SUPPORTING INFORMATION

One-Pot Reductive Coupling of *N*-Acylcarbamates with Activated Alkenes: Application to the Asymmetric Synthesis of Pyrrolo[1,2-*a*]azepin-5-one Ring System and (–)-Xenovenine

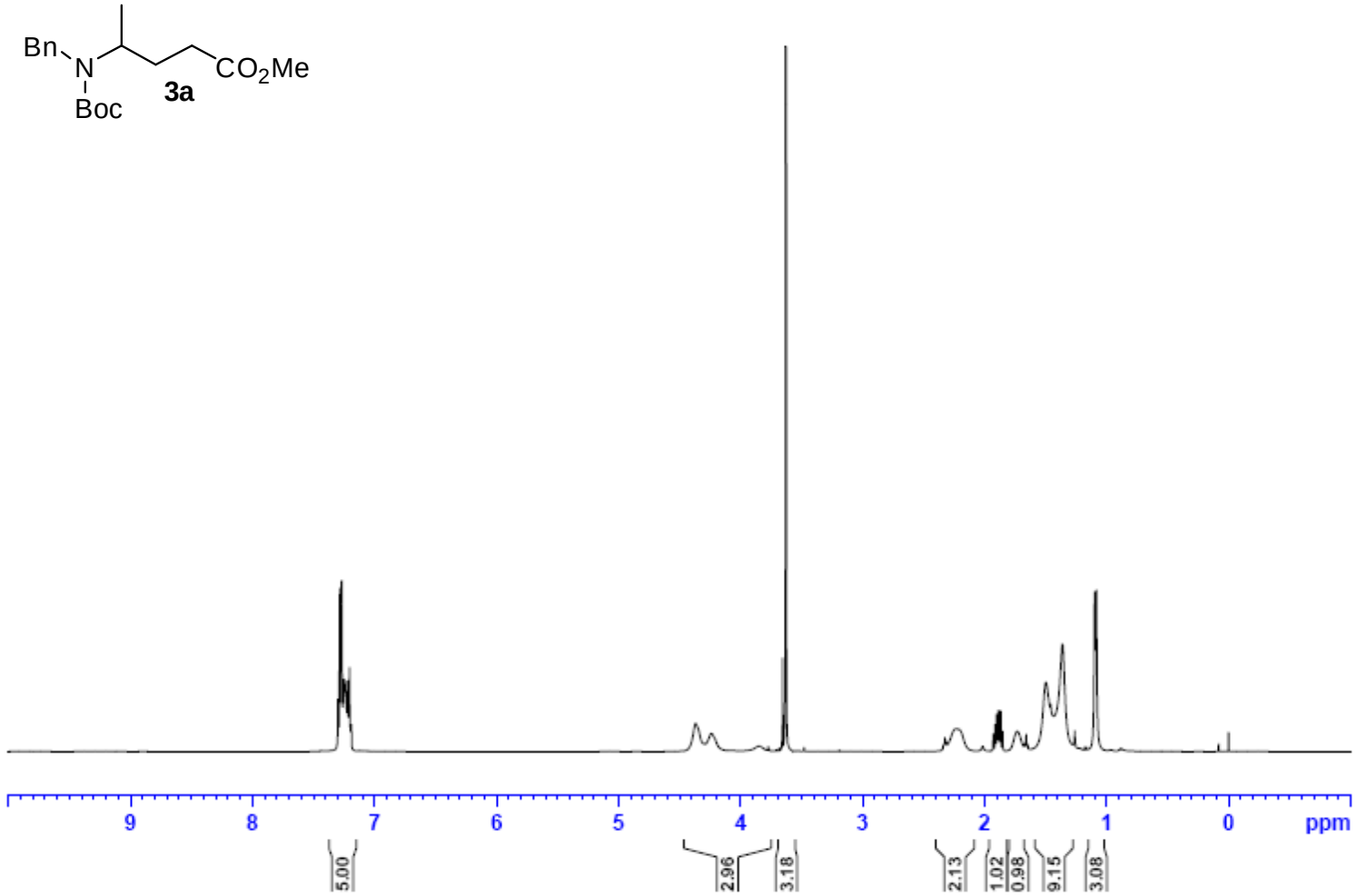
Xue-Kui Liu,[a] Xiao Zheng,[a] Yuan-Ping Ruan,[a] Jie Ma,[a] and Pei-Qiang Huang*[a, b]

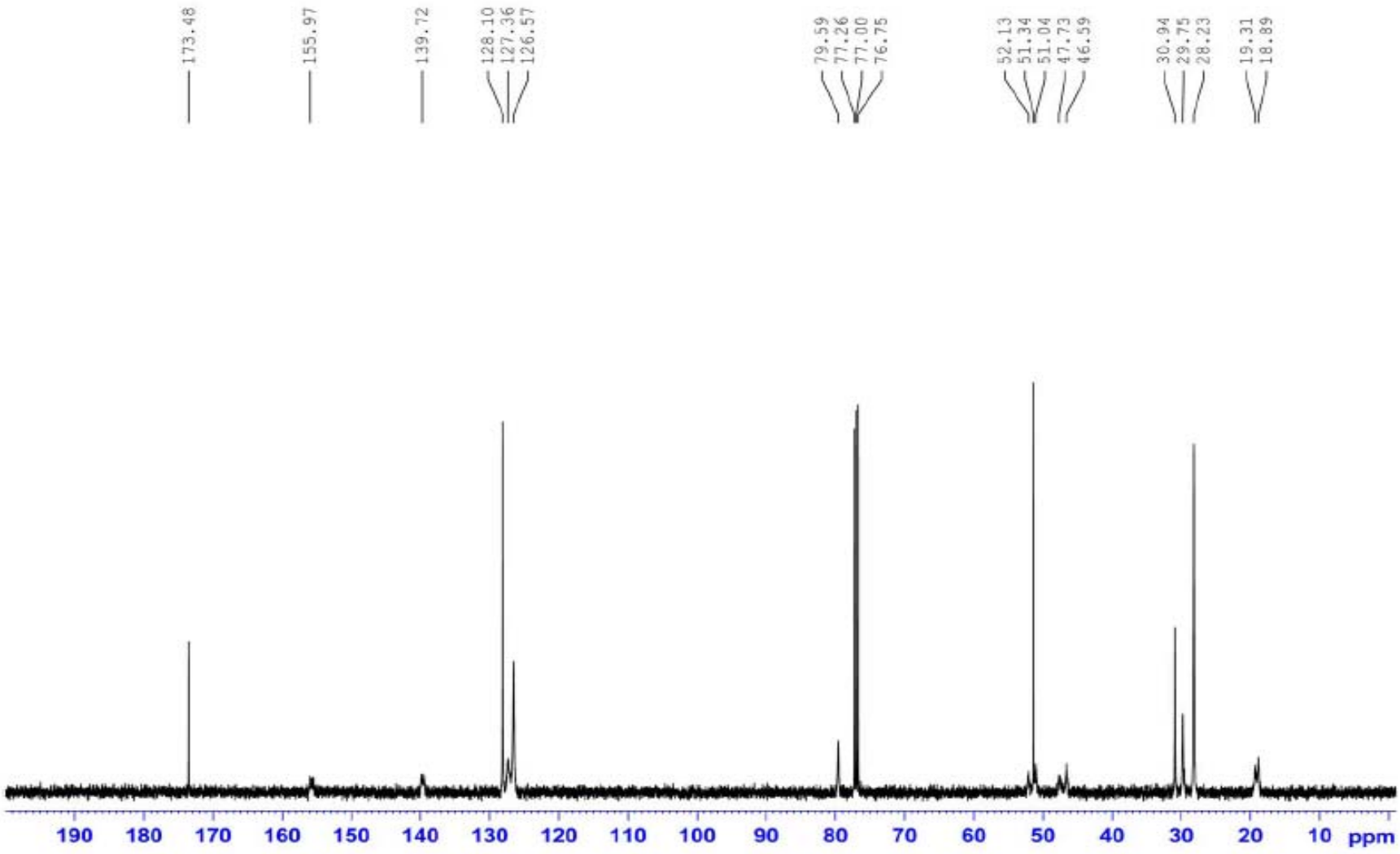
[a] *Department of Chemistry and The Key Laboratory for Chemical Biology of Fujian Province, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, Fujian 361005, P. R. China;* [b] *The State Key Laboratory of Elemento-Organic Chemistry, Nankai University, Tianjin 300071, P. R. China*

E-mail: pqhuang@xmu.edu.cn

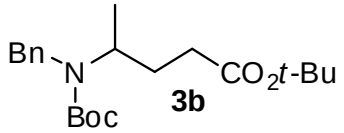
Contents

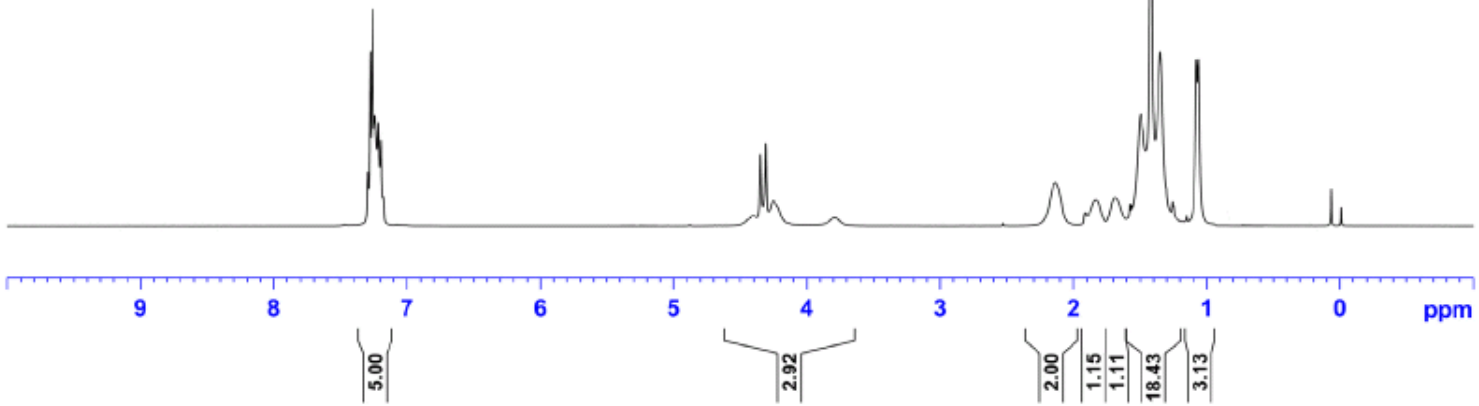
^{1}H NMR and ^{13}C NMR data of compound **3a**:

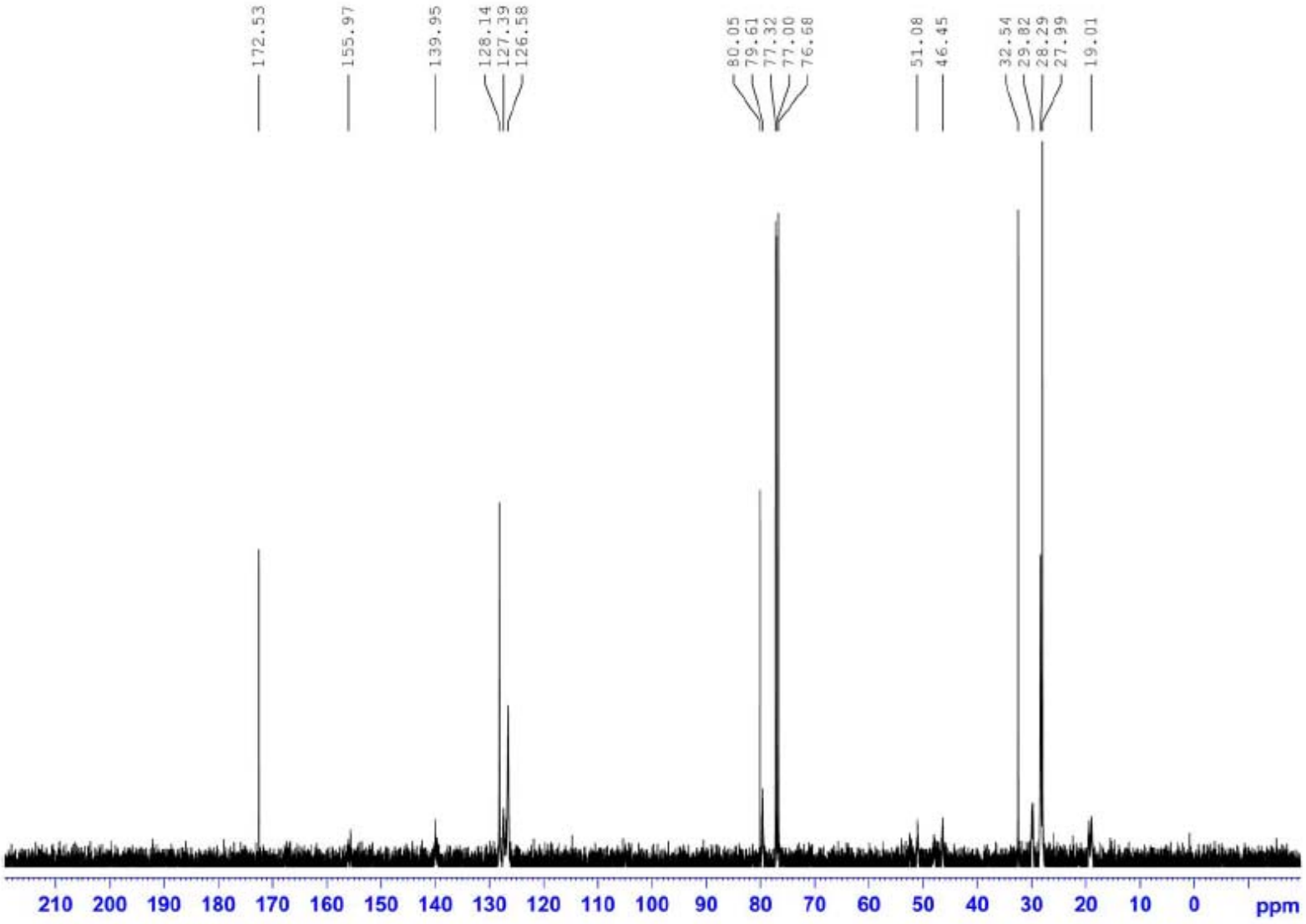




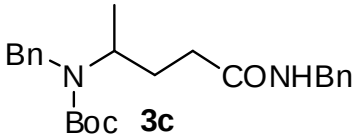
^{1}H NMR and ^{13}C NMR data of compound **3b**:

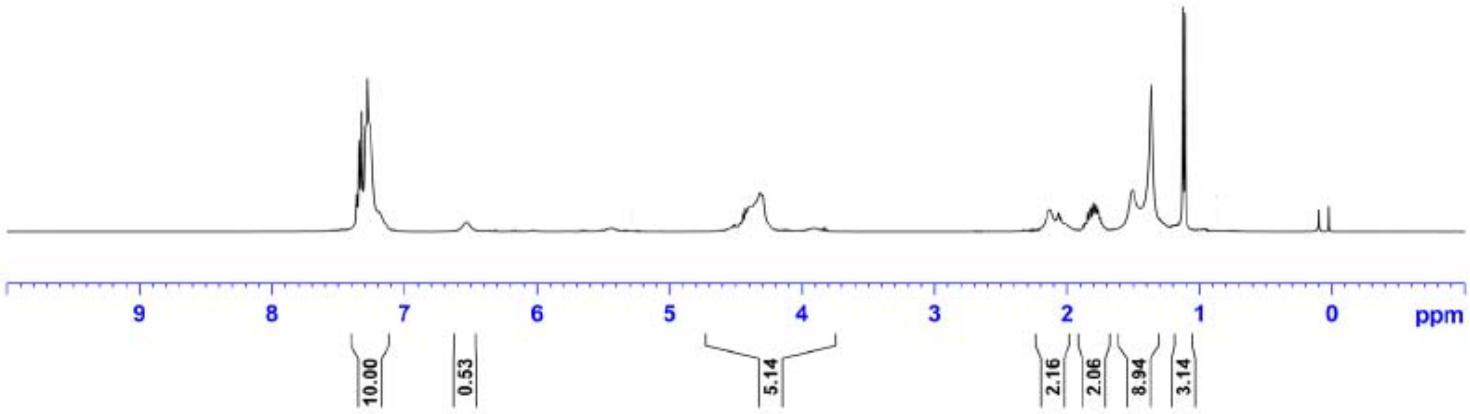


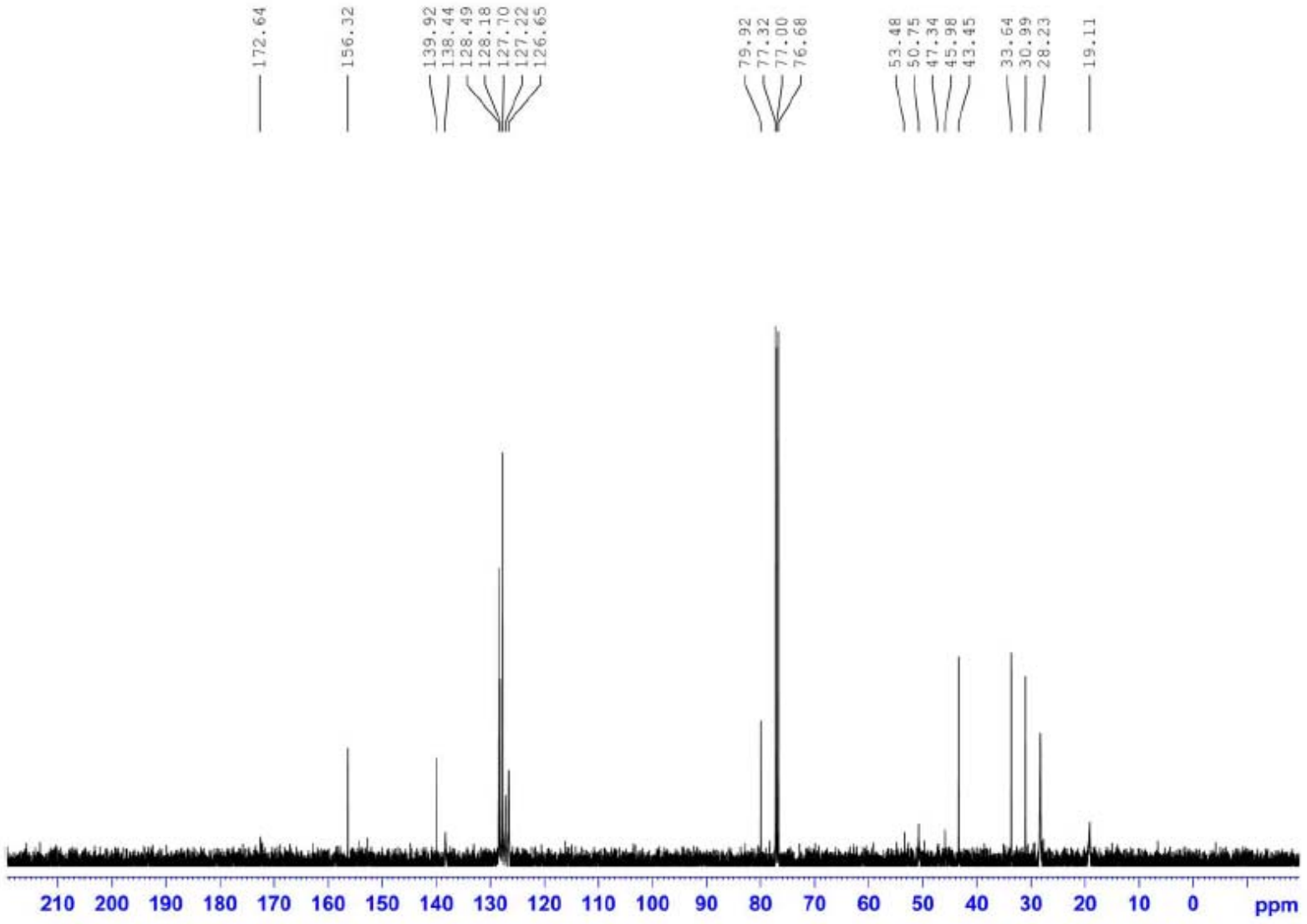




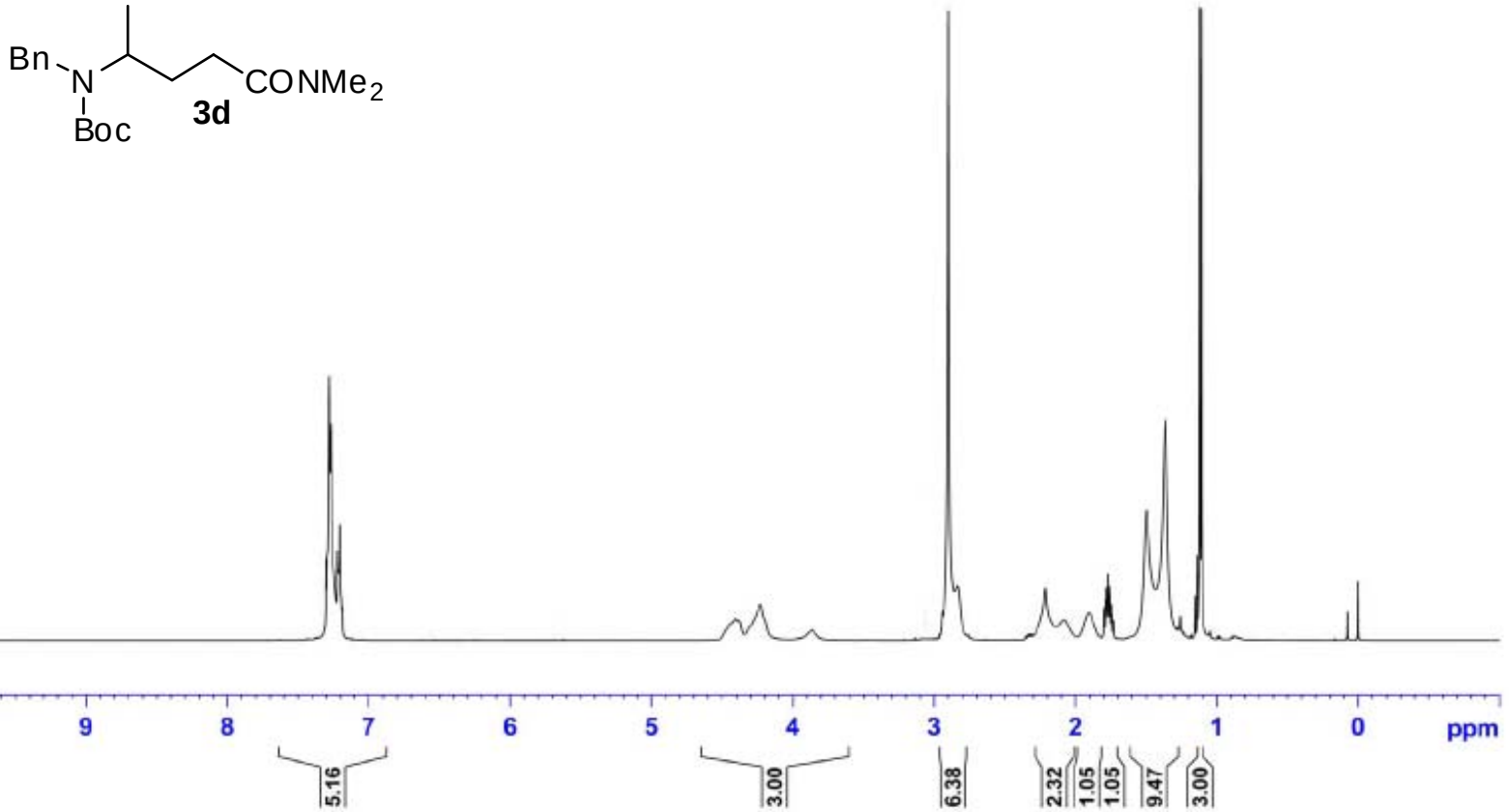
^{1}H NMR and ^{13}C NMR data of compound **3c**:

