

Supporting Information

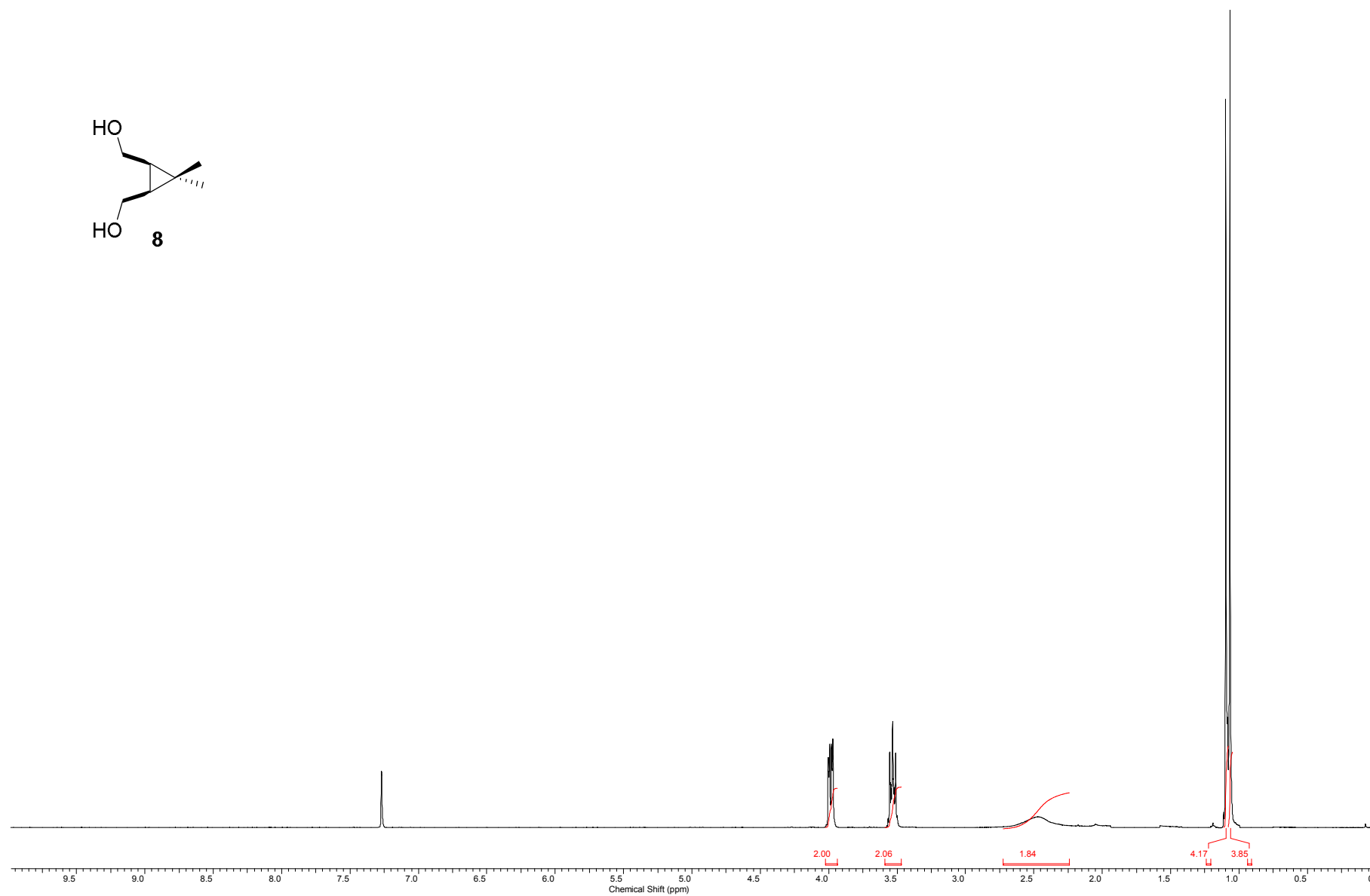
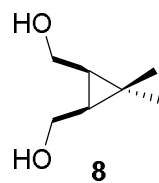
Total Synthesis of the Natural Product EBC-329

Raju S. Thombal and Vrushali H. Jadhav *

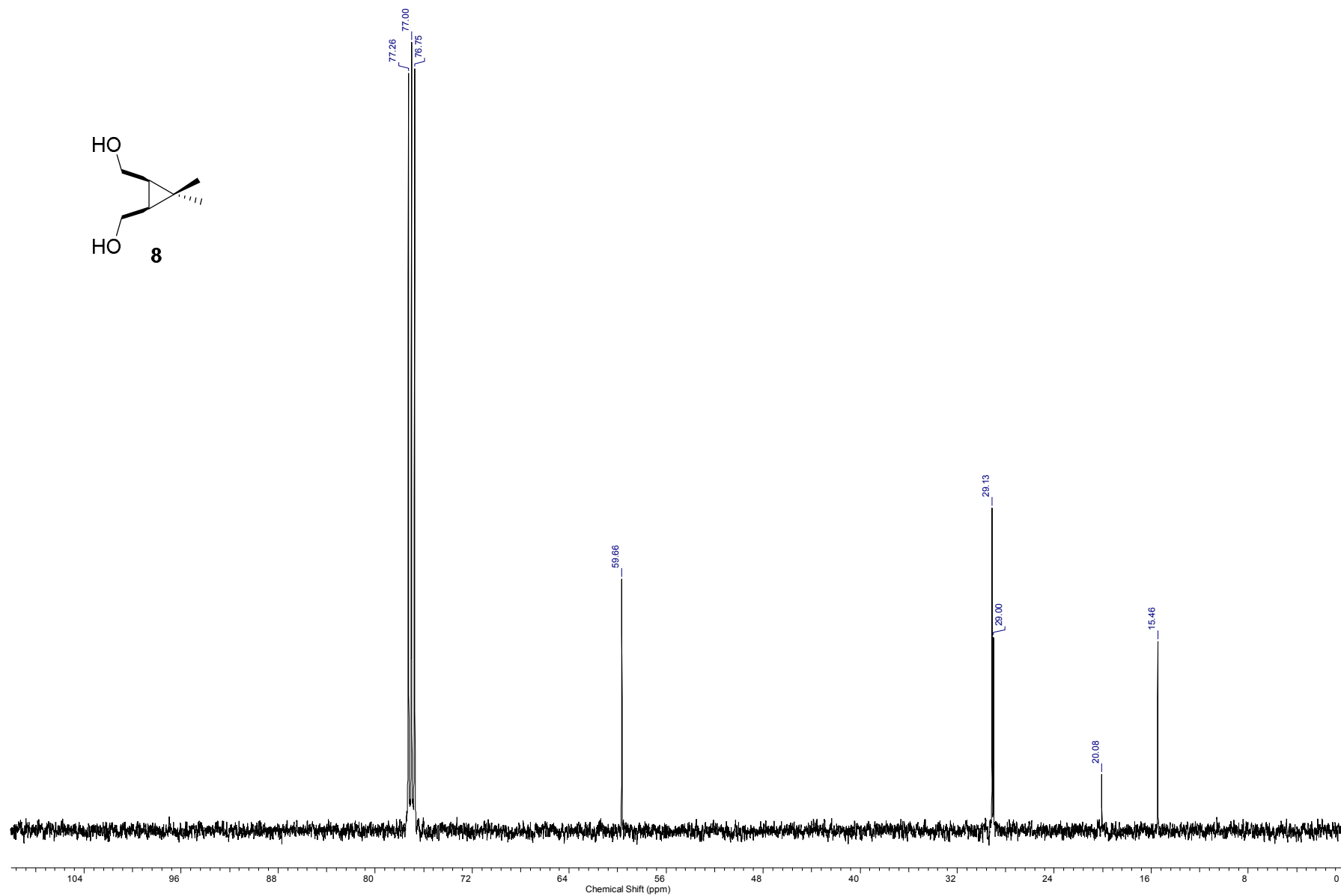
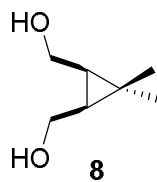
*Division of Organic Chemistry, National Chemical Laboratory (CSIR-NCL), Pune-411008,
India.*

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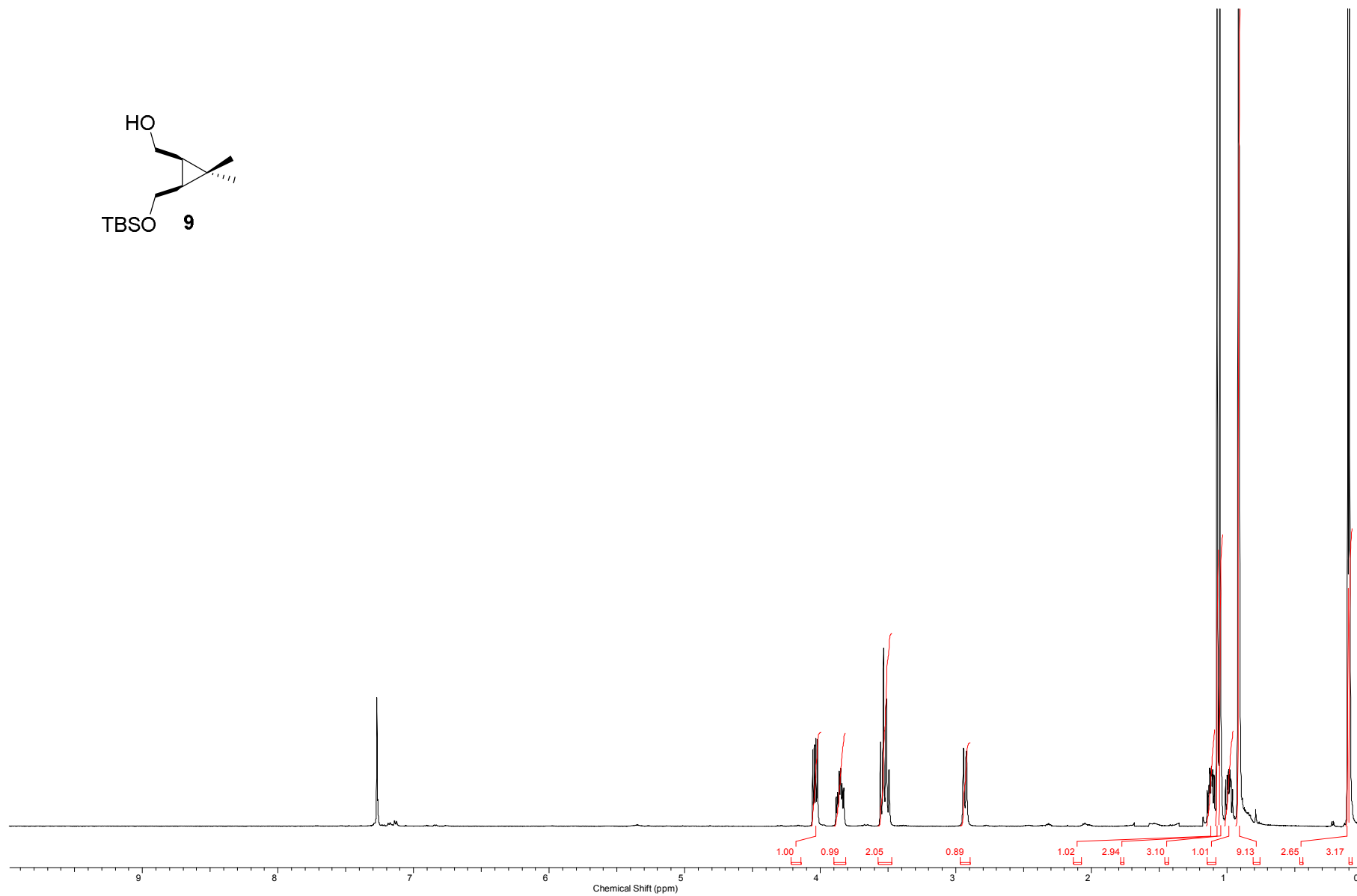
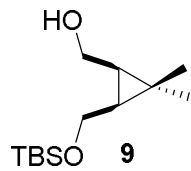
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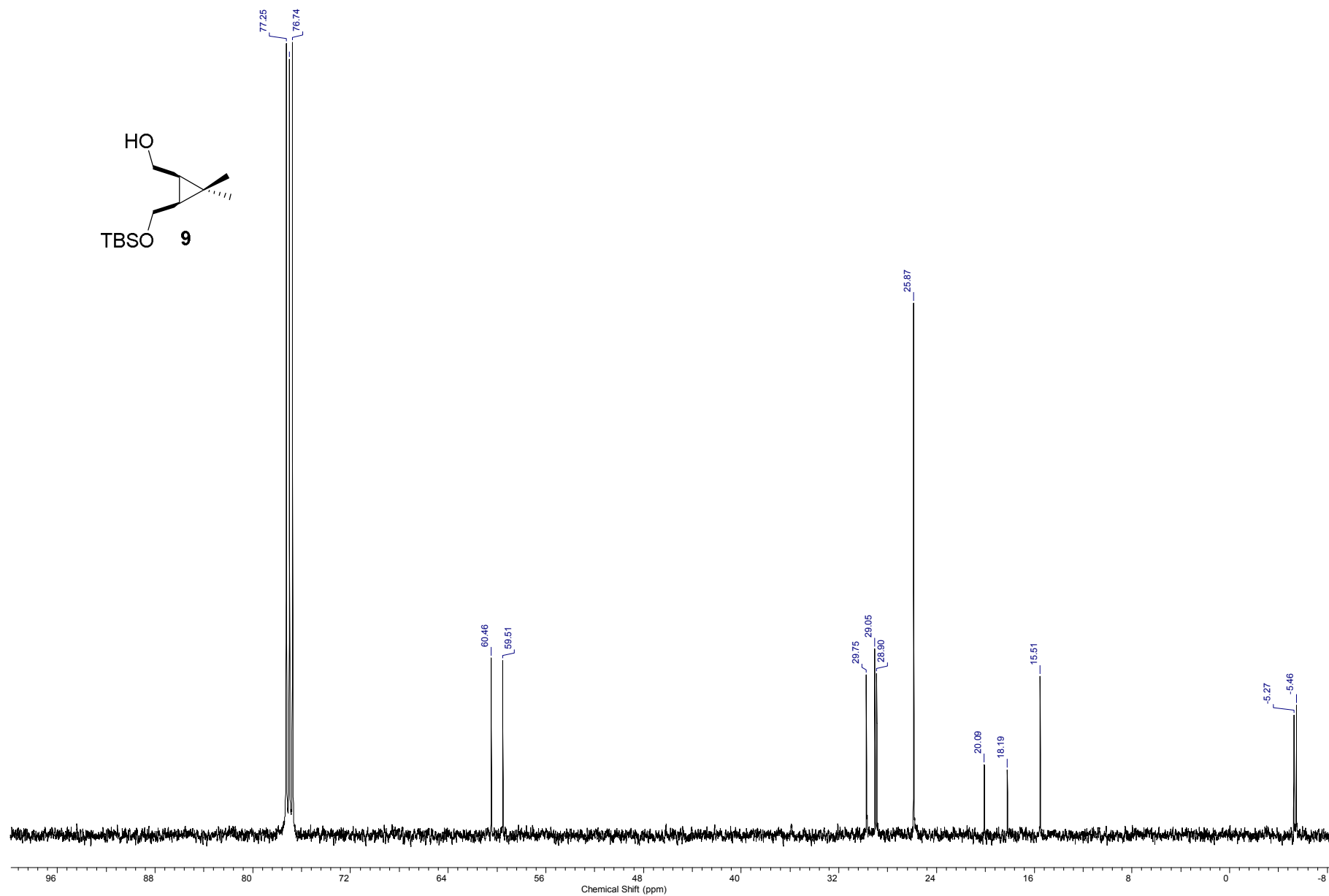
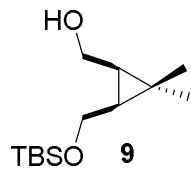
^1H NMR (400 MHz, CDCl_3) spectrum of compound **8**



