

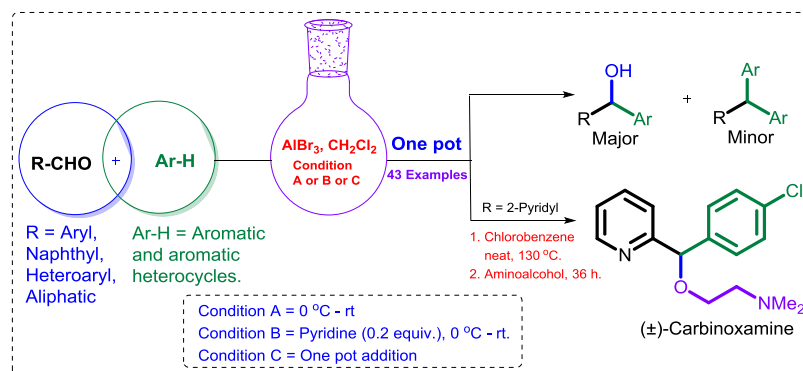
Electronic Supplementary Information

Cooperative effect of Lewis pair in Friedel-Crafts hydroxyalkylation reaction: A simple and effective route for the synthesis of (±)-carbinoxamine

Adhikesavan Harikrishnan, Jayakumar Sanjeevi and Chinnasamy Ramaraj Ramanathan*

Department of Chemistry, Pondicherry University, Puducherry – 605 014, India.

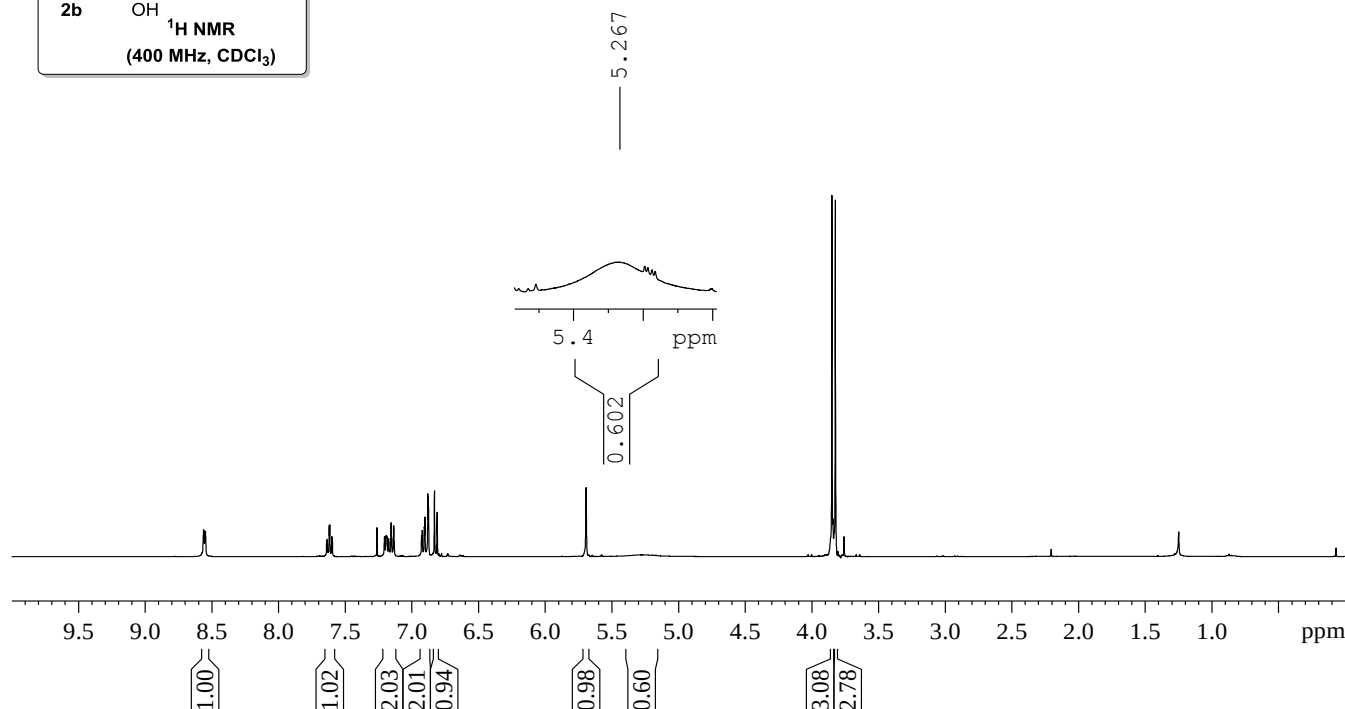
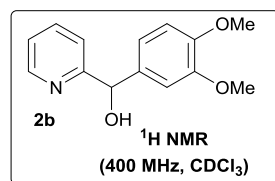
E-mail: crnath.che@pondiuni.edu.in



PROTON CDC13 {D:\CRR} KOPAL 1

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7.631
7.616
7.612
7.597
7.593
7.260
7.203
7.191
7.186
7.172
7.154
7.135
6.926
6.921
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6.901
6.878
6.873
6.829
6.809
5.692
5.267

3.848
3.822



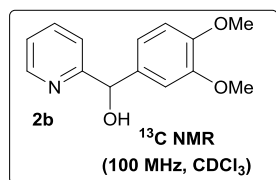
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EXPNO 1
PROCNO 1

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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 294.3 K
D1 1.00000000 sec
TD0 1

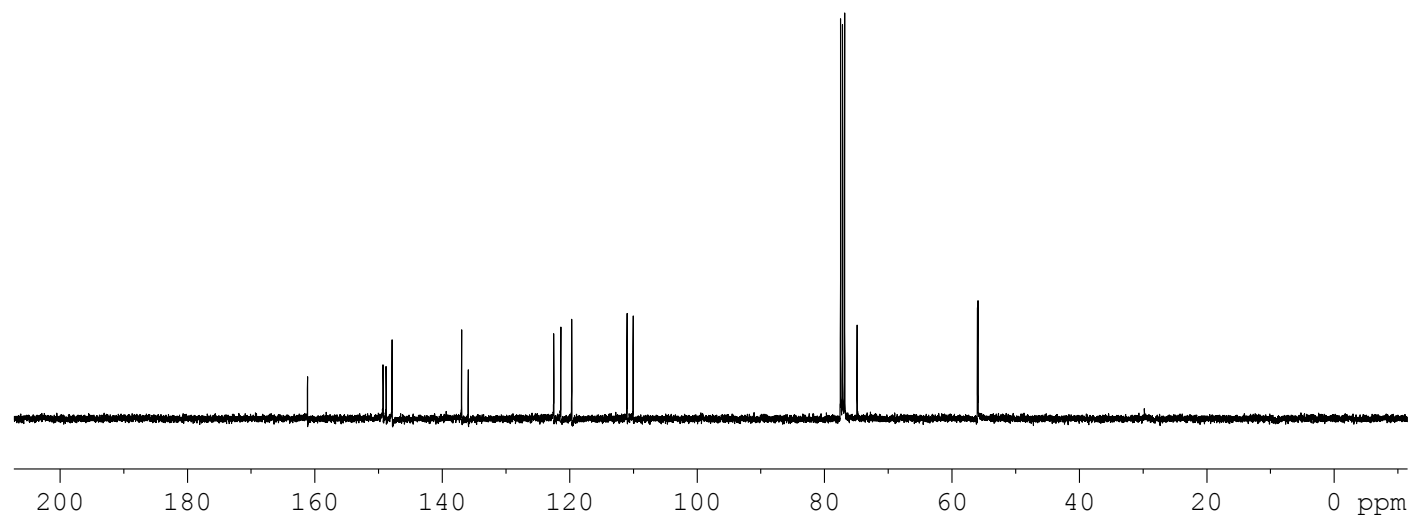
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P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

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SF 400.1300050 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



161.16
149.29
148.82
147.87
136.96
135.92
122.50
121.39
119.68
111.00
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55.92



Current Data Parameters
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EXPNO 2
PROCNO 1

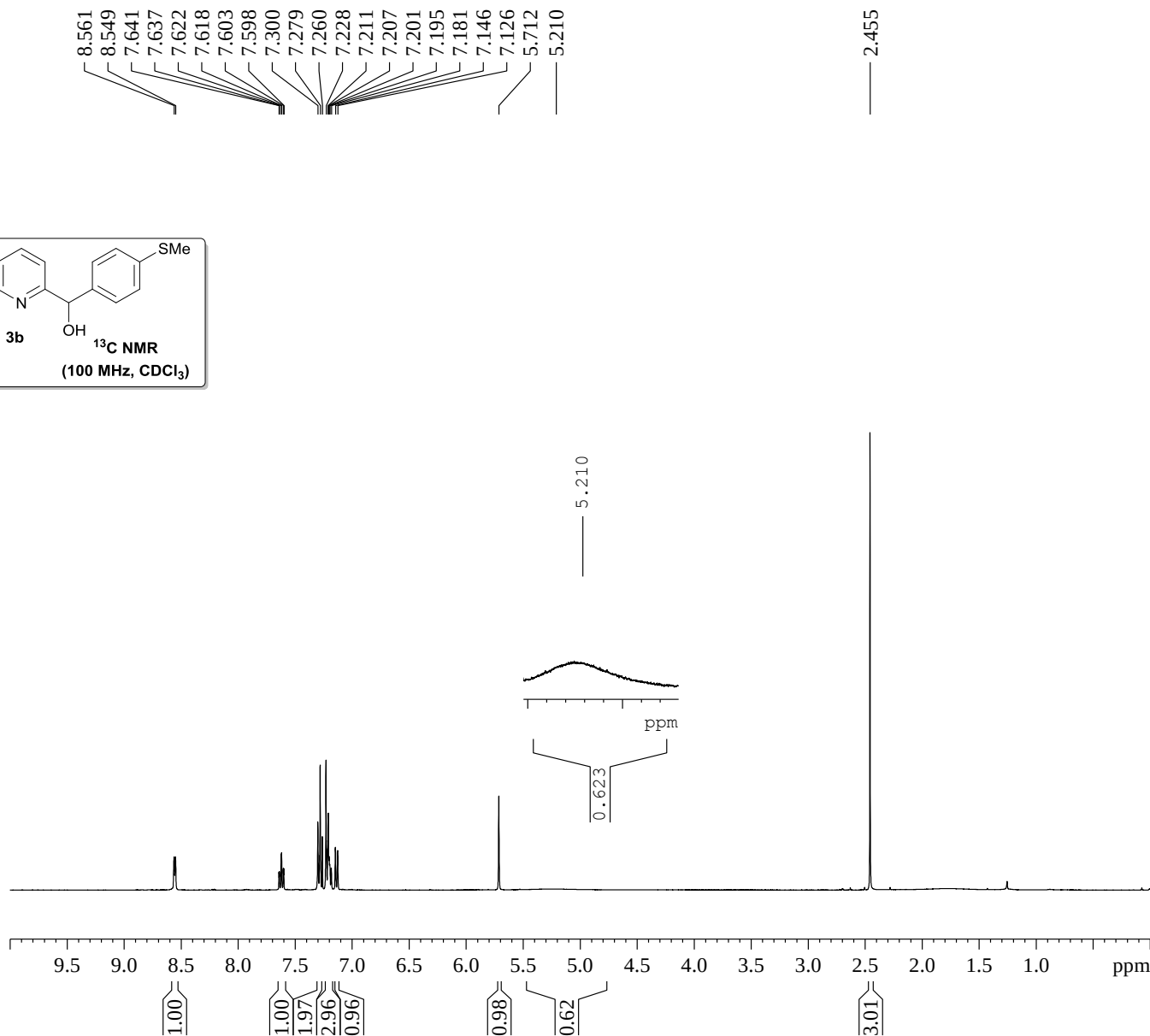
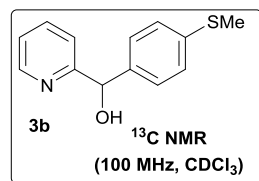
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TD 65536
SOLVENT CDC13
NS 165
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 50.8
DW 20.800 usec
DE 6.00 usec
TE 294.8 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
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SF 100.6127585 MHz
WDW EM
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LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



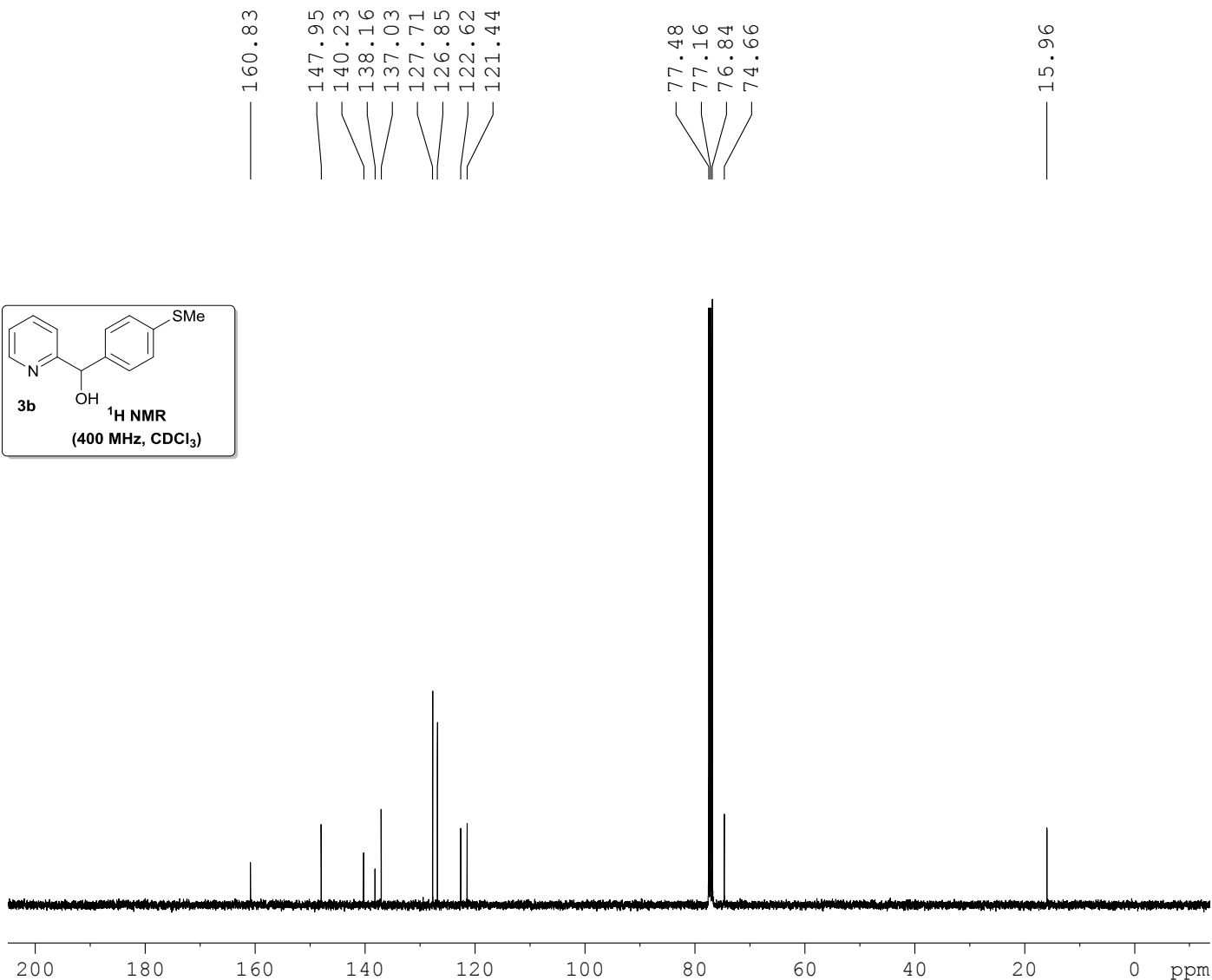
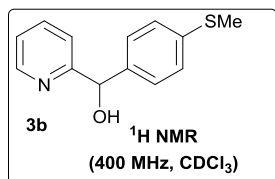
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 Time 15.01
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 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 287
 DW 60.800 usec
 DE 6.00 usec
 TE 294.0 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 14.50 usec
 PL1 -0.90 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300058 MHz
 WDW EM
 SSB 0
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C13CPD CDC13 {D:\CRR} KOPAL 1



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 PROCNO 1

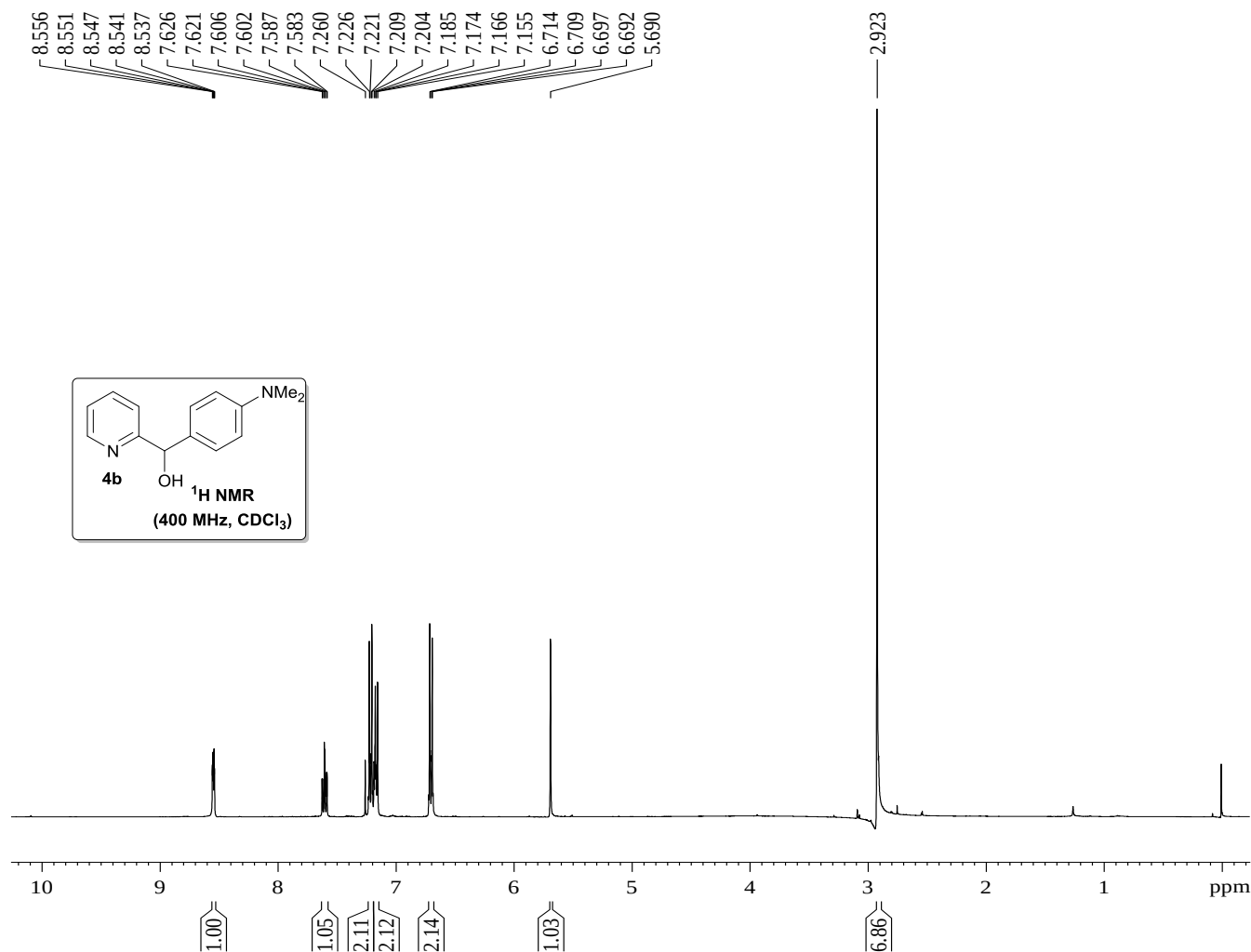
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 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 575
 DW 20.800 usec
 DE 6.00 usec
 TE 294.2 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.96 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
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 WDW EM
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 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



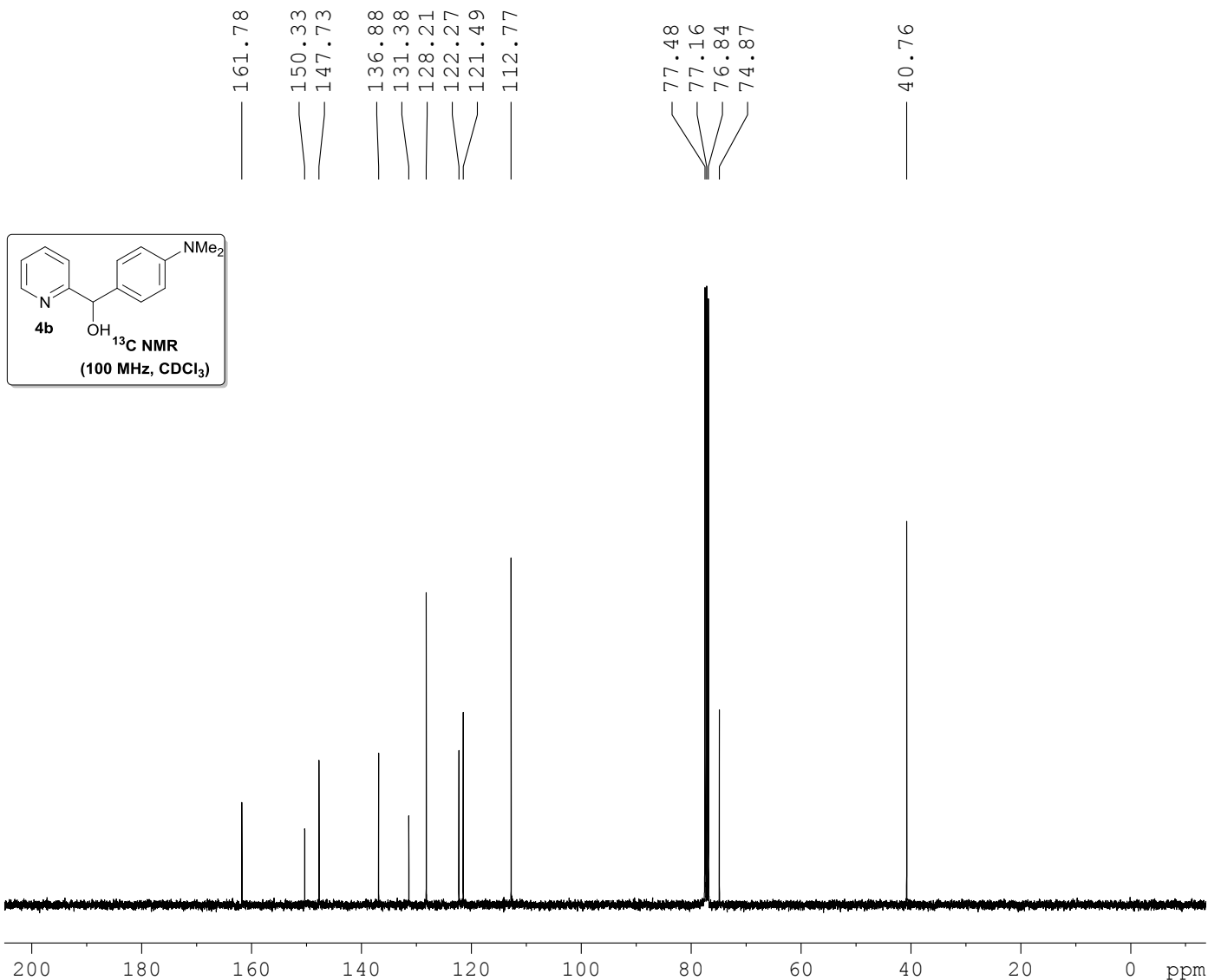
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 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 114
 DW 60.800 usec
 DE 6.00 usec
 TE 296.0 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300046 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-360B
EXPNO 2
PROCNO 1

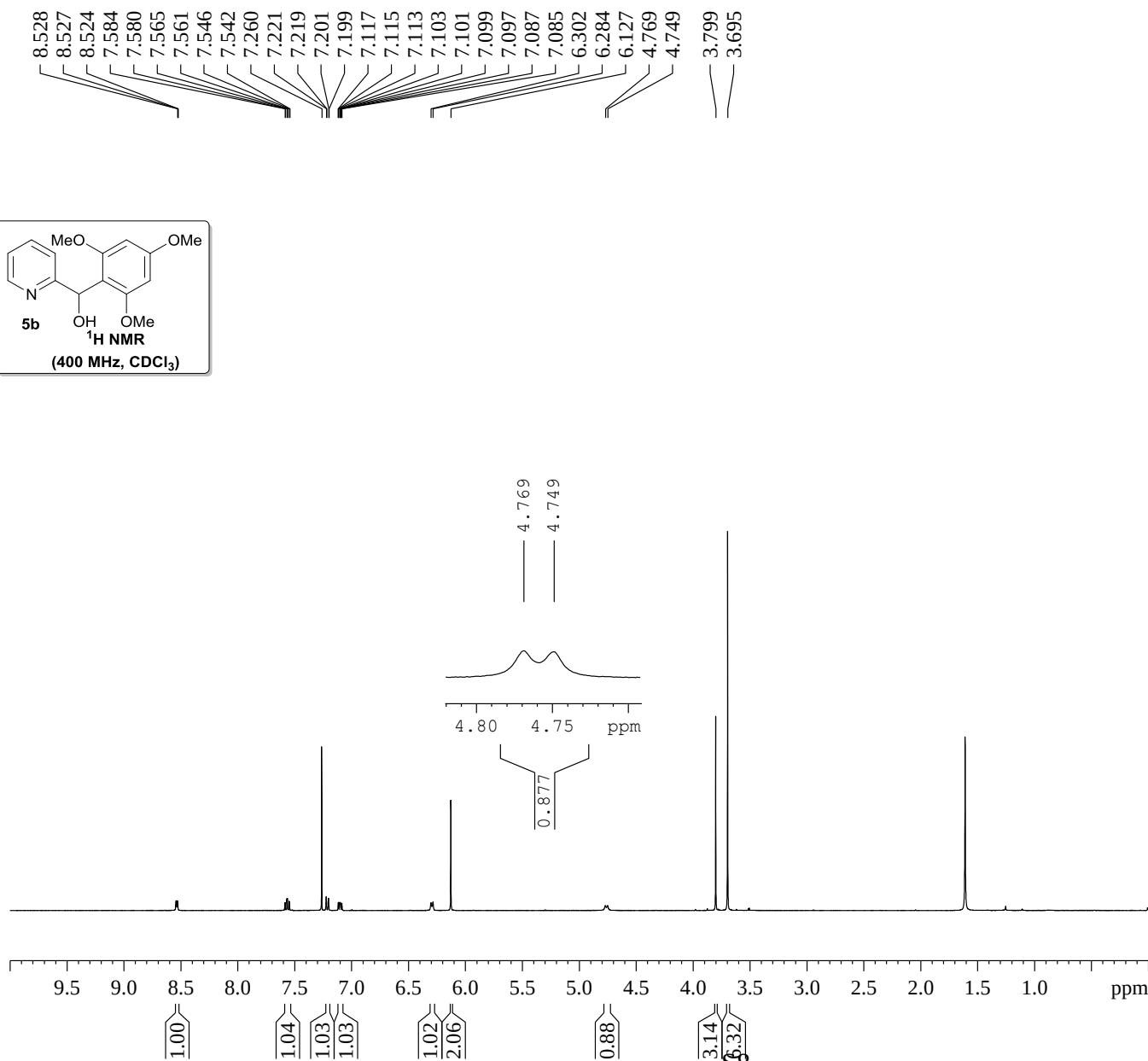
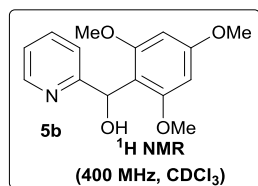
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PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 64
DW 20.800 usec
DE 6.00 usec
TE 296.2 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127575 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



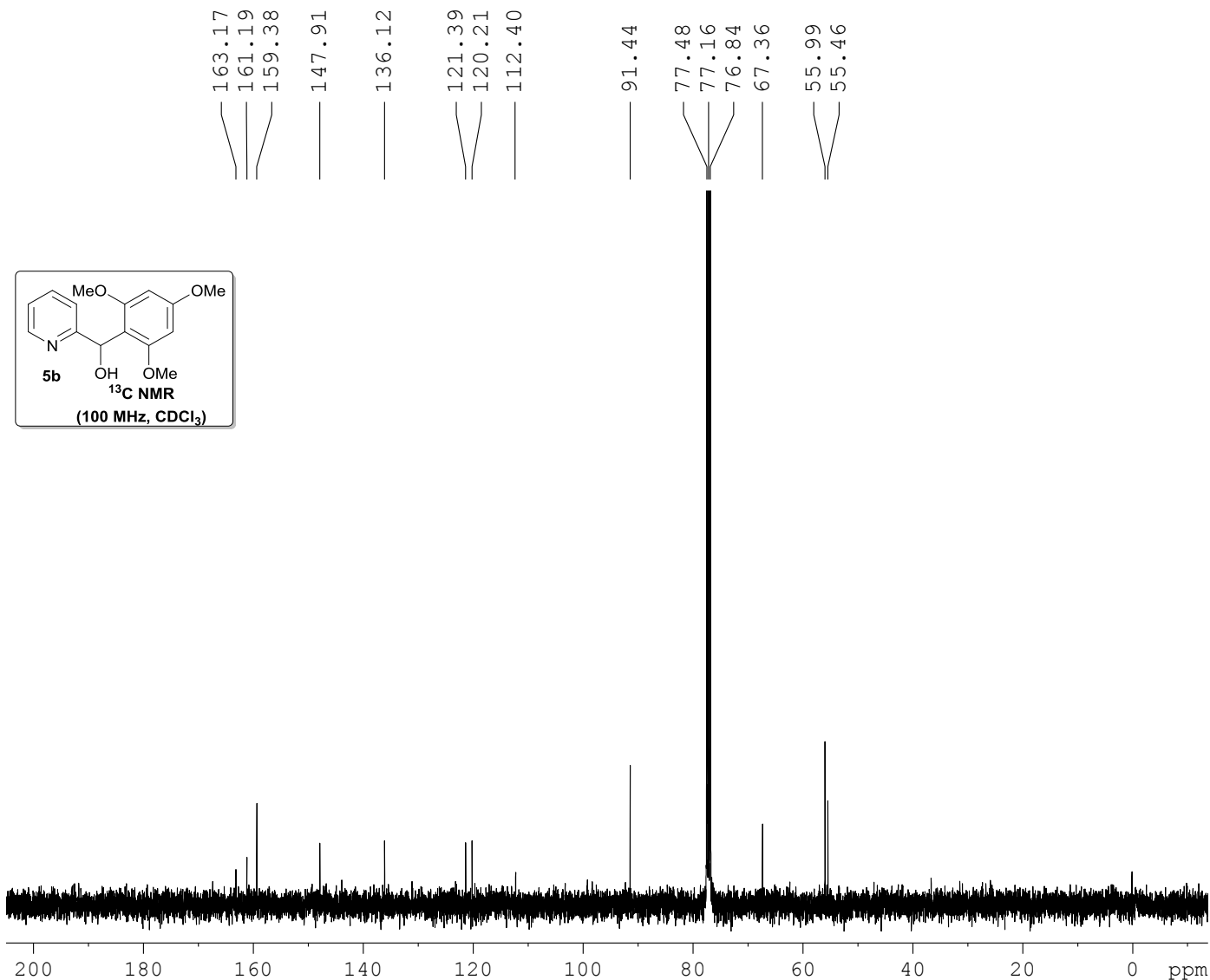
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EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
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Time 12.18
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 228
DW 60.800 usec
DE 6.00 usec
TE 295.7 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300048 MHz
WDW EM
SSB 0
LB 0.30 Hz
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PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-362-B
EXPNO 2
PROCNO 1

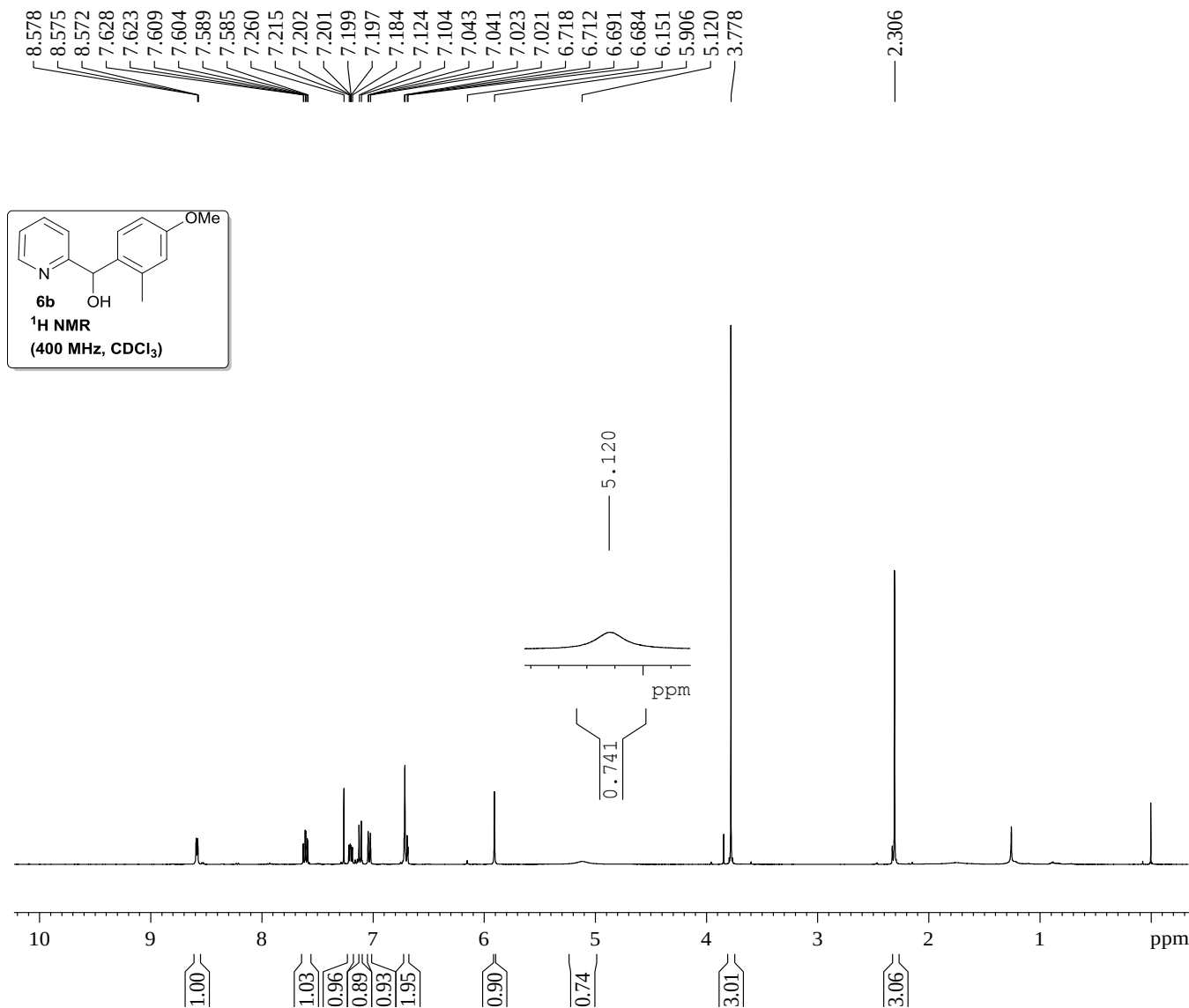
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Time_ 12.58
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PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 45.2
DW 20.800 usec
DE 6.00 usec
TE 296.4 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
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SF 100.6127532 MHz
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SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



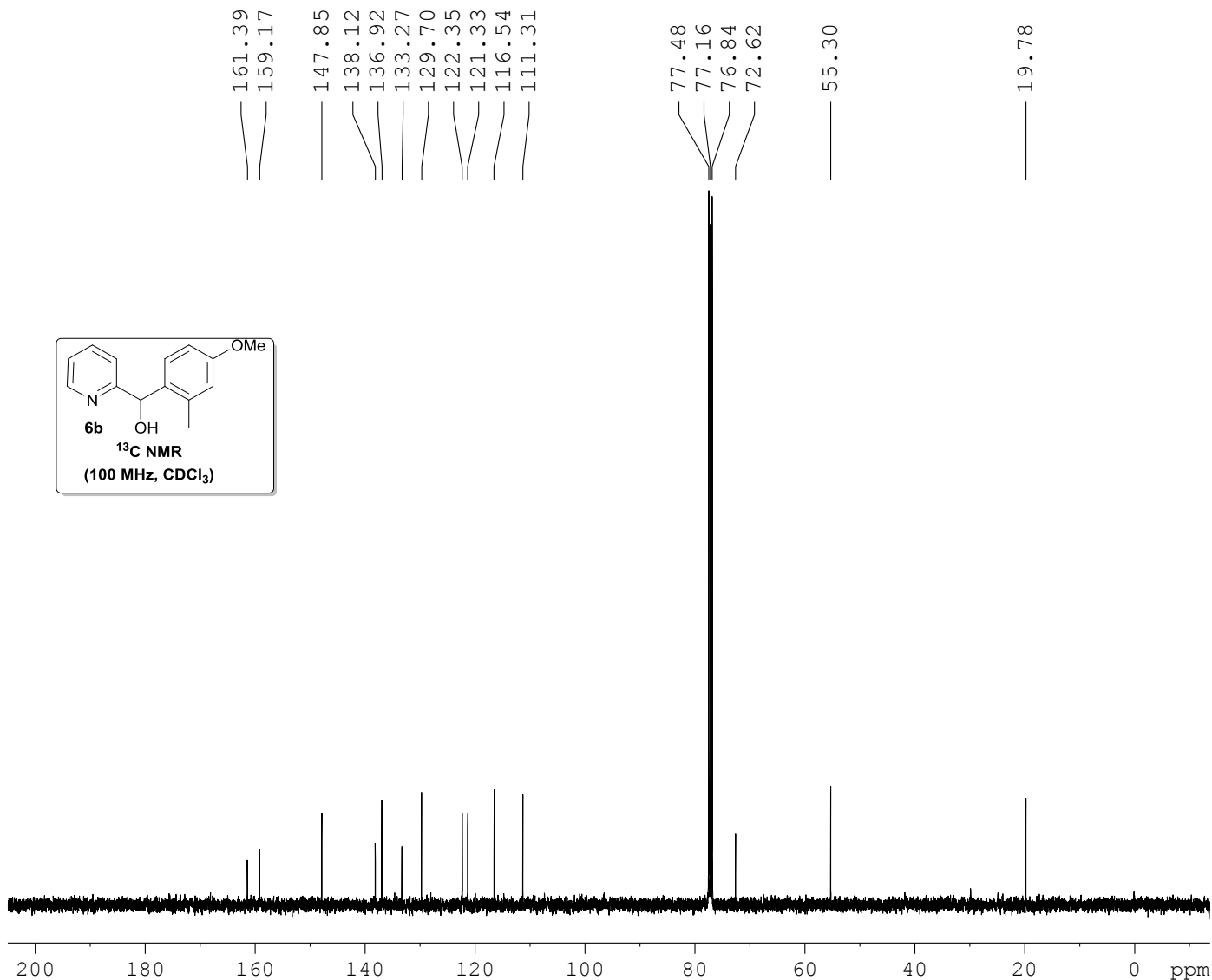
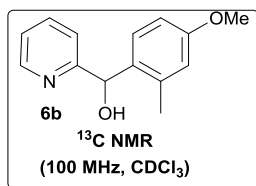
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EXPNO 1
PROCNO 1

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Time 12.18
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PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 287
DW 60.800 usec
DE 6.00 usec
TE 293.3 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300056 MHz
WDW EM
SSB 0
LB 0.30 Hz
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PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-422B
 EXPNO 2
 PROCNO 1

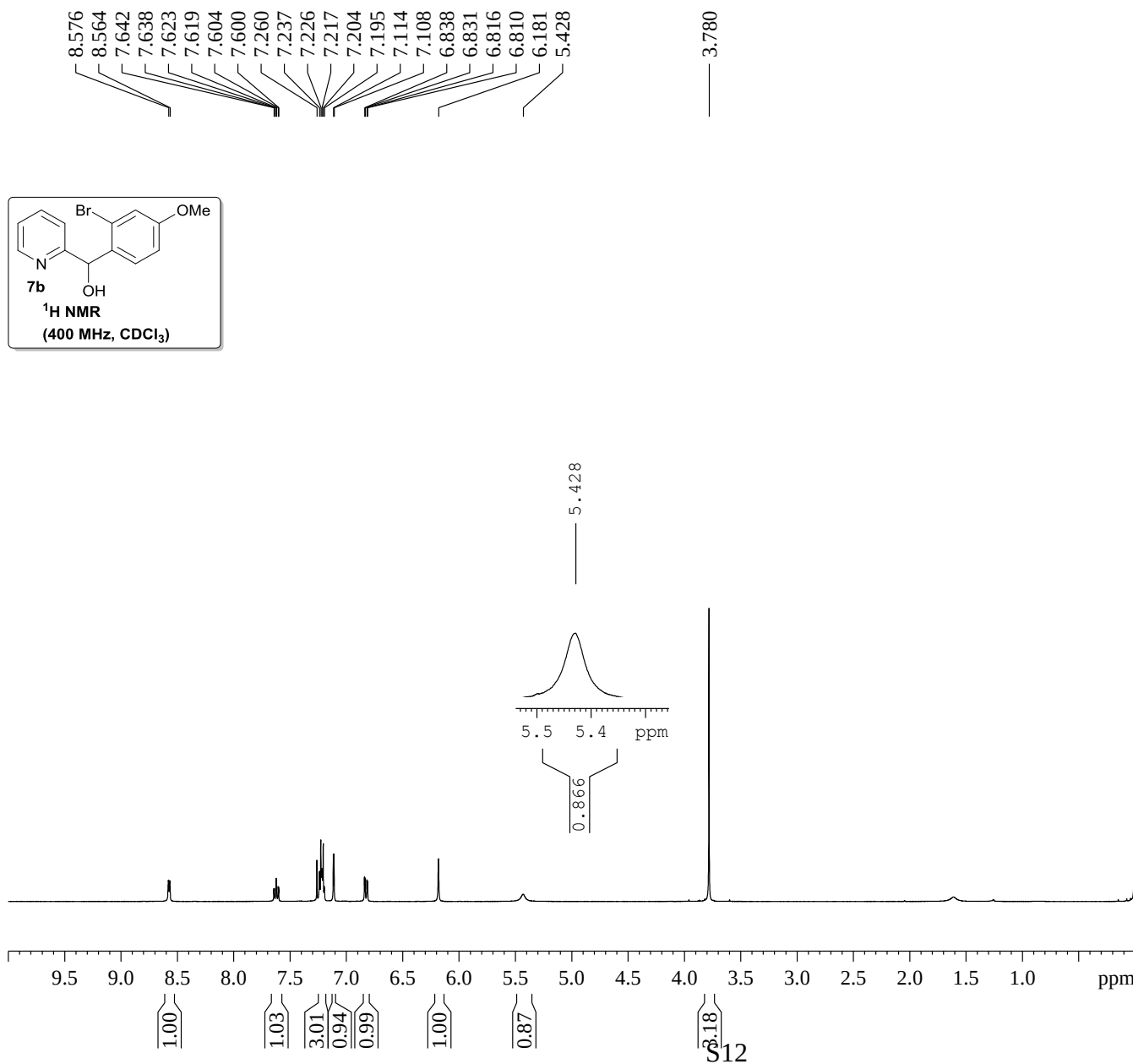
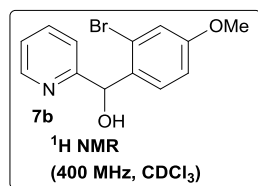
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 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 45.2
 DW 20.800 usec
 DE 6.00 usec
 TE 294.5 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.96 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127556 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



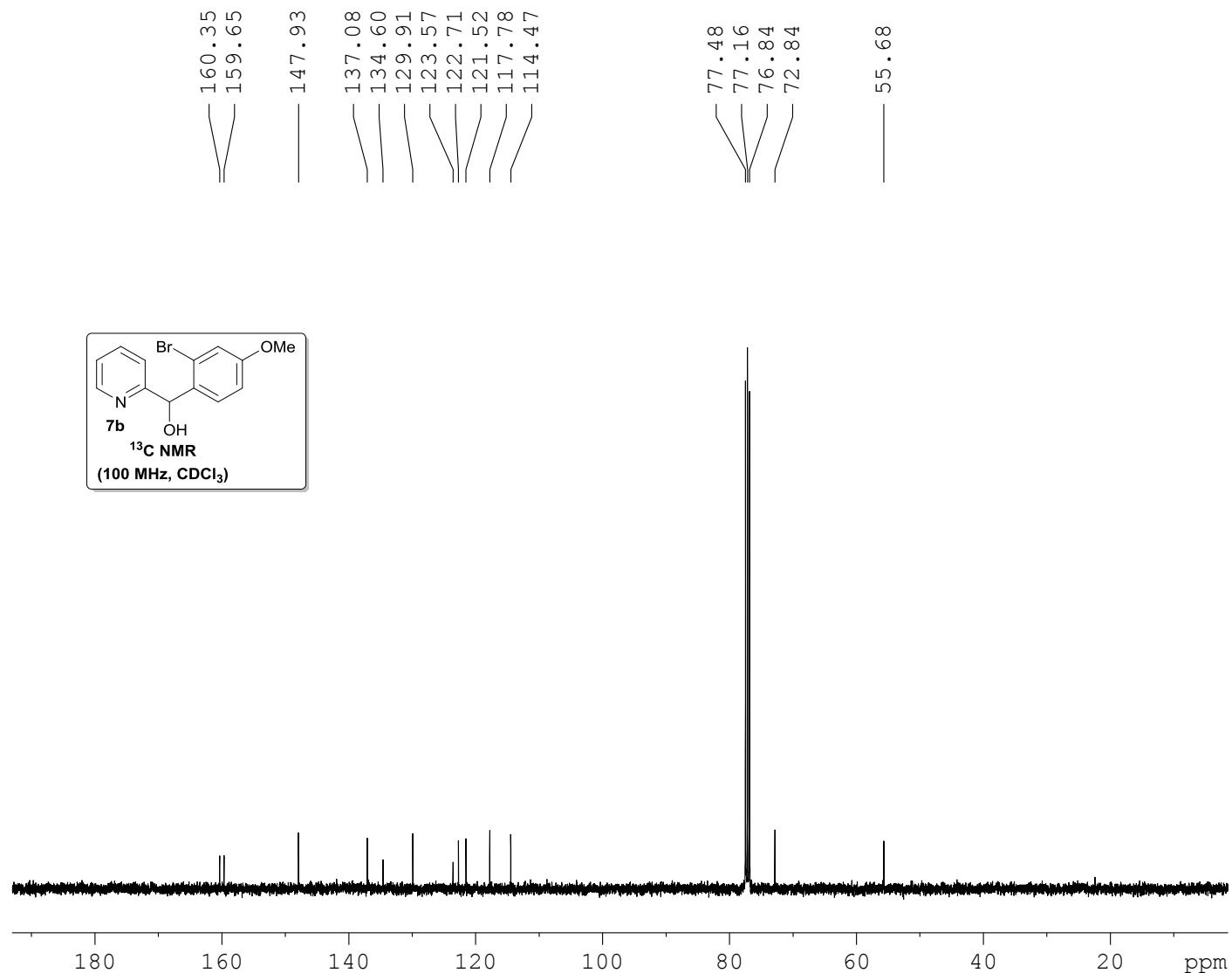
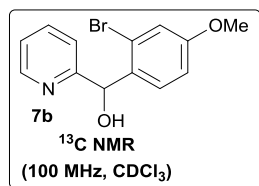
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EXPNO 1
PROCNO 1

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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 406
DW 60.800 usec
DE 6.00 usec
TE 296.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300037 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
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C13CPD CDC13 {D:\CRR} KOPAL 1



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Current Data Parameters
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EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
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Time      11.08
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        256
DS        4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG        1150
DW        20.800 usec
DE        6.00 usec
TE        296.7 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999998 sec
TD0       1

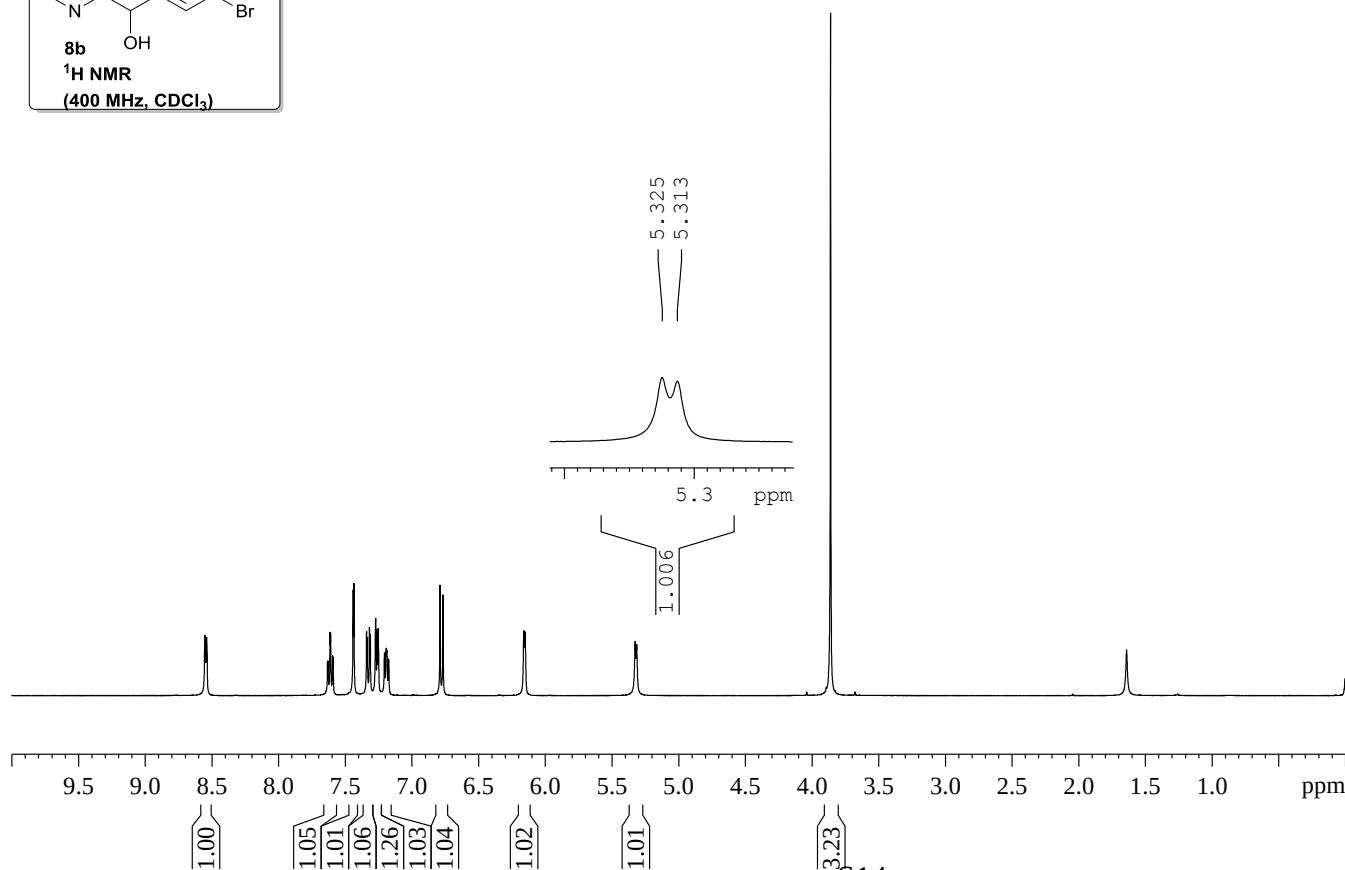
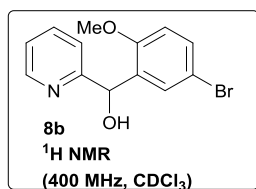
===== CHANNEL f1 =====
NUC1      13C
P1        9.50 usec
PL1       -0.60 dB
SFO1     100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      15.60 dB
PL13      15.60 dB
PL2       -0.90 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127532 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
  
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PROTON CDCl3 {D:\CRR} KOPAL 1

8.548
8.537
7.632
7.628
7.613
7.609
7.594
7.590
7.440
7.434
7.339
7.333
7.317
7.311
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7.260
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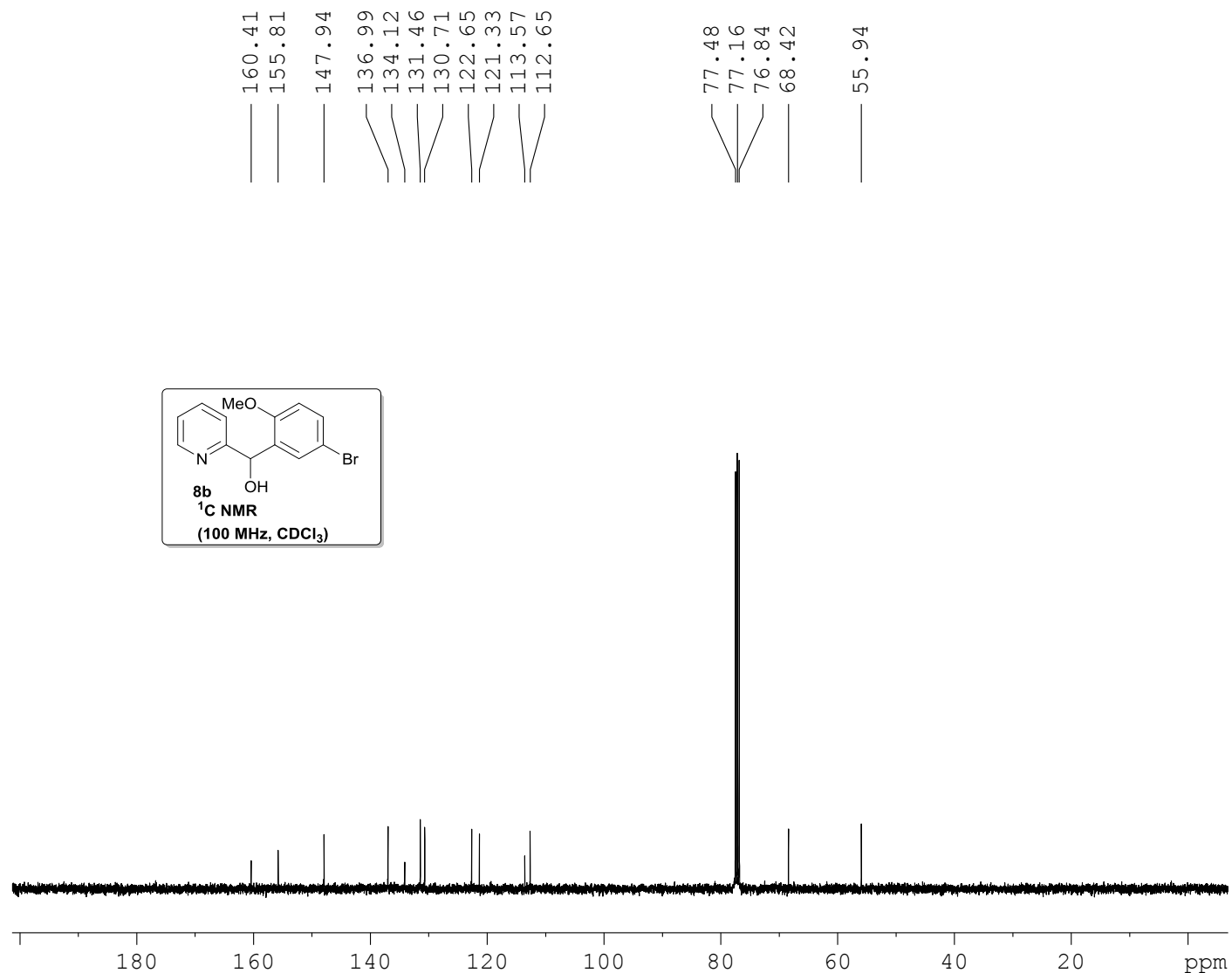
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EXPNO 1
PROCNO 1

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Time_ 11.43
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PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 256
DW 60.800 usec
DE 6.00 usec
TE 295.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300034 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



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Current Data Parameters
NAME          AHK-106B
EXPNO         2
PROCNO        1

