

Stereoselective Synthesis of the Decahydroquinoline Alkaloid *cis*-195J

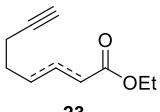
Rudina Veliu and Christoph Schneider*

Institut für Organische Chemie, Universität Leipzig, Johannisallee 29, D-04103 Leipzig, Germany

Email: schneider@chemie.uni-leipzig.de.

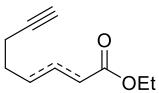
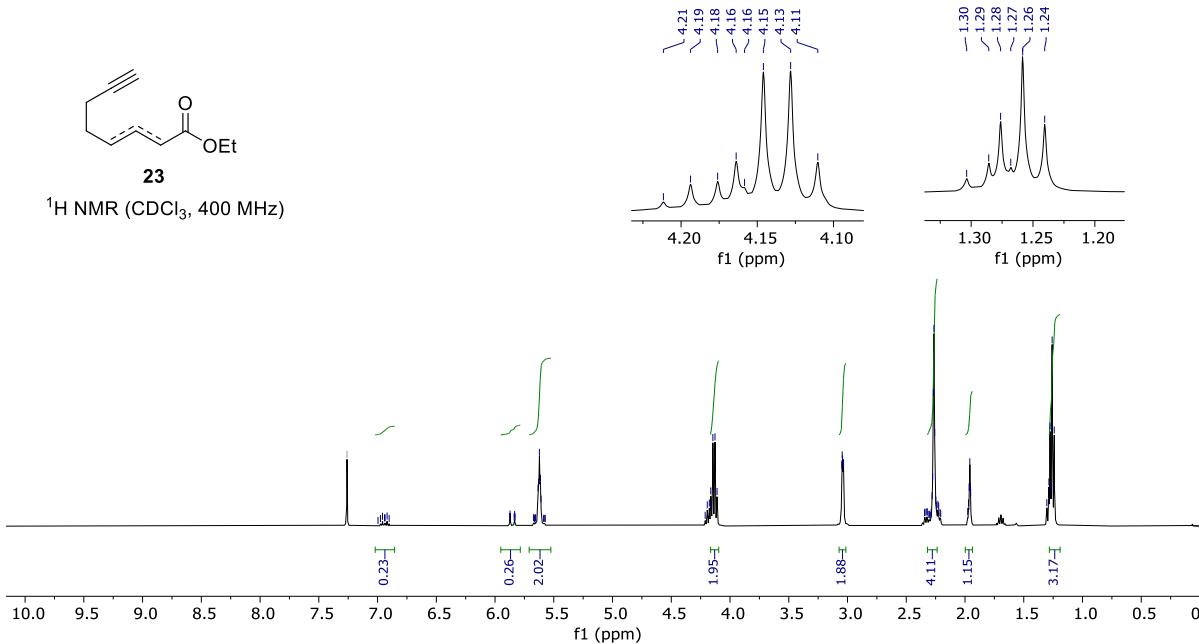
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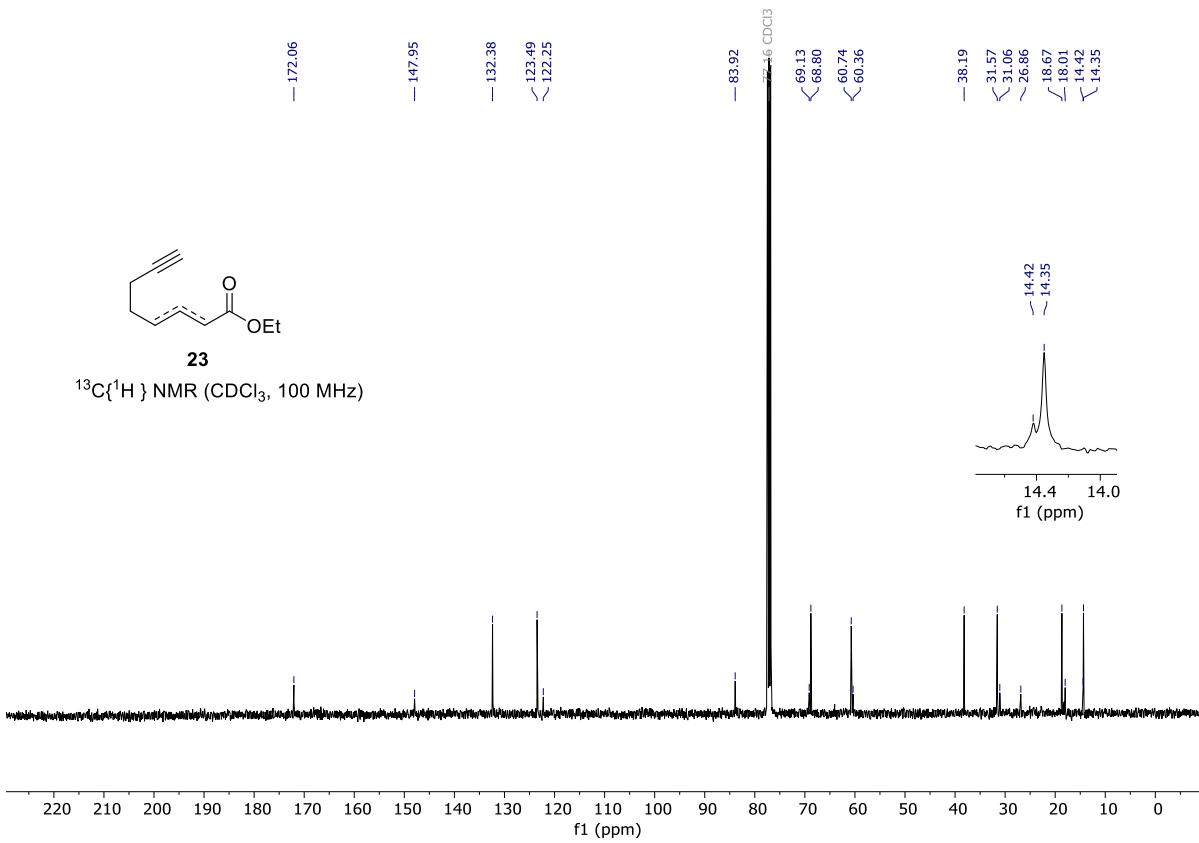
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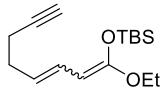
¹H NMR (CDCl₃, 400 MHz)



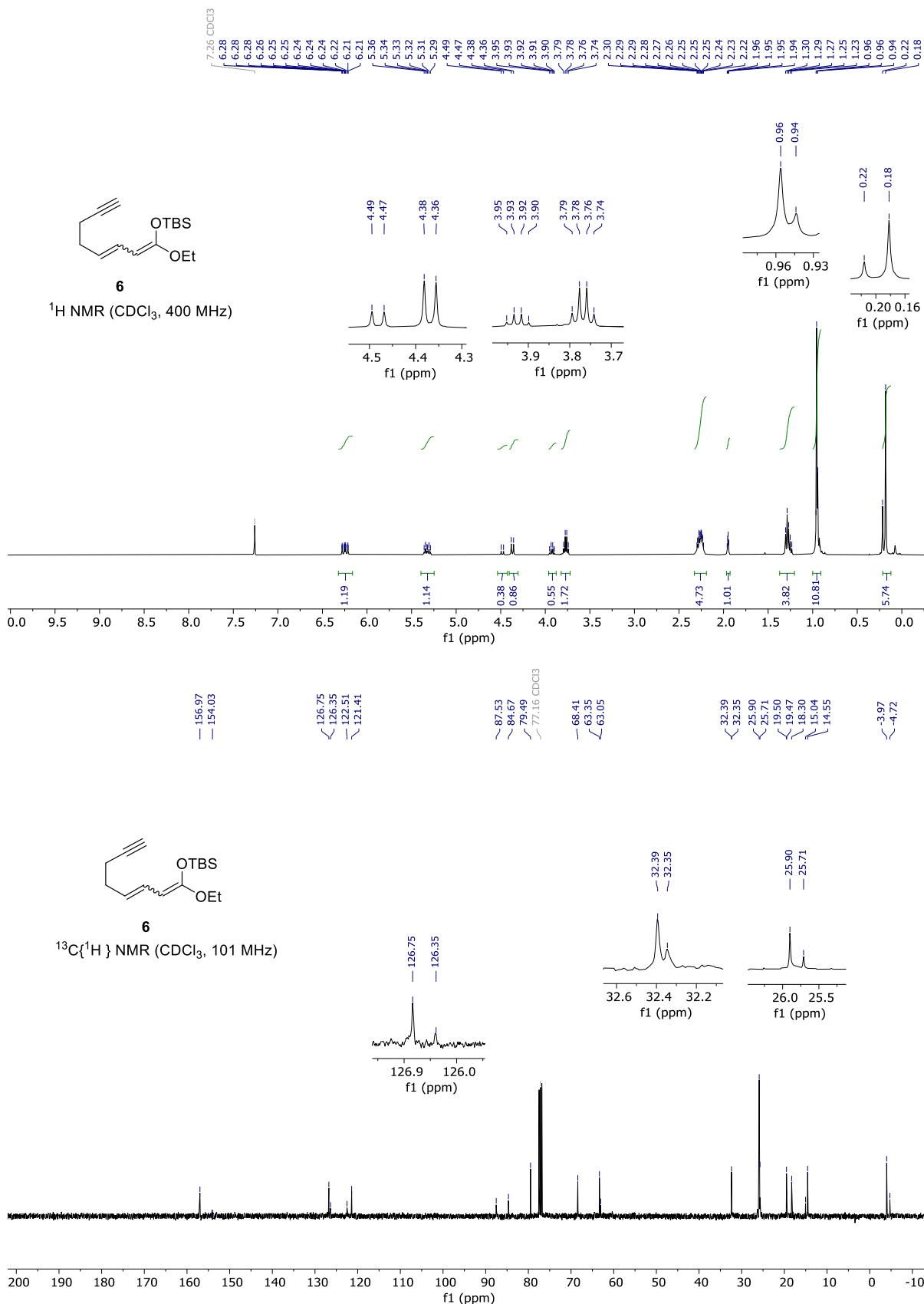
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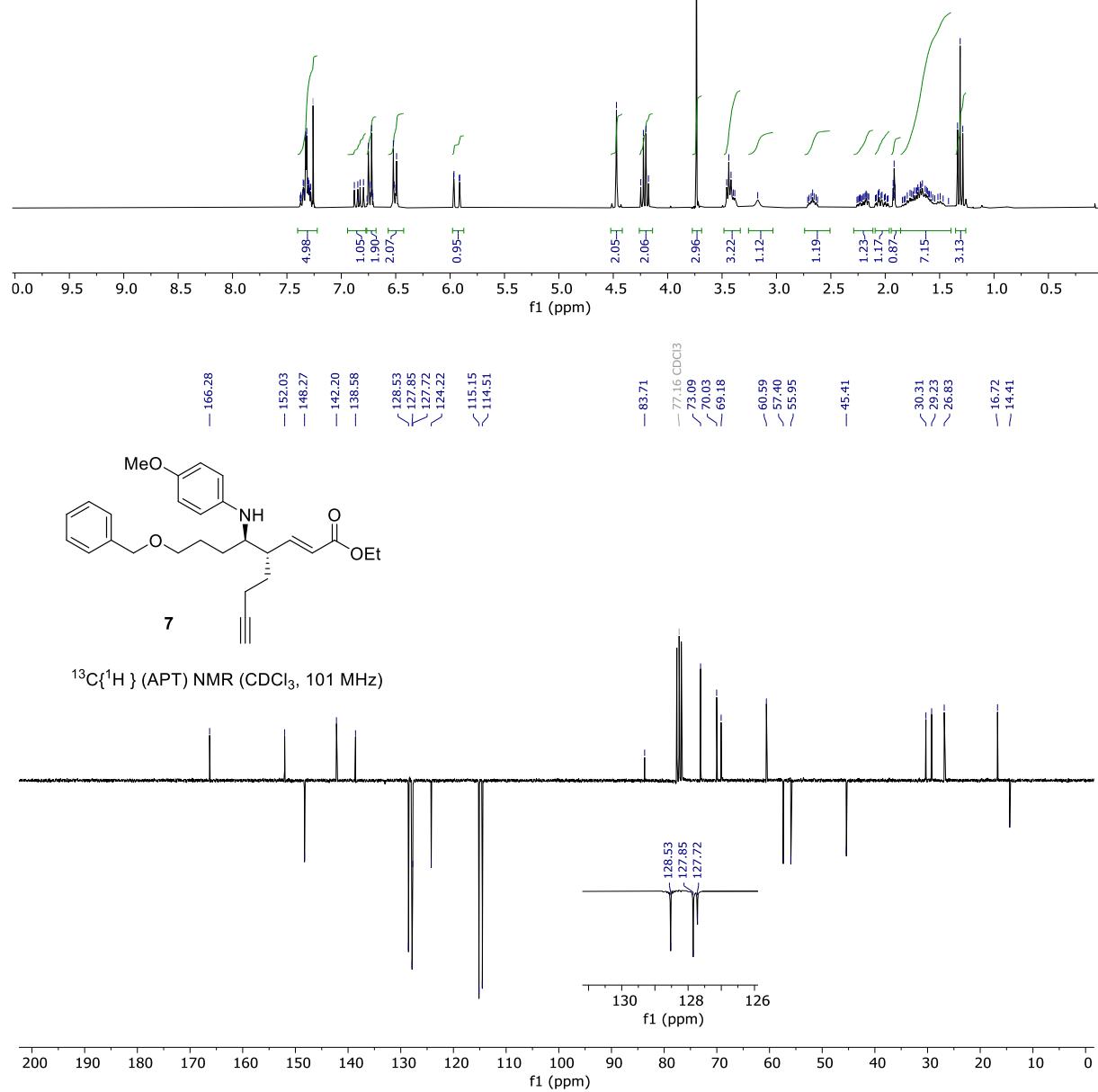
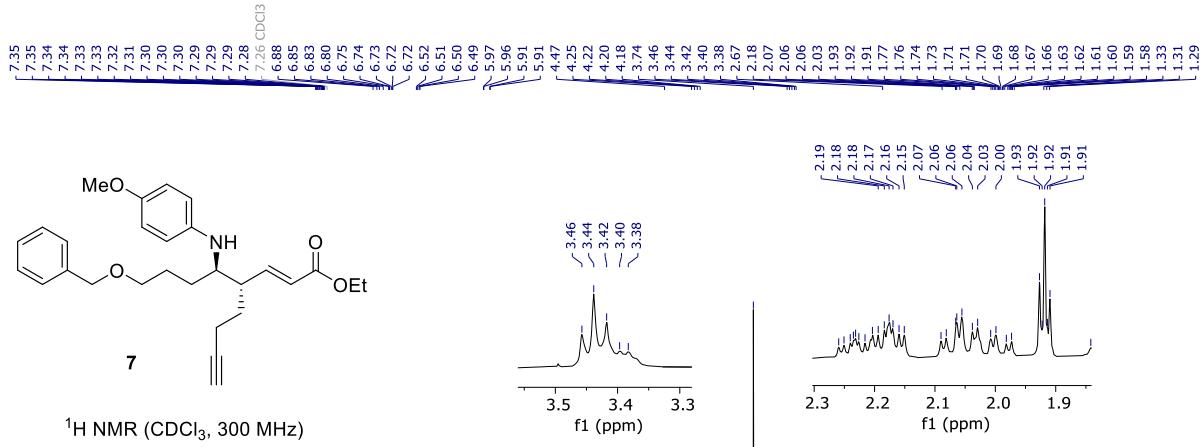
¹³C{¹H } NMR (CDCl₃, 100 MHz)

