

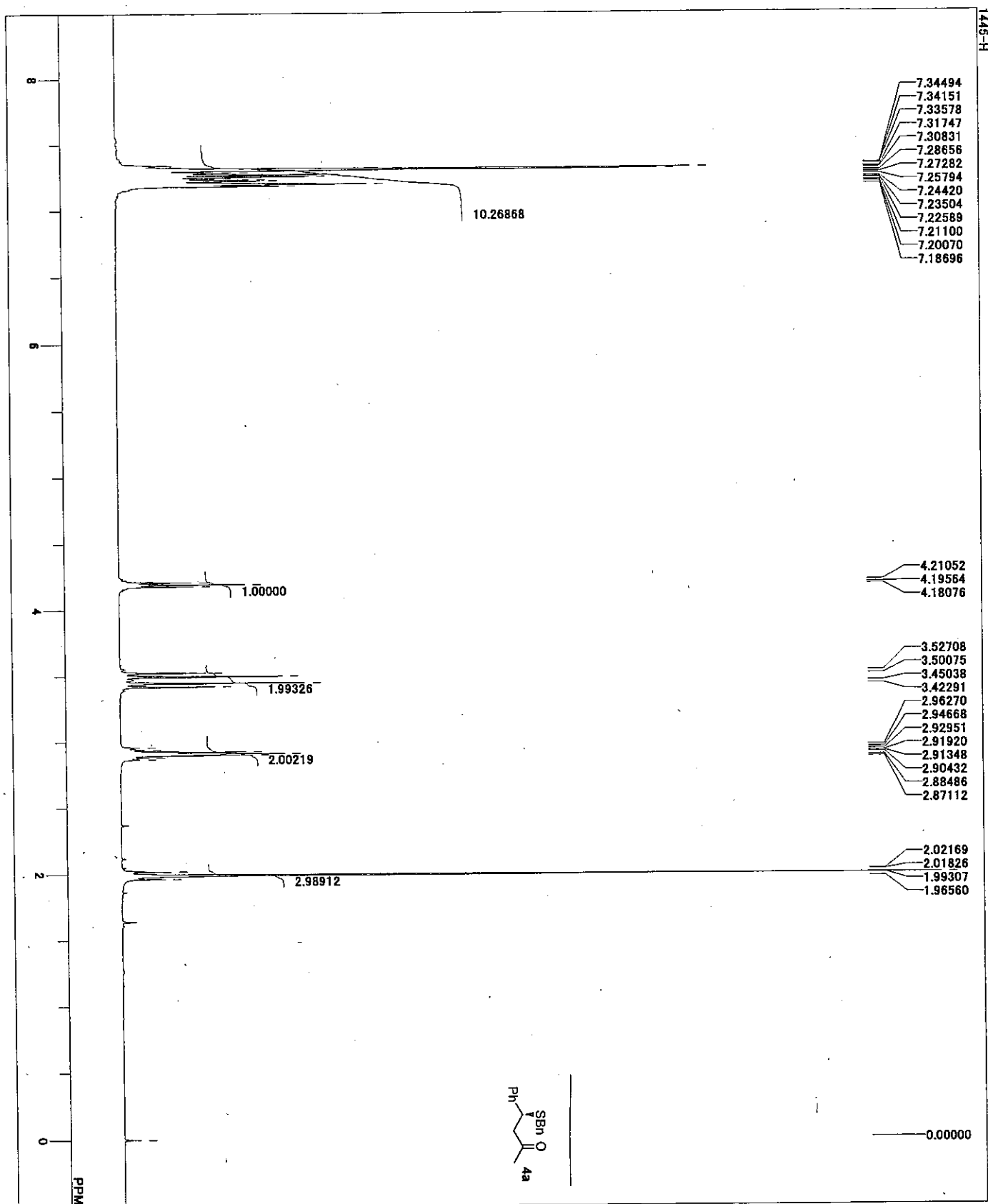
# Chiral-Sc Catalyzed Asymmetric Michael Addition/Protonation of Thiols with Enones in Water

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Department of Chemistry, School of Science and Graduate School of Pharmaceutical  
Sciences, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan

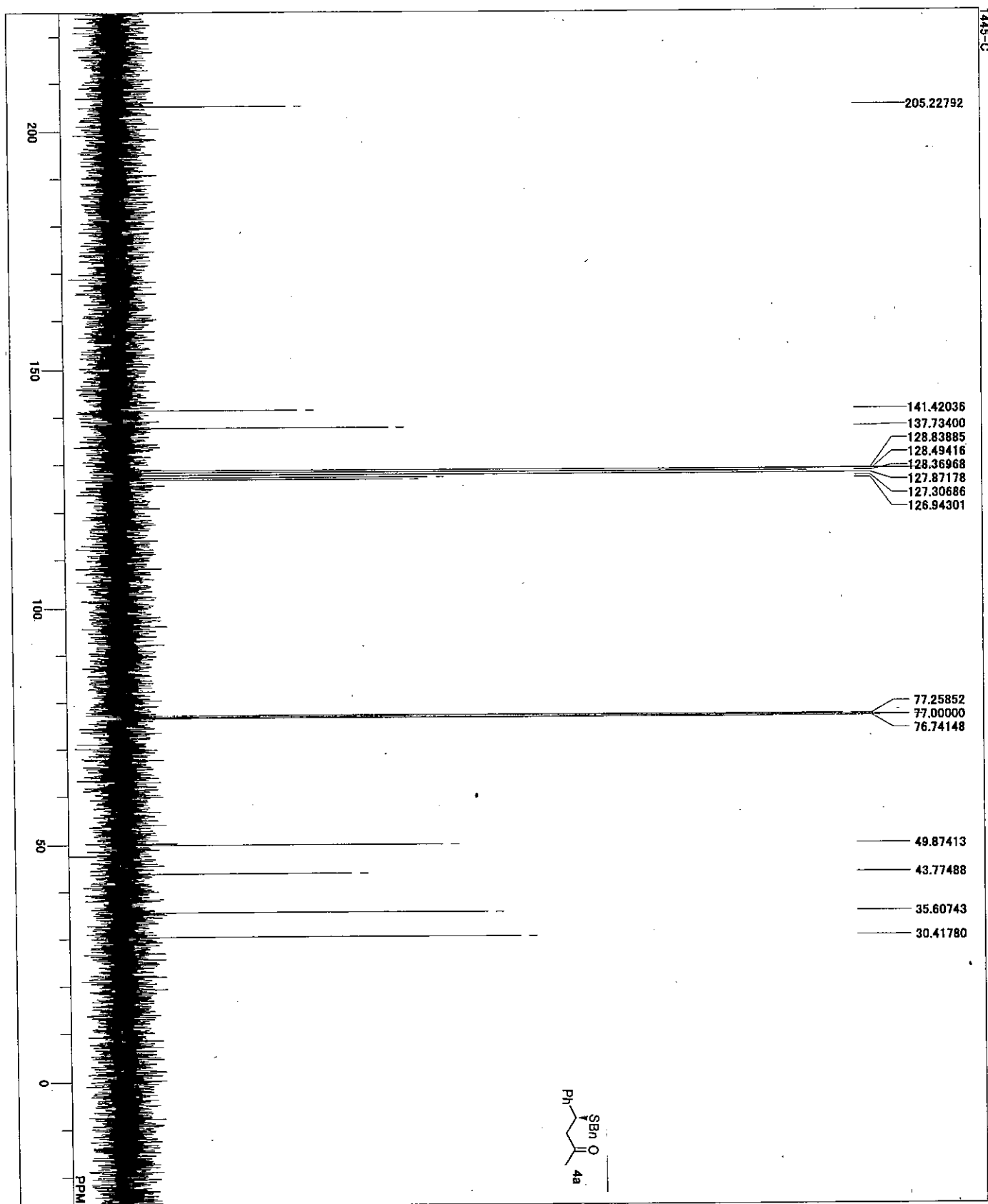
## Copies of $^1\text{H}$ and $^{13}\text{C}$ NMR Spectra

1.	Michael reactions of thiols <b>4a-4o</b> .....	S-2
2.	$\alpha,\beta$ -Unsaturated ketones <b>7g, 7h, 7o</b> .....	S-32
3.	Michael additions and protonations <b>6a-6f</b> .....	S-38
4.	Protonations <b>8a-8r</b> .....	S-50
5.	Desulfurization of protonated products <b>9p</b> .....	S-86
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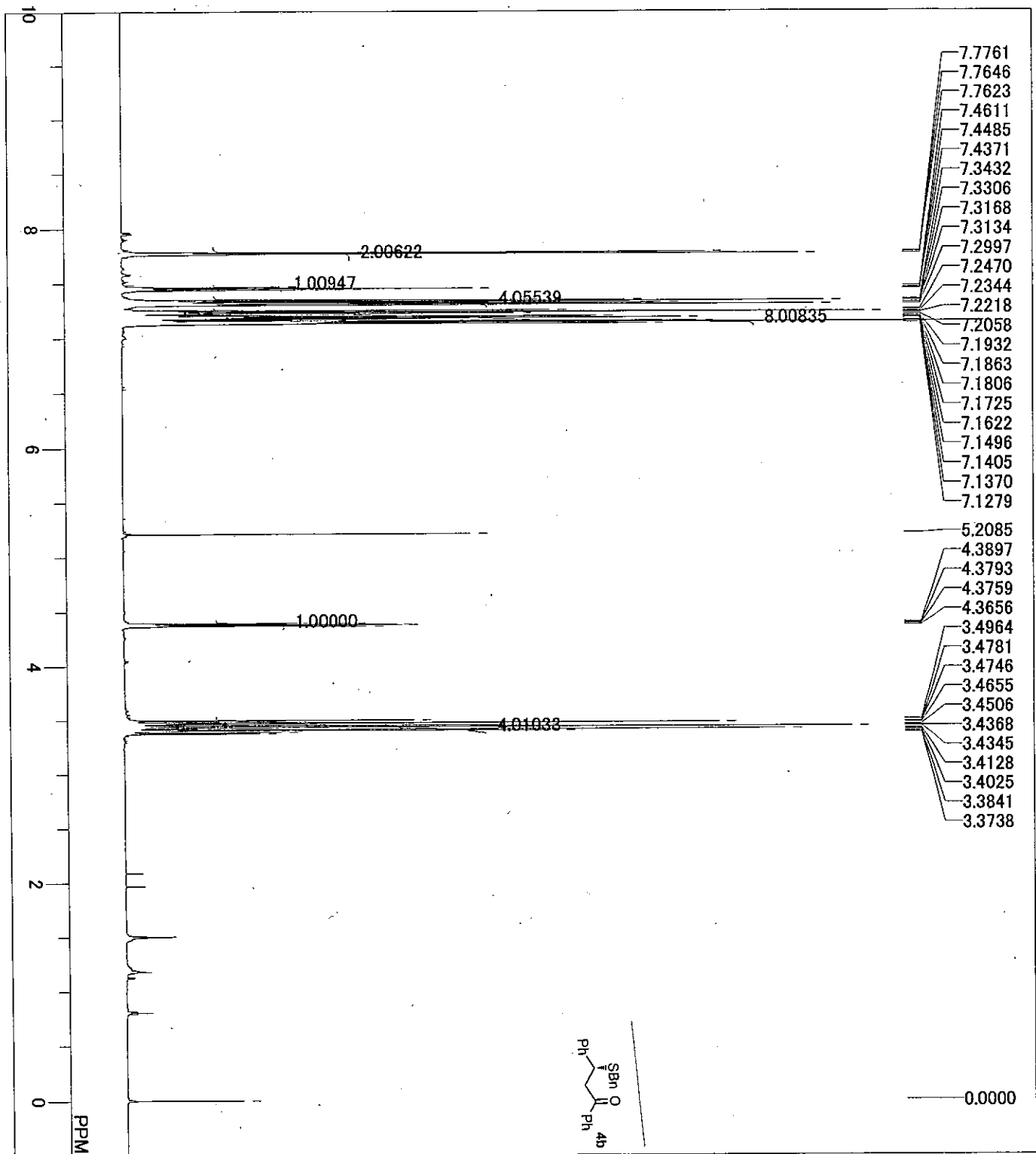


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 PW1 5.0000 sec  
 IRNUC 1H  
 CTEMP 19.1 °C  
 SLYNT  
 EXREF CDCl3  
 BF 0.00 ppm  
 RGAIN 0.12 Hz  
 32

C:\Documents and Settings\KALLOE2\Documents\1445-C-1.jdf  
 1445-C

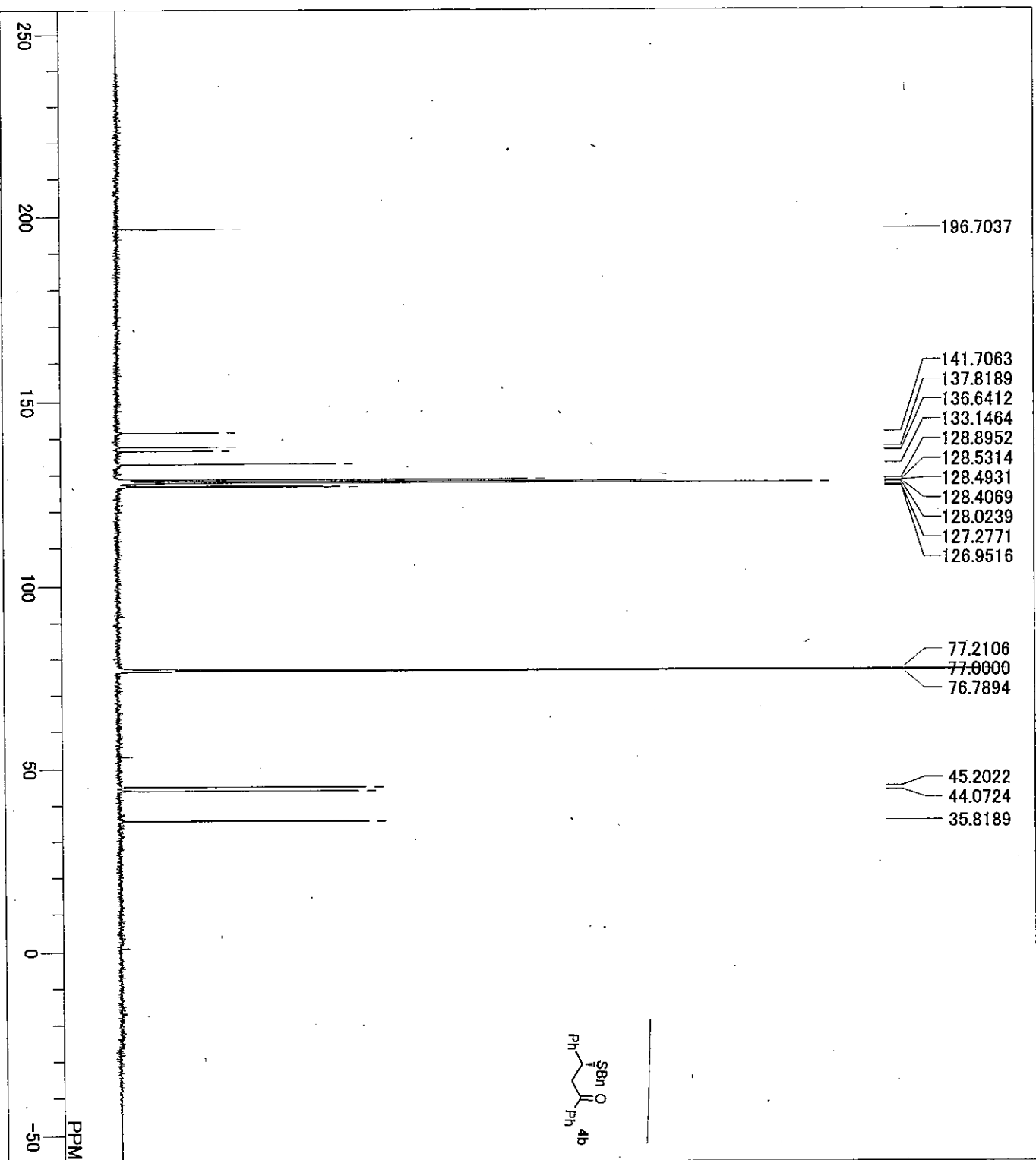


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 OBFIN 6.00 Hz  
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 BF 60  
 RGAIN



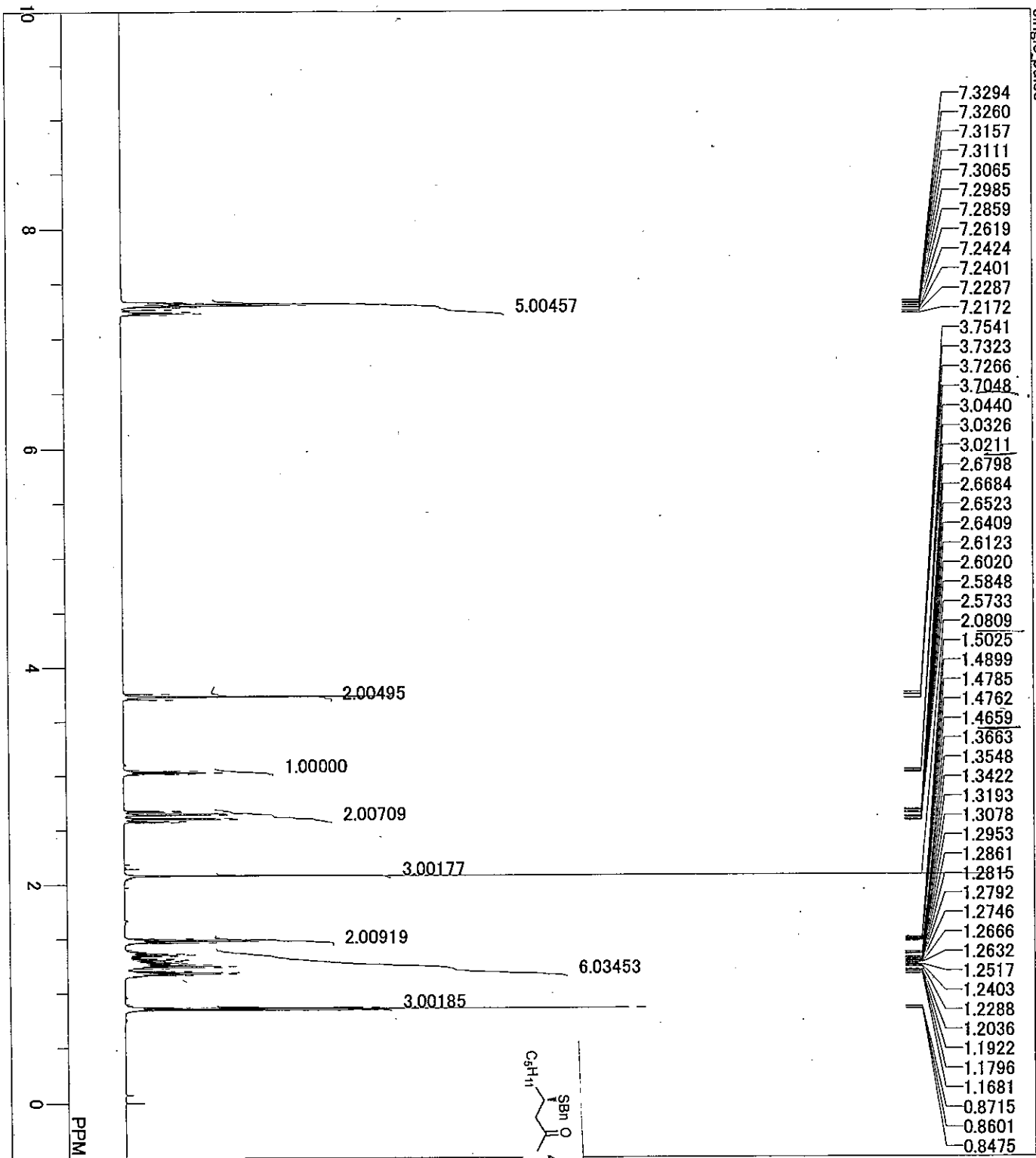
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 PW1  
 IRNUC  
 CTEMP  
 SLVNT  
 EXREF  
 BF  
 RGAIN

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 5.47 Hz  
 16384  
 11261.26 Hz  
 16  
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 4.0000 sec  
 6.50 usec  
 1H  
 18.4 °C  
 CDCl3  
 0.00 ppm  
 0.12 Hz  
 38



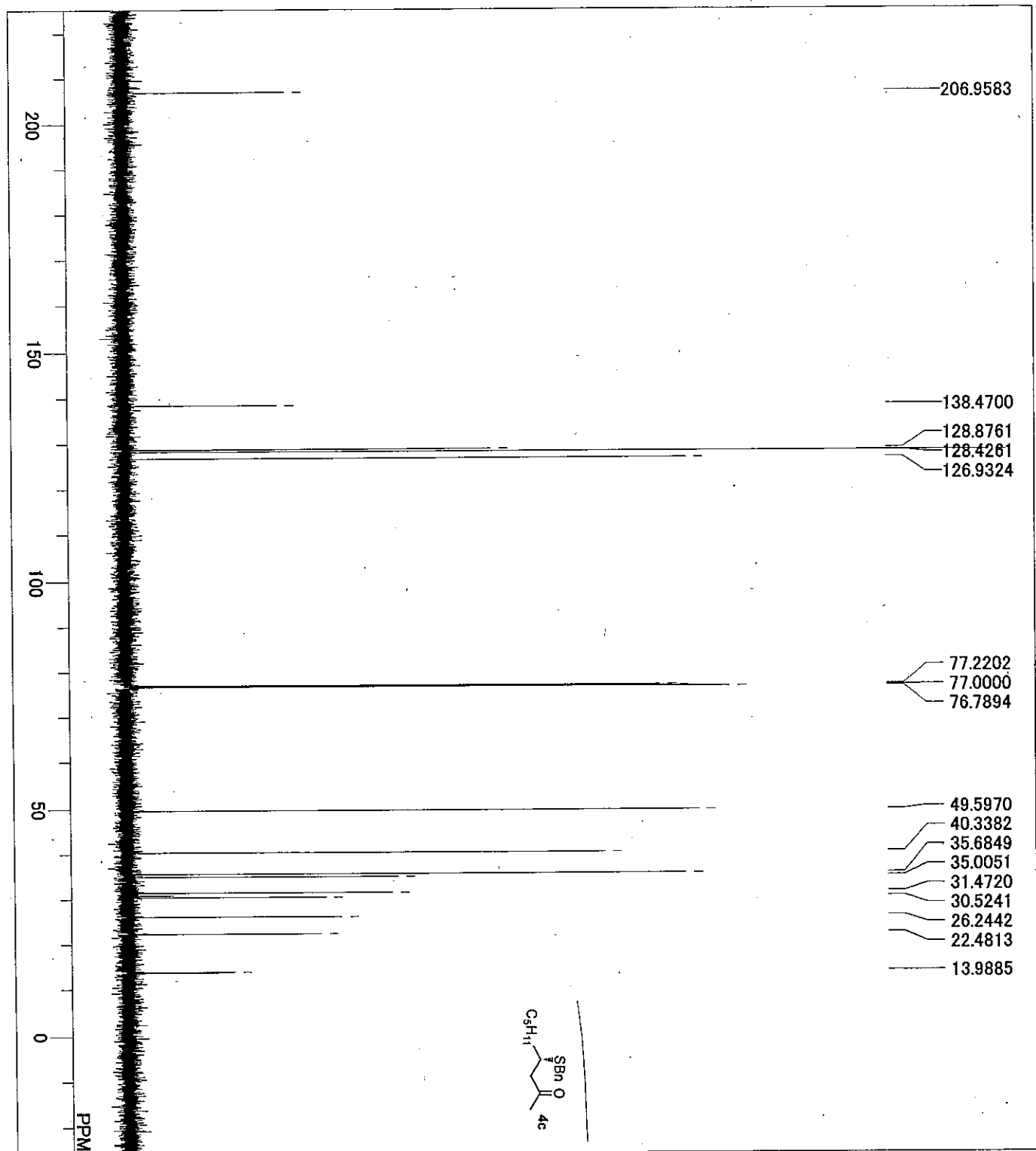
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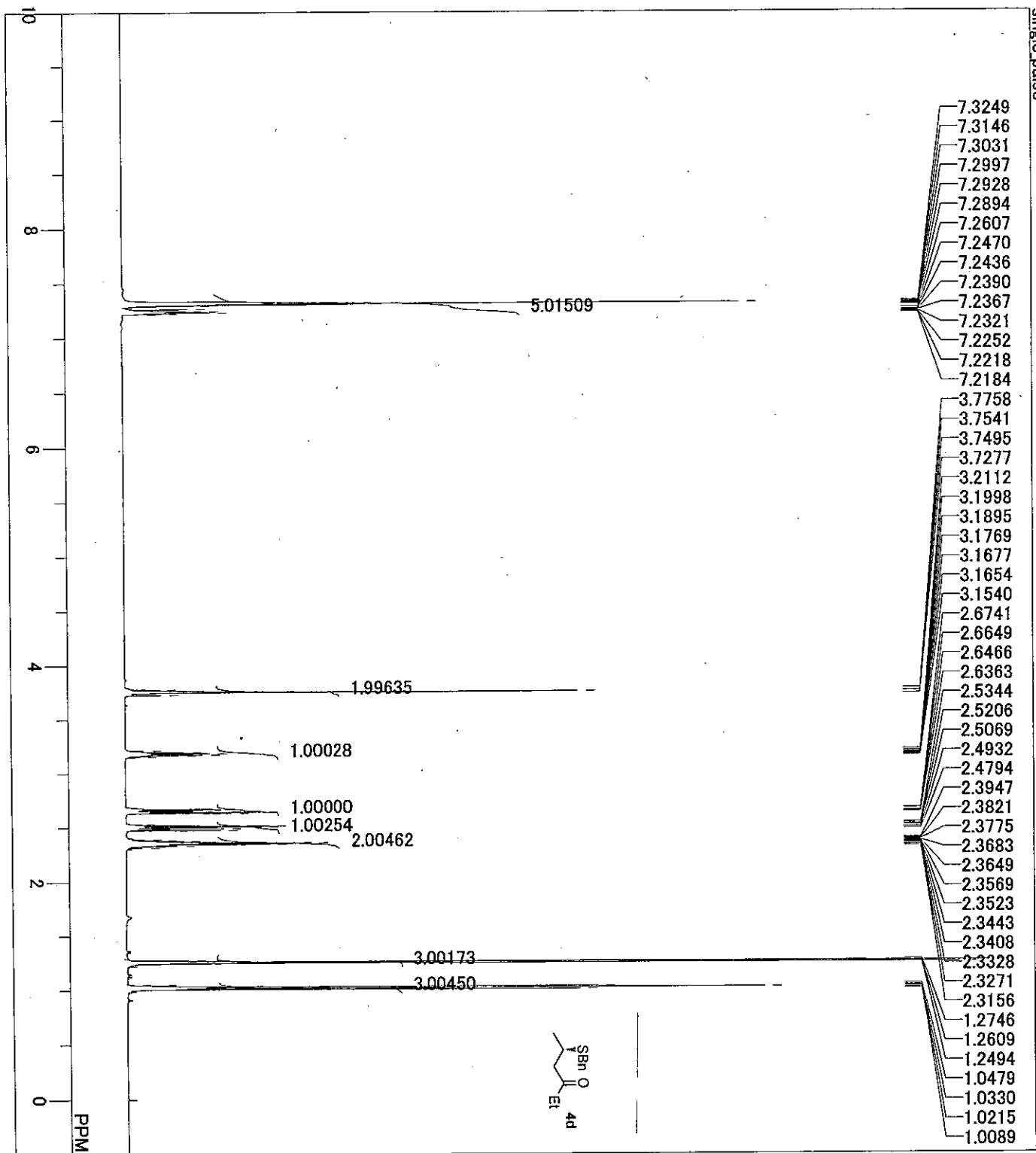
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 CTEMP  
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 BF  
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C:\Documents and Settings\delta\My D  
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 8  
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 1H  
 17.9 c  
 CDCL3  
 0.00 ppm  
 0.12 Hz  
 32



FILE  
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 SCANS 102  
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 PD 2.0000 sec  
 PW1 2.87 usec  
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 CTEMP 18.9 c  
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 single pulse



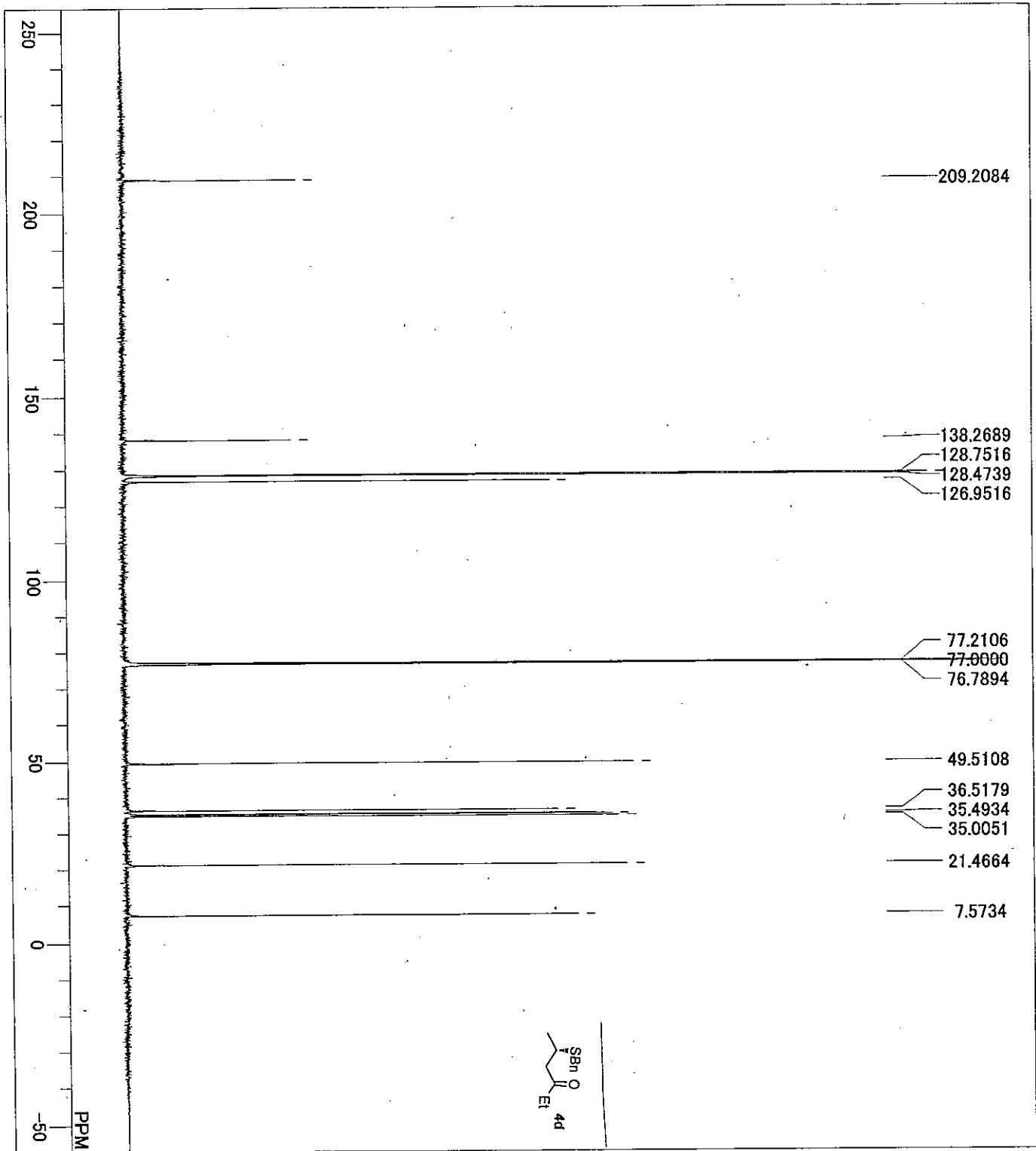
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 PD  
 PW1  
 IRNUC  
 CTEMP  
 SLVNT  
 EXREF  
 BF  
 RGAIN

1H  
 17.6 °  
 CDCL3  
 0.00 ppm  
 0.12 Hz  
 34

single pulse  
 16-02-2011 02:25:50  
 1H  
 single pulse,ex2  
 600.17 MHz  
 5.30 KHz  
 5.47 Hz  
 13107  
 9008.87 Hz  
 8  
 1.4549 sec  
 2.0000 sec  
 6.50 usec

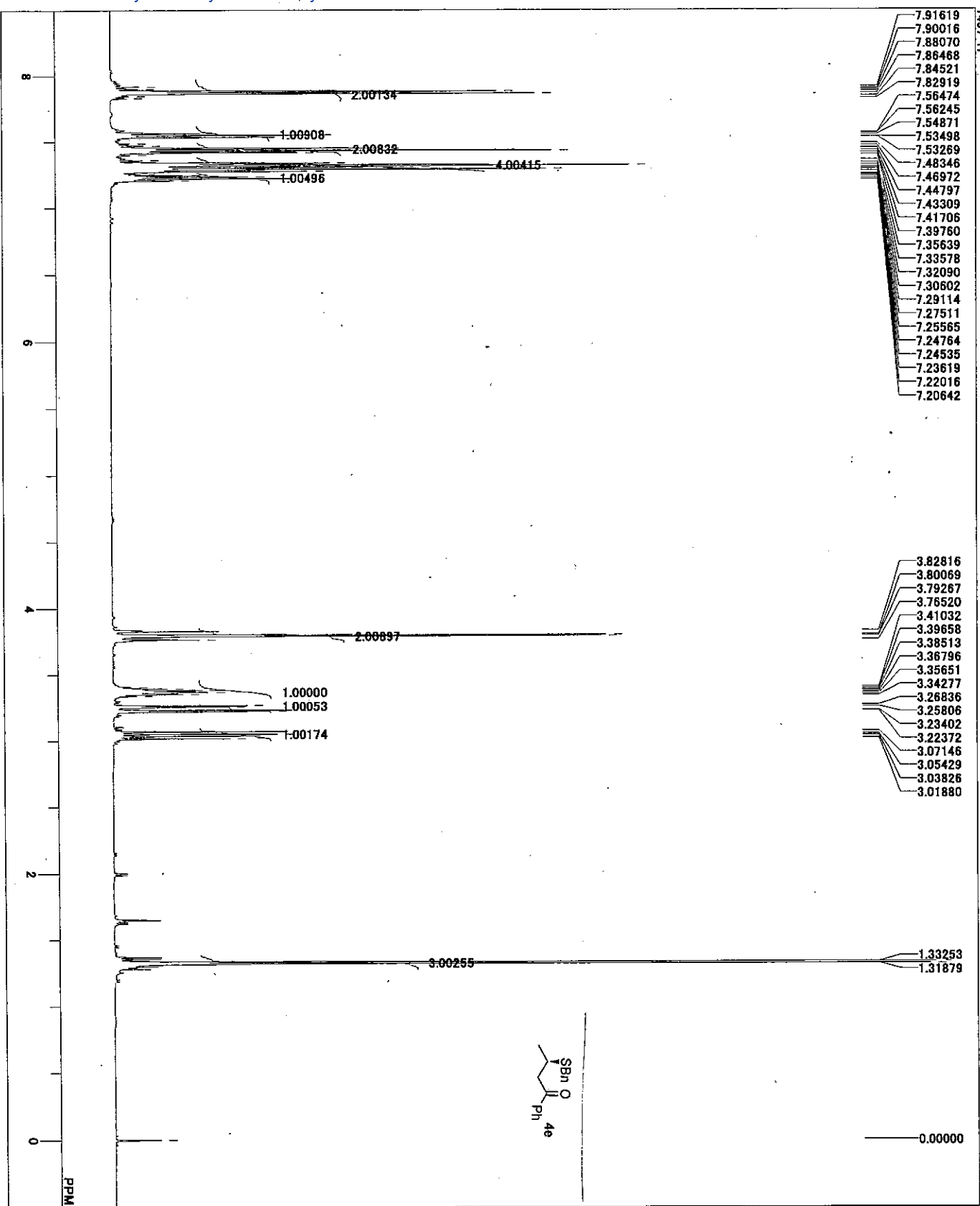
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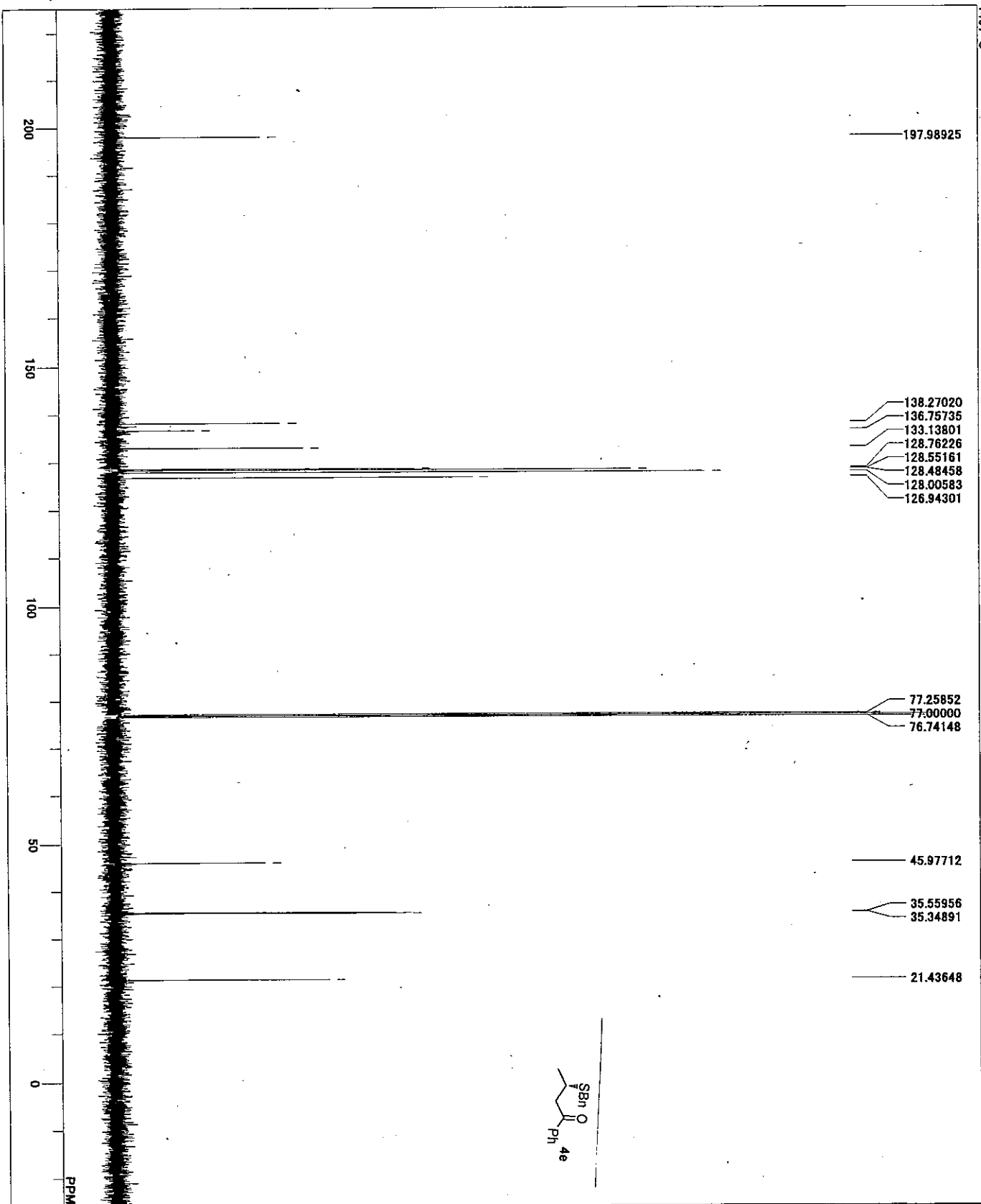
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SCANS	1024
ACQTM	0.6921 sec
PD	2.0000 sec
PW1	2.87 usec
IRNUC	1H
CTEMP	19.6 c
SLVNT	CDCl3
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1497-H



