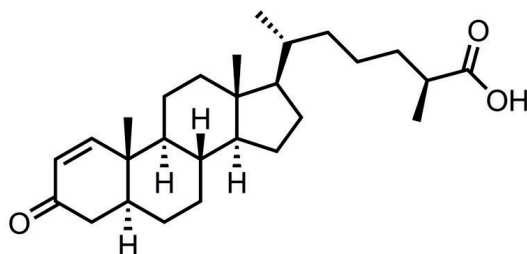


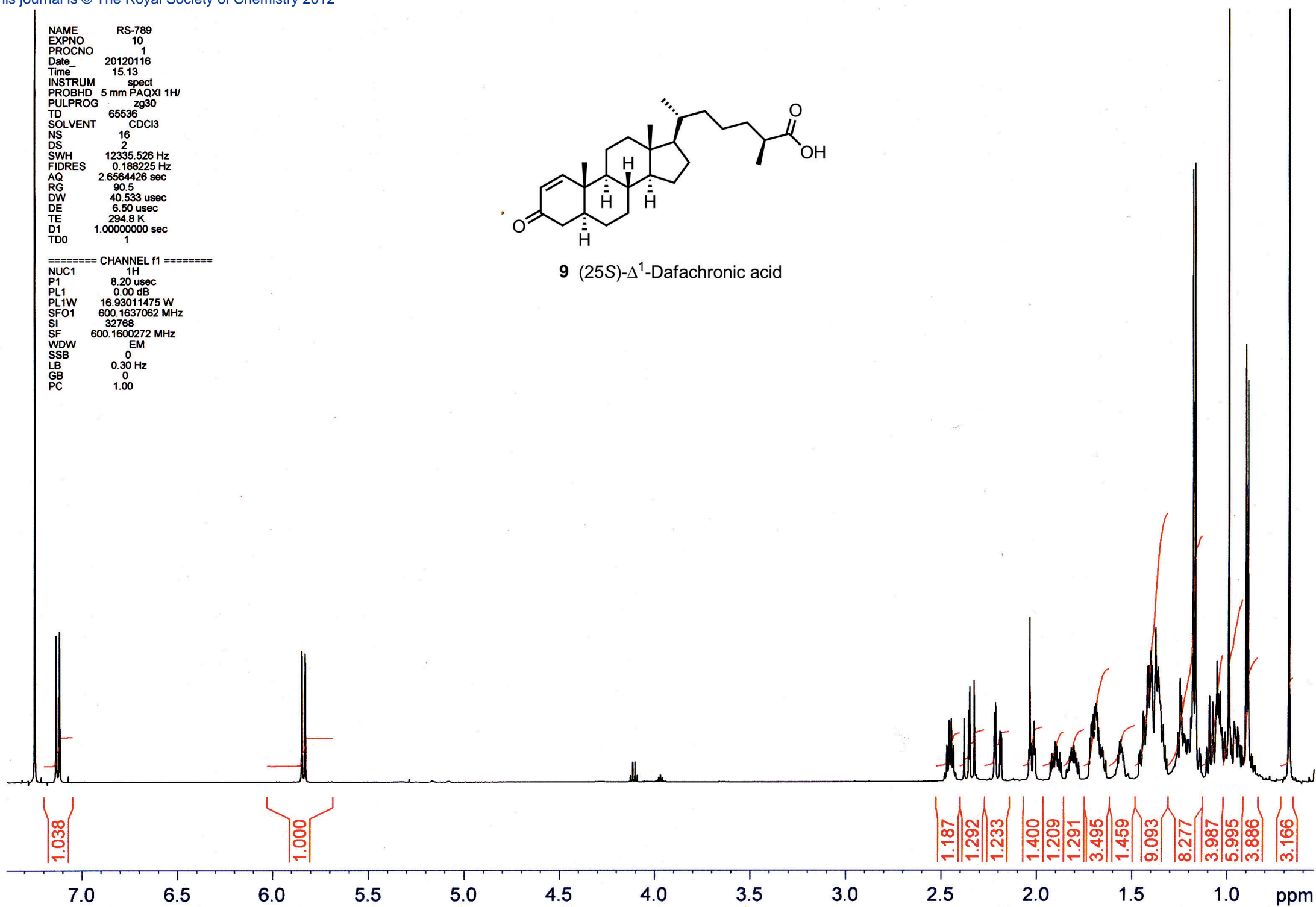
NAME RS-789  
EXPNO 10  
PROCNO 1  
Date\_ 20120116  
Time 15.13  
INSTRUM spect  
PROBHD 5 mm PAQXI 1H/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 16  
DS 2  
SWH 12335.526 Hz  
FIDRES 0.188225 Hz  
AQ 2.6564426 sec  
RG 90.5  
DW 40.533 usec  
DE 6.50 usec  
TE 294.8 K  
D1 1.00000000 sec  
TD0 1

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

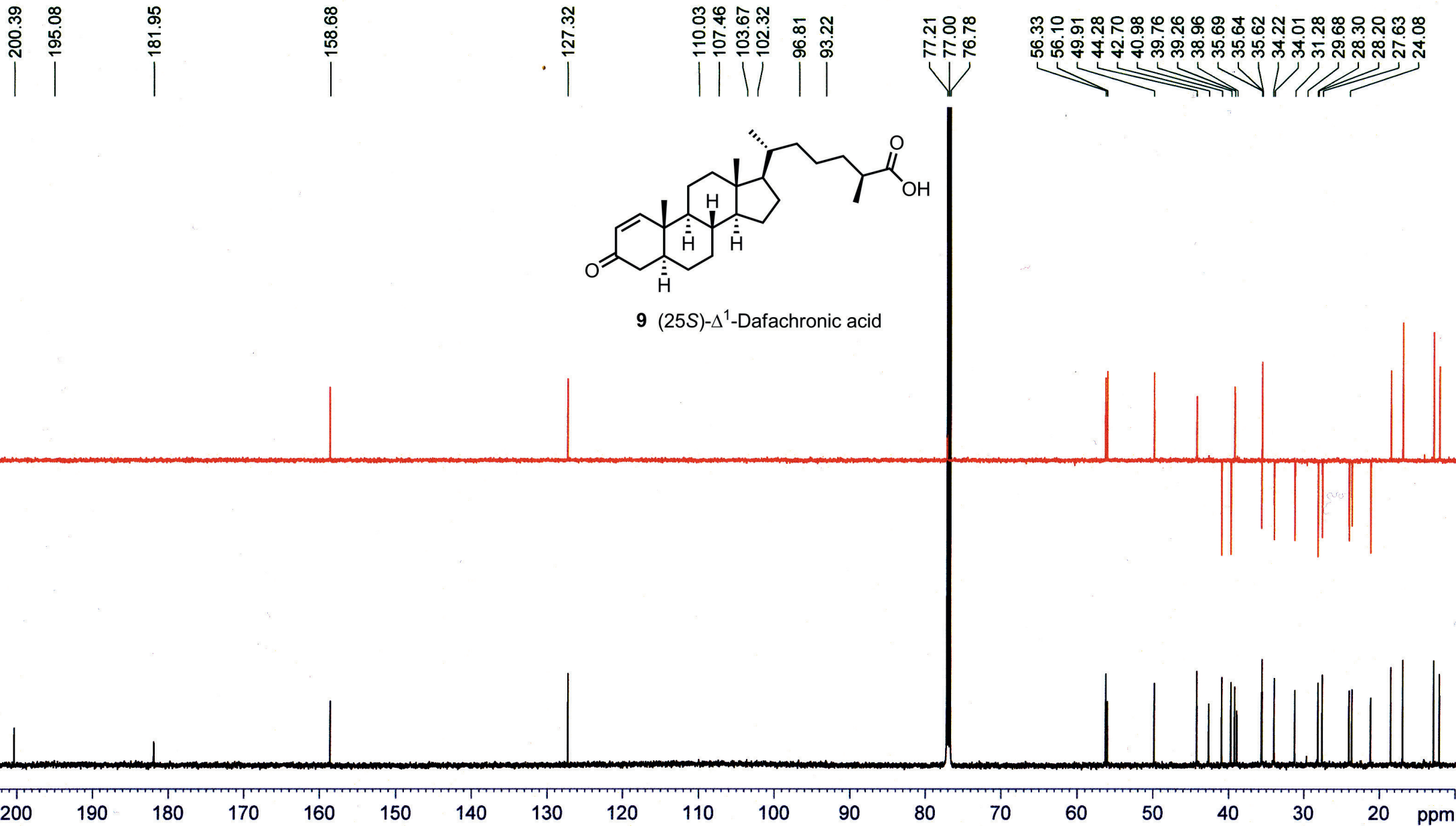
NUC1 1H  
P1 8.20 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1637062 MHz  
SI 32768  
SF 600.1600272 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



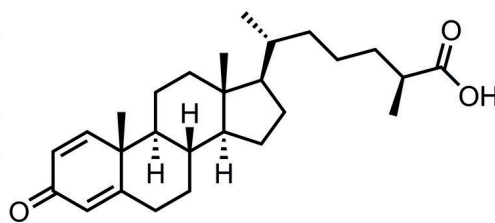
**9** (25S)- $\Delta^1$ -Dafachronic acid



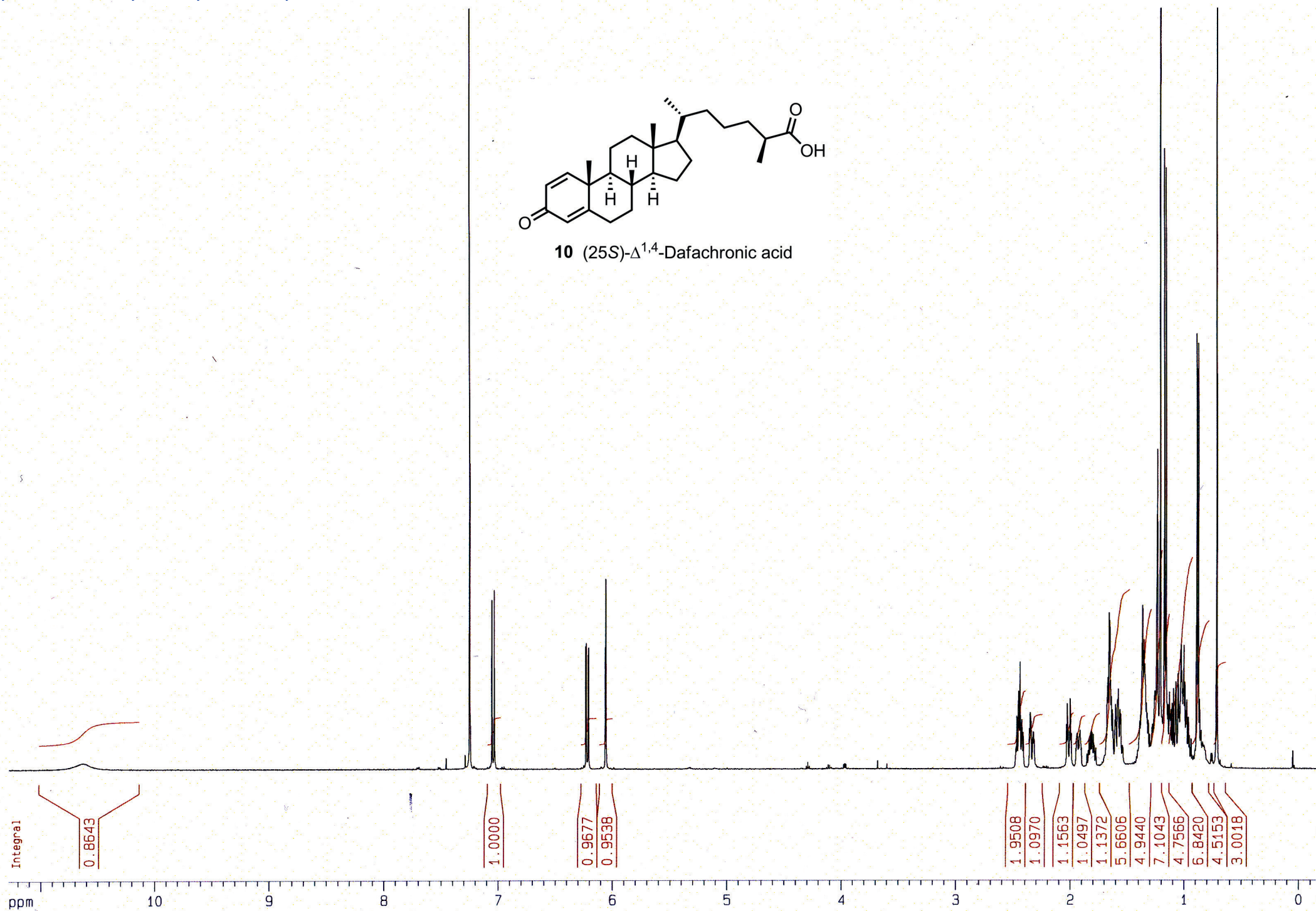
NAME RS-789  
EXPNO 11  
PROCNO 1  
Date\_ 20120116  
Time 17.51  
INSTRUM spect  
PROBHD 5 mm PAQXI 1H/  
PULPROG zgpg30  
TD 65536  
SOLVENT CDCl3  
NS 3213  
DS 4