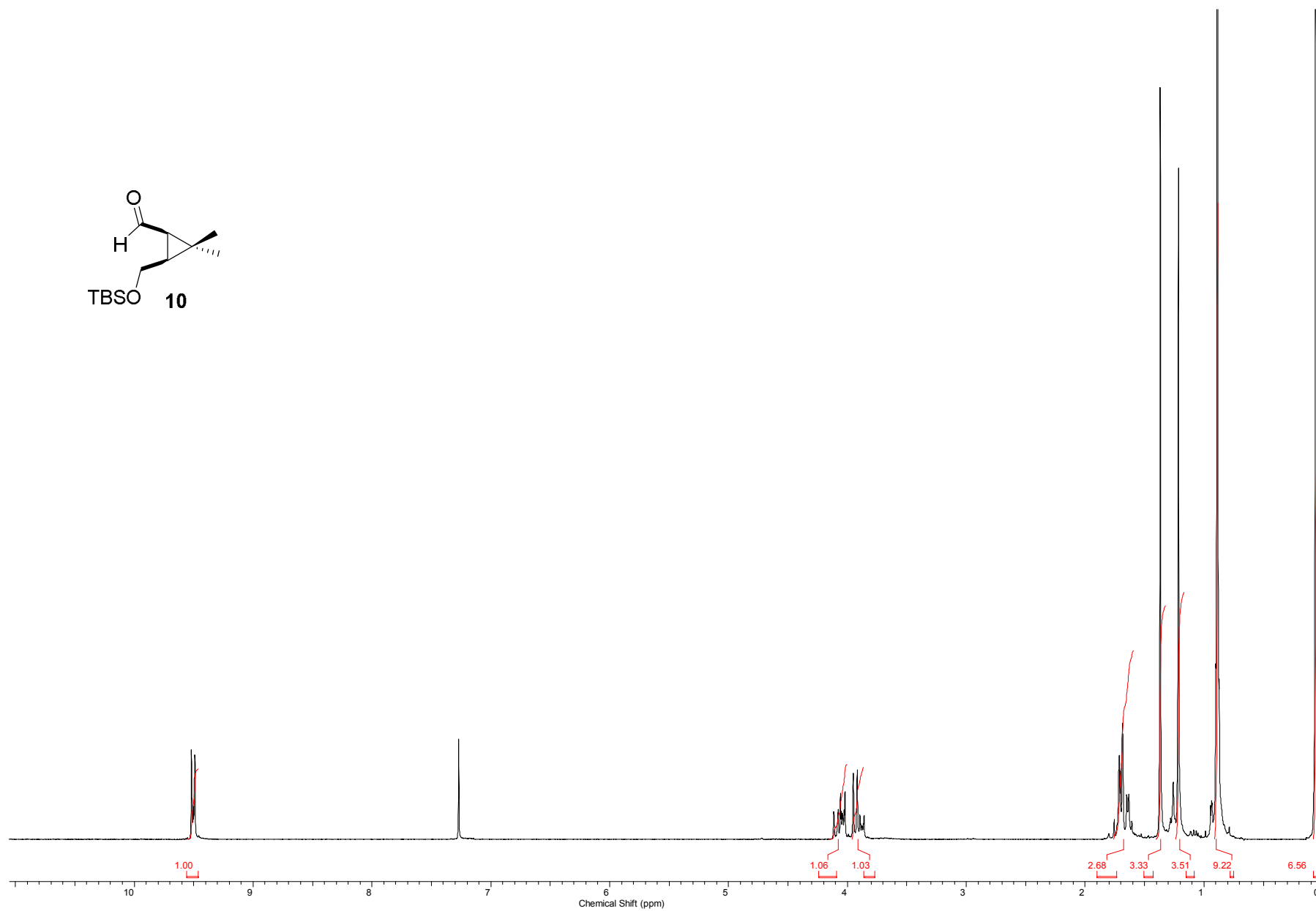
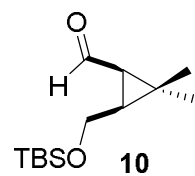
¹³C NMR (100 MHz, CDCl₃) spectrum of compound **8**



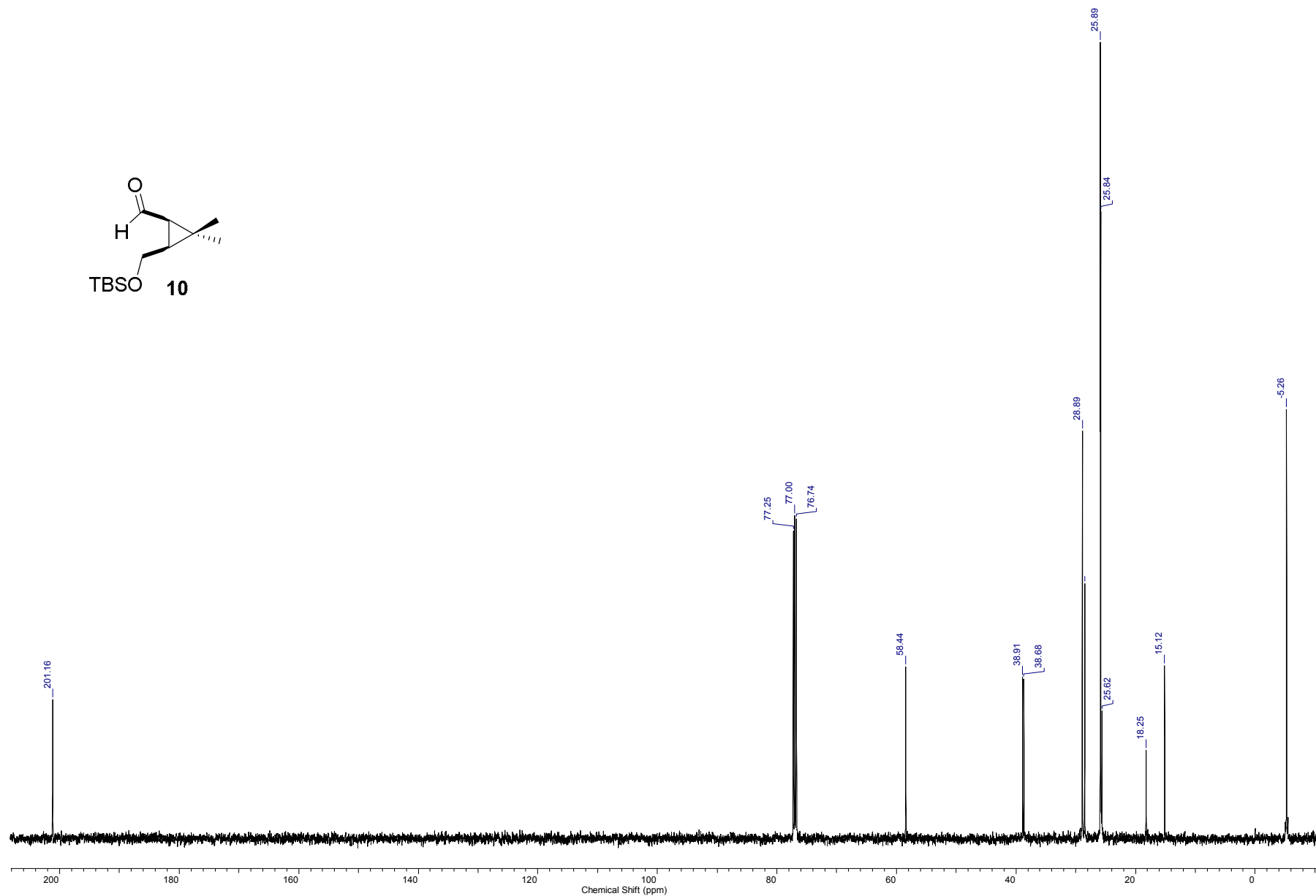
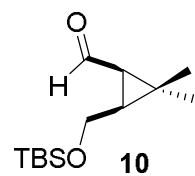
^1H NMR (500 MHz, CDCl_3) spectrum of compound **9**



