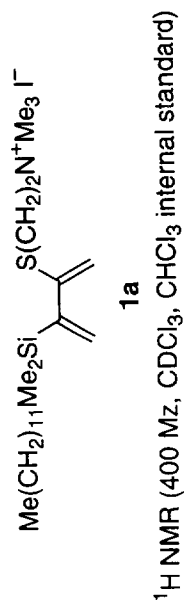


Proton

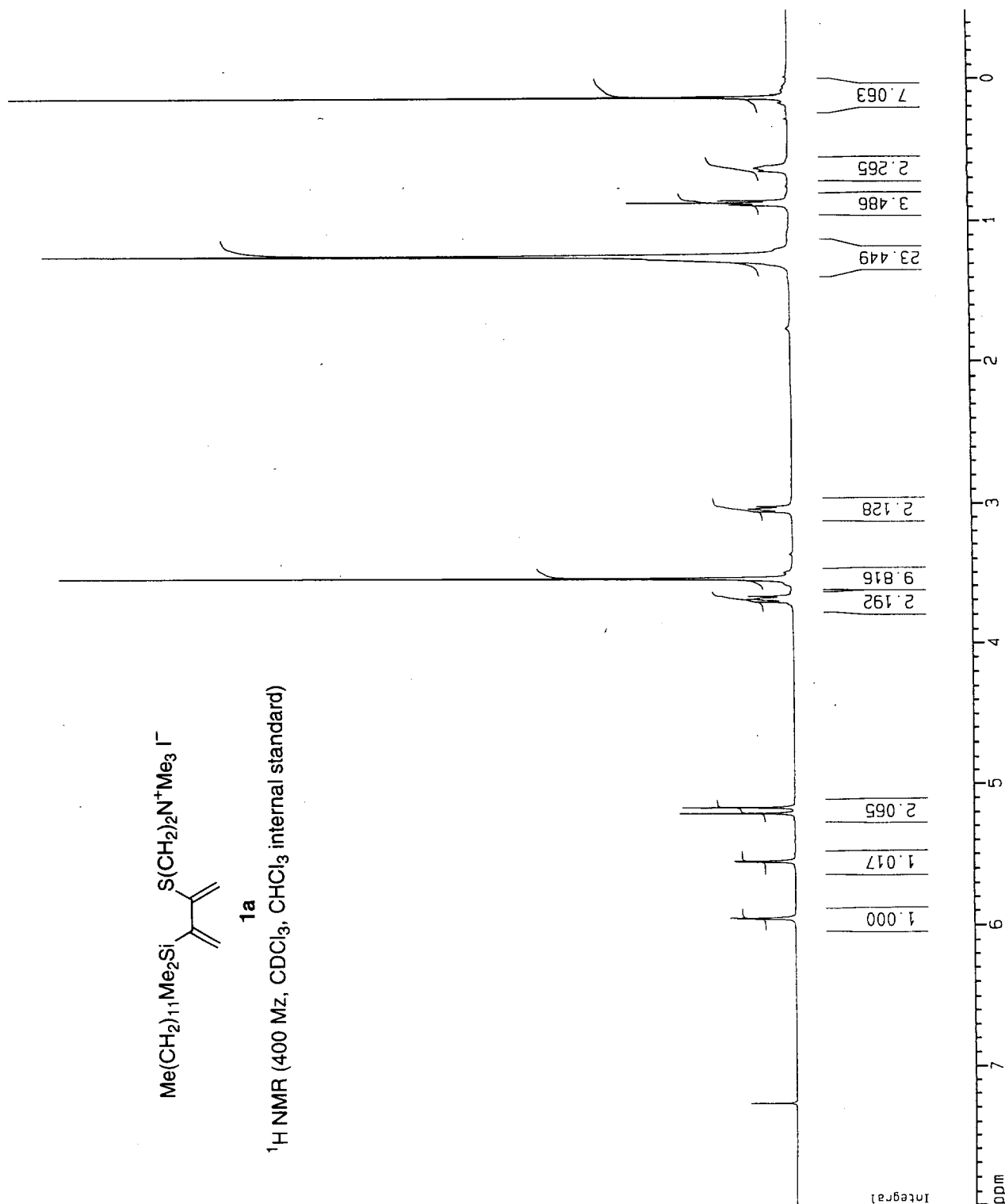


Current Data Parameters
 NAME ds-2-131a
 EXPNO 63
 PROCNO 1

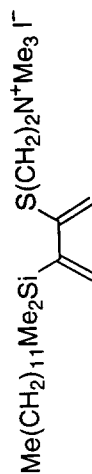
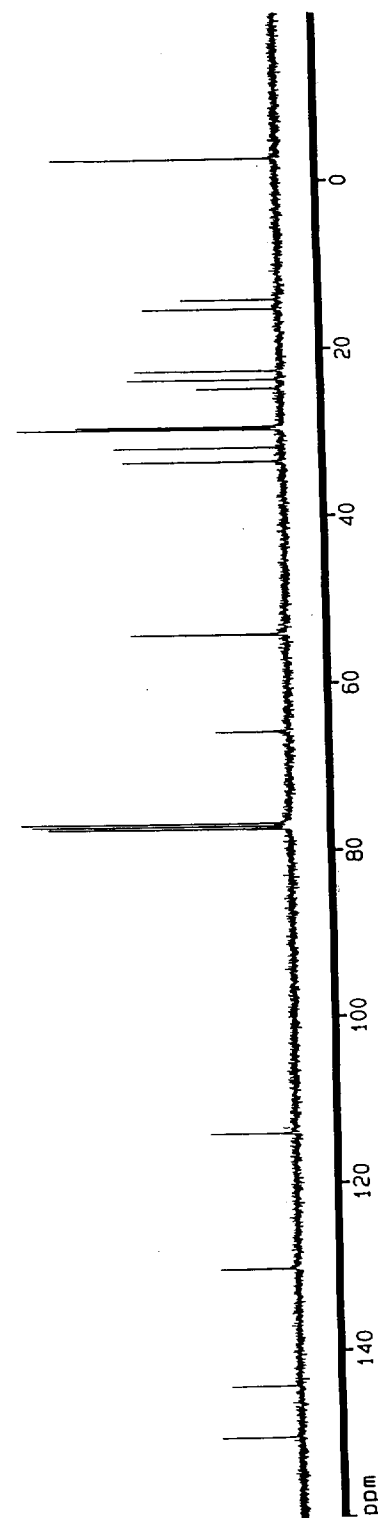
F2 - Acquisition Parameters
 Date_ 970312
 Time 12.15
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TD 32768
 SOLVENT CDCl_3
 NS 32
 DS 0
 SWH 8012.820 Hz
 FIDRES 0.244532 Hz
 AQ 2.0447731 sec
 RG 64
 DW 62.400 usec
 DE 4.50 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 DE 4.50 usec
 SF01 400.1323036 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm



Carbon

**1a**¹³C NMR (100.6 Mz, CDCl₃, CDCl₃ internal standard)

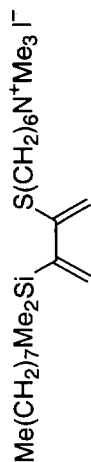
Current Data Parameters
 NAME ds-2-13iac
 EXPNO 70
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 970313
 Time 22.08
 INSTRUM spect
 PROBO 5 mm QNP 1H
 PULPROG zgpg
 TD 32768
 SOLVENT CDCl3
 NS 500
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 1024
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.0300000 sec
 PL12 16.00 dB
 PL1 16.00 dB
 CPDPRG2 gprp
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 DE 4.50 usec
 SF01 100.6227903 MHz
 NUC1 13C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127727 MHz
 EM
 WDW 0
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 160.000 ppm
 F1 16098.04 Hz
 F2P -20.000 ppm
 F2 -2012.26 Hz
 PPMCM 9.00000 ppm/cm
 HZCM 905.51495 Hz/cm

Proton

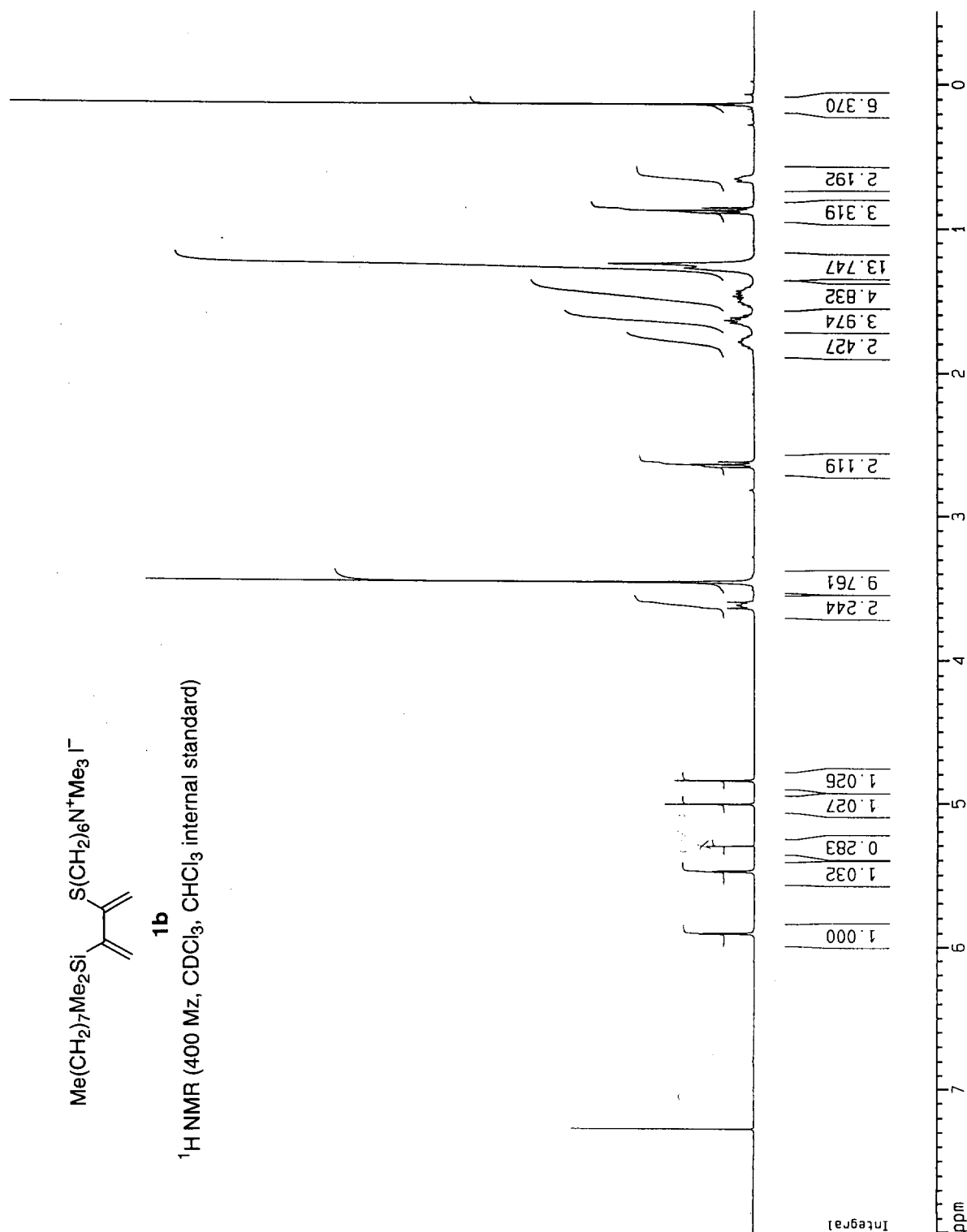
**1b**¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

Current Data Parameters
 NAME ds-3-53b
 EXPNO 112
 PROCNO 1

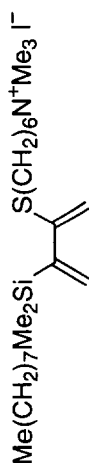
F2 - Acquisition Parameters
 Date_ 970811
 Time 10.28
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zg
 TO 32768
 SOLVENT CDCl₃
 NS 16
 DS 0
 SWH 8012.820 Hz
 FIDRES 0.244532 Hz
 AQ 2.0447731 sec
 RG 256
 DW 62.400 usec
 DE 4.50 usec
 TE 300.0 K
 D1 3.0000000 sec
 P1 5.00 usec
 DE 4.50 usec
 SF01 400.1323096 MHz
 NUC1 ¹H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm



Carbon

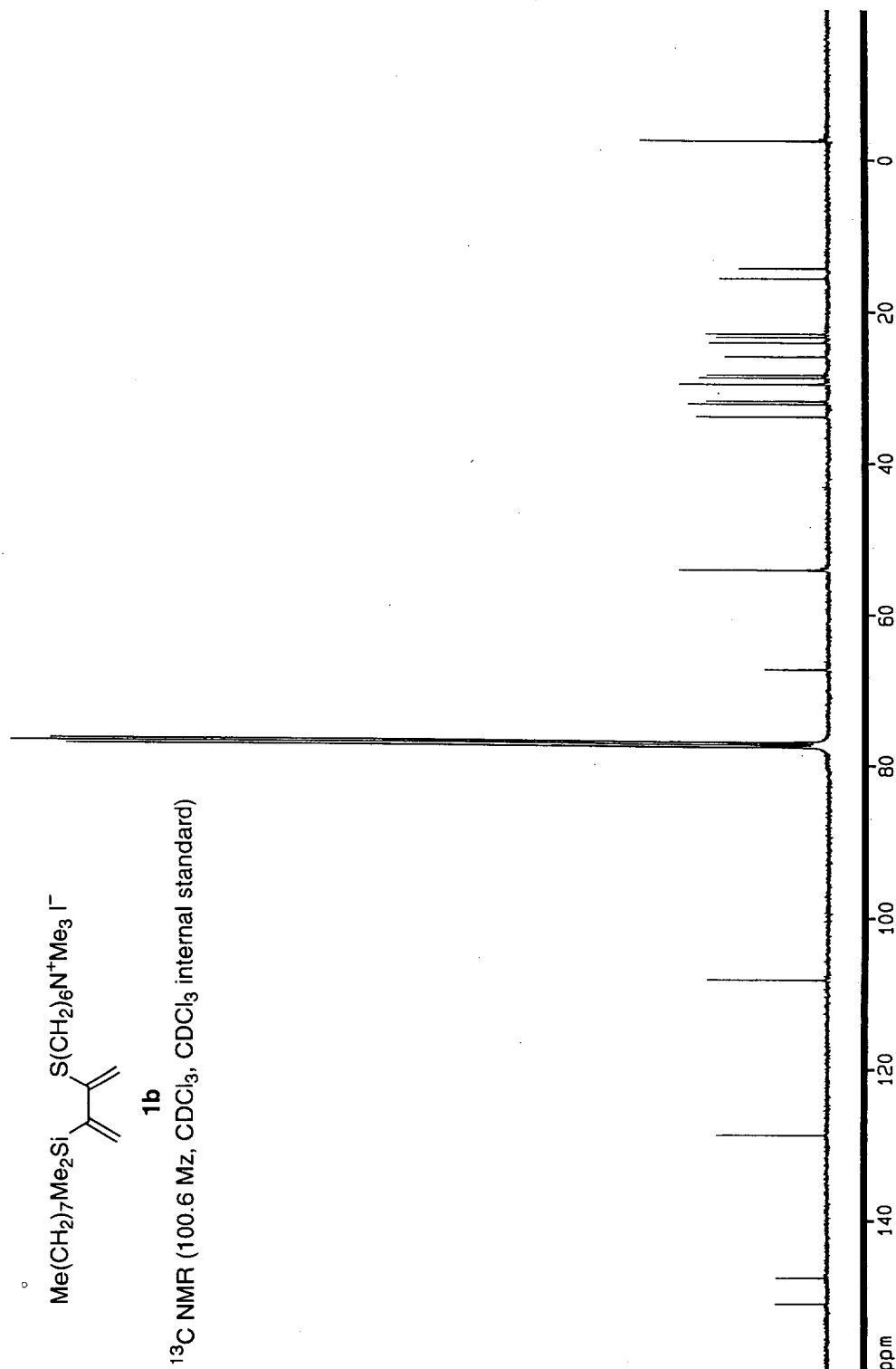
**1b**¹³C NMR (100.6 Mz, CDCl₃, CDCl₃ internal standard)

Current Data Parameters
 NAME ds-3-S3bc
 EXPNO 115
 PROCNO 1

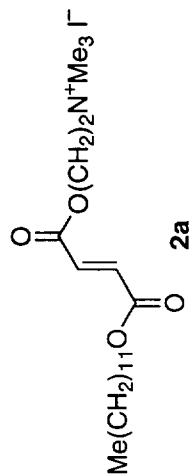
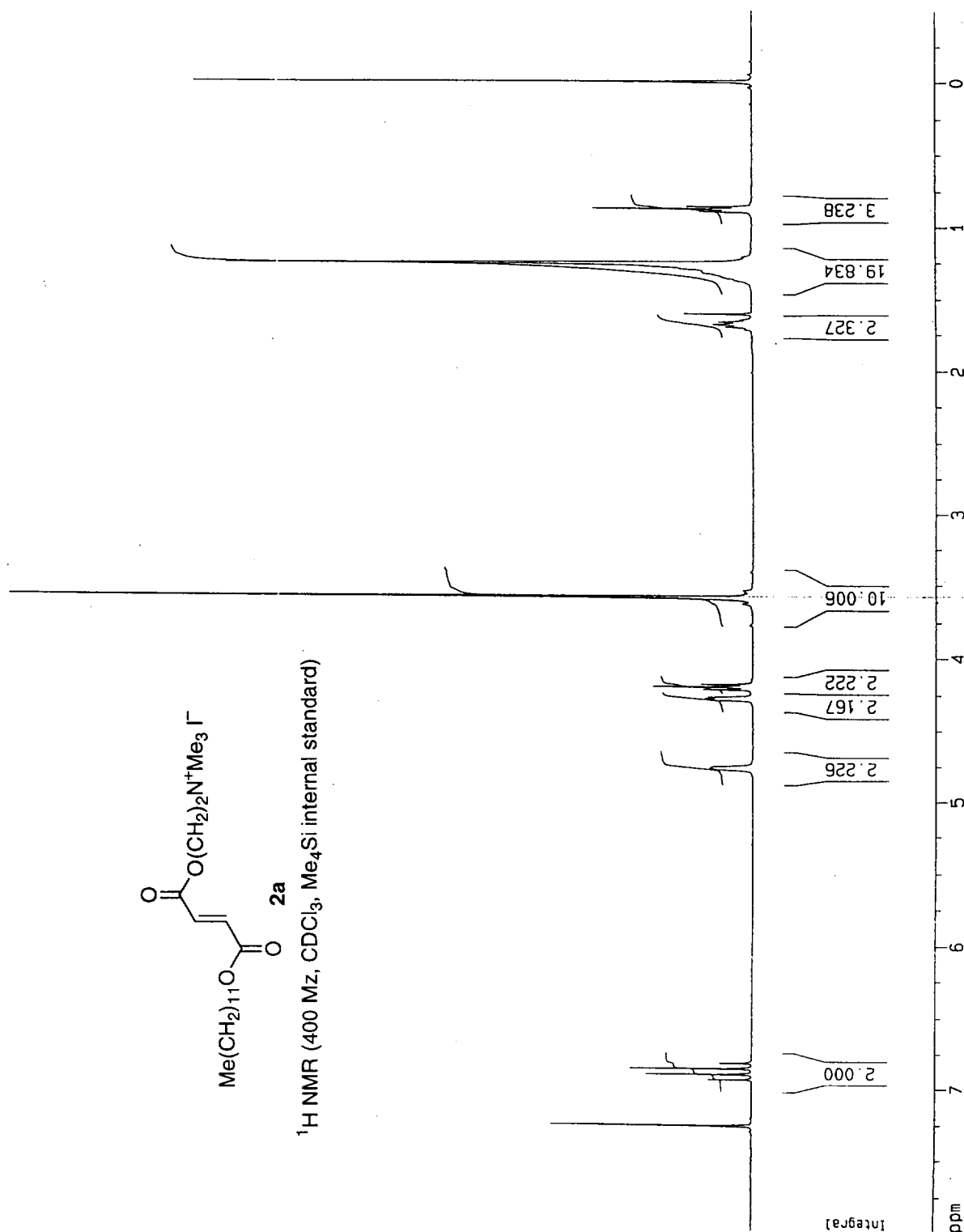
F2 - Acquisition Parameters
 Date_ 970813
 Time 5.32
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zgpg
 TD 32768
 SOLVENT CDCl3
 NS 9600
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 1024
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 D11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 garp
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 ¹H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 DE 4.50 usec
 SF01 100.6227903 MHz
 NUC1 ¹³C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127505 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 160.000 ppm
 F1 16098.04 Hz
 F2P -20.000 ppm
 F2 -2012.25 Hz
 PPMCM 9.00000 ppm/cm
 HZCM 905.51471 Hz/cm



