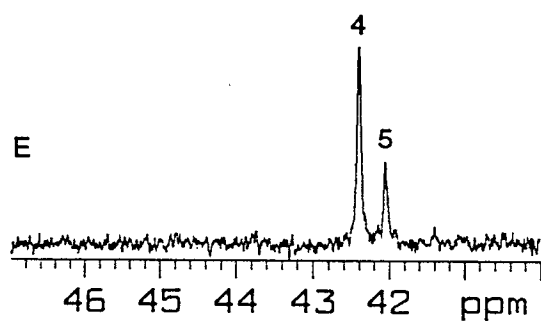
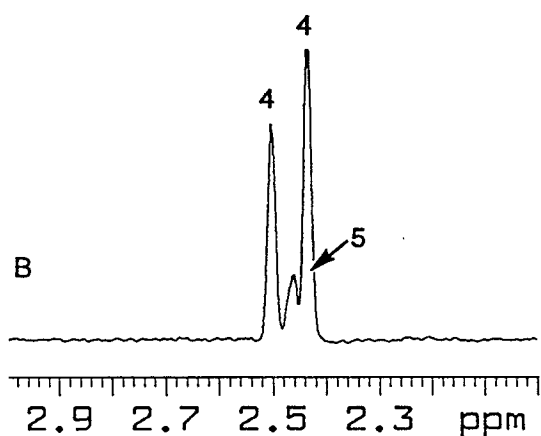
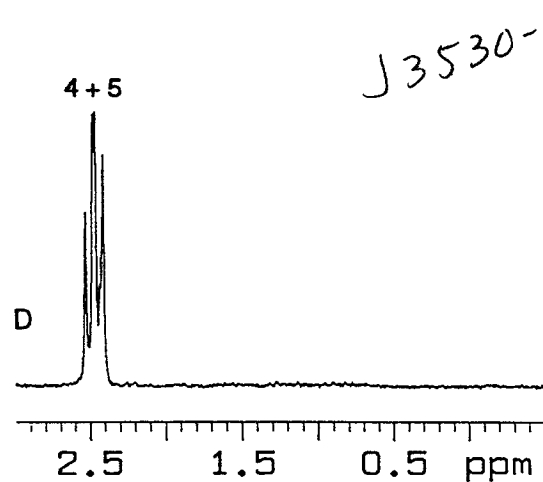
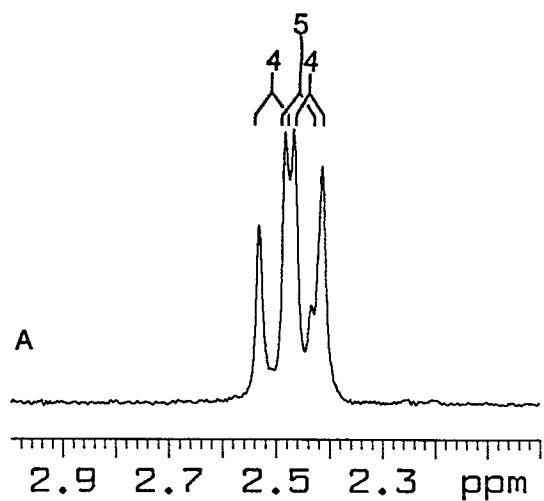
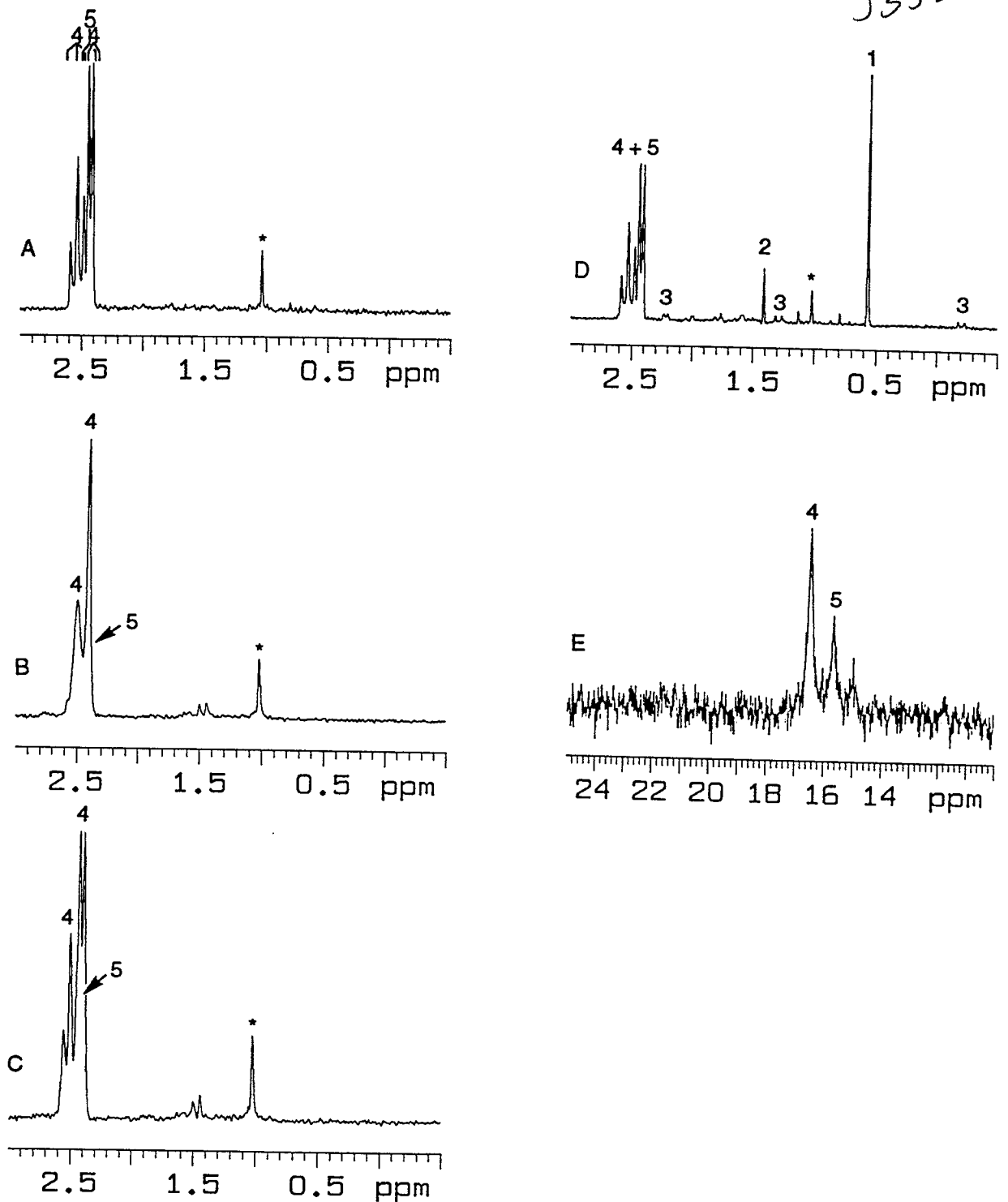


I.  $^6\text{Li}$  and  $^{15}\text{N}$  NMR spectra of 0.10 M  $[\text{}^6\text{Li},^{15}\text{N}]\text{LiHMDS}$  in 2:1 pentane/toluene at  $-110\text{ }^\circ\text{C}$ : (A)  $^6\text{Li}$  NMR spectrum with 0.5 equiv of added  $[\text{}^6\text{Li}]\text{LiDMEDA}$ ; (B)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added  $[\text{}^6\text{Li}]\text{LiDMEDA}$  with single frequency  $^{15}\text{N}$  decoupling at 43.8 ppm (3); (C)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added  $[\text{}^6\text{Li}]\text{LiDMEDA}$  with single frequency  $^{15}\text{N}$  decoupling at 46.5 ppm (3); (D)  $^6\text{Li}$  NMR spectrum with 0.25 equiv of added DMEDA; (E)  $^{15}\text{N}\{^1\text{H}\}$  NMR spectrum with 0.5 equiv of added  $[\text{}^6\text{Li}]\text{LiDMEDA}$ ; (F)  $^{15}\text{N}\{^1\text{H},^6\text{Li}\}$  NMR spectrum with 0.5 equiv of added  $[\text{}^6\text{Li}]\text{LiDMEDA}$ .