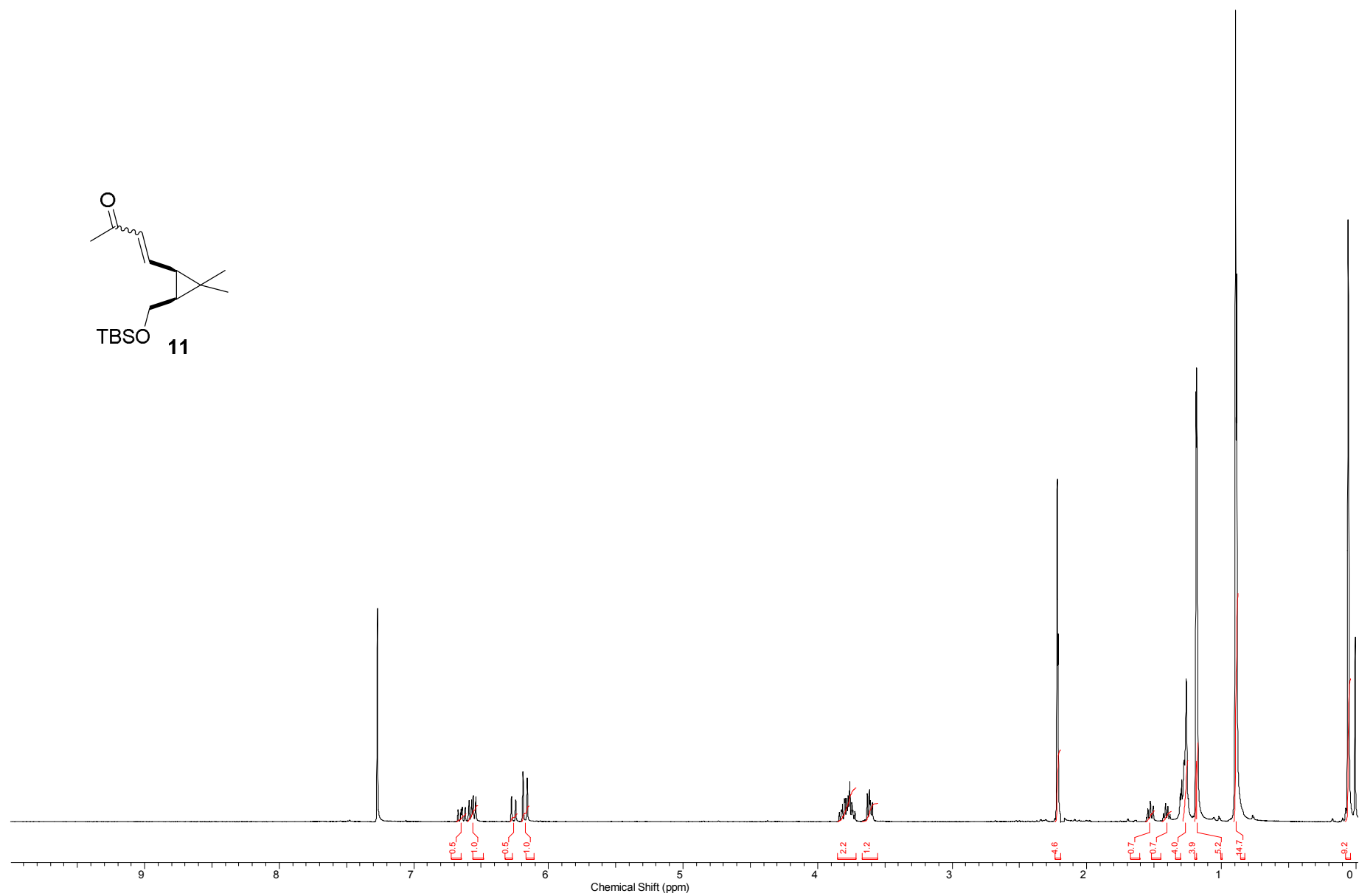
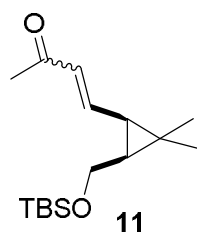
¹³C NMR (125 MHz, CDCl₃) spectrum of compound **9**



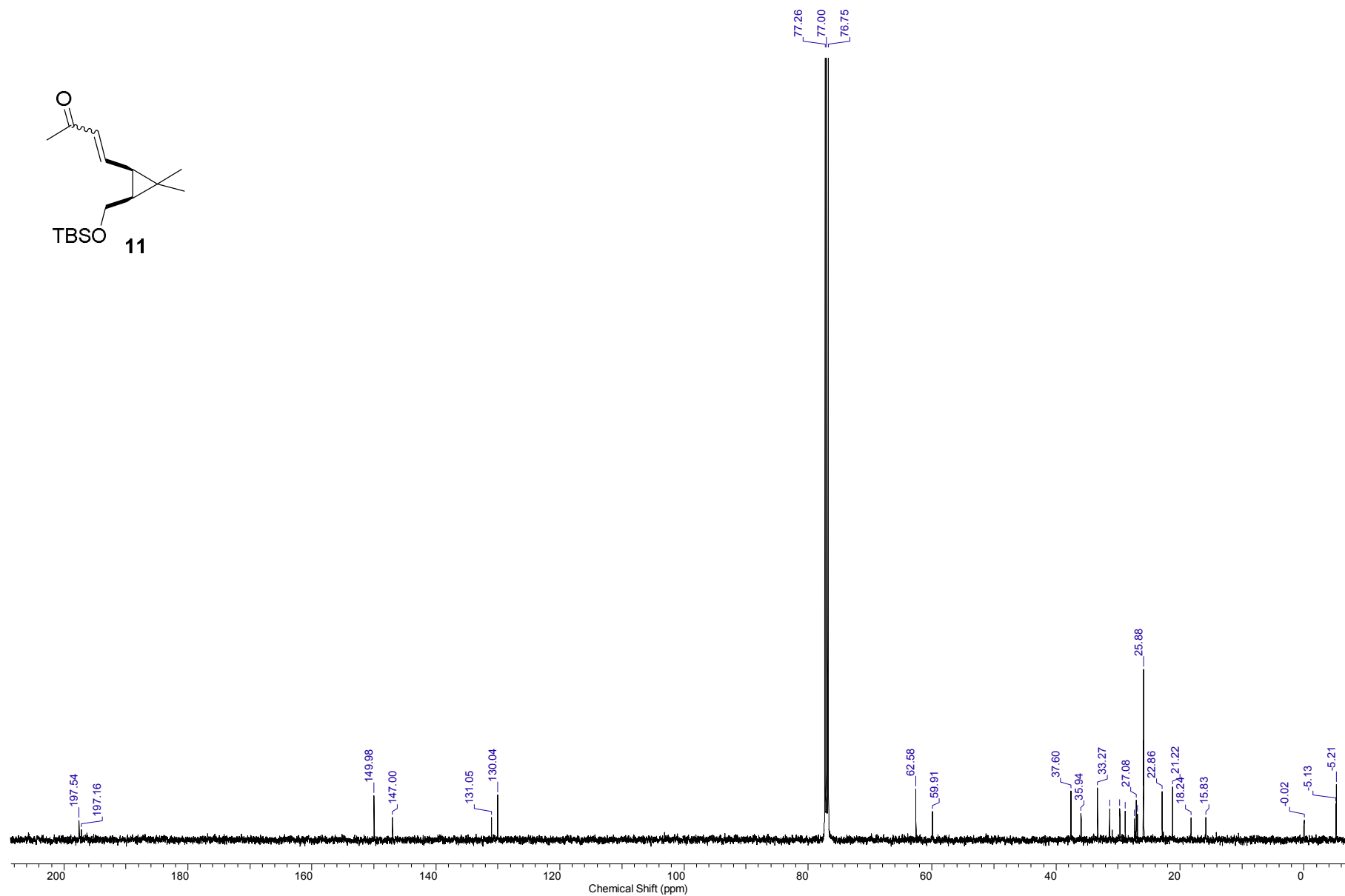
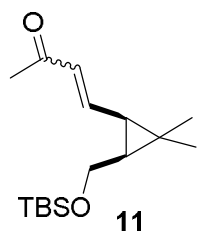
¹H NMR (400 MHz, CDCl₃) spectrum of compound **10**



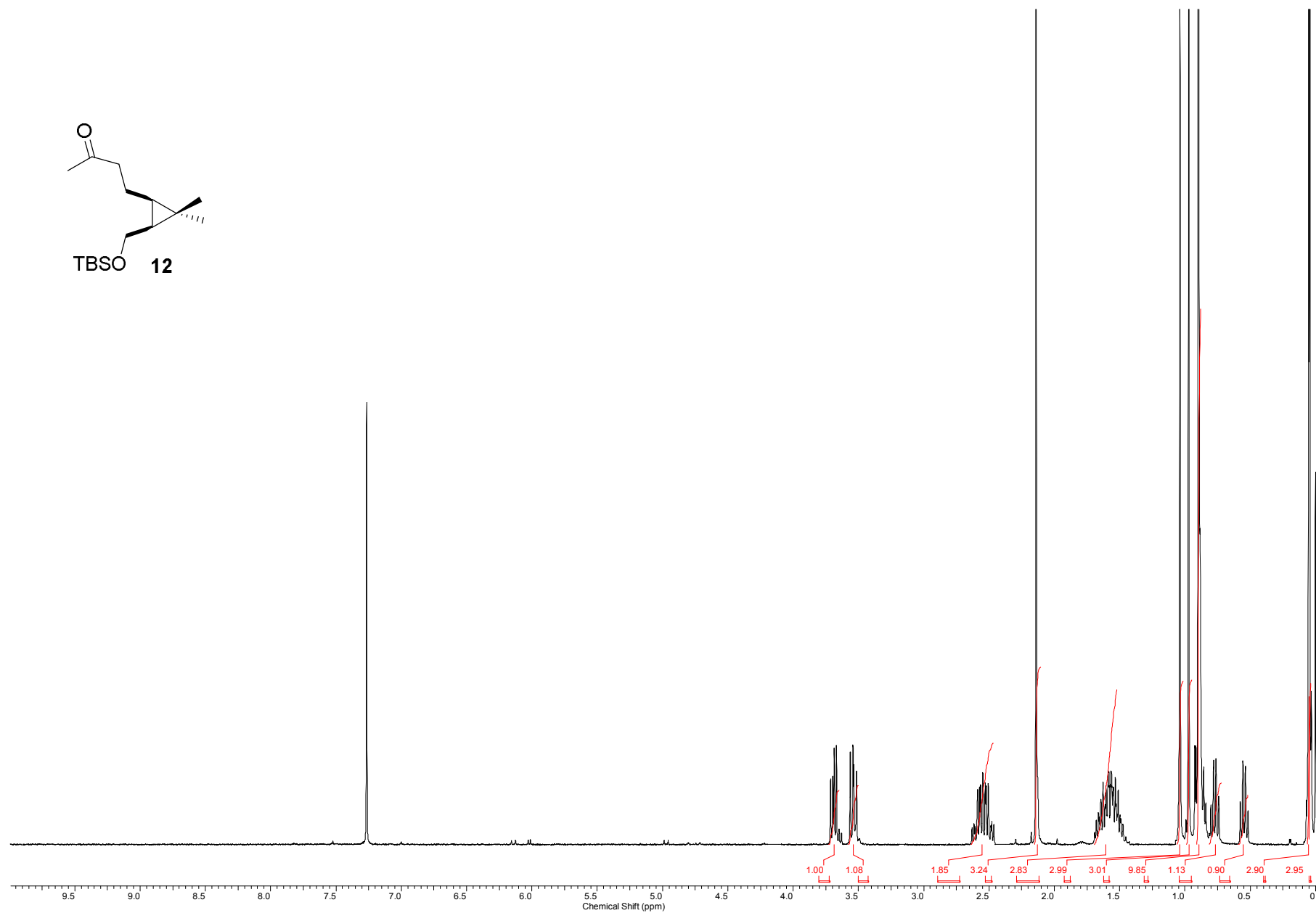
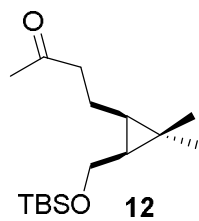
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **10**



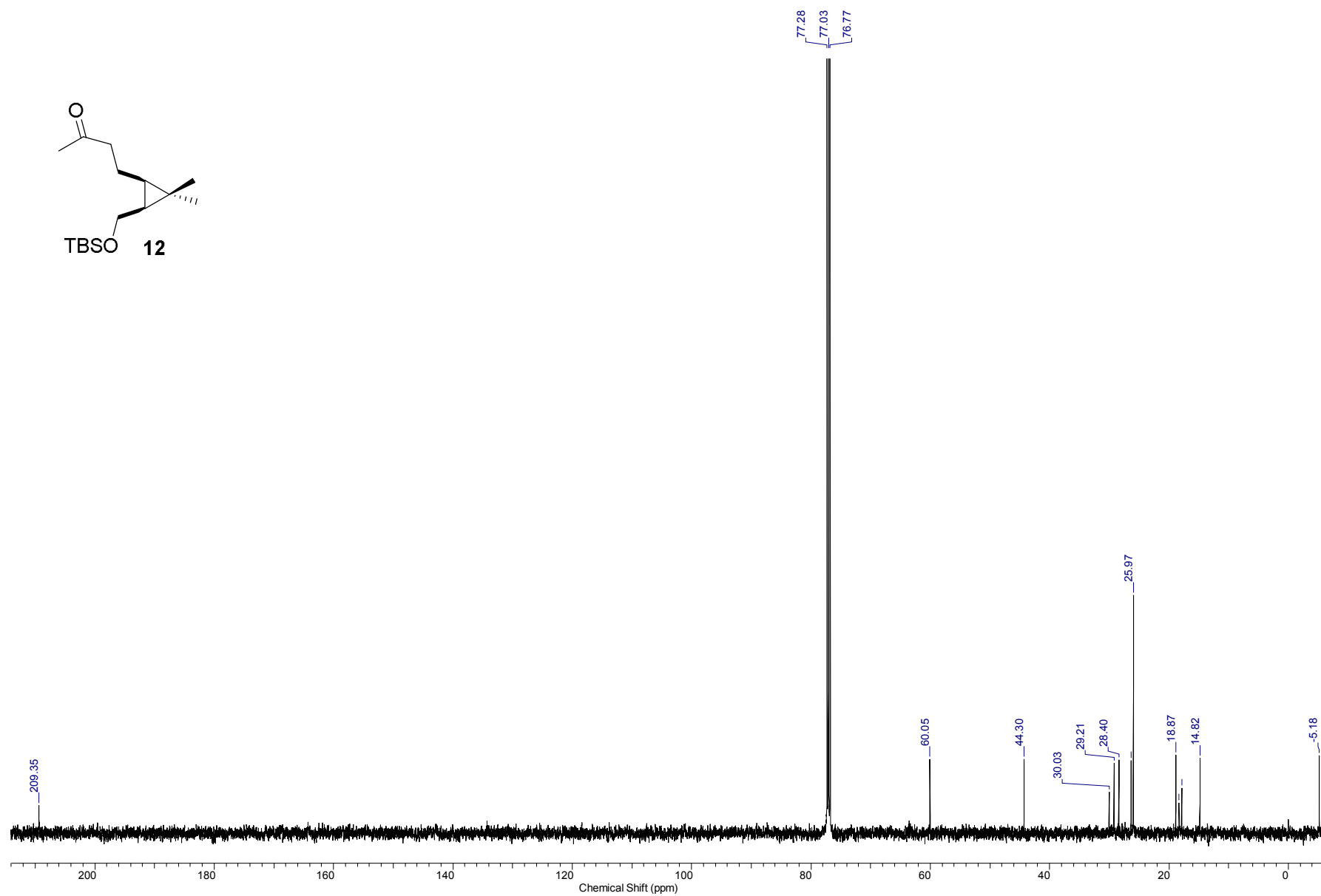
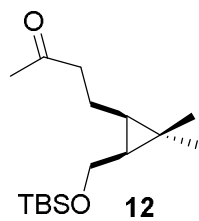
^1H NMR (400 MHz, CDCl_3) spectrum of compound **11**