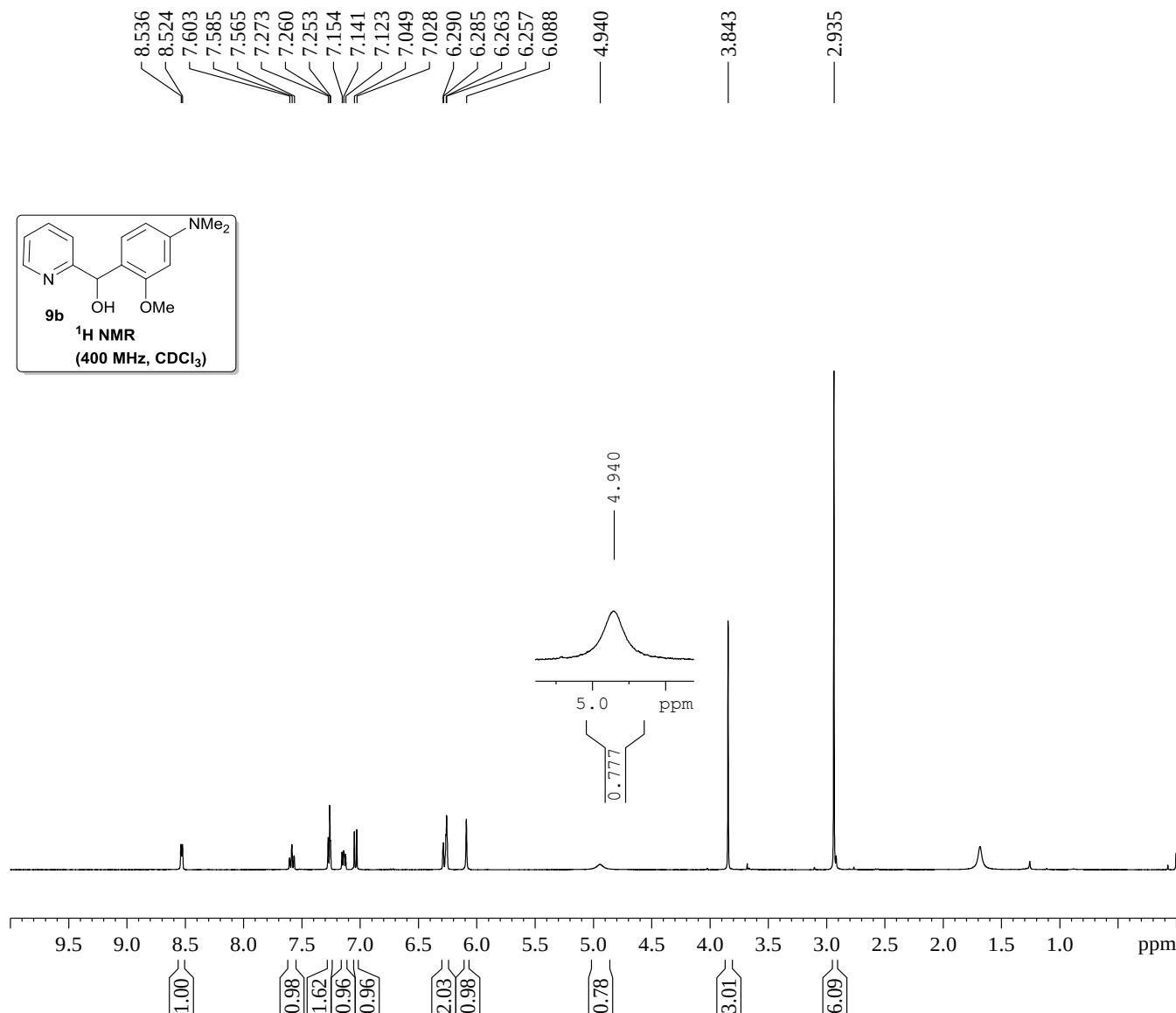
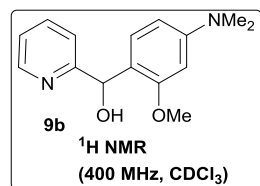
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Time_         11.51
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PROBHD        5 mm BBO BB-1H
PULPROG       zgpg30
TD            65536
SOLVENT       CDC13
NS            256
DS            4
SWH           24038.461 Hz
FIDRES        0.366798 Hz
AQ            1.3631988 sec
RG            1290
DW            20.800 usec
DE            6.00 usec
TE            295.9 K
D1            2.00000000 sec
d11           0.03000000 sec
DELTA         1.89999998 sec
TDO           1

===== CHANNEL f1 =====
NUC1          13C
P1            9.50 usec
PL1           -0.60 dB
SFO1          100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2       waltz16
NUC2          1H
PCPD2         90.00 usec
PL12          15.60 dB
PL13          15.60 dB
PL2           -0.90 dB
SFO2          400.1316005 MHz

F2 - Processing parameters
SI            32768
SF            100.6127545 MHz
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PROTON CDCl3 {D:\CRR} KOPAL 1



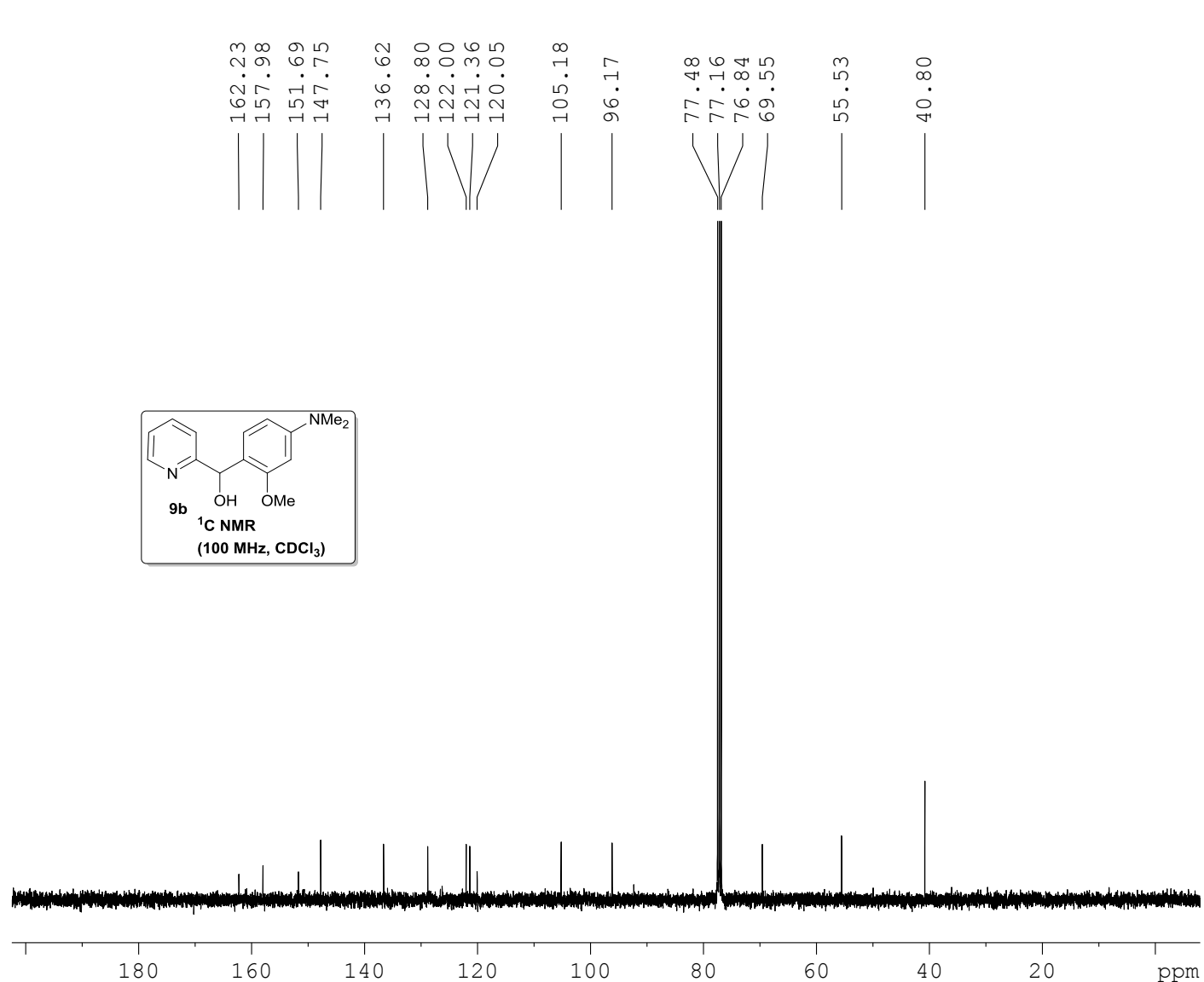
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 PROCNO 1

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 PROBHD 5 mm BBO BB-1H
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 645
 DW 60.800 usec
 DE 6.00 usec
 TE 297.6 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 14.50 usec
 PL1 -0.90 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300060 MHz
 WDW EM
 SSB 0
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C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-419B
 EXPNO 2
 PROCNO 1

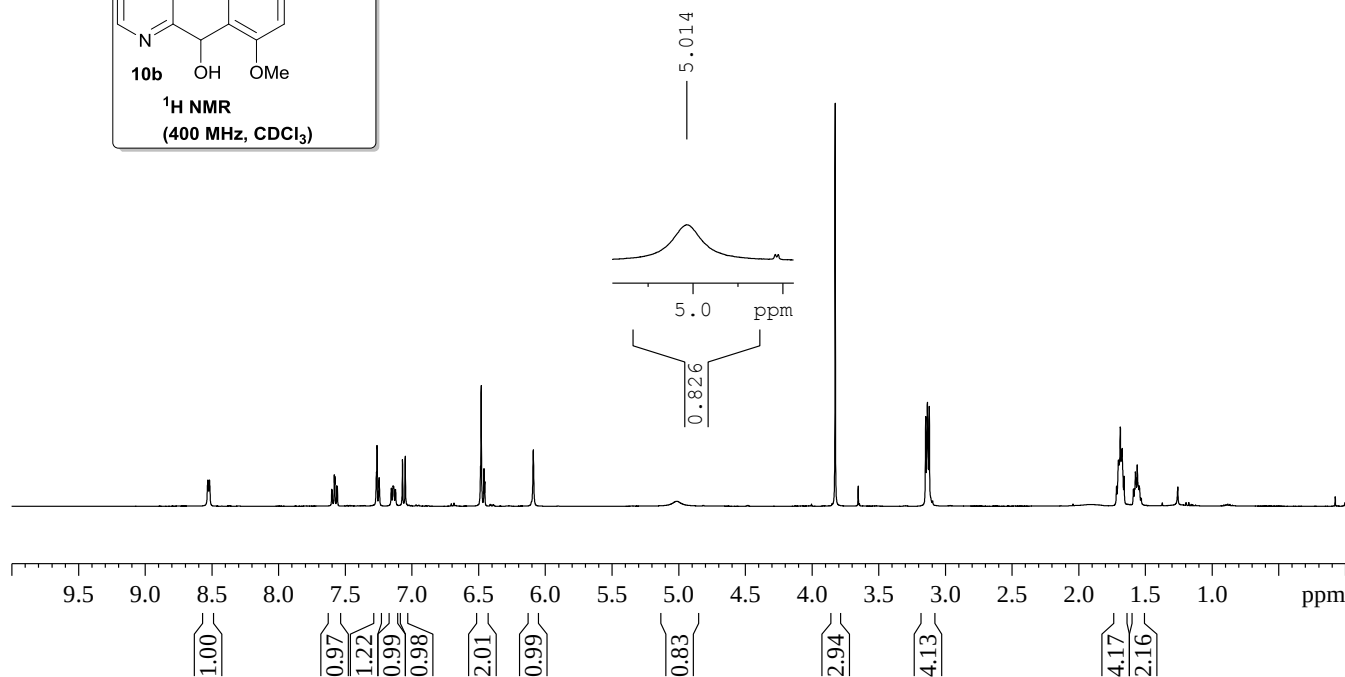
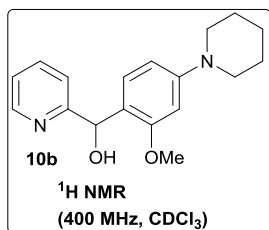
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 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
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 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 1150
 DW 20.800 usec
 DE 6.00 usec
 TE 297.7 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.96 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127541 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



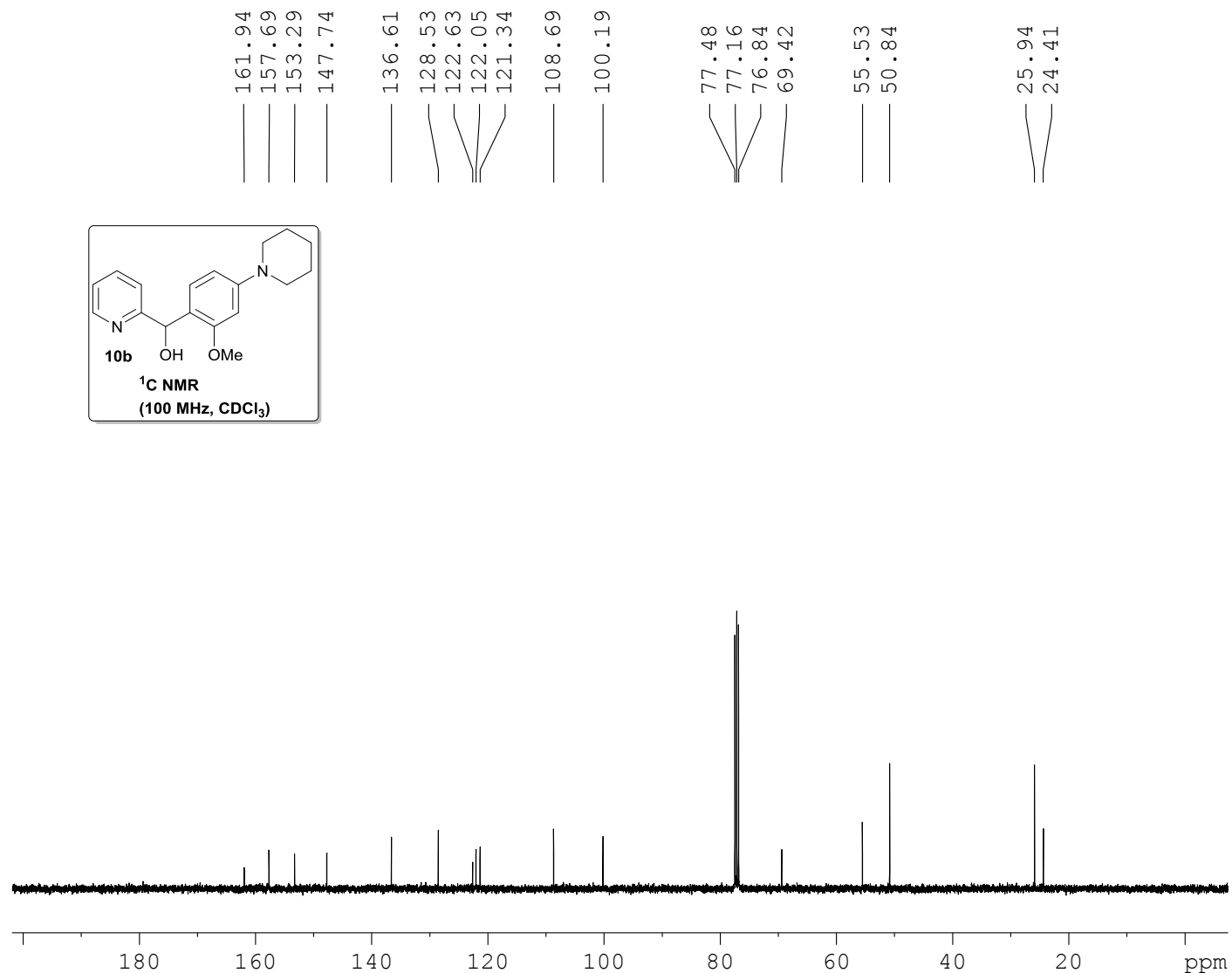
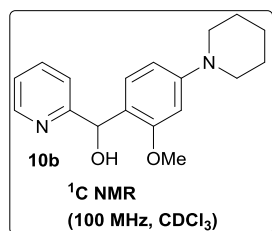
Current Data Parameters
NAME AHK-I-454 B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131028
Time 12.46
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 144
DW 60.800 usec
DE 6.00 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300060 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-454 B
EXPNO     2
PROCNO    1

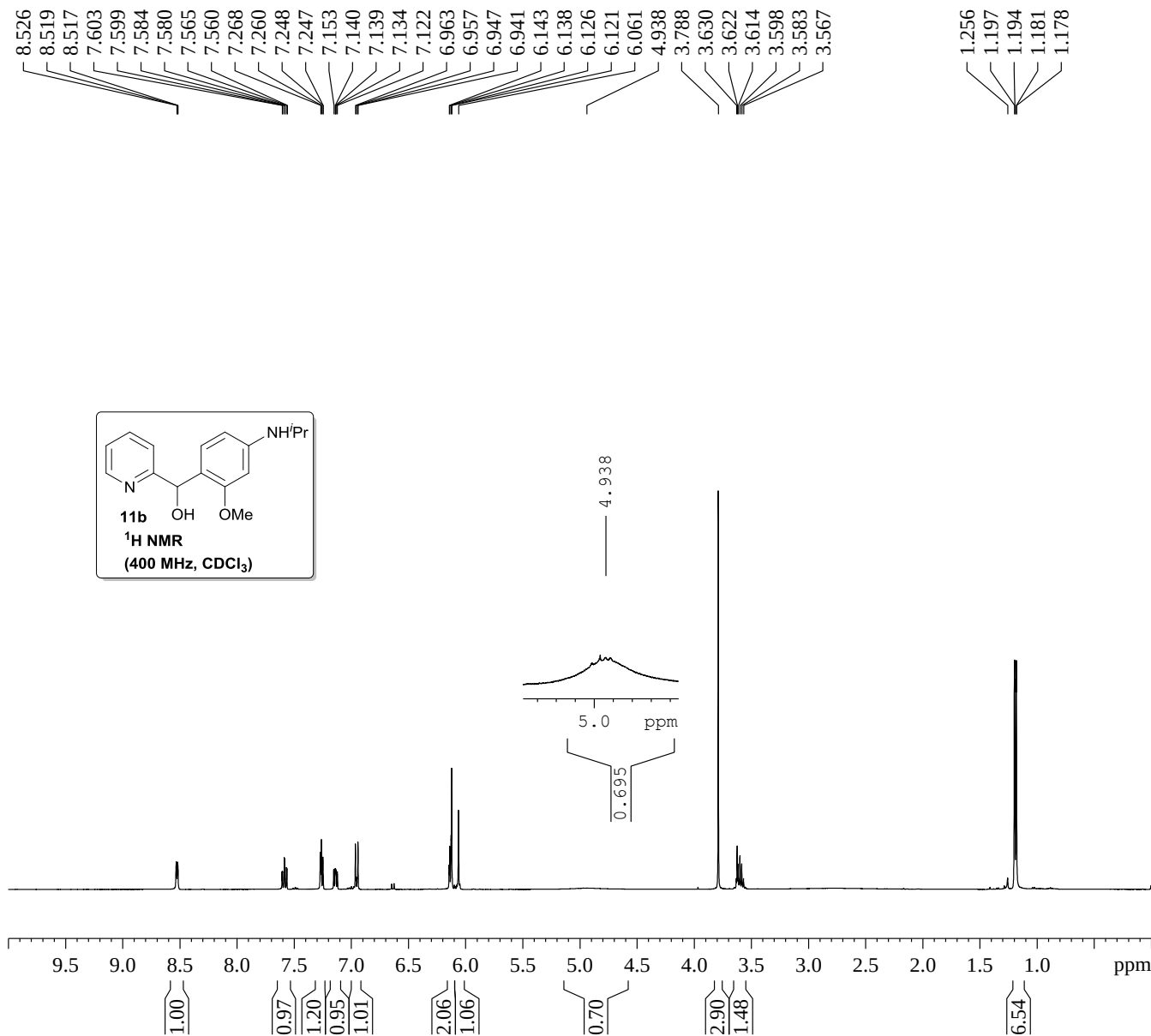
F2 - Acquisition Parameters
Date_     20131028
Time      12.51
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        101
DS        4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG        1030
DW        20.800 usec
DE        6.00 usec
TE        296.0 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999998 sec
TD0       1

===== CHANNEL f1 =====
NUC1      13C
P1        9.50 usec
PL1       -0.60 dB
SFO1     100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      14.96 dB
PL13      15.60 dB
PL2       -0.90 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127580 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
  
```

PROTON CDC13 {D:\CRR} KOPAL 1



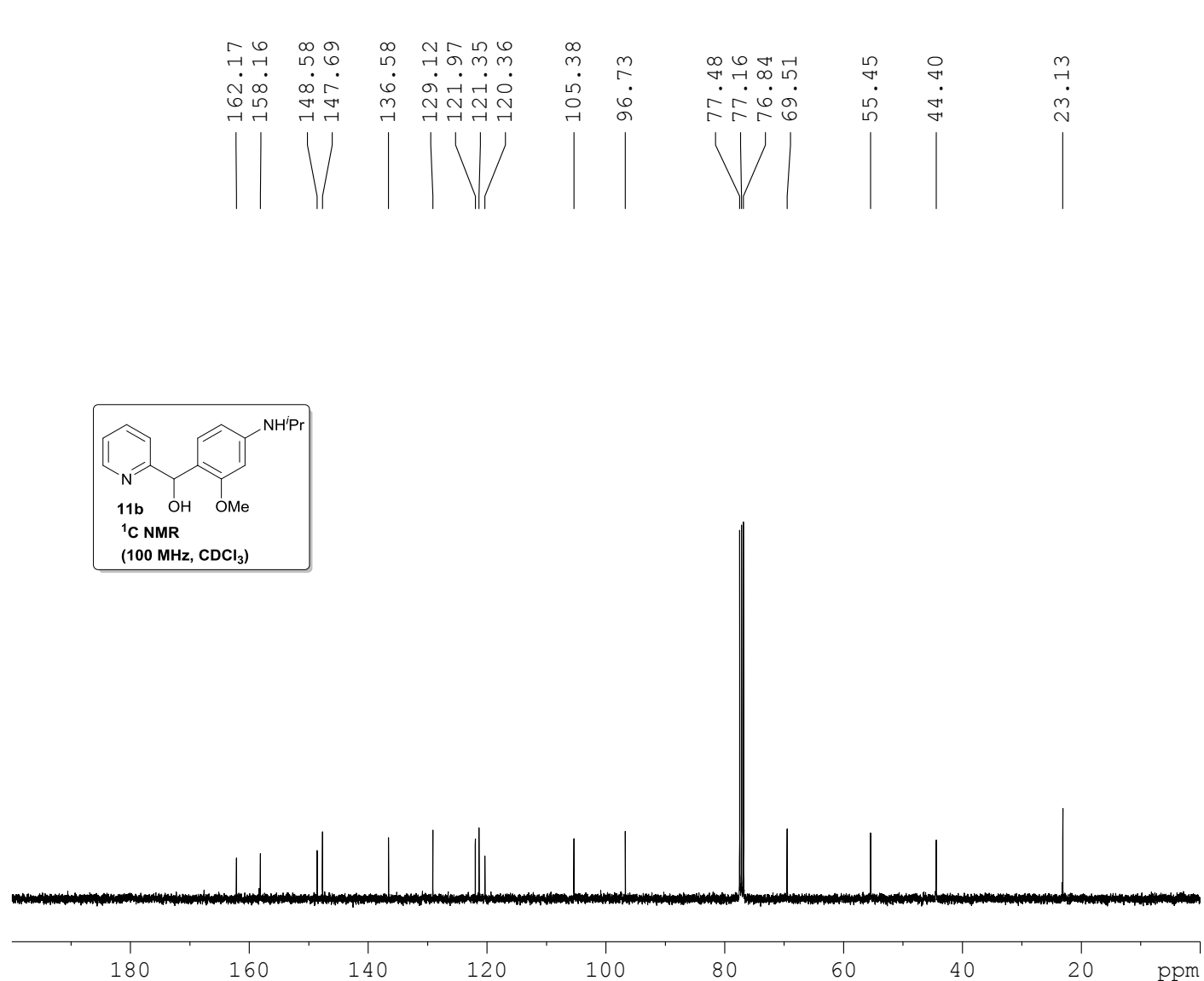
Current Data Parameters
 NAME AHK-I-460B
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20131218
 Time_ 13.35
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 181
 DW 60.800 usec
 DE 6.00 usec
 TE 295.3 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 14.50 usec
 PL1 -0.90 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300058 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-460B
EXPNO     2
PROCNO    1

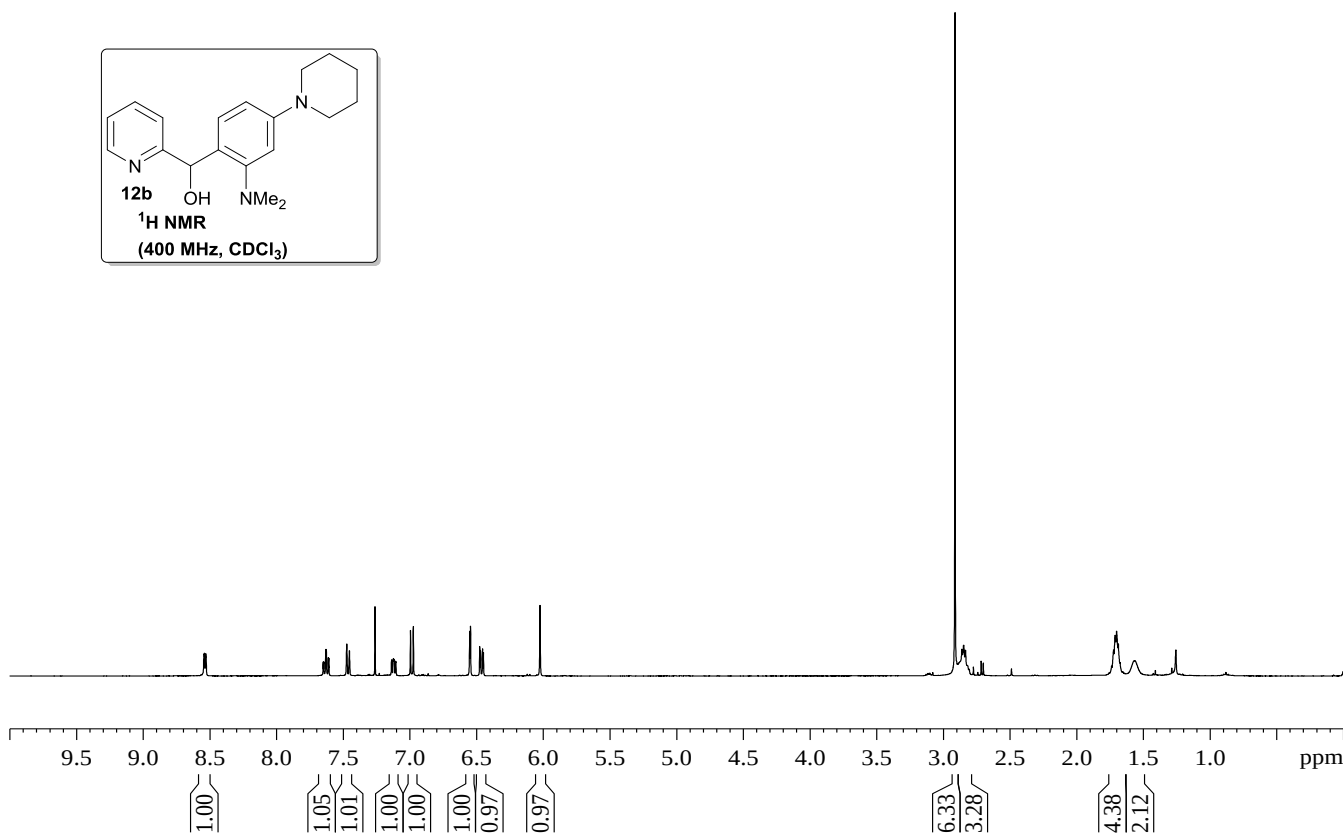
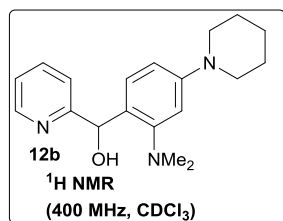
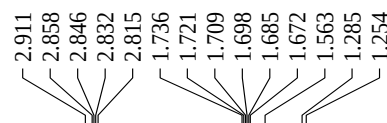
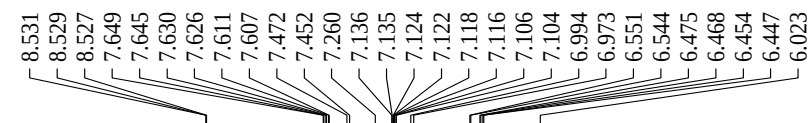
F2 - Acquisition Parameters
Date_     20131218
Time      13.39
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        101
DS         4
SWH        24038.461 Hz
FIDRES     0.366798 Hz
AQ         1.3631988 sec
RG         1290
DW         20.800 usec
DE         6.00 usec
TE         295.7 K
D1         2.00000000 sec
d11        0.03000000 sec
DELTA     1.89999998 sec
TDO        1

===== CHANNEL f1 =====
NUC1       13C
P1         9.50 usec
PL1        -0.60 dB
SFO1       100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      90.00 usec
PL12       14.96 dB
PL13       15.60 dB
PL2        -0.90 dB
SFO2       400.1316005 MHz

F2 - Processing parameters
SI         32768
SF         100.6127580 MHz
WDW        EM
SSB        0
LB         1.00 Hz
GB         0
PC         1.40
  
```

PROTON CDC13 {D:\CRR} KOPAL 1



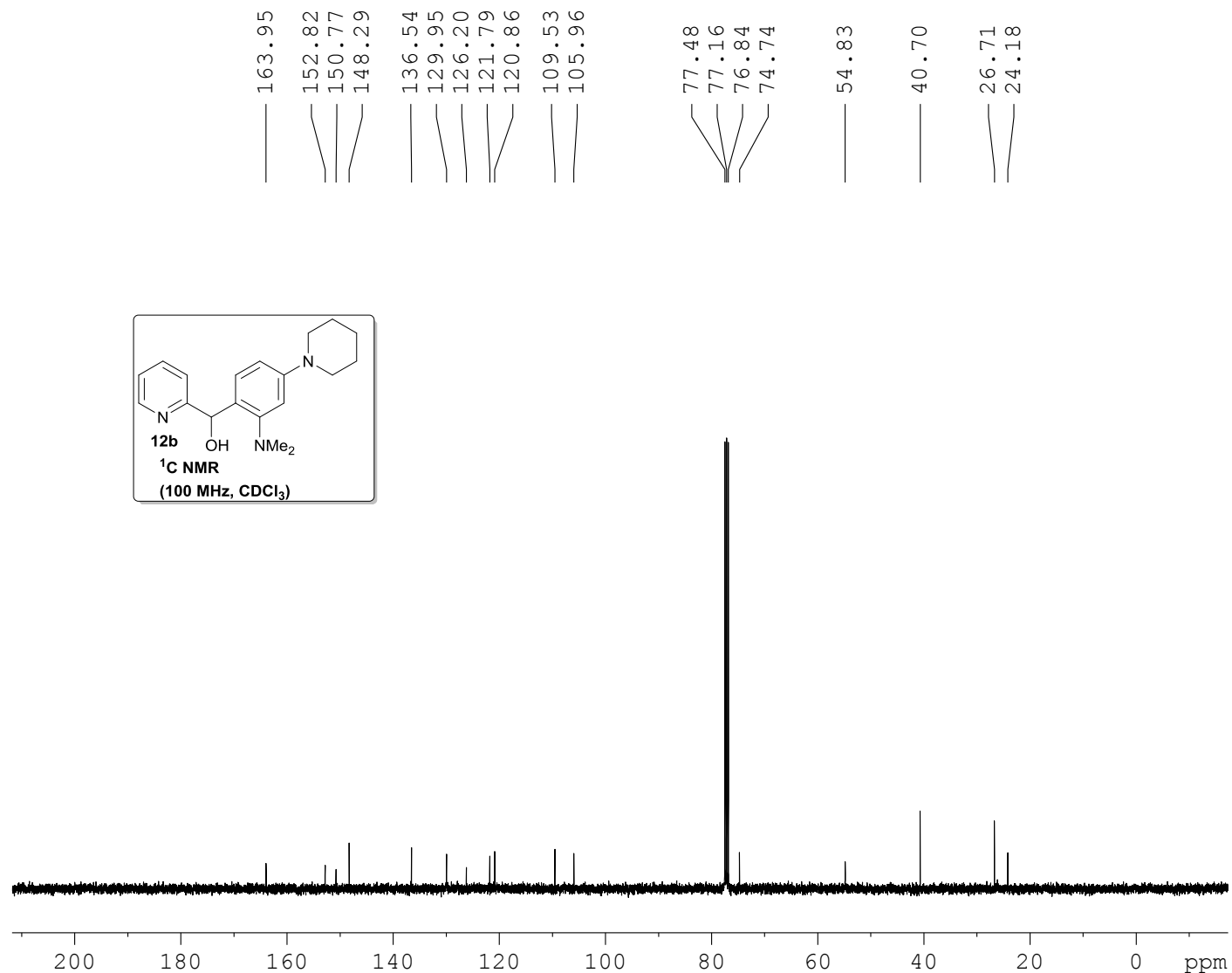
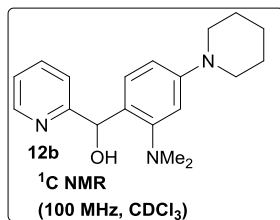
Current Data Parameters
NAME AHK-I-456 B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131218
Time 13.51
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 228
DW 60.800 usec
DE 6.00 usec
TE 295.3 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300058 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-456 B
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131218
Time_ 13.58
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 123
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 812
DW 20.800 usec
DE 6.00 usec
TE 295.7 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

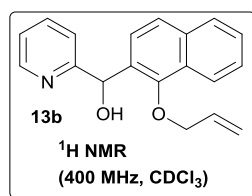
===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.96 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127554 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.641
8.629
8.375
8.368
8.352
8.038
8.021
8.016
7.559
7.540
7.520
7.453
7.442
7.432
7.361
7.341
7.261
7.212
7.198
7.181
7.069
7.049
6.774
6.755
6.314
6.220
6.207
6.194
6.179
6.165
6.151
6.138
6.125
5.542
5.499
5.353
5.327
4.721
4.709

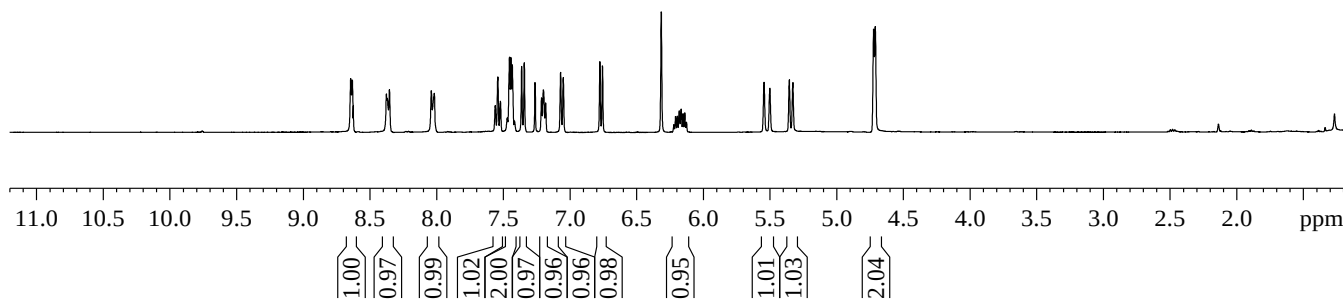


Current Data Parameters
NAME AHKP-I-ALLY-2
EXPNO 1
PROCNO 1

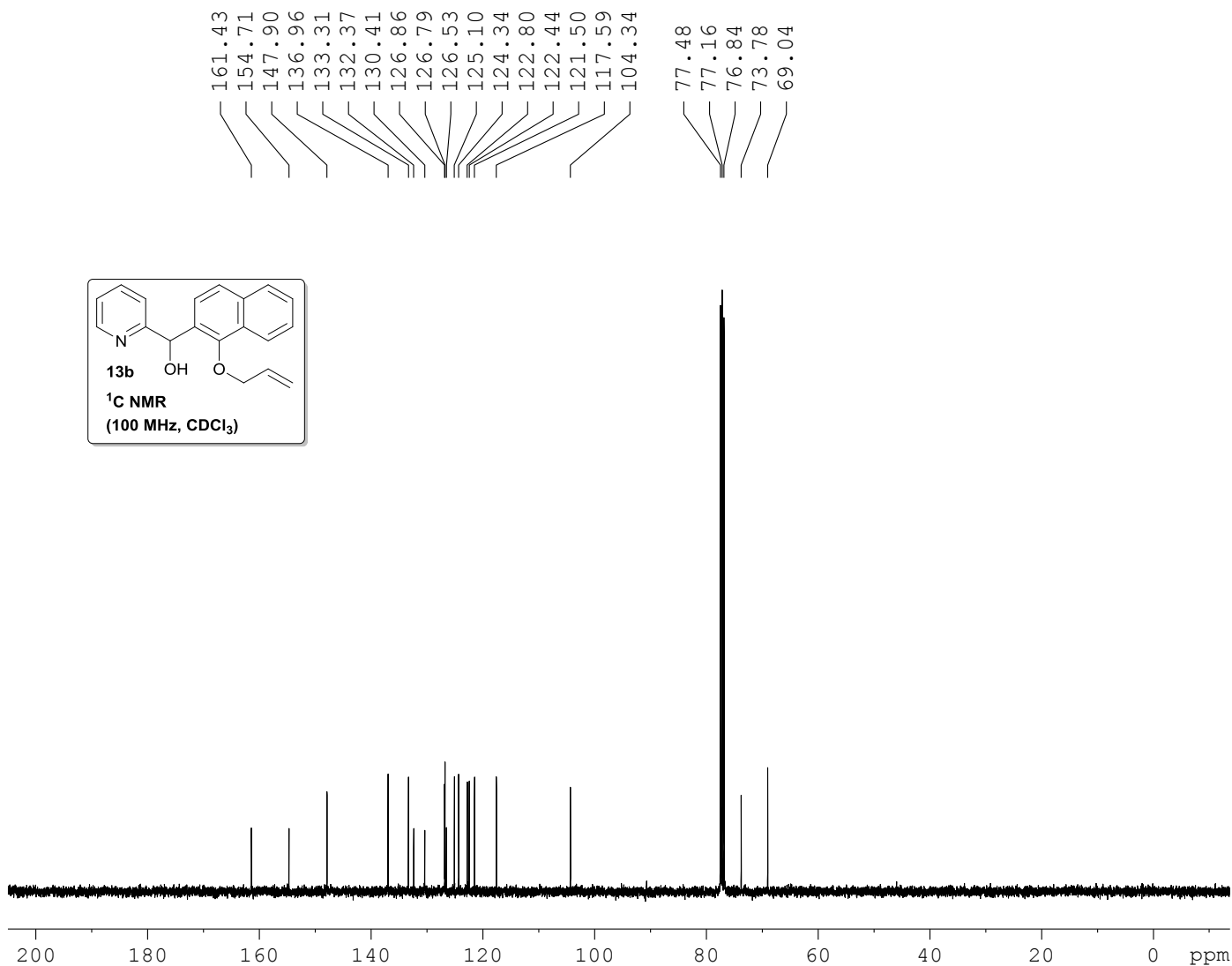
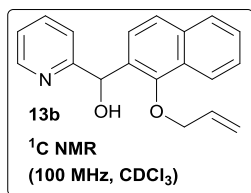
F2 - Acquisition Parameters
Date_ 20130319
Time_ 12.13
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 161
DW 60.800 usec
DE 6.00 usec
TE 294.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300043 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHKP-I-ALLY-2
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130319
Time_ 12.25
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 193
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 22.6
DW 20.800 usec
DE 6.00 usec
TE 295.2 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

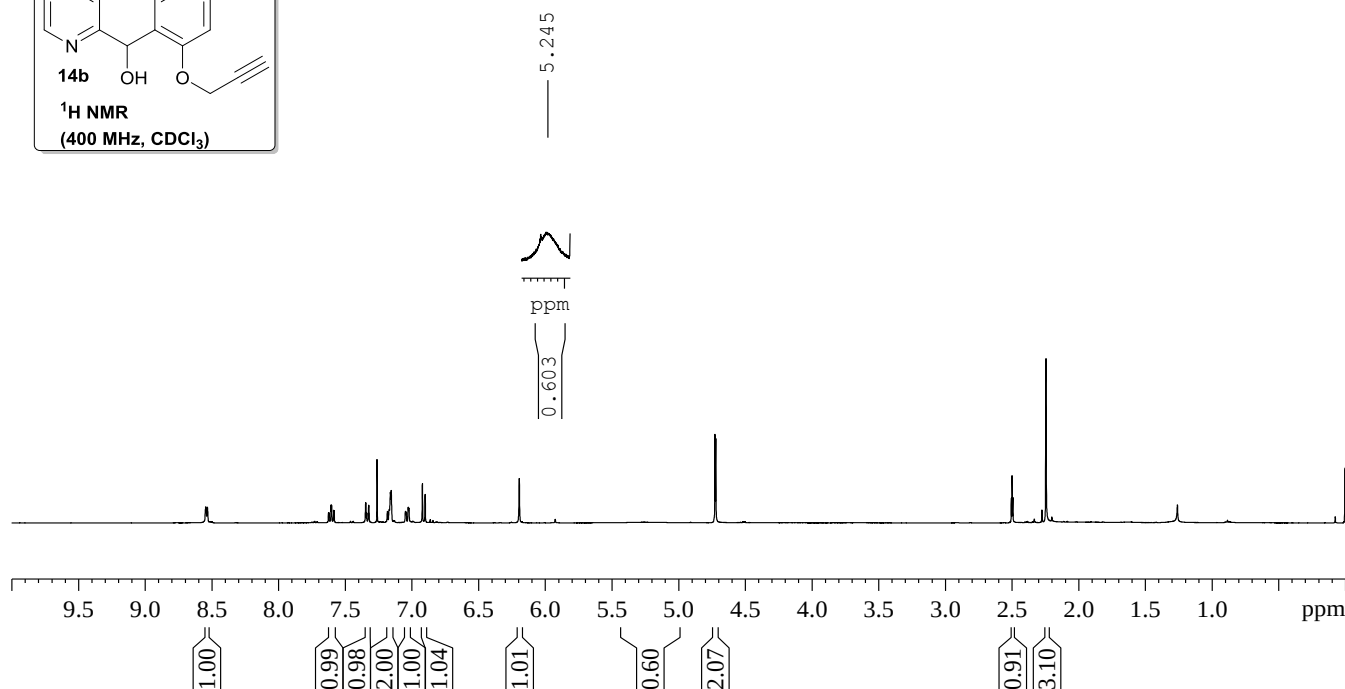
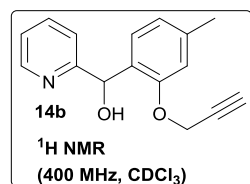
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127568 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.543
8.531
7.623
7.618
7.603
7.599
7.584
7.580
7.343
7.323
7.260
7.183
7.182
7.169
7.161
7.154
7.047
7.043
7.026
7.022
6.920
6.899
6.194
5.245
4.725
4.719

2.503
2.497
2.491
2.243



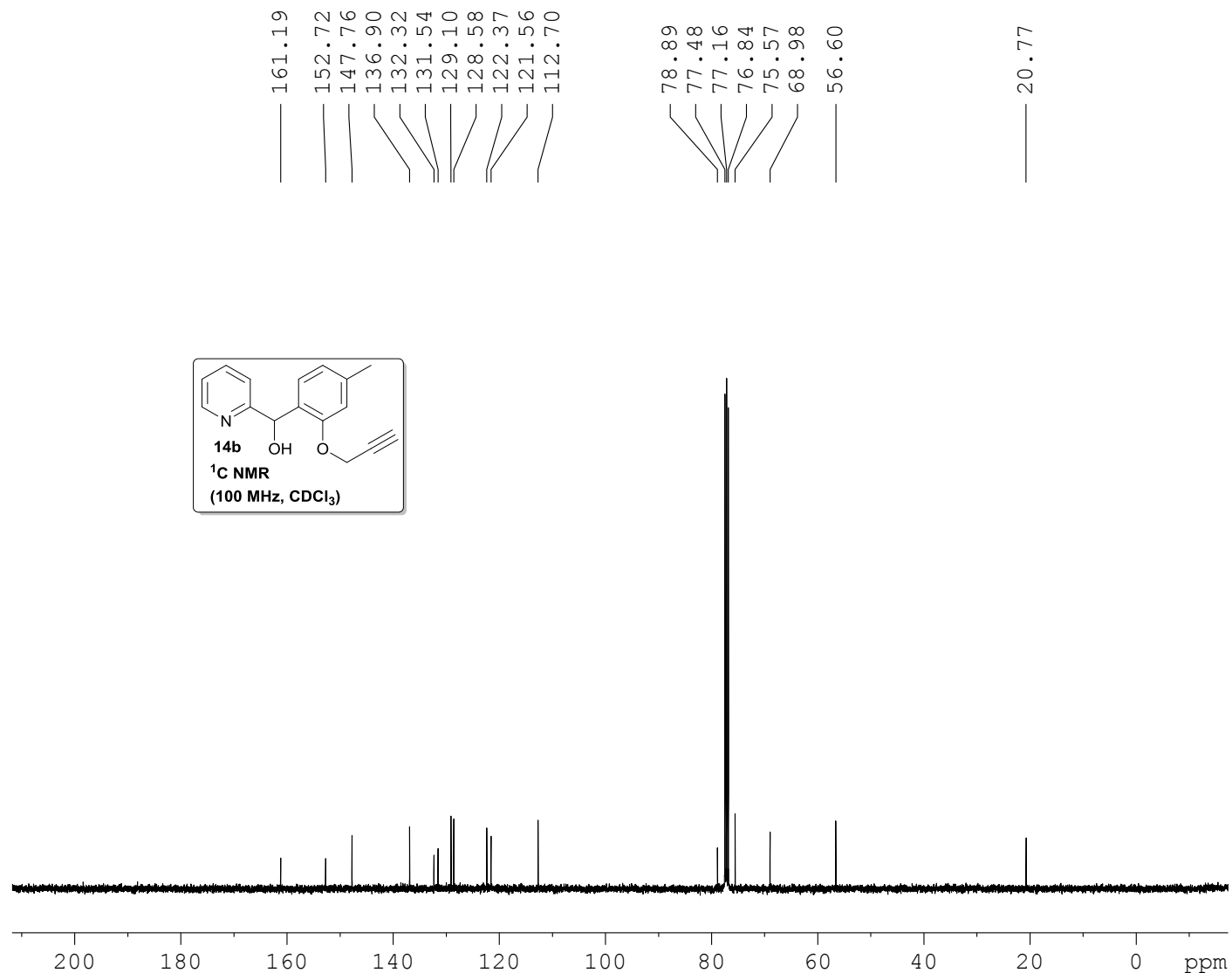
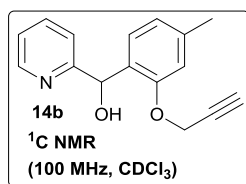
Current Data Parameters
NAME AHKN-I-PROG-2A
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130401
Time 10.44
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.00 usec
TE 298.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHKN-I-PROG-2A
 EXPNO 2
 PROCNO 1

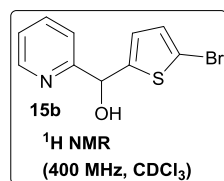
F2 - Acquisition Parameters
 Date_ 20130401
 Time_ 11.41
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 50.8
 DW 20.800 usec
 DE 6.00 usec
 TE 299.5 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127539 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1

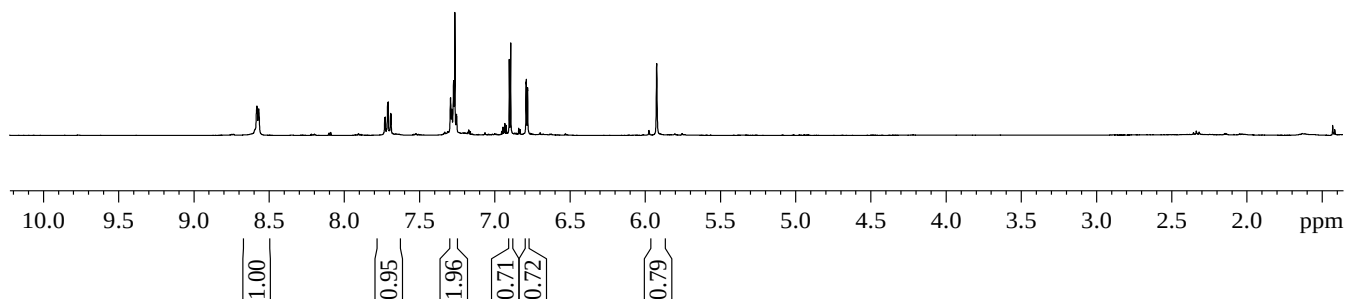


Current Data Parameters
NAME AHK-I-488B
EXPNO 1
PROCNO 1

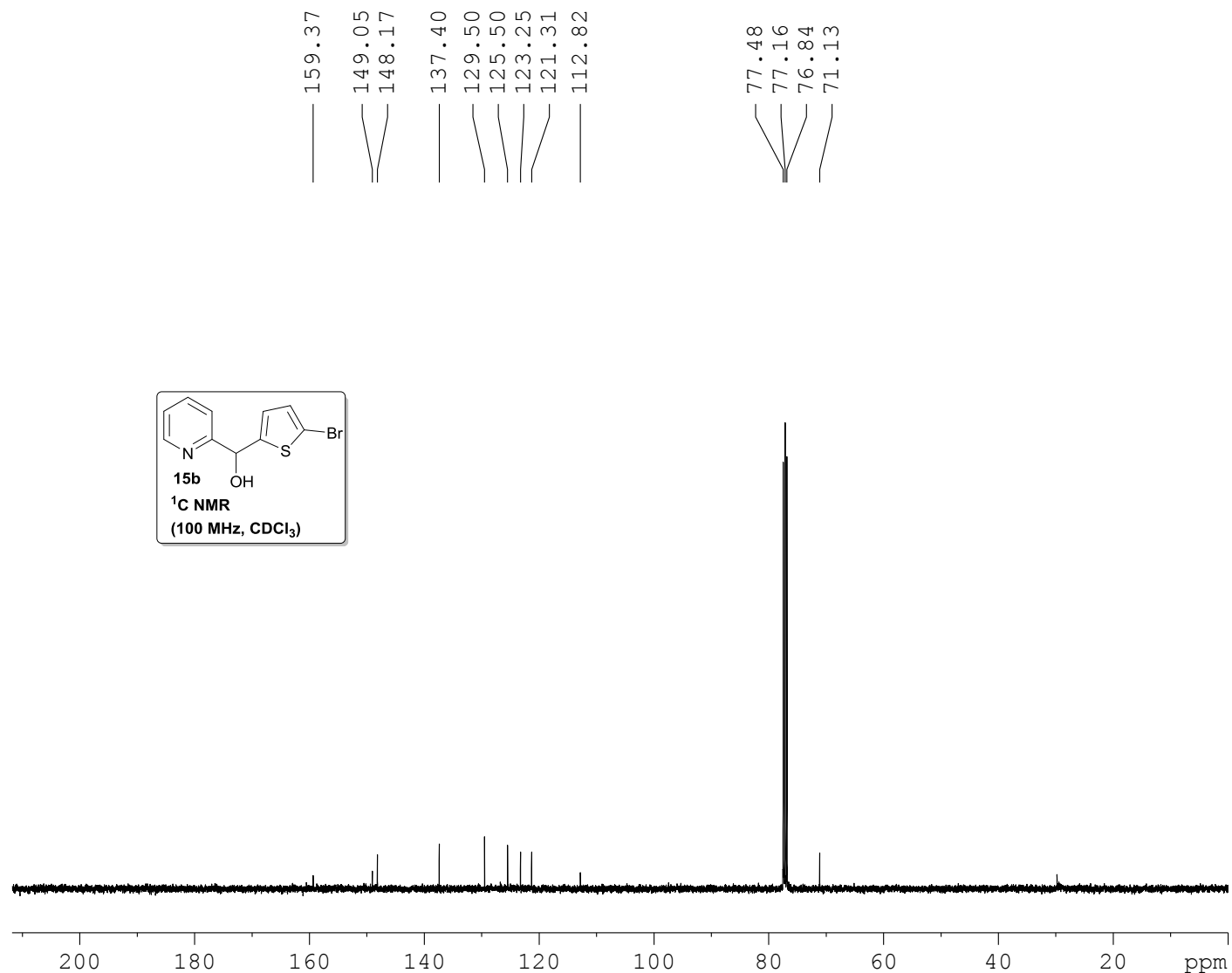
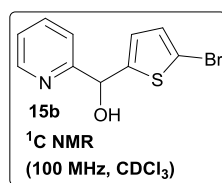
F2 - Acquisition Parameters
Date_ 20140514
Time_ 12.25
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.00 usec
TE 293.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300041 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters

NAME	AHK-I-488B
EXPNO	2
PROCNO	1

F2 - Acquisition Parameters

Date_	20140514
Time_	12.40
INSTRUM	spect
PROBHD	5 mm DUL 13C-1
PULPROG	zgpg30
TD	65536
SOLVENT	CDC13
NS	256
DS	4
SWH	24038.461 Hz
FIDRES	0.366798 Hz
AQ	1.3631988 sec
RG	36
DW	20.800 usec
DE	6.00 usec
TE	294.2 K
D1	2.00000000 sec
d11	0.03000000 sec
DELTA	1.89999998 sec
TD0	1

===== CHANNEL f1 =====

NUC1	13C
P1	9.15 usec
PL1	0.00 dB
SFO1	100.6228298 MHz

===== CHANNEL f2 =====

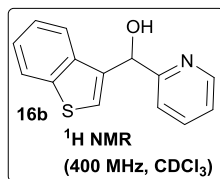
CPDPRG2	waltz16
NUC2	1H
PCPD2	90.00 usec
PL12	14.90 dB
PL13	14.90 dB
PL2	-3.00 dB
SFO2	400.1316005 MHz

F2 - Processing parameters

SI	32768
SF	100.6127553 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.511
8.500
7.748
7.744
7.732
7.728
7.726
7.666
7.664
7.660
7.652
7.648
7.644
7.509
7.505
7.490
7.486
7.471
7.466
7.260
7.216
7.212
7.202
7.198
7.197
7.193
7.183
7.179
7.170
7.161
7.124
7.111
7.102
7.081
6.039
5.341

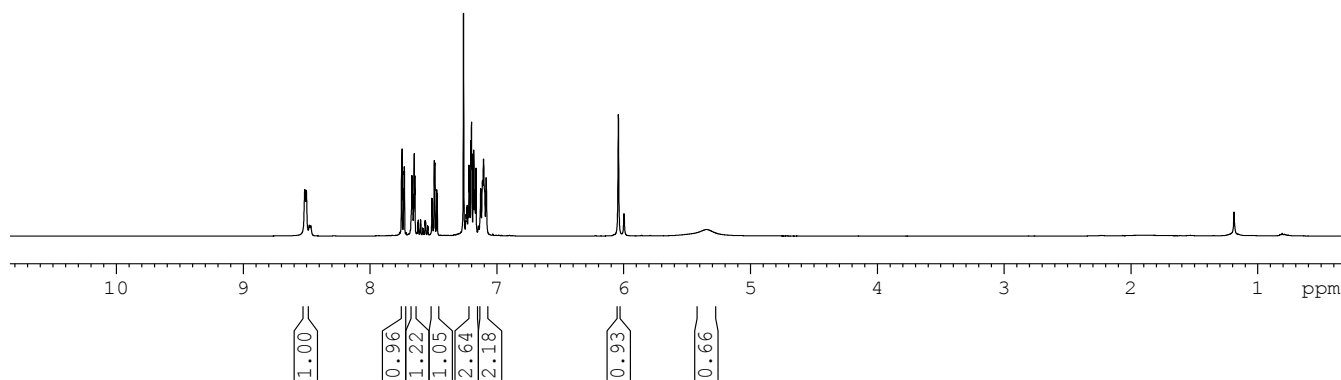


Current Data Parameters
NAME AHK-I-508 B2
EXPNO 1
PROCNO 1

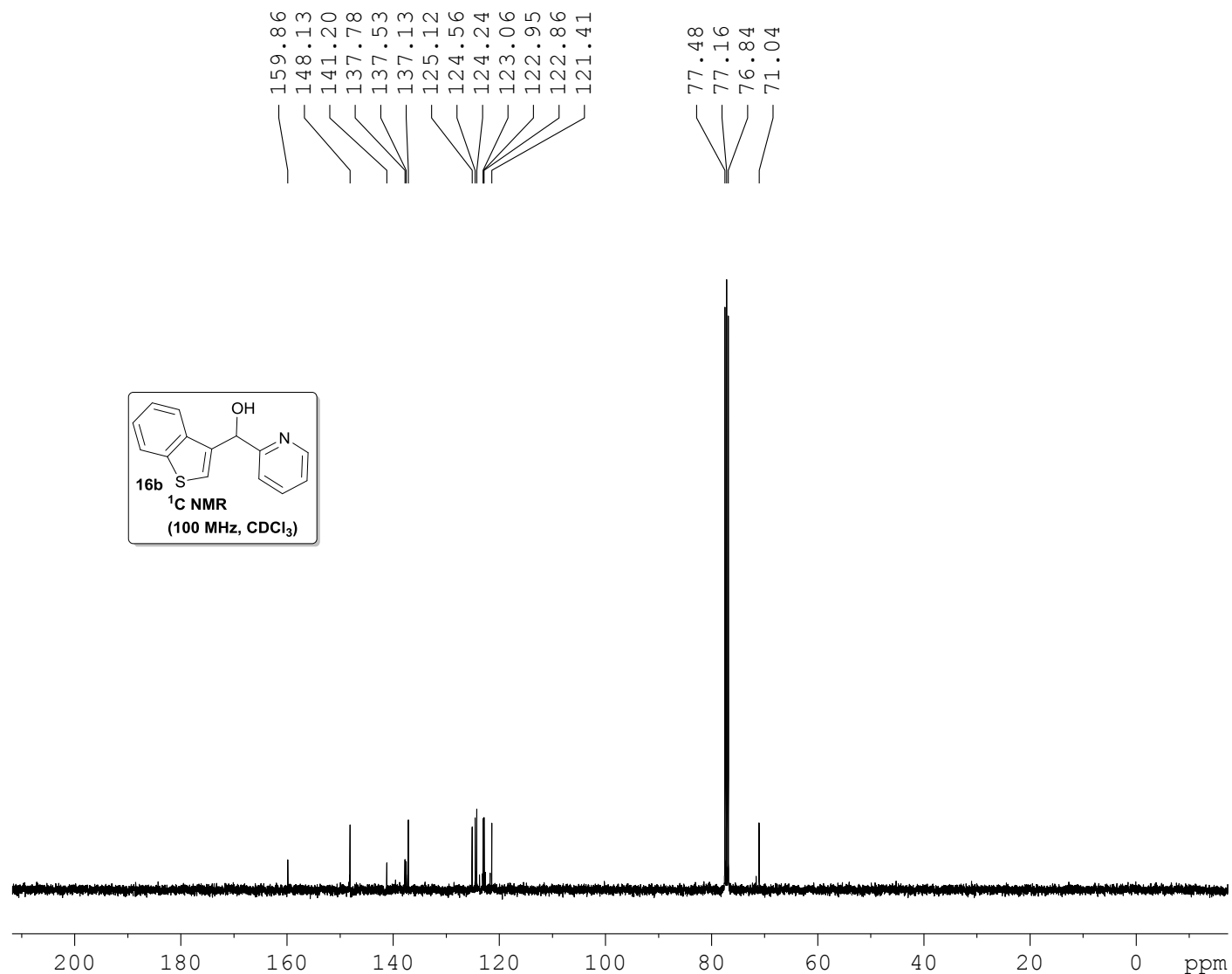
F2 - Acquisition Parameters
Date_ 20141111
Time 12.12
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.00 usec
TE 297.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300443 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-316-B
 EXPNO 2
 PROCNO 1