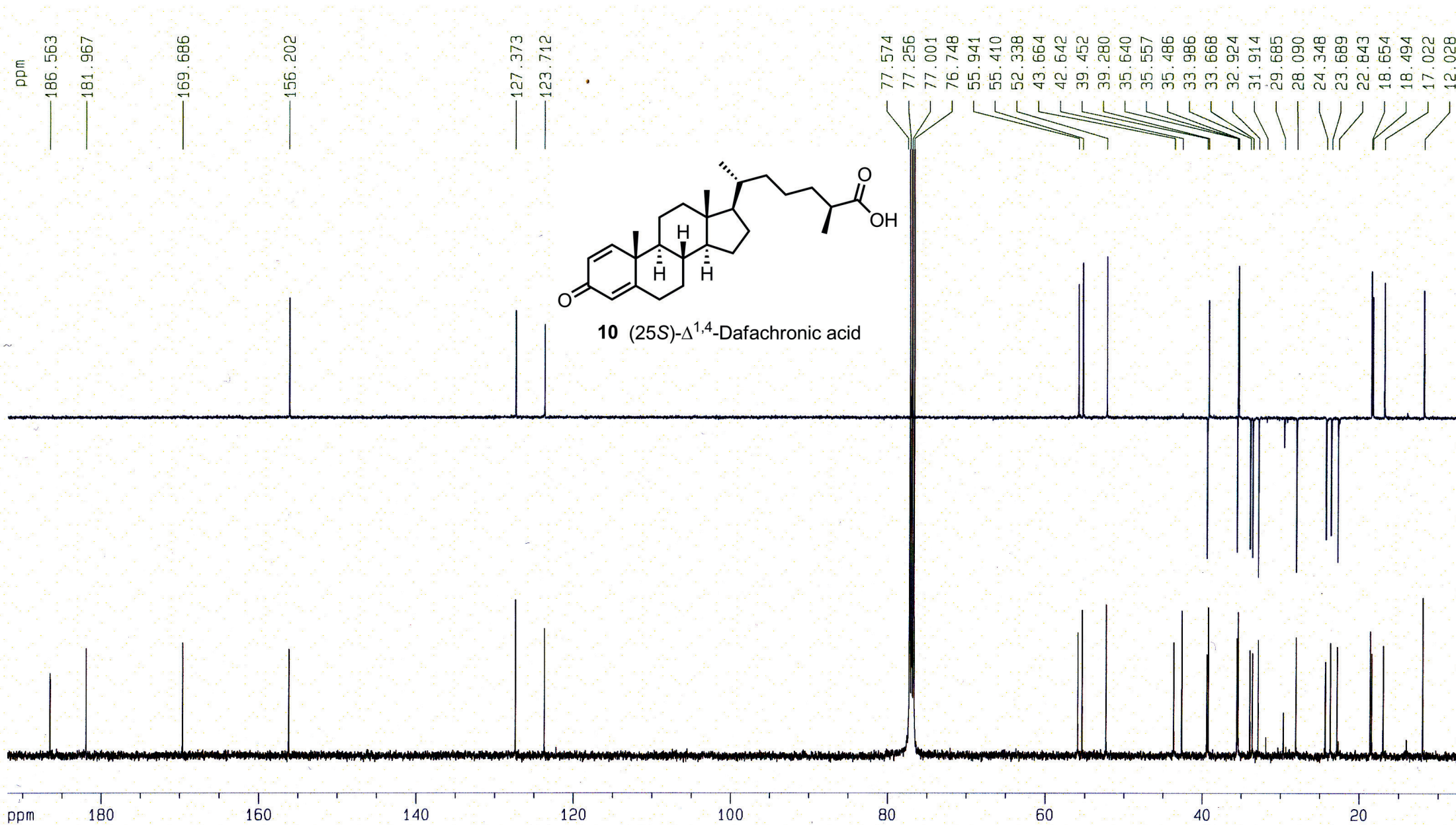


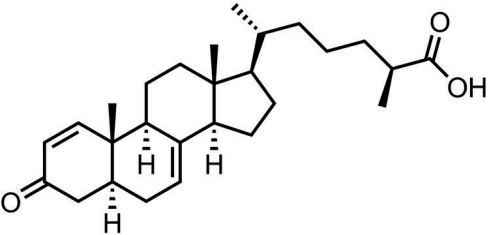




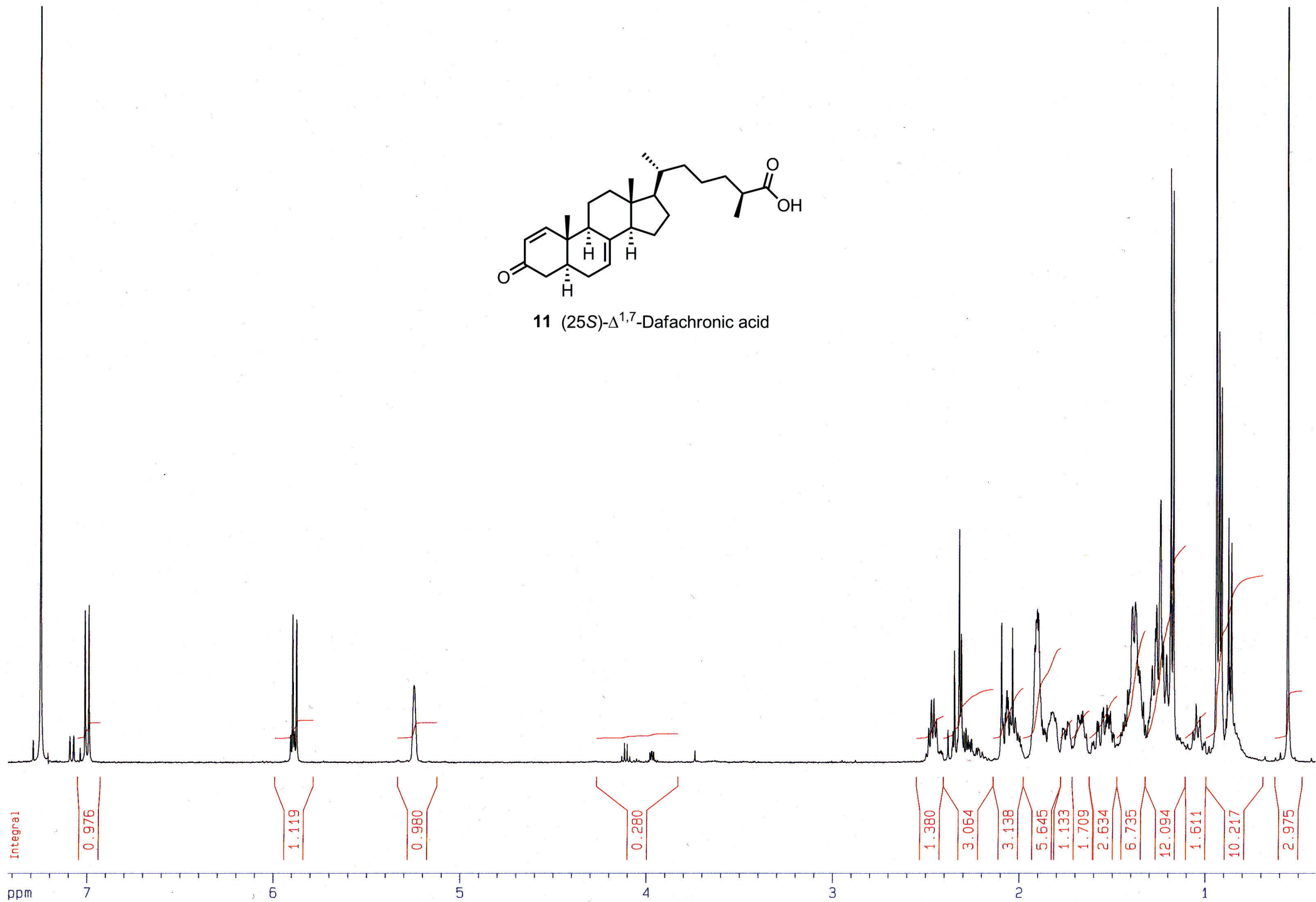
**10** (25S)- $\Delta^{1,4}$ -Dafachronic acid



