

27

¹H NMR (400 MHz, CDCl₃)

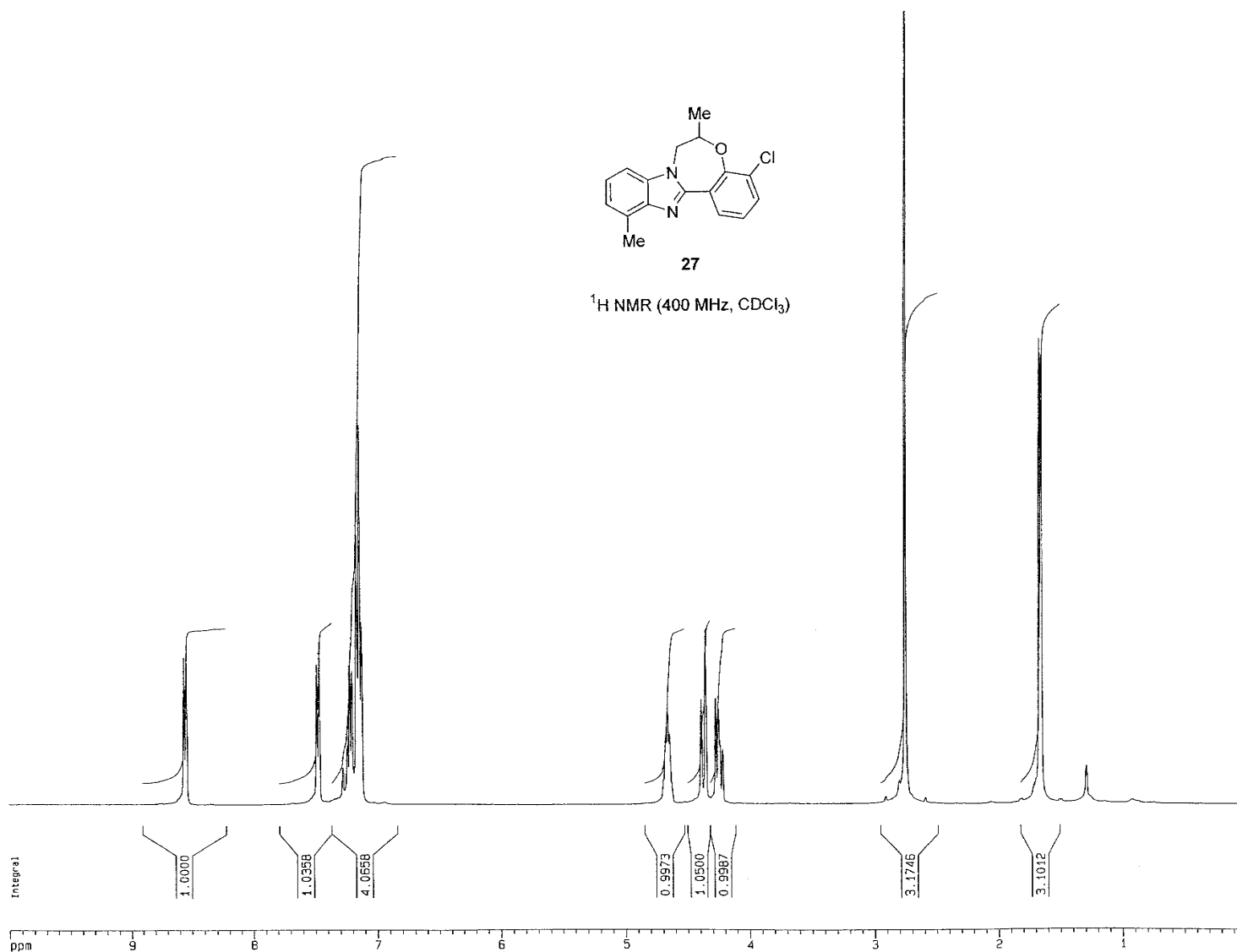
Current Data Parameters
NAME May26-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030526
Time 16.02
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 10.000 ppm
F1 4001.30 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.33333 ppm/cm
HZCM 133.37666 Hz/cm



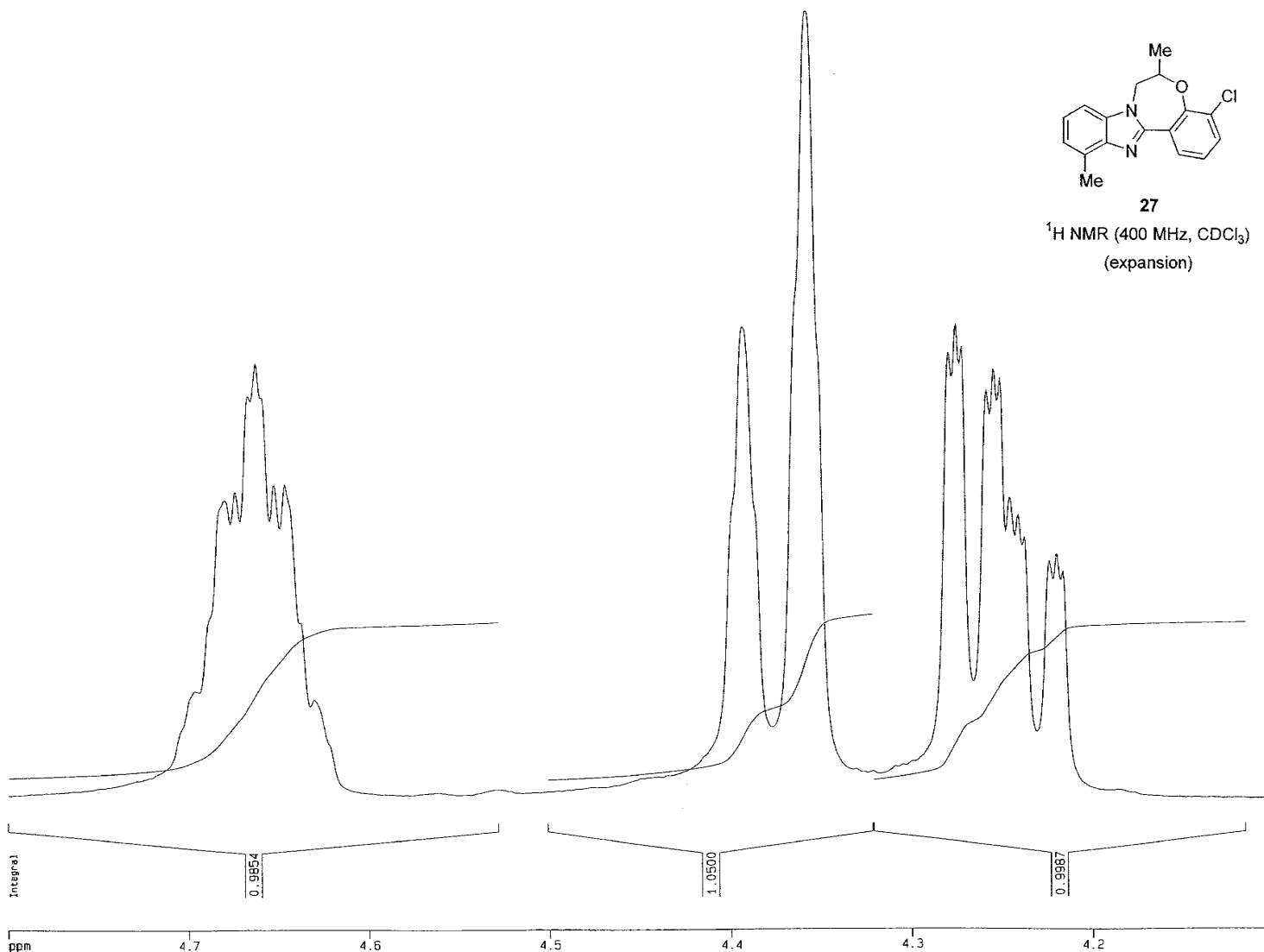
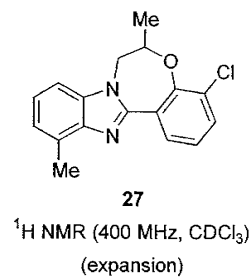
Current Data Parameters
 NAME May26-2003
 EXPNO 10
 PROCNO 1

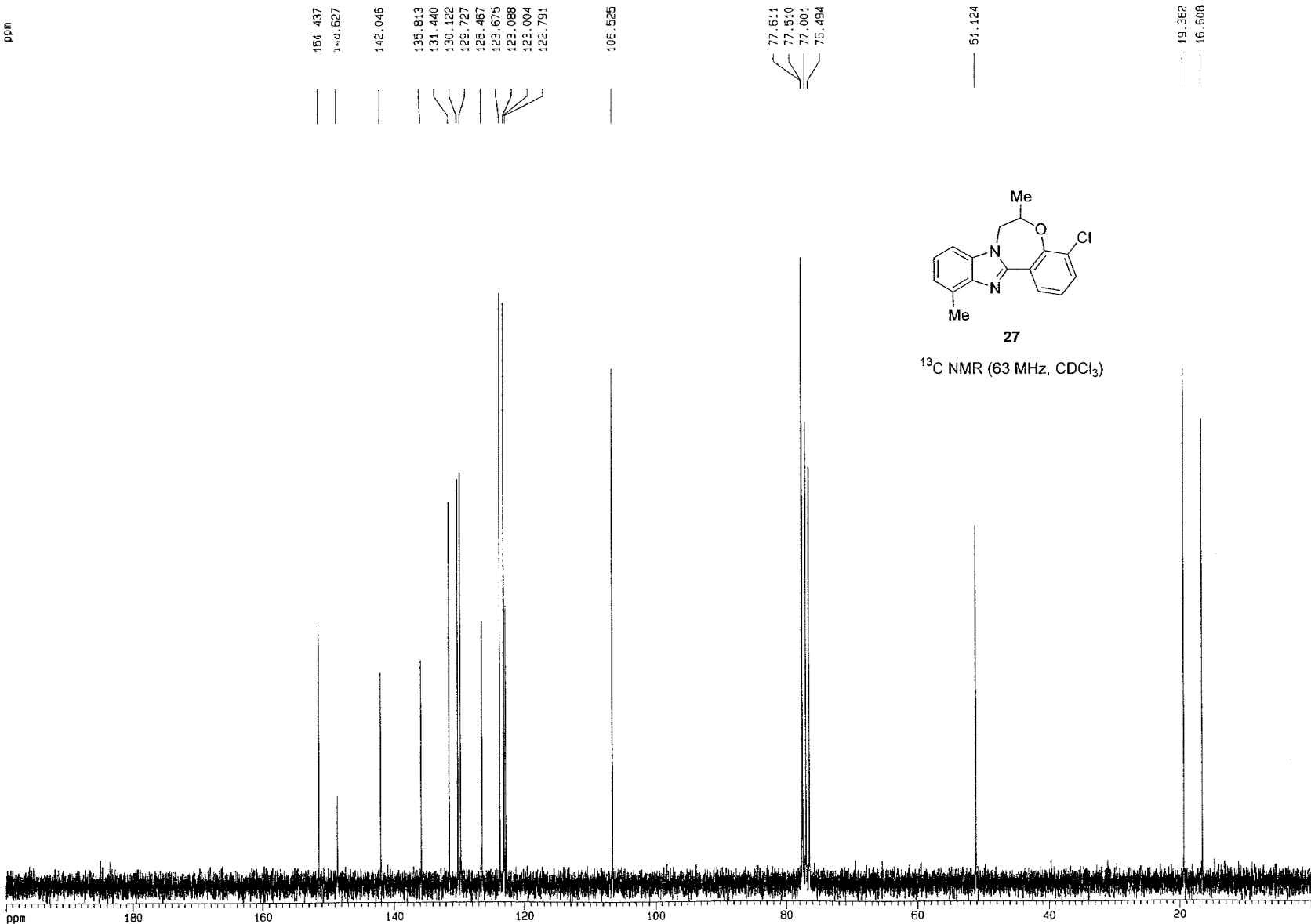
F2 - Acquisition Parameters
 Date_ 20030526
 Time 16.02
 INSTRUM spect
 PROBHD 5 mm BBO BB-
 PULPROG zg30
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 90.5
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.0000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

10 NMR plot parameters
 CX 30.00 cm
 F1P 4.800 ppm
 F1 1920.52 Hz
 F2P 4.100 ppm
 F2 1640.53 Hz
 PPMCM 0.02333 ppm/cm
 HZCM 9.33637 Hz/cm





Current Data Parameters
NAME May26-2003
EXPNO 20
PROCNO 1

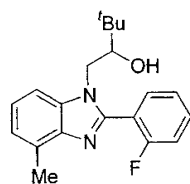
F2 - Acquisition Parameters
Date_ 20030526
Time 15.06
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 560
DS 4
SWH 15723.271 Hz
FIDRES 0.239918 Hz
AQ 2.0640948 sec
RG 13004
DM 31.800 usec
DE 30.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.0002000 sec

===== CHANNEL f1 =====
NUC1 13C
P1 8.00 usec
PL1 0.00 dB
SF01 62.9021320 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -4.00 dB
PL12 15.00 dB
PL13 17.00 dB
SF02 250.1310005 MHz

F2 - Processing parameters
SI 32768
SF 62.8952435 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.40

10 NMR plot parameters
CX 34.00 cm
F1P 200.000 ppm
F1 12579.05 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 5.88235 ppm/cm
HZCM 369.97202 Hz/cm



28

¹H NMR (400 MHz, CDCl₃)

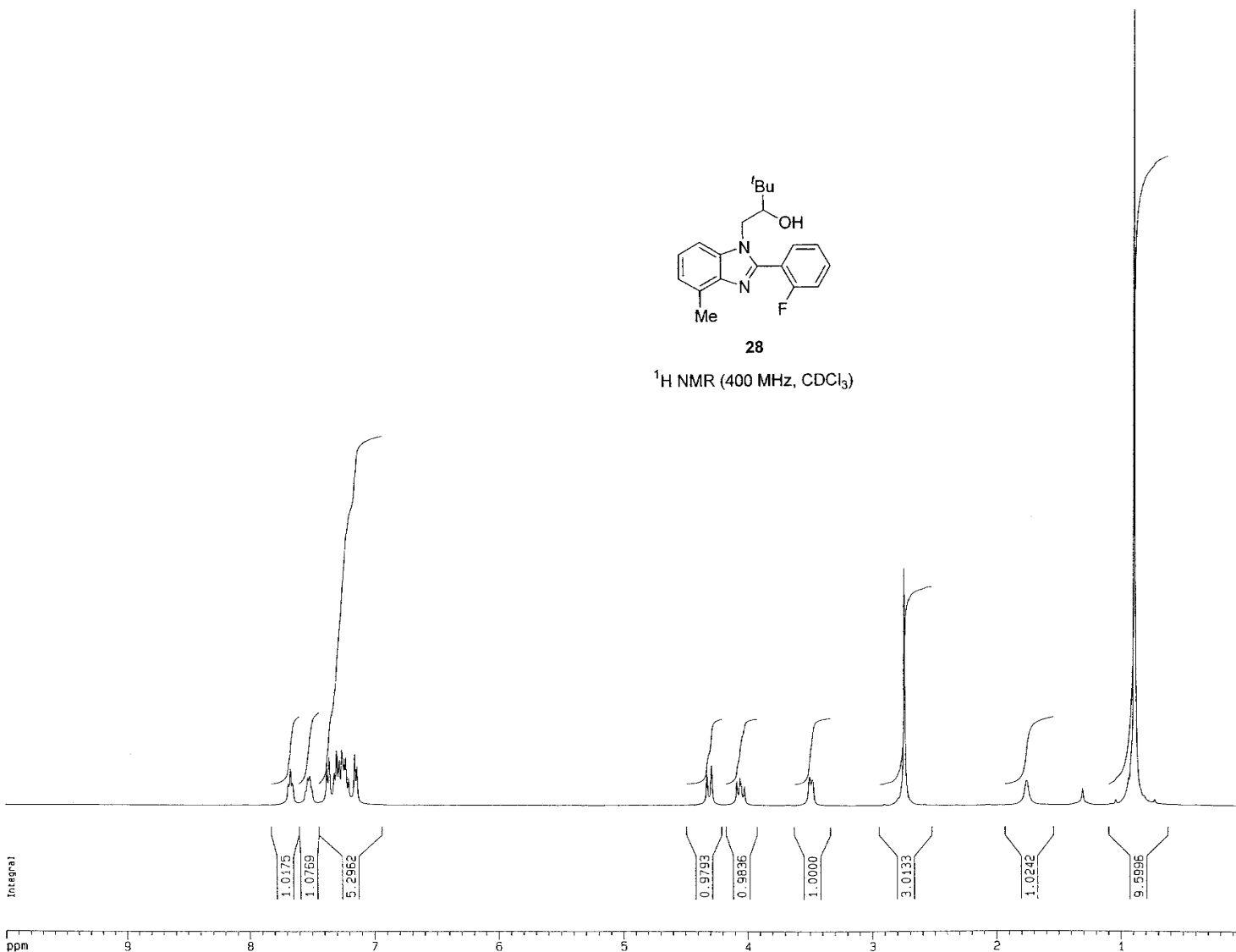
Current Data Parameters
NAME Jan11-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030111
Time 15.53
INSTRUM spect
PROBHD 5 mm BBD BB-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 10.000 ppm
F1 4001.30 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.33333 ppm/cm
HZCM 133.37666 Hz/cm



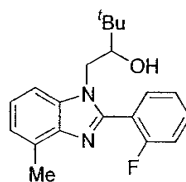
Current Data Parameters
 NAME Jan11-2003
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030111
 Time 15.53
 INSTRUM spect
 PROBHD 5 mm BB0 BB-1
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 90.5
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

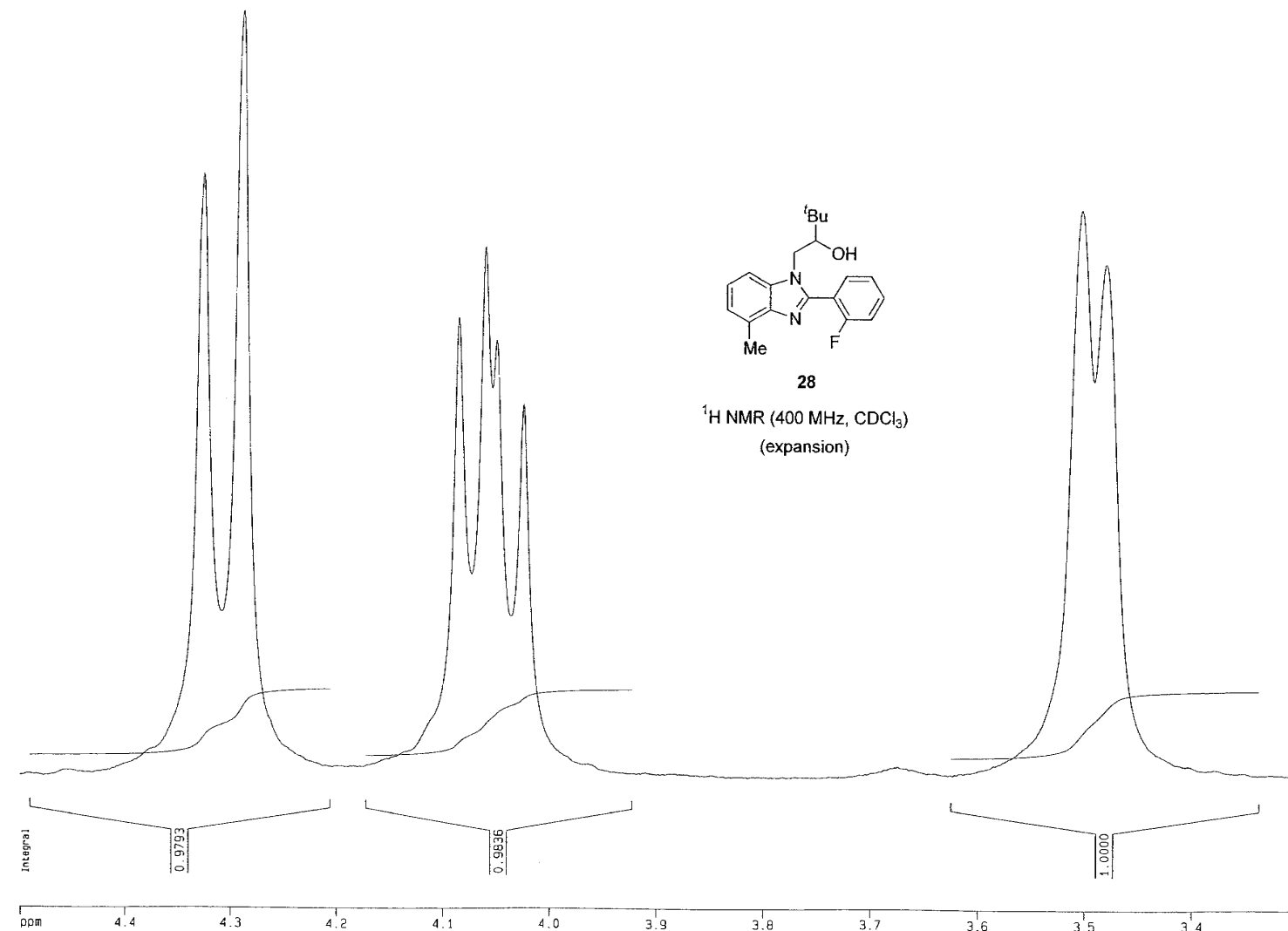
F2 - Processing parameters
 SI 32768
 SF 400.130000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

