

Indium triflate catalysed 3-aza-Cope rearrangement of Amino acid derived α,β -unsaturated esters to the alkylidene oxindoles

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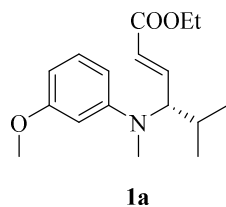
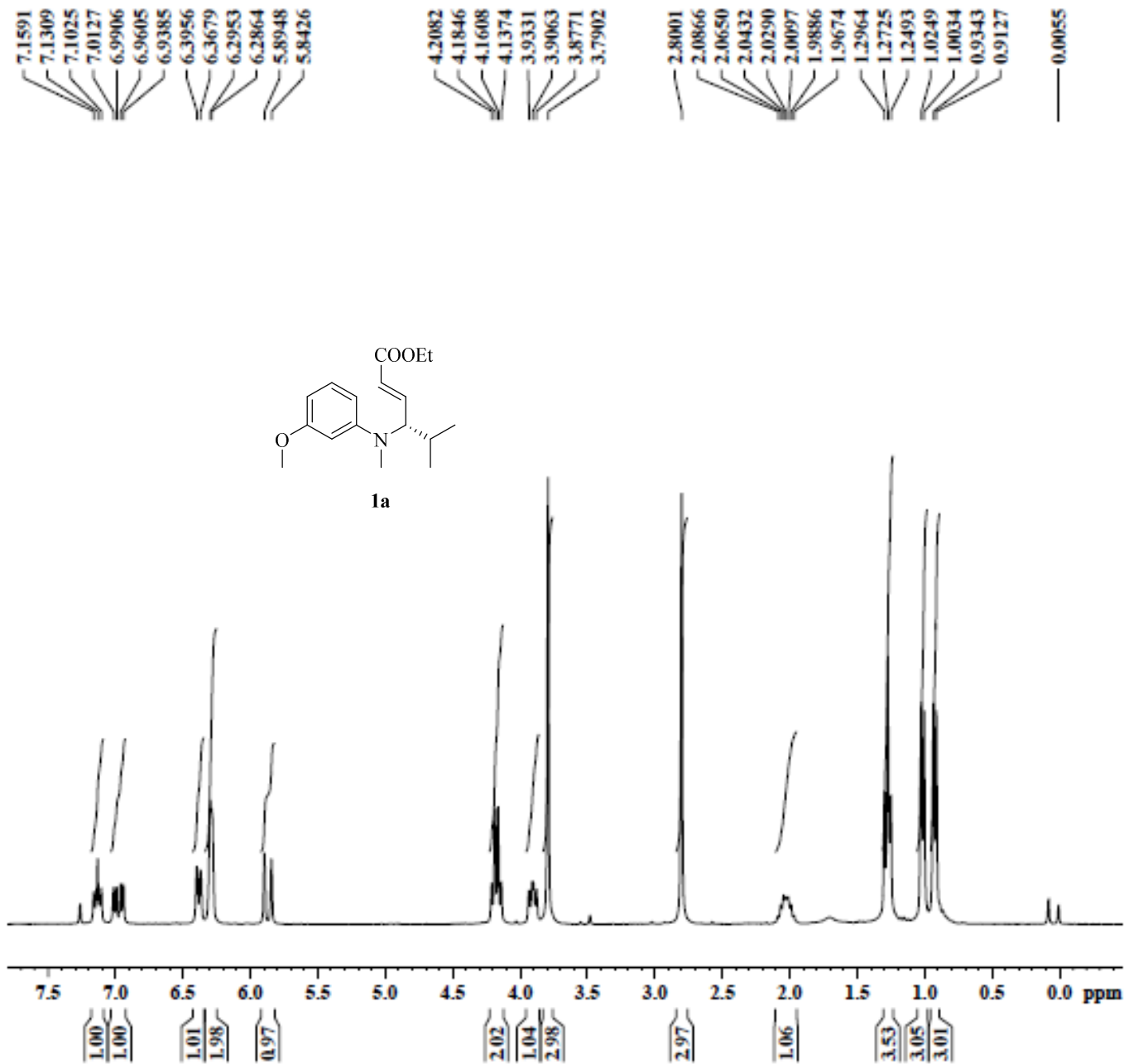
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SKM-515B
1H, CDCl3

Current Data Parameters
 NAME SKM-515B, 1H, 300 MHz, 11.3.13.E
 EXPNO 340
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20130311
 Time 3.45
 INSTRUM spect
 PROBHD 5 mm QNP 1H/13
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 2
 SWH 6188.119 Hz
 FIDRES 0.094423 Hz
 AQ 5.2953557 sec
 RG 64
 DW 80.800 usec
 DE 15.00 usec
 TE 673.2 K
 D1 1.00000000 sec
 TD0 1

----- CHANNEL f1 -----
 NUC1 1H
 P1 10.00 usec
 PL1 -1.00 dB
 PL1W 15.02081871 W
 SFO1 300.1318534 MHz

F2 - Processing parameters
 SI 32768
 SF 300.1300070 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

¹H -NMR Spectrum of **1a**

166.41
 160.73
 151.60
 145.27
 129.79
 122.60
 105.98
 101.29
 99.59
 77.32
 77.00
 76.68
 66.28
 60.38
 55.09
 32.10
 30.31
 20.42
 20.13
 14.19

SKM-515B
13C, CDCl3

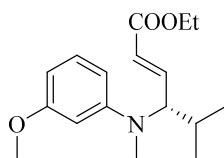
Current Data Parameters
NAME SKM-515B, 13C, 400 MHz, 24 June, 2013, E
EXPNO 80
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130624
Time 18.41
INSTRUM spect
PROBHD 5 mm PABBO DDJ
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24220.481 Hz
FIDRES 0.366796 Hz
AQ 1.3621488 sec
RG 201.40
DM 20.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

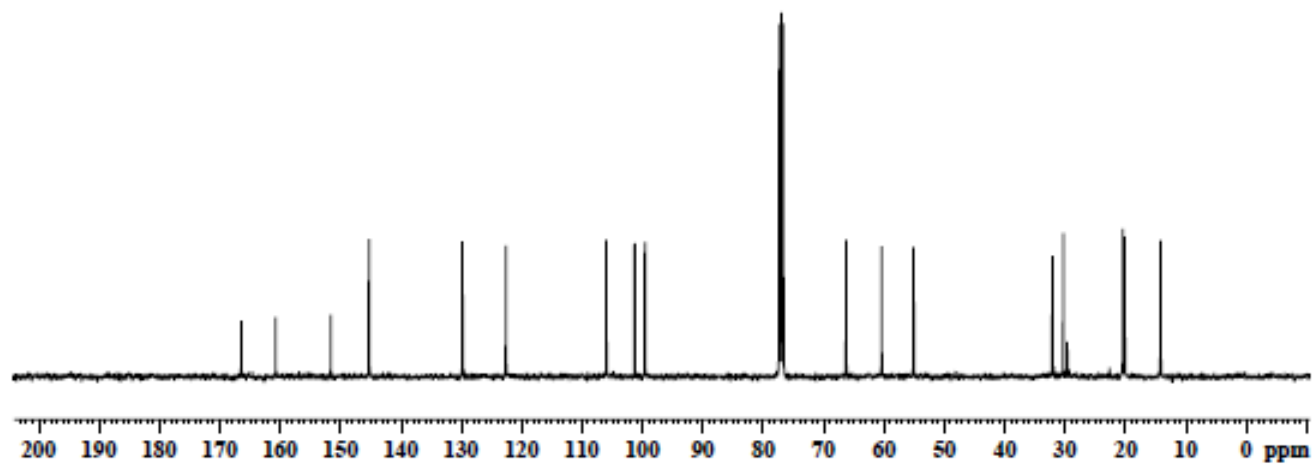
----- CHANNEL f1 -----
SFO1 100.620440 MHz
NUC1 13C
P1 0.20 usec
PLW1 70.58999947 W

----- CHANNEL f2 -----
SFO2 400.1621000 MHz
NUC2 131
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW3 0.26341936 W
PLW4 0.21553000 W

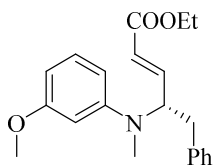
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SF 100.620440 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.40



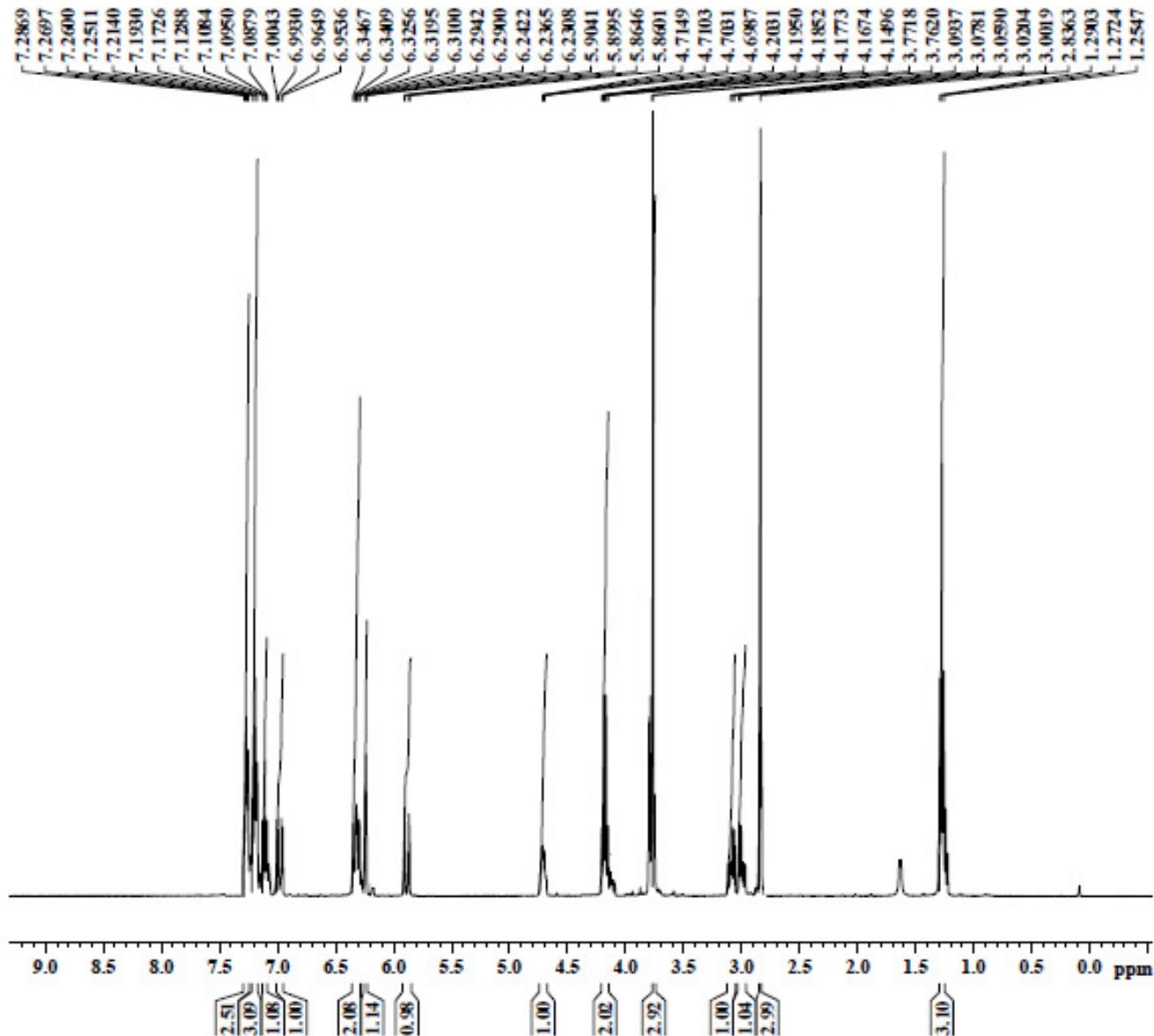
1a



¹³C -NMR Spectrum of **1a**



1b



SKM-646C
1H, CDC13

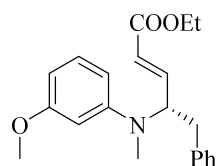
Current Data Parameters
NAME SKM-646C,13C,300 MHz,4 Sep.
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130905
Time 13.32
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 8
DS 2
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 65.65
DW 62.400 usec
DE 6.50 usec
TE 299.6 K
D1 1.00000000 sec
TD0 1

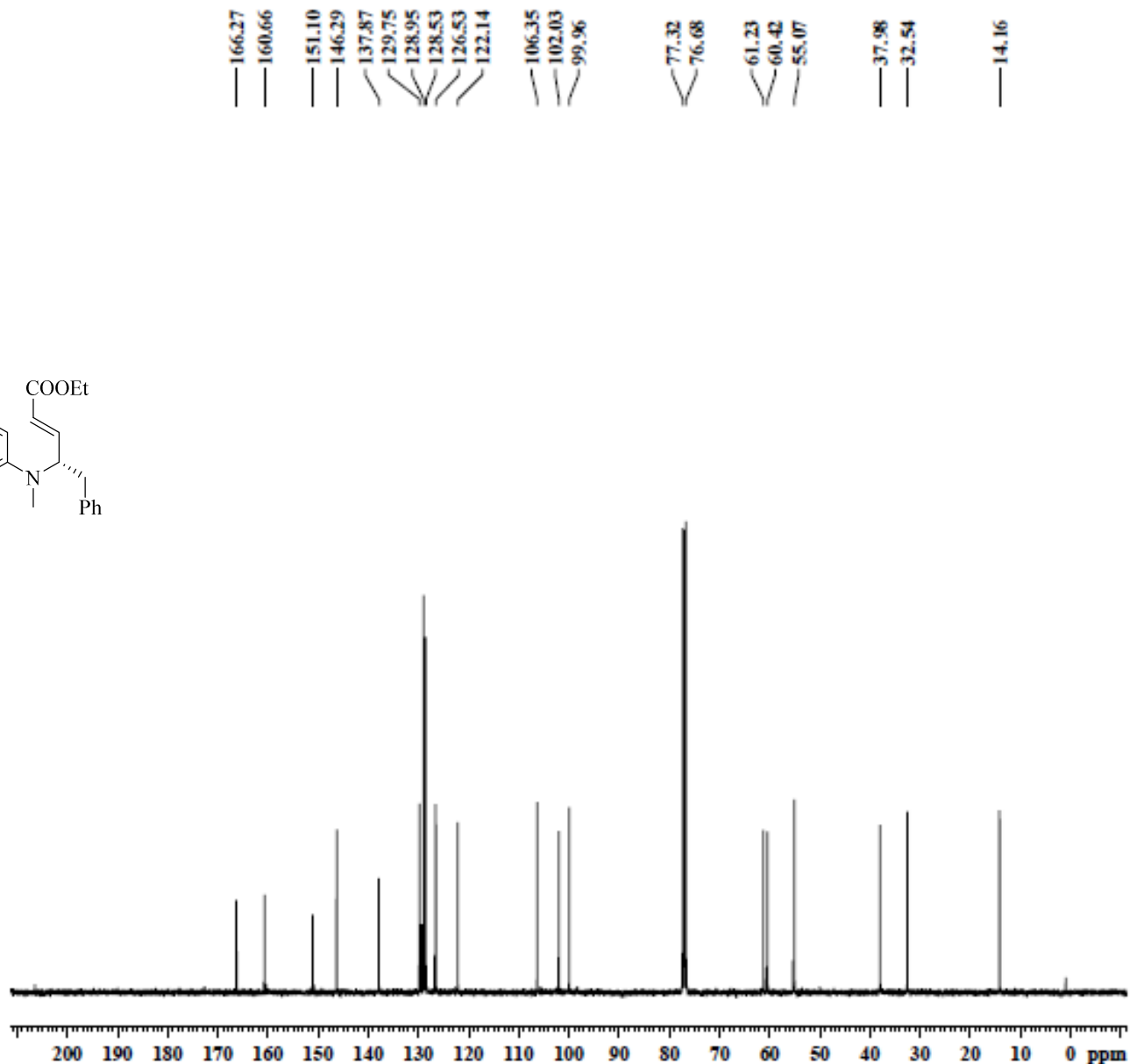
===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605103 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1b**



1b



SKM-646 C
13C, CDC13

Current Data Parameters
NAME SKM-646C, 13C, 400 MHz, 21 Sep, 2013, E
EXPNO 20
PROCNO 1

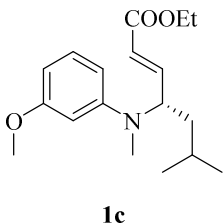
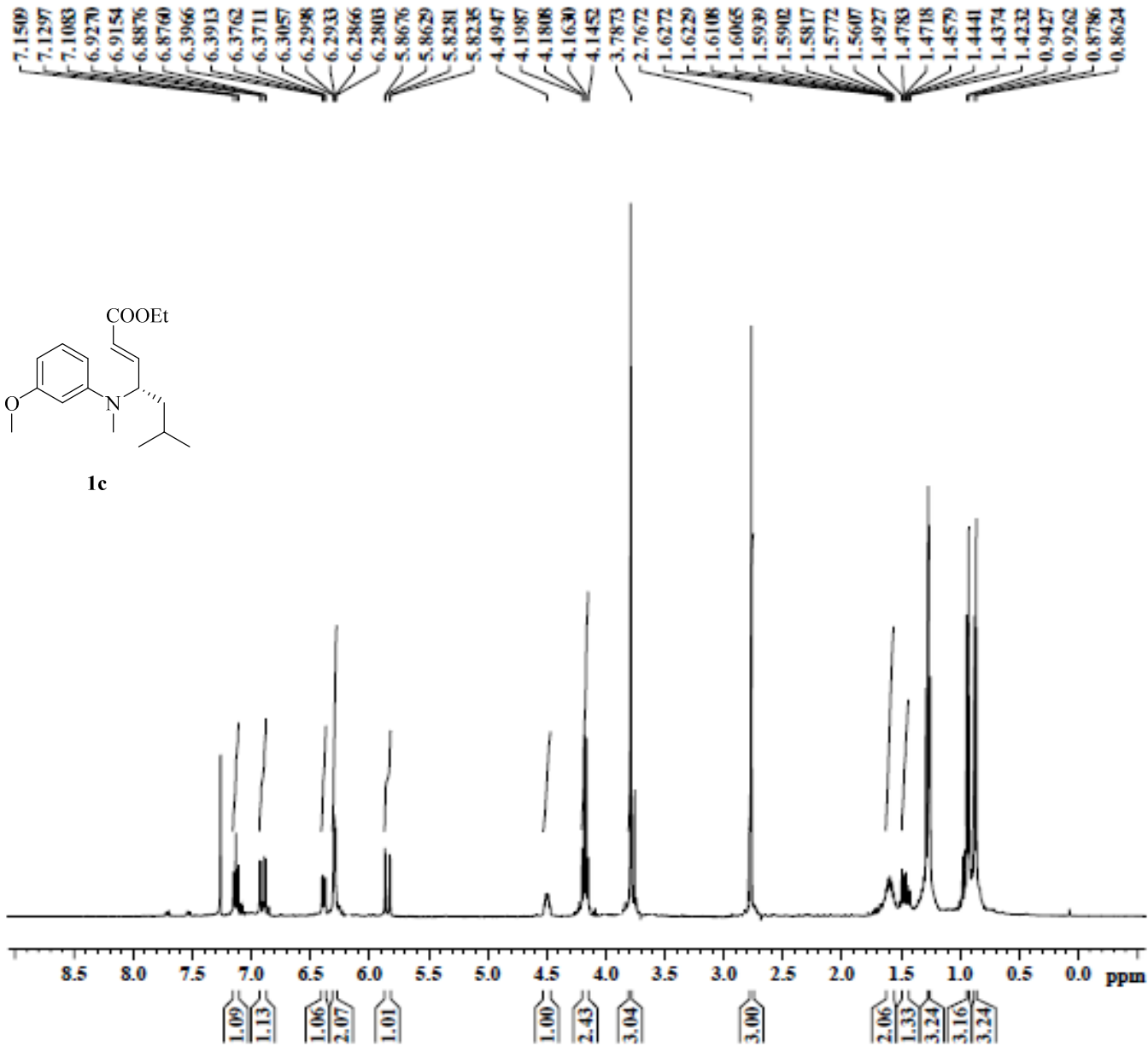
F2 - Acquisition Parameters
Date_ 20130925
Time 20.57
INSTRUM spect
PROSHD 8 mm F4BBO BB1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24032.461 Hz
FIDRES 0.366736 Hz
AQ 1.3631488 sec
RG 201.60
DW 20.800 usec
DE 6.50 usec
TE 300.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6304993 MHz
NUC1 13C
P1 8.20 usec
PLW1 70.59999647 W

----- CHANNEL f2 -----
SFO2 400.1421006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.26361999 W
PLW13 0.21353000 W

F2 - Processing parameters
SI 32768
SF 100.6204436 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

^{13}C -NMR Spectrum of **1b**



SKM-647 C
1H, CDCl3

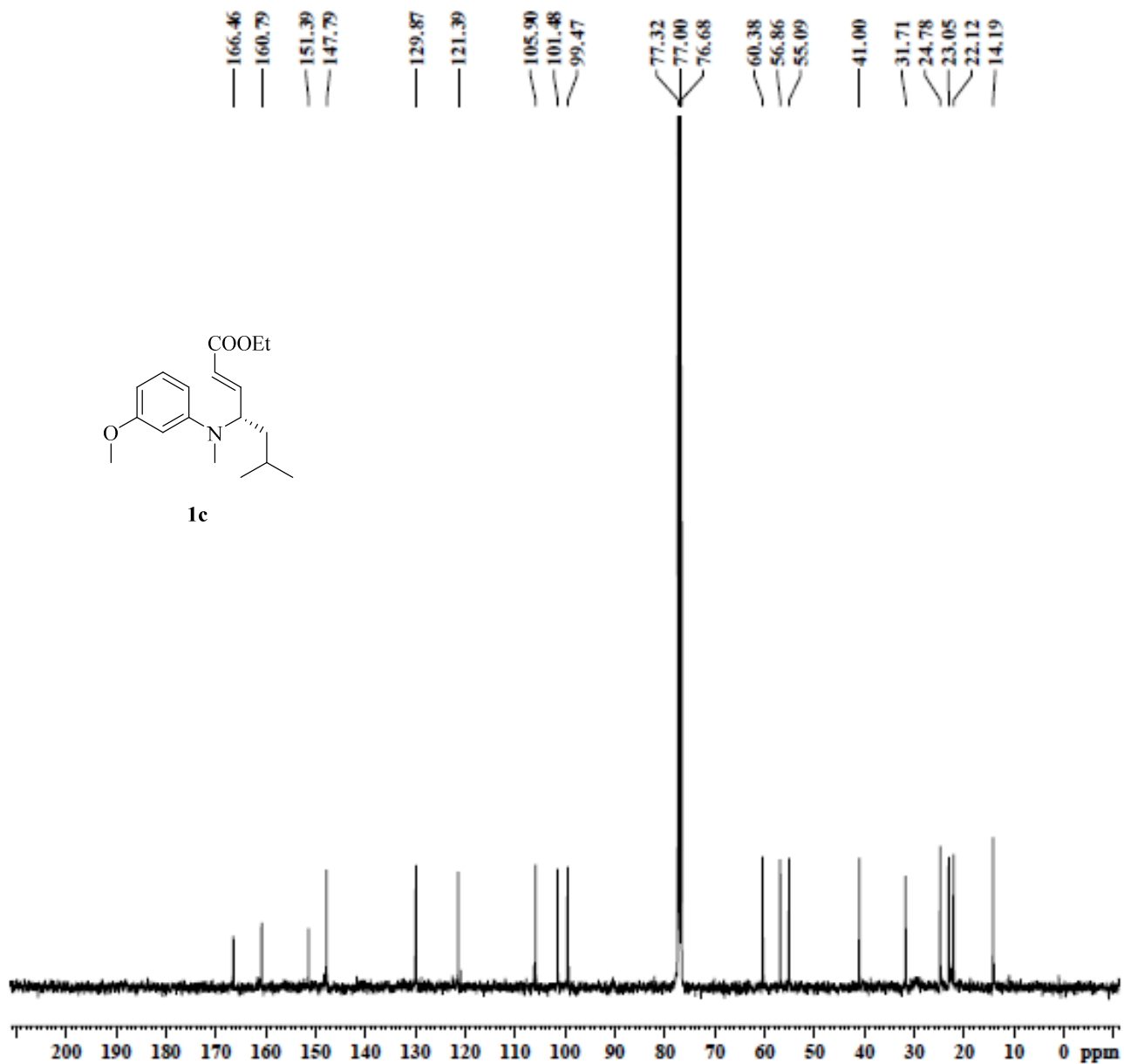
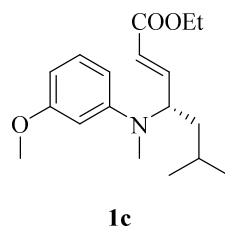
Current Data Parameters
NAME SKM-647C, 1H, 400 MHz, 5 Sep, 2013, M
EXPNO 100
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130906
Time 2.56
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 2
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 89.7
DW 82.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.50000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 400.1629712 MHz
NUC1 1H
P1 12.38 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605104 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1c**



SKM-647 C
13C, CDCl3

Current Data Parameters
NAME SKM-647C,13C,400 MHz,16 Sep,2013,M
EXPNO 20
PROCNO 1

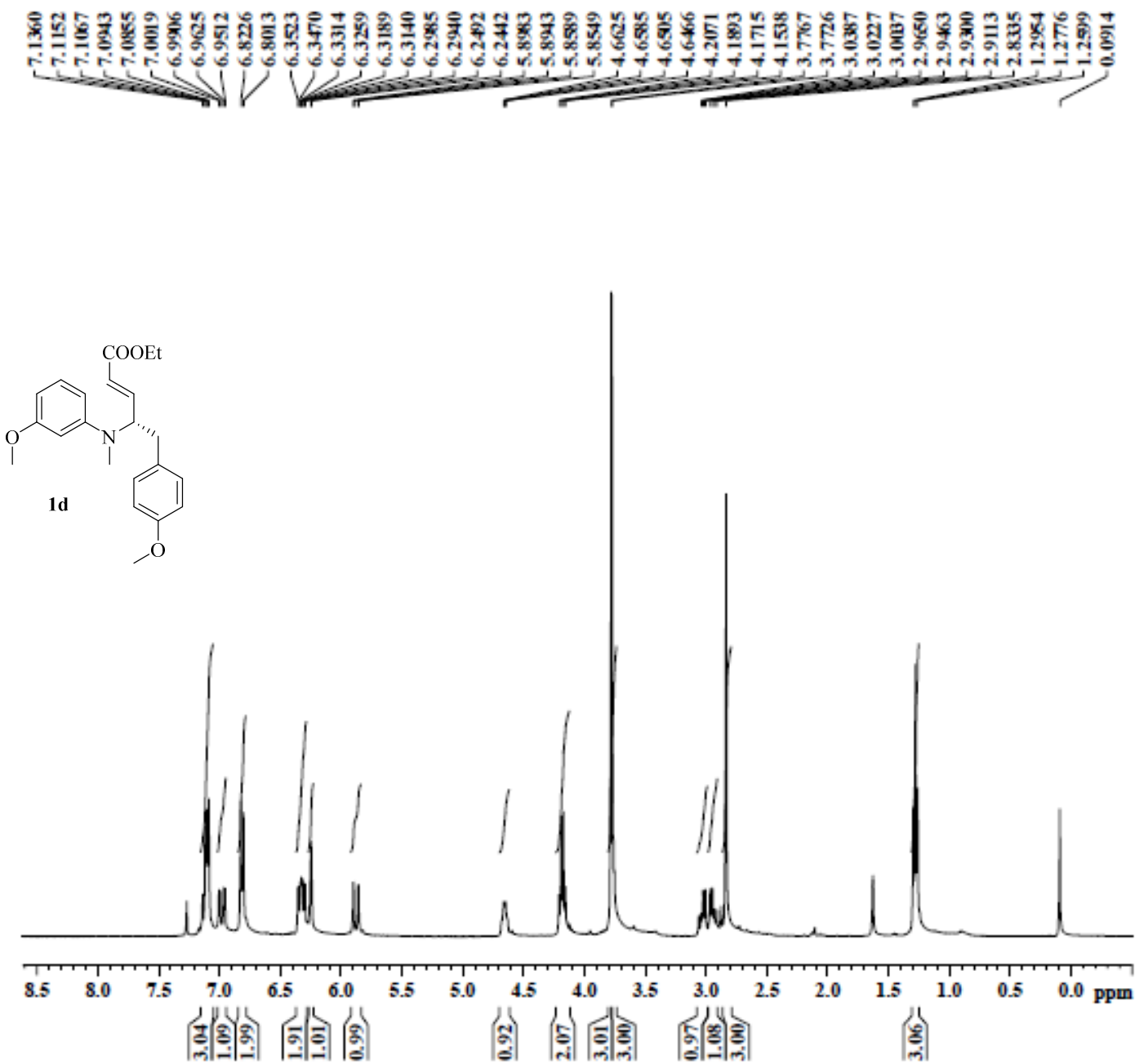
F2 - Acquisition Parameters
Date_ 20130916
Time 17.07
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.80 usec
TE 300.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6204993 MHz
NUC1 13C
P1 8.20 usec
PLW1 70.59999647 W

----- CHANNEL f2 -----
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waftz16
PCPD2 80.00 usec
PLW2 14.0000000 W
PLW12 0.26361999 W
PLW13 0.21353000 W

F2 - Processing parameters
SI 32768
SF 100.6204411 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of **1c**