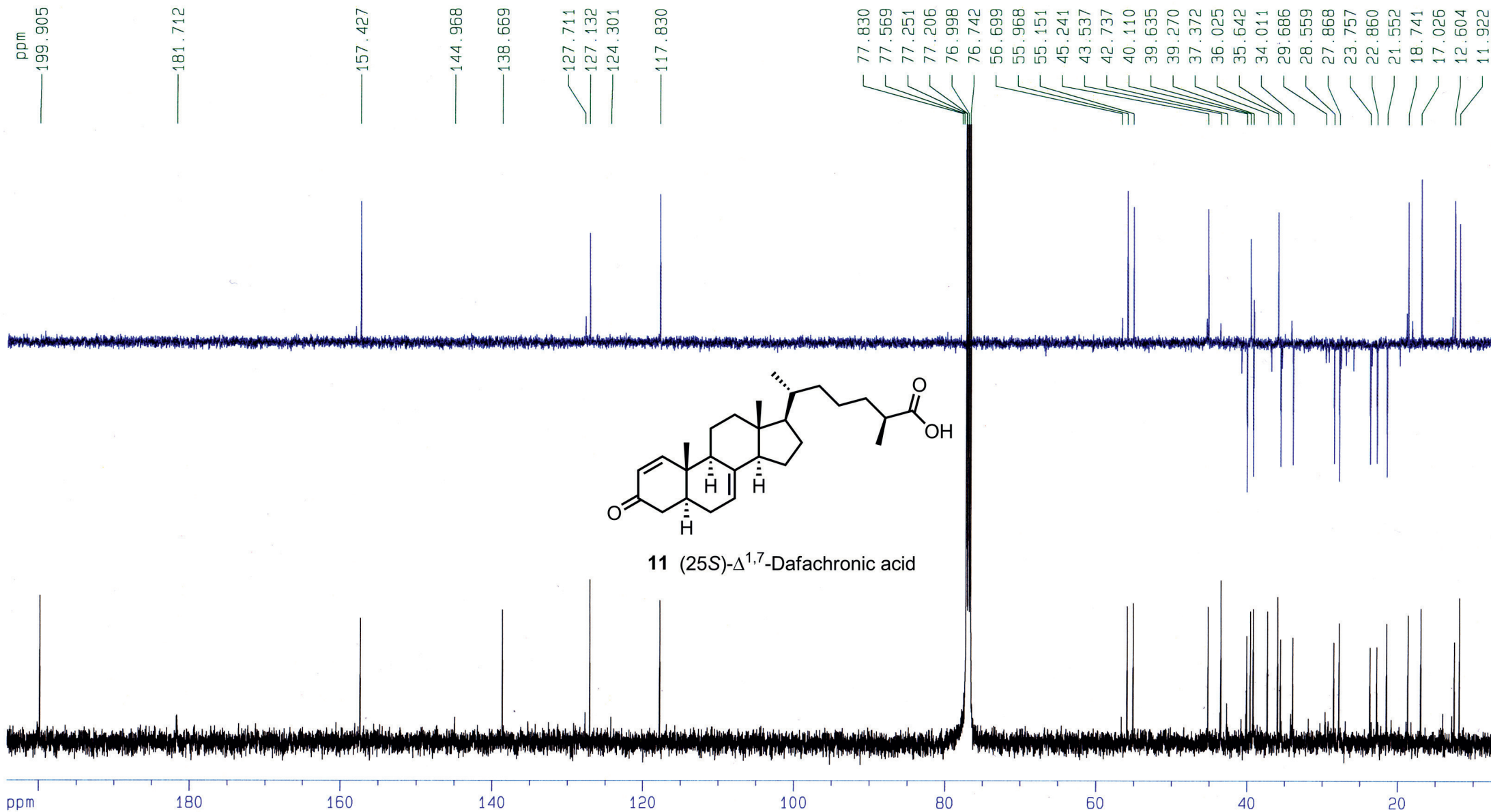


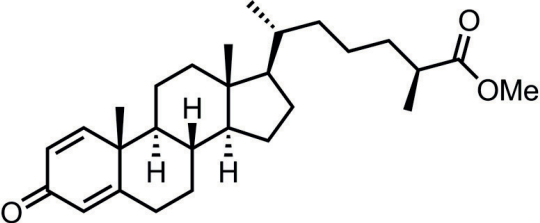


**11** (25S)- $\Delta^{1,7}$ -Dafachronic acid

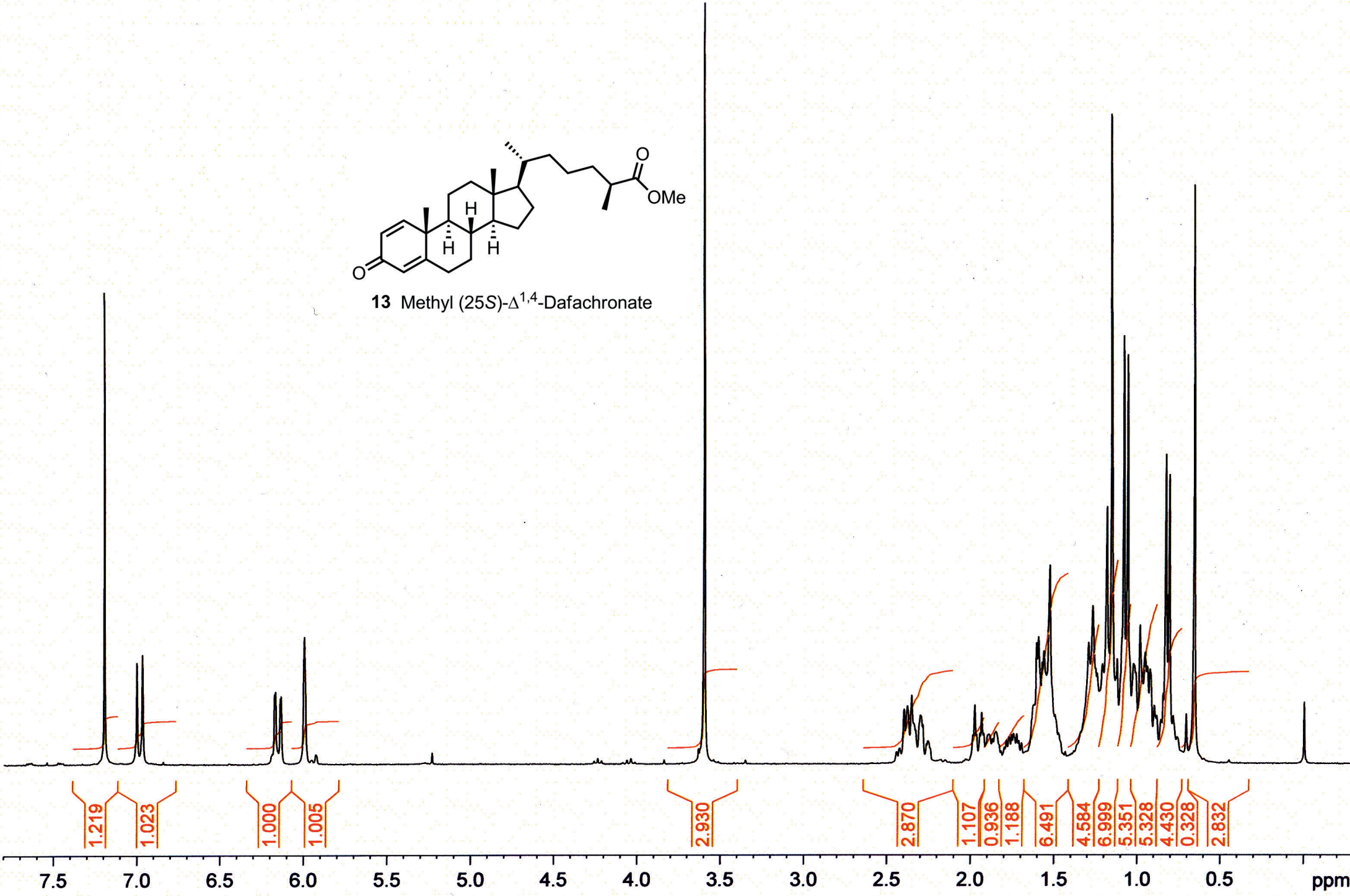




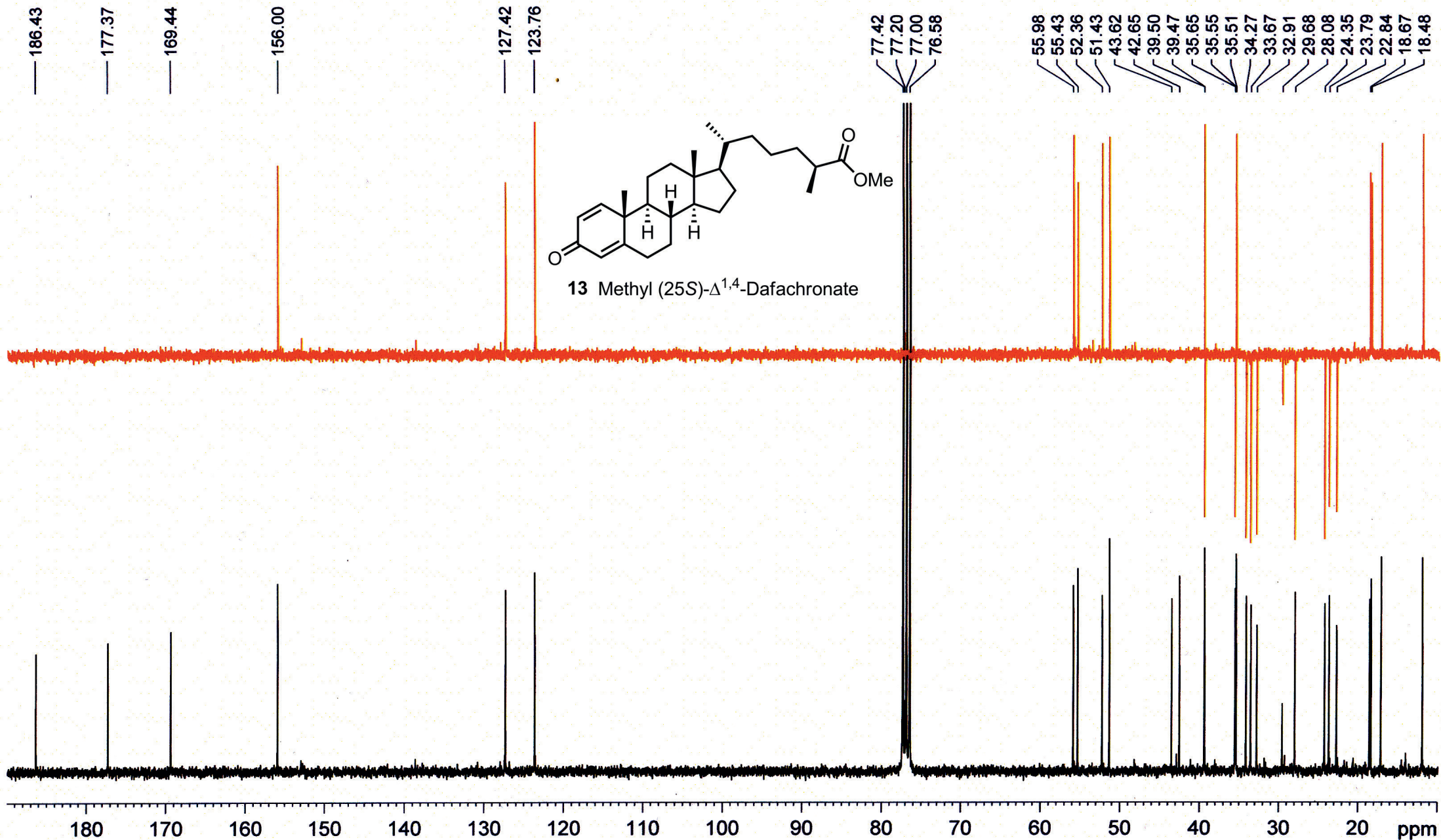


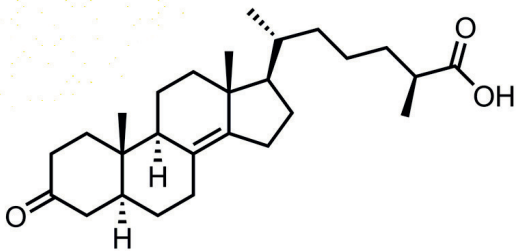


13 Methyl (25S)- $\Delta^{1,4}$ -Dafachronate

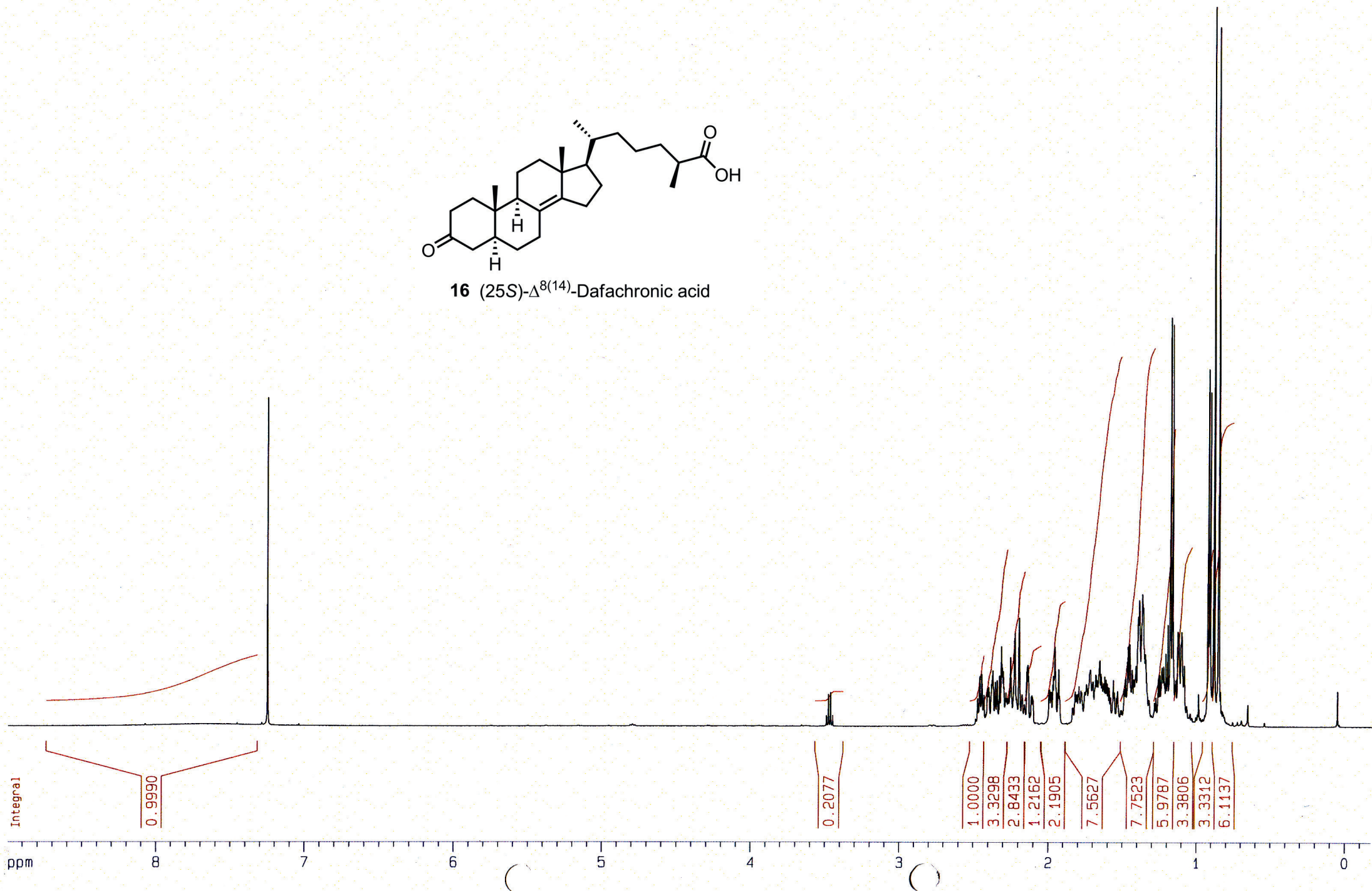