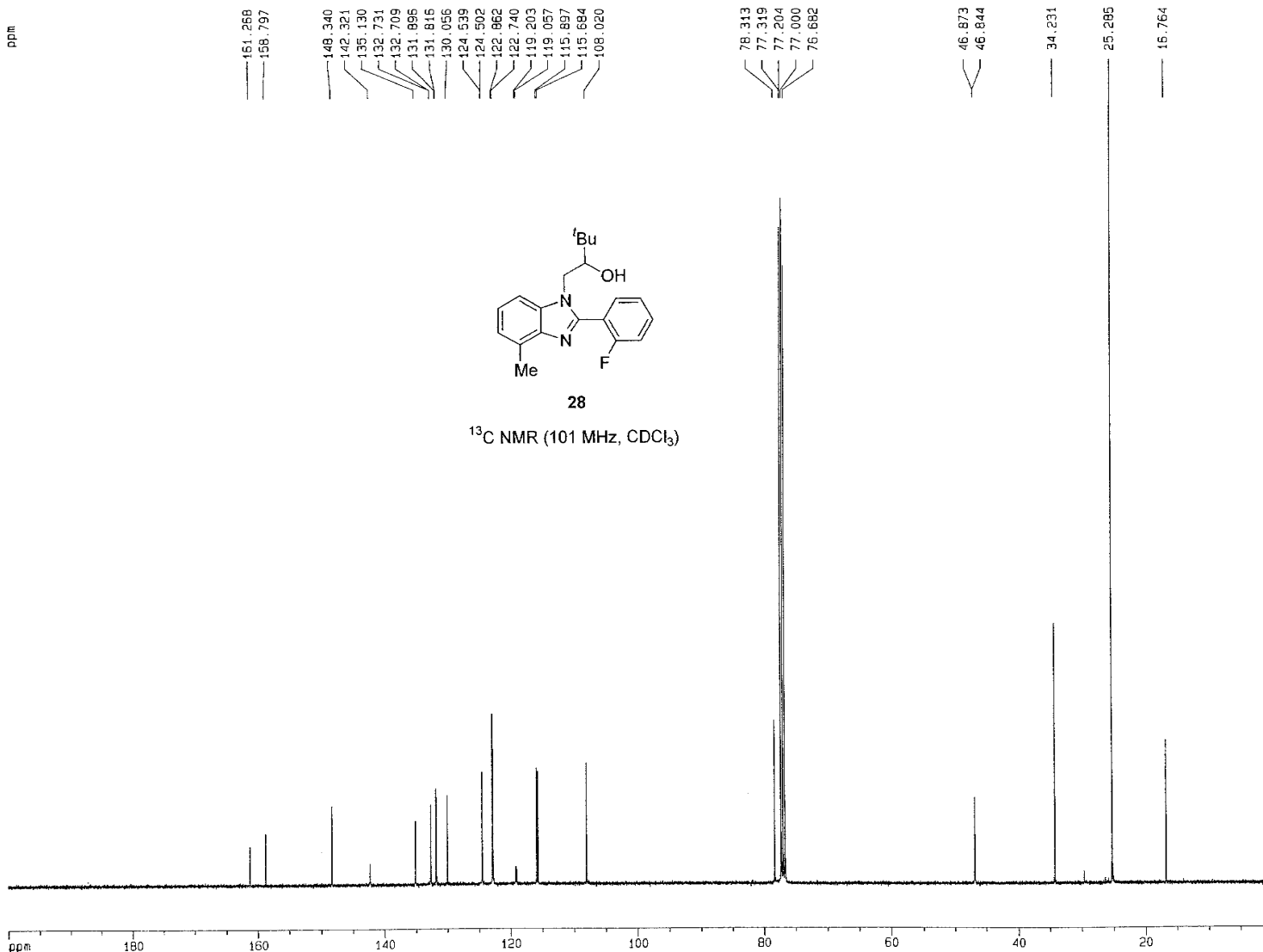
1D NMR plot parameters
 CX 30.00 cm
 F1P 4.500 ppm
 F1 1800.58 Hz
 F2P 3.300 ppm
 F2 1320.43 Hz
 PPMCM 0.04000 ppm/cm
 HZCM 16.00520 Hz/cm



28

¹H NMR (400 MHz, CDCl₃)
 (expansion)





Current Data Parameters
 NAME Jan12-2003
 EXPNO 30
 PROCNO 1

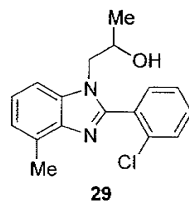
F2 - Acquisition Parameters
 Date_ 20030113
 Time 4.58
 INSTRUM spect
 PROBHD 5 mm BBO BB-i
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl_3
 NS 10000
 DS 4
 SWH 25125.629 Hz
 FIDRES 0.383387 Hz
 AQ 1.3042164 sec
 RG 4096
 DW 19.900 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

===== CHANNEL f1 =====
 NUC1 ^{13}C
 P1 5.90 usec
 PL1 -6.00 dB
 SF01 100.6237959 MHz

===== CHANNEL f2 =====
 CPOPRG2 waltz16
 NUC2 ^1H
 PCPD2 80.00 usec
 PL2 -6.00 dB
 PL12 15.80 dB
 PL13 15.80 dB
 SF02 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127784 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 30.00 cm
 F1P 200.000 ppm
 F1 20122.55 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 6.66667 ppm/cm
 HZCM 670.75177 Hz/cm



¹H NMR (400 MHz, CDCl₃)

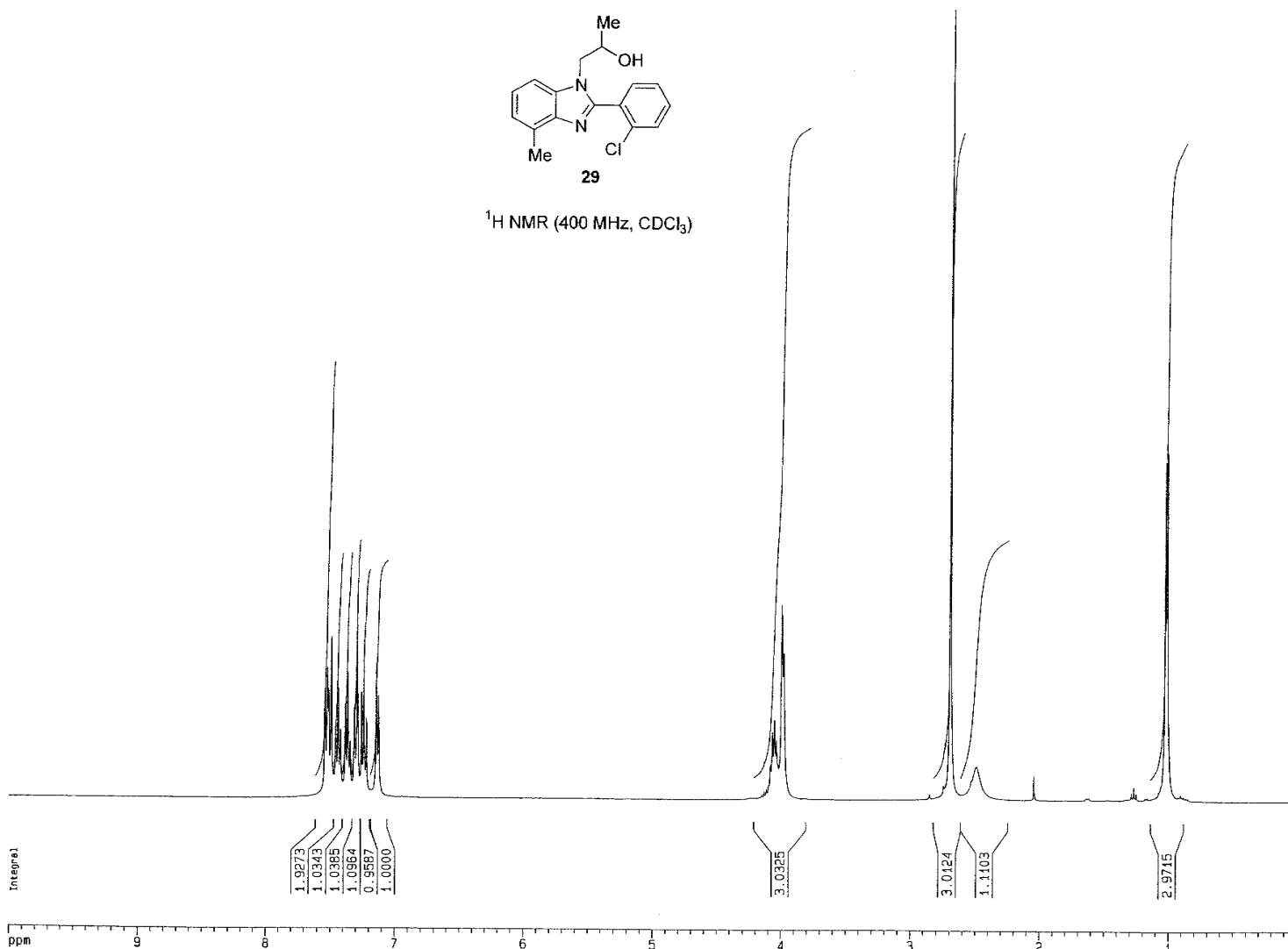
Current Data Parameters
NAME Jul13-2003
EXPNO 30
PROCNO 1

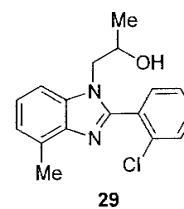
F2 - Acquisition Parameters
Date_ 20030713
Time 19.08
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DM 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SF01 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 10.000 ppm
F1 4001.30 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.33333 ppm/cm
HZCM 133.37656 Hz/cm





¹H NMR (400 MHz, CDCl₃)
(expansion)

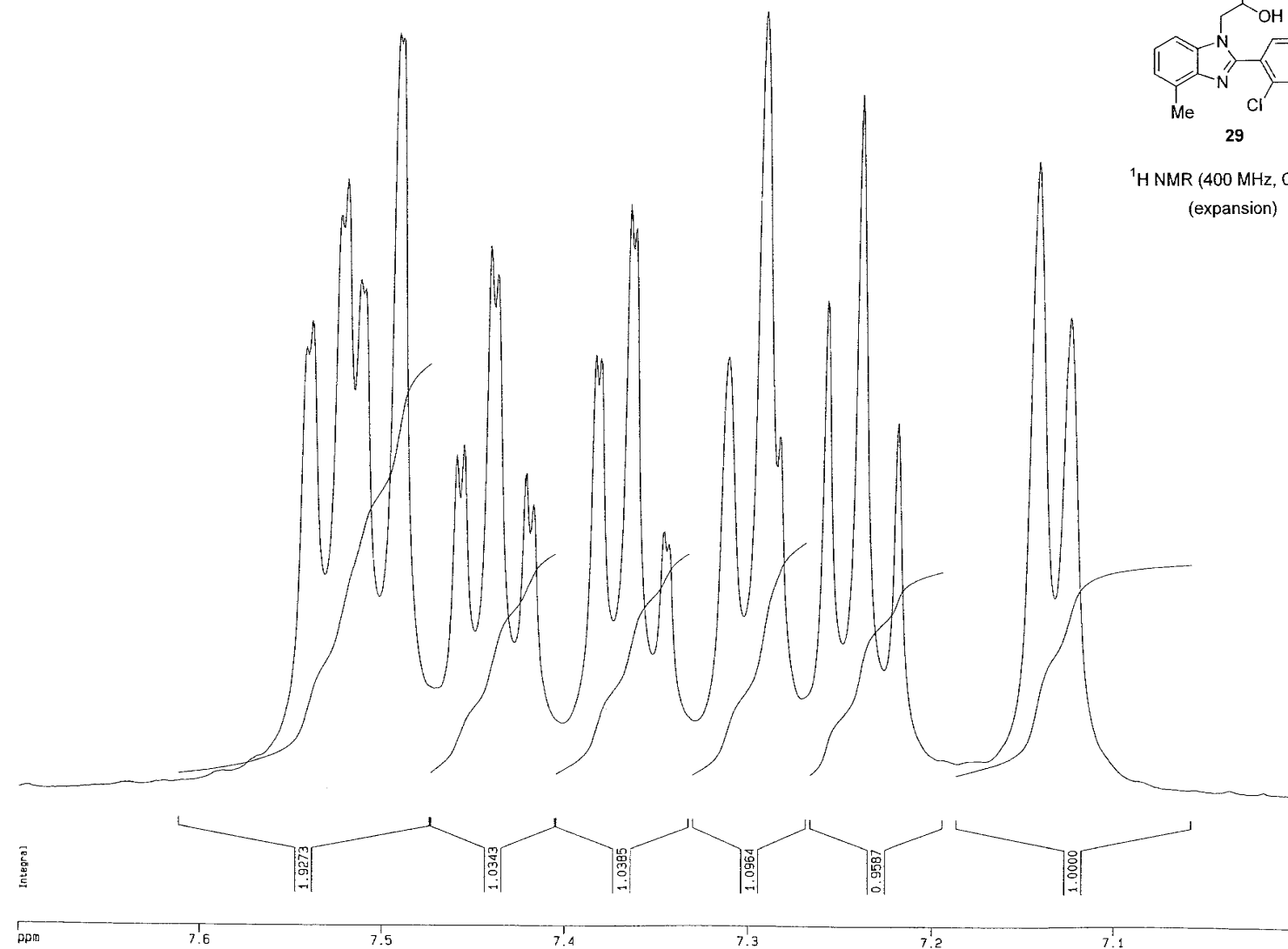
Current Data Parameters
NAME Jul13-2003
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030713
Time 19.08
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

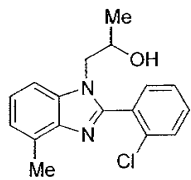
===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SF01 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

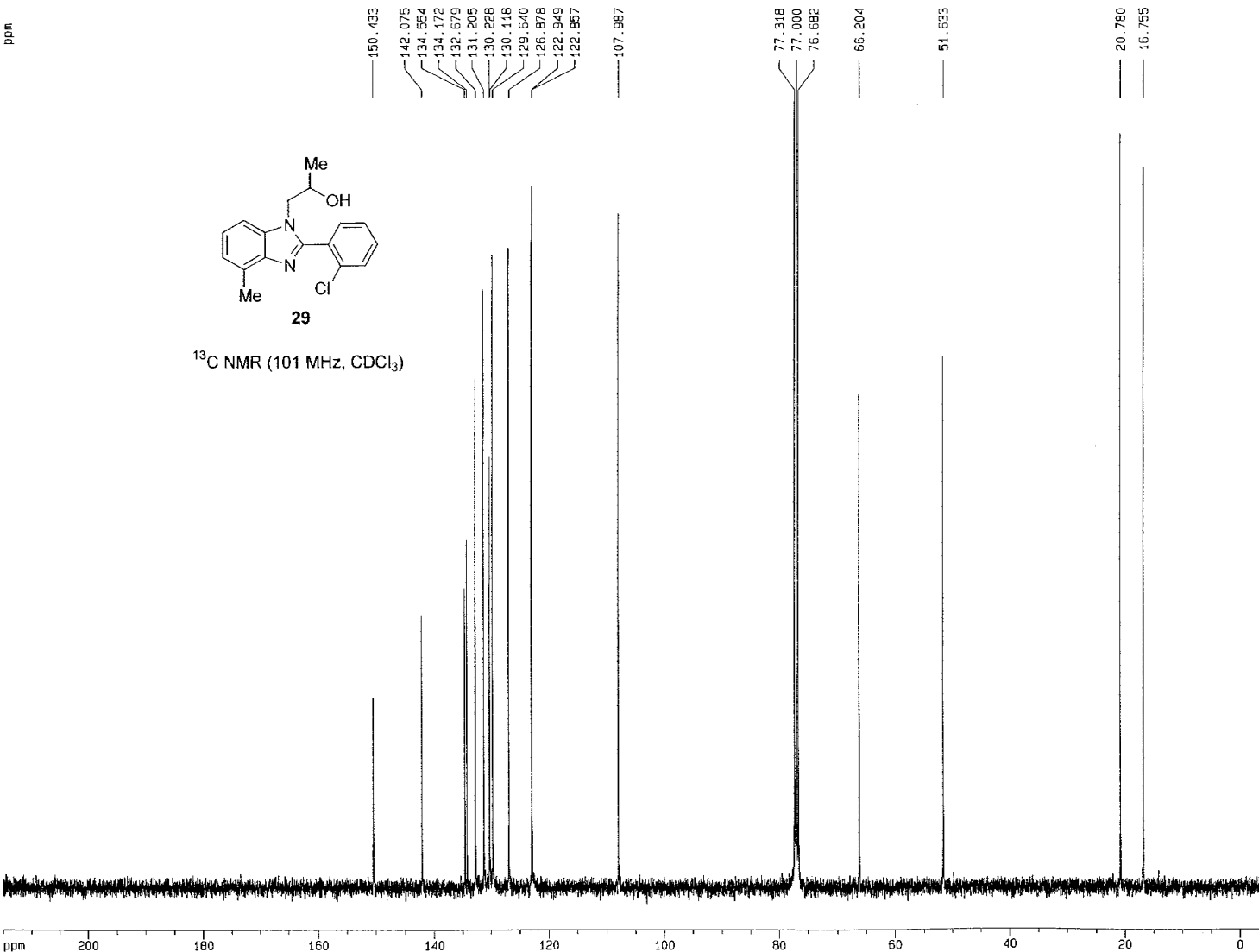
1D NMR plot parameters
CX 30.00 cm
F1P 7.700 ppm
F1 3081.00 Hz
F2P 7.000 ppm
F2 2800.91 Hz
PPMCM 0.02333 ppm/cm
HZCM 9.33636 Hz/cm



ppm



^{13}C NMR (101 MHz, CDCl_3)



Current Data Parameters

NAME Jul13-2003
EXPNO 31
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030713
Time 20.09
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 1024
DS 4
SWH 25125.629 Hz
FIDRES 0.383387 Hz
AQ 1.3042164 sec
RG 4096
DW 19.900 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

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

NUC1 13C
P1 5.90 usec
PL1 -6.00 dB
SF01 100.6237959 MHz

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

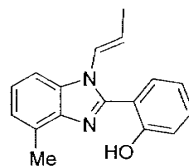
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -6.00 dB
PL12 15.80 dB
PL13 15.80 dB
SF02 400.1316005 MHz

F2 - Processing parameters

SI 32768
SF 100.6127748 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters

CX 30.00 cm
F1P 215.000 ppm
F1 21631.75 Hz
F2P -5.000 ppm
F2 -503.06 Hz
PPNCH 7.33333 ppm/cm
HZCM 737.82703 Hz/cm



E-(30)
¹H NMR (400 MHz, CDCl₃)

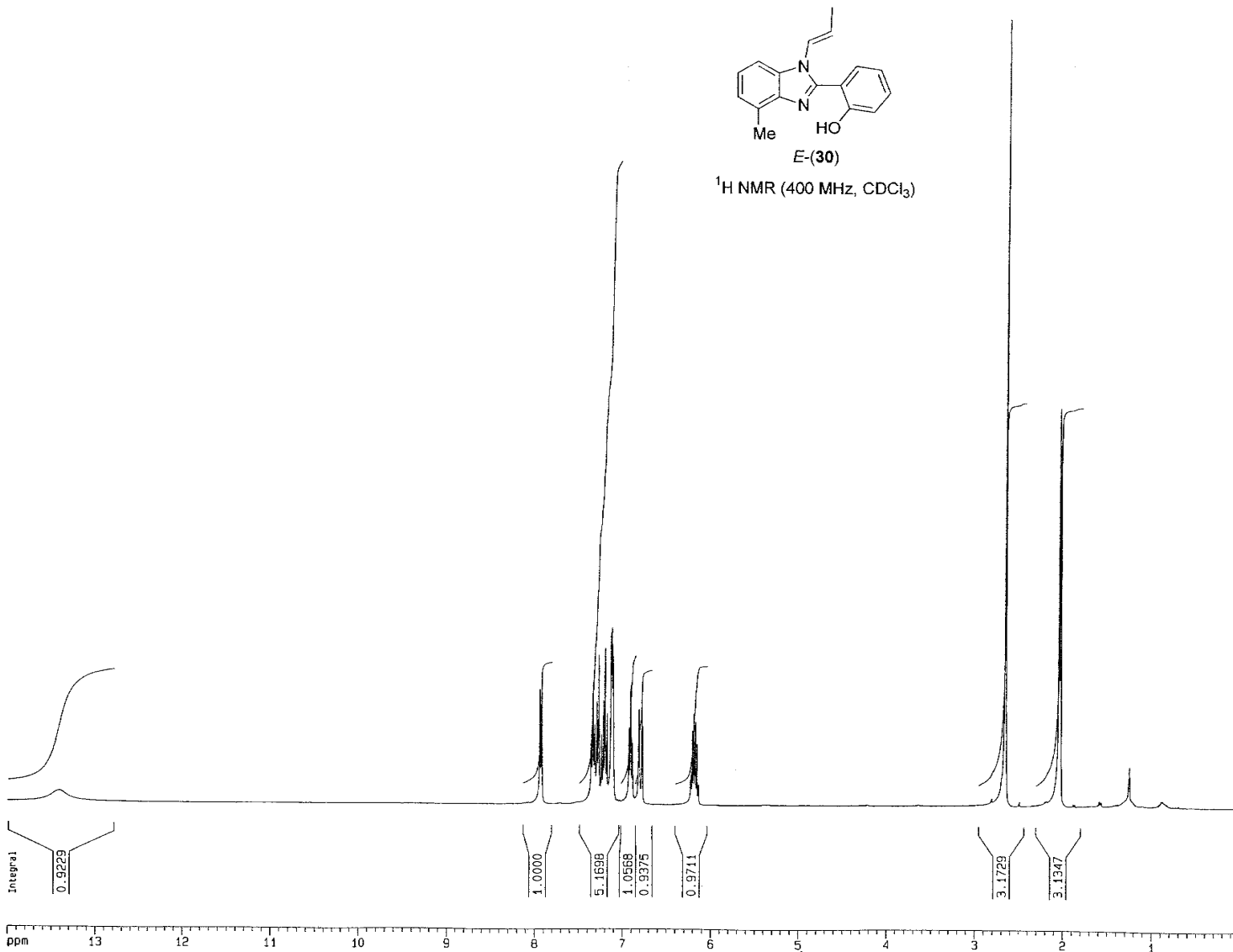
Current Data Parameters
 NAME Aug29-2003
 EXPNO 10
 PROCNO 1