Proton

¹H NMR (400 Mz, CDCl₃, Me₄Si internal standard)

Current Data Parameters **DS-4-A**
 NAME ds-4-xx
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980223
 Time 20.30
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TO 32768
 SOLVENT CDCl₃
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 362
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300079 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm

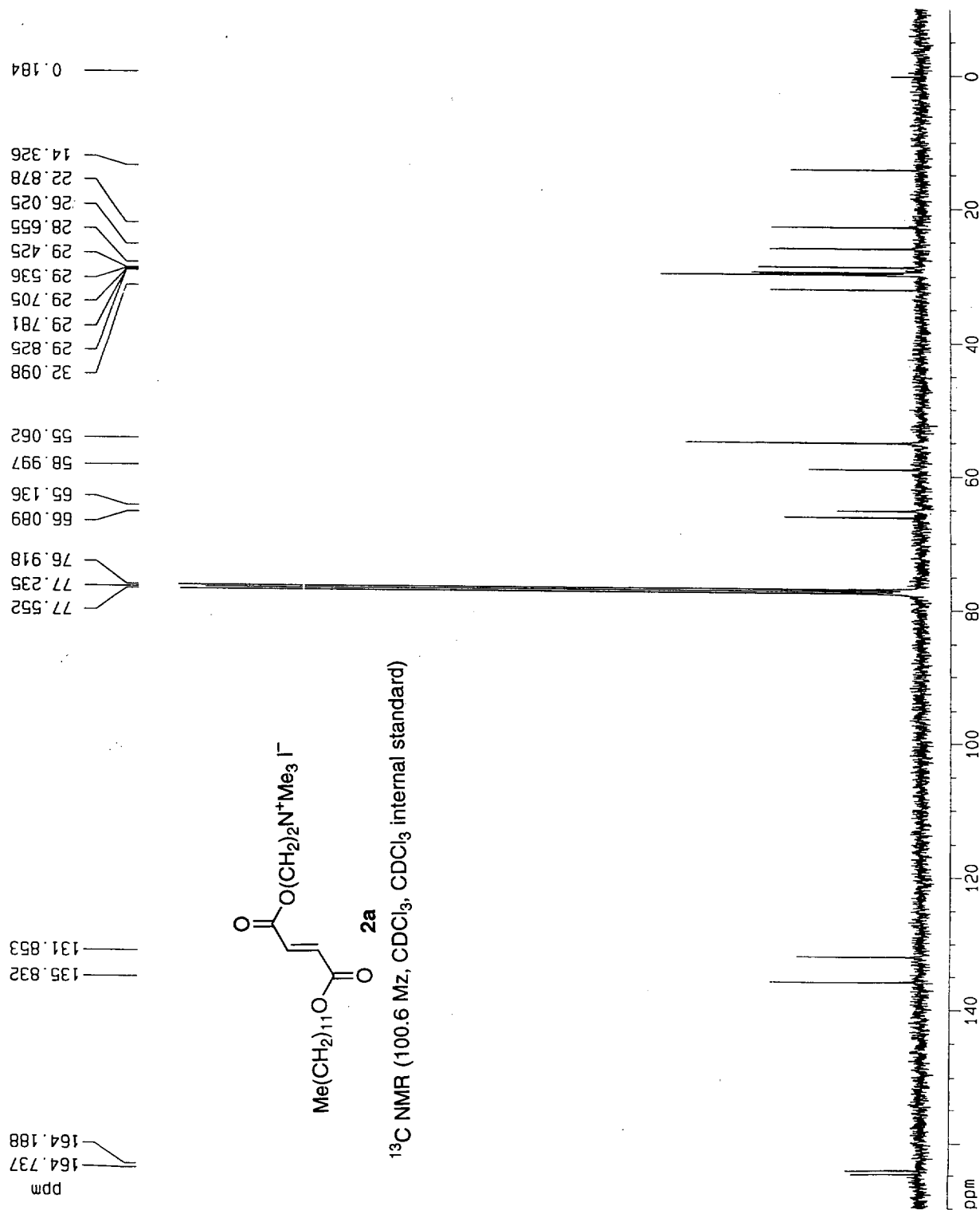
Carbon

Current Data Parameters
 NAME ds-4-xx
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980223
 Time 21.11
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zgpg30
 TD 32768
 SOLVENT CDCl3
 NS 768
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 362
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPOPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 13C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127505 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 170.000 ppm
 F1 17104.17 Hz
 F2P -10.000 ppm
 F2 -1006.13 Hz
 PPMCM 9.00000 ppm/cm
 HZCM 905.51471 Hz/cm



Current Data Parameters
 NAME ds-2-97a
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980503
 Time 20.37
 INSTRUM spect
 PROBHD 5 mm GNP 1H
 PULPROG zg
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 90.5
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

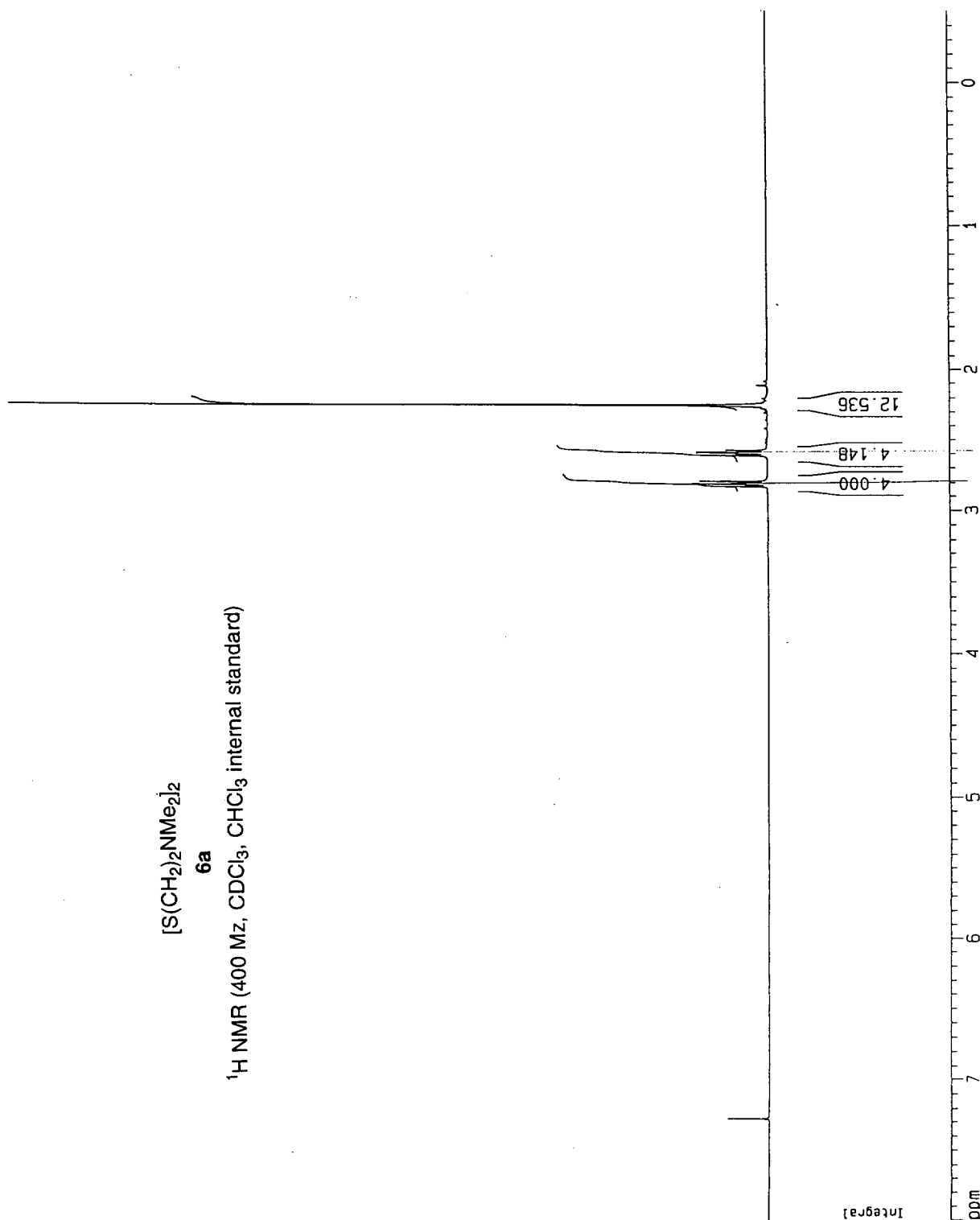
F2 - Processing parameters
 SI 16384
 SF 400.1300062 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm

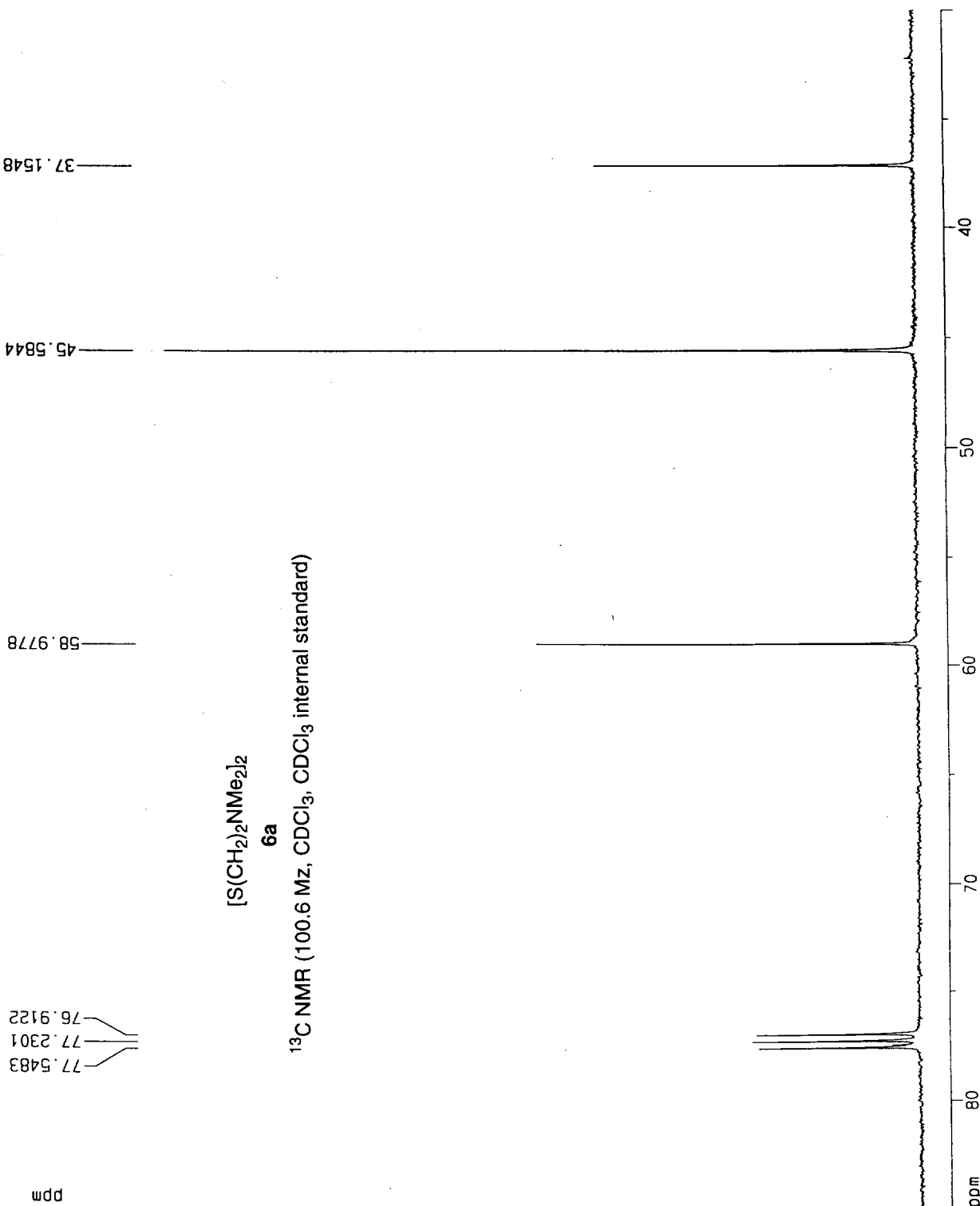
[S(CH₂)₂NMe₂]₂

6a

¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)



Carbon



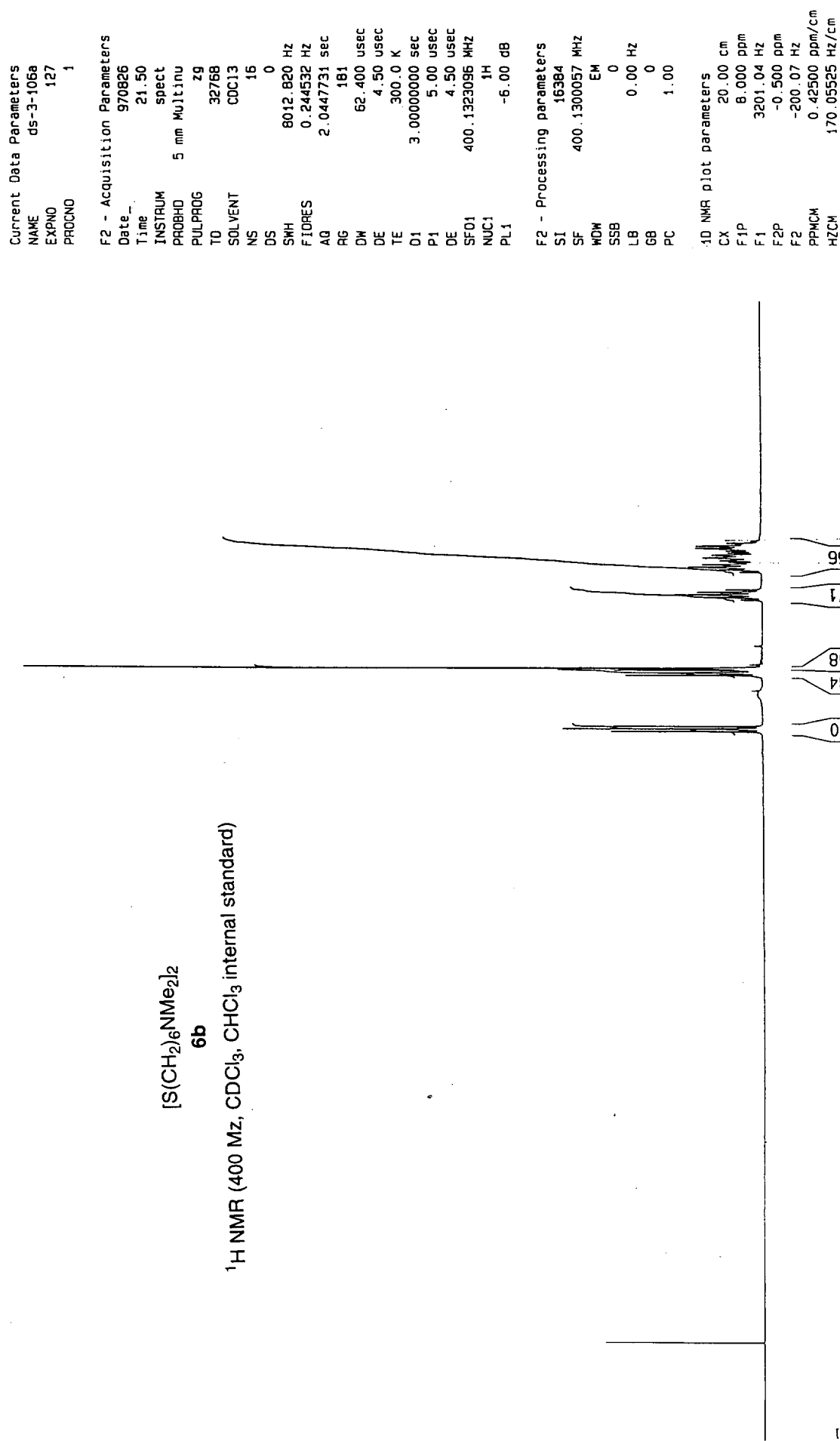
Current Data Parameters
 NAME ds-2-97ac
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980603
 Time 21.00
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zgpg30
 TD 32768
 SOLVENT $CDCl_3$
 NS 502
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 362
 DM 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 ^{13}C
 PL1 -6.00 dB

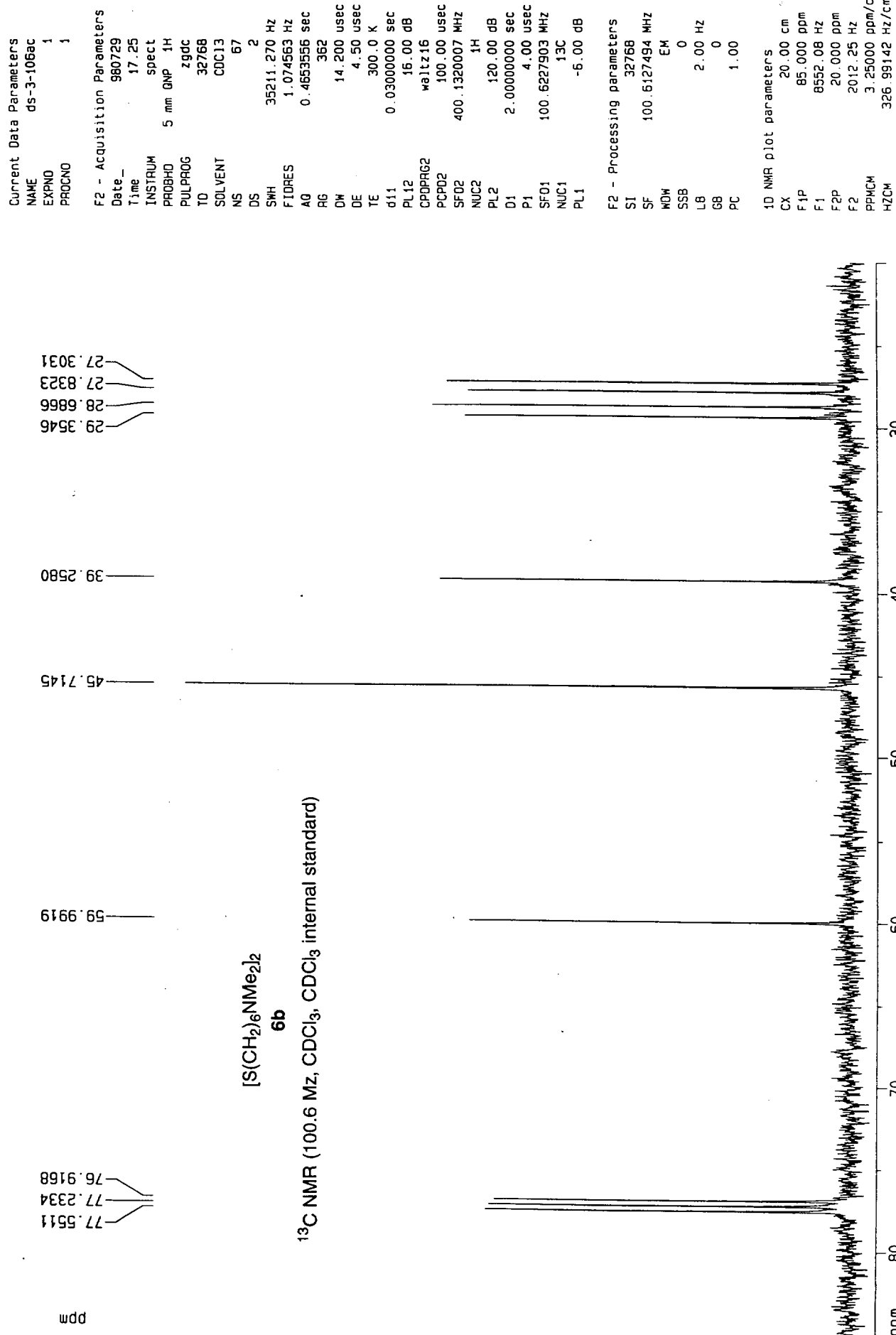
F2 - Processing parameters
 SI 32768
 SF 100.6127515 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 85.000 ppm
 F1 8552.08 Hz
 F2P 30.000 ppm
 F2 3018.38 Hz
 PPMCM 2.75000 ppm/cm
 HZCM 276.68509 Hz/cm

