AN EFFICIENT PREPARATION OF NEW SULFONYL FLUORIDES AND LITHIUM SULFONATES

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SUPPORTING INFORMATION

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General experimental methods

General. Solvents were distilled before use. Reagents were obtained commercially and used without further purification. CsF and KF were dried in an oven at 250°C overnight. ^{1}H, ^{19}F and ^{13}C NMR were recorded at room temperature in $CDCl_3$ (unless stated otherwise cited) at 300 MHz, 282 MHz and 75 MHz respectively. Chemical shifts are given in ppm relative to residual peak of solvent (δ_H = 7.26 ppm for $CHCl_3$, δ_H = 2.50 ppm for Me_2SO, δ_H = 2.05 ppm for acetone, δ_C = 77.0 ppm for $CDCl_3$, δ_C = 39.52 ppm for Me_2SO-d_6 and δ_C = 29.84 ppm for acetone-d_6) and $CFCl_3$ (^{19}F). Coupling constants are given in Hertz. TLC analyses were carried out on silica gel deposited on aluminum plates, detection being done by UV. Silica gel chromatography was performed with silica gel (230 - 400 mesh). Mass spectrometric data (MS) were obtained by electron ionization (EI, 70 eV), chemical ionization (CI, NH_3 or CH_4), or electrospray ionization (ESI). Melting points are uncorrected and were performed in capillary tubes. *HRMS or combustion of new sulfinates **7a** and **8a** is precluded by their thermal stability*. *As lithium sulfonates **21-27** are hygroscopic solids, their elemental analysis were not determined.*

Synthesis of 1-(Bromo-difluoro-methylsulfanyl)-benzene (1a):[1] To a suspension of sodium hydride (6 g, 150 mmol) in anhydrous DMF (100 mL), was slowly added thiophenol (10.2 mL, 100 mmol) at 0°C over a period of 30 min. The reaction mixture was cooled to -50°C for 15 min before bromodifluoromethane (27 mL, 300 mmol) was added. The resulting reaction mixture was maintained at -50°C for 3 h and stirred 1 h from -50°C to room temperature. The resulting flask was cooled in an ice-water bath and excess sodium hydride was quenched by dropwise addition of water (100 mL). The aqueous phase was extracted with Et_2O (3 x 100 mL), the combined organic layers washed with water (3 x 100 mL), brine (100 mL), and dried over $MgSO_4$. Filtration and solvent evaporation left a crude product that was purified by distillation. **1a** was obtained as a colorless liquid (14.3 g, 60%). B.p. 97°C / 34 mmHg; R_f=0.7 (Pentane); ^{1}H NMR: δ= 7.66 (d, 2H, $^3J_{H\text{-}H}$ = 7.4 Hz), 7.52 (m, 1H), 7.43 (m, 2H); ^{13}C NMR: δ = 136.5, 131.2, 129.6, 127.3 (t, $^3J_{F\text{-}C}$ = 1.1 Hz), 119.4 (t, $^1J_{F\text{-}C}$ = 336.0 Hz); ^{19}F NMR: δ= -22.53 (s, 2F).

1-(2-Bromo-1,1,2,2-tetrafluoro-ethylsulfanyl)-4-fluoro-benzene (2b): colorless liquid (83% yield); b.p 85-90°C/30mmHg; R_f=0.8 (Pentane); ^{1}H NMR: δ= 7.65 (m, 2H), 7.12 (m, 2H); ^{13}C NMR: δ= 164.8 (d, $^1J_{F\text{-}C}$ = 252.5 Hz), 139.7 (d, $^3J_{F\text{-}C}$ = 9.3 Hz), 122.1 (ttd, $^1J_{F\text{-}C}$ = 290.9 Hz, $^2J_{F\text{-}C}$ = 34.3 Hz, $^6J_{F\text{-}C}$ = 1.5 Hz), 118.9 (m), 116.9 (d, $^2J_{F\text{-}C}$ = 22.0 Hz) 116.8 (tt, $^1J_{F\text{-}C}$ = 313.4 Hz, $^2J_{F\text{-}C}$ = 40.4 Hz); ^{19}F NMR: δ= -62.71 (t, 2F, $^3J_{F\text{-}F}$ = 8.0 Hz), -108.88 (t, 2F, $^3J_{F\text{-}F}$ = 8.0 Hz) -108.88 (m, 1F). Anal. Calcd for $C_8H_4BrF_5S$: C, 31.29; H, 1.31. Found C, 31.64; H, 1.58.

1-Bromo-4-(2-Bromo-1,1,2,2-tetrafluoro-ethylsulfanyl)-benzene (2c): colorless liquid (90% yield); R_f=0.8 (Pentane); ^{1}H NMR: δ= 7.57-7.49 (m, 4H); ^{13}C NMR: δ= 138.7, 132.8, 126.4, 122.6 (t, $^3J_{F\text{-}C}$ = 2.7 Hz), 121.9 (tt, $^1J_{F\text{-}C}$ = 291.2 Hz, $^2J_{F\text{-}C}$ = 34.2 Hz), 116.69 (tt, $^1J_{F\text{-}C}$ = 312.9 Hz, $^2J_{F\text{-}C}$ = 40.2 Hz); ^{19}F NMR: δ= -62.75 (t, 2F, $^3J_{F\text{-}F}$ = 8.0 Hz), -85.59 (t, 2F, $^3J_{F\text{-}F}$ = 8.0 Hz). Anal. Calcd for $C_8H_4Br_2F_4S$: C, 26.11; H, 1.10. Found C, 26.38; H, 1.38.

2-(2-Bromo-1,1,2,2-tetrafluoro-ethylsulfanyl)-pyridine (3a): yellow liquid (85% yield); R_f=0.2 (Pentane/CH_2Cl_2 1:1); ^{1}H NMR: δ= 8.66 (m, 1H), 7.77-7.66 (m, 2H), 7.36 (ddd, 1H, $^3J_{H\text{-}H}$ = 7.3 Hz, $^3J_{H\text{-}H}$ = 4.8 Hz, $^4J_{H\text{-}H}$ = 1.3 Hz); ^{13}C NMR: δ= 150.8, 148.0, 137.6, 130.9,

[1] a) Prakash, G. K. S.; Hu, J.; Olah, G. A. *J. Org. Chem.* **2003**, *68*, 4457-4463. b) Reutrakul, V.; Thongpaisanwong, T.; Tuchinda, P.; Kuhakarn, C.; Pohmakotr, M. *J. Org. Chem.* **2004**, *69*, 6913-6915.

124.5, 123.1 (tt, $^{1}J_{F\text{-}C}$ = 292.3 Hz, $^{2}J_{F\text{-}C}$ = 34.3 Hz), 116.8 (tt, $^{1}J_{F\text{-}C}$ = 313.0 Hz, $^{2}J_{F\text{-}C}$ = 39.7 Hz); ^{19}F NMR: δ = -63.12 (t, 2F, $^{3}J_{F\text{-}F}$ = 8.0 Hz), -84.55 (t, 2F, $^{3}J_{F\text{-}F}$ = 8.0 Hz). Anal. Calcd for $C_7H_4BrF_4NS$: C, 28.98; H, 1.39. Found C, 29.12; H, 1.56.

[Difluoro-(4-fluoro-phenylsulfanyl)-methyl]-trimethyl-silane (4b): yellow liquid (95% yield); R_f=0.6 (Pentane); ^{1}H NMR: δ = 7.56 (m, 2H), 7.06 (m, 2H), 0.26 (s, 9H); ^{13}C NMR: δ = 169.9 (d, $^{1}J_{F\text{-}C}$ = 249.7 Hz), 138.8 (d, $^{3}J_{F\text{-}C}$ = 8.8 Hz), 133.9 (td, $^{1}J_{F\text{-}C}$ = 300.5 Hz, $^{6}J_{F\text{-}C}$ = 1.1 Hz), 121.5 (td, $^{3}J_{F\text{-}C}$ = 4.4 Hz, $^{4}J_{F\text{-}C}$ = 3.3 Hz), 116.1 (d, $^{2}J_{F\text{-}C}$ = 21.9 Hz), -4.1 (t, $^{3}J_{F\text{-}C}$ = 1.4 Hz); ^{19}F NMR: δ = -88.41 (s, 2F), -112.06 (m, 1F). Anal. Calcd for $C_{10}H_{13}F_3SSi$: C, 47.97; H, 5.23. Found C, 48.12; H, 5.49.

Trimethyl-(1,1,2,2-tetrafluoro-2-phenylsulfanyl-ethyl)-silane (5a): yellow liquid (90% yield); R_f=0.7 (Pentane); ^{1}H NMR: δ = 7.65 (m, 2H), 7.48-7.36 (m, 3H), 0.27 (m, 9H); ^{13}C NMR: δ = 137.3, 130.3, 129.2, 127.5 (tt, $^{1}J_{F\text{-}C}$ = 281.8 Hz, $^{2}J_{F\text{-}C}$ = 32.5 Hz), 124.6 (m), 123.0 (tt, $^{1}J_{F\text{-}C}$ = 273.2 Hz, $^{2}J_{F\text{-}C}$ = 45.3 Hz), -4.0 (m); ^{19}F NMR: δ = -82.88 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -122.56 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz). Anal. Calcd for $C_{11}H_{14}F_4SSi$: C, 46.79; H, 5.00. Found C, 47.01; H, 5.28.

Trimethyl-[1,1,2,2-tetrafluoro-2-(4-fluoro-phenyl-sulfanyl)-ethyl]-silane (5b): yellow liquid (88% yield); R_f= 0.6 (Pentane); ^{1}H NMR: δ = 7.64 (m, 2H), 7.09 (m, 2H), 0.27 (s, 9H); ^{13}C NMR: δ = 164.4 (d, $^{1}J_{F\text{-}C}$ = 251.4 Hz), 139.5 (d, $^{3}J_{F\text{-}C}$ = 8.8 Hz), 127.1 (ttd, $^{1}J_{F\text{-}C}$ = 281.2 Hz, $^{2}J_{F\text{-}C}$ = 32.9 Hz, $^{6}J_{F\text{-}C}$ = 1.4 Hz), 122.8 (tt, $^{1}J_{F\text{-}C}$ = 272.2 Hz, $^{2}J_{F\text{-}C}$ = 45.3 Hz), 119.9 (m), 116.5 (d, $^{2}J_{F\text{-}C}$ = 22.0 Hz) -4.0 (m); ^{19}F NMR: δ = -83.29 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -110.55 (m, 1F), -122.52 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz). Anal. Calcd for $C_{11}H_{13}F_5SSi$: C, 43.99; H, 4.36. Found C, 44.22; H, 4.48.

2-(1,1,2,2-Tetrafluoro-2-trimethylsilanyl-ethylsulfanyl)-pyridine (6a): yellow liquid (76% yield); R_f=0.5 (Pentane/CH_2Cl_2 1:2); ^{1}H NMR: δ = 8.68 (ddd, 1H, $^{3}J_{H\text{-}H}$ = 4.8 Hz, $^{4}J_{H\text{-}H}$ = 1.6 Hz, $^{5}J_{H\text{-}H}$ = 1.1 Hz), 7.71-7.63 (m, 2H), 7.26 (ddd, 1H, $^{3}J_{H\text{-}H}$ = 6.5 Hz, $^{3}J_{H\text{-}H}$ = 4.8 Hz, $^{4}J_{H\text{-}H}$ = 2.2 Hz), 0.28 (s, 9H); ^{13}C NMR: δ = 150.5, 149.8, 137.3, 130.2, 127.8 (tt, $^{1}J_{F\text{-}C}$ = 283.4 Hz, $^{2}J_{F\text{-}C}$ = 32.4 Hz), 123.6, 122.5 (tt, $^{1}J_{F\text{-}C}$ = 273.0 Hz, $^{2}J_{F\text{-}C}$ = 44.7 Hz), -4.1 (m); ^{19}F NMR: δ = -82.15 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -122.48 (t, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz). Anal. Calcd for $C_{10}H_{13}F_4NSSi$: C, 42.39; H, 4.62. Found C, 42.54; H, 4.76.

Synthesis of (2,2-Difluoro-1-phenyl-vinyloxy)-trimethyl-silane (9):[2] Into a mixture of Mg turnings (0.2 g, 8.3 mmol) and TMSCl (2 mL, 16 mmol) in anhydrous THF (10 mL) at 0°C, was slowly added $PhCOCF_3$ (0.56 mL, 4 mmol). The reaction mixture was stirred at 0°C for 4 h. After removal of the solvent and excess TMSCl under vacuum, pentane was added. Solids were filtrated and the resulting filtrate was concentrated to give 0.92 g of crude **9** as a colorless liquid. The product is pure enough to be used for the next step. R_f=0.7 (Petroleum ether/CH_2Cl_2 7:3); ^{1}H NMR: δ= 7.62 (m, 2H), 7.48 (m, 2H), 7.38 (m, 1H), 0.22 (s, 9H); ^{19}F NMR: δ= -100.29 (d, 1F, $^2J_{F\text{-}F}$ = 67.7 Hz), -112.06 (d, 1F, $^2J_{F\text{-}F}$ = 67.7 Hz).

1,1,2,2-Tetrafluoro-2-(4-fluoro-phenylsulfanyl)-ethane-sulfonyl fluoride (13b): yellow liquid (A: 67% yield, B: 64% yield); R_f=0.7 (Pentane); ^{1}H NMR: δ = 7.66 (m, 2H), 7.14 (m, 2H); ^{13}C NMR: δ= 165.4 (d, $^1J_{F\text{-}C}$ = 253.6 Hz), 140.0 (d, $^3J_{F\text{-}C}$ = 9.3 Hz), 117.6 (m), 117.4 (d, $^2J_{F\text{-}C}$ = 22.0 Hz), 121.8 (m), 116.1 (ttd, $^1J_{F\text{-}C}$ = 300.6 Hz, $^2J_{F\text{-}C}$ = 40.3 Hz, $^2J_{F\text{-}C}$ = 33.8 Hz); ^{19}F NMR: δ= 46.01 (m, 1F), -86.99 (m, 2F), -105.70 (m, 2F), -107.67 (m, 1F); MS (EI): *m/z* = 127.3, 177.3, 310.2 (M^+); HRMS: calcd for $C_8H_4F_6O_2S_2$: 309.9557 ; found: 309.9559.

1,1,2,2-Tetrafluoro-2-(4-trimethylsilanyl-phenylsulfanyl)-ethanesulfonyl fluoride (13c): colorless liquid (A: 48% yield, B: 77% yield); R_f=0.7 (Pentane); ^{1}H NMR: δ = 7.64-7.56 (m, 4H), 0.29 (s, 9H); ^{13}C NMR: δ= 145.4, 136.5, 134.6, 122.4 (t, $^3J_{F\text{-}C}$ = 3.0 Hz), 121.9 (ttd, $^1J_{F\text{-}C}$ = 291.0 Hz, $^2J_{F\text{-}C}$ = 30.8 Hz, $^3J_{F\text{-}C}$ = 1.1 Hz), 116.0 (ttd, $^1J_{F\text{-}C}$ = 300.5 Hz, $^2J_{F\text{-}C}$ = 40.8 Hz, $^2J_{F\text{-}C}$ = 32.6 Hz), -1.2; ^{19}F NMR: δ= 46.01 (m, 1F), -86.40 (m, 2F), -105.54 (m, 2F); MS (EI): *m/z* = 265, 349, 364 (M^+); HRMS: calcd for $C_{11}H_{13}F_5O_2S_2Si$: 364.0046; found: 364.0045.

2-(4-Bromo-phenylsulfanyl)-1,1,2,2-tetrafluoro-ethane-sulfonyl fluoride (13d): colorless liquid (B: 62% yield); R_f= 0.7 (Pentane); ^{1}H NMR: δ= 7.64-7.51 (m, 4H); ^{13}C NMR: δ= 138.8, 133.2, 127.1, 121.5 (ttd, $^1J_{F\text{-}C}$ = 291.6 Hz, $^2J_{F\text{-}C}$ = 30.8 Hz, $^3J_{F\text{-}C}$ = 1.0 Hz), 121.1 (m), 115.8 (ttd, $^1J_{F\text{-}C}$ = 300.6 Hz, $^2J_{F\text{-}C}$ = 40.4 Hz, $^2J_{F\text{-}C}$ = 32.9 Hz); ^{19}F NMR: δ = 46.06 (m, 1F), -86.59 (m, 2F), -105.72 (m, 2F); MS (EI): *m/z* = 187, 189, 237, 239, 370 (M^+), 372; HRMS: calcd for $C_8H_4BrF_5O_2S_2$: 369.8756; found: 369.8757.

1,1,2,2-Tetrafluoro-2-(pyridin-2-ylsulfanyl)-ethane-sulfonyl fluoride (14a): yellow liquid (A: 70% yield, B: 72% yield); R_f=0.3 (Pentane); ^{1}H NMR: δ= 8.68 (ddd, 1H, $^3J_{H\text{-}H}$ = 4.8 Hz, $^4J_{H\text{-}H}$ = 1.9 Hz, $^5J_{H\text{-}H}$ = 0.9 Hz), 7.78 (ddd, 1H, $^3J_{H\text{-}H}$ = $^3J_{H\text{-}H}$ = 7.5 Hz, $^4J_{H\text{-}H}$ = 1.9 Hz), 7.72 (m,

[2] a) Amii, H.; Kobayashi, T.; Hatamoto, Y.; Uneyama, K. *Chem. Commun*. **1999**, 1323-1324. b) Prakash, G. K. S.; Hu, J.; Simon, J.; Bellew, D. R.; Olah, G. A. J. Fluorine. Chem. **2004**, *125*, 595-601.

1H), 7.41 (ddd, 1H, $^{3}J_{H\text{-}H}$ = 7.5 Hz, $^{3}J_{H\text{-}H}$ = 4.8 Hz, $^{4}J_{H\text{-}H}$ = 1.2 Hz); ^{13}C NMR: δ= 151.2, 146.5 (m), 138.0, 131.5, 125.1, 126.7-114.7 (m, 2C); ^{19}F NMR: δ= 46.34 (m, 1F), -85.23 (m, 2F), -105.74 (m, 2F); MS (EI): *m/z* = 293.4 (M^+); HRMS: calcd for $C_7H_4F_5NO_2S_2$: 292.9604; found: 292.9608.

1,1-Difluoro-2-oxo-2-phenyl-ethanesulfonyl fluoride (15): colorless liquid (A: 45% yield, B: 67% yield); R_f=0.6 (Petroleum ether/CH_2Cl_2 9:1); ^{1}H NMR: δ= 8.10 (m, 2H), 7.79 (m, 1H), 7.60 (m, 2H); ^{13}C NMR: δ= 181.1 (td, $^{2}J_{F\text{-}C}$ = 23.9 Hz, $^{3}J_{F\text{-}C}$ = 1.7 Hz), 136.8, 130.5 (t, $^{4}J_{F\text{-}C}$ = 2.7 Hz), 129.8 (td, $^{3}J_{F\text{-}C}$ = $^{4}J_{F\text{-}C}$ = 2.6 Hz), 116.6 (td, $^{1}J_{F\text{-}C}$ = 309.3 Hz, $^{2}J_{F\text{-}C}$ = 28.0 Hz); ^{19}F NMR: δ= 41.61 (t, 1F, $^{3}J_{F\text{-}F}$ = 2.3 Hz), -95.98 (d, 2F, $^{3}J_{F\text{-}F}$ = 2.3 Hz); MS (EI): *m/z* = 77.3, 105.3, 238.3 (M^+); HRMS: calcd for $C_8H_5F_3O_3S$: 237.9912; found: 237.9913.

Difluoro-phenylsulfanyl-methanesulfonyl fluoride (16a): colorless liquid (B: 57% yield); R_f=0.6 (Pentane); ^{1}H NMR: δ= 7.71 (d, 2H, $^{3}J_{H\text{-}H}$ = 7.5 Hz), 7.56 (t, 1H, $^{3}J_{H\text{-}H}$ = 7.5 Hz), 7.46 (dd, 2H, $^{3}J_{H\text{-}H}$ = $^{3}J_{H\text{-}H}$ = 7.5 Hz); ^{13}C NMR: δ= 137.5 (t, $^{4}J_{F\text{-}C}$ = 1.1 Hz), 132.1, 130.0, 126.6 (td, $^{1}J_{F\text{-}C}$ = 323.3 Hz, $^{2}J_{F\text{-}C}$ = 32.9 Hz), 121.8 (t, $^{3}J_{F\text{-}C}$ = 3.0 Hz); ^{19}F NMR: δ= 35.06 (t, 1F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -76.08 (d, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz); MS (EI): *m/z* = 77, 109, 159, 242 (M^+); HRMS: calcd for $C_7H_5F_3O_2S_2$: 241.9683; found: 241.9686.

Difluoro-(4-fluoro-phenylsulfanyl)-methanesulfonyl fluo-ride (16b): colorless liquid (B: 32% yield); R_f=0.7 (Pentane); ^{1}H NMR: δ = 7.70 (m, 2H), 7.16 (m, 2H); ^{13}C NMR: δ= 165.3 (d, $^{1}J_{F\text{-}C}$ = 254.7 Hz), 139.9 (d, $^{3}J_{F\text{-}C}$ = 9.3 Hz), 126.7 (tdd, $^{1}J_{F\text{-}C}$ = 323.4 Hz, $^{2}J_{F\text{-}C}$ = 32.3 Hz, $^{6}J_{F\text{-}C}$ = 2.4 Hz), 117.4 (d, $^{2}J_{F\text{-}C}$ = 22.5 Hz), 117.1 (m); ^{19}F NMR: δ= 35.2 (t, 1F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -76.80 (d, 2F, $^{3}J_{F\text{-}F}$ = 4.6 Hz), -106.74 (m, 1F); MS (EI): *m/z* = 177, 260 (M^+); HRMS: calcd for $C_7H_4F_4O_2S_2$: 259.9589; found: 259.9591.

Benzenesulfinyl-difluoro-methanesulfonyl fluoride (19a): colorless liquid (34% yield); R_f=0.45 (Pentane/CH_2Cl_2 1:1); ^{1}H NMR: δ= 7.86 (d, 2H, $^{3}J_{H\text{-}H}$ = 7.3 Hz), 7.77-7.63 (m, 3H); ^{13}C NMR: δ= 134.7, 134.1 (dd, $^{3}J_{F\text{-}C}$ = $^{3}J_{F\text{-}C}$ = 2.5 Hz), 129.9, 126.6 (dd, $^{4}J_{F\text{-}C}$ = $^{4}J_{F\text{-}C}$ = 1.1 Hz), 123.7 (ddd, $^{1}J_{F\text{-}C}$ = 348.9 Hz, $^{1}J_{F\text{-}C}$ = 340.7 Hz, $^{2}J_{F\text{-}C}$ = 24.8 Hz); ^{19}F NMR: δ= 49.78 (dd, 1F, $^{3}J_{F\text{-}F}$ = $^{3}J_{F\text{-}F}$ = 5.1 Hz), -99.61 (dd, 1F, $^{1}J_{F\text{-}F}$ = 215.7 Hz, $^{3}J_{F\text{-}F}$ = 5.1 Hz), -105.45 (dd, 1F, $^{1}J_{F\text{-}F}$ = 215.7 Hz, $^{3}J_{F\text{-}F}$ = 5.1 Hz); MS (EI): *m/z* = 125, 258 (M^+); HRMS: calcd for $C_7H_5F_3O_3S_2$: 257.9632; found: 257.9630.

Benzenesulfonyl-difluoro-methanesulfonyl fluoride (20a): colorless liquid (75% yield); R_f=0.7 (Pentane); ^{1}H NMR: δ= 8.09 (d, 2H, $^{3}J_{H\text{-}H}$ = 7.6 Hz), 7.90 (t, 1H, $^{3}J_{H\text{-}H}$ = 7.6 Hz), 7.70 (dd, 2H, $^{3}J_{H\text{-}H}$ = $^{3}J_{H\text{-}H}$ = 7.6 Hz); ^{13}C NMR: δ= 137.7, 131.6, 131.0, 130.2, 118.8 (td, $^{1}J_{F\text{-}C}$ = 336.3 Hz, $^{2}J_{F\text{-}C}$ = 30.0 Hz); ^{19}F NMR: δ= 49.28 (t, 1F, $^{3}J_{F\text{-}F}$ = 5.7 Hz), -99.40 (d, 2F, $^{3}J_{F\text{-}F}$ =

5.7 Hz); MS (EI): *m/z* = 77, 141, 274 (M^+); HRMS: calcd for $C_7H_5F_3O_4S_2$: 273.9581; found: 273.9580.

Lithium 2-benzenesulfinyl-1,1,2,2-tetrafluoro-ethanesulfonate (22): white solid (0.15 g, 71% yield); m.p. 200°C, ^{1}H NMR (acetone-d_6): δ = 7.87 (d, 2H, $^3J_{H\text{-}H}$ = 7.2 Hz), 7.70-7.61 (m, 3H), 4.2 (br s, H_2O linked); ^{13}C NMR (acetone-d_6): δ = 137.6 (dd, $^3J_{F\text{-}C}$ = $^3J_{F\text{-}C}$ = 2.5 Hz), 133.9, 130.0, 127.7 (d, $^4J_{F\text{-}C}$ = 1.6 Hz), 119.2 (dddd, $^1J_{F\text{-}C}$ = 310.5 Hz, $^1J_{F\text{-}C}$ = 309.6 Hz, $^2J_{F\text{-}C}$ = $^2J_{F\text{-}C}$ = 30.5 Hz), 115.2 (dddd, $^1J_{F\text{-}C}$ = $^1J_{F\text{-}C}$ = 289.5 Hz, $^2J_{F\text{-}C}$ = $^2J_{F\text{-}C}$ = 27.8 Hz); ^{19}F NMR (acetone-d_6): δ = -113.47 (ddd, 1F, $^2J_{F\text{-}F}$ = 265.8 Hz, $^3J_{F\text{-}F}$ = $^3J_{F\text{-}F}$ = 4.7 Hz), -113.51 (ddd, 1F, $^2J_{F\text{-}F}$ = 233.7 Hz, $^3J_{F\text{-}F}$ = $^3J_{F\text{-}F}$ = 4.7 Hz), -114.49 (ddd, 1F, $^2J_{F\text{-}F}$ = 265.8 Hz, $^3J_{F\text{-}F}$ = $^3J_{F\text{-}F}$ = 4.7 Hz), -120.80 (ddd, 1F, $^2J_{F\text{-}F}$ = 233.7 Hz, $^3J_{F\text{-}F}$ = $^3J_{F\text{-}F}$ = 4.7 Hz); MS (ESI-MeOH): *m/z* = 304.9 (M^-), 305.9, 306.9, 616.8.

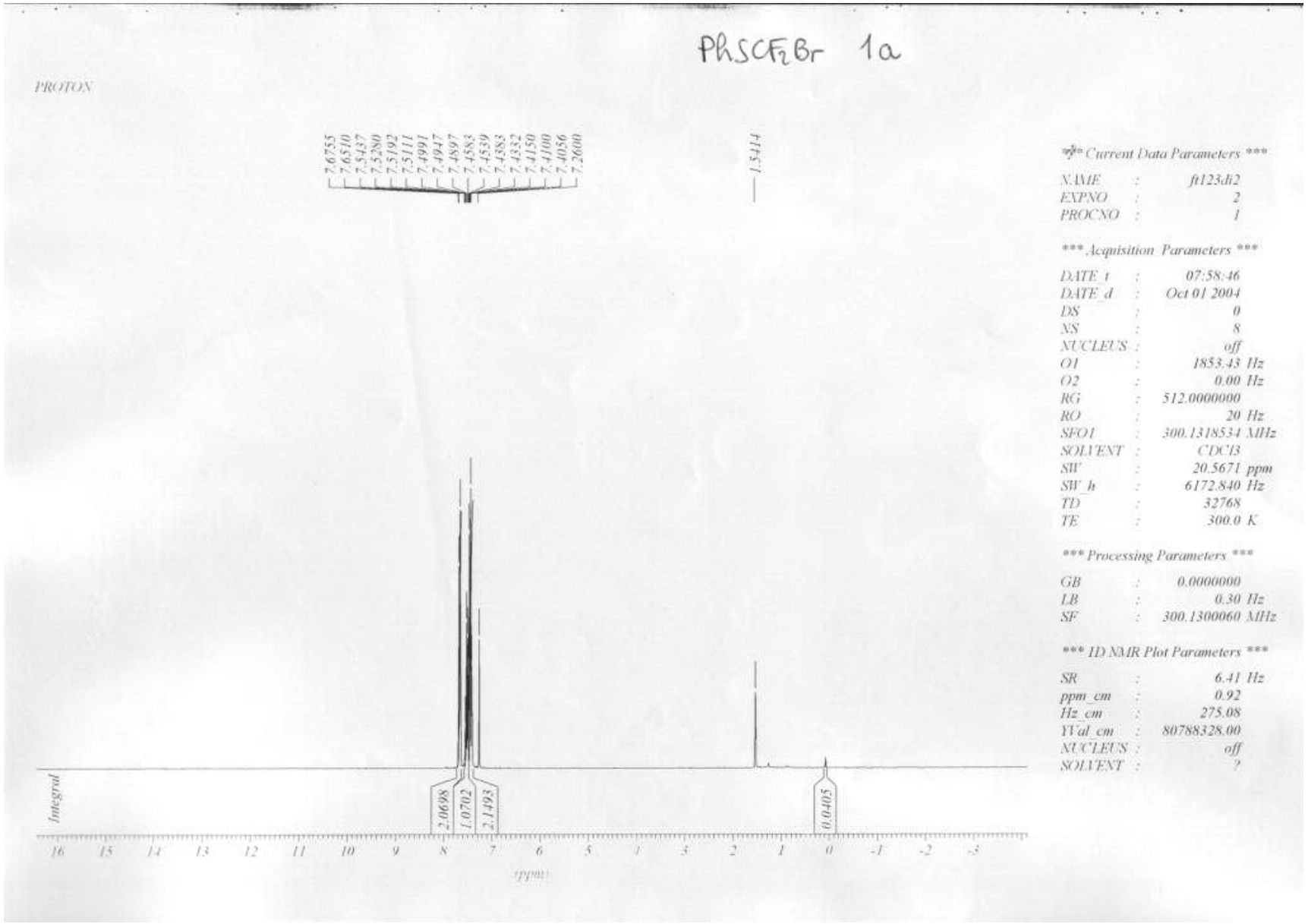
Lithium 2-benzenesulfonyl-1,1,2,2-tetrafluoro-ethanesulfonate (23): white solid (0.19 g, 92% yield); m.p. 75-80°C; ^{1}H NMR (acetone-d_6): δ = 8.05 (d, 2H, $^3J_{H\text{-}H}$ = 7.5 Hz), 7.94 (m, 1H), 7.79 (m, 2H), 3.01 (br s, H_2O linked); ^{13}C NMR (acetone-d_6): δ = 137.1, 134.2, 131.4, 130.6, 116.4 (tt, $^1J_{F\text{-}C}$ = 279.9 Hz, $^2J_{F\text{-}C}$ = 37.1 Hz, $^3J_{F\text{-}C}$ = 35.0 Hz), 115.4 (tt, $^1J_{F\text{-}C}$ = 287.8 Hz, $^2J_{F\text{-}C}$ = 33.9 Hz); ^{19}F NMR (acetone-d_6): δ = -110.65 (m, 2F), -113.48 (m, 2F); MS (ESI-MeOH): *m/z* = 321 (M^-), 322, 323.

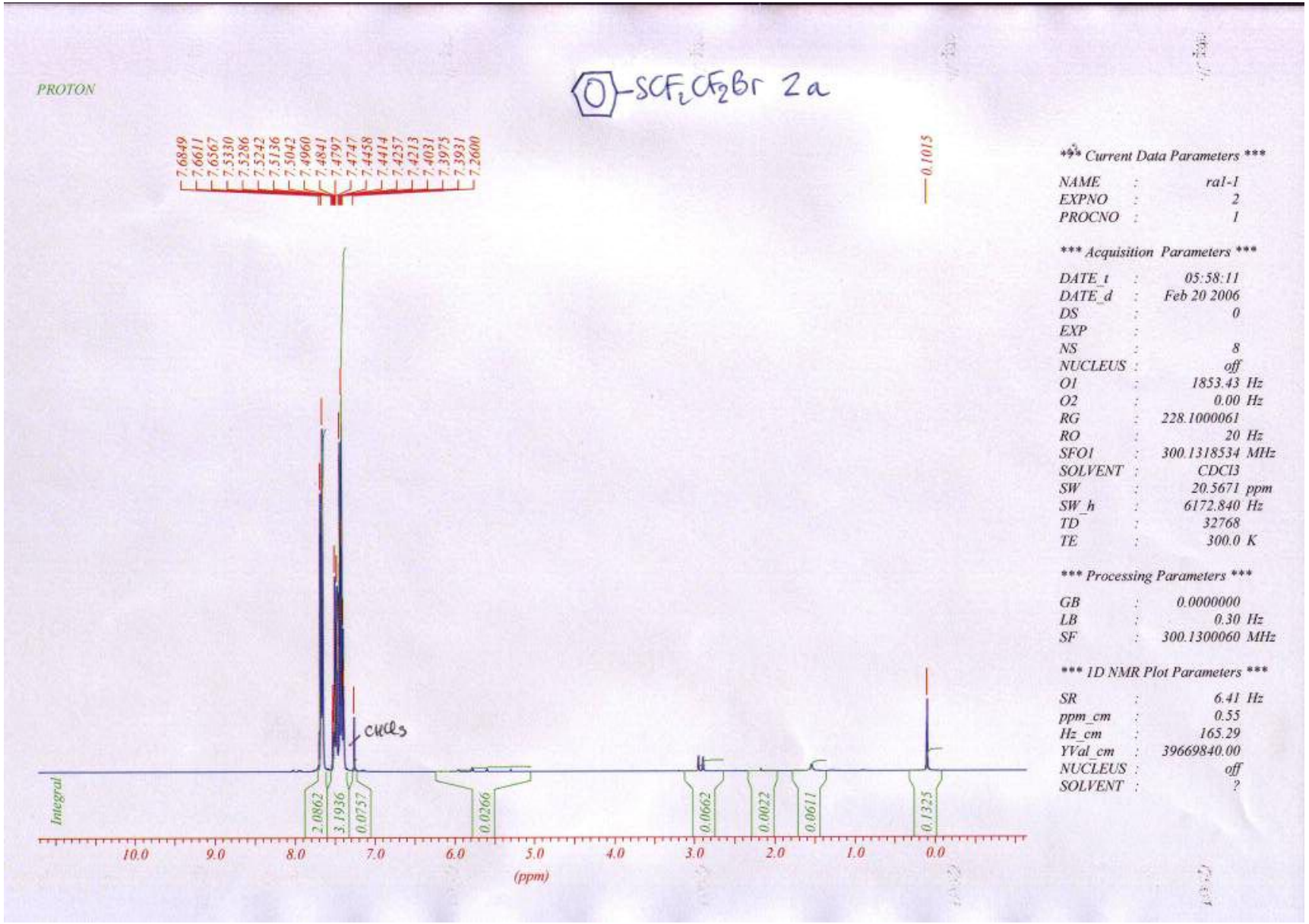
Lithium difluoro-phenylsulfanyl-methanesulfonate (24): White solid (1.29 g, 83% yield); m.p. 175-182°C; ^{1}H NMR (acetone-d_6) : δ = 7.63 (m, 2H), 7.49-7.39 (m, 3H), 2.88 (br s, H_2O linked); ^{13}C NMR (acetone-d_6): δ = 137.0, 130.5, 129.8, 128.2 (t, $^1J_{F\text{-}C}$ = 315.3 Hz), 127.3 (t, $^3J_{F\text{-}C}$ = 1.9 Hz); ^{19}F NMR (acetone-d_6): δ = -79.08 (s, 2F); MS (ESI-MeOH): *m/z* = 239.0 (M^-), 240.0, 241.0, 484.9.

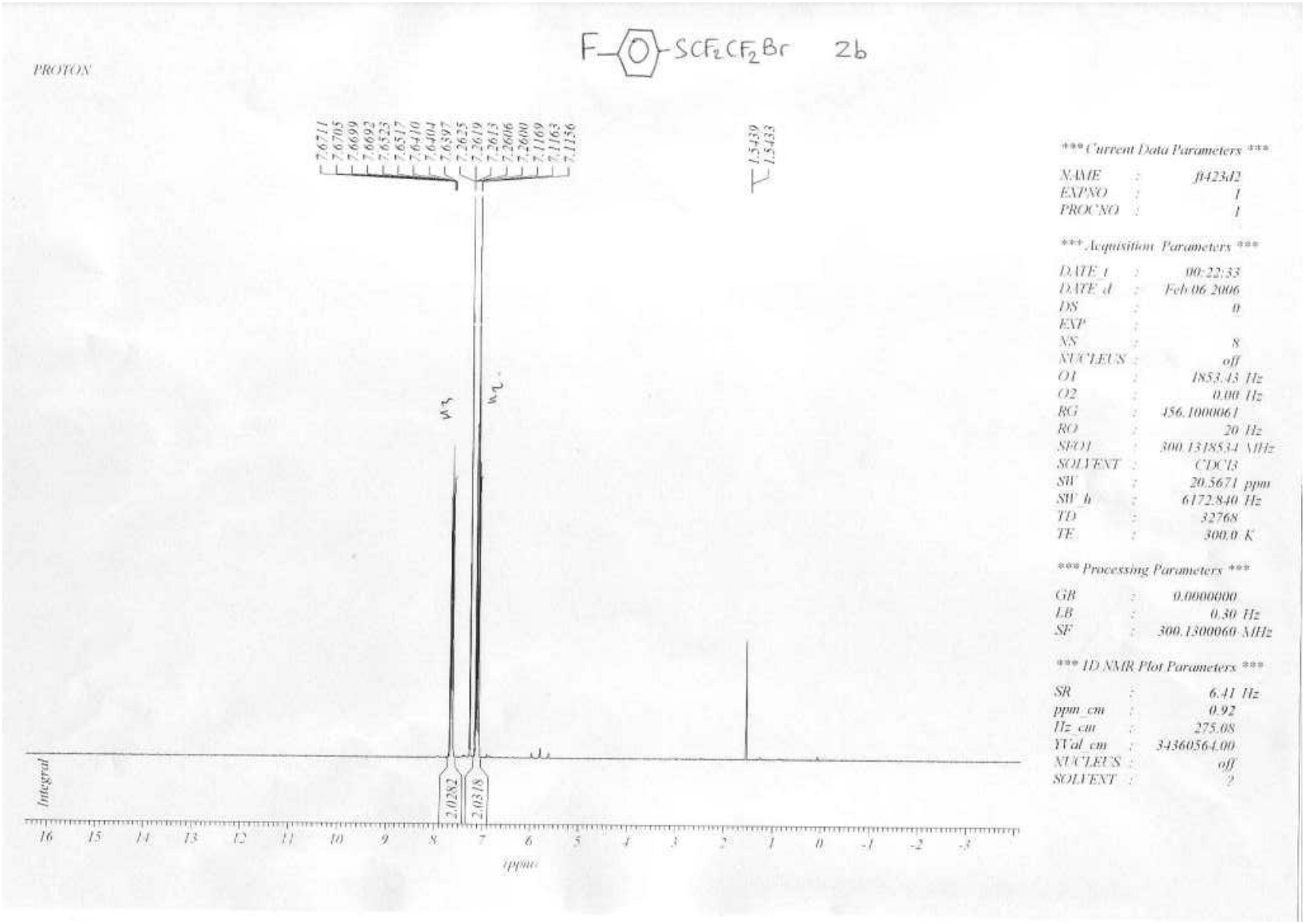
Lithium benzenesulfinyl-difluoro-methanesulfonate (25): White solid (0.16 g, 51% yield); m.p. 215-220°C; ^{1}H NMR (acetone-d_6): δ = 7.83 (d, 2H, $^3J_{H\text{-}H}$ = 7.7 Hz), 7.72-7.62 (m, 3H); ^{13}C NMR (acetone-d_6): δ = 136.3 (dd, $^3J_{F\text{-}C}$ = $^3J_{F\text{-}C}$ = 3.0 Hz), 133.9, 130.0, 127.5 (m), 122.6 (dd, $^1J_{F\text{-}C}$ = 341.9 Hz, $^1J_{F\text{-}C}$ = 329.9 Hz); ^{19}F NMR (acetone-d_6): δ = -105.90 (d, 1F, $^1J_{F\text{-}F}$ = 205.9 Hz), -113.87 (d, 1F, $^1J_{F\text{-}F}$ = 205.9 Hz); MS (ESI-MeOH): *m/z* = 130.0, 131.1, 255.0 (M^-), 256.0, 256.9.

Lithium benzenesulfonyl-difluoro-methanesulfonate (26): White solid (0.20 g, 72% yield); m.p. 225°C; ^{1}H NMR (acetone-d_6): δ = 8.02 (m, 2H), 7.83 (m, 1H), 7.63 (m, 2H), 3.20 (br s, H_2O linked); ^{13}C NMR (acetone-d_6): δ = 136.1, 135.2, 131.5 (t, $^4J_{F\text{-}C}$ = 1.1 Hz), 129.9, 119.9 (t, $^1J_{F\text{-}C}$ = 324.7 Hz); ^{19}F NMR (acetone-d_6): δ = -104.76 (s, 2F); MS (ESI-MeOH): *m/z* = 130.0, 271.0 (M^-), 272.0, 273.0.

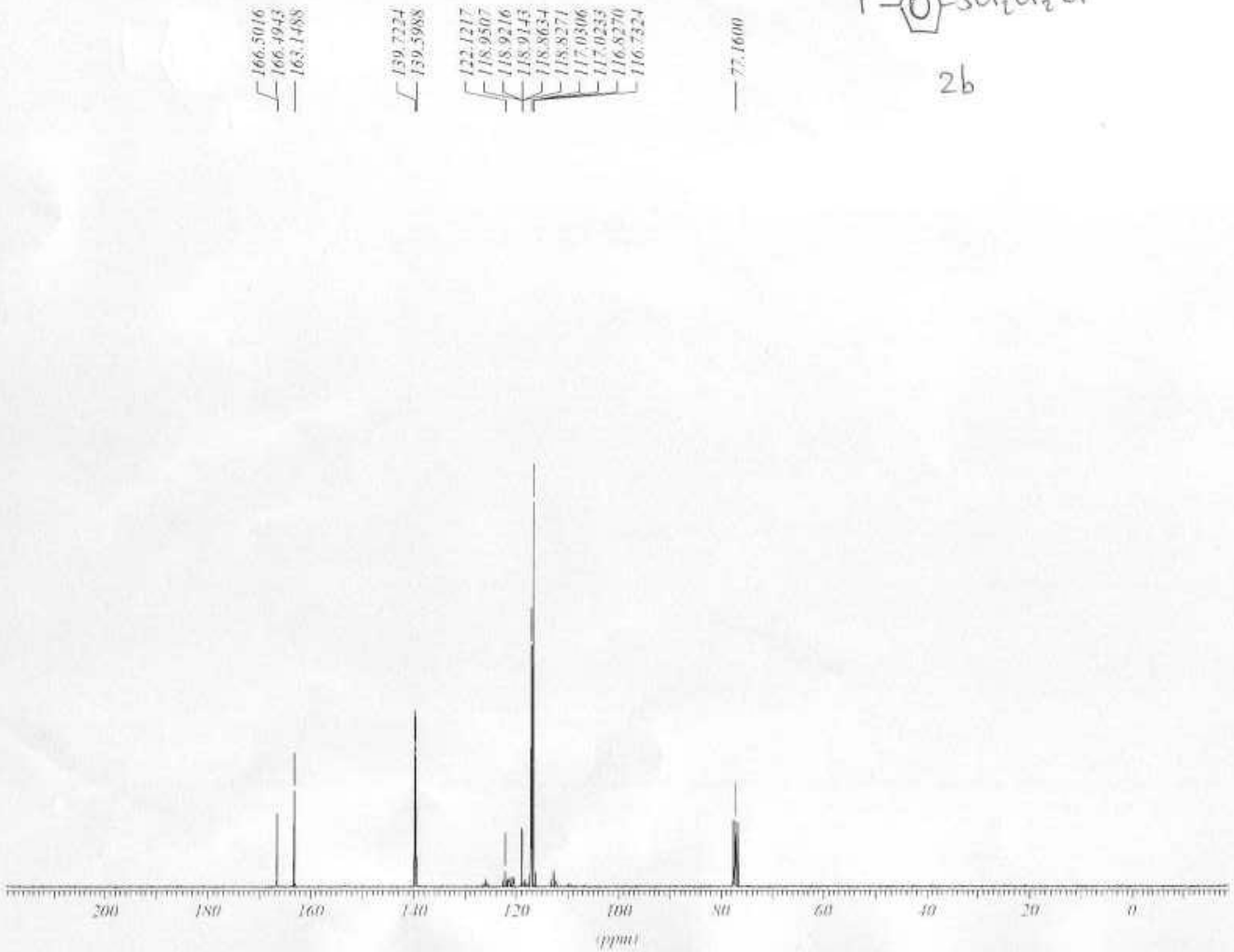
Lithium 1,1-difluoro-2-oxo-2-phenyl-ethanesulfonate (27): White solid (0.94 g, 77% yield); m.p. 118-122°C; ^{1}H NMR (acetone-d_6): δ = 8.25 (m, 2H), 7.67 (m, 1H), 7.51 (m, 2H), 4.06 (br s, H_2O linked); ^{13}C NMR (acetone-d_6): δ = 188.8 (t, $^{2}J_{F\text{-}C}$ = 25.3 Hz), 134.8, 133.8 (m), 131.5 (t, $^{4}J_{F\text{-}C}$ = 3.0 Hz), 129.0, 117.3 (t, $^{1}J_{F\text{-}C}$ = 287.0 Hz); ^{19}F NMR (acetone-d_6): δ = -104.36 (s, 2F); MS (ESI-MeOH): *m/z* = 235.1 (M^-), 267.0.


PhSCF2Br 1a
PROTON
7.6755
7.6510
7.5437
7.5280
7.5192
7.5111
7.4991
7.4947
7.4897
7.4583
7.4539
7.4383
7.4332
7.4150
7.4100
7.4056
7.2600
1.5414
*** Current Data Parameters ***
NAME : ft123di2
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:58:46
DATE_d : Oct 01 2004
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 80788328.00
NUCLEUS : off
SOLVENT : ?
Integral
2.0698
1.0702
2.1493
0.0405
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)


PROTON
-SCF2CF2Br 2a
7.6849
7.6611
7.6367
7.5330
7.5286
7.5242
7.5136
7.5042
7.4960
7.4841
7.4797
7.4747
7.4458
7.4414
7.4257
7.4213
7.4031
7.3975
7.3931
7.2600
0.1015
CHCl3
Integral
2.0862
3.1936
0.0757
0.0266
0.0662
0.0022
0.0611
0.1325
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)
*** Current Data Parameters ***
NAME : ra1-1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 05:58:11
DATE_d : Feb 20 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 228.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.55
Hz_cm : 165.29
YVal_cm : 39669840.00
NUCLEUS : off
SOLVENT : ?


F-⟨O⟩-SCF2CF2Br 2b
PROTON
7.6711
7.6705
7.6699
7.6692
7.6523
7.6517
7.6410
7.6404
7.6397
7.2625
7.2619
7.2613
7.2606
7.2600
7.1169
7.1163
7.1156
1.5439
1.5433
2.0282
2.0318
Integral
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fl423d2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:22:33
DATE_d : Feb 06 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 34360564.00
NUCLEUS : off
SOLVENT : ?