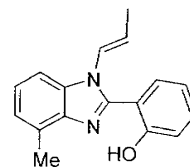
F2 - Acquisition Parameters
 Date_ 20030829
 Time 21:58
 INSTRUM spect
 PROBHD 5 mm 800 BB-
 PULPROG zg30
 TO 32768
 SOLVENT CDCl₃
 NS 16
 OS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 90.5
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 O1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300164 MHz
 WDW EN
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 14.000 ppm
 F1 5601.82 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.46667 ppm/cm
 HZCM 186.72734 Hz/cm





E-(30)

¹H NMR (400 MHz, CDCl₃)
(expansion)

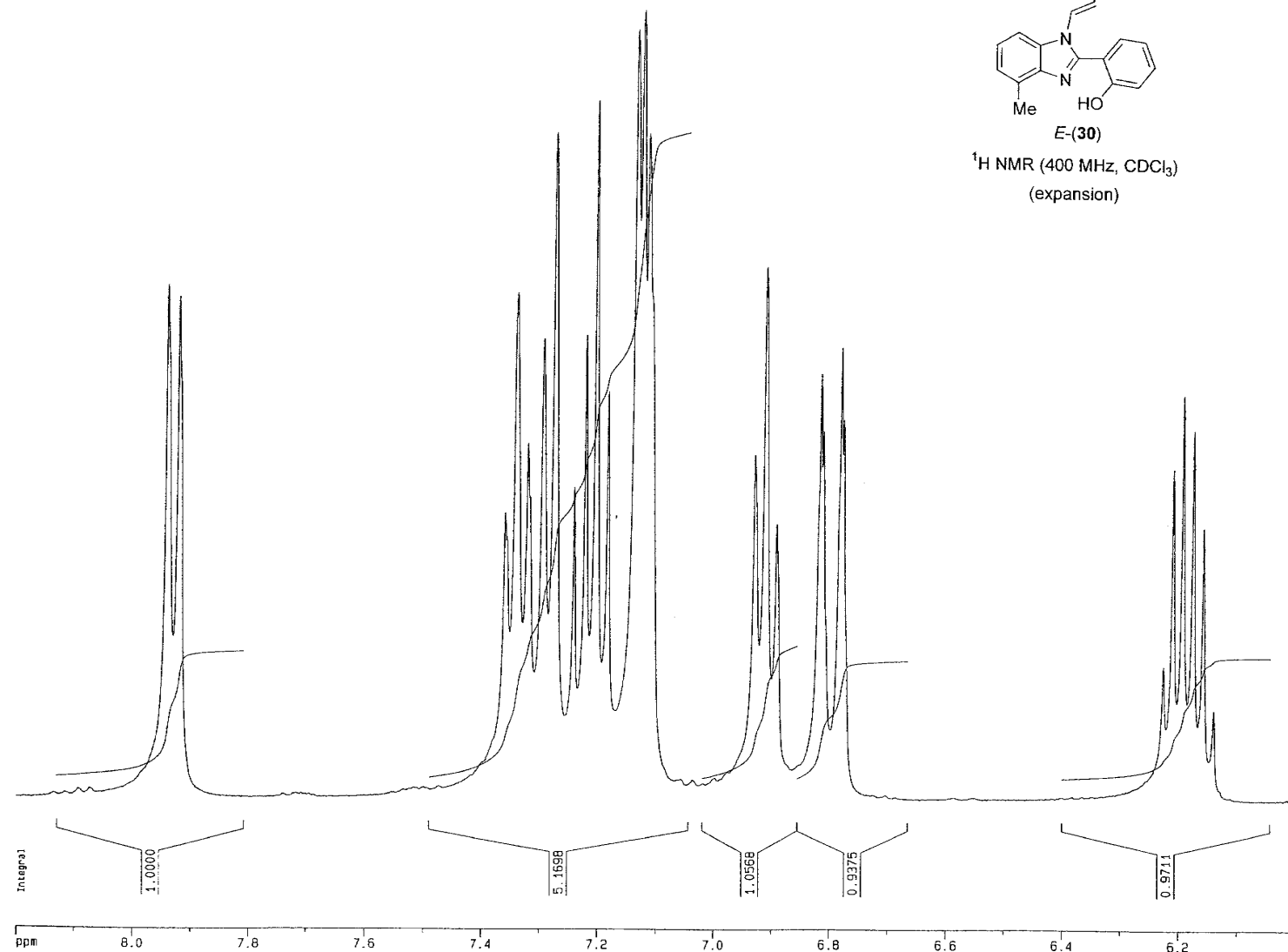
Current Data Parameters
NAME Aug29-2003
EXPNO 10
PROCNO 1

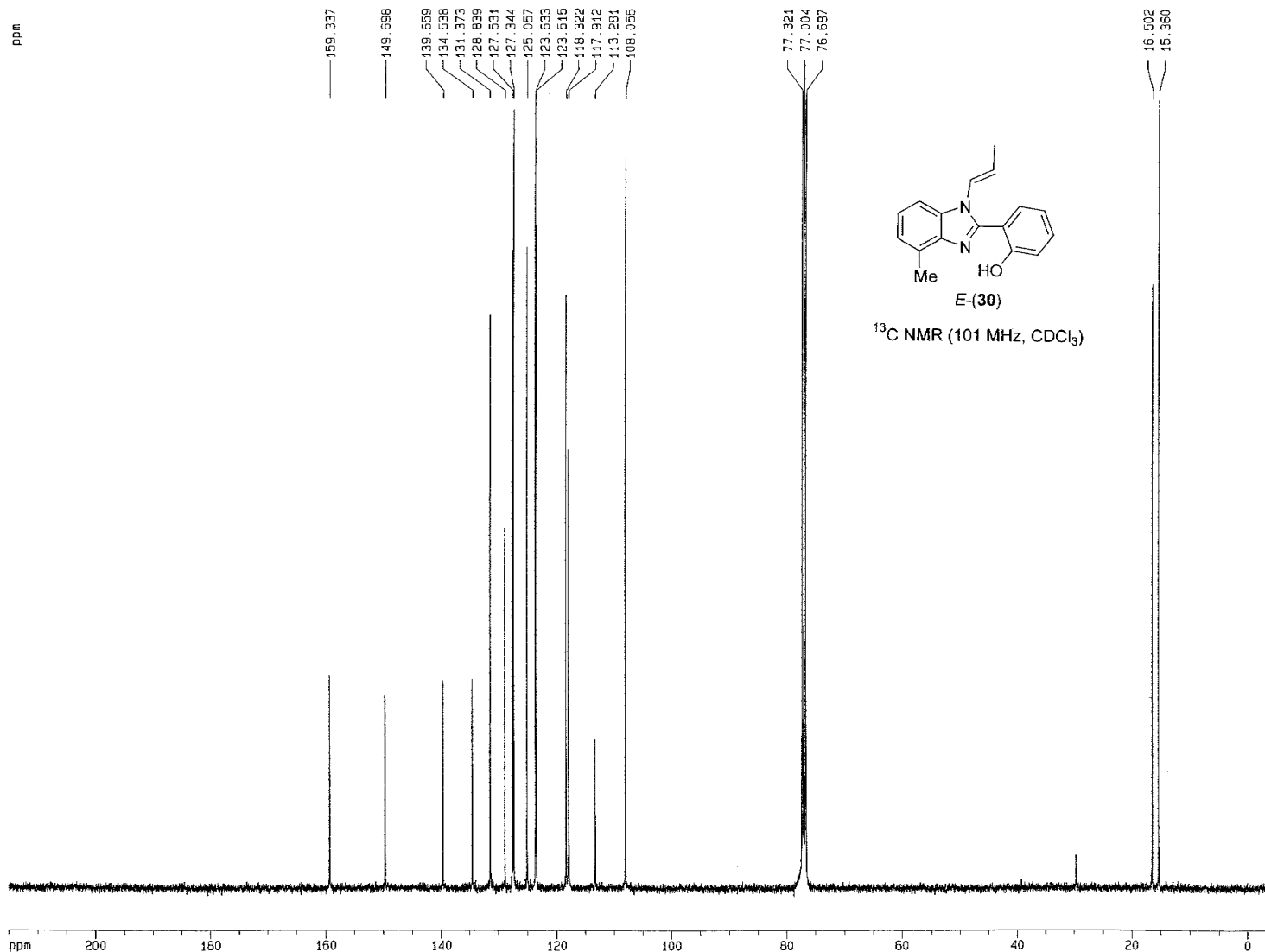
F2 - Acquisition Parameters
Date_ 20030829
Time 21.58
INSTRUM spect
PROBHD 5 mm 880 88-
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SF01 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300164 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 8.200 ppm
F1 3281.07 Hz
F2P 6.000 ppm
F2 2400.78 Hz
PPMCM 0.07333 ppm/cm
HZCM 29.34286 Hz/cm





Current Data Parameters

NAME Aug29-2003
EXPNO 12
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030830
Time 7.53
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 10500
DS 4
SWH 25125.629 Hz
FIDRES 0.383387 Hz
AQ 1.3042164 sec
RG 16384
DW 19.900 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

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

NUC1 13C
P1 5.90 usec
PL1 -6.00 dB
SF01 100.6237959 MHz

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

CPOPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -6.00 dB
PL12 15.80 dB
PL13 15.80 dB
SF02 400.1316005 MHz

F2 - Processing parameters

SI 32768
SF 100.6127709 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters

CX 30.00 cm
F1P 215.000 ppm
F1 21631.75 Hz
F2P -5.000 ppm
F2 -503.06 Hz
PPMCM 7.33333 ppm/cm
HZCM 737.62697 Hz/cm

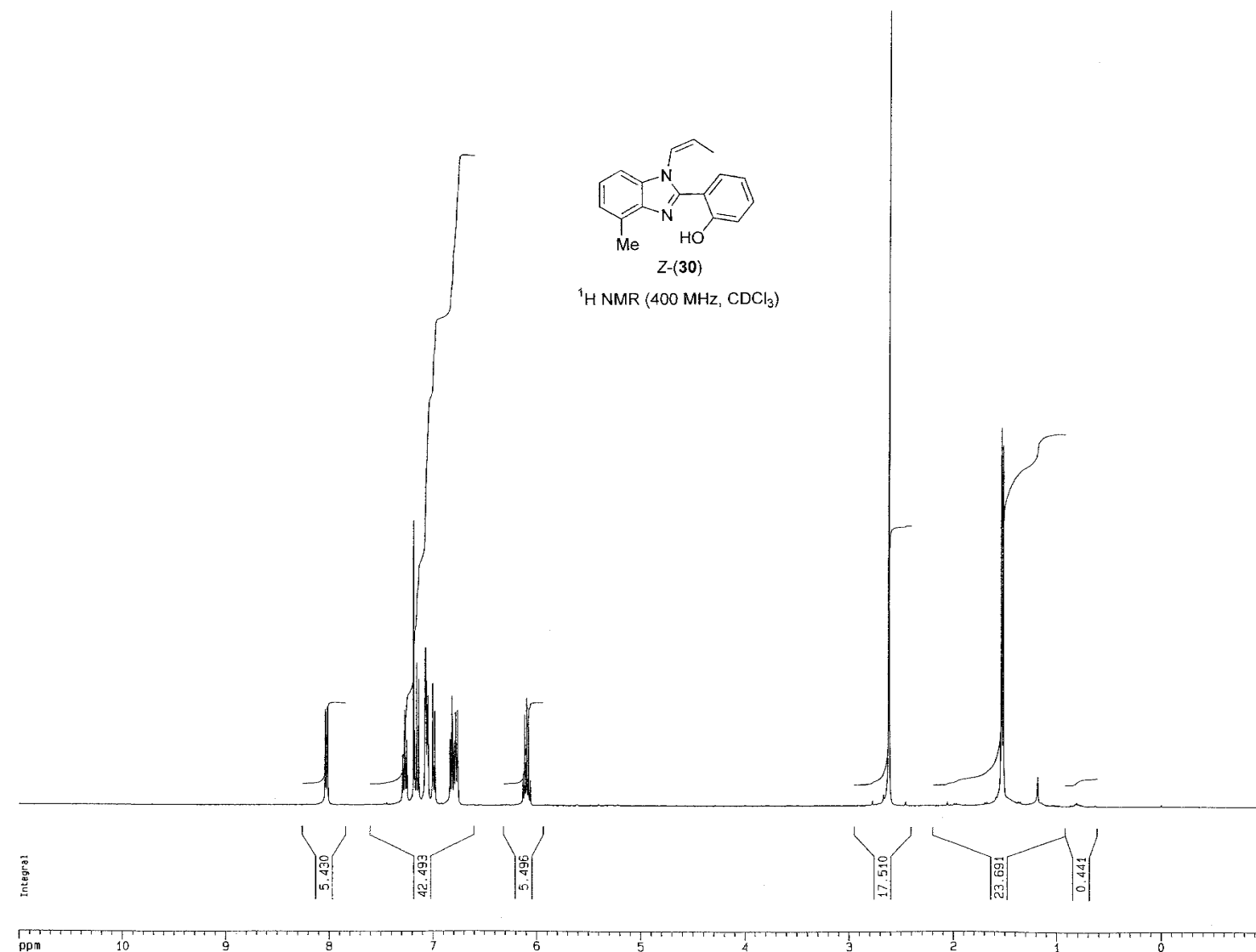
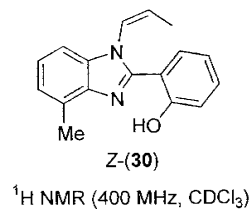
Current Data Parameters
 NAME Aug28-2003
 EXPNO 10
 PROCNO 1

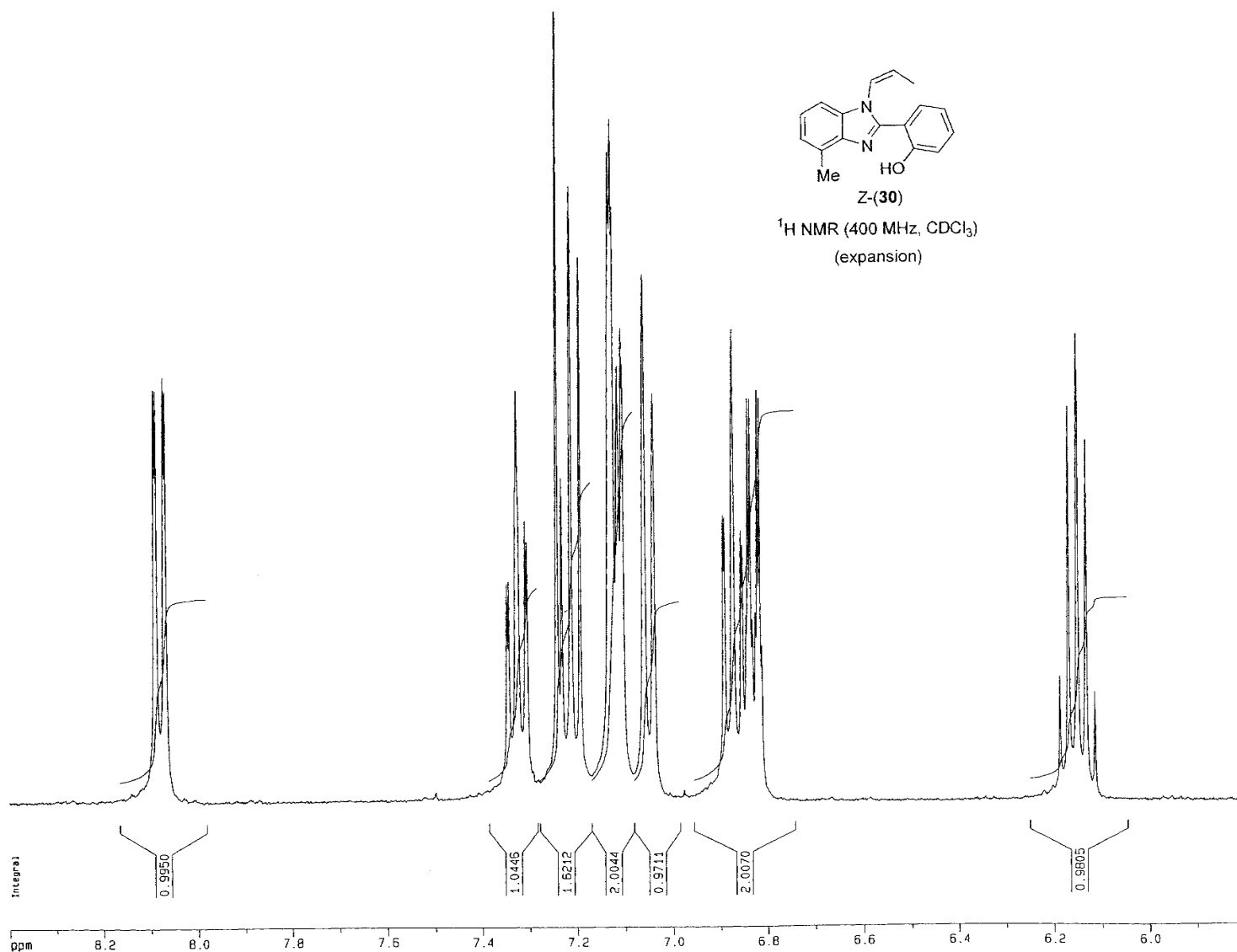
F2 - Acquisition Parameters
 Date_ 20030828
 Time 21.56
 INSTRUM spect
 PROBHD 5 mm BBO BB-
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 287.4
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.0000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300392 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 11.000 ppm
 F1 4401.43 Hz
 F2P -1.000 ppm
 F2 -400.13 Hz
 PPMCM 0.40000 ppm/cm
 HZCM 160.05202 Hz/cm





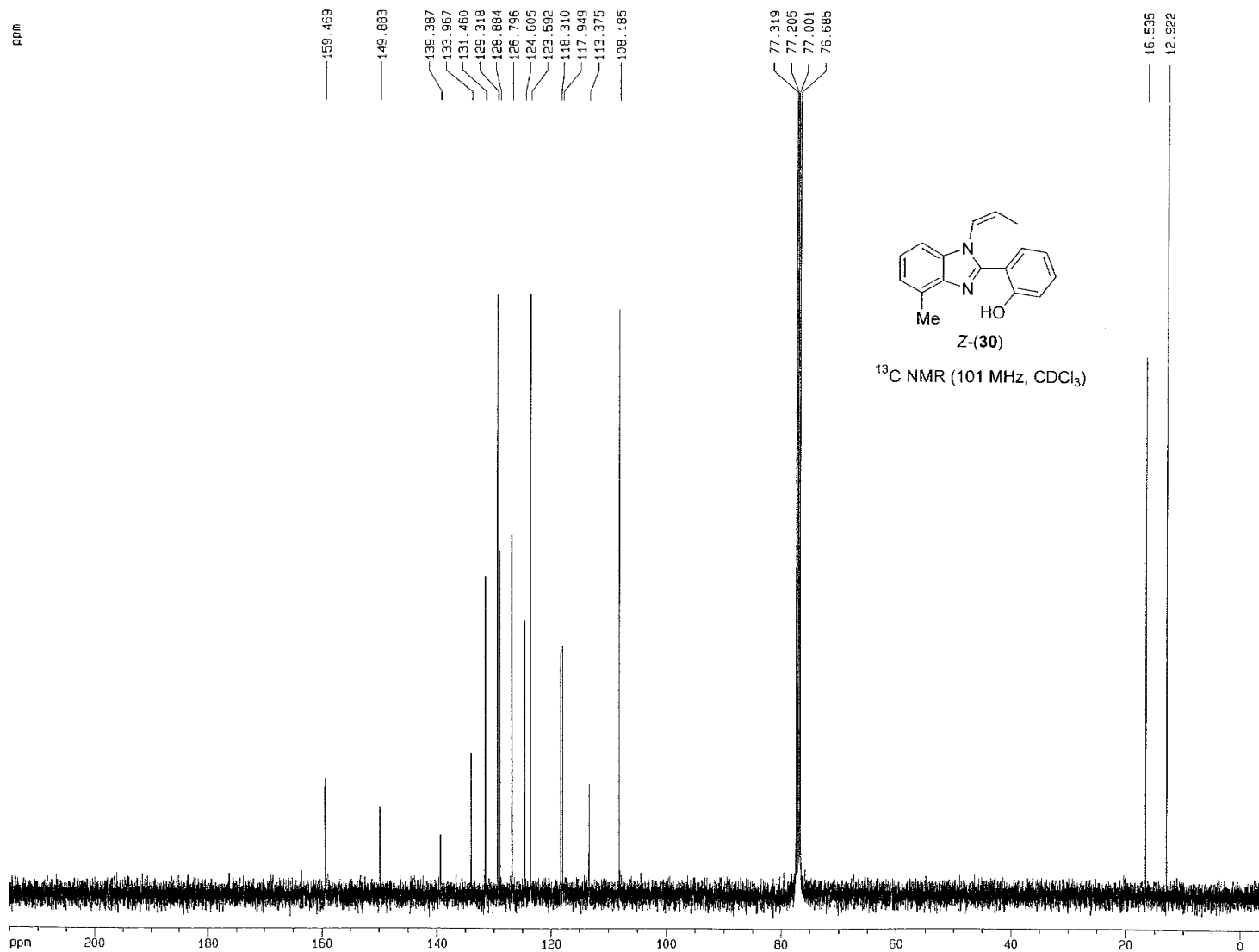
Current Data Parameters
 NAME Aug28-2003
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030828
 Time 21.56
 INSTRUM spect
 PROBHD 5 mm BBO BB-
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 287.4
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.0000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300169 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 8.400 ppm
 F1 3361.09 Hz
 F2P 5.800 ppm
 F2 2320.75 Hz
 PPMCM 0.08667 ppm/cm
 HZCM 34.67793 Hz/cm



