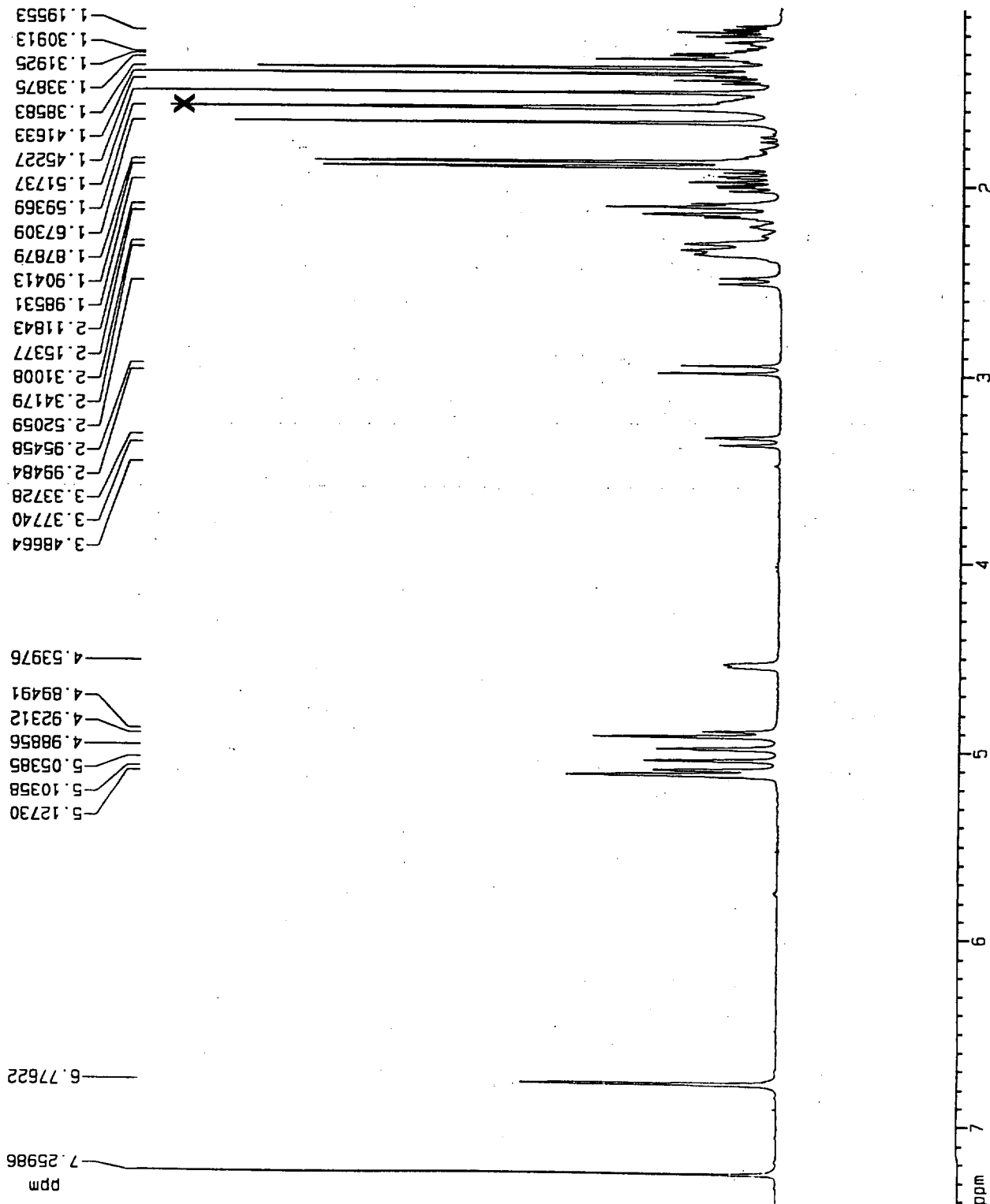


**<sup>1</sup>H NMR (300 MHz) spectrum of bisgersolanolide (1) in CDCl<sub>3</sub>.**



Current Data Parameters  
 NAME pbh421371  
 EXPNO 1  
 PROCNO 1

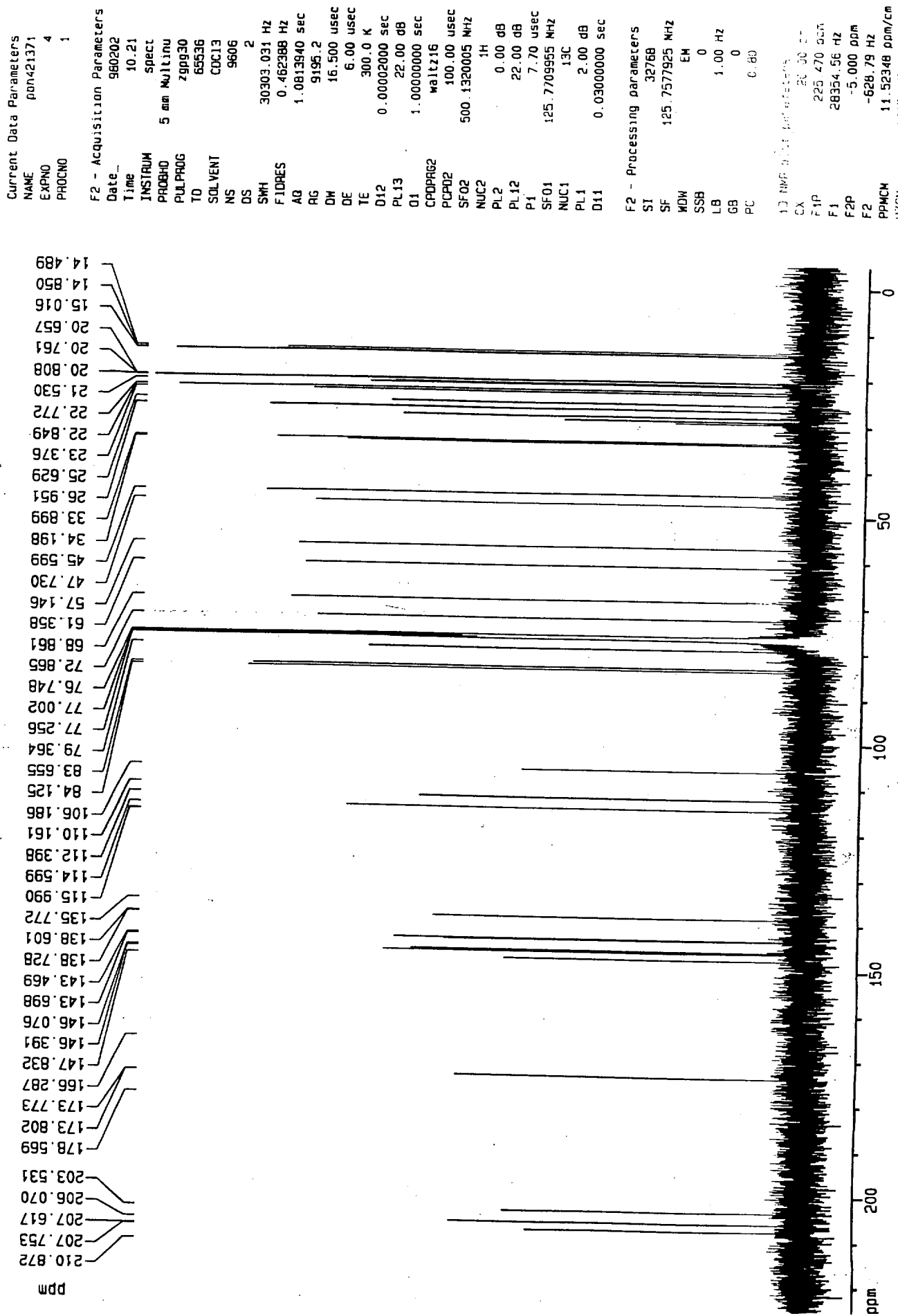
F2 - Acquisition Parameters  
 Date\_ 980119  
 Time 18.30  
 INSTRUM ddx300  
 PROBP0 5 mm Multinu  
 PULPROG zg30  
 TD 32768  
 SOLVENT CDCl3  
 NS 45  
 DS 2  
 SMH 3881.988 Hz  
 FIDRES 0.118469 Hz  
 AQ 4.2205682 sec  
 RG 574.7  
 DM 128.800 usec  
 DE 5.00 usec  
 TE 300.0 K  
 D1 1.0000000 sec  
 P1 11.00 usec  
 DE 5.00 usec  
 SF01 300.1316661 MHz  
 NUC1 1H  
 PL1 -4.00 dB

F2 - Processing parameters  
 SI 16384  
 SF 300.1300060 MHz  
 MDW EM  
 SSB 0  
 LB 0.30 Hz  
 GB 0  
 PC 4.00

1D NMR plot parameters  
 CX 20.00 cm  
 F1P 7.413 ppm  
 F1 2224.85 Hz  
 F2P 1.065 ppm  
 F2 319.65 Hz  
 PPMCN 0.31740 ppm/cm  
 HZCM 95.25984 Hz/cm

