Development of a Mild and Efficient Protocol for the Protection and *O*-Alkylation of Tertiary Allyl Alcohol of Oxindole with Potassium Carbonate under Microwave Irradiation

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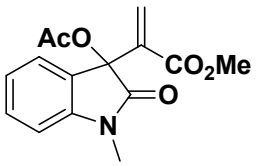
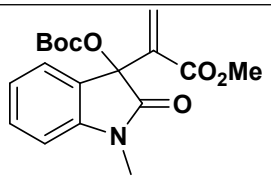
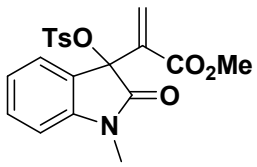
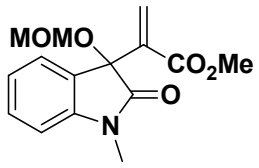
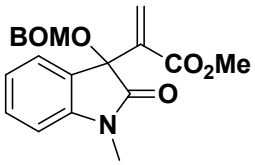
General Remark: All the reactions were carried out in oven-dried glassware. Progress of reactions was monitored by Thin Layer Chromatography (TLC) while purification of crude compounds was done by column chromatography using silica gel (100-200 mesh). Melting points were recorded on a Buchi melting point apparatus and are uncorrected. NMR spectra were recorded at 500 and 300 MHz (based on availability of instruments) 125 and 75 MHz (for ^{13}C) respectively on Brucker Avance DPX-500 MHz. and Bruker Avance DPX-300 MHz. Chemical shifts are reported in δ (ppm) relative to TMS (^{1}H) or $CDCl_3$ (^{13}C) as internal standards. Mass spectra were recorded using JEOL JMS 600H mass spectrometer. IR spectra were recorded on Bomem MB series FT-IR spectrometer, absorbencies are reported in cm^{-1}. Yields refer to quantities obtained after chromatography.

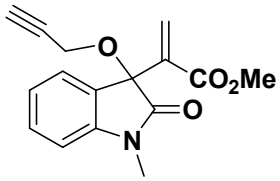
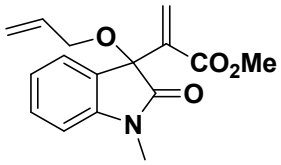
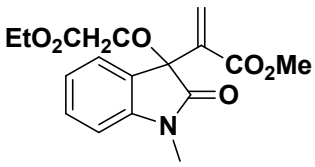
Typical Experimental Procedure: The MBH adduct **1a** (100 mg, 0.404 mmol), potassium carbonate (100 % w/w) and protecting reagents or alkylation reagents (1.5 equiv.) with tetra-butyl ammonium bromide (1.5 equiv.) were made a slurry in 50 ml round bottom flask and subjected to microwave oven of Start S (Milestone-Italy) which is equipped with a magnetic stirrer, a noncontact infrared continuous feedback temperature system under atmospheric pressure for a period of 10-15 minutes. After cooling the reaction mixture to room temperature, the crude mixture was dissolved in EtOAc and

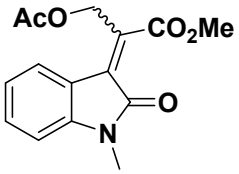
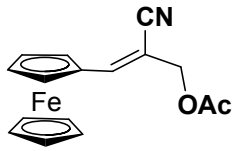
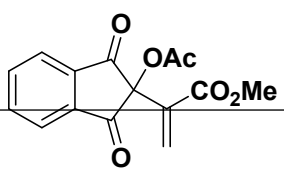
filtered through celite pad then purified by a silica gel column chromatography and afforded the corresponding products in good to moderate yield (45-98%).

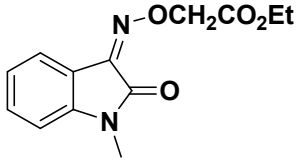
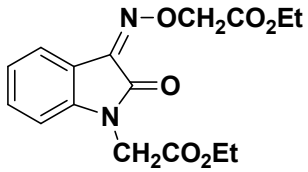
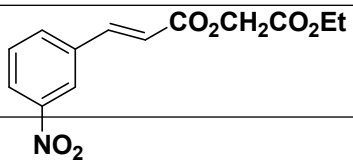
Characterization of new compounds:

 **Compound 3a**	**IR** (CH_2Cl_2) γ_{max}: 1130, 1361, 1476, 1492, 1619, 1721, 1732, 2126, 2931, 3218 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.03(s, 3H), 3.27(s, 3H), 3.77(s, 3H), 6.50(s,1H), 6.57(s, 1H), 6.91(d, J=7Hz, 1H), 7.20(s, 1H), 7.60(s, 1H), 7.79(d, J=7Hz, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 20.52, 26.99, 54.87, 78.29, 108.29, 115.52, 122.80, 127.61, 129.06, 131.61, 135.47, 135.87, 165.68, 169.87, 173.01; **FAB** mass: Calcd. For $C_{15}H_{15}NO_5$ is 289.10; Found : 290.47(M+1).
 **Compound 3b**	**IR** (CH_2Cl_2) γ_{max}: 1131, 1360, 1472, 1617, 1719, 1731, 2123, 2930, 3215 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 1.85-1.89(bs, 9H), 3.28(s, 1H), 3.59(s, 3H), 6.88(s, 1H), 6.89(s, 1H), 7.14-7.15(d, J=6.5Hz, 1H), 7.32-7.34(t, J= 6.5Hz, 1H), 7.40(s, 1H), 7.54(s, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 25.56, 25.60, 26.04, 27.29, 51.85, 76.56, 81.34, 113.26, 133.56, 121.34, 121.97, 131.90, 138.75, 139.29, 144.21, 157.29, 164..03; **FAB** mass: Calcd. For $C_{15}H_{15}NO_5$ is 347.14; Found : 348.12(M+1).
 (Data has been presented only	**IR** (CH_2Cl_2) γ_{max}: 1132, 1223, 1353, 1478, 1490, 1618, 1723, 1735, 2124, 2926, 3212 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.42(s, 3H), 3.17(s, 3H), 3.94(s, 3H), 6.22(s, 2H), 6.78(s, 1H), 6.99(s,1H), 7.30-7.37(m, 4H), 7.81-7.83(d, *J* = 7.5Hz,

protected isomer **3c**) **Compound 3c**	2H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 26.25, 33.14, 55.38, 79.05, 113.05, 113.20, 114.63(2C), 119.20, 122.48, 122.69, 124.21, 129.51, 129.75(2C), 132.18, 132.39, 146.81, 165.74, 166.25; **FAB** mass: Calcd. For $C_{20}H_{19}NO_6S$ is 401.09; Found : 401.34(M+).
 **Compound 3d**	**IR** (CH_2Cl_2) γ_{max}: 1128, 1222, 1475, 1492, 1616, 1725, 1728, 2116, 2925, cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.49 (s, 3H), 3.22(s, 3H), 3.99(s, 3H), 5.32(s, 2H), 6.79-6.80(d, *J* = 8Hz, 1H), 6.98-6.702(t, *J* = 7.5Hz, 1H), 7.32-7.35(t, *J* = 7.5Hz, 1H), 7.43-7.44(d, *J* = 8Hz, 1H), 7.52-7.54(m, 1H), 7.69-7.71(m, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 25.99, 31.52, 39.37, 52.48, 73.33, 113.76, 125.59, 127.01, 128.18, 129.42, 130.07, 131.52, 148.48, 160.22, 168.74; **FAB** mass: Calcd. For $C_{15}H_{17}NO_5$ is 291.11; Found : 292.21(M+1).
 **Compound 3e**	**IR** (CH_2Cl_2) γ_{max}: 1135, 1213, 1334, 1465, 1470, 1618, 1724, 1729, 2116, 2915, cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 3.30(s, 3H), 3.57(s, 3H), 4.12-4.16(dd, *J* = 11 Hz, 2H), 4.52-4.56(dd, J = 11 Hz, 2H), 6.43(s, 1H), 6.55(s, 1H), 6.86-6.87(d, *J* = 8 Hz, 1H), 6.98-6.99(t, *J* = 8Hz, 1H), 7.12-7.14(t, *J* = 8Hz, 1H), 7.30-7.34(m, 6H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 26.86, 52.19, 66.60, 66.91, 73.41, 79.83, 108.69, 122.83, 123.39, 125.94,128.16, 128.23 132.15, 136.25, 136.67(4C), 136.80, 145.60, 163.99, 167.39, 172.63; **FAB** mass: Calcd. For $C_{21}H_{21}NO_5$ is 367.14; Found:

	368.29(M+1).
 **Compound 3f**	**IR** (CH_2Cl_2) γ_{max}: 1134, 1233, 1354, 1475, 1470, 1613, 1724, 1735, 2122, 2928, 3210 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.35(s, 1H), 3.27(s, 3H), 3.57(s, 3H), 3.88-4.03(m, 2H), 6.62(s, 2H), 6.85-6.87(d, *J* = 7.5Hz, 1H), 7.04-7.06(t, *J* = 7.0Hz, 1H), 7.12-7.14(d, *J* = 7.5Hz, 1H), 7.34-7.34(t, *J* = 7.0Hz, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 26.46, 51.95, 52.91, 74.62, 79.10, 80.41, 108.47, 122.89, 124.55, 125.96, 128.51, 130.75, 137.42, 145.34, 164.57, 173.43; **FAB** mass: Calcd. For $C_{16}H_{15}NO_4$ is 285.12; Found: 286.32(M+1).
 **Compound 3g**	**IR** (CH_2Cl_2) γ_{max}: 1130, 1343, 1481, 1476, 1634, 1725, 1781, 2938 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 3.27(s, 3H), 3.56 (s, 3H), 3.61-3.64(m, 1H), 3.78-3.80(m, 1H), 5.08 –5.10 (d, *J* = 10.5Hz, 1H), 5.80-5.84(m, 1H), 6.59(s, 1H), 6.61(s, 1H) 6.85-6.86 (d, *J* = 7.5Hz, 1H), 7.02-7.05 (t, *J* = 7.5Hz, 1H), 7.10 -7.11 (d, *J* = 7 Hz, 1H), 7.33 -7.36 (t, *J* = 7 Hz, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 26.43, 51.89, 65.33, 80.28, 108.30, 116.75, 122.82, 124.14, 126.87, 128.25, 130.39, 134.01, 138.03, 145.31, 164.70, 174.19; **FAB** mass: Calcd. For $C_{16}H_{17}NO_4$ is 287.12; Found : 288.32(M+1).
 **Compound 3h**	**IR** (CH_2Cl_2) γ_{max}: 1138, 1214, 1356, 1470, 1616, 1715, 1728, 2116, 2930 cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 1.20(t, *J* = 2Hz, 3H), 3.28(s, 3H), 3.57(s, 3H), 3.75-3.78(d, *J* = 17Hz, 1H), 3.97-4.00(d, *J* = 17Hz, 1H), 4.10-4.12(q, *J* = 2Hz,

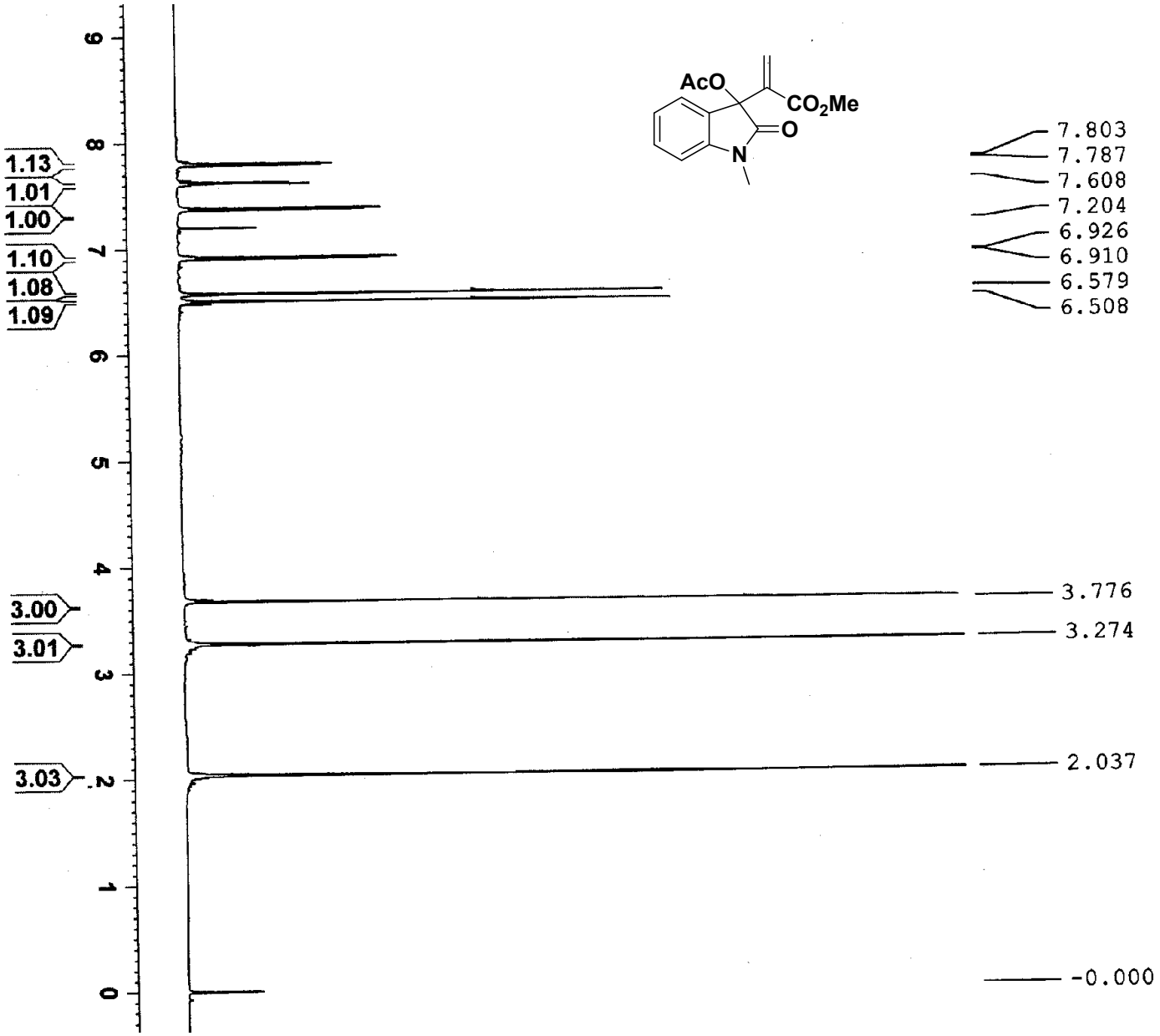
	2H), 6.64(s, 1H), 6.72(s, 1H), 6.86-6.87(d, *J* = 7.5Hz, 1H), 7.01-7.04(t, *J* = 7.5Hz, 1H), 7.12-7.14(d, *J* = 7.5Hz, 1H), 7.33-7.37(t, *J* = 7.0Hz, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 14.07, 26.47, 51.94, 60.89, 62.25, 80.45, 108.49, 122.90, 124.71, 125.85, 128.78, 130.80, 137.31, 145.28, 164.58, 169.08, 173.40; **FAB** mass: Calcd. For $C_{17}H_{19}NO_6$ is 333.12; Found: 333.29(M+).
 **Compound 4a**	**IR** (CH_2Cl_2) γ_{max}: 1131, 1323, 1476, 1617,1654, 1721, 2226, 2929, cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.08(s, 3H), 3.22(s, 3H), 3.95(s, 3H), 5.72(s, 2H), 6.79-6.81(d, *J* = 7.5Hz, 1H), 6.98-7.01(m, 1H), 7.31-7.34(m, 2H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 26.03, 29.71, 38.27, 52.83, 108.35, 119.62, 122.58, 124.30, 128.18, 131.57, 136.66, 144.04, 166.81, 166.85, 177.27; **FAB** mass: Calcd. For $C_{15}H_{15}NO_5$ is 289.09; Found: 290.10 (M+1).
 **Compound 6c**	**IR** (CH_2Cl_2) γ_{max}: 1131, 1323, 1470, 1723, 2224, 2928, cm^{-1}; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.13(s, 3H), 4.20(s, 5H), 4.49-4.50(m, 2H), 4.66(s, 2H), 4.84-4.85(m, 2H), 7.08(s, 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 20.97, 65.45, 69.96, 70.08(2C), 71.71(7C), 75.75, 100.42, 118.68, 149.86, 170.58 ; **FAB** mass: Calcd. For $C_{16}H_{15}FeNO_2$ is 309.04; Found: 310.14 (M+1).
	**IR** (CH_2Cl_2) γ_{max}: 1130, 1325, 1465, 1618, 1721, 2214, 2921, cm^{-1};

