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Supporting Information

Efficient Stereochemical Relay En Route to Leucascandrolide A

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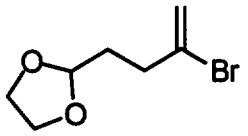
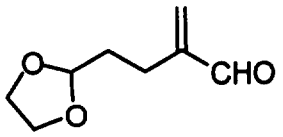
ether (200 mL) and water (200 ml). The organic layer was separated, washed with water (300 mL), saturated aqueous solution of $NaHCO_3$ (200 mL), dried over anhydrous $MgSO_4$. Concentration under reduced pressure gave 12.4 g of the crude aldehyde **11** (74% yield), which was used for the next step without further purification.

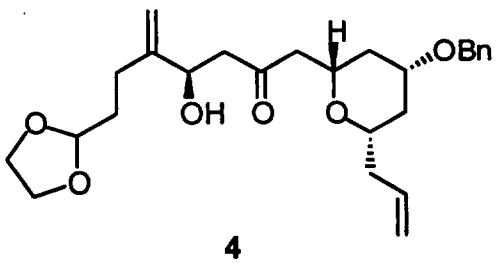


A 100-mL round-bottomed flask, equipped with the Dean-Stark trap was charged with aldehyde **11** (4.66 g, 28.6 mmol), ethylene glycol (1.86 g, 30 mmol), TsOH (50 mg) and benzene (50 mL). The resulting mixture was heated under a gentle reflux for 5 h, partitioned between ether (30 mL) and saturated aqueous solution of $NaHCO_3$ (50 mL). The aqueous layer was extracted with ether (30 mL), dried over anhydrous $MgSO_4$, filtered and concentrated. The resulting dark-brown oil was subjected to the bulb-to-bulb distillation (100 °C oven temperature, 2 mm Hg) to give 5.62 g (96% yield) of the corresponding acetal, as a pale-yellow oil. ^{1}H NMR (400 MHz, $CDCl_3$) δ 1.91 (m, 2H), 2.54 (m, 2H), 3.84 (m, 2H), 3.95 (m, 2H), 4.88 (t, 1H, J = 4.5 Hz), 5.38 (d, 1H, J = 1.7 Hz), 5.59 (q, 1H, J = 1.2 Hz); ^{13}C NMR (100 MHz, $CDCl_3$) δ 32.3, 35.8, 65.0, 103.1, 116.8, 133.6; IR (neat) 2957, 2881, 1629, 1406, 1138, 1037, 886 cm^{-1}.



5

Aldehyde 5. A solution of vinyl bromide (3.70 g, 17.8 mmol), prepared in the previous step, in THF (50 mL) was treated dropwise with *n*-butyllithium (7.2 mL, 2.5 M in hexane) at –78 °C, followed by addition of dimethylformamide (6.9 mL) after a 20 min period. The reaction mixture was allowed to warm to ambient temperature, quenched by addition of water (200 mL), extracted with ether (2x300 mL), dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ether:hexane; 1:3, 1:1) afforded 0.81 g of starting bromide and 1.15 g of aldehyde **5** (53% yield) as a colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$) δ 1.80 (m, 2H), 2.36 (t, 2H, J = 8.0 Hz), 3.83 (m, 2H), 3.94 (m, 2H), 4.86 (t, 1H, J = 4.5 Hz), 6.00 (s, 1H), 6.26 (s, 1H), 9.52 (s, 1H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 22.3, 31.7, 64.9, 103.7, 134.0, 149.5, 194.4; IR (neat) 2952, 2884, 1688, 1138, 1035, 945 cm^{-1}.

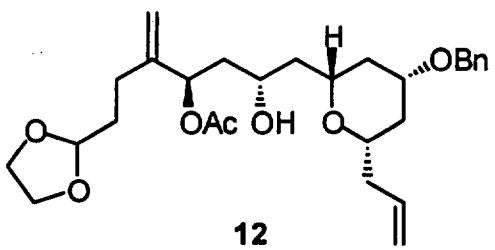


4

Ketone 4 Dicyclohexylboron chloride (2.5 mL of 1.0 M solution in hexane, 2.5 mmol) in ether (20 mL) was cooled to 0 °C, and treated with triethyl amine (0.39 mL, 2.8 mL), followed by addition of ketone **6** (473 mg, 1.64 mmol) in ether (6 mL). The resulting white suspension was stirred for 15 min at 0 °C, cooled to –78 C, and treated with aldehyde **5** (442 mg, 2.83

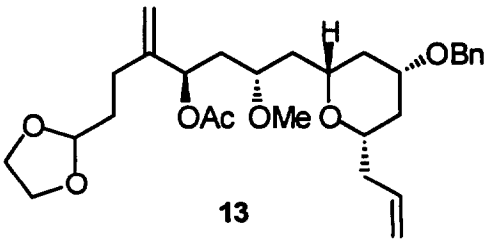
mmol) in ether (6 mL) over a 10 min period. The reaction mixture was stirred for 5 h at –78 C, quenched by addition of 21 mL of methanol:pH 7 buffer (6:1). Upon warming to ambient temperature, 9 mL of methanol-30% hydrogen peroxide (2:1) was added. The stirring was continued for 4 h. The resulting colorless solution was partitioned between ethyl acetate (100 mL) and saturated aqueous solution of $NaHCO_3$ (50 mL). The organic layer was washed with 10% solution of Na_2SO_3, dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ethyl acetate:hexane; 1:1) afforded 554 mg of ketone **4** (76% yield) as a colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$) δ 1.20 (m, 3H), 1.84 (m, 2H), 2.05 (m, 2H), 2.06-2.30 (m, 4H), 2.43 (dd, 1H, *J* = 15.0, 4.5 Hz), 2.66 (dd, 1H, *J* = 17.0, 9.0 Hz), 2.75 (m, 2H), 3.33 (m, 1H), 3.55 (dddd, 1H, *J* = 11.0, 11.0, 5.0, 5.0 Hz), 3.75 (m, 1H), 3.83 (, 2H), 3.94 (m, 2H), 4.52 (m, 1H), 4.53 (s, 2H), 4.88 (m, 2H), 5.01 (d, 1H, *J* = 9 Hz), 5.03 (d, 1H, *J* = 16.5 Hz), 5.08 (s, 1H), 5.75 (dddd, 1H, *J* = 17.0, 10.0, 7.0, 7.0 Hz); 7.26-7.34 (m, 5H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 26.1, 32.1, 37.3, 37.8, 40.3, 49.4, 49.7, 64.9, 69.7, 70.3, 72.2, 74.2, 75.2, 104.0, 110.1, 117.1, 127.6, 128.4, 134.3, 138.4, 149.2, 209.8; IR (neat) 3451, 2916, 2849, 1710, 1352, 1069, 906, 733, 697 cm^{-1}.

Alcohol 12. A solution of ketone **4** (120 mg, 0.27 mmol) and acetaldehyde (48 mg, 1.1 mmol) in THF (3 mL) was cooled to –10 °C and treated with SmI_2 (0.80 mL, 0.1 M solution in THF). The reaction mixture was stirred for 15 min, quenched by addition of saturated aqueous solution of $NaHCO_3$ (15 mL), extracted with ethyl acetate (50 mL), dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ethyl acetate:hexane; 2:1) afforded 122 mg of alcohol **12** (93% yield) as a colorless oil. ^{1}H NMR (500 MHz, C_6D_6) δ 1.15 (m, 3H), 1.60 (dt, 1H, *J* = 14.0, 9.5 Hz), 1.72 (s, 3H), 1.65-1.85 (m, 4H), 1.95 (m, 1H), 2.00-2.10 (m, 3H), 2.40 (m, 2H), 2.95 (m, 1H), 3.18 (m, 2H), 3.33 (m, 1H), 3.35 (m, 2H), 3.52 (m, 2H), 3.77 (s, 1H), 3.95 (t, 1H, *J* = 9.0 Hz), 4.34 (d, 1H, *J* = 12.5 Hz), 4.36 (d, 1H, *J* = 12.5 Hz), 4.84 (t, 1H, *J* = 4.5 Hz), 4.89 (s, 1H), 4.98 (m, 2H), 5.15 (s, 1H), 5.66 (dddd, 1H, *J* = 17.0, 10.0, 7.0, 7.0 Hz); 5.87 (dd, 1H, *J* = 9.5, 2.5 Hz), 7.13 (t, *J* = 7.0 Hz), 7.22 (t, 2H, *J* = 7.0 Hz), 7.34 (d, 2H, *J* = 7 Hz); ^{13}C NMR (125 MHz, C_6D_6) δ 20.7, 26.9, 32.7, 37.8, 38.8, 40.7, 42.6, 43.3, 64.8, 67.7, 69.4, 73.8, 74.3, 75.2, 76.5, 104.2, 110.4, 117.5, 127.5, 127.6, 128.6, 134,7, 139.6, 148.9, 169.6; IR (neat) 3492, 2917, 2860, 1736, 1642, 1368, 1236, 1070, 904, 736, 698 cm^{-1}.



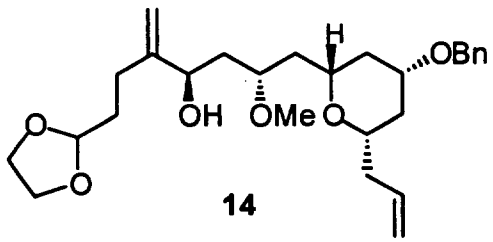
12

Methyl Ether 13. A solution of alcohol **12** (110 mg, 0.225 mmol), 2,6-di-*tert*-butylpyridine (0.76 mL, 3.37 mmol) and methyl triflate (0.323 mL, 2.25 mmol) was stirred for 14 h at ambient temperature, and quenched by addition of aqueous solution of ammonium hydroxide (10 mL). The product was extracted with ether (2x50 mL), dried over anhydrous $MgSO_4$, filtered and concentrated. The excess 2,6-di-*tert*-butylpyridine was removed by bulb-to-bulb distillation (80 °C, 0.5 mm Hg). Flash chromatography on silica gel (elution with ethyl acetate:hexane; 1:2) afforded 81 mg of methyl ether **13** (72% yield) as a colorless oil. ^{1}H NMR (500 MHz, C_6D_6) δ 1.19 (q, 1H, J = 11.5 Hz), 1.26 (q, 1H, J = 11.5 Hz), 1.43 (ddd, 1H, J = 14.0, 7.5, 3.5 Hz), 1.77 (s, 3H), 1.80-1.90 (m, 5H), 2.00-2.10 (m, 3H), 2.27 (m, 1H), 2.40 (m, 2H), 2.98 (m, 1H), 3.17 (s, 3H), 3.20-3.28 (m, 2H), 3.33 (m, 1H), 3.35 (m, 2H), 3.50 (m, 2H), 4.37 (s, 2H), 4.83 (t, 1H, J = 4.5 Hz), 4.89 (s, 1H), 5.03 (m, 2H), 5.17 (s, 1H), 5.84 (dd, 1H, J = 9.5, 2.5 Hz), 5.90 (m, 1H); 7.12 (t, J = 7.0 Hz), 7.22 (t, 2H, J = 7.0 Hz), 7. 35 (d, 2H, J = 7 Hz); ^{13}C NMR (125 MHz, C_6D_6) δ 20.7, 26.8, 32.7, 38.1, 39.0, 39.4, 39.8, 40.9, 56.5, 64.8, 69.4, 72.1, 73.8, 74.7, 74.8, 75.2, 104.2, 110.5, 116.6, 127.5, 127.6, 128.5, 135,5, 139.7, 148.8, 169.3; IR (neat) 2939, 2880, 1736, 1368, 1235, 1070, 906, 736, 698 cm^{-1}.



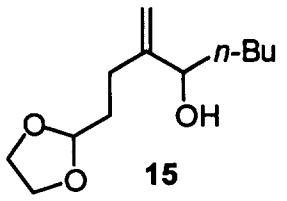
13

Alcohol 14. Lithium aluminum hydride (38 mg, 1 mmol) was suspended in ether (2 mL), cooled to –78 °C, and treated with methyl ether **13** (66 mg, 0.13 mmol) in ether (2 mL). The reaction mixture was stirred for 30 min at –78 °C, quenched by dropwise addition of water (0.2 mL). The resulting suspension was allowed to reach ambient temperature, vigorously stirred for 1 h, diluted with ether, dried with anhydrous Na_2SO_4, filtered and concentrated. Flash chromatography on silica gel (elution with ethyl acetate:hexane; 1:2) afforded 51 mg of alcohol **14** (86% yield) as a colorless oil. ^{1}H NMR (500 MHz, C_6D_6) δ 1.20 (q, 1H, J = 11.5 Hz), 1.26 (q, 1H, J = 11.5 Hz), 1.46 (ddd, 1H, J = 14.0, 7.5, 3.5 Hz), 1.80-1.85 (m, 4H), 1.93 (ddd, 1H, J = 14.0, 9.0, 4.5 Hz), 2.00-2.04 (m, 2H), 2.10 (m, 1H), 2.28 (m, 2H), 2.40 (m, 1H), 3.00 (m, 1H), 3.08 (s, 3H), 3.20-3.28 (m, 2H), 3.35 (m, 2H), 3.69 (m, 1H), 4.37 (s, 2H), 4.43 (m, 1H), 4.85 (t, 1H, J = 4.5 Hz), 4.95 (s, 1H), 5.04 (m, 2H), 5.33 (s, 1H), 5.86 (dddd, 1H, J = 17.0, 10.0, 7.0, 7.0 Hz), 7.12 (t, J = 7.0 Hz), 7.22 (t, 2H, J = 7.0 Hz), 7. 35 (d, 2H, J = 7 Hz); ^{13}C NMR (125 MHz, C_6D_6) δ 26.7, 33.0, 37.9, 39.0, 38.9, 39.3, 39.5, 40.9, 56.0, 64.8, 69.4, 72.3, 74.8, 75.2, 76.4, 104.4, 108.9, 116.8, 127.5, 127.6, 128.5, 135,3, 139.7, 152.2; IR (neat) 3452, 2942, 2878, 1642, 1354, 1071, 904, 736, 698 cm^{-1}.

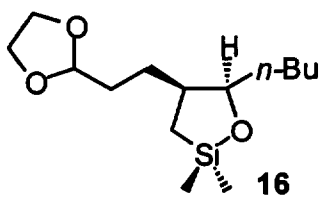


14

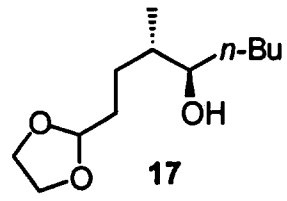
Alcohol 15. Aldehyde **5** (312 mg, 2.0 mmol) in THF (10 mL) was cooled to –78 °C, and treated with *n*-butyllithium (0.88 mL, 2.5 M solution in hexane). After 15 min, the reaction was quenched by addition of saturated aqueous solution of $NaHCO_3$ (15 mL), extracted with ether (50 mL), dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ether:hexane; 2:1) afforded 380 mg of alcohol **15** (87% yield) as a colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$) δ 0.87 (t, 3H, *J* = 7.0 Hz), 1.20-1.38 (m, 4H), 1.53 (m, 2H), 1.78 (br s, 1H), 1.85 (m, 2H), 2.10 (m, 1H), 2.21 (m, 1H), 3.81 (m, 2H), 3.95 (m, 2H), 4.06 (t, 1H, *J* = 7.0 Hz), 4.83 (s, 1H), 4.87 (t, 1H, *J* = 4.5 Hz), 5.01 (s, 1H); ^{13}C NMR (125 MHz, $CDCl_3$) δ 14.0, 22.6, 25.3, 27.8, 32.2, 35.1, 64.9, 75.6, 104.2, 109.8, 151.1; IR (neat) 3439, 2953, 2870, 1692, 1409, 1135, 1031, 899, 731 cm^{-1}.



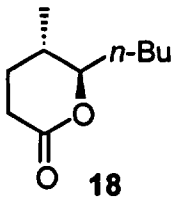
Silane 16. A solution of alcohol **15** (142 mg, 0.66 mmol) in CH_2Cl_2 (0.50 mL) was treated with tetramethyldisilazane (0.35 mL, 2.0 mmol). After 12 h, ^{1}H NMR analysis indicated complete consumption of the starting alcohol. The excess tetramethyldisilazane was removed under high vacuum. The resulting silyl ether was dissolved in C_6H_6 (7 mL) and treated with H_2PtCl_6 [30 μL, 0.05 M in THF, (0.3 mol%)]. After 30 min at 50 °C, ^{1}H NMR analysis indicated quantitative formation of the silacycle **16**, as 85:15 mixture of diastereomers. Major isomer: ^{1}H NMR (400 MHz, C_6D_6) δ 0.10 (s, 3H), 0.15 (s, 3H), 0.90 (t, 3H, *J* = 7.0 Hz), 1.20-1.90 (m, 10H), 2.00 (m, 1H), 3.39 (m, 2H), 3.56 (m, 2H), 3.99 (ddd, 1H, *J* = 10.4, 5.6, 3.2 Hz), 4.82 (t, 1H, *J* = 4.5 Hz); ^{13}C NMR (100 MHz, C_6D_6) δ 0.2, 1.2, 14.4, 16.2, 23.0, 26.9, 28.7, 31.4, 33.2, 42.5, 64.8, 104.8; IR (neat) 2953, 2871, 1408, 1250, 1033, 840, 796 cm^{-1}.