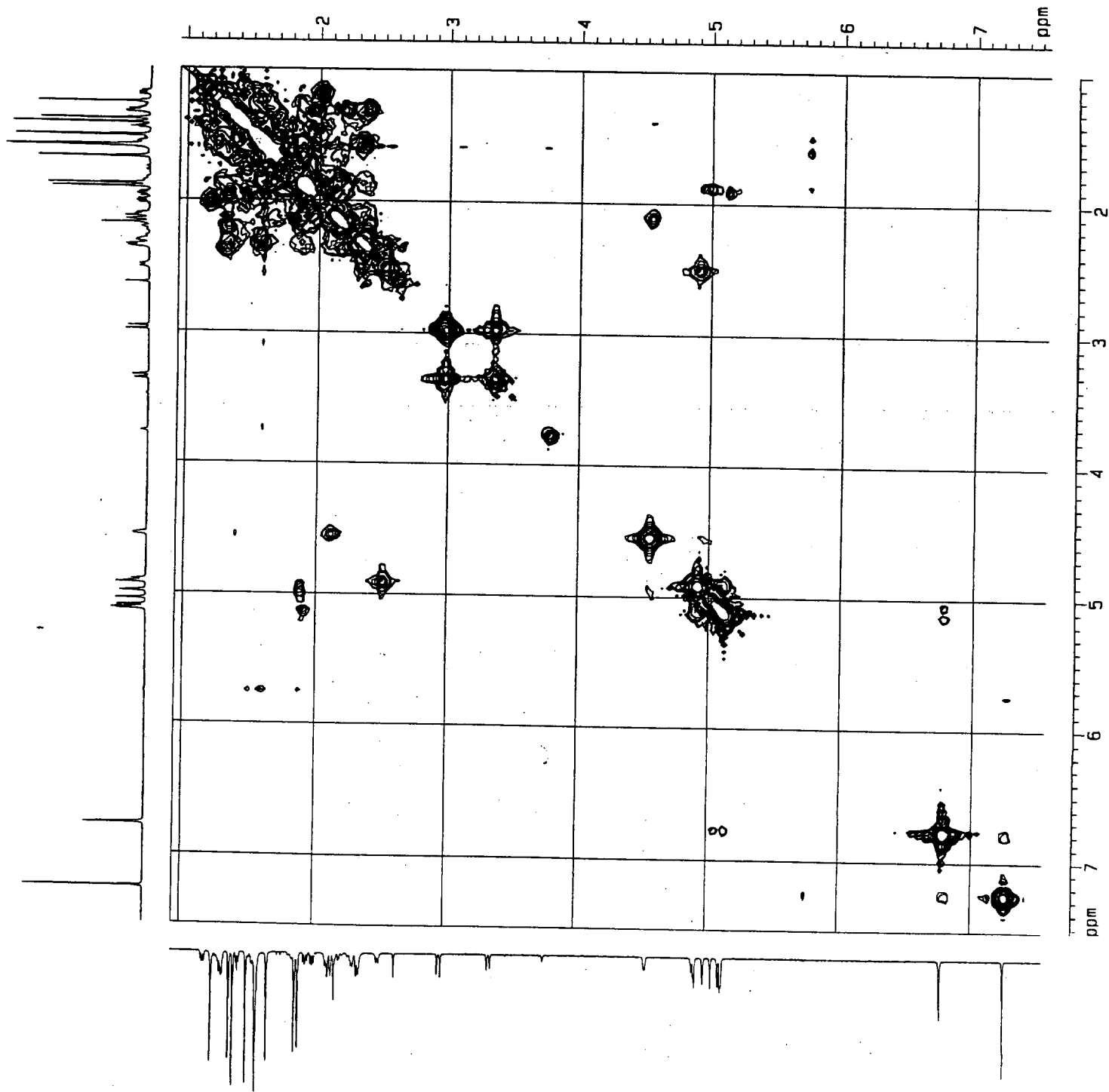
**X = H<sub>2</sub>O**

**<sup>13</sup>C NMR (125 MHz) spectrum of bisgersolanolide (1) in CDCl<sub>3</sub>.**



<sup>1</sup>H-<sup>1</sup>H COSY spectrum of bisgersolanolide (1) in CDCl<sub>3</sub>.