Compound 6d	**^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 2.54(s, 3H), 3.82(s, 3H), 7.11(s, 1H), 7.54(s, 1H), 7.87-7.89(m, 2H), 8.01-8.03(m, 2H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 23.25, 50.22, 75.38, 123.83, 124.00, 129.29, 136.00, 136.38, 141.20, 141.30, 152.01, 167.79, 168.29, 199.03, 199.57; **FAB** mass: Calcd. For $C_{15}H_{12}O_6$ is 288.06; Found: 289.06 (M+1).
 **Compound 6e**	**IR** (CH_2Cl_2) γ_{max}: 1142, 1517, 1615, 1721, 2913, 3072 ; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 1.26-1.28 (t, *J* = 2Hz, 3H), 3.30(s, 3H), 4.22-4.27(q, *J* = 2Hz, 2H), 4.49(s, 2H), 6.72-6.73(d, *J* = 8Hz, 1H), 7.08-7.11(t, *J* = 7.5Hz, 1H), 7.37-7.40(t, *J* = 7.5 Hz, 1H), 8.07-8.09(d, *J* = 7.5Hz 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 14.90, 23.46, 41.35, 61.23, 108.55, 115.64, 123.72, 128.75, 132.46, 143.99, 144.62, 163.16, 167.46; **FAB** mass: Calcd. For $C_{13}H_{14}N_2O_4$ is 262.09; Found: 263.52. (M+1).
 **Compound 6f**	**IR** (CH_2Cl_2) γ_{max}: 1143,1515, 1617, 1724, 2911, 3085; **^{1}H NMR** ($CDCl_3$/TMS, 500.1 MHz): δ 1.24-1.31(m, 6H), 4.20-4.28(m, 4H), 4.49(s, 2H), 5.02(s, 2H), 6.72-6.73(d, *J* = 7.5Hz, 1H), 7.08-7.11(t, *J* = 7.0Hz, 1H), 7.37-7.40(t, *J* = 7.0Hz, 1H), 8.07-8.09(d, *J* = 7.5Hz 1H); **^{13}C NMR** ($CDCl_3$/TMS, 125.7 MHz): δ 14.10, 14.15, 41.23, 61.35, 61.90, 72.89, 108.62, 115.64, 123.55, 128.75, 132.99, 143.46, 144.72, 163.12, 167.16, 168.41; **FAB** mass: Calcd. For $C_{16}H_{18}N_2O_6$ is 334.12; Found: 335.56 (M+1).
	**IR** (CH_2Cl_2) γ_{max}: 1135, 1345, 1654, 1684, 1724, 2860, 2910, 3080;

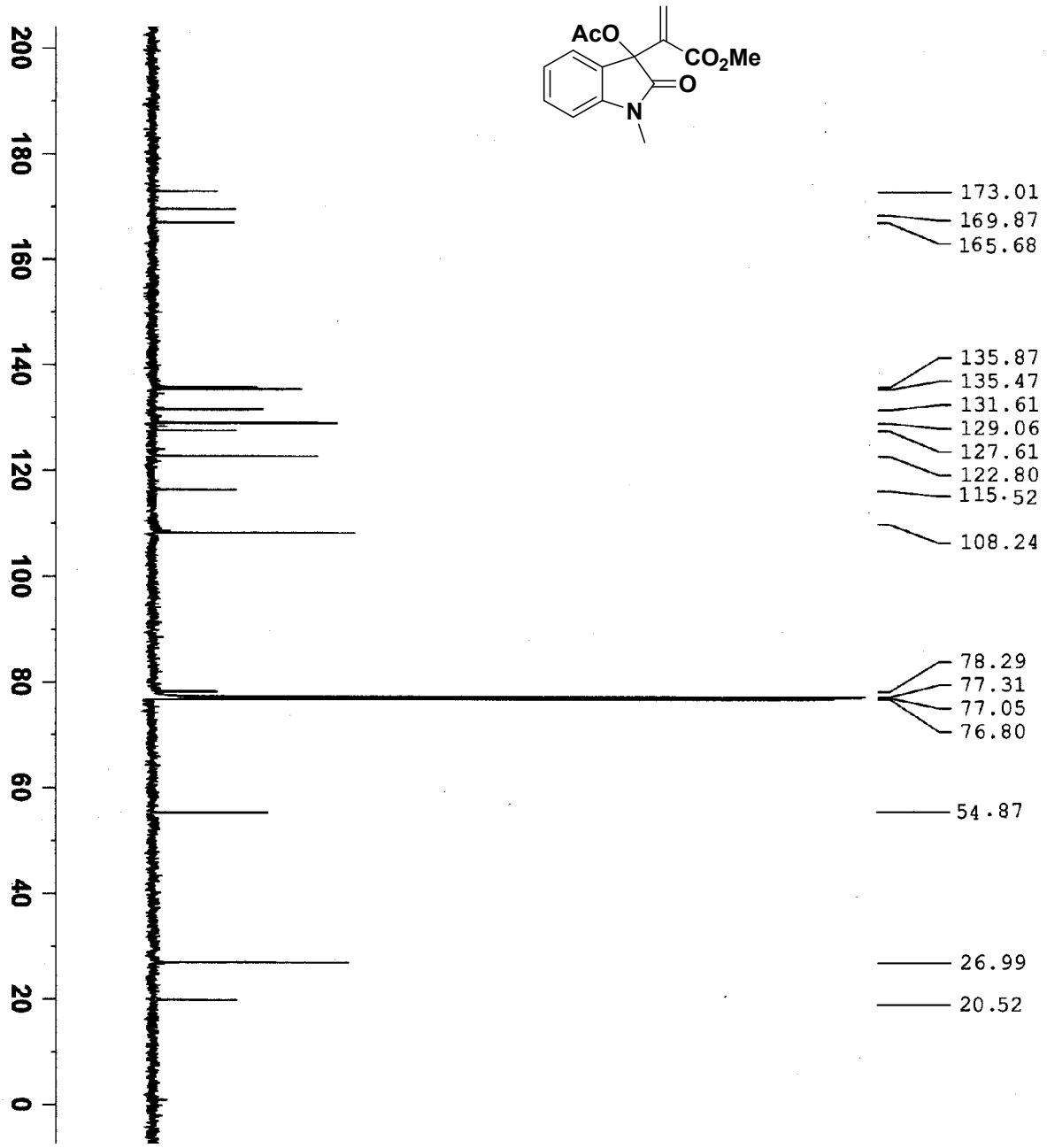
Compound 6g	**^{1}H NMR** ($CDCl_3$/TMS, 300.1 MHz): δ 1.25-1.31(m, 3H), 4.23-4.30(m, 2H), 4.76(s, 2H), 6.62-6.68(d, *J* = 16Hz, 1H), 7.56-7.61(d, *J* = 8.7Hz, 2H), 7.68-7.71(d, *J* = 16Hz, 1H), 8.25-8.28(d, *J* = 8.7Hz, 2H); **^{13}C NMR** ($CDCl_3$/TMS, 75.3 MHz): δ 14.12, 61.12, 61.62, 121.14, 124.22(2C), 128.81(2C), 140.20, 143.16, 148.69, 165.25, 167.62; **FAB** mass: Calcd. For $C_{13}H_{13}NO_6$ is 279.07; Found: 280.31(M+1).

Copies of ^{1}H and ^{13}C NMR spectra of new compounds:

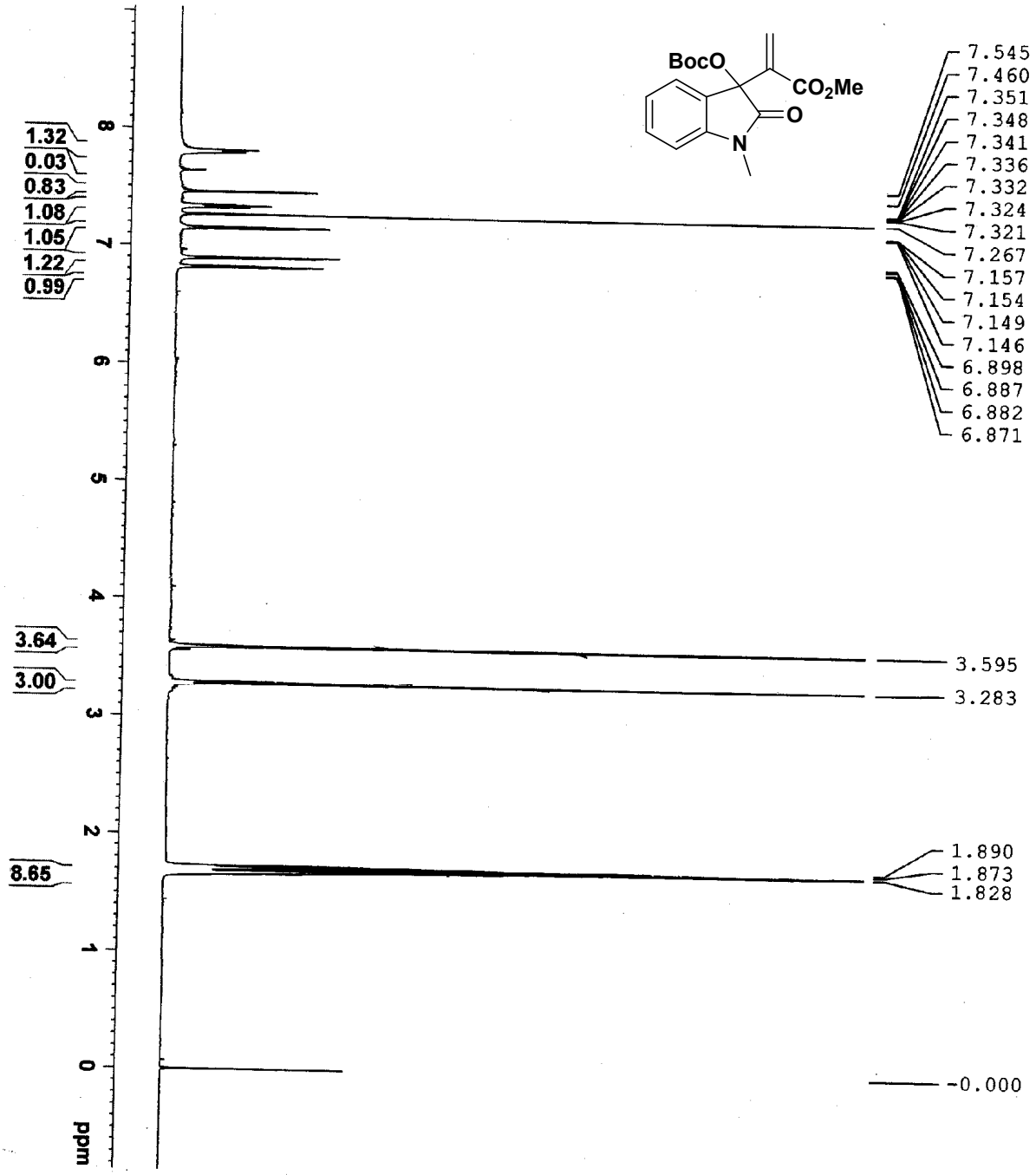
Compound 3a



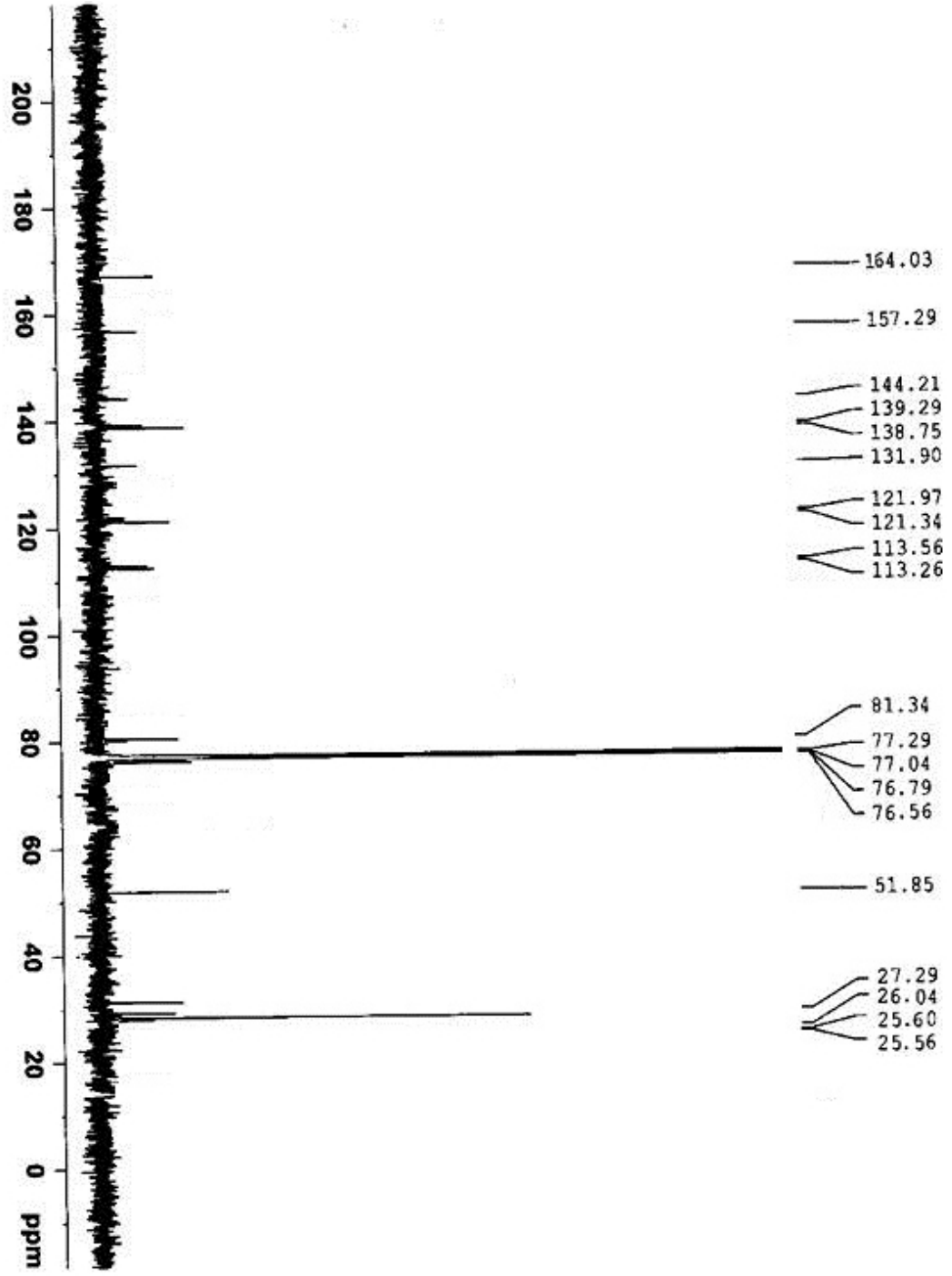
Compound 3a


AcO
CO2Me
O
N
200
180
160
140
120
100
80
60
40
20
0
173.01
169.87
165.68
135.87
135.47
131.61
129.06
127.61
122.80
115.52
108.24
78.29
77.31
77.05
76.80
54.87
26.99
20.52