Alcohol 17. Cyclic silane **16**, obtained upon concentration of the crude hydrosilylation reaction mixture was treated with TBAF (2.6 mmol) in DMF (2.5 mL). The resulting solution was heated to 75 °C for 24 h. The excess DMF was removed by bulb-to-bulb distillation (50 °C, 0.5 mm Hg). Flash chromatography on silica gel (elution with ethyl acetate:hexane; 1:2) afforded 121 mg of alcohol **17** (82% yield from **15**) as a colorless oil. ^{1}H NMR (500 MHz, $CDCl_3$) δ 0.87 (d, 3H, *J* = 7.0 Hz), 0.88 (t, 3H, *J* = 7.0 Hz), 1.20-1.90 (m, 10H), 2.74 (m, 1H), 3.41 (m, 1H), 3.82 (m, 2H), 3.95 (m, 2H), 4.83 (t, 1H, *J* = 4.5 Hz); ^{13}C NMR (125 MHz, $CDCl_3$) δ 14.0, 15.2, 22.7, 26.0, 28.2, 31.6, 33.1, 38.6, 64.8, 75.7, 104.7.

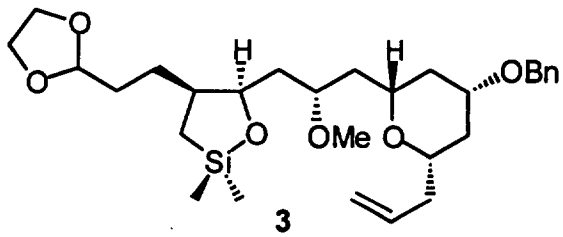


Lactone 18. A solution of alcohol **17** (110 mg, .50 mmol) in 6 mL of THF-water (5:1) containing a drop of concentrated H_2SO_4 was heated to 80 °C for 10 h, then partitioned between saturated aqueous solution of $NaHCO_3$ (1 mL), and ether (20 mL). The organic layer was separated, dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ether:pentane; 1:1) afforded 62 mg of the corresponding lactol as a colorless oil. The oxidation was conducted by addition of bromine (15 μL) to the solution of the lactol in acetic acid (0.4 mL) and water (0.64 mL). After 1 h, the reaction mixture was partitioned between saturated aqueous solution of $NaHCO_3$, and ether (20 mL). The organic layer was separated, dried over anhydrous $MgSO_4$, filtered and concentrated. Flash chromatography on silica gel (elution with ether:pentane; 1:1) afforded 61 mg of lactone **18** (86% from 17) as a colorless oil. ^1H NMR (400 MHz, $CDCl_3$) δ 0.89 (t, 3H, J = 7.0 Hz), 0.97 (t, 3H, J = 7.0 Hz), 1.20-1.70 (m, 8H), 1.87 (m, 1H), 2.45 (ddd, 1H, J = 17.0, 10.0, 6.8 Hz), 2.60 (ddd, 1H, J = 17.0, 6.4, 4.4 Hz), 3.91 (ddd, 1H, J = 10.0, 8.0, 3.0 Hz); ^{13}C NMR (100 MHz, $CDCl_3$) δ 13.9, 17.4, 22.6, 26.5, 27.8, 29.5, 32.2, 33.1, 85.9, 174.0.



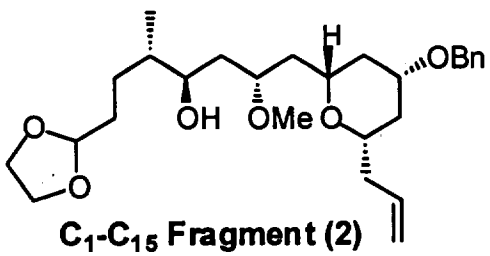
18

Silane 3. A solution of alcohol **13** (46 mg, 0.10 mmol) in $CDCl_3$ (0.50 mL) was treated with tetramethyldisilazane (0.10 mL, 0.56 mmol). After 15 min, ^1H NMR analysis indicated complete consumption of the starting alcohol. The excess tetramethyldisilazane was removed under high vacuum. The resulting silyl ether was dissolved in C_6D_6 (1 mL) and treated with H_2PtCl_6 (0.5 mol%). After 10 min at 57 °C, ^1H NMR analysis indicated quantitative formation of the silacycle **3**, as 87:13 mixture of diastereomers. Major isomer: ^1H NMR (500 MHz, C_6D_6) δ 0.11 (s, 3H), 0.17 (s, 3H), 0.48 (dd, 1H, J = 14.5, 11.0 Hz), 0.80 (dd, 1H, J = 14.5, 7.0 Hz), 1.25 (q, 1H, J = 11.5 Hz), 1.36 (q, 1H, J = 11.5 Hz), 1.46-2.38 (m, 2H), 3.10 (m, 1H), 3.33 (s, 3H), 3.20-3.28 (m, 2H), 3.28 (m, 2H), 3.35 (m, 2H), 3.90 (m, 1H), 4.38 (s, 2H), 4.50 (m, 1H), 4.85 (t, 1H, J = 4.5 Hz), 5.04 (m, 2H), 5.92 (m, 1H), 7.11 (t, J = 7.0 Hz), 7.21 (t, 2H, J = 7.0 Hz), 7. 34 (d, 2H, J = 7 Hz).



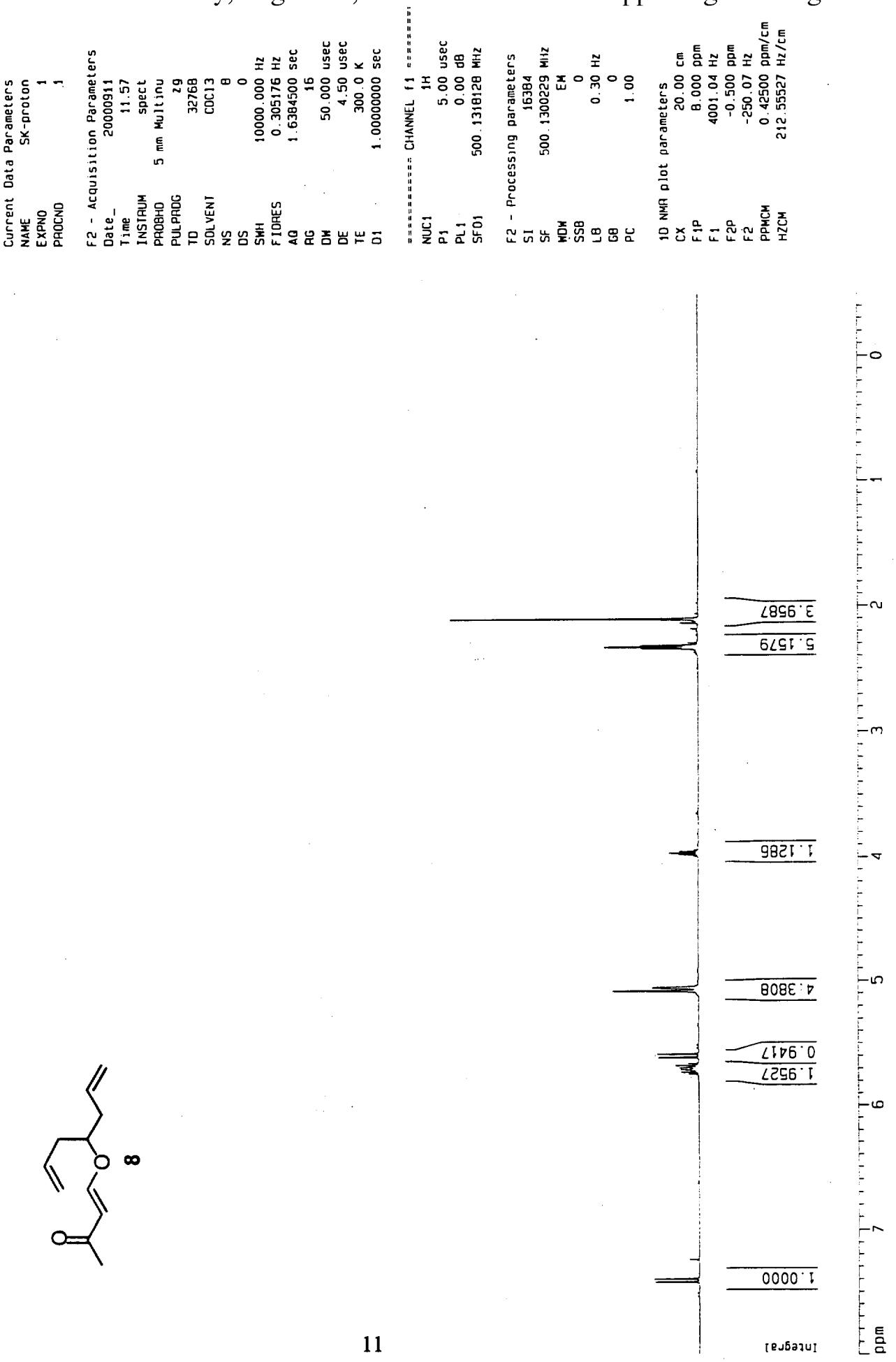
3

Alcohol 2. Cyclic silane **3**, obtained upon concentration of the crude hydrosilylation reaction mixture was treated with TBAF (0.4 mmol) in *d*-DMF (0.5 mL). The resulting solution was heated to 70 °C for 15 min. At this point, ^{1}H NMR analysis indicated complete consumption of the starting silane **3**. The excess DMF was removed by bulb-to-bulb distillation (50 °C, 0. 5 mm Hg). Flash chromatography on silica gel (elution with ethyl acetate:hexane; 1:1) afforded 24 mg of alcohol **2** (54% yield from **14**) as a colorless oil. ^{1}H NMR (500 MHz, C_6D_6) δ 0.93 (d, 3H, *J* = 6.5 Hz), 1.22 (q, 1H, *J* = 11.5 Hz), 1.28 (q, 1H, *J* = 11.5 Hz), 1.48-2.03 (m, H), 2.10 (m, 1H), 2.30 (m, 1H), 2.80 (br s, 1H), 3.00 (m, 1H), 3.07 (s, 3H), 3.26 (m, 2H), 3.36 (m, 2H), 3.56 (m, 2H), 3.67 (m, 1H), 3.78 (m, 1H), 4.37 (s, 2H), 4.85 (t, 1H, *J* = 4.5 Hz), 5.04 (m, 2H), 5.87 (dddd, 1H, *J* = 17.0, 10.0, 7.0, 7.0 Hz), 7.12 (t, *J* = 7.0 Hz), 7.22 (t, 2H, *J* = 7.0 Hz), 7. 35 (d, 2H, *J* = 7 Hz); ^{13}C NMR (125 MHz, C_6D_6) δ 15.4, 27.0, 32.2, 36.3, 37.9, 38.9, 39.3, 39.4, 40.9, 56.2, 64.8, 69.4, 72.4, 74.9, 75.2, 76.8, 105.2, 116.8, 127.5, 127.6, 128.5, 135,2, 139.7; IR (neat) 3470, 2919, 2870, 1354, 1071, 736, 697 cm^{-1}.



C_1-C_{15} Fragment (2)