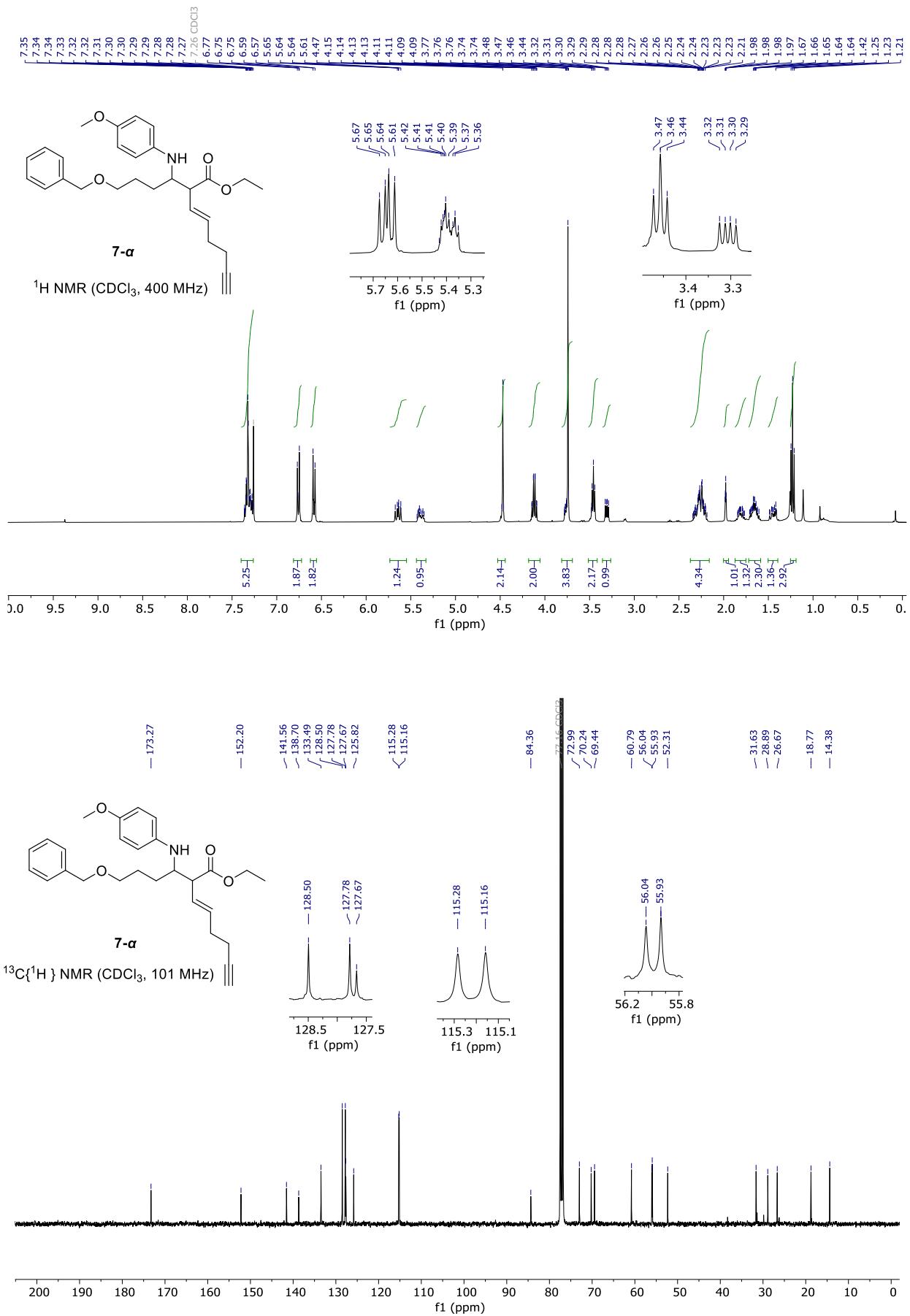


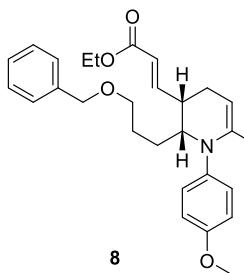


¹H NMR (CDCl₃, 400 MHz)

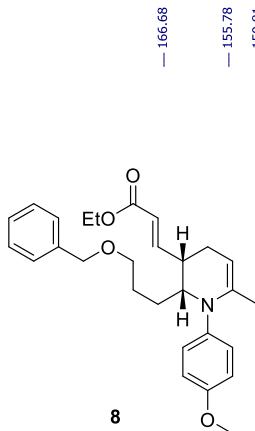
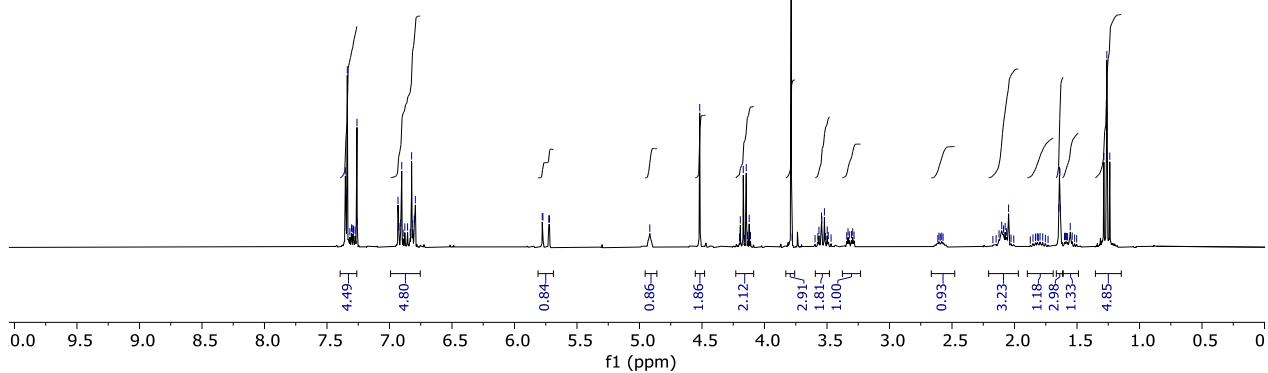