Compound 3b



Compound 3b


200
180
160
140
120
100
80
60
40
20
0
ppm
164.03
157.29
144.21
139.29
138.75
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121.97
121.34
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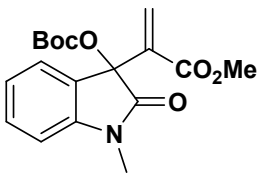
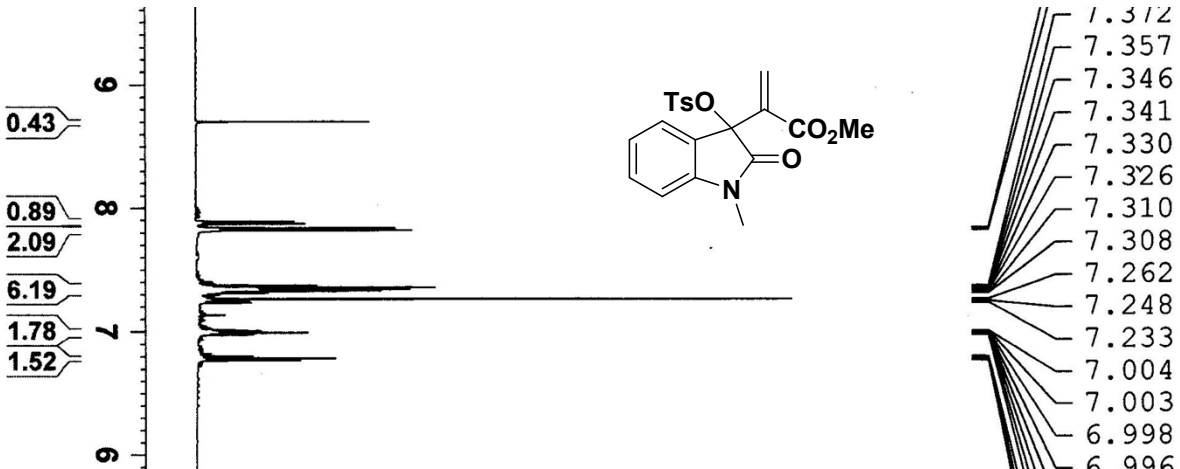
76.56
51.85
27.29
26.04
25.60
25.56


BocO
CO2Me
O
N

Compound 3c


0.43
0.89
2.09
6.19
1.78
1.52
TsO
CO2Me
O
N
7.372
7.357
7.346
7.341
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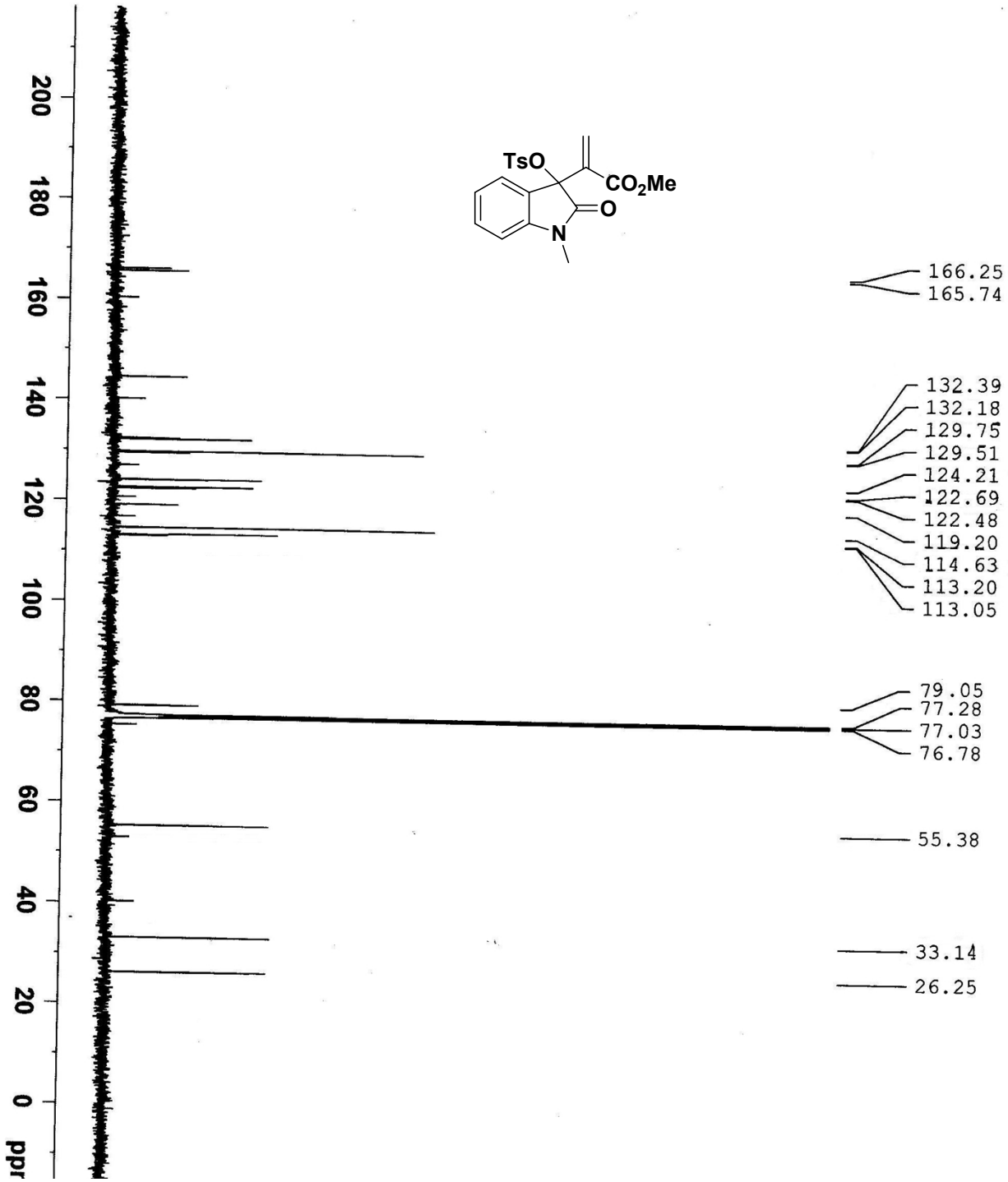
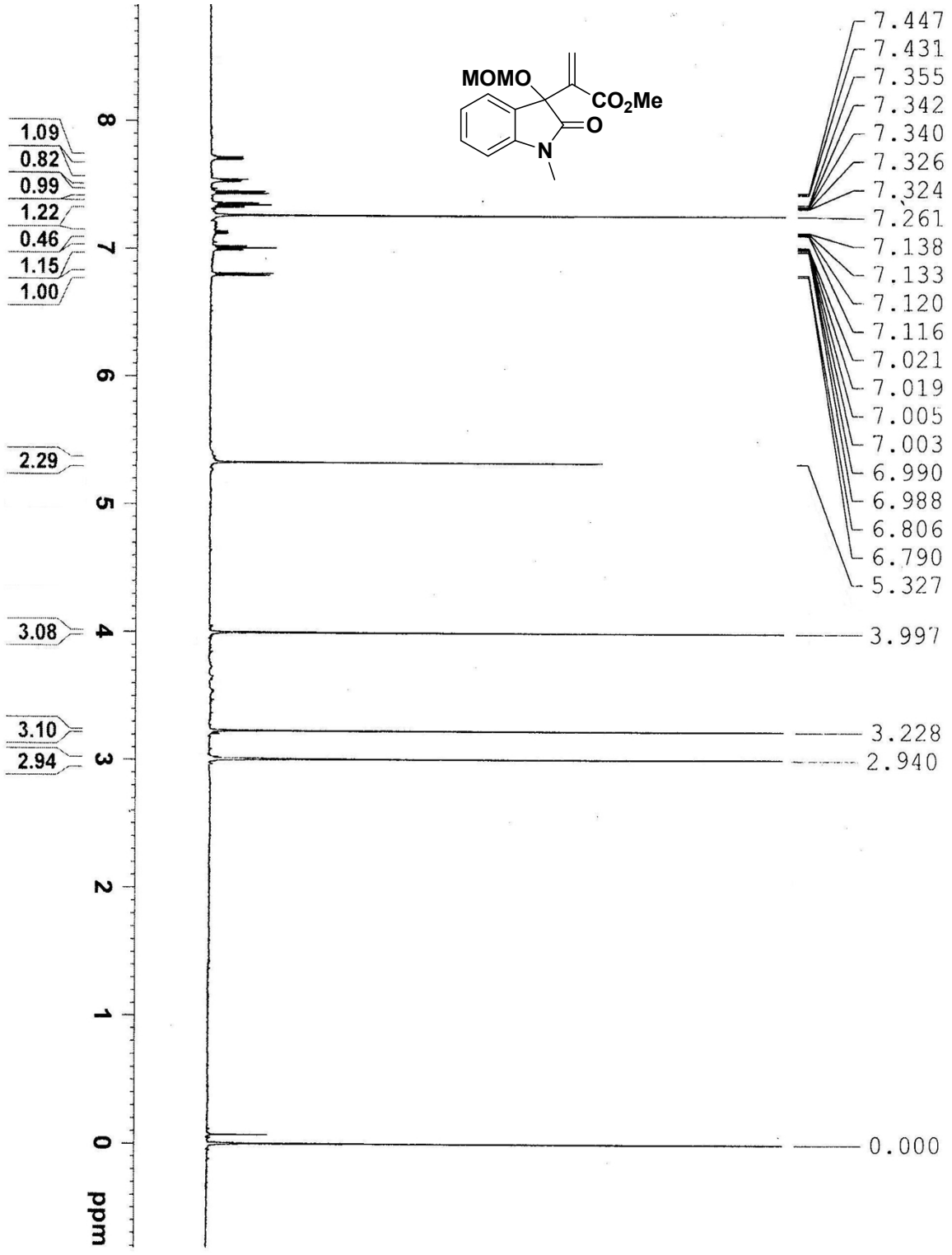
7.233
7.004
7.003
6.998
6.996

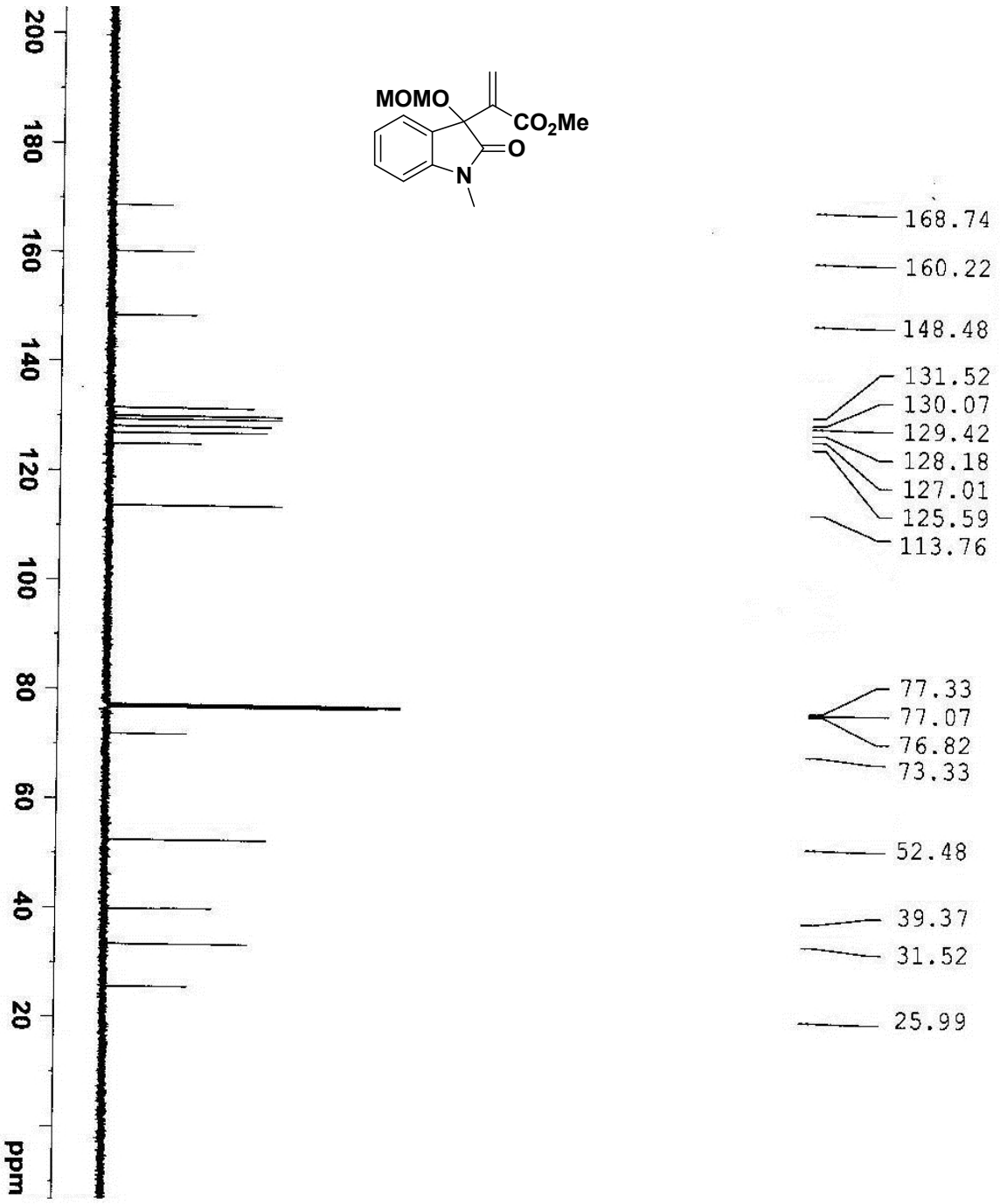
Compound 3c


TsO
CO2Me
O
N
166.25
165.74
132.39
132.18
129.75
129.51
124.21
122.69
122.48
119.20
114.63
113.20
113.05
79.05
77.28
77.03
76.78
55.38
33.14
26.25
200
180
160
140
120
100
80
60
40
20
0
ppm