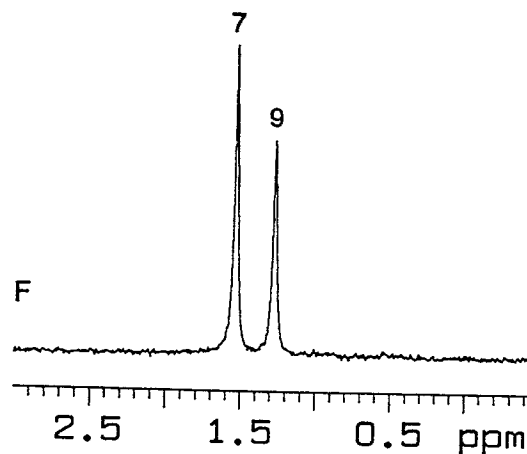
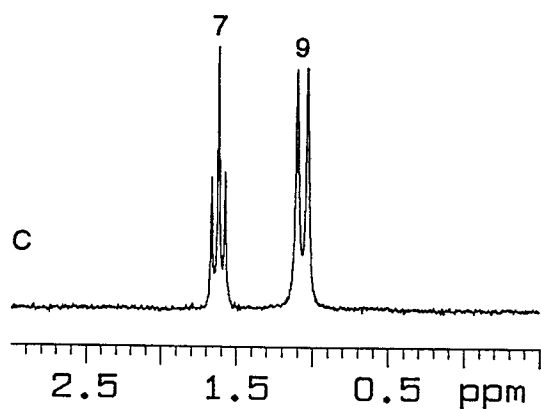
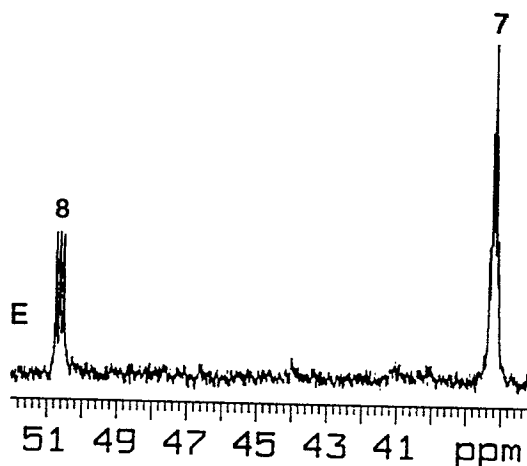
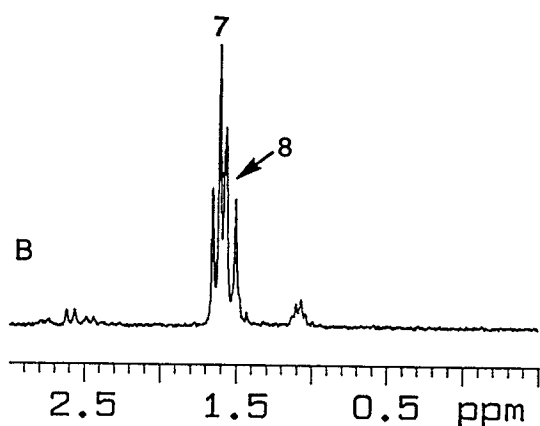
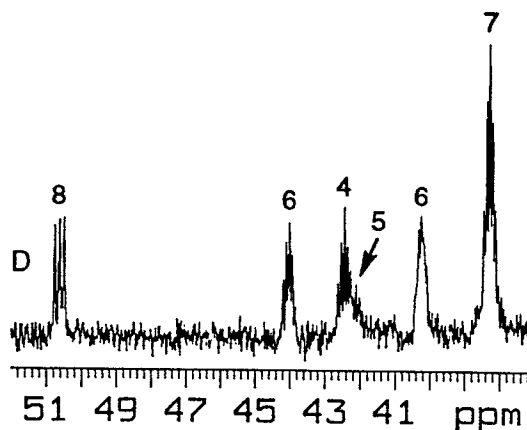
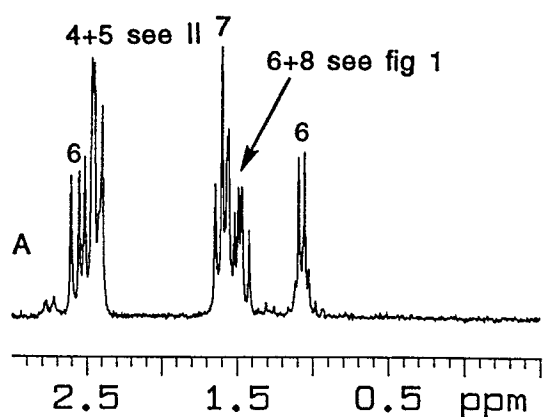


II.  $^6\text{Li}$  and  $^{15}\text{N}$  NMR spectra of 0.10 M  $[^6\text{Li},^{15}\text{N}]\text{LiHMDS}$  in 2:1 pentane/toluene at  $-110\text{ }^\circ\text{C}$ : (A)  $^6\text{Li}$  NMR spectrum with 0.5 equiv of added DMEDA; (B)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added DMEDA with single frequency  $^{15}\text{N}$  decoupling at 42.4 ppm (4); (C)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added DMEDA with single frequency  $^{15}\text{N}$  decoupling at 42.1 ppm (5); (D)  $^6\text{Li}$  NMR spectrum with 1.0 equiv of added  $[^6\text{Li}]\text{LiDMEDA}$ ; (E)  $^{15}\text{N}\{^1\text{H},^6\text{Li}\}$  NMR spectrum with 0.5 equiv of added DMEDA.



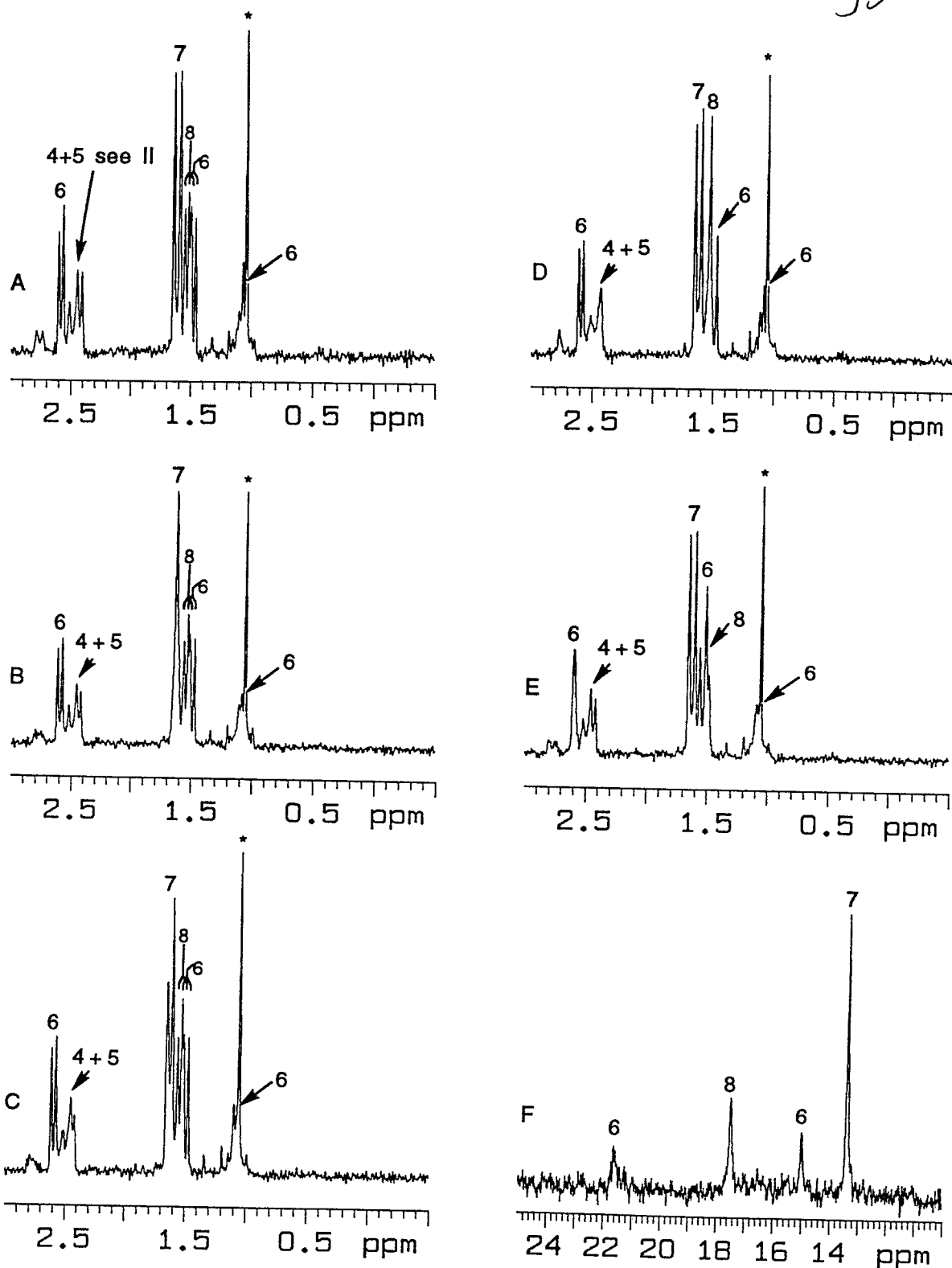