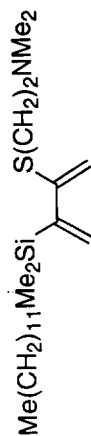
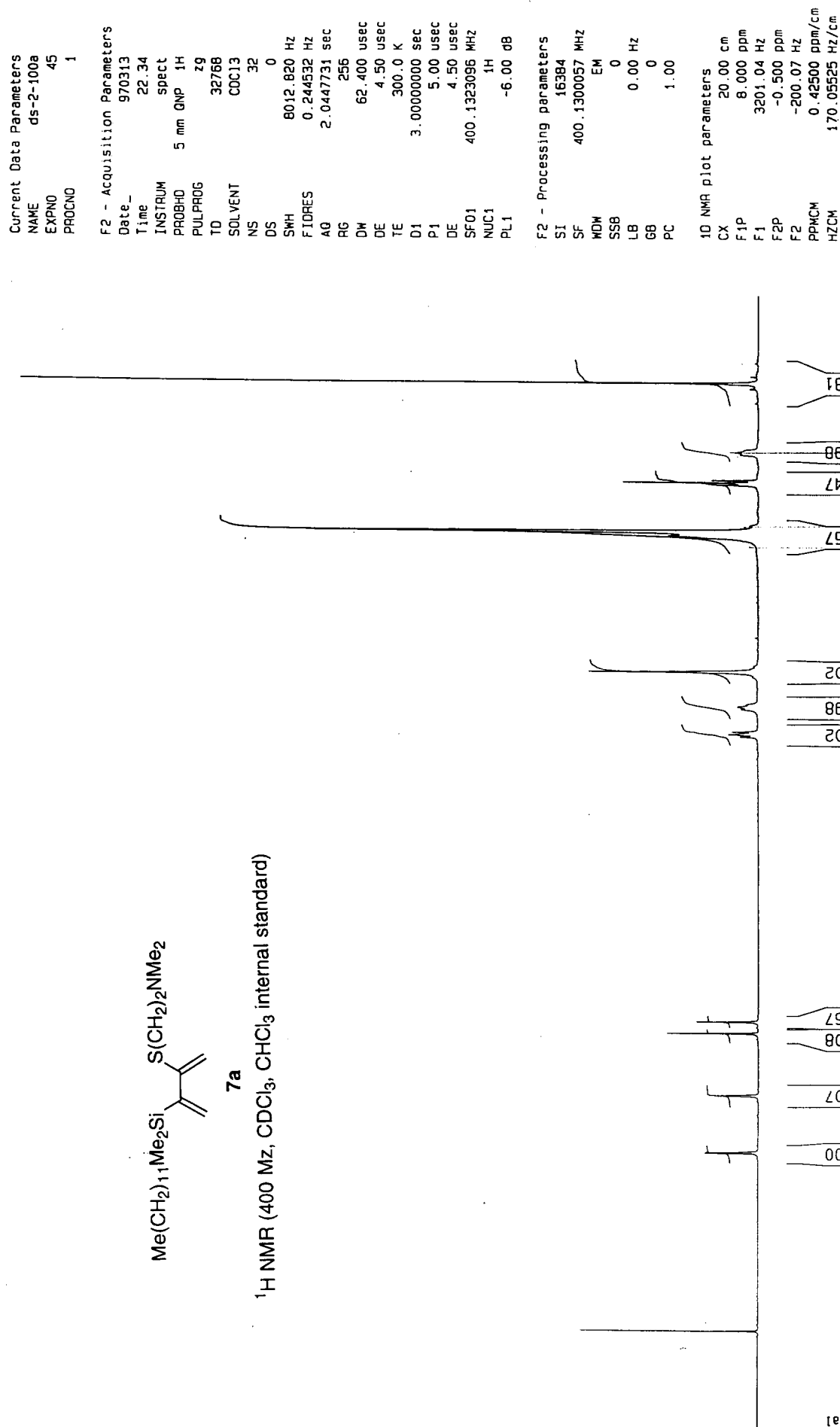
Proton

[S(CH₂)₆NMe₂]₂**6b**¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

Carbon

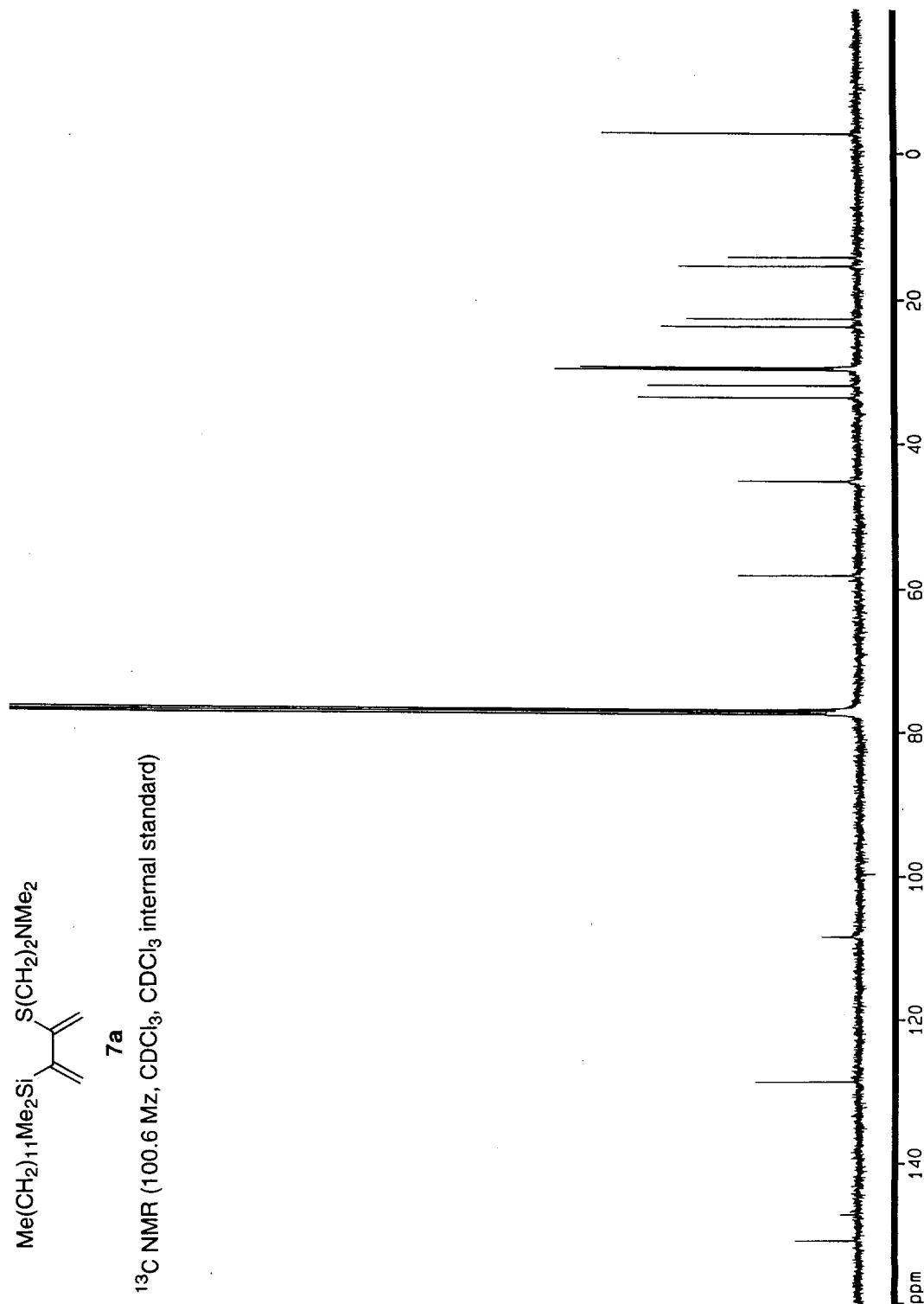


Proton

**7a**¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

$$\text{Me}(\text{CH}_2)_{11}\text{Me}_2\text{Si}=\text{C}(\text{S}(\text{CH}_2)_2\text{NMe}_2)=\text{C}(\text{Me})_2$$

7a

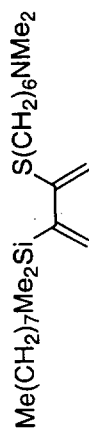
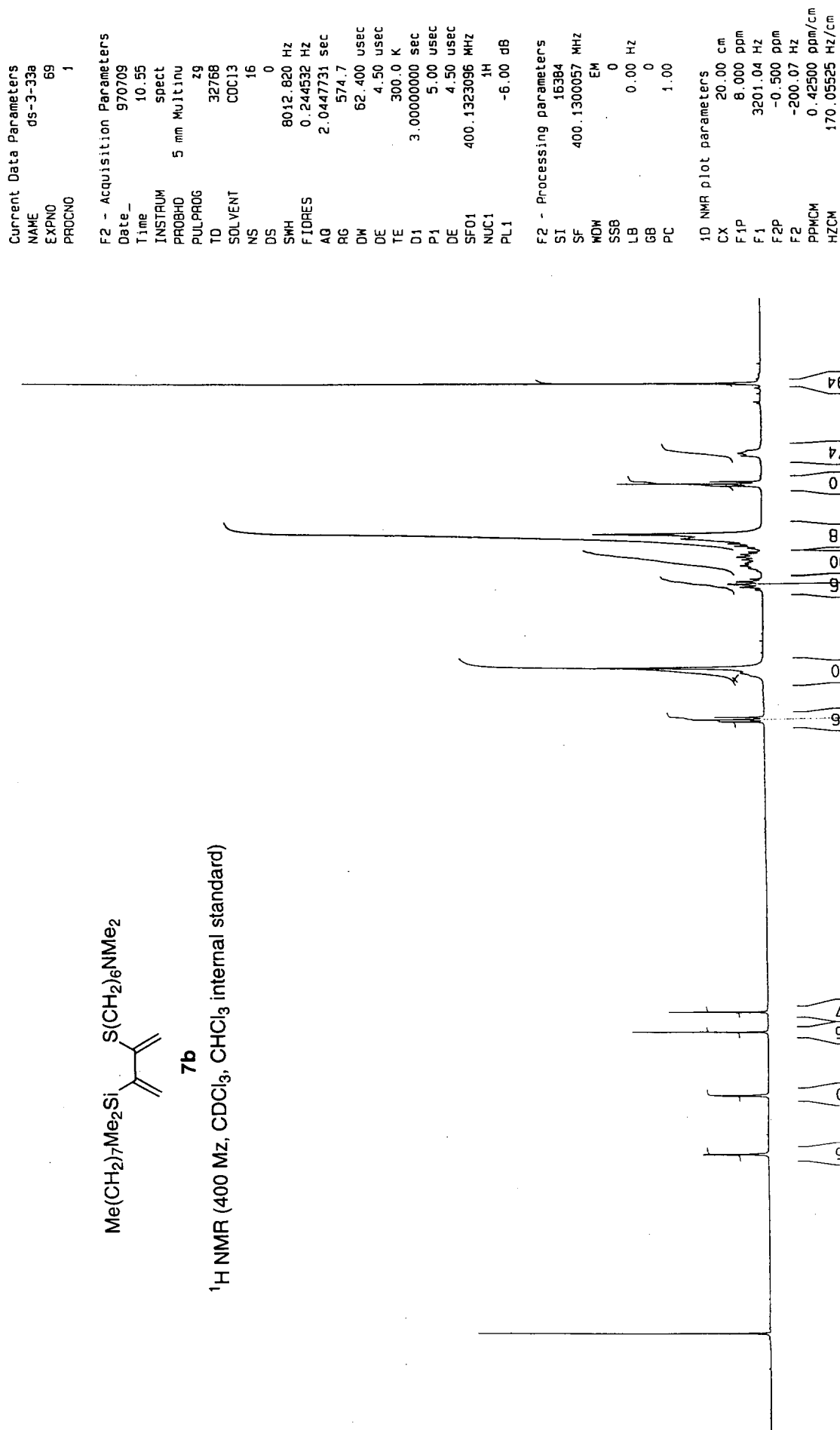
¹³C NMR (100.6 Mz, CDCl₃, CDCl₃ internal standard)

Current Data Parameters	
NAME	ds-2-100ac
EXPNO	71
PROCNO	1

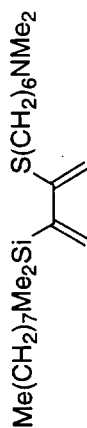
F2 - Acquisition Parameters	
Date_	970314
Time	3:04
INSTRUM	spect
PROBHD	5 mm QNP 1H
PULPROG	zgdc
TD	32768
SOLVENT	CDCl3
NS	6400
DS	2
SWH	35211.270 Hz
FIDRES	1.0745563 Hz
AQ	0.4653556 sec
RG	1024
DW	14.200 usec
DE	4.50 usec
TE	300.0 K
g1	0.0300000 sec
PL12	16.00 dB
CPDPRG2	garp
PCPD02	100.00 usec
FSF02	400.1320007 MHz
NUC2	1H
PL2	120.00 dB
D1	2.0000000 sec
P1	4.00 usec
DE	4.50 usec
FSF01	100.6227903 MHz
NUC1	13C
PL1	-6.00 dB

F2 - Processing parameters	
SI	32768
SF	100.6127663 MHz
EM	
SSB	0
LB	1.00 Hz
GB	0
PC	1.00
1D NMR plot parameters	
CX	20.00 cm
FfP	160.000 ppm
Ff1	16098.04 Hz
2p	-20.000 ppm
2	-2012.26 Hz
PPMCH	9.00000 ppm/cm
HZCM	905.51495 Hz/cm

Proton

**7b**¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

Carbon

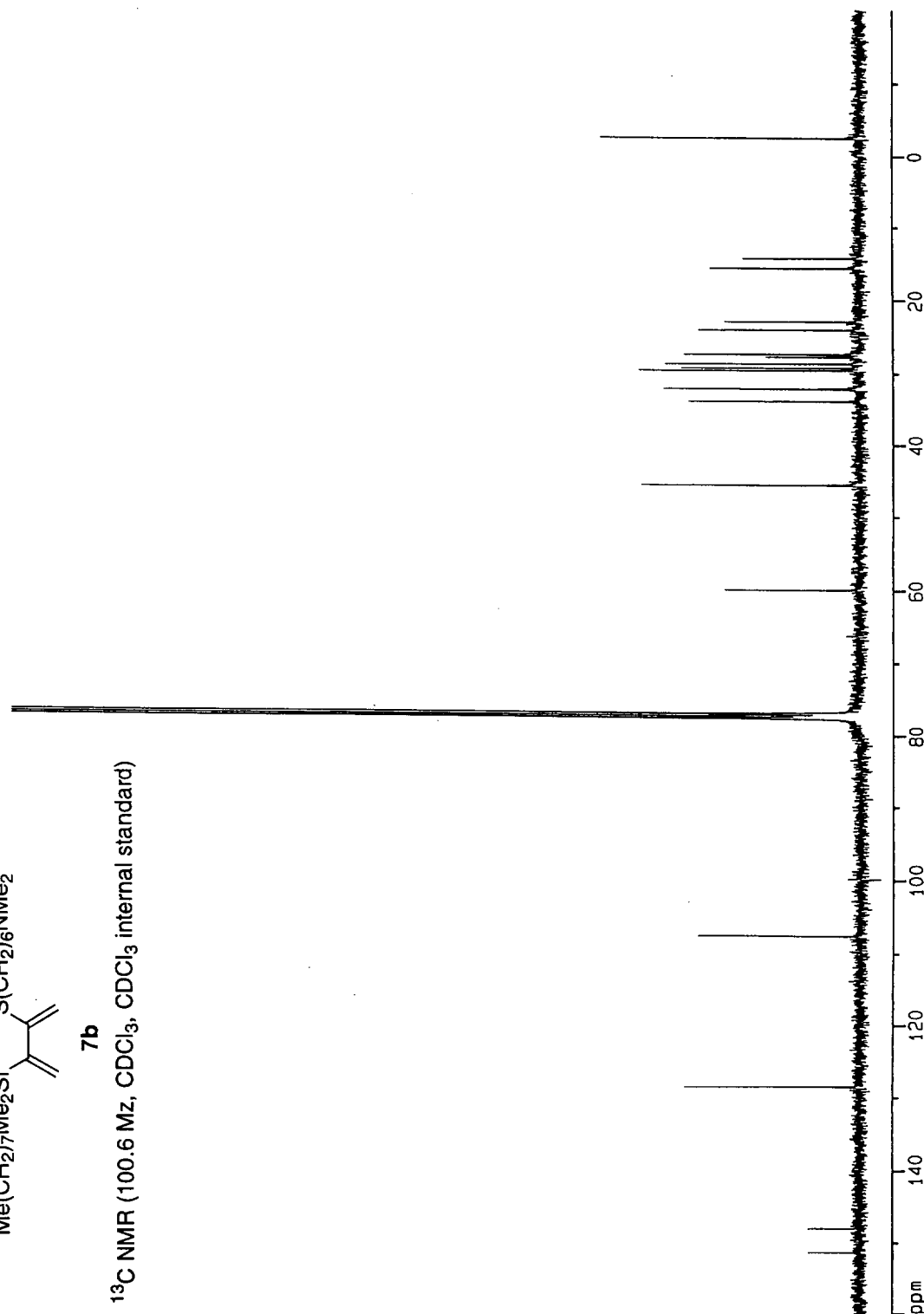
**7b**¹³C NMR (100.6 Mz, CDCl₃, CDCl₃ internal standard)

Current Data Parameters
 NAME ds-3-33ac
 EXPNO 76
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 970716
 Time 4.21
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zgpg
 TD 32768
 SOLVENT CDCl₃
 NS 8000
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 1024
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 D11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 garp
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 ¹H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 DE 4.50 usec
 SF01 100.6227903 MHz
 NUC1 ¹³C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127483 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 160.000 ppm
 F1 16098.04 Hz
 F2P -20.000 ppm
 F2 -2012.25 Hz
 PPMCM 9.00000 ppm/cm
 HZCM 905.51471 Hz/cm



Proton

 $\text{HO}(\text{CH}_2)_6\text{N}^+\text{Me}_2\text{NH}_2\text{Cl}^-$

9

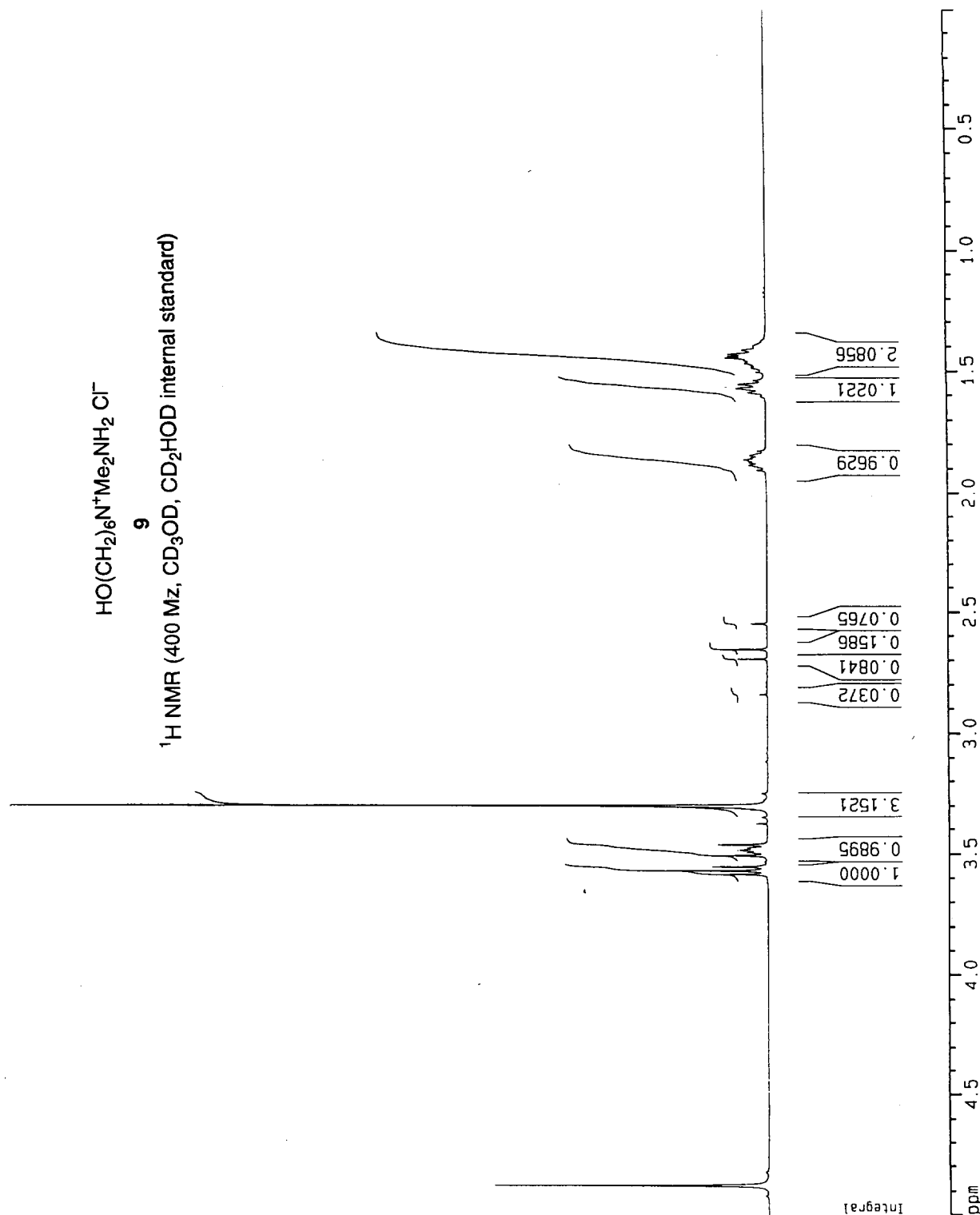
 ^1H NMR (400 Mz, CD_3OD , CD_2HOD internal standard)