^{1}H NMR and ^{13}C NMR Spectra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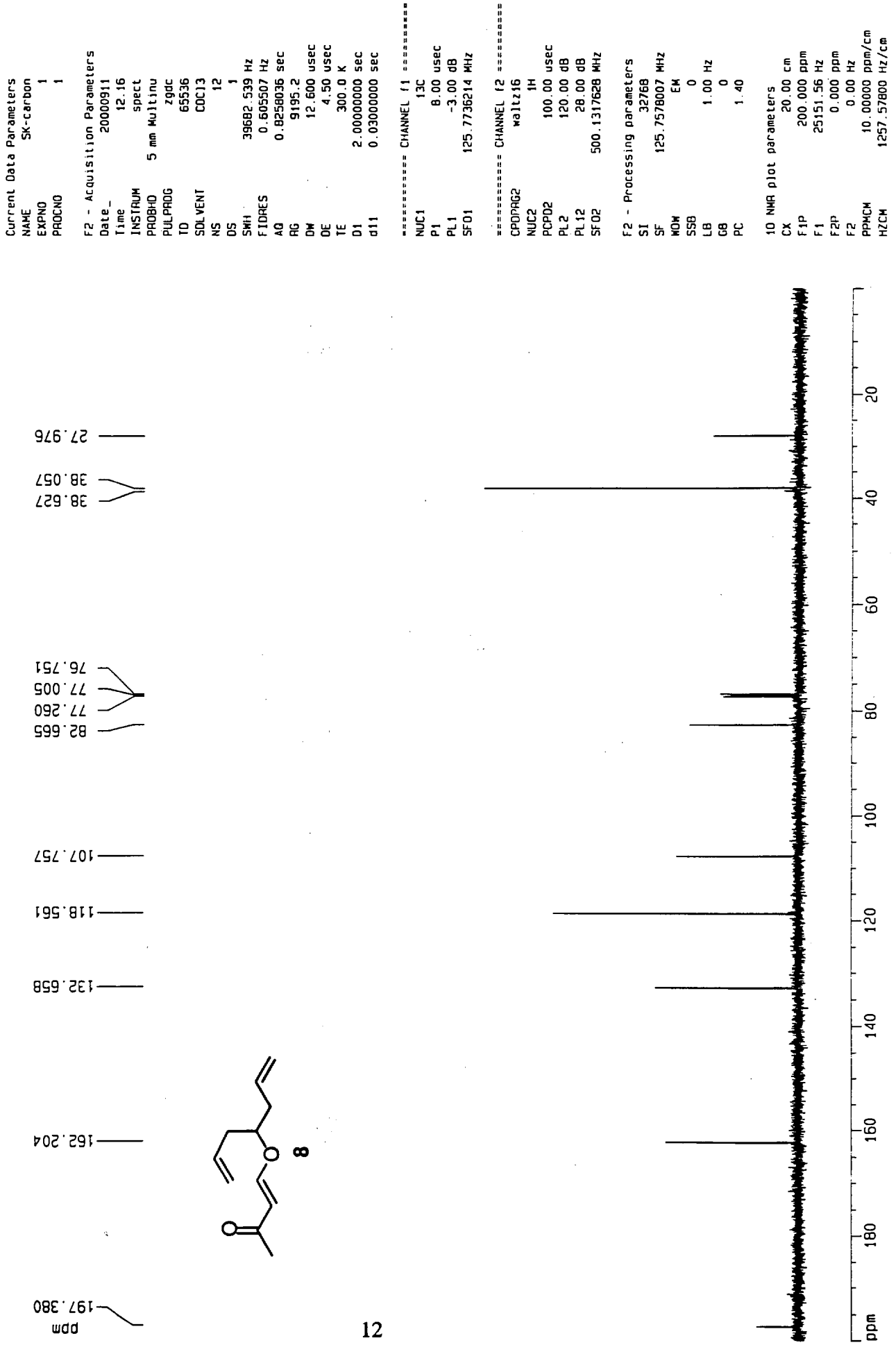
4.3808
0.9417
1.9527
1.0000
Integral
ppm
8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EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
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Time 12.16
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PROBHD 5 mm Multinu
PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 12
DS 1
SWH 39682.539 Hz
FIDRES 0.605507 Hz
AQ 0.8258036 sec
RG 9195.2
DW 12.600 usec
DE 4.50 usec
TE 300.0 K
D1 2.00000000 sec
D11 0.03000000 sec
CHANNEL f1
NUC1 13C
P1 8.00 usec
PL1 -3.00 dB
SFO1 125.7736214 MHz
CHANNEL f2
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 120.00 dB
PL12 28.00 dB
SFO2 500.1317628 MHz
F2 - Processing parameters
SI 32768
SF 125.7578007 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
1D NMR plot parameters
CX 20.00 cm
F1P 200.000 ppm
F1 25151.56 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 10.00000 ppm/cm
HZCM 1257.57800 Hz/cm
27.976
38.057
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77.005
77.260
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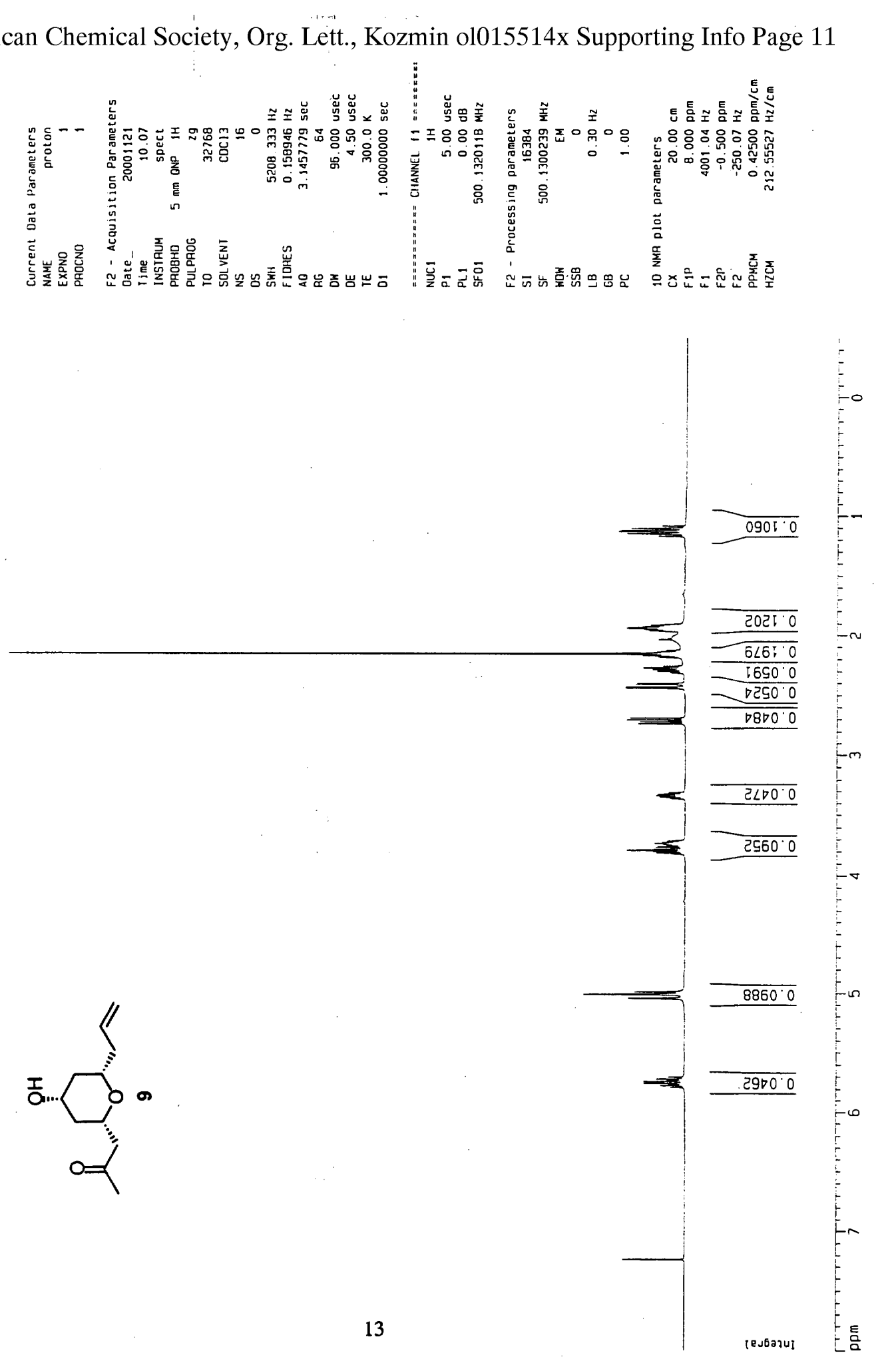
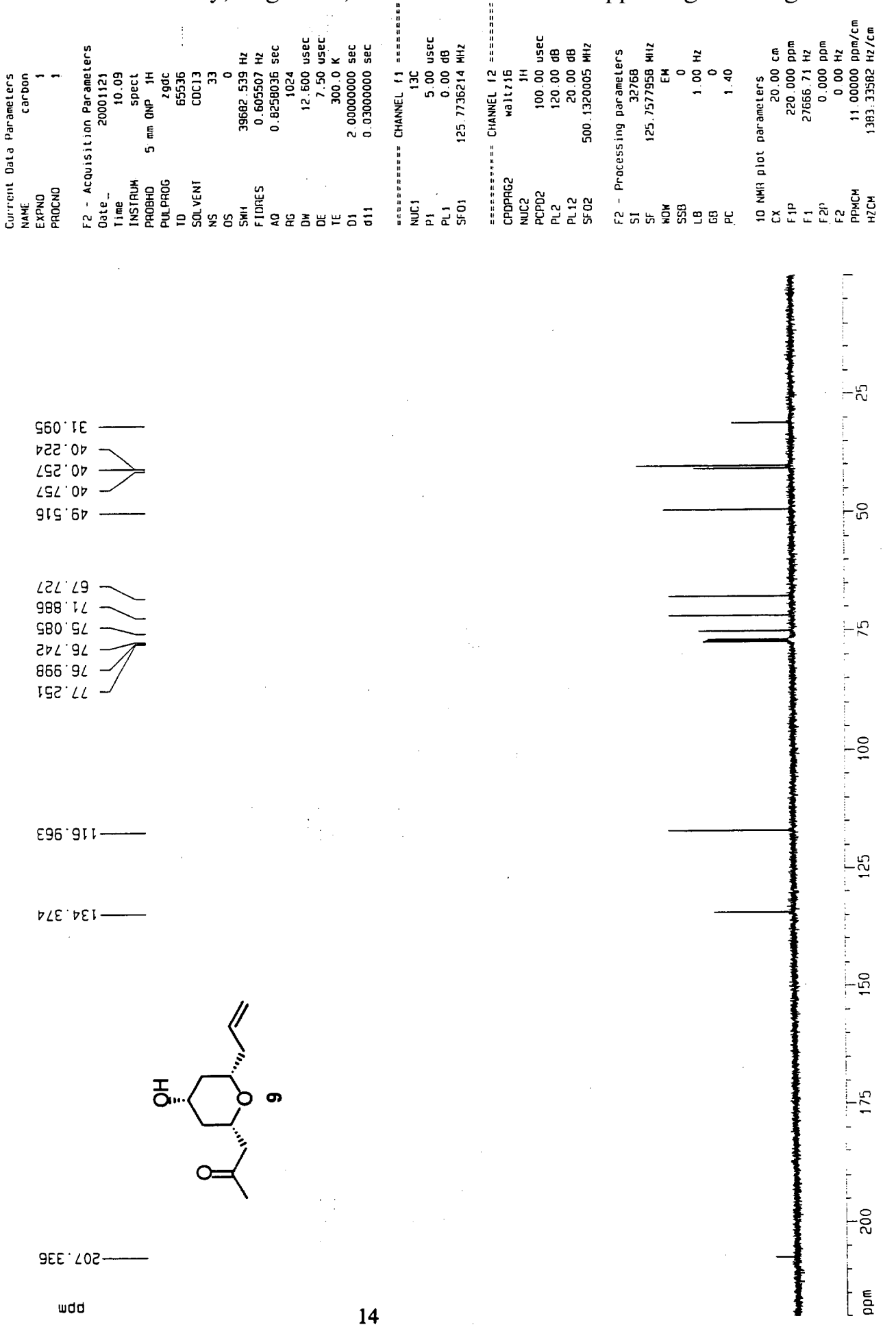
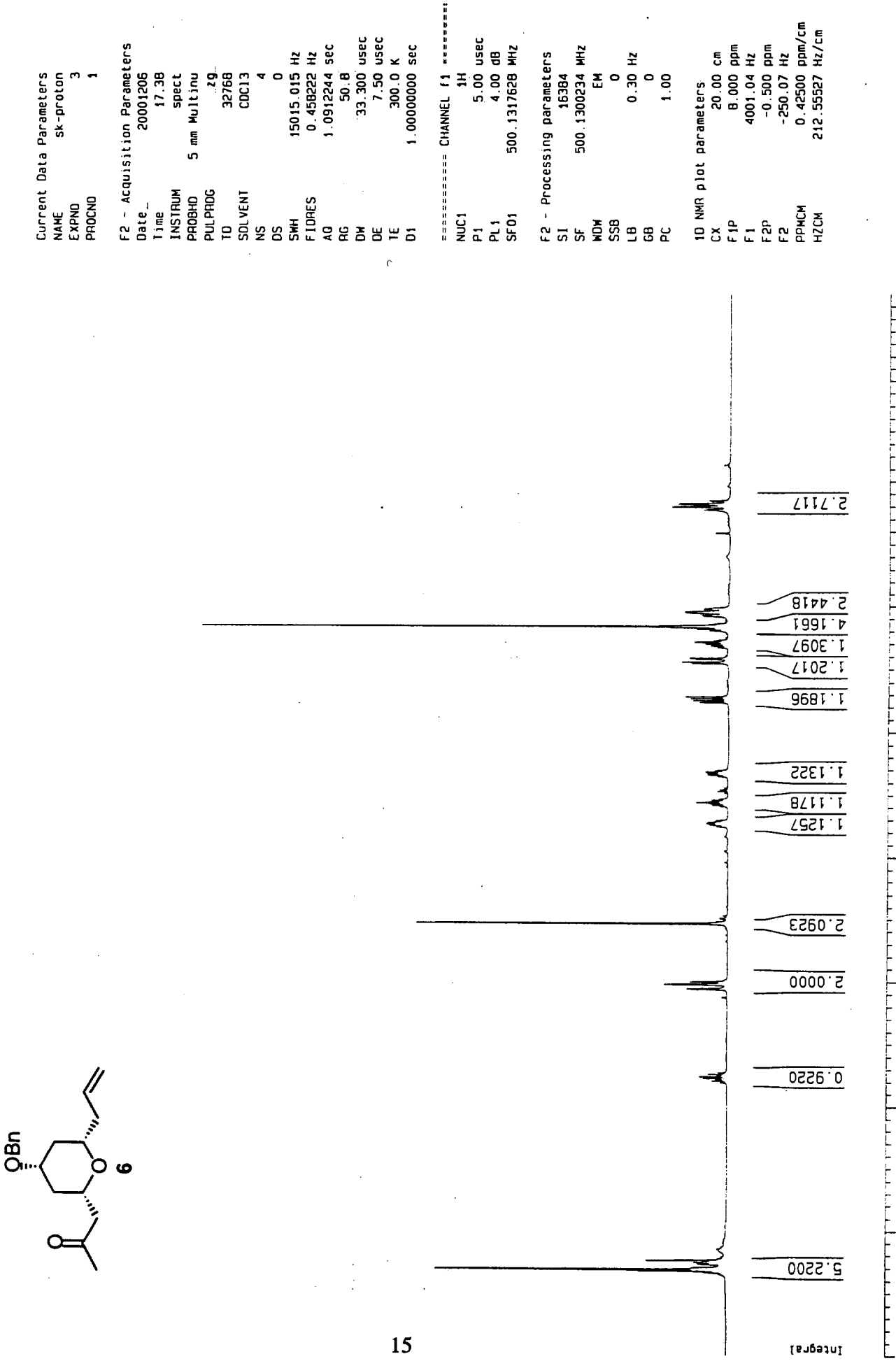
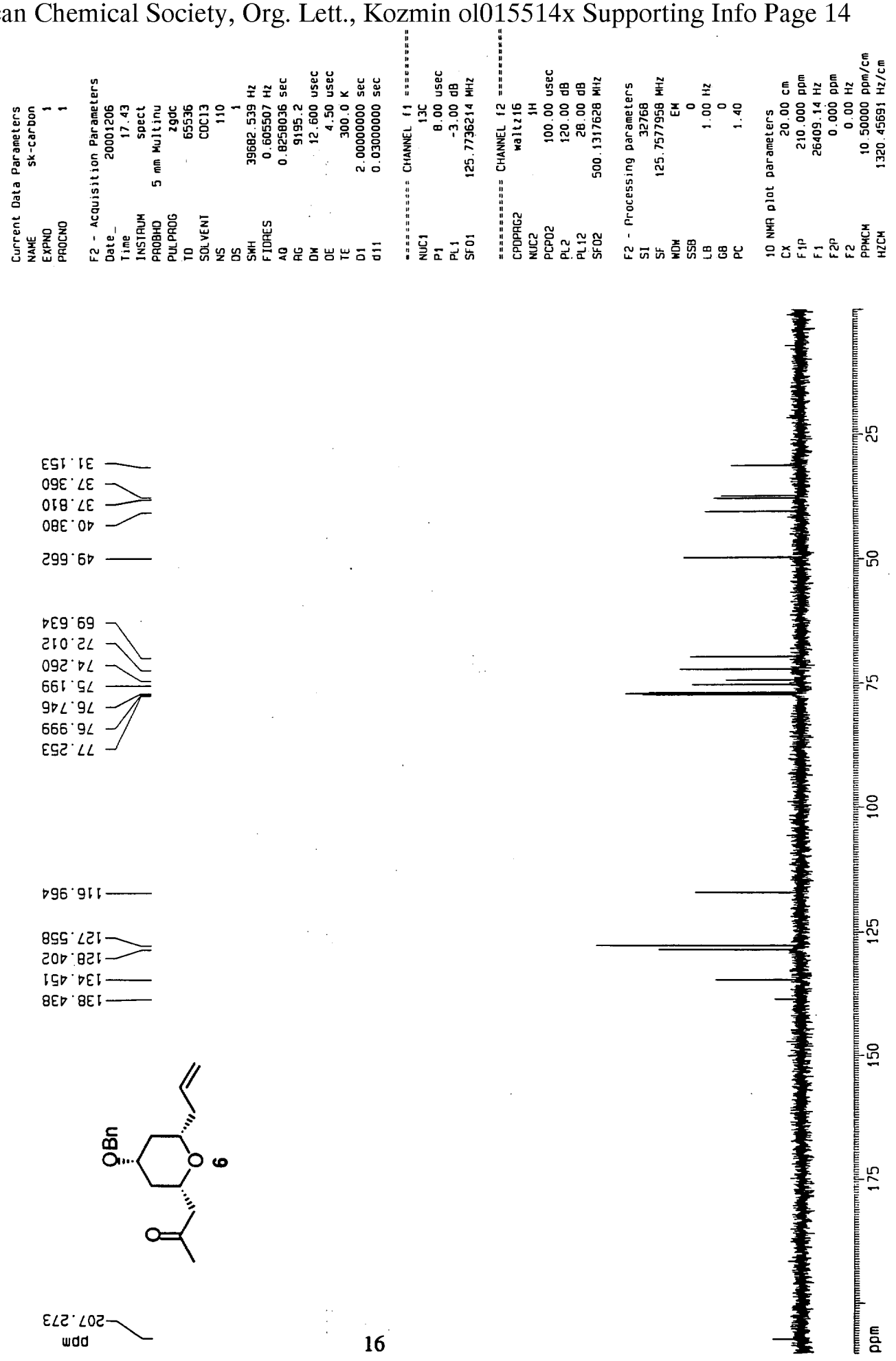
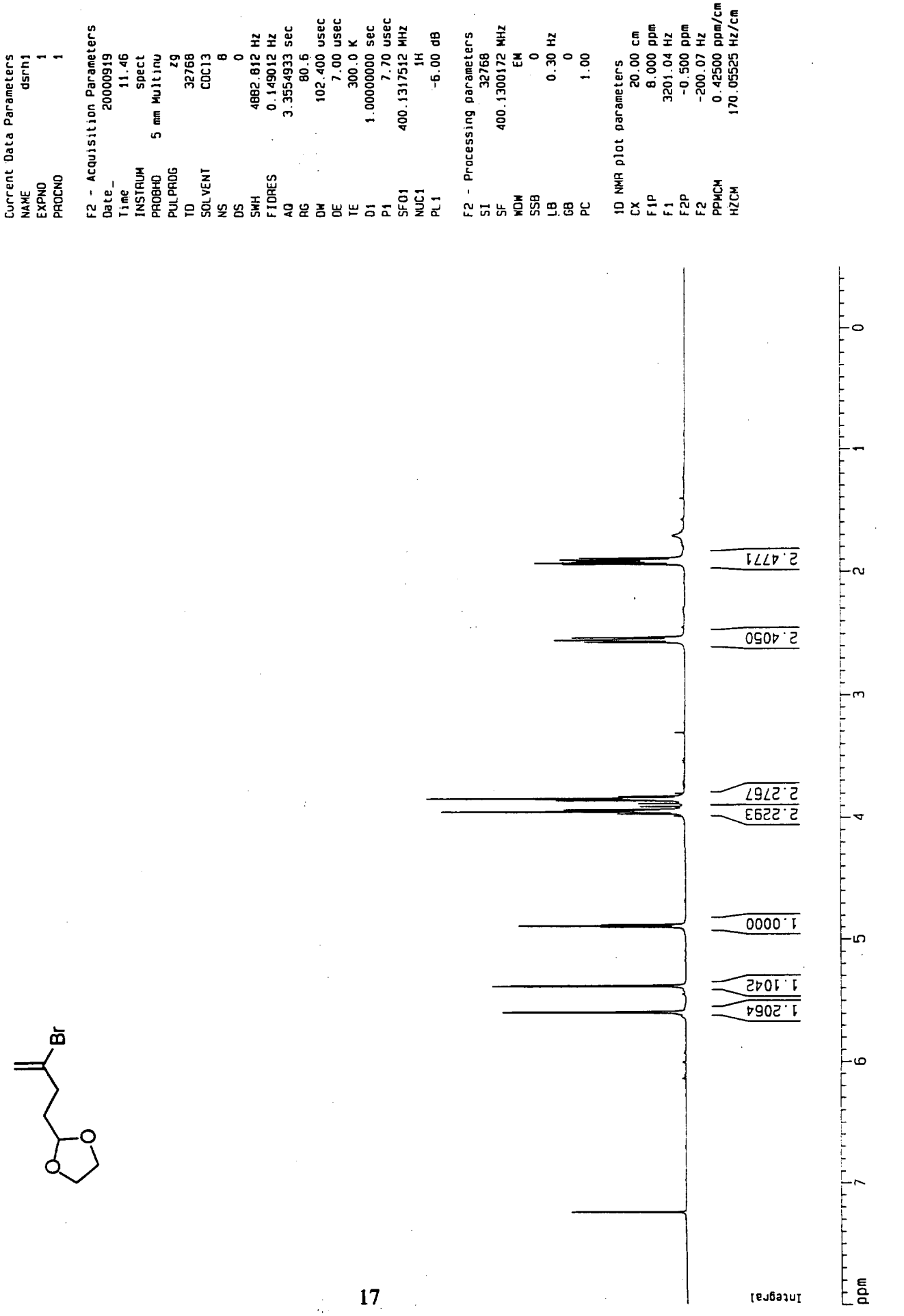
ppm
8
ppm

