Phaeochromycins F–H, three new polyketide metabolites from *Streptomyces* sp. DSS-18

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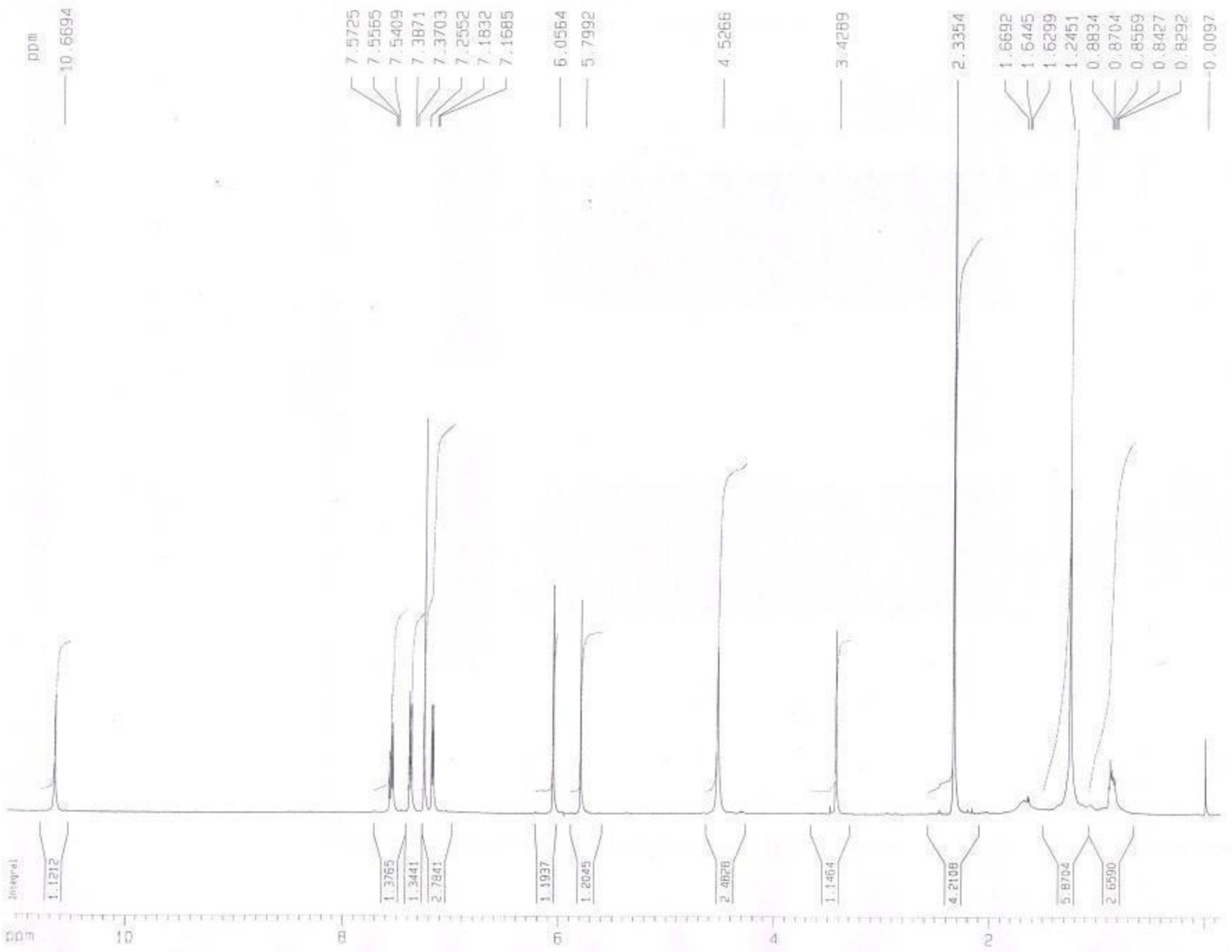
1-1H

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Current Data Parameters
NAME                  mds20
EXPNO                    21
PROCNO                    1

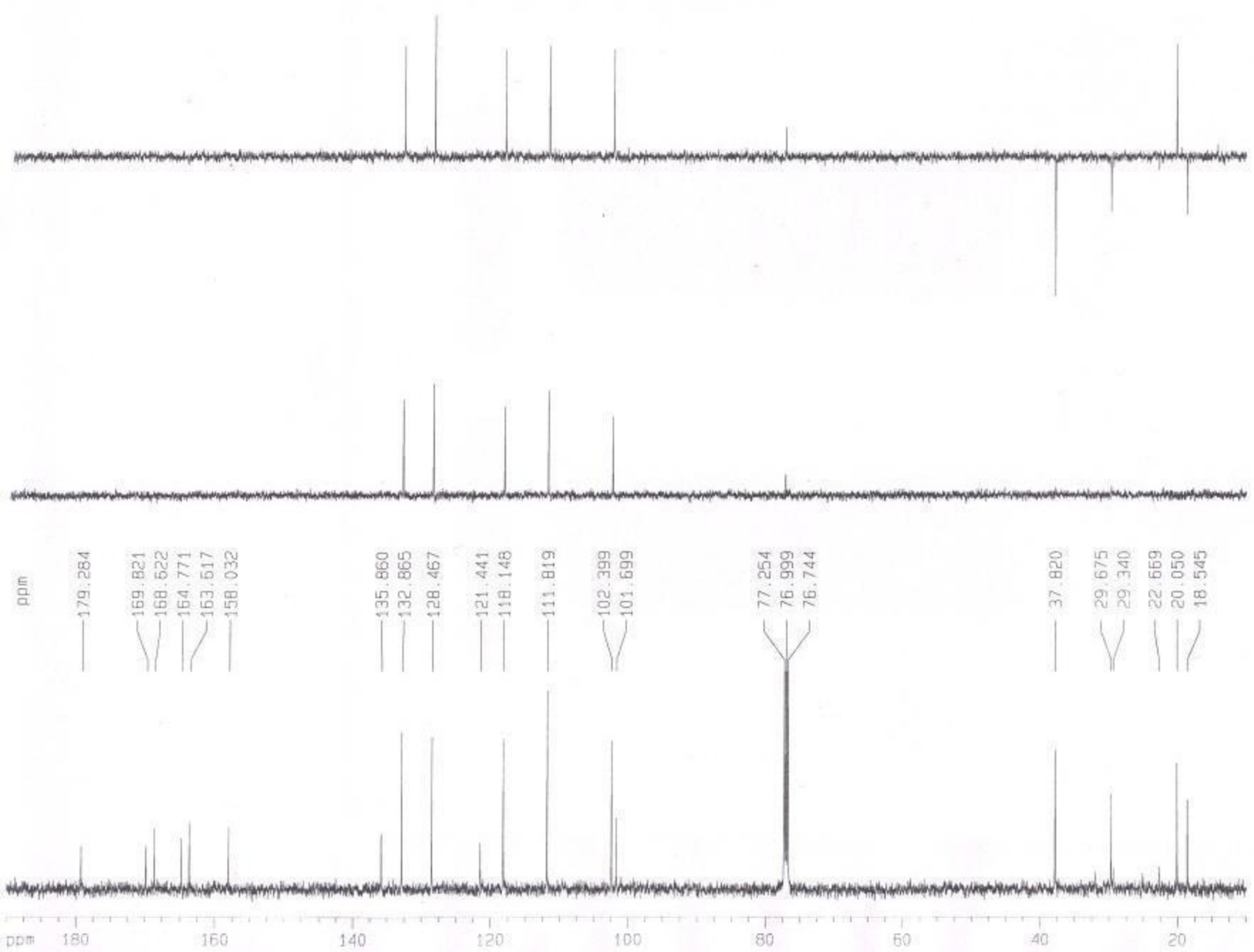
F2 - Acquisition Parameters
Date_              20051125
Time                  17.17
INSTRUM              DRX500
PROBHD   5 mm BBI 1H-BB
PULPROG                 zg
TD                   32768
SOLVENT              CDCl3
NS                        1
DS                        0
SWH               6127.451 Hz
FIDRES           0.186995 Hz
AQ               2.6739187 sec
RG                     80.6
DW                81.600 usec
DE                 6.00 usec
TE                300.0 K
D1             2.00000000 sec

======== CHANNEL f1 ========
NUC1                     1H
P1                 10.00 usec
PL1                -4.00 dB
SFO1          500.1329931 MHz

F2 - Processing parameters
SI                       16384
SF            500.1300160 MHz
WDW                      EM
SSB                       0
LB                   0.30 Hz
GB                        0
PC                     1.00

1D NMR plot parameters
CX                   22.00 cm
CY                   14.00 cm
F1P                 11.095 ppm
F1                 5548.92 Hz
F2P                 -0.152 ppm
F2                  -75.93 Hz
PPMCM              0.51122 ppm/cm
HZCM             255.67503 Hz/cm
```

1-DEPT

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Current Data Parameters
NAME                  nds20
EXPNO                    22
PROCNO                    1

F2 - Acquisition Parameters
Date_              20051128
Time                  13.48
INSTRUM               DRX500
PROBHD   5 mm DUL 13C-1
PULPROG                zgdc
TD                    32768
SOLVENT               CDCl3
NS                      203
DS                        0
SWH               29498.525 Hz
FIDRES            0.900224 Hz
AQ                0.5554676 sec
RG                     8192
DW                  16.950 usec
DE                   6.00 usec
TE                   300.0 K
D1                3.00000000 sec
d11               0.03000000 sec

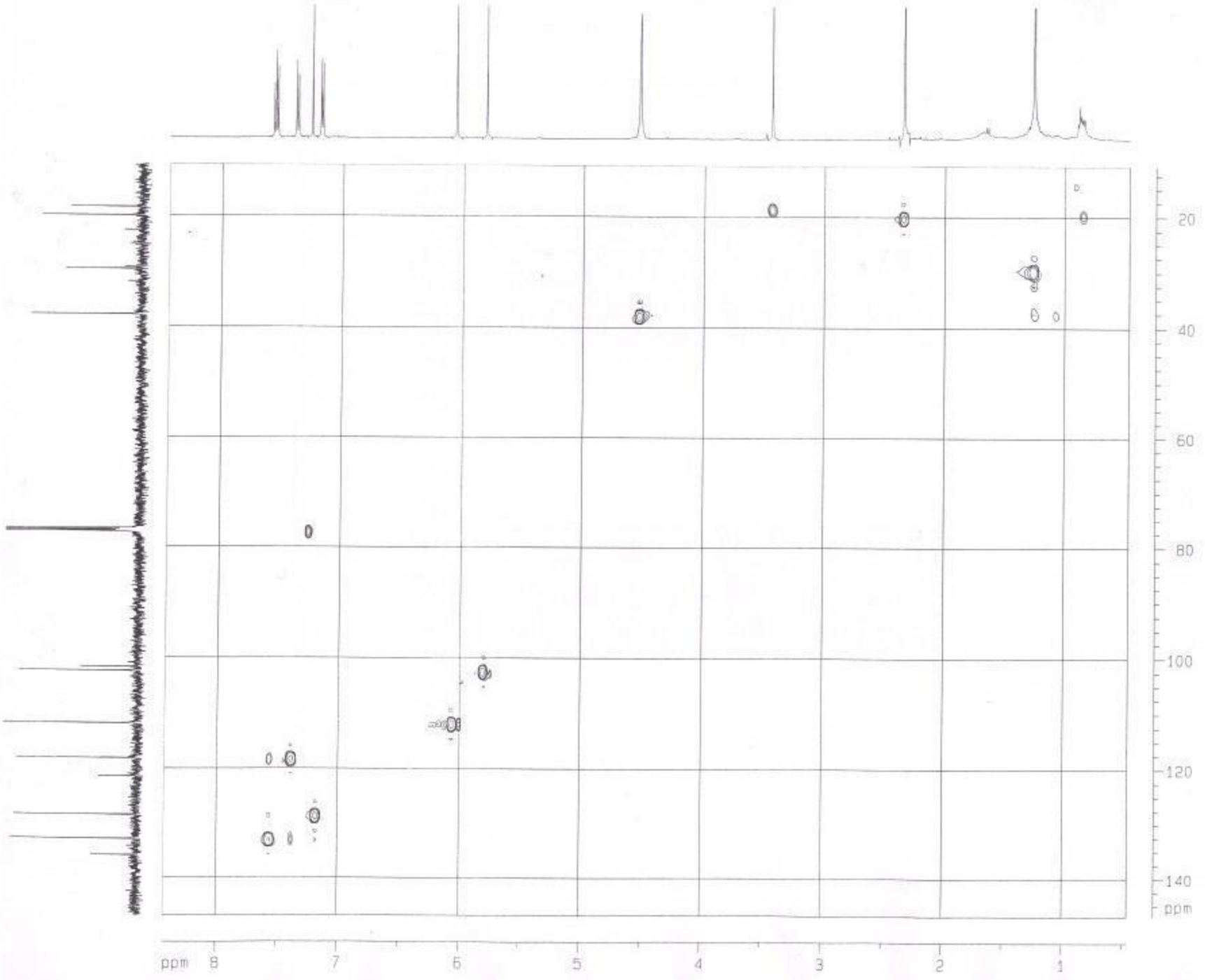
======== CHANNEL f1 ========
NUC1                     13C
P1                    5.90 usec
PL1                   0.00 dB
SF01             125.7716224 MHz

======== CHANNEL f2 ========
CPDPRG2              waltz16
NUC2                     1H
PCPD2                84.00 usec
PL2                  -4.00 dB
PL12                 18.00 dB
SF02             500.1338510 MHz

F2 - Processing parameters
SI                      16384
SF               125.7577908 MHz
WDW                      EM
SSB                       0
LB                    2.00 Hz
GB                        0
PC                     1.50

1D NMR plot parameters
CX                   22.00 cm
CY                   12.00 cm
F1P                190.000 ppm
F1                 23893.98 Hz
F2P                 10.000 ppm
F2                  1257.58 Hz
PPMCM              8.18182 ppm/cm
HZCM            1028.92737 Hz/cm
```

