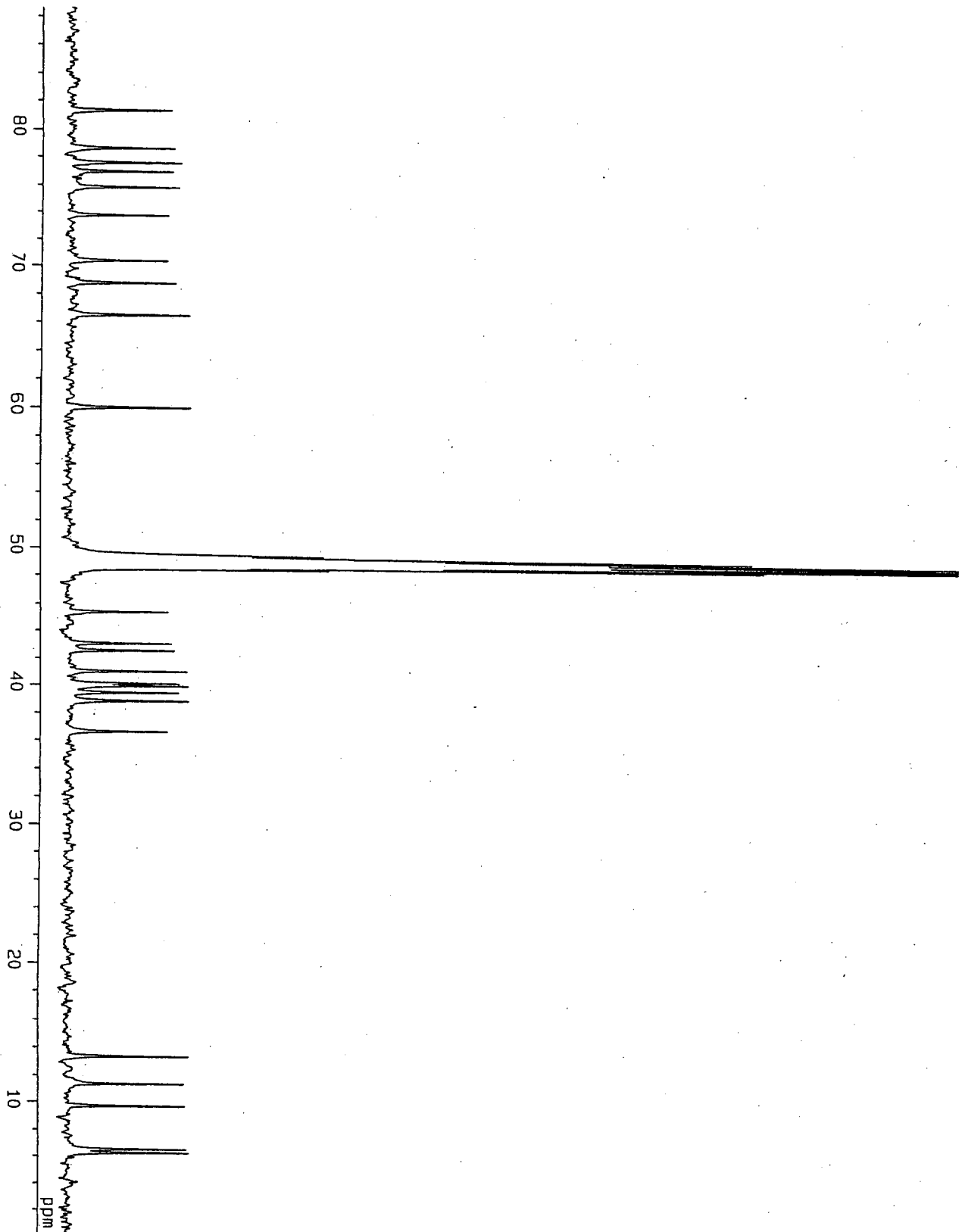
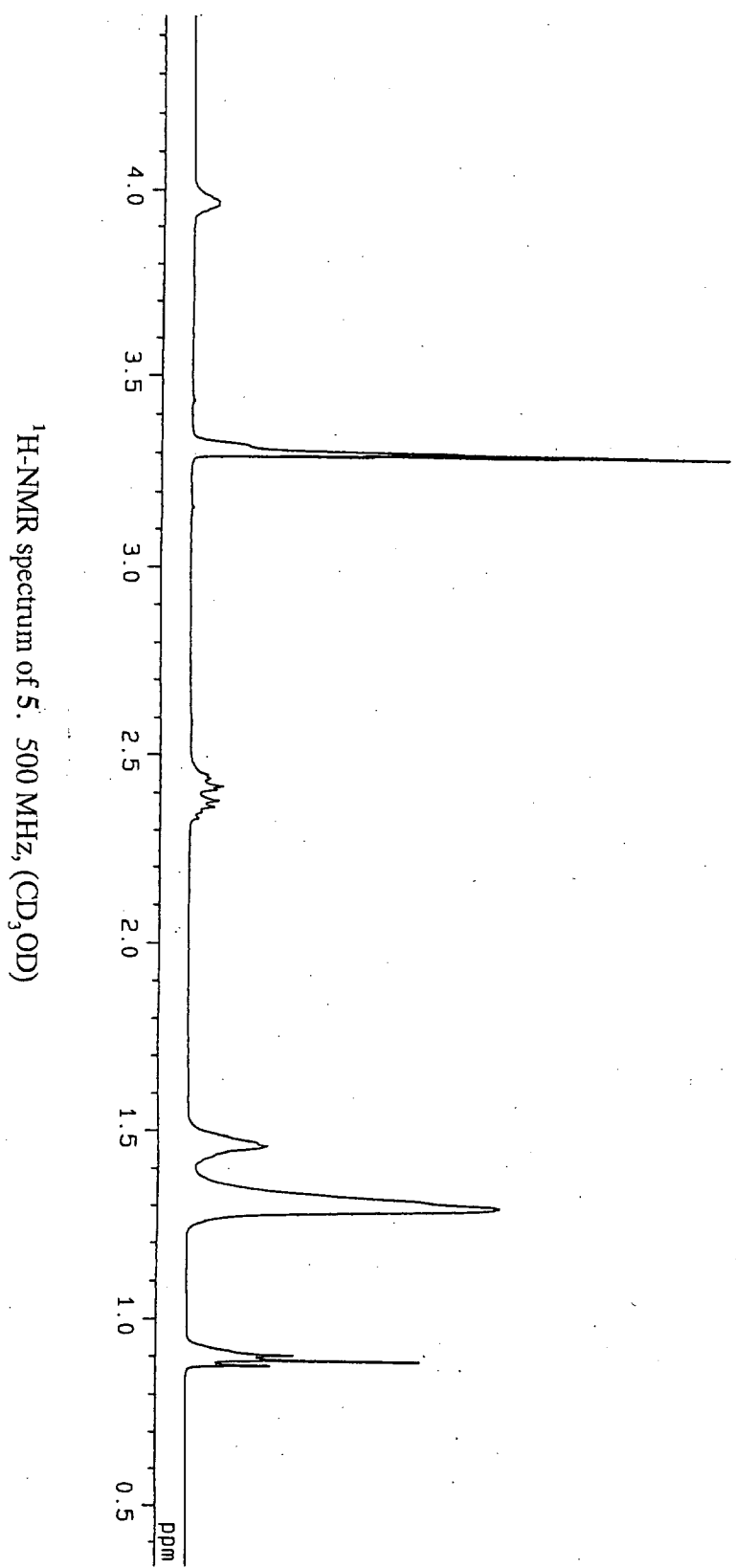


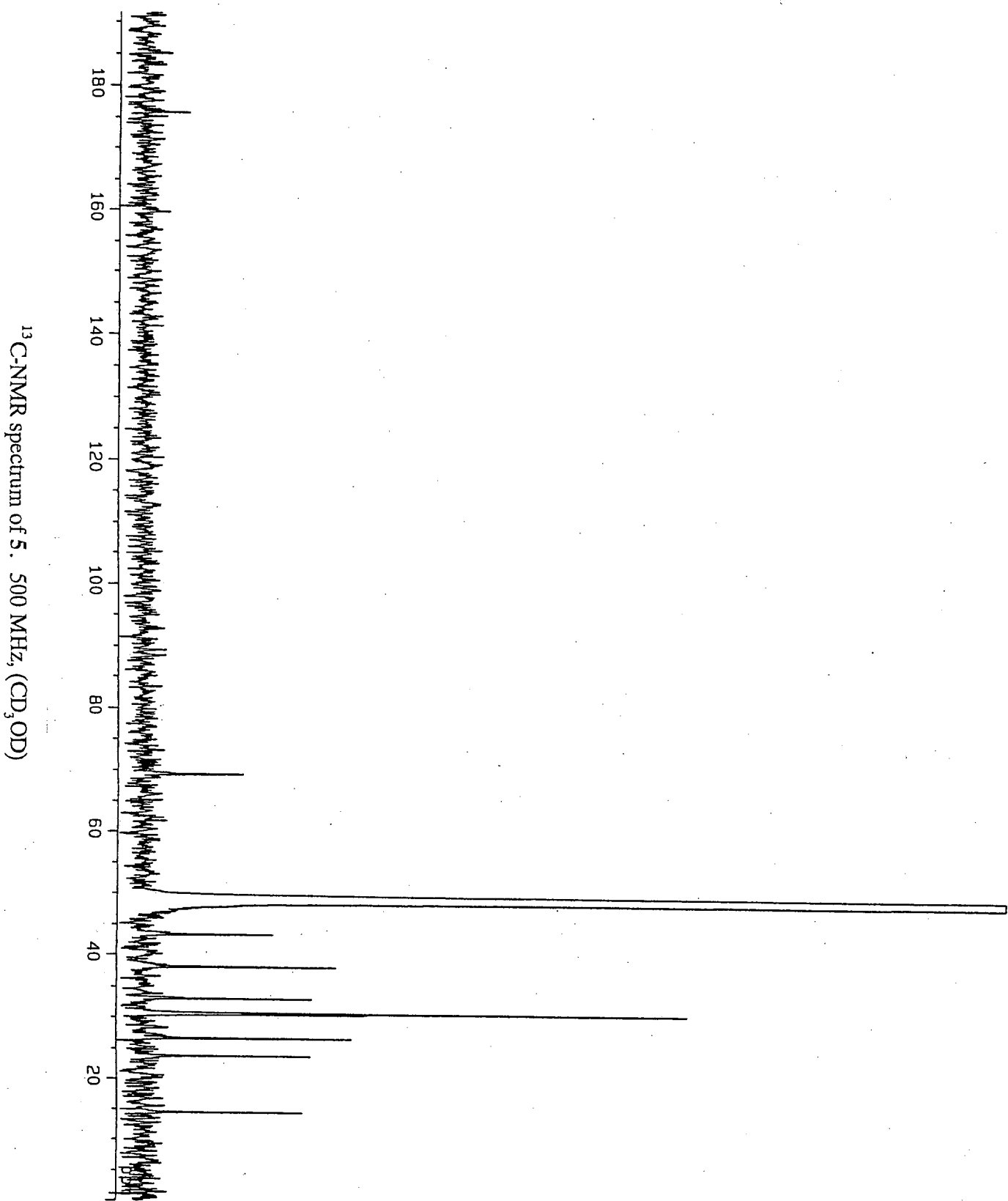
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^{13}C -NMR spectrum of 3. 500 MHz, (CD_3OD)

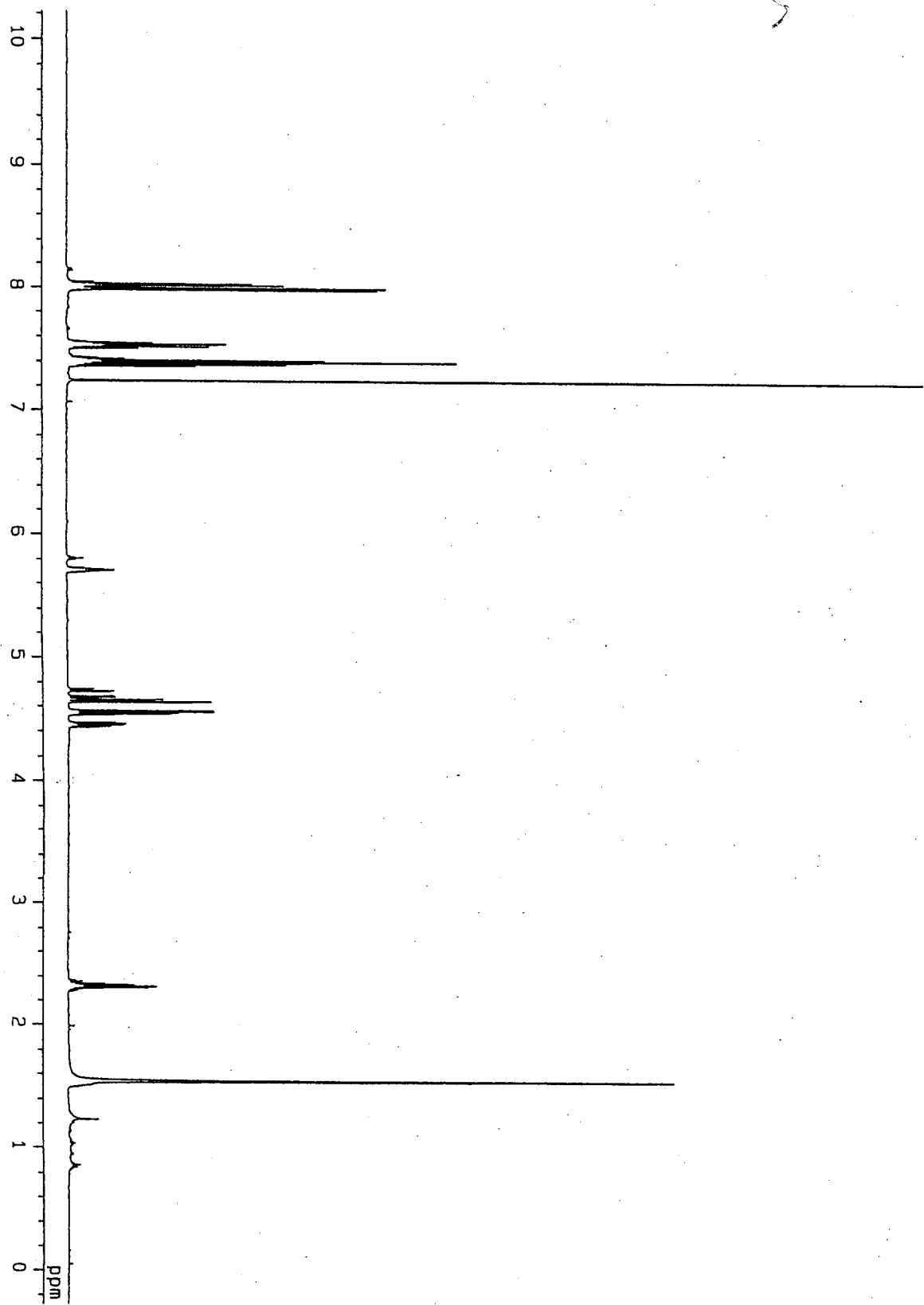




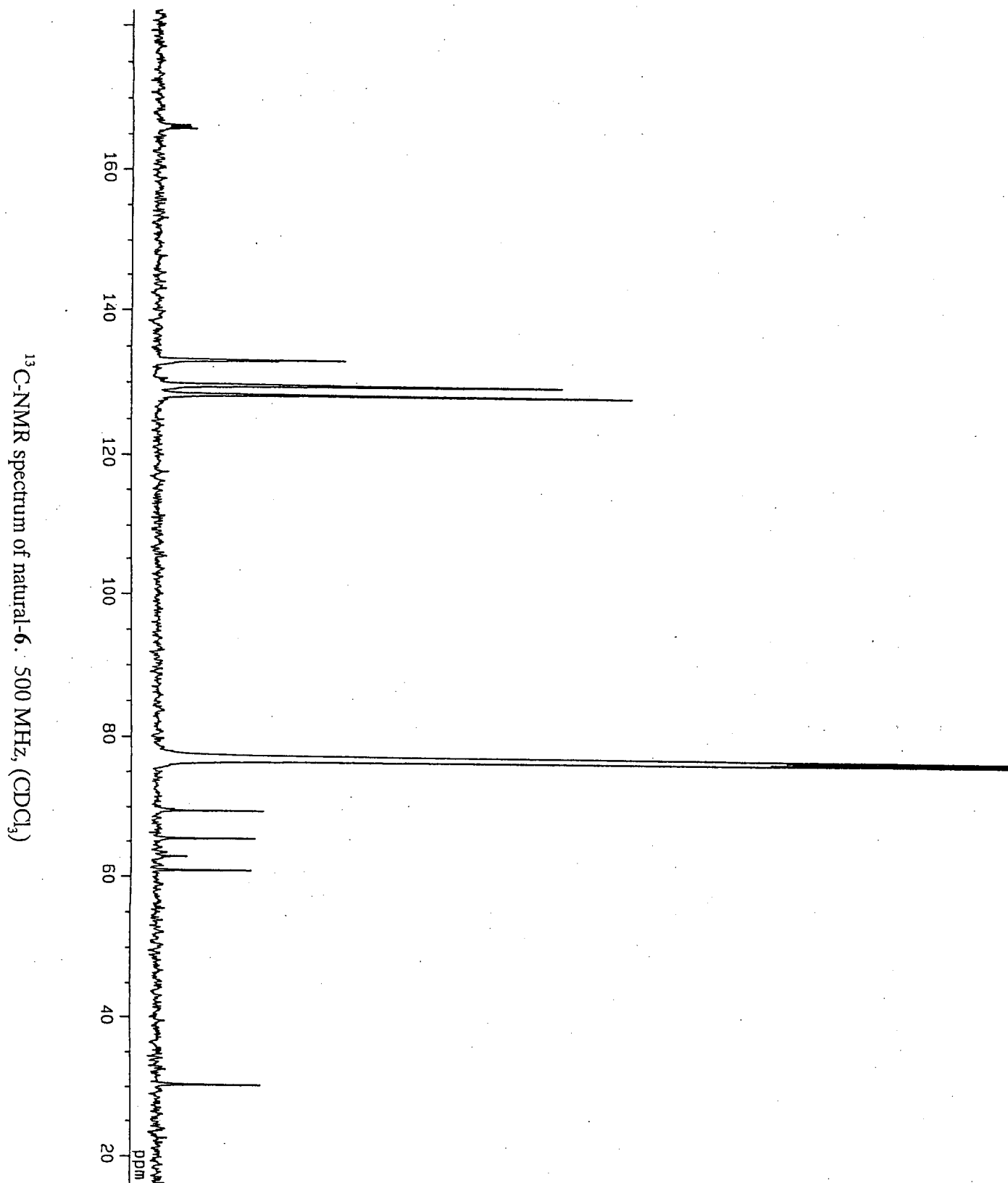
¹H-NMR spectrum of 5. 500 MHz, (CD₃OD)



