Supporting Information

Total Synthesis of Maltepolide F

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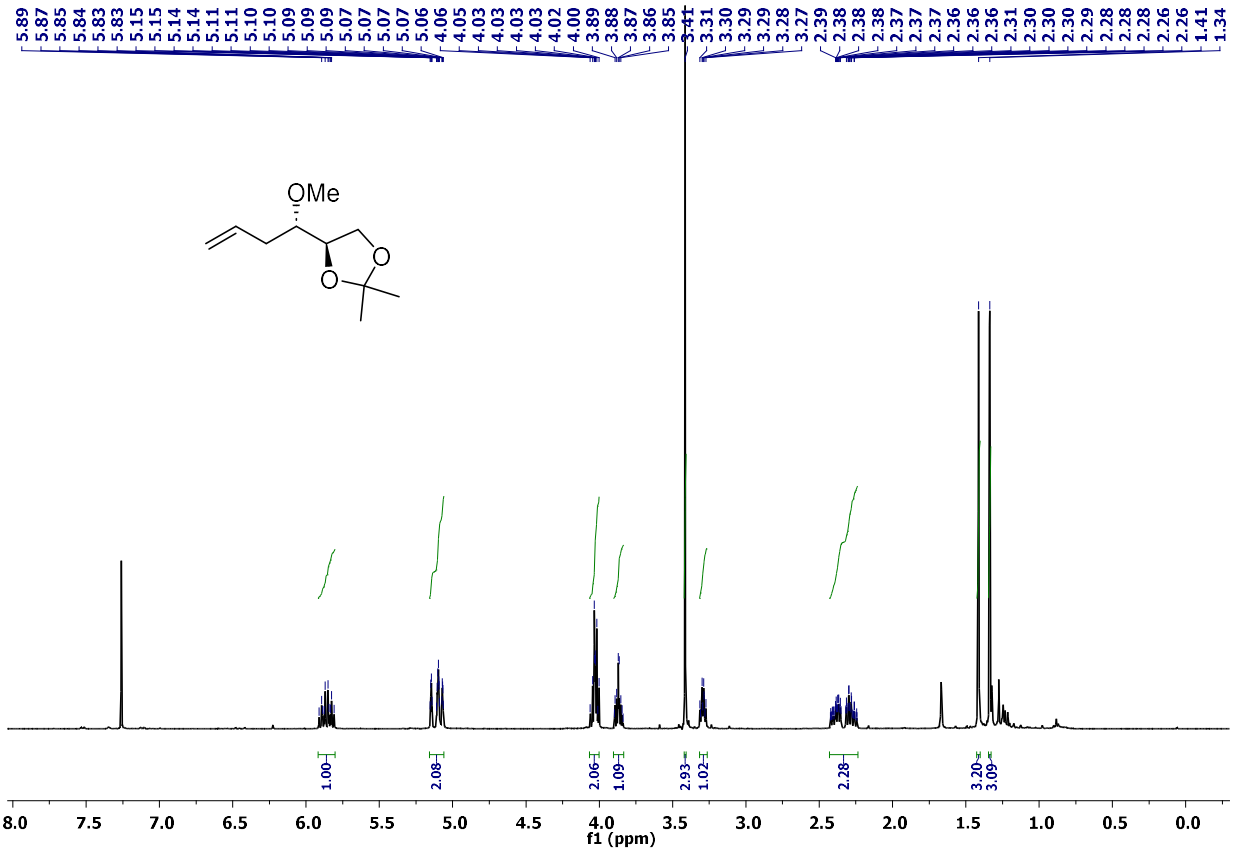
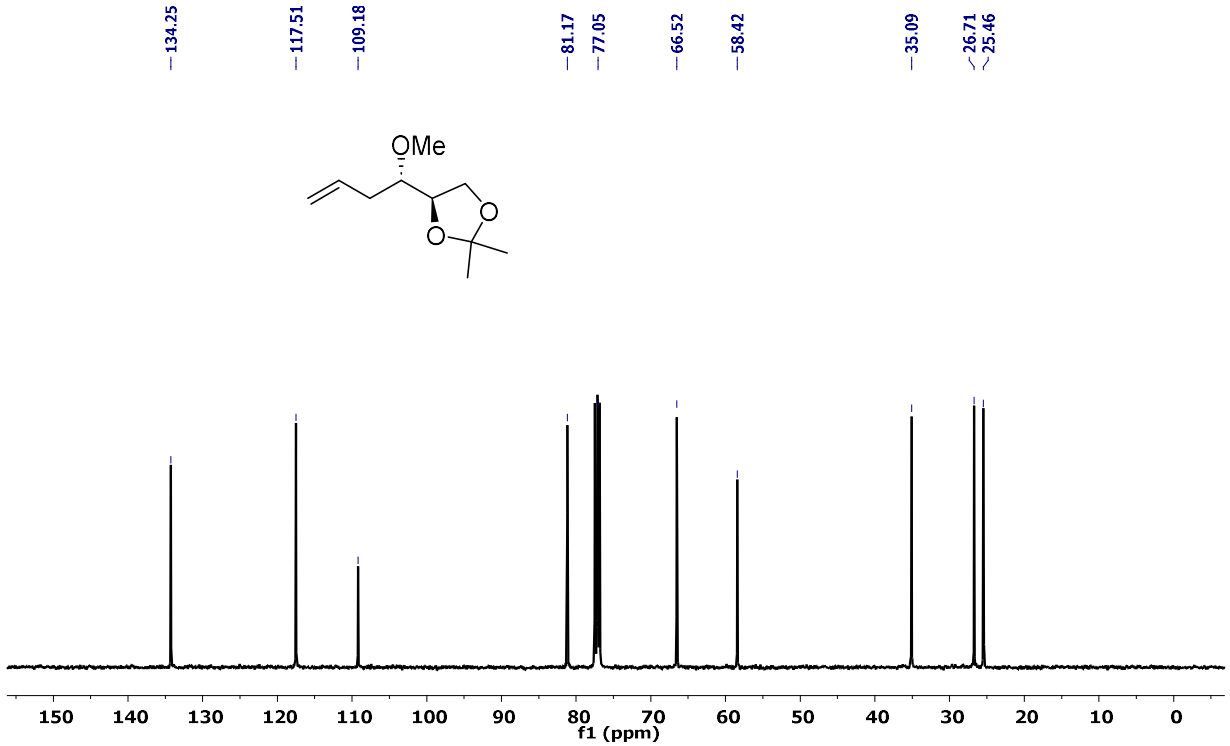
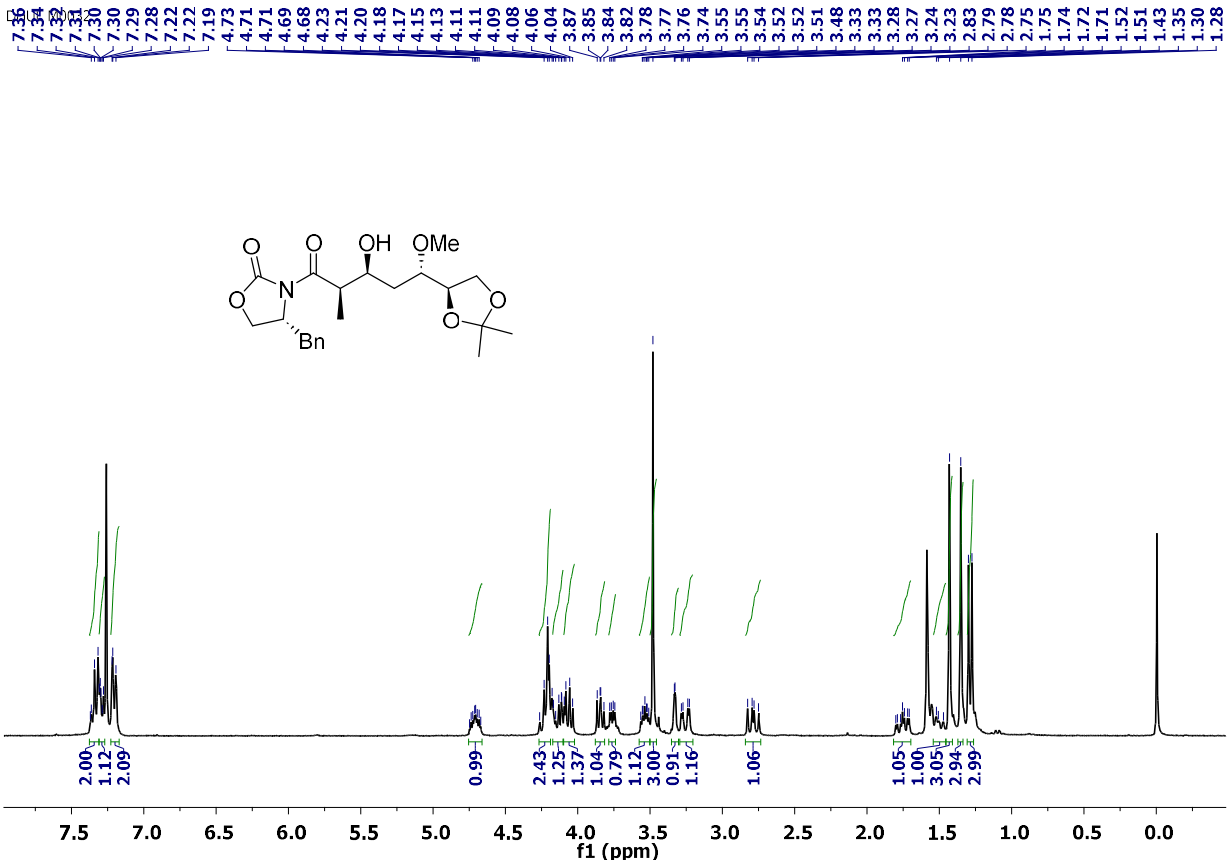


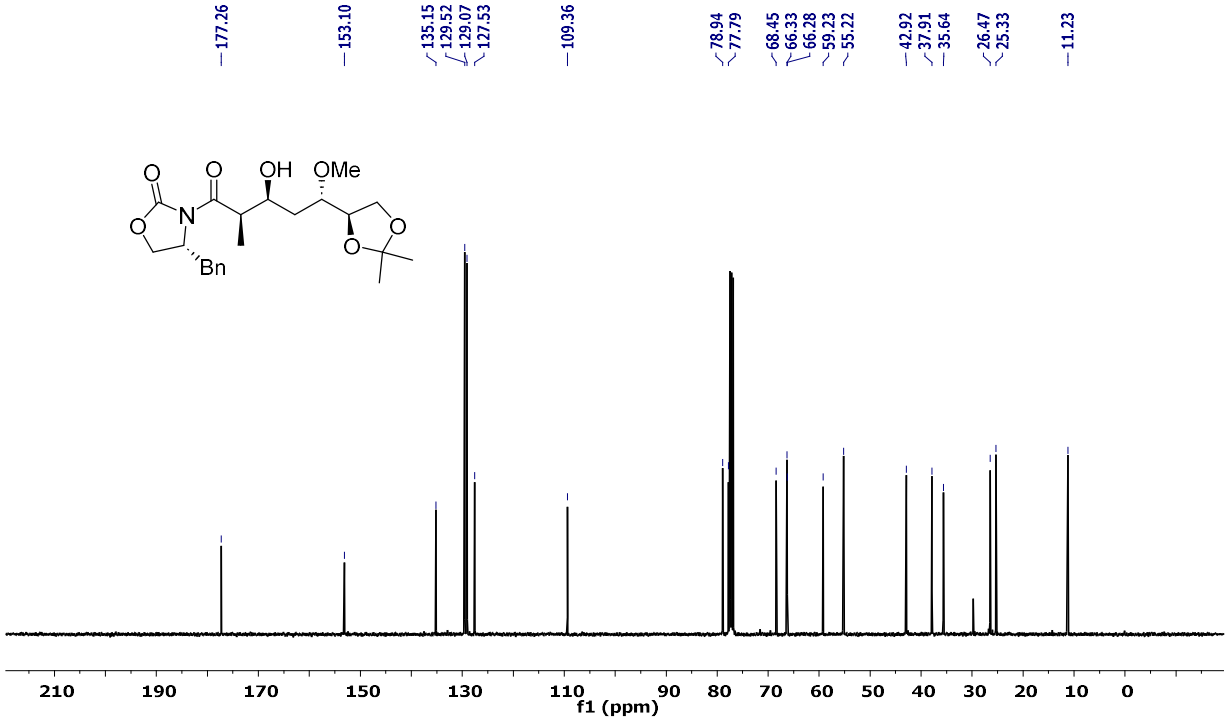
^{1}H NMR spectrum of 19 ($CDCl_3$, 400 MHz)



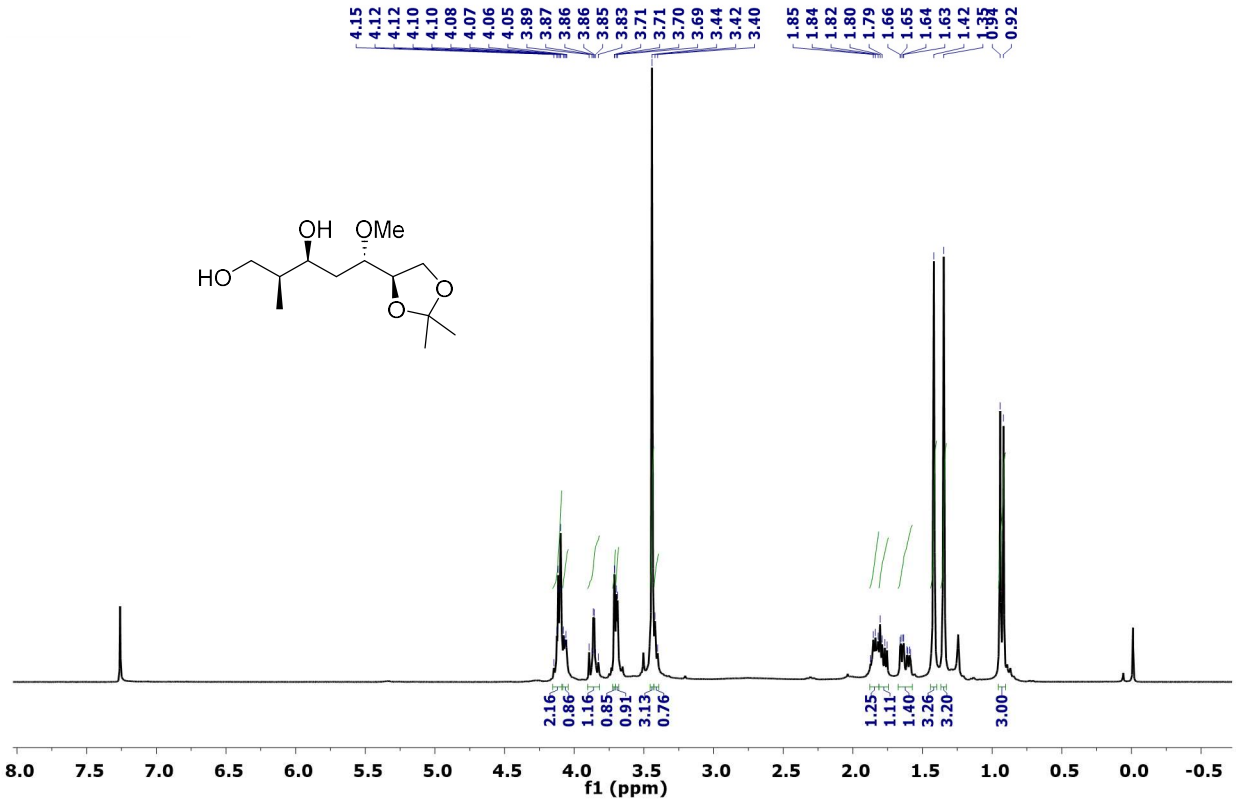
^{13}C NMR spectrum of 19 ($CDCl_3$, 100 MHz)



^{1}H NMR spectrum of 20 ($CDCl_3$, 300 MHz)



^{13}C NMR spectrum of 20 ($CDCl_3$, 100 MHz)