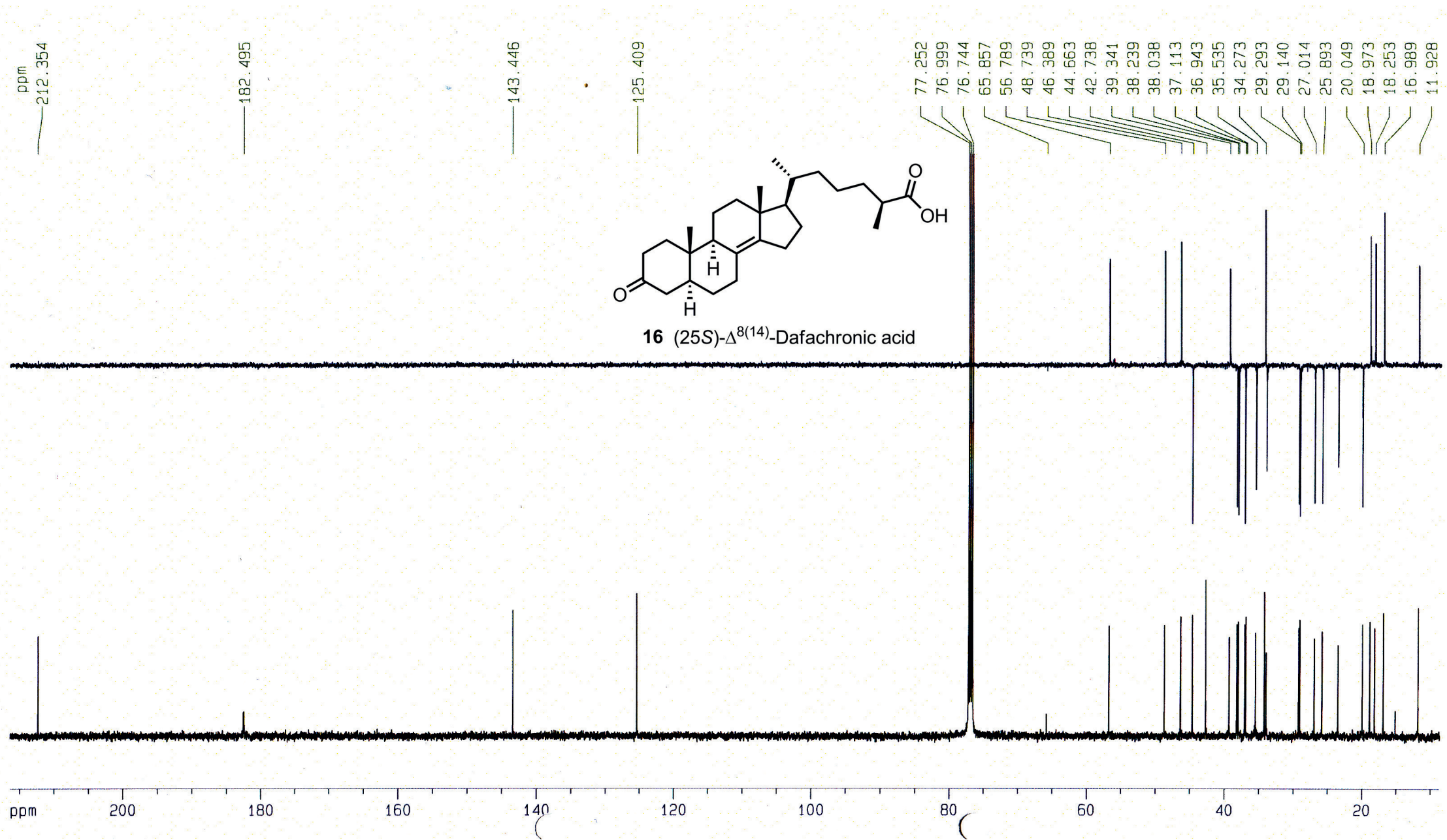


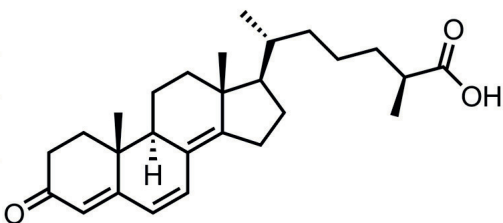


**16** (25*S*)- $\Delta^{8(14)}$ -Dafachronic acid

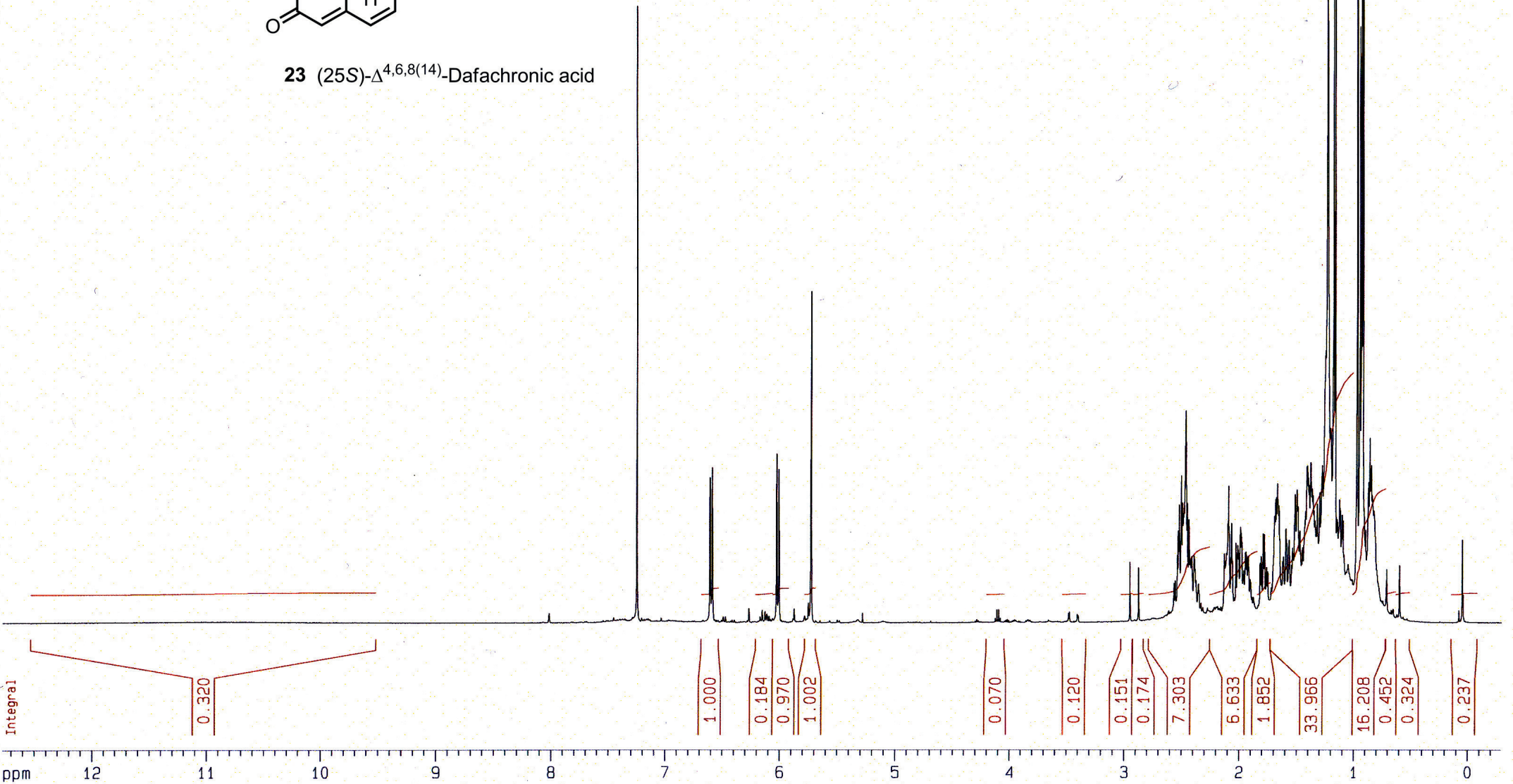




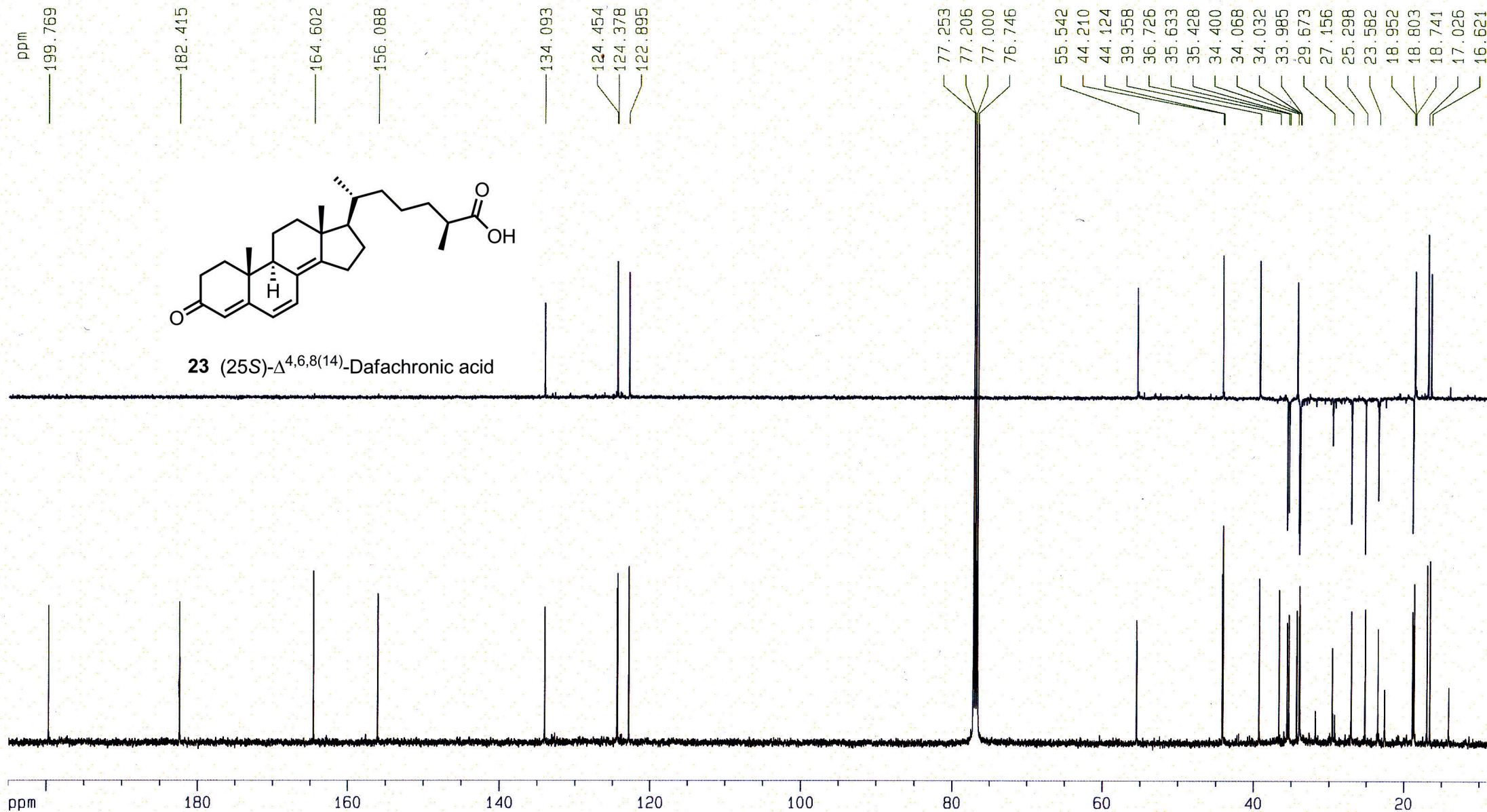




**23** (25*S*)- $\Delta^{4,6,8(14)}$ -Dafachronic acid



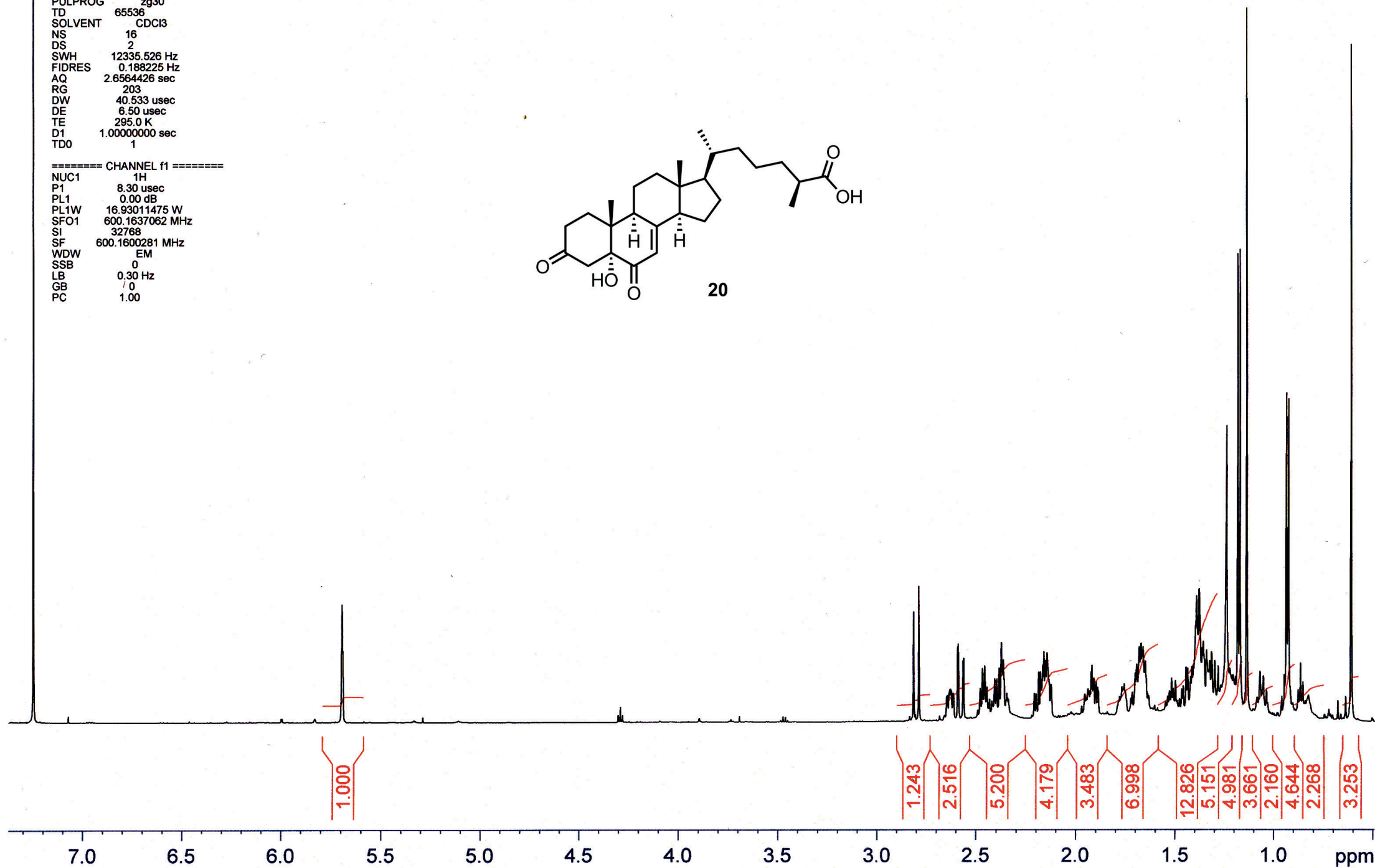
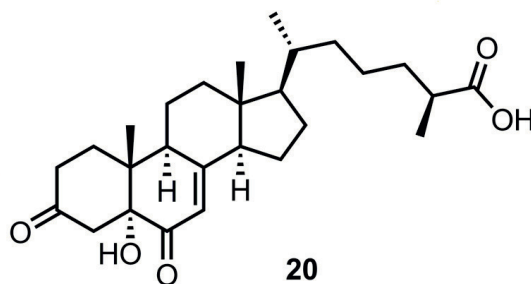




