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.[1] 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. $ZnBr_2$ was sublimed under reduced pressure before use and stored in a desiccator. *Cs_2CO_3 powder was purchased from Alfa Aesar (Stock # 12887) and stored in a desiccator. The source of Cs_2CO_3 (and particle size) may be critical for the success of the reaction.* $CO_{(g)}$ (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_2CO_3 (2.5 mmol) were placed into a 10 ml glass sleeve fitted with a rubber septum. The sleeve was then evacuated and backfilled with $CO_{(g)}$ three times. Dioxane (5.0 mL) was added, and the mixture sparged with $CO_{(g)}$ 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 $CO_{(g)}$ (3 cycles, 60 psi). The reactor was heated at 140 °C (oil bath) with stirring for 24 h at 60 psi of $CO_{(g)}$. The reaction mixture was filtered through a pad of Celite, eluting with EtOAc. The filtrate was washed with H_2O (20 mL), brine (20 mL), dried ($MgSO_4$), 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.

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

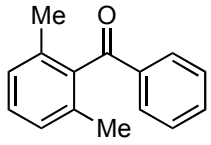
Carbonylative Suzuki Cross-Coupling of *ortho*-Disubstituted Aryl Iodides (balloon pressure, Method B):

The aryl iodide (1.0 mmol), boronic acid (2.0 mmol), PEPPSI-*i*Pr (0.03 mmol) and Cs_2CO_3 (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 $CO_{(g)}$ (3 cycles). The mixture was heated to 80 °C (oil bath) with stirring for 24 h under a balloon of $CO_{(g)}$. The reaction mixture was filtered through a pad of Celite, eluting with EtOAc, and the filtrate was washed with H_2O (20 mL), brine (20 mL), dried ($MgSO_4$), 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):

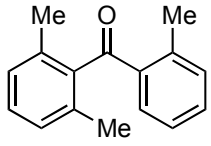
n-BuLi (0.63 mmol, 2.12 M solution in hexanes) was added dropwise to a solution of the alkyne (0.60 mmol) in THF (1.0 mL) at -78 °C. The resultant solution was stirred for 30 min, whereupon a solution of $ZnBr_2$ (0.63 mmol) in THF (0.65 mL) was added. The cooling bath was removed, and the solution was 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 $CO_{(g)}$ (3 cycles, 60 psi). The reactor was heated to 80 °C (oil bath) with stirring for 24 h at 60 psi of $CO_{(g)}$. The reaction mixture was diluted with CH_2Cl_2 (20 mL) and brine (20 mL). The layers were separated, and the aqueous layer was extracted with CH_2Cl_2 (2 x 10 mL). The combined organics were dried ($MgSO_4$), 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.



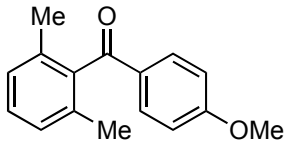
2

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}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 200.5, 139.6, 136.9, 134.1, 133.7, 129.4, 128.8, 128.7, 127.5, 19.4; IR (neat) 3061, 1673 cm^{-1}; mass spectrum (CI) *m/z* 211.1123 [$C_{15}H_{15}O$ (M + 1) requires 211.1123], 421, 212, 211.



6a

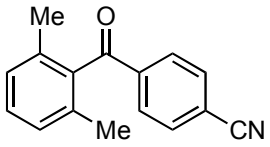
2,2',6-Trimethylbenzophenone (6a). Method A: 93%. Method B: 99% of **6a** as a white solid (98:2 hexanes/EtOAc): mp = 68-69 °C; ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.42-7.36 (m, 2 H), 7.31 (d, *J* = 7.2 Hz, 1 H), 7.24-7.20 (m, 1 H), 7.16 (t, *J* = 7.5 Hz, 1 H), 7.06 (d, *J* = 7.5 Hz, 2 H), 2.73 (s, 3 H), 2.14 (s, 6 H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 225.1280 [$C_{16}H_{17}O$ (M + 1) requires 225.1279], 253, 226, 225.



6b

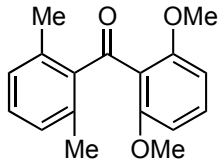
2,6-Dimethyl-4'-methoxybenzopheone (6b). Method A: >99%. Method B: 75% of **6b** as a yellow oil that solidified on standing (9:1 hexanes/EtOAc): mp = 37-38 °C; ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.75 (comp, 2 H), 7.19 (t, *J* = 7.7 Hz, 1 H), 7.03 (d,

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}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 241.1228 [$C_{16}H_{17}O_2$ (M + 1) requires 241.1229], 481, 242, 241.



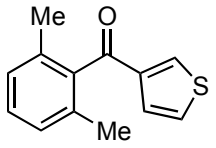
6c

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}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 236.1079 [$C_{16}H_{13}NO$ (M + 1) requires 236.1075], 268, 264, 236.



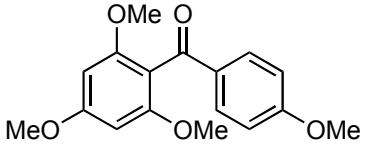
6d

2,6-Dimethyl-2',6'-dimethoxybenzophenone (6d). Method A: 62%. Method B: 95% of **6d** as an off-white solid (9:1→ 0:1 hexanes/EtOAc): mp = 139-140 ° C; ^{1}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 271.1337 [$C_{17}H_{19}O_3$ (M + 1) requires 271.1334], 272, 271, 239, 165.



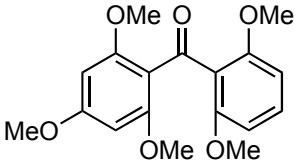
6e

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; ^{1}H NMR (400 MHz, $CDCl_3$) 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); ^{13}C NMR (100 MHz, $CDCl_3$) 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^{-1}; mass spectrum (CI) *m/z* 217.0692 [$C_{13}H_{12}OS$ (M + 1) requires 217.0687], 433, 327, 245, 218, 217.



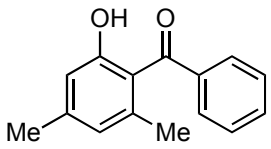
6f

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); ^{1}H NMR (400 MHz, $CDCl_3$) 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); ^{13}C NMR (100 MHz, $CDCl_3$) 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^{-1}; mass spectrum (ESI) *m/z* 303.12270 [$C_{17}H_{19}O_5$ (M + 1) requires 303.1231], 331, 304, 303.



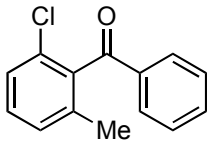
6g

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; ^{1}H NMR (400 MHz, $CDCl_3$) 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); ^{13}C NMR (100 MHz, $CDCl_3$) 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^{-1}; mass spectrum (ESI) *m/z* 333.13327 [$C_{18}H_{21}O_6$ (M + 1) requires 333.1338], 361, 334, 333.



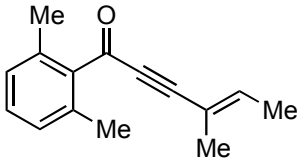
6h

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; ^{1}H NMR (400 MHz, $CDCl_3$) δ 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, $CDCl_3$) δ 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.



6i

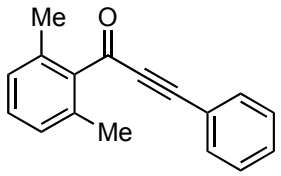
2-Chloro-6-methylbenzophenone (6i). Method B: 89% of **6i** as a colorless oil that solidified upon standing (9:1 hexanes/EtOAc): mp = 54-55 °C; ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.81-7.79 (comp, 2 H), 7.59-7.54 (comp, 1 H), 7.46-7.41 (comp, 2 H), 7.26-7.23 (comp, 2 H), 7.15-7.13 (comp, 1 H), 2.15 (s, 3 H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 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.



8a

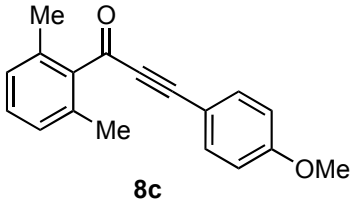
(*E*)-1-(2',6'-dimethylphenyl)-4-methylhex-4-en-2-yn-1-one (8a). Method A: 49% of **8a** as a yellow oil (9:1 hexanes/EtOAc); ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.16 (t, *J* = 7.7 Hz, 1 H), 7.01 (d, *J* = 7.7 Hz, 2 H), 6.27 (qq, *J* = 7.2, 1.7 Hz, 1 H), 2.35 (s, 6 H), 1.82 (comp, 3 H), 1.75 (comp, 3 H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 213.1276 [$C_{15}H_{17}O$ (M + 1) requires 213.1279], 213, 213.



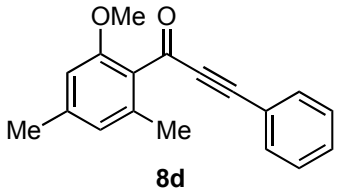
8b

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}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 235.1126 [$C_{17}H_{14}O$ (M + 1) requires 235.1123], 470, 469, 236, 235, 133.



8c

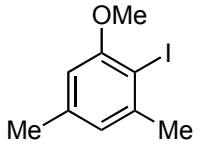
1-(2',6'-Dimethylphenyl)-3-(4''-methoxyphenyl)prop-2-yn-1-one (8c). Method C: 75% of **8c** as a yellow oil (9:1 hexanes/EtOAc): ^{1}H NMR (400 MHz, $CDCl_3$) δ 7.53-7.50 (comp, 2 H), 7.20 (t, *J* = 7.7 Hz, 1 H), 7.05 (d, *J* = 7.7 Hz, 2 H), 6.89-6.85 (comp, 2 H), 3.82 (s, 3 H), 2.40 (s, 6 H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (CI) *m/z* 265.1229 [$C_{18}H_{17}O_2$ (M + 1) requires 265.1229], 529, 266, 265.



8d

1-(2'-Methoxy-4',6'-dimethylphenyl)-3-phenylprop-2-yn-1-one (8d). Method C (3 mol % 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}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 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 cm^{-1}; mass spectrum (ESI) *m/z* 265.12231 [$C_{18}H_{17}O_2$ (M + 1) requires 265.1228], 288, 265, 163.



7

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 NH_4Cl (10 mL) was slowly added. The mixture was diluted with EtOAc (50 mL), and the layers were separated. The organic layer was washed with H_2O (4 x 50 mL) and brine (50 mL), dried ($MgSO_4$), 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}H NMR (400 MHz, $CDCl_3$) δ 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}C NMR (100 MHz, $CDCl_3$) δ 157.8, 142.7, 138.7, 123.2, 109.0, 88.8, 56.2, 28.4, 21.1; IR (neat) 2936, 1572, 1457 cm^{-1}; mass spectrum (ESI) *m/z* 262.99273 [$C_9H_{12}IO$ (M + 1) requires 262.9927], 263, 262.

bmo5118

expl std1h

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d1	2.000	werr	
tof	169.9	wexp	
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gain	not used		
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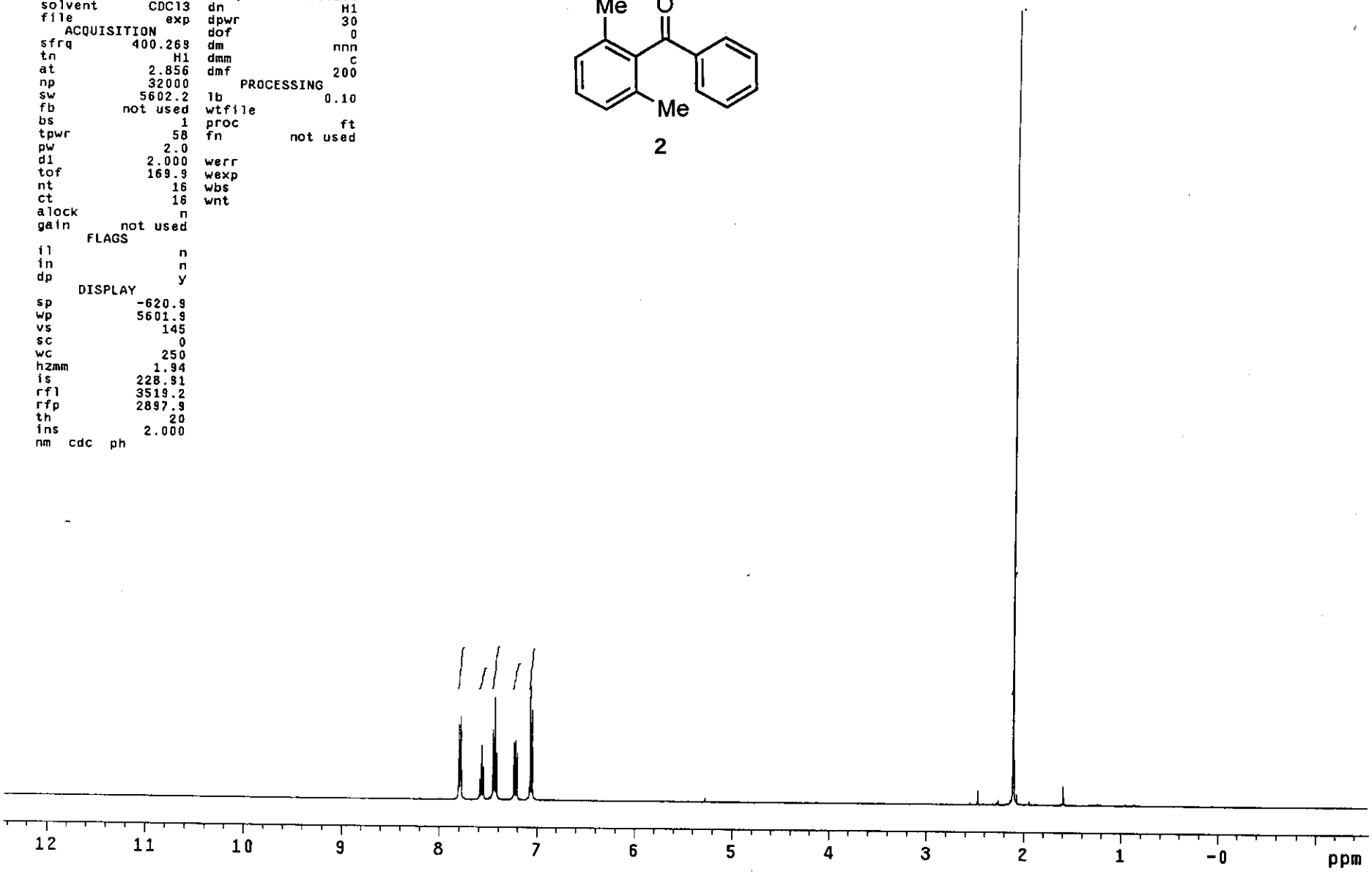
ins	2.000		
nm cdc ph			

2

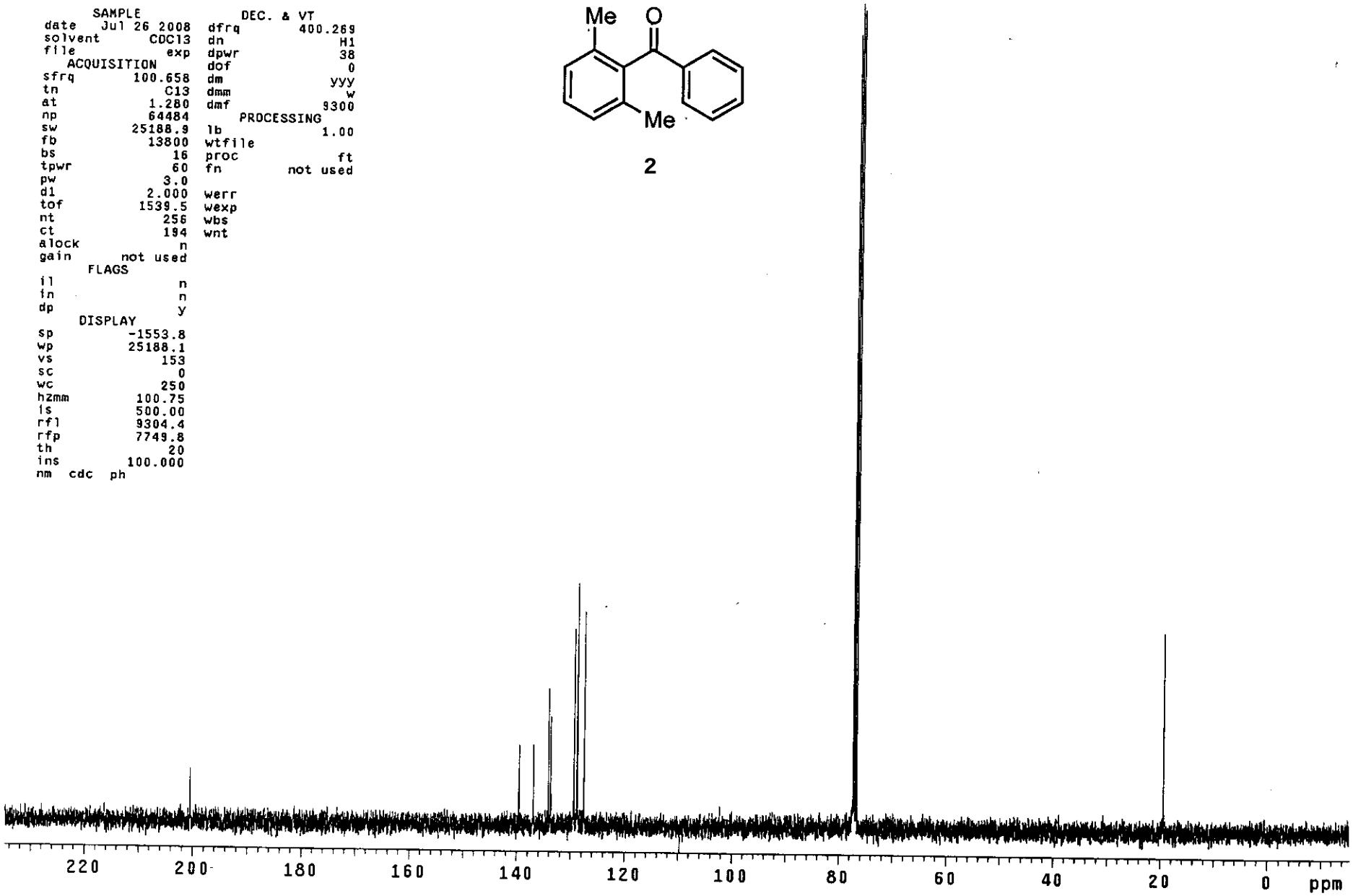


bmo5118

exp1 std13c

SAMPLE		DEC. & VT	
date	Jul 26 2008	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	64484	**PROCESSING**	
sw	25188.9	lb	1.00
fb	13800	wtfile	
bs	16	proc	ft
tpwr	60	fn	not used
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	256	wbs	
ct	194	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	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		
rfp	7749.8		
th	20		
ins	100.000		
nm cdc ph			

