Supporting Information File 2

for

Total synthesis of the endogenous inflammation resolving lipid resolvin D2 using a common lynchpin

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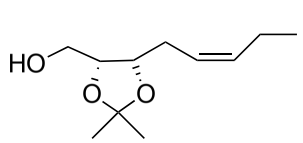
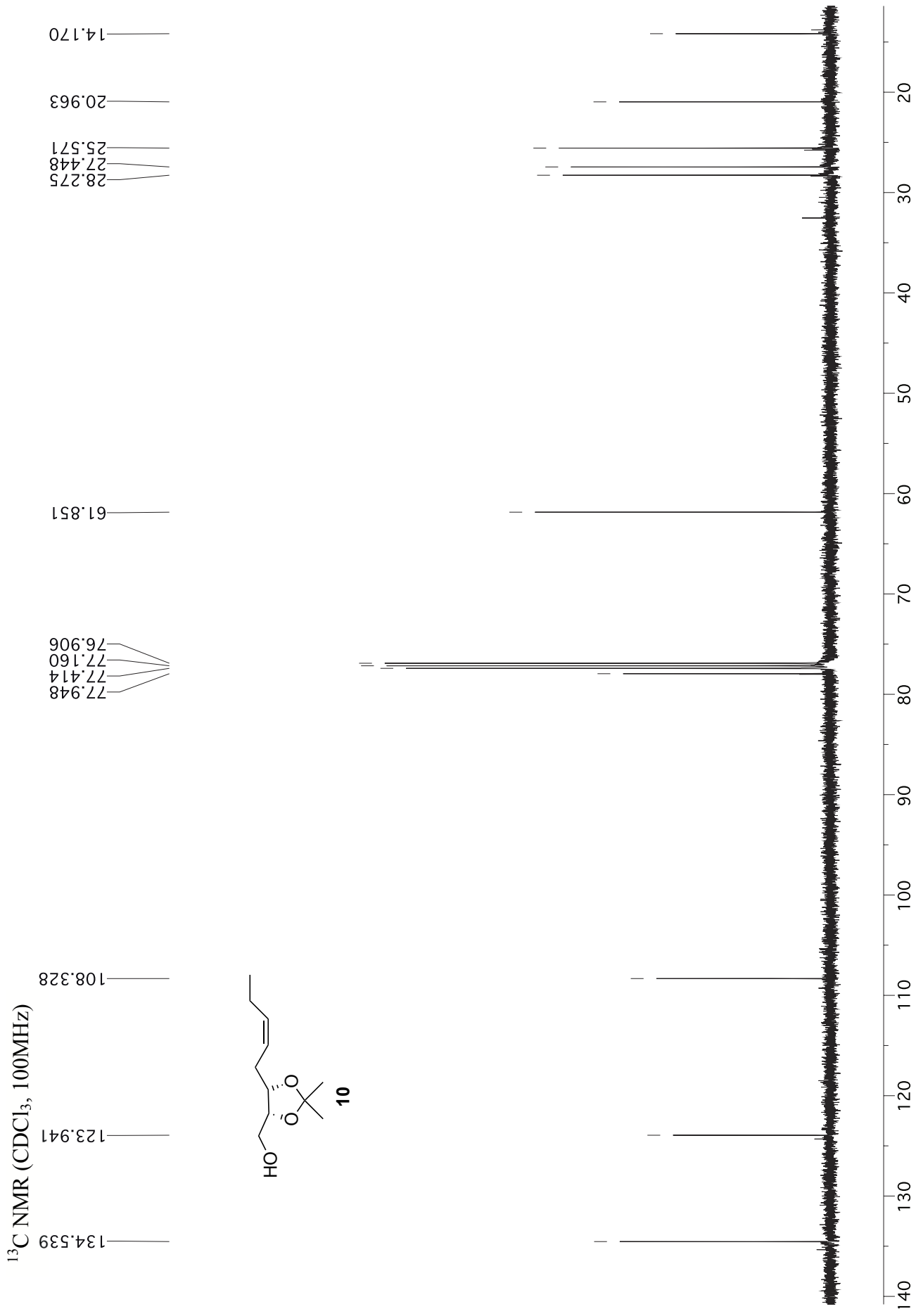
^{1}H and ^{13}C NMR spectra of all intermediates and the mass spectrum of RvD2 (1)

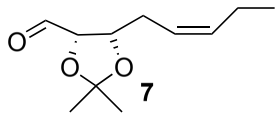
^{1}H NMR ($CDCl_3$, 400MHz)

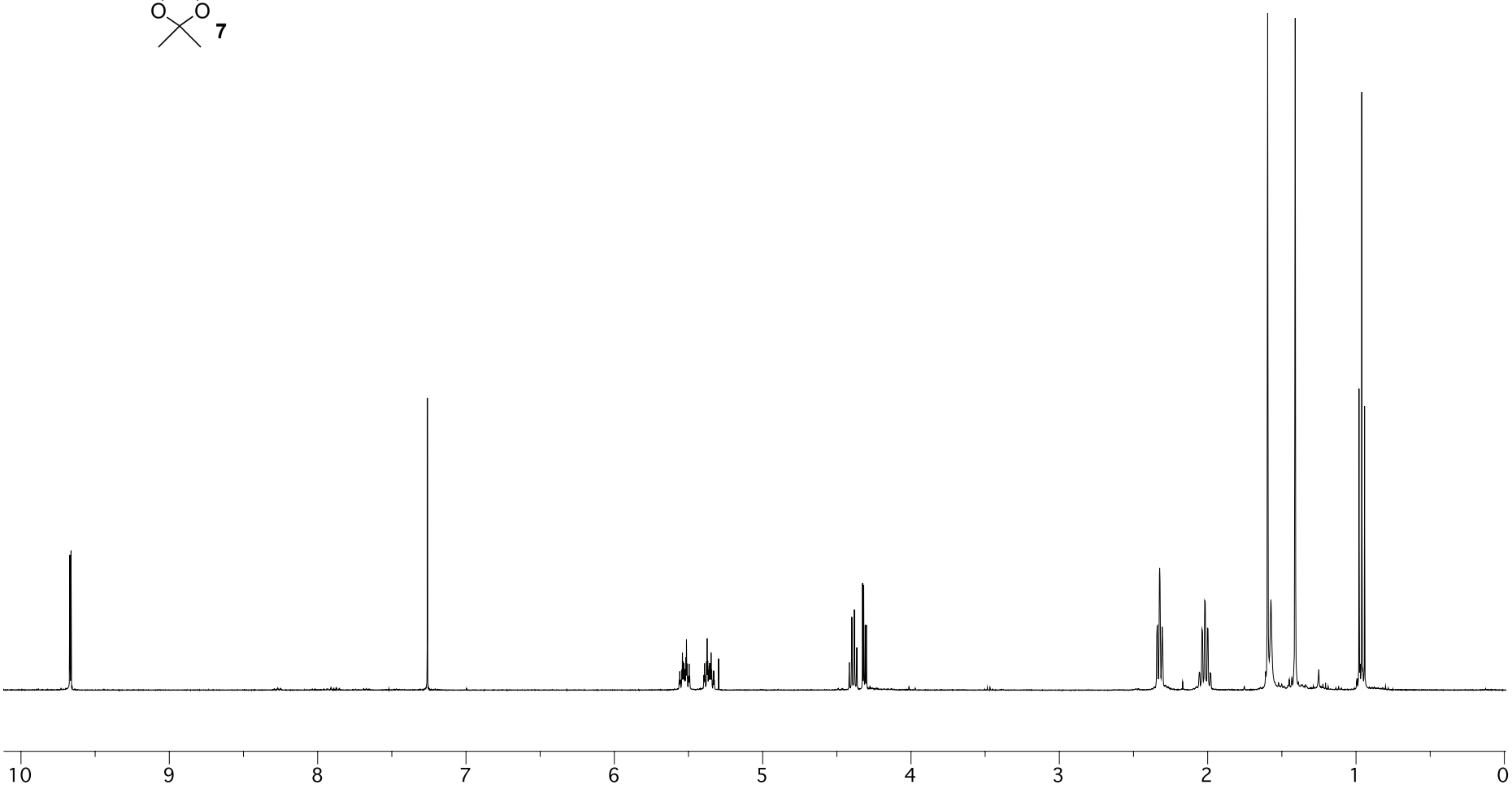


10

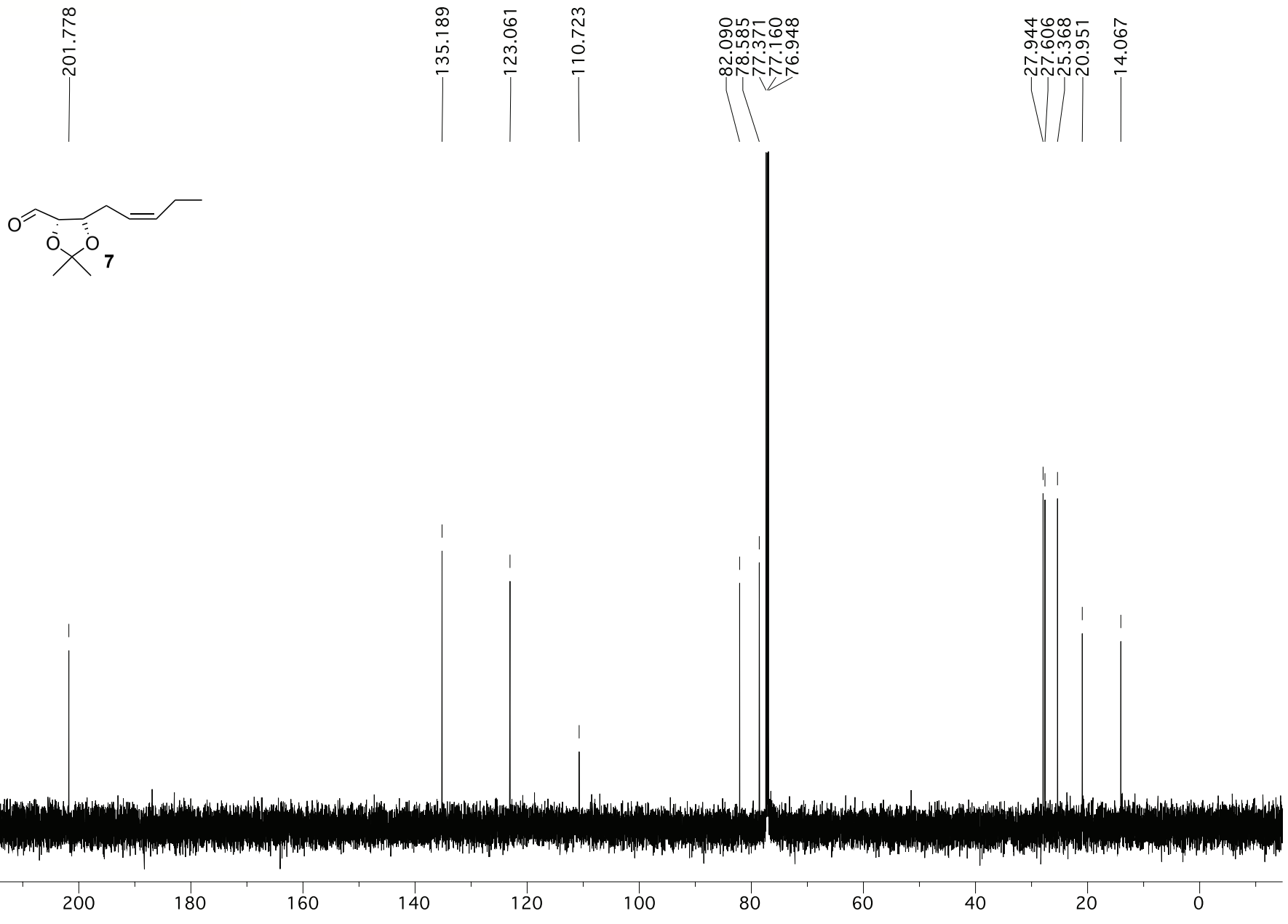

^{13}C NMR (CDCl$_3$, 100MHz)
134.539
123.941
108.328
77.948
77.414
77.160
76.906
61.851
28.275
27.448
25.571
20.963
14.170
HO
O
O
10
140
130
120
110
100
90
80
70
60
50
40
30
20