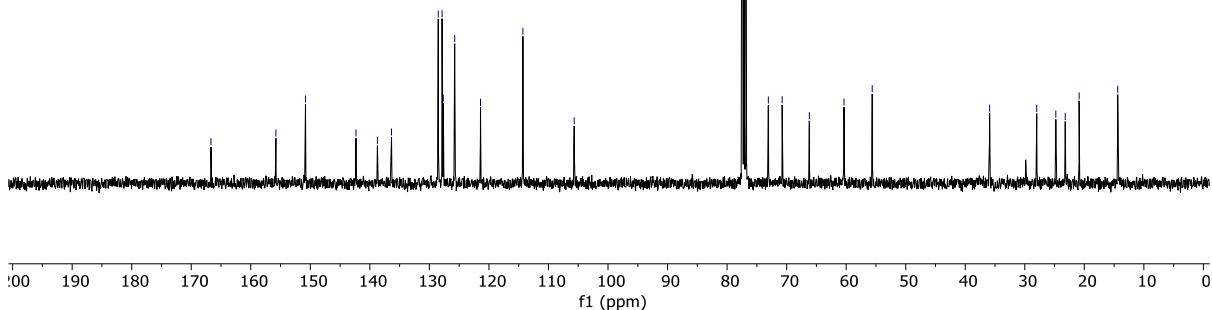


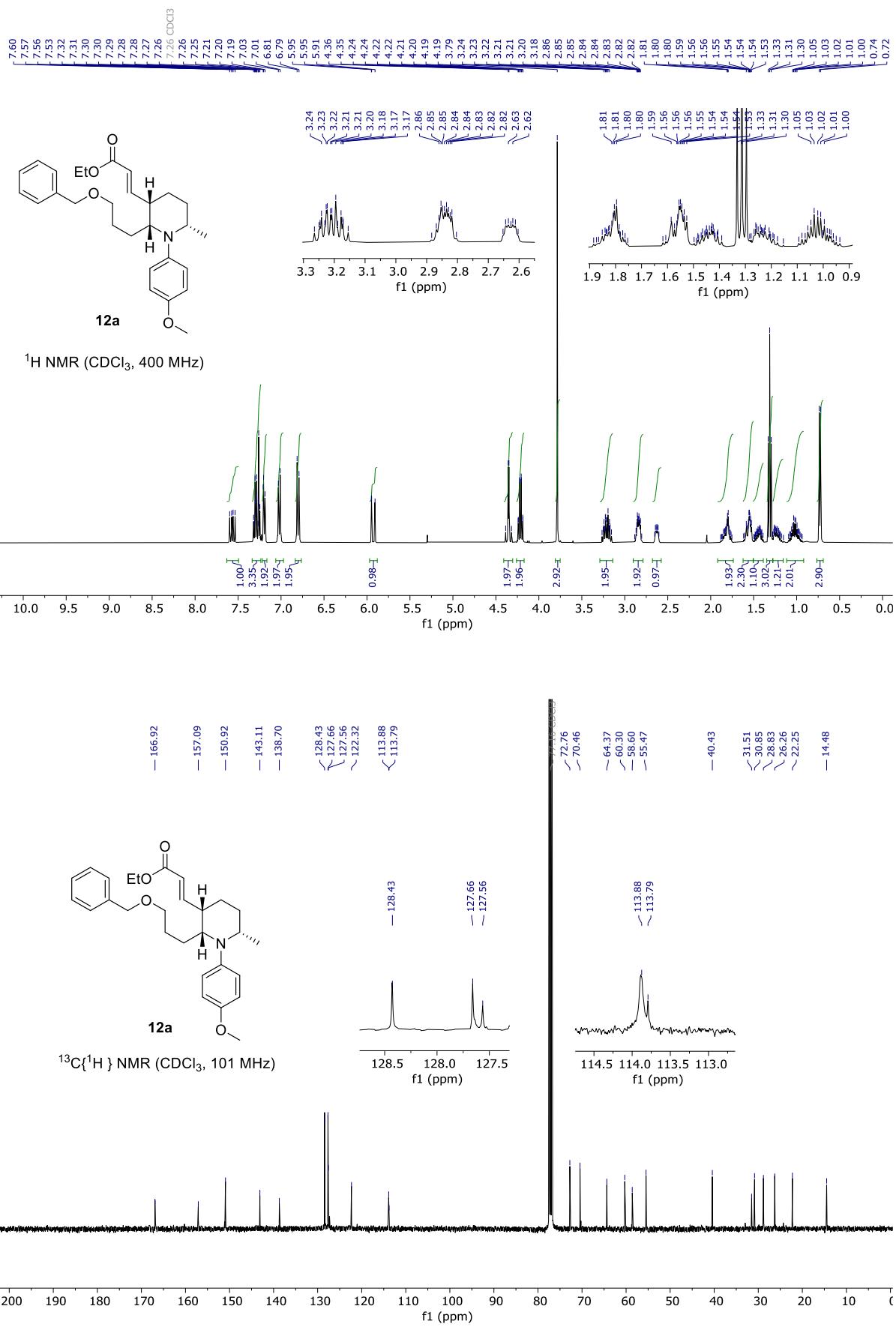


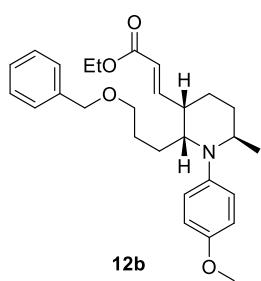
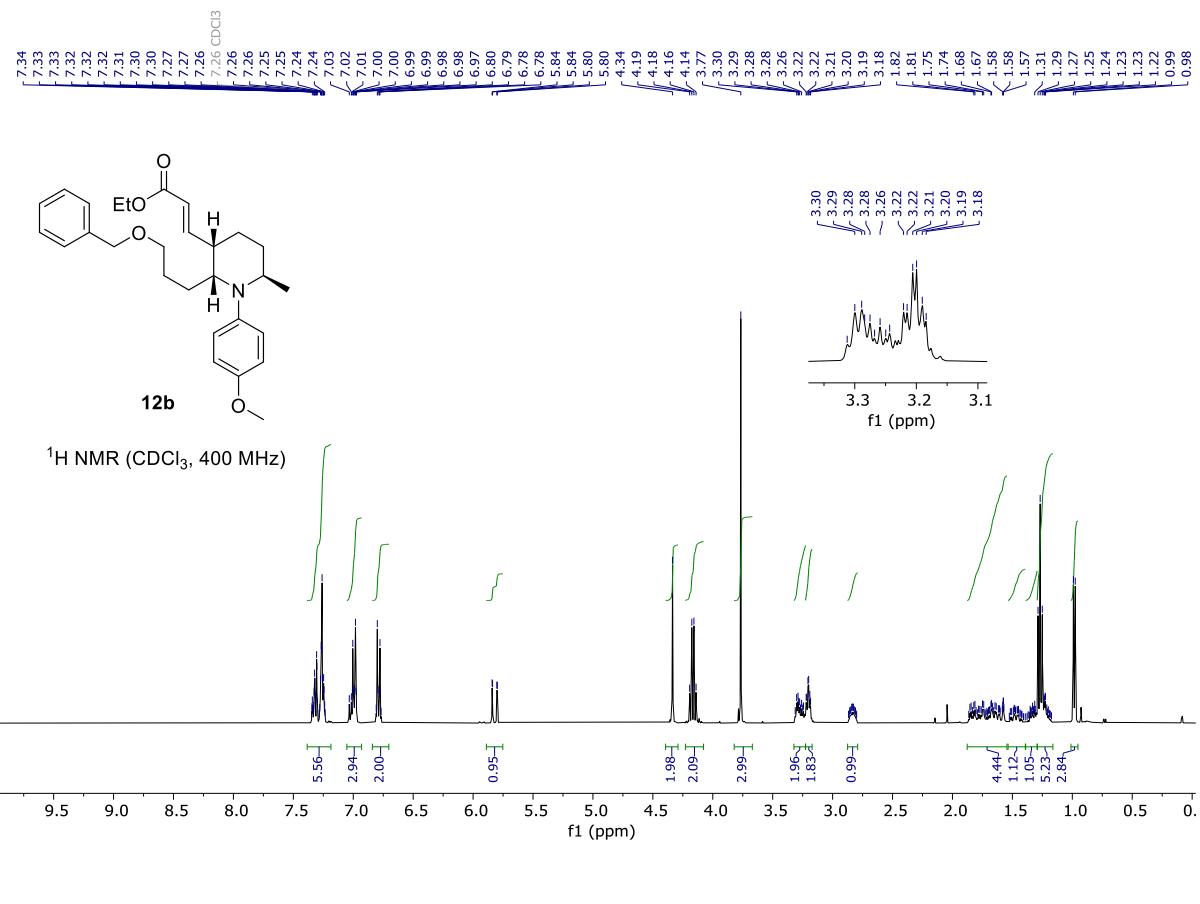
¹H NMR (CDCl₃, 400 MHz)



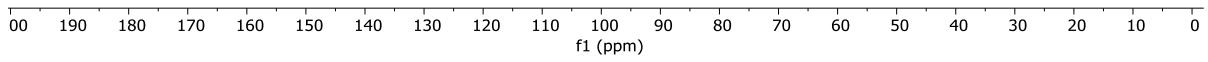
$^{13}\text{C}\{\text{H}\}$ NMR (CDCl_3 , 101 MHz)

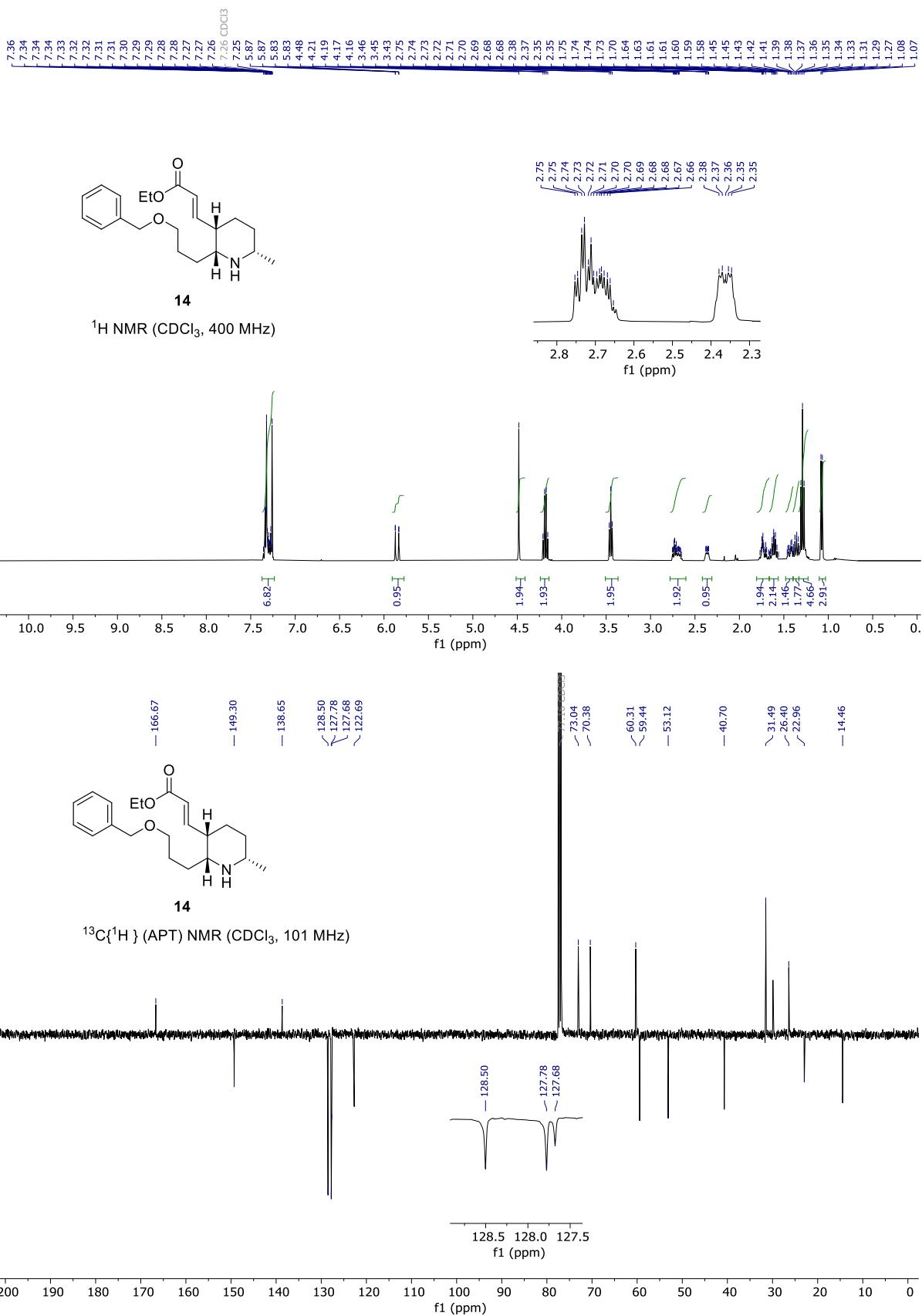


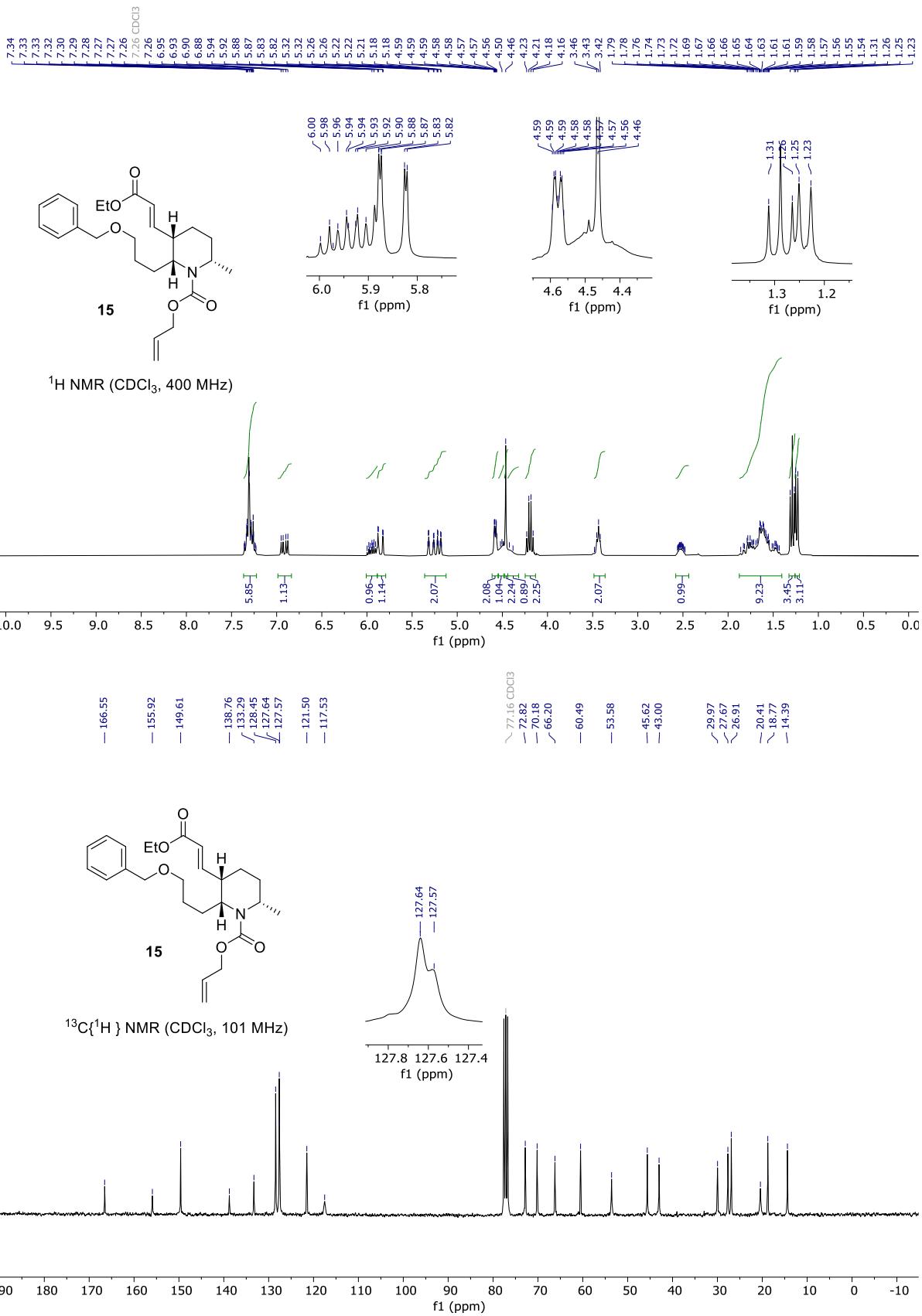


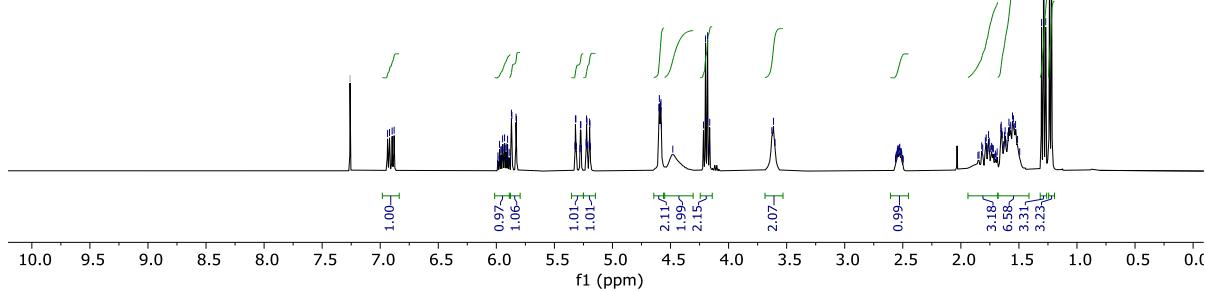
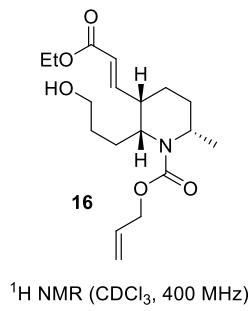


¹³C{¹H } NMR (CDCl₃, 101 MHz)