Current Data Parameters
 NAME ds-2-178a
 EXPNO 22
 PROCNO 1

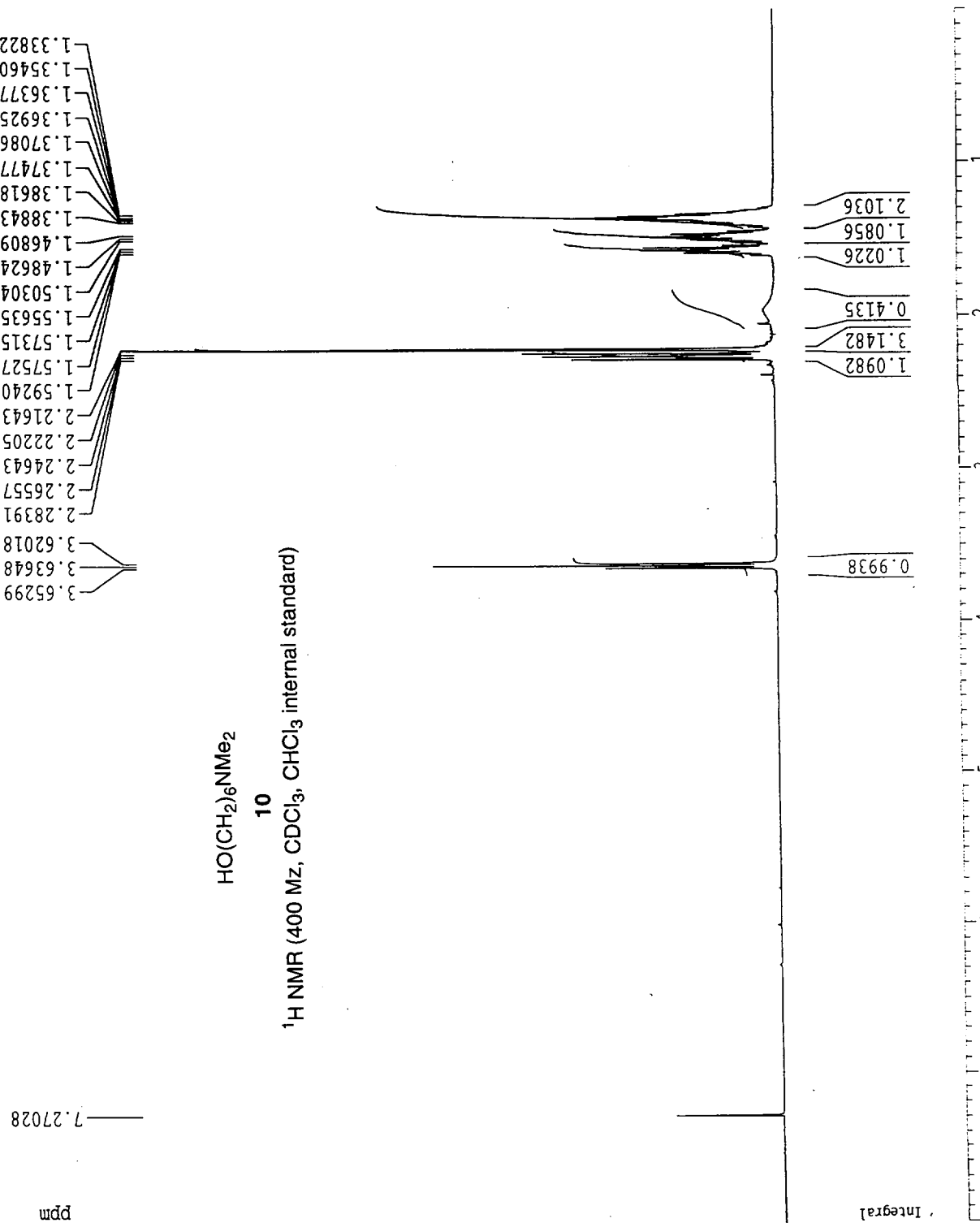
F2 - Acquisition Parameters
 Date_ 970408
 Time 10.31
 INSTRUM spect
 PROBHD 5 mm GNP 1H
 PULPROG zg
 TD 32768
 SOLVENT MeOH
 NS 16
 DS 0
 SMH 8012.820 Hz
 FIDRES 0.244532 Hz
 AQ 2.0447731 sec
 RG 128
 DW 62.400 usec
 DE 4.50 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 DE 4.50 usec
 SF01 400.1323096 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300094 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 5.000 ppm
 F1 2000.65 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 0.25000 ppm/cm
 HZCM 100.03250 Hz/cm



Proton



HO(CH₂)₆NMe₂
10
¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

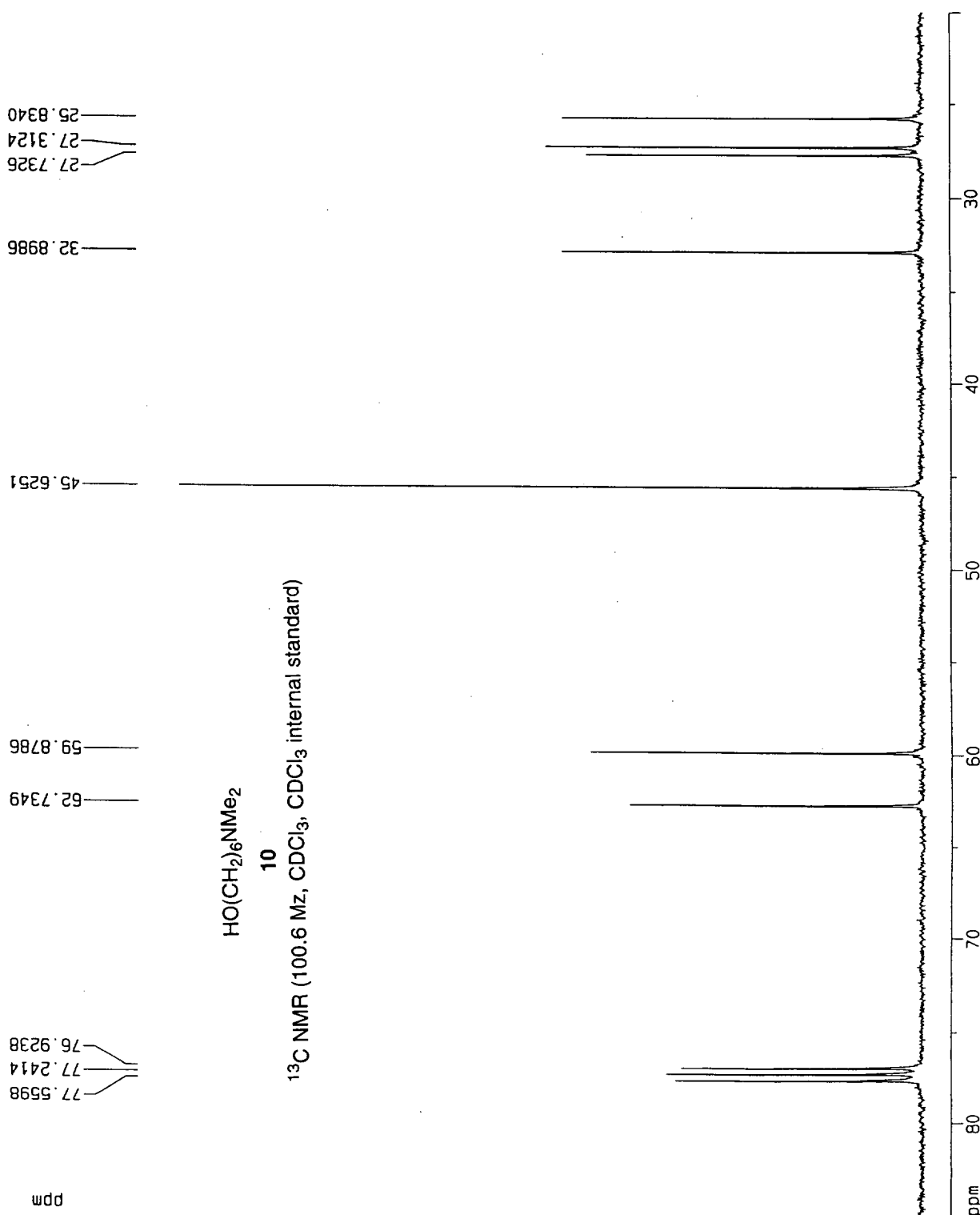
Current Data Parameters
NAME ds-3-103a
EXPNO 118
PROCNO 1

F2 - Acquisition Parameters
Date_ 970820
Time 11.33
INSTRUM spect
PROBHD 5 mm Multinu
PULPROG zg
TD 32768
SOLVENT CDCl₃
NS 16
DS 0
SWH 8012.820 Hz
FIDRES 0.244532 Hz
AQ 2.0447731 sec
RG 128
DW 62.400 usec
DE 4.50 usec
TE 300.0 K
D1 3.00000000 sec
P1 5.00 usec
DE 4.50 usec
SF01 400.1323096 MHz
NUC1 ¹H
PL1 -6.00 dB

F2 - Processing parameters
SI 16384
SF 400.1300057 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 20.00 cm
F1P 8.000 ppm
F1 3201.04 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.40000 ppm/cm
HZCM 160.05200 Hz/cm

Carbon



Current Data Parameters
NAME ds-3-103ac
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 980603
Time 20.25
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg
TD 32768
SOLVENT CDCl_3
NS 487
DS 2
SWH 35211.270 Hz
FIDRES 1.074563 Hz
AQ 0.4653555 sec
RG 362
DW 14.200 usec
DE 4.50 usec
TE 300.0 K
d11 0.03000000 sec
PL12 16.00 dB
CPDPRG2 waltz16
PCPD2 100.00 usec
SF02 400.1320007 MHz
NUC2 ^1H
PL2 120.00 dB
D1 2.00000000 sec
P1 4.00 usec
SF01 100.6227903 MHz
NUC1 ^{13}C
PL1 -6.00 dB

F2 - Processing parameters
SI 32768
SF 100.6127505 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

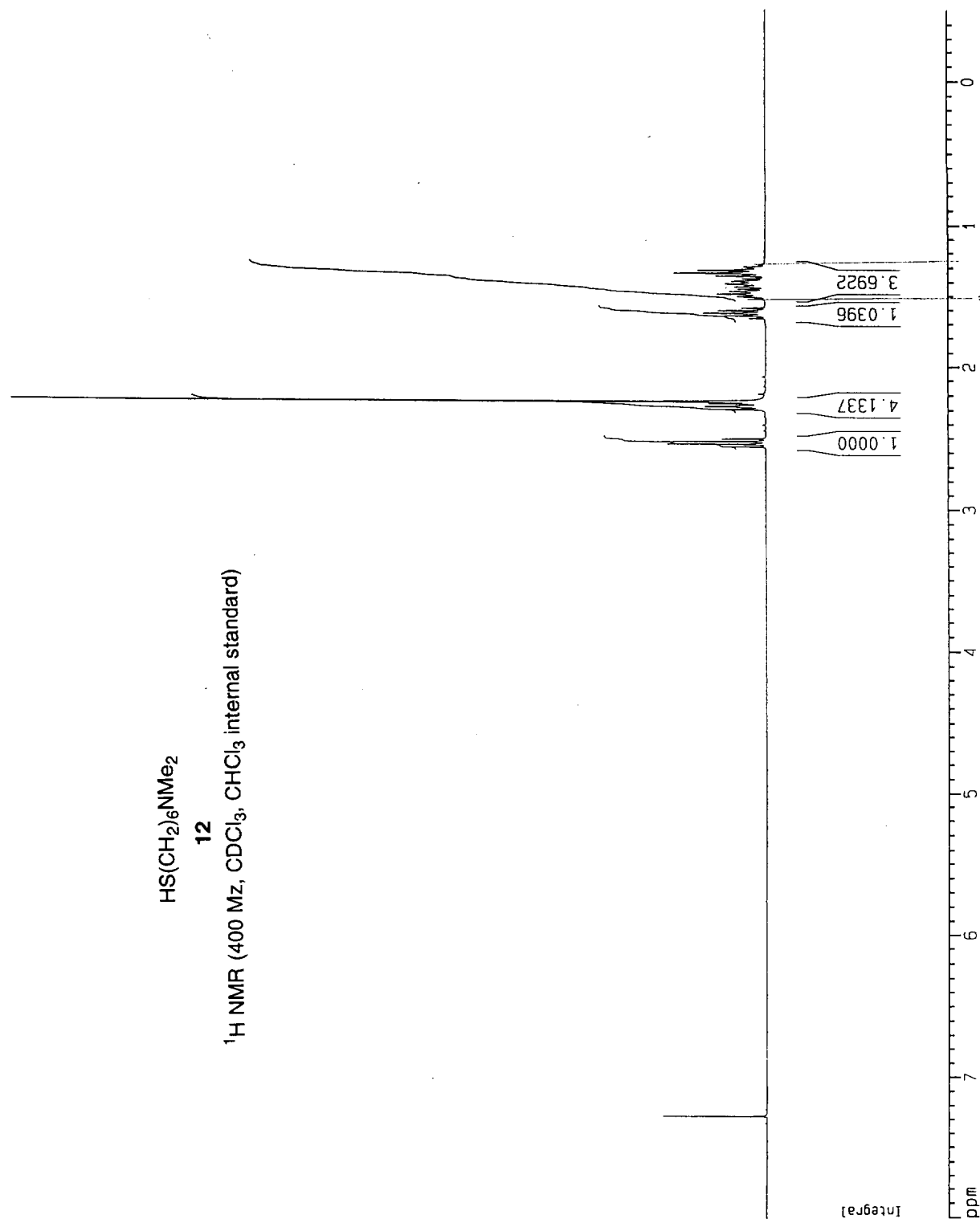
1D NMR plot parameters
CX 20.00 cm
F1P 85.000 ppm
F1 8552.08 Hz
F2P 20.000 ppm
F2 2012.25 Hz
PPHMC 3.25000 ppm/cm
HZCM 326.99142 Hz/cm

Current Data Parameters
 NAME ds-2-209b
 EXPNO 38
 PROCNO 1

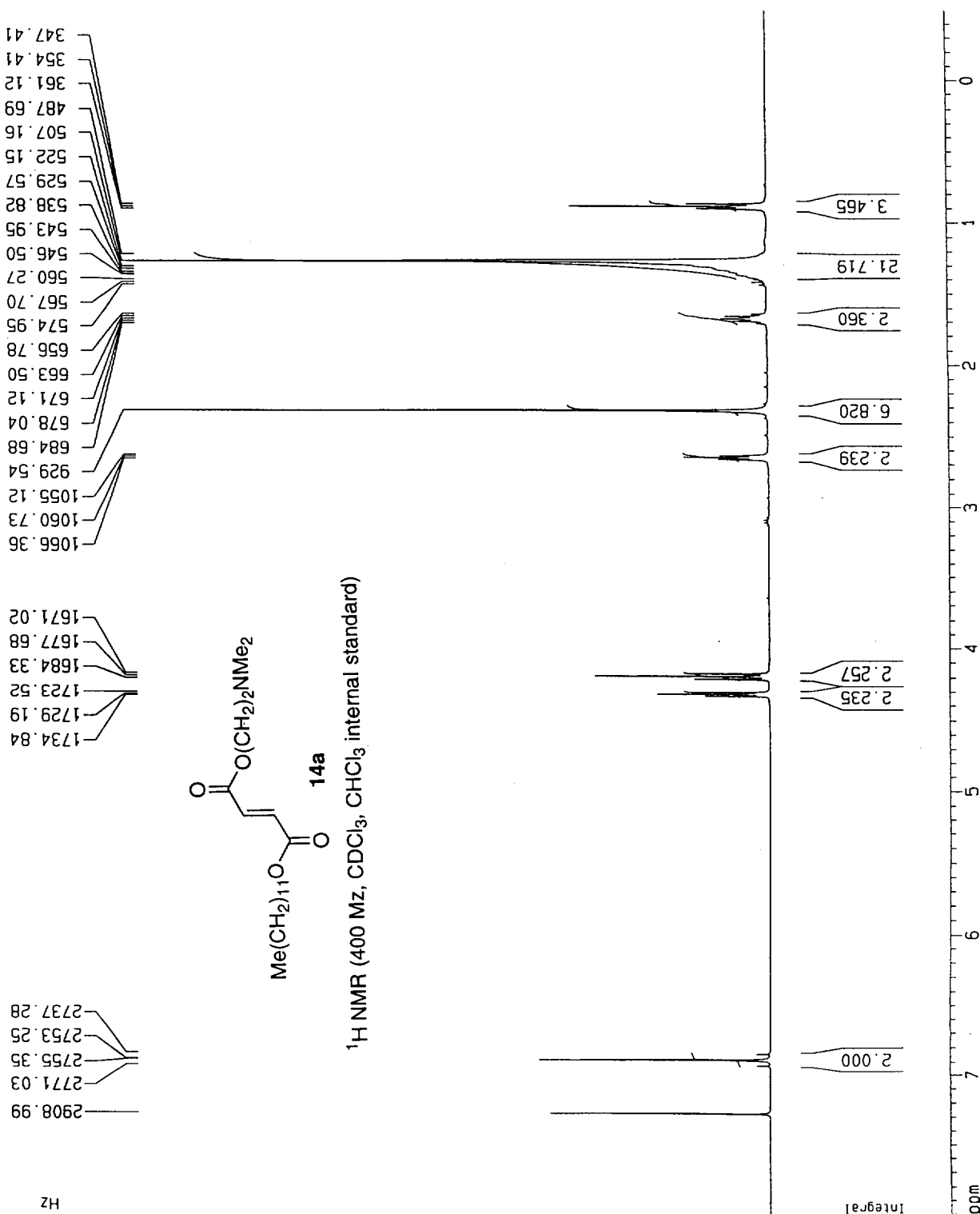
F2 - Acquisition Parameters
 Date_ 970422
 Time 15.26
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8012.820 Hz
 FIDRES 0.244532 Hz
 AQ 2.0447731 sec
 RG 256
 DW 62.400 usec
 DE 4.50 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 DE 4.50 usec
 SF01 400.1323096 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300052 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm