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

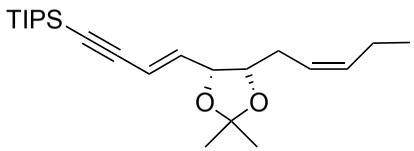




^{13}C NMR ($CDCl_3$, 100MHz)

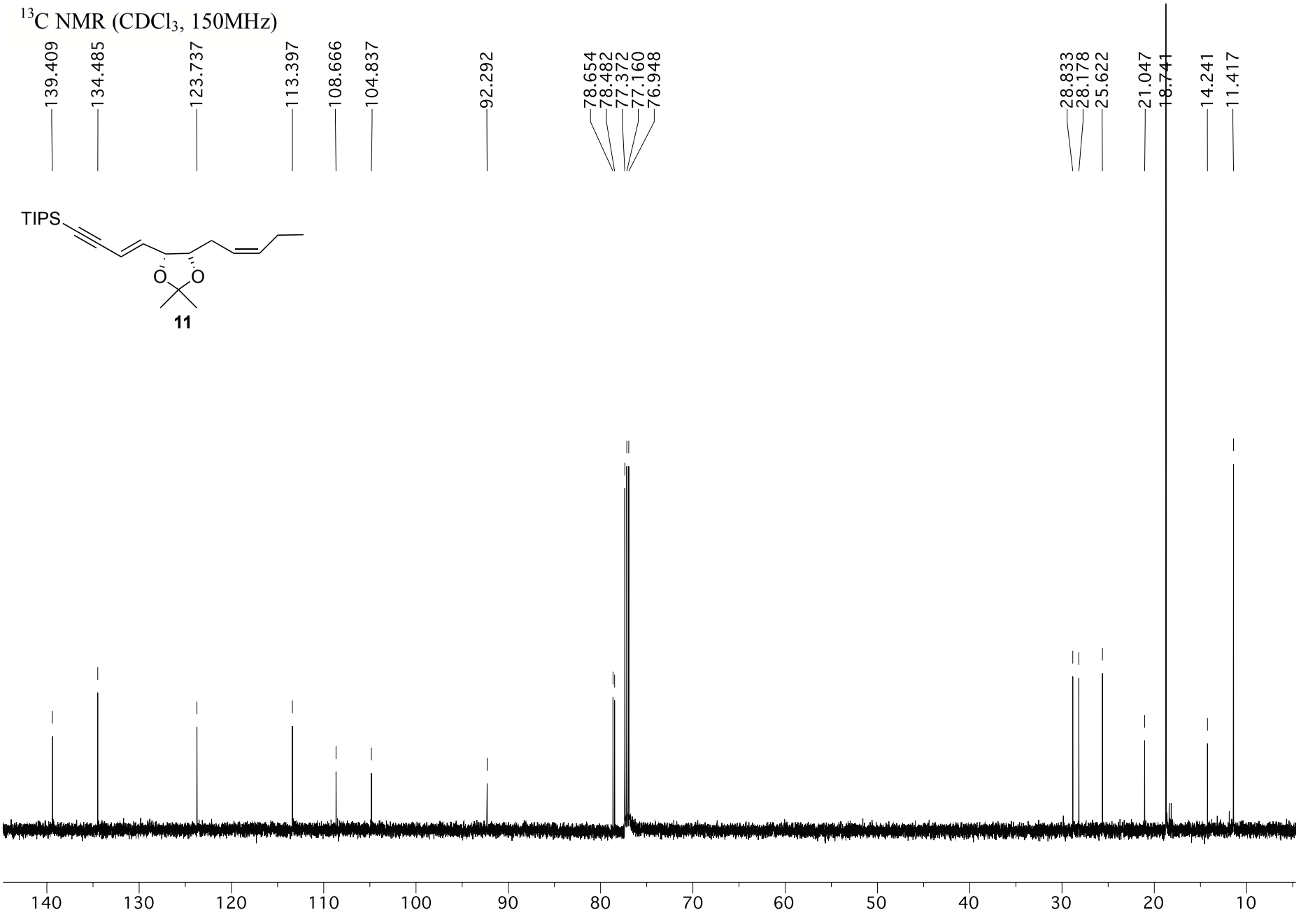


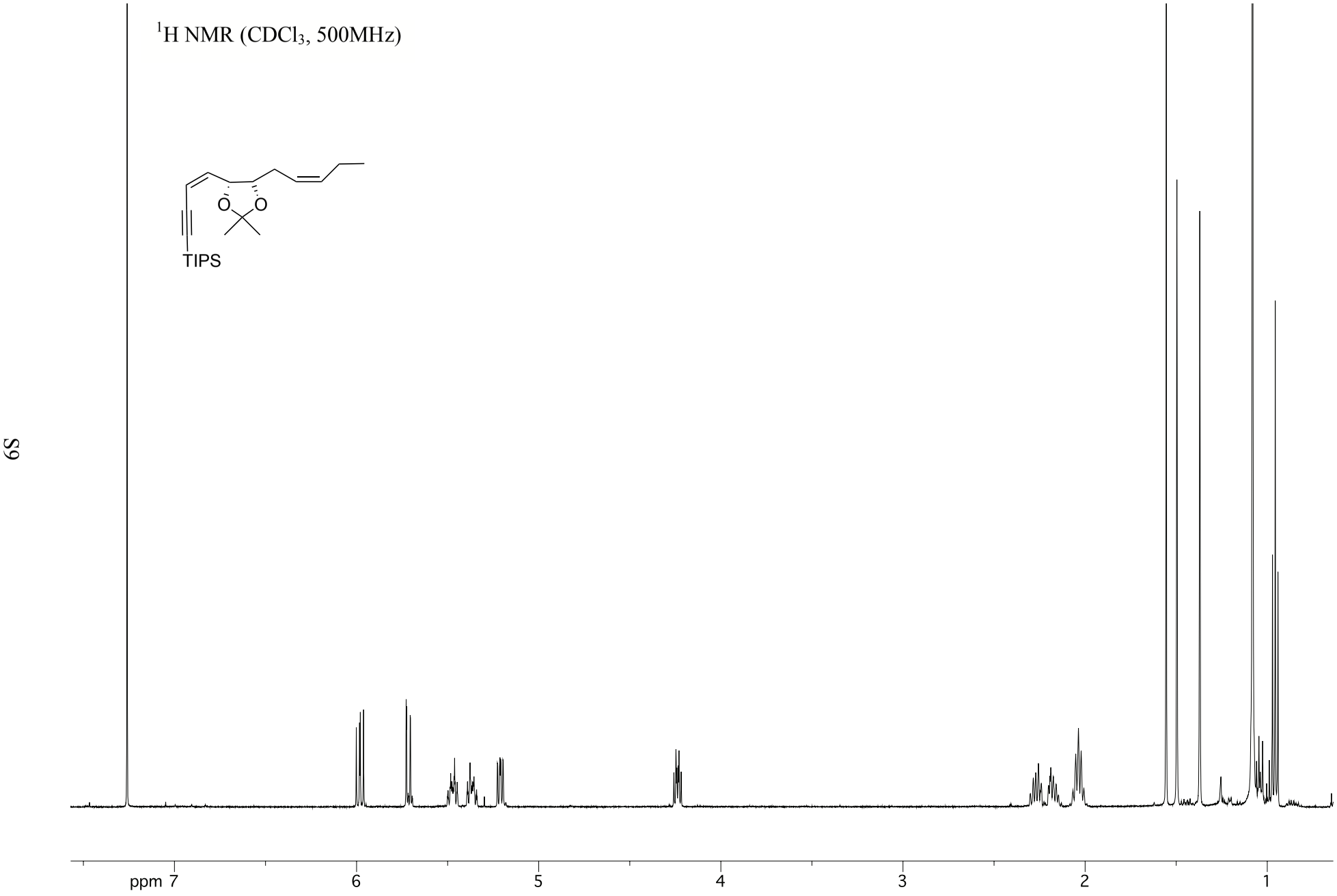
^{1}H NMR ($CDCl_3$, 600MHz)

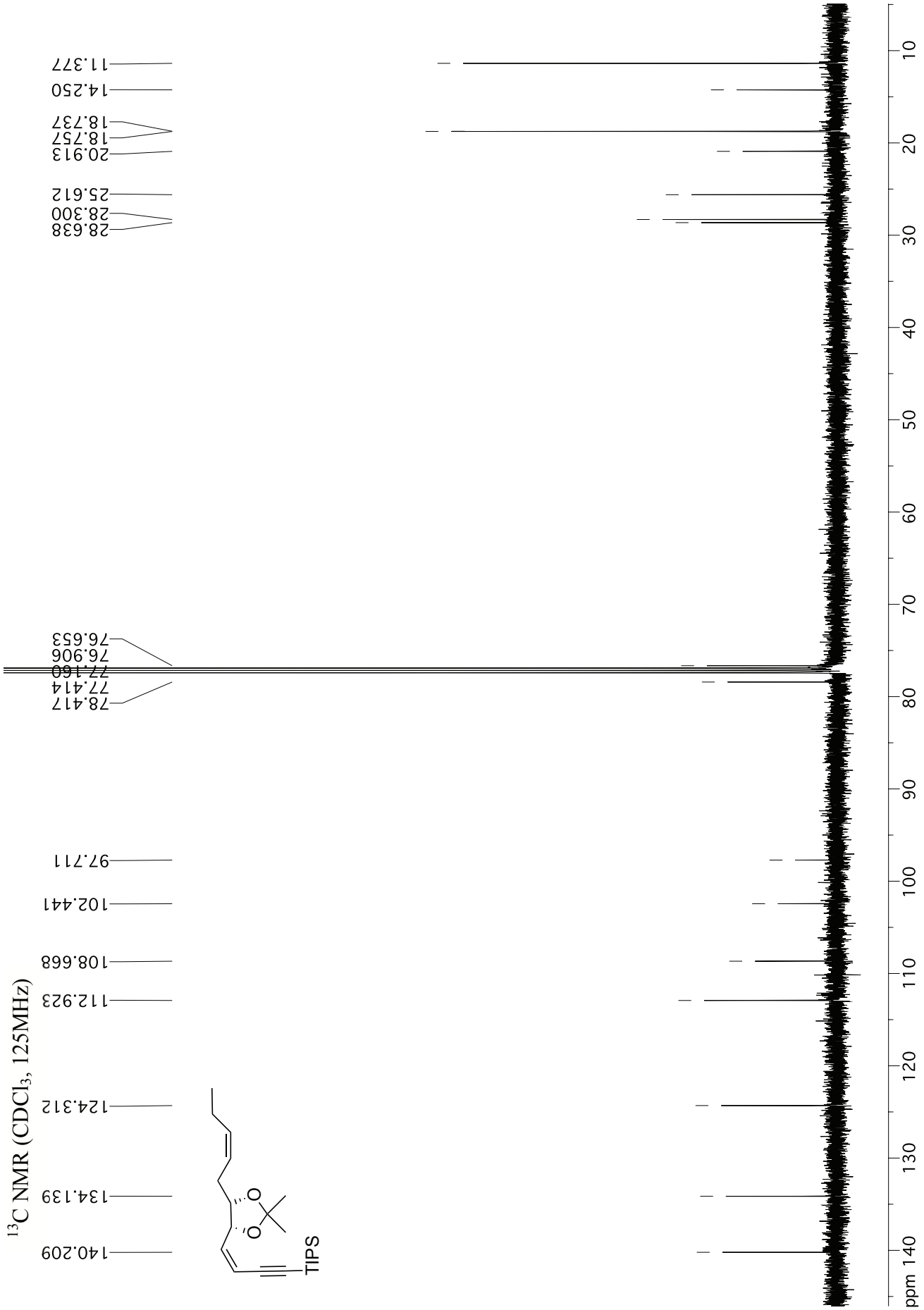


11

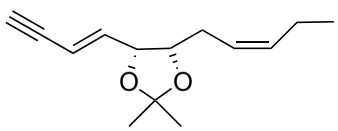
^{13}C NMR ($CDCl_3$, 150MHz)