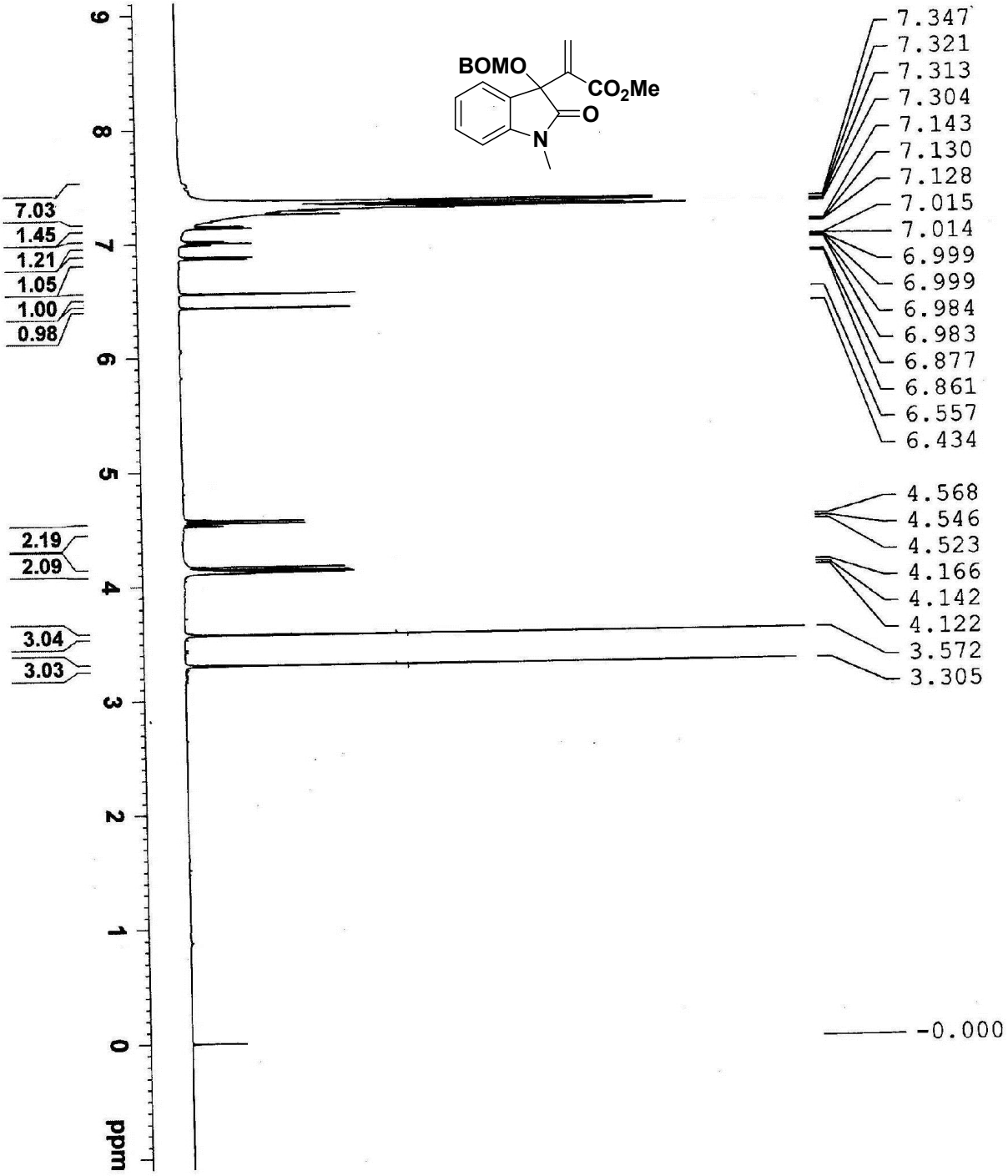
Compound 3d


MOMO
CO2Me
O
N
7.447
7.431
7.355
7.342
7.340
7.326
7.324
7.261
7.138
7.133
7.120
7.116
7.021
7.019
7.005
7.003
6.990
6.988
6.806
6.790
5.327
3.997
3.228
2.940
0.000
1.09
0.82
0.99
1.22
0.46
1.15
1.00
2.29
3.08
3.10
2.94
8
7
6
5
4
3
2
1
0
ppm

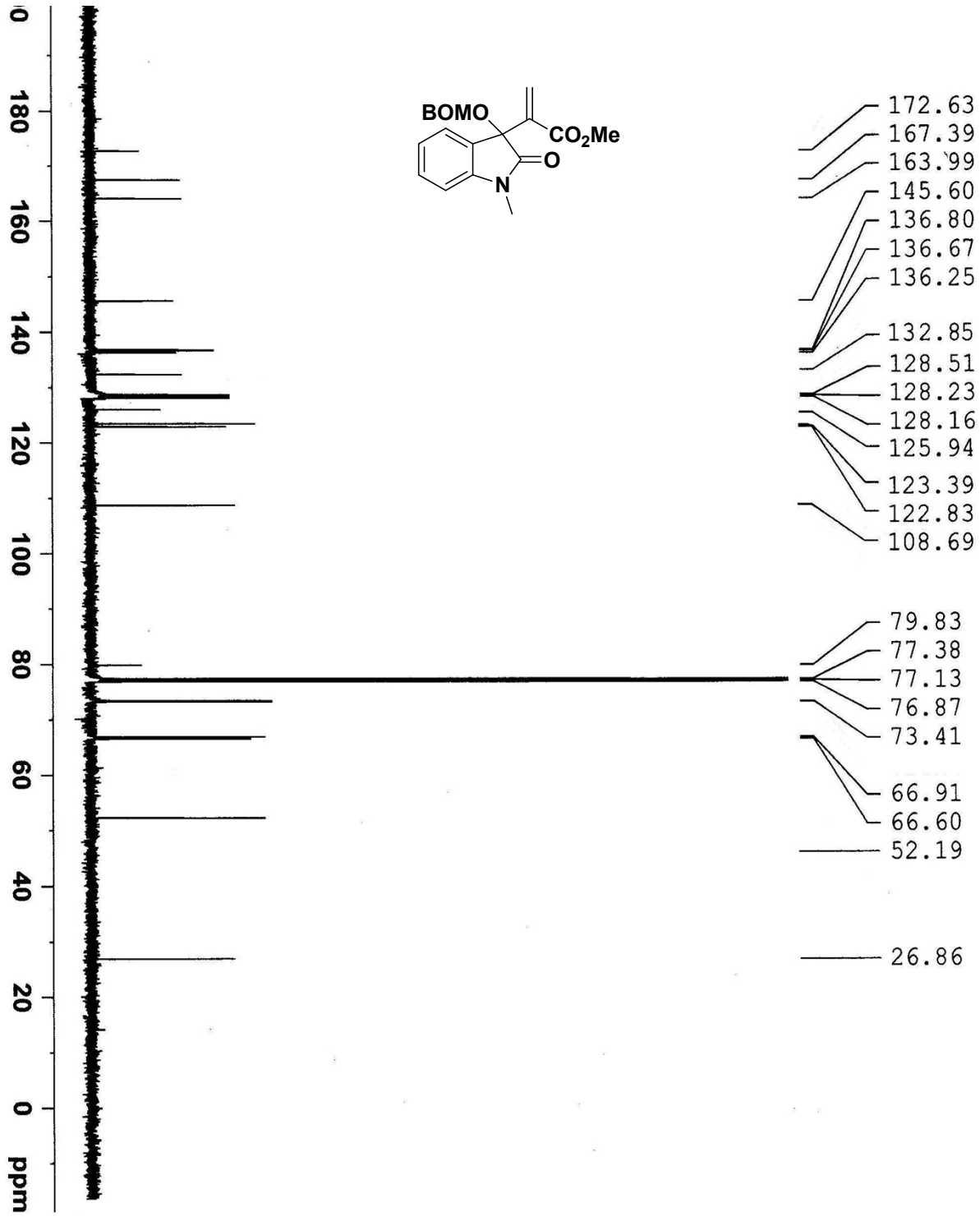
Compound 3d


MOMO
CO2Me
O
N
168.74
160.22
148.48
131.52
130.07
129.42
128.18
127.01
125.59
113.76
77.33
77.07
76.82
73.33
52.48
39.37
31.52
25.99
200
180
160
140
120
100
80
60
40
20
ppm

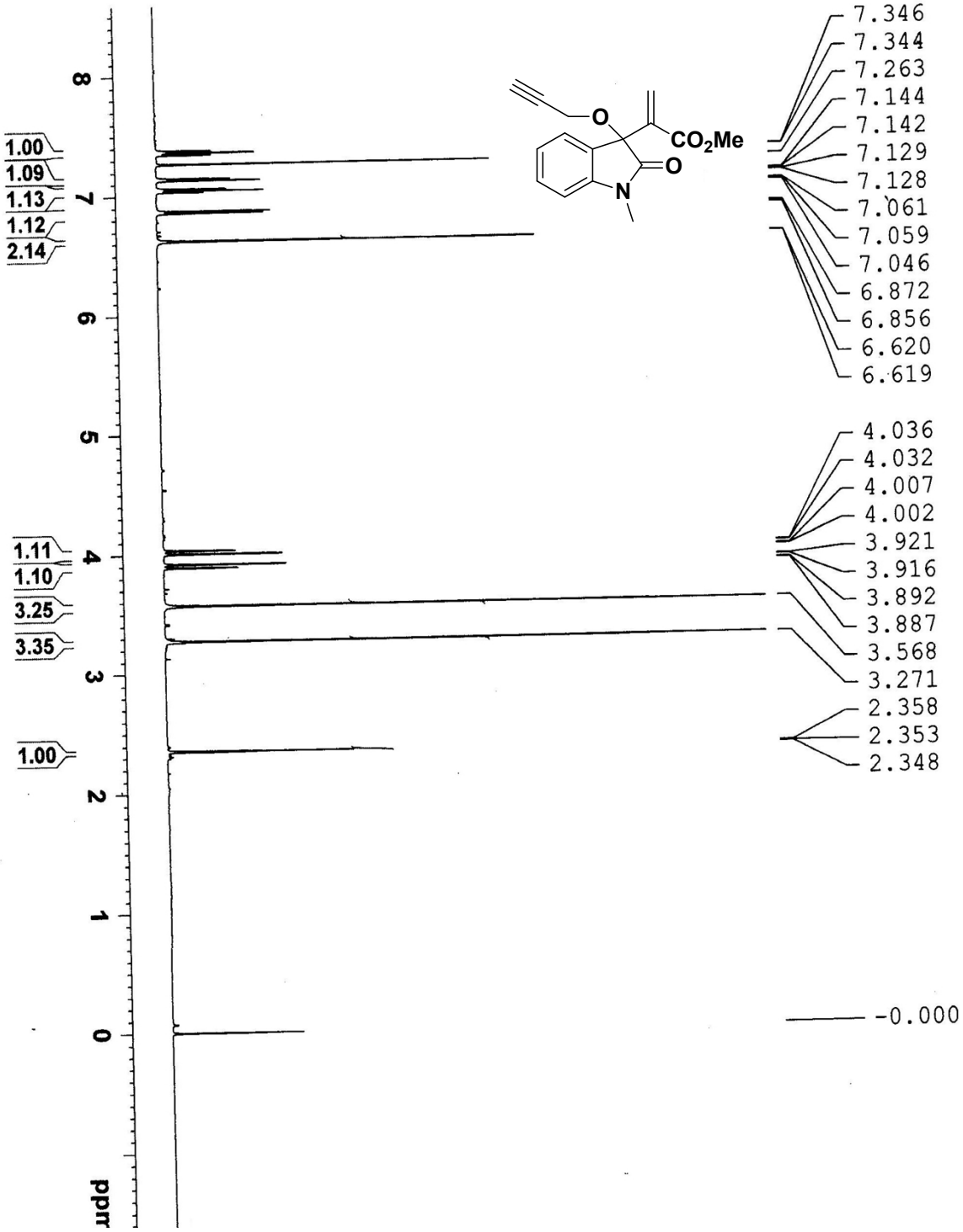
Compound 3e


BOMO
CO2Me
O
N
7.347
7.321
7.313
7.304
7.143
7.130
7.128
7.015
7.014
6.999
6.999
6.984
6.983
6.877
6.861
6.557
6.434
4.568
4.546
4.523
4.166
4.142
4.122
3.572
3.305
-0.000
7.03
1.45
1.21
1.05
1.00
0.98
2.19
2.09
3.04
3.03
ppm

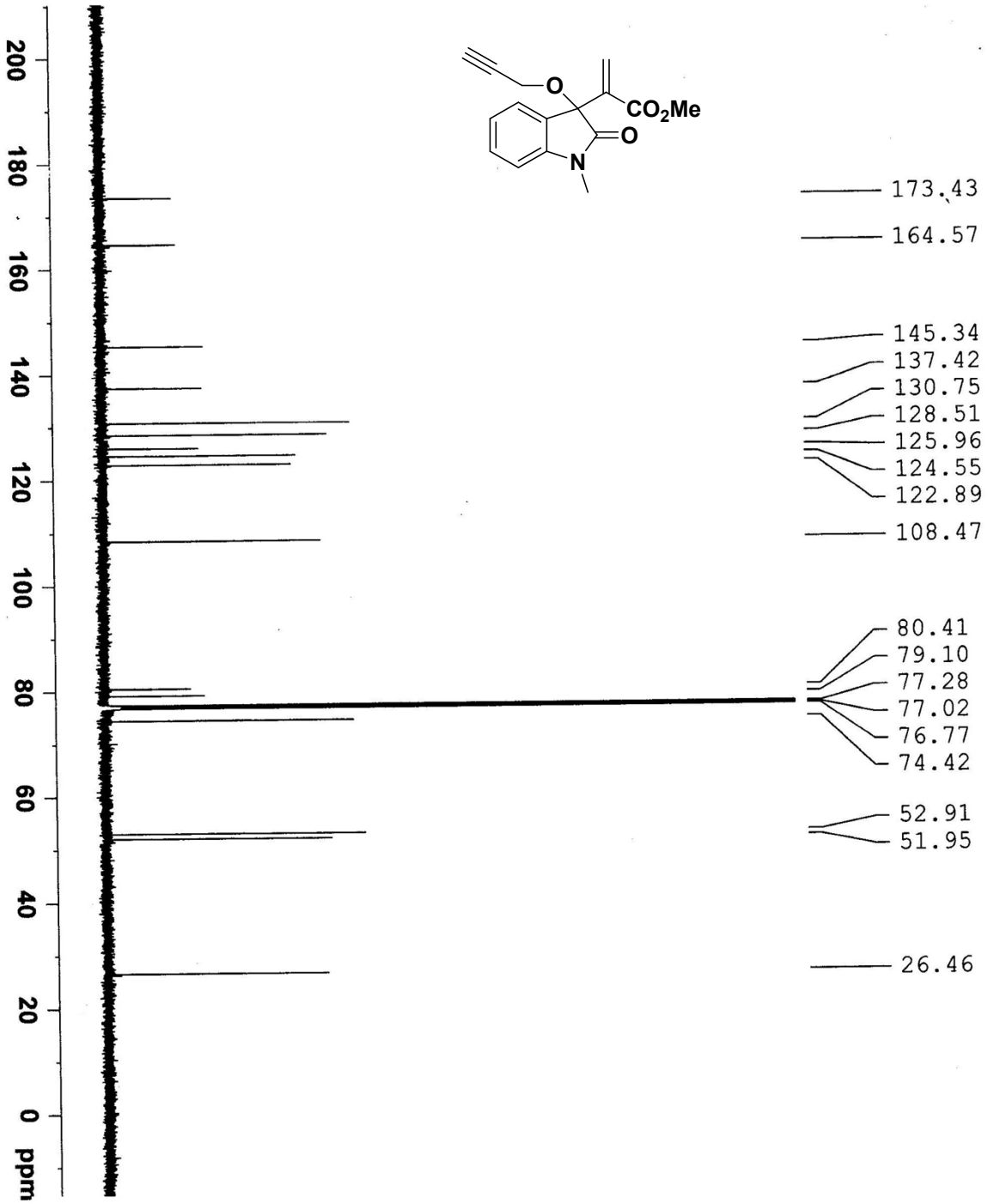
Compound 3e


BOMO
CO2Me
O
N
172.63
167.39
163.99
145.60
136.80
136.67
136.25
132.85
128.51
128.23
128.16
125.94
123.39
122.83
108.69
79.83
77.38
77.13
76.87
73.41
66.91
66.60
52.19
26.86
ppm