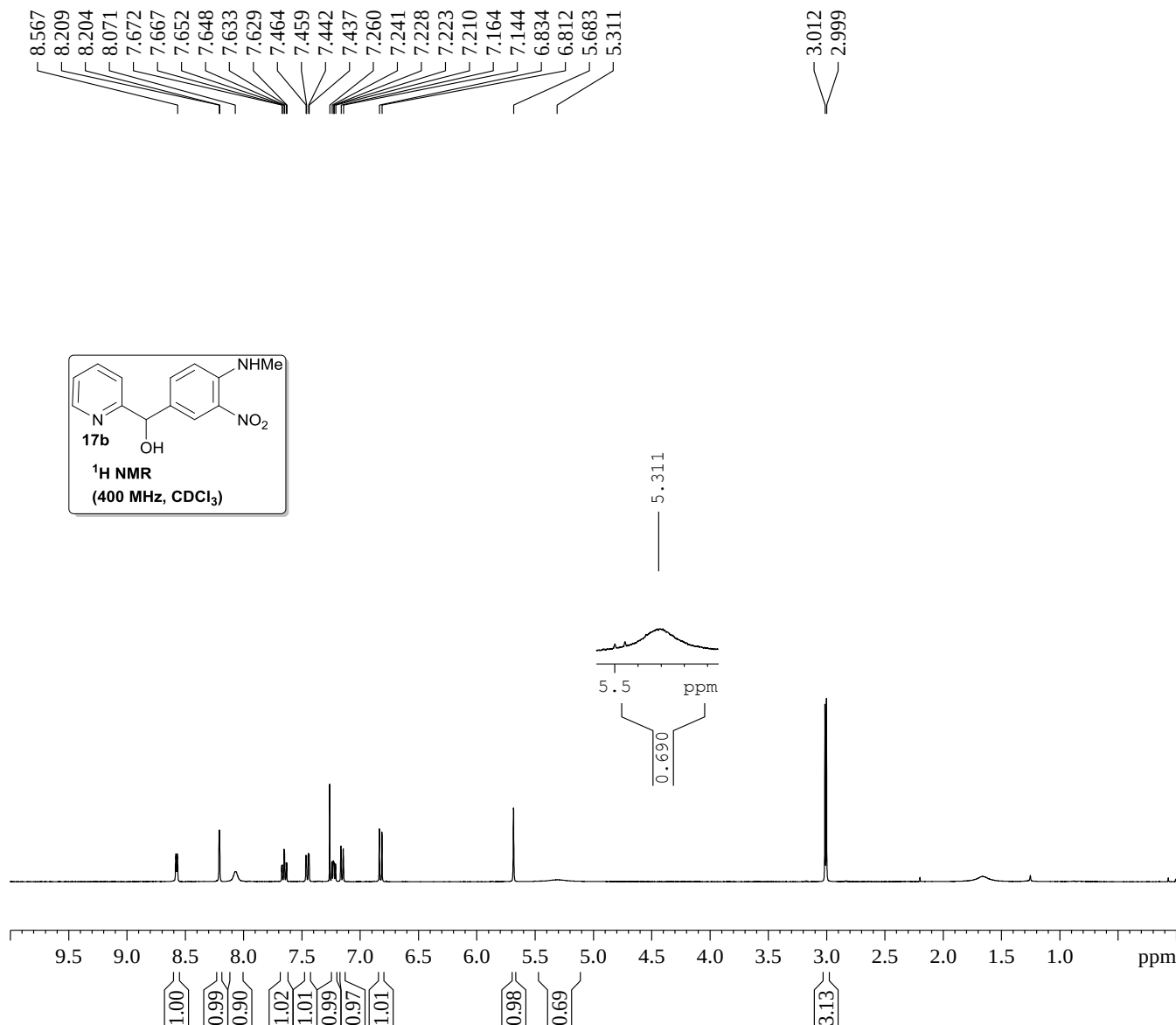
F2 - Acquisition Parameters
 Date_ 20120813
 Time_ 10.57
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 40.3
 DW 20.800 usec
 DE 6.00 usec
 TE 298.2 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127540 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



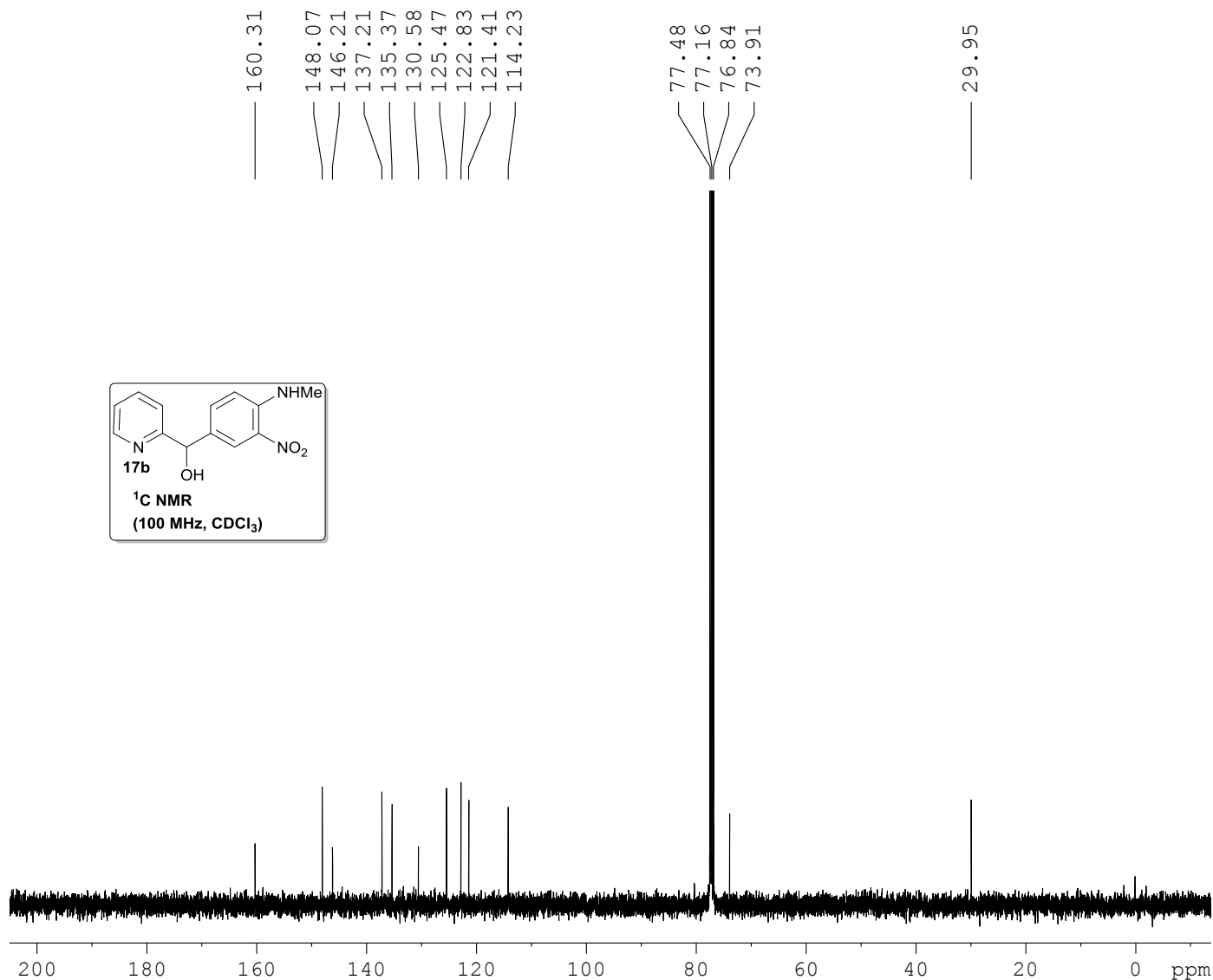
Current Data Parameters
NAME AHK-I-436 C
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131007
Time 16.42
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 724
DW 60.800 usec
DE 6.00 usec
TE 294.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300058 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-436 C
EXPNO 2
PROCNO 1

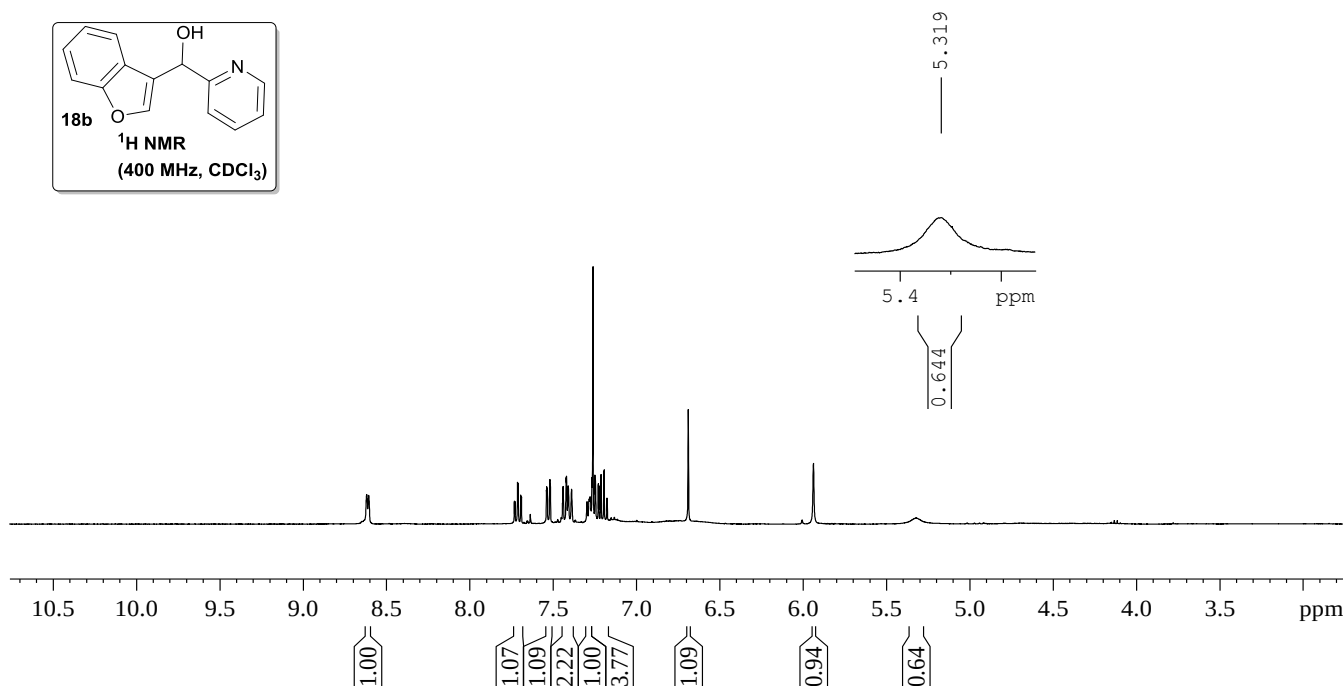
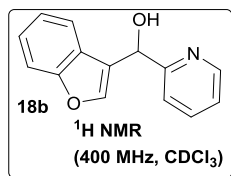
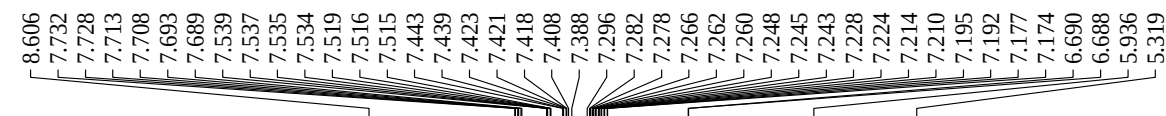
F2 - Acquisition Parameters
Date_ 20131007
Time_ 16.52
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 45.2
DW 20.800 usec
DE 6.00 usec
TE 295.1 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 ¹³C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 ¹H
PCPD2 90.00 usec
PL12 14.96 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127547 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



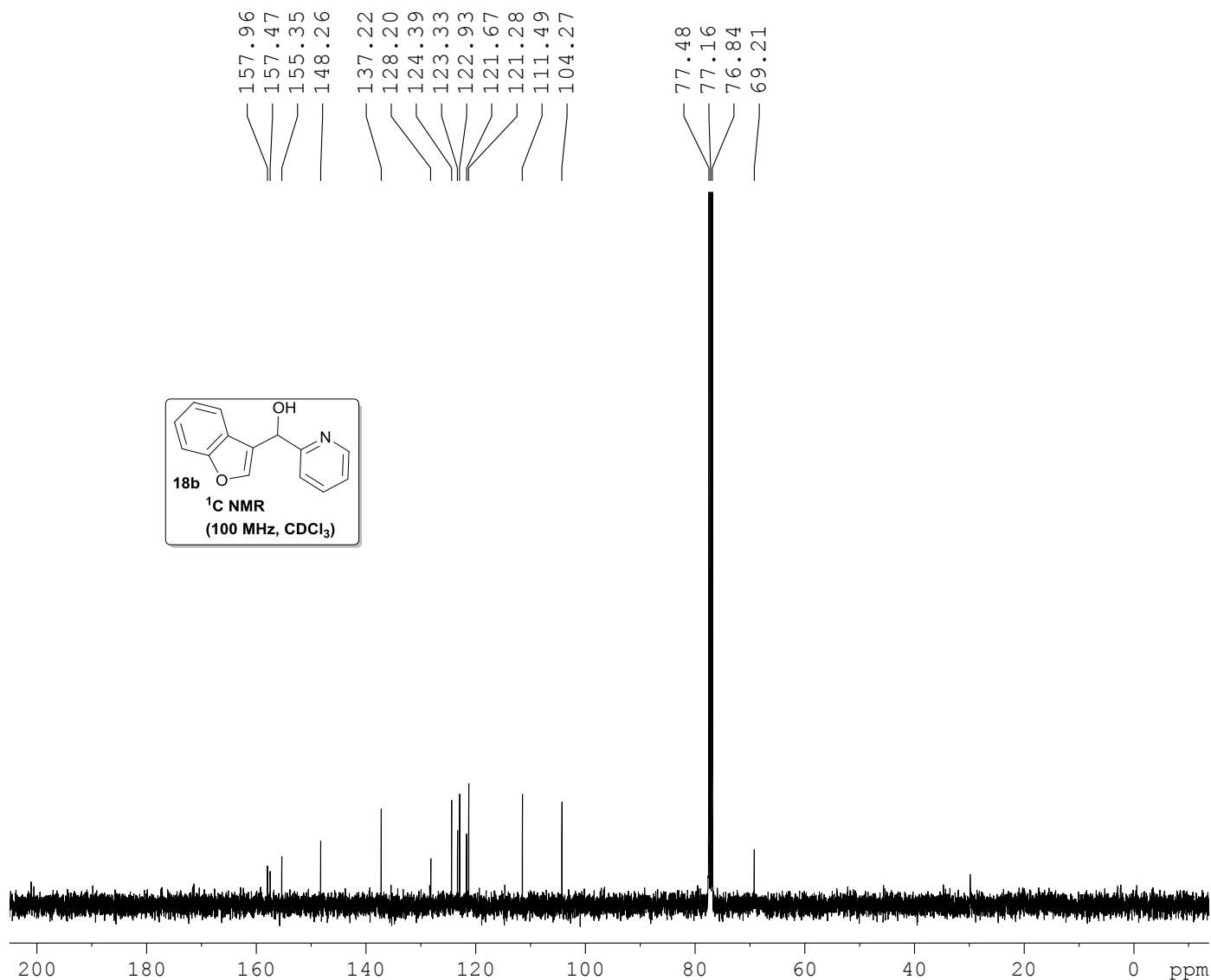
Current Data Parameters
NAME AHK-I-509B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20141113
Time_ 11.47
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.00 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300051 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-509B
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20141113
Time_ 12.02
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 32
DW 20.800 usec
DE 6.00 usec
TE 296.1 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

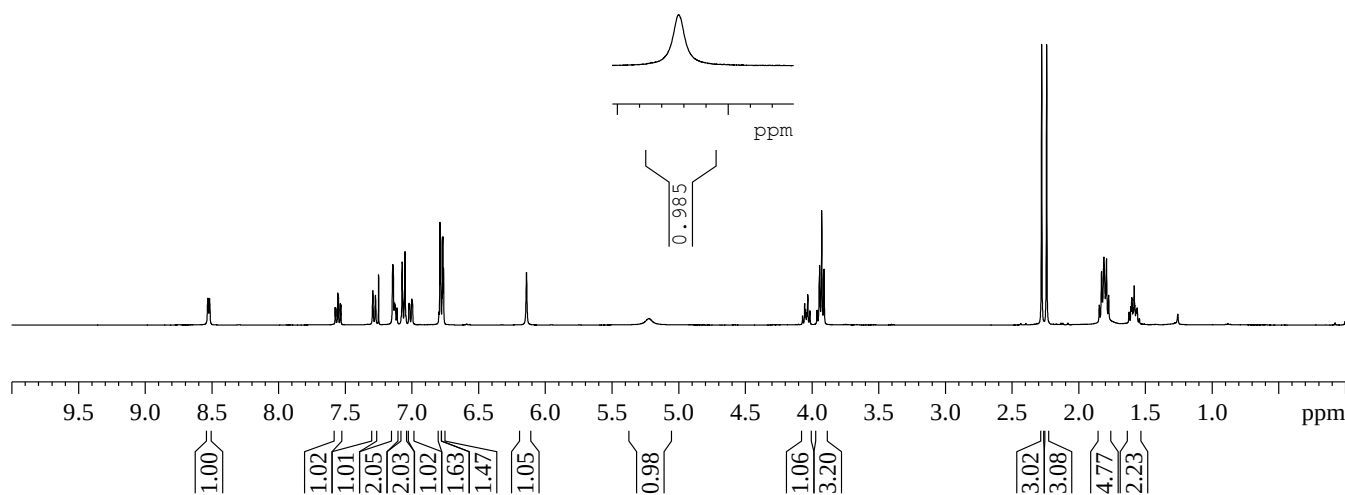
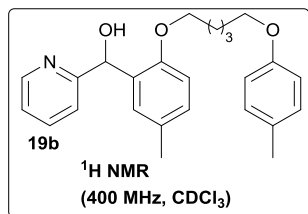
===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127540 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.529
8.517
7.555
7.551
7.536
7.532
7.292
7.272
7.249
7.143
7.139
7.129
7.124
7.071
7.051
7.020
7.016
6.999
6.995
6.789
6.783
6.772
6.767
6.762
6.140
5.222
4.053
4.046
4.030
4.014
3.960
3.941
3.925
3.909
2.276
2.238
1.843
1.826
1.819
1.809
1.789
1.773
1.599
1.581



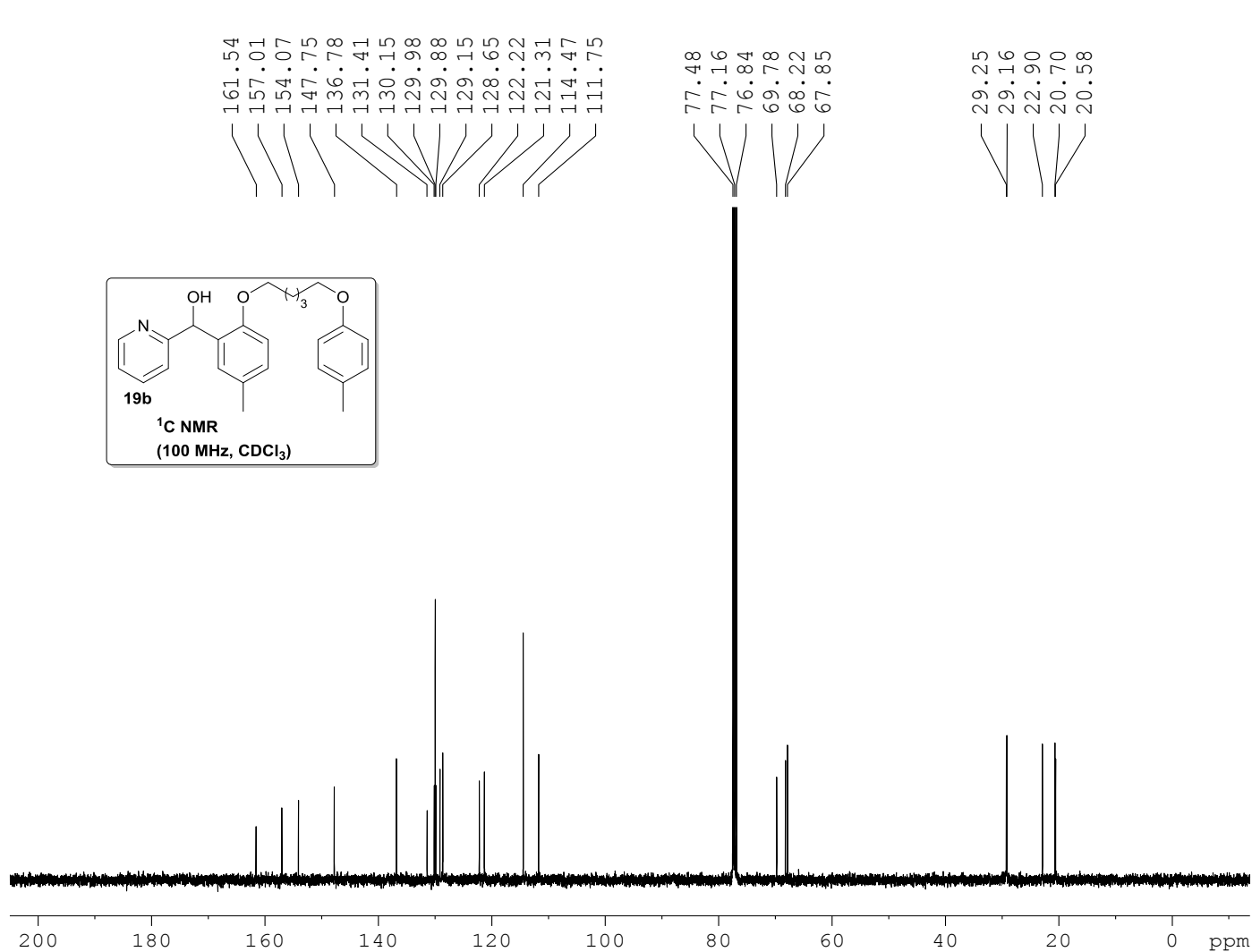
Current Data Parameters
NAME AHK-OS-1,5PRO
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140506
Time 14.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300098 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



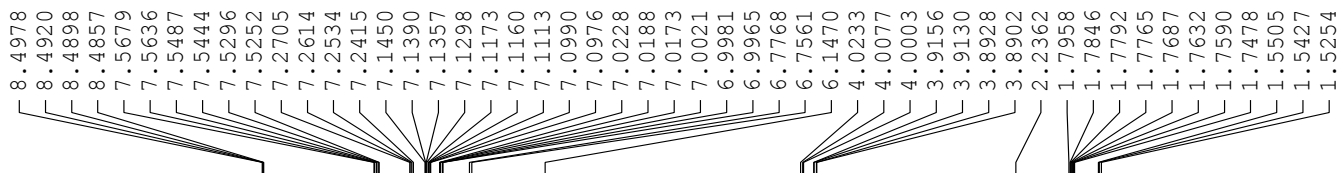
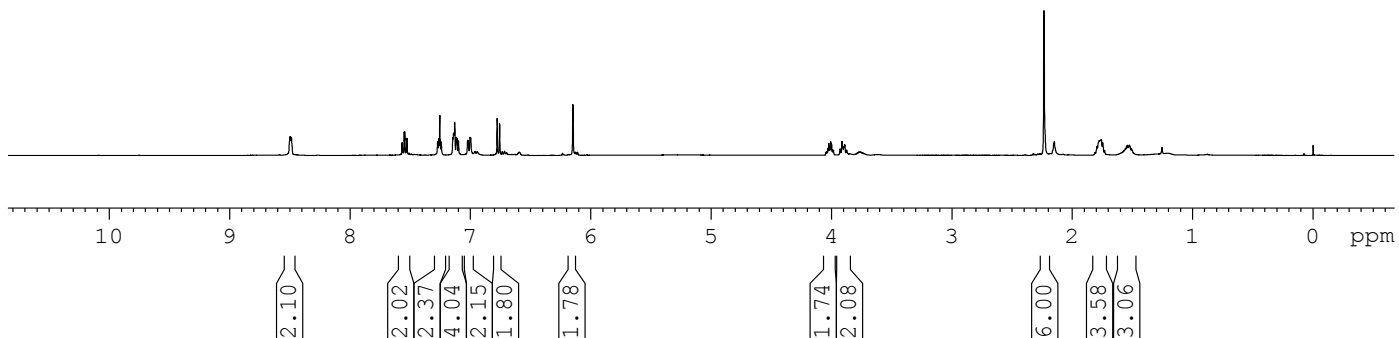
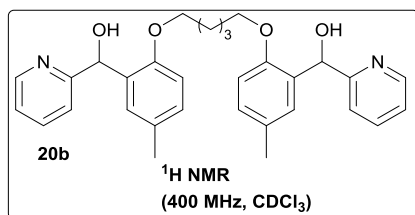
Current Data Parameters
 NAME AHK-OS-1,5PRO
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140506
 Time_ 14.37
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 36
 DW 20.800 usec
 DE 6.00 usec
 TE 296.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127574 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



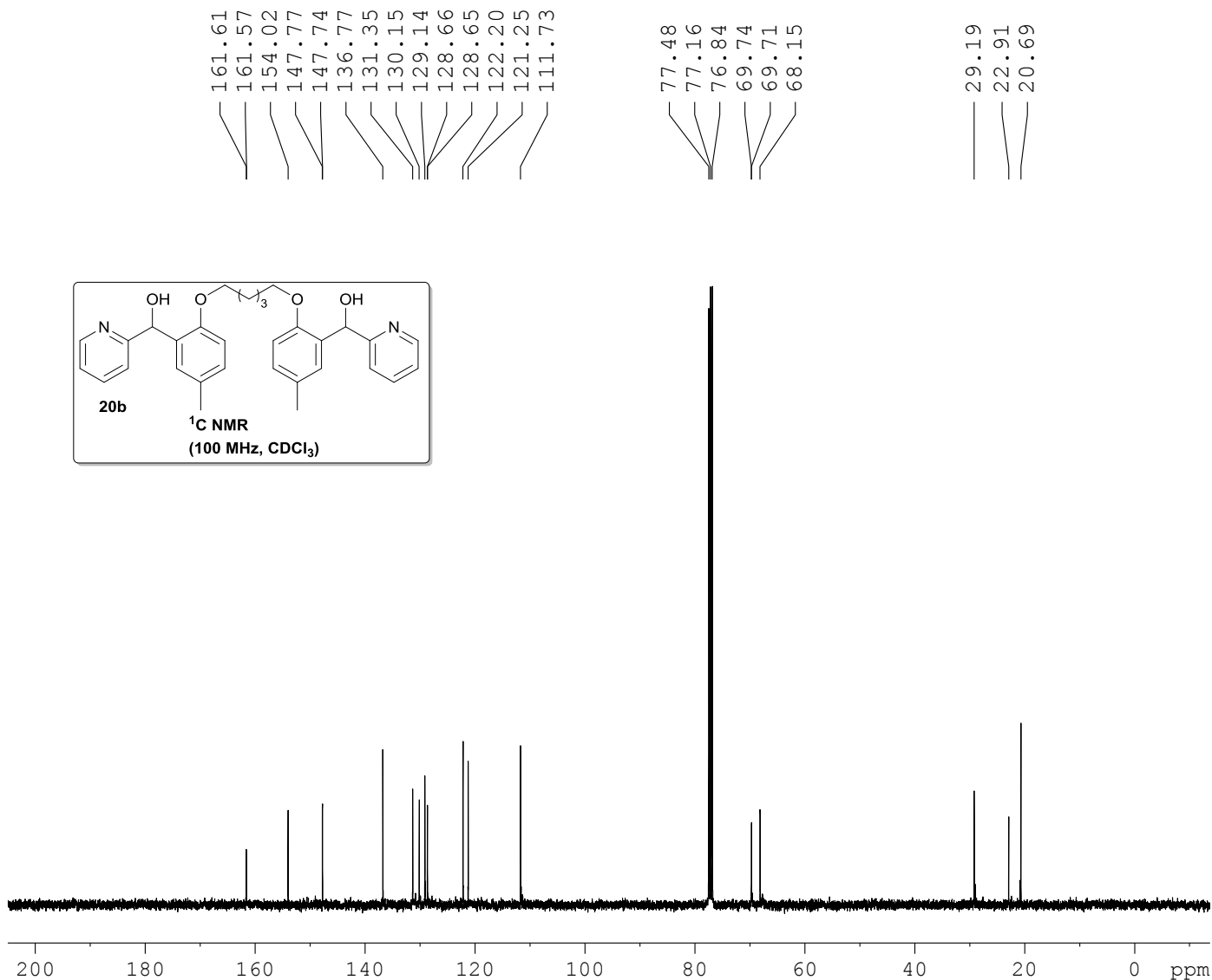
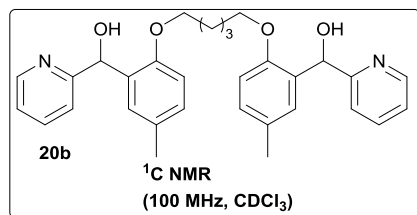
Current Data Parameters
NAME AHK-I-OS-1,5-DIPR
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140510
Time 12.46
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 90.5
DW 60.800 usec
DE 6.00 usec
TE 294.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300079 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-OS-1,5-DIPR
EXPNO 2
PROCNO 1

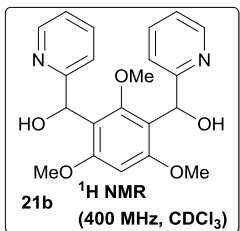
F2 - Acquisition Parameters
Date_ 20140510
Time_ 12.52
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 36
DW 20.800 usec
DE 6.00 usec
TE 294.8 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127597 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

8.5388
8.5360
8.5300
8.5283
8.5239
7.6116
7.6073
7.6025
7.5981
7.5924
7.5881
7.5835
7.5791
7.5732
7.5688
7.5642
7.5598
7.2601
7.2315
7.2300
7.2116
7.2100
7.1920
7.1905
7.1720
7.1705
7.1463
7.1338
7.1307
7.1279
7.1155
6.2106
6.1610
3.5830
3.5740
3.5703

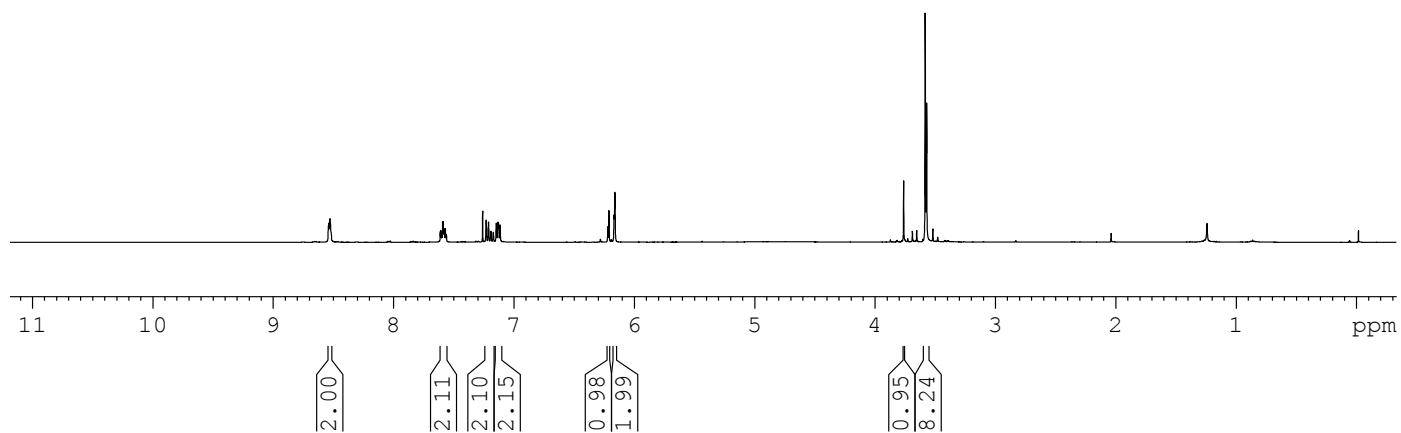


Current Data Parameters
NAME AHK-I-493 B
EXPNO 1
PROCNO 1

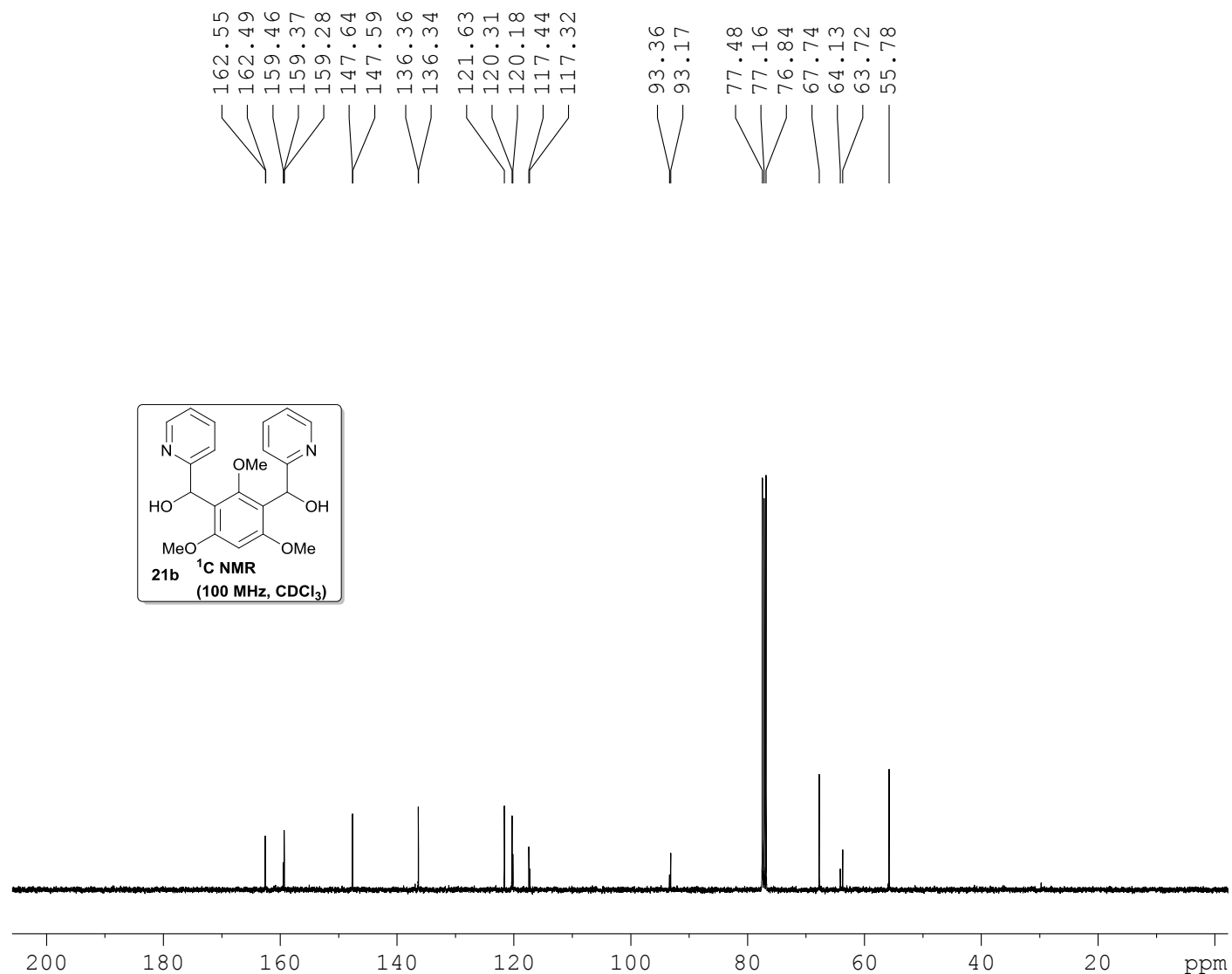
F2 - Acquisition Parameters
Date_ 20140523
Time_ 10.32
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 32
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.00 usec
TE 290.9 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300053 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-493 B
EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
Date_     20140523
Time      10.42
INSTRUM   spect
PROBHD    5 mm DUL 13C-1
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS         362
DS         4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG         32
DW        20.800 usec
DE         6.00 usec
TE        291.8 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999999 sec
TDO       1

===== CHANNEL f1 =====
NUC1      13C
P1        9.15 usec
PL1       0.00 dB
SFO1     100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      14.90 dB
PL13      14.90 dB
PL2       -3.00 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127586 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40

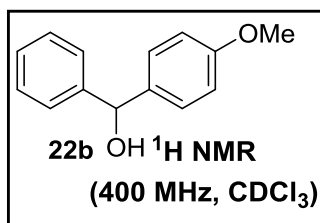
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PROTON CDC13 {D:\CRR} KOPAL 1

7.351
7.332
7.324
7.304
7.285
7.260
7.239
7.224
6.846
6.824
— 5.763

— 3.755

— 2.309

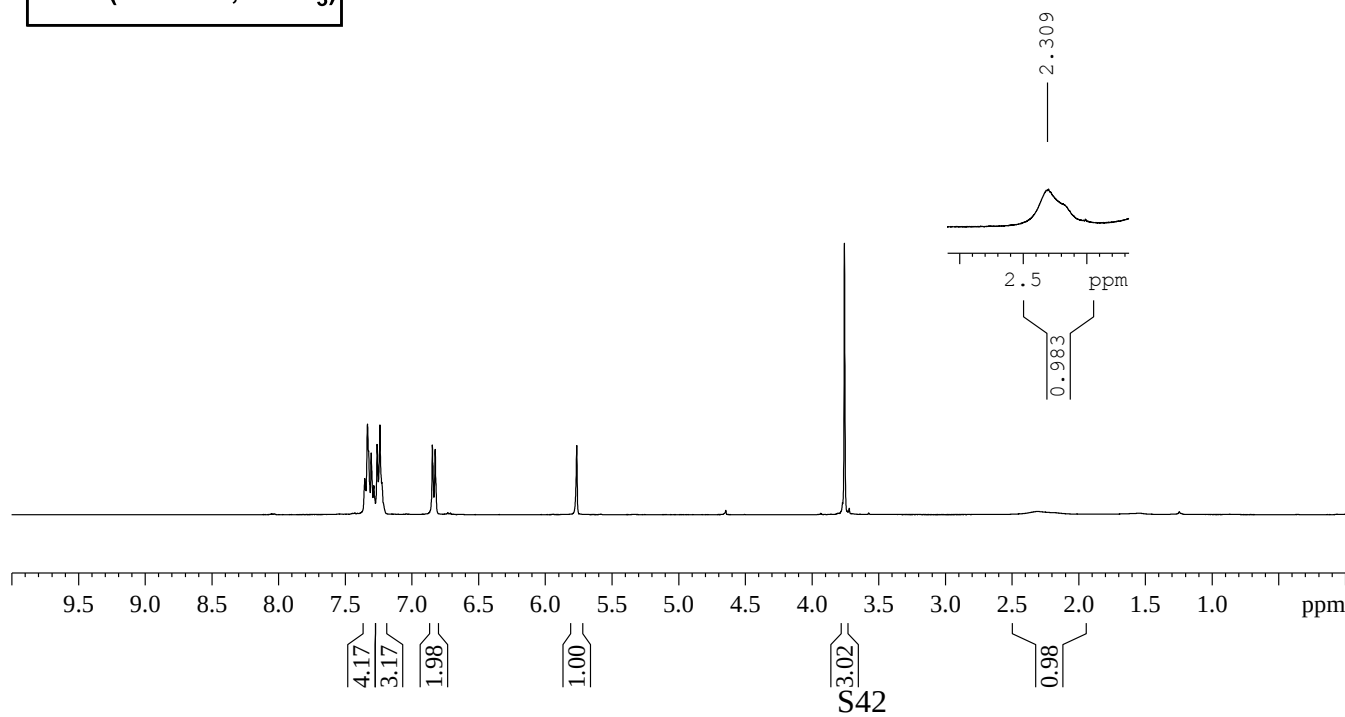


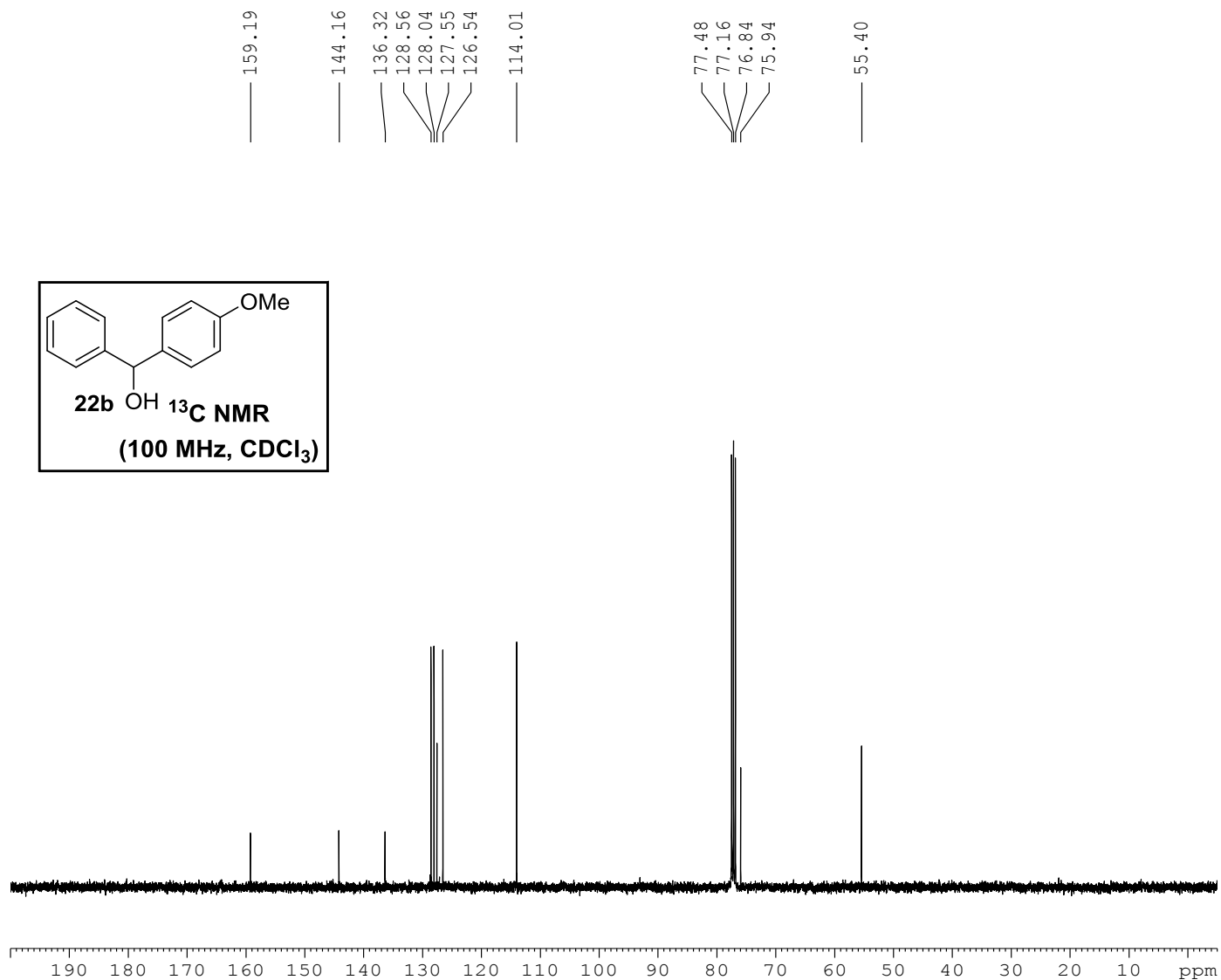
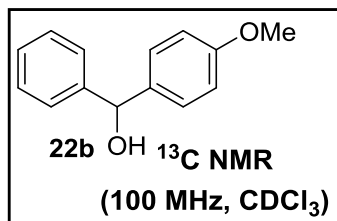
Current Data Parameters
NAME AHK-I-273A
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20120427
Time_ 12.19
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 80.6
DW 60.800 usec
DE 6.00 usec
TE 298.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300202 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





Current Data Parameters
 NAME AHK-I-273
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20120427
 Time_ 16.56
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 183
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 36
 DW 20.800 usec
 DE 6.00 usec
 TE 298.2 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

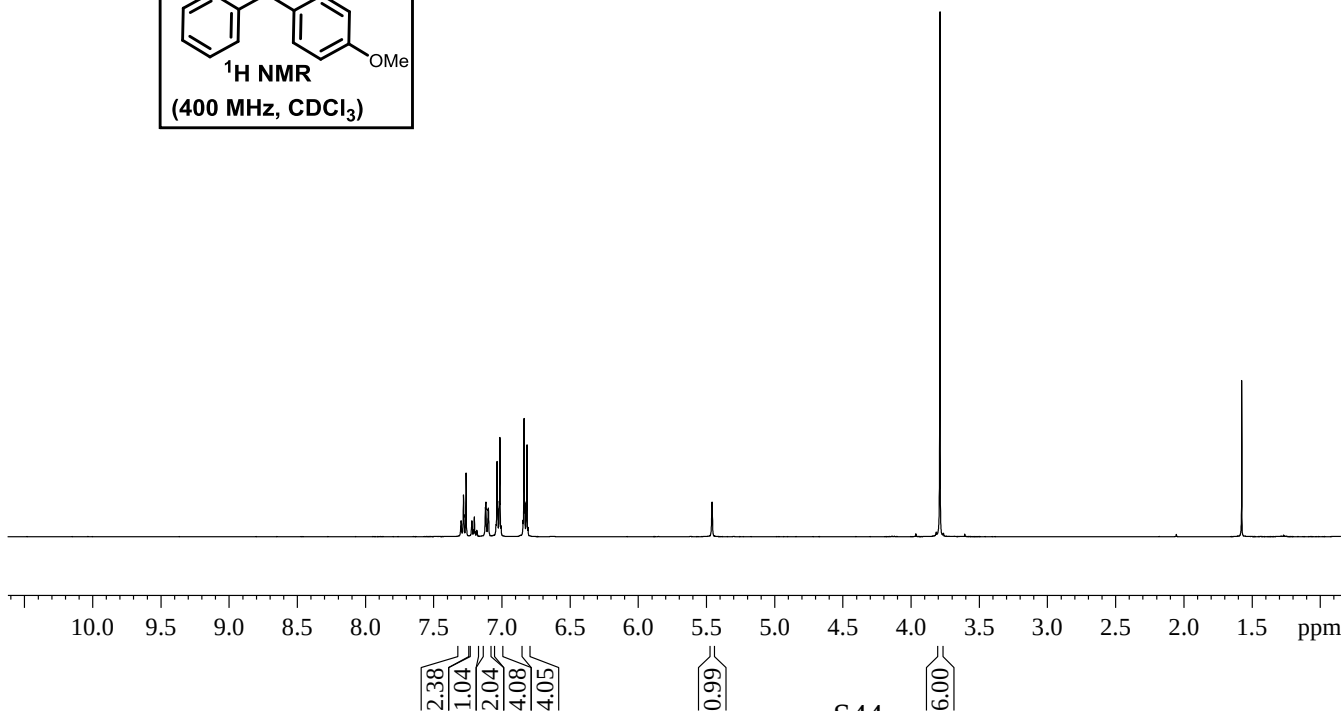
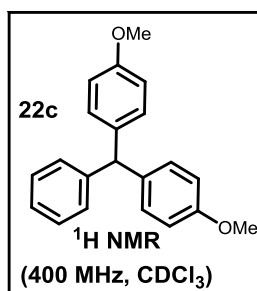
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127561 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1

7.300
7.297
7.293
7.279
7.276
7.264
7.260
7.255
7.221
7.218
7.215
7.205
7.200
7.194
7.185
7.182
7.178
7.120
7.119
7.116
7.111
7.099
7.098
7.096
7.034
7.029
7.017
7.013
6.843
6.836
6.830
6.819
6.814
6.806
5.457
3.786

1.573



Current Data Parameters
NAME AHK-I-120 A
EXPNO 1
PROCNO 1

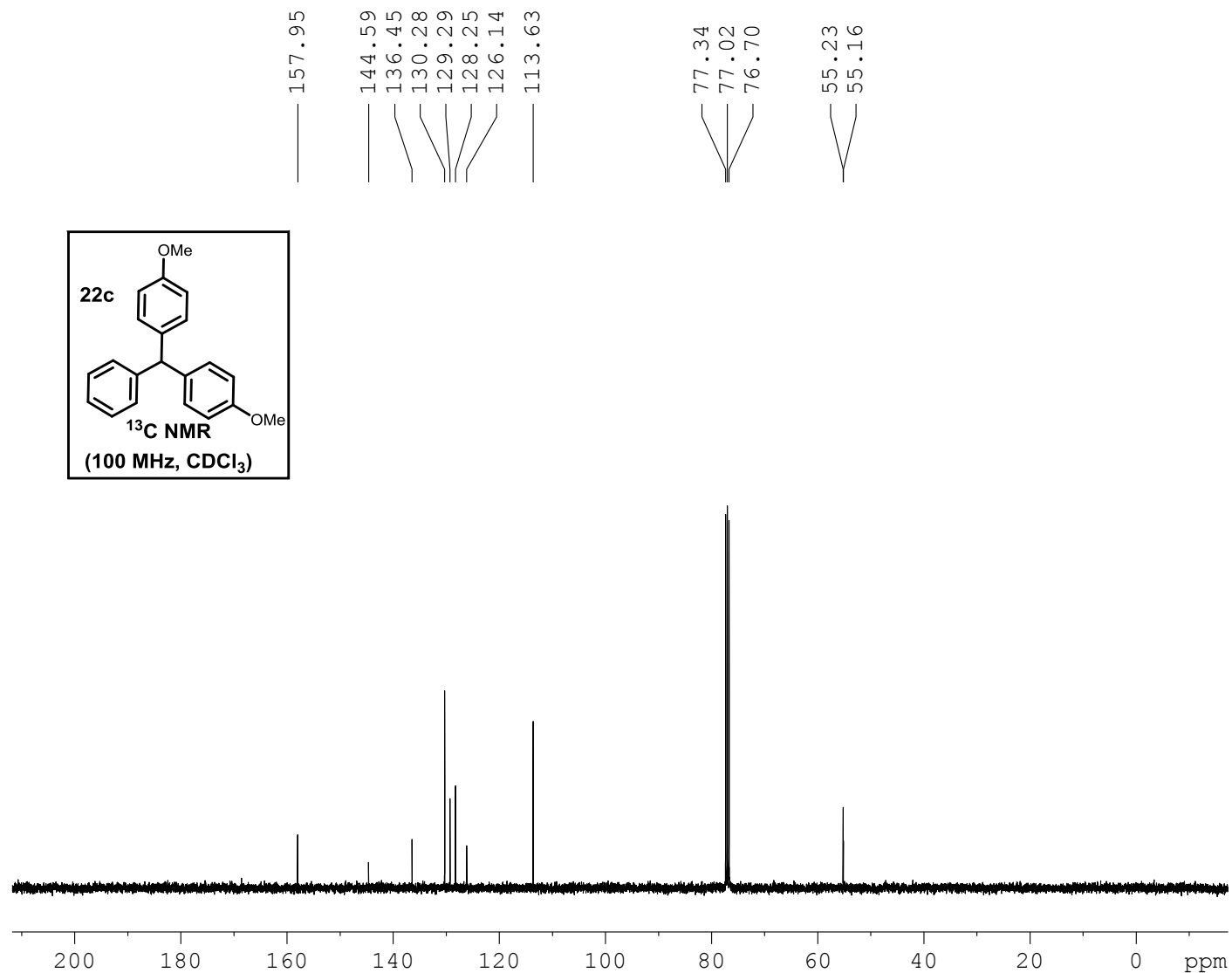
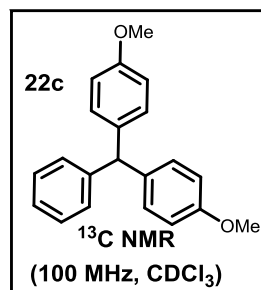
F2 - Acquisition Parameters
Date_ 20110331
Time 12.13
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 256
DW 60.800 usec
DE 6.00 usec
TE 294.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300040 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

S44

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-120 A
EXPNO 2
PROCNO 1

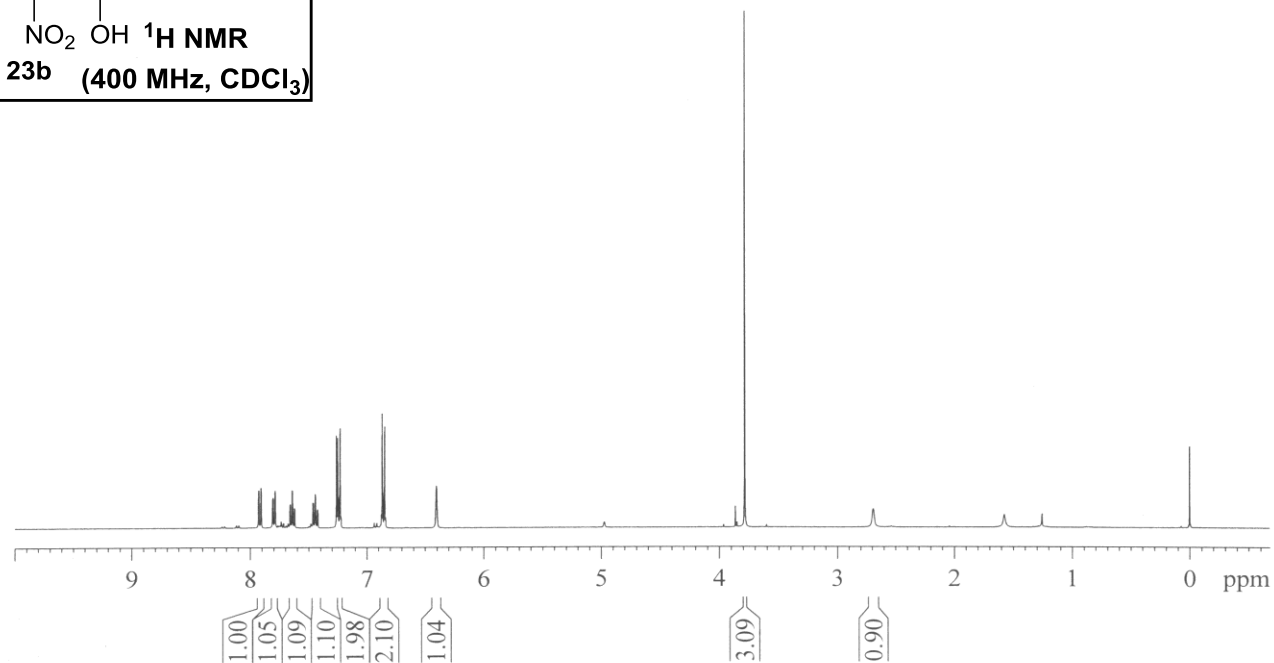
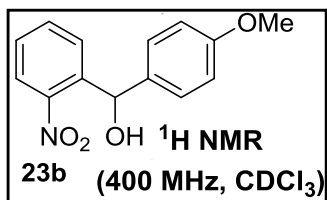
F2 - Acquisition Parameters
Date_ 20110331
Time_ 12.22
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 166
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 50.8
DW 20.800 usec
DE 6.00 usec
TE 294.8 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 15.60 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\GV} KOPAL 1