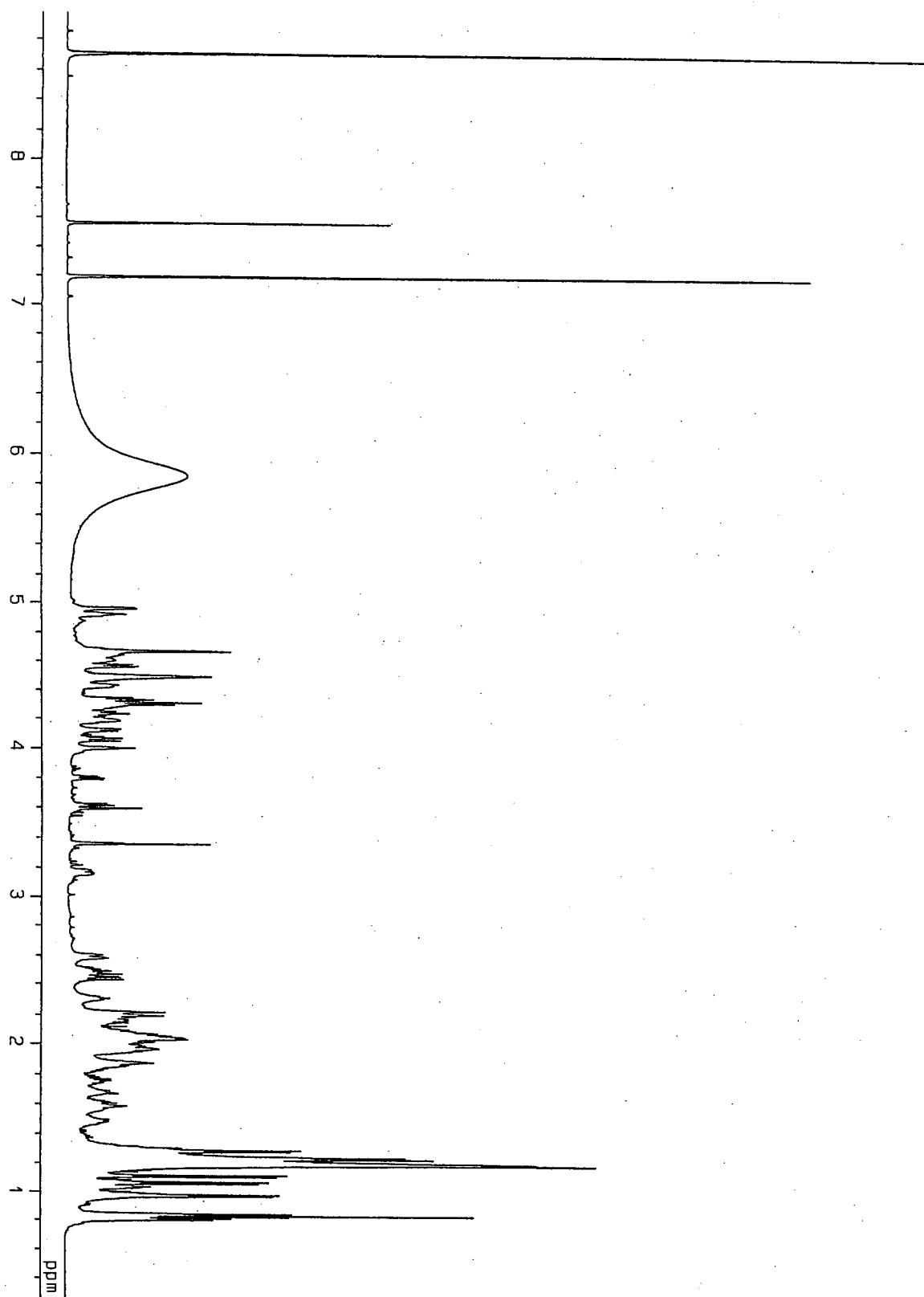
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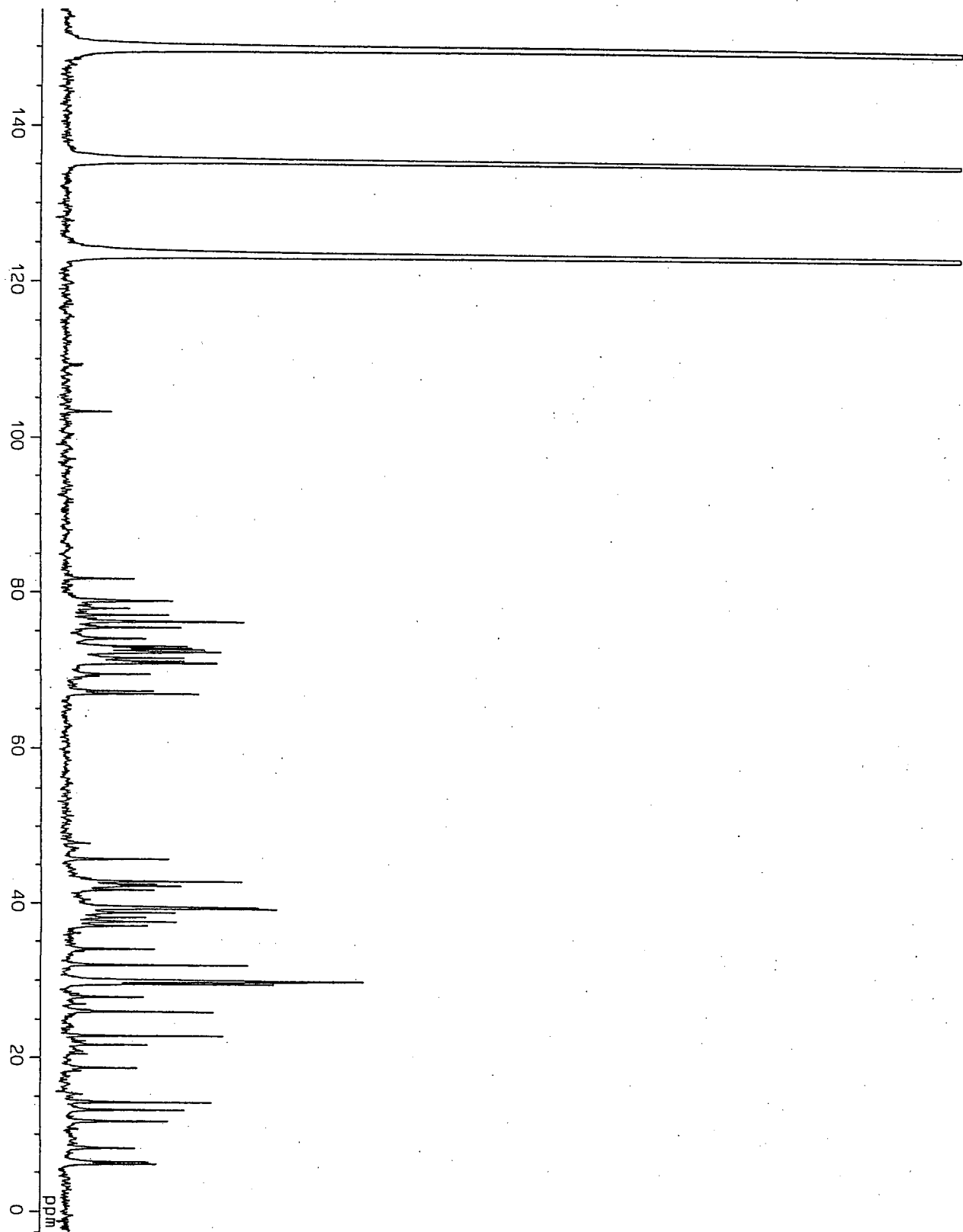
¹H-NMR spectrum of natural-6. 500 MHz, (CDCl₃)

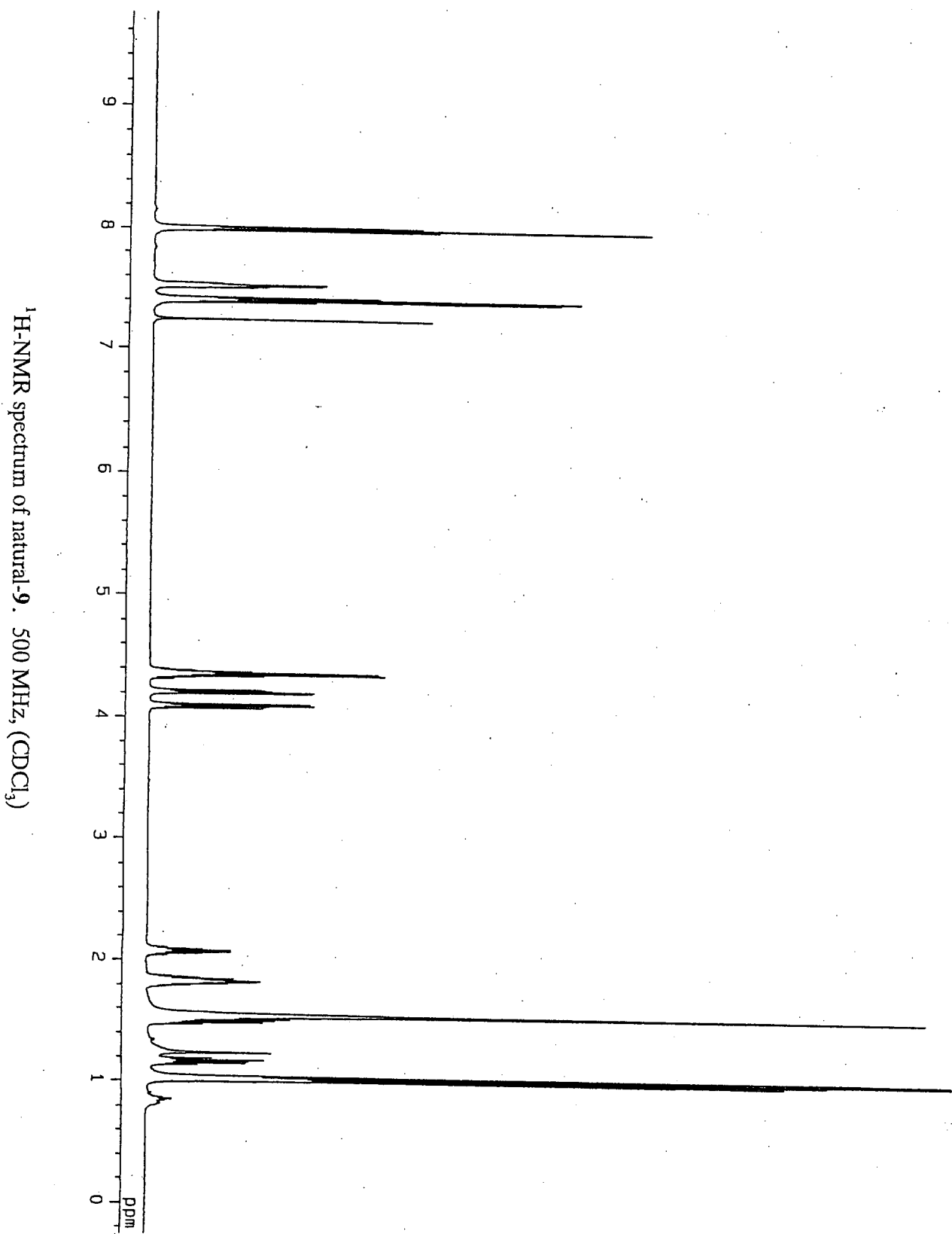


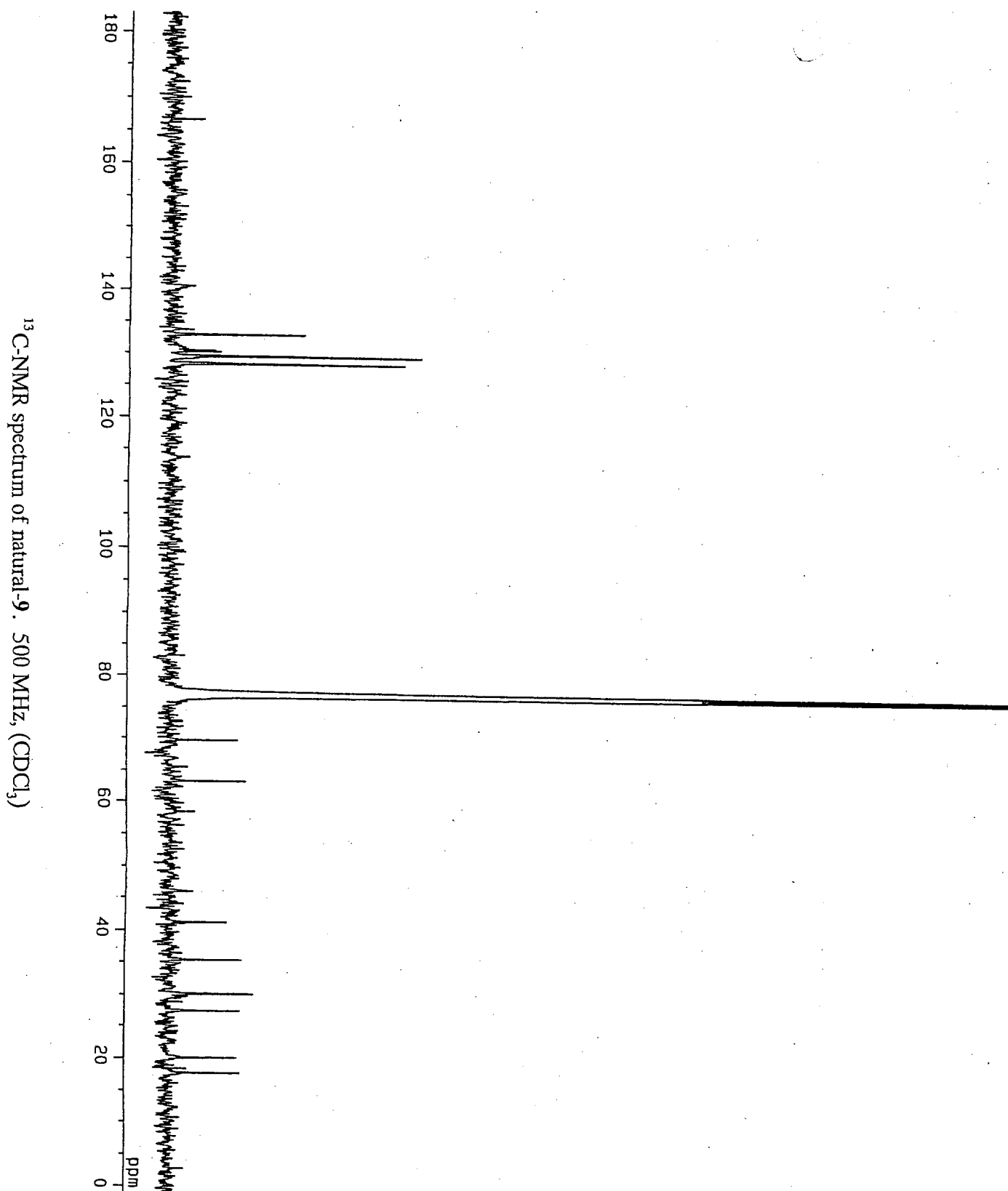
$^1\text{H-NMR}$ spectrum of 7. 600 MHz, ($\text{C}_3\text{D}_3\text{N}$)



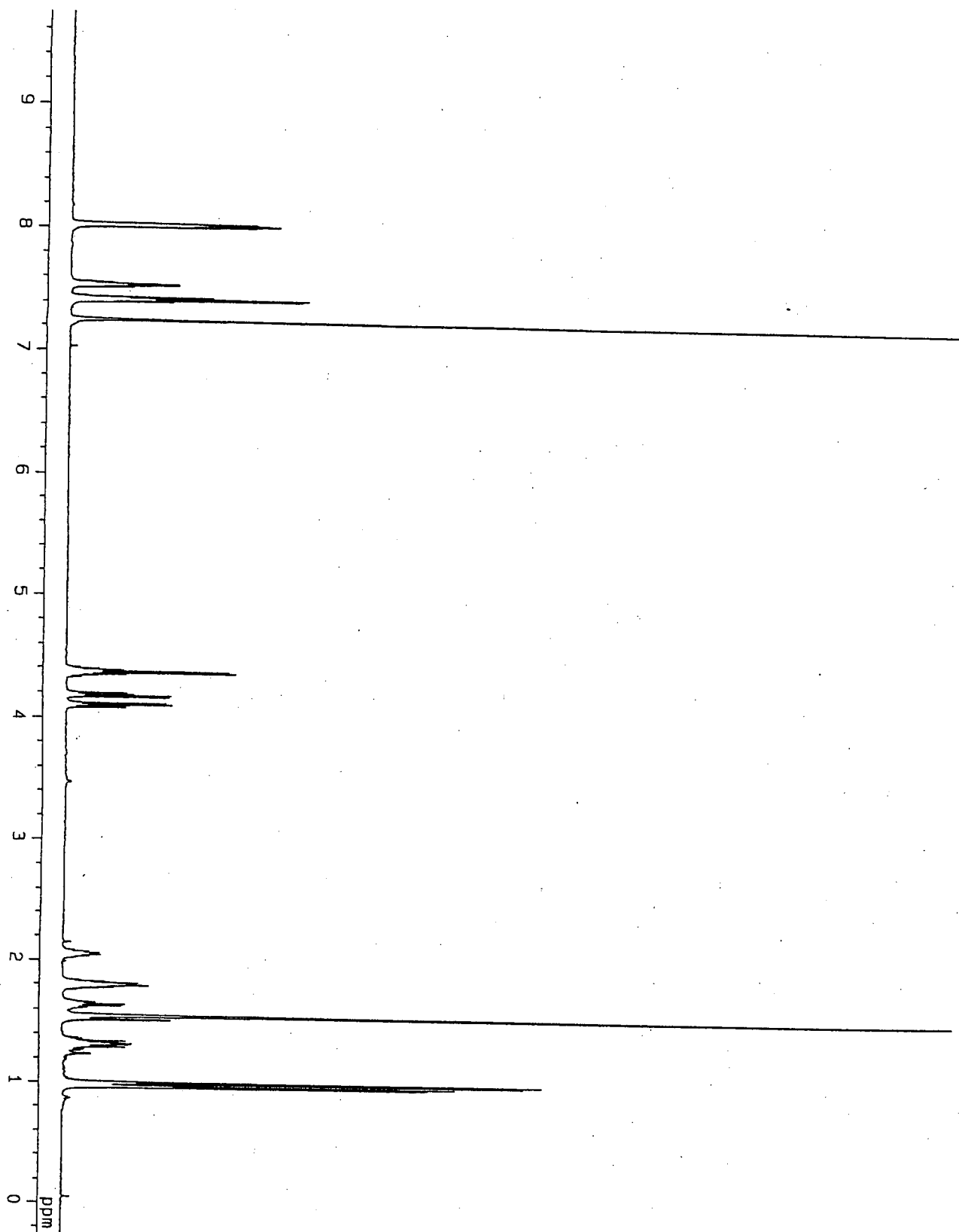
$^{13}\text{C-NMR}$ spectrum of 7. 600 MHz , ($\text{C}_2\text{D}_2\text{N}$)