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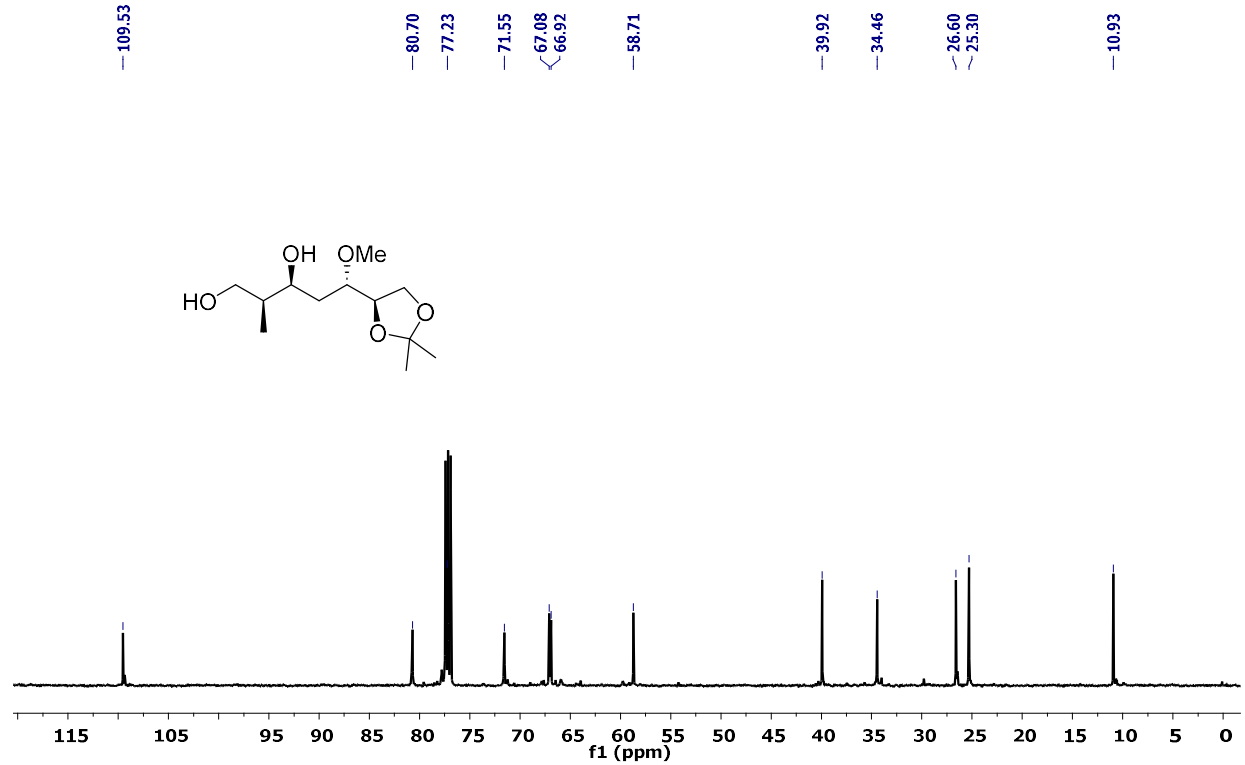
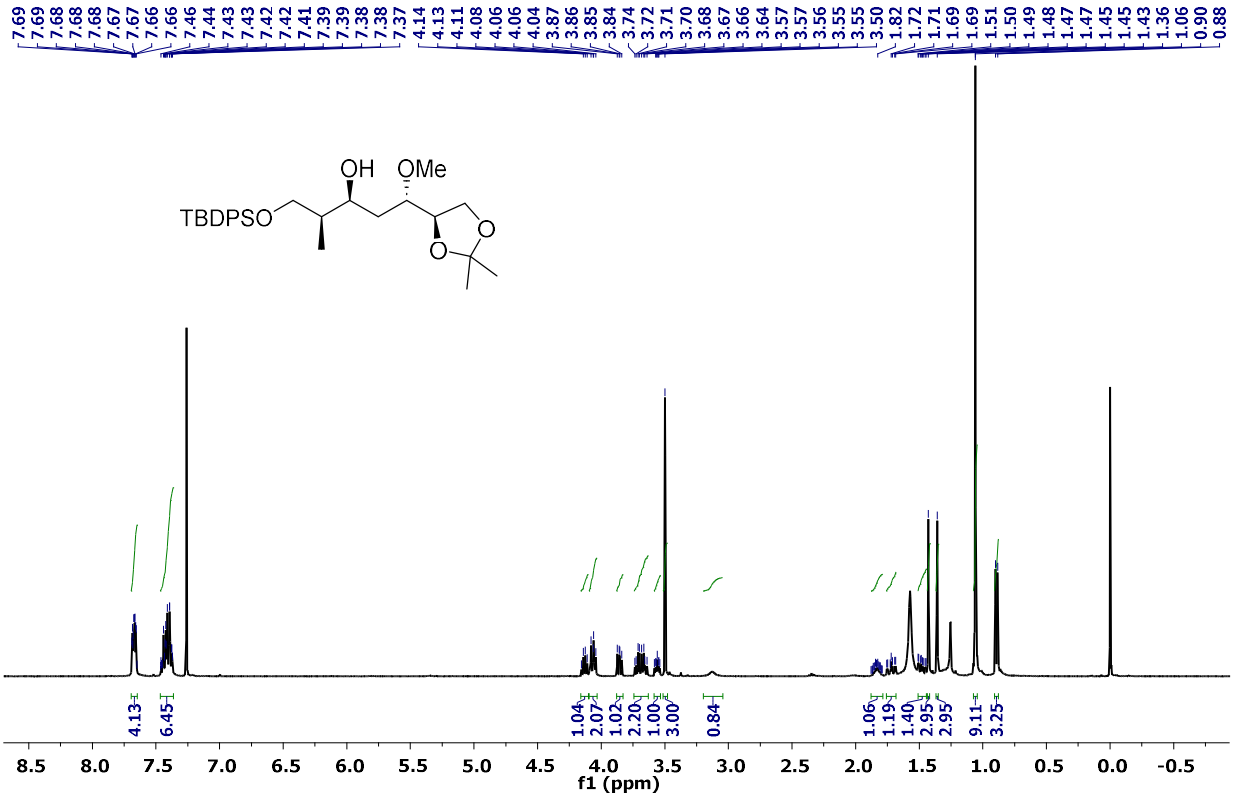
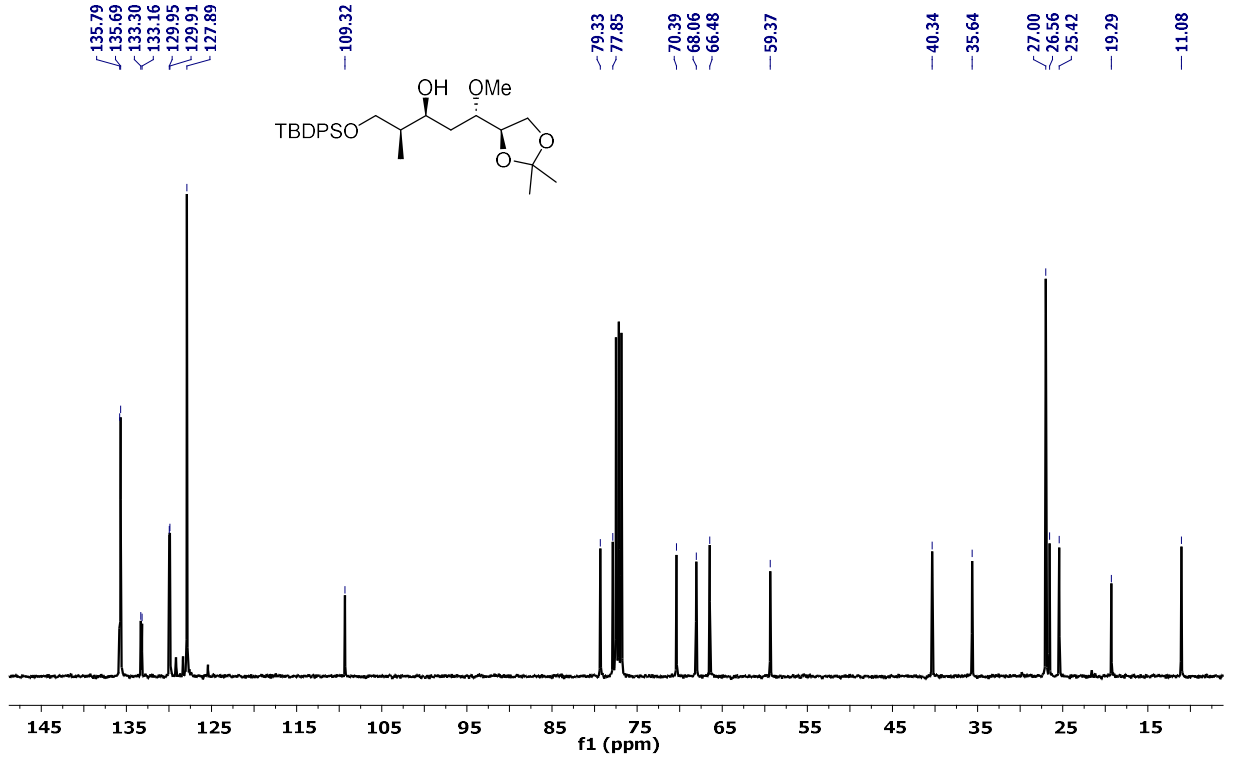


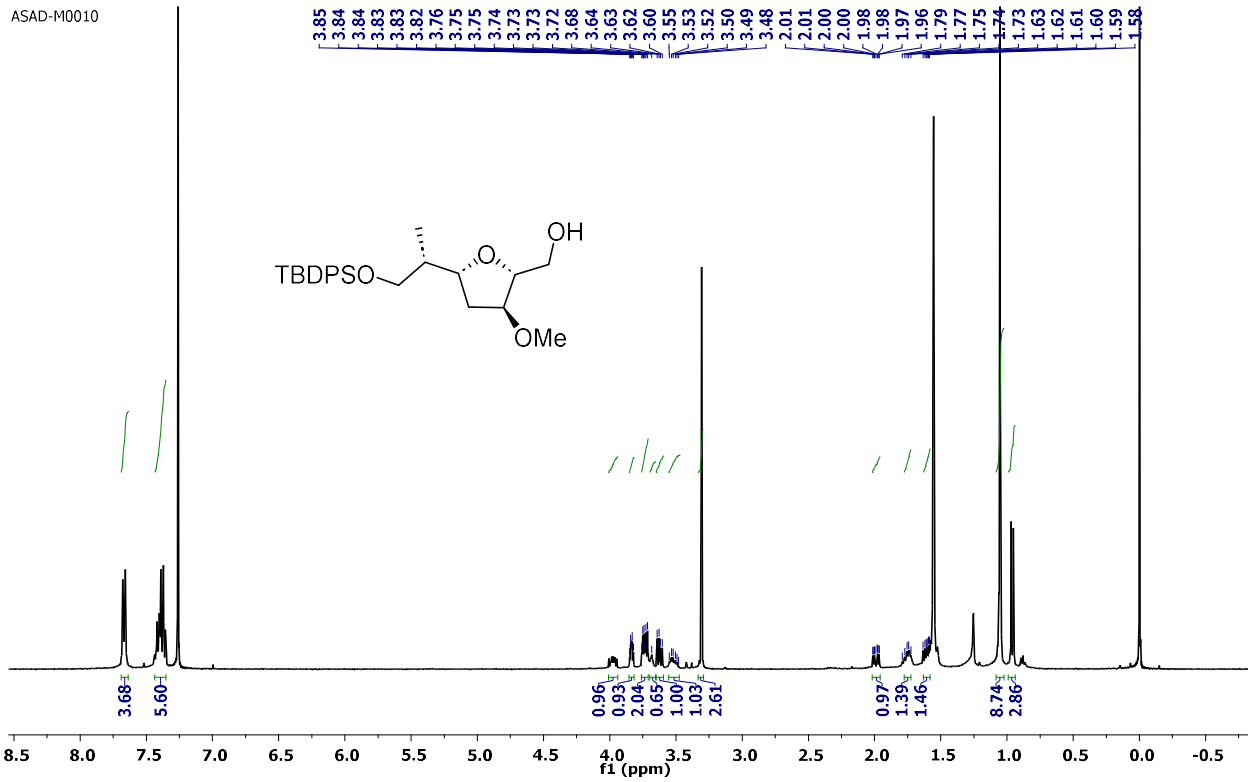
^{13}C NMR spectrum of 21 ($CDCl_3$, 125 MHz)



^{1}H NMR spectrum of 22 ($CDCl_3$, 400 MHz)



^{13}C NMR spectrum of 22 ($CDCl_3$, 100 MHz)



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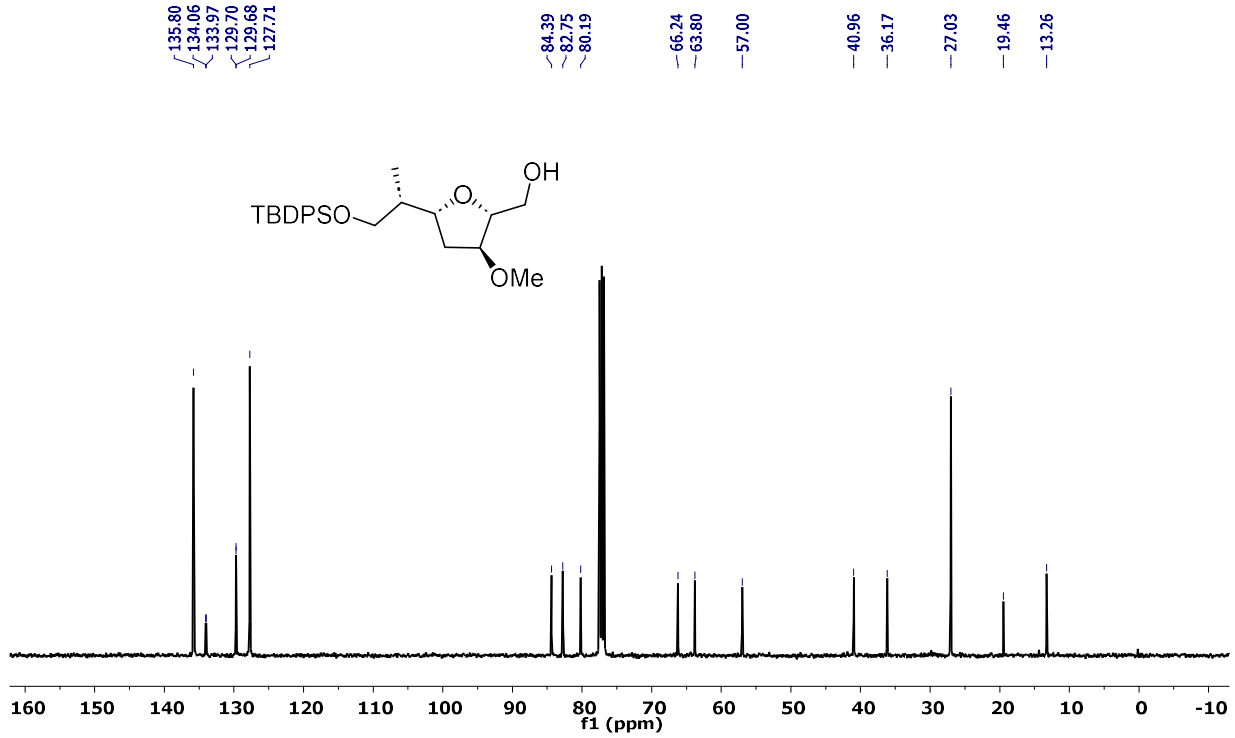
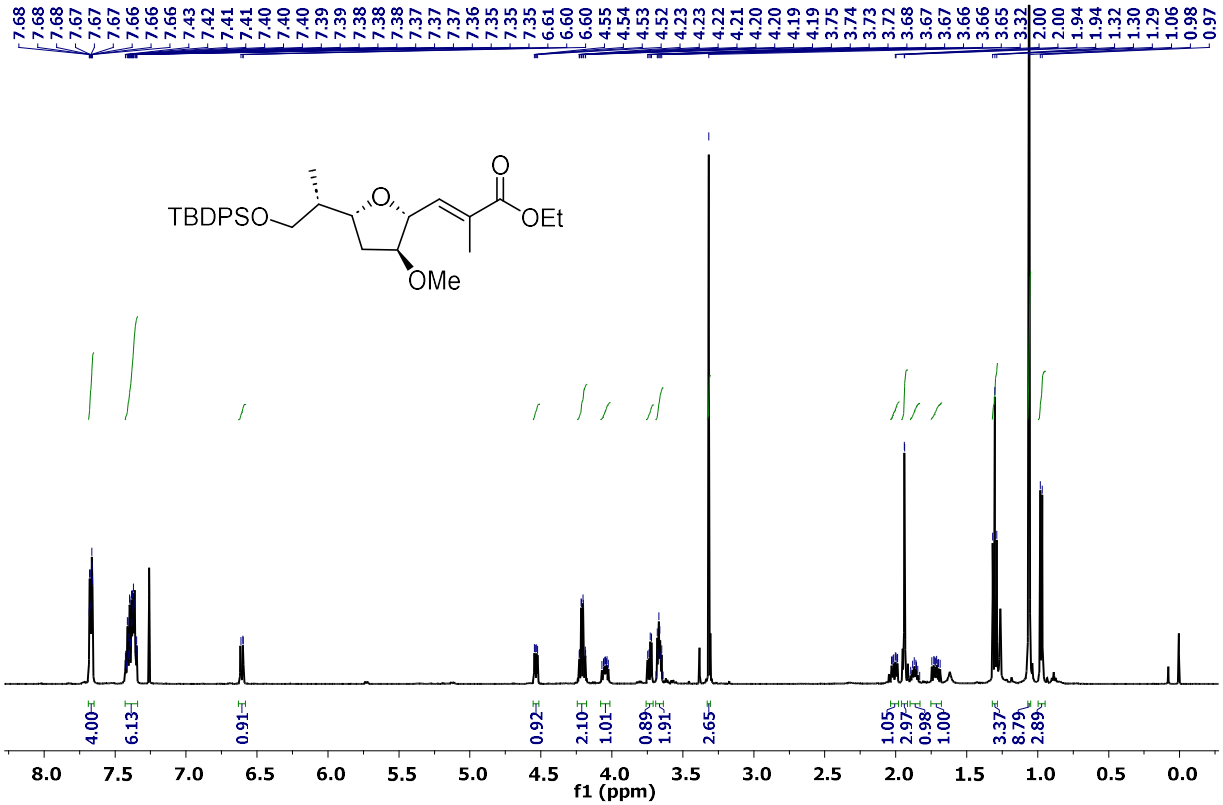


^{13}C NMR spectrum of 13 ($CDCl_3$, 100 MHz)