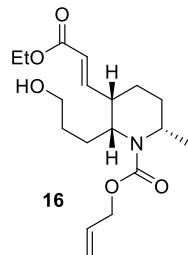




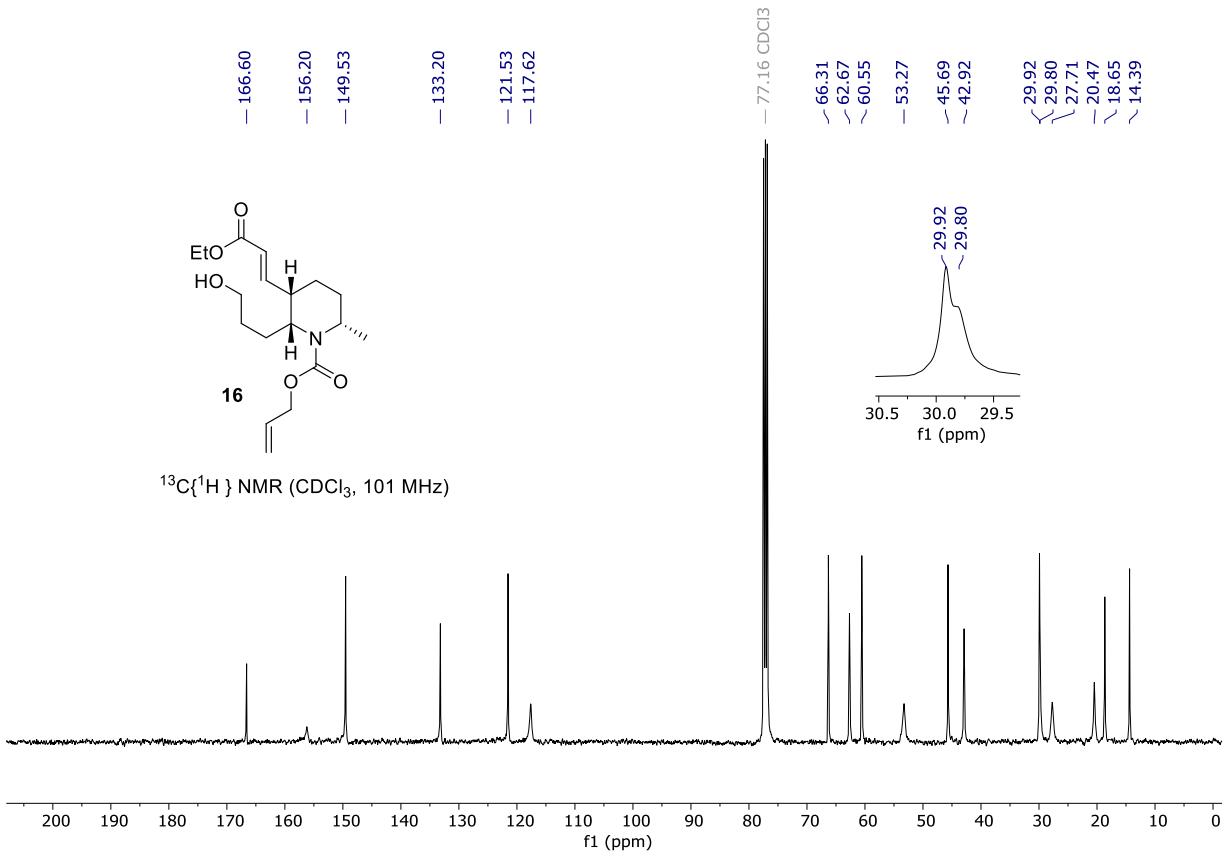


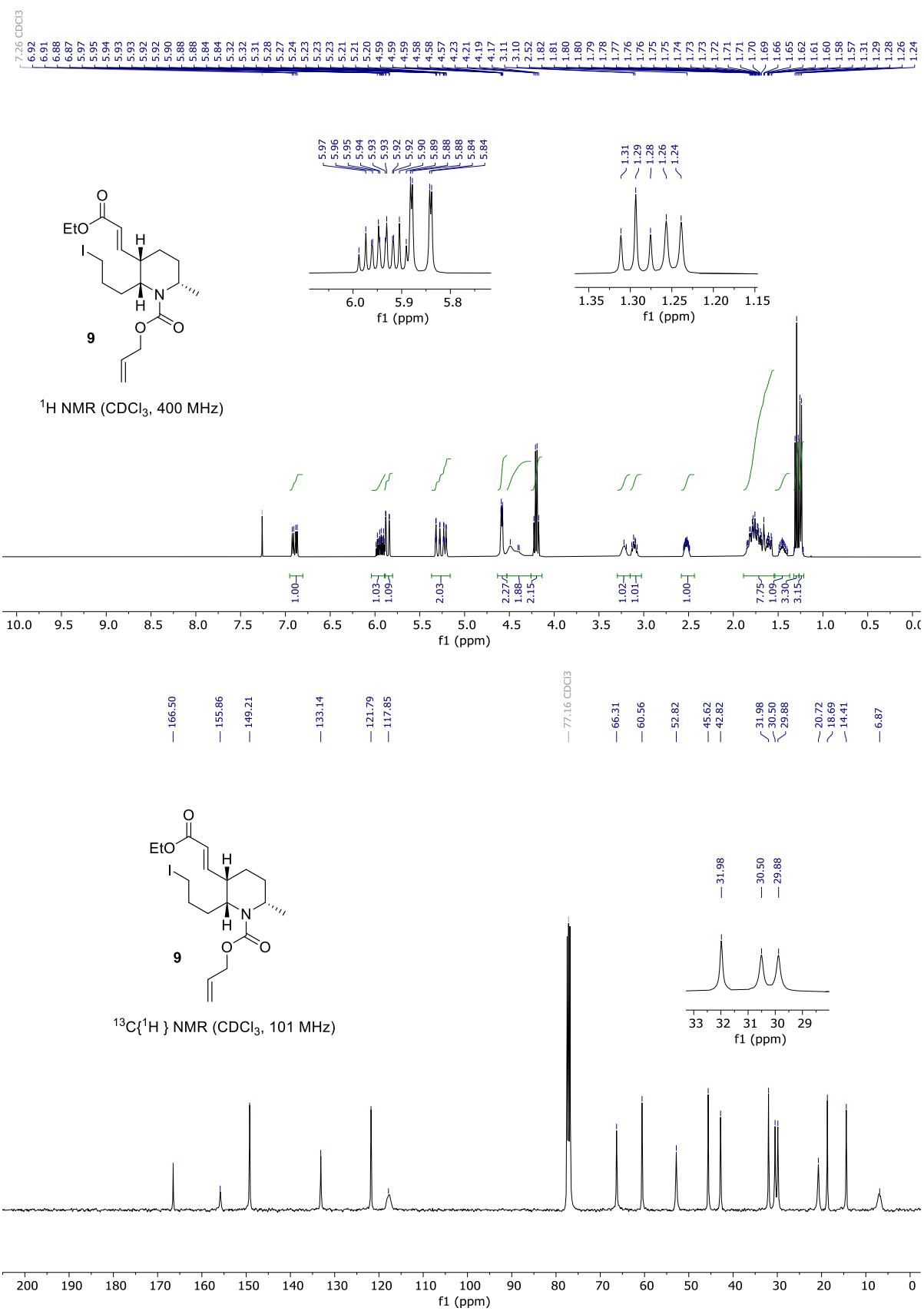


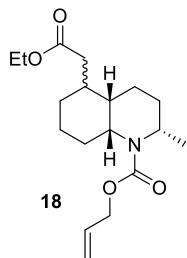
-166.60
-156.20
-149.53
-133.20
-121.53
-117.62
- 0.00



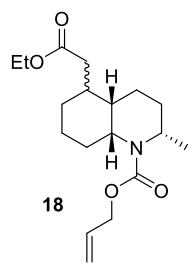
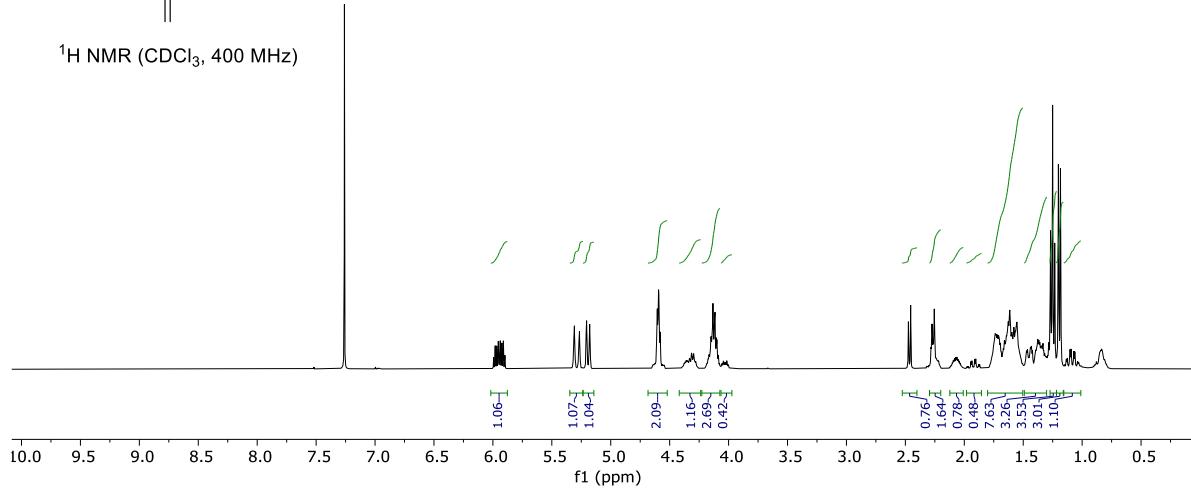
¹³C{¹H } NMR (CDCl₃, 101 MHz)



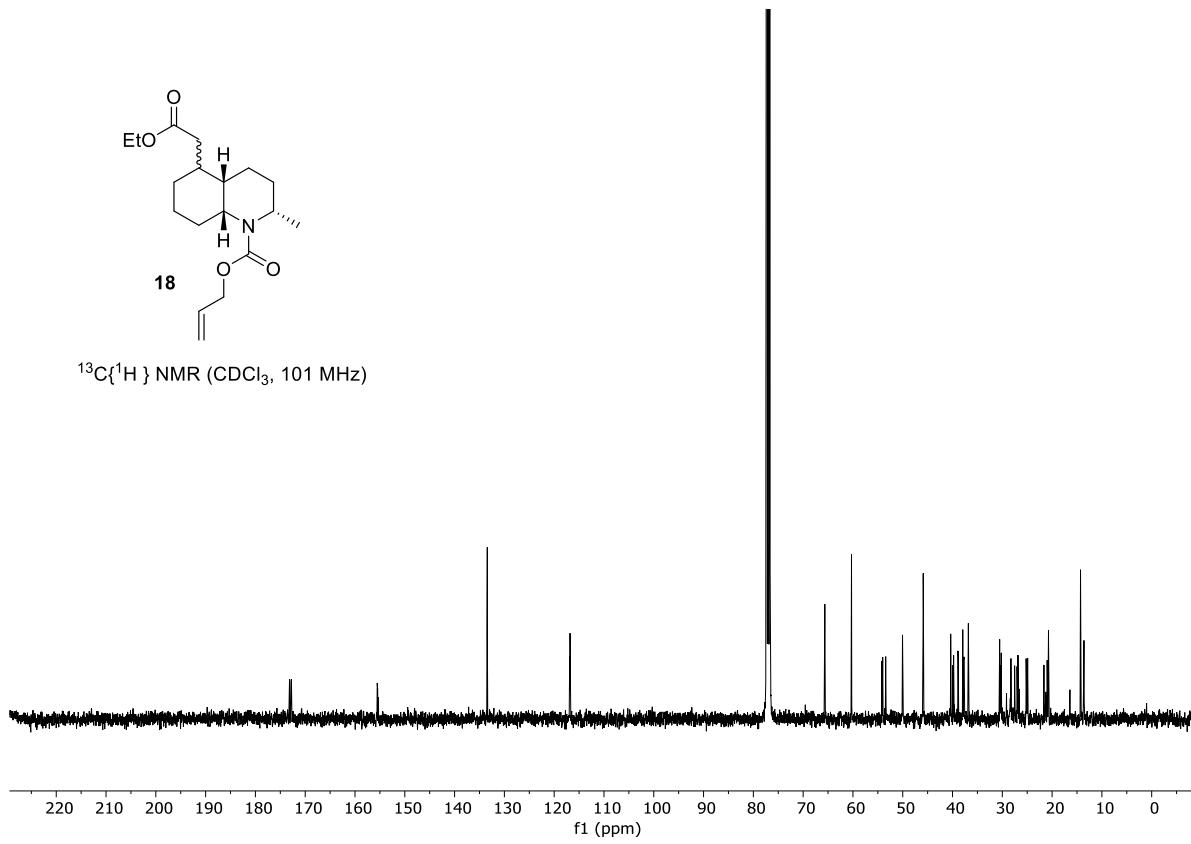


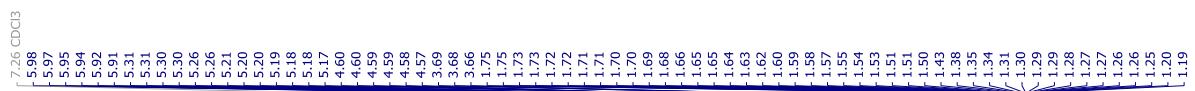


^1H NMR (CDCl_3 , 400 MHz)

