SUPPORTING INFORMATION

A Green and Sustainable Procedure for the Functionalization of Morpholin-2-ones by Oxidative Imidation reactions

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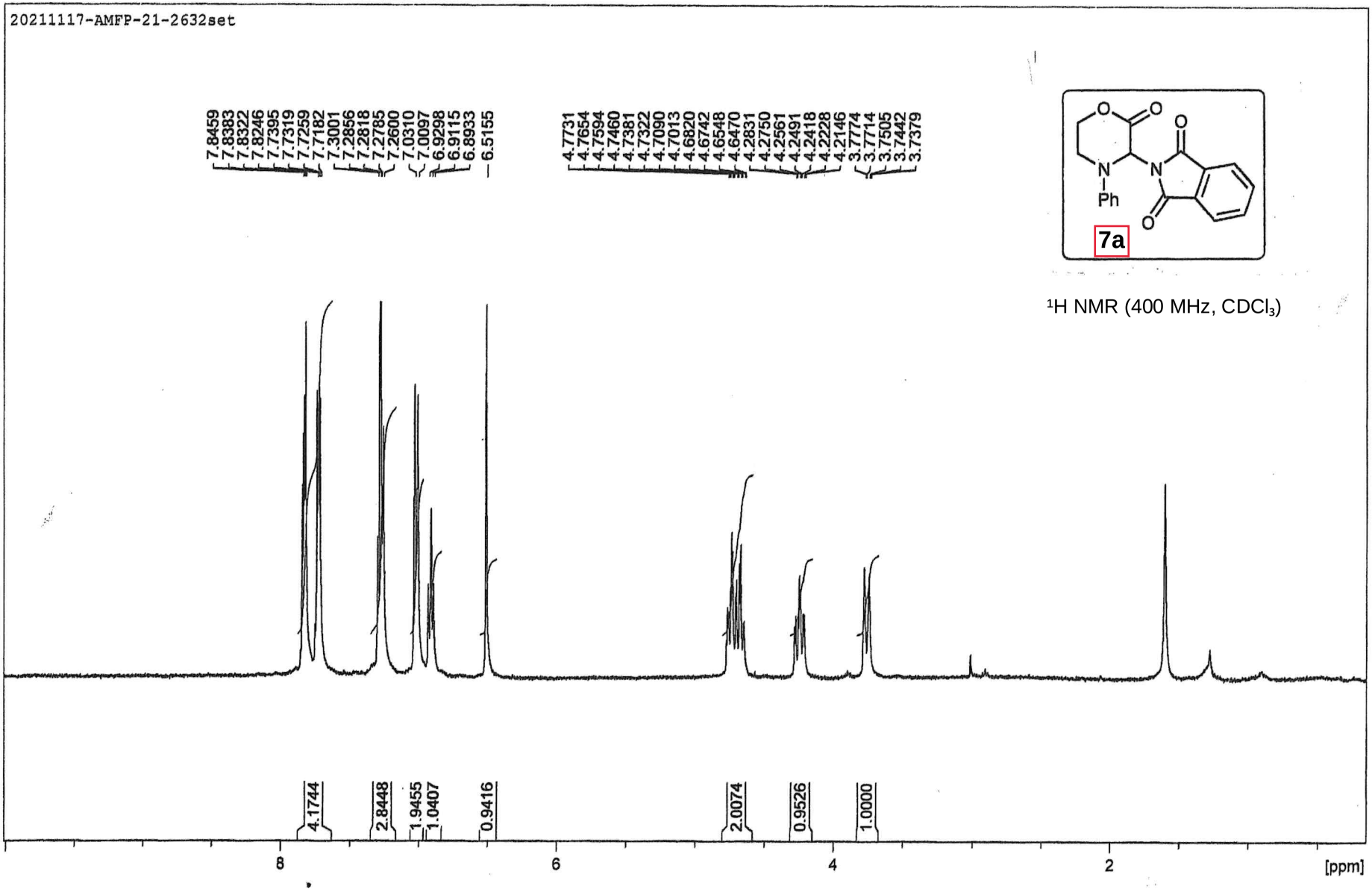
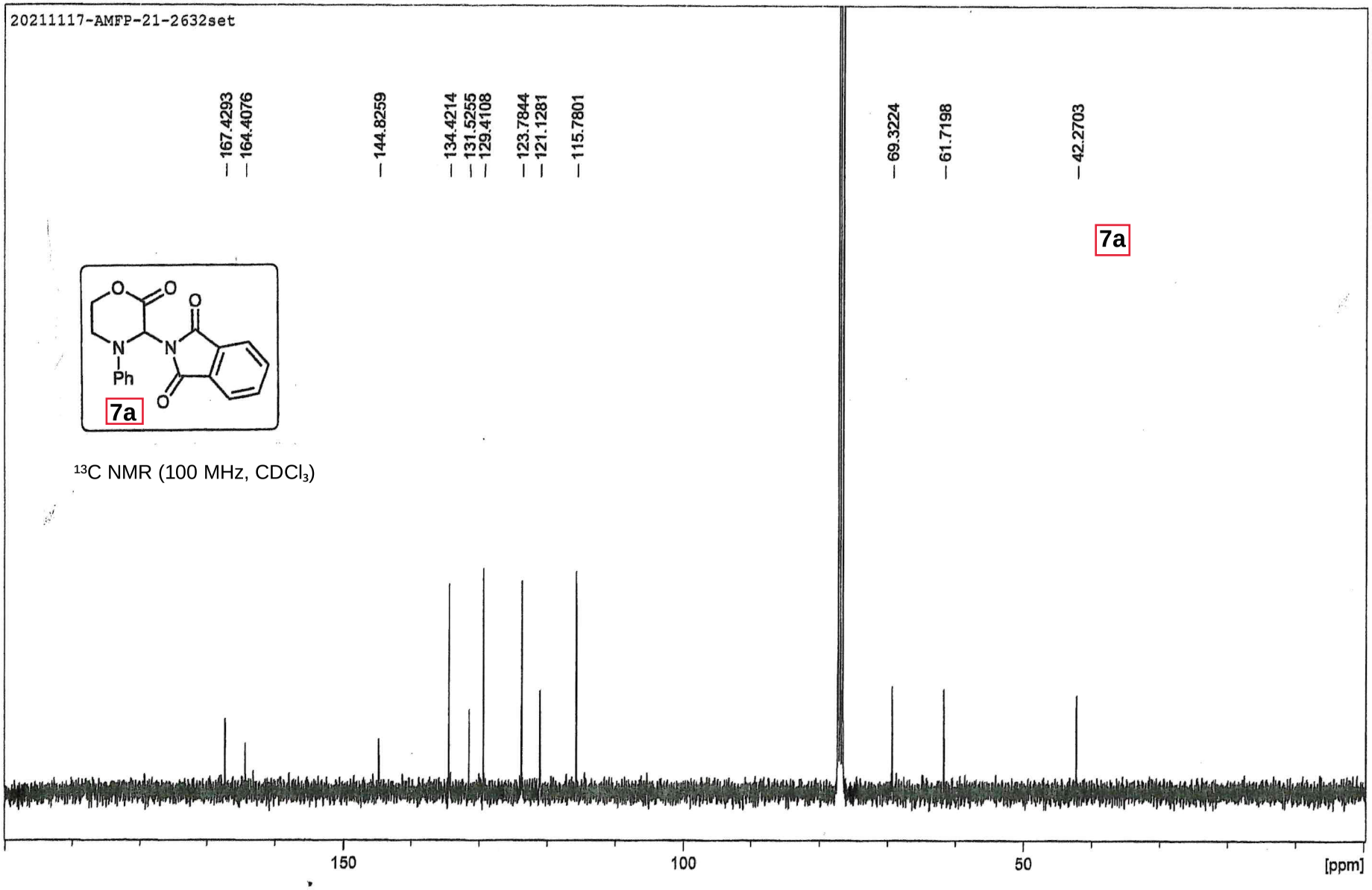
117198 Moscow, Russia

20211117-AMFP-21-2632set 1 1 D:\NMR-Files\IST-2021



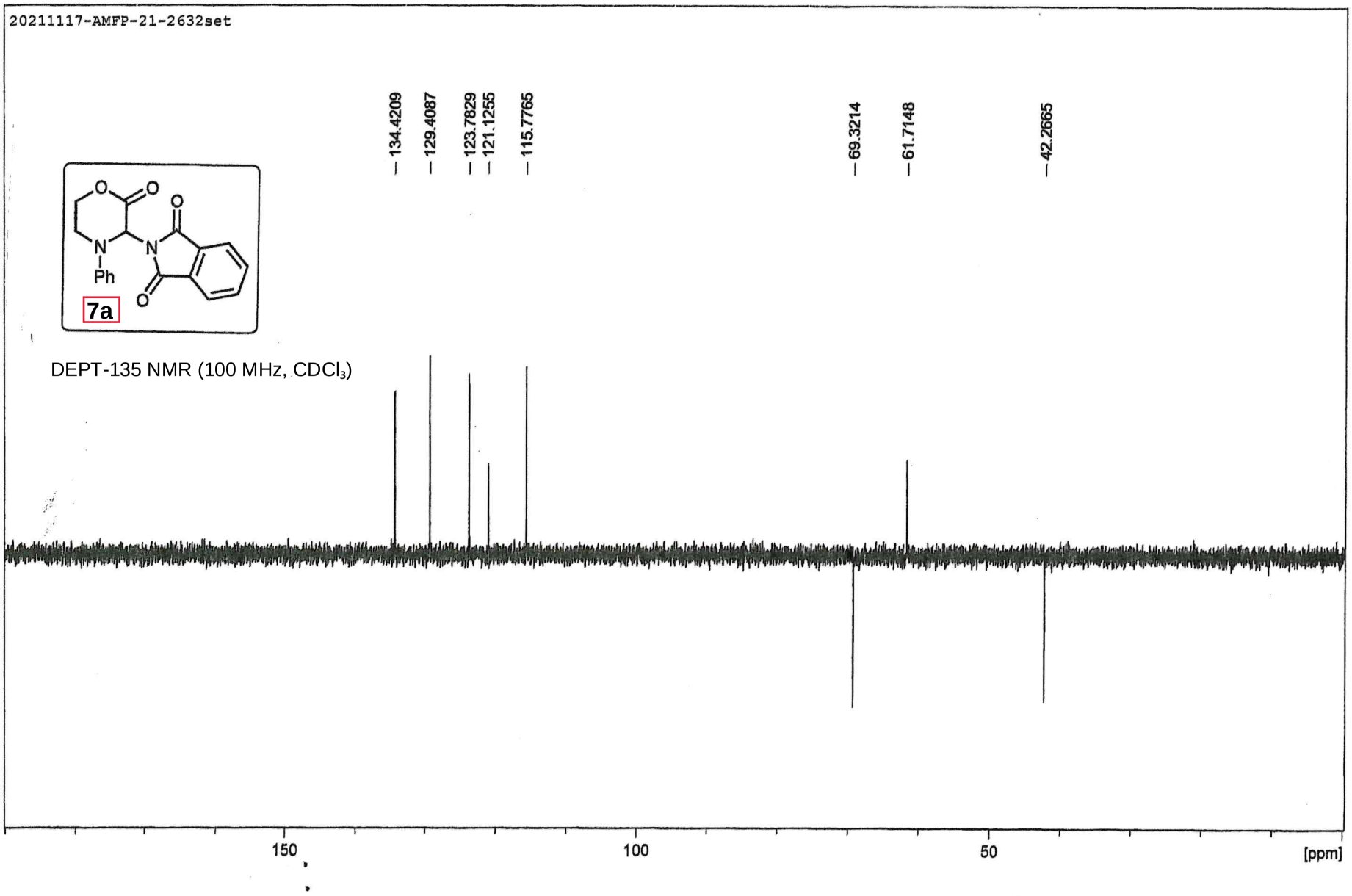
^{1}H NMR (400 MHz, $CDCl_3$)

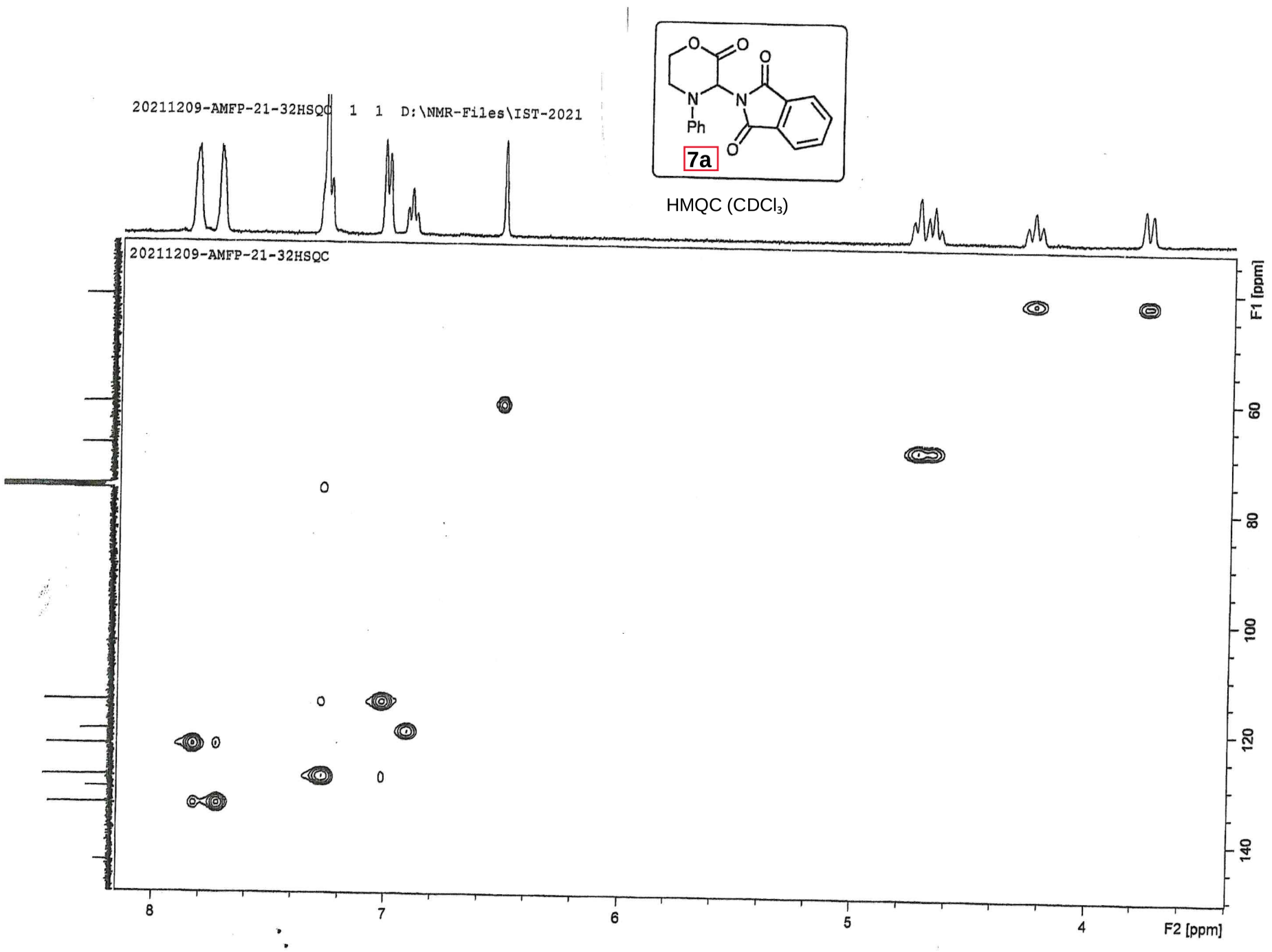
20211117-AMFP-21-2632set 2 1 D:\NMR-Files\IST-2021



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

20211117-AMFP-21-2632set 3 1 D:\NMR-Files\IST-2021

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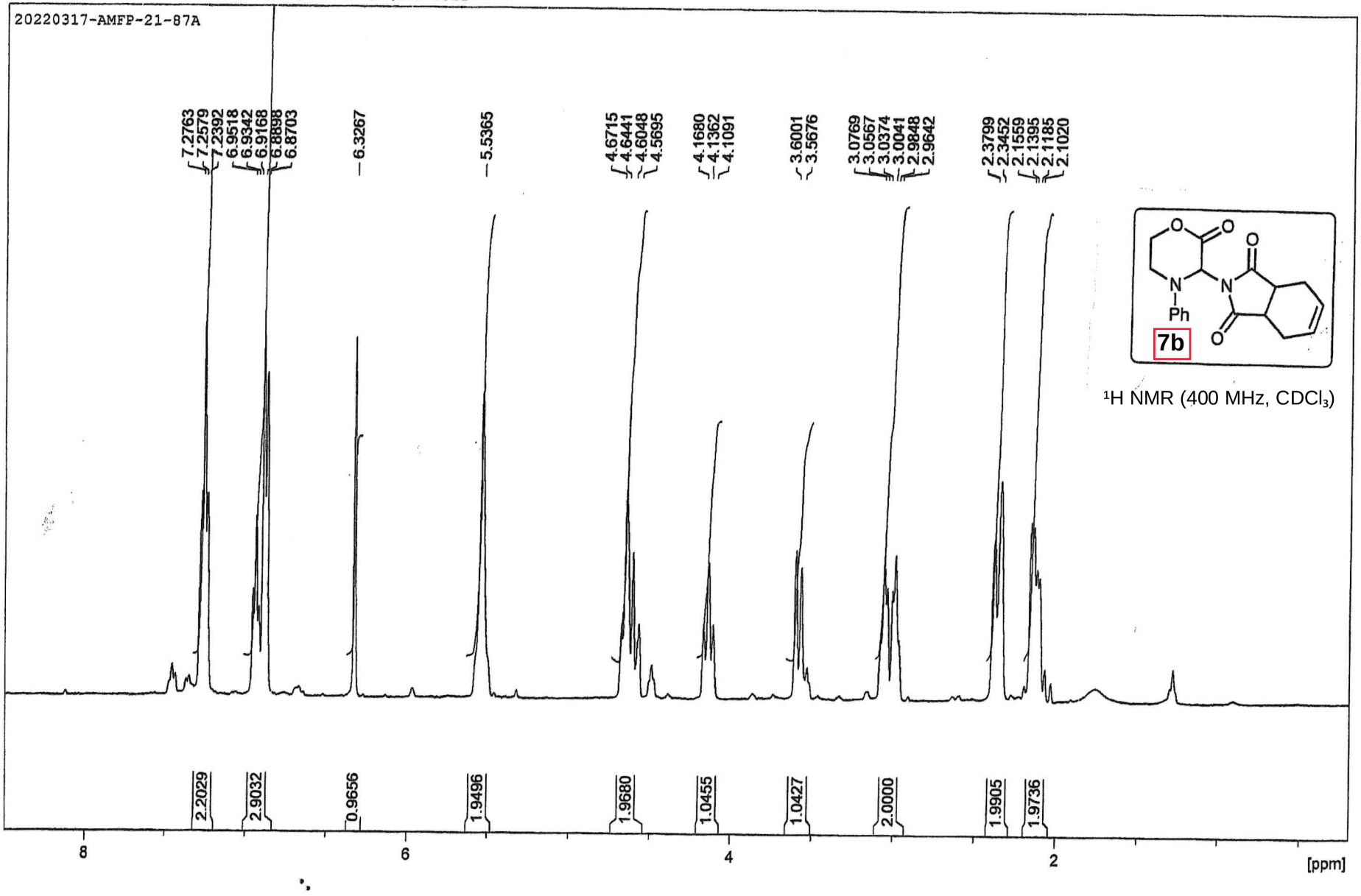
F1 [ppm]
F2 [ppm]
60
80
100
120
140
8
7
6
5
4
Ph
7a