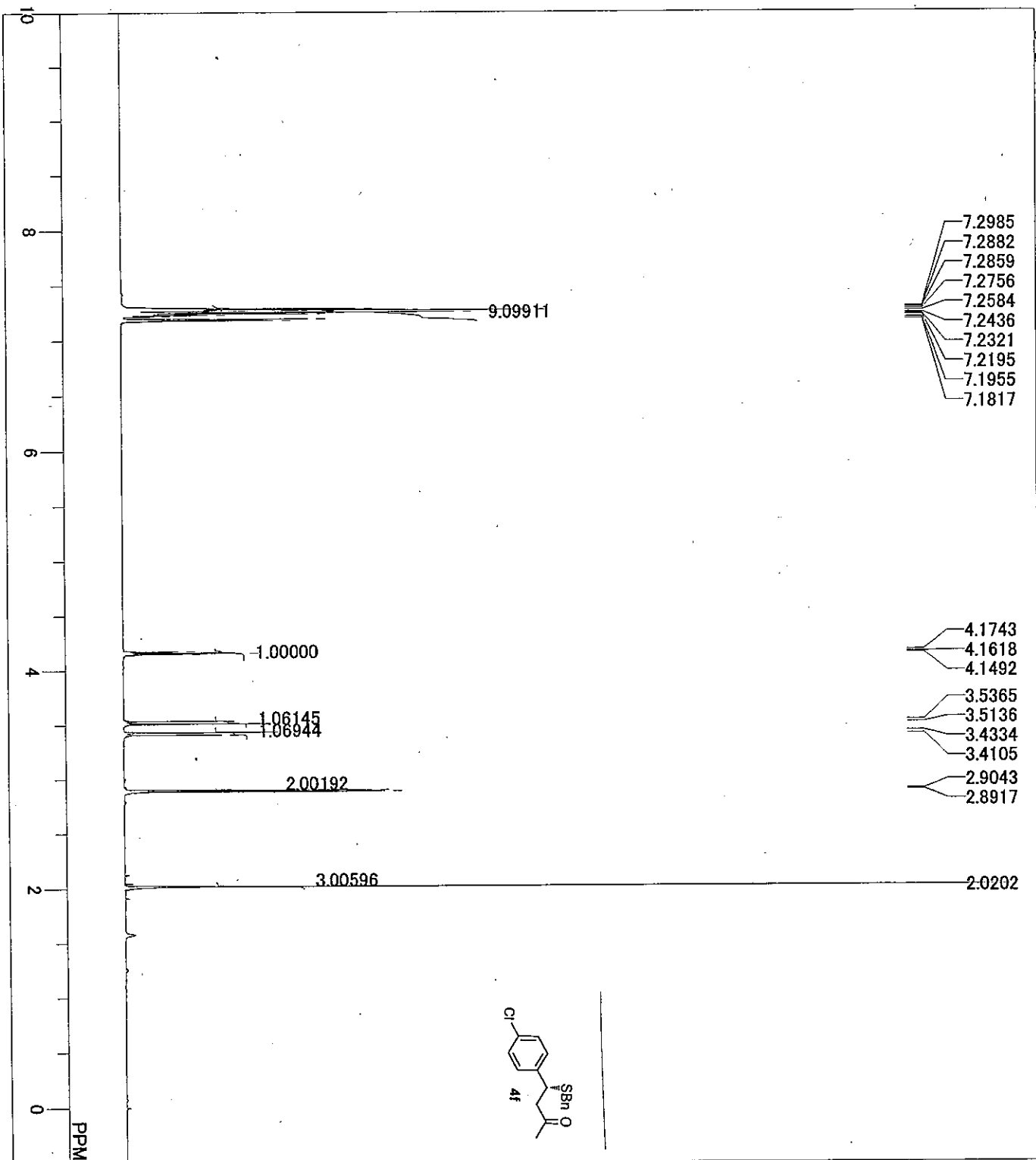
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OBFIN 9.64 Hz  
POINT 16384  
FREQU 9286.78 Hz  
SCANS 8  
ACQTM  
PD 1.7642 sec  
PW1 5.0000 sec  
IRNUC 5.80 usec  
CTEMP 18.2 c  
SLVNT CDCl3  
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BF 0.12 Hz  
RGAIN 34

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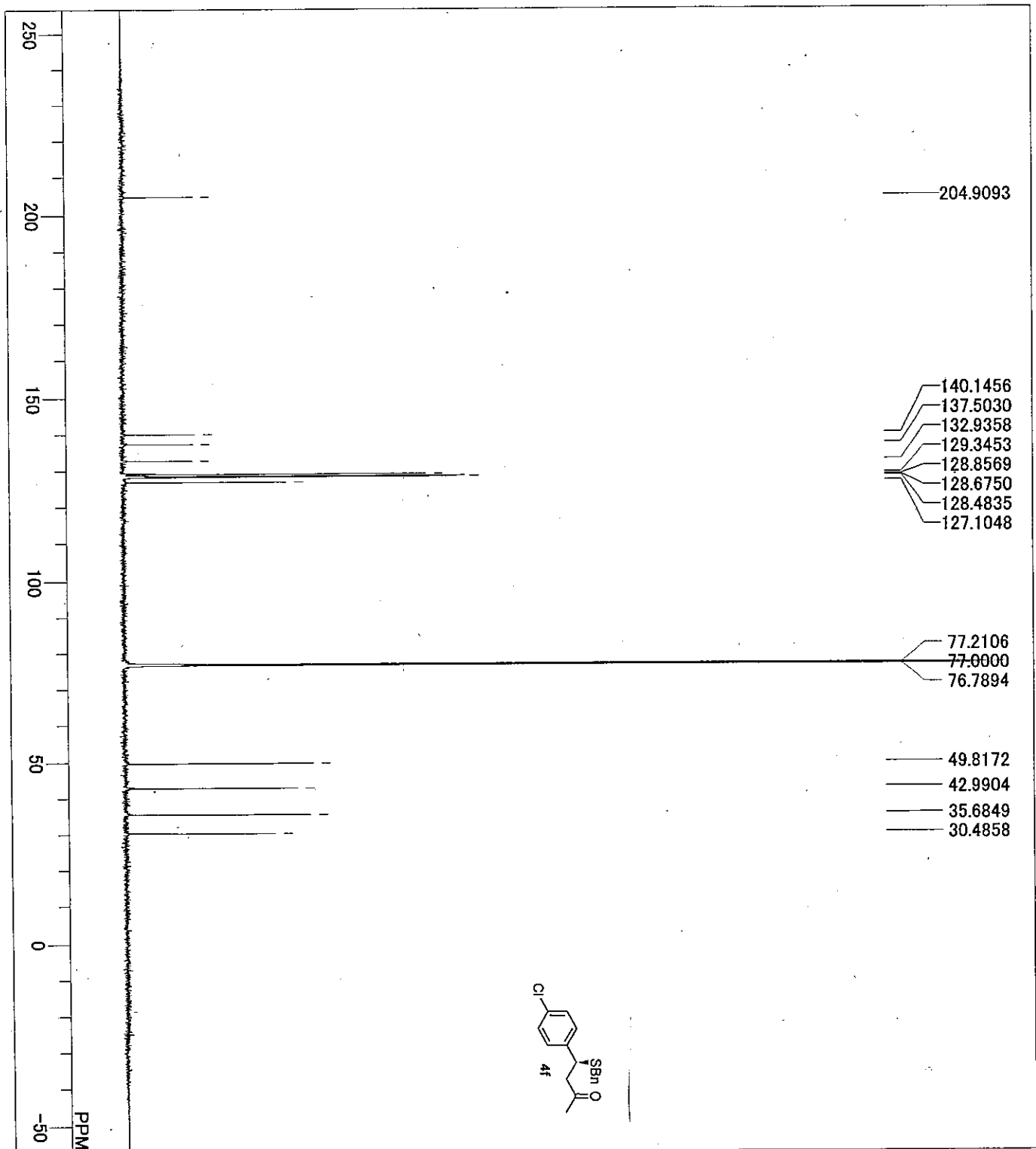


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 OBSSET 6.00 Hz  
 OBFIN 32.768  
 POINT 39062.50 Hz  
 FREQU 412  
 SCANS 0.8389 sec  
 ACQTM 2.0000 sec  
 PD 3.67 usec  
 PW1 18.9 e  
 IRNUC ODDCL3  
 CTMP 77.00 ppm  
 SLVNT EXREF 0.12 Hz  
 BF 60  
 RGAIN

C:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\MS289p.als  
 single pulse

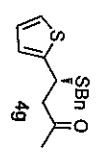
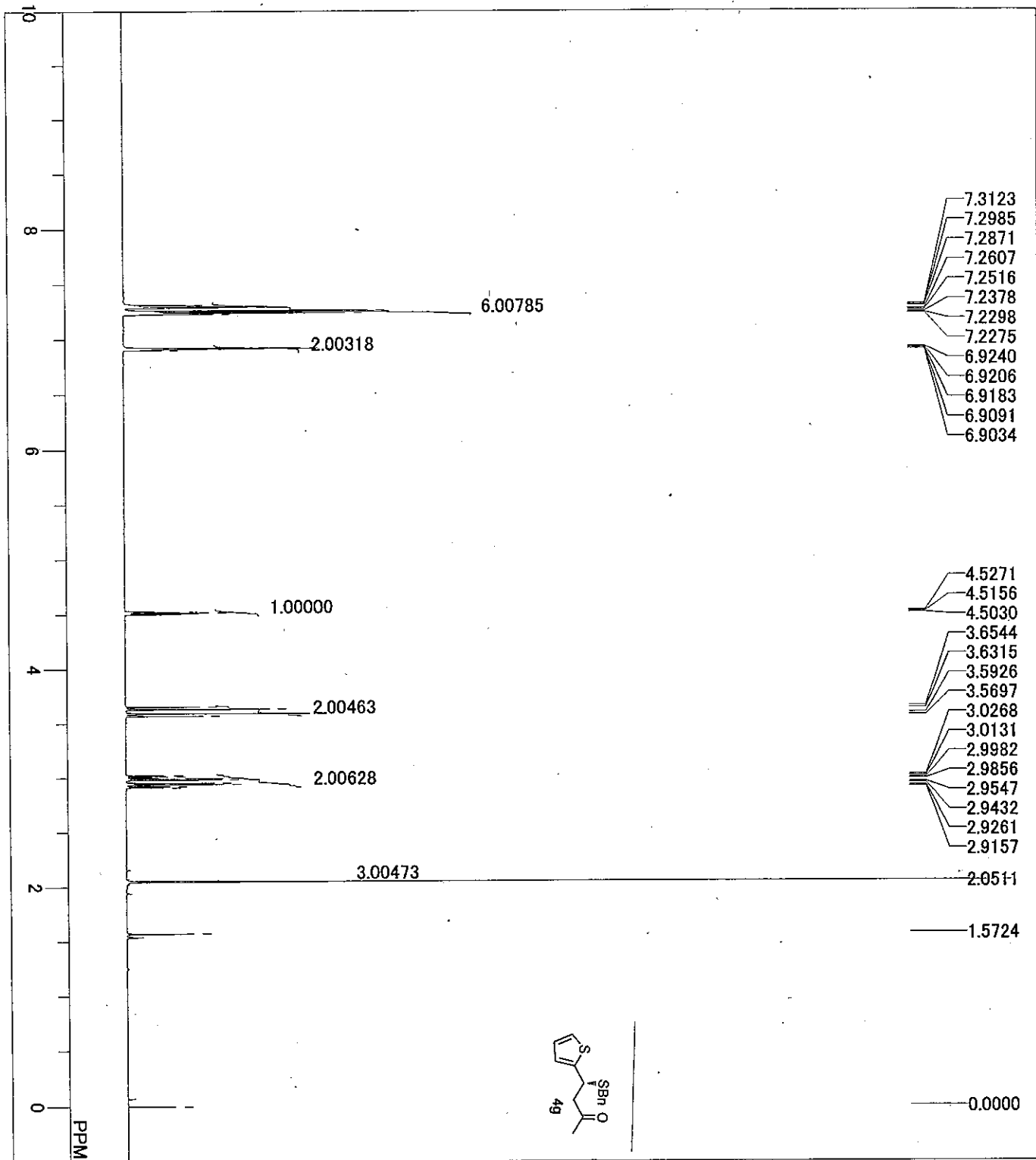


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 DATIM 15-02-2011.05:24:44  
 OBNJUC 1H  
 EXMOD single pulse ex2  
 OBFREQ 600.17 MHz  
 OBSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 13107  
 FREQU 9008.87 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 CTEMP 18.0 c  
 SLYNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 40

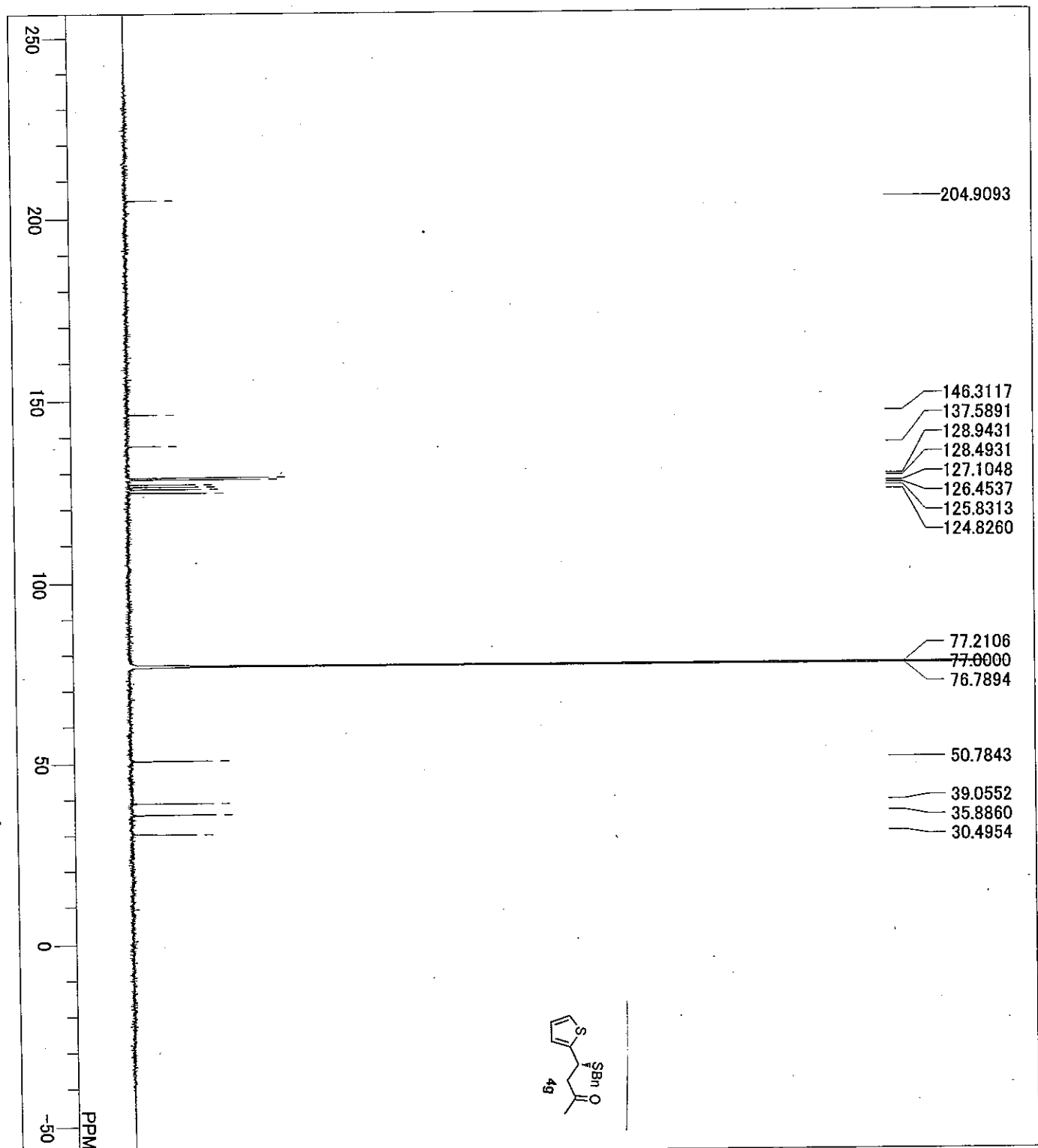


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 OBSSET 40961  
 OBFIN 59186.51 Hz  
 POINT 1024  
 FREQU 0.6921 sec  
 SCANS 2.0000 sec  
 ACQTM 2.87 usec  
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 PW1  
 IRNUC 1H  
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 SLVNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 58

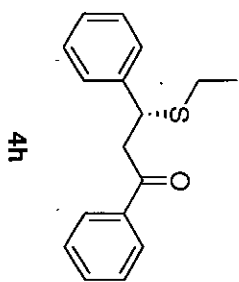
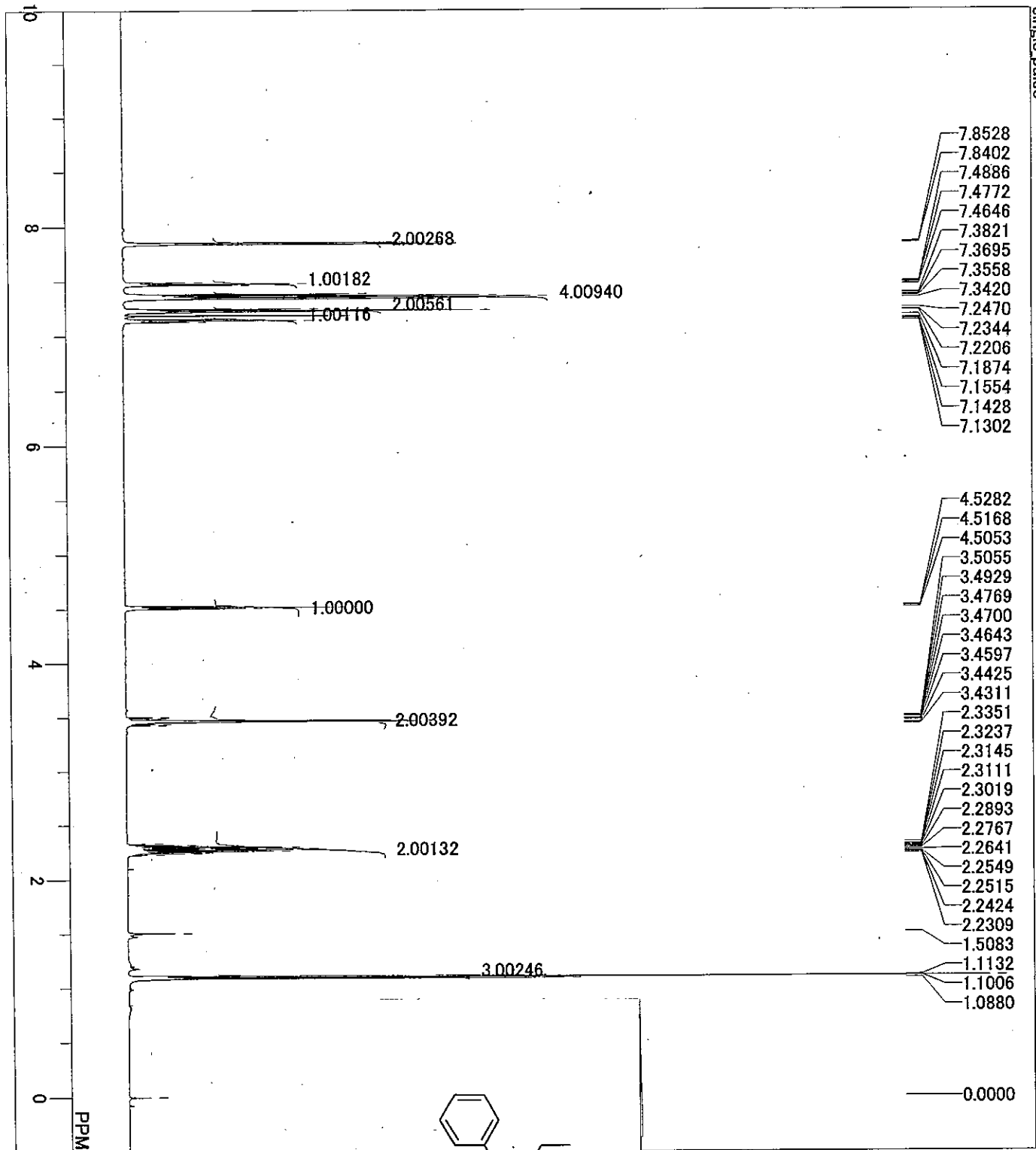
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 single\_pulse



DFILE C:\Documents and Settings\delta\My D  
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 OBNUC 1H  
 EXMOD single\_pulse.ex2  
 OBFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 13107  
 FREQU 9008.87 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
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 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 42

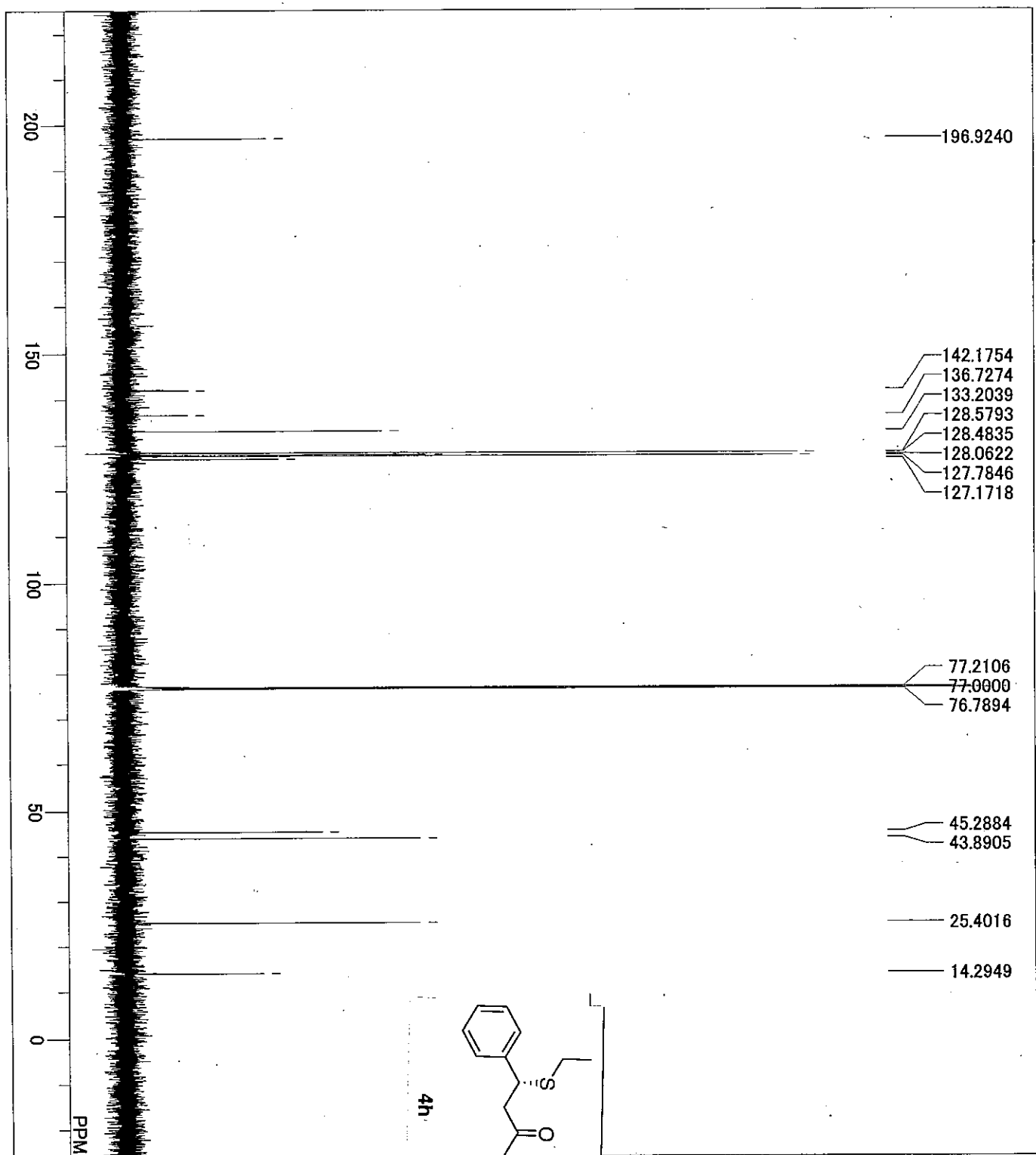


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 OBFRQ 1.74 Hz  
 OBSETT 40961  
 OBFIN 59186.51 Hz  
 POINT 1024  
 FREQU 0.6921 sec  
 SCANS 2.0000 sec  
 ACQTM 2.87 usec  
 PD  
 PW1  
 IRNUC 1H  
 CTEMP 19.8 c  
 SLVNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60



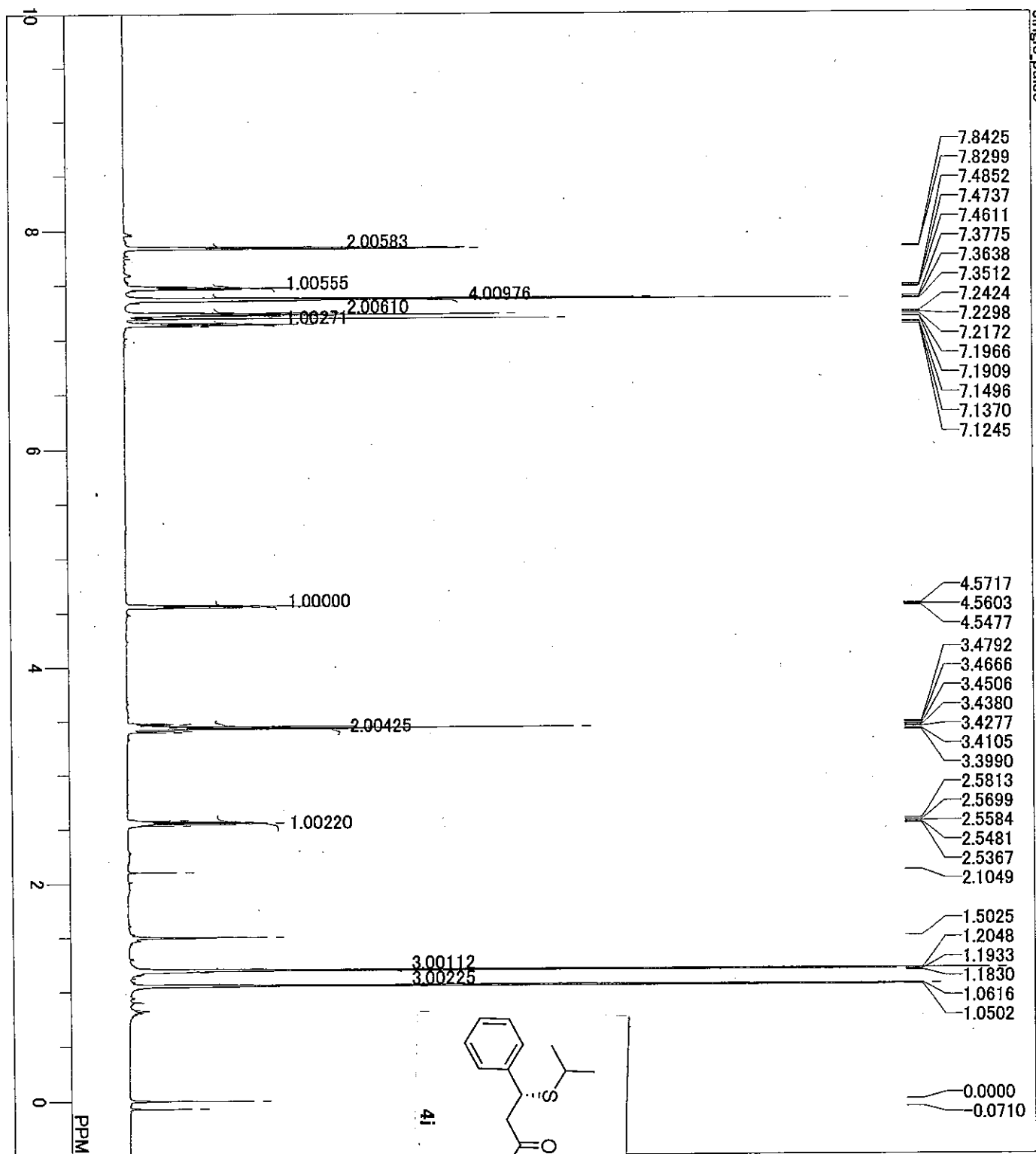
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C:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\110218\etshals	single.pulse	18-02-2011 08:40:50	1H	single.pulse.ex2	600.17 MHz	5.30 KHz	5.47 Hz	16384	11261.26 Hz	20	1.4549 sec	2.0000 sec	6.50 usec	1H	18.2 c	CDCl3	0.00 ppm	0.12 Hz	42





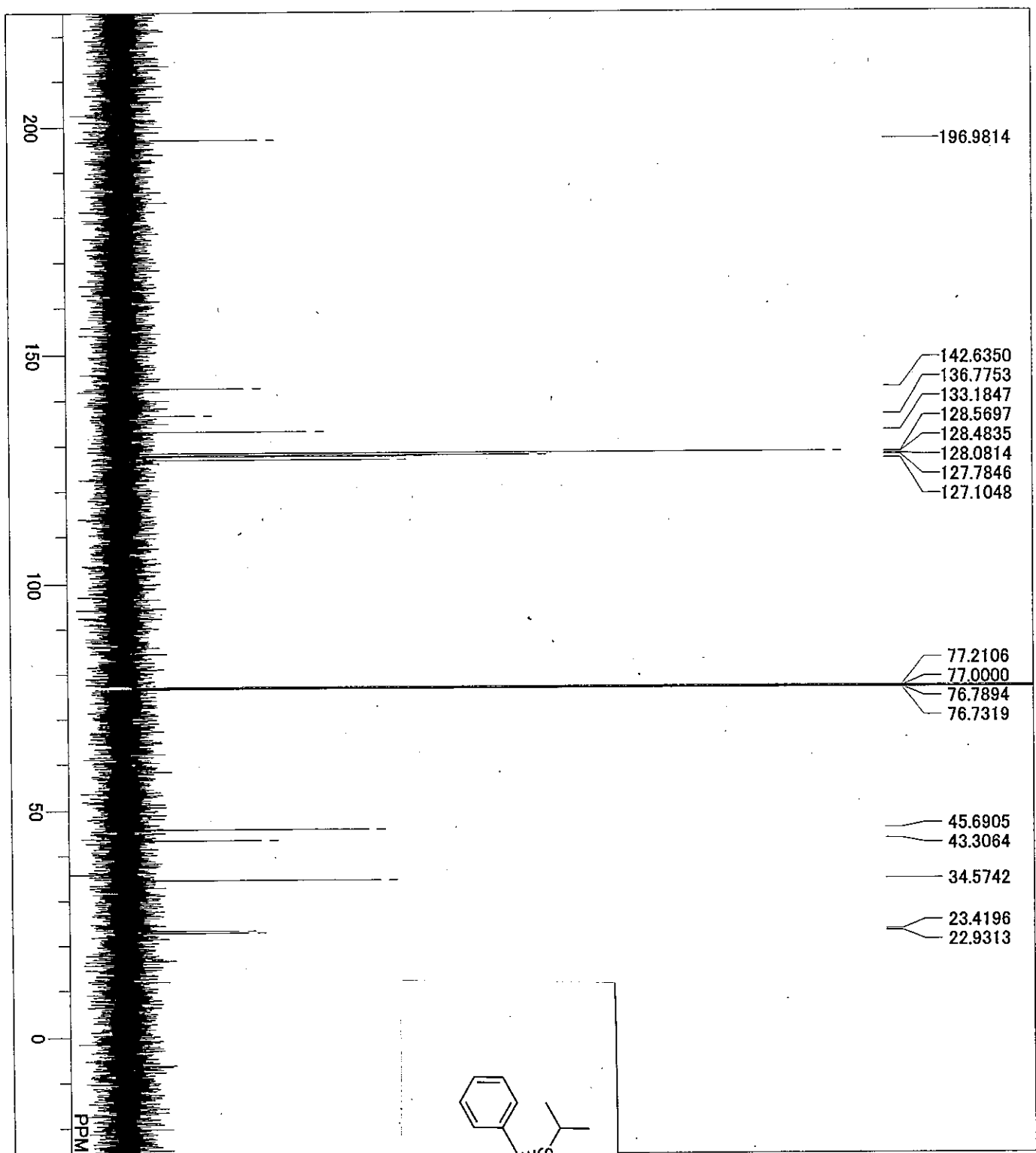
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 OBFN 1.74 Hz  
 POINT 32768  
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 SCANS 140  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PW1 2.87 usec  
 IRNUC 1H  
 CTEMP 18.8 c  
 SLVNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60

C:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\110218\prshals  
 single\_pulse

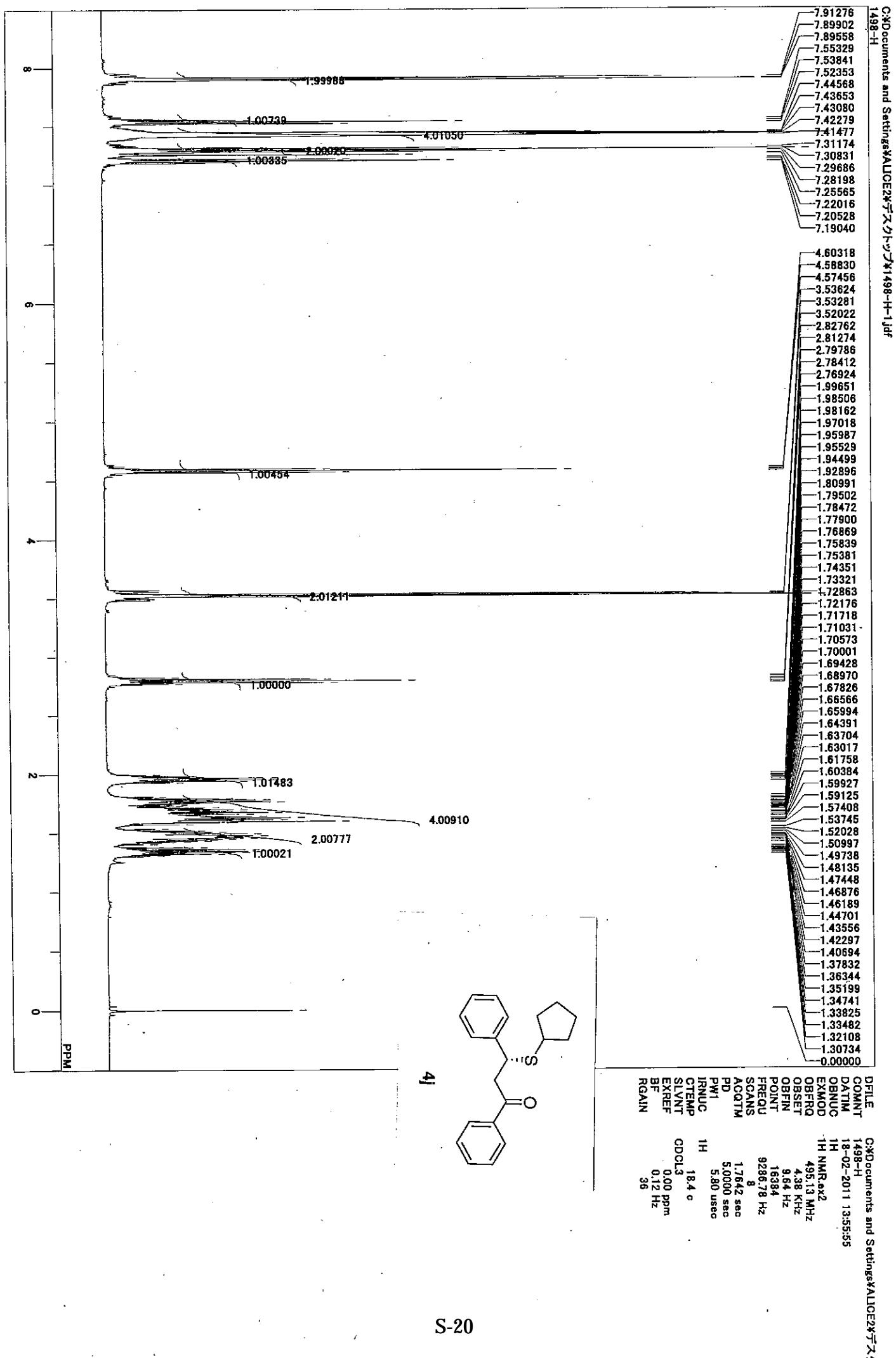


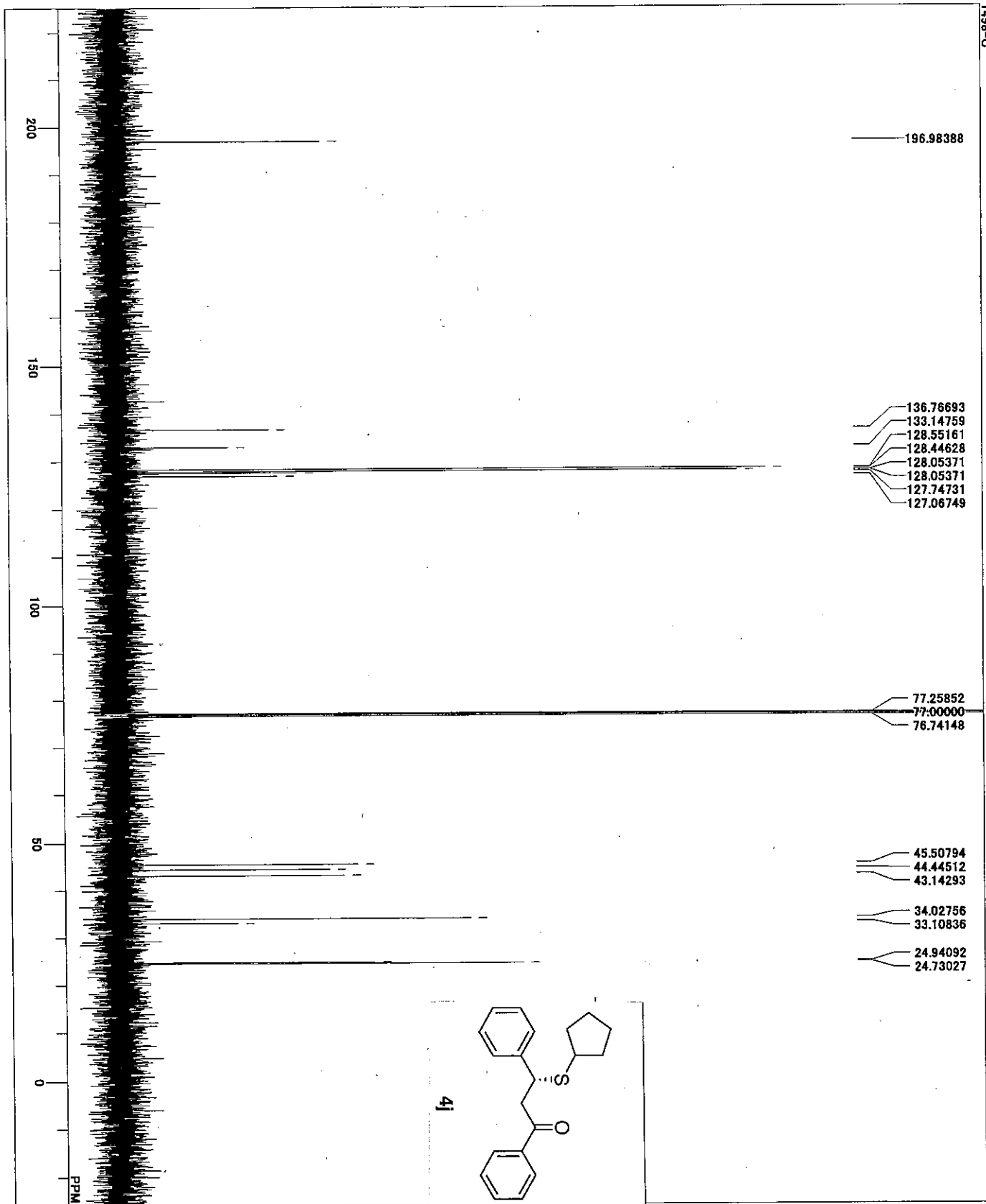
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 IRNUC  
 CTEMP  
 SLVNT  
 EXREF  
 BF  
 RGAIN

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 single\_pulse.ex2  
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 5.30 KHz  
 5.47 Hz  
 16384  
 11261.26 Hz  
 24  
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 2.0000 sec  
 6.50 usec  
 1H  
 17.9 °C  
 CDCL3  
 0.00 ppm  
 0.12 Hz  
 42