SKM-656A
1H, CDCl3

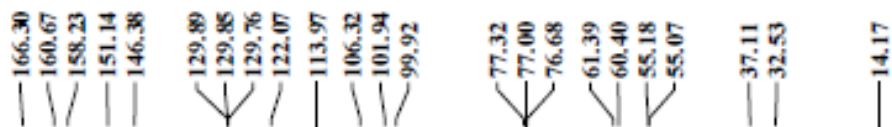
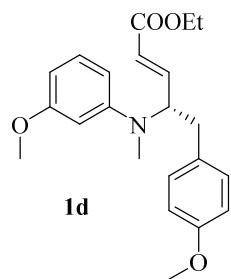
Current Data Parameters
NAME SKM-656A.13C.400 MHz.16 Sep.2013.M
EXPNO 80
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130916
Time 14.28
INSTRUM spect
PROBHD 5 mm PABBO BB1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 58.68
DW 52.000 usec
DE 5.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 400.1629712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605079 MHz
WDWV EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1d**



SKM-656 A
13C, CDCl3

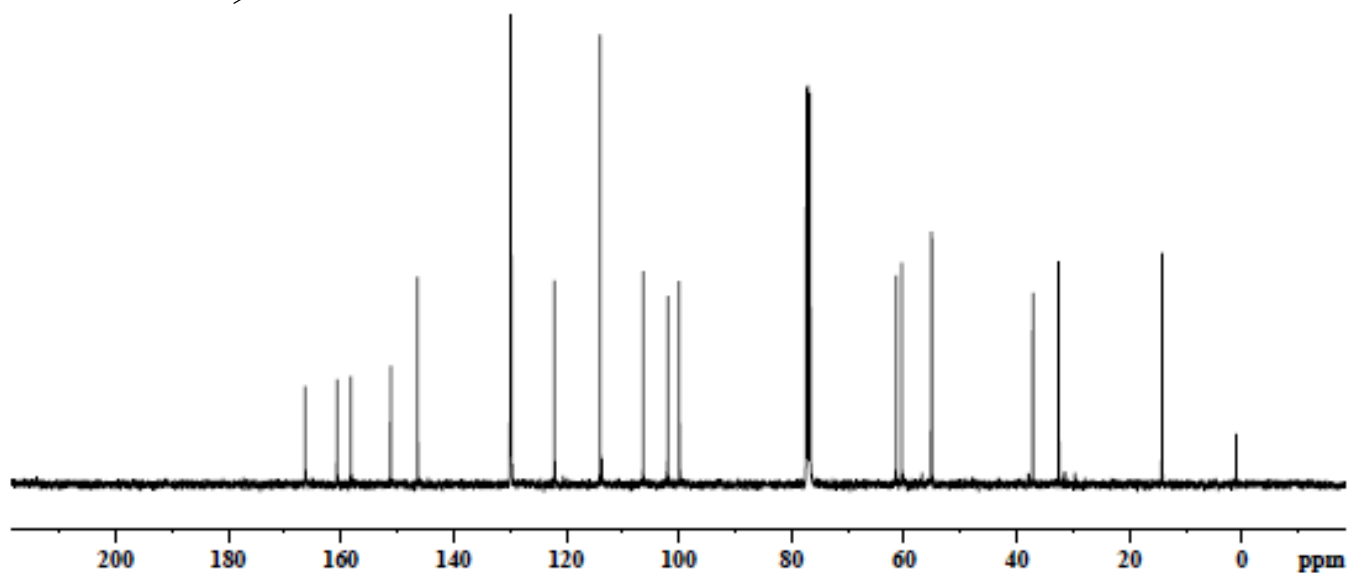
Current Data Parameters
NAME SKM-656A, 13C, 400 MHz, 24 Sep, 2013, M
EXPNO 20
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130925
Time 9.02
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.388798 Hz
AQ 1.3831488 sec
RG 201.48
DNV 20.800 usec
DE 8.50 usec
TE 300.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6204993 MHz
NUC1 13C
P1 8.20 usec
PLW1 70.59998647 W

----- CHANNEL f2 -----
SFO2 400.1621006 MHz
NUC2 1H
CPOPRG[2] waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.26361999 W
PLW13 0.21383000 W

F2 - Processing parameters
SI 32768
SF 100.6204433 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



¹³C -NMR Spectrum of **1d**

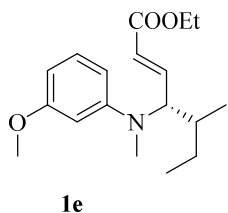
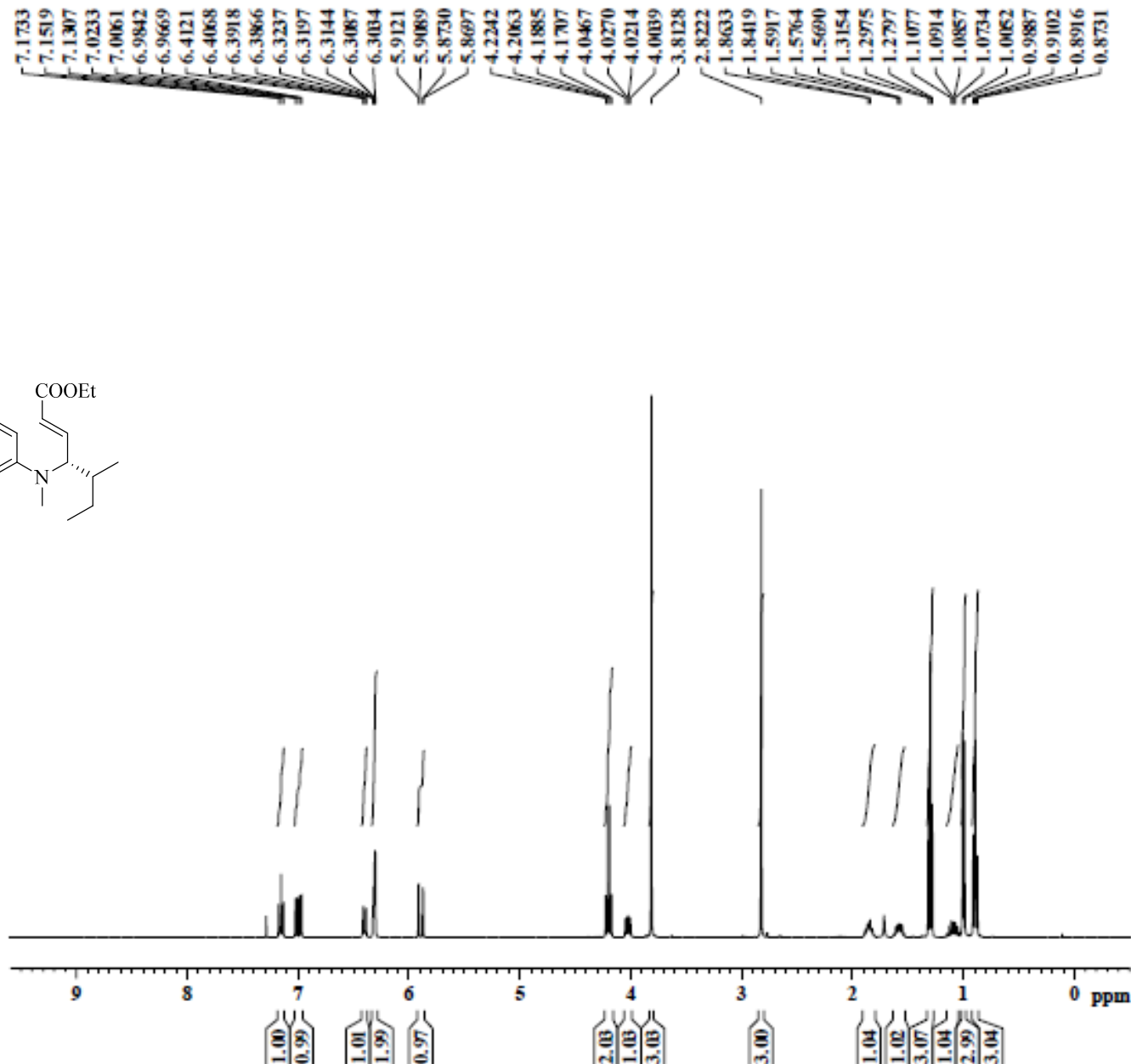
SKM-662A
1H, CDCl3

Current Data Parameters
NAME SKM-662A,1H,400 MHz,20 Sep,2013.E
EXPNO 50
PROCNO 1

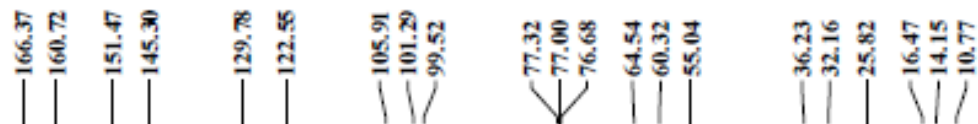
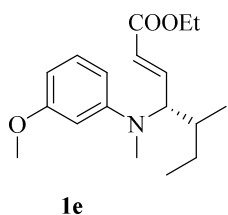
F2 - Acquisition Parameters
Date_ 20130921
Time 7.11
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.122286 Hz
AQ 4.0894465 sec
RG 31.99
DW 62.400 usec
DE 6.50 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

***** CHANNEL F1 *****
SFO1 400.1629712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



¹H -NMR Spectrum of **1e**



SKM-662 A
13C, CDC13

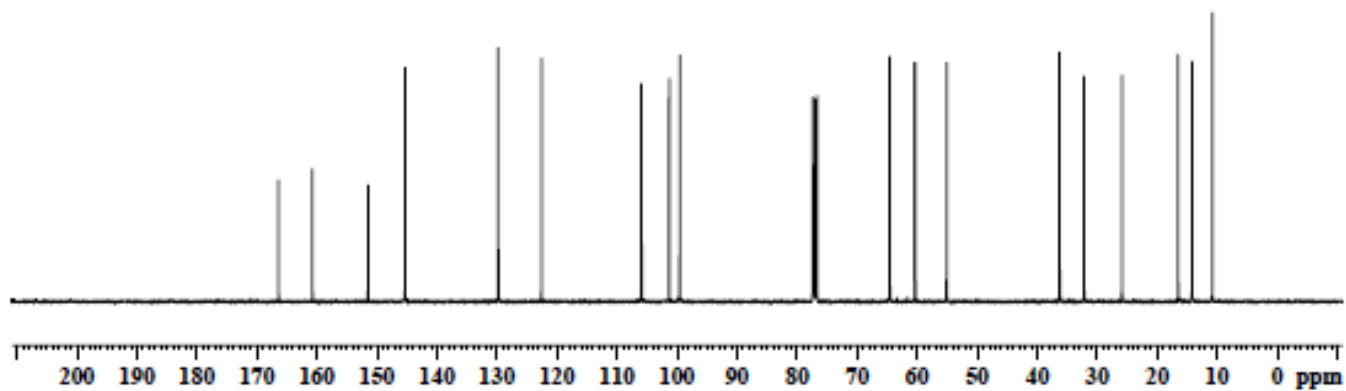
Current Data Parameters
NAME SKM-662A,13C,400 MHz,25 Sep,2013,E
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130926
Time 23.04
INSTRUM spect
PROBHD 5 mm F4BBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24028.461 Hz
FIDRES 0.386798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.500 usec
DE 6.50 usec
TE 300.0 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

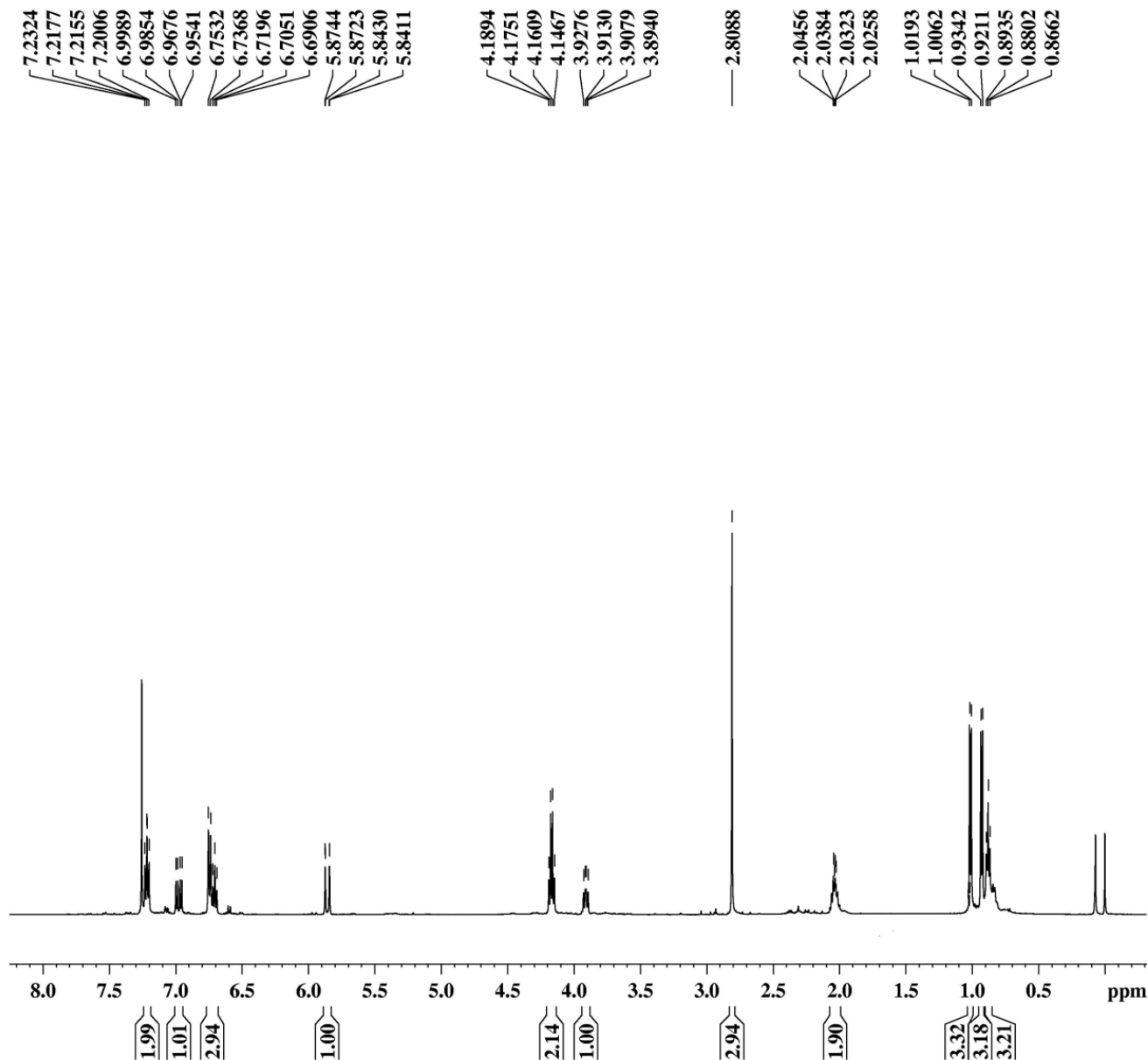
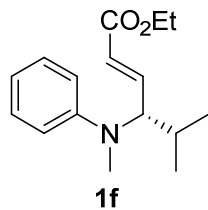
----- CHANNEL f1 -----
SFO1 100.620451 MHz
NUC1 13C
P1 8.20 usec
PLW1 70.55998847 W

----- CHANNEL f2 -----
SFO2 400.1621008 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.00000000 W
PLW12 0.26381999 W
PLW13 0.21353000 W

F2 - Processing parameters
SI 32768
SF 100.6204451 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



¹³C -NMR Spectrum of **1e**



SLK-388W
1H, CDCl3

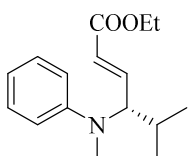
Current Data Parameters
NAME slk-388w
EXPNO 60
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160502
Time 10.08
INSTRUM spect
PROBHD 5 mm PATXI 1H/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 10026.738 Hz
FIDRES 0.152996 Hz
AQ 3.2680619 sec
RG 87.95
DW 49.867 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TDO 1

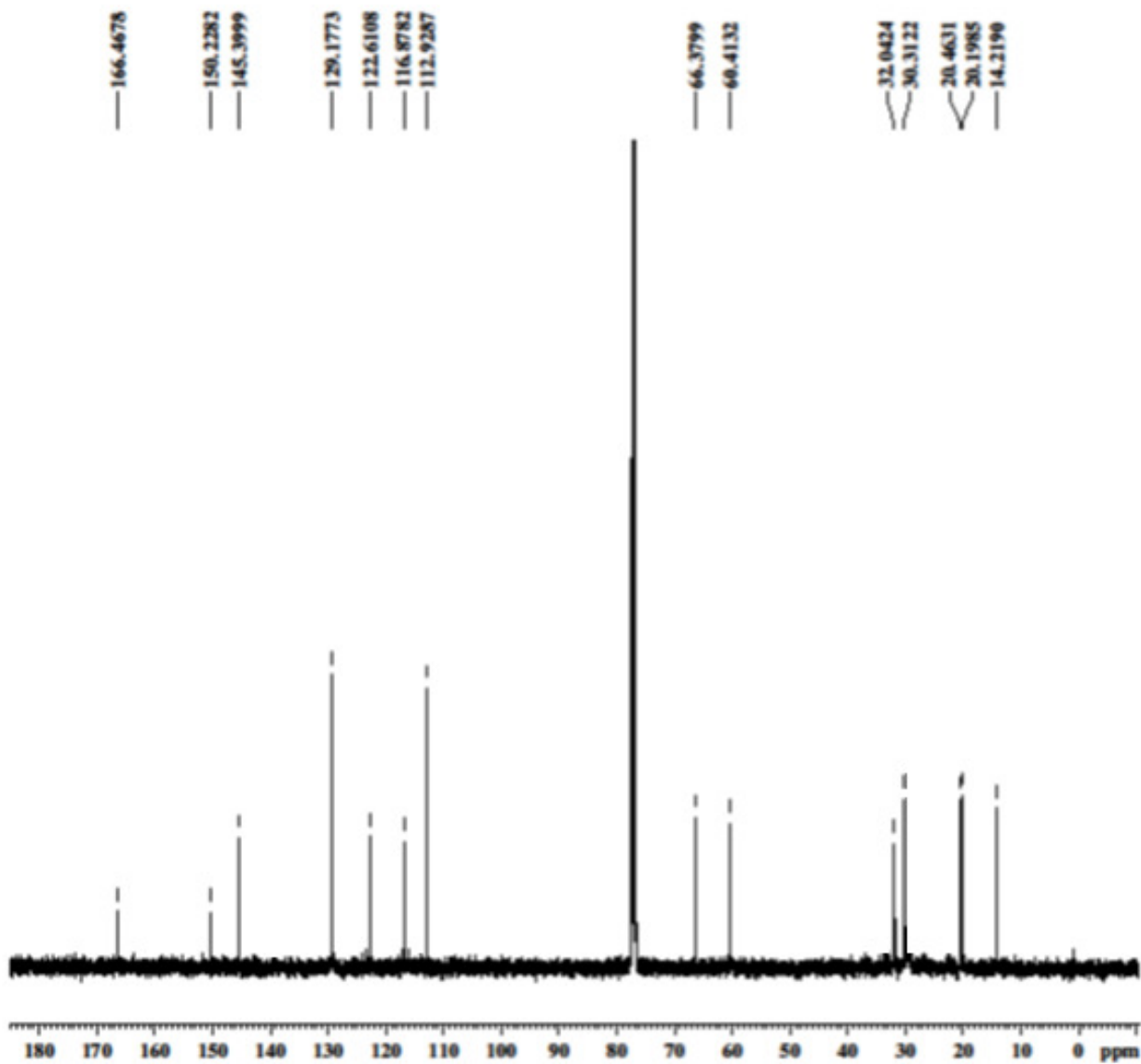
===== CHANNEL f1 =====
SFO1 500.6794419 MHz
NUC1 1H
P1 6.45 usec
PLW1 13.60000038 W

F2 - Processing parameters
SI 65536
SF 500.6763640 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1f**



1f



SLK-388W
13C, CDC13

Current Data Parameters
NAME slk-388w
EXPNO 50
PROCNO 1

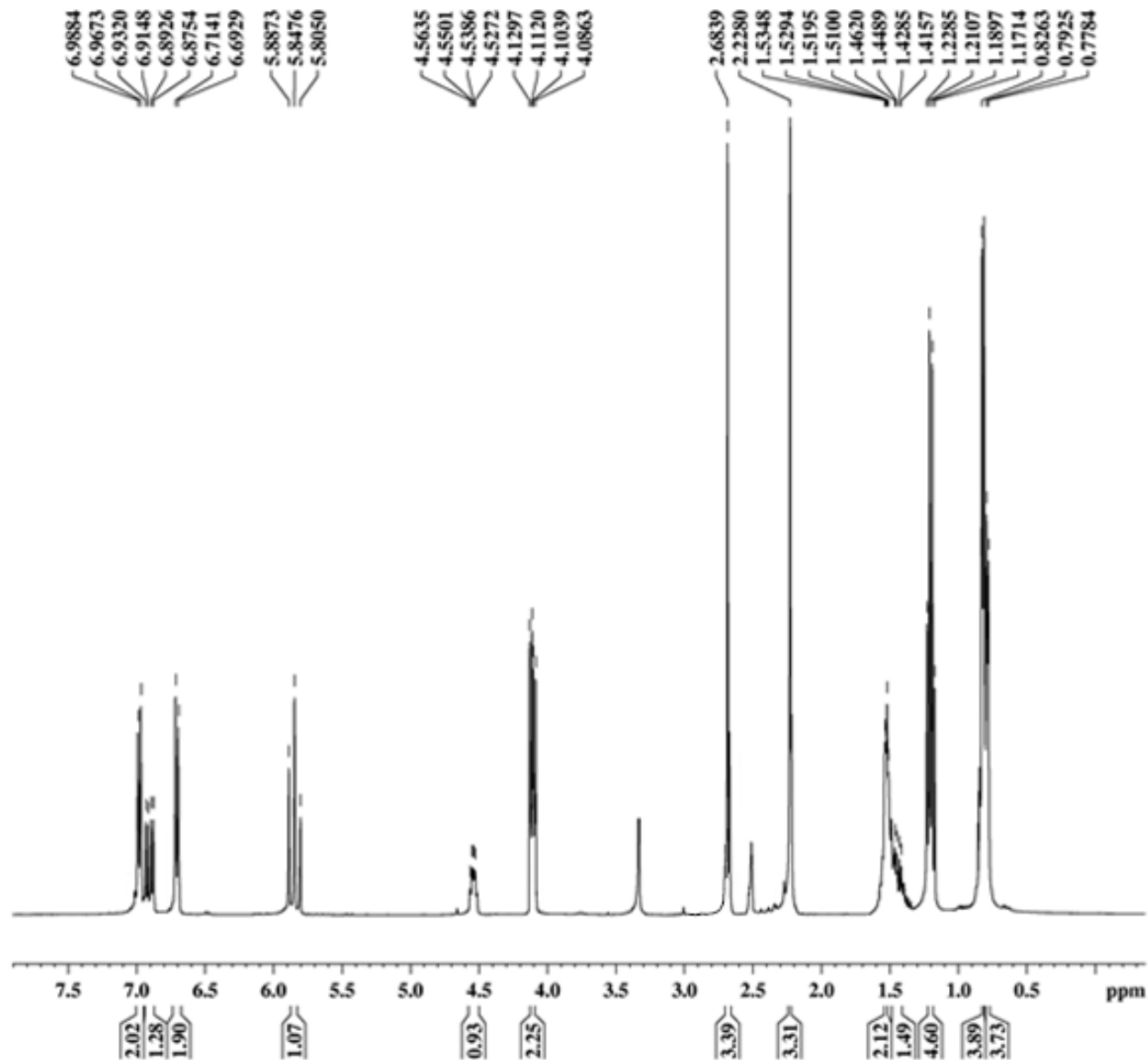
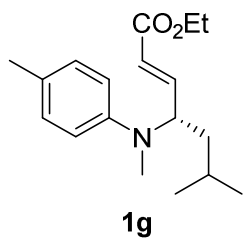
F2 - Acquisition Parameters
Date_ 20180510
Time 21.04
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.2621488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.2 K
D1 2.0000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 100.6204380 MHz
NUC1 13C
P1 9.00 usec
PLW1 0.00000000 W

===== CHANNEL f2 =====
SFO2 400.1621006 MHz
NUC2 1H
COPROG2 waltz16
PCPD2 50.00 usec
PLW2 13.00000000 W
PLW12 0.27963000 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of **1f**



SLK-366W
1H, DMSO

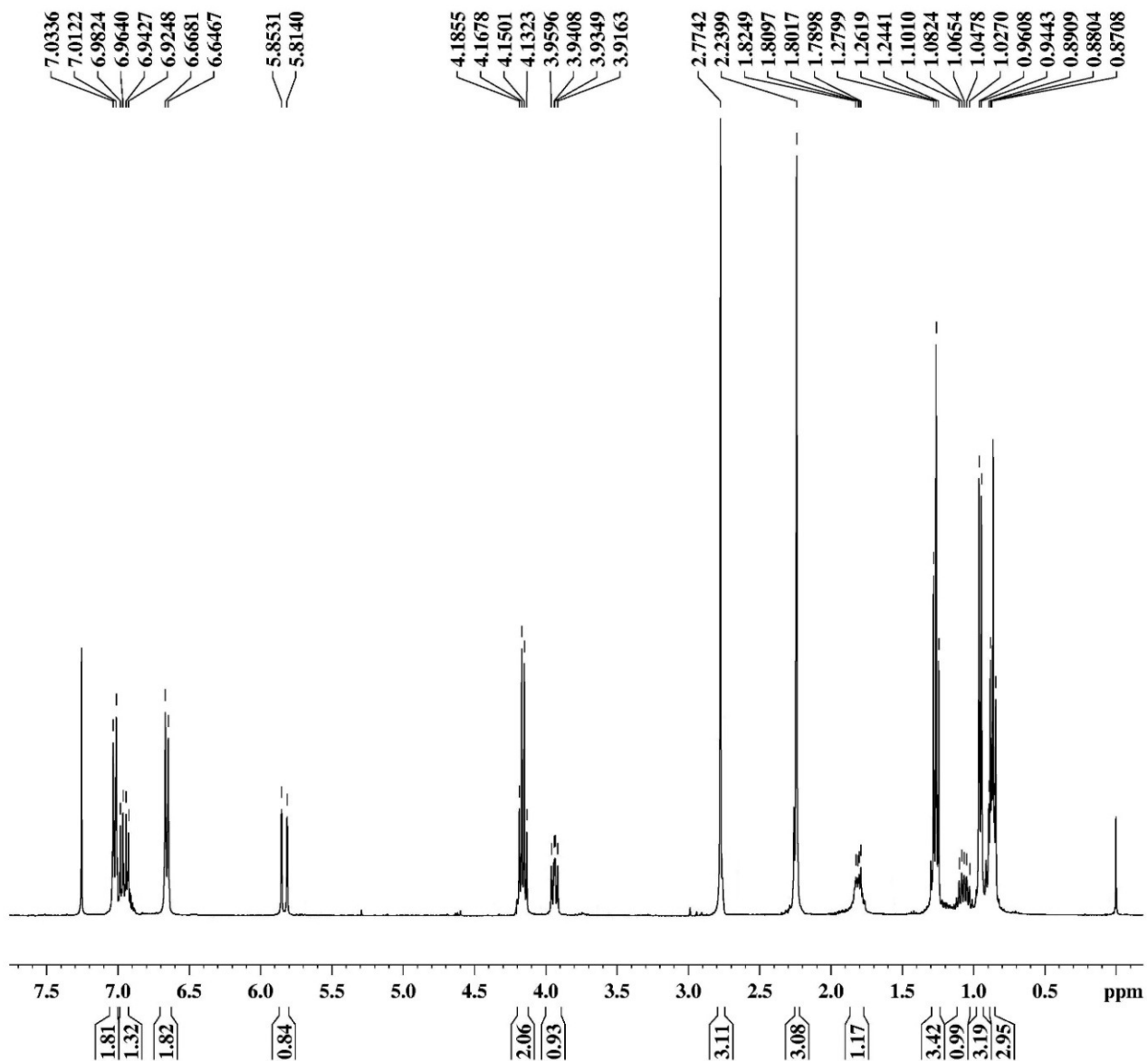
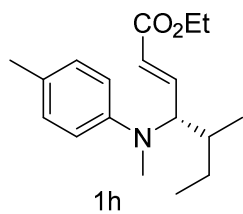
Current Data Parameters
NAME slk-366w
EXPNO 20
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160310
Time 14.51
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 31.99
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1g**