PdH.4.21.3.7.1



Current Data Parameters  
 NAME pdh421371  
 EXPNO 2  
 PROCNO 1

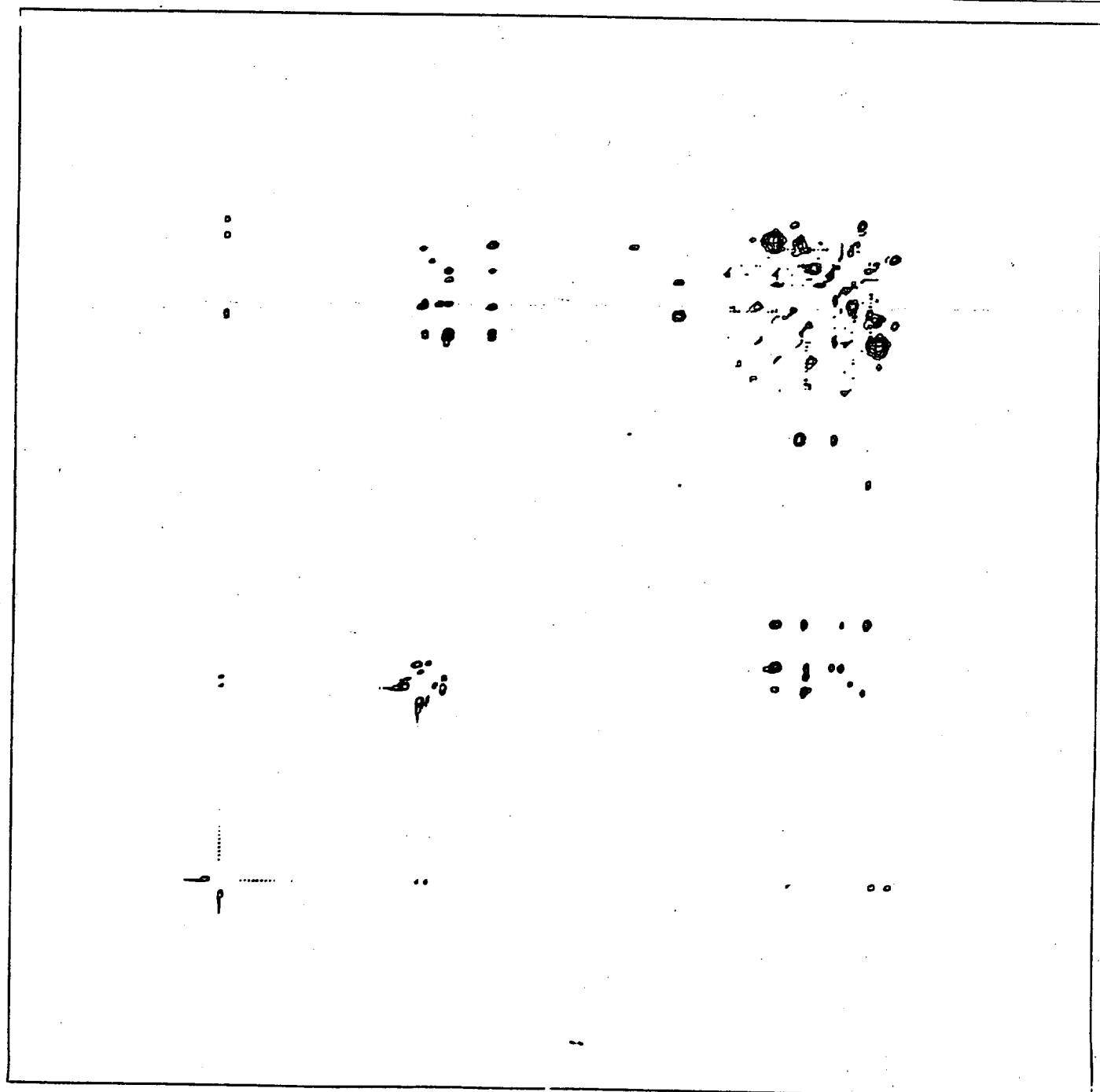
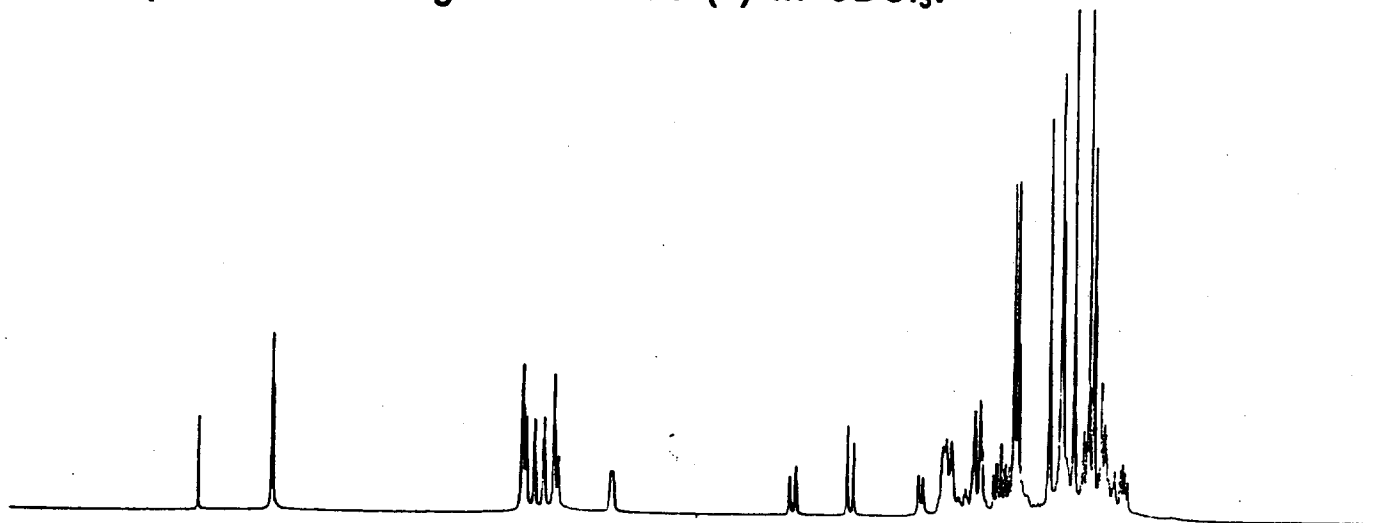
F2 - Acquisition Parameters  
 Date\_ 990129  
 Time 14.38  
 INSTRUM spect  
 PROBHD 5 mm Nujilmu  
 PULPROG cosy45  
 TD 1024  
 SOLVENT CDCl3  
 NS 16  
 DS 32  
 SWH 7246.377 Hz  
 FIDRES 7.076540 Hz  
 AQ 0.0707060 sec  
 RG 362  
 DM 69.000 usec  
 DE 6.00 usec  
 TE 300.0 K  
 D1 3.00000000 sec  
 P1 8.25 usec  
 SF01 500.132885 MHz  
 NUCL1 1H  
 PL1 0.00 dB  
 D0 0.00000300 sec  
 IM0 0.00013800 sec