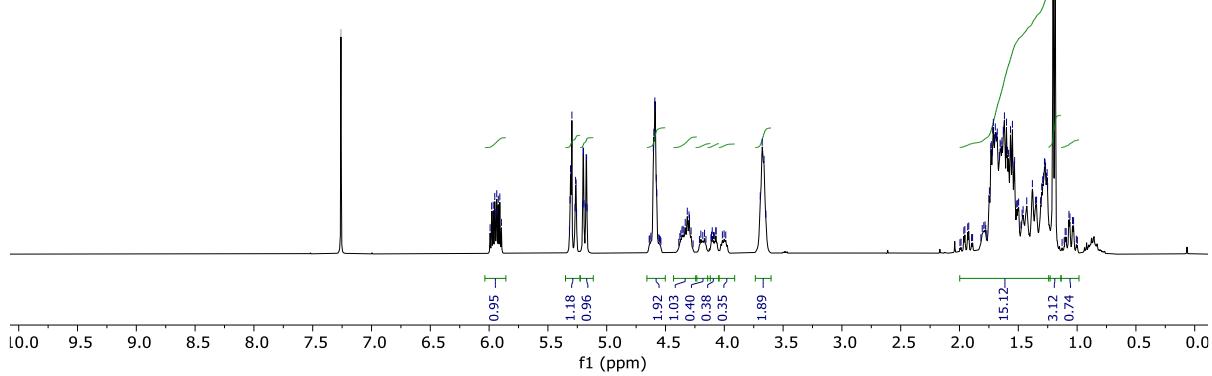


$^{13}\text{C}\{\text{H}\}$ NMR (CDCl_3 , 101 MHz)

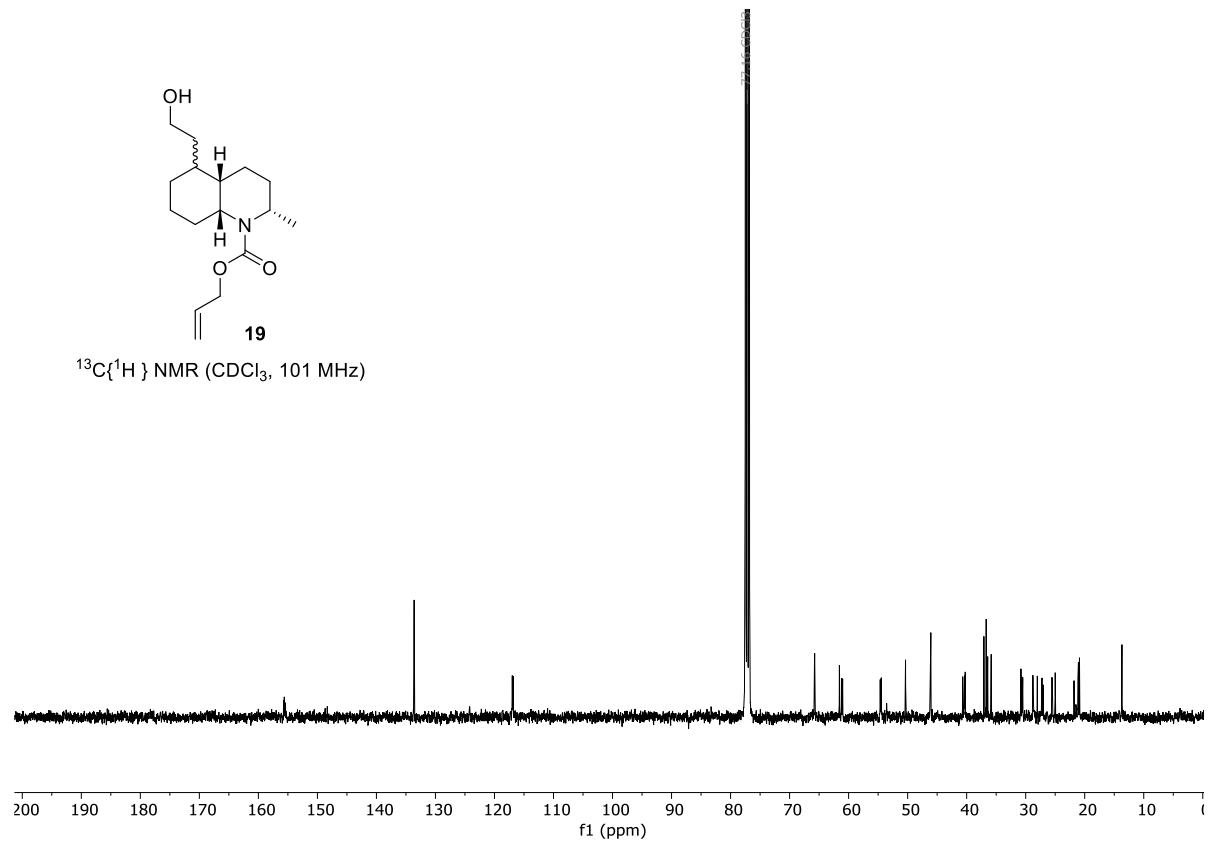


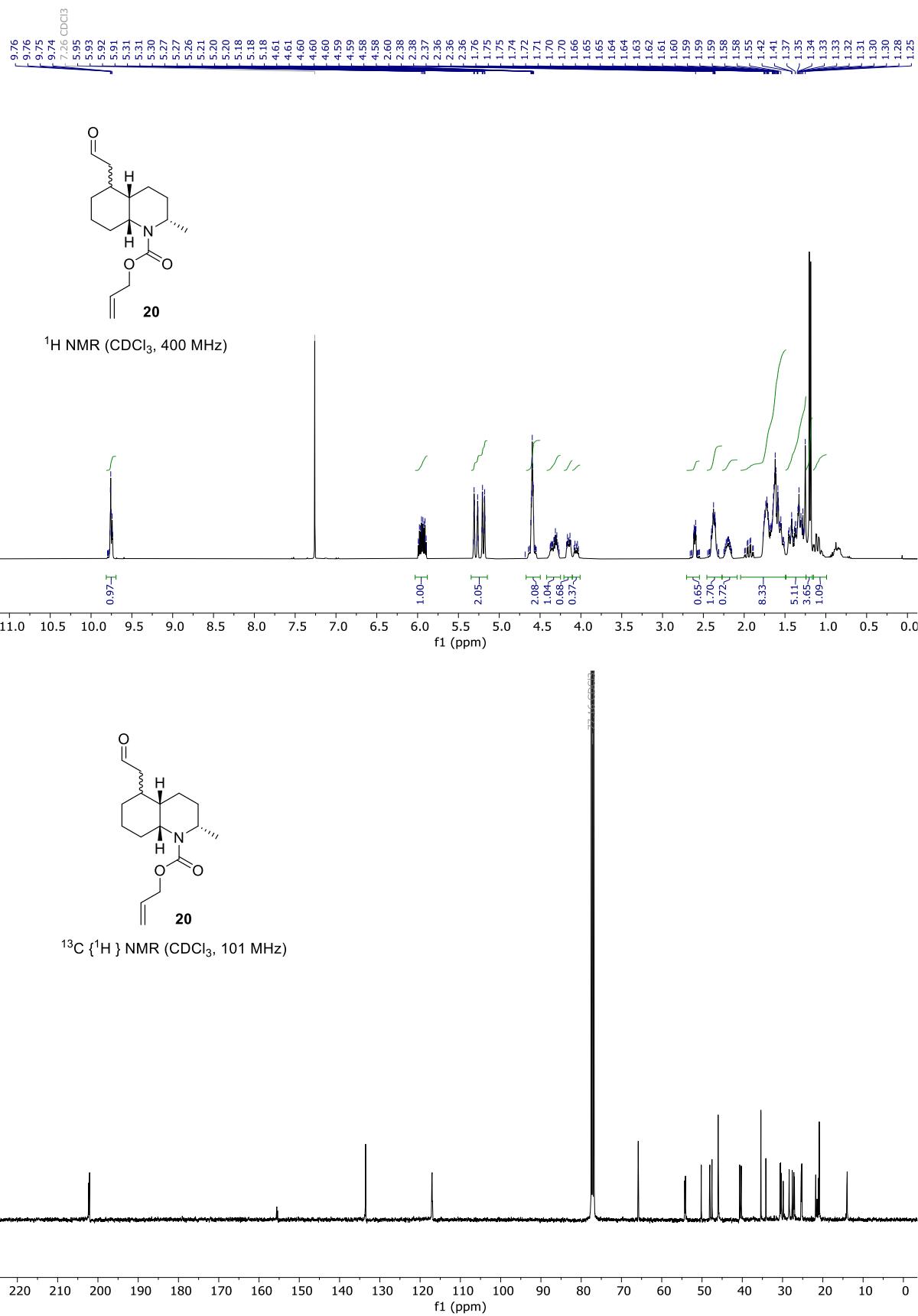


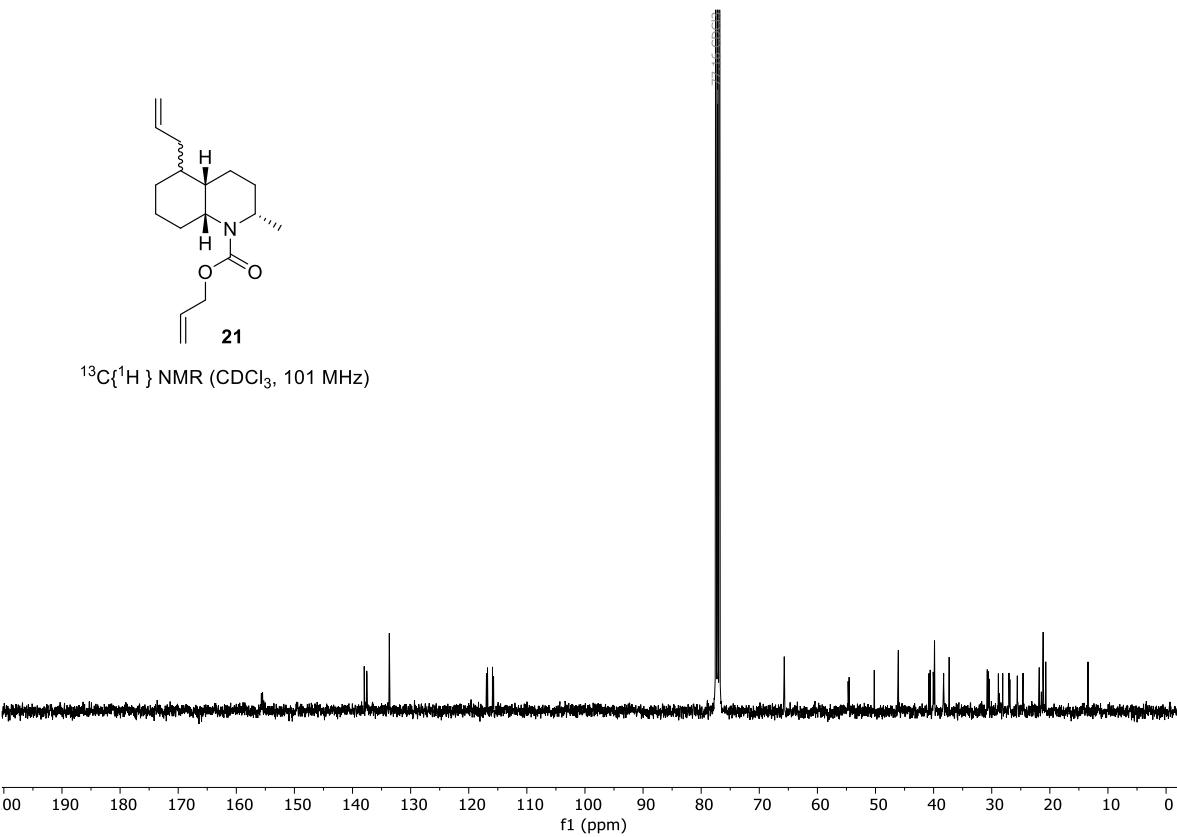
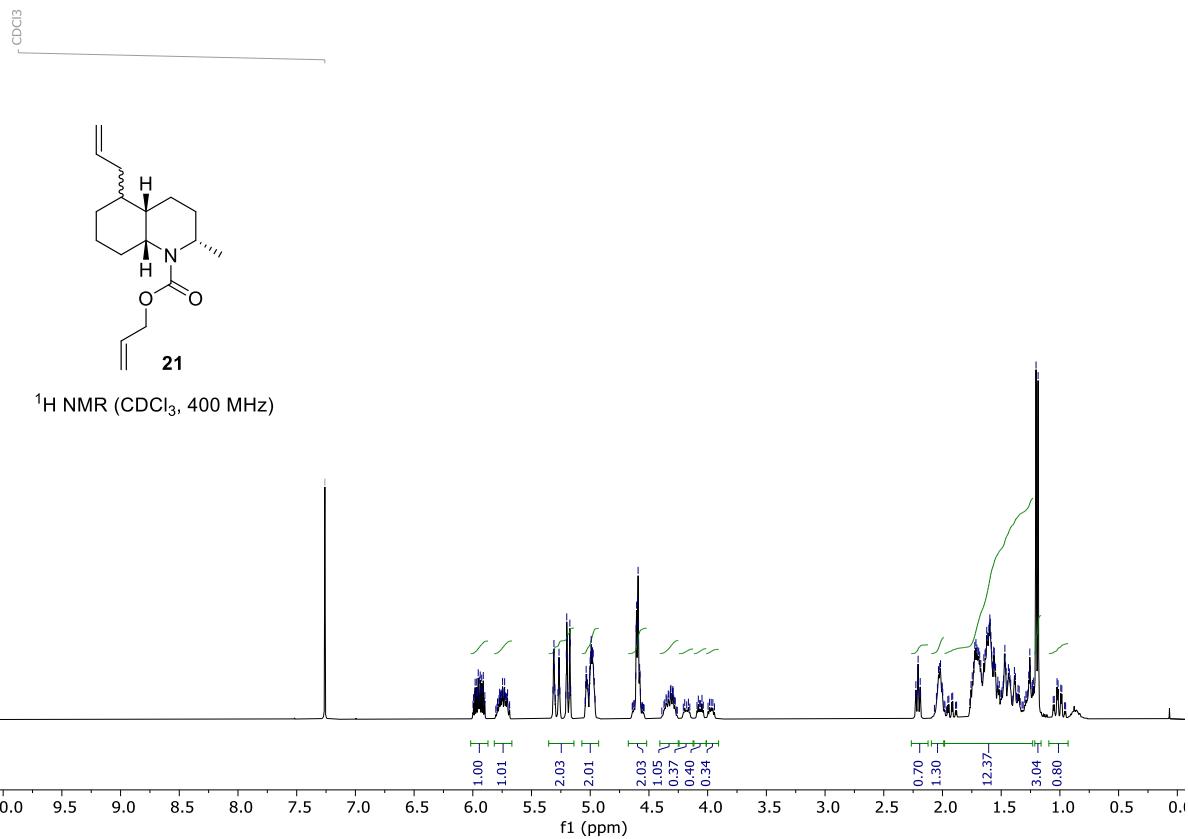
¹H NMR (CDCl₃, 400 MHz)

