

# Supporting Information

for

## **Carbonylative Cross-Coupling of *ortho*-Disubstituted Aryl Iodides. Convenient Synthesis of Sterically Hindered Aryl Ketones.**

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## Experimental Procedures:

**General.** Unless otherwise noted, solvents and reagents were used without further purification. Tetrahydrofuran was dried by filtration through two columns of activated, neutral alumina according to the procedure described by Grubbs.<sup>1</sup> Dioxane was distilled from sodium metal and benzophenone prior to use. *N*-methylpyrrolidinone was dried over 4 Å MS before use. Dimethylformamide was dried by filtration through two columns of activated molecular sieves. ZnBr<sub>2</sub> was sublimed under reduced pressure before use and stored in a desiccator. Cs<sub>2</sub>CO<sub>3</sub> powder was purchased from Alfa Aesar (Stock # 12887) and stored in a desiccator. The source of Cs<sub>2</sub>CO<sub>3</sub> (and particle size) may be critical for the success of the reaction. CO<sub>(g)</sub> (99.9%) was obtained from Praxair. All reactions involving air or moisture sensitive reagents or intermediates were performed under an inert atmosphere of nitrogen or argon in glassware that was flame dried.

### Carbonylative Suzuki Cross-Coupling of *ortho*-Disubstituted Aryl Iodides (60 psi, Method A):

The aryl iodide (1.0 mmol), boronic acid (2.0 mmol), PEPPSI-*i*Pr (0.03 mmol) and Cs<sub>2</sub>CO<sub>3</sub> (2.5 mmol) were placed into a 10 ml glass sleeve fitted with a rubber septum. The sleeve was then evacuated and backfilled with CO<sub>(g)</sub> three times. Dioxane (5.0 mL) was added, and the mixture sparged with CO<sub>(g)</sub> for 2 min, whereupon the rubber septum was removed, and the glass sleeve was quickly sealed in a stainless steel pressure reactor. The reactor was evacuated and backfilled with CO<sub>(g)</sub> (3 cycles, 60 psi). The reactor was heated at 140 °C (oil bath) with stirring for 24 h at 60 psi of CO<sub>(g)</sub>. The reaction mixture was filtered through a pad of Celite, eluting with EtOAc. The filtrate was washed with H<sub>2</sub>O (20 mL), brine (20 mL), dried (MgSO<sub>4</sub>), filtered and the organics were concentrated under reduced pressure. The crude residue was purified by flash column chromatography, eluting with the indicated solvent to afford the desired benzophenone.

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(1) Pangborn, A. B.; Giardello, M. A.; Grubbs, R. H.; Rosen, R. K.; Timmers, F. J. *Organometallics* **1996**, *15*, 1518.

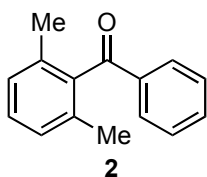
**Carbonylative Suzuki Cross-Coupling of *ortho*-Disubstituted Aryl Iodides (balloon pressure, Method B):**

The aryl iodide (1.0 mmol), boronic acid (2.0 mmol), PEPPSI-*i*Pr (0.03 mmol) and Cs<sub>2</sub>CO<sub>3</sub> (3.0 mmol) were placed into a 25 mL round bottomed flask that was fitted with a reflux condenser. Chlorobenzene (5 mL) was added, and the flask was evacuated and backfilled with CO<sub>(g)</sub> (3 cycles). The mixture was heated to 80 °C (oil bath) with stirring for 24 h under a balloon of CO<sub>(g)</sub>. The reaction mixture was filtered through a pad of Celite, eluting with EtOAc, and the filtrate was washed with H<sub>2</sub>O (20 mL), brine (20 mL), dried (MgSO<sub>4</sub>), filtered and the organics were concentrated under reduced pressure. The crude residue was purified by flash column chromatography, eluting with the indicated solvent to afford the desired benzophenone.

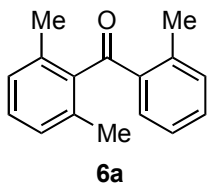
**Carbonylative Negishi Coupling of *ortho*-Disubstituted Aryl Iodides with Alkynyl-zinc Reagents (Method C):**

*n*-BuLi (0.63 mmol, 2.12 M solution in hexanes) was added dropwise to a solution of the alkyne (0.60 mmol) in THF (1.0 mL) at -78 °C. The resultant solution was stirred for 30 min, whereupon a solution of ZnBr<sub>2</sub> (0.63 mmol) in THF (0.65 mL) was added. The cooling bath was removed, and the solution was warmed to ambient temperature. The aryl iodide (0.30 mmol), PEPPSI-*i*Pr (0.009 mmol) and LiBr (0.90 mmol) were placed into a dry, 10 mL glass sleeve. The sleeve was placed into the metal jacket of the stainless steel pressure reactor, fitted with a rubber septum, and placed under nitrogen. NMP (2 mL) was added, and the mixture was cooled to -78 °C, whereupon the previously prepared zinc acetylide solution (2 mL, 0.3 M) was added dropwise. The jacket was removed from the bath, and the pressure reactor was sealed. The reactor was evacuated and backfilled with CO<sub>(g)</sub> (3 cycles, 60 psi). The reactor was heated to 80 °C (oil bath) with stirring for 24 h at 60 psi of CO<sub>(g)</sub>. The reaction mixture was diluted with CH<sub>2</sub>Cl<sub>2</sub> (20 mL) and brine (20 mL). The layers were separated, and the aqueous layer was extracted with CH<sub>2</sub>Cl<sub>2</sub> (2 x 10 mL). The combined organics were dried (MgSO<sub>4</sub>), filtered and were concentrated under reduced pressure. The crude residue was purified

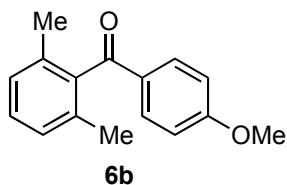
by flash column chromatography, eluting with the indicated solvent to deliver the desired ketone.



**2,6-Dimethylbenzophenone (2).** Method A: 82%. Method B: 95% of **2** as an off-white solid (98:2 hexanes/EtOAc); mp = 64 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.78 (d,  $J = 7.2$  Hz, 2 H), 7.57 (comp, 1 H), 7.43 (t,  $J = 7.9$  Hz, 2 H), 7.22 (t,  $J = 7.0$  Hz, 1 H), 7.06 (d,  $J = 7.0$  Hz, 2 H), 2.10 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  200.5, 139.6, 136.9, 134.1, 133.7, 129.4, 128.8, 128.7, 127.5, 19.4; IR (neat) 3061, 1673  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  211.1123 [ $\text{C}_{15}\text{H}_{15}\text{O}$  ( $M + 1$ ) requires 211.1123], 421, 212, 211.

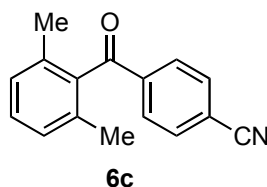


**2,2',6-Trimethylbenzophenone (6a).** Method A: 93%. Method B: 99% of **6a** as a white solid (98:2 hexanes/EtOAc): mp = 68-69 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.42-7.36 (m, 2 H), 7.31 (d,  $J = 7.2$  Hz, 1 H), 7.24-7.20 (m, 1 H), 7.16 (t,  $J = 7.5$  Hz, 1 H), 7.06 (d,  $J = 7.5$  Hz, 2 H), 2.73 (s, 3 H), 2.14 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  202.3, 141.1, 140.1, 136.4, 134.1, 132.3, 132.2, 131.9, 128.6, 127.6, 125.9, 21.8, 19.3; IR (neat) 2922, 1665, 1454  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  225.1280 [ $\text{C}_{16}\text{H}_{17}\text{O}$  ( $M + 1$ ) requires 225.1279], 253, 226, 225.

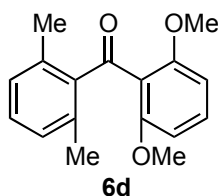


**2,6-Dimethyl-4'-methoxybenzophenone (6b).** Method A: >99%. Method B: 75% of **6b** as a yellow oil that solidified on standing (9:1 hexanes/EtOAc): mp = 37-38 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.75 (comp, 2 H), 7.19 (t,  $J = 7.7$  Hz, 1 H), 7.03 (d,

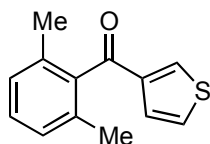
$J = 7.7$  Hz, 2 H), 6.89 (d,  $J = 8.9$  Hz, 2 H), 3.82 (s, 3 H), 2.10 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  198.8, 163.9, 139.8, 133.9, 131.6, 130.0, 128.4, 127.4, 113.9, 55.3, 19.2; IR (neat) 2954, 1665  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  241.1228 [ $\text{C}_{16}\text{H}_{17}\text{O}_2$  ( $M + 1$ ) requires 241.1229], 481, 242, 241.



**4'-Cyano-2,6-dimethylbenzophenone (6c).** Method A: 43%. Method B: 13% of **6c** as an off-white solid (9:1 hexanes/EtOAc): mp = 90-91 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.87 (d,  $J = 8.4$  Hz, 2 H), 7.74 (d,  $J = 8.4$  Hz, 2 H), 7.25 (t,  $J = 7.5$  Hz, 1 H), 7.07 (d,  $J = 7.5$  Hz, 2 H), 2.07 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  198.9, 139.7, 138.2, 134.1 (2C), 132.7 (2C), 129.5 (2C), 129.3, 127.8 (2C), 117.8, 116.8, 19.3 (2C); IR (neat) 2922, 2231, 1676  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  236.1079 [ $\text{C}_{16}\text{H}_{13}\text{NO}$  ( $M + 1$ ) requires 236.1075], 268, 264, 236.

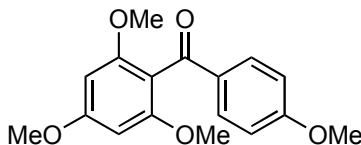


**2,6-Dimethyl-2',6'-dimethoxybenzophenone (6d).** Method A: 62%. Method B: 95% of **6d** as an off-white solid (9:1  $\rightarrow$  0:1 hexanes/EtOAc): mp = 139-140 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.28 (t,  $J = 8.4$  Hz, 1 H), 7.09 (t,  $J = 7.6$  Hz, 1 H), 6.94 (d,  $J = 7.6$  Hz, 2 H), 6.52 (d,  $J = 8.4$  Hz, 2 H), 3.63 (s, 6 H), 2.20 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  199.1, 158.5, 142.2, 135.1, 132.0, 128.4, 127.6, 120.4, 104.4, 55.8, 19.5; IR (neat) 2951, 1666  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  271.1337 [ $\text{C}_{17}\text{H}_{19}\text{O}_3$  ( $M + 1$ ) requires 271.1334], 272, 271, 239, 165.



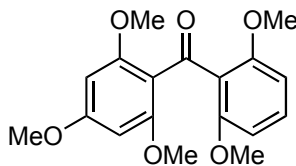
**6e**

**3-(2',6'-Dimethylbenzoyl)thiophene (6e).** Method B: 50% of **6e** as a pale orange/pink solid (9:1 hexanes/EtOAc): mp = 65-66 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.71 (dd, *J* = 2.9, 1.2 Hz, 1 H), 7.53 (dd, *J* = 5.1, 1.2 Hz, 1 H), 7.32 (dd, *J* = 5.1, 2.9 Hz, 1 H), 7.20 (t, *J* = 7.6 Hz, 1 H), 7.04 (d, *J* = 7.6 Hz, 2 H), 2.14 (s, 6 H); <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ 194.1, 143.0, 140.4, 135.1, 133.9, 128.7, 127.5, 127.0, 126.9, 19.3; IR (neat) 2921, 1659 cm<sup>-1</sup>; mass spectrum (CI) *m/z* 217.0692 [C<sub>13</sub>H<sub>12</sub>OS (M + 1) requires 217.0687], 433, 327, 245, 218, 217.