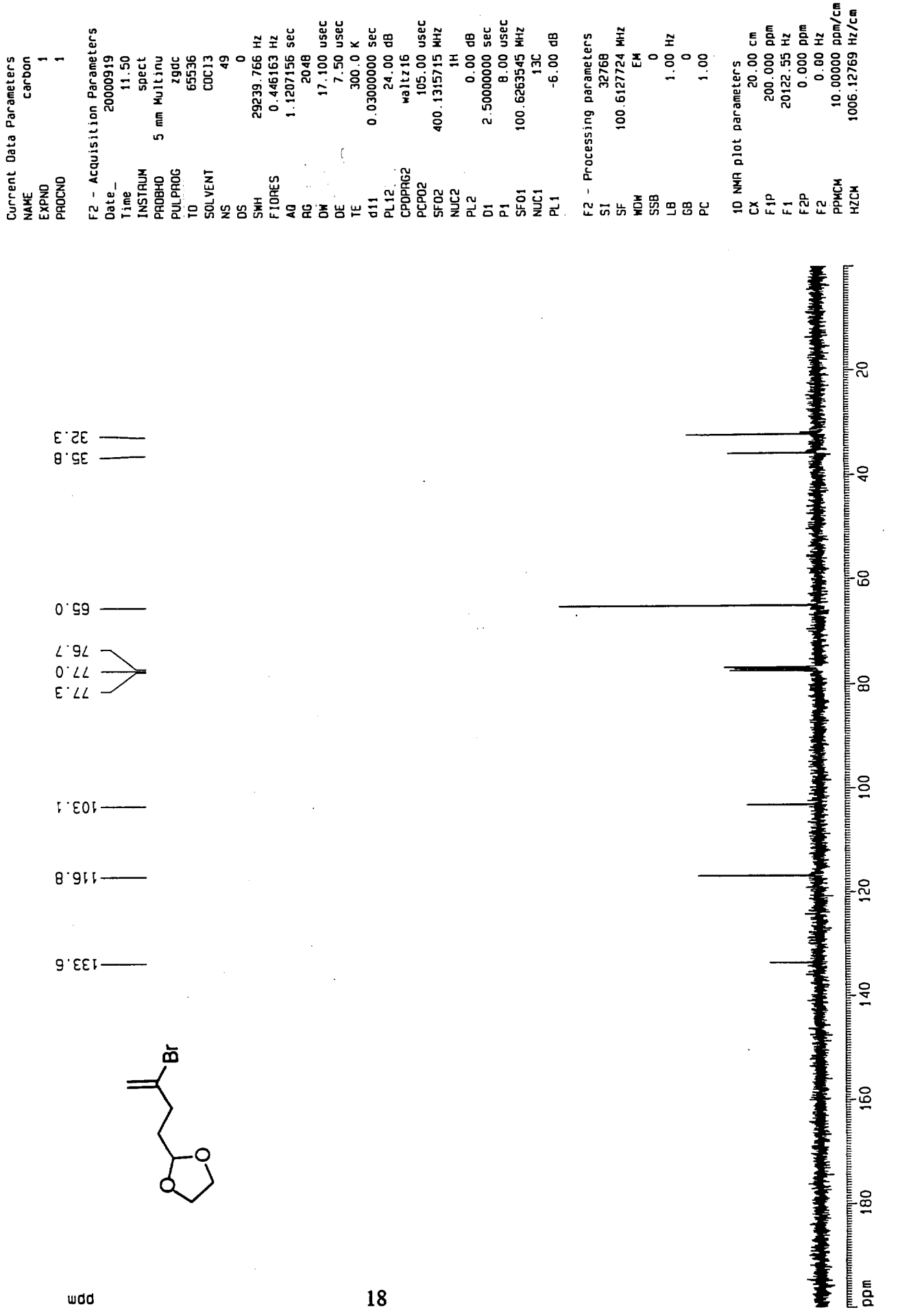








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PROCNO 1
F2 - Acquisition Parameters
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Time 11.50
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PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 49
DS 0
SWH 29239.766 Hz
FIDRES 0.446163 Hz
AQ 1.1207156 sec
RG 2048
DW 17.100 usec
DE 7.50 usec
TE 300.0 K
d11 0.03000000 sec
PL12 24.00 dB
CPDPRG2 waltz16
PCPD2 105.00 usec
SFO2 400.1315715 MHz
NUC2 1H
PL2 0.00 dB
D1 2.50000000 sec
P1 8.00 usec
SFO1 100.6263545 MHz
NUC1 13C
PL1 -6.00 dB
F2 - Processing parameters
SI 32768
SF 100.6127724 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00
1D NMR plot parameters
CX 20.00 cm
F1P 200.000 ppm
F1 20122.55 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 10.00000 ppm/cm
HZCM 1006.12769 Hz/cm
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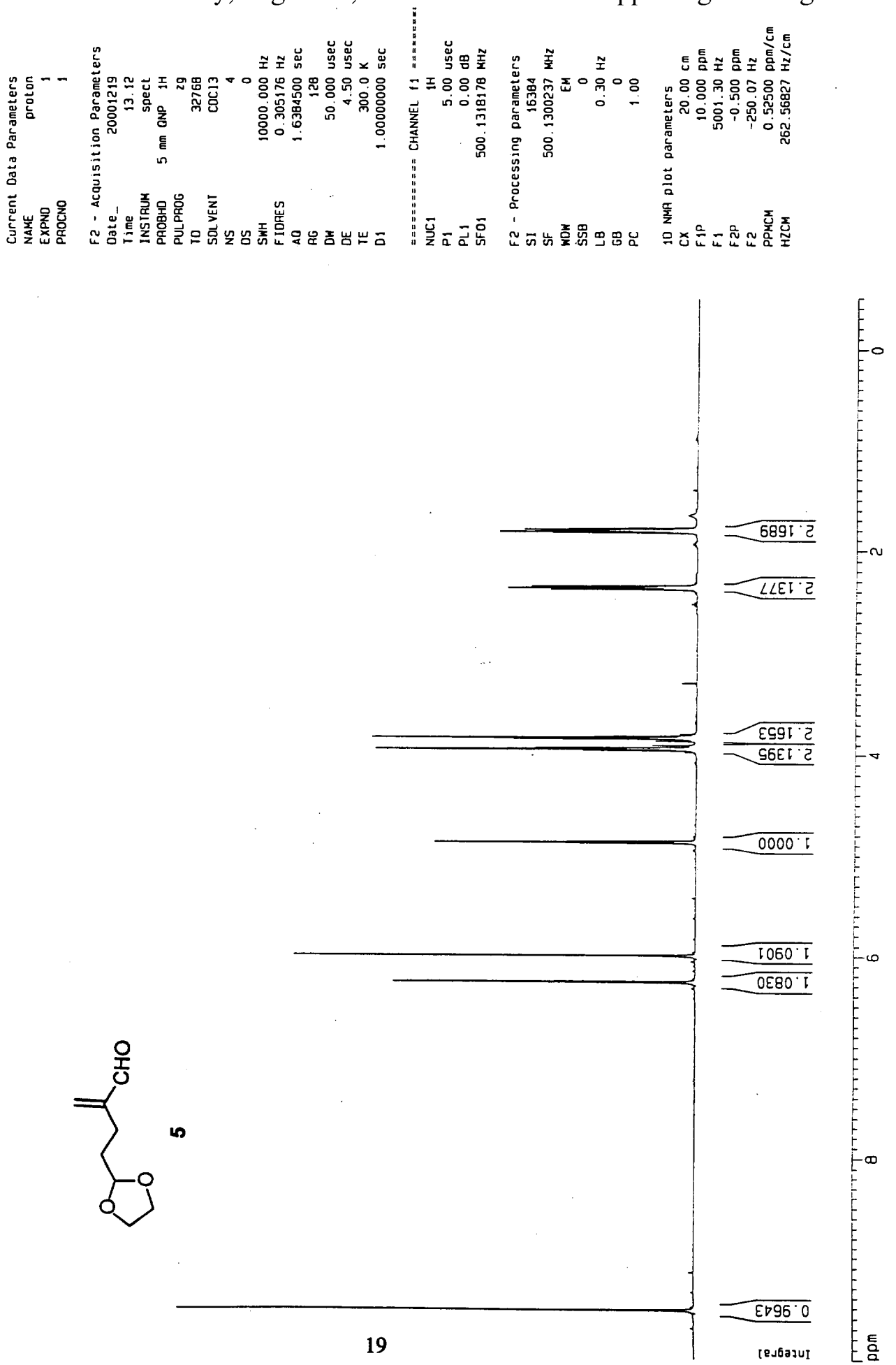
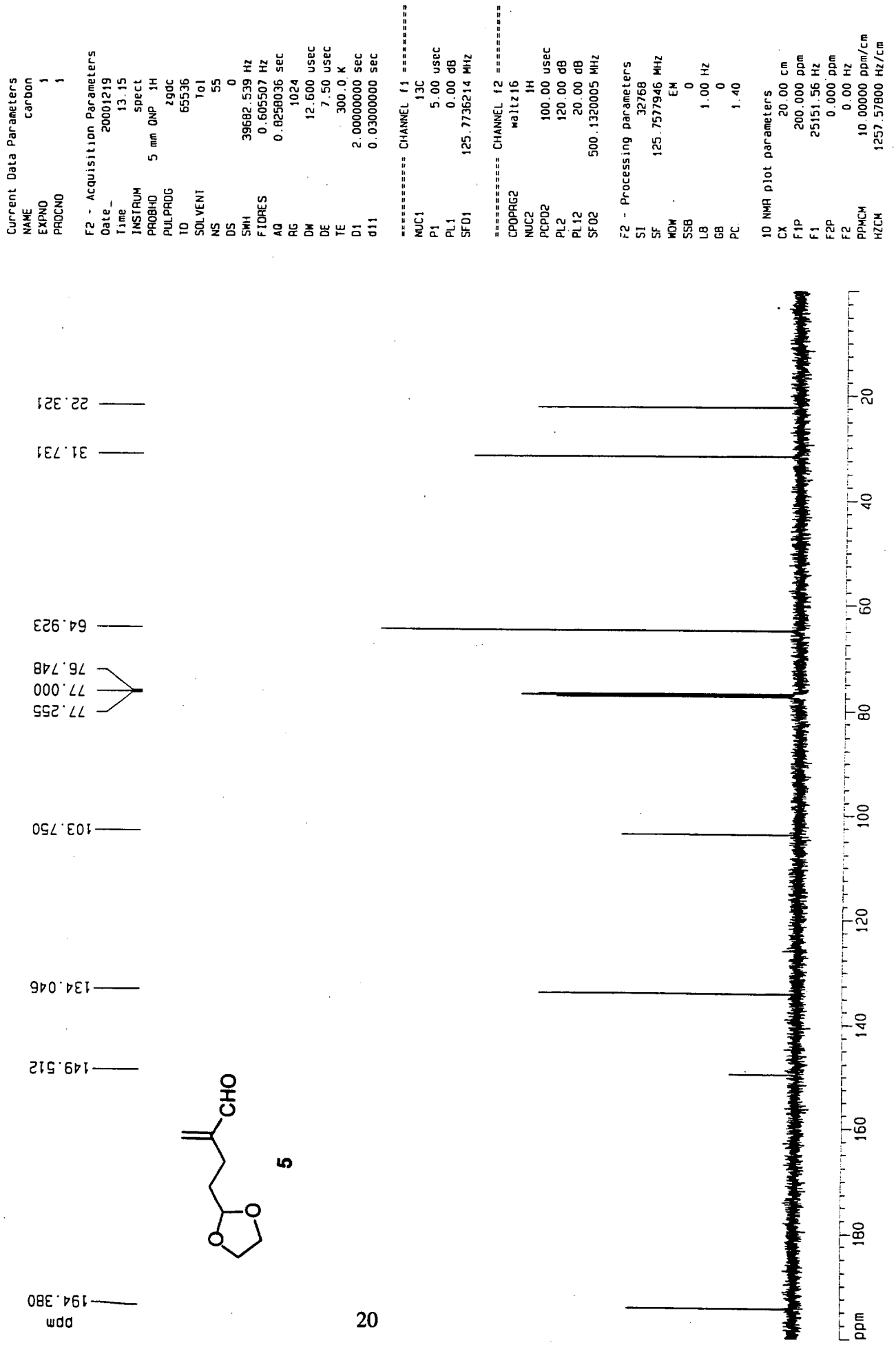
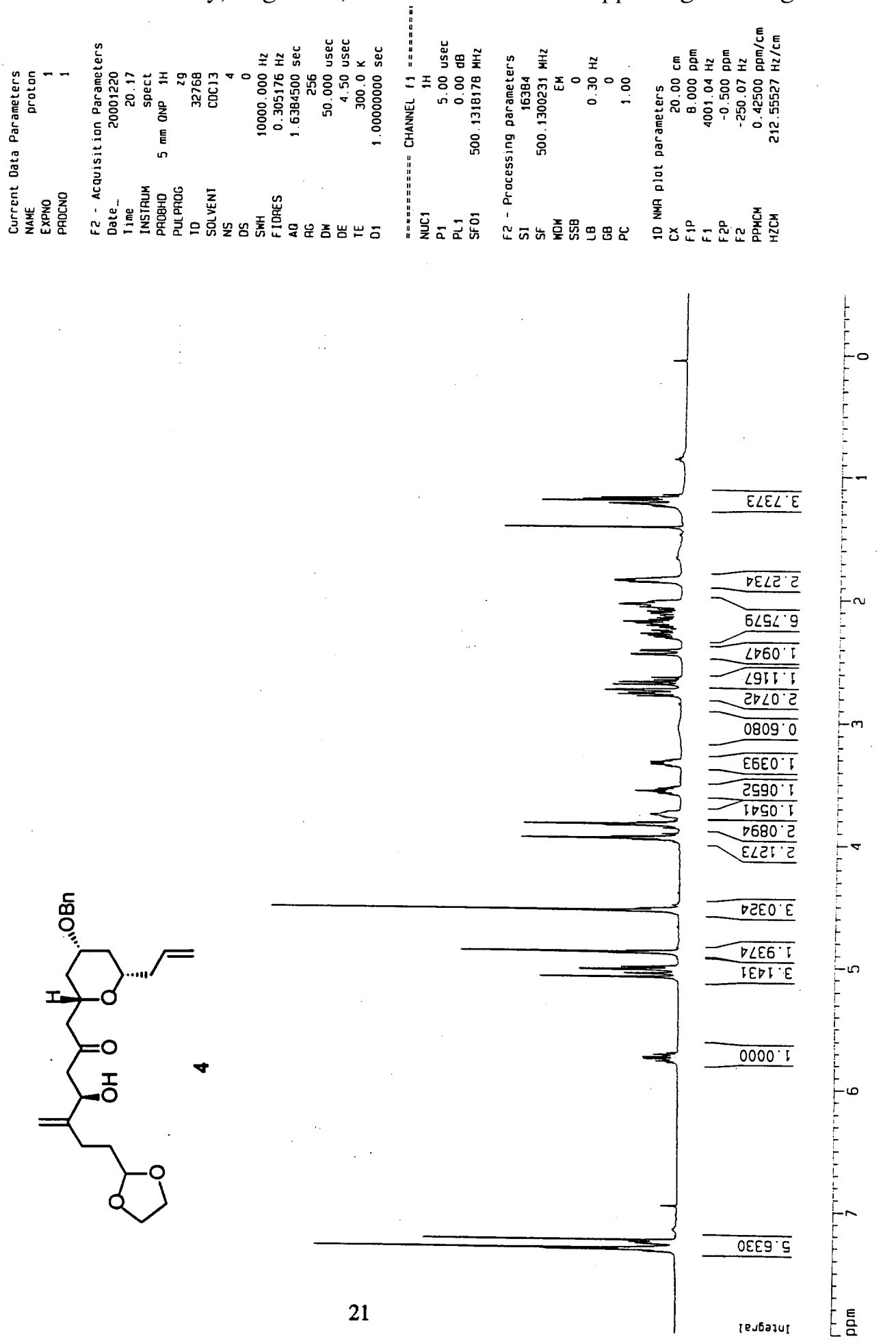
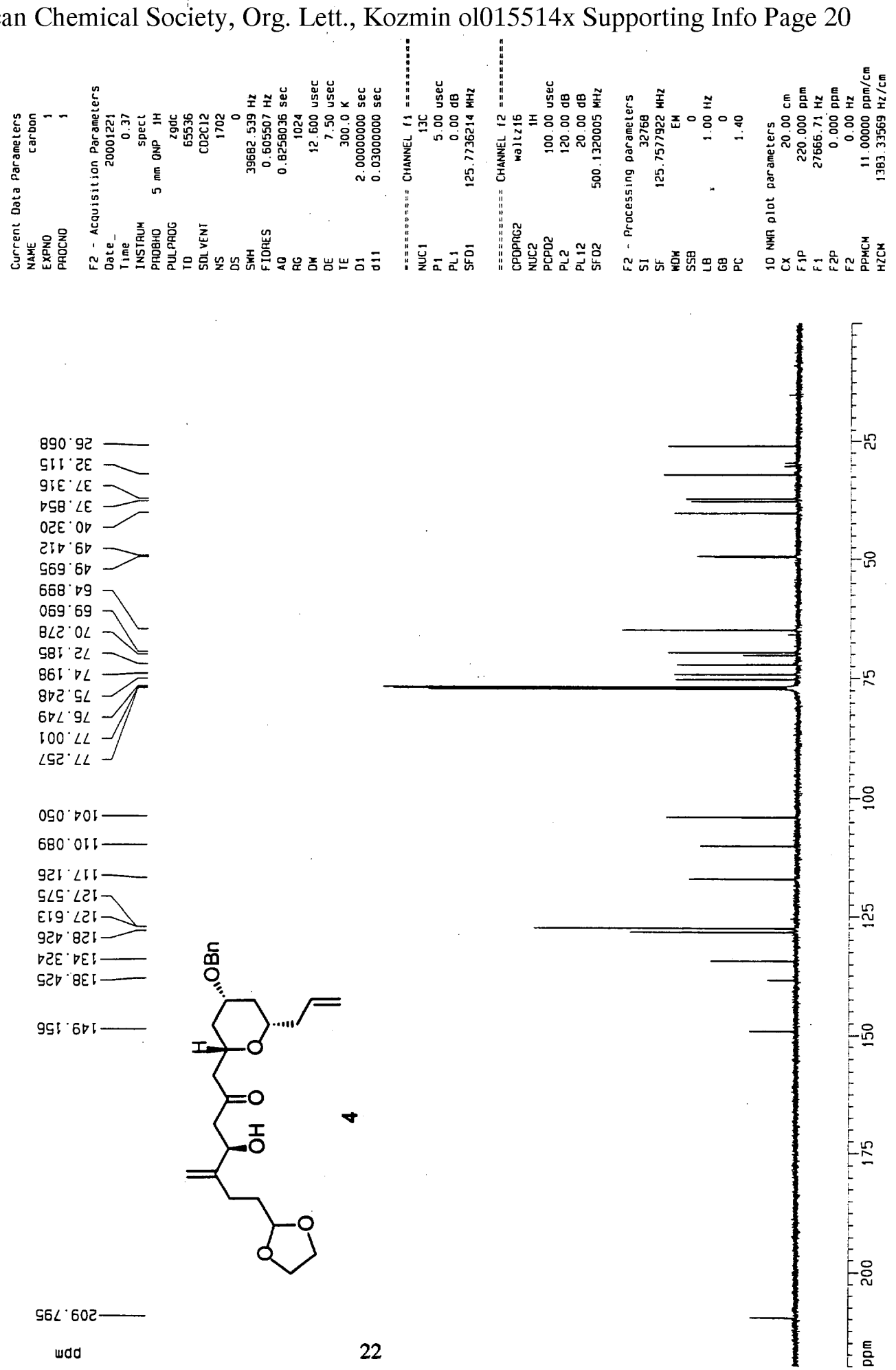
65.0
76.7
77.0
77.3
103.1
116.8
133.6
Br
ppm