SLK-374w
1H, CDC13

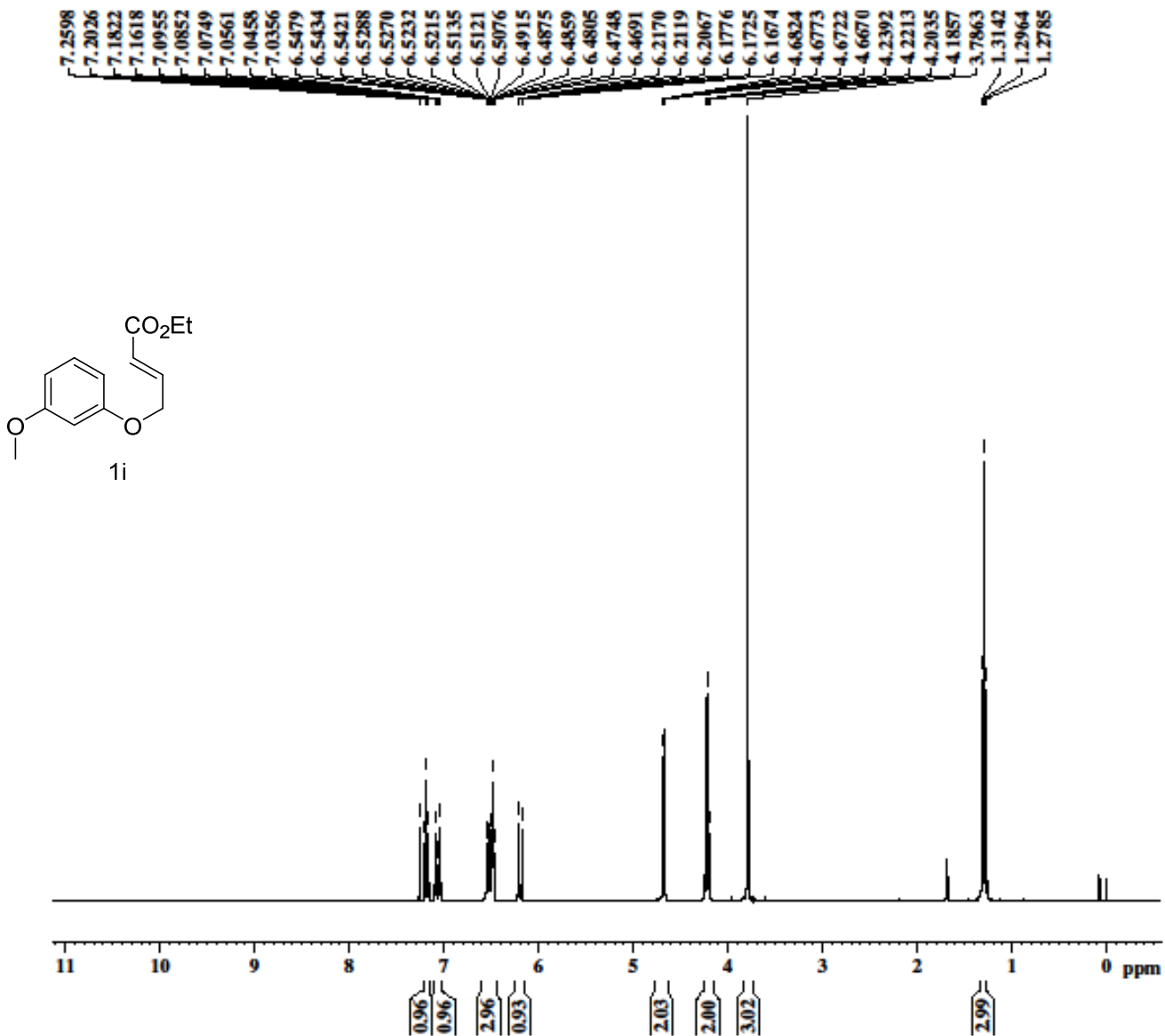
Current Data Parameters
NAME slk-374
EXPNO 130
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160404
Time 14.57
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 73.53
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605117 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1h**



SLK-399
1H, CDC13

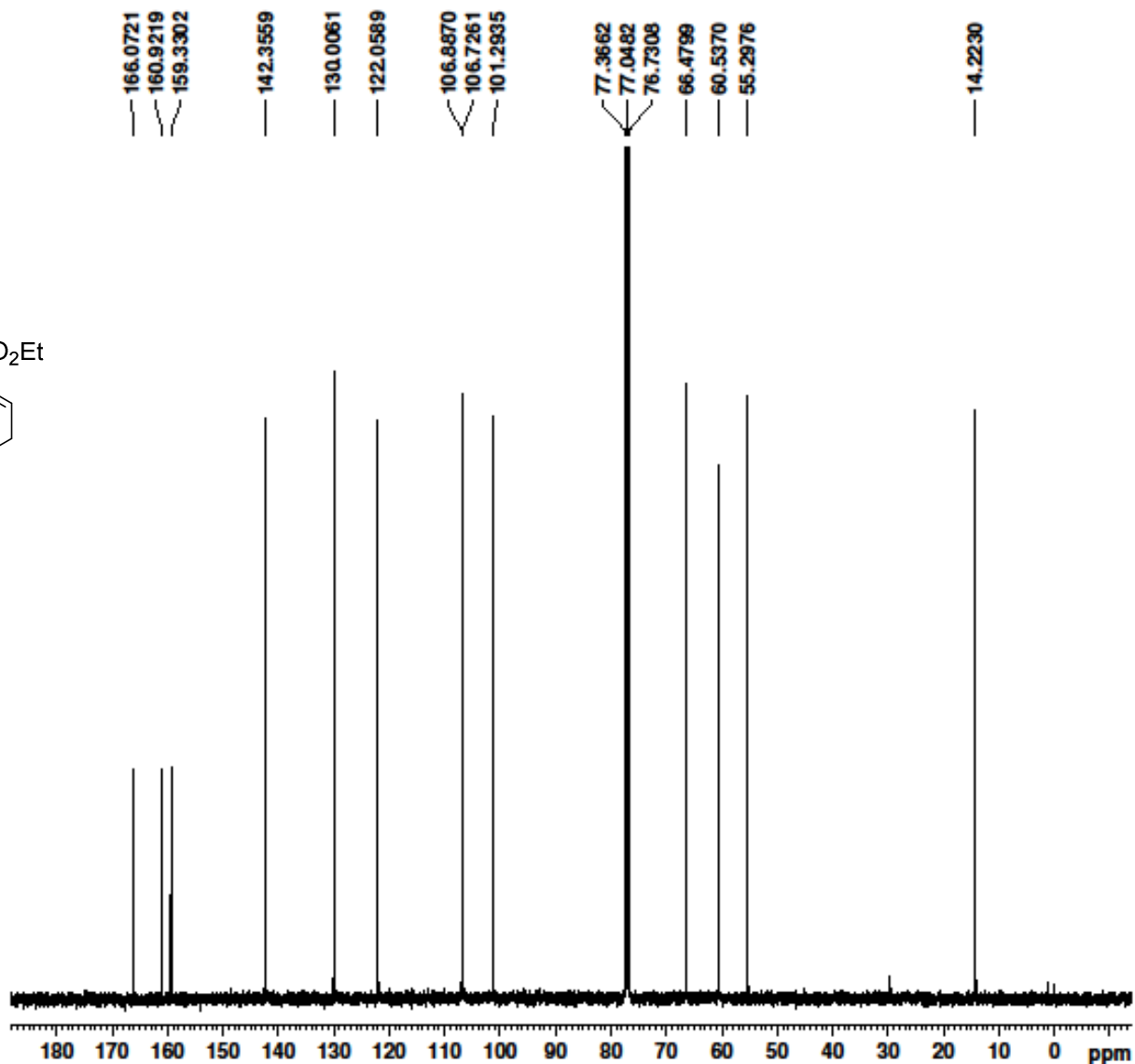
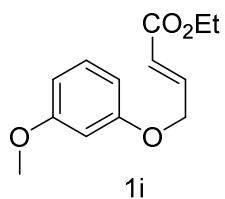
Current Data Parameters
NAME submission
EXPNO 50
PROCNO 1

F2 - Acquisition Parameters
Date_ 20180801
Time 14.02
INSTRUM spect
PROBHD 5 mm PABBO BBI
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 58.68
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TDO 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605099 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **1i**



SLK-399
13C, CDCl3

Current Data Parameters
NAME submission 13c
EXPNO 90
PROCNO 1

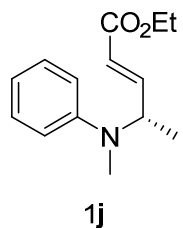
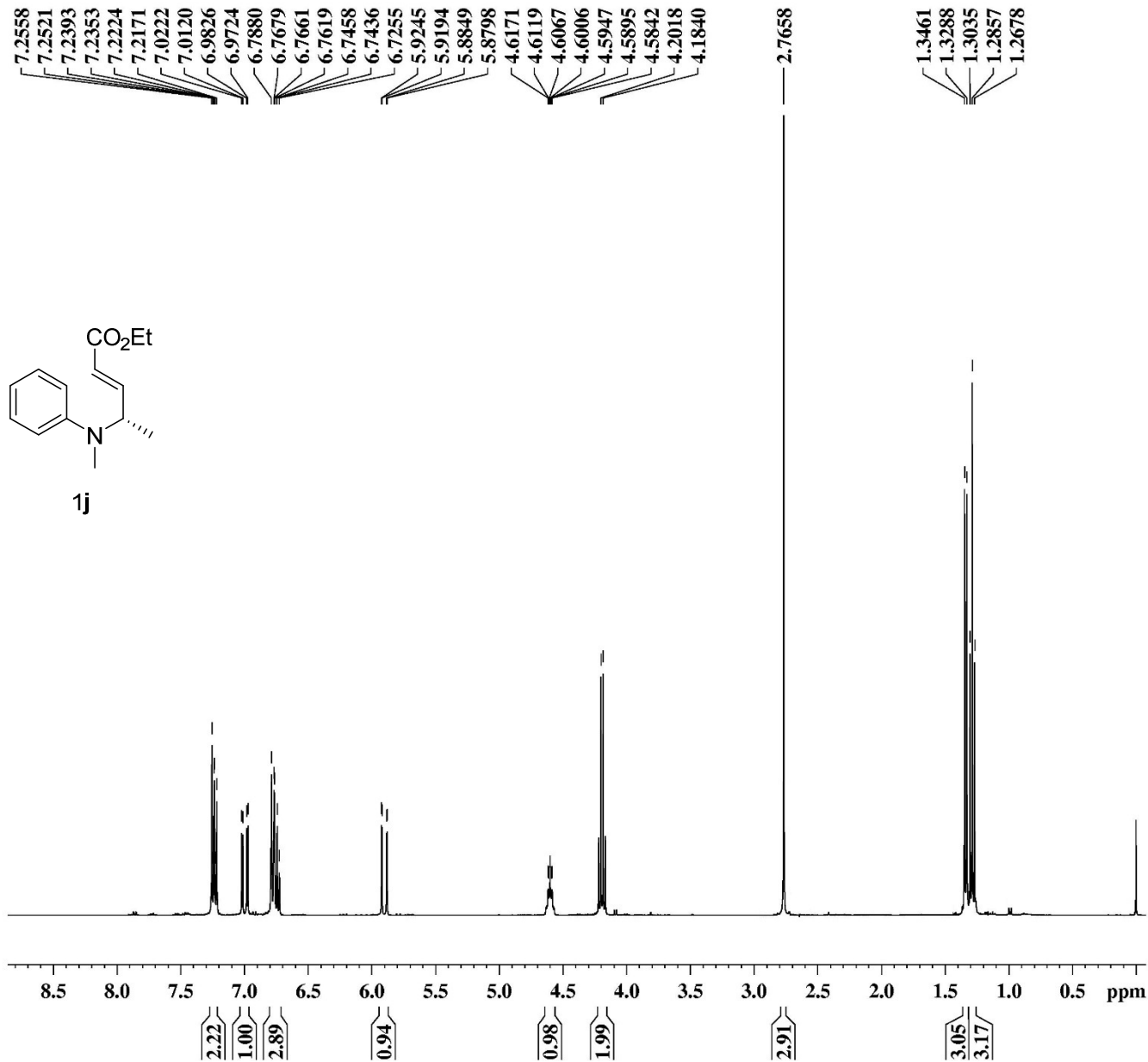
F2 - Acquisition Parameters
Date 20160802
Time 6.22
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3531488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.2 K
D1 2.0000000 sec
D11 0.03000000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.00000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of **1i**



SLK-284
1H, CDC13

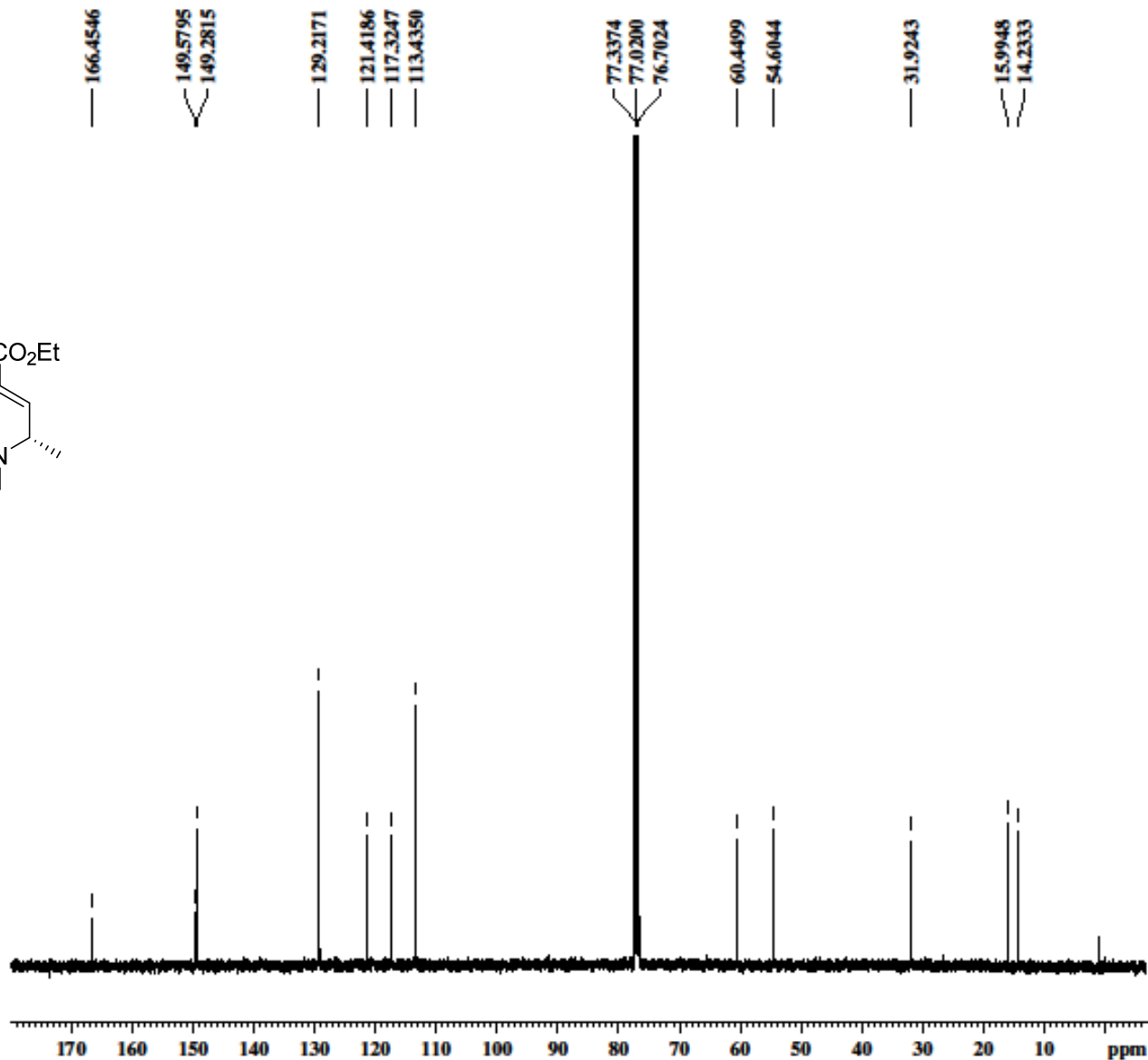
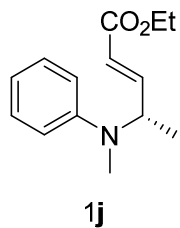
Current Data Parameters
NAME slk-284
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20150730
Time 6.04
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 100.41
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605116 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 1j



SLK-284
13C, CDCl3

Current Data Parameters
 NAME slk-284
 EXPNO 60
 PROCNO 1

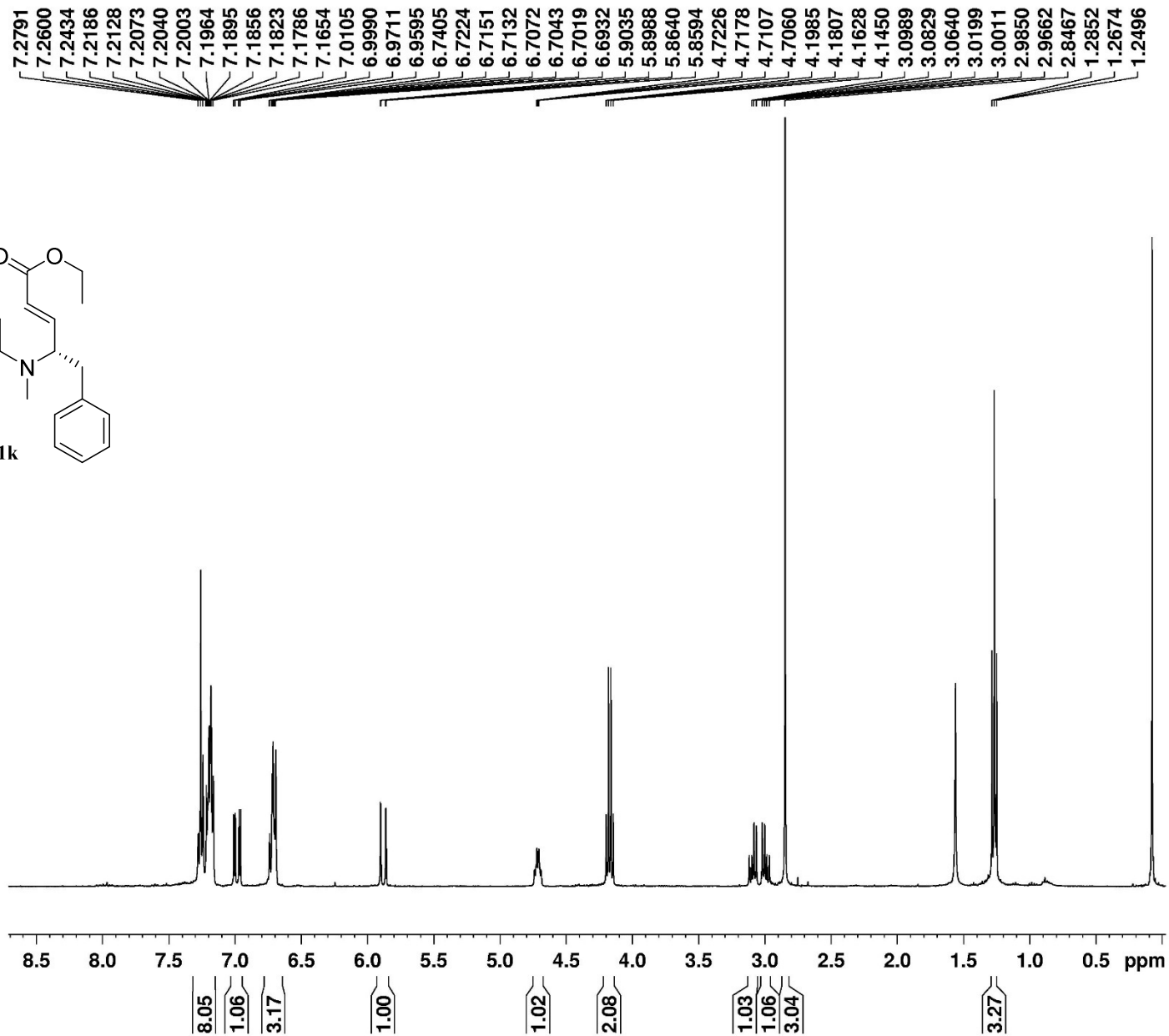
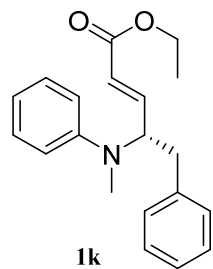
F2 - Acquisition Parameters
 Date_ 20151013
 Time 7.20
 INSTRUM spect
 PROBHD 5 mm PABBO BB
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 512
 DS 0
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3531488 sec
 RG 201.48
 DW 20.800 usec
 DE 6.50 usec
 TE 300.0 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TD0 1

==== CHANNEL f1 =====
 SFO1 100.6304993 MHz
 NUC1 13C
 P1 9.00 usec
 PLW1 61.09999847 W

==== CHANNEL f2 =====
 SFO2 400.1621006 MHz
 NUC2 1H
 CPDPRG2 waltz16
 PCPD2 90.00 usec
 PLW2 13.1000038 W
 PLW12 0.26705000 W
 PLW13 0.21630999 W

F2 - Processing parameters
 SI 32768
 SF 100.6204380 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

¹³C -NMR Spectrum of **1j**



SLK-478W
1H, CDC13

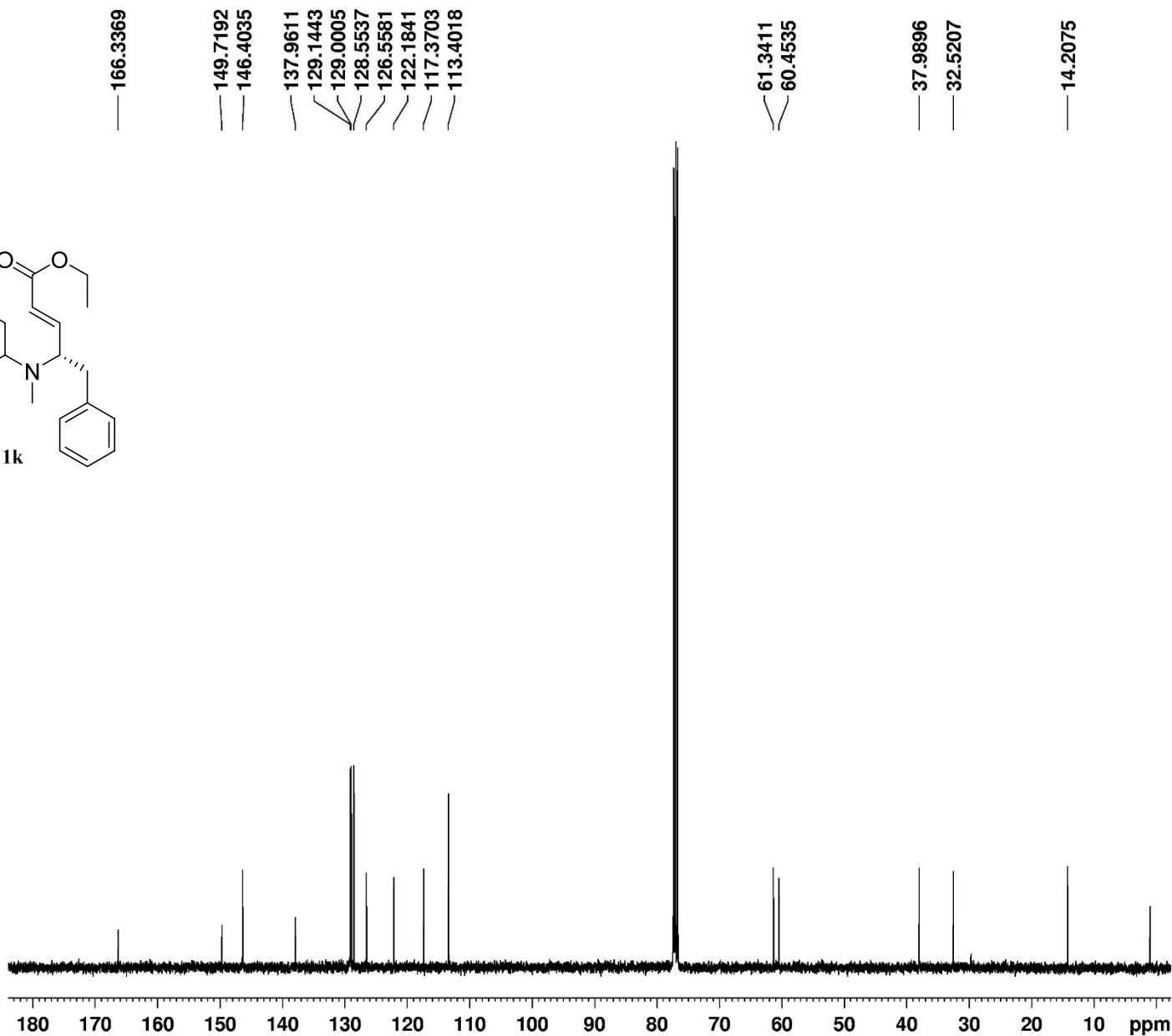
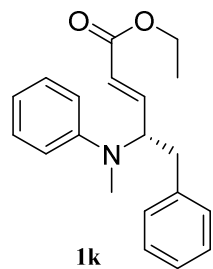
Current Data Parameters
NAME SLK-478W
EXPNO 60
PROCNO 1

F2 - Acquisition Parameters
Date 20161230
Time 15.40
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH1 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 129.57
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.0000000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605095 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H-NMR Spectrum of **1k**



¹³C-NMR Spectrum of **1k**

SLK-478
13C, CDC13

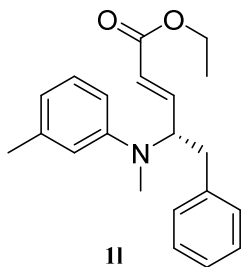
Current Data Parameters
NAME SLK-478W
EXPNO 20
PROCNO 1

F2 - Acquisition Parameters
Date_ 20161231
Time 17.18
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.0000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.0000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



7.2785
7.2427
7.2043
7.1851
7.1812
7.1644
7.1007
7.0815
7.0616
6.9970
6.9855
6.9576
6.9461
6.5578
6.5387
6.5259
6.5070
5.8901
5.8855
5.8507
5.8461
4.7190
4.7043
4.6926
4.6880
4.6742
4.1900
4.1721
4.1543
4.1365
3.1014
3.0830
3.0667
3.0482
3.0038
2.9847
2.9693
2.9498
2.8322
2.2789
1.2775
1.2561
1.2418

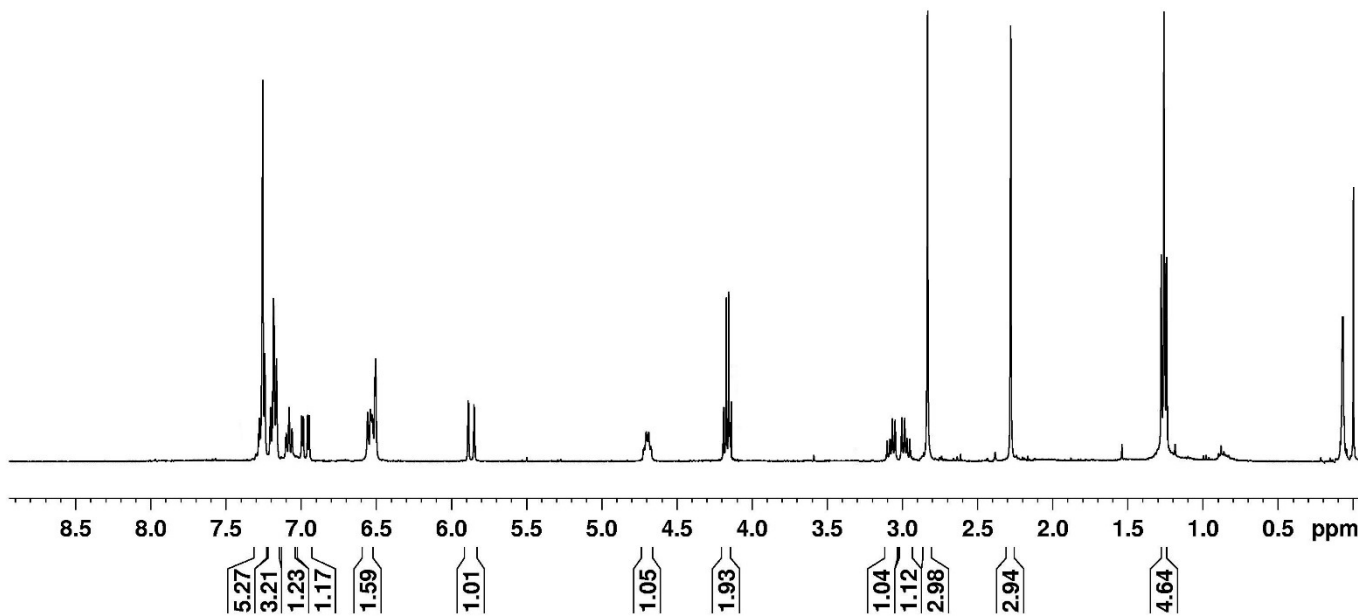
SLK-482W
CDCl3

Current Data Parameters
NAME SLK-482W
EXPNO 20
PROCNO 1

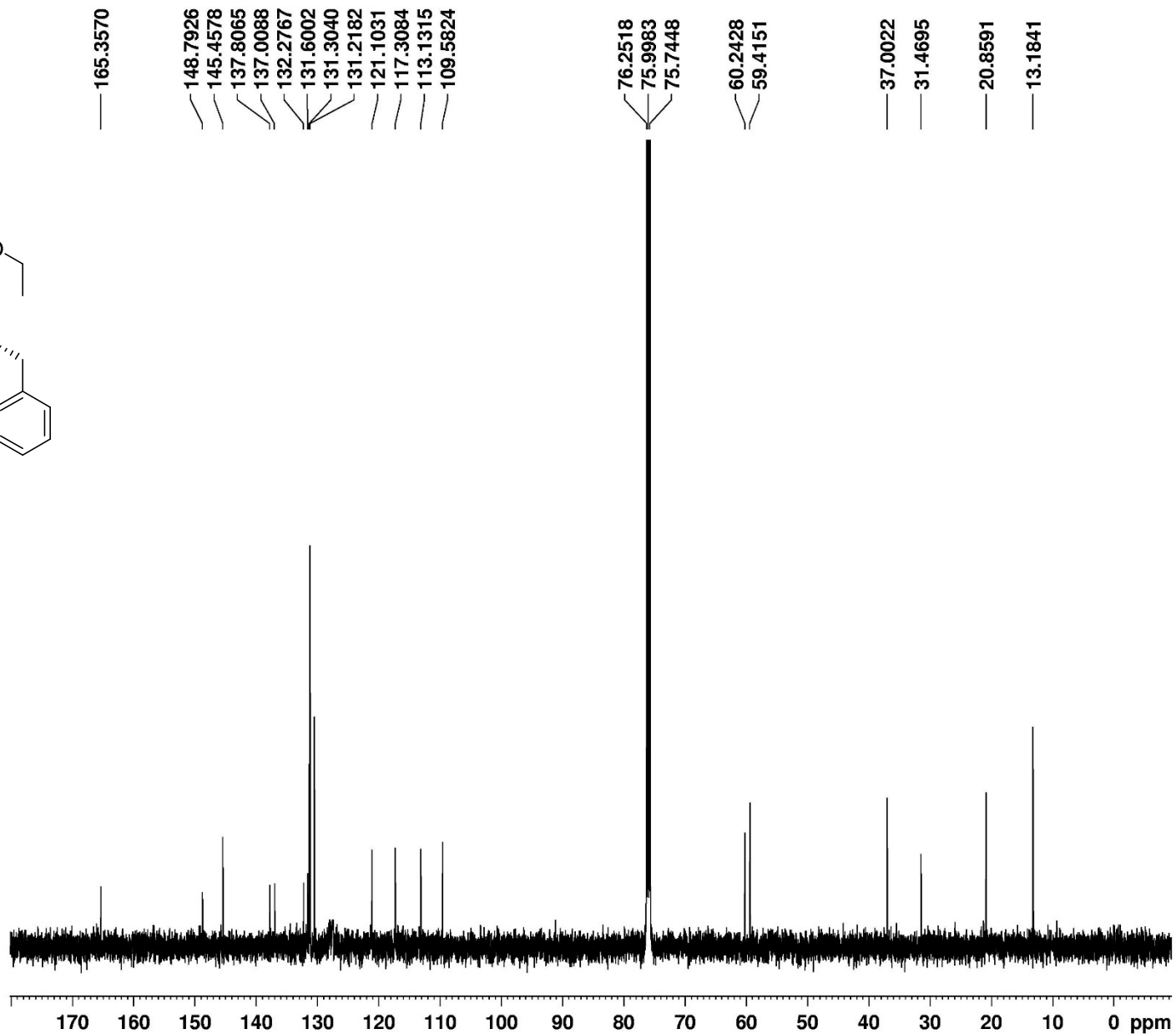
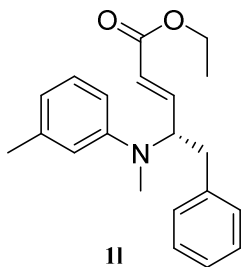
F2 - Acquisition Parameters
Date_ 20170103
Time 15.16
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 129.57
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605112 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