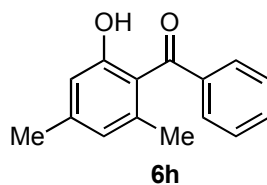
**6f**

**2,4,4',6-Tetramethoxybenzophenone (6f)** Method B: 52% of **6f** as a white solid (9:1 → 4:1 hexanes/EtOAc): mp = 144 °C (EtOH); <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.81-7.77 (comp, 2 H), 6.88-6.84 (comp, 2 H), 6.14 (s, 2 H), 3.82 (s, 3 H), 3.81 (s, 3 H), 3.65 (s, 6 H); <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ 193.6, 163.4, 162.1, 158.4, 131.7, 131.3, 113.4, 111.1, 90.6, 55.7, 55.37, 55.33; IR (neat) 2940, 1661 cm<sup>-1</sup>; mass spectrum (ESI) *m/z* 303.12270 [C<sub>17</sub>H<sub>19</sub>O<sub>5</sub> (M + 1) requires 303.1231], 331, 304, 303.

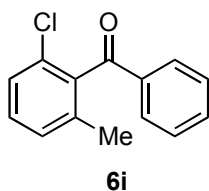


**6g**

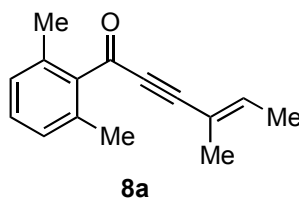
**2,2',4,6,6'-Pentamethoxybenzophenone (6g).** Method B: 33% of **6g** as a tan solid (9:1 → 0:1 hexanes/EtOAc): mp = 142-143 °C; <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) δ 7.18 (t, *J* = 8.3 Hz, 1 H), 6.49 (d, *J* = 8.3 Hz, 2 H), 6.04 (s, 2 H), 3.79 (s, 3 H), 3.67 (s, 6 H), 3.64 (s, 6 H); <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) δ 192.8, 162.6, 160.3, 157.91, 130.1, 122.9, 115.0, 104.4, 91.0, 56.25, 56.28, 55.3; IR (neat) 2939, 1673 cm<sup>-1</sup>; mass spectrum (ESI) *m/z* 333.13327 [C<sub>18</sub>H<sub>21</sub>O<sub>6</sub> (M + 1) requires 333.1338], 361, 334, 333.



**2-Hydroxy-4,6-dimethylbenzophenone (6h).** Method B ( $K_2CO_3$  was used as the base): 51% of **6h** as an off-white solid (9:1 hexanes/EtOAc): mp = 138-139 °C;  $^1H$  NMR (400 MHz,  $CDCl_3$ )  $\delta$  9.41 (s, 1 H), 7.66-7.63 (comp, 2 H), 7.56-7.52 (comp, 1 H), 7.45-7.41 (comp, 2 H), 6.69 (s, 1 H), 6.55 (s, 1 H), 2.30 (s, 3 H), 1.91 (s, 3 H);  $^{13}C$  NMR (100 MHz,  $CDCl_3$ )  $\delta$  201.4, 159.4, 144.6, 140.4, 138.8, 132.6, 128.8, 128.6, 124.0, 120.2, 115.4, 22.6, 21.6; IR (neat) 3352 (br), 2922, 1651  $cm^{-1}$ ; mass spectrum (ESI)  $m/z$  249.08860 [ $C_{15}H_{14}O_2Na$  (M + Na) requires 249.0891], 255, 228, 227.

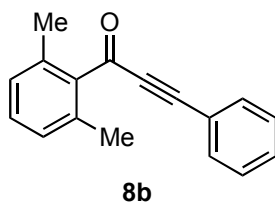


**2-Chloro-6-methylbenzophenone (6i).** Method B: 89% of **6i** as a colorless oil that solidified upon standing (9:1 hexanes/EtOAc): mp = 54-55 °C;  $^1H$  NMR (400 MHz,  $CDCl_3$ )  $\delta$  7.81-7.79 (comp, 2 H), 7.59-7.54 (comp, 1 H), 7.46-7.41 (comp, 2 H), 7.26-7.23 (comp, 2 H), 7.15-7.13 (comp, 1 H), 2.15 (s, 3 H);  $^{13}C$  NMR (100 MHz,  $CDCl_3$ )  $\delta$  196.3, 138.4, 136.8, 136.1, 133.9, 130.2, 129.8, 129.4, 128.8, 128.6, 126.7, 19.2; IR (neat) 3061, 1674  $cm^{-1}$ ; mass spectrum (CI)  $m/z$  231.0579 [ $C_{14}H_{12}ClO$  (M + 1) requires 231.0577], 233, 232, 231.

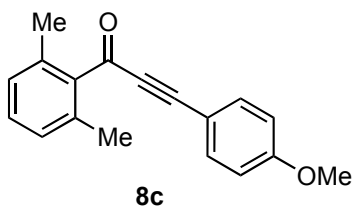


**(E)-1-(2',6'-dimethylphenyl)-4-methylhex-4-en-2-yn-1-one (8a).** Method A: 49% of **8a** as a yellow oil (9:1 hexanes/EtOAc);  $^1H$  NMR (400 MHz,  $CDCl_3$ )  $\delta$  7.16 (t,  $J$  = 7.7 Hz, 1 H), 7.01 (d,  $J$  = 7.7 Hz, 2 H), 6.27 (qq,  $J$  = 7.2, 1.7 Hz, 1 H), 2.35 (s, 6 H), 1.82 (comp, 3 H), 1.75 (comp, 3 H);  $^{13}C$  NMR (100 MHz,  $CDCl_3$ )  $\delta$  184.6, 141.1, 140.5,

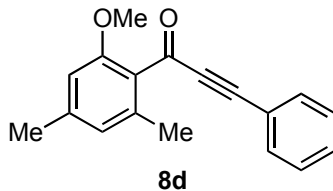
134.6, 129.3, 128.1, 117.1, 97.6, 86.8, 19.6, 16.1, 14.7; IR (neat) 2924, 2180, 1646  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  213.1276 [ $\text{C}_{15}\text{H}_{17}\text{O}$  ( $M + 1$ ) requires 213.1279], 213, 213.



**1-(2',6'-Dimethylphenyl)-3-phenylprop-2-yn-1-one (8b).** Method C: 80% of **8b** as a light yellow oil (9:1 hexanes/EtOAc):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.58-7.55 (comp, 2 H), 7.47-7.42 (comp, 1 H), 7.39-7.34 (comp, 2 H), 7.21 (t,  $J = 7.7$  Hz, 1 H), 7.06 (d,  $J = 7.7$  Hz, 2 H), 2.42 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  184.4, 140.1, 134.8, 133.2, 130.9, 129.6, 128.6, 128.2, 119.9, 93.6, 89.3, 19.6; IR (neat) 2959, 2191, 1645  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  235.1126 [ $\text{C}_{17}\text{H}_{14}\text{O}$  ( $M + 1$ ) requires 235.1123], 470, 469, 236, 235, 133.



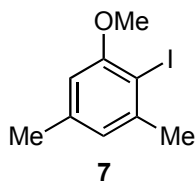
**1-(2',6'-Dimethylphenyl)-3-(4''-methoxyphenyl)prop-2-yn-1-one (8c).** Method C: 75% of **8c** as a yellow oil (9:1 hexanes/EtOAc):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.53-7.50 (comp, 2 H), 7.20 (t,  $J = 7.7$  Hz, 1 H), 7.05 (d,  $J = 7.7$  Hz, 2 H), 6.89-6.85 (comp, 2 H), 3.82 (s, 3 H), 2.40 (s, 6 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  184.5, 161.8, 140.4, 135.3, 134.7, 129.4, 128.1, 114.3, 111.7, 95.0, 89.4, 55.4, 19.6; IR (neat) 2961, 2183, 1643  $\text{cm}^{-1}$ ; mass spectrum (CI)  $m/z$  265.1229 [ $\text{C}_{18}\text{H}_{17}\text{O}_2$  ( $M + 1$ ) requires 265.1229], 529, 266, 265.



**1-(2'-Methoxy-4',6'-dimethylphenyl)-3-phenylprop-2-yn-1-one (8d).** Method C (3 mol %  $\text{PPh}_3$  was added to the reaction mixture and the pressure was increased to 170



psi of CO): 67% of **8d** as a yellow oil (9:1 hexanes/EtOAc):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  7.55-7.53 (comp, 2 H), 7.43-7.39 (comp, 1 H), 7.36-7.32 (comp, 2 H), 6.64 (s, 1 H), 6.62 (s, 1 H), 3.85 (s, 3 H), 2.35 (s, 3 H), 2.33 (s, 3 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  181.0, 158.0, 141.9, 137.5, 133.0, 130.4, 128.5, 126.7, 124.0, 120.6, 110.0, 90.9, 90.1, 55.8, 21.7, 19.5; IR (neat) 2925, 2193, 1644  $\text{cm}^{-1}$ ; mass spectrum (ESI)  $m/z$  265.12231 [ $\text{C}_{18}\text{H}_{17}\text{O}_2$  ( $M + 1$ ) requires 265.1228], 288, 265, 163.

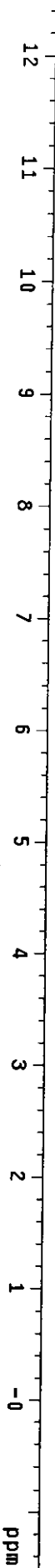
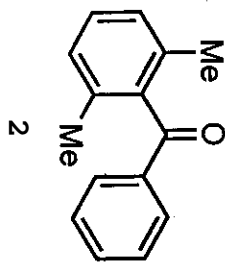


**2-Iodo-1-methoxy-3,5-dimethylbenzene (7).** Sodium hydride (0.32 g, 8.1 mmol) was added in one portion to a solution of 2-iodo-3,5-dimethylphenol (1.0 g, 4.0 mmol) and methyl iodide (1.3 mL, 20.2 mmol) in DMF (20 mL) at 0 °C. After gas evolution had subsided, the cooling bath was removed, and the mixture was stirred at ambient temperature for 30 min. The mixture was recooled to 0 °C, whereupon saturated  $\text{NH}_4\text{Cl}$  (10 mL) was slowly added. The mixture was diluted with EtOAc (50 mL), and the layers were separated. The organic layer was washed with  $\text{H}_2\text{O}$  (4 x 50 mL) and brine (50 mL), dried ( $\text{MgSO}_4$ ), filtered, and was concentrated. The crude residue was purified by flash column chromatography, eluting with hexanes/ethyl acetate (9:1), to afford 0.95 g (90%) of **7** as a white solid: mp = 43-44 °C;  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )  $\delta$  6.72 (s, 1 H), 6.46 (s, 1 H), 3.85 (s, 3 H), 2.43 (s, 3 H), 2.30 (s, 3 H);  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )  $\delta$  157.8, 142.7, 138.7, 123.2, 109.0, 88.8, 56.2, 28.4, 21.1; IR (neat) 2936, 1572, 1457  $\text{cm}^{-1}$ ; mass spectrum (ESI)  $m/z$  262.99273 [ $\text{C}_9\text{H}_{12}\text{IO}$  ( $M + 1$ ) requires 262.9927], 263, 262.