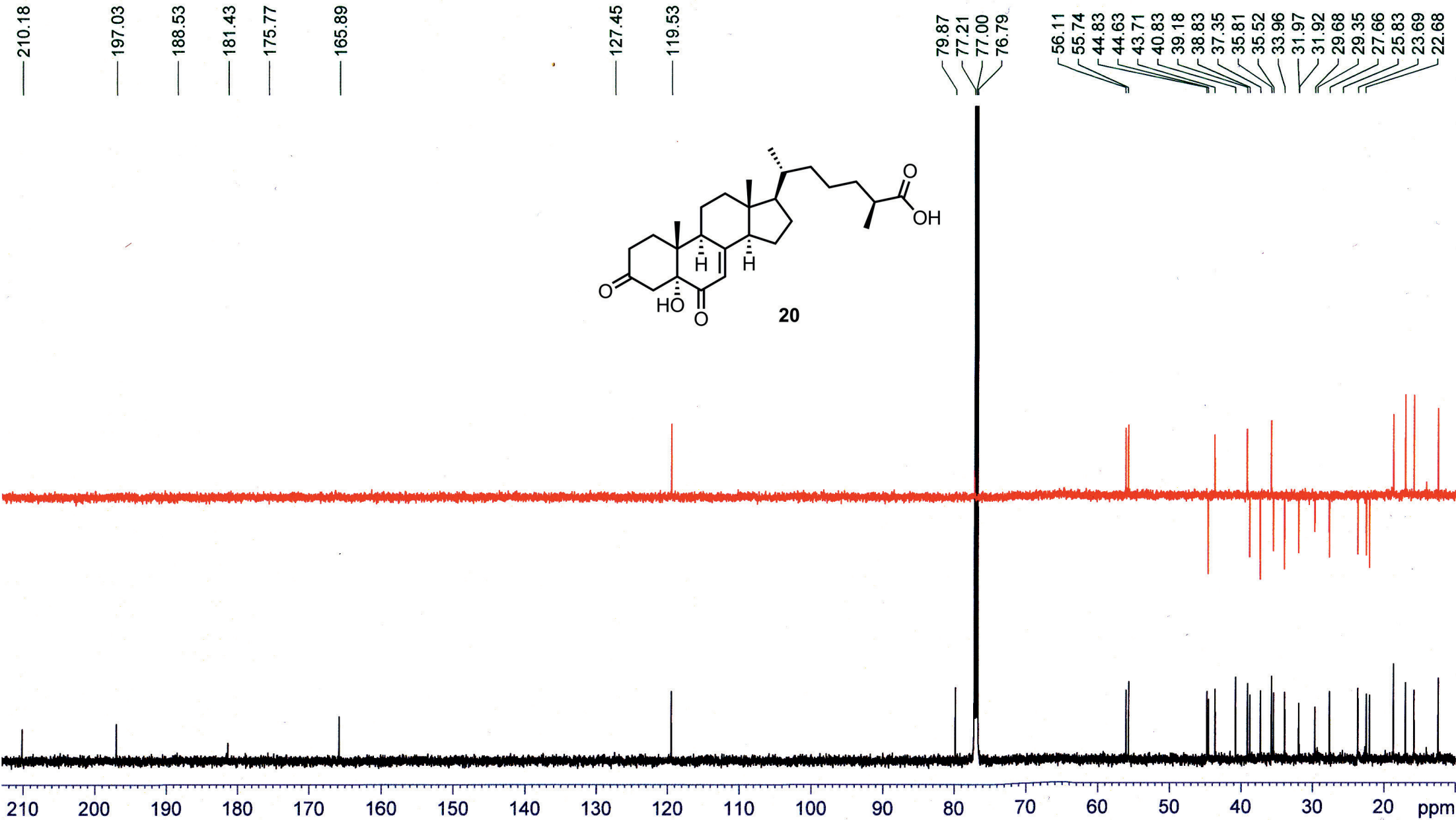


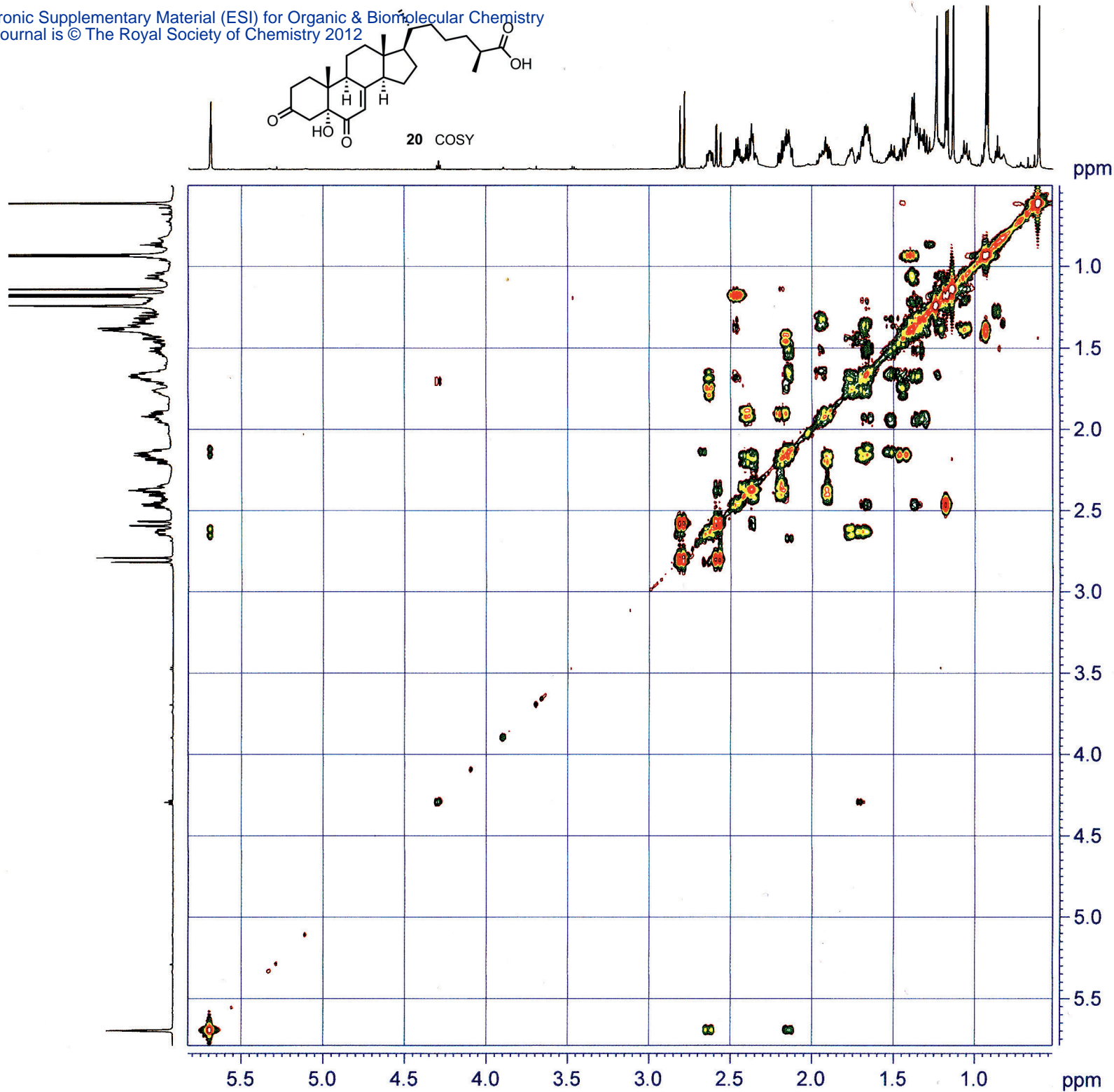
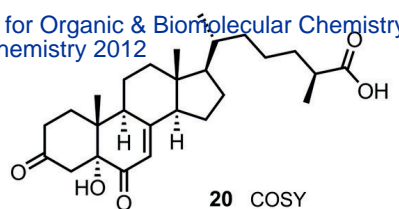
NAME RS-594  
EXPNO 10  
PROCNO 1  
Date\_ 20110502  
Time 16.22  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG zg30  
TD 65536  
SOLVENT CDCl3  
NS 16  
DS 2  
SWH 12335.526 Hz  
FIDRES 0.188225 Hz  
AQ 2.6564426 sec  
RG 203  
DW 40.533 usec  
DE 6.50 usec  
TE 295.0 K  
D1 1.0000000 sec  
TD0 1

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1637062 MHz  
SI 32768  
SF 600.1600281 MHz  
WDW EM  
SSB 0  
LB 0.30 Hz  
GB 0  
PC 1.00



NAME RS 594  
EXPNO 11  
PROCNO 1  
Date\_ 20110502  
Time 16.55  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG zgpg30  
TD 65536  
SOLVENT CDCl3  
NS 4096  
DS 4



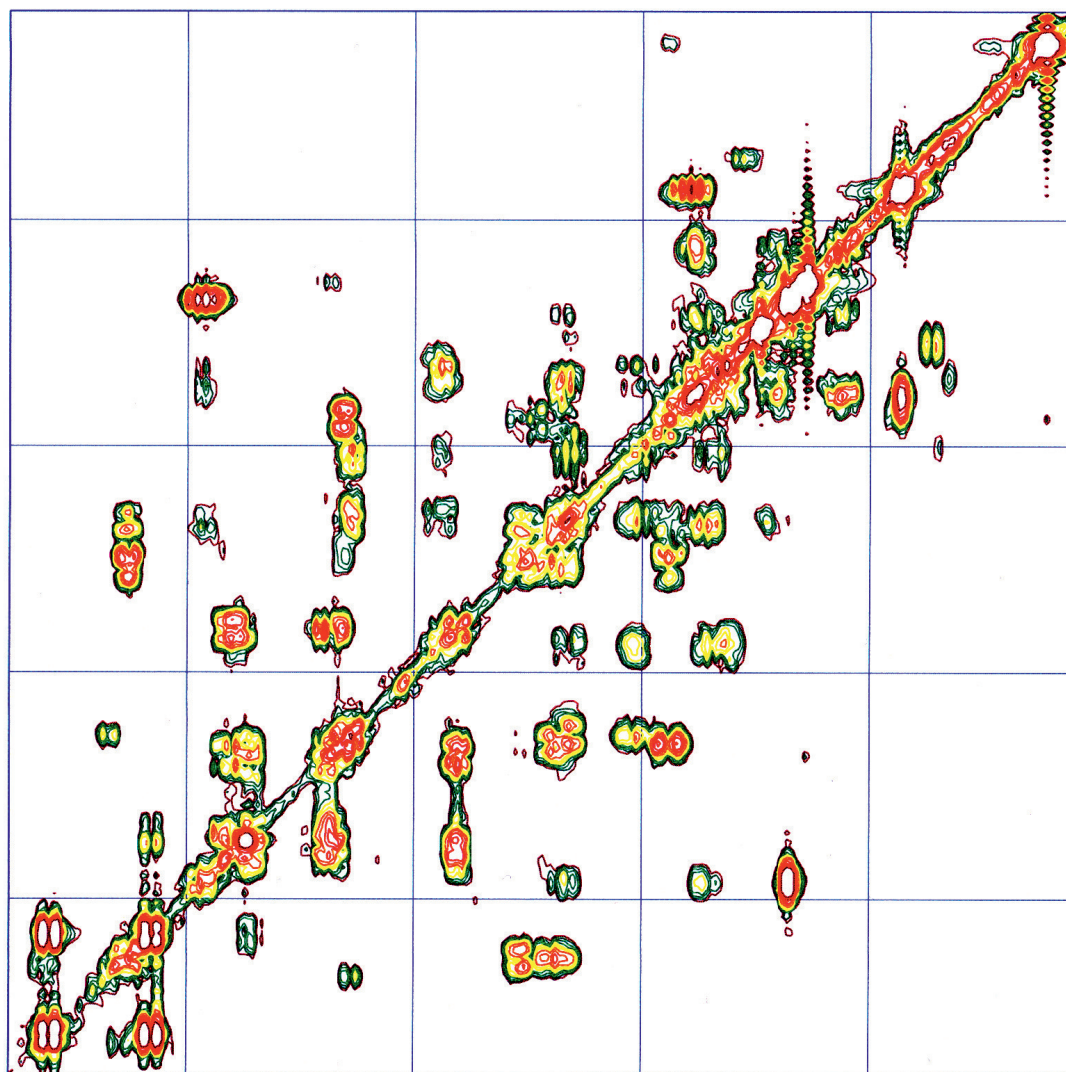
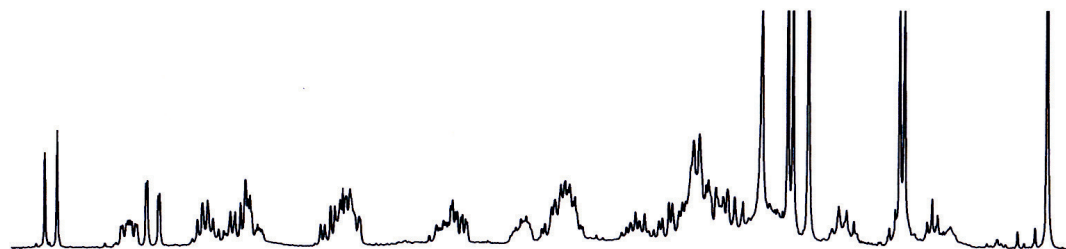
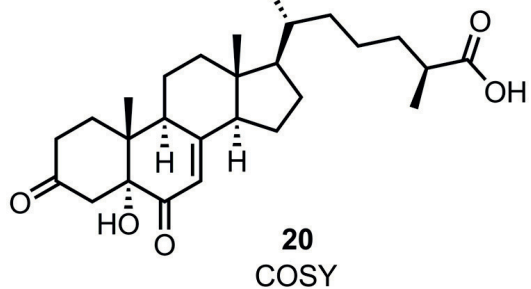