C13CPD CDCl3 n sercof 2



2b

*** Current Data Parameters ***

NAME	:	fl423d2
EXPNO	:	101
PROCNO	:	1

*** Acquisition Parameters ***

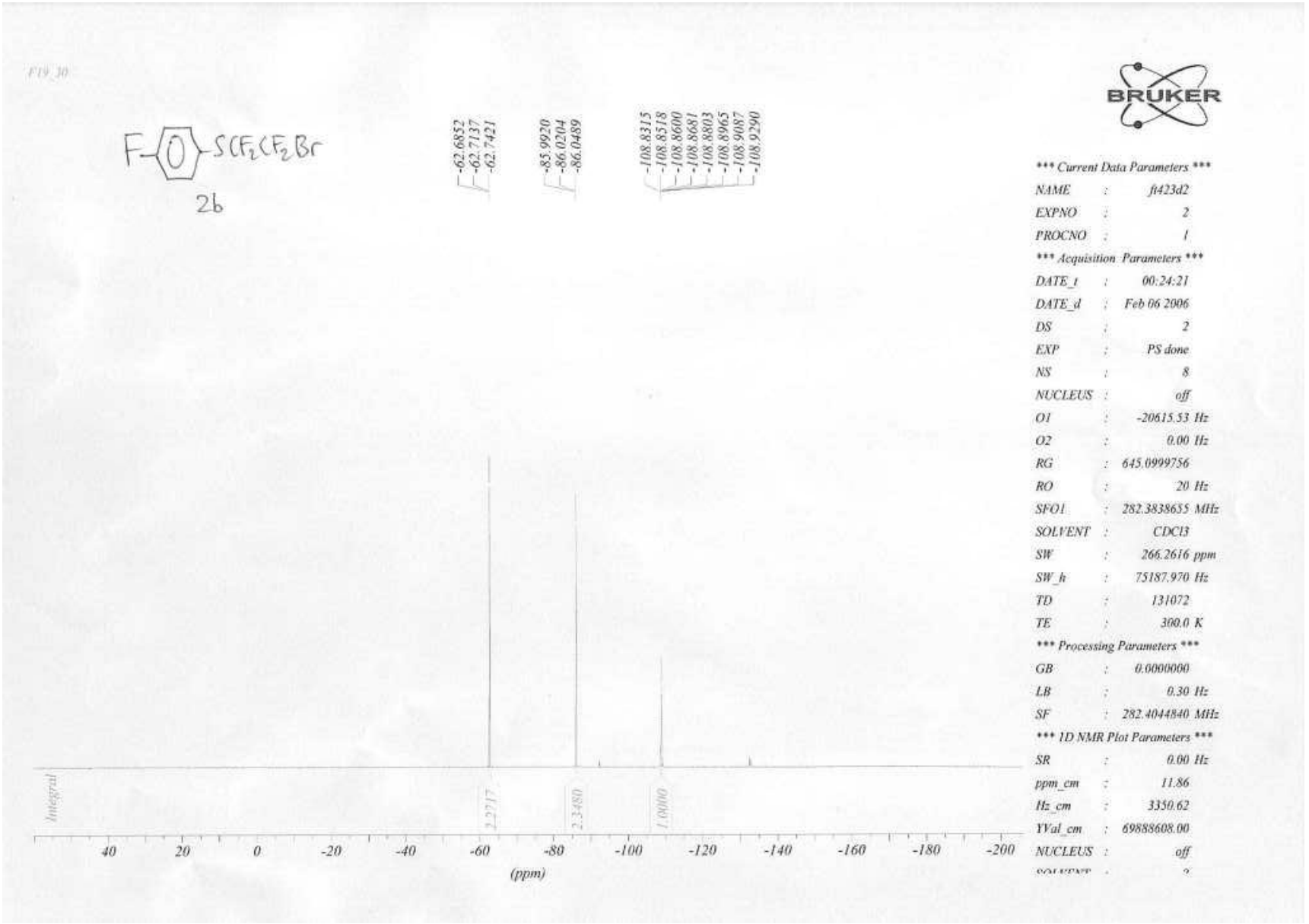
DATE_t	:	17:09:40
DATE_d	:	Feb 22 2006
DS	:	4
EXP	:	C13CPD
NS	:	2500
NUCLEUS	:	off
O1	:	7576.30 Hz
O2	:	1200.52 Hz
RG	:	4096.0000000
RO	:	20 Hz
SFO1	:	75.4752953 MHz
SOLVENT	:	CDCl3
SW	:	238.2980 ppm
SW_h	:	17985.612 Hz
TD	:	65536
TE	:	300.0 K

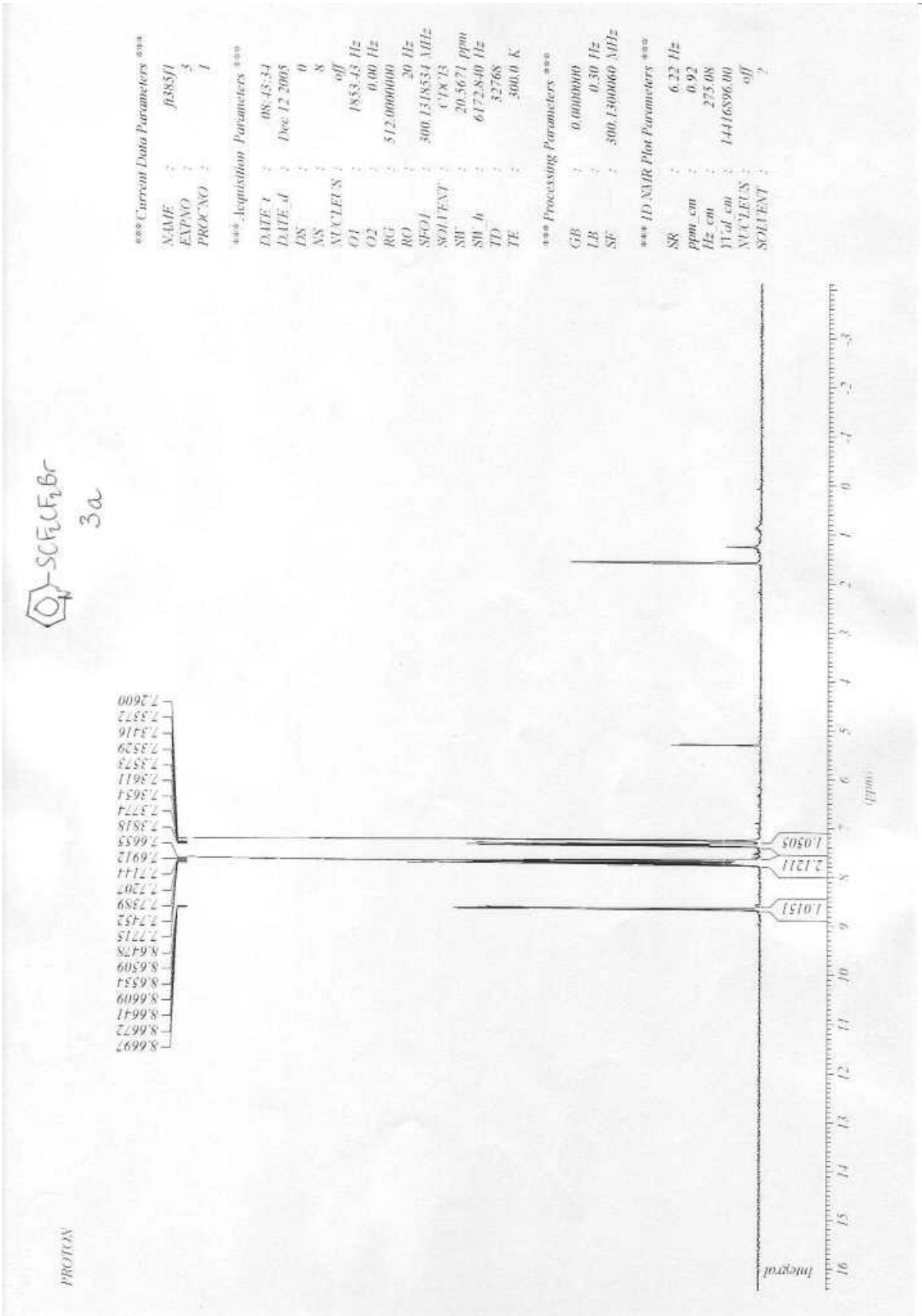
*** Processing Parameters ***

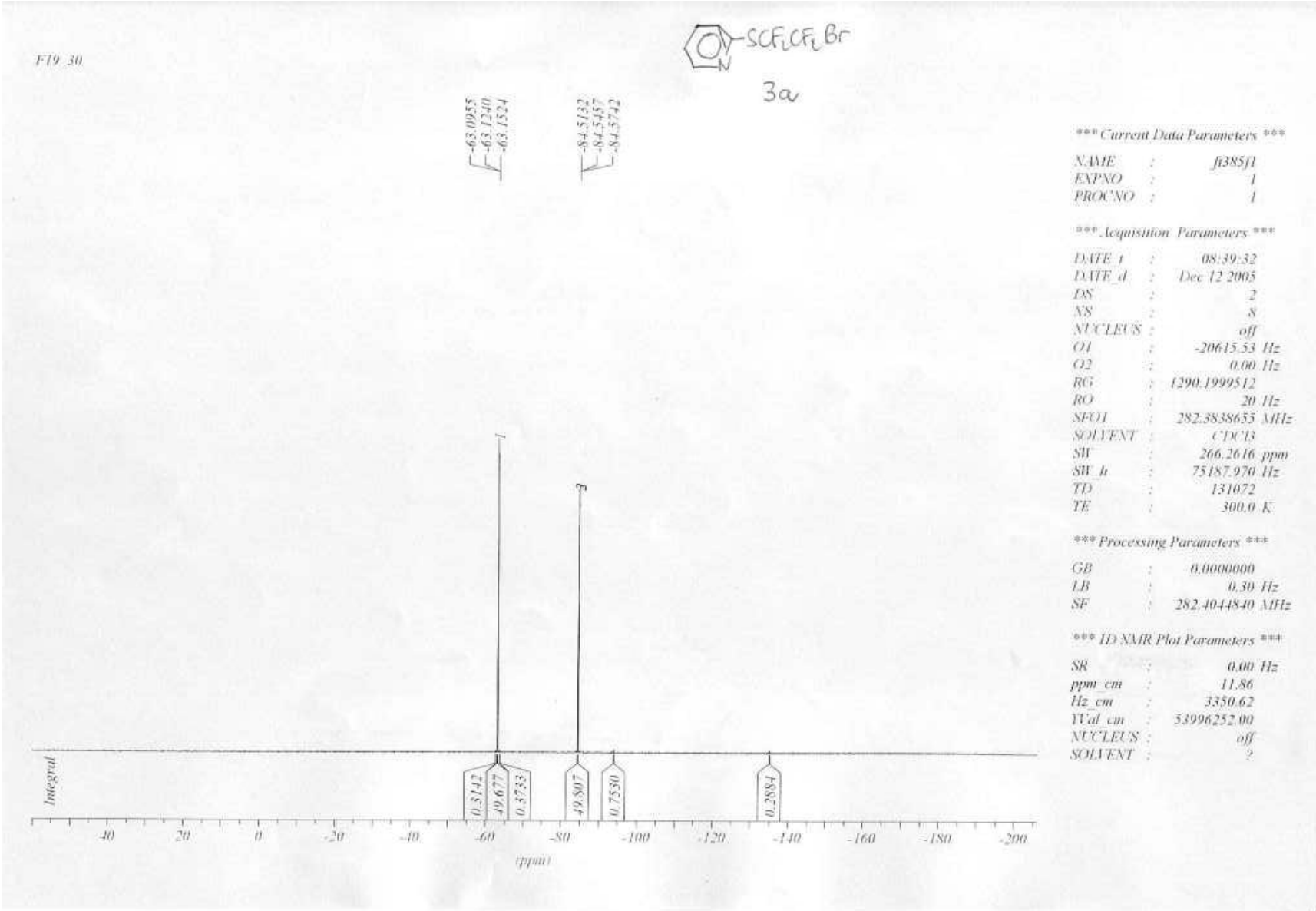
GB	:	0.0000000
LB	:	1.00 Hz
SF	:	75.4677350 MHz

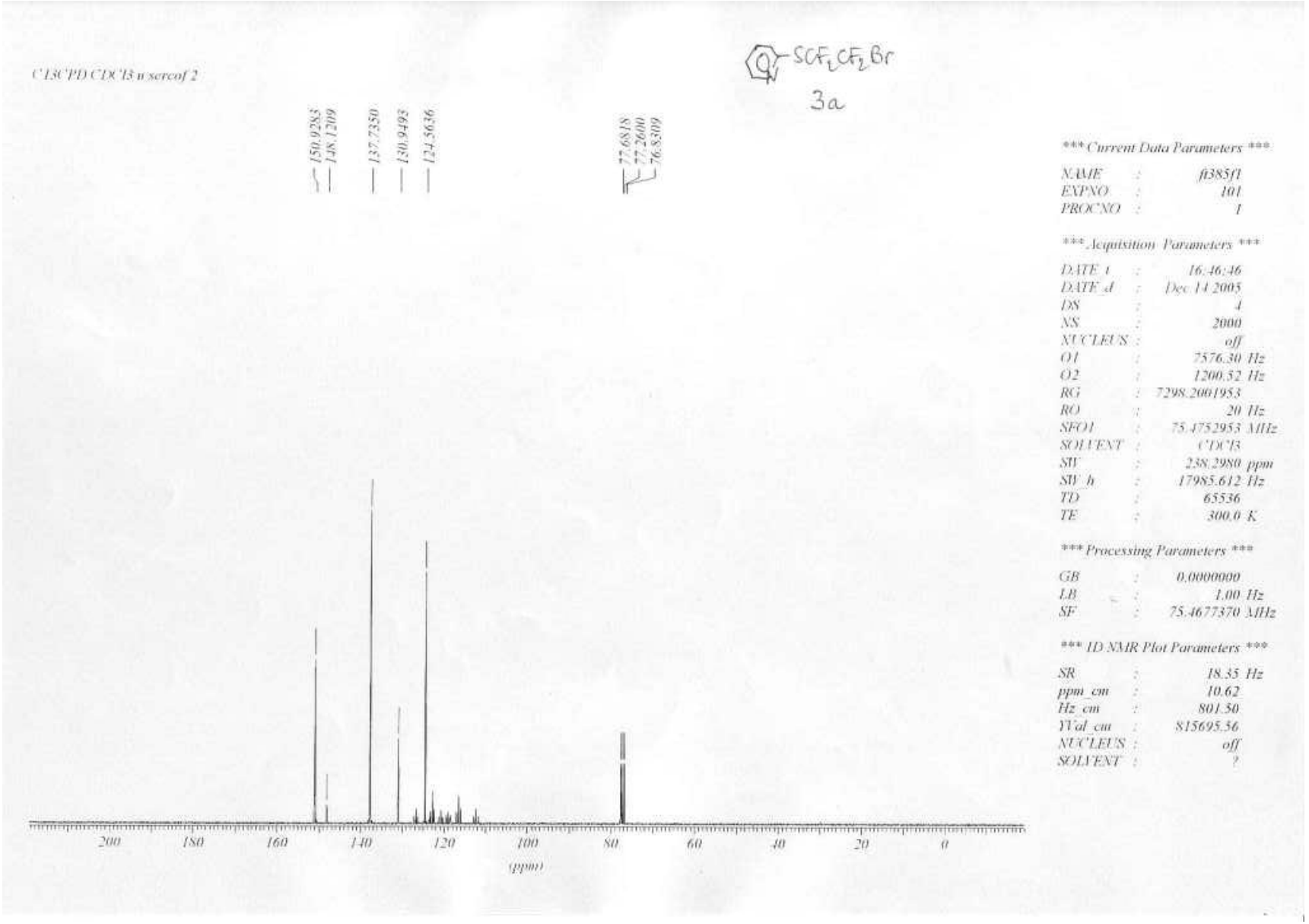
*** 1D NMR Plot Parameters ***

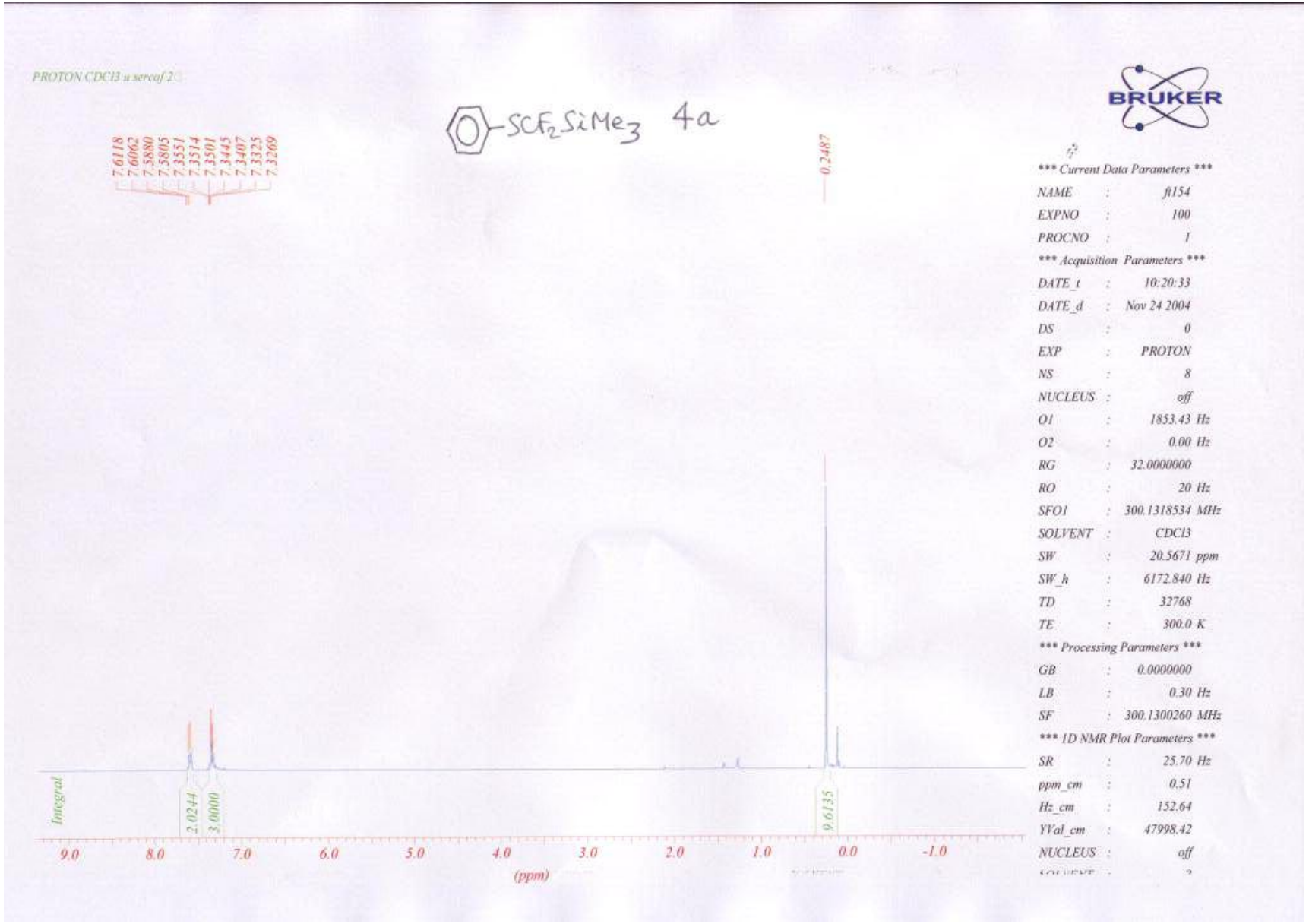
SR	:	16.01 Hz
ppm_cm	:	10.62
Hz_cm	:	801.50
YVal_cm	:	720331.81
NUCLEUS	:	off
SOLVENT	:	?

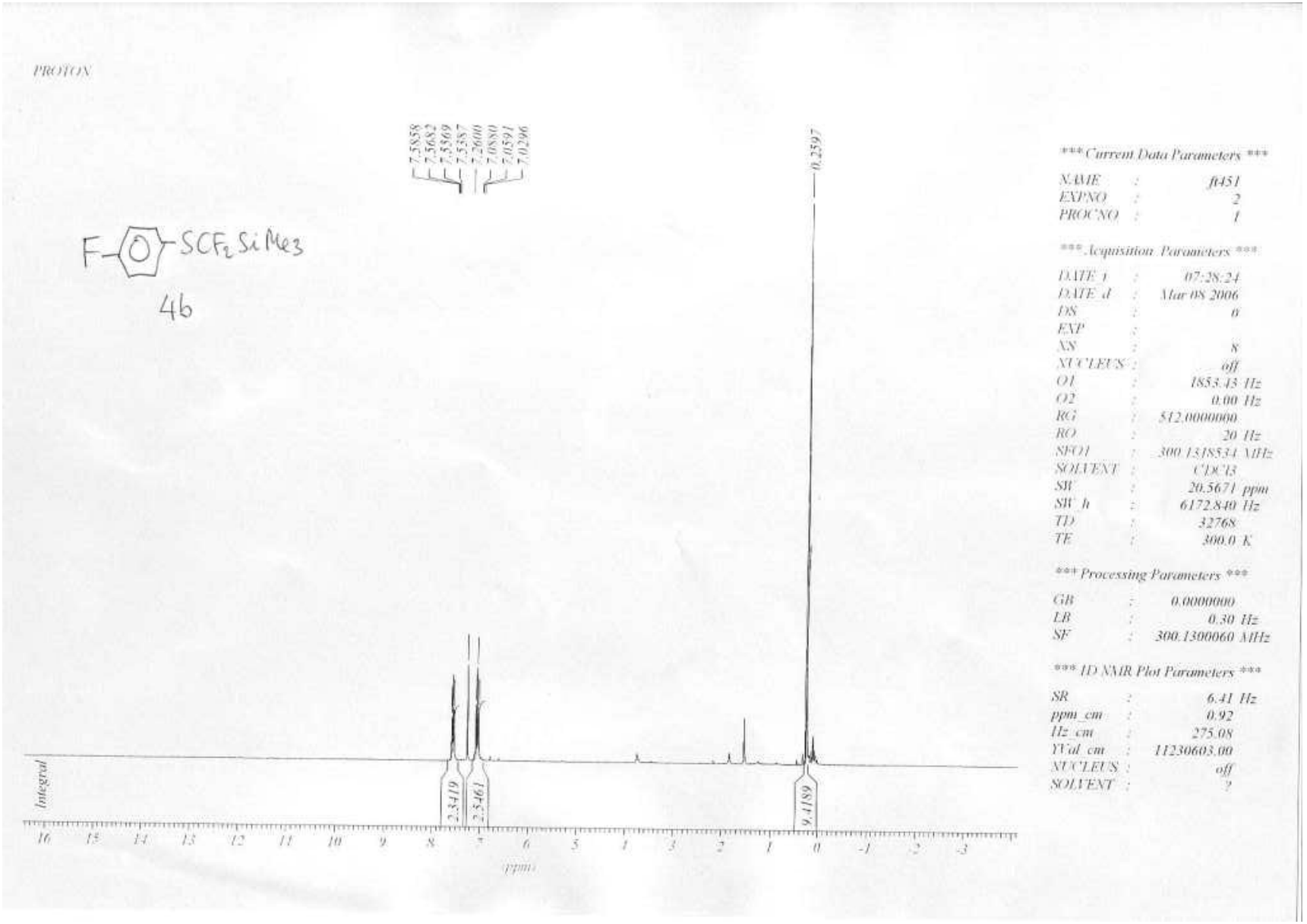

F19_30
F-⟨O⟩-SCF2CF2Br
2b
-62.6852
-62.7137
-62.7421
-85.9920
-86.0204
-86.0489
-108.8315
-108.8518
-108.8600
-108.8681
-108.8803
-108.8965
-108.9087
-108.9290
BRUKER
*** Current Data Parameters ***
NAME : ft423d2
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:24:21
DATE_d : Feb 06 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 645.0999756
RO : 20 Hz
SFO1 : 282.3838635 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 69888608.00
NUCLEUS : off
Integral
2.2717
2.3480
1.0000
40 20 0 -20 -40 -60 -80 -100 -120 -140 -160 -180 -200
(ppm)

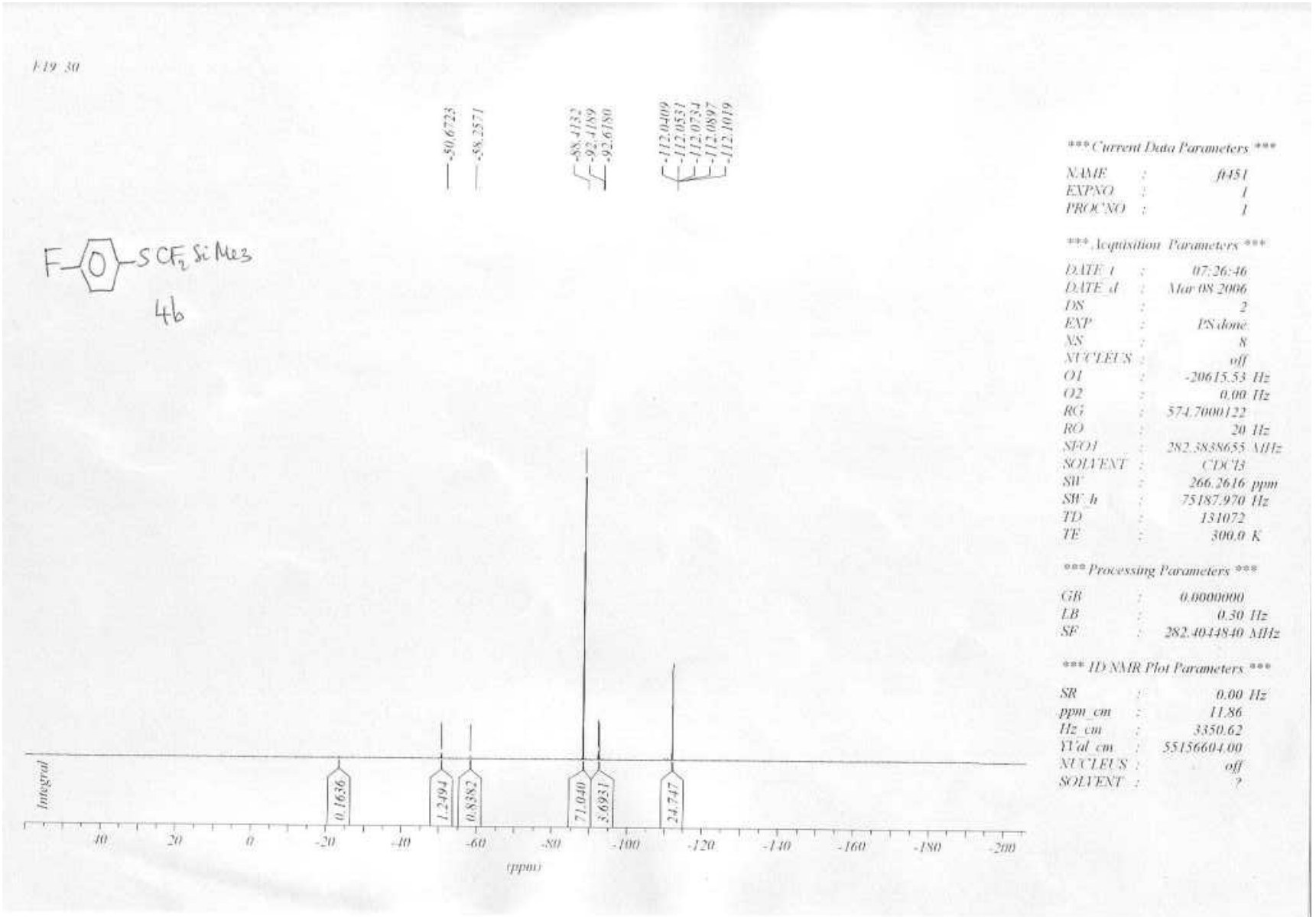

PROTON
3a
8.6697
8.6672
8.6641
8.6609
8.6534
8.6509
8.6478
7.7715
7.7452
7.7389
7.7207
7.7144
7.6912
7.6655
7.3818
7.3774
7.3654
7.3611
7.3573
7.3529
7.3416
7.3372
7.2600
1.0505
2.1211
1.0151
Integral
(ppm)
*** Current Data Parameters ***
NAME : fs385fl
EXPNO : 3
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:43:54
DATE_d : Dec 12 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 300.1318554 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.22 Hz
ppm_cm : 0.92
Hz_cm : 275.08
Wdef_cm : 14416896.00
NUCLEUS : off
SOLVENT :

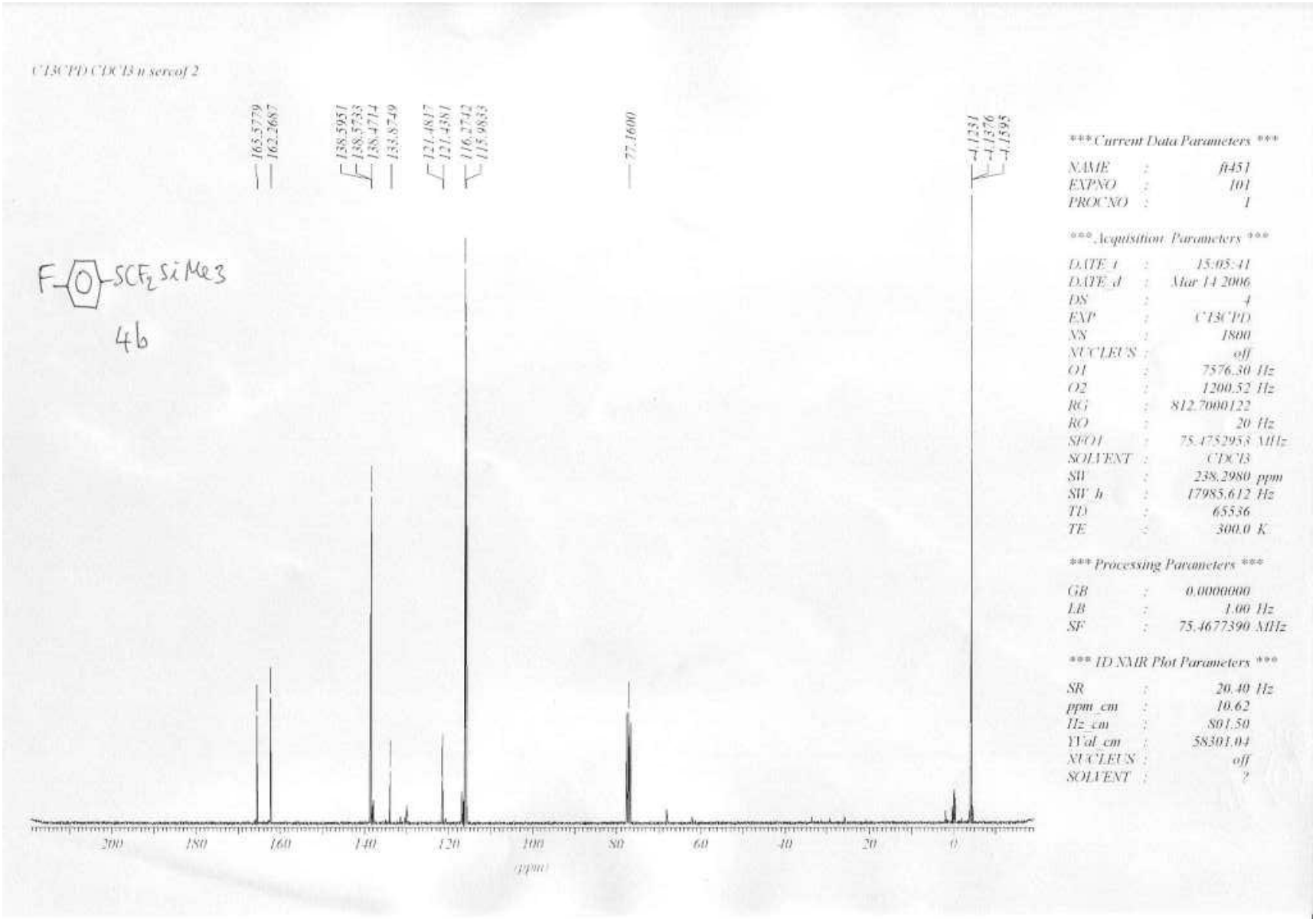

F19_30
-SCF2CF2Br
3a
-63.0955
-63.1240
-63.1524
-84.5132
-84.5457
-84.5742
1
3
Integral
0.3142
49.677
0.3733
49.807
0.7530
0.2884
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : fl385f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:39:32
DATE_d : Dec 12 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1290.1999512
RO : 20 Hz
SFO1 : 282.3838653 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
VVal_cm : 53996252.00
NUCLEUS : off
SOLVENT : ?

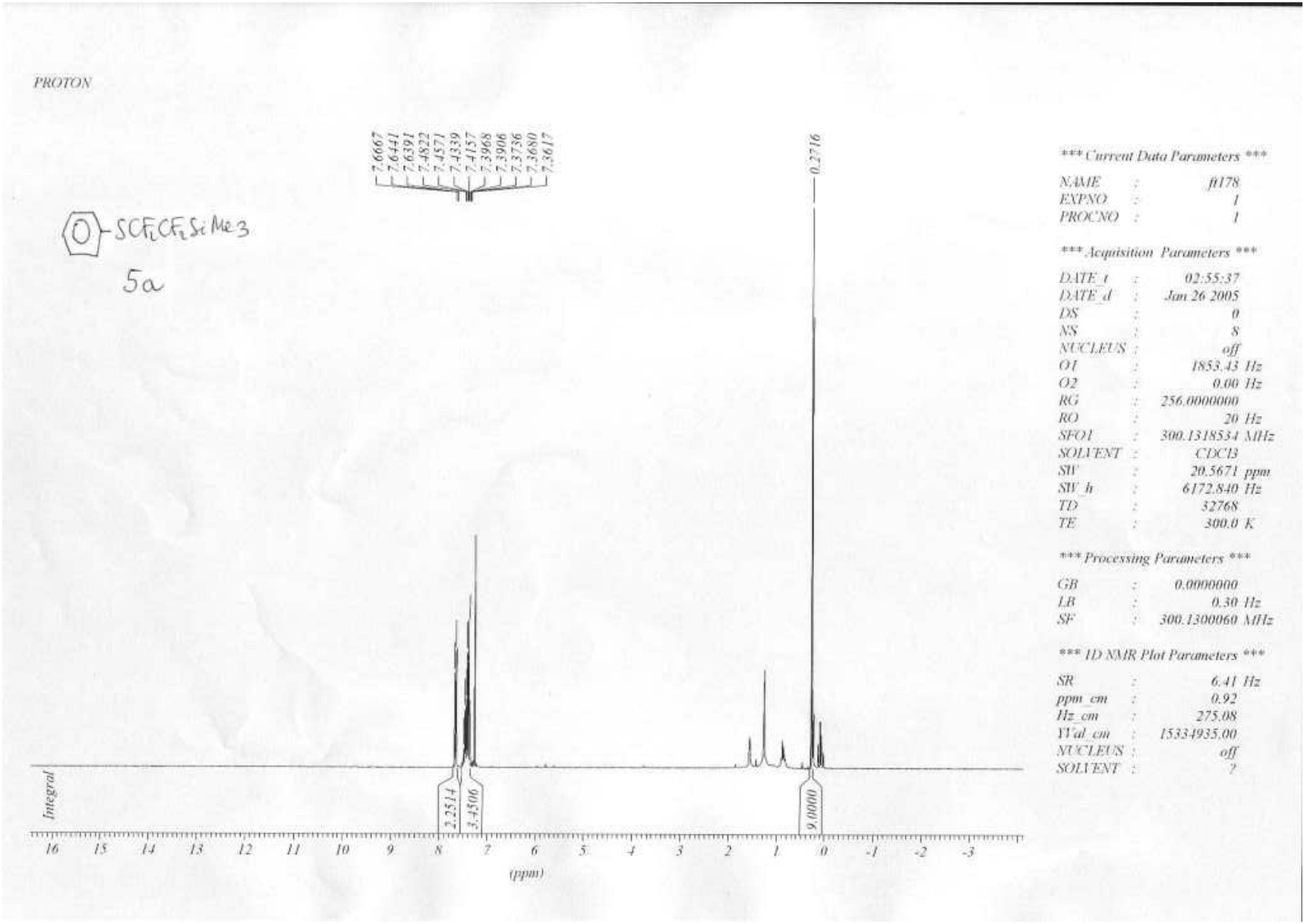

C13CPD CDCl3 n sercof 2
SCF2CF2Br
3a
150.9285
138.1209
137.7350
130.9493
124.5636
77.6818
77.2600
76.8309
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : fl385f1
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 16:46:46
DATE_d : Dec 14 2005
DS : 4
NS : 2000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 7298.2001953
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677370 MHz
*** 1D NMR Plot Parameters ***
SR : 18.35 Hz
ppm_cm : 10.62
Hz_cm : 801.50
WVal_cm : 815695.56
NUCLEUS : off
SOLVENT : ?

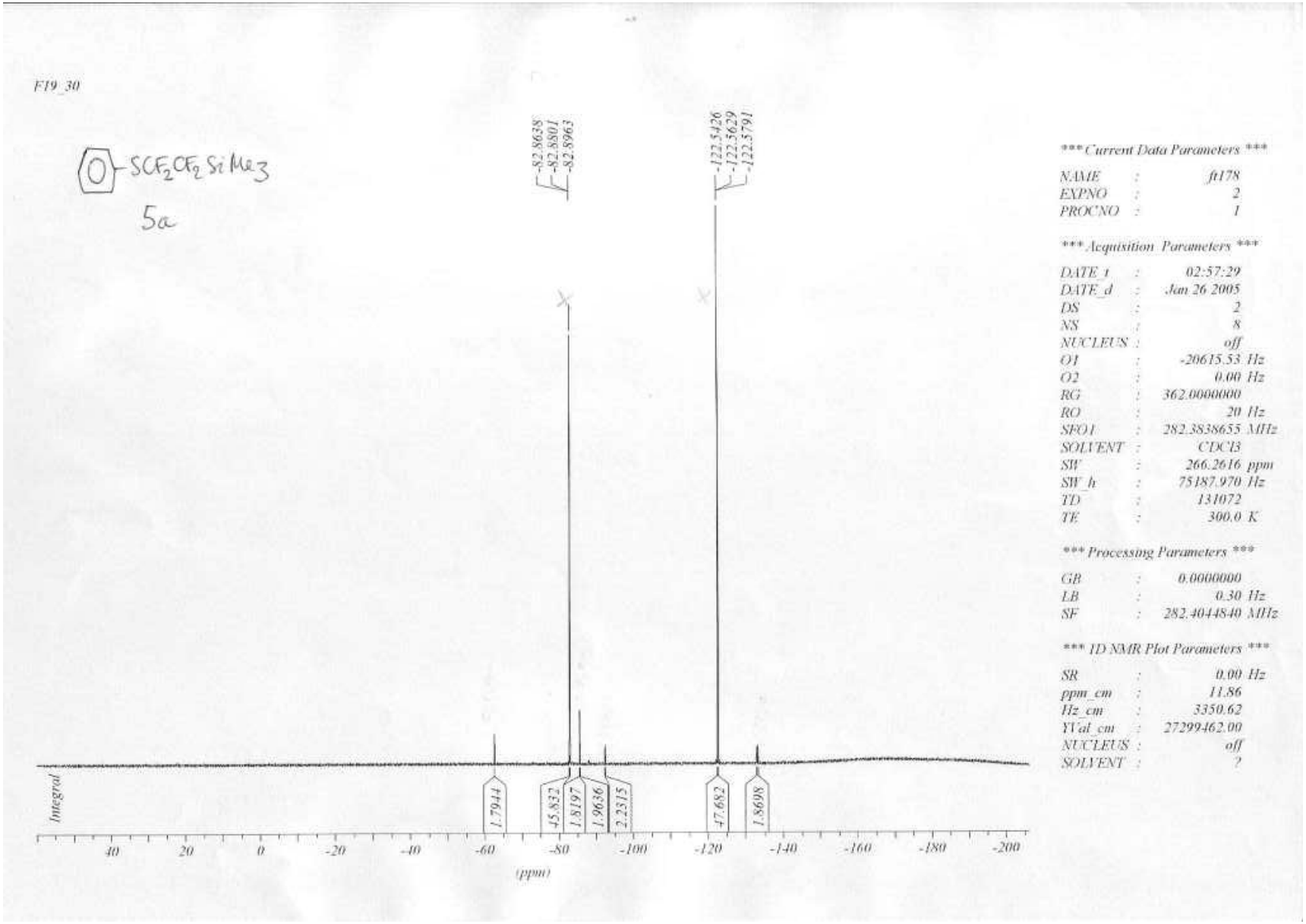

PROTON CDCl3 u sercaf 2
7.6118
7.6062
7.5880
7.5805
7.3551
7.3514
7.3501
7.3445
7.3407
7.3325
7.3269
SCF2SiMe3 4a
0.2487
Integral
2.0244
3.0000
9.6135
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
-1.0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl154
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 10:20:33
DATE_d : Nov 24 2004
DS : 0
EXP : PROTON
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 32.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300260 MHz
*** 1D NMR Plot Parameters ***
SR : 25.70 Hz
ppm_cm : 0.51
Hz_cm : 152.64
YVal_cm : 47998.42
NUCLEUS : off


PROTON
7.5858
7.5682
7.5369
7.5187
7.2600
7.0880
7.0591
7.0296
0.2597
F-SCF2SiMe3
4b
Integral
2.3419
2.3461
9.4189
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
ppm
*** Current Data Parameters ***
NAME : ft451
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:28:24
DATE_d : Mar 08 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 11230603.00
NUCLEUS : off
SOLVENT : ?

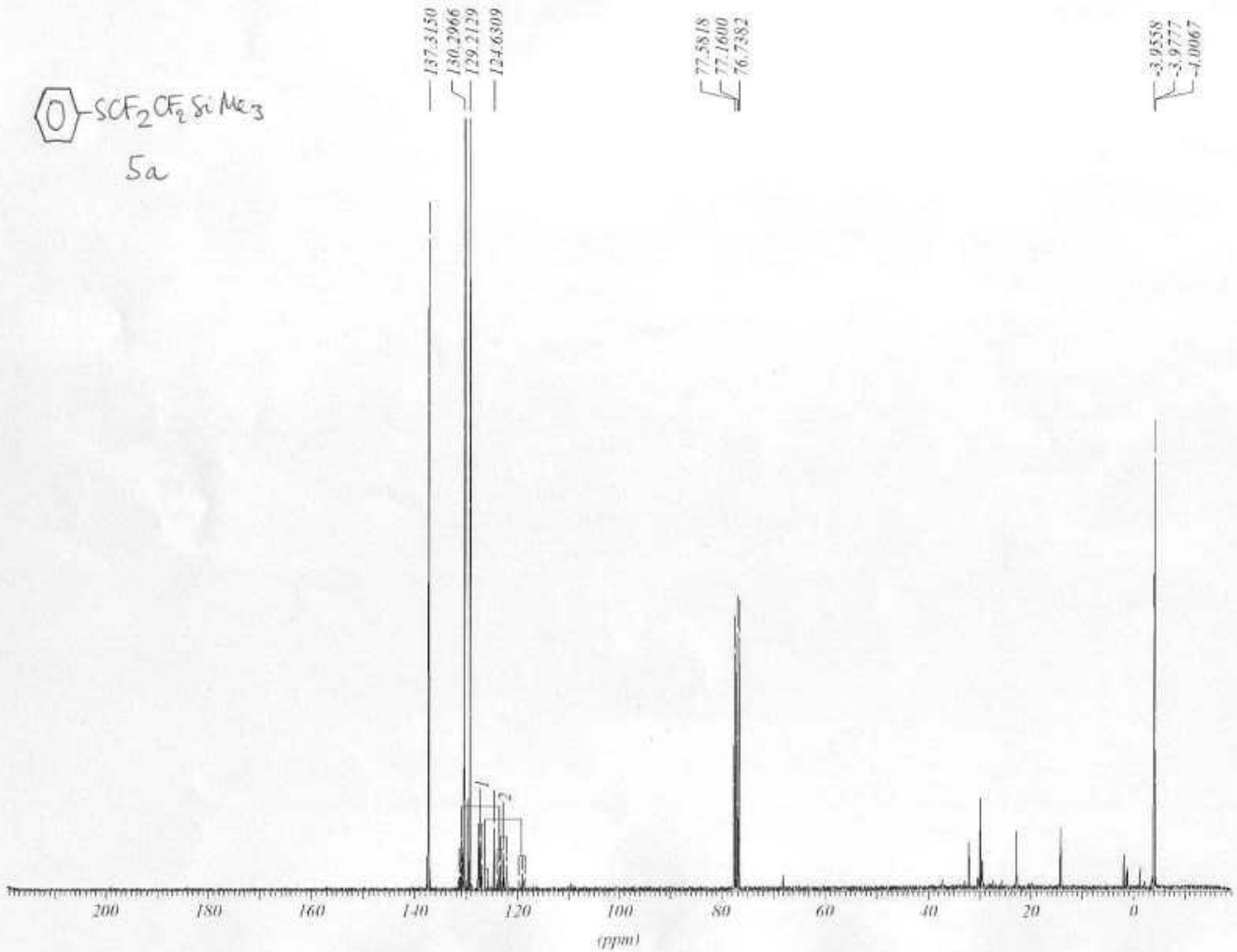

F-19 30
-50.6723
-58.2571
-88.4132
-92.4189
-92.6180
-112.0409
-112.0531
-112.0734
-112.0897
-112.1019
F
SCF2SiMe3
4b
Integral
0.1636
1.2494
0.8382
71.040
3.6931
24.747
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft451
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:26:46
DATE_d : Mar 08 2006
DS : 2
EXP : PS.dome
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 574.7000122
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 55156604.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 n sercof 2
165.5779
162.2687
138.5951
138.5733
138.4714
133.8749
121.4817
121.4381
116.2742
115.9853
77.1600
-4.1231
-4.1376
-4.1595
F-⟨O⟩-SCF2SiMe3
4b
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft451
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 15:05:41
DATE_d : Mar 14 2006
DS : 4
EXP : C13CPD
NS : 1800
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 812.7000122
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 20.40 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 58301.04
NUCLEUS : off
SOLVENT : ?


PROTON
7.6667
7.6441
7.6391
7.4822
7.4571
7.4339
7.4157
7.3968
7.3906
7.3736
7.3680
7.3617
0.2716
O-SCF2CF2SiMe3
5a
*** Current Data Parameters ***
NAME : ft178
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 02:55:37
DATE_d : Jan 26 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 256.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 15334935.00
NUCLEUS : off
SOLVENT : ?
Integral
2.2514
3.4506
9.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)


F19_30
-SCF2CF2SiMe3
5a
-82.8638
-82.8801
-82.8963
-122.5426
-122.5629
-122.5791
*** Current Data Parameters ***
NAME : ft178
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 02:57:29
DATE_d : Jan 26 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 27299462.00
NUCLEUS : off
SOLVENT : ?
Integral
1.7944
45.832
1.8197
1.9636
2.2515
47.682
1.8698
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)

C13CPD CDCl3 u sercof 2



*** Current Data Parameters ***

NAME	:	ft178
EXPNO	:	101
PROCNO	:	1

*** Acquisition Parameters ***

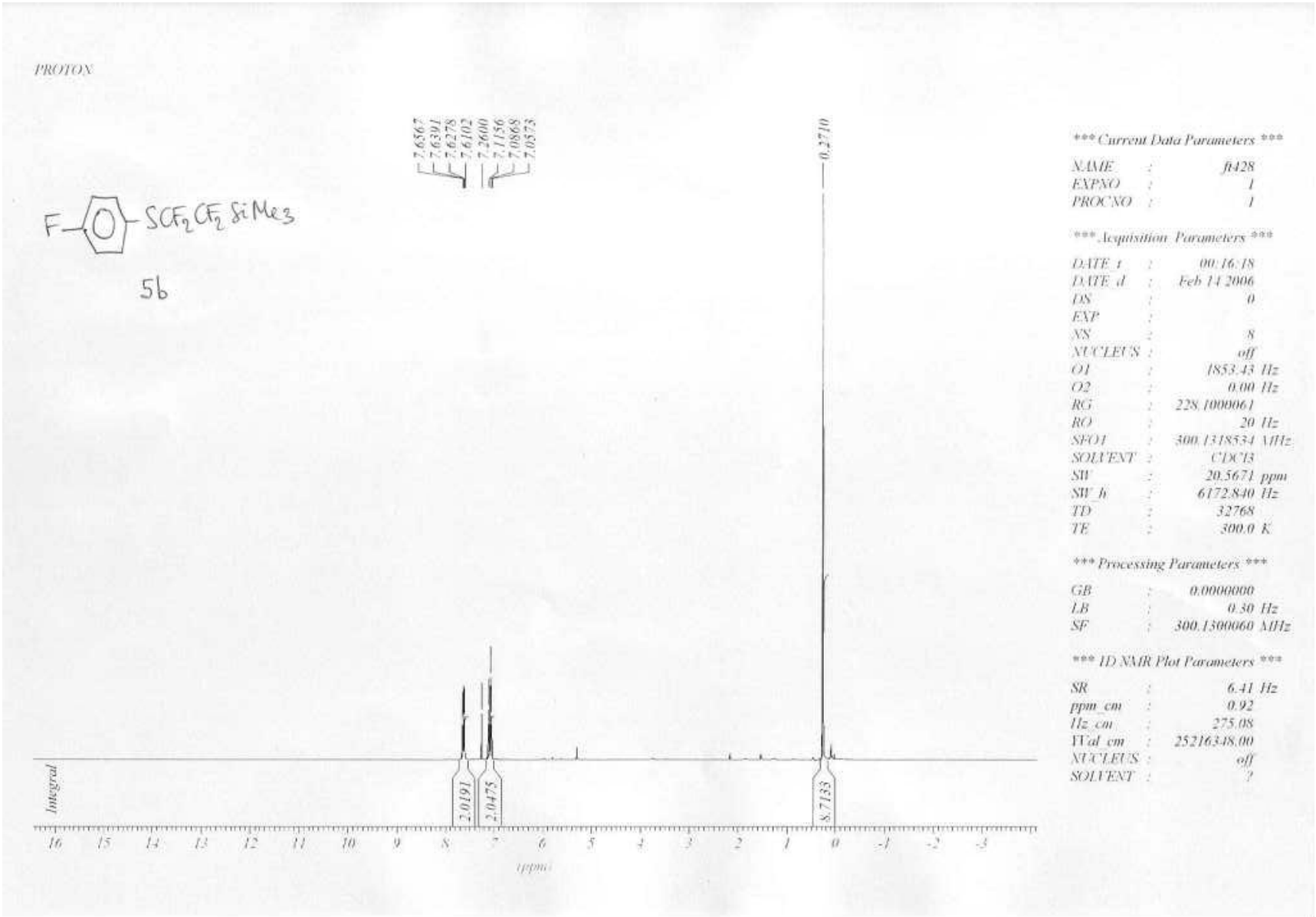
DATE_t	:	18:54:37
DATE_d	:	Jan 27 2005
DS	:	4
NS	:	4000
NUCLEUS	:	off
O1	:	7576.30 Hz
O2	:	1200.52 Hz
RG	:	1824.5999756
RO	:	20 Hz
SFO1	:	75.4752953 MHz
SOLVENT	:	CDCl3
SW	:	238.2980 ppm
SW_h	:	17985.612 Hz
TD	:	65536
TE	:	300.0 K

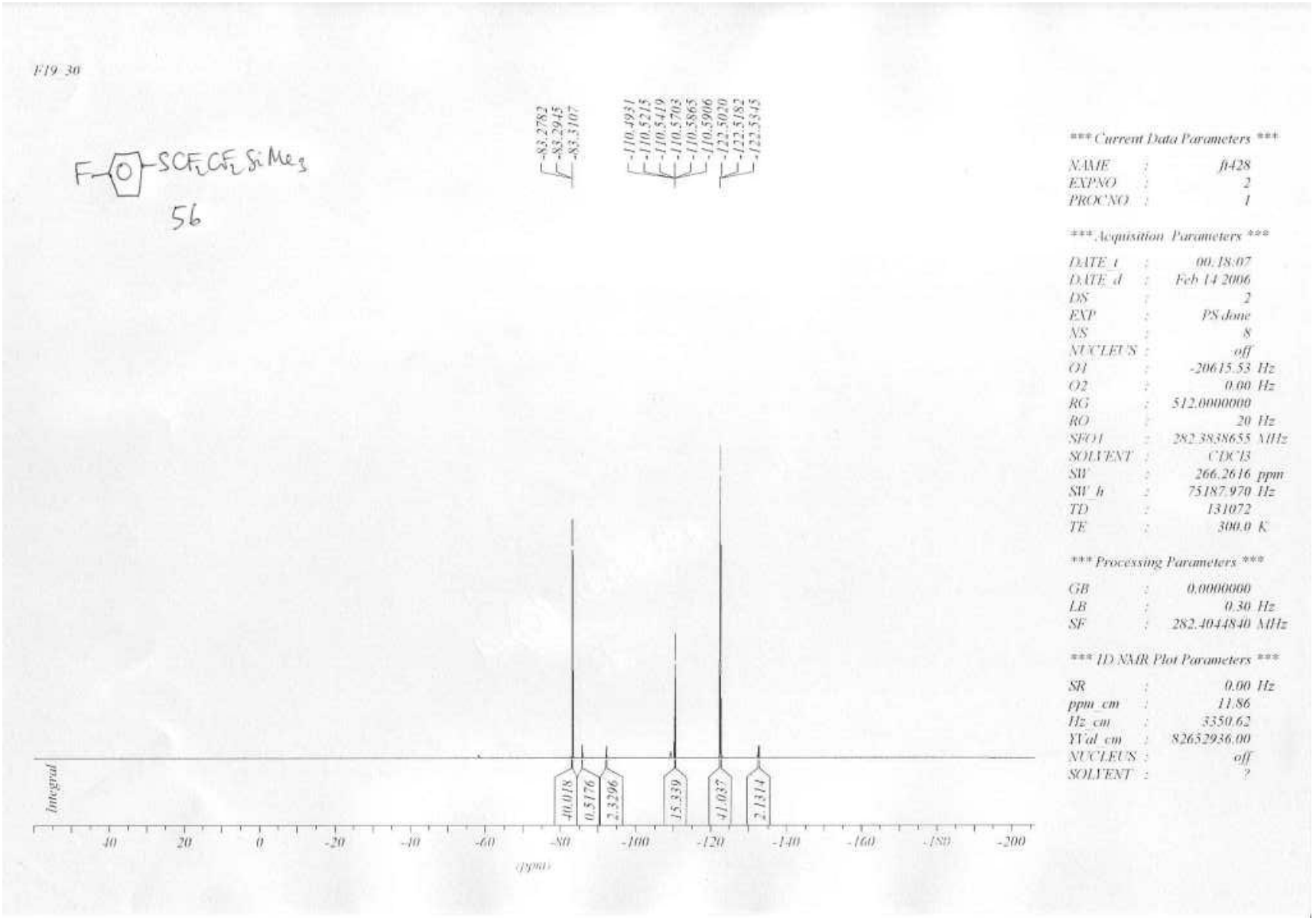
*** Processing Parameters ***

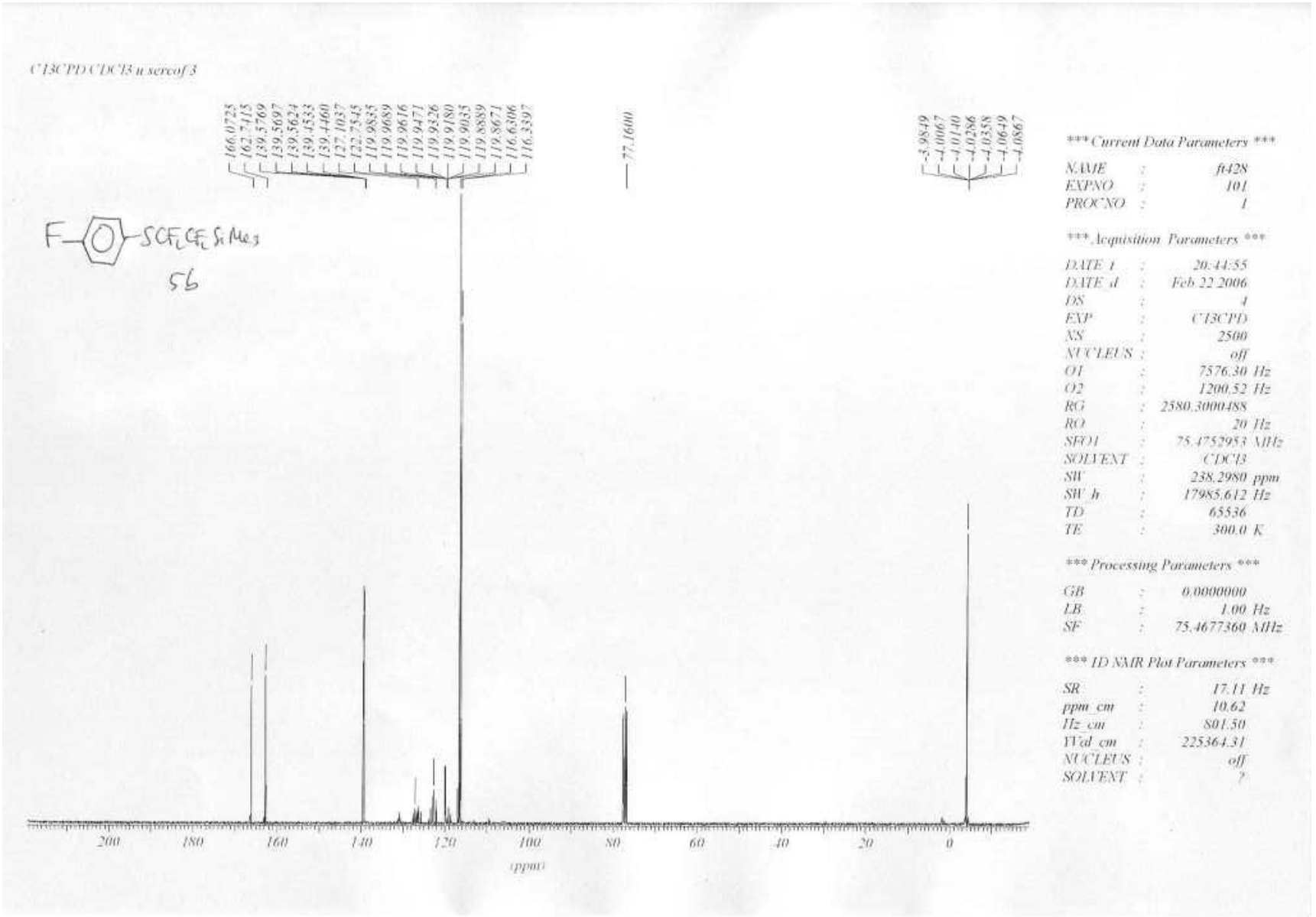
GB	:	0.0000000
LB	:	1.00 Hz
SF	:	75.4677400 MHz

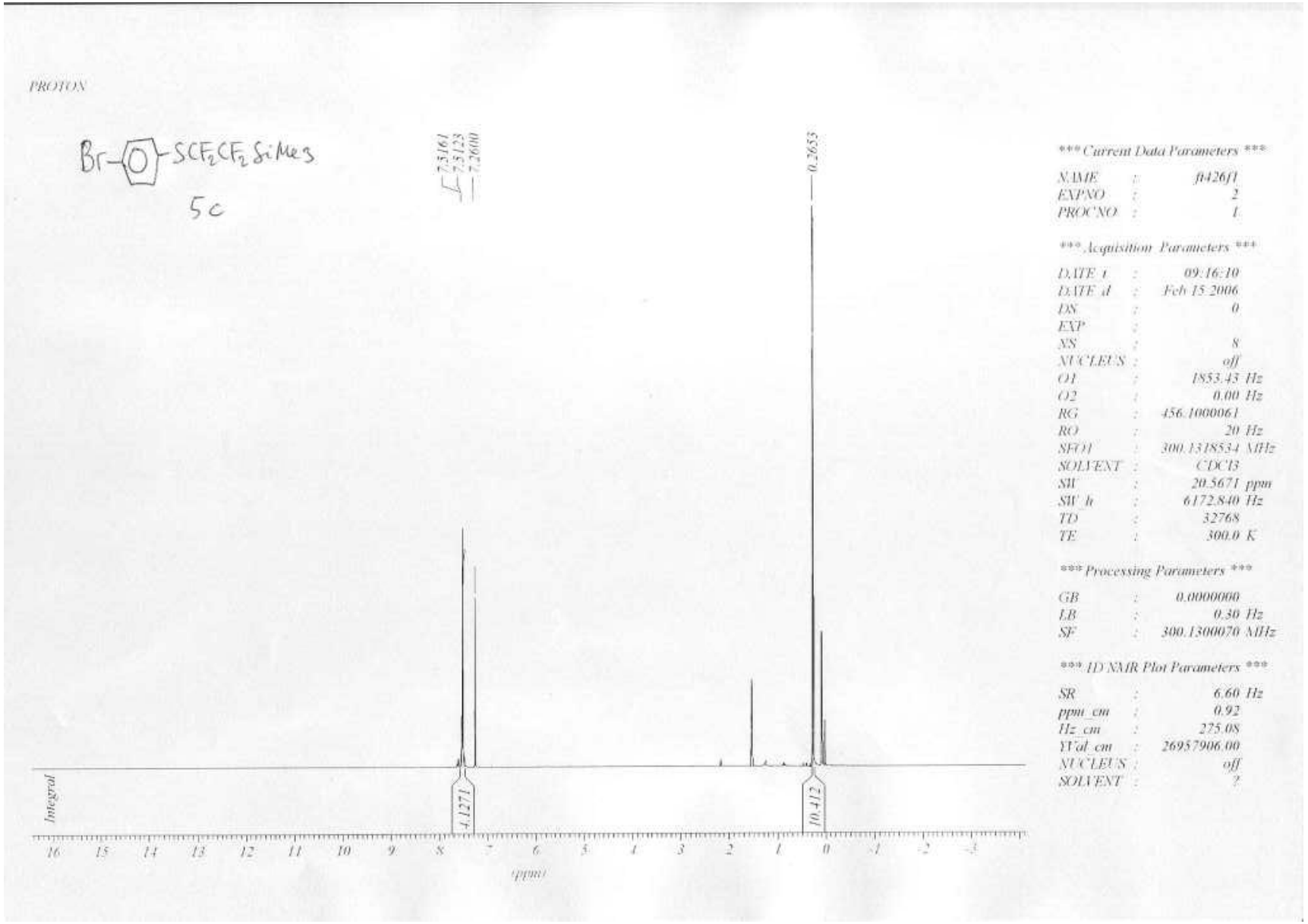
*** 1D NMR Plot Parameters ***

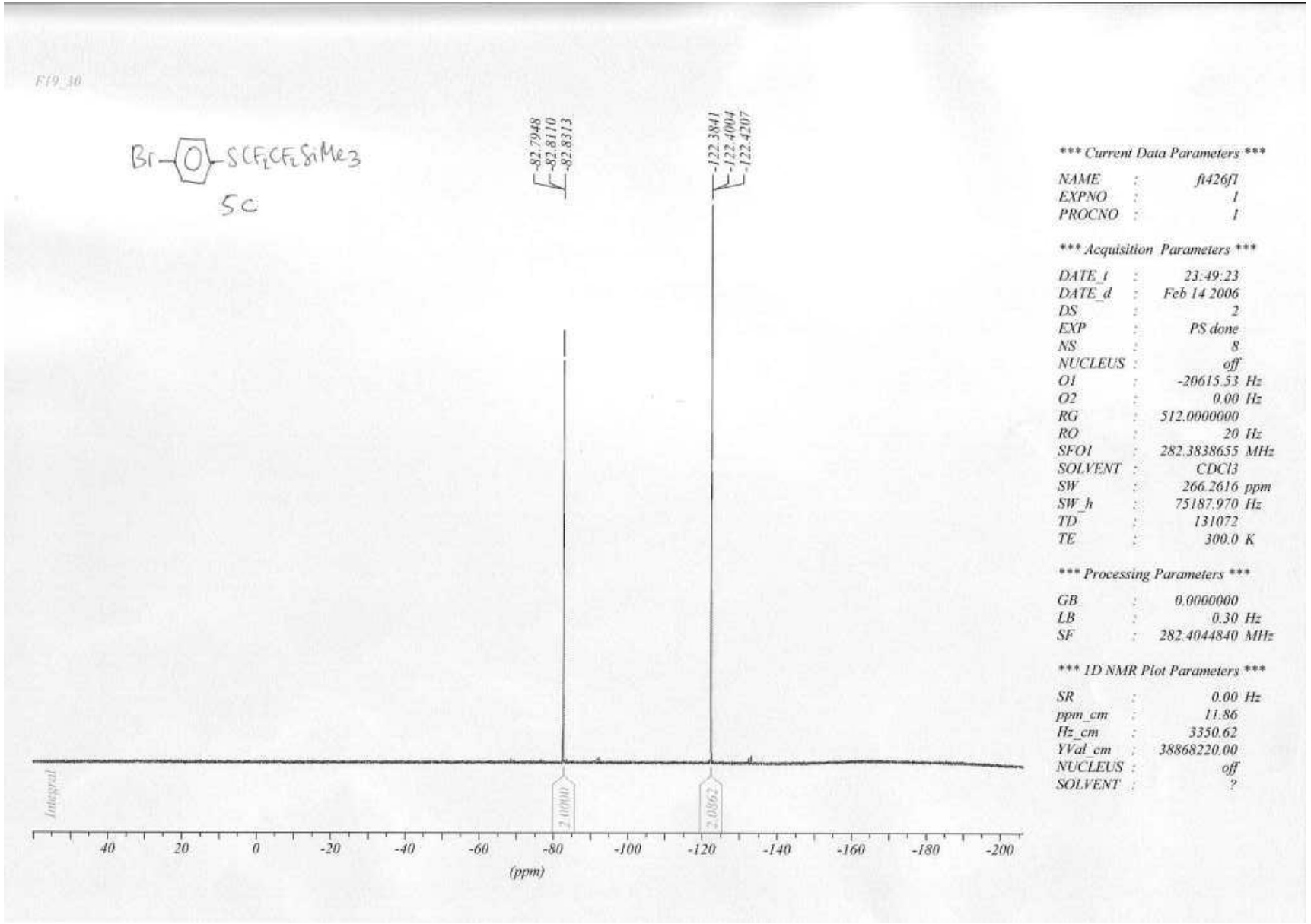
SR	:	21.50 Hz
ppm_cm	:	10.62
Hz_cm	:	801.50
YVal_cm	:	134867.23
NUCLEUS	:	off
SOLVENT	:	?