1-HSQC



Current Data Parameters
NAME hsqc25
EXPNO 24
PROCNO 1

F2 - Acquisition Parameters
Date_ 20051125
Time 18.53
INSTRUM DRX500
PROBHD 5 mm BBO 1H-BB
PULPROG inv4gp1i
TD 1024
SOLVENT CDCl3
NS 4
DS 16
SWH 8063.800 Hz
FIDRES 8.782037 Hz
AQ 0.0508044 sec
RG 9125.2
DW 55.600 usec
DE 6.00 usec
TE 300.0 K
CNST2 145.0000000
D0 0.00000300 sec
D1 1.20000005 sec
D4 0.00172414 sec
D11 0.03000000 sec
D13 0.00000400 sec
D16 0.00020000 sec
D24 0.00086200 sec
DELTA 0.00127360 sec
DELTA1 0.00120800 sec
IN0 0.00001729 sec
MCREST 0.00000000 sec
MCWRK 0.21666709 sec
ETSCAT 74

======== CHANNEL f1 ========
NUC1 1H
P1 8.80 usec
p2 17.60 usec
P28 2000.00 usec
PL1 -1.00 dB
SFO1 500.1330008 MHz

======== CHANNEL f2 ========
CPDPRG2 garp
NUC2 13C
P3 11.60 usec
p4 23.20 usec
PCPD2 75.00 usec
PL2 -1.00 dB
PL12 15.90 dB
SFO2 125.7703648 MHz

====== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPZ1 0.00 %
GPZ2 0.00 %
GPZ3 0.00 %
GPZ4 0.00 %
GPZ5 80.00 %
GPZ8 20.10 %
P30 1000.00 usec

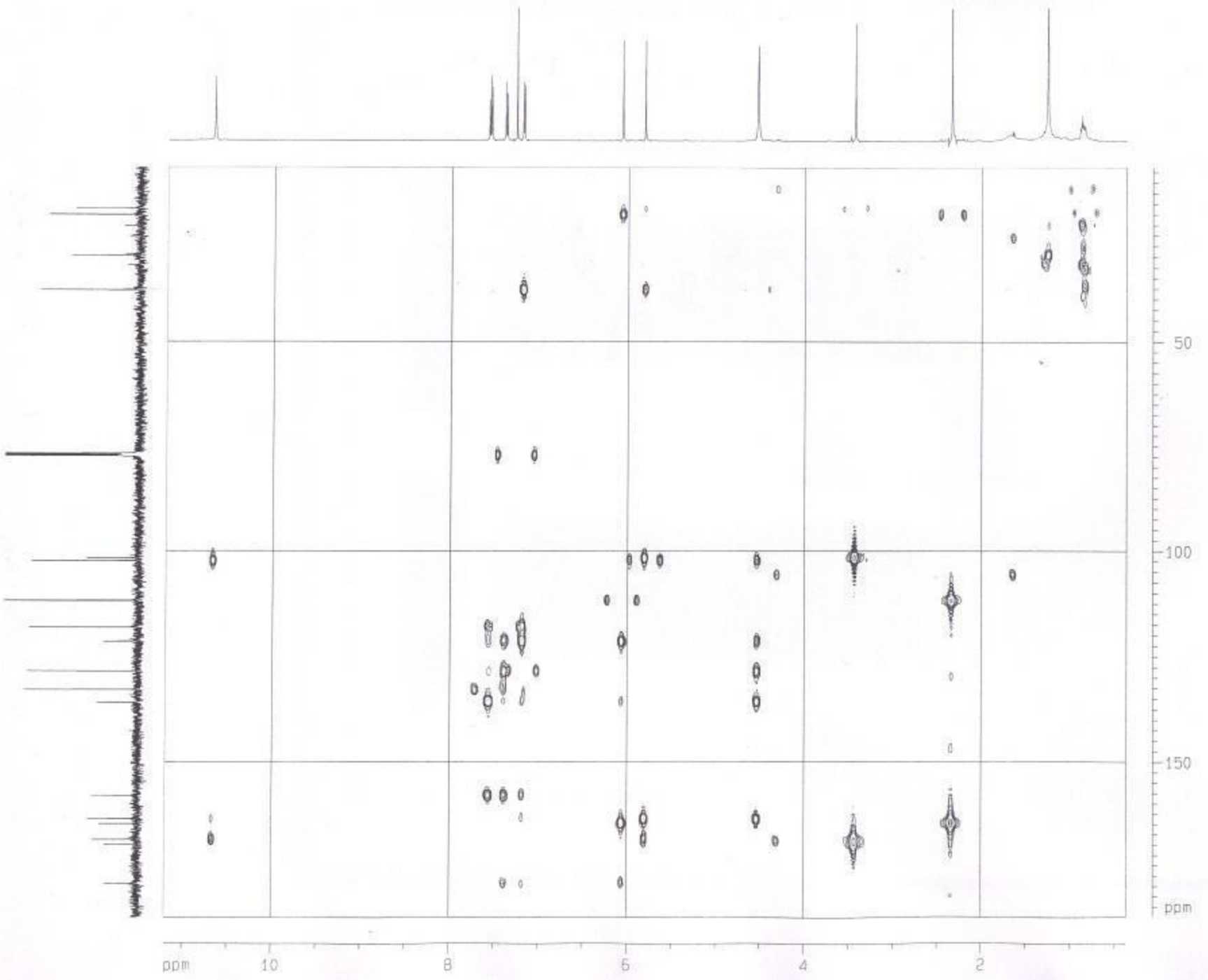
F1 - Acquisition parameters
ND0 2
TD 128
SFO1 125.7704 MHz
FIDRES 225.058069 Hz
SW 209.964 ppm
FnMODE Echo-Antiecho

F2 - Processing parameters
SI 1024
SF 500.1300119 MHz
WDW SINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40

F1 - Processing parameters
SI 512
MC2 echo-antiecho
SF 125.7577636 MHz
WDW SINE
SSB 2
LB 0.00 Hz
GB 0

2D NMR plot parameters
CX2 19.00 cm
CY1 14.00 cm
F2PLO 8.435 ppm
F2LO 4215.42 Hz
F2PHI 0.463 ppm
F2HI 231.38 Hz
F1PLO 148.918 ppm
F1LO 18676.87 Hz
F1PHI 18.813 ppm
F1HI 1358.77 Hz
F2PPMCM 0.44289 ppm/cm
F2HZCM 221.58249 Hz/cm
F1PPMCM 0.72581 ppm/cm
F1HZCM 1222.58253 Hz/cm

1-HMBC



Current Data Parameters
NAME nmr20
EXPNO 35
PROCNO 1

F2 - Acquisition Parameters
Date_ 20051125
Time 19.05
INSTRUM DRX500
PROBHD 5 mm BBI 1H-BB
PULPROG ihn4gpbirmod
TD 8548
SOLVENT CDCl3
NS 48
DS 16
SWH 8992.806 Hz
FIDRES 4.391018 Hz
AQ 0.1139188 sec
RG 28508
DW 55.520 usec
DE 6.00 usec
TE 300.0 K
CNST2 145.0000000
d0 0.00003300 sec
d1 1.29999995 sec
d7 0.00348828 sec
d6 0.06340000 sec
d13 0.00000400 sec
d16 0.00020000 sec
IN0 0.00001695 sec
MCREST 0.00000000 sec
MCWRK 1.29999995 sec

======== CHANNEL f1 ========
NUC1 1H
P1 8.90 usec
p2 17.80 usec
PL1 -1.00 dB
SFO1 500.1333314 MHz

======== CHANNEL f2 ========
NUC2 13C
P3 11.60 usec
PL2 -1.00 dB
SFO2 125.7722511 MHz

====== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPX1 0.00 %
GPX2 0.00 %
GPX3 0.00 %
GPY1 0.00 %
GPY2 0.00 %
GPY3 0.00 %
GPZ1 50.00 %
GPZ2 30.00 %
GPZ3 40.10 %
P16 1000.00 usec