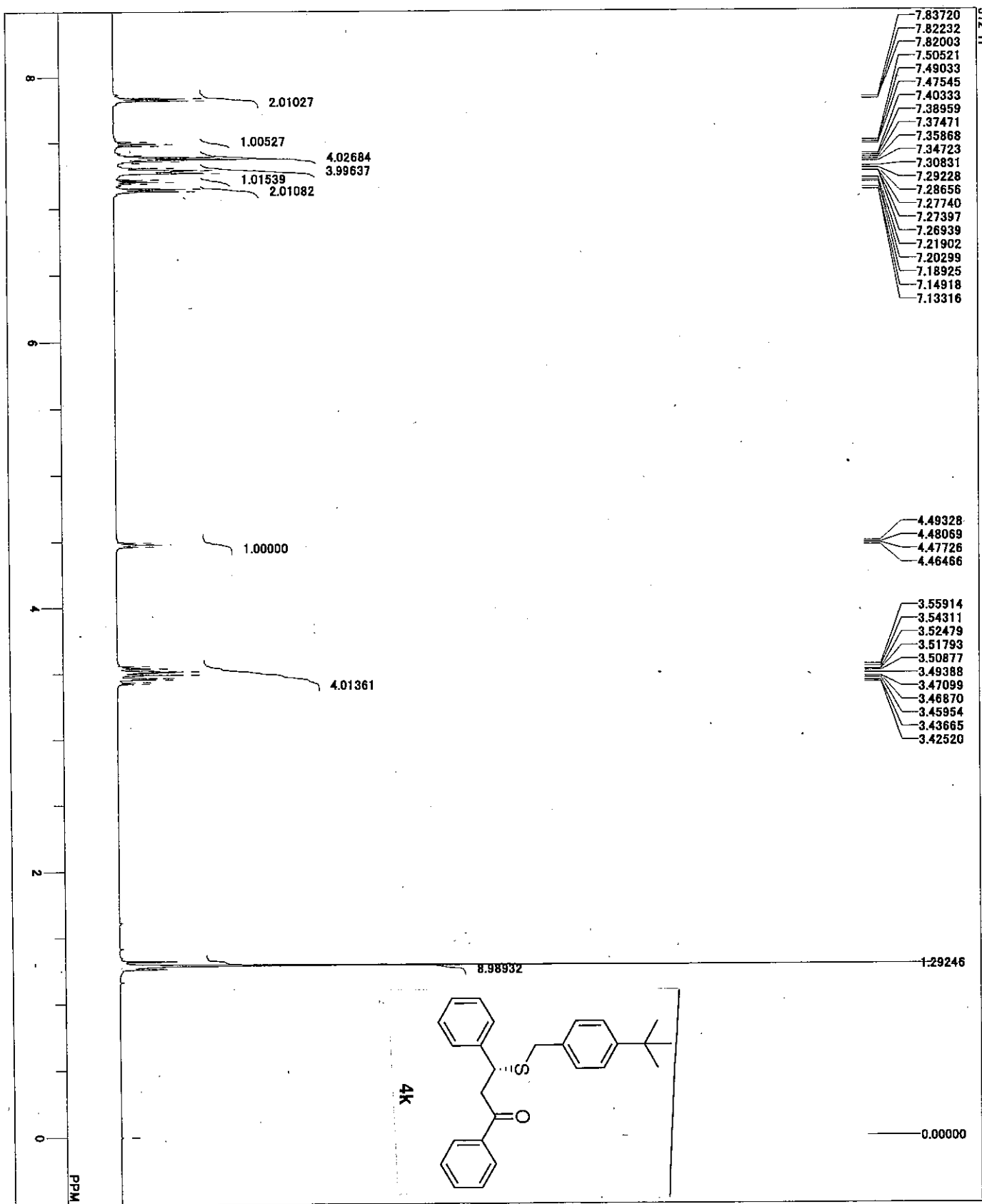
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FREQU	47348.49 Hz		
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PD	2.0000 sec		
PW1	2.87 usec		
IRNUC	1H		
CTEMP	19.3 c		
SLVNT	CDCL3		
EXREF	77.00 ppm		
BF	0.12 Hz		
RGAIN	60		





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 PD 2.0000 sec  
 PW1 3.67 usec  
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 BF 0.12 Hz  
 RGAIN 60

C:\Documents and Settings\All Users\Documents\Ueno\Aldol\312-H-3.a1s  
 312-H



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- 7.82232
- 7.82003
- 7.50521
- 7.49033
- 7.47545
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- 7.38959
- 7.37471
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- 7.18925
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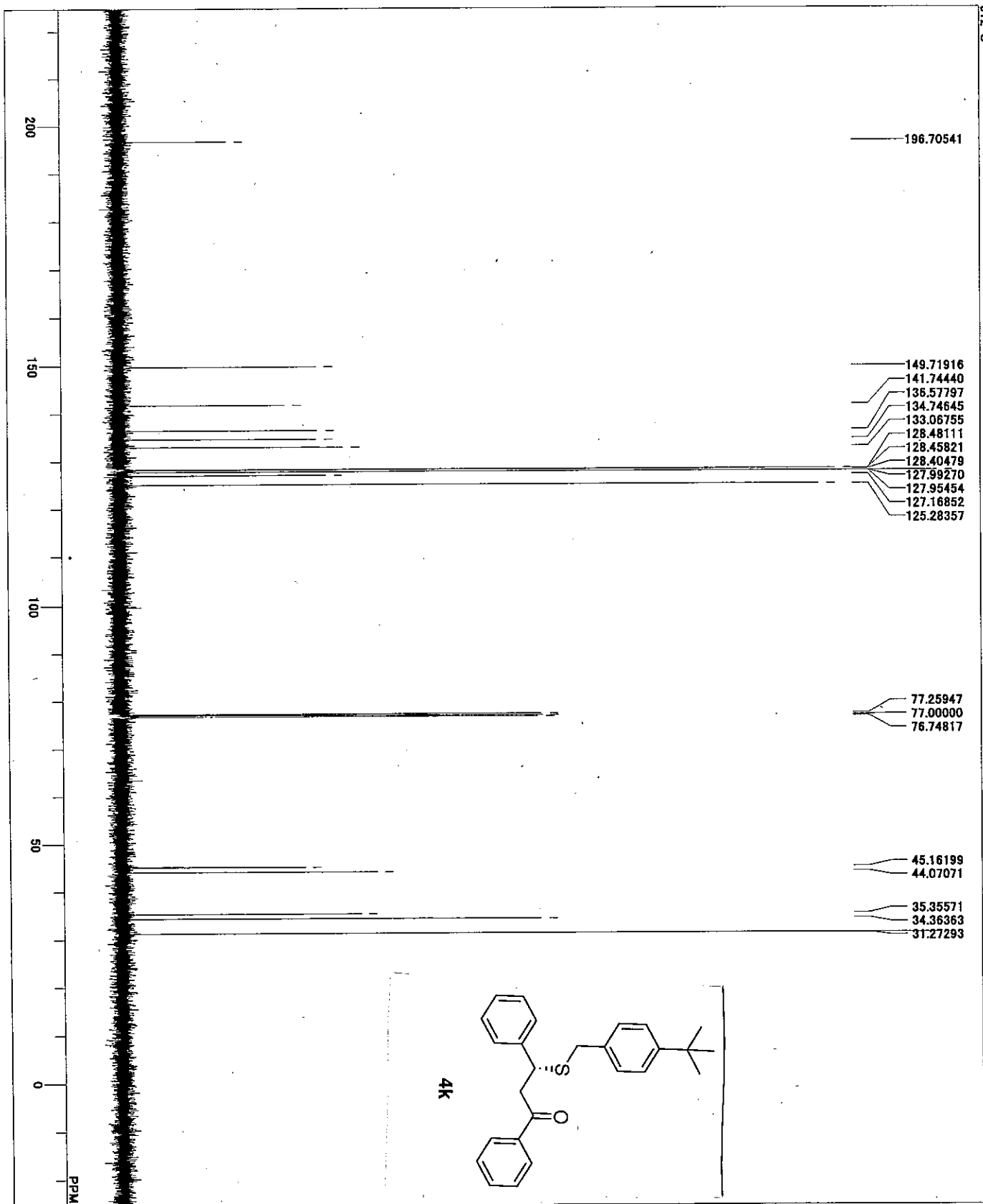
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 OBFST 9.84 Hz  
 POINT 13107  
 FREQU 7429.31 Hz  
 SCANS 8  
 ACQTM 1.7642 sec  
 PD 5.0000 sec  
 PW1 5.80 usec  
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 CTEMP 18.4 c  
 SLVNT CDCl3  
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 312-C



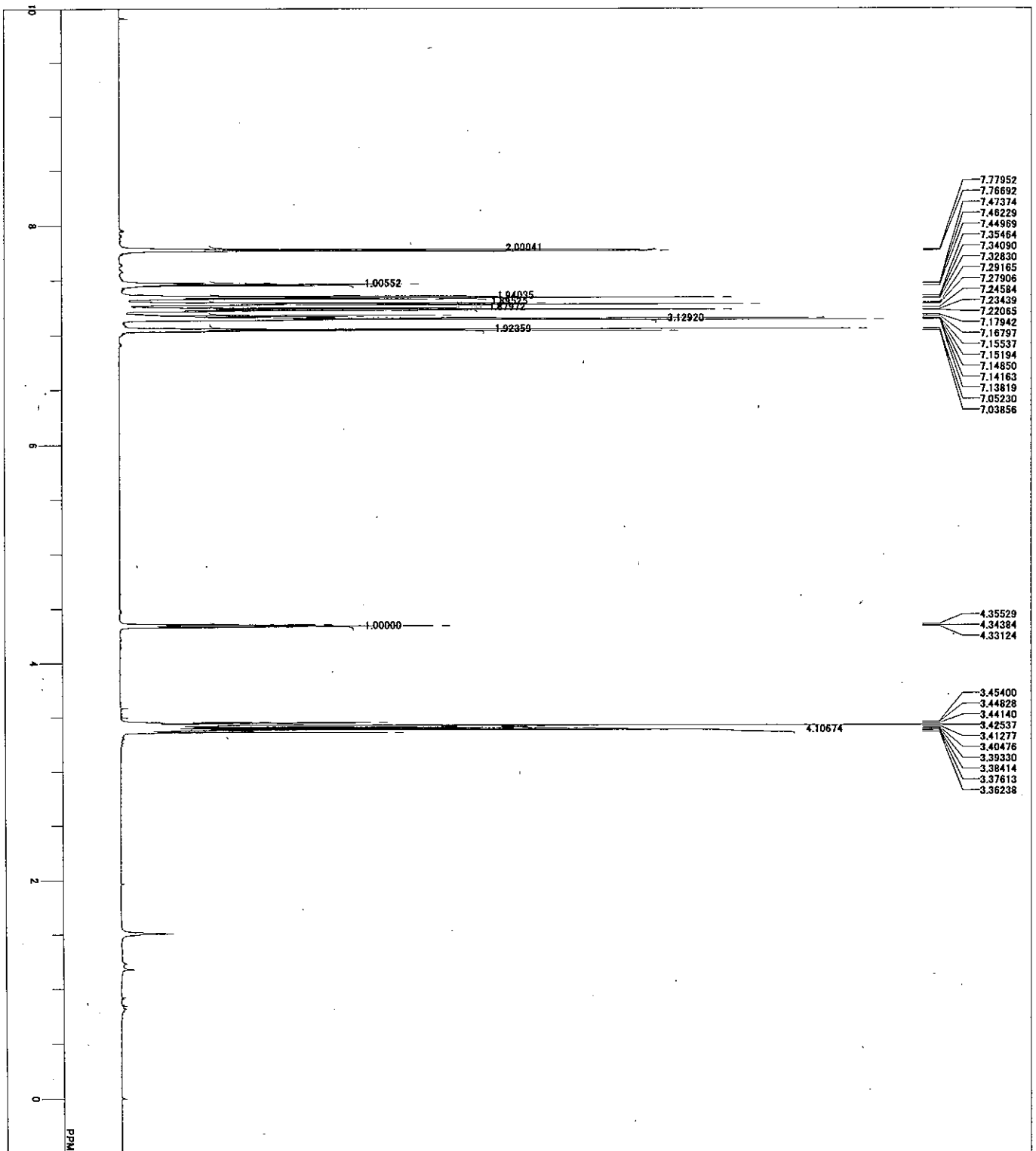
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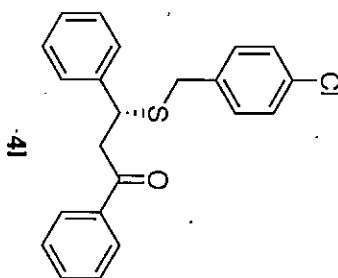
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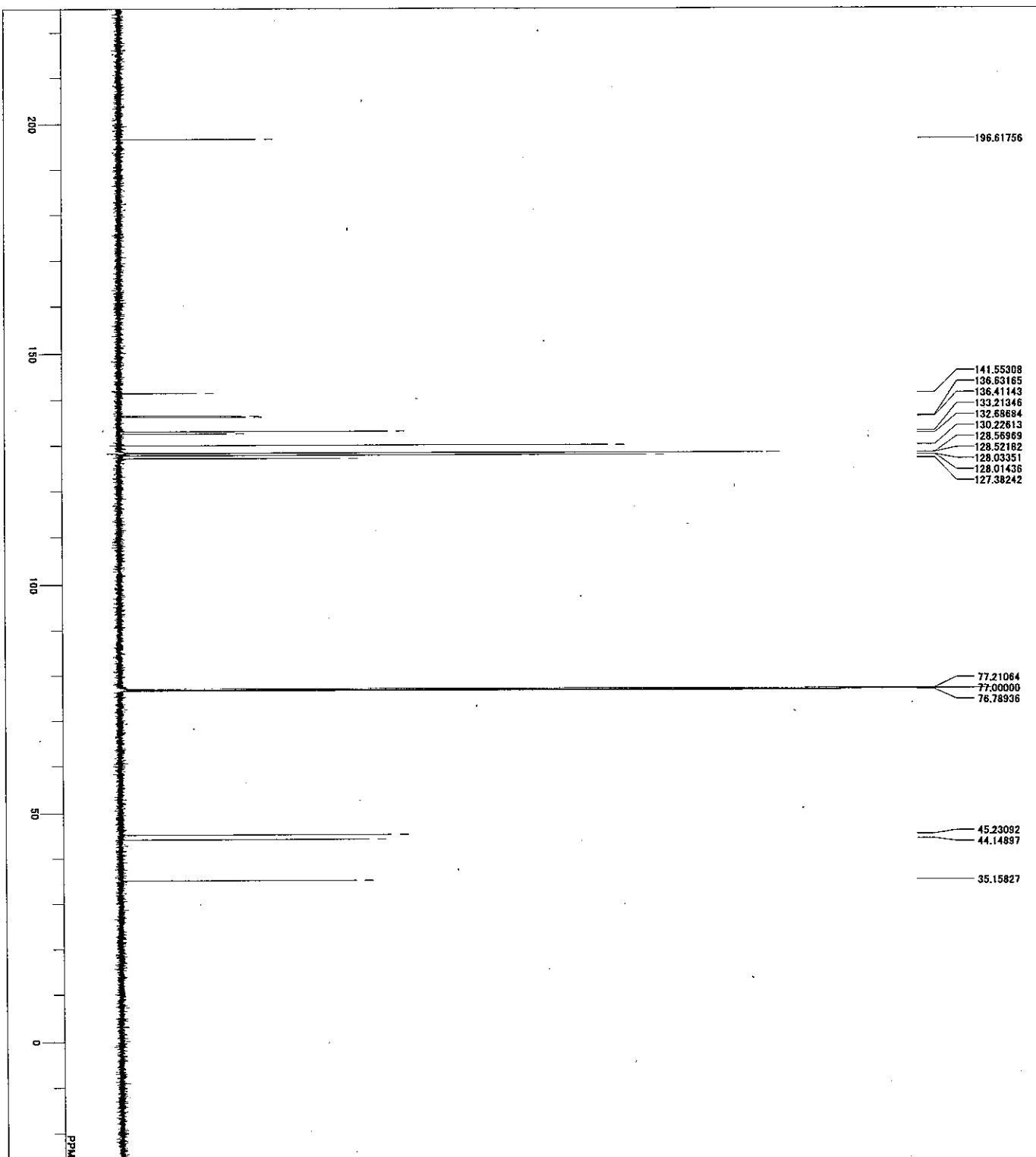
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 PD 1.0525 sec  
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 BF 0.12 Hz  
 RGAIN 76



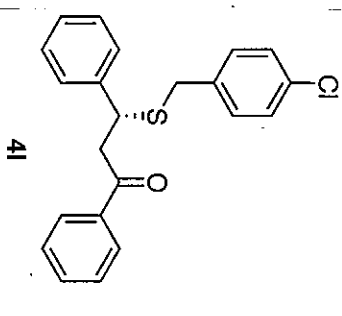
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 49.3 c  
 0.00 ppm  
 0.12 Hz  
 42

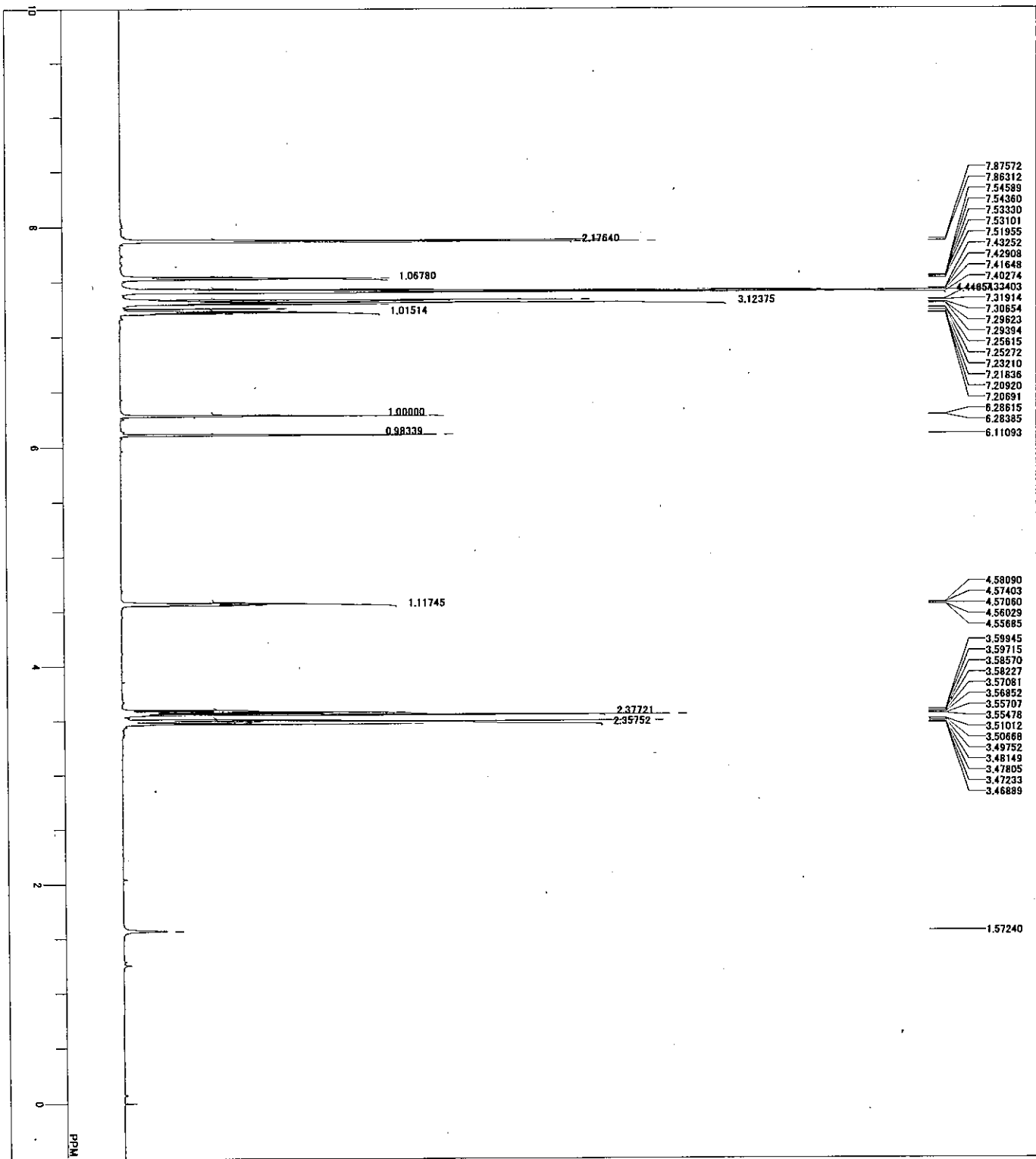




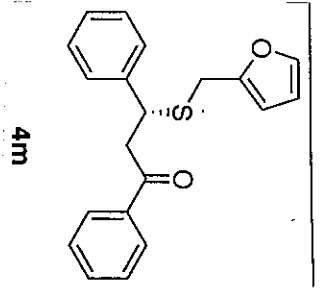


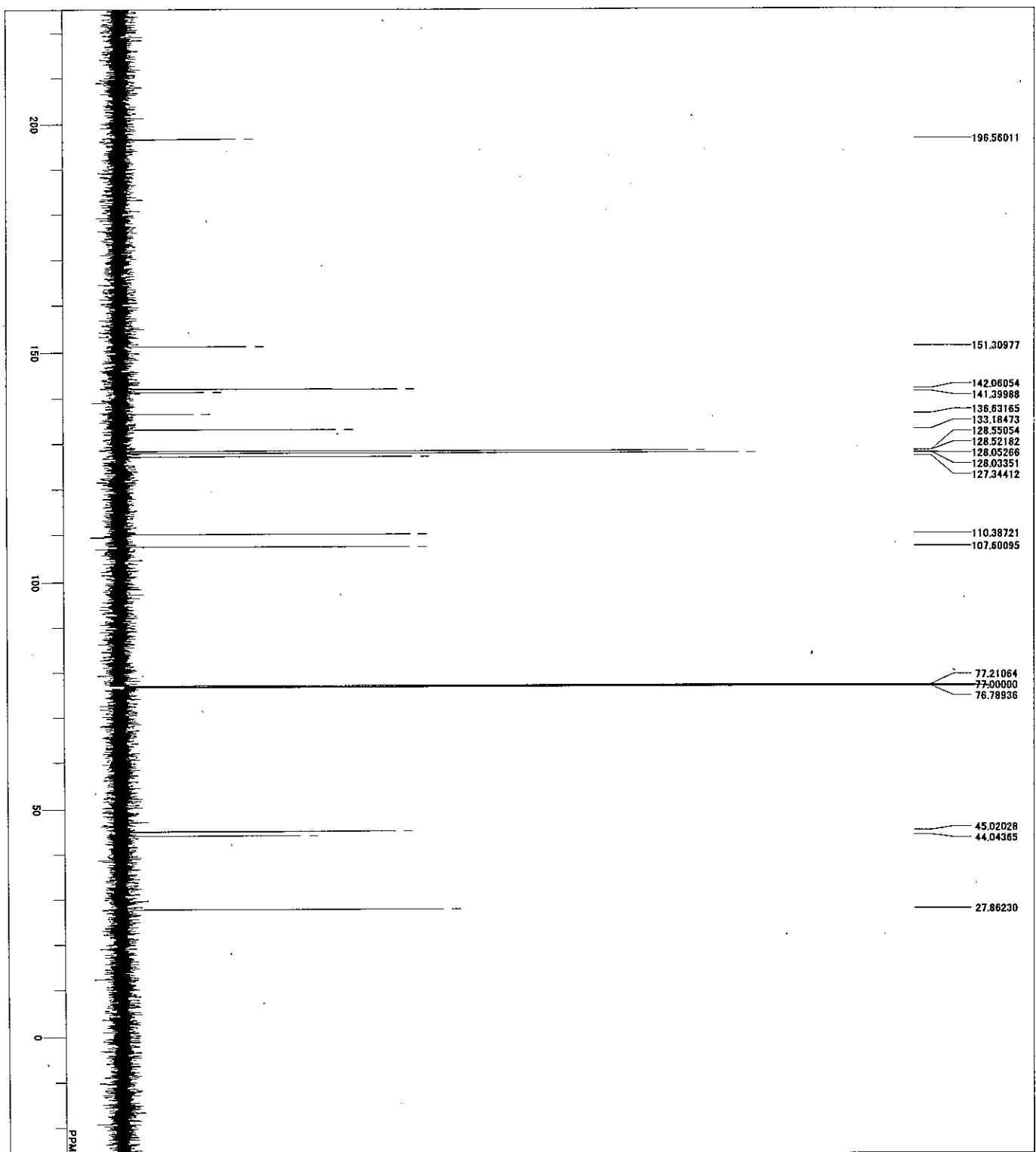
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 77.00 ppm  
 0.12 Hz  
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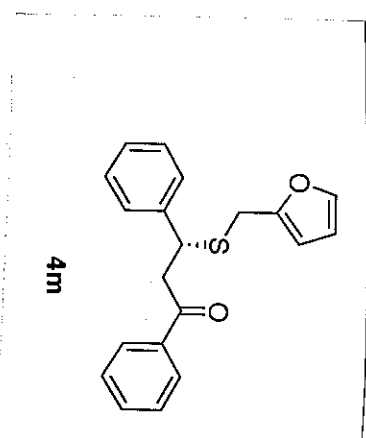


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 ORBIN 134.07 Hz  
 P1 1.00 Hz  
 FREQ 9008.87 Hz  
 SCANS 8  
 ACQTM B  
 PD 1.4549 sec  
 FWH 2.0000 sec  
 RNUC 6.50 usec  
 STVNT 1H  
 STVMT 21.5 e  
 SLEW 0.00 ppm  
 ERNF 0.02 Hz  
 RGAIN 38

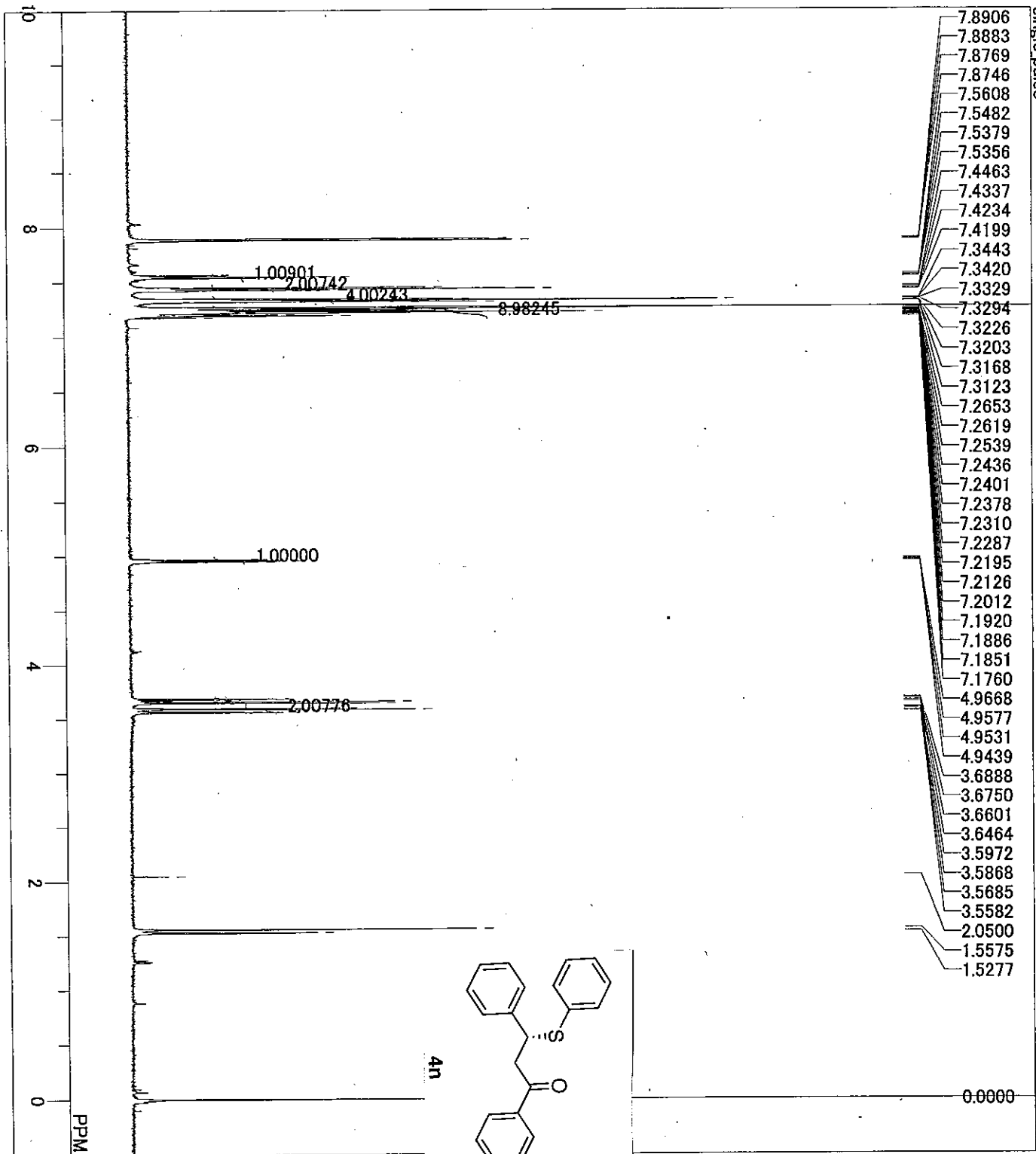




FILE C:\Documents and Settings\khalid\Frazer\7\NMS928C.1  
 COMMENT 04-03-2012 23:52:15  
 DATIM 13C  
 OBSNUC single-pulse,dec  
 EXMAD 150.92 MHz  
 OBSFRQ 8.32 KHz  
 OBSSET 31768 Hz  
 DORIN 31768 Hz  
 DORNU 47348.49 Hz  
 FREQU 84  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PW1  
 IRNUC  
 GTEMP 22.5 c  
 SLVNT CDCl<sub>3</sub>  
 STVNT 77.00 ppm  
 ERNEF 77.00 Hz  
 RGAIN 0.58



C:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\MS298.als  
 single pulse

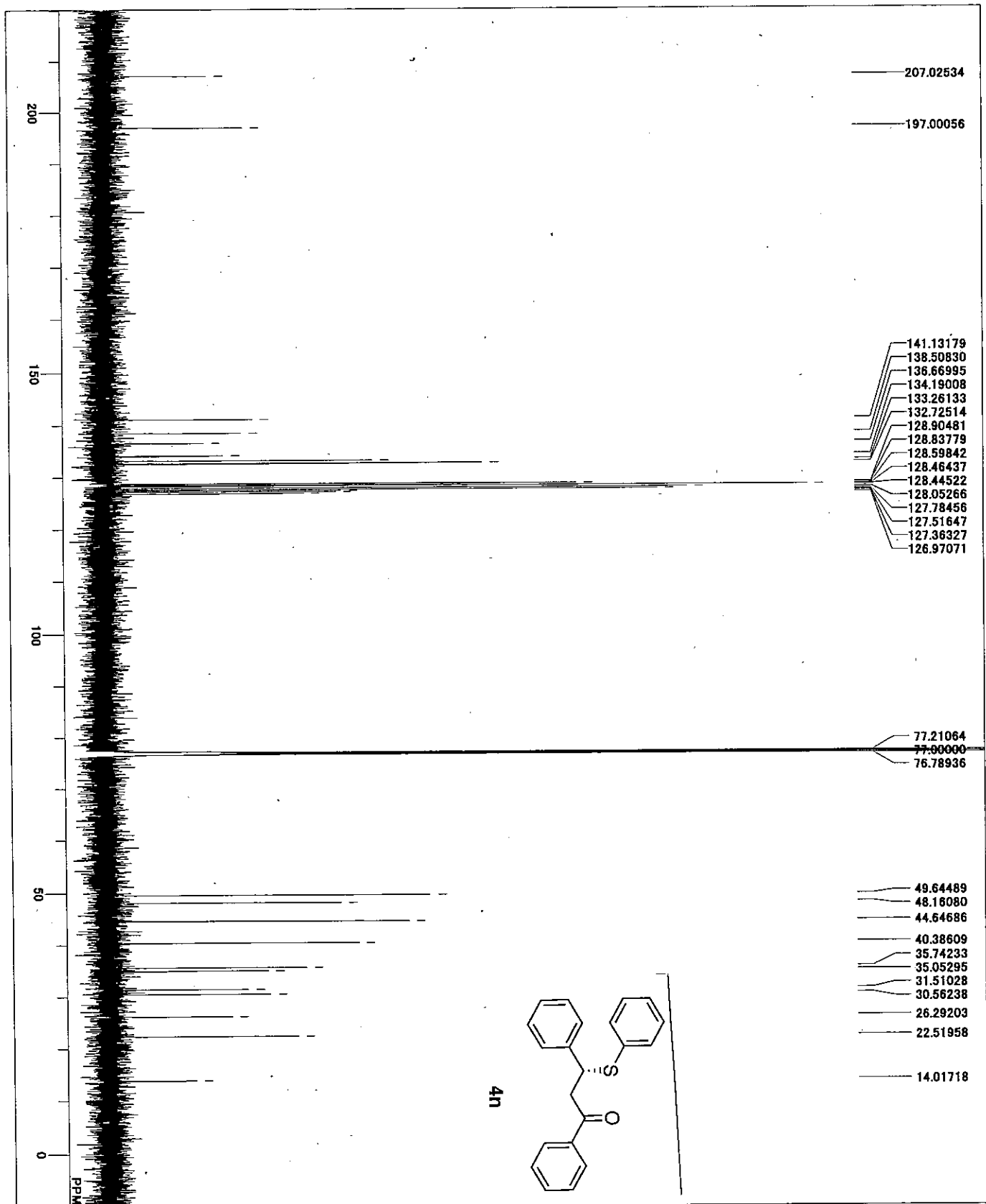


- 7.8906
- 7.8883
- 7.8769
- 7.8746
- 7.5608
- 7.5482
- 7.5379
- 7.5356
- 7.4463
- 7.4337
- 7.4234
- 7.4199
- 7.3443
- 7.3420
- 7.3329
- 7.3294
- 7.3226
- 7.3203
- 7.3168
- 7.3123
- 7.2653
- 7.2619
- 7.2539
- 7.2436
- 7.2401
- 7.2378
- 7.2310
- 7.2287
- 7.2195
- 7.2126
- 7.2012
- 7.1920
- 7.1886
- 7.1851
- 7.1760
- 4.9668
- 4.9577
- 4.9531
- 4.9439
- 3.6888
- 3.6750
- 3.6601
- 3.6464
- 3.5972
- 3.5868
- 3.5685
- 3.5582
- 2.0500
- 1.5575
- 1.5277

DFILE  
 COMNT  
 DATIM  
 OBNUC  
 EXMOD  
 OBFREQ  
 OBSET  
 OBFIN  
 POINT  
 FREQU  
 SCANS  
 ACQTM  
 PD  
 PW1  
 IRNUC  
 CTEMP  
 SLVNT  
 EXREF  
 BF  
 RGAIN

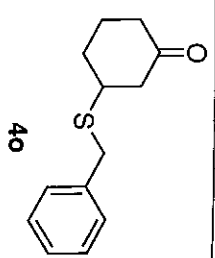
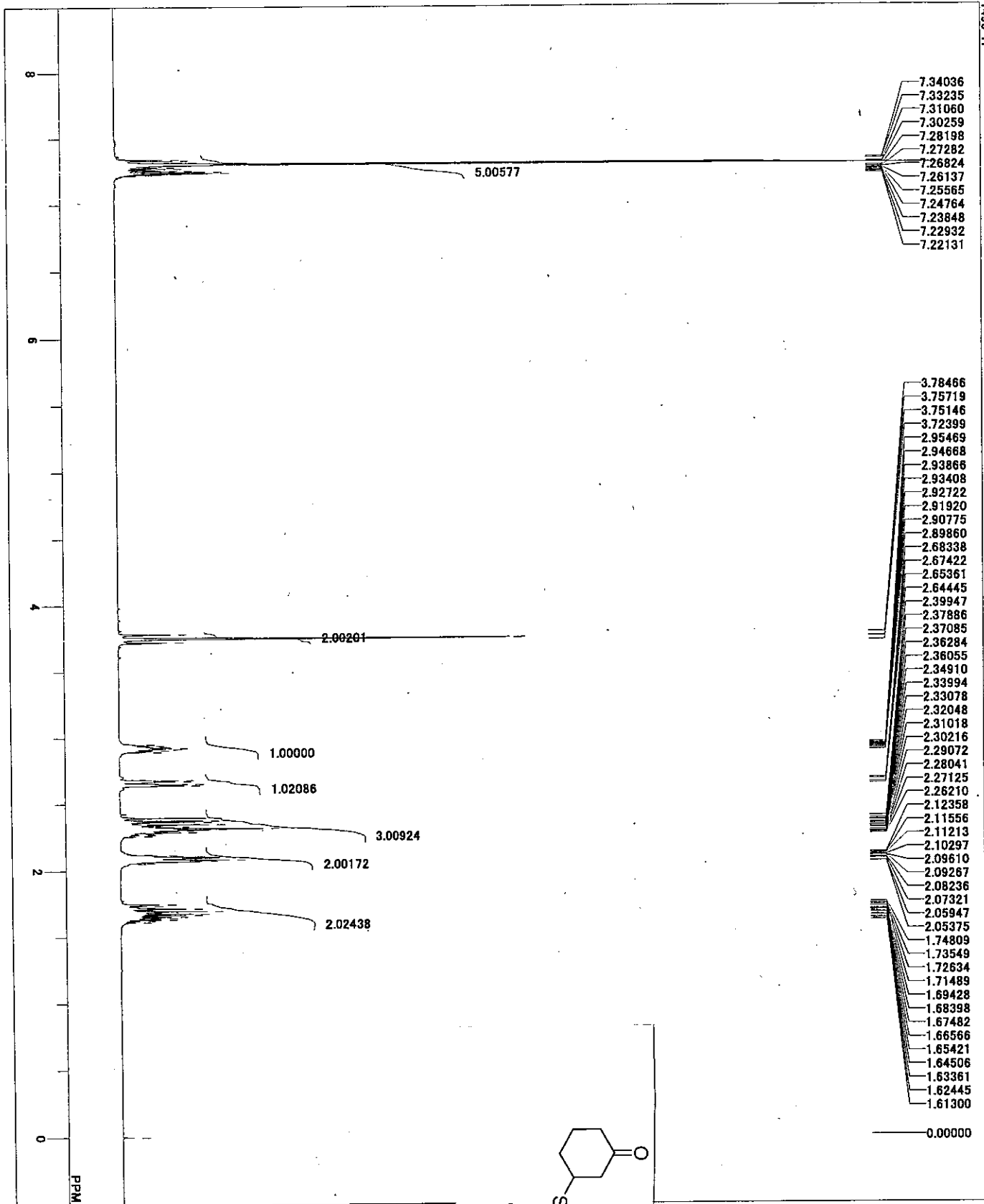
C:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\MS298.als  
 single pulse  
 10-02-2011 02:17:38  
 1H  
 single\_pulse.ex2  
 600.17 MHz  
 5.30 KHz  
 5.47 Hz  
 13107  
 9008.87 Hz  
 8  
 1.4549 sec  
 2.0000 sec  
 6.50 usec  
 1H  
 18.3 c  
 CDCL3  
 0.00 ppm  
 0.12 Hz  
 44