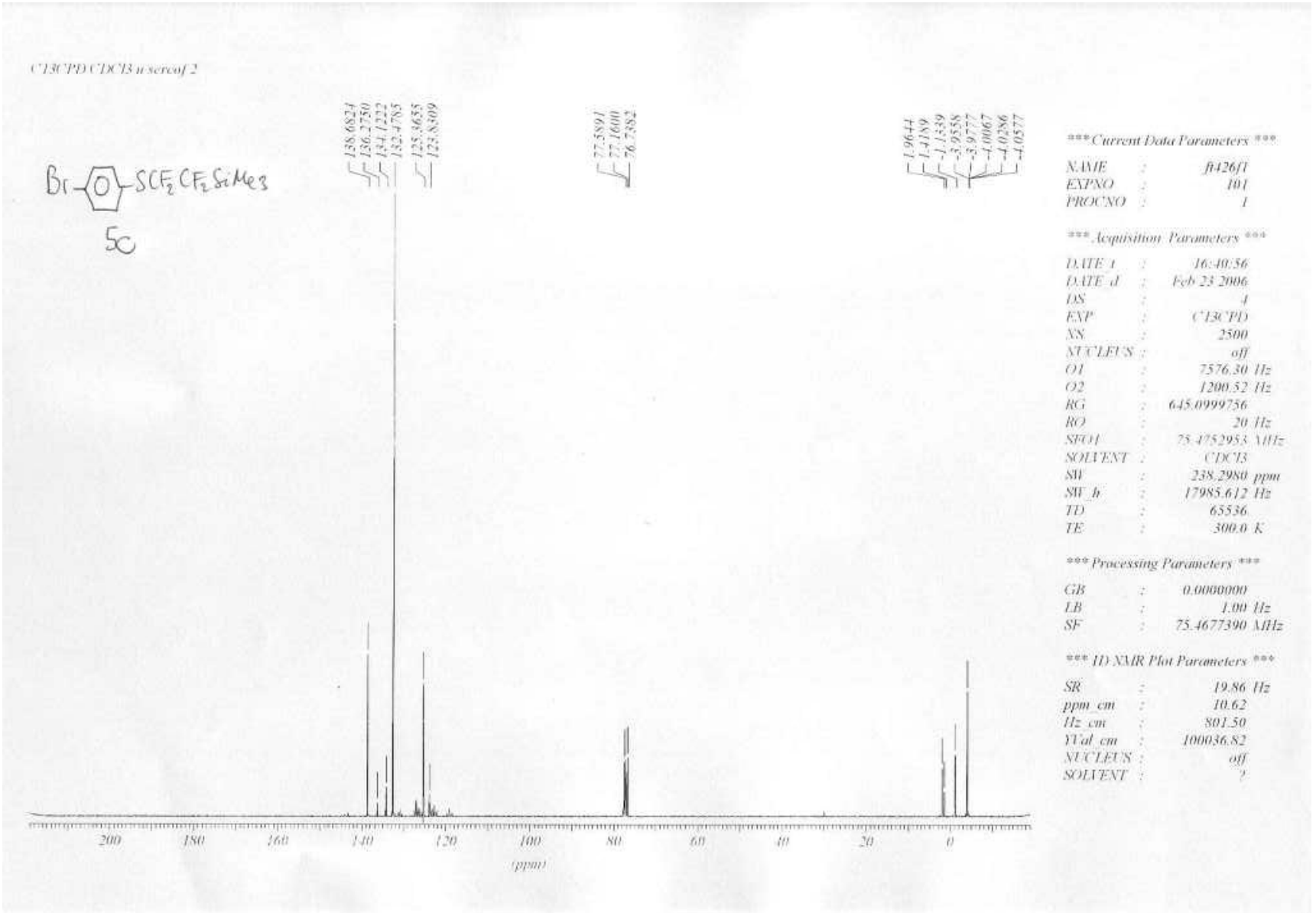

PROTON
7.6367
7.6291
7.6278
7.6102
7.3600
7.1156
7.0868
7.0373
0.2710
F
SCF2CF2SiMe3
5b
Integral
2.0191
2.0475
8.7133
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fl428
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:16:18
DATE_d : Feb 14 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 228.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
WCal_cm : 25216348.00
NUCLEUS : off
SOLVENT : ?


F19_30
F-⬡-SCF2CF2SiMe3
56
-83.2782
-83.2945
-83.3107
-110.4931
-110.5215
-110.5419
-110.5703
-110.5865
-110.5906
-122.5020
-122.5182
-122.5345
*** Current Data Parameters ***
NAME : ft428
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:18:07
DATE_d : Feb 14 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 82652936.00
NUCLEUS : off
SOLVENT : ?
Integral
40.018
0.5176
2.3296
15.339
41.037
2.1314
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)

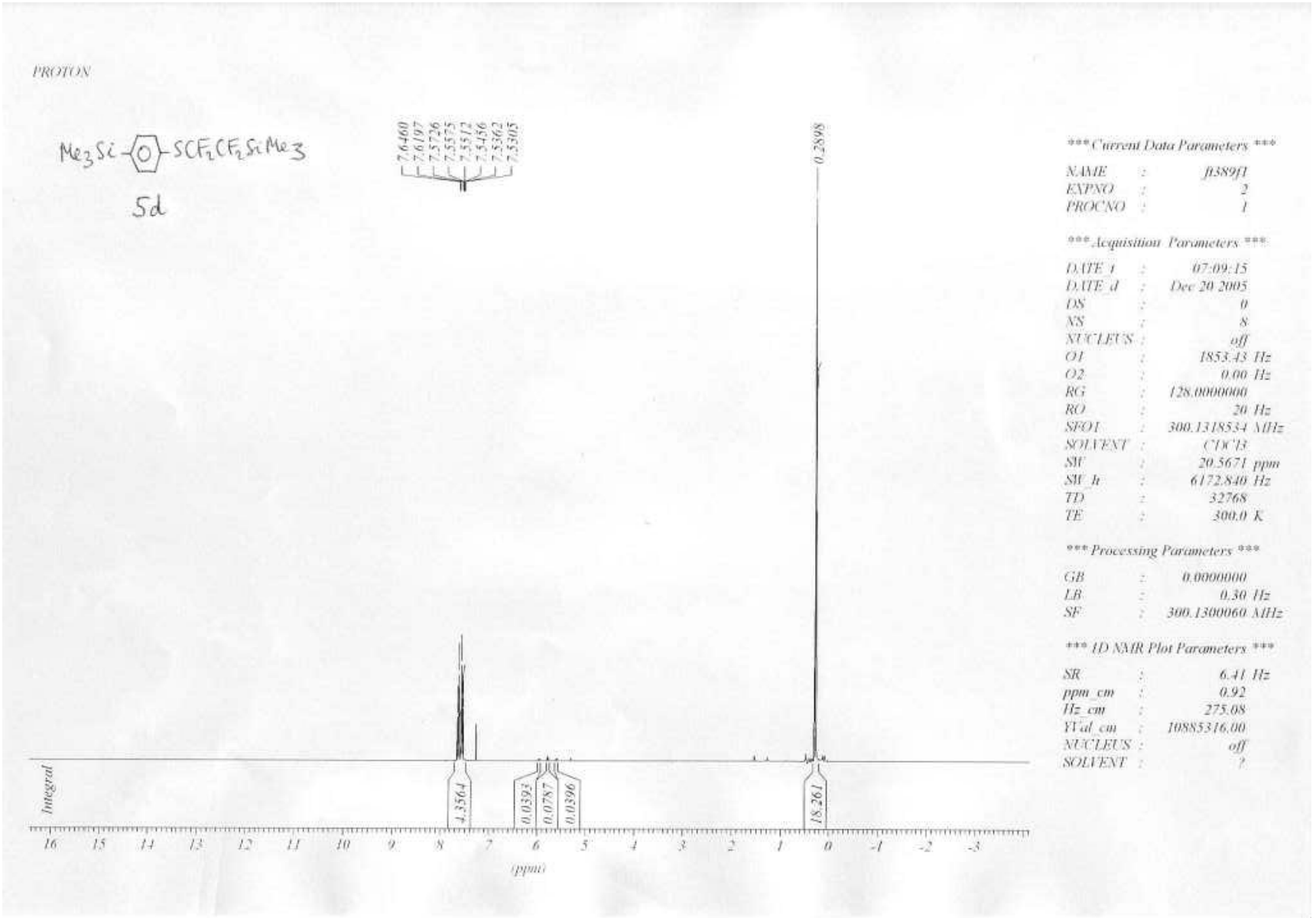

C13CPD CDCl3 n sercof 3
166.0725
162.7415
139.5769
139.5697
139.5624
139.4533
139.4460
127.1037
122.7545
119.9835
119.9689
119.9616
119.9471
119.9326
119.9180
119.9035
119.8889
119.8671
116.6306
116.3397
77.1600
-3.9849
-4.0067
-4.0140
-4.0286
-4.0358
-4.0649
-4.0867
F
SCF2CF2SiMe3
56
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft428
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_1 : 20:44:55
DATE_d : Feb 22 2006
DS : 4
EXP : C13CPD
NS : 2500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 2580.3000488
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677360 MHz
*** 1D NMR Plot Parameters ***
SR : 17.11 Hz
ppm_cm : 10.62
Hz_cm : 801.50
WCol_cm : 225364.31
NUCLEUS : off
SOLVENT : ?


PROTON
Br-⟨O⟩-SCF2CF2SiMe3
5c
7.5161
7.5123
7.2600
0.2653
Integral
4.1271
10.412
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fb426f1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 09:16:10
DATE_d : Feb 15 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300070 MHz
*** 1D NMR Plot Parameters ***
SR : 6.60 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 26957906.00
NUCLEUS : off
SOLVENT : ?


F19_30
Br-⟨O⟩-SCF2CF2SiMe3
5c
-82.7948
-82.8110
-82.8313
-122.3841
-122.4004
-122.4207
Integral
2.1000
2.0862
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft426f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:49:23
DATE_d : Feb 14 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 38868220.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 u sercof 2
Br
SCF2CF2SiMe3
5c
138.6824
136.2750
134.1222
132.4785
125.3655
123.8309
77.5891
77.1600
76.7582
1.9644
1.4189
-1.1339
-3.9558
-3.9777
-4.0067
-4.0286
-4.0577
***Current Data Parameters ***
NAME : ft426f1
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 16:40:56
DATE_d : Feb 23 2006
DS : 4
EXP : C13CPD
NS : 2500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 645.0999756
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 100036.82
NUCLEUS : off
SOLVENT : ?
200
180
160
140
120
100
80
60
40
20
0
(ppm)

PROTON



*** Current Data Parameters ***

NAME	:	fi389f1
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

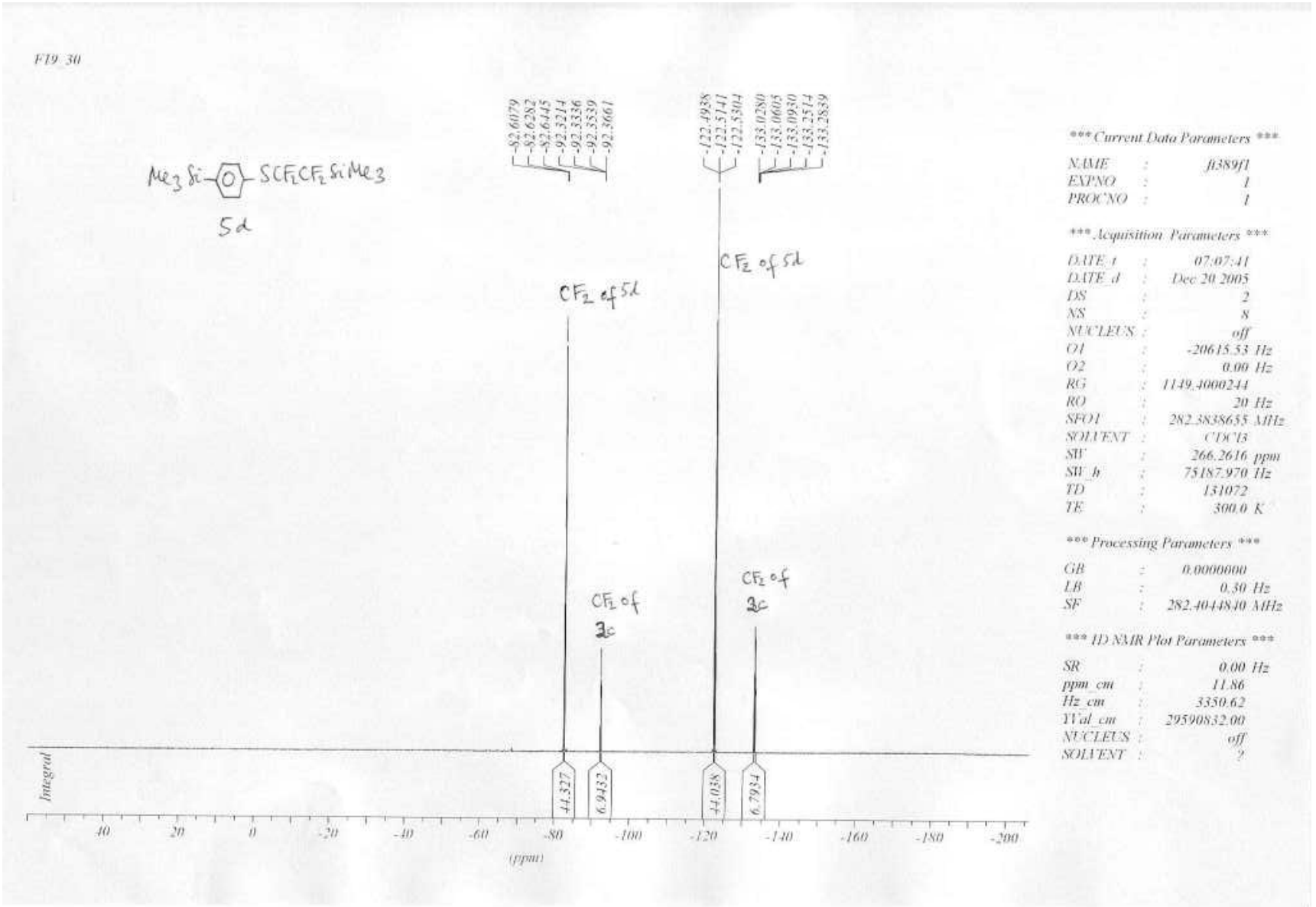
DATE_t	:	07:09:15
DATE_d	:	Dec 20 2005
DS	:	0
NS	:	8
NUCLEUS	:	off
O1	:	1853.43 Hz
O2	:	0.00 Hz
RG	:	128.0000000
RO	:	20 Hz
SFO1	:	300.1318534 MHz
SOLVENT	:	CDCl3
SW	:	20.5671 ppm
SW_h	:	6172.840 Hz
TD	:	32768
TE	:	300.0 K

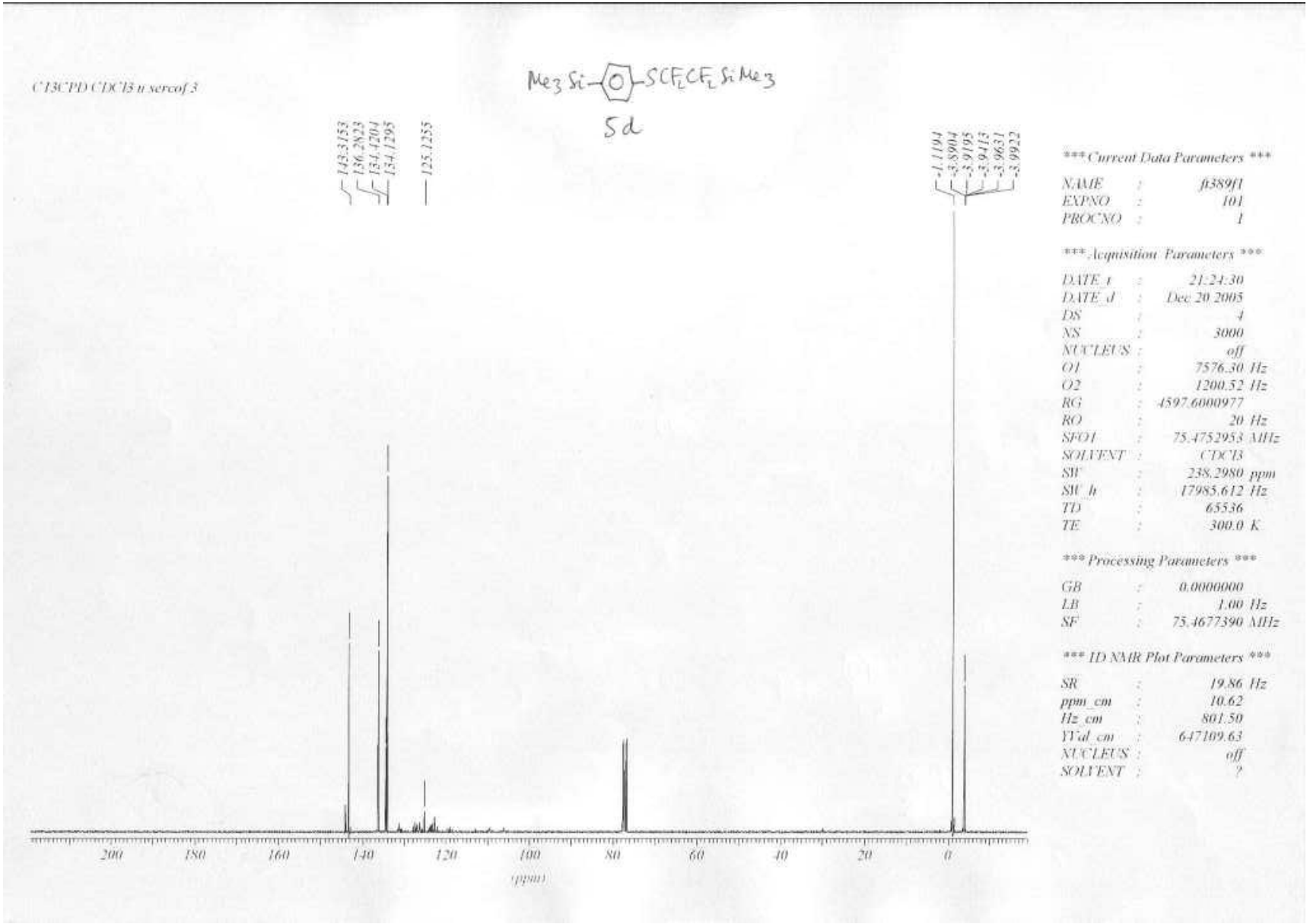
*** Processing Parameters ***

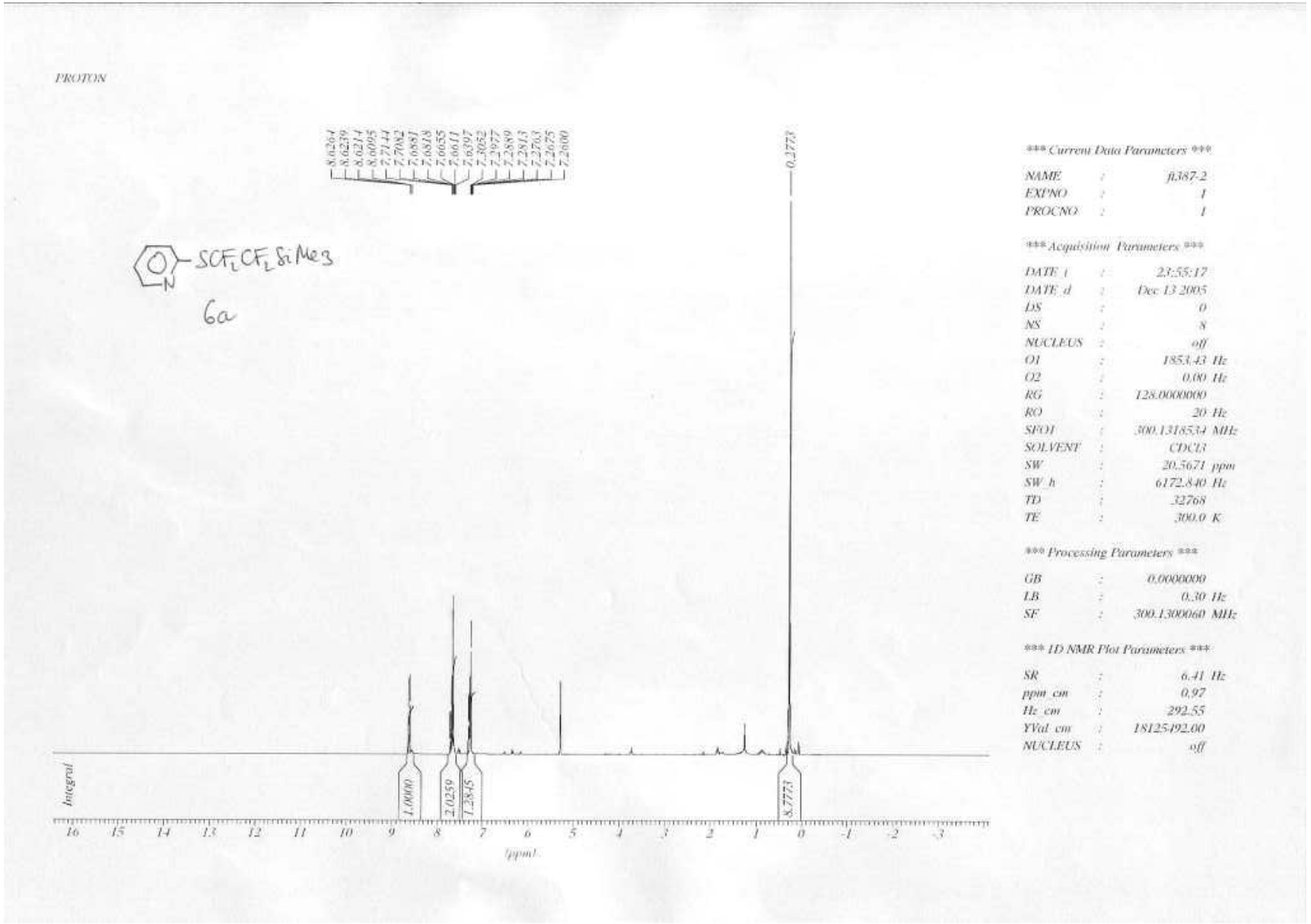
GB	:	0.0000000
LB	:	0.30 Hz
SF	:	300.1300060 MHz

*** 1D NMR Plot Parameters ***

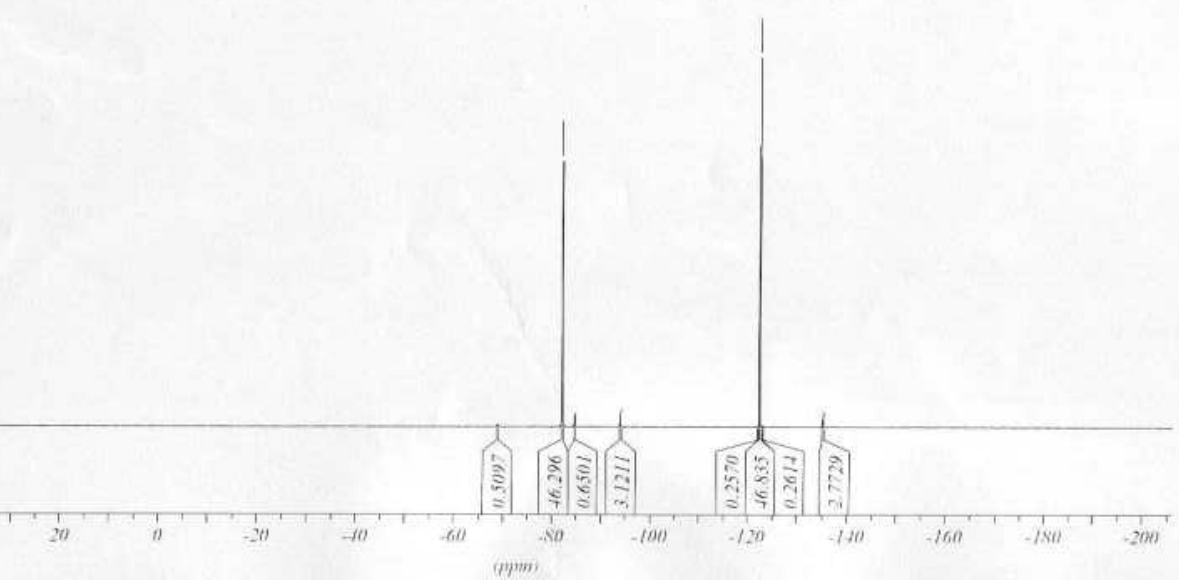
SR	:	6.41 Hz
ppm_cm	:	0.92
Hz_cm	:	275.08
YVal_cm	:	10885316.00
NUCLEUS	:	off
SOLVENT	:	?


F19_30
Me3Si-C6H4-SCF2CF2SiMe3
5d
-82.6079
-82.6282
-82.6445
-92.3214
-92.3336
-92.3539
-92.3661
-122.4938
-122.5141
-122.5304
-133.0280
-133.0605
-133.0930
-133.2514
-133.2839
CF2 of 5d
CF2 of 5d
CF2 of 3c
CF2 of 3c
Integral
44.327
6.9432
44.038
6.7934
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft389f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:07:41
DATE_d : Dec 20 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1149.4000244
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 29590832.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 u sercof 3
Me3 Si-(O)-SCF2CF2 SiMe3
5d
143.3153
136.2823
134.4204
134.1295
125.1255
1.1194
-3.8904
-3.9195
-3.9413
-3.9631
-3.9922
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft389ft
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 21:24:30
DATE_d : Dec 20 2005
DS : 4
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 4597.6000977
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Yval_cm : 647109.63
NUCLEUS : off
SOLVENT : ?


PROTON
8.0264
8.0239
8.0214
8.0095
7.7144
7.7082
7.6981
7.6818
7.6655
7.6611
7.6597
7.3052
7.2977
7.2889
7.2813
7.2763
7.2675
7.2600
0.2773
SCF2CF2SiMe3
6a
Integral
1.0000
2.0259
1.2845
8.7773
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fl387-2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:55:17
DATE_d : Dec 13 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 128.0009000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.97
Hz_cm : 292.55
YVal_cm : 18125492.00
NUCLEUS : off

F19_30



6a

*** Current Data Parameters ***

NAME	:	ft387-2
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

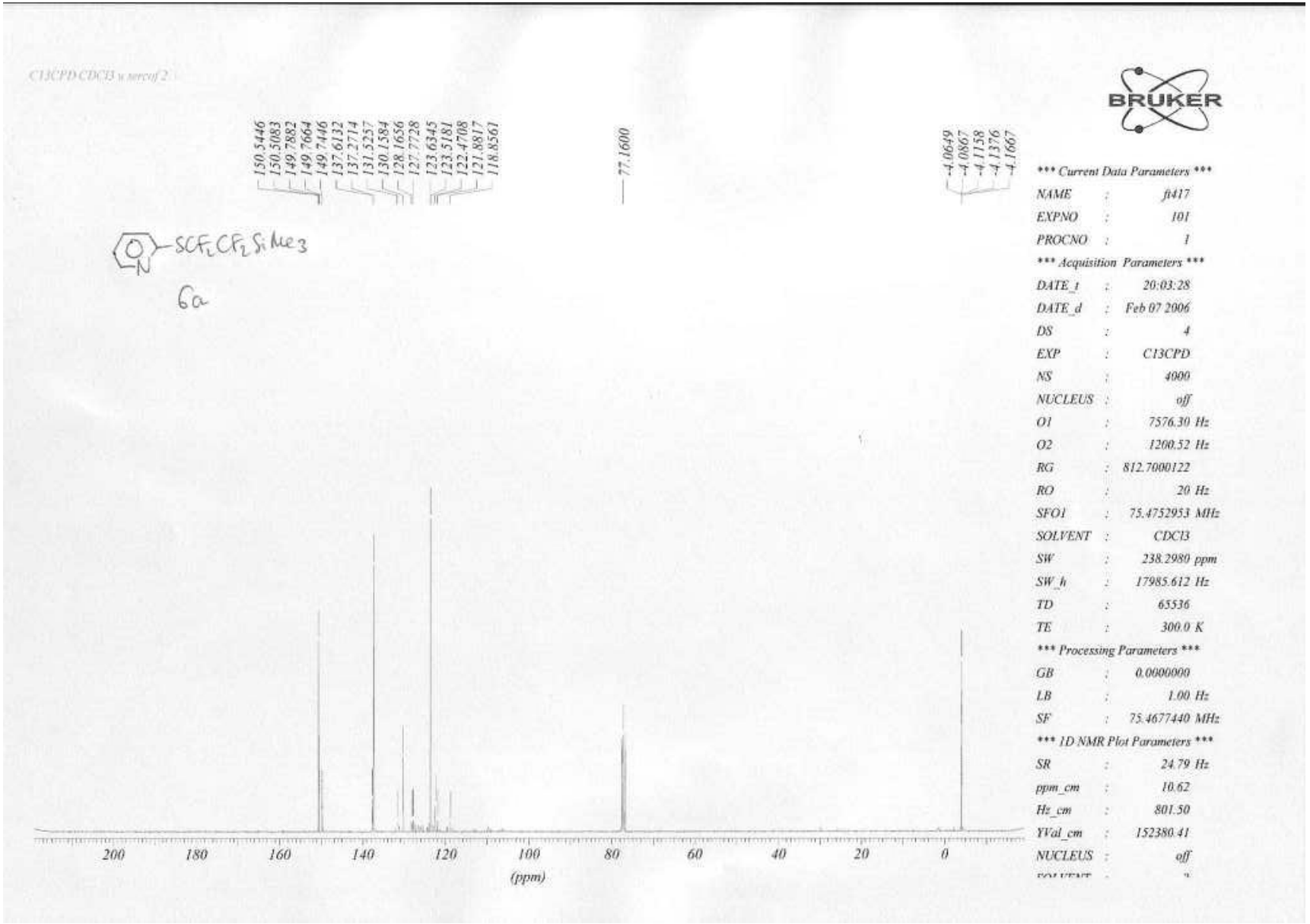
DATE_t	:	23:57:16
DATE_d	:	Dec 13 2005
DS	:	2
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	1024.0000000
RO	:	20 Hz
SFO1	:	282.3838653 MHz
SOLVENT	:	CDCl3
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

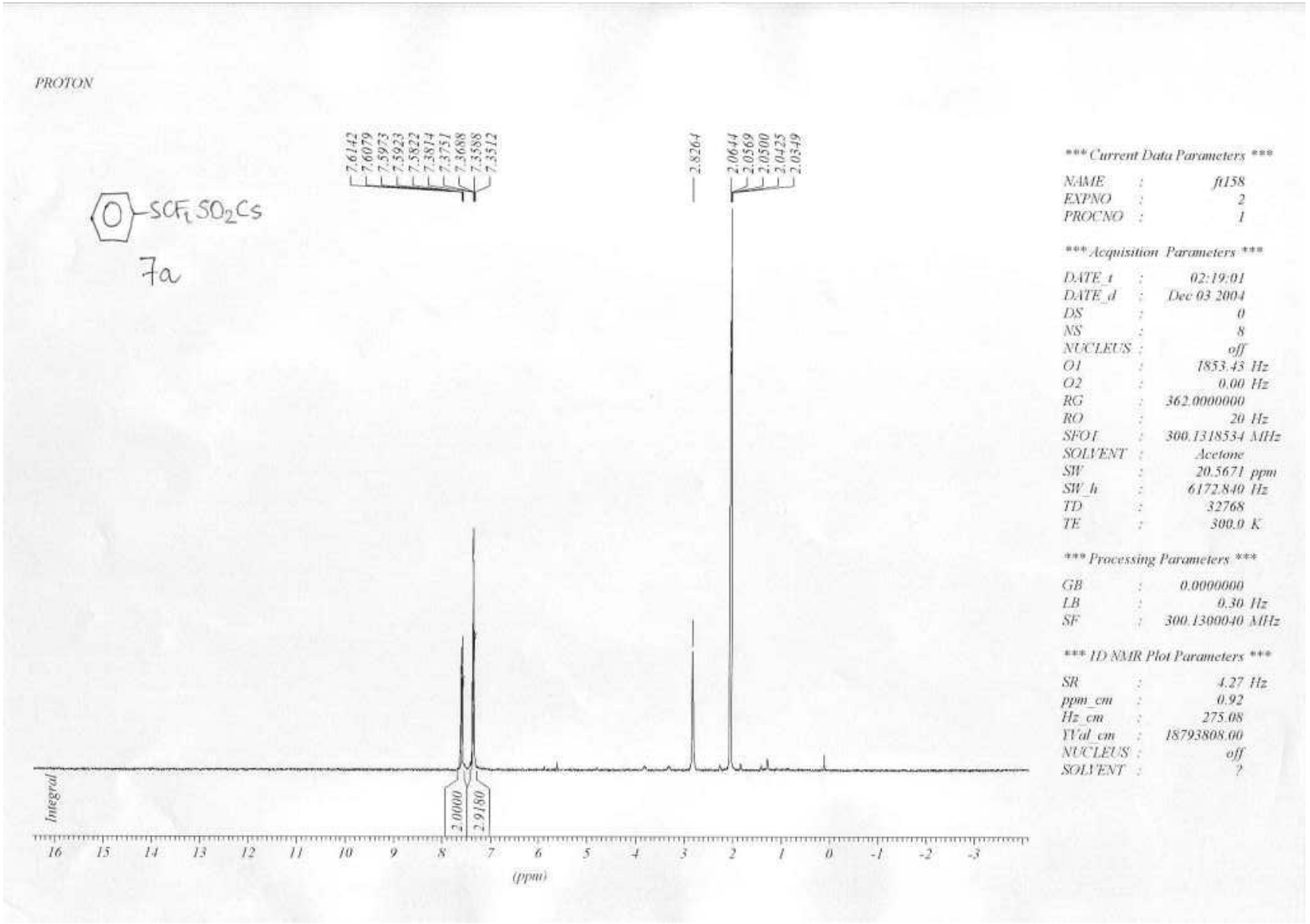
*** Processing Parameters ***

GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

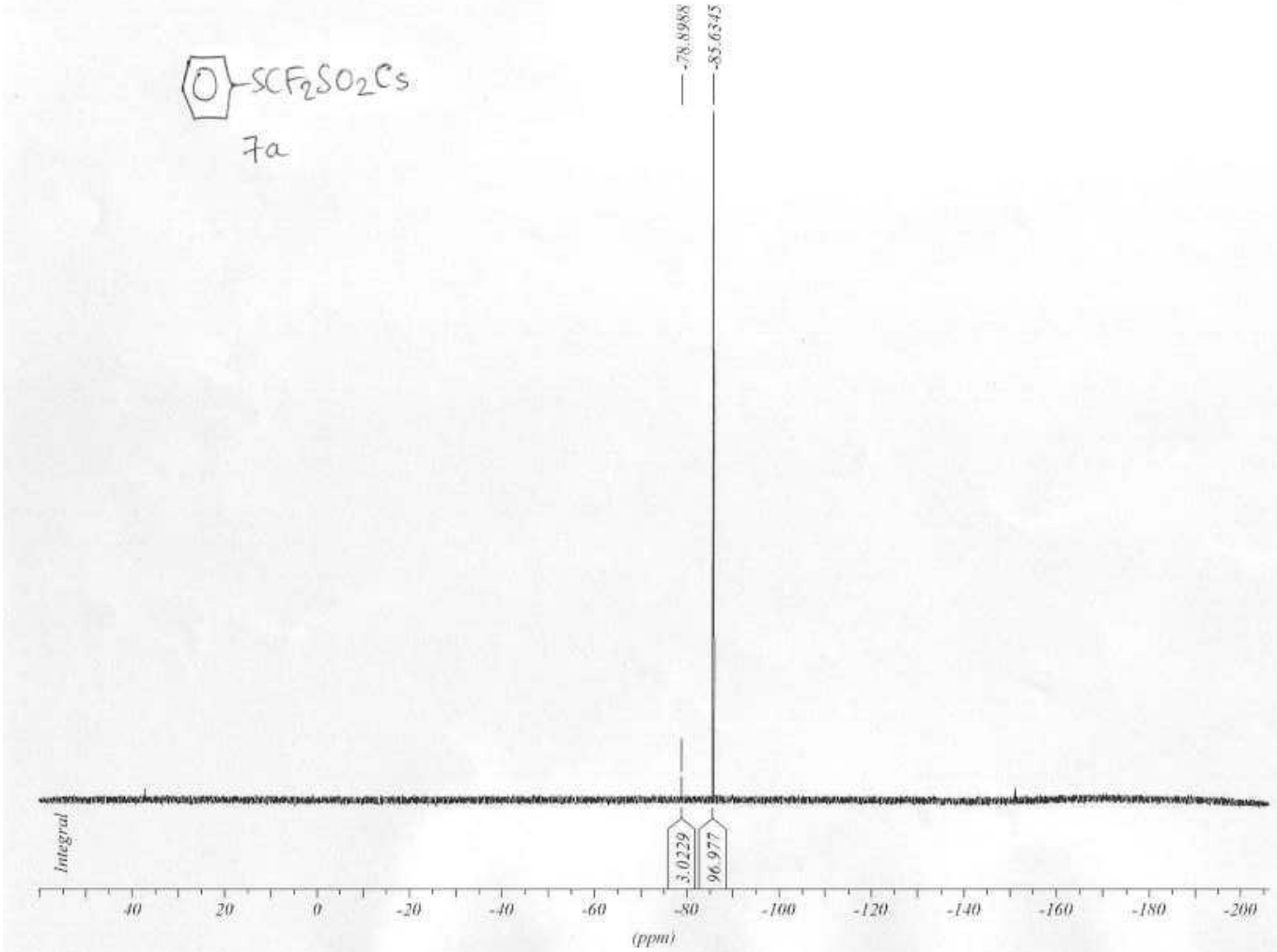
*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	68024616.00
NUCLEUS	:	off
SOLVENT	:	?


C13CPD CDCl3 w sercof 2
150.5446
150.5083
149.7882
149.7664
149.7446
137.6132
137.2714
131.5257
130.1584
128.1656
127.7728
123.6345
123.5181
122.4708
121.8817
118.8561
77.1600
-4.0649
-4.0867
-4.1158
-4.1376
-4.1667
SCF2CF2SiMe3
6a
200
180
160
140
120
100
80
60
40
20
0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : ft417
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 20:03:28
DATE_d : Feb 07 2006
DS : 4
EXP : C13CPD
NS : 4000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 812.7000122
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677440 MHz
*** 1D NMR Plot Parameters ***
SR : 24.79 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 152380.41
NUCLEUS : off


PROTON
7.6142
7.6079
7.5973
7.5923
7.5822
7.3814
7.3751
7.3688
7.3588
7.3512
2.8264
2.0644
2.0569
2.0500
2.0425
2.0349
7a
Integral
2.0000
2.9180
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft158
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 02:19:01
DATE_d : Dec 03 2004
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.27 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 18793808.00
NUCLEUS : off
SOLVENT : ?

F19_30



*** Current Data Parameters ***

NAME	:	fl158
EXPNO	:	1
PROCNO	:	1

*** Acquisition Parameters ***

DATE_t	:	02:17:30
DATE_d	:	Dec 03 2004
DS	:	2
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	1290.1999512
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	Acetone
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

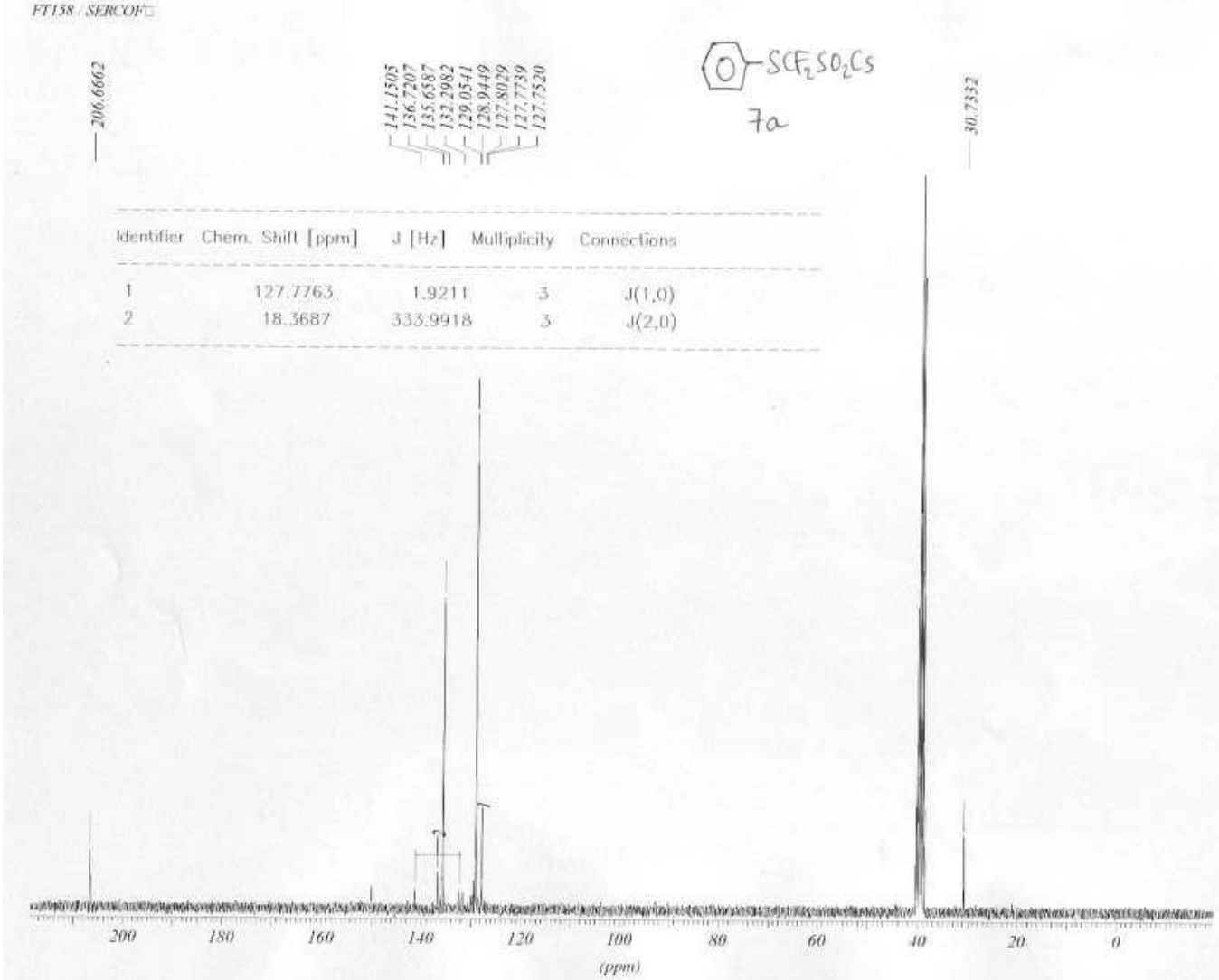
*** Processing Parameters ***

GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	31618912.00
NUCLEUS	:	off
SOLVENT	:	Acetone

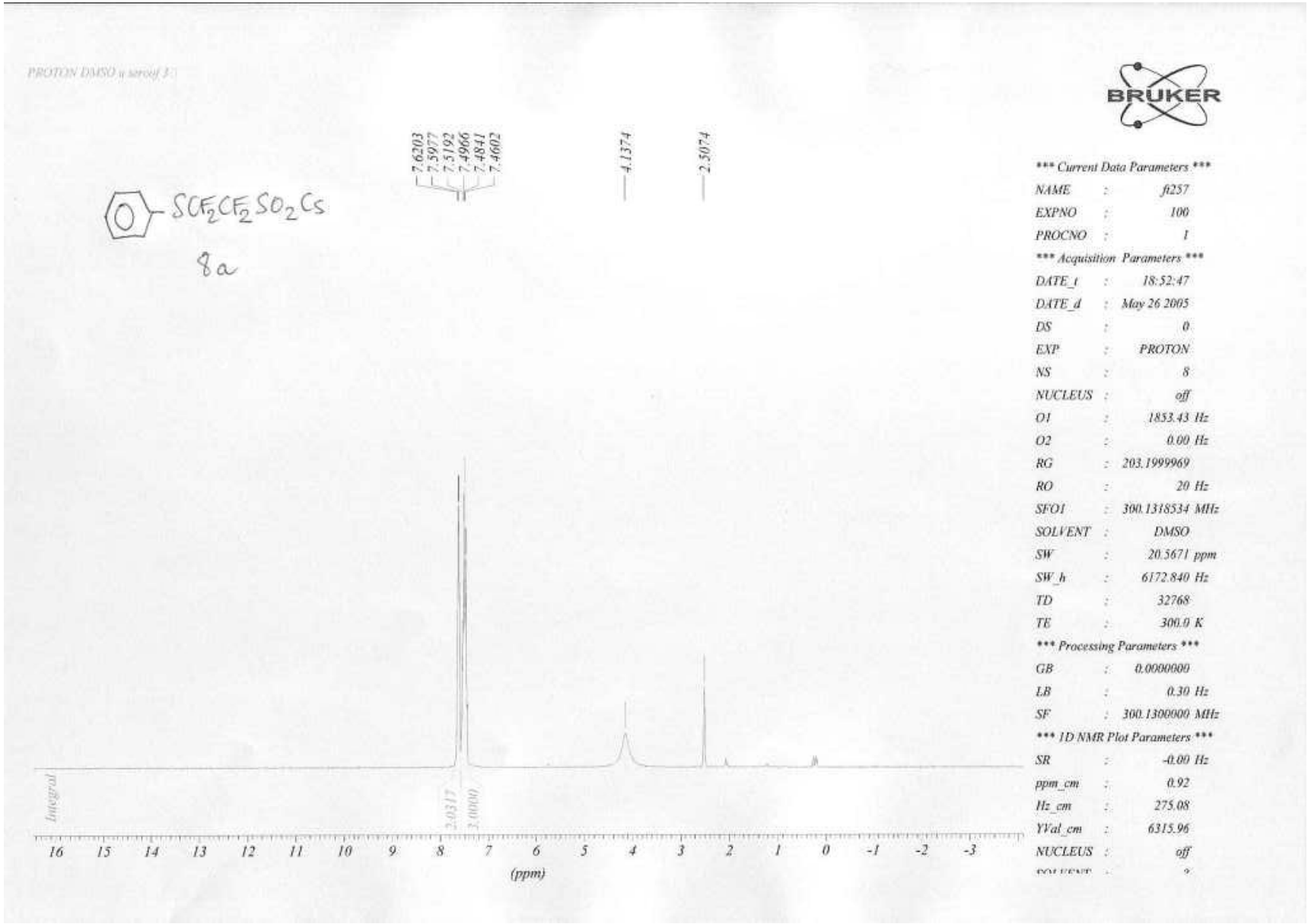
FT158 / SERCOF□



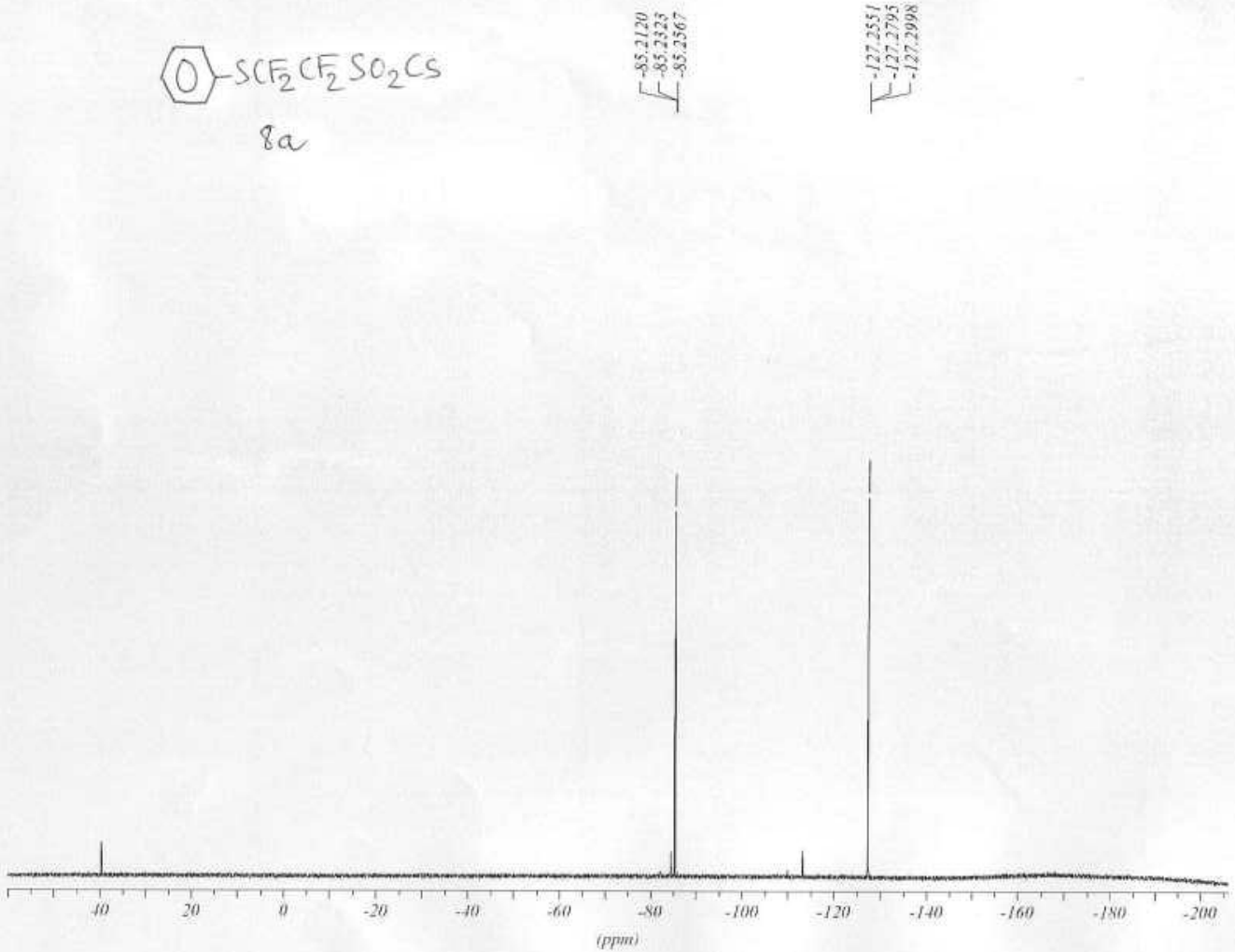
Identifier	Chem. Shift [ppm]	J [Hz]	Multiplicity	Connections
1	127.7763	1.9211	3	J(1,0)
2	18.3687	333.9918	3	J(2,0)

BRUKER

*** Current Data Parameters ***
NAME : ft158
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 11:42:06
DATE_d : Dec 16 2004
DS : 4
NS : 3072
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 4096.0000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : DMSO
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 296.2 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4587880 MHz
*** 1D NMR Plot Parameters ***
SR : 62.09 Hz
ppm_cm : 10.62
Hz_cm : 801.30
YVal_cm : 198513.92
NUCLEUS : off
SOLVENT : ?