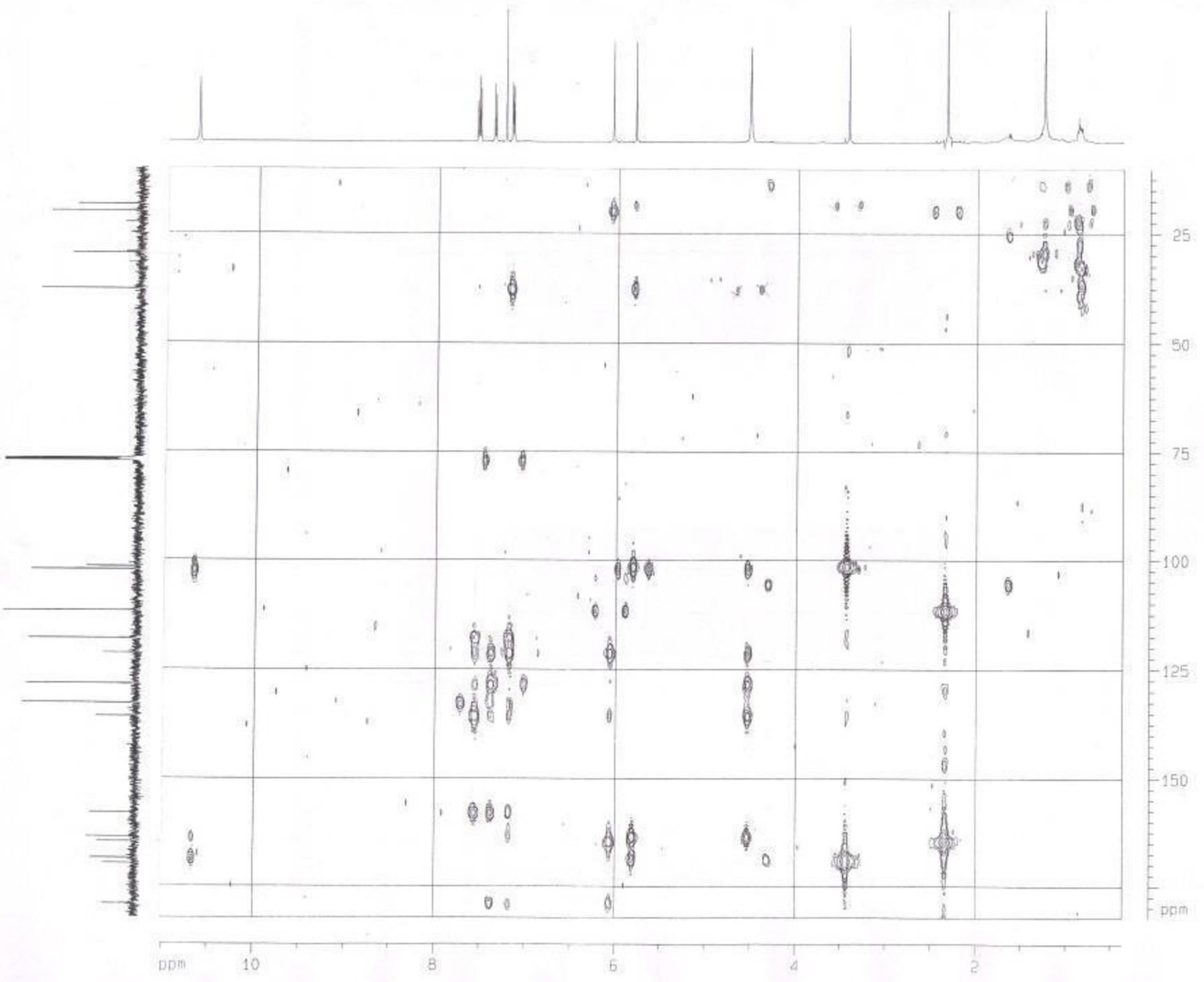
F1 - Acquisition parameters
MDD 2
TD 128
SFO1 125.7723 MHz
FIDRES 230.366216 Hz
SW 235.059 ppm
FnMODE QF

F2 - Processing parameters
SI 1024
SF 500.1300118 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40

F1 - Processing parameters
SI 512
MC2 QF
SF 125.7578045 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

2D NMR plot parameters
CN2 18.00 cm
CN3 14.00 cm
F2PLO 11.203 ppm
F2LO 5602.81 Hz
F2PHI 0.369 ppm
F2HI 184.40 Hz
F1PLO 197.423 ppm
F1LO 23569.53 Hz
F1PHI 8.813 ppm
F1HI 1106.27 Hz
F2PPMCM 0.60100 ppm/cm
F2HZCM 301.02869 Hz/cm
F1PPMCM 12.75788 ppm/cm
F1HZCM 1604.40430 Hz/cm

1-HMBC



Current Data Parameters
NAME hmbc20
EXPNO 35
PROCNO 1

F2 - Acquisition Parameters
Date_ 20051125
Time 19 55
INSTRUM DRX500
PROBHD 5 mm QBI 1H-BB
PULPROG invfgplpr.mdf
TD 2048
SOLVENT CDCl3
NS 48
DS 16
SWH 8992.806 Hz
FIDRES 4.391018 Hz
AQ 0.1139188 sec
RG 25008
DW 55.600 usec
DE 6.00 usec
TE 300.0 K
CNST2 145.0000000
D0 0.00000300 sec
D1 1.29999995 sec
D2 0.03344828 sec
D6 0.08340000 sec
d13 0.00000400 sec
D16 0.00020000 sec
IND 0.00031601 sec
MCREST 0.00000000 sec
MCWRK 1.29356695 sec

======== CHANNEL f1 ========
NUC1 1H
P1 8.50 usec
DE 17.60 usec
PL1 -1.00 dB
SFO1 500.1333214 MHz

======== CHANNEL f2 ========
NUC2 13C
P3 15.60 usec
PL2 -1.00 dB
SFO2 125.7722533 MHz

====== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPX1 0.00 %
GPX2 0.00 %
GPX3 0.00 %
GPY1 0.00 %
GPY2 0.00 %
GPY3 0.00 %
GPZ1 50.00 %
GPZ2 30.00 %
GPZ3 40.10 %
P16 1000.00 usec

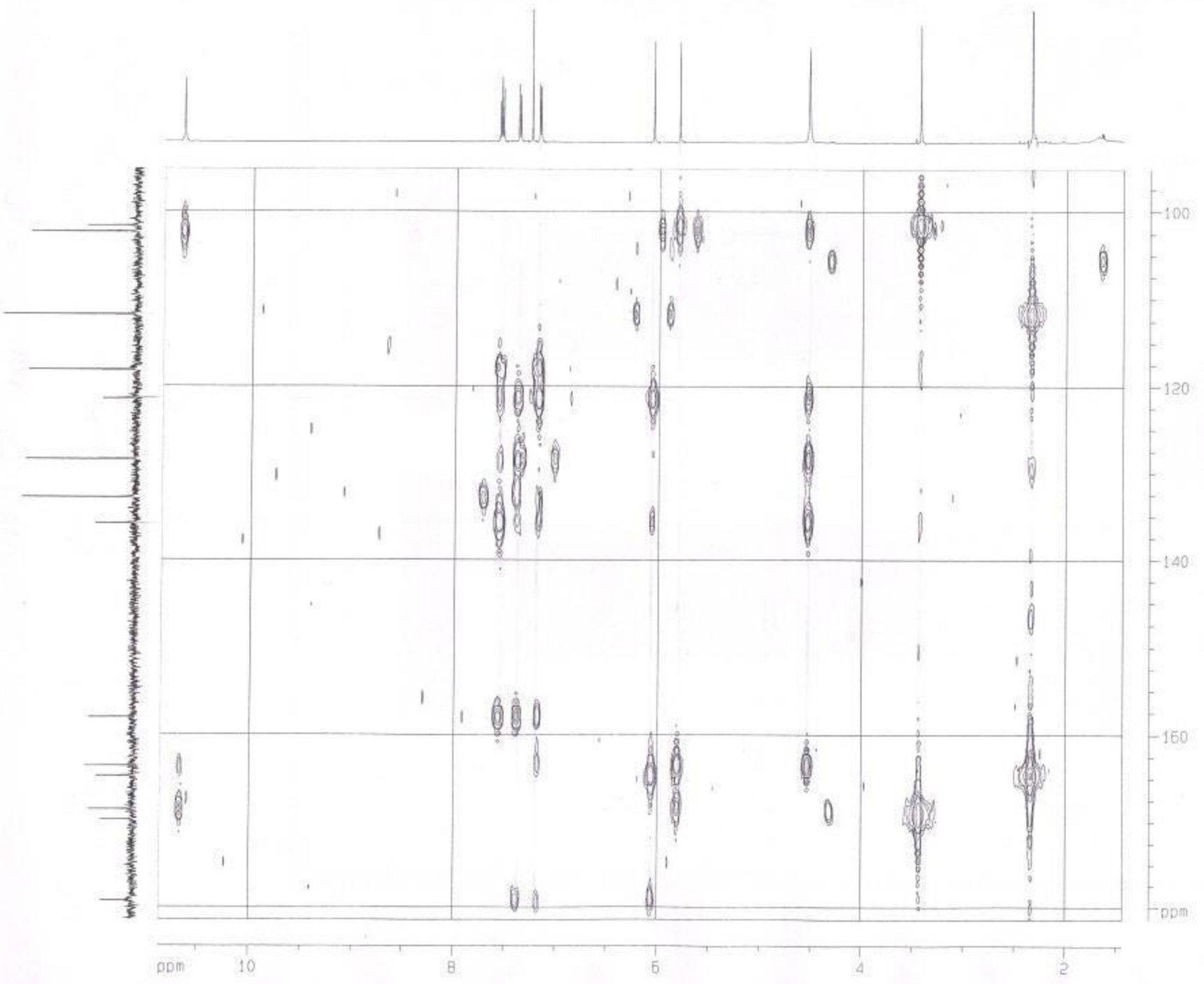
F1 - Acquisition parameters
NDD 2
TD 128
SFO1 125.7723 MHz
FIDRES 230.868216 Hz
SW 235.059 ppm
FnMODE QF

F2 - Processing parameters
SI 1024
SF 500.1300118 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40

F1 - Processing parameters
SI 512
MC2 QF
SF 125.7578045 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

2D NMR plot parameters
CX2 18.00 cm
CX1 14.00 cm
F2PLO 11.035 ppm
F2LO 5505.31 Hz
F2PHI 0.369 ppm
F2HI 184.40 Hz
F1PLO 182.372 ppm
F1LO 22934.76 Hz
F1PHI 10.390 ppm
F1HI 1201.46 Hz
F2PPMCM 0.58117 ppm/cm
F2HZCM 290.65100 Hz/cm
F1PPMCM 12.29876 ppm/cm
F1HZCM 1546.66467 Hz/cm

1-HMBC



Current Data Parameters

NAME	mpc30
EXPNO	35
PROCNO	1

F2 - Acquisition Parameters

Date_	20051125
Time	15.06
INSTRUM	DRX500
PROBHD	5 mm BBI in-BB
PULPROG	inv4gplplrndqf
TD	2048
SOLVENT	CDCl3
NS	48
DS	16
SWH	8992.806 Hz
FIDRES	4.391018 Hz
AQ	0.1139188 sec
RG	26008
DW	55.600 usec
DE	6.00 usec
TE	303.0 K
CNST2	145.0000000
D0	0.00000300 sec
D1	1.29999995 sec
D2	0.00344828 sec
D6	0.08340000 sec
d13	0.00000400 sec
D16	0.00020000 sec
IN0	0.00001691 sec
MCREST	0.00000000 sec
MCWRK	1.29999995 sec

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

NUC1	1H
P1	8.30 usec
p2	17.80 usec
PL1	-1.90 dB
SFO1	500.1333314 MHz

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

NUC2	13C
P3	11.60 usec
PL2	-1.00 dB
SFO2	125.7722511 MHz

====== GRADIENT CHANNEL =====

GPNAM1	SINE.100
GPNAM2	SINE.100
GPNAM3	SINE.100
GPX1	0.00 %
GPX2	0.00 %
GPX3	0.00 %
GPY1	0.00 %
GPY2	0.00 %
GPY3	0.00 %
GPZ1	50.00 %
GPZ2	31.00 %
GPZ3	40.10 %
P16	1000.00 usec