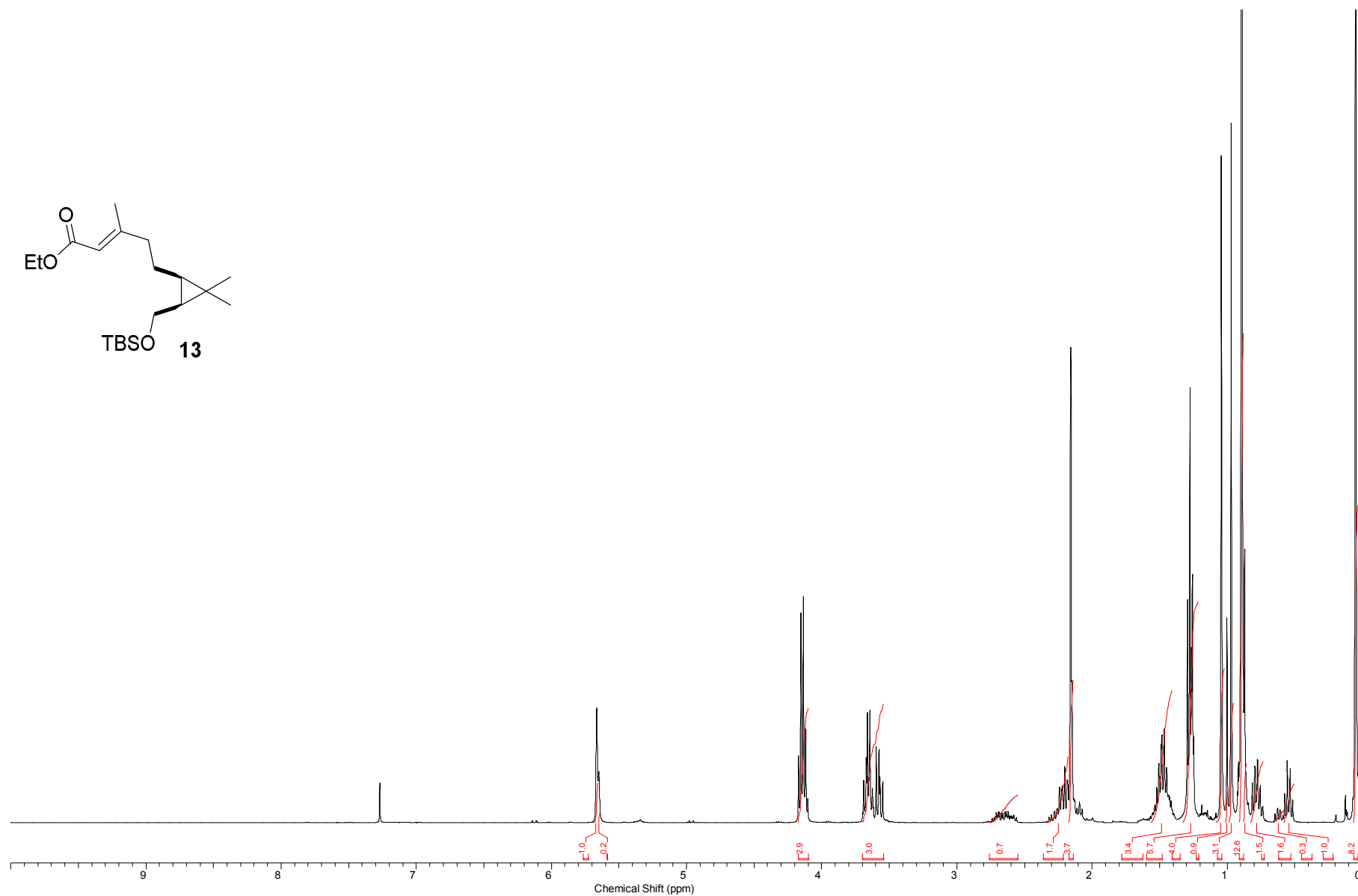
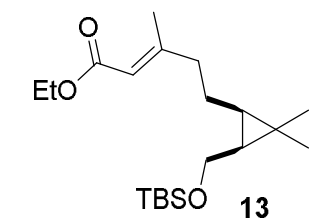
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **11**



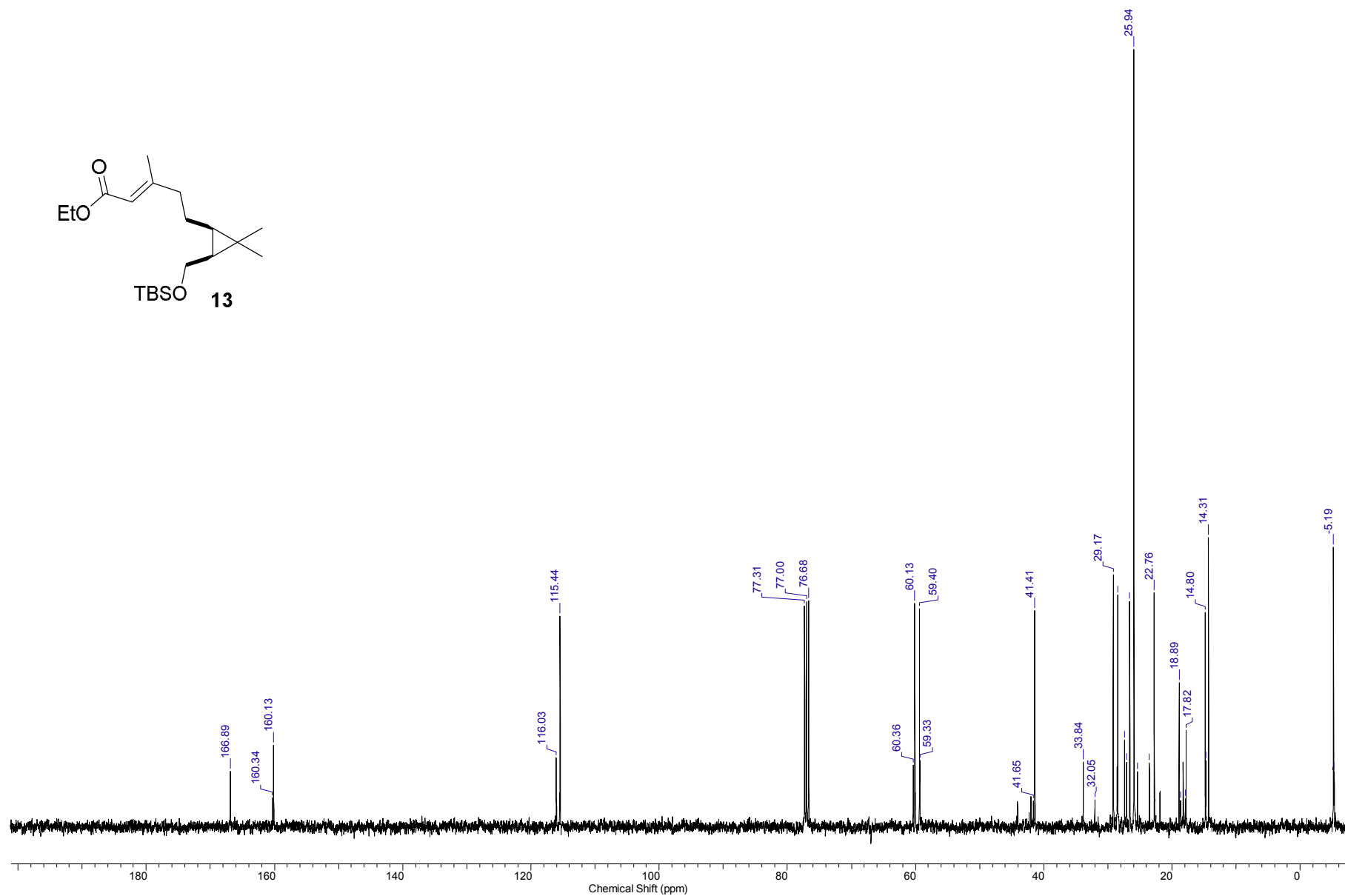
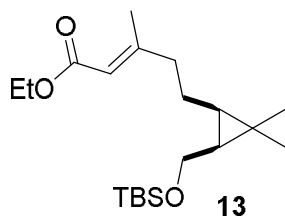
^1H NMR (400 MHz, CDCl_3) spectrum of compound **12**



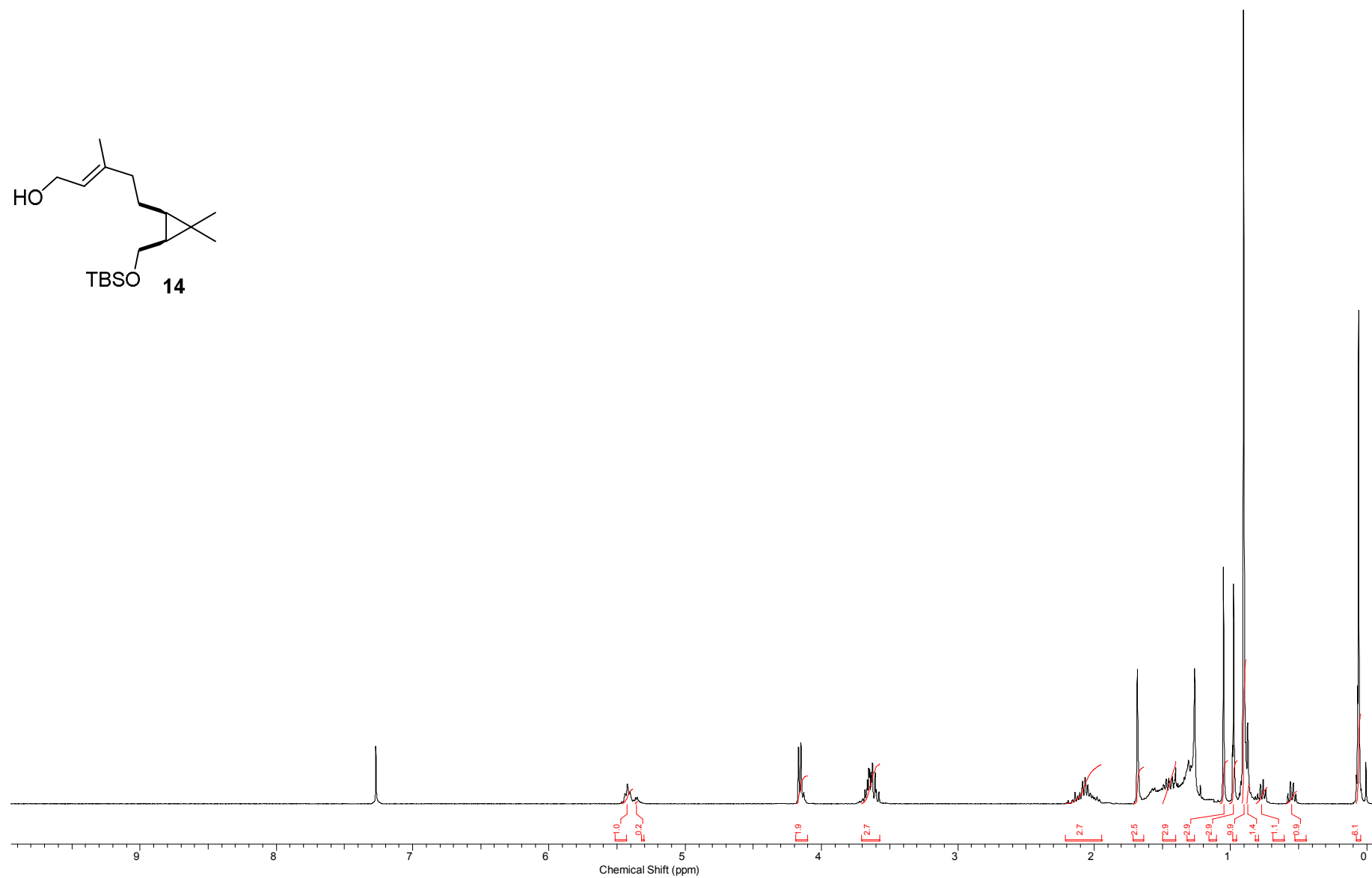
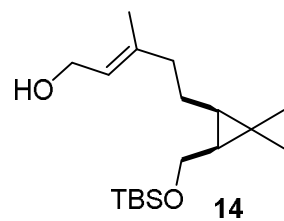
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **12**