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exptl std1h

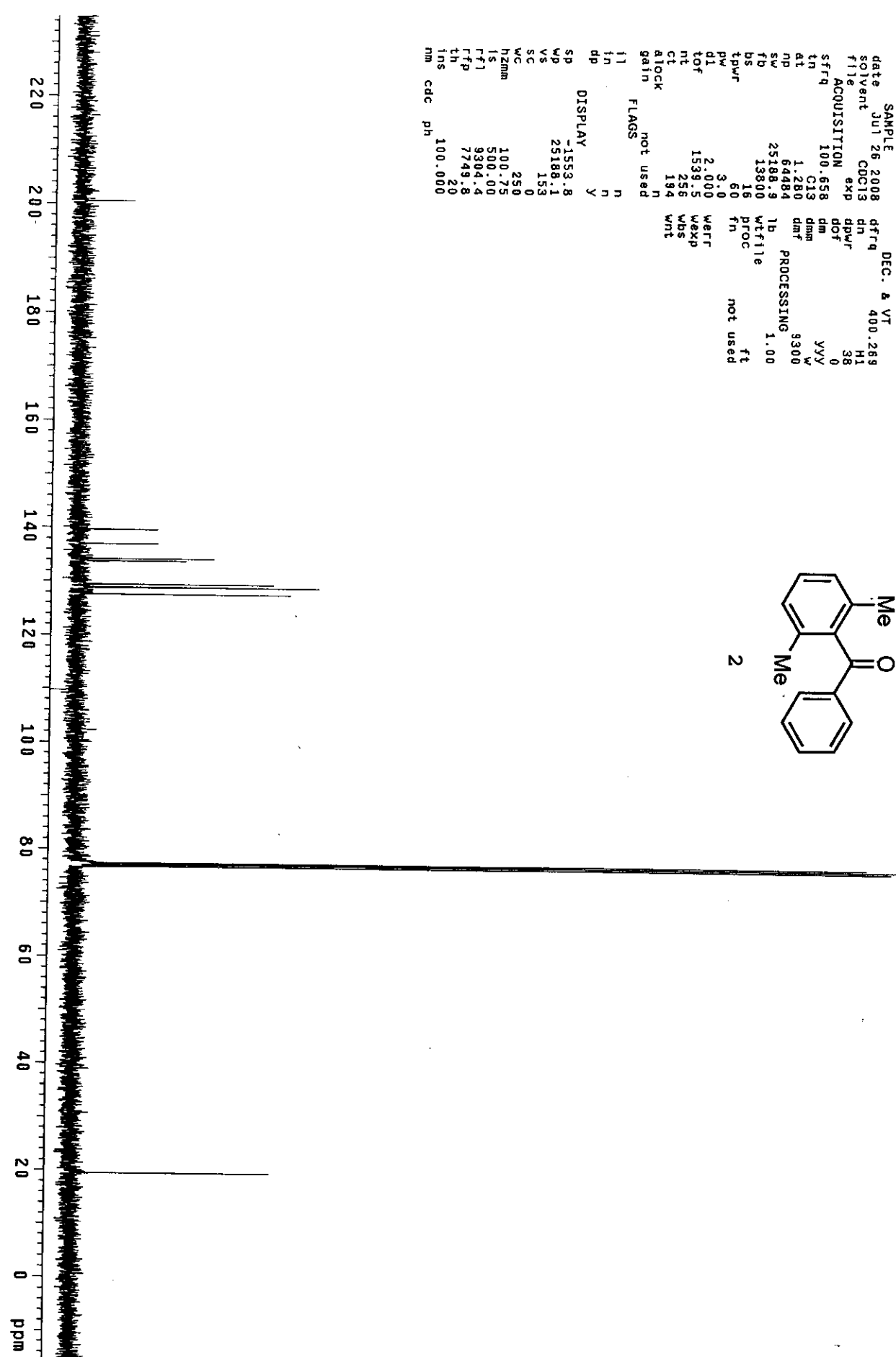
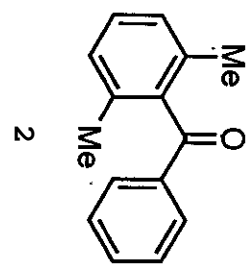
date	JUL 26 2008	DEC. & VT	400.269
solvent	CDCl3	dh	H1
file	exp	dbwr	30
file	ACQUISITION	dot	0
sfreq	400.269	dm	nmn
tn	H1	dm	c
at	2.856	dmf	200
np	32000	PROCESsing	0.10
sw	5602.2	lb	not used
fb	not used	wcfile	ft
bs	1	fn	not used
tpwr	58	fn	not used
pw	2.0	werr	
d1	2.000	wexp	
tof	169.9	wbs	
nt	16	wrt	
ct	16		
alock	n		
gain	not used		
fl	FLAGS		
in	n		
in	n		
dp	y		
sp	DISPLAY		
wp	-620.9		
vs	5601.9		
sc	145		
vc	0		
wc	250		
h2mm	1.94		
ls	228.91		
rfl	3519.2		
rfd	2897.9		
th	20		
ins	2.000		
nm	cdc	ph	



bmos118

expl std13c

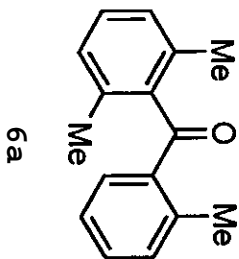
date	JUL 26 2008	DEC. & VT	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	38
ACQUISITION		doF	0
sfrq	100.658	dm	YYY
tn	C13	dmm	W
at	1.280	dmf	9300
np	64484	PROCESSING	1.00
sw	25188.9	lb	ft
fb	13800	wtfile	not used
bs	18	proc	fn
tpwr	60		
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	256	wbs	
ct	184	wnt	
atlock	184		
gain	not used		
FLAGS	not used		
fl	n		
fn	n		
dp	y		
DISPLAY			
SP	-1553.8		
WP	25188.1		
VS	153		
SC	0		
WC	250		
Hzmm	100.75		
IS	500.00		
rfl	9304.4		
rffp	7749.8		
th	20		
ins	100.000		
nm	cdc		
ph			



bmo-4284-1

exptl \_std1h

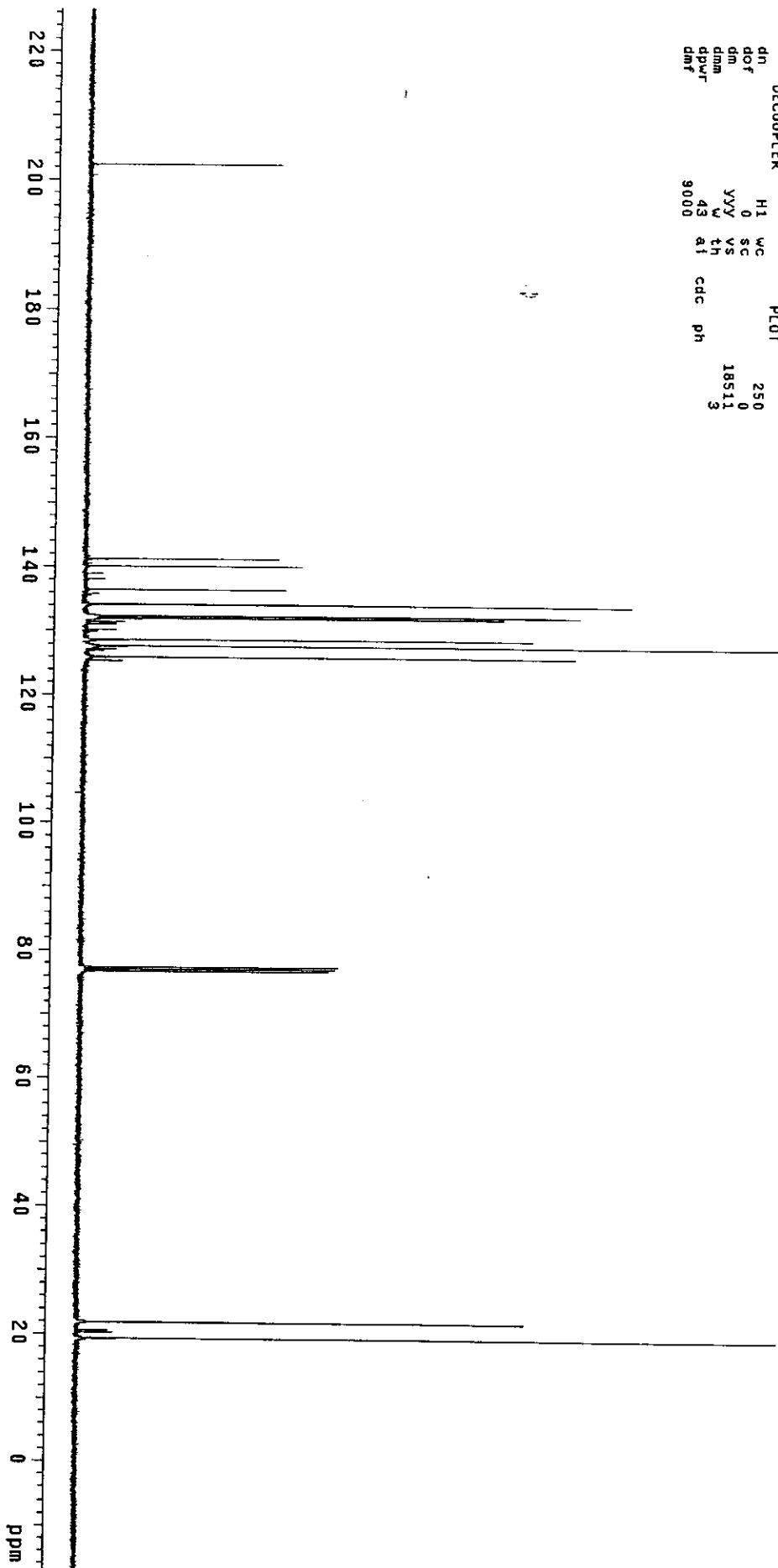
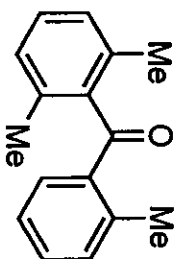
date	Mar 3 2008	DEC. 8 VT	400.269
solvent	CDCl3	dn	H1
file	ACQUISITION	exp	0
sfrq	400.269	doz	30
tn	H1	dmm	nmn
at	2.856	dmf	c
np	32000	PROCESSING	200
sw	5802.2	lb	0.10
fb	not used	wtfile	ft
bs	1	proc	not used
tpwr	58	fn	
pw	2.0	werr	
d1	2.000	wexp	
tof	169.9	wbs	
nt	16	wnt	
ct	16		
atlock	16		
gain	not used		
flags	not used		
f1	n		
f2	n		
dp	y		
DISPLAY			
sp	-621.2		
wp	5601.9		
vs	151		
sc	151		
wc	250		
hzmm	3.74		
fs	308.60		
rfl	621.6		
rffp	0		
th	20		
ins	6.000		
nm	cdc	ph	



bmo4284

expt1 Carbon

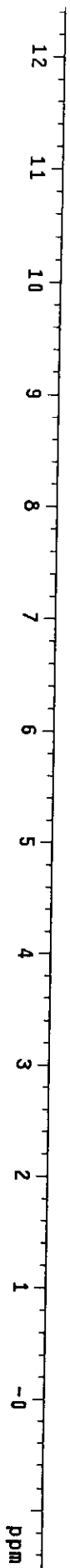
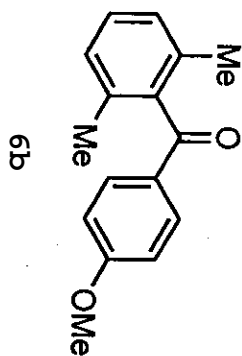
```
SAMPLE 3 2008 temp 27.0
date Mar cdc13 gain 30
solvent cdc13 path 20
file /export/home/~ hst 0.008
space/data/martin_ hst 9.700
bmo4284_scpul_C13_~ pw90 10.000
ACQUISITION f1d a1fa
SW 24509.8 11
at 1.300 1n
np 63750 dp
fb 17000 hs
bs 64 1b
d1 2.000 1b
m1 256 1n
ct TRANSMITTER 256 DISPLAY not used
tn C13 sp -1737.5
sfrq 100.542 wf 24509.1
tof 1042.7 rfp 9479.1
tpwr 54 fp 7740.9
pw 3.233 1p -195.0
DECOUPLER H1 WC PLOT 250
dn 0 SC 0
dof 0 VS 0
dm YYY 1851.1
dmm W th
dpwr 43 at cdc ph 3
dmf 9000
```