PROTON DMSO a seroul 3
7.6203
7.5977
7.5192
7.4966
7.4841
7.4602
4.1374
2.5074
SCF2CF2SO2Cs
8a
Integral
2.0317
3.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl257
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 18:52:47
DATE_d : May 26 2005
DS : 0
EXP : PROTON
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 203.1999969
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : DMSO
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300000 MHz
*** 1D NMR Plot Parameters ***
SR : -0.00 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 6315.96
NUCLEUS : off

F19_30



8a

*** Current Data Parameters ***

NAME	:	ft257
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

DATE_t	:	03:02:38
DATE_d	:	May 20 2005
DS	:	2
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	512.0000000
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	DMSO
SW	:	266.2616 ppm
SW_h	:	75187.979 Hz
TD	:	131072
TE	:	300.0 K

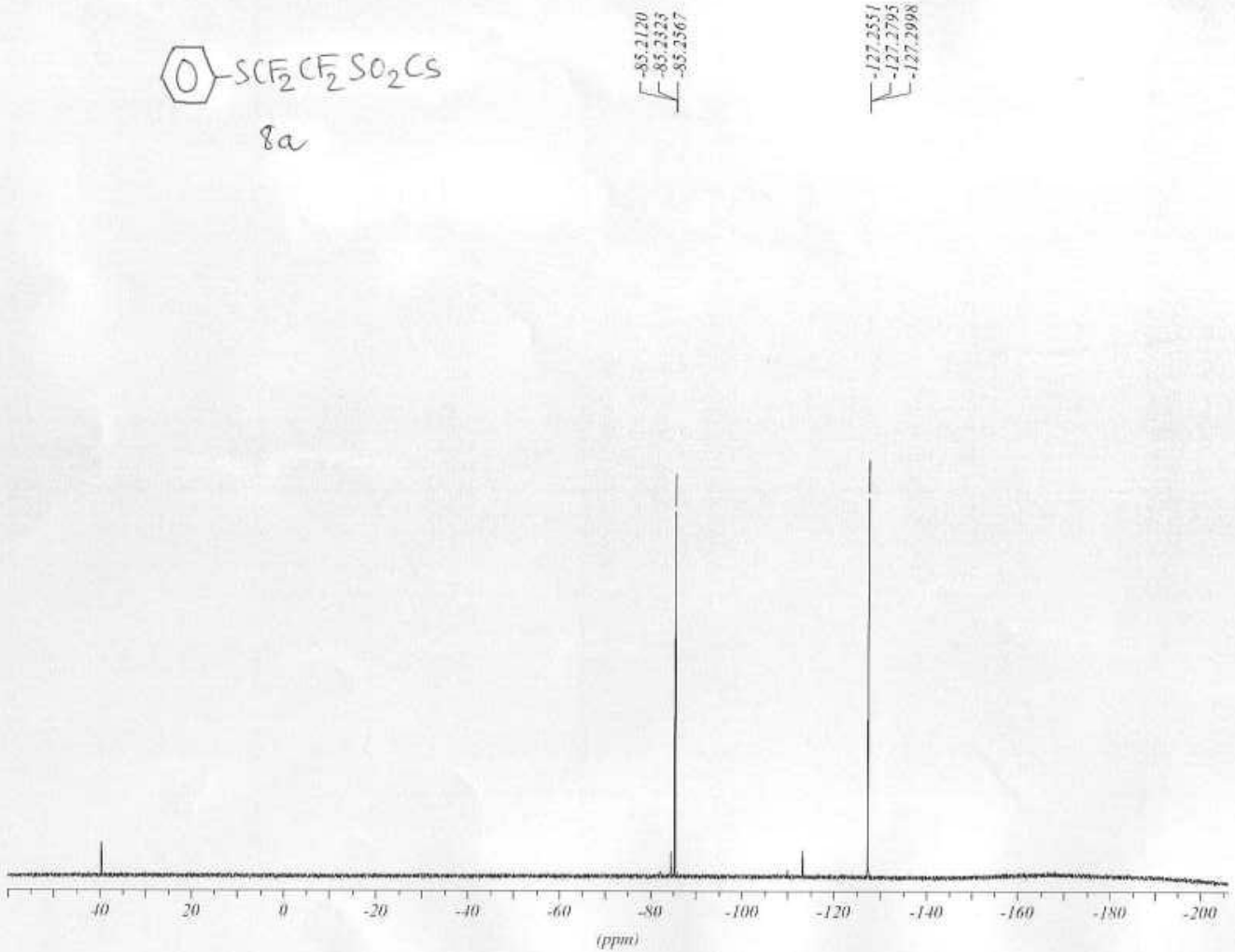
*** Processing Parameters ***

GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	57739740.00
NUCLEUS	:	off
SOLVENT	:	?

F19_30



8a

*** Current Data Parameters ***

NAME	:	ft257
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

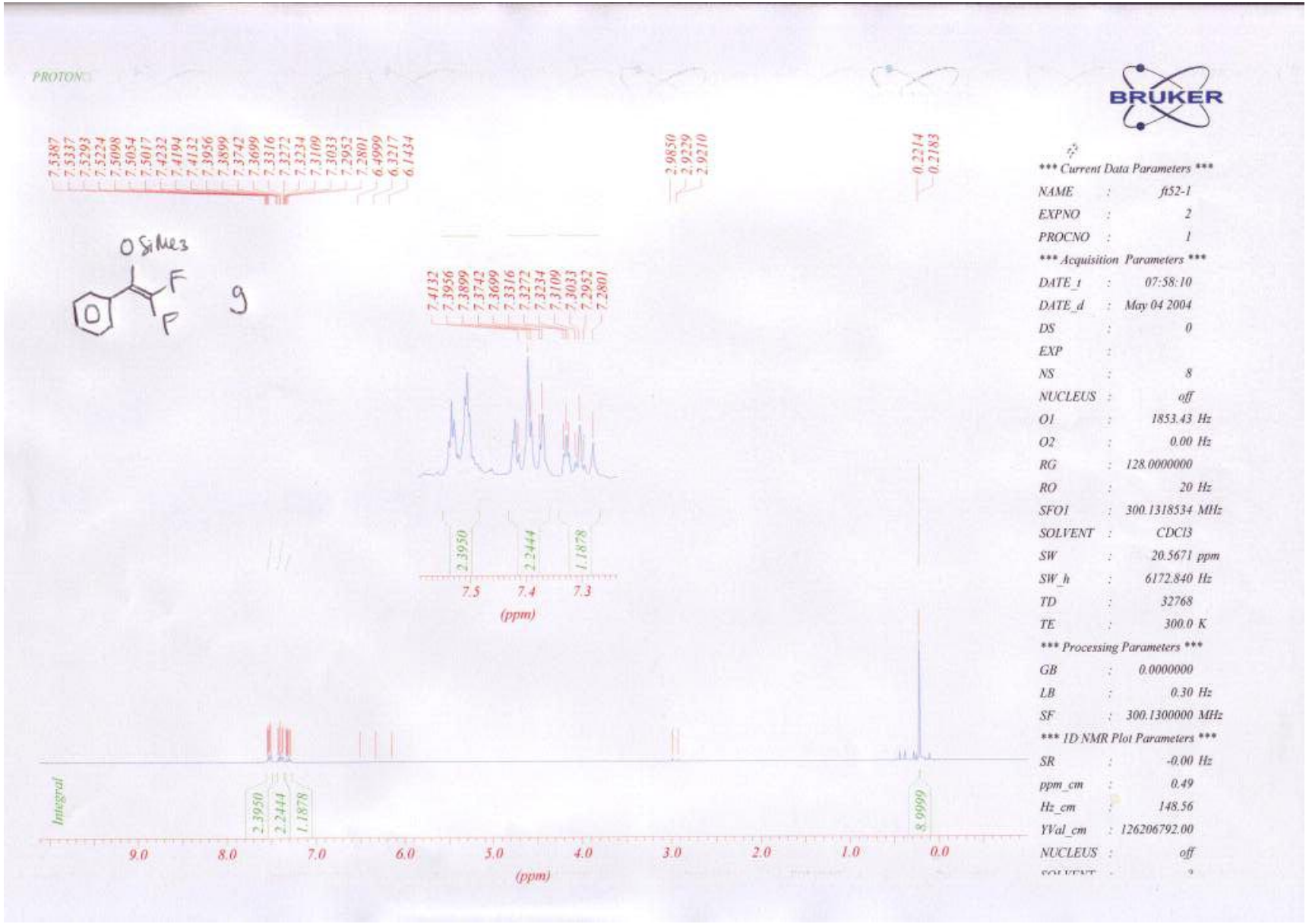
DATE_t	:	03:02:38
DATE_d	:	May 20 2005
DS	:	2
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	512.0000000
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	DMSO
SW	:	266.2616 ppm
SW_h	:	75187.979 Hz
TD	:	131072
TE	:	300.0 K

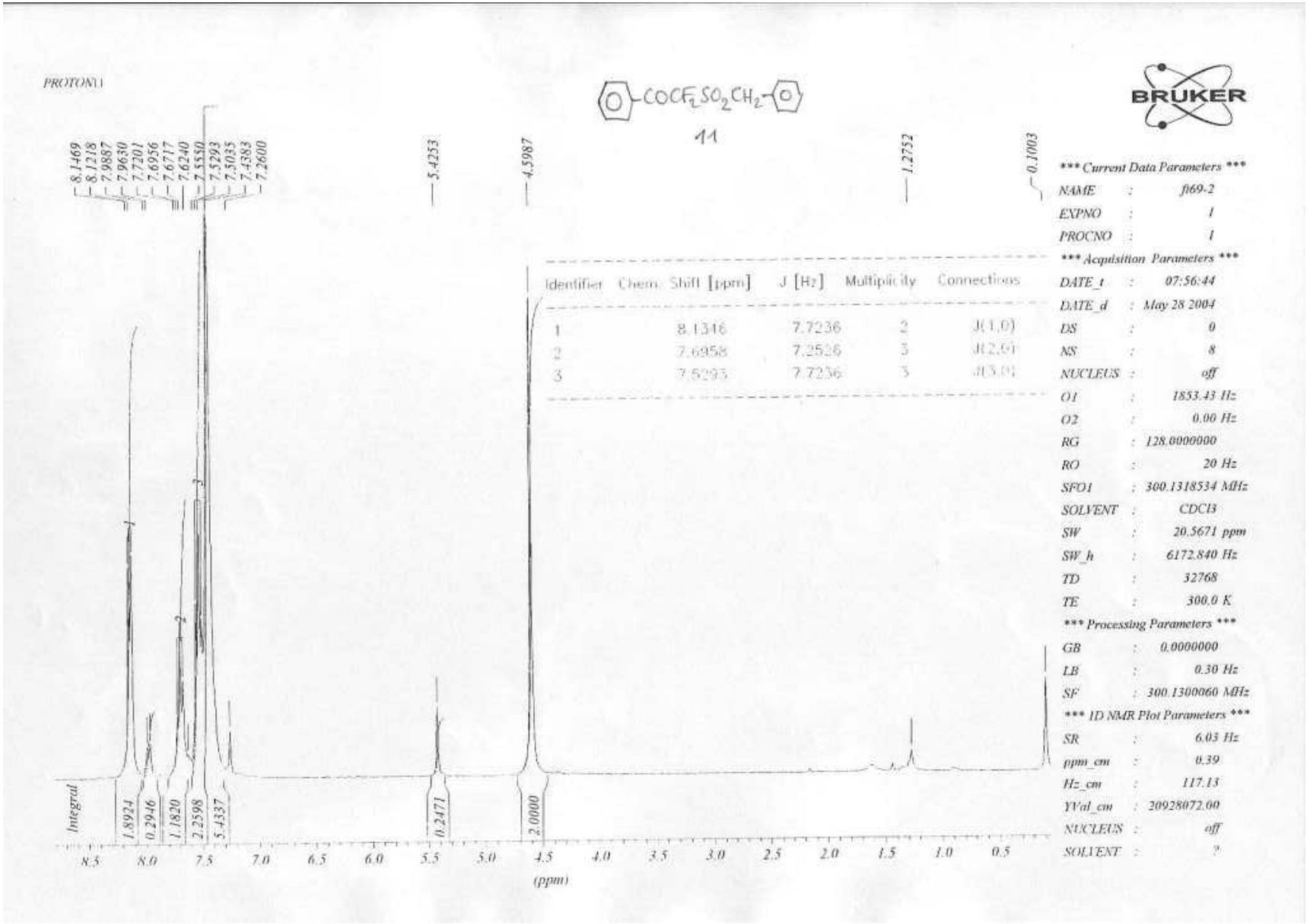
*** Processing Parameters ***

GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

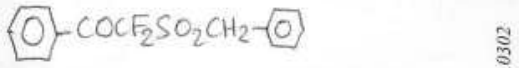
*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	57739740.00
NUCLEUS	:	off
SOLVENT	:	?


PROTON
7.5387
7.5337
7.5293
7.5224
7.5098
7.5054
7.5017
7.4232
7.4194
7.4132
7.3956
7.3899
7.3742
7.3699
7.3316
7.3272
7.3234
7.3109
7.3033
7.2952
7.2801
6.4999
6.3217
6.1434
2.9850
2.9229
2.9210
0.2214
0.2183
OSiMe3
F
F
O
9
7.4132
7.3956
7.3899
7.3742
7.3699
7.3316
7.3272
7.3234
7.3109
7.3033
7.2952
7.2801
2.3950
2.2444
1.1878
7.5
7.4
7.3
(ppm)
Integral
2.3950
2.2444
1.1878
8.9999
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : ft52-1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:58:10
DATE_d : May 04 2004
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 128.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300000 MHz
*** 1D NMR Plot Parameters ***
SR : -0.00 Hz
ppm_cm : 0.49
Hz_cm : 148.56
YVal_cm : 126206792.00
NUCLEUS : off


PROTON1
11
8.1469
8.1218
7.9887
7.9630
7.7201
7.6956
7.6717
7.6240
7.5550
7.5293
7.5035
7.4383
7.2600
5.4253
4.5987
1.2752
0.1003
Identifier Chem. Shift [ppm] J [Hz] Multiplicity Connections
1 8.1346 7.7236 2 J(1,0)
2 7.6958 7.2526 3 J(2,0)
3 7.5293 7.7236 3 J(3,0)
Integral
1.8924
1.8946
0.2946
1.1820
2.2598
5.4337
0.2471
2.0000
8.5 8.0 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 0.5
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl69-2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:56:44
DATE_d : May 28 2004
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 128.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.03 Hz
ppm_cm : 0.39
Hz_cm : 117.13
YVal_cm : 20928072.00
NUCLEUS : off
SOLVENT : ?

F19_30



11

*** Current Data Parameters ***

NAME	:	ft69-2
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

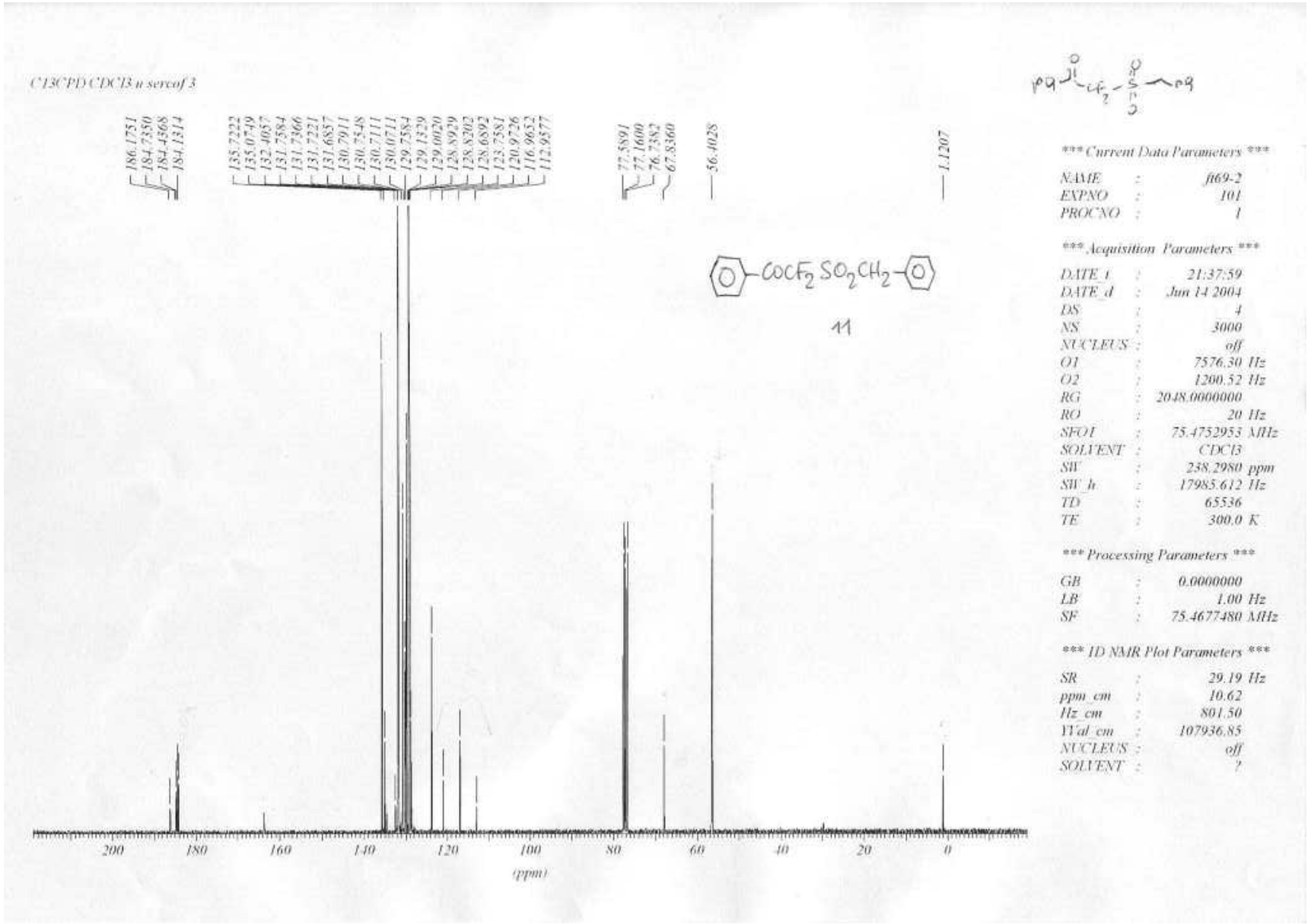
DATE_t	:	07:58:26
DATE_d	:	May 28 2004
DS	:	2
EXP	:	PS done
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	574.7000122
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	CDCl3
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

*** Processing Parameters ***

GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

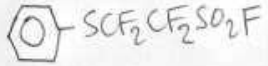
*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	31979594.00
NUCLEUS	:	off
SOLVENT	:	?

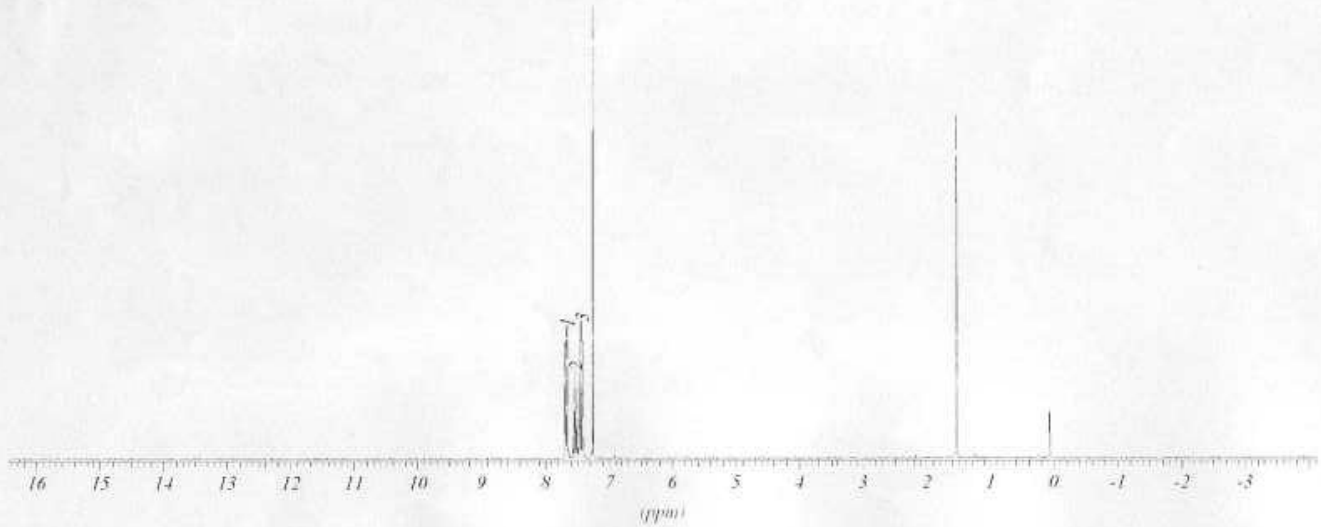

C13CPD CDCl3 u sercof 3
186.1751
184.7350
184.4368
184.1314
135.7222
135.0749
132.4057
131.7584
131.7366
131.7231
131.6857
130.7911
130.7548
130.7111
130.0711
129.7584
129.1329
129.0020
128.8929
128.8202
128.6892
123.7581
120.9726
116.9652
112.9577
77.5891
77.1600
76.7382
67.8360
56.4028
1.1207
200
180
160
140
120
100
80
60
40
20
0
(ppm)
11
*** Current Data Parameters ***
NAME : fl69-2
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 21:37:59
DATE_d : Jun 14 2004
DS : 4
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 2048.0000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677480 MHz
*** 1D NMR Plot Parameters ***
SR : 29.19 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Val_cm : 107936.85
NUCLEUS : off
SOLVENT : ?

PROTON

Identifier	Chem. Shift [ppm]	J [Hz]	Multiplicity	Connections
1	7.6749	7.5352	2	J(1,0)
2	7.5381	7.1584	3	J(2,0)
3	7.4435	7.4410	3	J(3,0)



13a



BRUKER

*** Current Data Parameters ***

NAME	:	fl183dd
EXPNO	:	1
PROCNO	:	1

*** Acquisition Parameters ***

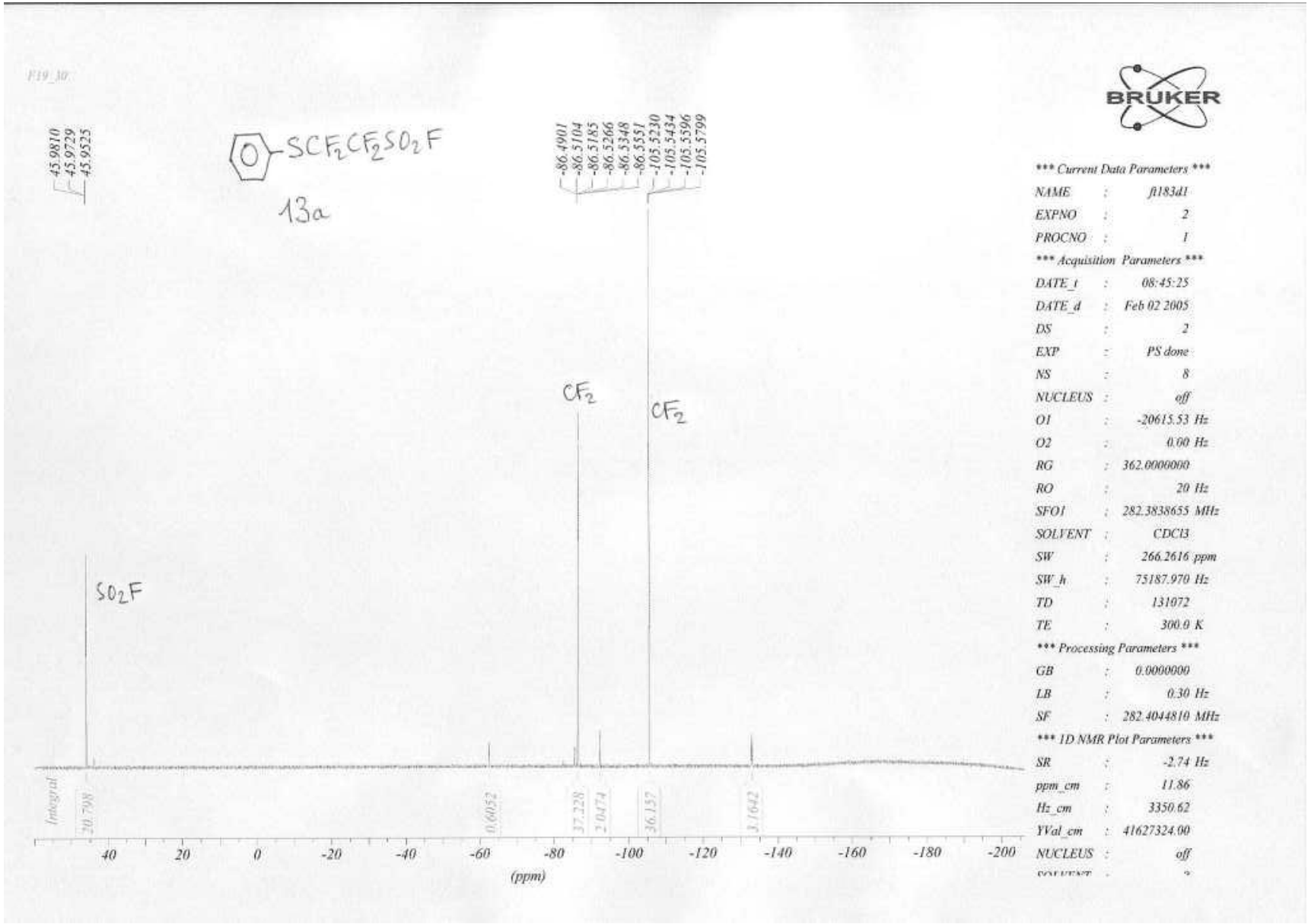
DATE_t	:	09:07:31
DATE_d	:	Feb 14 2005
DS	:	0
NS	:	8
NUCLEUS	:	off
O1	:	1853.43 Hz
O2	:	0.00 Hz
RG	:	406.3999939
RO	:	20 Hz
SFO1	:	300.1318534 MHz
SOLVENT	:	CDCl3
SW	:	20.5671 ppm
SW_h	:	6172.840 Hz
TD	:	32768
TE	:	300.0 K

*** Processing Parameters ***

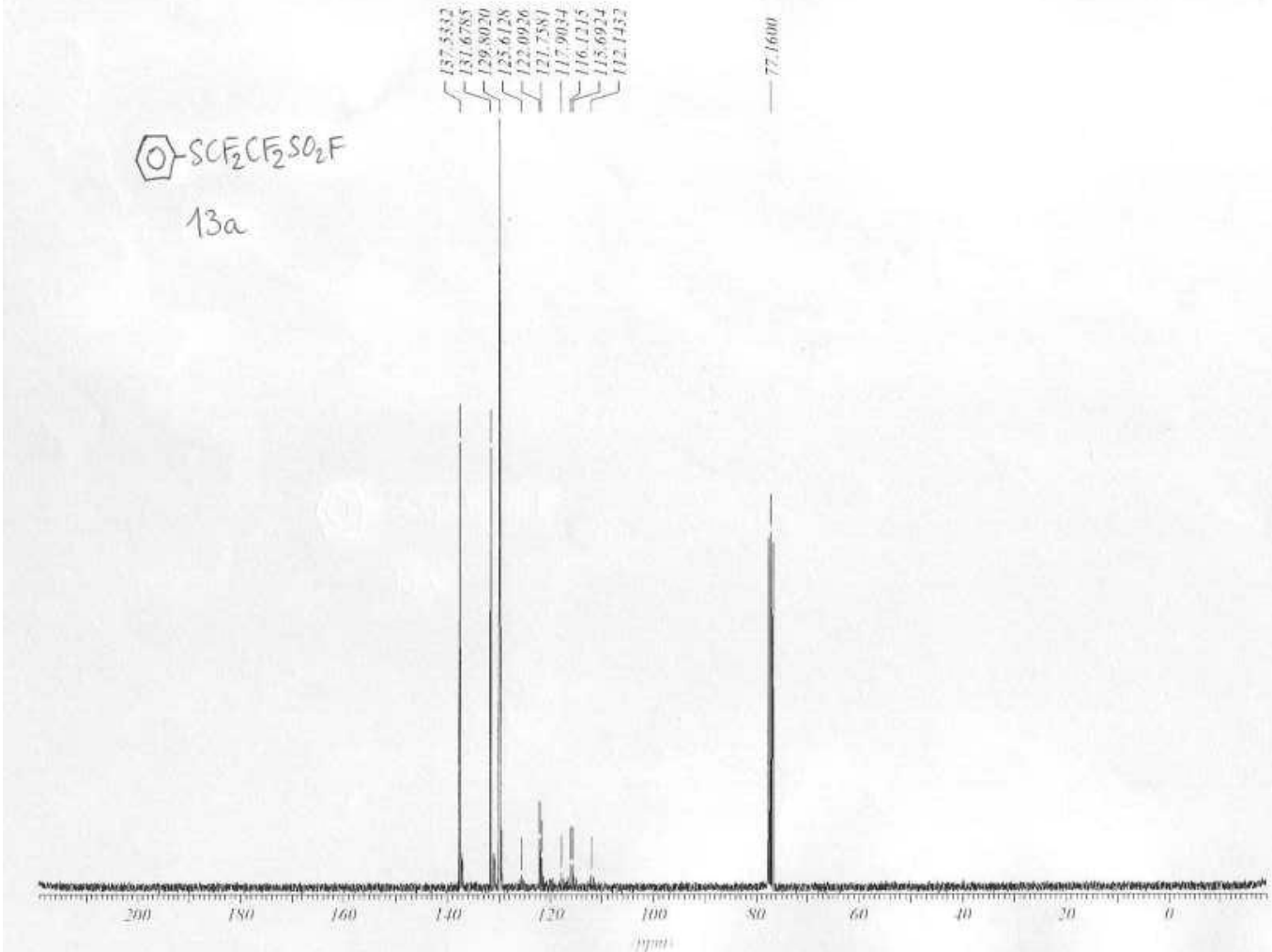
GB	:	0.0000000
LB	:	0.30 Hz
SF	:	300.1300070 MHz

*** 1D NMR Plot Parameters ***

SR	:	6.60 Hz
ppm_cm	:	0.92
Hz_cm	:	275.08
YVal_cm	:	43004356.00
NUCLEUS	:	off
SOLVENT	:	?


F19_30
45.9810
45.9729
45.9525
SCF2CF2SO2F
13a
-86.4901
-86.5104
-86.5185
-86.5266
-86.5348
-86.5551
-105.5230
-105.5434
-105.5596
-105.5799
CF2
CF2
SO2F
Integral
20.798
0.6052
37.228
2.0474
36.152
3.1642
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl183d1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:45:25
DATE_d : Feb 02 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044810 MHz
*** 1D NMR Plot Parameters ***
SR : -2.74 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 41627324.00
NUCLEUS : off

C13CPDCDCl3 u sercof 2



*** Current Data Parameters ***

NAME	:	ft183dd
EXPNO	:	101
PROCNO	:	1

*** Acquisition Parameters ***

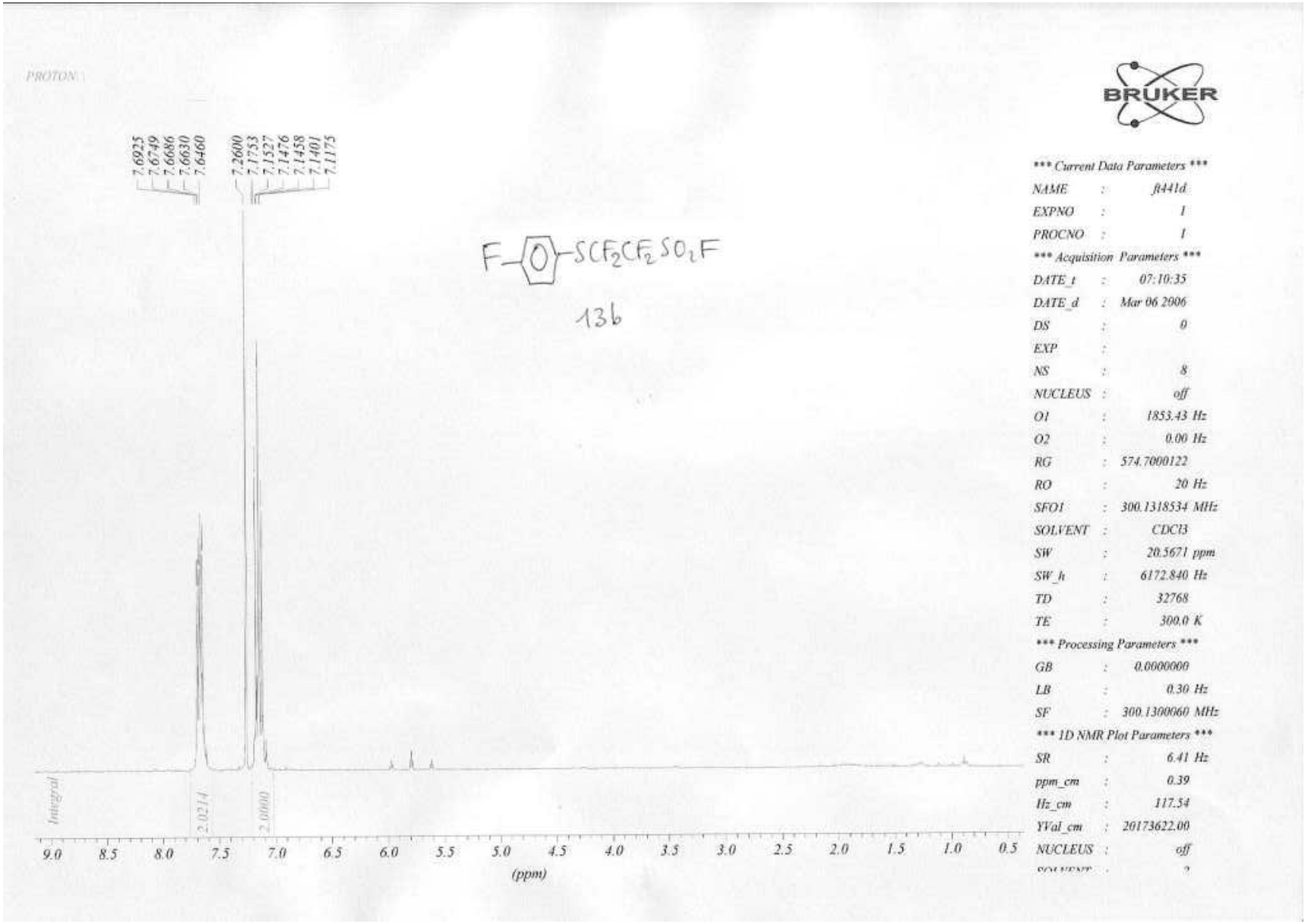
DATE_t	:	21:01:57
DATE_d	:	Feb 14 2005
DS	:	4
NS	:	3500
NUCLEUS	:	off
O1	:	7576.30 Hz
O2	:	1200.52 Hz
RG	:	2580.3000488
RO	:	20 Hz
SFO1	:	75.4752953 MHz
SOLVENT	:	CDCl3
SW	:	238.2980 ppm
SW_h	:	17985.612 Hz
TD	:	65536
TE	:	300.0 K

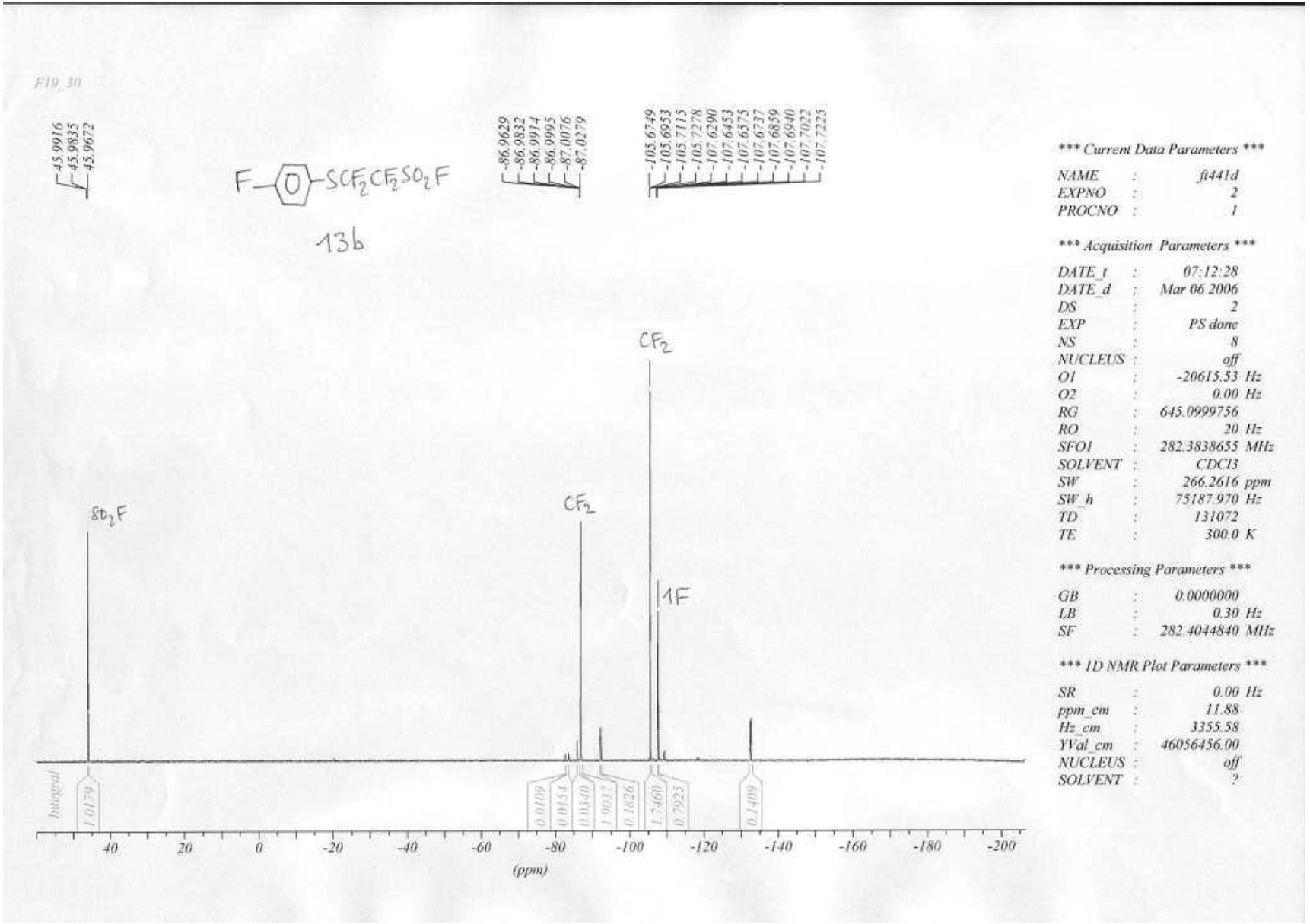
*** Processing Parameters ***

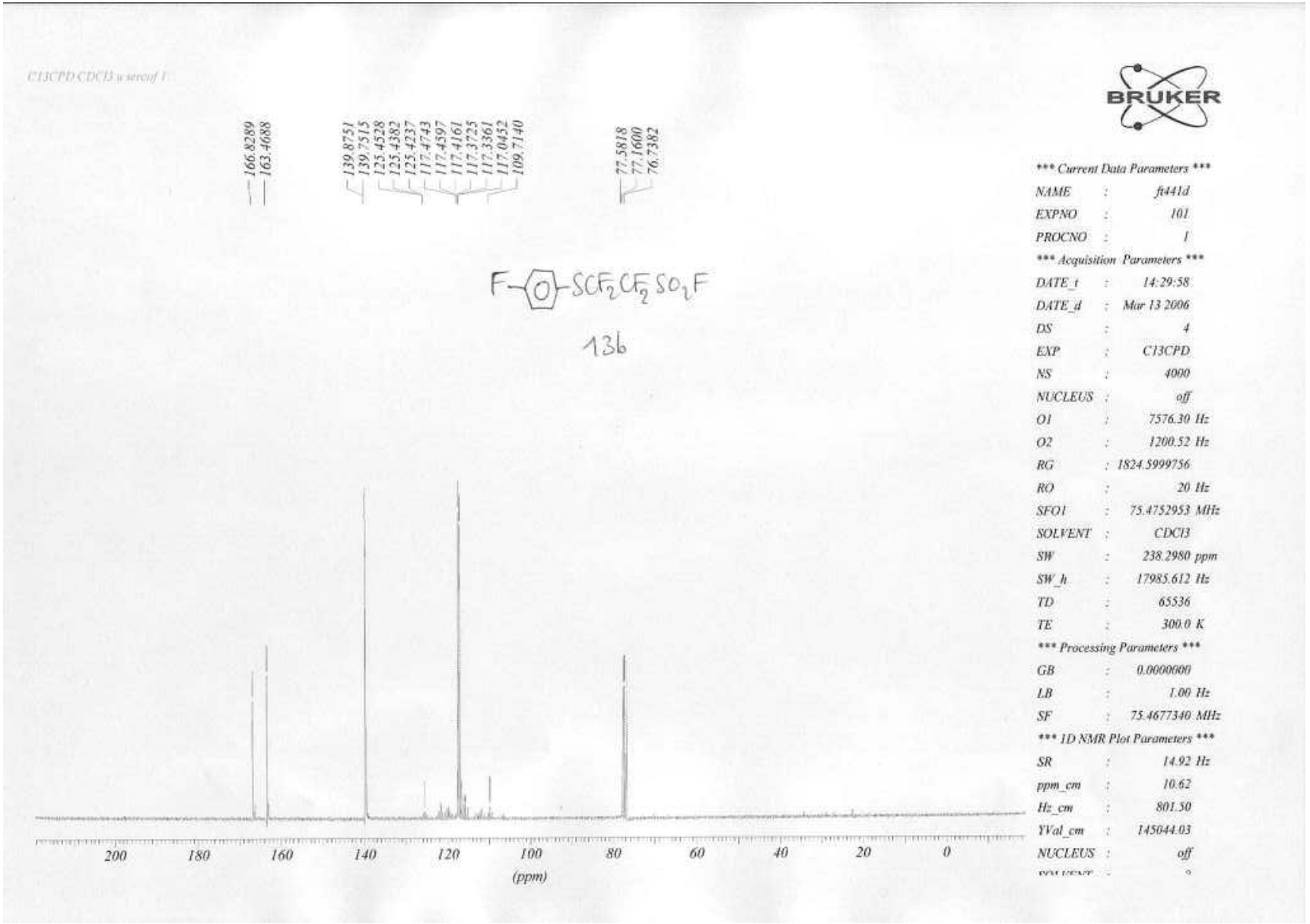
GB	:	0.0000000
LB	:	1.00 Hz
SF	:	75.4677380 MHz

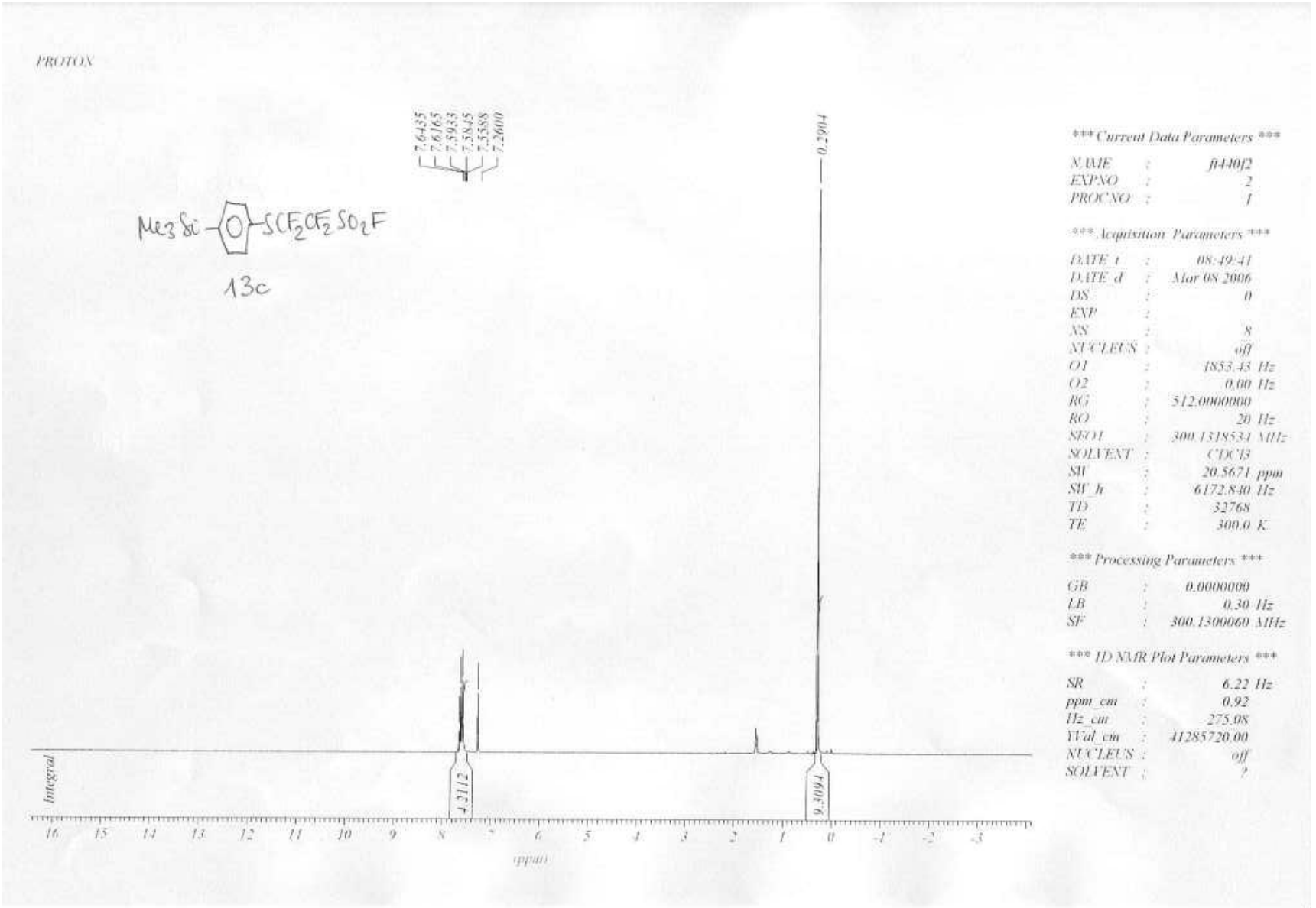
*** 1D NMR Plot Parameters ***

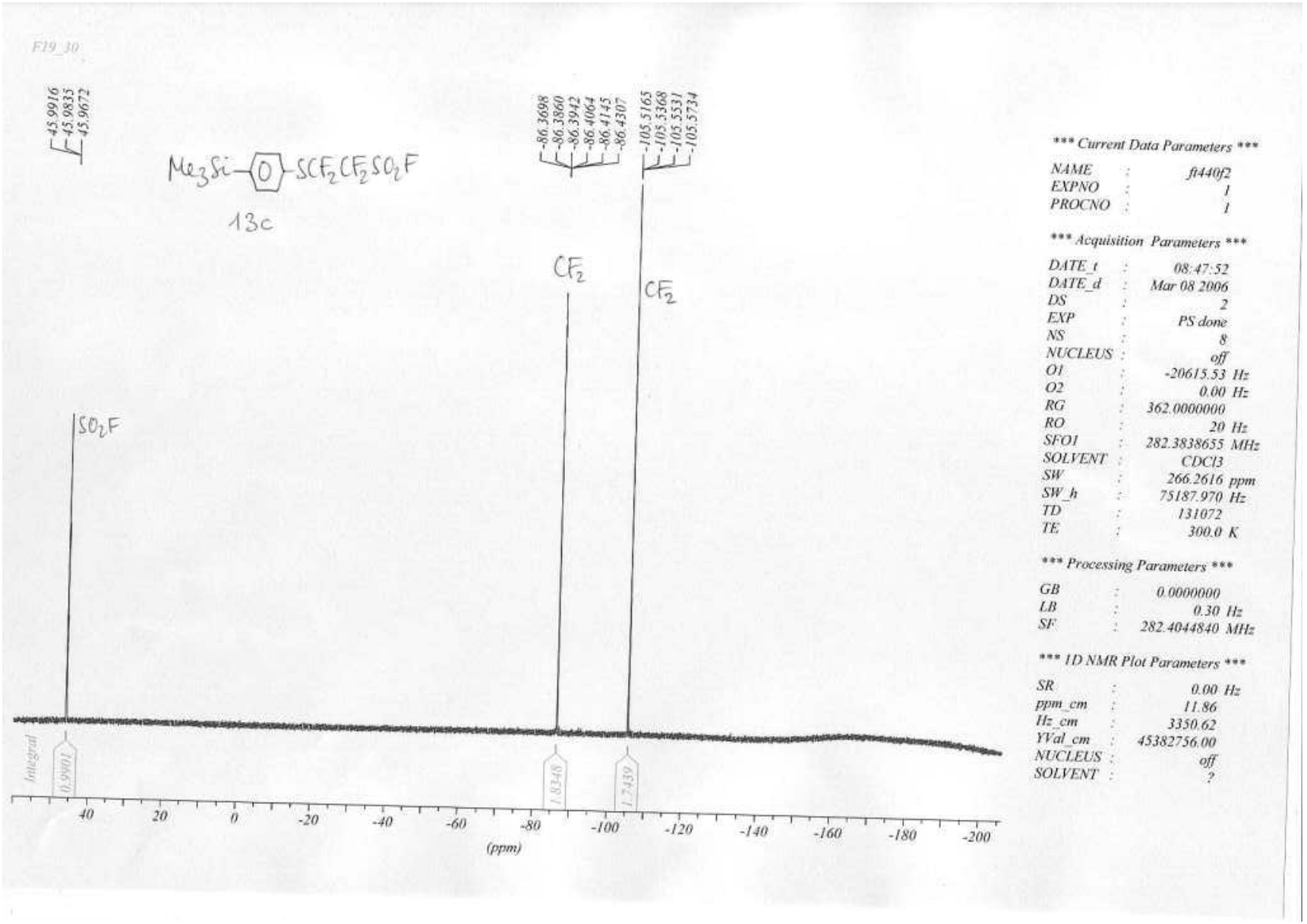
SR	:	18.76 Hz
ppm_cm	:	10.62
Hz_cm	:	801.50
YVal_cm	:	104807.91
NUCLEUS	:	off
SOLVENT	:	?