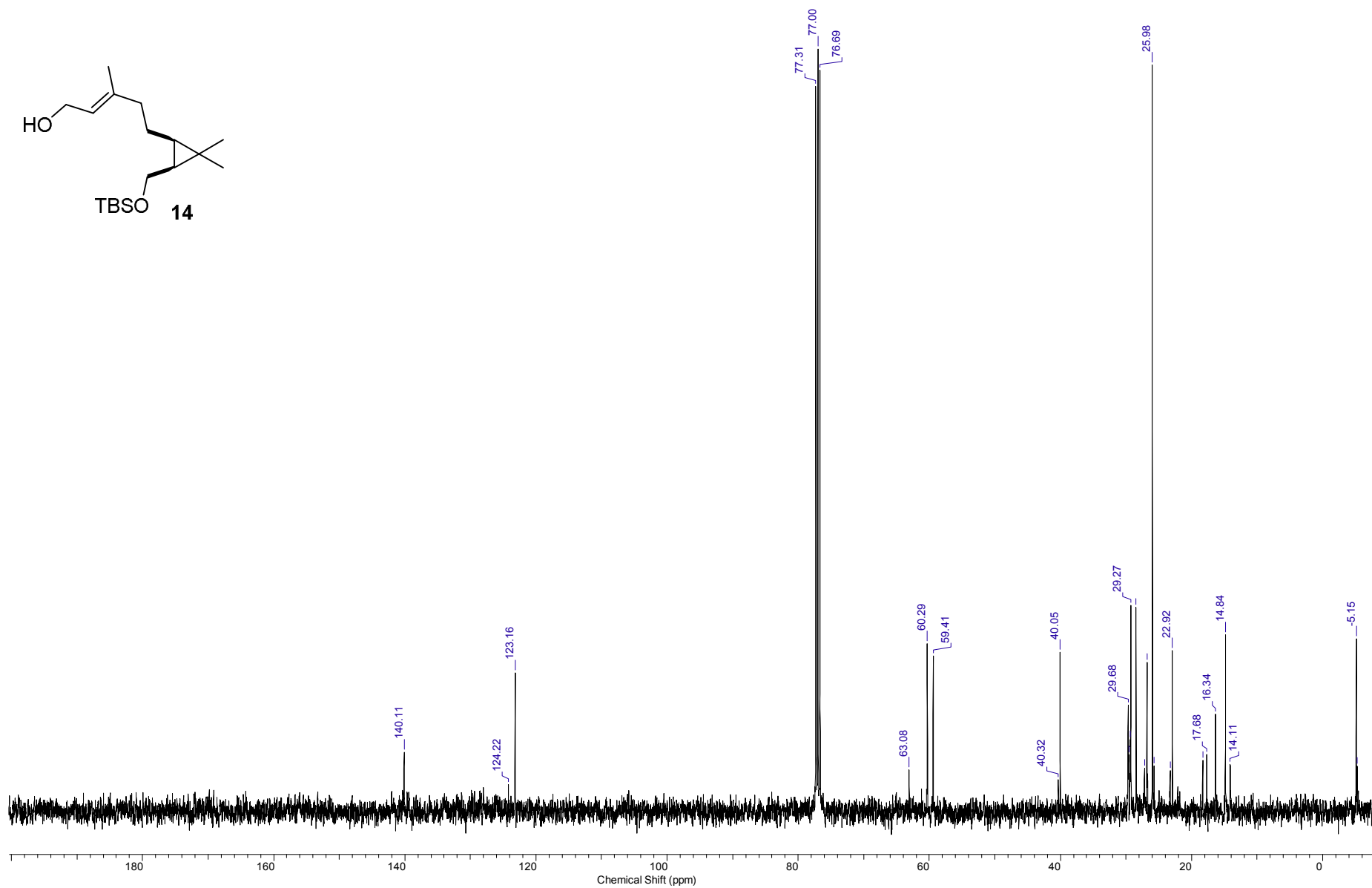
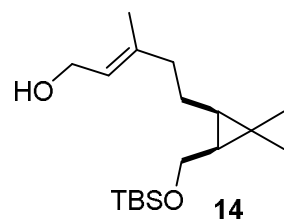
¹H NMR (400 MHz, CDCl₃) spectrum of compound **13**



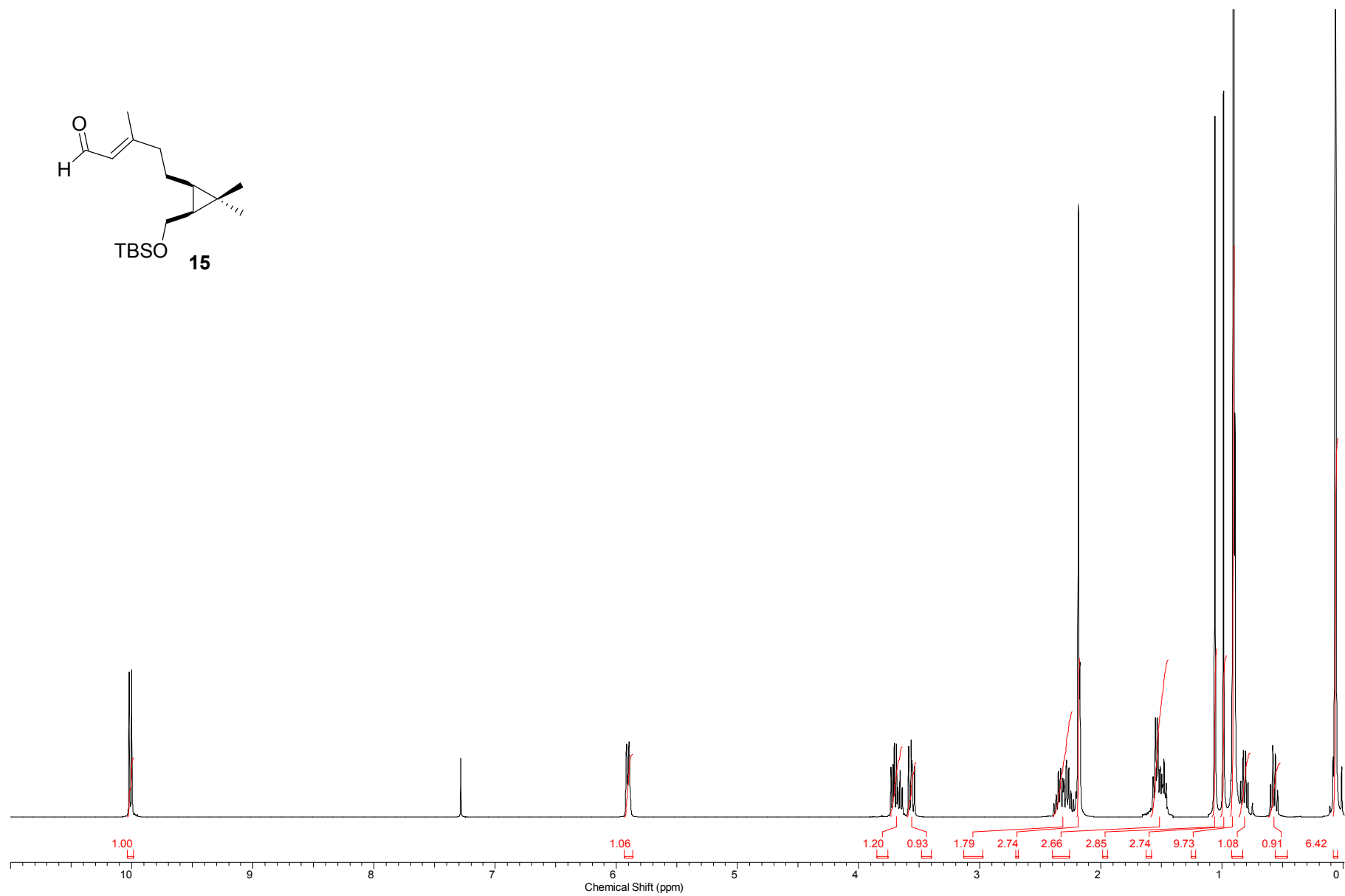
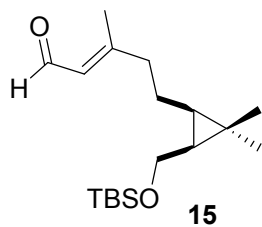
¹³C NMR (100 MHz, CDCl₃) spectrum of compound **13**



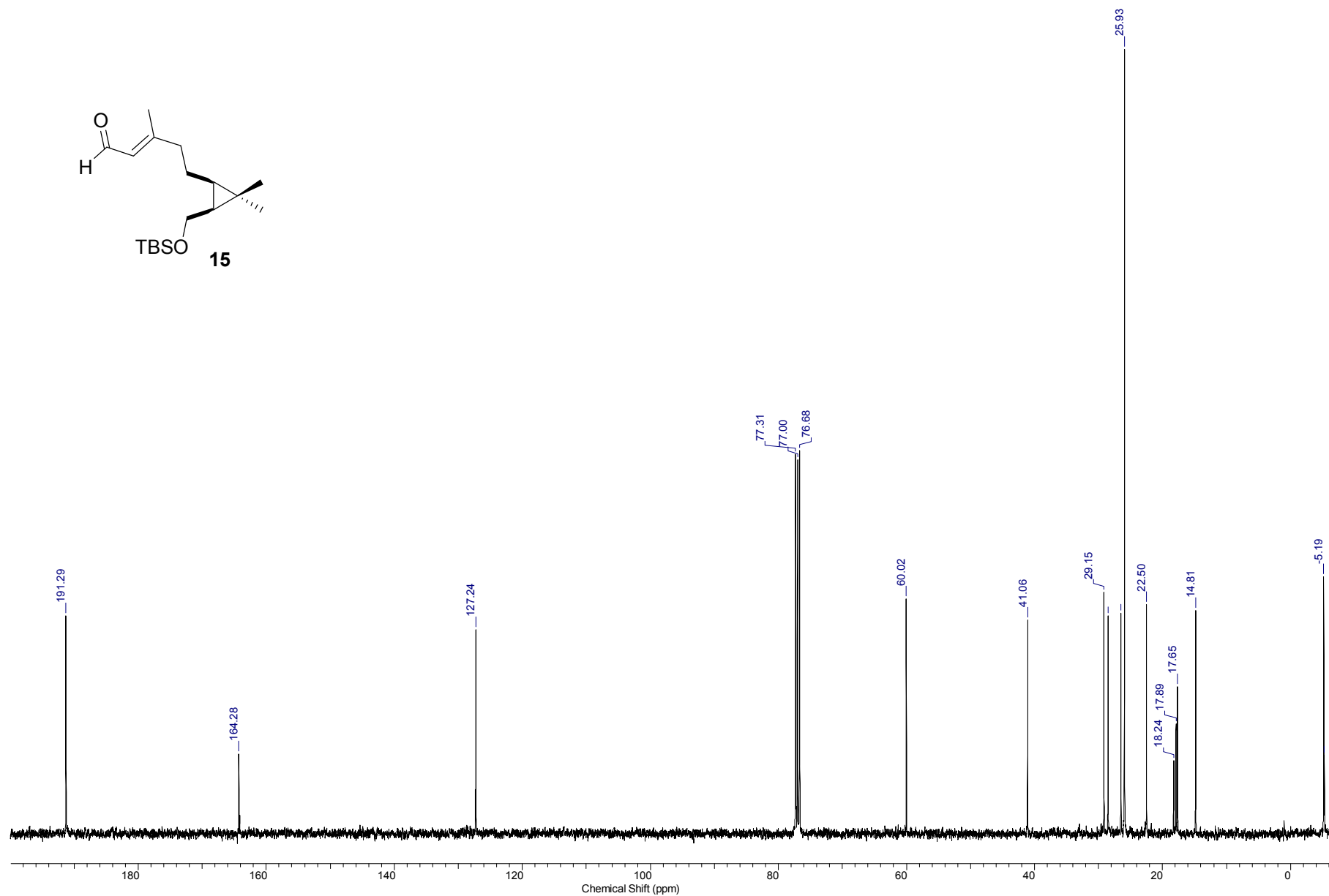
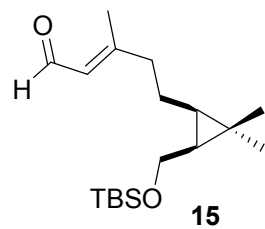
¹H NMR (400 MHz, CDCl₃) spectrum of compound **14**