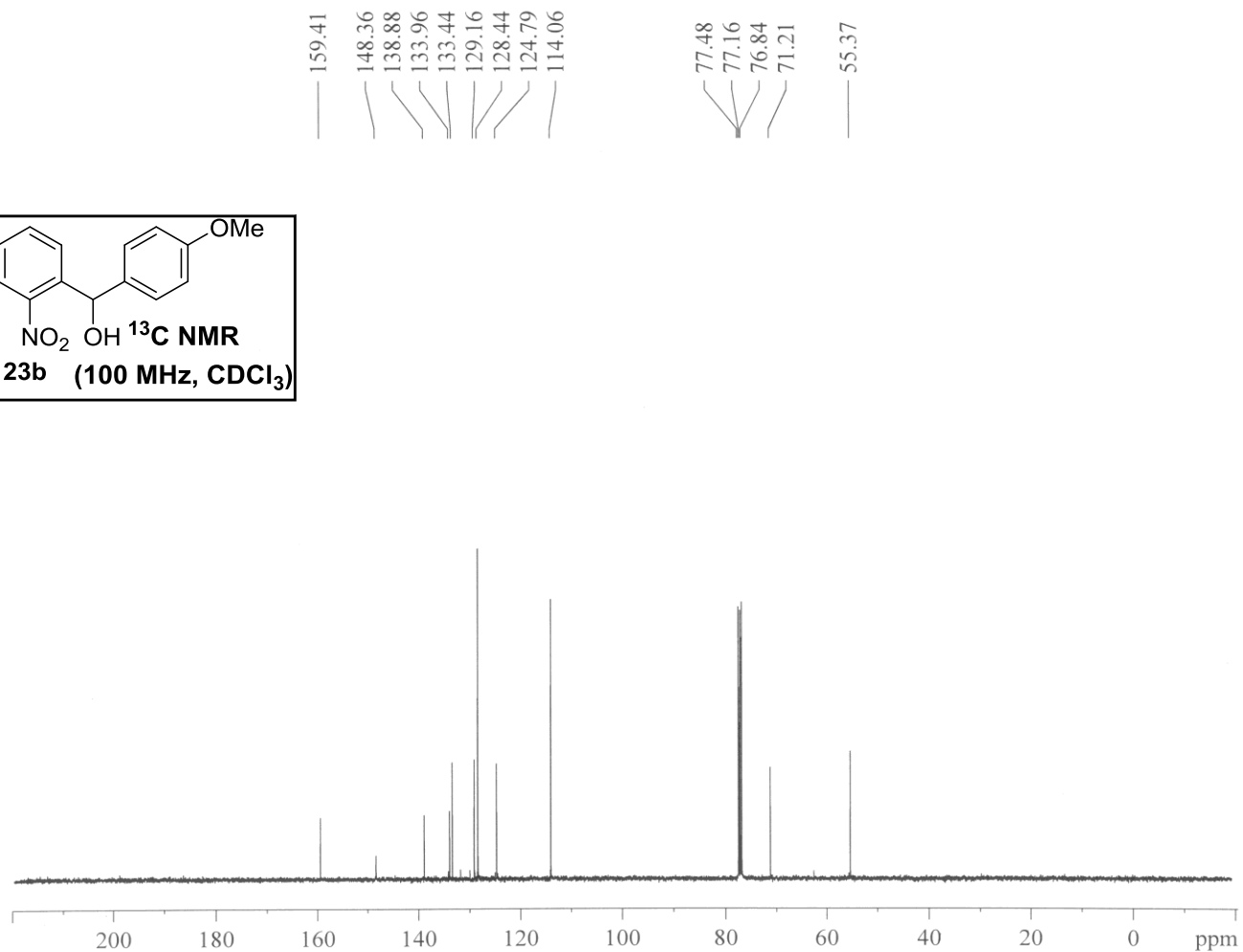
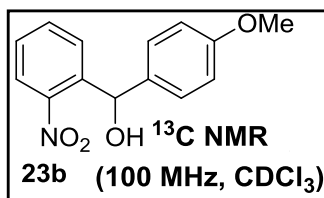
Current Data Parameters
 NAME AHK-I-253E
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20120724
 Time_ 11.24
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 144
 DW 60.800 usec
 DE 6.00 usec
 TE 297.1 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300029 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-253D
 EXPNO 2
 PROCNO 1

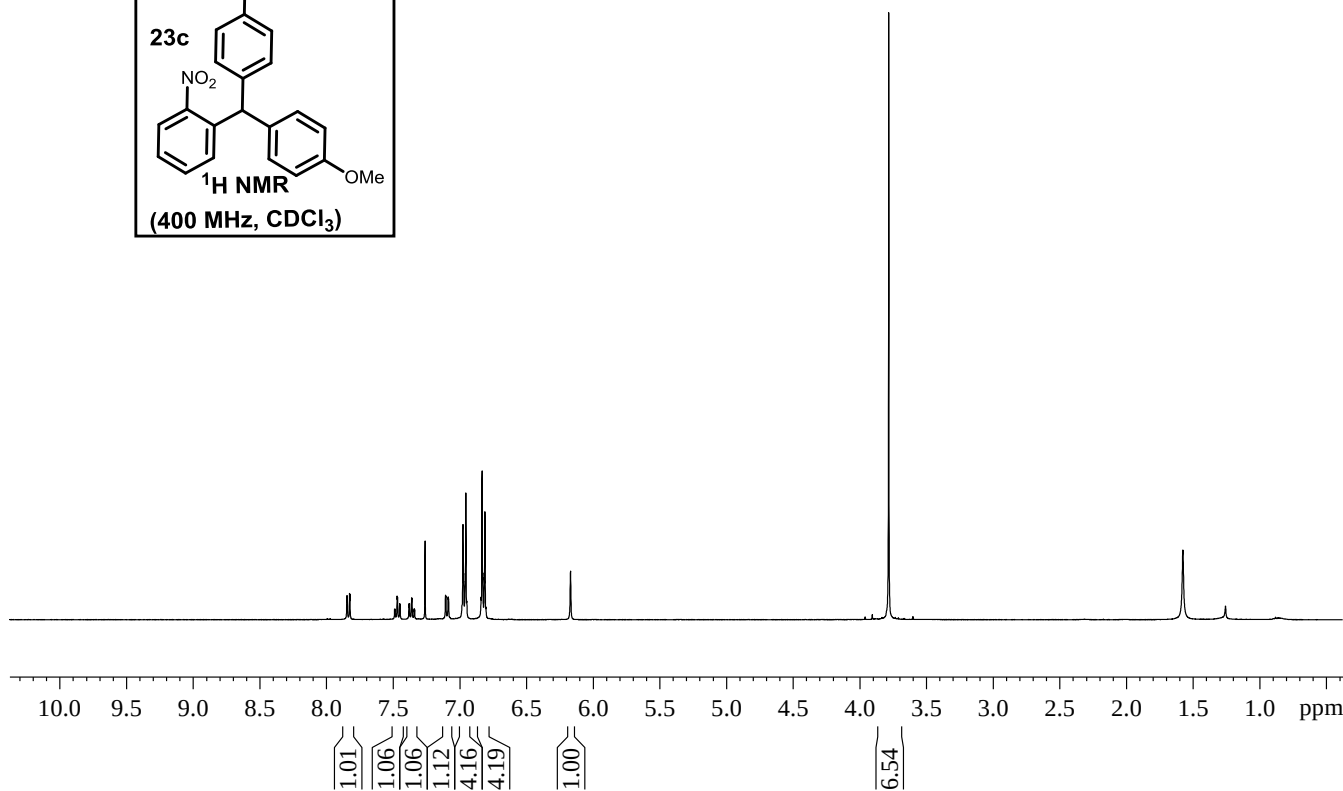
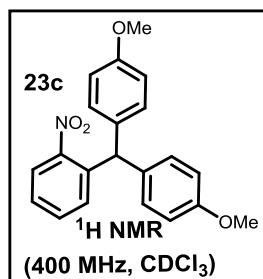
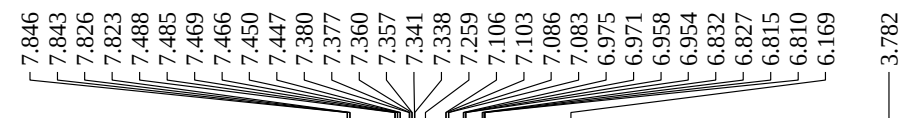
F2 - Acquisition Parameters
 Date_ 20120723
 Time 10.32
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl₃
 NS 137
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 32
 DW 20.800 usec
 DE 6.00 usec
 TE 298.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127565 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



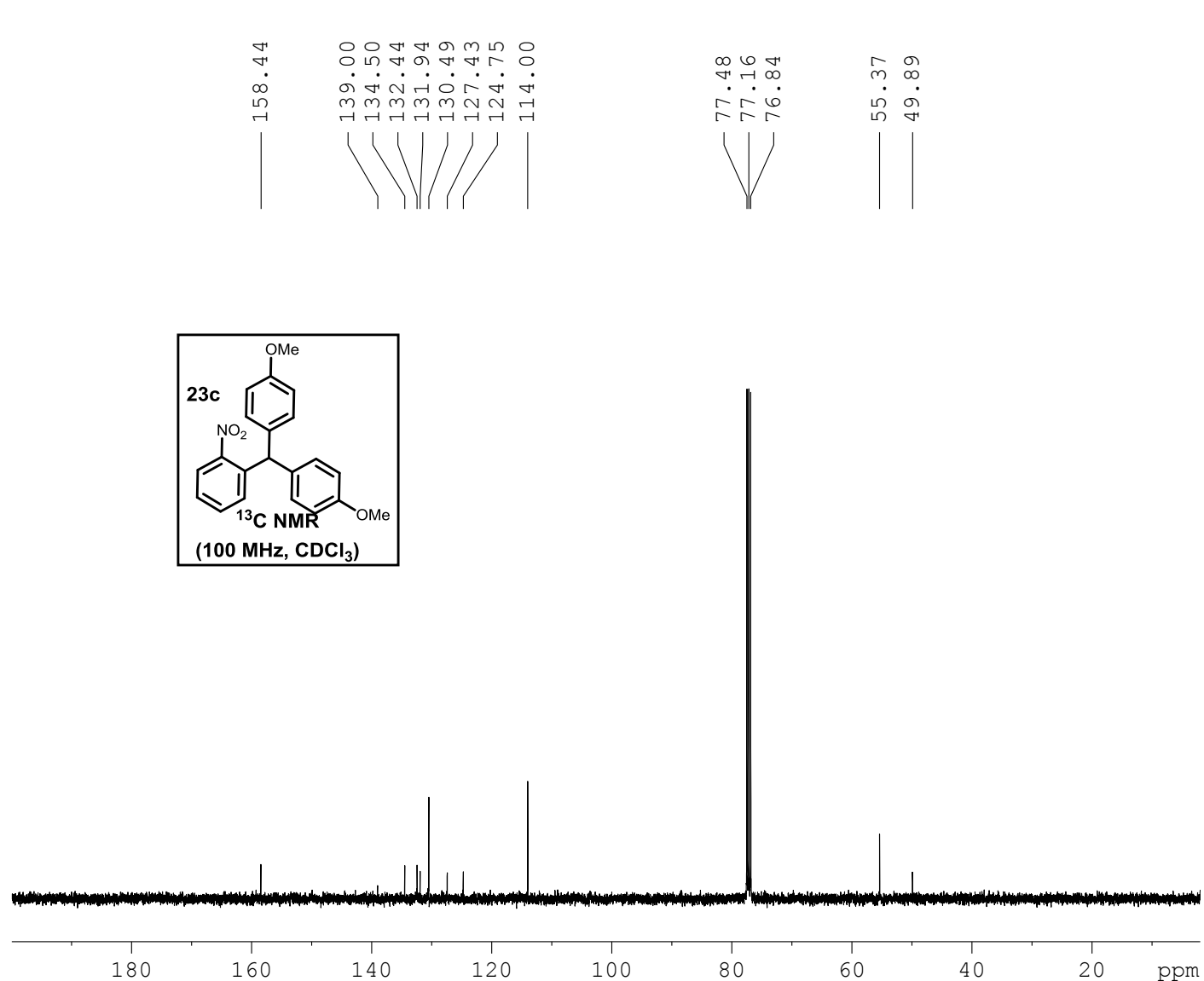
Current Data Parameters
NAME AHK-I-126 B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110516
Time 11.44
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 287
DW 60.800 usec
DE 6.00 usec
TE 295.3 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300040 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-126 B
 EXPNO 2
 PROCNO 1

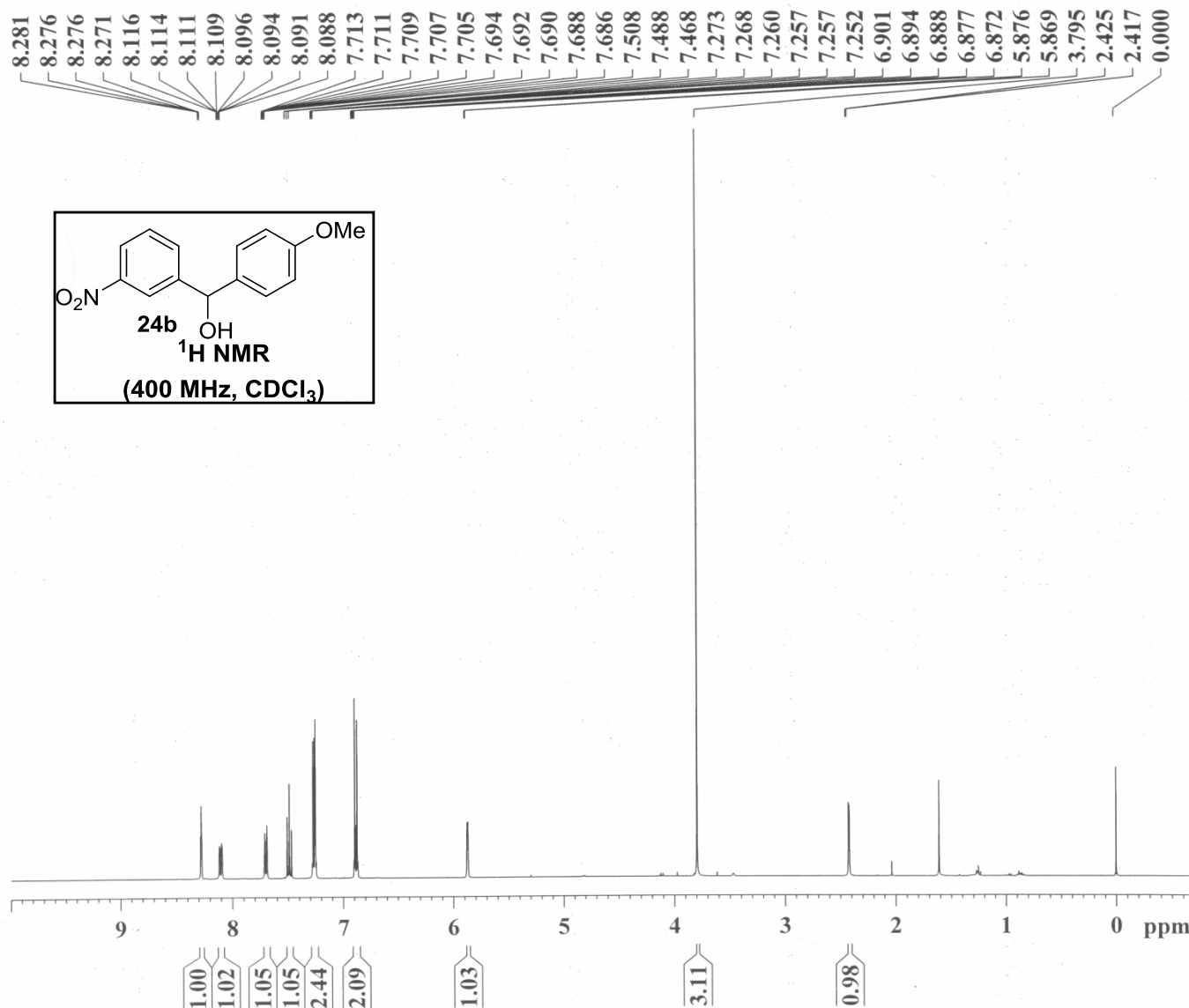
F2 - Acquisition Parameters
 Date_ 20110516
 Time_ 12.00
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 50.8
 DW 20.800 usec
 DE 6.00 usec
 TE 295.8 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 ¹³C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 ¹H
 PCPD2 90.00 usec
 PL12 15.60 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127534 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} crr 1

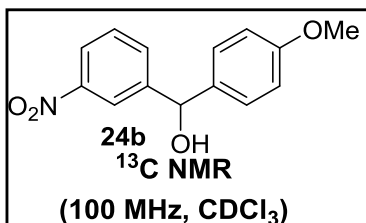


Current Data Parameters
 NAME AHK-I-267B
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20120413
 Time 22.59
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 256
 DW 60.800 usec
 DE 6.00 usec
 TE 295.1 K
 D1 1.00000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 14.00 usec
 PL1 -0.90 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300041 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



159.57
 148.32
 146.08
 135.09
 132.37
 129.28
 128.07
 122.28
 121.21
 114.28

77.34
 77.02
 76.70
 74.92

55.32



Current Data Parameters
 NAME AHK-I-267D
 EXPNO 1
 PROCNO 1

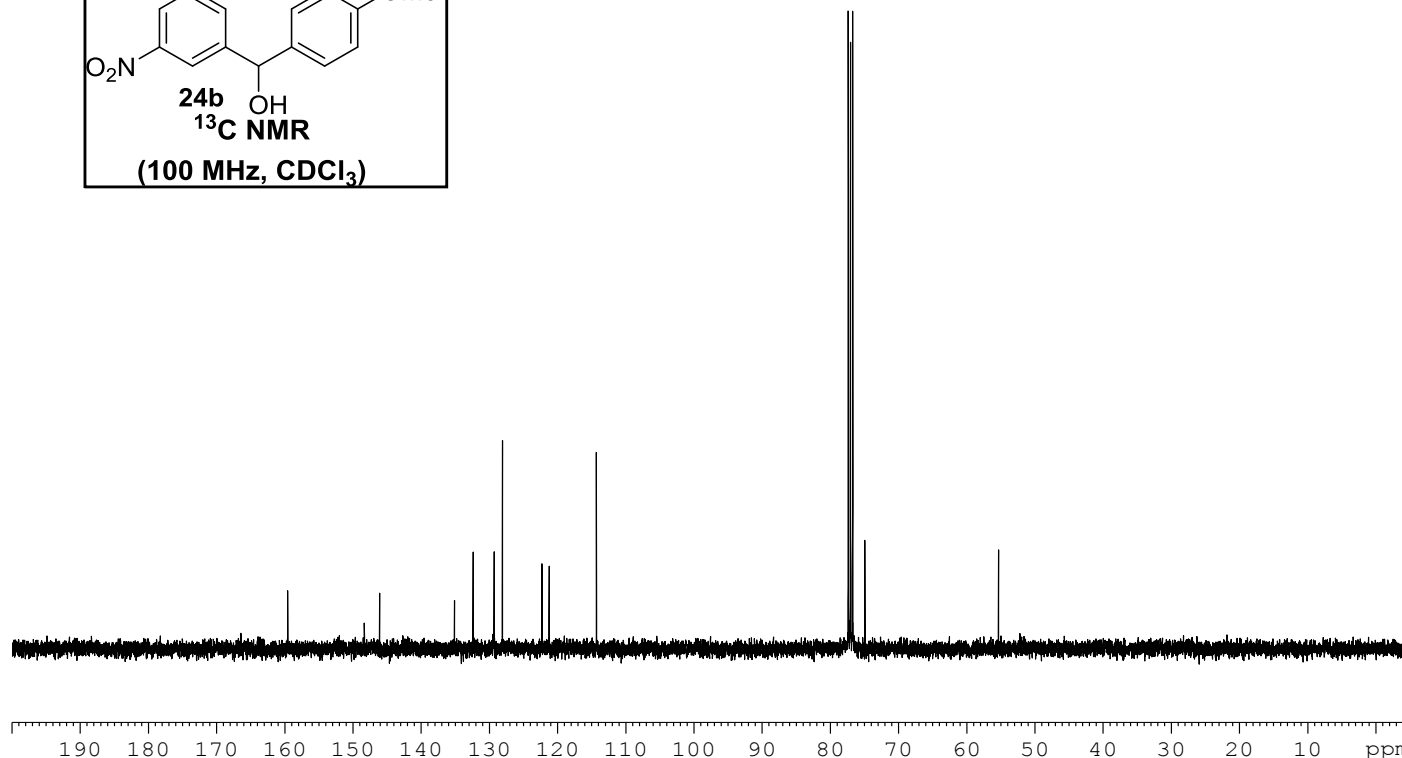
F2 - Acquisition Parameters

Date_ 20120417
 Time_ 11.45
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl₃
 NS 118
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 2050
 DW 20.800 usec
 DE 6.00 usec
 TE 295.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

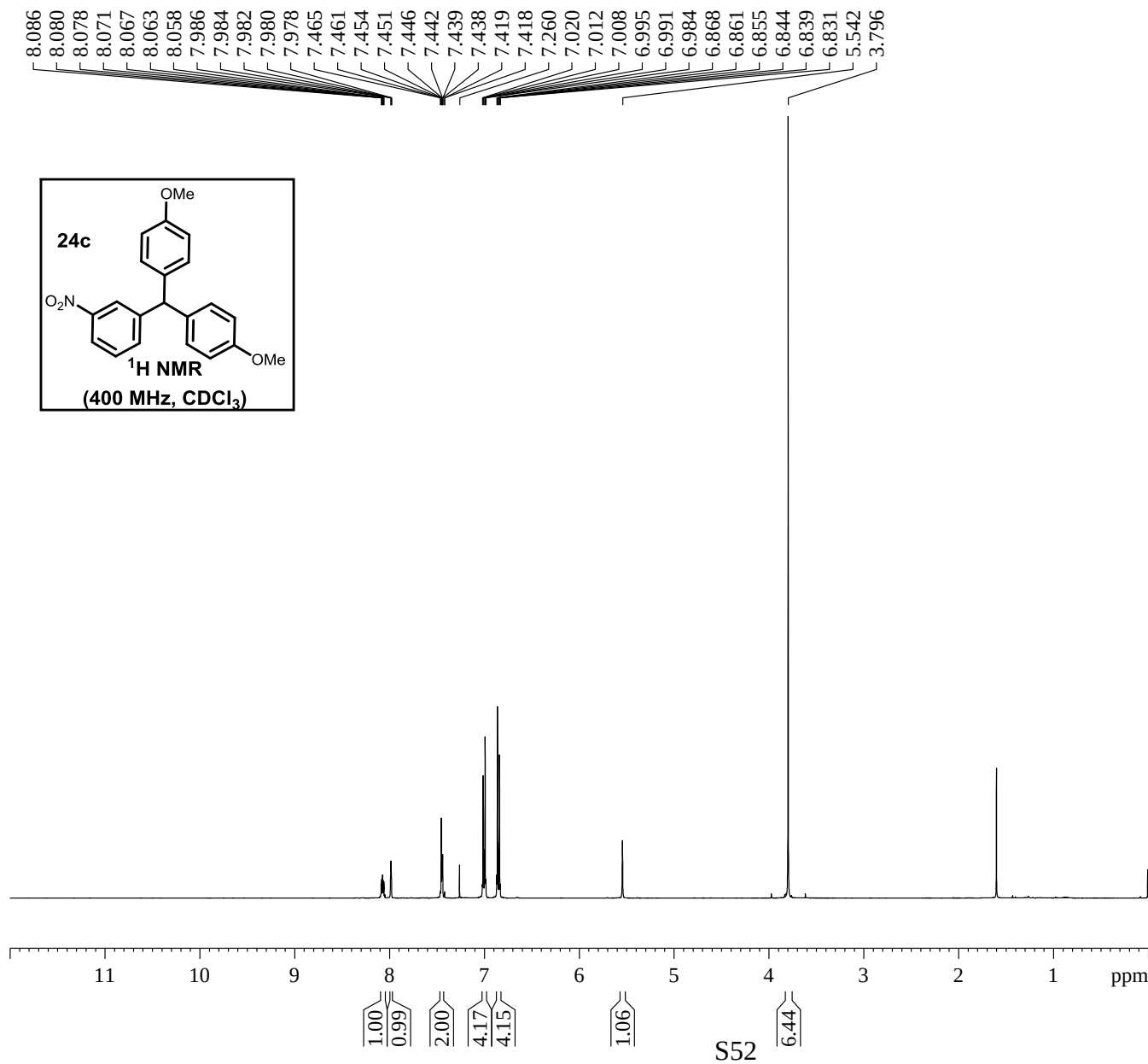
===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 15.60 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127690 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



PROTON CDC13 {D:\CRR} KOPAL 1



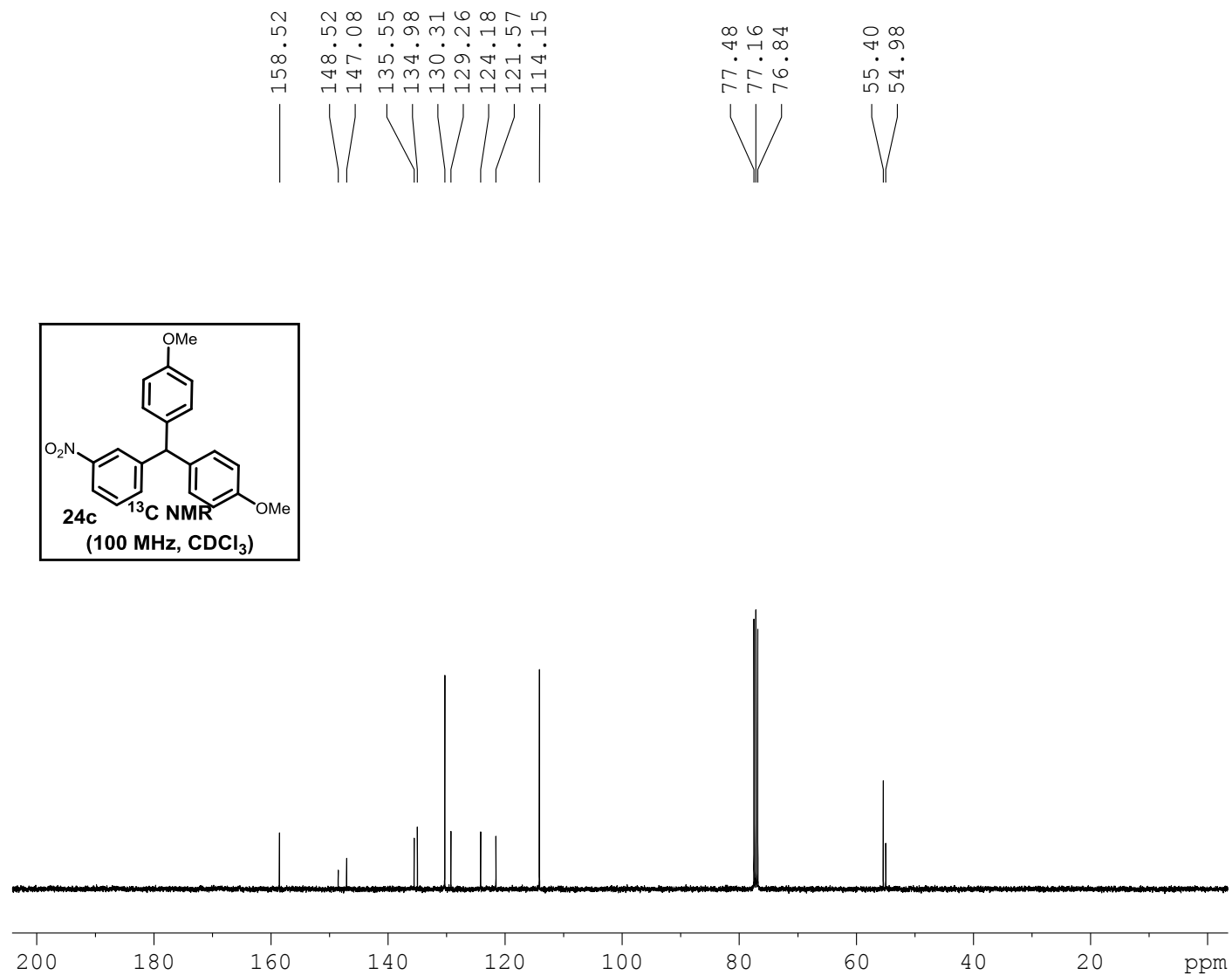
Current Data Parameters
NAME AHK-I-116-E
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110406
Time 11.52
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 181
DW 60.800 usec
DE 6.00 usec
TE 294.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300038 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



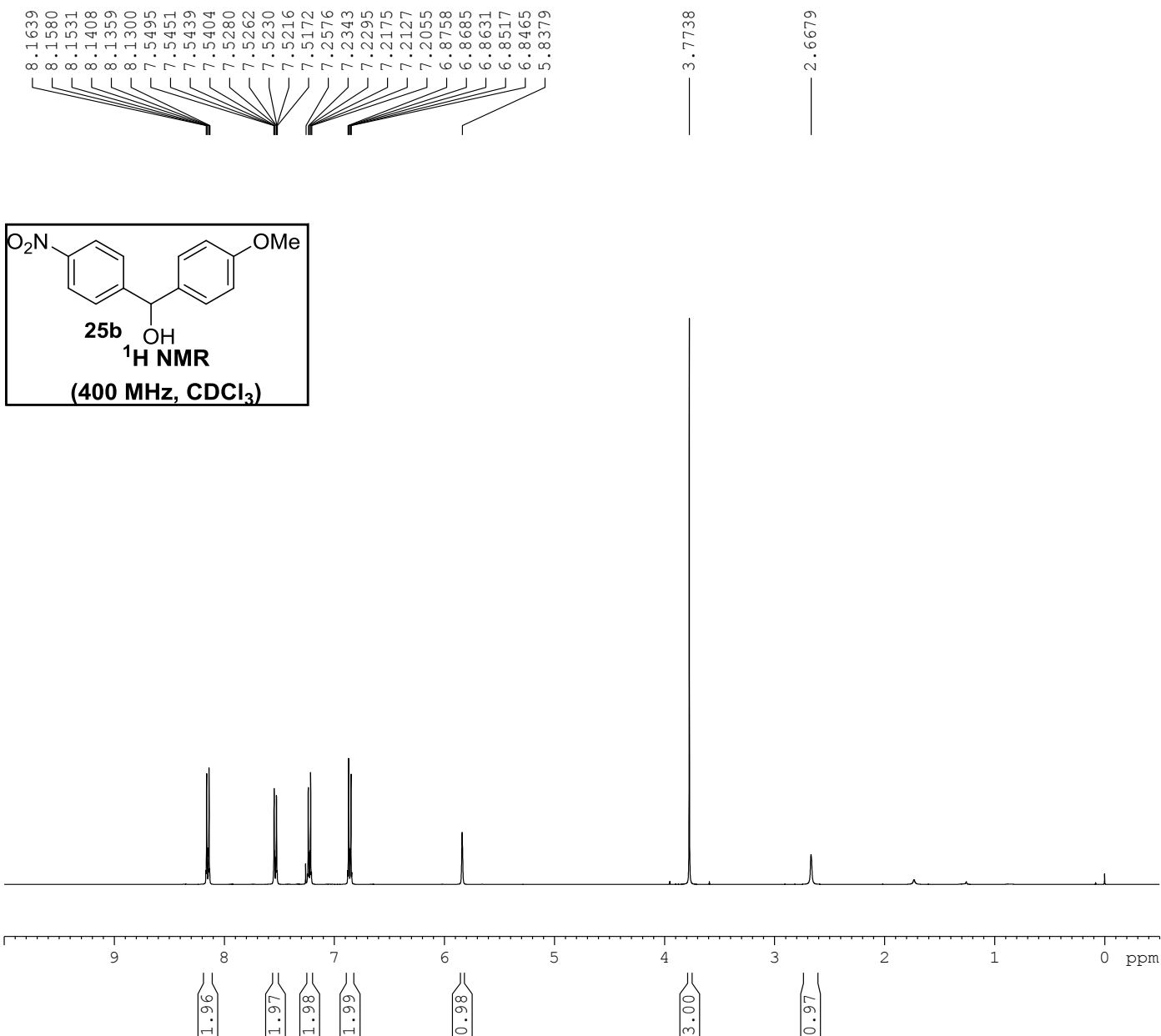
Current Data Parameters
NAME AHK-I-116-E2
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110407
Time_ 10.38
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 258
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 50.8
DW 20.800 usec
DE 6.00 usec
TE 295.4 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 ¹³C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 ¹H
PCPD2 90.00 usec
PL12 15.60 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127553 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

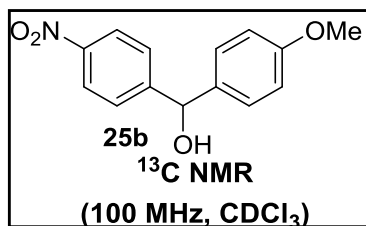


Current Data Parameters
 NAME AHK-I-252B
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20120411
 Time 11.58
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 128
 DW 60.800 usec
 DE 6.00 usec
 TE 294.7 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 14.00 usec
 PL1 -0.90 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300046 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



— 159.64
 — 151.23
 — 147.12

 — 135.11
 — 128.22
 — 127.04
 — 123.69
 — 114.35

 77.48
 77.16
 76.84
 75.13

 — 55.41



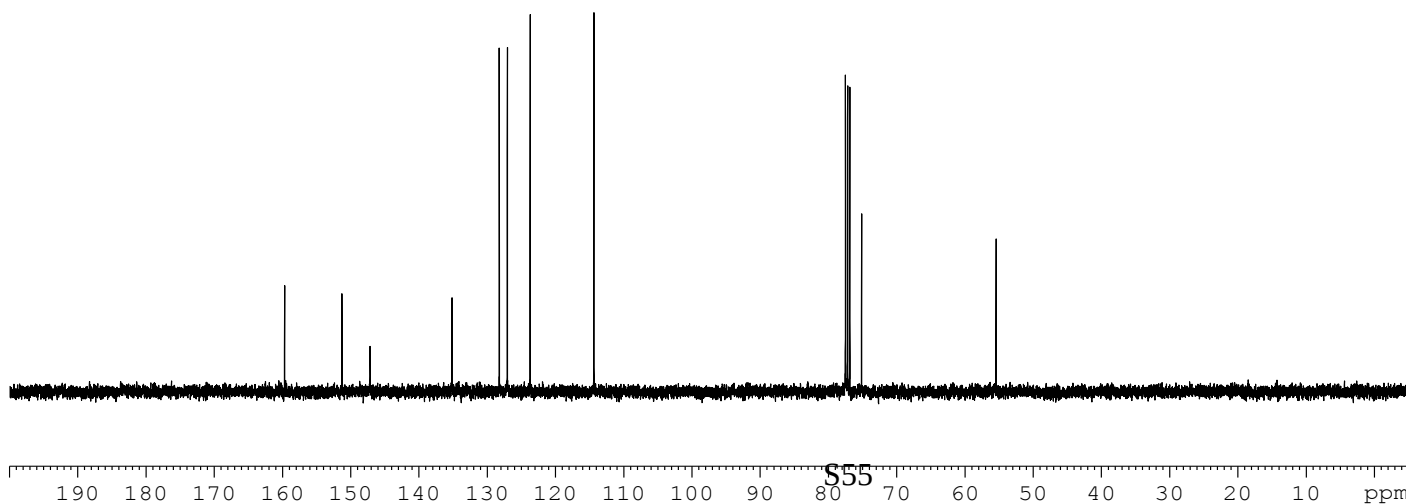
Current Data Parameters
 NAME AHK-I-252B
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20120411
 Time 12.00
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl₃
 NS 38
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 1030
 DW 20.800 usec
 DE 6.00 usec
 TE 295.1 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 15.60 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127597 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



PROTON CDC13 {D:\CRR} KOPAL 1

8.142
8.137
8.125
8.120
7.282
7.277
7.273
7.260
7.256
7.250
7.005
6.998
6.993
6.981
6.977
6.970
6.864
6.856
6.851
6.840
6.834
5.532

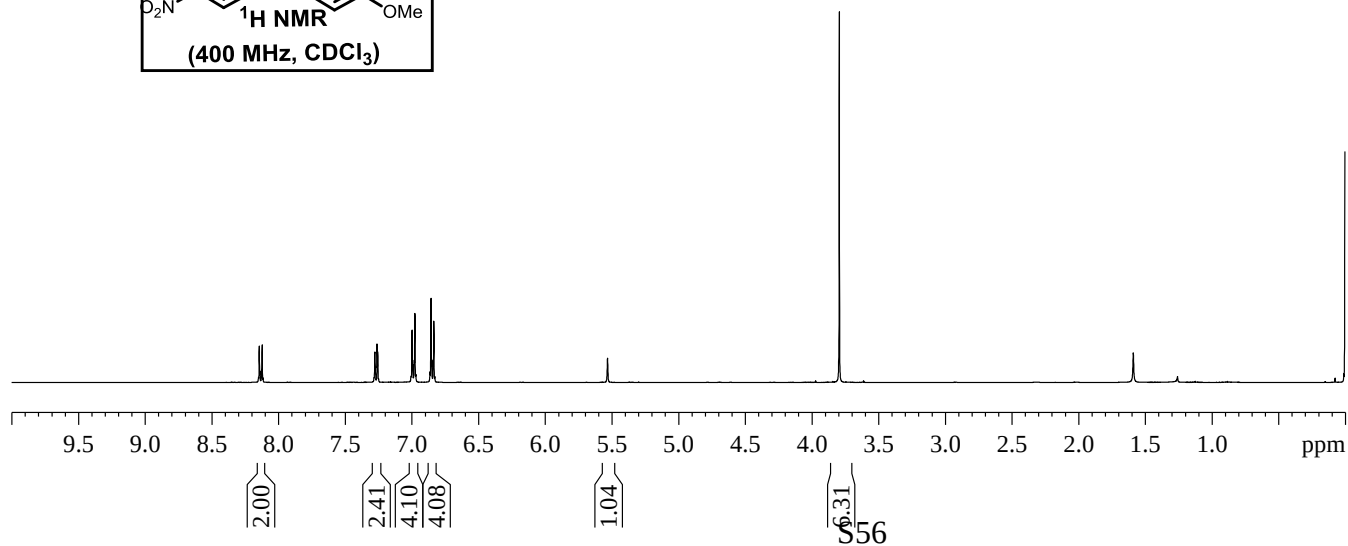
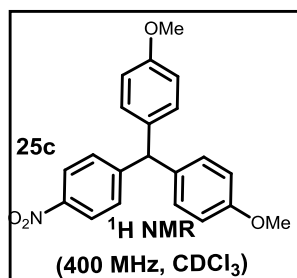
3.793

Current Data Parameters
NAME AHK-I-127 B
EXPNO 1
PROCNO 1

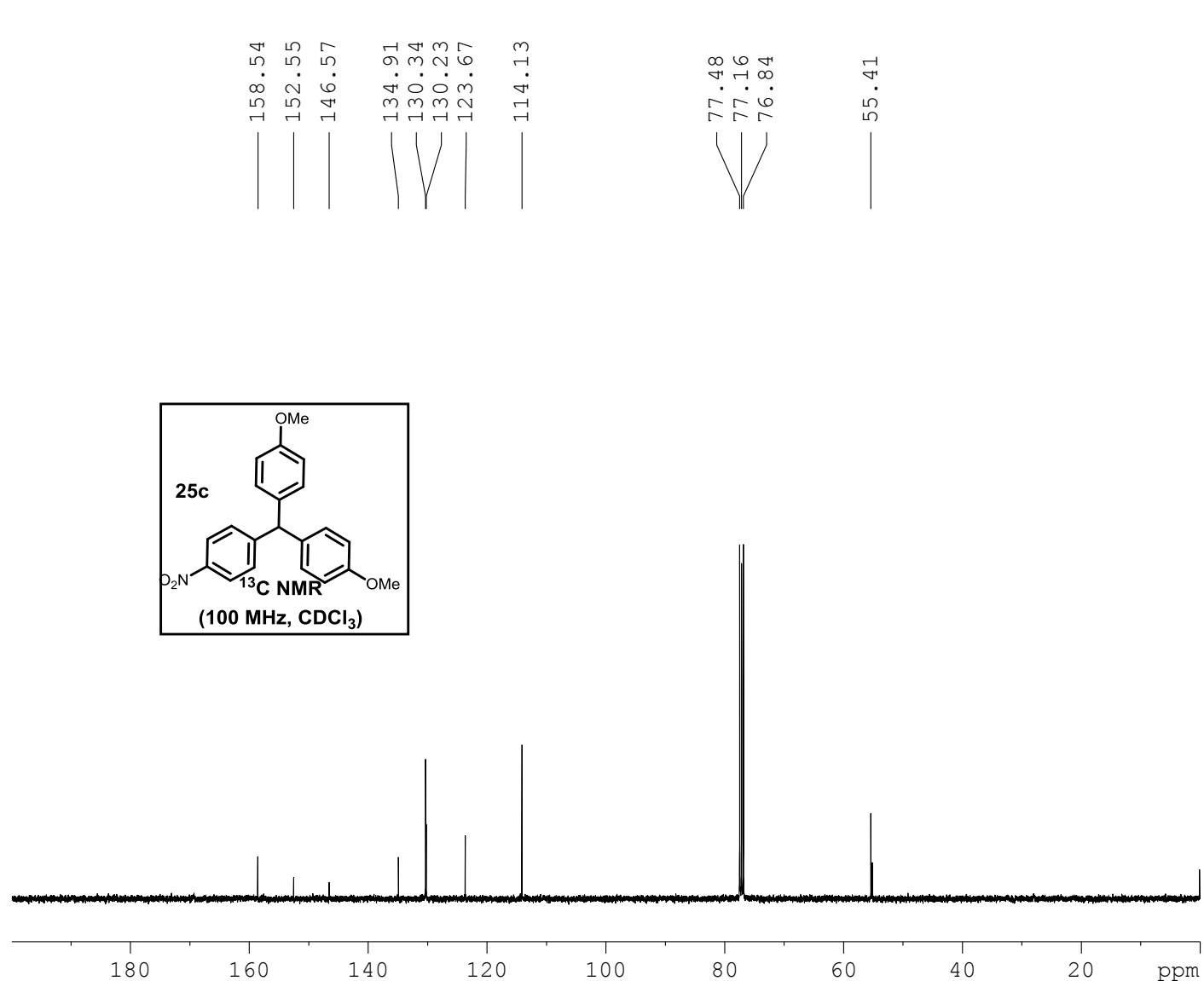
F2 - Acquisition Parameters
Date_ 20110516
Time 12.59
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 256
DW 60.800 usec
DE 6.00 usec
TE 295.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300038 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-127 B
EXPNO 2
PROCNO 1

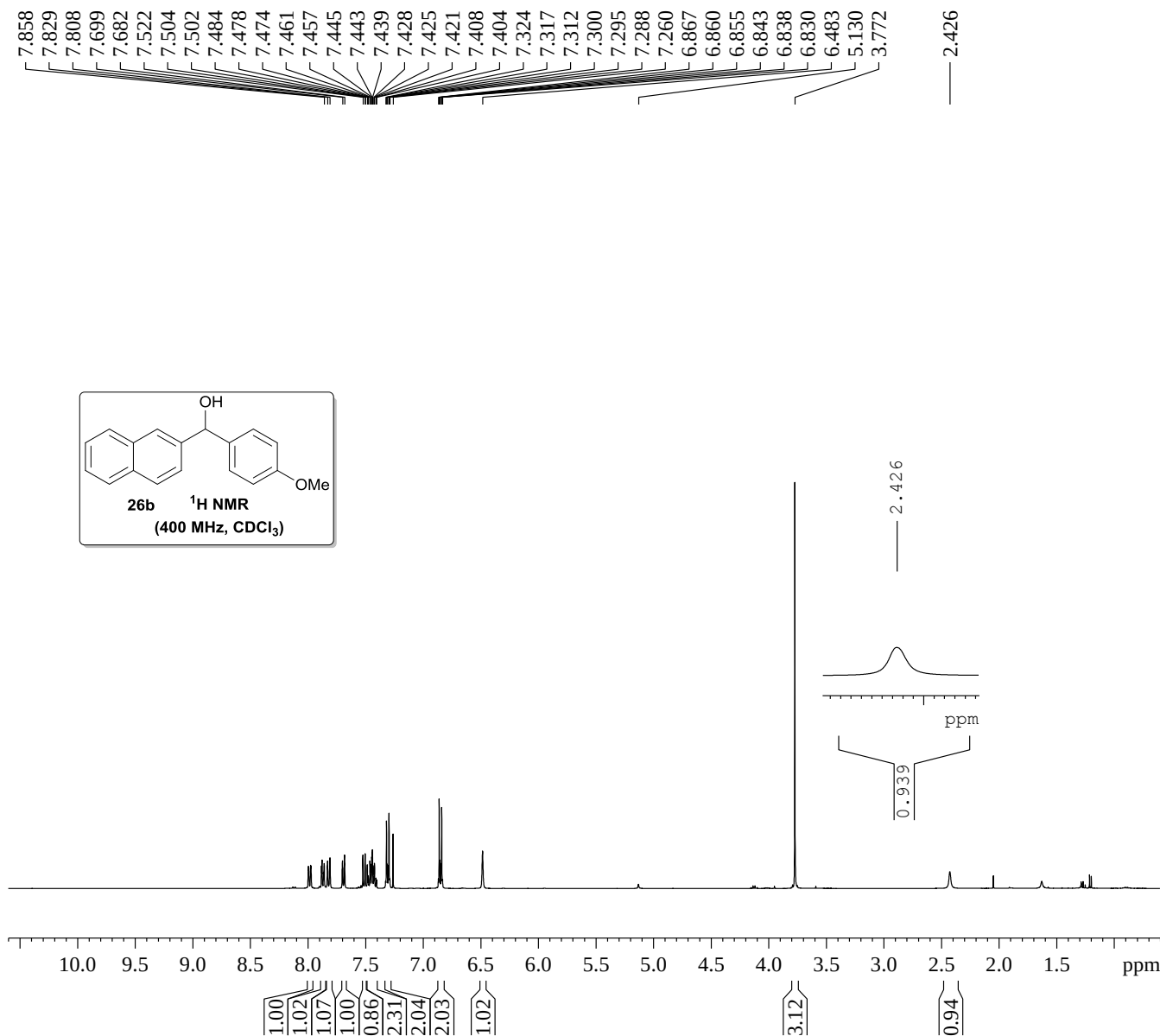
F2 - Acquisition Parameters
Date_ 20110516
Time_ 13.15
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 1030
DW 20.800 usec
DE 6.00 usec
TE 295.8 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 15.60 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127543 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



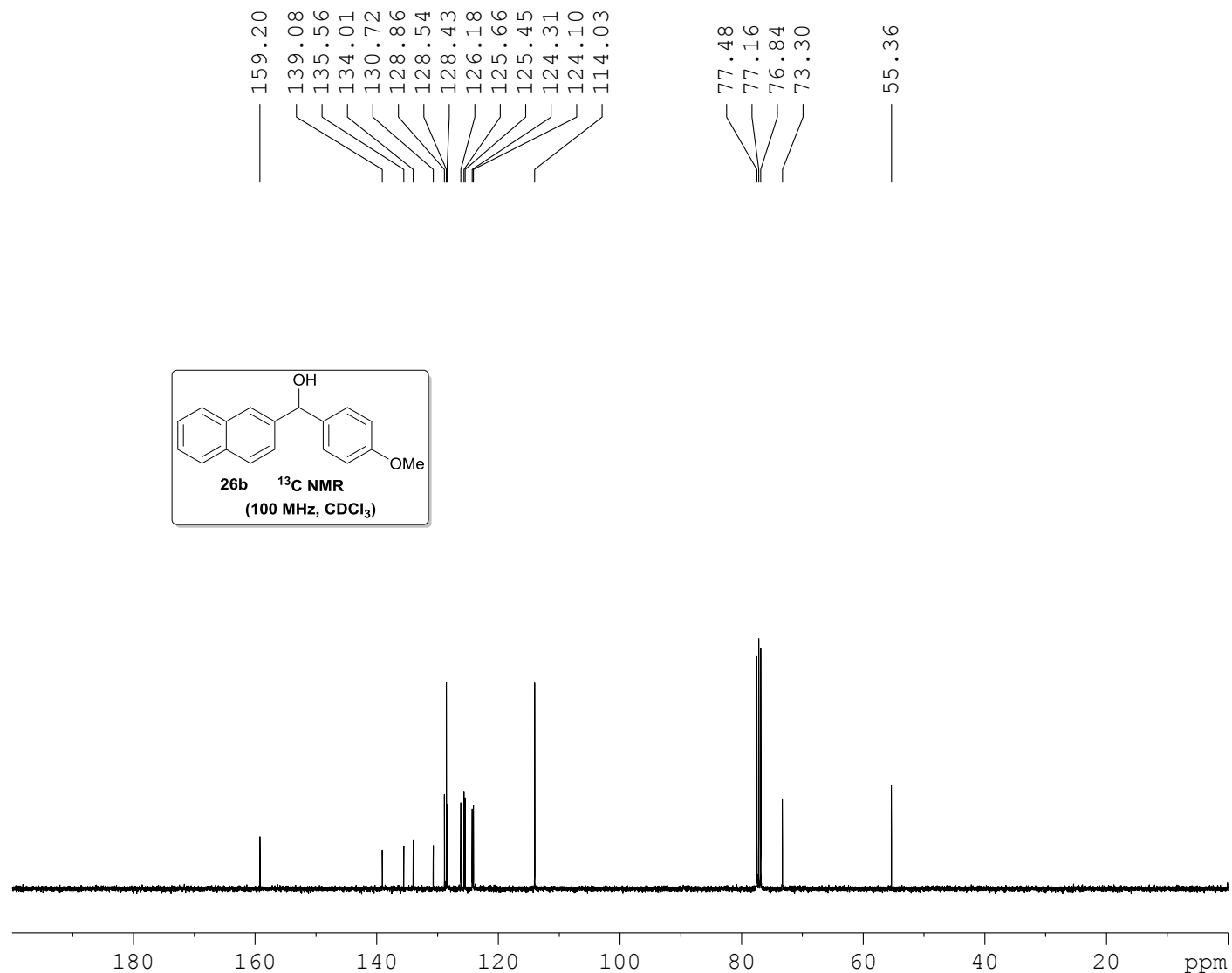
Current Data Parameters
NAME AHK-I-373-B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130212
Time 12.06
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 295.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-373-B
EXPNO 2
PROCNO 1

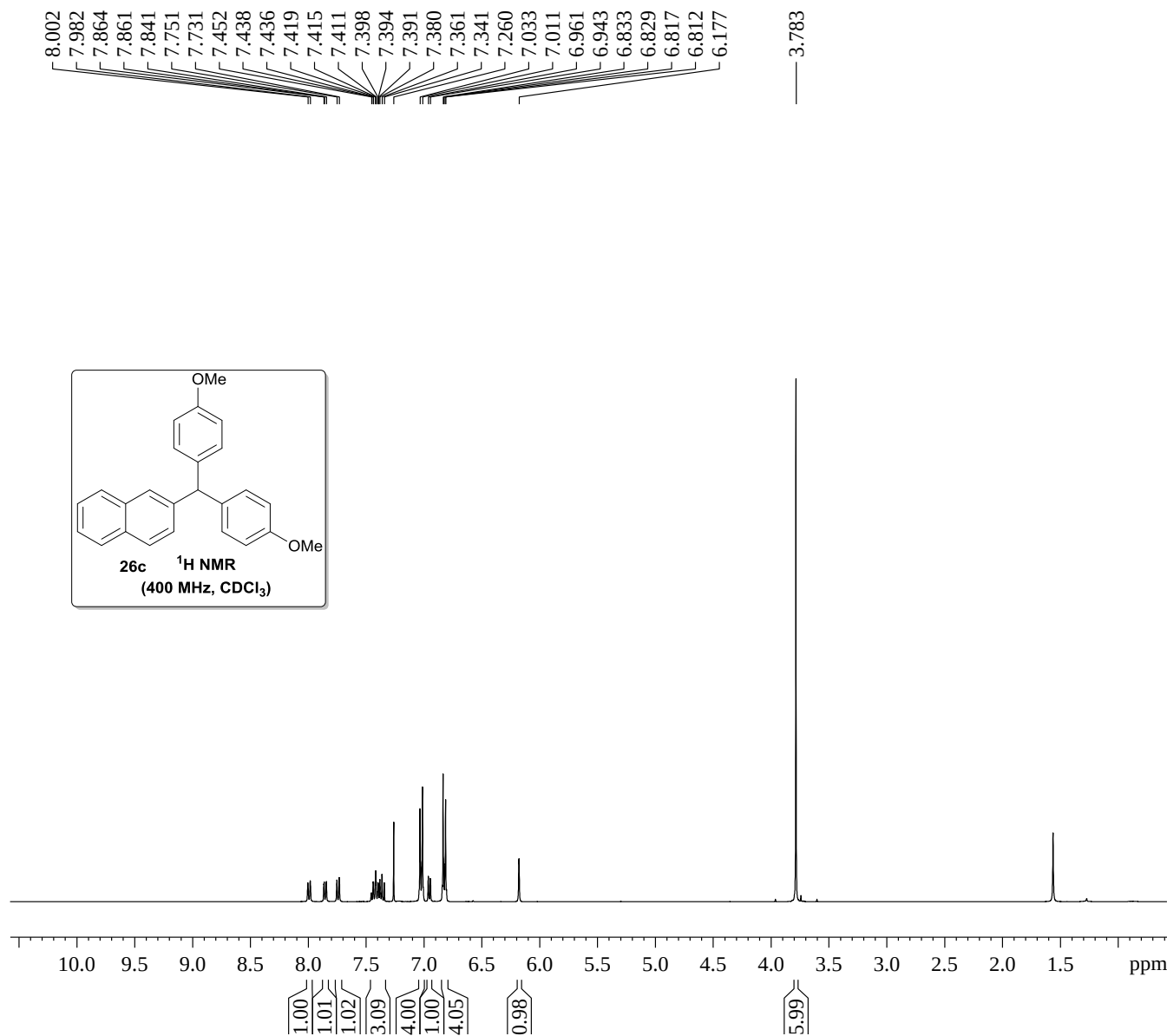
F2 - Acquisition Parameters
Date_ 20130212
Time_ 12.11
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 91
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 90.5
DW 20.800 usec
DE 6.00 usec
TE 296.3 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127581 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



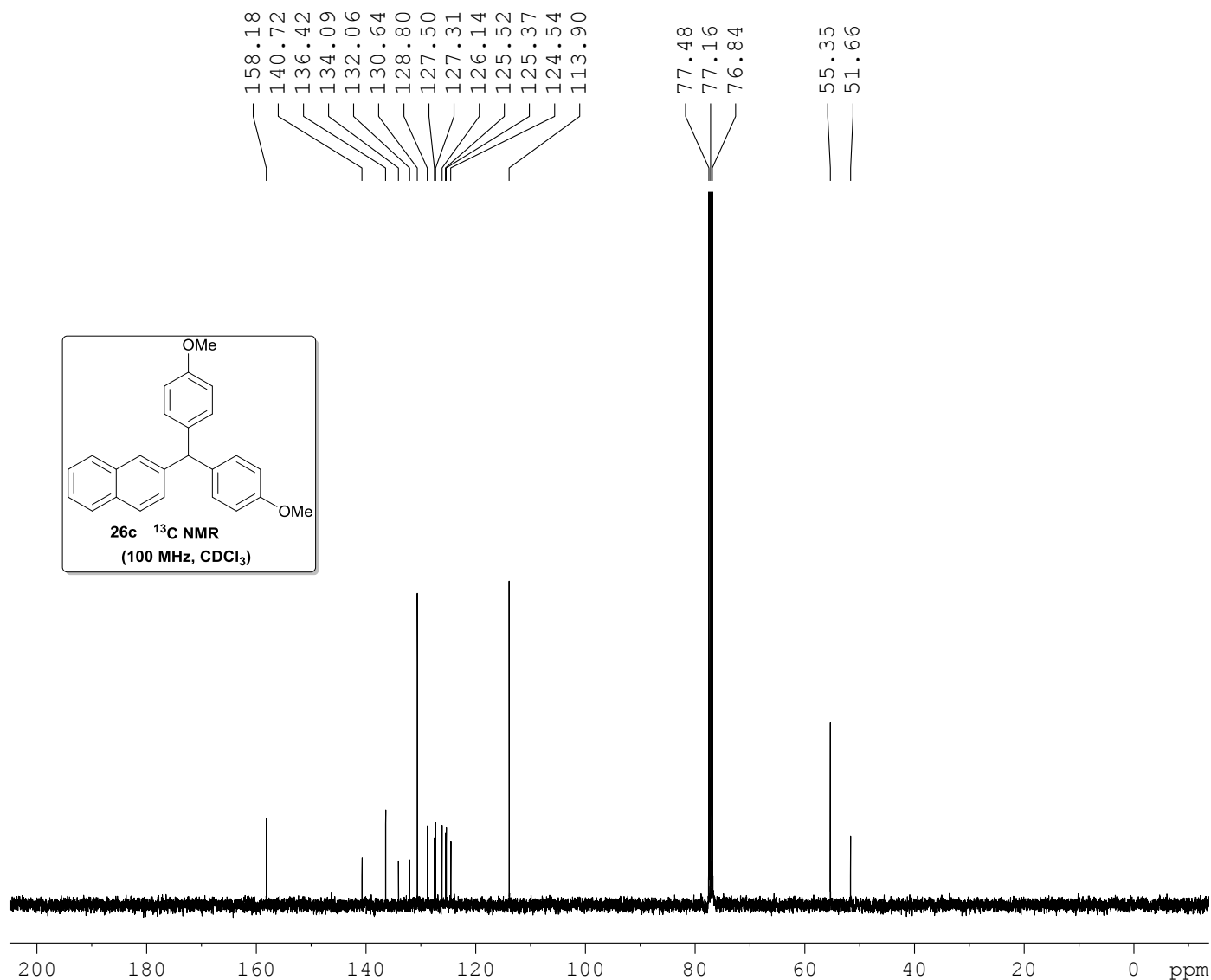
Current Data Parameters
NAME AHK-I-373D
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130307
Time 11.05
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 128
DW 60.800 usec
DE 6.00 usec
TE 299.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-373D
 EXPNO 2
 PROCNO 1