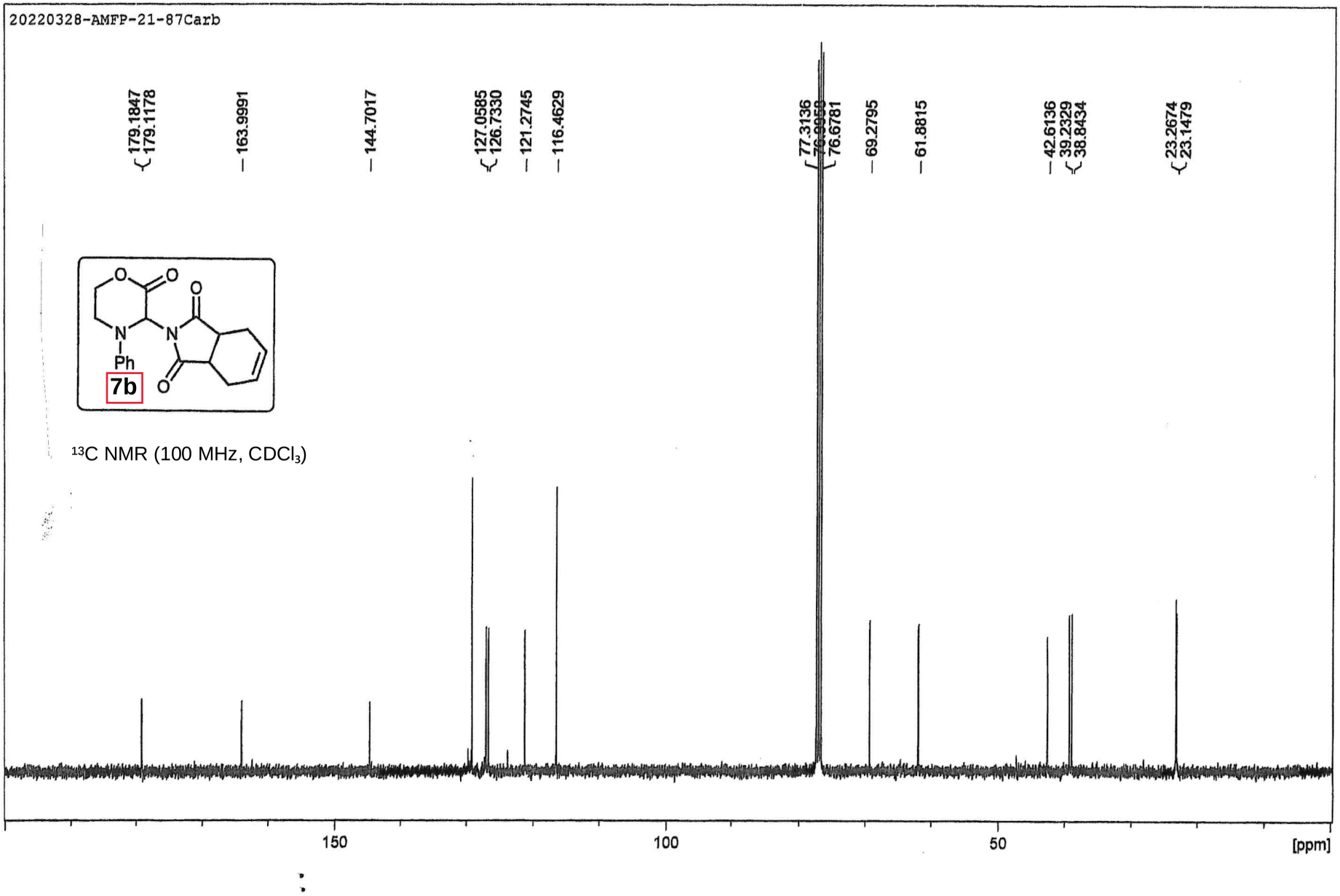
HMQC ($CDCl_3$)

20220317-AMFP-21-87A 1 1 D:\NMR-Files\IST-2022



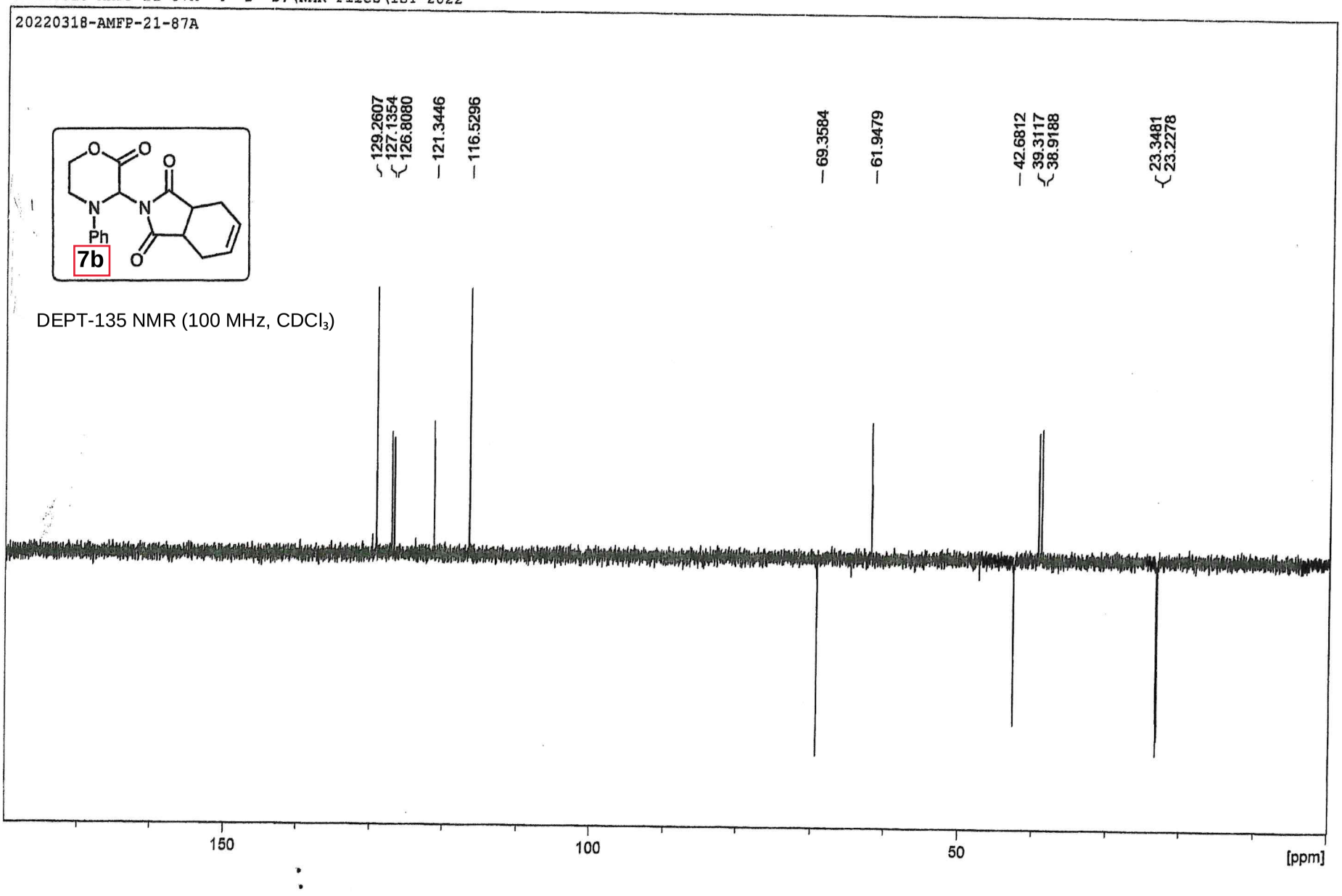
^{1}H NMR (400 MHz, $CDCl_3$)

20220328-AMFP-21-87Carb 3 1 D:\NMR-Files\IST-2022

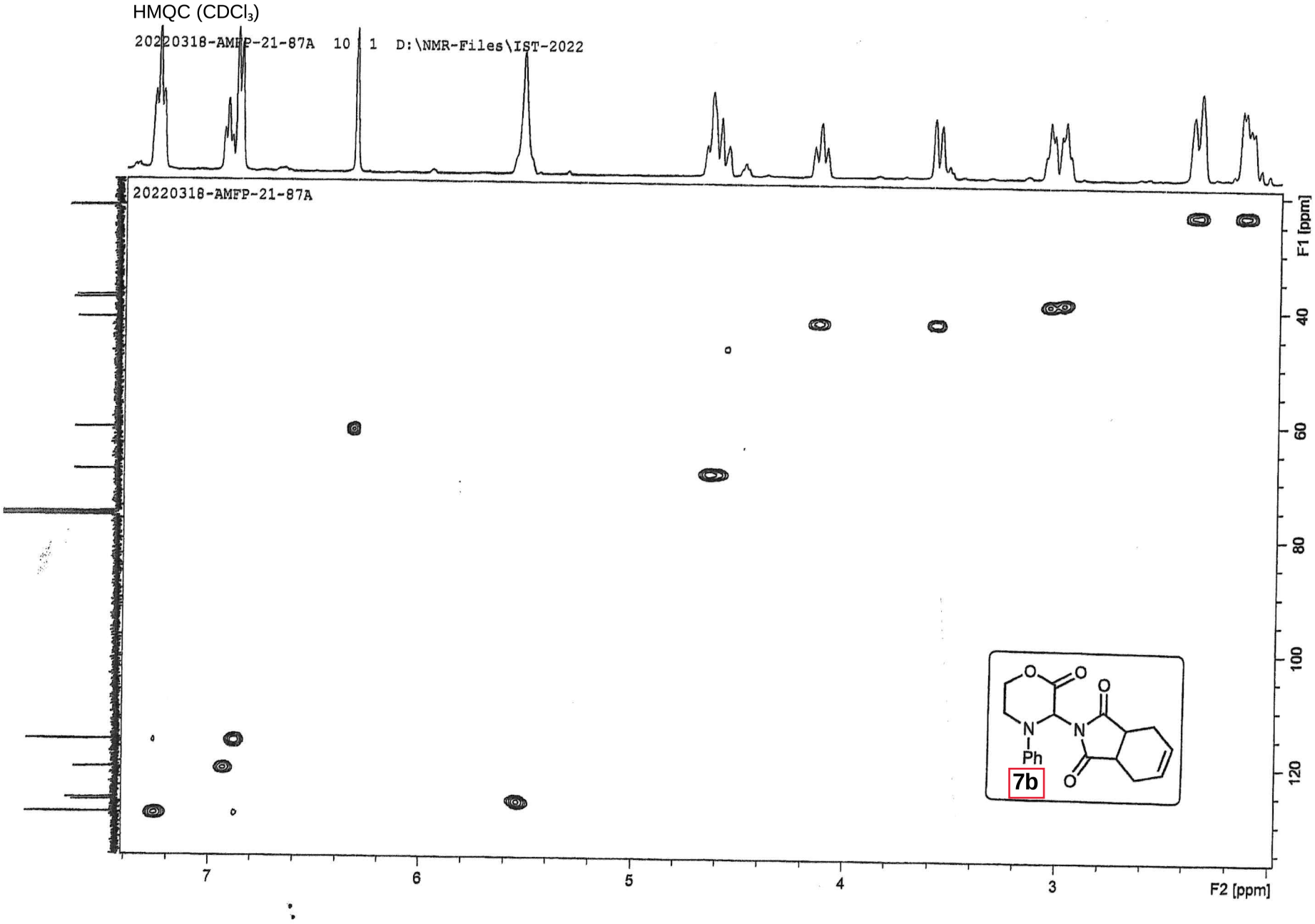


^{13}C NMR (100 MHz, $CDCl_3$)

20220318-AMFP-21-87A 4 1 D:\NMR-Files\IST-2022



HMQC ($CDCl_3$)


20220318-AMFP-21-87A 10 1 D:\NMR-Files\IST-2022
20220318-AMFP-21-87A
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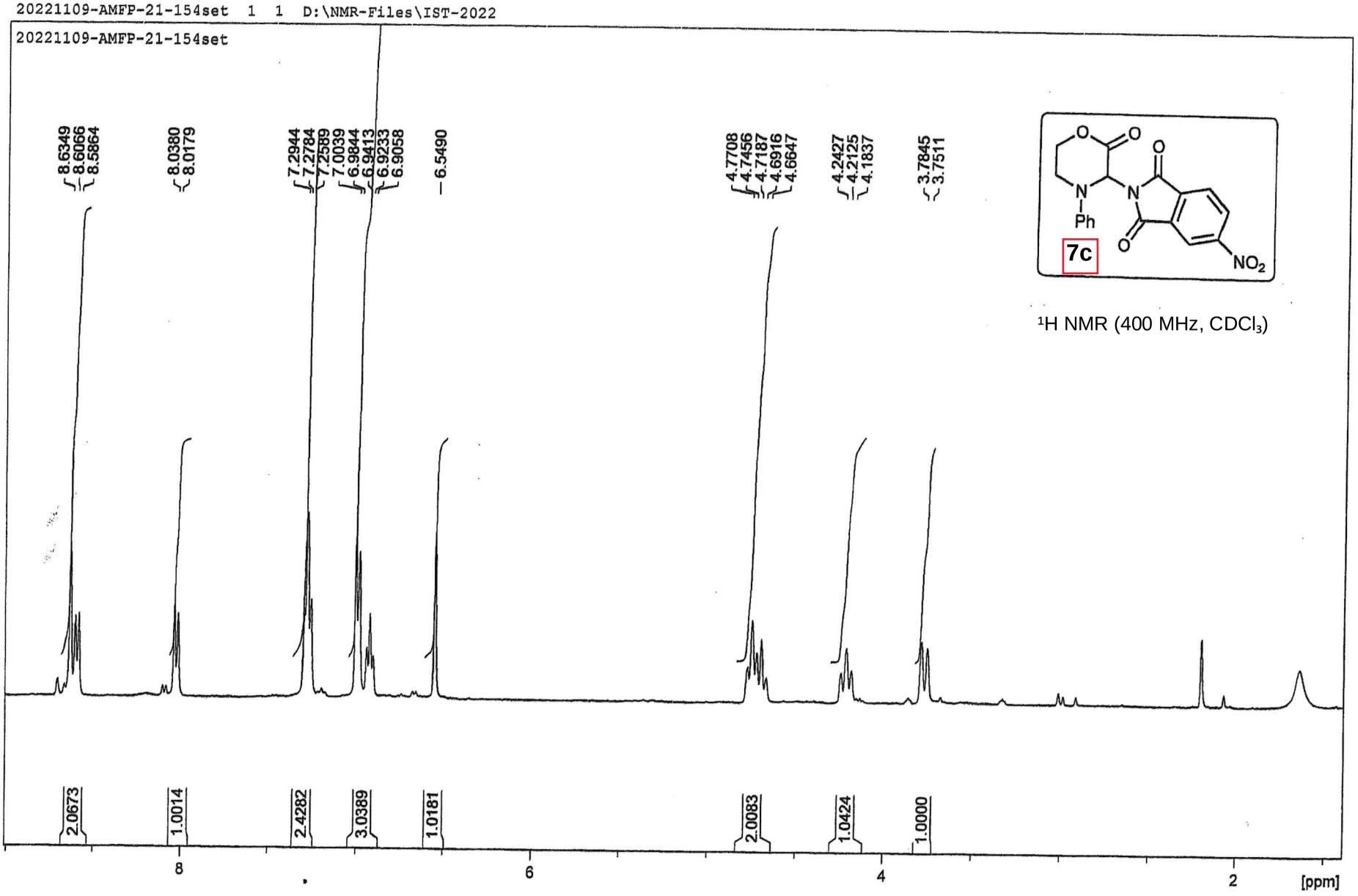
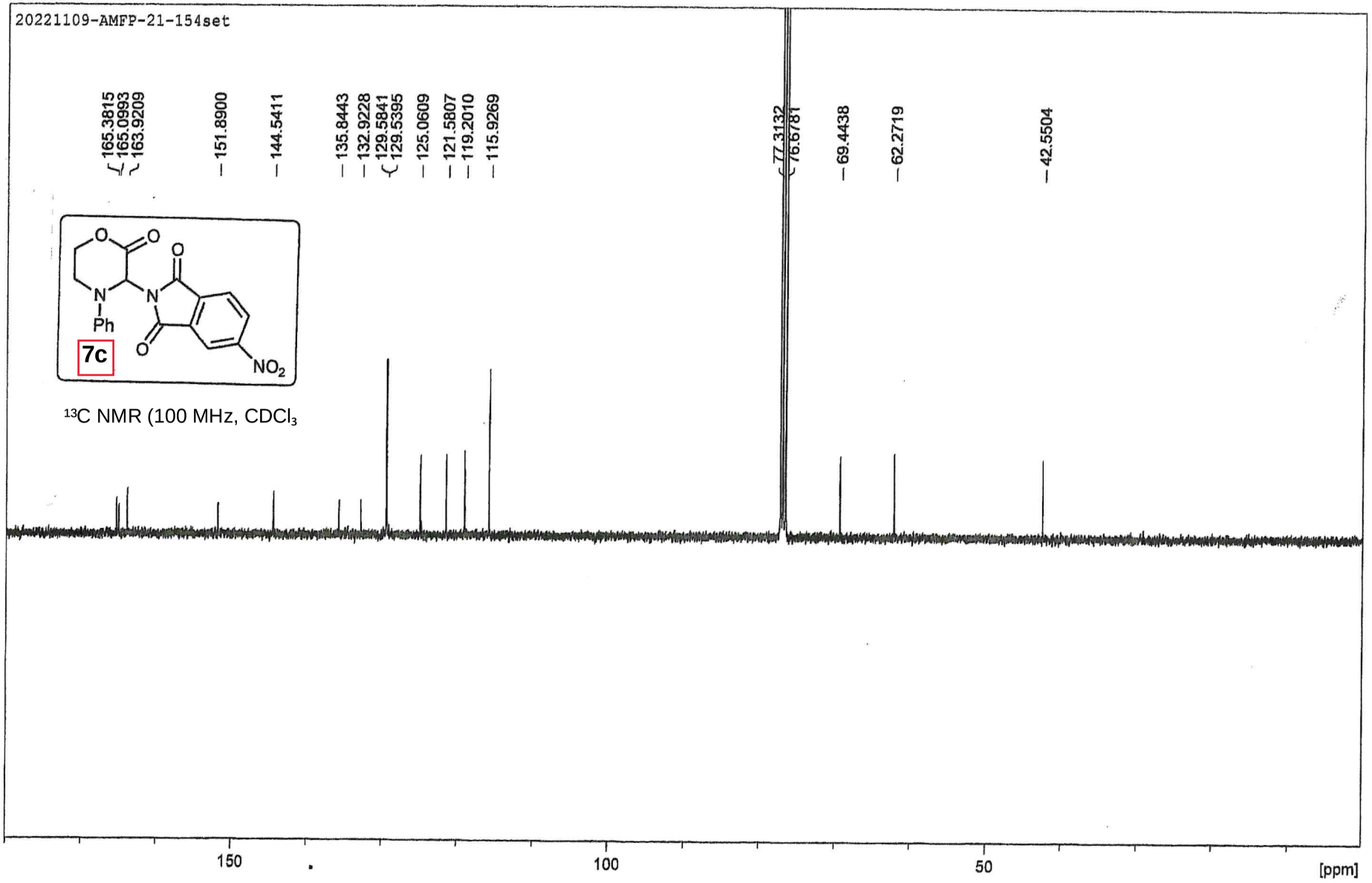
40
60
80
100
120
7
6
5
4
3
F2 [ppm]
O
O
N
N
Ph
O
O
7b