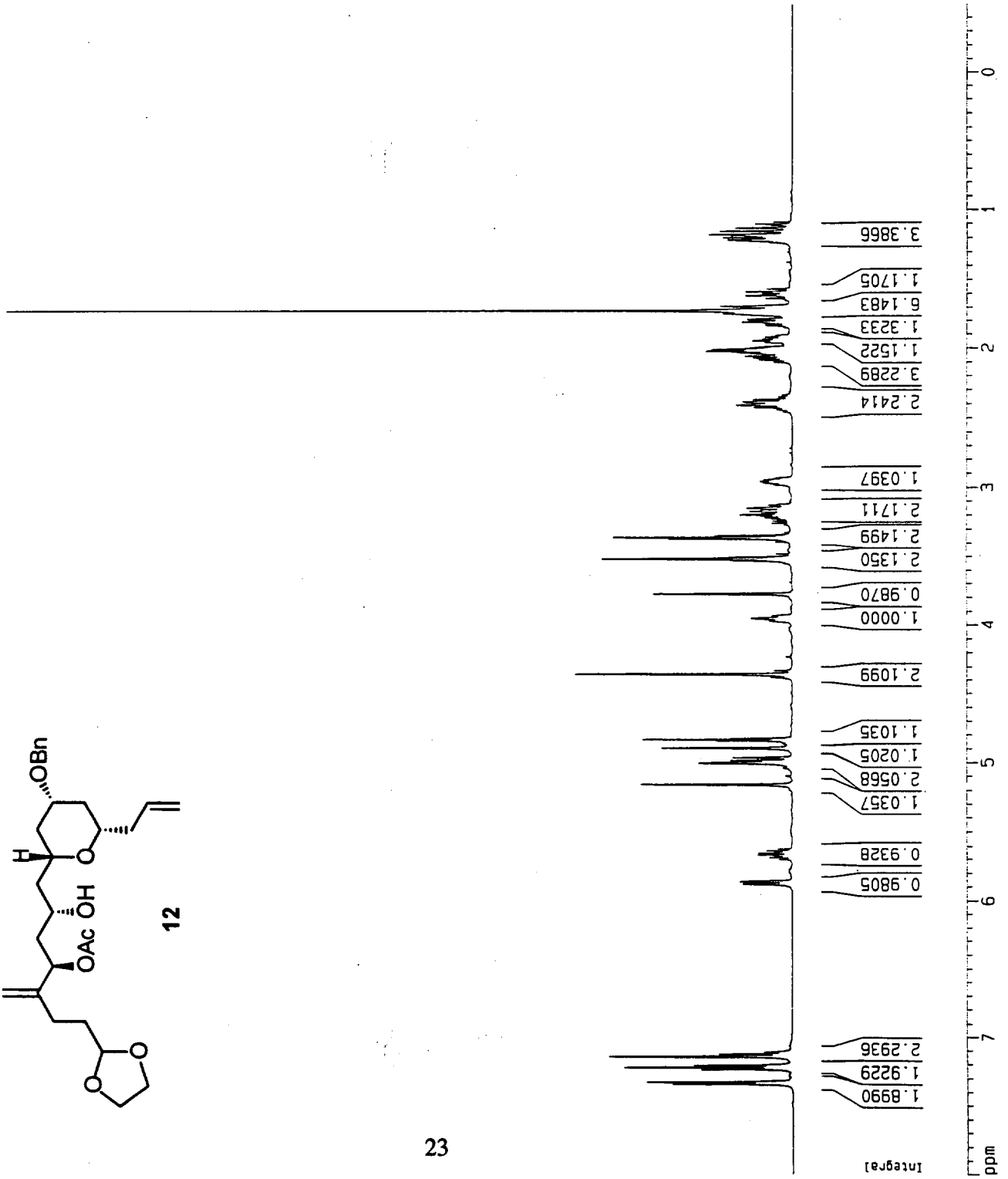


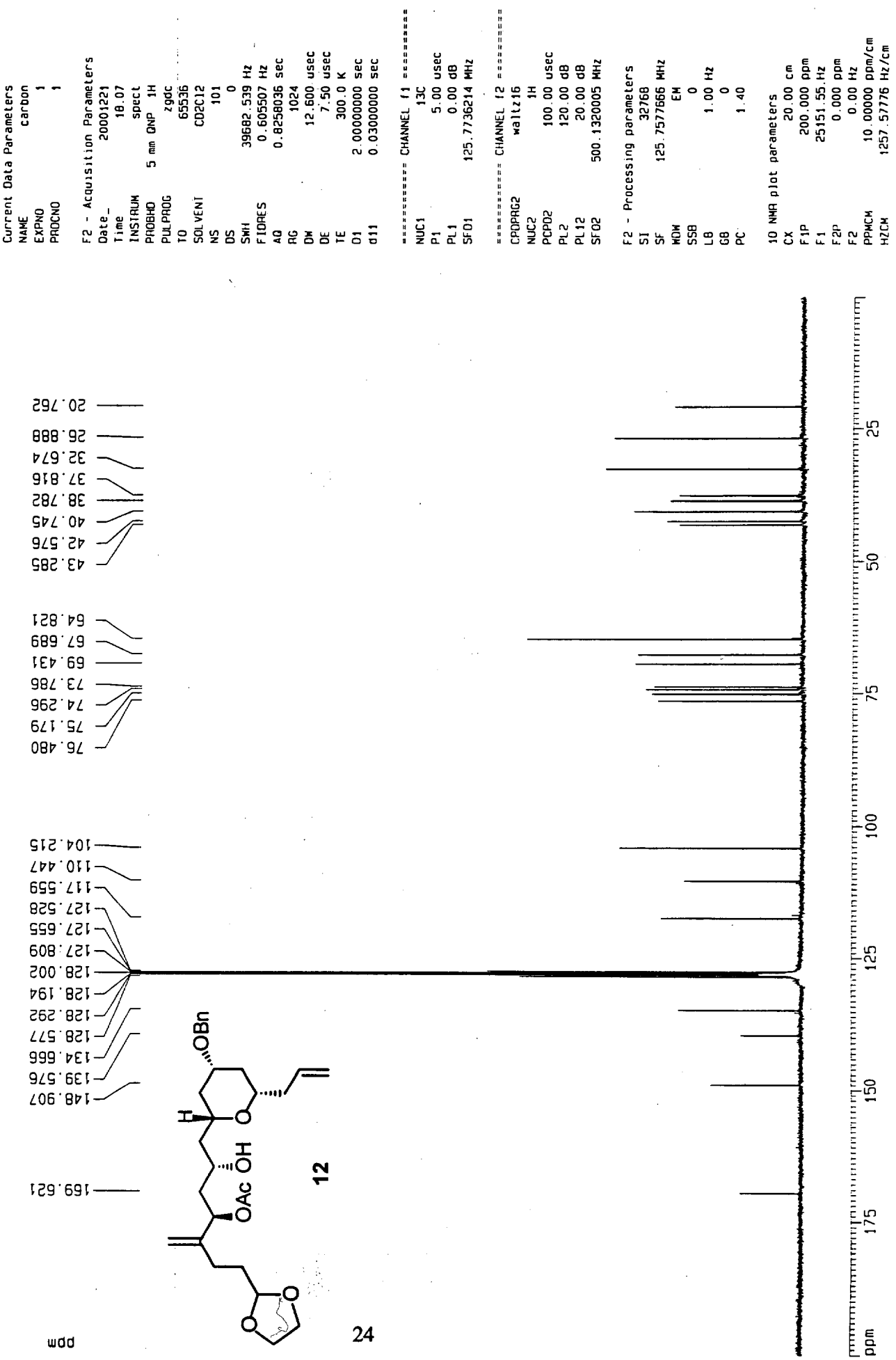


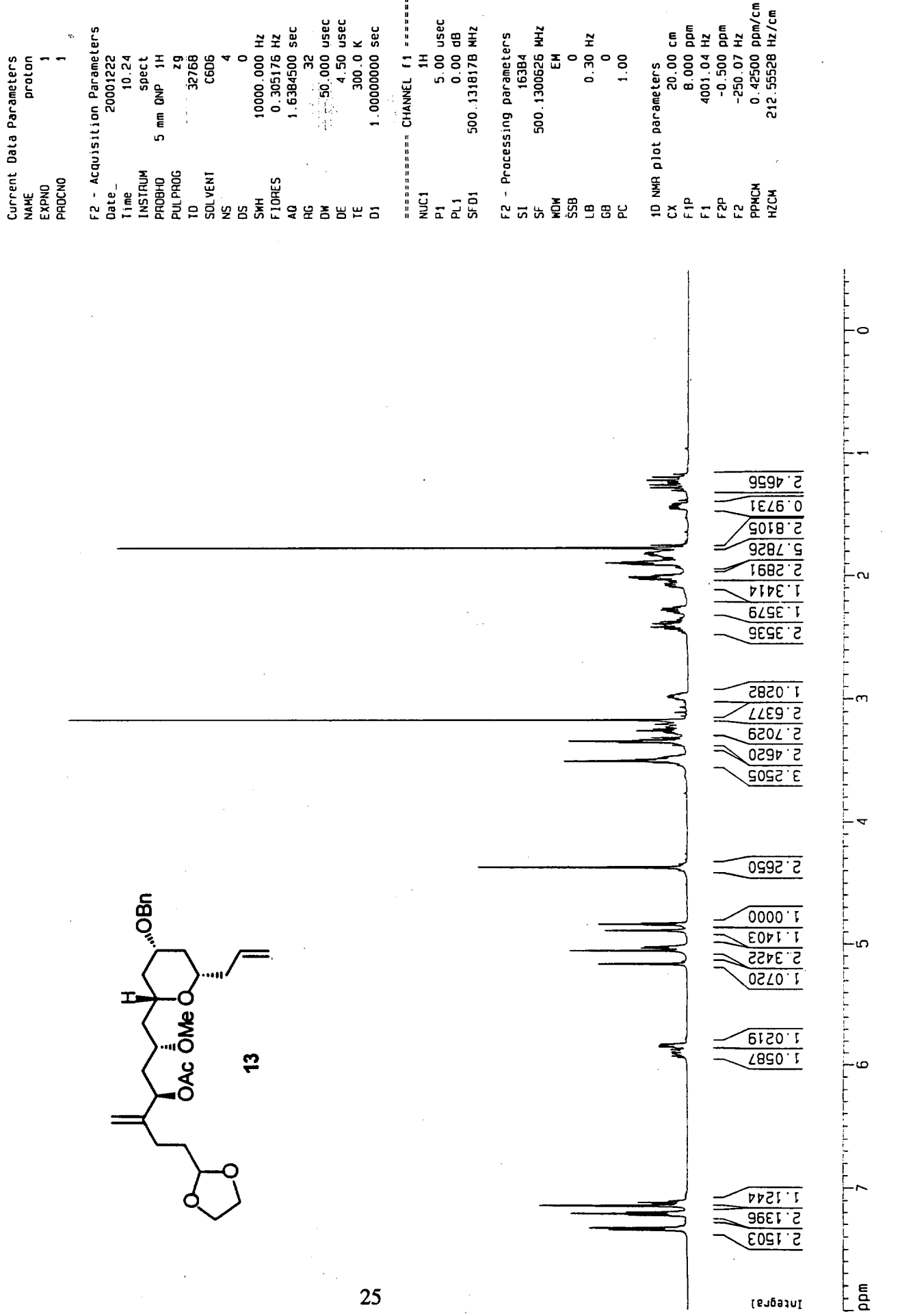


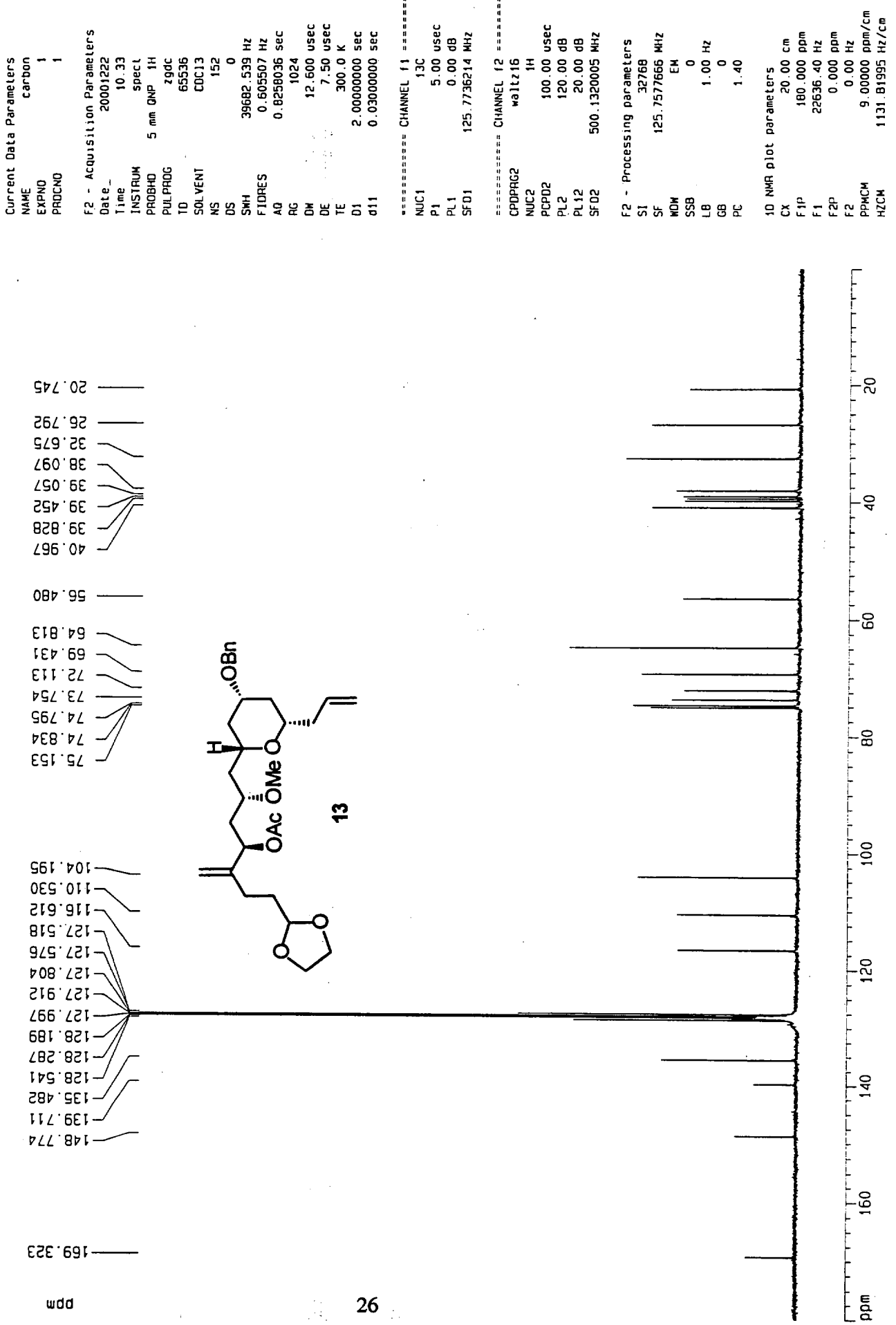


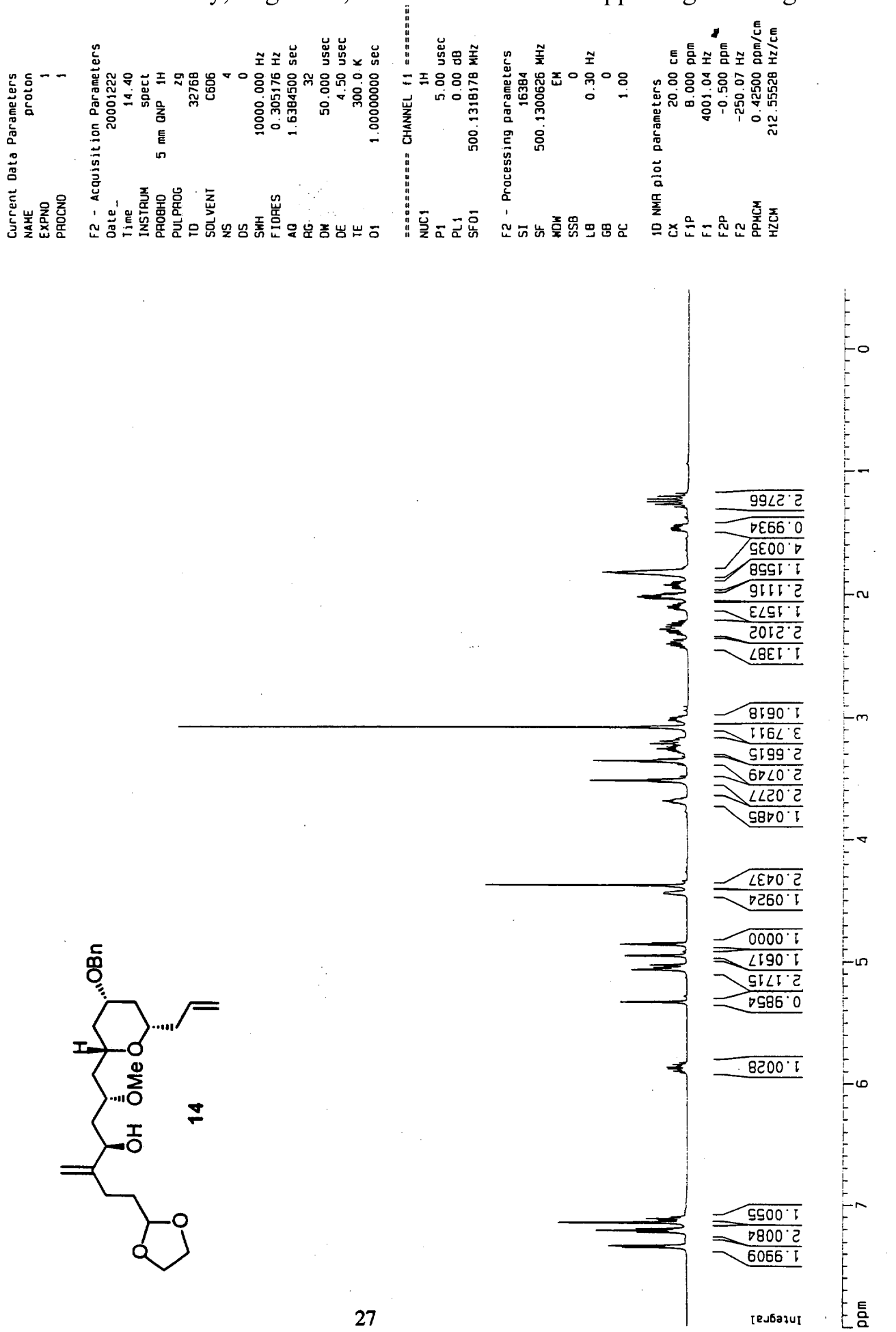
12

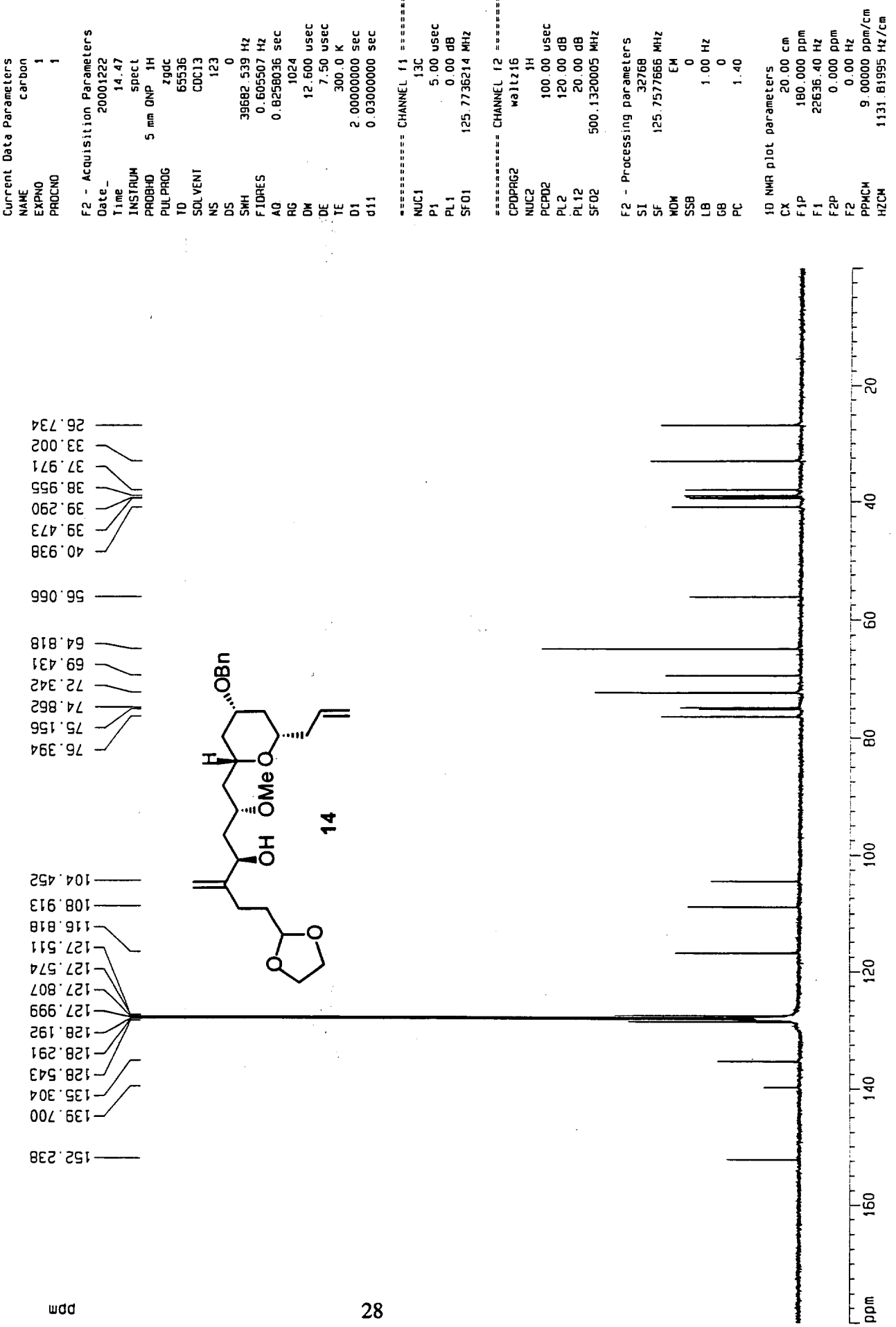


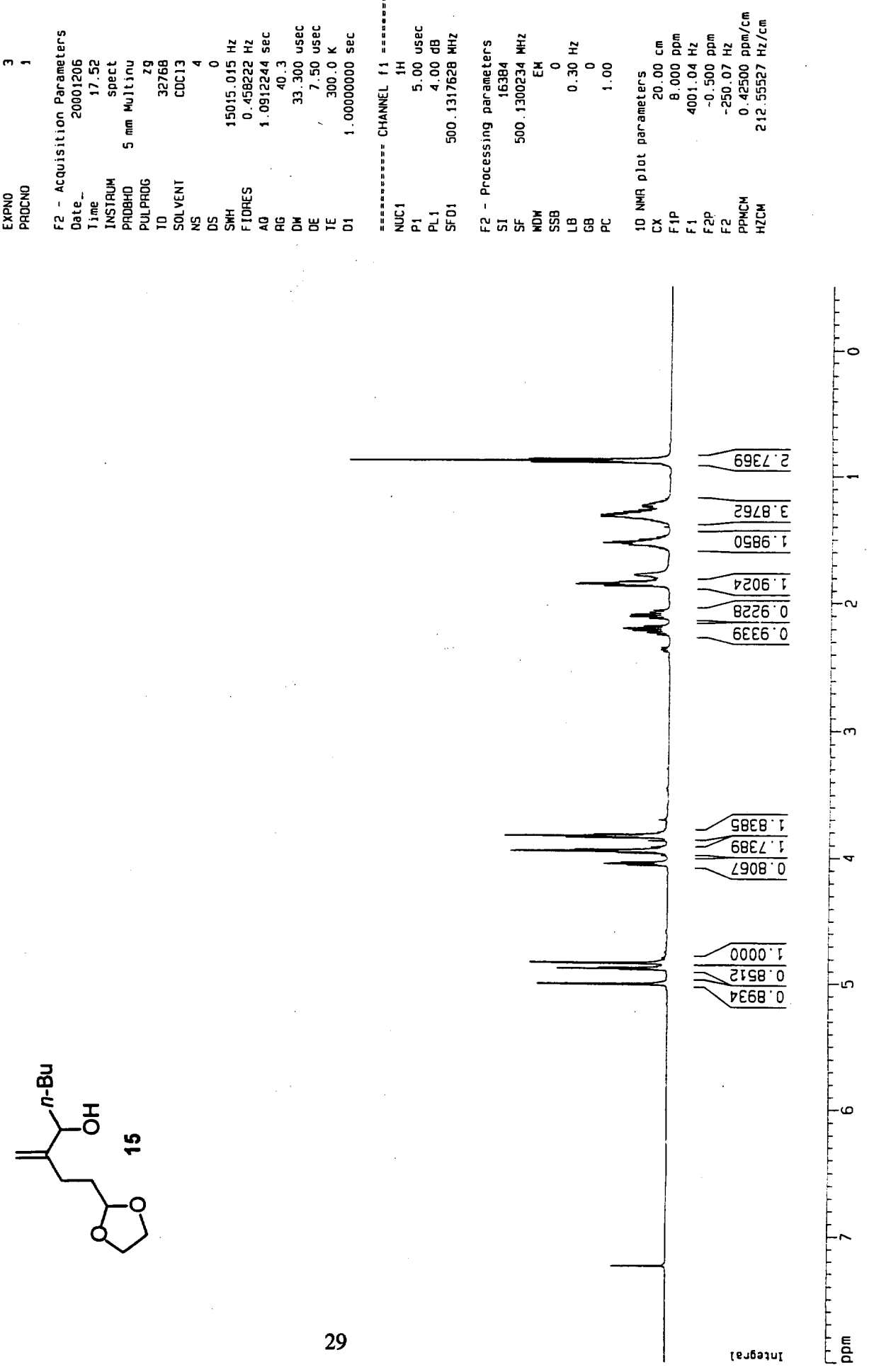


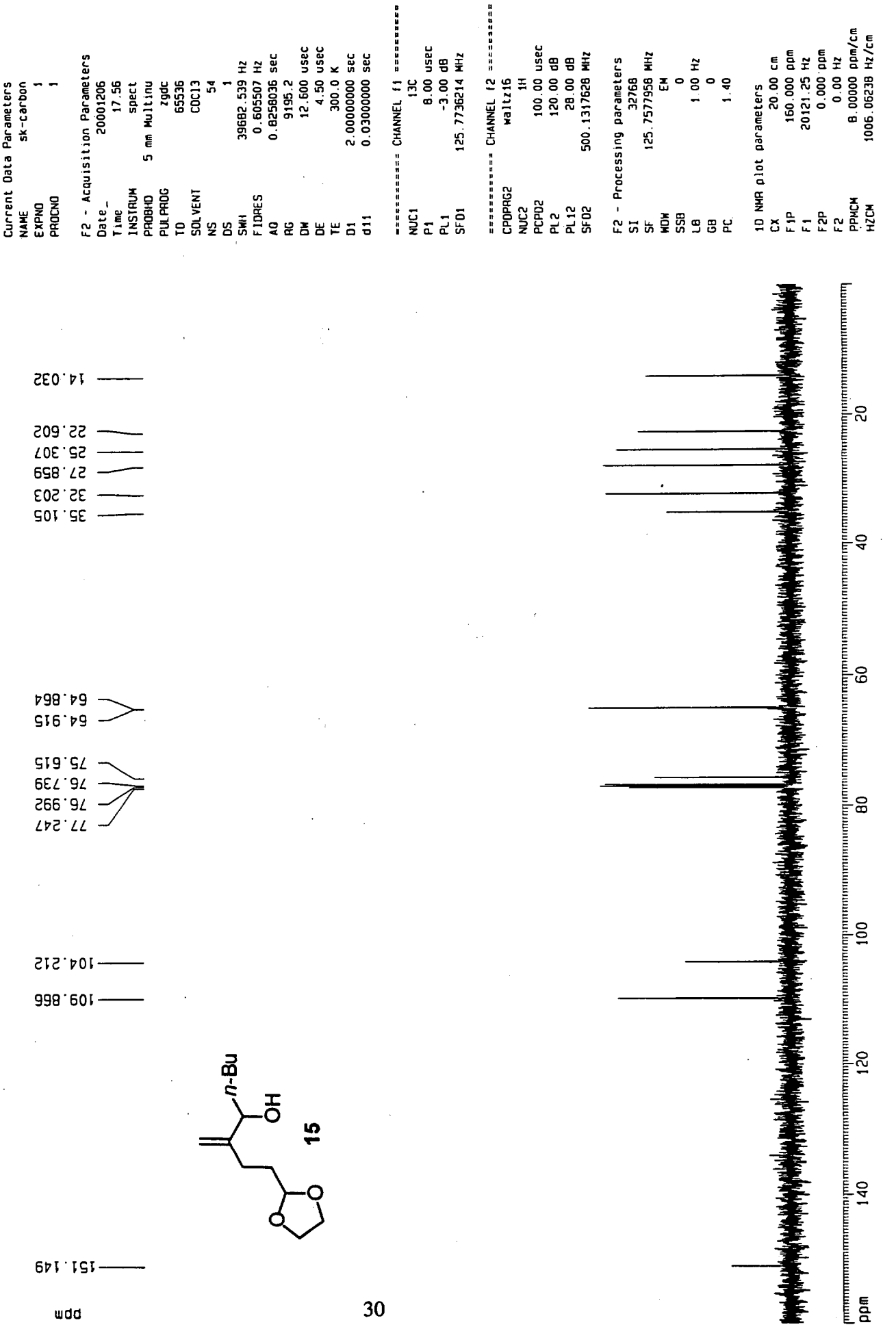


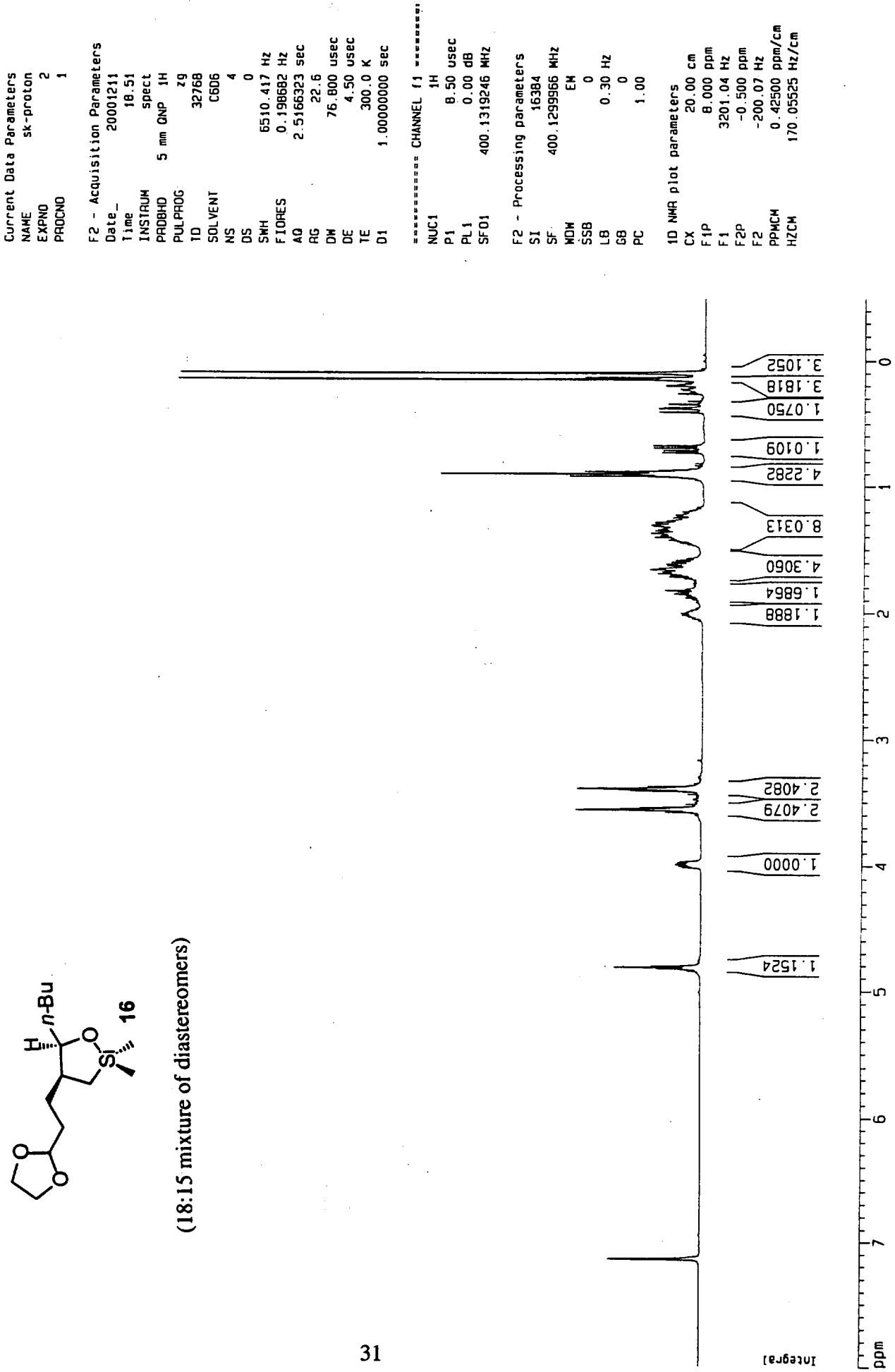


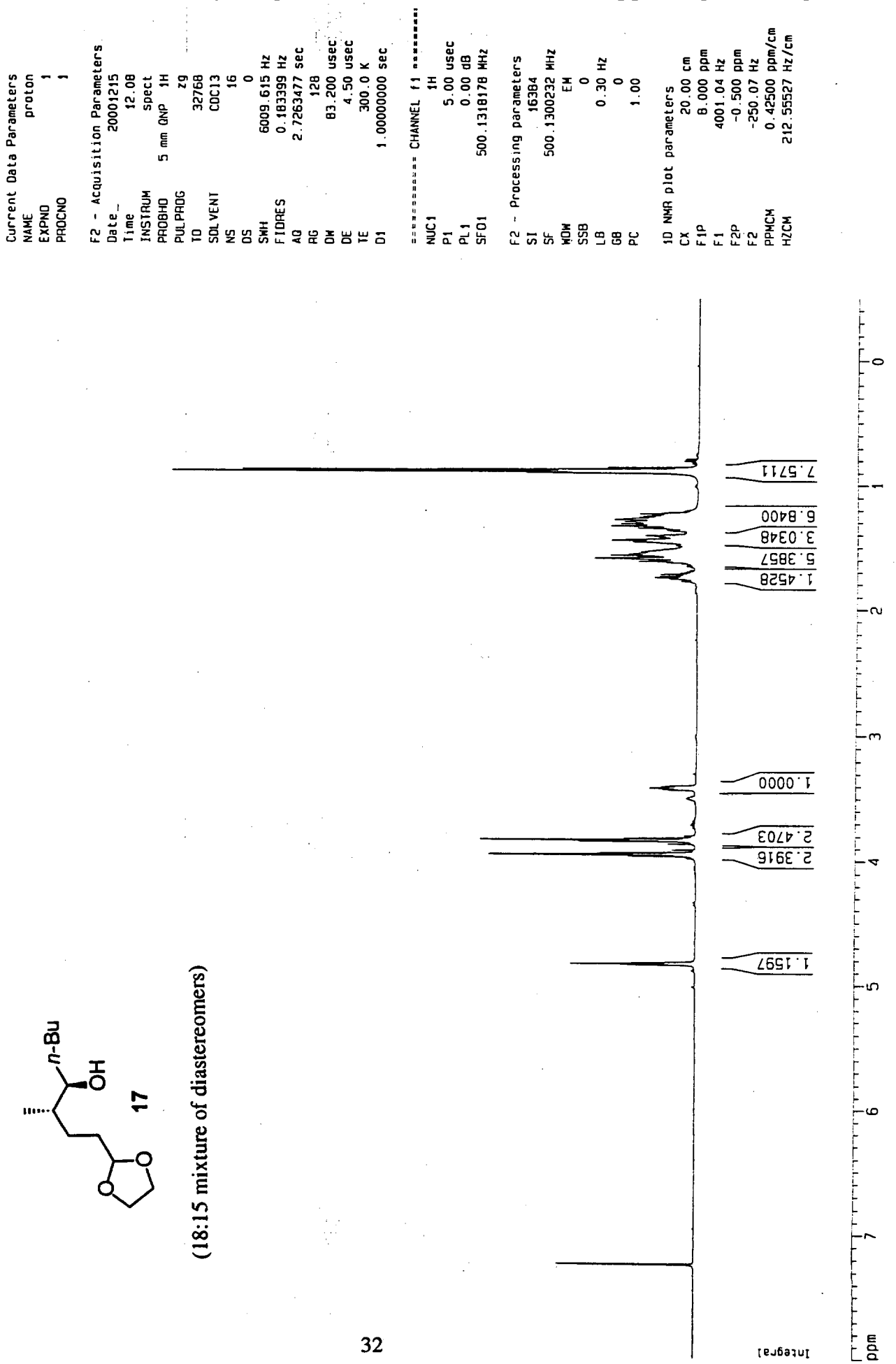


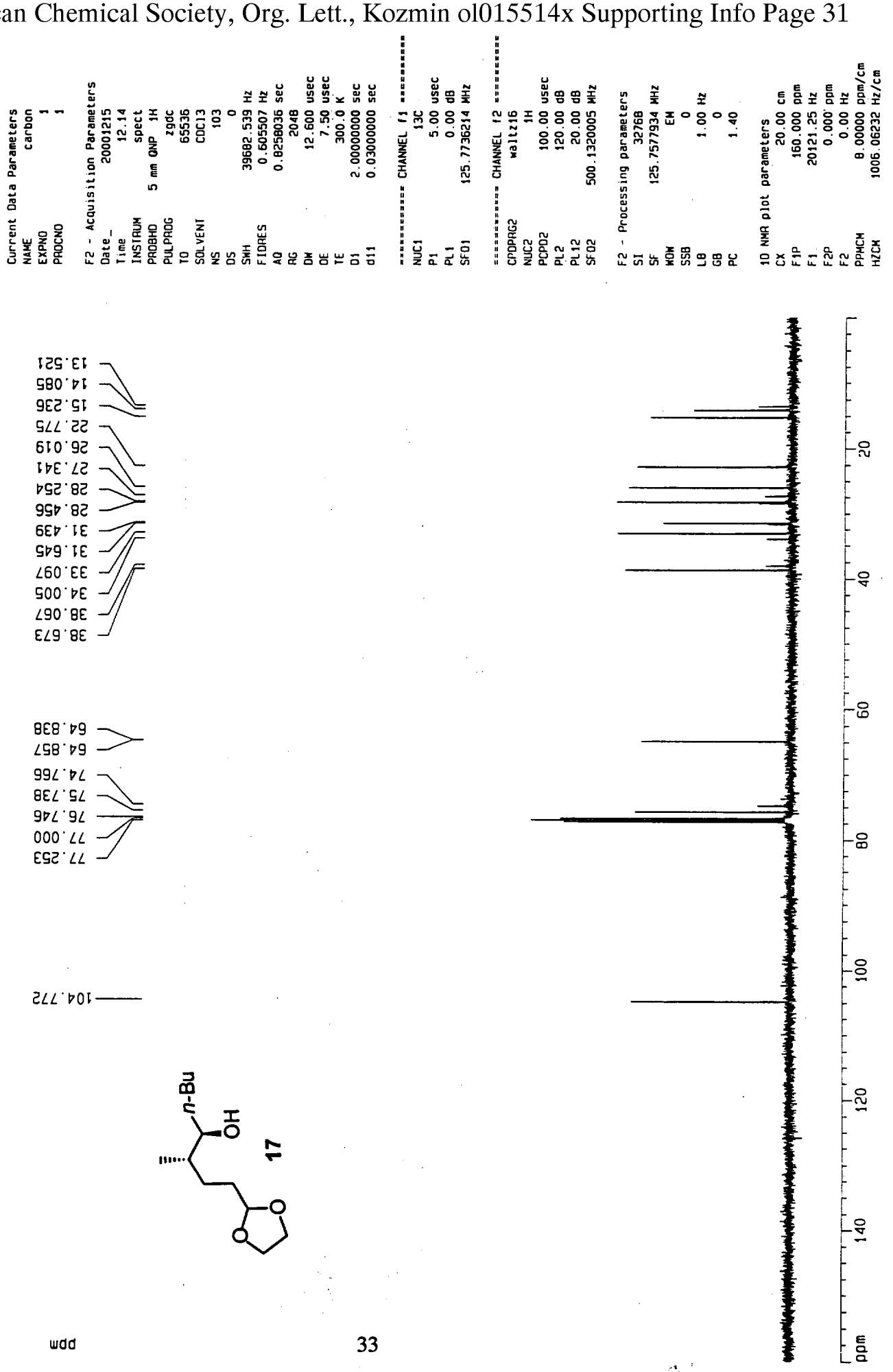


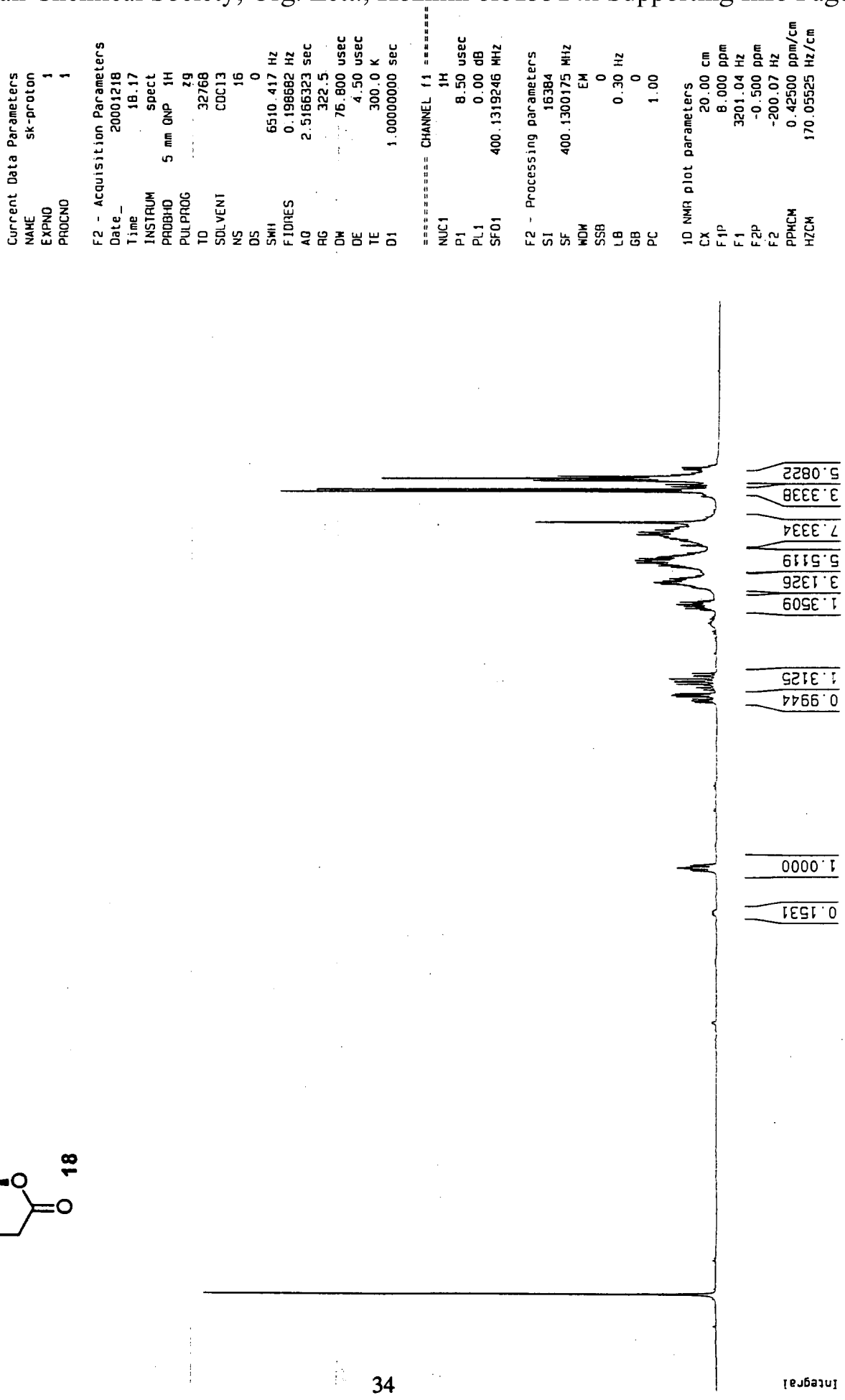








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PROCNO 1
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Time 18.17