F1 - Acquisition parameters

NDO	2
TD	128
SFO1	125.7723 MHz
FIDRES	230.968218 Hz
SW	235.059 ppm
FnMODE	QF

F2 - Processing parameters

SI	1024
SF	500.1300138 MHz
WDW	SINE
SSB	0
LB	0.00 Hz
GB	0
PC	1.40

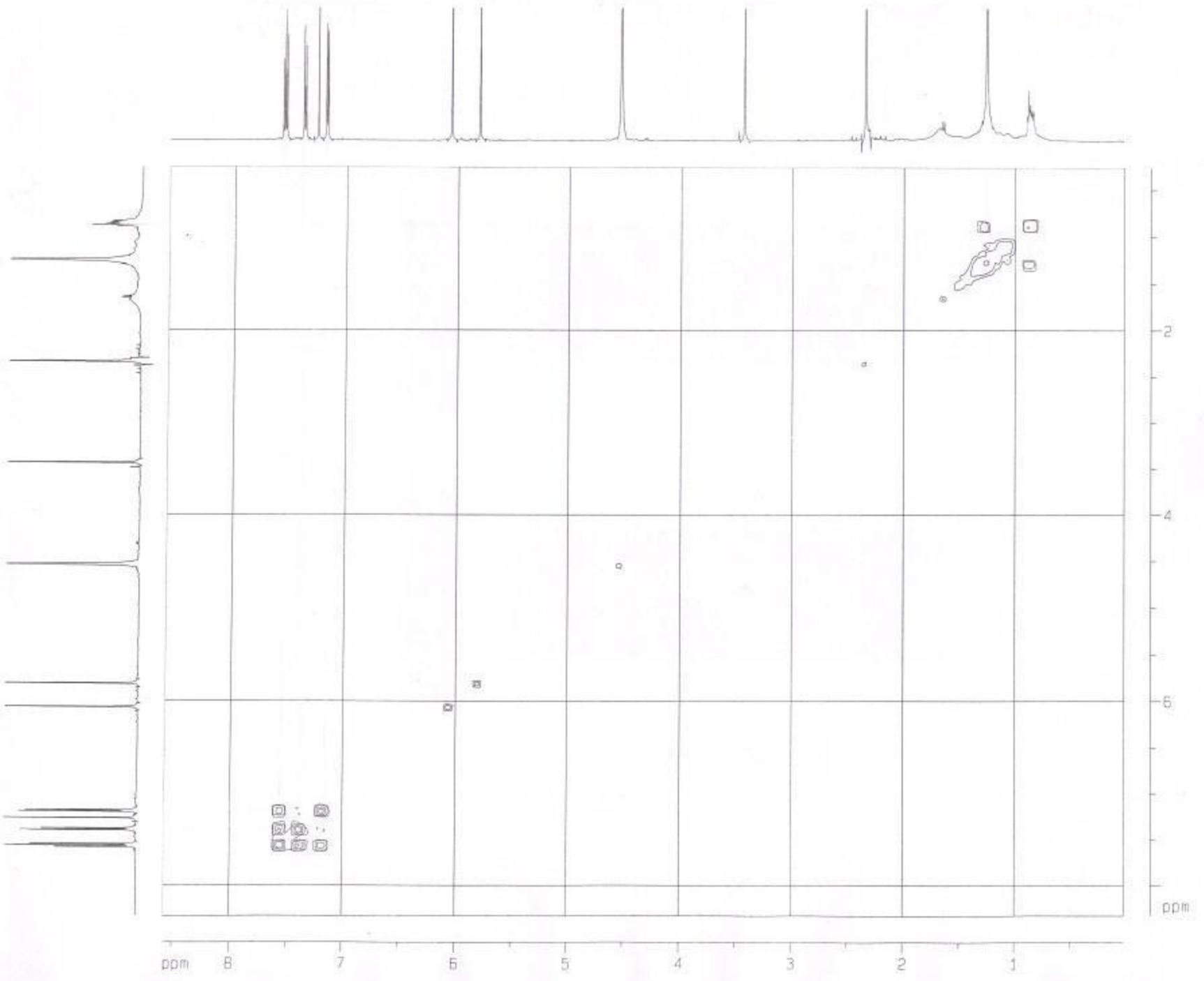
F1 - Processing parameters

SI	512
MC2	QF
SF	125.7578045 MHz
WDW	SINE
SSB	0
LB	0.00 Hz
GB	0

2D NMR plot parameters

CX2	18.00 cm
CX1	14.00 cm
F2PPM	10.869 ppm
F2HZ	5436.05 Hz
F2PPM	1.440 ppm
F2HZ	720.10 Hz
F1PPM	181.854 ppm
F1HZ	22839.28 Hz
F1PPM	95.133 ppm
F1HZ	11963.75 Hz
F2PPMCM	0.52286 ppm/cm
F2HZDCM	261.697.66 Hz/cm
F1PPMCM	6.16578 ppm/cm
F1HZDCM	775.39459 Hz/cm

1- H-H- COSY




```
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NAME                  mbs20
EXPNO                    33
PROCNO                    1

                F2 - Acquisition Parameters
Date_              20051125
Time                  18.43
INSTRUM              DRX500
PROBHD     5 mm BBI 1H-BB
PULPROG          cosygpmfqf
TD                     1024
SOLVENT                CDCl3
NS                        2
DS                       16
SWH                8052.820 Hz
FIDRES             7.865020 Hz
AQ                 0.0639476 sec
RG                     26008
DW                  62.400 usec
DE                   6.00 usec
TE                  300.0 K
D0                 0.00000300 sec
D1                 2.00000000 sec
d13                0.00000400 sec
D16                0.00020000 sec
IN0                0.00012496 sec
MCREST             0.00000000 sec
MCWRK              2.00000000 sec

        ======== CHANNEL f1 ========
NUC1                      1H
P1                     8.90 usec
PL1                   -1.00 dB
SFO1            500.1318310 MHz

        ====== GRADIENT CHANNEL =====
GPNAM1               sine.100
GPNAM2               sine.100
GPNAM3               sine.100
GPX1                    0.00 %
GPX2                    0.00 %
GPX3                    0.00 %
GPY1                    0.00 %
GPY2                    0.00 %
GPY3                    0.00 %
GPZ1                   10.00 %
GPZ2                   10.00 %
GPZ3                   30.00 %
P16                 1000.00 usec

        F1 - Acquisition parameters
NDO                       1
TD                      128
SFO1            500.133 MHz
FIDRES          62.518757 Hz
SW                 16.001 ppm
FnMODE                 QF

        F2 - Processing parameters
SI                     1024
SF              500.1300119 MHz
WDW                    SINE
SSB                       0
LB                     0.00 Hz
GB                        0
PC                     1.00

        F1 - Processing parameters
SI                     1024
MC2                    QF
SF              500.1311765 MHz
WDW                    SINE
SSB                       0
LB                     0.00 Hz
GB                        0

        2D NMR plot parameters
CX2                   18.00 cm
CX1                   14.00 cm
F2PLO                 8.581 ppm
F2LO                4291.83 Hz
F2PHI                 0.023 ppm
F2HI                  11.54 Hz
F1PLO                 8.335 ppm
F1LO                4168.78 Hz
F1PHI                 0.257 ppm
F1HI                 128.51 Hz
F2PPMCM           0.47546 ppm/cm
F2HZCM          237.70367 Hz/cm
F1PPMCM           0.57703 ppm/cm
F1HZCM          288.50103 Hz/cm
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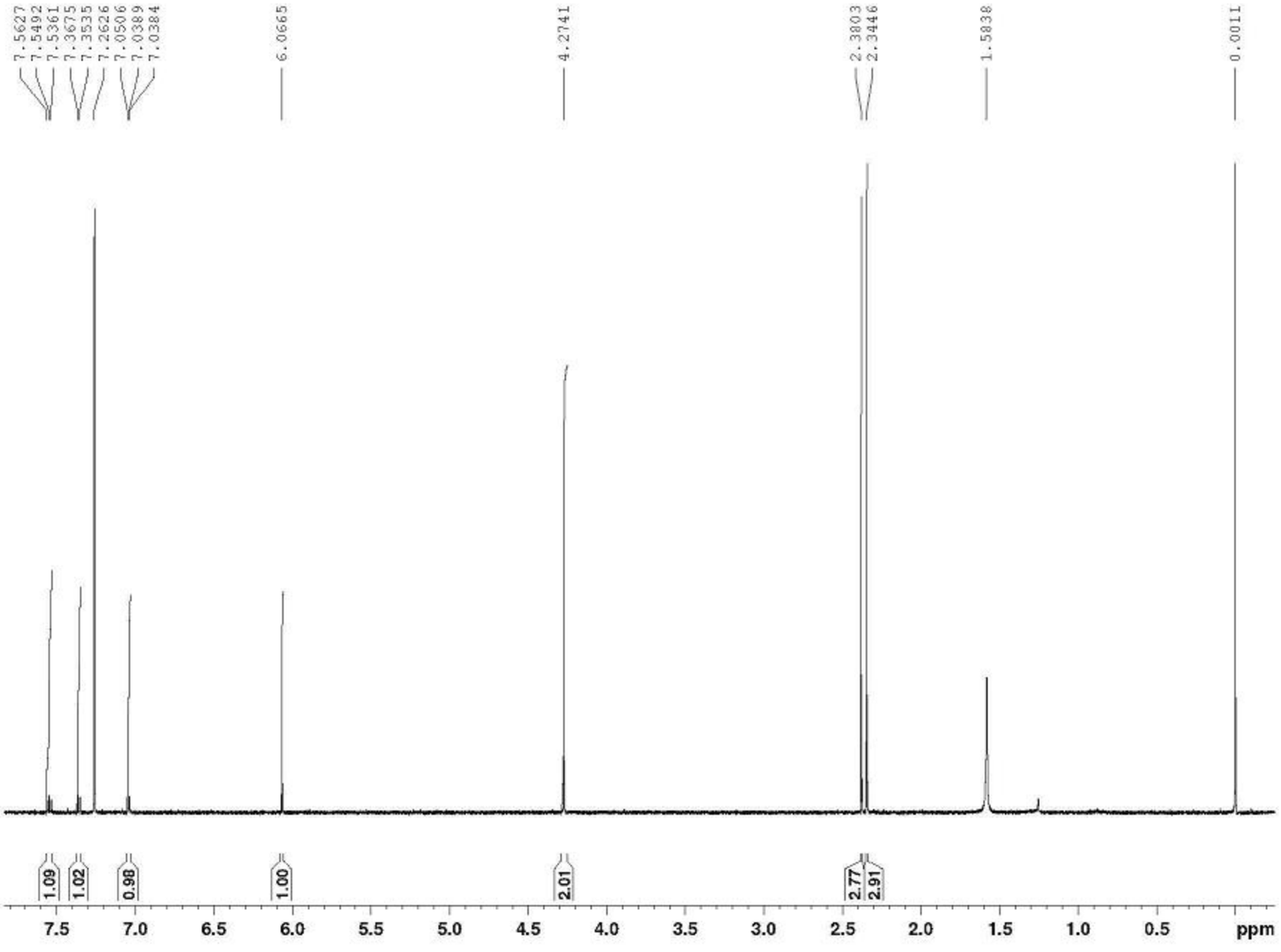


```
Current Data Parameters
NAME                  DS-25-1
EXPNO                       1
PROCNO                      1

P2 - Acquisition Parameters
Date_              20070828
Time                    9.23
INSTRUM                 spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     65536
SOLVENT                CDCl3
NS                        40
DS                         2
SWH                4854.369 Hz
PIDRES             0.074072 Hz
AQ                 6.7502580 sec
RG                      1150
DW                  103.000 usec
DE                    6.00 usec
TE                   296.2 K
D1                3.00000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                       9.70 usec
PL1                      2.00 dB
SFO1           600.1322845 MHz