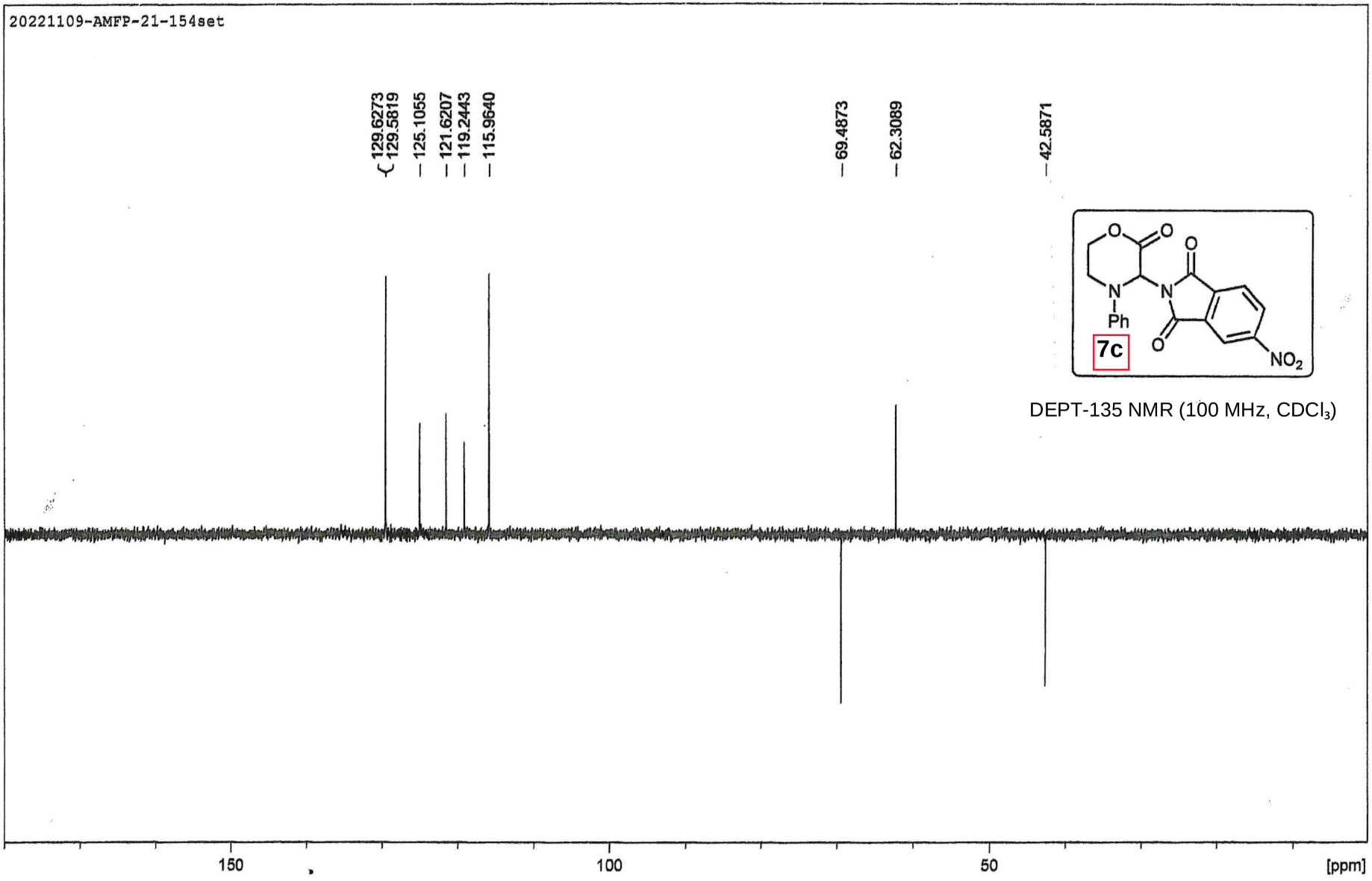
^{1}H NMR (400 MHz, $CDCl_3$)

20221109-AMFP-21-154set 3 1 D:\NMR-Files\IST-2022

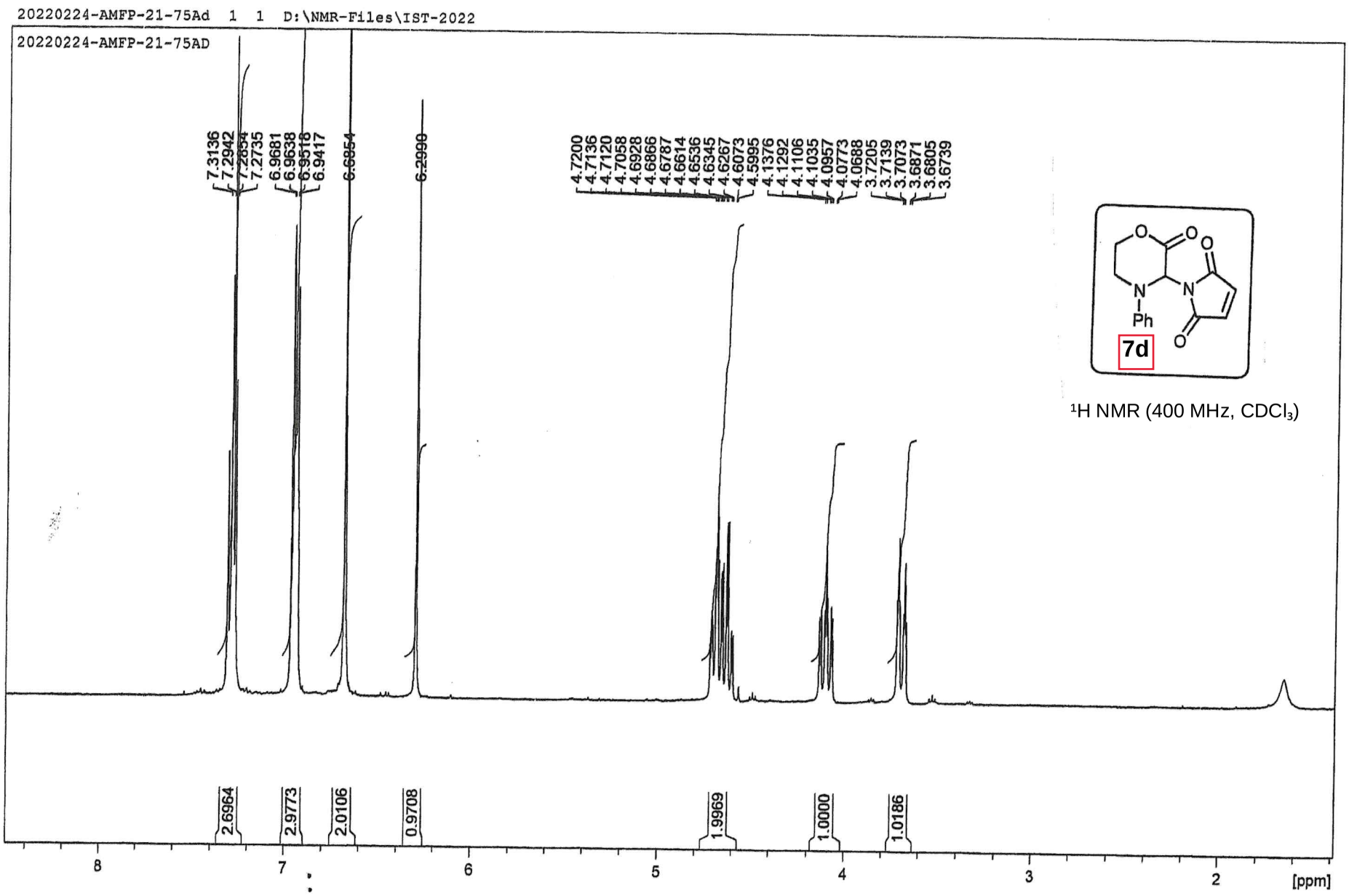


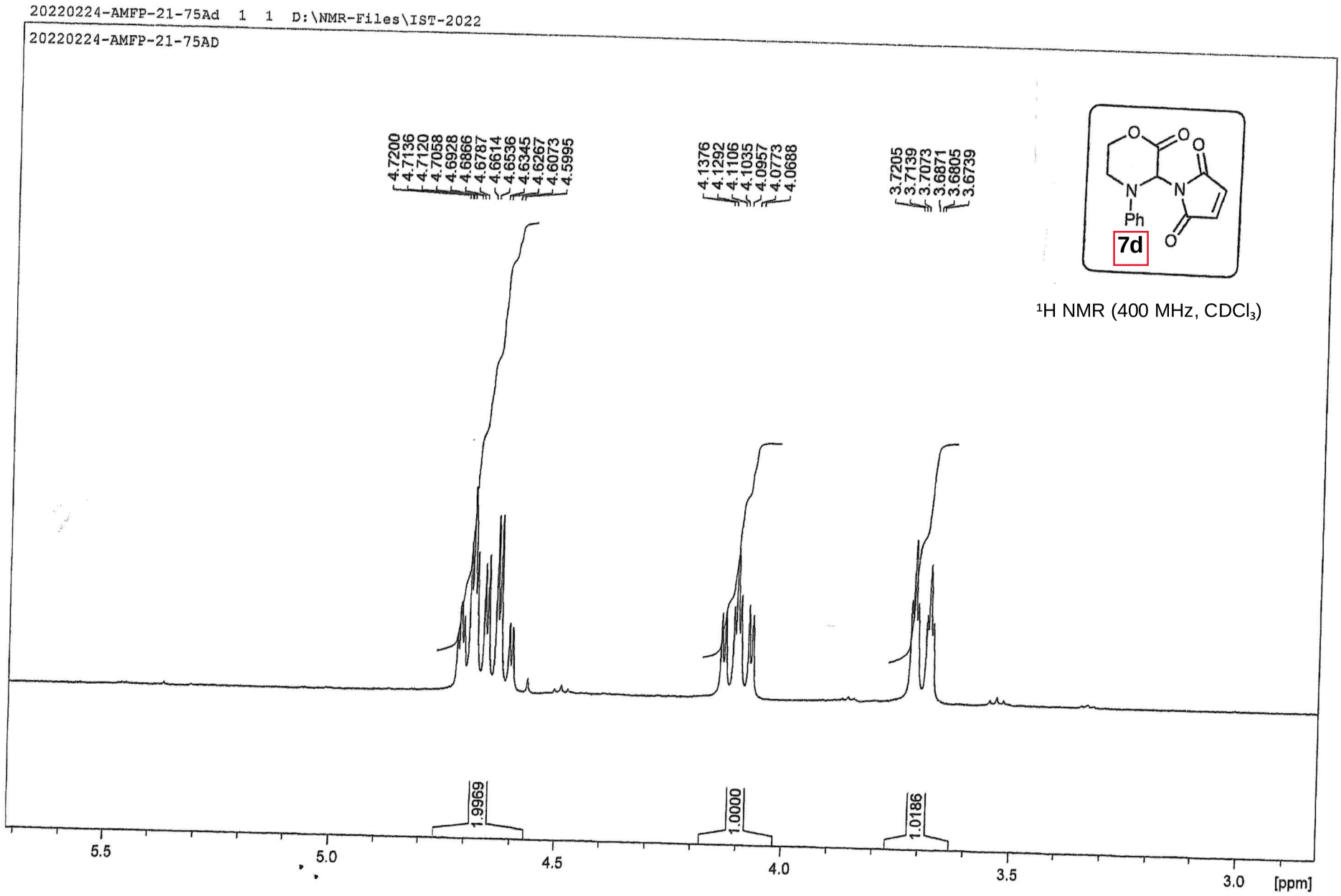
^{13}C NMR (100 MHz, $CDCl_3$

20221109-AMFP-21-154set 2 1 D:\NMR-Files\IST-2022

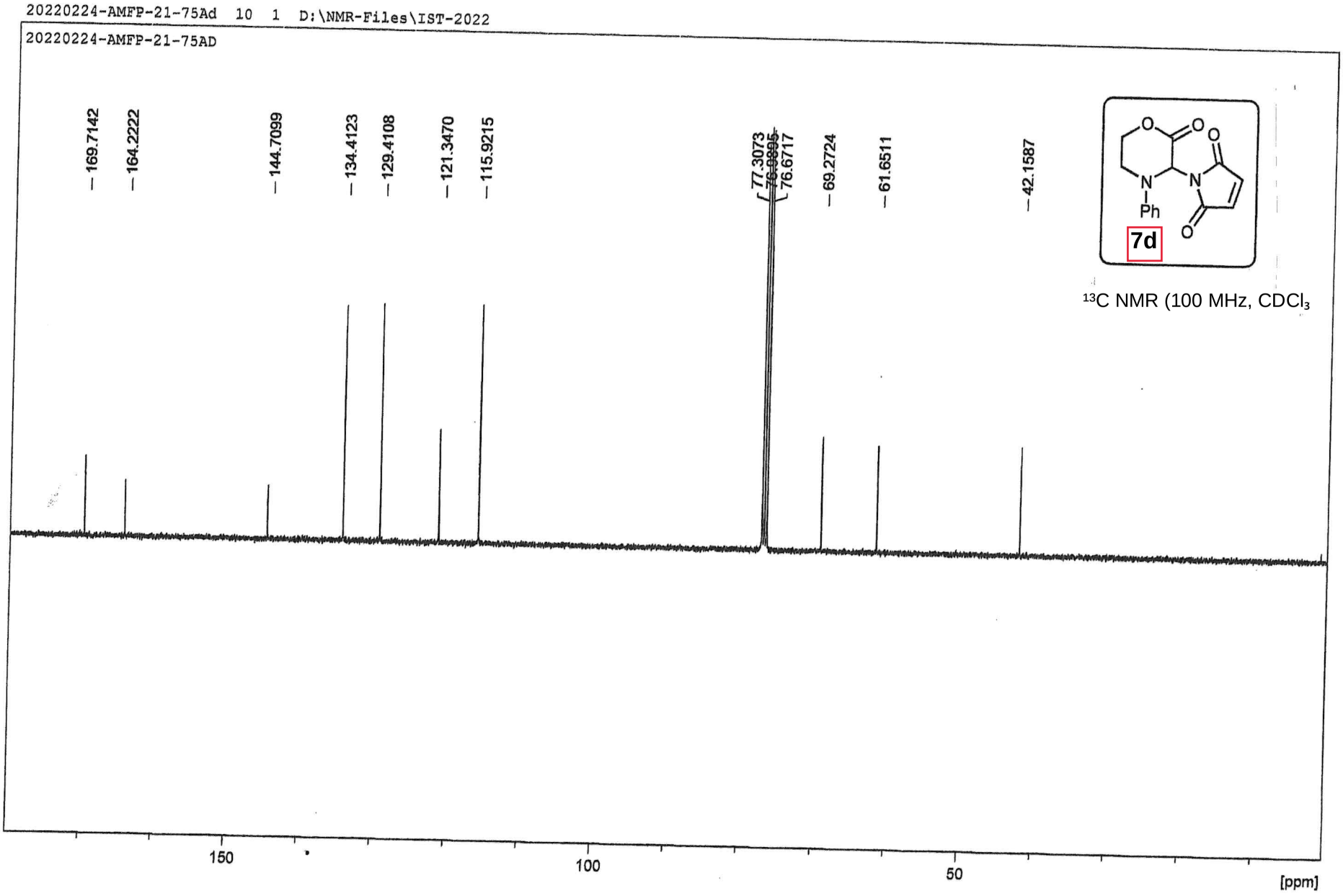


DEPT-135 NMR (100 MHz, $CDCl_3$)