2

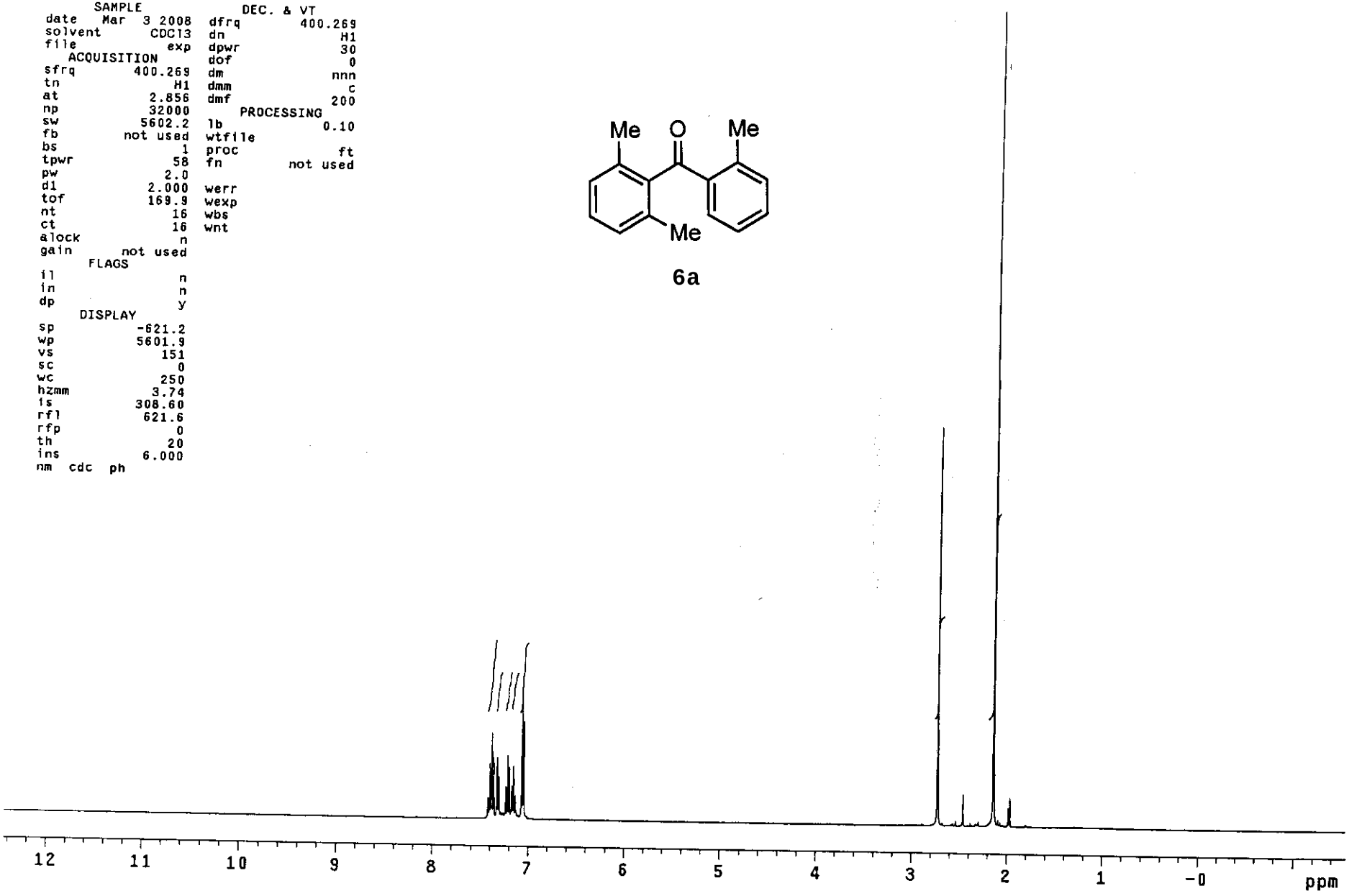


bmo-4284-1

exp1 stdlh

SAMPLE		DEC. & VT	
date	Mar 3 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-621.2		
wp	5601.9		
vs	151		
sc	0		
wc	250		
hzmm	3.74		
is	308.60		
rfl	621.6		
rfp	0		
th	20		
ins	6.000		
nm cdc ph			

6a

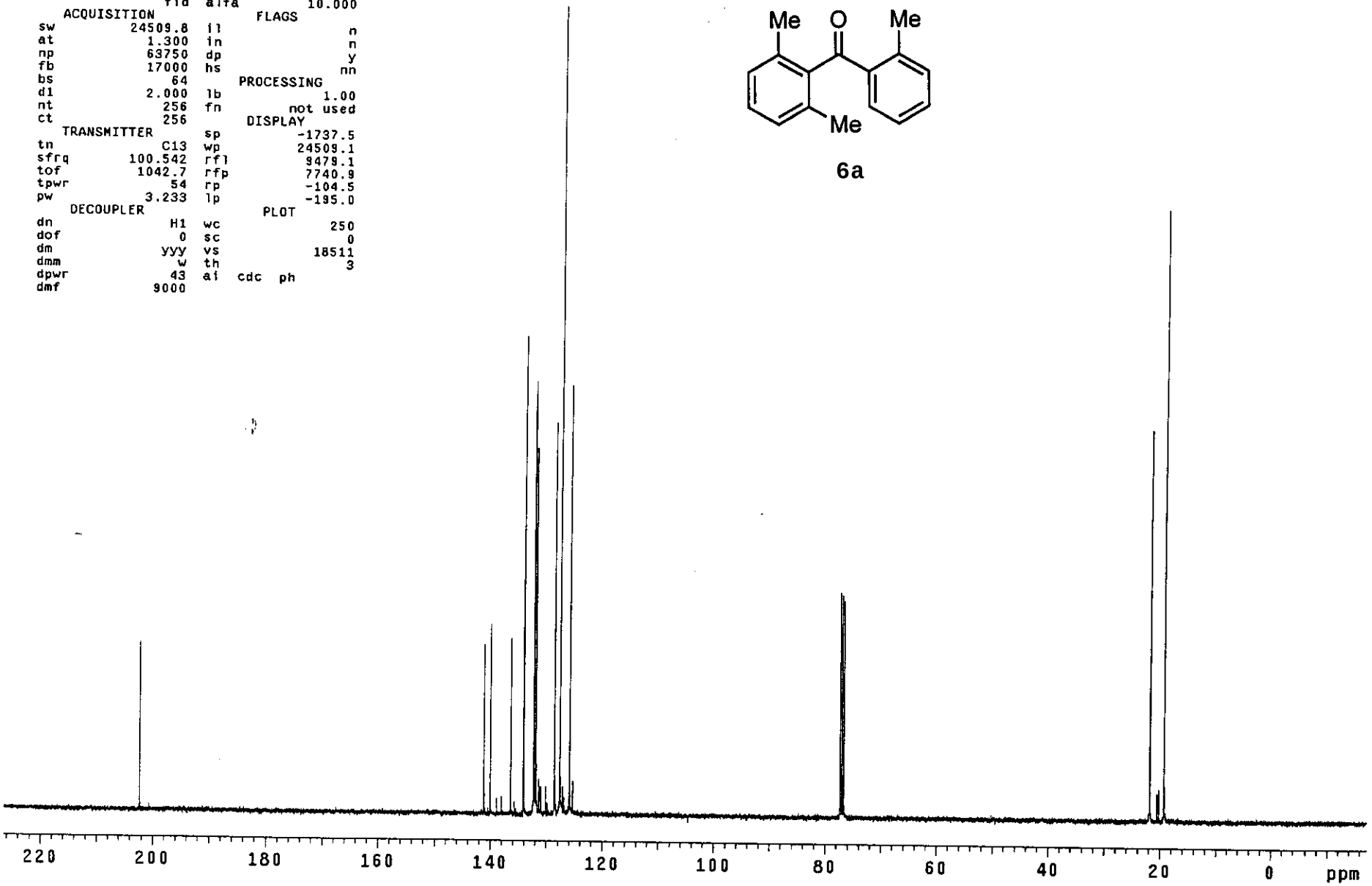


bmo4284

exp1 Carbon

SAMPLE		SPECIAL	
date	Mar 3 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spin	20
space/data/martin_~		hst	0.008
bmo4284_s2pul_C13.~		pw90	9.700
	fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1737.5
tn	C13	wp	24509.1
sfrq	100.542	rfl	9479.1
tof	1042.7	rfp	7740.9
tpwr	54	rp	-104.5
pw	3.233	lp	-195.0
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	18511
dmm	w	th	3
dpwr	43	ai cdc ph	
dmf	9000		

6a

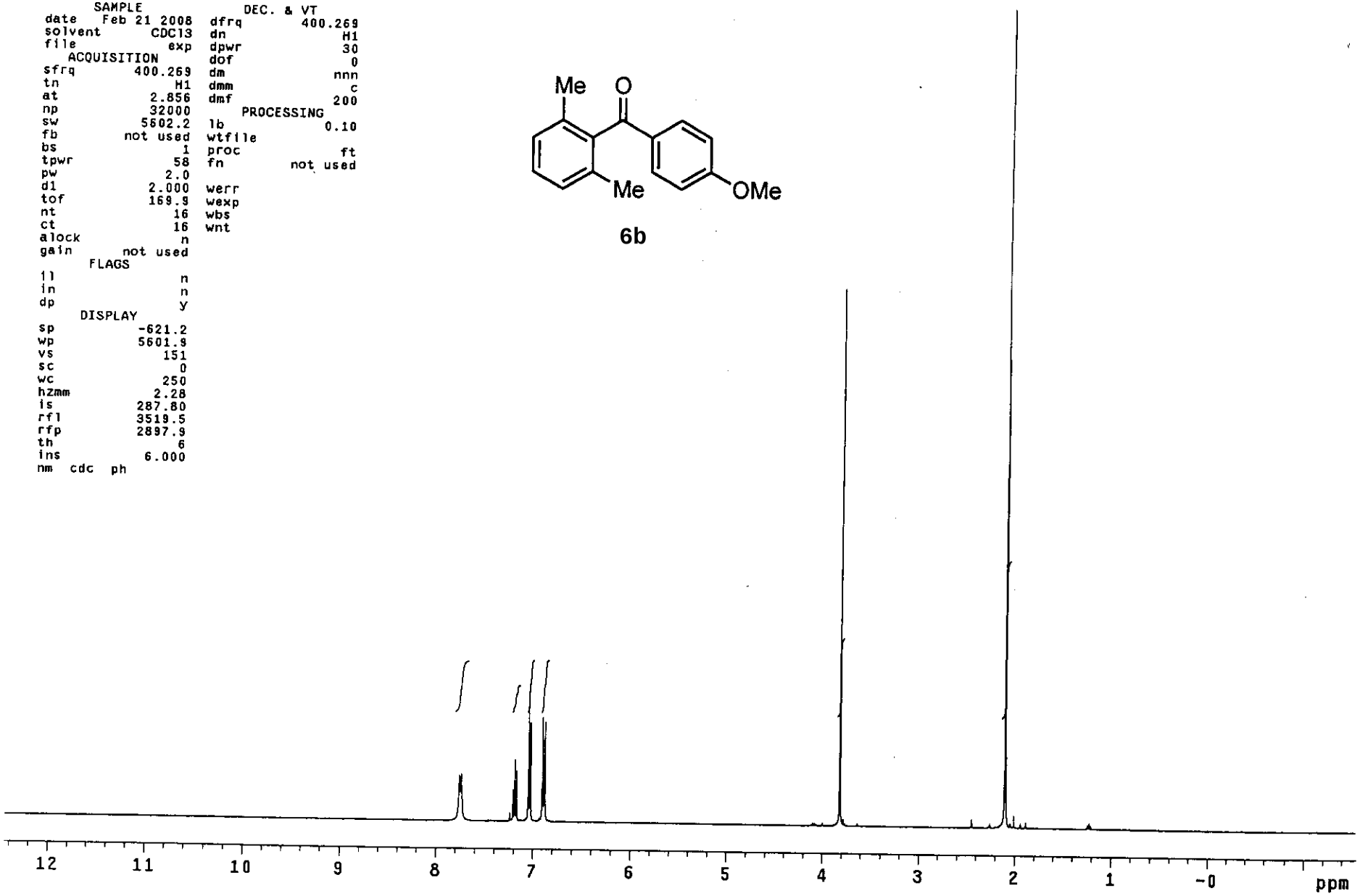


bmo-4272-3 F2

expl std1h

SAMPLE		DEC. & VT	
date	Feb 21 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0	werr	
d1	2.000	wexp	
tof	169.9	wbs	
nt	16	wnt	
ct	16		
alock	n		
gain	not used		
FLAGS			
ll	n		
in	n		
dp	y		
DISPLAY			
sp	-621.2		
wp	5601.9		
vs	151		
sc	0		
wc	250		
hzmm	2.28		
is	287.80		
rfl	3519.5		
rfp	2897.9		
th	6		
ins	6.000		
nm cdc ph			

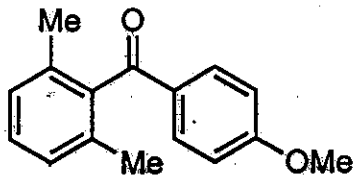
6b



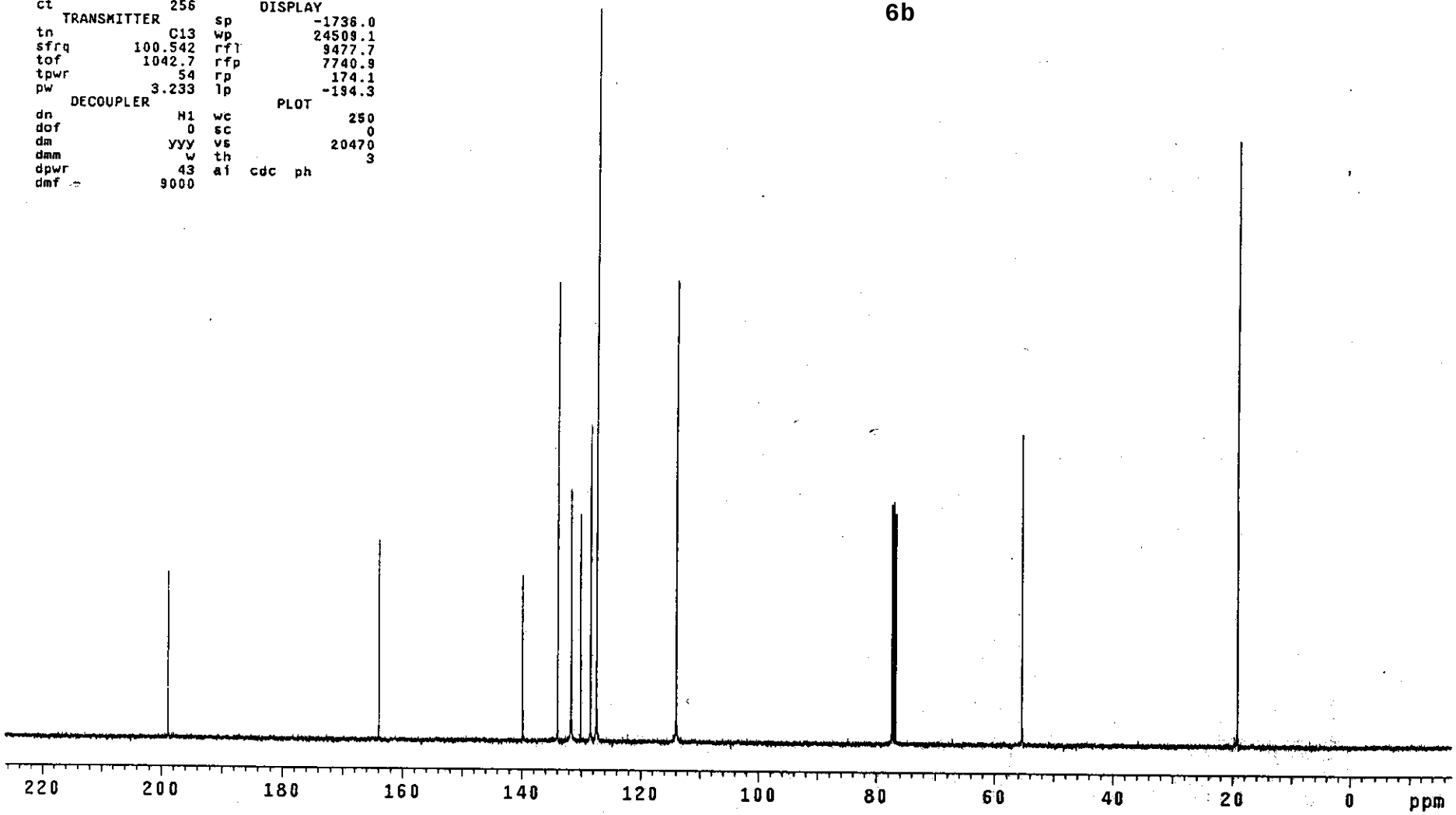
bmo4272_F2

expl Carbon

SAMPLE		SPECIAL	
date	Feb 21 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spin	20
space	/data/martin_~	hst	0.008
bmo4272_F2_s2pul_C~		pw90	9.700
	13.fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1736.0
tn	C13	wp	24509.1
sfrq	100.542	rfl	9477.7
tof	1042.7	rfp	7740.9
tpwr	54	rp	174.1
pw	3.233	lp	-194.3
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	20470
dmm	w	th	3
dpwr	43		
dmf	9000	ai cdc ph	