F1 - Acquisition parameters  
 MD0 1  
 TD 256  
 SF01 500.1329 MHz  
 FIDRES 28.306160 Hz  
 SN 14.489 ppm

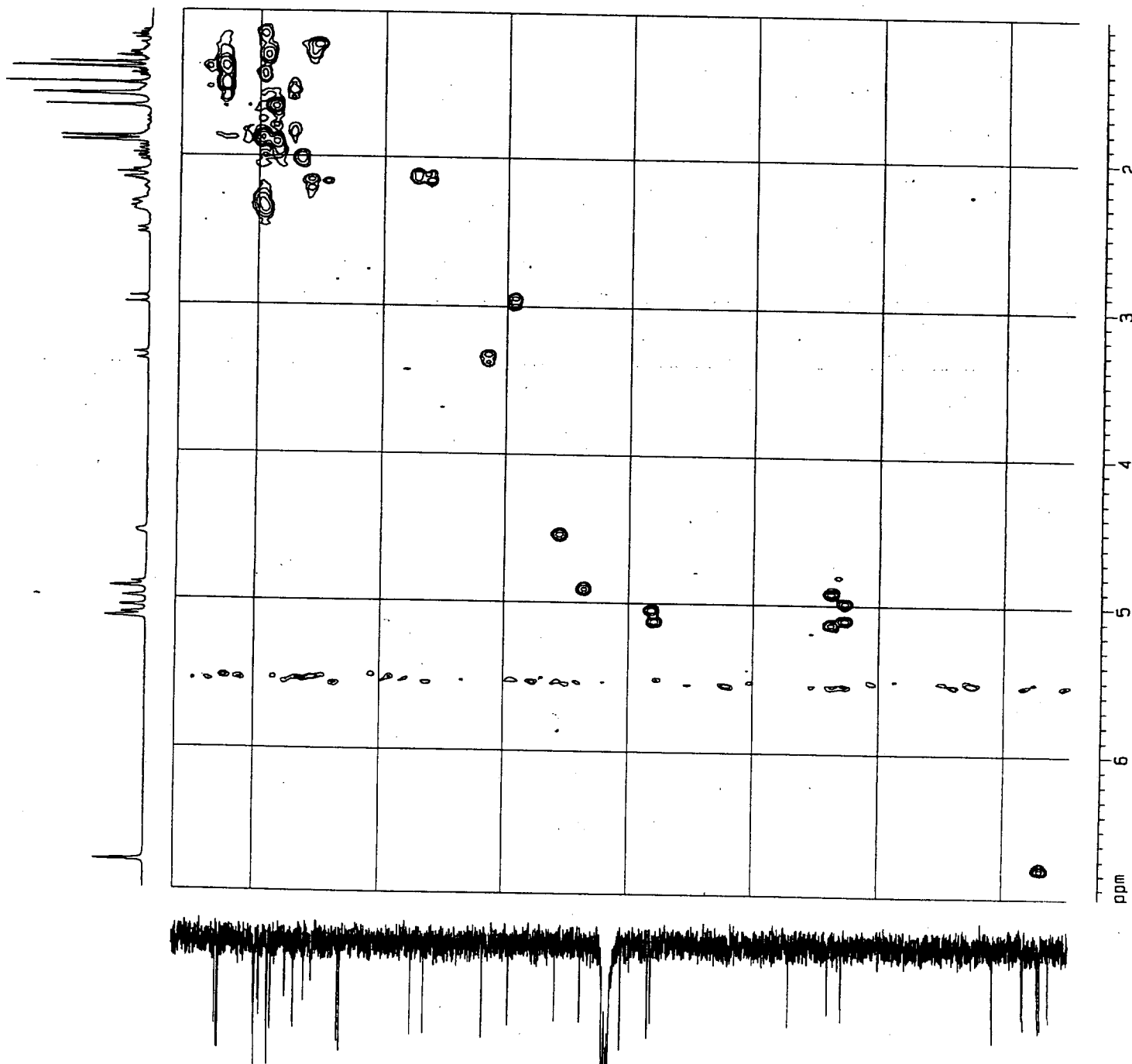
F2 - Processing parameters  
 SI 512  
 SF 500.130035 MHz  
 WDW EM  
 SSB 0  
 LB 0.00 Hz  
 GB 0  
 PC 1.00

F1 - Processing parameters  
 SI 512  
 MC2 GF  
 SF 500.130035 MHz  
 WDW SINE  
 SSB 0  
 LB 0.00 Hz  
 GB 0

2D NMR plot parameters  
 CX2 15.00 cm  
 CX1 15.00 cm  
 F2FLO 7.531 ppm  
 F2LO 3766.72 Hz  
 F2PHI 0.964 ppm  
 F2PI 497.36 Hz  
 F2PLO 7.560 ppm  
 F2LO 3780.83 Hz  
 F2PHI 0.938 ppm  
 F2PI 469.01 Hz  
 F2PACM 0.43590 ppm/cm  
 F2AZCM 217.95743 Hz/cm  
 F2PPACM 0.44146 ppm/cm  
 F2HZCM 220.78804 Hz/cm



HMOC spectrum of bisgersolanolide (1) in CDCl<sub>3</sub>.