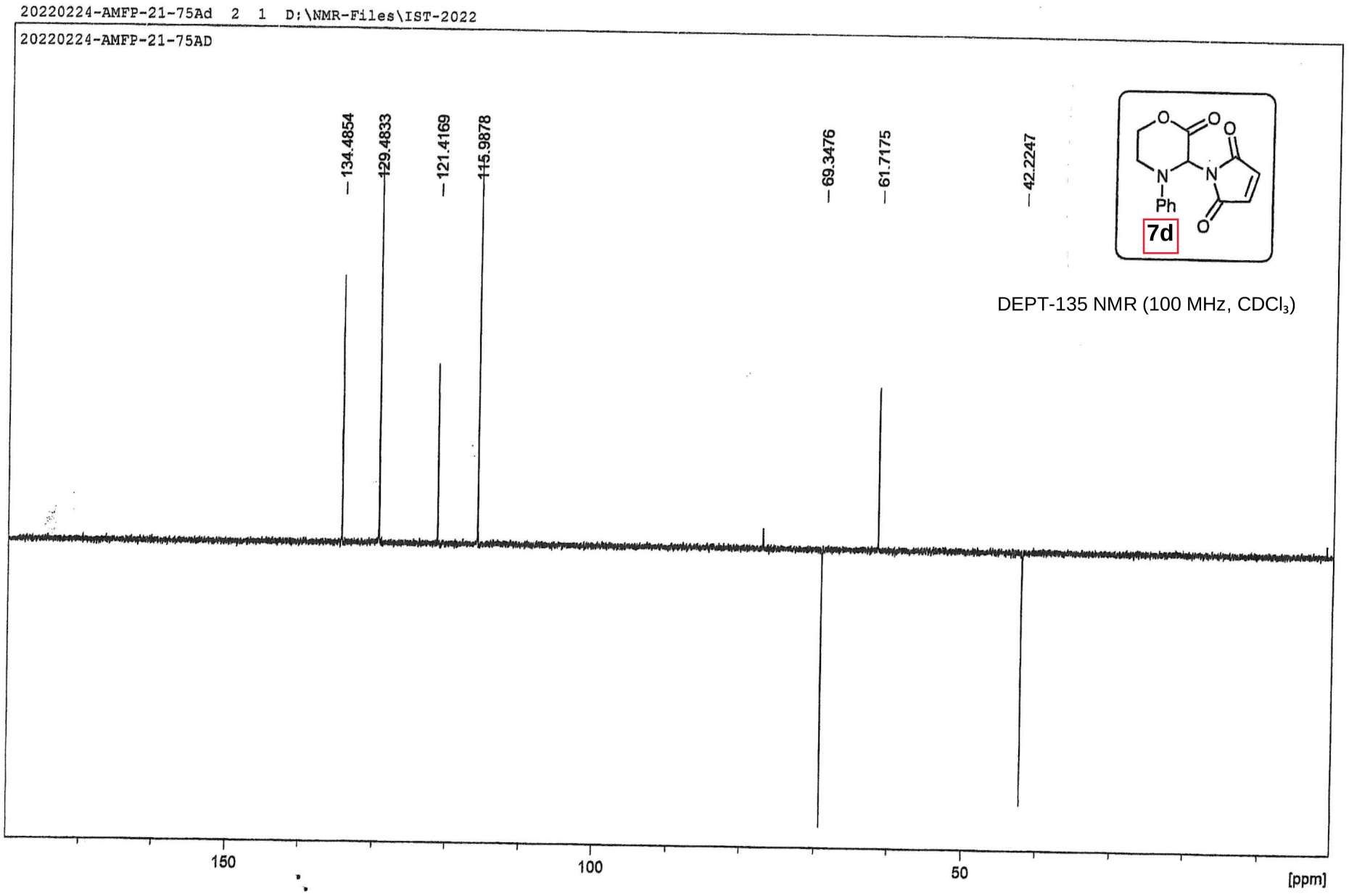

20220224-AMFP-21-75Ad 1 1 D:\NMR-Files\IST-2022
20220224-AMFP-21-75AD
7.3136
7.2942
7.2854
7.2735
6.9681
6.9638
6.9518
6.9417
6.6854
6.2999
4.7200
4.7136
4.7120
4.7058
4.6928
4.6866
4.6787
4.6614
4.6536
4.6345
4.6267
4.6073
4.5995
4.1376
4.1292
4.1106
4.1035
4.0957
4.0773
4.0688
3.7205
3.7139
3.7073
3.6871
3.6805
3.6739
2.6964
2.9773
2.0106
0.9708
1.9969
1.0000
1.0186
8
7
6
5
4
3
2
[ppm]
7d
^{1}H NMR (400 MHz, $CDCl_3$)



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

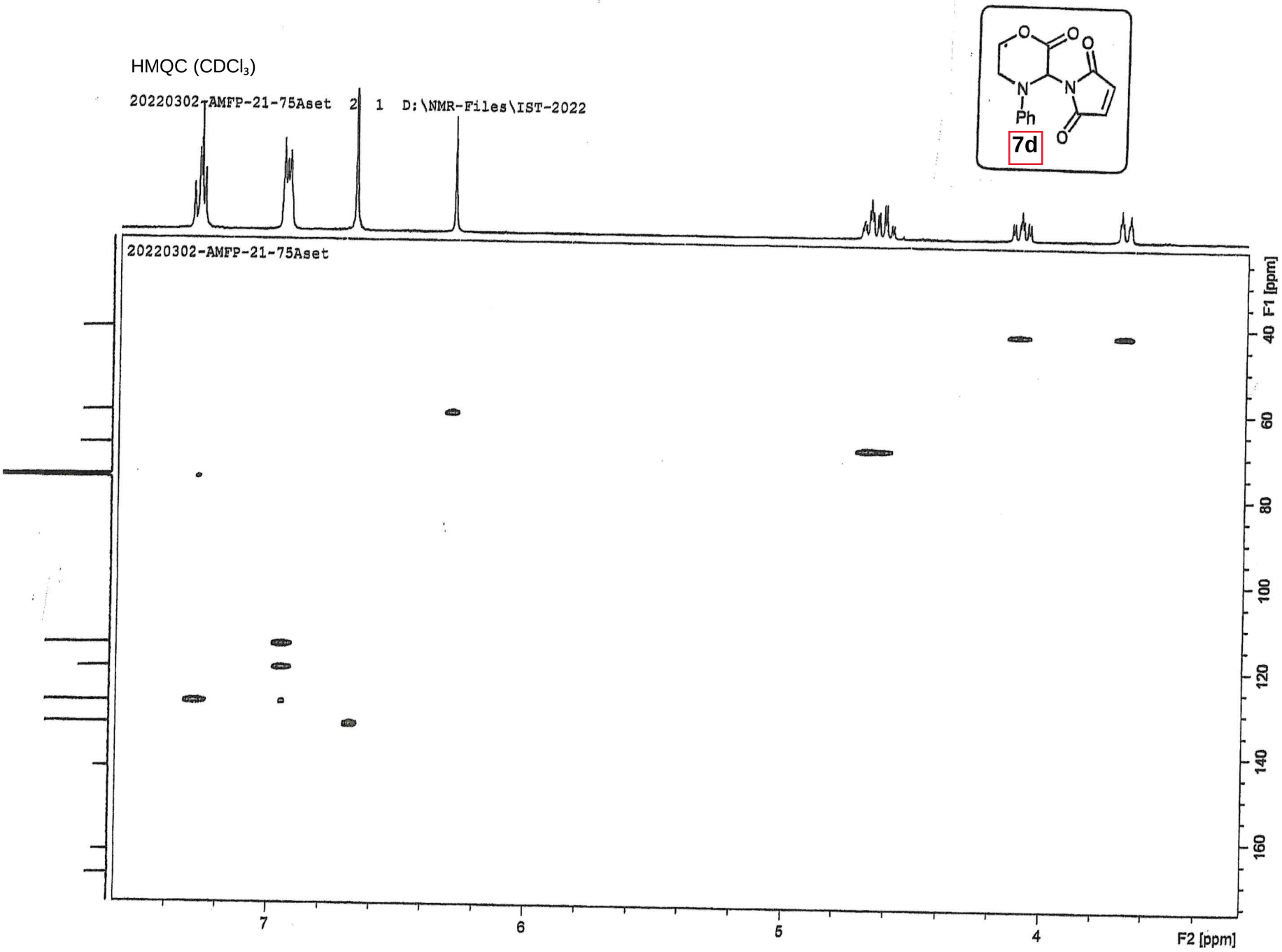


^{13}C NMR (100 MHz, $CDCl_3$



DEPT-135 NMR (100 MHz, $CDCl_3$)

HMQC ($CDCl_3$)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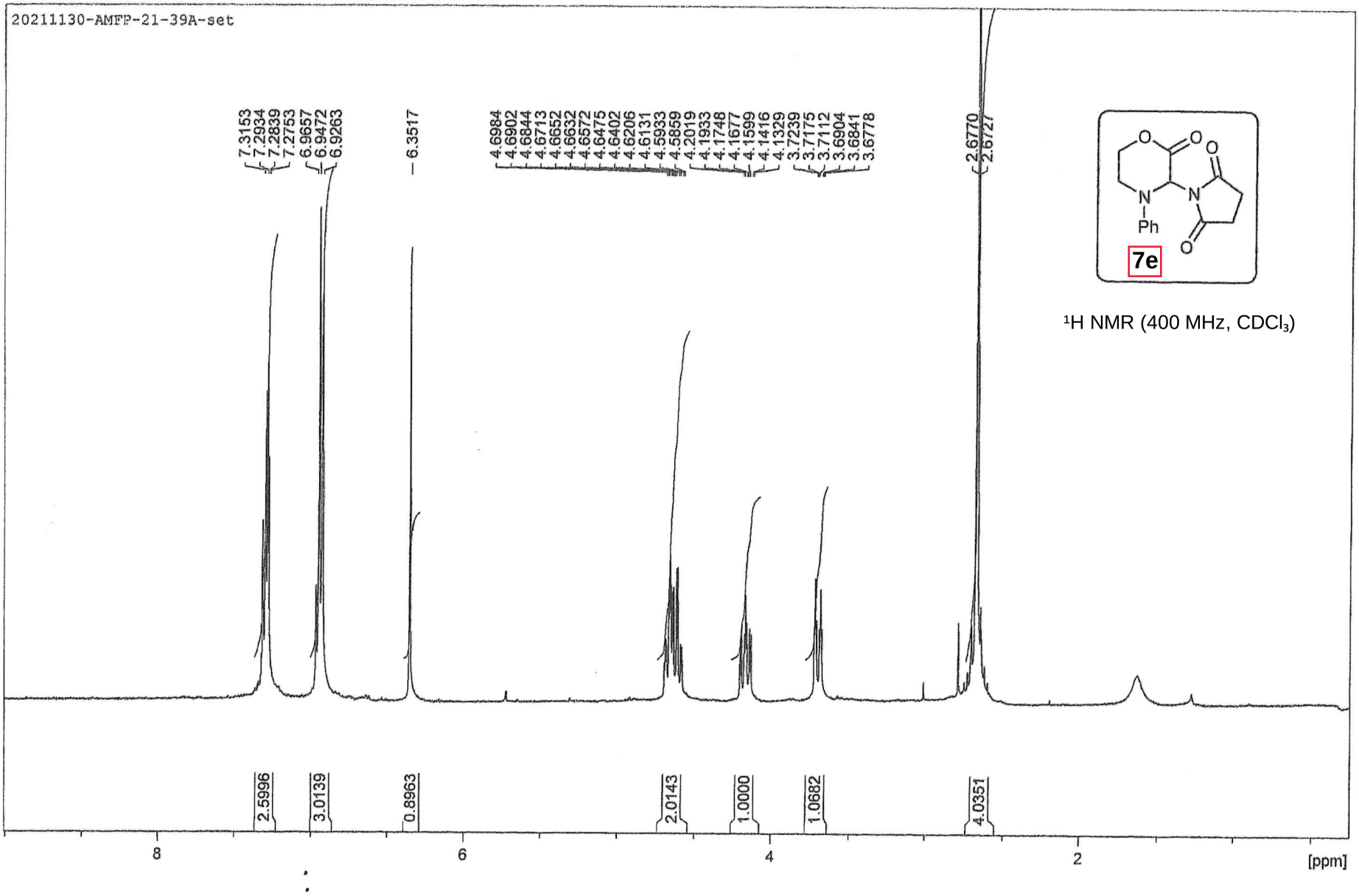
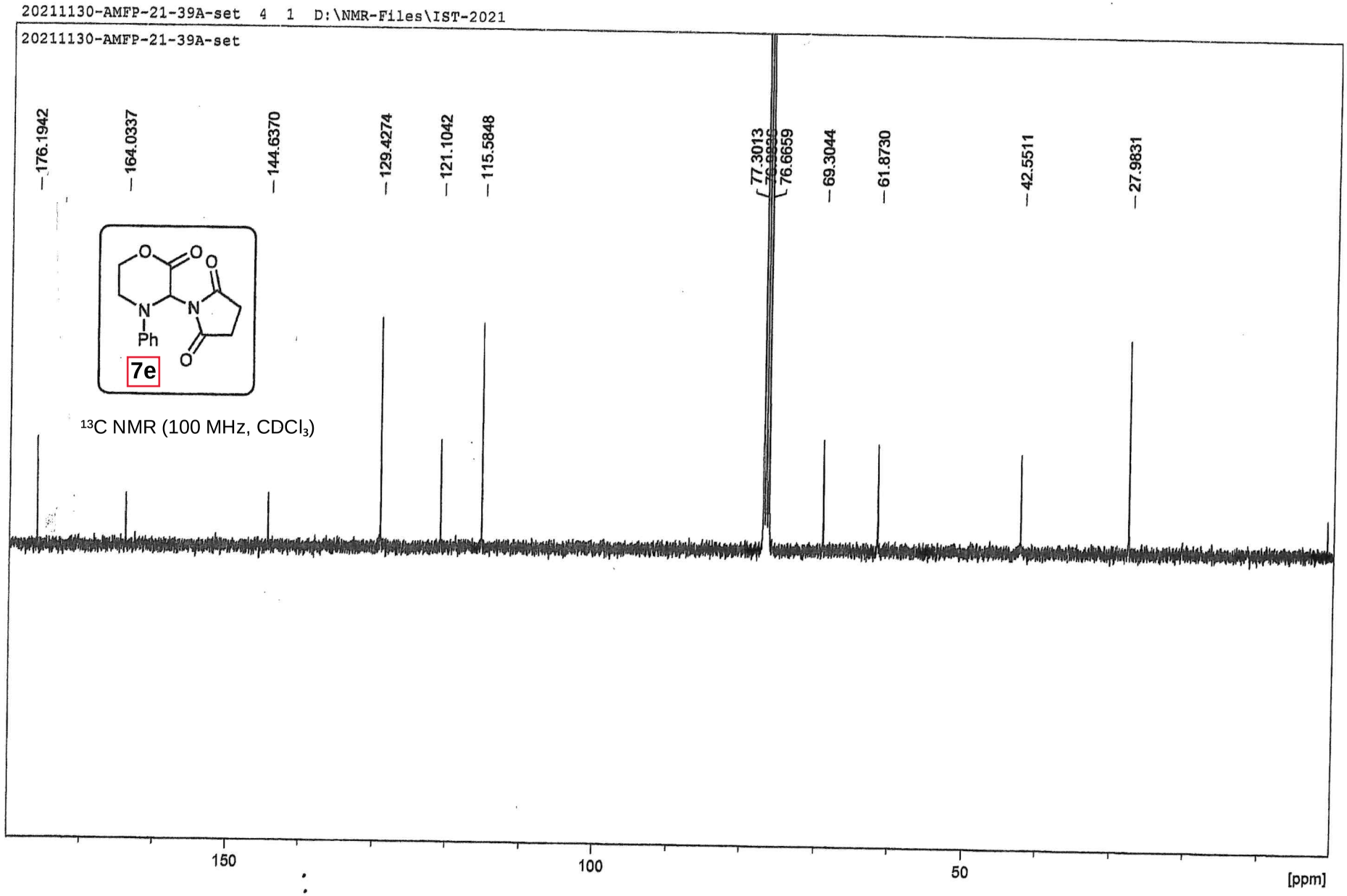
20220302-AMFP-21-75Aset
O
O
O
N
N
Ph
O
7d
F1 [ppm]
40
60
80
100
120
140
160
7
6
5
4
F2 [ppm]