P2 - Processing parameters
SI                      32768
SF             600.1300087 MHz
WDW                        no
SSB                         0
LB                       0.00 Hz
GB                          0
PC                       1.00
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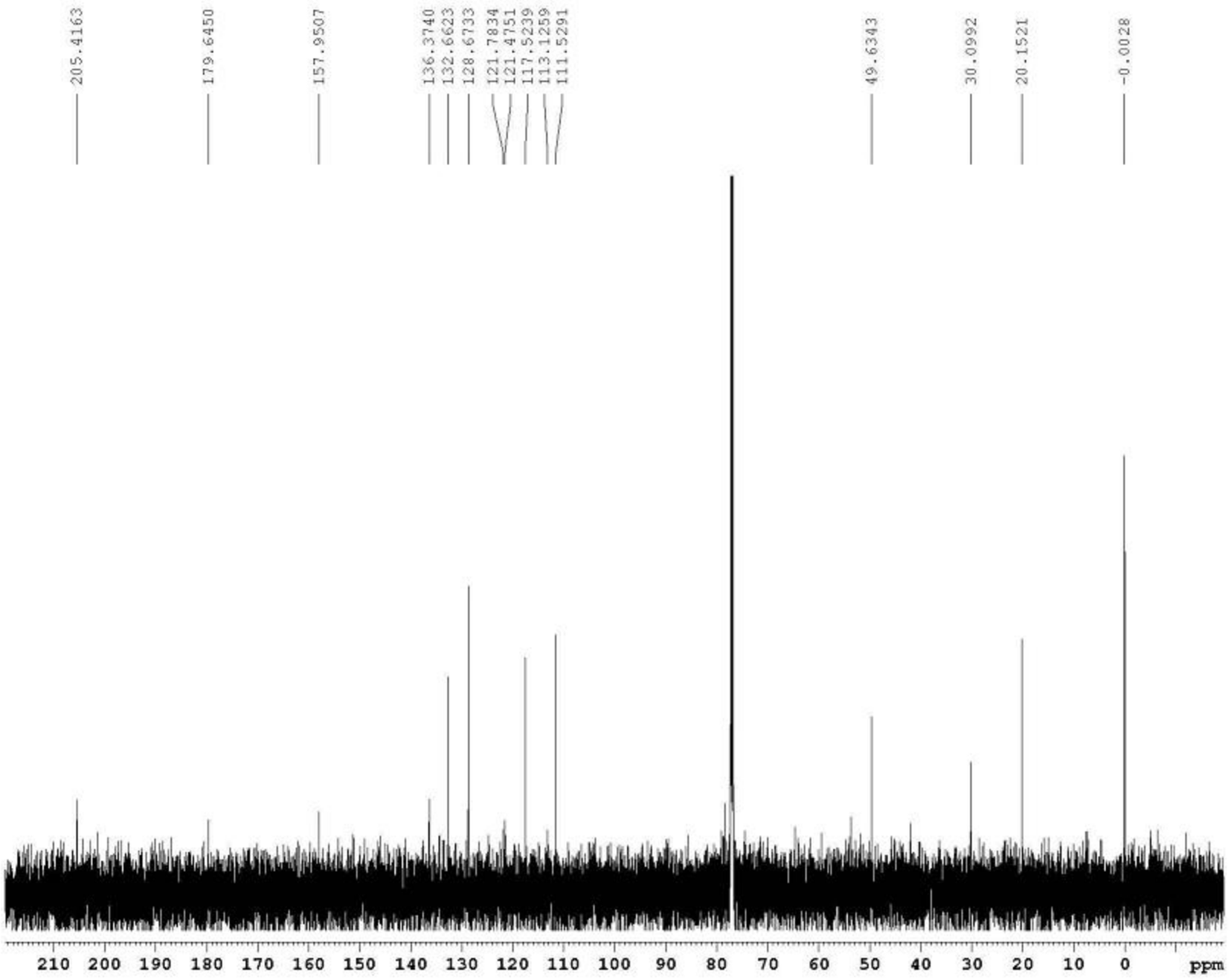



```
Current Data Parameters
NAME                  DS-25-1
EXPNO                       2
PROCNO                      1

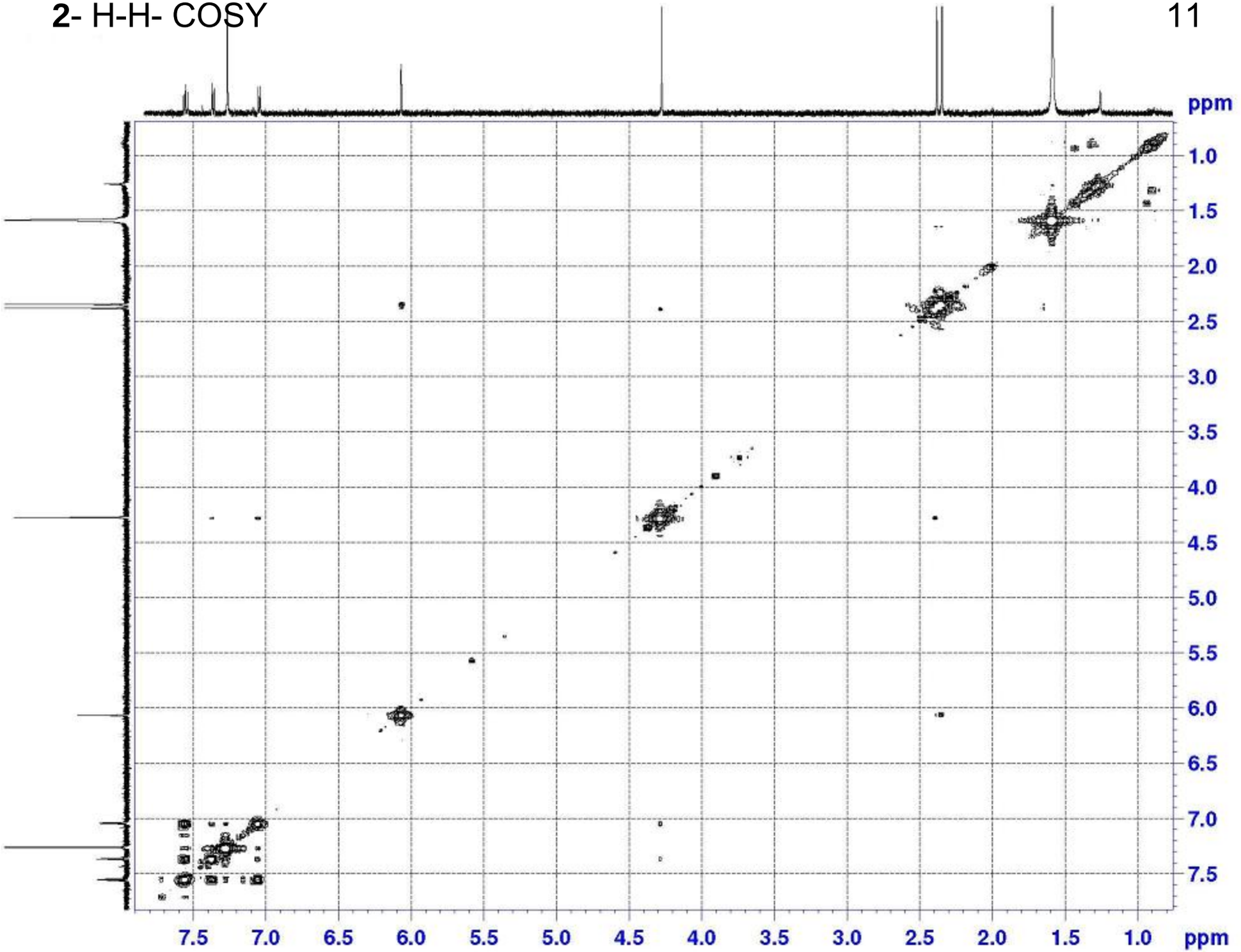
F2 - Acquisition Parameters
Date_              20070830
Time                    3.09
INSTRUM                 spect
PROBHD    5 mm PABBO BB-
PULPROG                 zgdc30
TD                      65536
SOLVENT                 CDCl3
NS                       4096
DS                          4
SWH                36057.691 Hz
FIDRES             0.550197 Hz
AQ                 0.9088159 sec
RG                       2050
DW                    13.867 usec
DE                     6.00 usec
TE                    299.9 K
D1                 3.00000000 sec
d11                0.03000000 sec
ID0                         1

======== CHANNEL f1 ========
NUC1                      13C
P1                       9.80 usec
PL1                      2.00 dB
SFO1              150.9178988 MHz

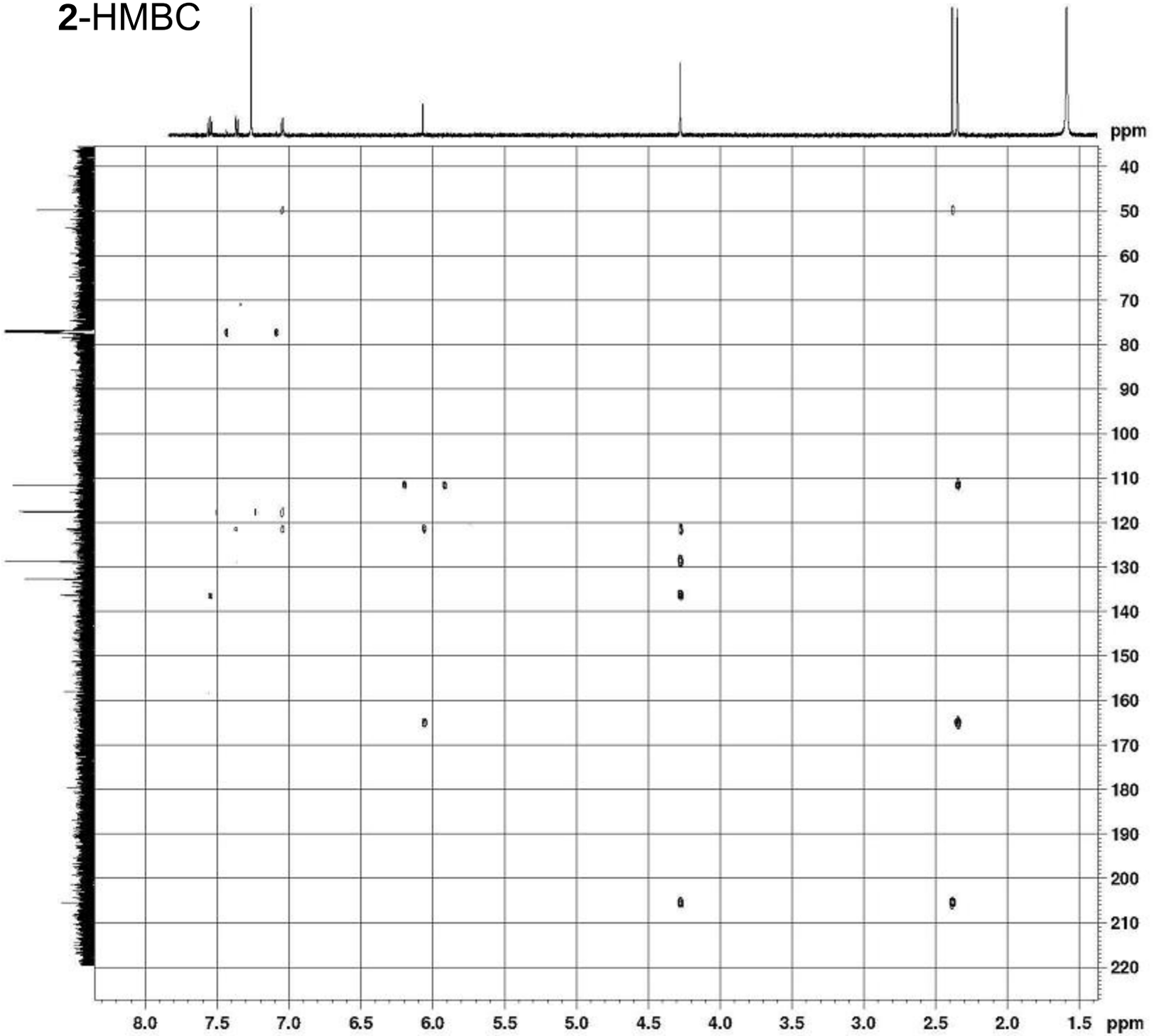
======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                       1H
PCPD2                   70.00 usec
PL12                    13.50 dB
PL2                     -1.00 dB
SFO2              600.1324005 MHz

F2 - Processing parameters
SI                       32768
SF                150.9028057 MHz
WDW                         no
SSB                          0
LB                        0.00 Hz
GB                           0
PC                        0.40
```