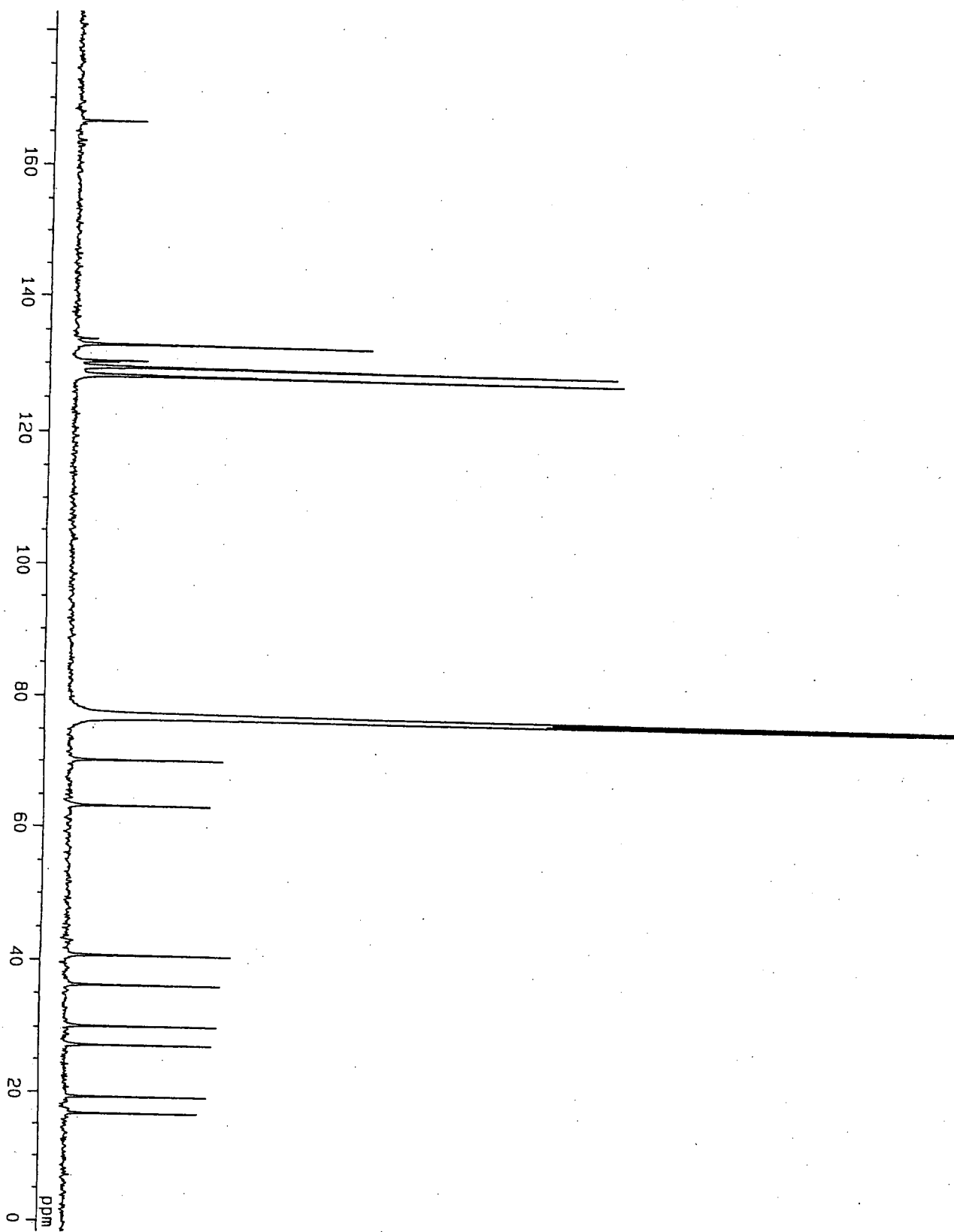




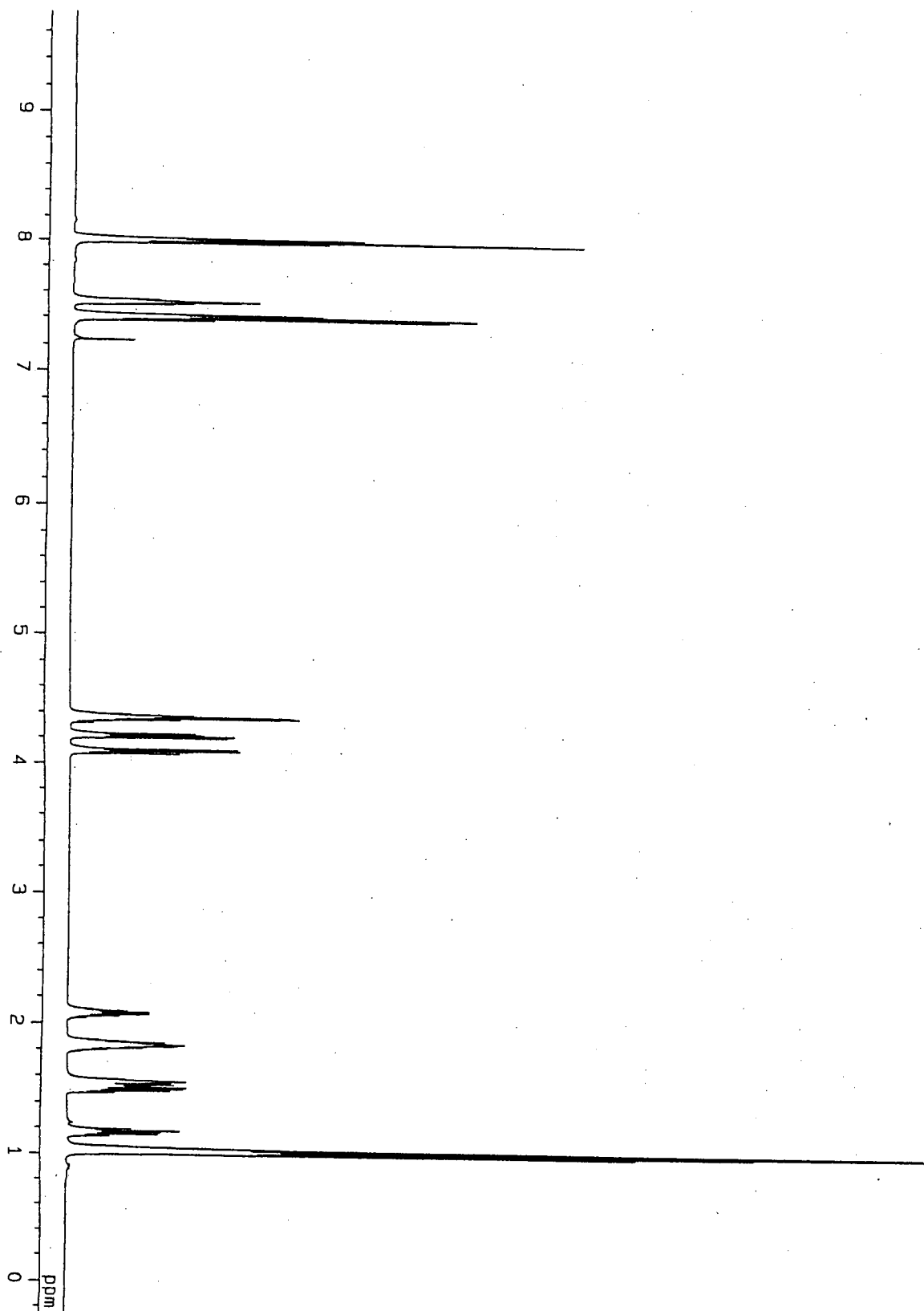
$^1\text{H-NMR}$ spectrum of (2*S*,4*S*)-**9**. 500 MHz, (CDCl_3)

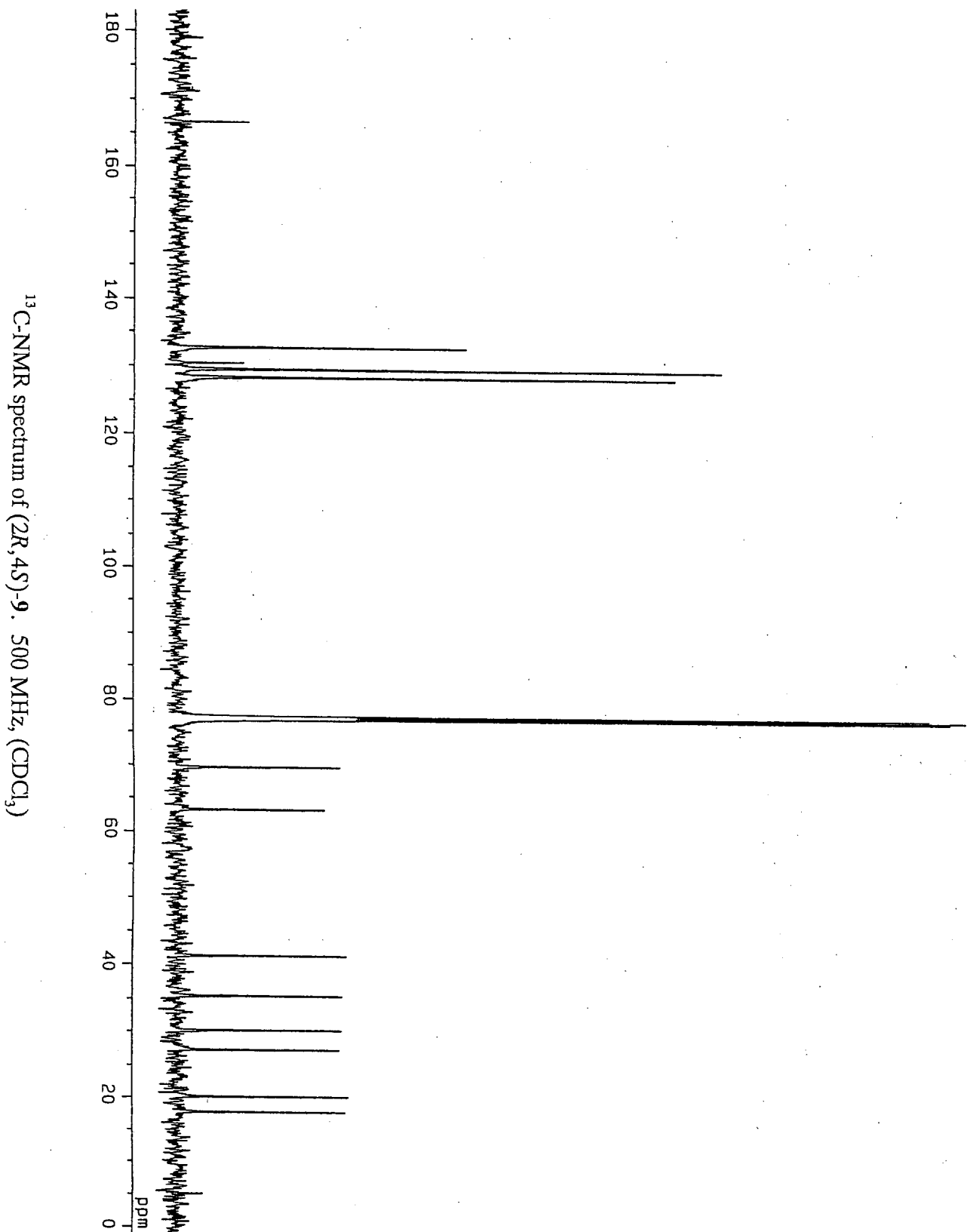


^{13}C -NMR spectrum of (2*S*,4*S*)-**9**. 500 MHz, (CDCl_3)

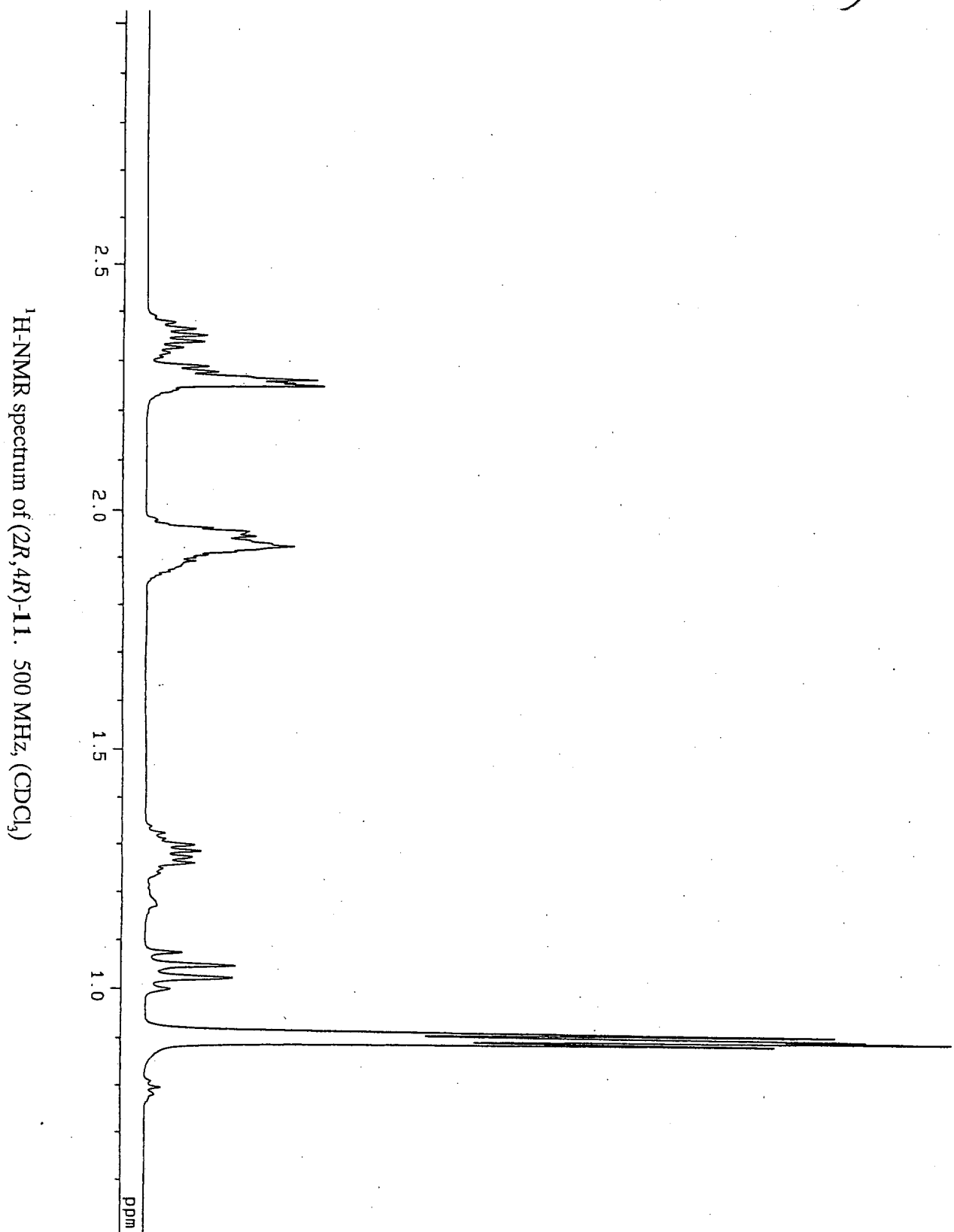


¹H-NMR spectrum of (2*R*,4*S*)-**9**. 500 MHz, (CDCl₃)