¹H-NMR Spectrum of **11**



SLK-482 W
13C, CDC13

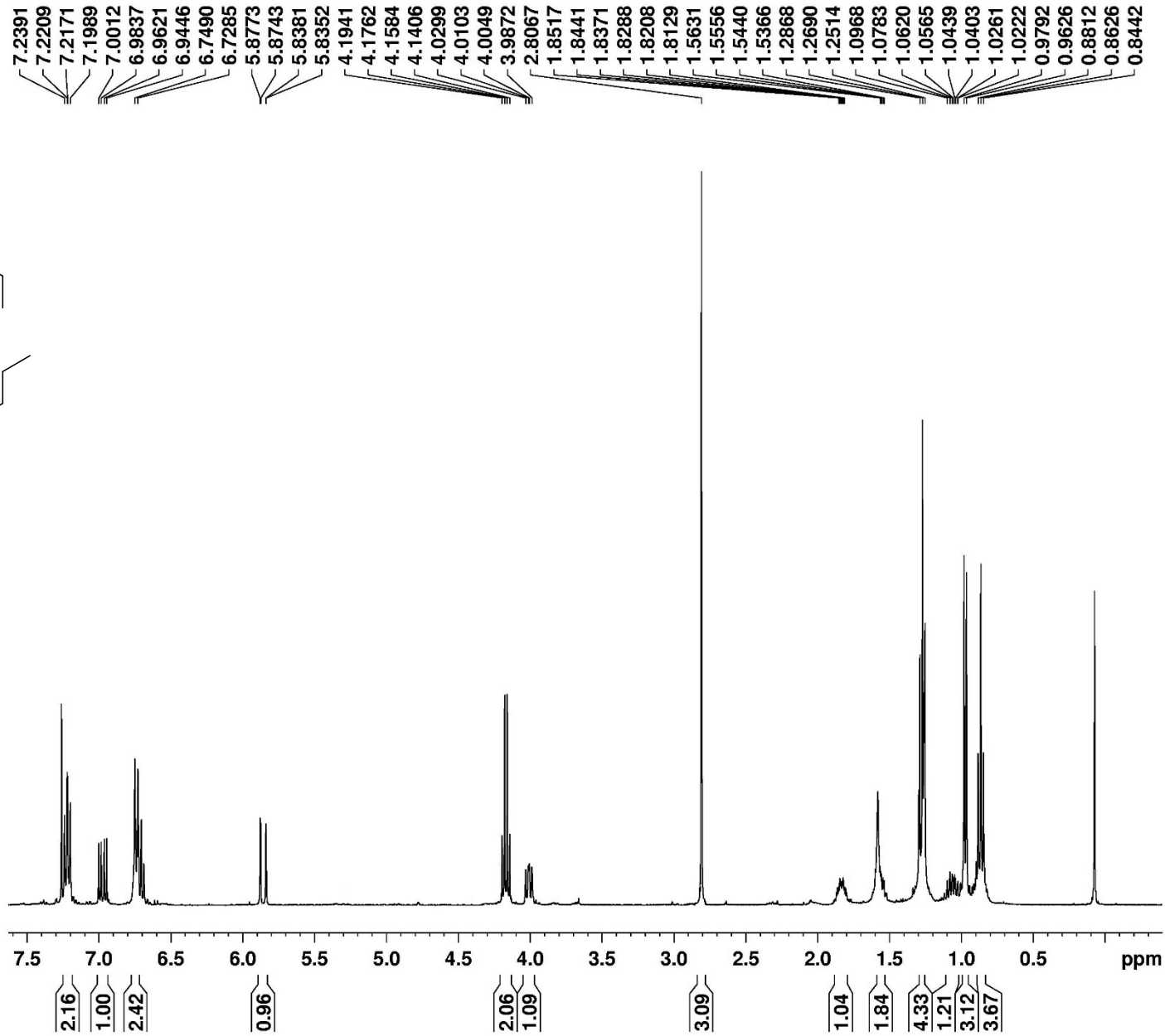
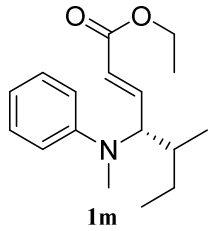
Current Data Parameters
NAME SLK-482W
EXPNO 40
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170106
Time 17.23
INSTRUM spect
PROBHD 5 mm PATX1 1H/
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 2048
DS 4
SWH 29761.904 Hz
FIDRES 0.454131 Hz
AQ 1.1010048 sec
RG 38.43
DW 16.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 125.9077573 MHz
NUC1 13C
P1 9.23 usec
PLW1 244.0000000 W

==== CHANNEL f2 ====
SFO2 500.6783527 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 80.00 usec
PLW2 13.6000038 W
PLW12 0.08840500 W
PLW13 0.05657900 W

F2 - Processing parameters
SI 32768
SF 125.8952970 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



SM-77W,
1H, CDC13

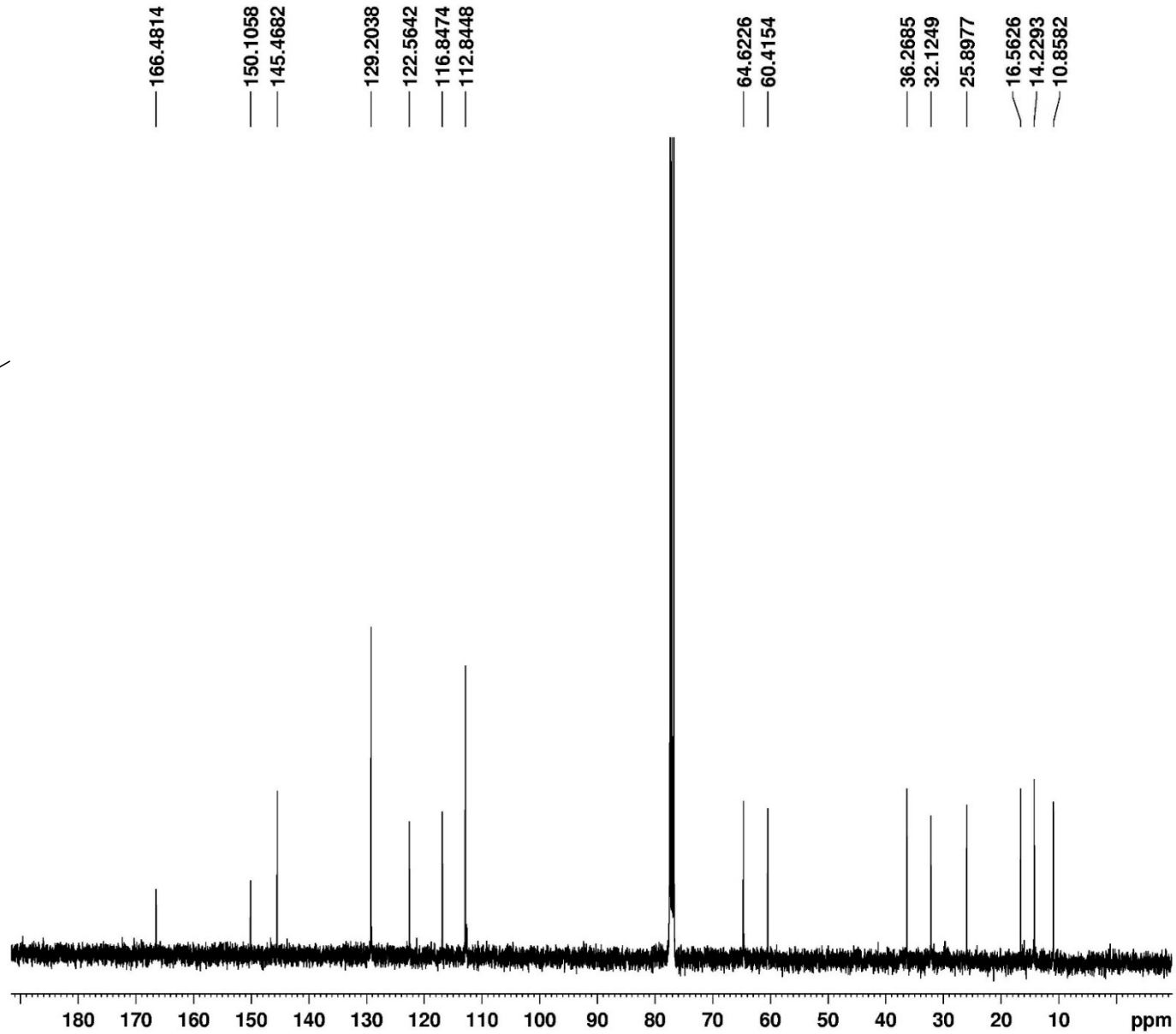
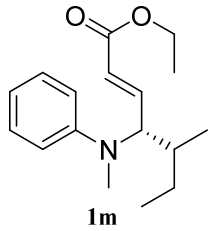
Current Data Parameters
NAME SM-77W
EXPNO 20
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170105
Time 22.36
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 114.26
DW 62.400 usec
DE 6.50 usec
TE 295.7 K
D1 1.0000000 sec
TDO 1

==== CHANNEL f1 ====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.0000000 W

F2 - Processing parameters
SI 65536
SF 400.1605097 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H-NMR Spectrum of **1m**



SM-77W,
13C, CDCl3

Current Data Parameters
NAME SM-77WN
EXPNO 20
PROCNO 1

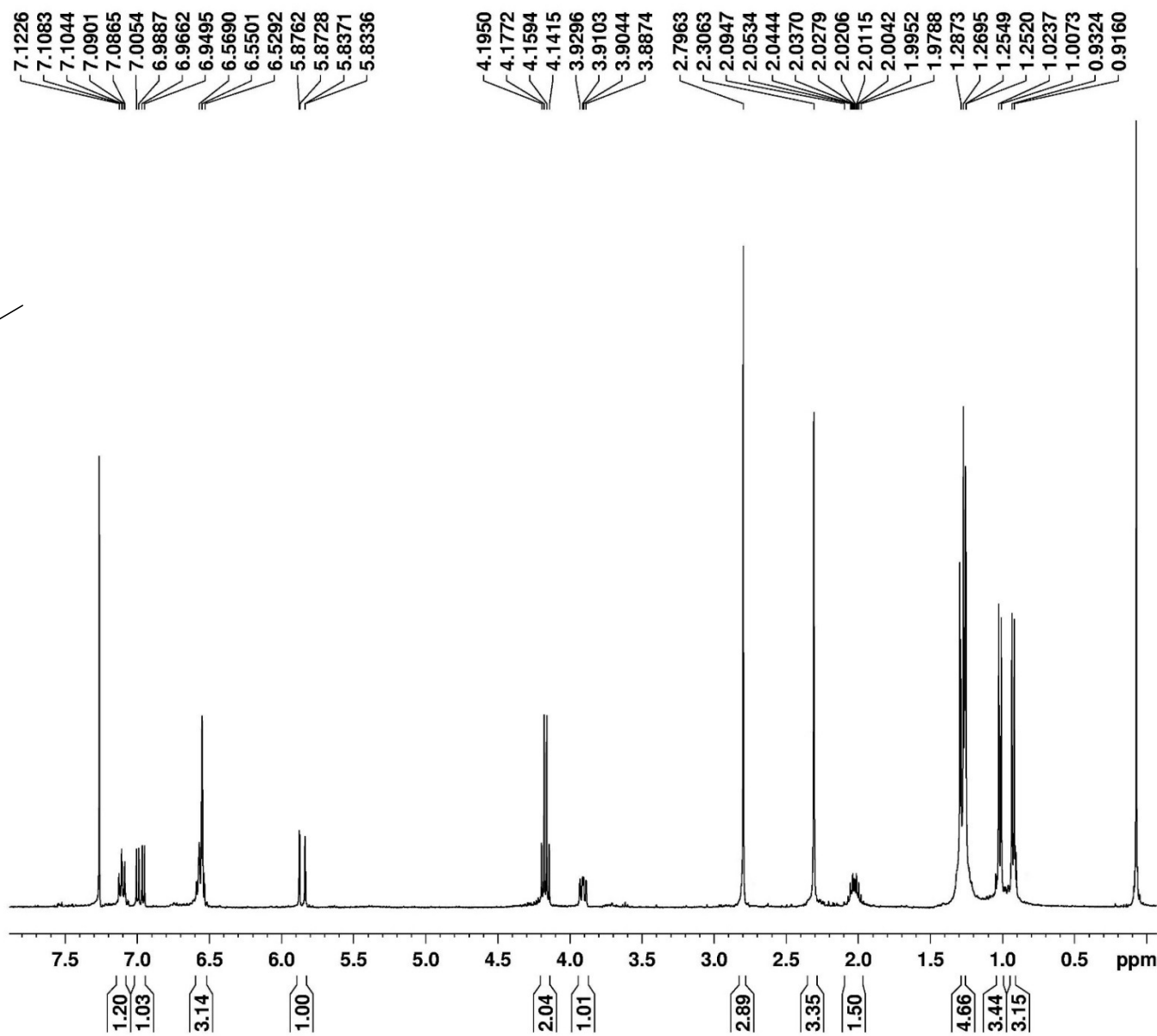
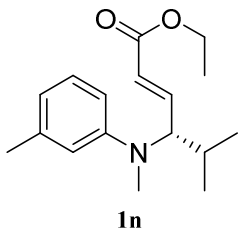
F2 - Acquisition Parameters
Date_ 20170107
Time 23.09
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 296.7 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.00000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C-NMR Spectrum of **1m**



SM-80W
1H, CDCl3

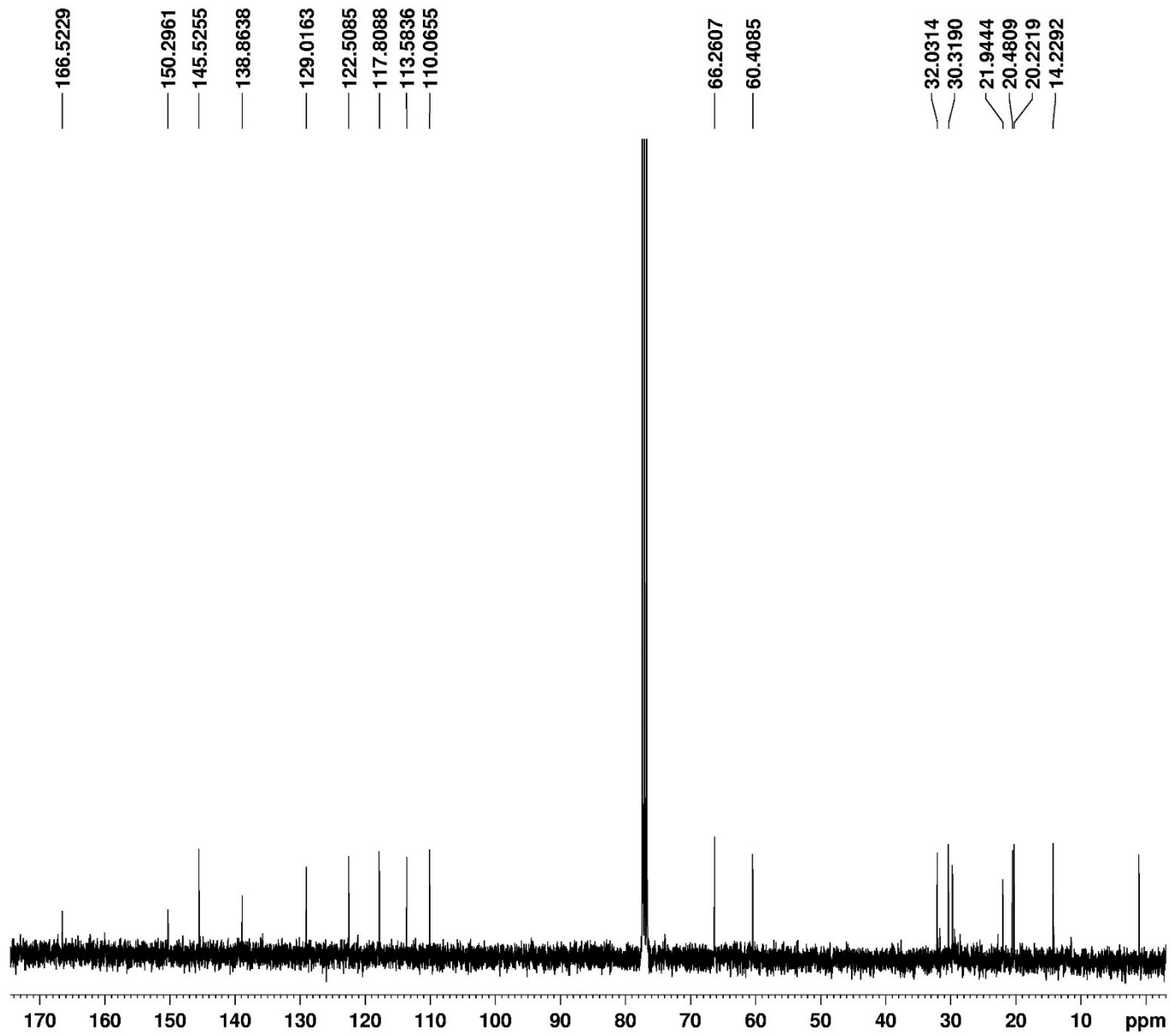
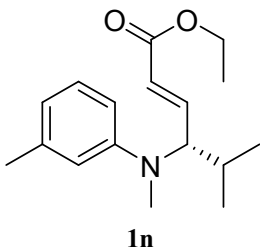
Current Data Parameters
 NAME SM-80W
 EXPNO 30
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20170105
 Time 22.45
 INSTRUM spect
 PROBHD 5 mm PABBO BB/
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 0
 SWH 8012.820 Hz
 FIDRES 0.122266 Hz
 AQ 4.0894465 sec
 RG 129.57
 DW 62.400 usec
 DE 6.50 usec
 TE 295.7 K
 DI 1.00000000 sec
 TD0 1

==== CHANNEL f1 ====
 SFO1 400.1629712 MHz
 NUC1 1H
 P1 13.20 usec
 PLW1 13.00000000 W

F2 - Processing parameters
 SI 65536
 SF 400.1605096 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

¹H-NMR Spectrum of **1n**



SM-80W,
13C, CDCl₃

Current Data Parameters
NAME SM-80WN
EXPNO 30
PROCNO 1

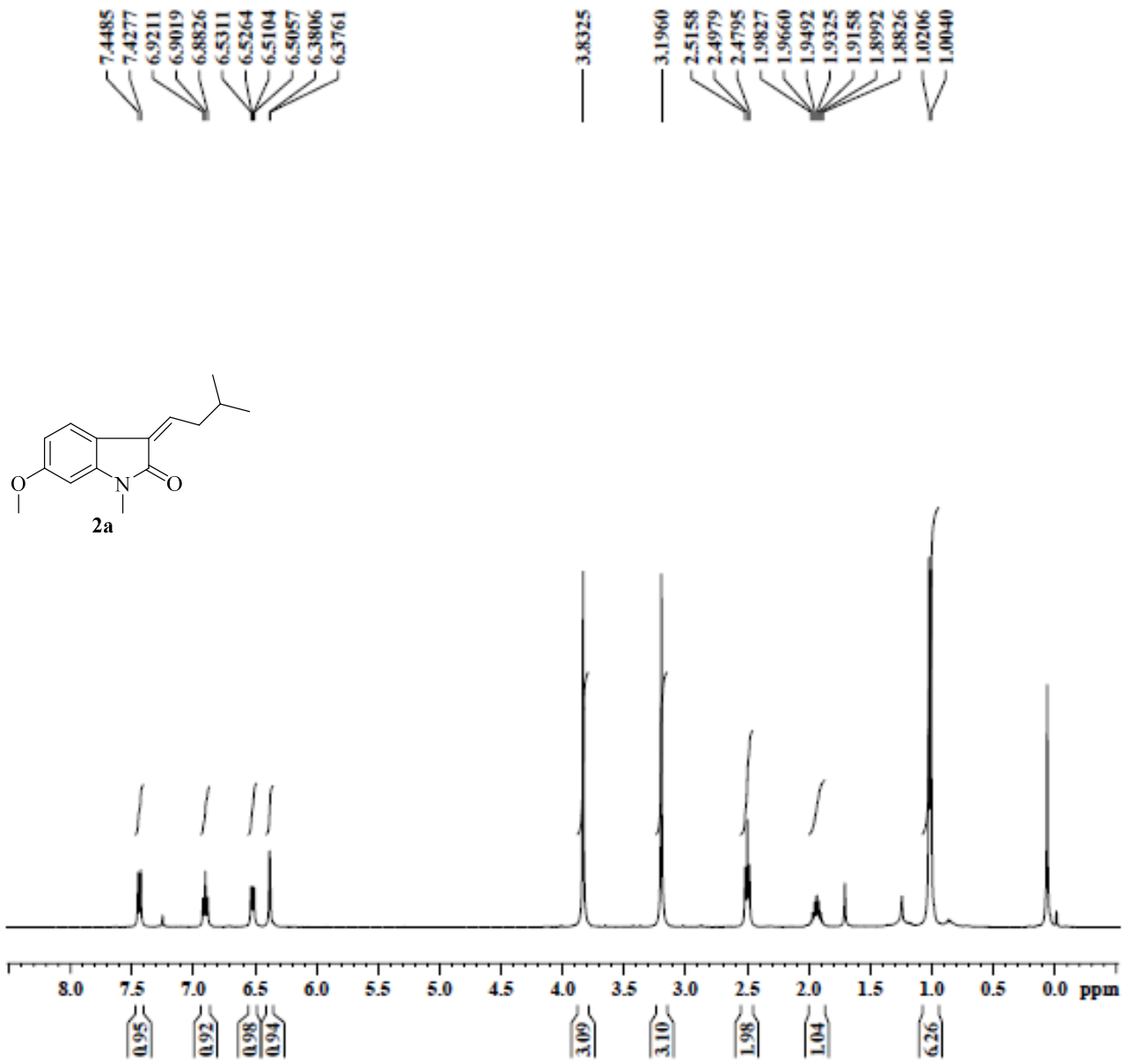
F2 - Acquisition Parameters
Date_ 20170107
Time 23.44
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 512
DS 0
SWH1 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 296.8 K
D1 2.0000000 sec
D11 0.03000000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.00000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C-NMR Spectrum of **1n**



SKM-522B F
1H, CDCl3

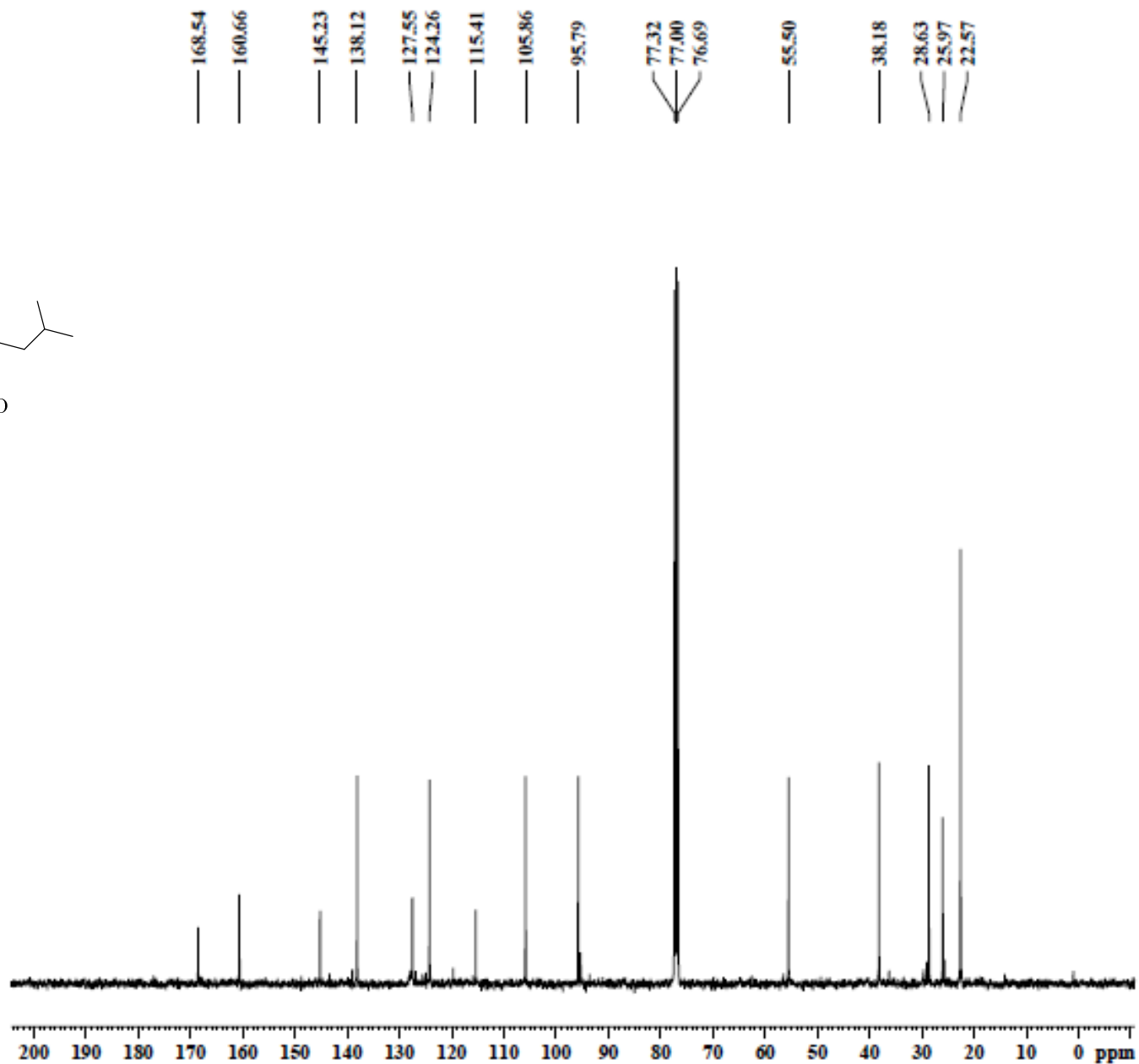
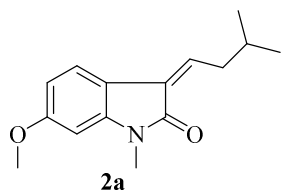
Current Data Parameters
NAME SKM-522B,1H,400 MHz,29.4.13.E
EXPNO 310
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130429
Time 8.15
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0084966 sec
RG 65.65
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TDO 1

----- CHANNEL f1 -----
SFO1 400.1620712 MHz
NUC1 1H
P1 12.35 usec

F2 - Processing parameters
SI 65536
SF 400.1605138 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2a**



SKM-522B
13C, CDCl3

Current Data Parameters
NAME SKM-522B,13C,400 MHz,17.5.13,M.FF
EXPNO 510
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130517
Time 11.50
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

***** CHANNEL f1 *****
SFO1 100.6204893 MHz
NUC1 13C
P1 6.20 usec

F2 - Processing parameters
SI 32768
SF 100.6204418 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of 2a