III.  $^6\text{Li}$  and  $^{15}\text{N}$  NMR spectra of 0.10 M  $[\text{}^6\text{Li}]\text{LiHMDS}$  in 2:1 pentane/toluene at  $-110\text{ }^\circ\text{C}$ : (A)  $^6\text{Li}$  NMR spectrum with 0.5 equiv of added  $[\text{}^{15}\text{N}']\text{DMEDA}$ ; (B)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added  $[\text{}^{15}\text{N}']\text{DMEDA}$  with single frequency  $^{15}\text{N}$  decoupling at 16.5 ppm (4); (C)  $^6\text{Li}$  NMR spectrum containing 0.5 equiv of added  $[\text{}^{15}\text{N}']\text{DMEDA}$  with single frequency  $^{15}\text{N}$  decoupling at 15.7 ppm (5); (D)  $^6\text{Li}$  NMR spectrum with 0.25 equiv of added  $[\text{}^{15}\text{N}']\text{DMEDA}$ ; (E)  $^{15}\text{N}\{^1\text{H},^6\text{Li}\}$  NMR spectrum with 0.5 equiv of added  $[\text{}^{15}\text{N}']\text{DMEDA}$ . \* Impurity is uniquely observed in samples containing  $[\text{}^{15}\text{N}']\text{DMEDA}$ .

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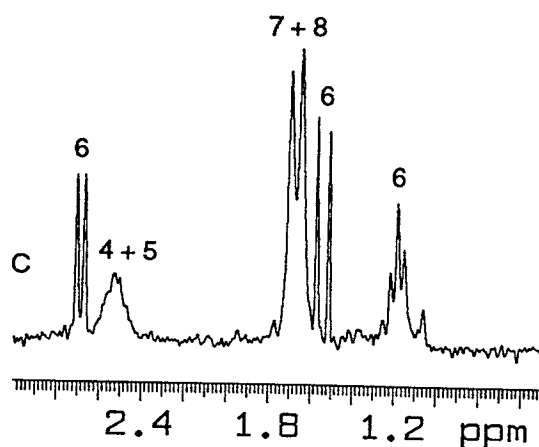