Proton



Current Data Parameters
 NAME ds-4-186a
 EXPNO 1
 PROCNO 1

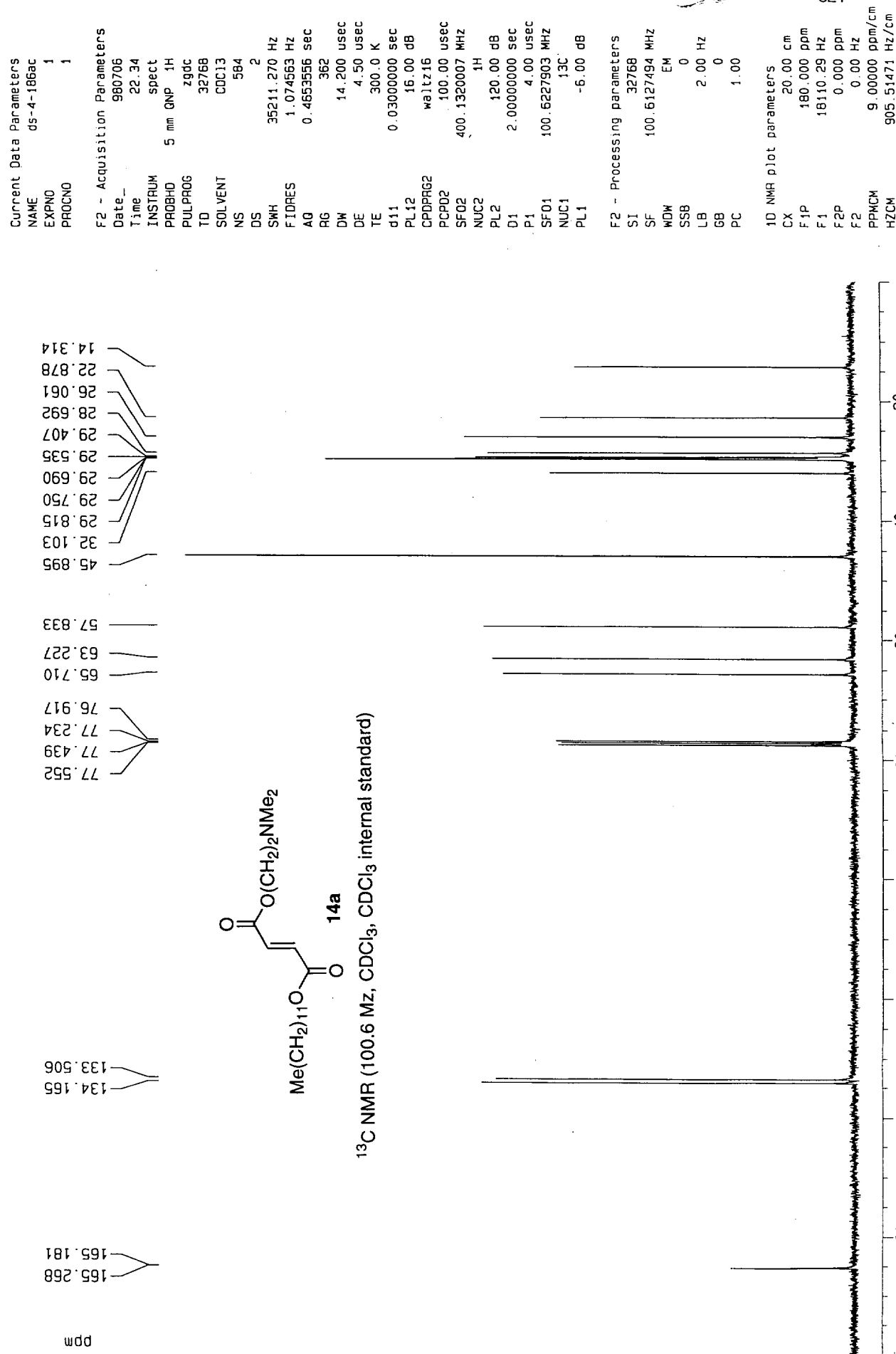
F2 - Acquisition Parameters
 Date_ 980705
 Time 21.56
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TO 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 287.4
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

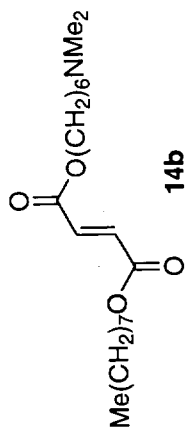
1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm

S21

Carbon

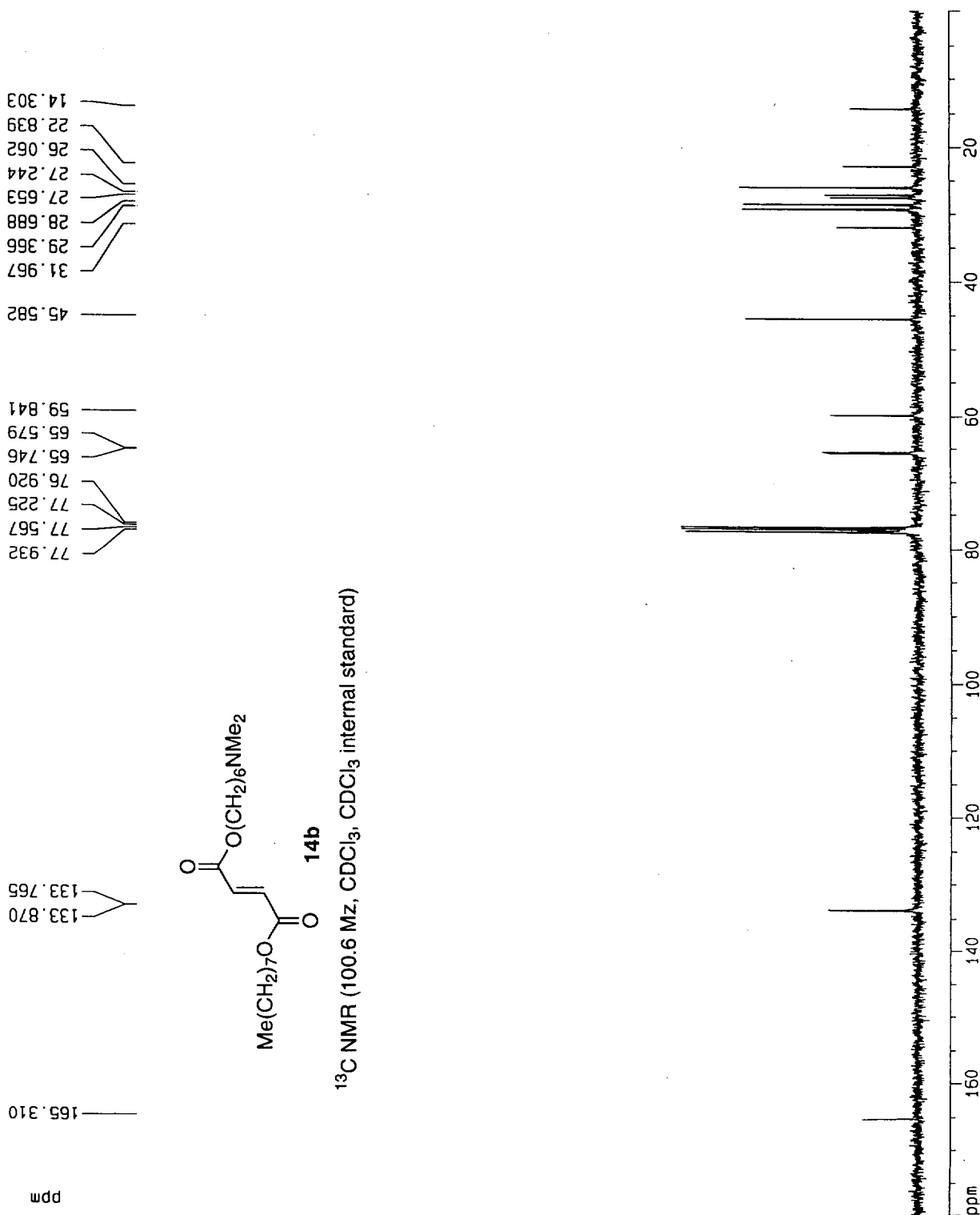


Proton

¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

Current Data Parameters	
NAME	ds-4-163ac1
EXPNO	1
PROCNO	1
F2 - Acquisition Parameters	
Date_	980625
Time	17.04
INSTRUM	spect
PROBHD	5 mm Multinu
PULPROG	zg
TD	32768
SOLVENT	COC13
NS	16
DS	0
SMH	8250.825 Hz
FIDRES	0.251795 Hz
AQ	1.9857908 sec
RG	181
DW	60.600 usec
DE	6.00 usec
TE	300.0 K
D1	3.00000000 sec
P1	5.00 usec
SFO1	400.1324710 MHz
NUC1	1H
PL1	-5.00 dB
F2 - Processing parameters	
SI	16384
SF	400.1300057 MHz
WDW	EM
SSB	0
LB	0.30 Hz
GB	0
PC	1.00
1D NMR plot parameters	
CX	20.00 cm
FFIP	8.000 ppm
F1	3201.04 Hz
F2P	-0.500 ppm
F2	-200.07 Hz
PPMCM	0.42500 ppm/cm
HZCM	170.05525 Hz/cm

Carbon



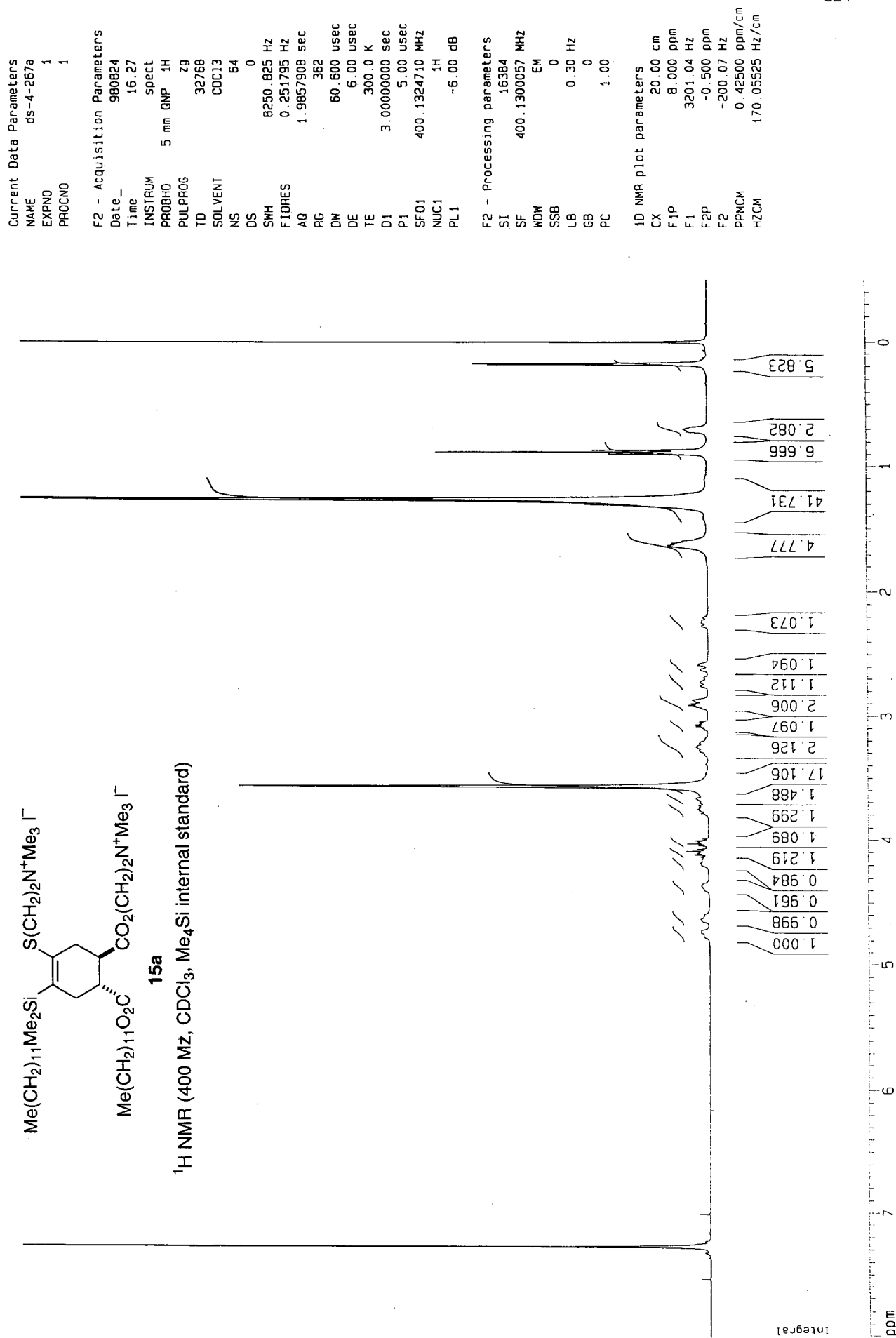
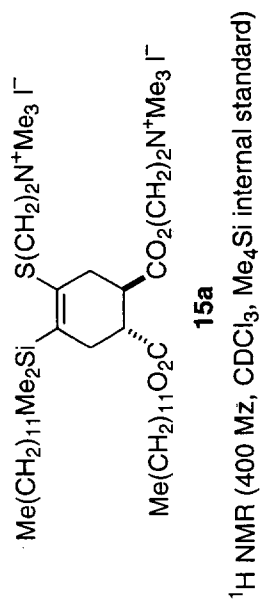
Current Data Parameters
 NAME ds-4-163ac
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980624
 Time 21.18
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zgdc
 TO 32768
 SOLVENT CDCl3
 NS 640
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 4096
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 ¹H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 ¹³C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127494 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 180.000 ppm
 F1 18110.29 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCM 9.00000 ppm/cm
 HZCM 905.51471 Hz/cm

Proton



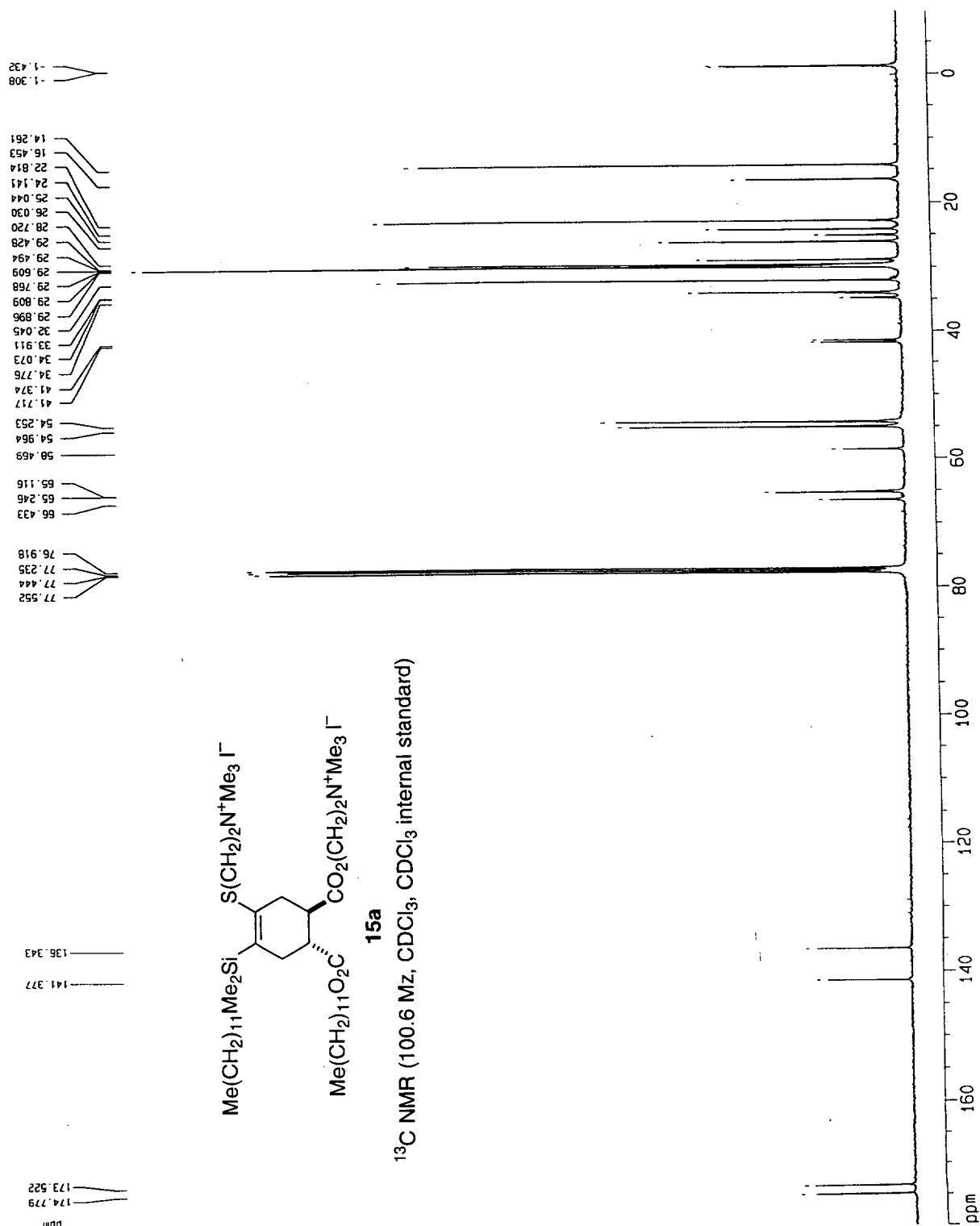
Carbon

Current Data Parameters
 NAME ds-4-267ac
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980824
 Time 22.57
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zgpg
 TO 32768
 SOLVENT CDCl3
 NS 12020
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 10321.3
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 13C
 PL1 -6.00 dB

F2 - Processing parameters
 S1 32768
 SF 100.6127558 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 180.000 ppm
 F1 18110.29 Hz
 F2P -10.000 ppm
 F2 -1006.13 Hz
 PPMCM 9.50000 ppm/cm
 HZCM 955.82117 Hz/cm