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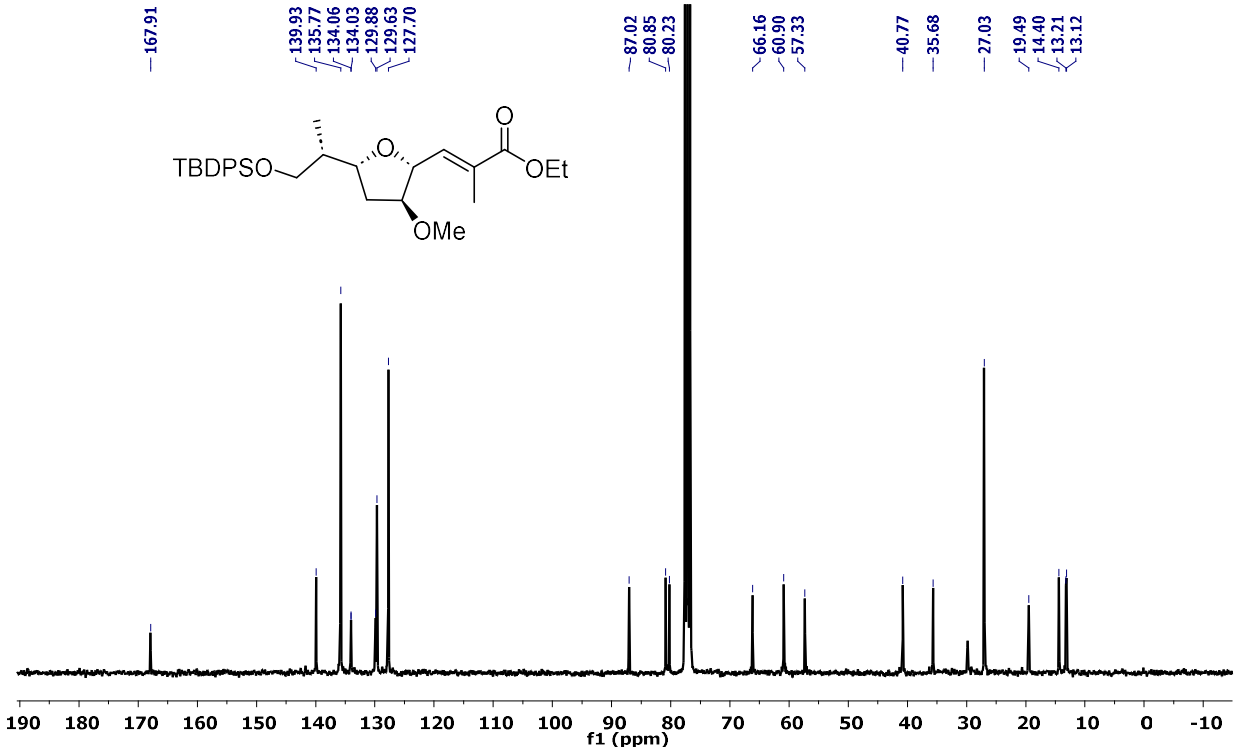
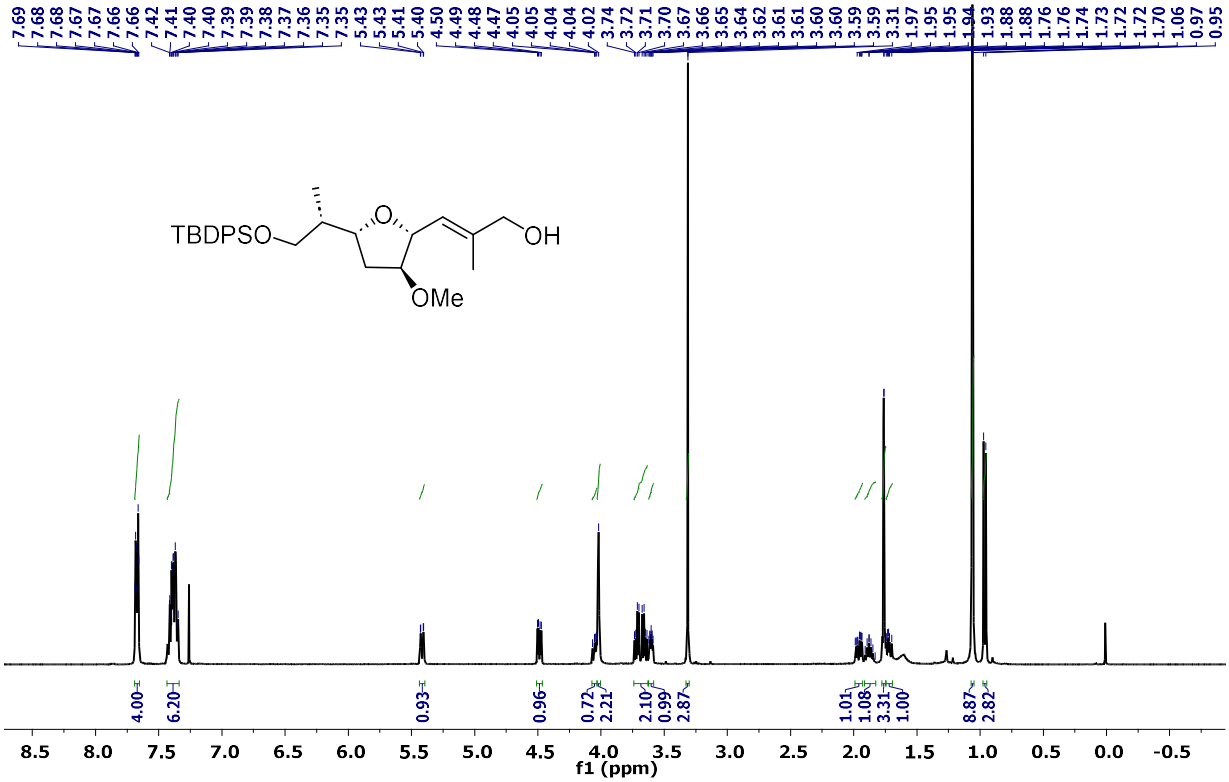
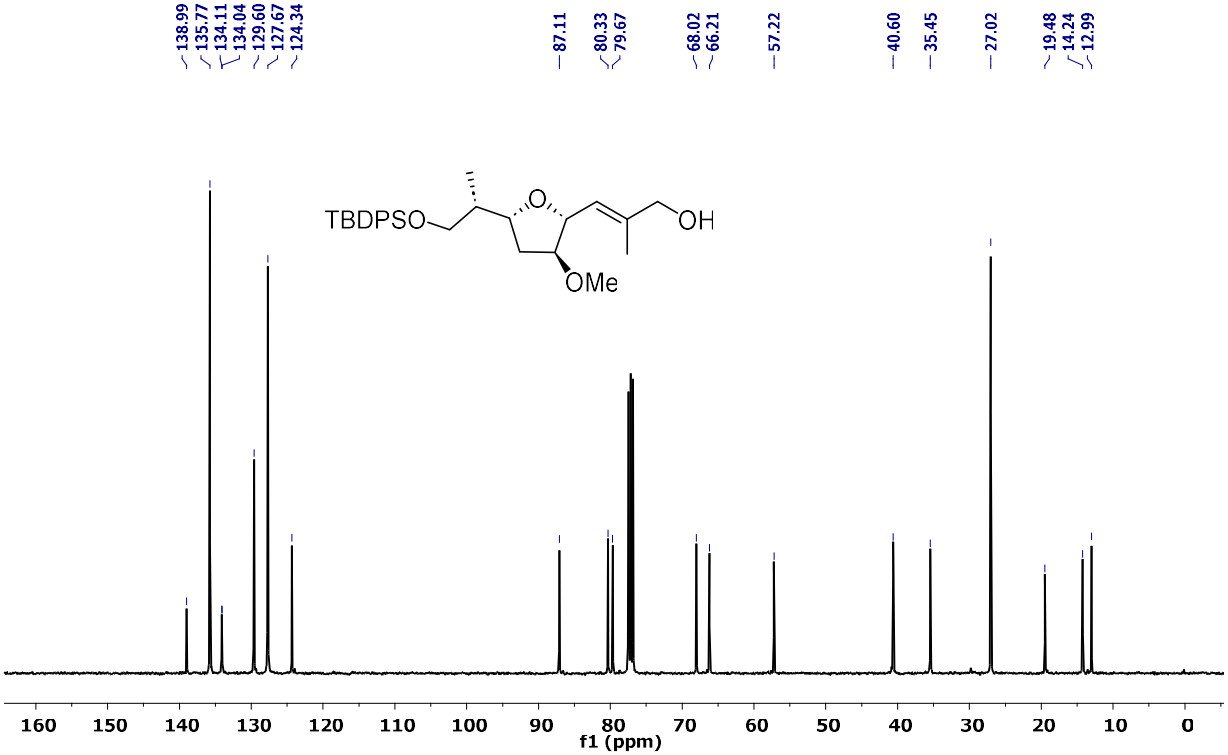


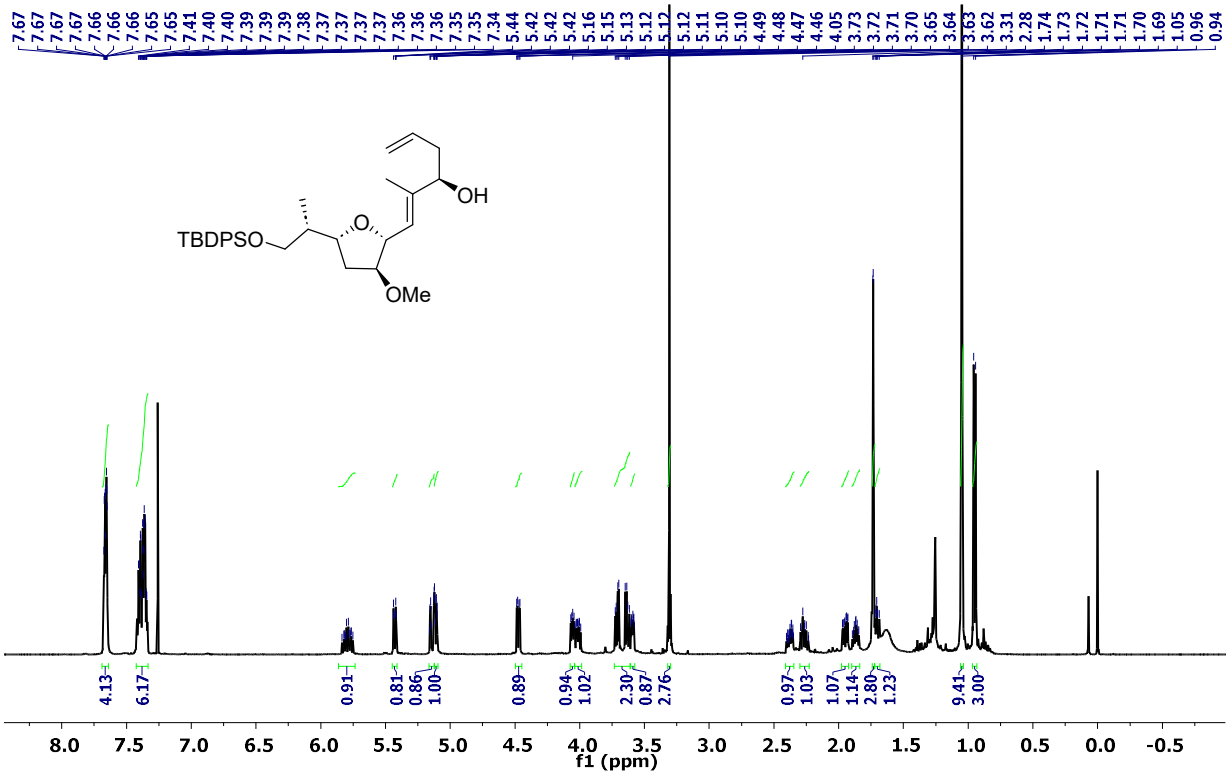
^{13}C NMR spectrum of 23 ($CDCl_3$, 75 MHz)



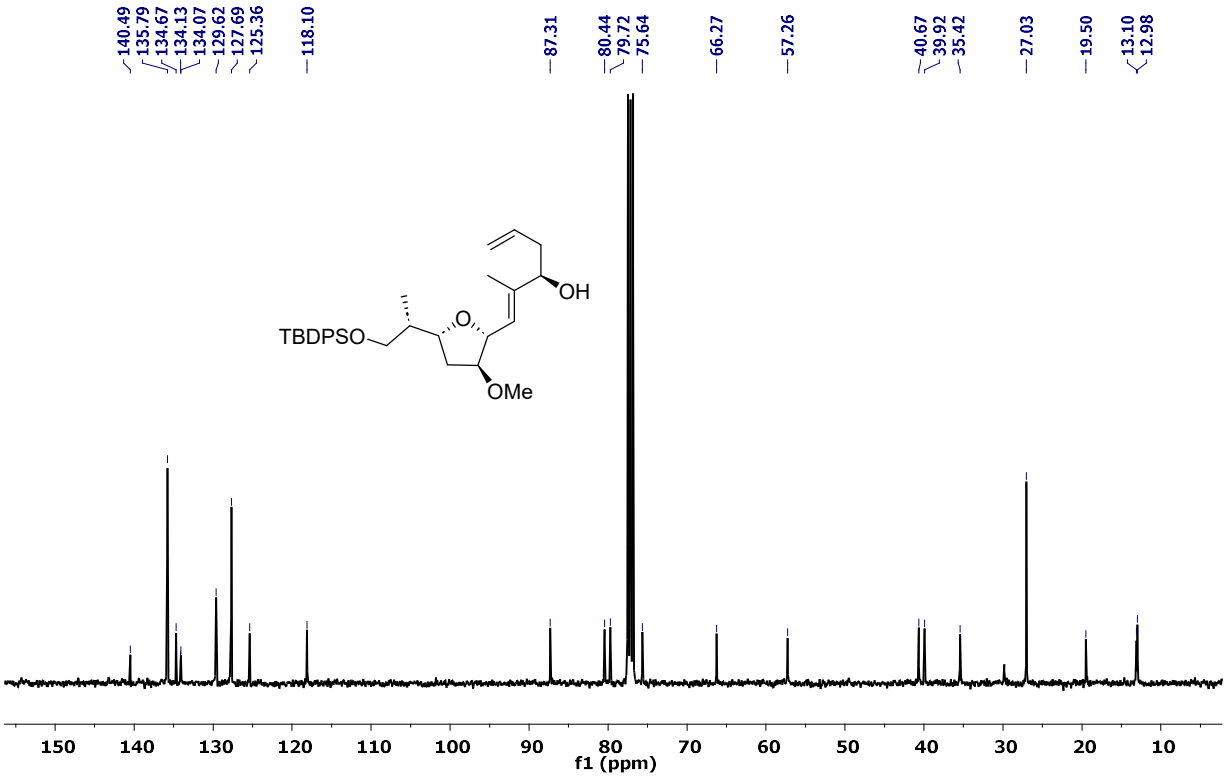
^{1}H NMR spectrum of 12 ($CDCl_3$, 400 MHz)



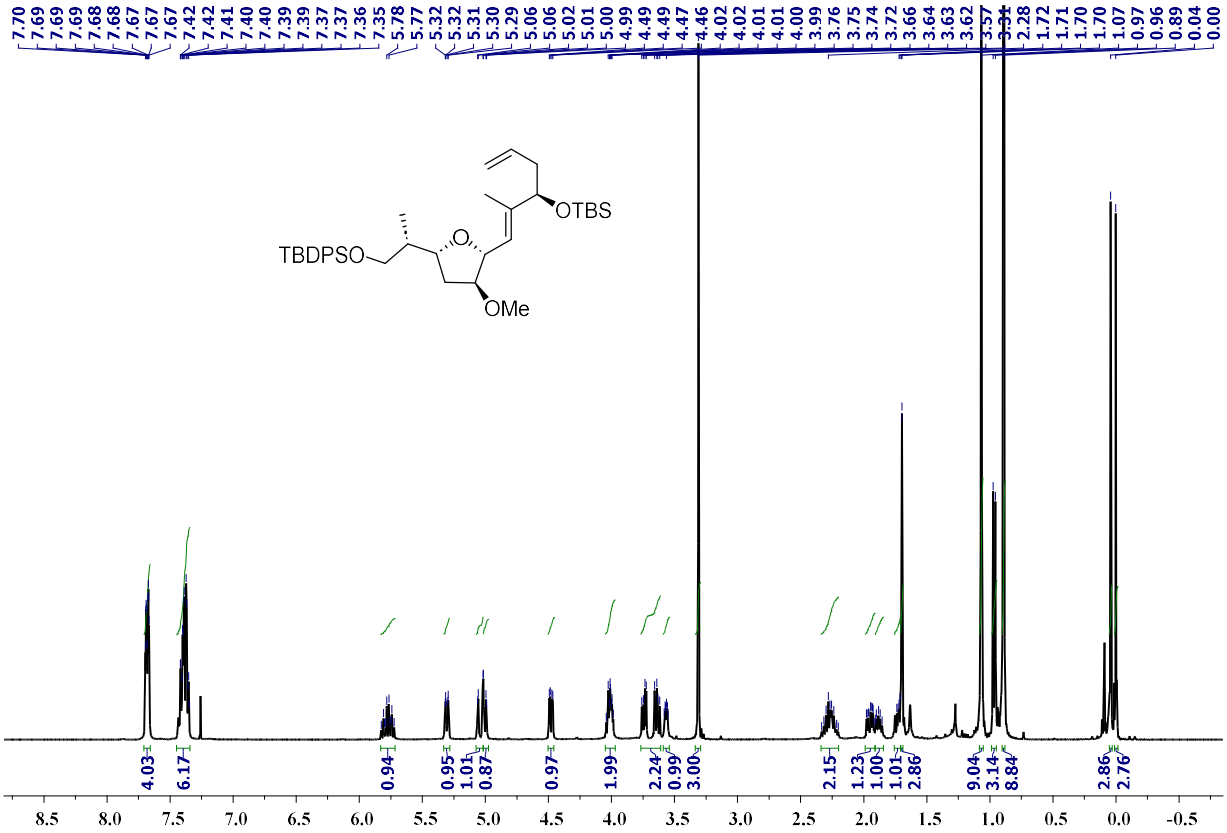
^{13}C NMR spectrum of 12 ($CDCl_3$, 100 MHz)



^{1}H NMR spectrum of 24 ($CDCl_3$, 500 MHz)



^{13}C NMR spectrum of 24 ($CDCl_3$, 100 MHz)



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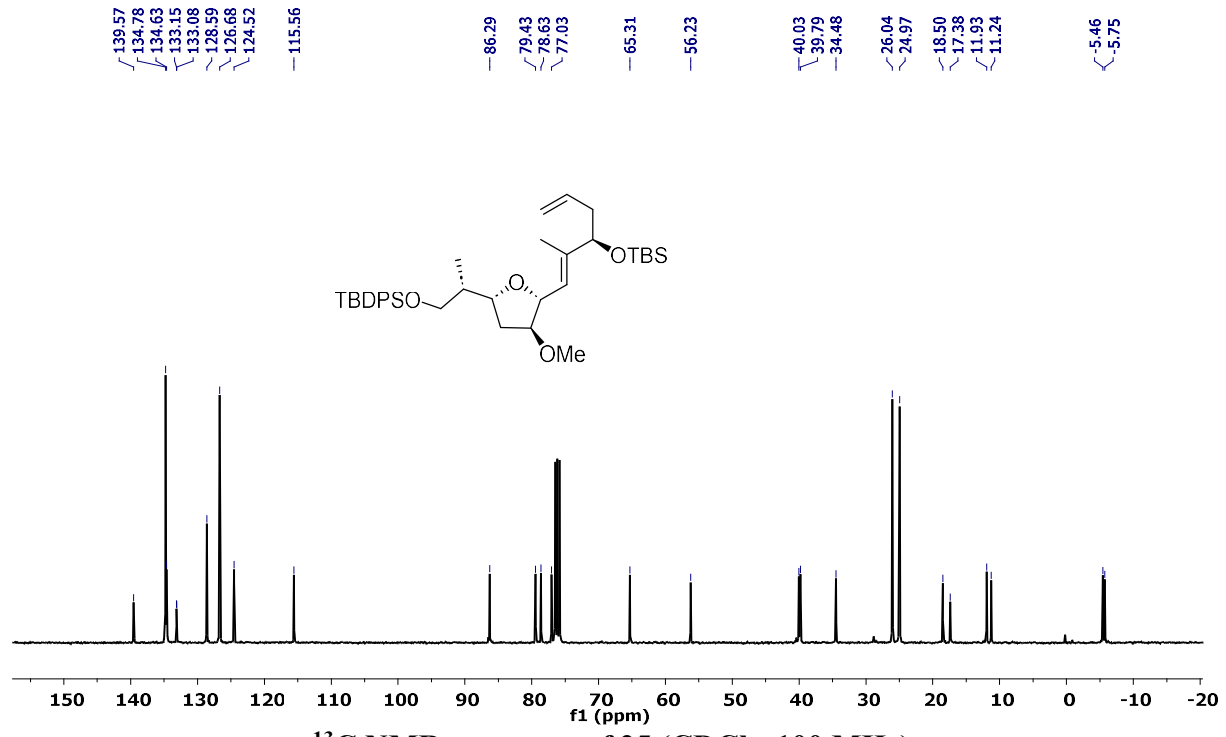

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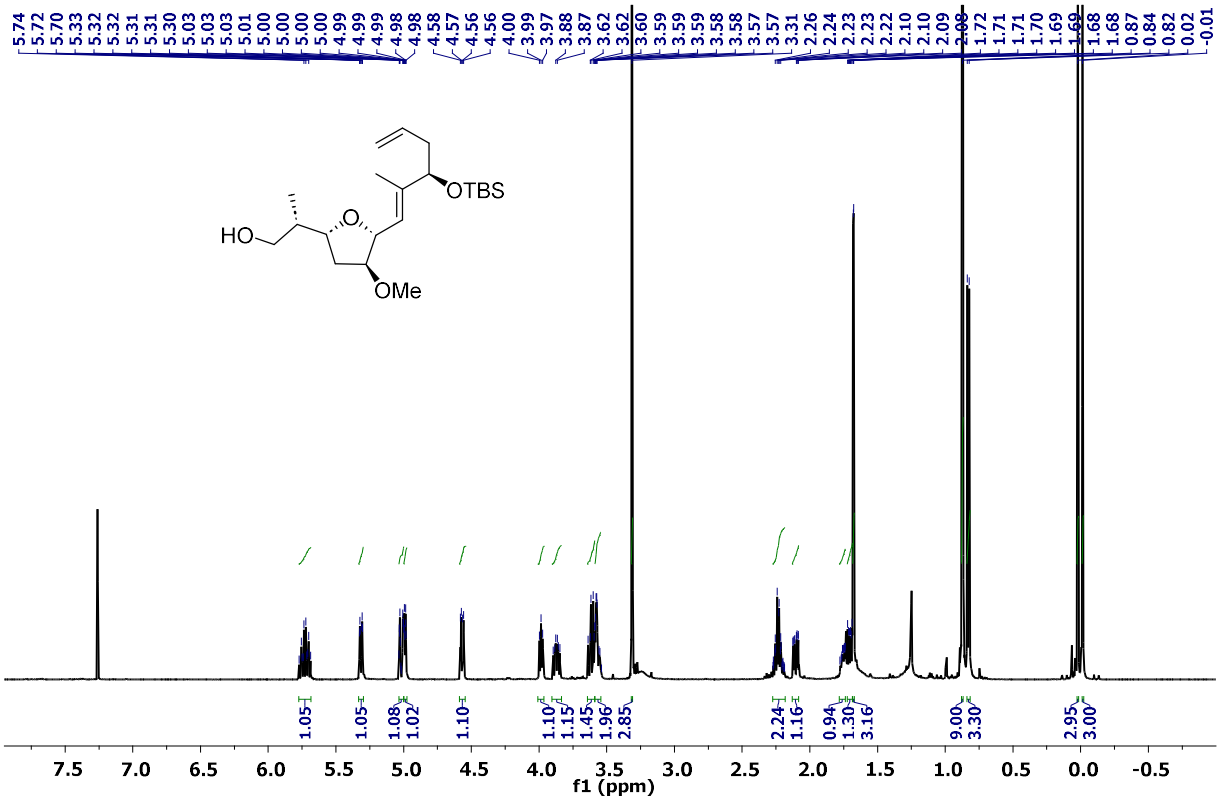