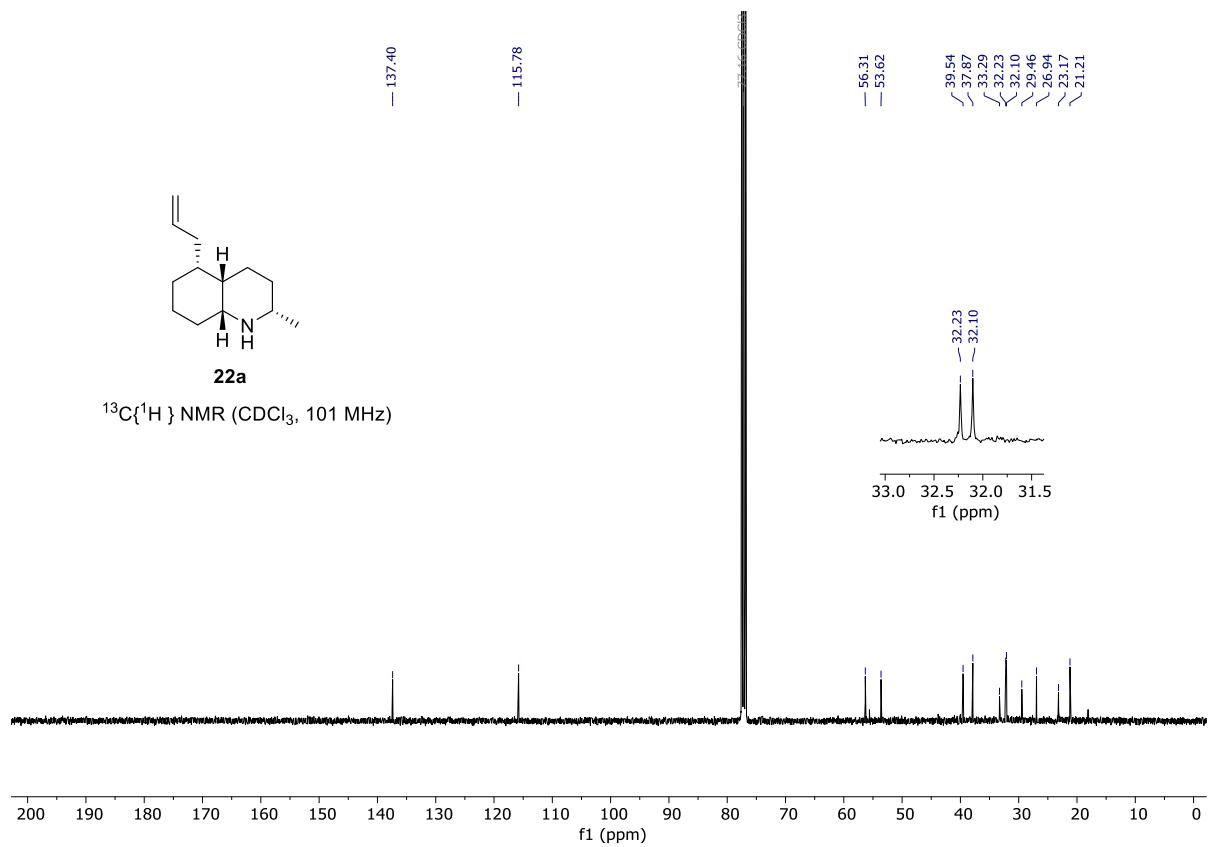
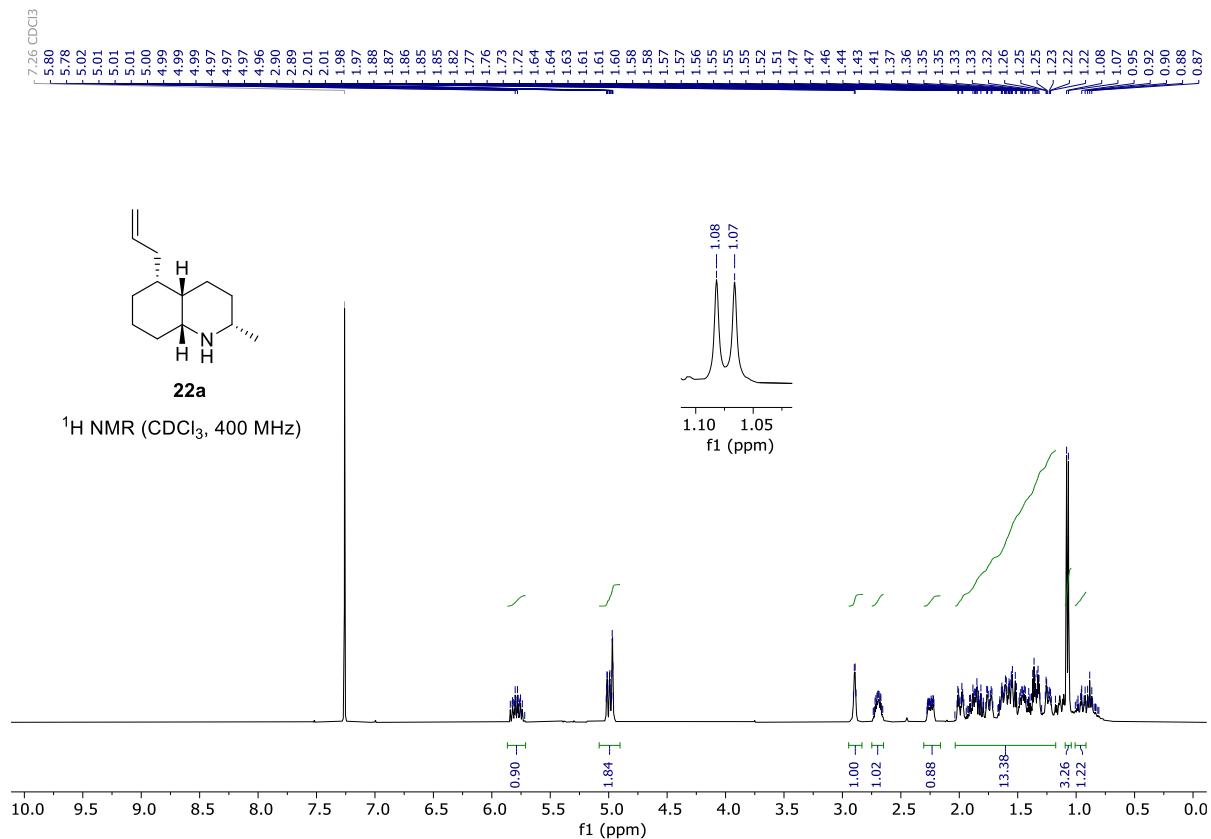


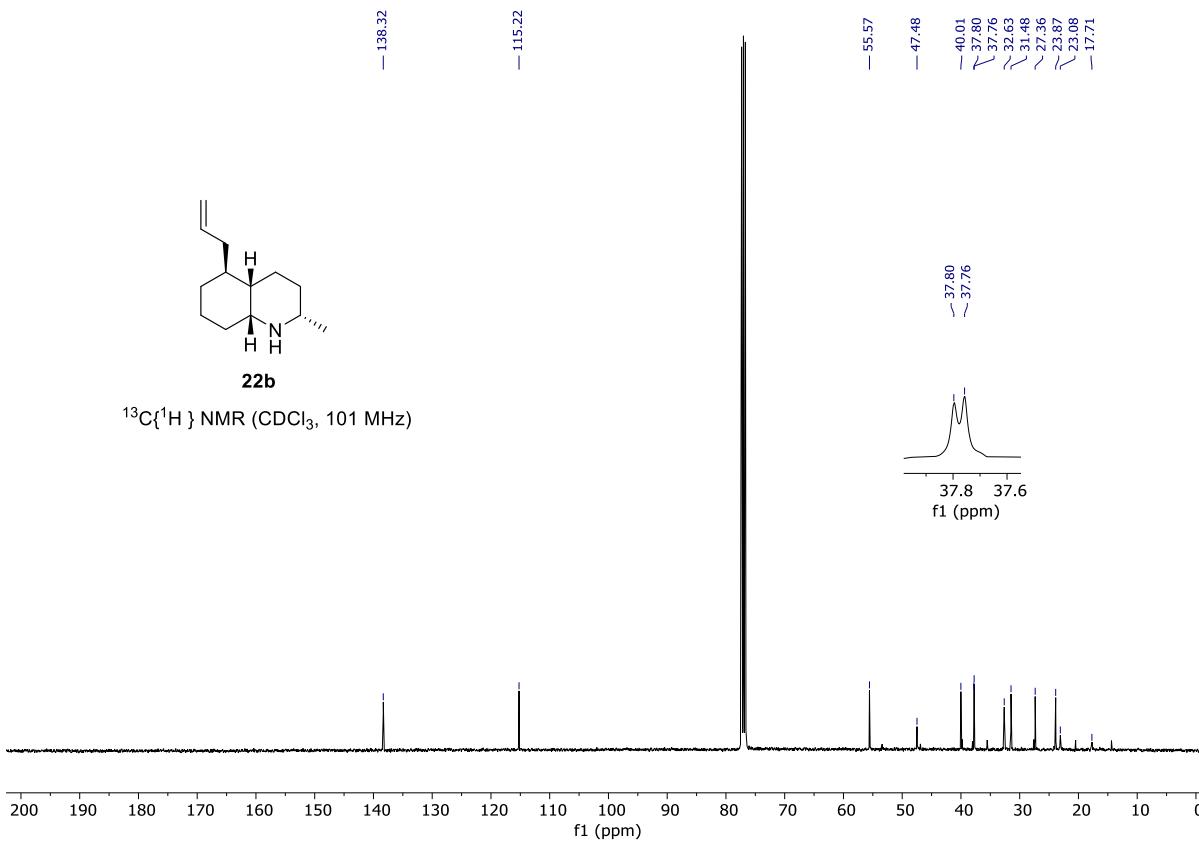
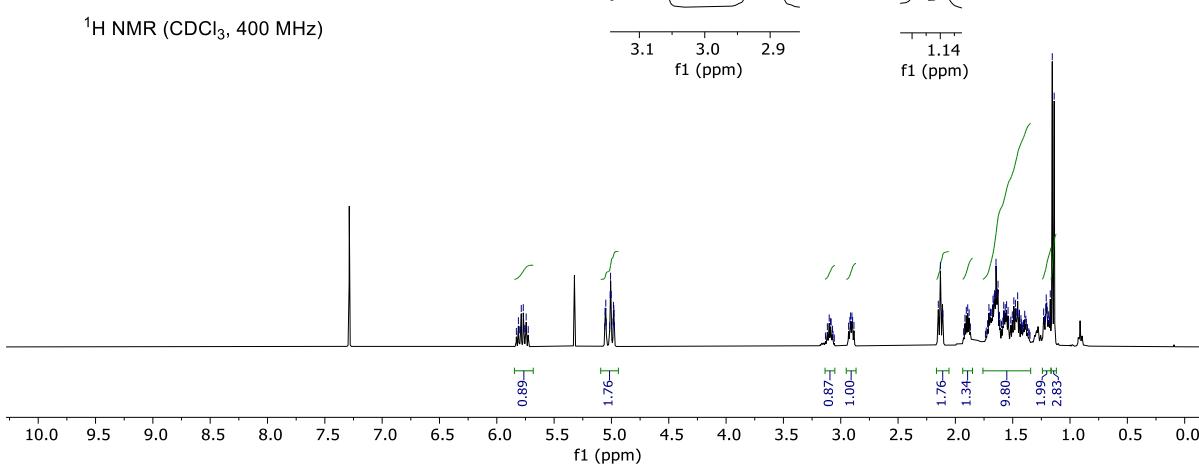
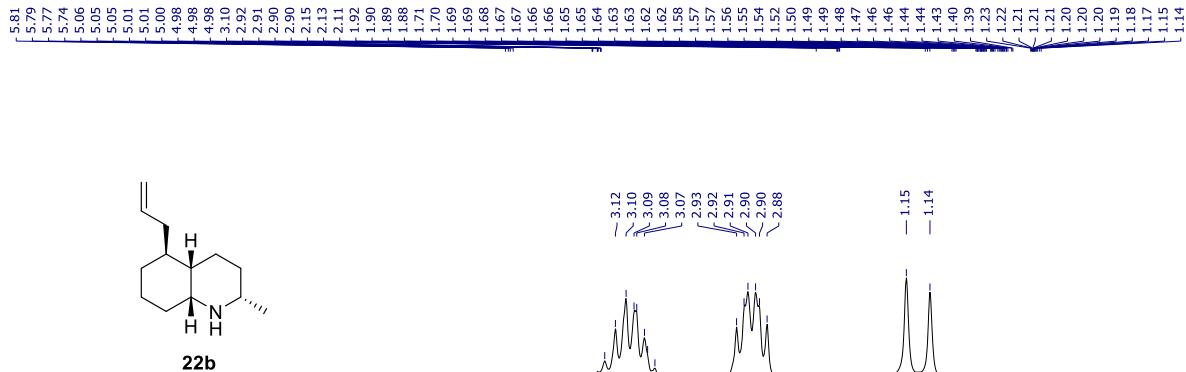
¹³C{¹H} NMR (CDCl₃, 101 MHz)