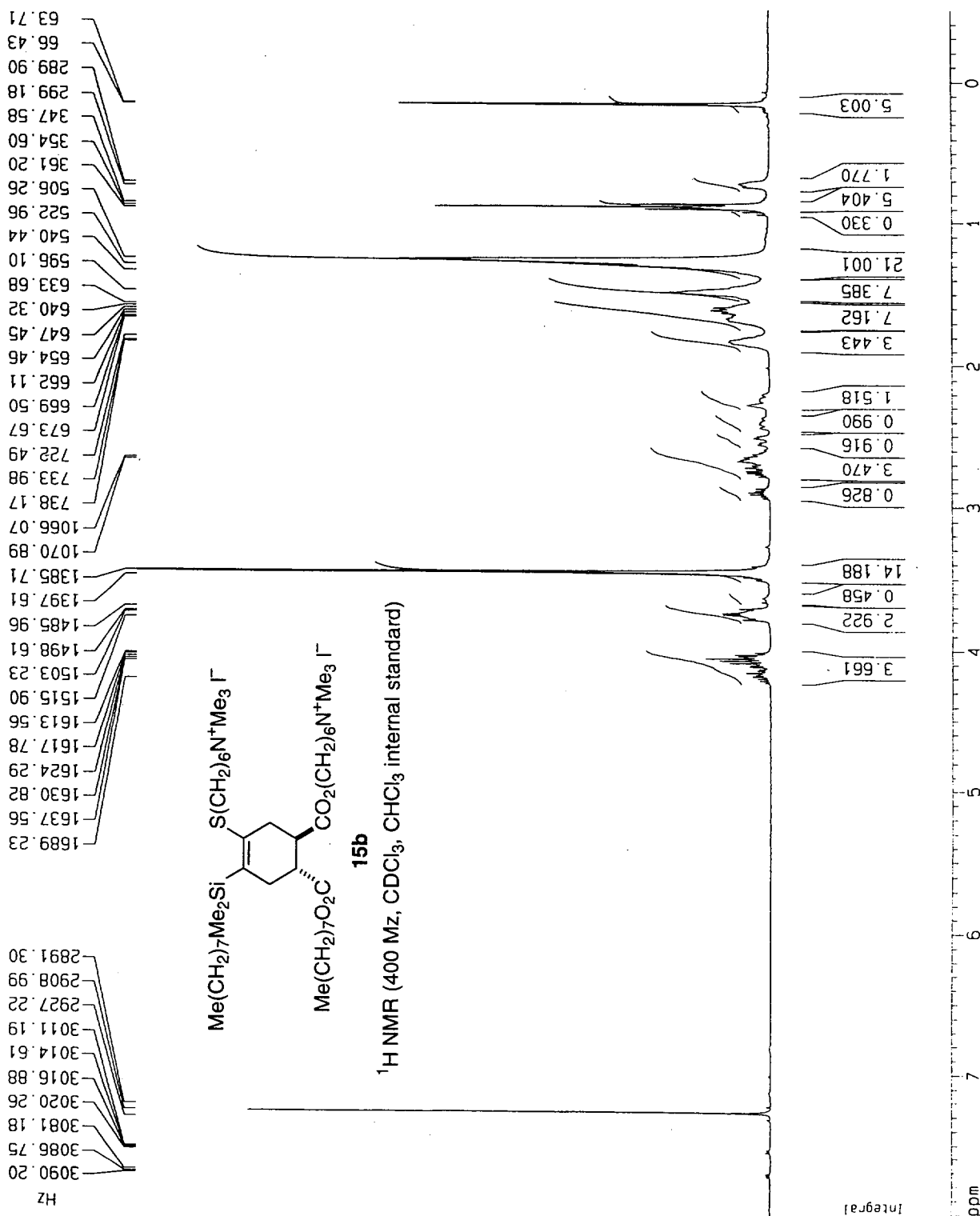


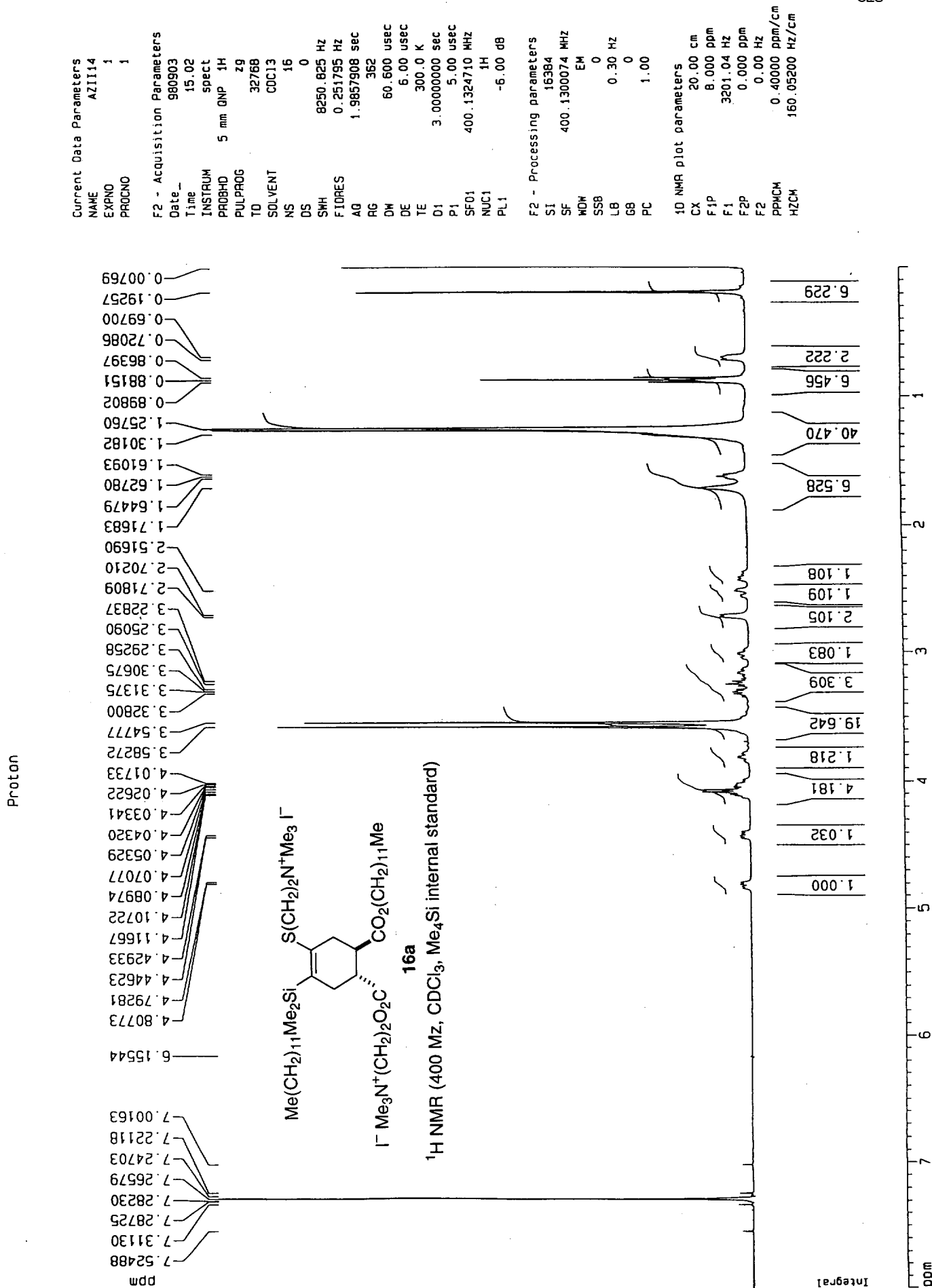
Current Data Parameters
 NAME ds-4-179a
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980629
 Time 18.20
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zg
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 512
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.0000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCH 0.42500 ppm/cm
 HZCH 170.05525 Hz/cm





S29

Current Data Parameters
 NAME AZ1114c1
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters

Date_ 980903

Time 22.20

INSTRUM spect

PROBHD 5 mm QNP 1H

PULPROG zgpg

TD 32768

SOLVENT CDCl3

NS 3400

DS 2

SWH 35211.270 Hz

FIDRES 1.074563 Hz

AQ 0.4653556 sec

RG 7298.2

DW 14.200 usec

DE 4.50 usec

TE 300.0 K

d11 0.03000000 sec

PL12 16.00 dB

CPDPRG2 waltz16

PCPD2 100.00 usec

SFO2 400.1320007 MHz

NUC2 1H

PL2 120.00 dB

D1 10.00000000 sec

P1 4.00 usec

SFO1 100.6227903 MHz

NUC1 13C

PL1 -6.00 dB

F2 - Processing parameters

SI 32768

SF 100.6127483 MHz

WDW EM

SSB 0

LB 2.00 Hz

GB 0

PC 1.00

1D NMR plot parameters

CX 20.00 cm

F1P 200.000 ppm

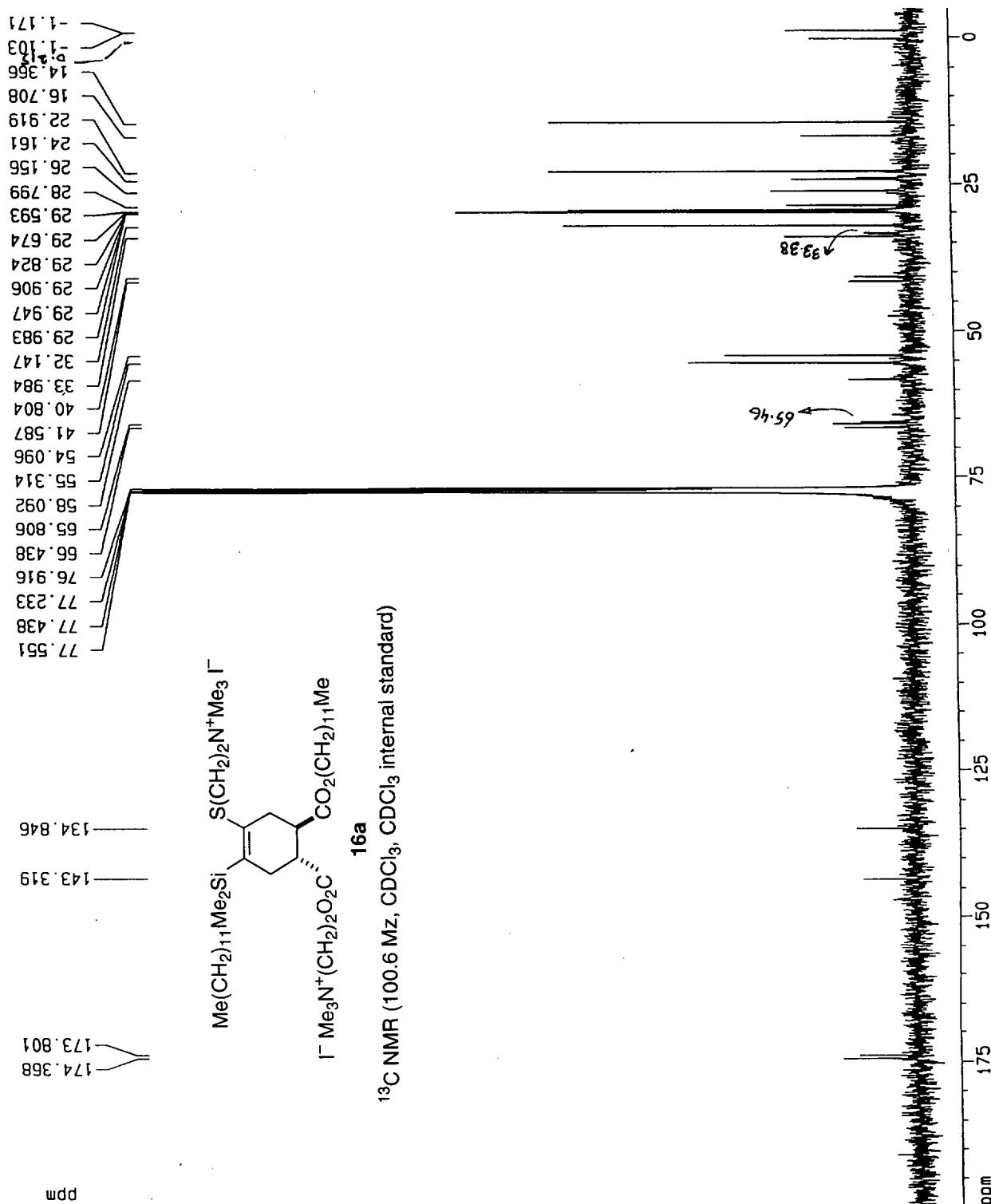
F1 20122.55 Hz

F2P -5.000 ppm

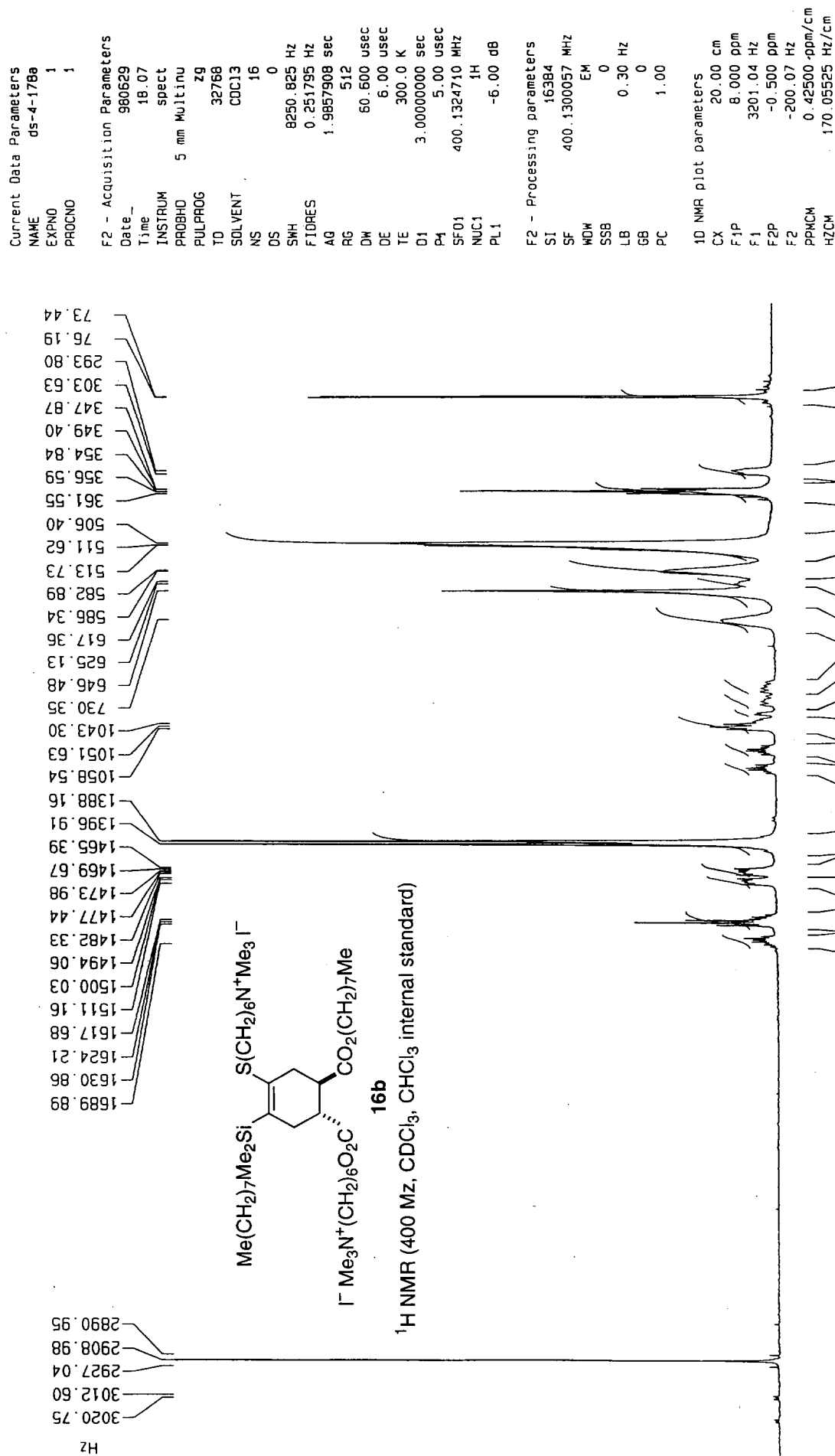
F2 -503.06 Hz

PPHMC 10.25000 ppm/cm

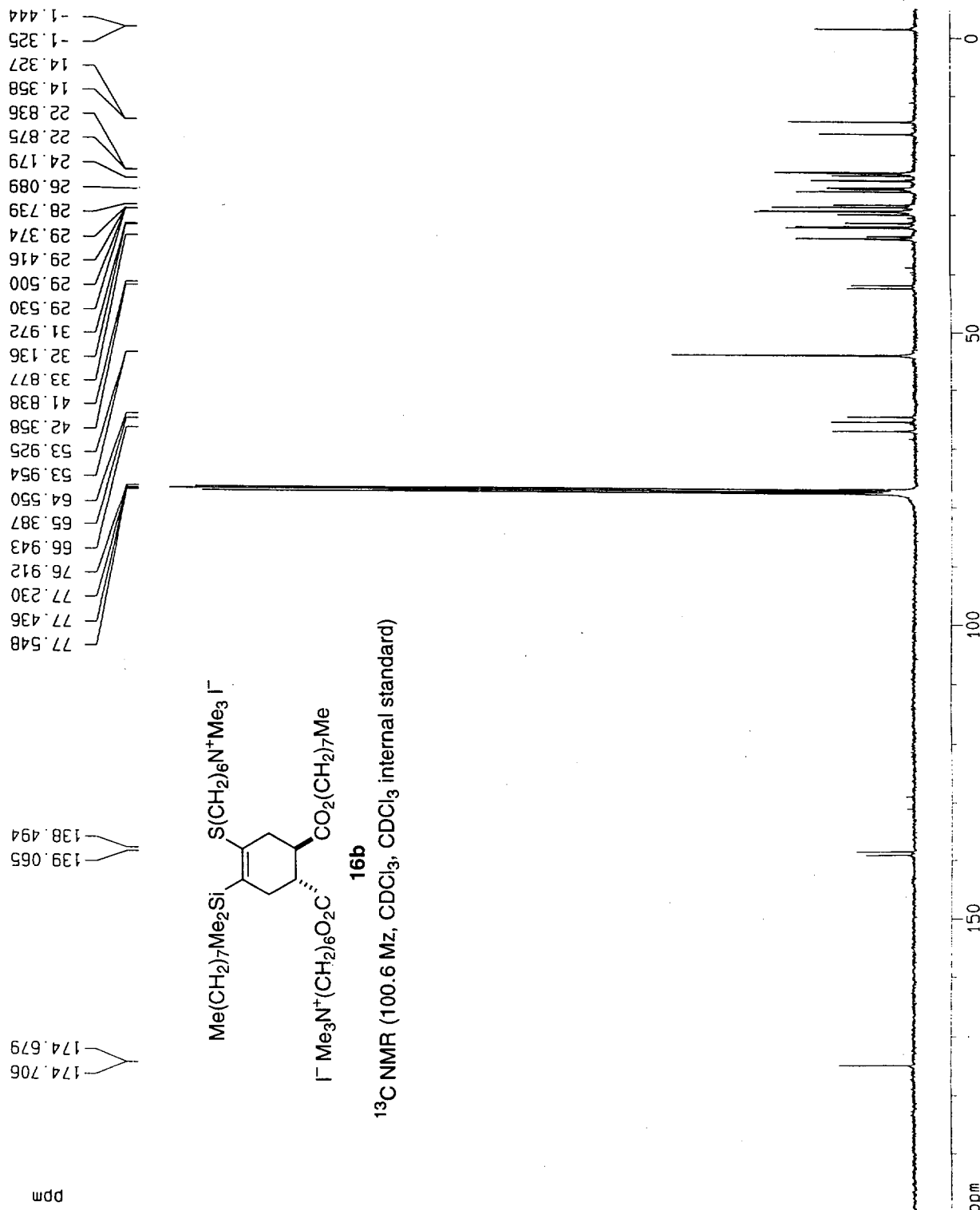
HZCM 1031.28076 Hz/cm



Proton



Carbon



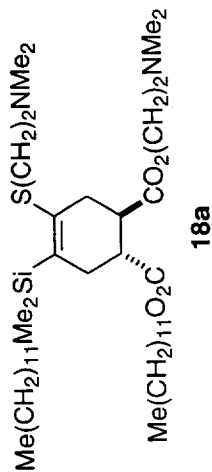
Current Data Parameters
 NAME ds-4-178ac
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980629
 Time 22.22
 INSTRUM spect
 PROBHD 5 mm Multinu
 PULPROG zgpg
 TO 32768
 SOLVENT CDCl3
 NS 11817
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 362
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPOPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 ^1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 ^{13}C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127515 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 200.000 ppm
 F1 20122.55 Hz
 F2P -5.000 ppm
 F2 -503.06 Hz
 PPMCM 10.25000 ppm/cm
 HZCM 1031.28076 Hz/cm

Proton



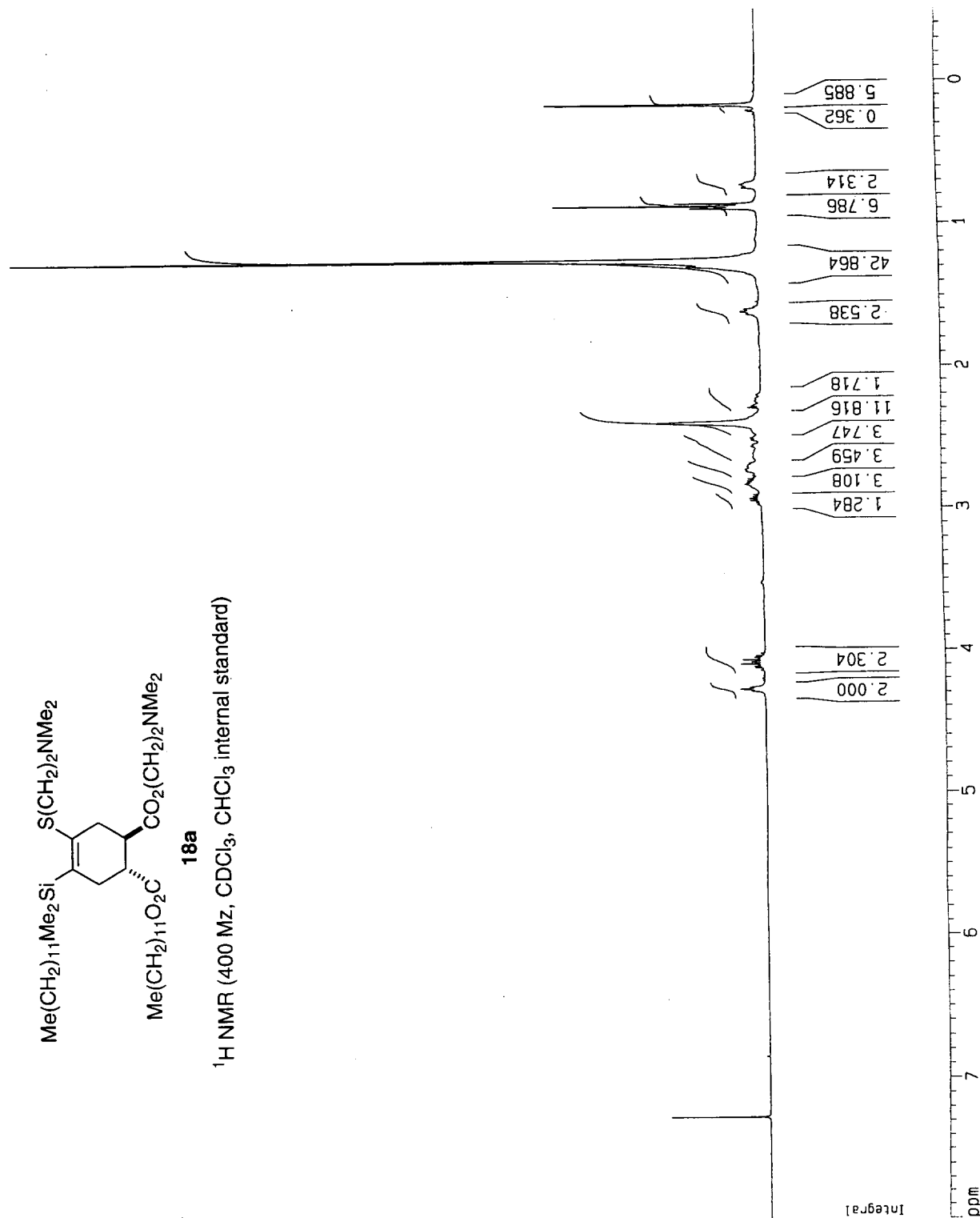
^1H NMR (400 Mz, CDCl_3 , CHCl_3 internal standard)