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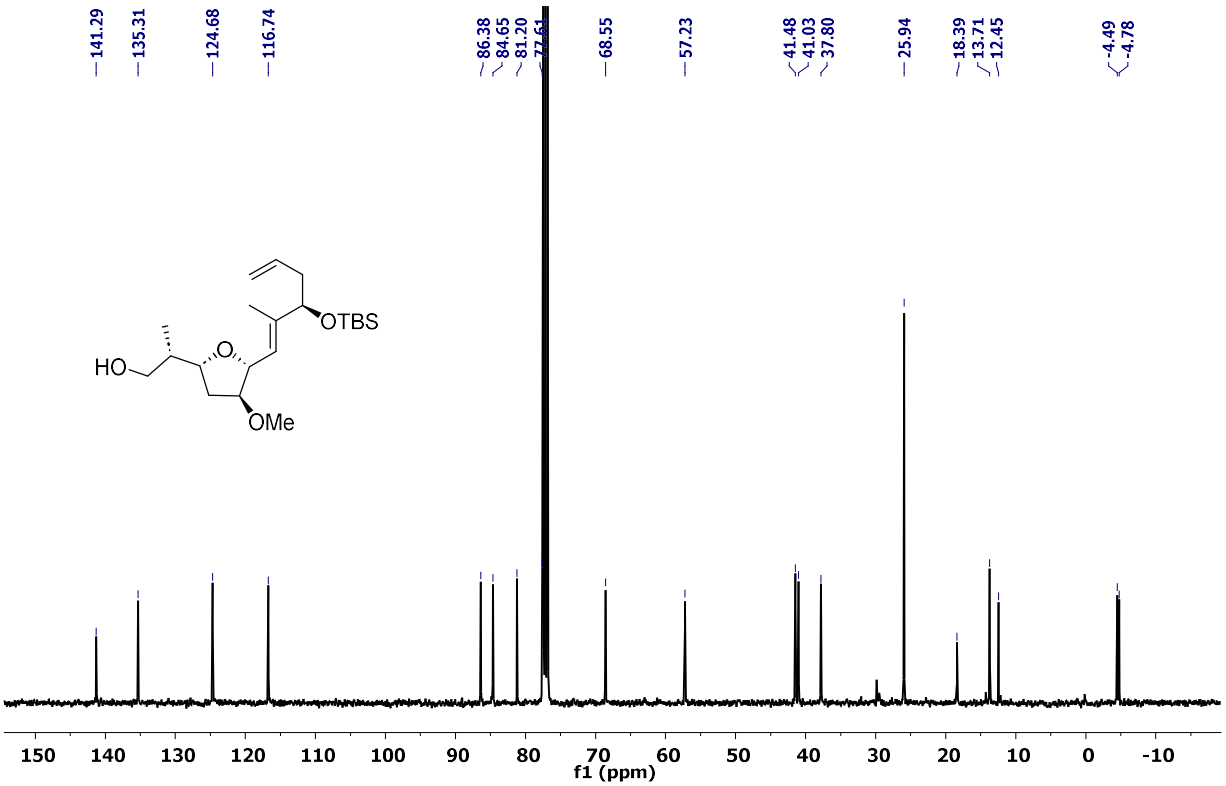

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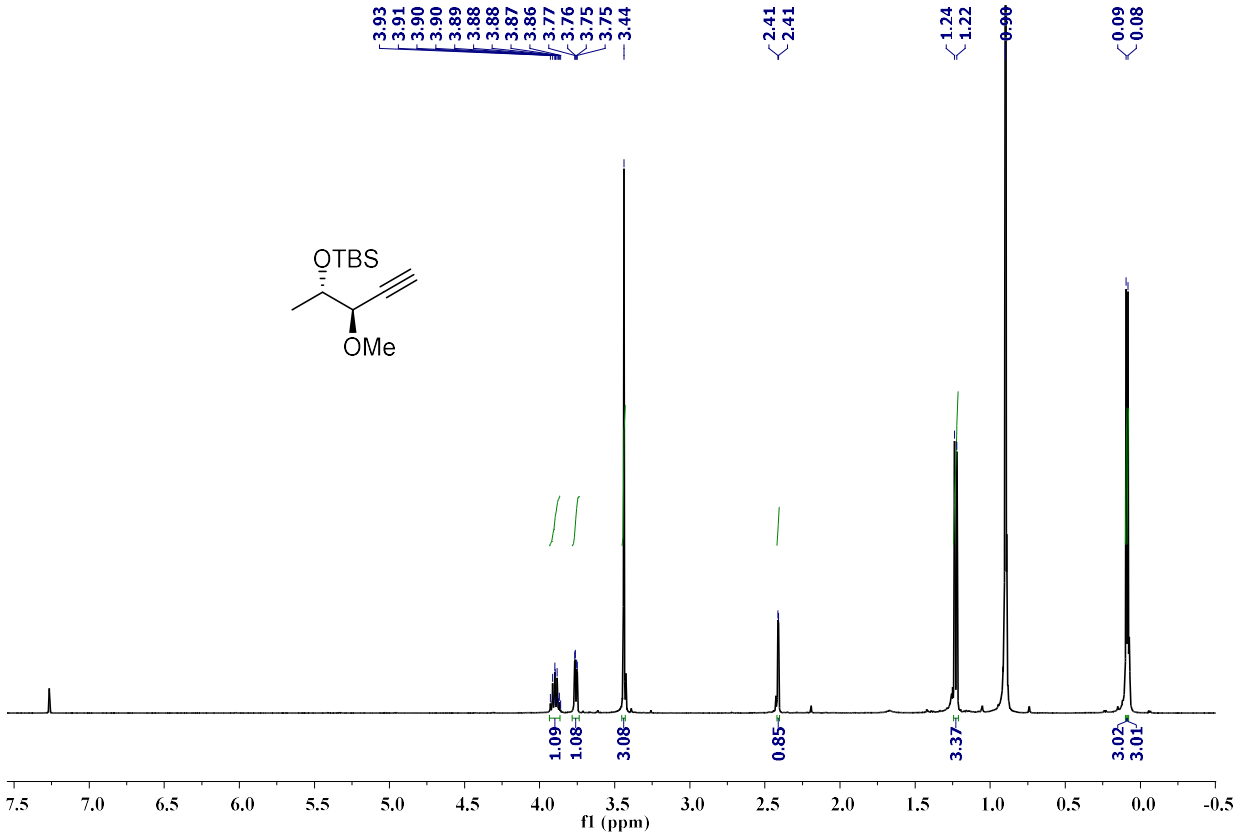
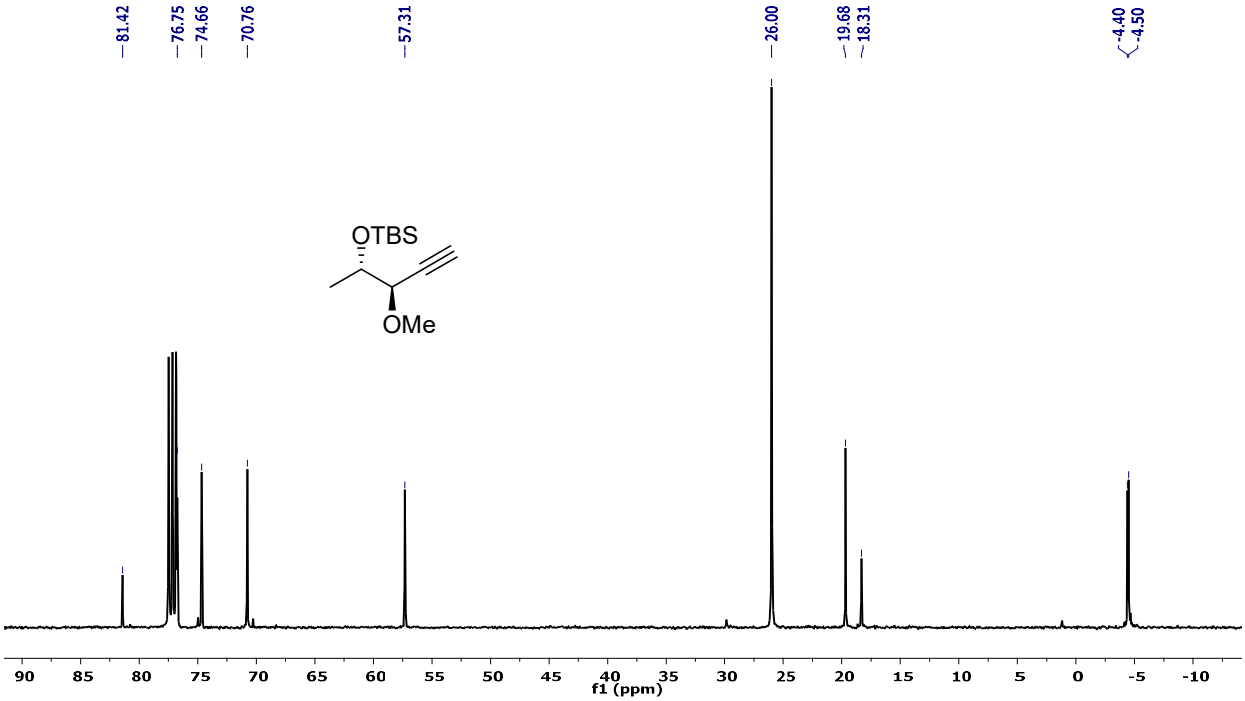
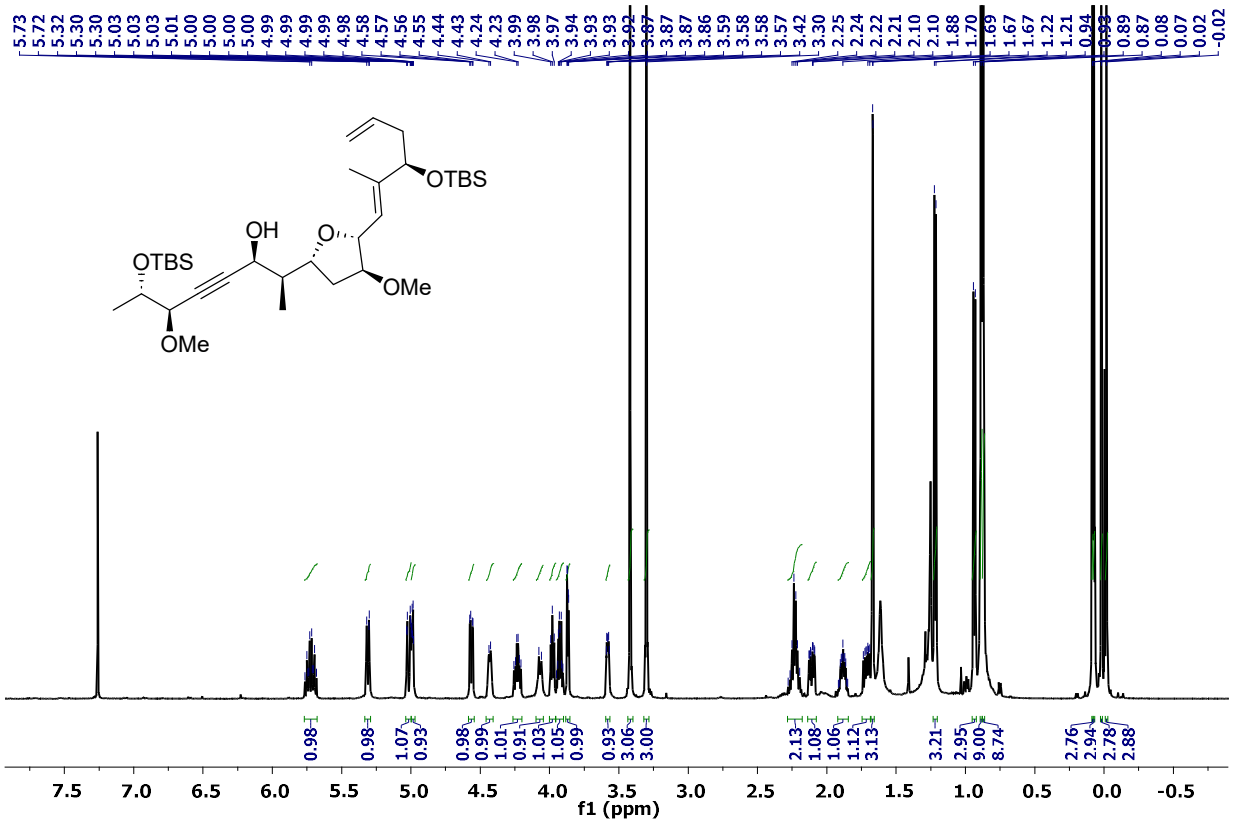


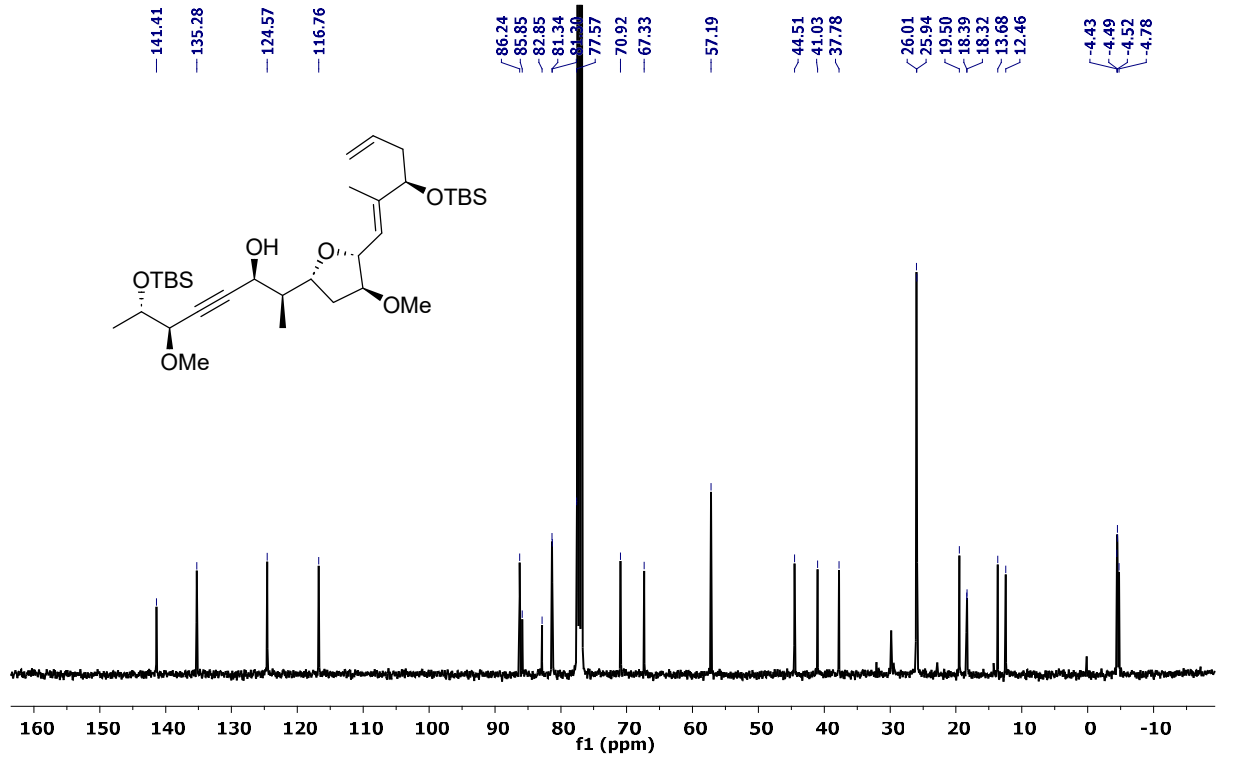
^{1}H NMR spectrum of 10 ($CDCl_3$, 400 MHz)



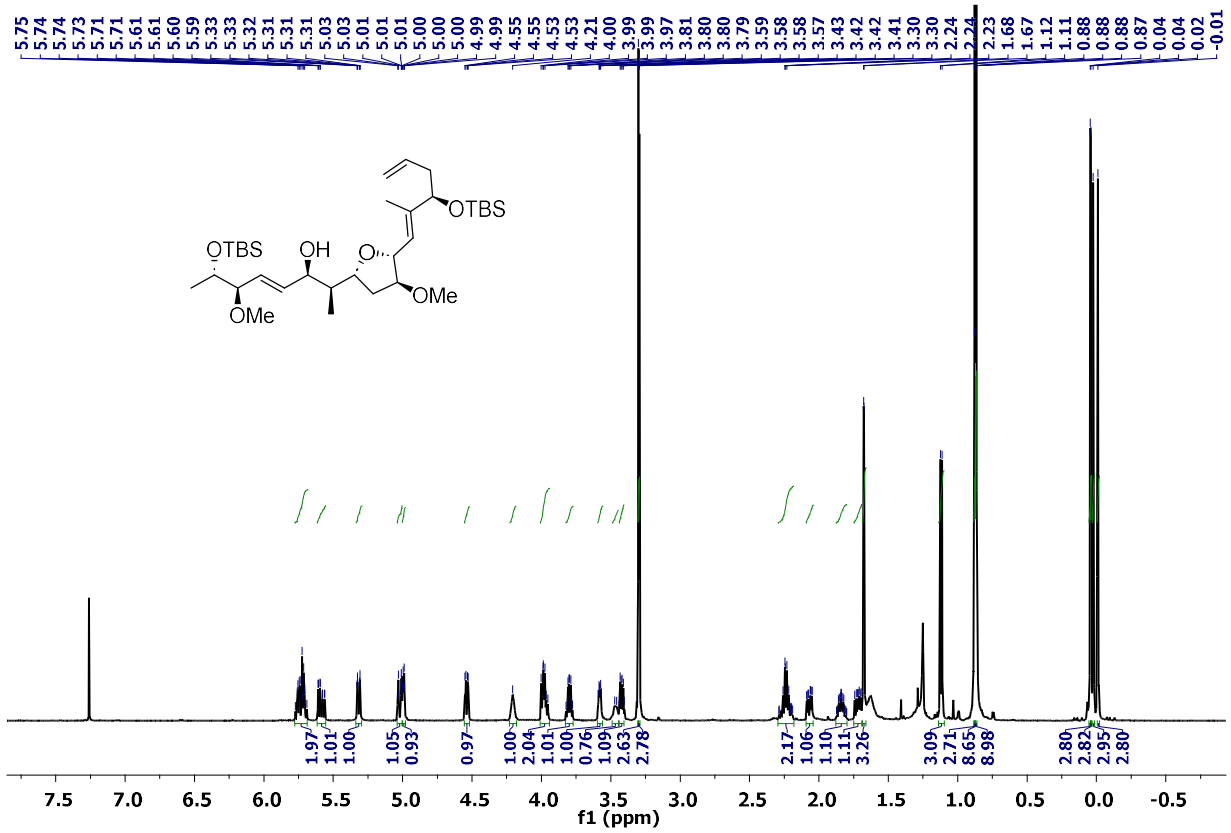
^{13}C NMR spectrum of 10 ($CDCl_3$, 100 MHz)