SKM-522B
COSY, CDC13

Current Data Parameters
NAME SKM-522B_COSY_400 MHz_21 Jun_2013
EXPNO 101
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130322
Time 2.51
INSTRUM spect
PROBHD 5 mm PABBO BBI
PULPROG cyeypptpf
TD 2640
SOLVENT CDCl3
NS 32
DS 0
SWH 3267.874 Hz
FIDRES 1.59690 Hz
AQ 0.3123440 sec
RG 65.65
DW 183.000 usec
DE 8.50 usec
TE 300.7 K
D0 0.0000000 sec
D1 1.37034895 sec
D11 0.0000000 sec
D12 0.0002000 sec
D13 0.0000000 sec
D16 0.0002000 sec
SFO 0.0000000 sec

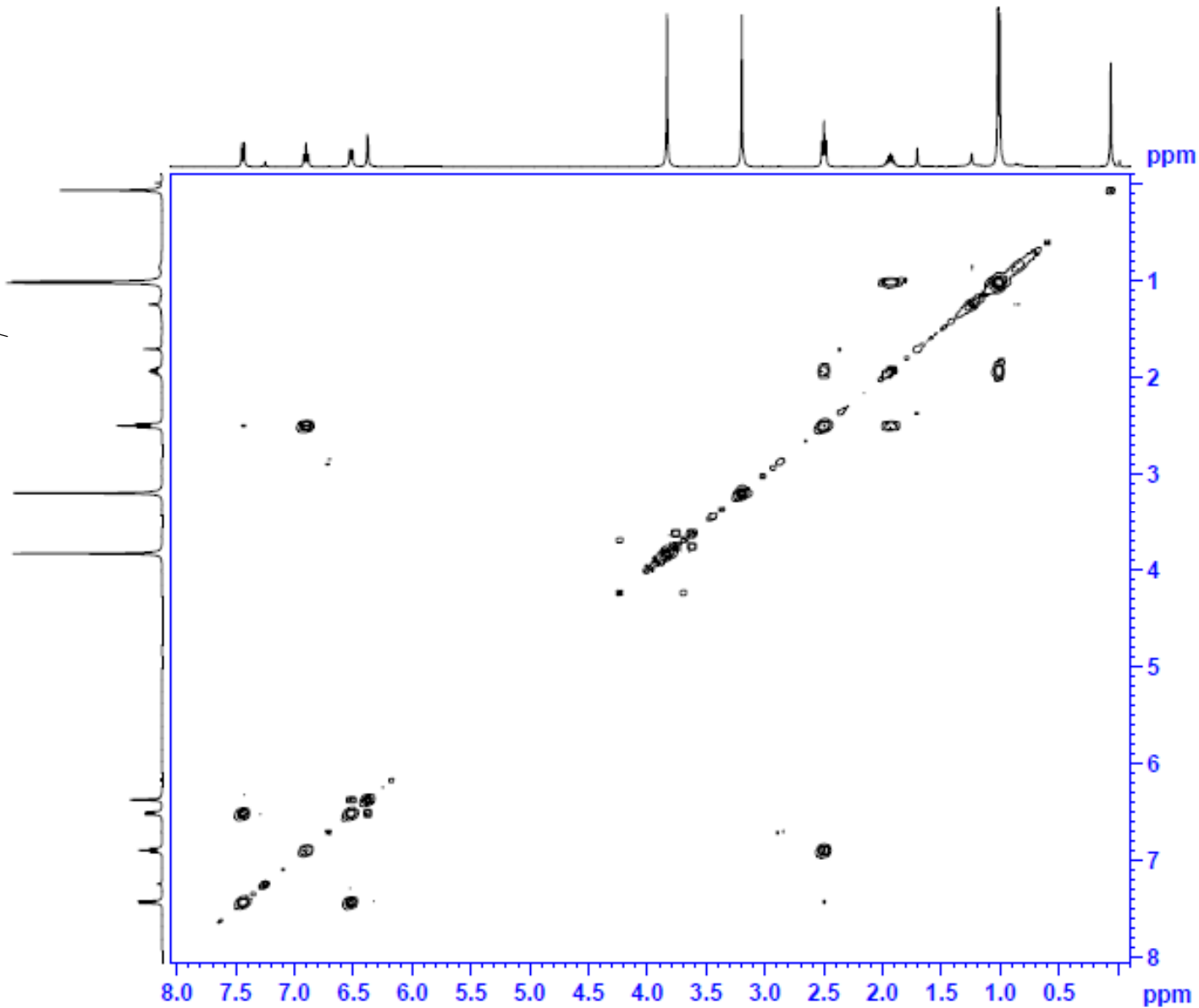
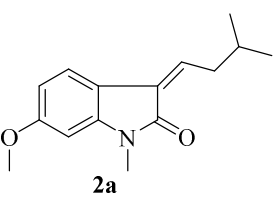
***** CHANNEL f1 *****
SFO1 400.1821060 MHz
NUC1 1H
P0 12.35 usec
P1 12.35 usec
P1T 2500.00 usec
PLW1 14.0000000 W
PLW10 3.15079859 W

***** GRADIENT CHANNEL *****
GPNAM[1] SMSQ10.100
GPZ1 10.00 %
P16 1900.00 usec

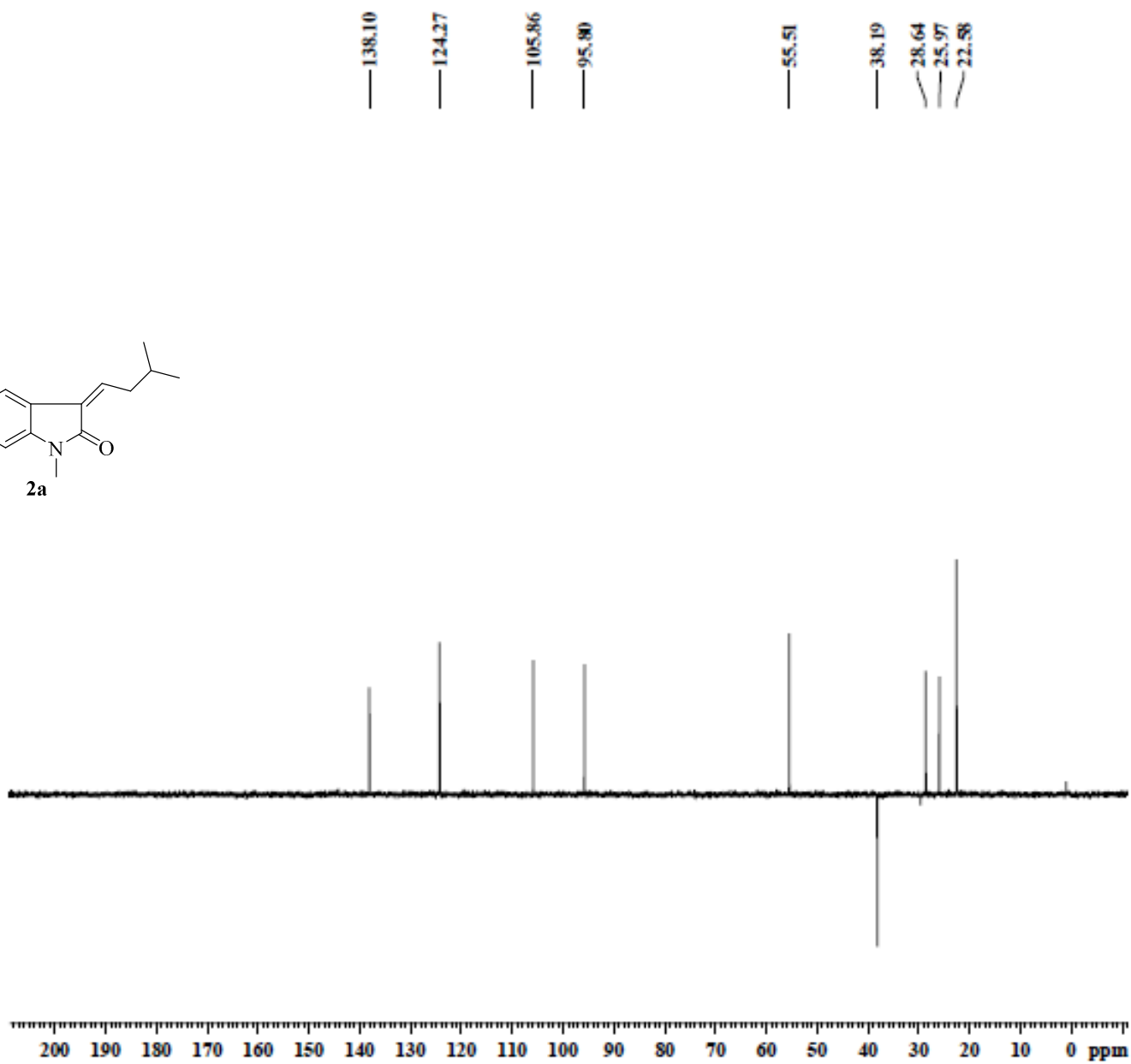
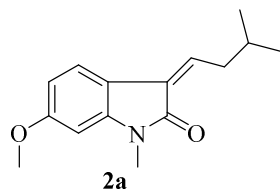
F1 - Acquisition parameters
TD 128
SFO1 400.1821 MHz
FIDRES 26.531946 Hz
SW 0.187 ppm
F0MODE GF

F2 - Processing parameters
SI 1024
SF 400.1805129 MHz
WDWV 0
SSB 0
LB 0 Hz
GB 0
PC 1.40

F1 - Processing parameters
SI 1024
MC2 GF
SF 400.1805129 MHz
WDWV 0
SSB 0
LB 0 Hz
GB 0



COSY Spectrum of 2a

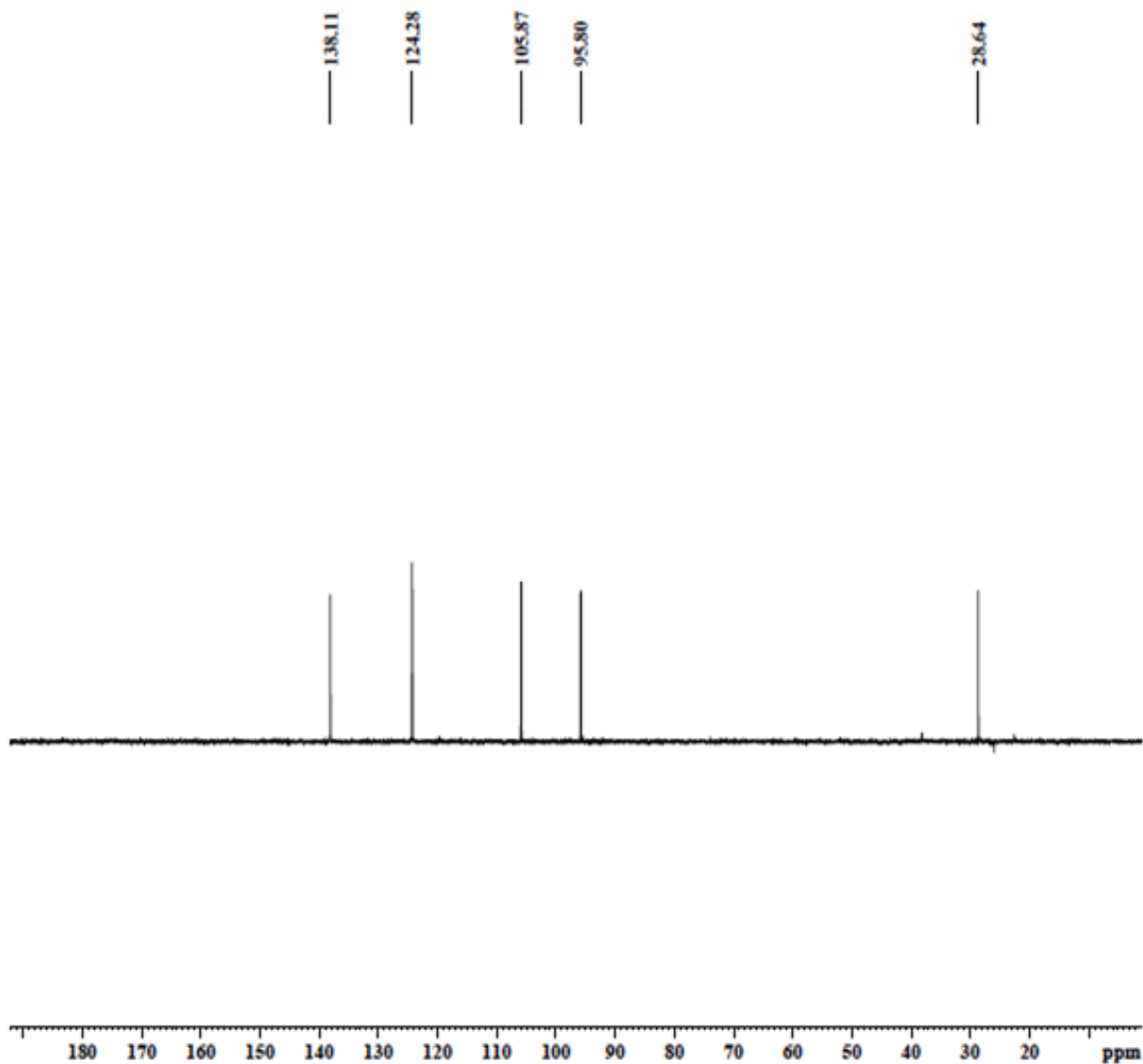
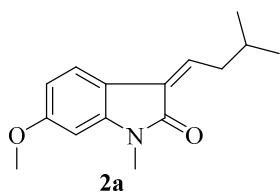


SKM-522B
DEPT-I, CDCl₃

Current Data Parameters
NAME SKM-522B, DEPT-I, 300 MHz, 6.5.13.M
EXPNO 350
PROCNO 1

F2 - Processing parameters
SI 32768
SF 75.4677506 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

DEPT-I Spectrum of **2a**



SKM-522B
DEPT-II. CDCL3

```

Current Data Parameters
NAME: SKM-522B-DEPT-1,300 MHz,AS,15.M
EXPNO: 381
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20130606
Time: 9.13
INSTRUM: agpt
PROBHD: 5 mm QNP 1H/13
PULPROG: zgpg30
TD: 65536
SOLVENT: CDCl3
NS: 204
DS: 4
SWH: 19023.840 Hz
FREQS: 0.270990 Hz
AQ: 1.8175019 sec
RG: 3990
SF: 27.720 MHz
AQ: 18.30 sec
TE: 300.2 K
CNS12: 148.000000 sec
D1: 2.0000000 sec
D2: 0.0000000 sec
D3: 0.0000000 sec
TDR: 1

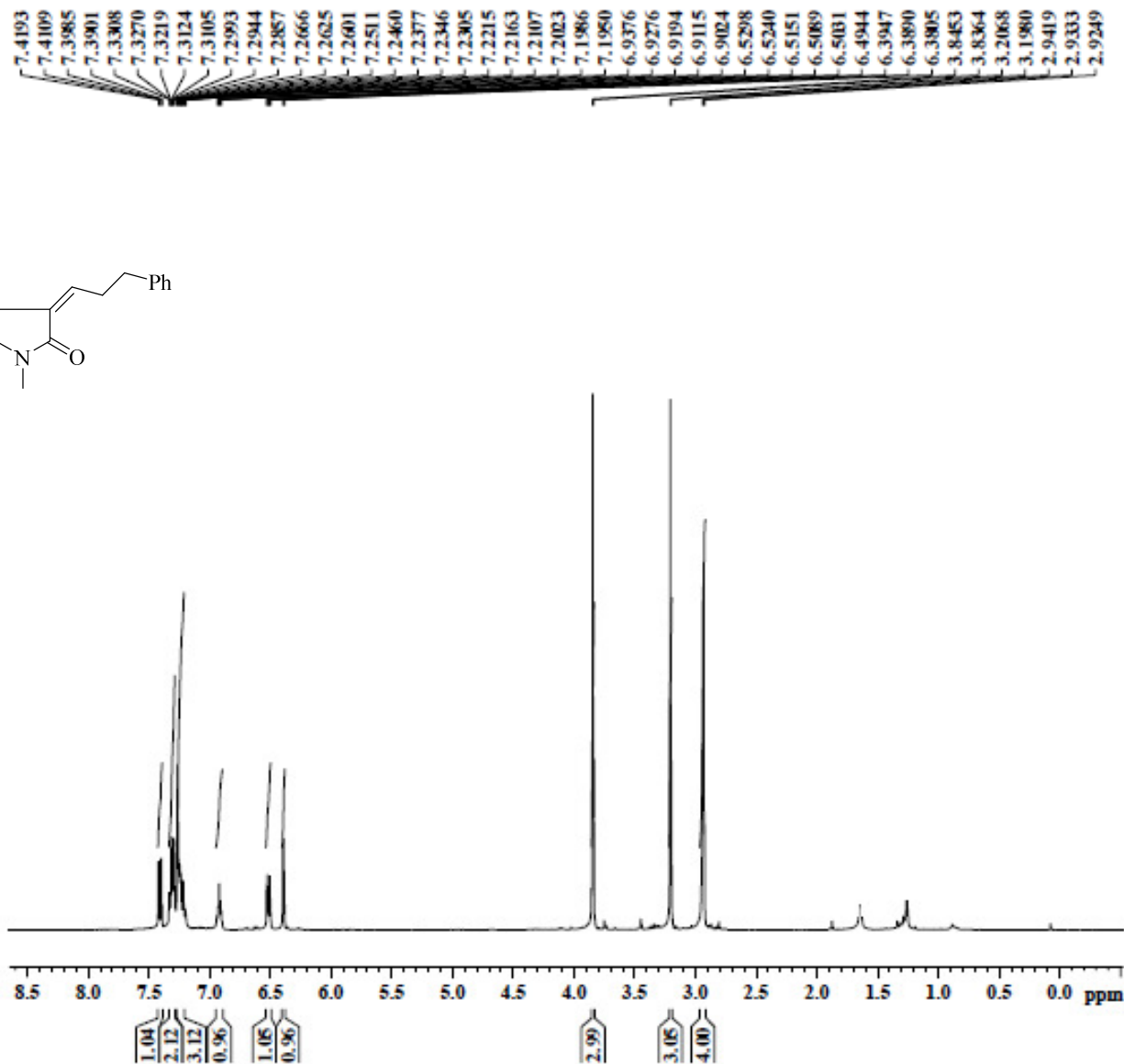
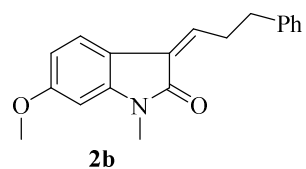
===== CHANNEL f1 =====
NUC1: 13C
P1: 5.15 sec
PL1: 19.10 dB
PL12: -3.00 dB
PL1W: 55.1500000 W
SFO1: 75.4782603 MHz

===== CHANNEL f2 =====
CPROG2: waltz16
NUC2: 1H
P2: 10.00 sec
PL2: 20.00 dB
PL2W: 50.00 dB
PL2: -1.00 dB
PL12: 17.00 dB
PL2W: 18.0000000 W
PL1W2: 0.2000000 W
SFO2: 300.1312000 MHz

F2 - Processing parameters
SI: 32768
SF: 75.4777601 MHz
WDW: EM
SSB: 0
LB: 1.00 Hz
GB: 0
PC: 1.40

```

DEPT-II Spectrum of **2a**



SKM-648
1H, CDC13

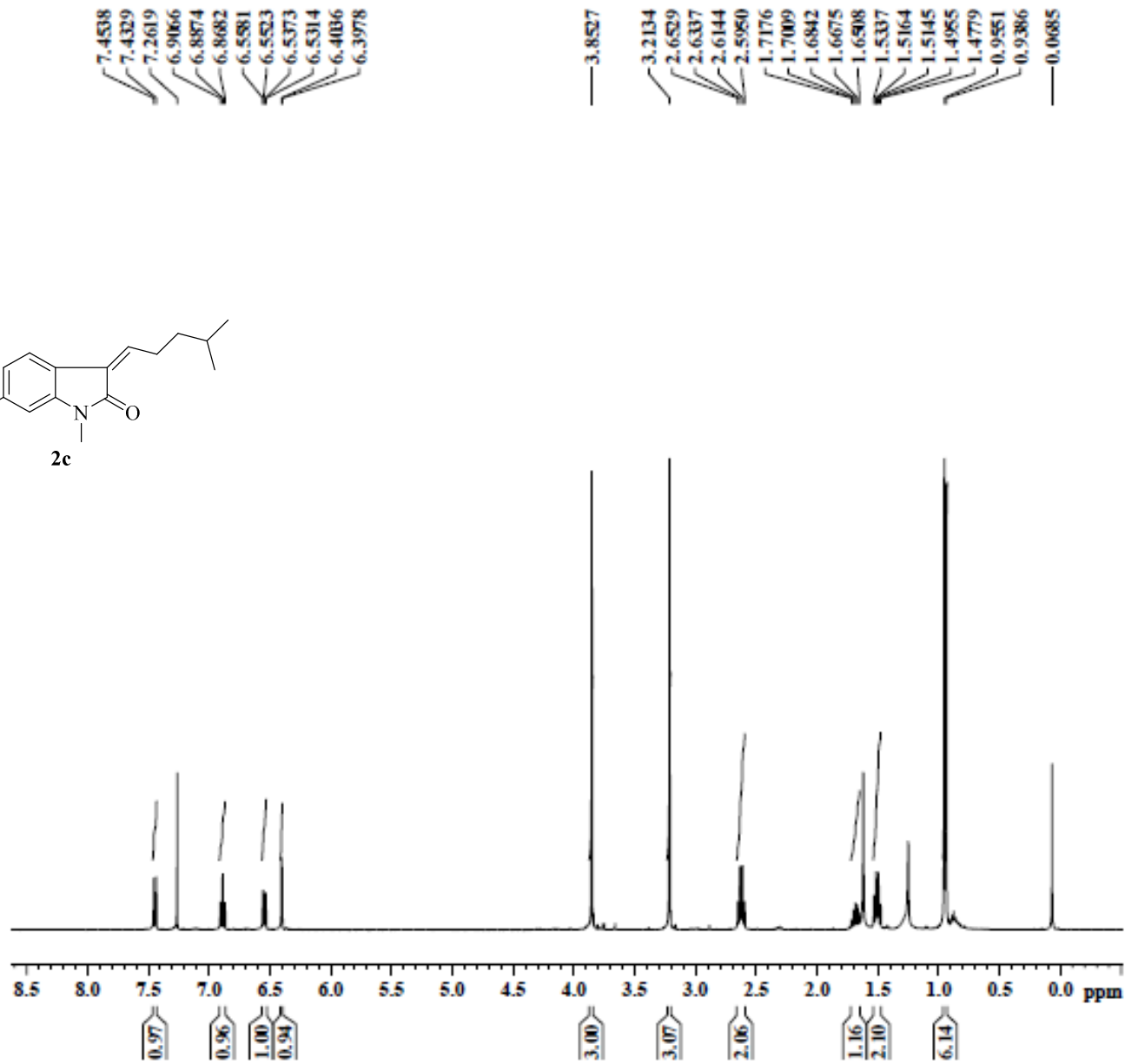
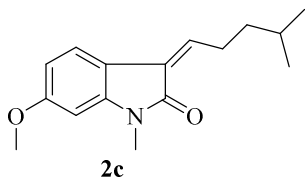
Current Data Parameters
NAME SKM-648,1H,400 MHz,6 Sep,2013.M
EXPNO 40
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130907
Time 10.46
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 512
DS 2
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.089465 sec
RG 100.41
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.0000000 sec
TDO 1

***** CHANNEL f1 *****
SFO1 400.1629712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605109 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2b**



SKM-652
1H, CDCl3

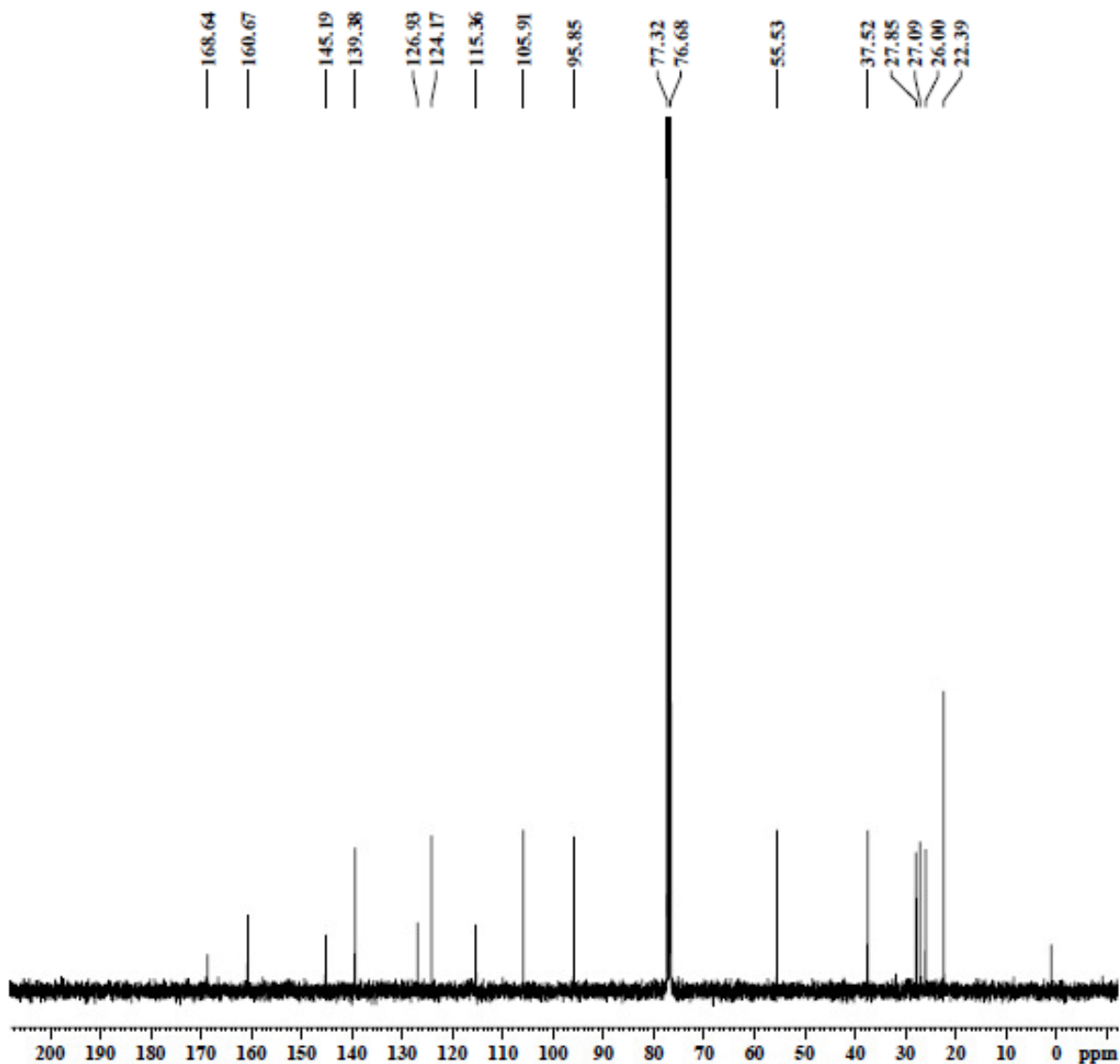
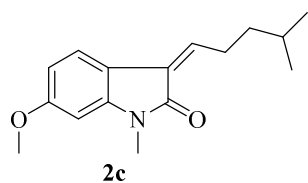
Current Data Parameters
NAME SKM-652,1H,400 MHz,11 Sep,2013.M
EXPNO 50
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130911
Time 15.53
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4076720 sec
RG 114.26
DW 52.000 usec
DE 5.20 usec
TE 294.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 12.38 usec
PLW1 14.30000000 W

F2 - Processing parameters
SI 65536
SF 400.1605097 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2c



SKM-652
13C, CDC13

Current Data Parameters
NAME SKM-652, 13C, 400 MHz, 12 Sep, 2013, E
EXPNO 30
PROCNO 1

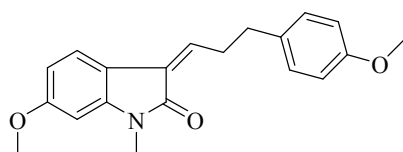
F2 - Acquisition Parameters
Date_ 20130913
Time 13.22
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366795 Hz
AQ 1.3631486 sec
RG 201.68
DW 23.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6304993 MHz
NUC1 13C
P1 8.20 usec
PLW1 70.59999647 W