6b

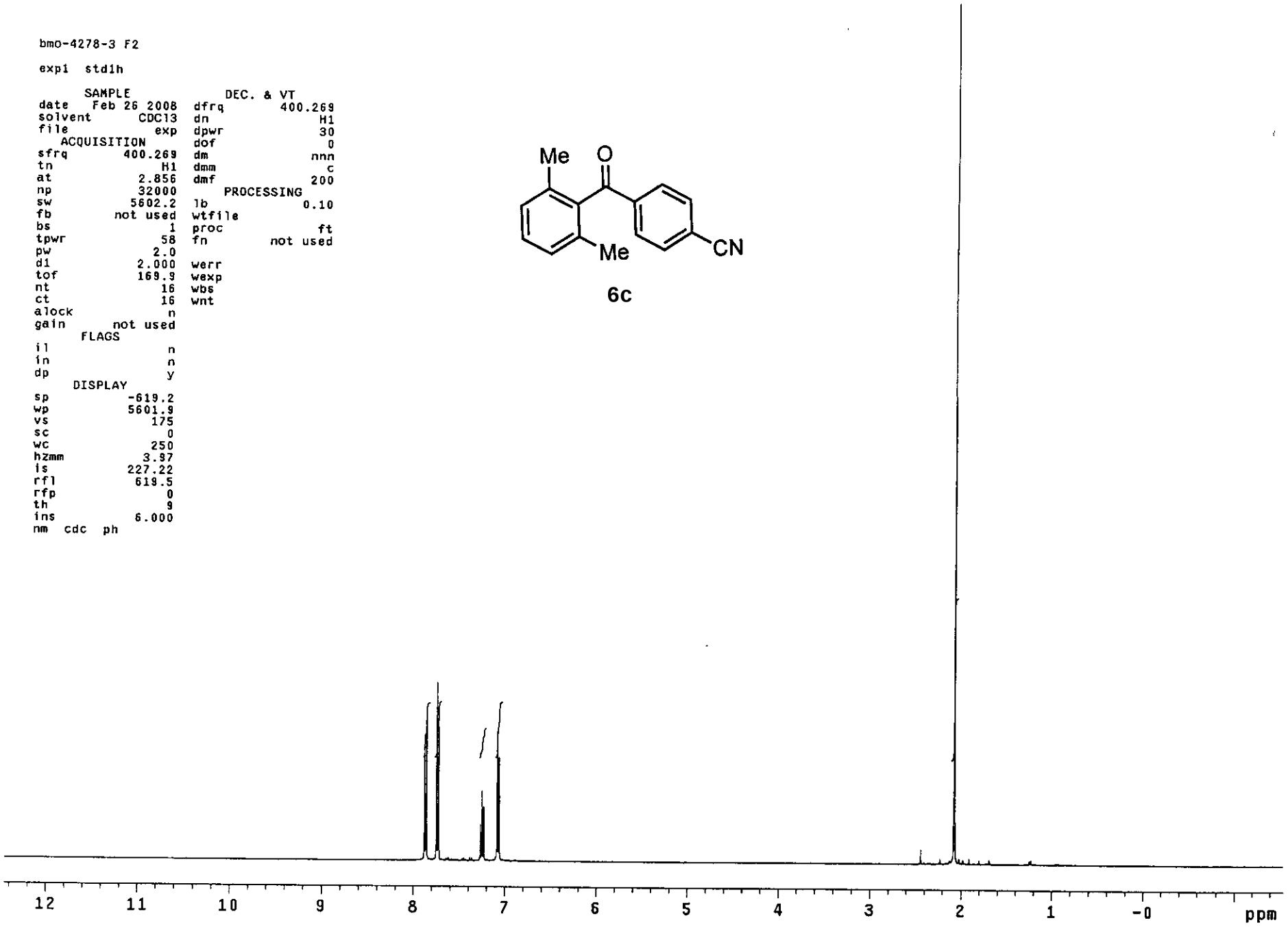


bmo-4278-3 F2

expi std1h

SAMPLE		DEC. & VT	
date	Feb 26 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-619.2		
wp	5601.9		
vs	175		
sc	0		
wc	250		
hzmm	3.97		
is	227.22		
rfl	619.5		
rfp	0		
th	9		
ins	6.000		
nm cdc ph			

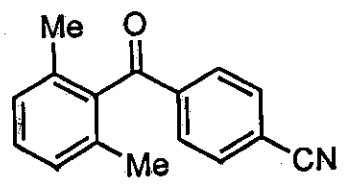
6c



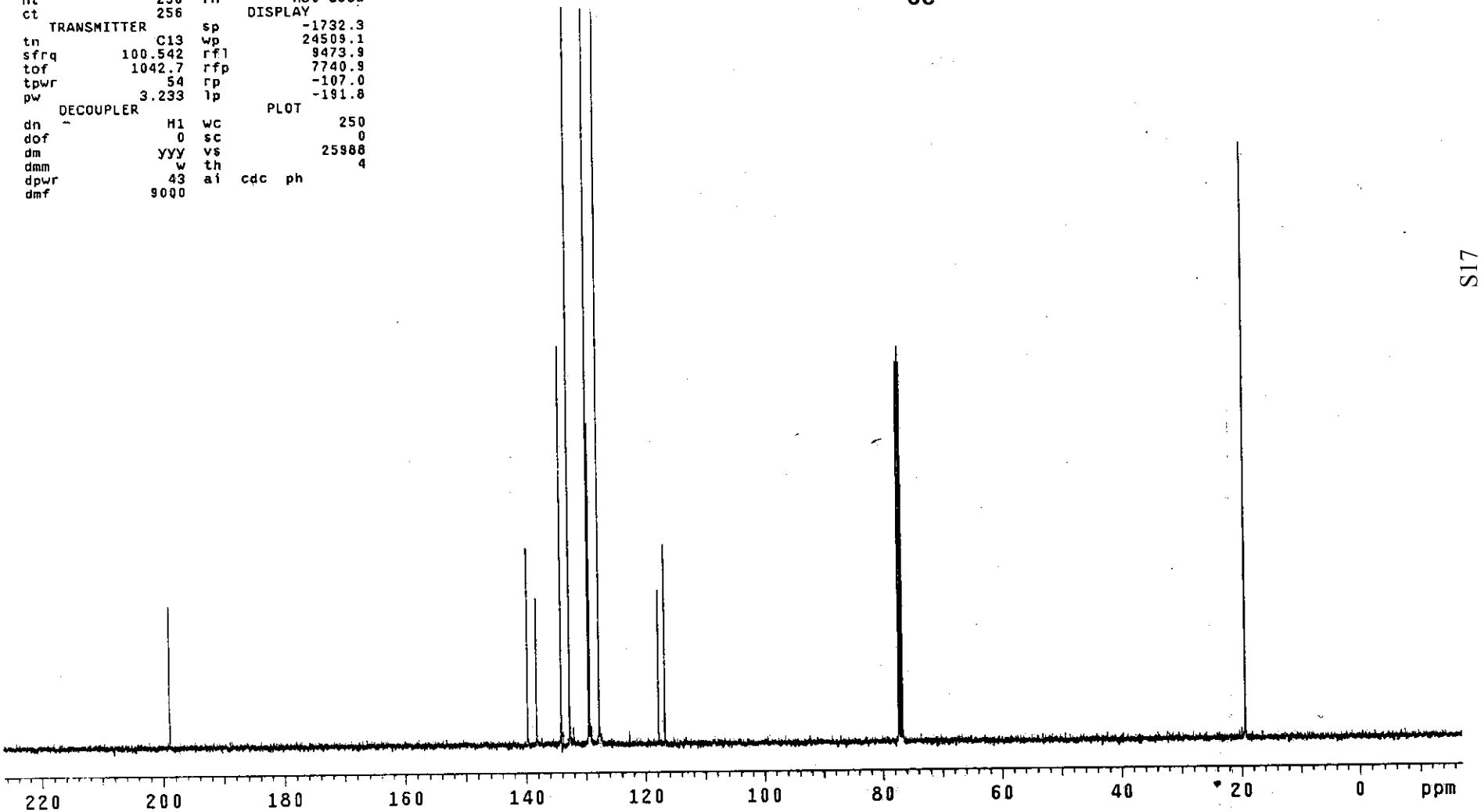
bmo4278F2

exp1 Carbon

SAMPLE		SPECIAL	
date	Feb 26 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spin	20
space	/data/martin_~	hst	0.008
bmo4278F2_s2pul_C1~		pw90	9.700
	3.fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1732.3
tn	C13	wp	24509.1
sfrq	100.542	rfl	9473.9
tof	1042.7	rfp	7740.9
tpwr	54	rp	-107.0
pw	3.233	lp	-191.8
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	25988
dmm	w	th	4
dpwr	43	ai cdc ph	
dmf	9000		



6c

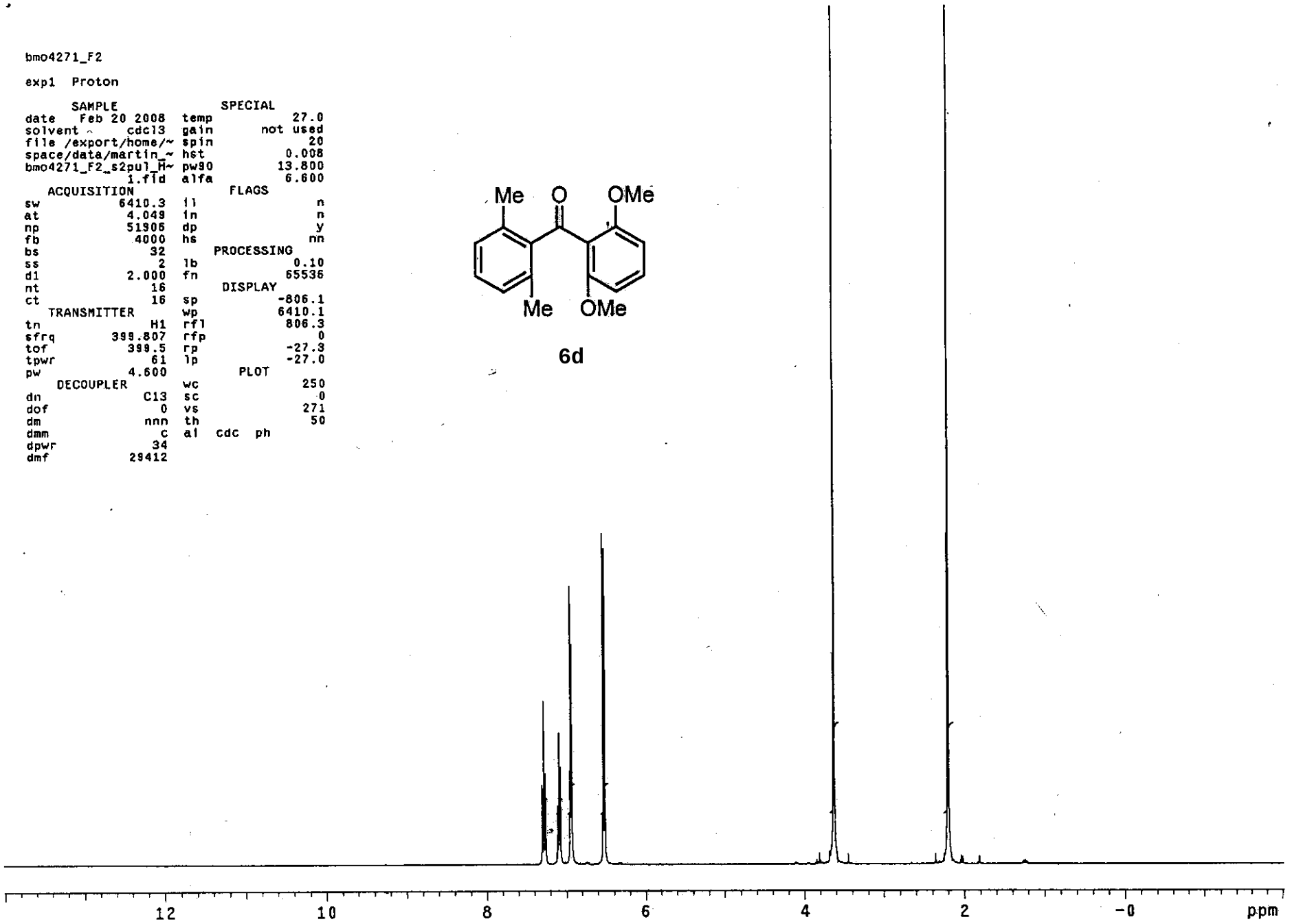


bmo4271_F2

exp1 Proton

SAMPLE		SPECIAL	
date	Feb 20 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/export/home/~	spin	20
space	/data/martin_~	hst	0.008
bmo4271_F2_s2pul_H~		pw90	13.800
	1.fid	alfa	6.600
ACQUISITION		**FLAGS**	
sw	6410.3	il	n
at	4.049	in	n
np	51906	dp	y
fb	4000	hs	nn
bs	32	**PROCESSING**	
ss	2	lb	0.10
d1	2.000	fn	65536
nt	16	**DISPLAY**	
ct	16	sp	-806.1
TRANSMITTER		wp	6410.1
tn	H1	rfl	806.3
sfrq	399.807	rfp	0
tof	399.5	rp	-27.3
tpwr	61	lp	-27.0
pw	4.600	**PLOT**	
DECOUPLER		wc	250
dn	C13	sc	0
dof	0	vs	271
dm	nnn	th	50
dmm	c	al	cdc ph
dpwr	34		
dmf	29412		

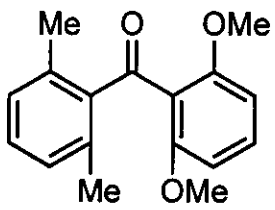
6d



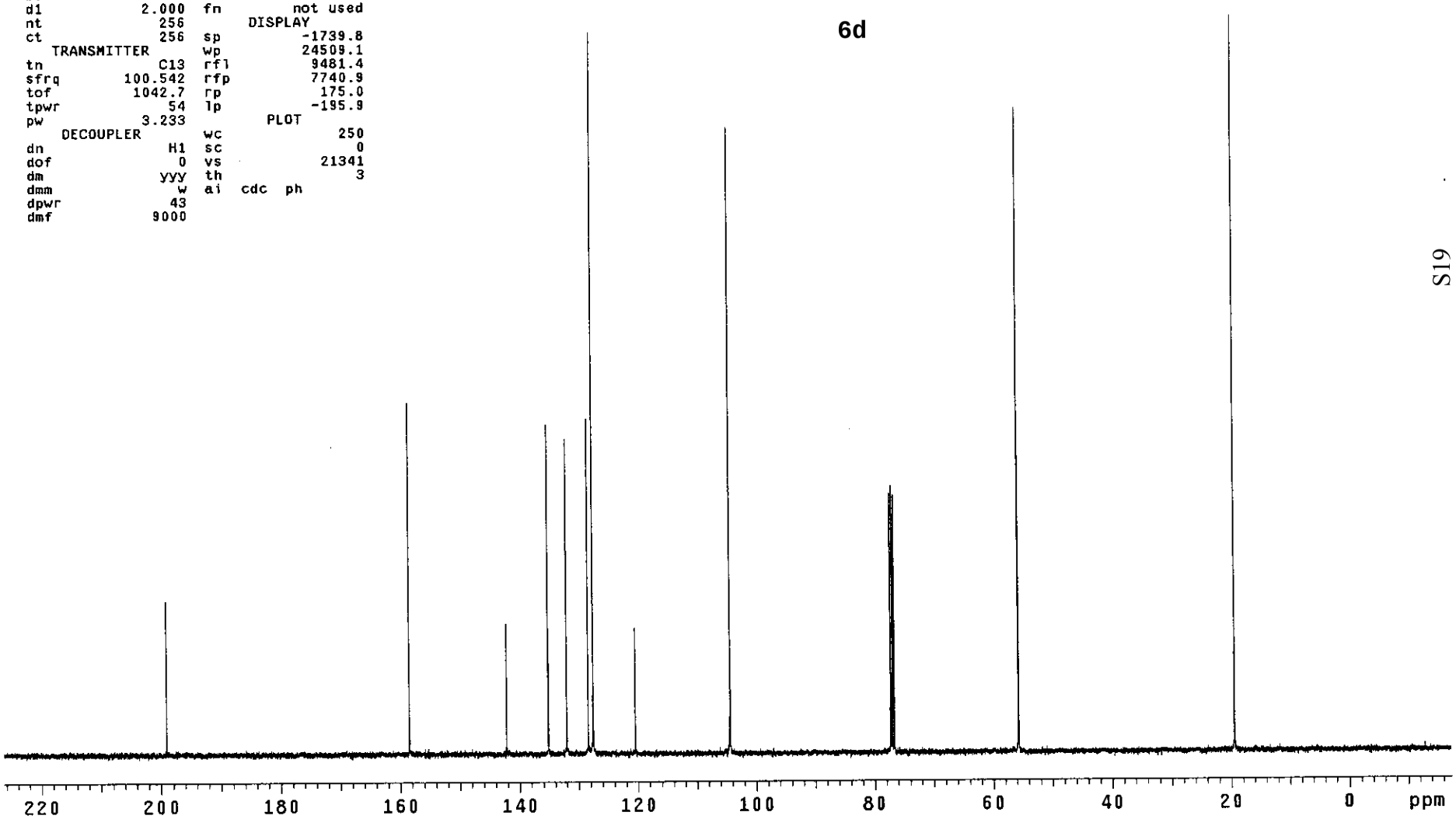
bmo4271

exp1 Carbon

SAMPLE		SPECIAL	
date	Feb 20 2008	temp	27.0
solvent	cdcl3	gain	30
file	/cdrom/080303~	spin	20
	_0848/NMRROBO/auto~	hst	0.008
	_2008.02.20/martin~	pw90	9.700
	_bmo4271_F2_s2pul_~	alfa	10.000
	02.fid	FLAGS	
ACQUISITION		il	n
sw	24509.8	in	n
at	1.300	dp	y
np	63750	hs	nn
fb	17000	PROCESSING	
bs	64	lb	1.00
d1	2.000	fn	not used
nt	256	DISPLAY	
ct	256	sp	-1739.8
TRANSMITTER		wp	24509.1
tn	C13	rfl	9481.4
sfrq	100.542	rfp	7740.9
tof	1042.7	rp	175.0
tpwr	54	lp	-195.9
pw	3.233	PLOT	
DECOUPLER		wc	250
dn	H1	sc	0
dof	0	vs	21341
dm	yyy	th	3
dmm	w	ai	cdc ph
dpwr	43		
dmf	9000		