bmo-4272--3 F2

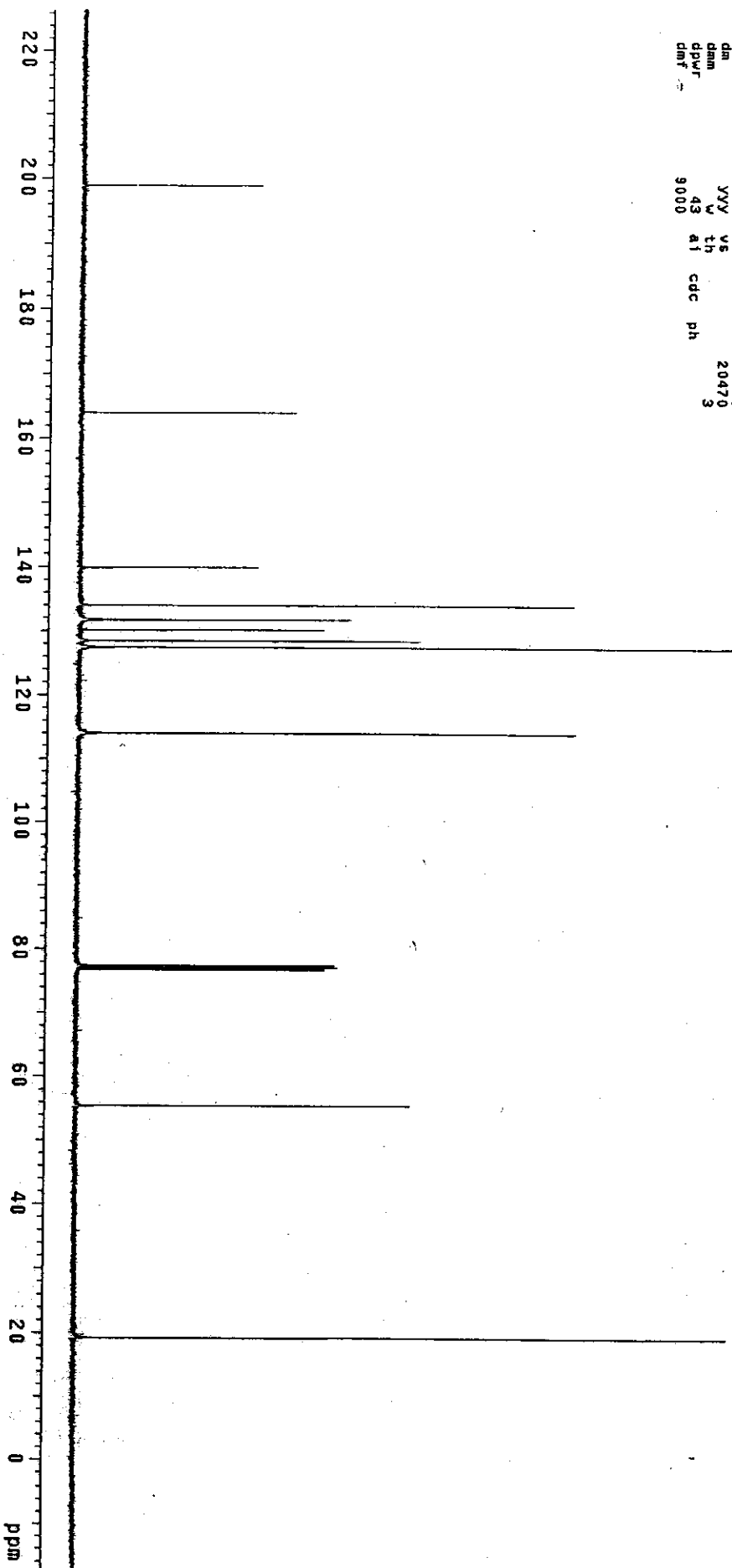
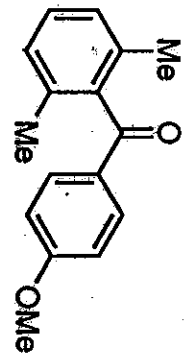
expt std1h

SAMPLE	date	Feb 21 2008	DEC. & VT	400.269
solvent	CDCl3			
file	ACQUISITION	exp	H1	30
sfrq	400.269		dm	0
in	H1		dmm	mmn
at	2.856		dmf	c
np	32000		PROCESSING	200
sw	5602.2		lb	0.10
fb	not used		wtfile	
bs	not used		fn	not used
lpwr	58		PROC	ft
pw	2.0		WERR	
d1	2.000		waxp	
tof	189.9		wbs	
nt	16		wnt	
ct	16			
alock	n			
gain	not used			
flags	not used			
11	n			
in	n			
dp	y			
DISPLAY				
sp	-621.2			
wp	5601.9			
vs	151			
sc	0			
wc	250			
hzmm	2.28			
ls	287.80			
rfl	3519.5			
rtp	2897.9			
th	6			
ins	6.000			
nm	cdc			
ph				



bm04272\_F2  
expt1 Carbon

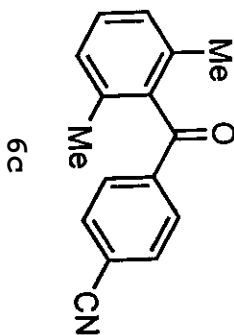
SAMPLE 27.0  
date Feb 21 2008 temp  
solvent cdc13 gain 30  
file /export/home/~ sp in 20  
space/data/martin/~ hst 0.008  
bm04272\_F2\_s2pul1\_C- pw90 9.700  
13.fid a1fa 10.000  
ACQUISITION  
SW 24509.8 11  
at 1.300 in n  
np 63750 dp y  
fb 17000 hs y  
bs 64 lb nm  
d1 2.000 fb 1.00  
nt 256 fn not used  
ct TRANSMITTER 256 DISPLAY  
in C13 SP -1736.0  
stfq 100.542 WP 24509.1  
tof 1042.7 rfp 9477.7  
tpwr 54 rfp 7740.6  
pw 3.233 lp 179.1  
DECOUPLER H1 WC PLOT -134.3  
dn H1 WC 250  
dof 0 SC 0  
dm 0 VS 20470  
dmm YYY V 3  
dpwr 43 aj cdc ph  
dmf 9000



bmo-4278-3 F2

expi std1h

```
SAMPLE DEC. & VT
date Feb 26 2008 dfrq 400.269
solvent CDCl3 dn H1
file ACQUISITION exp H1
ACQUISITION 400.269 dm 30
sfreq 400.269 dm 0
tn H1 dnm mn 0
at 2.856 dnt c 200
np 32000 PROCESSING 0.10
sw 5602.2 lb wifile ft
fb not used 1 proc not used
bs 58 fn
tpwr 2.0 warr
pw 2.000 wexp
di 189.3 wds
tof 16 wnt
nt 16
ct 16
atlock not used
gain not used
flags not used
il n
in n
dp y
DISPLAY
SP -819.2
WP 5801.9
VS 175
SC 0
WC 250
hzm 3.37
ls 227.22
rfl 619.5
rfp 0
th 9
ins 6.000
nm cdc ph
```





bmo4278f2

expi Carbon

date	Feb 26 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	sp1n	20
space/data/martin	hst	hst	0.008
bmo4278f2_s2pul1.C1	pw90	pw90	9.700
3.Fid	alfa	alfa	10.000

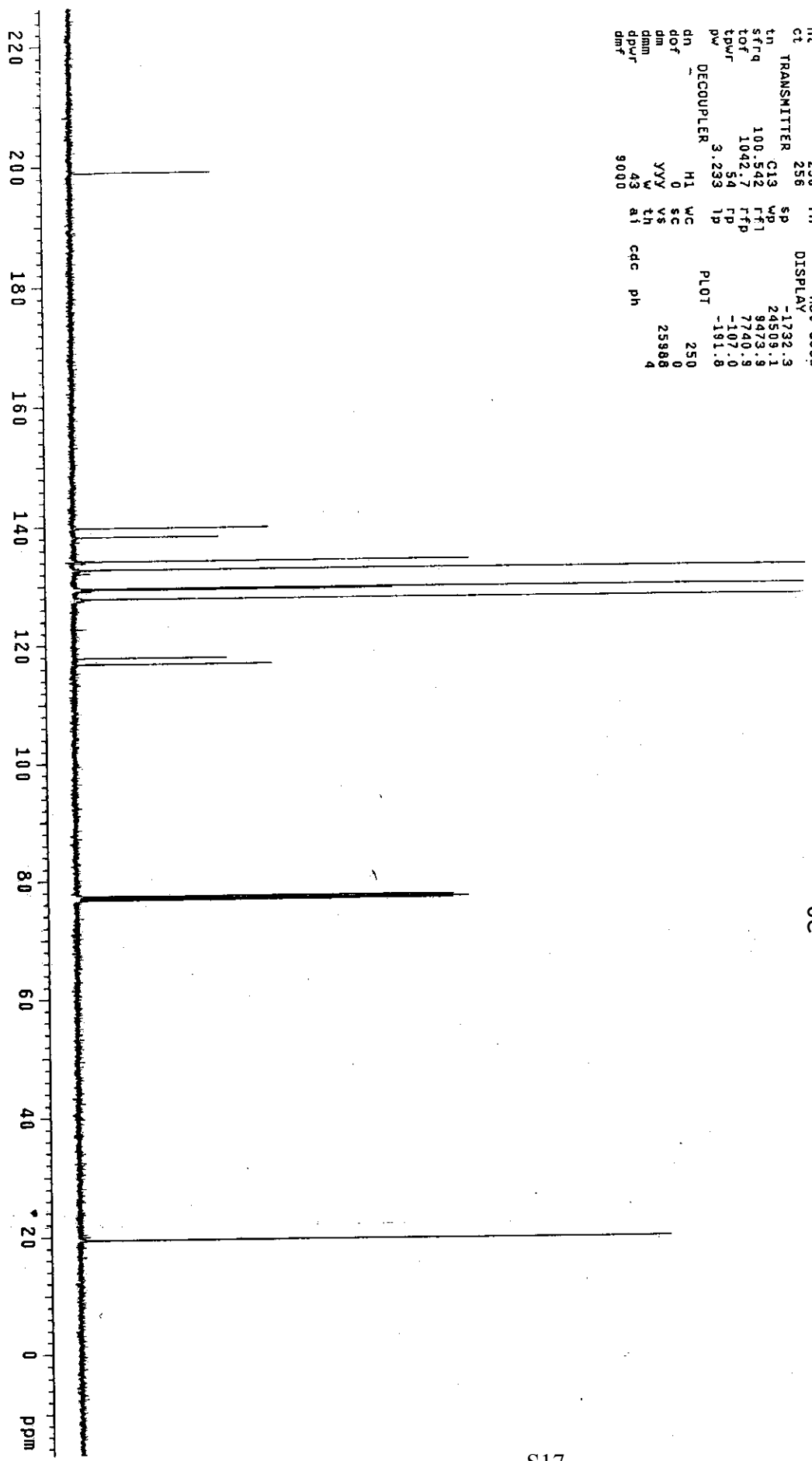
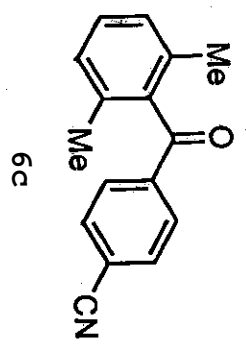
ACQUISITION	24509.8	11	n
at	1300	in	n
np	63750	dp	y
fb	17000	hs	nm
bs	84	lb	1.00
d1	2.000	fn	not used
nt	256	sp	not used
ct	256	display	not used

TRANSMITTER	C13	sp	-1732.3
tn	100.542	wd	24509.1
sfreq	1042.7	rf1	9473.9
lof	34	rfp	7740.9
tpwr	3.233	tp	-107.0
pw		lp	-181.8

DECOUPLER	H1	WC	250
dn	0	sc	0
dof	0	vs	0
dm	YYY	th	25388
dmm	43	at	cdc
dpwr	9000	ph	4



bmo4271\_f2

expi Proton

SAMPLE	Feb 20 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/export/home/~	spin	20
space/data/martin/~	ht	pw90	0.008
bmo4271_f2_s2pu1	H~	atfa	13.800
1.ftd			6.600

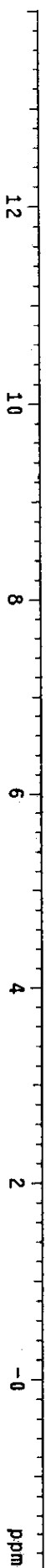
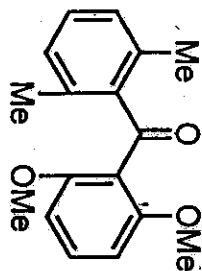
ACQUISITION	6410.3	11	n
at	4.049	in	n
np	51506	dp	y
fb	4000	hs	nr
bs	32	1b	0.10
ss	2.000	fn	55536
d1	16		
nt	16		
ct	16		