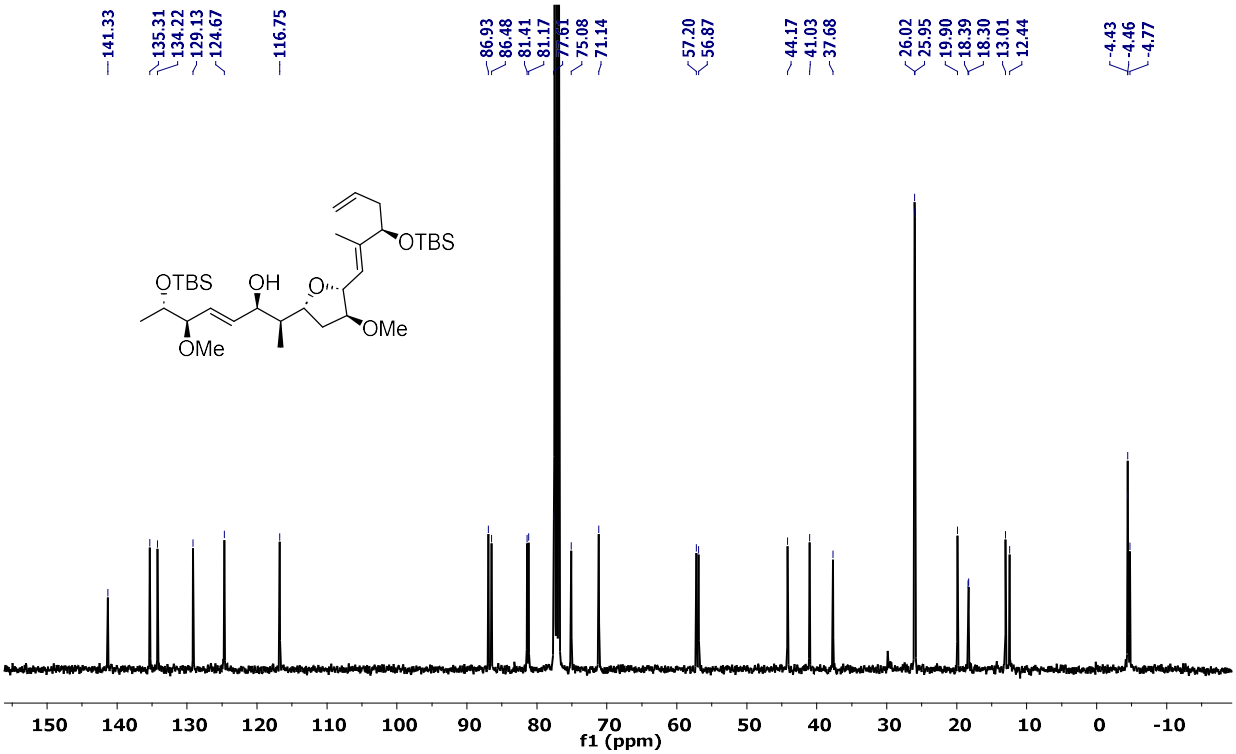
^{1}H NMR spectrum of 28 ($CDCl_3$, 500 MHz)



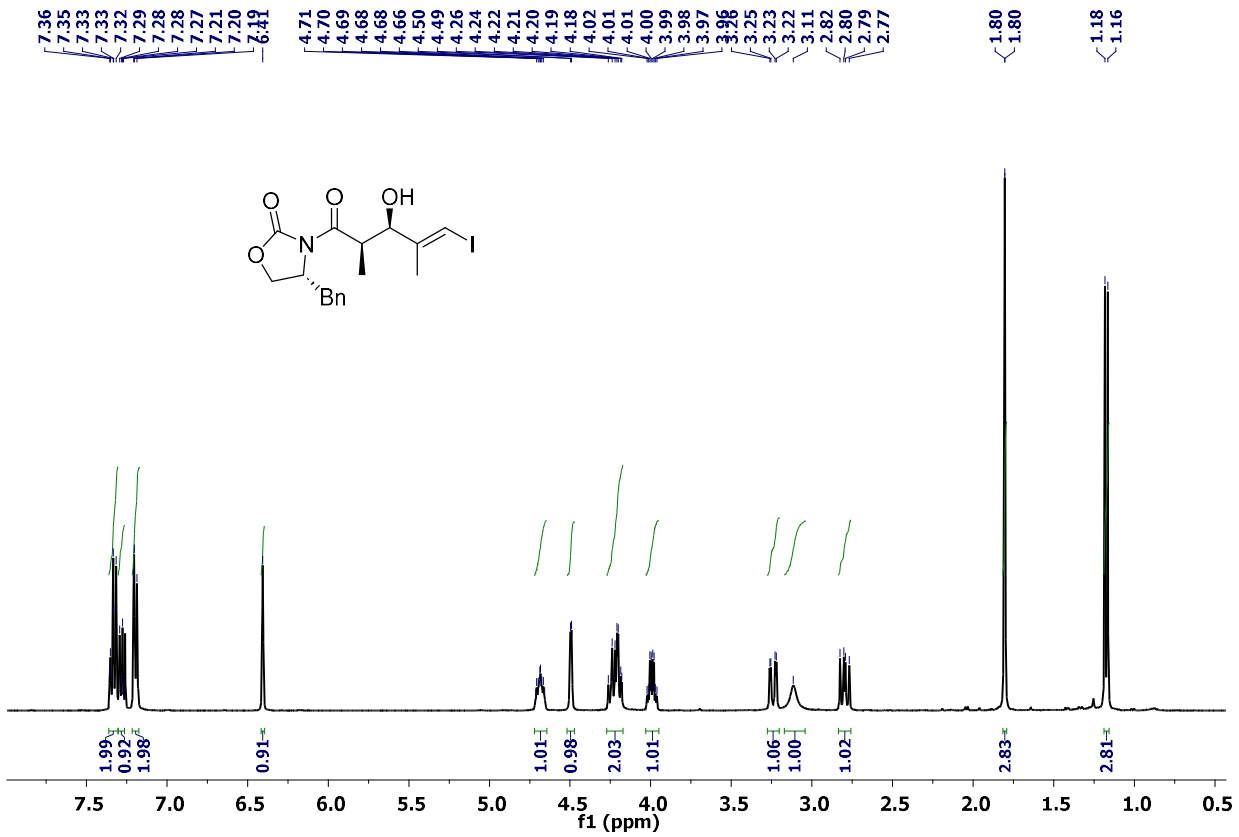
^{13}C NMR spectrum of 28 ($CDCl_3$, 100 MHz)



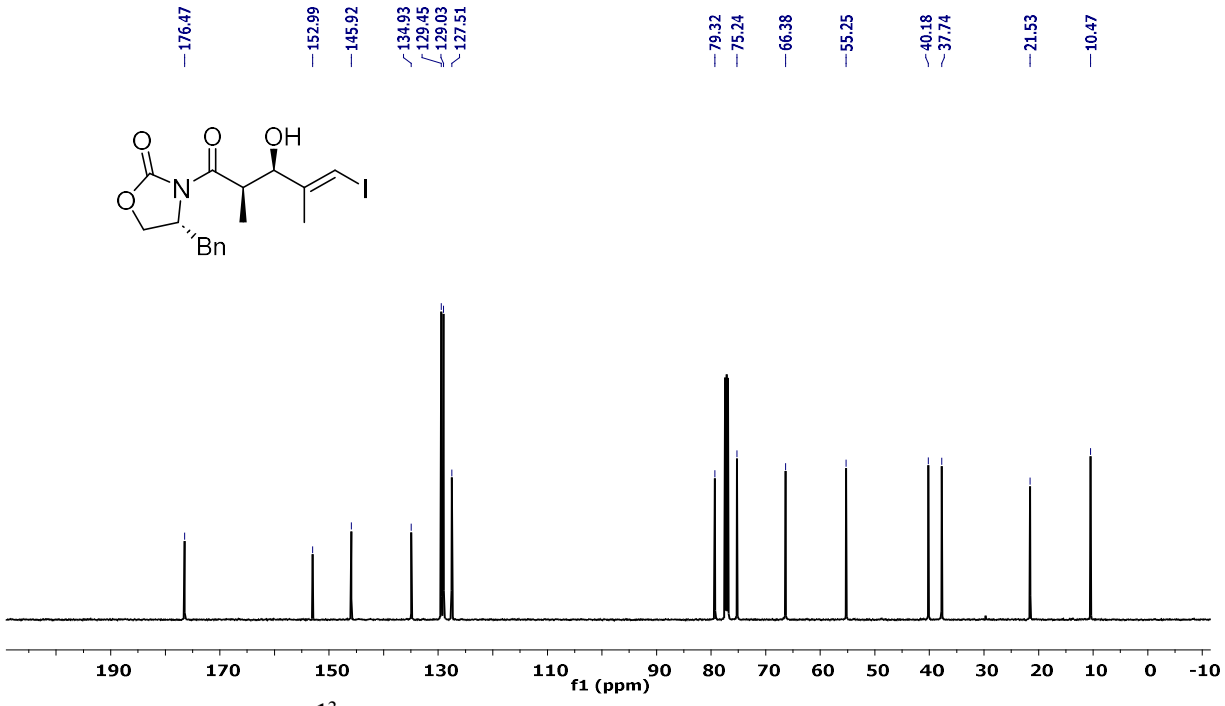
^{1}H NMR spectrum of 9 ($CDCl_3$, 500 MHz)



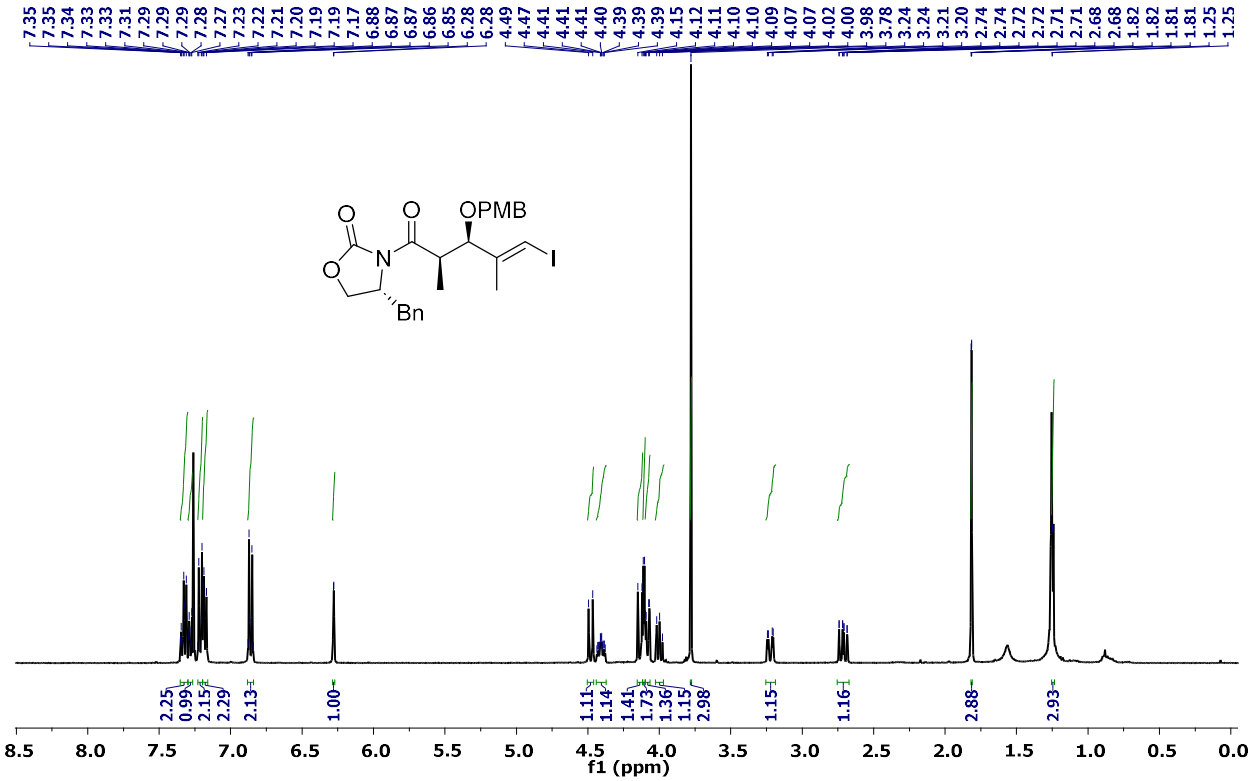
^{13}C NMR spectrum of 9 ($CDCl_3$, 100 MHz)



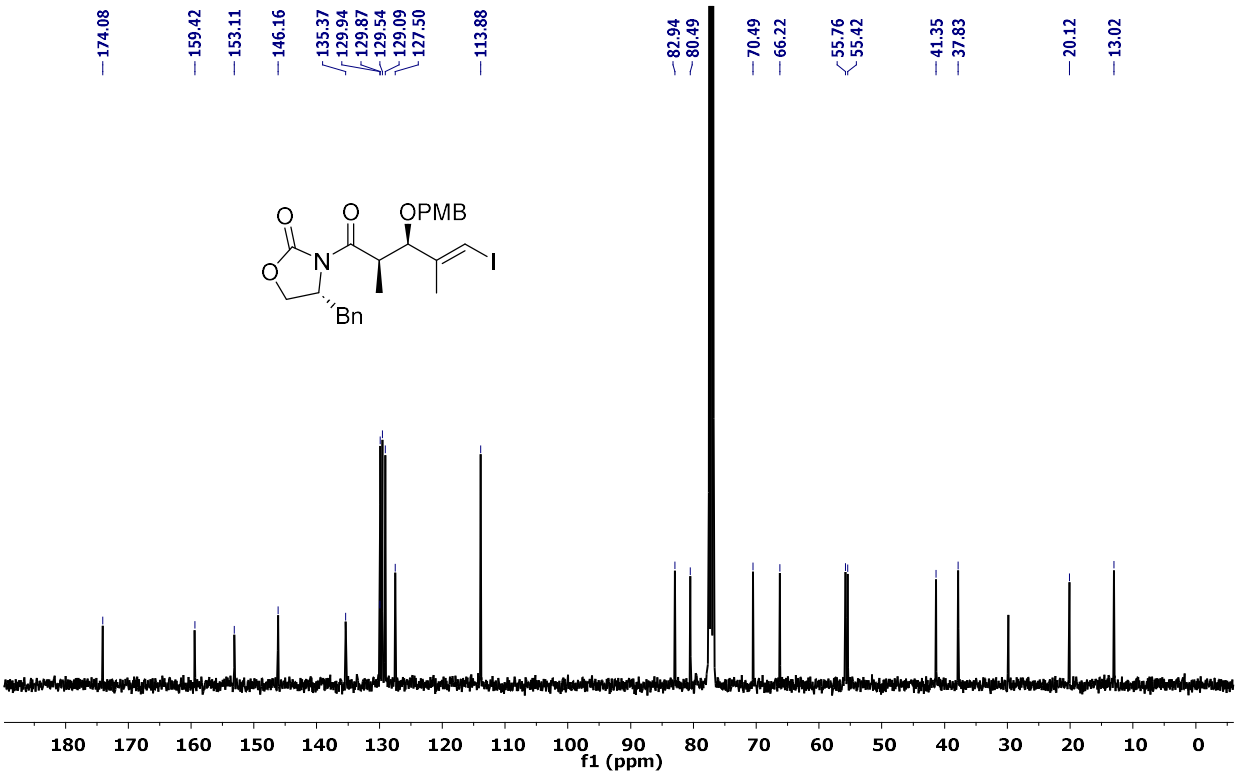
^{1}H NMR spectrum of 29 ($CDCl_3$, 400 MHz)



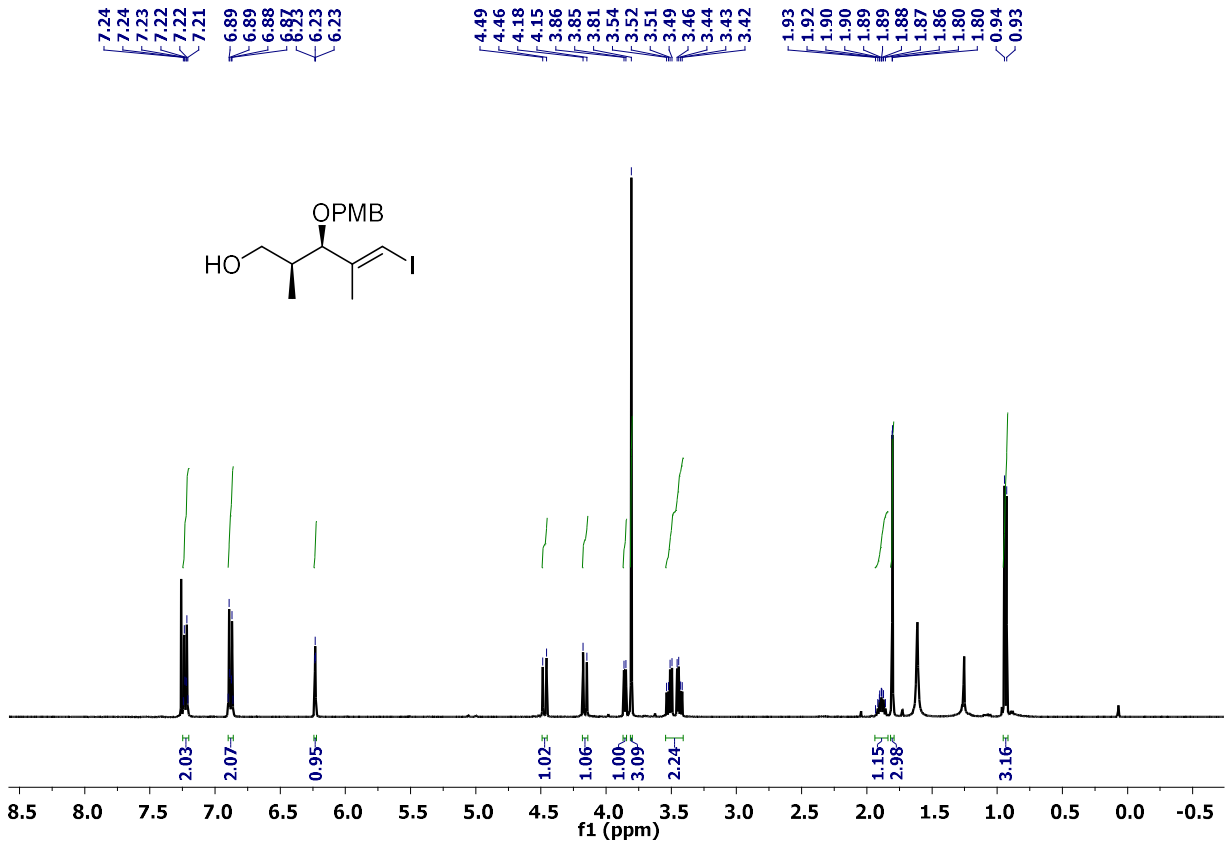
^{13}C NMR spectrum of 29 ($CDCl_3$, 125 MHz)