^{1}H NMR ($CDCl_3$, 500MHz)
O
O
TIPS
ppm 7
6
5
4
3
2
1

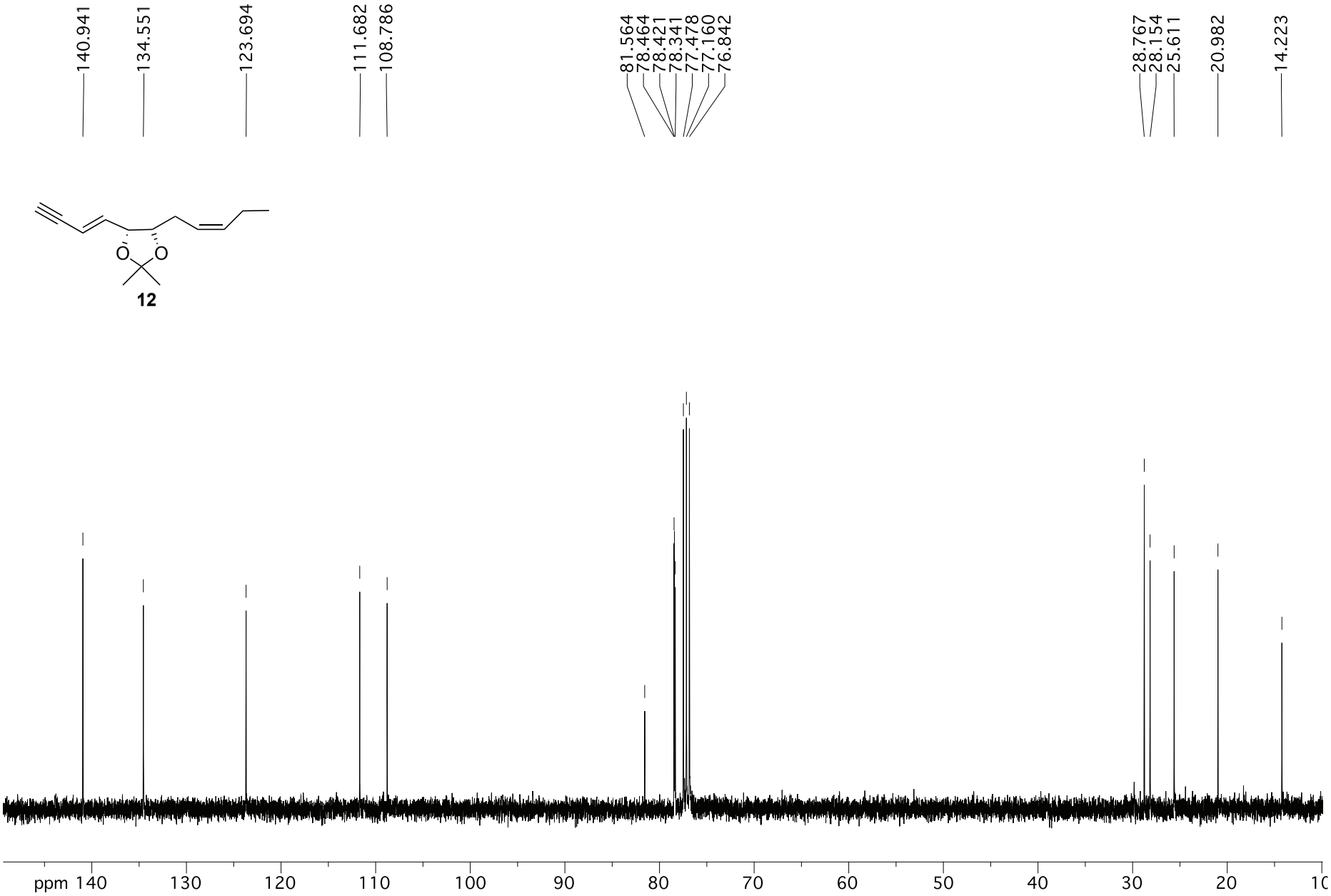

^{13}C NMR ($CDCl_3$, 125MHz)
140.209
134.139
124.312
112.923
108.668
102.441
97.711
78.417
77.414
77.160
76.906
76.653
28.638
28.300
25.612
20.913
18.757
18.737
14.250
11.377
TIPS
O
O
ppm 140
130
120
110
100
90
80
70
60
50
40
30
20
10

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

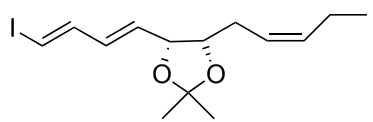


12

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

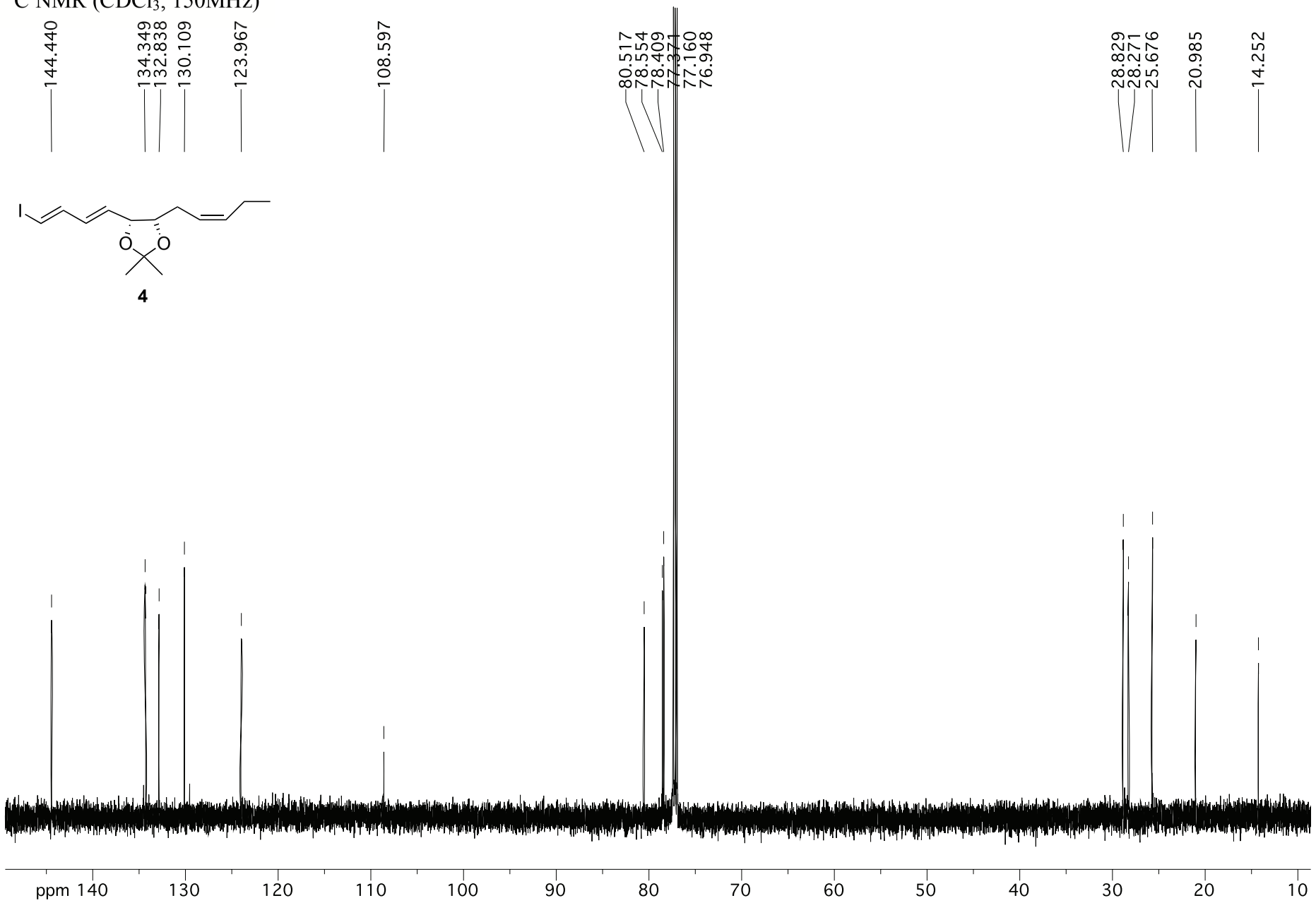


^{1}H NMR ($CDCl_3$, 600MHz)



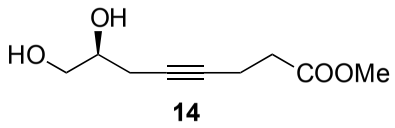
4

^{13}C NMR ($CDCl_3$, 150MHz)