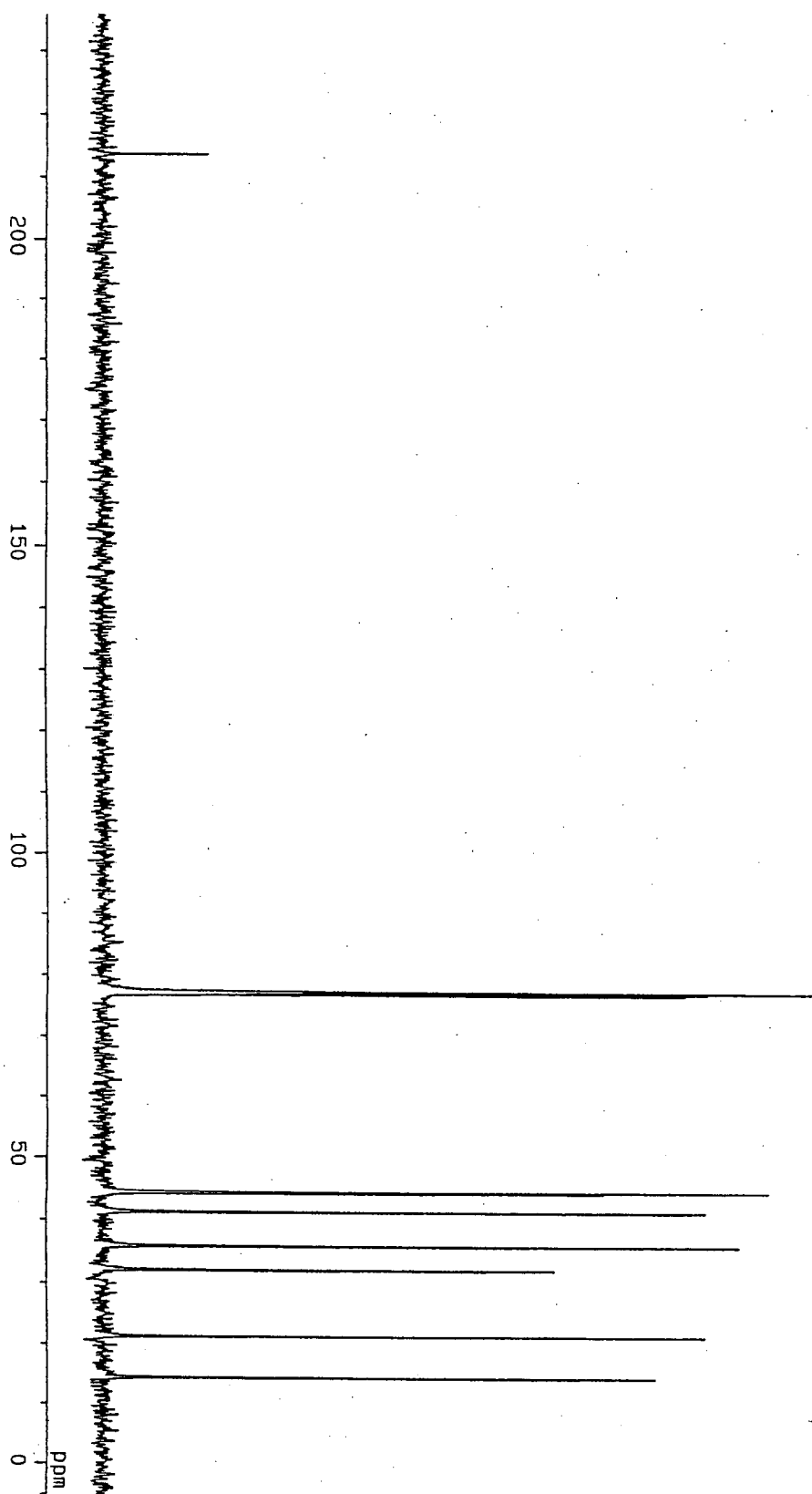


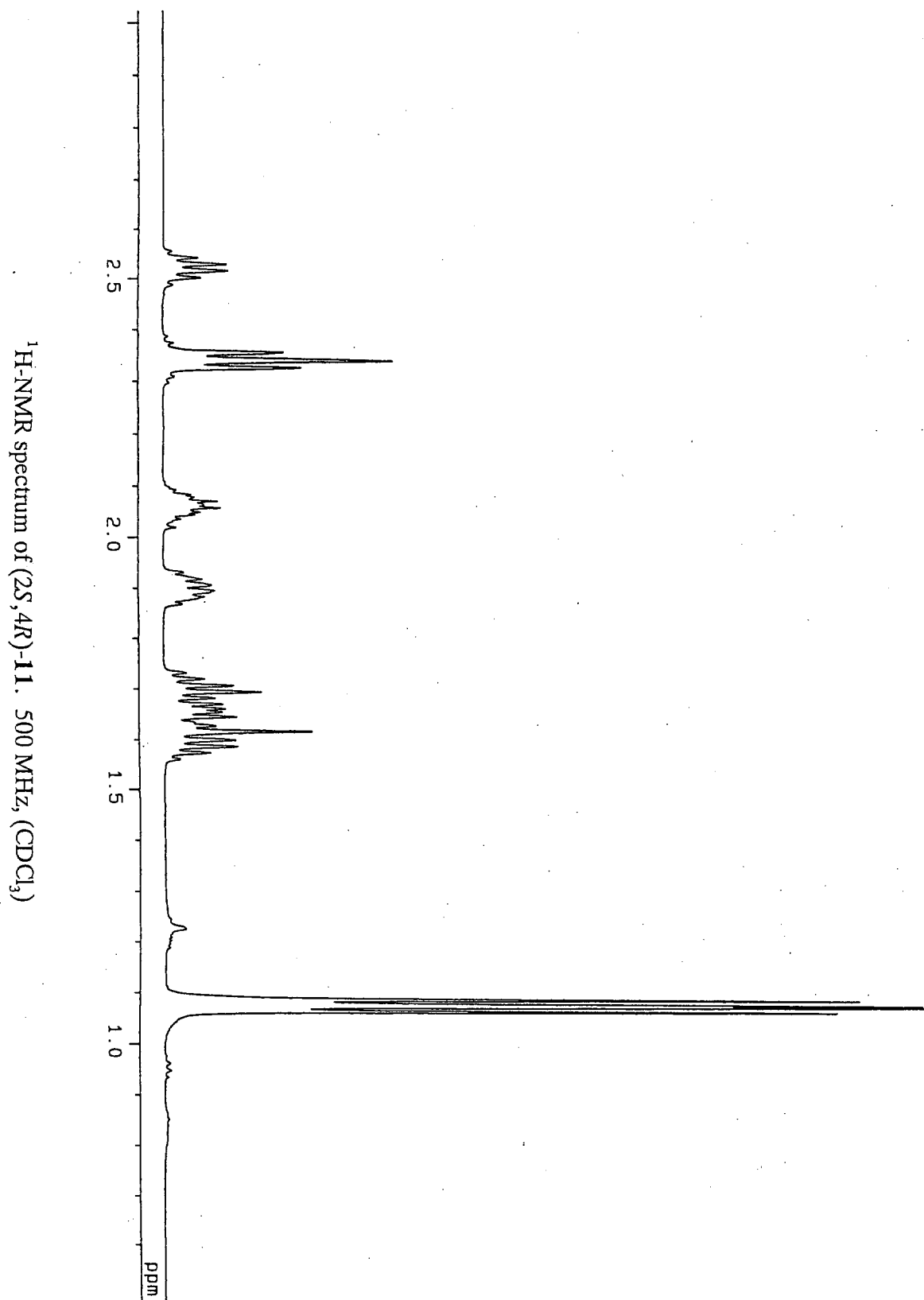


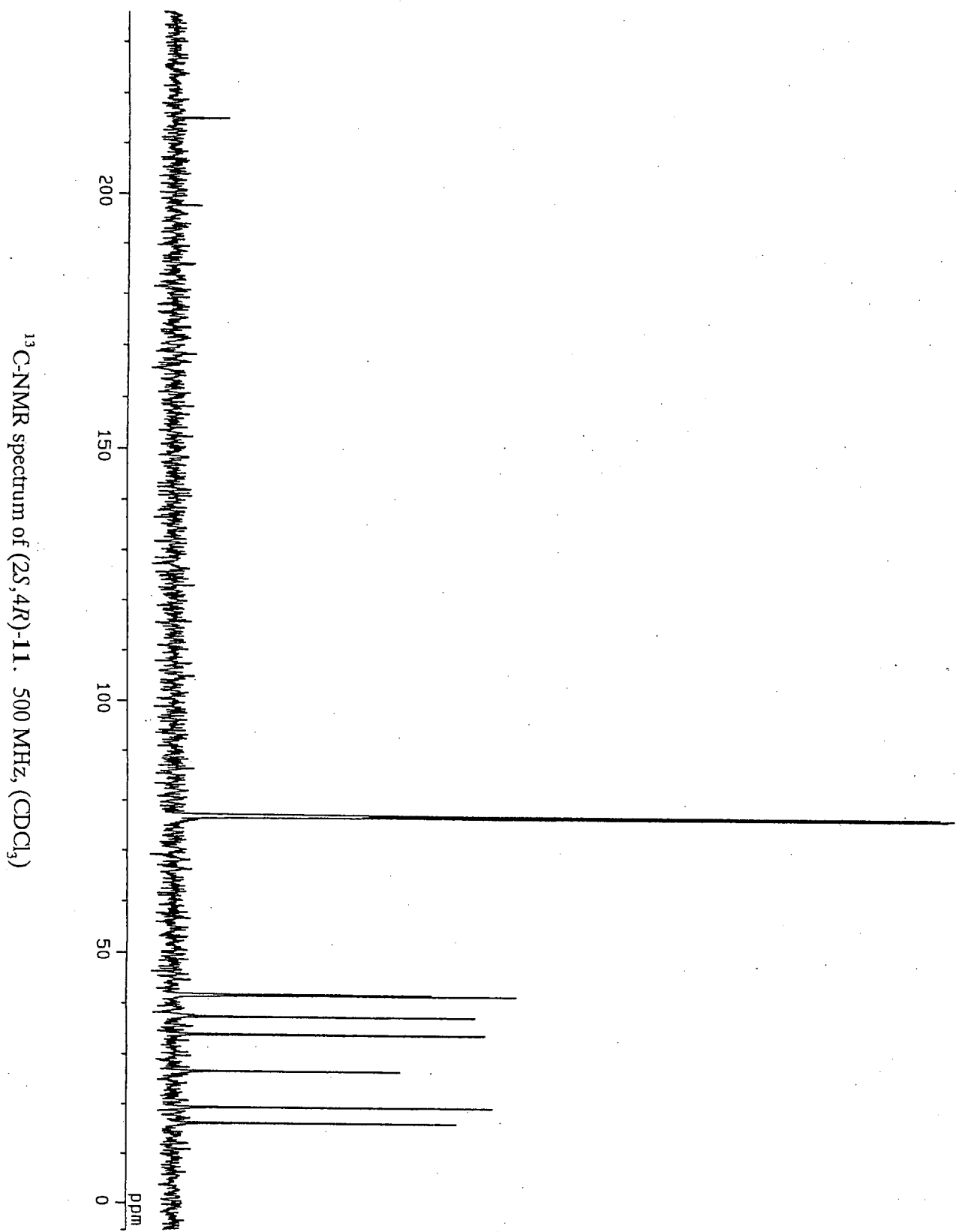
15



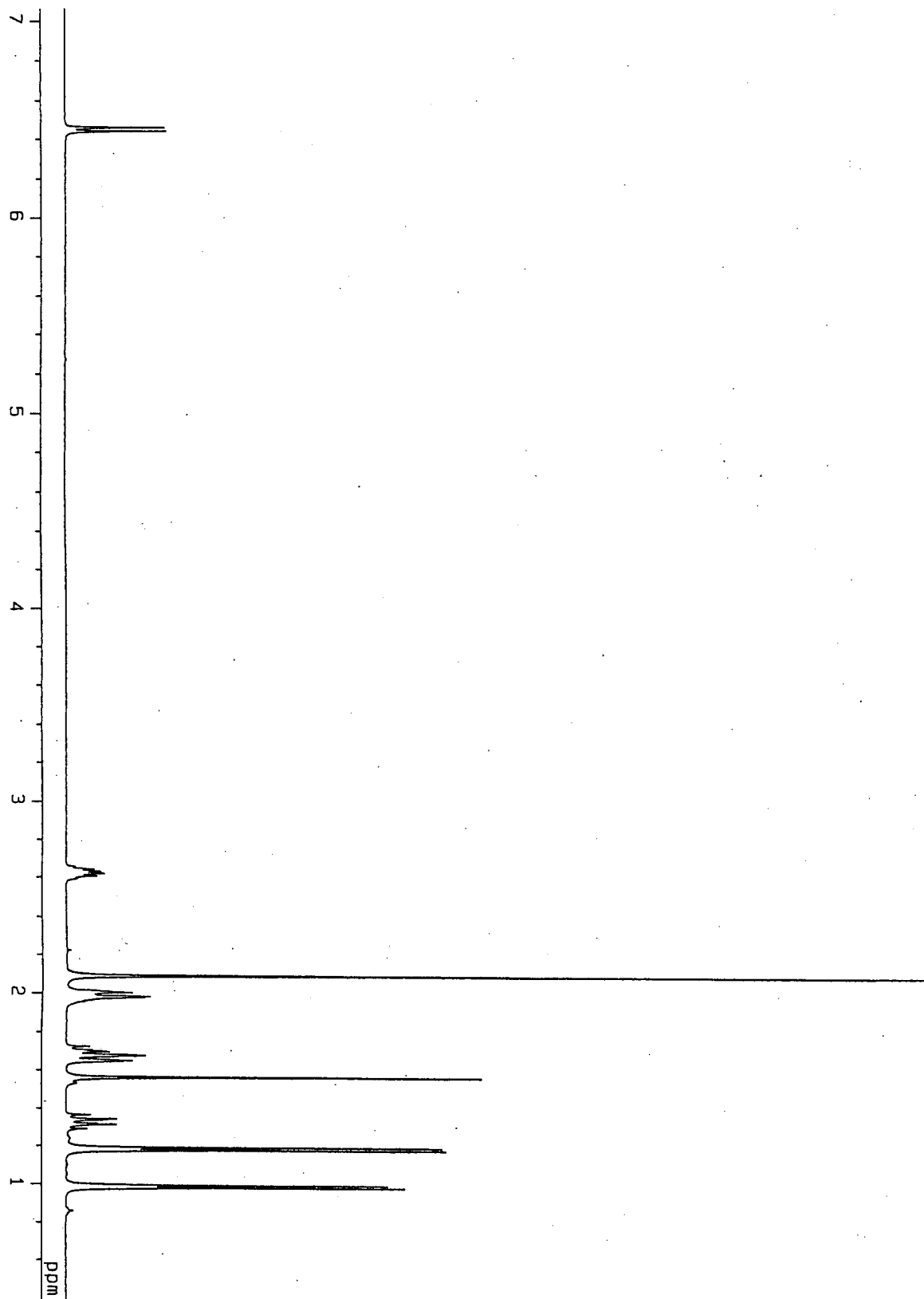
^{13}C -NMR spectrum of (2R,4R)-11. 500 MHz, (CDCl_3)





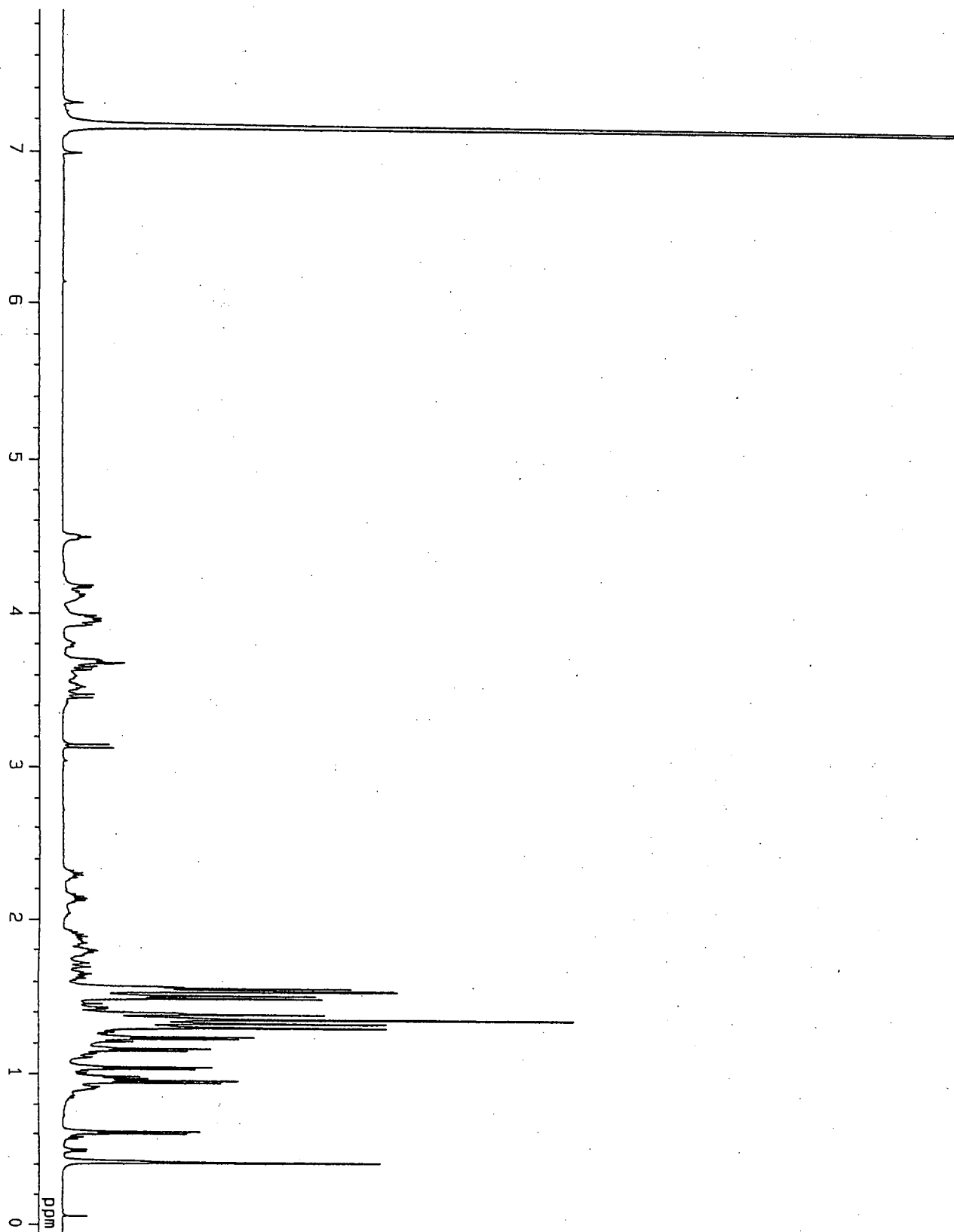


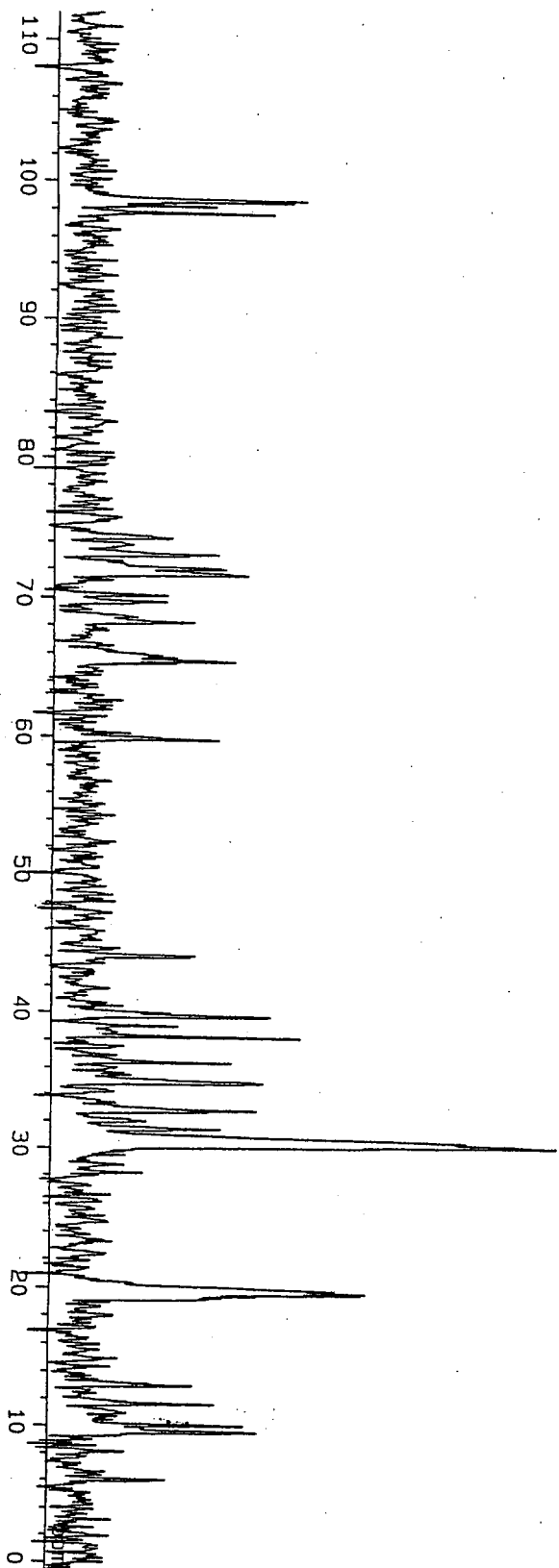
$^1\text{H-NMR}$ spectrum of **12**. 500 MHz, (CDCl_3)



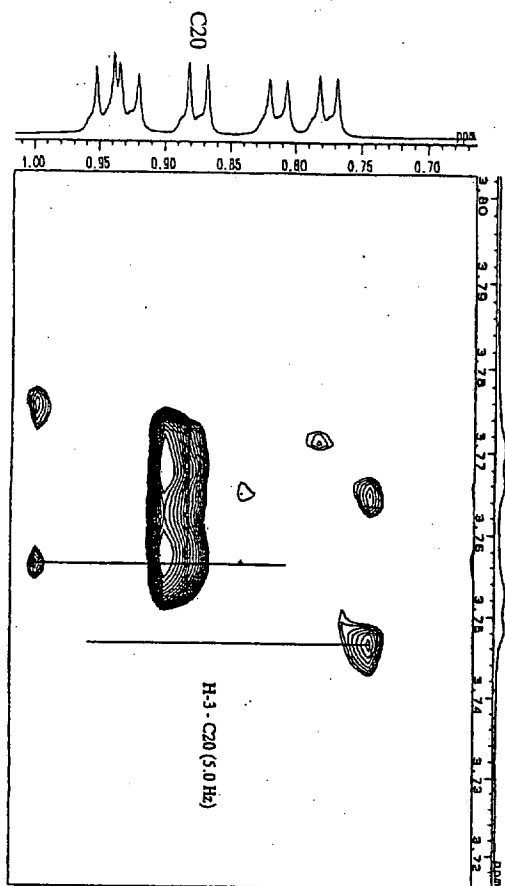
20

$^1\text{H-NMR}$ spectrum of 13. 500 MHz, (benzen- d_6)

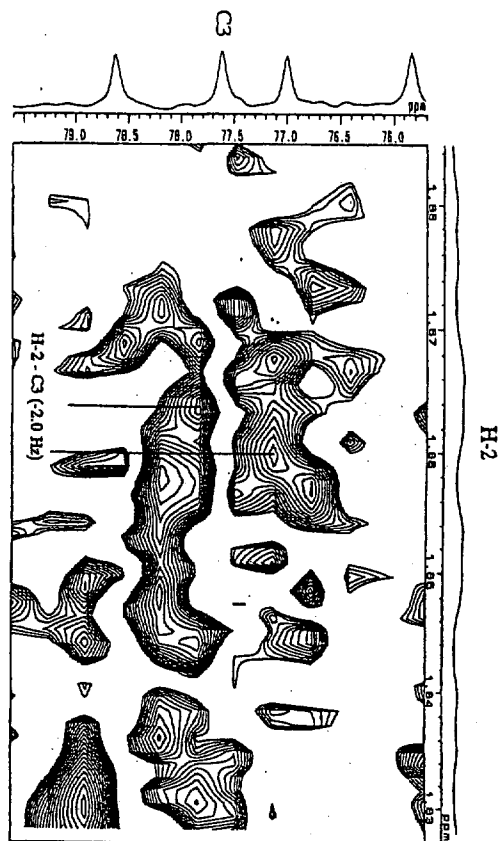




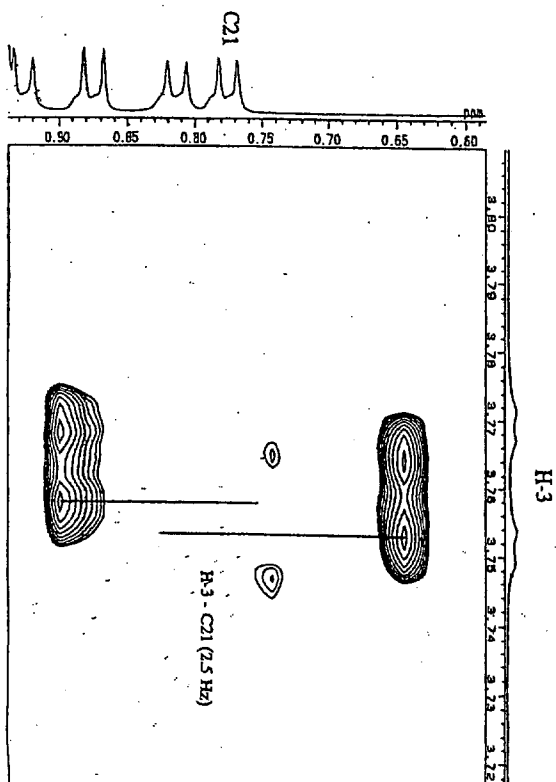
^{13}C -NMR spectrum of **13**. 500 MHz, (benzene- d_6)