C:\Documents and Settings\VALUEZY\Fra\10219phshoc.1



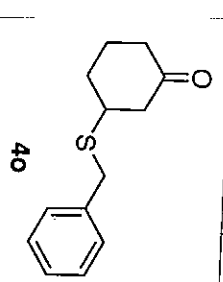
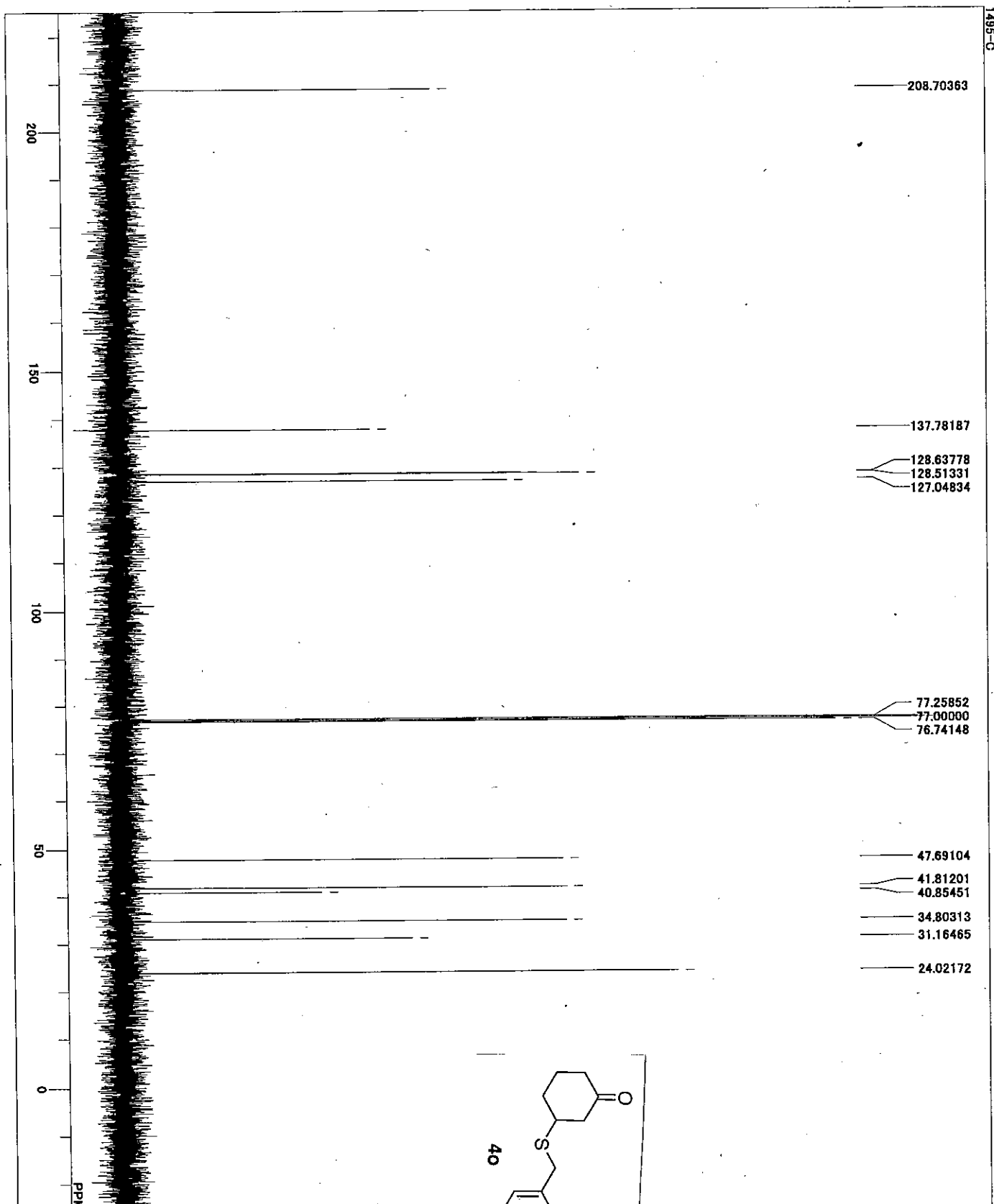
FILE C:\Documents and Settings\VALUEZY\Fra\10219phshoc.1  
 COMMENT 18-02-2011 17:36:05  
 DATE 13C  
 OBNUC single pulse Dec  
 EXMOD 150.92 MHz  
 OBFREQ 8.52 KHz  
 OBFSET 1.74 Hz  
 POINT 32768  
 FREQU 47348.49 Hz  
 SCANS 9999  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PW1 2.87 usec  
 IRNUC 1H  
 CTEMP 19.0 c  
 SLVNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60

C:\Documents and Settings\YALUCEZ\F\A\1495-H-1.jif  
 1495-H



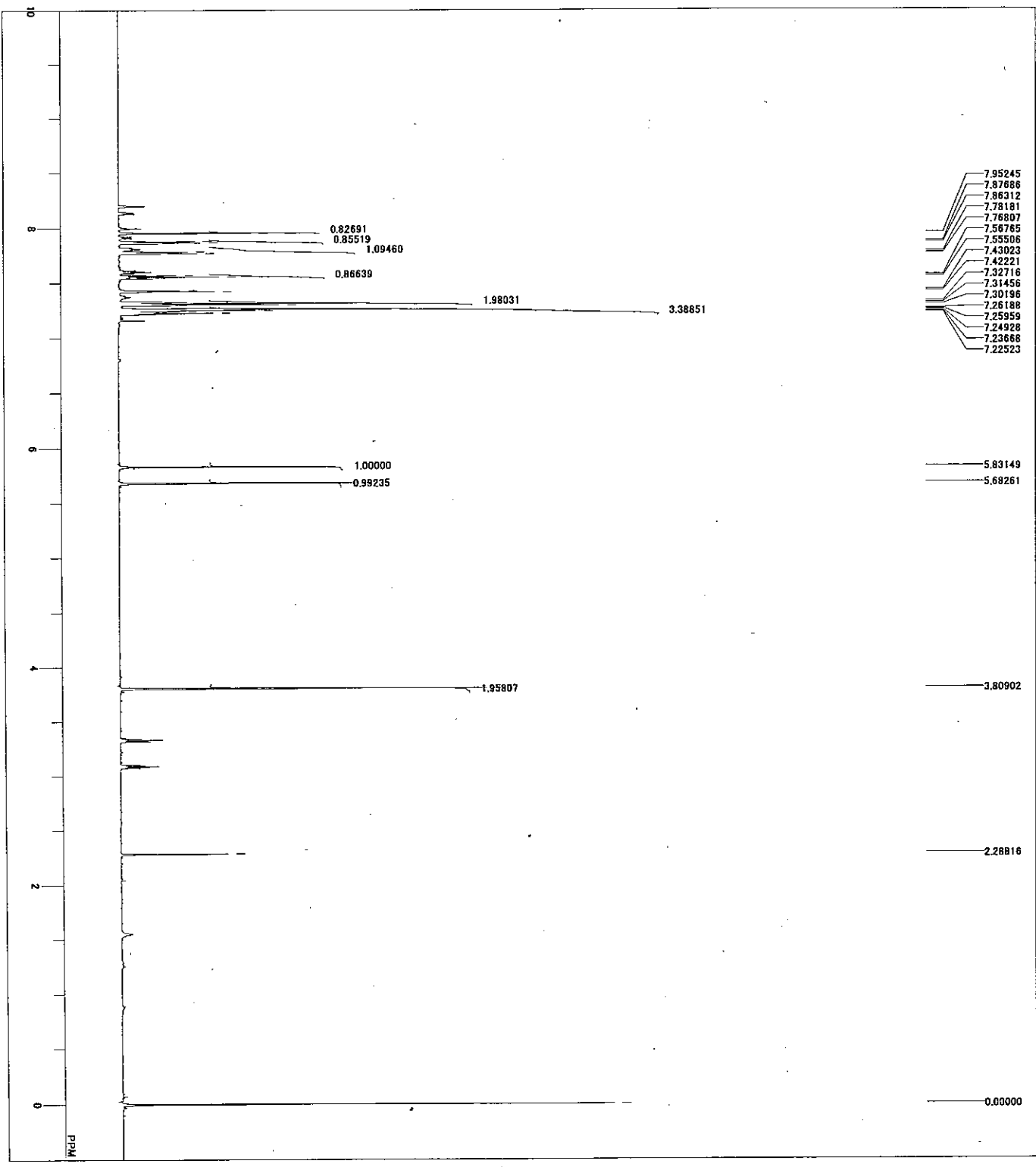
FILE	COMMENT	DATE	TIME
1495-H	17-02-2011 17:34:41		
OBNUC	1H NMR,ex2		
EXMOD	495.13 MHz		
OBFRQ	4.38 KHz		
OBSET	9.64 Hz		
OBFIN	16384		
POINT	9286.78 Hz		
FREQ	8		
SCANS	1.7642 sec		
ACQTM	5.0000 sec		
PD	5.80 usec		
PWT	1H		
IRNUC	18.2 °		
CTEMP	CDCl3		
SLVNT	0.00 ppm		
EXREF	0.12 Hz		
BF	32		
RGAIN			

C:\Documents and Settings\YALUCEZ\F\A\1495-H-1.jif  
 1495-H

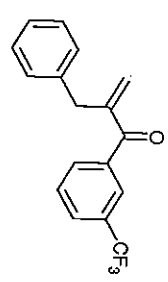


FILE	1495-C
COM1	17-02-2011 17:42:20
DATIM	13C
OBNUC	13C NMR
EXMOD	124.51 MHz
OBFRQ	3.45 KHz
OBSET	6.00 Hz
OBFIN	32.768
POINT	39062.50 Hz
FREQU	145
SCANS	0.8389 sec
ACQTM	2.0000 sec
PD	3.67 usec
PW1	1H
IRNUC	18.6 °
CTEMP	CDCL3
SLVNT	77.00 ppm
EXREF	0.12 Hz
BF	80
RGAIN	

C:\Documents and Settings\delatamy\Documents\Personal Folder\Sakani\SYMS812-22.a1s  
 single-pulse

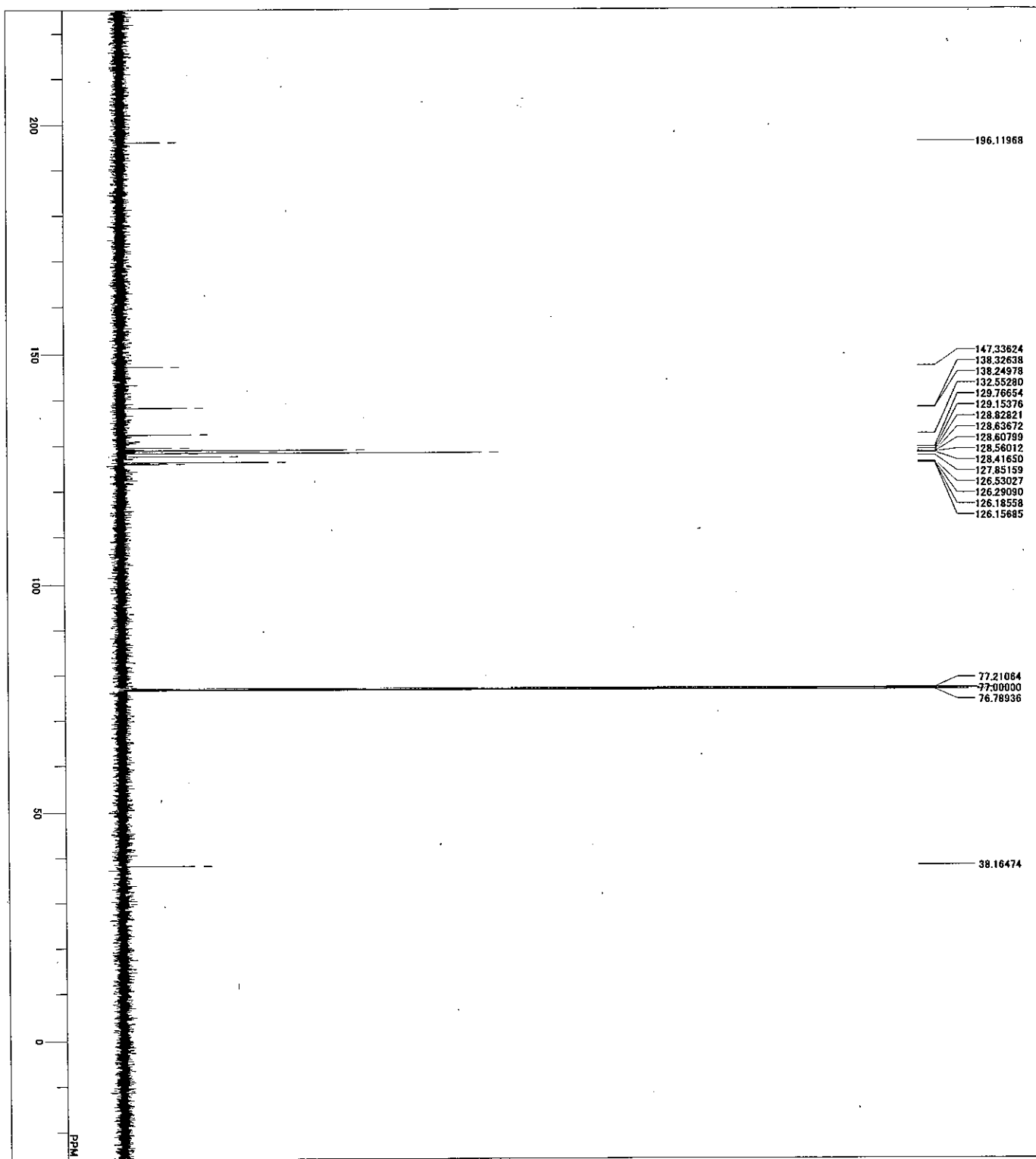


DELTA  
 COUNT 1H  
 DATE\_ 12-01-2012 23:37:31  
 OBNUC 1H  
 EXMOD single-pulse.ac2  
 OBSFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 DBRN 5.47 Hz  
 POINT 131.07 Hz  
 FREQUS 9000.87 Hz  
 ACCTM 9  
 PD 1.4548 sec  
 SCALES 2.0000  
 PVI 6.50 usec  
 IRNUC 1H  
 CTEMP 19.7 c  
 SLYNT ODCL3  
 EXREF 0.00 ppm  
 REAIN 0.12 Hz  
 42

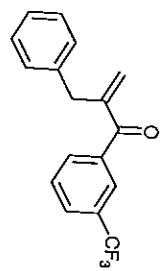


7g



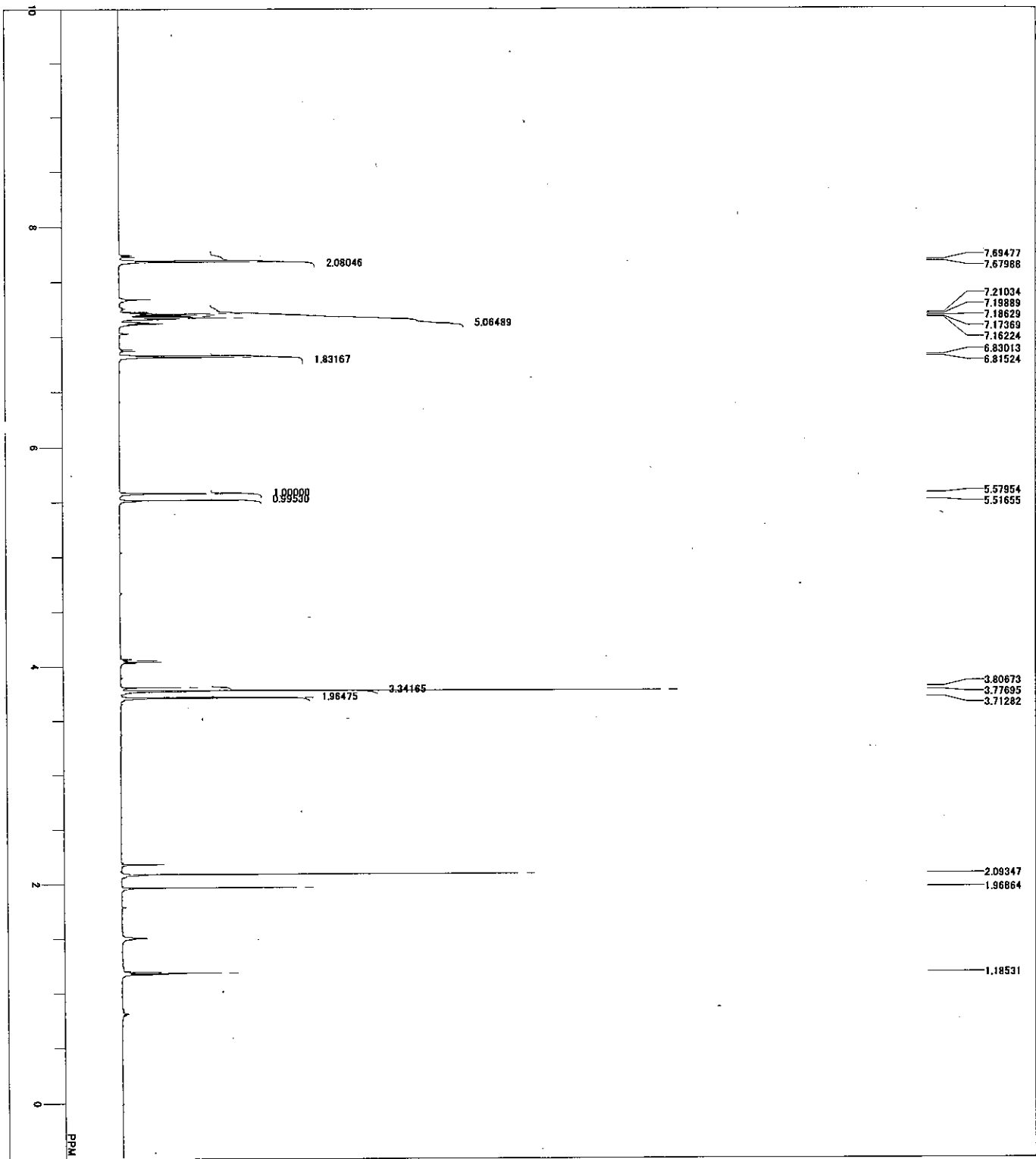


DPFILE 12-01-2012 23:49:59  
 COMMENT 13C  
 DATE 13C  
 EXMNUC single-pulse dec  
 EXMPOD 15092 MHz  
 OBSFREQ 832 KHz  
 OBSSET 2621 Hz  
 PCNT 2621 Hz  
 FREQ 37578.21 Hz  
 SCANS 219  
 ACQTIME 0.6921 sec  
 PD 2.0000 sec  
 PWT 2.87 usec  
 IRNUC 1H  
 GTEMP 28.9 c  
 SLEW 7.00 ppm  
 ERREF 0.12 Hz  
 RGAIN 40

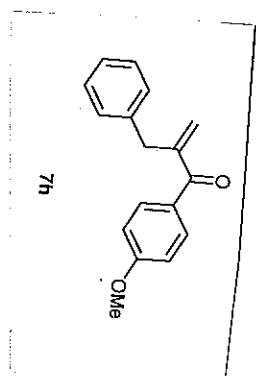


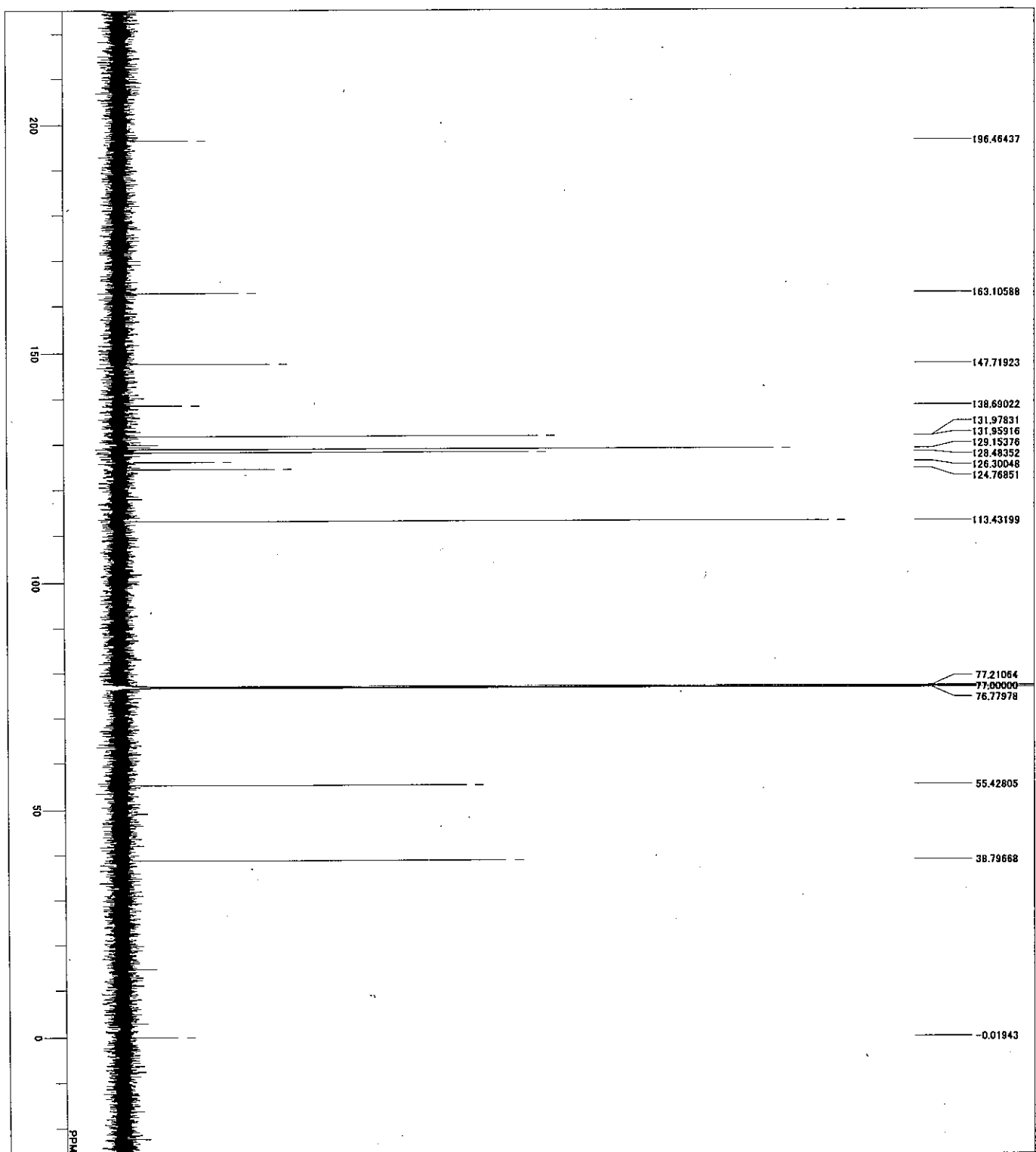
7g

C:\Documents and Settings\delatky\Documents\Personal Folder\Sakai\44MS70-3.ms  
 single.pulse

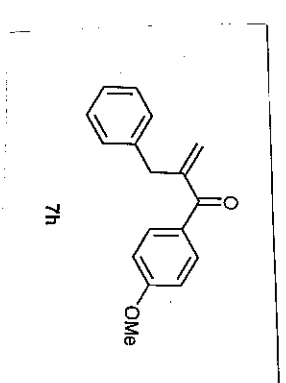


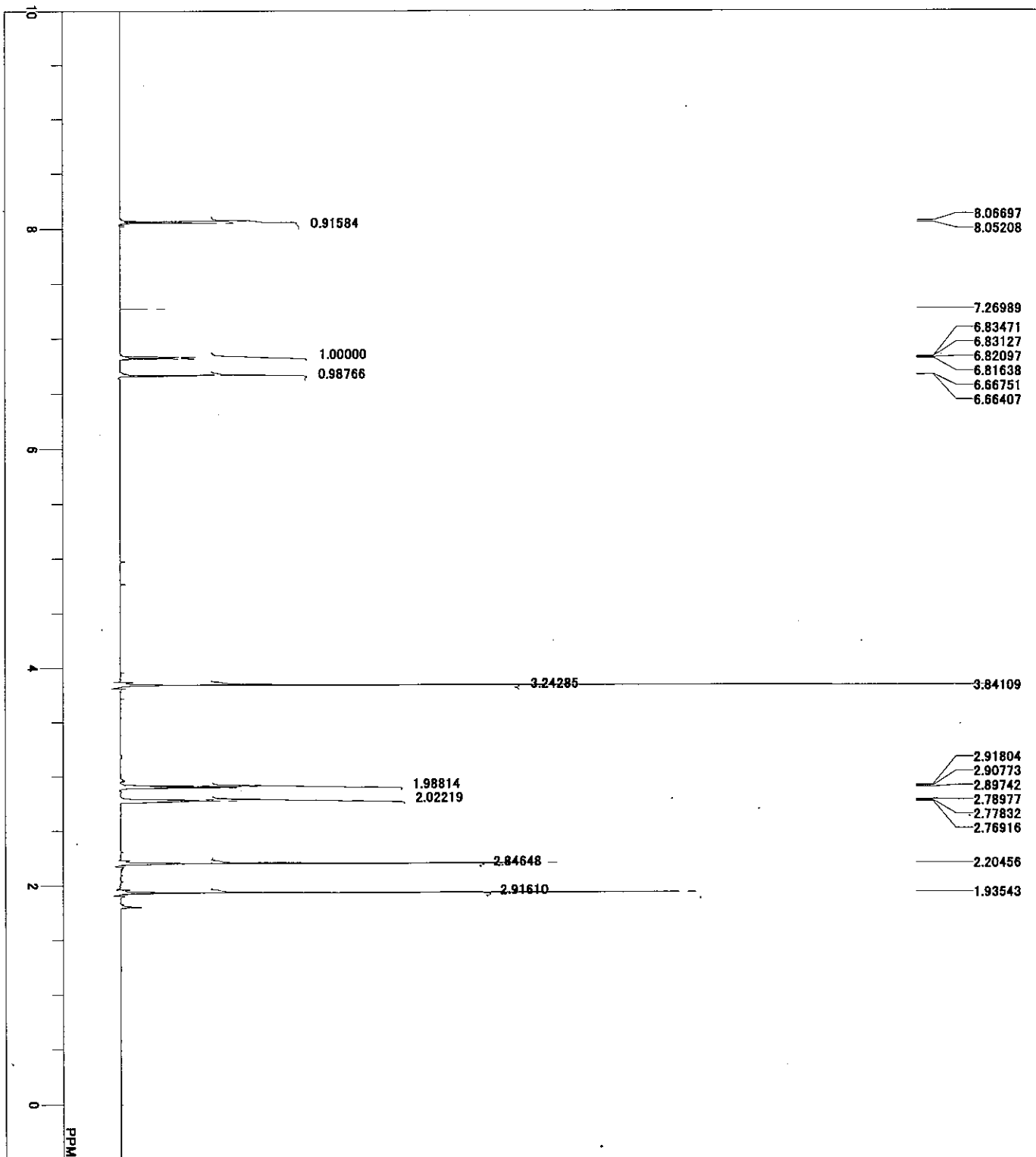
DELTA  
 COMPT single.pulse  
 DATIM 12-09-2011 21:56:29  
 OBNUC 1H  
 EXMOD 600.17 MHz  
 OBFRQ 5.30 KHz  
 OBSIN 3.47 Hz  
 PPRNT 131.07 Hz  
 PPRNS 900.0 Hz  
 SCANS 4  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PVI 6.50 usec  
 IRNUC 28.8 °C  
 CTEMP  
 SLVNT CDCl<sub>3</sub>  
 ERREF 0.00 ppm  
 RGAIN 0.12 Hz  
 42



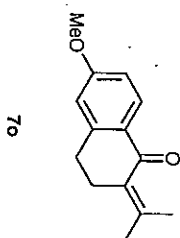


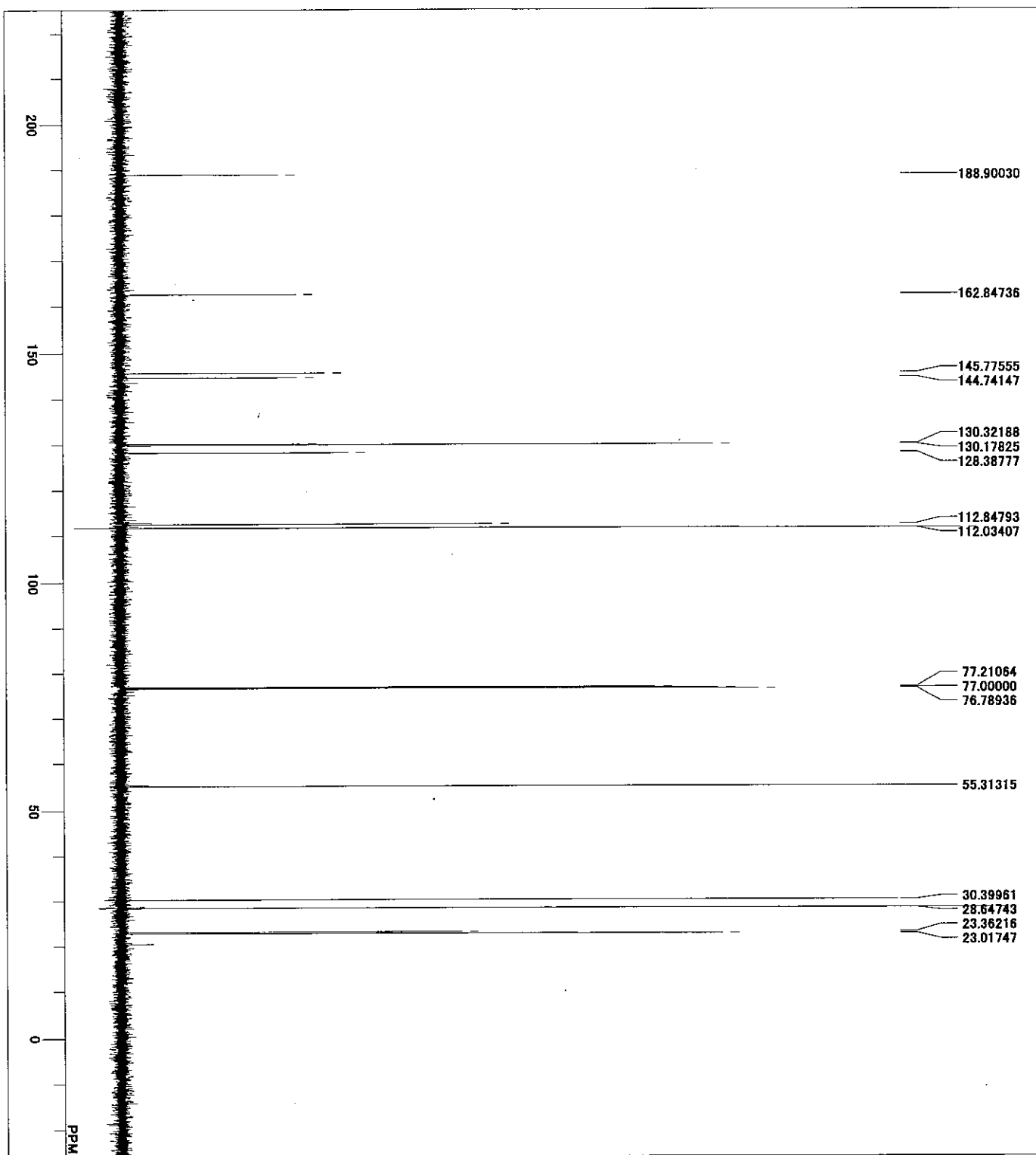
FILE C:\Documents and Settings\Kekelamy\Documents\Personal\Folden\Skai\W2  
 COMNT 12-01-2012 15:26:25  
 DATIM 13C  
 ORNUC single-pulse\_dac  
 EXMAD 150.97 MHz  
 ORFRQ 83.2 MHz  
 OBSRT 2  
 POINT 26214  
 FREQU 376276.21 Hz  
 SCANS 1024  
 ACQTM 0.66921 sec  
 PD 2.0000 sec  
 PVI 2.87 usec  
 IRNUC 1H  
 GTEMP 21.4 °C  
 SLYNT 71.00 ppm  
 SKREF 71.12 Hz  
 RGAIN 80



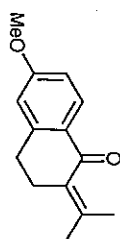


DFILE C:\Documents and Settings\delkamy\Documents\Personal Folder\Sakait\5\MS926.a1s  
 COMMENT single\_pulse  
 DATIM 05-03-2012 22:03:21  
 ORNUC 1H  
 EXMOD single\_pulse.ac2  
 OBFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 QTEMP 22.1 °C  
 SLVNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 32

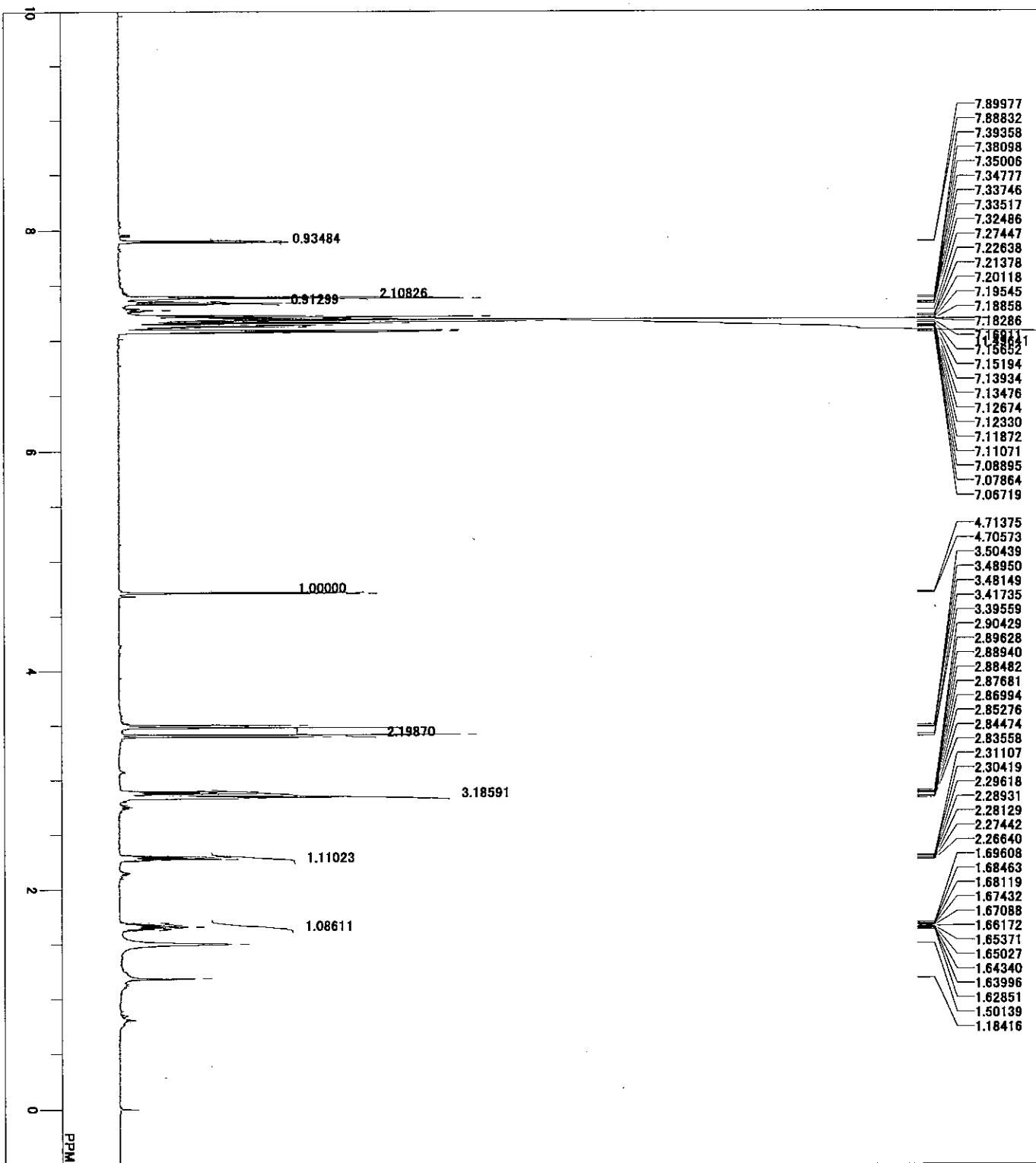




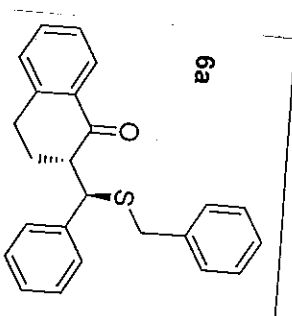
DFILE 05-03-2012 22:11:01  
 COMMENT  
 DATUM 13C  
 OBNUC single\_pulse\_dac  
 EXMOD 150.92 MHz  
 OBRFQ 8.52 KHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 124  
 SCANS 0.6921 sec  
 ACCQTM 2.0000 sec  
 PD 2.87 usec  
 PW1 23.2 °  
 IRNUC CDOL3  
 QTEMP 77.00 ppm  
 SLVNT EXREF 0.12 Hz  
 BF 80  
 RGAIN

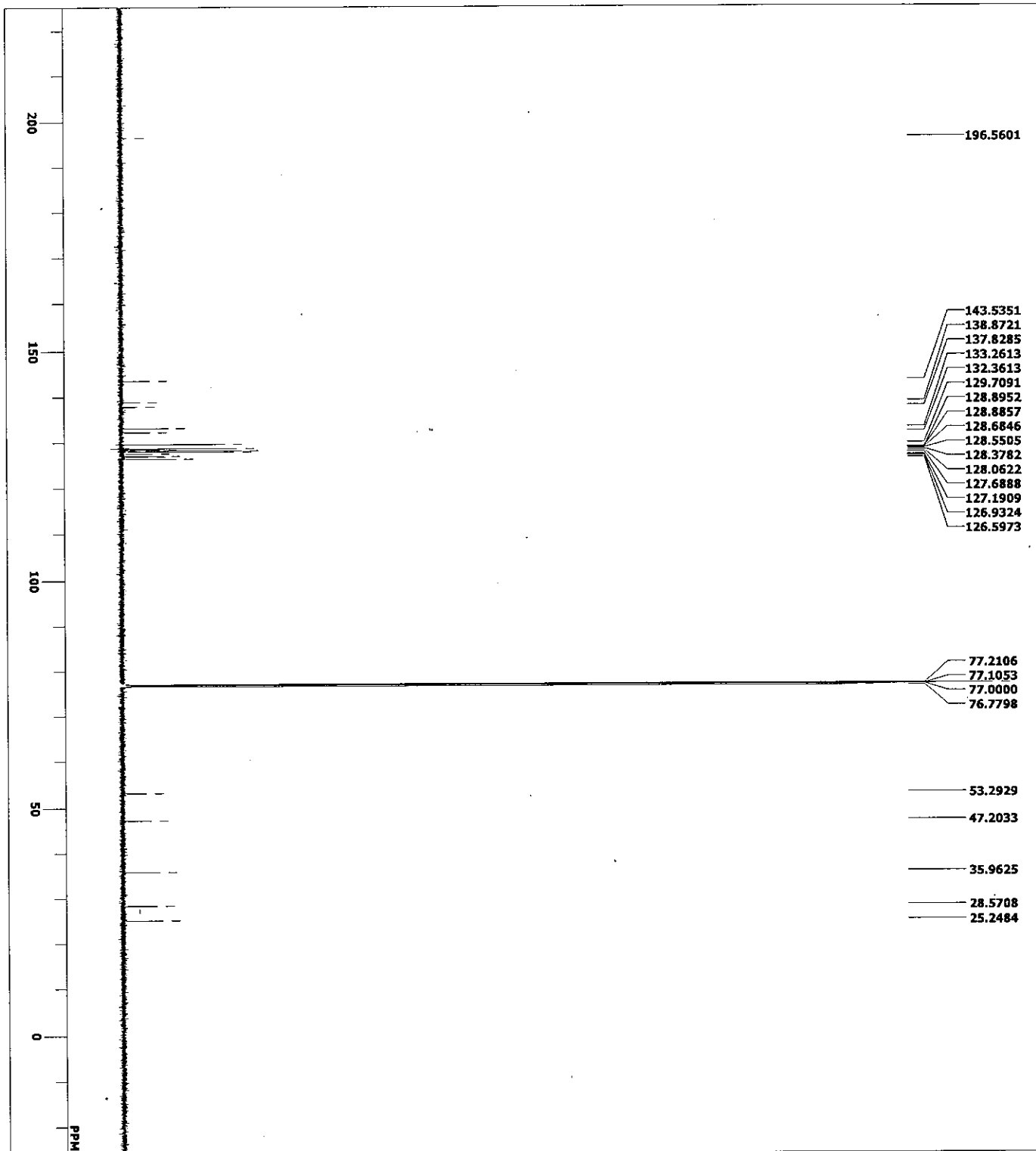


7o

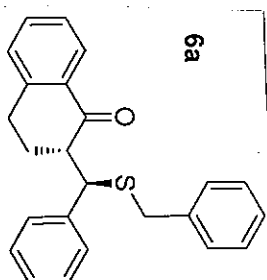


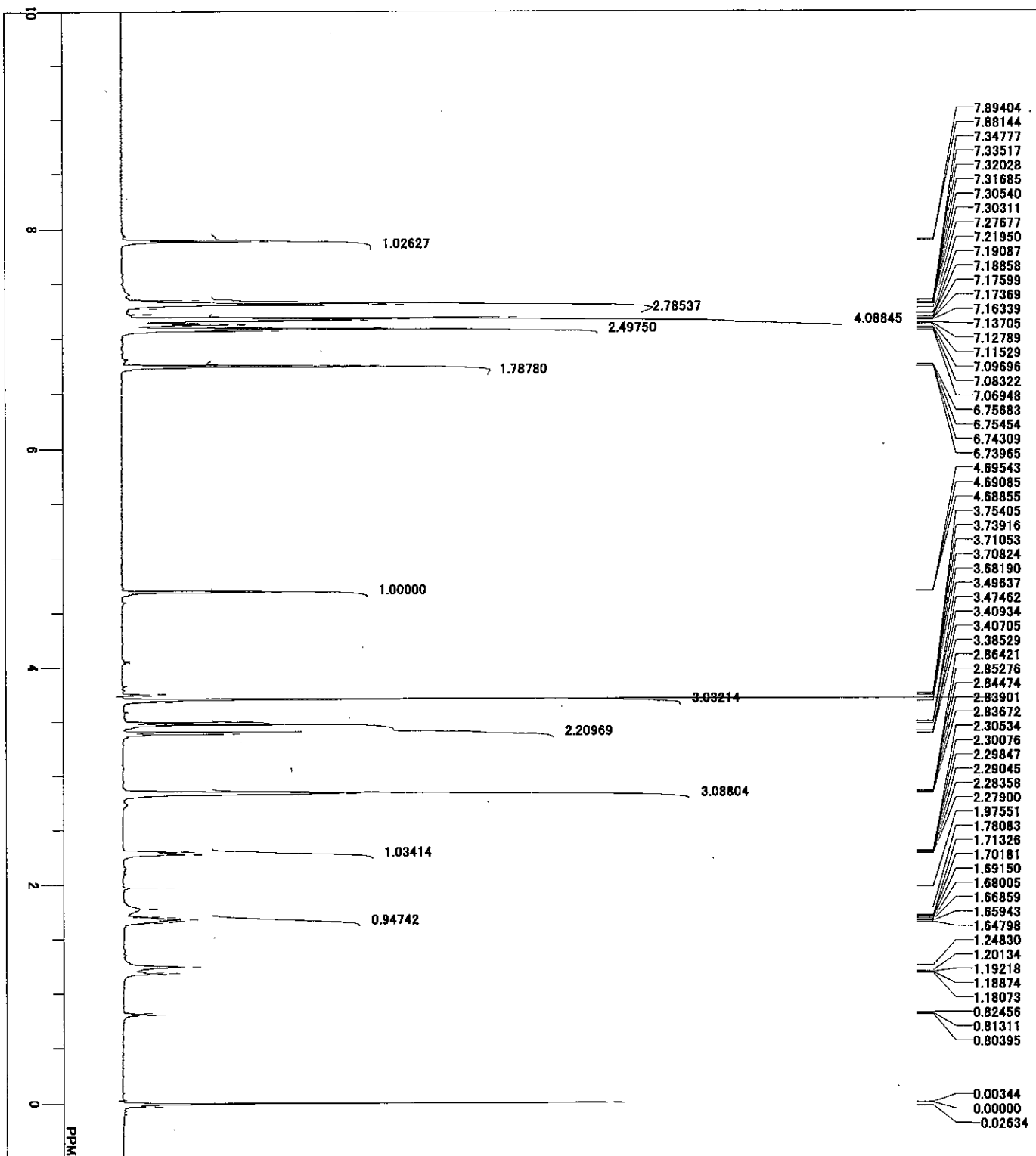
FILE C:\Documents and Settings\deltaelta\My Documents\Per  
 COMNT single-pulse  
 DATIM 03-04-2012 06:04:46  
 OBNUC 1H  
 EXMUD single-pulse-a2  
 OBFRO 600.17 MHz  
 OBSRT 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 16  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PVI 6.30 usec  
 IRNUC 1H  
 QTEMP 23.0 c  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 44