2- H-H- COSY


ppm
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
ppm

2-HMBC




```
Current Data Parameters
NAME                  DS-25-1
EXPNO                       7
PROCNO                      1

P2 - Acquisition Parameters
Date_              20070830
Time                   7.09
INSTRUM               spect
PROBHD    5 mm PABBO BB-
PULPROG       hmbcgpndqf
TD                     2048
SOLVENT              CDCl3
NS                       16
DS                       16
SWH                4854.369 Hz
FIDRES             2.370397 Hz
AQ                 0.2109940 sec
RG                      2050
DW                  103.000 usec
DE                    6.00 usec
TE                   296.4 K
CNST13            8.0000000
d0                0.00000300 sec
D1                1.50000000 sec
D16               0.00020000 sec
d6                0.06250000 sec
IN0               0.00001490 sec

======== CHANNEL f1 ========
NUC1                      1H
P1                     14.90 usec
p2                     29.80 usec
PL1                    -1.00 dB
SFO1           600.1322758 MHz

======== CHANNEL f2 ========
NUC2                     13C
P3                      9.80 usec
PL2                     2.00 dB
SFO2           150.9178748 MHz

====== GRADIENT CHANNEL =====
GPNAM1              SINE.100
GPNAM2              SINE.100
GPNAM3              SINE.100
GPZ1                   50.00 %
GPZ2                   30.00 %
GPZ3                   40.10 %
P16                  1000.00 usec

F1 - Acquisition parameters
ND0                         2
TD                        175
SFO1           150.9179 MHz
FIDRES         191.754547 Hz
SW                 222.353 ppm
FnMODE                   QF

F2 - Processing parameters
SI                       1024
SF             600.1300056 MHz
WDW                      SINE
SSB                         0
LB                       0.00 Hz
GB                          0
PC                       1.40

F1 - Processing parameters
SI                       1024
MC2                        QF
SF             150.9028035 MHz
WDW                      SINE
SSB                         0
LB                       0.00 Hz
GB                          0
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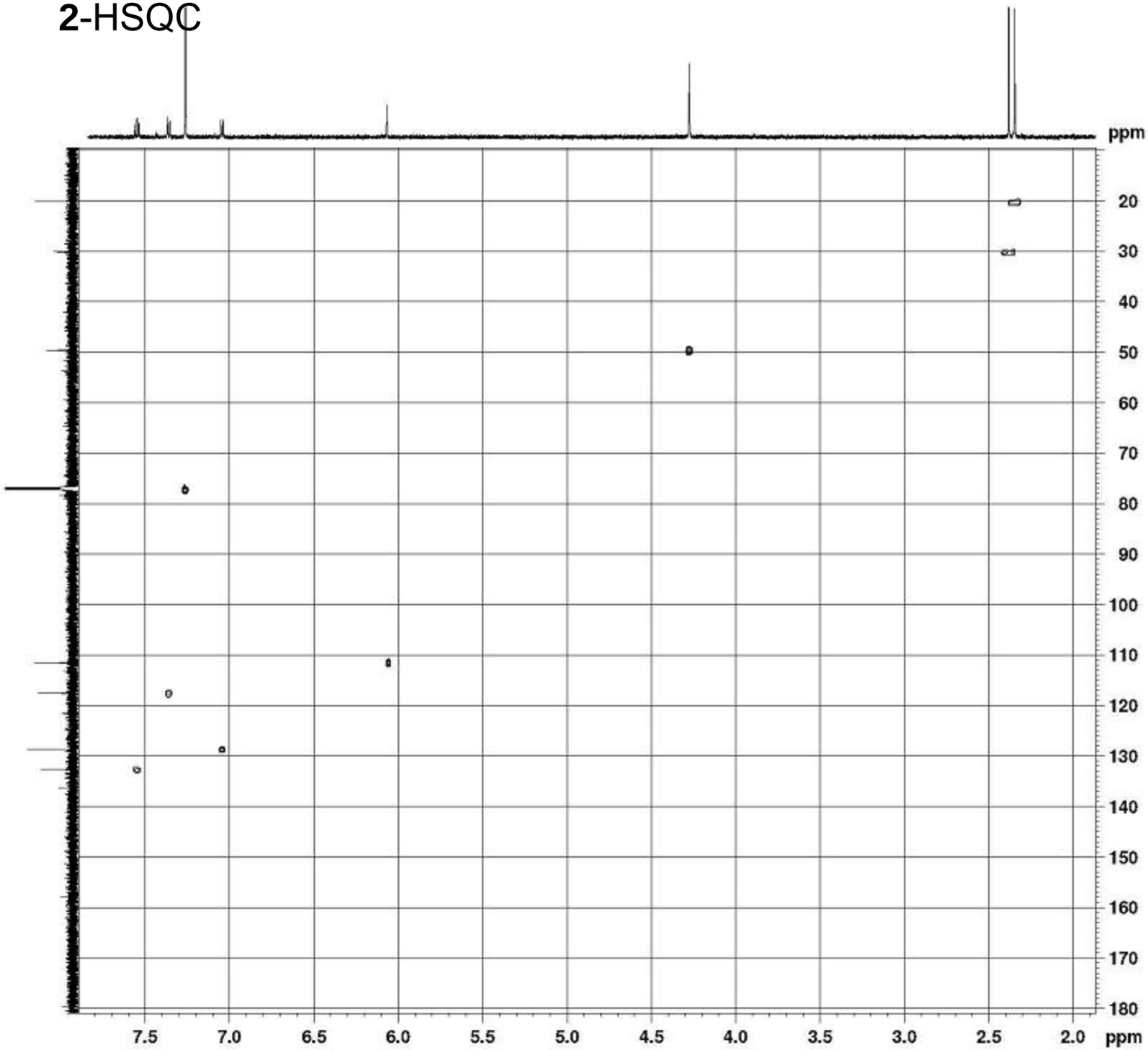



```
Current Data Parameters
NAME                  DS-25-1
EXPNO                       6
PROCNO                      1

F2 - Acquisition Parameters
Date_              20070830
Time                    5.18
INSTRUM                 spect
PROBHD     5 mm PABBO BB-
PULPROG             hsqcetgp
TD                      1024
SOLVENT                 CDCl3
NS                        16
DS                        16
SWH                 4854.369 Hz
FIDRES              4.740595 Hz
AQ                  0.1055220 sec
RG                       2050
DW                   103.000 usec
DE                     6.00 usec
TE                     296.5 K
CNST2              145.0000000
d0                   0.00000300 sec
D1                   1.50000000 sec
d11                  0.03000000 sec
d13                  0.00000400 sec
D16                  0.00020000 sec
d4                   0.00172414 sec
DELTA                0.00123580 sec
DELTA1               0.00071614 sec
ING                  0.00001440 sec
ST1CNT                    128
ZGOPTNS

======== CHANNEL f1 ========
NUC1                       1H
P1                      14.90 usec
p2                      29.80 usec
P20                   1000.00 usec
PL1                     -1.00 dB
SFO1               600.1322758 MHz

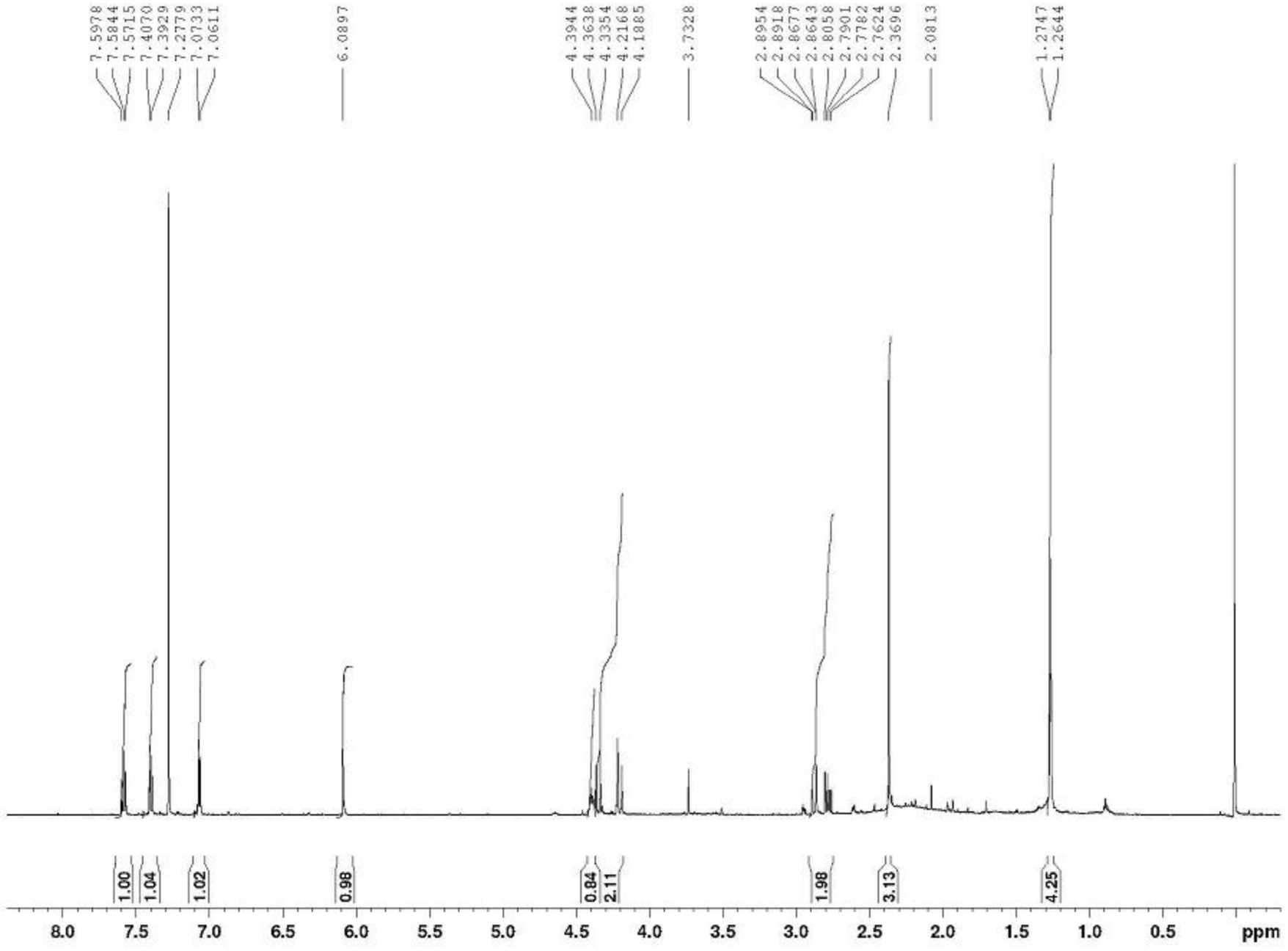
======== CHANNEL f2 ========
CPDPRG2                 garp
NUC2                     13C
P3                       9.80 usec
p8                      19.60 usec
PCPD2                   70.00 usec
PL12                    19.00 dB
PL2                      2.00 dB
SFO2               150.9171448 MHz

====== GRADIENT CHANNEL =====
GPNAM1               SINE.100
GPNAM2               SINE.100
GPZ1                    80.00 %
GPZ2                    20.10 %
P16                   1000.00 usec

F1 - Acquisition parameters
NDO                         2
TD                        256
SFO1               150.9171 MHz
FIDRES             135.633682 Hz
SW                    230.075 ppm
FnMODE       Echo-Antiecho