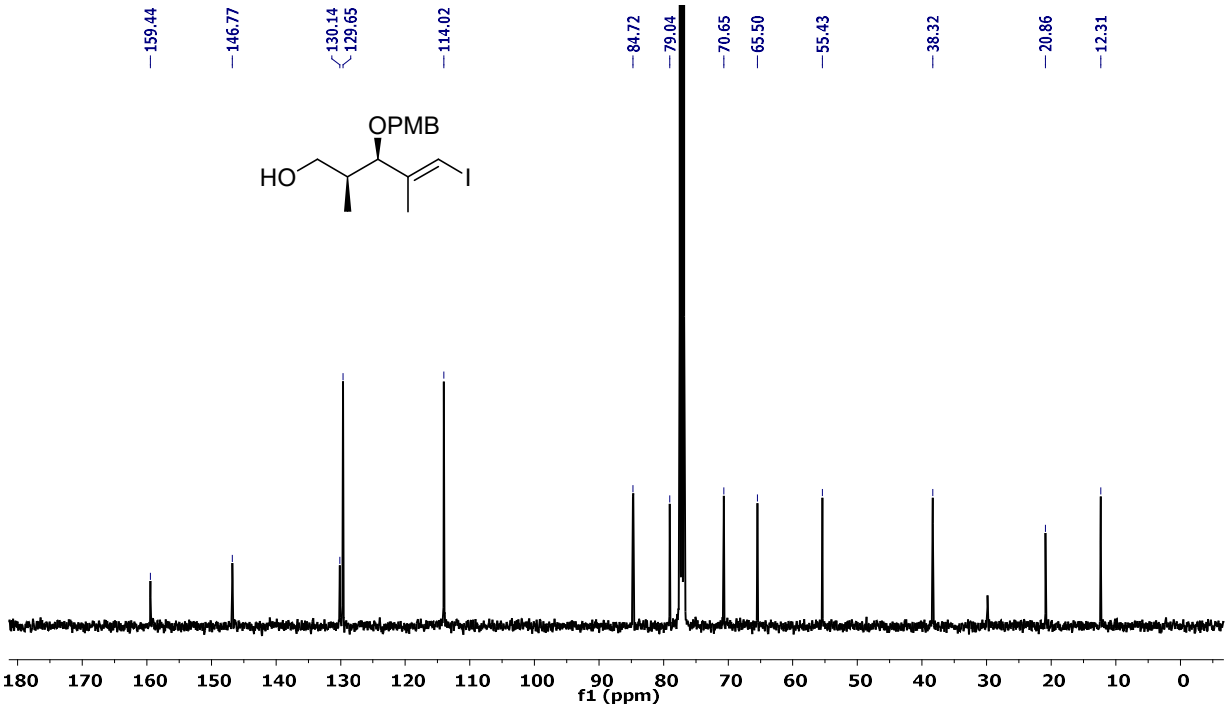
^{1}H NMR spectrum of 30 ($CDCl_3$, 400 MHz)



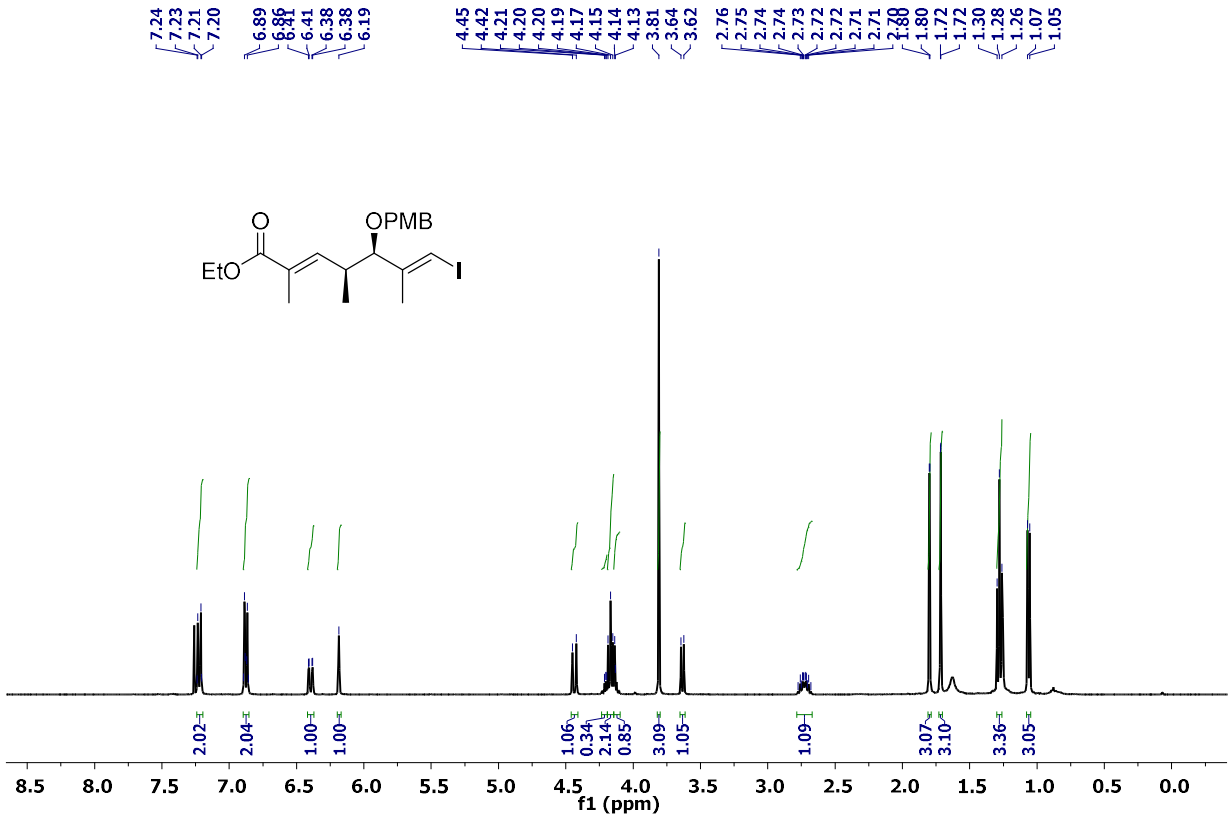
^{13}C NMR spectrum of 30 ($CDCl_3$, 100 MHz)



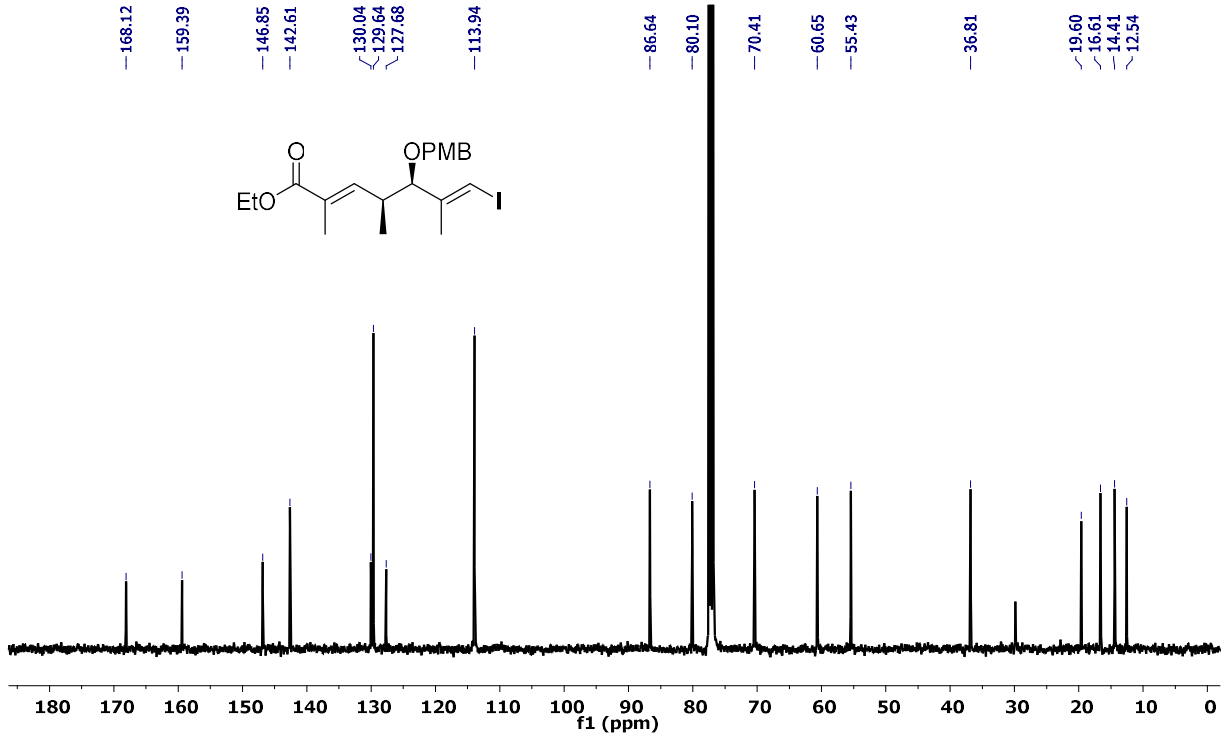
^{1}H NMR spectrum of 17 ($CDCl_3$, 400 MHz)



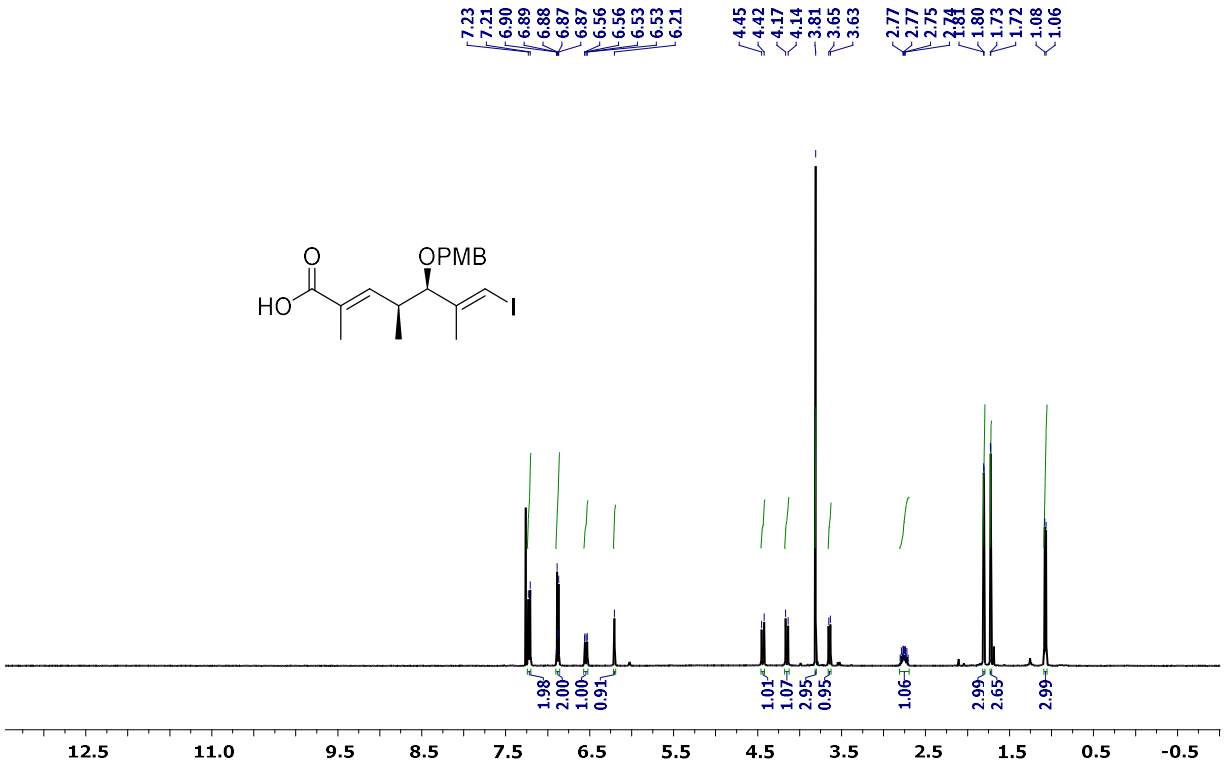
^{13}C NMR spectrum of 17 ($CDCl_3$, 100 MHz)



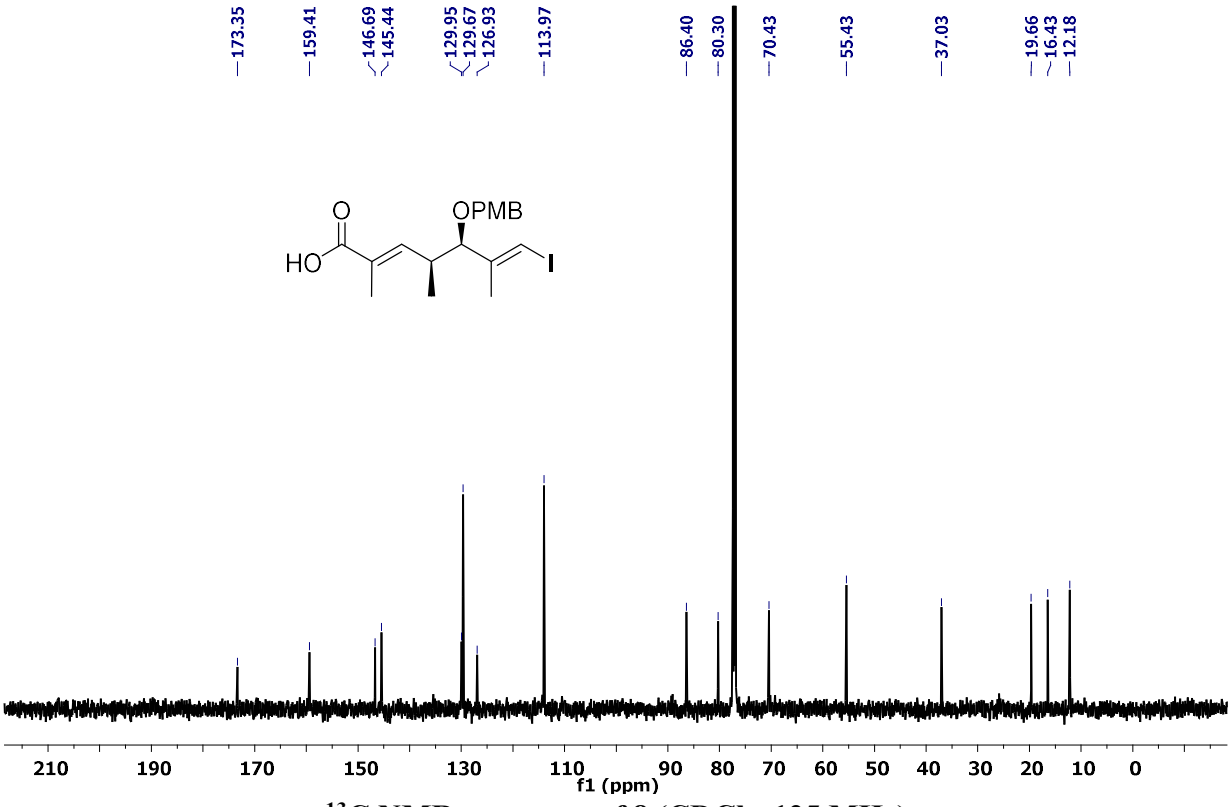
^{1}H NMR spectrum of 31 ($CDCl_3$, 400 MHz)



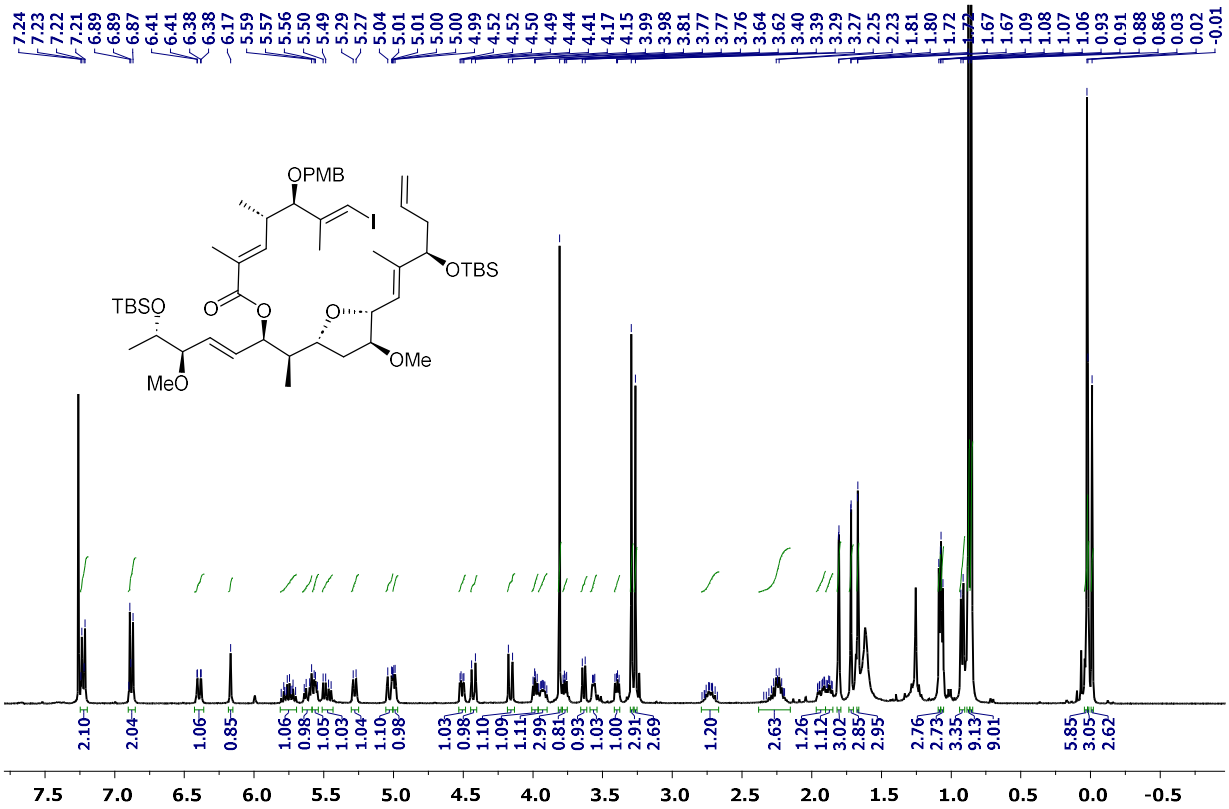
^{13}C NMR spectrum of 31 ($CDCl_3$, 100 MHz)