6d

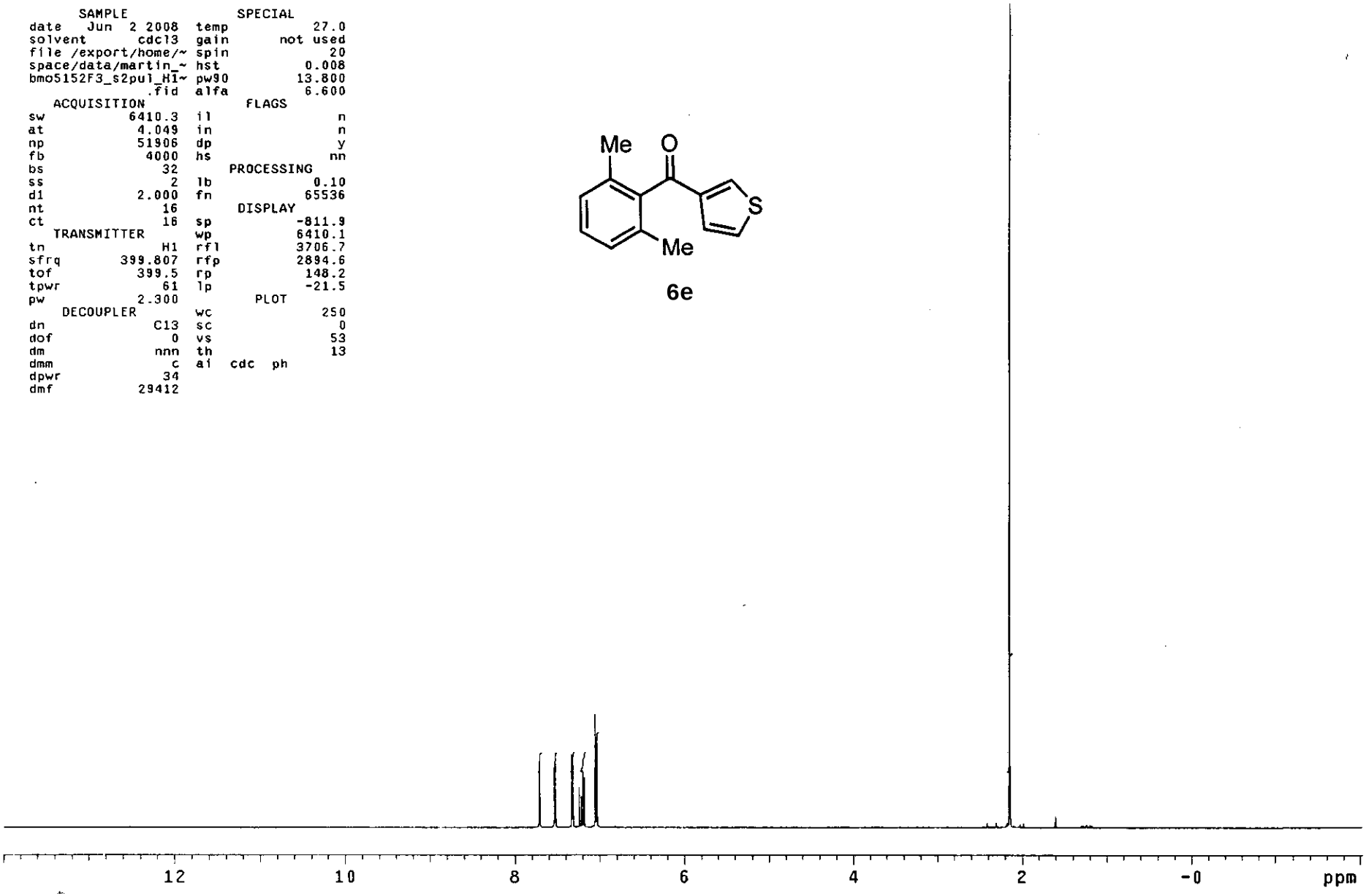


bmo5152F3

exp1 Proton

SAMPLE		SPECIAL	
date	Jun 2 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/export/home/~	spin	20
space	/data/martin_~	hst	0.008
bmo5152F3_s2pul_H1~	.fid	pw90	13.800
		alfa	6.600
ACQUISITION		**FLAGS**	
sw	6410.3	il	n
at	4.049	in	n
np	51906	dp	y
fb	4000	hs	nn
bs	32	**PROCESSING**	
ss	2	lb	0.10
d1	2.000	fn	65536
nt	16	**DISPLAY**	
ct	16	sp	-811.9
TRANSMITTER		wp	6410.1
tn	H1	rfl	3706.7
sfrq	399.807	rfp	2894.6
tof	399.5	rp	148.2
tpwr	61	lp	-21.5
pw	2.300	**PLOT**	
DECOUPLER		wc	250
dn	C13	sc	0
dof	0	vs	53
dm	nnn	th	13
dmm	c	ai	cdc ph
dpwr	34		
dmf	29412		

6e

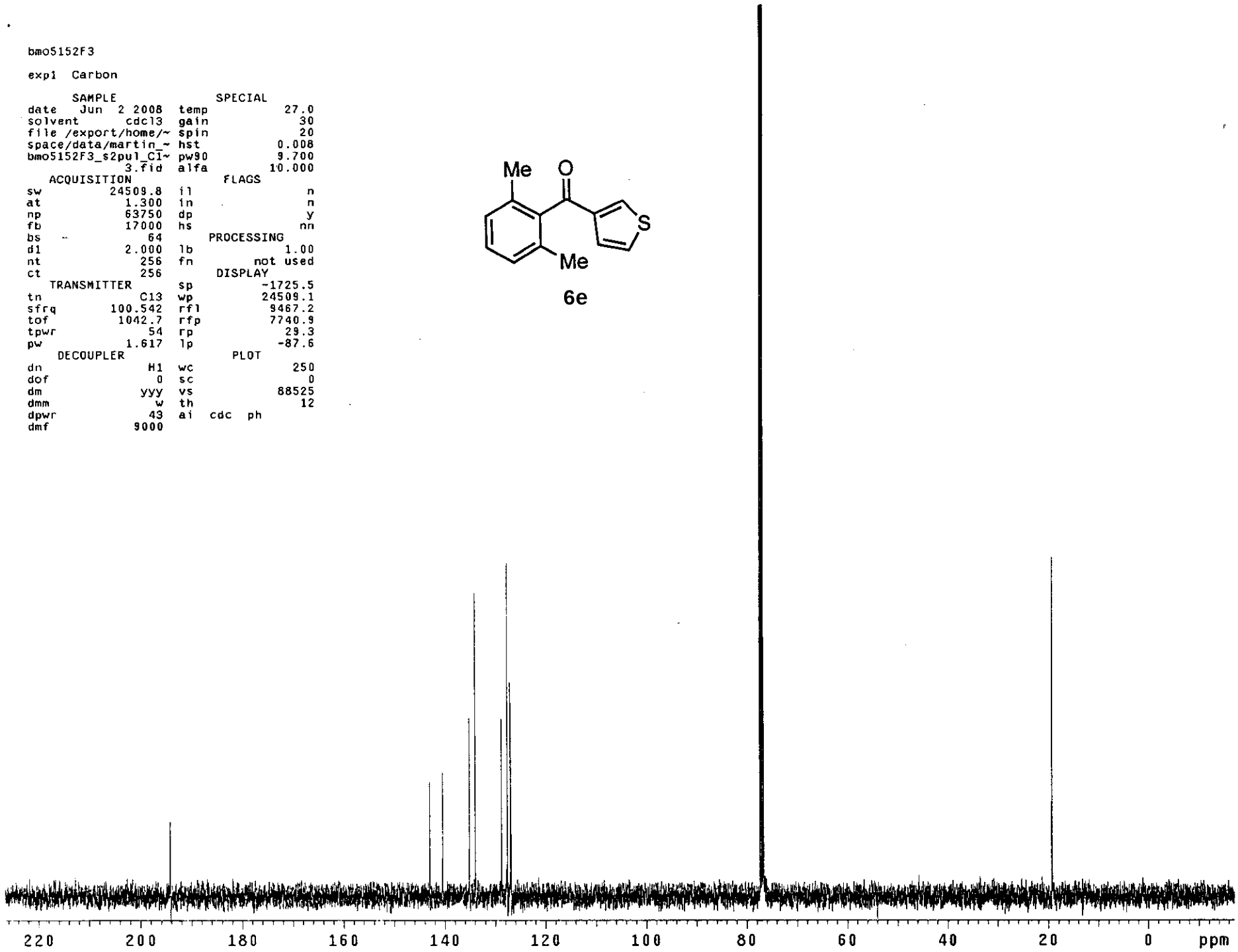


bmo5152F3

exp1 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
bmo5152F3_s2pul_Cl~		pw90	9.700
	3.fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1725.5
tn	C13	wp	24509.1
sfrq	100.542	rf1	9467.2
tof	1042.7	rfp	7740.9
tpwr	54	rp	29.3
pw	1.617	lp	-87.6
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	88525
dmm	w	th	12
dpwr	43	ai cdc ph	
dmf	9000		

6e

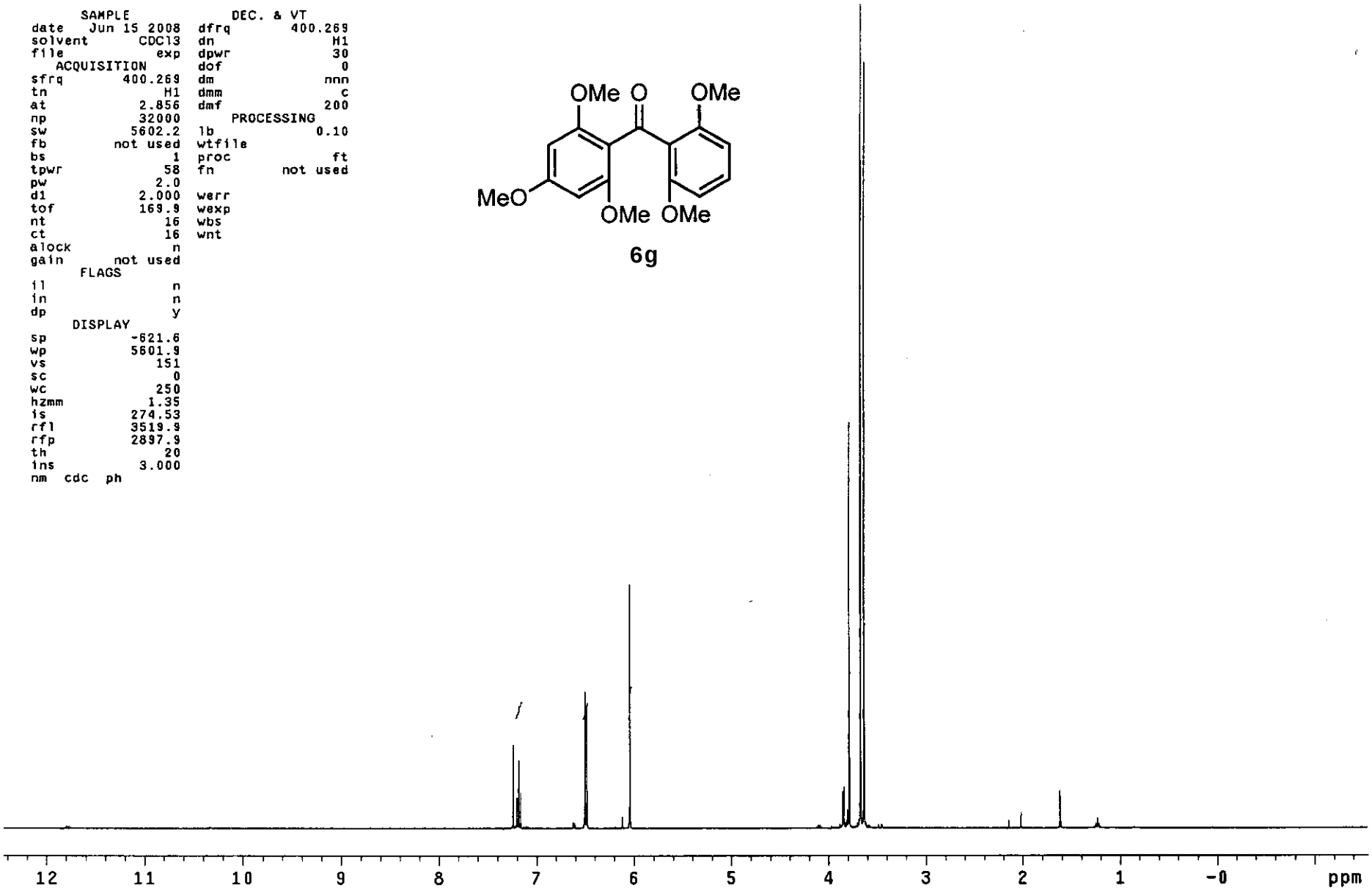


bmo_5178_4 F3

exp1 std1h

SAMPLE		DEC. & VT	
date	Jun 15 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-621.6		
wp	5601.9		
vs	151		
sc	0		
wc	250		
hzmm	1.35		
is	274.53		
rfl	3519.9		
rfp	2897.9		
th	20		
ins	3.000		
nm cdc ph			

6g

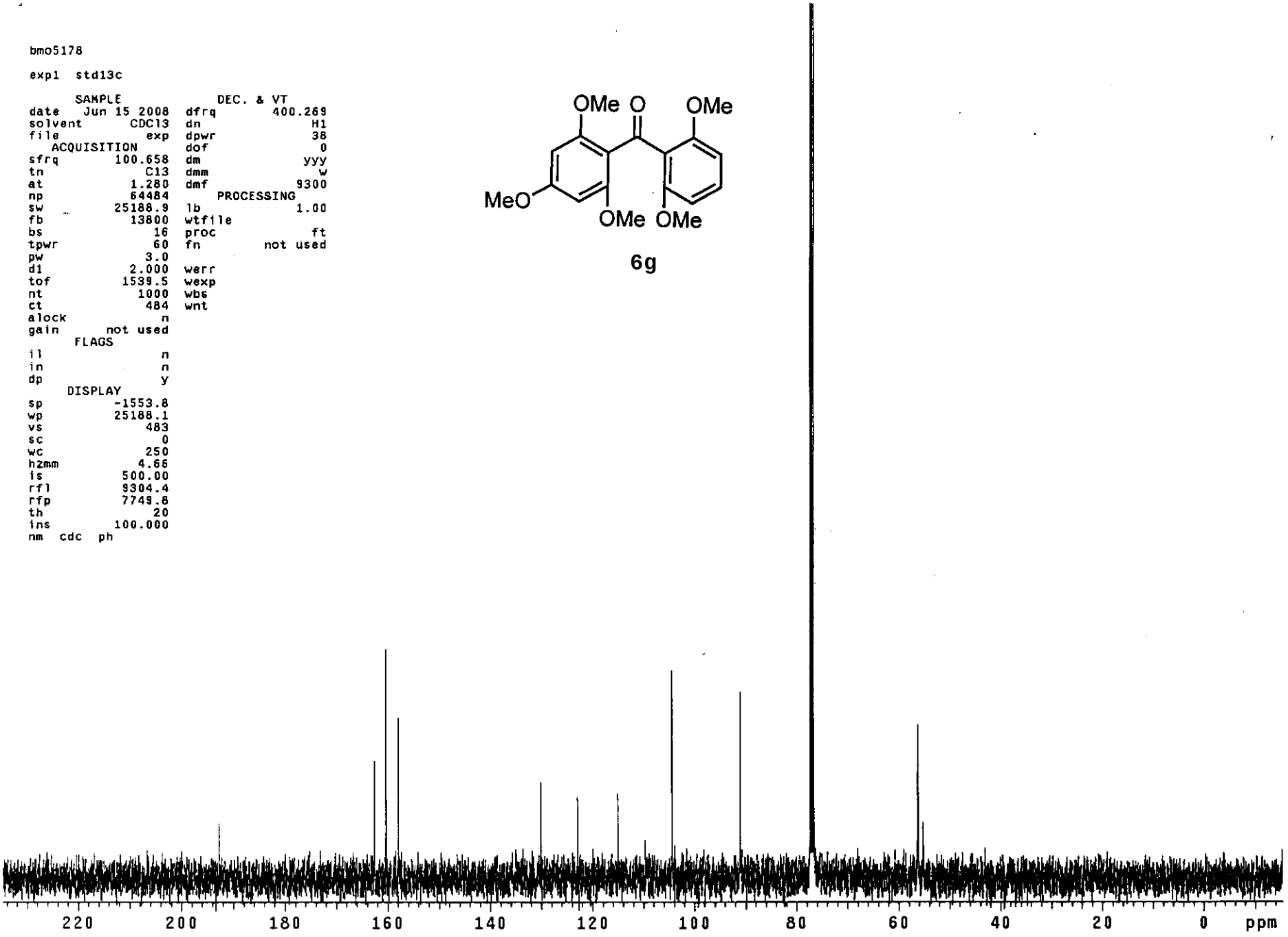


bmo5178

exp1 std13c

SAMPLE		DEC. & VT	
date	Jun 15 2008	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	64484	PROCESSING	
sw	25188.9	lb	1.00
fb	13800	wtfile	
bs	16	proc	ft
tpwr	60	fn	not used
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	1000	wbs	
ct	484	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-1553.8		
wp	25188.1		
vs	483		
sc	0		
wc	250		
hzmm	4.66		
is	500.00		
rfl	9304.4		
rfp	7749.8		
th	20		
ins	100.000		
nm cdc ph			