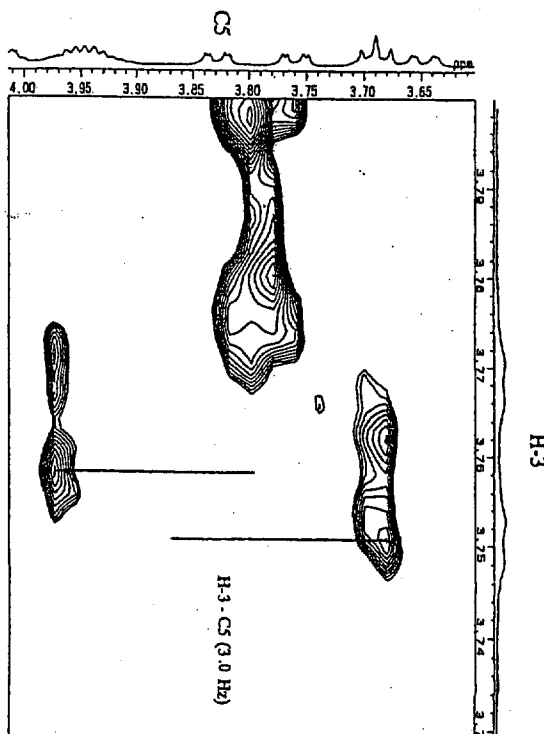
PHETLOC, mixing 30 ms, 500 MHz (CD₃OD)



CH-HETLOC, mixing 30 ms, 500 MHz (CD₃OD)

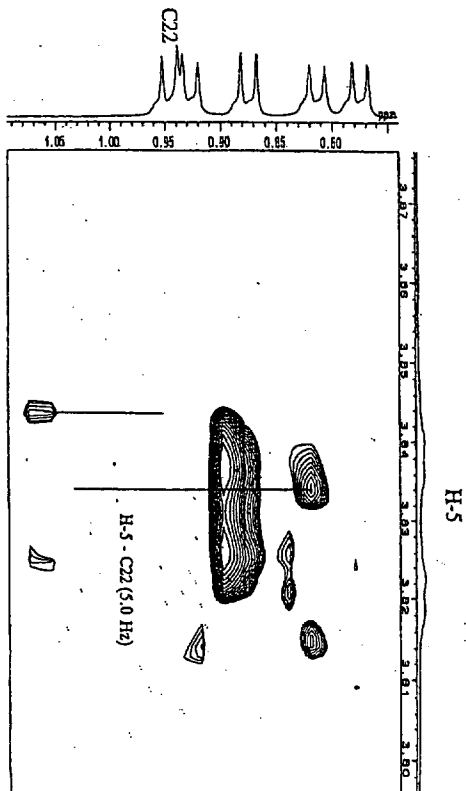
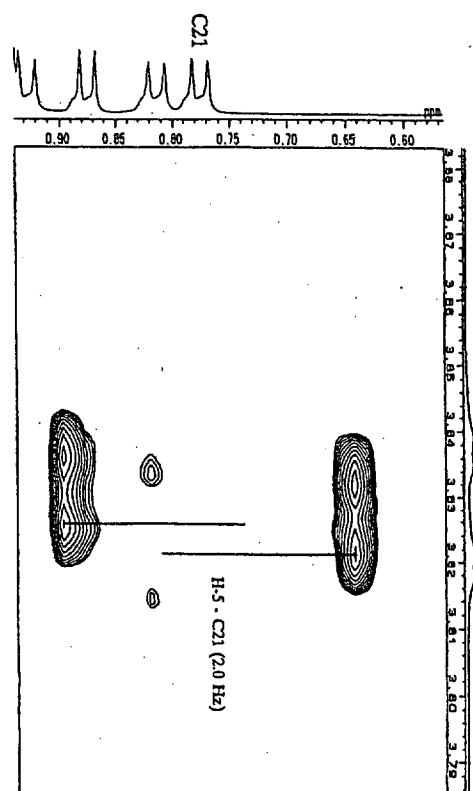
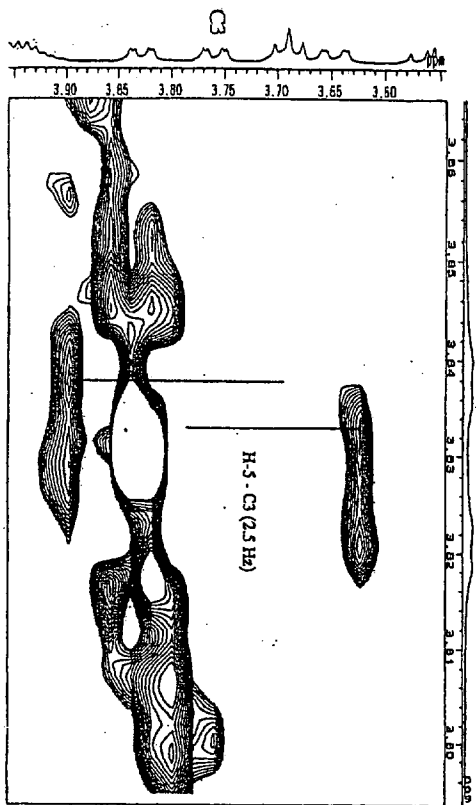
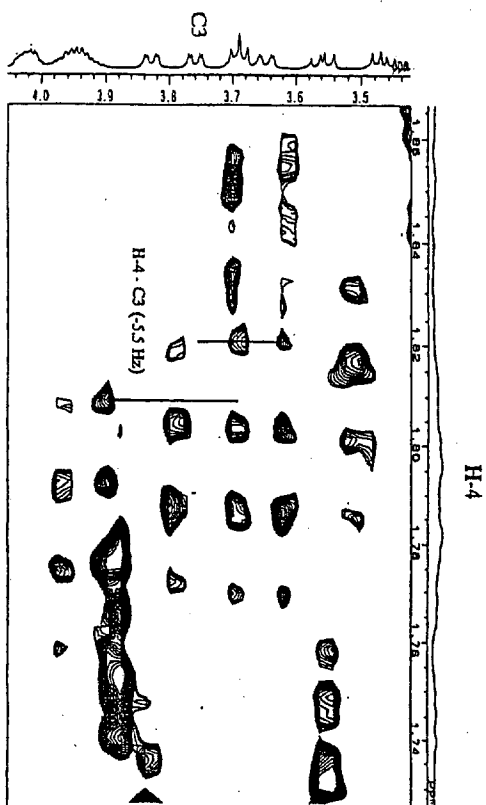


PHETLOC, mixing 30 ms, 500 MHz (CD₃OD)

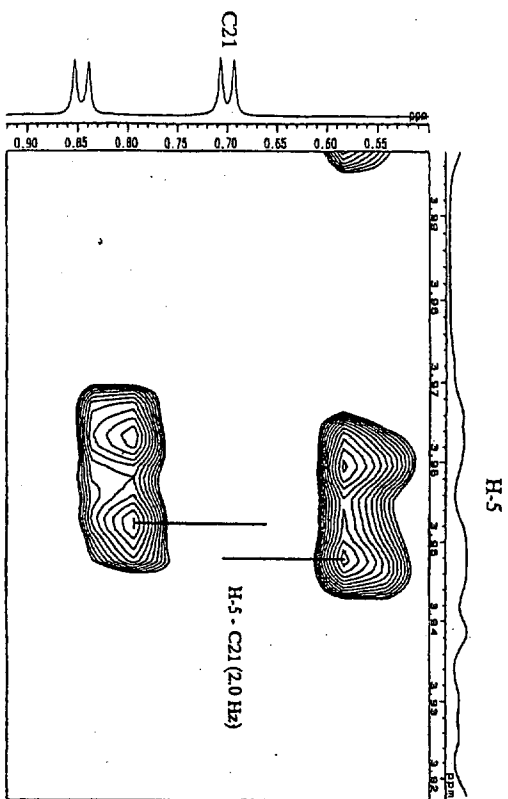


PHETLOC, mixing 30 ms, 500 MHz (CD₃OD)

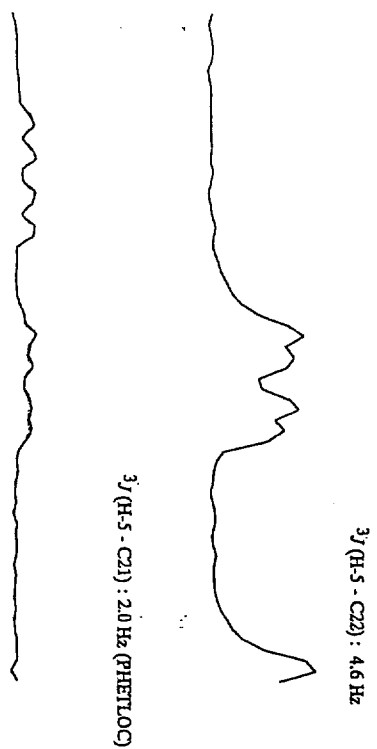
Partial HETLOC spectra of 3 used for measurements of ${}^{2,3}J_{CH}$ (1)



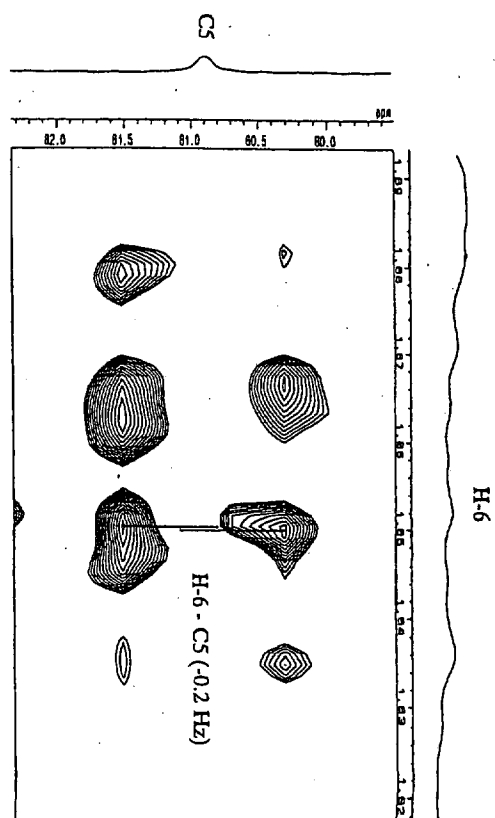
Partial HETLOC spectra of **3** used for measurements of ${}^{2,3}J_{\text{CH}}$ (2)



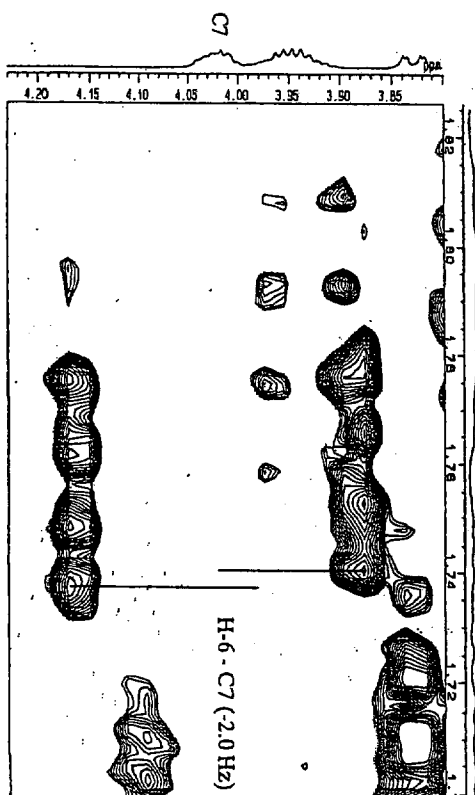
PHETLLOC, mixing 30 ms, 500 MHz ($C_2D_5N-CD_3OD$, 3:1)



PFQ-HMBC, delay 50 ms, 500 MHz ($C_2D_5N-CD_3OD$, 3:1)

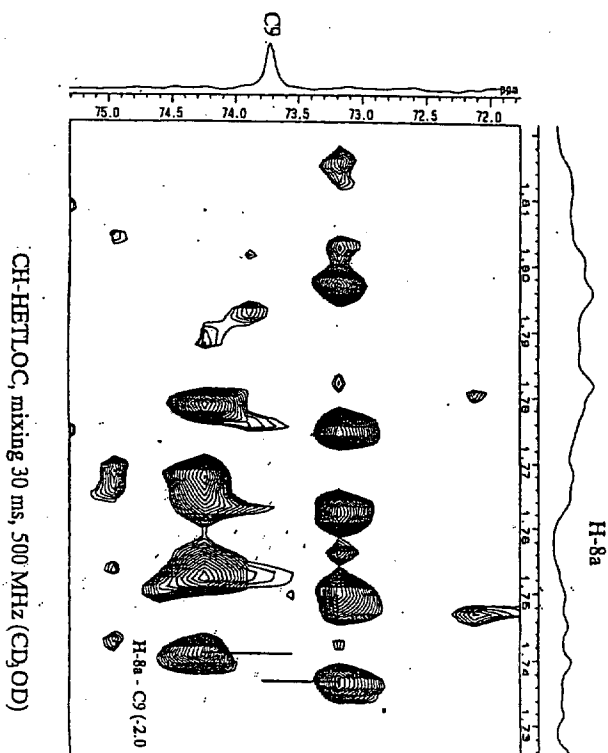
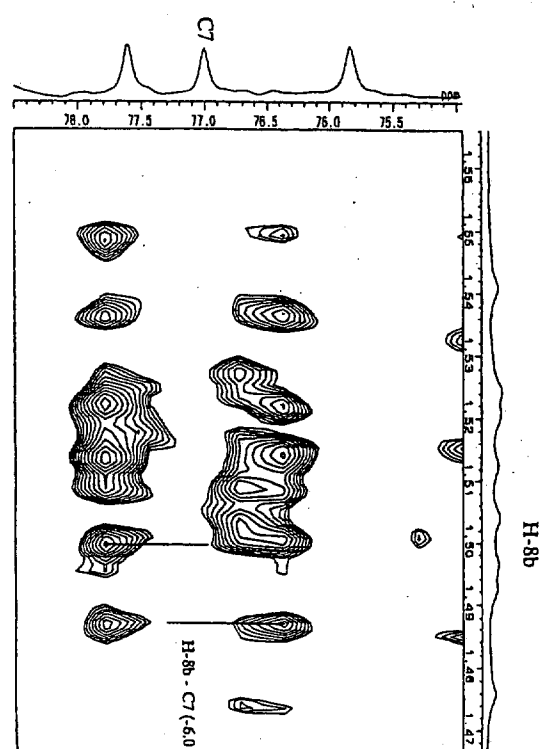
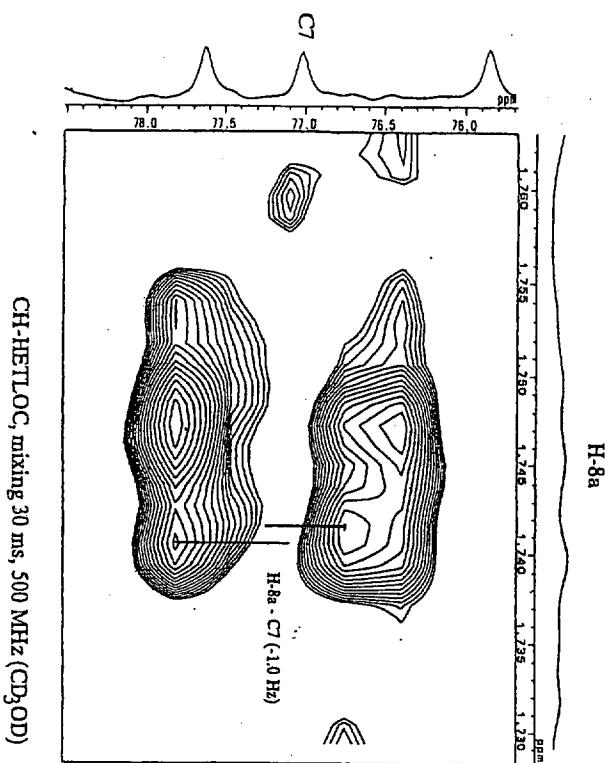
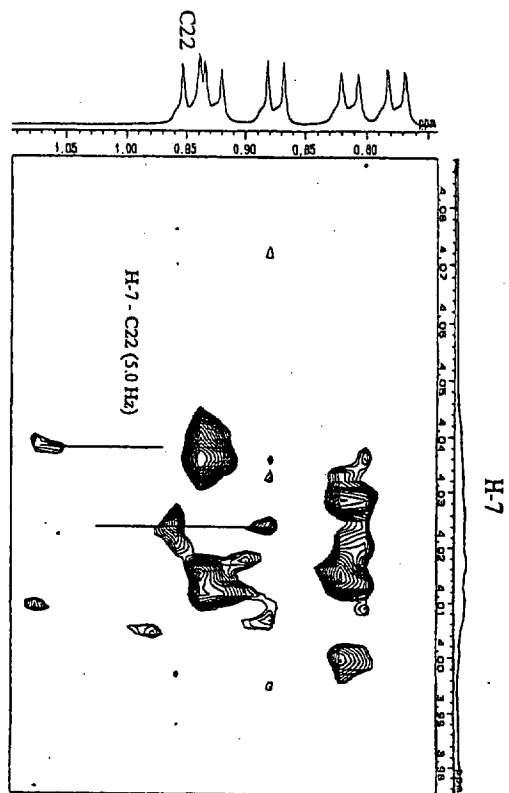


CH-ETLOC, mixing 30 ms, 500 MHz (C_2D_5N)