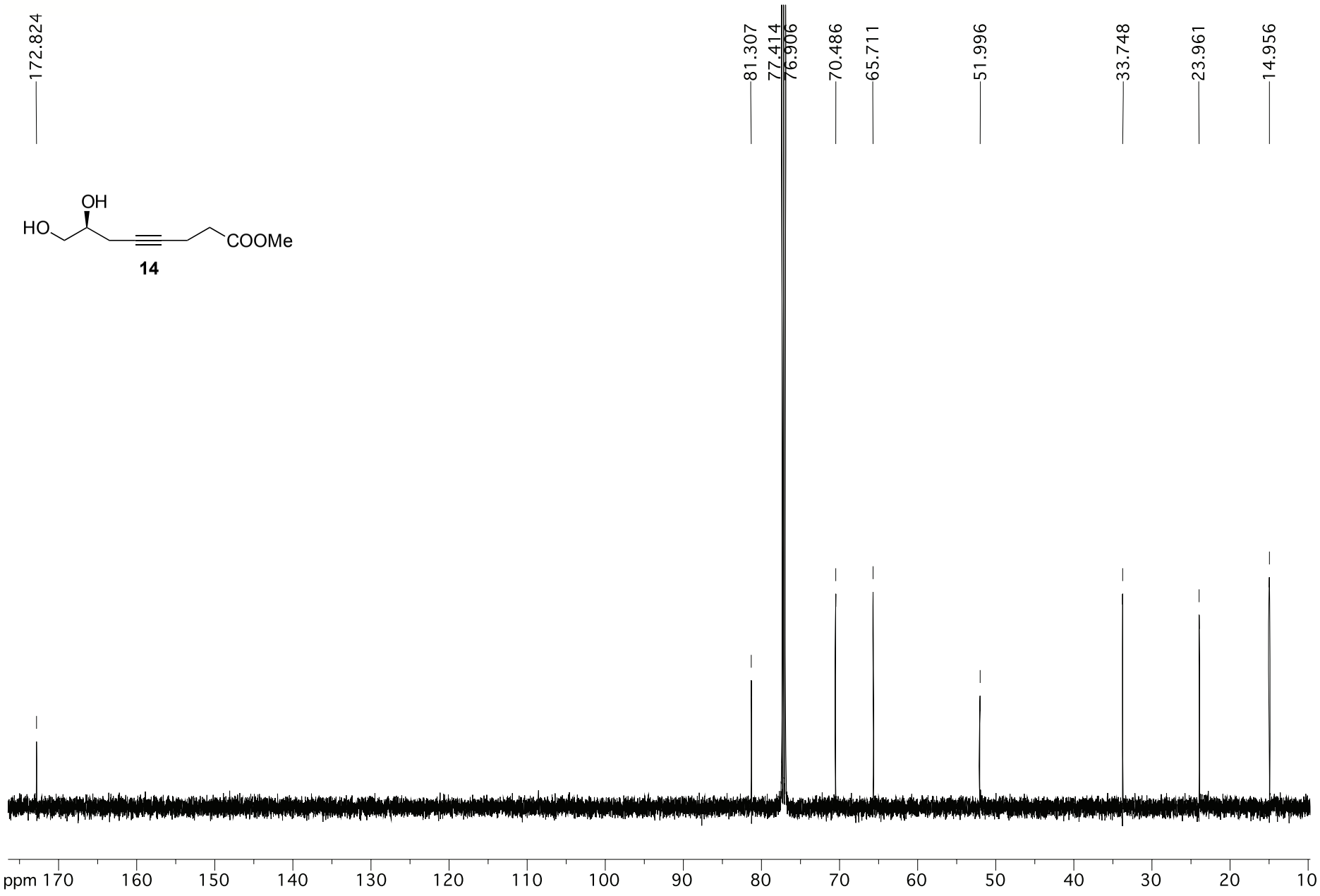
4

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

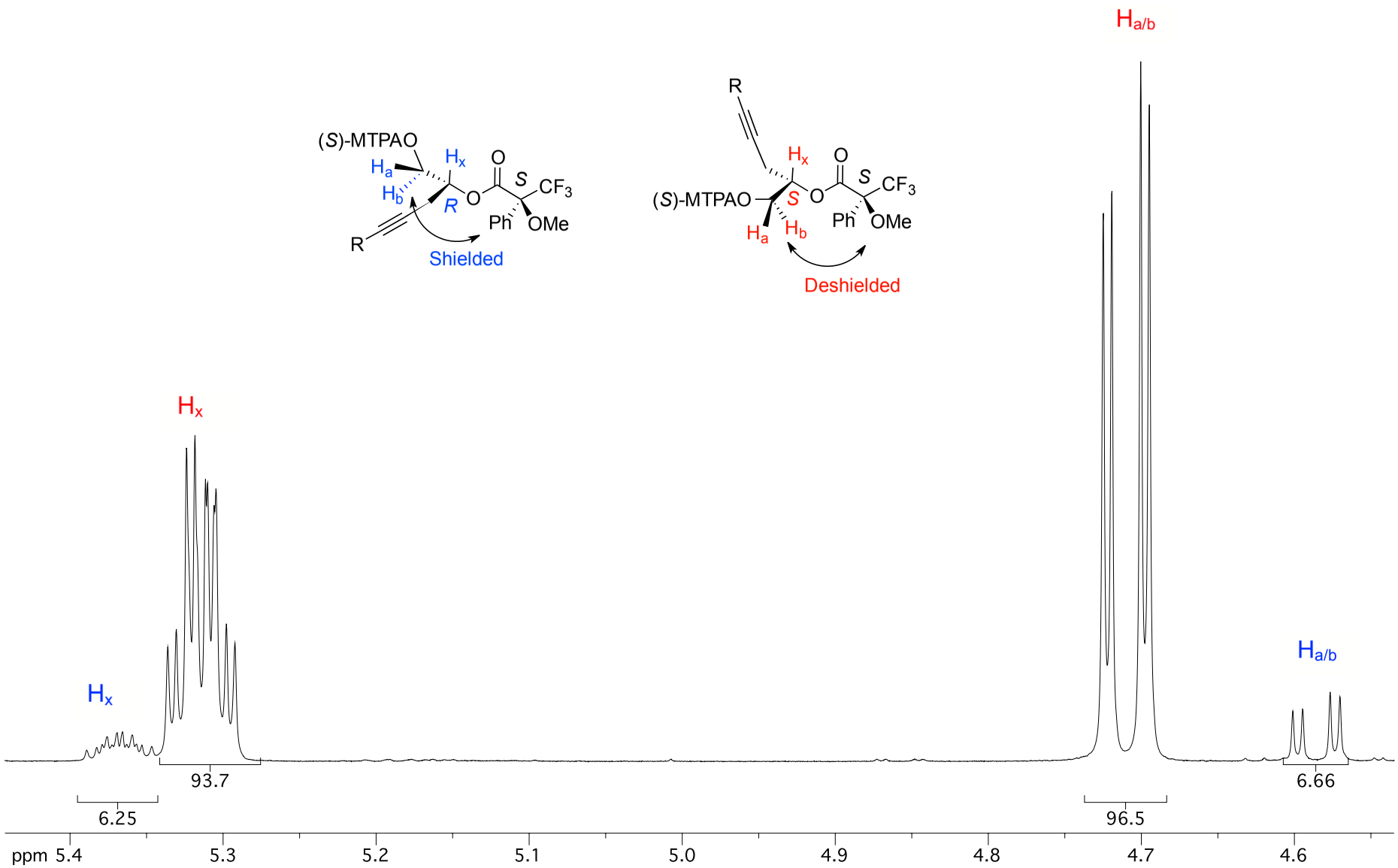


14

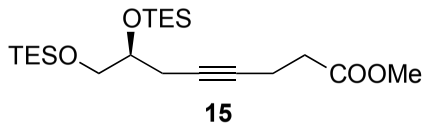
^{13}C NMR ($CDCl_3$, 125MHz)



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

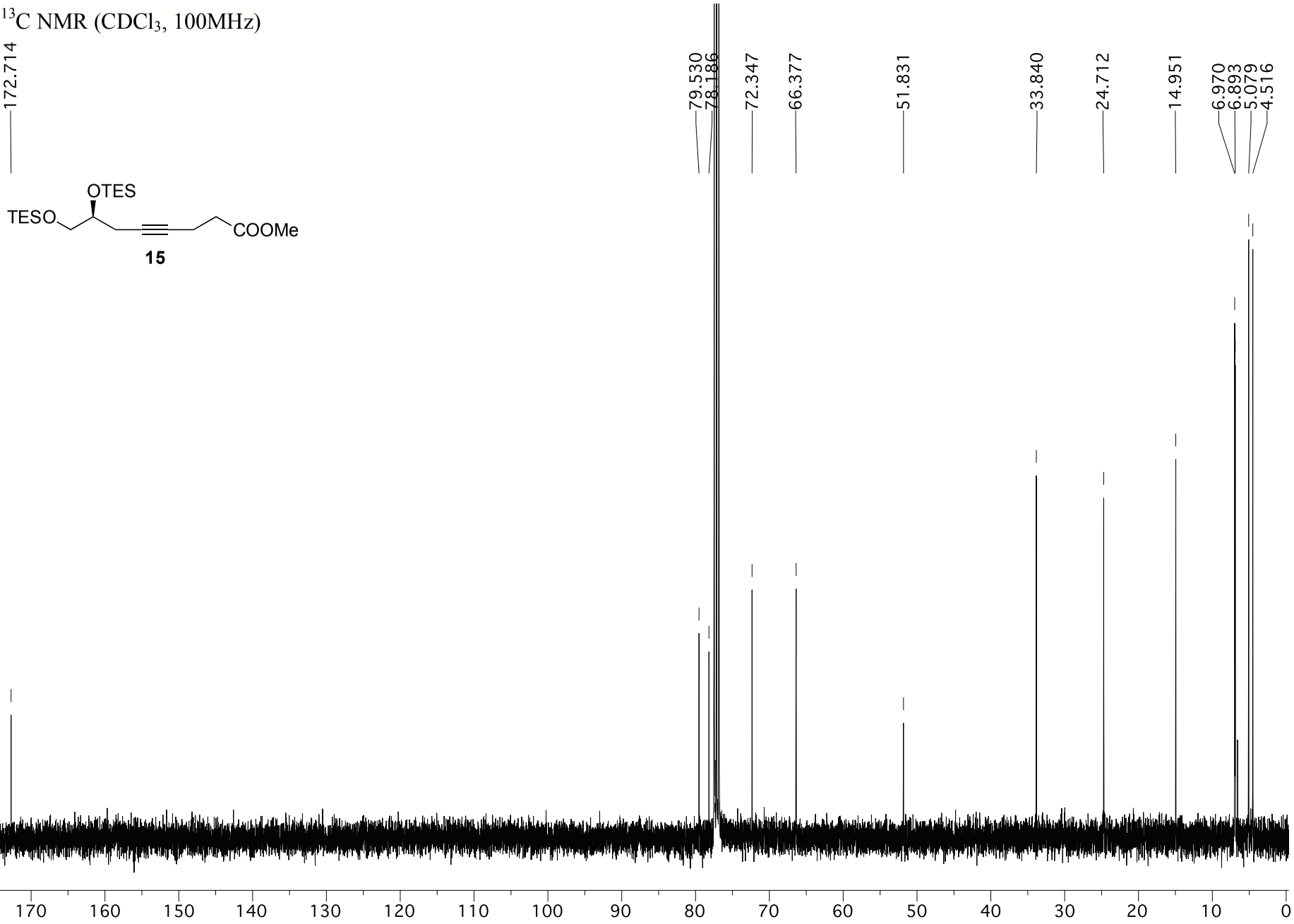


^{1}H NMR ($CDCl_3$, 400MHz)

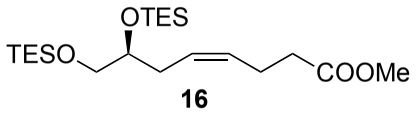


15

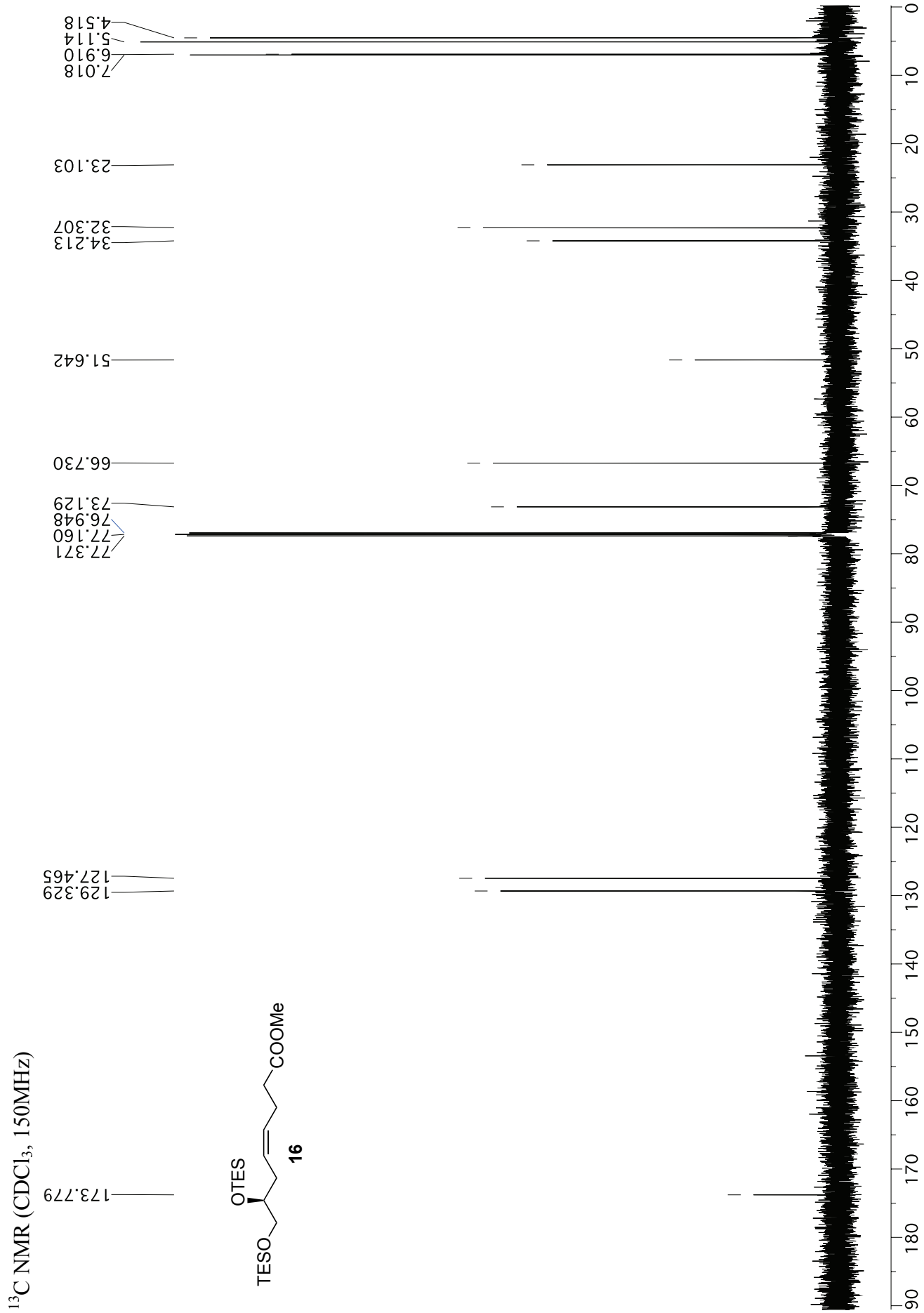
^{13}C NMR ($CDCl_3$, 100MHz)