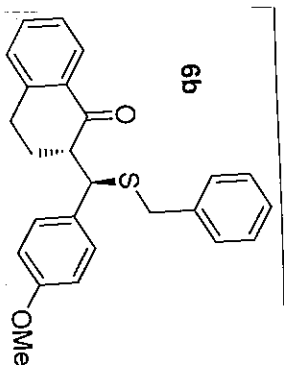


DFILE 03-04-2012 07:24:41  
 COMMENT 13C  
 DATIN single\_pulse\_dec  
 EXMNUD 150.92 MHz  
 EXMFRQ 8.52 KHz  
 OBFREQ 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1734  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PWT 1H  
 IRNUC 24.2 C  
 CTEMP CDCl3  
 SLVNT 77.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN

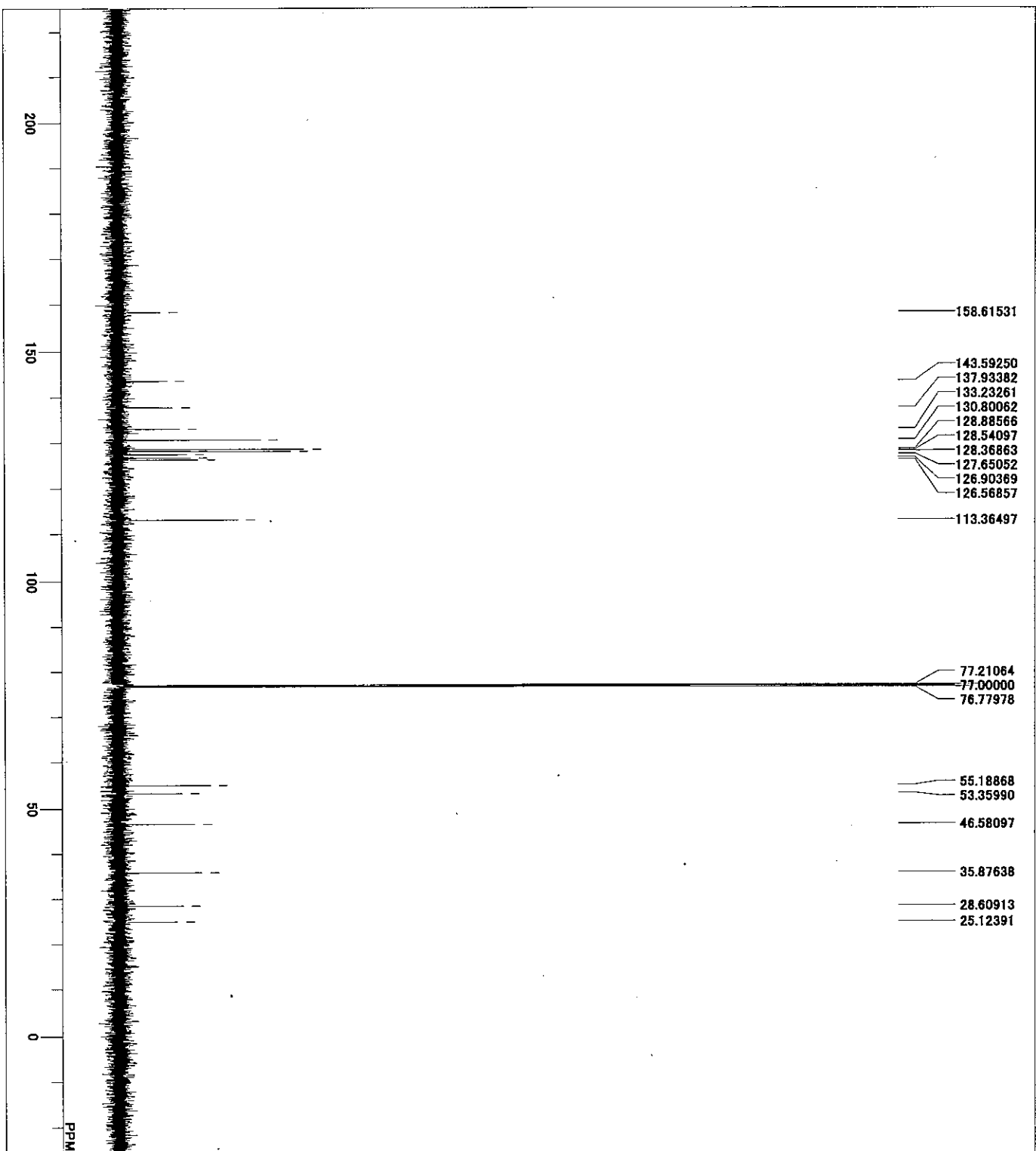




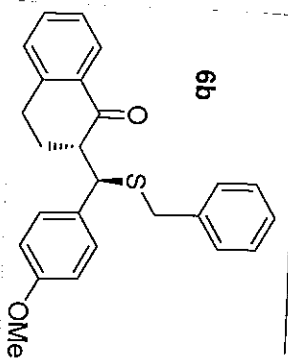
FILE C:\Documents and Settings\deltakmy Documents\Personal Folder\Sakai\K5M\889-2a1s  
 COMMENT single\_pulse  
 DATE 31-01-2012 00:25:23  
 DATUM 1H  
 ORNUC 1H  
 EXMOD single\_pulse.ac2  
 OBSRO 600.17 MHz  
 OBSRT 5.30 KHz  
 OBSFN 3.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PUL 6.50 usec  
 IRNUC 1H  
 GTEMP 21.3 c  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 42

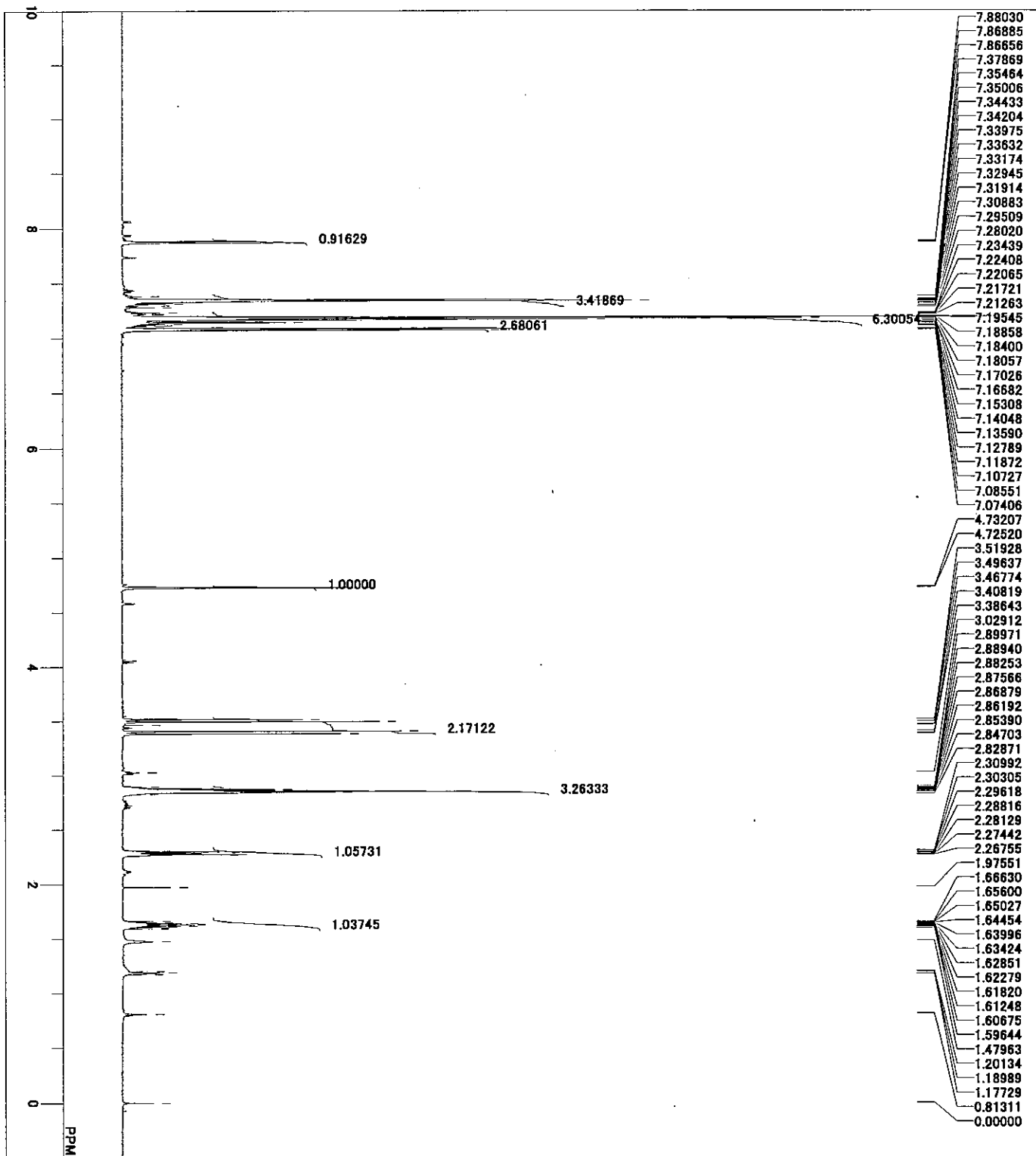




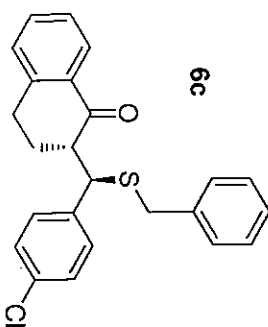


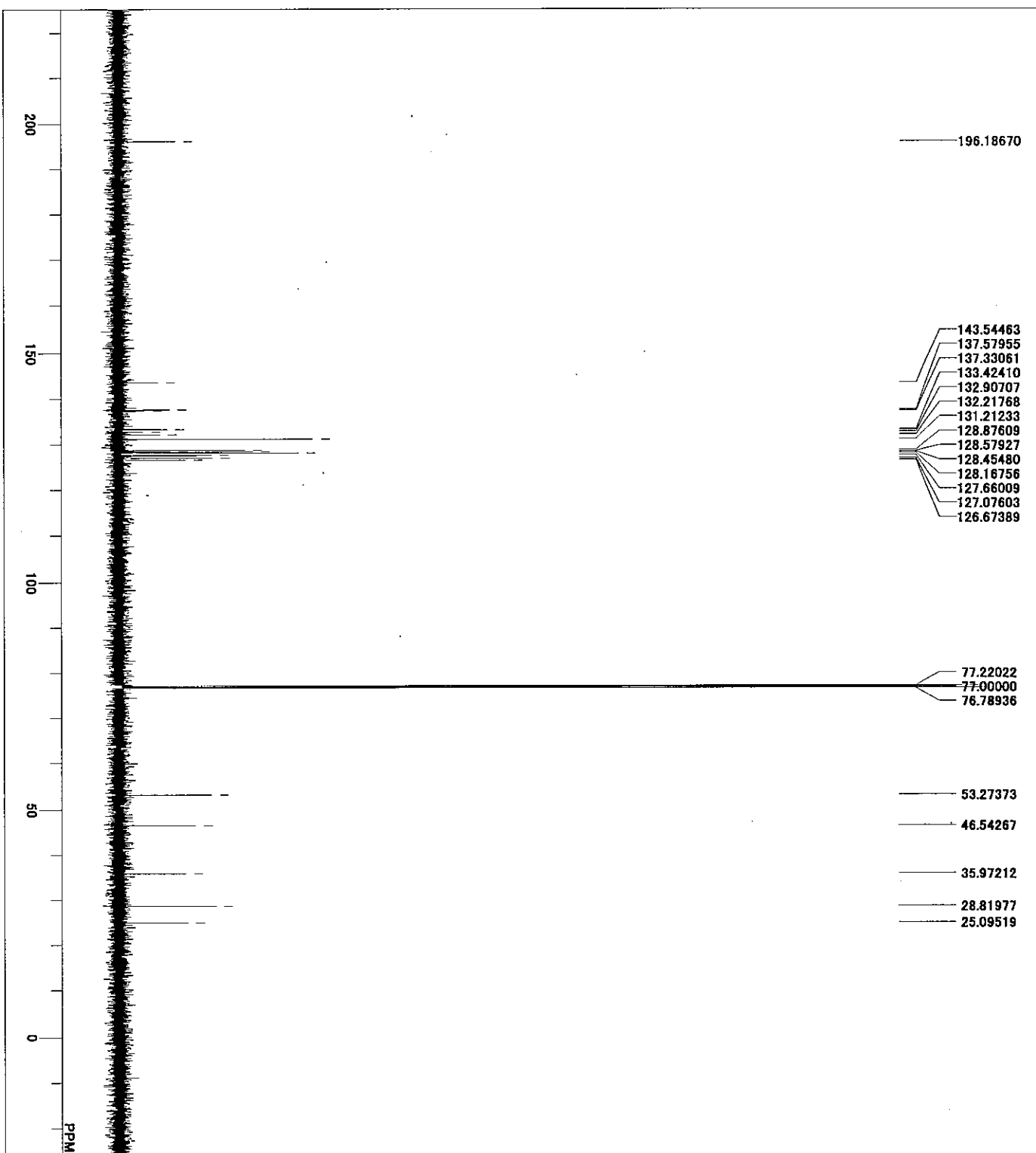
FILE C:\Documents and Settings\deltax\デスクトップ\MS868-2C:1  
 COMNT 31-01-2012 00:37:03  
 DATIM 13C  
 OBNUC single,pulse,dec  
 EXMOD 150.92 MHz  
 OBFRO 8.52 KHz  
 OBSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 213  
 SCANS 1  
 ACO TM 0.6921 sec  
 PD 2.0000 sec  
 IRNUC 2.87 usec  
 PW1 1H  
 CTEMP 22.5 e  
 SLVNT CDCl3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60



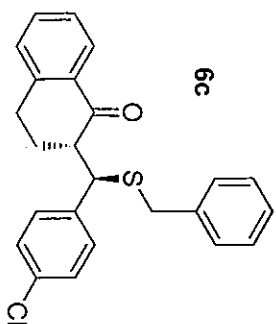


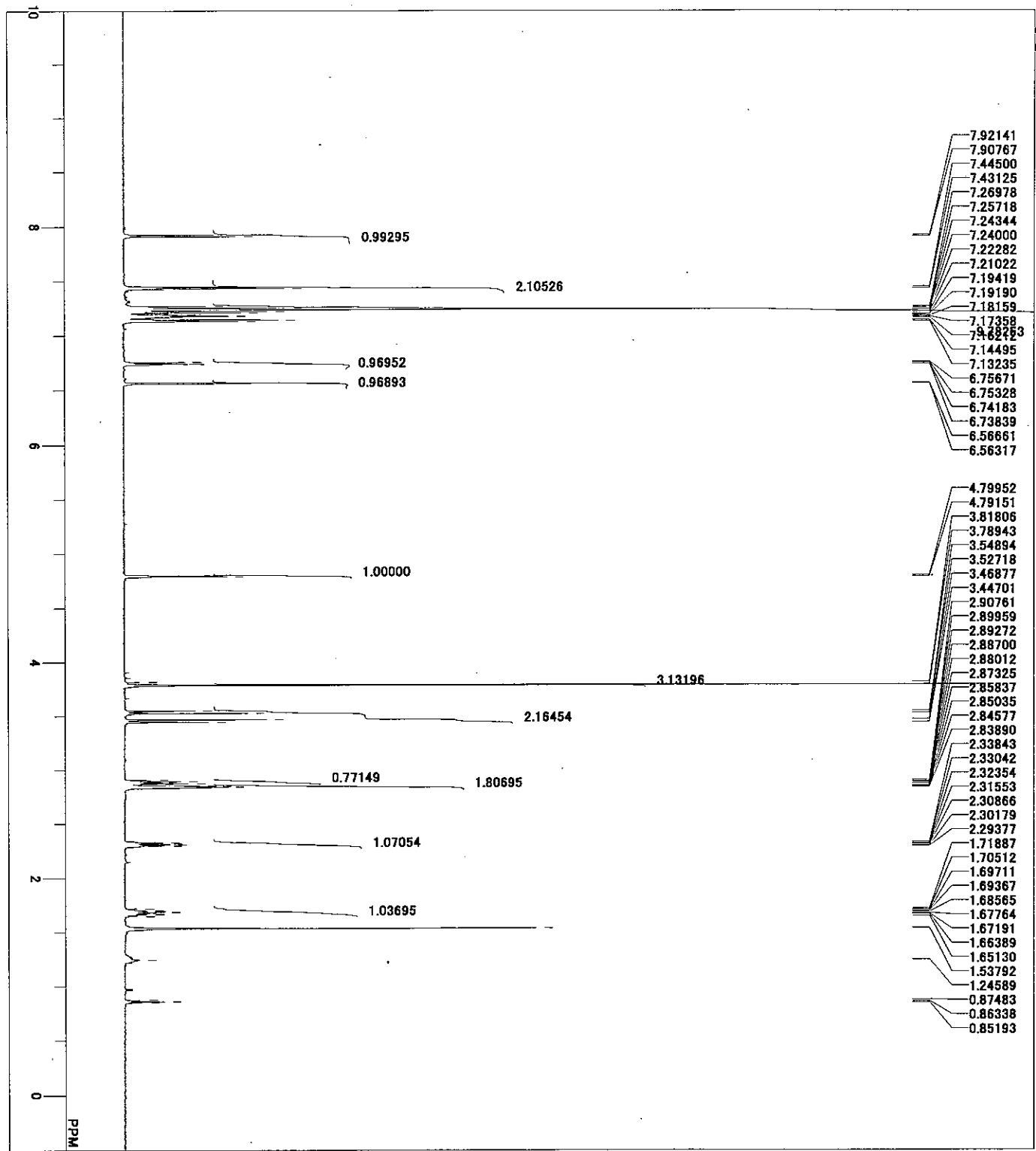
FILE  
 COMMENT single\_pulse  
 DATE 30-01-2012 04:48:20  
 IN 1H  
 EXMOD single\_pulse.ac2  
 OBSFRQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBSFN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PWT 6.50 usec  
 IRNUC 1H  
 CTEMP 21.7 °  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 44



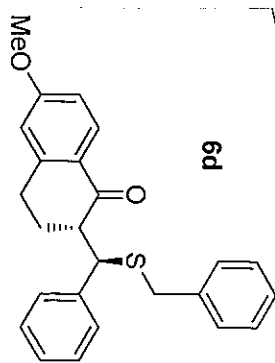


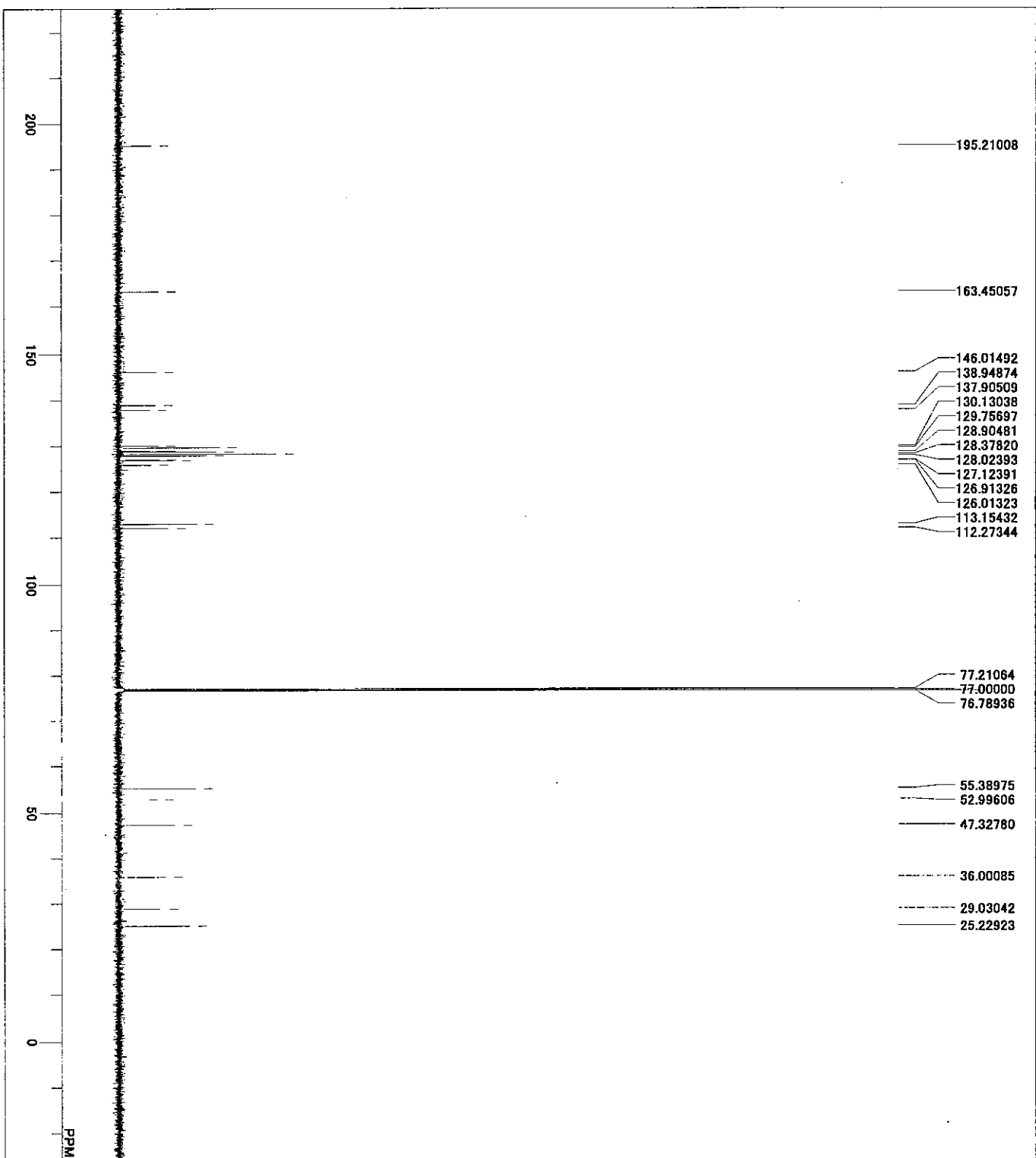
DEFILE 30-01-2012 04:59:45  
 COMMENT 13C  
 DATIM single.pulse.doc  
 ORNUC 150.92 MHz  
 EXMOD 8.52 KHz  
 OBFRO 1.74 Hz  
 OBSET 32768  
 OBFIN 47348.49 Hz  
 POINT 208  
 FREQU 208  
 SCANS 0.6921 sec  
 ACOTM 2.0000 sec  
 PD 2.87 usec  
 PWT 1H  
 IRNUC 22.4 °  
 GTEMP GDCL3  
 SLVNT 77.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN



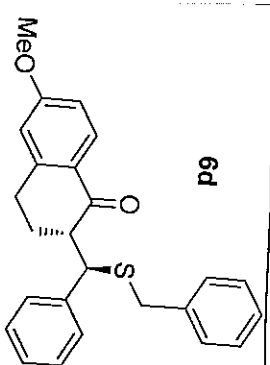


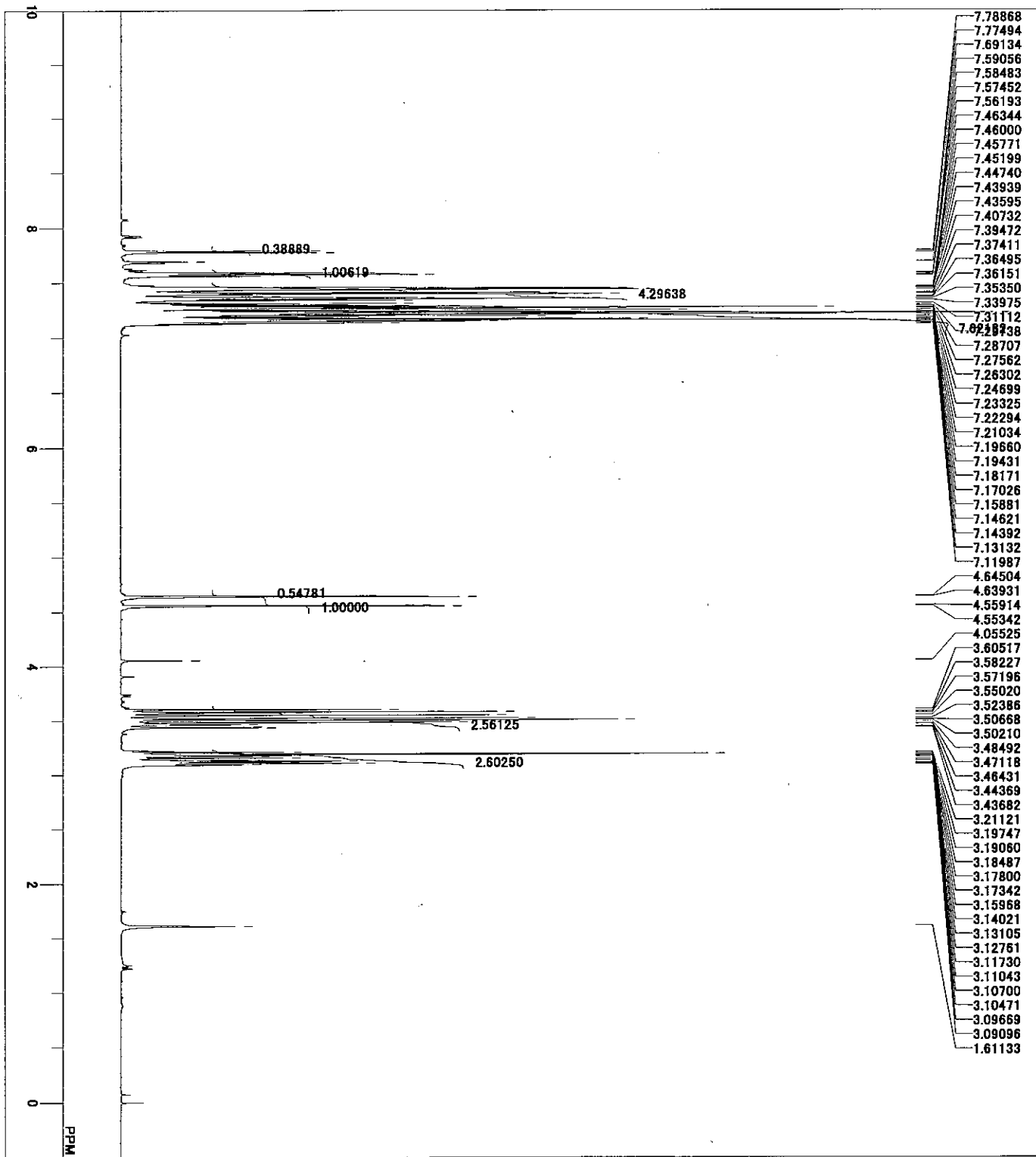
DPLE	DPLE
COMNT	single-pulse
DATM	01-12-2011 02:33:33
OBNUC	1H
EXMOD	single-pulse.exe2
OBFRQ	600.17 MHz
OBSET	3.30 KHz
OBFIN	5.47 Hz
POINT	13107
FREQU	9008.87 Hz
SCANS	8
ACQTM	1.4549 sec
PD	2.0000 sec
PW1	6.50 usec
IRNUC	1H
CTEMP	402.1 °
SLVNT	CDCl3
EXREF	7.24 ppm
BF	0.12 Hz
RGAIN	44





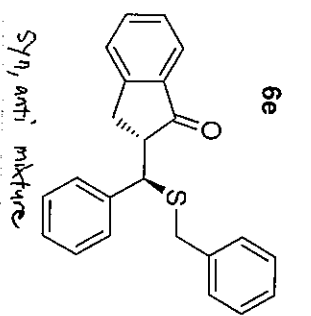
FILE C:\Documents and Settings\deltax\デスクトップ\803rec\_CARBON.1  
 COMMENT 12-12-2011 10:27:41  
 DATIM 13C  
 ORNUC single-pulse, dca  
 EXMAD 150.92 MHz  
 OFFRQ 8.52 KHz  
 ORSET 1.74 Hz  
 OFPIN 1.74 Hz  
 POINT 32768  
 FREQU 47348.49 Hz  
 SCANS 1024  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PWT 2.87 usec  
 IRNUC 1H  
 CTEMP 23.4 °C  
 SLVNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60

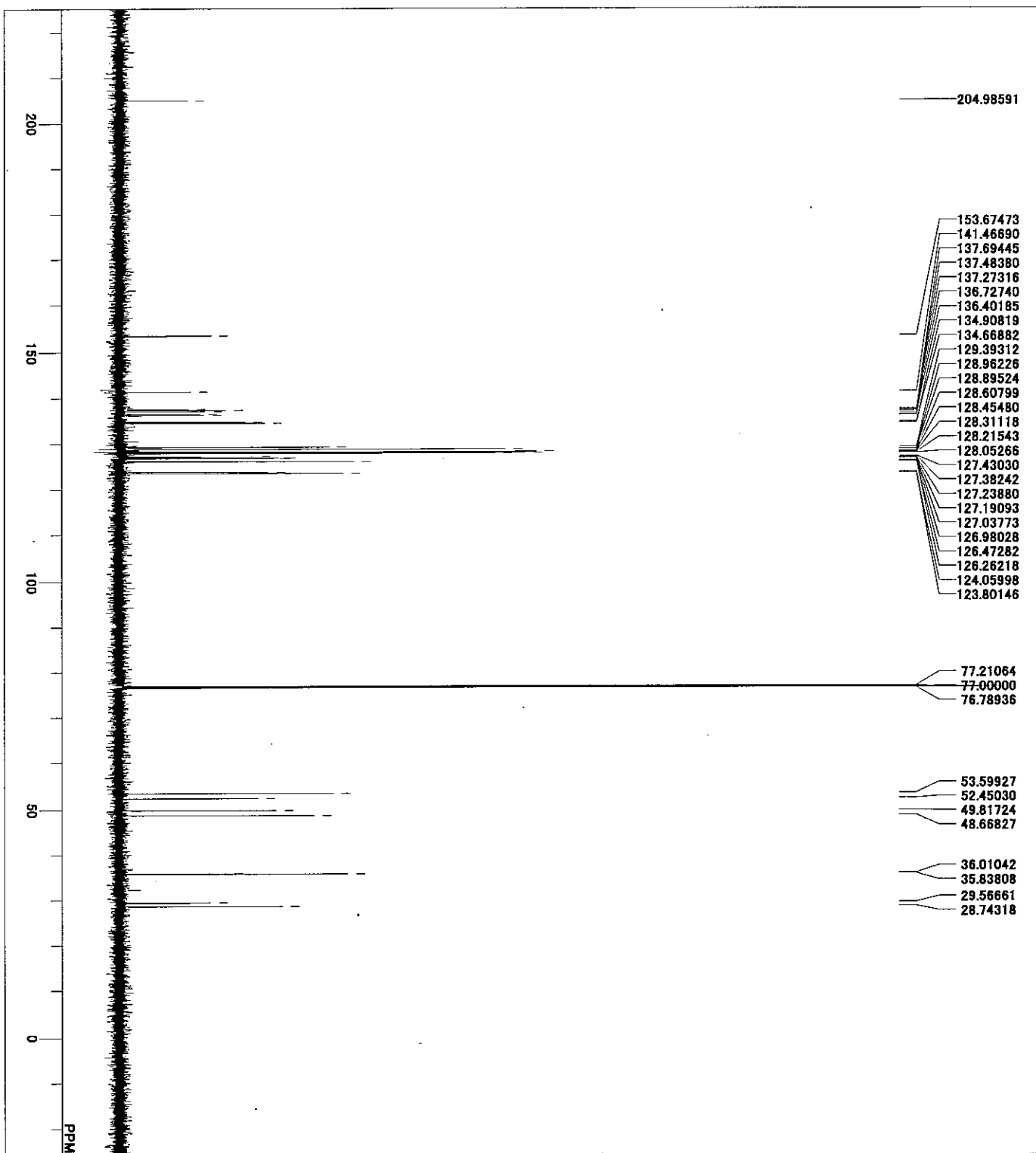




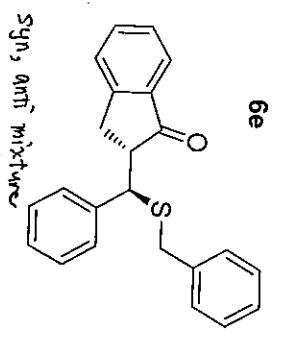
C:\Documents and Settings\kdelta\My Documents\personal Folder\Sakai\5\NMS929-22.a1s  
 single pulse

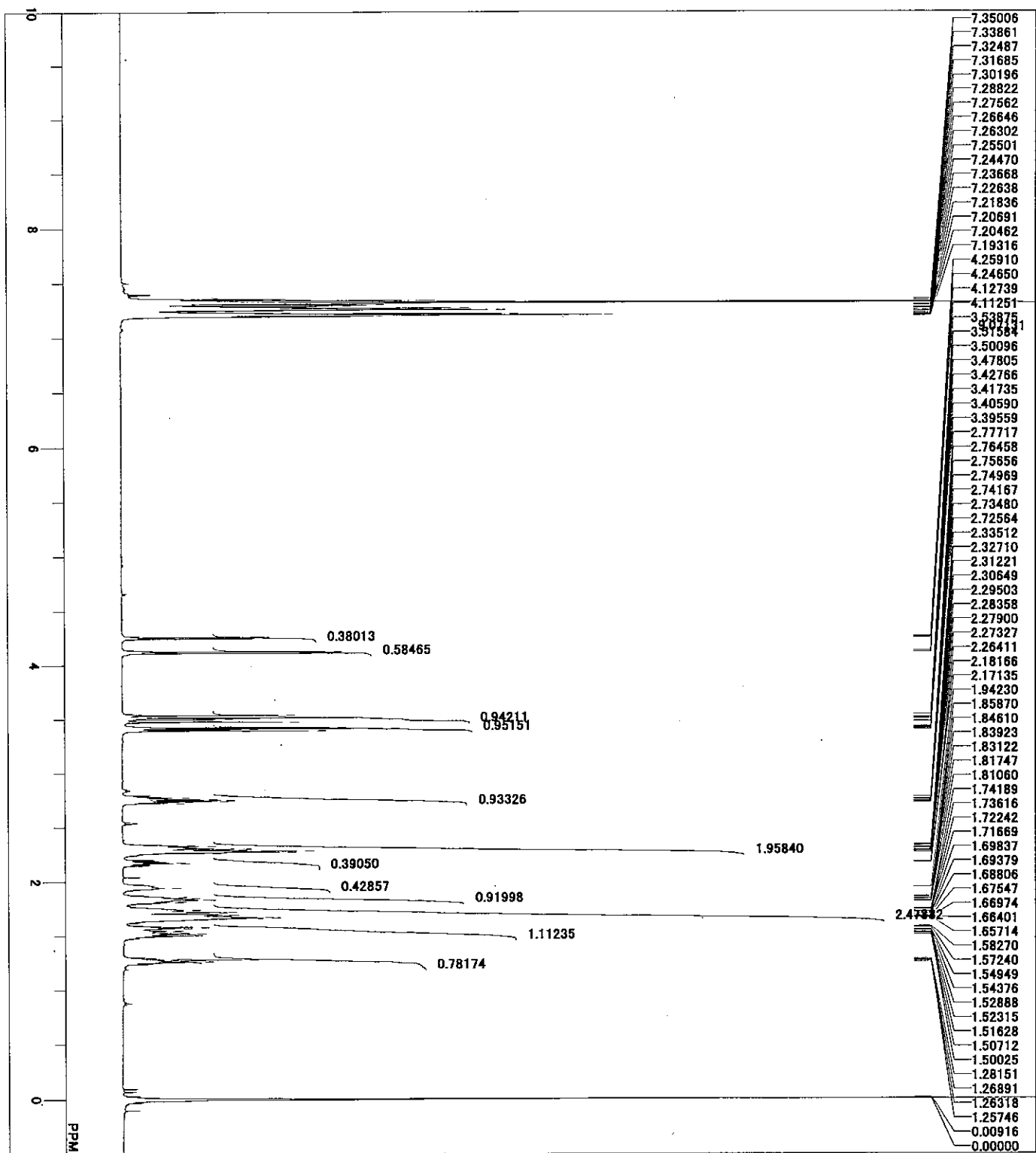
FILE C:\Documents and Settings\kdelta\My Documents\perso  
 COMMENT single pulse  
 DATIM 05-03-2012 22:18:49  
 1H  
 EXMOD single pulse,ex2  
 OBFRQ 600.17 MHz  
 OBSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACOPTM 1.4549 sec  
 PD 2.0000 sec  
 PM1 6.50 usec  
 IRNUC 1H  
 CTEMP 22.3 °C  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 38