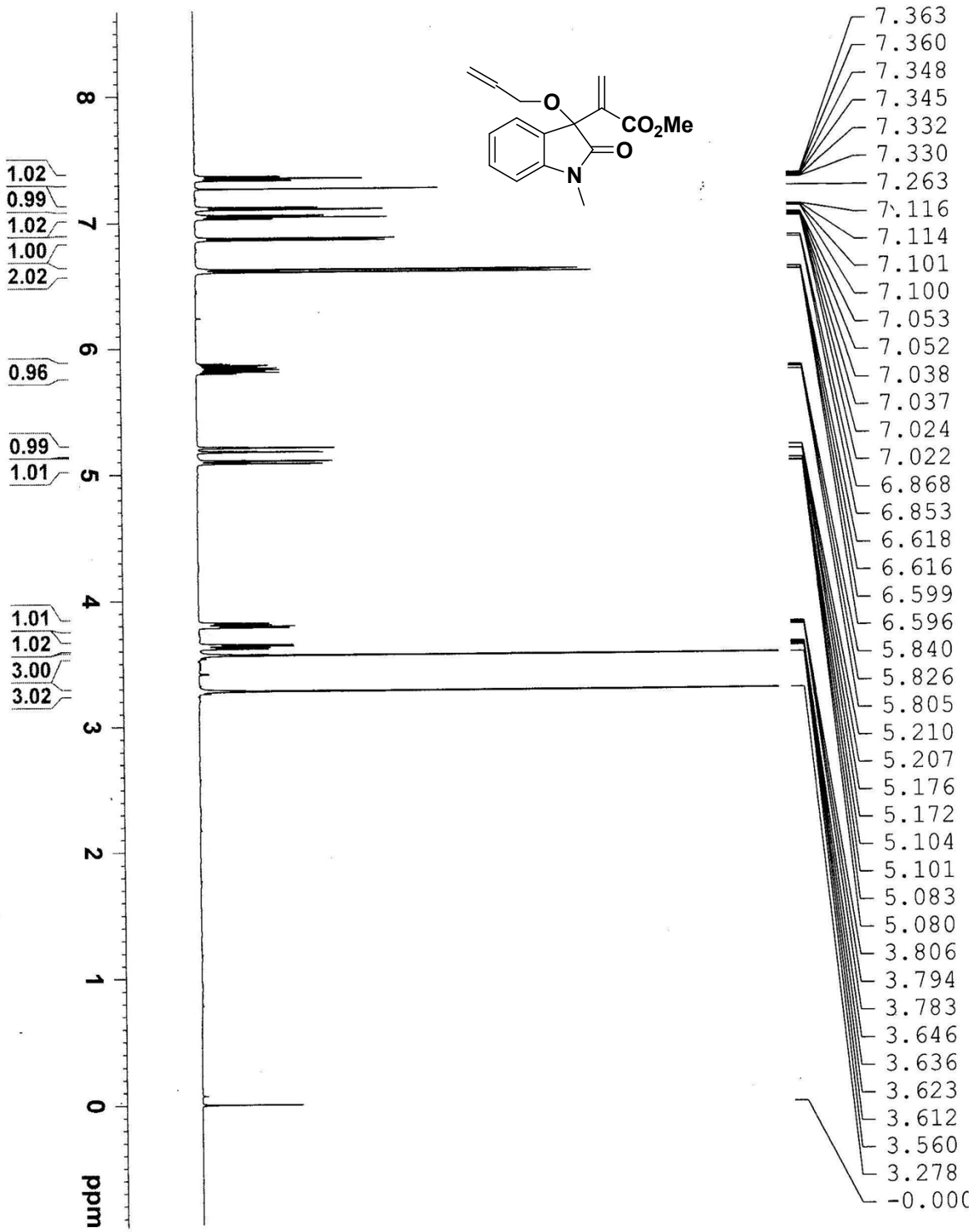
Compound 3f


7.346
7.344
7.263
7.144
7.142
7.129
7.128
7.061
7.059
7.046
6.872
6.856
6.620
6.619
4.036
4.032
4.007
4.002
3.921
3.916
3.892
3.887
3.568
3.271
2.358
2.353
2.348
-0.000
1.00
1.09
1.13
1.12
2.14
1.11
1.10
3.25
3.35
1.00
O
CO2Me
O
N
ppm

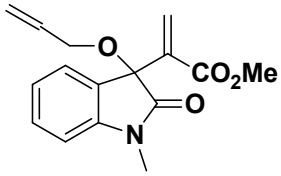
Compound 3f

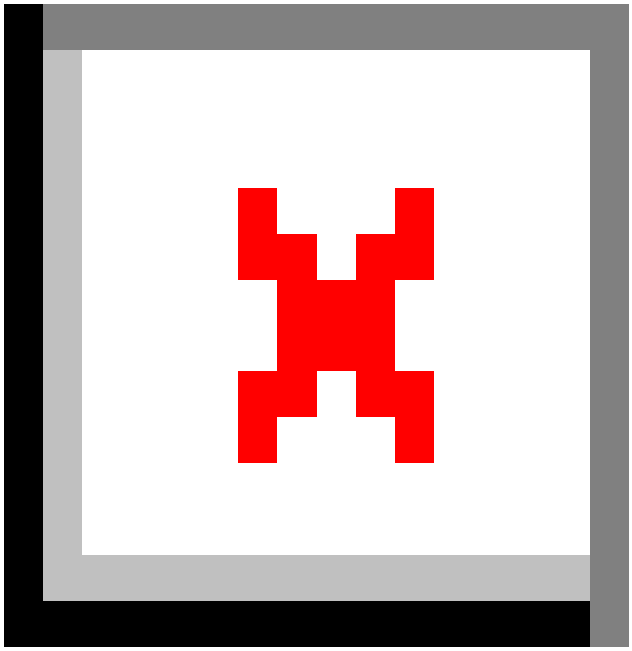

O
CO2Me
O
N
173.43
164.57
145.34
137.42
130.75
128.51
125.96
124.55
122.89
108.47
80.41
79.10
77.28
77.02
76.77
74.42
52.91
51.95
26.46
200
180
160
140
120
100
80
60
40
20
0
ppm

Compound 3g

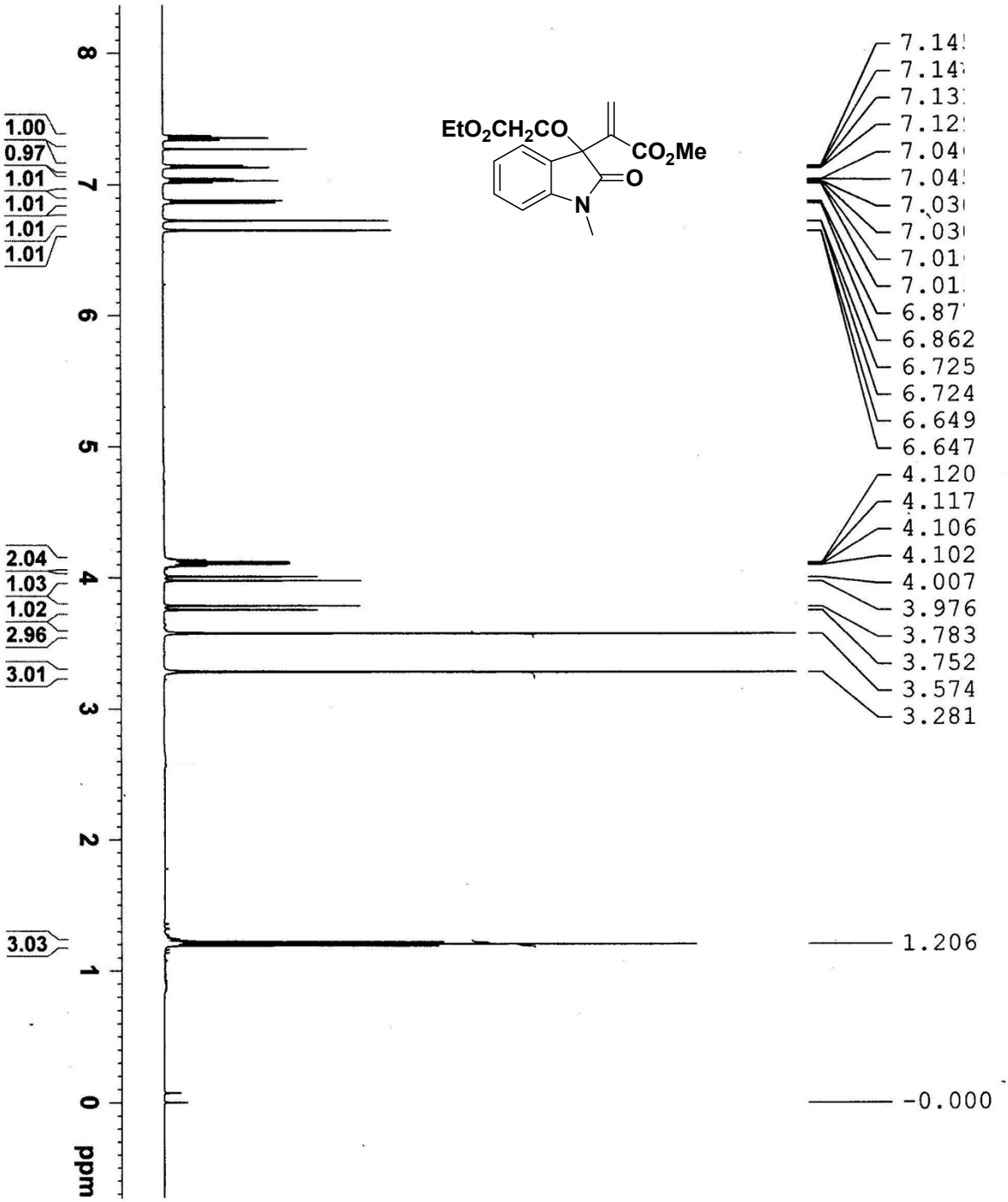

7.363
7.360
7.348
7.345
7.332
7.330
7.263
7.116
7.114
7.101
7.100
7.053
7.052
7.038
7.037
7.024
7.022
6.868
6.853
6.618
6.616
6.599
6.596
5.840
5.826
5.805
5.210
5.207
5.176
5.172
5.104
5.101
5.083
5.080
3.806
3.794
3.783
3.646
3.636
3.623
3.612
3.560
3.278
-0.000
1.02
0.99
1.02
1.00
2.02
0.96
0.99
1.01
1.01
1.02
3.00
3.02
O
CO2Me
O
N
ppm

Compound 3g

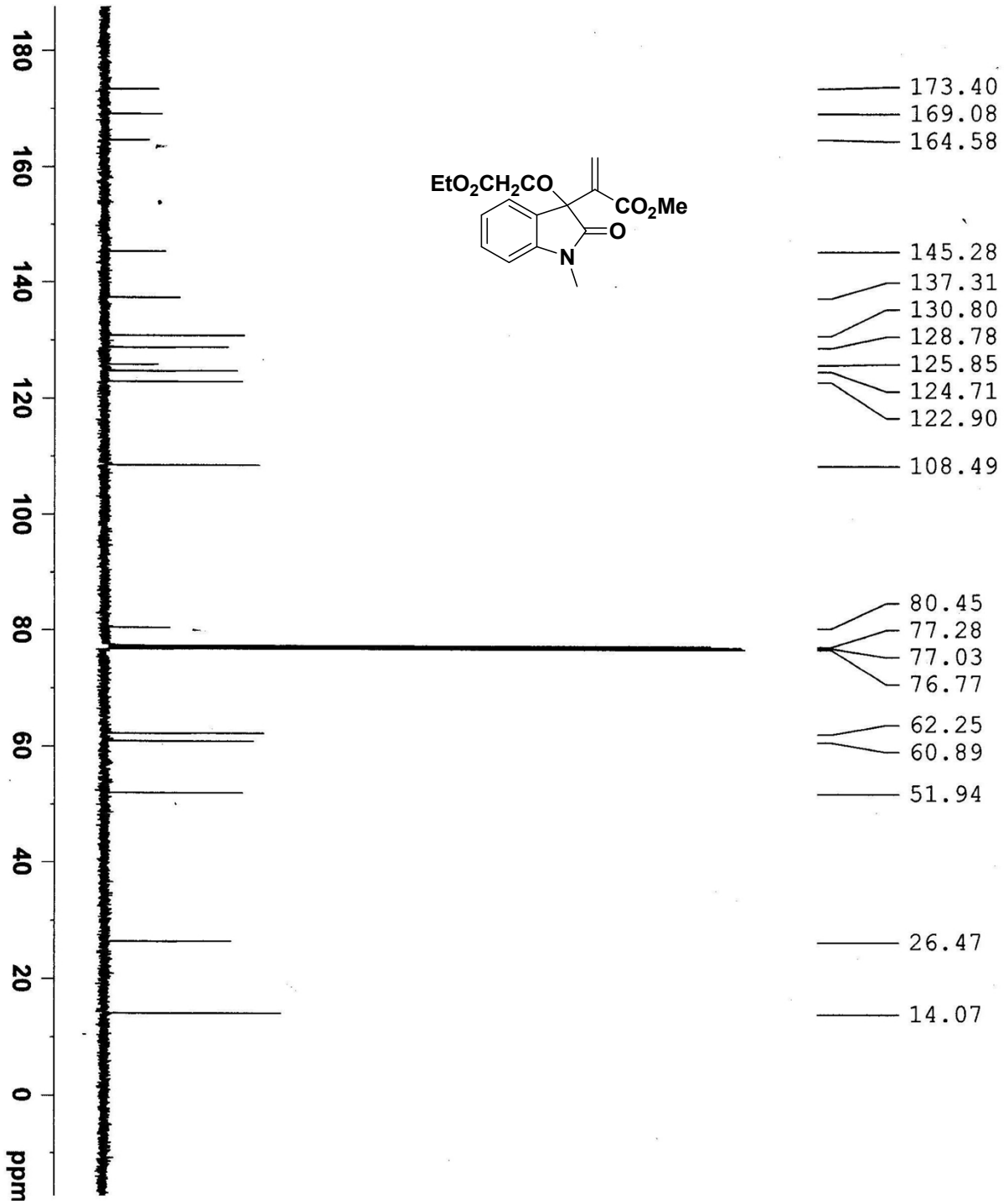




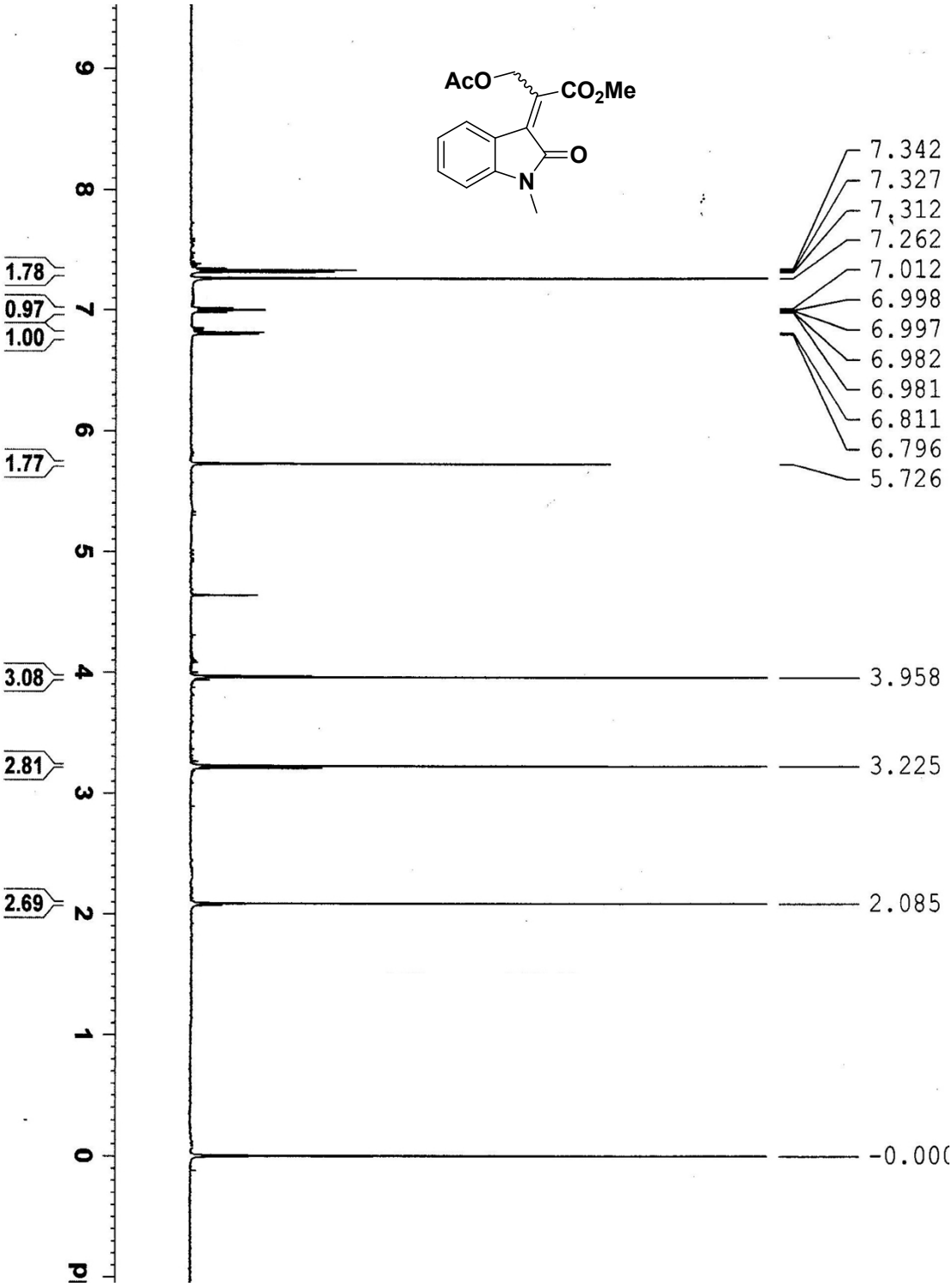
Compound 3h


EtO2CH2CO
CO2Me
O
N
1.00
0.97
1.01
1.01
1.01
1.01
2.04
1.03
1.02
2.96
3.01
3.03
7.145
7.143
7.131
7.125
7.046
7.045
7.030
7.030
7.015
7.015
6.871
6.862
6.725
6.724
6.649
6.647
4.120
4.117
4.106
4.102
4.007
3.976
3.783
3.752
3.574
3.281
1.206
-0.000
ppm