6g

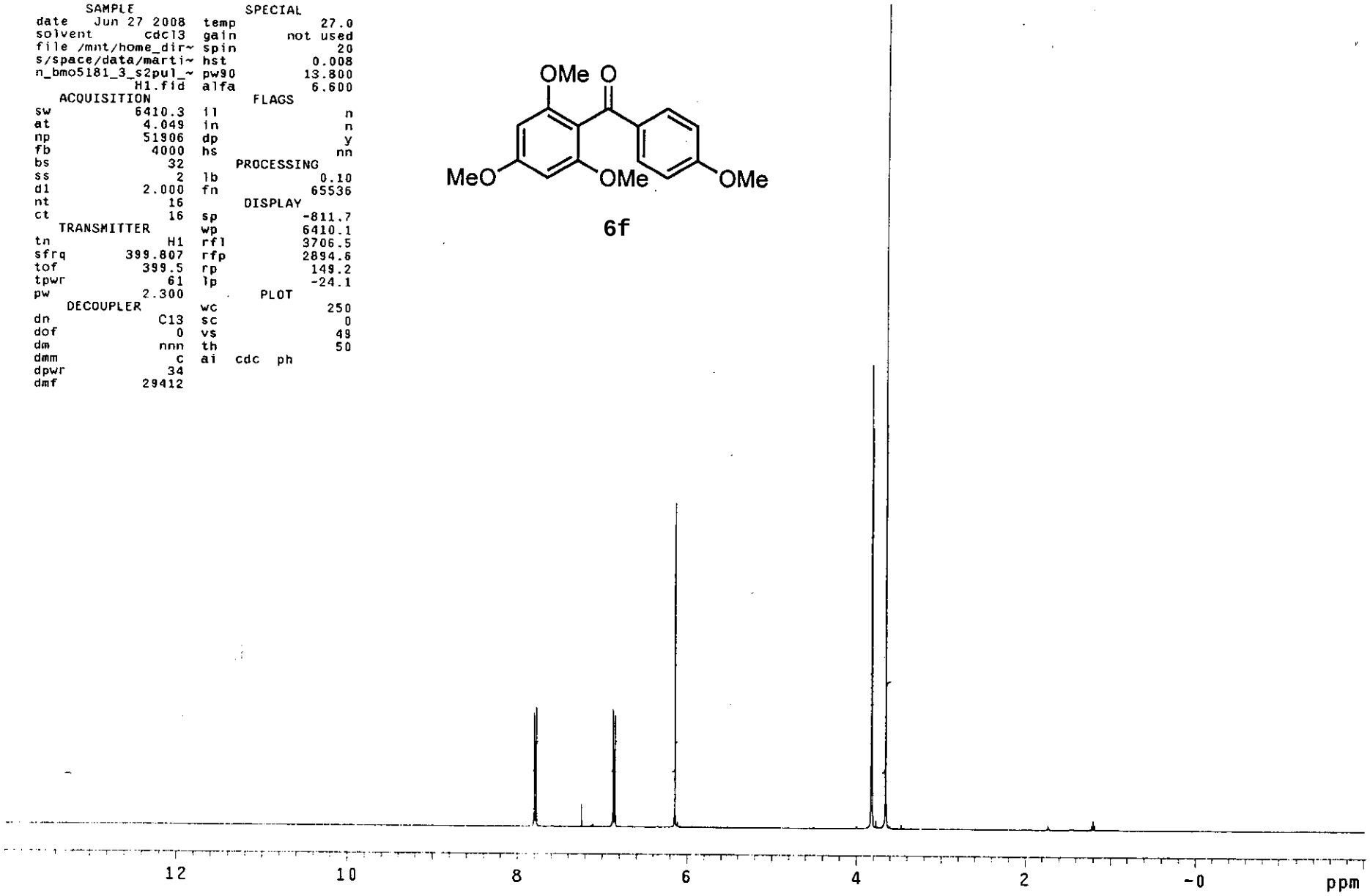


bmo5181

exp1 Proton

SAMPLE		SPECIAL	
date	Jun 27 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/mnt/home_dir~	spin	20
s/space/data/marti~		hst	0.008
n_bmo5181_3_s2pul_~		pw90	13.800
	H1.fid	alfa	6.600
ACQUISITION		FLAGS	
sw	6410.3	il	n
at	4.049	in	n
np	51906	dp	y
fb	4000	hs	nn
bs	32	PROCESSING	
ss	2	lb	0.10
d1	2.000	fn	65536
nt	16	DISPLAY	
ct	16	sp	-811.7
TRANSMITTER		wp	6410.1
tn	H1	rfl	3706.5
sfrq	399.807	rfp	2894.6
tof	399.5	rp	149.2
tpwr	61	lp	-24.1
pw	2.300	PLOT	
DECOUPLER		wc	250
dn	C13	sc	0
dof	0	vs	49
dm	nnn	th	50
dmm	c	ai	cdc ph
dpwr	34		
dmf	29412		

6f

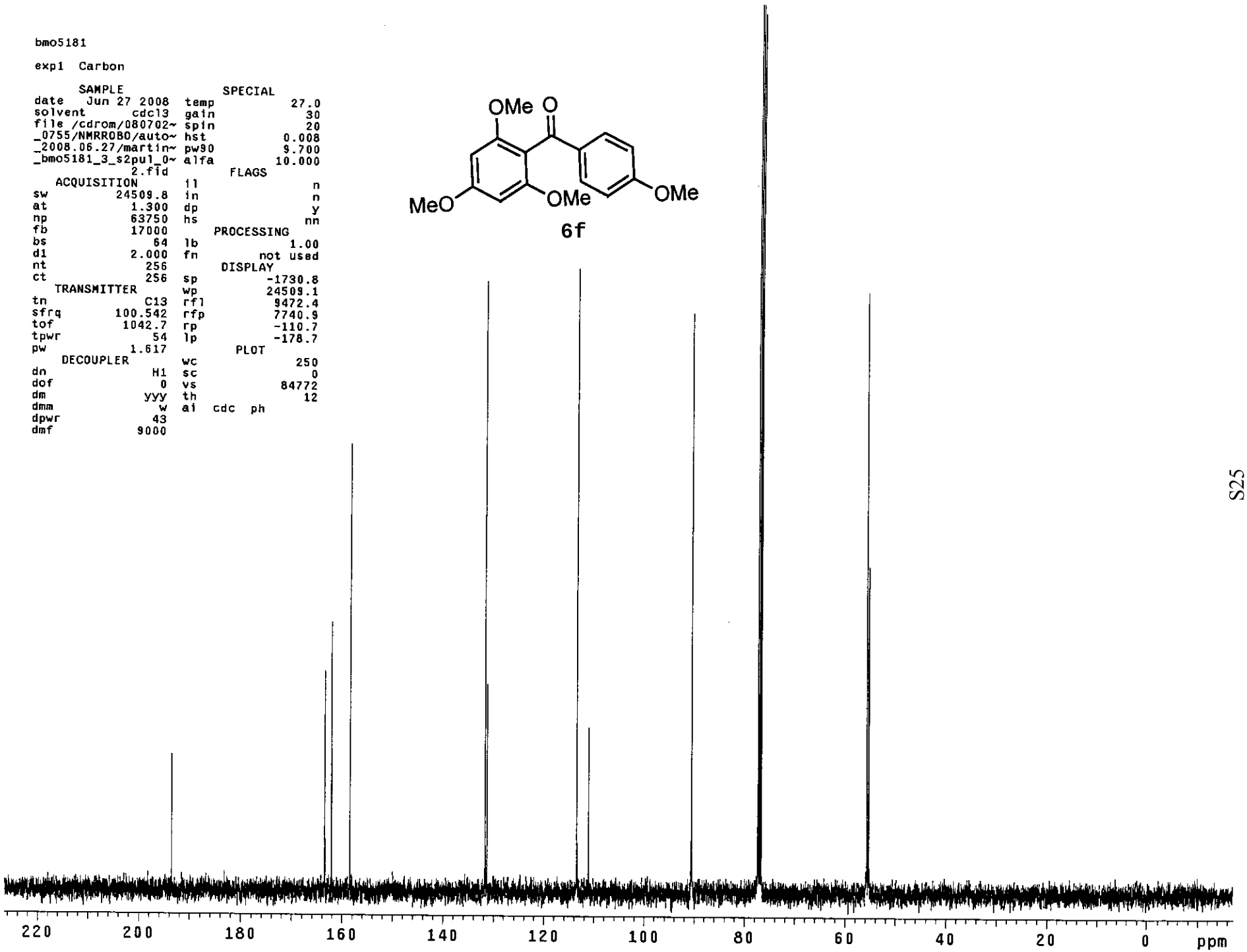


bmo5181

exp1 Carbon

SAMPLE		SPECIAL	
date	Jun 27 2008	temp	27.0
solvent	cdcl3	gain	30
file	/cdrom/080702~	spin	20
	_0755/NMRROBO/auto~	hst	0.008
	_2008.06.27/martin~	pw90	9.700
	_bmo5181_3_s2pul_0~	alfa	10.000
	2.fid	FLAGS	
ACQUISITION		il	n
sw	24509.8	in	n
at	1.300	dp	y
np	63750	hs	nn
fb	17000	PROCESSING	
bs	64	lb	1.00
d1	2.000	fn	not used
nt	256	DISPLAY	
ct	256	sp	-1730.8
TRANSMITTER		wp	24509.1
tn	C13	rfl	9472.4
sfrq	100.542	rfp	7740.9
tof	1042.7	rp	-110.7
tpwr	54	lp	-178.7
pw	1.617	PLOT	
DECOUPLER		wc	250
dn	H1	sc	0
dof	0	vs	84772
dm	yyy	th	12
dmm	w	ai	cdc ph
dpwr	43		
dmf	9000		

6f

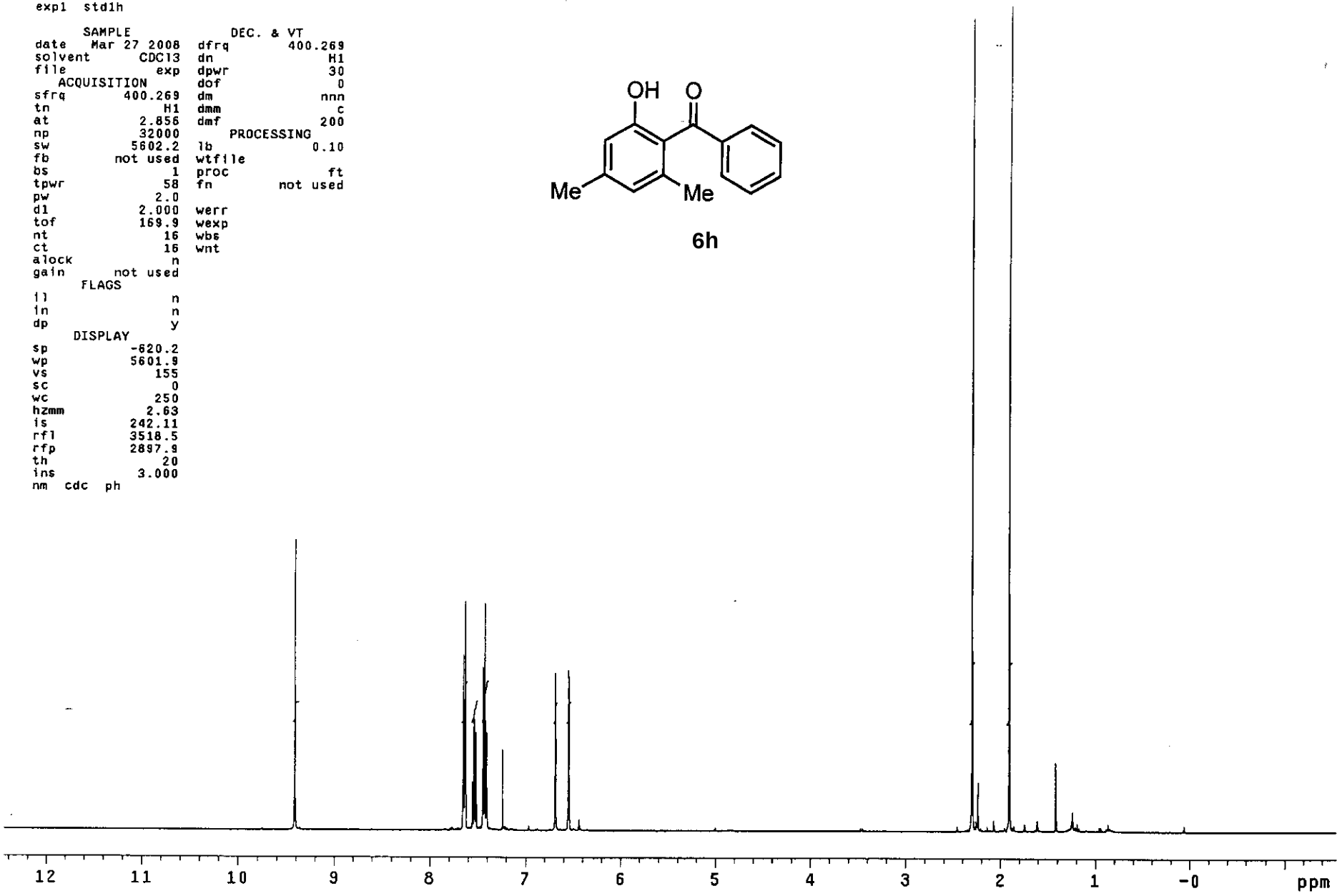


bmo-5031-4

exp1 std1h

SAMPLE		DEC. & VT	
date	Mar 27 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-620.2		
wp	5601.9		
vs	155		
sc	0		
wc	250		
hzmm	2.63		
is	242.11		
rfl	3518.5		
rfp	2897.9		
th	20		
ins	3.000		
nm cdc ph			