TRANSMITTER	H1	SP	-606.1
tn		WD	6410.1
strq	399.807	FT1	806.3
tot	399.5	FP	-27.3
tpwr	61	TP	-27.0
pw	4.600		

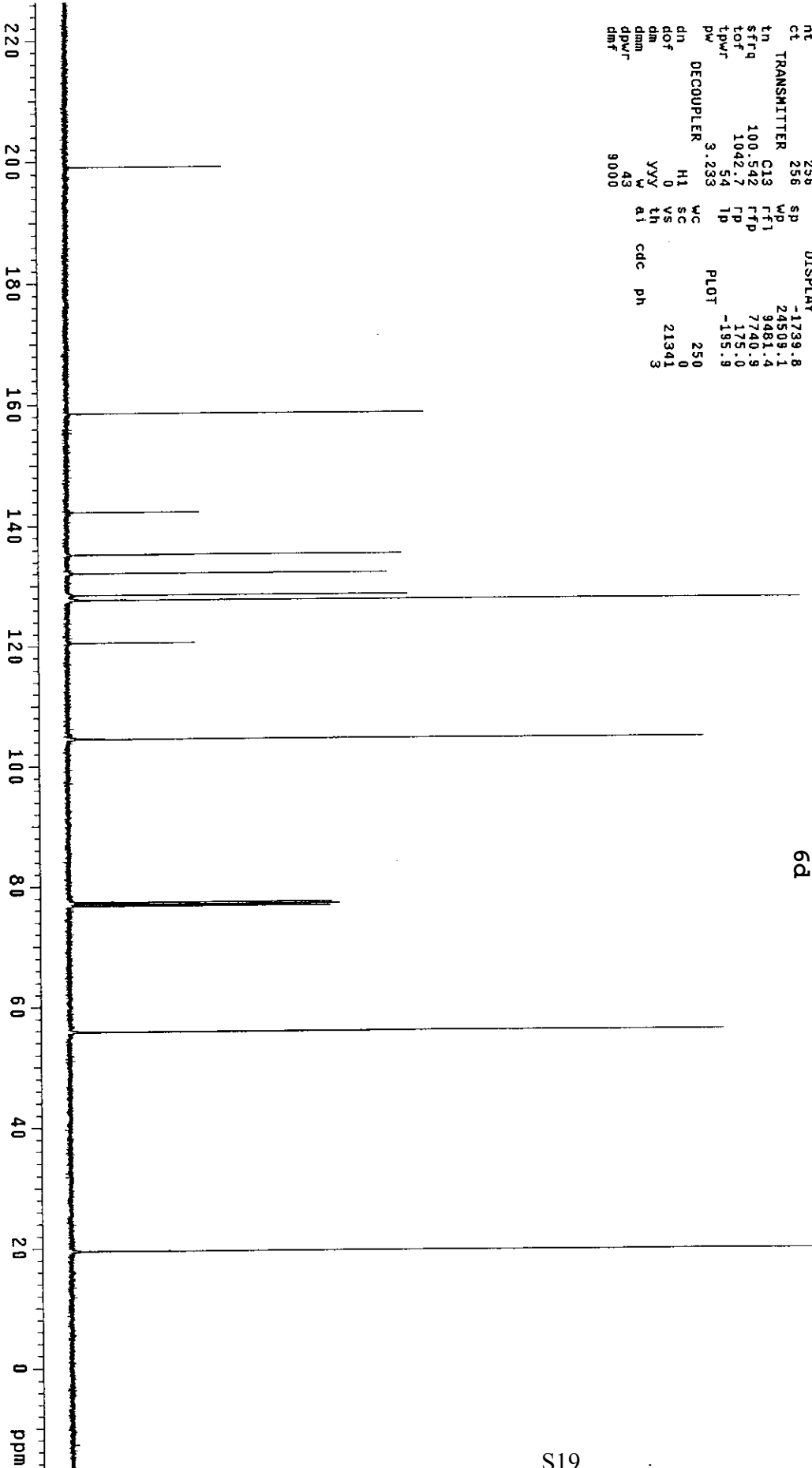
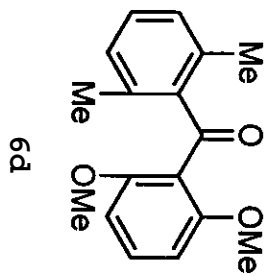
DECOUPLER	C13	WC	250
dn		SC	.0
dof	0	VS	271
dm	nmn	th	50
dmm	C	at	cdc
dpwr	34	ph	
dmt	29412		



bmo4271

expt1 Carbon

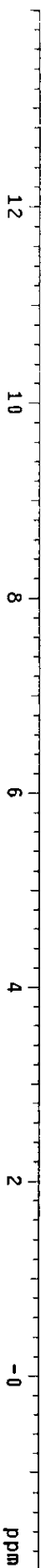
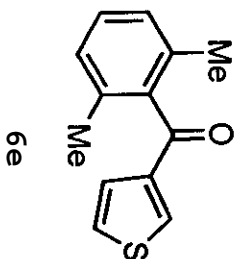
```
SAMPLE          SPECIAL
date    Feb 20 2008    temp    27.0
solvent cdc13          gain    30
file    /cdrom/080303~ spin    20
      _0848/MKR080/autor~ hst    0.008
      _2008_02_20/martin~ pw90    9.700
      _bmo4271_f2_s2pul1~ a1fa    10.000
      02.fid          FLAGS
ACQUISITION     11          n
sw    24509.8         in    n
at    1.300          dp    y
np    63750          hs    nm
fd    17000          hs    nm
bs    64            lb    1.00
d1    2.000         fh    not used
nt    256           sp    DISPLAY
ct    TRANSMITTER 256     -1739.8
      C13          wp    24509.1
      100.542     rff1   9481.4
      1042.7     rfp    7740.9
      54         fp     175.0
      54         tp     -195.9
pw    3.233         tp
      DECOUPLER   H1      WC    250
      H1         SC     0
      0         VS     21341
dm    YYY         th     3
dmm  W           ai    cdc  ph
dpwr 43
dmf  9000
```



bmo5152f3

expt1 Proton

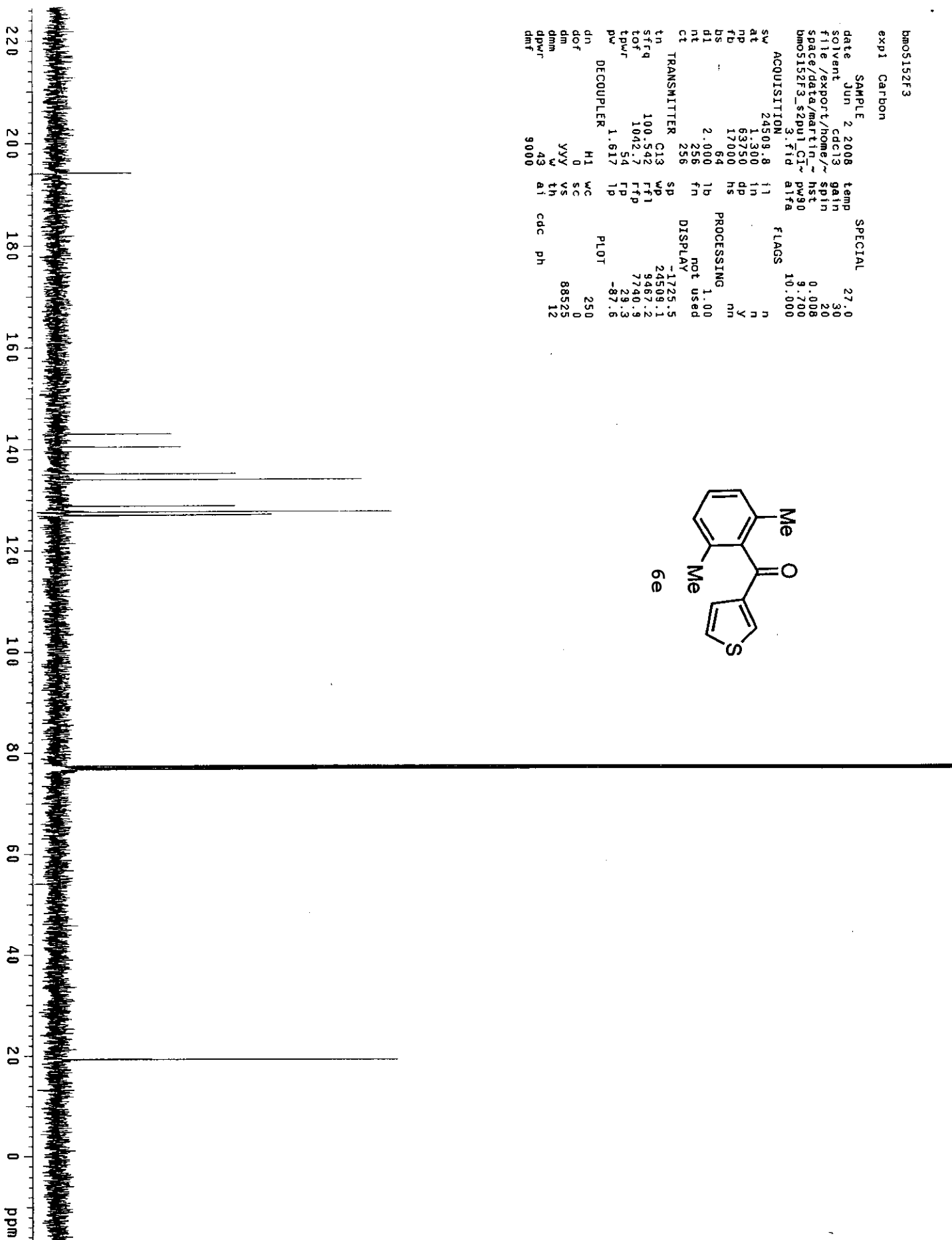
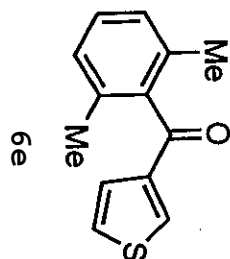
date	Jun 2 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/export/home/~	spin	20
space/data/martin	~	hst	0.008
bmo5152f3_scpul	HI	pw90	13.800
ACQUISITION	.fid	dtfa	6.600
sw	6410.3	11	n
at	4.049	1n	n
np	51906	dp	y
fb	4000	hs	nm
bs	32	2	1b
ss	2	1b	fn
dl	2.000	fn	65536
nt	16	16	SP
ct	16	16	WD
TRANSMITTER	H1	rfl	6410.1
sfreq	399.807	rffp	3706.7
tof	399.5	fp	2894.6
tpwr	61	1p	148.2
pw	2.300	1p	-21.5
DECOUPLER	C13	wc	250
dn	0	vs	0
nof	0	th	53
dm	nm	at	13
dmm	nm	at	13
dpwr	34	at	13
dmf	29412	at	13



bm05152f3

expt Carbon

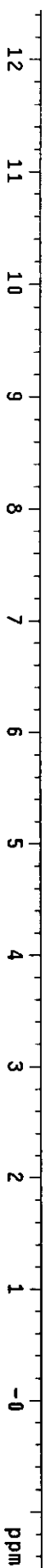
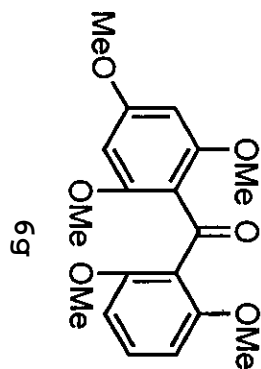
```
SAMPLE          SPECIAL
date Jun 2 2008 temp 27.0
solvent cdcl3 gain 30
file /export/home/~ spin 20
space/data/martin/~ hst 0.008
bm05152f3_1s2pu1.ct~ pw90 9.700
3.f1d a1fa 10.000
ACQUISITION          FLAGS
sw 24509.8 i1 n
at 1.300 in n
np 63750 dp y
fb 17000 hs nn
bs 64
dl 2.000 lb
nt 256 fn not used
ct 258 DISPLAY 1.00
TRANSMITTER          DISPLAY
tn C13 sp -1725.5
sfrq 100.542 wp 24509.1
tof 1042.7 rfp 9467.2
tpwr 54 fp 7740.9
pw 1.617 lp -29.3
DECOUPLER H1 WC PLOT -87.6
dn 0 SC 250
dof 0 SC 0
dm YYY VS 88525
dmm W TH 12
dpwr 43 ai cdc ph
dmf 9000
```