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PULPROG zg
TD 32768
SOLVENT CDCl3
NS 16
DS 0
SWH 6510.417 Hz
FIDRES 0.198682 Hz
AQ 2.5166323 sec
RG 322.5
DW 76.800 usec
DE 4.50 usec
TE 300.0 K
D1 1.00000000 sec
======== CHANNEL f1 ========
NUC1 1H
P1 8.50 usec
PL1 0.00 dB
SFO1 400.1319246 MHz
F2 - Processing parameters
SI 16384
SF 400.1300175 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
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3.3338
7.3334
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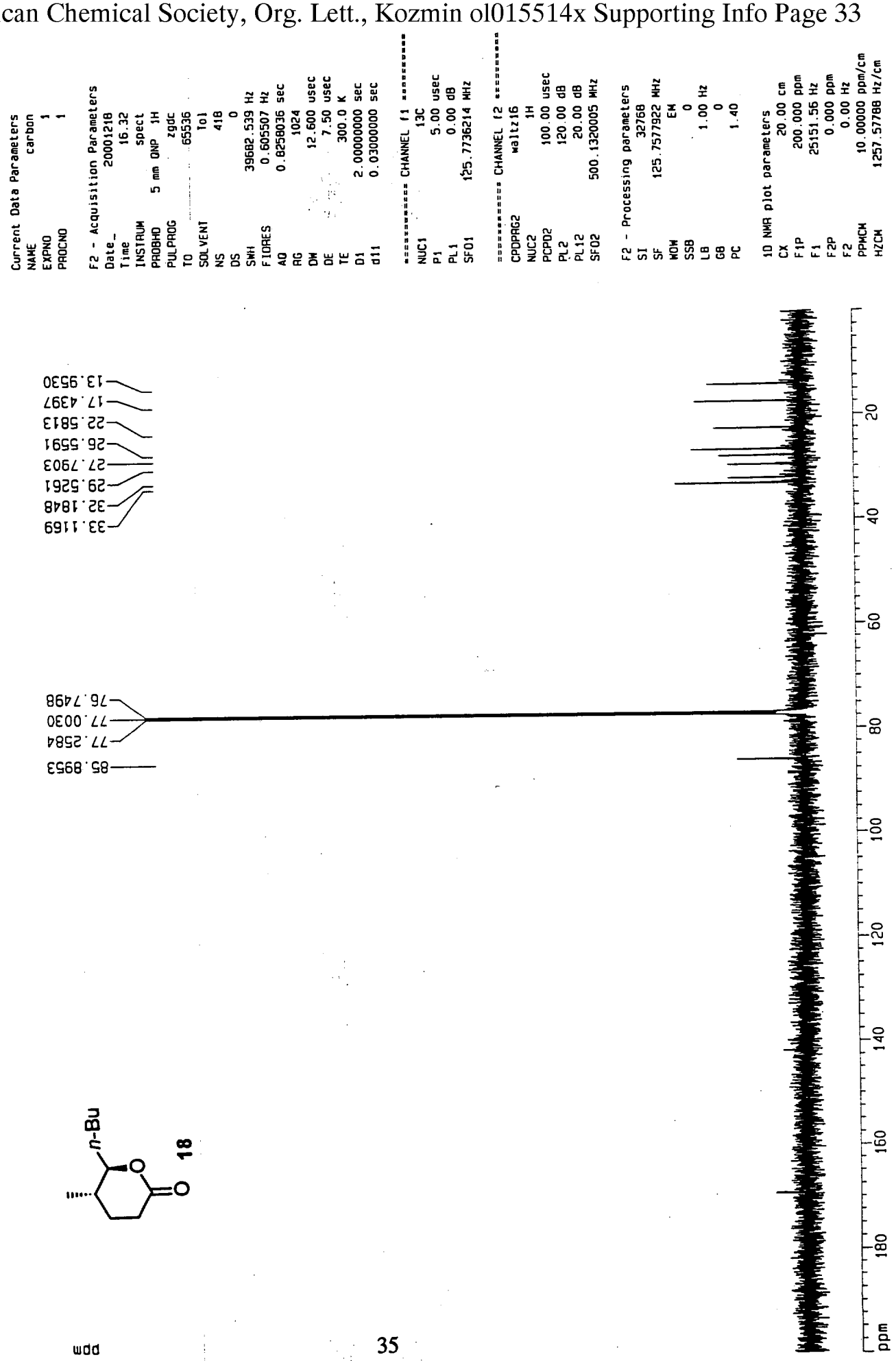
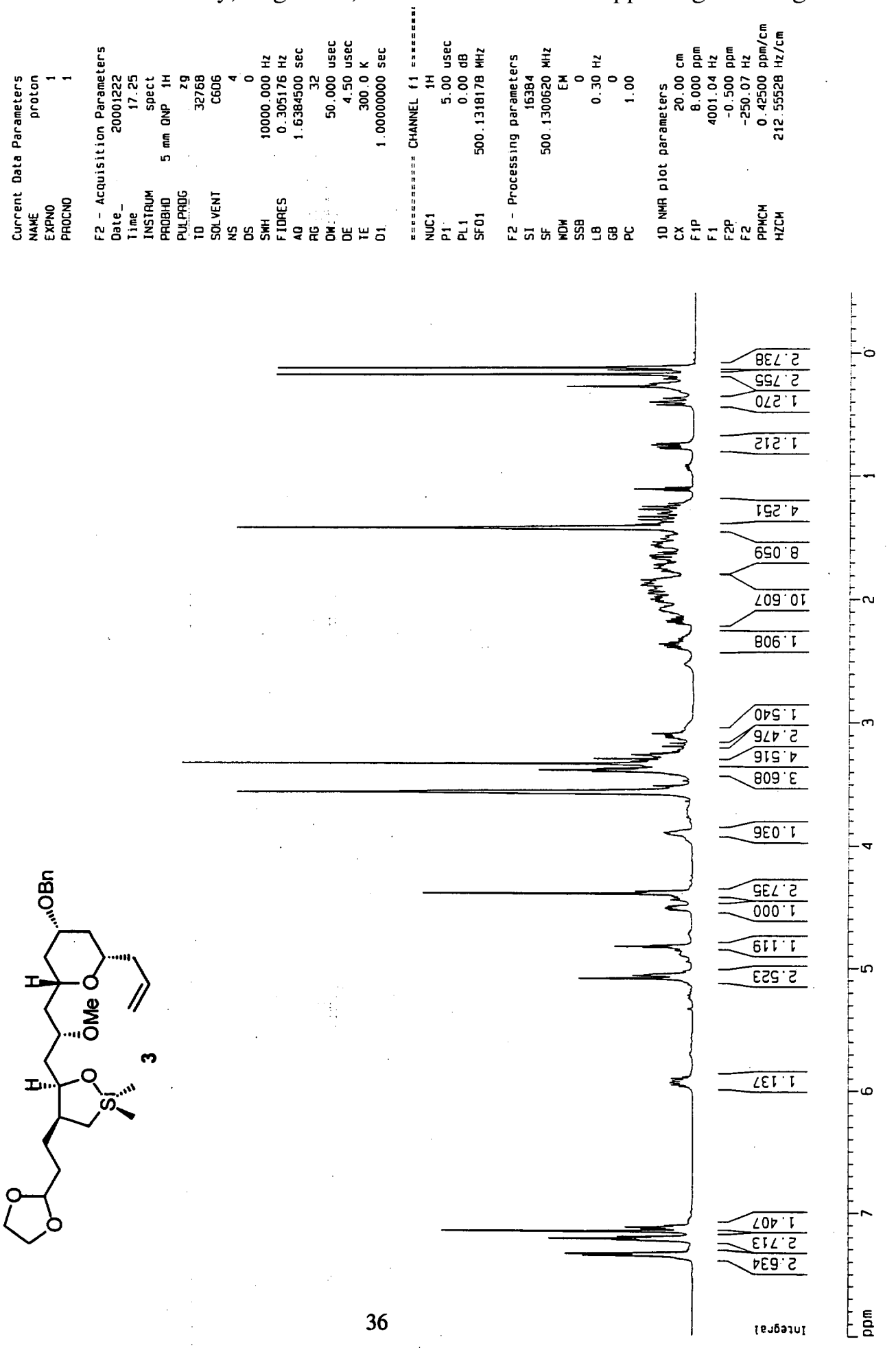
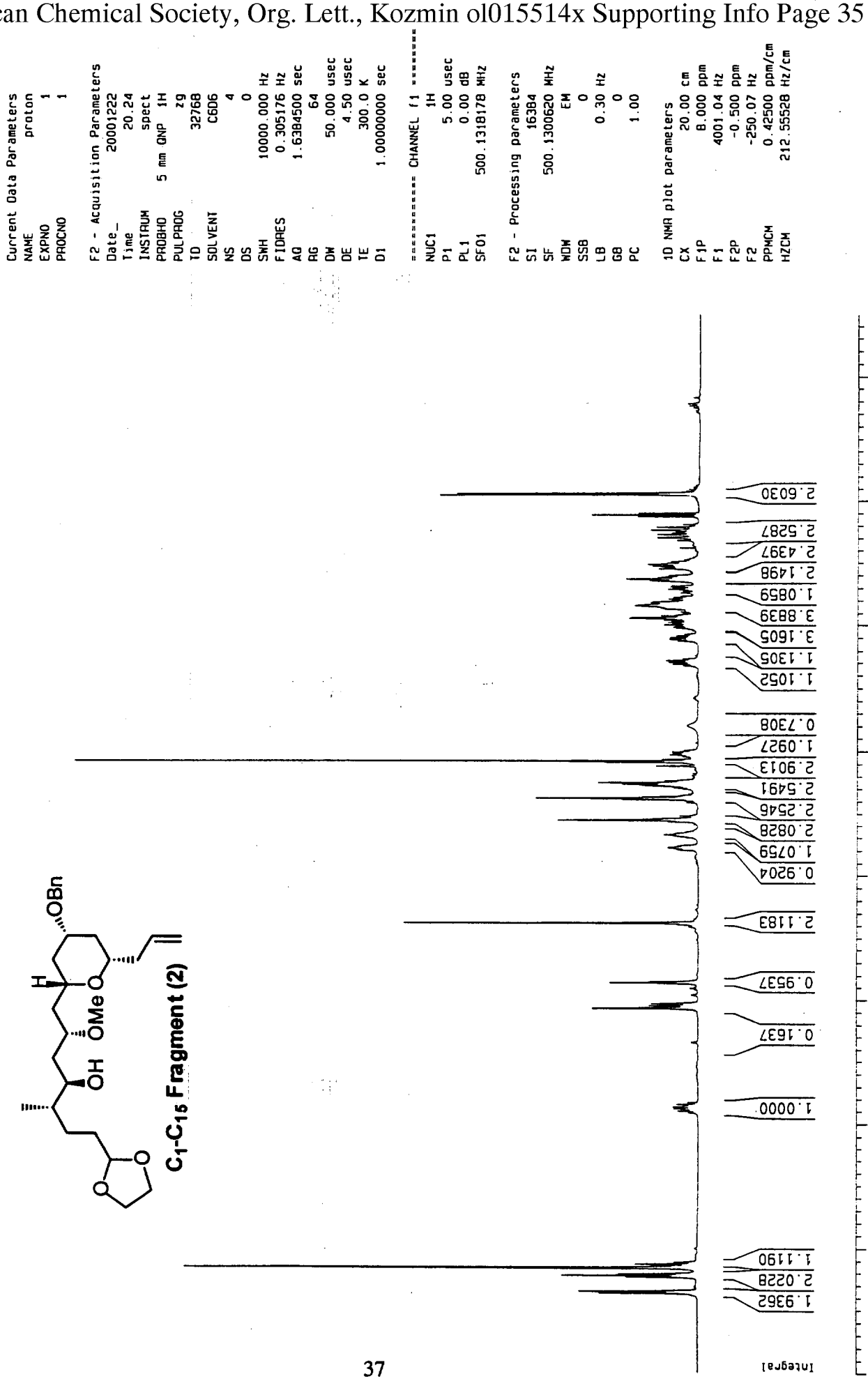