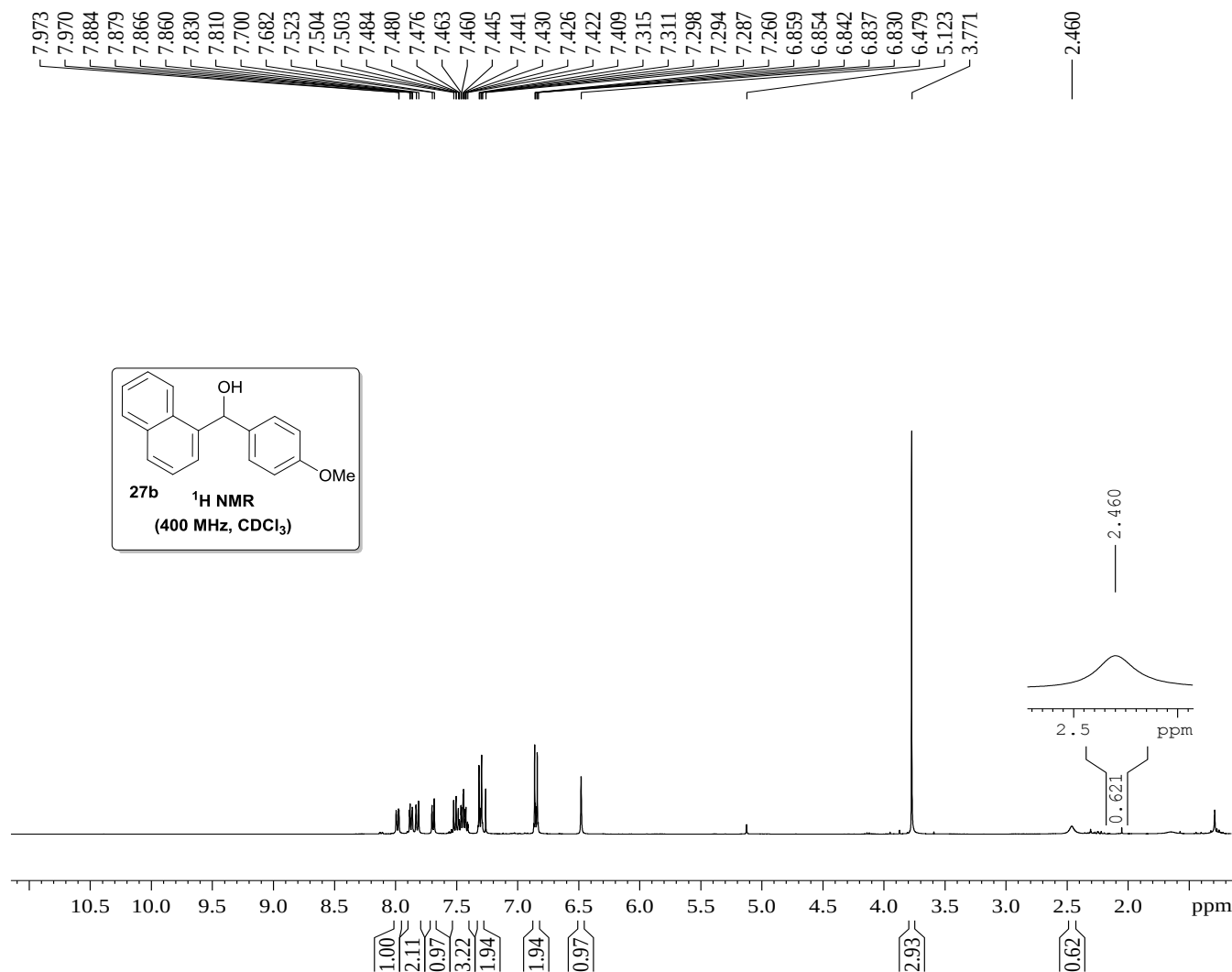
F2 - Acquisition Parameters
 Date_ 20130307
 Time_ 11.19
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 272
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 40.3
 DW 20.800 usec
 DE 6.00 usec
 TE 300.3 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127531 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



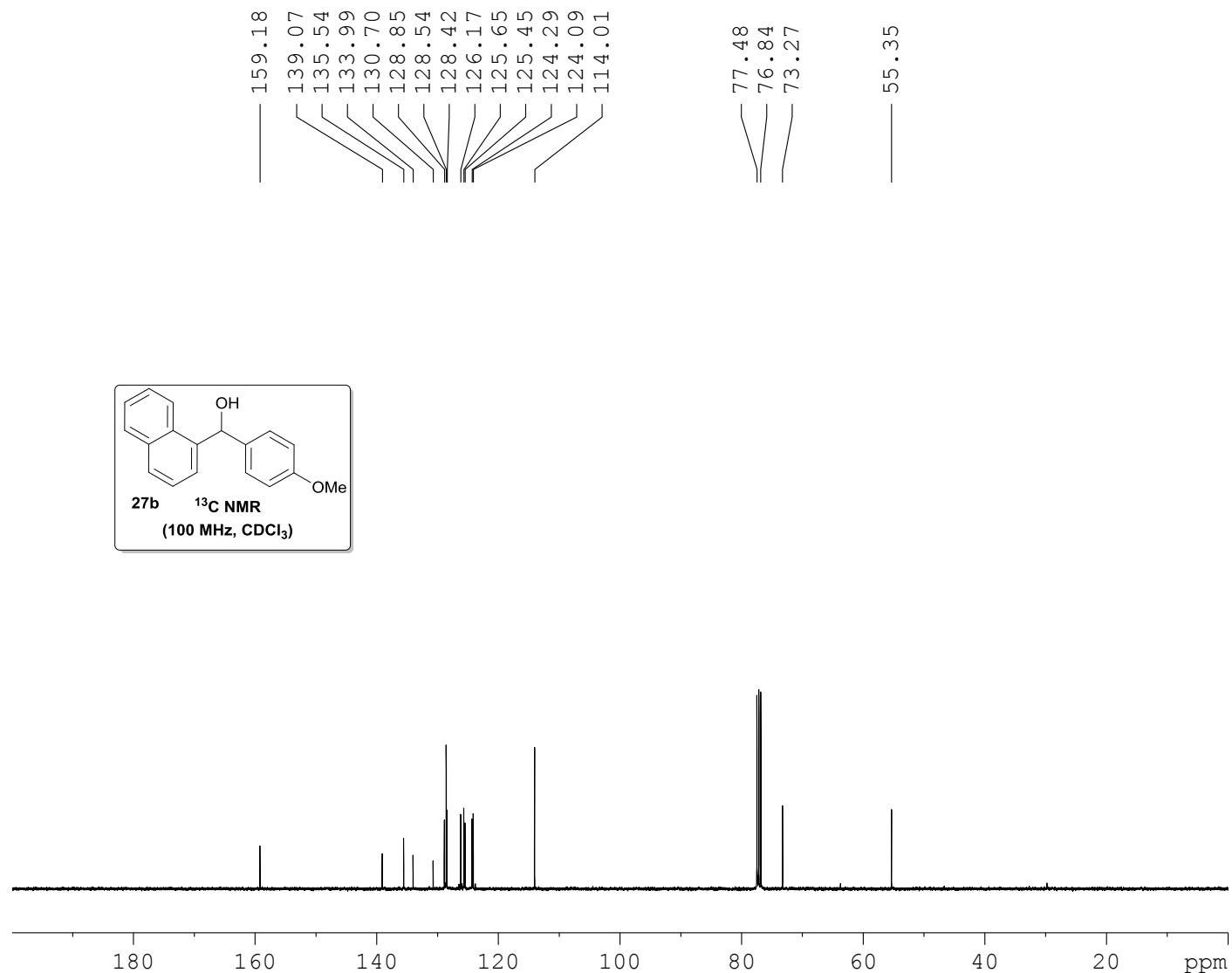
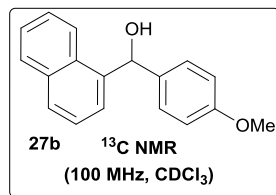
Current Data Parameters
NAME AHK-I-498B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140623
Time_ 10.20
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.00 usec
TE 294.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300050 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters

NAME	AHK-I-498B
EXPNO	2
PROCNO	1

F2 - Acquisition Parameters

Date_	20140623
Time_	10.35
INSTRUM	spect
PROBHD	5 mm DUL 13C-1
PULPROG	zgpg30
TD	65536
SOLVENT	CDC13
NS	256
DS	4
SWH	24038.461 Hz
FIDRES	0.366798 Hz
AQ	1.3631988 sec
RG	50.8
DW	20.800 usec
DE	6.00 usec
TE	294.8 K
D1	2.00000000 sec
d11	0.03000000 sec
DELTA	1.89999998 sec
TD0	1

===== CHANNEL f1 =====

NUC1	13C
P1	9.15 usec
PL1	0.00 dB
SFO1	100.6228298 MHz

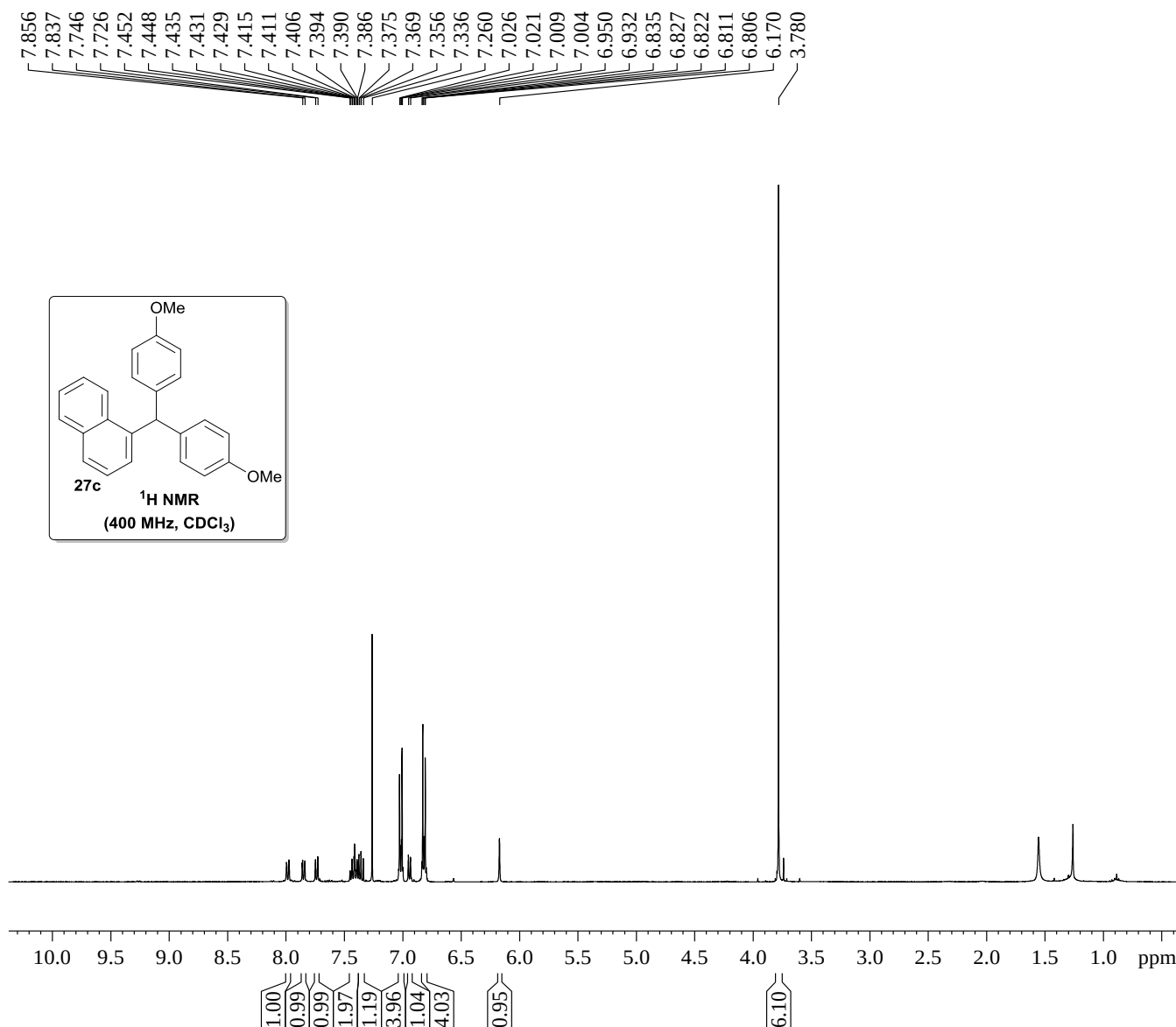
===== CHANNEL f2 =====

CPDPRG2	waltz16
NUC2	1H
PCPD2	90.00 usec
PL12	14.90 dB
PL13	14.90 dB
PL2	-3.00 dB
SFO2	400.1316005 MHz

F2 - Processing parameters

SI	32768
SF	100.6127598 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.40

PROTON CDC13 {D:\CRR} KOPAL 1



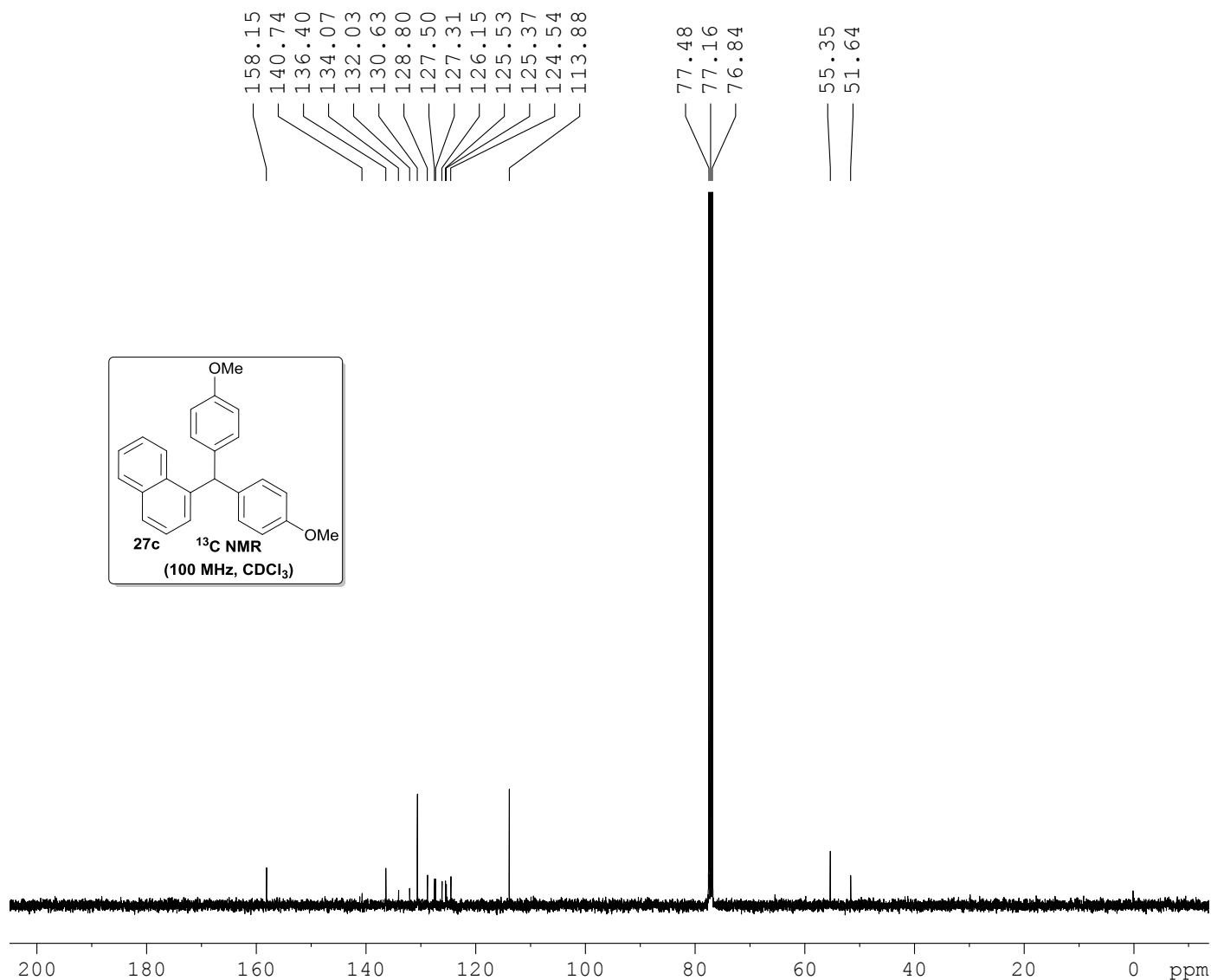
Current Data Parameters
NAME AHK-I-498 A3
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140702
Time 9.52
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 32
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 287
DW 60.800 usec
DE 6.00 usec
TE 296.2 K
D1 1.0000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300051 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-498 A3
 EXPNO 2
 PROCNO 1

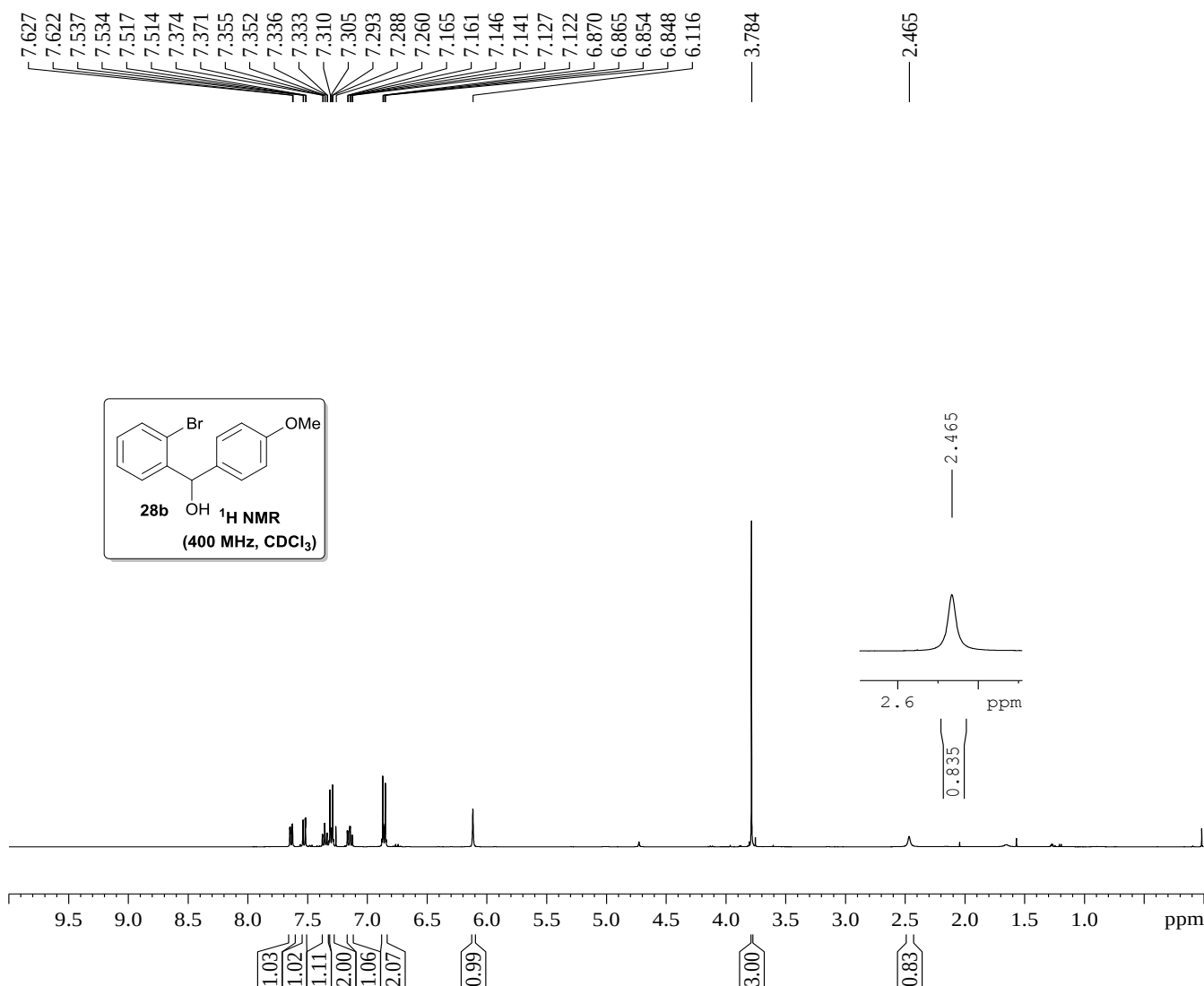
F2 - Acquisition Parameters
 Date_ 20140702
 Time_ 10.09
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 28.5
 DW 20.800 usec
 DE 6.00 usec
 TE 296.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127531 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



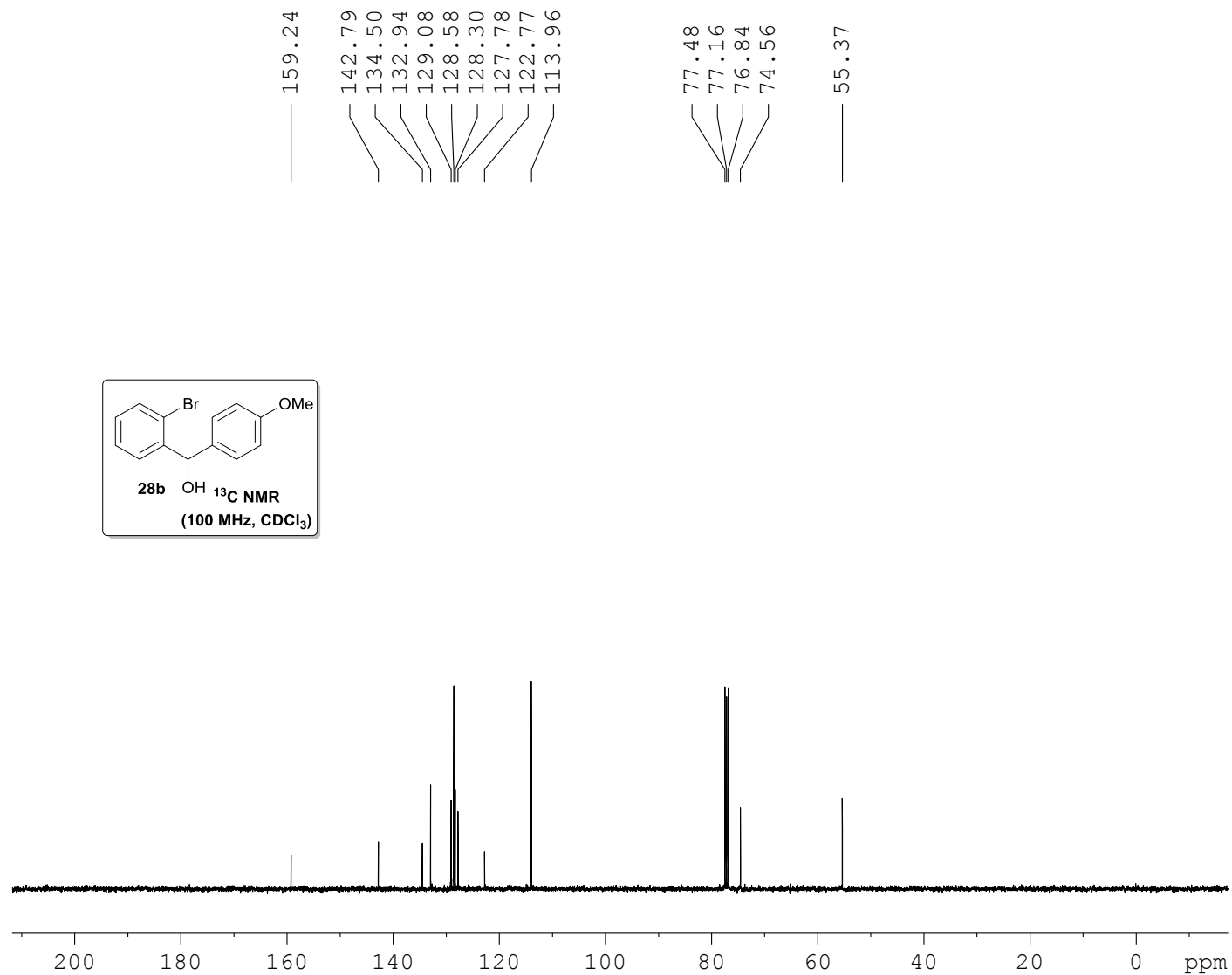
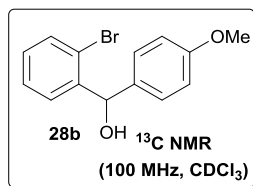
Current Data Parameters
 NAME AHK-I-376-B
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20130212
 Time_ 12.17
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 114
 DW 60.800 usec
 DE 6.00 usec
 TE 295.5 K
 D1 1.0000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300046 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-376-B
EXPNO 2
PROCNO 1

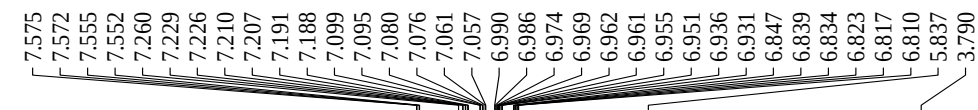
F2 - Acquisition Parameters
Date_ 20130212
Time_ 12.20
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 71
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 90.5
DW 20.800 usec
DE 6.00 usec
TE 296.3 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127577 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1

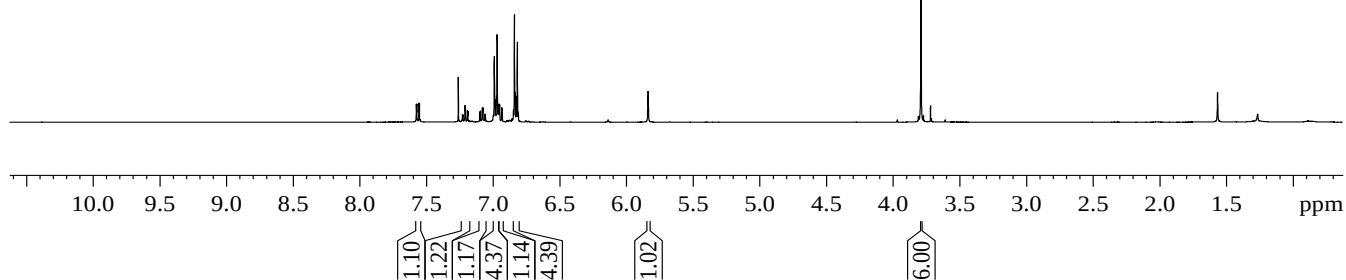
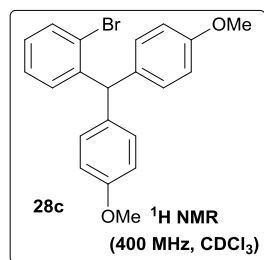


Current Data Parameters
NAME AHK-I-376D
EXPNO 1
PROCNO 1

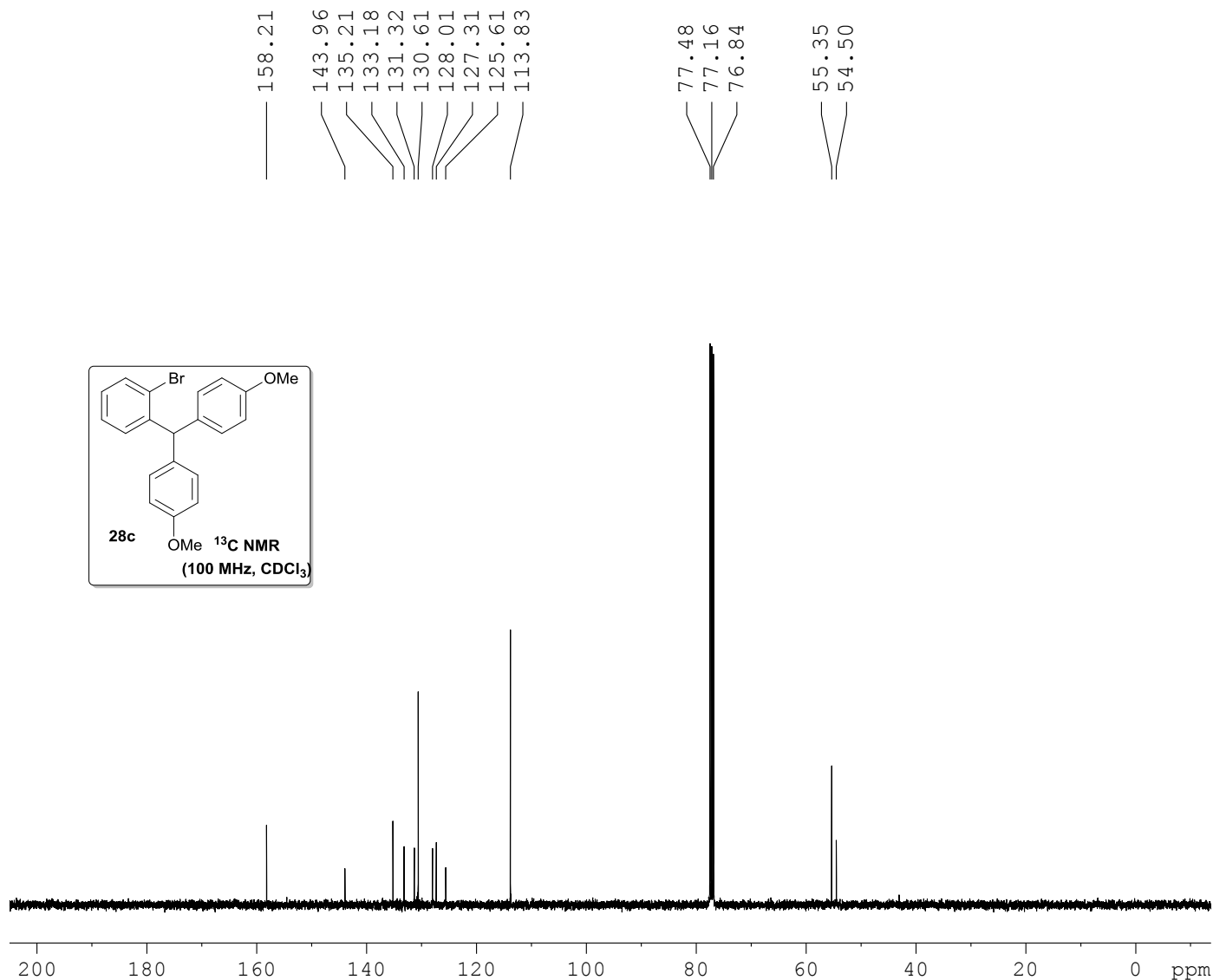
F2 - Acquisition Parameters
Date_ 20130304
Time 10.12
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 161
DW 60.800 usec
DE 6.00 usec
TE 295.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300047 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-376D
 EXPNO 2
 PROCNO 1

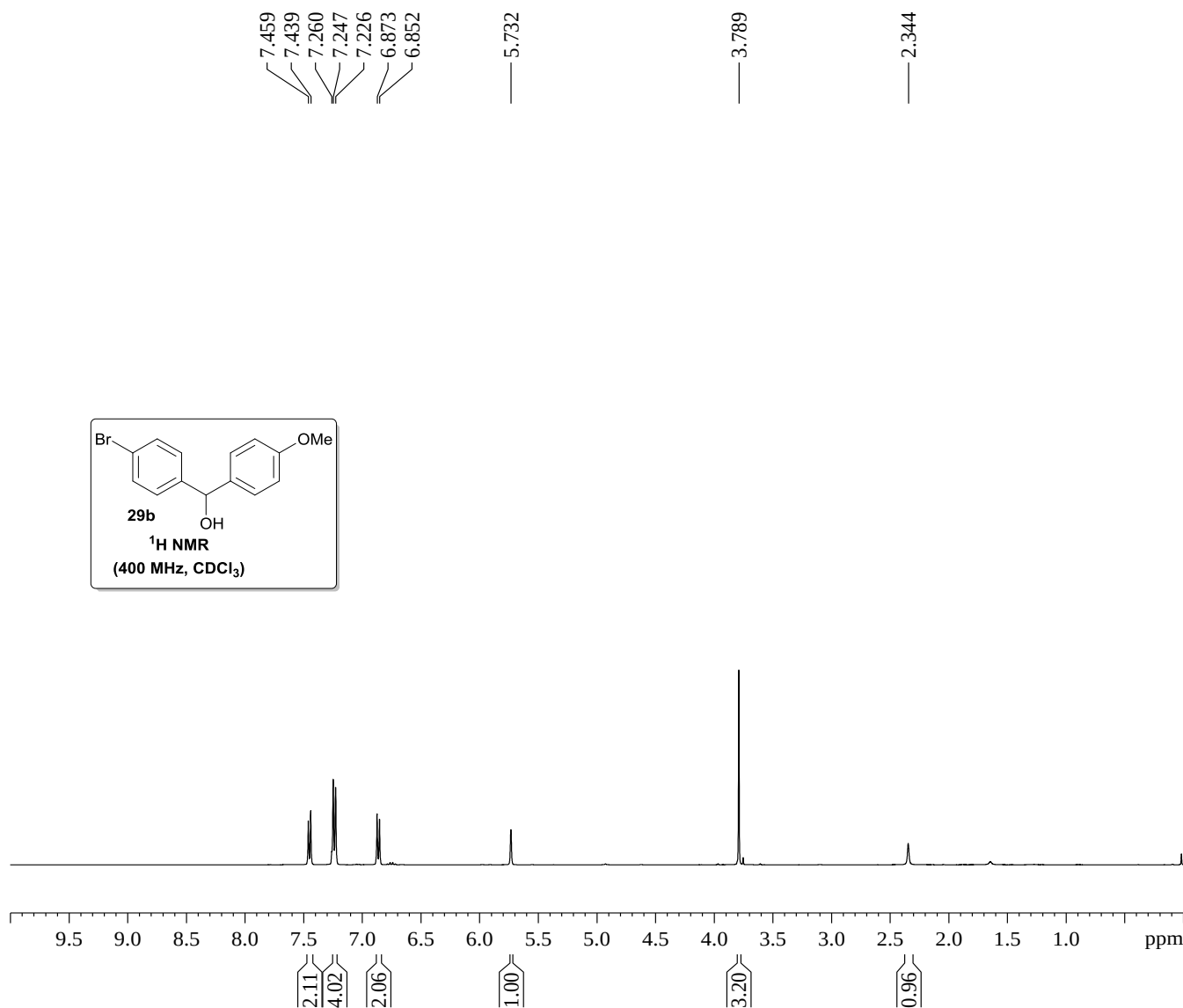
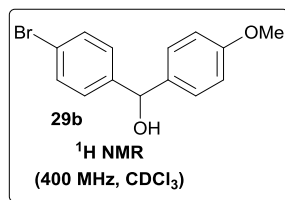
F2 - Acquisition Parameters
 Date_ 20130304
 Time_ 10.27
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 45.2
 DW 20.800 usec
 DE 6.00 usec
 TE 295.6 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127546 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



Current Data Parameters

NAME AHK-I-370-B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters

Date_ 20130212
Time_ 12.44
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

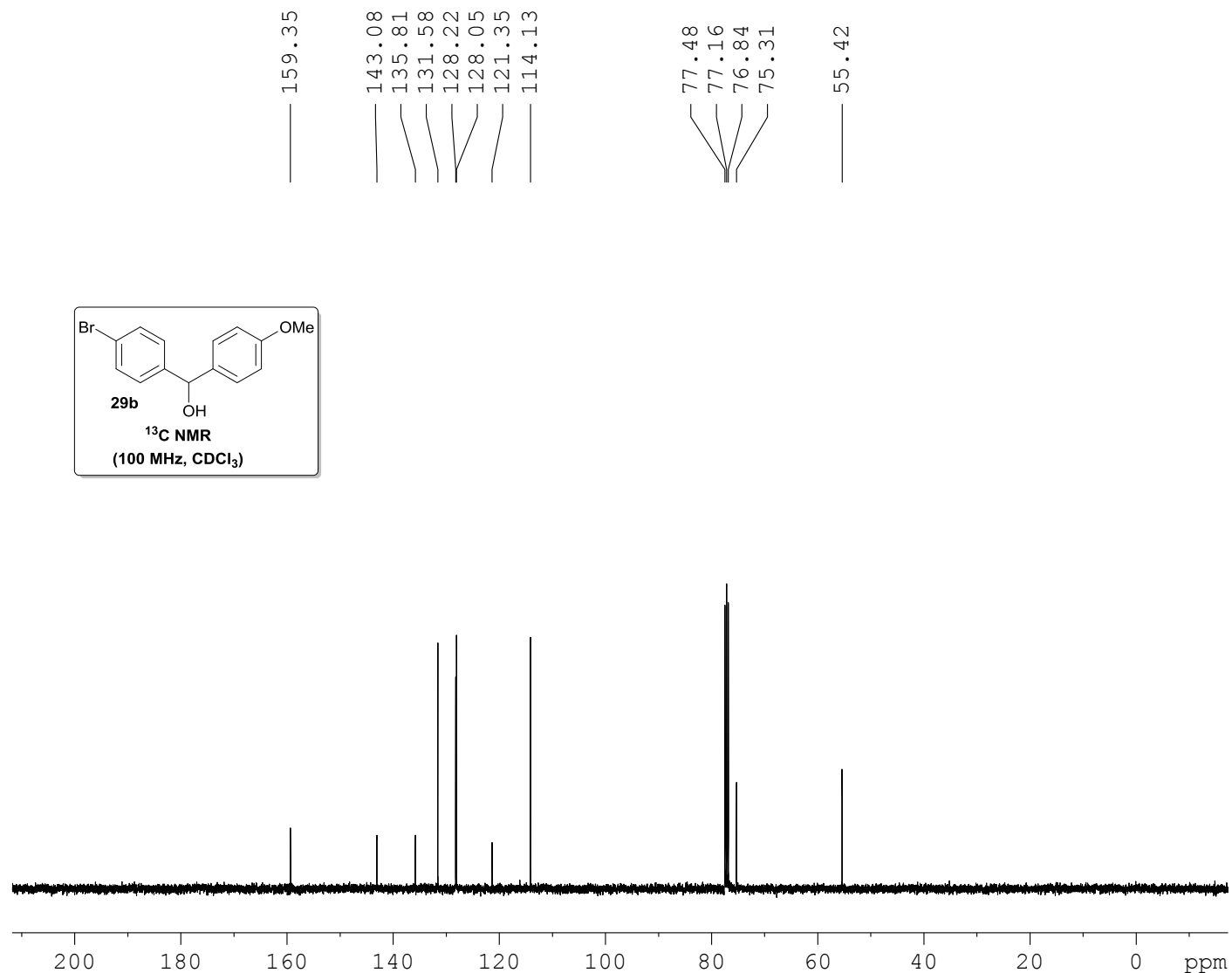
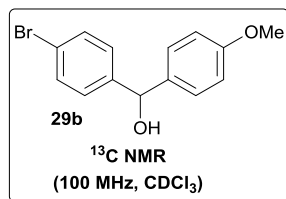
===== CHANNEL f1 =====

NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters

SI 32768
SF 400.1300045 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters

NAME	AHK-I-370-B
EXPNO	2
PROCNO	1

F2 - Acquisition Parameters

Date_	20130212
Time_	12.47
INSTRUM	spect
PROBHD	5 mm DUL 13C-1
PULPROG	zgpg30
TD	65536
SOLVENT	CDC13
NS	41
DS	4
SWH	24038.461 Hz
FIDRES	0.366798 Hz
AQ	1.3631988 sec
RG	90.5
DW	20.800 usec
DE	6.00 usec
TE	296.0 K
D1	2.00000000 sec
d11	0.03000000 sec
DELTA	1.89999998 sec
TD0	1

===== CHANNEL f1 =====

NUC1	13C
P1	9.15 usec
PL1	0.00 dB
SFO1	100.6228298 MHz

===== CHANNEL f2 =====

CPDPRG2	waltz16
NUC2	1H
PCPD2	90.00 usec
PL12	14.90 dB
PL13	14.90 dB
PL2	-3.00 dB
SFO2	400.1316005 MHz

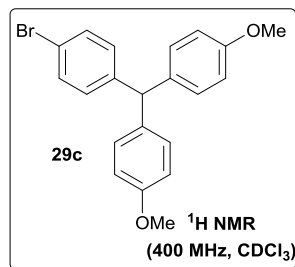
F2 - Processing parameters

SI	32768
SF	100.6127574 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.40

PROTON CDC13 {D:\CRR} KOPAL 1

7.401
7.396
7.385
7.380
7.260
6.999
6.994
6.991
6.989
6.983
6.978
6.969
6.963
6.835
6.829
6.825
6.822
6.818
6.813
5.397

3.785

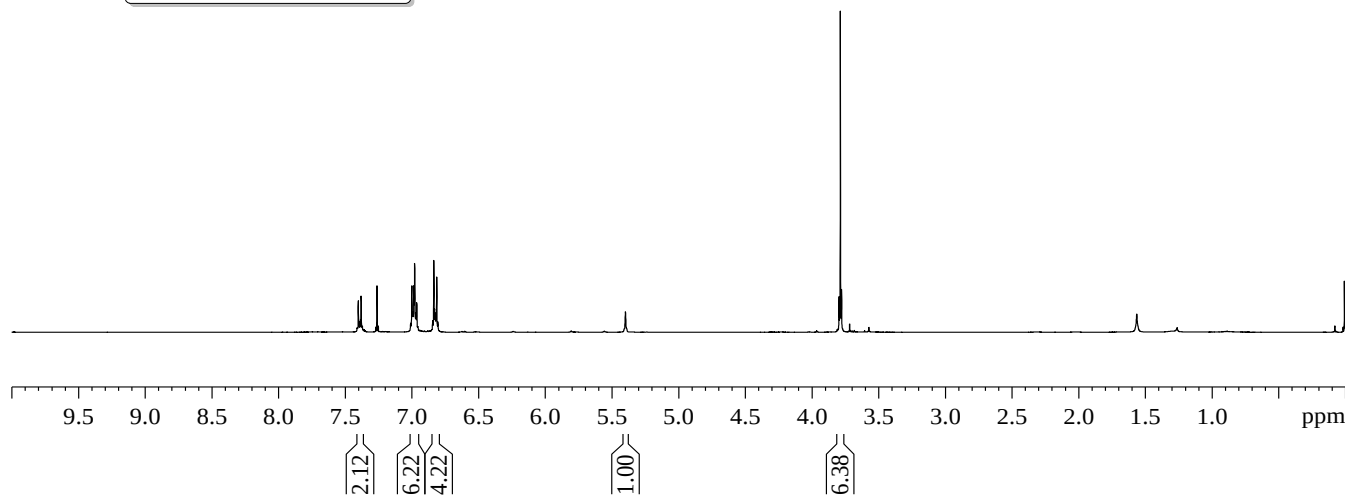


Current Data Parameters
NAME AHK-I-370D
EXPNO 1
PROCNO 1

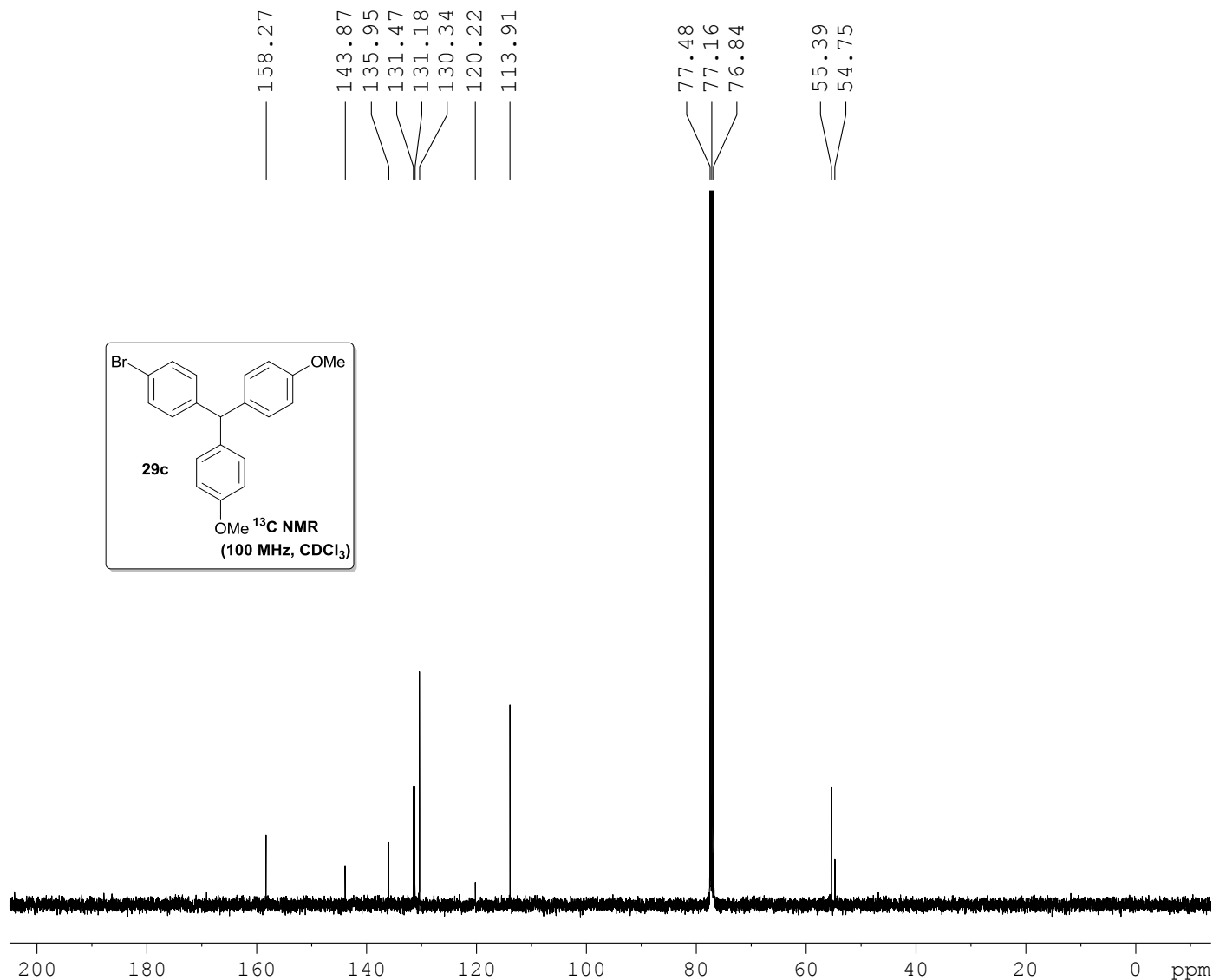
F2 - Acquisition Parameters
Date_ 20130301
Time 11.46
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.00 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300047 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-370D
EXPNO 2
PROCNO 1

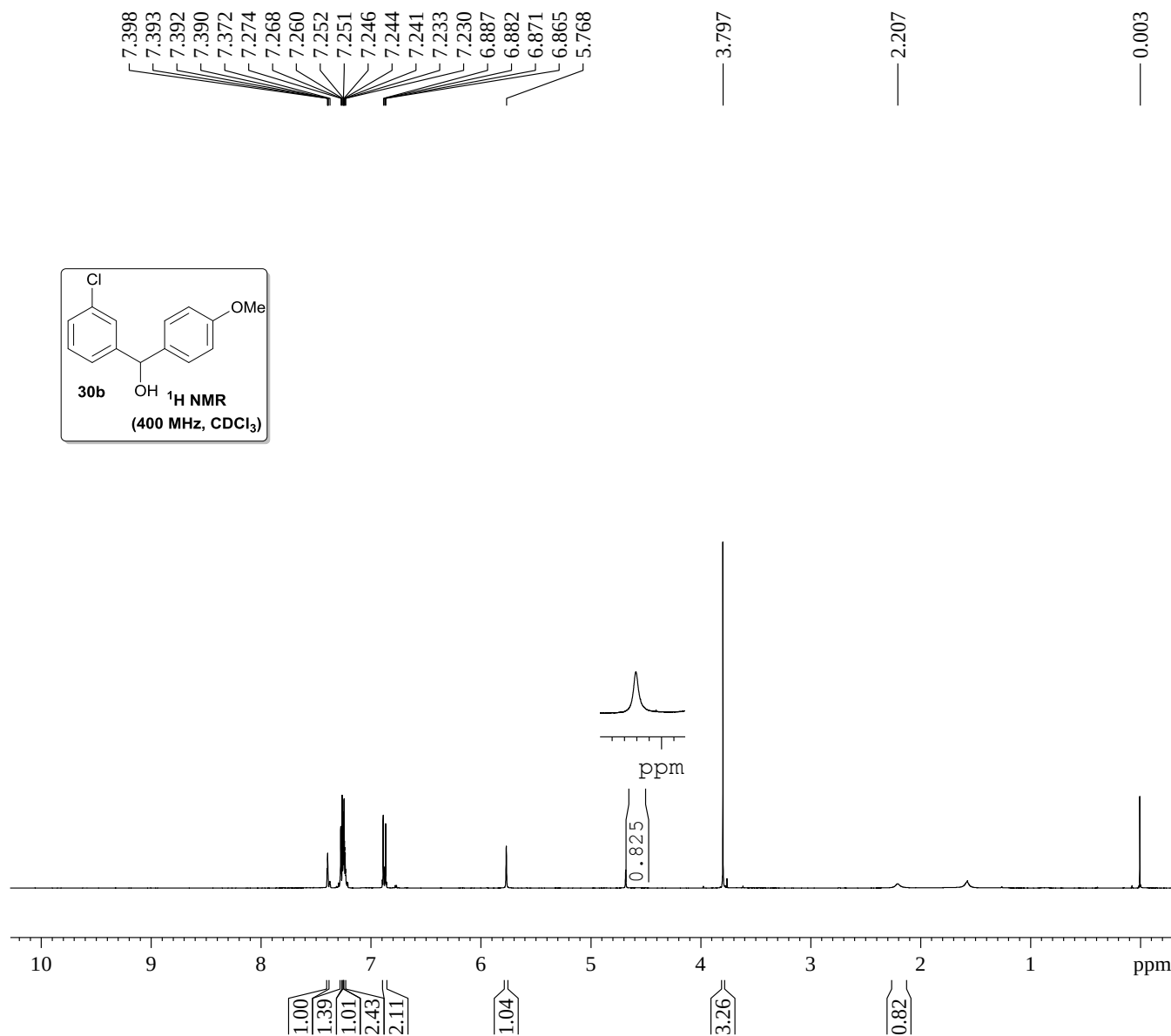
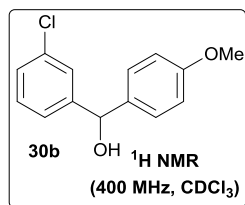
F2 - Acquisition Parameters
Date_ 20130301
Time_ 11.50
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 45.2
DW 20.800 usec
DE 6.00 usec
TE 296.5 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127536 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



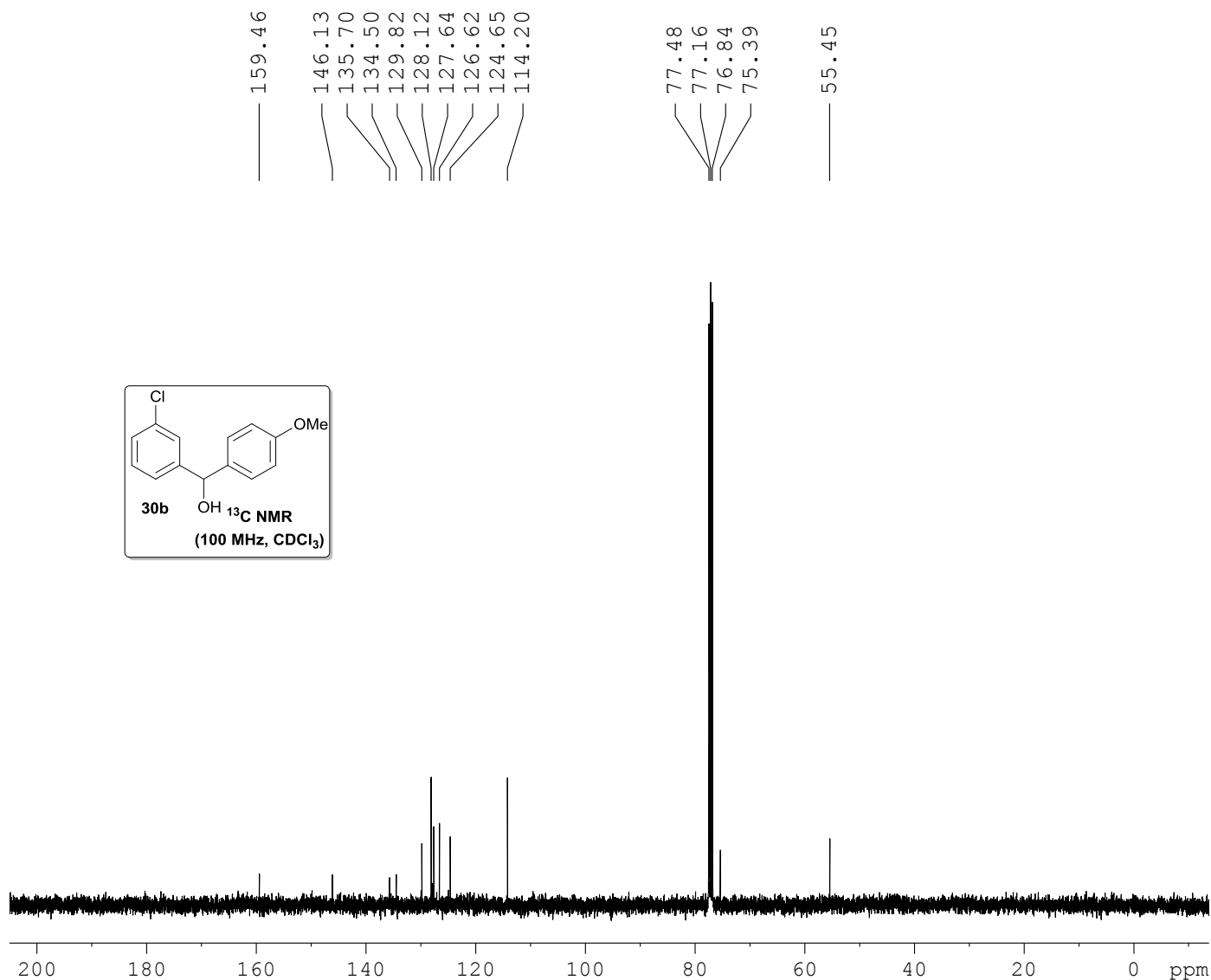
Current Data Parameters
NAME AHK-I-371-B2
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130213
Time 9.58
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 228
DW 60.800 usec
DE 6.00 usec
TE 296.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300047 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-371-B2
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130213
Time_ 10.06
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 64
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 90.5
DW 20.800 usec
DE 6.00 usec
TE 296.5 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

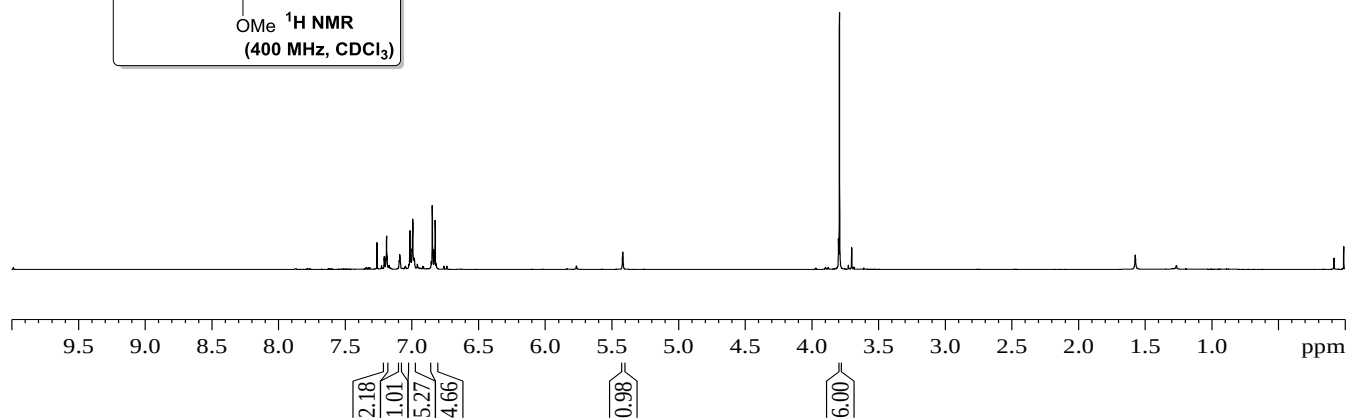
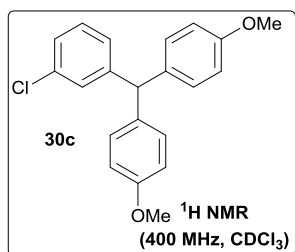
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127538 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1