bmo\_5178\_4 F3

exp1 std1h

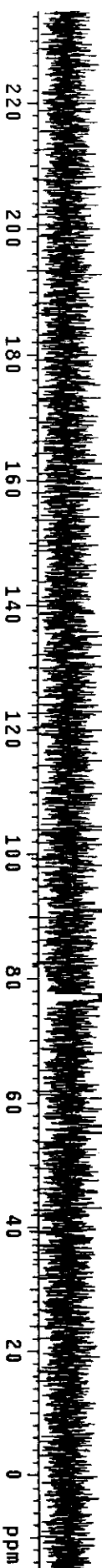
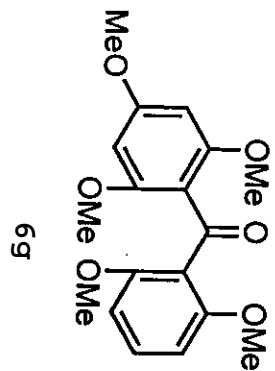
SAMPLE	date	Jun 15 2008	DEC. & VT	dfreq	400.269
	solvent	CDCl3		dn	H1
	file	exp		dpwr	30
ACQUISITION	sfrq	400.269		dof	0
	tn	H1		dmm	nmn
	at	2.856		dmf	c
	np	32000	PROCESSING		200
	sw	5802.2	lb	0.10	
	fb	not used	wtf11e		
	bs	1	fn		ft
	tpwr	58	proc		not used
	pw	2.0			
	d1	2.000	werr		
	tof	169.9	wexp		
	nt	16	wbs		
	ct	16	wnt		
alock		n			
gain	FLAGS	not used			
l1		n			
ln		n			
dp		y			
DISPLAY					
sp		-821.6			
wp		5801.9			
vs		151			
sc		0			
wc		250			
hzmm		1.35			
ls1		274.33			
rs1		3819.9			
rfp		2897.9			
th		20			
ins		3.000			
nm	cdc	ph			



bm05178

expi std13c

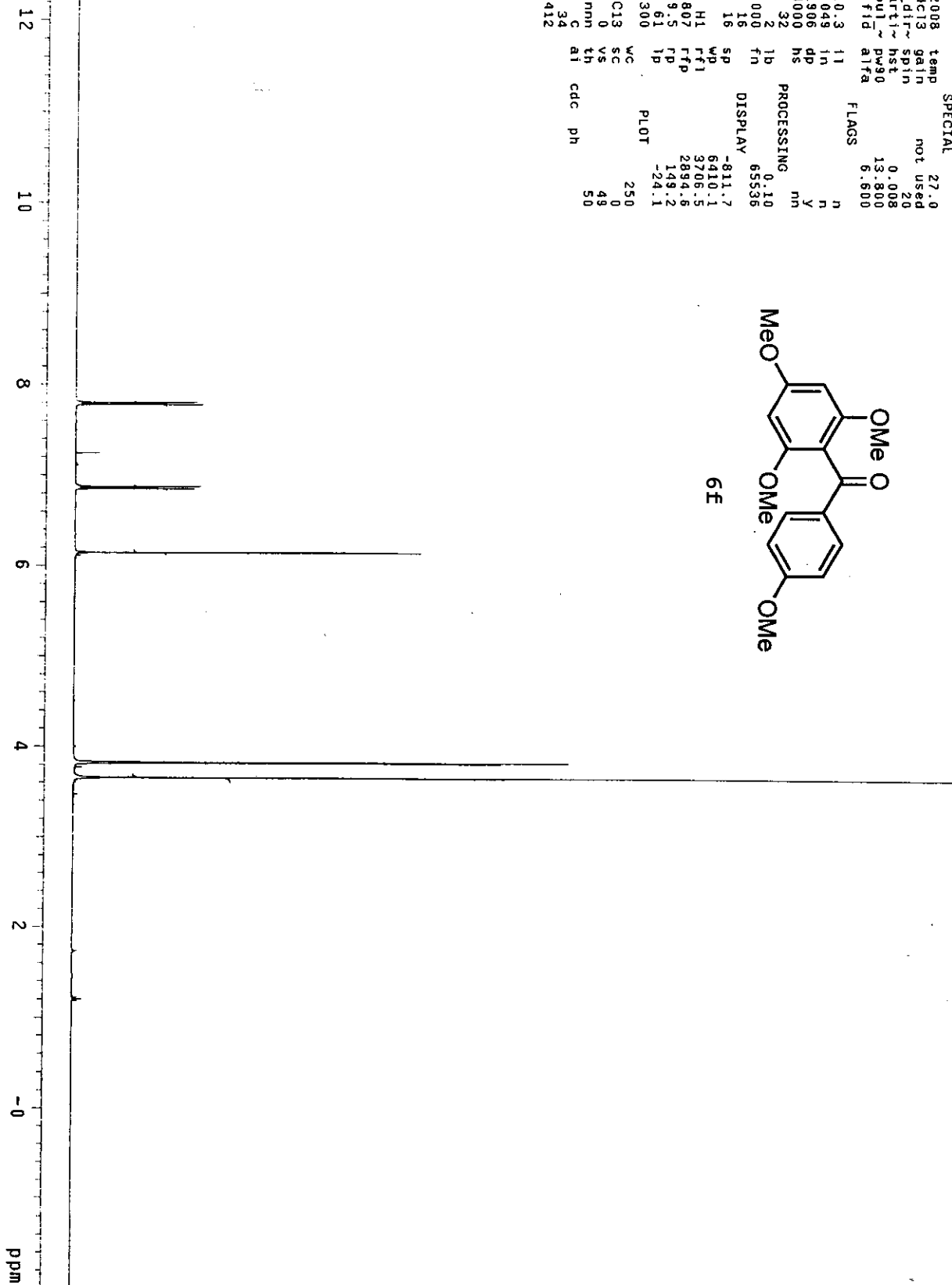
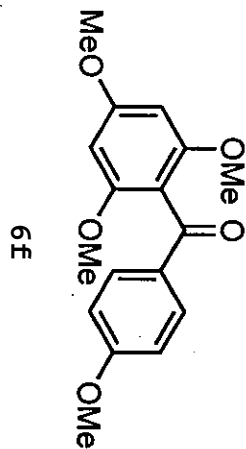
```
SAMPLE      DEC. & VT
date Jun 15 2008      dfrq 400.269
solvent CDC13         dn      H1
file ACQUISITION     exp      38
                             dof      0
sfrq 100.658         dm      VVV
tn C13               dmm      W
at 1.250             dmf      9300
np 64484             PROCESsing 1.00
sw 25188.9           lb      ft
fb 13800             wtfile 1.00
bs 16                proc   not used
tpwr 3.0            fn
pw 2.000            werr
dl 1539.5           wexp
nt 1000             wds
ct 484             wnt
alock not used
gain not used
flags
ii n
in n
dp y
DISPLAY
sp -1553.8
wp 25188.1
vs 483
sc 0
wc 250
hzm 4.66
is 500.00
rfi 9304.4
rfp 7749.8
th 20
nm cdc ph 100.000
```



bmos181

expi Proton

```
SAMPLE          SPECIAL
date Jun 27 2008 temp 27.0
solvent cdc13 gain not used
file /mnt/home_dir/spin 20
s/pace/data/marti~ hst 0.008
n_bmos181_3_s2pul~ pv90 13.800
                  H1.fid alfa 6.600
ACQUISITION
sw 6410.3 11 n
at 4.049 1n n
np 51906 dpd y
fb 4000 hs nn
bs 32 2 1b fn
ss 2.000 1b fn
d1 2.000 1b fn
nt 16 16 DISPLAY
ct 16 sp -811.7
   TRANSMITTER H1 wp 6410.1
   sfreq 399.807 ffl 3708.5
   tot 399.5 ffp 2894.6
   tpwr 61 1p 149.2
   pw 2.300 PLOT -24.1
DECOUPLER WC 250
dn C13 sc 0
dof 0 vs 0
dm nnn th 49
dmm C at cdc ph 50
dpwr 34
dnt 28412
```

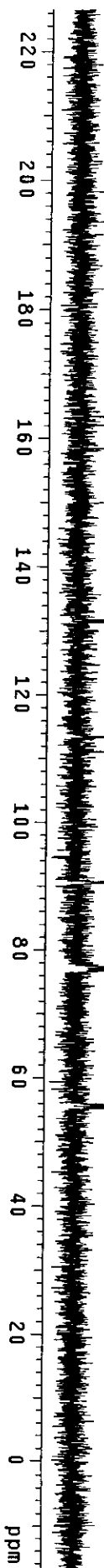
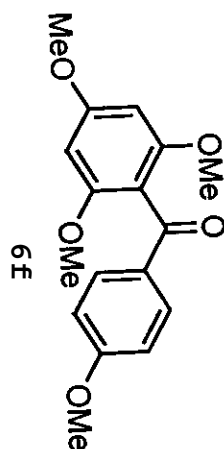




bmo5181

exptl Carbon

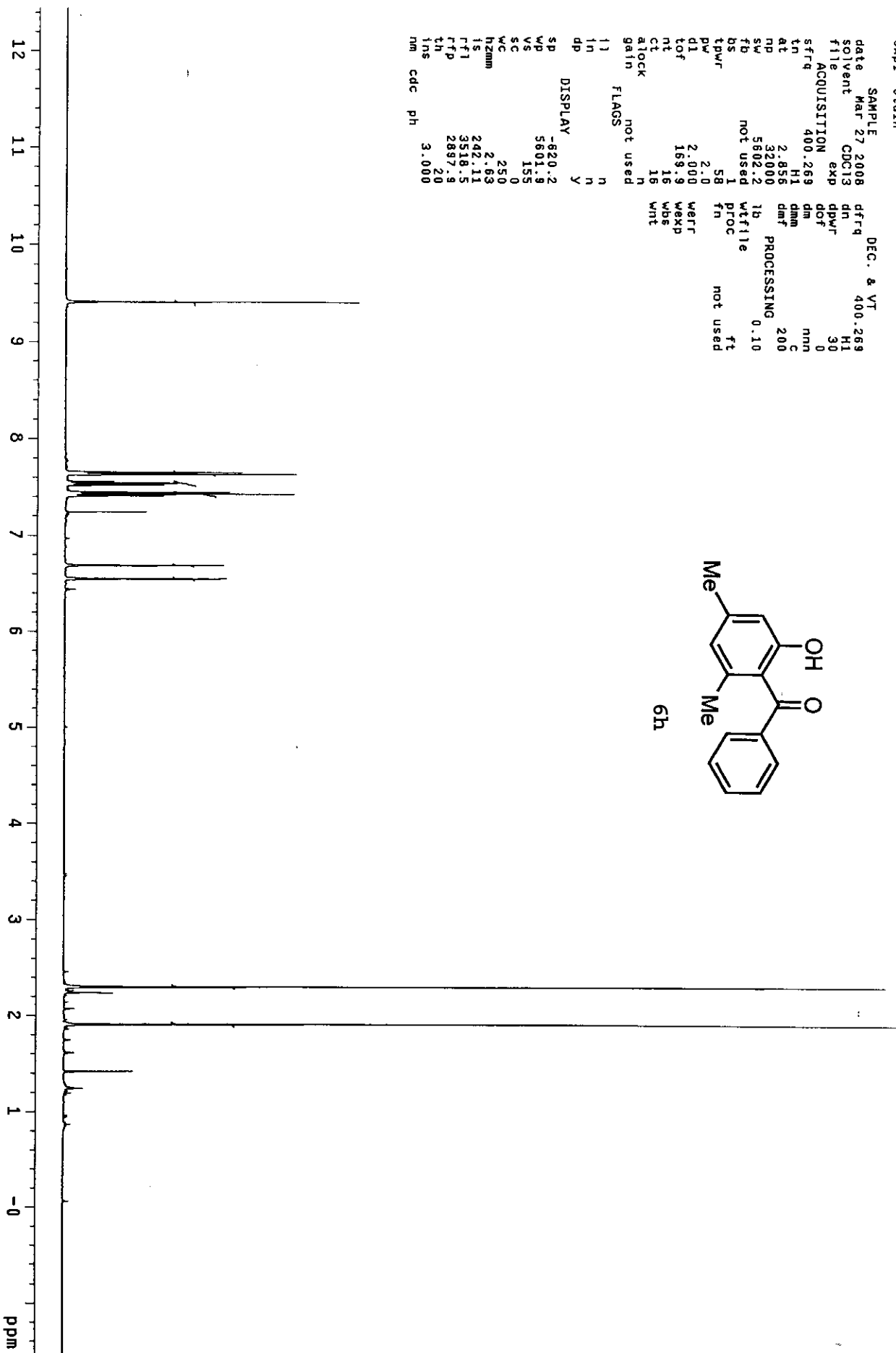
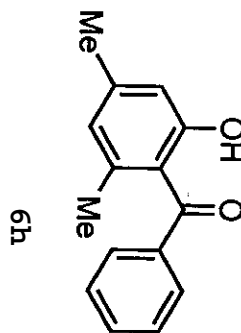
SAMPLE date Jun 27 2008 SPECIAL 27.0  
solvent cdc13 gain 30  
file /cdrom/080702~ sp1n 20  
\_0755/NMRROBD/autor~ hst 0.008  
\_2008.06.27/martir~ pw90 9.700  
\_bmo5181\_3\_s2pu1\_0~ a1fa 10.000  
2.f1d  
ACQUISITION 11  
sw 24509.8 in n  
at 1.300 dp y  
np 63750 hs y  
fb 17000  
bs 84 lb 1.00  
d1 2.000 fn not used  
nt 256  
ct TRANSMITTER 256 DISPLAY -1730.8  
tn C13 WP 24509.1  
sfrq 100.542 rfi 9472.4  
tof 1042.7 tpf 7740.9  
tpwr 54 tp -110.7  
pw 1.617 PLOT -178.7  
DECOUPLER WC 250  
dn H1 SC 0  
dof 0 VS 84772  
dm YYY TH 12  
dmm W al cdc ph  
dpwr 43  
dmf 9000