Current Data Parameters
NAME ds-4-191b
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 980711
Time 16.30
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zg
TD 32768
SOLVENT CDCl_3
NS 16
DS 0
SWH 8250.825 Hz
FIDRES 0.251795 Hz
AQ 1.9857908 sec
RG 181
DE 60.600 usec
TE 300.0 K
D1 3.00000000 sec
P1 5.00 usec
SF01 400.1324710 MHz
NUC1 1H
PL1 -6.00 dB

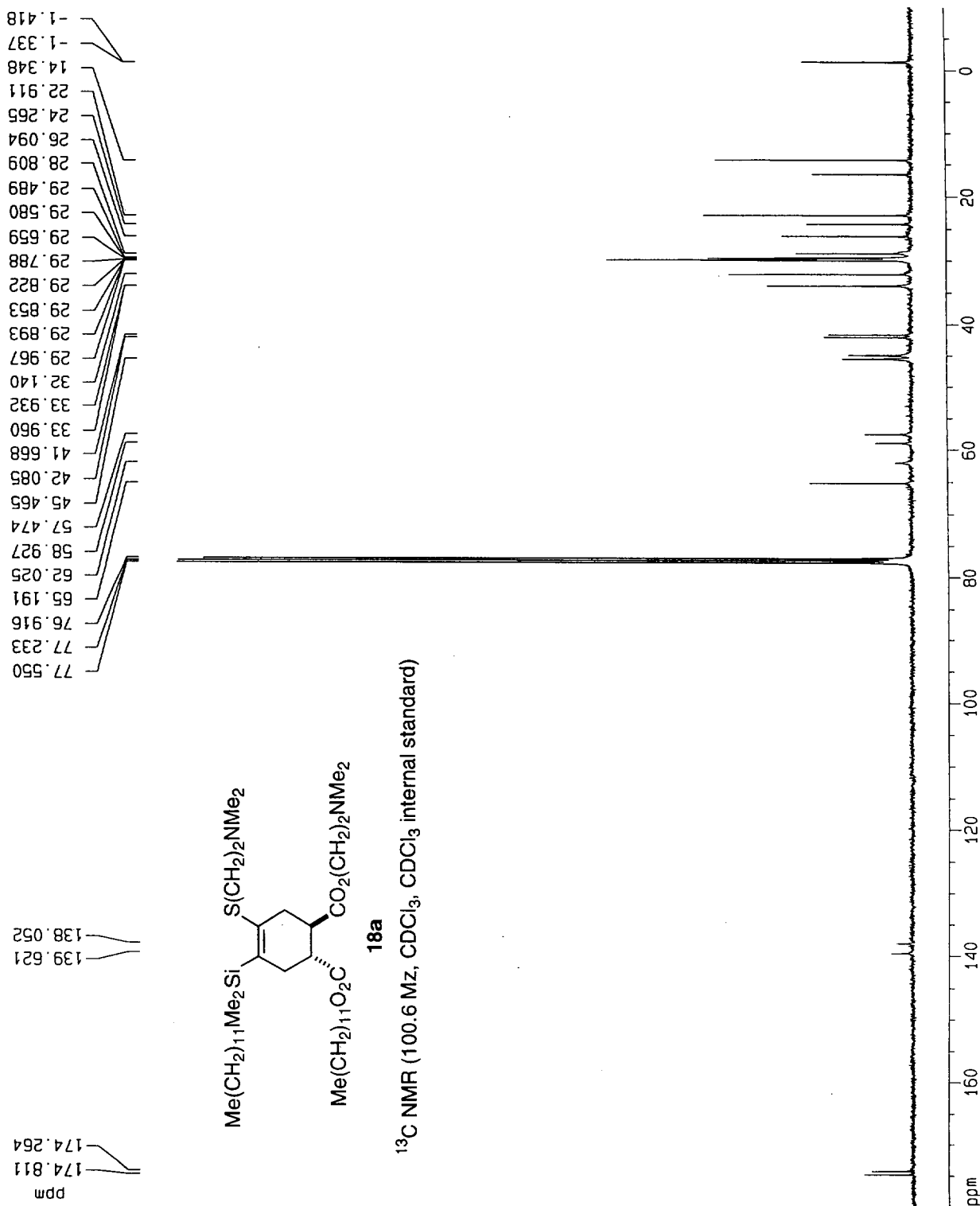
F2 - Processing parameters
SI 16384
SF 400.1300057 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 20.00 cm
F1P 8.000 ppm
F1 3201.04 Hz
F2P -200.07 Hz
F2 0.42500 ppm/cm
PPMCM 170.05525 Hz/cm
HZCM



S33

Carbon



Current Data Parameters
 NAME ds-4-191bc
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980712
 Time 0.19
 INSTRUM spect
 PROBHD 5 mm QNP
 PULPROG zgdc
 TD 32768
 SOLVENT COCl3
 NS 8755
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 362
 DM 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.0300000 sec
 PL12 15.00 dB
 CPDPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 ¹H
 PL2 120.00 dB
 D1 2.0000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 ¹³C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127483 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 180.000 ppm
 F1 18110.29 Hz
 F2P -10.000 ppm
 F2 -1006.13 Hz
 PPMCM 9.50000 ppm/cm
 HZCM 955.82111 Hz/cm

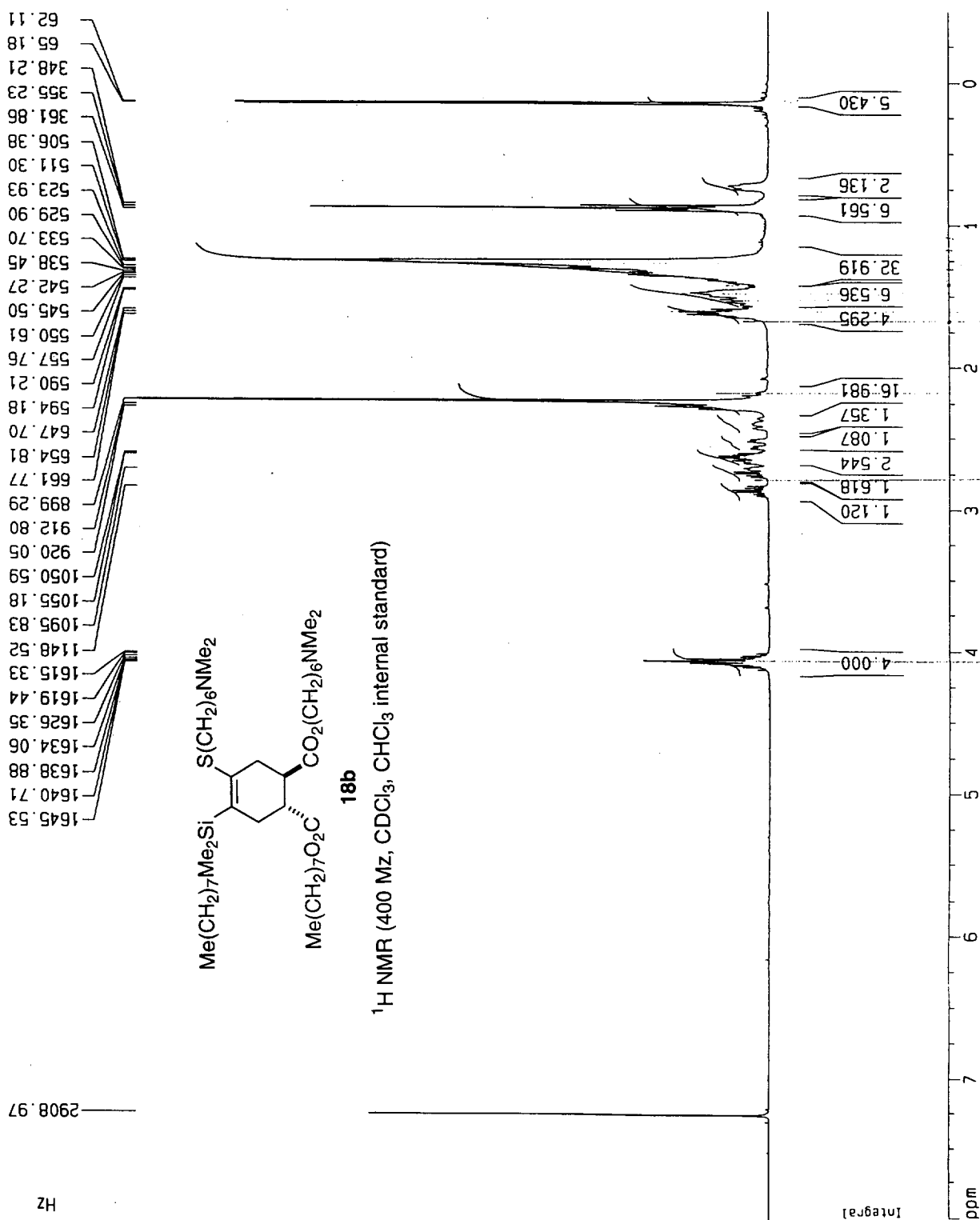
Proton

Current Data Parameters
 NAME ds-4-206b
 EXPNO 1
 PROCNO 1

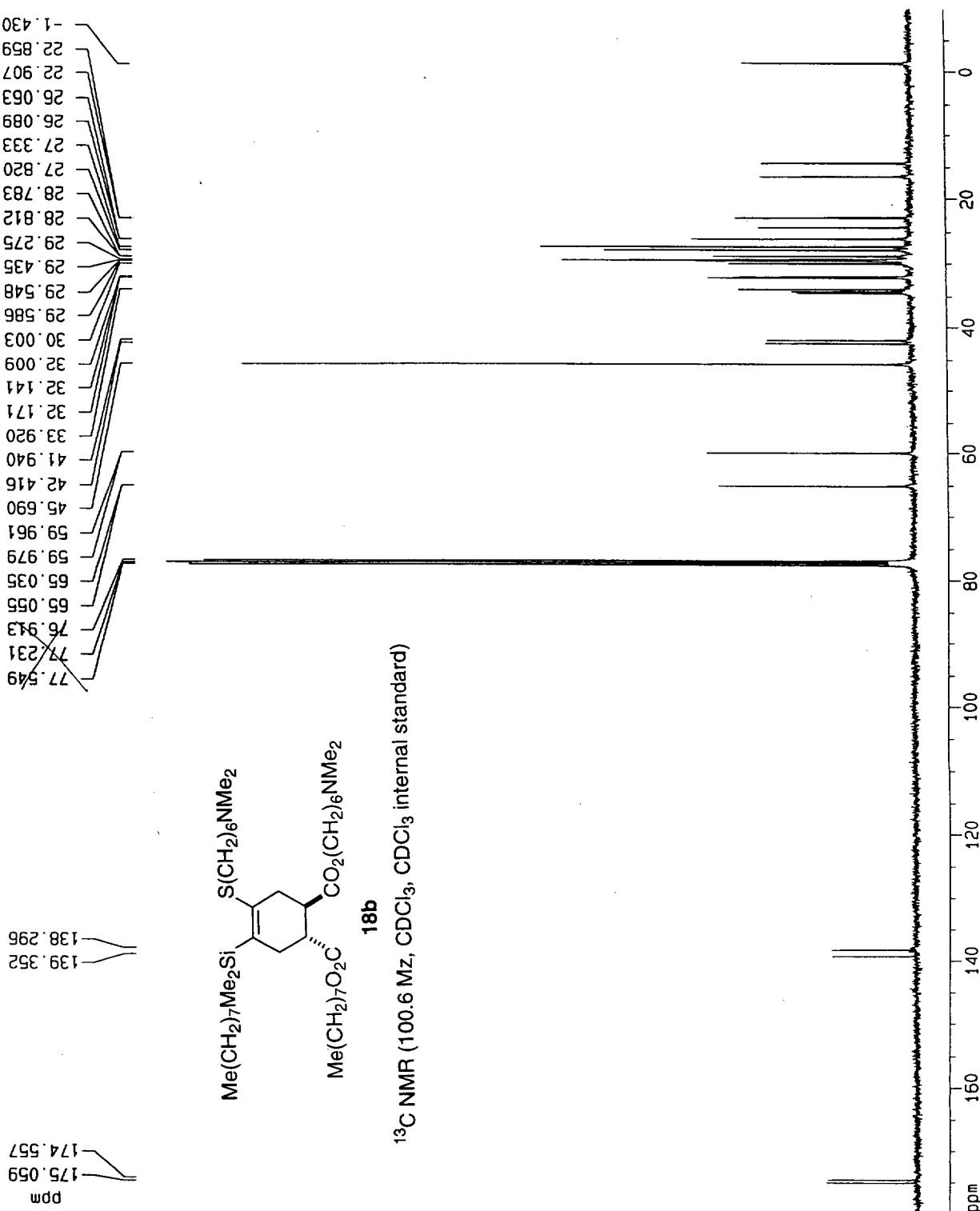
F2 - Acquisition Parameters
 Date_ 980720
 Time 21.07
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 287.4
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCM 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm



Carbon



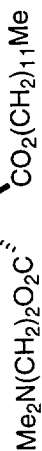
Current Data Parameters
 NAME ds-4-206bc
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980720
 Time 21.52
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zgpg30
 TO 32768
 SOLVENT CDCl3
 NS 4324
 DS 2
 SWH 35211.270 Hz
 FIDRES 1.074563 Hz
 AQ 0.4653556 sec
 RG 362
 DW 14.200 usec
 DE 4.50 usec
 TE 300.0 K
 d11 0.03000000 sec
 PL12 16.00 dB
 CPDPRG2 waltz16
 PCPD2 100.00 usec
 SF02 400.1320007 MHz
 NUC2 1H
 PL2 120.00 dB
 D1 2.00000000 sec
 P1 4.00 usec
 SF01 100.6227903 MHz
 NUC1 13C
 PL1 -6.00 dB

F2 - Processing parameters
 SI 32768
 SF 100.6127483 MHz
 WDW EM
 SSB 0
 LB 2.00 Hz
 GB 0
 PC 1.00

1D NMR plot parameters
 CX 20.00 cm
 F1P 180.000 ppm
 F1 18110.29 Hz
 F2P -10.000 ppm
 F2 -1006.13 Hz
 PPMCH 9.50000 ppm/cm
 HZCM 955.82111 Hz/cm

Proton

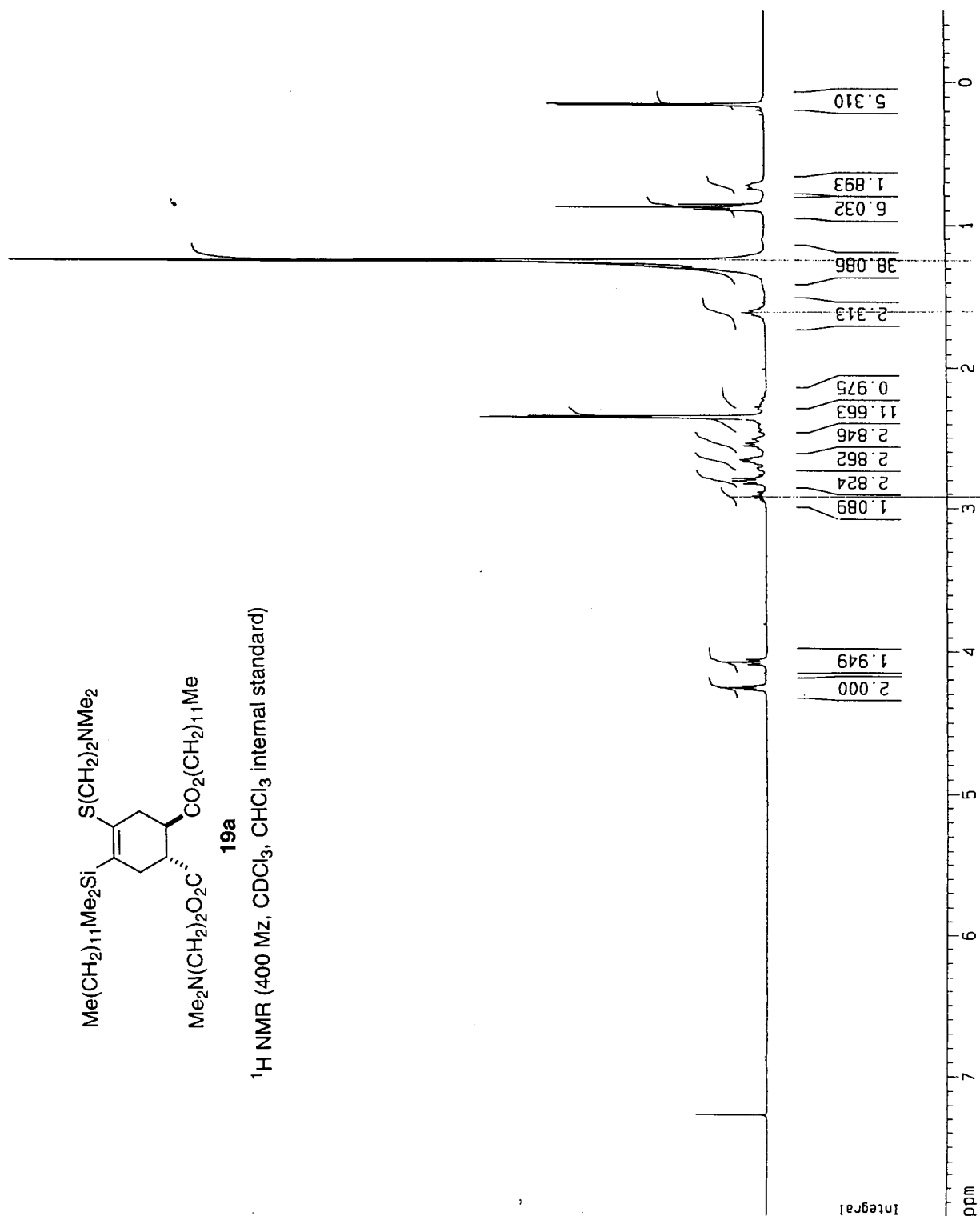
**19a**¹H NMR (400 Mz, CDCl₃, CHCl₃ internal standard)

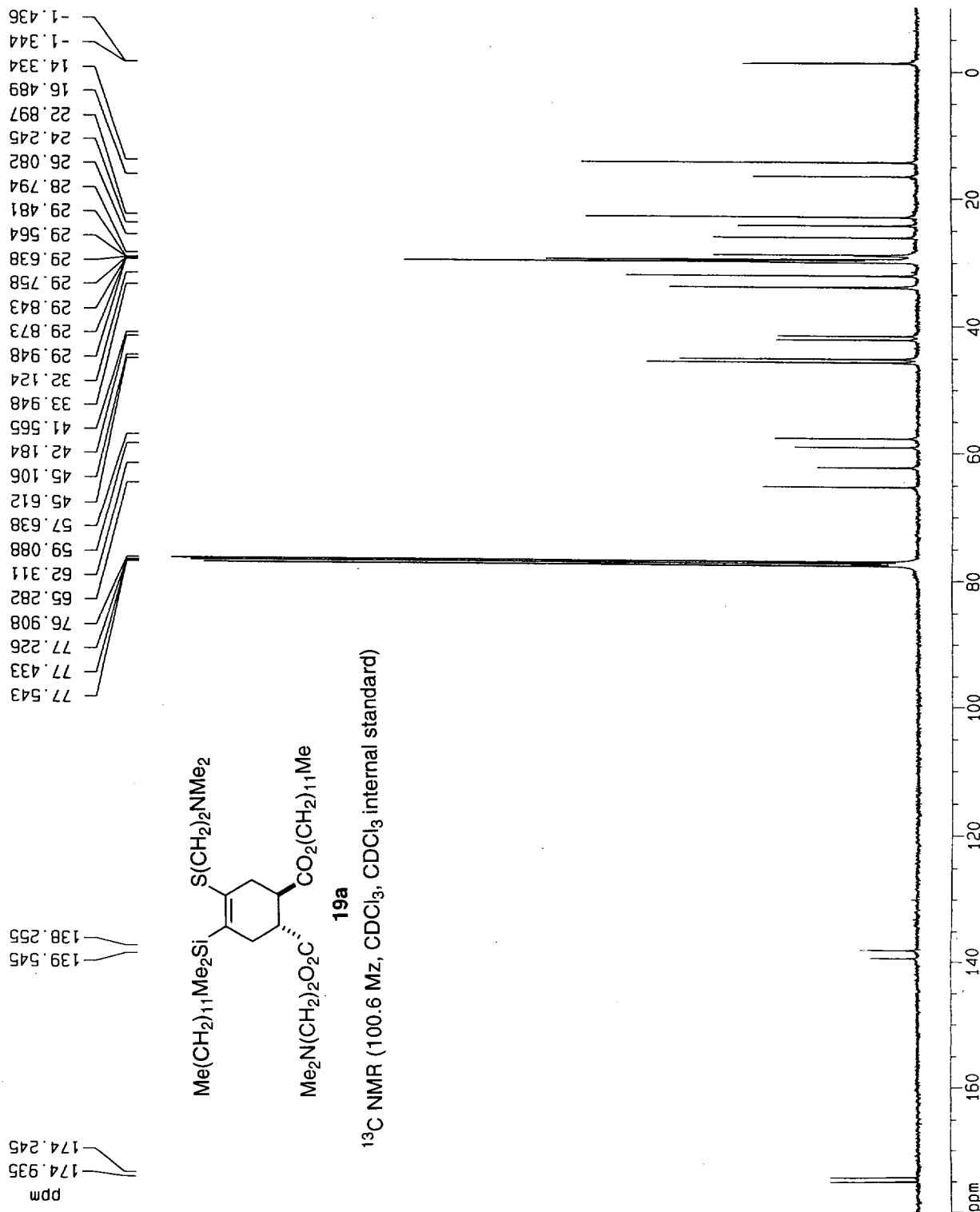
Current Data Parameters
 NAME ds-4-191a
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 980711
 Time 16.17
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TD 32768
 SOLVENT CDCl3
 NS 16
 DS 0
 SWH 8250.825 Hz
 FIDRES 0.251795 Hz
 AQ 1.9857908 sec
 RG 90.5
 DW 60.600 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.00000000 sec
 P1 5.00 usec
 SF01 400.1324710 MHz
 NUC1 1H
 PL1 -6.00 dB