7.260
7.206
7.193
7.188
7.184
7.094
7.089
7.085
7.013
7.009
6.998
6.992
6.987
6.983
6.979
6.845
6.840
6.829
6.823
5.417

3.791



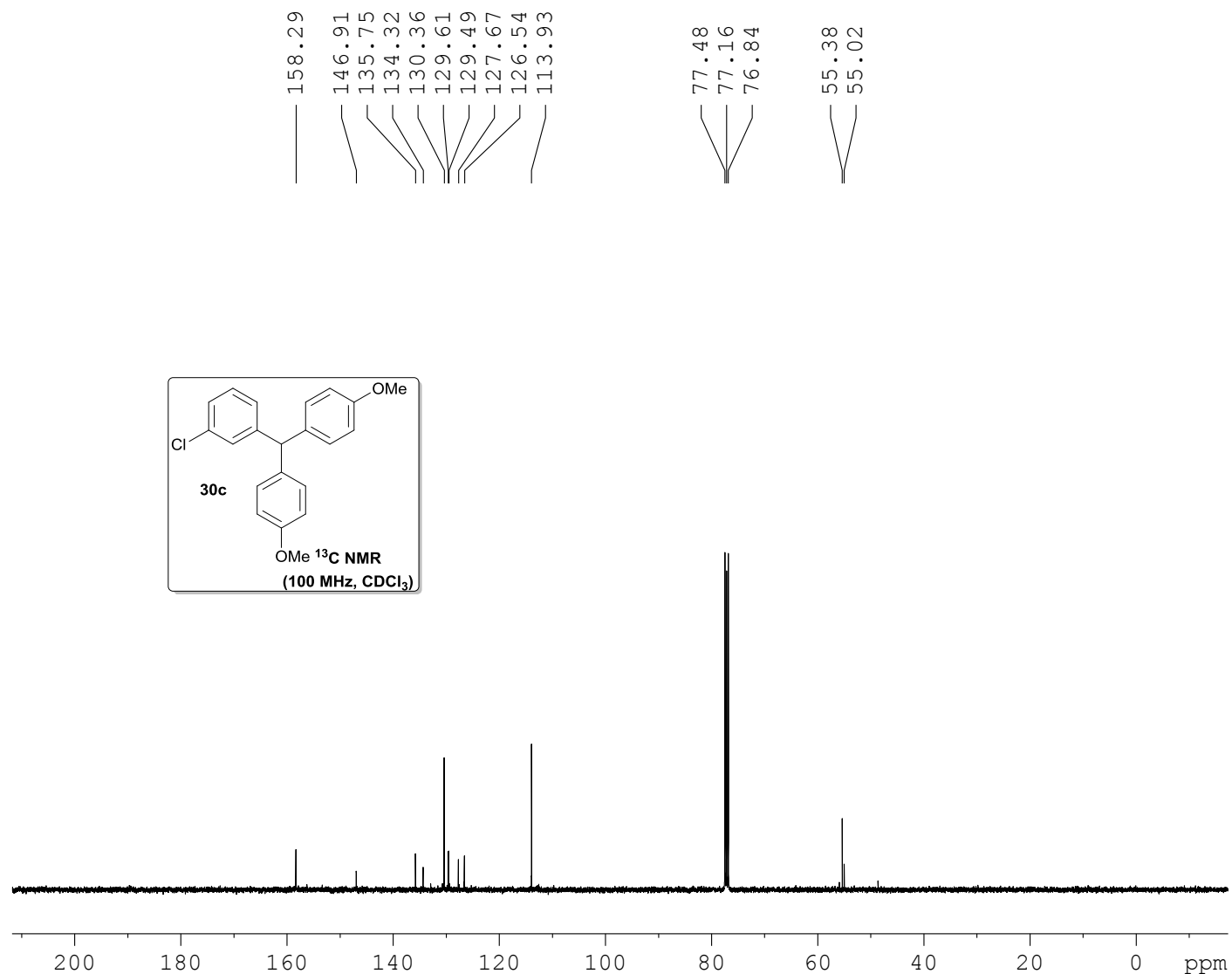
Current Data Parameters
NAME AHK-I-371D
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130304
Time 10.33
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 161
DW 60.800 usec
DE 6.00 usec
TE 295.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300048 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-371D
EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
Date_     20130304
Time      10.48
INSTRUM   spect
PROBHD    5 mm DUL 13C-1
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        256
DS        4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG        57
DW        20.800 usec
DE        6.00 usec
TE        295.4 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999998 sec
TD0       1

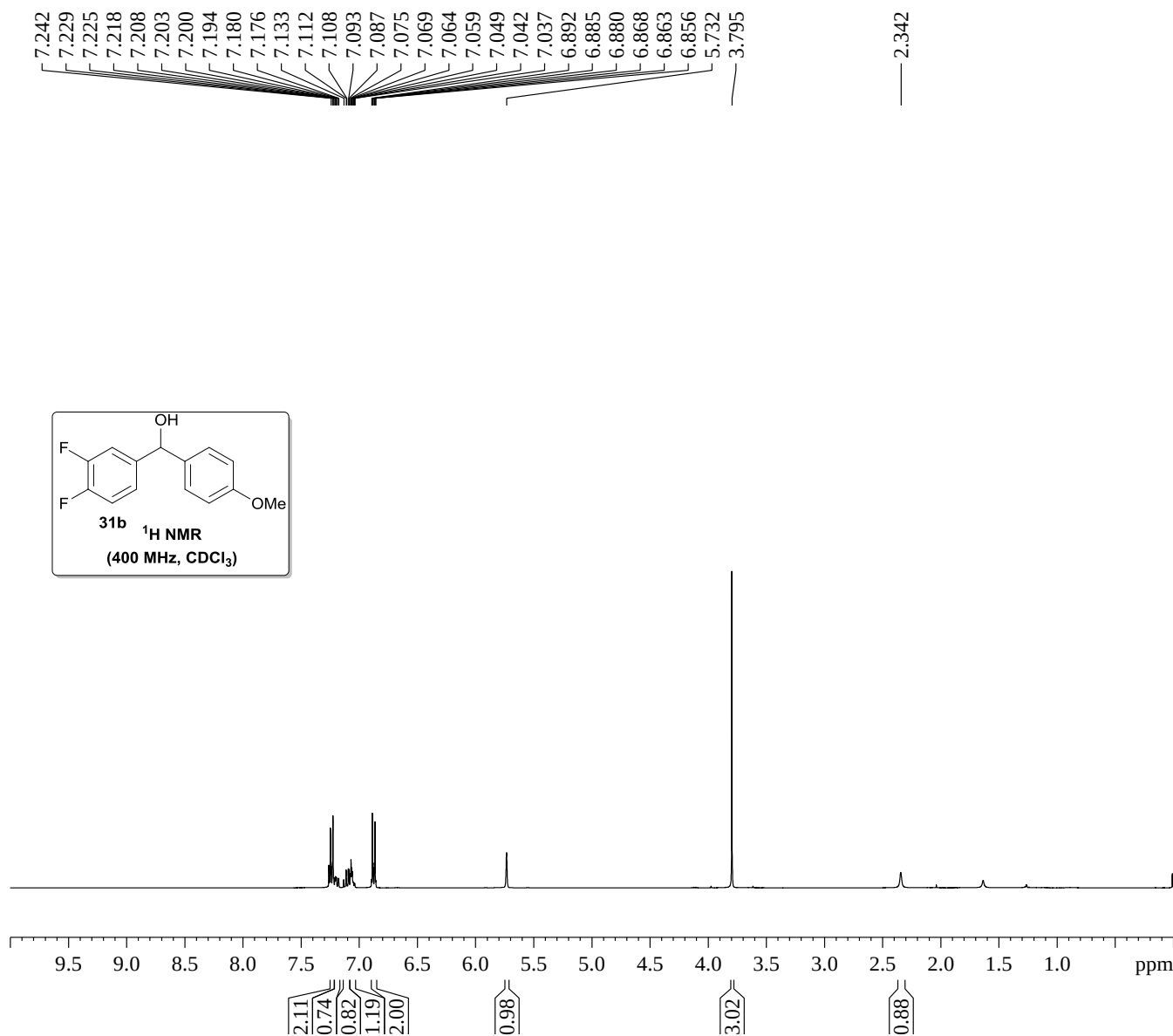
===== CHANNEL f1 =====
NUC1      13C
P1        9.15 usec
PL1       0.00 dB
SFO1     100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      14.90 dB
PL13      14.90 dB
PL2       -3.00 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127549 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40

```

PROTON CDC13 {D:\CRR} KOPAL 1



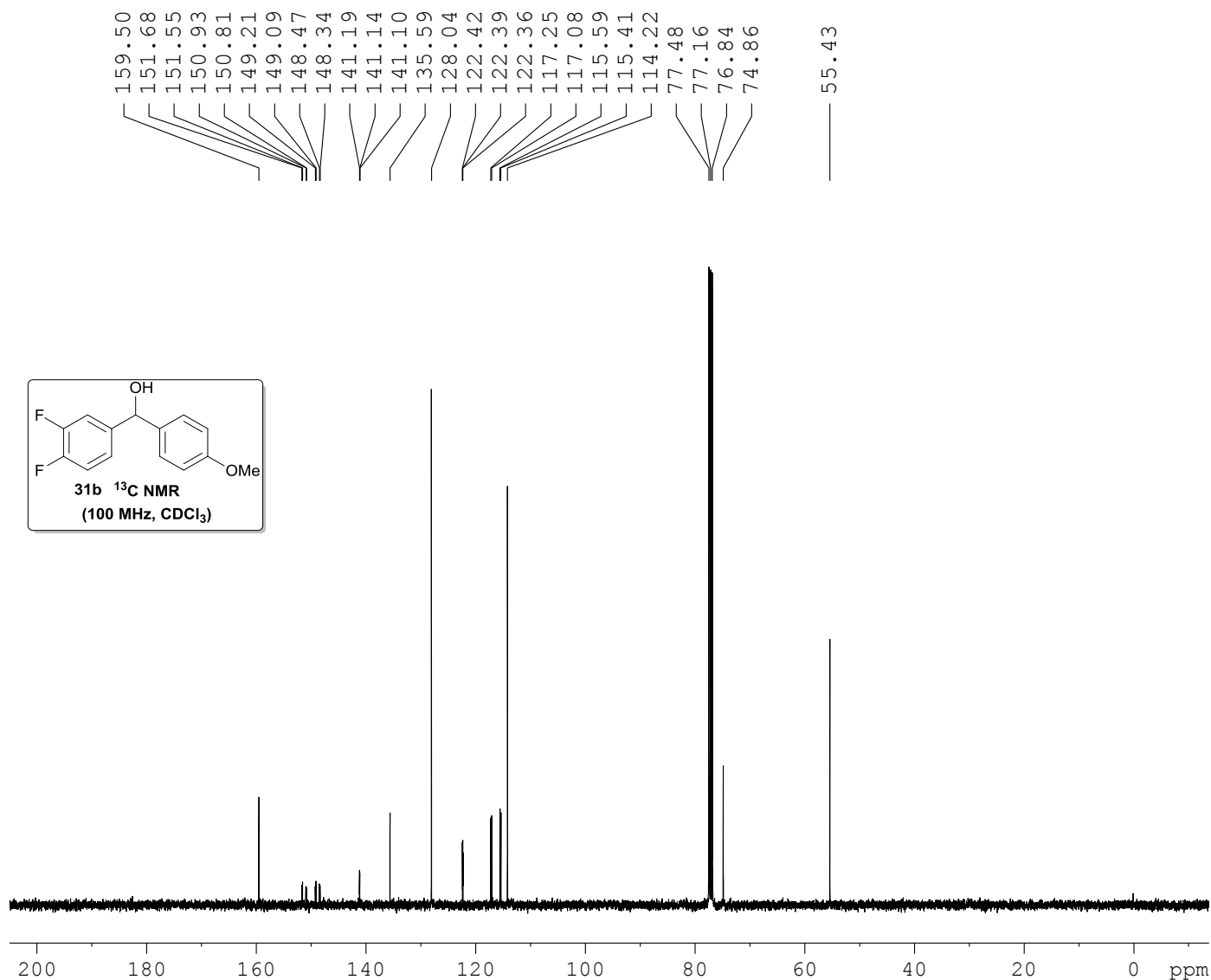
Current Data Parameters
NAME AHK-I-497 B2
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140703
Time 10.32
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 128
DW 60.800 usec
DE 6.00 usec
TE 295.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.130051 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-497 B2
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140703
Time_ 10.38
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 25.4
DW 20.800 usec
DE 6.00 usec
TE 295.6 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

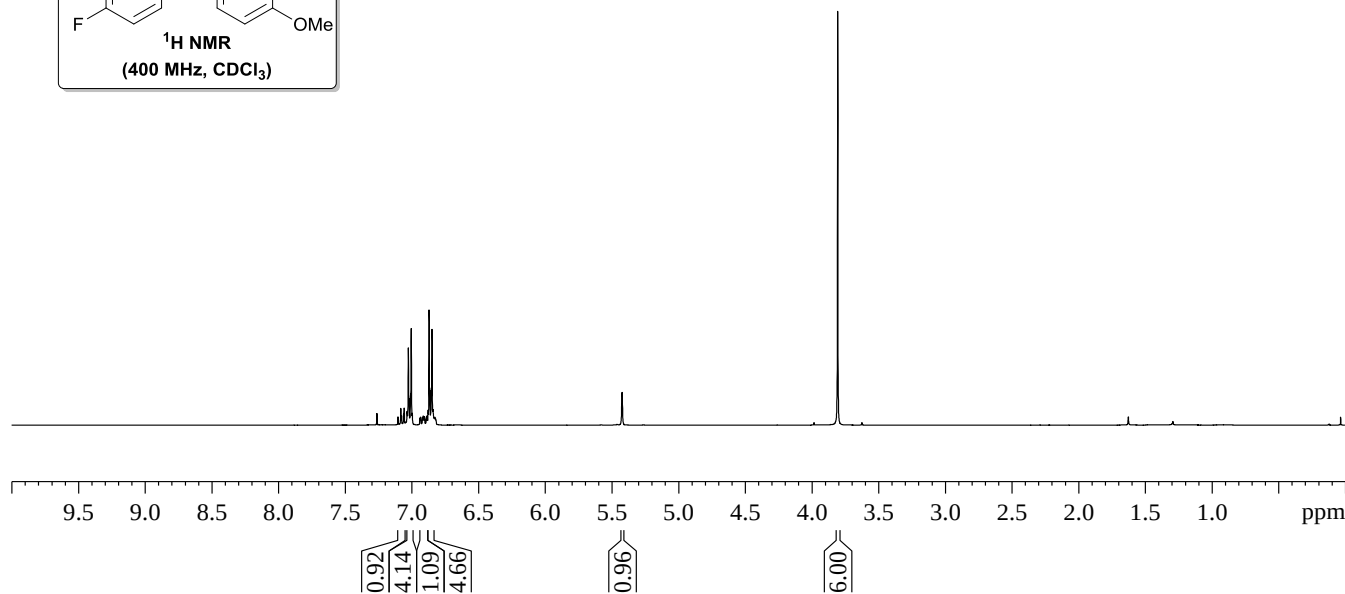
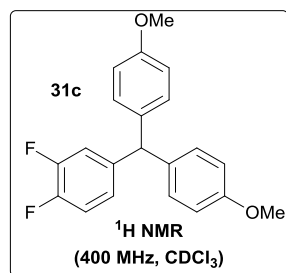
===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127556 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

7.260
7.103
7.082
7.078
7.061
7.057
7.036
7.026
7.021
7.009
7.004
6.997
6.939
6.933
6.919
6.914
6.910
6.904
6.890
6.885
6.877
6.870
6.864
6.853
6.848
6.840
6.832
6.827
5.423
3.806



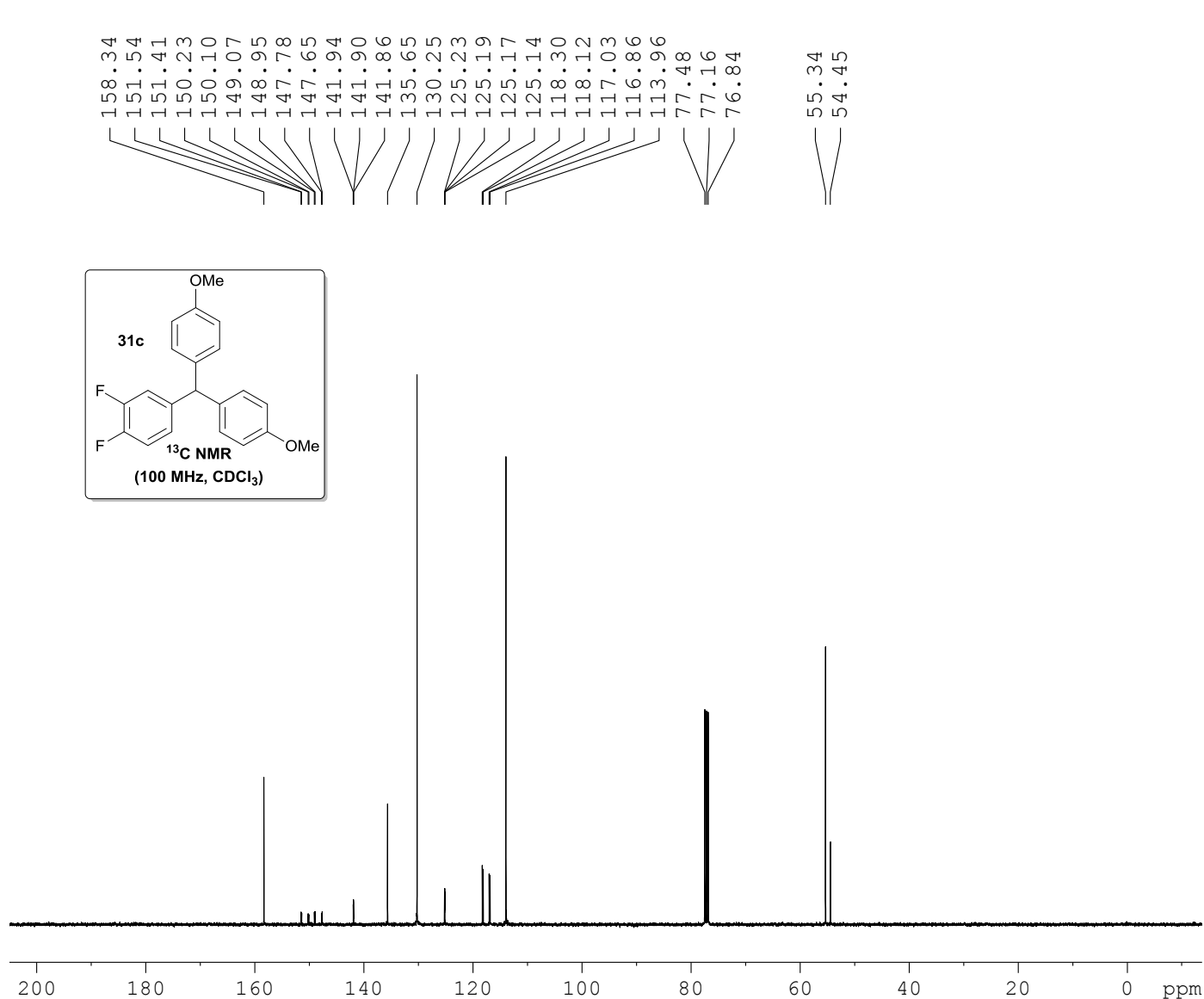
Current Data Parameters
NAME AHK-I-497-A5
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140704
Time 10.19
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 71.8
DW 60.800 usec
DE 6.00 usec
TE 292.8 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300048 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-497-A5
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140704
Time_ 10.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 45.2
DW 20.800 usec
DE 6.00 usec
TE 293.6 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

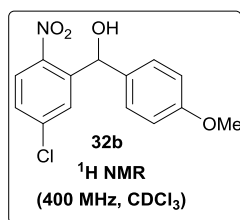
F2 - Processing parameters
SI 32768
SF 100.6127591 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

7.901
7.896
7.887
7.419
7.413
7.397
7.391
7.260
7.227
7.223
7.210
7.206
6.873
6.865
6.860
6.848
6.843
6.836
6.434
6.427

3.786

2.648
2.638

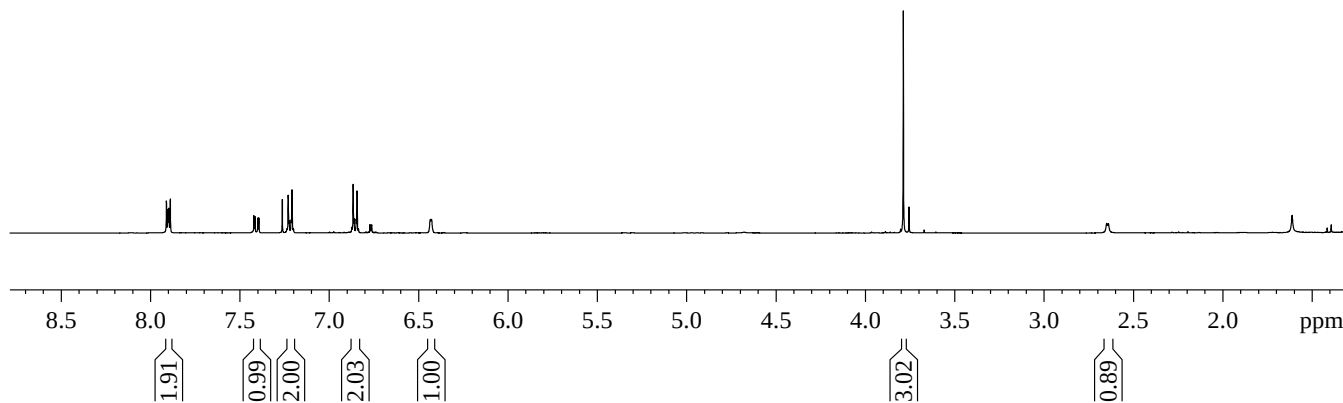


Current Data Parameters
NAME AHK-I-496-B2-I
EXPNO 1
PROCNO 1

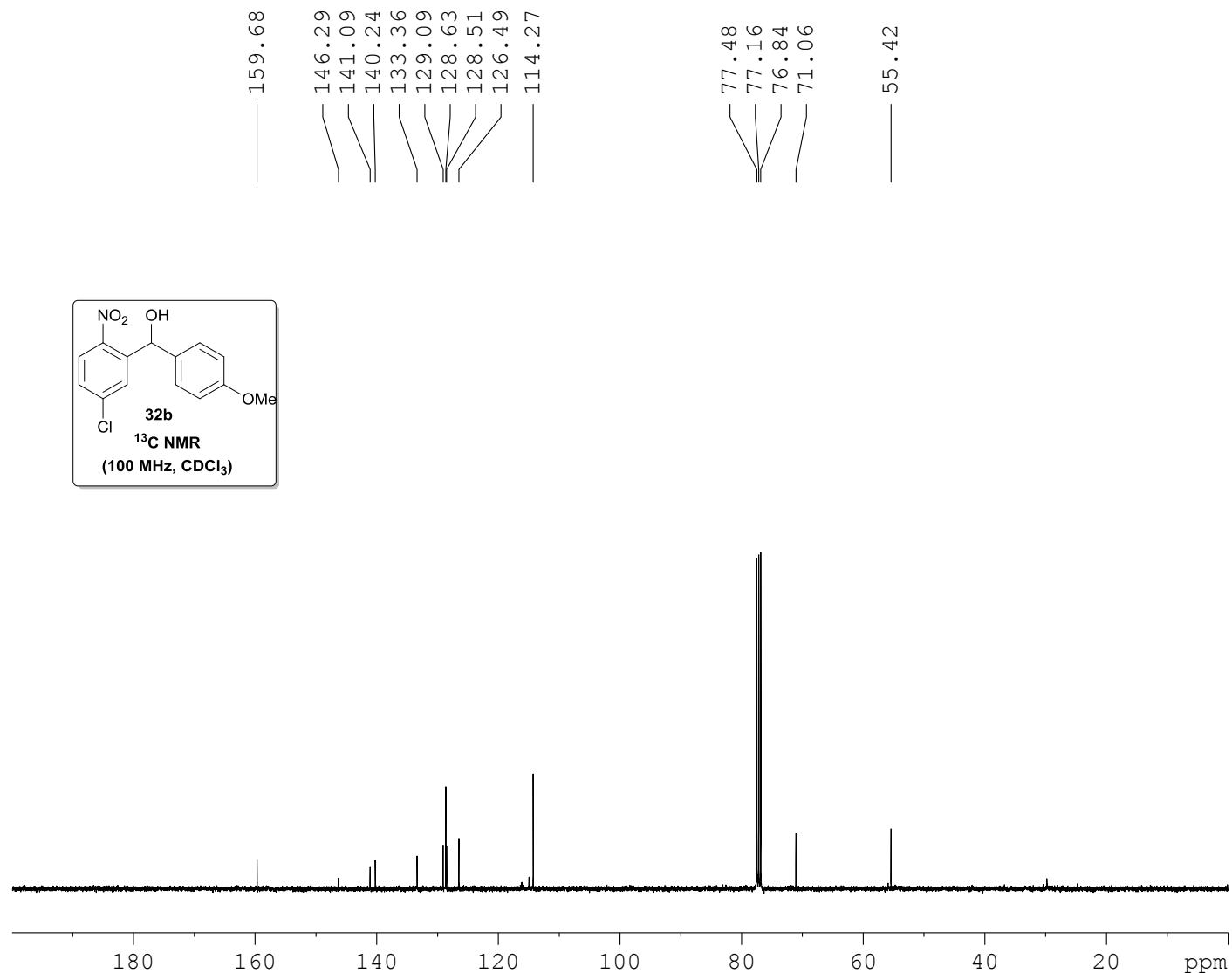
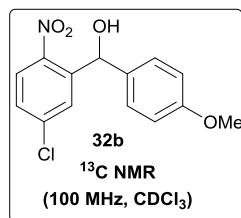
F2 - Acquisition Parameters
Date_ 20141029
Time 14.37
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 181
DW 60.800 usec
DE 6.00 usec
TE 296.7 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300049 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-496-B2-I
 EXPNO 2
 PROCNO 1

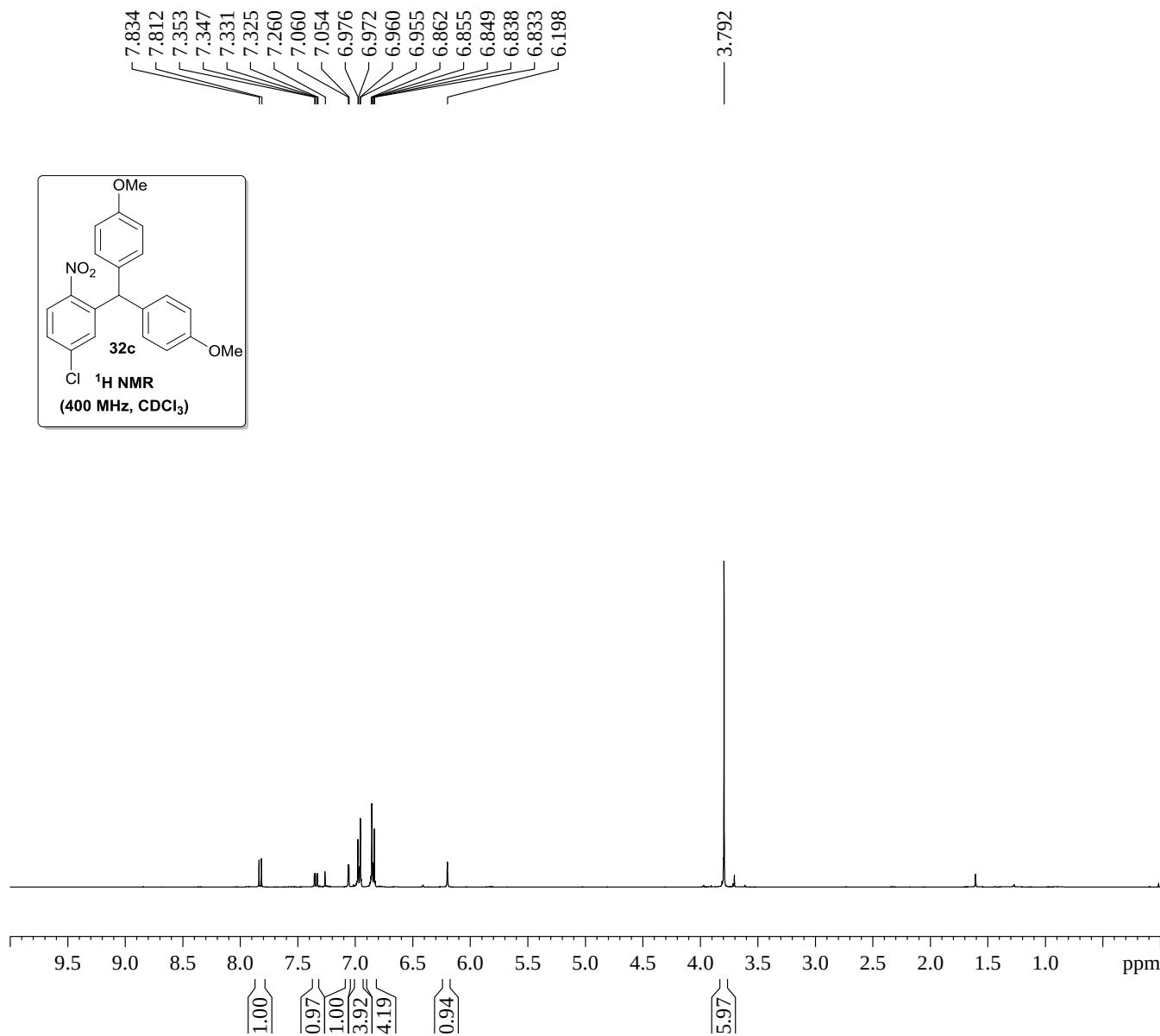
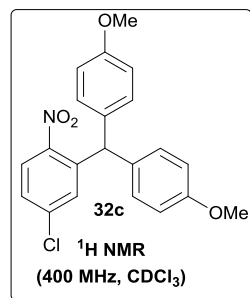
F2 - Acquisition Parameters
 Date_ 20141029
 Time_ 14.53
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 50.8
 DW 20.800 usec
 DE 6.00 usec
 TE 297.1 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127544 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



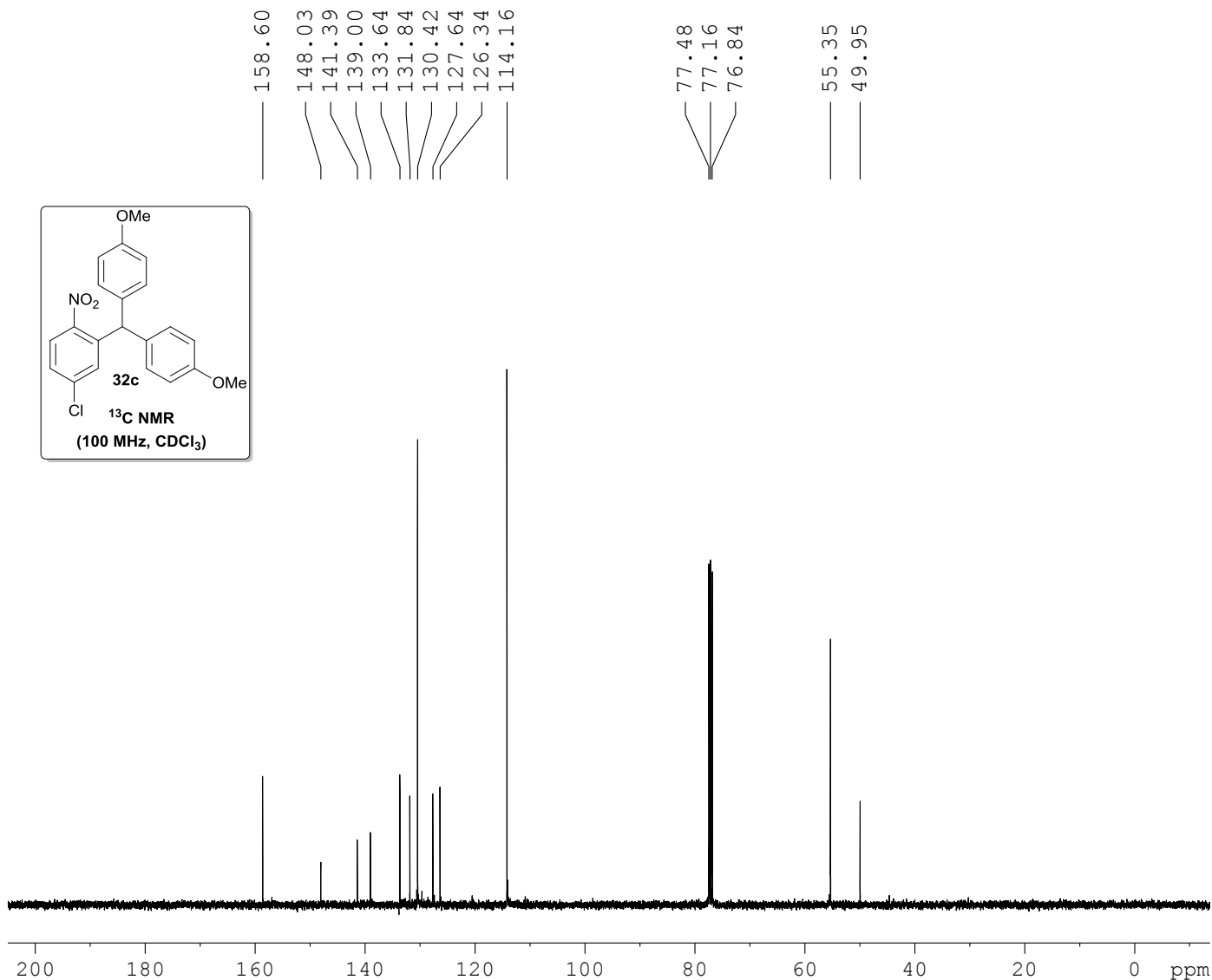
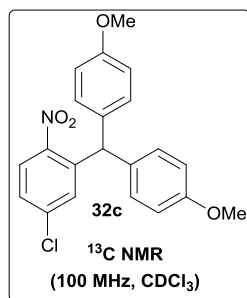
Current Data Parameters
 NAME AHK-I-496 A
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140625
 Time_ 11.10
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 90.5
 DW 60.800 usec
 DE 6.00 usec
 TE 296.4 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300048 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



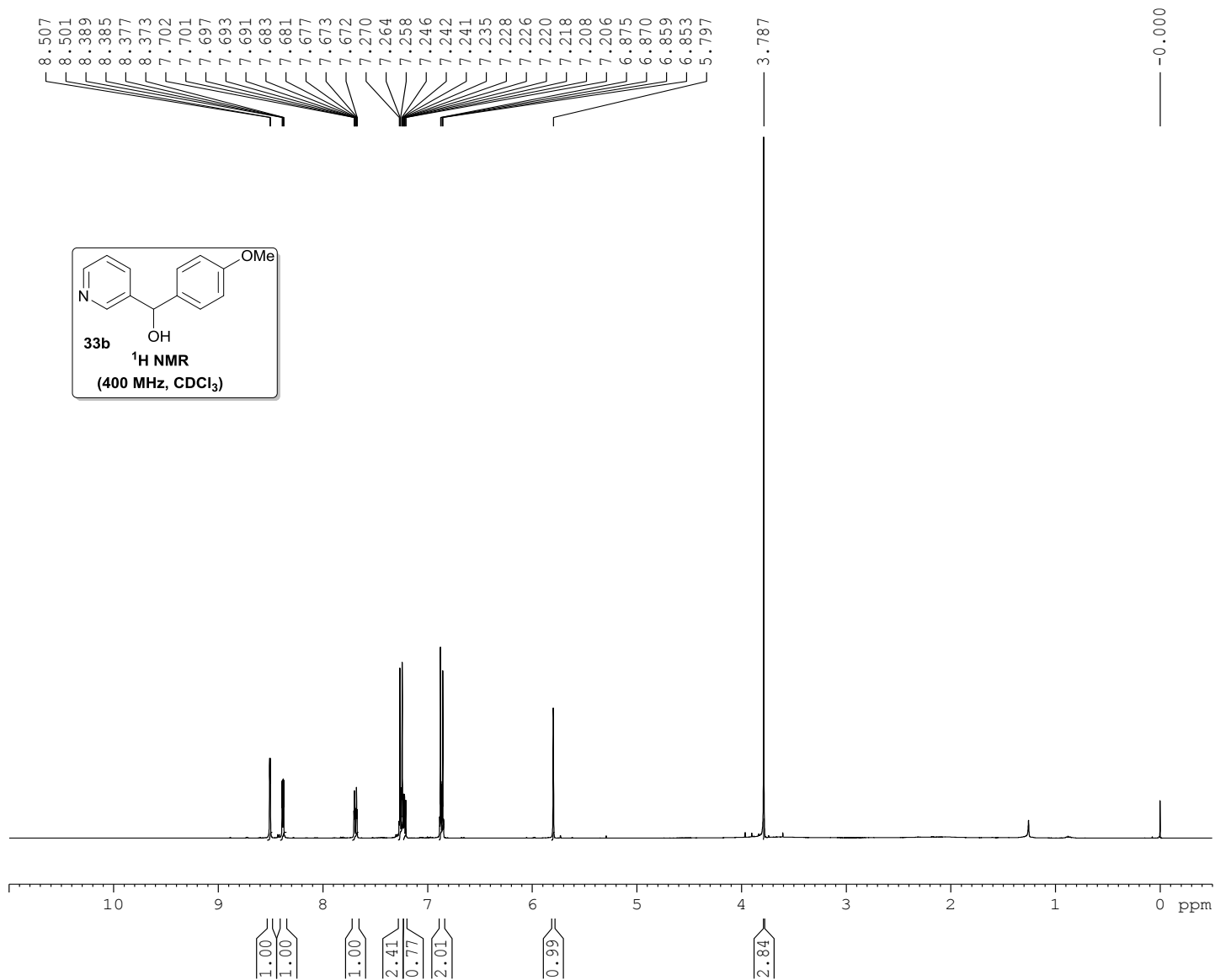
Current Data Parameters
 NAME AHK-I-496 A
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140625
 Time_ 11.15
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 101
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 32
 DW 20.800 usec
 DE 6.00 usec
 TE 297.1 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127579 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



```

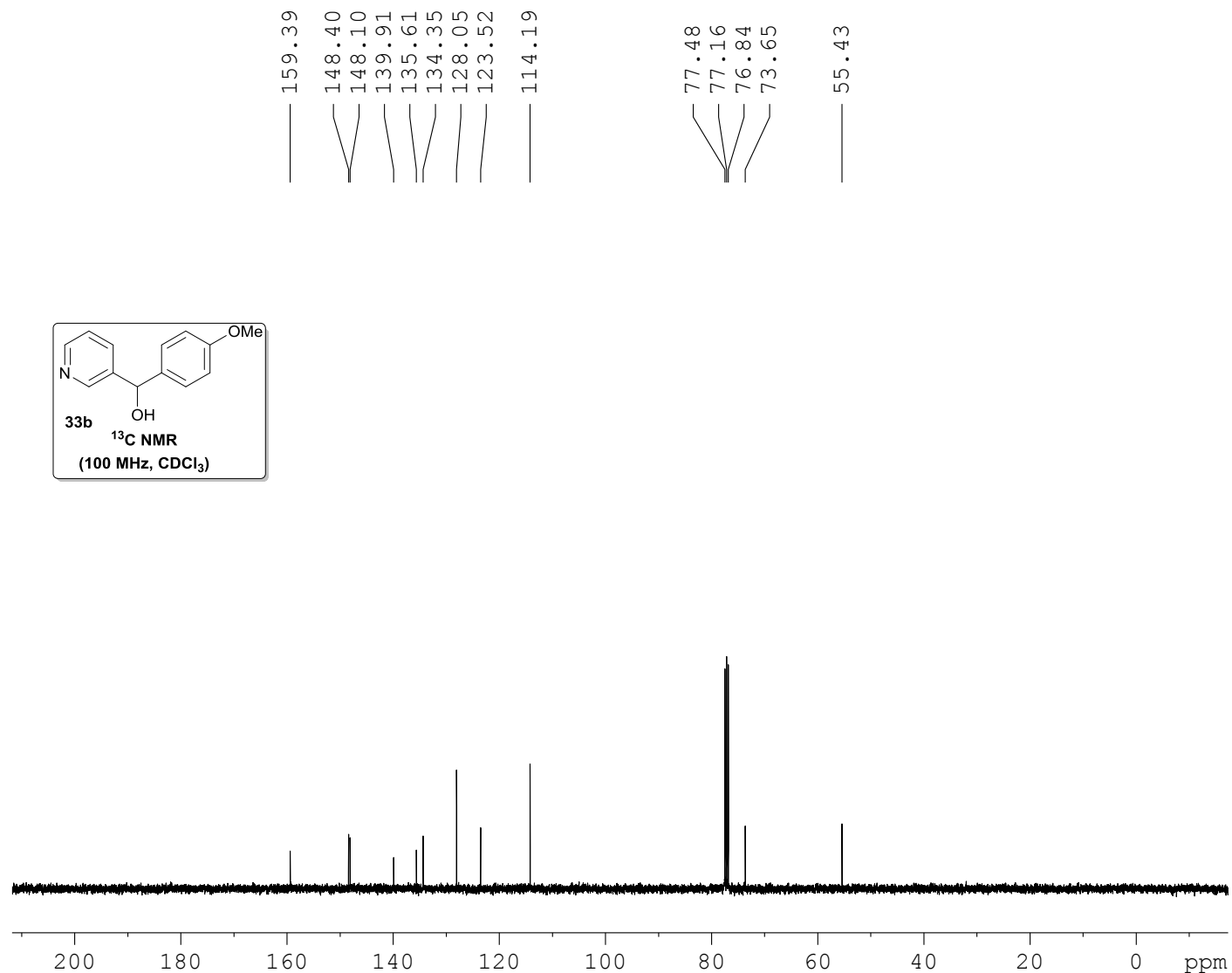
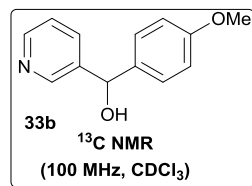
Current Data Parameters
NAME      AHK-I-117 A
EXPNO     1
PROCNO    1

F2 - Acquisition Parameters
Date_     20110330
Time      17.19
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zg30
TD         65536
SOLVENT   CDCl3
NS         16
DS         2
SWH        8223.685 Hz
FIDRES     0.125483 Hz
AQ         3.9846387 sec
RG         181
DW         60.800 usec
DE         6.00 usec
TE         295.4 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         14.00 usec
PL1        -0.90 dB
SFO1       400.1324710 MHz

F2 - Processing parameters
SI         32768
SF         400.1300023 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.00
  
```

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-117 A
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20110330
 Time_ 17.24
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 64
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 50.8
 DW 20.800 usec
 DE 6.00 usec
 TE 296.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 15.60 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127560 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

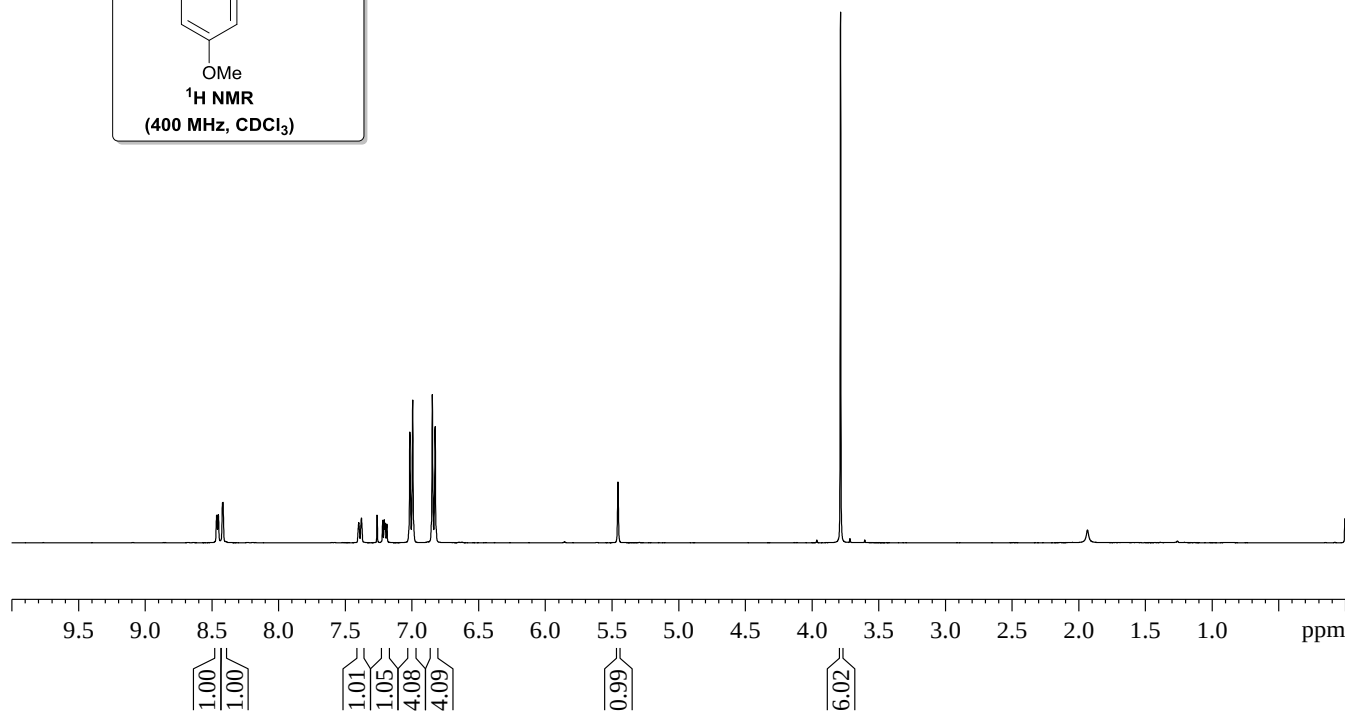
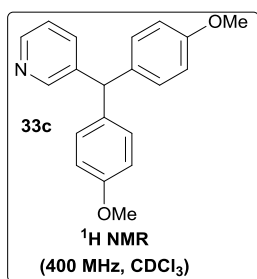
PROTON CDC13 {D:\CRR} KOPAL 1

8.461
8.449
8.417
8.414
7.398
7.378
7.260
7.218
7.206
7.199
7.187
7.014
6.993
6.846
6.825

5.453

3.784

1.932



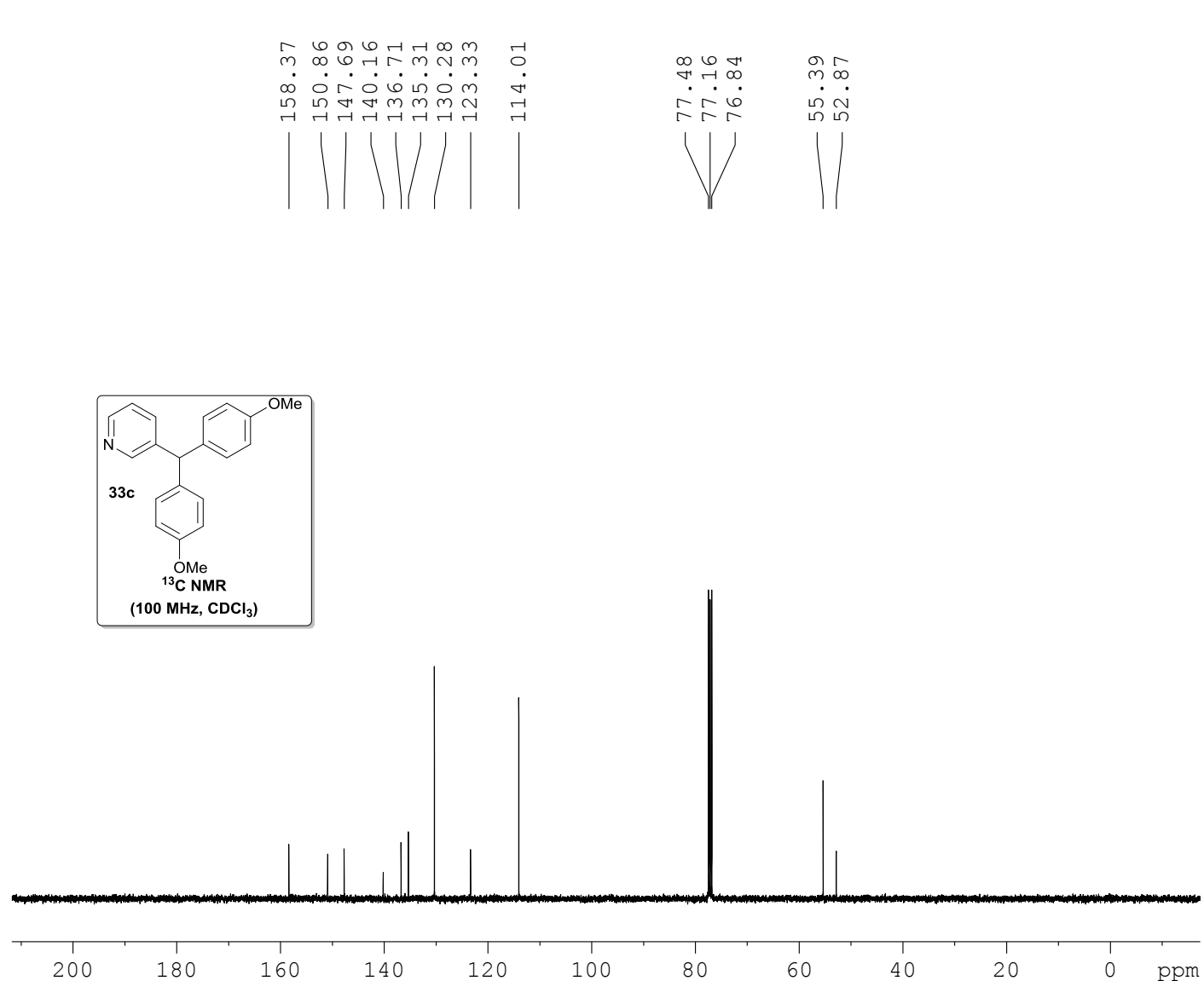
Current Data Parameters
NAME AHK--I-374D
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130918
Time 13.31
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 228
DW 60.800 usec
DE 6.00 usec
TE 295.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300059 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK--I-374D
EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
Date_     20130918
Time      13.40
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        132
DS         4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG         724
DW        20.800 usec
DE         6.00 usec
TE        295.5 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999998 sec
TD0       1

===== CHANNEL f1 =====
NUC1      13C
P1        9.50 usec
PL1       -0.60 dB
SFO1     100.6228298 MHz

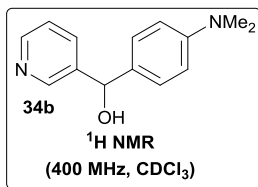
===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      14.96 dB
PL13      15.60 dB
PL2       -0.90 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127563 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
  
```

PROTON CDC13 {D:\CRR} KOPAL 1

8.584
8.451
8.448
8.439
8.437
7.723
7.719
7.715
7.703
7.699
7.695
7.260
7.250
7.238
7.230
7.218
7.202
7.197
7.185
7.180
6.701
6.696
6.684
6.679
5.787

2.935

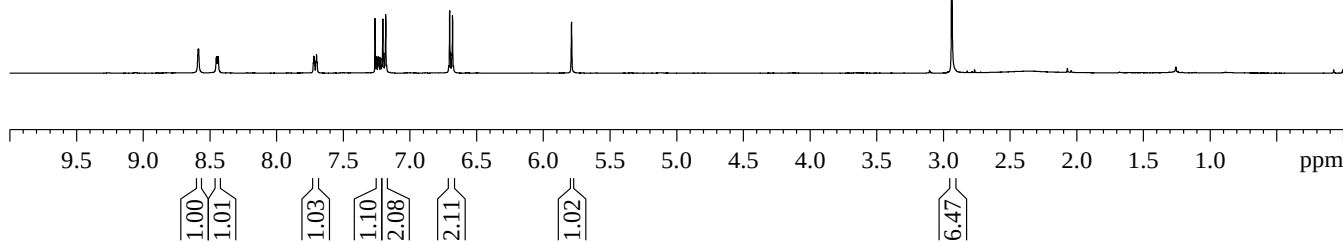


Current Data Parameters
NAME AHK-I-316-B
EXPNO 3
PROCNO 1

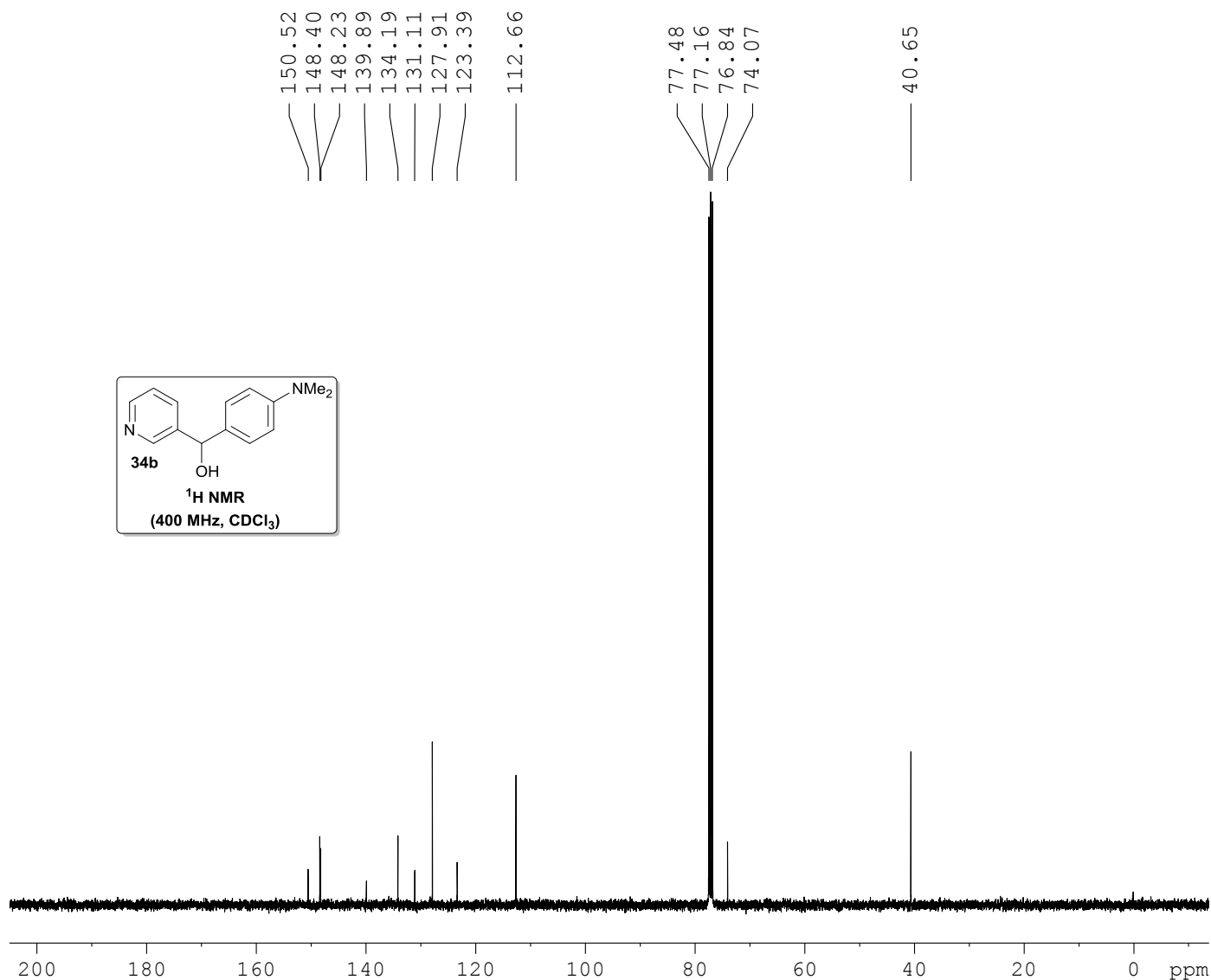
F2 - Acquisition Parameters
Date_ 20130104
Time 11.34
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 181
DW 60.800 usec
DE 6.00 usec
TE 295.8 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300048 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-316-B
 EXPNO 4
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20130104
 Time_ 11.49
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 45.2
 DW 20.800 usec
 DE 6.00 usec
 TE 296.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