bmo-5031-4

exp1 std1h

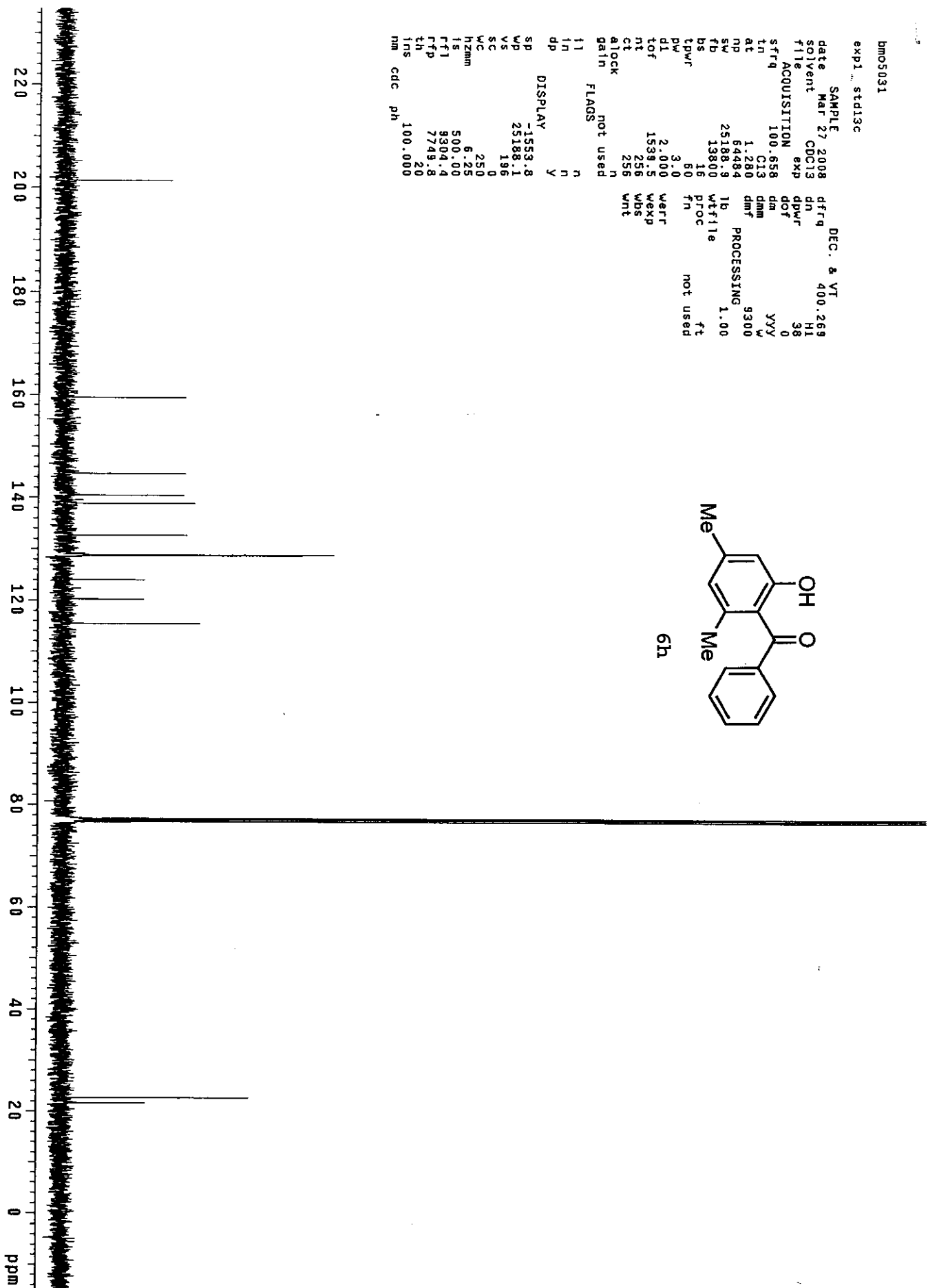
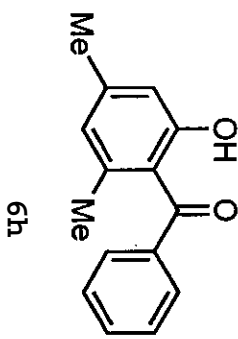
date	Mar 27 2008	DEC. & VT	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nmn
tn	H1	dmm	C
at	2.856	dmf	200
np	32000	PROCESSING	0.10
sw	5602.2	1b	ft
fb	not used	wtfile	not used
bs	not used	fn	
tpwr	58	proc	
pw	2.0	werr	
dl	2.000	wexp	
tof	169.9	wbs	
nt	16	wnt	
ct	16		
atock	16		
gain	not used		
FLAGS			
l1	n		
in	n		
dp	y		
DISPLAY			
sp	-820.2		
wp	5601.6		
vs	155		
sc	0		
WC	250		
hzmnm	2.63		
is	242.11		
rfl	3518.5		
rtp	2897.9		
th	20		
ins	3.000		
nm	cdc		
ph			



bmo5031

exp1\_std13c

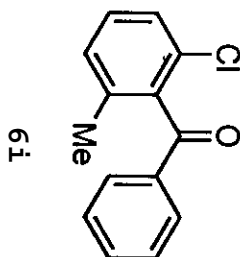
date	Mar 27 2008	DEC. & VT	dfrq	400.269
solvent	CDCl3		dn	H1
file	exp		dpwr	38
ACQUISITION			dof	0
sfrq	100.658		dm	YYY
tn	C13		dmm	W
at	1.280		dmf	9300
np	51484		PROCESsing	1.00
sw	25188.3		lb	wtfile
fb	13800		proc	not used
bs	16		fn	ft
tpwr	3.0		werr	2.000
pw	2.000		wexp	1539.5
dl	1539.5		wds	256
tof	256		wnt	not used
nt	256			
ct	256			
atlock	n			
gain	not used			
fl	FLAGS			
in	n			
dp	y			
DISPLAY				
sp	-1553.8			
wp	25188.1			
vs	196			
sc	0			
wc	250			
hzm	6.25			
fs	500.00			
rfl	9304.4			
rfp	7749.8			
th	20			
ins	100.000			
nm	cdc			
ph				



bmo\_5225\_3

expi stdih

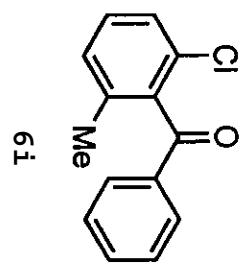
date	Jul 30 2008	DEC. & VT	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nmn
in	H1	dmm	C
at	2.856	dmf	200
np	32000	lb	PROCESSING
sw	5602.2	wf1le	0.10
fb	not used	fn	ft
bs	58	proc	not used
tpwr	2.0	weff	
pw	2.000	wexp	
tof	169.9	wbs	
nt	16	wnt	
ct	16		
atlock	n		
gain	not used		
FLAGS			
ll	n		
ln	n		
dp	y		
DISPLAY			
sp	-623.0		
wp	5601.9		
vs	155		
sc	0		
wc	250		
hzmm	2.83		
ls	183.93		
rfl	3521.2		
rfdp	2897.9		
th	20		
ins	3.000		
nm	cdc	ph	



bmo\_5225\_2

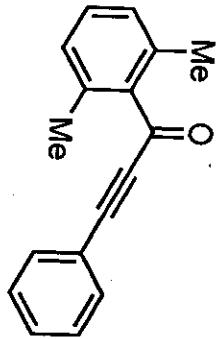
expl std13c

```
SAMPLE DEC. & VT
date Jul 30 2008 dfrq 400.268
solvent CDCl3 dn H1
file ACQUISITION exp dpr 38
ACQUISITION dpr 0
sfrq 100.658 dm YYY
tn C13 dmm W
at 1.280 dmt 9300
np 64484 lb PROCESSING 1.00
sw 25188.9 wf file
fb 13800 16 proc not used
bs tpwr 60 fn
pw 3.0 werr
d1 2.000 wexp
tof 1539.5 wexp
nt 1000 wbs
ct 175 wnt
gain not used
alock n
flags not used
ll n
in n
dp y
DISPLAY
sp -1565.3
wp 25188.1
vs 144
sc 0
wc 250
hzmh 100.75
is 500.00
rfi 9315.9
rfp 7749.8
th 20
ins 100.000
nm cdc ph
```



n1s\_1176\_1  
expt std1h

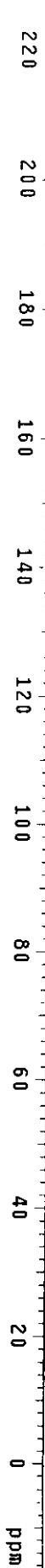
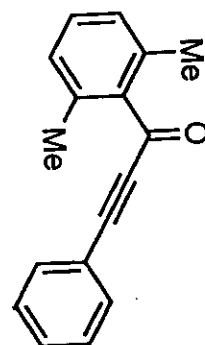
SAMPLE DEC. 6 VT  
date Jun 30 2008 dfrq 400.269  
solvent CDCl3 dn H1  
file exp dpwr H1  
ACQUISITION 30  
sfrq 400.270 dm dof 0  
tn H1 dmf nm C  
at 2.854 dmf 200  
np 36592 lb PROCESSING 0.10  
sw 6410.3 wifile  
fb not used  
bs 1 fn  
tpwr 58  
pw 2.0 werr not used  
d1 2.000 wexp  
tof 784.7 wps  
nt 16 wnt  
ct 16  
alock gain not used  
flags not used  
ll n  
ln n  
dp Y  
DISPLAY  
sp -410.5  
wp 6410.1  
vs 151  
sc 0  
vc 250  
hzmm 1.23  
fs 221.73  
rf1 3308.6  
rfp 2897.9  
th 20  
ins 6.000  
nm cdc ph