F2 - Processing parameters
 SI 16384
 SF 400.1300057 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

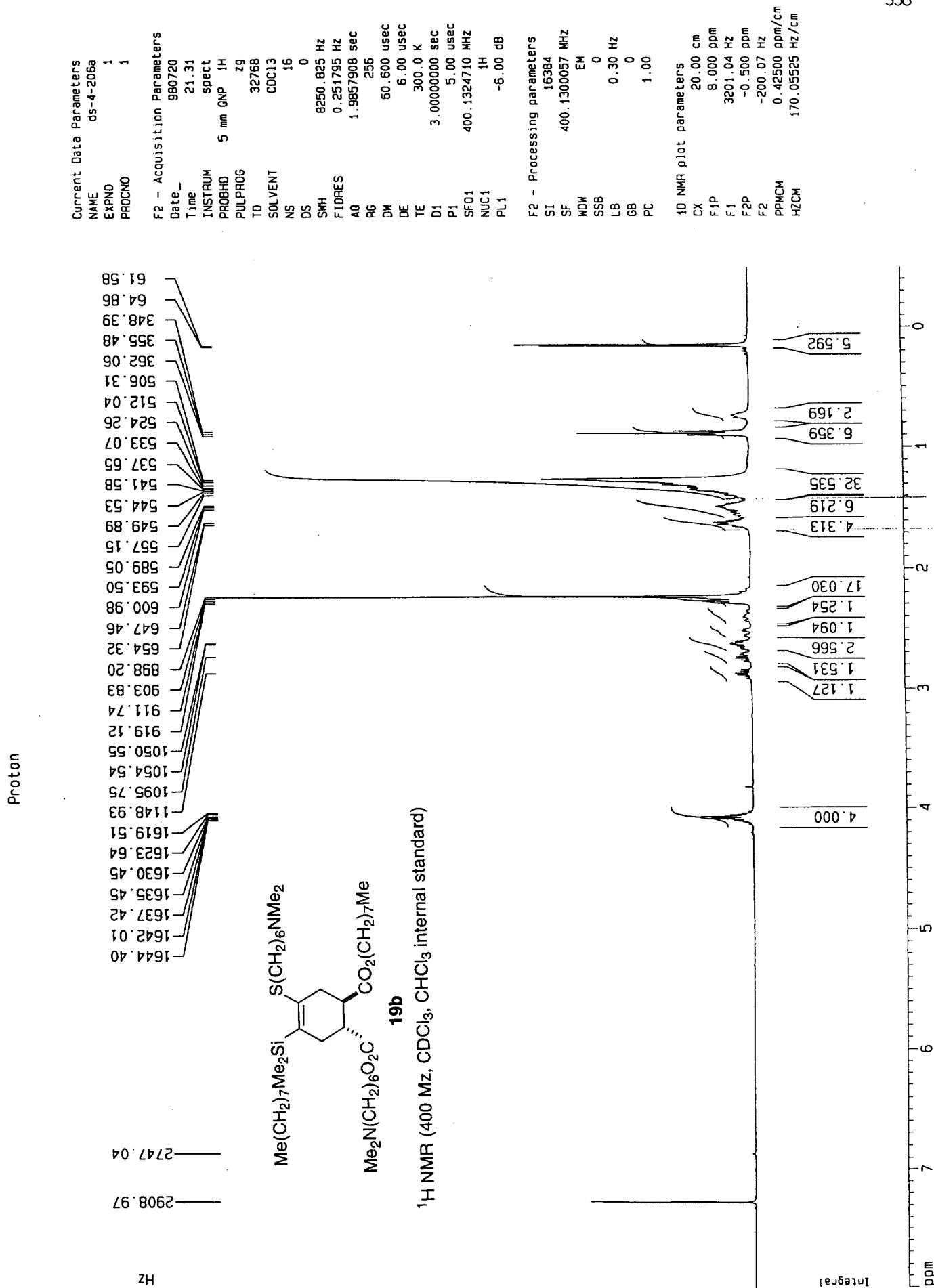
1D NMR plot parameters
 CX 20.00 cm
 F1P 8.000 ppm
 F1 3201.04 Hz
 F2P -0.500 ppm
 F2 -200.07 Hz
 PPMCH 0.42500 ppm/cm
 HZCM 170.05525 Hz/cm



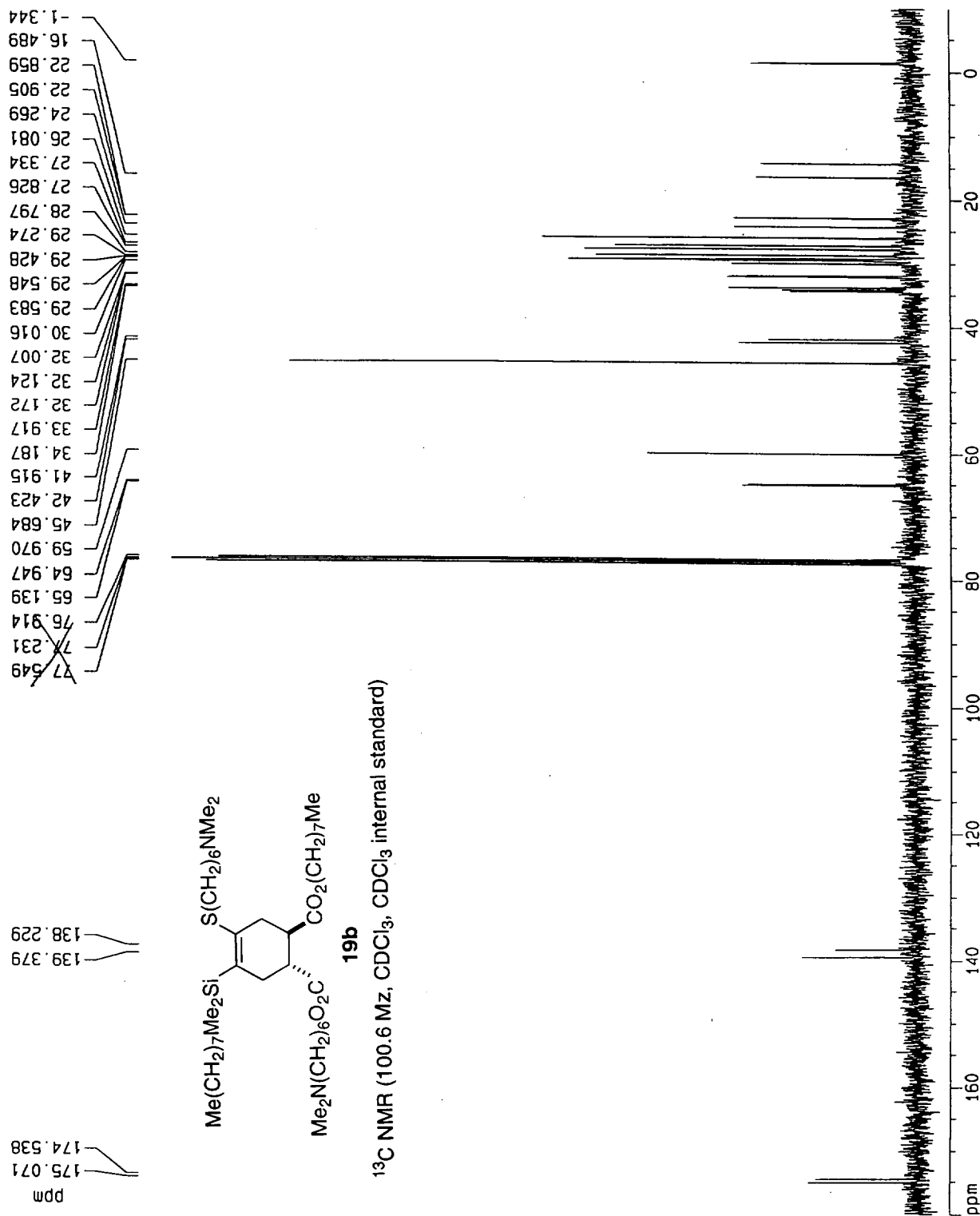
¹³C NMR (100.6 Mz, CDCl₃, CDCl₃ internal standard)

19a

Current Data Parameters	
NAME	ds-4-19iac
EXPNO	1
PROCNO	1
F2 - Acquisition Parameters	
Date_	980711
Time	17.09
INSTRUM	spect
PROBHD	5 mm QNP 1H
PULPROG	zgdc
TD	32768
SOLVENT	CDC13
NS	9879
DS	2
SWH	35211.270 Hz
FIDRES	1.074553 Hz
AQ	0.4653556 sec
RG	5160.6
DW	14.200 usec
DE	4.50 usec
TE	300.0 K
d11	0.0300000 sec
PL12	16.00 dB
CPDPRG2	waltz16
PCPD2	100.00 usec
SF02	400.132007 MHz
NUC2	1H
PL2	120.00 dB
D1	2.0000000 sec
P1	4.00 usec
SF01	100.6227903 MHz
NUC1	13C
PL1	-6.00 dB
F2 - Processing parameters	
SI	32768
SF	100.6127494 MHz
WDW	EM
SSB	0
LB	2.00 Hz
GB	0
PC	1.00
1D NMR plot parameters	
CX	20.00 cm
F1P	180.000 ppm
F1	18110.29 Hz
2P	-10.000 ppm
2	-1006.13 Hz
PCMC	9.50000 ppm/Hz
4ZCM	955.82111 Hz/cm



Carbon

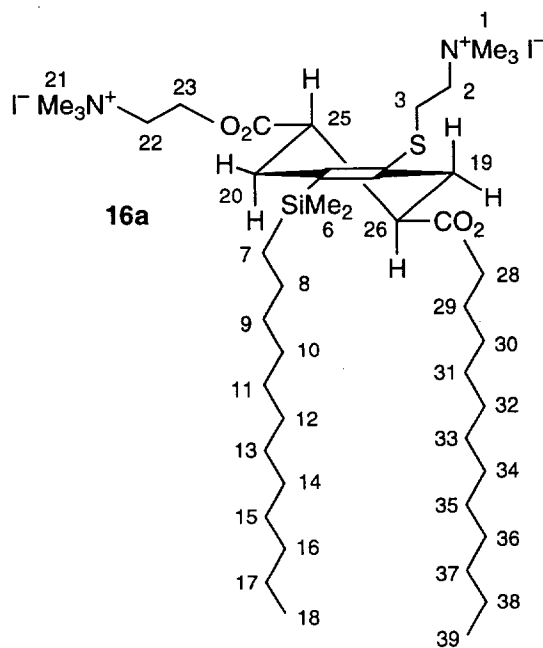
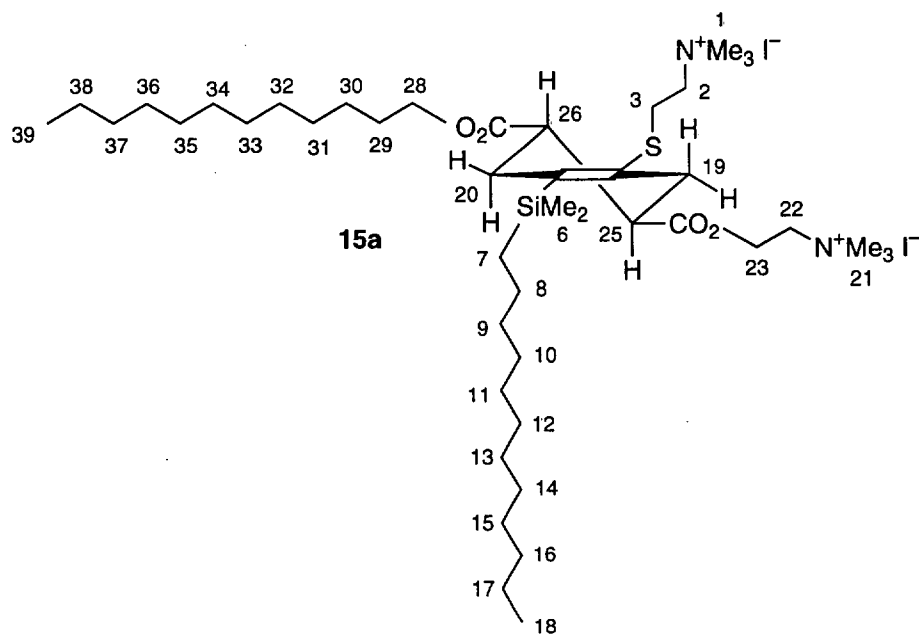


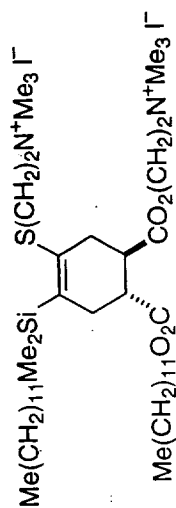
Current Data Parameters
NAME 05-4-206ac
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 980721
Time 1.04
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg
TD 32768
SOLVENT CDCl₃
NS 342
DS 2
SMH 35211.270 Hz
FIDRES 1.074563 Hz
AQ 0.4653556 sec
RG 362
DM 14.200 usec
DE 4.50 usec
TE 300.0 K
d11 0.03000000 sec
PL12 16.00 dB
CPOPRG2 waltz16
PCPD2 100.00 usec
SF02 400.1320007 MHz
NUC2 1H
PL2 120.00 dB
D1 2.00000000 sec
P1 4.00 usec
SF01 100.6227903 MHz
NUC1 13C
PL1 -6.00 dB

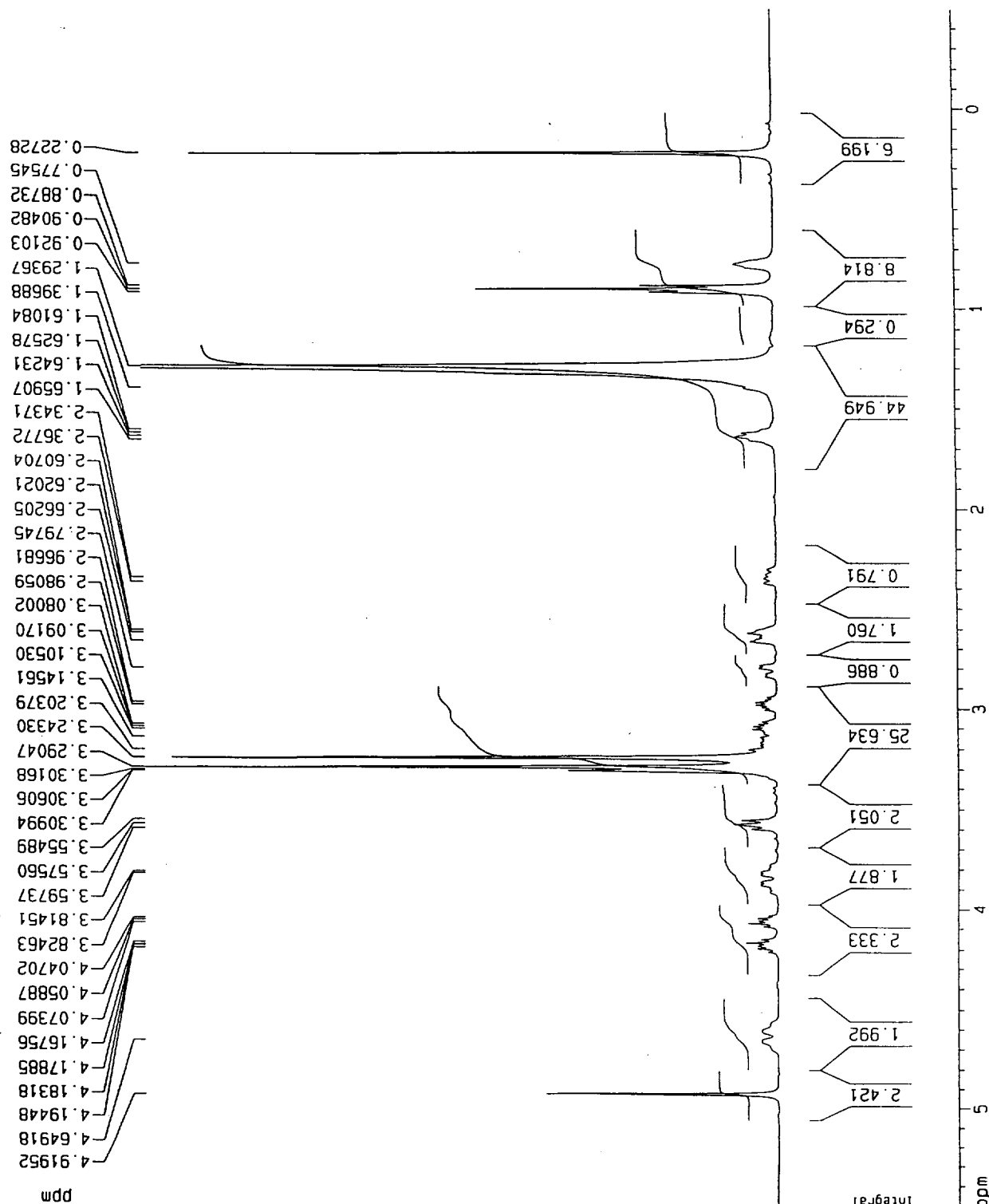
F2 - Processing parameters
SI 32768
SF 100.6127483 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

1D NMR plot parameters
CX 20.00 cm
F1P 180.000 ppm
F1 18110.29 Hz
F2P -10.000 ppm
F2 -1006.13 Hz
P2CH 9.50000 ppm/cm
HZCM 955.82111 Hz/cm

Numbering Scheme for ^1H , ^1H COSY and ^1H , ^1H ROESY NMR Experiments



15a

 ^1H NMR (400 Mz, CD_3OD , CD_2HOD internal standard)

Current Data Parameters
 NAME AZI176a
 EXPNO 1
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 981210
 Time 15.12
 INSTRUM spect
 PROBHD 5 mm QNP 1H
 PULPROG zg
 TO 32768
 SOLVENT MeOH
 NS 32
 DS 0
 SWH 2403.846 Hz
 FIDRES 0.073360 Hz
 AQ 6.8157940 sec
 RG 256
 DW 208.000 usec
 DE 6.00 usec
 TE 300.0 K
 D1 3.0000000 sec
 P1 5.00 usec
 SF01 400.1310075 MHz
 NUC1 1H
 PL1 -6.00 dB
 F2 - Processing parameters
 SI 16384
 SF 400.1300076 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00
 1D NMR plot parameters
 CX 20.00 cm
 F1P 5.500 ppm
 F1 2200.72 Hz
 F2P -0.500 ppm
 F2 -200.06 Hz
 PPMCM 0.30000 ppm/cm
 HZCM 120.03900 Hz/cm