Current Data Parameters
 NAME Aug28-2003
 EXPNO 15
 PROCNO 1

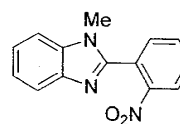
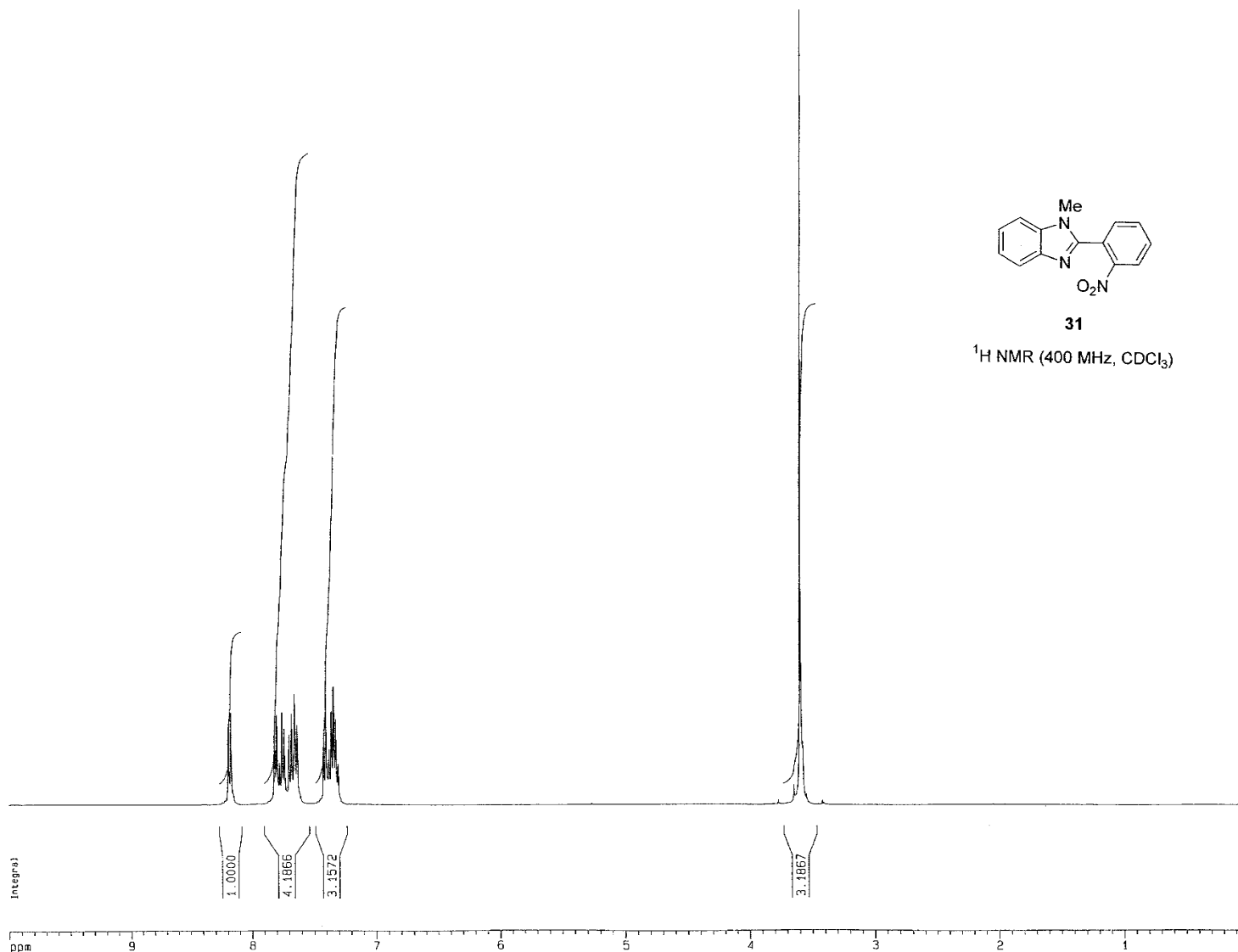
F2 - Acquisition Parameters
 Date_ 20030829
 Time 7.45
 INSTRUM spect
 PROBHD 5 mm BBO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 10400
 DS 4
 SWH 25125.629 Hz
 FIDRES 0.383387 Hz
 AQ 1.3042164 sec
 RG 16384
 DW 19.900 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

===== CHANNEL f1 =====
 NUC1 13C
 P1 5.90 usec
 PL1 -6.00 dB
 SF01 100.6237959 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -6.00 dB
 PL12 15.80 dB
 PL13 15.80 dB
 SF02 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127700 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 30.00 cm
 F1P 215.000 ppm
 F1 21631.75 Hz
 F2P -5.000 ppm
 F2 -503.06 Hz
 PPMCM 7.33333 ppm/cm
 HZCM 737.62697 Hz/cm



¹H NMR (400 MHz, CDCl₃)

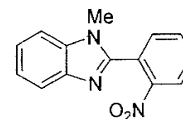
Current Data Parameters
 NAME Mar04-2003
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030304
 Time 22.01
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 40.3
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 WDN EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 10.000 ppm
 F1 4001.30 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.33333 ppm/cm
 HZCM 133.37666 Hz/cm



31

¹H NMR (400 MHz, CDCl₃)
(expansion)

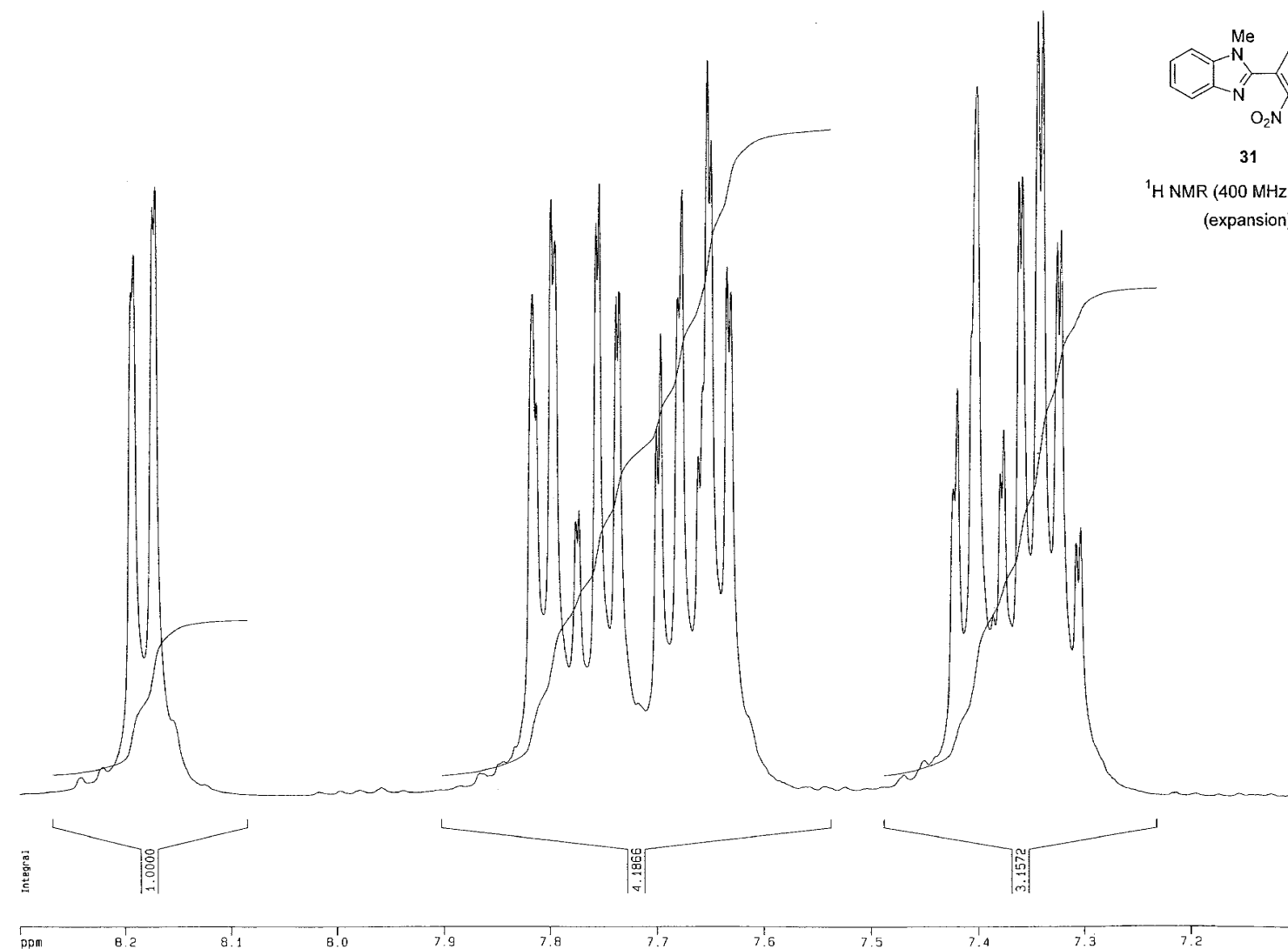
Current Data Parameters
NAME Mar04-2003
EXPNO 10
PROCNO 1

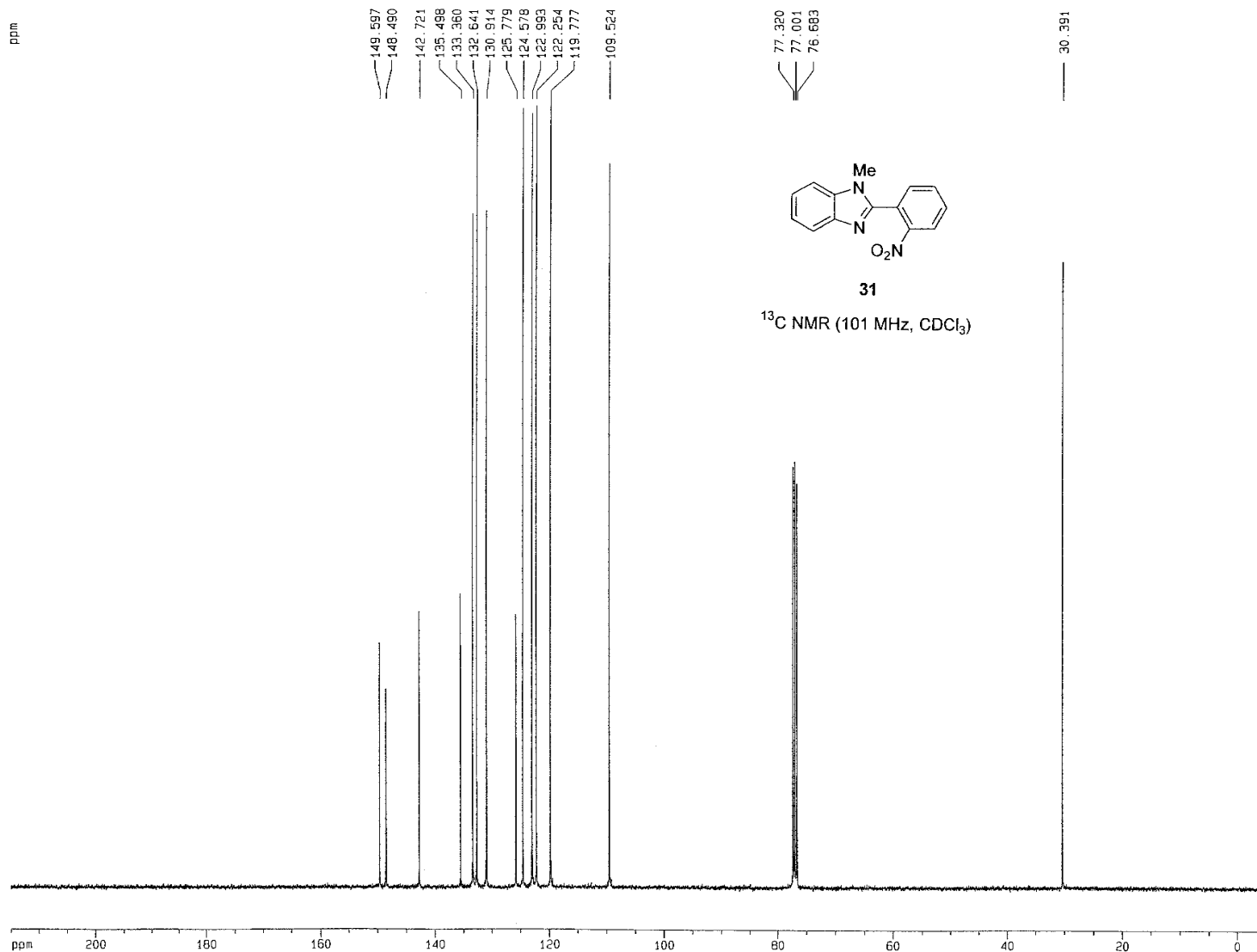
F2 - Acquisition Parameters
Date_ 20030304
Time 22.01
INSTRUM spect
PROBHD 5 mm BBO BB-1
PULPROG zg30
TD 32768
SOLVENT CDCl₃
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 40.3
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec

===== CHANNEL f1 =====
NUC1 ¹H
P1 7.50 usec
PL1 -6.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 8.300 ppm
F1 3321.08 Hz
F2P 7.100 ppm
F2 2840.92 Hz
PPMCM 0.04000 ppm/cm
HZCM 16.00520 Hz/cm





Current Data Parameters
NAME Mar04-2003
EXPNO 11
PROCNO 1

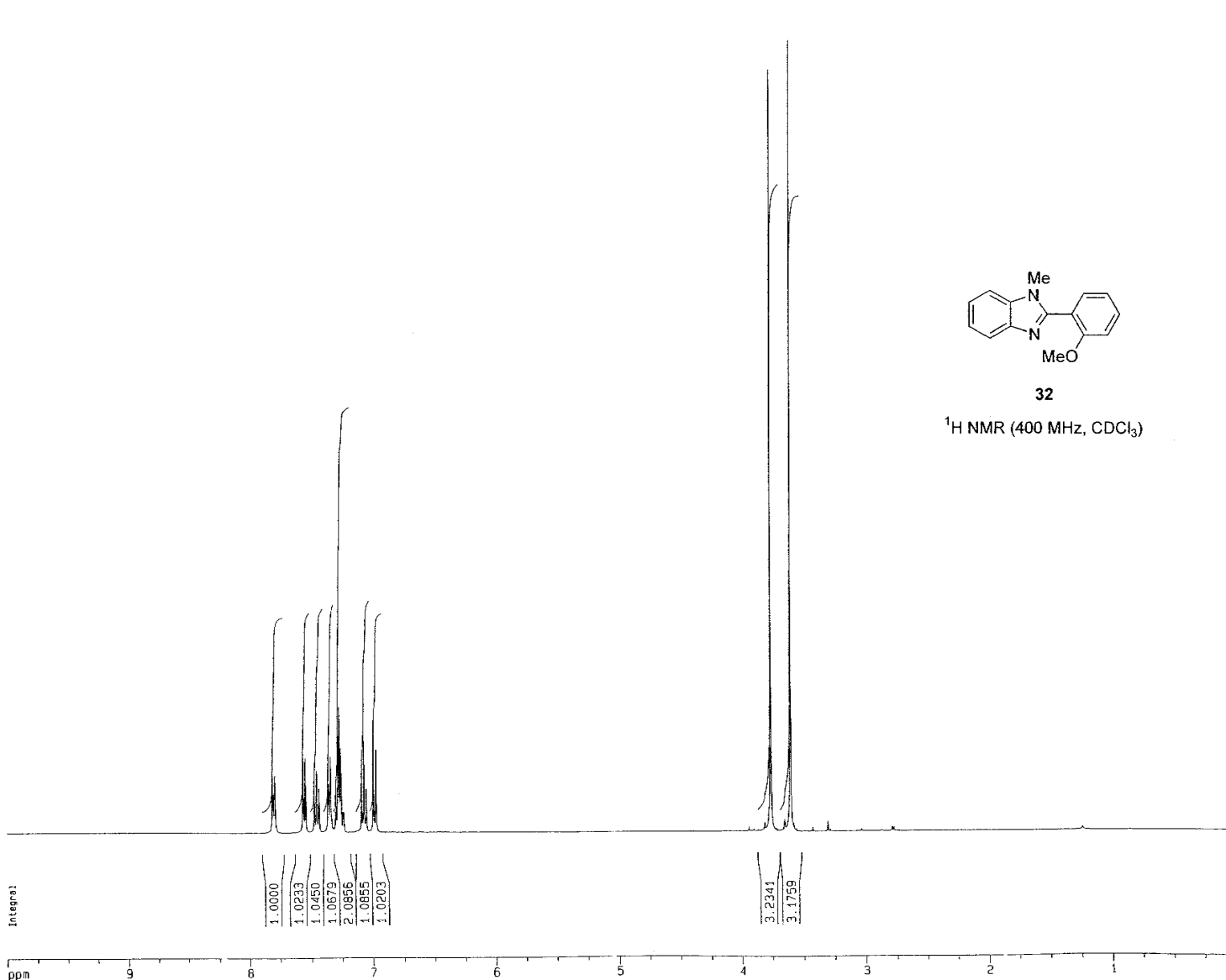
F2 - Acquisition Parameters
Date_ 20030304
Time 23.40
INSTRUM spect
PROBHD 5 mm BBO BB-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl₃
NS 1700
DS 4
SWH 25125.629 Hz
FIDRES 0.383387 Hz
AQ 1.3042164 sec
RG 8192
DW 19.900 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

===== CHANNEL f1 =====
NUC1 ¹³C
P1 5.90 usec
PL1 -6.00 dB
SF01 100.6237959 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 ¹H
PCPD2 80.00 usec
PL2 -6.00 dB
PL12 15.80 dB
PL13 15.80 dB
SF02 400.1316005 MHz

F2 - Processing parameters
SI 32768
SF 100.6127916 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters
CX 30.00 cm
F1P 215.000 ppm
F1 21631.75 Hz
F2P -5.000 ppm
F2 -503.06 Hz
PPMCM 7.33333 ppm/cm
HZCM 737.82715 Hz/cm



Current Data Parameters

NAME Jan12-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030112
Time 19.08
INSTRUM spect
PROBHD 5 mm BBO BB-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 57
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

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

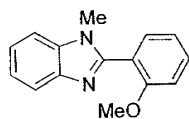
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SF01 400.1324710 MHz

F2 - Processing parameters

SI 32768
SF 400.1300268 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

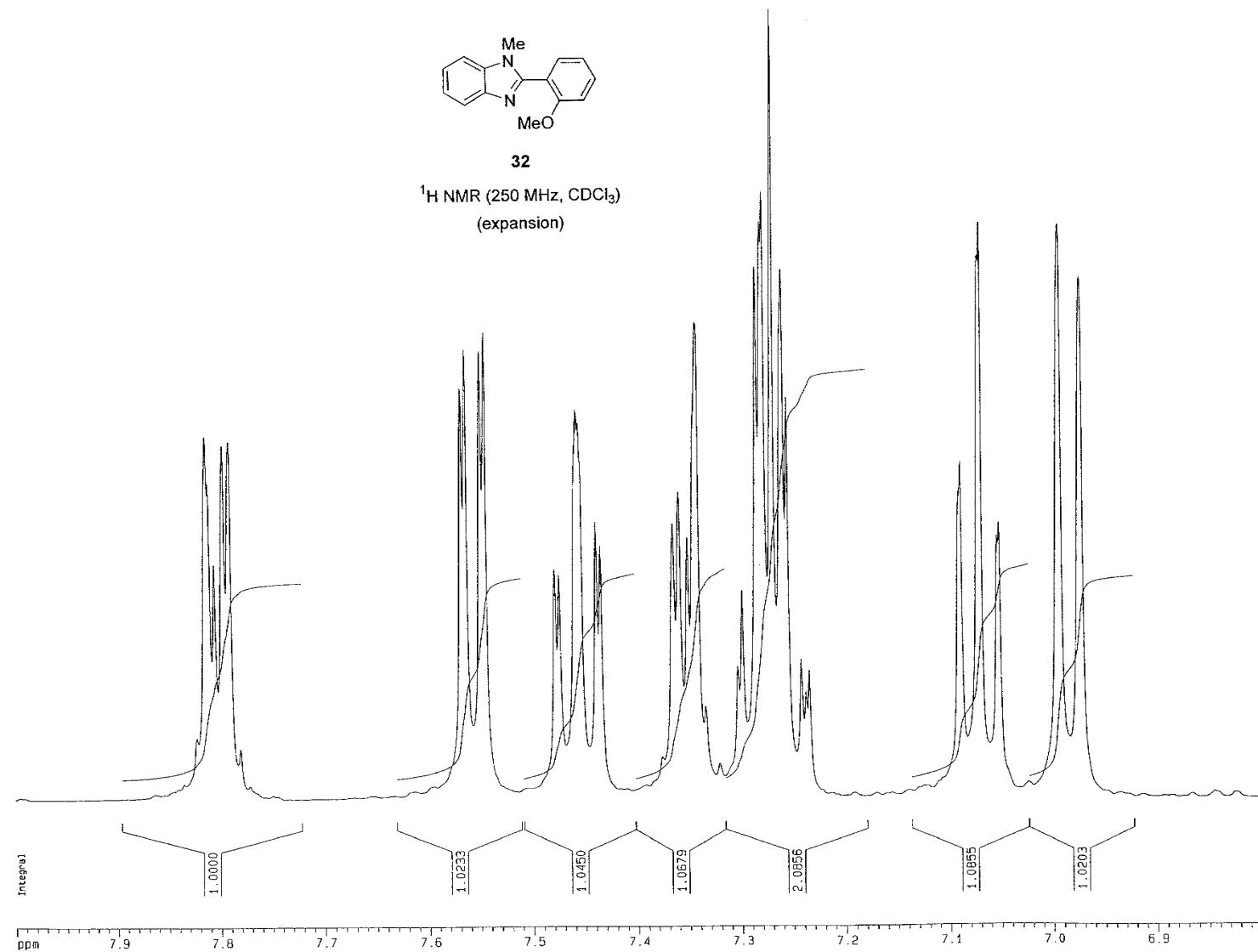
1D NMR plot parameters

CX 30.00 cm
F1P 10.000 ppm
F1 4001.30 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCH 0.33333 ppm/cm
HZCM 133.37668 Hz/cm