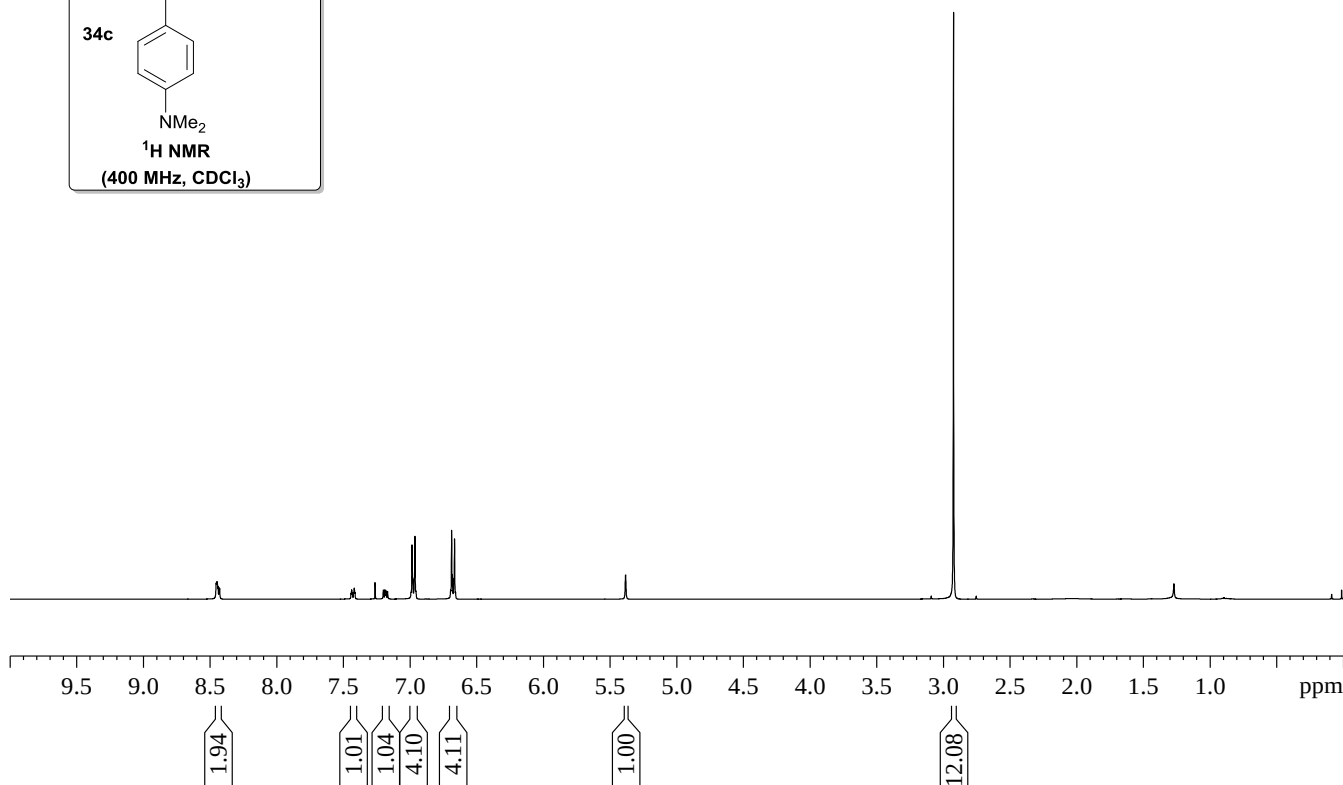
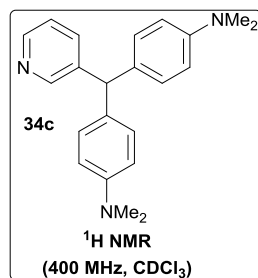
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127544 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.430
8.427
7.440
7.436
7.432
7.420
7.416
7.412
7.260
7.199
7.198
7.187
7.186
7.179
7.178
7.167
7.166
6.990
6.983
6.979
6.966
6.961
6.954
6.694
6.686
6.681
6.670
6.664
6.657
5.381

2.922



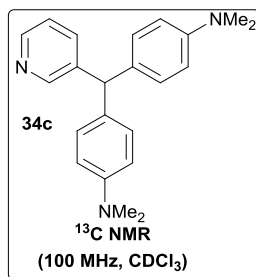
Current Data Parameters
NAME AHK-I-361-D-4
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20141101
Time 17.54
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 295.3 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300051 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1

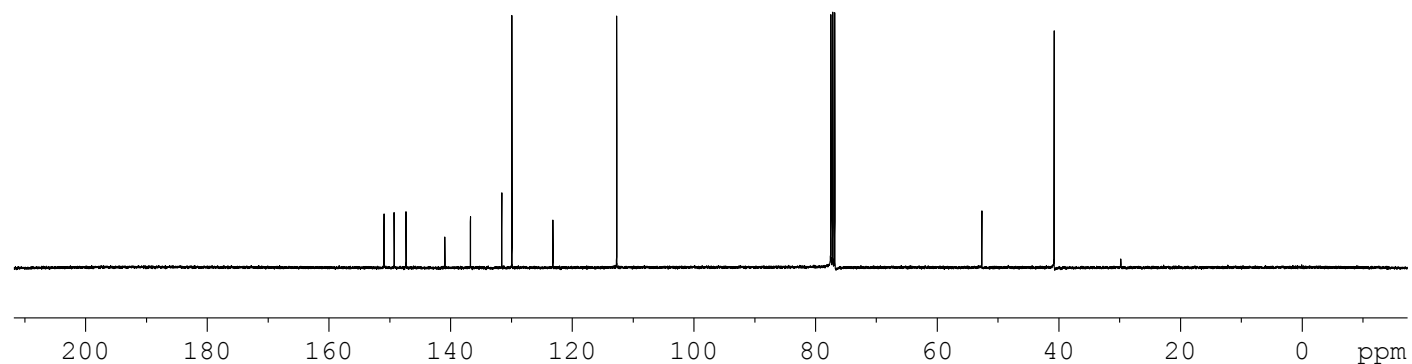


150.95
149.28
147.33
140.95
136.74
131.59
129.93
123.18
112.69

77.48
77.16
76.84

52.67

40.78



Current Data Parameters
NAME AHK-I-361-D-4
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20141101
Time_ 18.24
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 57
DW 20.800 usec
DE 6.00 usec
TE 295.7 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

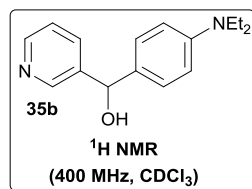
F2 - Processing parameters
SI 32768
SF 100.6127581 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1

8.530
8.364
8.361
8.353
8.350
7.725
7.721
7.717
7.706
7.702
7.697
7.258
7.214
7.201
7.200
7.194
7.182
7.143
7.138
7.121
6.624
6.619
6.607
6.602
5.726

3.347
3.329
3.312
3.294

1.149
1.132
1.114

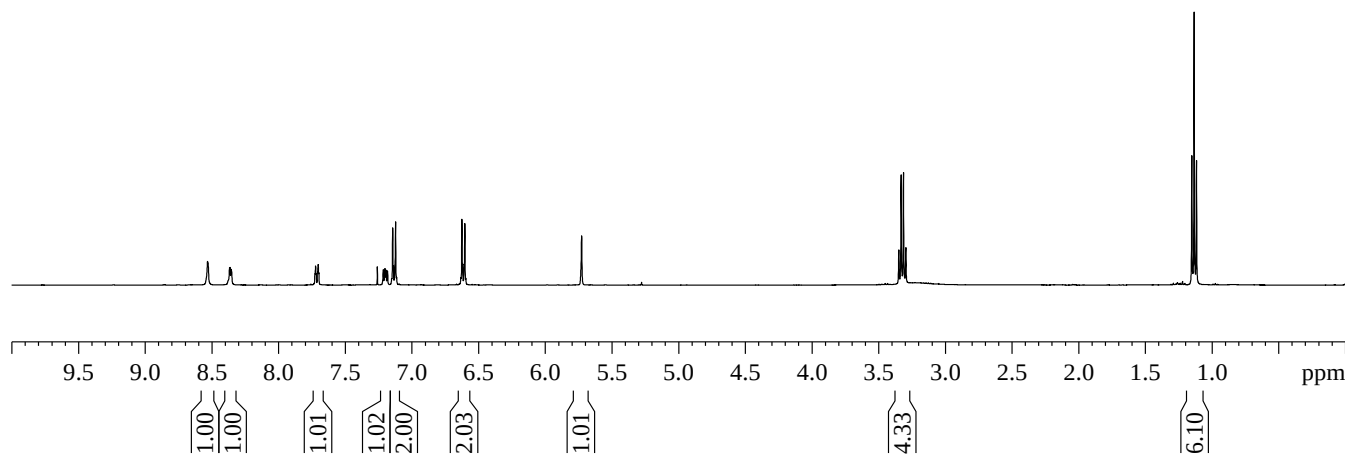


Current Data Parameters
NAME AHK-I-339B
EXPNO 1
PROCNO 1

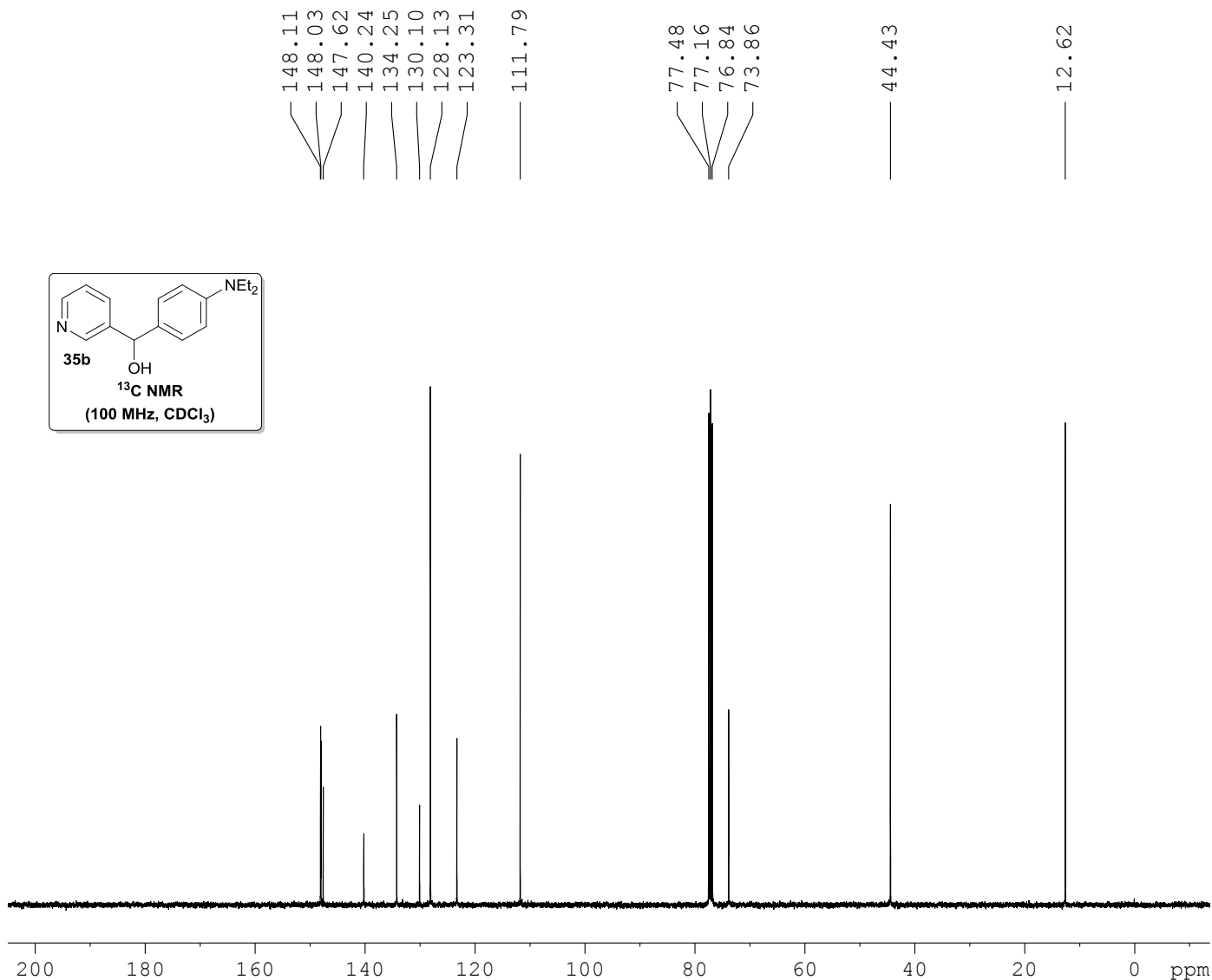
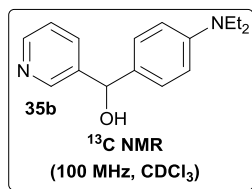
F2 - Acquisition Parameters
Date_ 20121128
Time 12.11
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 71.8
DW 60.800 usec
DE 6.00 usec
TE 297.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.130054 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-339B
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters

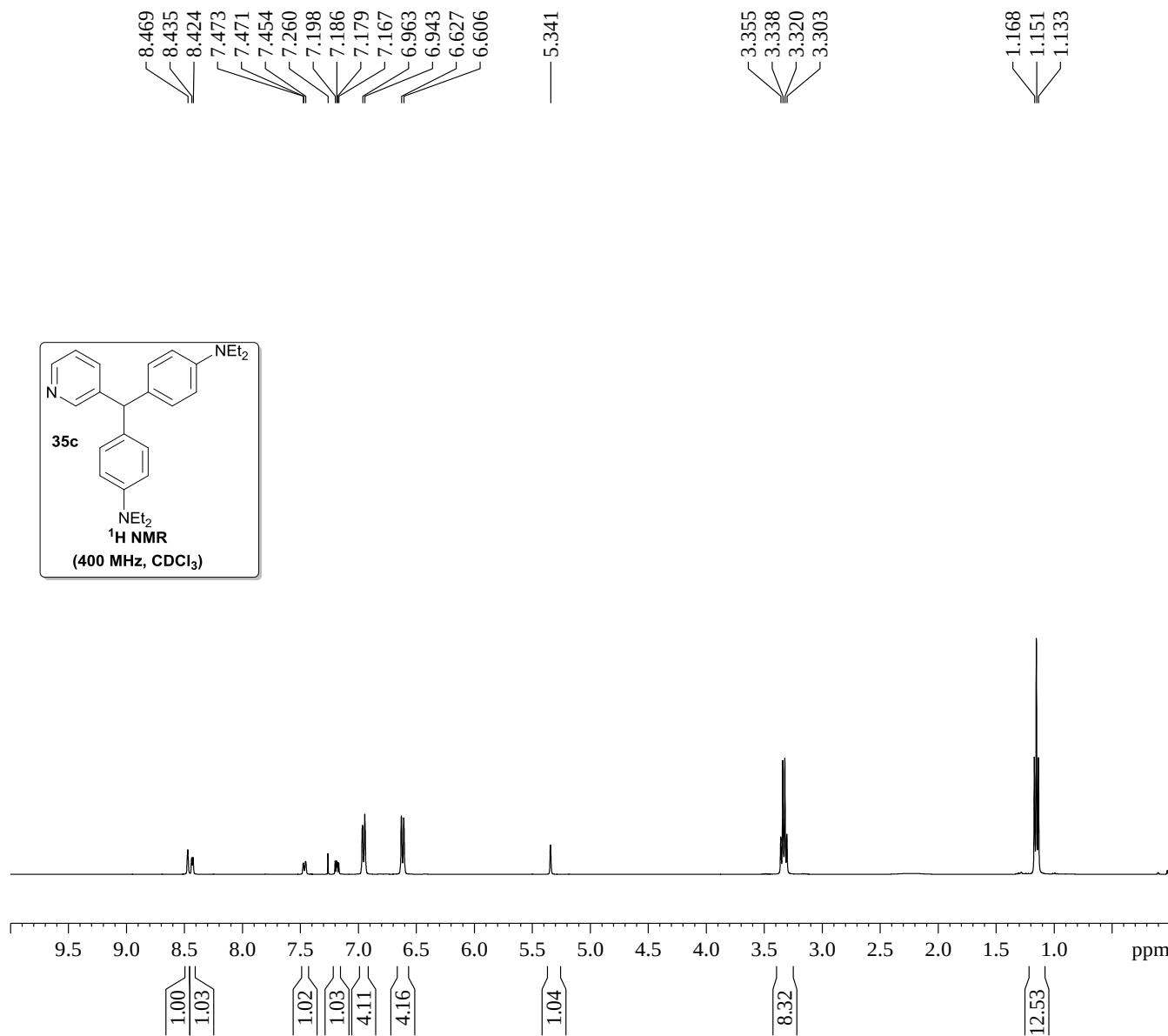
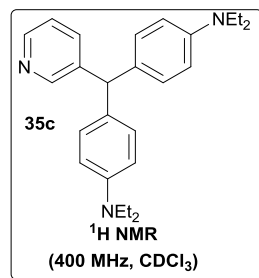
Date_ 20121128
Time_ 12.41
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 50.8
DW 20.800 usec
DE 6.00 usec
TE 297.7 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127596 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



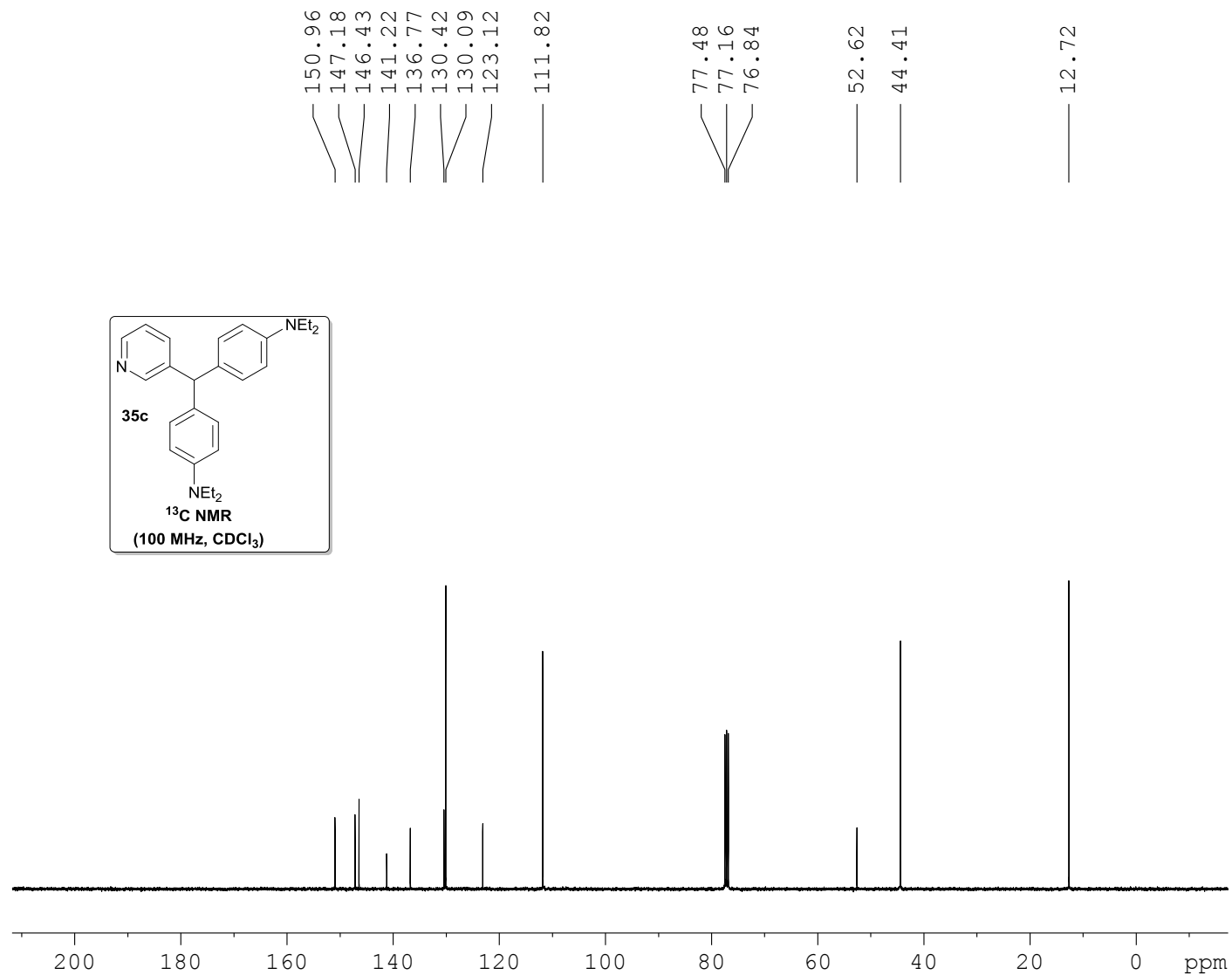
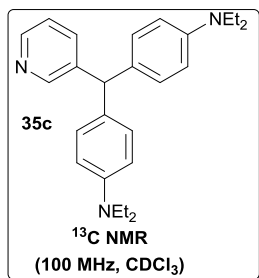
Current Data Parameters
NAME AHK-I-339 D
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20121127
Time 16.31
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 57
DW 60.800 usec
DE 6.00 usec
TE 296.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-339 D
EXPNO     2
PROCNO    1

F2 - Acquisition Parameters
Date_     20121127
Time      16.46
INSTRUM   spect
PROBHD    5 mm DUL 13C-1
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS         256
DS         4
SWH        24038.461 Hz
FIDRES     0.366798 Hz
AQ         1.3631988 sec
RG         32
DW         20.800 usec
DE         6.00 usec
TE         297.2 K
D1         2.00000000 sec
d11        0.03000000 sec
DELTA     1.89999998 sec
TDO        1

===== CHANNEL f1 =====
NUC1       13C
P1         9.15 usec
PL1        0.00 dB
SFO1       100.6228298 MHz

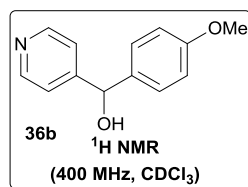
===== CHANNEL f2 =====
CPDPRG2    waltz16
NUC2       1H
PCPD2      90.00 usec
PL12       14.90 dB
PL13       14.90 dB
PL2        -3.00 dB
SFO2       400.1316005 MHz

F2 - Processing parameters
SI         32768
SF         100.6127605 MHz
WDW        EM
SSB        0
LB         1.00 Hz
GB         0
PC         1.40
  
```

PROTON CDC13 {D:\CRR} KOPAL 1

8.381
8.377
8.369
8.365
7.292
7.291
7.288
7.287
7.281
7.279
7.277
7.275
7.260
7.233
7.228
7.217
7.212
6.857
6.852
6.840
6.835
5.713

3.772

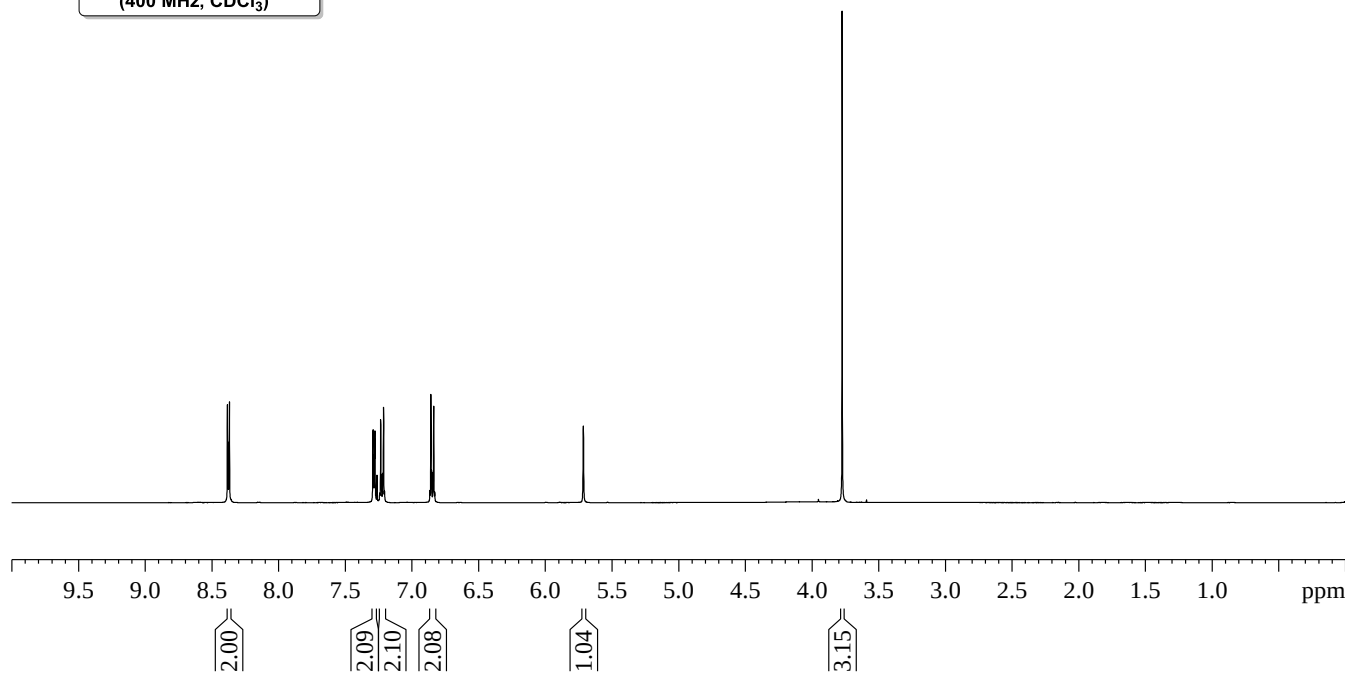


Current Data Parameters
NAME AHK-I-340B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20121203
Time_ 10.36
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.00 usec
TE 297.1 K
D1 1.00000000 sec
TD0 1

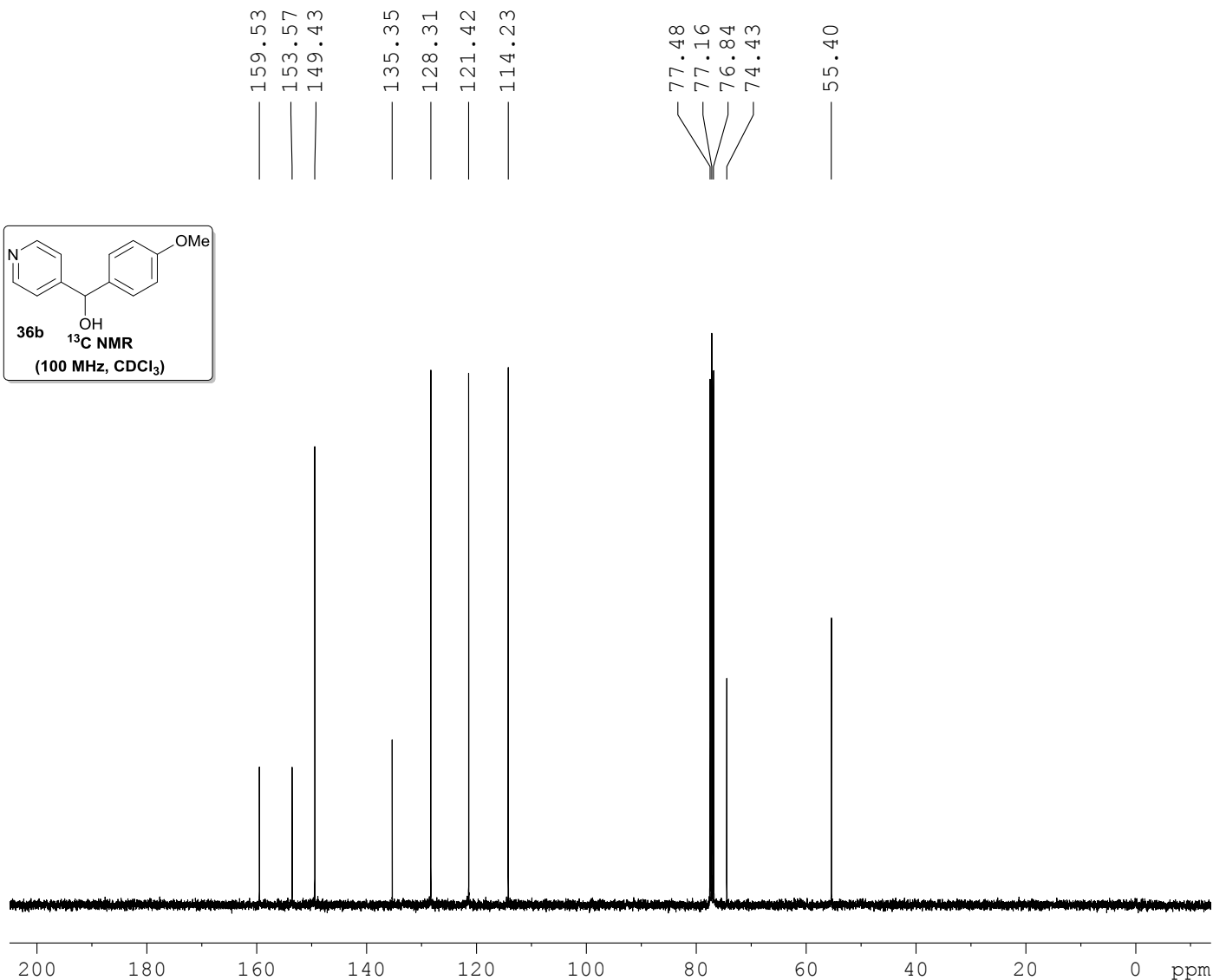
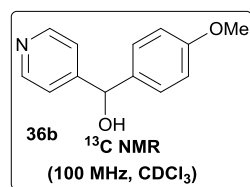
===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300047 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



S98

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-340B
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters

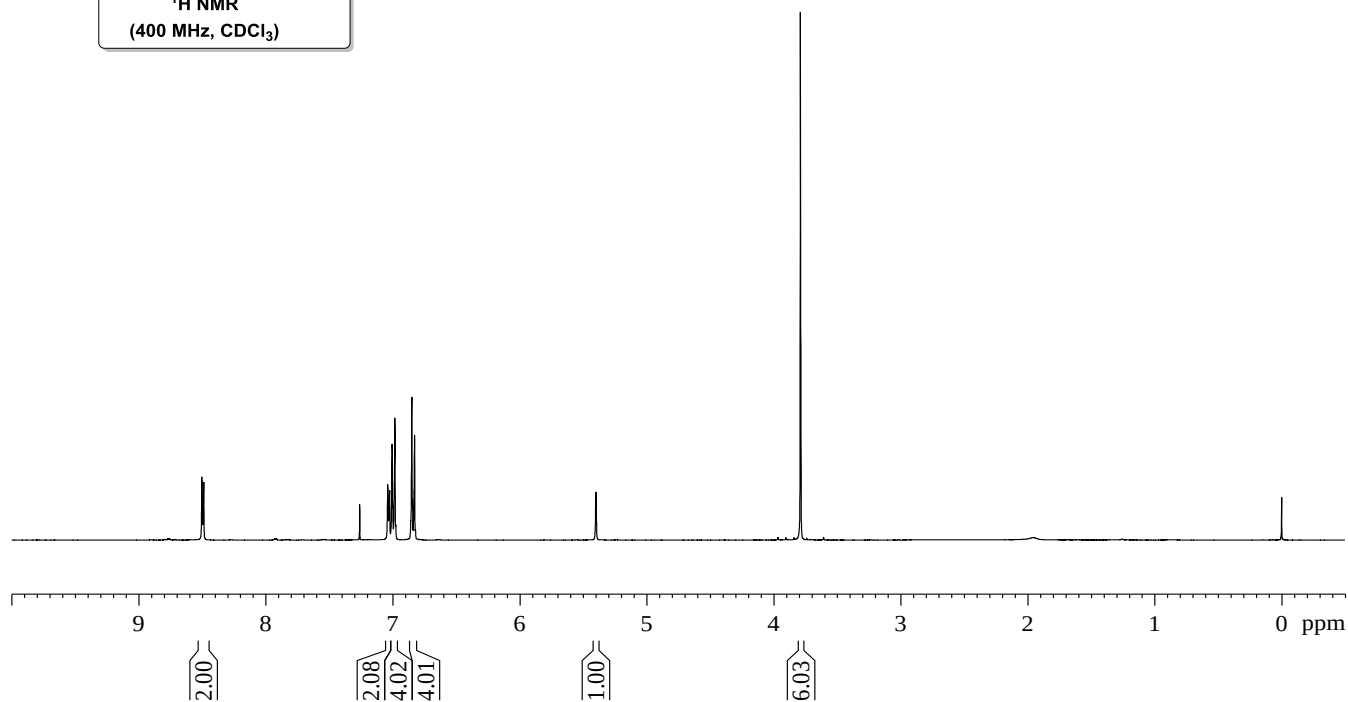
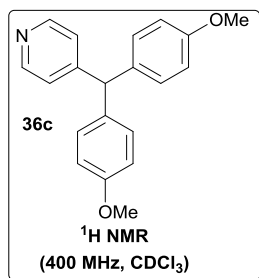
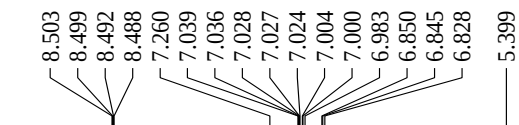
Date_ 20121203
 Time_ 10.41
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 187
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 32
 DW 20.800 usec
 DE 6.00 usec
 TE 297.3 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127568 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-118A
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110324
Time_ 11.15
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 256
DW 60.800 usec
DE 6.00 usec
TE 294.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.00 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300038 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



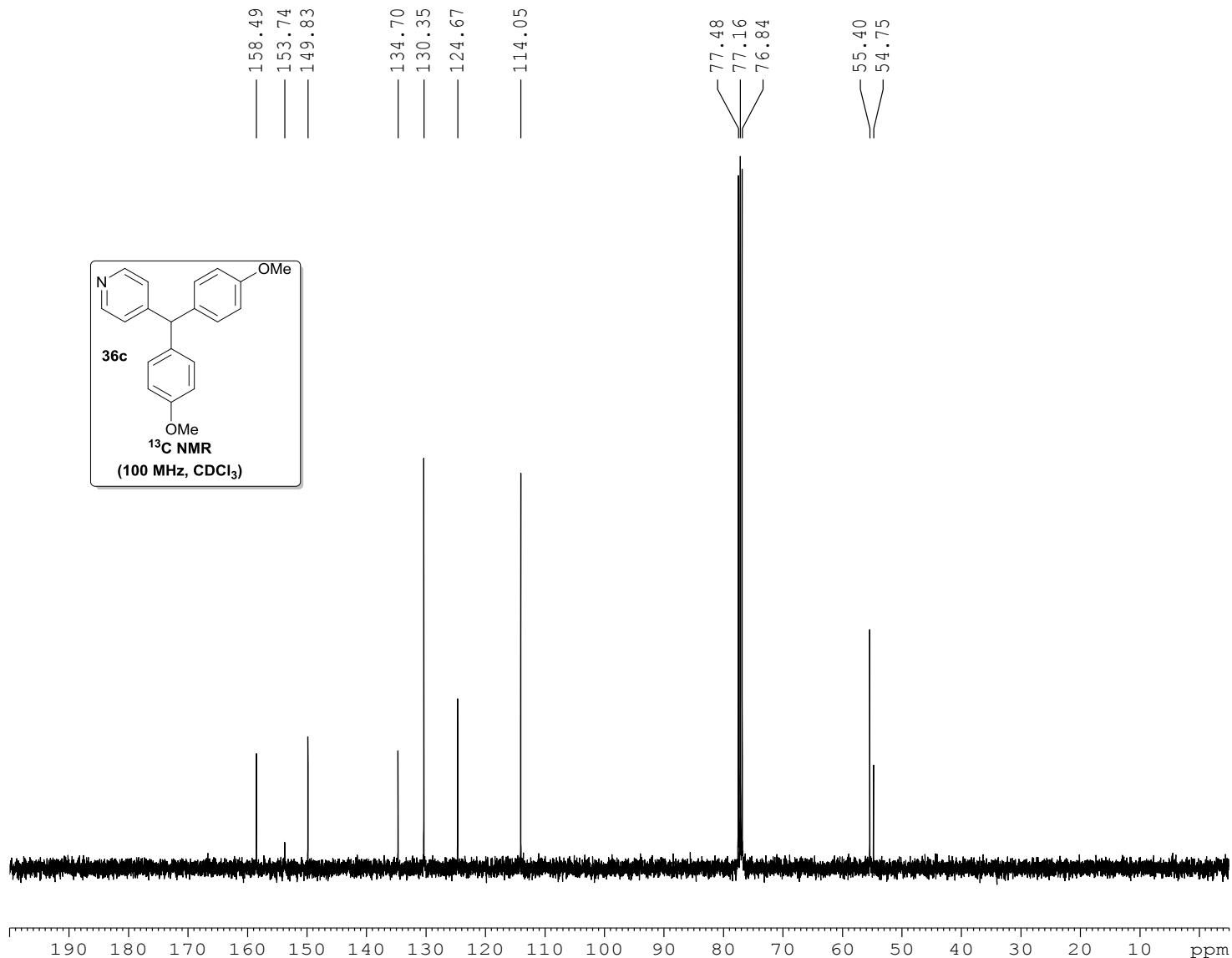
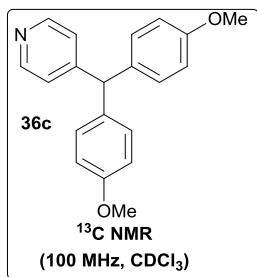
Current Data Parameters
NAME AHK-I-118A
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 20110324
Time_ 11.18
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 50.8
DW 20.800 usec
DE 6.00 usec
TE 295.1 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -0.60 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 15.60 dB
PL13 15.60 dB
PL2 -0.90 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127545 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



PROTON CDC13 {D:\CRR} KOPAL 1

8.488
8.484
8.480
8.477
8.473
7.337
7.322
7.260
7.130
7.125
7.113
7.108
6.630
6.624
6.612
6.607
5.687

3.359
3.341
3.324
3.306
2.441

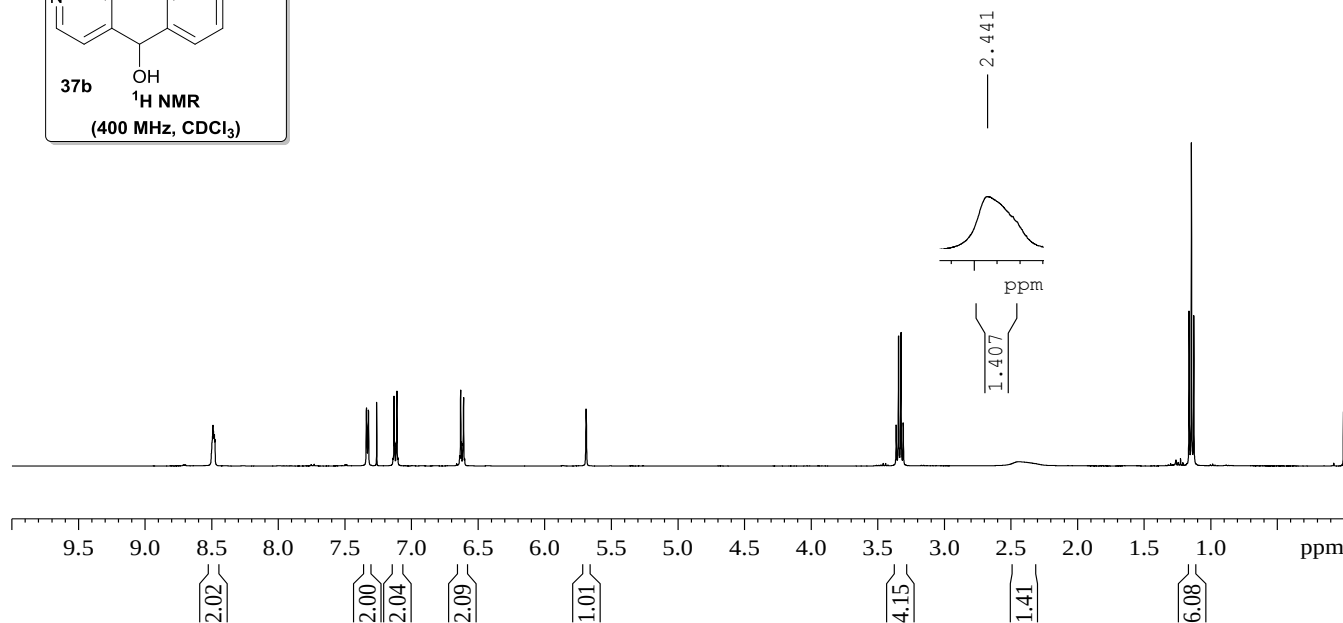
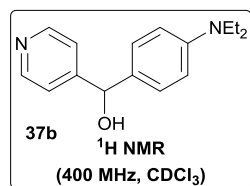
1.160
1.143
1.125

Current Data Parameters
NAME AHK-I337B
EXPNO 1
PROCNO 1

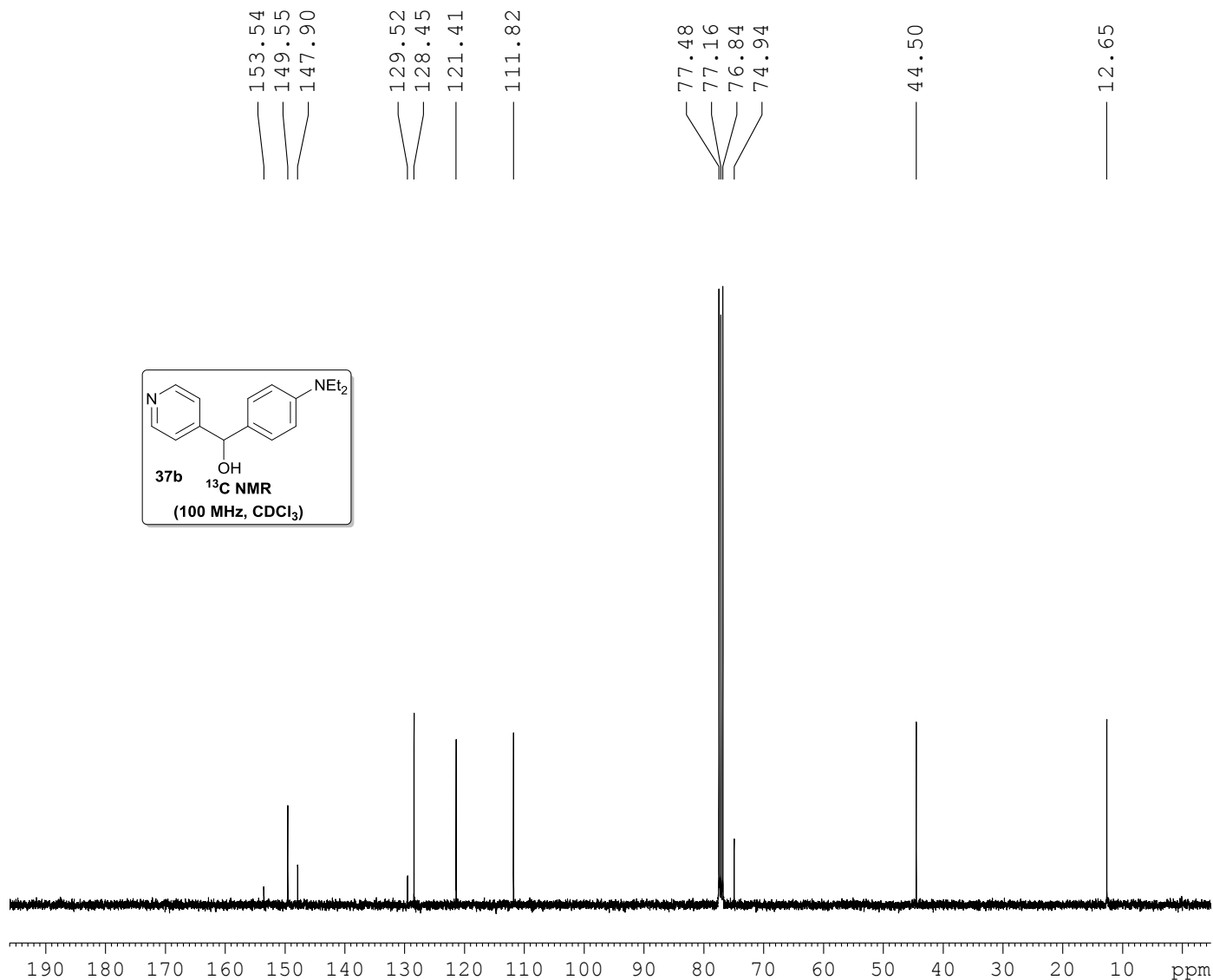
F2 - Acquisition Parameters
Date_ 20121116
Time 10.17
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 128
DW 60.800 usec
DE 6.00 usec
TE 301.5 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I337B
EXPNO 2
PROCNO 1

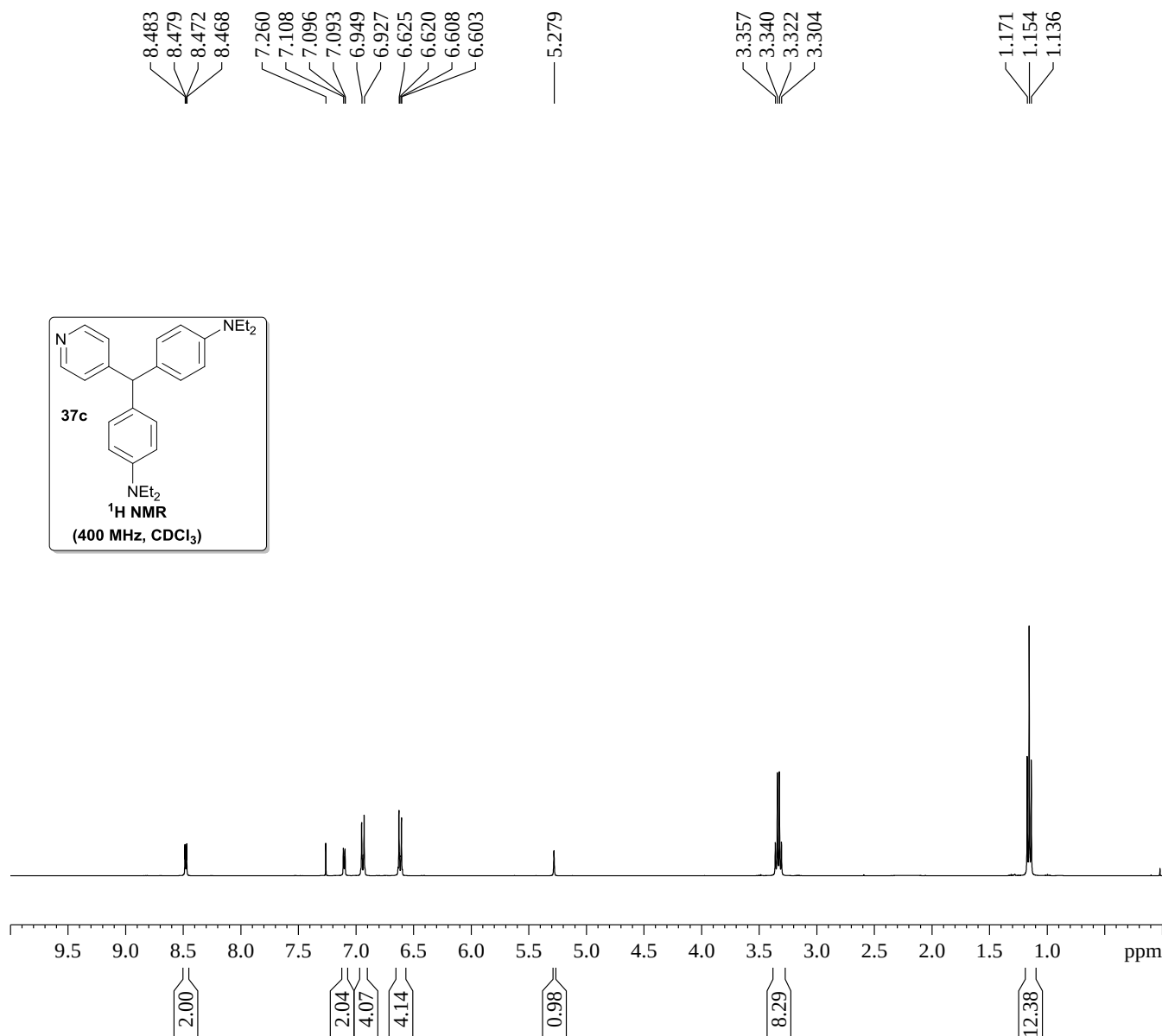
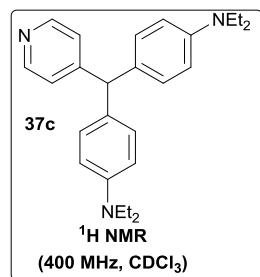
F2 - Acquisition Parameters
Date_ 20121116
Time_ 10.33
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 25.4
DW 20.800 usec
DE 6.00 usec
TE 300.9 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127535 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



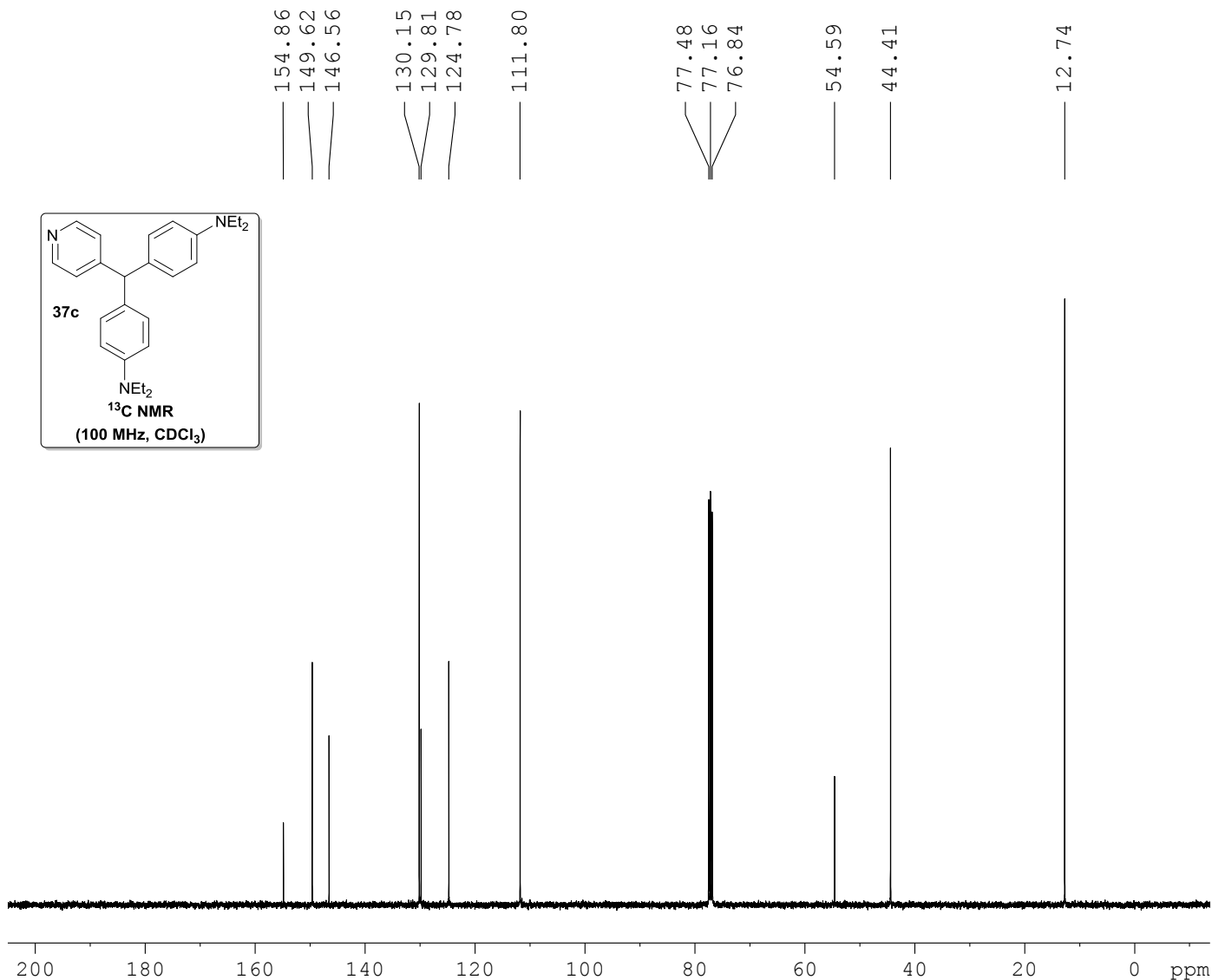
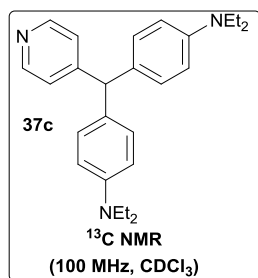
Current Data Parameters
NAME AHK-I337D
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20121116
Time 10.37
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 64
DW 60.800 usec
DE 6.00 usec
TE 300.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300046 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I337D
EXPNO 2
PROCNO 1

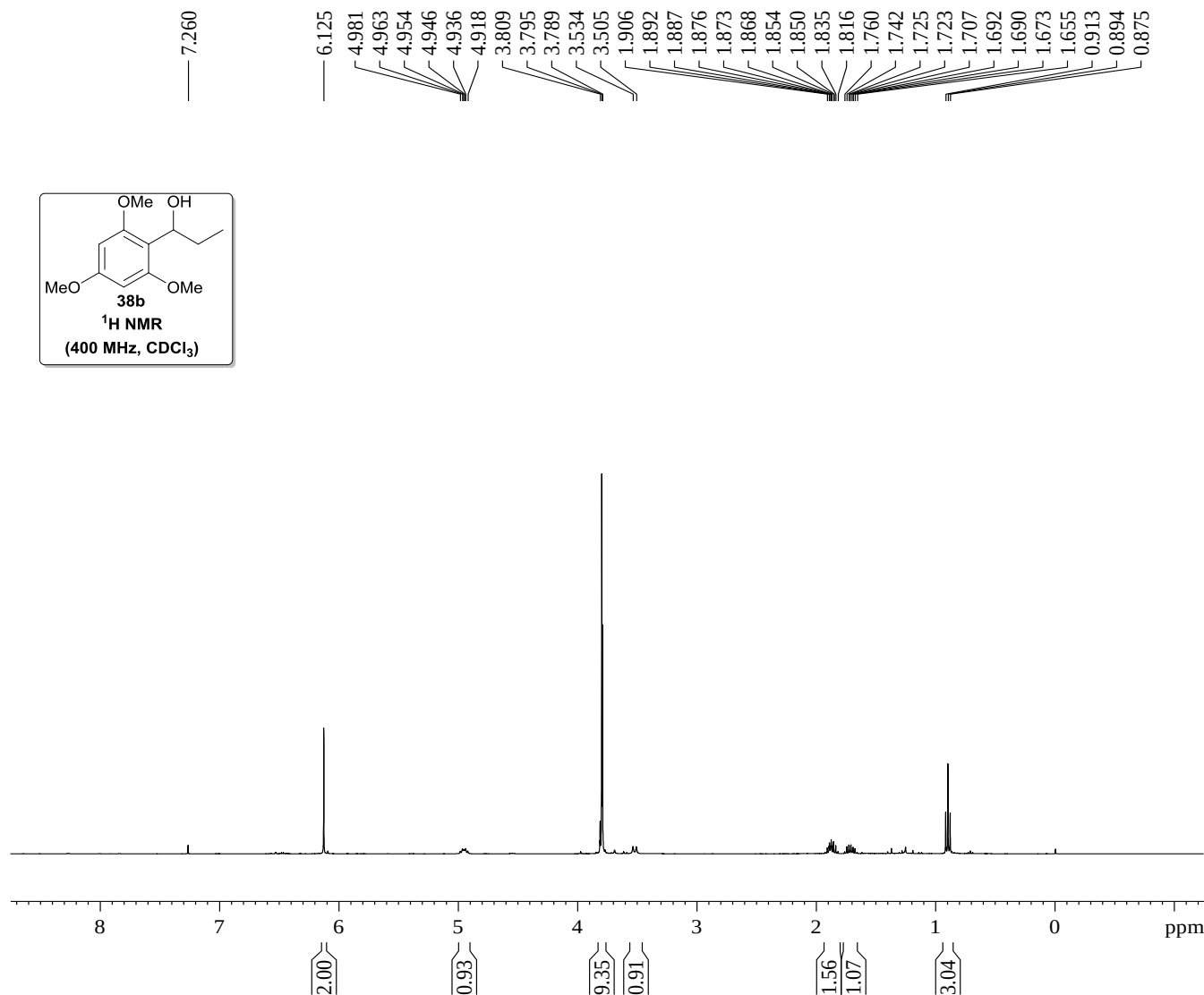
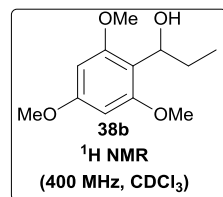
F2 - Acquisition Parameters
Date_ 20121116
Time_ 10.53
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 40.3
DW 20.800 usec
DE 6.00 usec
TE 300.3 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127583 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1



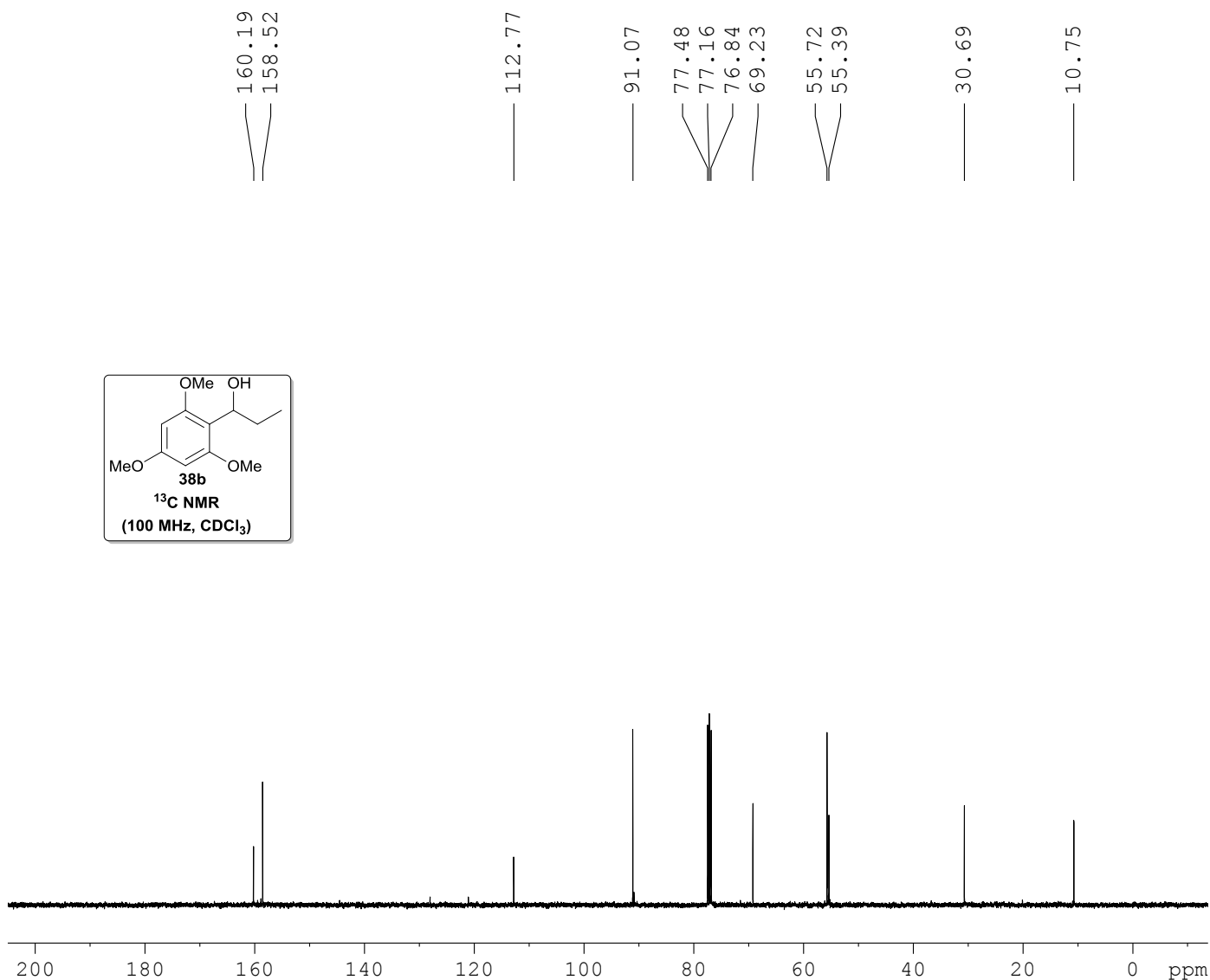
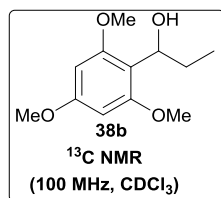
Current Data Parameters
 NAME AHK-I-485 BG
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140314
 Time 15.57
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 71.8
 DW 60.800 usec
 DE 6.00 usec
 TE 296.0 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300052 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-485 BG
 EXPNO 3
 PROCNO 1

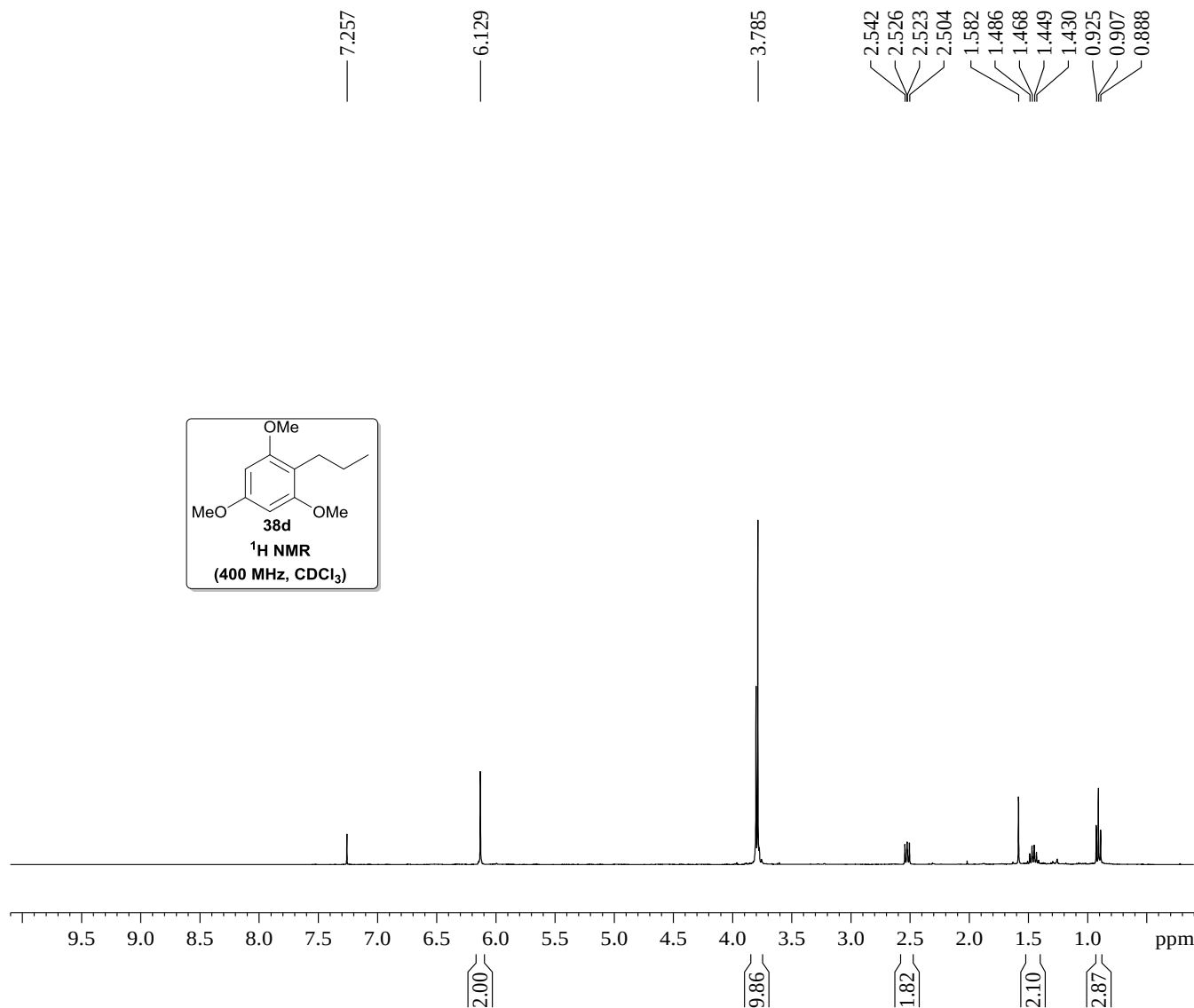
F2 - Acquisition Parameters
 Date_ 20140314
 Time_ 16.02
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 94
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 28.5
 DW 20.800 usec
 DE 6.00 usec
 TE 296.7 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127593 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



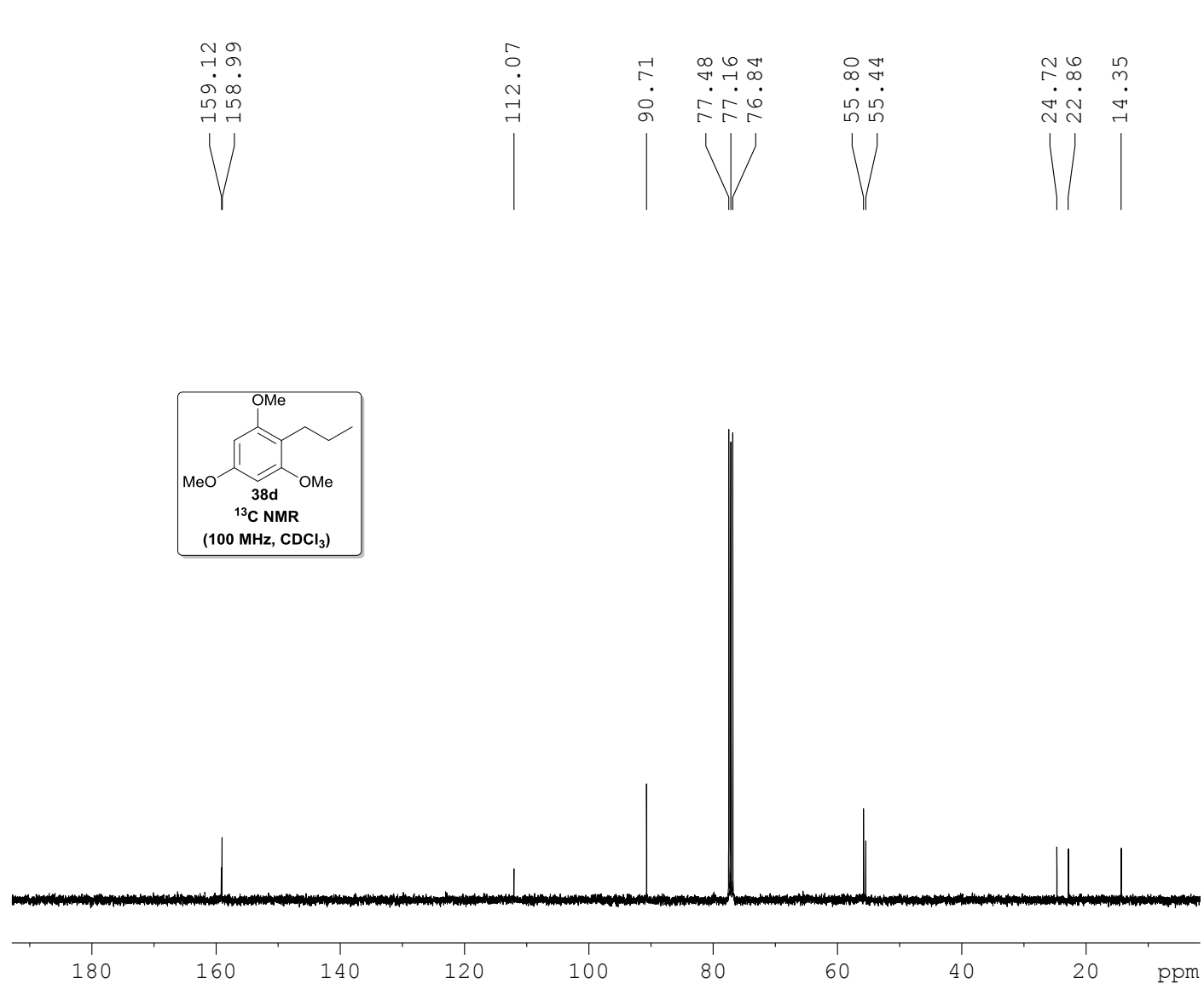
Current Data Parameters
NAME AHK-I-463 C
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20140106
Time_ 10.02
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 256
DW 60.800 usec
DE 6.00 usec
TE 295.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300071 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

C13CPD CDC13 {D:\CRR} KOPAL 1