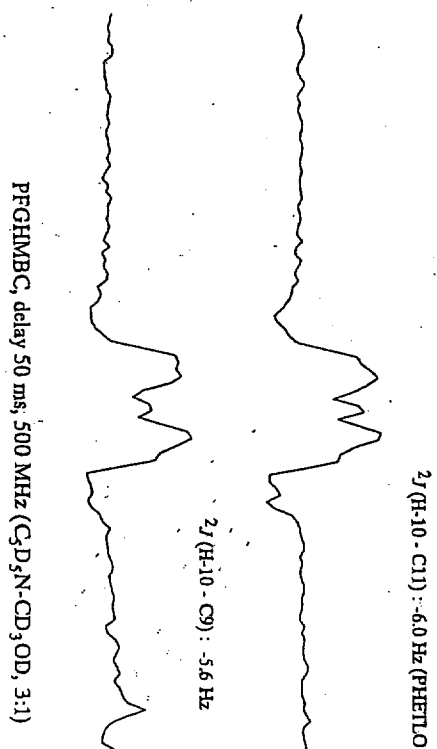
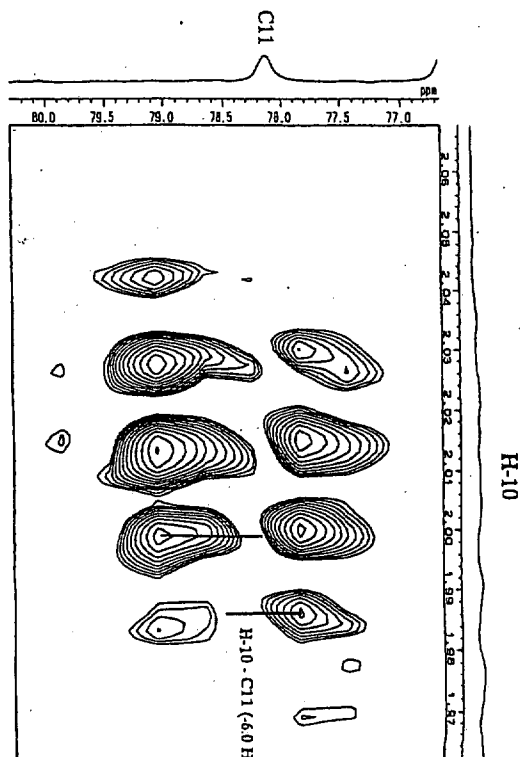
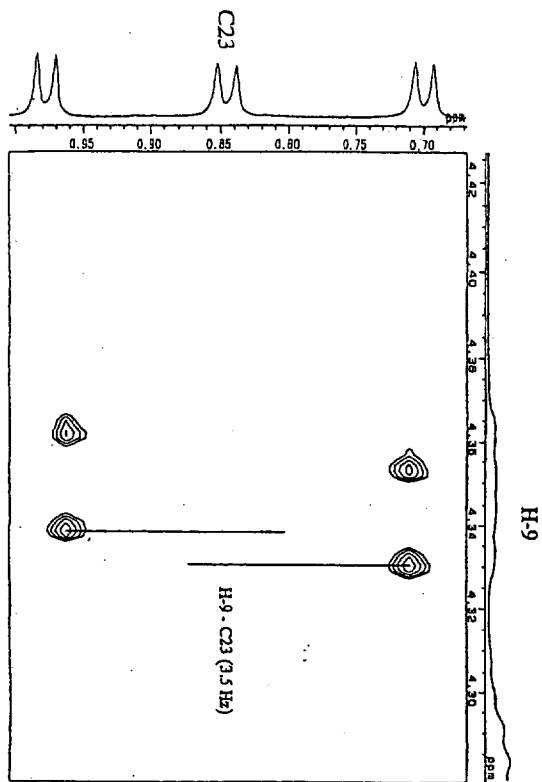
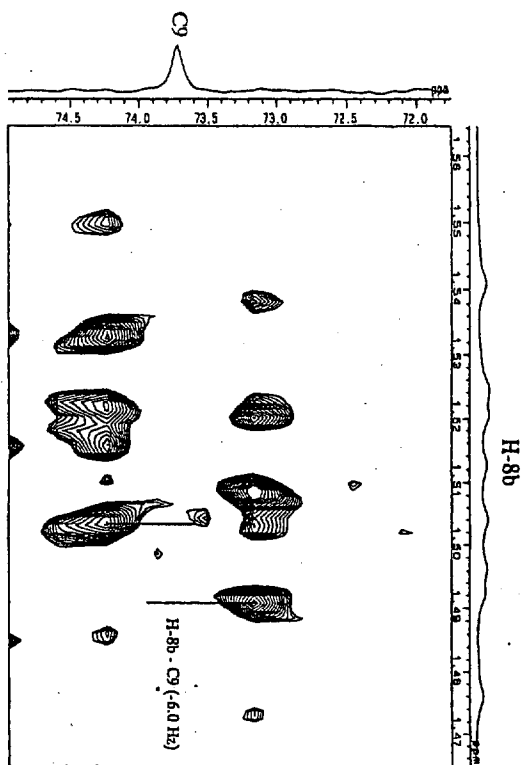


PHETLLOC, mixing 30 ms, 500 MHz (CD_3OD)

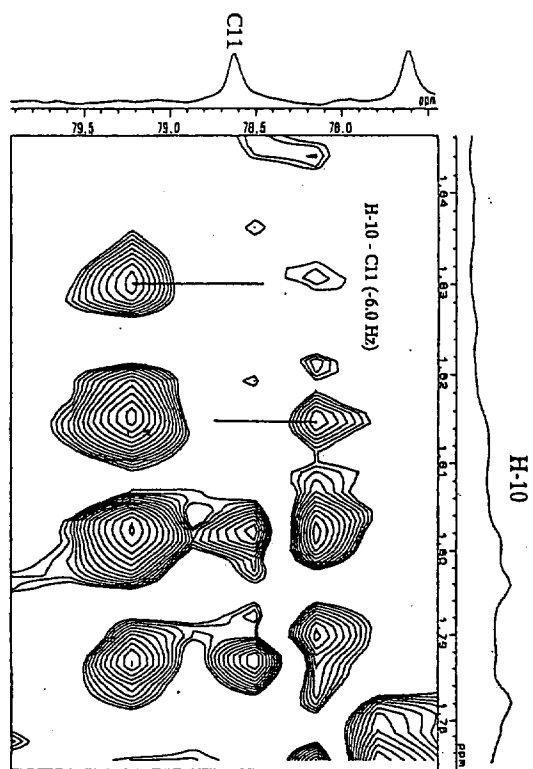
Partial HETLOC spectra and sliced PS-HMBC spectra of **3** used for measurements of ${}^2,3J_{CH}$ (3)



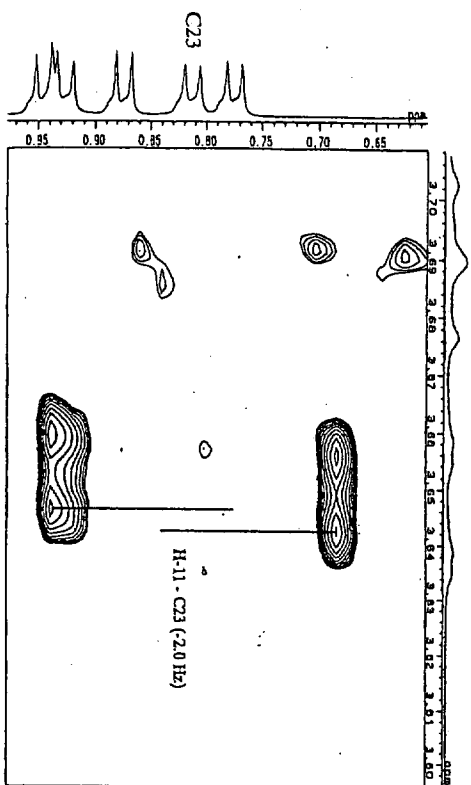
Partial HETLOC spectra of **3** used for measurements of $^2J_{CH}$ (4)



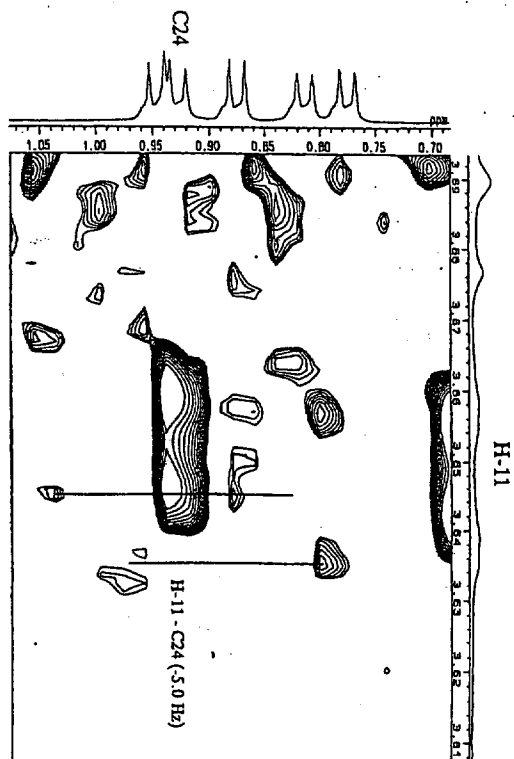
Partial HETLOC spectra and sliced PS-HMBC spectra of **3** used for measurements of ${}^2J_{\text{CH}}$ (5)



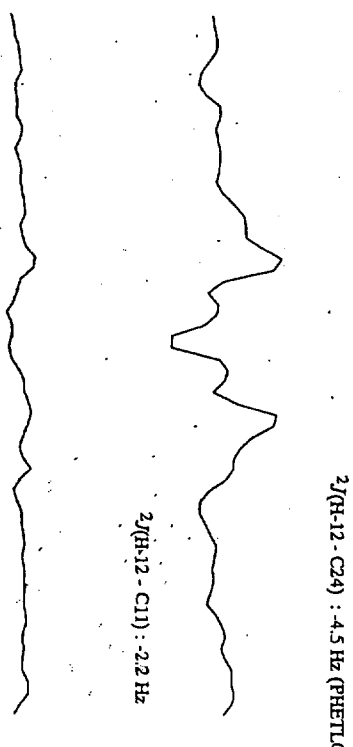
CH-HETLOC, mixing 30 ms, 500 MHz (CD₃OD)



PHETLLOC, mixing 30 ms, 500 MHz (CD₃OD)

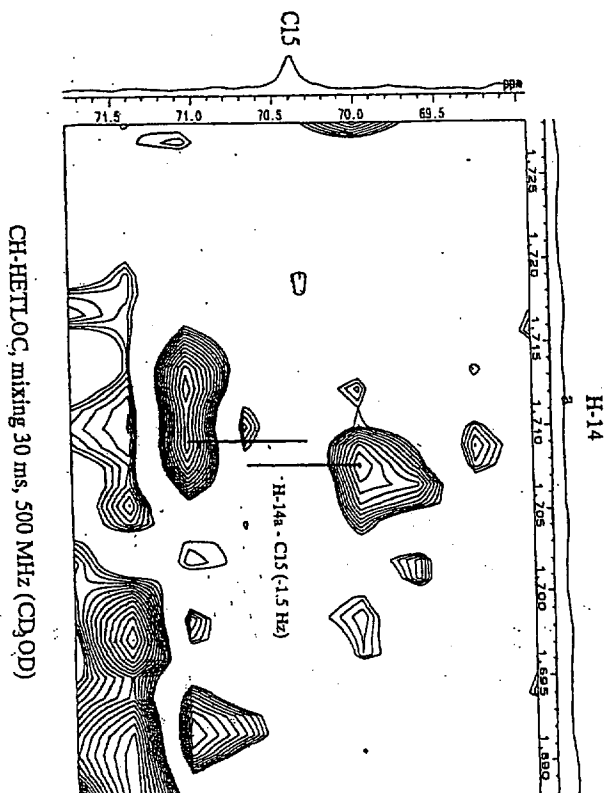
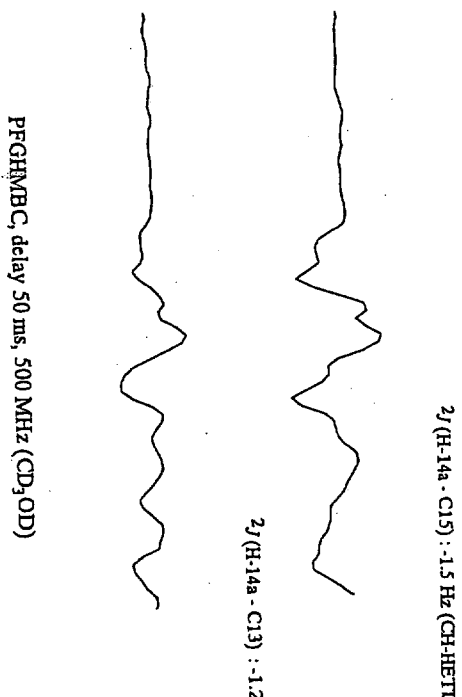
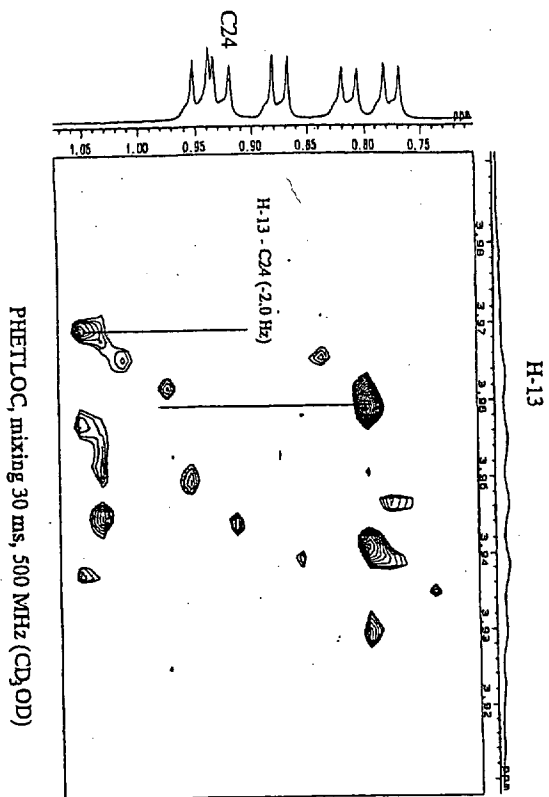
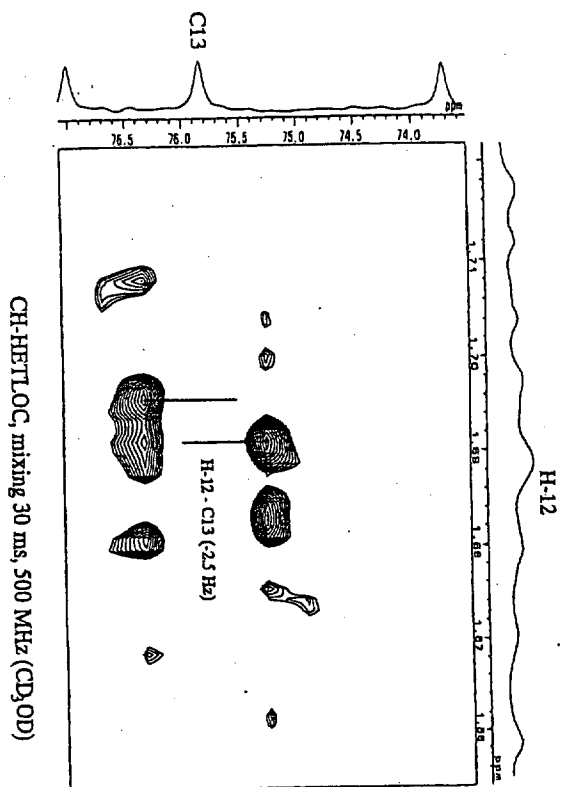


PHETLLOC, mixing 30 ms, 500 MHz (CD₃OD)

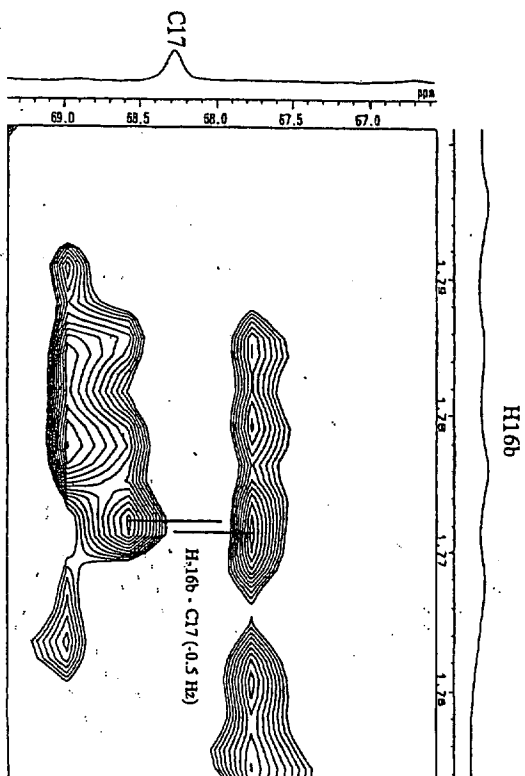
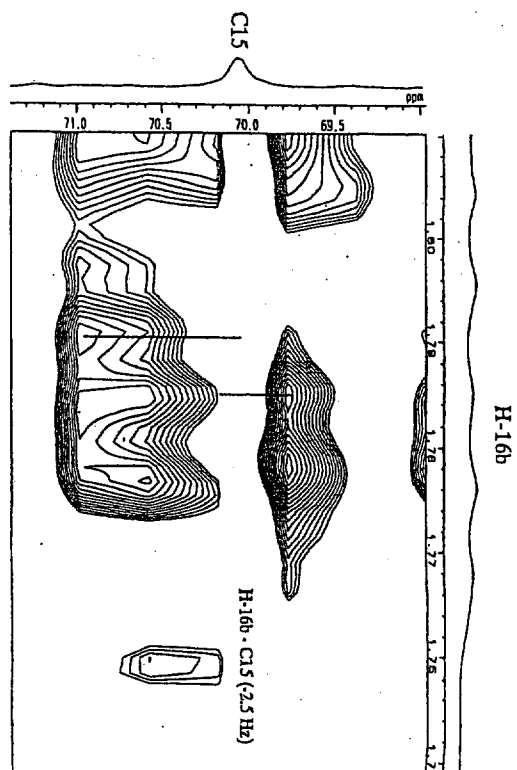
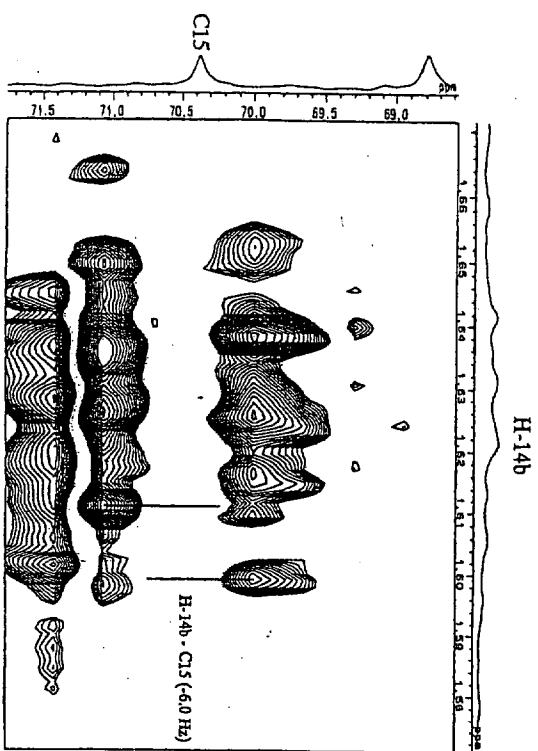
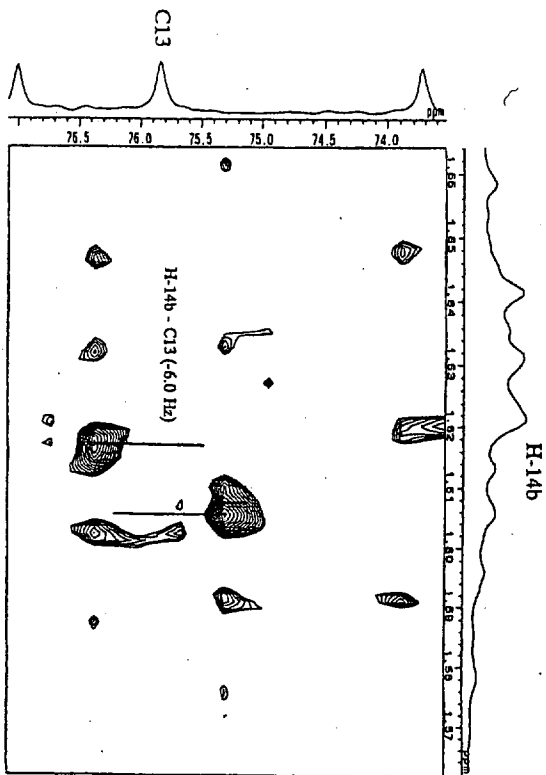