32

¹H NMR (250 MHz, CDCl₃)
(expansion)



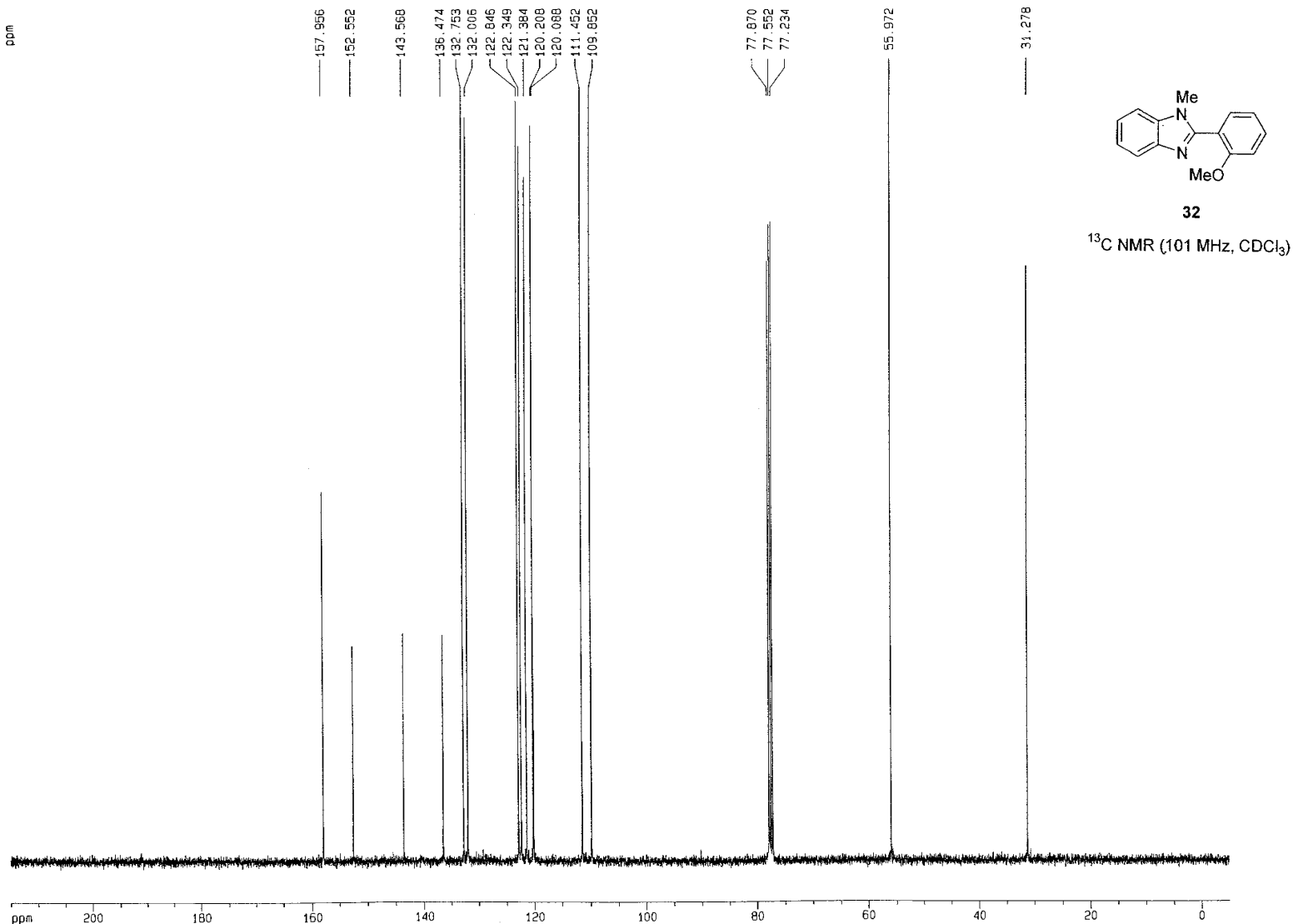
Current Data Parameters
NAME Jan12-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030112
Time 18.08
INSTRUM spect
PROBHD 5 mm BBO BB-1
PULPRDG zg30
TD 32768
SOLVENT CDCl3
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 57
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.0000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SF01 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300268 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 8.000 ppm
F1 3201.04 Hz
F2P 6.800 ppm
F2 2720.88 Hz
PPMCM 0.04000 ppm/cm
HZCM 16.00520 Hz/cm



Current Data Parameters

NAME Jan12-2003
EXPNO 11
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030112
Time 18.45
INSTRUM spect
PROBHD 5 mm BBO BB-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 25125.629 Hz
FIDRES 0.383387 Hz
AQ 1.3042164 sec
RG 4096
DN 19.900 usec
DE 6.00 usec
TE 300.0 K
O1 2.0000000 sec
d11 0.03000000 sec
d12 0.00002000 sec

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

NUC1 13C
P1 5.90 usec
PL1 -6.00 dB
SF01 100.6237959 MHz

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

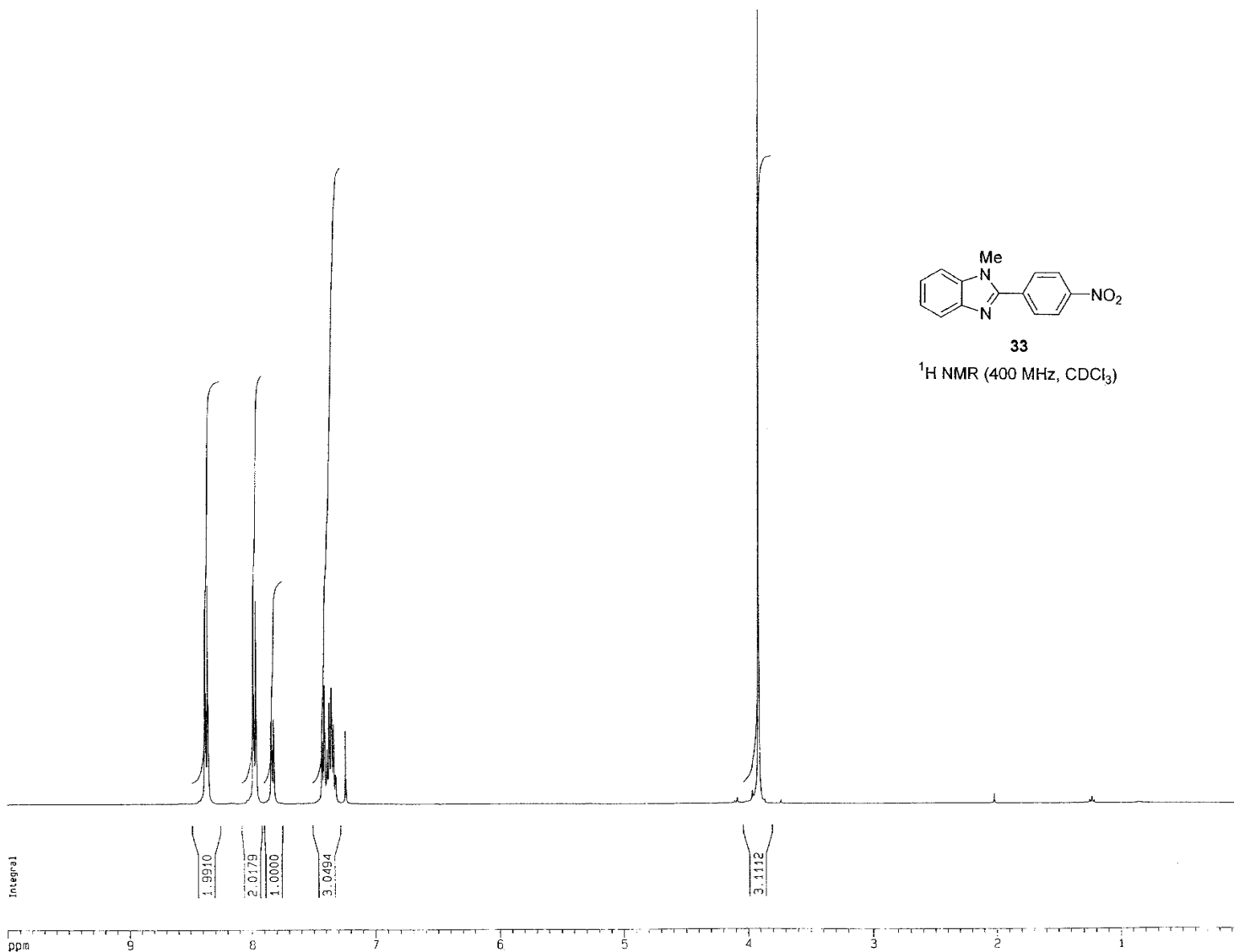
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -6.00 dB
PL12 15.80 dB
PL13 15.80 dB
SF02 400.1316005 MHz

F2 - Processing parameters

SI 32768
SF 100.6127290 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters

CX 30.00 cm
F1P 215.000 ppm
F1 21631.74 Hz
F2P -5.000 ppm
F2 -503.06 Hz
PPMCM 7.33333 ppm/cm
HZCM 737.82672 Hz/cm



Current Data Parameters
 NAME Mar02-2003
 EXPNO 20
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030302
 Time 18.47
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zg30
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 181
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300247 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 10.000 ppm
 F1 4001.30 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.33333 ppm/cm
 HZCM 133.37668 Hz/cm

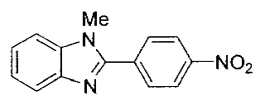
Current Data Parameters
 NAME Mar02-2003
 EXPNO 20
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030302
 Time 18.47
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH B278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 181
 OW 60.400 usec
 OE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

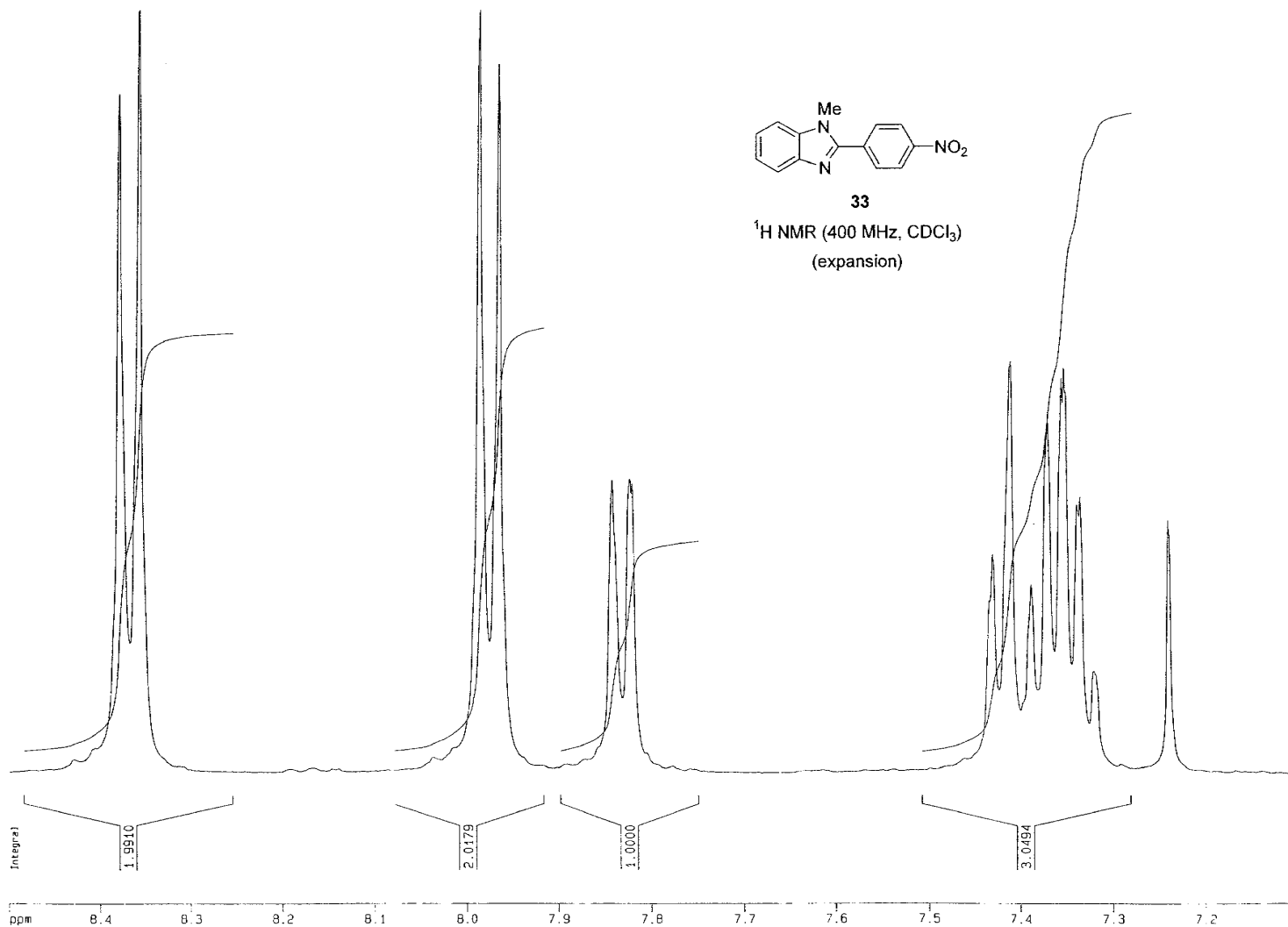
F2 - Processing parameters
 SI 32768
 SF 400.1300247 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

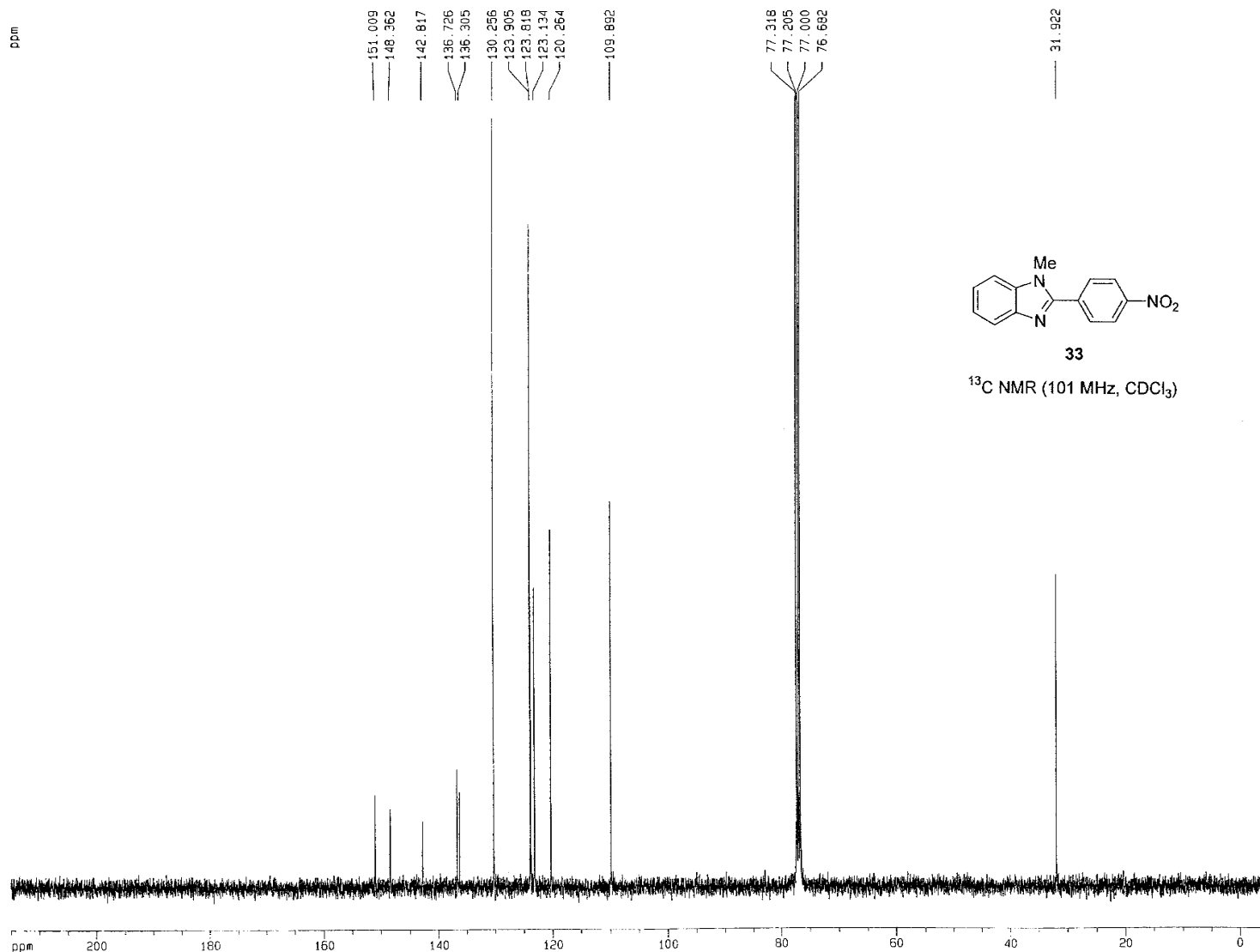
1D NMR plot parameters
 CX 30.00 cm
 F1P 8.500 ppm
 F1 3401.11 Hz
 F2P 7.100 ppm
 F2 2840.92 Hz
 PPMCM 0.04667 ppm/cm
 HZCM 18.67274 Hz/cm



33

¹H NMR (400 MHz, CDCl₃)
 (expansion)





Current Data Parameters
 NAME Mar02-2003
 EXPNO 21
 PROCNO 1

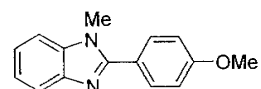
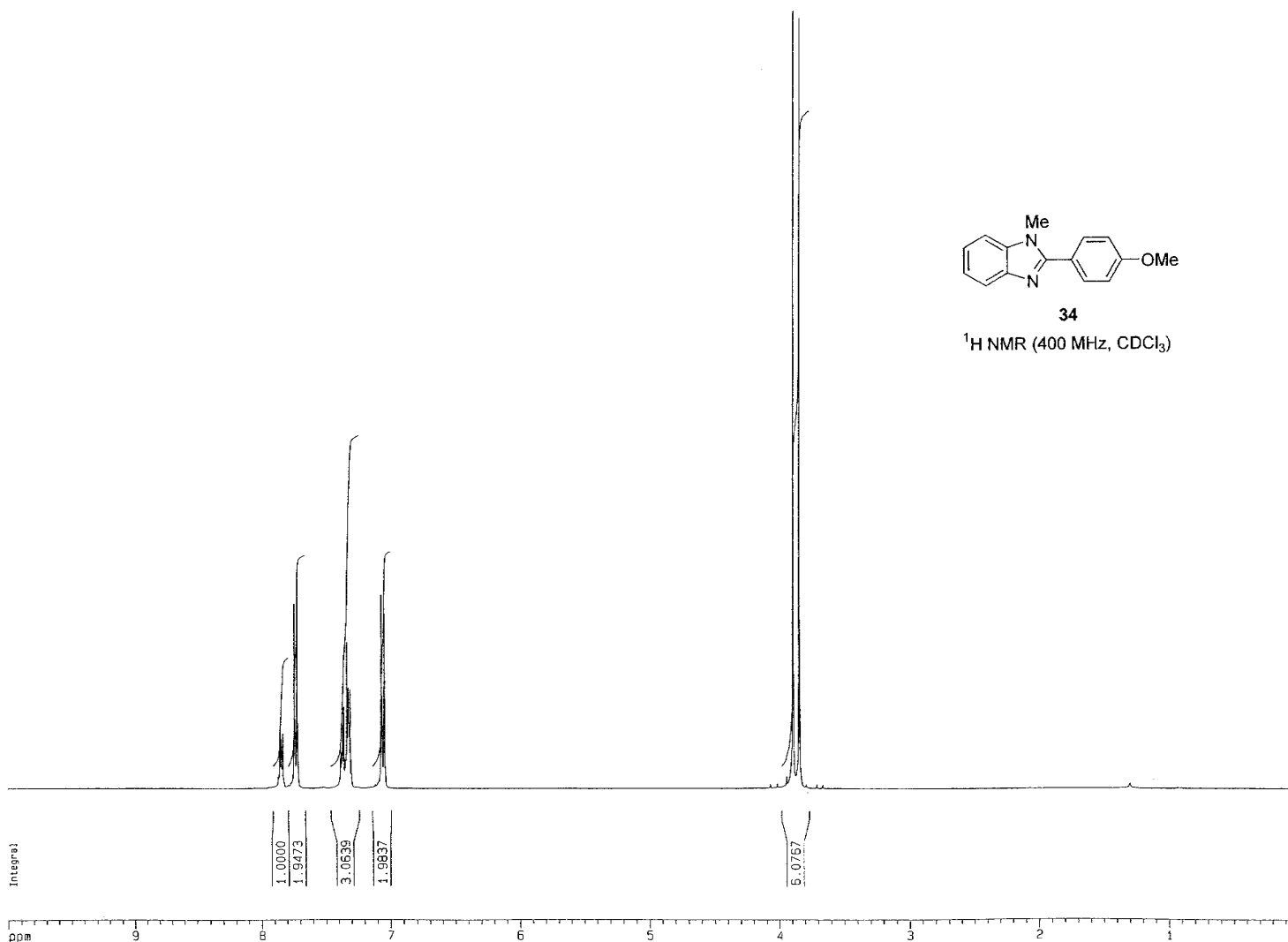
F2 - Acquisition Parameters
 Date_ 20030302
 Time 19.36
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 800
 DS 4
 SWH 25125.629 Hz
 FIDRES 0.38387 Hz
 AQ 1.3042164 sec
 RG 3251
 DW 19.900 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

===== CHANNEL f1 =====
 NUC1 13C
 P1 5.90 usec
 PL1 -6.00 dB
 SF01 100.6237959 MHz