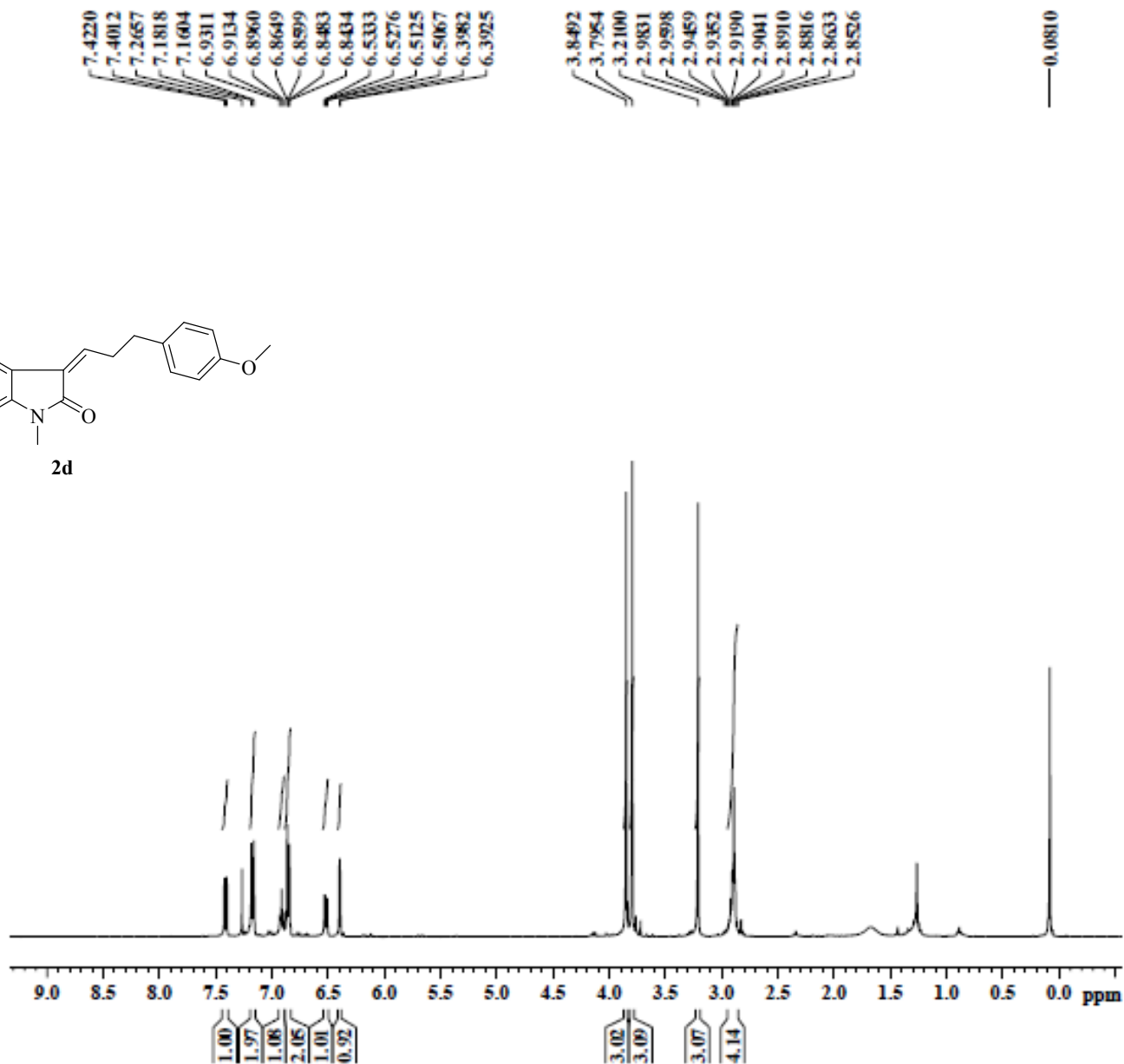
----- CHANNEL f2 -----
SFO2 400.1621006 MHz
NUC2 1H
CPOPRG2 waltz16
PCPD2 90.00 usec
PLW2 14.0000000 W
PLW12 0.28381999 W
PLW13 0.21352000 W

F2 - Processing parameters
SI 32768
SF 100.6304336 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of 2c



2d



SKM-663
1H, CDCl3

Current Data Parameters
NAME SKM-663, 1H, 400 MHz, 19 Sep, 2013, M
EXPNO 60
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130919
Time 14.22
INSTRUM spect
PROBHD 5 mm PABBO BB1
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 80.54
DW 62.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 400.1620712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1600000 MHz
WDM EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2d

SKM-663
13C, CDC13

Current Data Parameters
NAME SKM-663,13C,400 MHz,24 Sep,2013,E
EXPNO 50
PROCNO 1

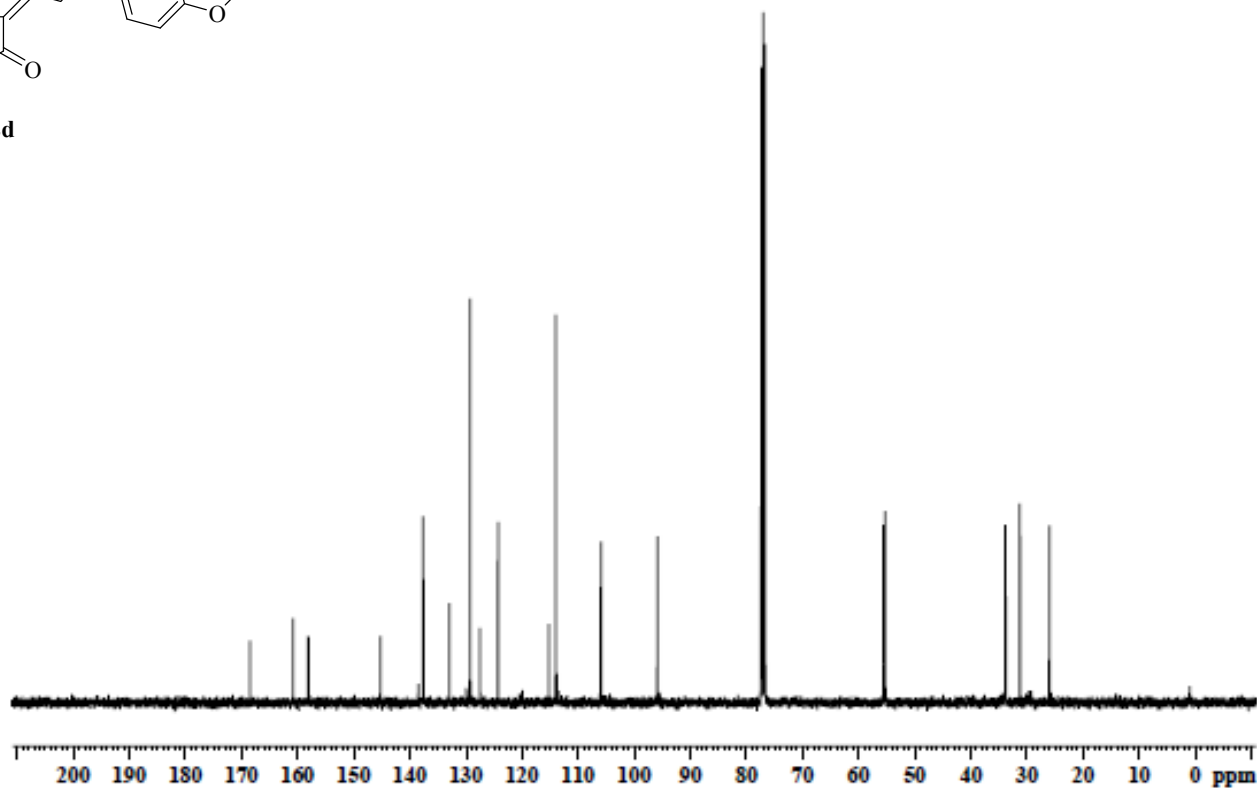
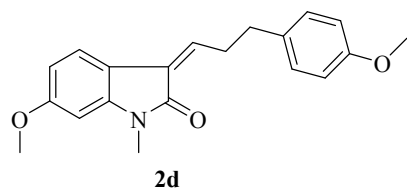
F2 - Acquisition Parameters
Date_ 20130925
Time 10.42
INSTRUM spect
PROBHD 5 mm PABBO BBI
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24026.461 Hz
FREQS 0.365736 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 100.6204993 MHz
NUC1 13C
P1 8.25 usec
PLW1 70.5000047 W

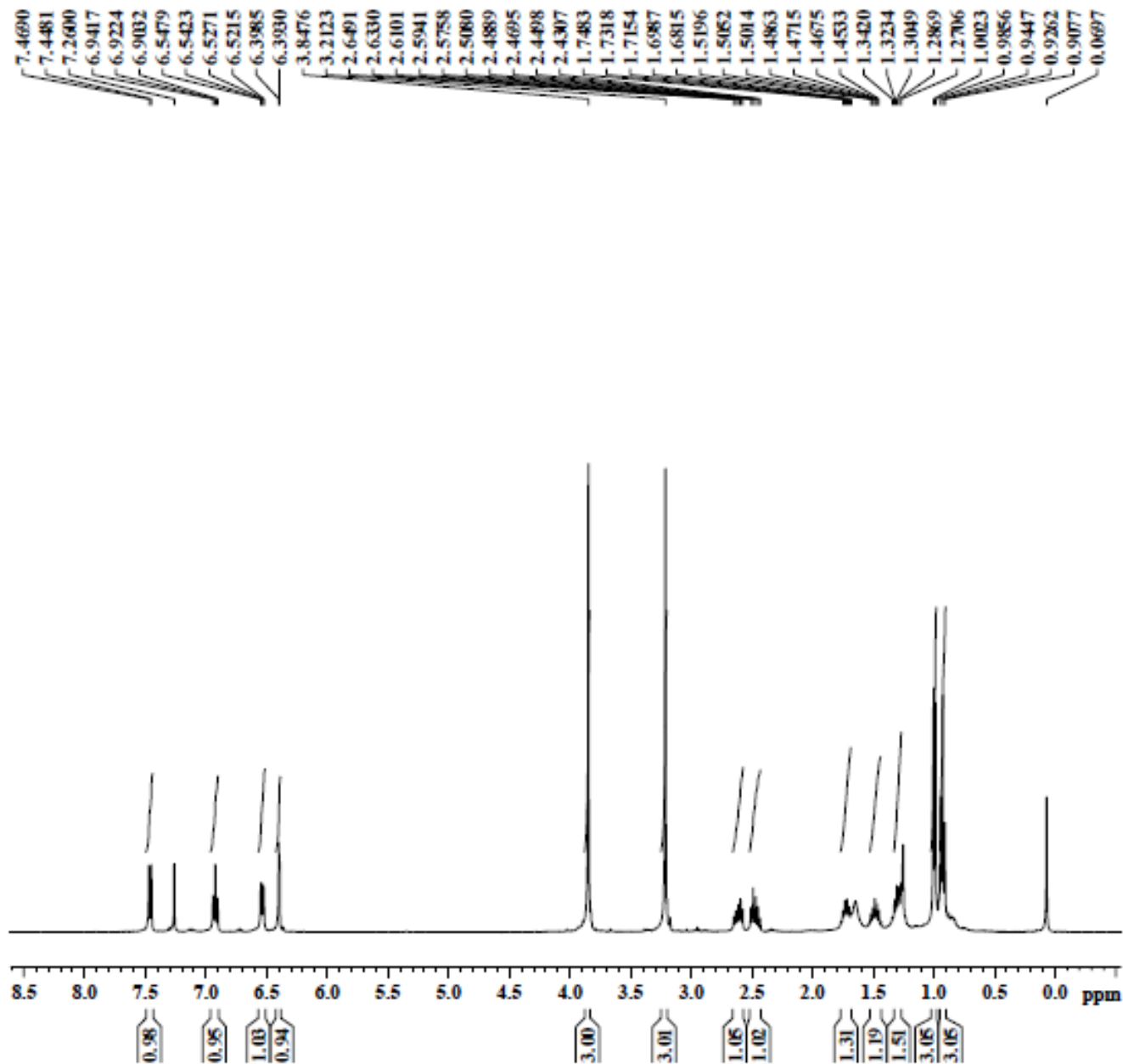
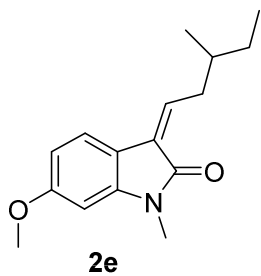
----- CHANNEL f2 -----
SFO2 400.1621006 MHz
NUC2 1H
CPOPRG2 waltz16
PCPD2 96.00 usec
PLW2 14.0000000 W
PLW12 0.26361999 W
PLW13 0.21353000 W

F2 - Processing parameters
SI 32768
SF 100.6204418 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

168.49
160.80
158.08
145.25
137.60
132.94
129.23
127.46
124.27
115.18
113.99
105.92
95.87
77.32
77.00
76.68
55.51
55.25
33.81
31.24
25.99



¹³C -NMR Spectrum of 2d



SKM-671
1H, CDC13

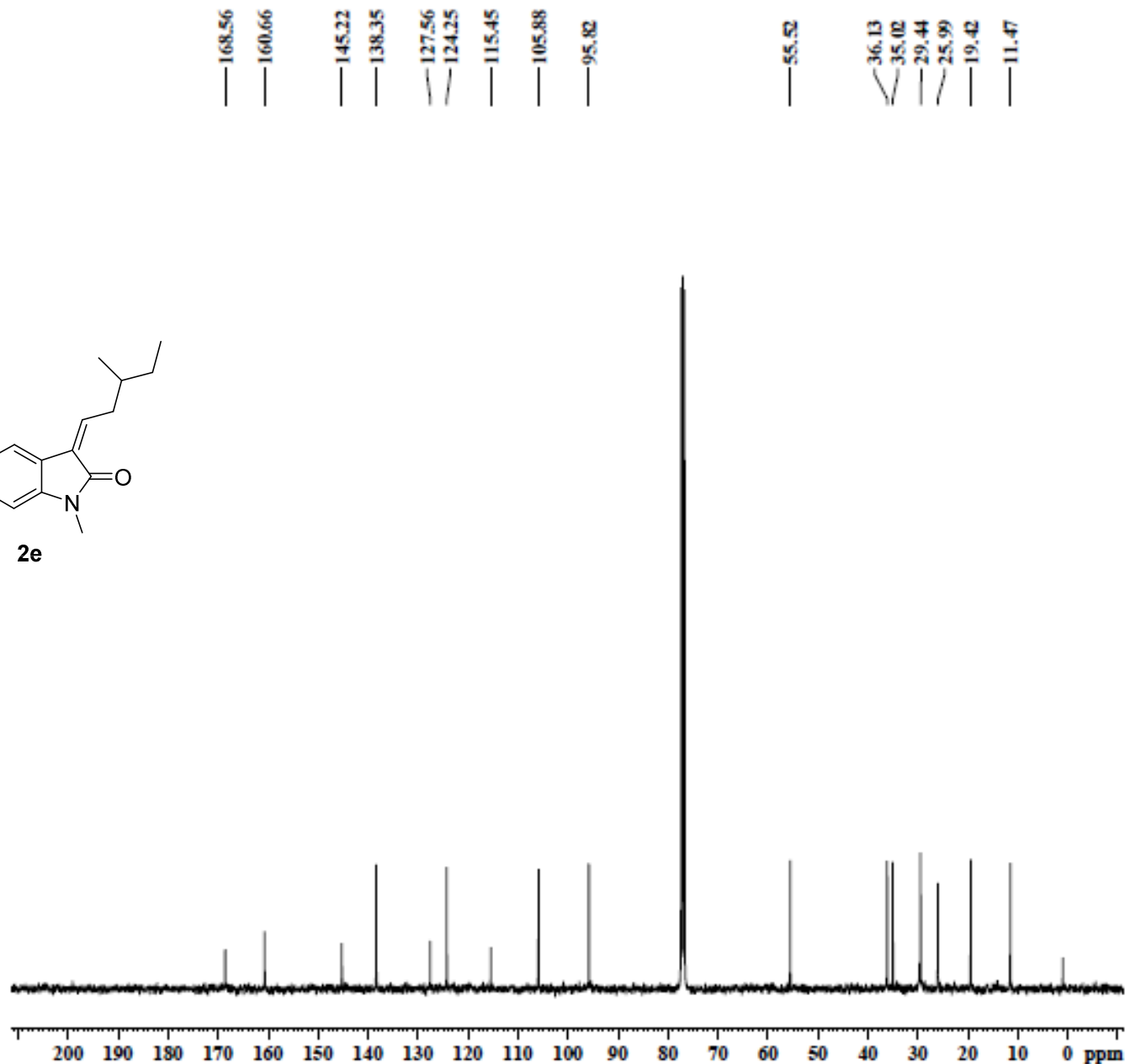
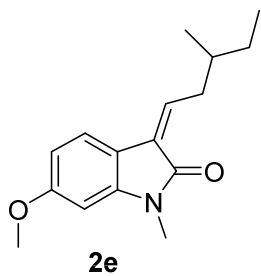
Current Data Parameters
NAME SKM-671,1H,400 MHz, 3 Oct,2013,M
EXPNO 70
PROCNO 1

F2 - Acquisition Parameters
Date_ 20131003
Time 14.51
INSTRUM spect
PROBHD 5 mm PABBO BBI
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.148719 Hz
AQ 1.4078220 sec
RG 80.54
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.20000000 sec
TD0 1

----- CHANNEL f1 -----
SFO1 400.1629712 MHz
NUC1 1H
P1 12.35 usec
PLW1 14.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605104 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2e**



SKM-677
13C, CDCl3

Current Data Parameters
 NAME SKM-677_13C_400 MHz_7 Oct_2013.M
 EXPNO 60
 PROCNO 1

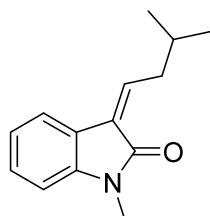
F2 - Acquisition Parameters
 Date_ 20131007
 Time 23.06
 INSTRUM spect
 PROBHD 5 mm PABBO BB/
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 512
 DS 0
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631488 sec
 RG 201.48
 DW 20.800 usec
 DE 6.50 usec
 TE 300.0 K
 D1 2.0000000 sec
 D11 0.03000000 sec
 TD0 1

***** CHANNEL f1 *****
 SFO1 100.6204993 MHz
 NUC1 13C
 P1 8.20 usec
 PLW1 70.59999847 W

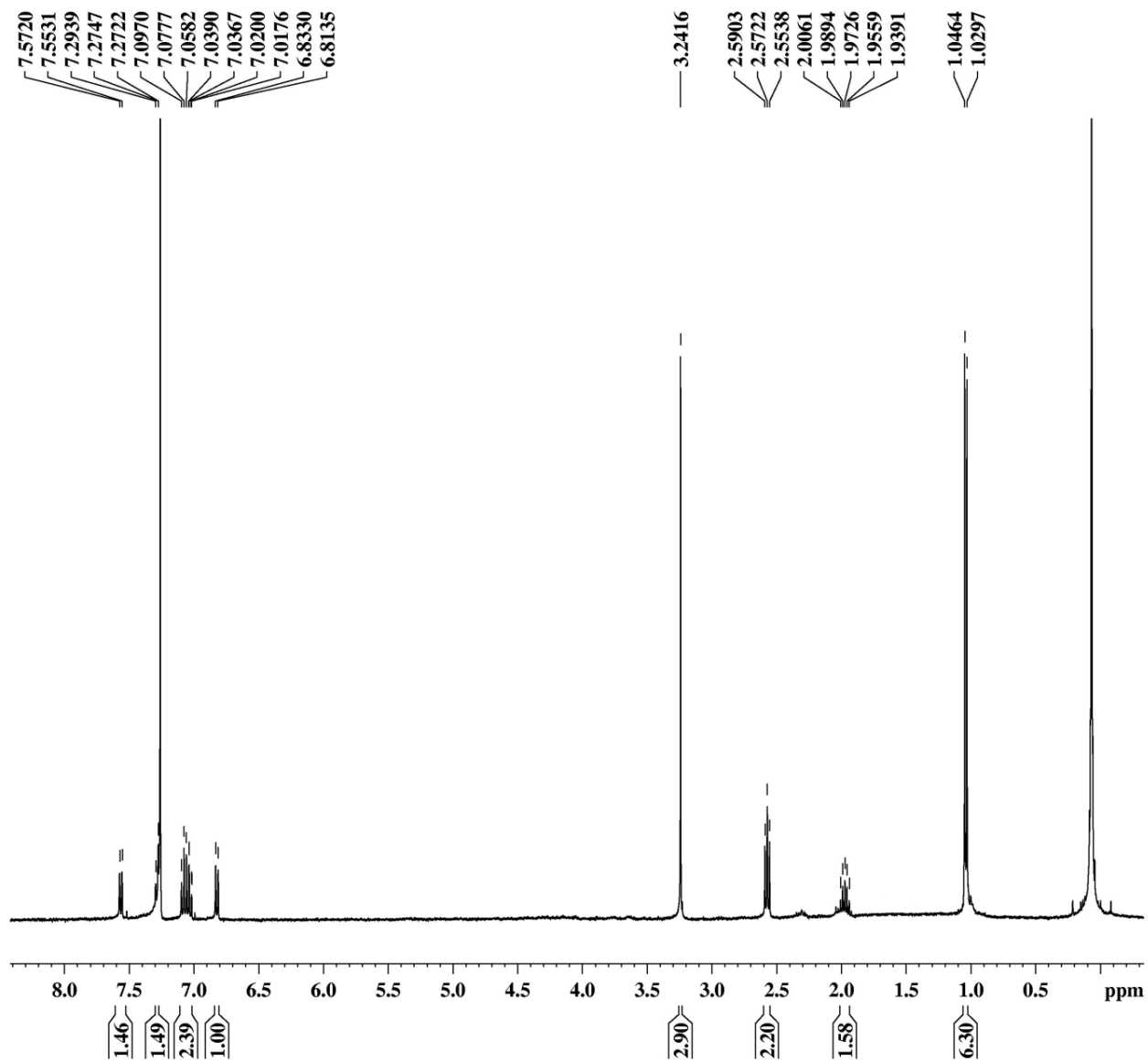
***** CHANNEL f2 *****
 SFO2 400.1621006 MHz
 NUC2 1H
 CPDPRGf2 waltz16
 PCPD2 90.00 usec
 PLW2 14.00000000 W
 PLW12 0.26361999 W
 PLW13 0.21353000 W

F2 - Processing parameters
 S 32768
 SF 100.6204404 MHz
 WDW EM
 SSB 0
 LB 3.00 Hz
 GB 0
 PC 1.40

¹³C -NMR Spectrum of **2e**



2f



SLK-389
1H, CDCl3

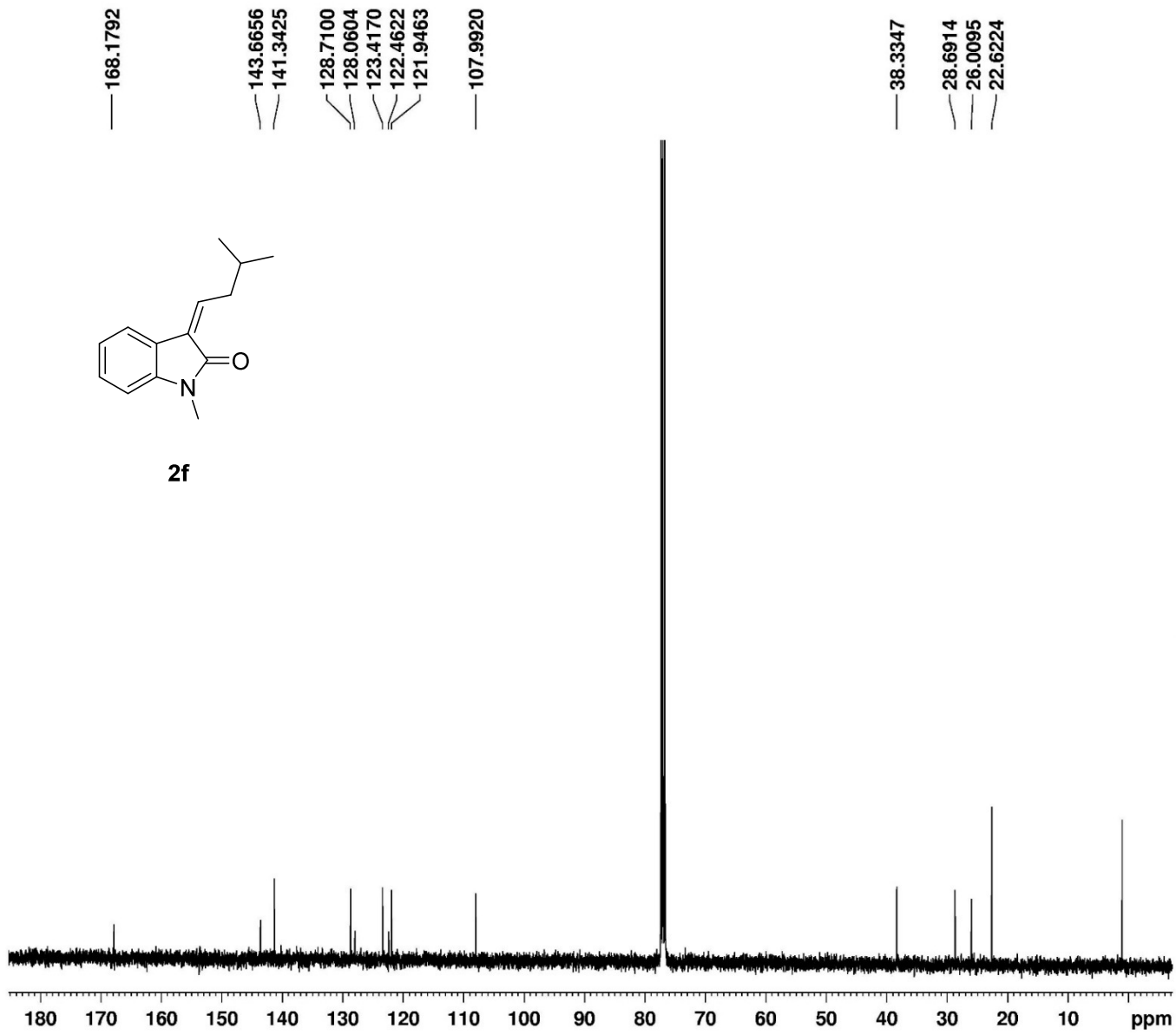
Current Data Parameters
NAME slk-389N
EXPNO 40
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160513
Time 7.46
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 179.93
DW 62.400 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605108 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2f**



SLK-389
13C, CDC13

Current Data Parameters
NAME SLK-389
EXPNO 50
PROCNO 1

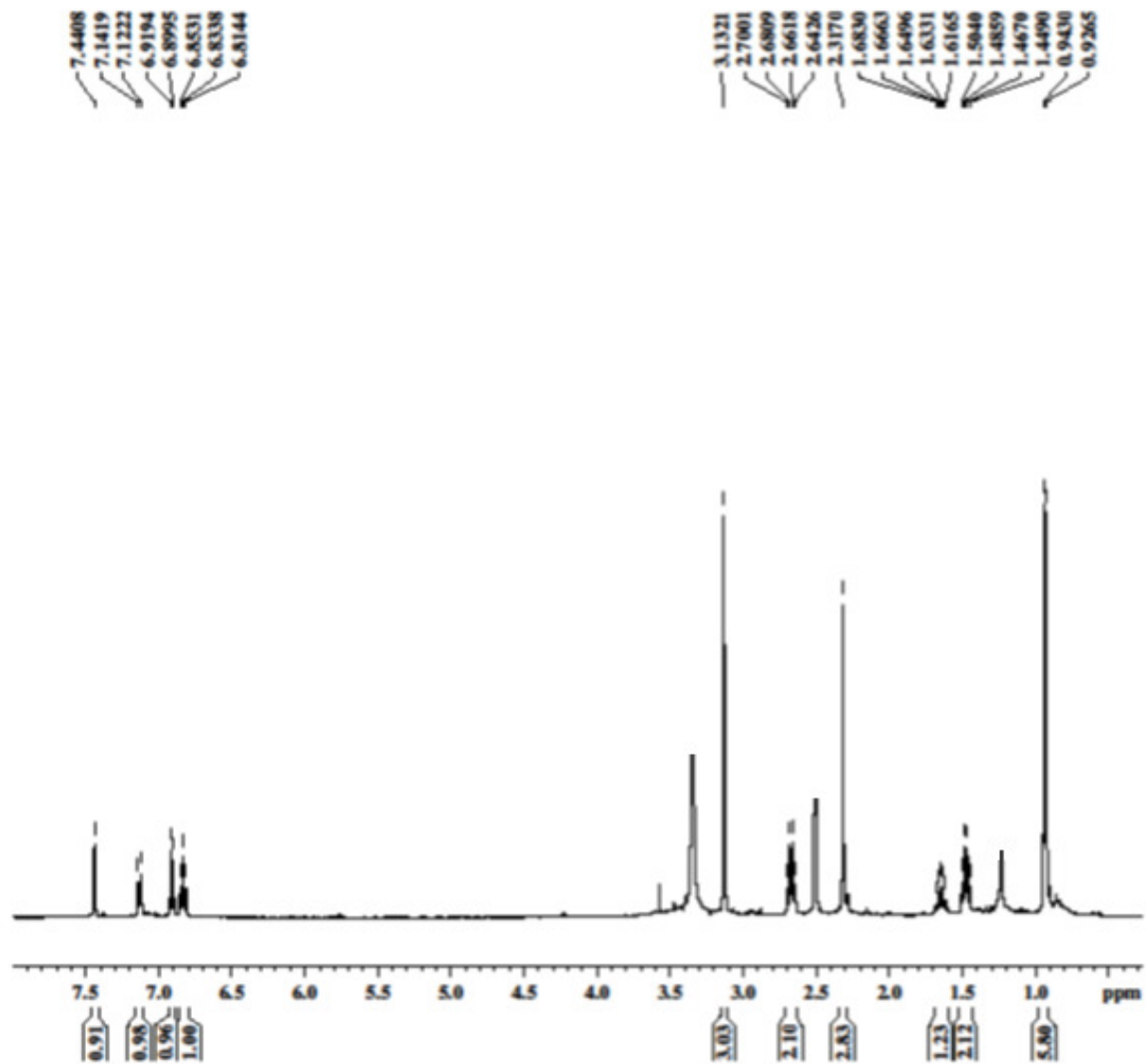
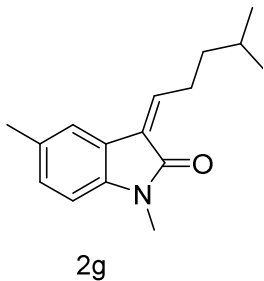
F2 - Acquisition Parameters
Date_ 20170106
Time 0.23
INSTRUM spect
PROBHD 5 mm FAPBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1024
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 296.7 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.00000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of **2f**