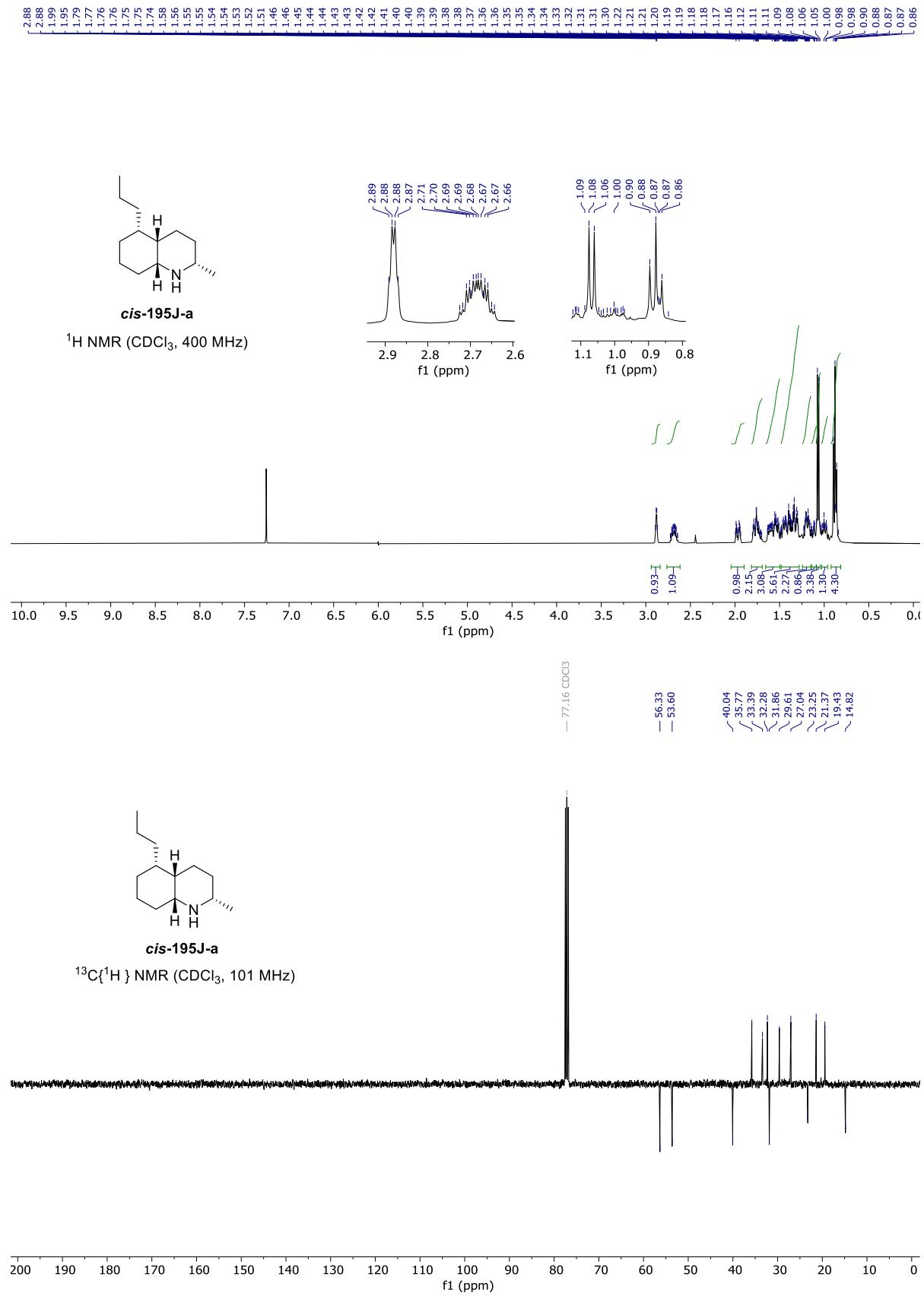


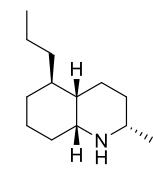
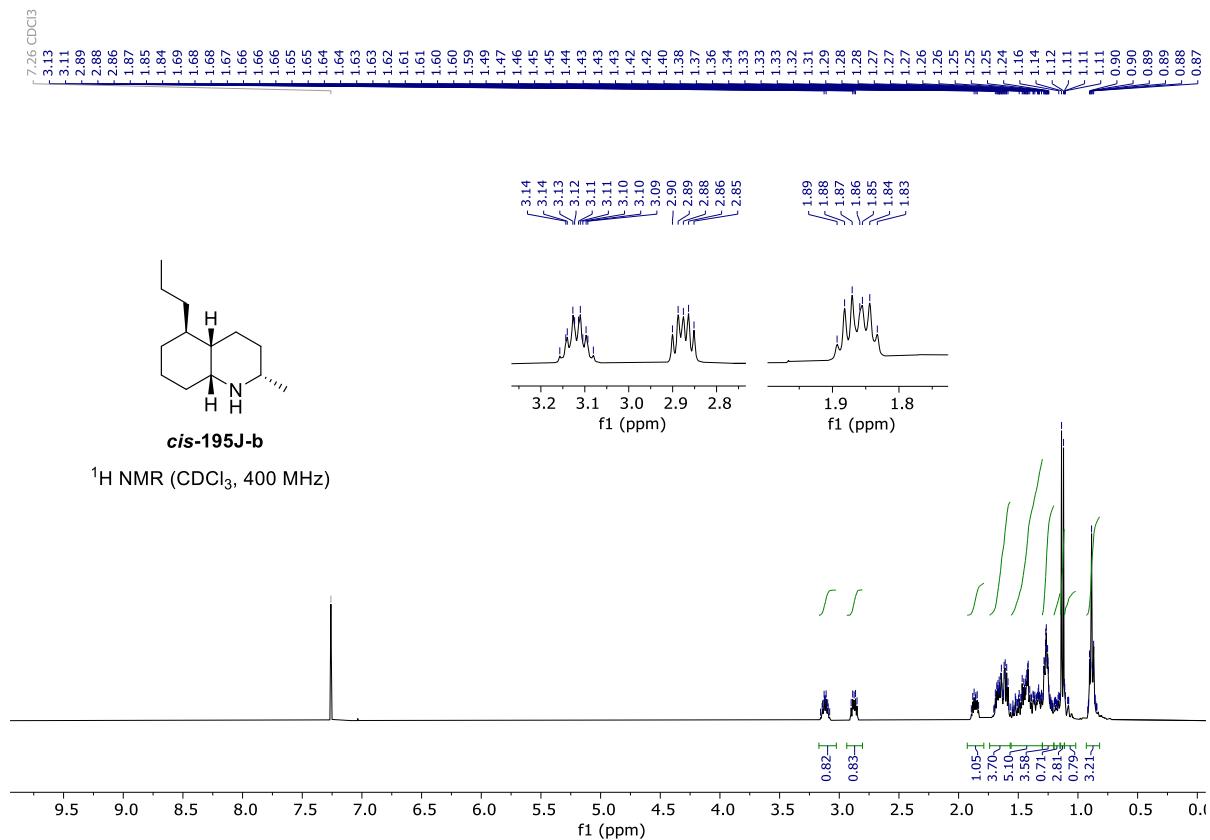






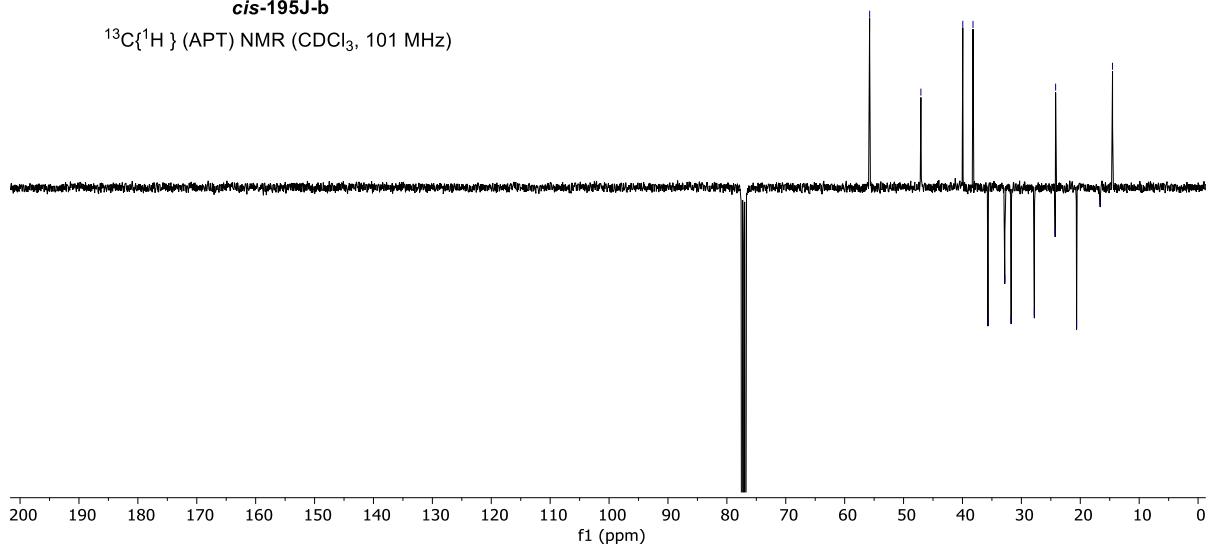


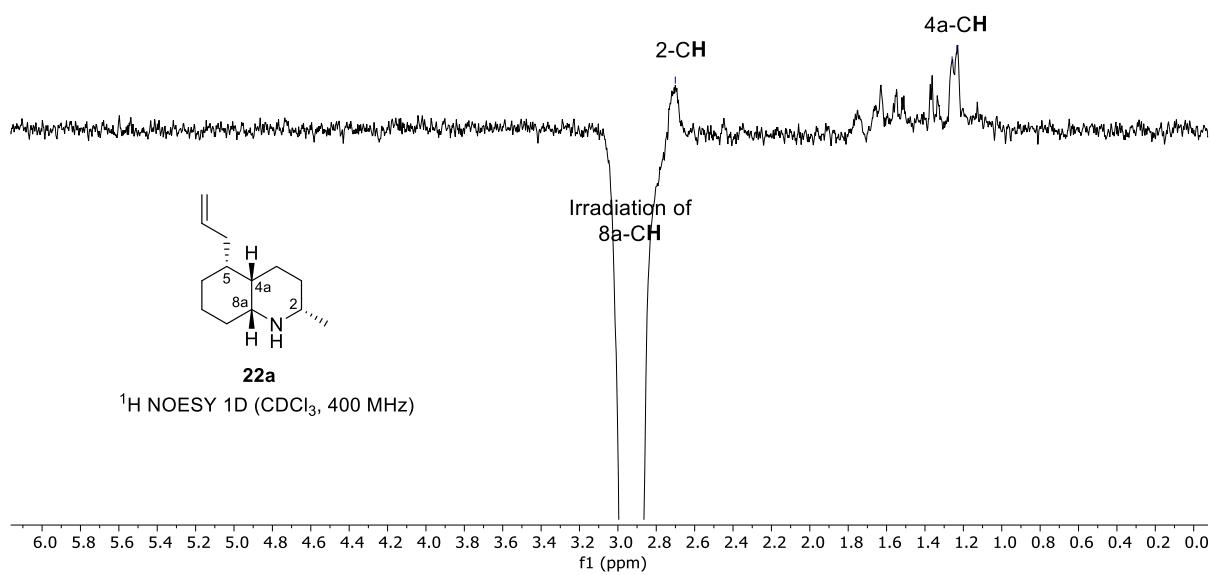
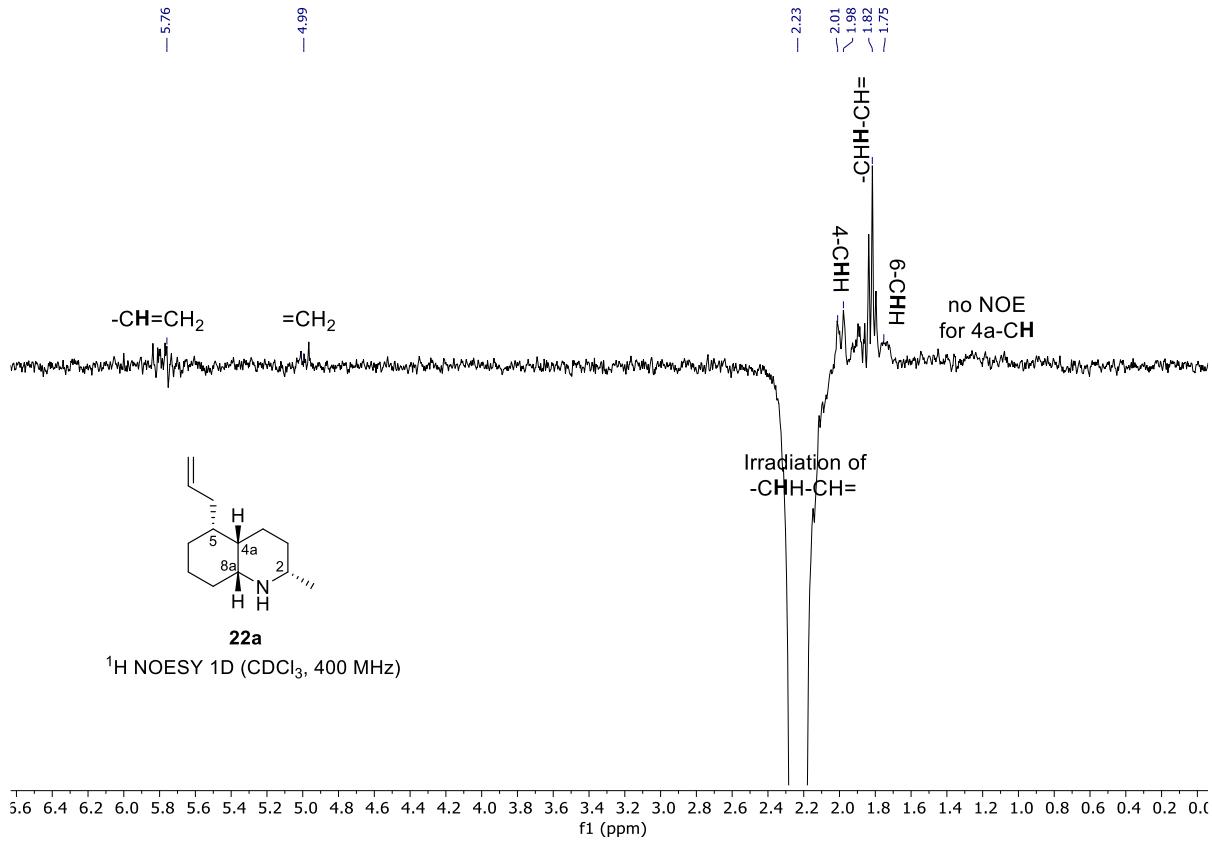