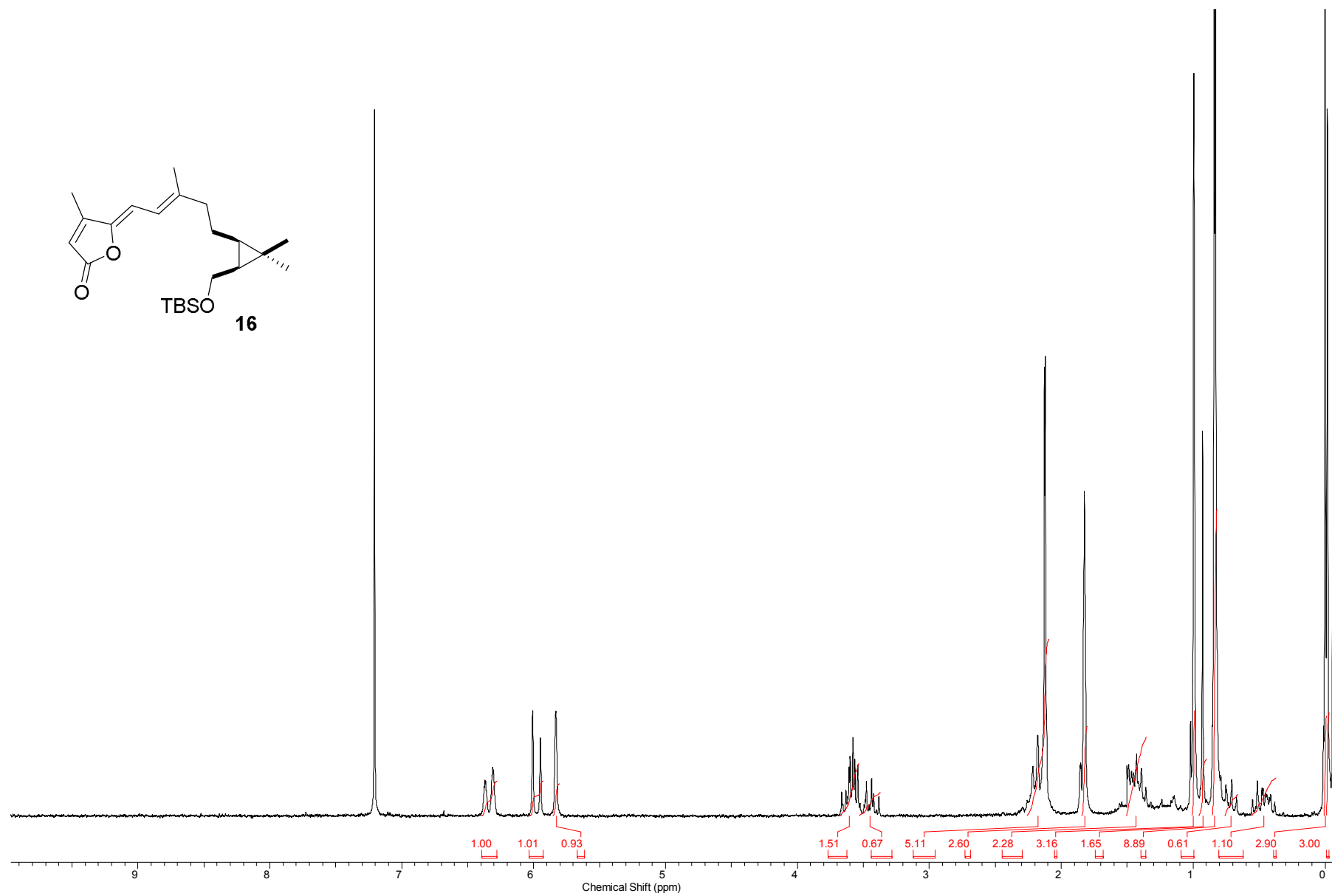
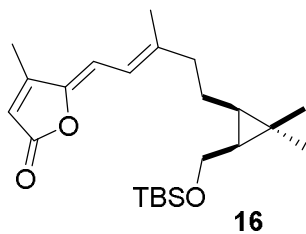
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **14**



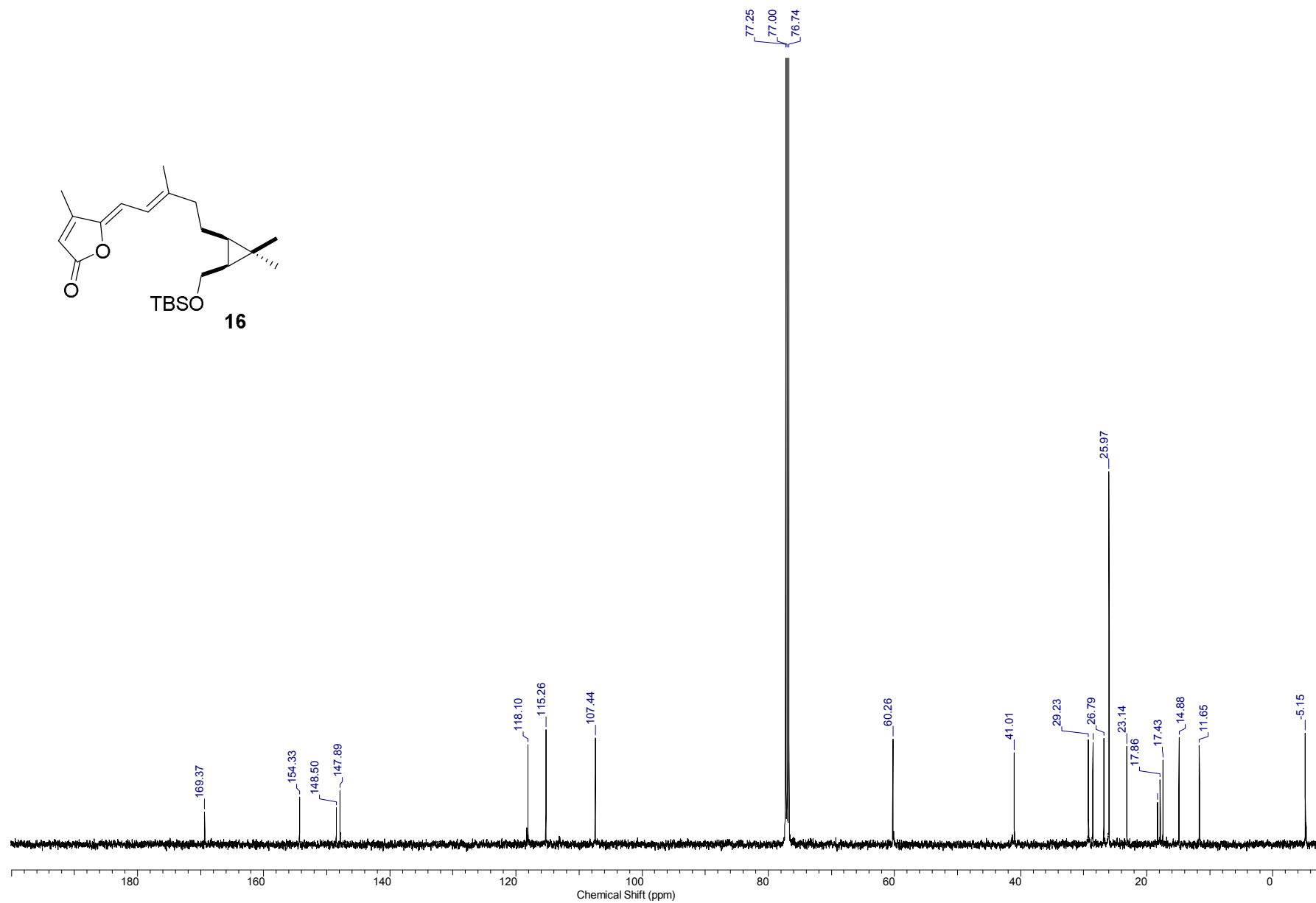
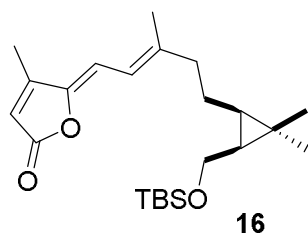
^1H NMR (400 MHz, CDCl_3) spectrum of compound **15**



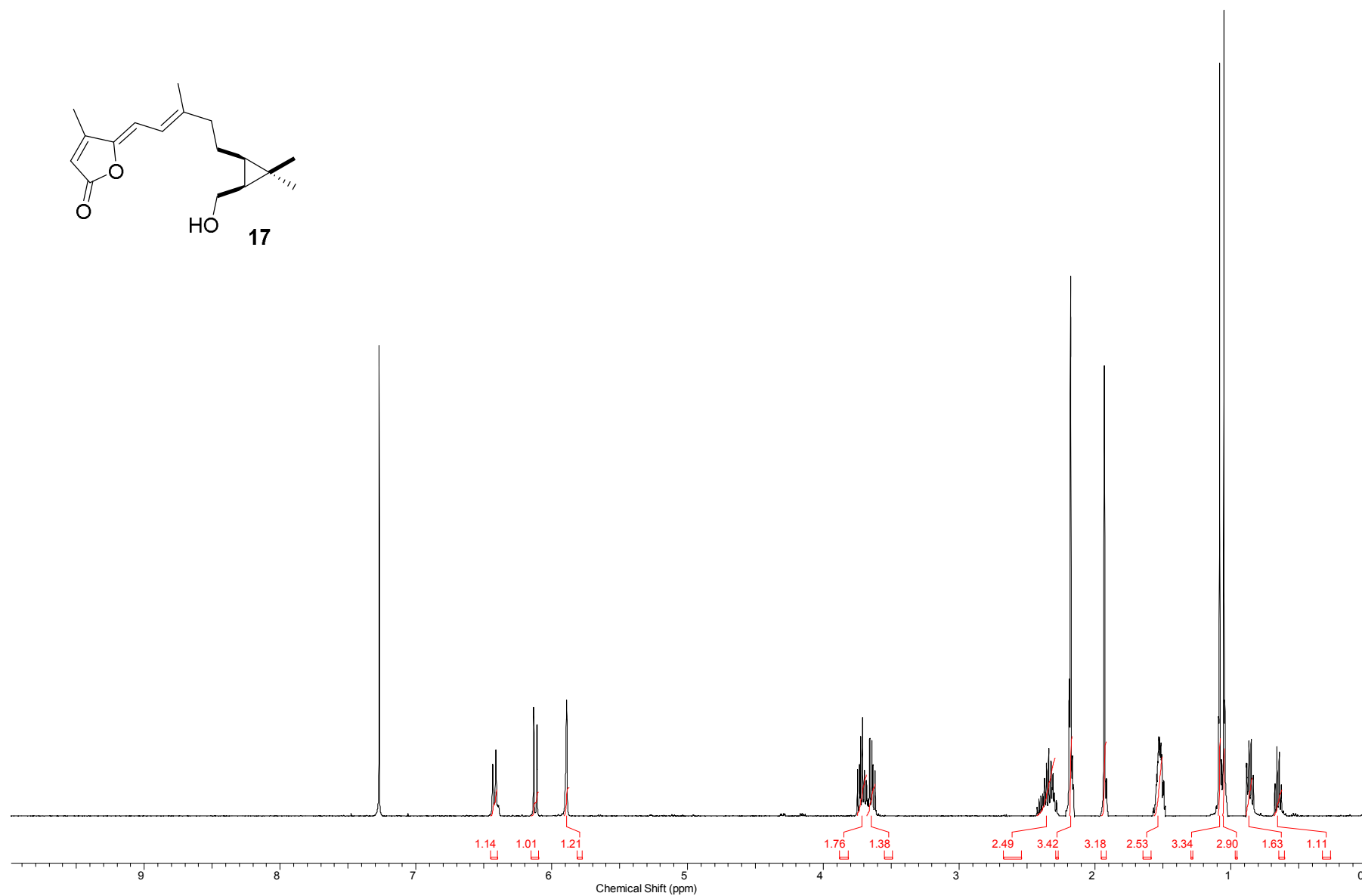
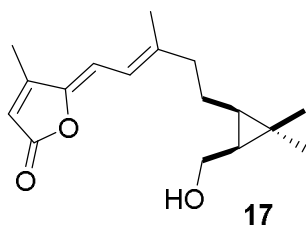
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **15**