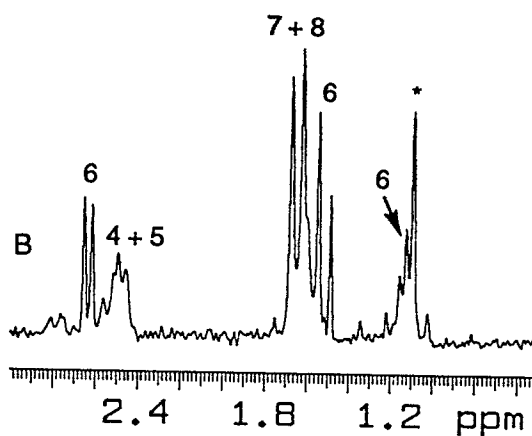
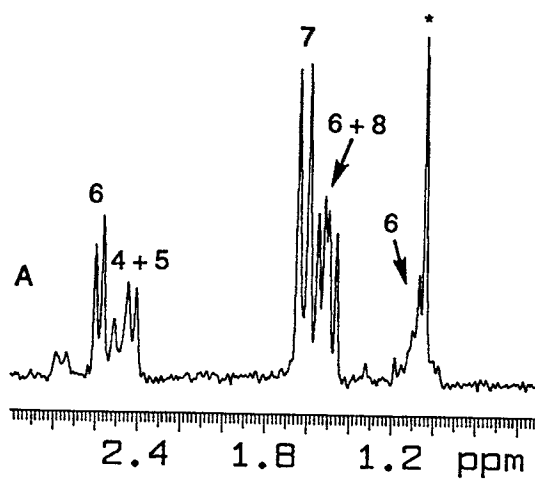
IV.  $^6\text{Li}$  and  $^{15}\text{N}$  NMR spectra of 0.10 M  $[^6\text{Li},^{15}\text{N}]\text{LiHMDS}$  in 2:1 pentane/toluene at  $-110^\circ\text{C}$ : (A)  $^6\text{Li}$  NMR spectrum with 0.75 equiv of added DMEDA; (B)  $^6\text{Li}$  NMR spectrum with 1.0 equiv of added DMEDA; (C)  $^6\text{Li}$  NMR spectrum with 1.5 equiv of added DMEDA; (D)  $^{15}\text{N}\{^1\text{H}\}$  NMR spectrum with 0.75 equiv of added DMEDA; (E)  $^{15}\text{N}\{^1\text{H}\}$  NMR spectrum with 1.5 equiv of added DMEDA; (F)  $^6\text{Li}$  NMR spectrum of 0.10 M  $[^6\text{Li}]\text{LiHMDS}$  with 1.2 equiv. of added  $[^{15}\text{N}]\text{DMEDA}$ .

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V.  ${}^6\text{Li}$  and  ${}^{15}\text{N}$  NMR spectra of 0.10 M  $[{}^6\text{Li}]\text{LiHMDS}$  in 2:1 pentane/toluene containing 0.75 equiv of added  $[{}^{15}\text{N}]\text{DMEDA}$  at  $-110\text{ }^\circ\text{C}$ : (A)  ${}^6\text{Li}$  NMR spectrum; (B)  ${}^6\text{Li}$  NMR spectrum with single frequency  ${}^{15}\text{N}$  decoupling at 13.4 ppm (7); (C)  ${}^6\text{Li}$  NMR spectrum with single frequency  ${}^{15}\text{N}$  decoupling at 15.0 ppm (6); (D)  ${}^6\text{Li}$  NMR spectrum with single frequency  ${}^{15}\text{N}$  decoupling at 17.5 ppm (8); (E)  ${}^6\text{Li}$  NMR spectrum with single frequency  ${}^{15}\text{N}$  decoupling at 21.6 ppm (6); (F)  ${}^{15}\text{N}\{{}^1\text{H}, {}^6\text{Li}\}$  NMR spectrum. \* Impurity is uniquely observed in samples containing  $[{}^{15}\text{N}]\text{DMEDA}$ .

J3530-4



VI.  $^6\text{Li}$  NMR spectrum of 0.10 M  $[^6\text{Li}]\text{LiHMDS}$  in 2:1 pentane/toluene with 0.75 equiv of added  $[^{15}\text{N}']\text{DMEDA}$  at (A)  $-110\text{ }^\circ\text{C}$ ; (B)  $-100\text{ }^\circ\text{C}$ ; (C)  $-90\text{ }^\circ\text{C}$ . \* Impurity is uniquely observed in samples containing  $[^{15}\text{N}']\text{DMEDA}$ .