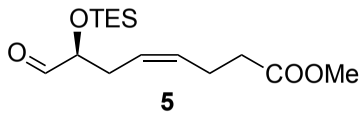
^{1}H NMR ($CDCl_3$, 600MHz)



16

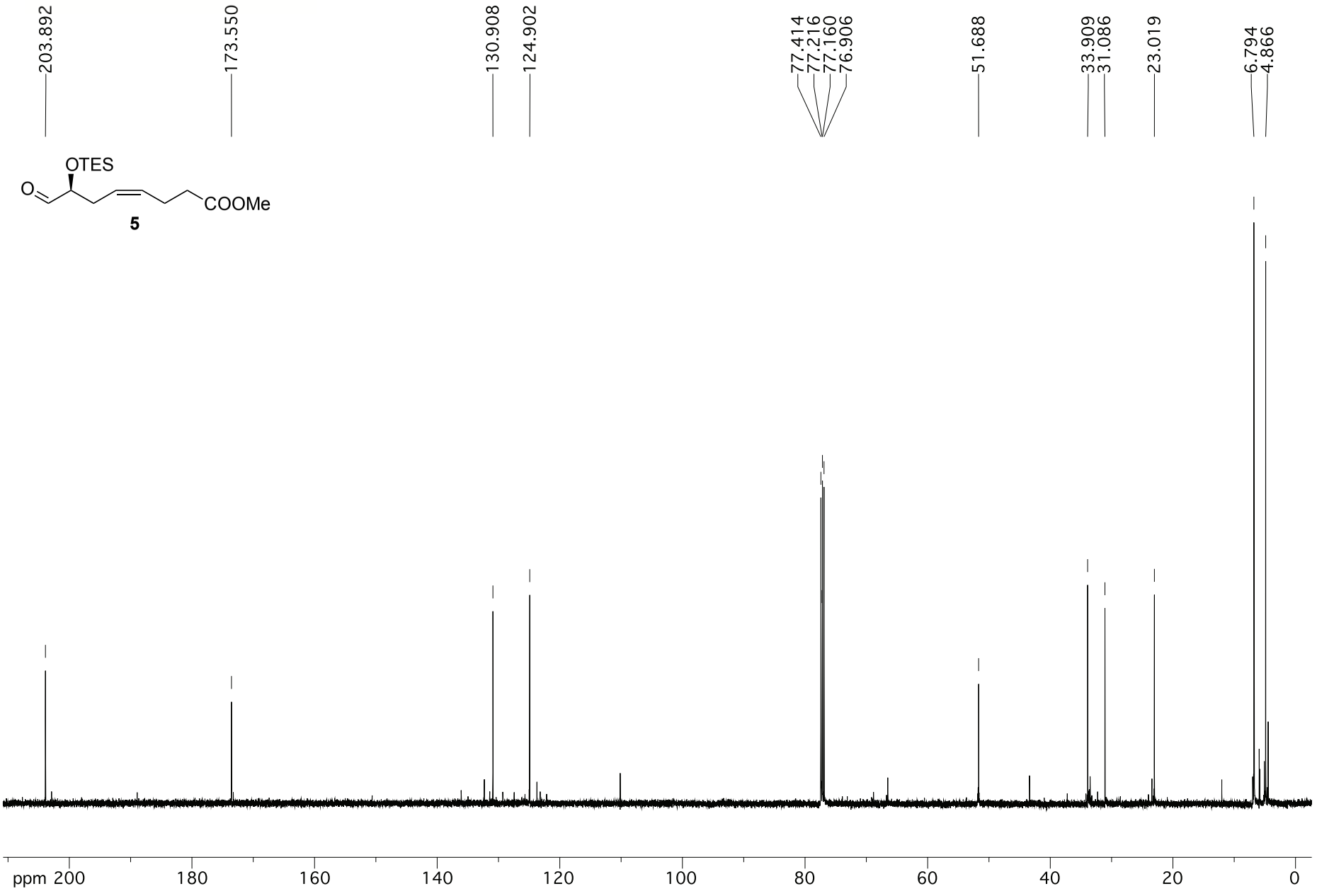

^{13}C NMR ($CDCl_3$, 150MHz)
173.779
129.329
127.465
77.371
77.160
76.948
73.129
66.730
51.642
34.213
32.307
23.103
7.018
6.910
5.114
4.518
TESO
OTES
COOMe
16

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

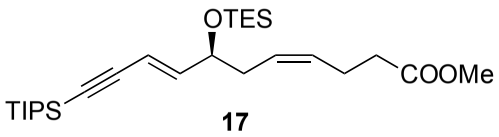


5

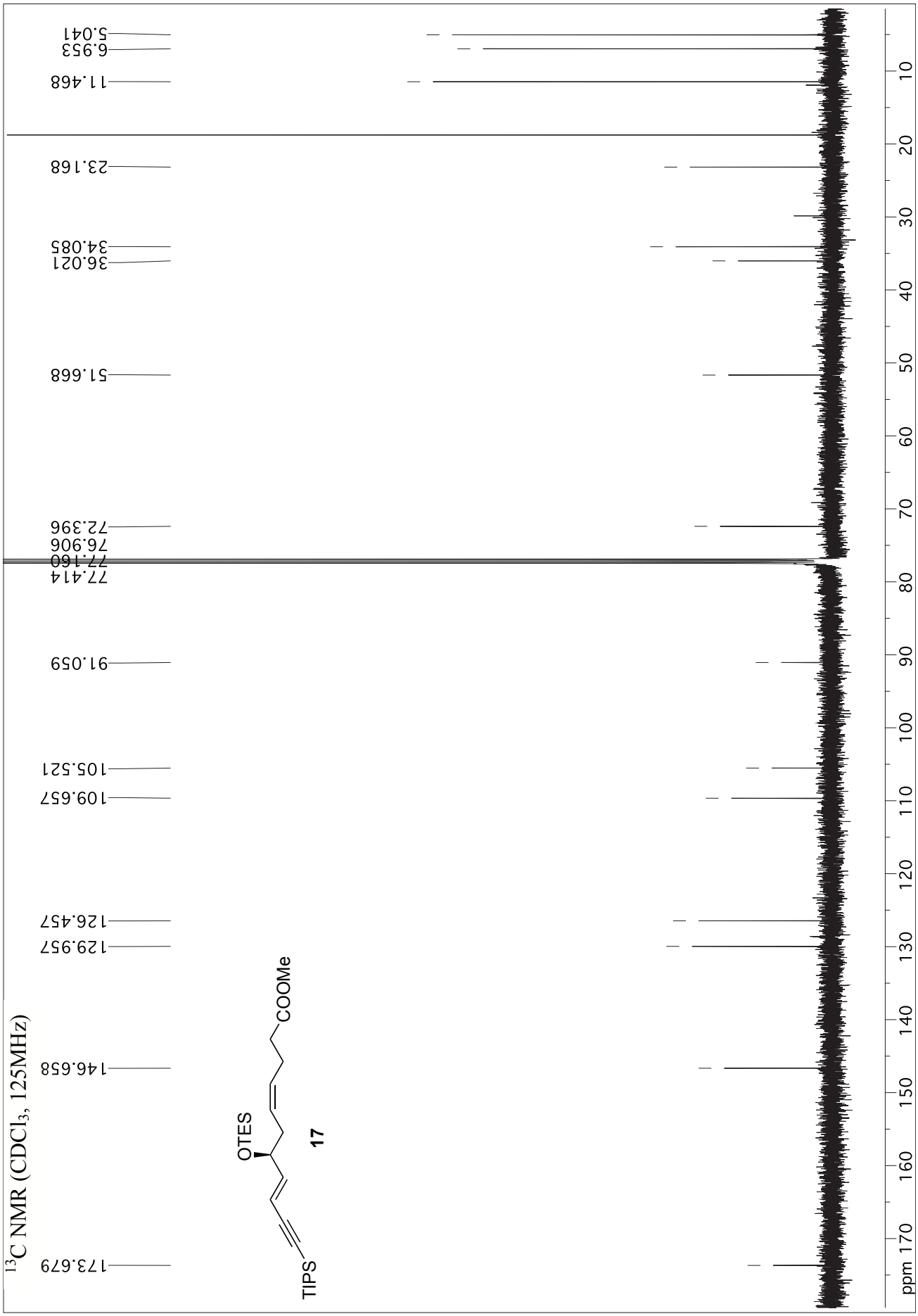
^{13}C NMR ($CDCl_3$, 125MHz)