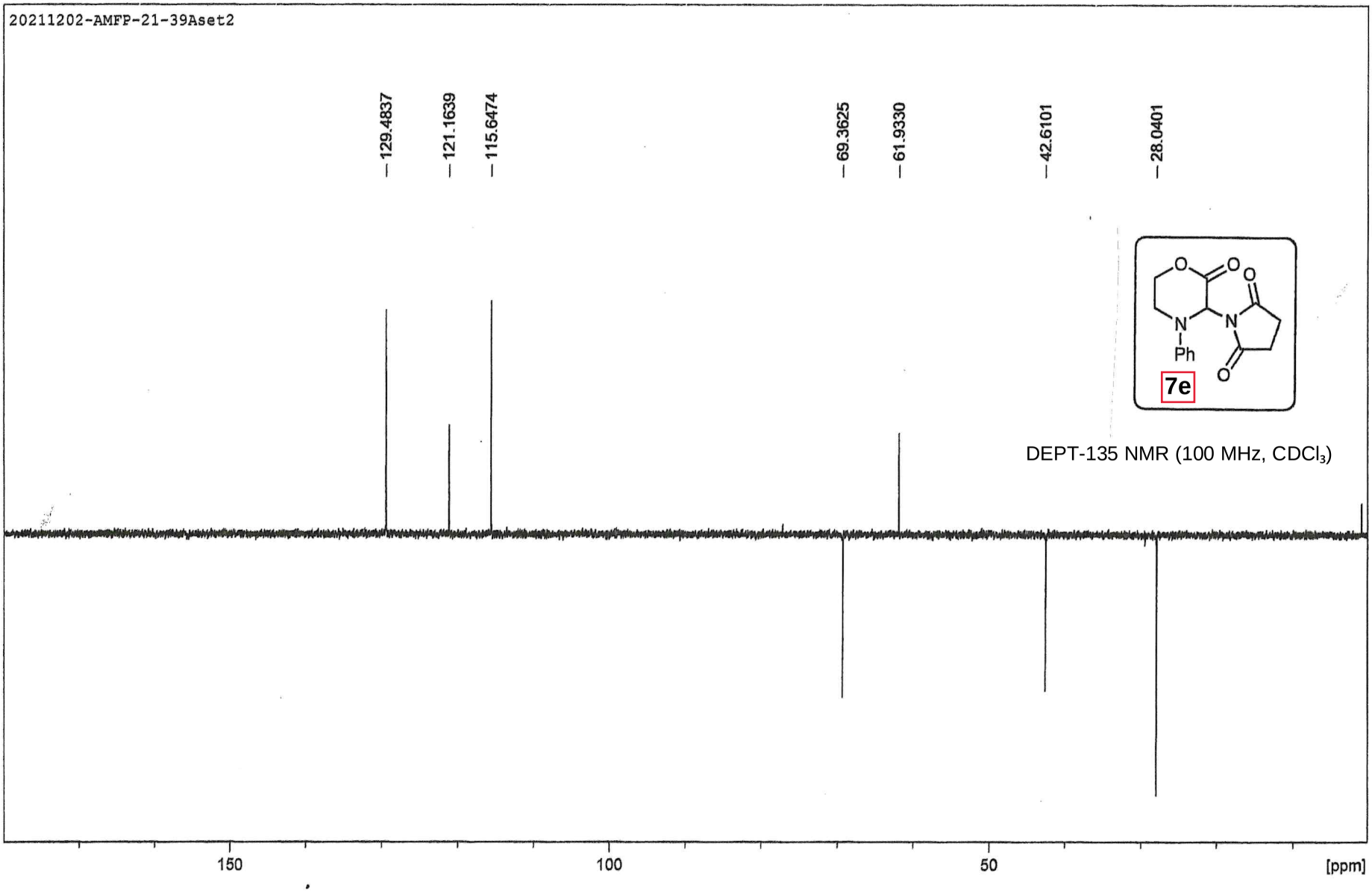
20211130-AMFP-21-39A-set 10 1 D:\NMR-Files\IST-2021



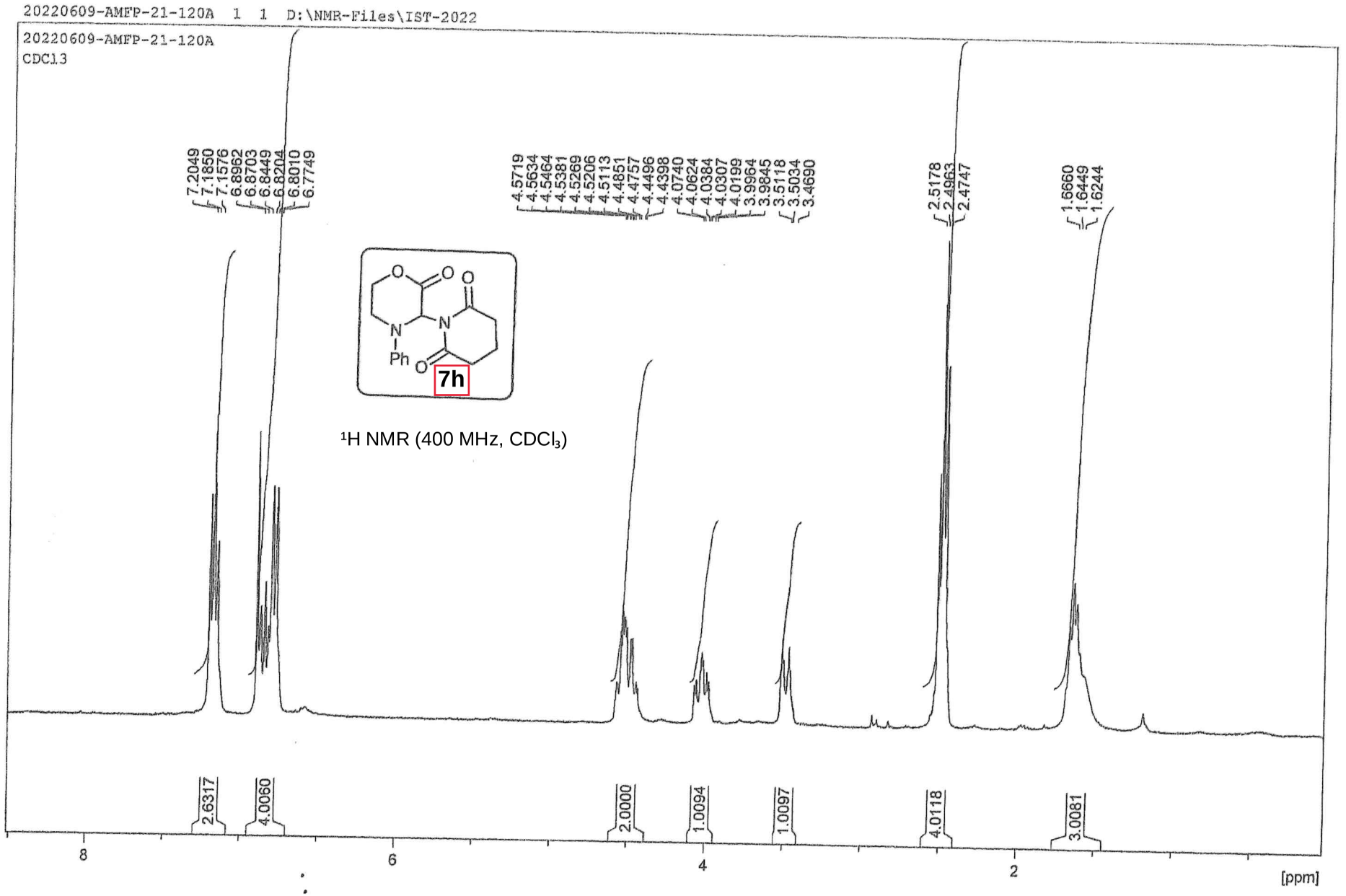
^{1}H NMR (400 MHz, $CDCl_3$)


20211130-AMFP-21-39A-set 4 1 D:\NMR-Files\IST-2021
20211130-AMFP-21-39A-set
176.1942
164.0337
144.6370
129.4274
121.1042
115.5848
77.3013
76.6659
69.3044
61.8730
42.5511
27.9831
Ph
7e
13C NMR (100 MHz, CDCl3)
150
100
50
[ppm]

20211202-AMFP-21-39Aset2 3 1 D:\NMR-Files\IST-2021

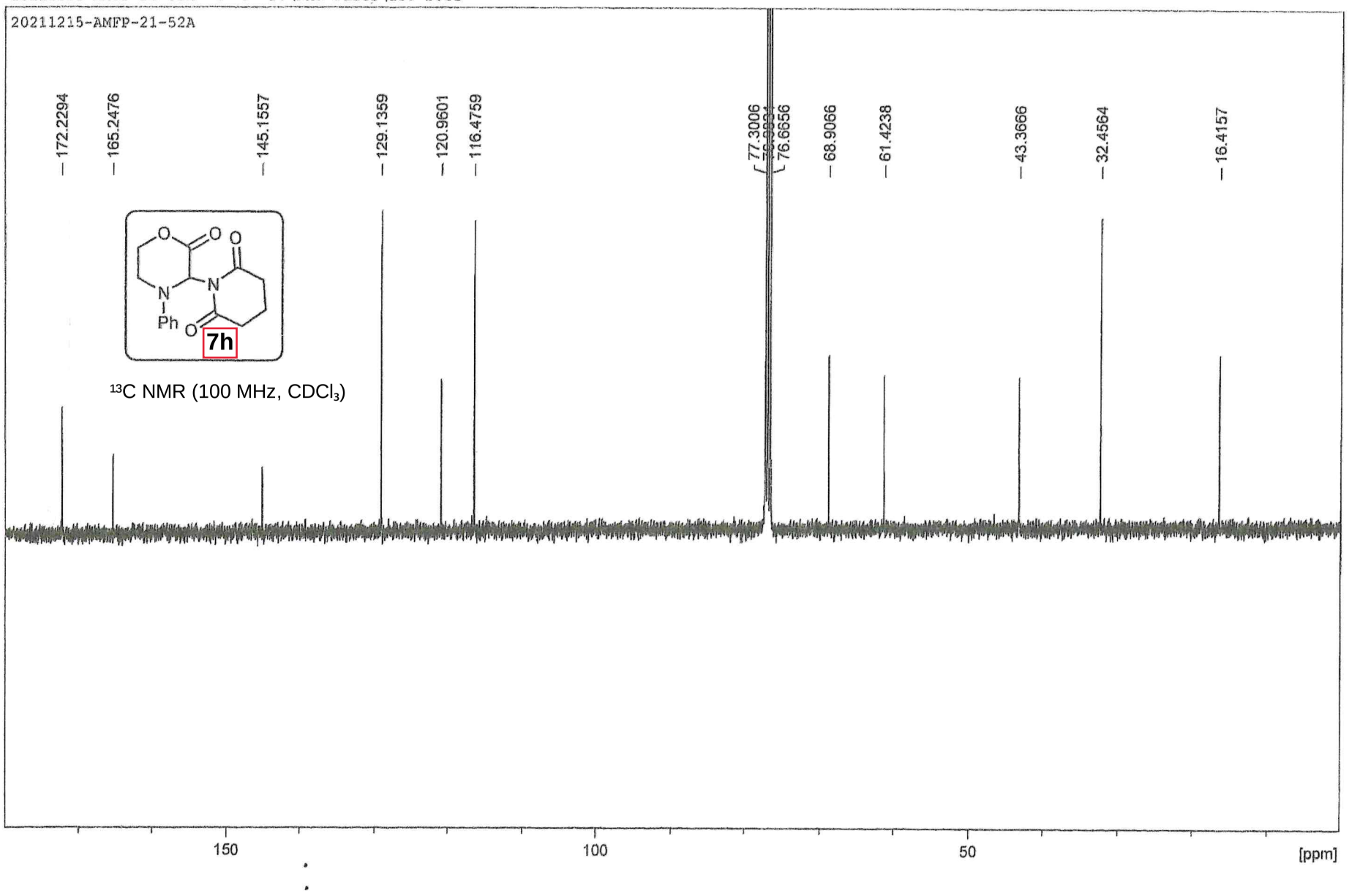


DEPT-135 NMR (100 MHz, $CDCl_3$)



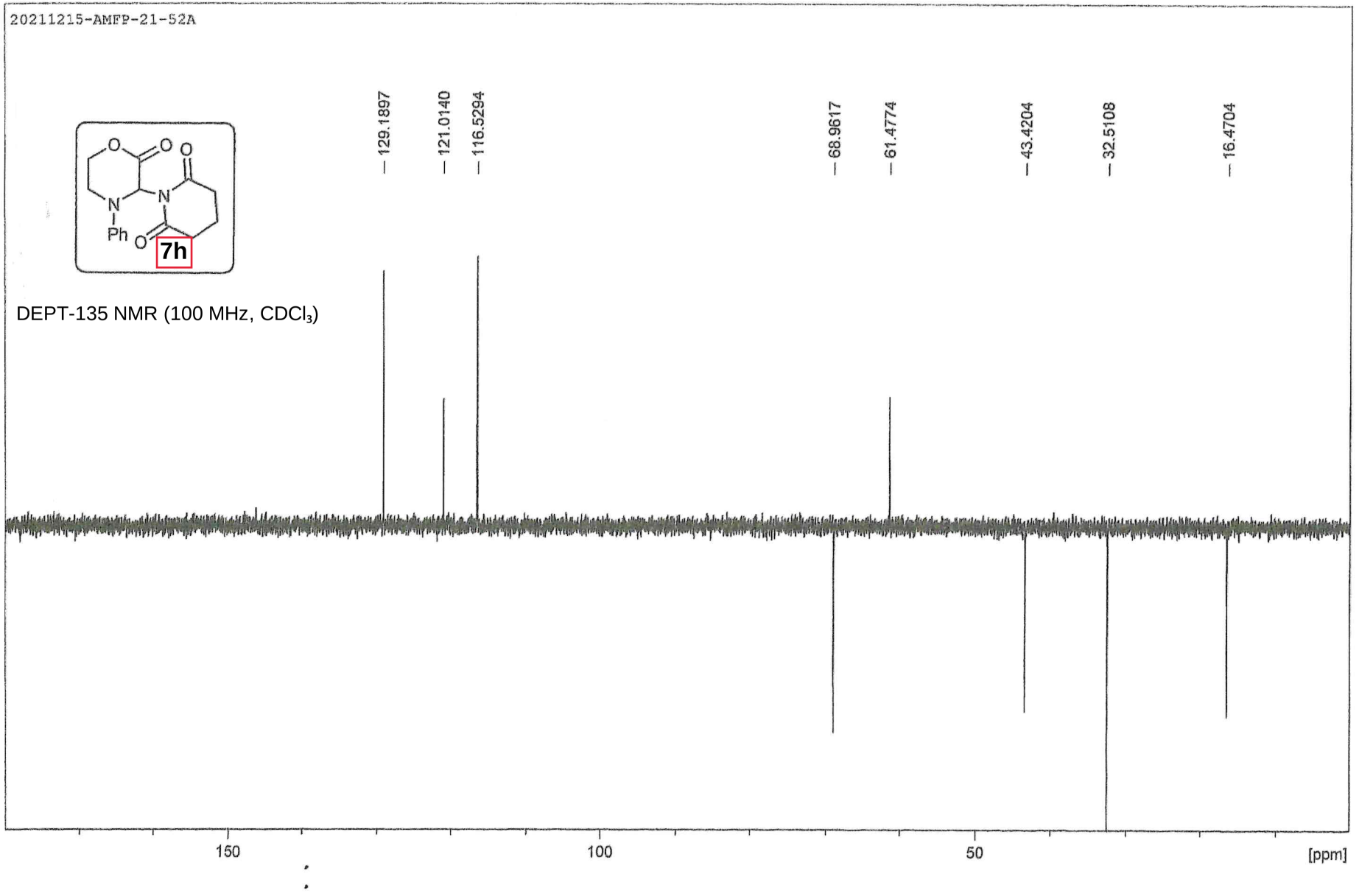
^{1}H NMR (400 MHz, $CDCl_3$)

20211215-AMFP-21-52A 4 1 D:\NMR-Files\IST-2021



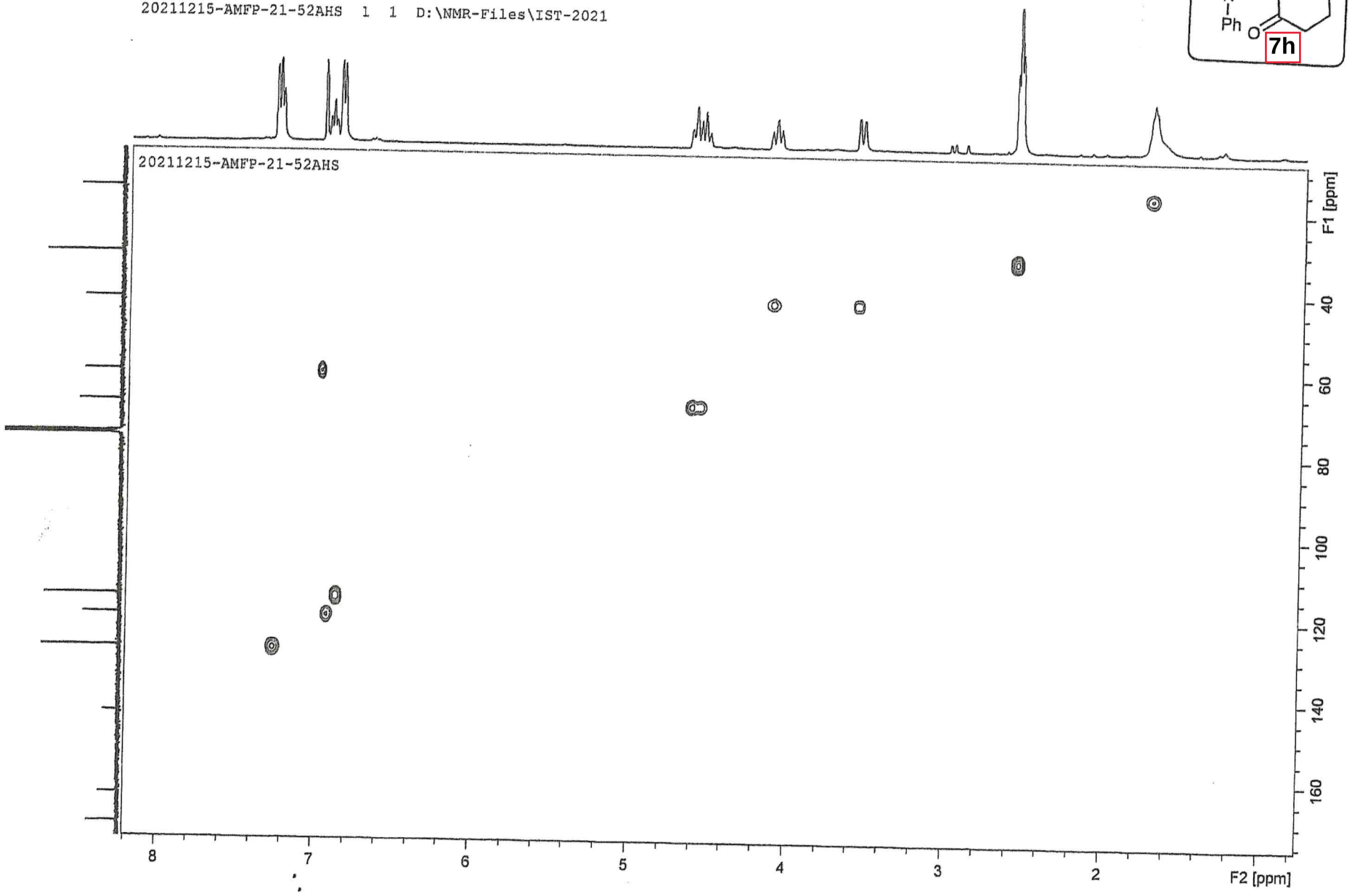
^{13}C NMR (100 MHz, $CDCl_3$)