NAME RS 594  
EXPNO 13  
PROCNO 1  
Date\_ 20110502  
Time 21.30  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG cosygpgf  
TD 2048  
SOLVENT CDCl3  
NS 4  
DS 8  
SWH 6009.615 Hz  
FIDRES 2.934382 Hz  
AQ 0.1704436 sec  
RG 161  
DW 83.200 usec  
DE 10.00 usec  
TE 294.9 K  
D0 0.00000300 sec  
D1 2.00000000 sec  
D13 0.00000400 sec  
D16 0.00010000 sec  
IN0 0.00016640 sec

===== CHANNEL f1 =====  
NUC1 1H  
P0 8.30 usec  
P1 8.30 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1627607 MHz

===== GRADIENT CHANNEL =====  
GPNAM1 SINE.100  
GPZ1 10.00 %  
P16 1000.00 usec  
ND0 1  
TD 320  
SFO1 600.1628 MHz  
FIDRES 18.780022 Hz  
SW 10.013 ppm  
FnMODE QF  
SI 1024  
SF 600.1600261 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0  
PC 0.60  
SI 1024  
MC2 QF  
SF 600.1600257 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0





ppm

1.0

1.5

2.0

2.5

ppm

NAME RS 594  
EXPNO 13  
PROCNO 1  
Date\_ 20110502  
Time 21.30  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG cosygppqf  
TD 2048  
SOLVENT CDCl3  
NS 4  
DS 8  
SWH 6009.615 Hz  
FIDRES 2.934382 Hz  
AQ 0.1704436 sec  
RG 161  
DW 83.200 usec  
DE 10.00 usec  
TE 294.9 K  
D0 0.00000300 sec  
D1 2.00000000 sec  
D13 0.00000400 sec  
D16 0.00010000 sec  
IN0 0.00016640 sec

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

NUC1 1H  
P0 8.30 usec  
P1 8.30 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1627607 MHz

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

GPNAME1 SINE.100  
GPZ1 10.00 %  
P16 1000.00 usec  
ND0 1  
TD 320  
SFO1 600.1628 MHz  
FIDRES 18.780022 Hz  
SW 10.013 ppm  
FnMODE QF  
SI 1024  
SF 600.1600261 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0  
PC 0.60  
SI 1024  
MC2 QF  
SF 600.1600257 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0

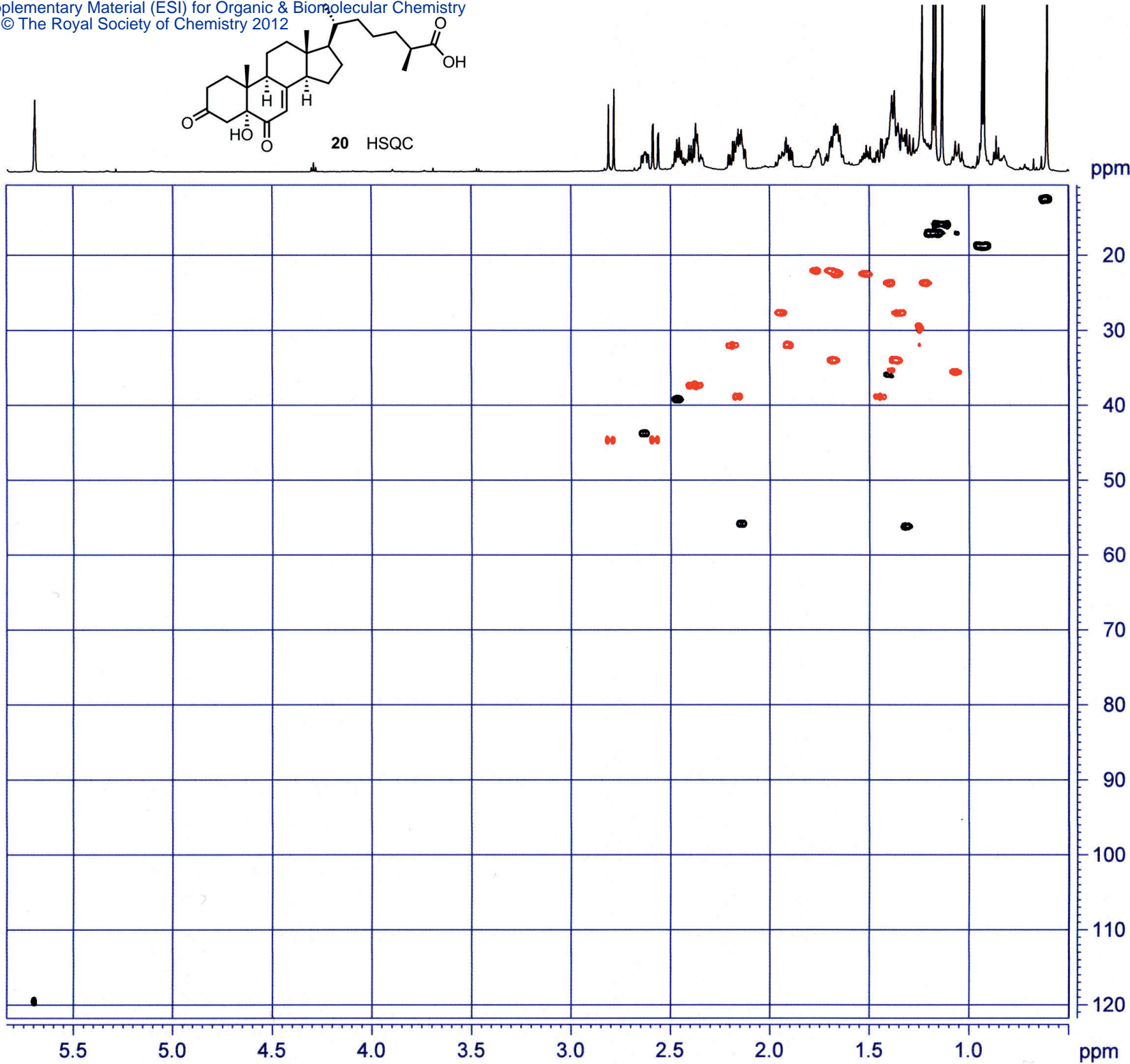
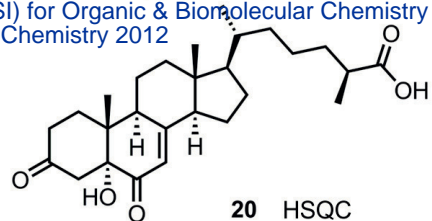
ppm

2.2

2.4

2.6

5.8 5.7 5.6 ppm



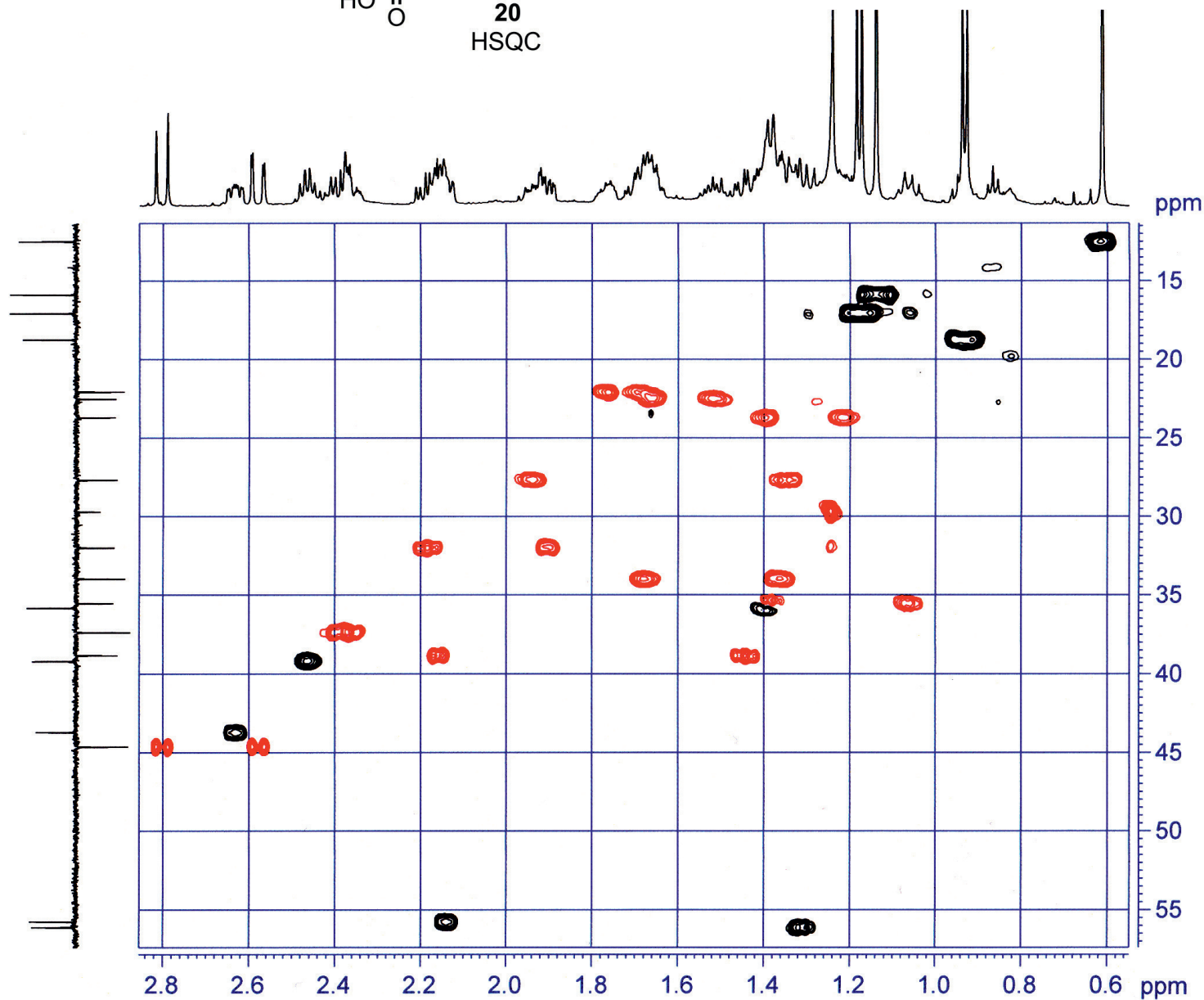
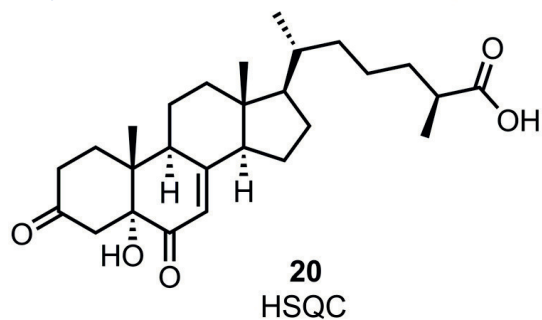
NAME RS 594  
EXPNO 14  
PROCNO 1  
Date\_ 20110502  
Time 22.20  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG hsqcedetgpp.3  
TD 2048  
SOLVENT CDCl3  
NS 8  
DS 32  
SWH 6009.615 Hz  
FIDRES 2.934382 Hz  
AQ 0.1704436 sec  
RG 2050  
DW 83.200 usec  
DE 20.00 usec  
TE 295.7 K  
CNST2 145.0000000  
D0 0.00000300 sec  
D1 2.00000000 sec  
D4 0.00172414 sec  
D11 0.03000000 sec  
D16 0.00010000 sec  
D21 0.00360000 sec  
IN0 0.00002000 sec