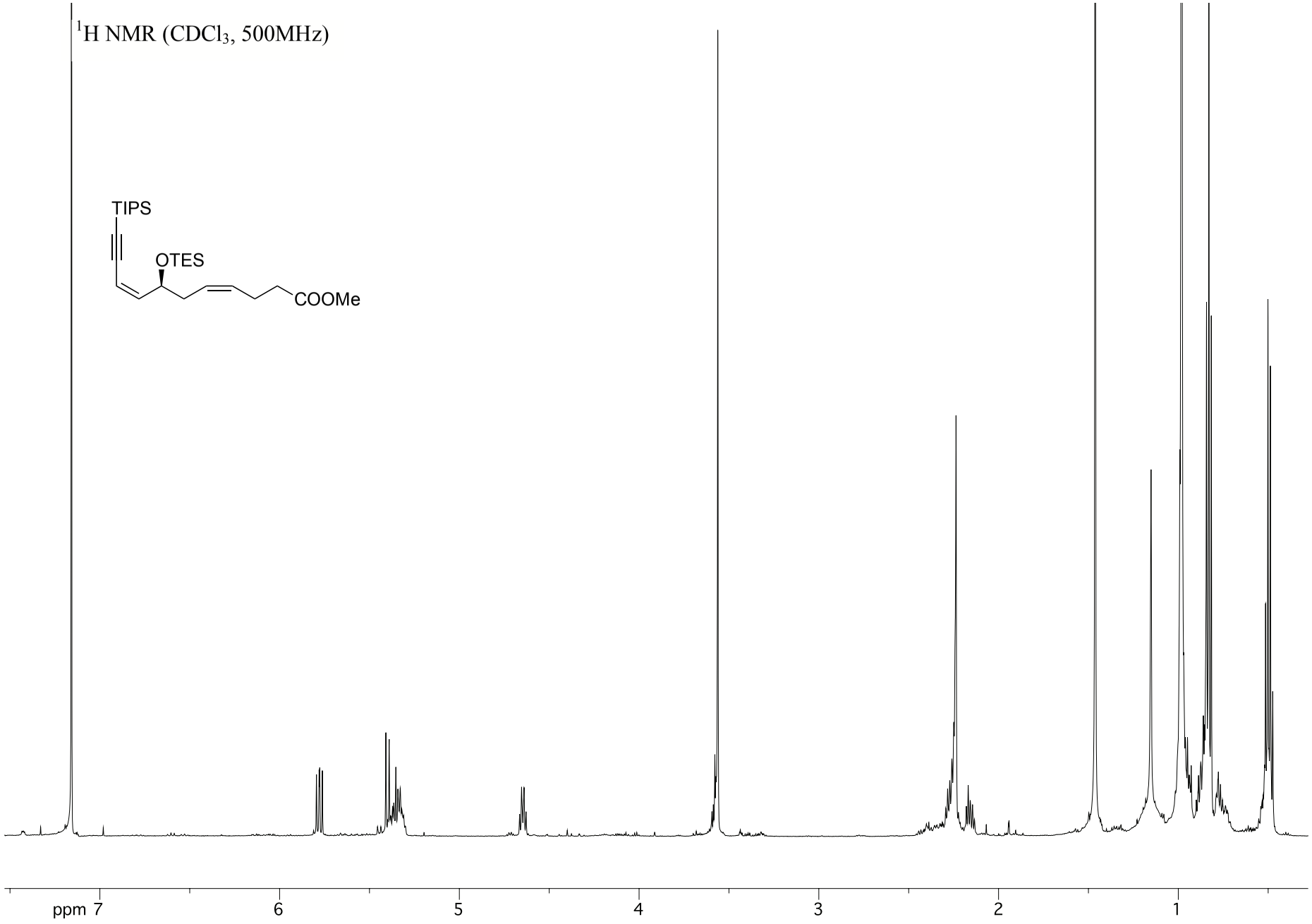


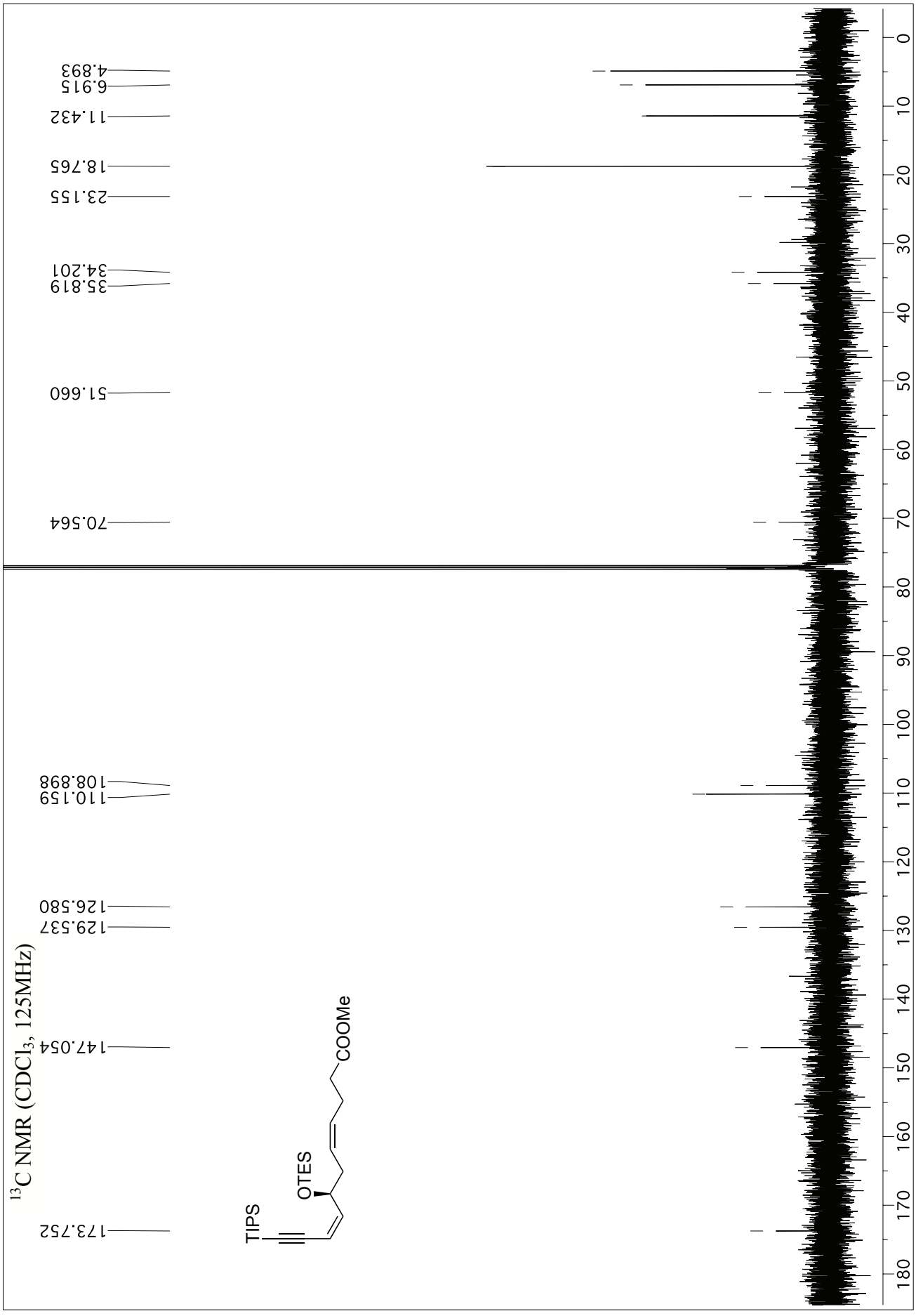
^{1}H NMR ($CDCl_3$, 500MHz)



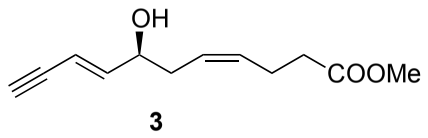
17


^{13}C NMR ($CDCl_3$, 125MHz)
173.679
146.658
129.957
126.457
109.657
105.521
91.059
77.414
77.160
76.906
72.396
51.668
36.021
34.085
23.168
11.468
6.953
5.041
TIPS
OTES
COOMe
17
ppm


^{1}H NMR ($CDCl_3$, 500MHz)
TIPS
OTES
COOMe
ppm 7
6
5
4
3
2
1

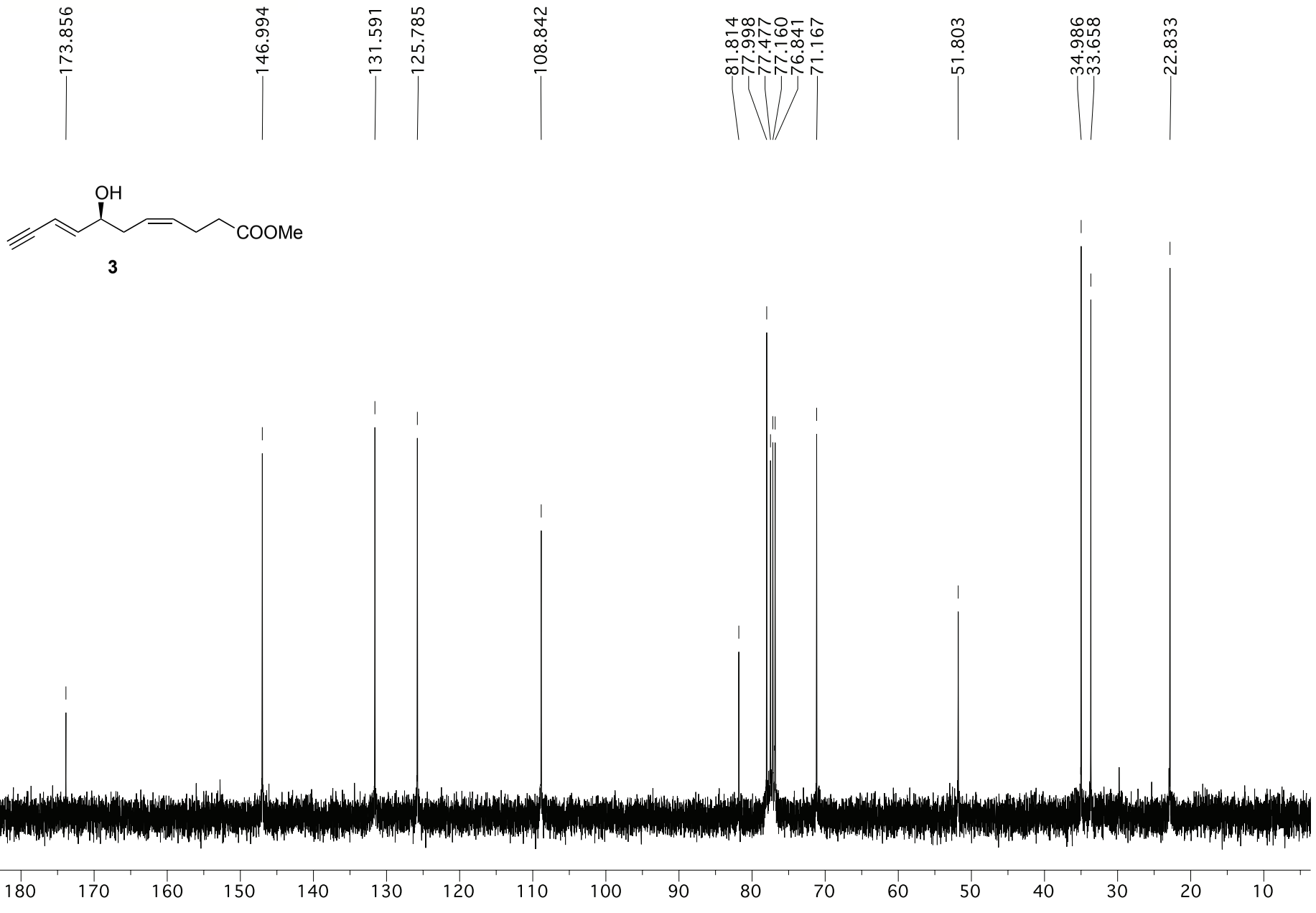

^{13}C NMR ($CDCl_3$, 125MHz)
TIPS
OTES
COOMe
173.752
147.054
129.537
126.580
110.159
108.898
70.564
51.660
35.819
34.201
23.155
18.765
11.432
6.915
4.893

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

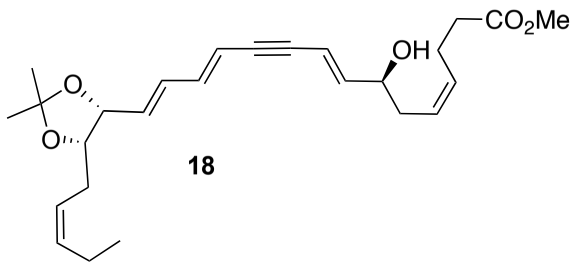


3

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

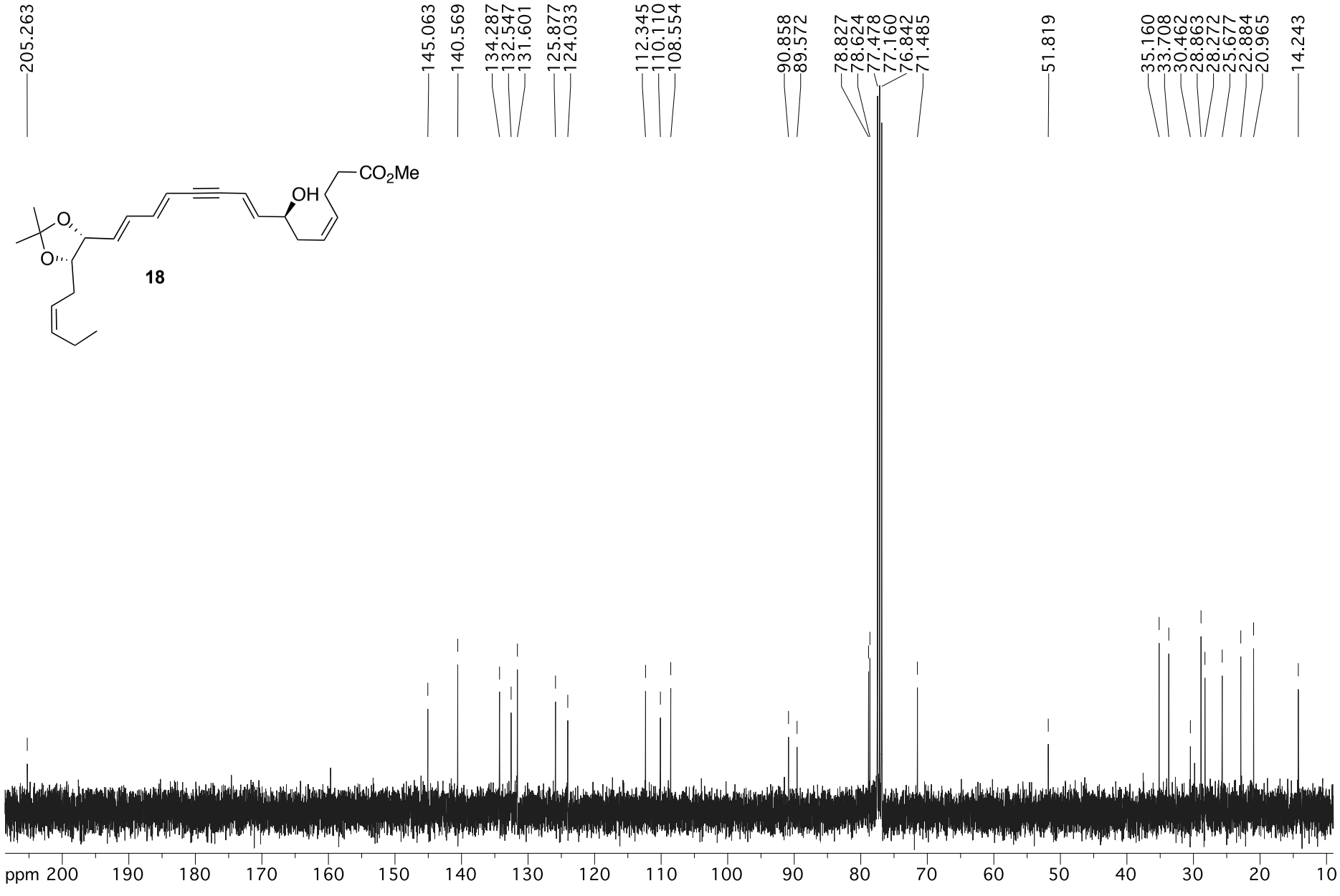


^{1}H NMR ($CDCl_3$, 500MHz)