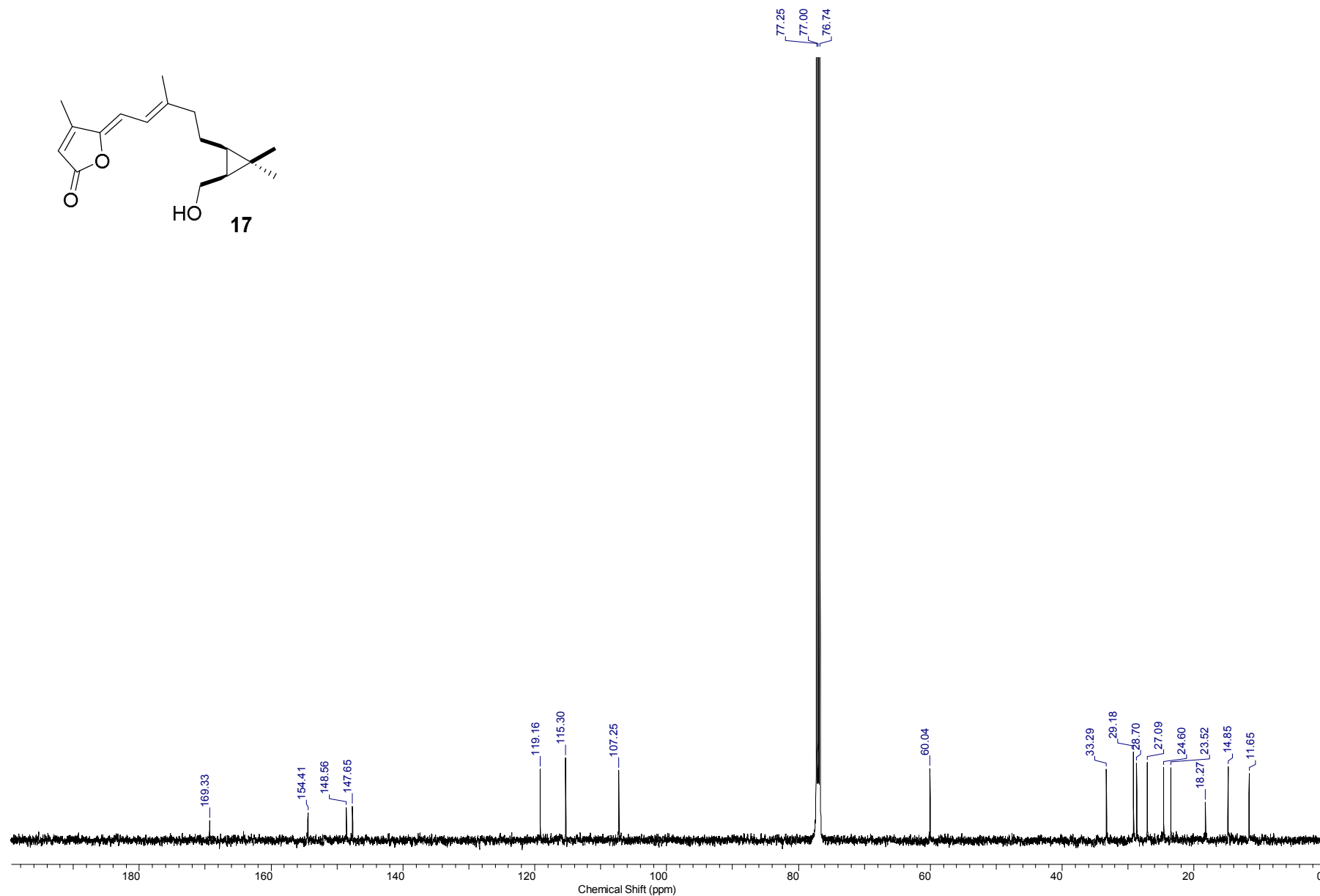
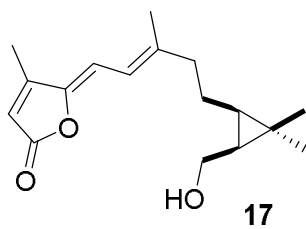
¹H NMR (400 MHz, CDCl₃) spectrum of compound **16**



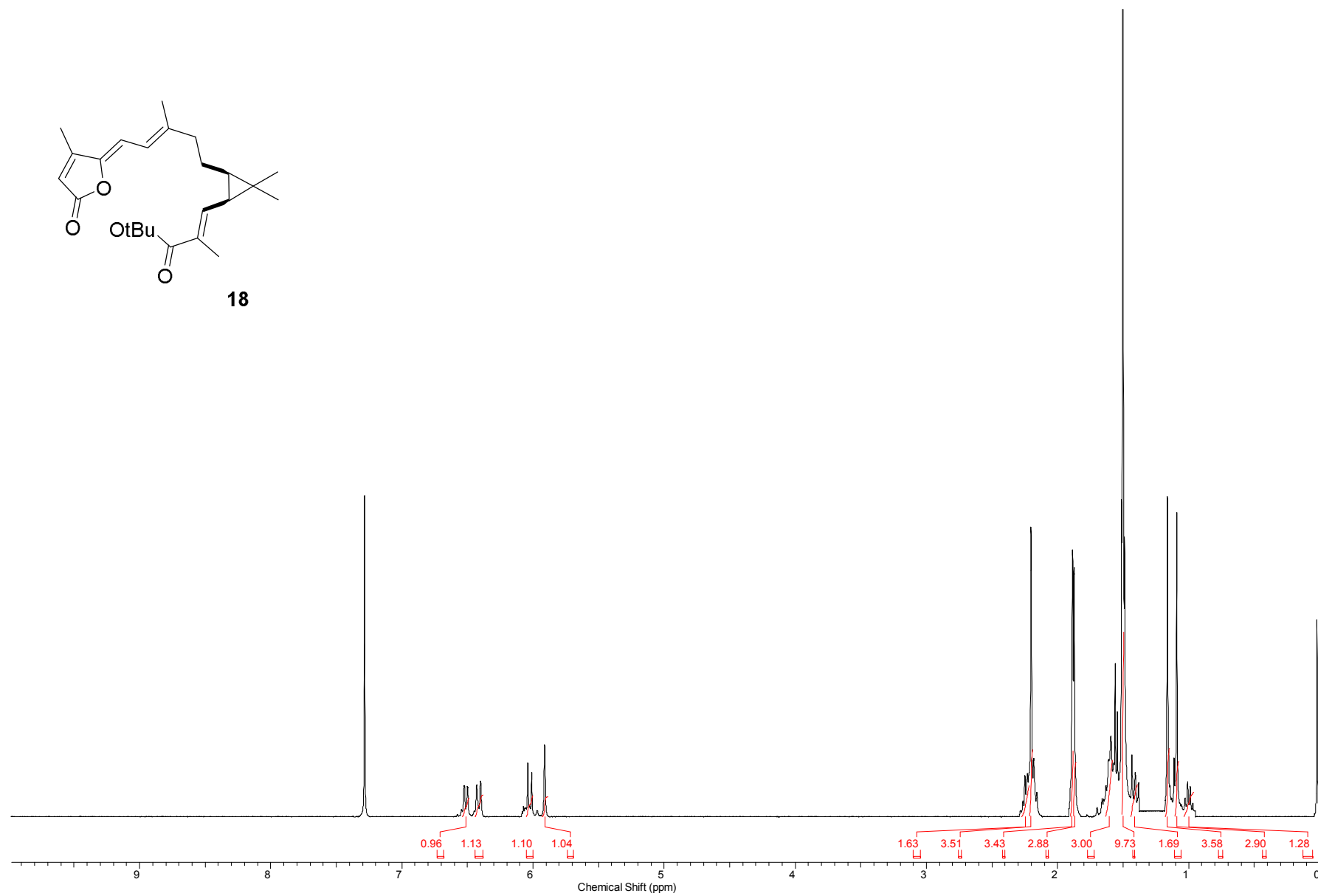
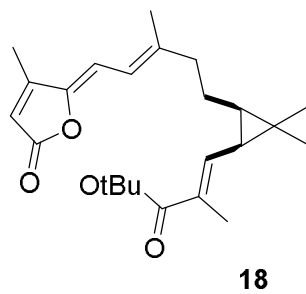
^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **16**



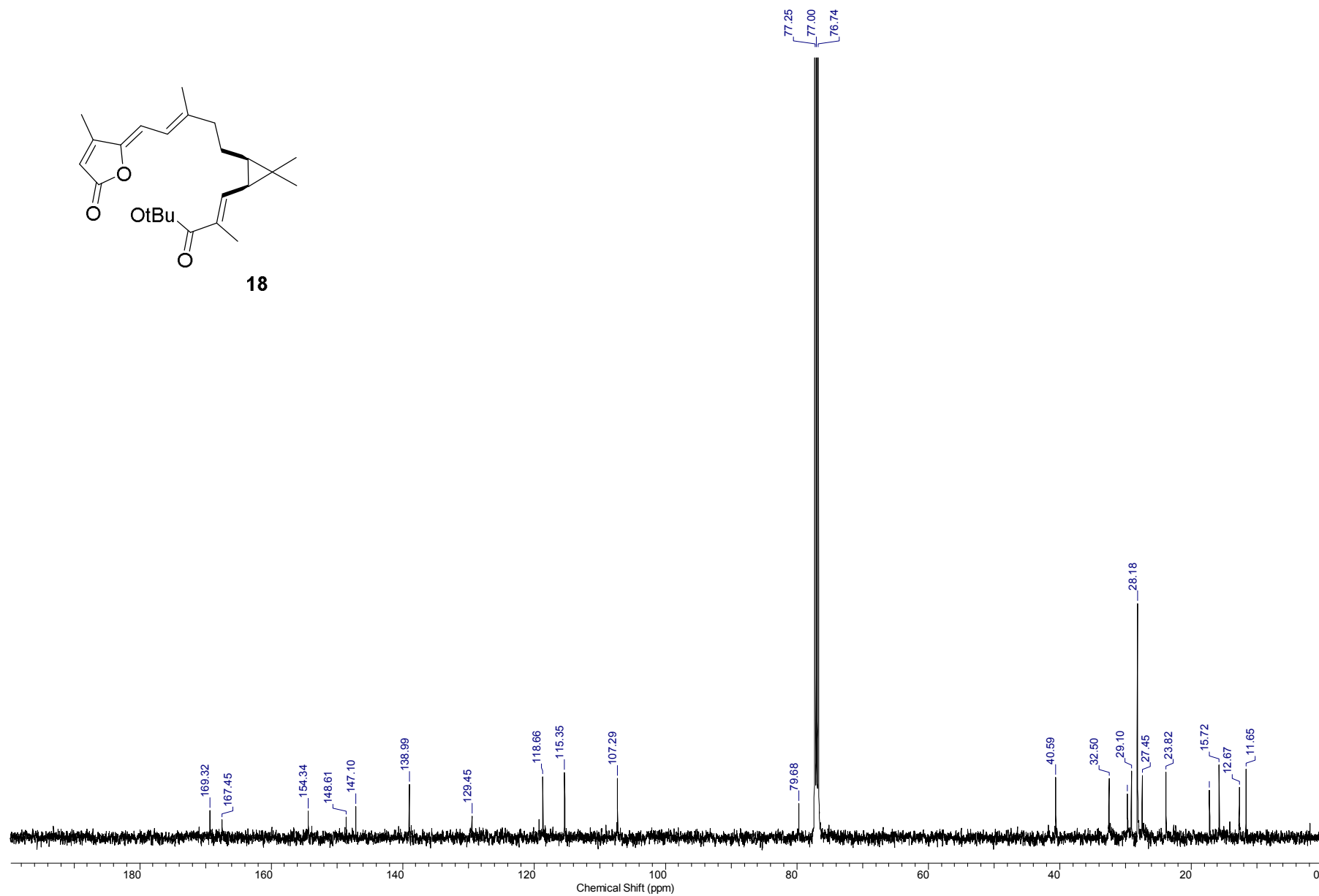
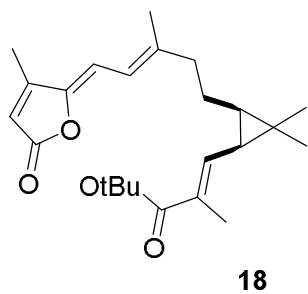
^1H NMR (500 MHz, CDCl_3) spectrum of compound **17**