nl1176

expt Carbon

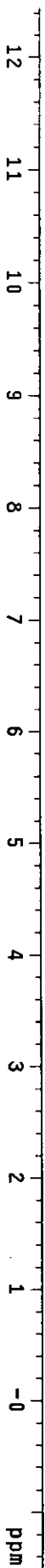
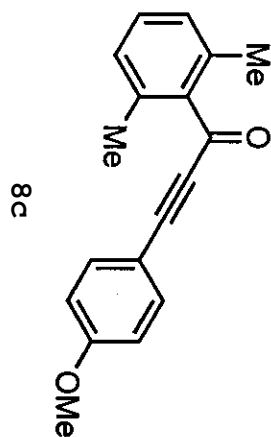
date	Jun 30 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spn	20
space/data/martin/~	hst	0.008	
nl1176_s2pul1_C13~	pw90	9.700	
	fid	alfa	10.000
		FLAGS	
ACQUISITION	24509.8	11	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64		
d1	2.000	tb	fn
nt	256		not used
ct	256		DISPLAY
TRANSMITTER	C13	SP	-1727.0
tn	100.542	WP	24509.1
stfq	1042.7	rf1	9468.7
tof	54	rfp	7740.9
tpwr	1.617	lp	-119.7
pw			-163.3
DECOUPLER	H1	WC	250
dn	0	SC	0
dof	0	VS	64779
dm	YVY	tn	13
dmm	W	at	cdc
dpwr	43	ph	
dmt	9000		



bmo\_5221\_2 F2

expt st11h

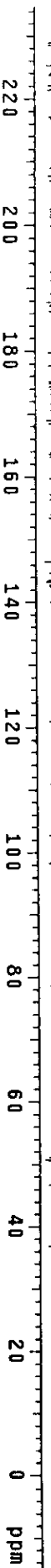
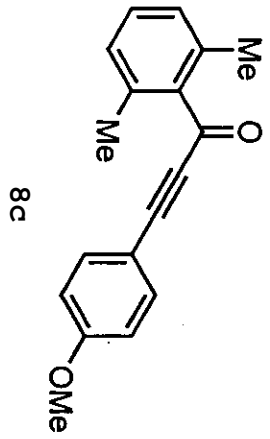
```
SAMPLE DEC. & VT
date JUL 26 2006 dfrq 400.269
solvent CDCl3 dn H1
file ACQUISITION dpwr 30
sfrq 400.269 dof 0
tn H1 dmm nmn
at 2.856 dm C
nd 32000 dmf 200
sw 5602.2 lb PROCESSING 0.10
fd not used wf file ft
bs 1 fn not used
tpwr 58 proc
pw 2.00 werr
dl 2.000 wexp
tof 169.9 wbs
nt 16 wnt
ct 15
atlock gain not used
gain flags not used
11 n
1n n
dp y
DISPLAY
sp -620.2
wd 5601.9
ve 155
sc 250
wc 1.33
hzmm 217.06
fs 3518.5
rfp 2897.9
th 20
lms cdc ph 6.000
```





expi std13c

SAMPLE	date	Jul 26 2008	DEC. & VT	400.268
solvent	CDCl3		H1	38
file	exp		0	
ACQUISITION	exp		0	
sfrq	100.658	dm	yyy	yy
ln	C13	dmm	yy	yy
at	1.280	dmf	9300	
np	64484	PROCESsing	1.00	
sw	25188.9	lb		
fb	13800	wtfile		
bs	16	proc		
tpwr	3.0	fn	not used	fi
pw	2.000	werr		
d1	1539.5	wexp		
tof	1000	wbs		
nt	401	wnt		
ct				
atlock	not used			
gain				
fl	FLAGS			
in	n			
in	n			
dp	y			
DISPLAY				
sp	-1554.6			
wp	25188.1			
vs	232			
sc	0			
wc	250			
hzm	4.66			
is	500.00			
rfl	9305.2			
rfp	7749.8			
th	20			
ins	100.000			
nm	cdc	ph		



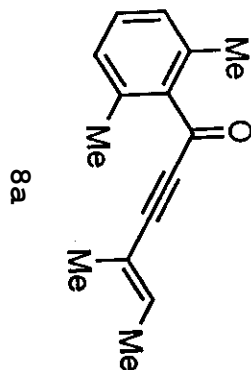
bmo-4256-2 P1

expl stdlh

date	Feb 8 2008	DEC. & VT	400.269
solvent	CDCl3	dn	H1
file	CDCl3	dpwr	30
ACQUISITION	exp	dof	0
sfreq	400.269	dm	nn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	0.10
sw	5602.2	lb	wtfile
fb	not used	proc	ft
bs	1	fn	not used
tpwr	58	werr	
dl	2.0	wexp	
tof	2.000	wbs	
nt	169.9	wnt	
ct	16		
atlock	16		
gain	not used		
flags	not used		
l1	n		
l2	n		
dp	y		

SP	DISPLAY	-620.9
WP		5601.9
VS		155
SC		D
WC		250
h2mm		22.41
fe		254.73
ff1		3515.2
ffp		2897.9
tn		20
lms		1.000
nm	cdc	ph



bmo4256

exh1 Carbon

```
SAMPLE 8 2008 temp 27.0
date Feb 8 2008 cdc13 gain 30
solvent space/home/~ spin not used
file /export/home/~ hst 0.005
space/data/martln_~ hst 9.700
bmo4256_s2bul_C13_~ pw90 10.000
fid alfa
```

ACQUISITION

sw	24509.8	11	n
at	1.300	in	n
np	63750	dp	Y
fb	17000	hs	nm
bs	84		
ds	2.000	lb	1.00
dl	256	fn	not used
nl	256		
ct	256		

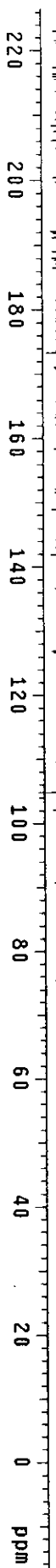
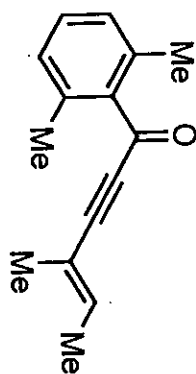
TRANSMITTER

tn	C13	sp	-1723.3
stfg	100.542	wp	24509.1
tof	1042.7	fft	9464.9
tpwr	54	fp	7740.9
		fp	161.0
pw	3.233	lp	-184.5

DECOUPLER

dn	H1	wc	250
dof	0	sc	0
dm	YYY	vs	89988
dmm	w	th	
dpwr	43	at	17
dmf	9000	cdc	ph

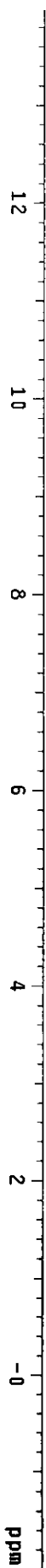
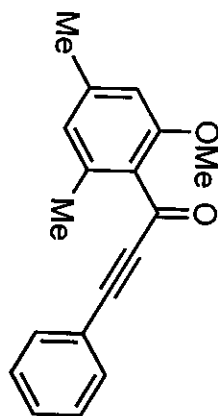
PLOT



bmo5XXXX

expt1 Proton

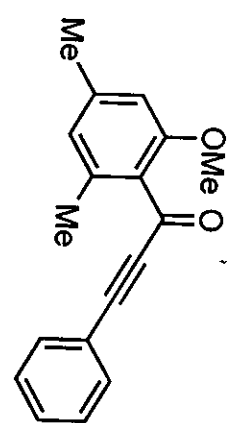
```
SAMPLE          SPECIAL
date Sep 9 2008 temp 27.0
solvent cdcl3 gain not used
file /mnt/home_dir/~ spin 20
s/Space/data/bmo_X~ hst 0.008
XXX_methoxy_s2pu1~ pw90 14.800
                    alfa 6.600
ACQUISITION     FLAGS
SW 6410.3 11 n
at 4.049 1n n
np 51906 dp hs y
fb 4000 32 mh
bs 2 2 1b
ss 2.000 32 fn
d1 2.000 32 DISPLAY -813.7
nt 32 32 65536
ct TRANSMITTER 32 SP 6410.1
tn H1 WP 3708.5
stfq 399.807 rf1 2894.6
tof 389.5 fp 147.8
tpwr 60 1p -19.9
pw 4.933 PLOT 250
DECOUPLER WC 250
dn C13 SC 0
dof 0 VS 254
dm 0 th 40
dmm C at
dpwr 34 cdc ph
dmf 29412
```



bmosXXX

expt1 Carbon

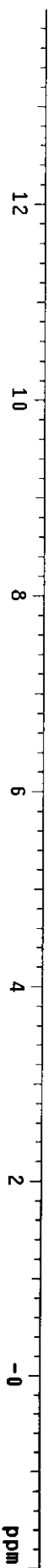
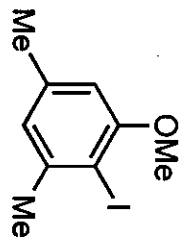
date	Sep 9 2008	temp	27.0
solvent	cdcl3	gain	30
file	/mnt/home-dlr/~	spin	20
s/	space/data/bmo_X~	hst	0.008
XXX_methoxy_s2pul	~	pw90	9.700
C13-fid	alfa	10.000	
ACQUISITION		FLAGS	
SW	24509.8	11	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nm
bs	64		
d1	2.000	1b	not used
nt	256	fn	1.00
ct	256	DISPLAY	
TRANSMITTER	C13	SP	-1729.3
tn	100.542	WP	24509.1
sfreq	1042.7	FT1	9470.9
tof	54	FP	-139.7
tpwr	3.233	1p	-176.2
DECOUPLER	H1	WC	250
dn	0	SC	0
dof	0	VS	32514
din	YY	th	4
dmm	W	at	cdc
dpwr	44	ph	
dmt	10200		



n1s1183

expt1 Proton

SAMPLE	date	Sep 12 2008	temp	27.0
SPECIAL	solvent	cdcl3	gain	not used
	file	/mnt/home/dfi- s/	spin	0.008
	s/	space/data/n1s11- 83s2p1	ns1	14.800
	ACQUISITION	6410.3	alpha	6.600
	sw	6410.3	flags	
	at	4.049	11	n
	np	51906	in	n
	fb	4000	dp	y
	bs	32	hs	nm
	ss	2		
	di	2.000	1b	nm
	di	16	fn	0.10
	ct	16		65538
	TRANSMITTER	H1	sp	-813.5
	ln	399.807	wp	6410.1
	stf	399.5	rf1	3708.3
	tof	60	rfp	2894.6
	lpwr	4.933	1p	-119.9
	PW			-27.5
	DECOUPLER	C13	WC	250
	dn	0	sc	0
	dof	nmn	vs	113
	dm	C	th	40
	dmm	34	ai	cdc
	dpwr	29412	ph	
	dmf			



nlsl183

exptl Carbon

SAMPLE Sep 12 2008 SPECIAL 27.0  
 solvent cdc13 gain 30  
 file /mnt/home\_dir spin 20  
 s/pace/data/nlsl183 hst 0.008  
 83\_s2pul1\_C13.fid pw90 9.700  
 ACQUISITION alfa 10.000  
 24509.8  
 SW 1.300 il n  
 at 63730 in n  
 np 17000 dp y  
 fs 64 hs nm  
 d1 2.000  
 nt 256 lb not used  
 ct 256 fn DISPLAY 1.00  
 TRANSMITTER C13 SP -1742.0  
 strq 100.542 WP 24508.1  
 lof 1042.7 rft 9483.6  
 tpwr 54 rfp 7740.9  
 pw 3.233 fp 138.5  
 DECOUPLER H1 lp -183.3  
 dn dn H1 PLOT 250  
 dof 0 wc 0  
 dm YYY SC 0  
 dmm W VS 16830  
 dpwr 44 tn 3  
 dmf 10200 at cdc ph