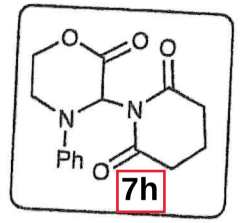
20211215-AMFP-21-52A 2 1 D:\NMR-Files\IST-2021



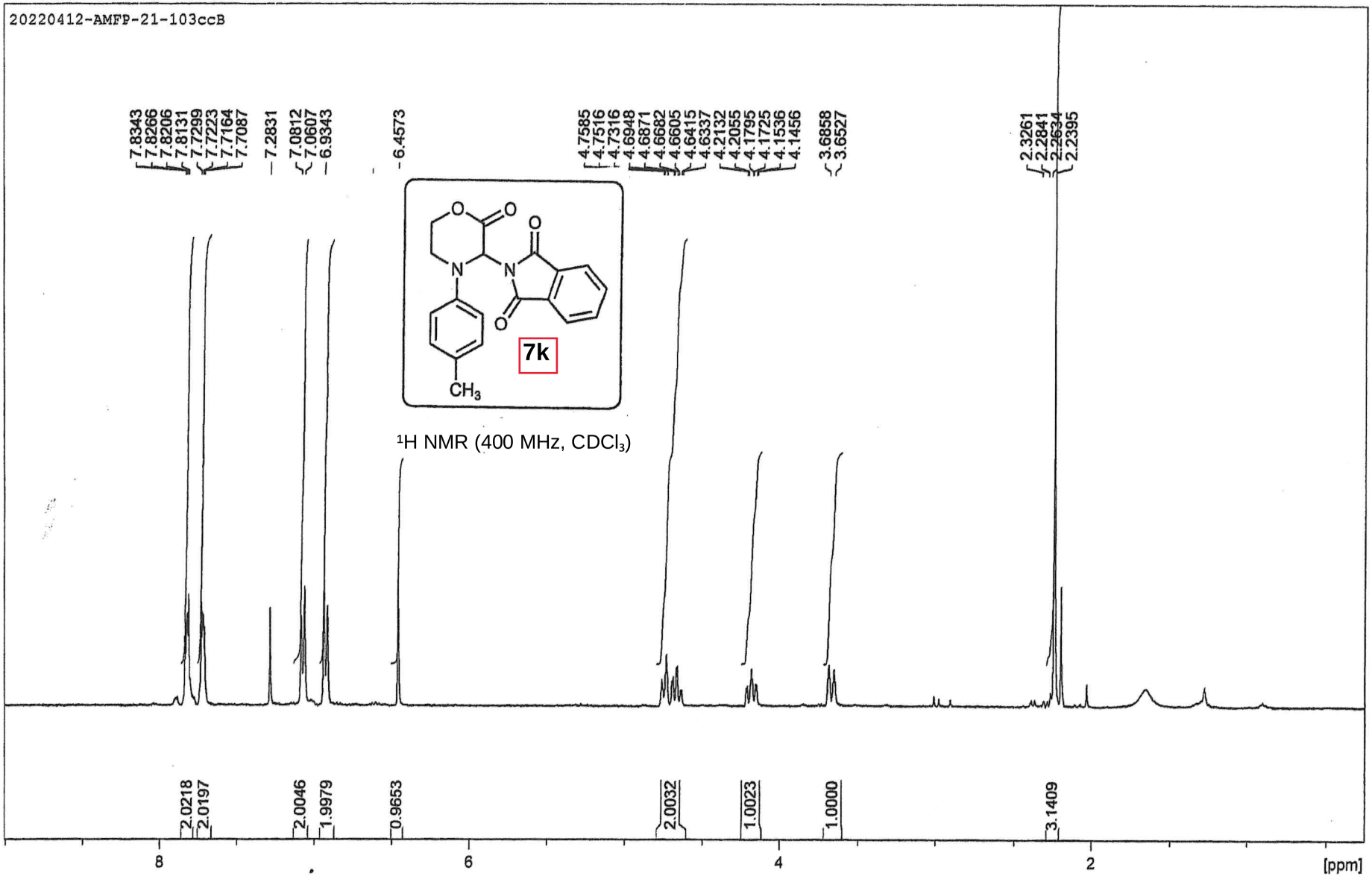
HMQC ($CDCl_3$)

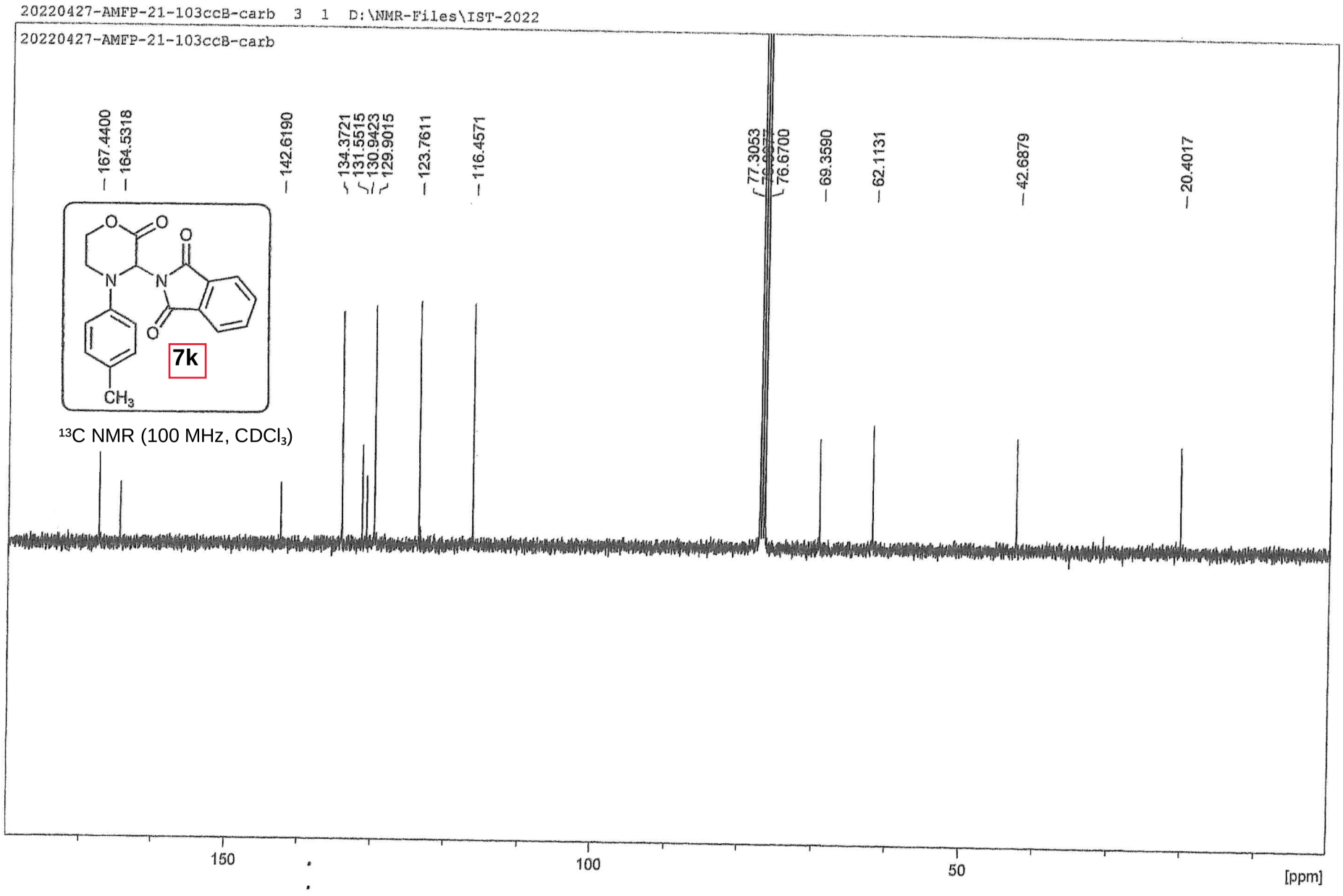
20211215-AMFP-21-52AHS 1 1 D:\NMR-Files\IST-2021





20220412-AMFP-21-103ccB 3 1 D:\NMR-Files\IST-2022

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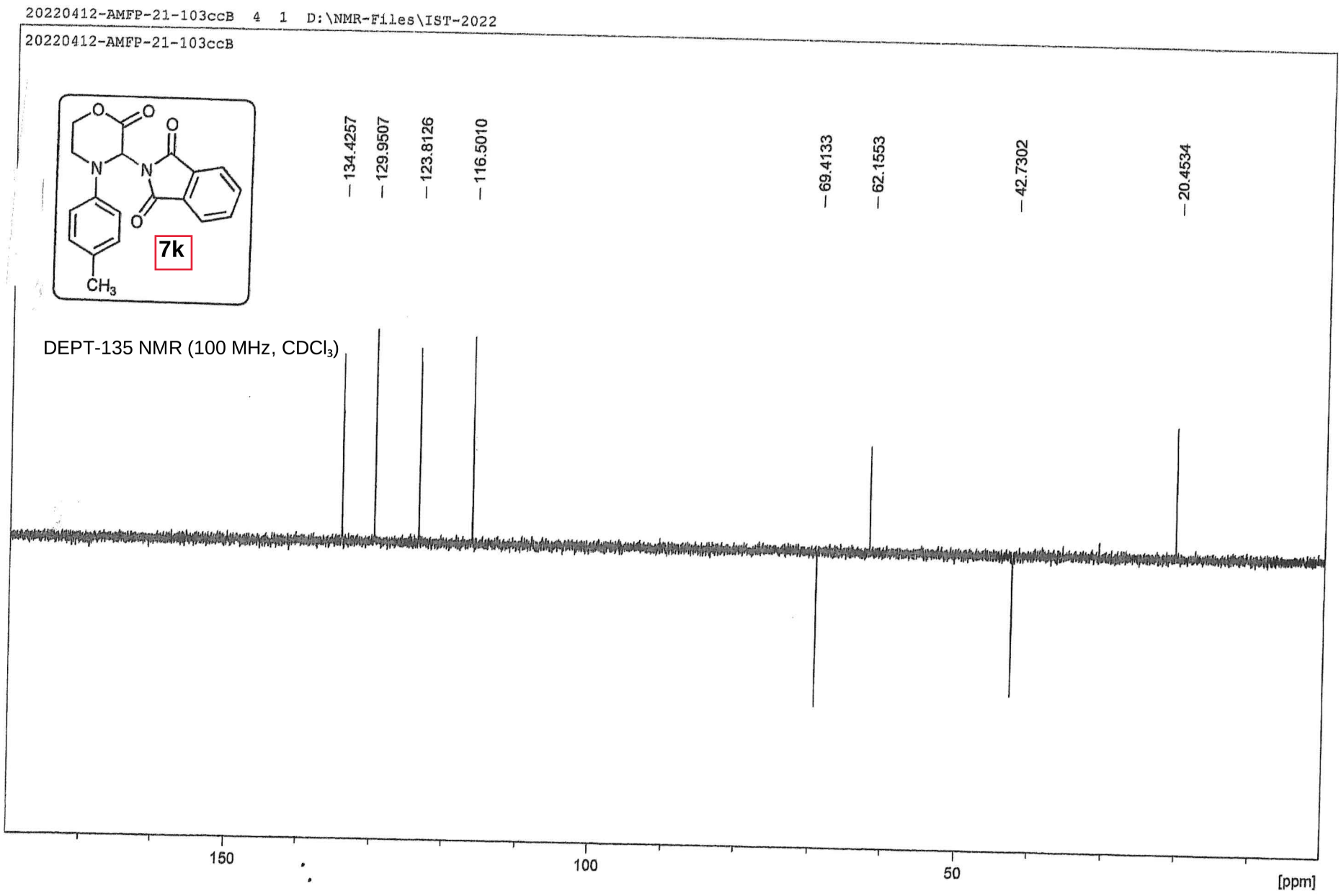
134.3721
131.5515
130.9423
129.9015
123.7611
116.4571
77.3053
76.6700
69.3590
62.1131
42.6879
20.4017
7k
CH3
13C NMR (100 MHz, CDCl3)
150
100
50
[ppm]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20220412-AMFP-21-103ccB
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CH3
134.4257
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123.8126
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62.1553
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20.4534
DEPT-135 NMR (100 MHz, CDCl3)
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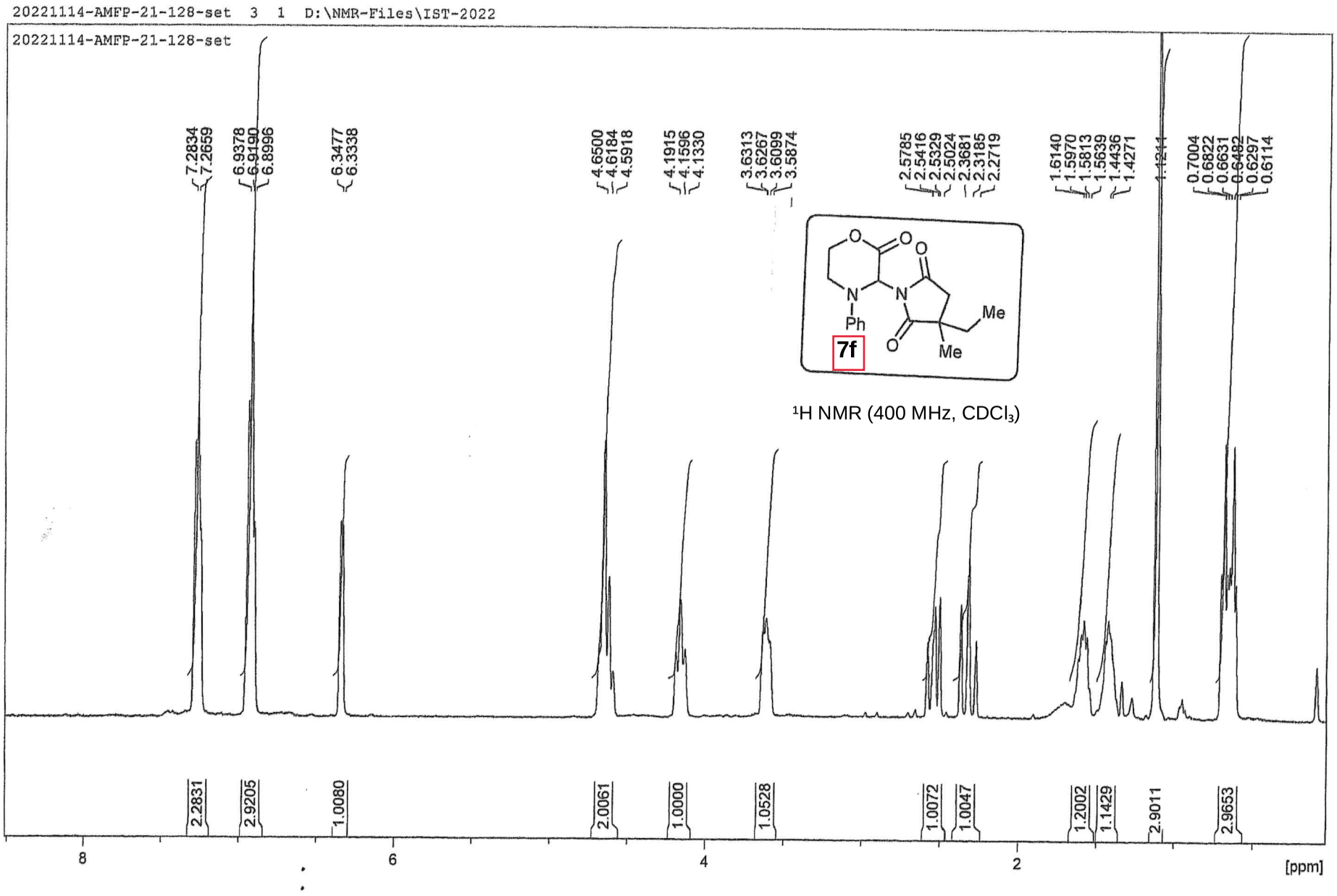
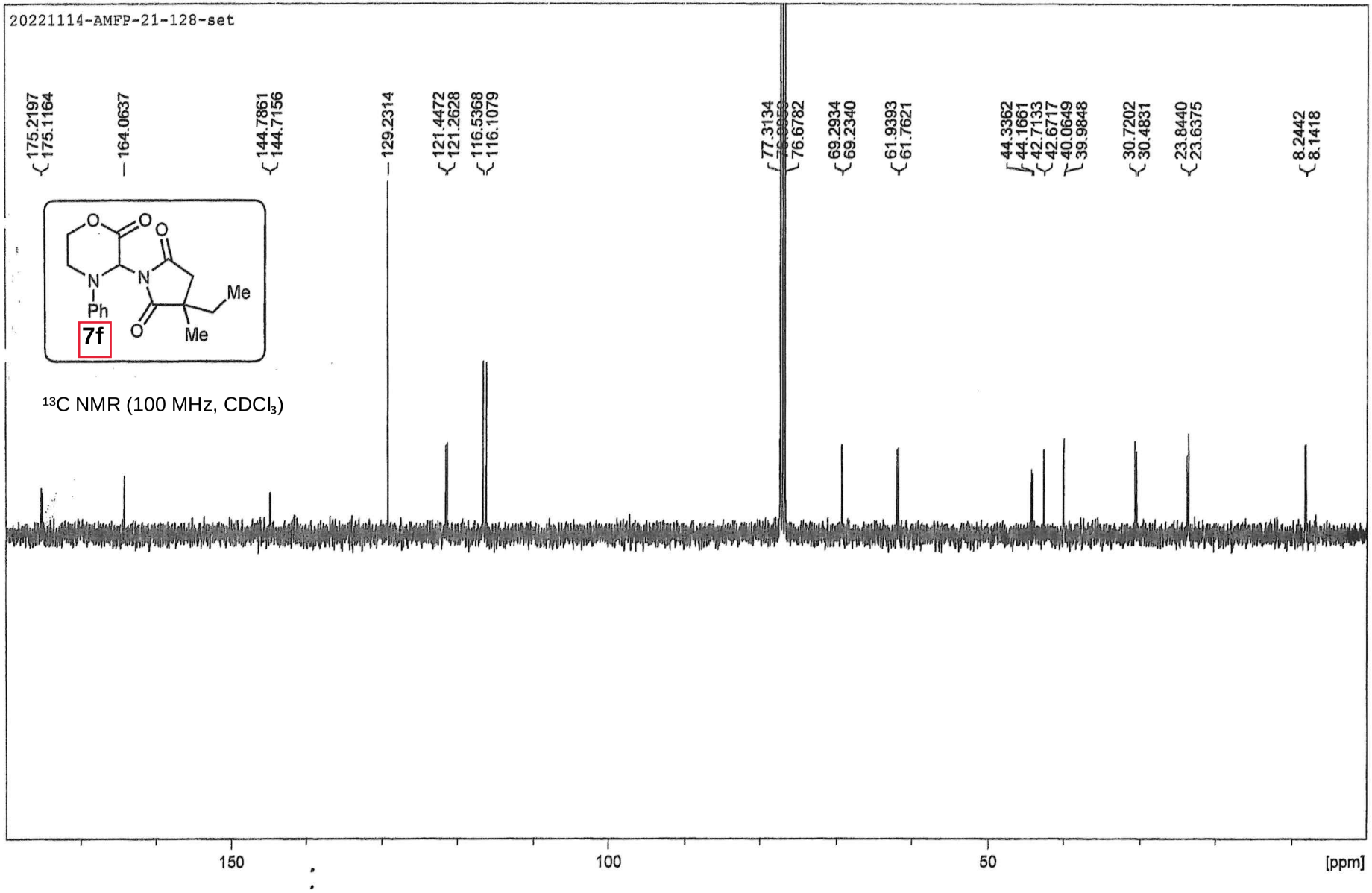
100
50
[ppm]