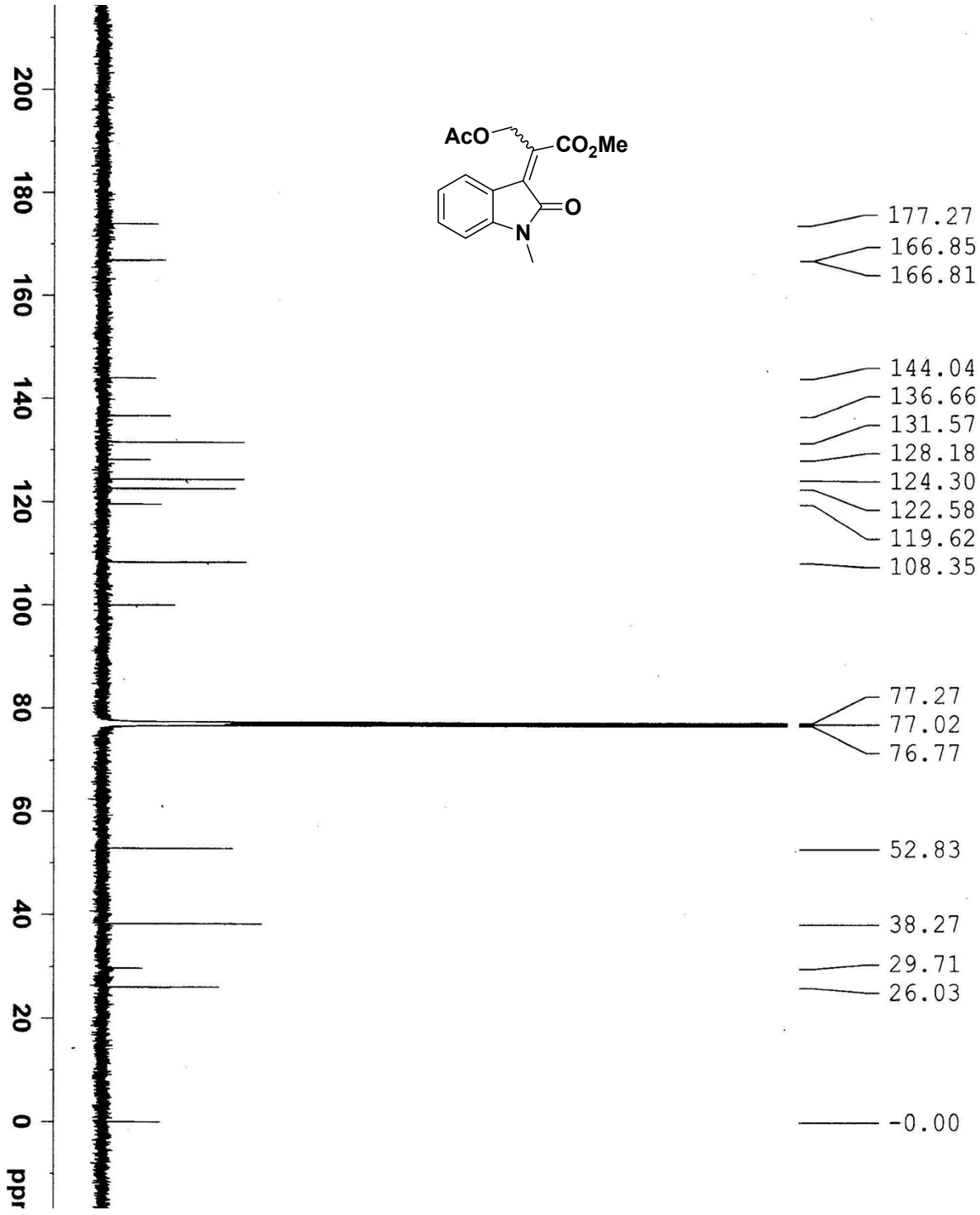
Compound 3h


EtO2CH2CO
CO2Me
O
N
173.40
169.08
164.58
145.28
137.31
130.80
128.78
125.85
124.71
122.90
108.49
80.45
77.28
77.03
76.77
62.25
60.89
51.94
26.47
14.07
180
160
140
120
100
80
60
40
20
0
ppm

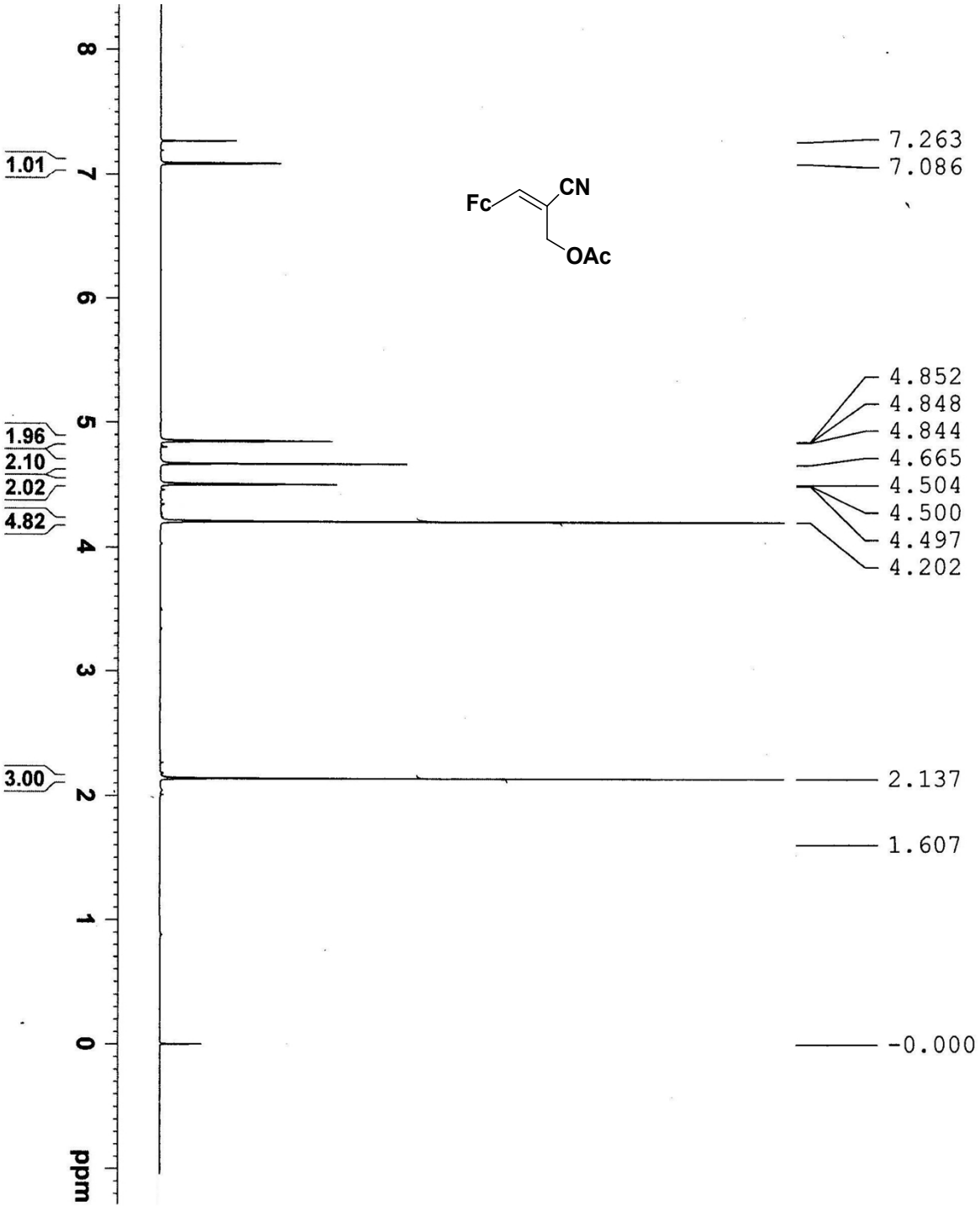
Compound 4a


AcO
CO2Me
O
N
7.342
7.327
7.312
7.262
7.012
6.998
6.997
6.982
6.981
6.811
6.796
5.726
3.958
3.225
2.085
-0.000
1.78
0.97
1.00
1.77
3.08
2.81
2.69

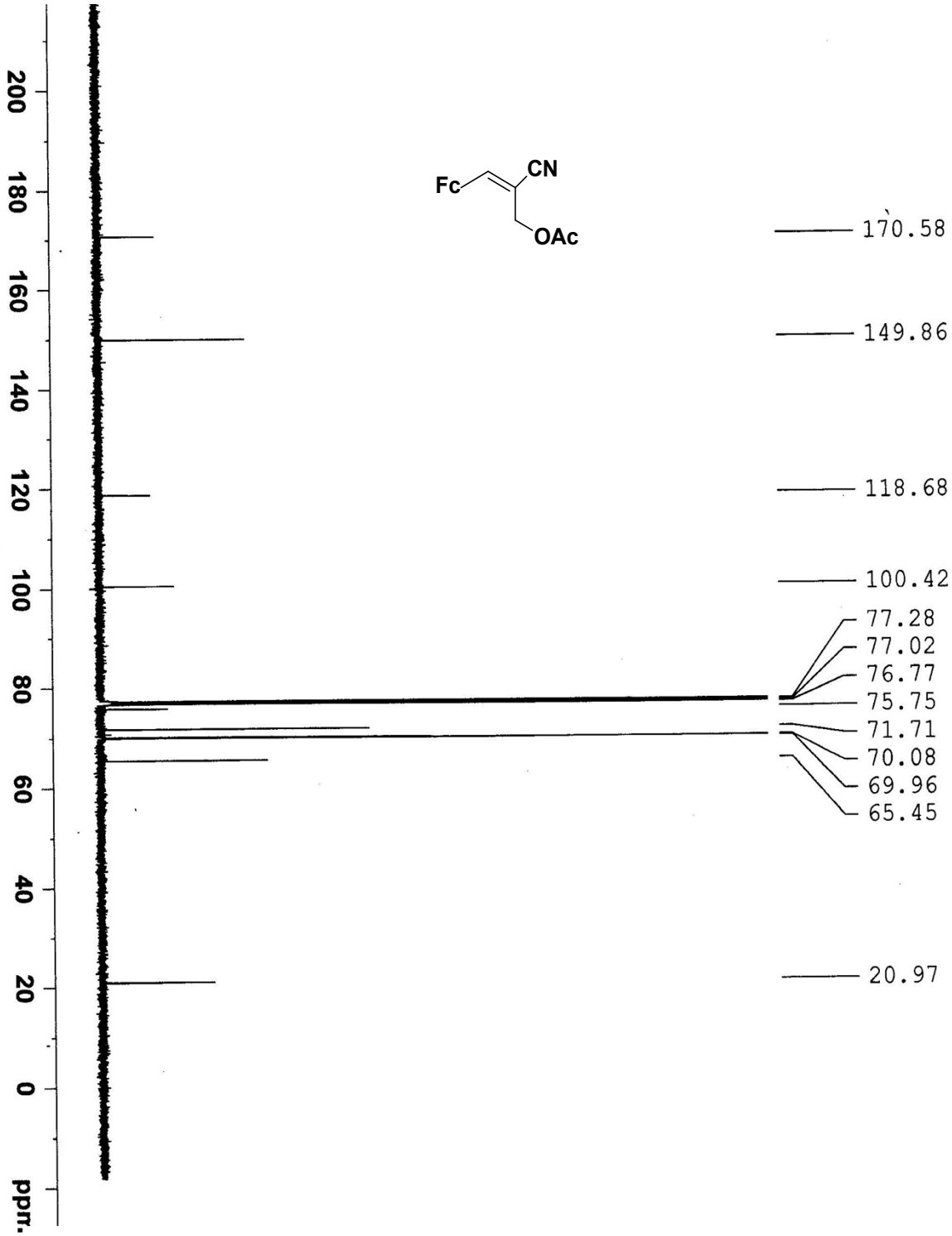
Compound 4a


AcO
CO2Me
O
N
177.27
166.85
166.81
144.04
136.66
131.57
128.18
124.30
122.58
119.62
108.35
77.27
77.02
76.77
52.83
38.27
29.71
26.03
-0.00
200
180
160
140
120
100
80
60
40
20
0
ppm