6h

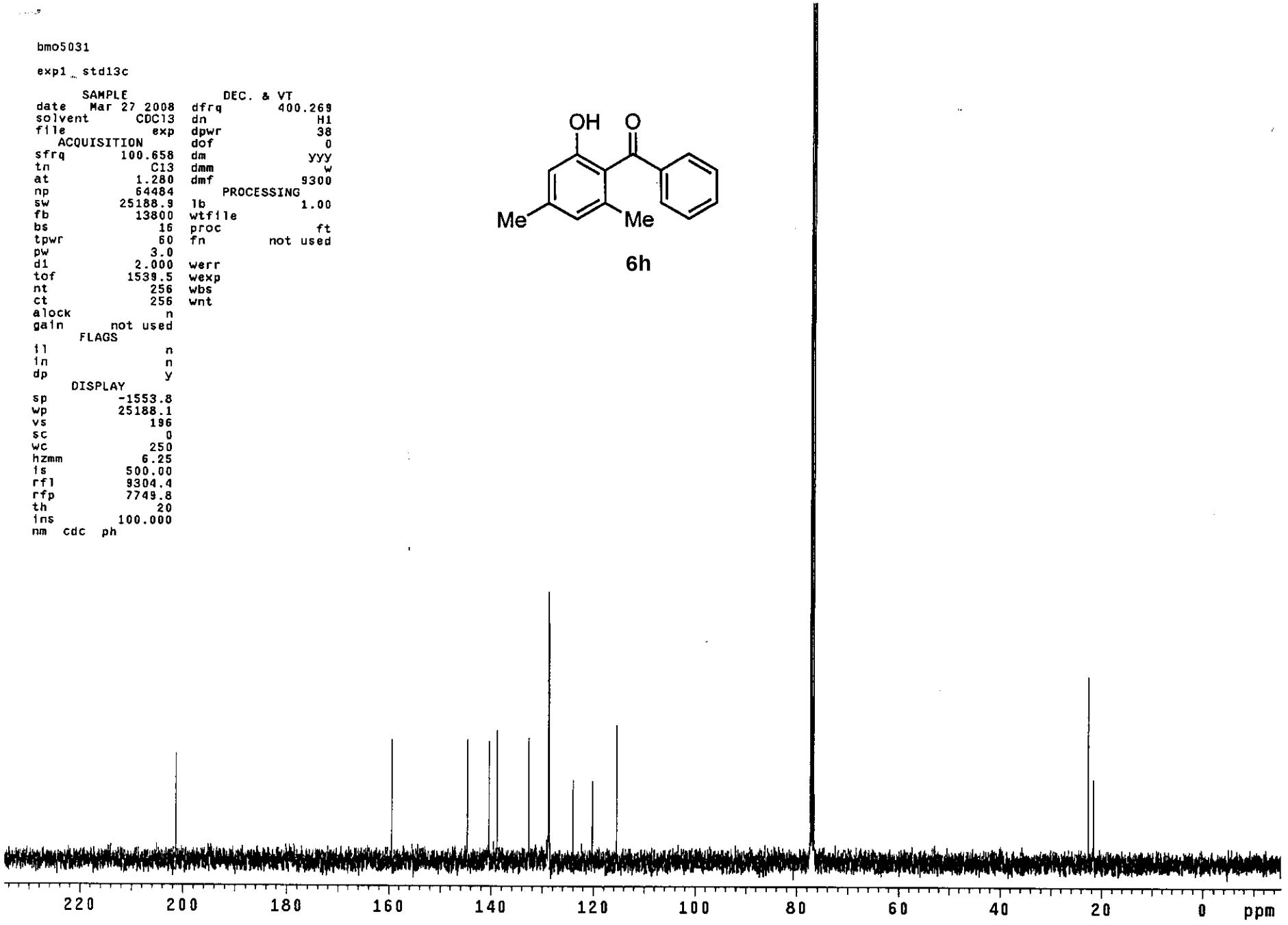


bmo5031

exp1 std13c

SAMPLE		DEC. & VT	
date	Mar 27 2008	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	64484	PROCESSING	
sw	25188.9	lb	1.00
fb	13800	wtfile	
bs	16	proc	ft
tpwr	60	fn	not used
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	256	wbs	
ct	256	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-1553.8		
wp	25188.1		
vs	196		
sc	0		
wc	250		
hzmm	6.25		
is	500.00		
rfl	9304.4		
rfp	7749.8		
th	20		
ins	100.000		
nm cdc ph			

6h

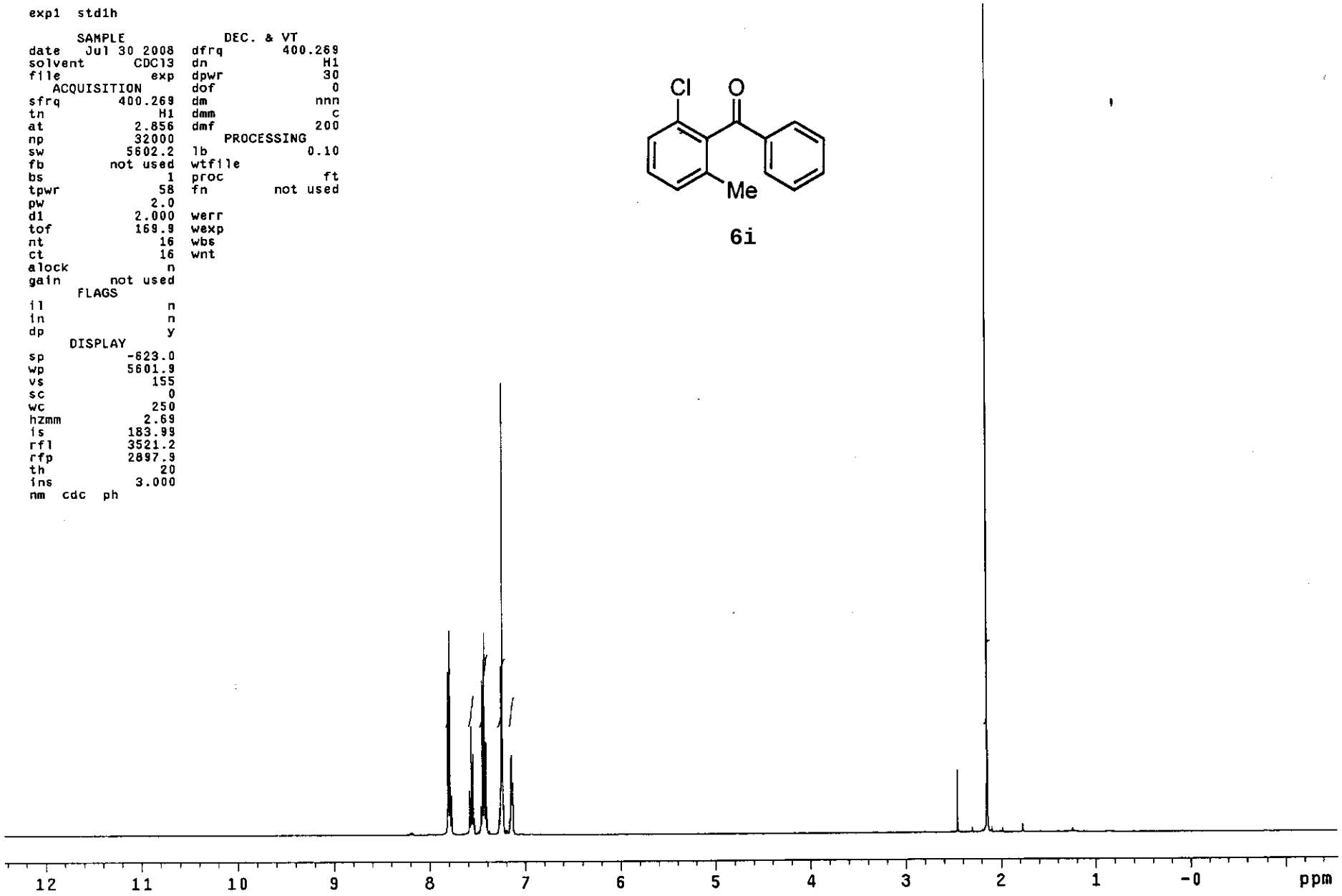


bmo_5225_3

exp1 std1h

SAMPLE		DEC. & VT	
date	Jul 30 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-623.0		
wp	5601.9		
vs	155		
sc	0		
wc	250		
hzmm	2.69		
is	183.98		
rfl	3521.2		
rfp	2897.9		
th	20		
ins	3.000		
nm cdc ph			

6i

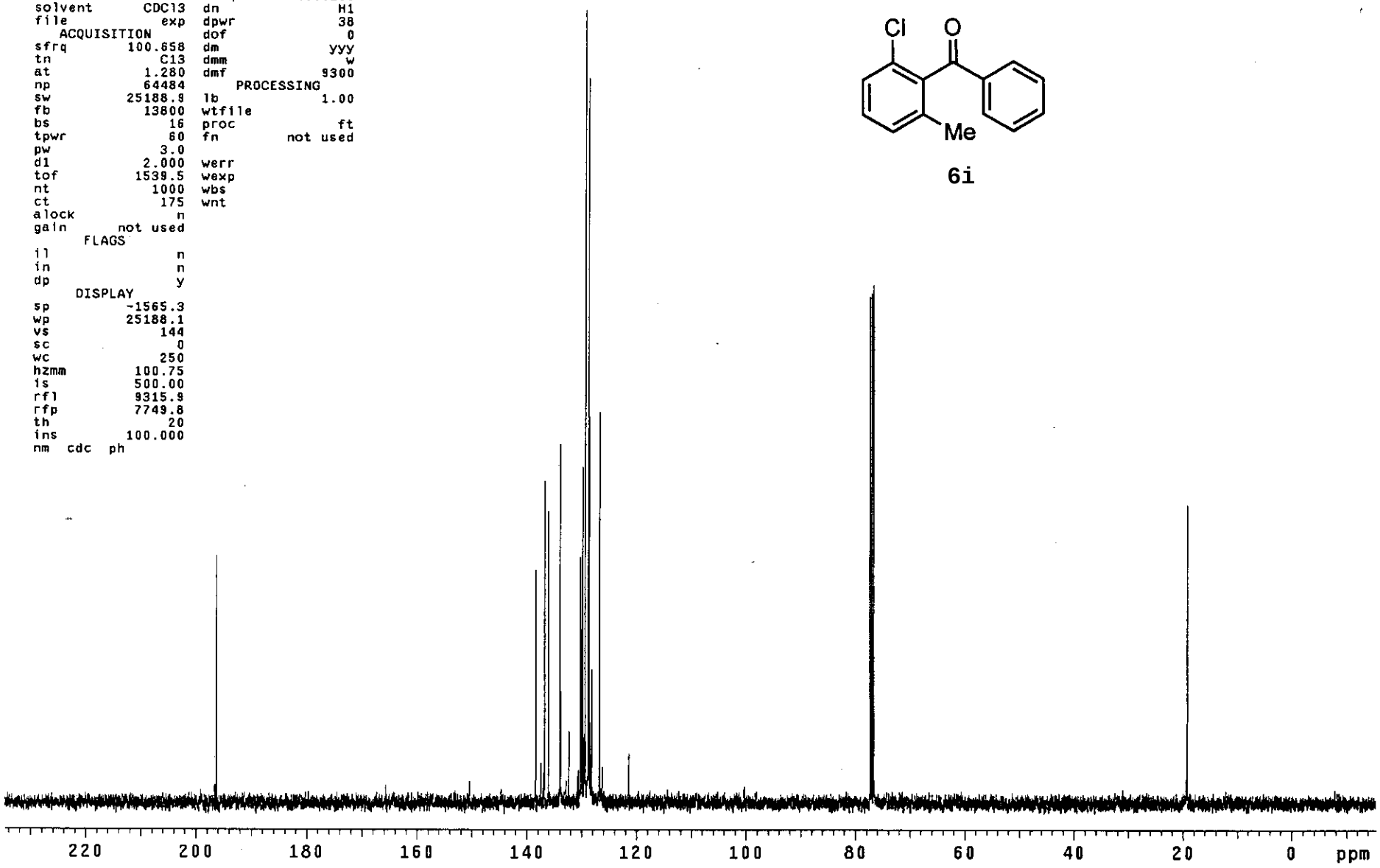


bmo_5225_2

exp1 std13c

SAMPLE		DEC. & VT	
date	Jul 30 2008	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	64484	PROCESSING	
sw	25188.9	lb	1.00
fb	13800	wtfile	
bs	16	proc	ft
tpwr	60	fn	not used
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	1000	wbs	
ct	175	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-1565.3		
wp	25188.1		
vs	144		
sc	0		
wc	250		
hzmm	100.75		
is	500.00		
rfl	9315.9		
rfp	7749.8		
th	20		
ins	100.000		
nm cdc ph			

6i



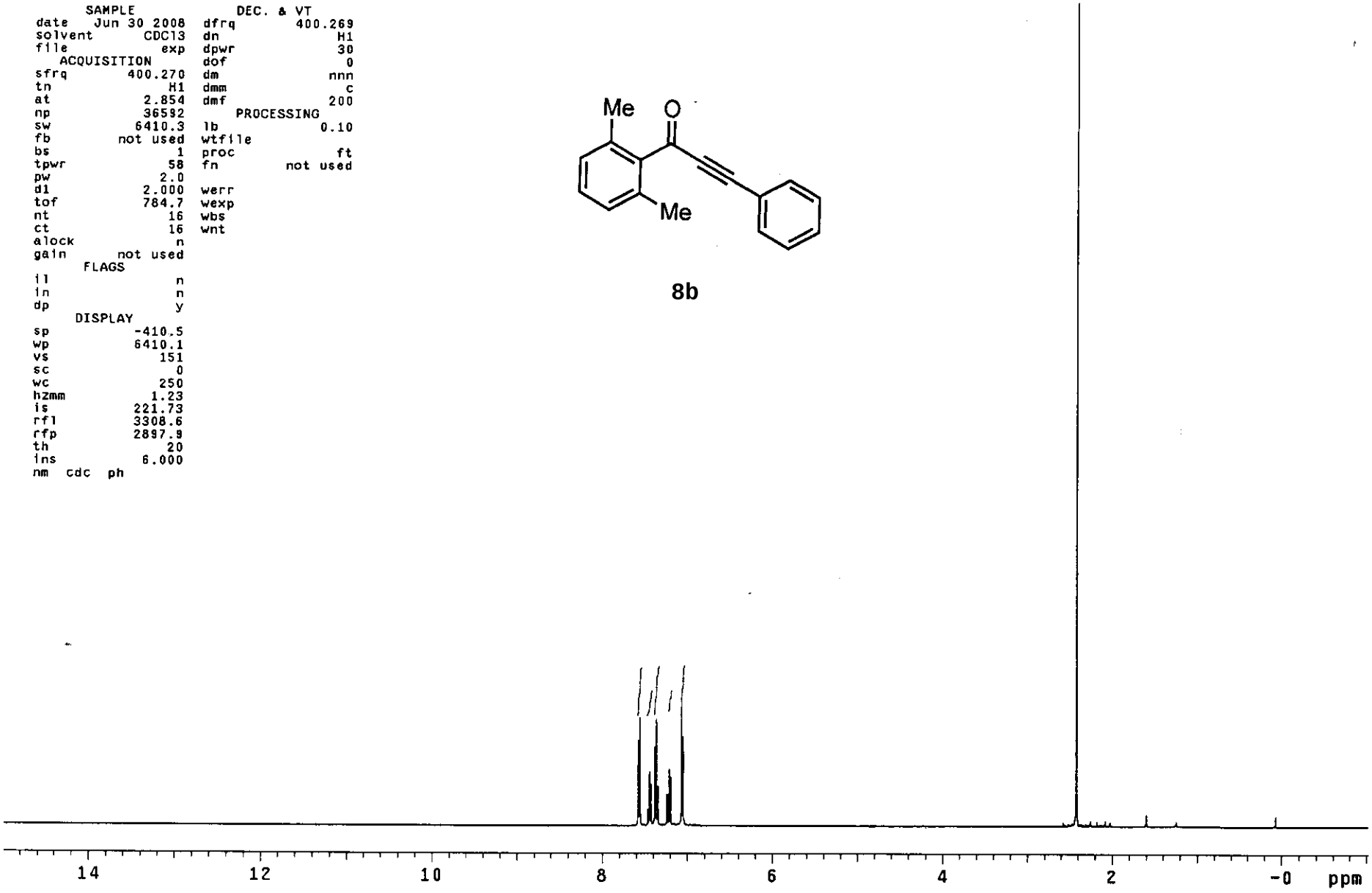
nls_1176_1

exp1 std1h

SAMPLE		DEC. & VT	
date	Jun 30 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.270	dm	nnn
tn	H1	dmm	c
at	2.854	dmf	200
np	36592	PROCESSING	
sw	6410.3	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	784.7	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-410.5		
wp	6410.1		
vs	151		
sc	0		
wc	250		
hzmm	1.23		
is	221.73		
rfl	3308.6		
rfp	2897.9		
th	20		
ins	6.000		

nm cdc ph

8b

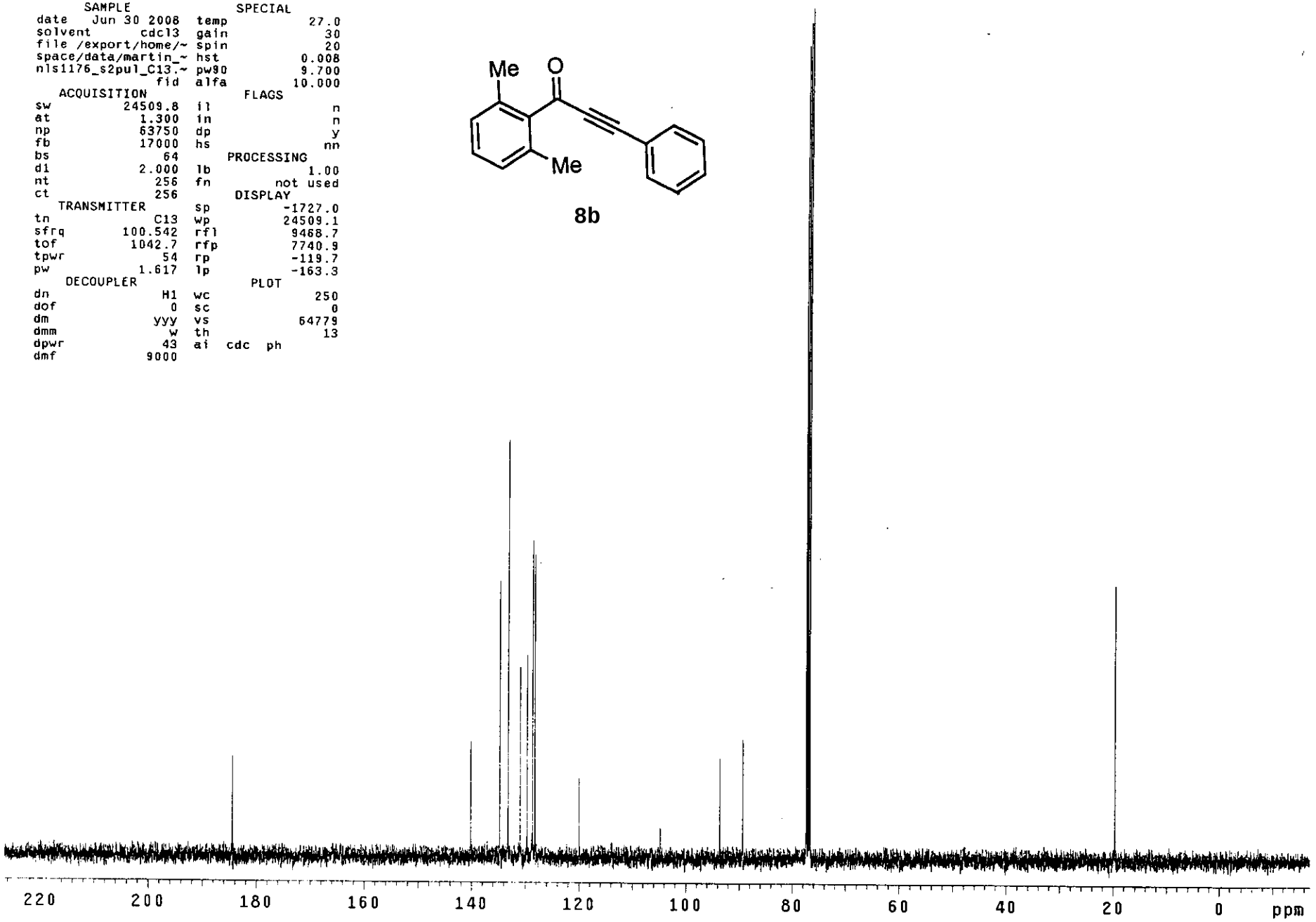


nls1176

exp1 Carbon

SAMPLE		SPECIAL	
date	Jun 30 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spin	20
space	/data/martin_~	hst	0.008
nls1176_s2pul_C13.~		pw90	9.700
	fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1727.0
tn	C13	wp	24509.1
sfrq	100.542	rfl	9468.7
tof	1042.7	rfp	7740.9
tpwr	54	rp	-119.7
pw	1.617	lp	-163.3
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	64779
dmm	w	th	13
dpwr	43	ai	cdc ph
dmf	9000		