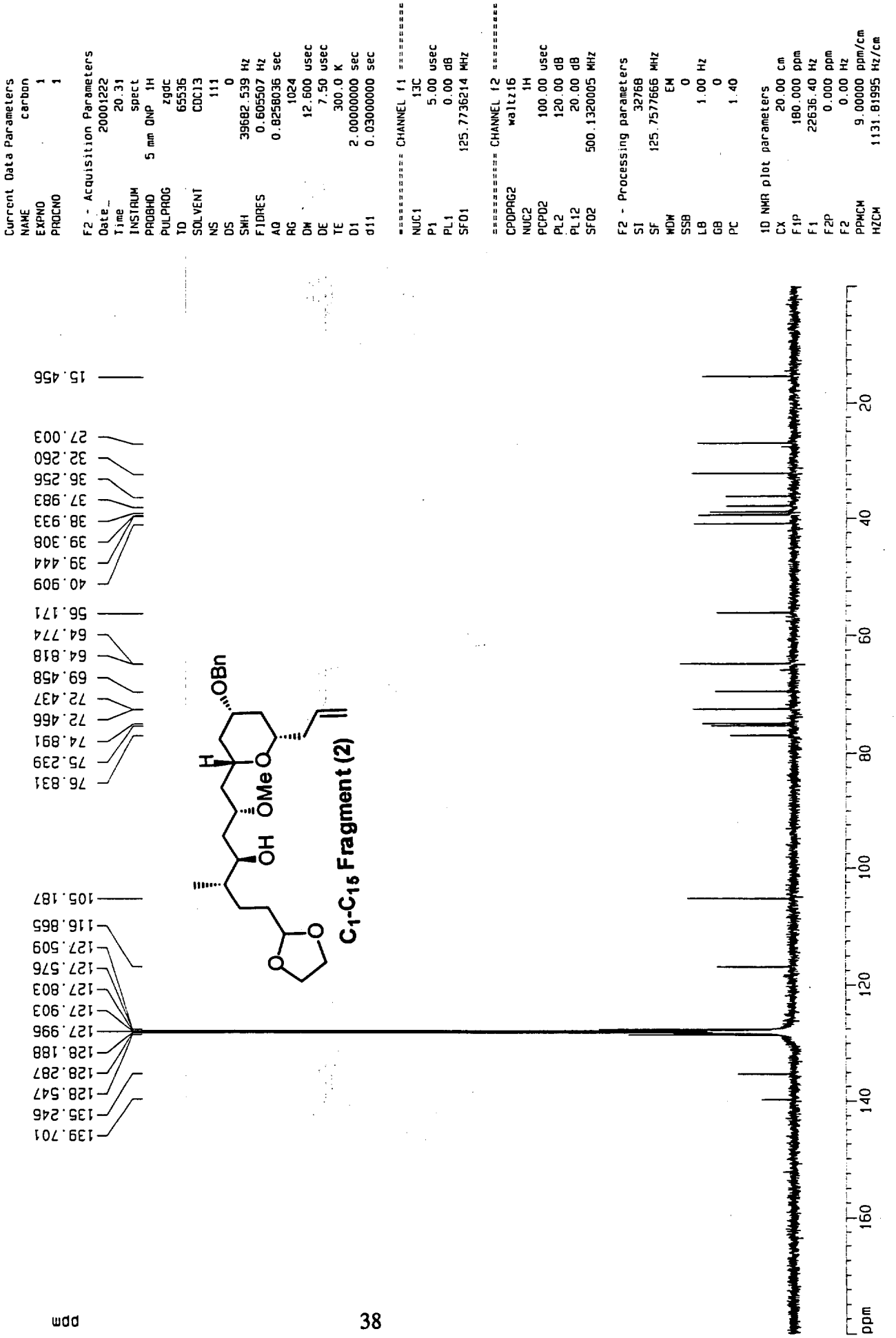
ppm
n-Bu
O
O
18





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PROCNO 1
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PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 111
DS 0
SWH 39682.539 Hz
FIDRES 0.605507 Hz
AQ 0.8258036 sec
RG 1024
DW 12.600 usec
DE 7.50 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
CHANNEL f1
NUC1 13C
P1 5.00 usec
PL1 0.00 dB
SFO1 125.7736214 MHz
CHANNEL f2
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 120.00 dB
PL12 20.00 dB
SFO2 500.1320005 MHz
F2 - Processing parameters
SI 32768
SF 125.7577665 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
1D NMR plot parameters
CX 20.00 cm
F1P 180.000 ppm
F1 22636.40 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 9.00000 ppm/cm
HZCM 1131.81995 Hz/cm
15.456
27.003
32.260
36.256
37.983
38.933
39.308
39.444
40.909
56.171
64.774
64.818
69.458
72.437
72.466
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75.239
76.831
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127.803
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128.188
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128.547
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H
O
OMe
OH
O
O
C1-C15 Fragment (2)
20
40
60
80
100
120
140
160
ppm