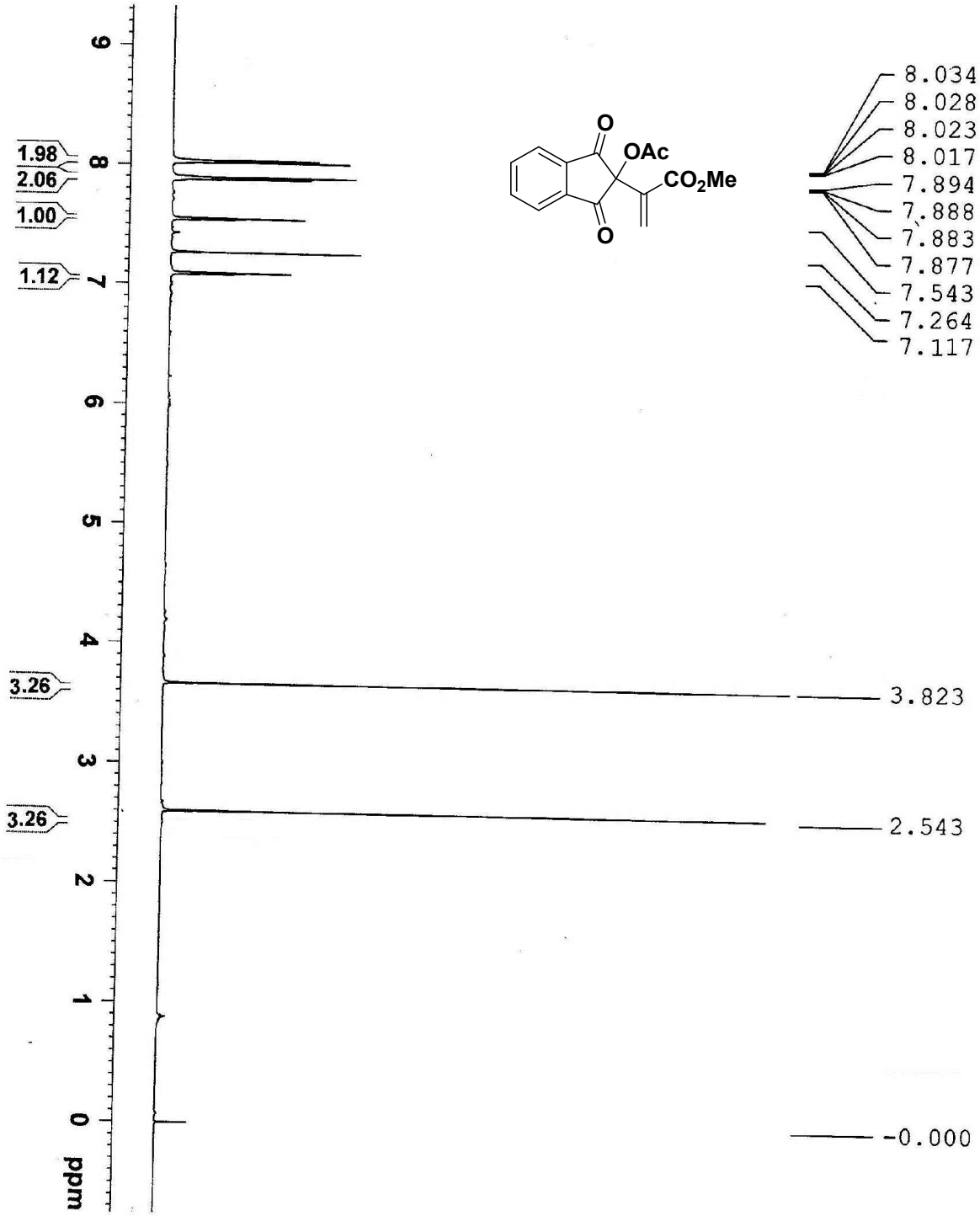
Compound 6c


1.01
1.96
2.10
2.02
4.82
3.00
Fc
CN
OAc
7.263
7.086
4.852
4.848
4.844
4.665
4.504
4.500
4.497
4.202
2.137
1.607
-0.000
ppm

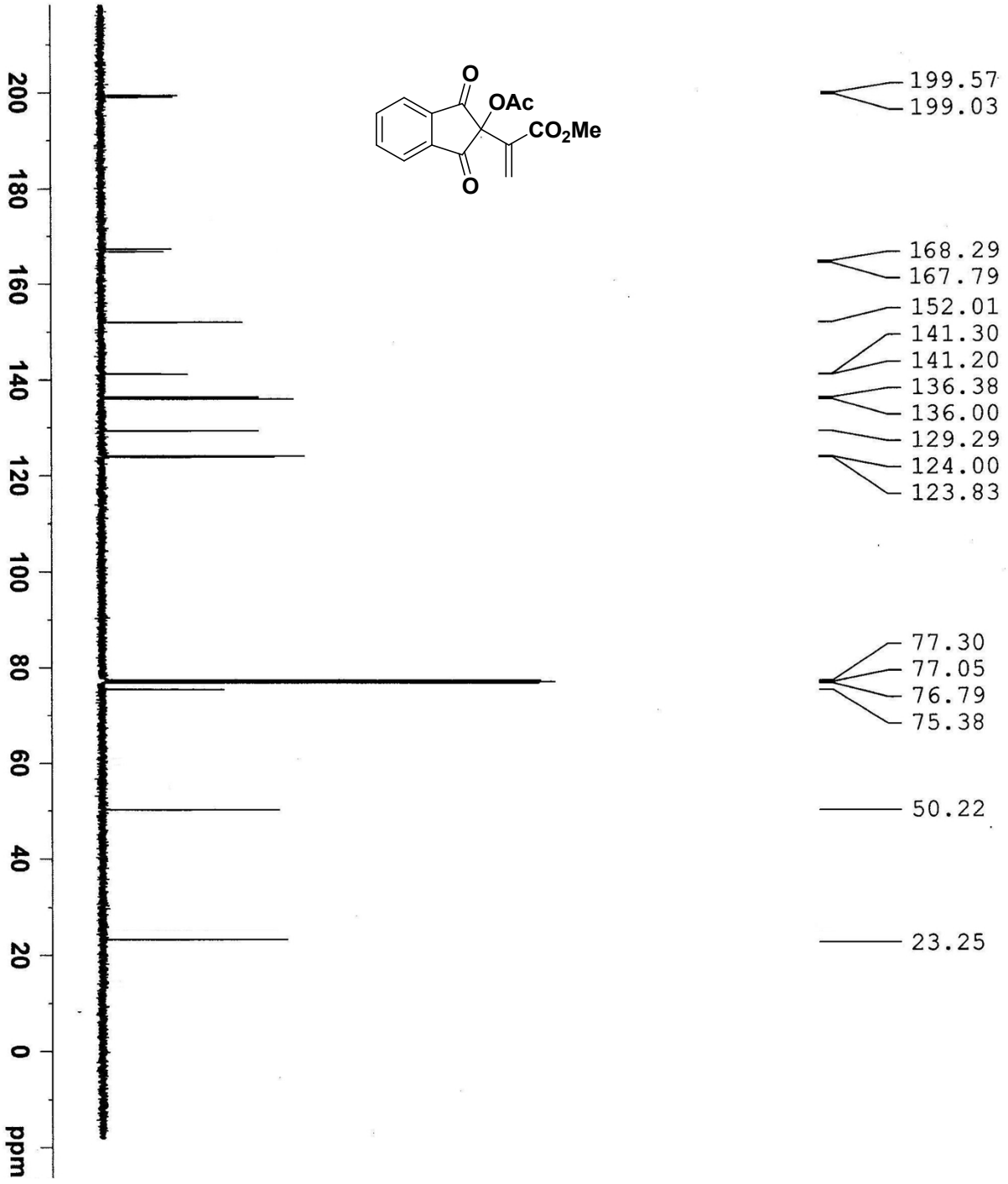
Compound 6c


Fc
CN
OAc
170.58
149.86
118.68
100.42
77.28
77.02
76.77
75.75
71.71
70.08
69.96
65.45
20.97
200
180
160
140
120
100
80
60
40
20
0
ppm

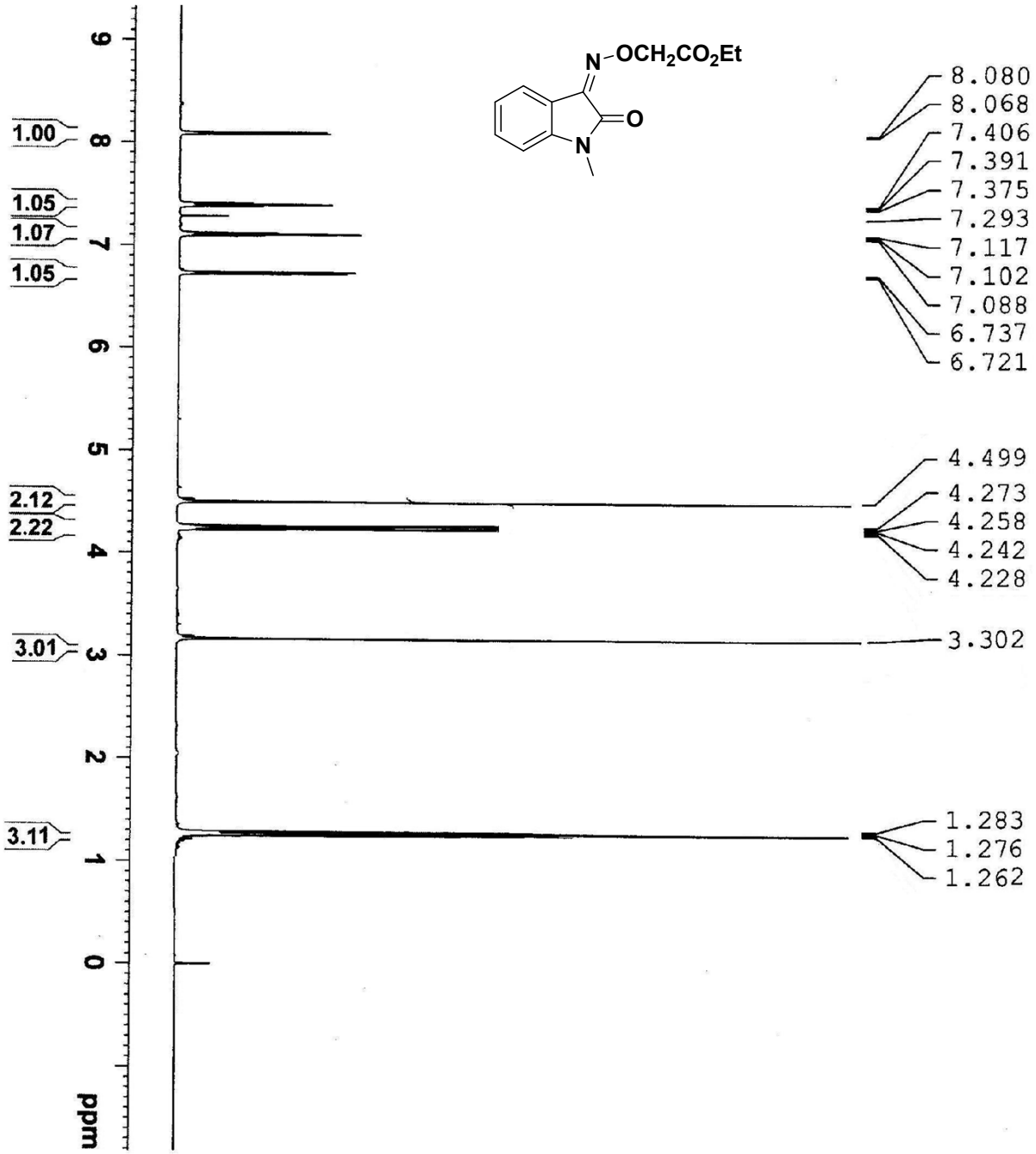
Compound 6d


8.034
8.028
8.023
8.017
7.894
7.888
7.883
7.877
7.543
7.264
7.117
1.98
2.06
1.00
1.12
3.26
3.26
3.823
2.543
-0.000
ppm
OAc
CO2Me

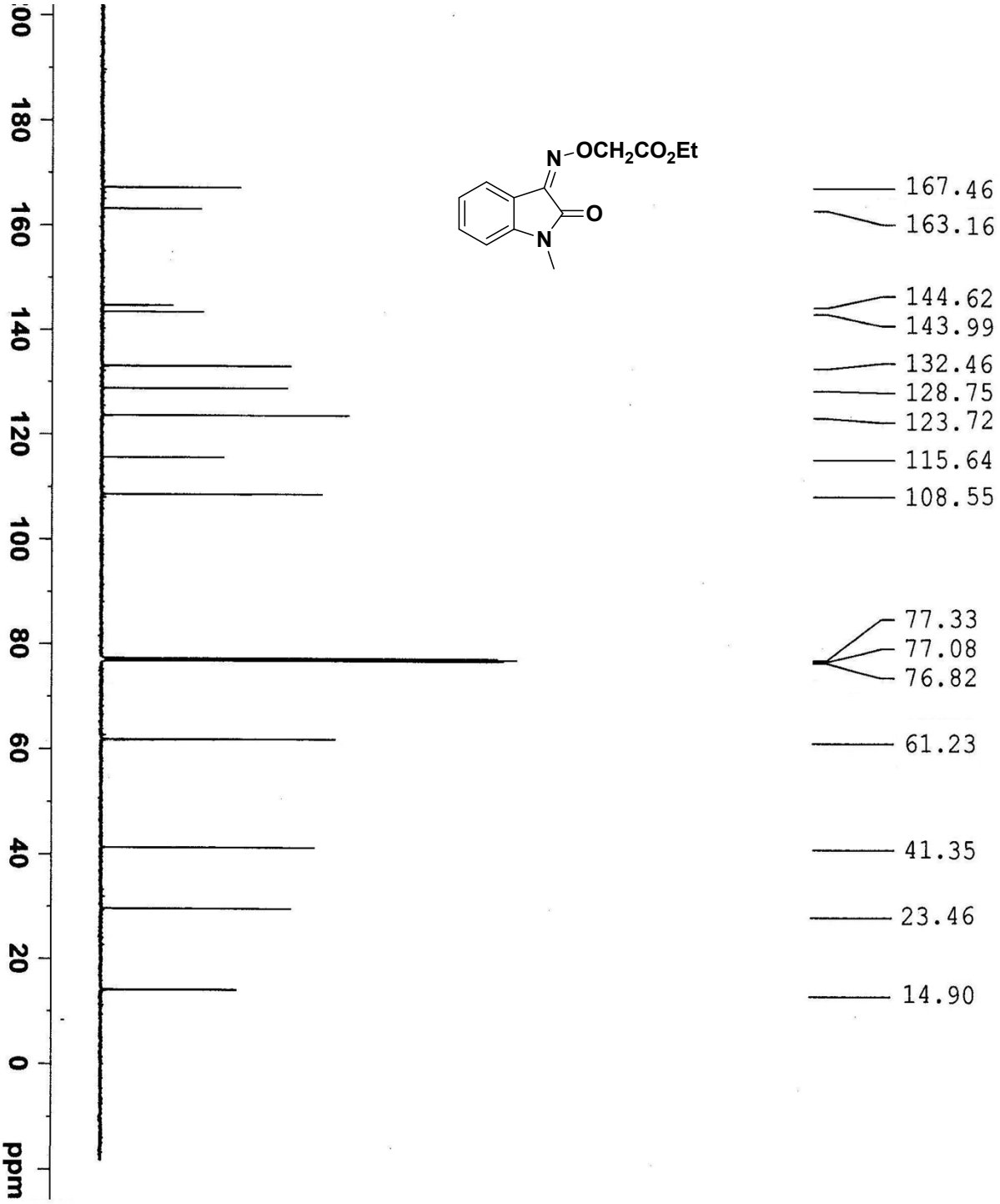
Compound 6d


O
OAc
CO2Me
O
199.57
199.03
168.29
167.79
152.01
141.30
141.20
136.38
136.00
129.29
124.00
123.83
77.30
77.05
76.79
75.38
50.22
23.25
200
180
160
140
120
100
80
60
40
20
0
ppm