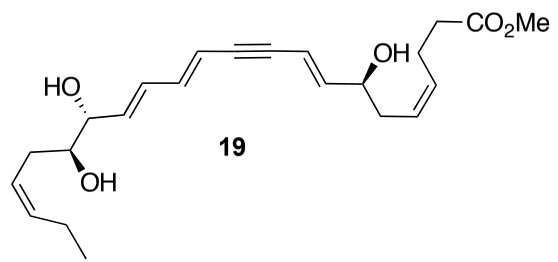


18

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

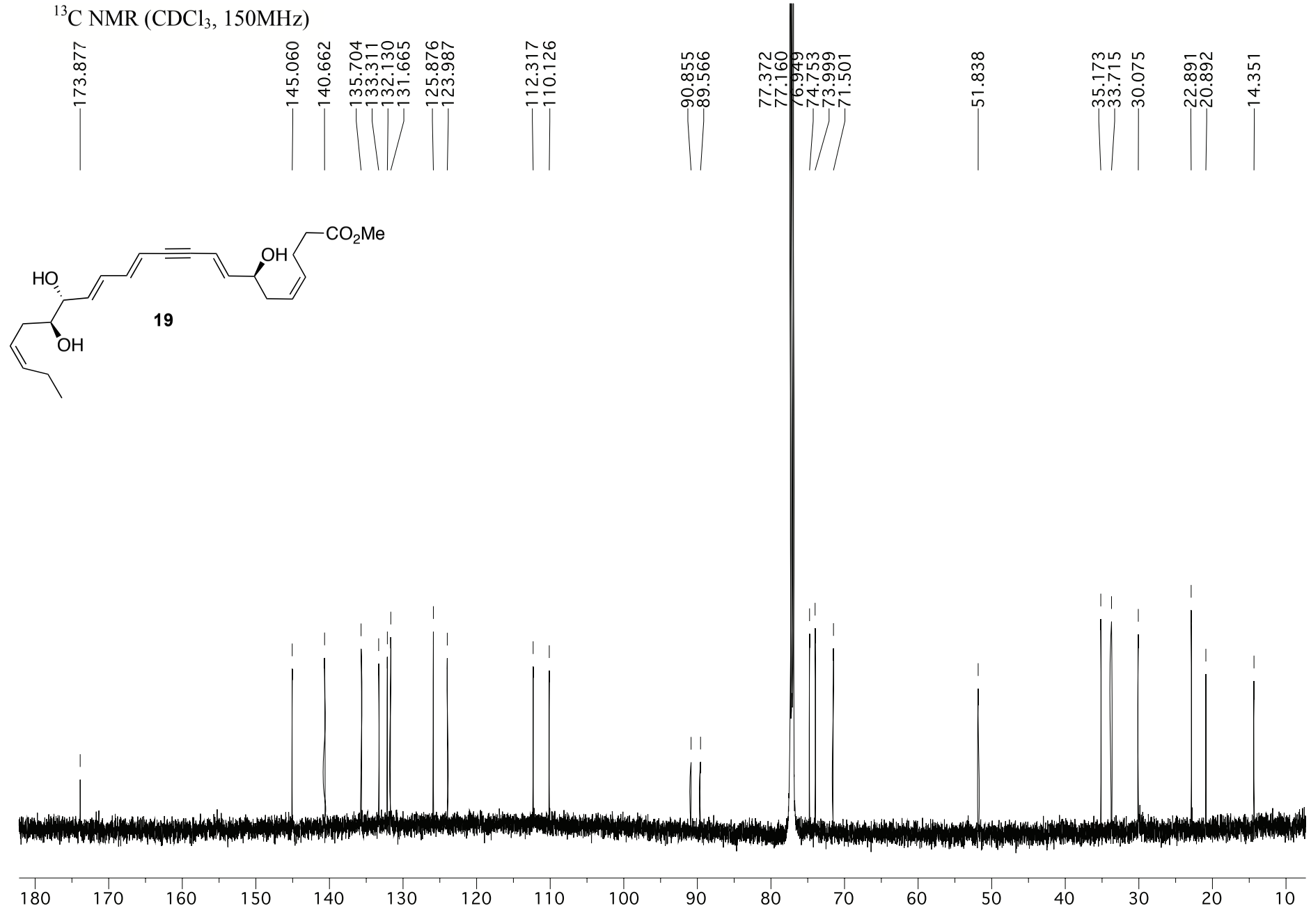


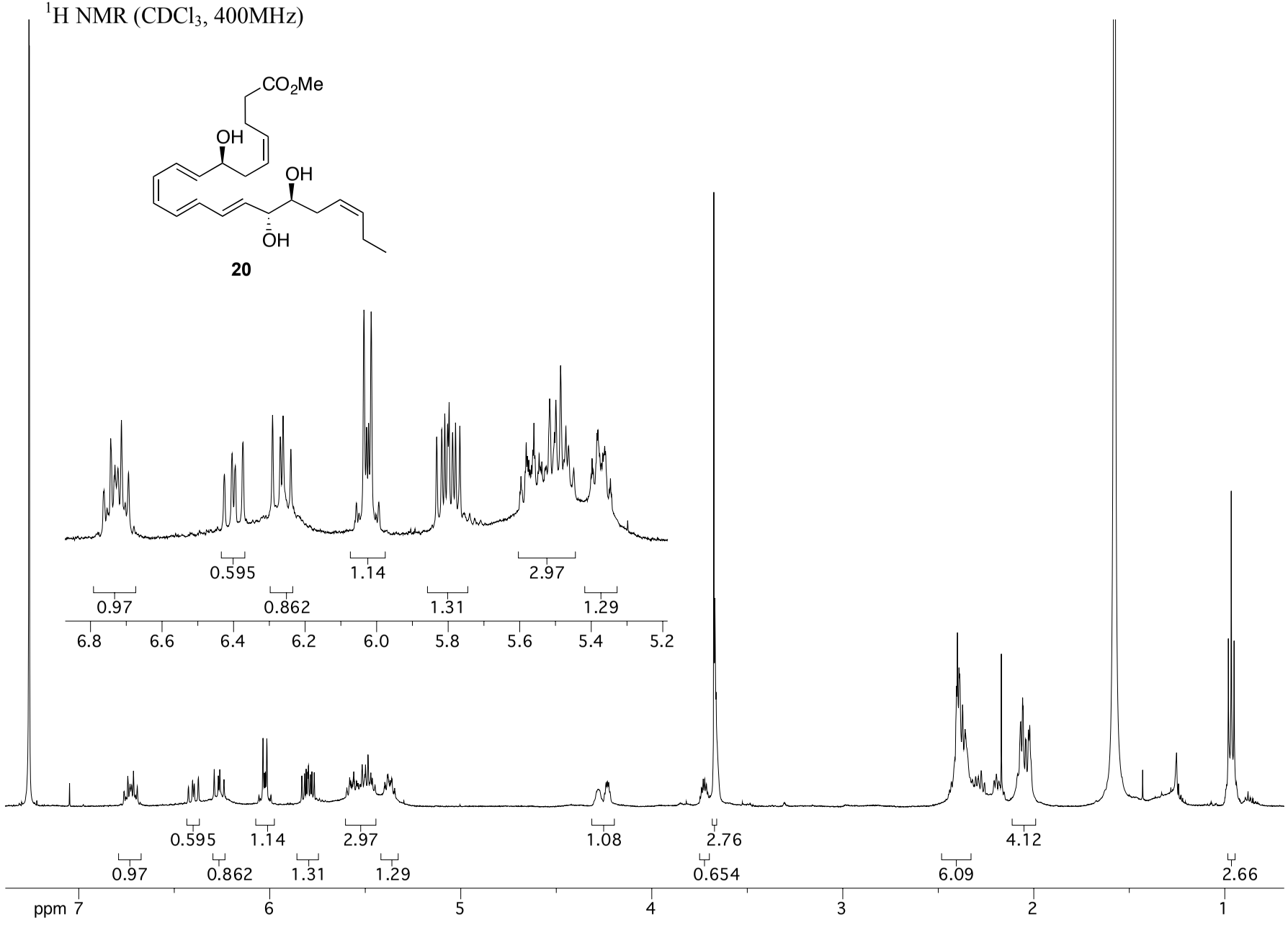
^{1}H NMR ($CDCl_3$, 500MHz)



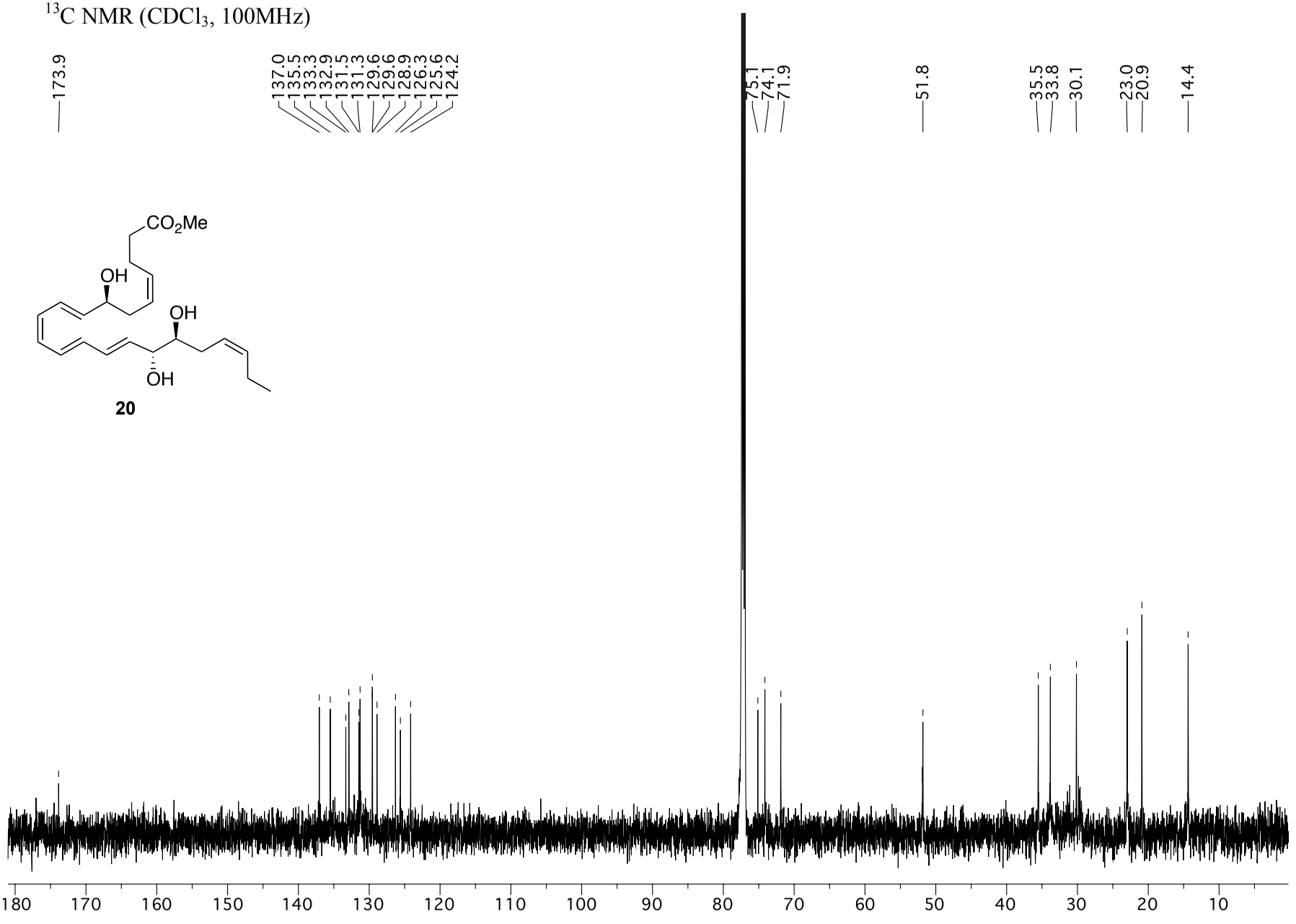
19

^{13}C NMR ($CDCl_3$, 150MHz)