===== CHANNEL f2 =====
 CPOPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -6.00 dB
 PL12 15.80 dB
 PL13 15.80 dB
 SF02 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127732 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 30.00 cm
 F1P 215.000 ppm
 F1 21631.75 Hz
 F2P -5.000 ppm
 F2 -503.06 Hz
 PPMCM 7.33333 ppm/cm
 HZCM 737.82697 Hz/cm



34
¹H NMR (400 MHz, CDCl₃)

Current Data Parameters
 NAME Mar05-2003
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030306
 Time 22.08
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zg30
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 90.5
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

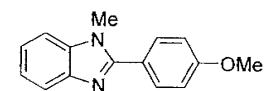
===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 30.00 cm
 F1P 10.000 ppm
 F1 4001.30 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.33333 ppm/cm
 HZCM 133.37666 Hz/cm

Current Data Parameters
 NAME Mar06-2003
 EXPNO 10
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030306
 Time 22.06
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zg30
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.252629 Hz
 AQ 1.9792372 sec
 RG 90.5
 DW 60.400 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.0000000 sec

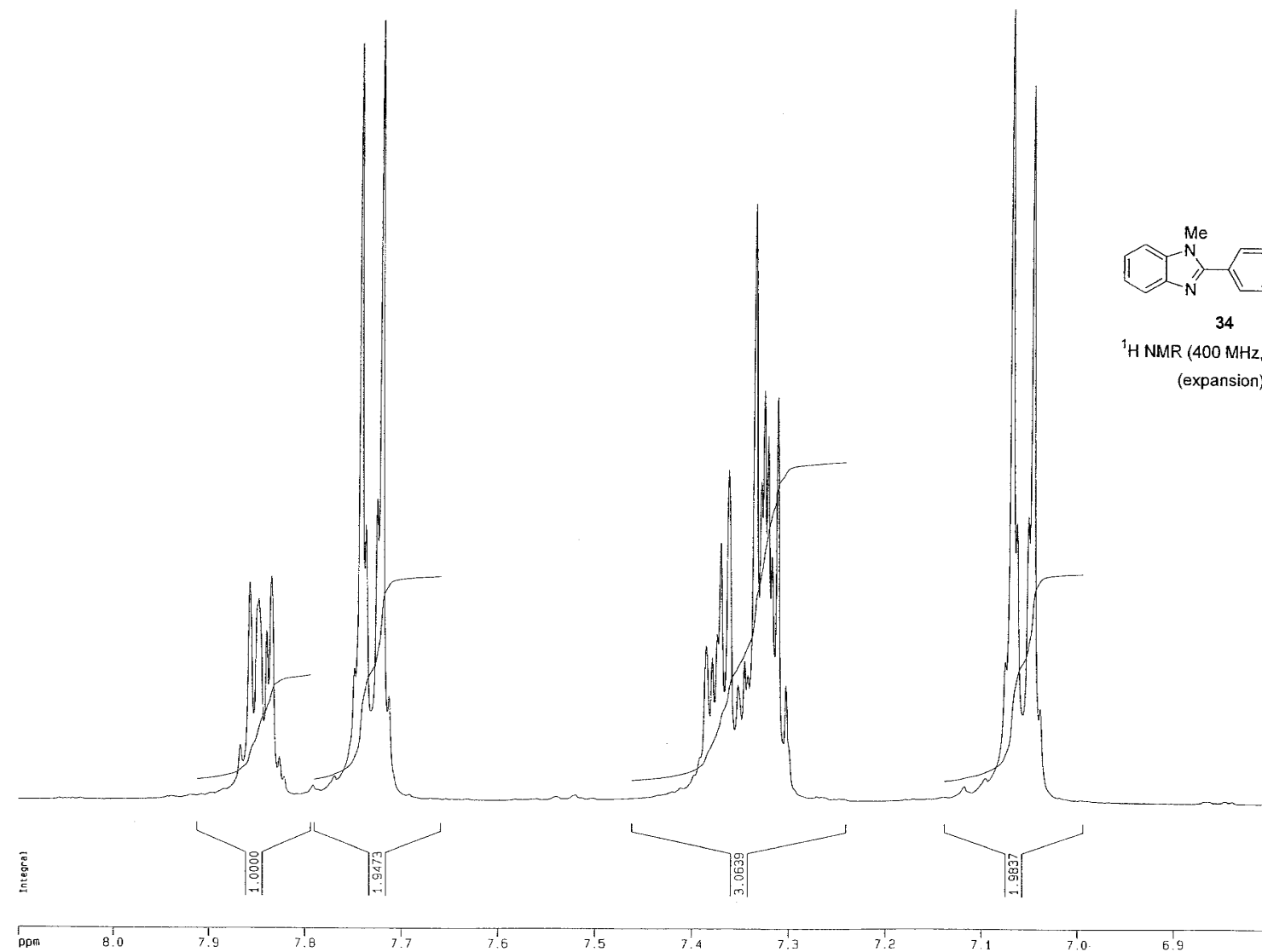


34
¹H NMR (400 MHz, CDCl₃)
 (expansion)

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 PL1 -6.00 dB
 SF01 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

10 NMR plot parameters
 CX 30.00 cm
 F1P 8.100 ppm
 F1 3241.05 Hz
 F2P 6.800 ppm
 F2 2720.88 Hz
 PPMCM 0.04333 ppm/cm
 HZCM 17.33897 Hz/cm



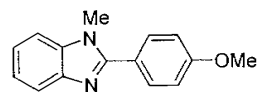
ppm

160.707
153.581
142.674
136.436
130.746
122.421
122.303
122.240
119.398
114.040
109.422

77.511
77.002
76.493

55.260

31.578



34

^{13}C NMR (63 MHz, CDCl_3)

Current Data Parameters
NAME Mar06-2003
EXPNO 41
PROCNO 1

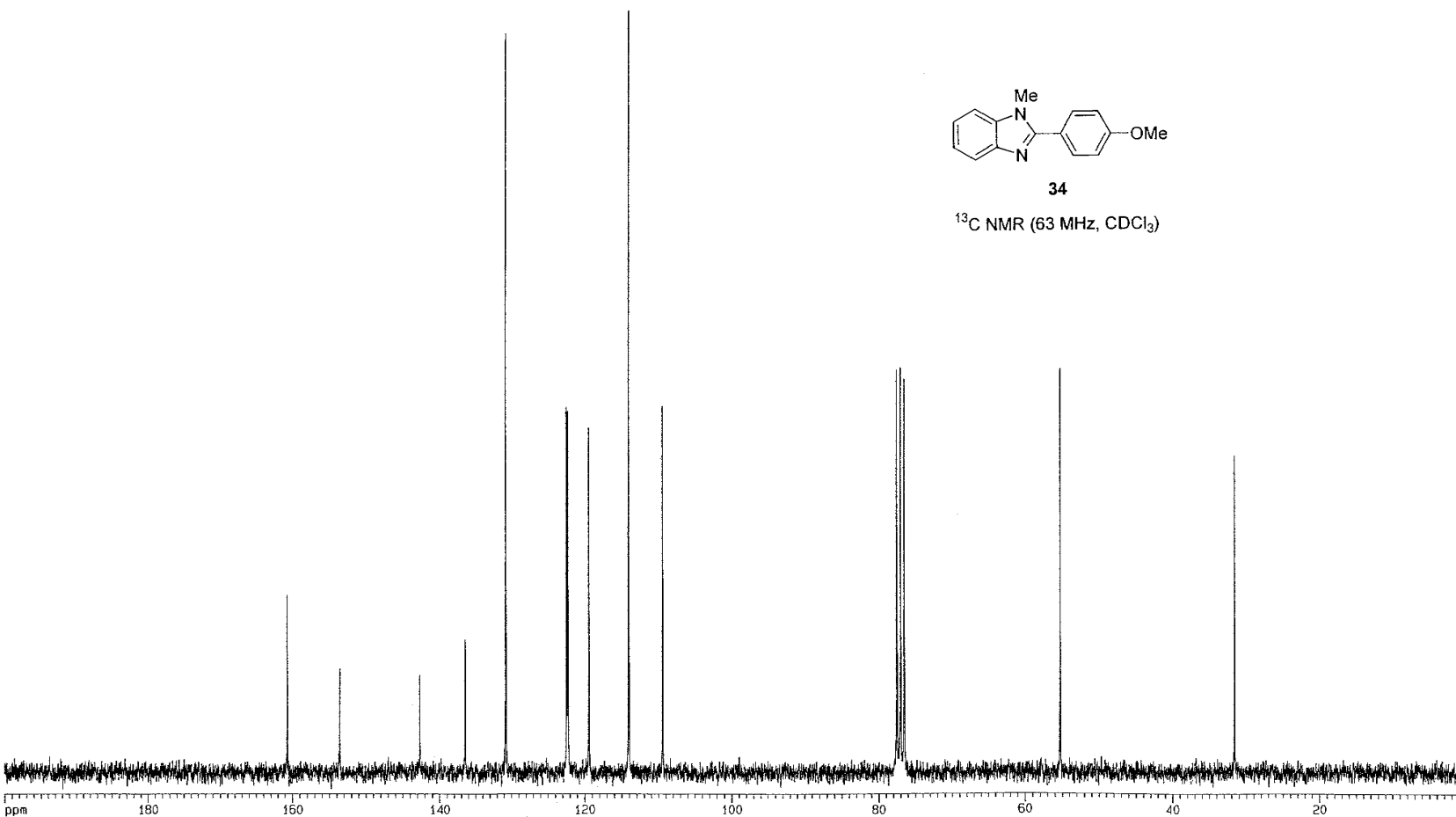
F2 - Acquisition Parameters
Date_ 20030306
Time 17.00
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 250
DS 2
SWH 15723.271 Hz
FIDRES 0.239918 Hz
AQ 2.0840948 sec
RG 14596.5
DW 31.000 usec
DE 30.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
d12 0.00020000 sec

===== CHANNEL f1 =====
NUC1 ^{13}C
P1 8.00 usec
PL1 0.00 dB
SF01 62.9021320 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 ^1H
PCPD2 80.00 usec
PL2 -4.00 dB
PL12 16.00 dB
PL13 17.00 dB
SF02 250.1310005 MHz

F2 - Processing parameters
SI 32768
SF 62.8952464 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

1D NMR plot parameters
CX 34.00 cm
F1P 200.000 ppe
F1 12579.05 Hz
F2P 0.000 ppe
F2 0.00 Hz
PPMCM 5.88235 ppe/cm
HZCM 369.97202 Hz/cm



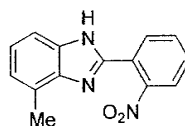
ppm

12.2219

7.9763
7.9707
7.9682
7.9463
7.9391
7.9184
7.9110
7.8907
7.8880
7.8820
7.7341
7.7277
7.7059
7.6977
7.6753
7.6683
7.1783
7.1488
7.1173
7.0674

2.5597

2.0402



37

¹H NMR (250 MHz, d₅-Me₂CO)

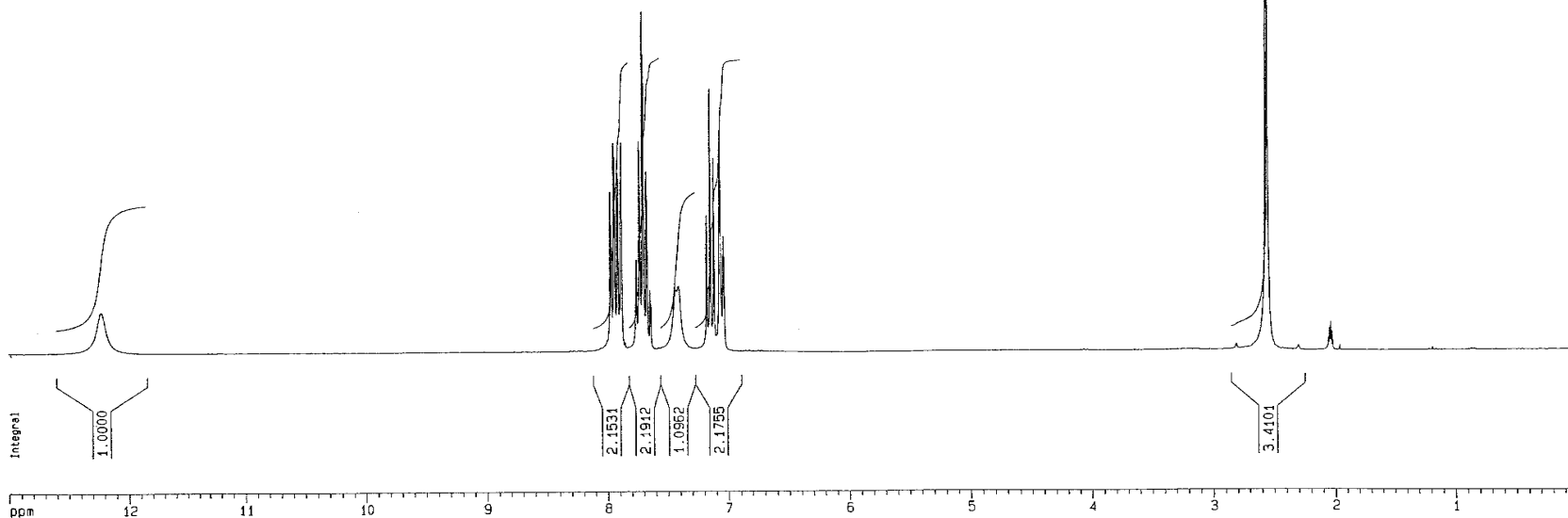
Current Data Parameters
NAME Feb28-2003-tfek
EXPNO 10
PROCNO 1

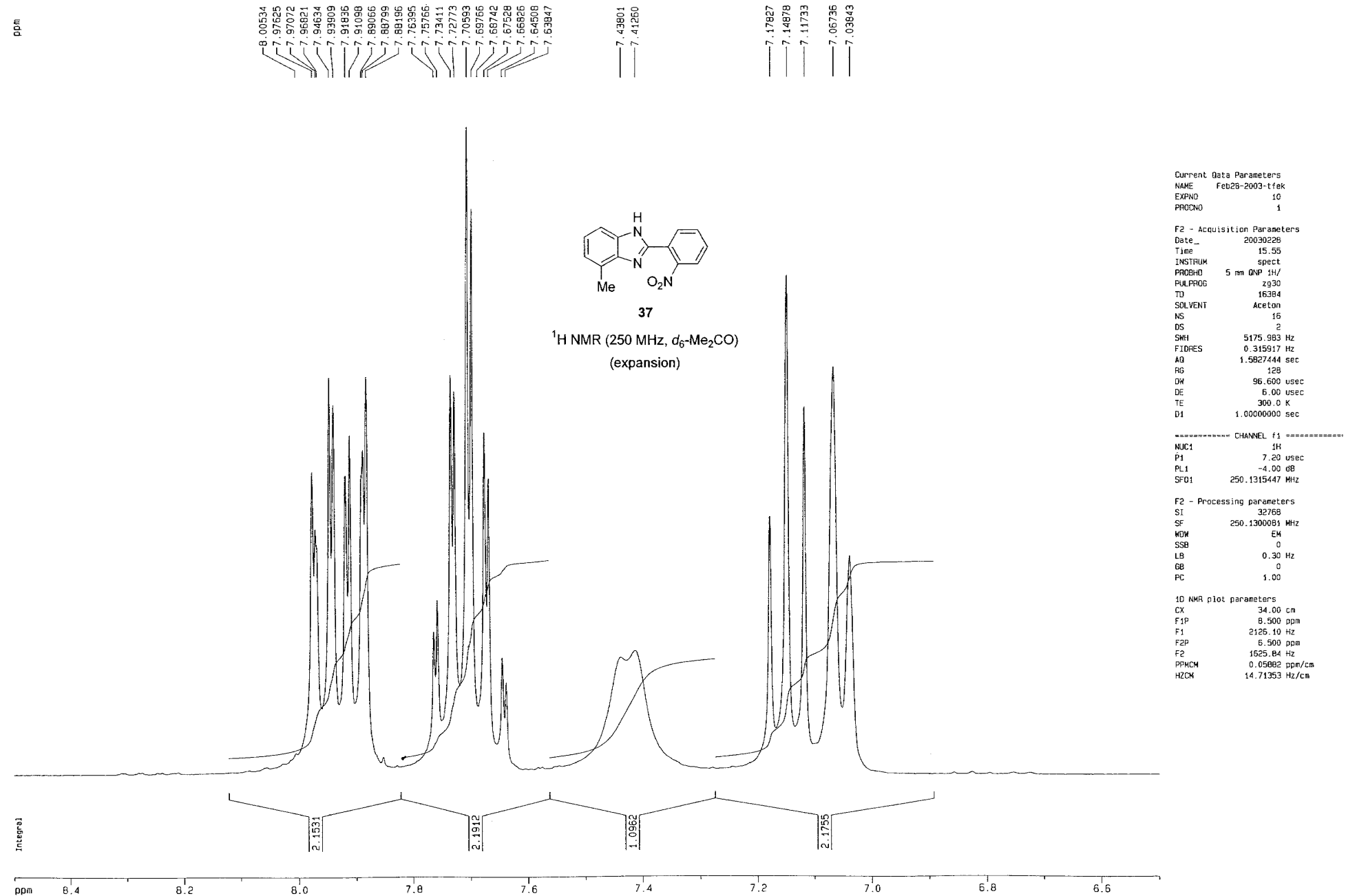
F2 - Acquisition Parameters
Date_ 20030228
Time 15.55
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT Aceton
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 128
DM 95.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

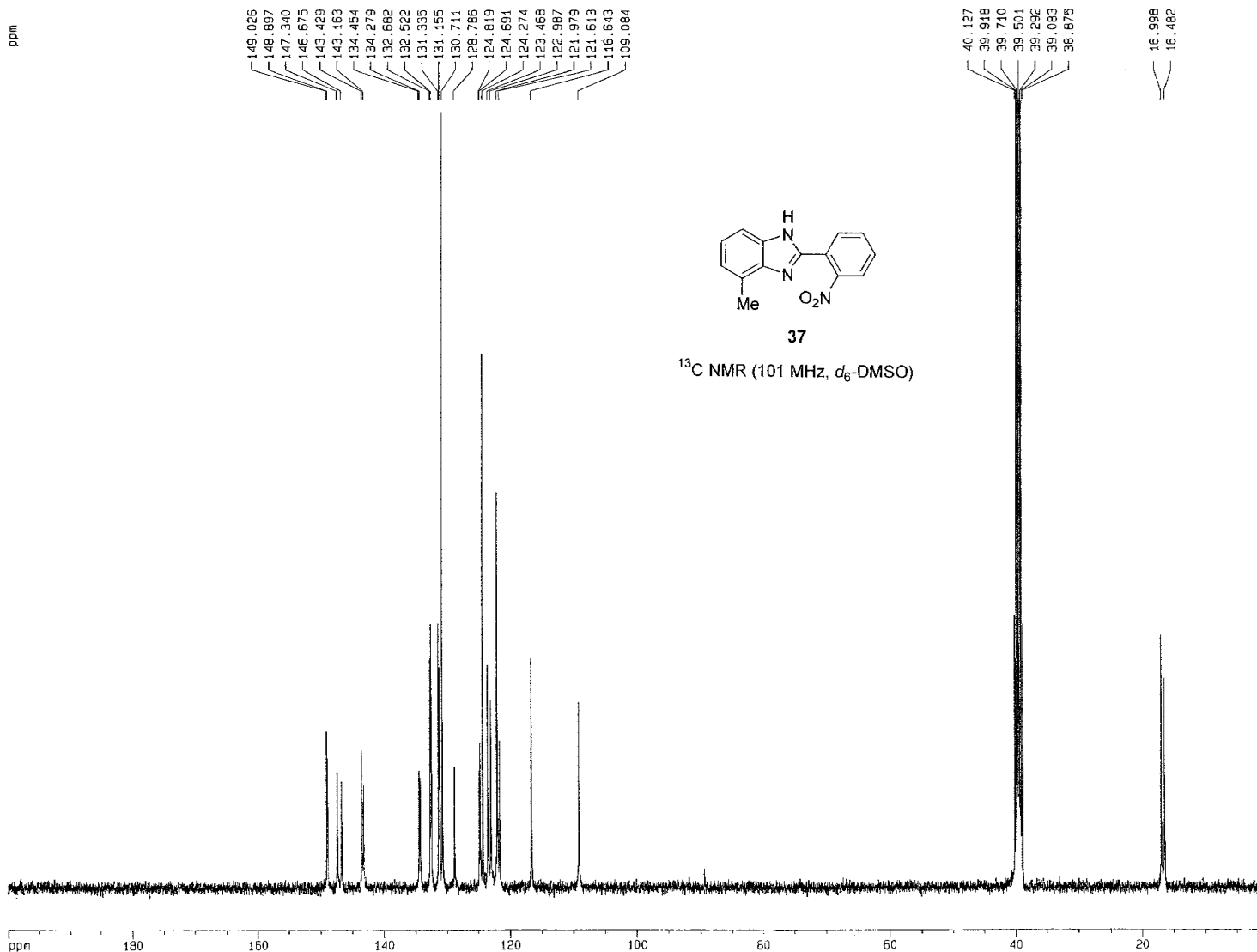
***** CHANNEL f1 *****
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SFO1 250.1315447 MHz

F2 - Processing parameters
SI 32768
SF 250.1300081 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 13.000 ppm
F1 3251.69 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.38235 ppm/cm
HZCM 95.63794 Hz/cm