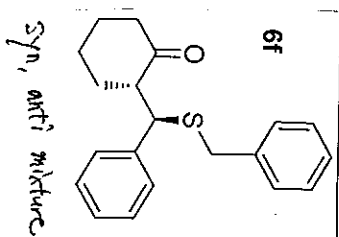
FILE C:\Documents and Settings\delaxk\My Documents\Kf\erz  
 COMMENT 05-03-2012 22:31:41  
 DATIM 13C  
 OBNUC single pulse dec  
 EXMOD 150.92 MHz  
 OBFRQ 8.52 KHz  
 OBSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 241  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PW1 1H  
 IRNUC 23.2 e  
 CTEMP CDCL3  
 SLVNT 77.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN



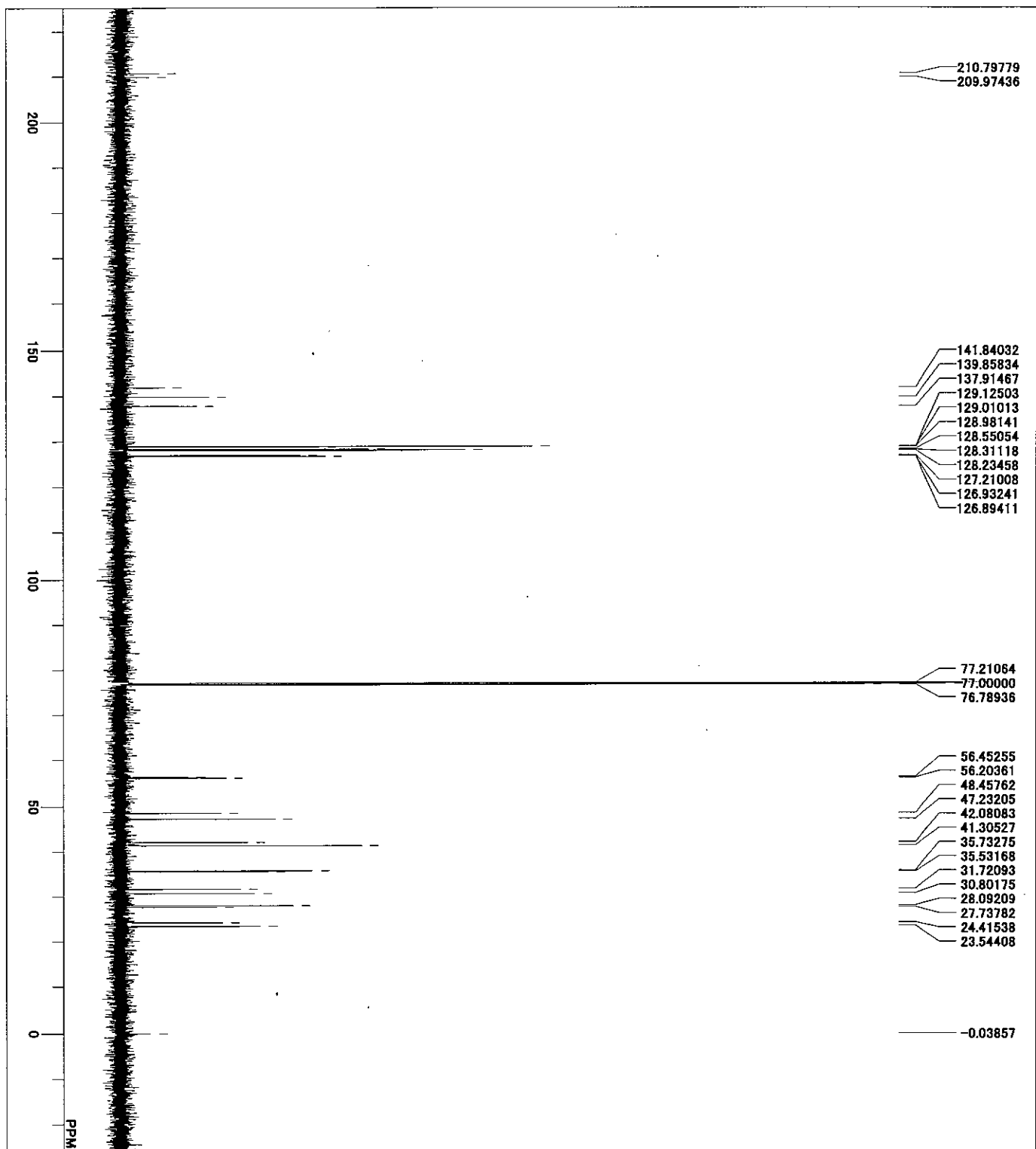


C:\Documents and Settings\deltaelta\My Documents\Personal Folder\Sakai\2\120126-621.als  
 single pulse

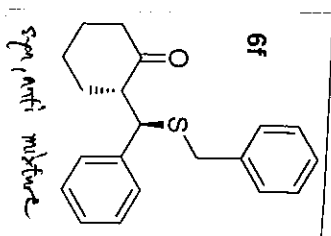
DFIL FILE  
 COMNT COMMENT  
 DATIM 26-01-2012 04:36:01  
 OBNUC 1H  
 EXMOD single\_pulse.ex2  
 OBFRQ 600.17 MHz  
 OBSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 CTEMP 21.7 °C  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 38

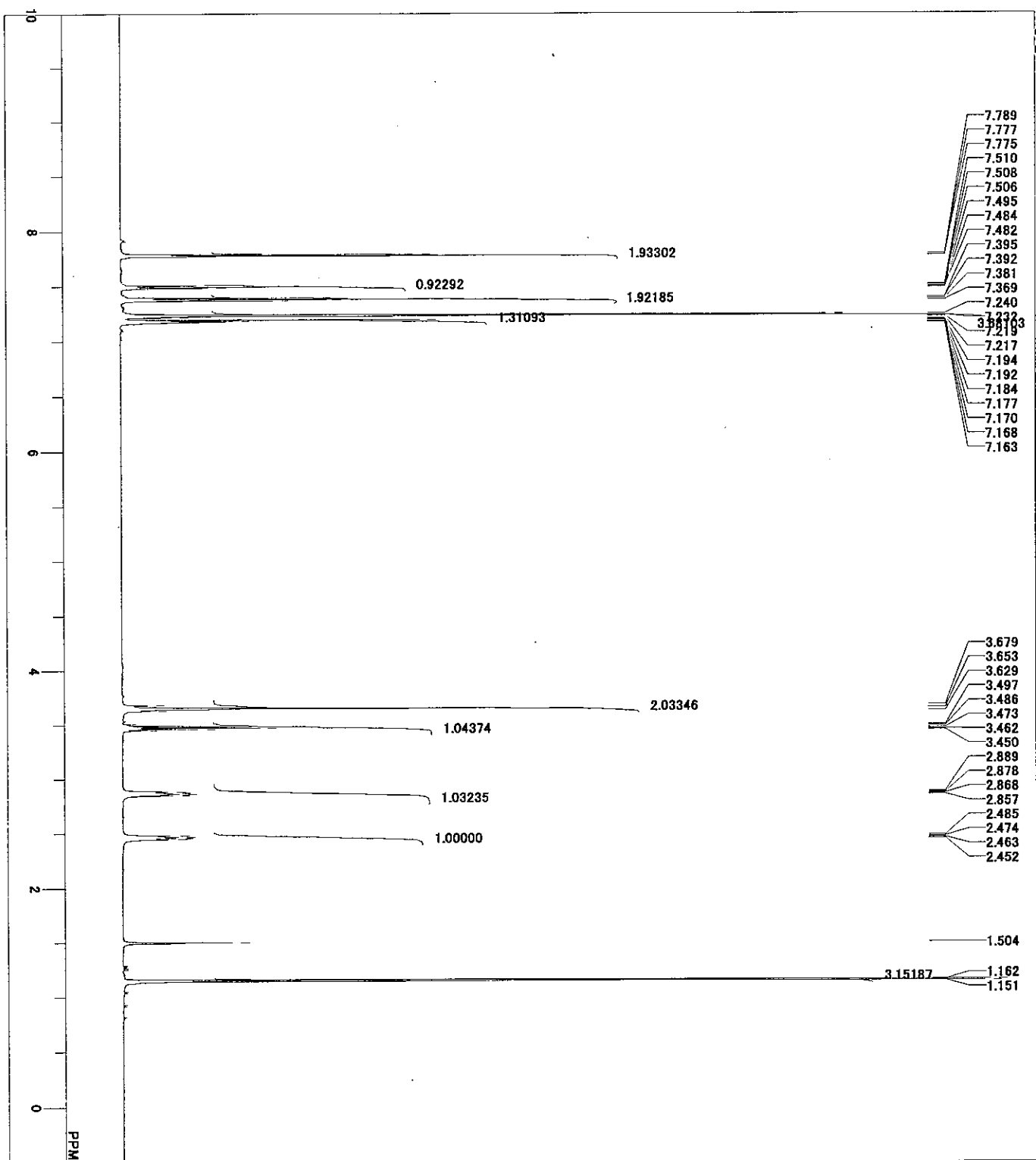






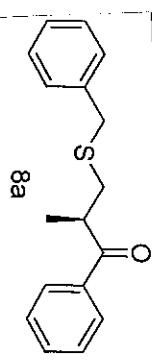
DFILE  
 COMMENT  
 DATIM 26-01-2012 04:45:26  
 OBNUC 13C  
 EXMOD single pulse, dec  
 OBFREQ 150.92 MHz  
 OBSET 8.52 KHz  
 OBFIN 1.74 Hz  
 POINT 32768  
 FREQU 47348.49 Hz  
 SCANS 159  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PW1 2.87 usec  
 IRNUC 1H  
 CTEMP 22.9 °  
 SLVNT CDCl3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60

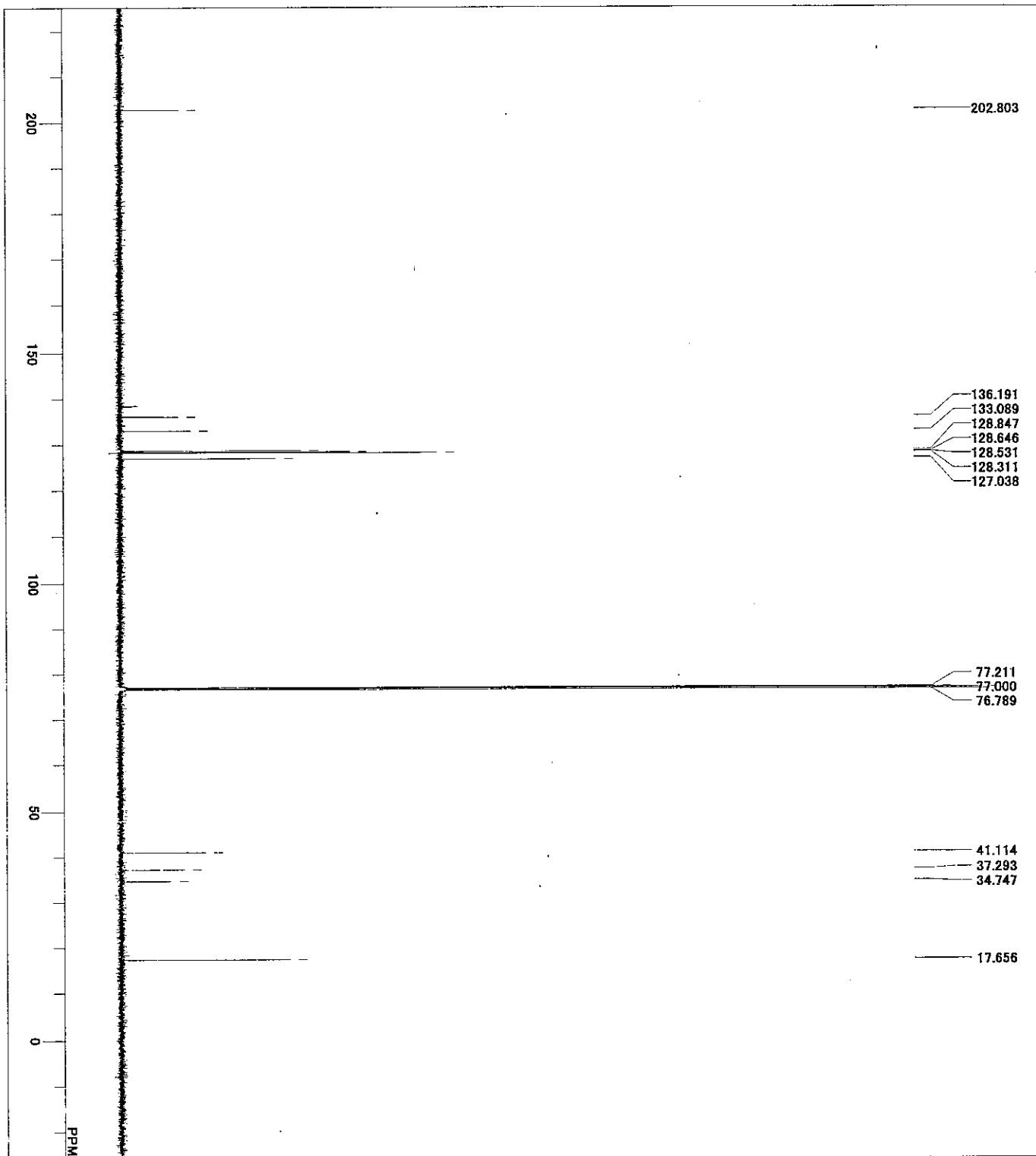




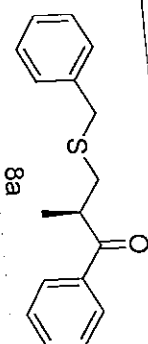
C:\Documents and Settings\delta\kay\デスクトップ\kay\aaaaaaaaa.1  
 single pulse

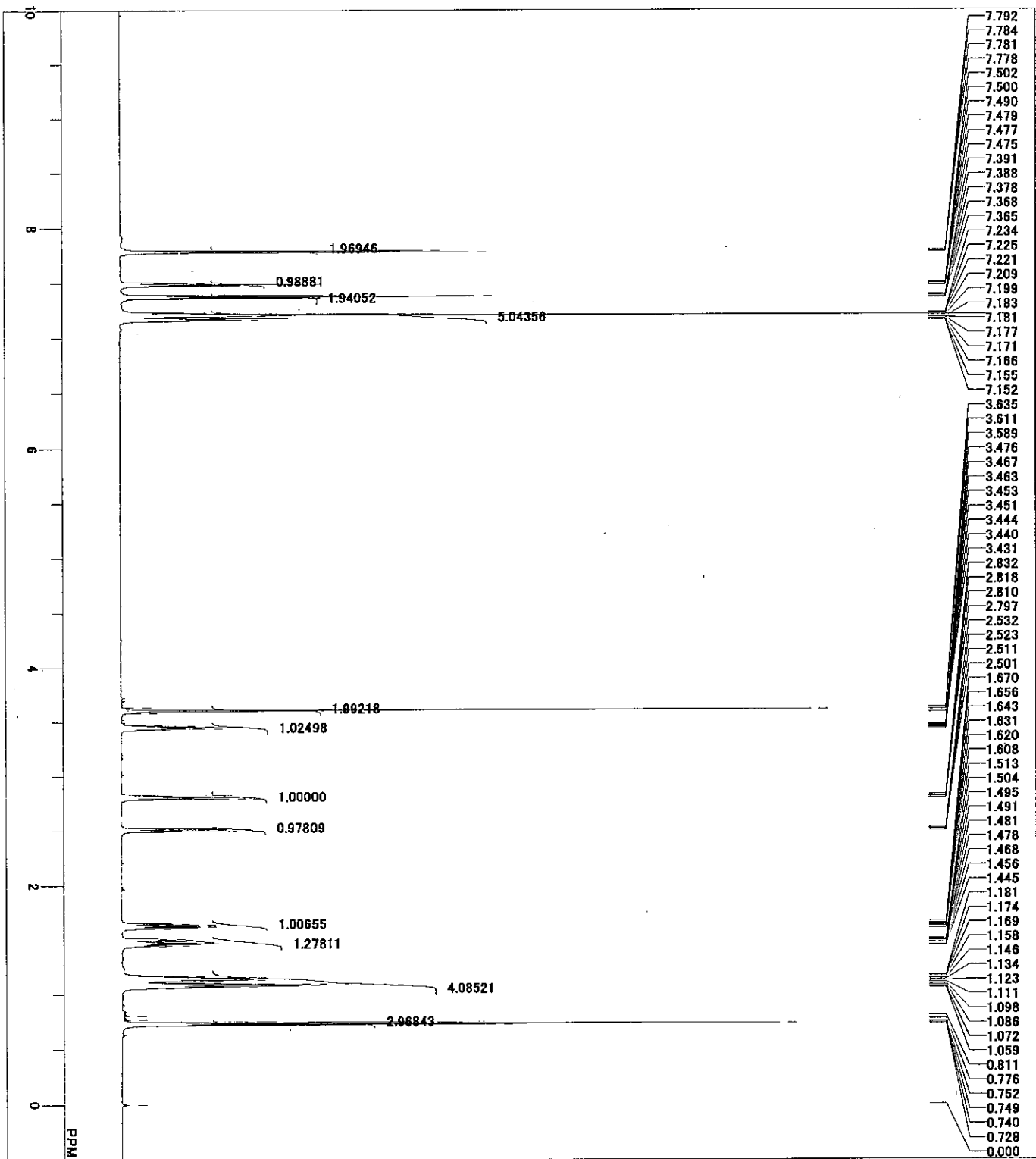
FILE C:\Documents and Settings\delta\kay\デスクトップ\kay\...  
 CONNT single pulse  
 DATM 28-11-2011 22:46:48  
 OBNUC 1H  
 EXMOD single pulse ex2  
 OBFREQ 600.17 MHz  
 OBSFET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 16384  
 FREQU 11261.26 Hz  
 SCANS 8  
 ACCTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 OTEMP 49.8 c  
 SLYNT GDCL3  
 EXREF 7.24 ppm  
 BF 0.12 Hz  
 RGAIN 42





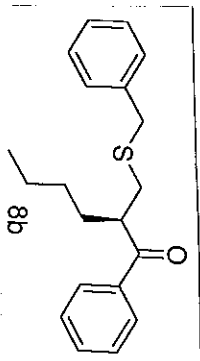
FILE 29-11-2011 12:23:46  
 COMNT 13C  
 DATIM single-pulse dec  
 OBNUC 150.92 MHz  
 EXMOD 8.52 KHz  
 OBFREQ 1.74 Hz  
 OBSSET 32768  
 OBFIN 47348.49 Hz  
 POINT 1024  
 FREQU 0.6921 sec  
 SCANS 2.0000 sec  
 ACQTM PD  
 PW1 2.87 usec  
 IRNUC 1H  
 QTEMP 52.3 e  
 SLYNT CDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60

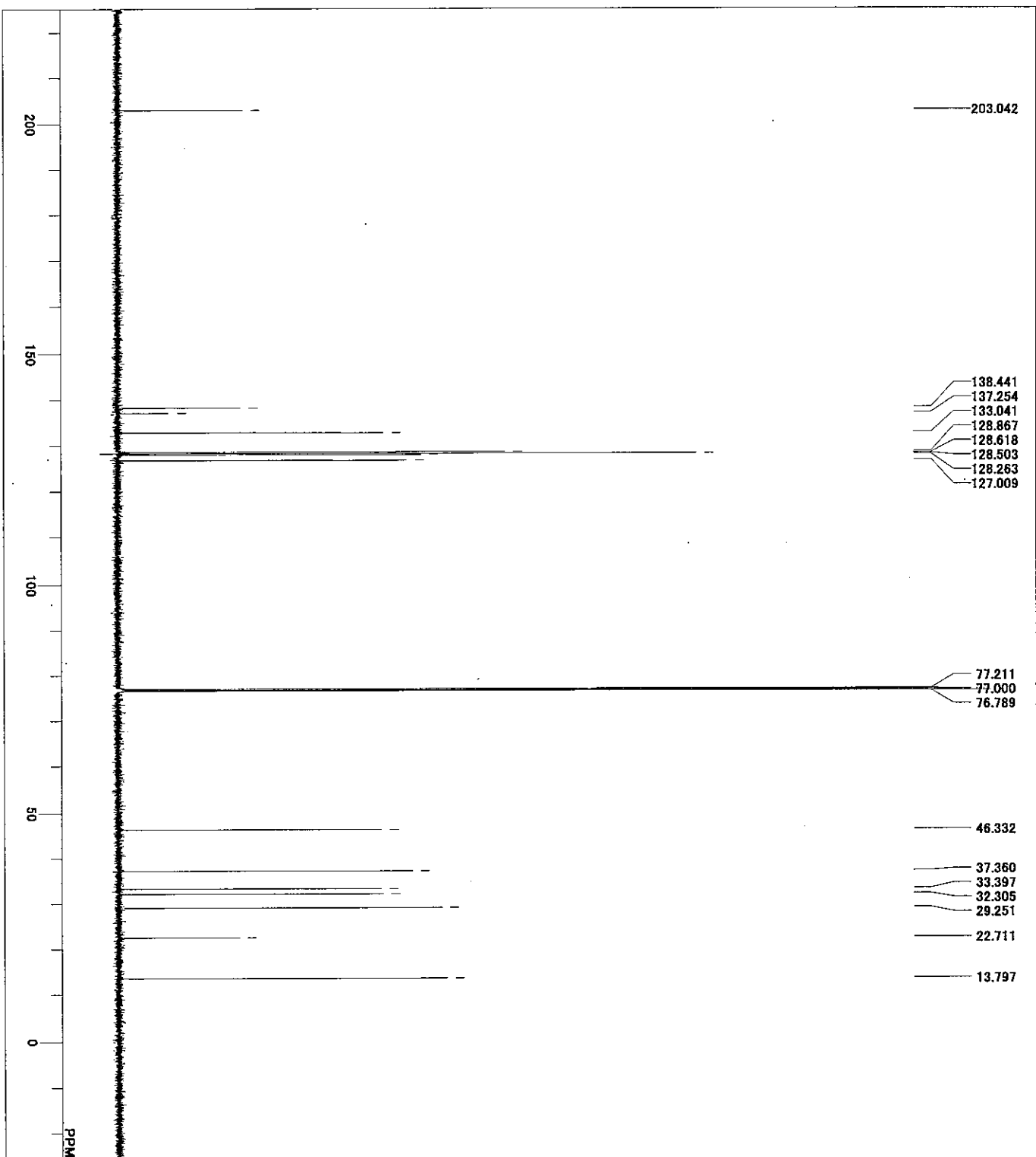




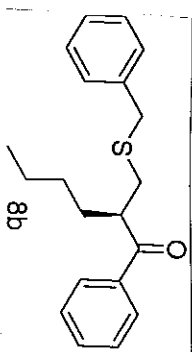
C:\Documents and Settings\delta\delta\My Documents\Personal Folder\Sakai\2\9689h\_1\PROTON.a1s

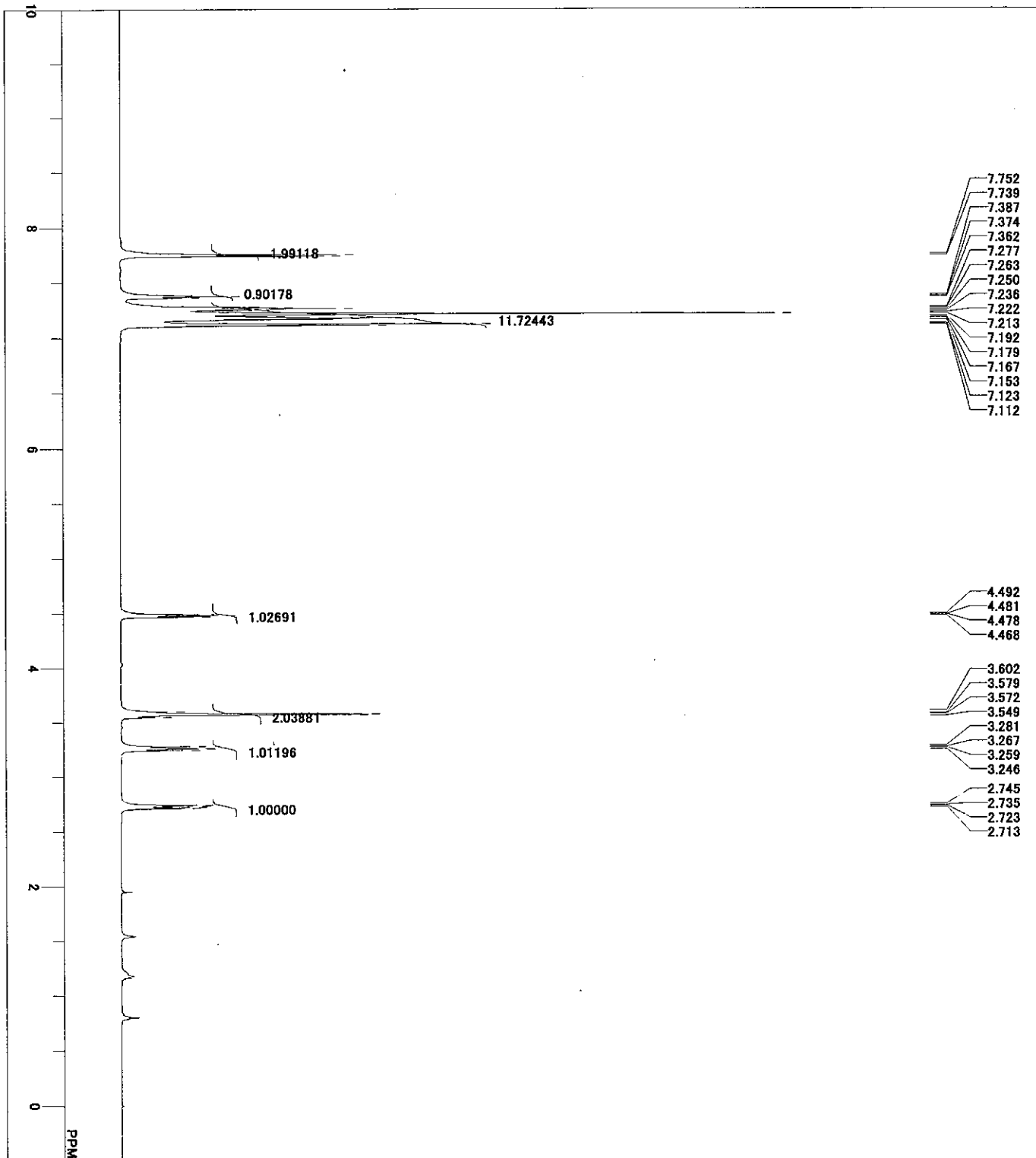
FILE C:\Documents and Settings\delta\delta\My Documents\Perse  
 COUNT 25-11-2011 12:11:08  
 DATUM 1H  
 OBNUC single pulse ex2  
 EXMOD 600.17 MHz  
 OBFRQ 5.30 KHz  
 OBSFT 5.47 Hz  
 OBFIN 16384  
 POINT 11281.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PW1 1H  
 IRNUC 49.3 e  
 GTEMP GDCL3  
 SLYNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 40  
 RGAIN



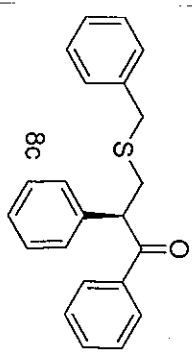


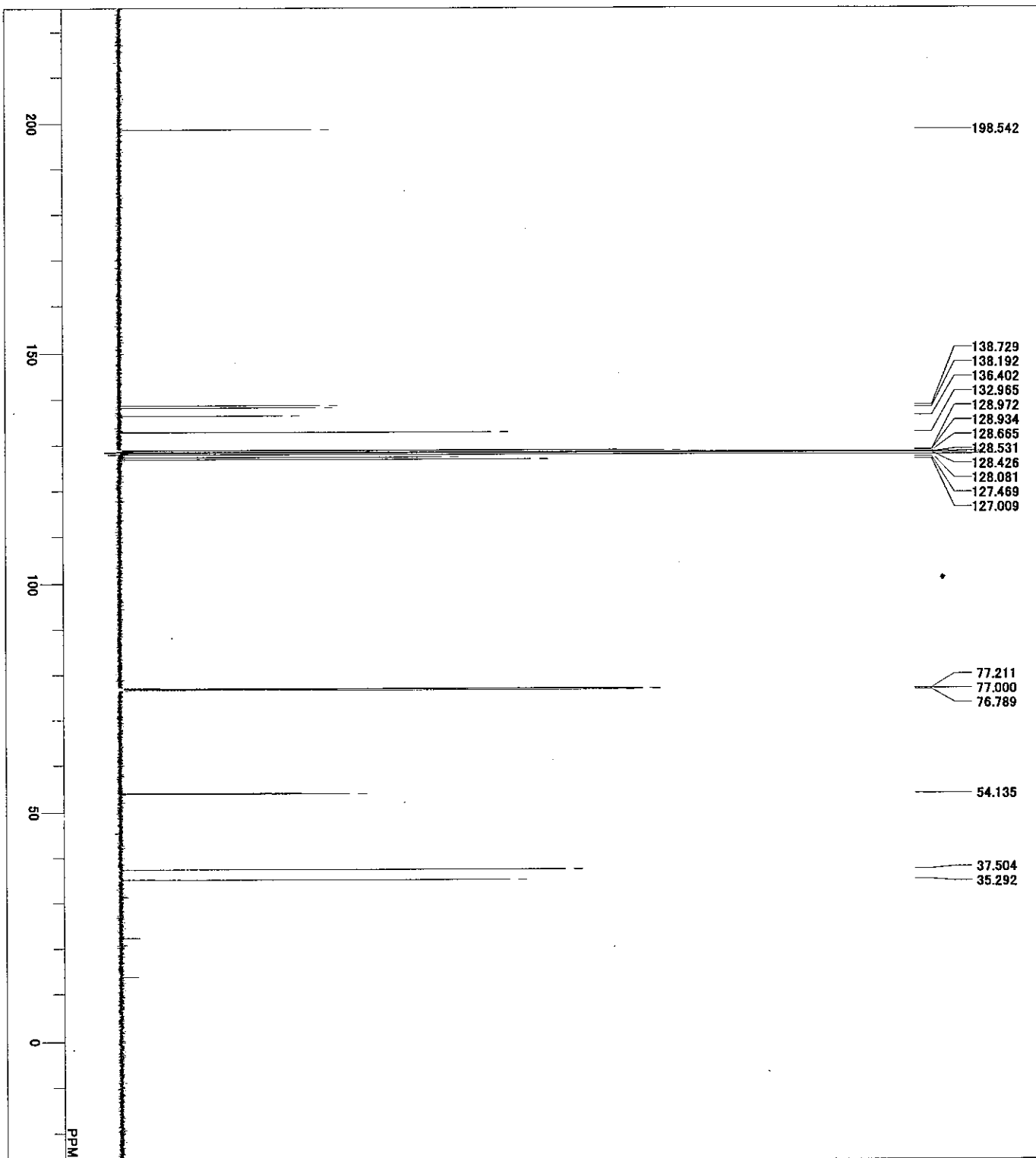
D:\Documents and Settings\delta\My Documents\Personal Folder\Sakai\2\689c\_CARBONals  
 FILE 25-11-2011 12:58:01  
 CONNT 13C  
 DATIM  
 EBNUC  
 EXMOD  
 OBFRQ 150.92 MHz  
 OBSET 8.52 KHz  
 OBRIN 1.74 Hz  
 POINT 32/68  
 FREQU 47348.49 Hz  
 SCANS 1024  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PW1 2.87 usec  
 IRNUC 1H  
 CTEMP 50.0 e  
 SLYNT GDCL3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 60



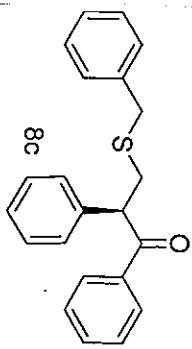


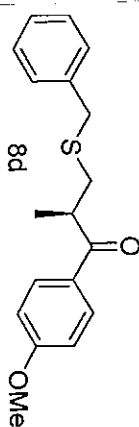
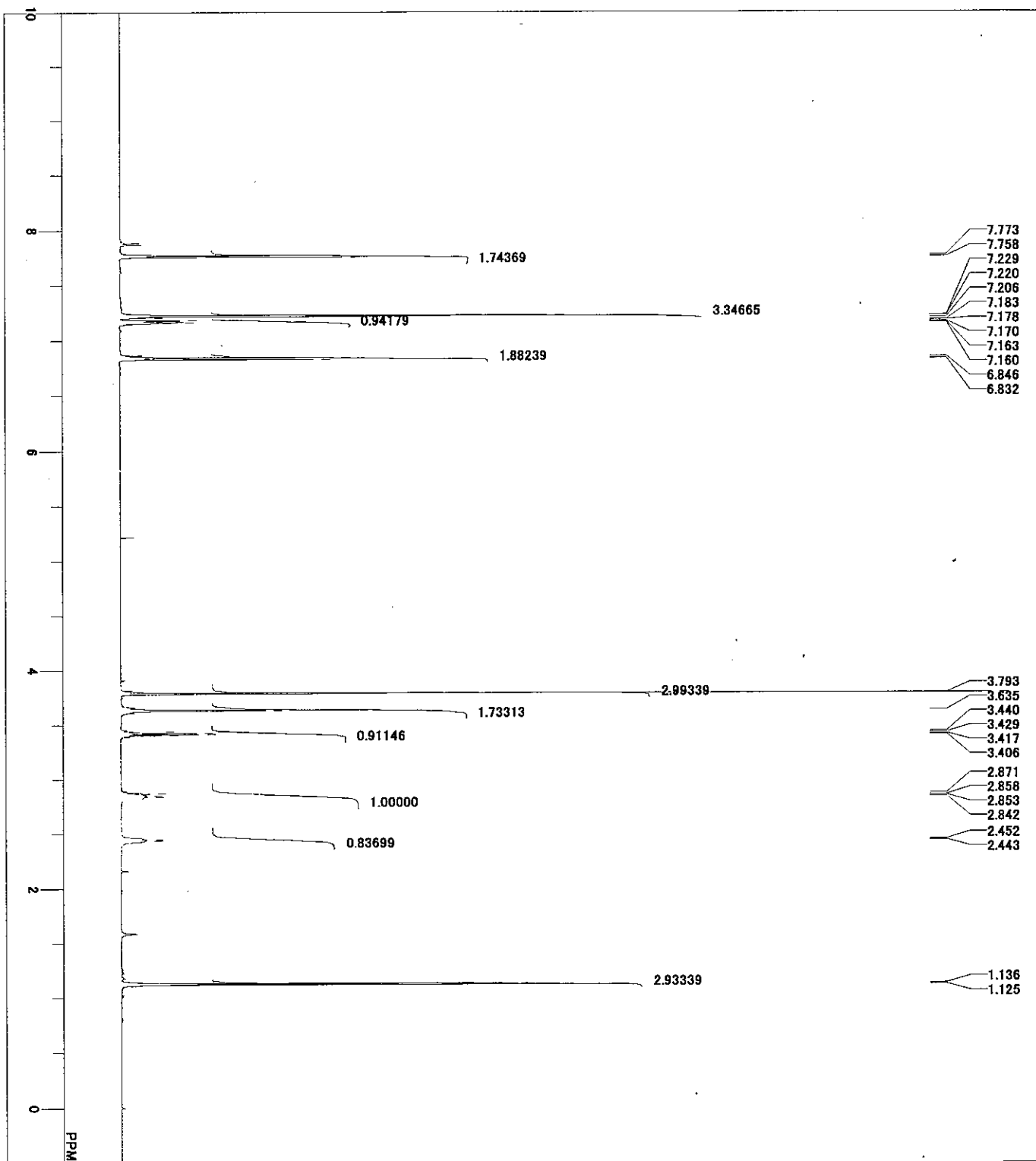
DFILE COMNT  
 DATIM 29-11-2011 09:41:30  
 OBNUC 1H  
 EXMOD single\_pulse\_ax2  
 OBFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 18384  
 FREQUS 11261.26 Hz  
 SCANS 16  
 ACQTM 1.4549 sec  
 PD 4.0000 sec  
 PFI 6.50 usec  
 IRNUC 1H  
 QTEMP 50.9 °C  
 SLVNT CDCl3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 34





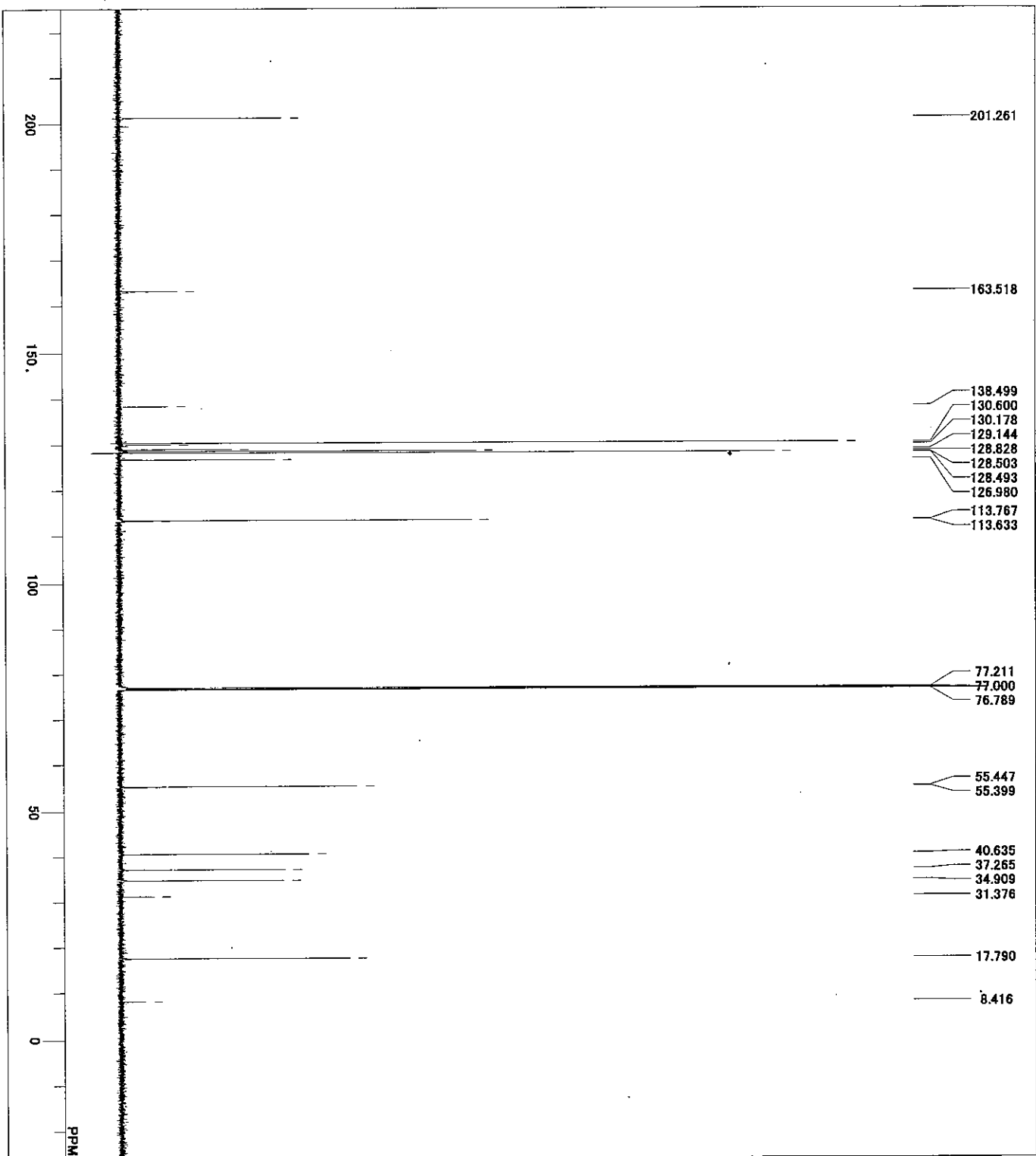
DFIL  
 COMNT 29-11-2011 10:32:23  
 DATM 13C  
 OBNUC single-pulse-dec  
 EXMOD 150.92 MHz  
 OBFRO 8.52 KHz  
 OBSET 1.74 Hz  
 OBRIN 32.768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PWT 51.7 °  
 IRNUC 77.00 ppm  
 CTEMP 0.12 Hz  
 SLVNT CDCL3  
 EXREF 80  
 BF 80  
 RGAIN 80