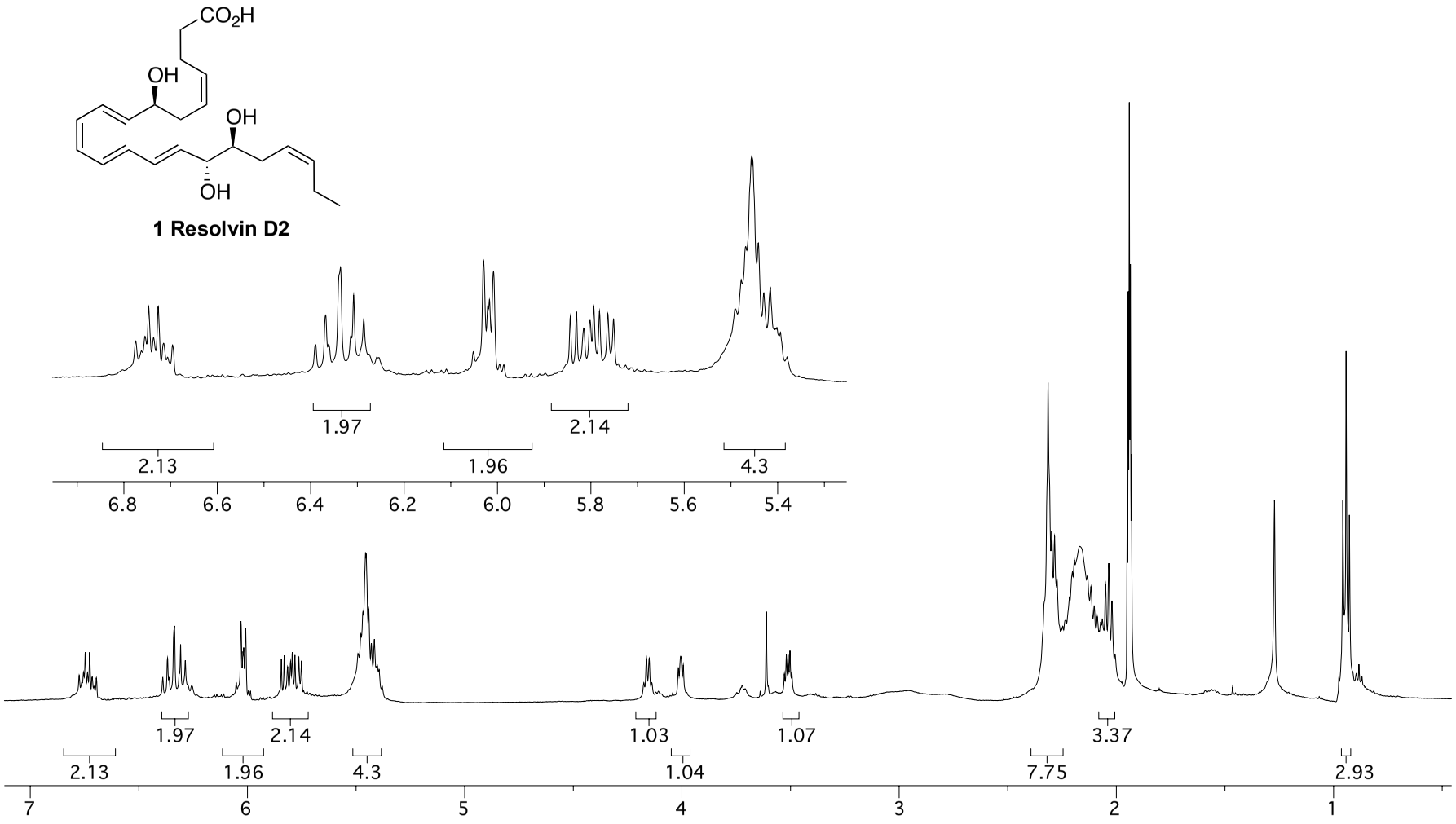



^{1}H NMR ($CDCl_3$, 400MHz)
CO_2Me
OH
OH
OH
20
0.595
1.14
2.97
0.97
0.862
1.31
1.29
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
0.595
1.14
2.97
1.08
2.76
4.12
0.97
0.862
1.31
1.29
0.654
6.09
2.66
ppm 7
6
5
4
3
2
1

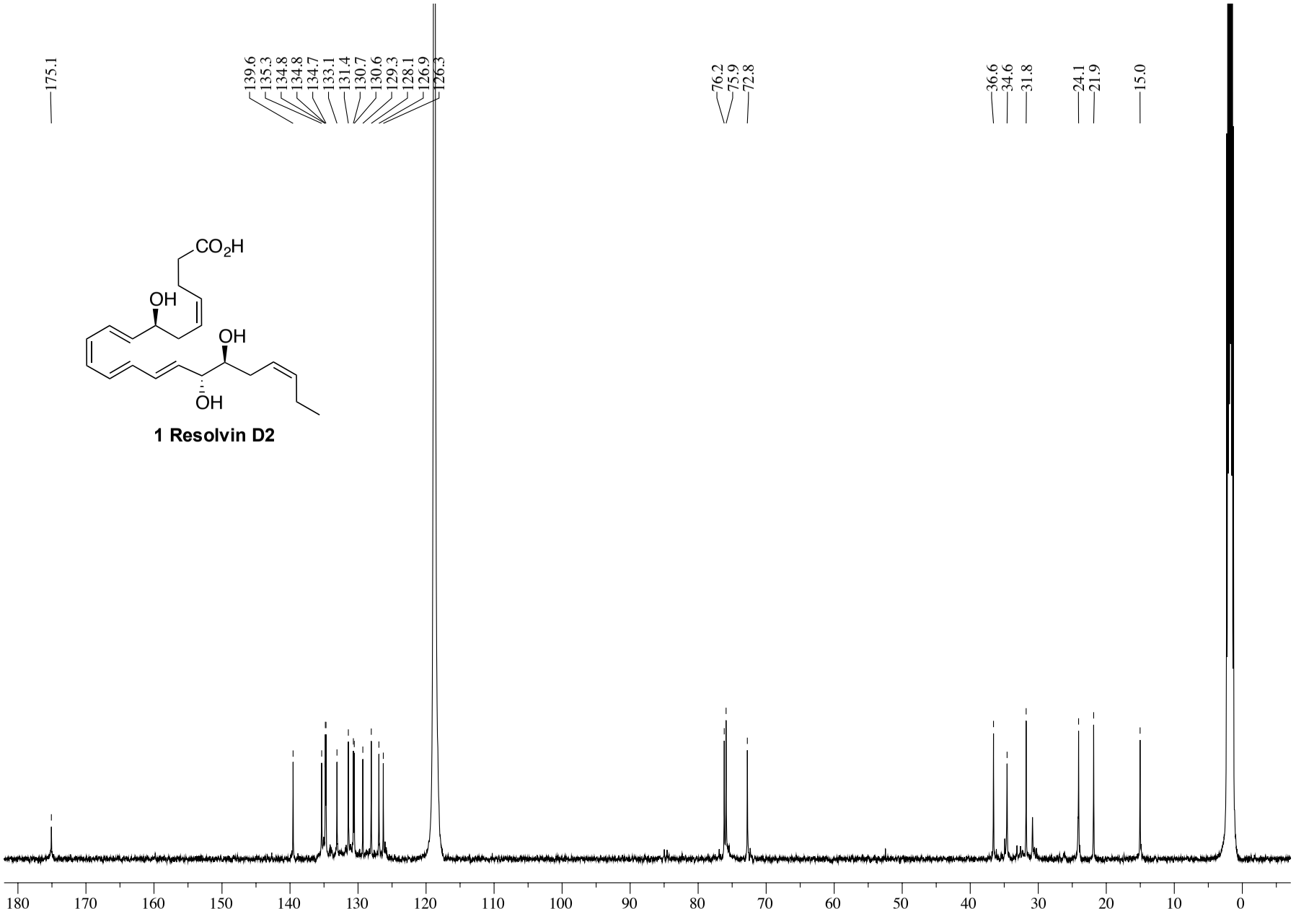
^{13}C NMR ($CDCl_3$, 100MHz)

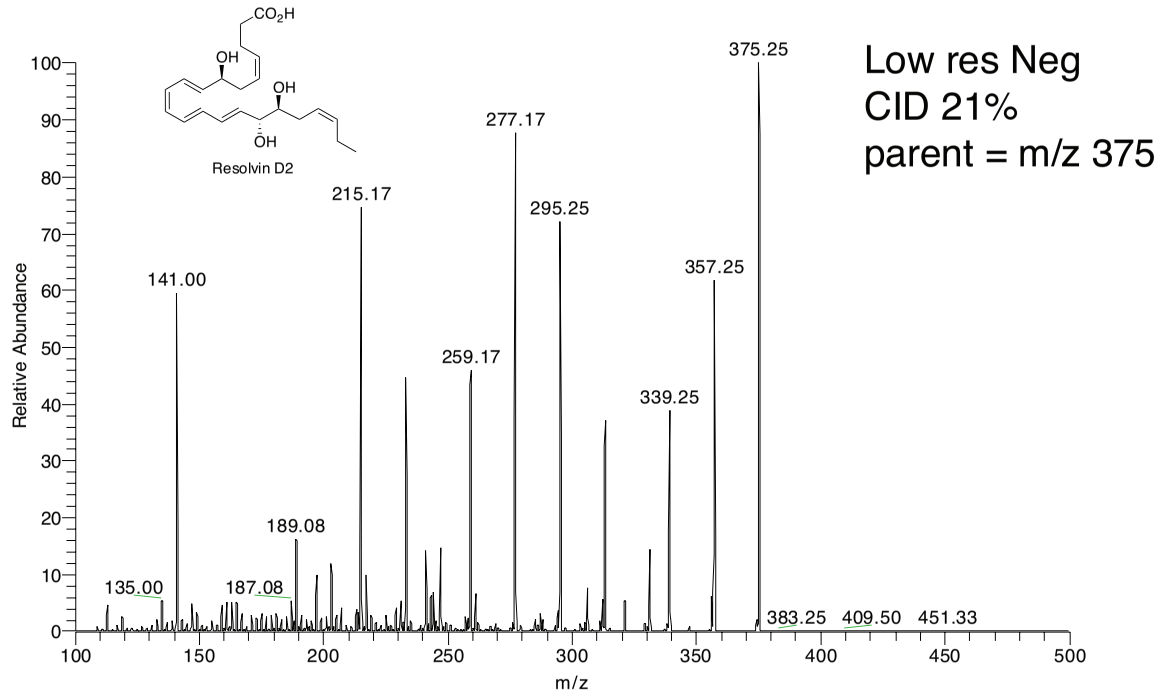


^{1}H NMR (CD_3CN, 500MHz)



^{13}C NMR (CD_3CN, 125MHz)




CO2H
OH
OH
OH
Resolvin D2
Low res Neg
CID 21%
parent = m/z 375
Relative Abundance
m/z
375.25
277.17
295.25
215.17
357.25
141.00
259.17
339.25
189.08
135.00
187.08
383.25
409.50
451.33