Current Data Parameters
 NAME Mar01-2003
 EXPNO 80
 PROCNO 1

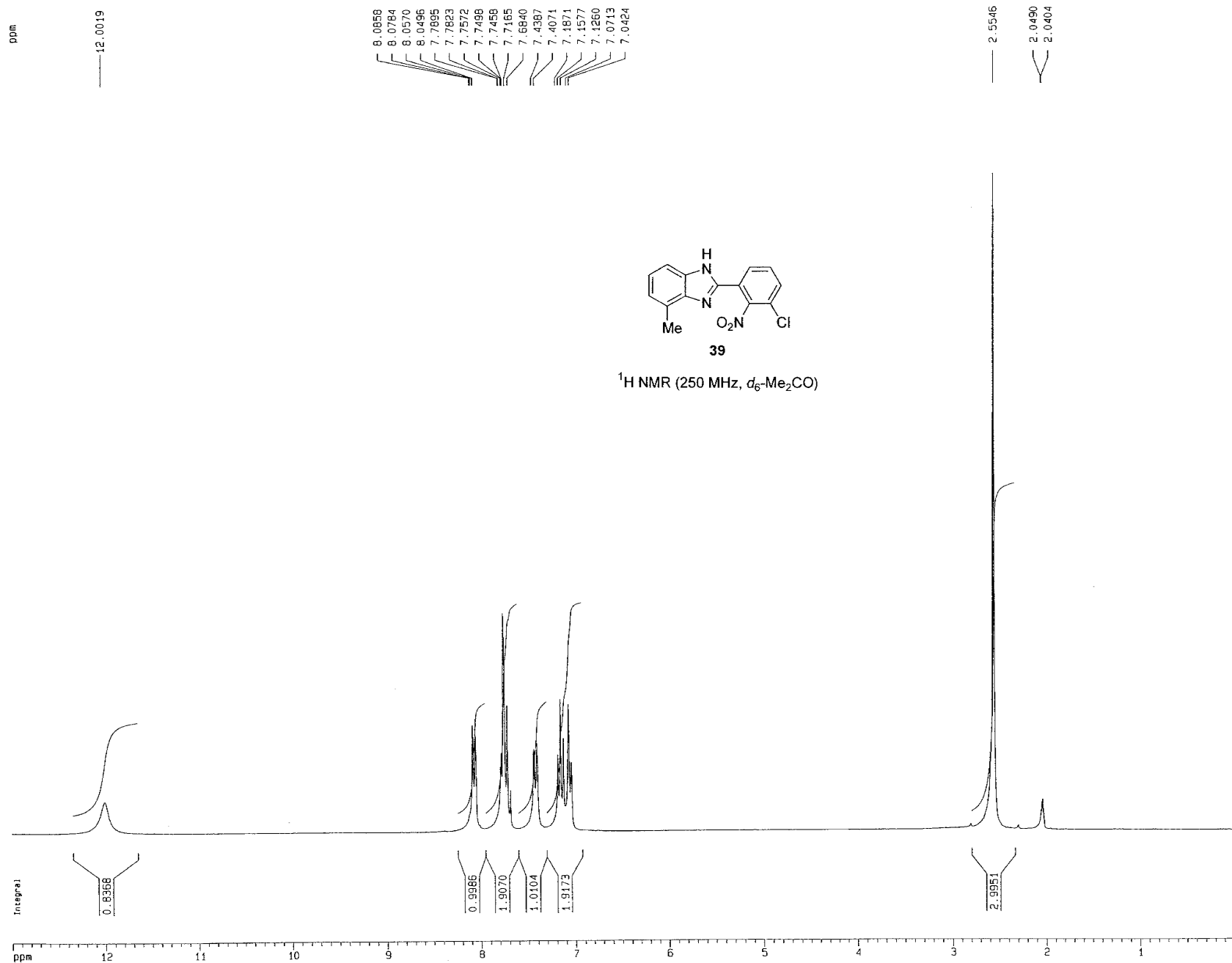
F2 - Acquisition Parameters
 Date_ 20030301
 Time 20.25
 INSTRUM spect
 PROBHD 5 mm BBO BB-1
 PULPROG zgpg30
 TD 65536
 SOLVENT DMSO
 NS 700
 DS 4
 SWH 25125.629 Hz
 FIDRES 0.383387 Hz
 AQ 1.3042164 sec
 RG 8192
 DW 19.900 usec
 DE 6.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.00002000 sec

===== CHANNEL f1 =====
 NUC1 13C
 P1 5.90 usec
 PL1 -6.00 dB
 SF01 100.6237959 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -6.00 dB
 PL12 15.80 dB
 PL13 15.80 dB
 SF02 400.1315005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6128143 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 30.00 cm
 F1P 200.000 ppm
 F1 20122.56 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 6.66657 ppm/cm
 HZCM 670.75208 Hz/cm



Current Data Parameters
 NAME Feb26-2003
 EXPNO 30
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030226
 Time 14.50
 INSTRUM spect
 PROBHD 5 mm GNP 1H/
 PULPROG zg30
 TD 16384
 SOLVENT Aceton
 NS 16
 DS 2
 SWH 5175.983 Hz
 FIDRES 0.315917 Hz
 AQ 1.5827444 sec
 RG 287.4
 DW 96.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.20 usec
 PL1 -4.00 dB
 SF01 250.1315447 MHz

F2 - Processing parameters
 SI 32768
 SF 250.1300080 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 34.00 cm
 F1P 13.000 ppm
 F1 3251.69 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.38235 ppm/cm
 HZCM 95.63794 Hz/cm

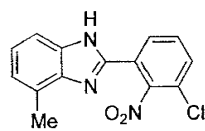
ppm

8.08584
8.07842
8.05596
8.04961

7.78954
7.78232
7.75721
7.74975
7.74576
7.71655
7.68396

7.43868
7.40714

7.18705
7.15775
7.12598
7.07128
7.04243



39

^1H NMR (250 MHz, d_6 -Me₂CO)
(expansion)

Current Data Parameters
NAME Feb26-2003
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030226
Time 14.50
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT Aceton
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 287.4
DN 96.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SF01 250.1315447 MHz

F2 - Processing parameters
SI 32768
SF 250.1300080 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

10 NMR plot parameters
CX 34.00 cm
F1P 8.500 ppm
F1 2126.10 Hz
F2P 6.600 ppm
F2 1650.86 Hz
PPMCM 0.05586 ppm/cm
HZCM 13.97785 Hz/cm

Integral

0.9986

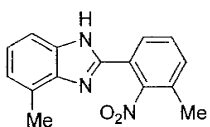
1.9070

1.0104

1.9173

ppm

8.4 8.2 8.0 7.8 7.6 7.4 7.2 7.0 6.8



41

¹H NMR (400 MHz, d₆-DMSO)

Current Data Parameters

NAME Jun05-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030605
Time 18.03
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zg30
TD 32768
SOLVENT DMSO
NS 16
DS 2
SMH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

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

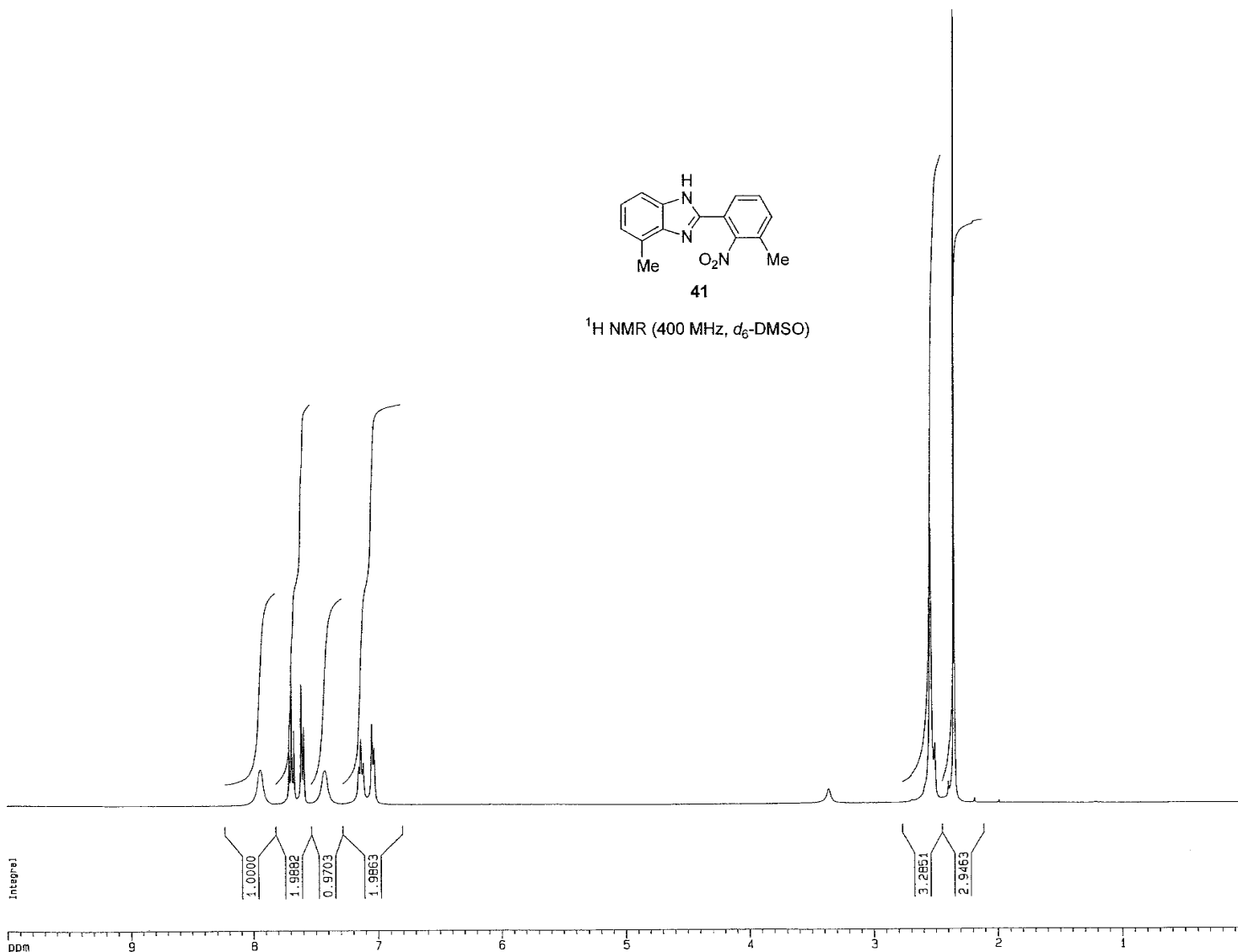
NUC1 1H
P1 7.50 usec
PL1 -6.00 dB
SFO1 400.1324710 MHz

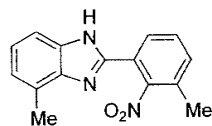
F2 - Processing parameters

SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters

CX 30.00 cm
F1P 10.000 ppm
F1 4001.30 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.33333 ppm/cm
HZCM 133.37666 Hz/cm





41

^1H NMR (400 MHz, d_6 -DMSO)
(expansion)

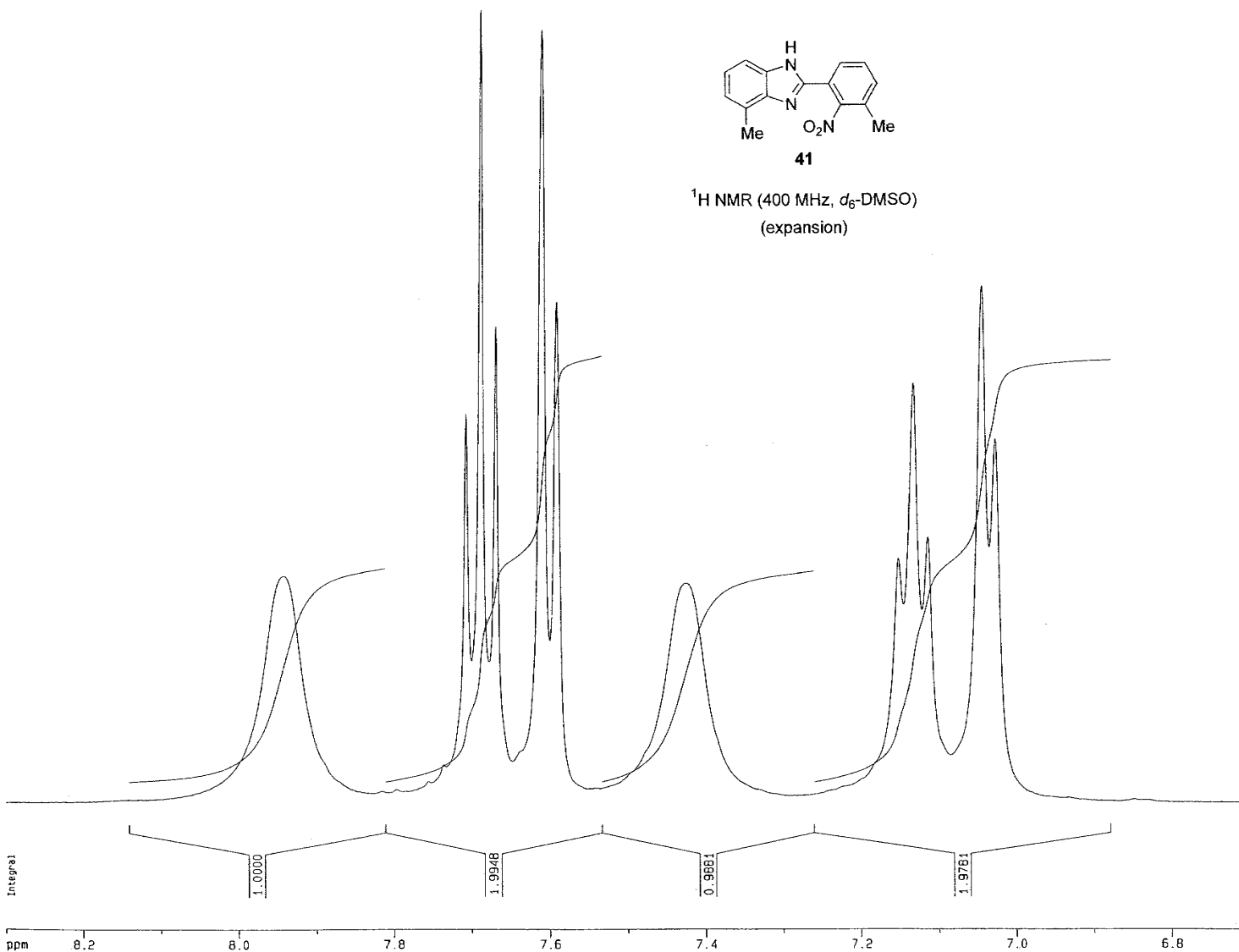
Current Data Parameters
NAME Jun05-2003
EXPNO 10
PROCNO 1

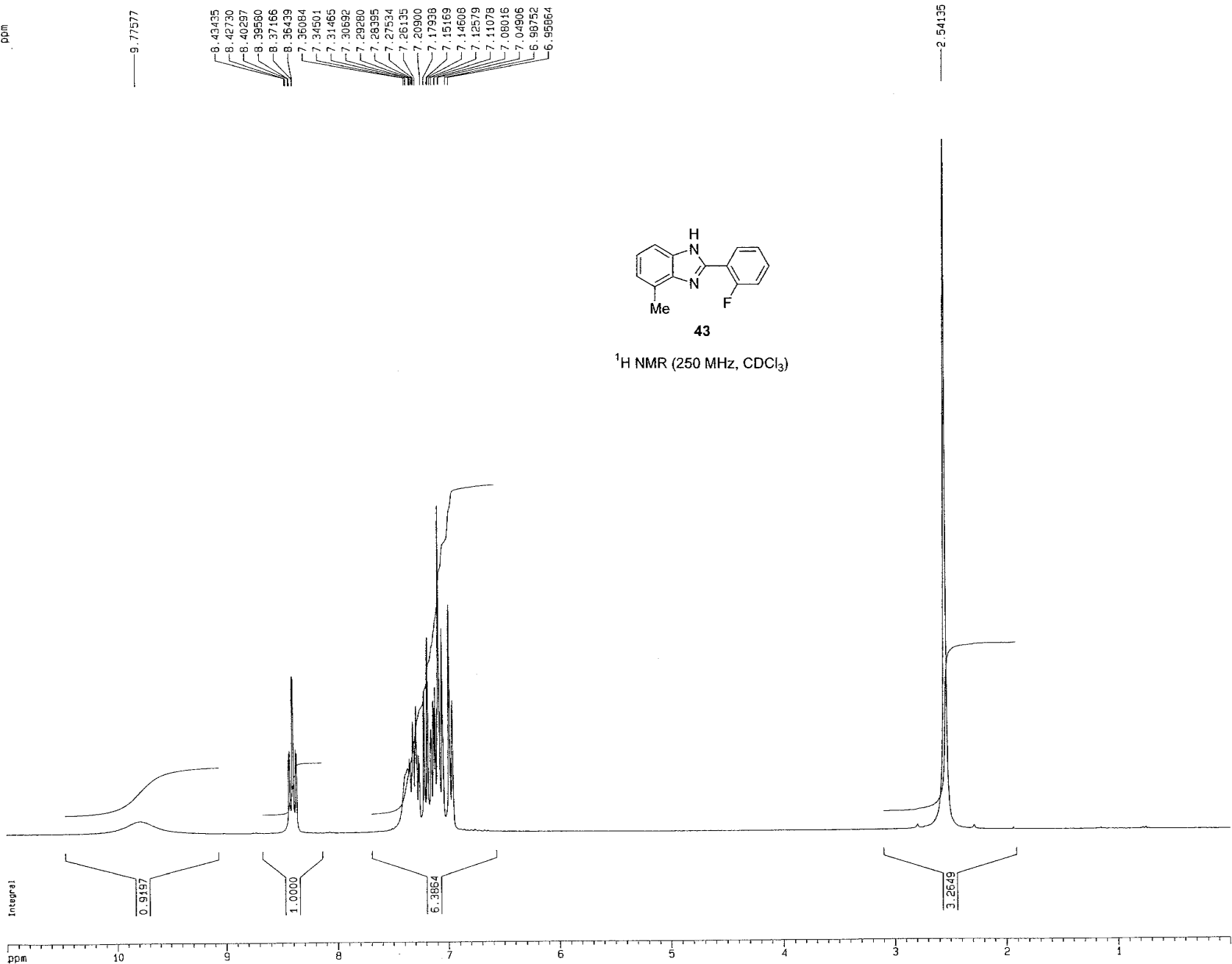
F2 - Acquisition Parameters
Date_ 20030605
Time 18.03
INSTRUM spect
PROBHD 5 mm BBO BB-
PULPROG zg30
TD 32768
SOLVENT DMSO
NS 16
DS 2
SWH 8278.146 Hz
FIDRES 0.252629 Hz
AQ 1.9792372 sec
RG 90.5
DW 60.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 ^1H
P1 7.50 usec
PL1 -6.00 dB
SFO1 400.1324710 MHz

F2 - Processing parameters
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 30.00 cm
F1P 8.300 ppm
F1 3321.08 Hz
F2P 6.700 ppm
F2 2680.87 Hz
PPMCM 0.05333 ppm/cm
HZCM 21.34027 Hz/cm





Current Data Parameters
NAME Feb28-2003-tfek
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030228
Time 16.10
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT CDCl3
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 322.5
DW 95.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SFO1 250.1315447 MHz

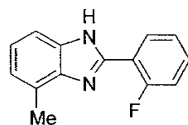
F2 - Processing parameters
SI 32768
SF 250.1300366 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 11.000 ppm
F1 2751.43 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.32353 ppm/cm
HZCM 80.92442 Hz/cm

ppm

8.43435
8.42730
8.40297
8.39580
8.37165
8.36439

7.50605
7.36084
7.34501
7.33780
7.32291
7.31465
7.30692
7.29280
7.28395
7.27534
7.26135
7.25375
7.20900
7.17938
7.15169
7.14508
7.12579
7.11078
7.08016
7.04906
6.98752
6.95864



43

¹H NMR (250 MHz, CDCl₃)
(expansion)

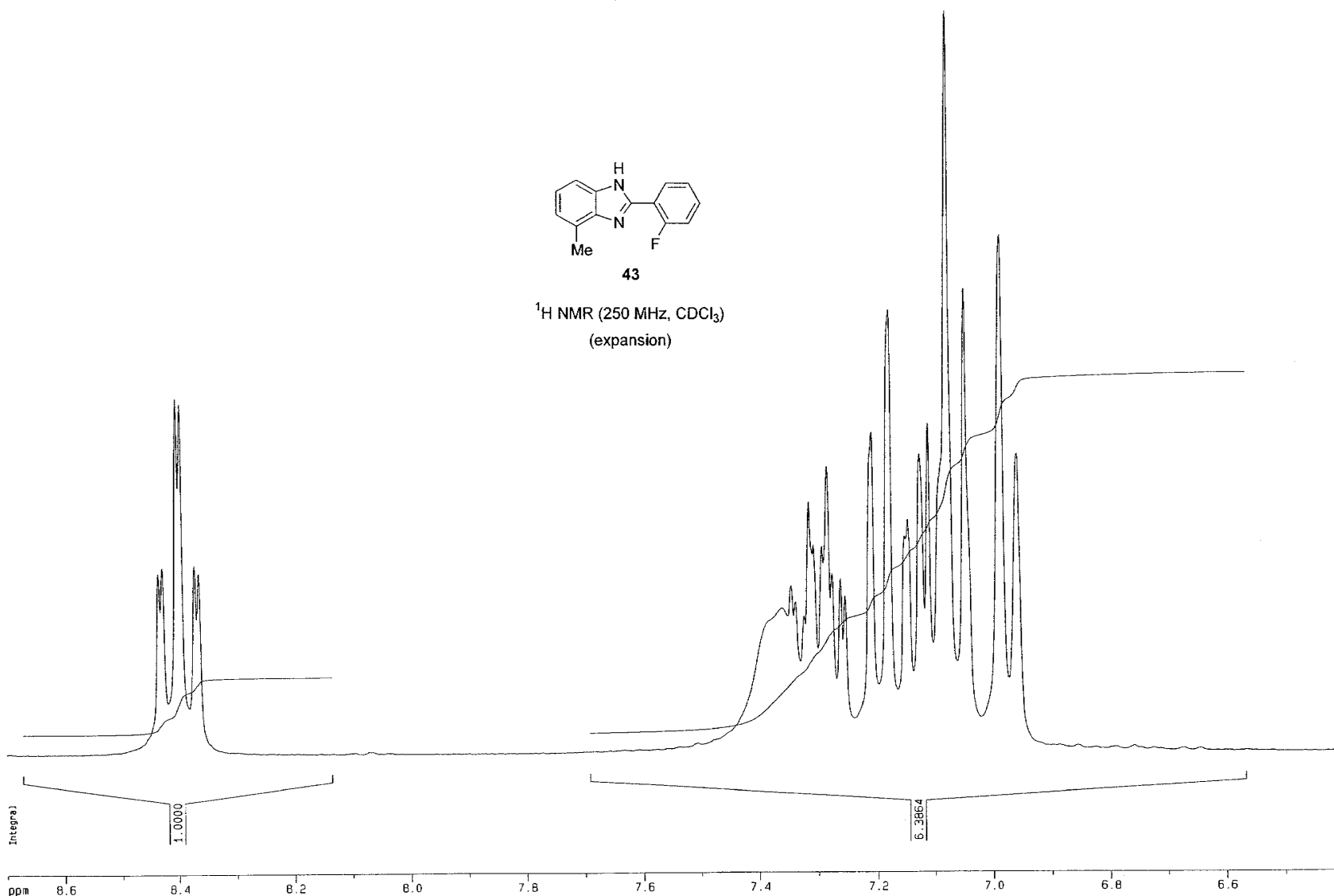
Current Data Parameters
NAME Feb28-2003-tfek
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030228
Time 16.10
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT CDCl₃
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 322.5
DM 95.500 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SFO1 250.1315447 MHz