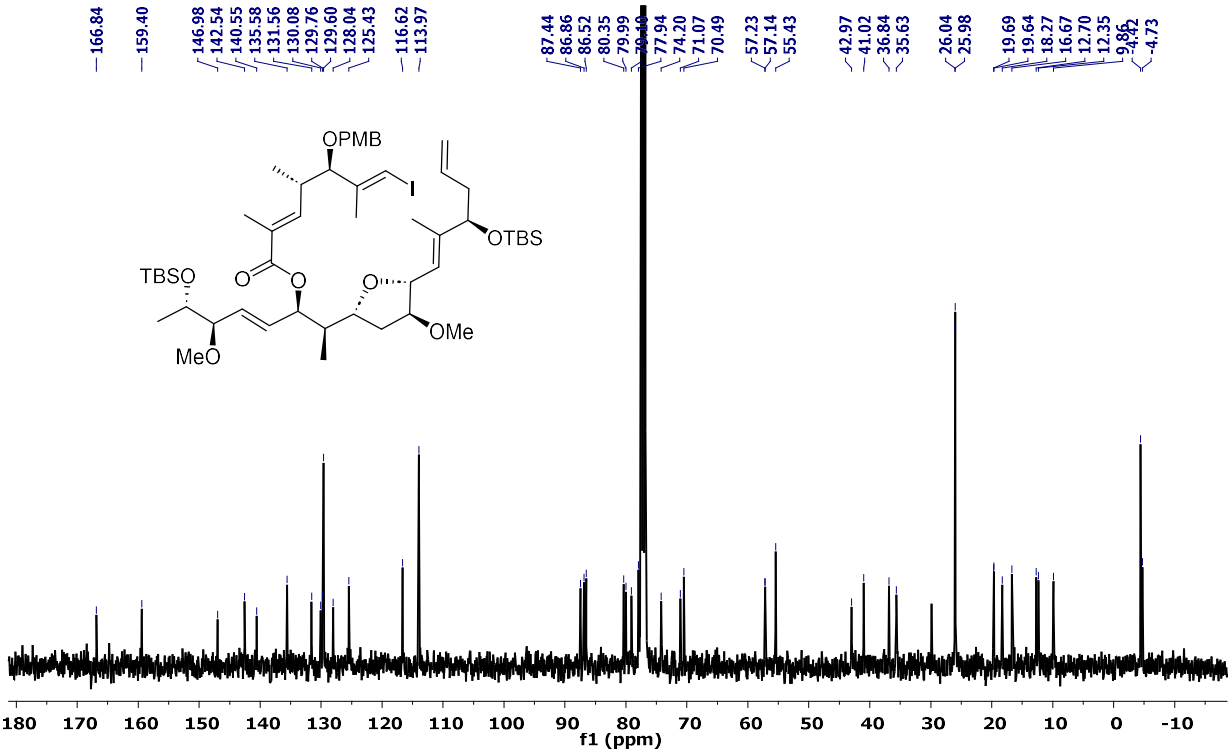
^{1}H NMR spectrum of 8 ($CDCl_3$, 400 MHz)



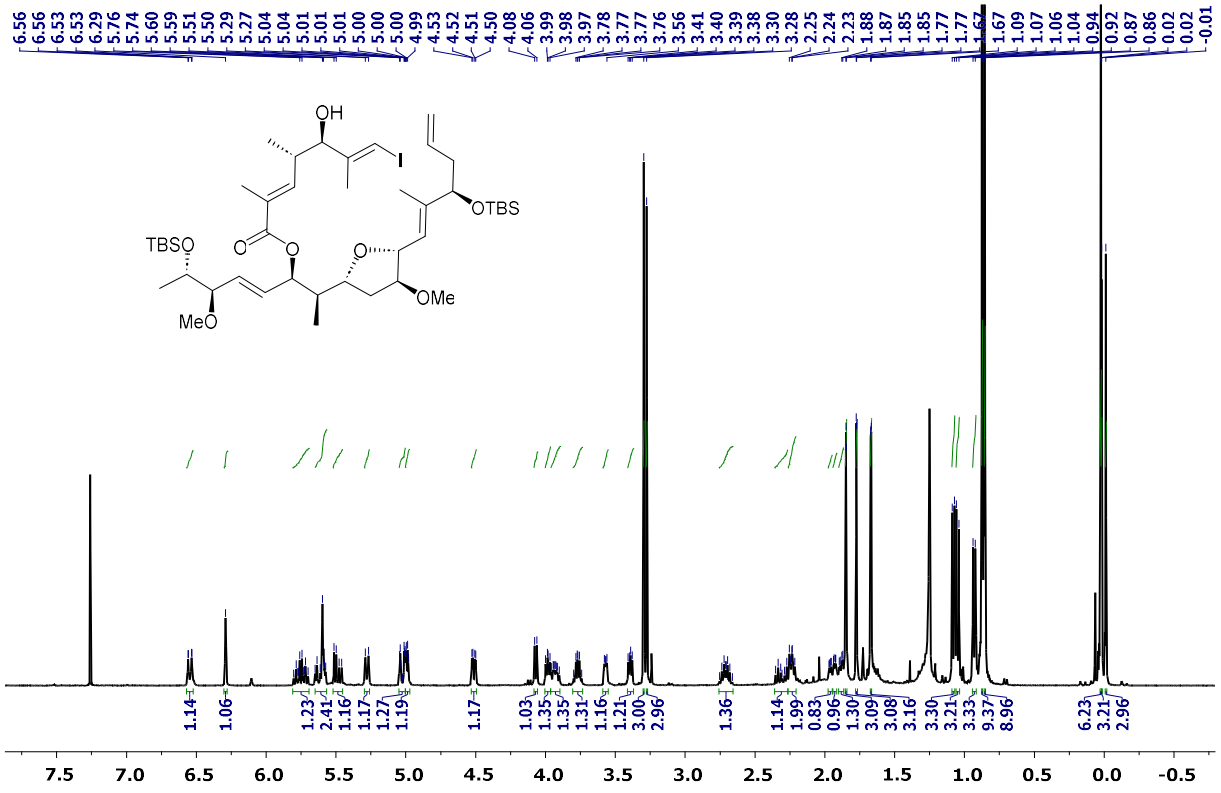
^{13}C NMR spectrum of 8 ($CDCl_3$, 125 MHz)



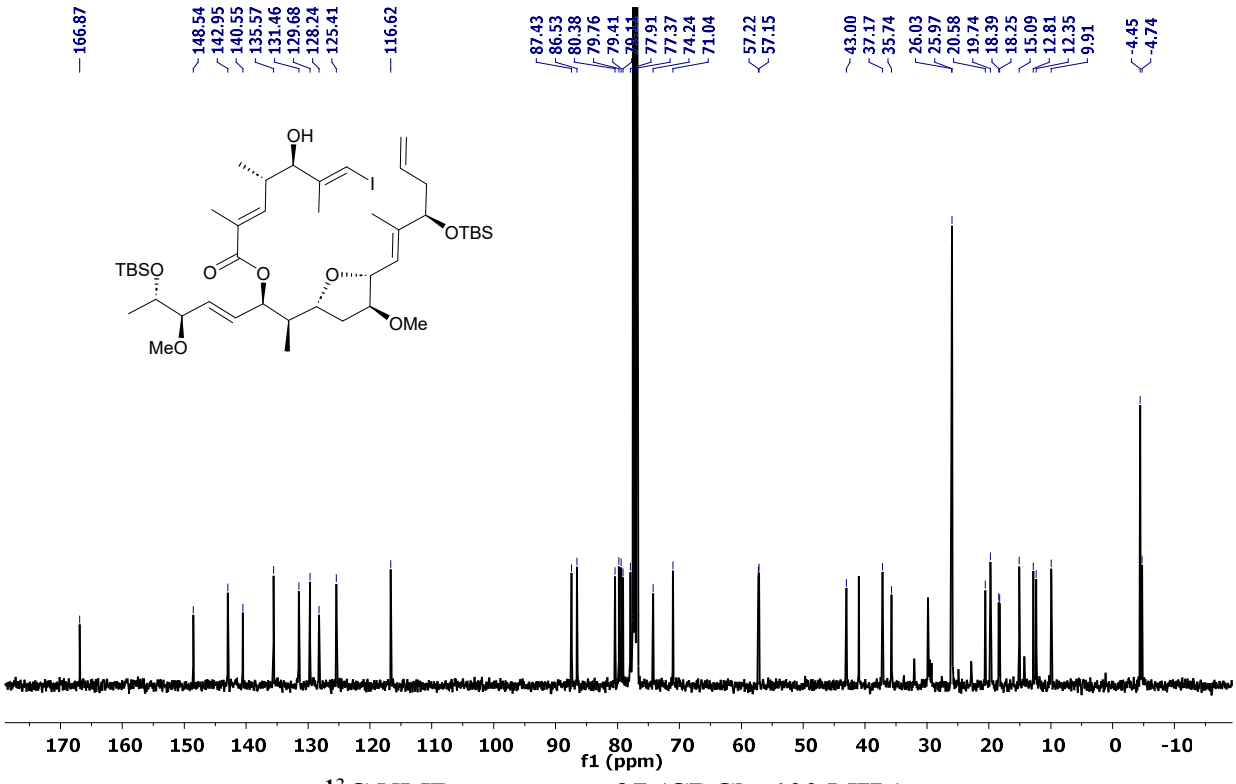
^{1}H NMR spectrum of 32 ($CDCl_3$, 400 MHz)



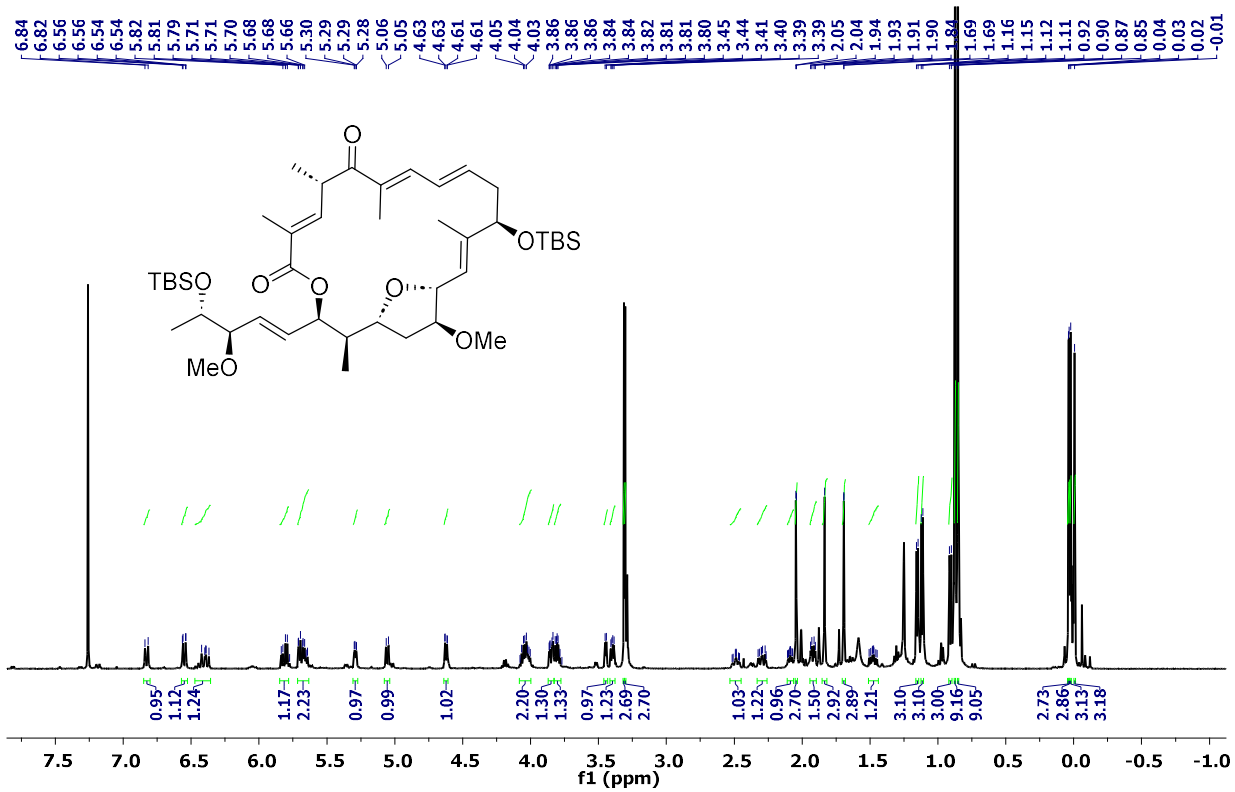
^{13}C NMR spectrum of 32 ($CDCl_3$, 100 MHz)



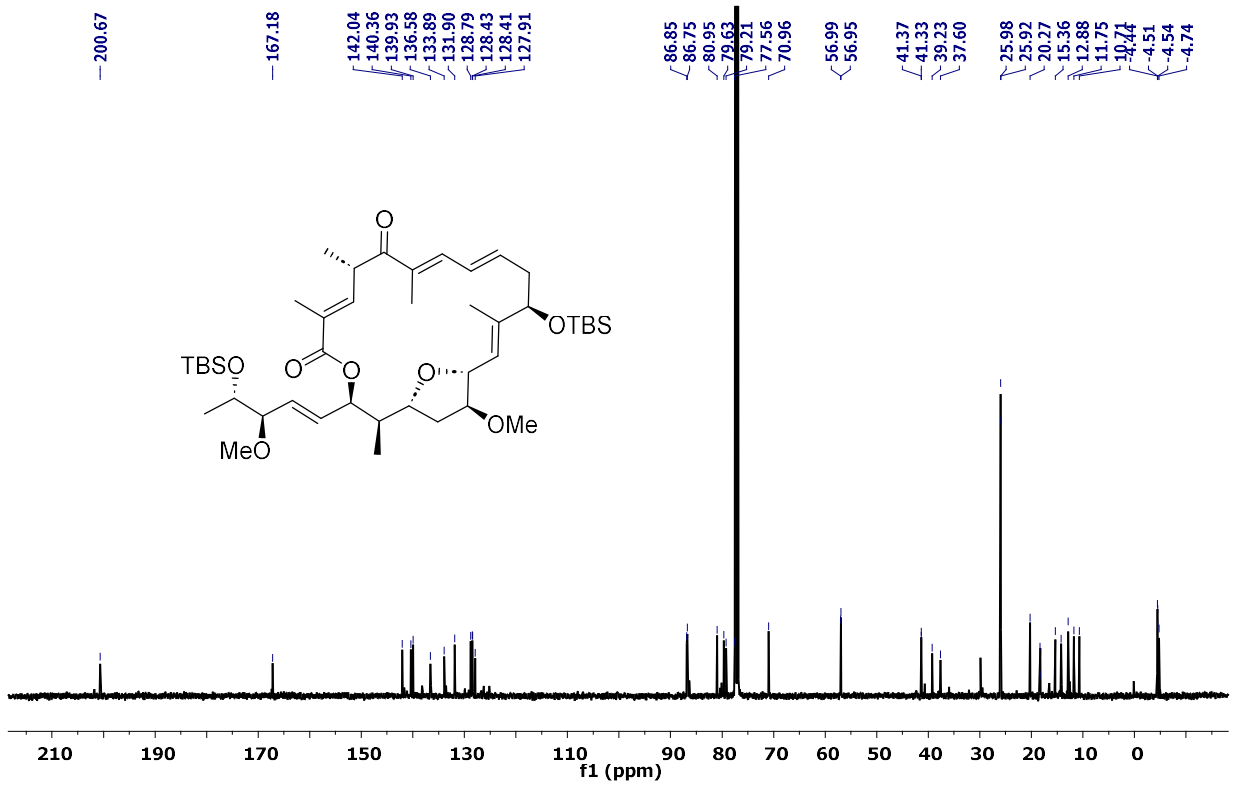
^{1}H NMR spectrum of 7 ($CDCl_3$, 400 MHz)



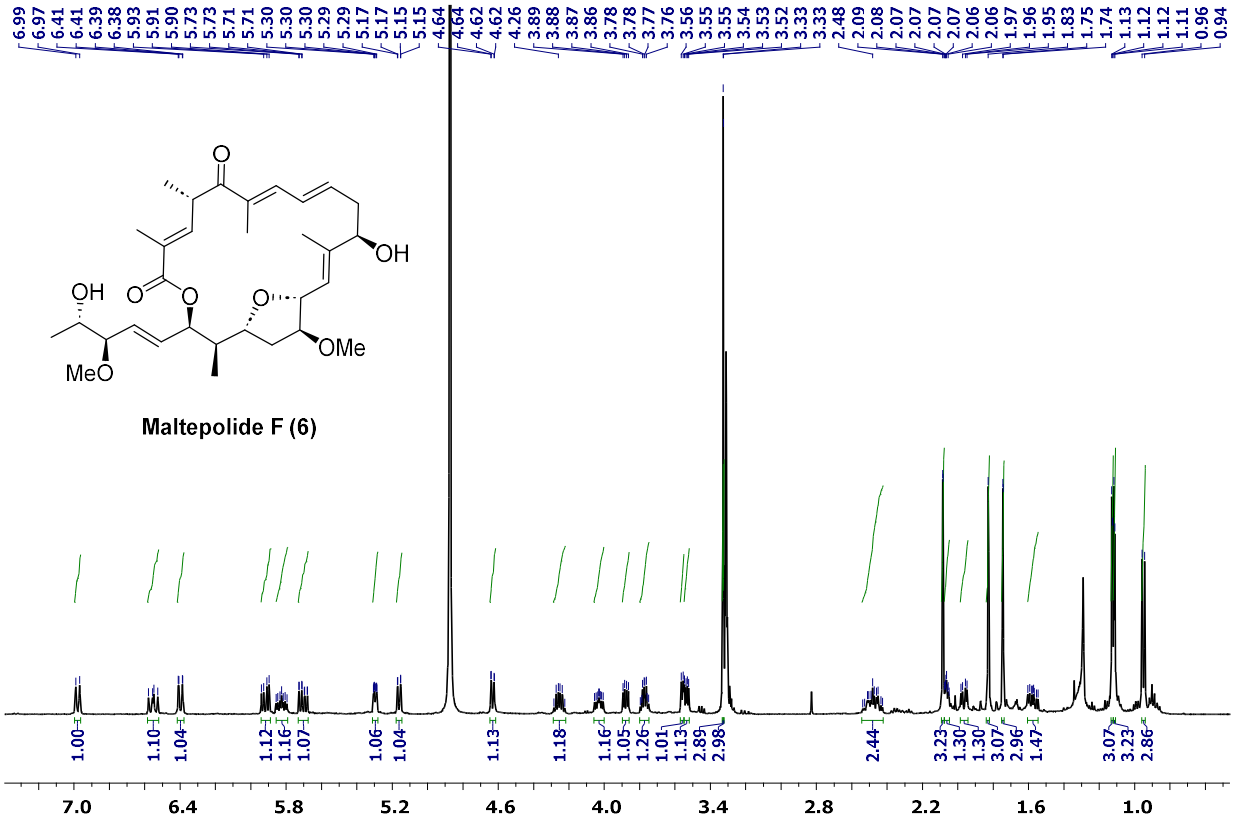
^{13}C NMR spectrum of 7 ($CDCl_3$, 100 MHz)