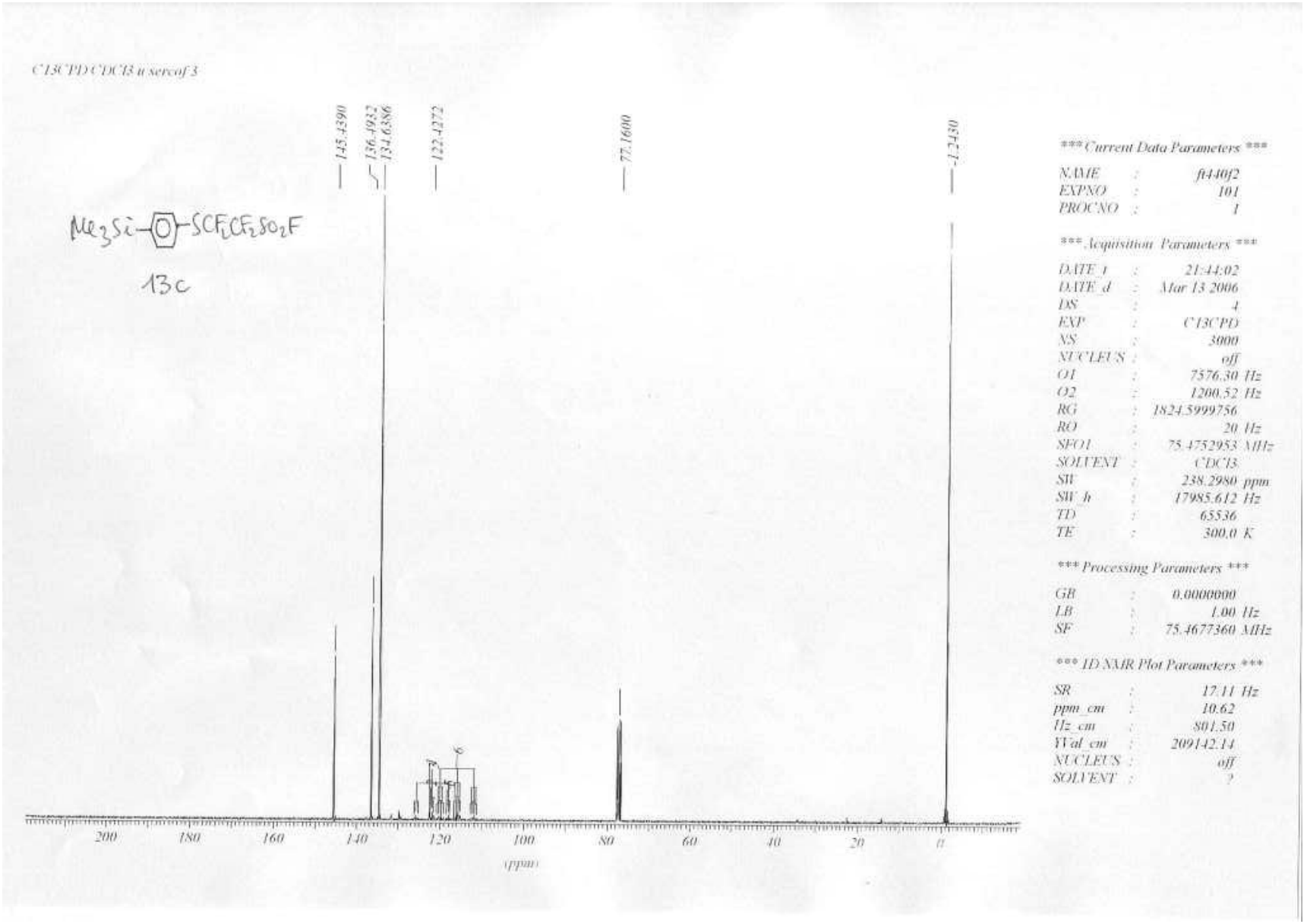

PROTON
7.6925
7.6749
7.6686
7.6630
7.6460
7.2600
7.1753
7.1527
7.1476
7.1458
7.1401
7.1175
F-⬡-SCF2CF2SO2F
136
Integral
2.0214
2.0000
9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : ft441d
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:10:35
DATE_d : Mar 06 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 574.7000122
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.39
Hz_cm : 117.54
YVal_cm : 20173622.00
NUCLEUS : off

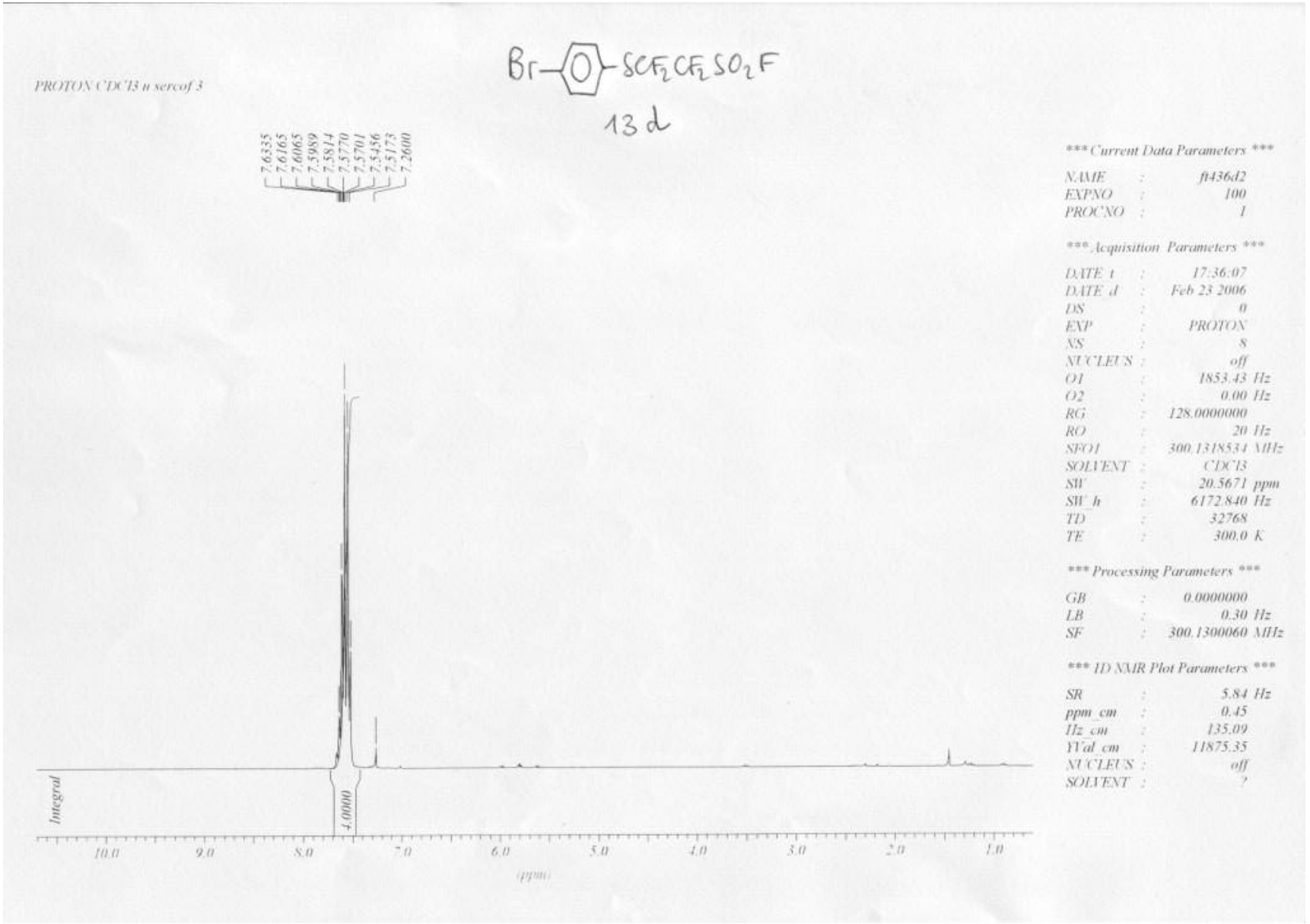

F19_30
45.9916
45.9835
45.9672
-86.9629
-86.9832
-86.9914
-86.9995
-87.0076
-87.0279
-105.6749
-105.6953
-105.7115
-105.7278
-107.6290
-107.6453
-107.6575
-107.6737
-107.6859
-107.6940
-107.7022
-107.7225
F—⬡—SCF2CF2SO2F
136
SO2F
CF2
CF2
1F
Integral
1.0179
0.0109
0.0154
0.0340
1.9033
0.1826
1.7460
0.7925
0.1409
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft441d
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 07:12:28
DATE_d : Mar 06 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 645.0999756
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.88
Hz_cm : 3355.58
YVal_cm : 46056456.00
NUCLEUS : off
SOLVENT : ?

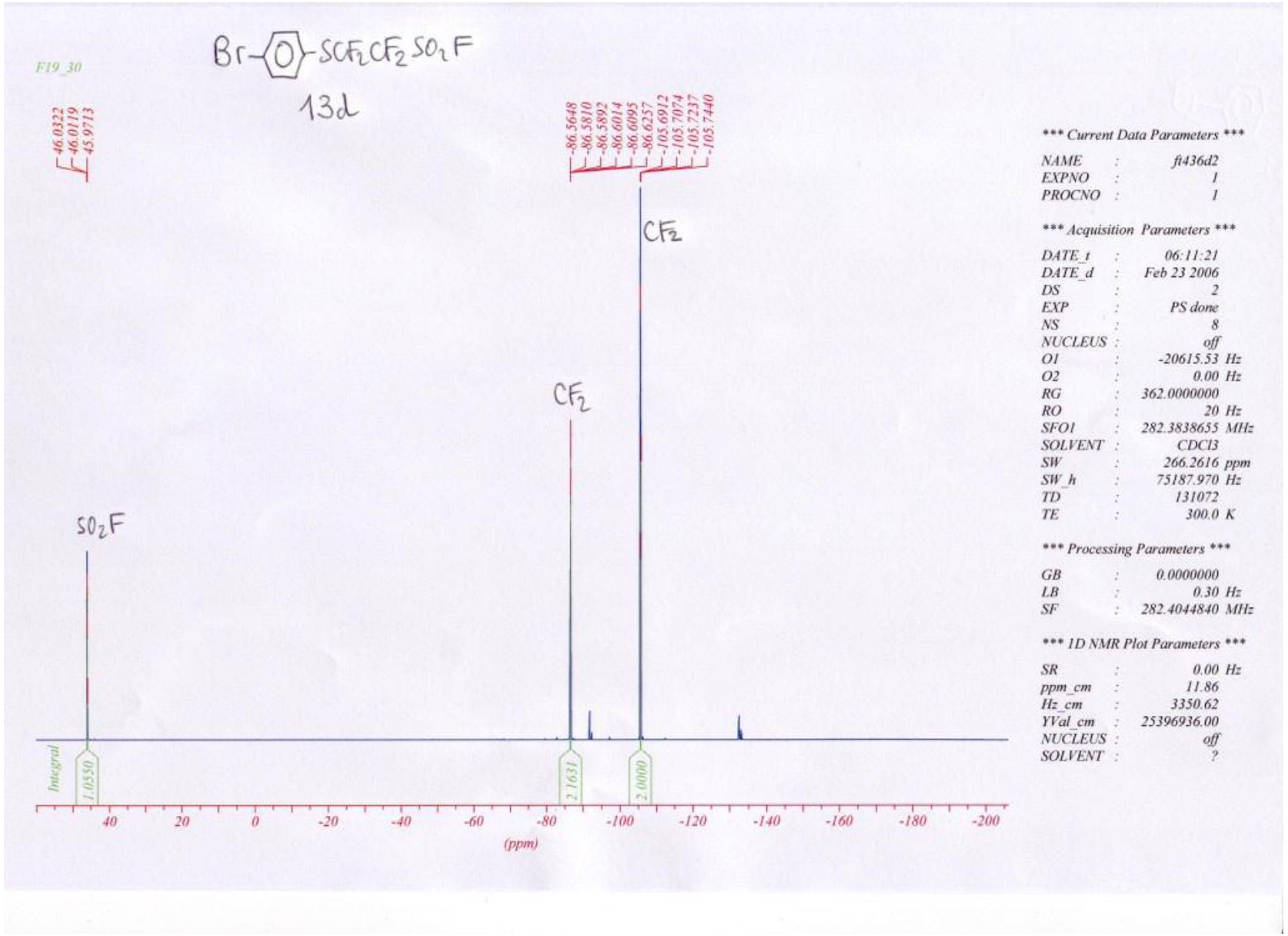

C13CPD CDCl3 w sercuf 1
166.8289
163.4688
139.8751
139.7515
125.4528
125.4382
125.4237
117.4743
117.4597
117.4161
117.3725
117.3361
117.0452
109.7140
77.5818
77.1600
76.7382
F-⬡-SCF2CF2SO2F
136
200
180
160
140
120
100
80
60
40
20
0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : ft441d
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 14:29:58
DATE_d : Mar 13 2006
DS : 4
EXP : C13CPD
NS : 4000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1824.5999756
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677340 MHz
*** 1D NMR Plot Parameters ***
SR : 14.92 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 145044.03
NUCLEUS : off

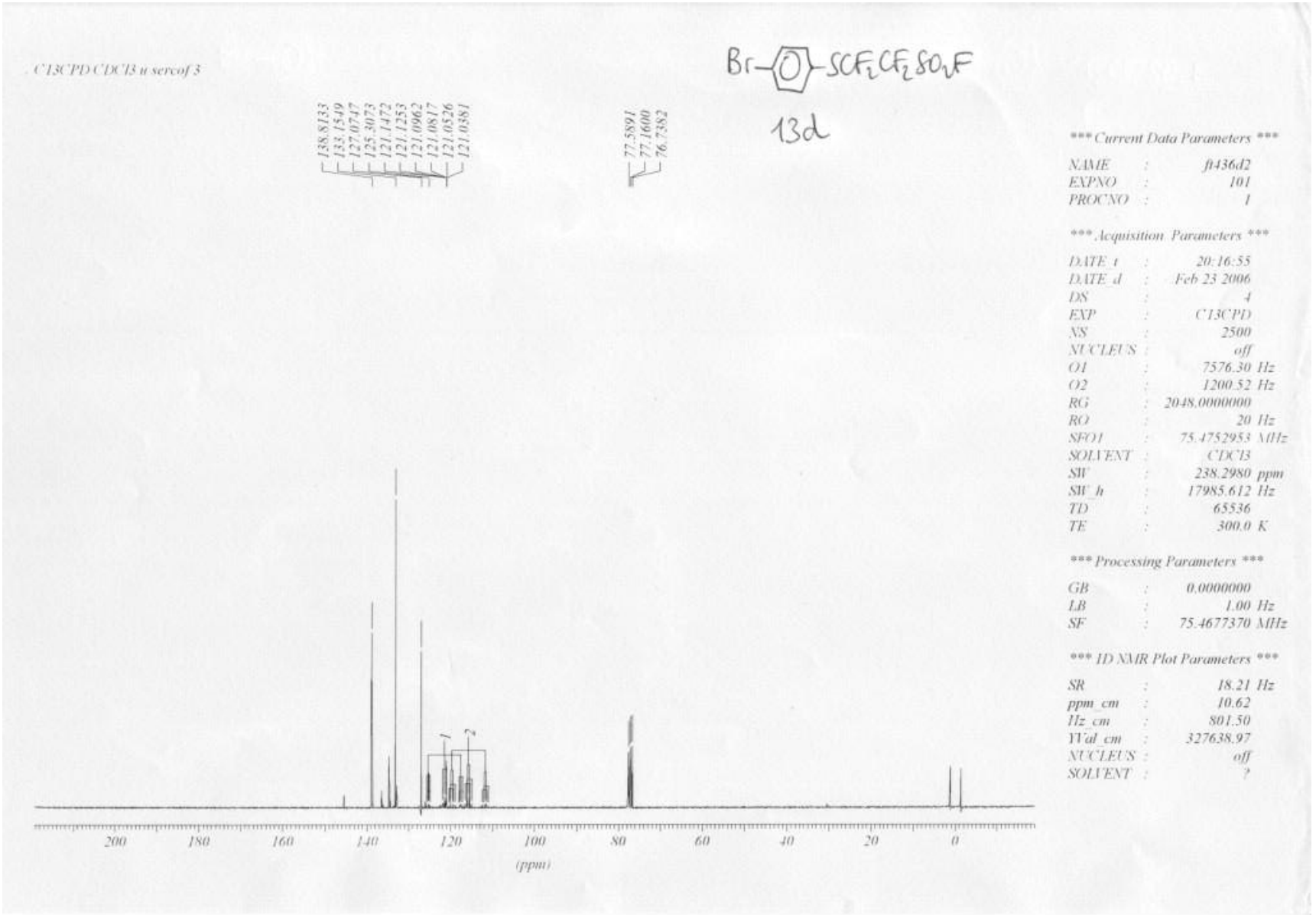

PROTON
7.6435
7.6165
7.5933
7.5845
7.5588
7.2600
0.2904
Me3Si
SCF2CF2SO2F
13c
Integral
4.3112
9.4091
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft440f2
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:49:41
DATE_d : Mar 08 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.22 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 41285720.00
NUCLEUS : off
SOLVENT : ?

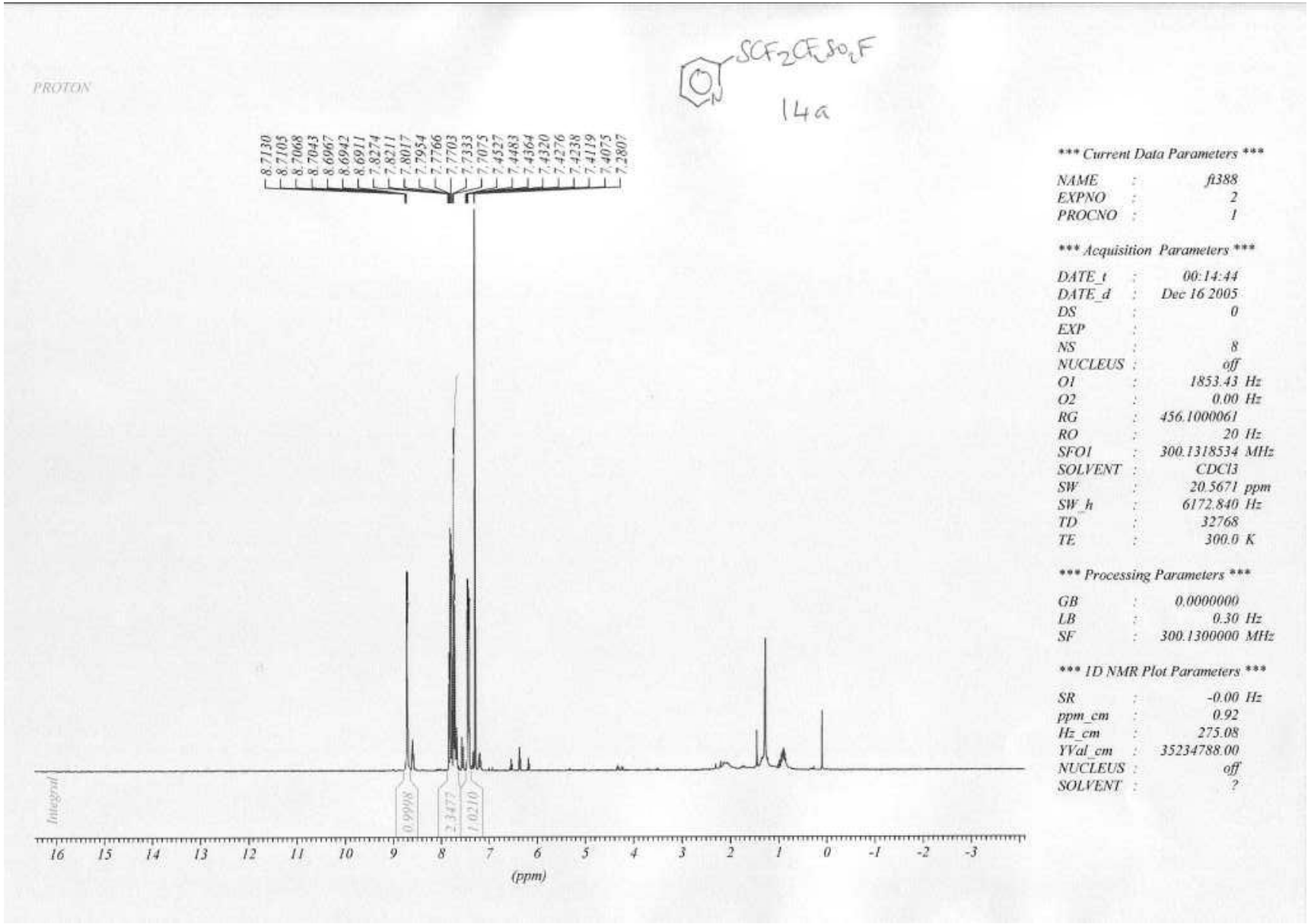

F19_30
45.9916
45.9835
45.9672
-86.3698
-86.3860
-86.3942
-86.4064
-86.4145
-86.4307
-105.5165
-105.5368
-105.5531
-105.5734
Me3Si
SCF2CF2SO2F
13c
CF2
CF2
SO2F
Integral
0.9901
1.8348
1.7439
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft440f2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:47:52
DATE_d : Mar 08 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 45382756.00
NUCLEUS : off
SOLVENT : ?

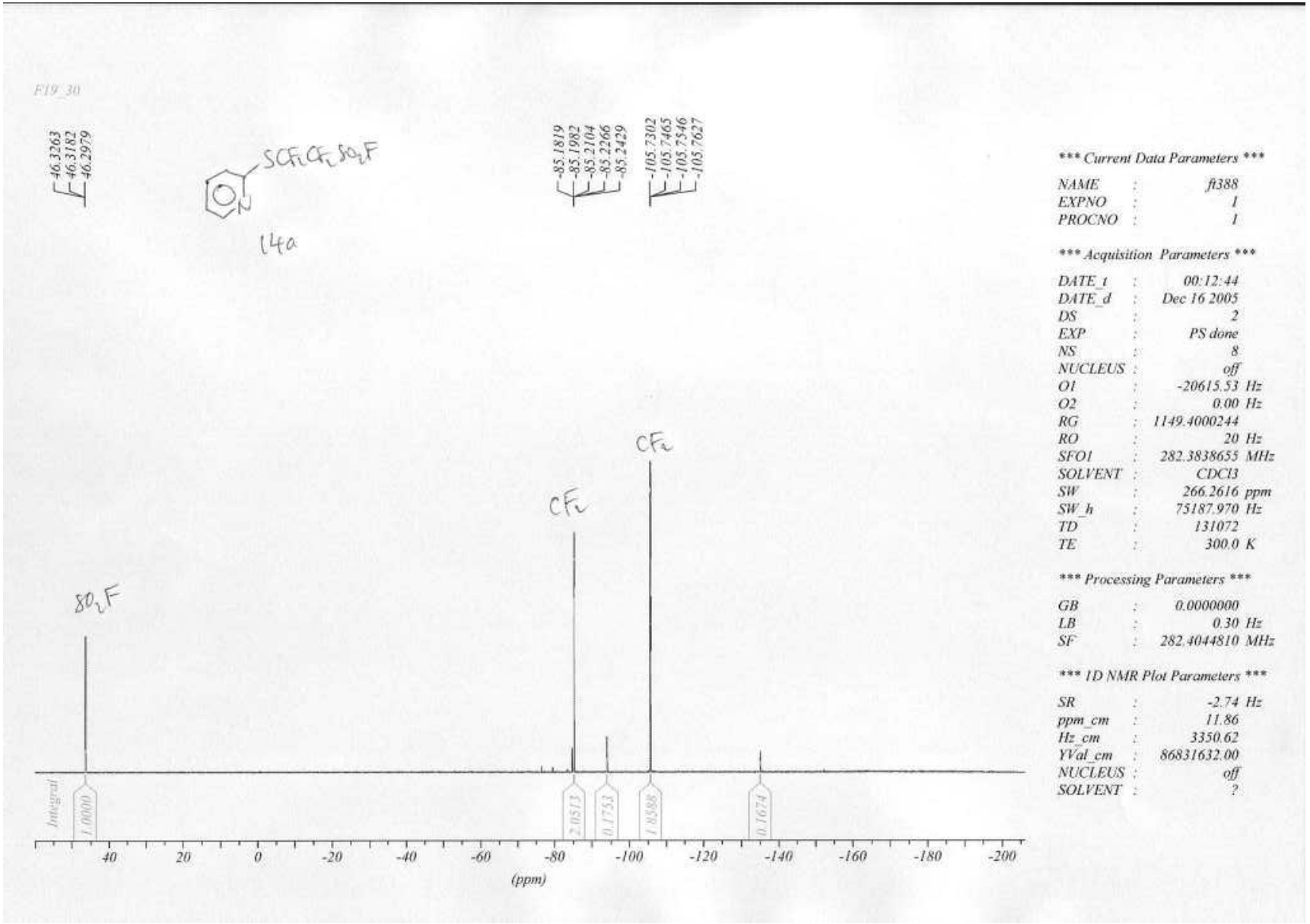

C13CPD CDCl3 u sercof 3
145.4390
136.4932
134.6386
122.4372
77.1600
41.2430
Me3Si-O-SCF2CF2SO2F
13c
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft440f2
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 21:44:02
DATE_d : Mar 13 2006
DS : 4
EXP : C13CPD
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1824.5999756
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677360 MHz
*** 1D NMR Plot Parameters ***
SR : 17.11 Hz
ppm_cm : 10.62
Hz_cm : 801.50
WAd_cm : 209142.14
NUCLEUS : off
SOLVENT : ?

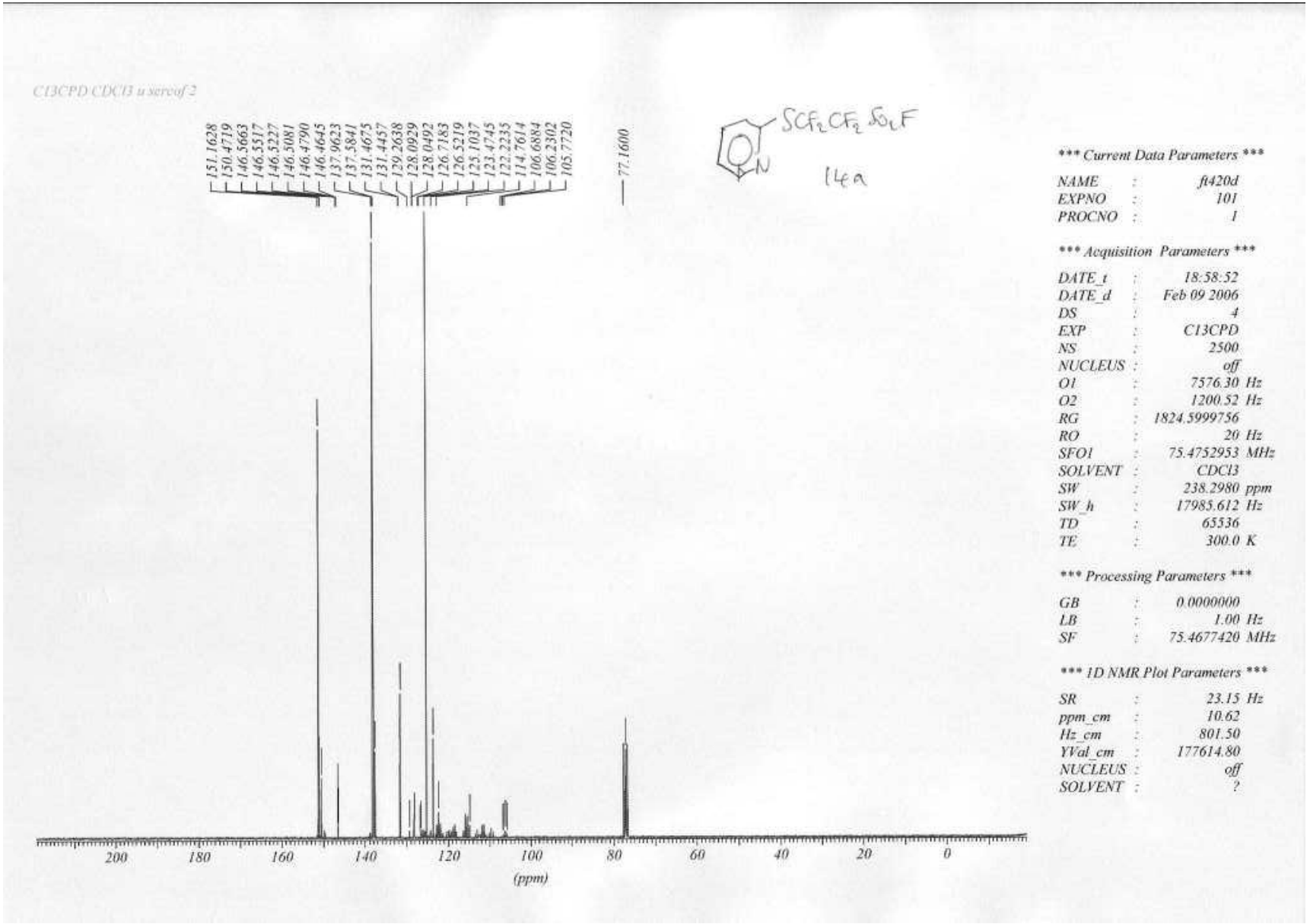

PROTON CDCl3 n sercof 3
Br–⟨O⟩–SCF2CF2SO2F
13d
7.6335
7.6165
7.6065
7.5989
7.5814
7.5770
7.5701
7.5456
7.5173
7.2600
*** Current Data Parameters ***
NAME : ft436d2
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 17:36:07
DATE_d : Feb 23 2006
DS : 0
EXP : PROTON
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 128.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 5.84 Hz
ppm_cm : 0.45
Hz_cm : 135.09
YVal_cm : 11875.35
NUCLEUS : off
SOLVENT : ?
Integral
4.0000
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)

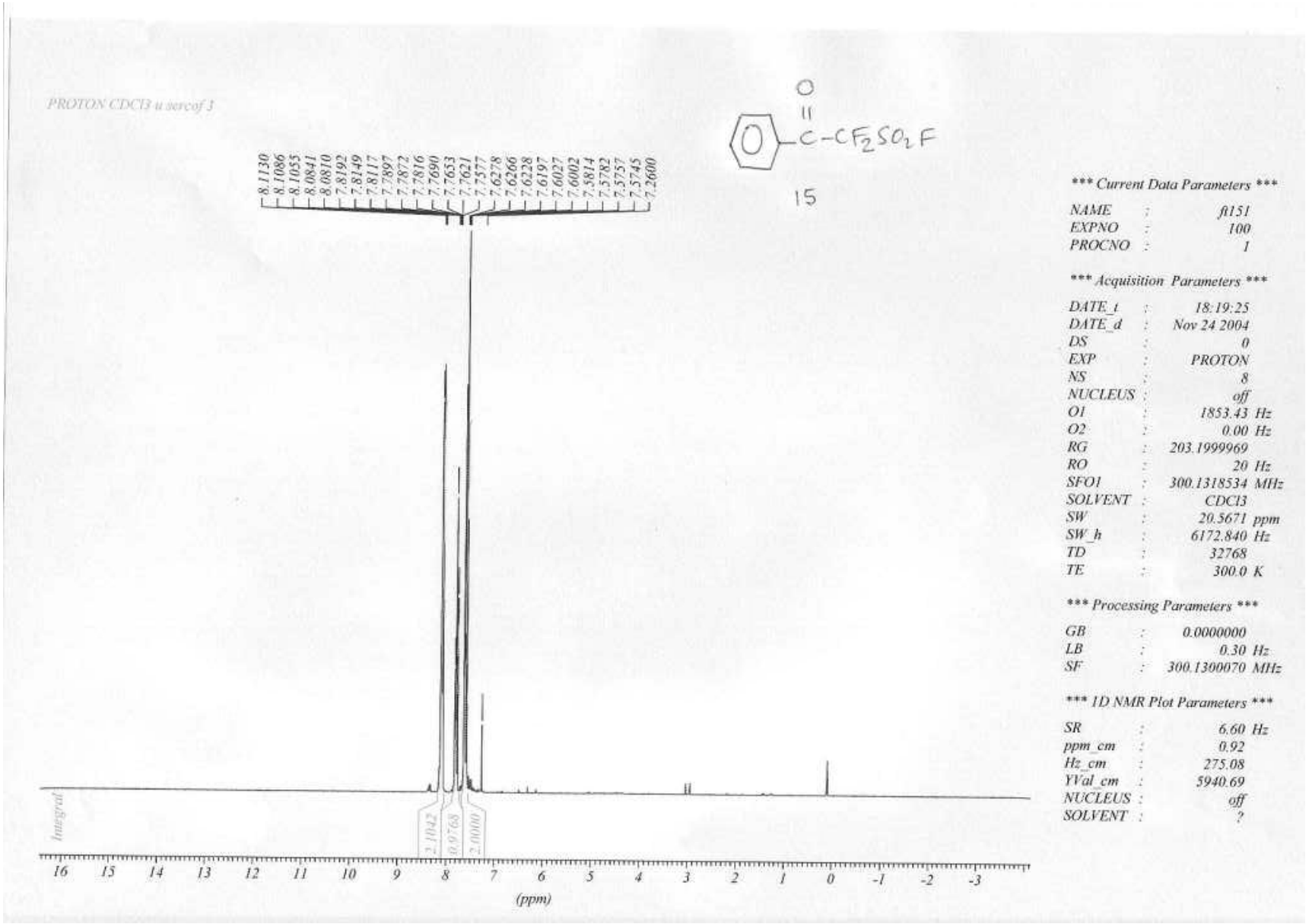

F19_30
Br-C6H4-SCF2CF2SO2F
13d
46.0322
46.0119
45.9713
-86.5648
-86.5810
-86.5892
-86.6014
-86.6095
-86.6257
-105.6912
-105.7074
-105.7237
-105.7440
CF2
CF2
SO2F
Integral
1.0550
2.1631
2.0000
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft436d2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 06:11:21
DATE_d : Feb 23 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 25396936.00
NUCLEUS : off
SOLVENT : ?

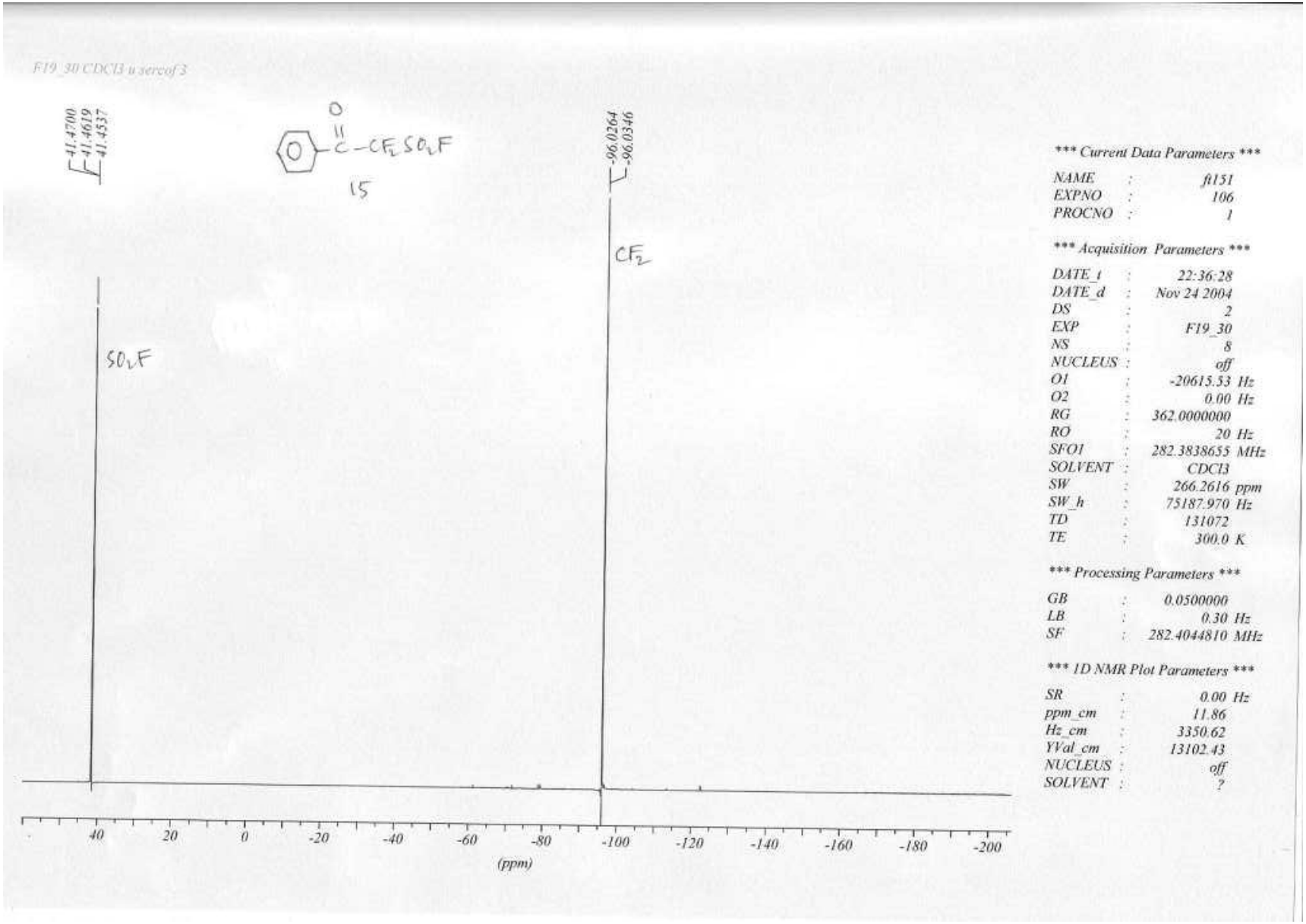

C13CPD CDCl3 u sercof 3
Br-⬡-SCF2CF2SO2F
13d
138.8133
135.1549
127.0747
125.3073
121.1472
121.1253
121.0962
121.0817
121.0526
121.0381
77.5891
77.1600
76.7382
*** Current Data Parameters ***
NAME : ft436d2
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 20:16:55
DATE_d : Feb 23 2006
DS : 4
EXP : C13CPD
NS : 2500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 2048.0000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677370 MHz
*** 1D NMR Plot Parameters ***
SR : 18.21 Hz
ppm_cm : 10.62
Hz_cm : 801.50
WVal_cm : 327638.97
NUCLEUS : off
SOLVENT : ?
200
180
160
140
120
100
80
60
40
20
0
(ppm)

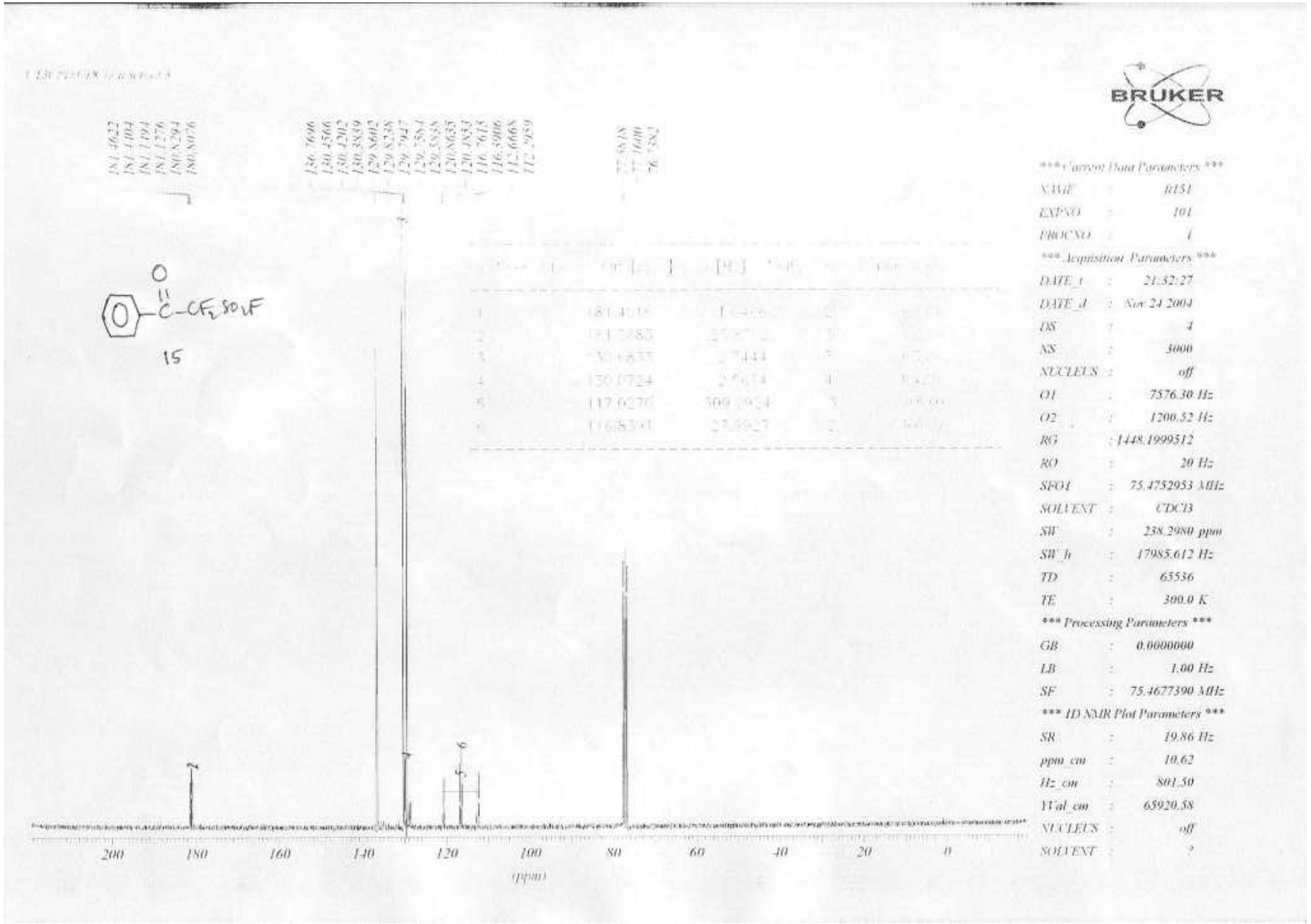

PROTON
SCF2CF2SO2F
14a
8.7130
8.7105
8.7068
8.7043
8.6967
8.6942
8.6911
7.8274
7.8211
7.8017
7.7954
7.7766
7.7703
7.7333
7.7075
7.4527
7.4483
7.4364
7.4320
7.4276
7.4238
7.4119
7.4075
7.2807
Integral
0.9998
2.3477
1.0210
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft388
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:14:44
DATE_d : Dec 16 2005
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300000 MHz
*** 1D NMR Plot Parameters ***
SR : -0.00 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 35234788.00
NUCLEUS : off
SOLVENT : ?

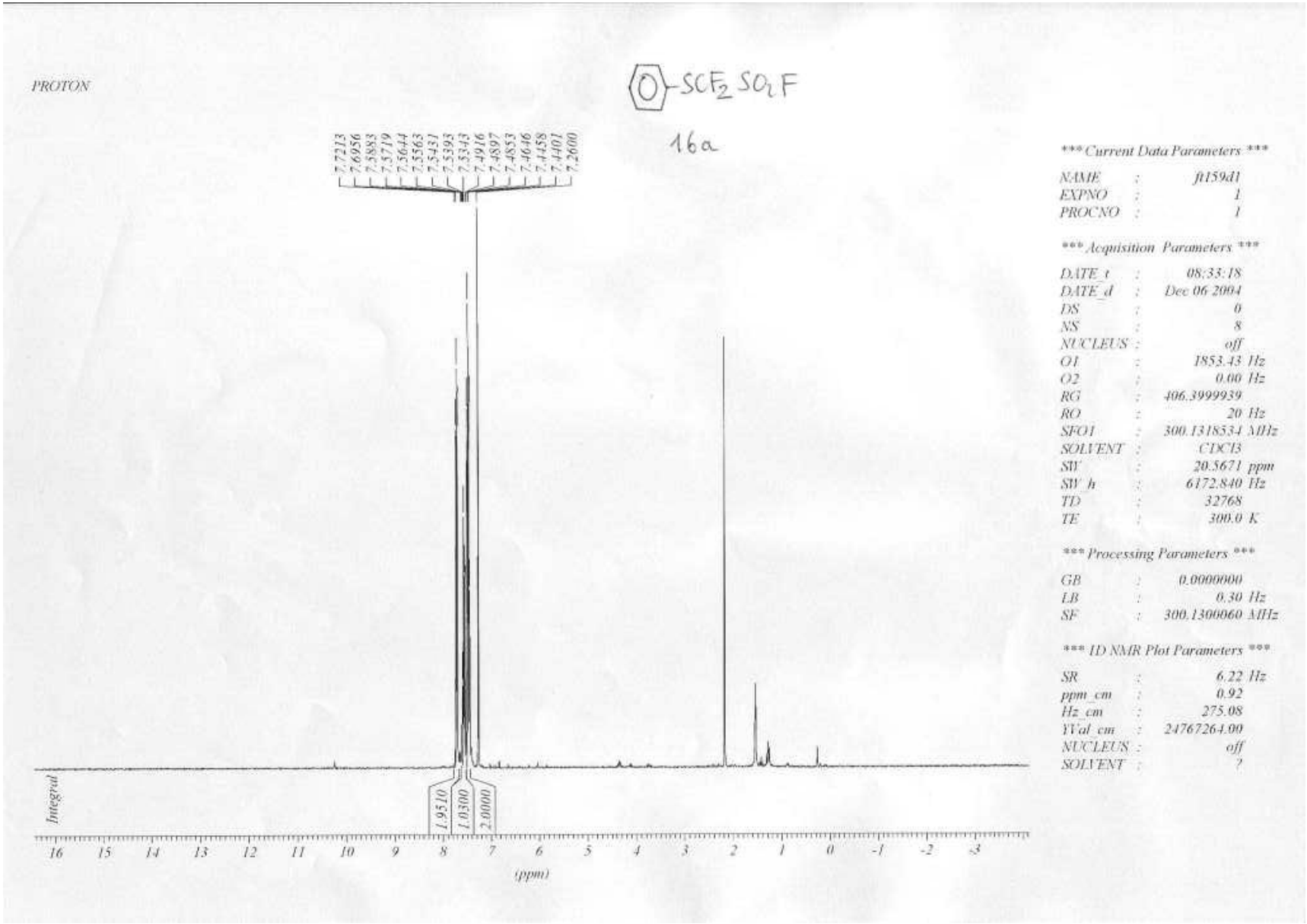

F19_30
-46.3363
-46.3182
-46.2979
-85.1819
-85.1982
-85.2104
-85.2266
-85.2429
-105.7302
-105.7465
-105.7546
-105.7627
SCF2CF2SO2F
140
CF2
CF2
SO2F
Integral
1.0000
2.0513
0.1753
1.8588
0.1674
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft388
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:12:44
DATE_d : Dec 16 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1149.4000244
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044810 MHz
*** 1D NMR Plot Parameters ***
SR : -2.74 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 86831632.00
NUCLEUS : off
SOLVENT : ?

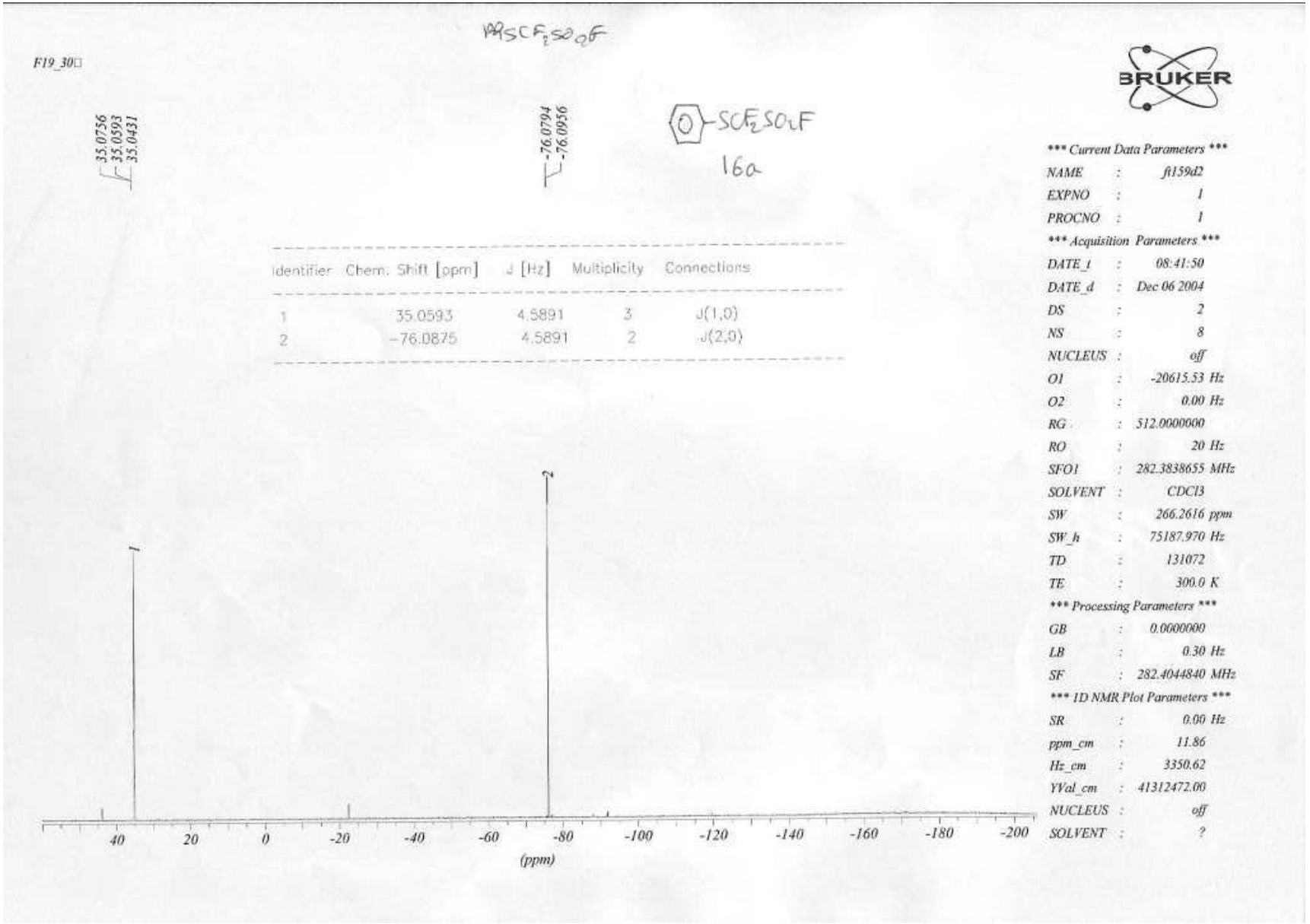

C13CPD CDCl3 a sercof 2
151.1628
150.4719
146.5663
146.5517
146.5227
146.5081
146.4790
146.4645
137.9623
137.5841
131.4675
131.4457
129.2638
128.0929
128.0492
126.7183
126.5219
125.1037
123.4745
122.2235
114.7614
106.6884
106.2302
105.7720
77.1600
SCF2CF2SO2F
14a
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft420d
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 18:58:52
DATE_d : Feb 09 2006
DS : 4
EXP : C13CPD
NS : 2500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1824.5999756
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677420 MHz
*** 1D NMR Plot Parameters ***
SR : 23.15 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 177614.80
NUCLEUS : off
SOLVENT : ?

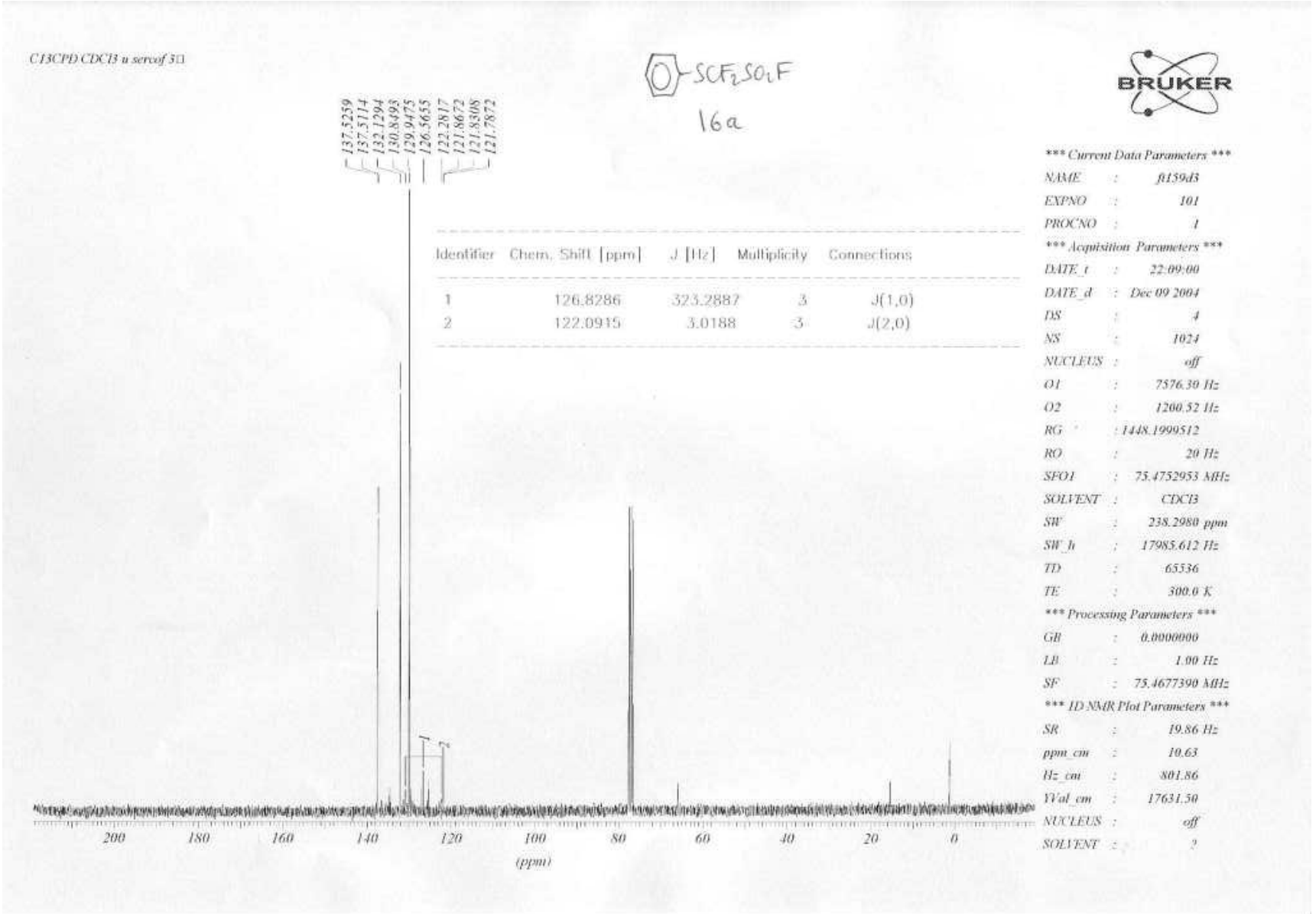

PROTON CDCl3 u sercof 3
8.1130
8.1086
8.1055
8.0841
8.0810
7.8192
7.8149
7.8117
7.7897
7.7872
7.7816
7.7690
7.7653
7.7621
7.7577
7.6278
7.6266
7.6228
7.6197
7.6027
7.6002
7.5814
7.5782
7.5757
7.5745
7.2600
O
C-CF2SO2F
15
Integral
2.1042
0.9768
2.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fl151
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 18:19:25
DATE_d : Nov 24 2004
DS : 0
EXP : PROTON
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 203.1999969
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300070 MHz
*** 1D NMR Plot Parameters ***
SR : 6.60 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 5940.69
NUCLEUS : off
SOLVENT : ?