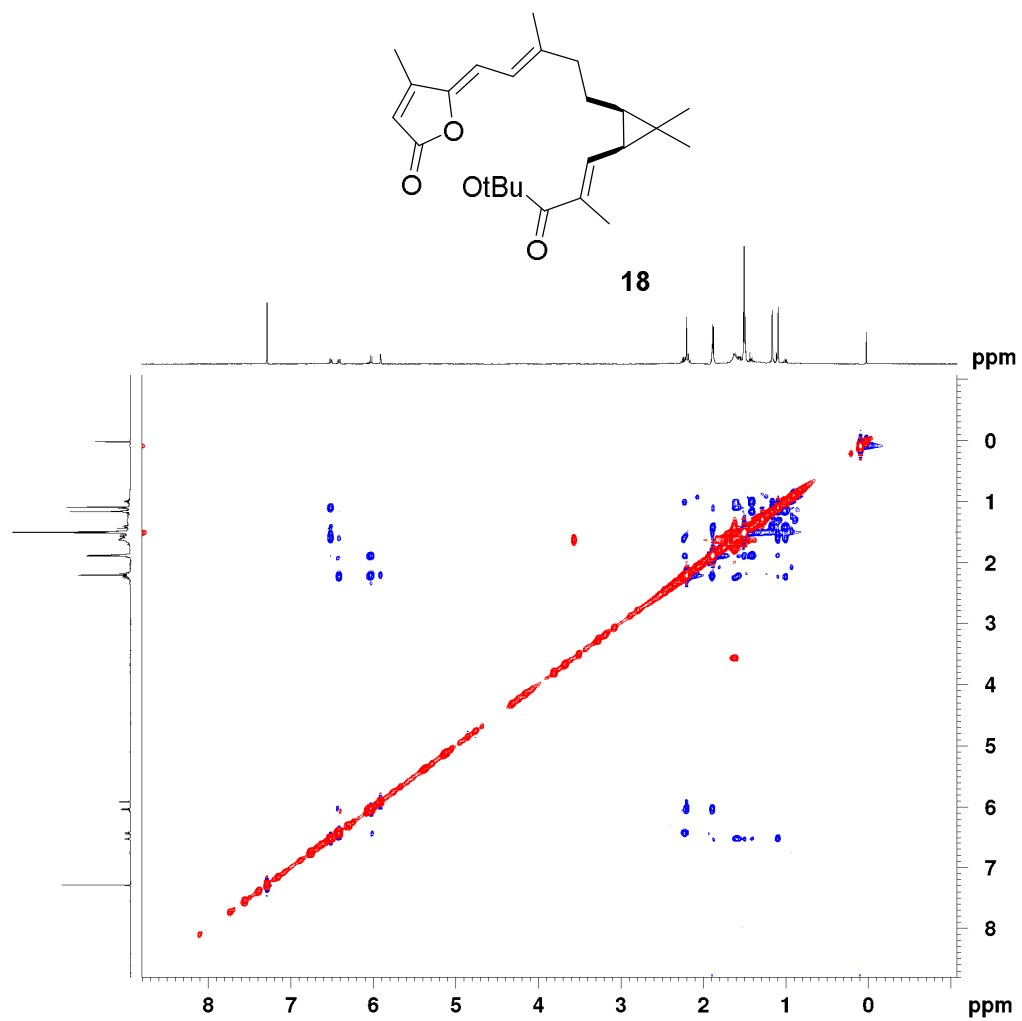
^{13}C NMR (125 MHz, CDCl_3) spectrum of compound **17**



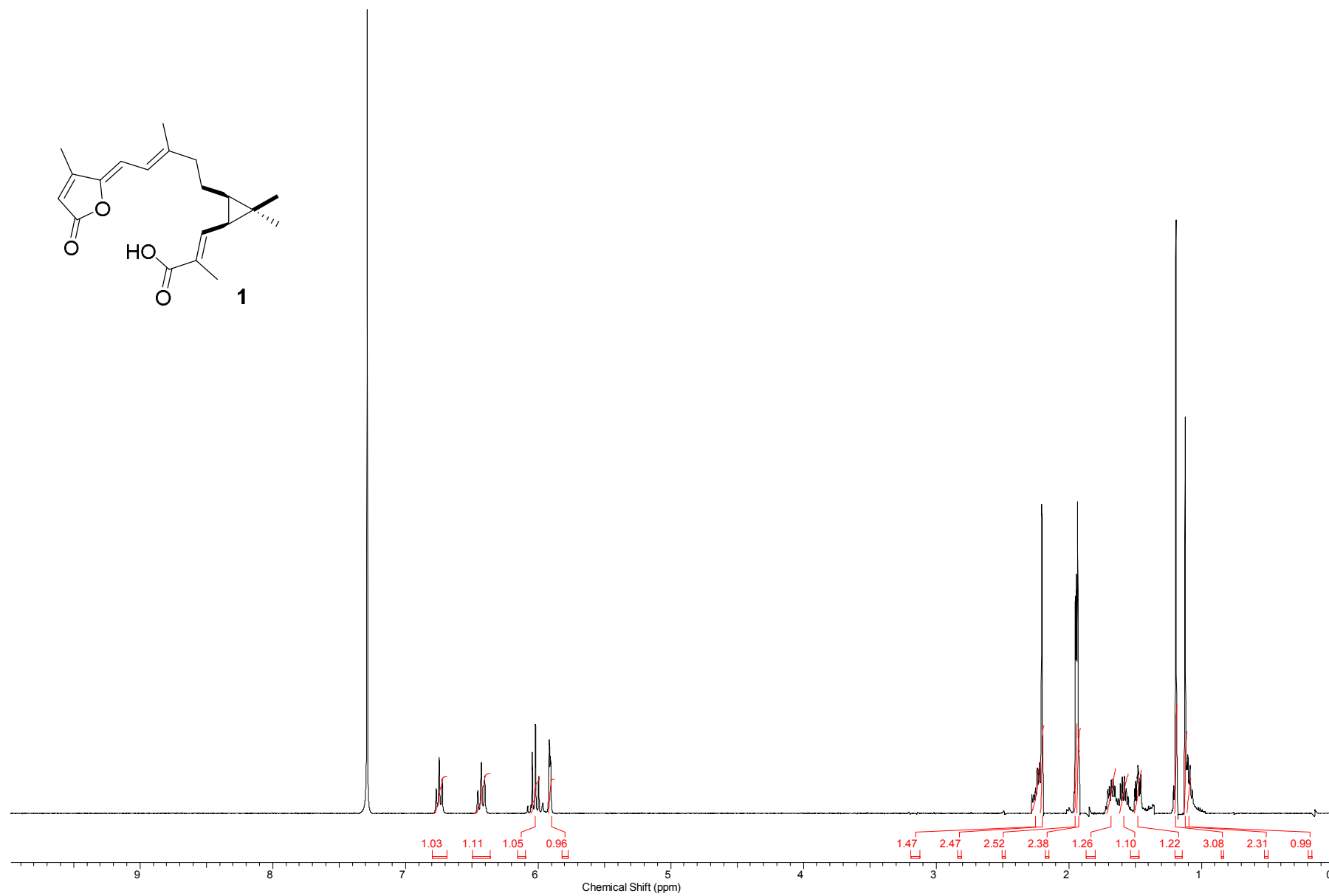
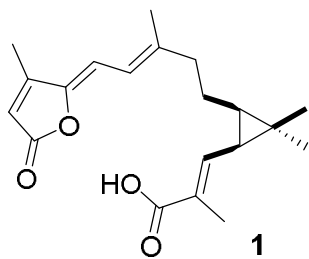
^1H NMR (500 MHz, CDCl_3) spectrum of compound **18**



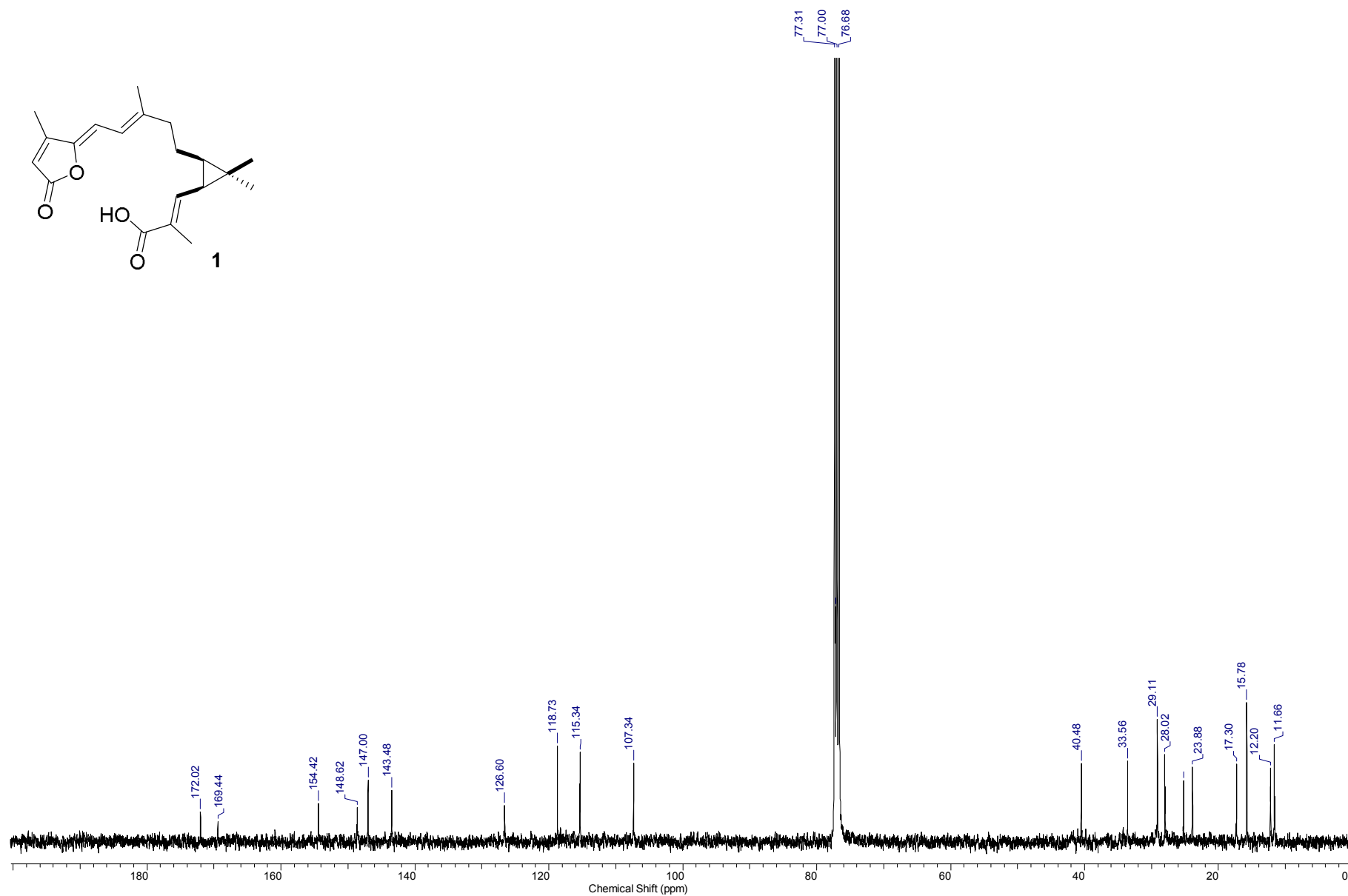
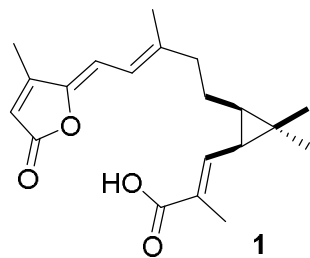
^{13}C NMR (125 MHz, CDCl_3) spectrum of compound **18**



^1H - ^1H NOESY NMR spectrum of compound **18**



¹H NMR (500 MHz, CDCl₃) spectrum of compound **1**



^{13}C NMR (125 MHz, CDCl_3) spectrum of compound **1**

Table1. Comparison of ^1H and ^{13}C NMR data of natural and synthesized EBC 329 (**1**).

No	Natural EBC 329 (1)		Synthesized EBC 329 (1)	
	^1H NMR	^{13}C NMR	^1H NMR	^{13}C NMR
1		148.68		148.62
2		154.37		154.32
3	5.87 (br s, 1H)	115.38	5.87 (bs, 1H)	115.34
4		169.36		169.44
5		171.83		172.02
6		126.68		126.60
7	6.69 (dd, $J = 10.6$ and 1.2 Hz, 1H)	143.37	6.71 (t, $J = 11.6$, 1H)	143.48
8	1.43 (m, 1H)	28.05	1.42-1.46 (m, 1H)	28.02
9	1.05 (m, 1H)	33.56	1.05-1.07 (m, 1H)	33.56
10a	1.54 (dd, $J = 14.6$ and 6.5 Hz, 1H)	23.90	1.51-1.59 (m, 1H)	23.88
10b	1.62 (dt, $J = 14.6$ and 7.1 , 1H)		1.61-1.68 (m, 1H)	
11	2.15-2.21 (m, 2H)	40.50	2.18-2.24 (m, 2H)	40.48
12		146.91		147.00
13	6.37 (dd, $J = 11.7$ and 1.0 Hz, 1H)	118.78	6.41 (t, $J = 11.9$ Hz, 1H)	118.73
14	5.98 (d, $J = 11.7$ Hz, 1H)	107.28	5.98 (t, $J = 11.9$ Hz, 1H)	107.34
15		25.15		25.19
16	1.08 (s, 3H)	15.78	1.09 (s, 3H)	15.78
17	1.14 (s, 3H)	29.13	1.16 (s, 3H)	29.11
18	1.88 (d, $J = 1.2$ Hz, 3H)	12.24	1.90 (d, $J = 1.2$ Hz, 3H)	12.25
19	2.16 (d, $J = 1.0$ Hz, 3H)	11.65	2.16 (d, $J = 1.2$ Hz, 3H)	11.66
20	1.84 (s, 3H)	17.30	1.89 (bs, 3H)	17.30