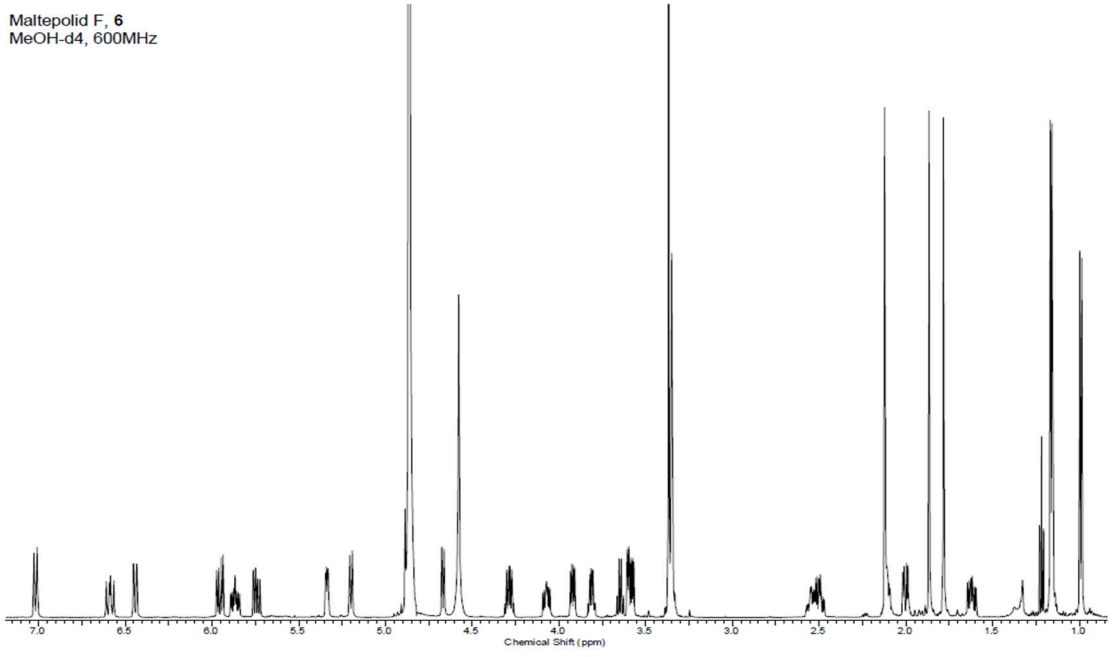
^{1}H NMR spectrum of 33 ($CDCl_3$, 500 MHz)



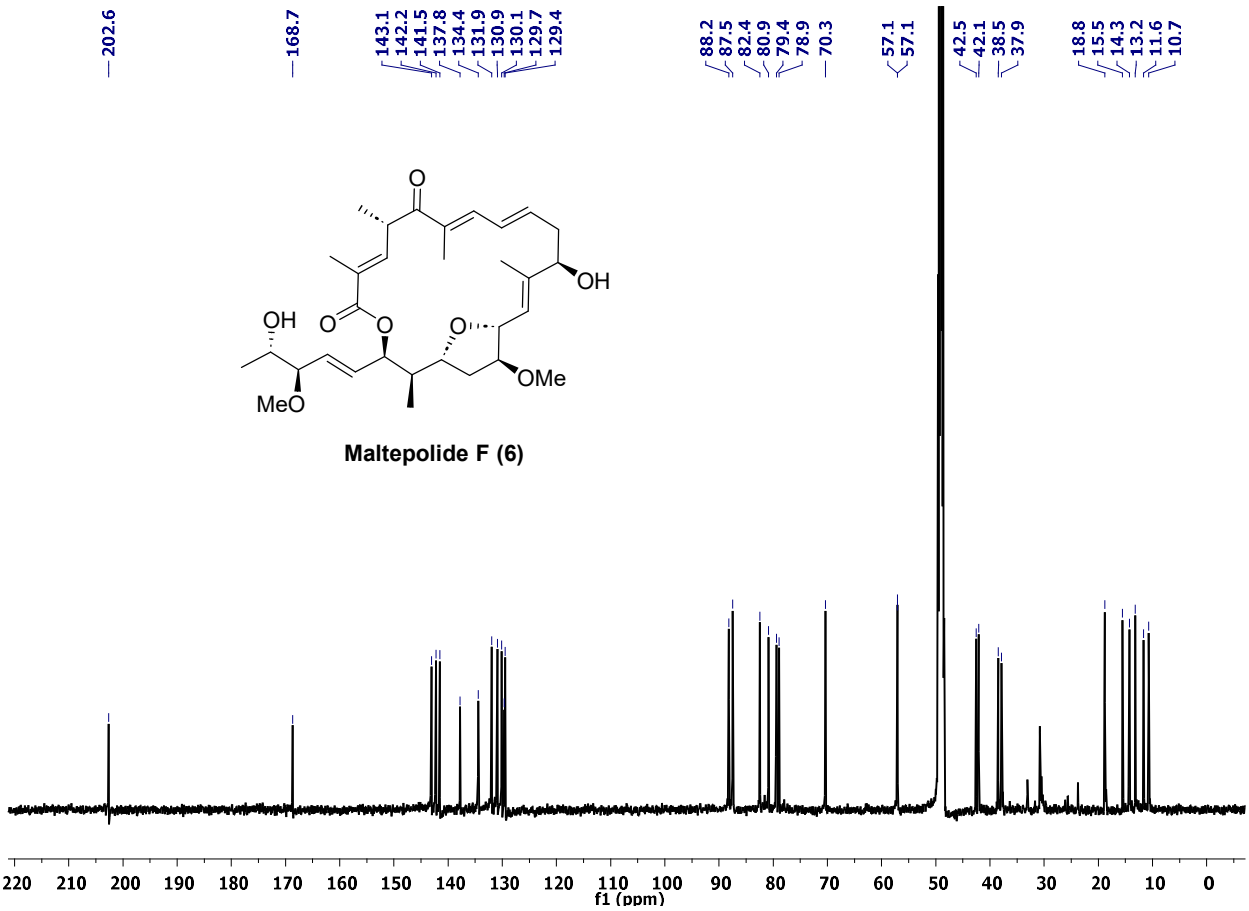
^{13}C NMR spectrum of 33 ($CDCl_3$, 125 MHz)



^{1}H NMR spectrum of synthetic Maltepolide F (6) (CD_3OD, 500 MHz)

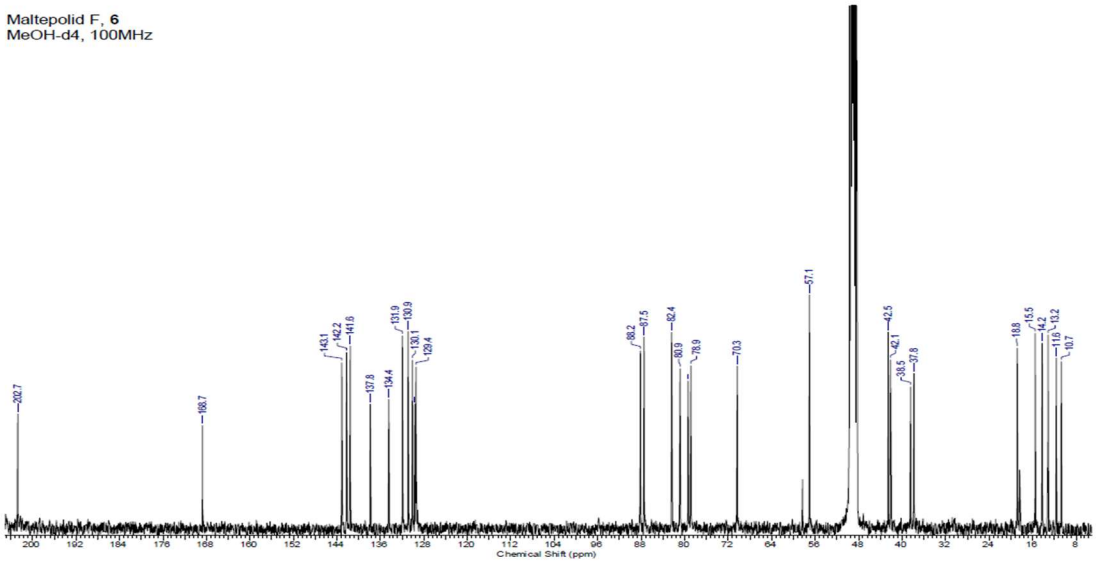


^{1}H NMR spectrum of isolated Maltepolide F (6) (CD_3OD, 600 MHz)

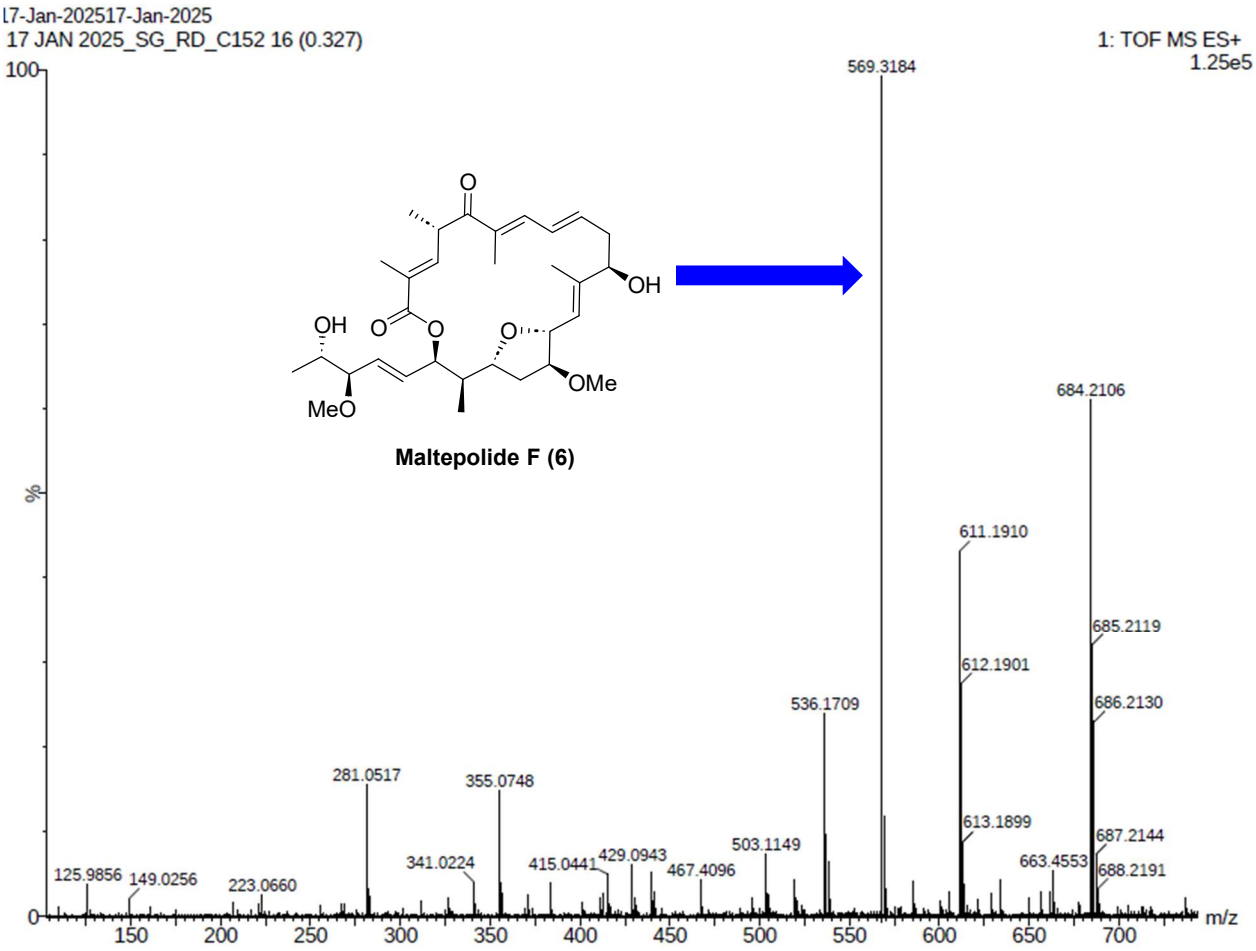


Maltepolide F (6)

^{13}C NMR spectrum of synthetic Maltepolide F (6) (CD_3OD, 125 MHz)



^{13}C NMR spectrum of isolated Maltepolide F (6) (CD_3OD, 100 MHz)

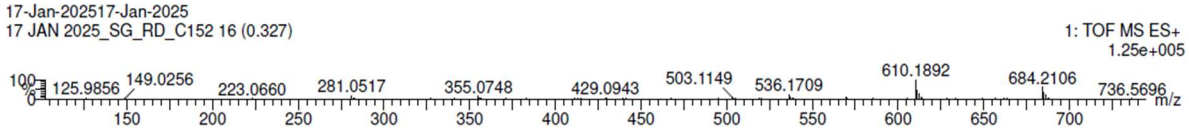


Maltepolide F (6)

Elemental Composition Report **Page 1**

Single Mass Analysis
Tolerance = 100.0 PPM / DBE: min = -1.5, max = 50.0
Element prediction: Off
Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Odd and Even Electron Ions
16 formula(e) evaluated with 1 results within limits (up to 50 closest results for each mass)
Elements Used:
C: 0-31 H: 0-46 O: 0-8 Na: 0-1



Minimum:				-1.5				
Maximum:		5.0	100.0	50.0				
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	Norm	Conf(%)	Formula
569.3184	569.3090	9.4	16.5	8.5	251.7	n/a	n/a	C31 H46 O8 Na

ESI HRMS of synthetic Maltepolide F (6)

Table 1: Comparison of ^{1}H chemical shifts (listed in order of decreasing δ values in ppm), coupling constants, and multiplicities of synthetic Maltepolide F (**6)** (500 MHz) and isolated Maltepolide F (600 MHz) in CD_3OD.

Sr. No	Synthetic Maltepolide F ^{1}H NMR (CD_3OD, 500 MHz)	Isolated Maltepolide F ^{1}H NMR (CD_3OD, 600 MHz)
1.	6.98 (d, *J* = 11.0 Hz, 1H)	6.97 (d, *J* = 11 Hz, 1H)
2.	6.55 (dd, *J* = 15.0, 11.0 Hz, 1H)	6.54 (dd, *J* = 15.0, 11.0 Hz, 1H)
3.	6.40 (dd, *J* = 11.2, 1.4 Hz, 1H)	6.39 (dd, *J* = 11.2, 1.1 Hz, 1H)
4.	5.92 (dd, *J* = 15.8, 6.6 Hz, 1H)	5.90 (dd, *J* = 15.8, 6.6 Hz, 1H)
5.	5.83 (m, 1H)	5.81 (m, 1H)
6.	5.70 (ddd, *J* = 15.7, 8.0, 1.1 Hz, 1H)	5.69 (ddd, *J* = 15.8, 8.1, 1.1 Hz, 1H)
7.	5.30 (ddd, *J* = 6.6, 2.7, 1.1 Hz, 1H)	5.29 (ddd, *J* = 6.6, 2.7, 1.1 Hz, 1H)
8.	5.16 (dd, *J* = 8.7, 0.9 Hz, 1H)	5.15 (d, *J* = 8.4 Hz, 1H)
9.	4.63 (dd, *J* = 8.6, 1.2 Hz, 1H)	4.62 (dd, *J* = 8.4, 1.1 Hz, 1H)
10.	4.25 (dq, *J* = 13.1, 6.5 Hz, 1H)	4.24 (m, 1H)
11.	4.03 (ddd, *J* = 11.4, 8.8, 4.5 Hz, 1H)	4.02 (ddd, *J* = 11.3, 8.7, 4.6 Hz, 1H)
12.	3.88 (dd, *J* = 10.4, 4.9 Hz, 1H)	3.87 (dd, *J* = 10.6, 4.8 Hz, 1H)
13.	3.77 (ddd, *J* = 12.9, 6.3, 4.4 Hz, 1H)	3.76 (ddd, *J* = 12.8, 6.3, 4.4 Hz, 1H)
14.	3.56 (d, *J* = 5.4 Hz, 1H)	3.55 (d, 1H, *J* = 5.1 Hz)
15.	3.53 (dd, *J* = 7.9, 4.2 Hz, 1H)	3.53 (dd, *J* = 7.9, 4.1 Hz, 1H)
16.	3.33 (s, 3H)	3.32 (s, 3H)
17.	3.33 (s, 3H)	3.32 (s, 3H)
18.	2.54 – 2.42 (m, 2H)	2.53-2.42 (m, 2H)
19.	2.08 (d, *J* = 1.4 Hz, 3H)	2.07 (d, *J* = 1.1 Hz, 3H)
20.	2.08 – 2.05 (m, 1H)	2.09 – 2.04 (m, 1H)
21.	1.96 (dd, *J* = 13.1, 4.6 Hz, 1H)	1.95 (dd, *J* = 13.0, 4.6 Hz, 1H)
22.	1.83 (s, 3H)	1.82 (s, 3H)
23.	1.74 (d, *J* = 1.0 Hz, 3H)	1.73 (d, 3H, *J* = 0.7 Hz)
24.	1.57 (ddd, *J* = 13.0, 11.4, 5.3 Hz, 1H)	1.57 (ddd, *J* = 13.0, 11.4, 5.3 Hz, 1H)
25.	1.12 (d, *J* = 6.5 Hz, 3H)	1.11 (d, *J* = 6.6 Hz, 3H)
26.	1.12 (d, *J* = 6.5 Hz, 3H)	1.11 (d, *J* = 6.6 Hz, 3H)
27.	0.95 (d, *J* = 7.3 Hz, 3H)	0.94 (d, *J* = 7.3 Hz, 3H)

Table 2: Comparison of ^{13}C chemical shifts (listed in order of decreasing δ values in ppm), coupling constants, and multiplicities of synthetic Maltepolide F (**6)** (125 MHz) and isolated Maltepolide F (100 MHz) in CD_3OD.

Sr. No	Synthetic Maltepolide F ^{13}C NMR (CD_3OD, 125 MHz)	Isolated Maltepolide F ^{13}C NMR (CD_3OD, 100 MHz)
1.	202.6	202.7
2.	168.7	168.7
3.	143.1	143.1
4.	142.2	142.2
5.	141.5	141.6
6.	137.8	137.8
7.	134.4	134.4
8.	131.9	131.9
9.	130.9	130.9
10.	130.1	130.1
11.	129.7	129.7
12.	129.4	129.4
13.	88.2	88.2
14.	87.5	87.5
15.	82.4	82.4
16.	80.9	80.9
17.	79.4	79.3
18.	78.9	78.9
19.	70.3	70.3
20.	57.1	57.1
21.	57.1	57.1
22.	42.5	42.5
23.	42.1	42.1
24.	38.5	38.5
25.	37.9	37.8
26.	18.8	18.8
27.	15.5	15.5
28.	14.3	14.2
29.	13.2	13.2
30.	11.6	11.6
31.	10.7	10.7