PFGHMBC, delay 50 ms, 500 MHz (CD₃OD)

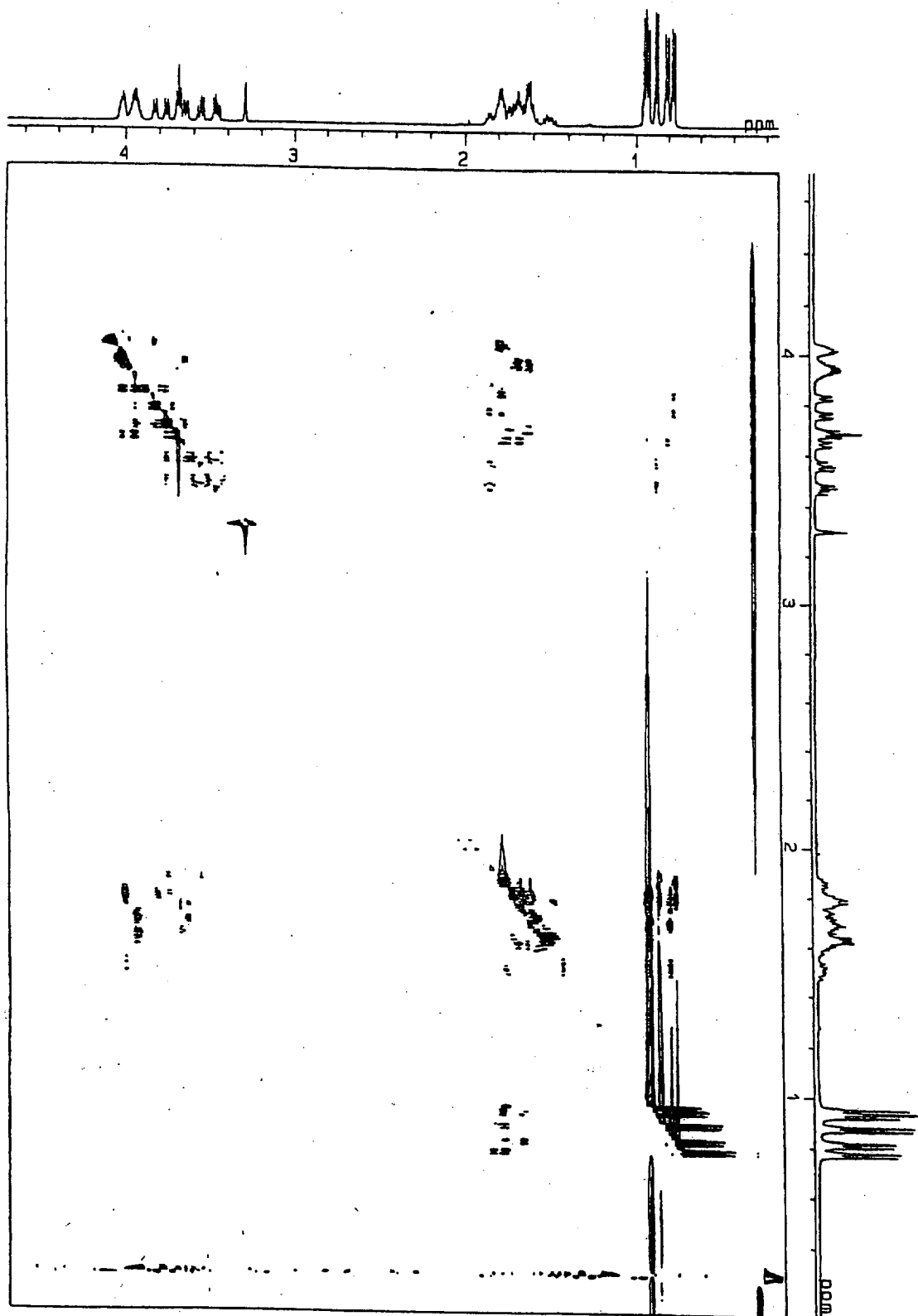
Partial HETLOC spectra and sliced PS-HMBC spectra of **3** used for measurements of ${}^2J_{\text{CH}}$ (6)



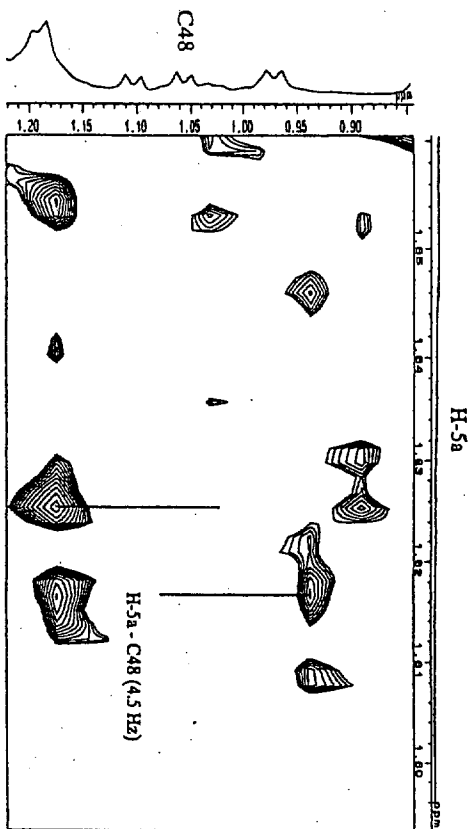
Partial HETLOC spectra and sliced PS-HMBC spectra of **3** used for measurements of ${}^2J_{\text{CH}}$ (7)



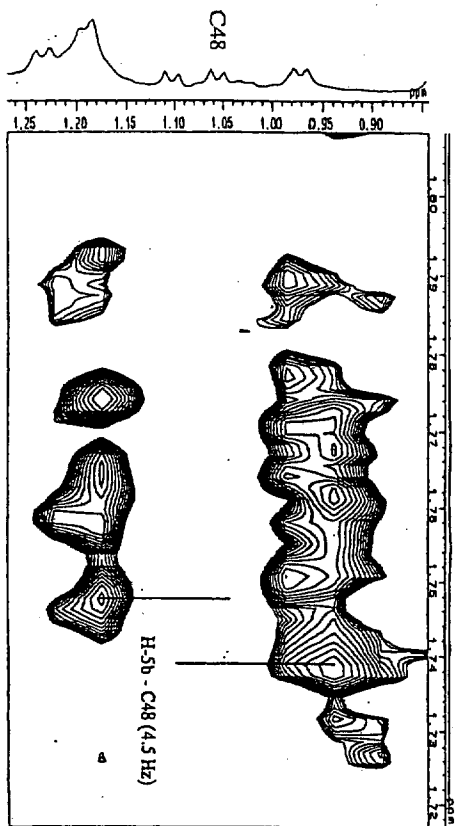
Partial HETLOC spectra of **3** used for measurements of ${}^2J_{CH}$ (**8**)



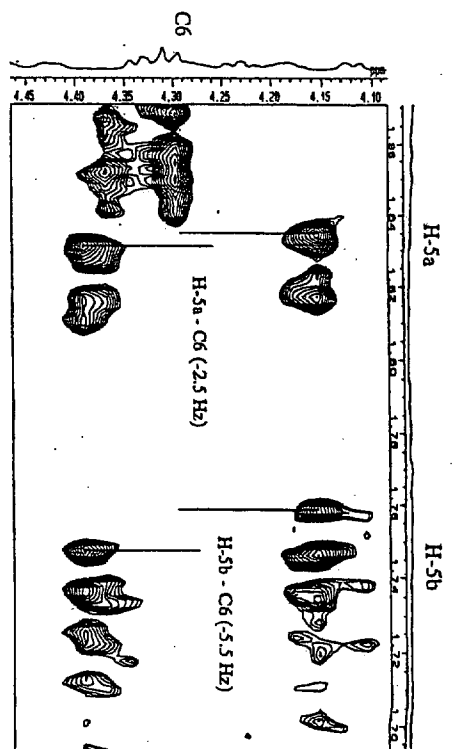
ROESY spectrum of **3** (500 MHz, CD₃OD)



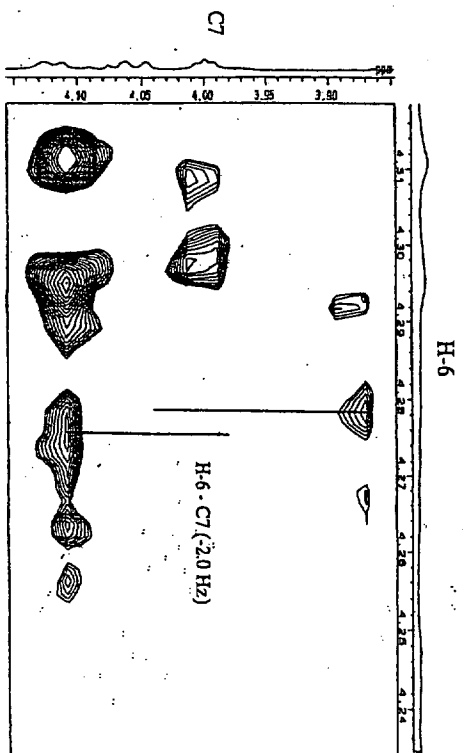
PHETLOC, mixing 30 ms, 600 MHz (G_D, N)



PHETLOC, mixing 30 ms, 600 MHz (G_D, N)

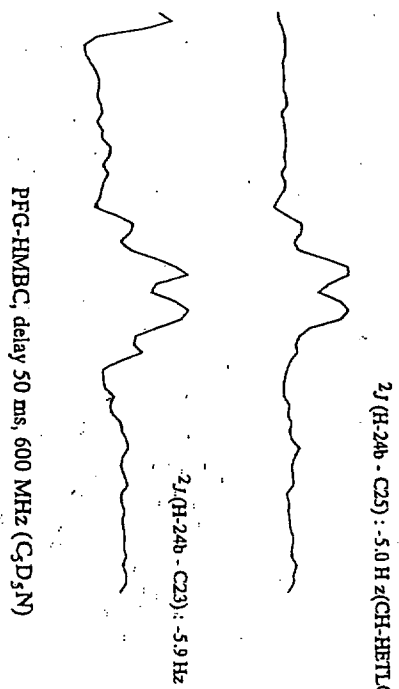
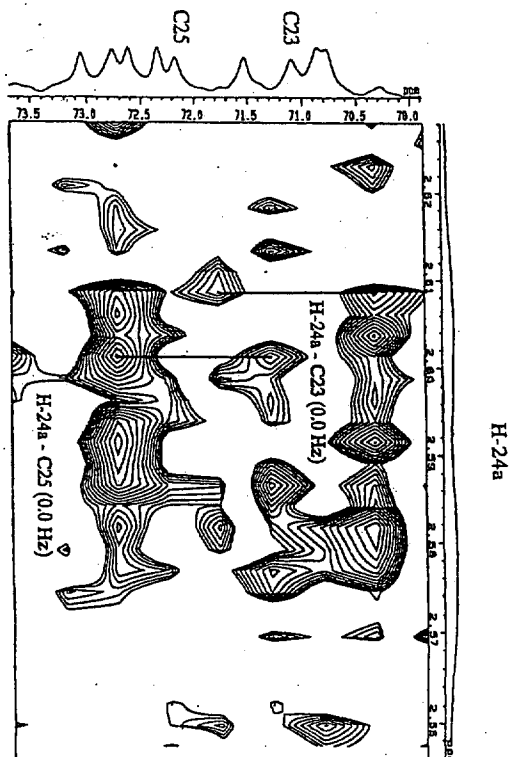
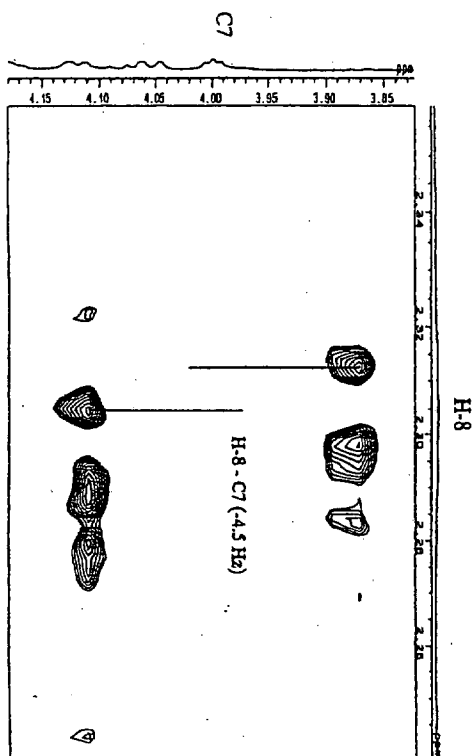
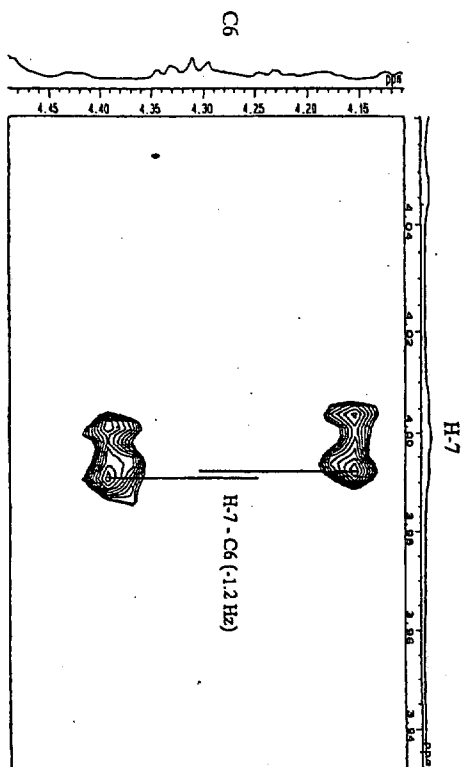


PHETLOC, mixing 30 ms, 600 MHz (G_D, N)

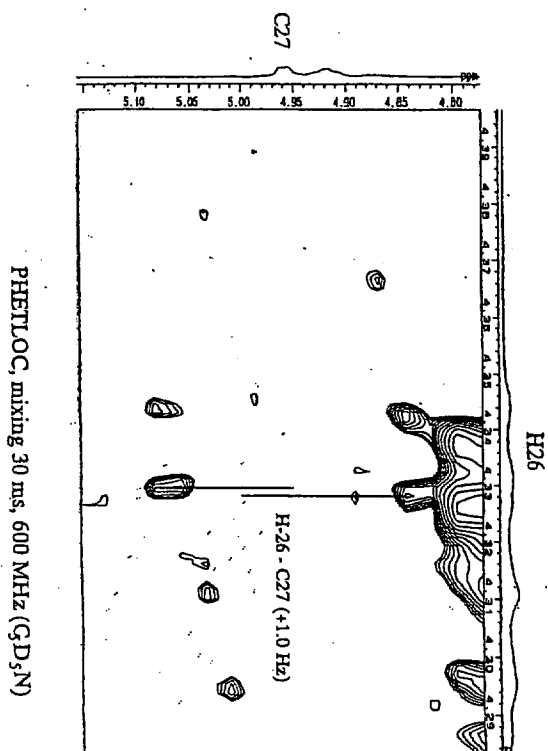
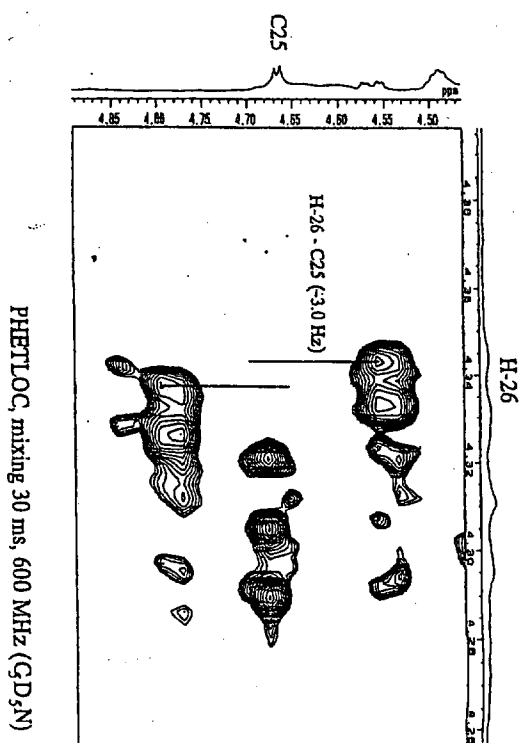
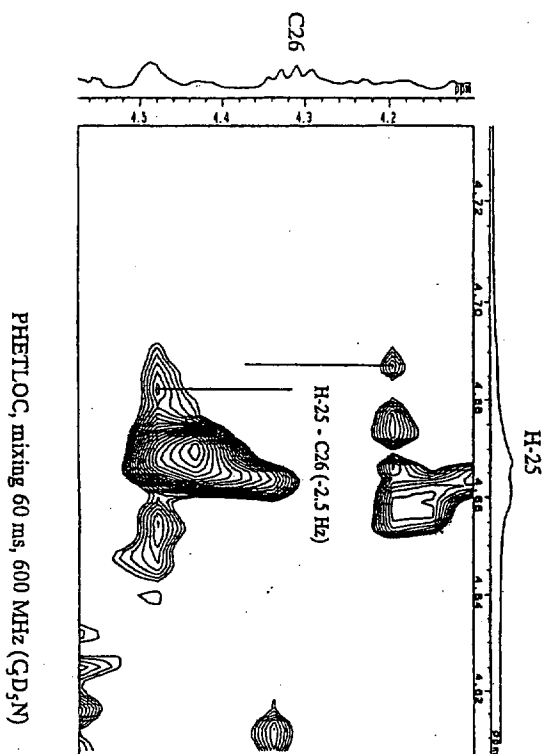
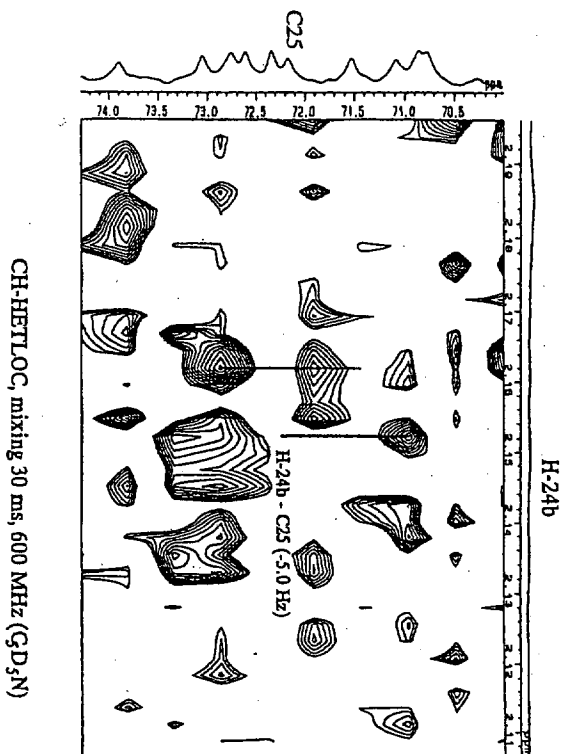


PHETLOC, mixing 30 ms, 600 MHz (G_D, N)