8b

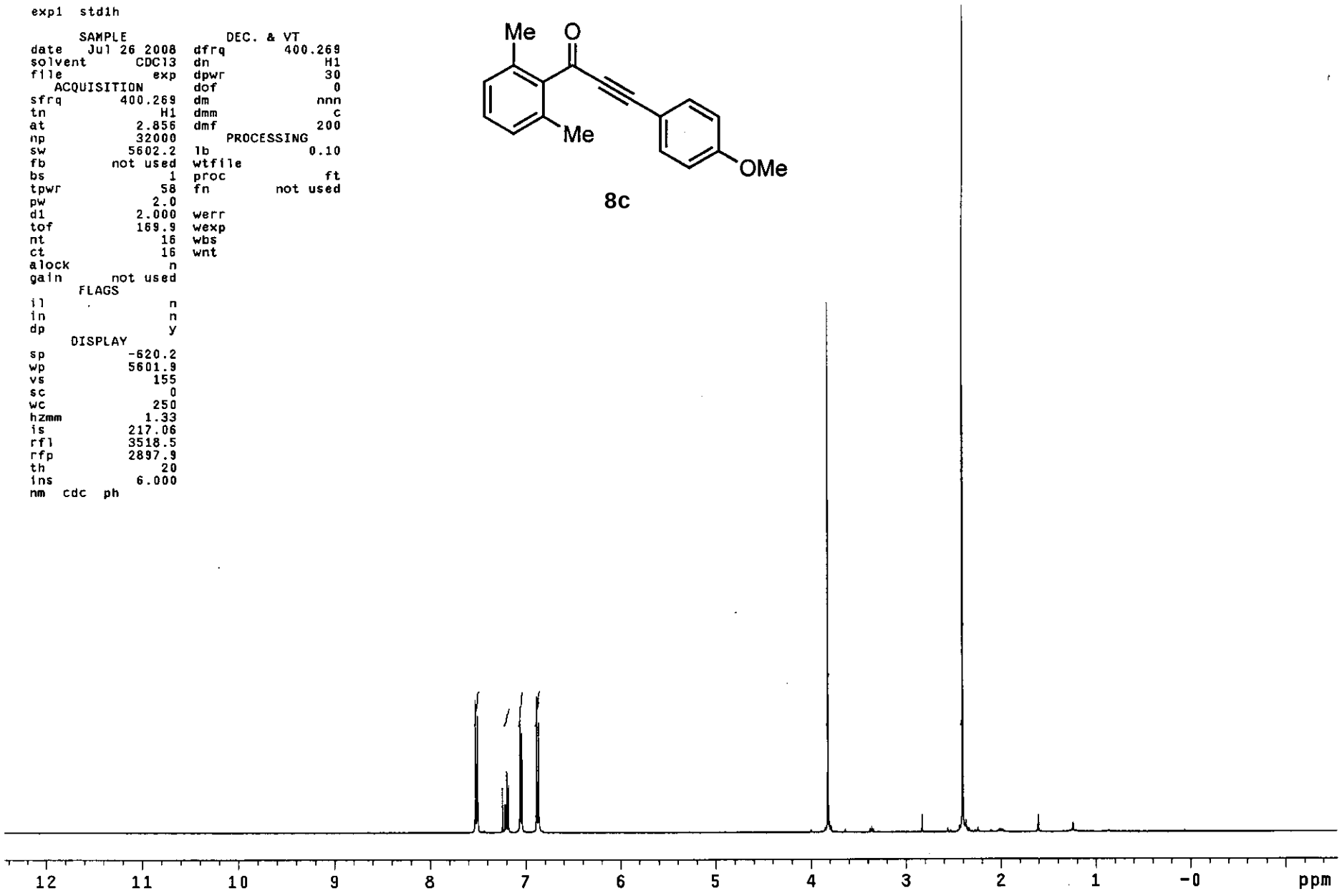


bmo_5221_2 F2

exp1 std1h

SAMPLE		DEC. & VT	
date	Jul 26 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-620.2		
wp	5601.9		
vs	155		
sc	0		
wc	250		
hzmm	1.33		
is	217.06		
rfl	3518.5		
rfp	2897.9		
th	20		
ins	6.000		
nm cdc ph			

8c

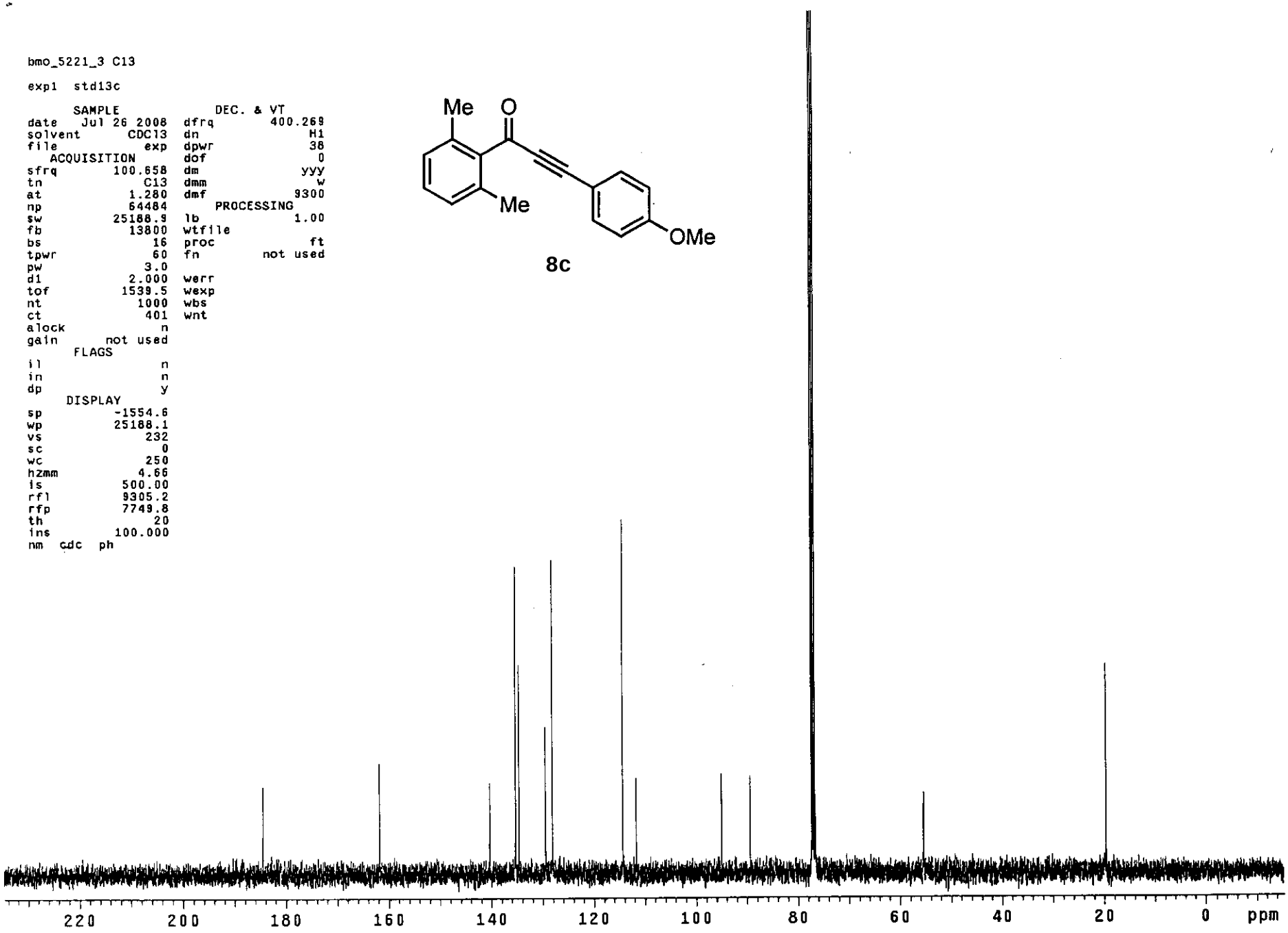


bmo_5221_3 C13

exp1 std13c

SAMPLE		DEC. & VT	
date	Jul 26 2008	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	64484	PROCESSING	
sw	25188.9	lb	1.00
fb	13800	wtfile	
bs	16	proc	ft
tpwr	60	fn	not used
pw	3.0		
d1	2.000	werr	
tof	1539.5	wexp	
nt	1000	wbs	
ct	401	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-1554.6		
wp	25188.1		
vs	232		
sc	0		
wc	250		
hzmm	4.66		
is	500.00		
rfl	9305.2		
rfp	7749.8		
th	20		
ins	100.000		
nm cdc ph			

8c

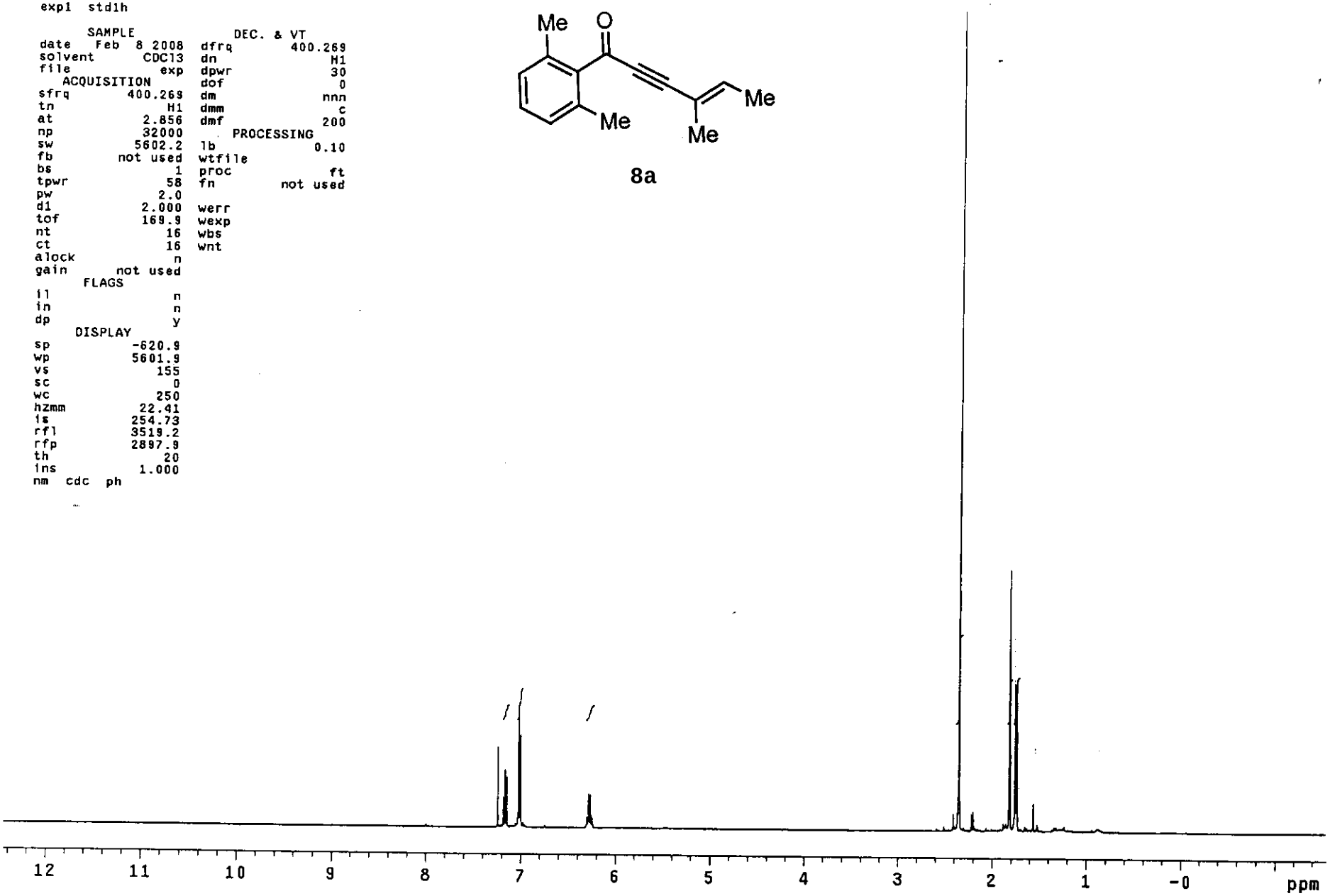


bmo-4256-2 P1

exp1 std1h

SAMPLE		DEC. & VT	
date	Feb 8 2008	dfrq	400.269
solvent	CDCl3	dn	H1
file	exp	dpwr	30
ACQUISITION		dof	0
sfrq	400.269	dm	nnn
tn	H1	dmm	c
at	2.856	dmf	200
np	32000	PROCESSING	
sw	5602.2	lb	0.10
fb	not used	wtfile	
bs	1	proc	ft
tpwr	58	fn	not used
pw	2.0		
d1	2.000	werr	
tof	169.9	wexp	
nt	16	wbs	
ct	16	wnt	
alock	n		
gain	not used		
FLAGS			
il	n		
in	n		
dp	y		
DISPLAY			
sp	-620.9		
wp	5601.9		
vs	155		
sc	0		
wc	250		
hzmm	22.41		
is	254.73		
rfl	3519.2		
rfp	2897.9		
th	20		
ins	1.000		
nm cdc ph			

8a

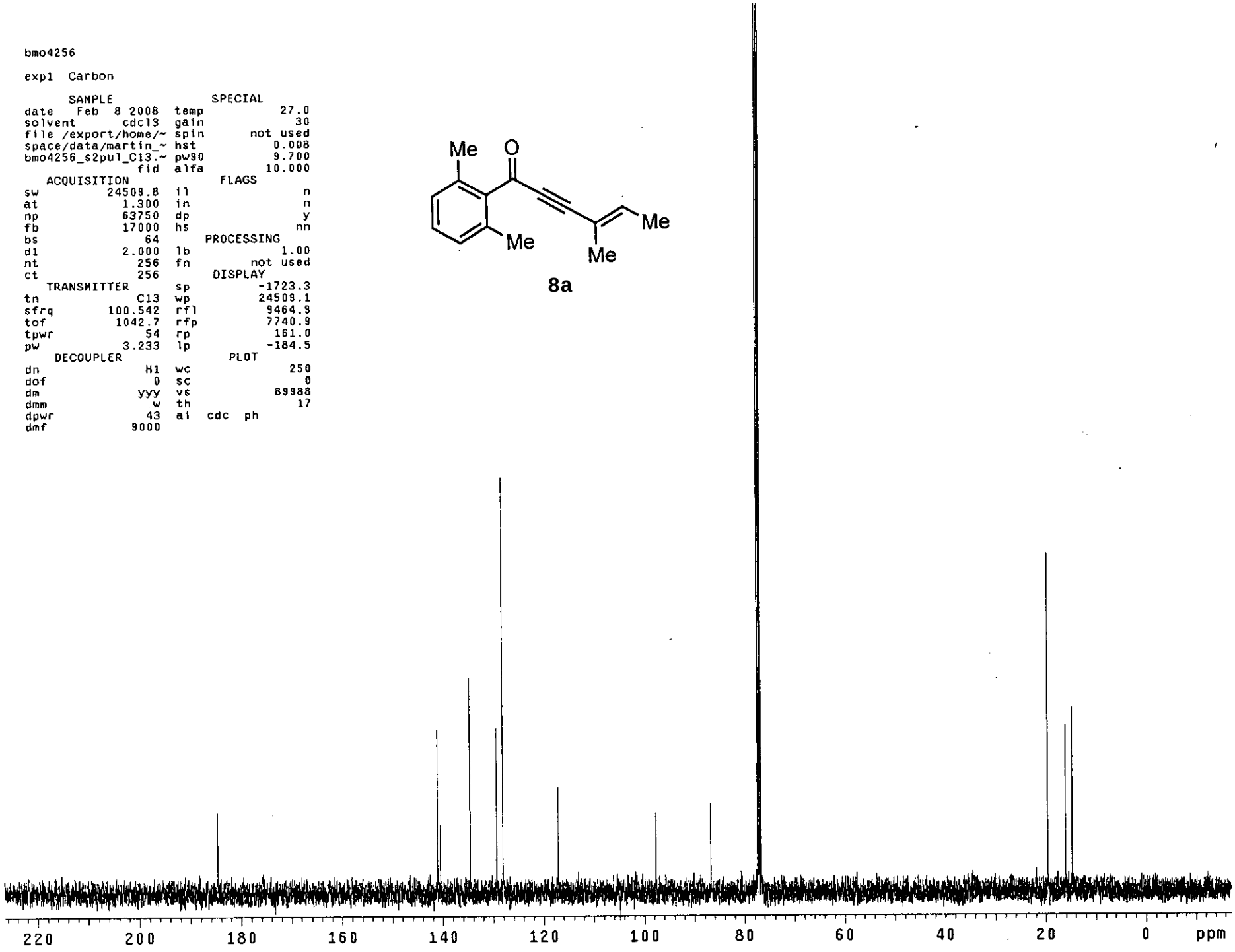


bmo4256

exp1 Carbon

SAMPLE		SPECIAL	
date	Feb 8 2008	temp	27.0
solvent	cdcl3	gain	30
file	/export/home/~	spin	not used
space	/data/martin_~	hst	0.008
bmo4256_s2pul_C13_~		pw90	9.700
	fid	alfa	10.000
ACQUISITION		**FLAGS**	
sw	24509.8	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	**PROCESSING**	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	**DISPLAY**	
TRANSMITTER		sp	-1723.3
tn	C13	wp	24509.1
sfrq	100.542	rf1	9464.9
tof	1042.7	rfp	7740.9
tpwr	54	rp	161.0
pw	3.233	lp	-184.5
DECOUPLER		**PLOT**	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	89988
dmm	w	th	17
dpwr	43	ai cdc ph	
dmf	9000		