F2 - Processing parameters
SI                       1024
SF                 600.1300043 MHz
WDW                     QSINE
SSB                         2
LB                       0.00 Hz
GB                          0
PC                       1.40

F1 - Processing parameters
SI                       1024
MC2           echo-antiecho
SF                 150.9027865 MHz
WDW                     QSINE
SSB                         2
LB                       0.00 Hz
GB                          0
```

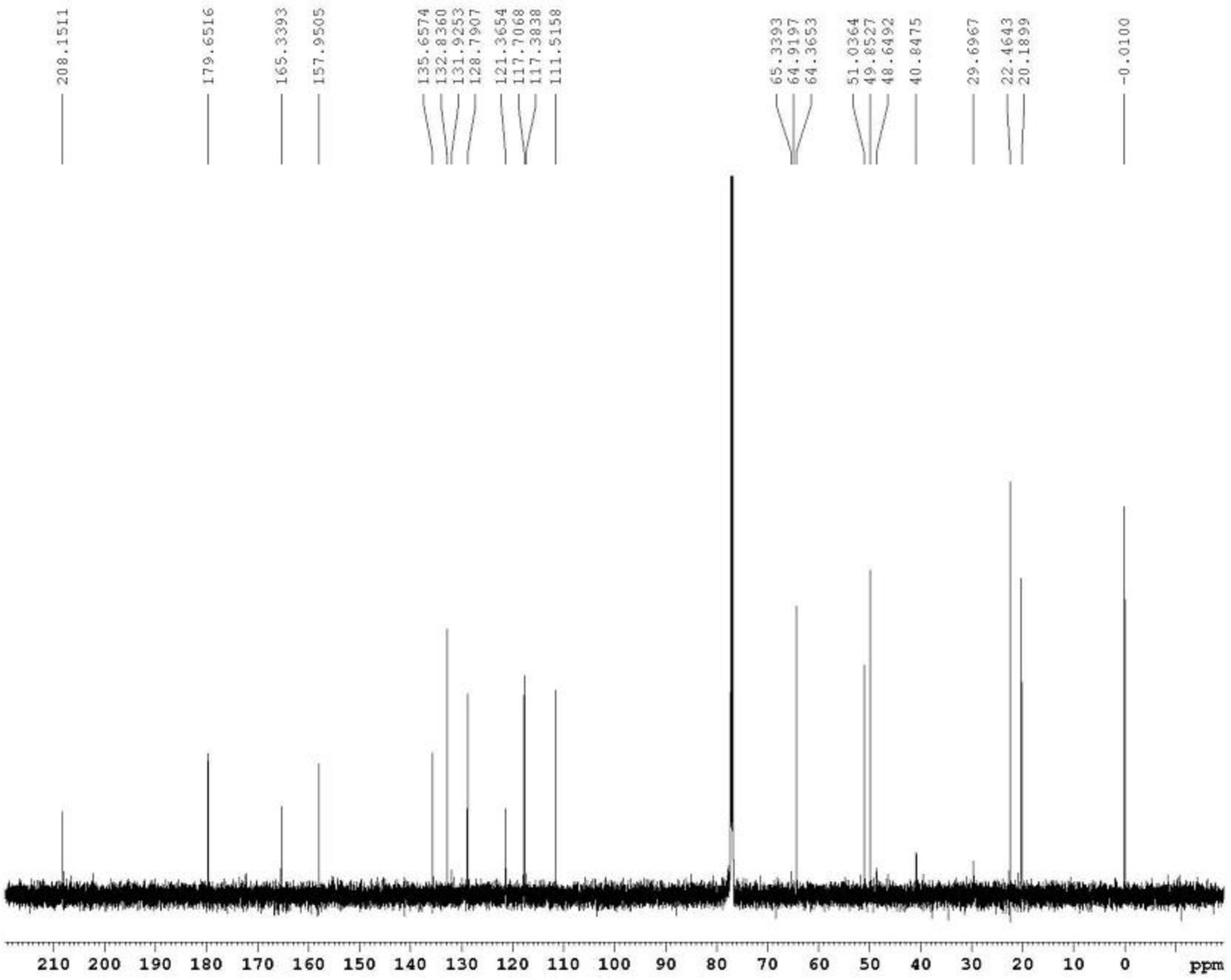



```
Current Data Parameters
NAME      DS-27-all-CDCl3
EXPNO                   1
PROCNO                  1

F2 - Acquisition Parameters
Date_            20070409
Time                 8.12
INSTRUM             spect
PROBHD   5 mm PAQXI 1H
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    32
DS                     2
SWH          12335.526 Hz
FIDRES        0.188225 Hz
AQ           2.6564426 sec
RG                   256
DW              40.533 usec
DE                6.00 usec
TE               292.9 K
D1           3.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                 9.70 usec
PL1                2.00 dB
SFO1        600.1337060 MHz

F2 - Processing parameters
SI                 32768
SF          600.1300000 MHz
WDW                   no
SSB                    0
LB                  0.00 Hz
GB                     0
PC                  1.00
```




```
Current Data Parameters
NAME                  D6-27
EXPNO                     2
PROCNO                    1

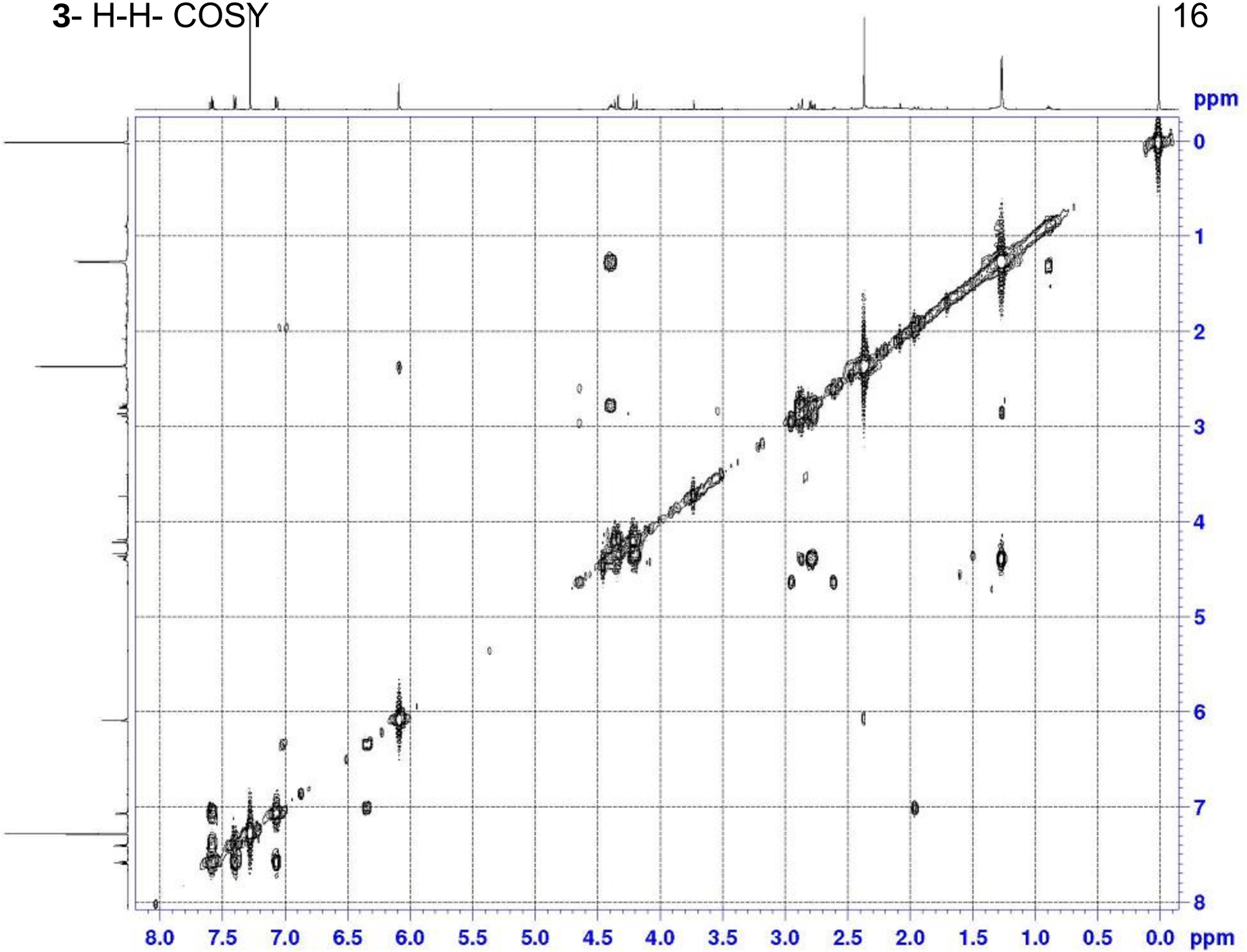
F2 - Acquisition Parameters
Date_              20070409
Time                 11.57
INSTRUM              spect
PROBHD    5 mm PABBO BB-
PULPROG              zgdc30
TD                    65536
SOLVENT               CDCl3
NS                    19841
DS                        4
SWH              36057.691 Hz
FIDRES           0.550197 Hz
AQ               0.9086159 sec
RG                     2050
DW                13.867 usec
DE                    6.00 usec
TE                   296.1 K
D1               2.00000000 sec
d11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
NUC1                    13C
P1                    9.80 usec
PL1                   2.00 dB
SFO1          150.9178988 MHz

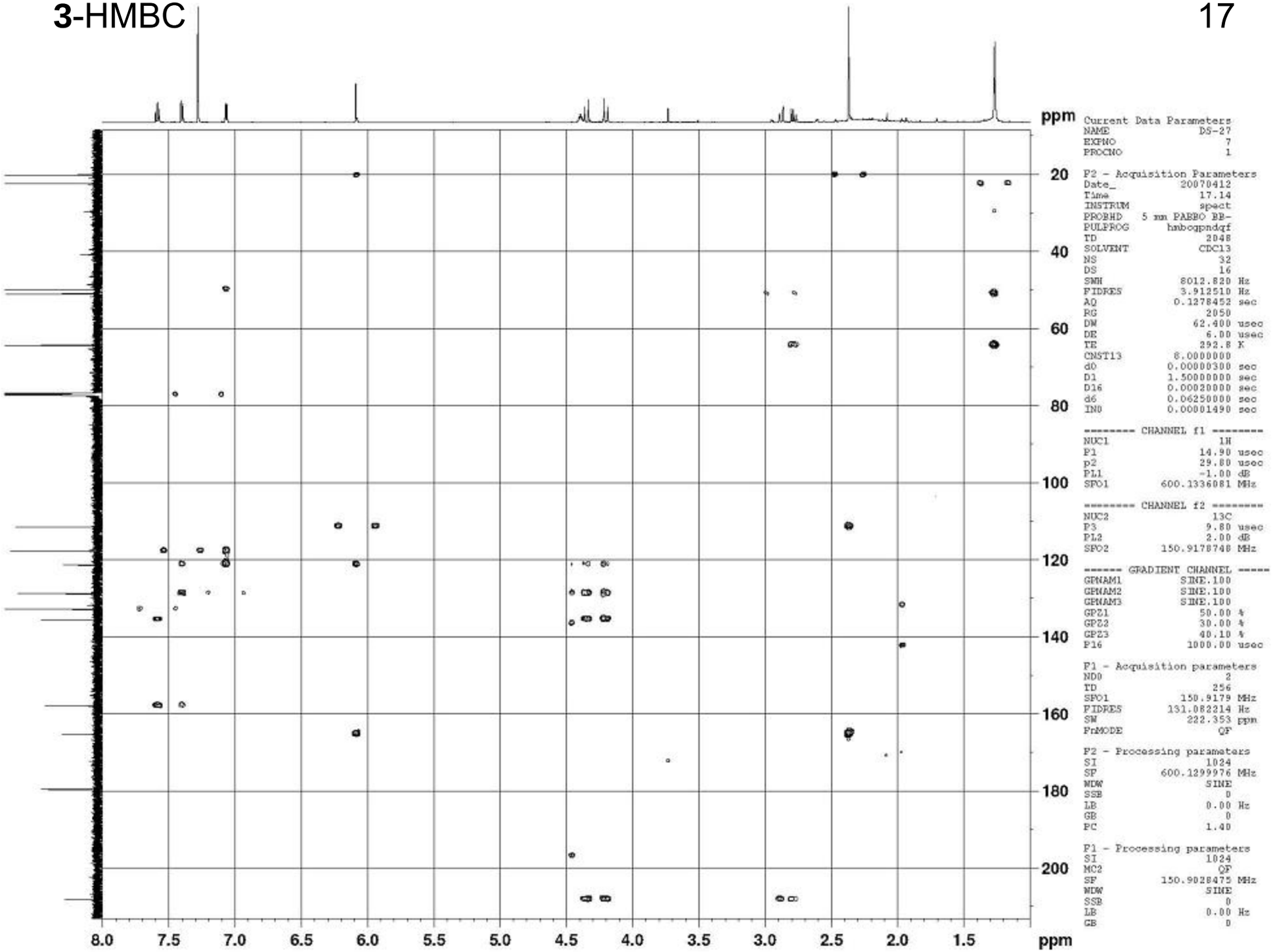
======== CHANNEL f2 ========
CPDPRG2             waltz16
NUC2                    1H
PCPD2                70.00 usec
PL12                 12.50 dB
PL2                  -1.00 dB
SFO2          600.1324005 MHz