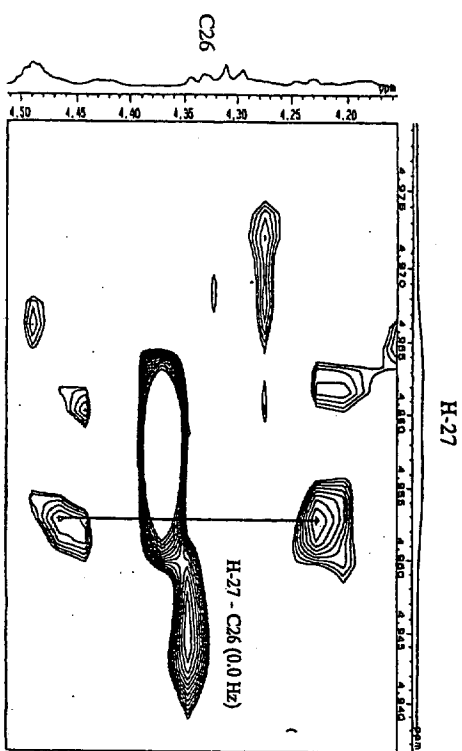
Partial HETLOC spectra of **7** used for measurements of ${}^{2,3}J_{CH}$ (1)



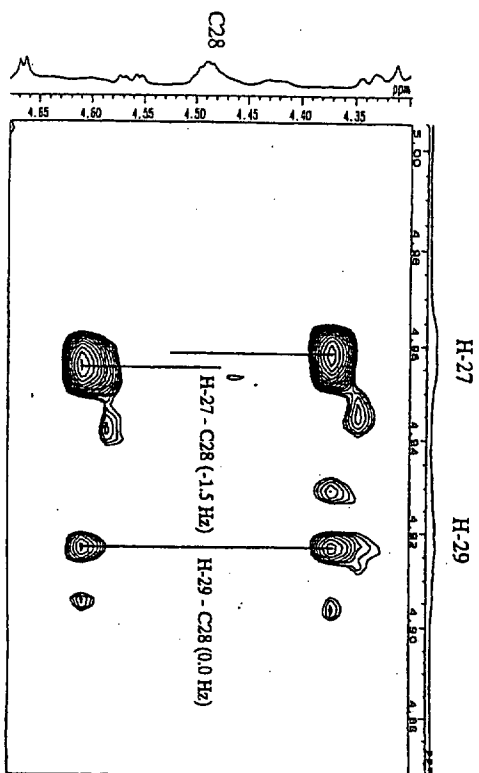
Partial HETLOC spectra and sliced PS-HMBC spectra of **7** used for measurements of $^2J_{C,H}$ (**2**)



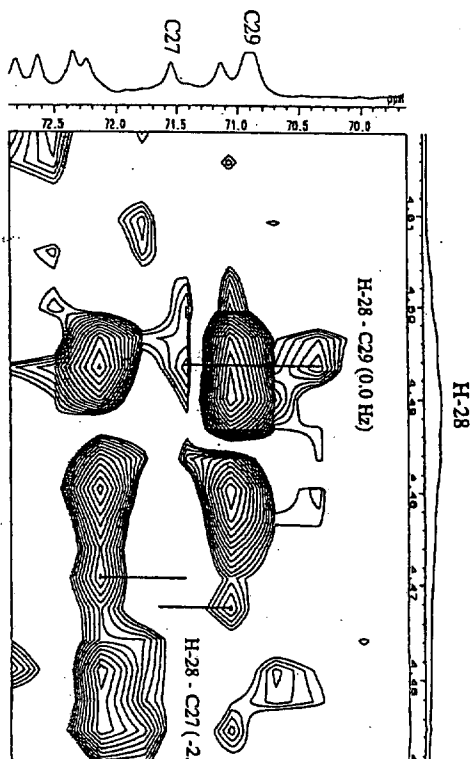
Partial HETLOC spectra of 7 used for measurements of $^{2,3}J_{CH}$ (3)



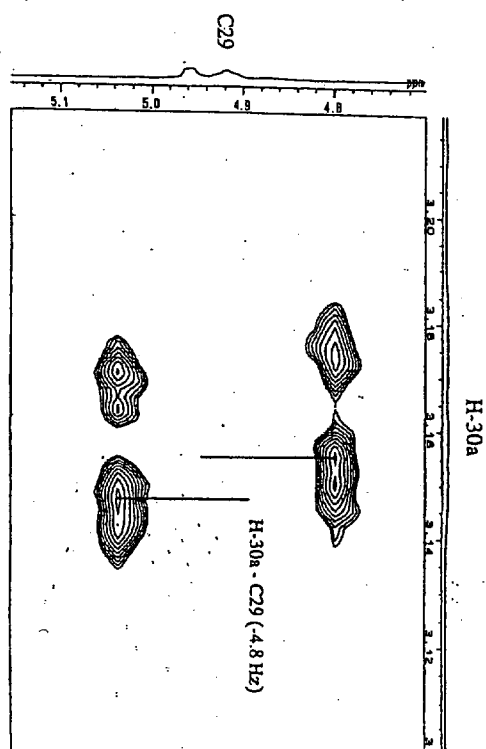
PHETLLOC, mixing 30 ms, 600 MHz (G_D,N)



PHETLLOC, mixing 30 ms, 600 MHz (G_D,N)

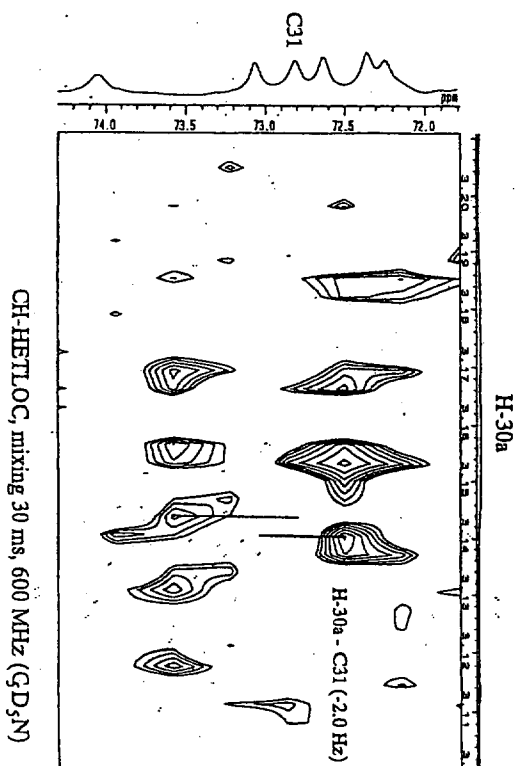
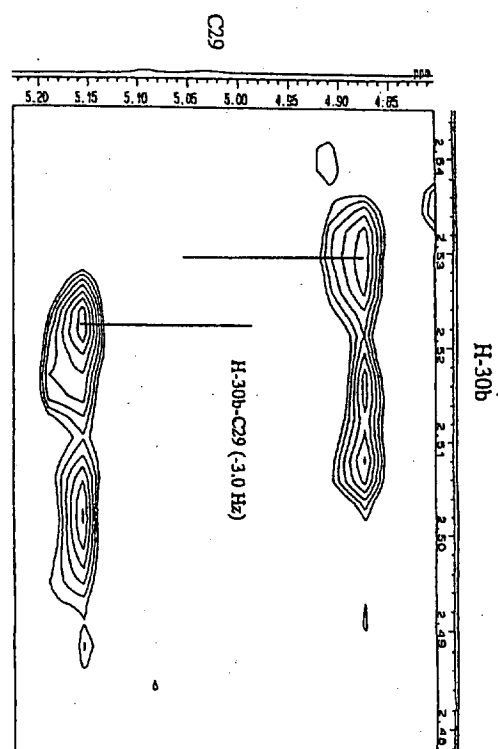
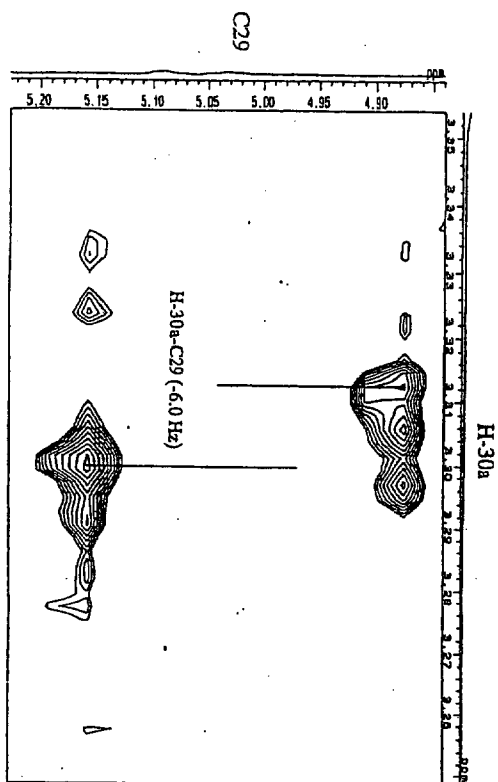
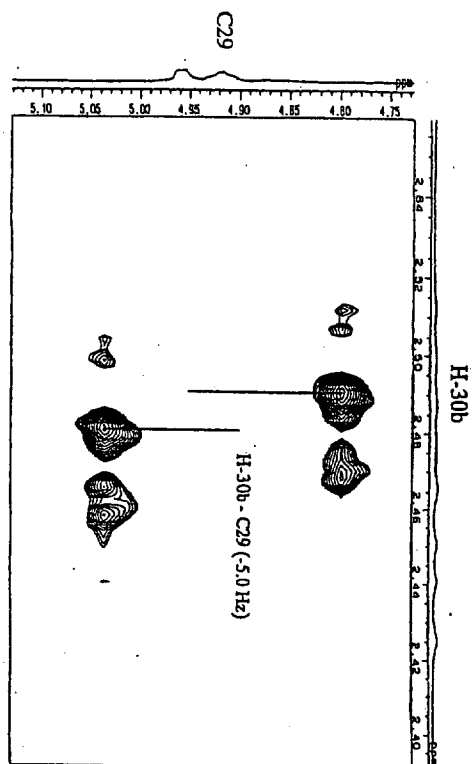


CH-HETLOC, mixing 30 ms, 600 MHz (G_D,N)

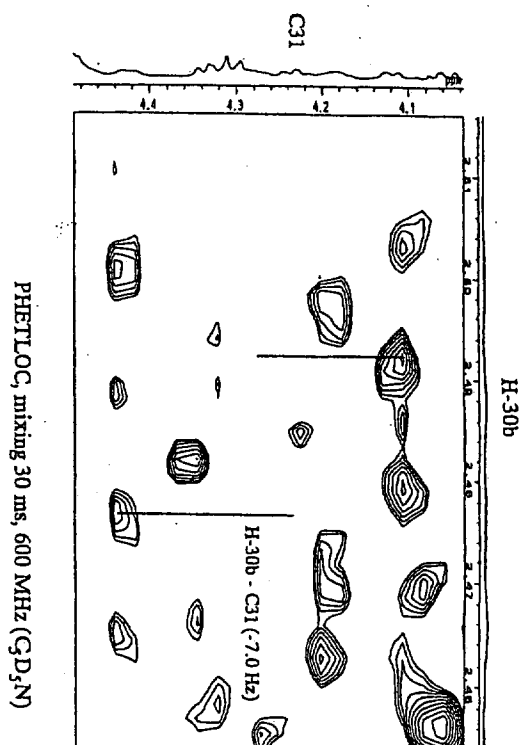


PHETLLOC, mixing 30 ms, 600 MHz (G_D,N)

Partial HETLOC spectra of **7** used for measurements of $^{2,3}J_{CH}$ (4)



Partial HETLOC spectra of **7** used for measurements of $^2,3J_{CH}$ (5)

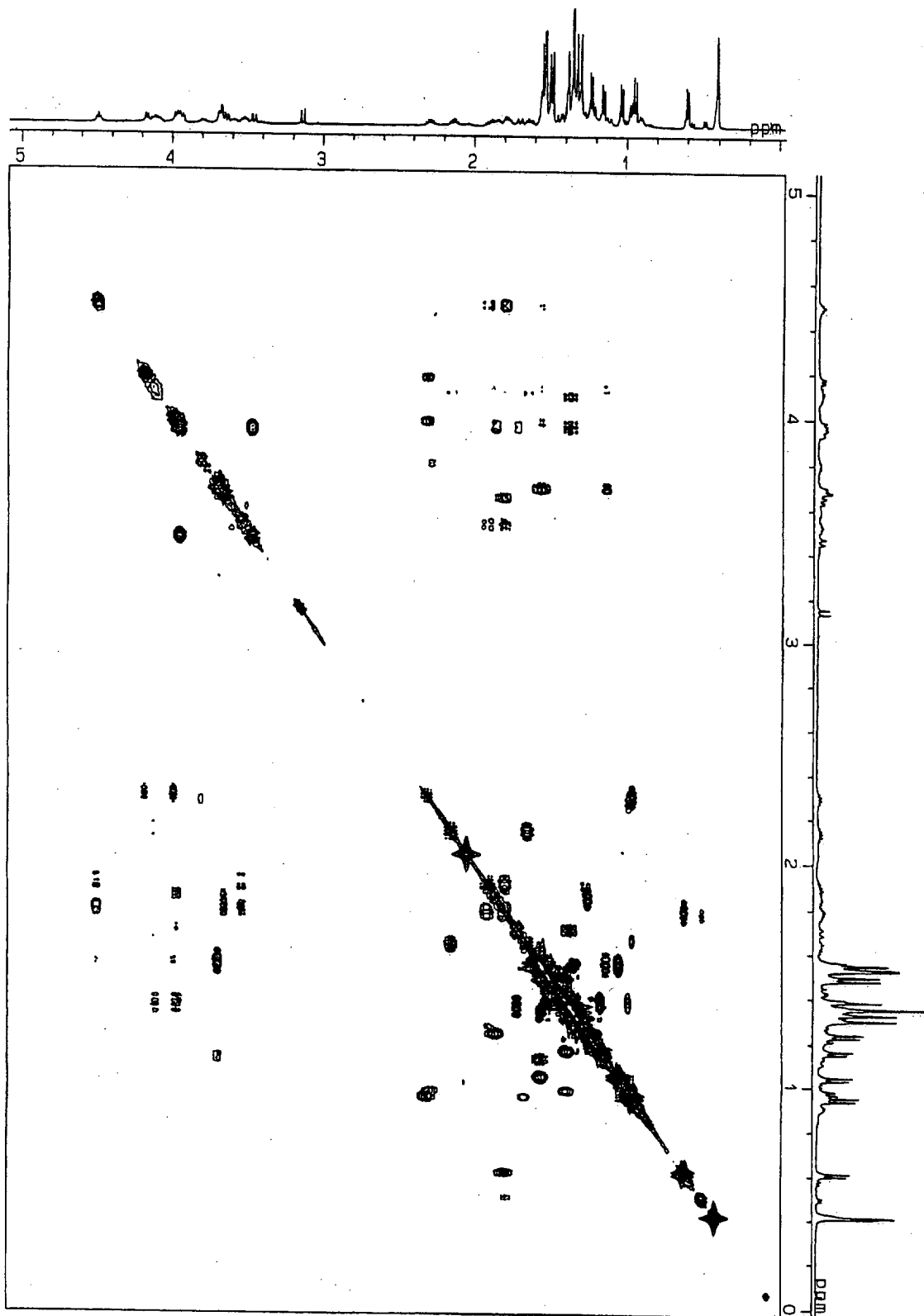


Partial HETLOC spectrum of 7 used for measurements of ${}^{2,3}J_{\text{C,H}}$ (6)

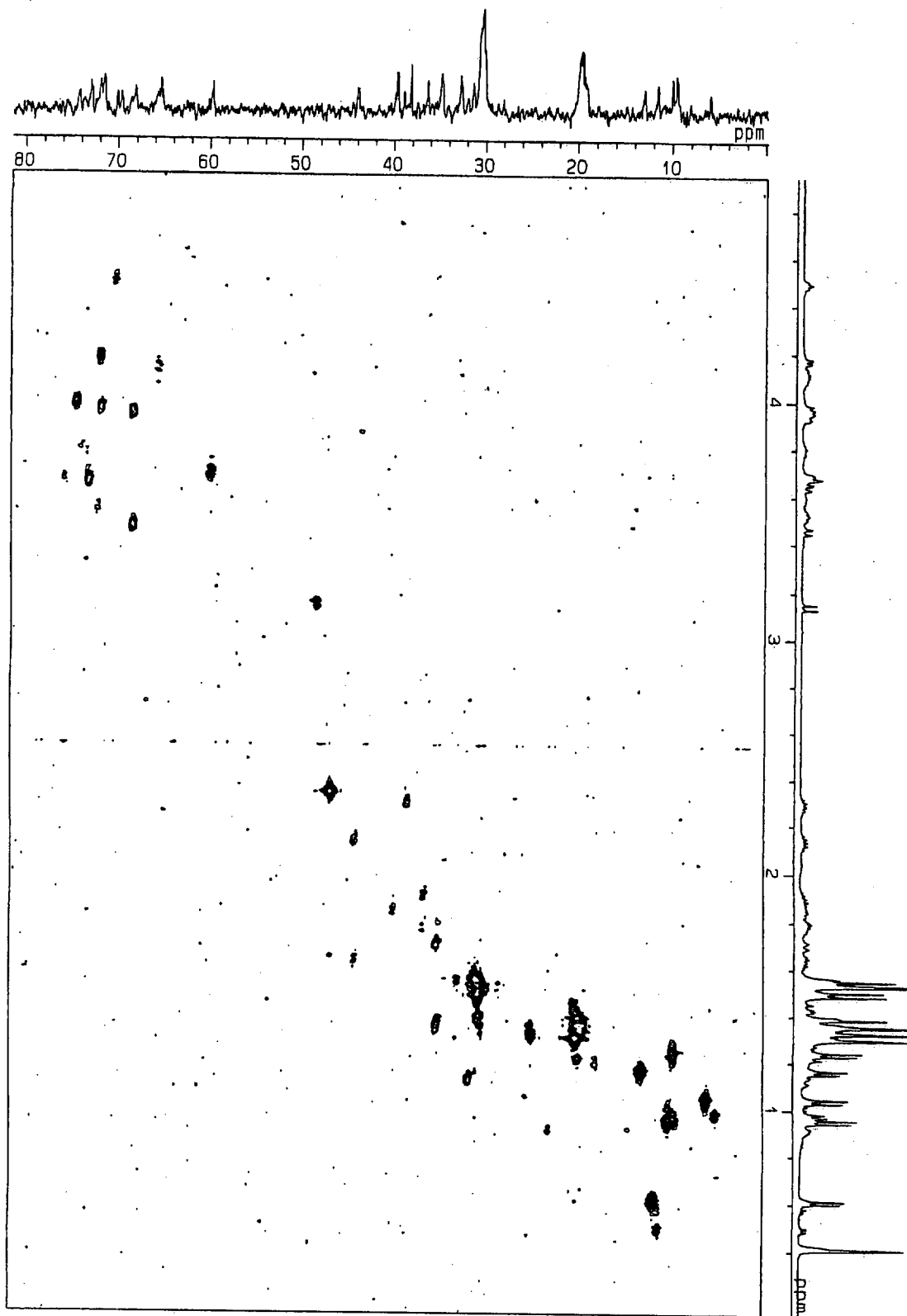


ROESY spectrum of 7 (500 MHz, C₃D₂N)

COSY spectrum of **13** (500 MHz, benzene- d_6)



FG-HMQC spectrum of **13** (500 MHz, benzene-*d*₆)



FG-HMBC spectrum of **13** (500 MHz, benzene-*d*₆)