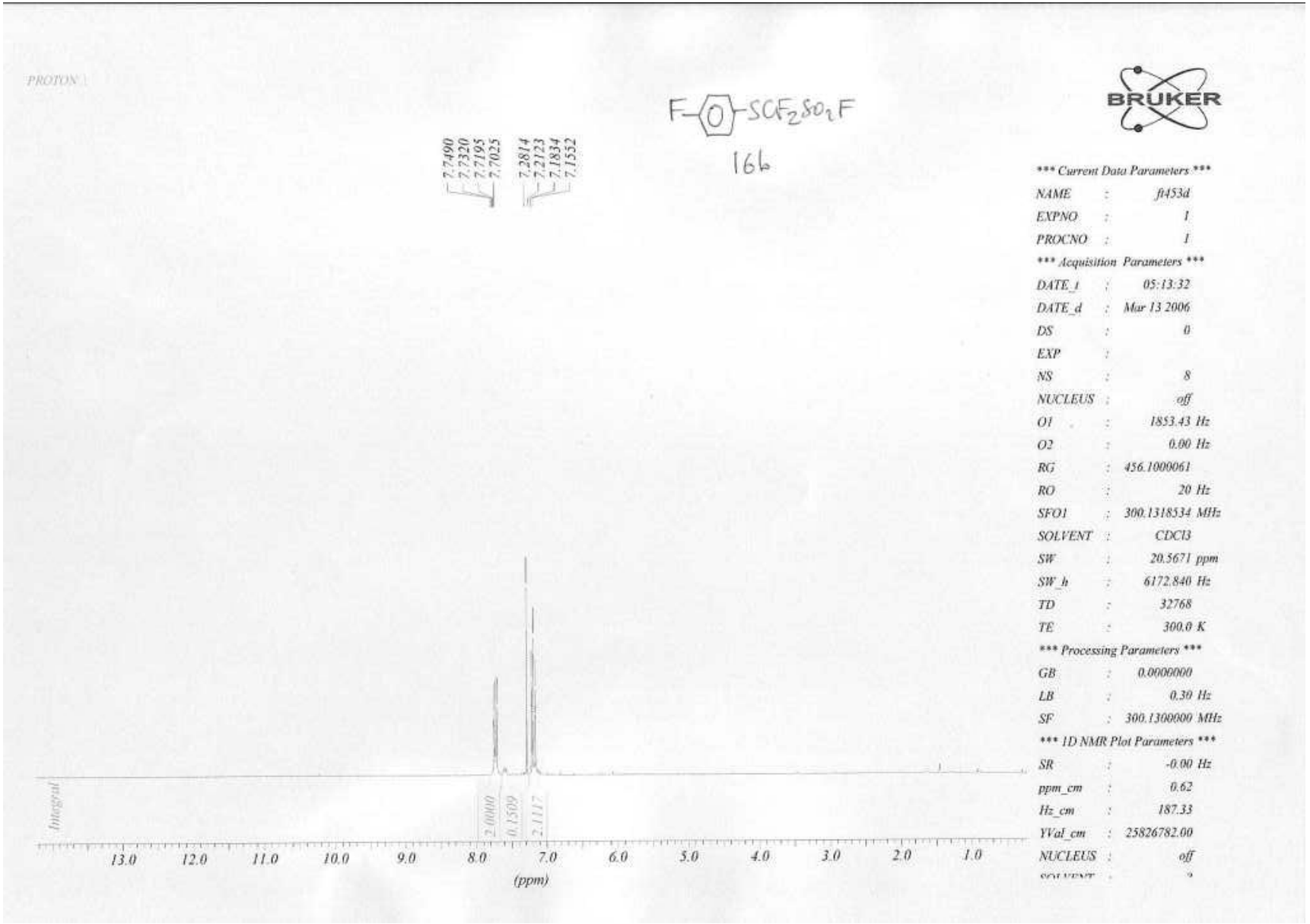

F19_30 CDCl3 u sercof 3
41.4700
41.4619
41.4537
O
C–CF2SO2F
15
-96.0264
-96.0346
CF2
SO2F
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : fl151
EXPNO : 106
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 22:36:28
DATE_d : Nov 24 2004
DS : 2
EXP : F19_30
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0500000
LB : 0.30 Hz
SF : 282.4044810 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 13102.43
NUCLEUS : off
SOLVENT : ?

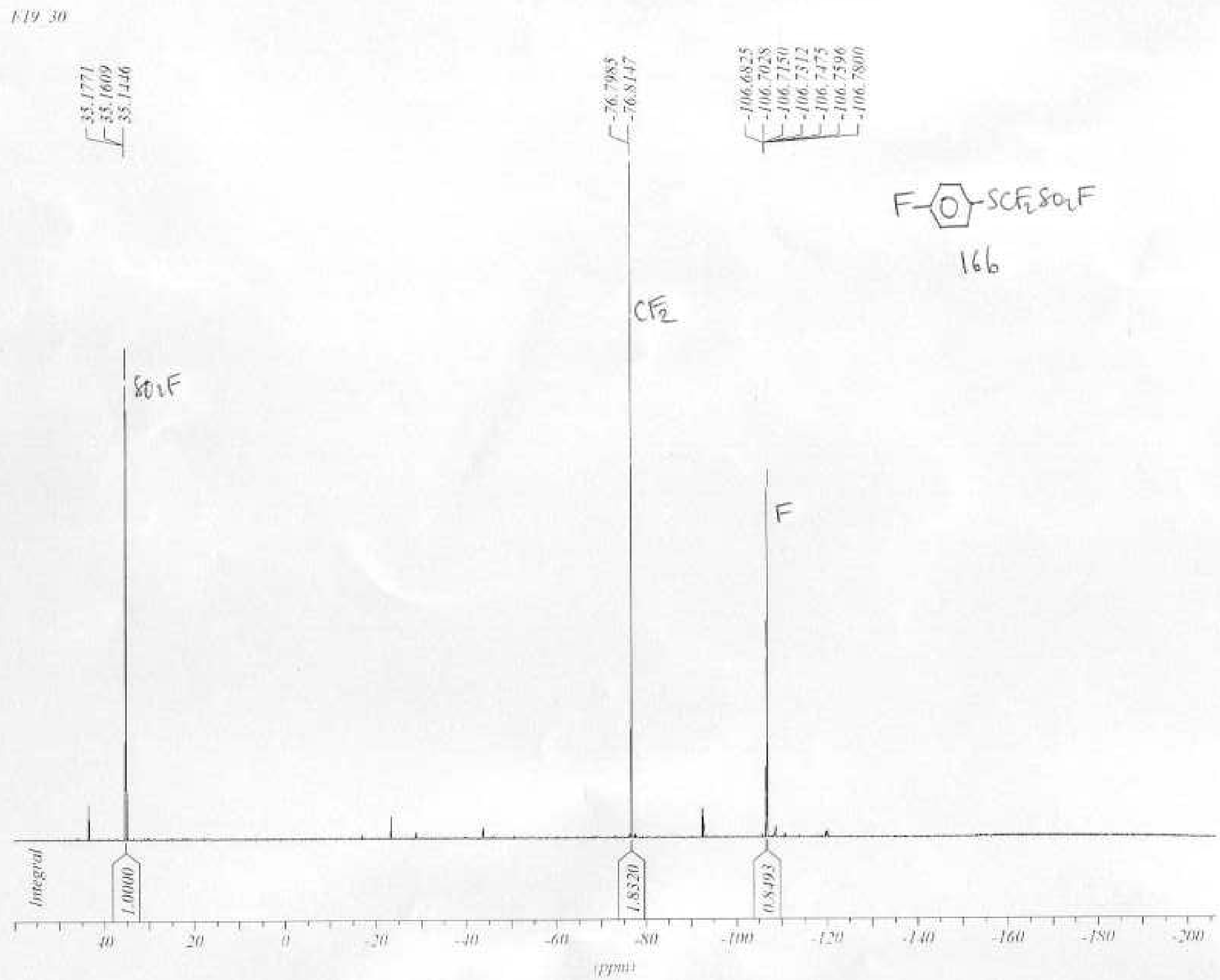

O
C-CF2SO2F
15
200
180
160
140
120
100
80
60
40
20
0
(ppm)
BRUKER
***Current Data Parameters ***
NAME : 8151
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 21:52:27
DATE_d : Nov 24 2004
DS : 4
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1448.1999512
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Val_cm : 65920.58
NUCLEUS : off
SOLVENT : ?


PROTON
16a
7.7213
7.6956
7.5883
7.5719
7.5644
7.5563
7.5431
7.5393
7.5343
7.4916
7.4897
7.4853
7.4646
7.4458
7.4401
7.2600
Integral
1.9510
1.0300
2.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft159d1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:33:18
DATE_d : Dec 06 2004
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 406.3999939
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.22 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 24767264.00
NUCLEUS : off
SOLVENT : ?


F19_30□
35.0756
35.0593
35.0431
-76.0794
-76.0956
16a
Identifier Chem. Shift [ppm] J [Hz] Multiplicity Connections
1 35.0593 4.5891 3 J(1,0)
2 −76.0875 4.5891 2 J(2,0)
1
2
40 20 0 -20 -40 -60 -80 -100 -120 -140 -160 -180 -200
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl159d2
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:41:50
DATE_d : Dec 06 2004
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 41312472.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 u sercof 3
137.5259
137.3114
132.1294
130.8393
129.9475
126.5655
122.2817
121.8672
121.8308
121.7872
16a
Identifier Chem. Shift [ppm] J [Hz] Multiplicity Connections
1 126.8286 323.2887 3 J(1,0)
2 122.0915 3.0188 3 J(2,0)
200 180 160 140 120 100 80 60 40 20 0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl159d3
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 22:09:00
DATE_d : Dec 09 2004
DS : 4
NS : 1024
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1448.1999512
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.63
Hz_cm : 801.86
YVal_cm : 17631.50
NUCLEUS : off
SOLVENT : ?


PROTON
F-⟨O⟩-SCF2SO2F
166
7.7490
7.7320
7.7195
7.7025
7.2814
7.2123
7.1834
7.1552
BRUKER
*** Current Data Parameters ***
NAME : fl453d
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 05:13:32
DATE_d : Mar 13 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300000 MHz
*** 1D NMR Plot Parameters ***
SR : -0.00 Hz
ppm_cm : 0.62
Hz_cm : 187.33
YVal_cm : 25826782.00
NUCLEUS : off
Integral
2.0000
0.1509
2.1117
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)



*** Current Data Parameters ***

NAME	:	f1453d
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

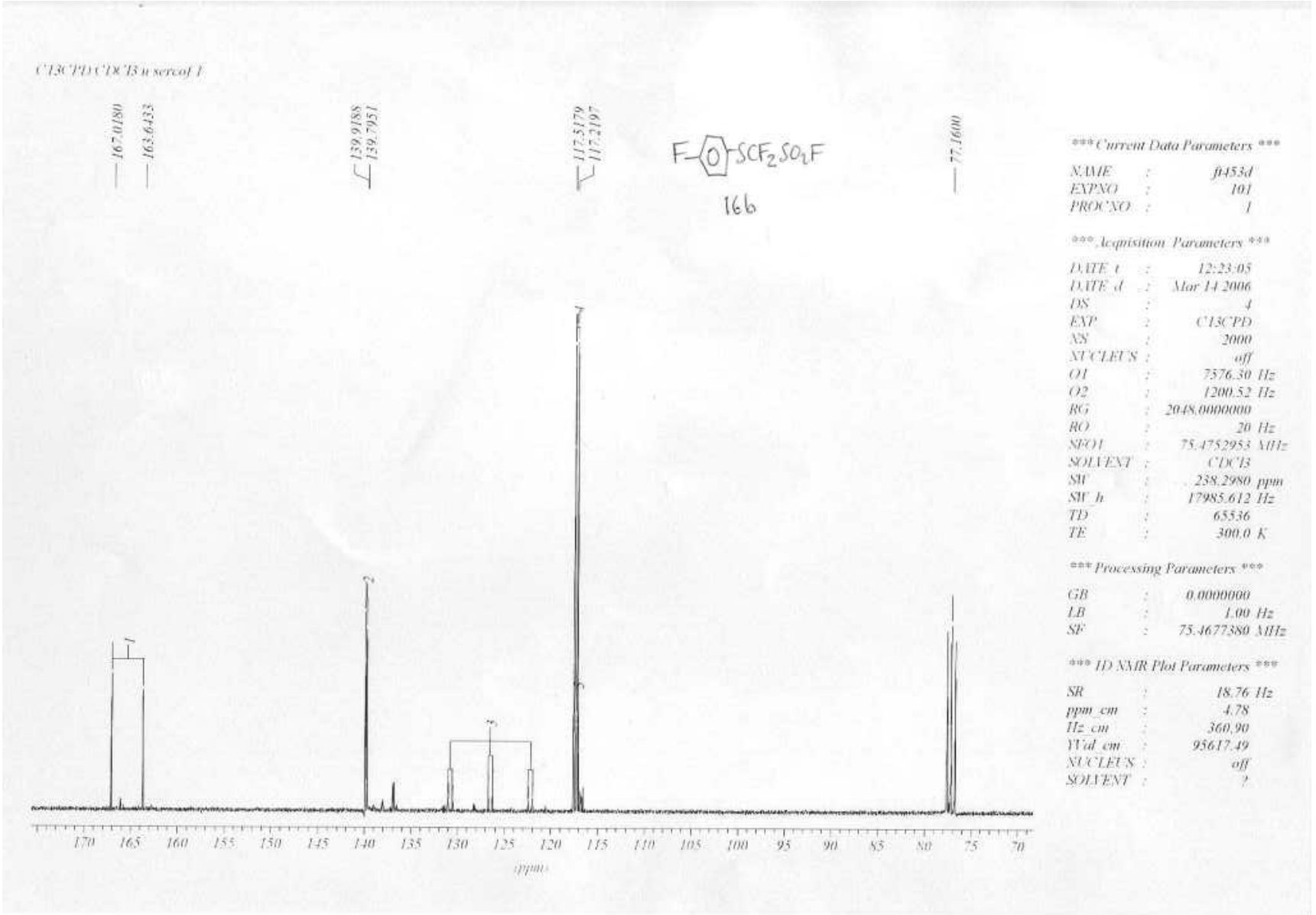
DATE_t	:	05:15:22
DATE_d	:	Mar 13 2006
DS	:	2
EXP	:	PS.done
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	362.0000000
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	CDCl3
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

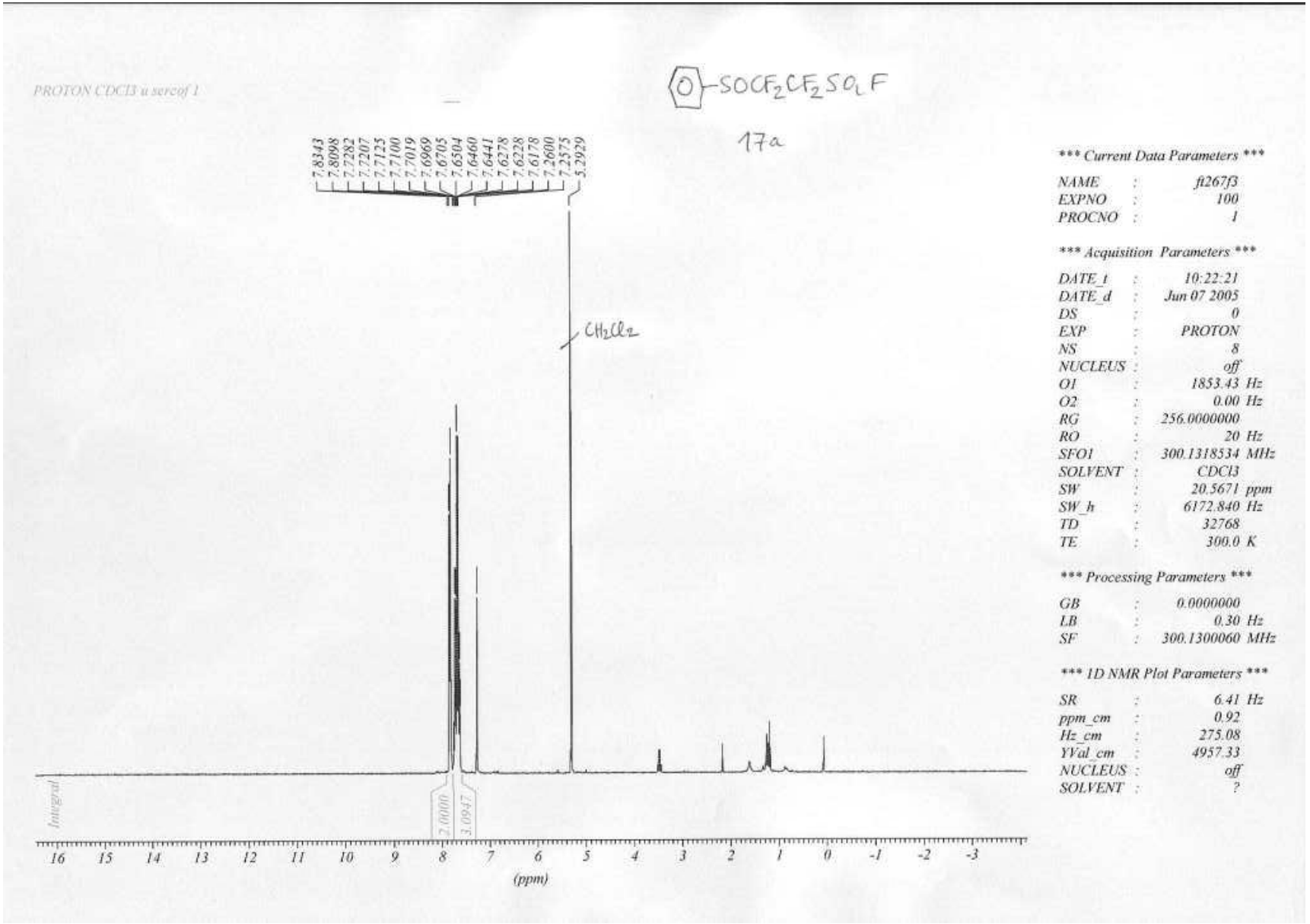
*** Processing Parameters ***

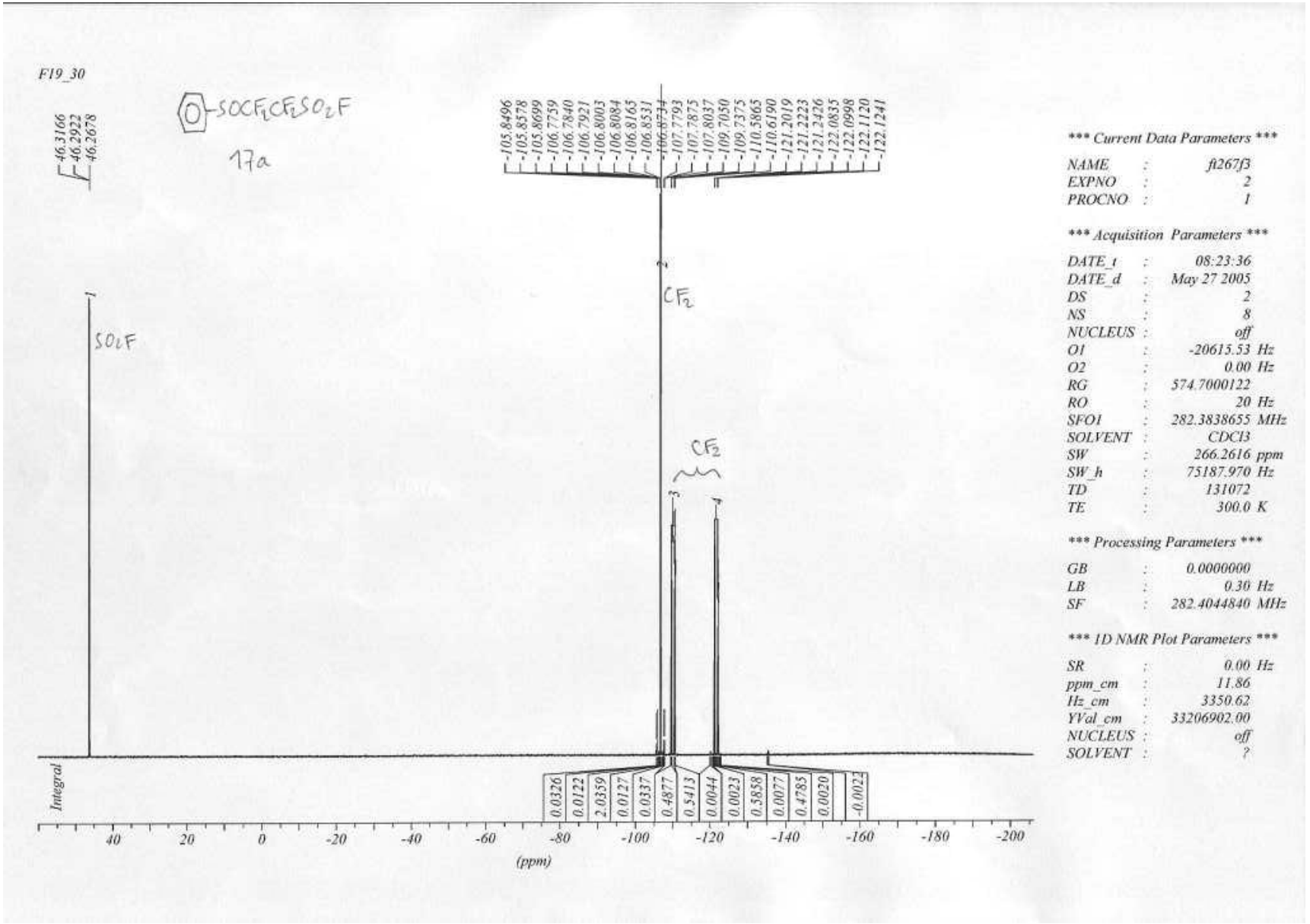
GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

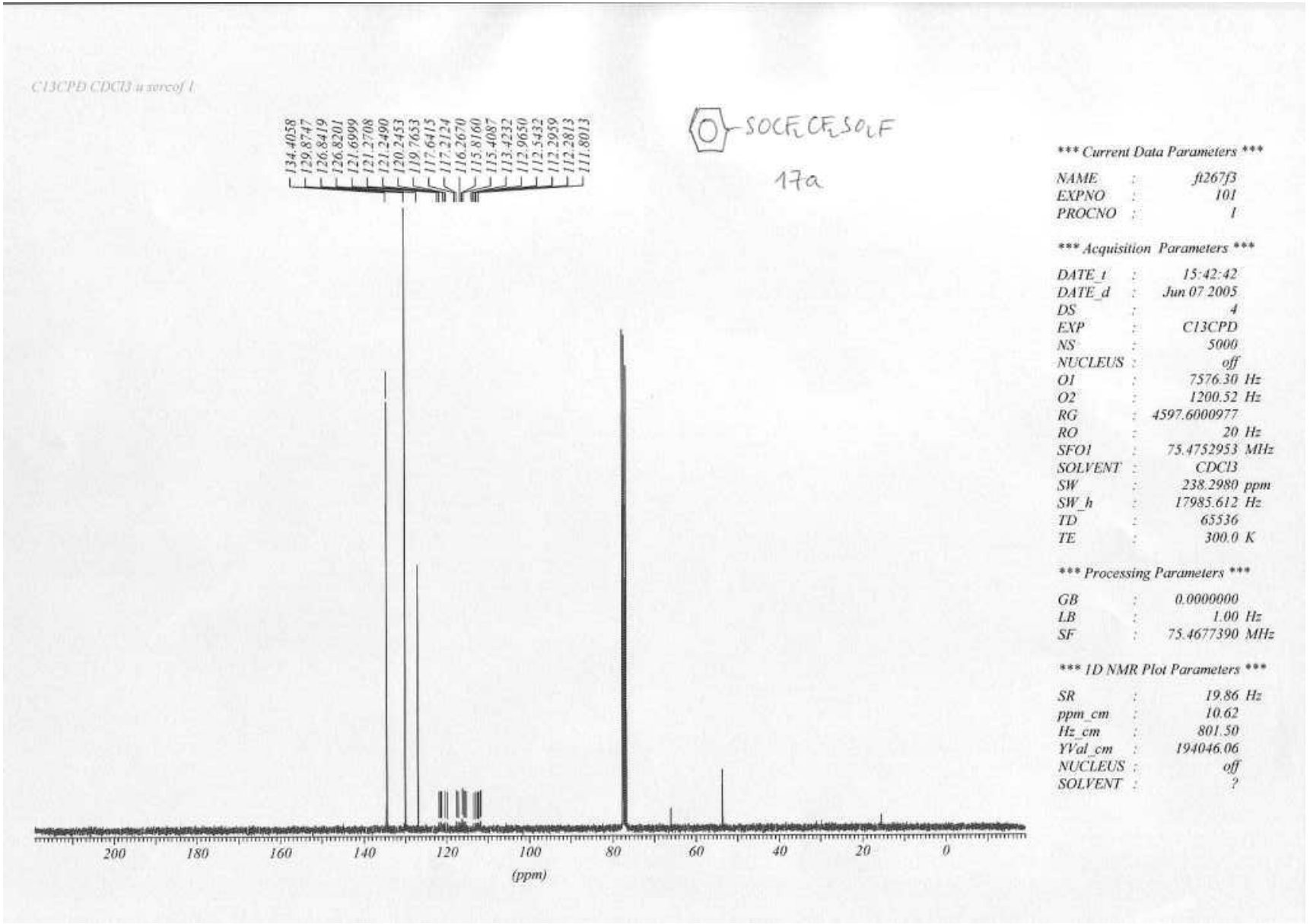
*** 1D NMR Plot Parameters ***

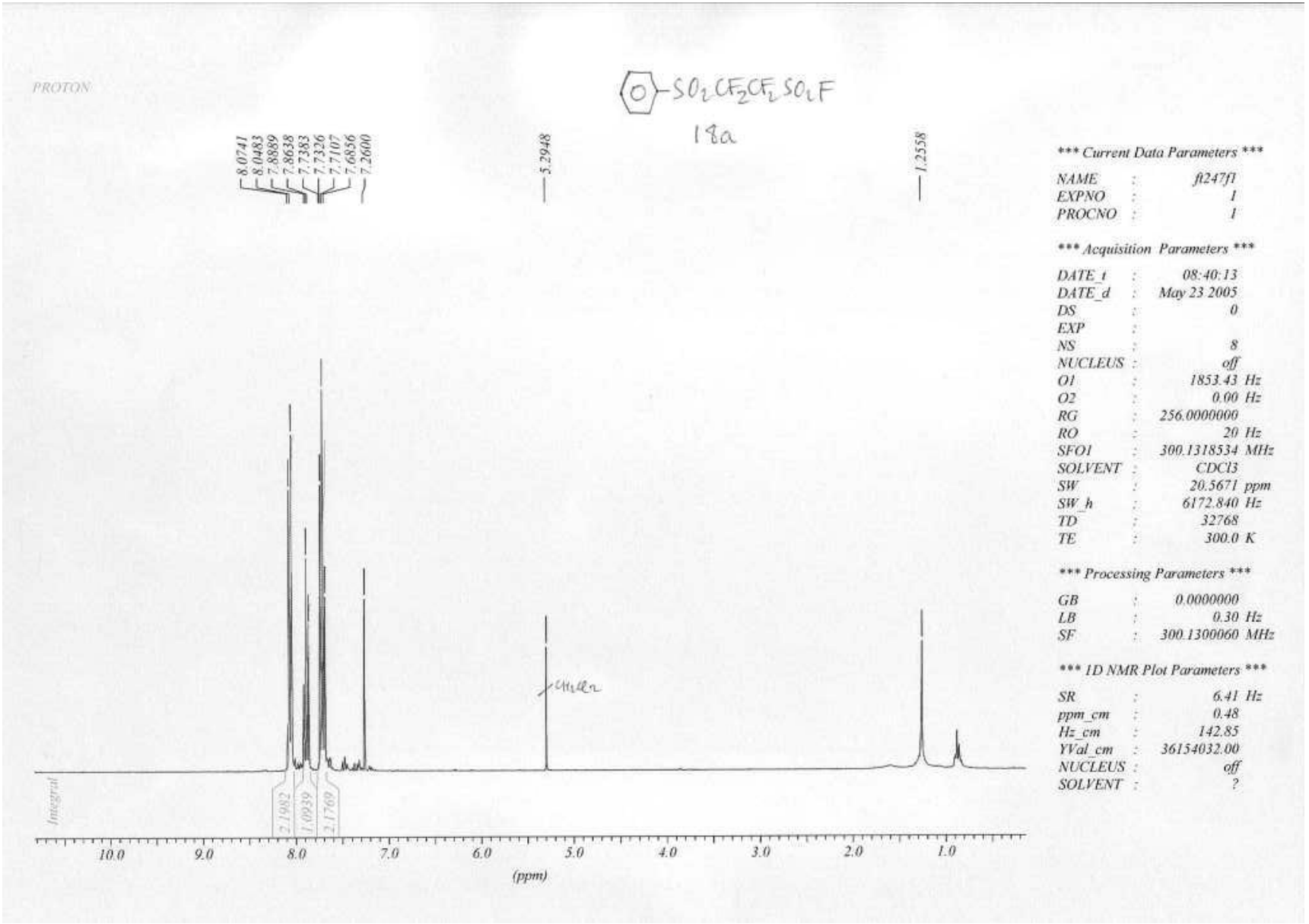
SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	33014144.00
NUCLEUS	:	off
SOLVENT	:	?

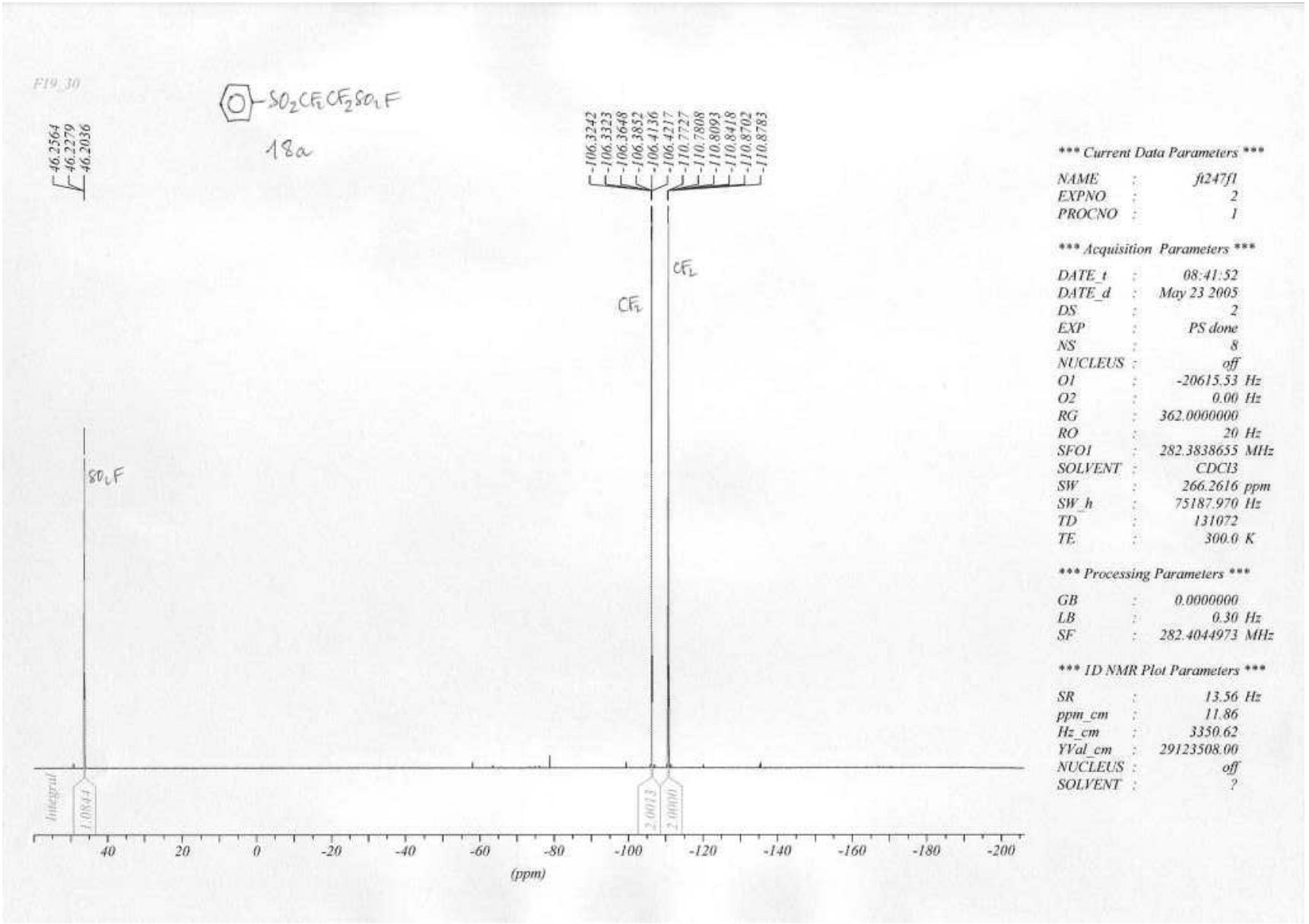

C13CPD/CDCl3 user.exp 1
167.0180
163.6433
139.9188
139.7951
117.5179
117.2197
77.1600
F-⬡-SCF2SO2F
166
*** Current Data Parameters ***
NAME : fl453d
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 12:23:05
DATE_d : Mar 14 2006
DS : 4
EXP : C13CPD
NS : 2000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 2048.0000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677380 MHz
*** 1D NMR Plot Parameters ***
SR : 18.76 Hz
ppm_cm : 4.78
Hz_cm : 360.90
YVal_cm : 95617.49
NUCLEUS : off
SOLVENT : ?
170 165 160 155 150 145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70
(ppm)


PROTON CDCl3 u sercof 1
7.8343
7.8098
7.7282
7.7207
7.7125
7.7100
7.7019
7.6969
7.6705
7.6504
7.6460
7.6441
7.6278
7.6228
7.6178
7.2600
7.2575
5.2929
CH2Cl2
Integral
2.0000
3.0947
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
17a
*** Current Data Parameters ***
NAME : ft267f3
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 10:22:21
DATE_d : Jun 07 2005
DS : 0
EXP : PROTON
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 256.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 4957.33
NUCLEUS : off
SOLVENT : ?

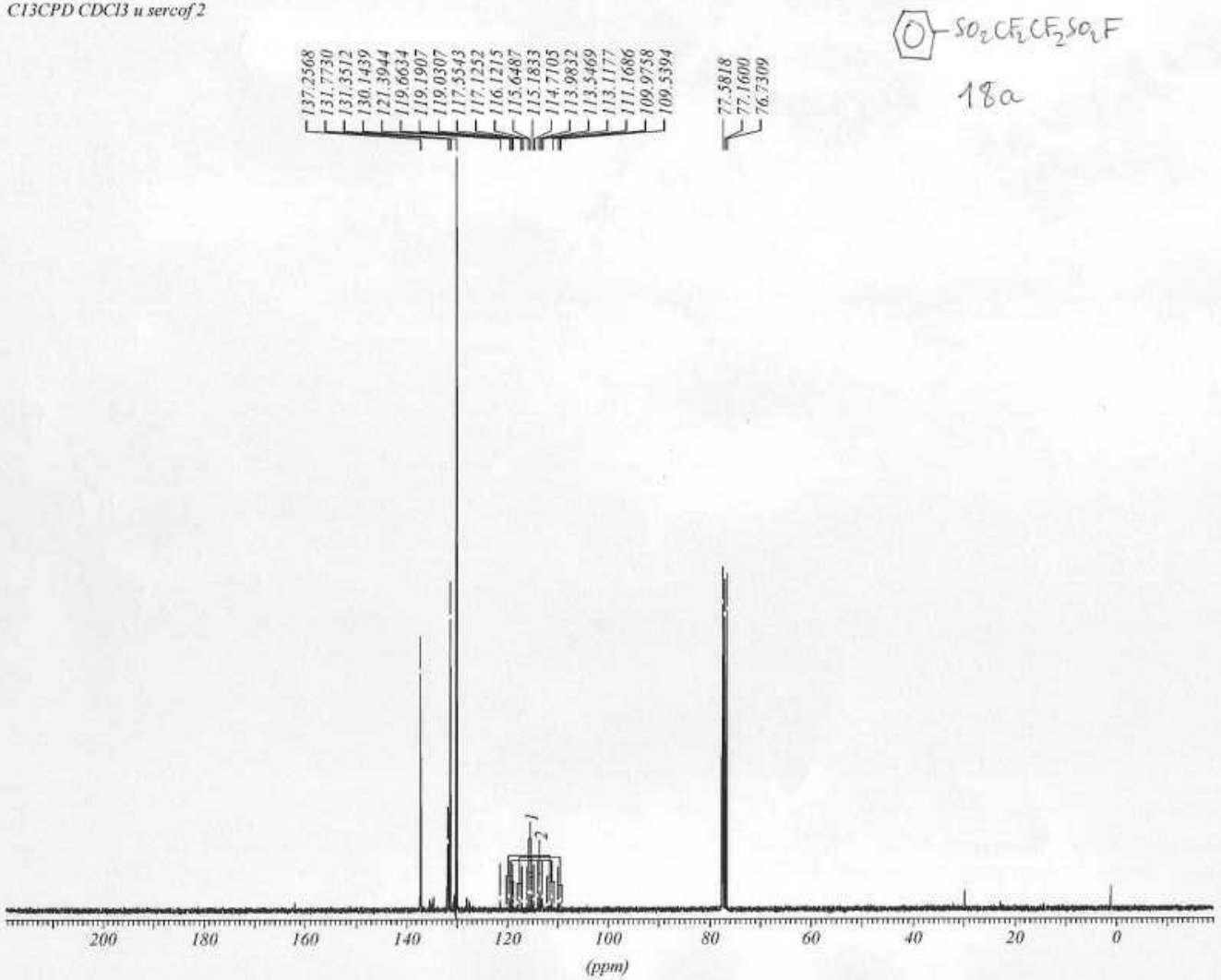

F19_30
O-SOCF2CF2SO2F
17a
46.3166
46.2922
46.2678
-105.8496
-105.8578
-105.8699
-106.7759
-106.7840
-106.7921
-106.8003
-106.8084
-106.8165
-106.8531
-107.0734
-107.7793
-107.7875
-107.8037
-109.7050
-109.7375
-110.5865
-110.6190
-121.2019
-121.2223
-121.2426
-122.0835
-122.0998
-122.1120
-122.1241
SO2F
CF2
CF2
Integral
0.0326
0.0122
2.0359
0.0127
0.0337
0.4877
0.5413
0.0044
0.0023
0.5858
0.0077
0.4785
0.0030
-0.0022
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : fl267f3
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:23:36
DATE_d : May 27 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 574.7000122
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 33206902.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 in sercof 1
134.4058
129.8747
126.8419
126.8201
121.6999
121.2708
121.2490
120.2453
119.7653
117.6415
117.2124
116.2670
115.8160
115.4087
113.4232
112.9650
112.5432
112.2959
112.2813
111.8013
OSOCF2CF2SO2F
17a
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft267f3
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 15:42:42
DATE_d : Jun 07 2005
DS : 4
EXP : C13CPD
NS : 5000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 4597.6000977
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 194046.06
NUCLEUS : off
SOLVENT : ?


PROTON
8.0741
8.0483
7.8889
7.8638
7.7383
7.7326
7.7107
7.6836
7.2600
5.2948
1.2558
18a
CH2Cl2
Integral
2.1982
1.0939
2.1769
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(ppm)
*** Current Data Parameters ***
NAME : ft247f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:40:13
DATE_d : May 23 2005
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 256.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.48
Hz_cm : 142.85
YVal_cm : 36154032.00
NUCLEUS : off
SOLVENT : ?


F19_30
18a
46.2564
46.2279
46.2036
-106.3242
-106.3323
-106.3648
-106.3852
-106.4136
-106.4217
-110.7727
-110.7808
-110.8093
-110.8418
-110.8702
-110.8783
CF2
CF2
SO2F
Integral
1.0844
2.0013
2.0000
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft247f1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:41:52
DATE_d : May 23 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044973 MHz
*** 1D NMR Plot Parameters ***
SR : 13.56 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 29123508.00
NUCLEUS : off
SOLVENT : ?

C13CPD CDCl3 u sercof 2



18a

*** Current Data Parameters ***

NAME	:	ft247f1
EXPNO	:	101
PROCNO	:	1

*** Acquisition Parameters ***

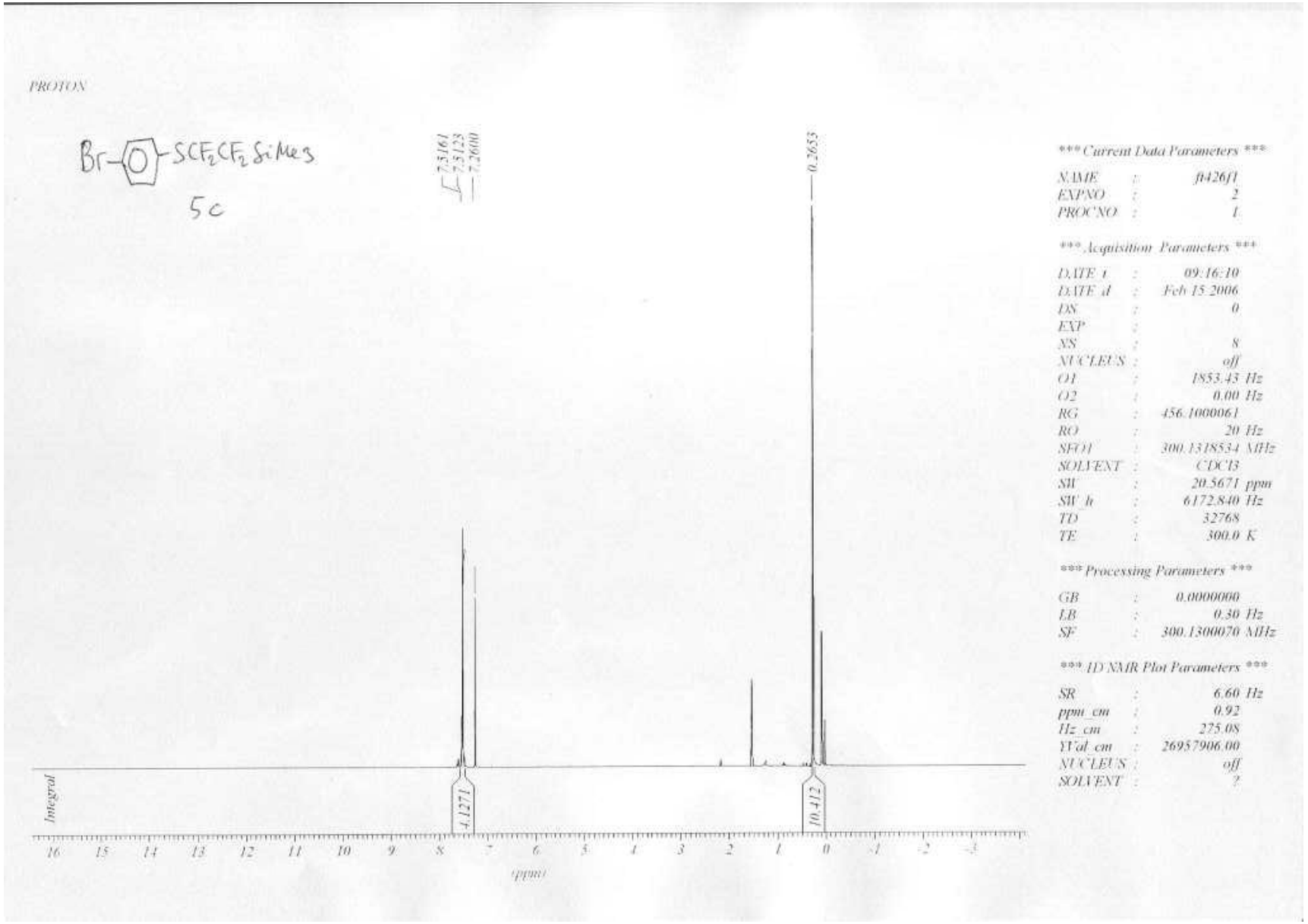
DATE_t	:	18:36:34
DATE_d	:	Jun 06 2005
DS	:	4
NS	:	4000
NUCLEUS	:	off
O1	:	7576.30 Hz
O2	:	1200.52 Hz
RG	:	9195.2001953
RO	:	20 Hz
SFO1	:	75.4752953 MHz
SOLVENT	:	CDCl3
SW	:	238.2980 ppm
SW_h	:	17985.612 Hz
TD	:	65536
TE	:	300.0 K

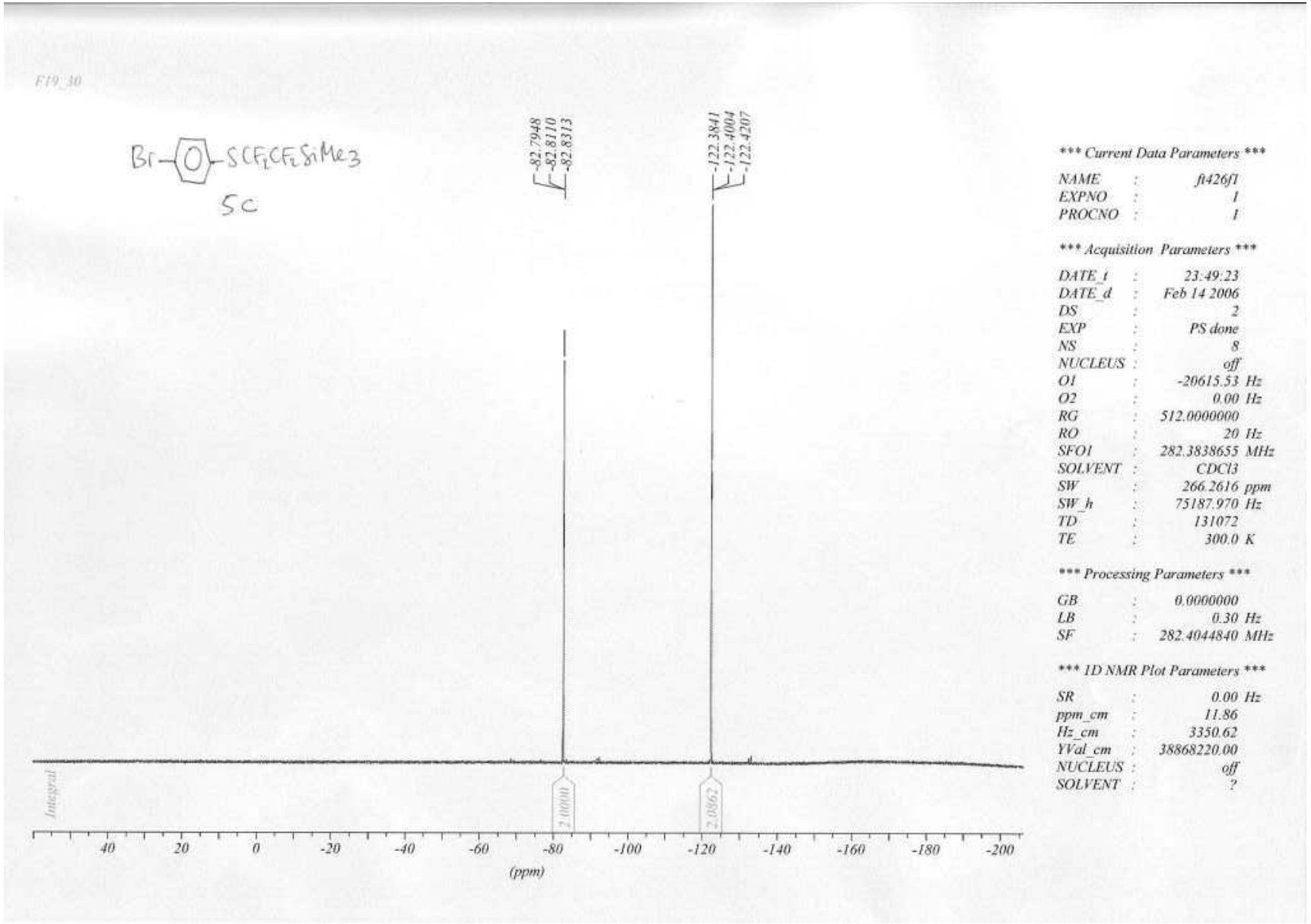
*** Processing Parameters ***

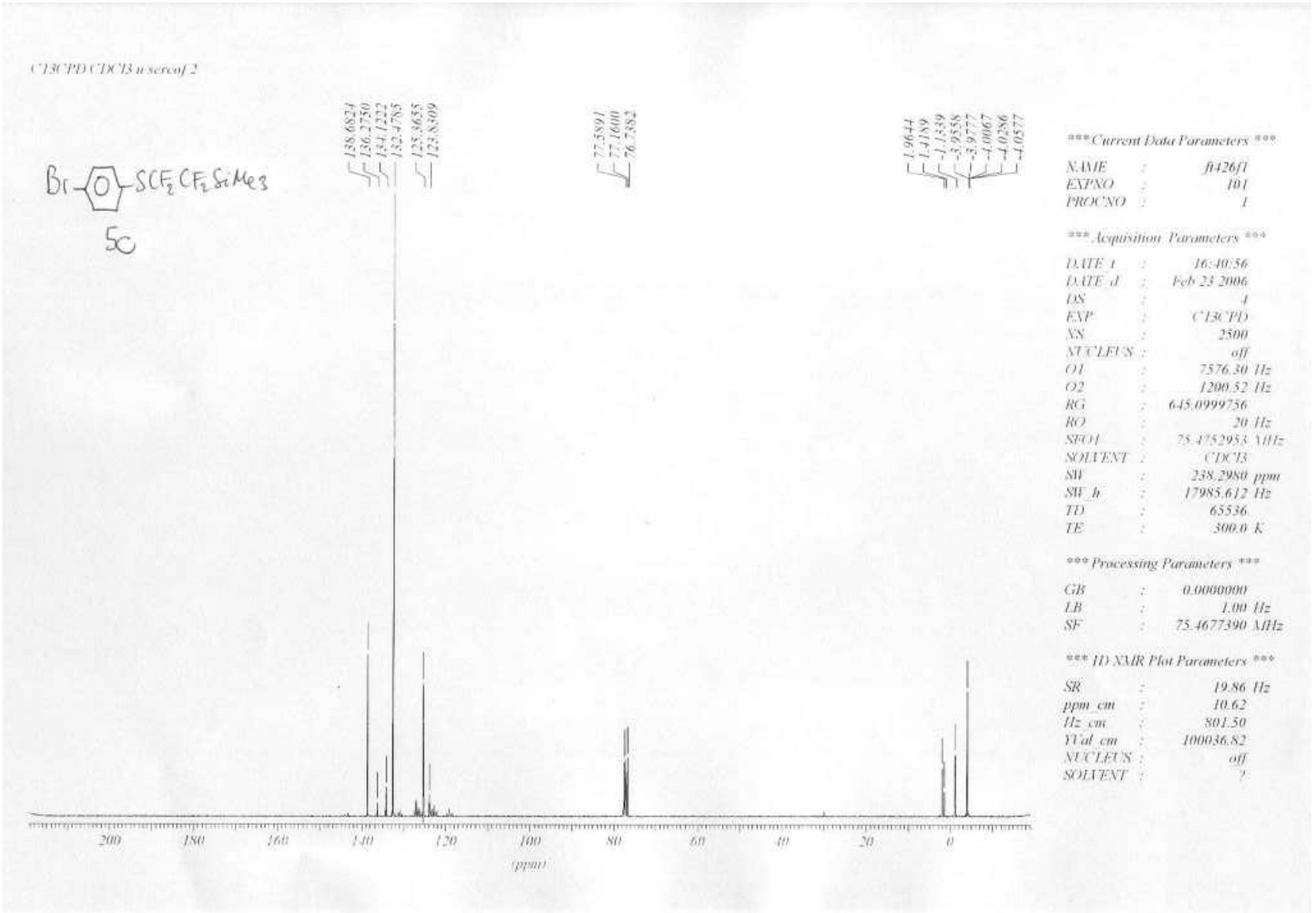
GB	:	0.0000000
LB	:	1.00 Hz
SF	:	75.4677380 MHz

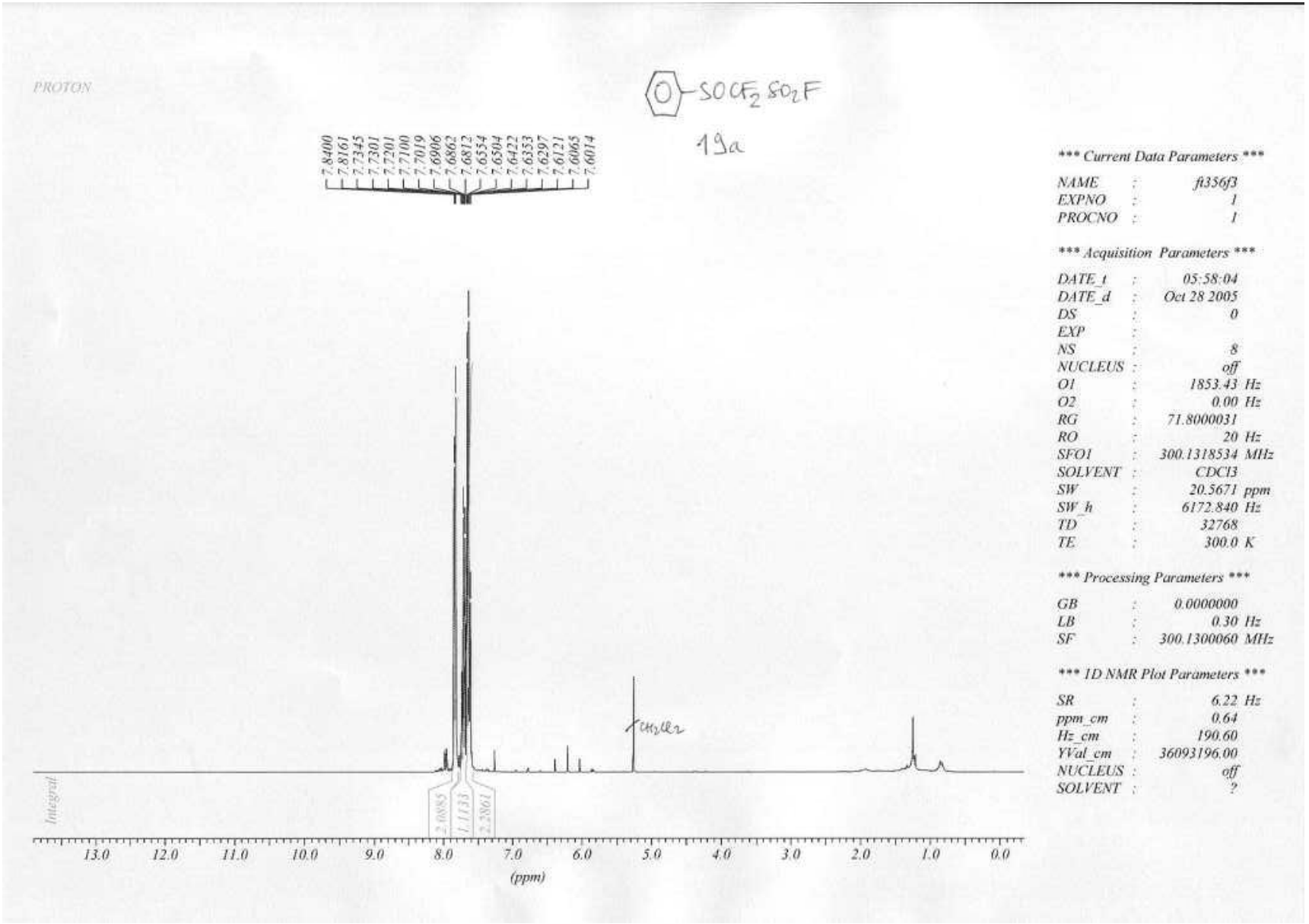
*** 1D NMR Plot Parameters ***

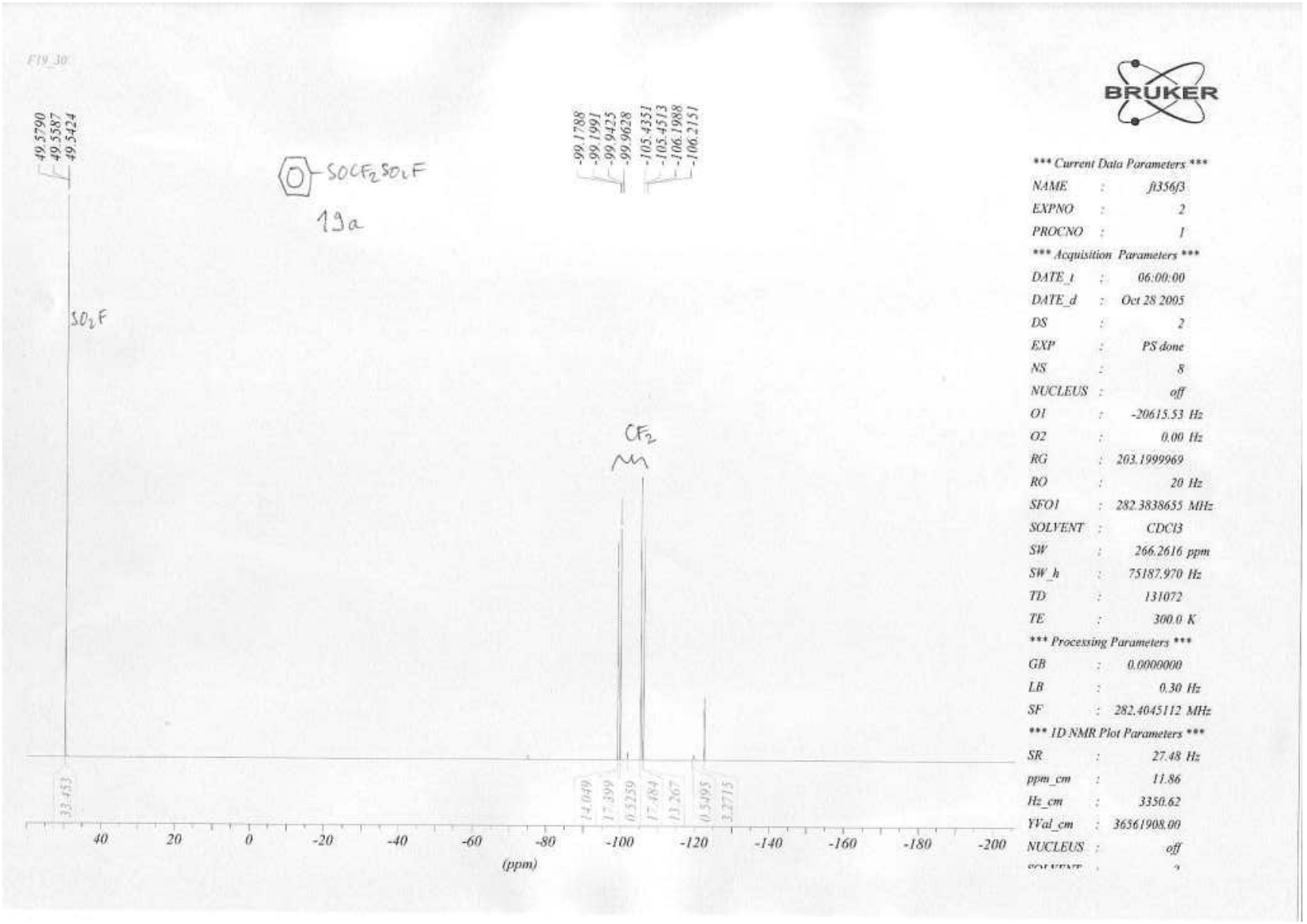
SR	:	19.31 Hz
ppm_cm	:	10.62
Hz_cm	:	801.50
YVal_cm	:	611422.25
NUCLEUS	:	off
SOLVENT	:	?