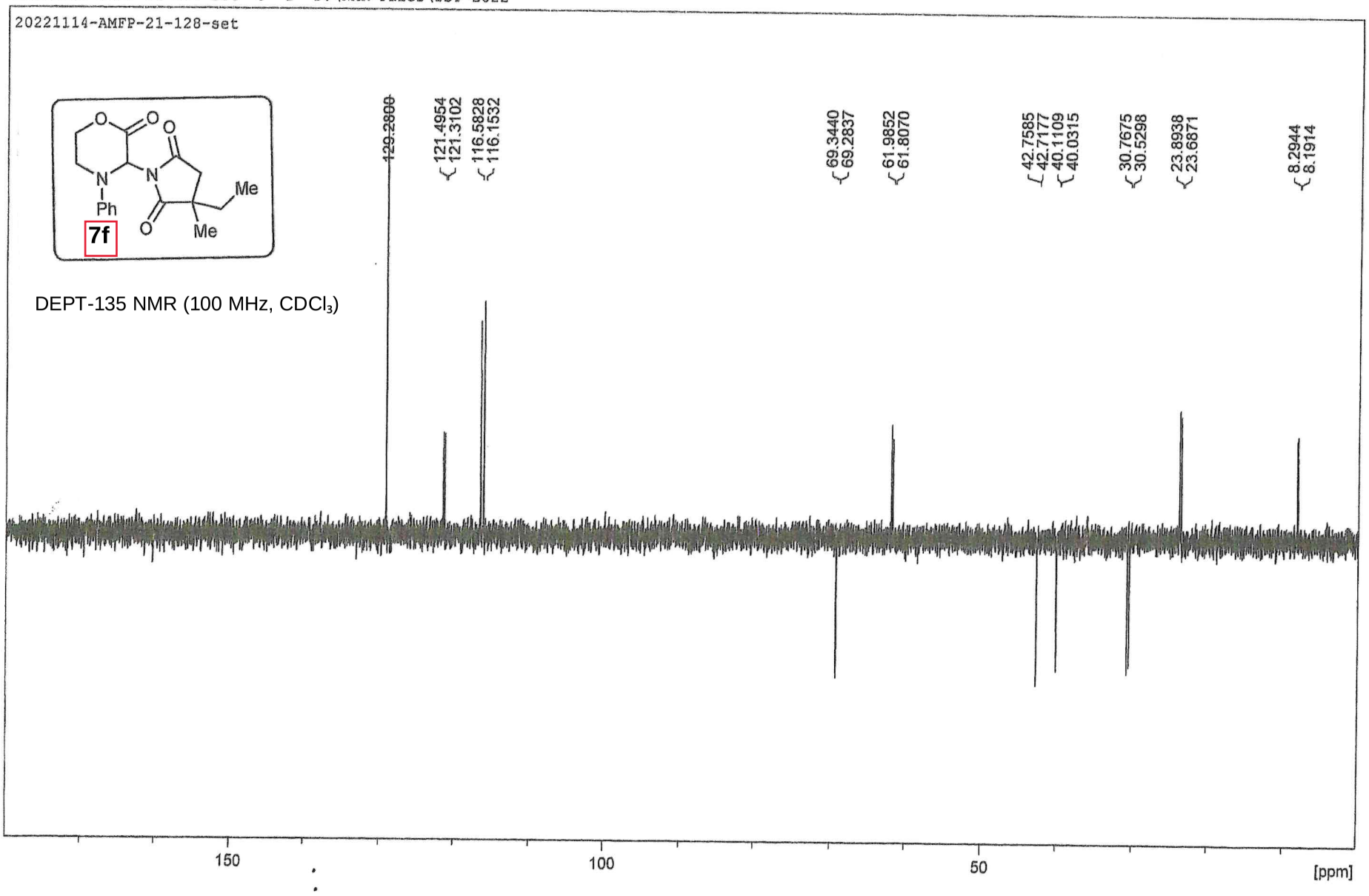
^{1}H NMR (400 MHz, $CDCl_3$)

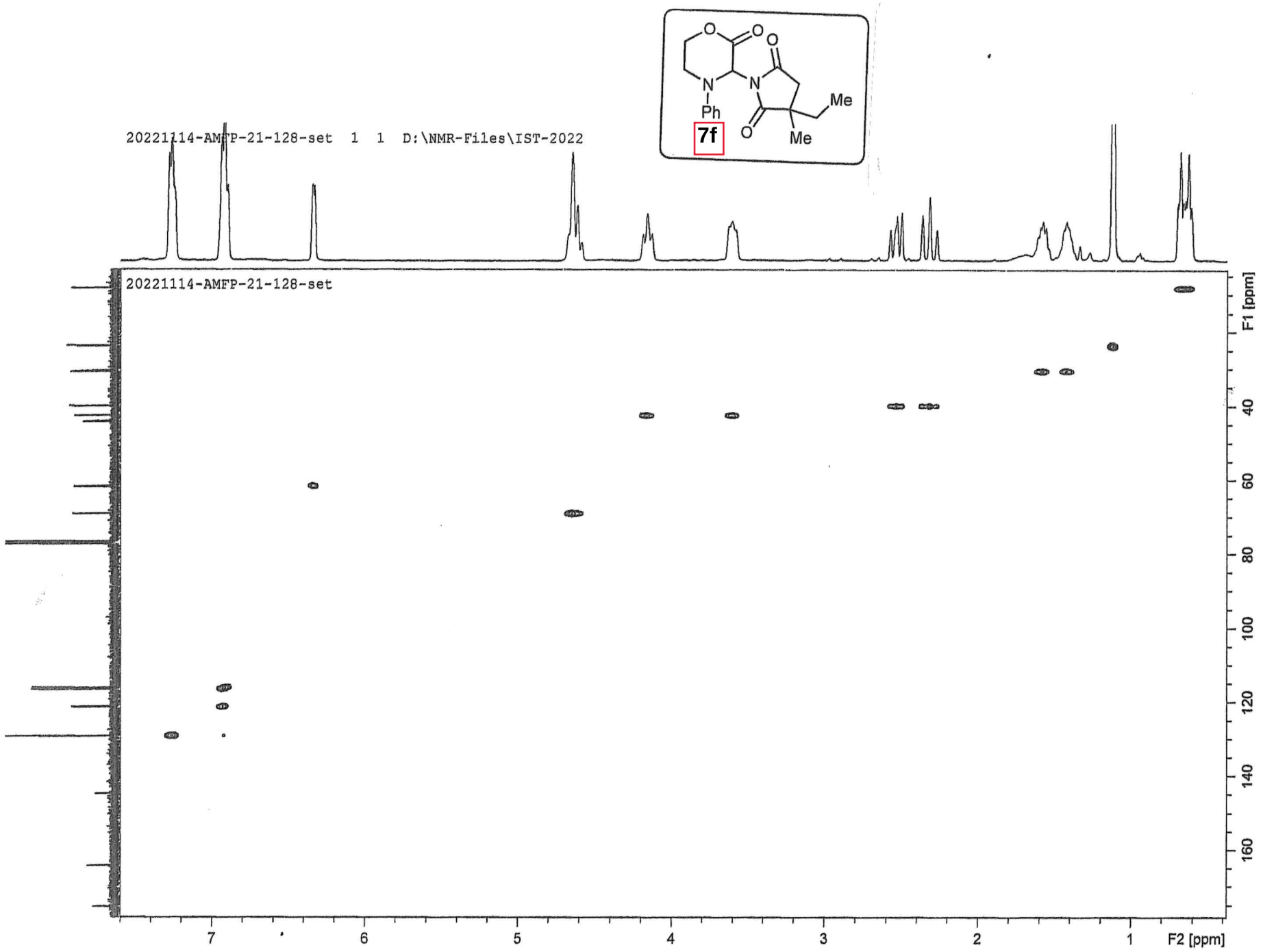
20221114-AMFP-21-128-set 2 1 D:\NMR-Files\IST-2022



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

20221114-AMFP-21-128-set 5 1 D:\NMR-Files\IST-2022

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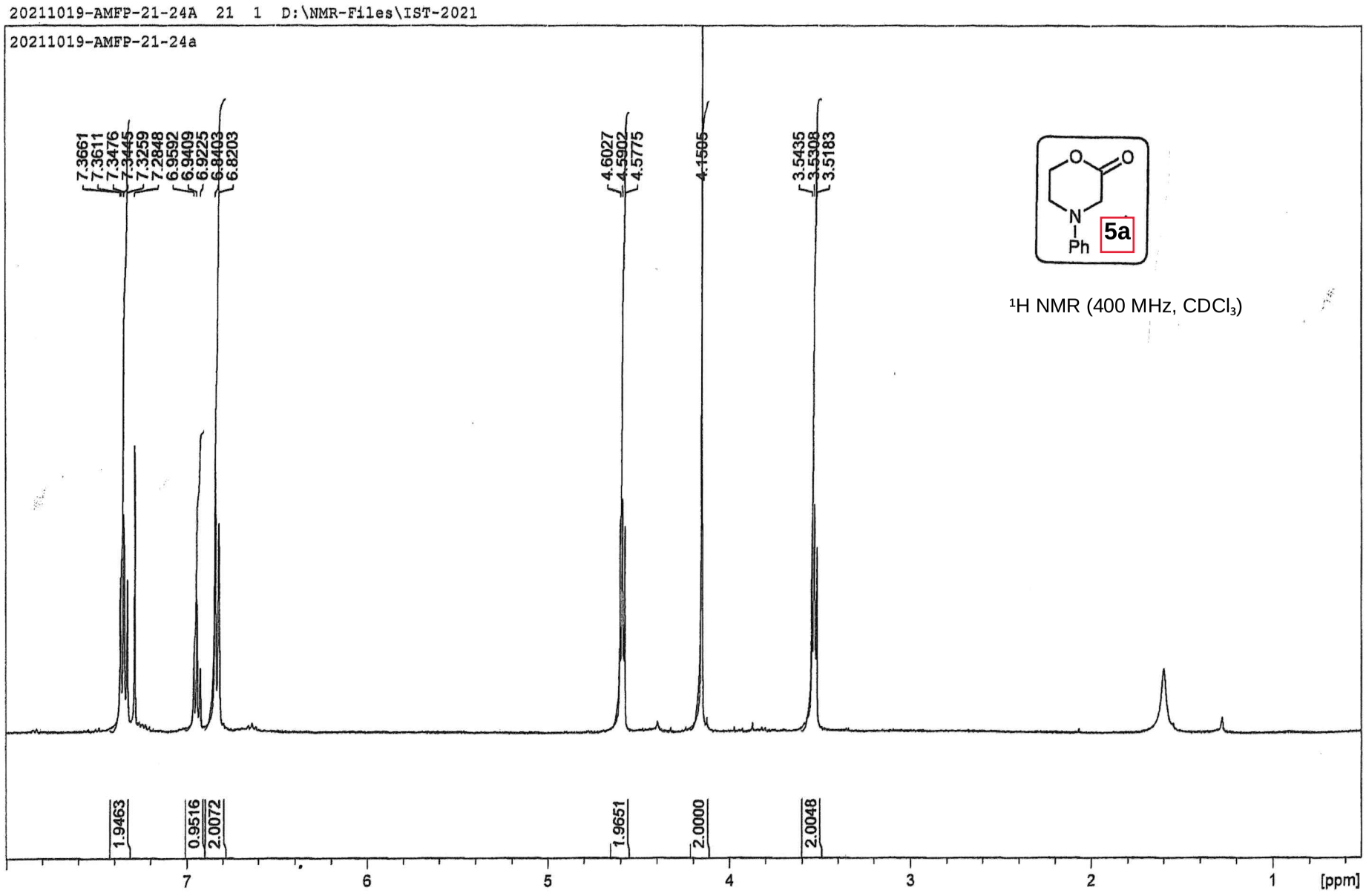
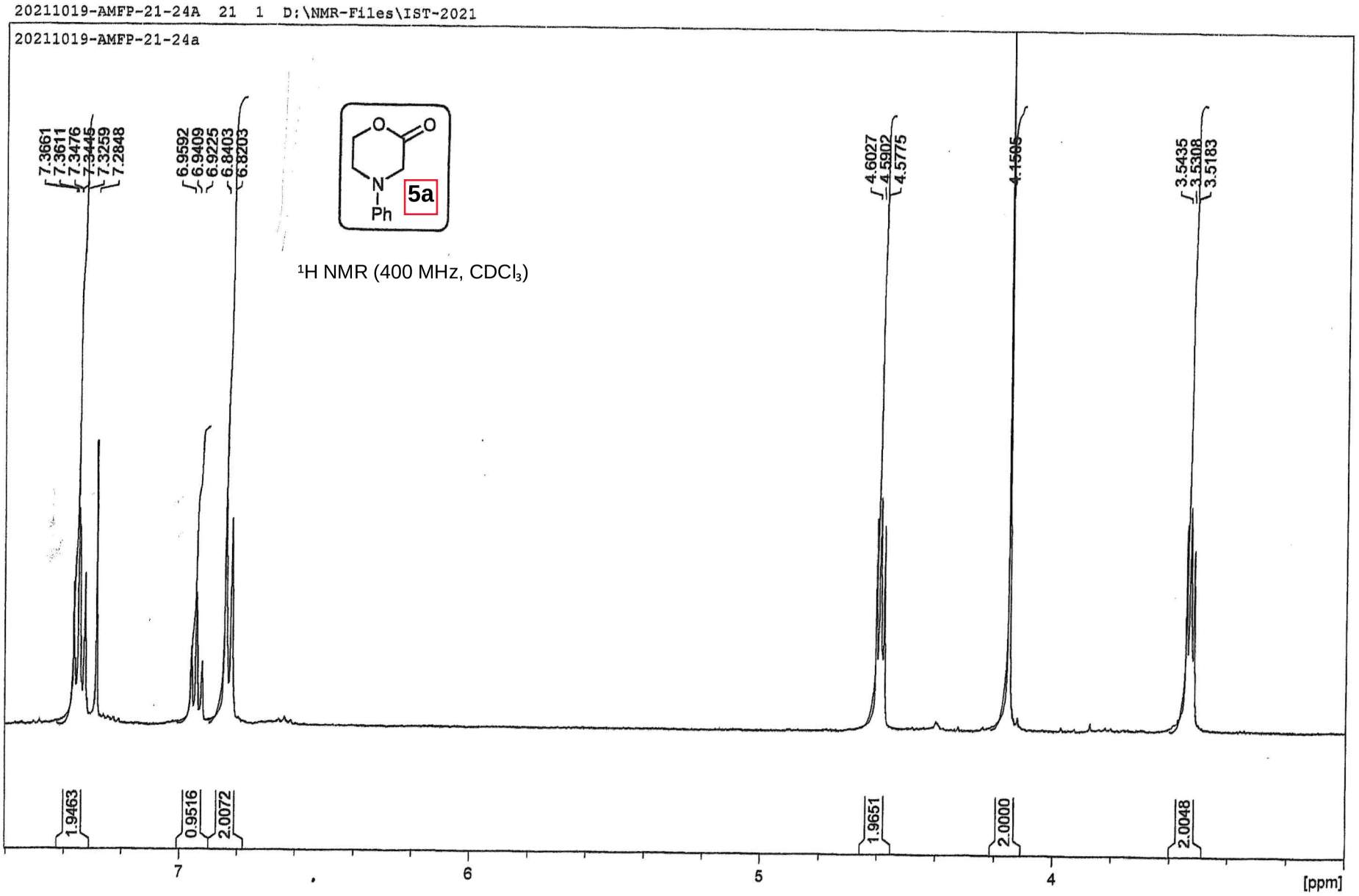
20221114-AMFP-21-128-set
7f
Ph
Me
Me
F1 [ppm]
F2 [ppm]
7
6
5
4
3
2
1
40
60
80
100
120
140
160