Current Data Parameters  
 NAME: 00M42206  
 PROCNO: 1

F2 - Acquisition Parameters  
 Date\_: 09/12/99  
 Time: 19:22  
 INSTRUM: CP1300  
 PROBRD: 5 mm NML100  
 PULPROG: zgpg30  
 TD: 65536  
 SFO: 500.136  
 AQ: 0.054  
 ME: 0.0013  
 DE: 24  
 CE: 16  
 SMA: 16  
 SF: 3681.988 Hz  
 FIDRES: 3.751063 Hz  
 AQ: 0.131812 sec  
 RG: 5168.6  
 DB: 181.080 uspc  
 DE: 5.00 uspc  
 TE: 300.0 K  
 D1: 1.5000000 sec  
 D2: 11.00 uspc  
 PL2: -2.00 dB  
 PL: 0.00345000 sec  
 SFO2: 22.00 uspc  
 AQC2: 10.00 uspc  
 F2: 75.475262 Hz  
 IXC: 1.0  
 D7: 0.3000001 sec  
 P3: 8.00 uspc  
 DV: 0.0000000 sec  
 PL12: 18.00 dB  
 DE: 5.00 uspc  
 SFO1: 300.1310601 MHz  
 PUL1: zgpg30  
 CHPROG: zgpg30  
 PULPR2: 100.00 uspc  
 PL2: -4.00 dB  
 P1: 100.00 uspc  
 P2: 100.000000 sec

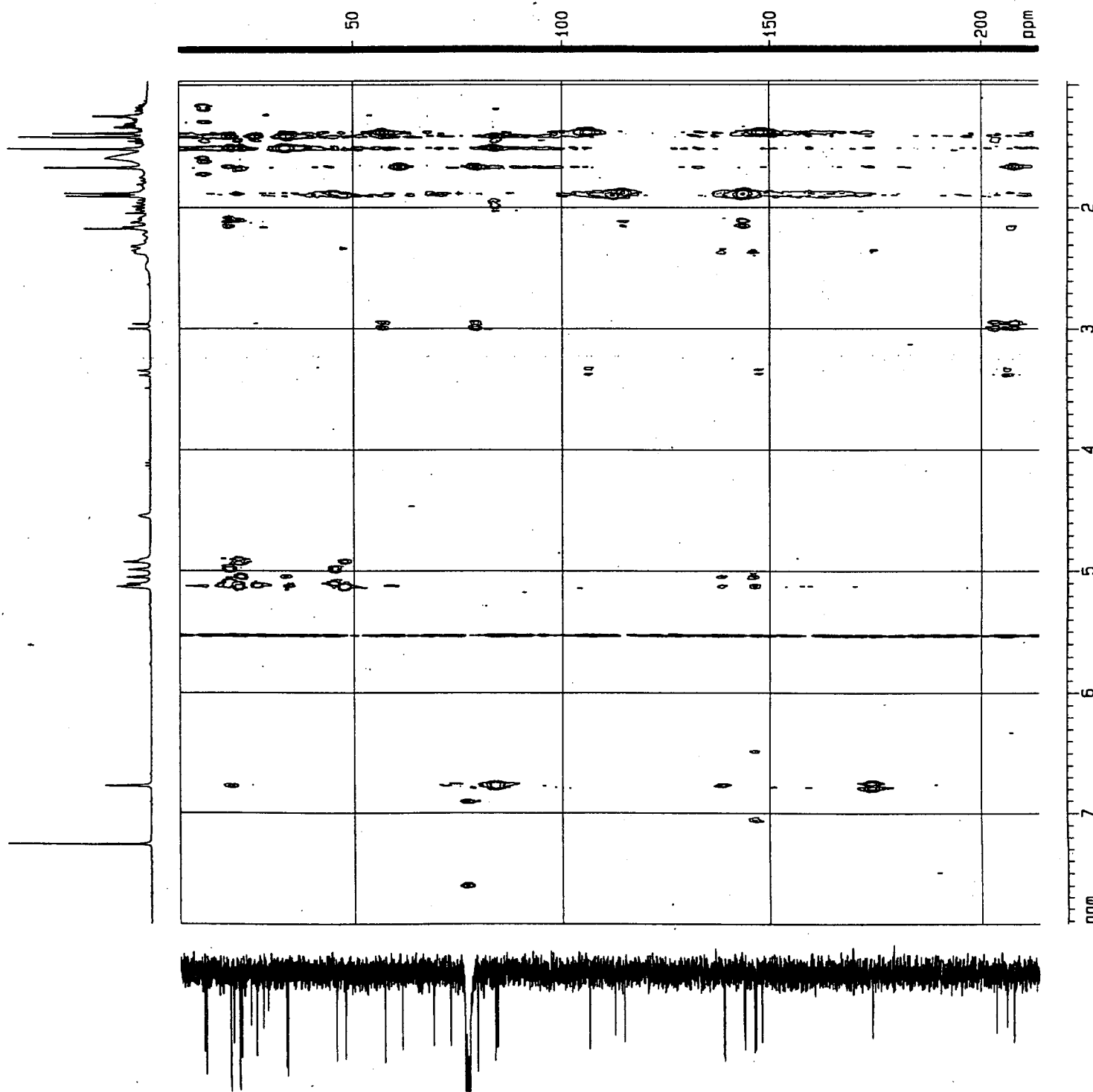
F1 - Acquisition parameters  
 FIDRES: 0.0001420 sec  
 SFO: 100.6261262 MHz  
 PULPROG: zgpg30  
 TD: 65536  
 SFO2: 500.1360601 MHz  
 AQC2: 10.00 uspc  
 F2: 75.475262 Hz  
 IXC: 1.0  
 D7: 0.3000001 sec  
 P3: 8.00 uspc  
 DV: 0.0000000 sec  
 PL12: 18.00 dB  
 DE: 5.00 uspc  
 SFO1: 300.1310601 MHz  
 PUL1: zgpg30  
 CHPROG: zgpg30  
 PULPR2: 100.00 uspc  
 PL2: -4.00 dB  
 P1: 100.00 uspc  
 P2: 100.000000 sec