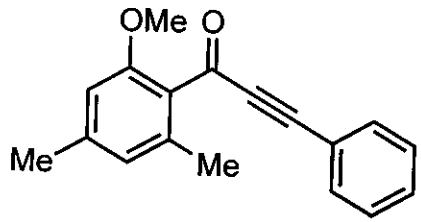
8a



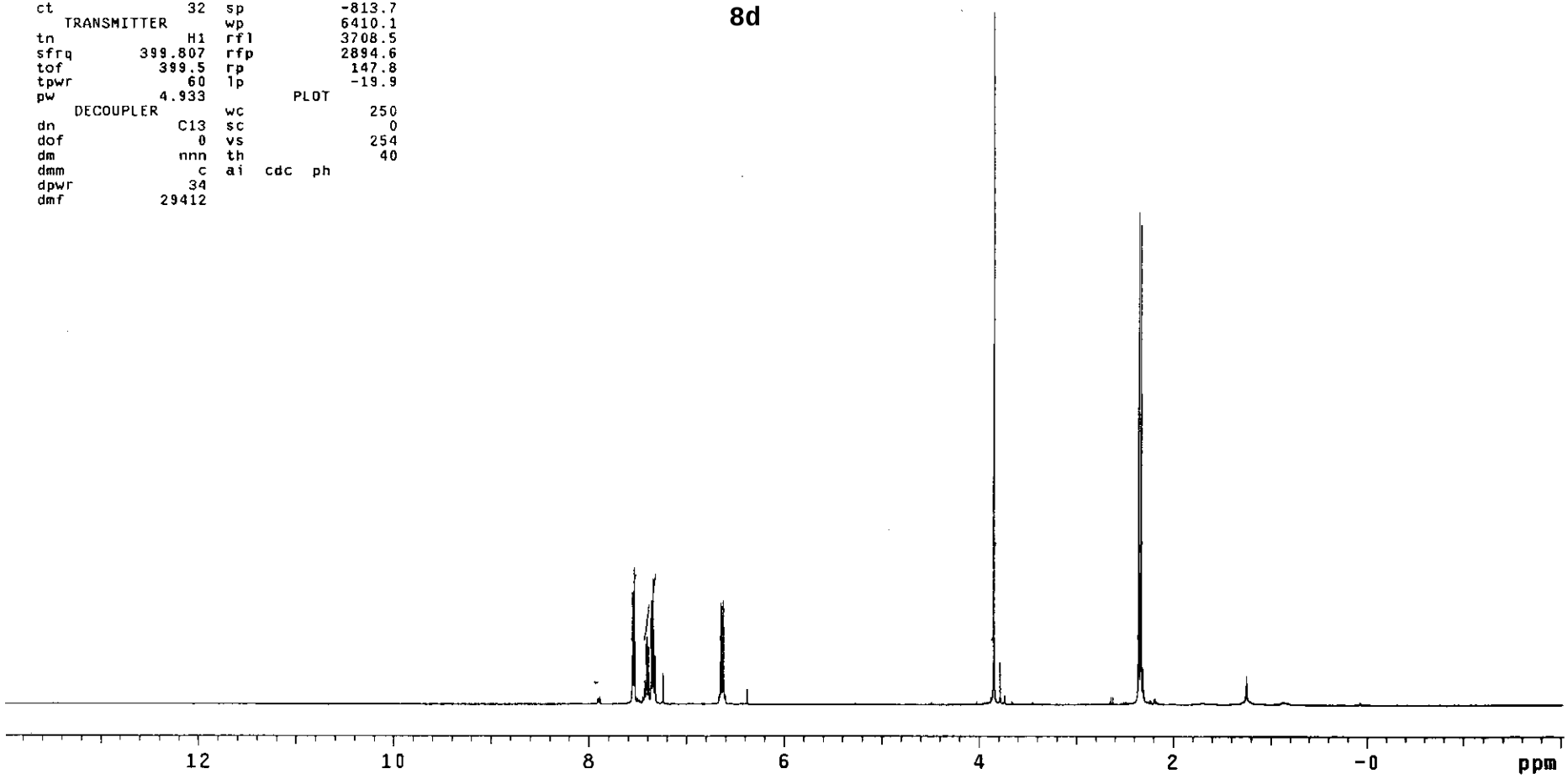
bmo5XXX

exp1 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_s2pul_~		pw90	14.800
	H1.fid	alfa	6.600
ACQUISITION		FLAGS	
sw	6410.3	il	n
at	4.049	in	n
np	51906	dp	y
fb	4000	hs	nn
bs	32	PROCESSING	
ss	2	lb	0.10
d1	2.000	fn	65536
nt	32	DISPLAY	
ct	32	sp	-813.7
TRANSMITTER		wp	6410.1
tn	H1	rfl	3708.5
sfrq	399.807	rfp	2894.6
tof	399.5	rp	147.8
tpwr	60	lp	-19.9
pw	4.933	PLOT	
DECOUPLER		wc	250
dn	C13	sc	0
dof	0	vs	254
dm	nnn	th	40
dmm	c	ai cdc ph	
dpwr	34		
dmf	29412		



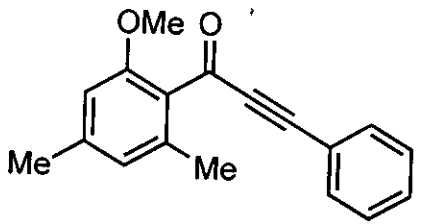
8d



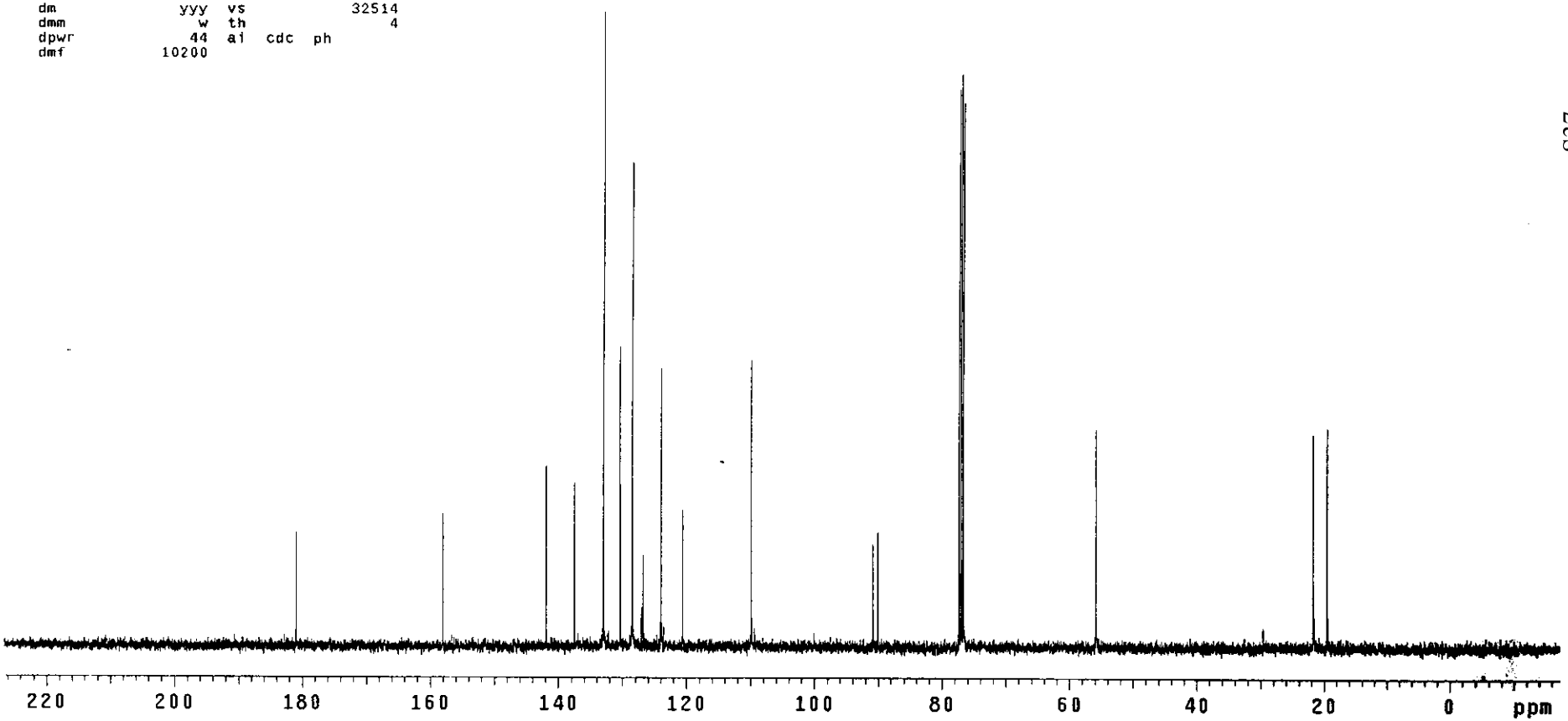
bmo5XXX

exp1 Carbon

SAMPLE		SPECIAL	
date	Sep 9 2008	temp	27.0
solvent	cdcl3	gain	30
file	/mnt/home_dir~	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	il	n
at	1.300	in	n
np	63750	dp	y
fb	17000	hs	nn
bs	64	PROCESSING	
d1	2.000	lb	1.00
nt	256	fn	not used
ct	256	DISPLAY	
TRANSMITTER		sp	-1729.3
tn	C13	wp	24509.1
sfrq	100.542	rfl	9470.9
tof	1042.7	rfp	7740.9
tpwr	54	rp	-139.7
pw	3.233	lp	-176.2
DECOUPLER		PLOT	
dn	H1	wc	250
dof	0	sc	0
dm	yyy	vs	32514
dmm	w	th	4
dpwr	44	ai	cdc ph
dmf	10200		



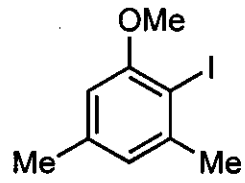
8d



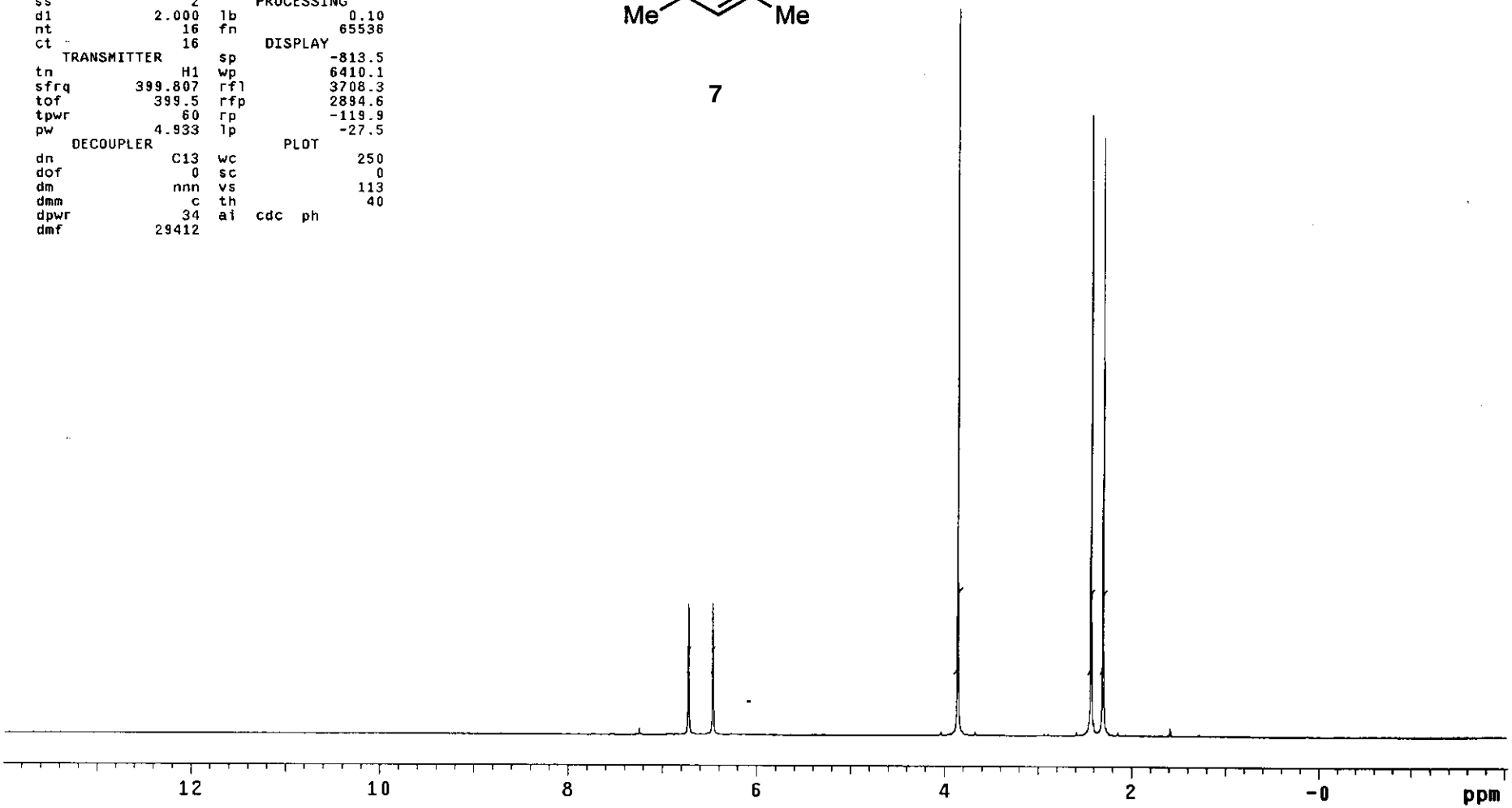
nls1183

exp1 Proton

SAMPLE		SPECIAL	
date	Sep 12 2008	temp	27.0
solvent	cdcl3	gain	not used
file	/mnt/home_dir~	spin	20
	s/space/data/nls11~	hst	0.008
	83_s2pul_H1.fid	pw90	14.800
ACQUISITION		alfa	6.600
sw	6410.3	FLAGS	
at	4.049	il	n
np	51906	in	n
fb	4000	dp	y
bs	32	hs	nn
ss	2	PROCESSING	
d1	2.000	lb	0.10
nt	16	fn	65536
ct	16	DISPLAY	
TRANSMITTER		sp	-813.5
tn	H1	wp	6410.1
sfrq	399.807	rfl	3708.3
tof	399.5	rfp	2894.6
tpwr	60	rp	-119.9
pw	4.933	lp	-27.5
DECOUPLER		PLOT	
dn	C13	wc	250
dof	0	sc	0
dm	nnn	vs	113
dmm	c	th	40
dpwr	34	ai cdc ph	
dmf	29412		



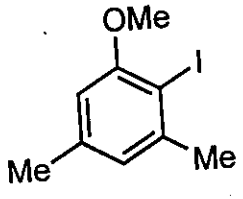
7



nls1183

expl Carbon

SAMPLE		SPECIAL	
date	Sep 12 2008	temp	27.0
solvent	cdcl3	gain	30
file	/mnt/home_dir~	spin	20
s/space/data/nls11~		hst	0.008
83_s2pul_C13.fid		pw90	9.700
ACQUISITION		alfa	10.000
sw	24509.8	FLAGS	
at	1.300	il	n
np	63750	in	n
fb	17000	dp	y
bs	64	hs	nn
d1	2.000	PROCESSING	
nt	256	lb	1.00
ct	256	fn	not used
TRANSMITTER		DISPLAY	
tn	C13	sp	-1742.0
sfrq	100.542	wp	24509.1
tof	1042.7	rfl	9483.6
tpwr	54	rfp	7740.9
pw	3.233	rp	138.5
DECOUPLER		lp	-183.3
dn	H1	PLOT	
dof	0	wc	250
dm	yyy	sc	0
dmm	w	vs	16830
dpwr	44	th	3
dmf	10200	ai cdc ph	



7