^{1}H NMR (400 MHz, $CDCl_3$)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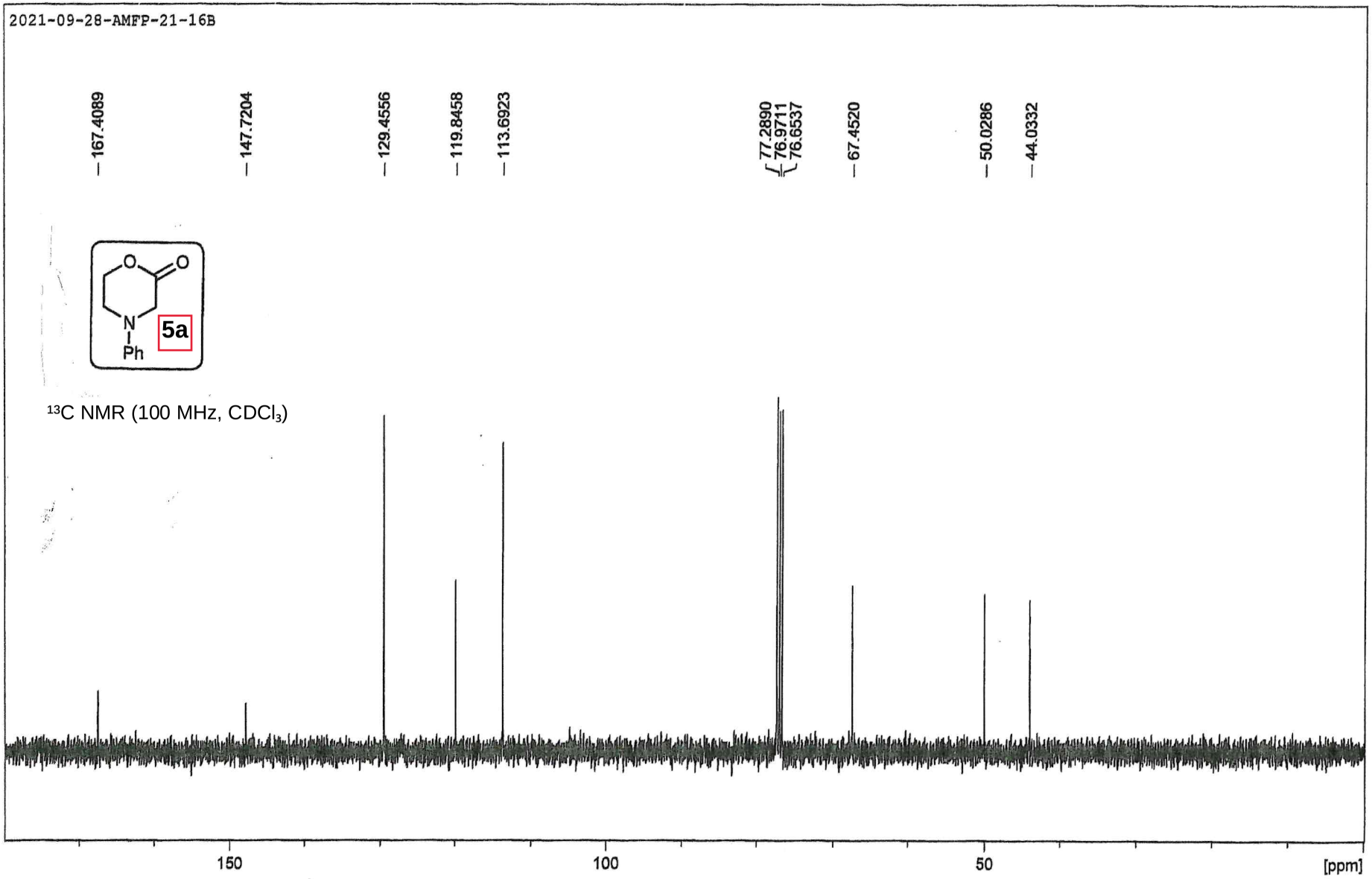
20211019-AMFP-21-24a
7.3661
7.3611
7.3476
7.3446
7.3259
7.2848
6.9592
6.9409
6.9225
6.8403
6.8203
4.6027
4.5902
4.5775
4.1585
3.5435
3.5308
3.5183
O
O
N
Ph
5a
1H NMR (400 MHz, CDCl3)
1.9463
0.9516
2.0072
1.9651
2.0000
2.0048
7
6
5
4
[ppm]

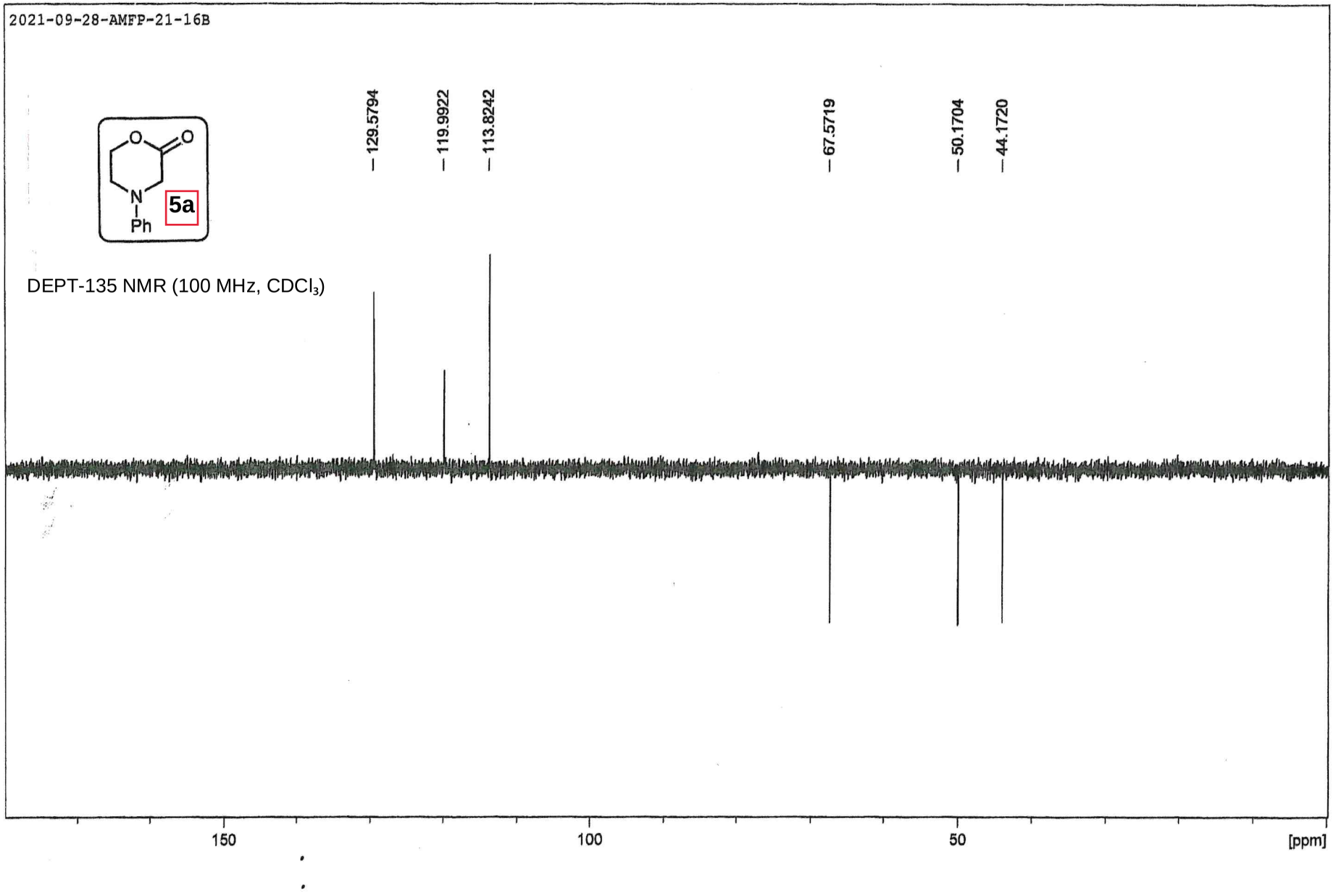
20210928-AMFP-21-16B 10 1 D:\NMR-Files\IST-2021

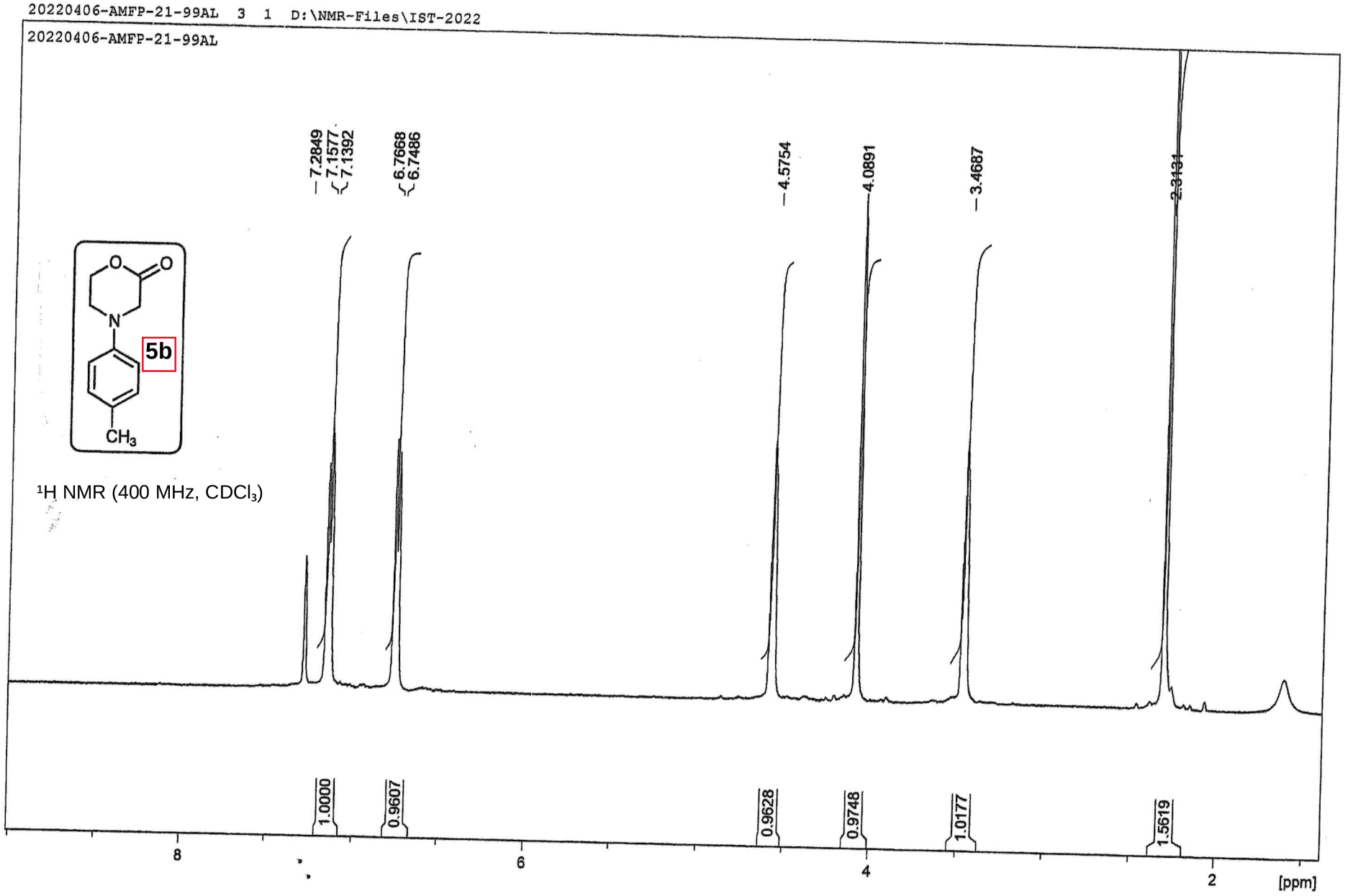
2021-09-28-AMFP-21-16B



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

2021-09-28-AMFP-21-16B 1 1 D:\NMR-Files\IST-2021




20220406-AMFP-21-99AL 3 1 D:\NMR-Files\IST-2022
20220406-AMFP-21-99AL
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7.1577
7.1392
6.7668
6.7486
4.5754
4.0891
3.4687
2.3131
5b
CH3
1H NMR (400 MHz, CDCl3)
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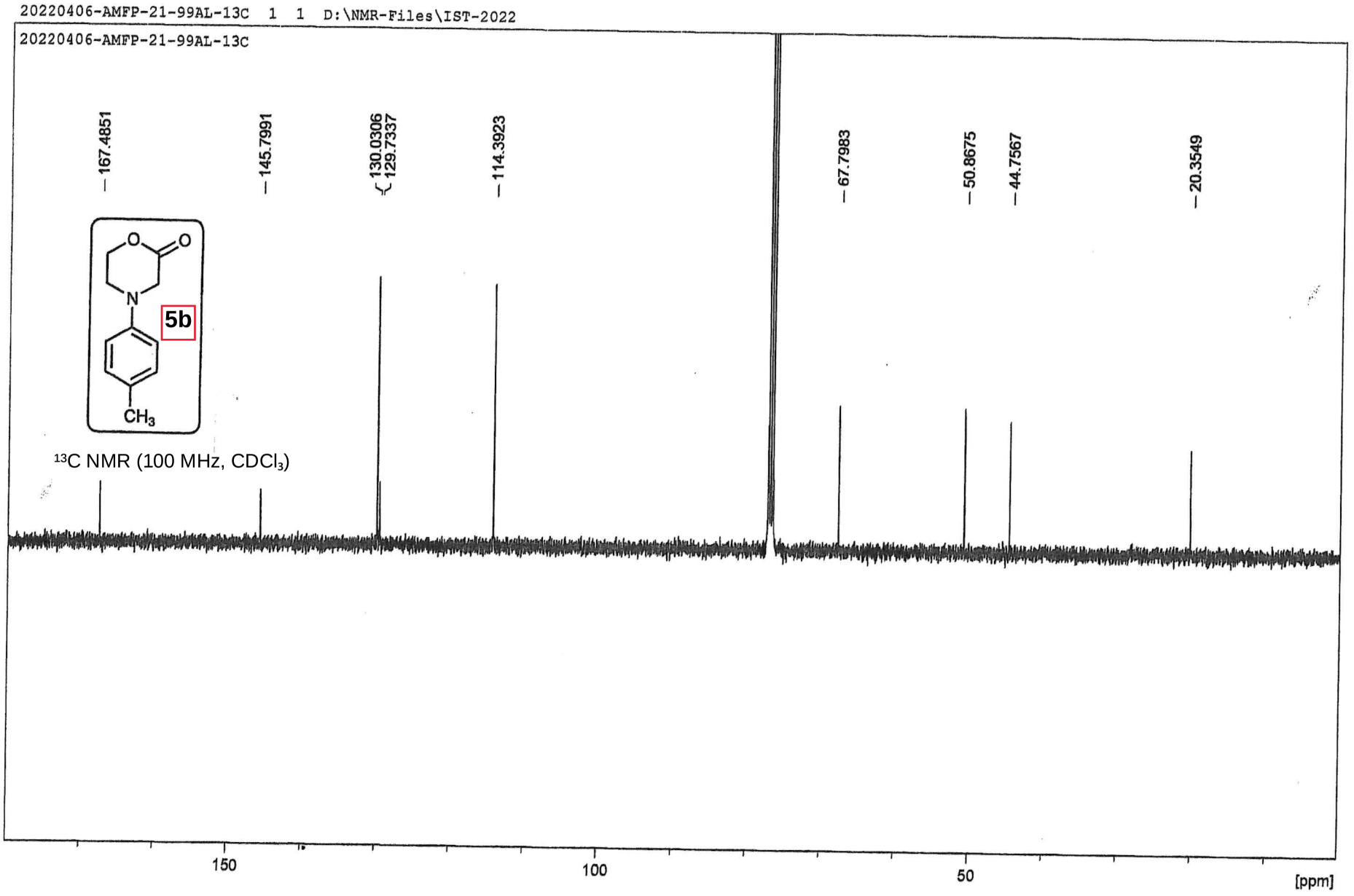
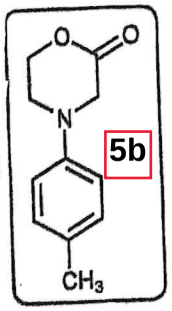
0.9607
0.9628
0.9748
1.0177
1.5619
8
6
4
2
[ppm]


20220406-AMFP-21-99AL-13C 1 1 D:\NMR-Files\IST-2022
20220406-AMFP-21-99AL-13C
167.4851
145.7991
130.0306
129.7337
114.3923
67.7983
50.8675
44.7567
20.3549
5b
^{13}C NMR (100 MHz, $CDCl_3$)
150
100
50
[ppm]

20220406-AMFP-21-99AL 1 1 D:\NMR-Files\IST-2022

20220406-AMFP-21-99AL



DEPT-135 NMR (100 MHz, $CDCl_3$)