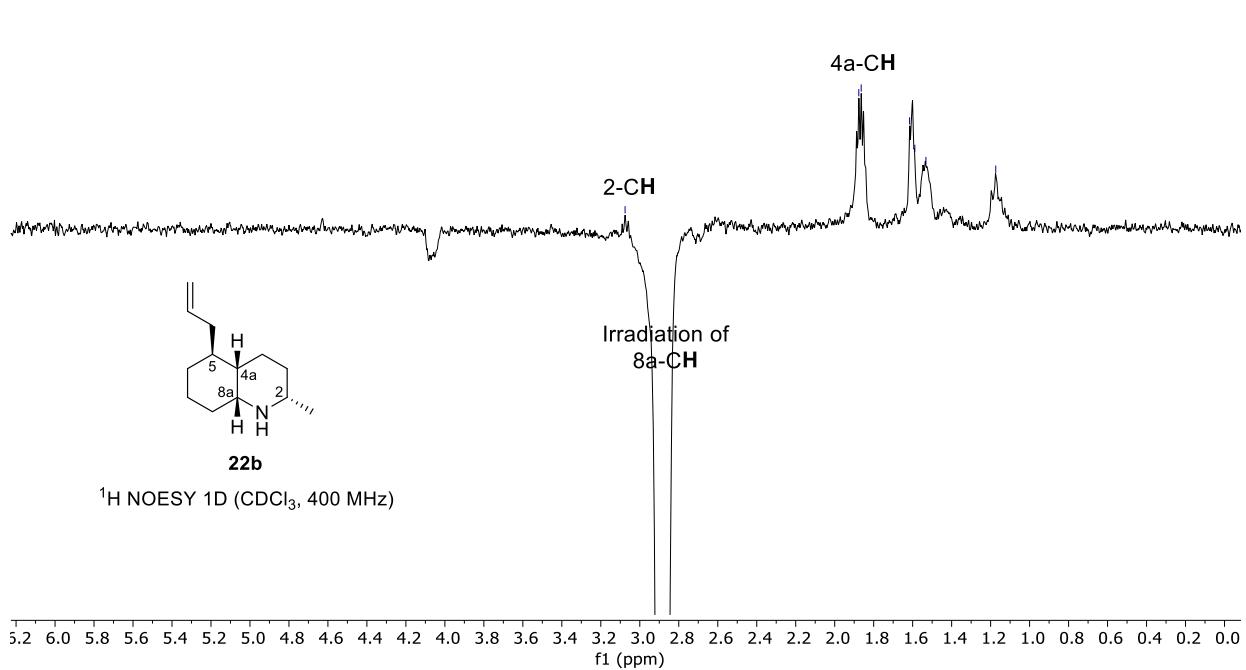
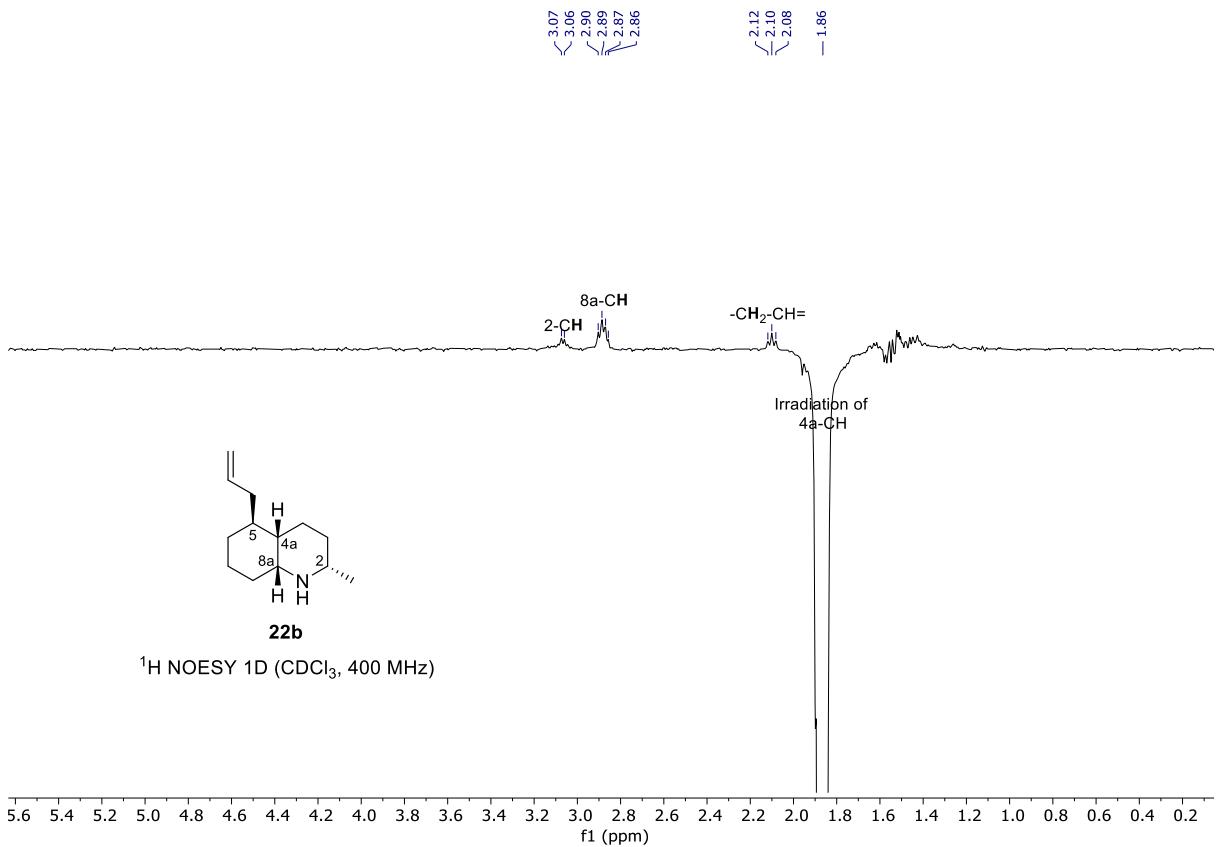


cis-195J-b

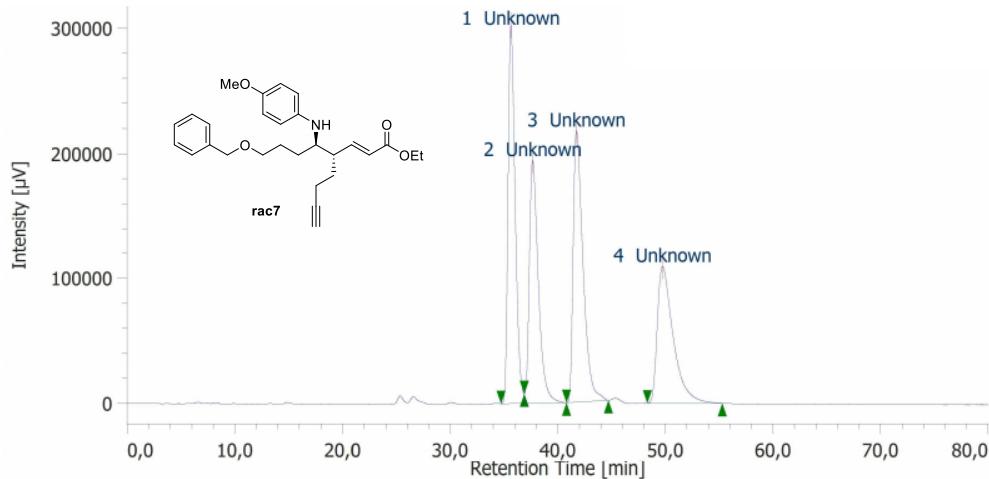
$^{13}\text{C}\{^1\text{H}\}$ (APT) NMR (CDCl_3 , 101 MHz)



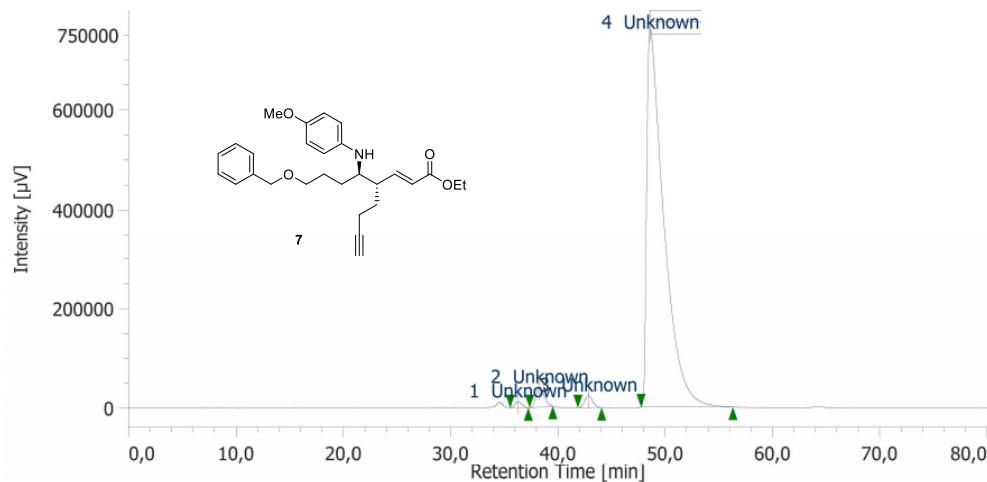




Chromatogram



Chromatogram



NMR data of <i>cis</i> -195J-a and <i>cis</i> -195J-b			
¹ H NMR (CHCl ₃ , 400 MHz)		¹³ C NMR (CHCl ₃ , 101 MHz)	
<i>cis</i> -195J-a	<i>cis</i> -195J-b	<i>cis</i> -195J-a	<i>cis</i> -195J-b
2.88 (q, 1H, <i>J</i> = 3.0 Hz)	3.12 (m, 1H)	56.3	55.8
2.68 (dqd, 1H, <i>J</i> = 10.6, 6.3, 2.7 Hz)	2.88 (dt, 1H, <i>J</i> = 9.7, 5.1 Hz)	53.6	47.1
2.01 – 1.93 (m, 1H)	1.86 (dt, 1H, <i>J</i> = 10.5, 4.5 Hz)	40.0	39.9
1.82 – 1.67 (m, 2H)	1.71 – 1.56 (m, 4H)	35.8	38.2
1.65 – 1.50 (m, 3H)	1.55 – 1.30 (m, 5H)	33.4	35.7
1.49 – 1.27 (m, 5H)	1.29 – 1.20 (m, 4H)	32.3	32.8
1.23 – 1.14 (m, 2H)	1.19 – 1.14 (m, 1H)	31.9	31.7
1.14 – 1.08 (m, 1H)	1.13 (d, 3H, <i>J</i> = 6.7 Hz)	29.6	27.8
1.07 (d, 3H, <i>J</i> = 6.3 Hz)	1.12 – 1.01 (m, 1H)	27.0	24.3
1.03 – 0.94 (m, 1H)	0.89 (t, 3H, <i>J</i> = 7.3 Hz)	23.3	24.2
0.88 (t, 3H, <i>J</i> = 7.2 Hz)		21.4	20.6
0.92 – 0.82 (m, 1H) ppm		19.4	16.6
Optical rotation: <i>cis</i> -195J-a [α] _D ²² = -12.4 (<i>c</i> = 0.45, CHCl ₃) <i>cis</i> -195J-b [α] _D ²² = +17.5 (<i>c</i> = 0.28, CHCl ₃)		14.8	14.5