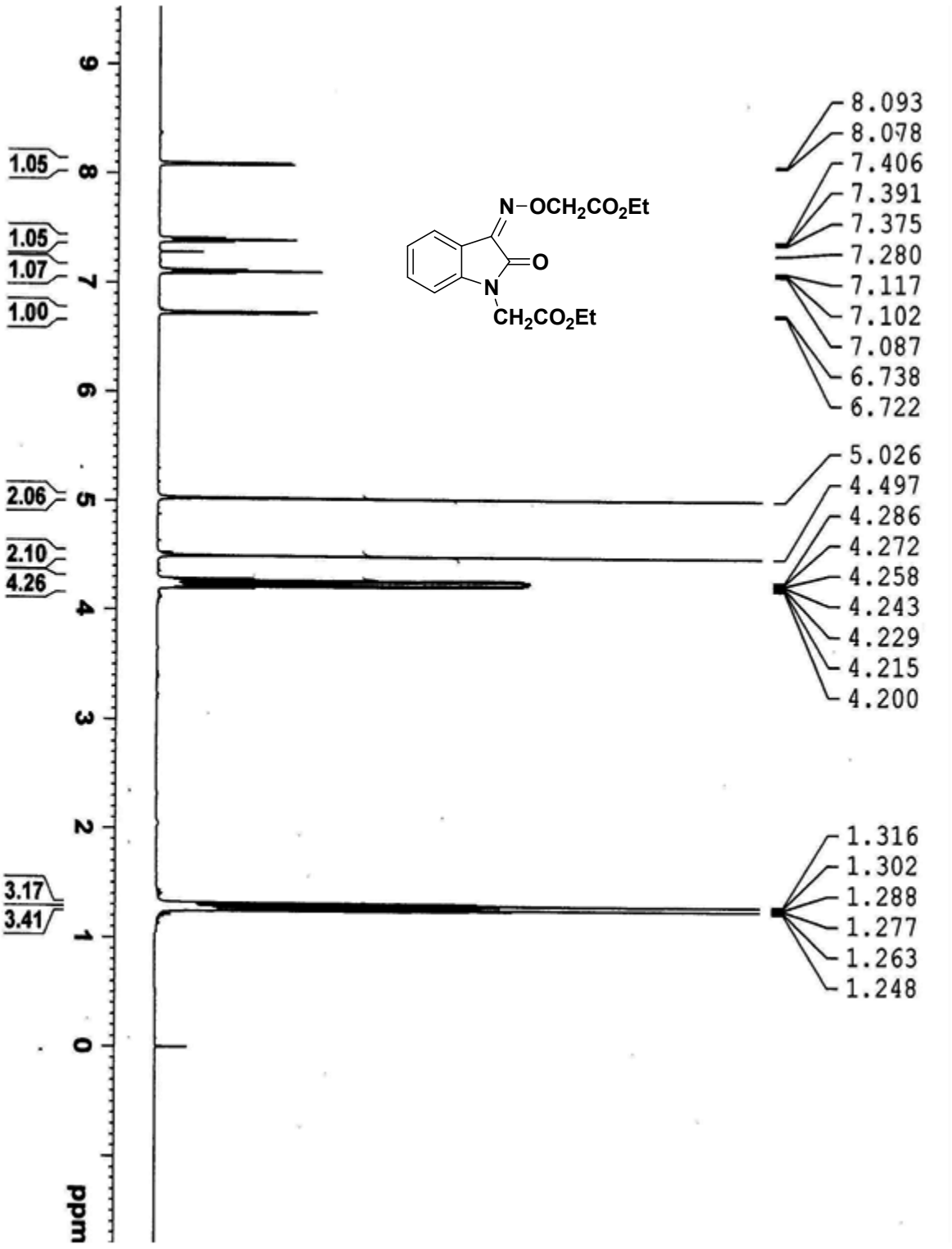
Compound 6e


N-OCH2CO2Et
O
N
8.080
8.068
7.406
7.391
7.375
7.293
7.117
7.102
7.088
6.737
6.721
4.499
4.273
4.258
4.242
4.228
3.302
1.283
1.276
1.262
1.00
1.05
1.07
1.05
2.12
2.22
3.01
3.11
ppm

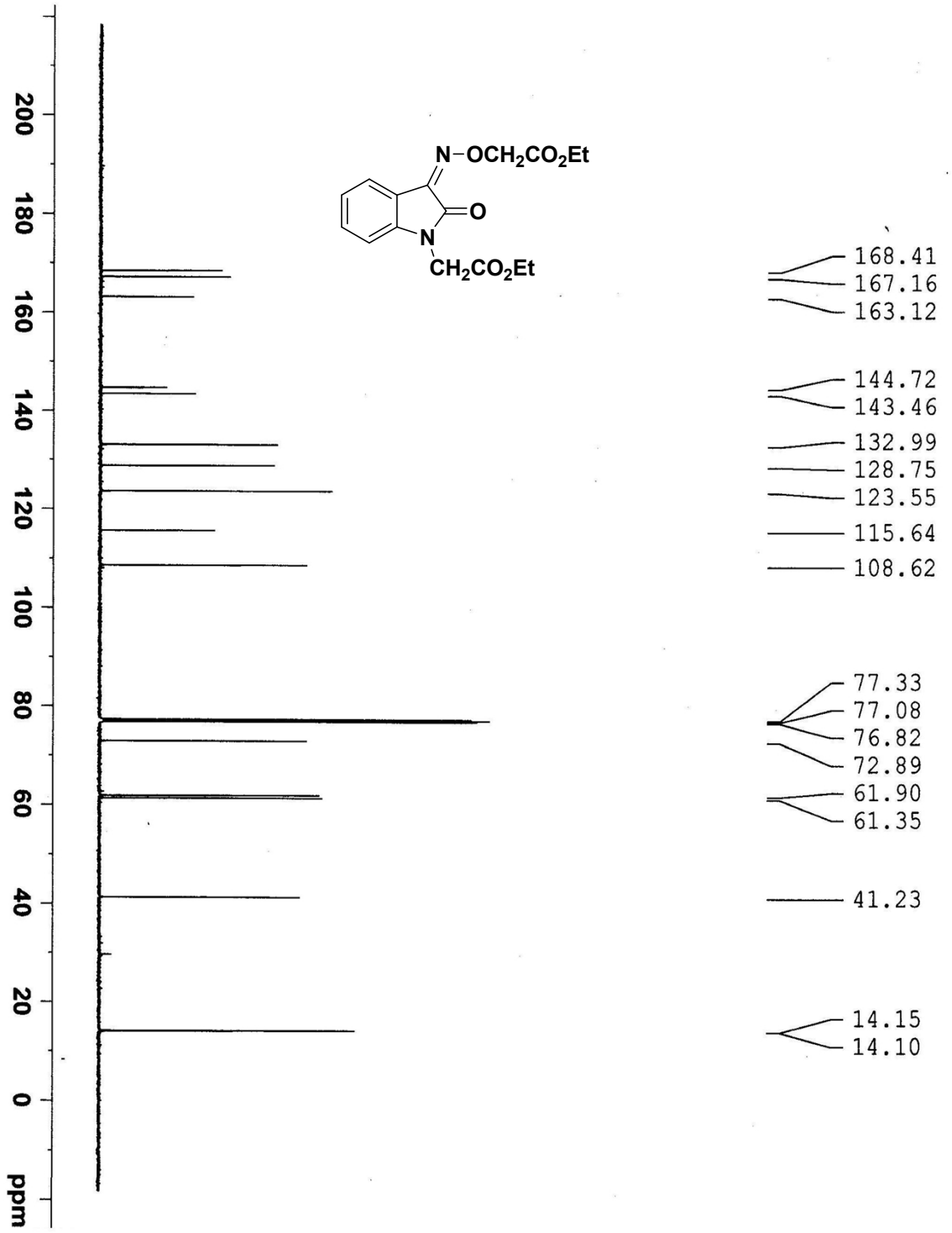
Compound 6e


N–OCH2CO2Et
O
N
167.46
163.16
144.62
143.99
132.46
128.75
123.72
115.64
108.55
77.33
77.08
76.82
61.23
41.35
23.46
14.90
ppm

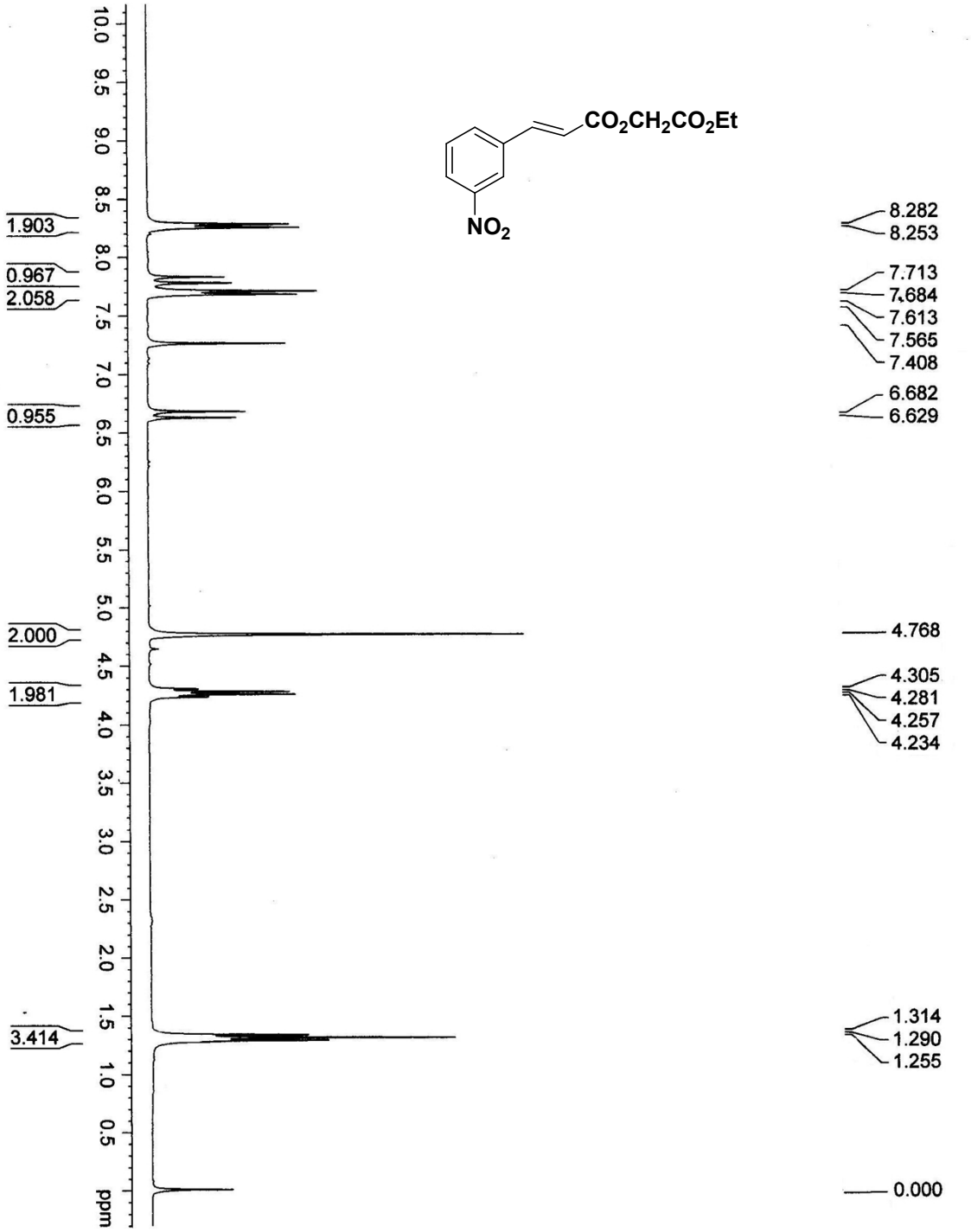
Compound 6f


8.093
8.078
7.406
7.391
7.375
7.280
7.117
7.102
7.087
6.738
6.722
5.026
4.497
4.286
4.272
4.258
4.243
4.229
4.215
4.200
1.316
1.302
1.288
1.277
1.263
1.248
1.05
1.05
1.07
1.00
2.06
2.10
4.26
3.17
3.41
N−OCH2CO2Et
O
N
CH2CO2Et
ppm

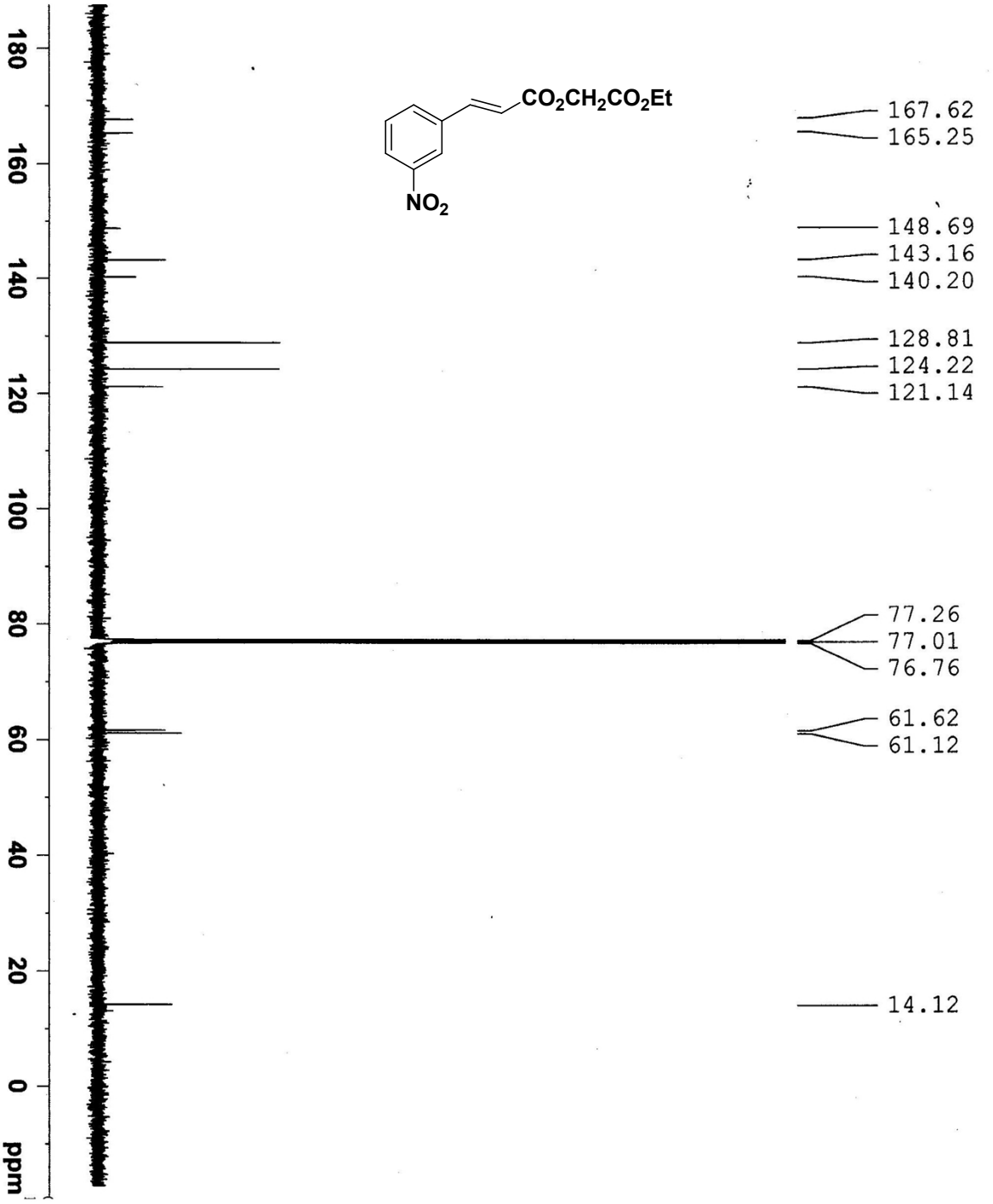
Compound 6f


N–OCH2CO2Et
O
N
CH2CO2Et
200
180
160
140
120
100
80
60
40
20
0
ppm
168.41
167.16
163.12
144.72
143.46
132.99
128.75
123.55
115.64
108.62
77.33
77.08
76.82
72.89
61.90
61.35
41.23
14.15
14.10

Compound 6g


CO2CH2CO2Et
NO2
1.903
0.967
2.058
0.955
2.000
1.981
3.414
8.282
8.253
7.713
7.684
7.613
7.565
7.408
6.682
6.629
4.768
4.305
4.281
4.257
4.234
1.314
1.290
1.255
0.000
ppm

Compound 6g


CO2CH2CO2Et
NO2
167.62
165.25
148.69
143.16
140.20
128.81
124.22
121.14
77.26
77.01
76.76
61.62
61.12
14.12
180
160
140
120
100
80
60
40
20
0
ppm