```

Current Data Parameters
NAME      AHK-I-463C
EXPNO     3
PROCNO    1

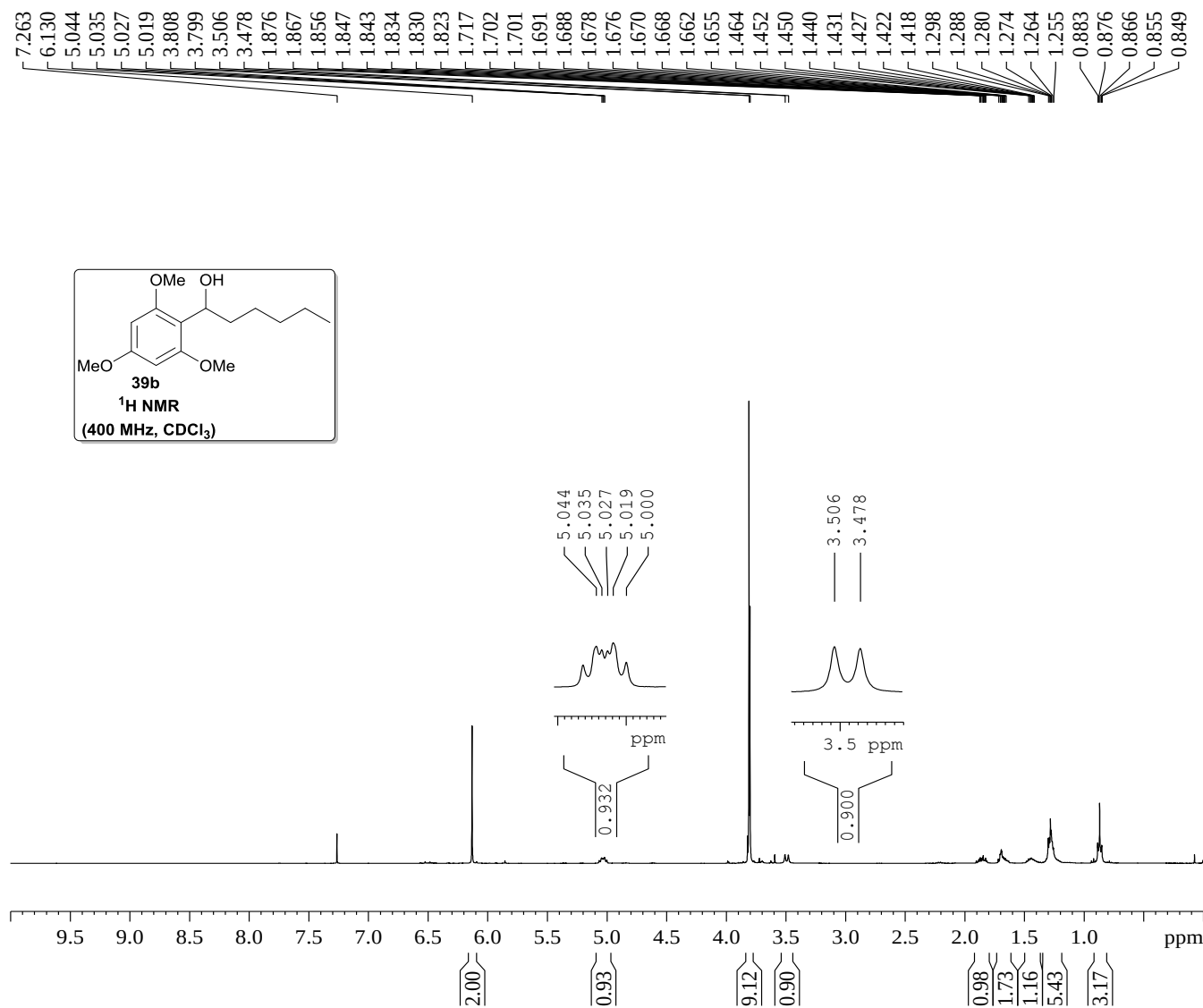
F2 - Acquisition Parameters
Date_     20140107
Time      17.32
INSTRUM   spect
PROBHD    5 mm BBO BB-1H
PULPROG   zgpg30
TD        65536
SOLVENT   CDC13
NS        178
DS        4
SWH       24038.461 Hz
FIDRES    0.366798 Hz
AQ        1.3631988 sec
RG        50.8
DW        20.800 usec
DE        6.00 usec
TE        296.5 K
D1        2.00000000 sec
d11       0.03000000 sec
DELTA     1.89999998 sec
TDO       1

===== CHANNEL f1 =====
NUC1      13C
P1        9.50 usec
PL1       -0.60 dB
SFO1     100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     90.00 usec
PL12      14.96 dB
PL13      15.60 dB
PL2       -0.90 dB
SFO2     400.1316005 MHz

F2 - Processing parameters
SI        32768
SF        100.6127542 MHz
WDW       EM
SSB       0
LB        1.00 Hz
GB        0
PC        1.40
  
```

PROTON CDC13 {D:\CRR} KOPAL 1



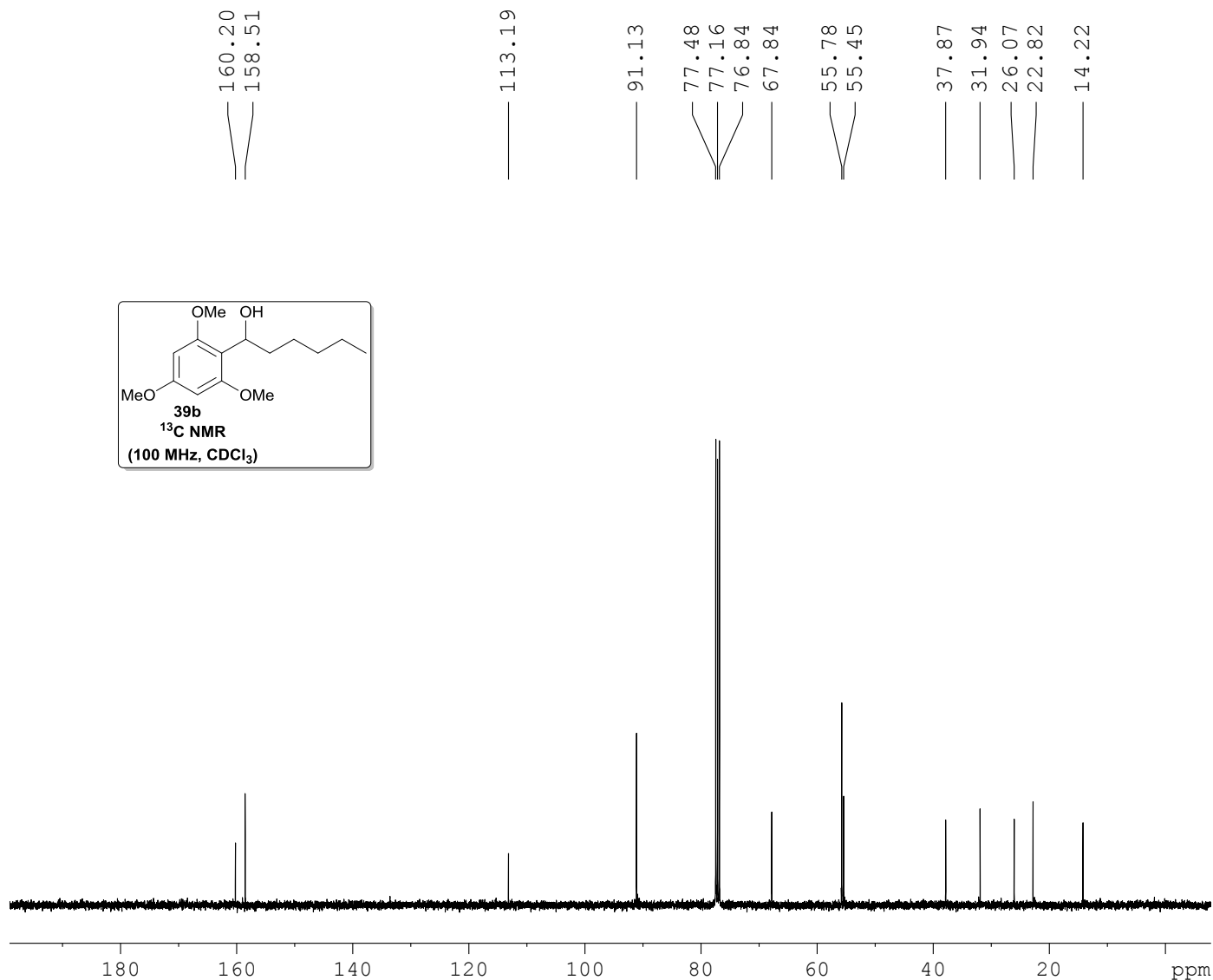
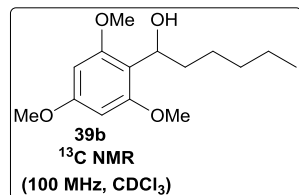
Current Data Parameters
 NAME AHK-I-484CG
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140320
 Time 10.01
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDC13
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 128
 DW 60.800 usec
 DE 6.00 usec
 TE 295.8 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300042 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD CDC13 {D:\CRR} guest 1



Current Data Parameters
 NAME AHK-I-484-CG
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters

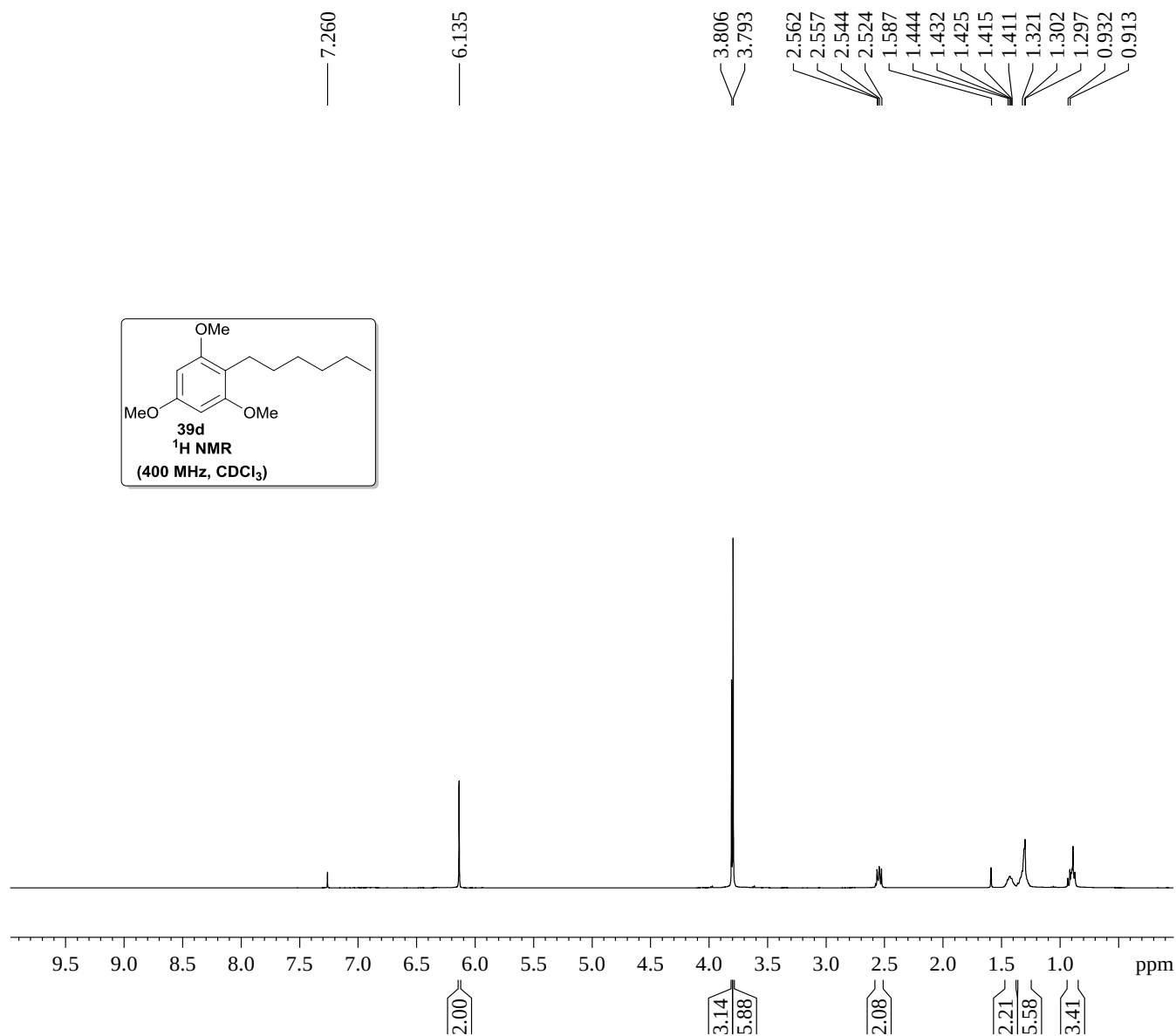
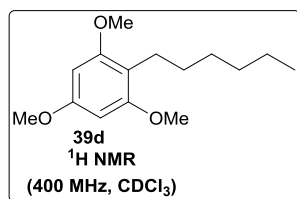
Date_ 20140320
 Time_ 10.21
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 206
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 28.5
 DW 20.800 usec
 DE 6.00 usec
 TE 296.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127548 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-464 C
EXPNO 1
PROCNO 1

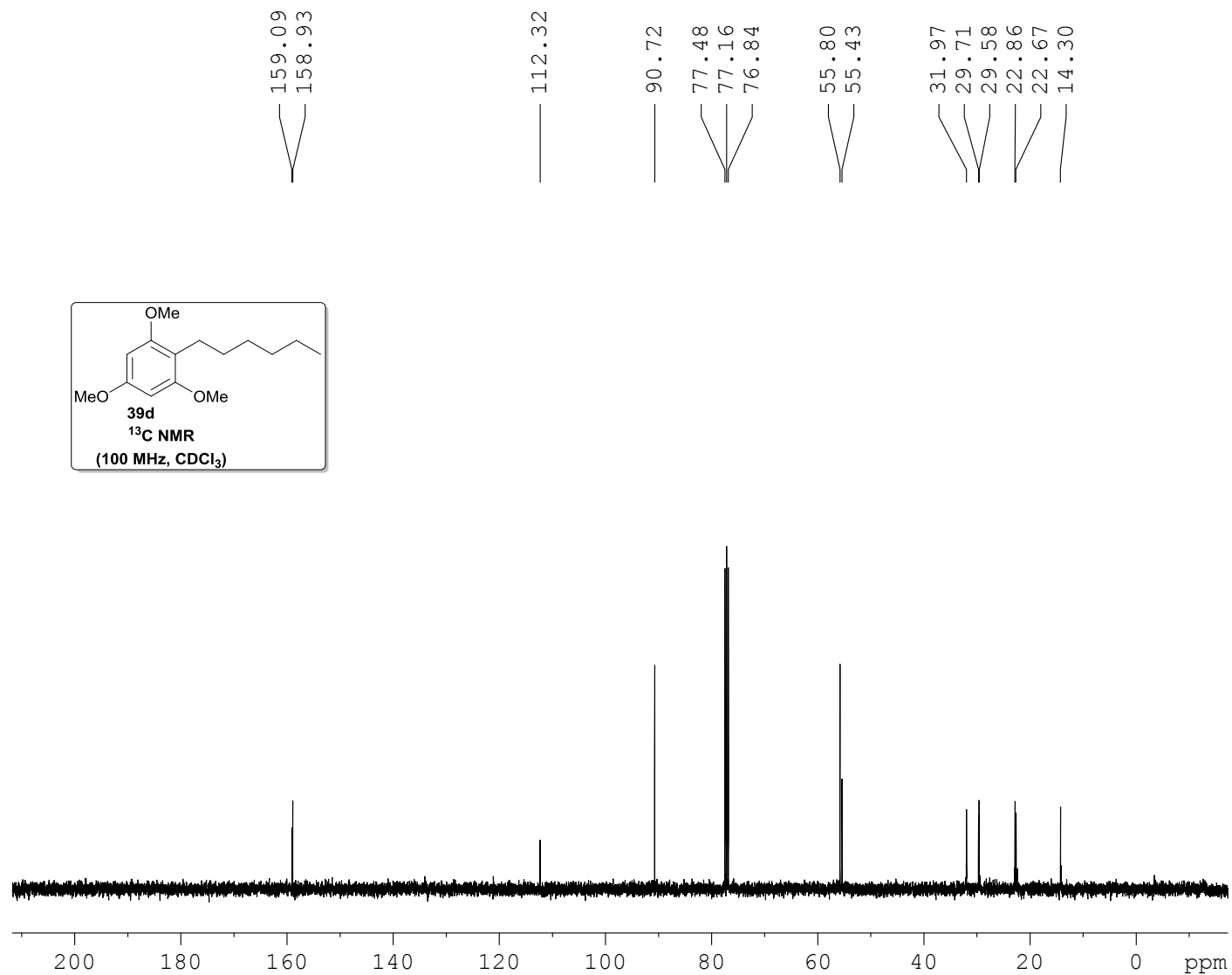
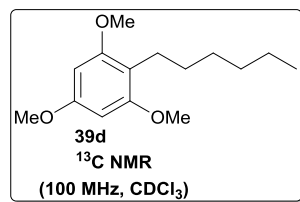
F2 - Acquisition Parameters
Date_ 20140107
Time 9.47
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 181
DW 60.800 usec
DE 6.00 usec
TE 295.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300059 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

S112

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-464C
 EXPNO 1
 PROCNO 1

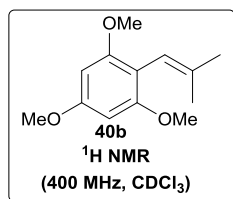
F2 - Acquisition Parameters
 Date_ 20140107
 Time_ 15.10
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 63
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 645
 DW 20.800 usec
 DE 6.00 usec
 TE 296.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.96 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127547 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



7.258

6.146

5.914

3.822

3.793

1.931

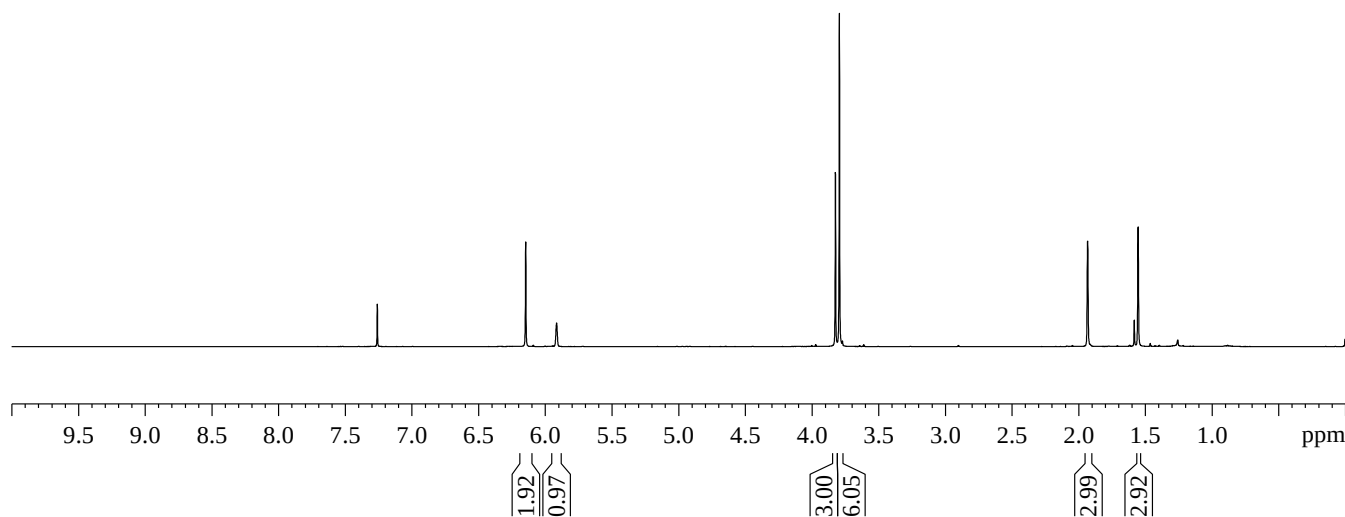
1.552

Current Data Parameters
NAME AHK-I-461 B
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131218
Time 10.51
INSTRUM spect
PROBHD 5 mm BBO BB-1H
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.00 usec
TE 294.2 K
D1 1.00000000 sec
TD0 1

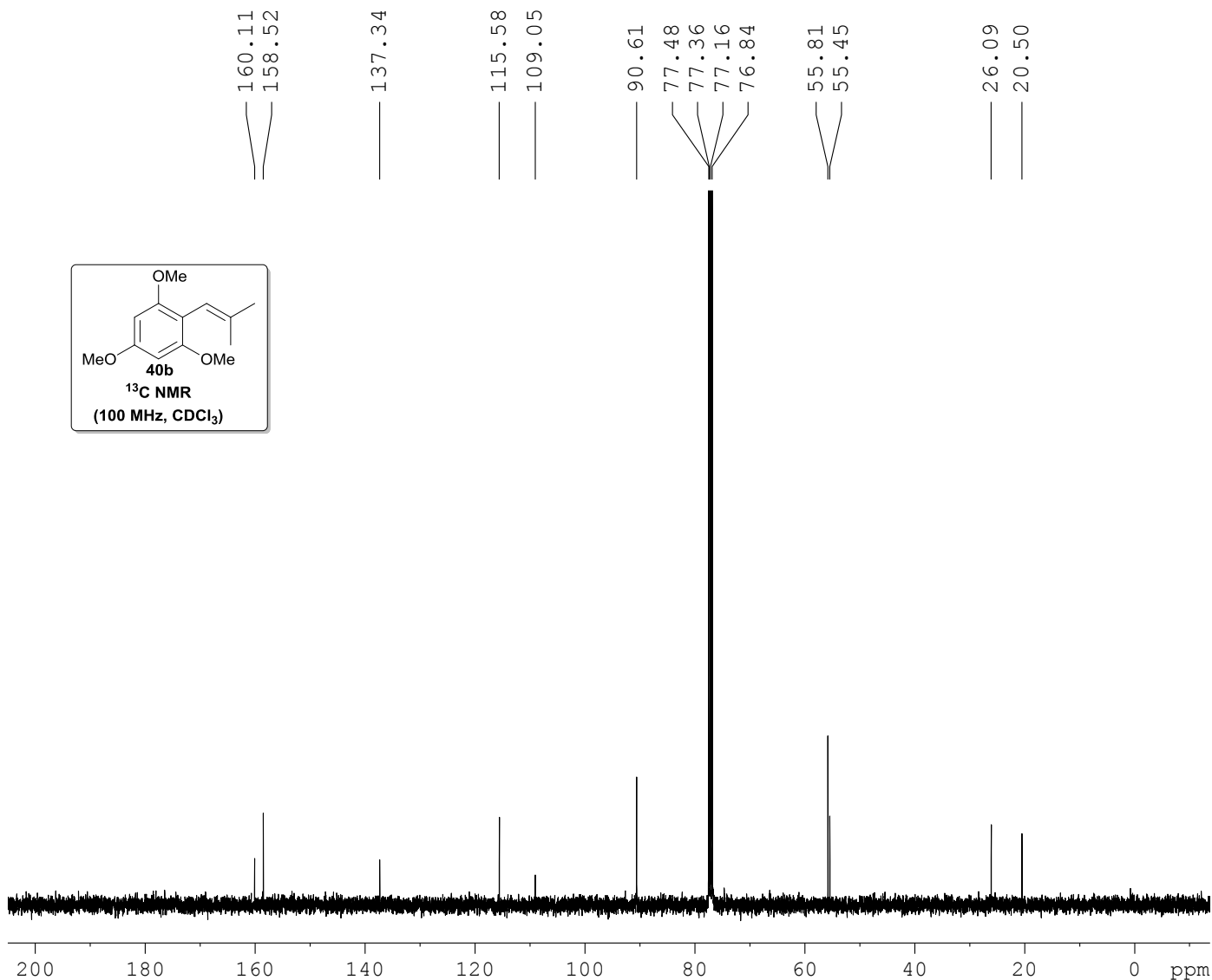
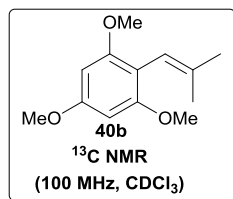
===== CHANNEL f1 =====
NUC1 1H
P1 14.50 usec
PL1 -0.90 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300066 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



S114

C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
 NAME AHK-I-461-B
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters

Date_ 20140102
 Time_ 10.31
 INSTRUM spect
 PROBHD 5 mm BBO BB-1H
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 183
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 45.2
 DW 20.800 usec
 DE 6.00 usec
 TE 295.8 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====

NUC1 13C
 P1 9.50 usec
 PL1 -0.60 dB
 SFO1 100.6228298 MHz

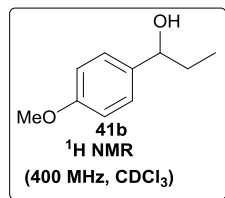
===== CHANNEL f2 =====

CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.96 dB
 PL13 15.60 dB
 PL2 -0.90 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters

SI 32768
 SF 100.6127539 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



7.271
7.267
7.260
7.255
7.250
6.890
6.885
6.874
6.868

4.552
4.535
4.519

3.802

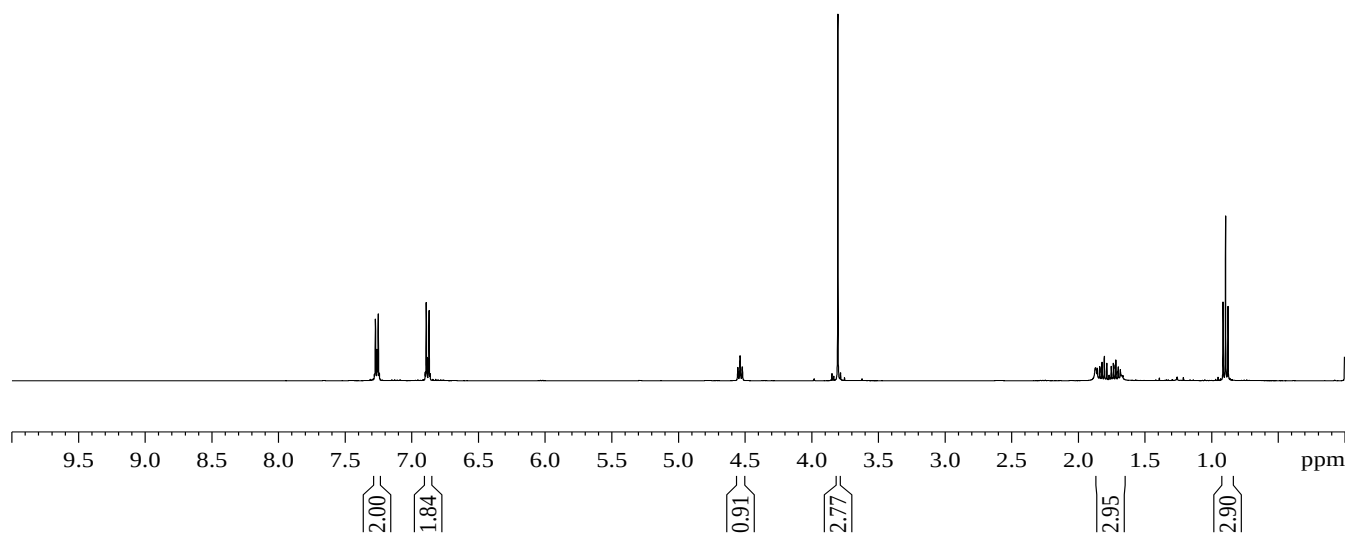
1.872
1.868
1.854
1.836
1.820
1.818
1.802
1.784
1.750
1.734
1.732
1.716
1.700
1.697
1.682
1.679
0.911

Current Data Parameters
NAME AHK-I-475G
EXPNO 1
PROCNO 1

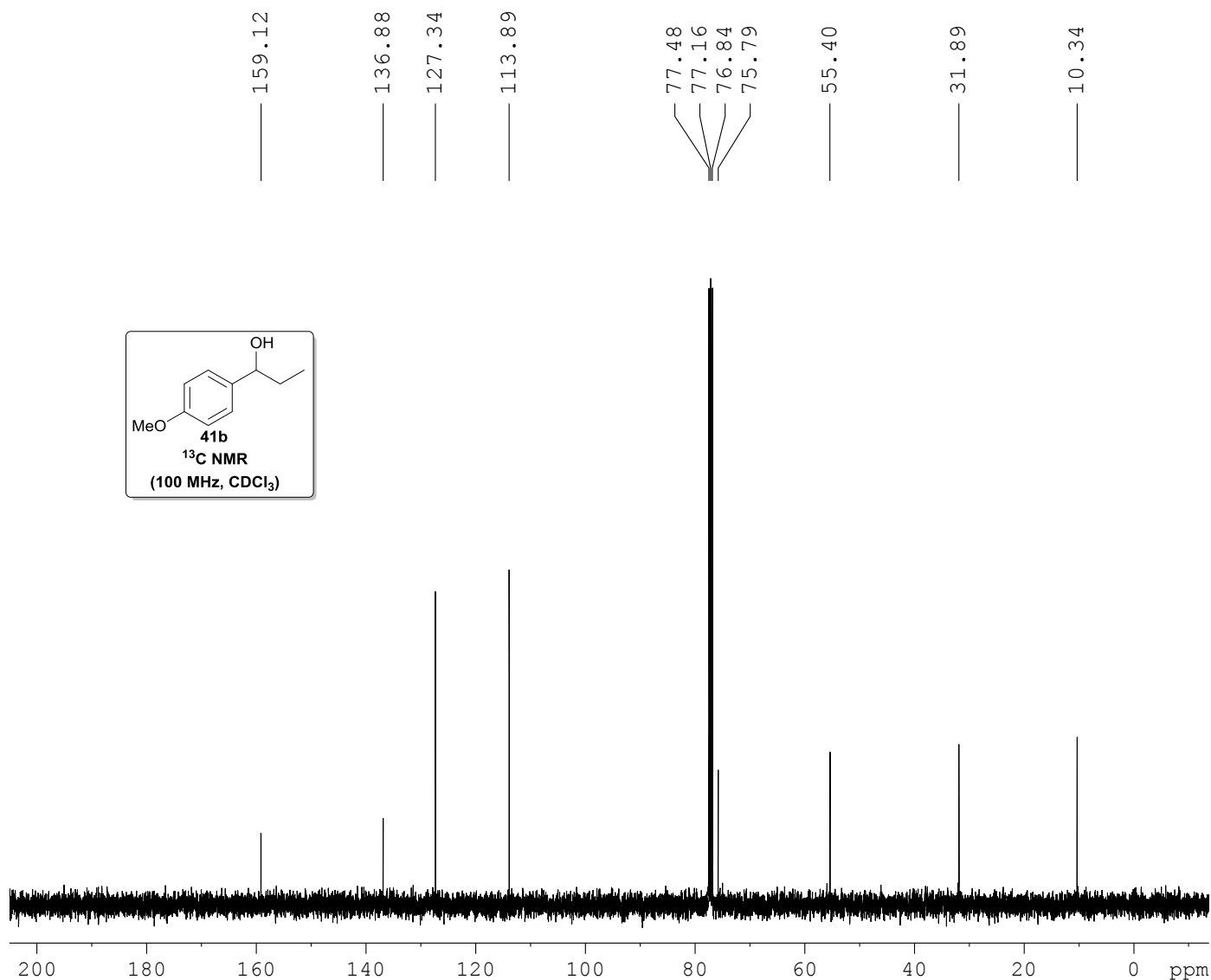
F2 - Acquisition Parameters
Date_ 20140312
Time_ 10.09
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 9
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.00 usec
TE 294.4 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300044 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-475G
EXPNO 2
PROCNO 1

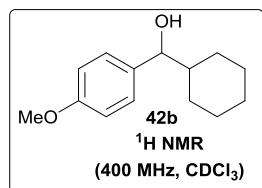
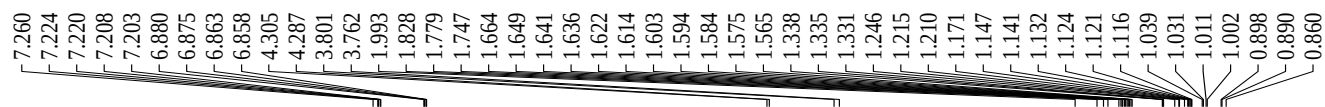
F2 - Acquisition Parameters
Date_ 20140312
Time_ 10.11
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 24
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 36
DW 20.800 usec
DE 6.00 usec
TE 294.7 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127559 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDCl3 {D:\CRR} KOPAL 1

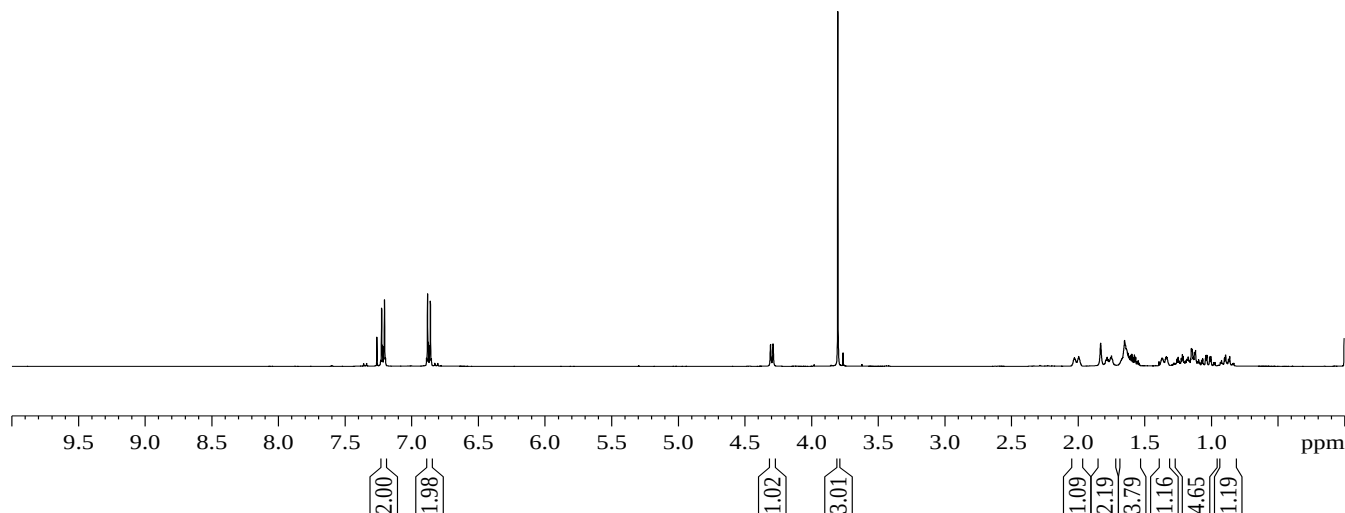


Current Data Parameters
NAME AHK-I-477G
EXPNO 1
PROCNO 1

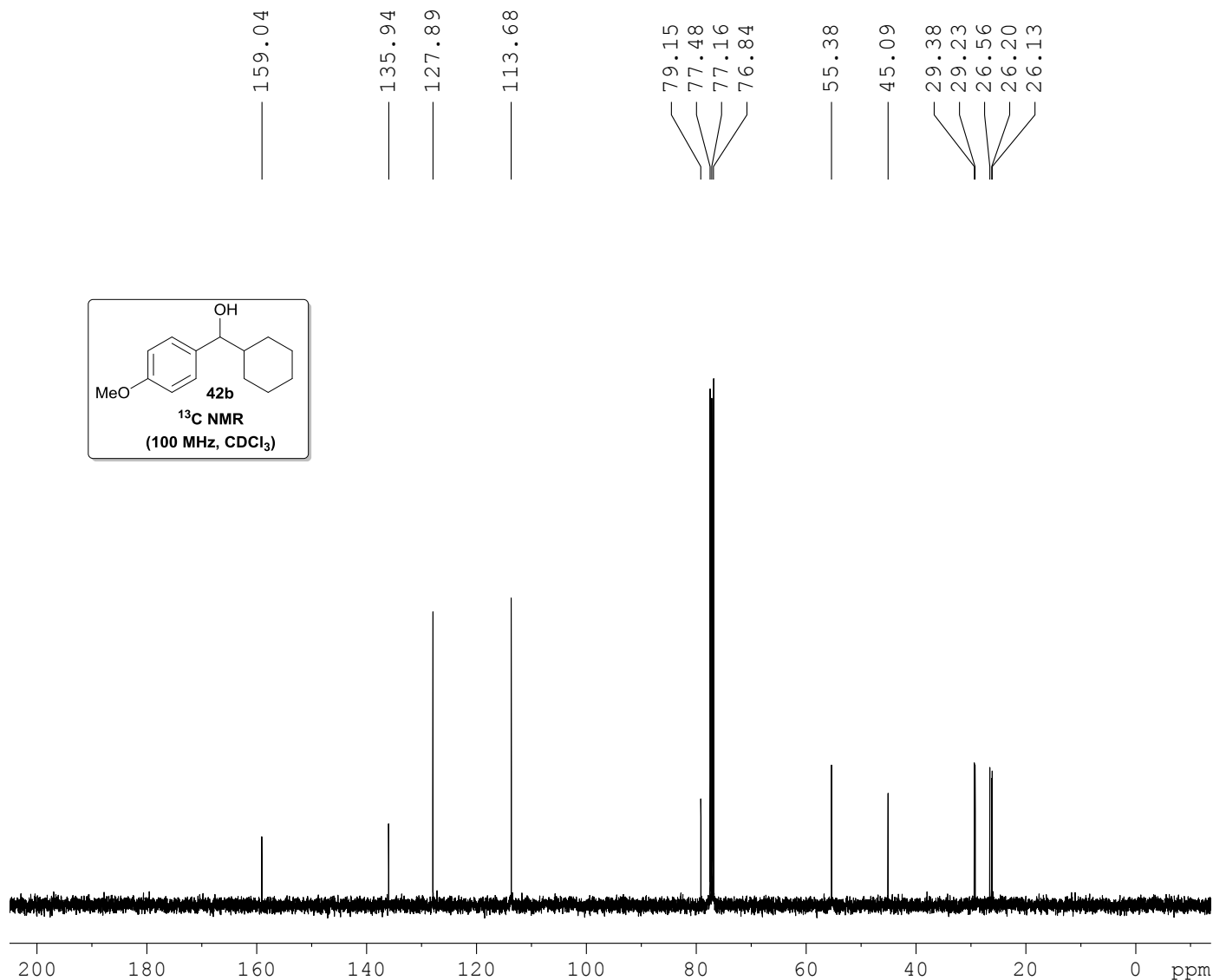
F2 - Acquisition Parameters
Date_ 20140312
Time 9.46
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.00 usec
TE 293.8 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 11.42 usec
PL1 -3.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300042 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



C13CPD CDC13 {D:\CRR} KOPAL 1



Current Data Parameters
NAME AHK-I-477G
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters

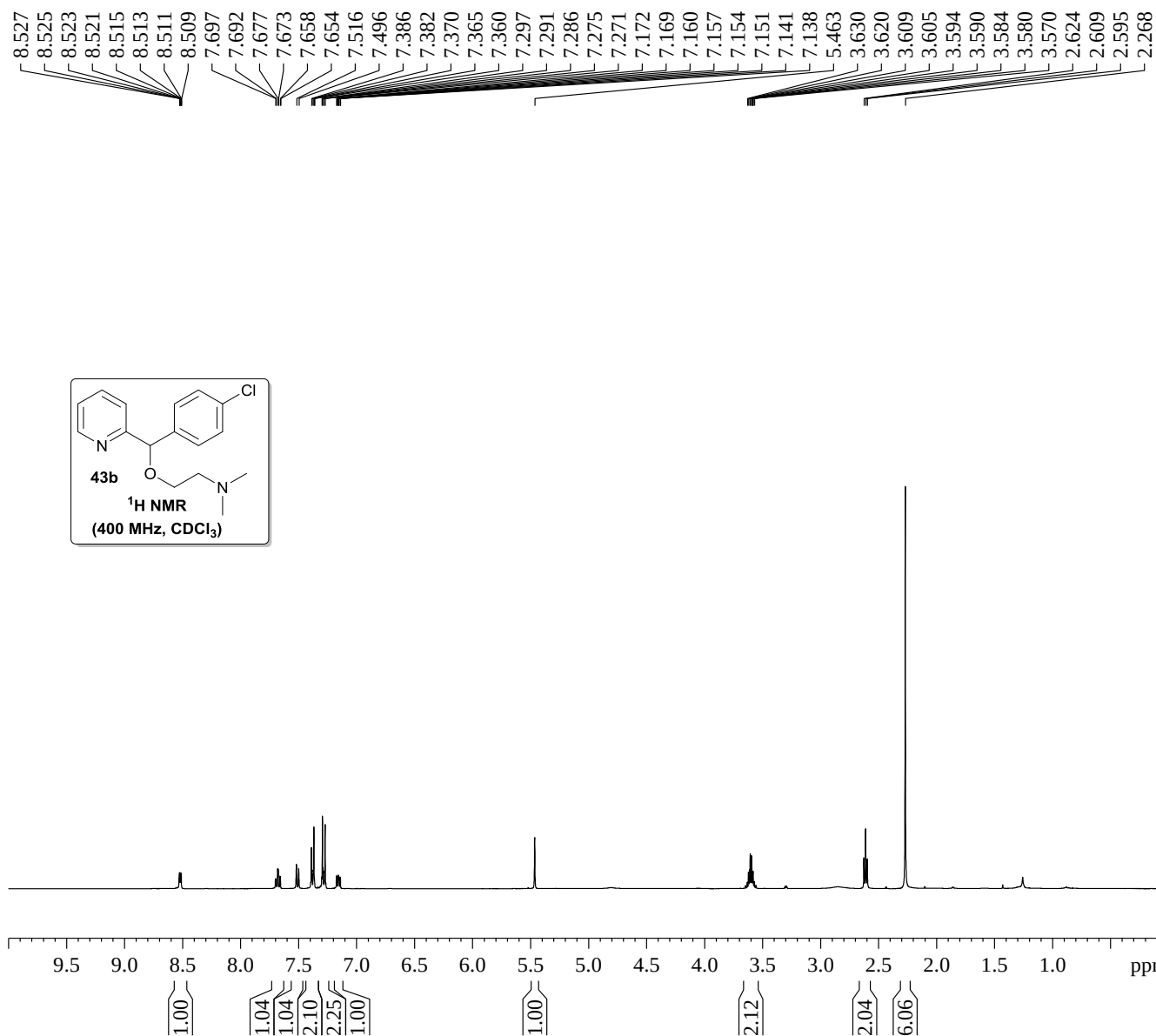
Date_ 20140312
Time_ 9.51
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 59
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 32
DW 20.800 usec
DE 6.00 usec
TE 294.4 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.15 usec
PL1 0.00 dB
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL12 14.90 dB
PL13 14.90 dB
PL2 -3.00 dB
SFO2 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127558 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

PROTON CDC13 {D:\CRR} KOPAL 1



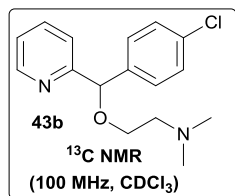
Current Data Parameters
 NAME AHK-I-D-1
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140812
 Time_ 10.26
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 32
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 114
 DW 60.800 usec
 DE 6.00 usec
 TE 293.6 K
 D1 1.00000000 sec
 TD0 1

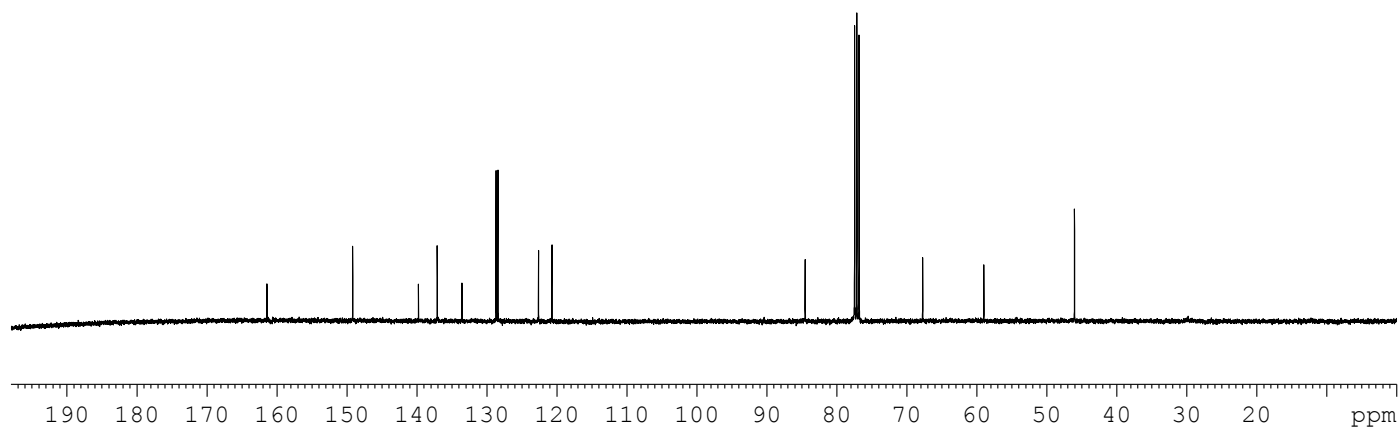
===== CHANNEL f1 =====
 NUC1 1H
 P1 11.42 usec
 PL1 -3.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300008 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

C13CPD DMSO {D:\CRR} KOPAL 1



161.40
 149.16
 139.77
 137.07
 133.54
 128.71
 128.44
 122.65
 120.73
 84.54
 77.48
 77.16
 76.84
 67.76
 59.02
 46.05



Current Data Parameters
 NAME AHK-I-D-1
 EXPNO 3
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20140812
 Time_ 14.26
 INSTRUM spect
 PROBHD 5 mm DUL 13C-1
 PULPROG zgpg30
 TD 65536
 SOLVENT DMSO
 NS 230
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 36
 DW 20.800 usec
 DE 6.00 usec
 TE 295.4 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 DELTA 1.89999998 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.15 usec
 PL1 0.00 dB
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL12 14.90 dB
 PL13 14.90 dB
 PL2 -3.00 dB
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6122776 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40