F2 - Processing parameters  
 SI: 1024  
 SF: 300.1300000 MHz  
 DS: 256  
 OSINE: 0  
 LB: 0.00 Hz  
 GB: 0  
 PC: 1.00

F1 - Processing parameters  
 SI: 512  
 SF: 75.4677504 MHz  
 DS: 256  
 OSINE: 0  
 LB: 0.00 Hz  
 GB: 0  
 PC: 1.00

2D NMR plot parameters  
 C2: 15.00 ca  
 C1: 15.00 ca  
 F2P1: 6.971 ppm  
 F2P2: 22.22 Hz  
 F2P3: 1.022 ppm  
 F2P4: 306.66 Hz  
 F2P5: 150.978 ppm  
 F2P6: 11393.95 Hz  
 F2P7: 7.451 ppm  
 F2P8: 562.34 Hz  
 F2P9: 0.39662 ppm/ca  
 F2P10: 119.03751 Hz/ca  
 F2P11: 9.56642 ppm/ca  
 F2P12: 122.10699 Hz/cm

HMBC spectrum of bisgersolanolide (1) in CDCl<sub>3</sub>.



Current Data Parameters  
 NAME p1942336  
 EXPNO 4  
 PROCNO 1

F2 - Acquisition Parameters  
 Date\_ 560125  
 Time 21.44  
 INSTRUM qnp300  
 PROBR0 5 mm Multinn  
 PULPROG zgpg30  
 TO 4035  
 SOLVENT CDCl3  
 NS 132  
 DS 32  
 SWH 3681.968 Hz  
 FIDRES 0.347751 Hz  
 AQ 0.5276148 sec  
 RG 1024  
 DM 128.600 usec  
 DE 5.00 usec  
 TE 300.0 K  
 D1 1.50000000 sec  
 P1 11.00 usec  
 D2 0.00345000 sec  
 P3 8.00 usec  
 SF02 75.4755682 MHz  
 NUC2 13C  
 PL2 -2.00 dB  
 OF 0.05000000 sec  
 DS 0.00003000 sec  
 P2 23.00 usec  
 DE 5.00 usec  
 SF01 300.1316651 MHz  
 NUC1 1H  
 PL1 -4.00 dB  
 INO 0.00002840 sec

F1 - Acquisition parameters  
 NOO 2  
 TD 135  
 SF01 75.47557 MHz  
 FIDRES 126.659409 Hz  
 SN 233.263 ppm