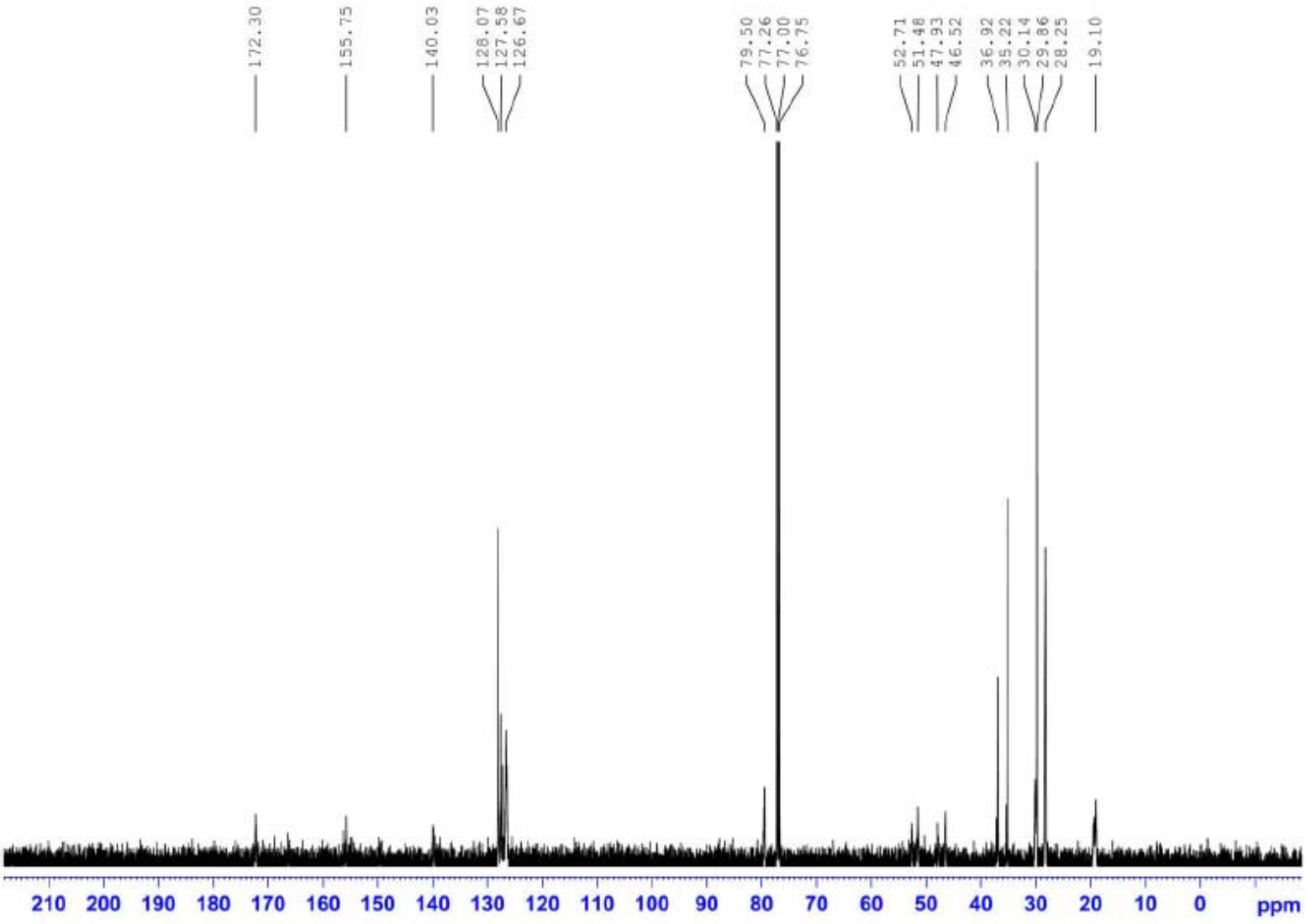




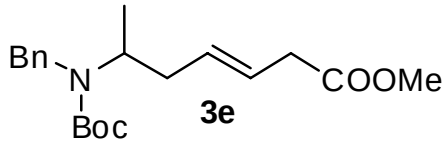


^{1}H NMR and ^{13}C NMR data of compound **3d**:



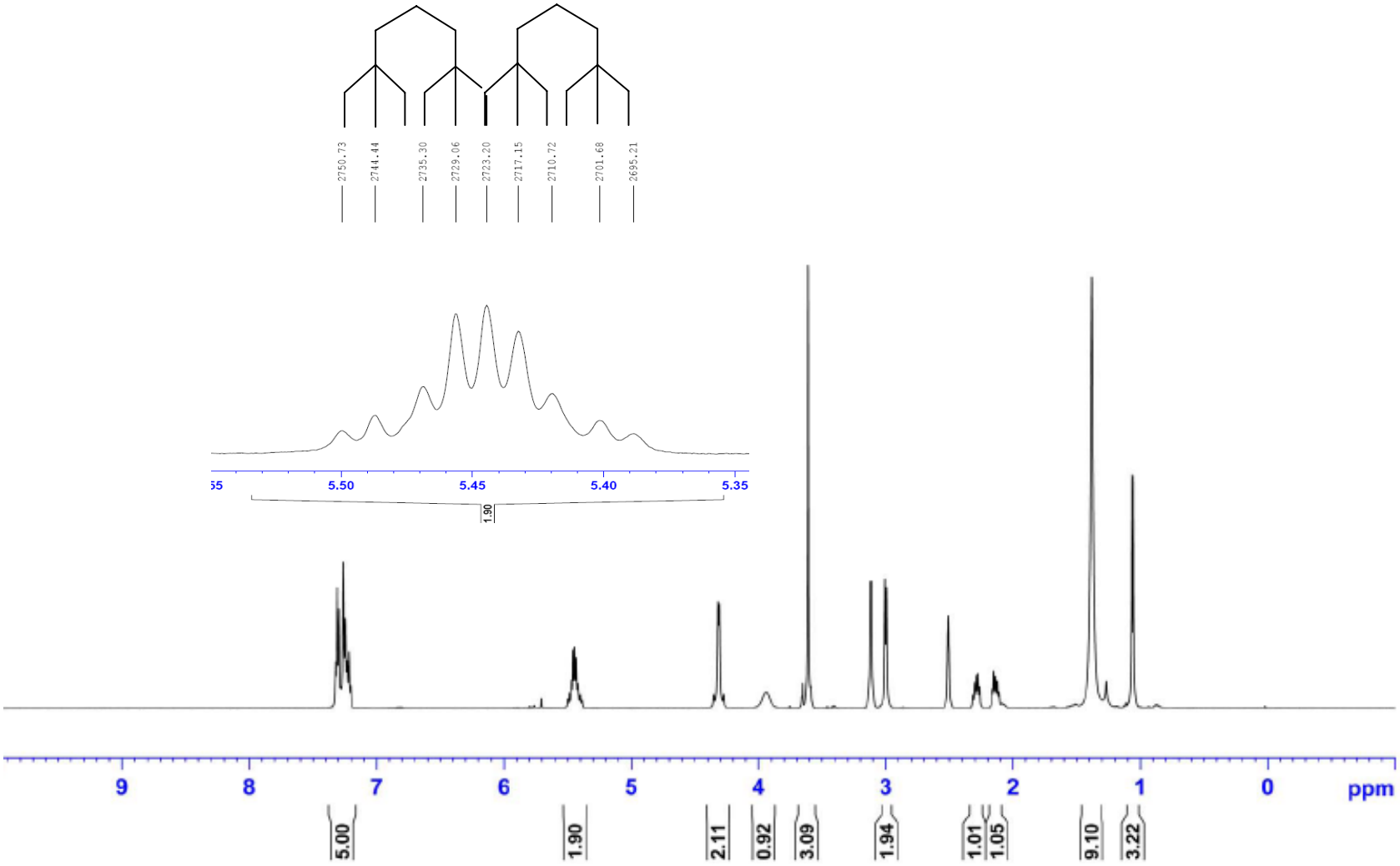


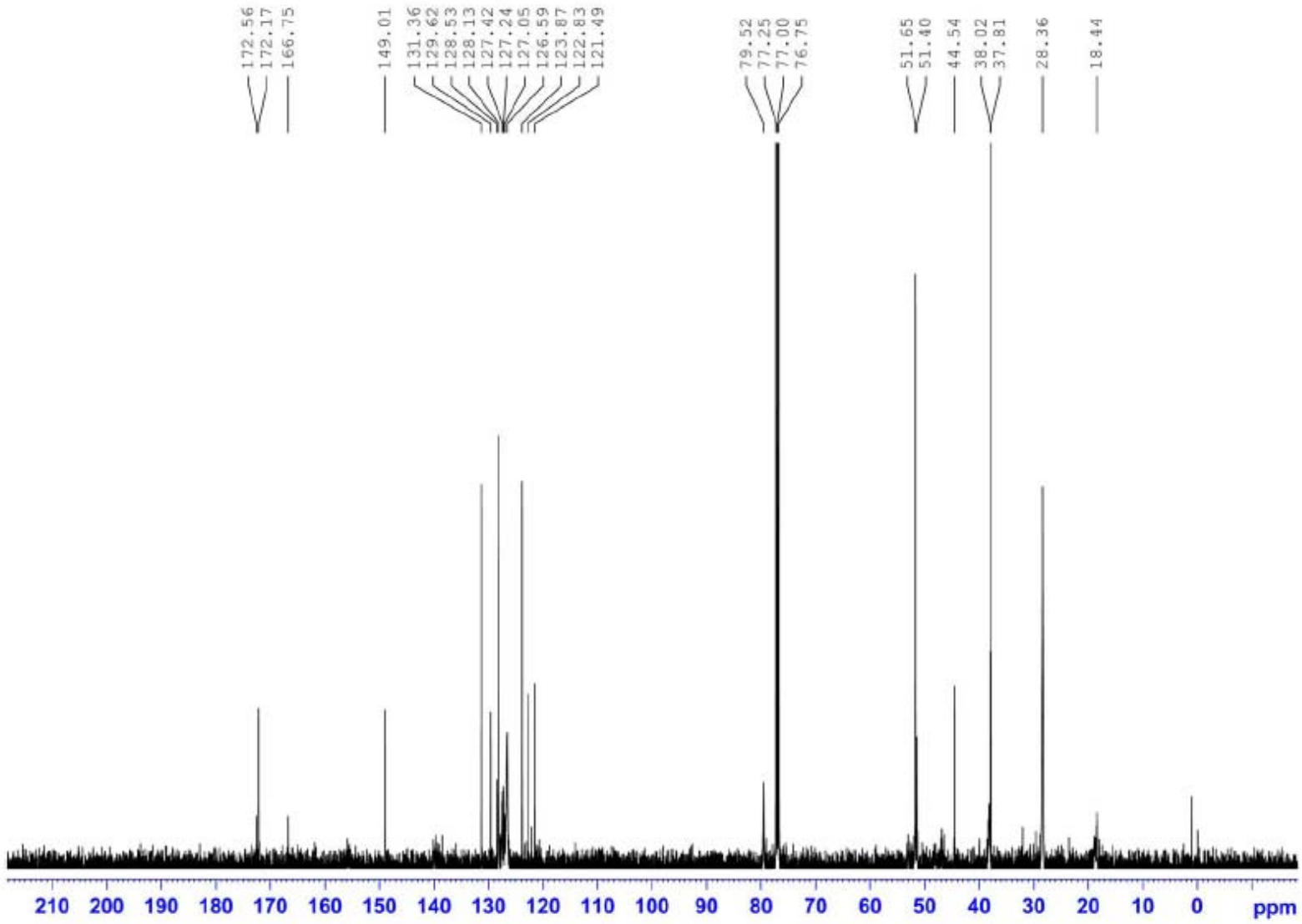
^{1}H NMR, VT ^{1}H NMR and ^{13}C NMR data of compound **3e**:



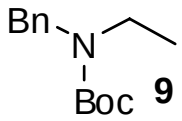
3e

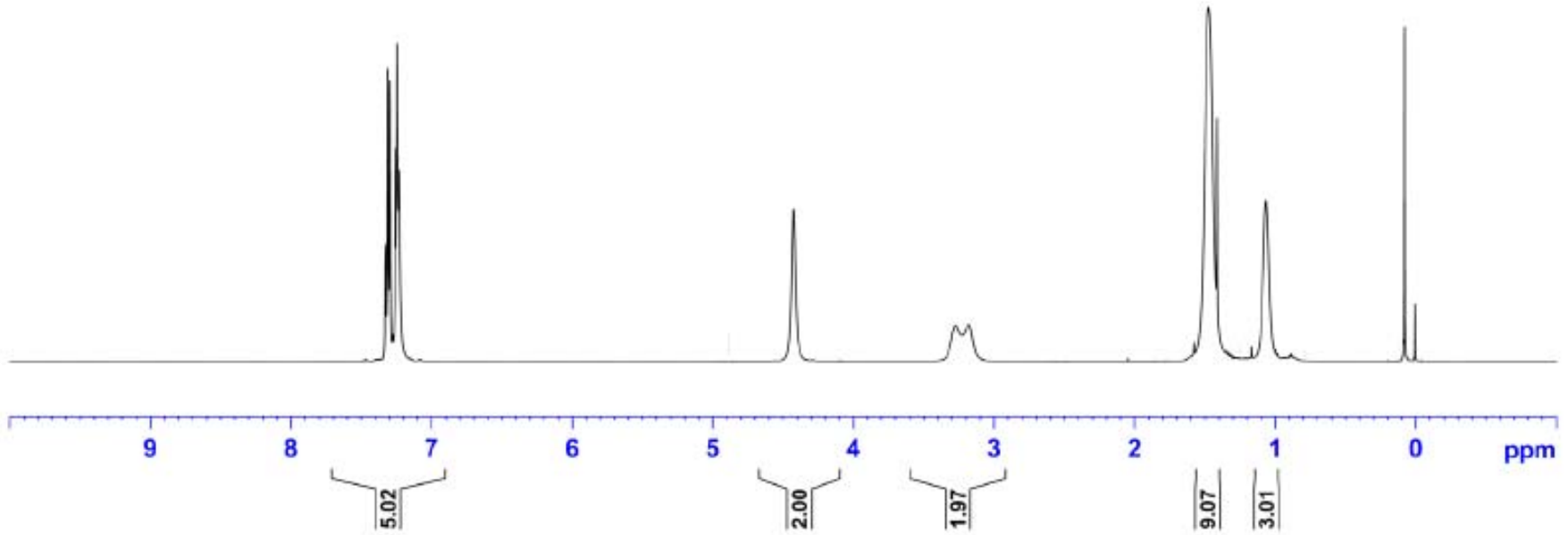
DMSO-d6, 343K

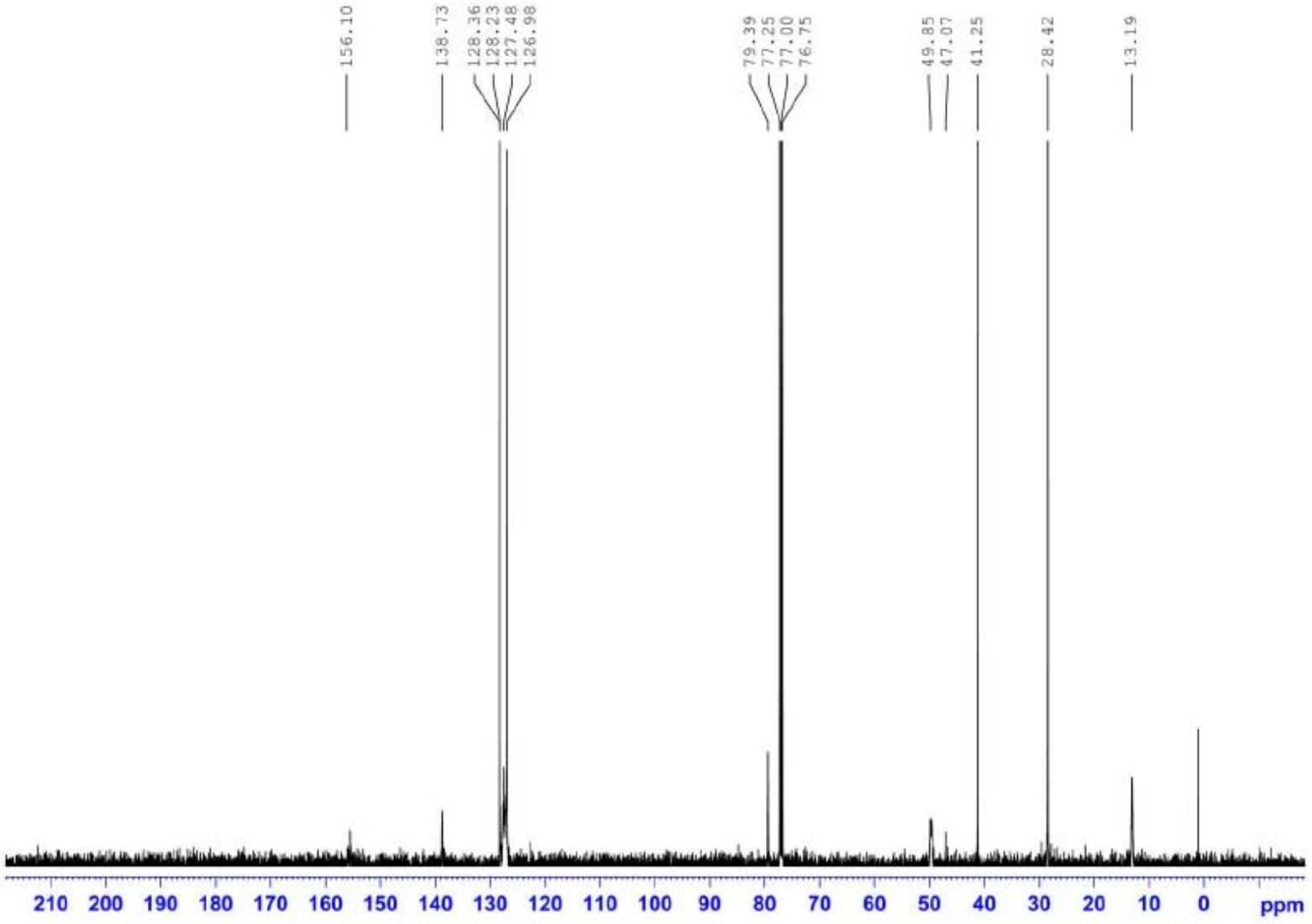

2750.73
2744.44
2735.30
2729.06
2723.20
2717.15
2710.72
2701.68
2695.21
5.50
5.45
5.40
5.35
1.90
9
8
7
6
5
4
3
2
1
0
ppm
5.00
1.90
2.11
0.92
3.09
1.94
1.01
1.05
9.10
3.22



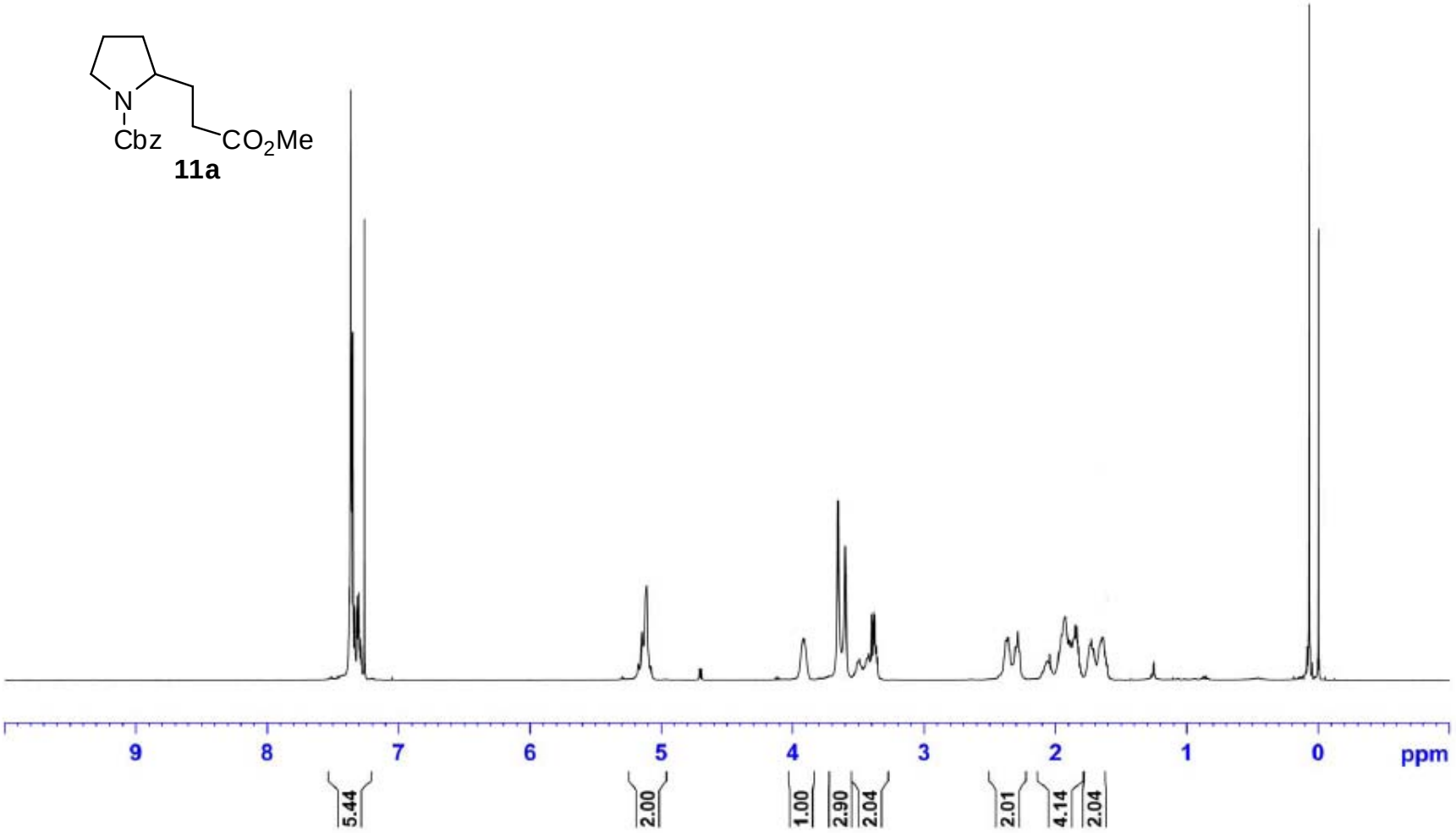
^{1}H NMR and ^{13}C NMR data of compound **9**:

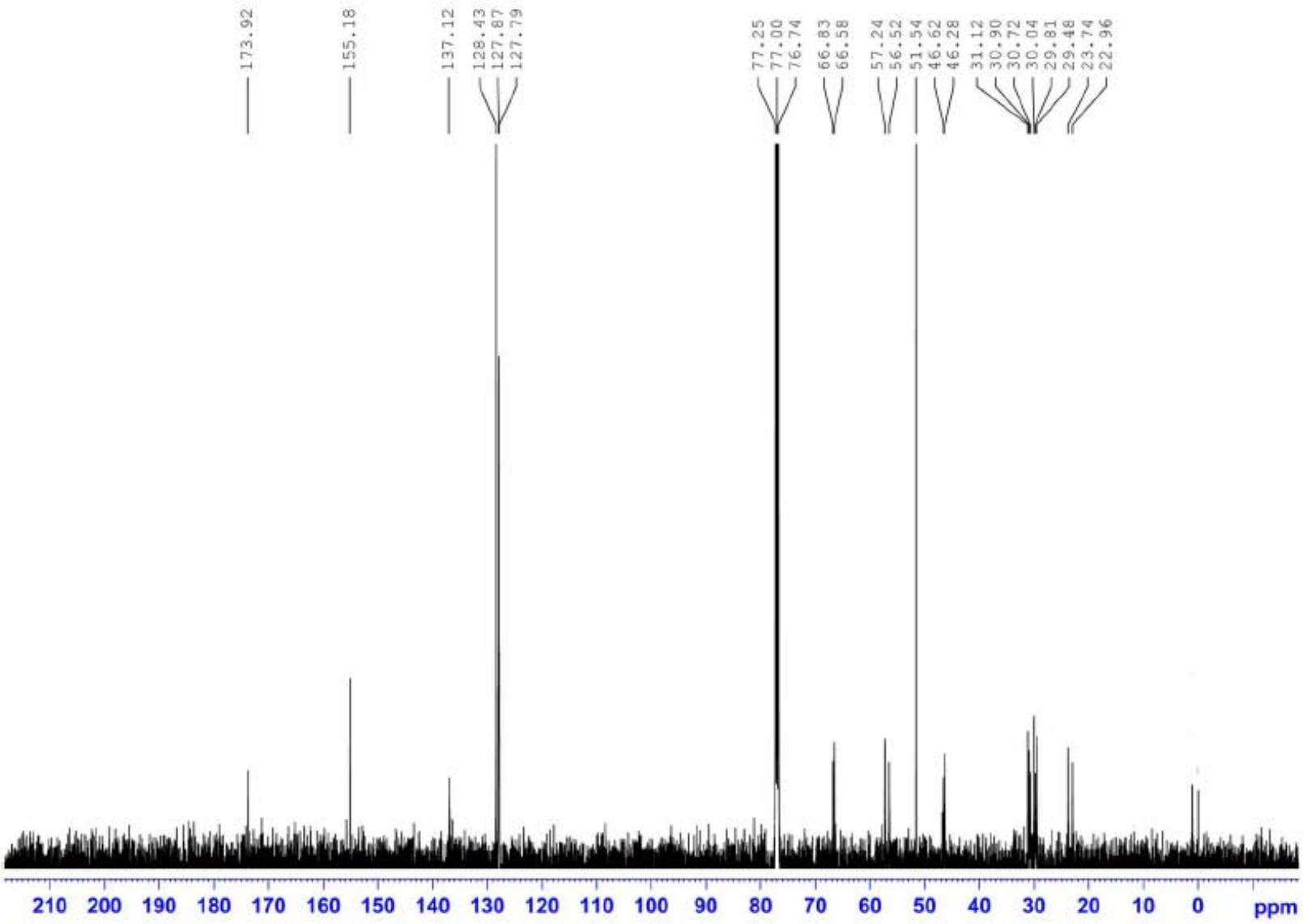




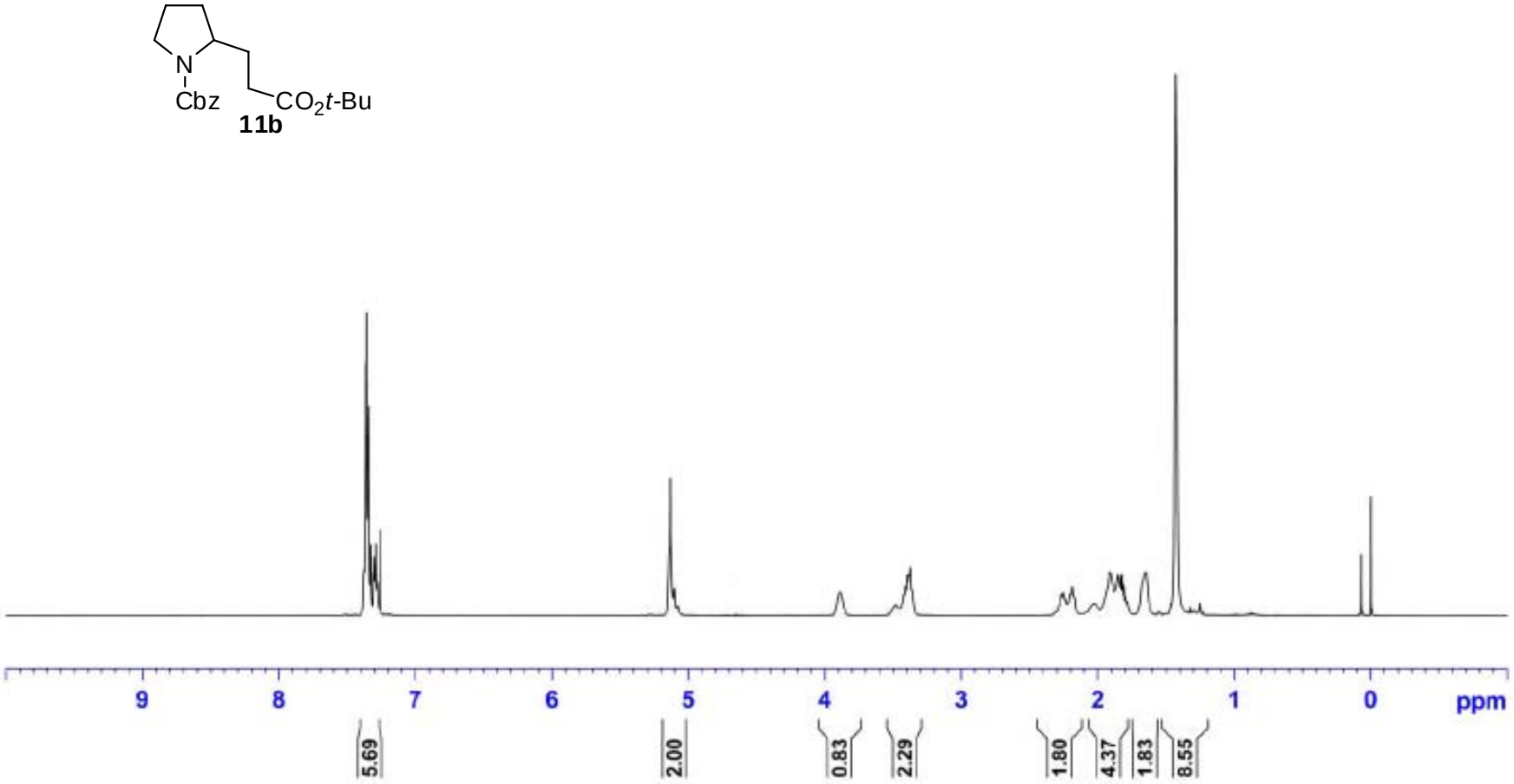


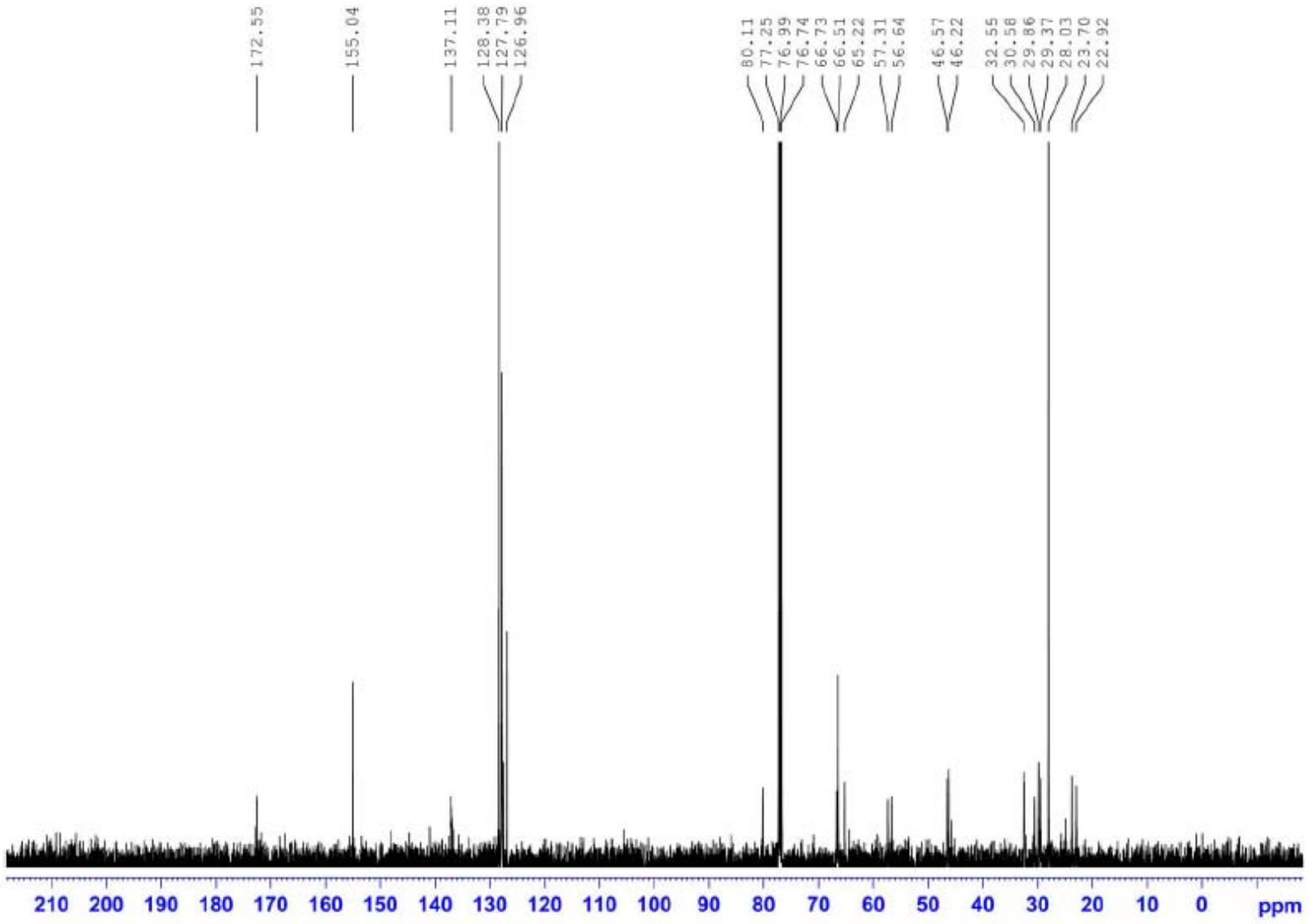
^{1}H NMR and ^{13}C NMR data of compound **11a**:



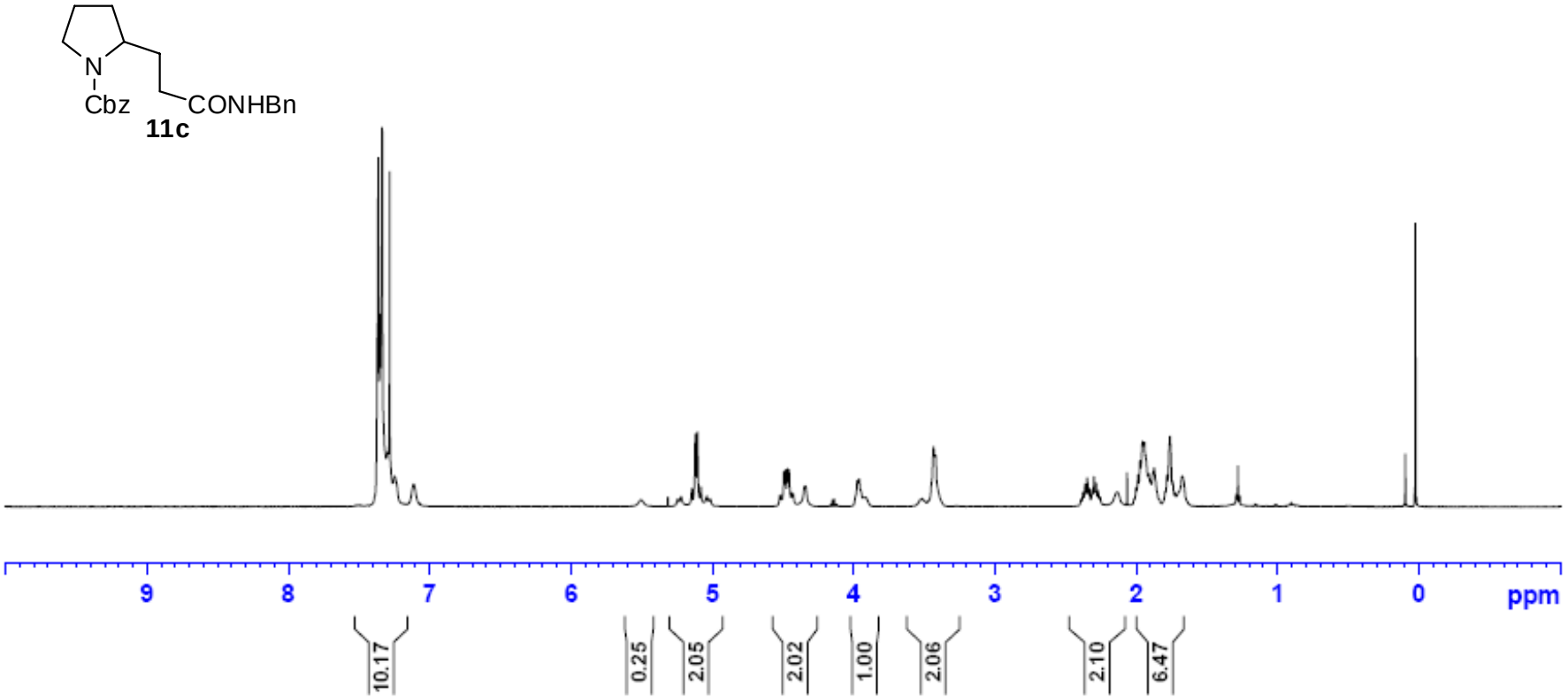


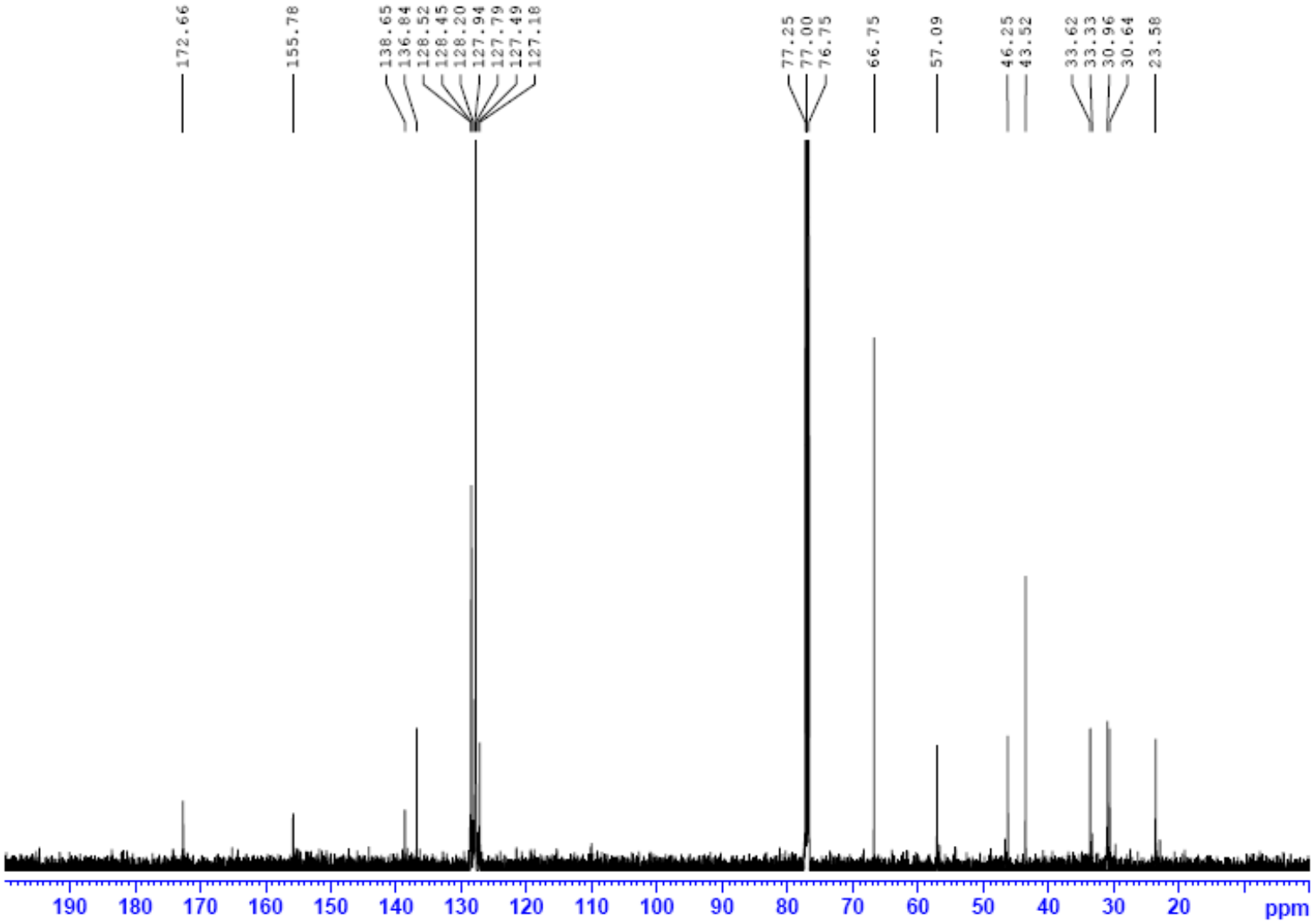
^{1}H NMR and ^{13}C NMR data of compound **11b**:



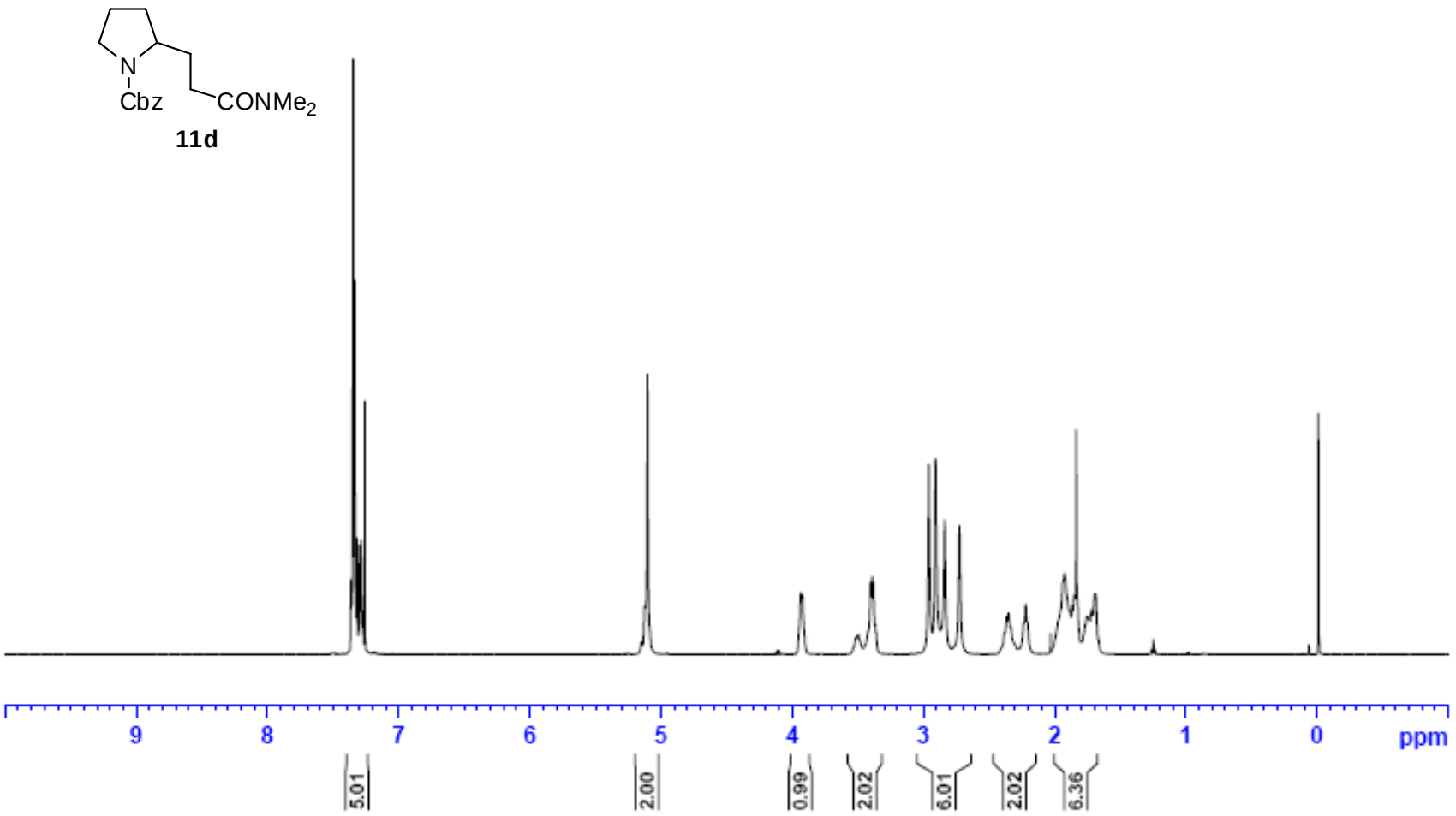


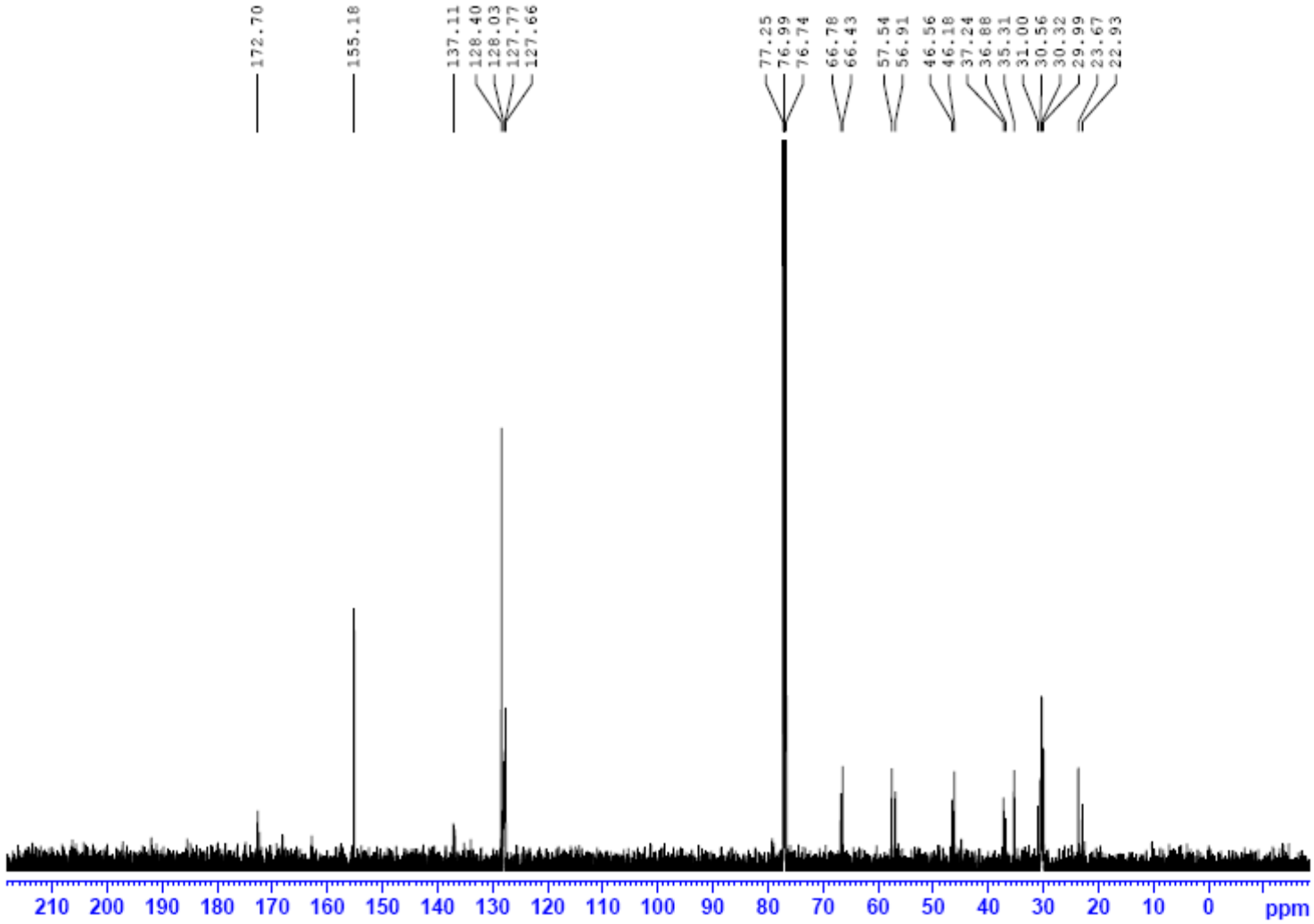
^{1}H NMR and ^{13}C NMR data of compound **11c**:



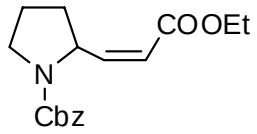


^{1}H NMR and ^{13}C NMR data of compound **11d**:

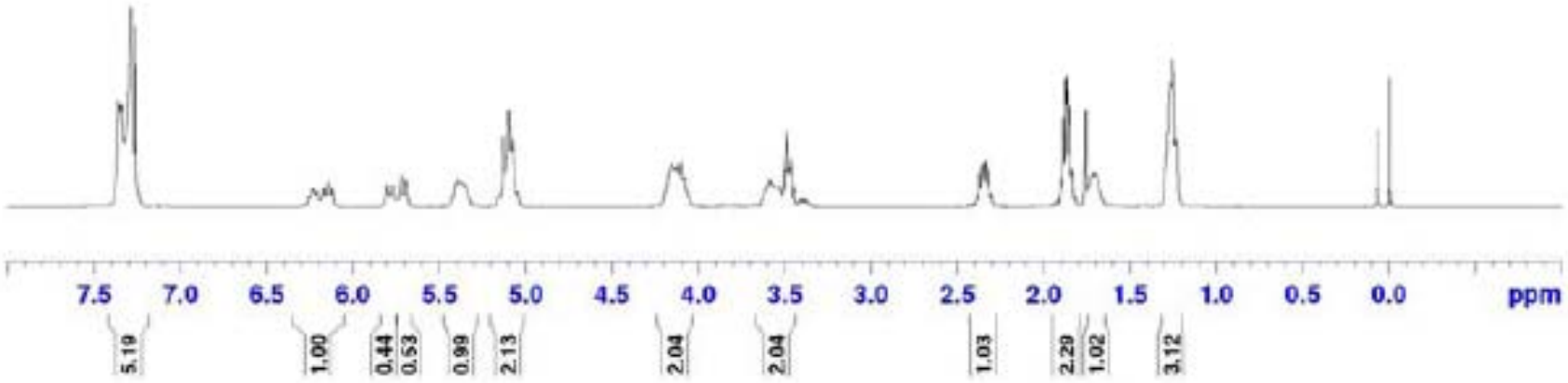


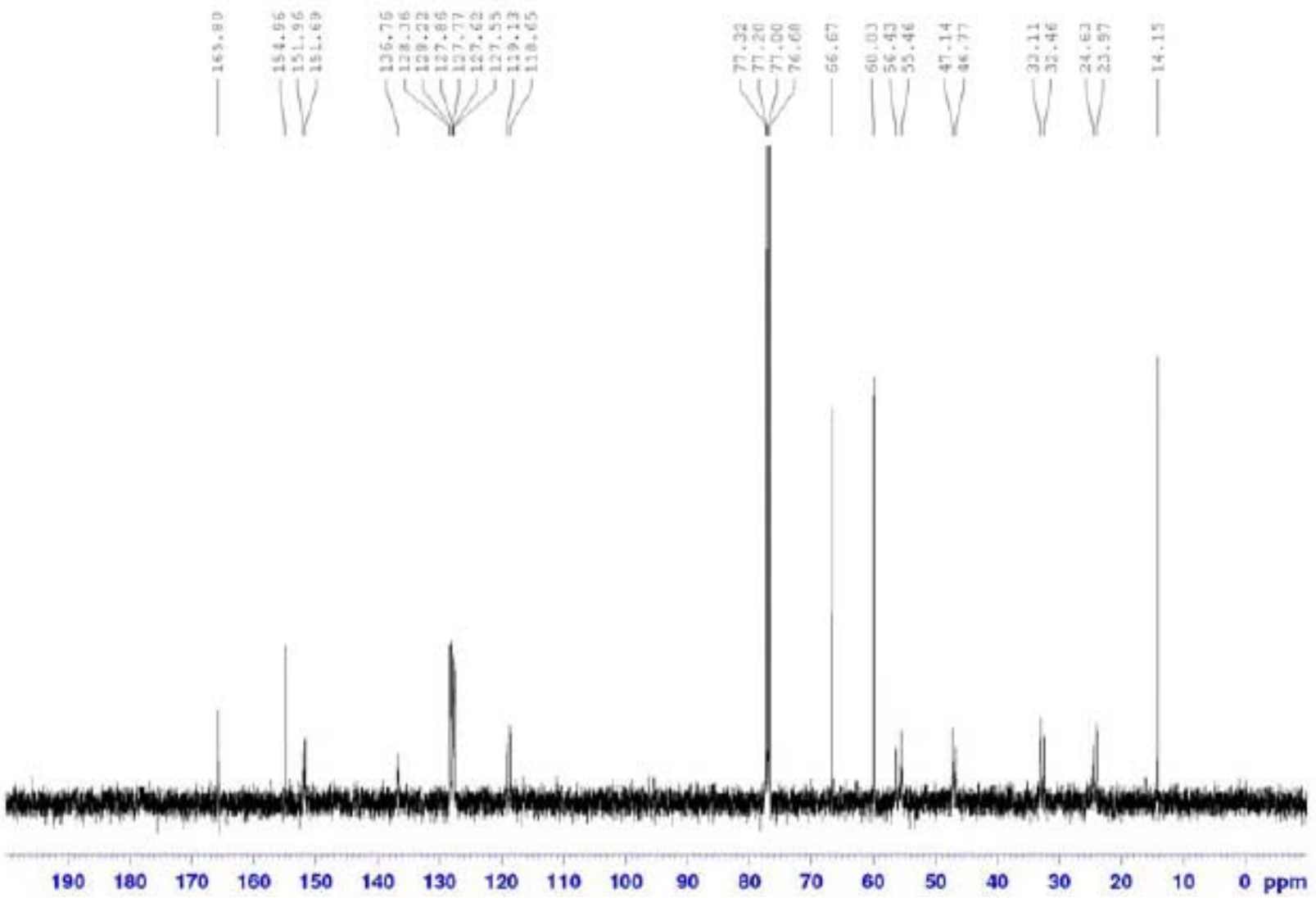


^{1}H NMR and ^{13}C NMR data of compound ***Z*-11e**:

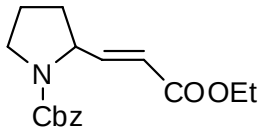


***Z*-11e**

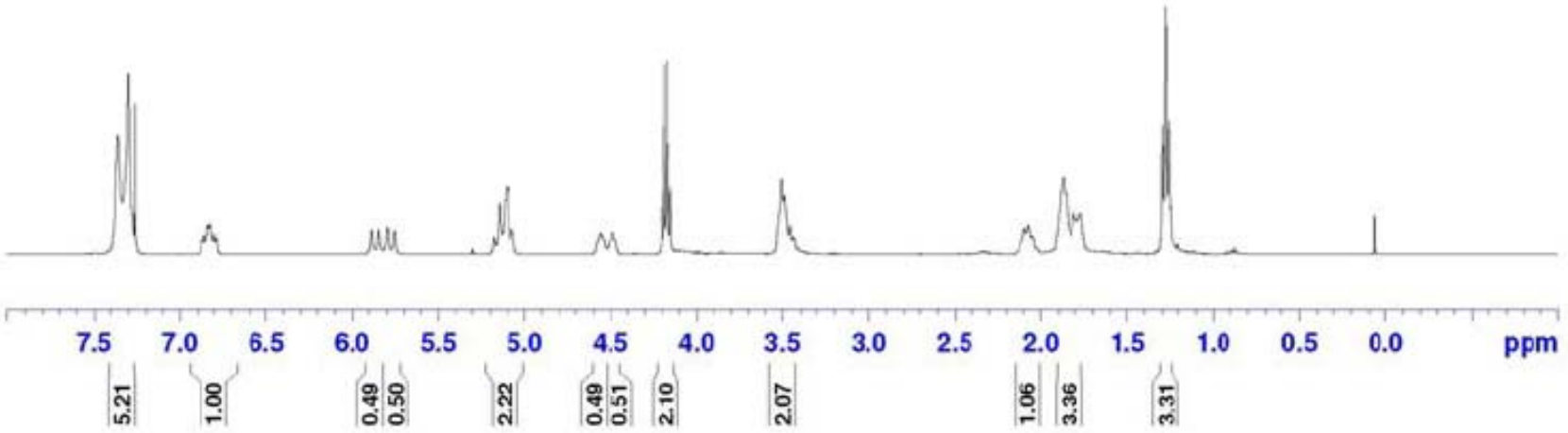


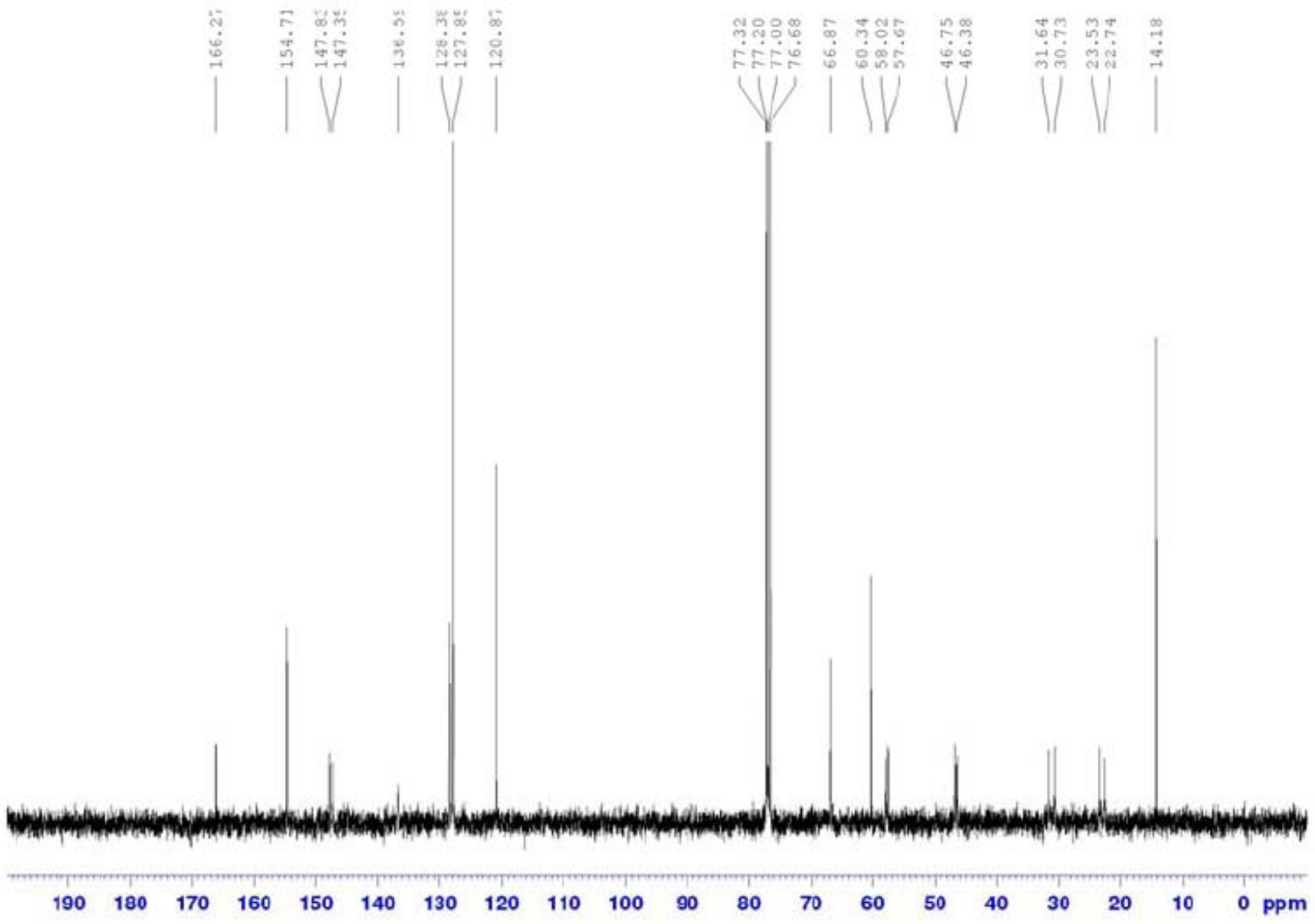


^{1}H NMR and ^{13}C NMR data of compound ***E*-11e**:

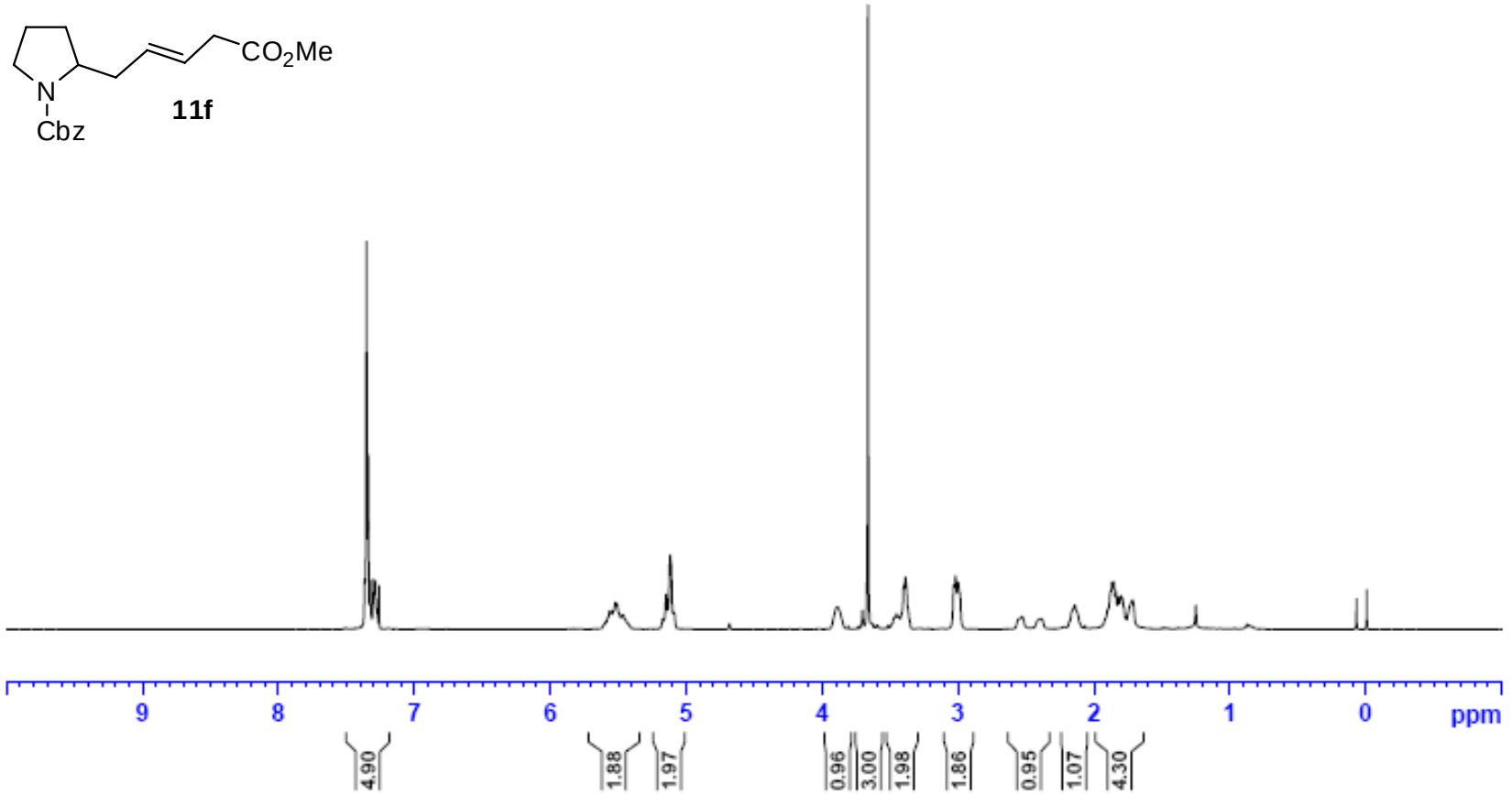


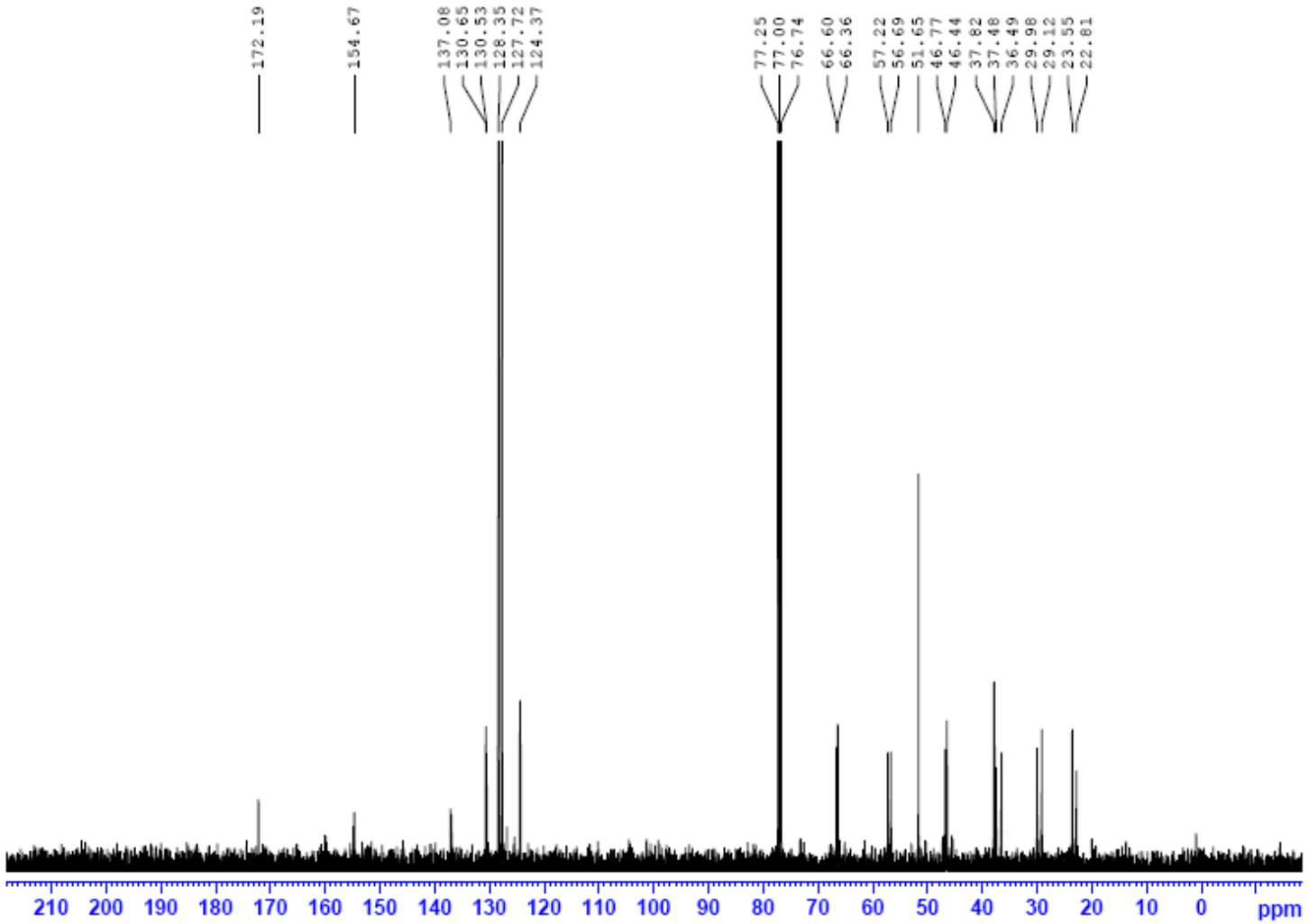
***E*-11e**



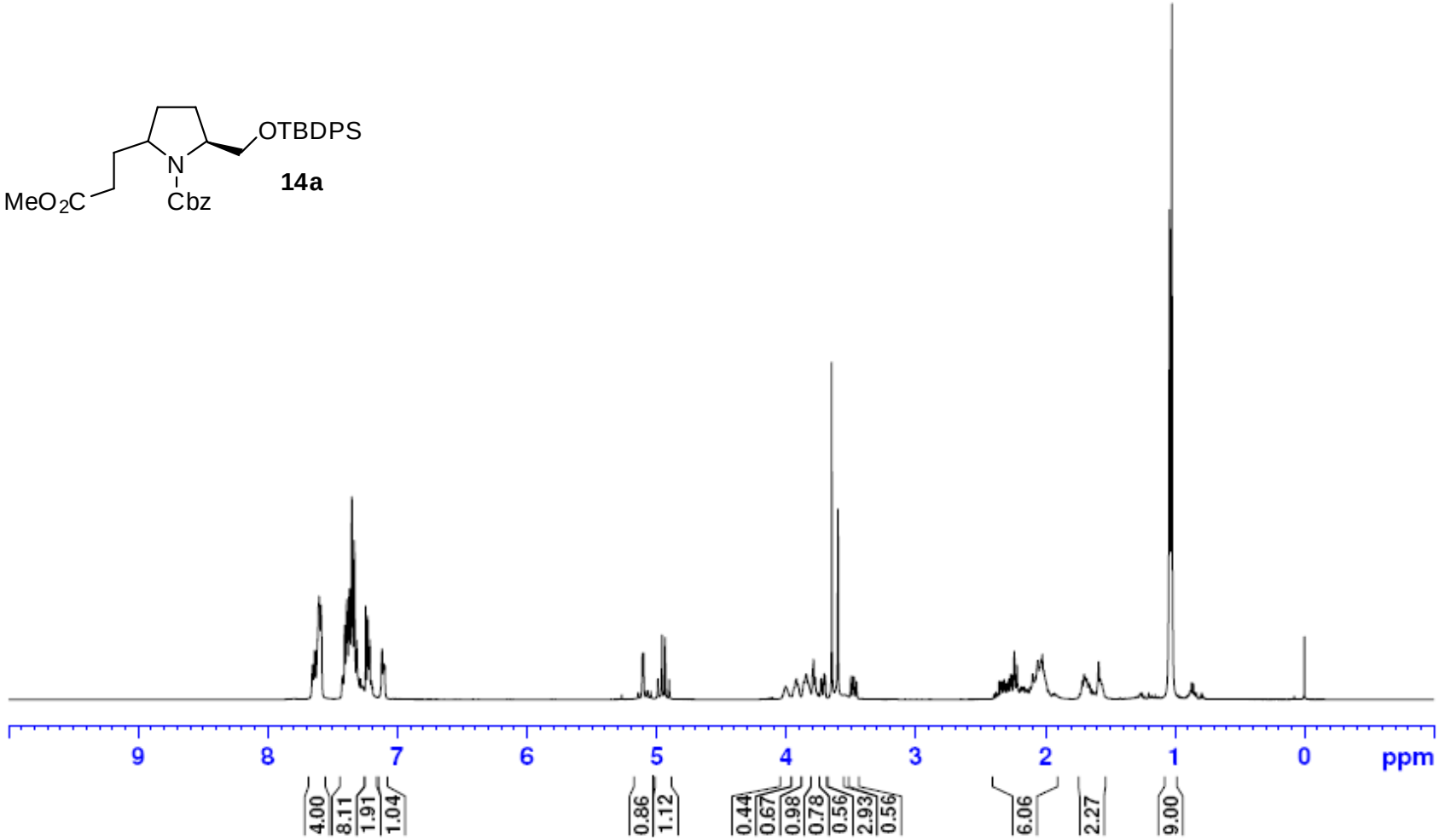


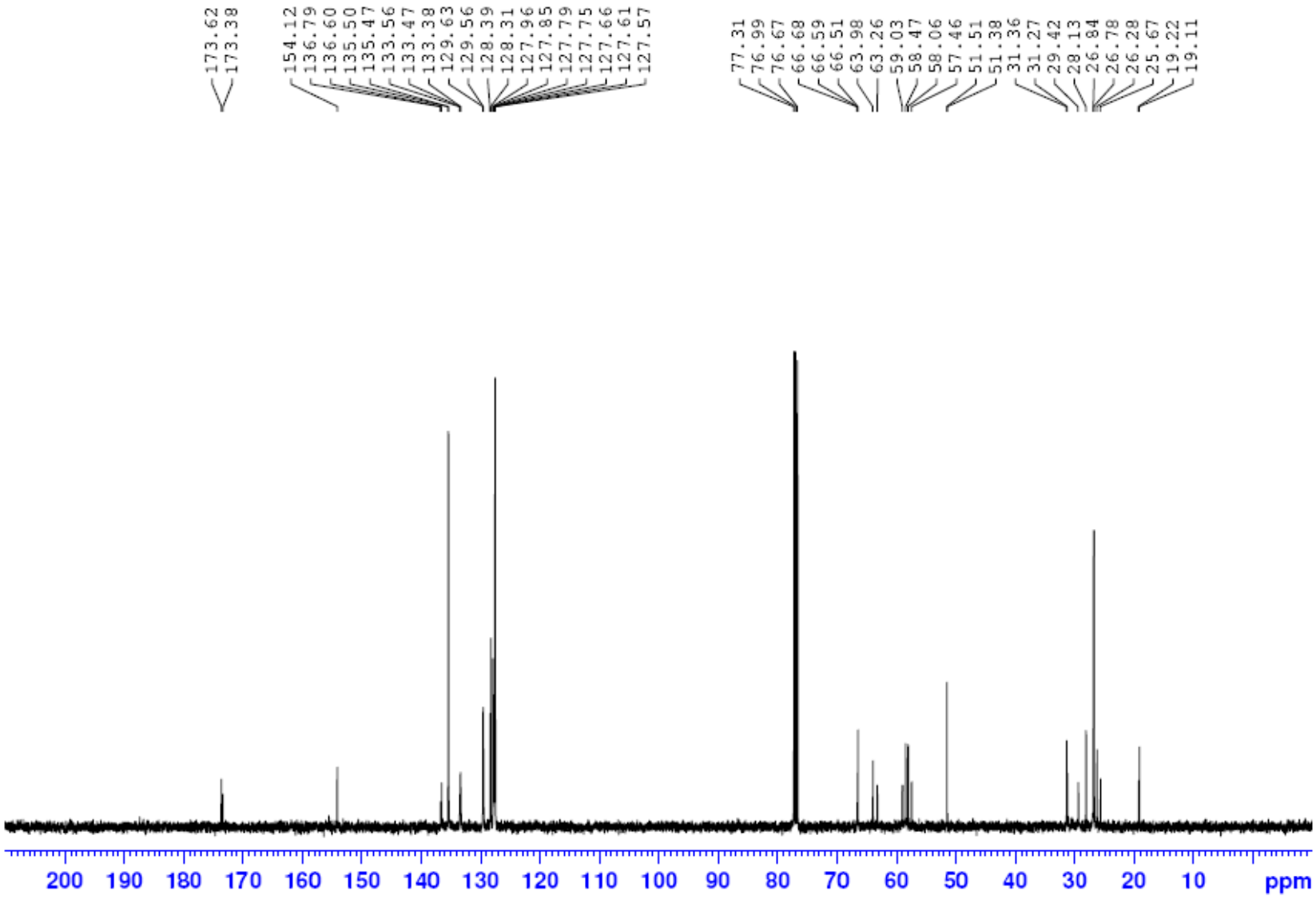
^{1}H NMR and ^{13}C NMR data of compound **11f**:



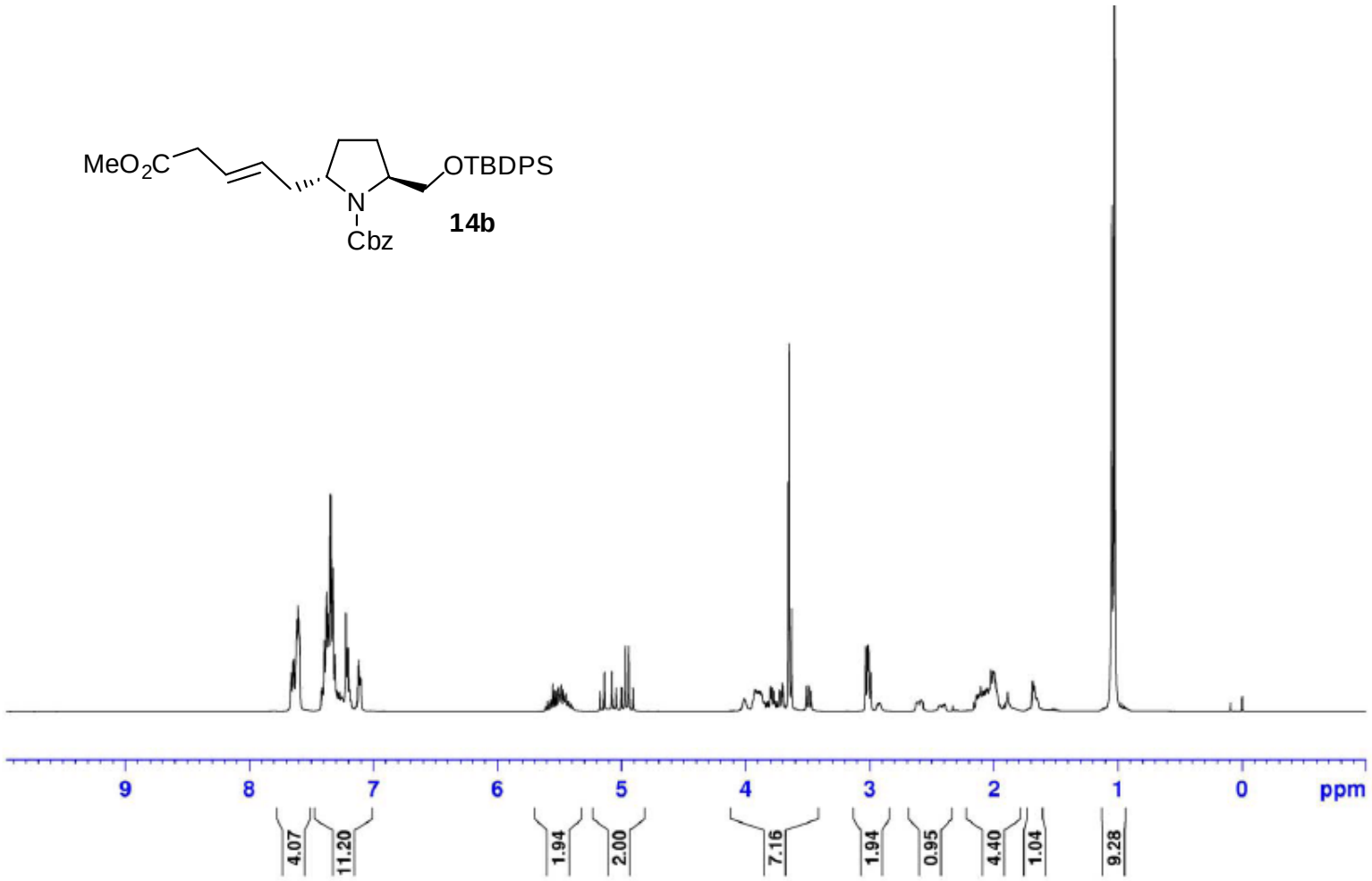


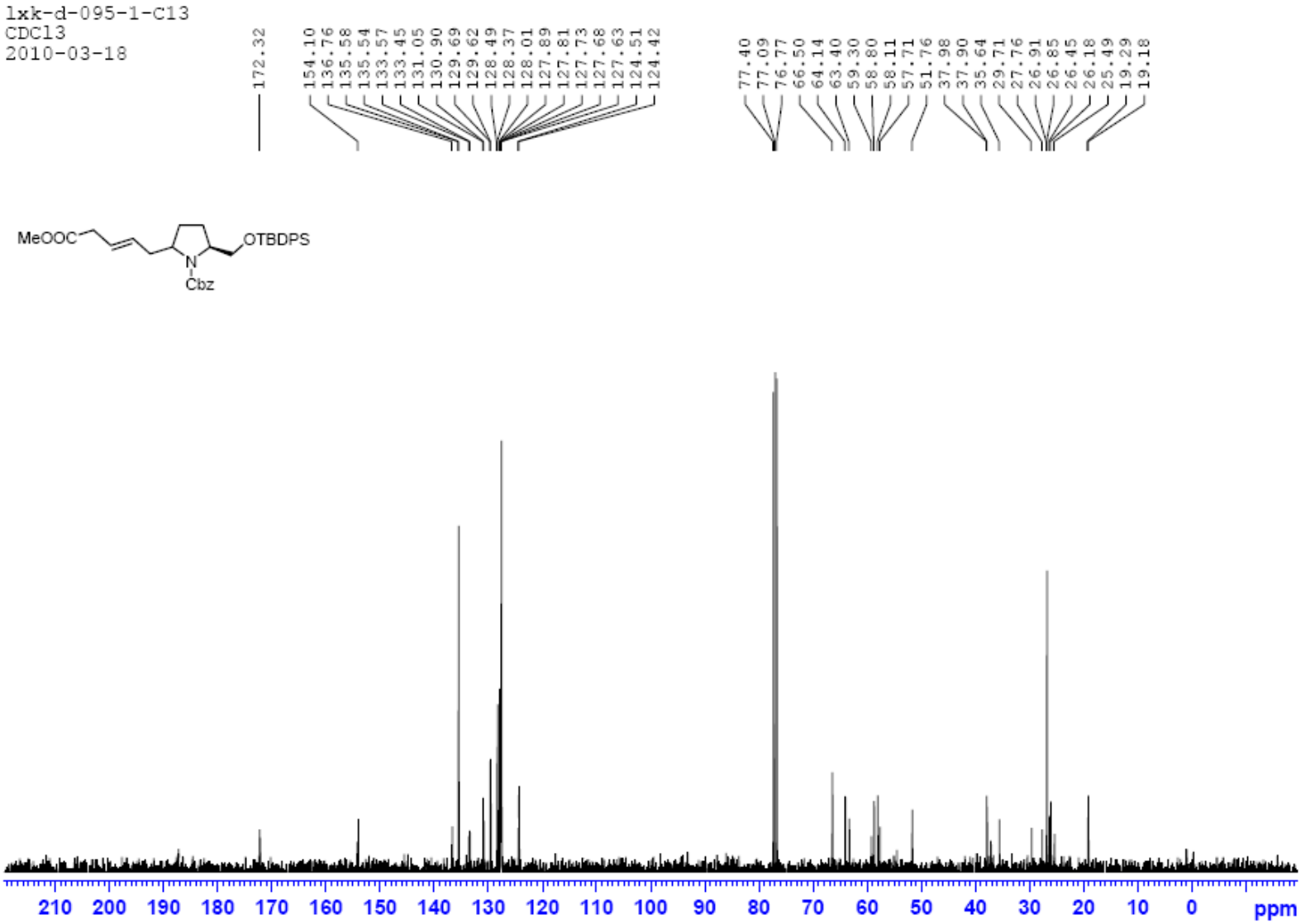
^{1}H NMR and ^{13}C NMR data of compound **14a**:



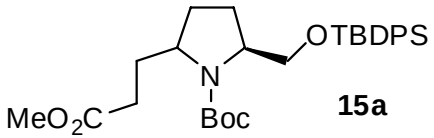


^{1}H NMR and ^{13}C NMR data of compound **14b**:

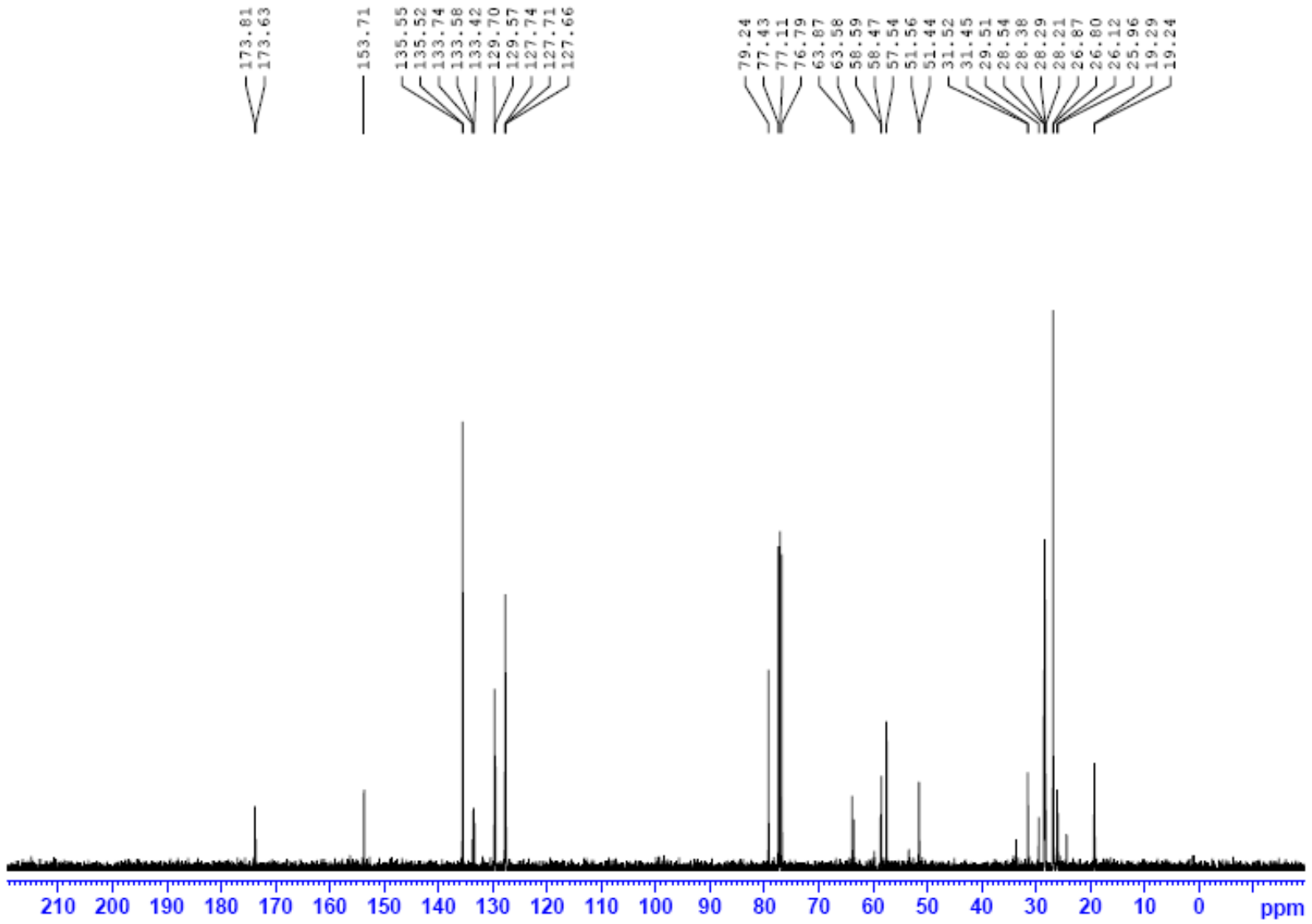




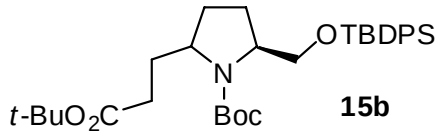
^{1}H NMR and ^{13}C NMR data of compound **15a**:



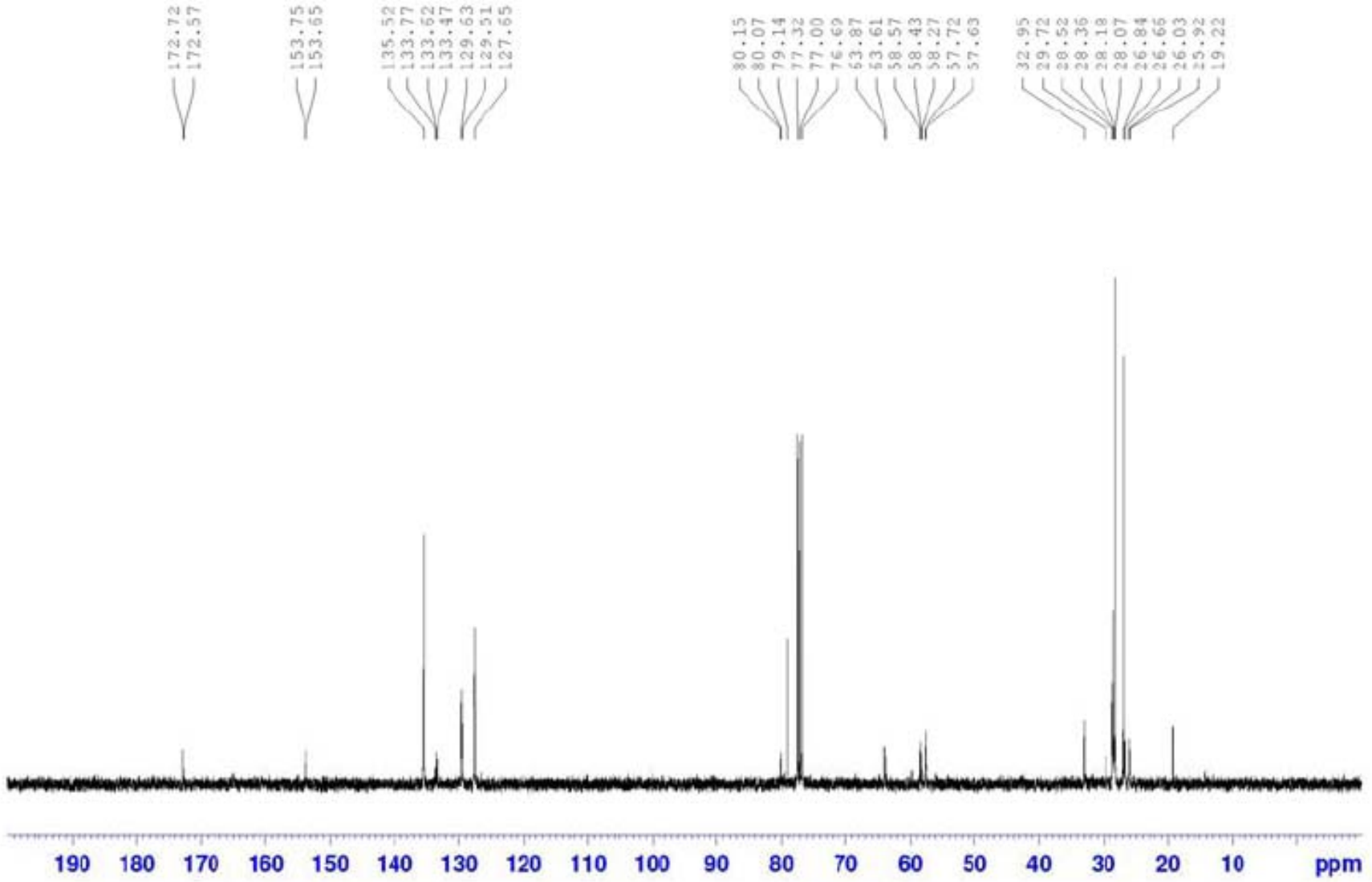
15a



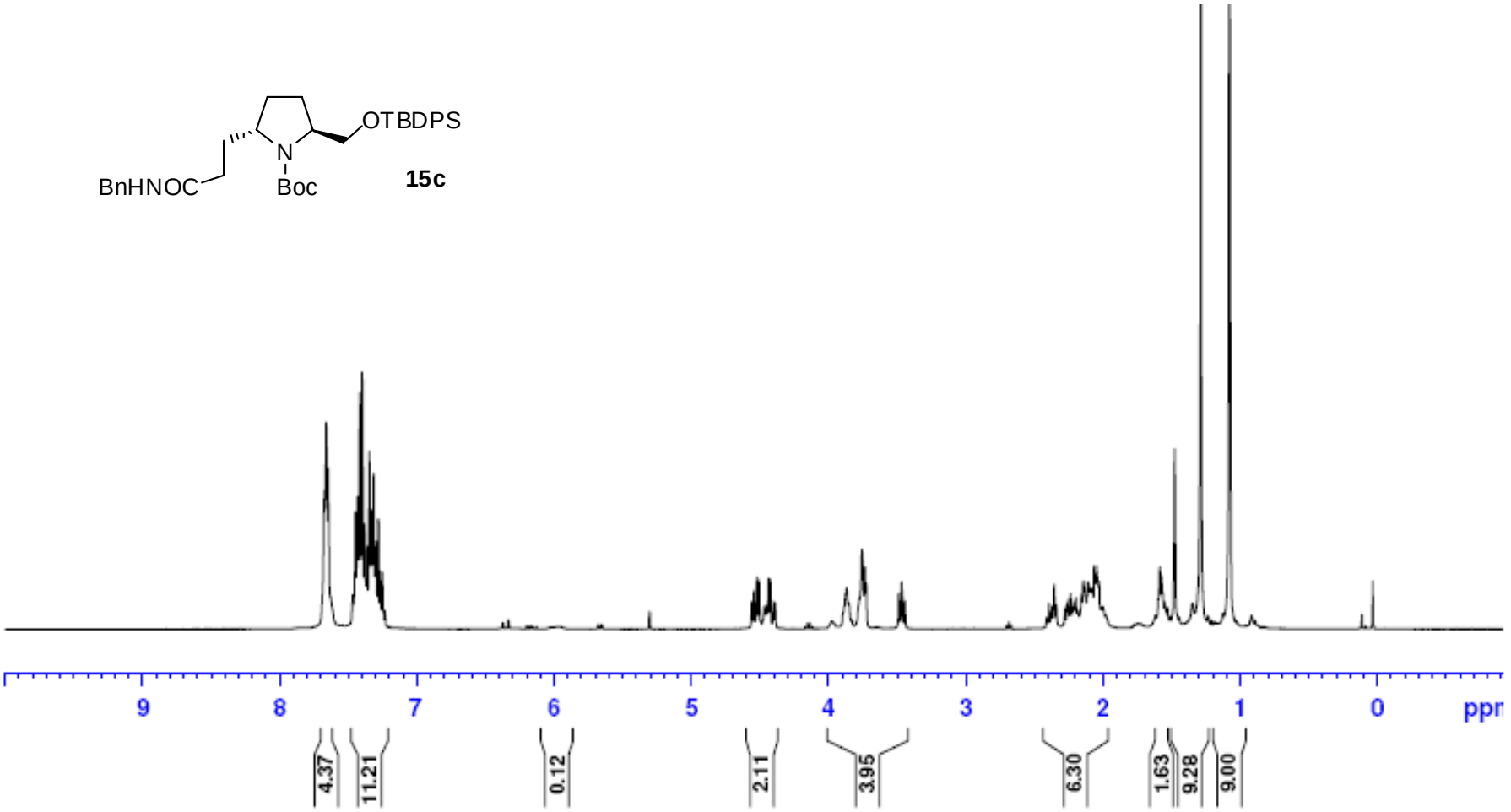
^{1}H NMR and ^{13}C NMR data of compound **15b**:

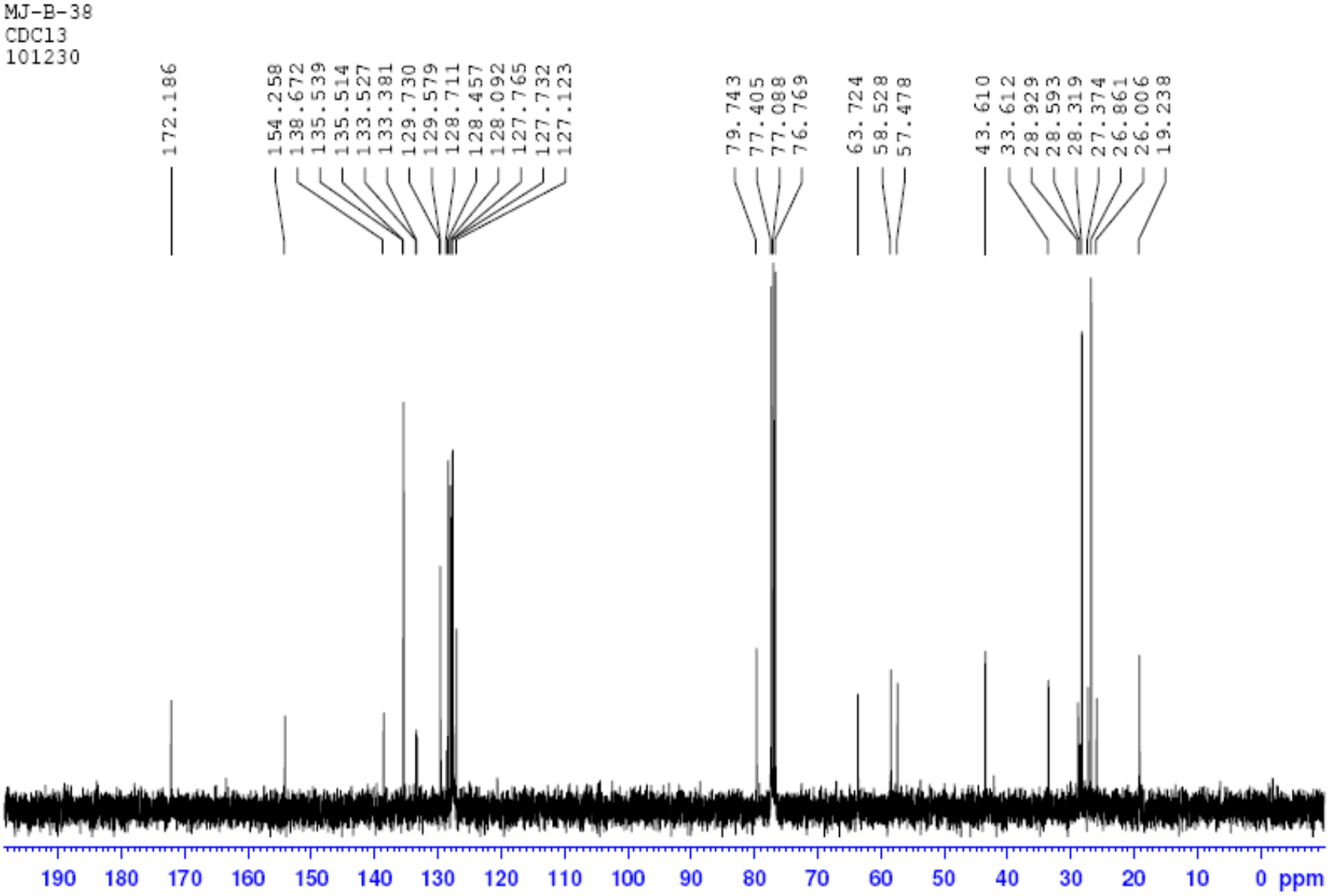


15b

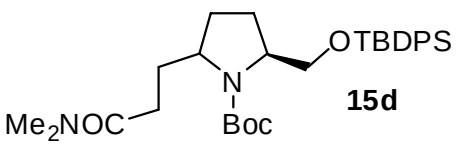


^{1}H NMR and ^{13}C NMR data of compound **15c**:

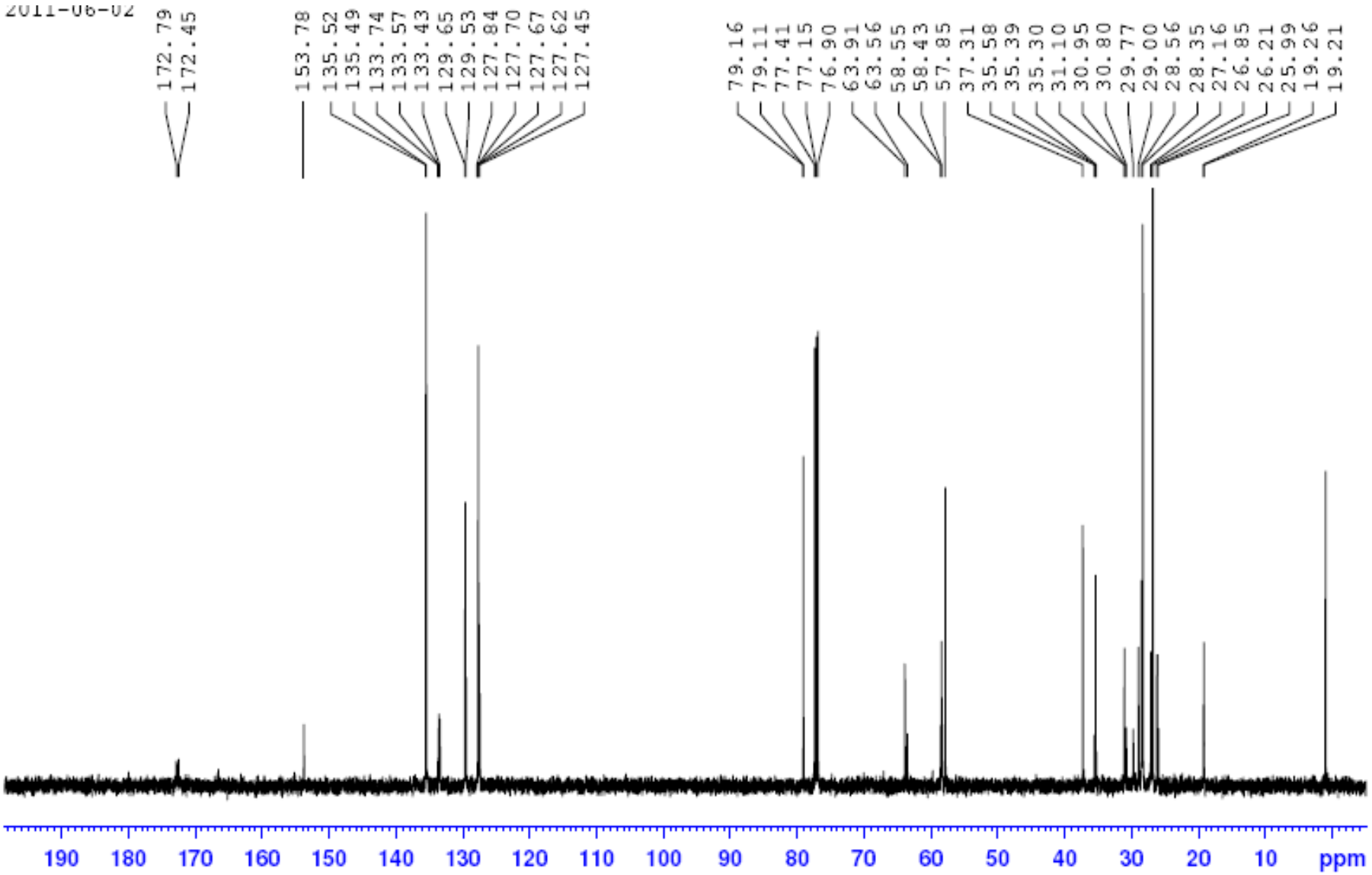




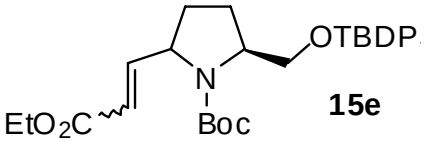
^{1}H NMR and ^{13}C NMR data of compound **15d**:



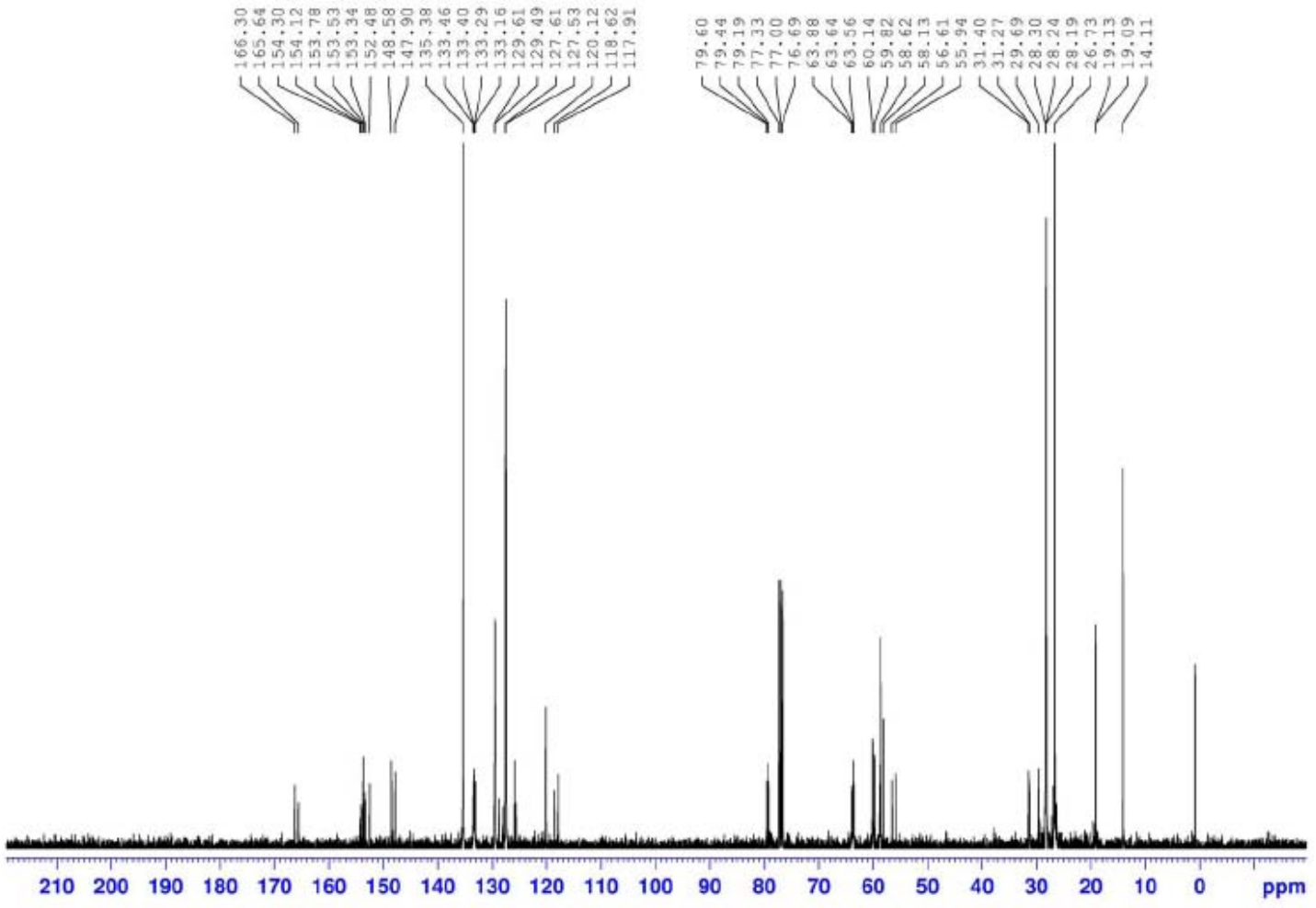
15d



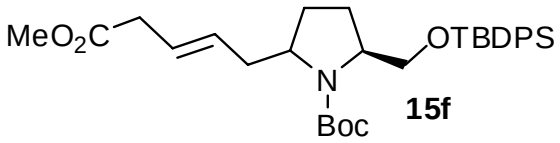
^{1}H NMR and ^{13}C NMR data of compound **15e**:



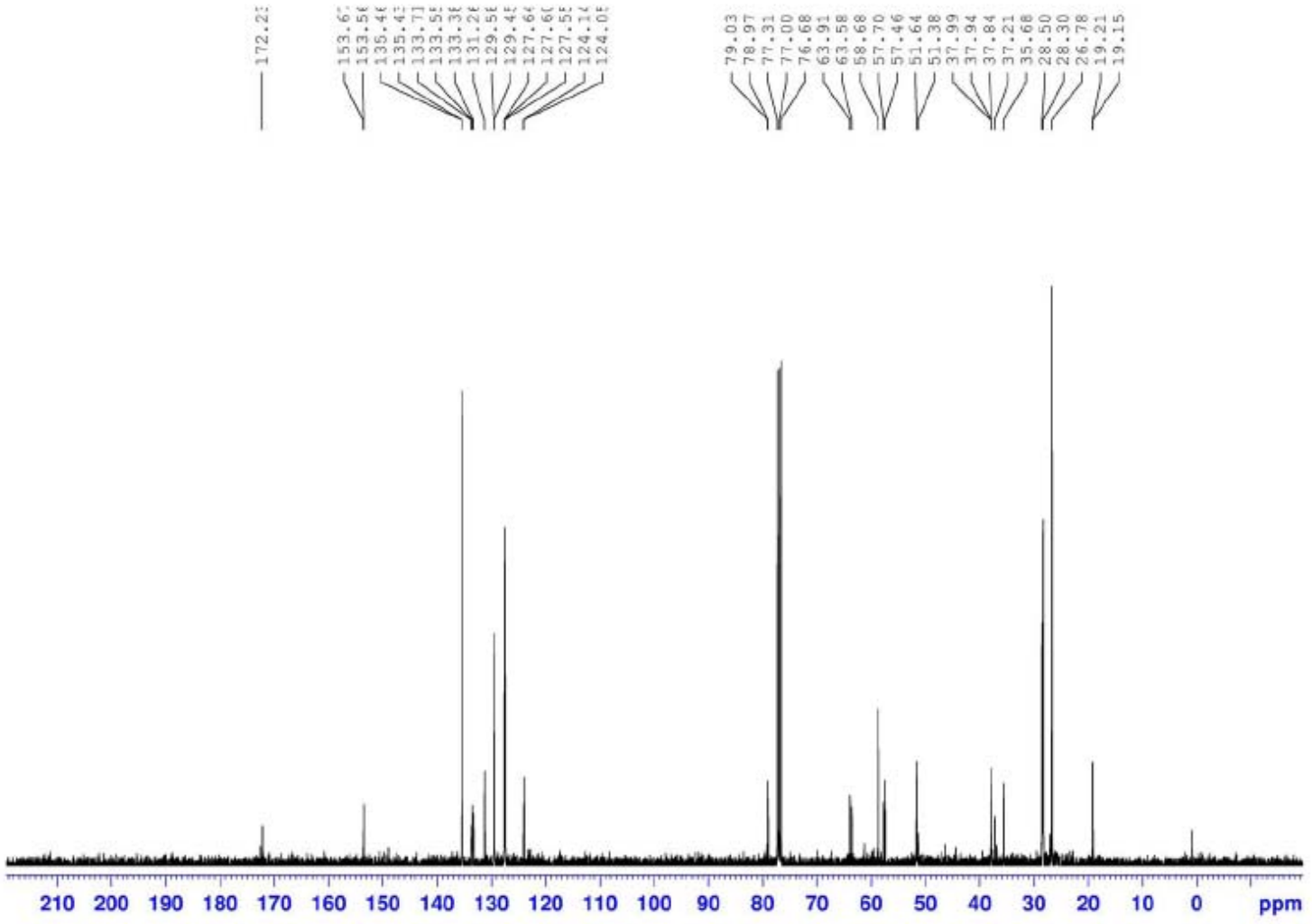
15e



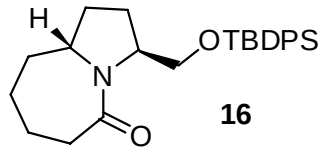
^{1}H NMR and ^{13}C NMR data of compound **15f**:



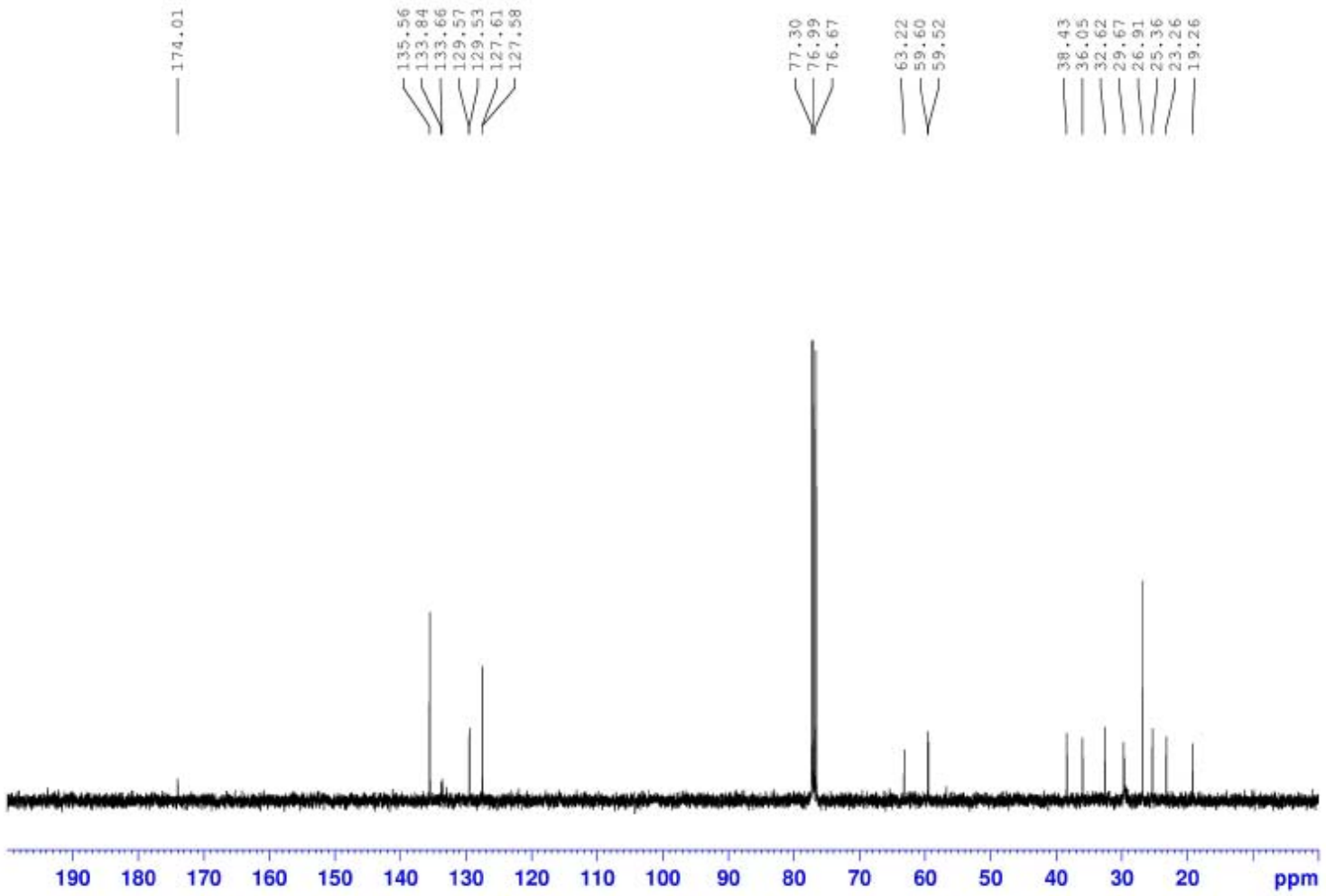
15f



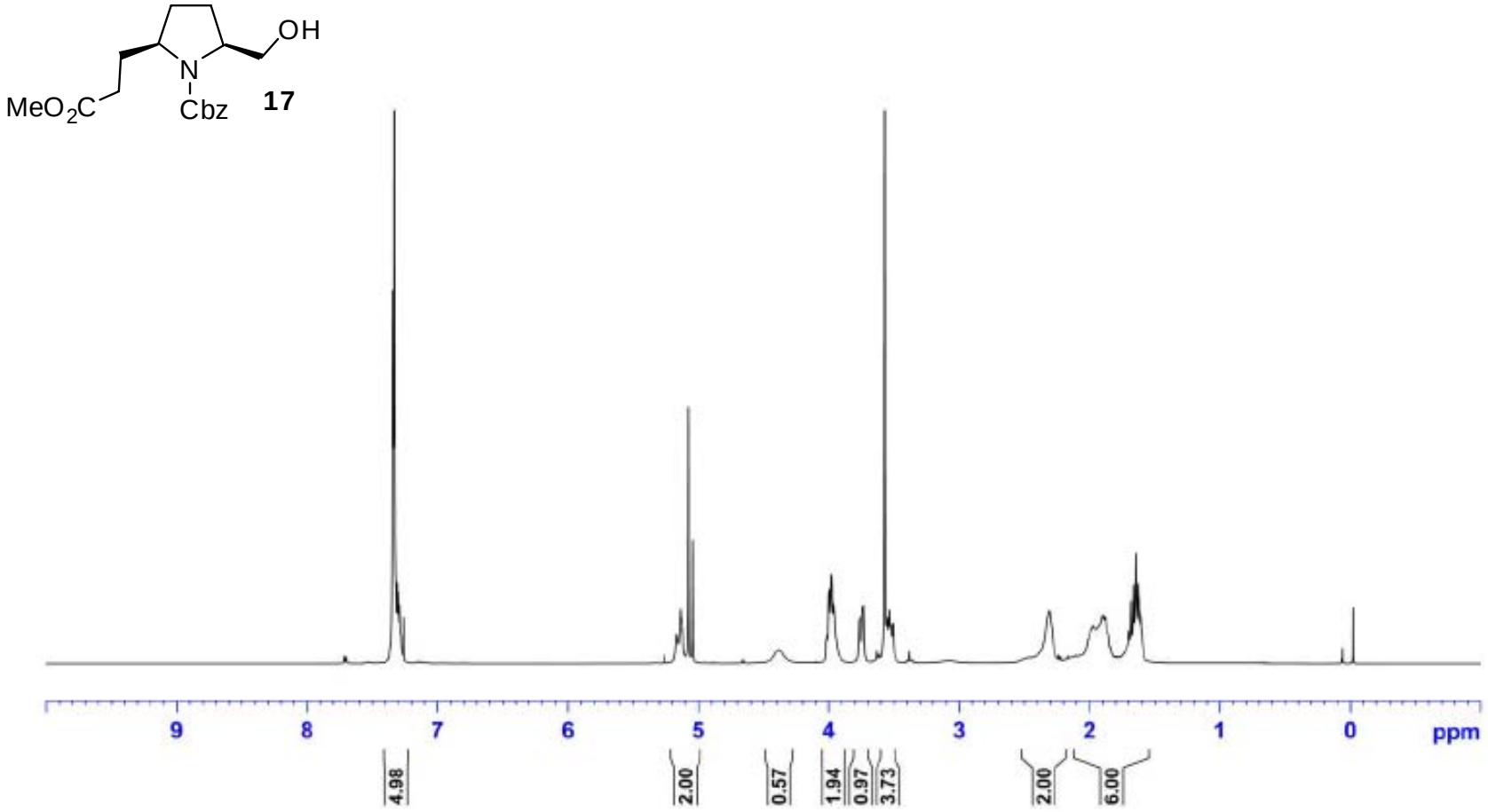
^{1}H NMR and ^{13}C NMR data of compound **16**:

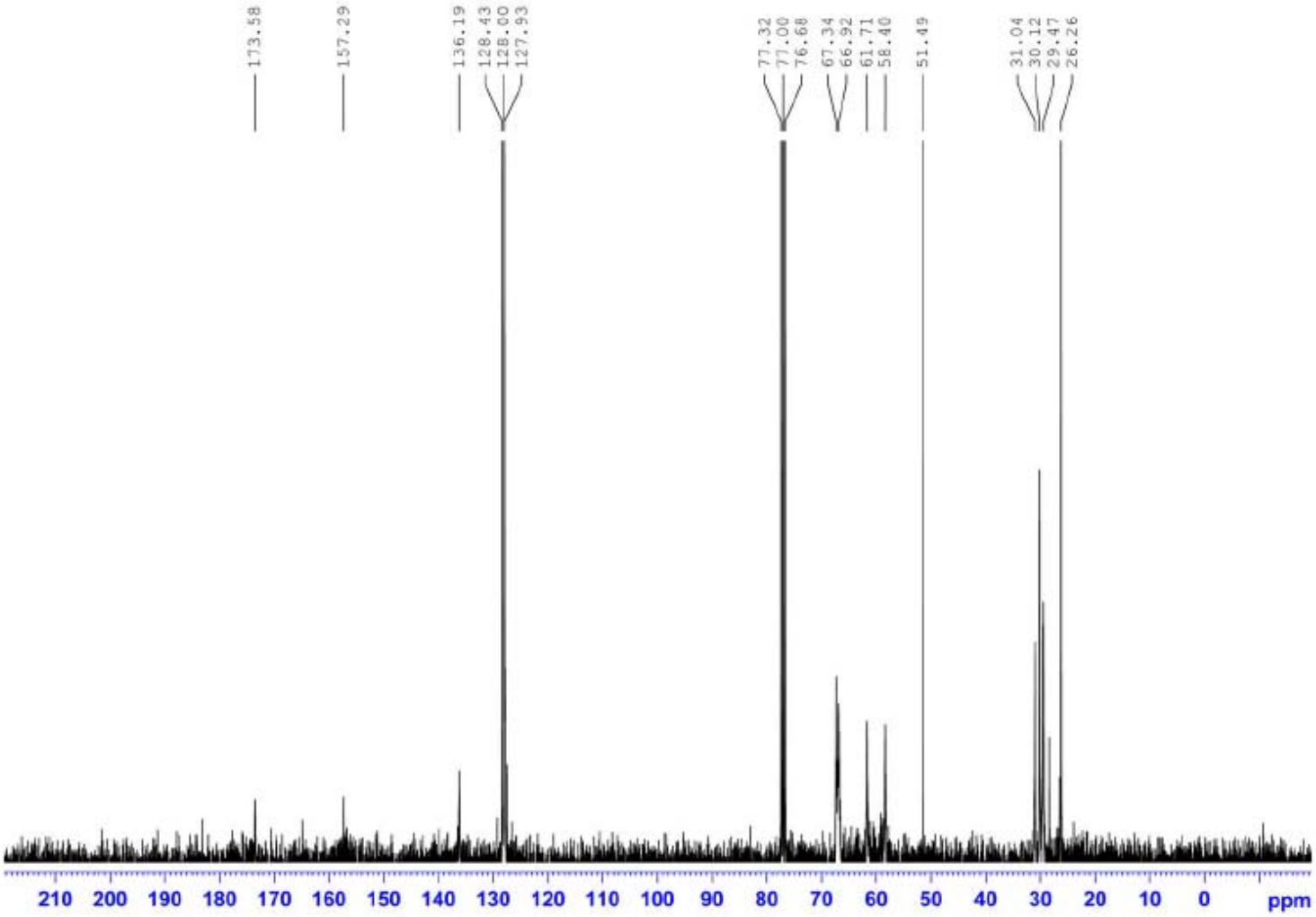


16

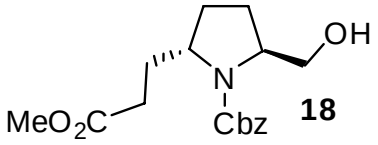


^{1}H NMR and ^{13}C NMR data of compound **17**:

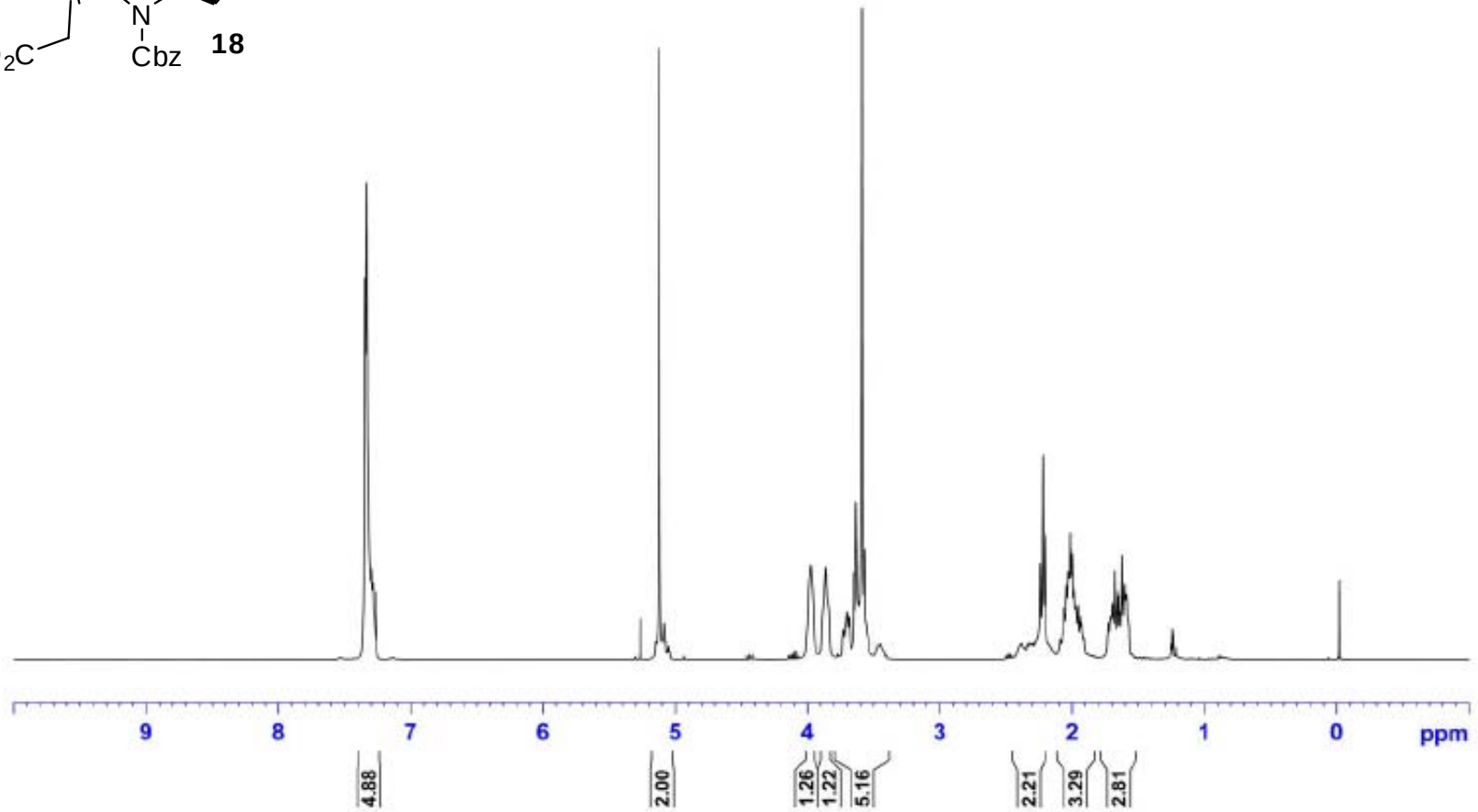


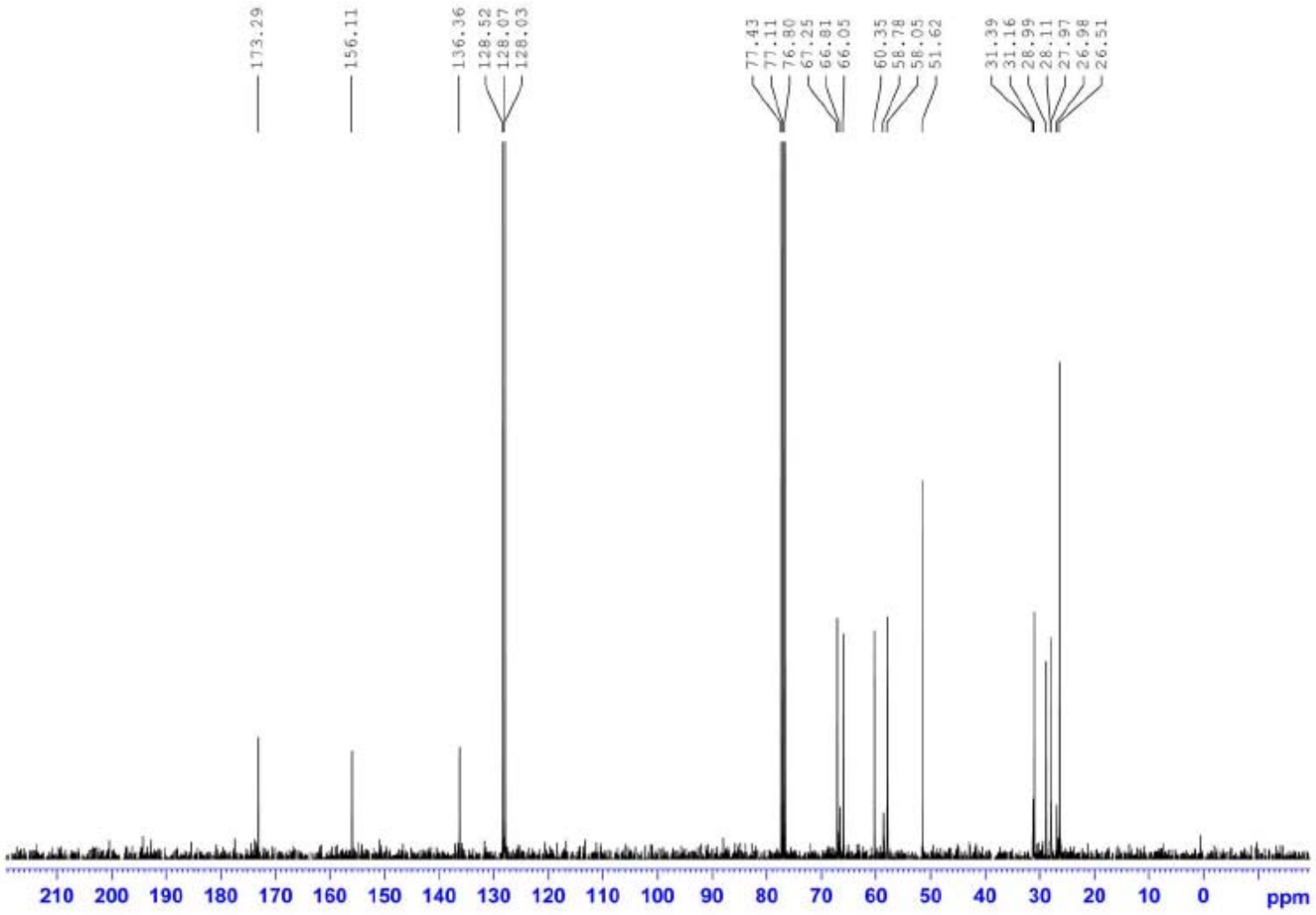


^{1}H NMR and ^{13}C NMR data of compound **18**:

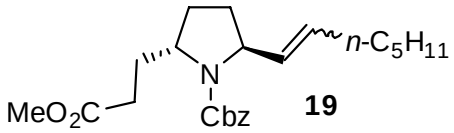


18

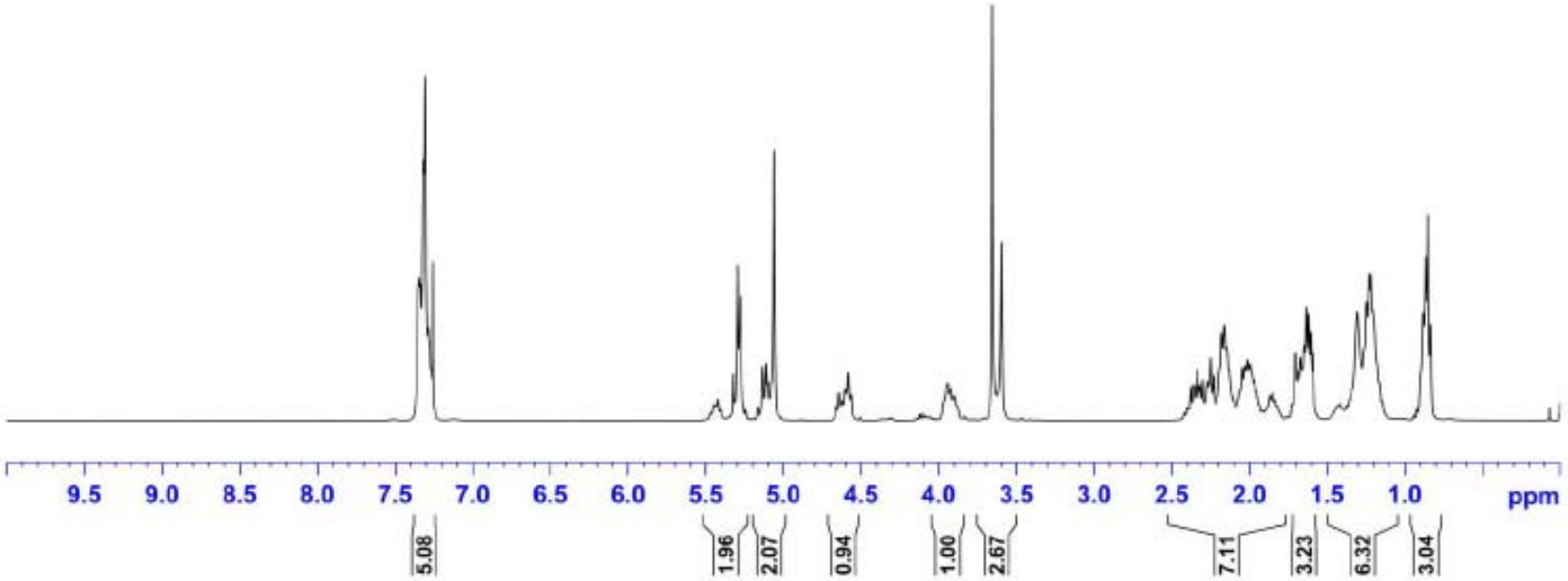


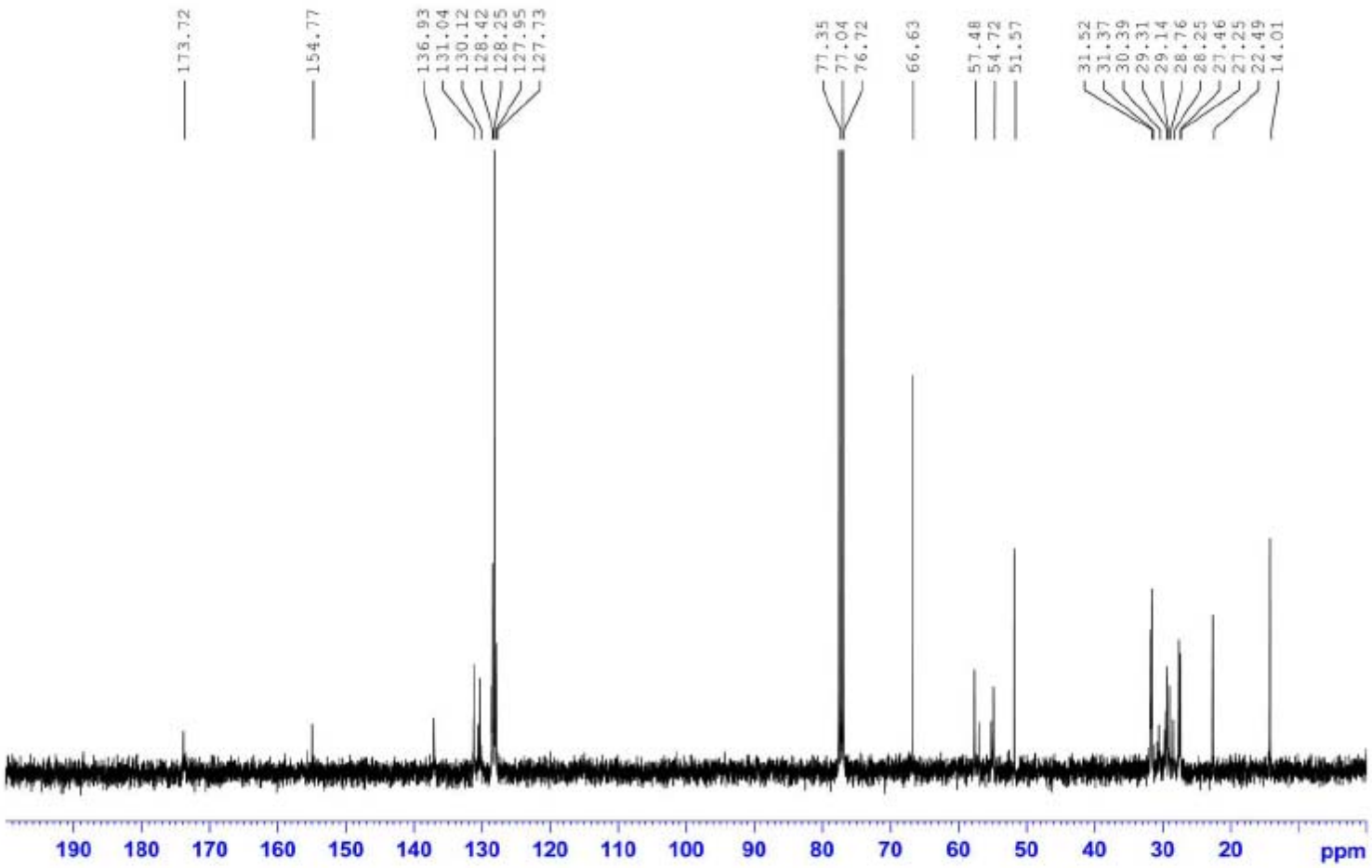


^{1}H NMR and ^{13}C NMR data of compound **19**:

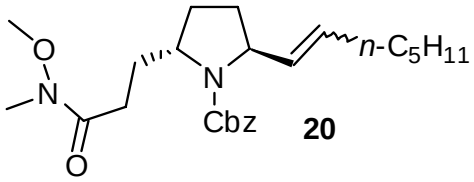


19

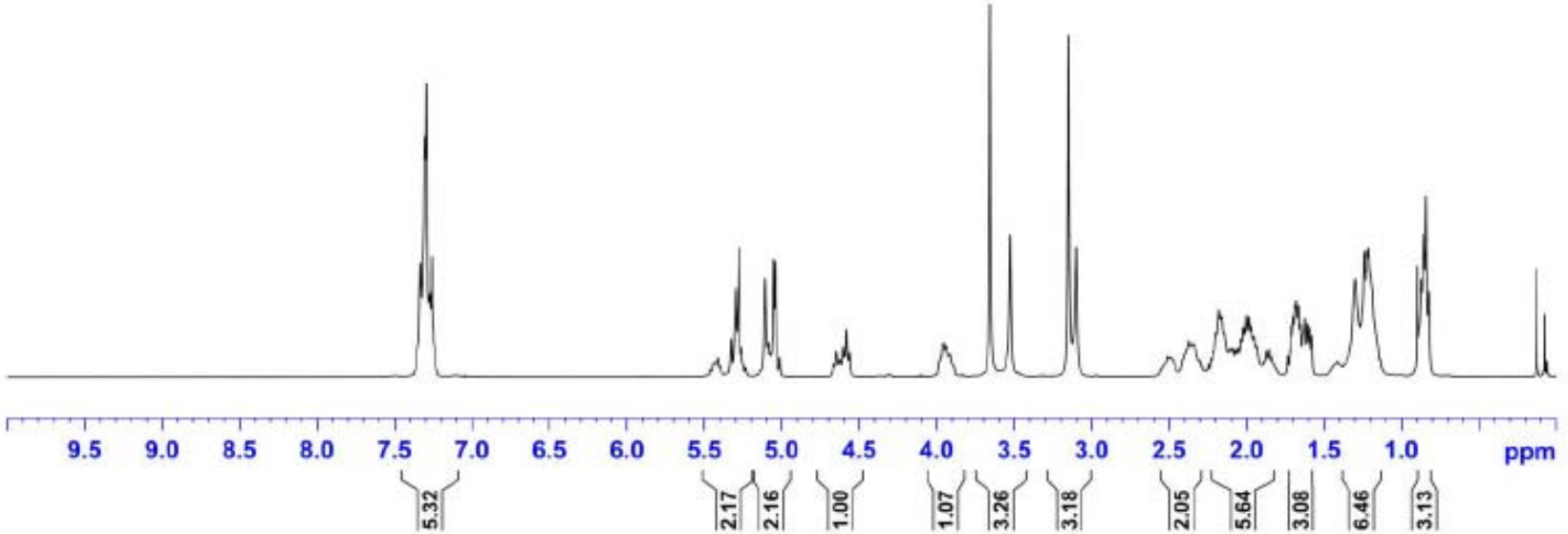


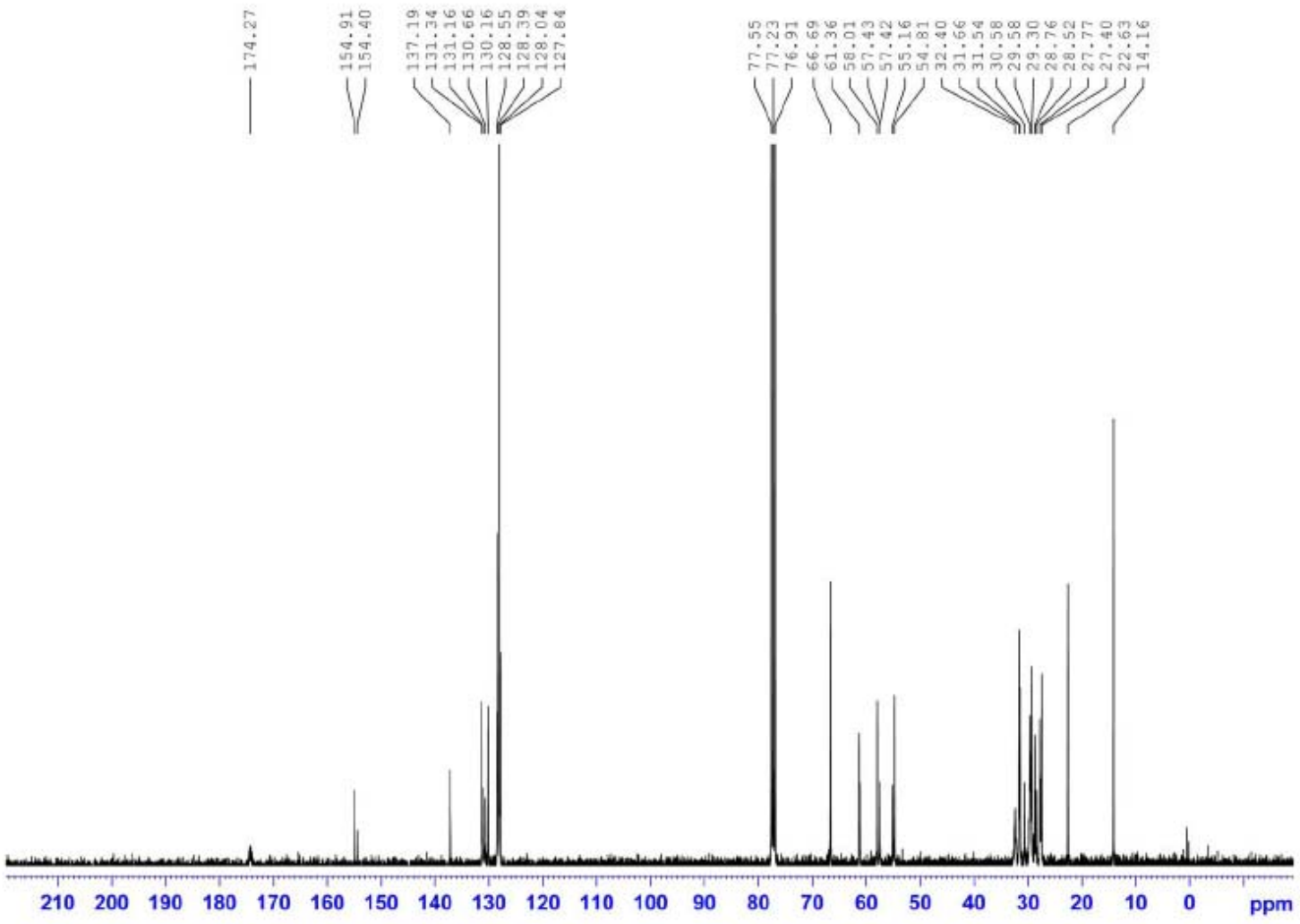


^{1}H NMR and ^{13}C NMR data of compound **20**:

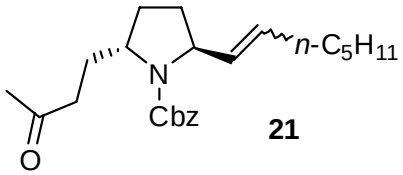


20

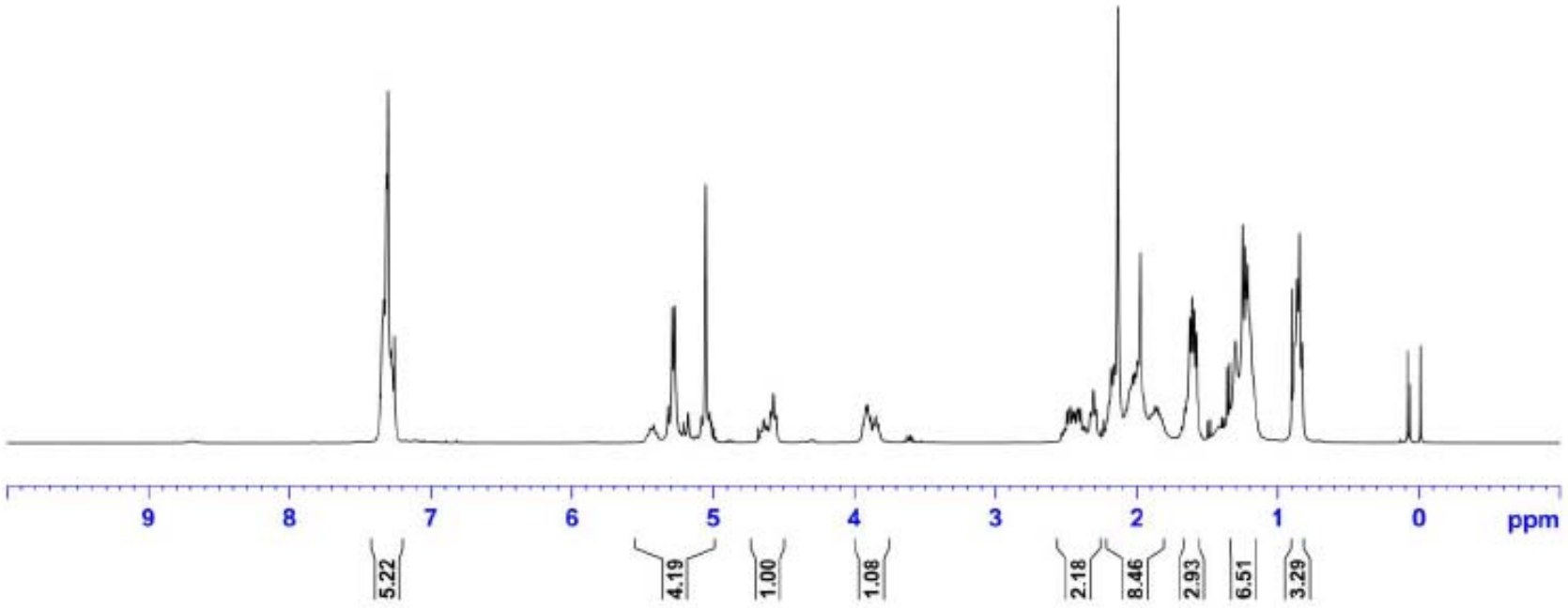


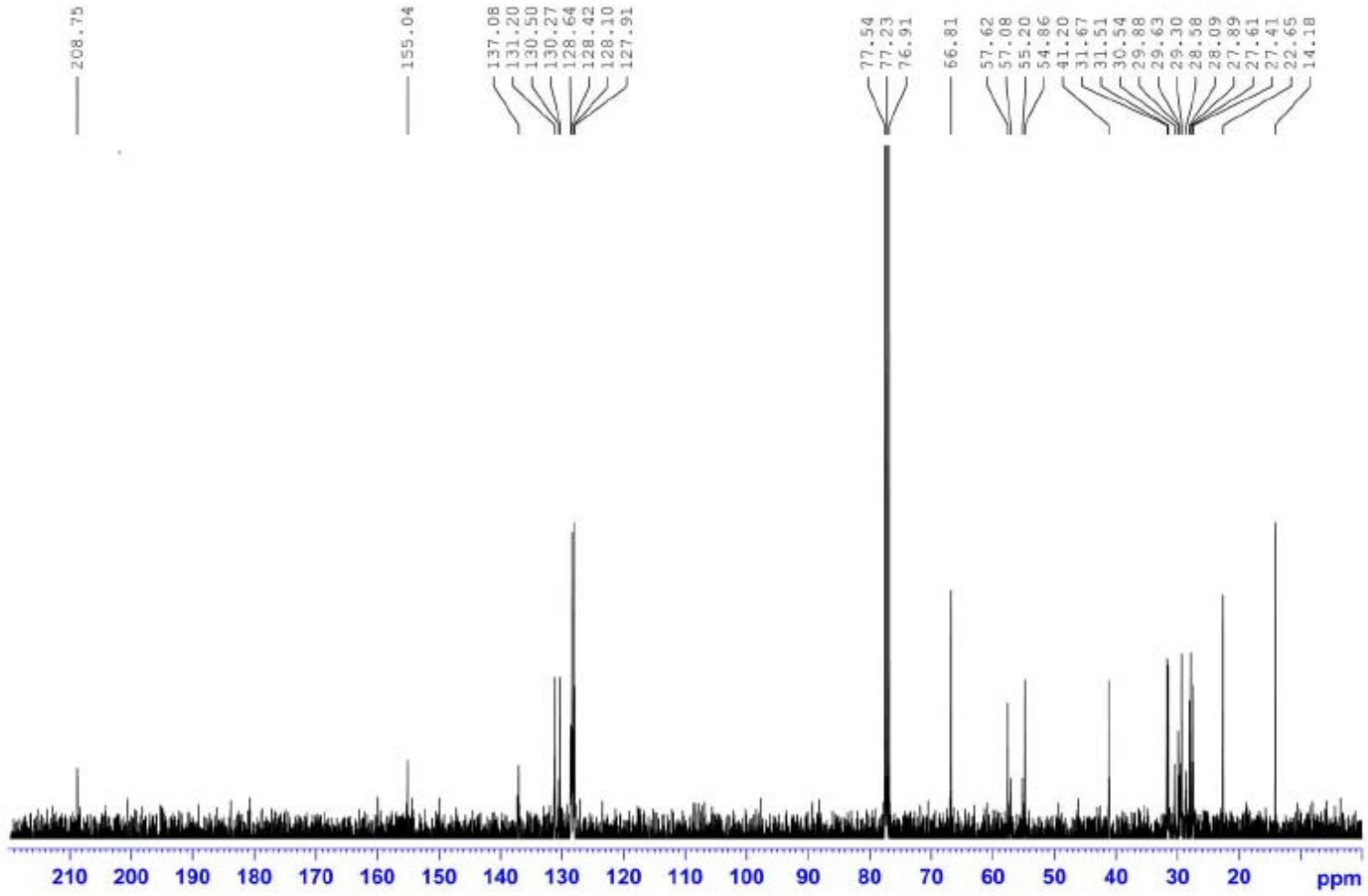


^{1}H NMR and ^{13}C NMR data of compound **21**:

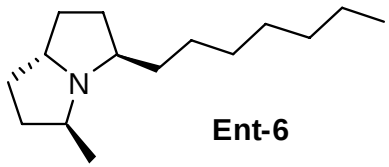


21

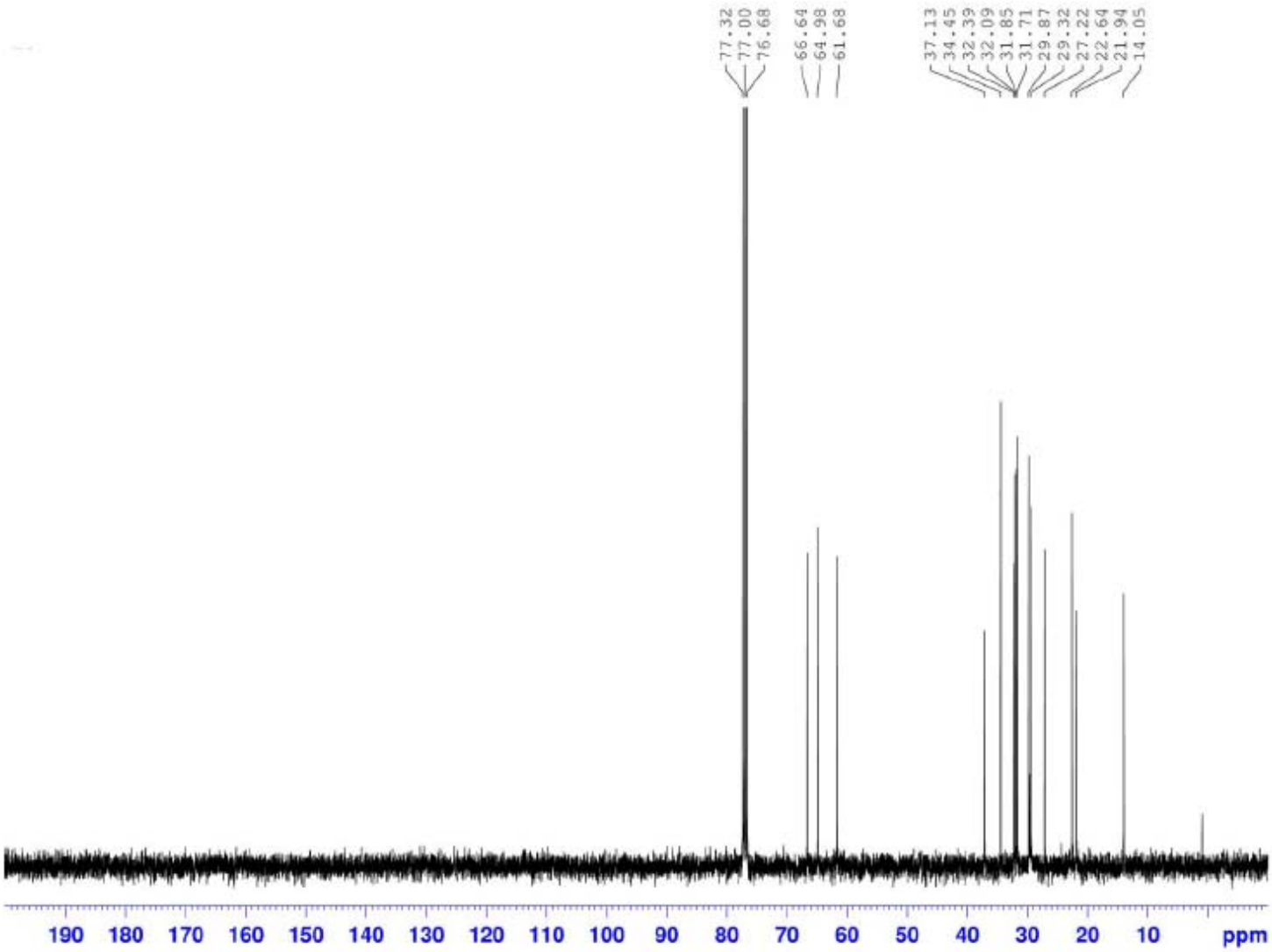




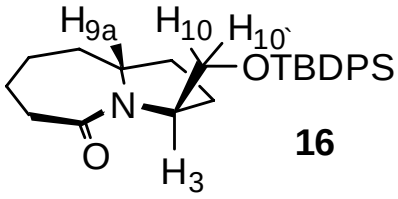
^{1}H NMR and ^{13}C NMR data of (**–**)-xenovenine (**ent-6**) :



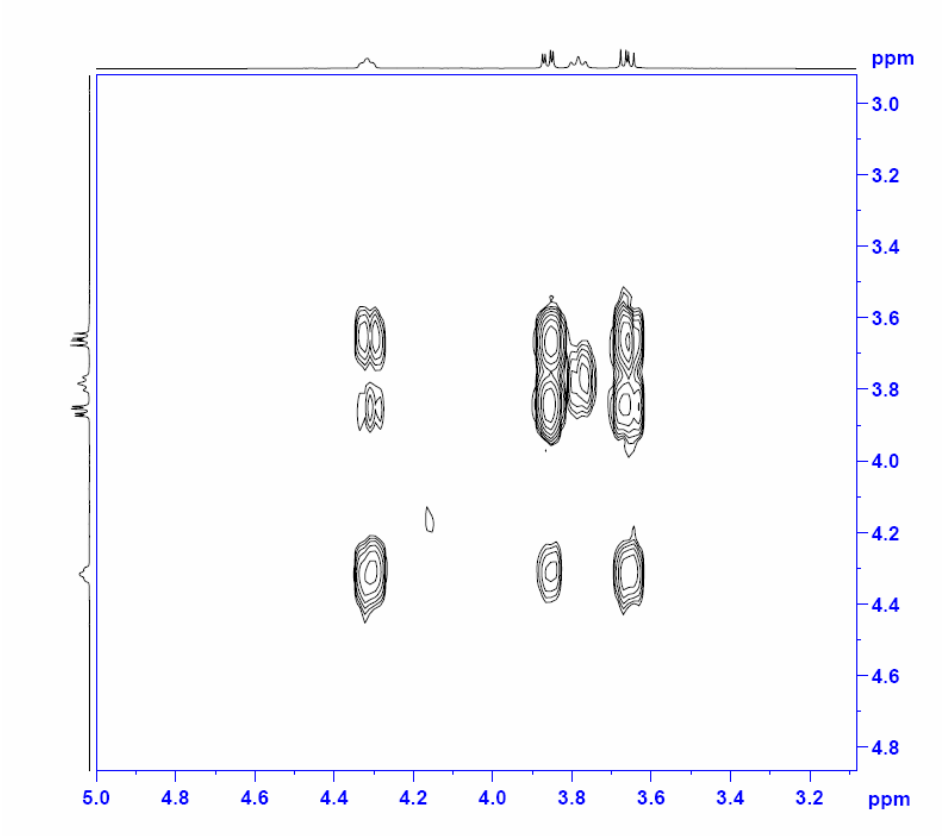
Ent-6



2D-COSY of compound **16**:

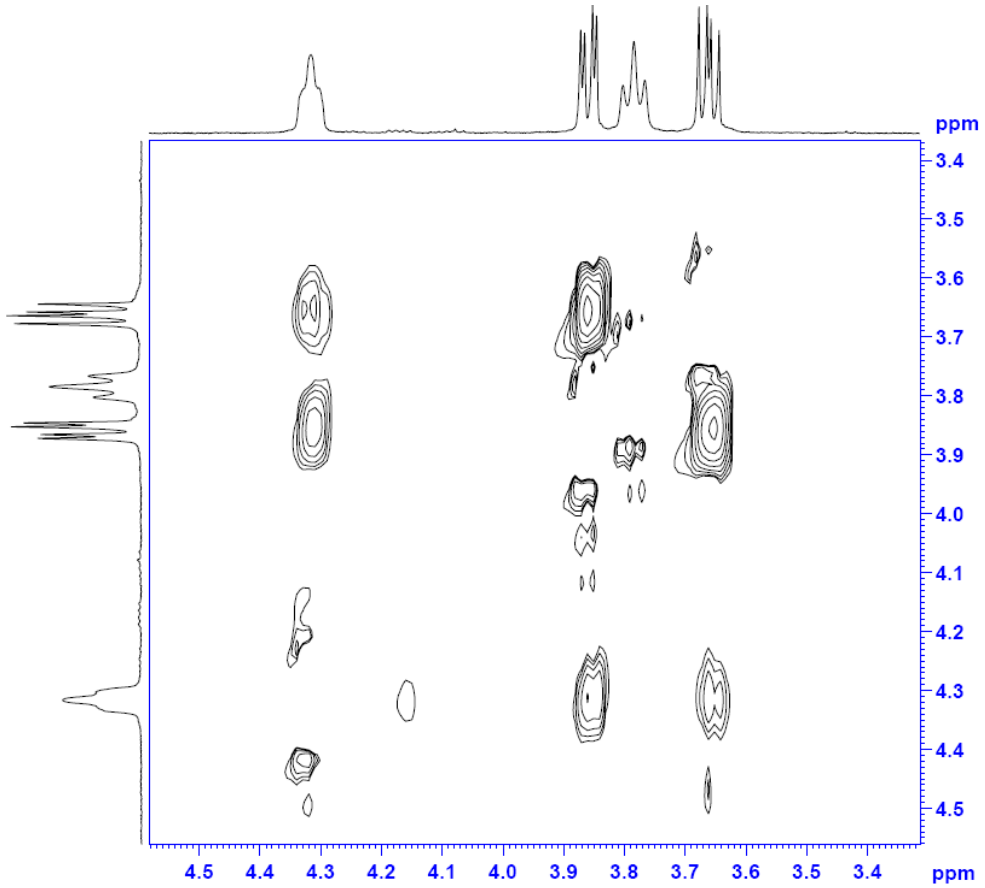


16



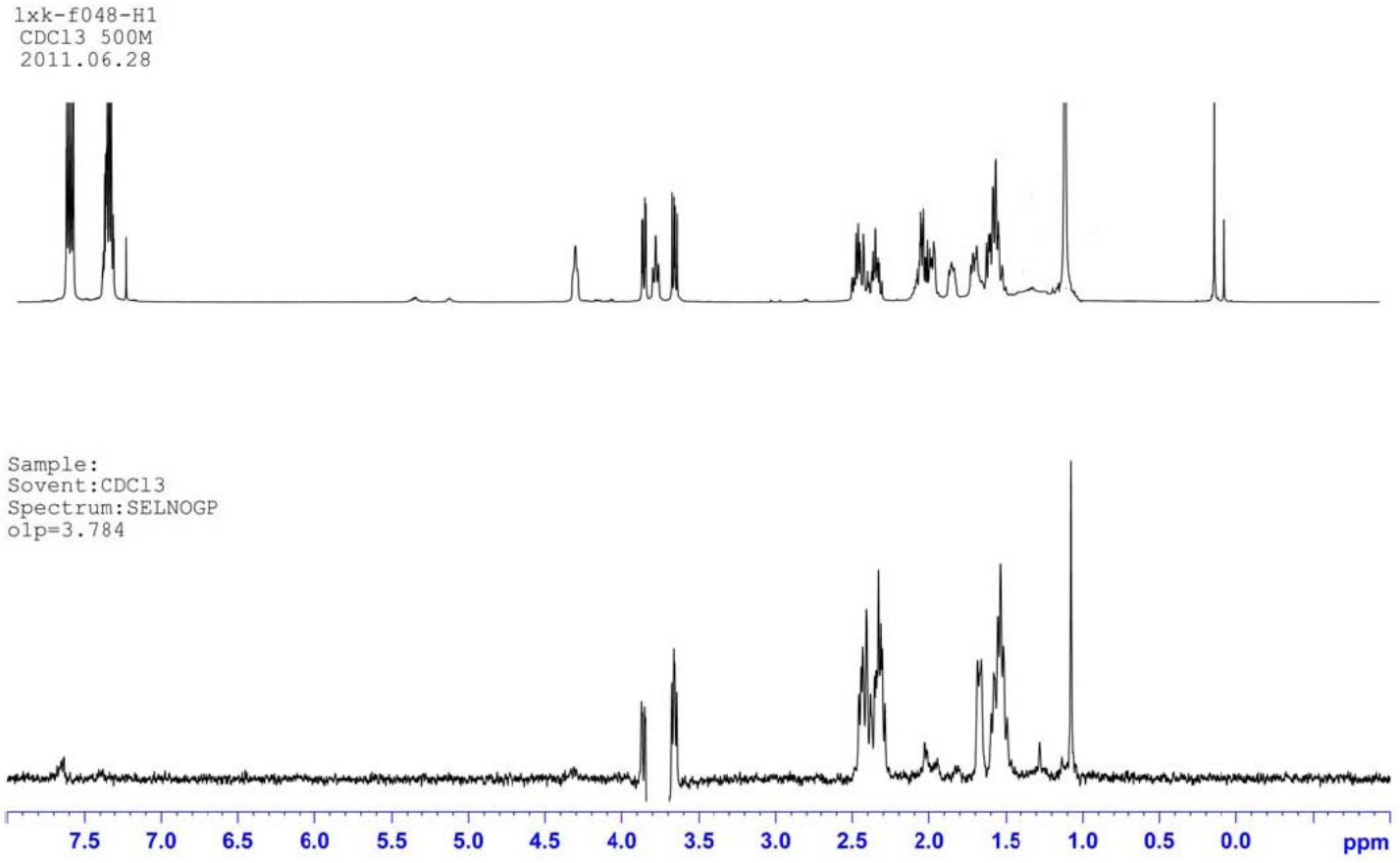
^{1}H-^{1}H COSY

2D-NOESY of compound **16**:



2D NOESY

1D-GOESY of compound **16**:



1D GOESY