F2 - Processing parameters
SI                     32768
SF            150.9028090 MHz
WDW                       no
SSB                        0
LB                    0.00 Hz
GB                         0
PC                      1.40
```

3- H-H- COSY



3-HMBC




```
Current Data Parameters
NAME                  DS-27
EXPNO                     7
PROCNO                    1

P2 - Acquisition Parameters
Date_              20070412
Time                  17.14
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG        hmbcgpndqf
TD                     2048
SOLVENT              CDCl3
NS                       32
DS                       16
SWH               8012.820 Hz
FIDRES            3.912510 Hz
AQ                0.1278452 sec
RG                    2050
DW                  62.400 usec
DE                   6.00 usec
TE                  292.8 K
CNST13           8.0000000
d0               0.00000300 sec
D1               1.50000000 sec
D16              0.00020000 sec
d6               0.06250000 sec
IN0              0.00001490 sec

-------- CHANNEL f1 --------
NUC1                     1H
P1                    14.90 usec
p2                    29.80 usec
PL1                   -1.00 dB
SFO1           600.1336081 MHz

-------- CHANNEL f2 --------
NUC2                    13C
P3                     9.80 usec
PL2                    2.00 dB
SFO2           150.9178748 MHz

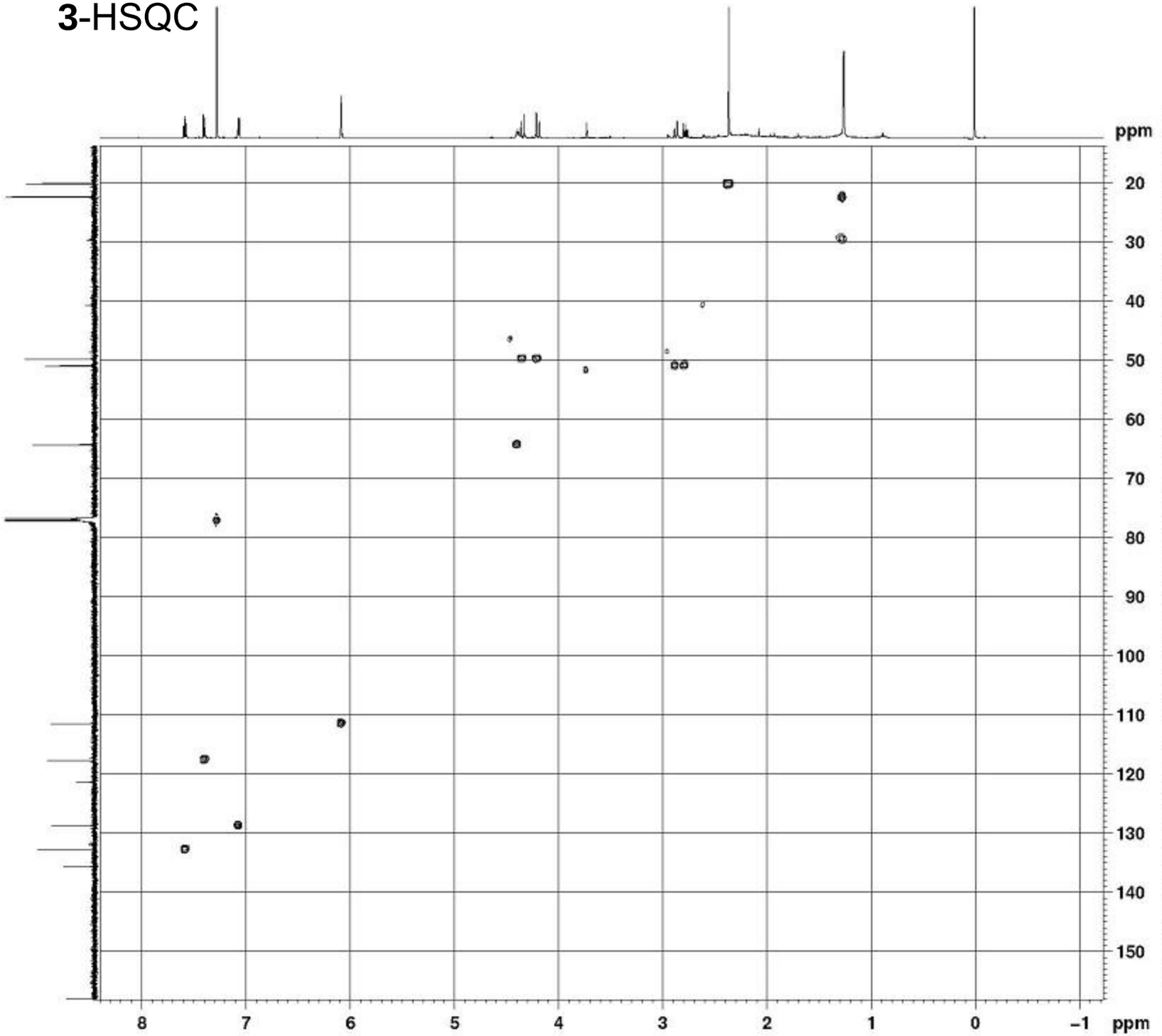
------ GRADIENT CHANNEL -----
GPNAM1              SINE.100
GPNAM2              SINE.100
GPNAM3              SINE.100
GPZ1                  50.00 %
GPZ2                  30.00 %
GPZ3                  40.10 %
P16                 1000.00 usec

F1 - Acquisition parameters
ND0                       2
TD                      256
SFO1           150.9179 MHz
FIDRES         131.082214 Hz
SW                222.353 ppm
FnMODE                   QF

F2 - Processing parameters
SI                     1024
SF             600.1299976 MHz
WDW                    SINE
SSB                       0
LB                     0.00 Hz
GB                        0
PC                     1.40

F1 - Processing parameters
SI                     1024
MC2                      QF
SF             150.9028475 MHz
WDW                    SINE
SSB                       0
LB                     0.00 Hz
GB                        0
```

3-HSQC




```
Current Data Parameters
NAME                  DS-27
EXPNO                     6
PROCNO                    1

F2 - Acquisition Parameters
Date_              20070412
Time                  14.32
INSTRUM                spect
PROBHD   5 mm PABBO BB-
PULPROG           hsqcetgp
TD                    1024
SOLVENT               CDCl3
NS                       24
DS                       16
SWH                8012.820 Hz
FIDRES             7.825020 Hz
AQ                 0.0639476 sec
RG                      2050
DW                    62.400 usec
DE                     6.00 usec
TE                    293.2 K
CNST2              145.0000000
d0                 0.00000300 sec
D1                 1.50000000 sec
d11                0.03000000 sec
d13                0.00000400 sec
D16                0.00020000 sec
d4                 0.00172414 sec
DELTA              0.00123580 sec
DELTA1             0.00071614 sec
IN0                0.00001655 sec
ST1CNT                   128
ZGOPTNS

======== CHANNEL f1 ========
NUC1                      1H
P1                     14.90 usec
p2                     29.80 usec
P28                  1000.00 usec
PL1                    -1.00 dB
SFO1            600.1336081 MHz

======== CHANNEL f2 ========
CPDPRG2                garp
NUC2                    13C
P3                     9.80 usec
p4                    19.60 usec
PCPD2                 70.00 usec
PL12                  19.00 dB
PL2                    2.00 dB
SFO2            150.9171048 MHz

====== GRADIENT CHANNEL =====
GPNAM1             SINE.100
GPNAM2             SINE.100
GPZ1                  80.00 %
GPZ2                  20.10 %
P16                 1000.00 usec

F1 - Acquisition parameters
ND0                       2
TD                      256
SFO1             150.9171 MHz
FIDRES          118.013596 Hz
SW                 200.186 ppm
FnMODE     Echo-Antiecho

F2 - Processing parameters
SI                      1024
SF              600.1299935 MHz
WDW                    QSINE
SSB                       2
LB                     0.00 Hz
GB                        0
PC                     1.40

F1 - Processing parameters
SI                      1024
MC2          echo-antiecho
SF              150.9028276 MHz
WDW                    QSINE
SSB                       2
LB                     0.00 Hz
GB                        0
```

HPLC data of compound **1** and crude extract

Compound **1** was examined by reversed-phase HPLC on a 4.6 × 250 mm C-18 (5 μm) column (Merck) with CH_3CN from 50% to 100% in 15 min (1 mL/min flow rate, 254 nm detection) with a retention time of 11.3 min. Crude extract was examined by the same method. The peak of compound **1** was detected with a retention time of 11.3 min.

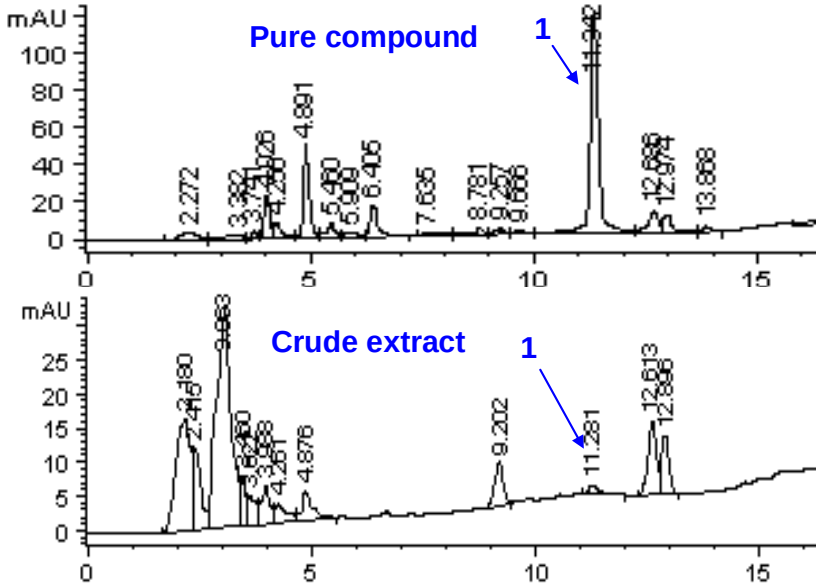


Figure 1: The HPLC result of compound **1** and crude extract.