SLK-372
1H, DMSO

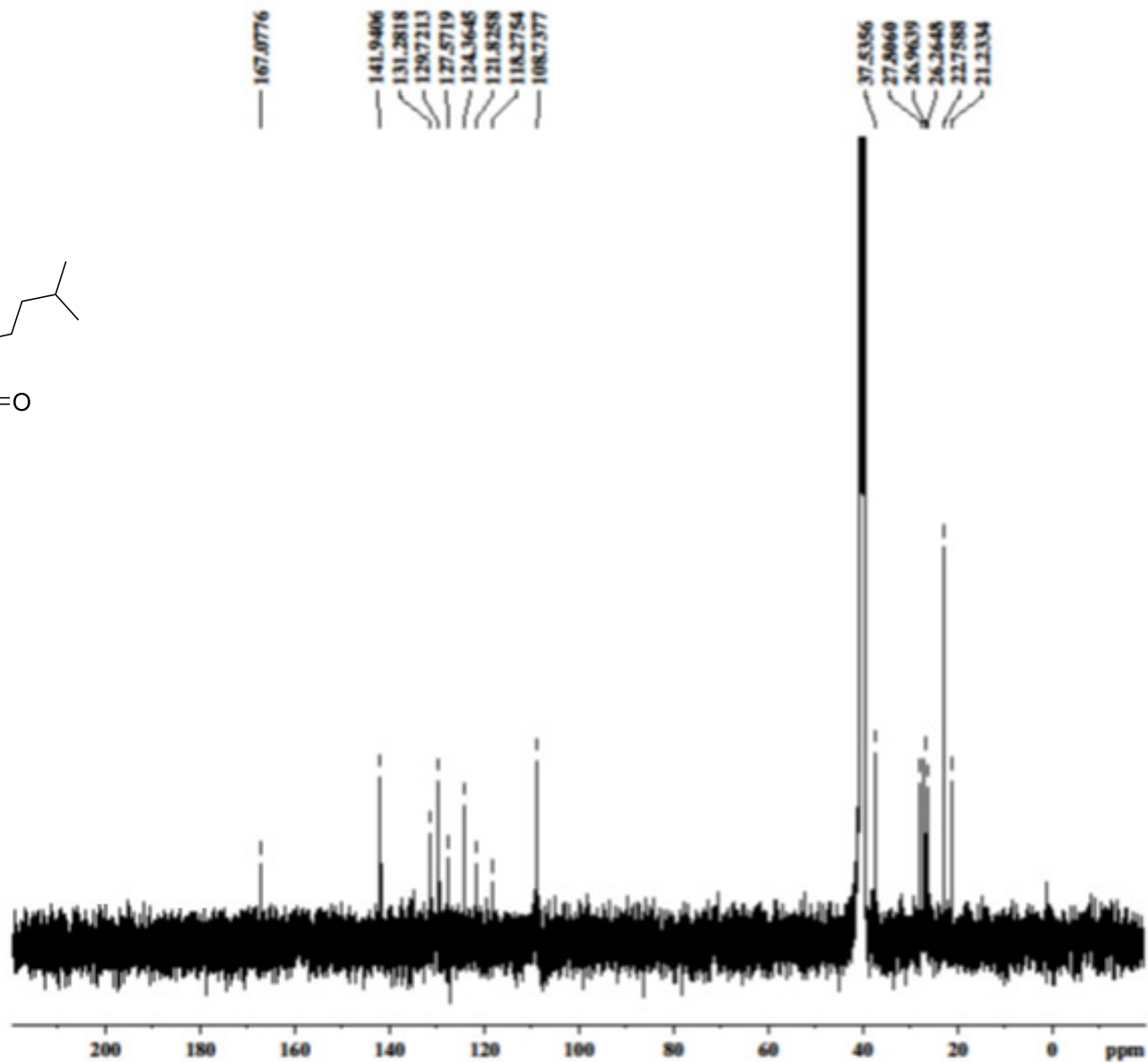
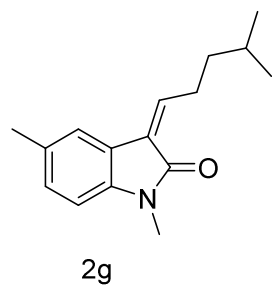
Current Data Parameters
NAME SLK-372
EXPRO 70
PROCNO 1

F2 - Acquisition Parameters
Date_ 20180329
Time 16.45
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 32
DS 0
SWH 9615.395 Hz
FIDRES 0.148719 Hz
AQ 3.4078720 sec
RG 114.26
DW 52.000 usec
DE 6.50 usec
TE 295.8 K
D1 1.00000000 sec
TDD 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WOW EM
SGB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2g



SLK-372
13C, CDC13

Current Data Parameters
NAME SLK-372
EXPNO 10
PROCNO 1

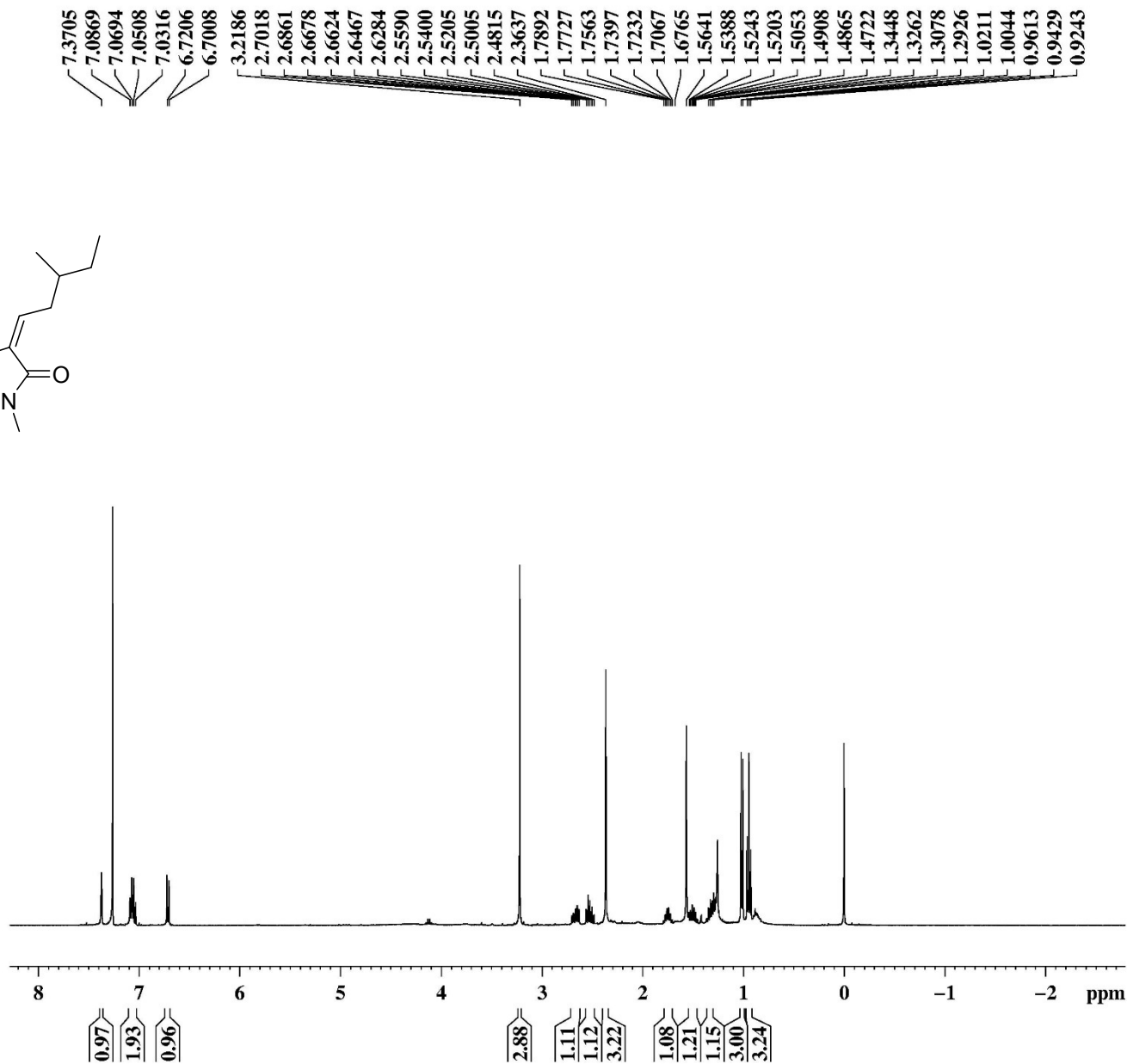
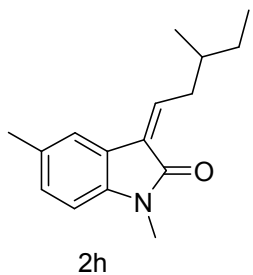
F2 - Acquisition Parameters
Date_ 20160403
Time 1.54
INSTRUM spect
PROBHD 5 mm PA180 8H
PULPROG zgpg30
TD 65536
SOLVENT DMSO
NS 1024
DS 0
SWH 24038.461 Hz
FIDRES 0.396798 Hz
AQ 1.2621488 sec
RG 301.48
DW 20.800 usec
DE 6.50 usec
TE 300.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 100.6204280 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.0000000 W

===== CHANNEL f2 =====
SFO2 400.1521006 MHz
NUC2 1H
CPOPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.0000000 W
PLW12 0.27963960 W
PLW13 0.20651000 W

F2 - Processing parameters
SI 32768
SF 100.6204280 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

^{13}C -NMR Spectrum of **2g**



SLK-375
1H, CDCl3

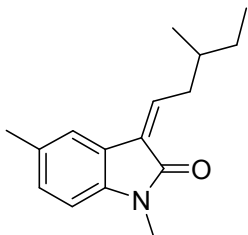
Current Data Parameters
NAME slk-375
EXPNO 160
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160412
Time 3.27
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 129.57
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

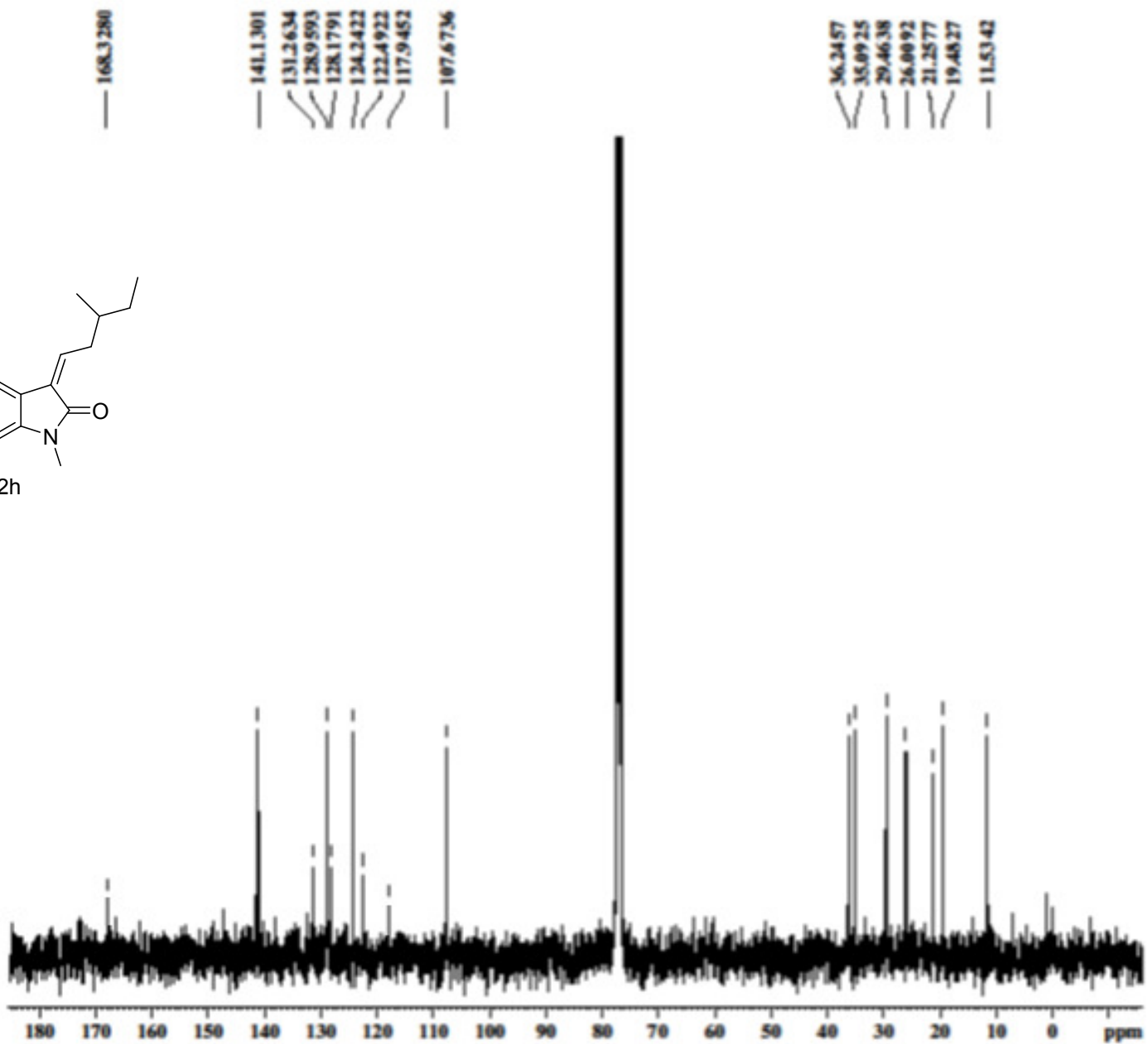
===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605099 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2h



2h



SLK-375
13C, CDC13

Current Data Parameters
NAME SLK-375
EXPNO 80
PROCNO 1

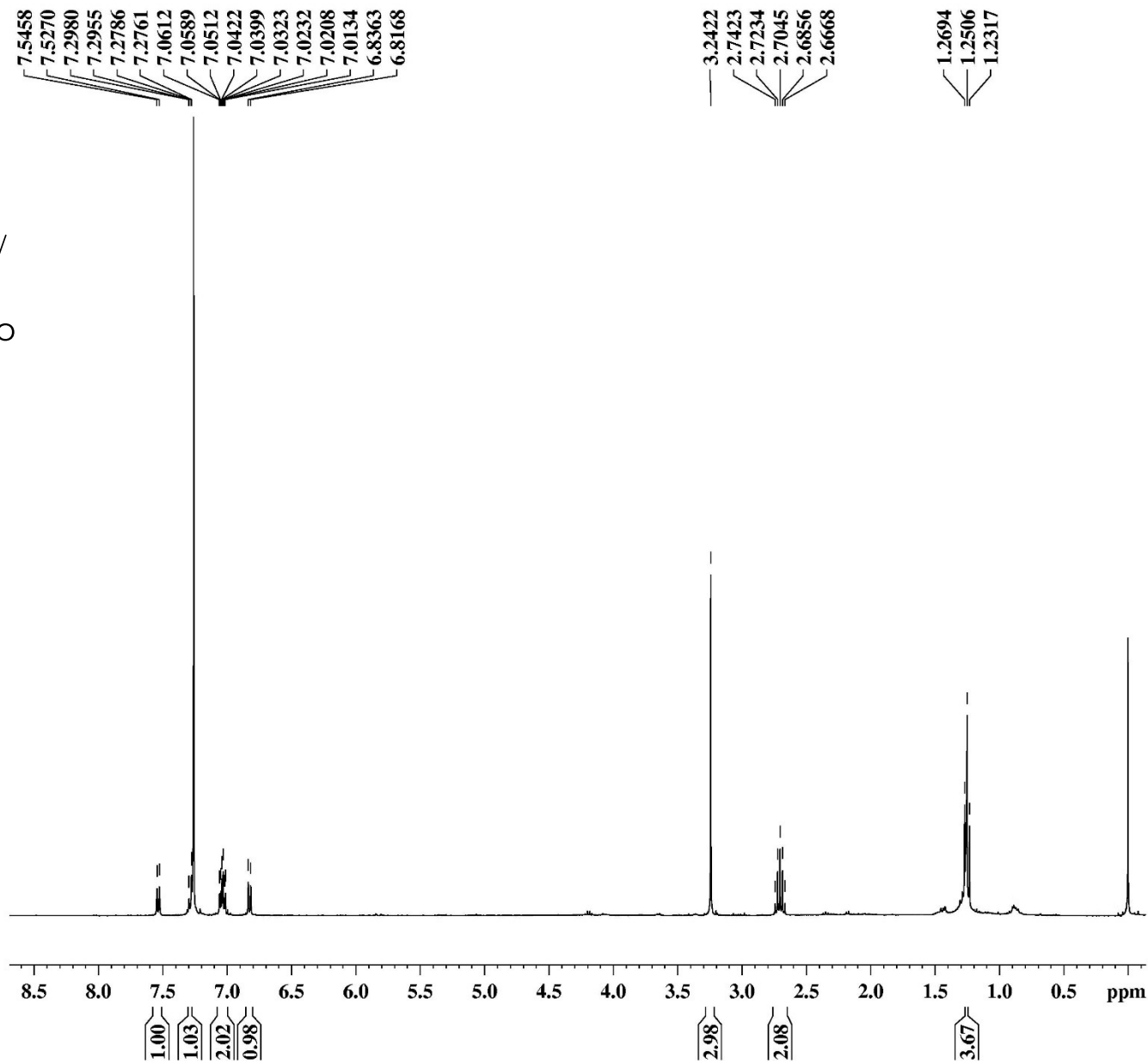
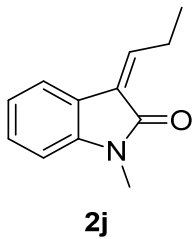
F2 - Acquisition Parameters
Date_ 20160426
Time 17.03
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366796 Hz
AQ 1.2621466 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 100.6264993 MHz
NUC1 13C
P1 9.90 usec
PLW1 52.00000000 W

===== CHANNEL f2 =====
SFO2 400.1621006 MHz
NUC2 1H
CPOPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27363999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6264380 MHz
WCM EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.40

¹³C -NMR Spectrum of 2h



SLK-285
1H, CDCl3

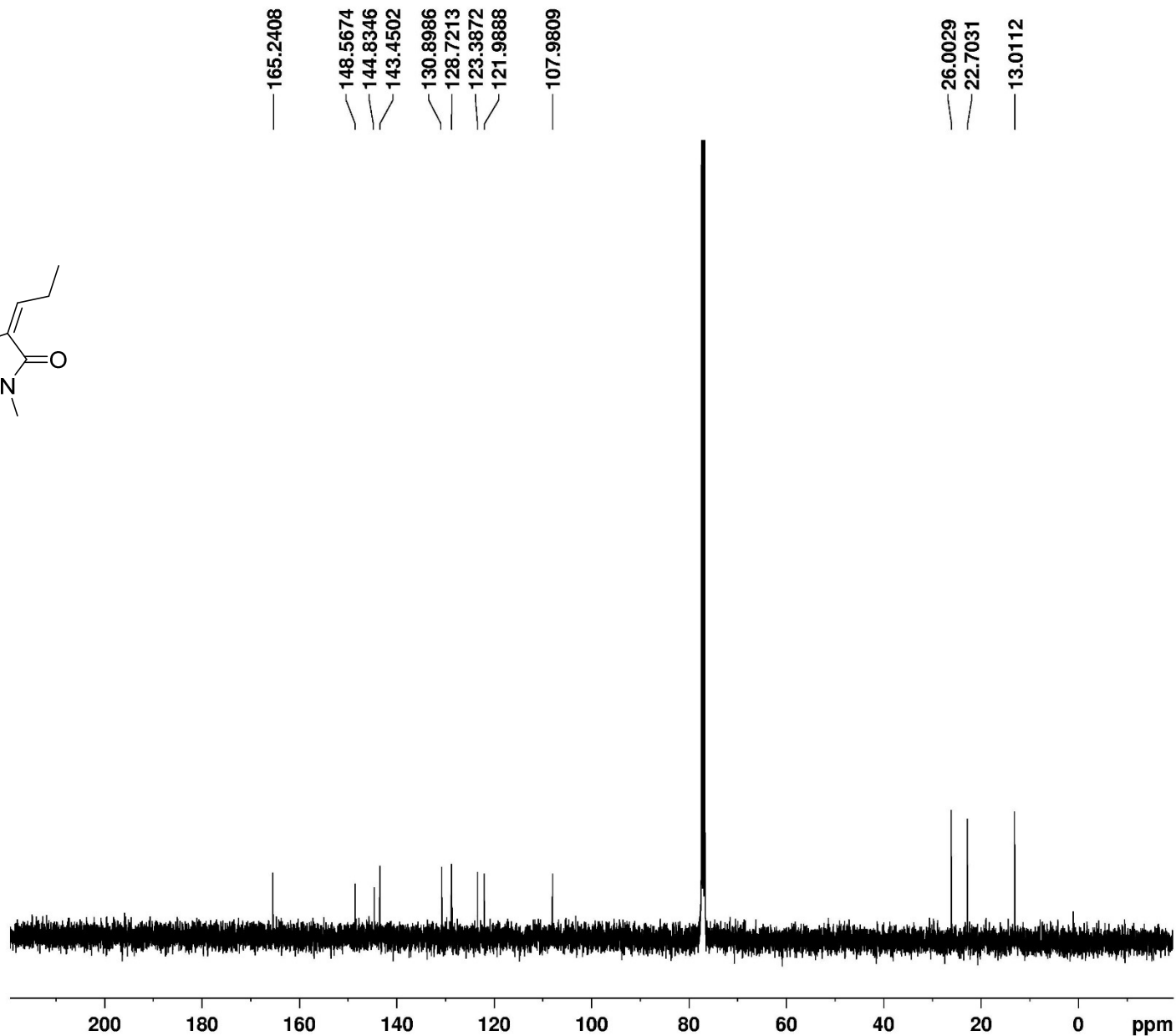
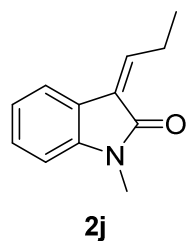
Current Data Parameters
NAME slk-285
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20160805
Time 14.03
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 64
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 159.22
DW 52.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605096 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2j



SLK-285
13C, CDCl₃

Current Data Parameters
NAME synergy
EXPNO 70
PROCNO 1

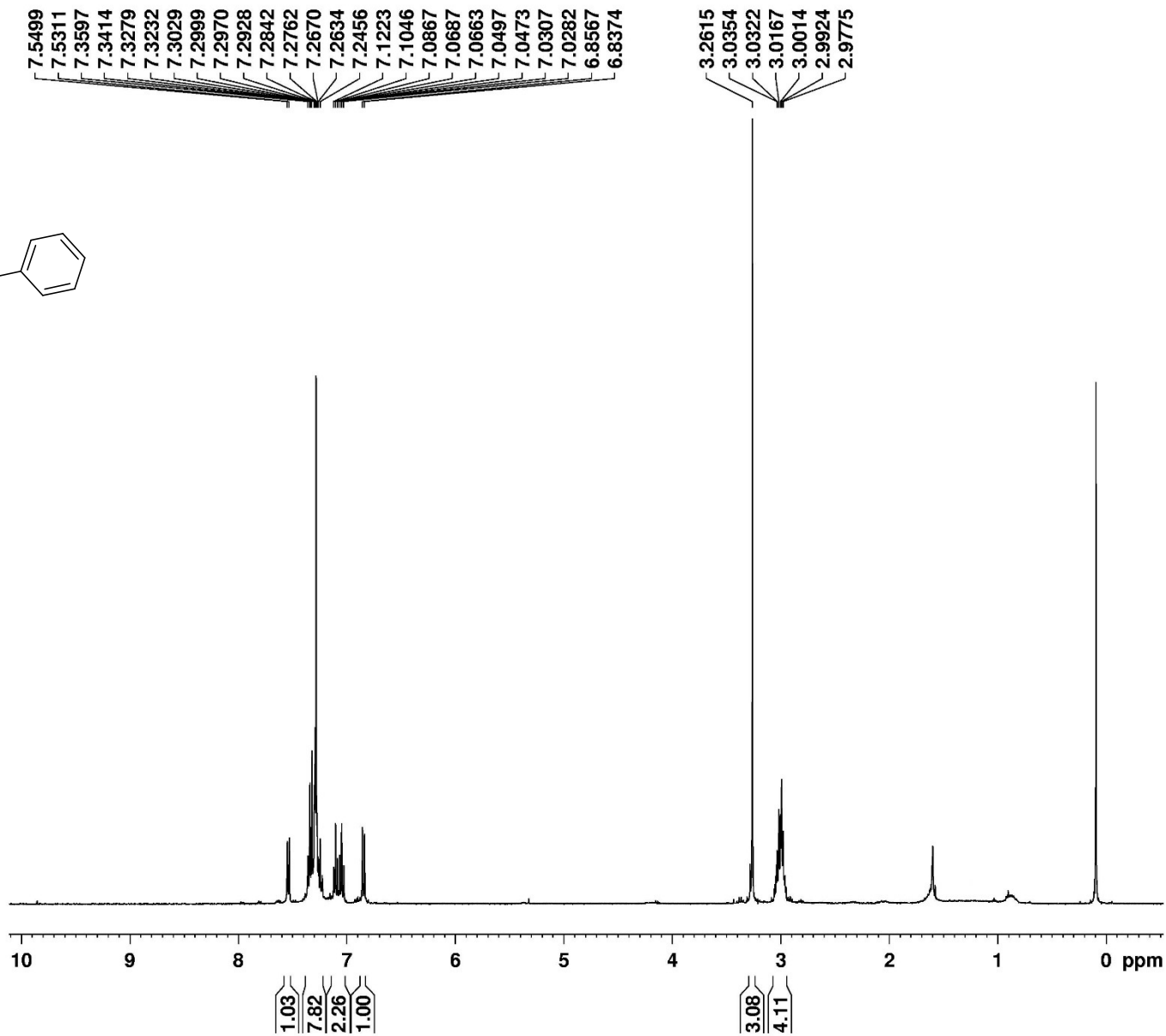
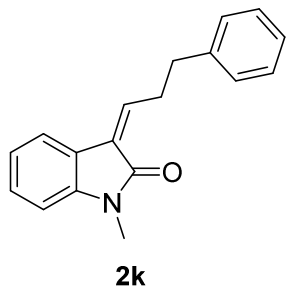
F2 - Acquisition Parameters
Date_ 20160807
Time 12.33
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 301.4 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.0000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 13.0000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

¹³C-NMR Spectrum of **2j**



SLK-497
1H, CDCl3

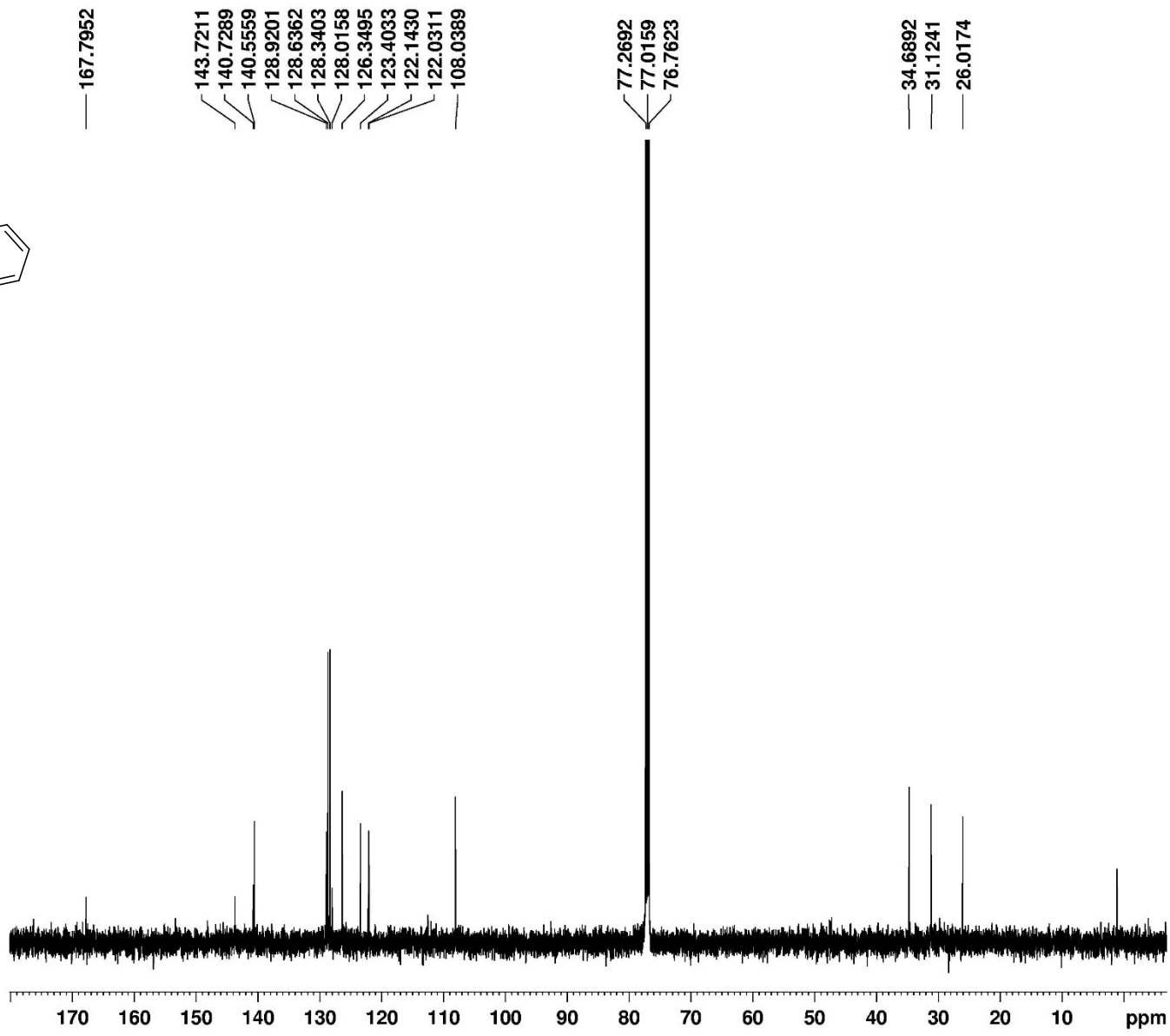
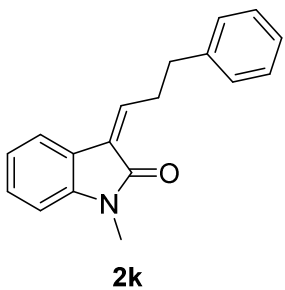
Current Data Parameters
NAME SLK-497F
EXPNO 80
PROCNO 1