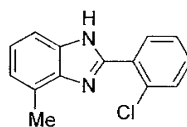
F2 - Processing parameters
SI 32768
SF 250.1300366 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 8.700 ppm
F1 2176.13 Hz
F2P 6.400 ppm
F2 1600.83 Hz
PPHMC 0.05765 ppm/cm
HZCM 15.92056 Hz/cm



ppm

8.15023
8.13735
8.13390
8.12624
8.11199
7.37374
7.34292
7.32924
7.32220
7.31663
7.30551
7.23250
7.21945
7.20979
7.20698
7.19443
7.11139
7.09192
7.05029
6.99302
6.96700
6.96408

**45**¹H NMR (250 MHz, CDCl₃)

2.53616

Current Data Parameters
NAME Jul09-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030709
Time 11.49
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT CDCl3
NS 16
DS 2
SMH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 256
DM 96.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SF01 250.1315447 MHz

F2 - Processing parameters
S1 32768
SF 250.1300366 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 12.000 ppm
F1 3001.56 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCH 0.35234 ppm/cm
HZCM 89.28119 Hz/cm

Integral

1.0000

6.4922

3.3046

ppm

11

10

9

8

7

6

5

4

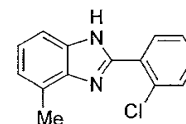
3

2

1

ppm

7.37374
7.35805
7.34292
7.32924
7.32220
7.31663
7.30551
7.29154
7.28827
7.26120
7.24842
7.24637
7.23250
7.21945
7.20979
7.20698
7.19443
7.18608
7.18299
7.18054
7.17790
7.14323
7.11139
7.08192
7.05029
5.99302
5.96700
5.96408



45

^1H NMR (250 MHz, CDCl_3)
(expansion)

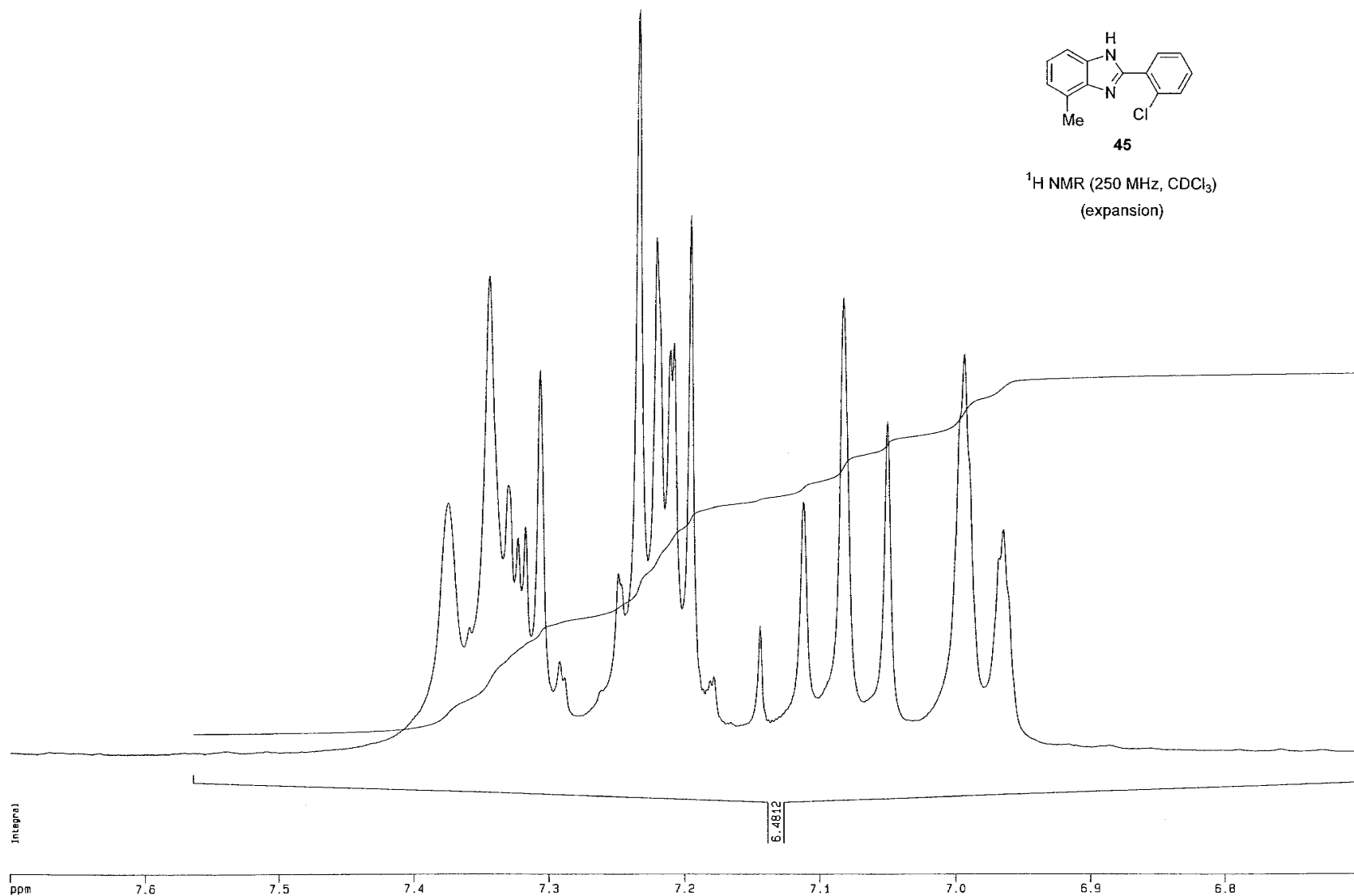
Current Data Parameters
NAME Jul09-2003
EXPNO 10
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030709
Time 11.49
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT CDCl_3
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 256
DM 96.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

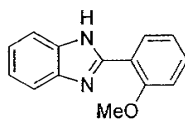
===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SFO1 250.1315447 MHz

F2 - Processing parameters
SI 32768
SF 250.1300366 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 7.700 ppm
F1 1926.00 Hz
F2P 6.700 ppm
F2 1675.87 Hz
PPMCM 0.02941 ppm/cm
HZCM 7.35677 Hz/cm



ppm

10.6645
10.54308.5070
8.5000
8.4757
8.4687
7.5437
7.3093
7.3054
7.3025
7.2987
7.2763
7.2691
7.1621
7.1494
7.1431
7.1380
7.1253
7.0590
7.0551
7.0281
6.9984
6.9584
6.92504.2349
4.0796
3.9469
3.7090
3.6542

48

¹H NMR (250 MHz, CDCl₃)

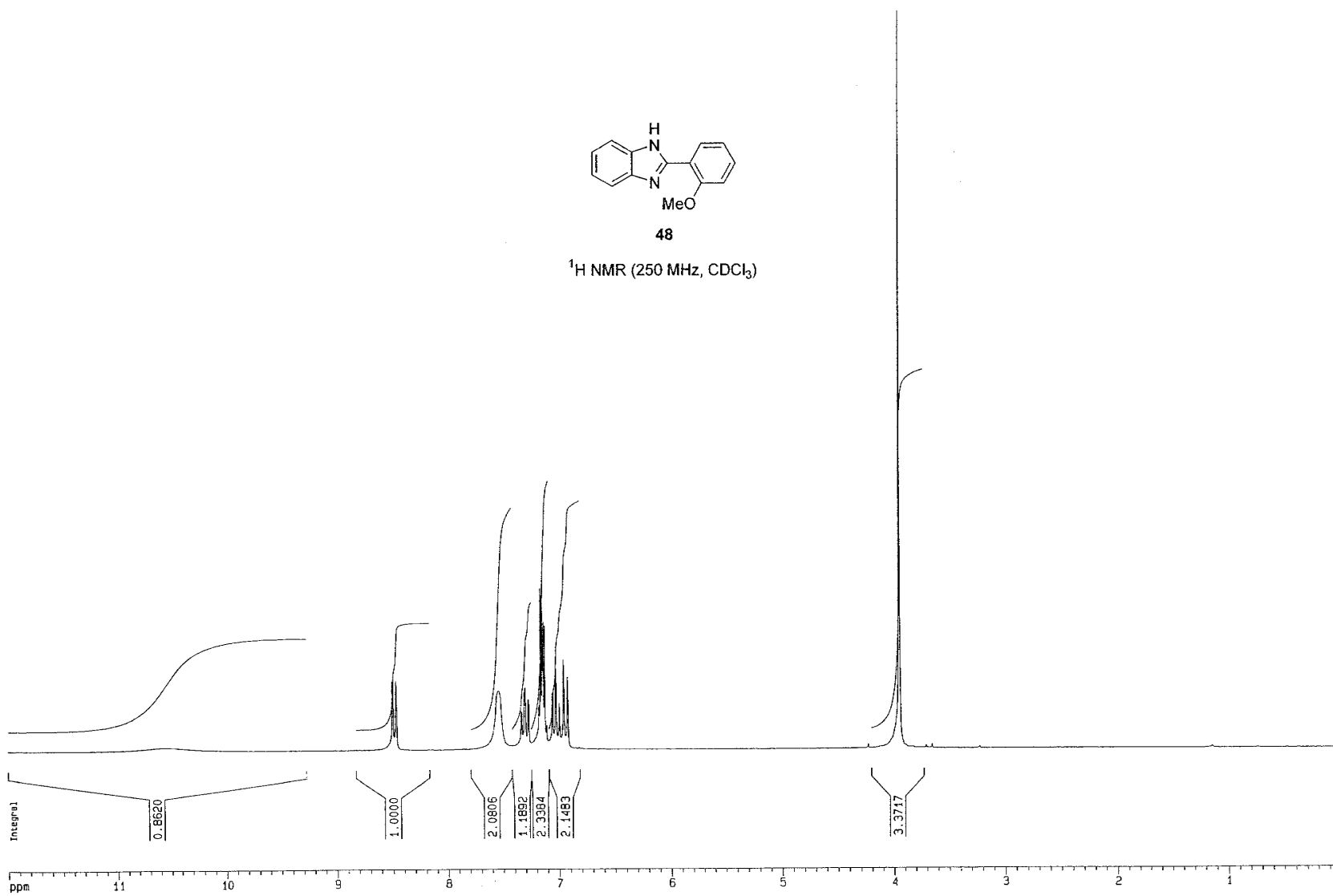
Current Data Parameters
 NAME Mer01-2003
 EXPNO 10
 PROCNO 1

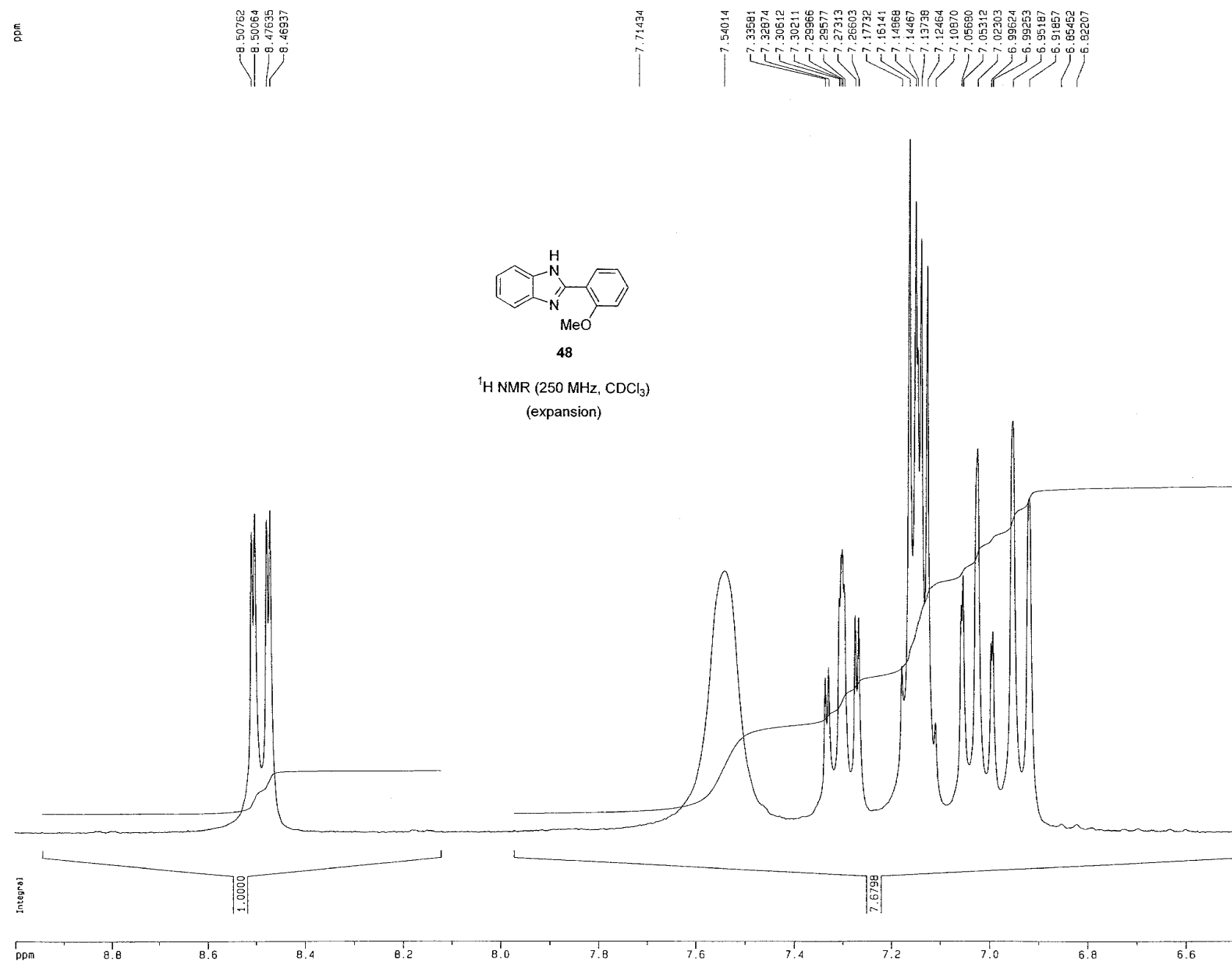
F2 - Acquisition Parameters
 Date_ 20030301
 Time 12.18
 INSTRUM spect
 PROBHD 5 mm QNP 1H/
 PULPROG zg30
 TD 16384
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 5175.983 Hz
 FIDRES 0.315917 Hz
 AQ 1.5827444 sec
 RG 512
 DM 96.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 1.00000000 sec

***** CHANNEL f1 *****
 NUC1 1H
 P1 7.20 usec
 PL1 -4.00 dB
 SFO1 250.1315447 MHz

F2 - Processing parameters
 SI 32768
 SF 250.1300365 MHz
 WDM EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 34.00 cm
 F1P 12.000 ppm
 F1 3001.56 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.35294 ppm/cm
 HZCM 88.28119 Hz/cm





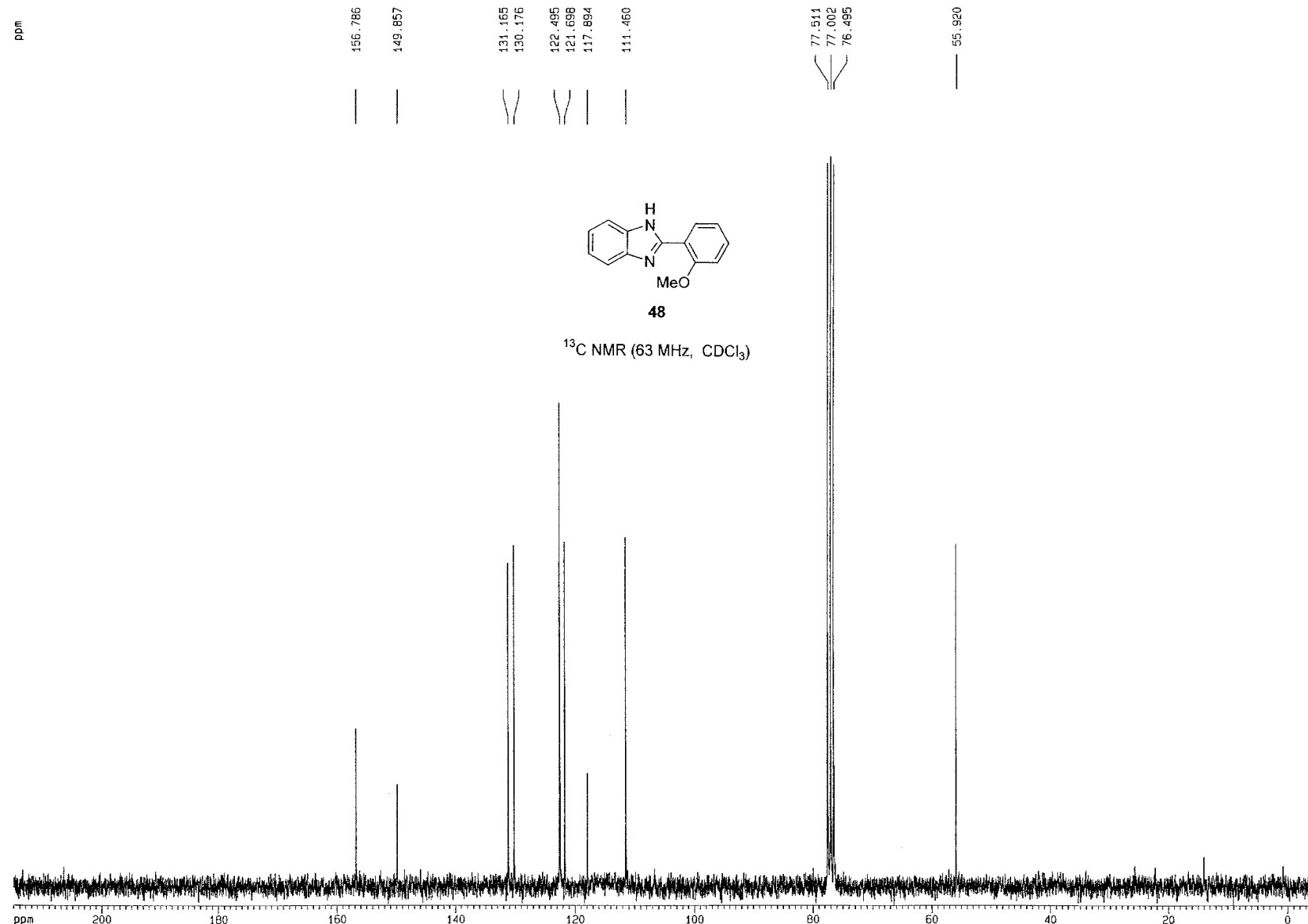
Current Data Parameters
NAME Feb28-2003
EXPNO 30
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030228
Time 13.18
INSTRUM spect
PROBHD 5 mm QNP 1H/
PULPROG zg30
TD 16384
SOLVENT CDCl3
NS 16
DS 2
SWH 5175.983 Hz
FIDRES 0.315917 Hz
AQ 1.5827444 sec
RG 406.4
DM 96.600 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 7.20 usec
PL1 -4.00 dB
SF01 250.1315447 MHz

F2 - Processing parameters
SI 32768
SF 250.1300366 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 34.00 cm
F1P 9.000 ppm
F1 2251.17 Hz
F2P 6.500 ppm
F2 1625.85 Hz
PQCM 0.07353 ppm/cm
HZCM 18.39191 Hz/cm



Current Data Parameters
 NAME Feb28-2003
 EXPNO 31
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20030228
 Time 13.54
 INSTRUM spect
 PROBHD 5 mm QNP 1H/
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 450
 DS 4
 SWH 15723.274 Hz
 FIDRES 0.239918 Hz
 AQ 2.0640948 sec
 RG 13004
 DW 31.800 usec
 DE 30.00 usec
 TE 300.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 d12 0.0002000 sec

===== CHANNEL f1 =====
 NUC1 ¹³C
 P1 8.00 usec
 PL1 0.00 dB
 SF01 62.9021320 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 ¹H
 PCPD2 80.00 usec
 PL2 -4.00 dB
 PL12 16.00 dB
 PL13 17.00 dB
 SF02 250.1310005 MHz

F2 - Processing parameters
 SI 32768
 SF 62.8952421 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

1D NMR plot parameters
 CX 34.00 cm
 F1P 215.000 ppm
 F1 13522.48 Hz
 F2P -5.000 ppm
 F2 -314.48 Hz
 PPMCM 5.47659 ppm/cm
 HZCM 406.96521 Hz/cm