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
P2 16.60 usec  
P28 2000.00 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1623521 MHz

===== CHANNEL f2 =====  
CPDPRG2 garp  
NUC2 13C  
P3 15.70 usec  
P14 500.00 usec  
P31 500.00 usec  
PCPD2 72.00 usec  
PL0 120.00 dB  
PL2 -0.95 dB  
PL12 12.28 dB  
PL0W 0.00000000 W  
PL2W 129.10707092 W  
PL12W 6.13691473 W  
SFO2 150.9224248 MHz  
SP3 3.29 dB  
SP18 3.29 dB  
SPNAM3 Crp60.0.5.20.1  
SPNAM18 Crp60.0.5.20.1  
SPOAL3 0.500  
SPOAL18 0.500  
SPOFFS3 0.00 Hz  
SPOFFS18 0.00 Hz

===== GRADIENT CHANNEL =====  
GPNAM1 SINE.100  
GPNAM2 SINE.100  
GPZ1 80.00 %  
GPZ2 20.10 %  
P16 1000.00 usec  
ND0 2  
TD 320  
SFO1 150.9224 MHz  
FIDRES 78.126305 Hz  
SW 165.651 ppm  
FnMODE Echo-Antiecho  
SI 2048  
SF 600.1600261 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0  
PC 1.40  
SI 1024  
MC2 echo-antiecho  
SF 150.9103458 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0



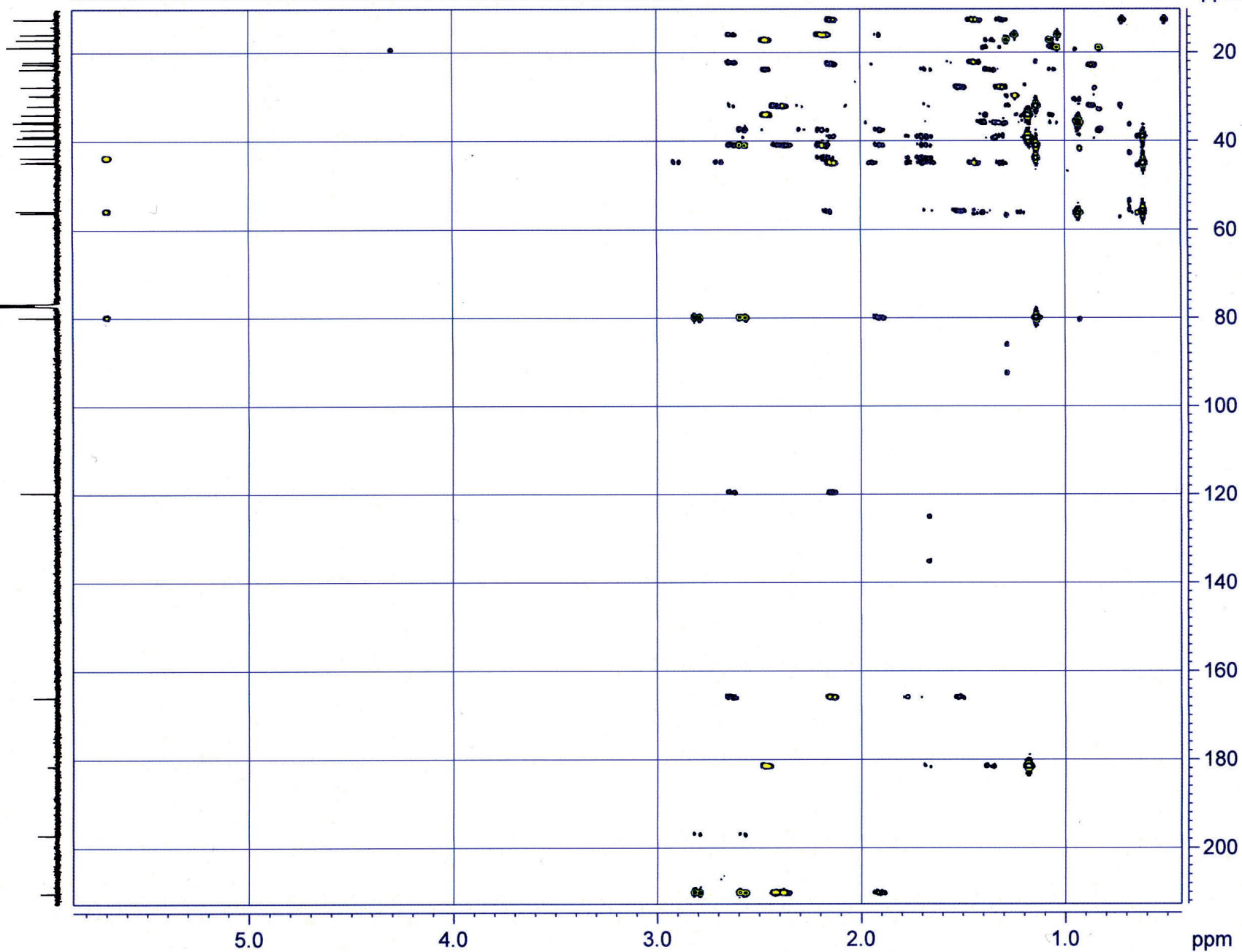
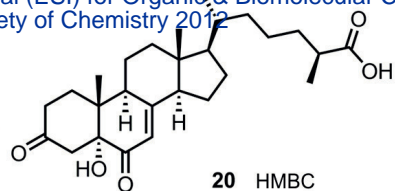


NAME RS 594  
EXPNO 14  
PROCNO 1  
Date\_ 20110502  
Time\_ 22.20  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG hsqcedetgppsp.3  
TD 2048  
SOLVENT CDCl3  
NS 8  
DS 32  
SWH 6009.615 Hz  
FIDRES 2.934382 Hz  
AQ 0.1704436 sec  
RG 2050  
DW 83.200 usec  
DE 20.00 usec  
TE 295.7 K  
CNST2 145.0000000  
D0 0.00000300 sec  
D1 2.00000000 sec  
D4 0.00172414 sec  
D11 0.03000000 sec  
D16 0.00010000 sec  
D21 0.00360000 sec  
IN0 0.0002000 sec

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
P2 16.60 usec  
P28 2000.00 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1623521 MHz

===== CHANNEL f2 =====  
CPDPRG2 garp  
NUC2 13C  
P3 15.70 usec  
P14 500.00 usec  
P31 500.00 usec  
PCPD2 72.00 usec  
PL0 120.00 dB  
PL2 -0.95 dB  
PL12 12.28 dB  
PL0W 0.00000000 W  
PL2W 129.10707092 W  
PL12W 6.13691473 W  
SFO2 150.9224248 MHz  
SP3 3.29 dB  
SP18 3.29 dB  
SPNAM3 Crp60.0.5.20.1  
SPNAM18 Crp60.0.5.20.1  
SPOAL3 0.500  
SPOAL18 0.500  
SPOFFS3 0.00 Hz  
SPOFFS18 0.00 Hz

===== GRADIENT CHANNEL =====  
GPNAM1 SINE 100  
GPNAM2 SINE 100  
GPZ1 80.00 %  
GPZ2 20.10 %  
P16 1000.00 usec  
ND0 2  
TD 320  
SFO1 150.9224 MHz  
FIDRES 78.126305 Hz  
SW 165.651 ppm  
FnMODE Echo-Antiecho  
SI 2048  
SF 600.1600261 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0  
PC 1.40  
SI 1024  
MC2 echo-antiecho  
SF 150.9103458 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0



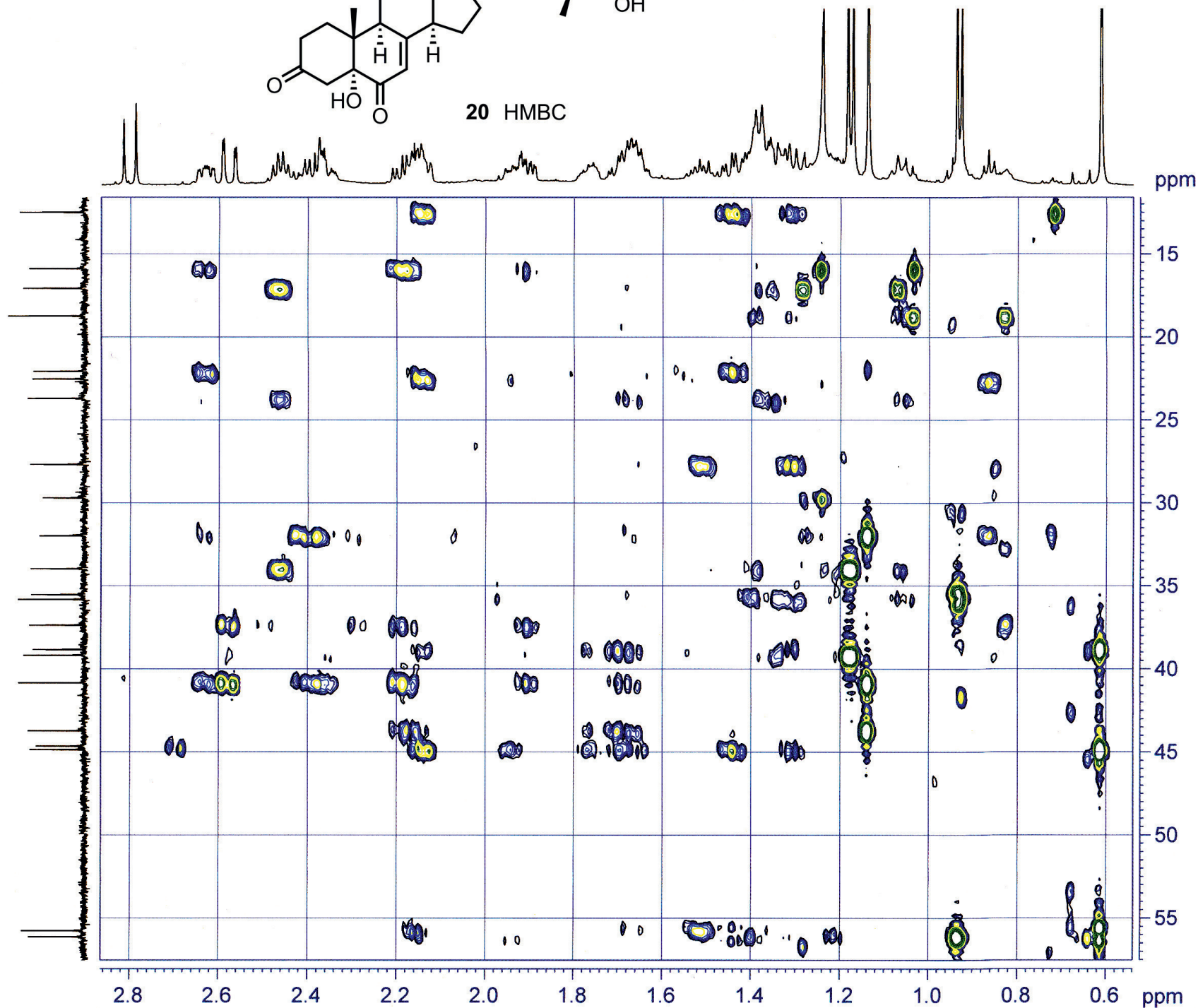
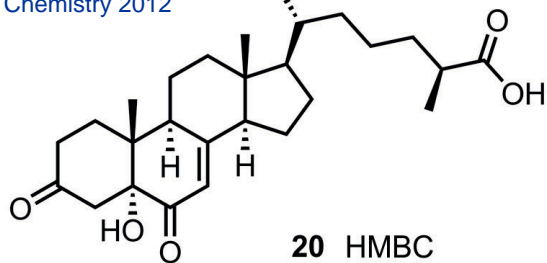
NAME RS 594  
EXPNO 15  
PROCNO 1  
Date\_ 20110502  
Time 23.55  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG hmbcpgpndqf  
TD 4096  
SOLVENT CDCl3  
NS 8  
DS 16  
SWH 7812.500 Hz  
FIDRES 1.907349 Hz  
AQ 0.2621940 sec  
RG 2050  
DW 64.000 usec  
DE 10.00 usec  
TE 295.9 K  
CNST2 145.0000000  
CNST13 10.0000000  
D0 0.00000300 sec  
D1 1.31568003 sec  
D2 0.00344828 sec  
D6 0.05000000 sec  
D16 0.00010000 sec  
IN0 0.0001490 sec