F2 - Acquisition Parameters
Date 20170105
Time 18.28
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 801.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 159.22
DW 62.400 usec
DE 6.50 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of 2k



SLK-497
 13C, CDC13

Current Data Parameters
 NAME SLK-497
 EXPNO 50
 PROCNO 1

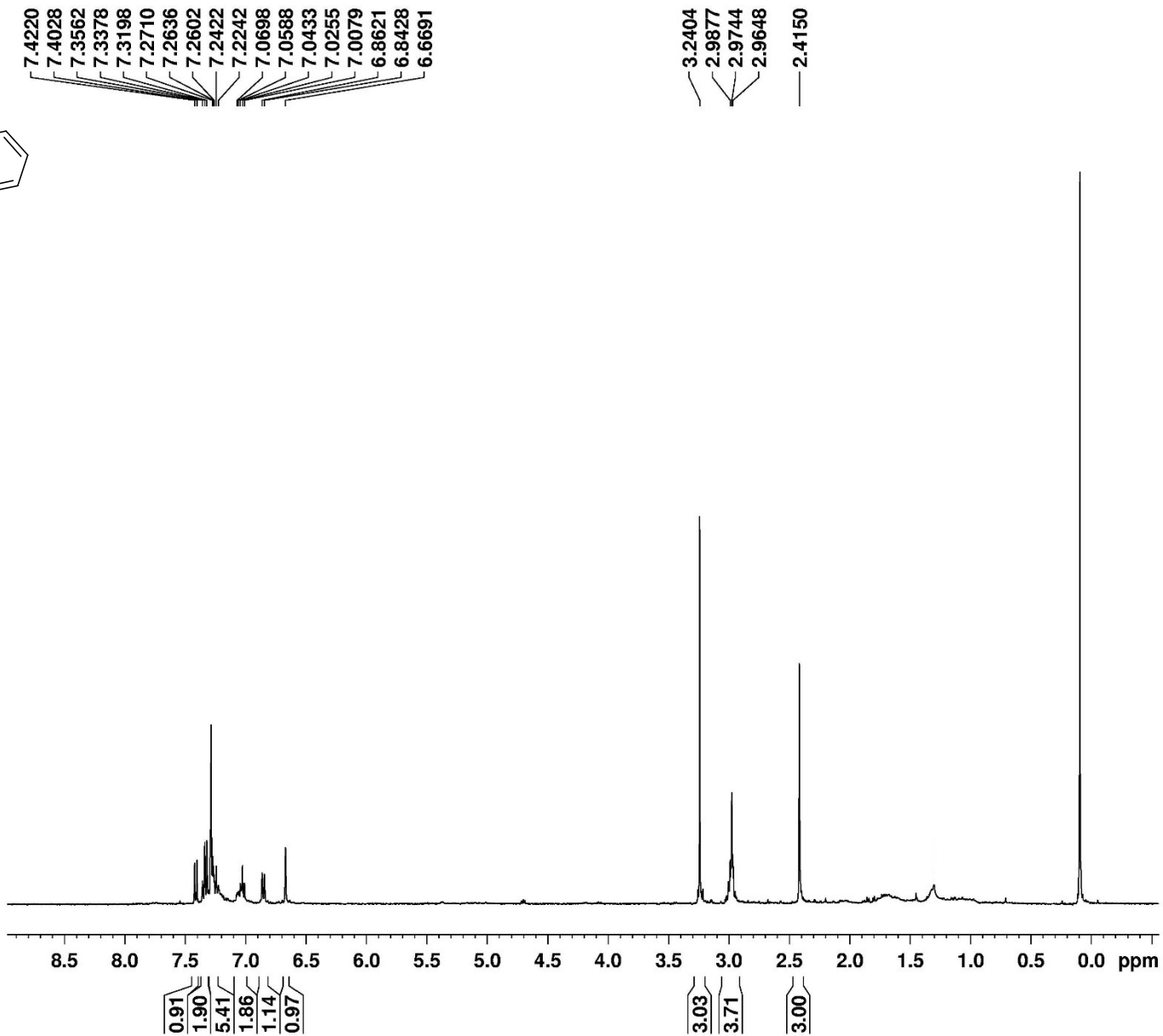
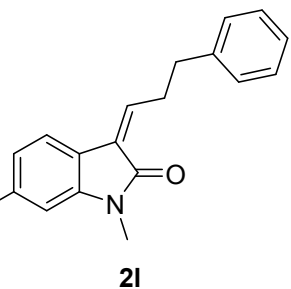
F2 - Acquisition Parameters
 Date_ 20170106
 Time 19.16
 INSTRUM spect
 PROBHD 5 mm PATXI III/
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 2048
 DS 4
 SWH 29761.904 Hz
 FIDRES 0.454131 Hz
 AQ 1.1010048 sec
 RG 38.43
 DW 16.800 usec
 DE 6.50 usec
 TE 300.0 K
 D1 2.0000000 sec
 D11 0.0300000 sec
 TDO 1

==== CHANNEL f1 ====
 SFO1 125.9077573 MHz
 NUC1 13C
 P1 9.23 usec
 PLW1 244.0000000 W

==== CHANNEL f2 ====
 SFO2 500.6783527 MHz
 NUC2 1H
 CPDPRG2 waltz16
 PCPD2 80.00 usec
 PLW2 13.60000038 W
 PLW12 0.08840500 W
 PLW13 0.05657900 W

F2 - Processing parameters
 SI 32768
 SF 125.8951680 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

¹³C -NMR Spectrum of **2k**



SLK-498,
1H, CDCl₃

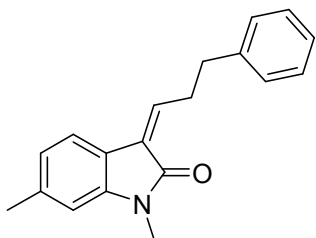
Current Data Parameters
NAME SLK-498F
EXPNO 90
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170105
Time 18.34
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 159.22
DW 62.400 usec
DE 6.50 usec
TE 295.5 K
D1 1.00000000 sec
TD0 1

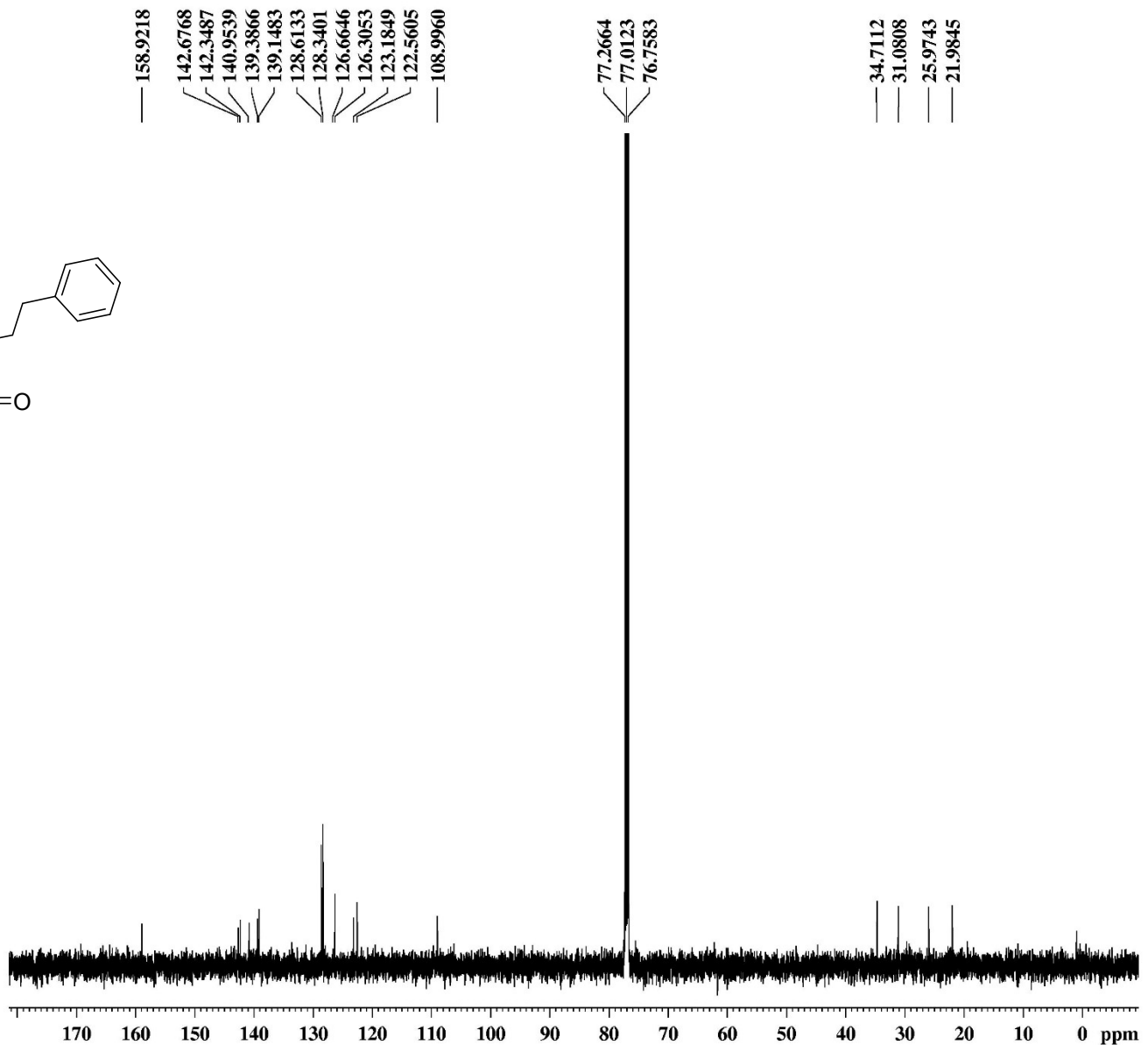
===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **21**



21



¹³C -NMR Spectrum of **21**

SLK-498
13C, CDCl3

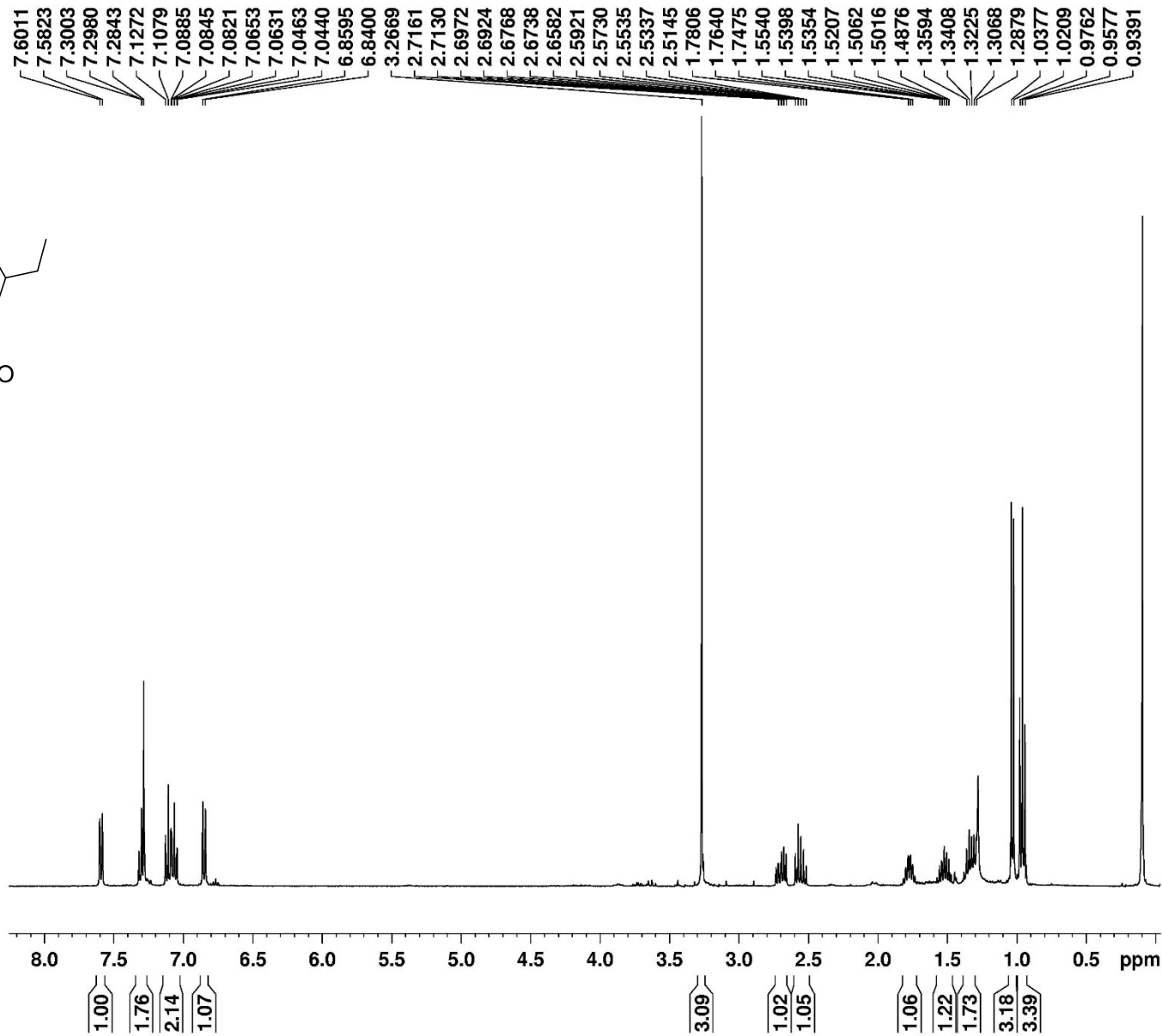
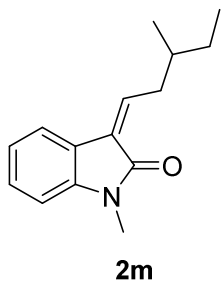
Current Data Parameters
NAME SLK-498F
EXPNO 60
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170106
Time 21.09
INSTRUM spect
PROBHD 5 mm PATXI 1H/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 2048
DS 4
SWH 29761.904 Hz
FIDRES 0.454131 Hz
AQ 1.1010048 sec
RG 38.43
DW 16.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
SF01 125.9077573 MHz
NUC1 13C
P1 9.23 usec
PLW1 244.00000000 W

===== CHANNEL f2 =====
SF02 500.6783527 MHz
NUC2 1H
PCPD2 waltz16
PLW2 80.00 usec
PLW12 13.60000038 W
PLW13 0.08840500 W
PLW13 0.05657900 W

F2 - Processing parameters
SI 32768
SF 125.8951680 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



SM-77F
1H, CDCl3

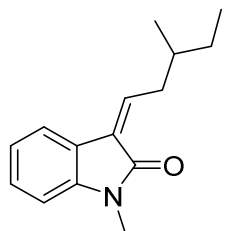
Current Data Parameters
NAME SM-77F
EXPNO 80
PROCNO 1

F2 - Acquisition Parameters
Date 20170106
Time 16.05
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 0
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.089465 sec
RG 114.26
DW 62.400 usec
DE 6.50 usec
TE 295.6 K
D1 1.00000000 sec
TD0 1

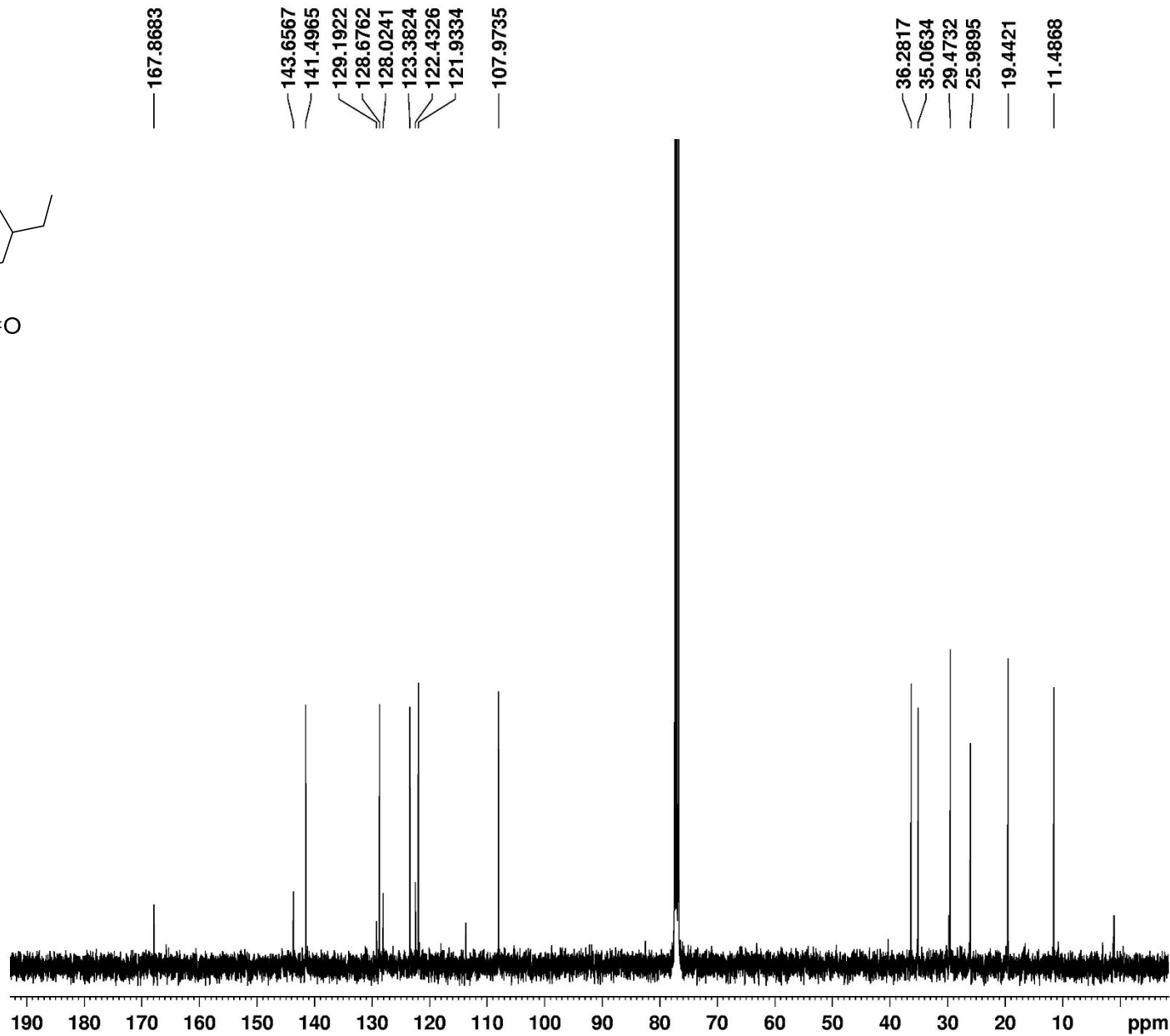
==== CHANNEL f1 ====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2m**



2m



¹³C -NMR Spectrum of 2m

SLK-77F
13C, CDCl₃

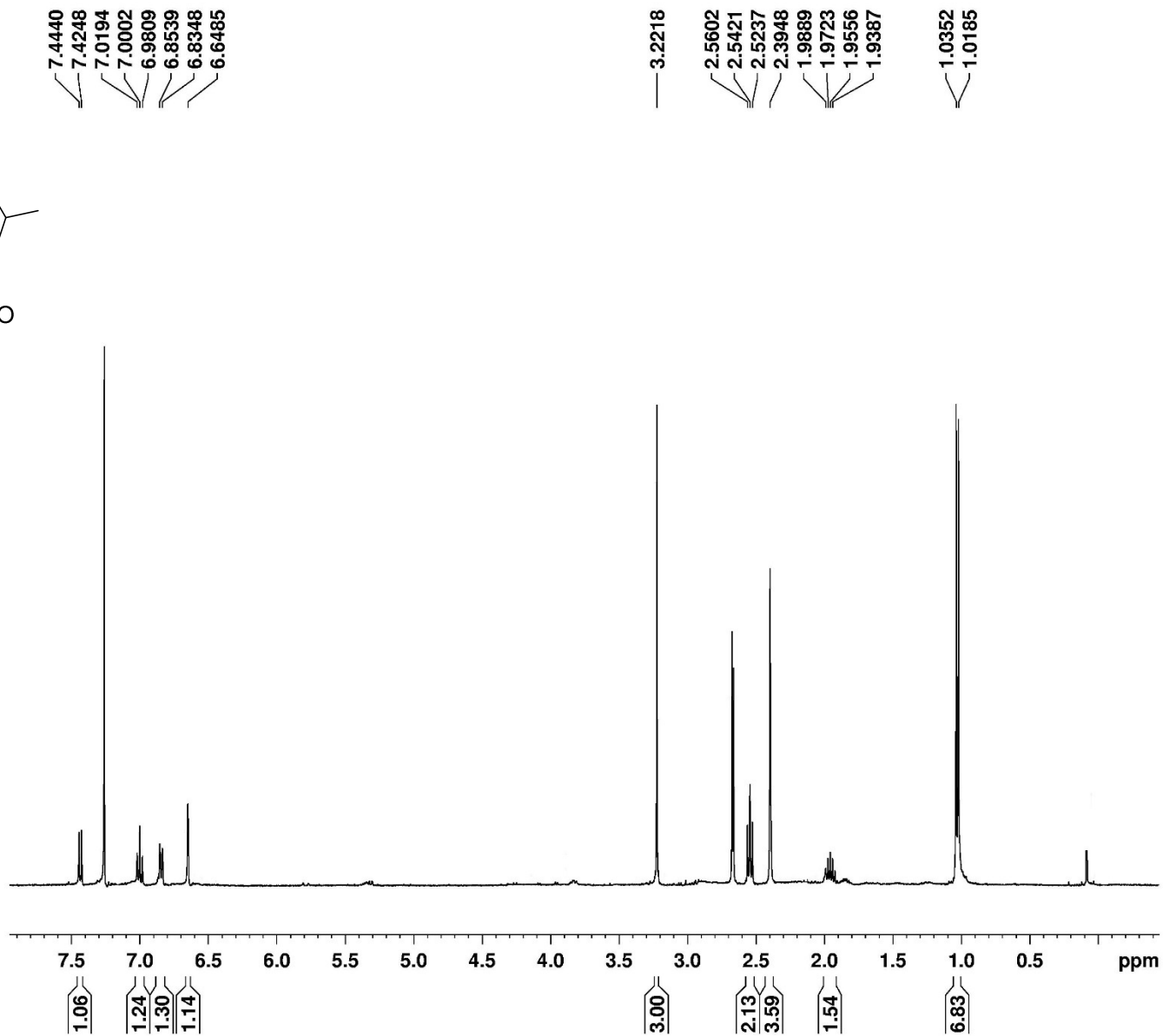
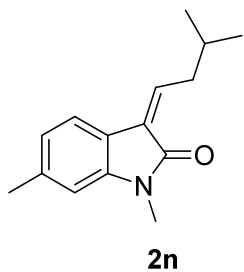
Current Data Parameters
NAME 13C
EXPNO 80
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170110
Time 4.16
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 512
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

==== CHANNEL f1 ====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.0000000 W

==== CHANNEL f2 ====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG2 waltz16
PCPD2 90.00 usec
PLW2 13.0000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



SM 80 F
1H, CDCl₃

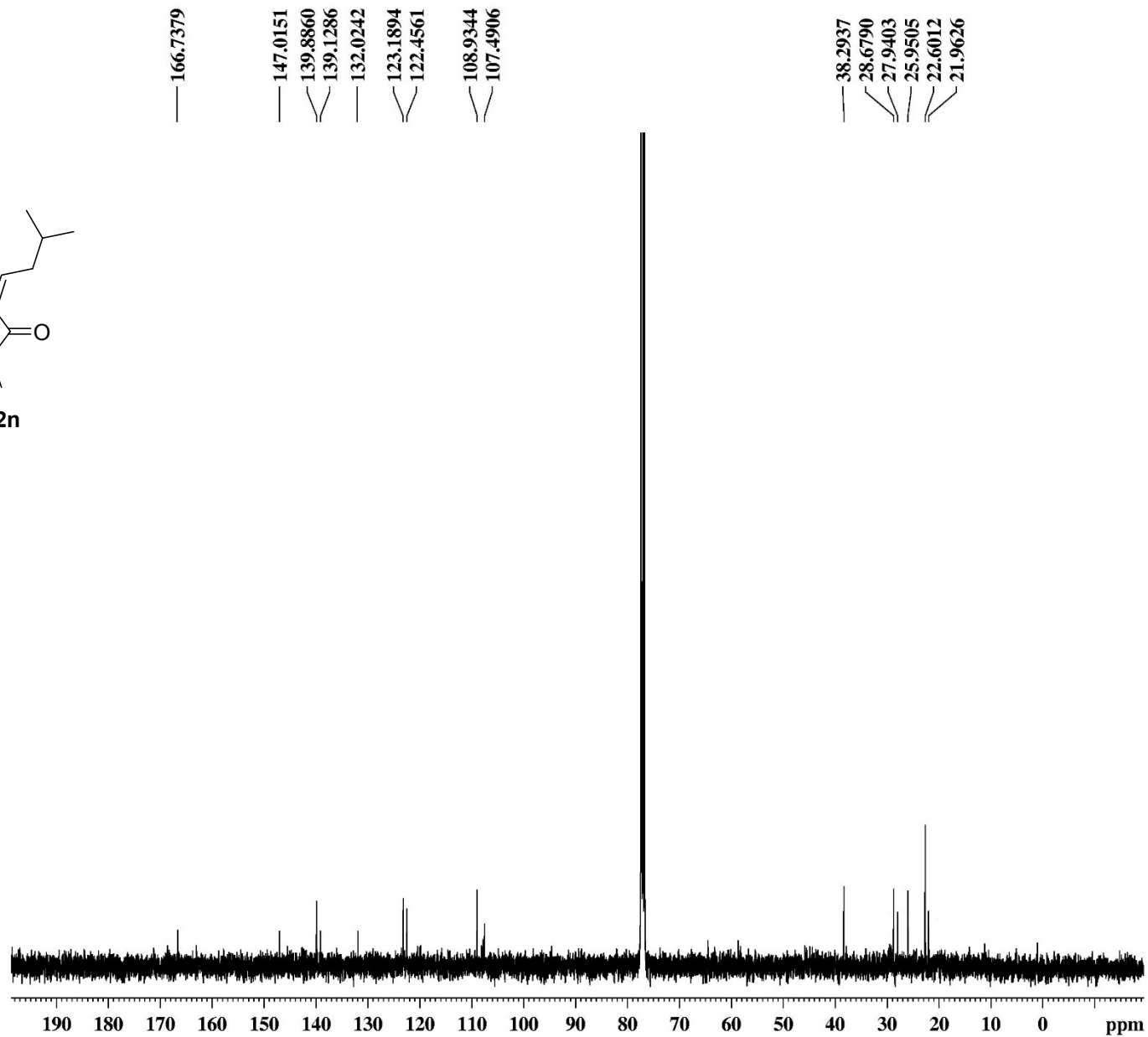
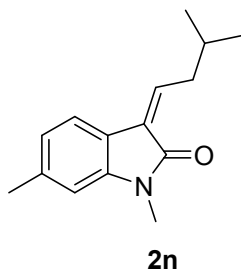
Current Data Parameters
NAME SM-80F
EXPNO 200
PROCNO 1

F2 - Acquisition Parameters
Date_ 20170109
Time 18.26
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 8
DS 0
SWH 9615.385 Hz
FIDRES 0.146719 Hz
AQ 3.4078720 sec
RG 129.57
DW 52.000 usec
DE 6.50 usec
TE 295.6 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
SFO1 400.1629712 MHz
NUC1 1H
P1 13.20 usec
PLW1 13.00000000 W

F2 - Processing parameters
SI 65536
SF 400.1605099 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

¹H -NMR Spectrum of **2n**



^{13}C -NMR Spectrum of **2n**

SLK-80F
13C, CDCl₃

Current Data Parameters
NAME SM-801T
EXPNO 120
PROCNO 1

F2 - Acquisition Parameters
Date 20170110
Time 22.35
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 1024
DS 0
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631488 sec
RG 201.48
DW 20.800 usec
DE 6.50 usec
TE 300.0 K
D1 2.0000000 sec
D11 0.03000000 sec
TD0 1

==== CHANNEL f1 =====
SFO1 100.6304993 MHz
NUC1 13C
P1 9.90 usec
PLW1 53.00000000 W

==== CHANNEL f2 =====
SFO2 400.1621006 MHz
NUC2 1H
CPDPRG[2] waltz16
PCPD2 90.00 usec
PLW2 13.00000000 W
PLW12 0.27963999 W
PLW13 0.22651000 W

F2 - Processing parameters
SI 32768
SF 100.6204380 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40