PROTON
Br-⟨O⟩-SCF2CF2SiMe3
5c
7.5161
7.5123
7.2600
0.2653
Integral
4.1271
10.412
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : fb426f1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 09:16:10
DATE_d : Feb 15 2006
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300070 MHz
*** 1D NMR Plot Parameters ***
SR : 6.60 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 26957906.00
NUCLEUS : off
SOLVENT : ?


F19_30
Br
SCF2CF2SiMe3
5c
-82.7948
-82.8110
-82.8313
-122.3841
-122.4004
-122.4207
Integral
2.1000
2.0862
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
*** Current Data Parameters ***
NAME : ft426f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 23:49:23
DATE_d : Feb 14 2006
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 38868220.00
NUCLEUS : off
SOLVENT : ?


C13CPD CDCl3 u sercof 2
Br
SCF2CF2SiMe3
5c
138.6824
136.2750
134.1222
132.4785
125.3655
123.8309
77.5891
77.1600
76.7582
1.9644
1.4189
-1.1339
-3.9558
-3.9777
-4.0067
-4.0286
-4.0577
*** Current Data Parameters ***
NAME : ft426f1
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 16:40:56
DATE_d : Feb 23 2006
DS : 4
EXP : C13CPD
NS : 2500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 645.0999756
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 19.86 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 100036.82
NUCLEUS : off
SOLVENT : ?
200
180
160
140
120
100
80
60
40
20
0
(ppm)

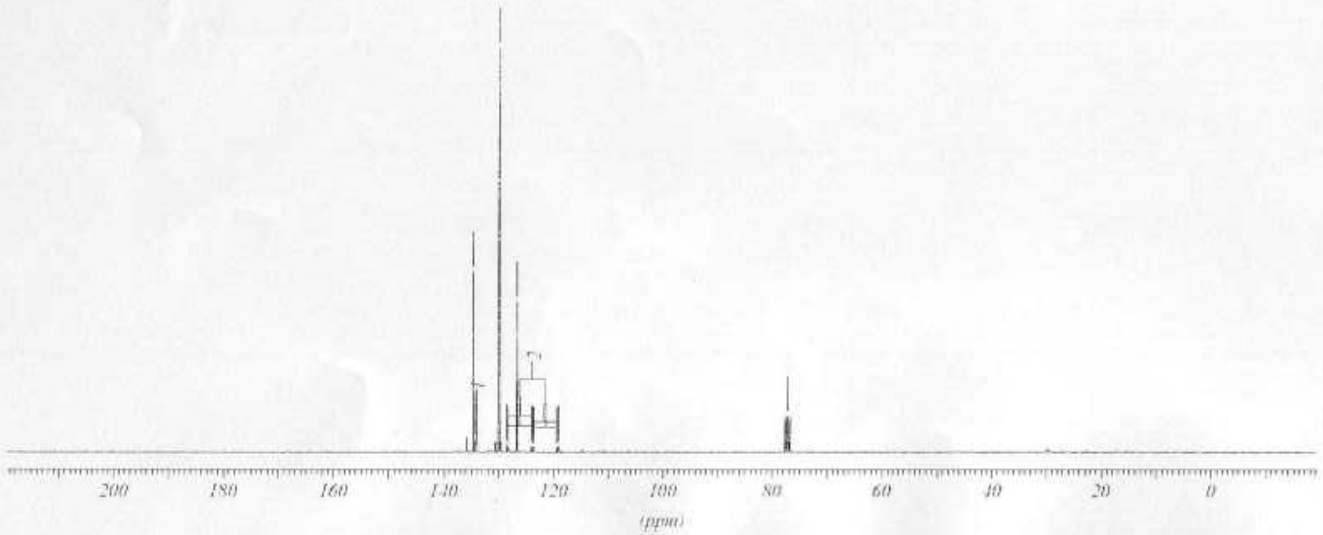

PROTON
19a
7.8400
7.8161
7.7345
7.7301
7.7201
7.7100
7.7019
7.6906
7.6862
7.6812
7.6554
7.6504
7.6422
7.6353
7.6297
7.6121
7.6065
7.6014
Integral
2.0885
1.1133
2.2861
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)
*** Current Data Parameters ***
NAME : fi356f3
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 05:58:04
DATE_d : Oct 28 2005
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 71.8000031
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.22 Hz
ppm_cm : 0.64
Hz_cm : 190.60
YVal_cm : 36093196.00
NUCLEUS : off
SOLVENT : ?

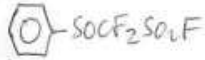

F19_30
49.5790
49.5587
49.5424
SO2F
SOCF2SO2F
19a
-99.1788
-99.1991
-99.9425
-99.9628
-105.4351
-105.4513
-106.1988
-106.2151
CF2
33.153
14.049
17.399
0.5259
17.484
13.267
0.5495
3.2715
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl356f3
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 06:00:00
DATE_d : Oct 28 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 203.1999969
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4045112 MHz
*** 1D NMR Plot Parameters ***
SR : 27.48 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 36561908.00
NUCLEUS : off

C13CPD CDCl3 n sercof 2

134.6676
134.1294
134.0931
134.0640
129.9111
128.4856
128.1510
126.6510
126.6164
126.6019
123.9691
123.8600
123.6418
123.5527
119.3434
119.0161

77.1600





19a

*** Current Data Parameters ***

NAME	:	fl356f3
EXPNO	:	101
PROCNO	:	1

*** Acquisition Parameters ***

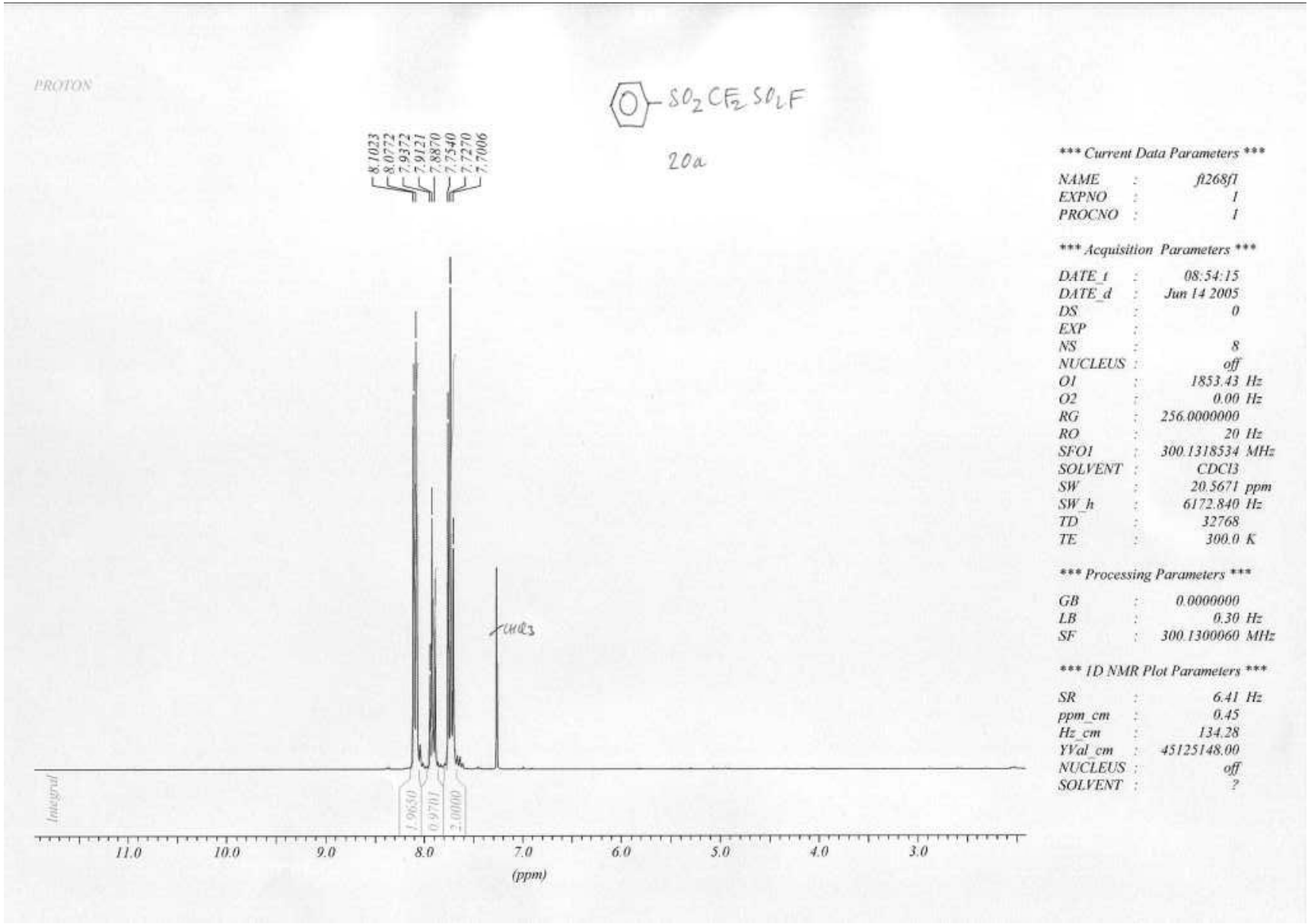
DATE_t	:	18:07:38
DATE_d	:	Nov 02 2005
DS	:	4
NS	:	3000
NUCLEUS	:	off
O1	:	7576.30 Hz
O2	:	1200.52 Hz
RG	:	5160.6000977
RO	:	20 Hz
SFO1	:	75.4752955 MHz
SOLVENT	:	CDCl3
SW	:	238.2980 ppm
SW_h	:	17985.612 Hz
TD	:	65536
TE	:	300.0 K

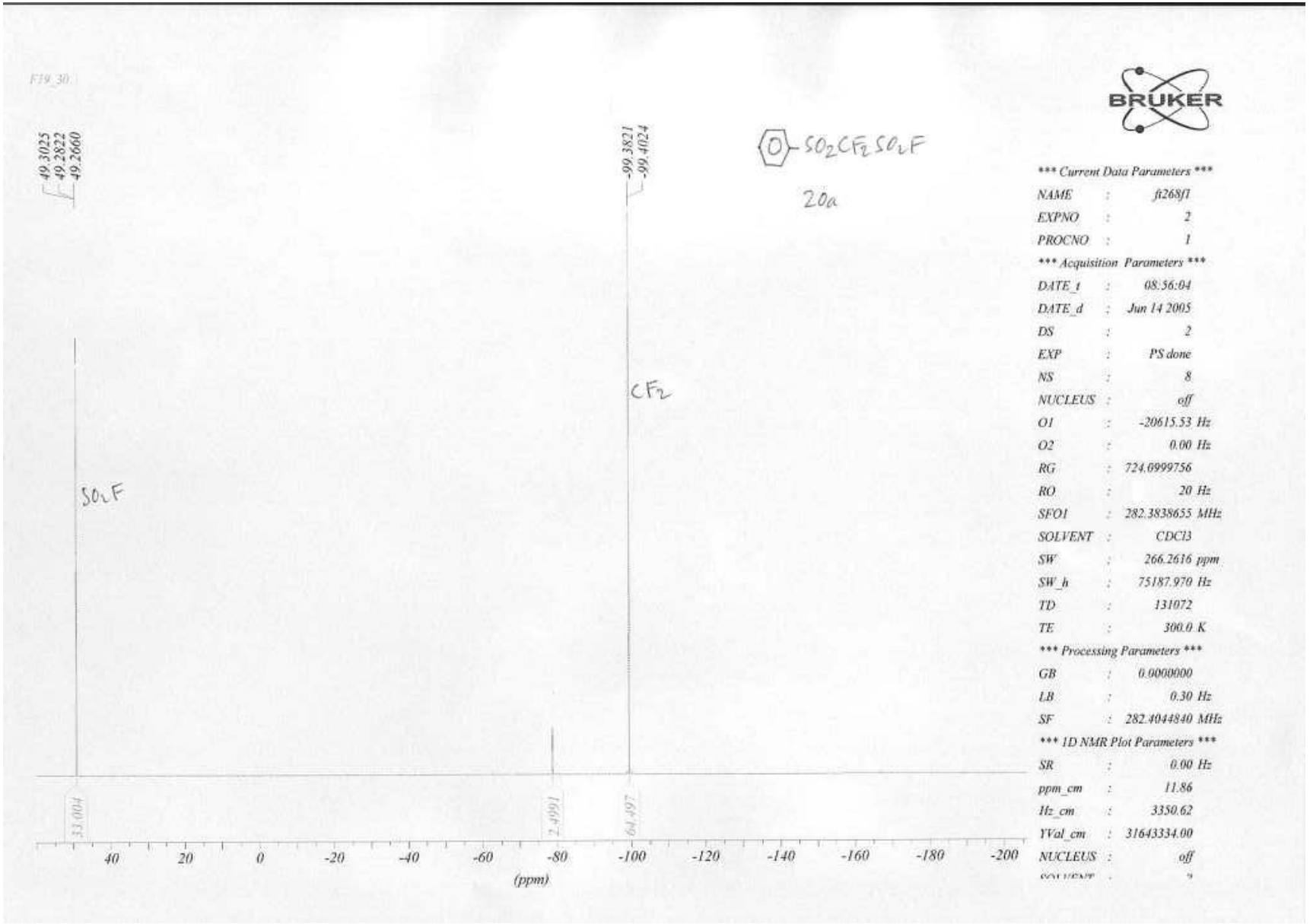
*** Processing Parameters ***

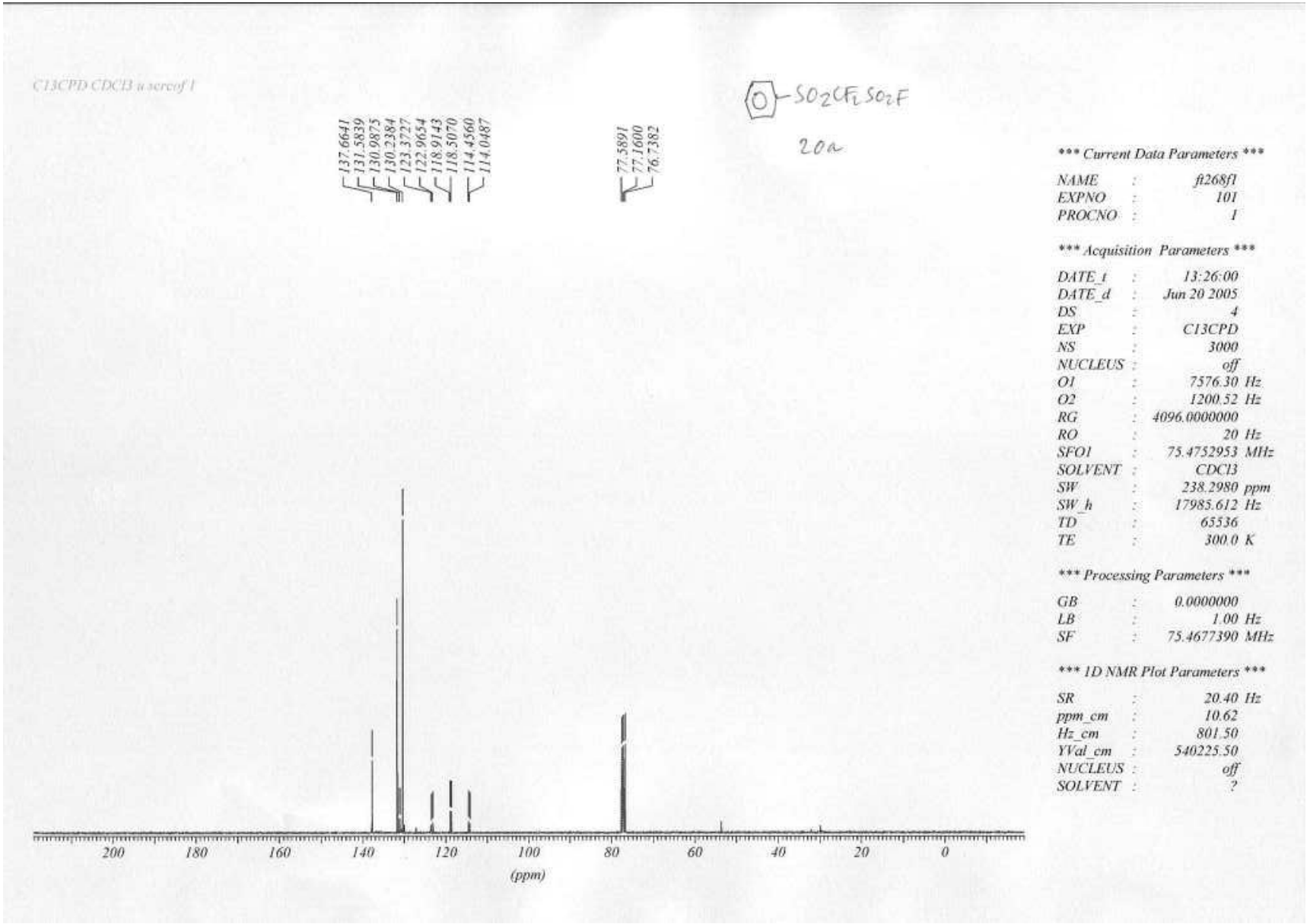
GB	:	0.0000000
LB	:	1.00 Hz
SF	:	75.4677470 MHz

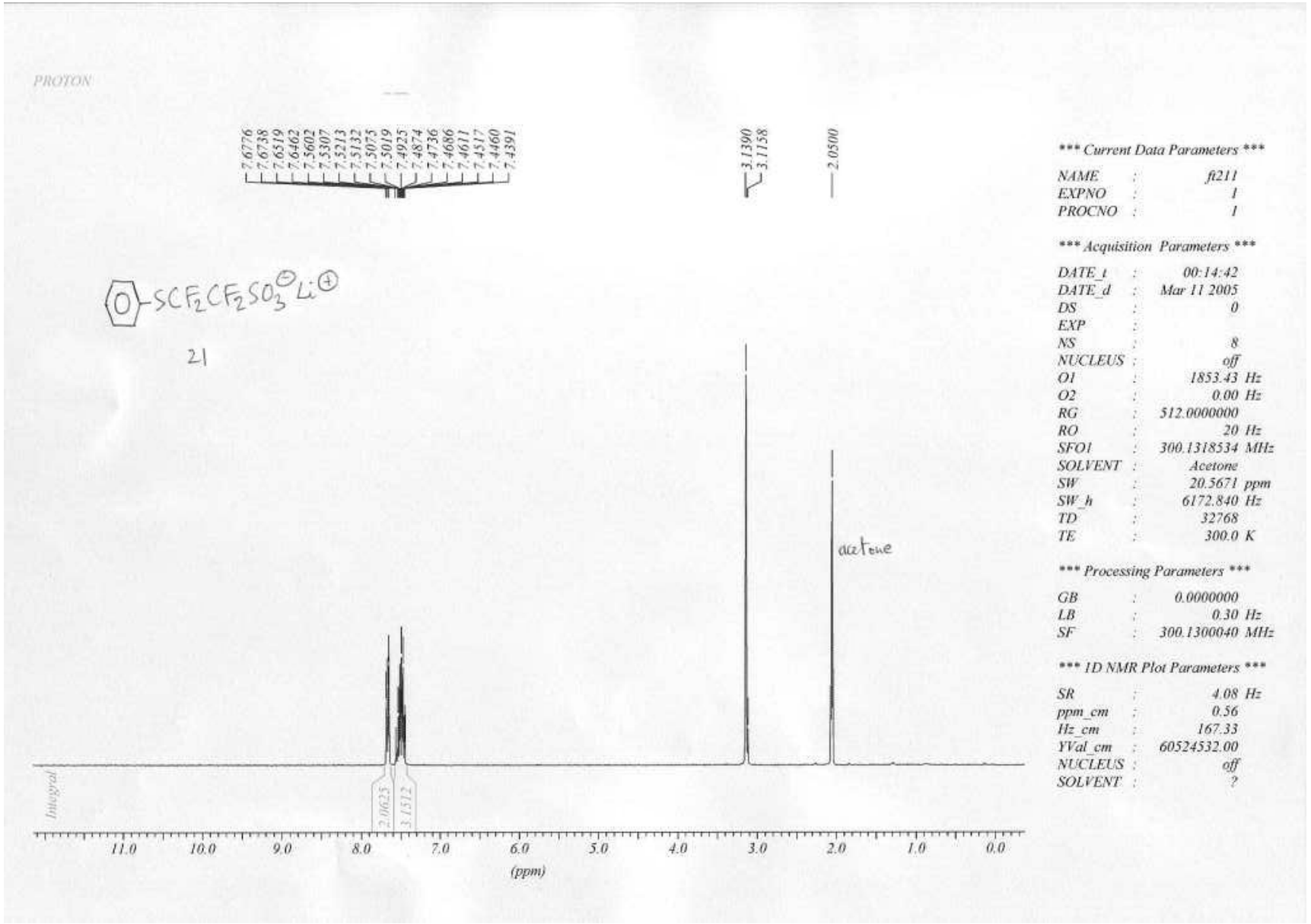
*** 1D NMR Plot Parameters ***

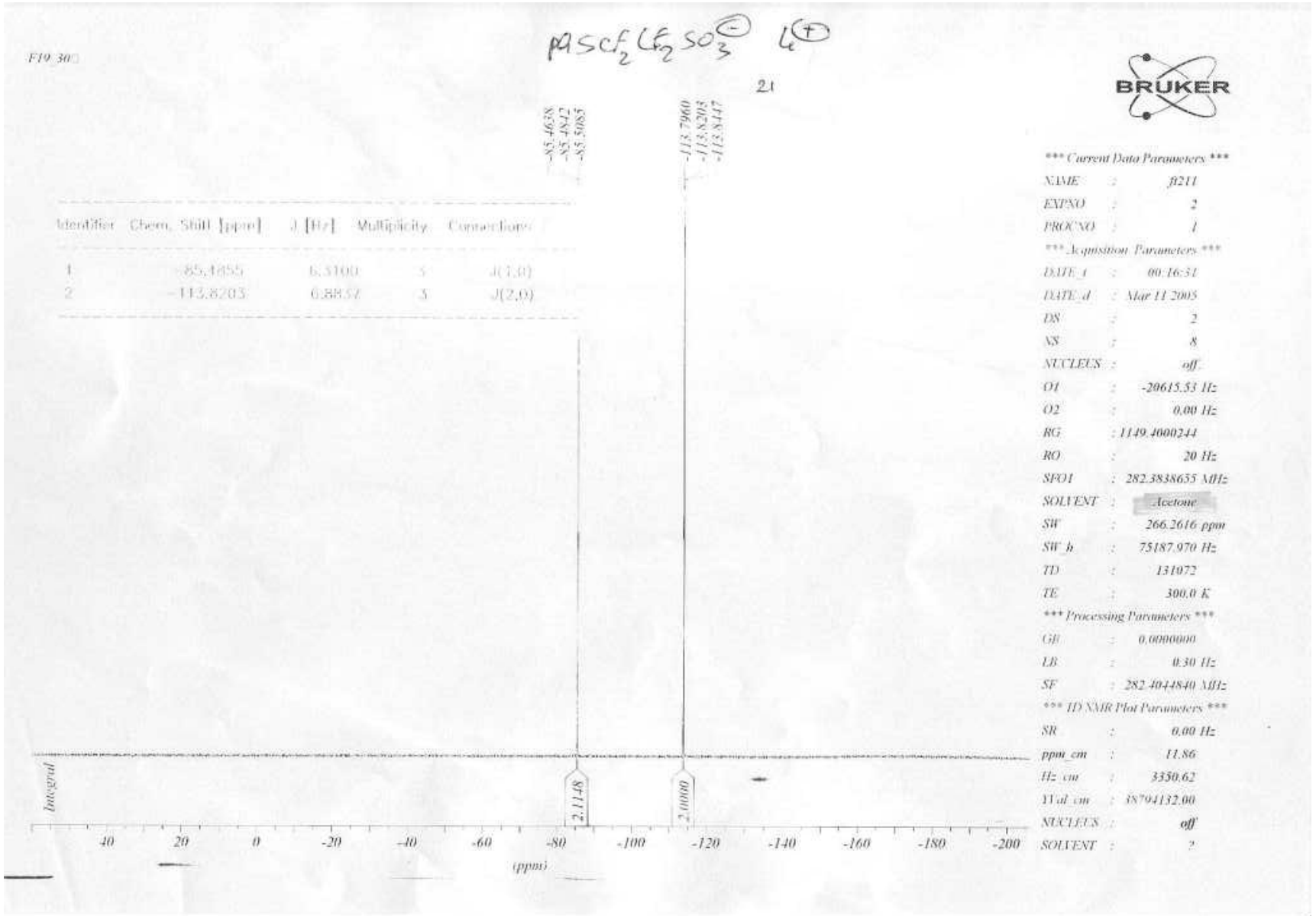
SR	:	27.54 Hz
ppm_cm	:	10.62
Hz_cm	:	801.69
VGA_cm	:	2359960.00
NUCLEUS	:	off
SOLVENT	:	?

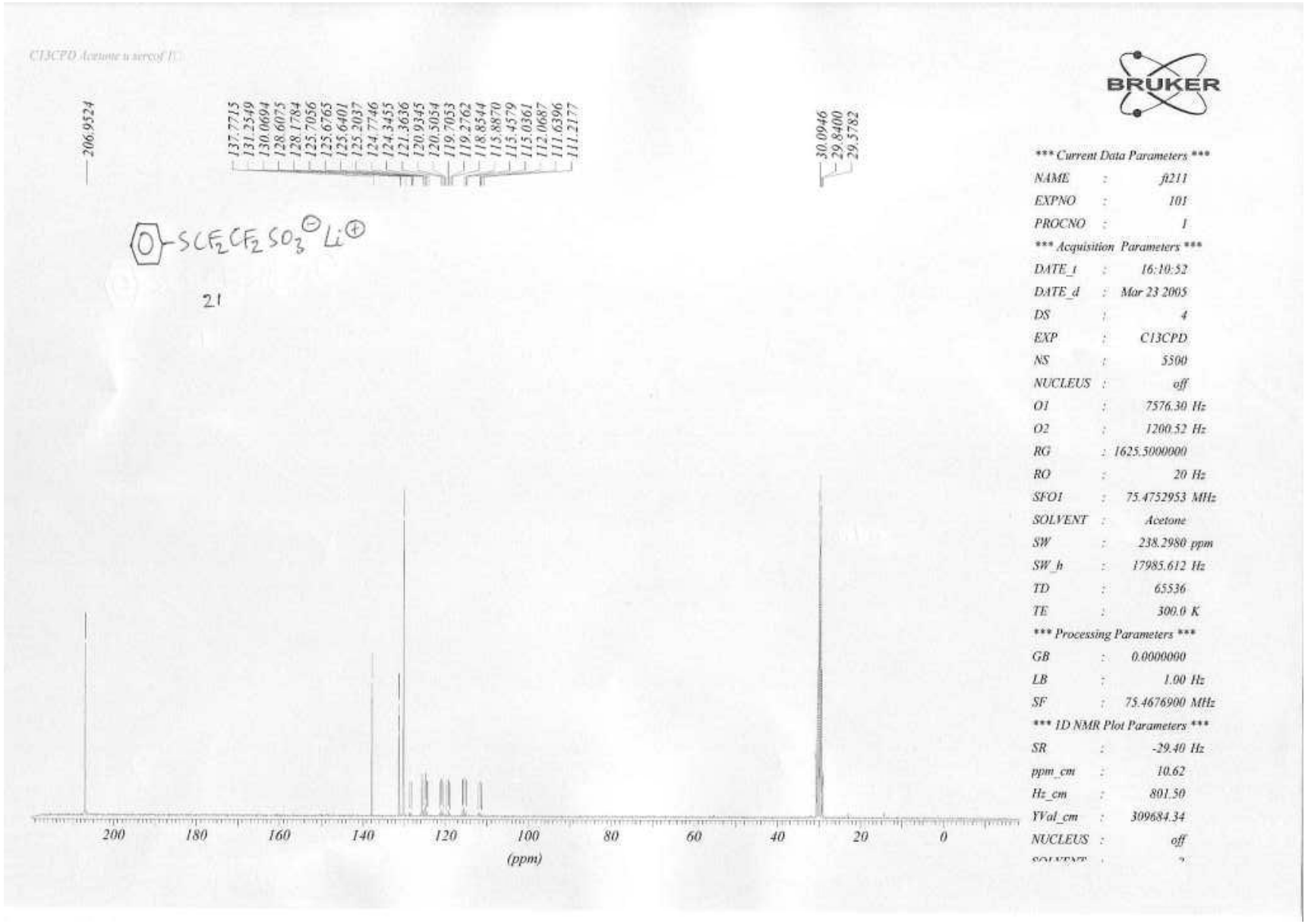

PROTON
8.1023
8.0772
7.9372
7.9121
7.8870
7.7540
7.7270
7.7006
20a
CHCl3
Integral
1.9650
0.9701
2.0000
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
(ppm)
*** Current Data Parameters ***
NAME : ft268f1
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:54:15
DATE_d : Jun 14 2005
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 256.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : CDCl3
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300060 MHz
*** 1D NMR Plot Parameters ***
SR : 6.41 Hz
ppm_cm : 0.45
Hz_cm : 134.28
YVal_cm : 45125148.00
NUCLEUS : off
SOLVENT : ?

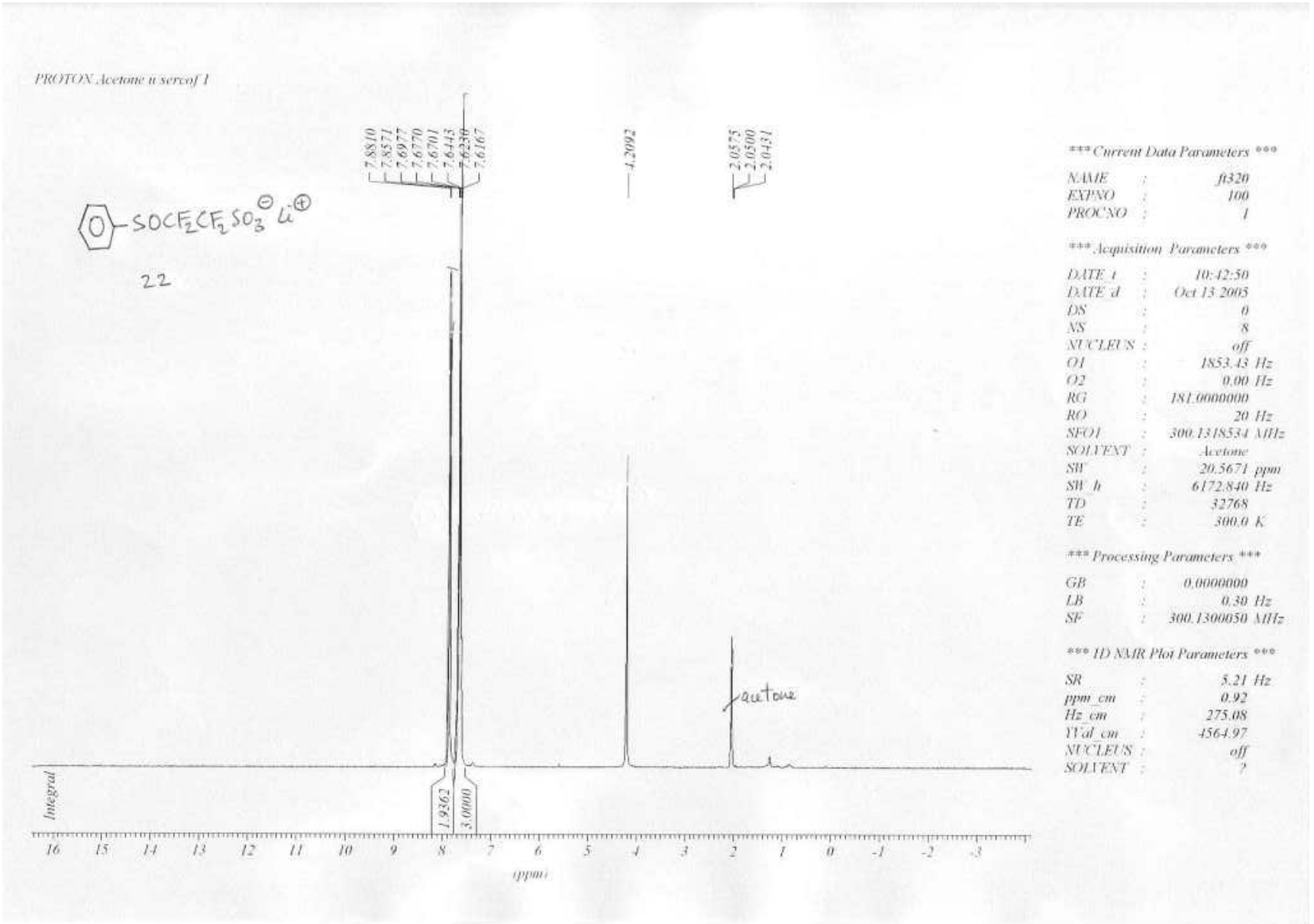

F19_30
49.3025
49.2822
49.2660
-99.3821
-99.4024
SO2CF2SO2F
20a
CF2
SO2F
33.004
2.4991
64.497
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fi268f1
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08.56.04
DATE_d : Jun 14 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 724.0999756
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : CDCl3
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 31643334.00
NUCLEUS : off

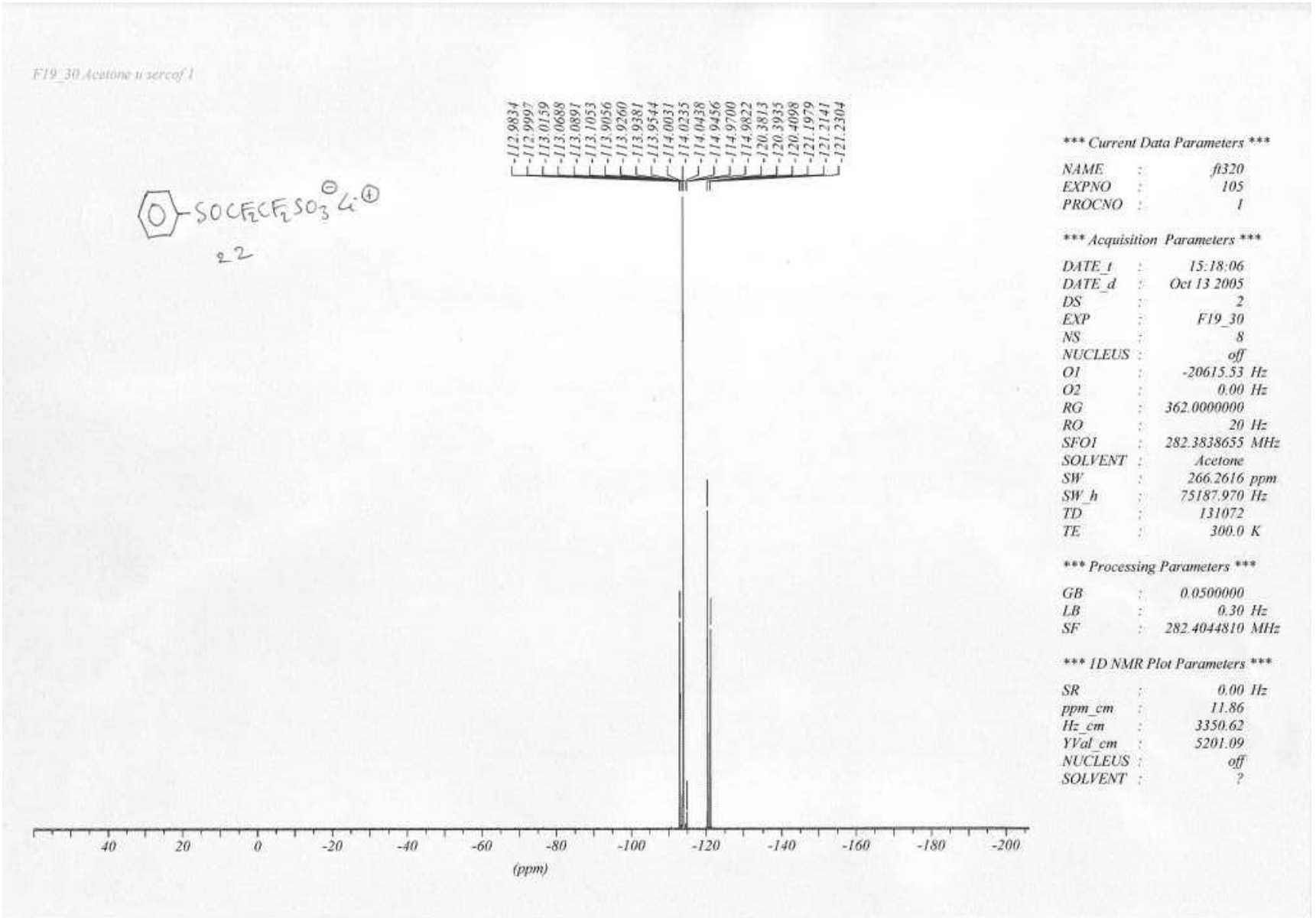

C13CPD CDCl3 a sercof 1
137.6641
131.5839
130.9875
130.2384
123.3727
122.9654
118.9143
118.5070
114.4560
114.0487
77.5891
77.1600
76.7382
O-SO2CF2SO2F
20a
*** Current Data Parameters ***
NAME : ft268f1
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 13:26:00
DATE_d : Jun 20 2005
DS : 4
EXP : C13CPD
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 4096.0000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : CDCl3
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677390 MHz
*** 1D NMR Plot Parameters ***
SR : 20.40 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 540225.50
NUCLEUS : off
SOLVENT : ?
200
180
160
140
120
100
80
60
40
20
0
(ppm)

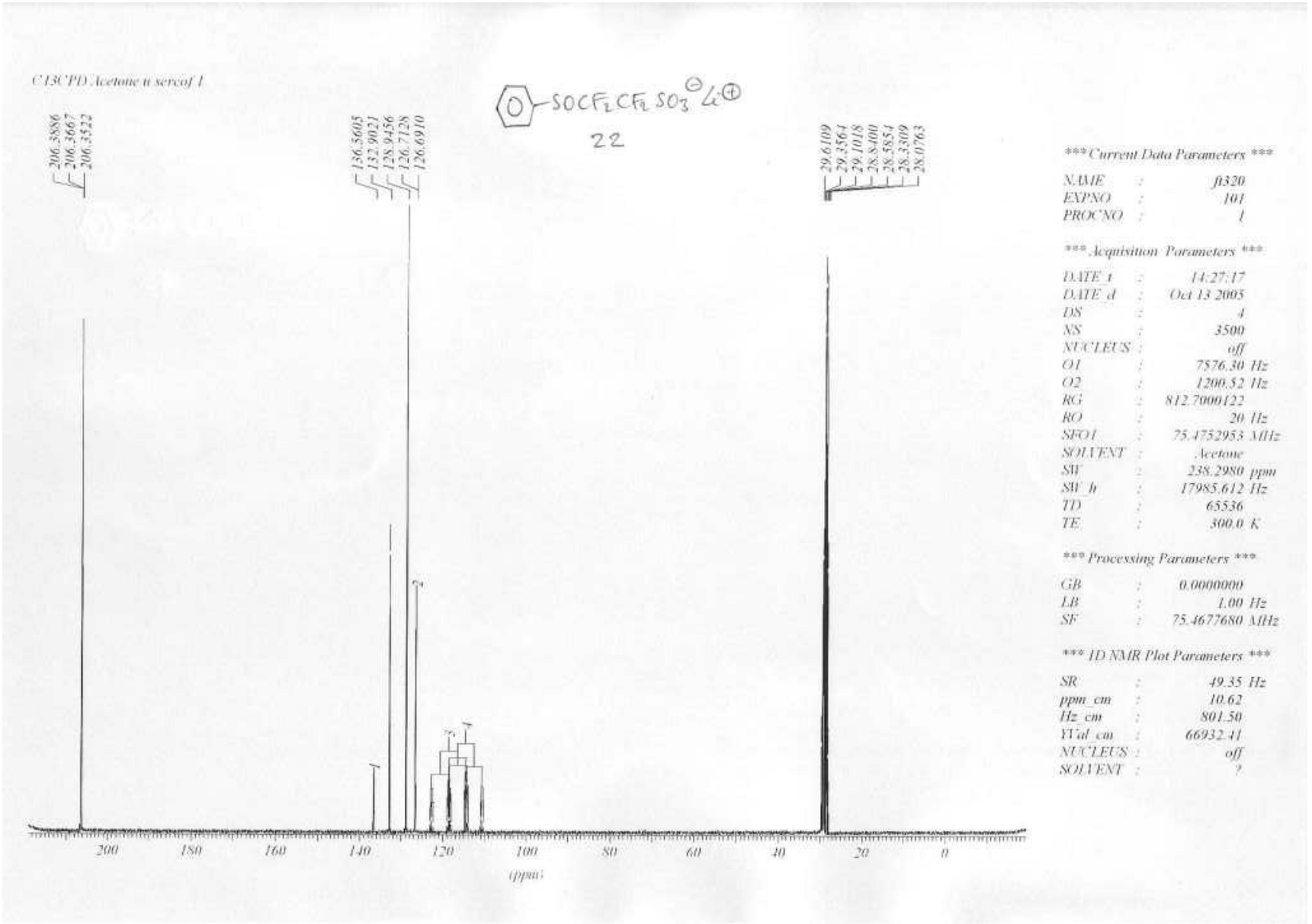

PROTON
7.6776
7.6738
7.6519
7.6462
7.5602
7.5307
7.5213
7.5132
7.5075
7.5019
7.4925
7.4874
7.4736
7.4686
7.4611
7.4517
7.4460
7.4391
3.1390
3.1158
2.0500
21
acetone
Integral
2.0625
3.1512
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)
*** Current Data Parameters ***
NAME : fi211
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:14:42
DATE_d : Mar 11 2005
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 512.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.08 Hz
ppm_cm : 0.56
Hz_cm : 167.33
YVal_cm : 60524532.00
NUCLEUS : off
SOLVENT : ?

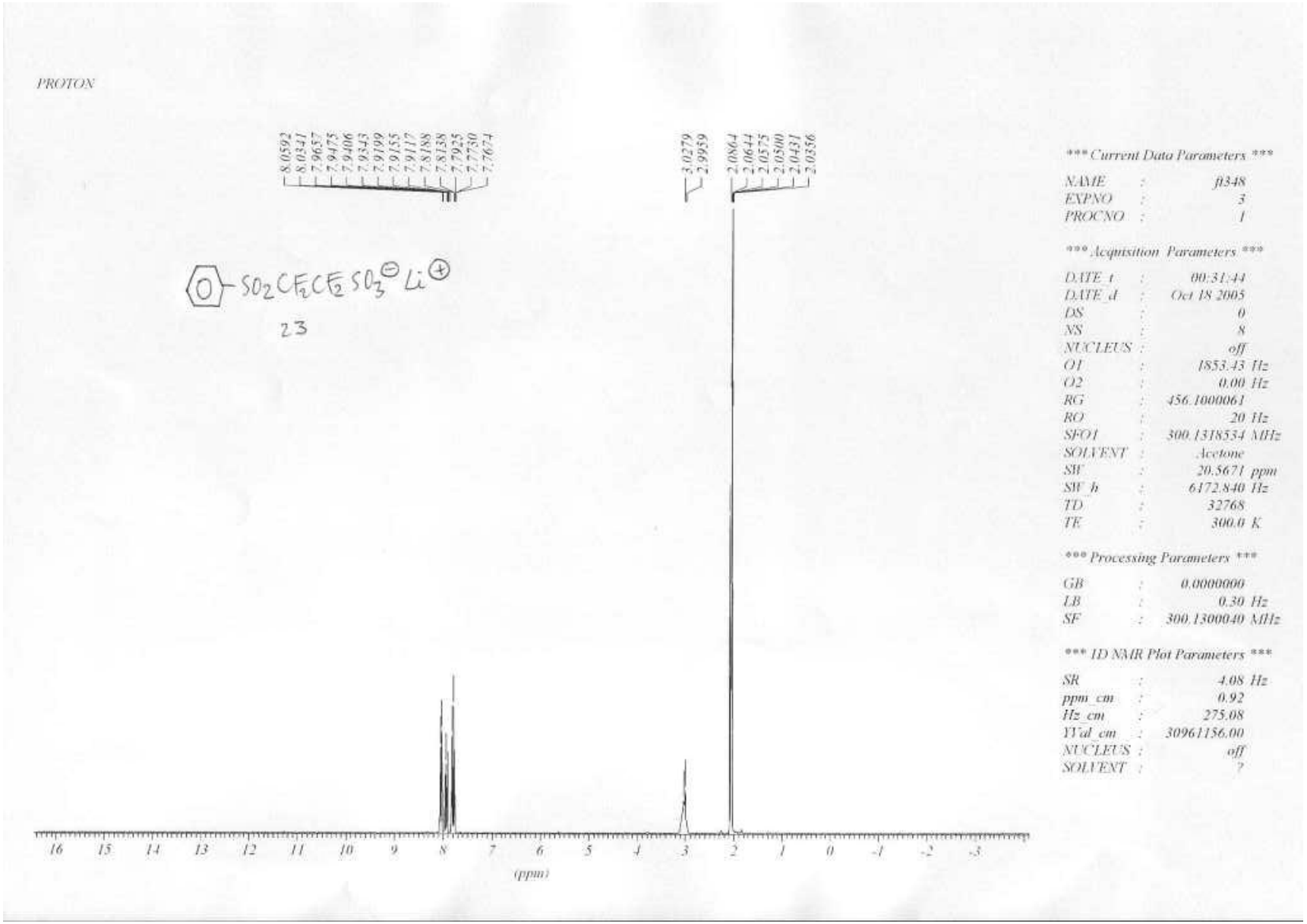

F19_30
21
-85.4638
-85.4942
-85.5085
-113.7960
-113.8203
-113.8447
Identifier Chem. Shift [ppm] J [Hz] Multiplicity Connections
1 -85.4855 6.3100 t J(1,0)
2 -113.8203 6.8857 t J(2,0)
integral
2.1148
2.0000
40 20 0 -20 -40 -60 -80 -100 -120 -140 -160 -180 -200
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fl211
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:16:51
DATE_d : Mar 11 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1149.4000244
RO : 20 Hz
SFO1 : 282.3838635 MHz
SOLVENT : Acetone
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
Val_cm : 38794132.00
NUCLEUS : off
SOLVENT : ?


C13CPD Acetone w xercof (1)
206.9524
137.7715
131.2549
130.0694
128.6075
128.1784
125.7056
125.6765
125.6401
125.2037
124.7746
124.3455
121.3636
120.9345
120.5054
119.7053
119.2762
118.8544
118.8870
115.4579
115.0361
112.0687
111.6396
111.2177
30.0946
29.8400
29.5782
21
200
180
160
140
120
100
80
60
40
20
0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fi211
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 16:10:52
DATE_d : Mar 23 2005
DS : 4
EXP : C13CPD
NS : 5500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1625.5000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4676900 MHz
*** 1D NMR Plot Parameters ***
SR : -29.40 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 309684.34
NUCLEUS : off

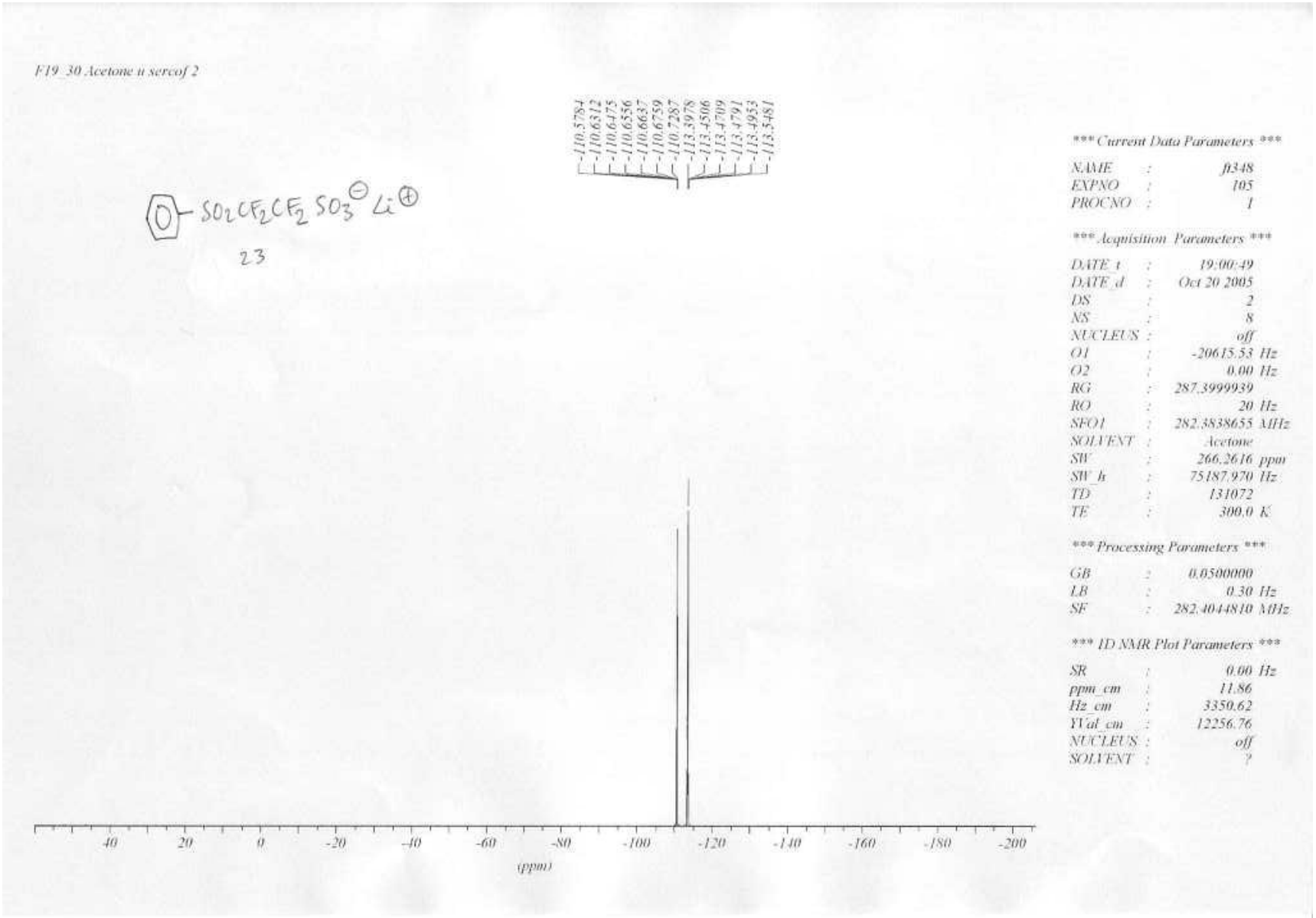

PROTON Acetone u sercof 1
7.8810
7.8571
7.6977
7.6770
7.6701
7.6443
7.6230
7.6167
4.2092
2.0575
2.0500
2.0431
SOCF2CF2SO3⊖ Li⊕
22
acetone
Integral
1.9362
3.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft320
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 10:42:50
DATE_d : Oct 13 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 181.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300050 MHz
*** 1D NMR Plot Parameters ***
SR : 5.21 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 4564.97
NUCLEUS : off
SOLVENT : ?