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
P2 16.60 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1639010 MHz

===== CHANNEL f2 =====  
NUC2 13C  
P3 15.70 usec  
PL2 -0.95 dB  
PL2W 129.10707092 W  
SFO2 150.9269521 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  
ND0 2  
TD 320  
SFO1 150.927 MHz  
FIDRES 104.750404 Hz  
SW 222.095 ppm  
FnMODE QF  
SI 2048  
SF 600.1600258 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0  
PC 1.40  
SI 1024  
MC2 QF  
SF 150.9103428 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0





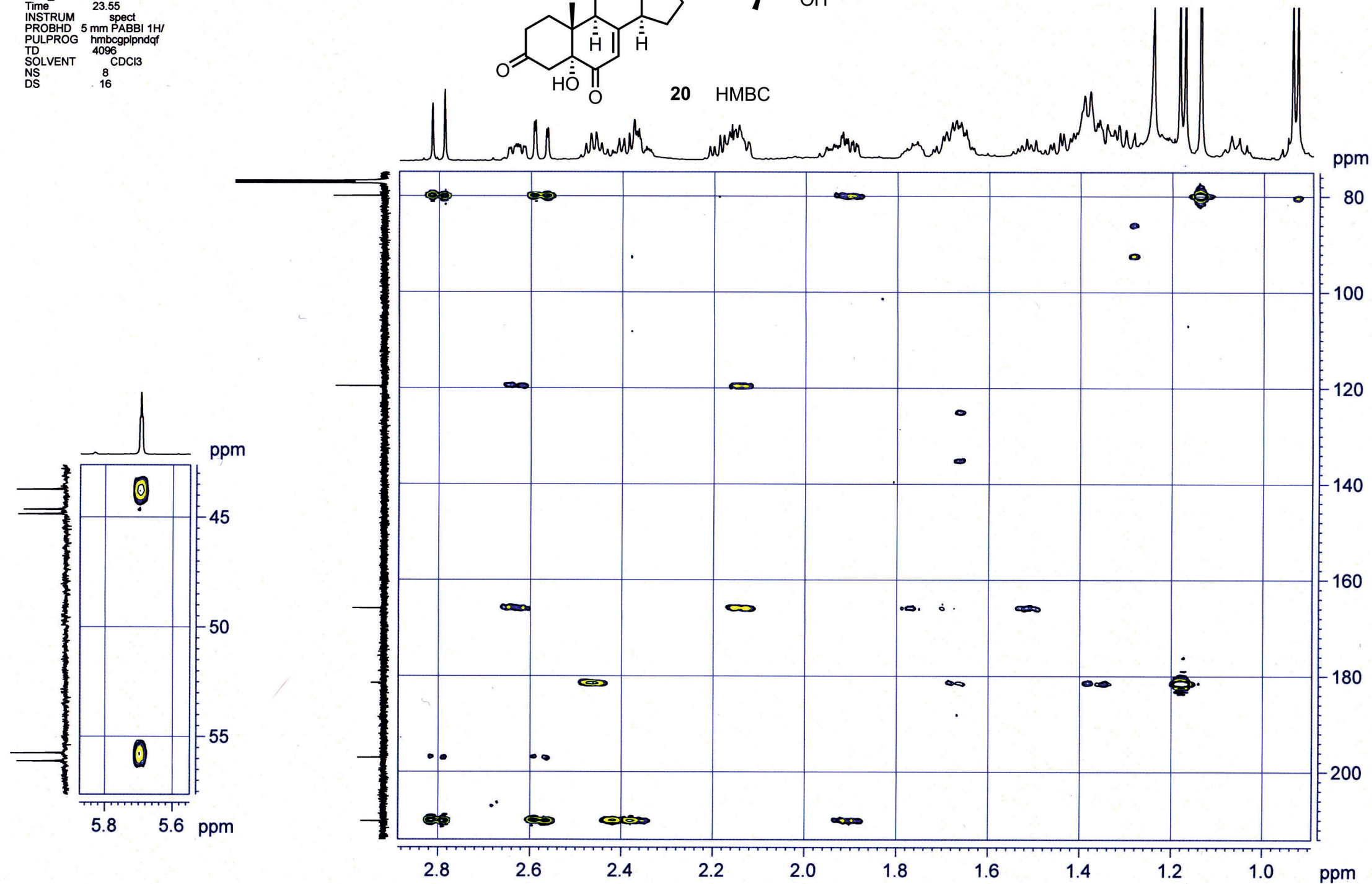
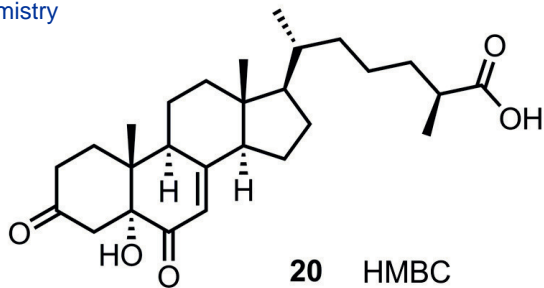
NAME RS 594  
EXPNO 15  
PROCNO 1  
Date\_ 20110502  
Time 23.55  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG hmbcgp1pndqf  
TD 4096  
SOLVENT CDCl3  
NS 8  
DS 16  
SWH 7812.500 Hz  
FIDRES 1.907349 Hz  
AQ 0.2621940 sec  
RG 2050  
DW 64.000 usec  
DE 10.00 usec  
TE 295.9 K  
CNST2 145.0000000  
CNST13 10.0000000  
D0 0.00000300 sec  
D1 1.31568003 sec  
D2 0.00344828 sec  
D6 0.05000000 sec  
D16 0.00010000 sec  
IN0 0.00001490 sec

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
P2 16.60 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1639010 MHz

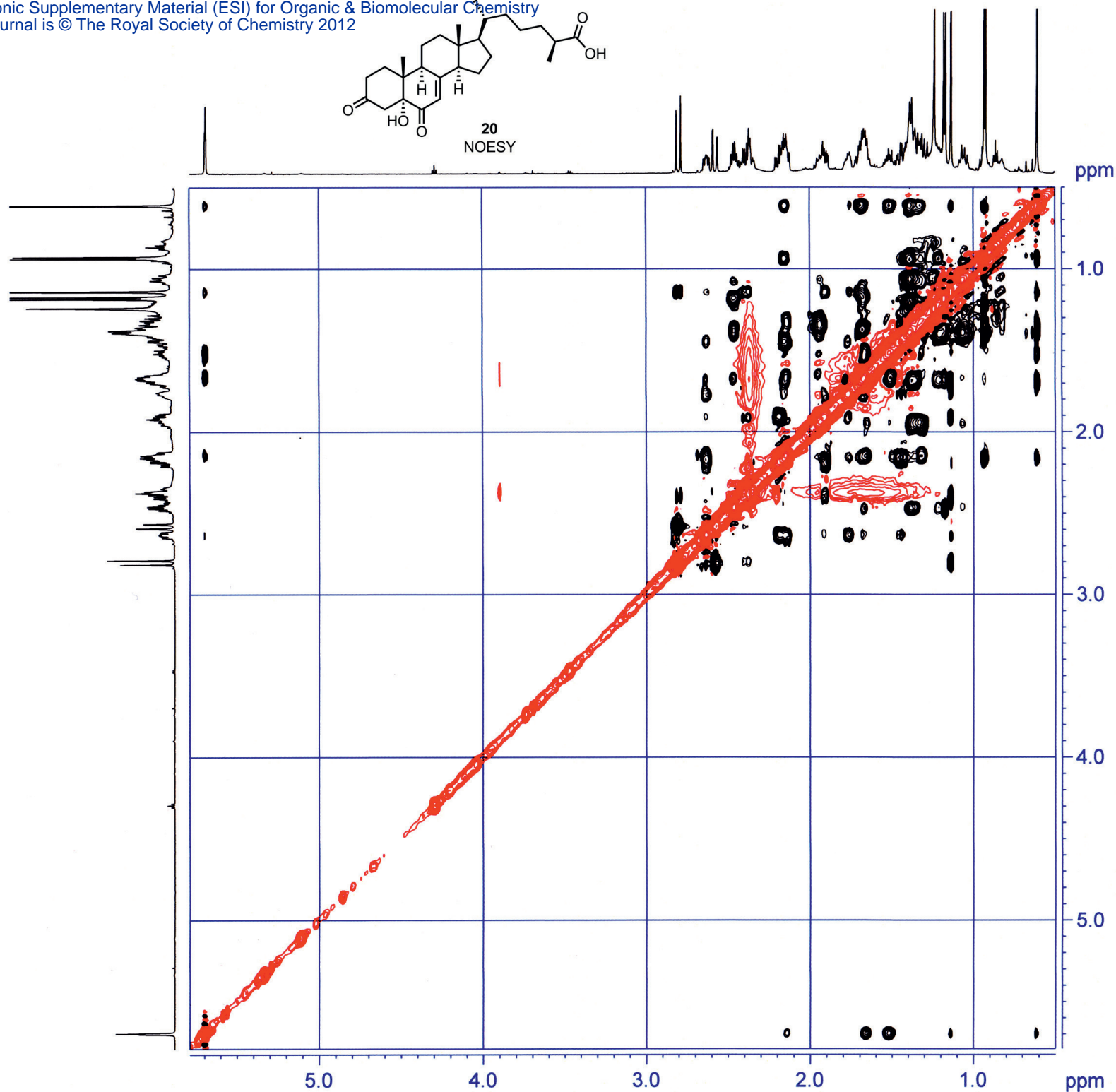
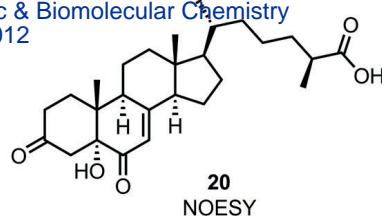
===== CHANNEL f2 =====  
NUC2 13C  
P3 15.70 usec  
PL2 -0.95 dB  
PL2W 129.10707092 W  
SFO2 150.9269521 MHz

===== GRADIENT CHANNEL =====  
GPNAM1 SINE.100  
GPNAM2 SINE.100  
GPNAM3 SINE.100  
GPZ1 50.00 %  
GPZ2 30.00 %  
GPZ3 40.10 %  
P16 1000.00 usec  
ND0 2  
TD 320  
SFO1 150.927 MHz  
FIDRES 104.750404 Hz  
SW 222.095 ppm  
FnMODE QF  
SI 2048  
SF 600.1600258 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0  
PC 1.40  
SI 1024  
MC2 QF  
SF 150.9103428 MHz  
WDW SINE  
SSB 0  
LB 0.00 Hz  
GB 0

NAME RS 594  
EXPNO 15  
PROCNO 1  
Date\_ 20110502  
Time 23.55  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG hmbcgp1pndqf  
TD 4096  
SOLVENT CDCl3  
NS 8  
DS 16







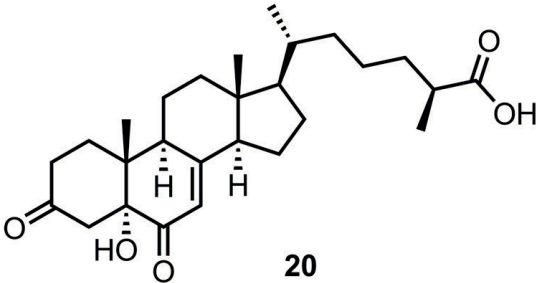
NAME RS 594  
EXPNO 16  
PROCNO 1  
Date\_ 20110503  
Time 1.07  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG noesygpph  
TD 2048  
SOLVENT CDCl3  
NS 8  
DS 16  
SWH 7812.500 Hz  
FIDRES 3.814697 Hz  
AQ 0.1311220 sec  
RG 228  
DW 64.000 usec  
DE 10.00 usec  
TE 294.8 K  
D0 0.00005352 sec  
D1 2.50000000 sec  
D8 0.80000001 sec  
D16 0.00010000 sec  
IN0 0.00012815 sec

===== CHANNEL f1 =====  
NUC1 1H  
P1 8.30 usec  
P2 16.60 usec  
PL1 0.00 dB  
PL1W 16.93011475 W  
SFO1 600.1636010 MHz

===== GRADIENT CHANNEL  
GPNAM1 SINE.100  
GPZ1 40.00 %  
P16 1000.00 usec  
ND0 1  
TD 256  
SFO1 600.1636 MHz  
FIDRES 30.477058 Hz  
SW 13.000 ppm  
FnMODE States-TPPI  
SI 1024  
SF 600.1600244 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0  
PC 1.00  
SI 1024  
MC2 States-TPPI  
SF 600.1600236 MHz  
WDW QSINE  
SSB 2  
LB 0.00 Hz  
GB 0



NAME RS-59  
EXPNO 16  
PROCNO 1  
Date\_ 20110503  
Time 1.07  
INSTRUM spect  
PROBHD 5 mm PABBI 1H/  
PULPROG noesygpph  
TD 2048  
SOLVENT CDCl3  
NS 8  
DS 16



20  
NOESY