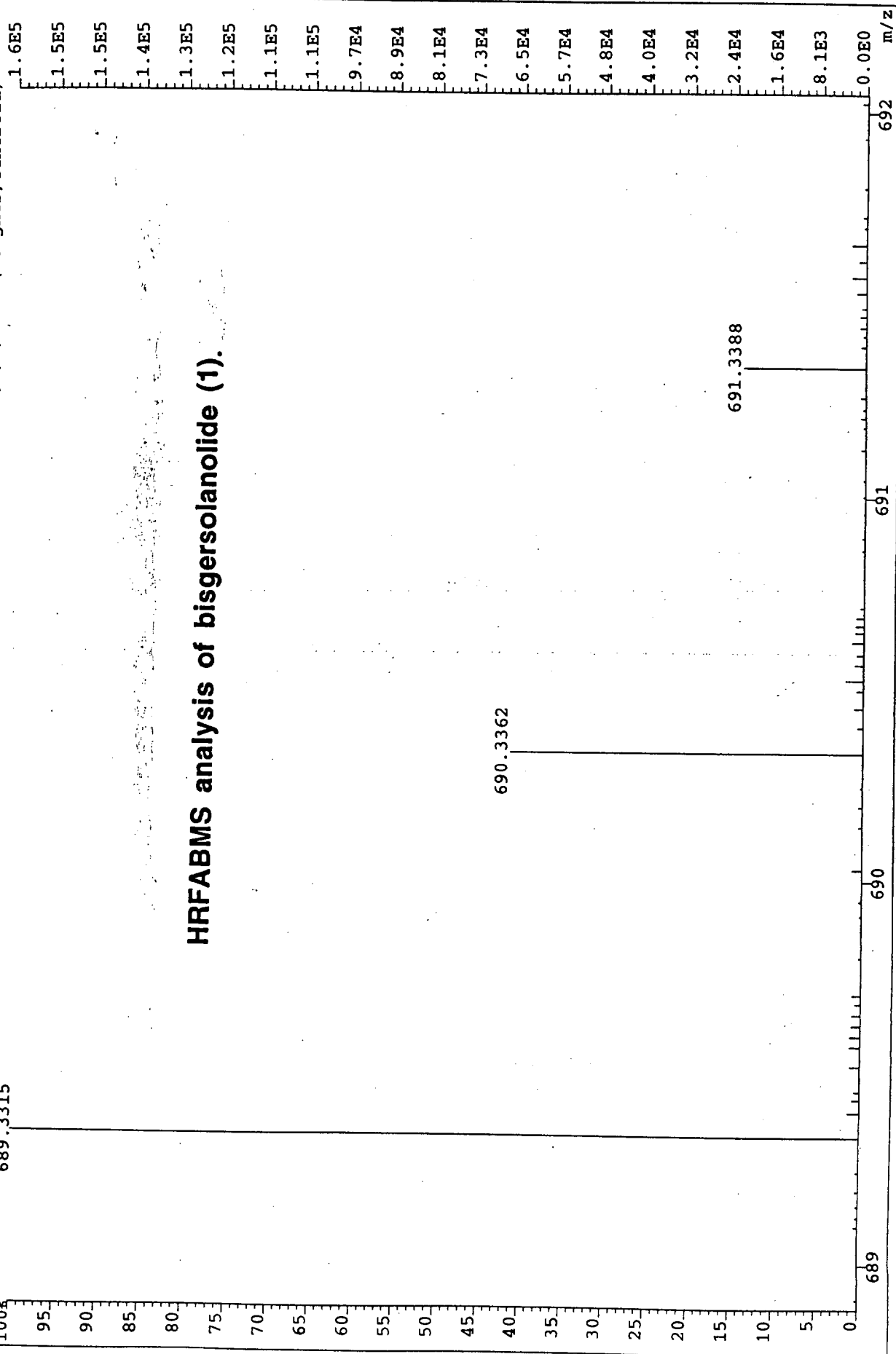
F2 - Processing parameters  
 SI 2048  
 SF 300.1300680 MHz  
 DSINE  
 SSB 4  
 LB 0.00 Hz  
 GB 0  
 PC 1.00

F1 - Processing parameters  
 SI 256  
 DS  
 SF 75.4677504 MHz  
 SINE  
 SSB 2  
 LB 0.00 Hz  
 GB 0

2D NMR plot parameters  
 CA2 15.00 cm  
 CA1 15.00 cm  
 F2P0 7.525 cm  
 F2L0 2378.45 Hz  
 F2PH 0.565 cm  
 F2M 263.60 Hz  
 F1L0 213.655 cm  
 F1M 15139.23 Hz  
 F1PH 8.618 cm  
 F1M 665.30 Hz  
 F2P0CH 0.46335 ppm/cm  
 F2L0CH 135.25620 Hz/cm  
 F1P0CH 13.66817 ppm/cm  
 F1MCH 50.315614 Hz/cm

File: 42623S Ident: 1 Acq: 17-FEB-1998 09:39:04 +10:16 Cal: 42605  
 AutoSpecETOFFPD FAB+ Voltage BpI: 345872 TIC: 28617014 Flags: NORM  
 File Text: PbH-4-21-3-7-1 Created from 42605 46\_55 SMO(1,5) PKD(5,3,5,0.00%,0.0,30.00%,F,F) SPEC(Heights, Centroid)  
 689.3315

### HRFABMS analysis of bisgersolanolide (1).



## Elemental Composition

Date : 19-FEB-1998

File:42623S Ident:1 Acq:17-FEB-1998 09:39:04 +10:16 Cal:42605  
AutoSpecETOFFPD FAB+ Voltage BpI:345872 TIC:28617014 Flags:NORM  
File Text:PbH-4-21-3-7-1 Created from 42605 46\_55 SMO(1.5)  
Heteroatom Max: 20 Ion: Even  
Limits:

688.882	20.0					-0.5	0	0	0	5
692.046	100.0		10.0			20.0	60	1	100	15
<b>Mass</b>	<b>%RA Pks</b>	<b>Std</b>	<b>PPM</b>	<b>mDa</b>	<b>Calc. Mass</b>	<b>DBE</b>	<b>C</b>	<b>13C</b>	<b>H</b>	<b>O</b>
690.336182	21.3		-0.4	-0.3	690.335928	16.5	39	1	49	10
			8.1	5.6	690.341802	7.5	32	1	53	15
689.331543	51.4		1.5	1.0	689.332573	16.5	40		49	10