F19_30 Acetone u sercof 1
-112.9834
-112.9997
-113.0159
-113.0688
-113.0891
-113.1053
-113.9056
-113.9260
-113.9381
-113.9544
-114.0031
-114.0235
-114.0438
-114.9456
-114.9700
-114.9822
-120.3813
-120.3935
-120.4098
-121.1979
-121.2141
-121.2304
22
*** Current Data Parameters ***
NAME : ft320
EXPNO : 105
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 15:18:06
DATE_d : Oct 13 2005
DS : 2
EXP : F19_30
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 362.0000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : Acetone
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0500000
LB : 0.30 Hz
SF : 282.4044810 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 5201.09
NUCLEUS : off
SOLVENT : ?
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)


C13CPD Acetone u sercof 1
206.3886
206.3667
206.3532
136.5605
132.9021
128.9456
126.7125
126.6910
29.6109
29.3564
29.1018
28.8400
28.5854
28.3309
28.0763
22
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft320
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 14:27:17
DATE_d : Oct 13 2005
DS : 4
NS : 3500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 812.7000122
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677680 MHz
*** 1D NMR Plot Parameters ***
SR : 49.35 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Vial_cm : 66932.41
NUCLEUS : off
SOLVENT : ?


PROTON
8.0592
8.0341
7.9657
7.9475
7.9406
7.9343
7.9199
7.9155
7.9117
7.8188
7.8138
7.7925
7.7730
7.7674
3.0279
2.9959
2.0864
2.0644
2.0575
2.0500
2.0431
2.0356
23
*** Current Data Parameters ***
NAME : fl348
EXPNO : 3
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:31:44
DATE_d : Oct 18 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.08 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 30961156.00
NUCLEUS : off
SOLVENT : ?
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)

F19_30 Acetone u sercof 2



*** Current Data Parameters ***

NAME	:	fl348
EXPNO	:	105
PROCNO	:	1

*** Acquisition Parameters ***

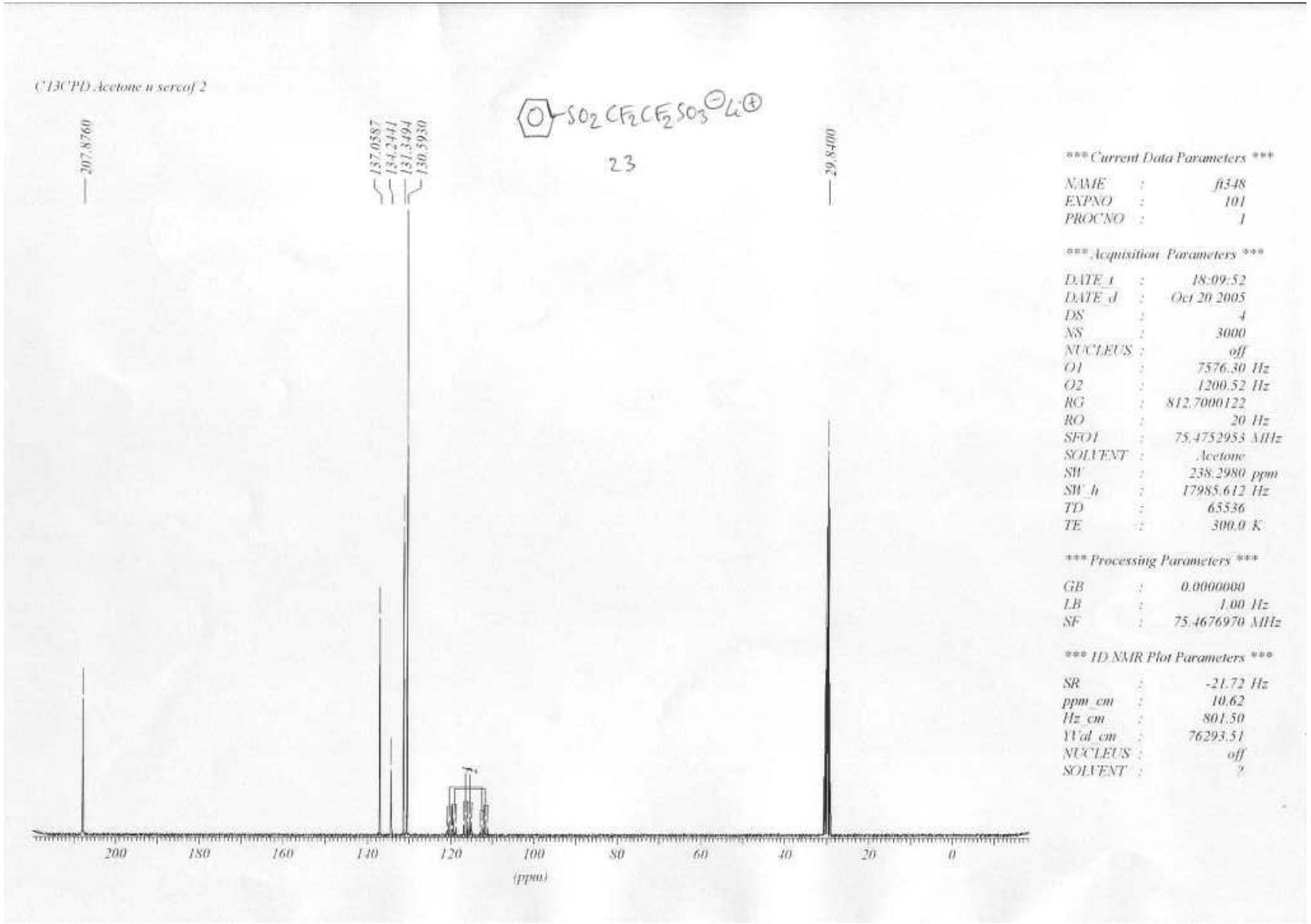
DATE_t	:	19:00:49
DATE_d	:	Oct 20 2005
DS	:	2
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	287.3999939
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	Acetone
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

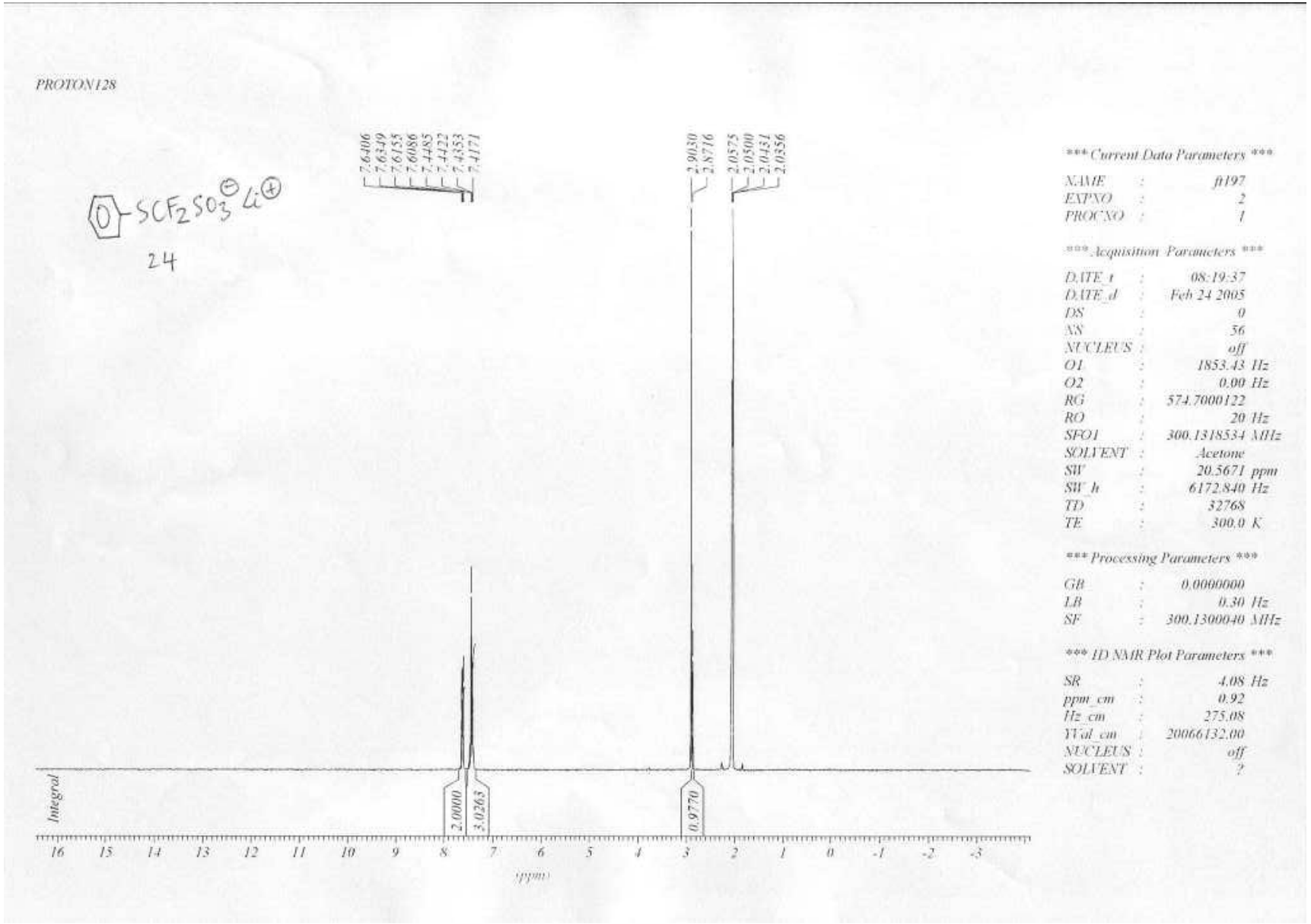
*** Processing Parameters ***

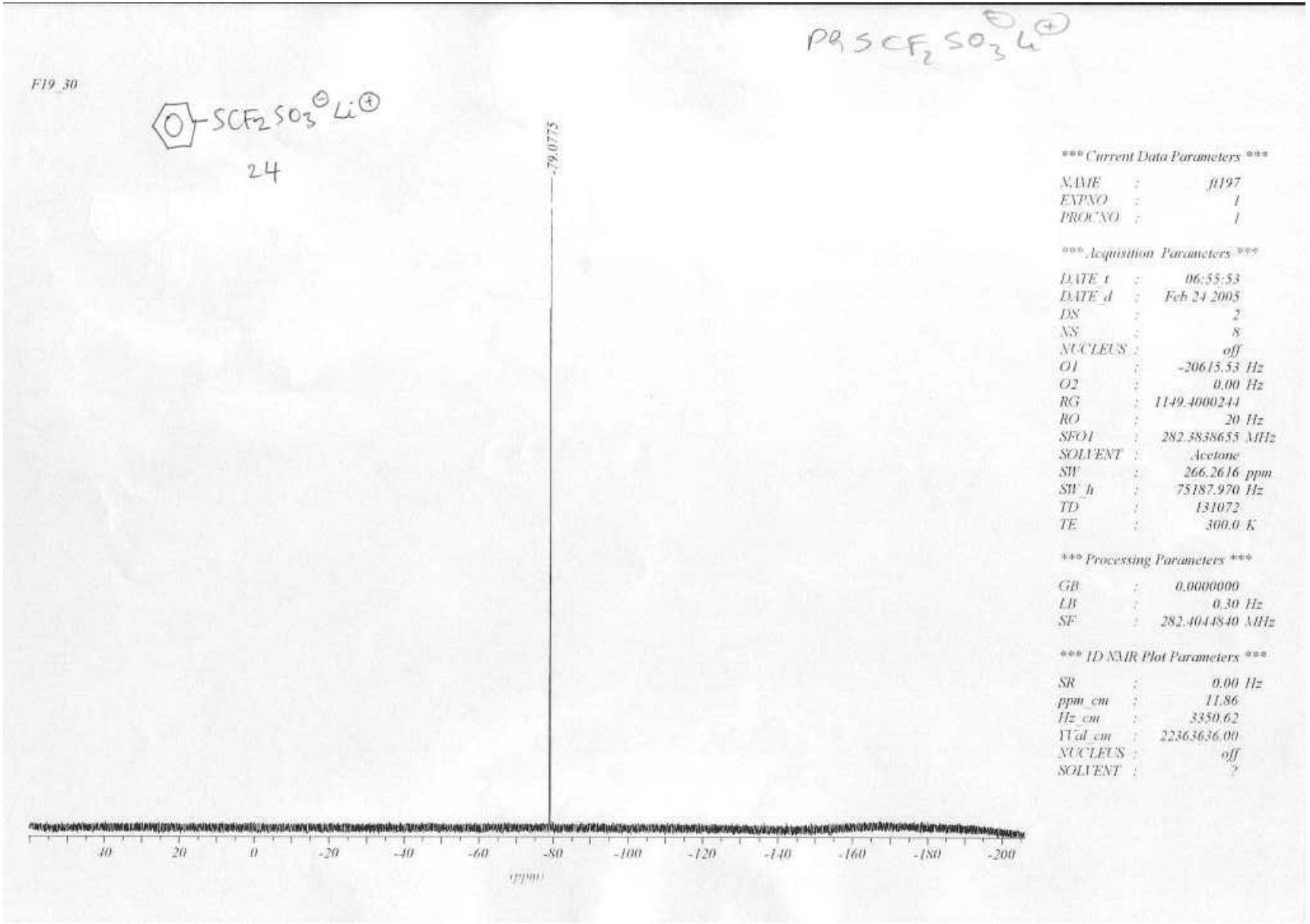
GB	:	0.0500000
LB	:	0.30 Hz
SF	:	282.4044810 MHz

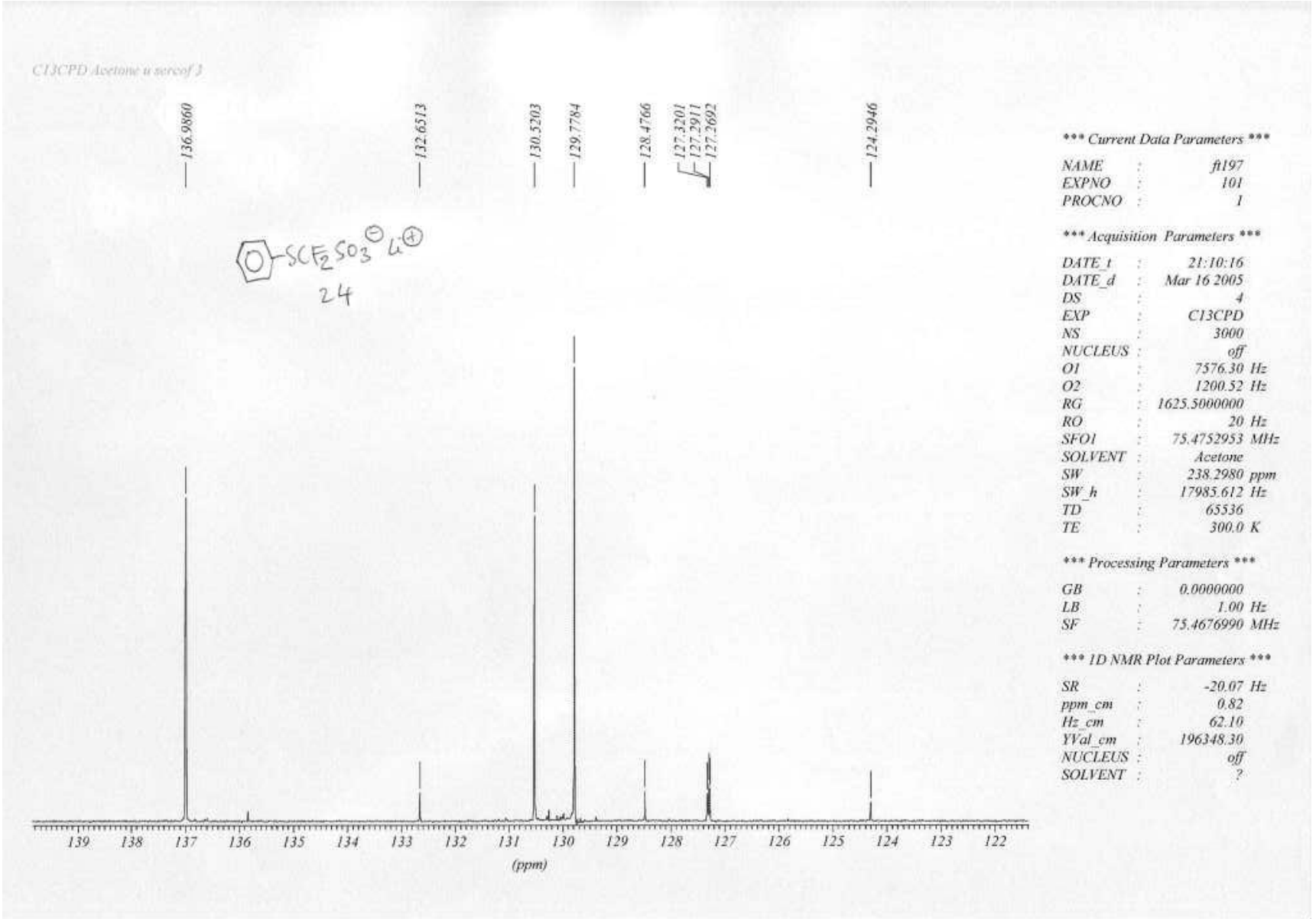
*** 1D NMR Plot Parameters ***

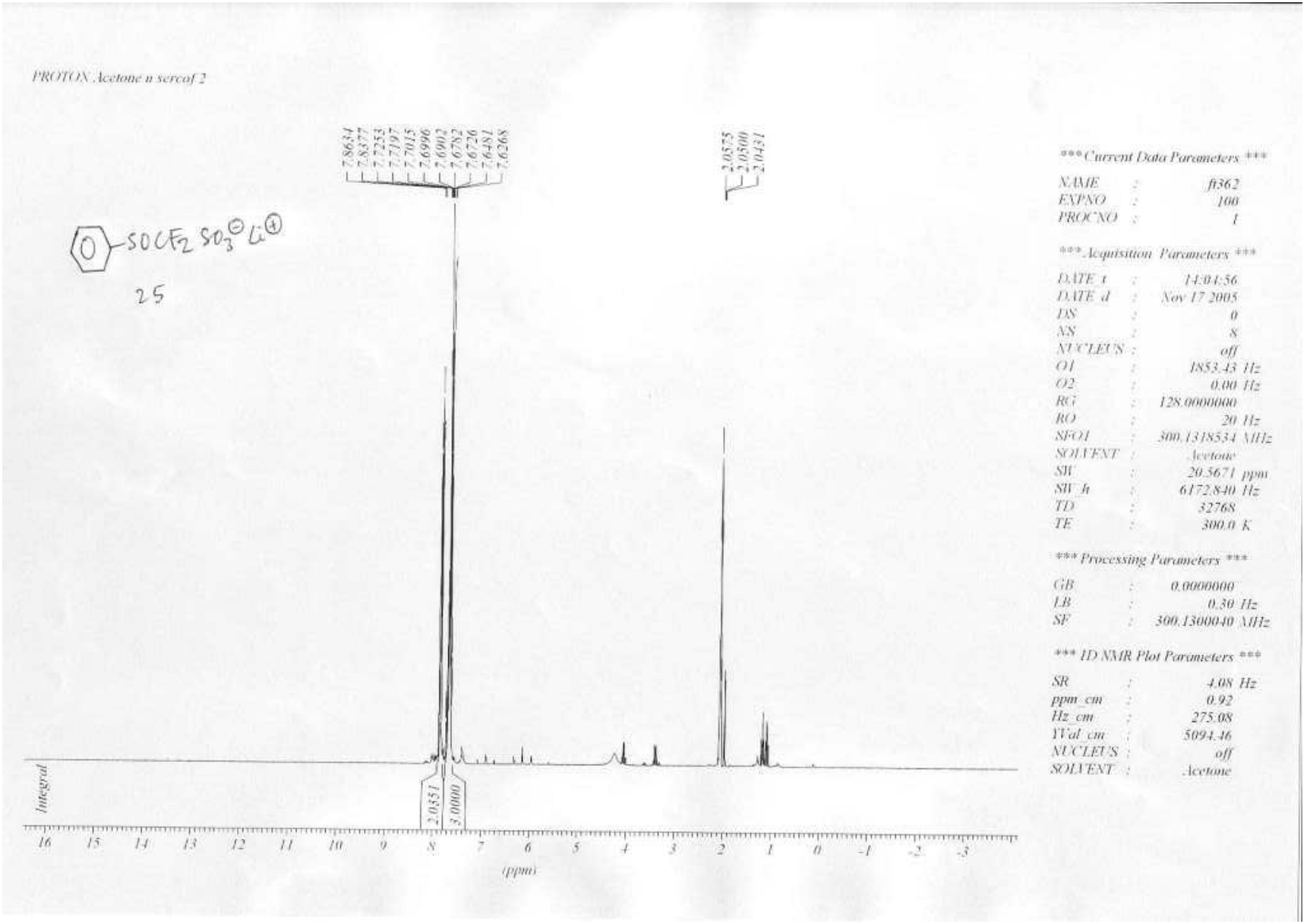
SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	12256.76
NUCLEUS	:	off
SOLVENT	:	?


C13CPD Acetone u sercof 2
207.8760
137.0587
134.2441
131.3494
130.5930
29.8400
23
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : fi348
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 18:09:52
DATE_d : Oct 20 2005
DS : 4
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 812.7000122
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4676970 MHz
*** 1D NMR Plot Parameters ***
SR : -21.72 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Wal_cm : 76293.51
NUCLEUS : off
SOLVENT : ?

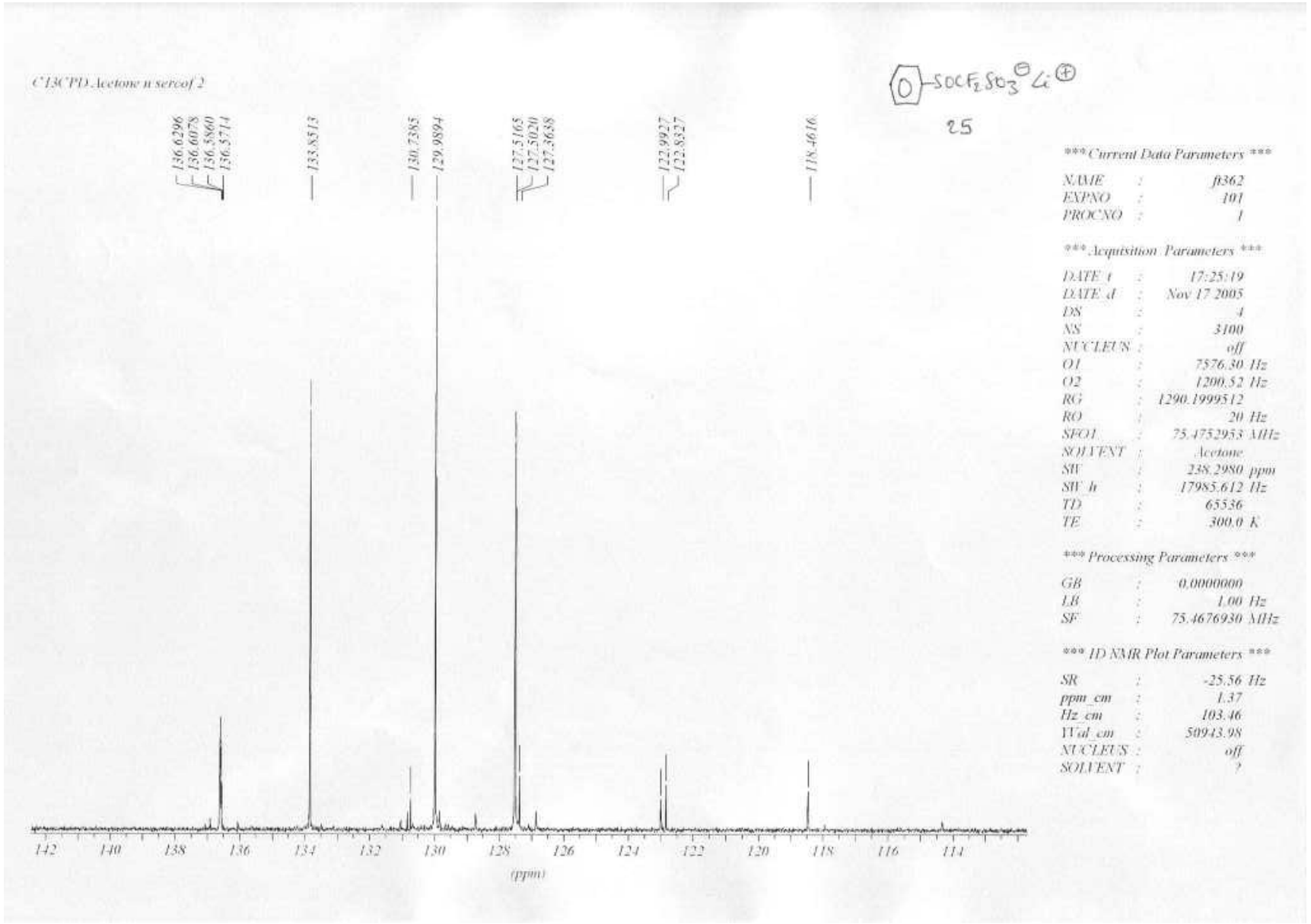

PROTON128
7.6406
7.6349
7.6155
7.6086
7.4485
7.4422
7.4353
7.4171
2.9030
2.8716
2.0575
2.0500
2.0431
2.0356
24
Integral
2.0000
3.0263
0.9770
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft197
EXPNO : 2
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 08:19:37
DATE_d : Feb 24 2005
DS : 0
NS : 56
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 574.7000122
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.08 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 20066132.00
NUCLEUS : off
SOLVENT : ?

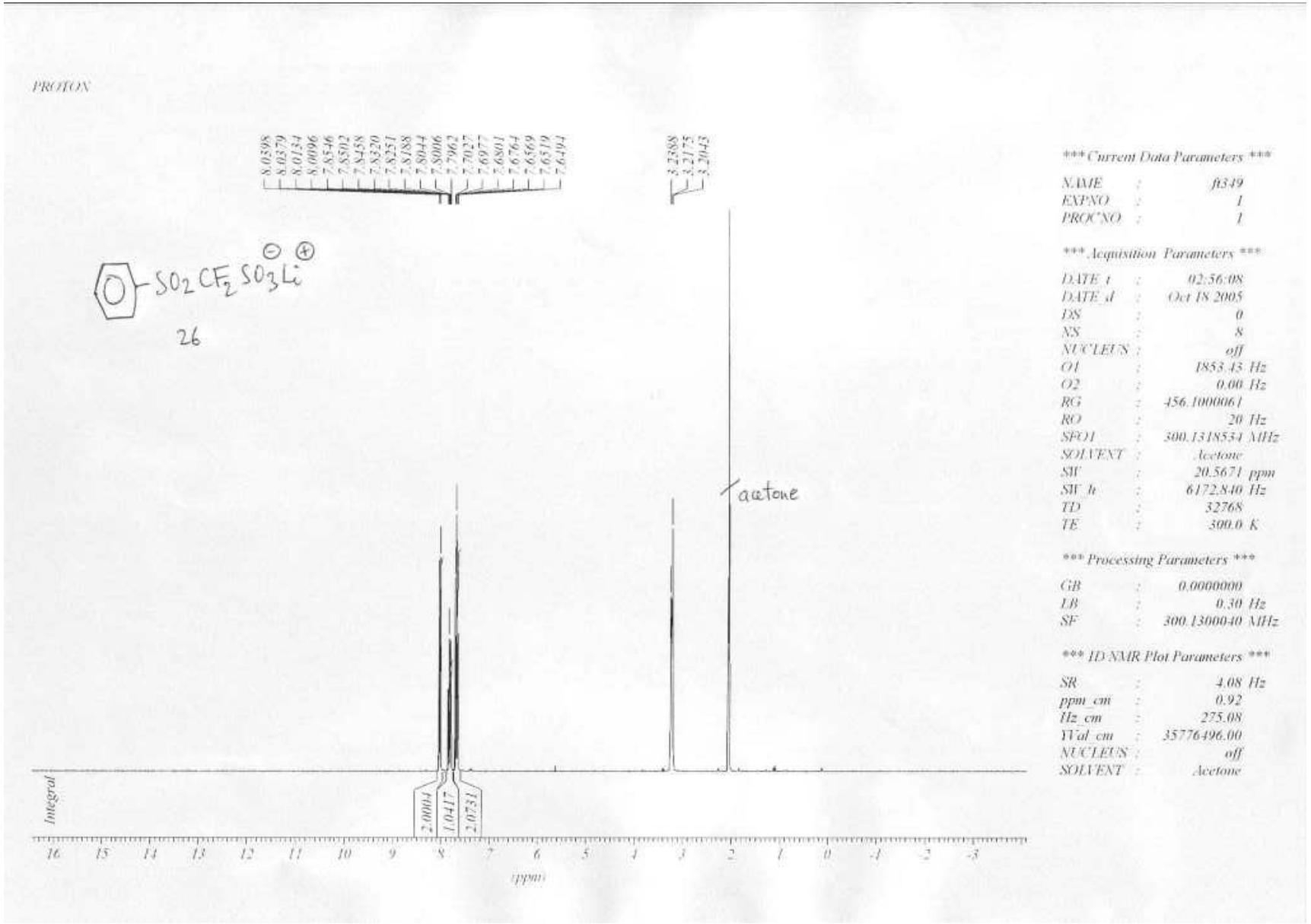

F19_30
24
-79.0775
*** Current Data Parameters ***
NAME : ft197
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 06:55:53
DATE_d : Feb 24 2005
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1149.4000244
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : Acetone
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
WDW_cm : 22363636.00
NUCLEUS : off
SOLVENT : ?
40
20
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
(ppm)


C13CPD Acetone u sercof 3
136.9860
132.6513
130.5203
129.7784
128.4766
127.3201
127.2911
127.2692
124.2946
24
139 138 137 136 135 134 133 132 131 130 129 128 127 126 125 124 123 122
(ppm)
*** Current Data Parameters ***
NAME : ft197
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 21:10:16
DATE_d : Mar 16 2005
DS : 4
EXP : C13CPD
NS : 3000
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1625.5000000
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4676990 MHz
*** 1D NMR Plot Parameters ***
SR : -20.07 Hz
ppm_cm : 0.82
Hz_cm : 62.10
YVal_cm : 196348.30
NUCLEUS : off
SOLVENT : ?

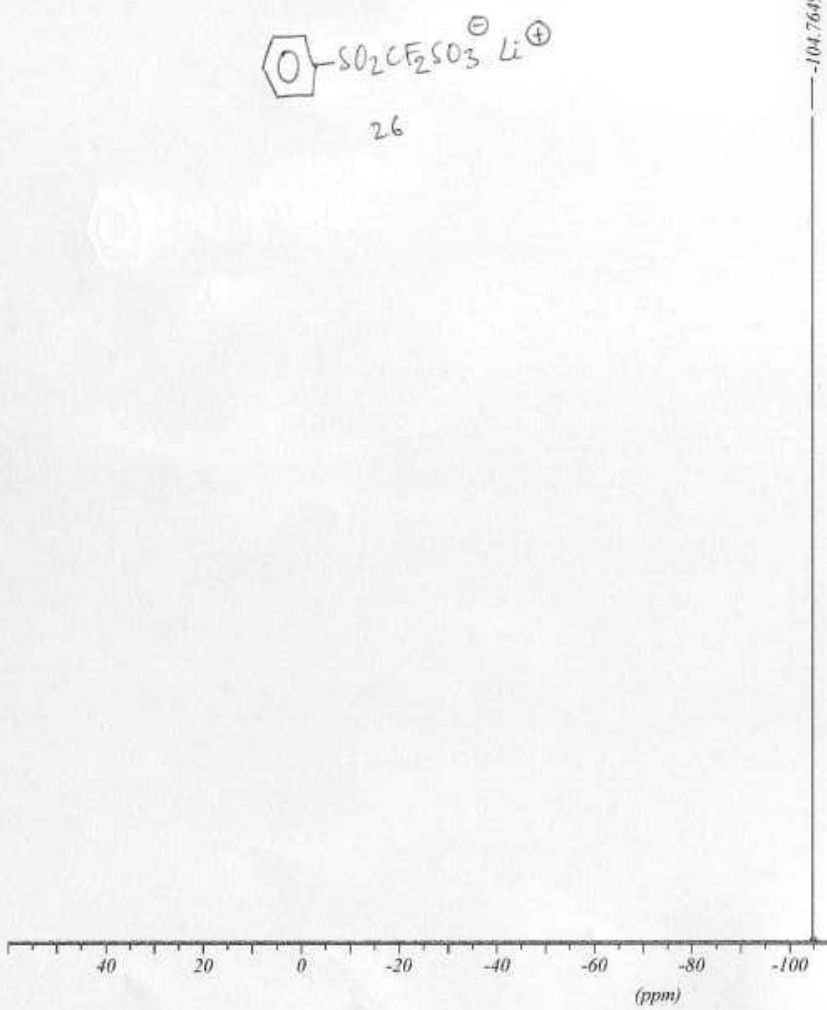

PROTON Acetone n sercaf 2
7.8634
7.8377
7.7253
7.7197
7.7015
7.6996
7.6902
7.6782
7.6726
7.6481
7.6268
2.0575
2.0500
2.0431
SOCF2SO3⊖Li⊕
25
Integral
2.0351
3.0000
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft362
EXPNO : 100
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 14:04:56
DATE_d : Nov 17 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 128.0000000
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.08 Hz
ppm_cm : 0.92
Hz_cm : 275.08
YVal_cm : 5094.46
NUCLEUS : off
SOLVENT : Acetone


F19_30
25
-105.5409
-106.2721
-113.4466
-114.1738
-124.8867
-125.0817
-125.1548
-125.3417
Integral
20.357
26.600
26.662
31.008
1.8793
2.9131
0.5399
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
-150
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : fi362
EXPNO : 3
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 00:38:15
DATE_d : Nov 07 2005
DS : 2
EXP : PS done
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 574.7060122
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : Acetone
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 6.13
Hz_cm : 1730.02
YVal_cm : 121017968.00
NUCLEUS : off


C13CPD Acetone n sercof 2
136.6296
136.6078
136.5860
136.5714
133.8513
130.7385
129.9894
127.5165
127.5020
127.3658
122.9927
122.8327
118.4616
142
140
138
136
134
132
130
128
126
124
122
120
118
116
114
(ppm)
25
*** Current Data Parameters ***
NAME : ft362
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 17:25:19
DATE_d : Nov 17 2005
DS : 4
NS : 3100
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1290.1999512
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4676930 MHz
*** 1D NMR Plot Parameters ***
SR : -25.56 Hz
ppm_cm : 1.37
Hz_cm : 103.46
Wid_cm : 50943.98
NUCLEUS : off
SOLVENT : ?


PROTON
8.0398
8.0379
8.0134
8.0096
7.8546
7.8502
7.8458
7.8320
7.8251
7.8188
7.8044
7.8006
7.7962
7.7027
7.6977
7.6801
7.6764
7.6569
7.6519
7.6494
3.2388
3.2175
3.2043
SO2CF2SO3Li
26
acetone
Integral
2.0000
1.0417
2.0731
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
(ppm)
*** Current Data Parameters ***
NAME : ft349
EXPNO : 1
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 02:56:08
DATE_d : Oct 18 2005
DS : 0
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.08 Hz
ppm_cm : 0.92
Hz_cm : 275.08
Wal_cm : 35776496.00
NUCLEUS : off
SOLVENT : Acetone

F19_30



*** Current Data Parameters ***

NAME	:	fi349
EXPNO	:	2
PROCNO	:	1

*** Acquisition Parameters ***

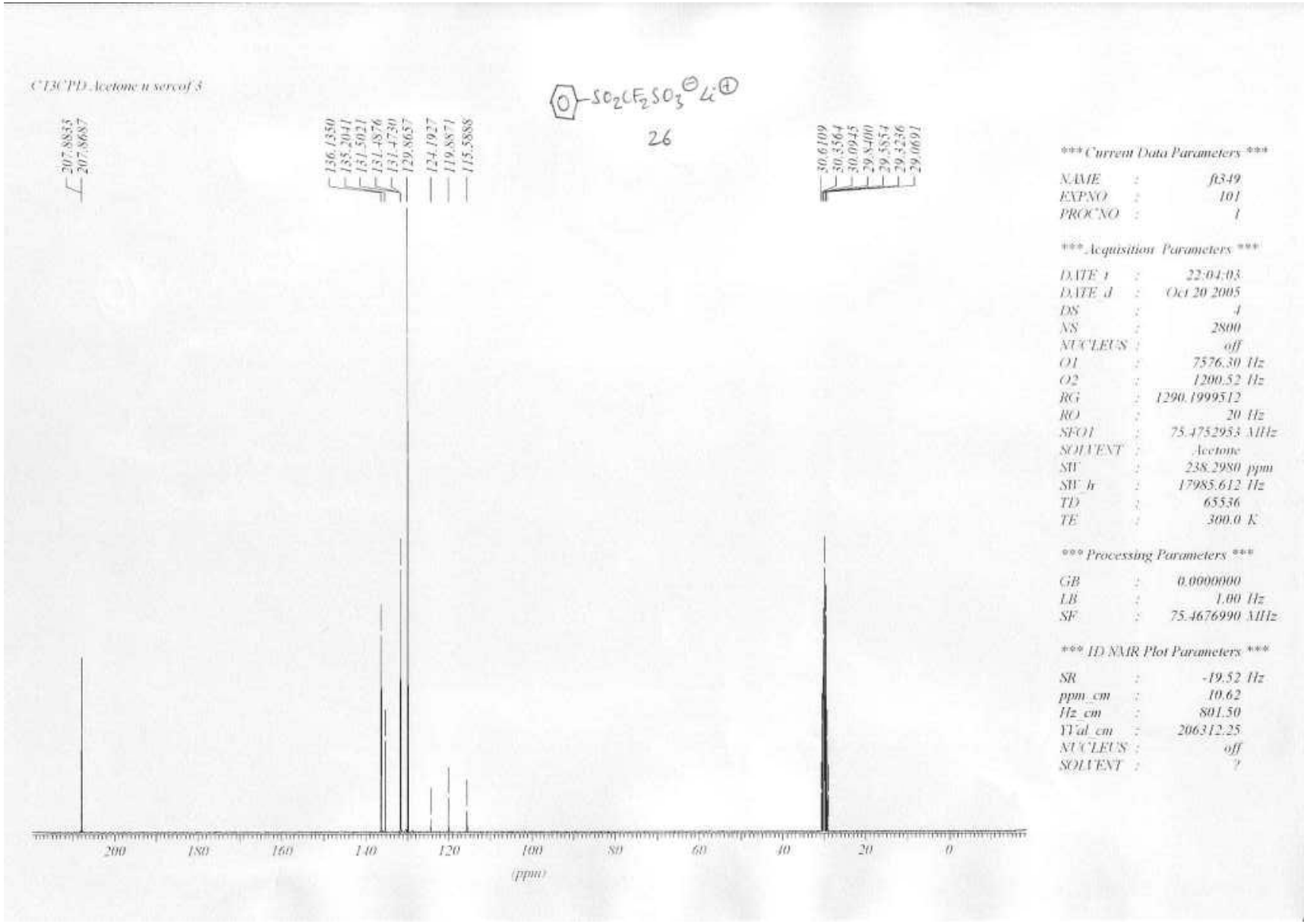
DATE_t	:	02:57:59
DATE_d	:	Oct 18 2005
DS	:	2
EXP	:	PS done
NS	:	8
NUCLEUS	:	off
O1	:	-20615.53 Hz
O2	:	0.00 Hz
RG	:	645.0999756
RO	:	20 Hz
SFO1	:	282.3838655 MHz
SOLVENT	:	Acetone
SW	:	266.2616 ppm
SW_h	:	75187.970 Hz
TD	:	131072
TE	:	300.0 K

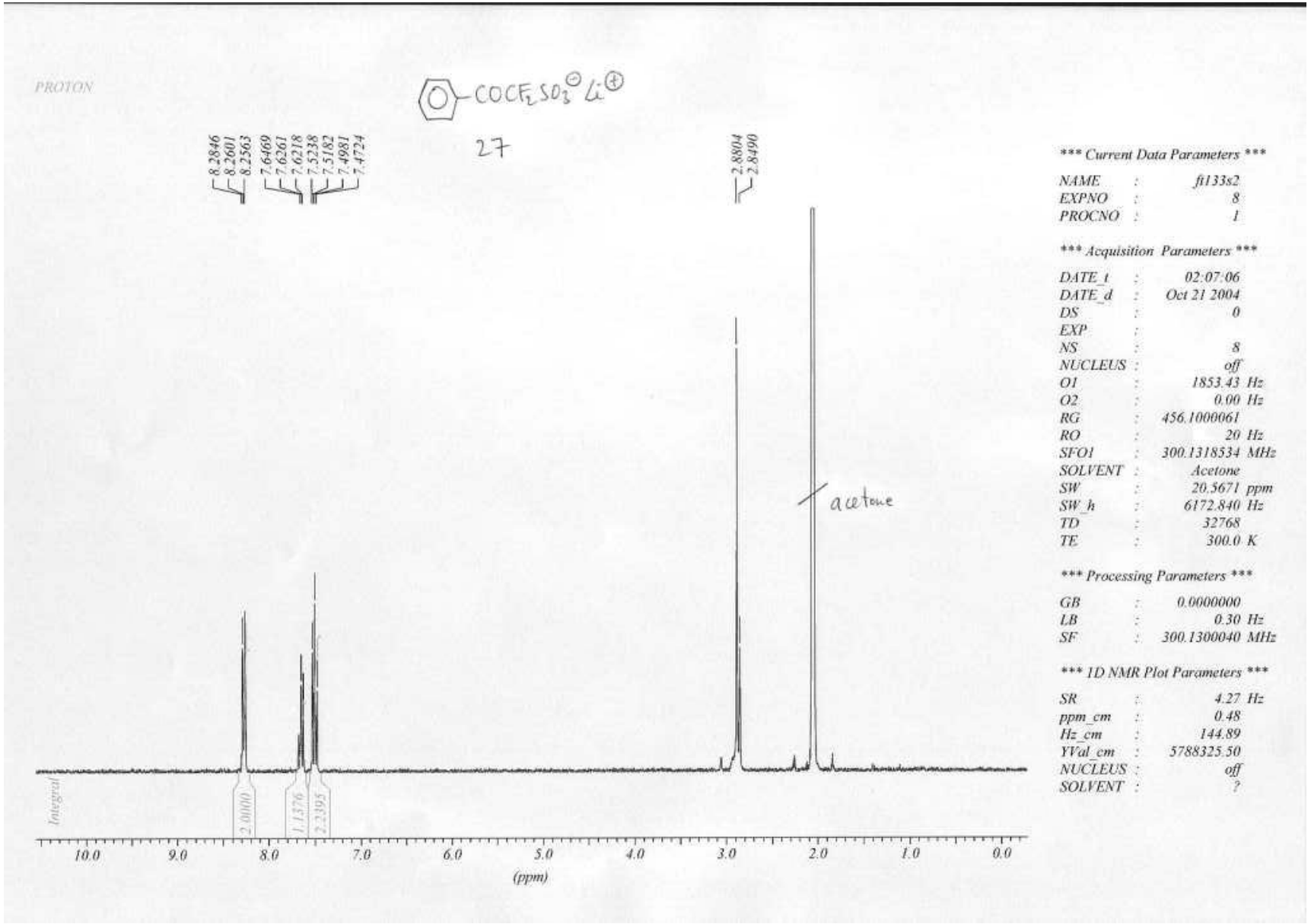
*** Processing Parameters ***

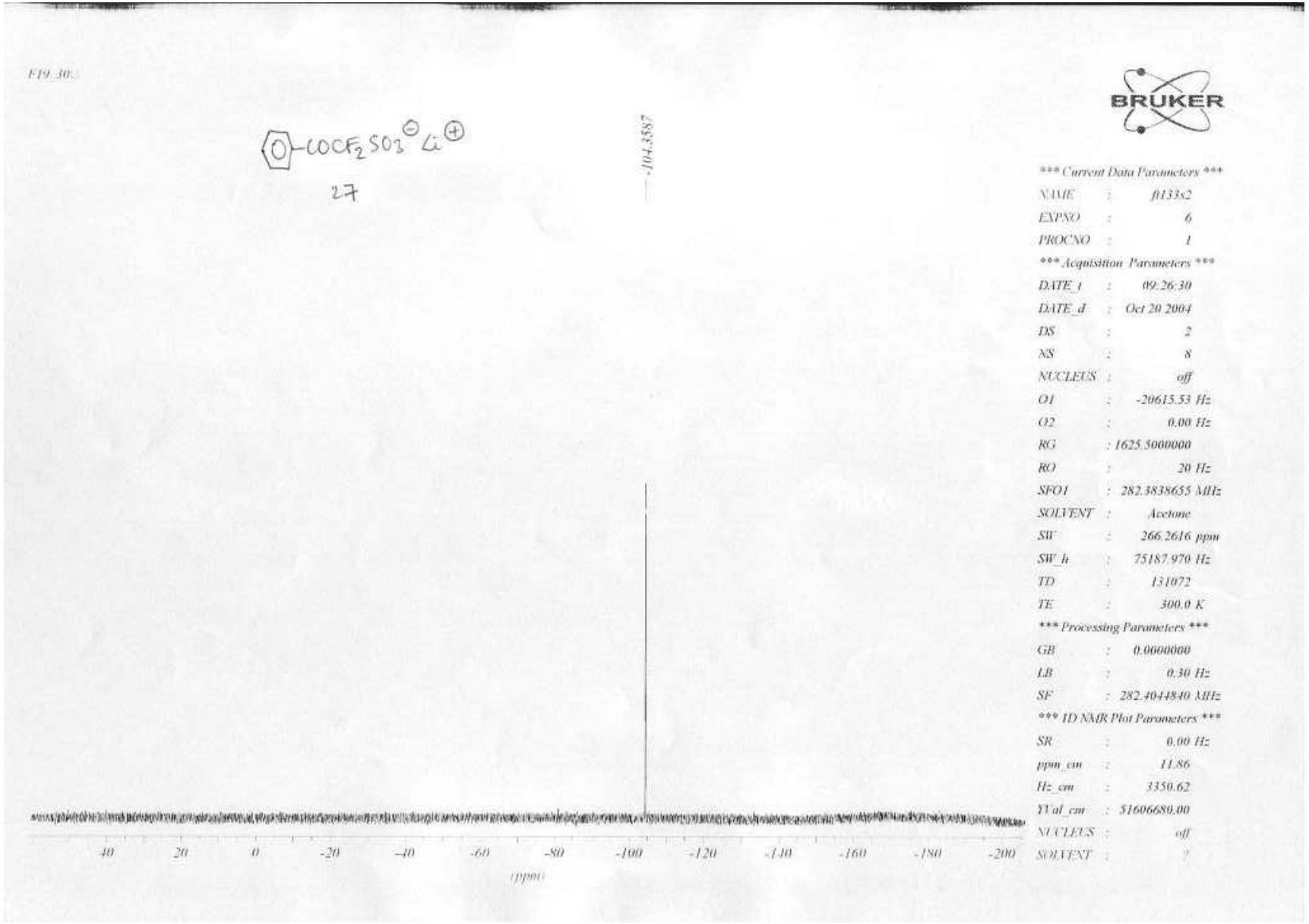
GB	:	0.0000000
LB	:	0.30 Hz
SF	:	282.4044840 MHz

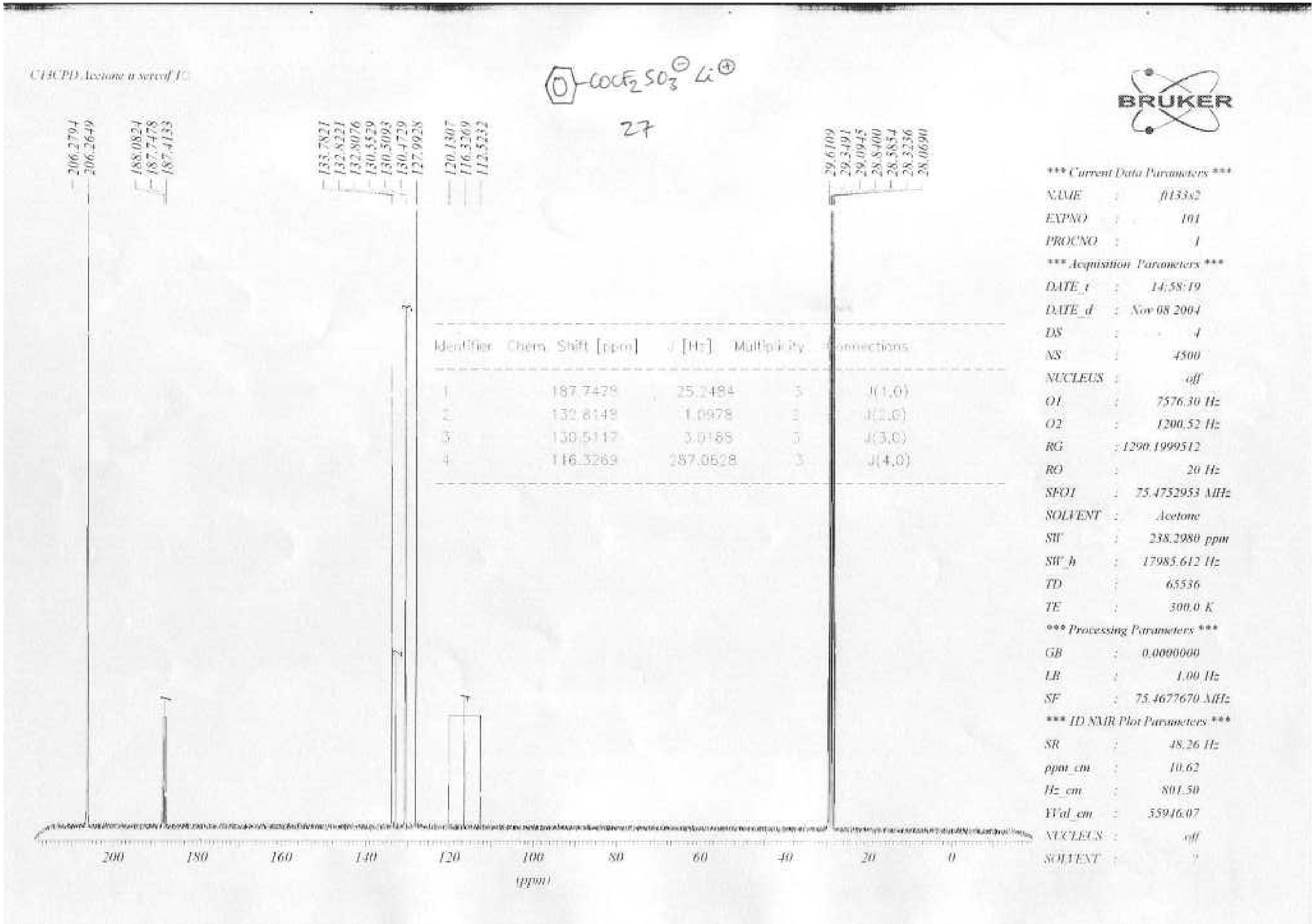
*** 1D NMR Plot Parameters ***

SR	:	0.00 Hz
ppm_cm	:	11.86
Hz_cm	:	3350.62
YVal_cm	:	28309930.00
NUCLEUS	:	off
SOLVENT	:	?


C13CPD Acetone u sercof 3
26
207.8835
207.8687
136.1350
135.2041
131.5021
131.4876
131.4730
129.8657
124.1927
119.8871
115.5888
30.6109
30.3564
30.0945
29.8400
29.5554
29.3236
29.0691
200
180
160
140
120
100
80
60
40
20
0
(ppm)
*** Current Data Parameters ***
NAME : ft349
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 22:04:03
DATE_d : Oct 20 2005
DS : 4
NS : 2800
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1290.1999512
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4676990 MHz
*** 1D NMR Plot Parameters ***
SR : -19.52 Hz
ppm_cm : 10.62
Hz_cm : 801.50
YVal_cm : 206312.25
NUCLEUS : off
SOLVENT : ?


PROTON
27
8.2846
8.2601
8.2563
7.6469
7.6261
7.6218
7.5238
7.5182
7.4981
7.4724
2.8804
2.8490
acetone
Integral
2.0000
1.1376
2.2395
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
(ppm)
*** Current Data Parameters ***
NAME : ft133s2
EXPNO : 8
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 02:07:06
DATE_d : Oct 21 2004
DS : 0
EXP :
NS : 8
NUCLEUS : off
O1 : 1853.43 Hz
O2 : 0.00 Hz
RG : 456.1000061
RO : 20 Hz
SFO1 : 300.1318534 MHz
SOLVENT : Acetone
SW : 20.5671 ppm
SW_h : 6172.840 Hz
TD : 32768
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 300.1300040 MHz
*** 1D NMR Plot Parameters ***
SR : 4.27 Hz
ppm_cm : 0.48
Hz_cm : 144.89
YVal_cm : 5788325.50
NUCLEUS : off
SOLVENT : ?


F19_30.
-104.3587
27
BRUKER
*** Current Data Parameters ***
NAME : fl133s2
EXPNO : 6
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 09:26:30
DATE_d : Oct 20 2004
DS : 2
NS : 8
NUCLEUS : off
O1 : -20615.53 Hz
O2 : 0.00 Hz
RG : 1625.5000000
RO : 20 Hz
SFO1 : 282.3838655 MHz
SOLVENT : Acetone
SW : 266.2616 ppm
SW_h : 75187.970 Hz
TD : 131072
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 0.30 Hz
SF : 282.4044840 MHz
*** 1D NMR Plot Parameters ***
SR : 0.00 Hz
ppm_cm : 11.86
Hz_cm : 3350.62
YVal_cm : 51606680.00
NUCLEUS : off
SOLVENT :
40 20 0 -20 -40 -60 -80 -100 -120 -140 -160 -180 -200
(ppm)


C13CPD Acetone u servef 1C
27
206.2794
206.2649
188.0824
187.7478
187.4133
133.7821
132.8221
132.8076
130.5529
130.5093
130.4729
127.9928
120.1307
116.3269
112.5232
29.6109
29.3491
29.0945
28.8400
28.5854
28.3236
28.0690
Identifier Chem. Shift [ppm] J [Hz] Multiplicity Connections
1 187.7478 25.2484 3 J(1,0)
2 132.8149 1.0978 3 J(2,0)
3 130.5117 3.0185 3 J(3,0)
4 116.3269 287.0628 3 J(4,0)
200 180 160 140 120 100 80 60 40 20 0
(ppm)
BRUKER
*** Current Data Parameters ***
NAME : f1133s2
EXPNO : 101
PROCNO : 1
*** Acquisition Parameters ***
DATE_t : 14:58:19
DATE_d : Nov 08 2004
DS : 4
NS : 4500
NUCLEUS : off
O1 : 7576.30 Hz
O2 : 1200.52 Hz
RG : 1290.1999512
RO : 20 Hz
SFO1 : 75.4752953 MHz
SOLVENT : Acetone
SW : 238.2980 ppm
SW_h : 17985.612 Hz
TD : 65536
TE : 300.0 K
*** Processing Parameters ***
GB : 0.0000000
LB : 1.00 Hz
SF : 75.4677670 MHz
*** 1D NMR Plot Parameters ***
SR : 48.26 Hz
ppm_cm : 10.62
Hz_cm : 801.50
Wd_cm : 55946.07
NUCLEUS : off
SOLVENT : ?