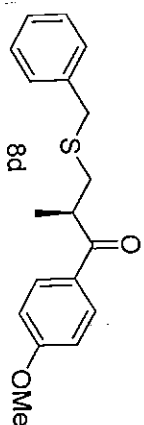


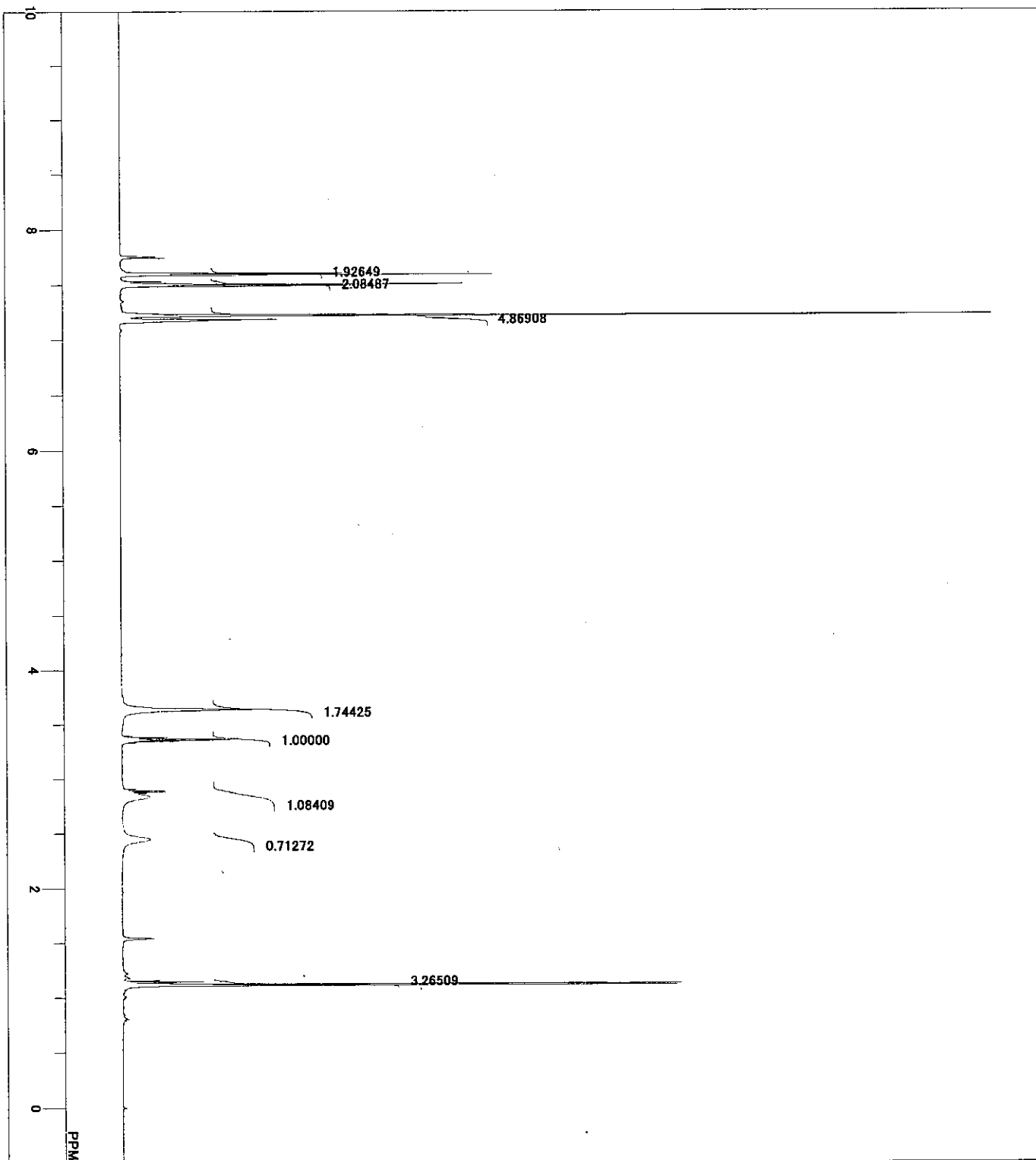
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 COUNT 22-11-2011 08:32:07  
 DATIM 1H  
 OBNUC single.pulse.ex2  
 EXMOD 600.17 MHz  
 OBSFREQ 5.30 KHz  
 OBSSET 5.47 Hz  
 OFFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PW1 48.2 e  
 IRNUC CDCl3  
 QTEMP 0.00 ppm  
 SLYNT 0.12 Hz  
 EXREF 40  
 BF 40  
 RGAIN



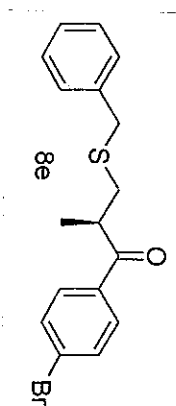


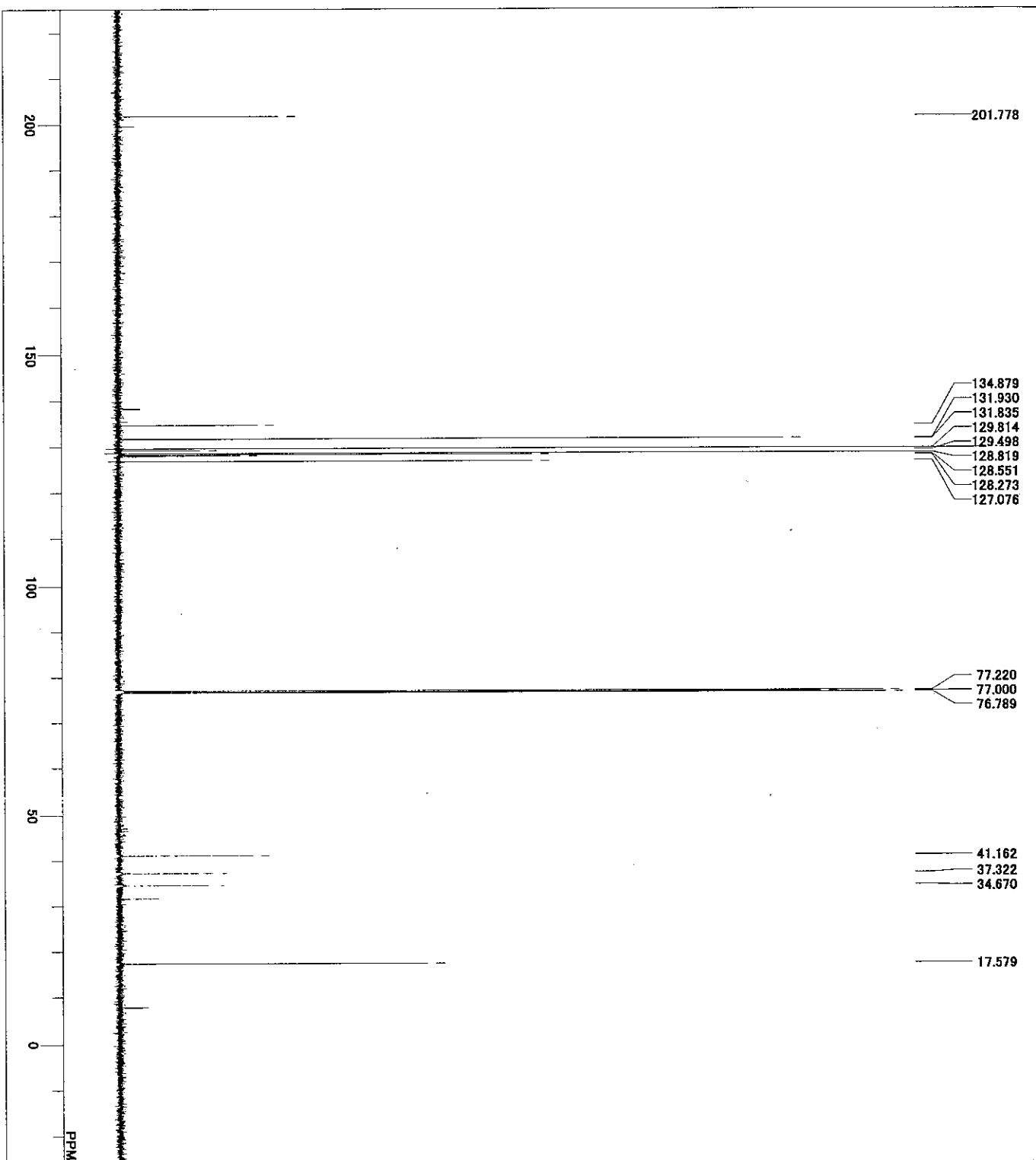
FILE COMNT 22-11-2011 09:19:01  
 DATIM 130  
 OBNUC single.pulse.dec  
 EXMOD 150.92 MHz  
 OBFRO 8.52 KHz  
 OBFET 1.74 Hz  
 OBFIN 32768 Hz  
 POINT 4734849 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACGTM 2.0000 sec  
 PD 2.87 usec  
 PW1 1H  
 IRNUC 49.7 °  
 QTEMP CDCL3 77.00 ppm  
 SLVNT EXREF 0.12 Hz  
 BF 80  
 RGAIN



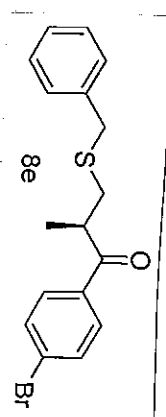


DPFILE 29-11-2011 10:42:40  
 COMMENT  
 DATIM 1H  
 ORNUC single\_pulse.exe2  
 EXMOD 600.17 MHz  
 OBSFRQ 5.30 KHz  
 OBSSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 14549 sec  
 ACQTIM 40000 sec  
 PD 6.50 usec  
 PW1 50.4 °  
 IRNUC 1H  
 GTEMP CDOL3  
 SLVNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 38  
 RGAIN

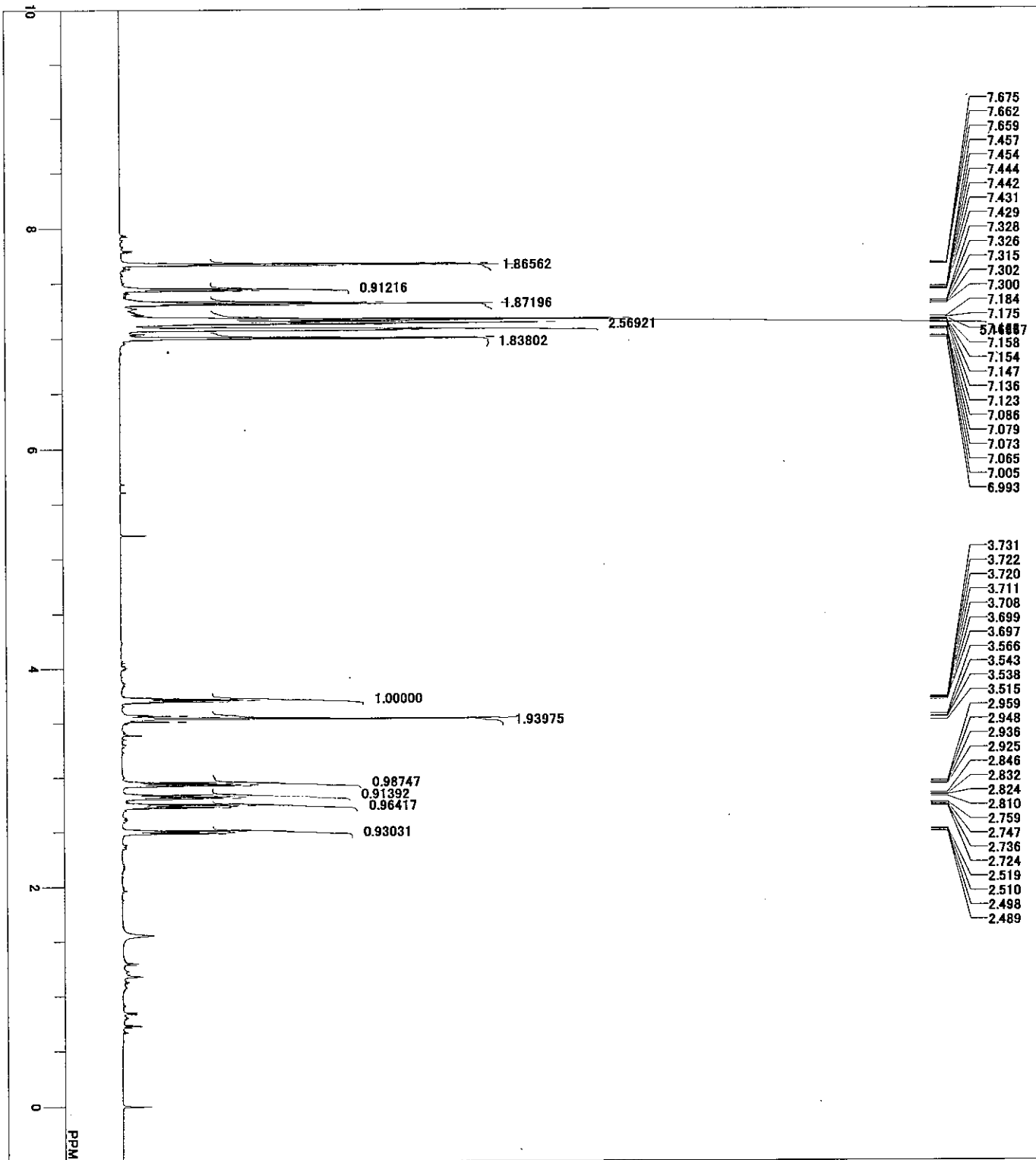




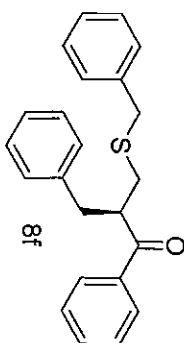
FILE C:\Documents and Settings\delakky\My Documents\Personal  
 COMNT 29-11-2011 11:29:33  
 DATM 13C  
 OBNUG single\_pulse\_dec  
 EXMOD 150.92 MHz  
 OBFREQ 8.52 KHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PM1 1H  
 IRNUC 52.4 e  
 GTEMP CDCL3 77.00 ppm  
 SLVNT EXREF 0.12 Hz  
 BF 80  
 RGAIN

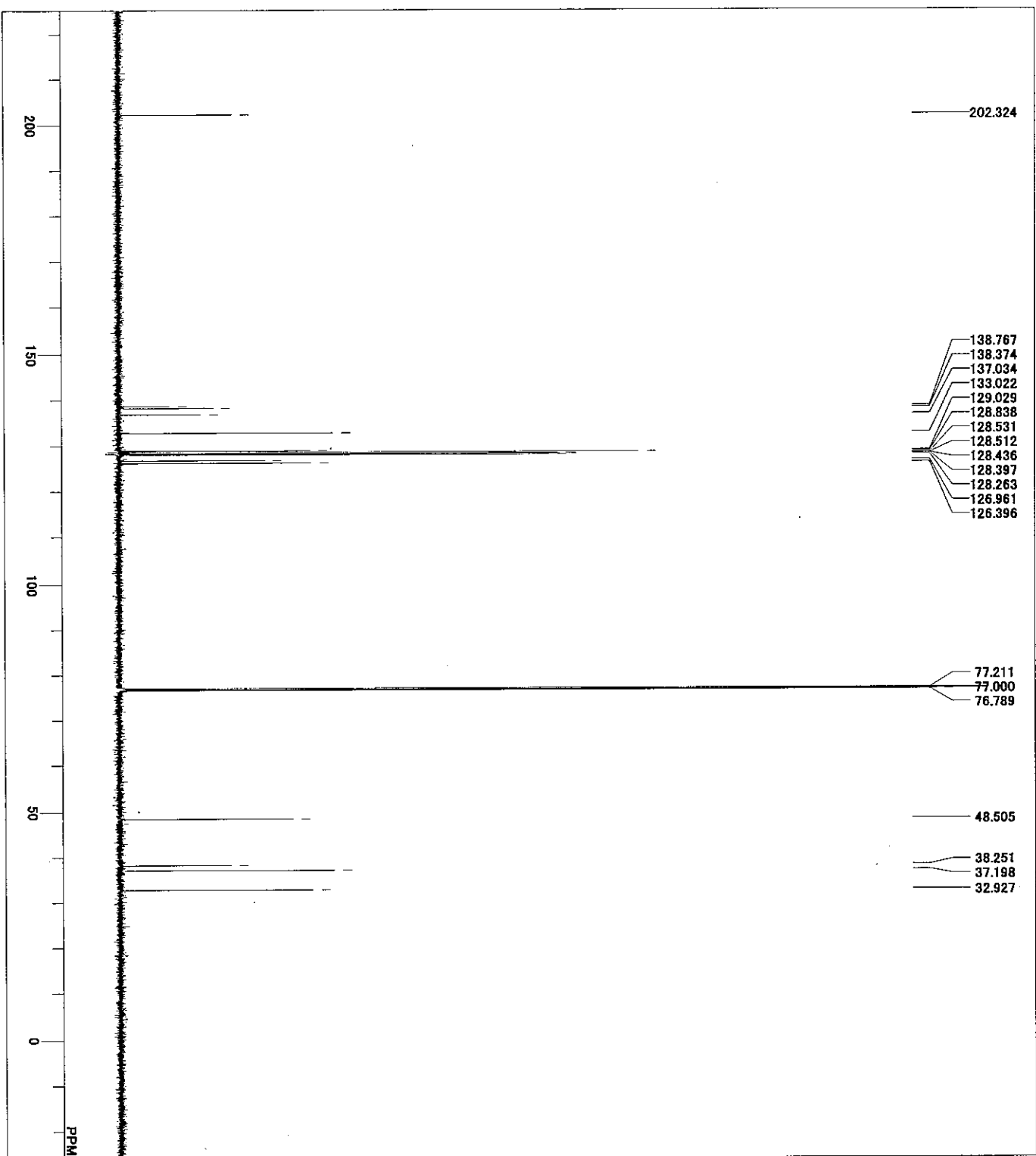


C:\Documents and Settings\delavay\デスクトップ\656h\_PROTON.1

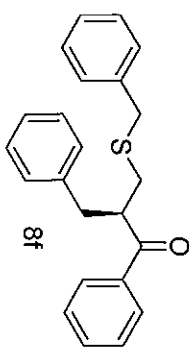


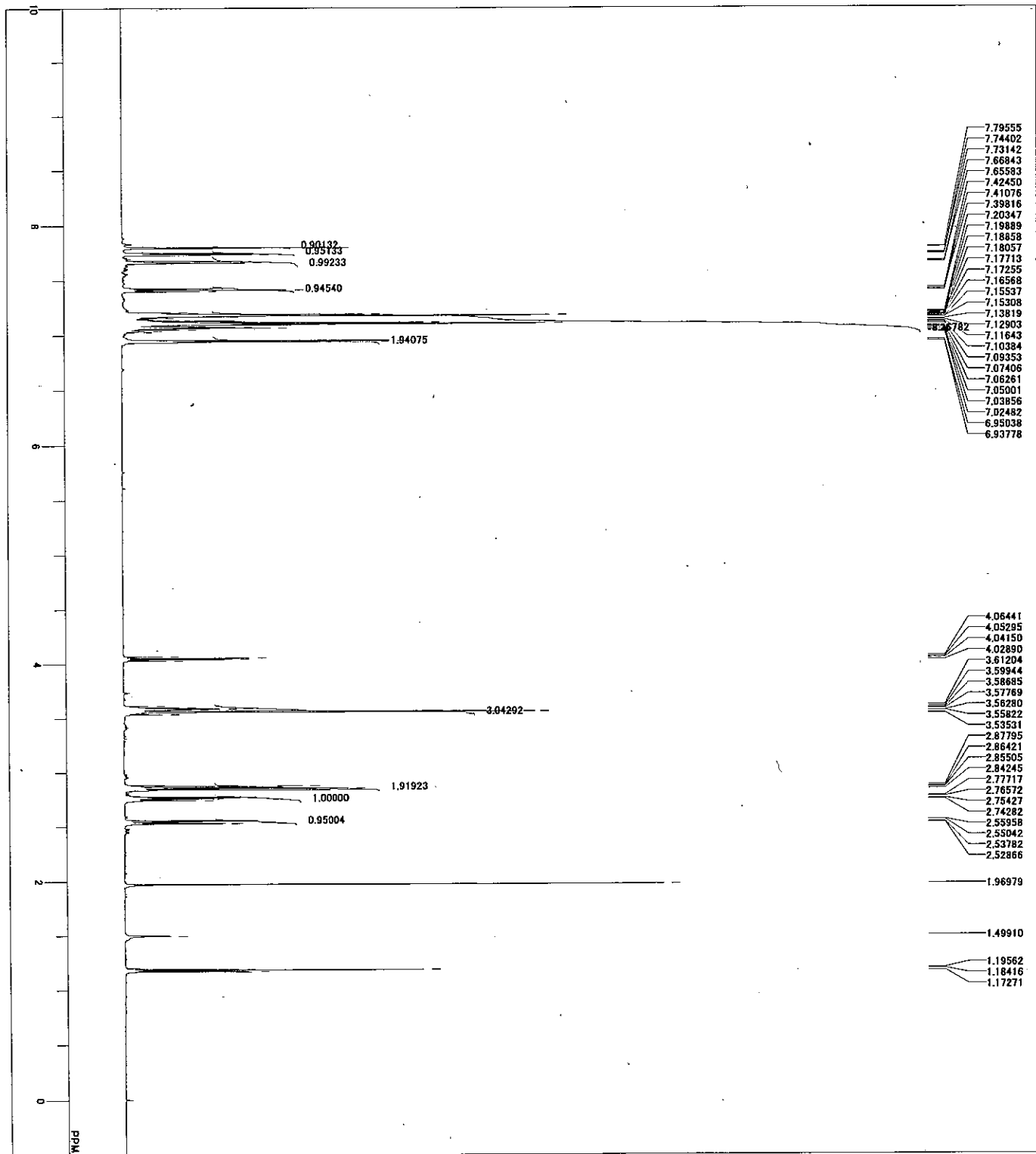
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 D:\FILE COMMENT  
 22-11-2011 10:25:38  
 1H  
 single-pulse.ax2  
 600.17 MHz  
 5.30 KHz  
 5.47 Hz  
 18384  
 11261.26 Hz  
 16  
 1.4549 sec  
 4.0000 sec  
 6.50 usec  
 40  
 48.3 c  
 CDCL3  
 0.00 ppm  
 0.12 Hz  
 40



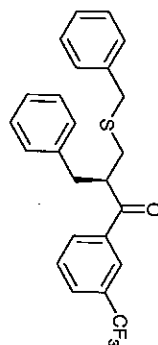


FILE C:\Documents and Settings\deltavm\My Documents\Persc  
 COMNT 22-11-2011 11:12:32  
 DATIM 13C  
 OBNOD singlepulse.dec  
 EXMOD 150.92 MHz  
 OBFREQ 8.52 KHz  
 OBSET 1.74 Hz  
 OBFIN 32768 Hz  
 POINT 4734849 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PFI 1H  
 IRNUG 49.2 °C  
 QTEMP CDCL3  
 SLVNT 77.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN

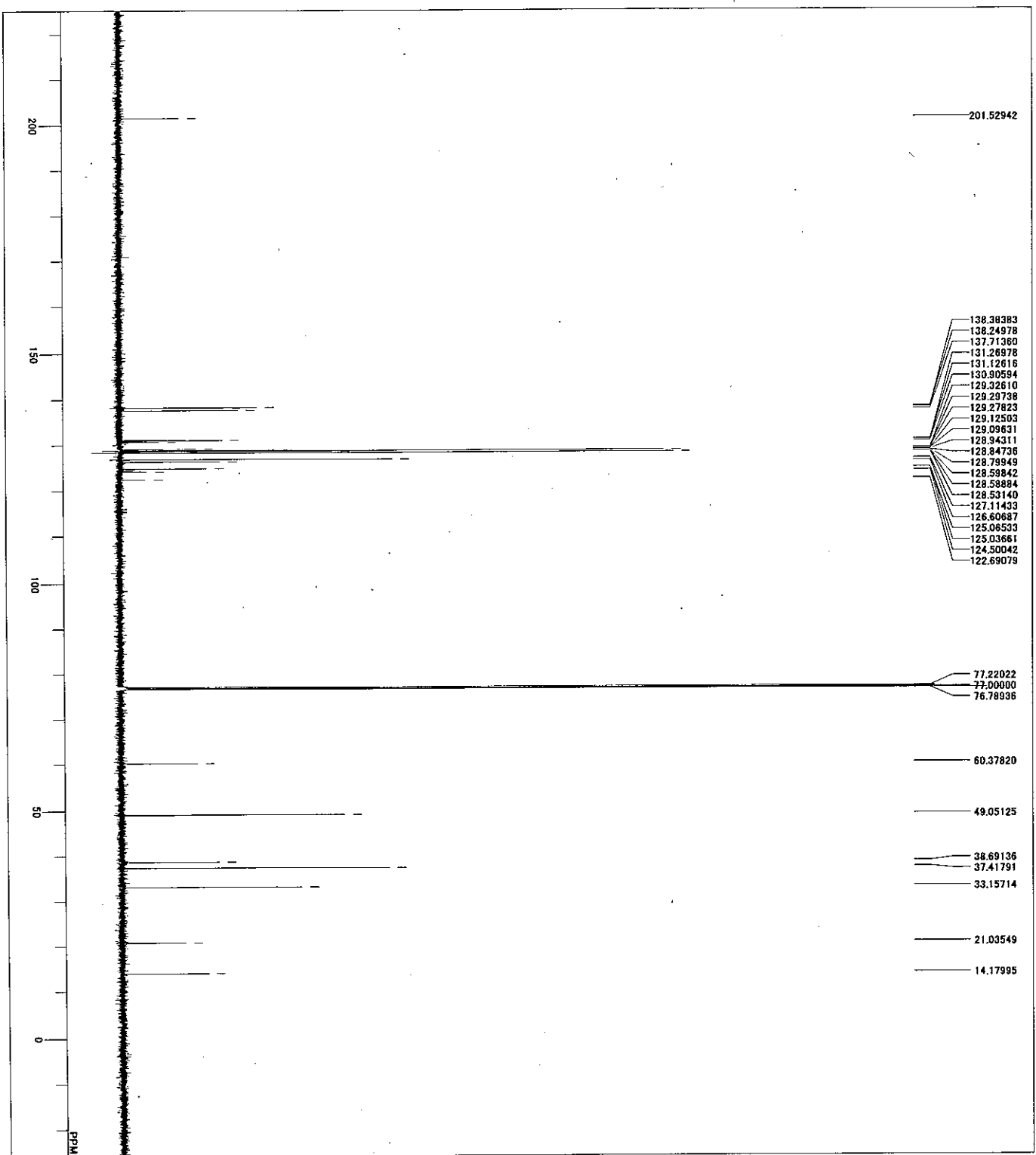




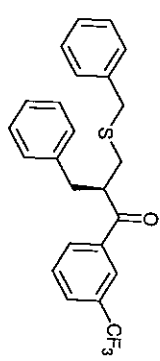
FILE C:\Documents and Settings\kdelis\My Documents\Personal Folder\Sakari\2  
 COMMT 12-12-2011 10:47:41  
 DATIM 1H  
 OBNAME singlepulsea2  
 EXMDC 600.17 MHz  
 OFPRG 5.37 MHz  
 OBEIT 13107 Hz  
 POINT 9008.87 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PWD 22.1 e  
 RMUG CDCL2 0.00 ppm  
 GTEMP 0.12 Hz  
 SAMP 42  
 EXPRF 42  
 BF 42  
 RGAIN 42



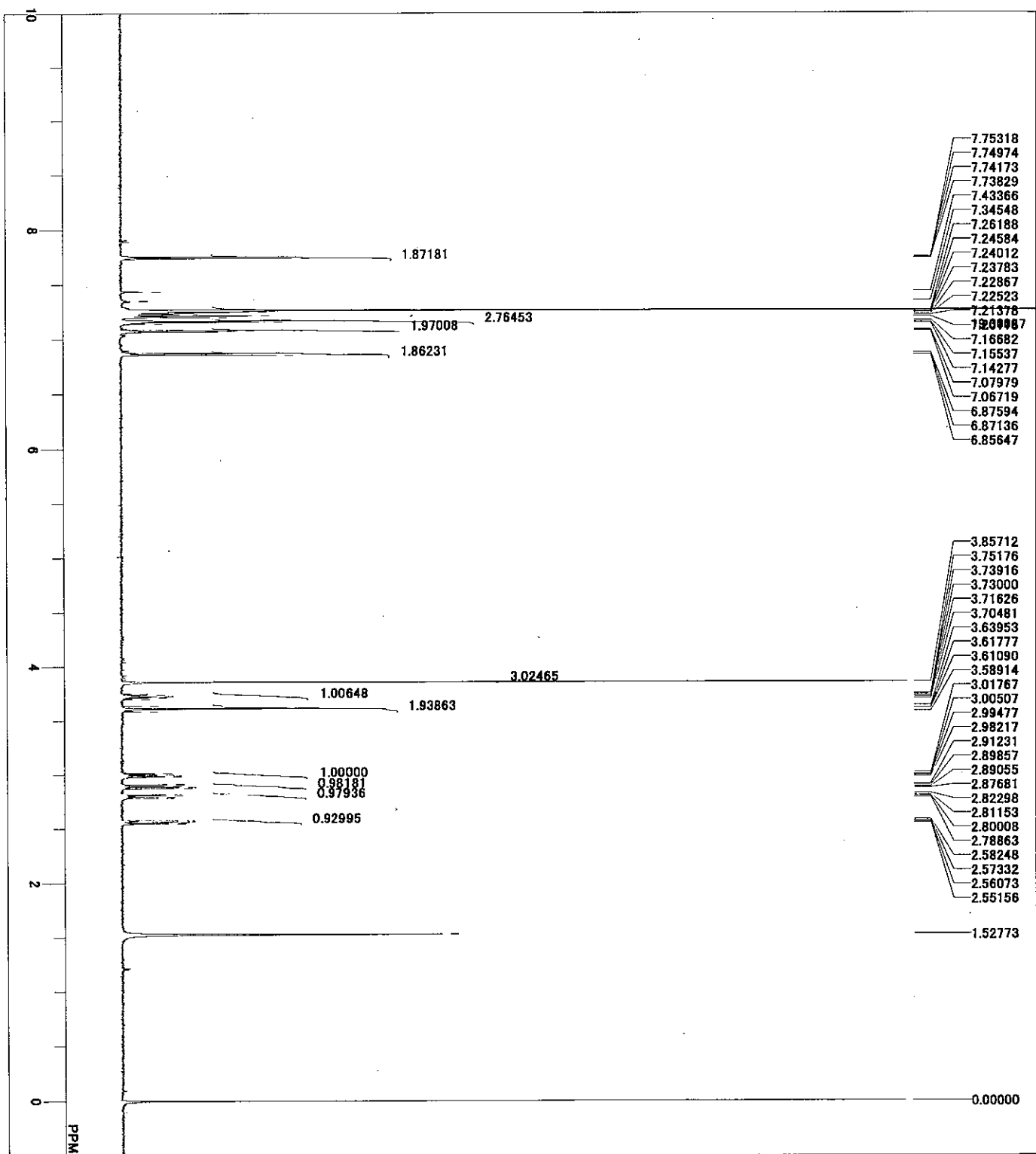
89



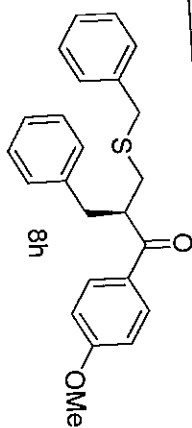
FILE C:\Documents and Settings\Kakalaxmy\Documents\Personal\Folder\Saketh\2  
 COMMENT 12-12-2011 11:34:34  
 DATE 12C  
 DATM 13C  
 INDC single\_pulse\_dec  
 EXMUD 150.92 MHz  
 OBSFQ 8.52 KHz  
 OBSRT 26.74 Hz  
 PULPR 2.87 usec  
 PULPW 231 e  
 FREQU 3787821 Hz  
 SCANS 1024  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 IRNUC 1H  
 STEMP 231 e  
 GDCQ1 170.00 ppm  
 SLYNT 7.12 Hz  
 SREF 60  
 RGAIN 60



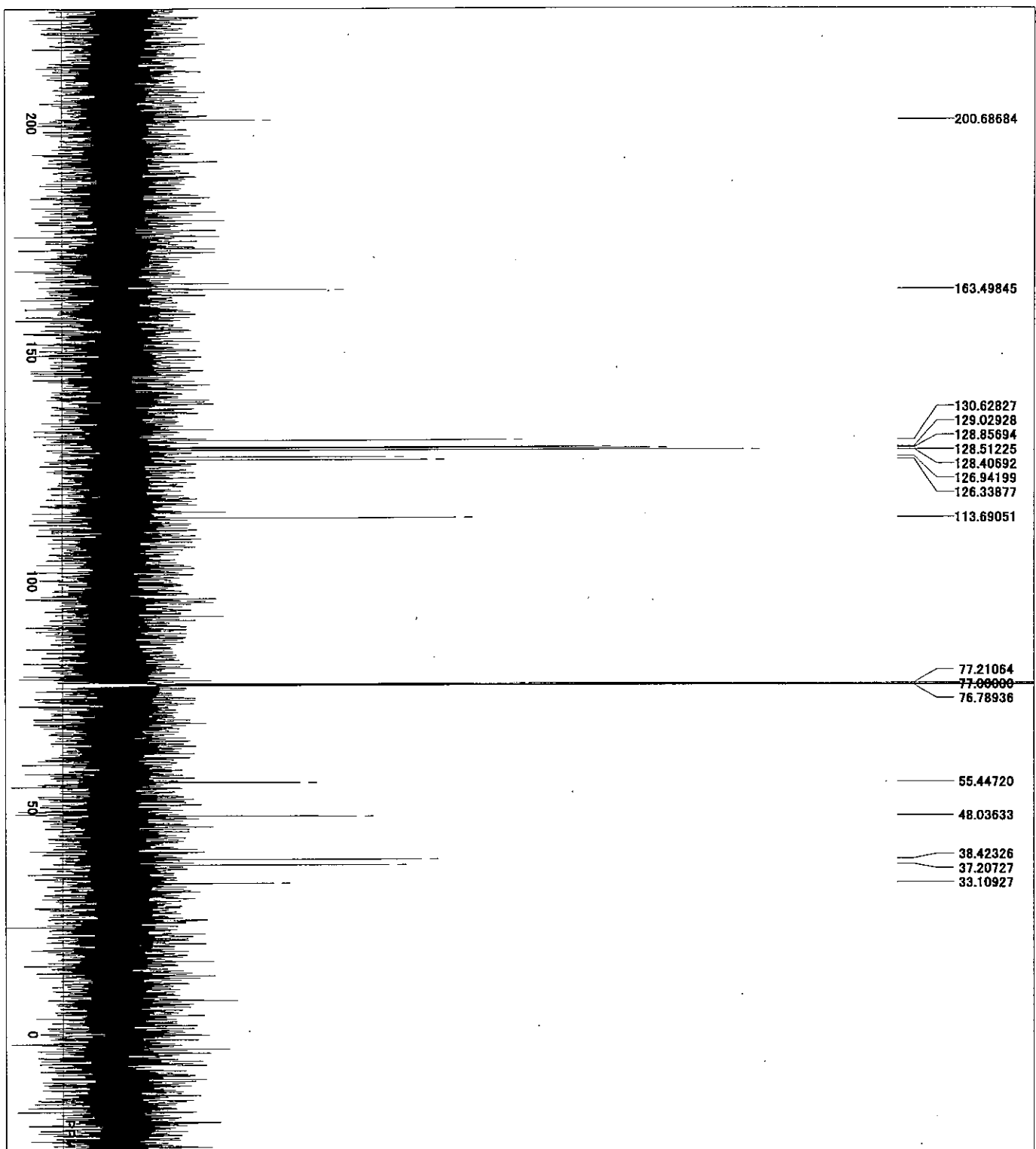
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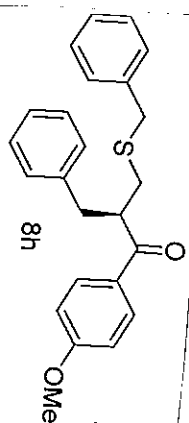
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 COMMENT 12-01-2012 10:05:37  
 DATUM 1H  
 EXMOD single pulse ex2  
 OBNUC 600.17 MHz  
 OBFRC 5.30 KHz  
 OBSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PW1 19.7 c  
 IRNUC CDCl3  
 CTEMP 0.00 ppm  
 SLYNT 0.12 Hz  
 EXREF 46  
 BF  
 RGAIN



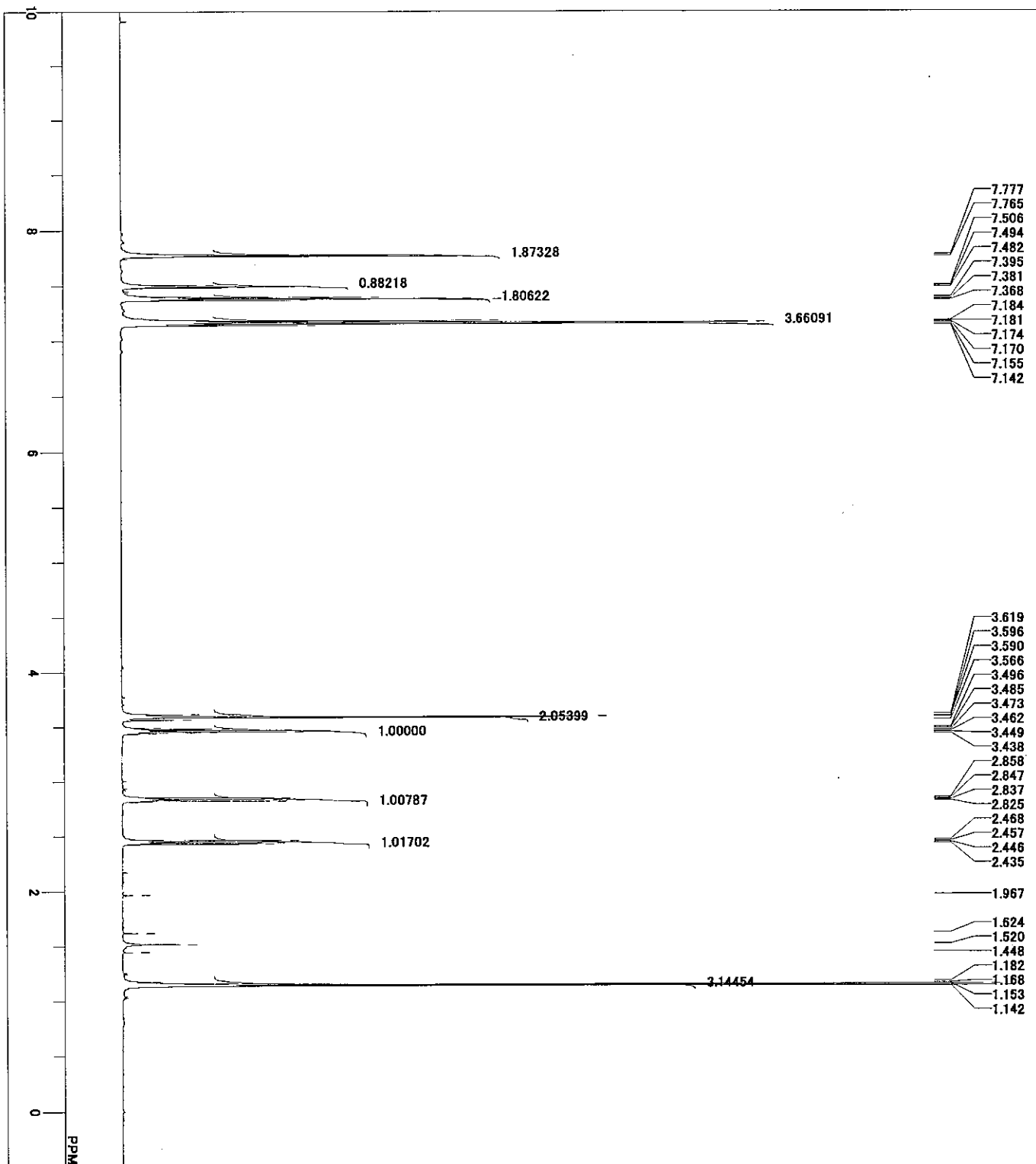




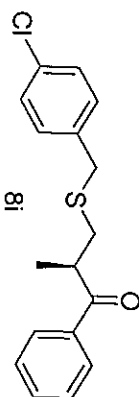
FILE C:\Documents and Settings\delta\delta\My Documents\Personal  
 COMMENT 16-01-2012 01:45:24  
 DATM 13C  
 OBNUC single, pulse, dec  
 EXMOD 150.92 MHz  
 OBFRQ 8.52 MHz  
 OBSET 1.74 Hz  
 OBRFN 32768  
 POINT 47348.49 Hz  
 FREQU 229  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PWT 1H  
 IRNUC 21.1 °  
 CTEMP 77.00 ppm  
 SLVNT CDCl3  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN

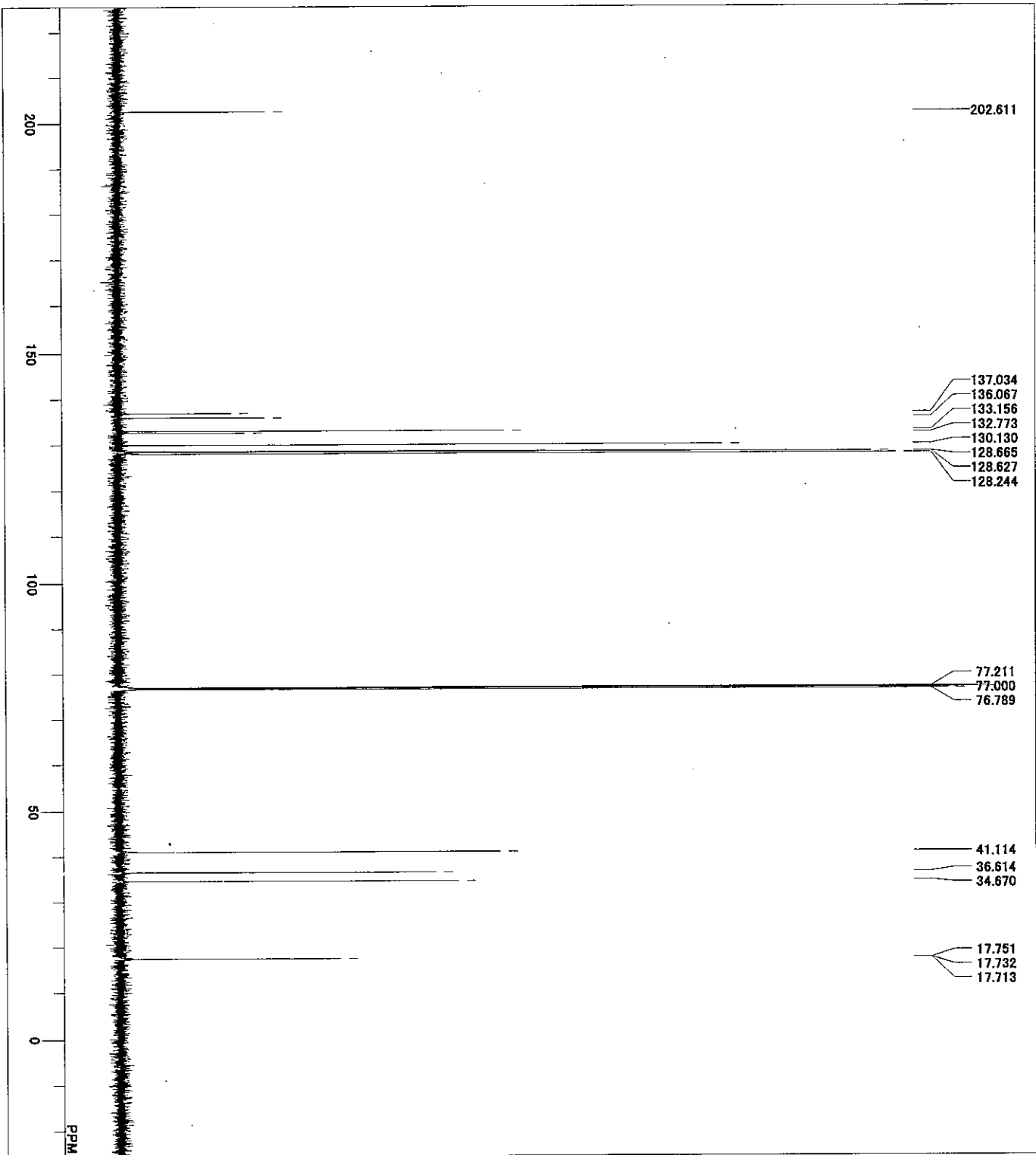


C:\Documents and Settings\deltaeltak\My Documents\Personal Folder\Sakak\44\MS719.a1s  
 single pulse



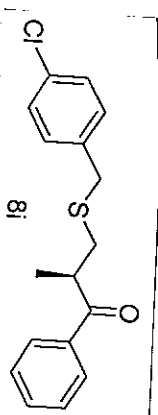
FILE C:\Documents and Settings\deltaeltak\My Documents\Personal Folder\Sakak\44\MS719.a1s  
 CONNT single pulse  
 DATIM 11-10-2011 07:42:54  
 OBNUC 1H  
 EXMOD single-pulsex2  
 OBFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBRIN 5.47 Hz  
 POINT 13107  
 FREQ 900837 Hz  
 SCANS 16  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 QTEMP 25.8 °C  
 SLVNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 40

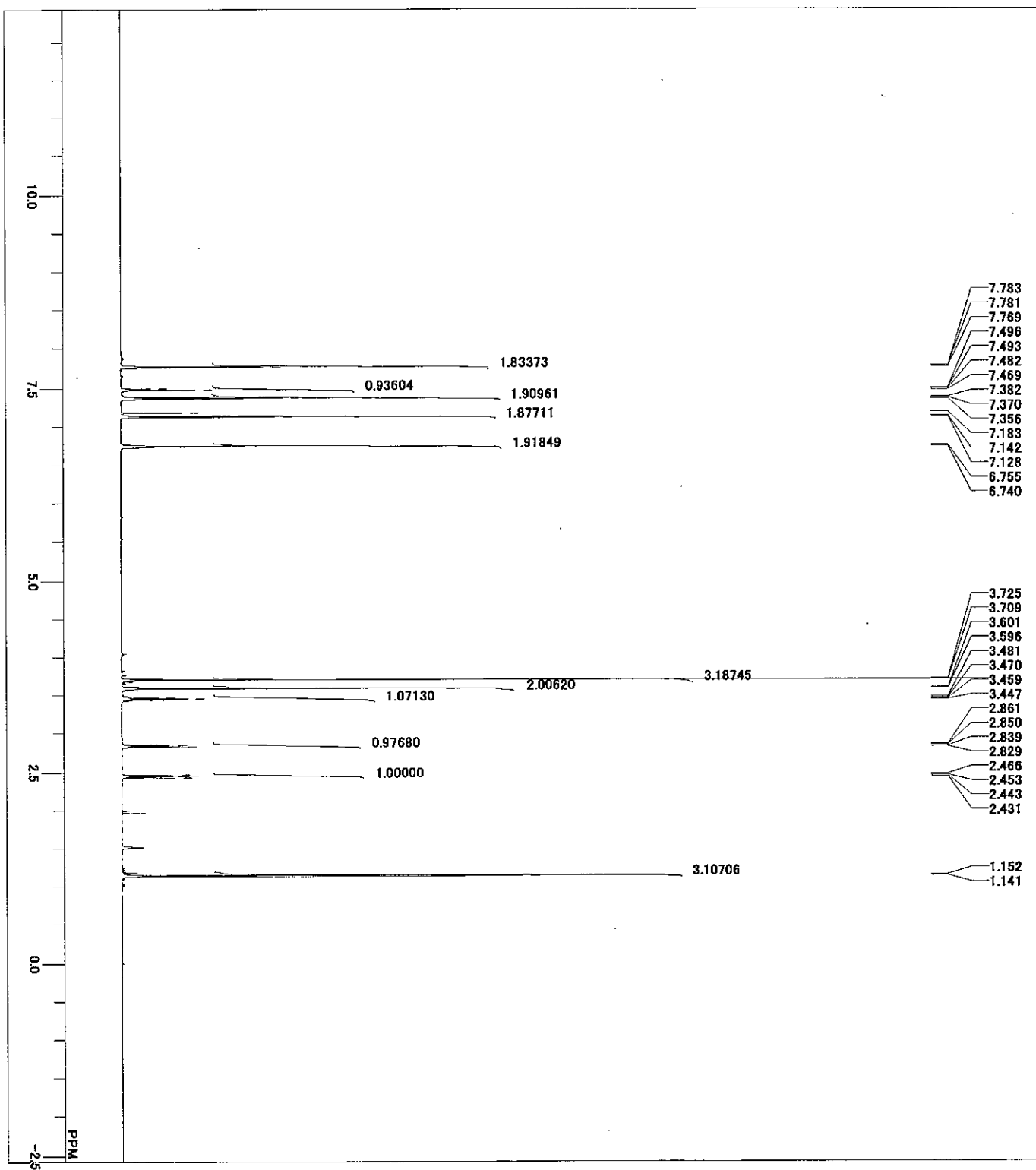




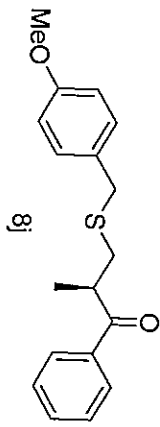
FILE 25-1-2011 22:37:56  
 COMMENT 130  
 DATIN single\_pulse\_dec  
 EXMOD 150.92 MHz  
 OBSFRQ 8.52 KHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0900 sec  
 PD 2.87 usec  
 PWH 50.7 e  
 IRNUC ODCL3  
 CTEMP 77.00 ppm  
 SLVNT EXREF  
 BF 0.12 Hz  
 RGAIN 58

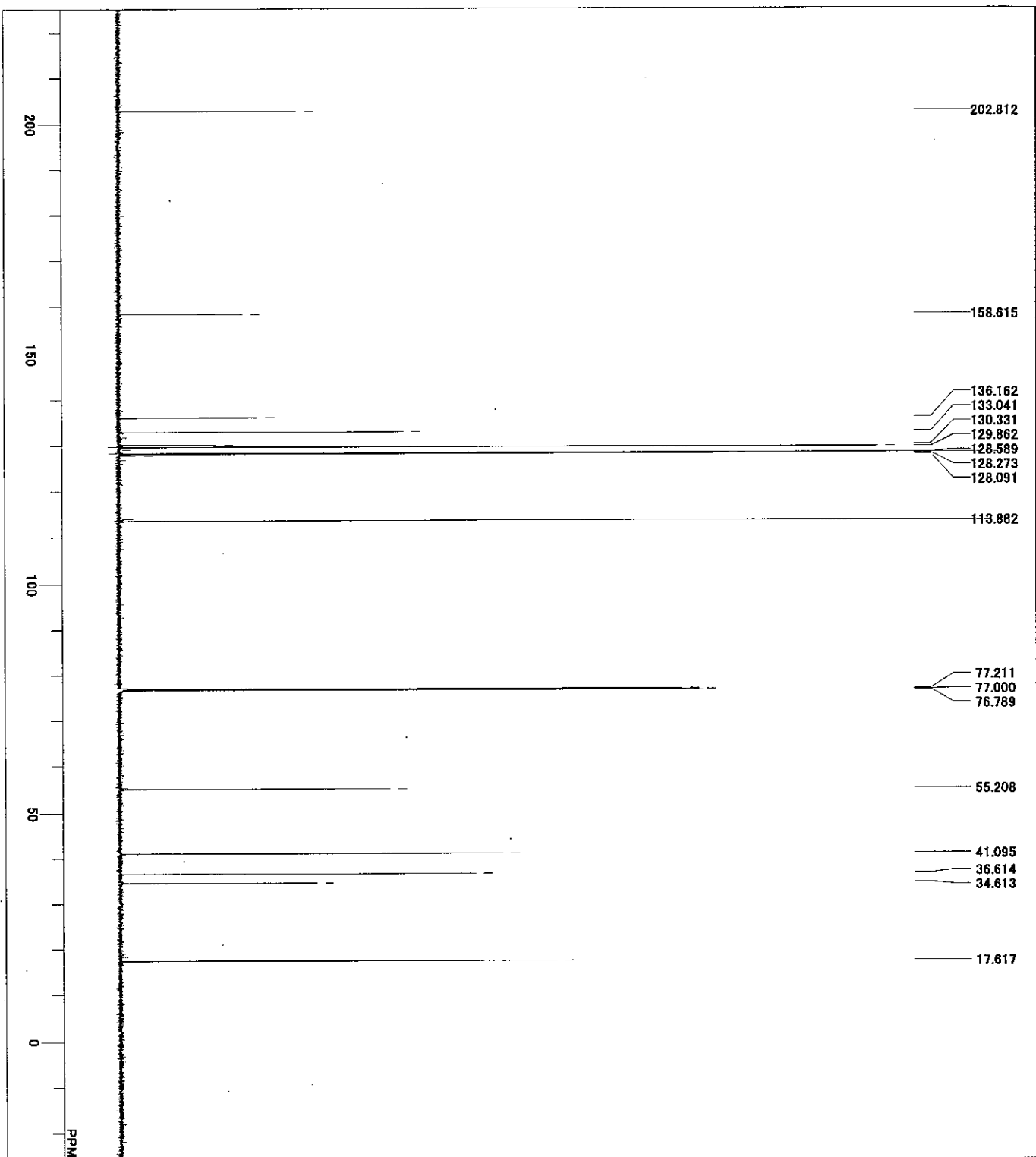
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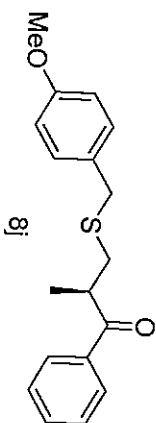


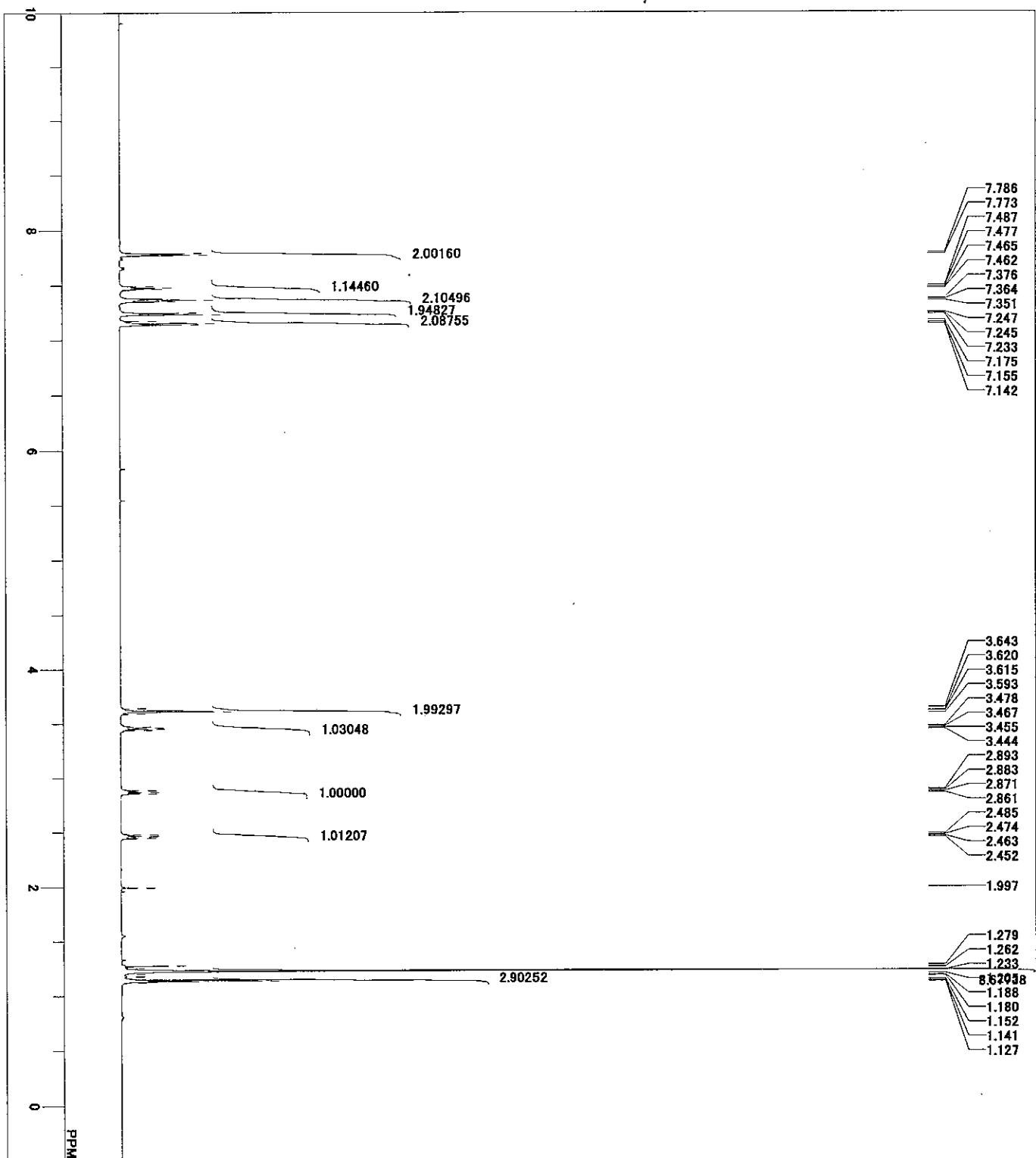
FILE C:\Documents and Settings\deltaelta\My Documents\k\Personal  
 COUNT single pulse  
 DATIM 11-10-2011 08:03:09  
 ONUC 1H  
 EXMOD single pulse;ex2  
 OBFREQ 600.17 MHz  
 OBSSET 5.30 KHz  
 OBFEN 5.47 Hz  
 POINT 13107  
 FREQUS 900837 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 GTEMP 25.9 c  
 SLVNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 40



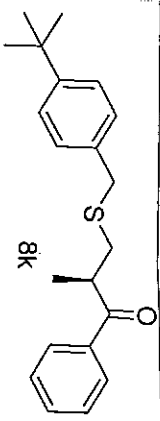


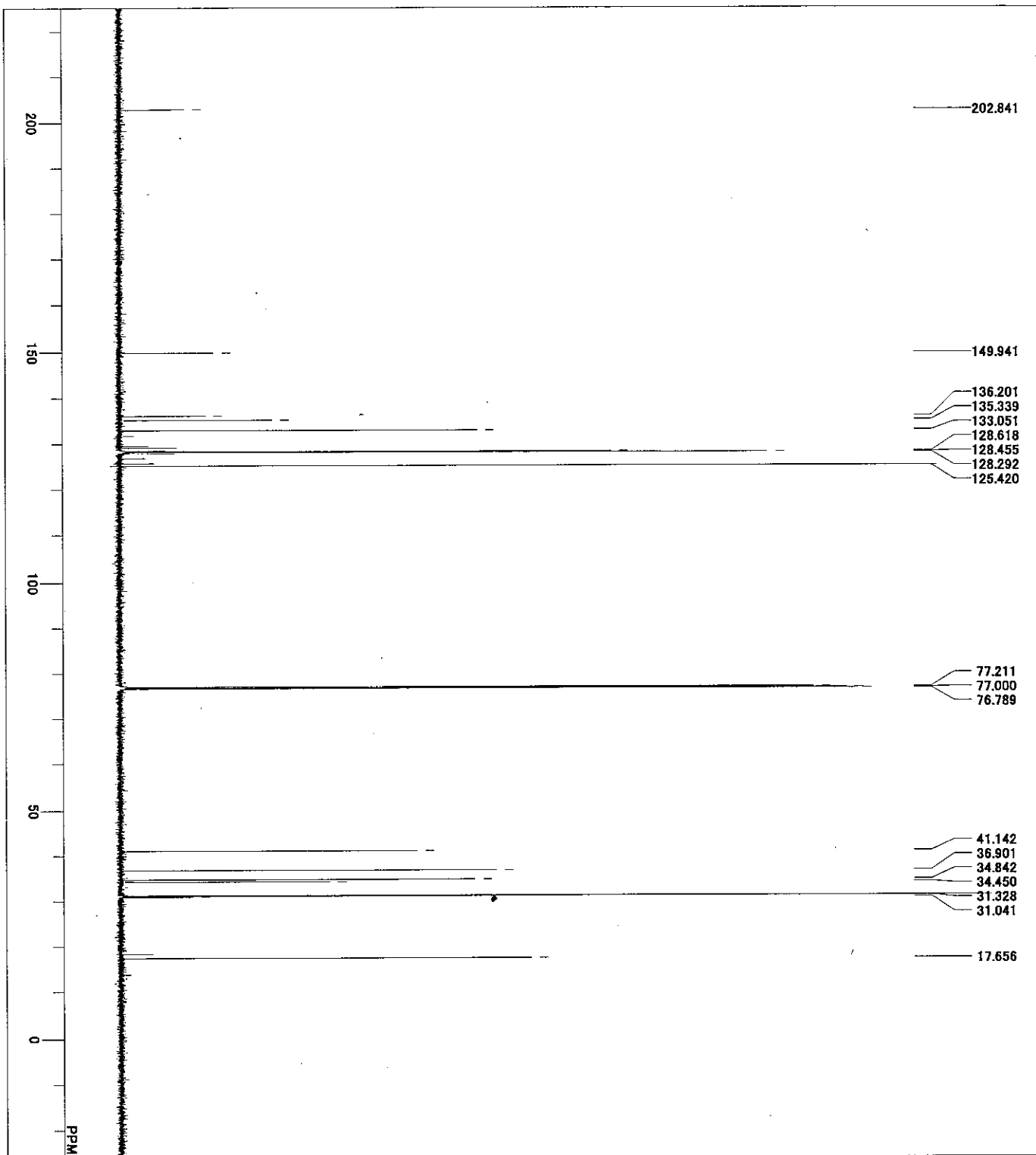
FILE C:\Documents and Settings\delax\デスクトップ\727c\_CARBON.1  
 COMMENT 25-11-2011 11:04:33  
 DATEM 13C  
 ORNUC single.pulse.dec  
 EXMOD 150.92 MHz  
 OBFRO 8.52 KHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PH1 1H  
 IRNUC 50.5 °  
 CTEMP CDCL3  
 SLVNT 77.00 ppm  
 EXREF 0.12 Hz  
 BF 80  
 RGAIN



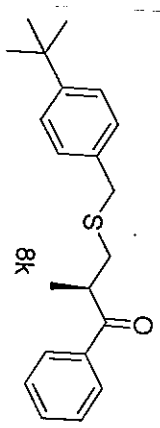


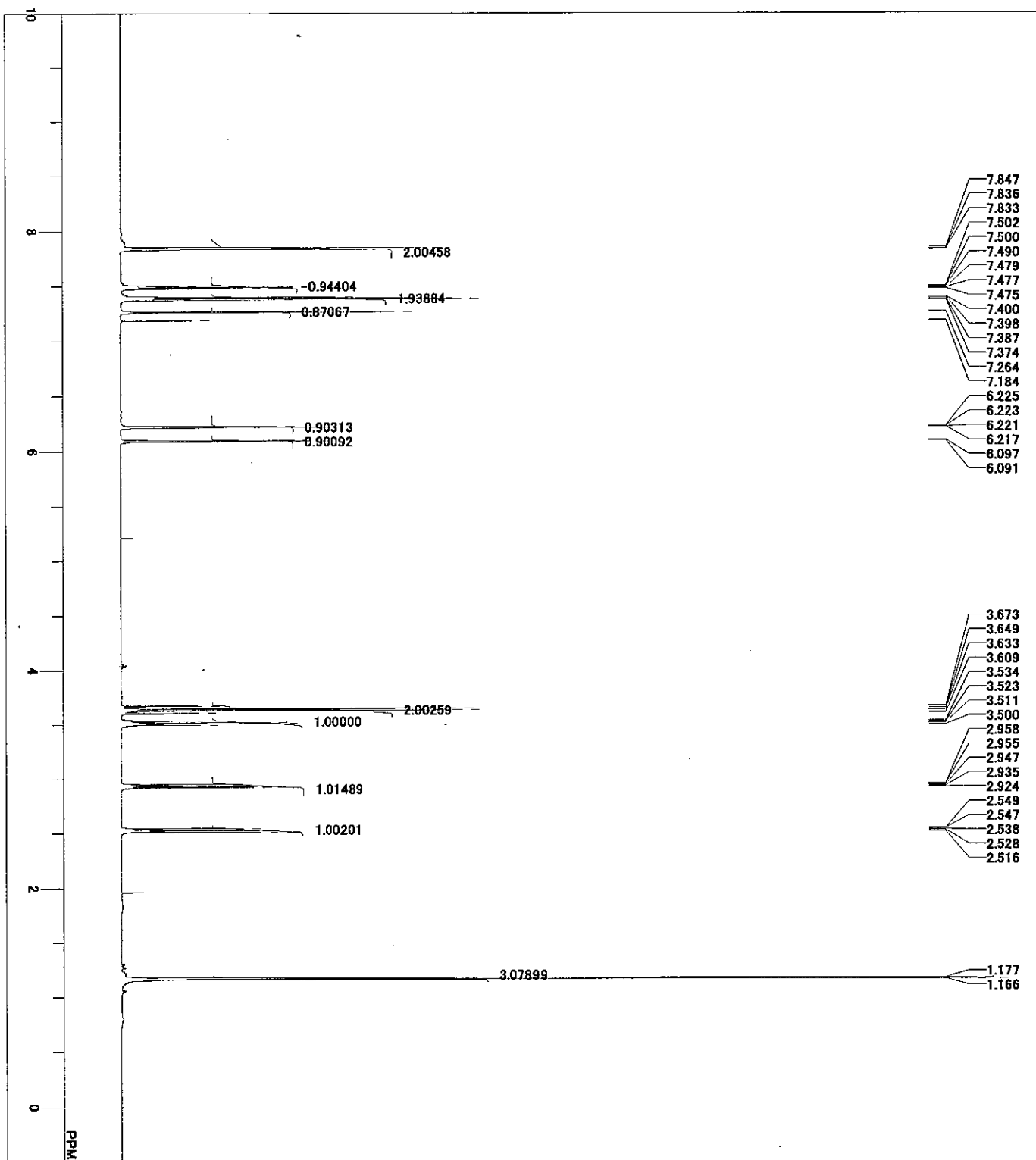
FILE C:\Documents and Settings\deltaeltax\My Documents\KPersonal  
 COMMENT 25-11-2011 11:14:13  
 DATUM 1H  
 OBNUC single,pulse,e2  
 EXMOD 600.17 MHz  
 OFFRQ 5.30 KHz  
 OBSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PID 6.50 usec  
 PWT 1H  
 IRNUC 49.4 o  
 QTEMP CDCl3  
 SLVNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 36  
 RGAIN



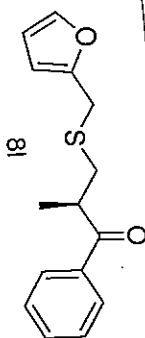


FILE C:\Documents and Settings\deltaelta\デスクトップ\7210\_CA  
COMNT 25-11-2011 12:01:05  
DATM 13C  
DIR 13C  
EXMOD single\_pulse\_dec  
EXNUC 150.92 MHz  
OBFREQ 8.52 KHz  
OBSSET 1.74 Hz  
OBRIN 32768  
POINT 47348.49 Hz  
SCANS 1024  
ACQTM 0.6921 sec  
PD 2.0000 sec  
PNT 2.87 usec  
IRNUC 1H  
CTEMP 50.7 °C  
SLVNT CDCL3  
EXREF 77.00 ppm  
BF 0.12 Hz  
RGAIN 56

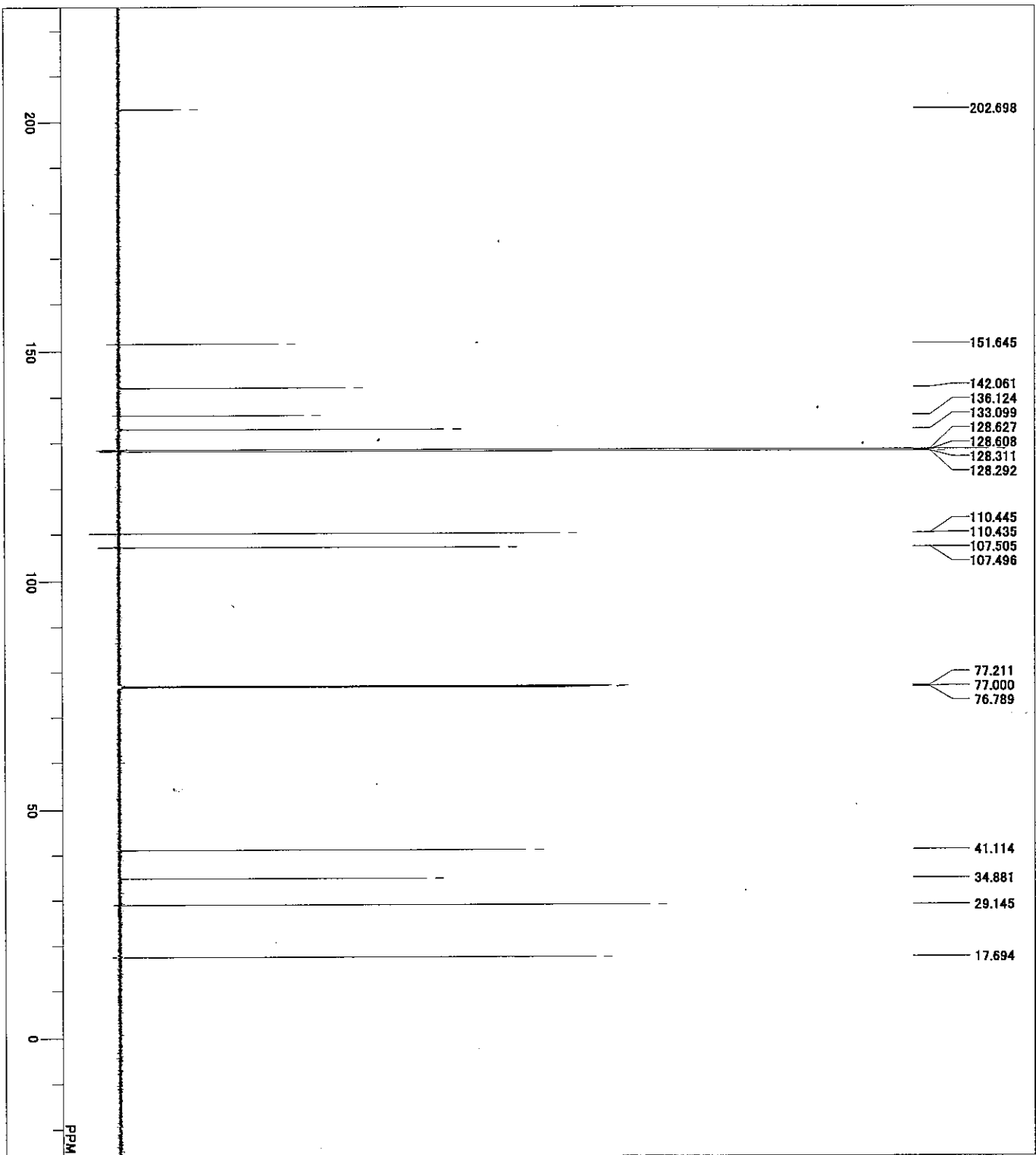




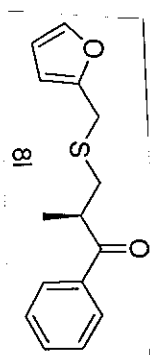
FILE C:\Documents and Settings\deltaelta\My Documents\Perse  
 CONNT 22-11-2011 11:22:13  
 DATIM 1H  
 OBNUC single.pulse.ex2  
 EXMOD 600.17 MHz  
 OBFREQ 5.30 KHz  
 OBSSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PWR 1H  
 IRNUC 48.5 e  
 CTEMP CDCL3  
 SLYNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 36  
 RGA 36

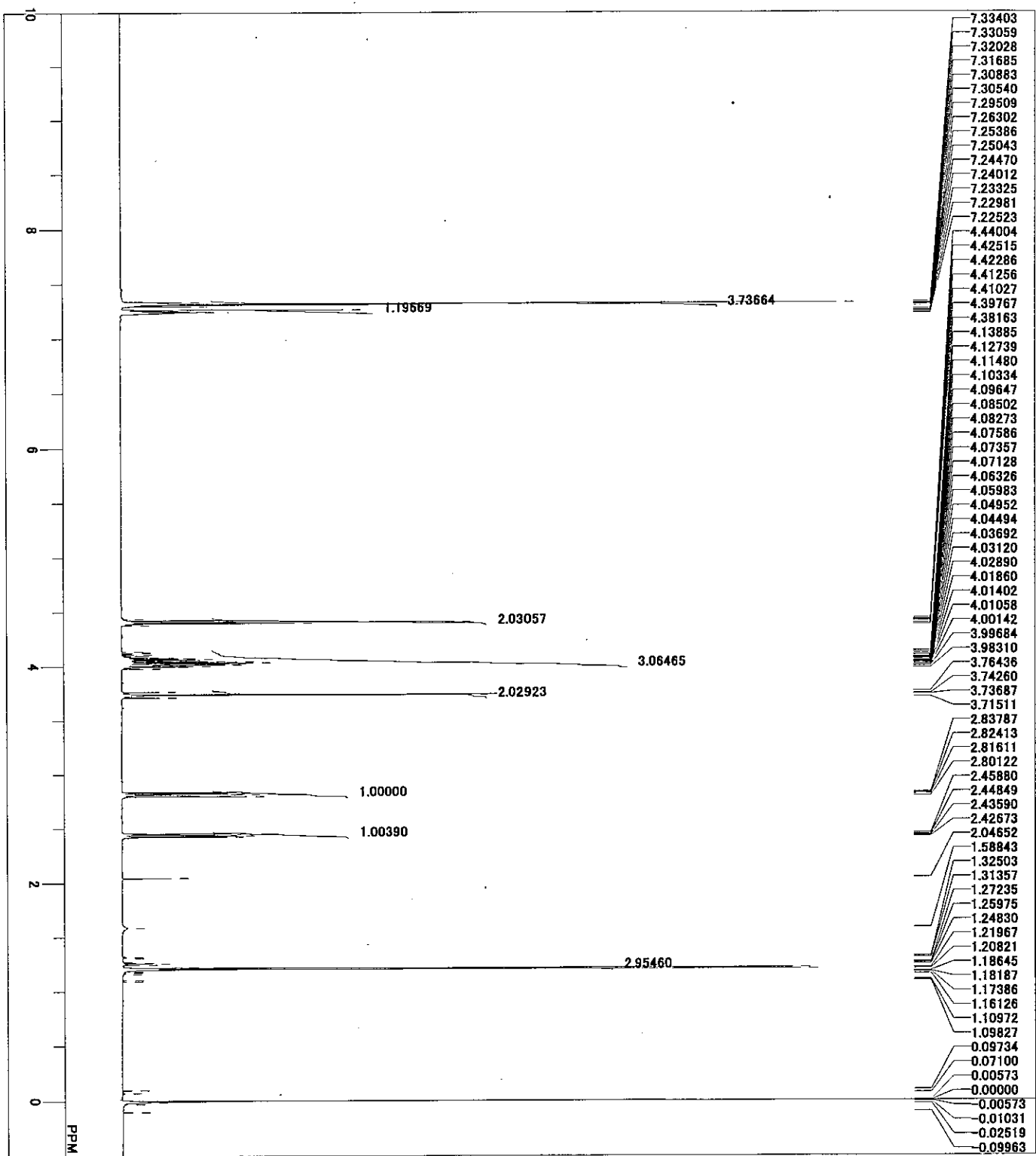




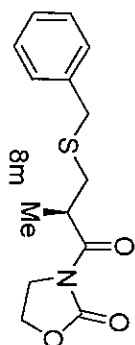


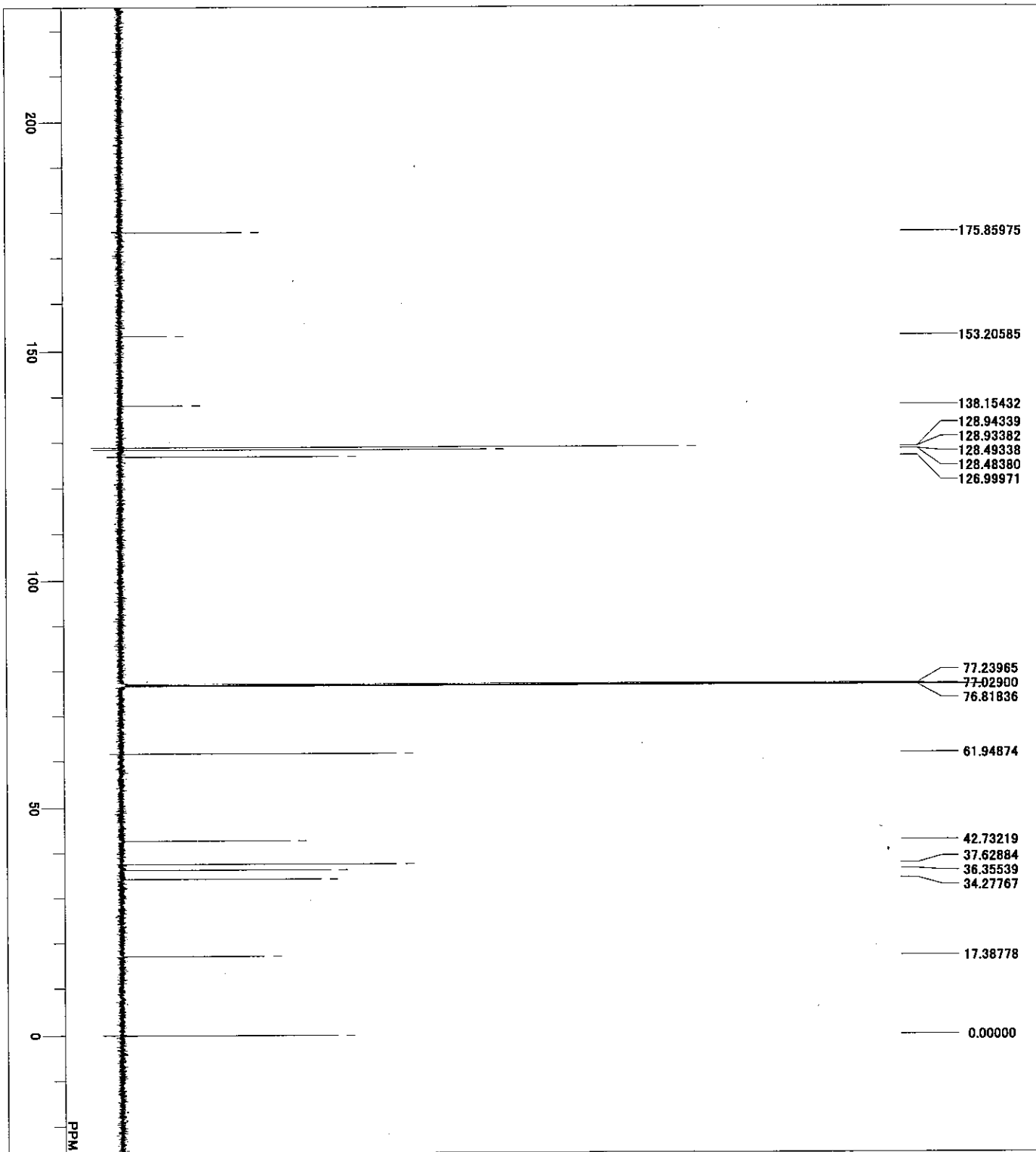
DFIL E  
 COMNT 22-11-2011 12:09:06  
 DATIM 130  
 OBNUC single-pulse, dec  
 EXMOD 150.92 MHz  
 OBFRO 8.52 KHz  
 OBSFT 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PWT 1H  
 IRNUC 49.8 °  
 CDCLS CDCL3  
 QTEMP 77.00 ppm  
 SLVNT EXREF  
 BF 0.12 Hz  
 RGAIN 60





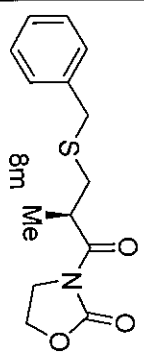
FILE C:\Documents and Settings\deltakmy\Documents\SP er.c  
 COMMENT 11-01-2012 09:29:23  
 DATE single\_pulse.ex2  
 EXMNUC 1H  
 OBNUC 600.17 MHz  
 OBFREQ 5.30 KHz  
 OBSSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 6.50 usec  
 PWT 19.7 c  
 IRNUC CDCL3  
 CTEMP 0.00 ppm  
 SLVNT EXREF  
 EXREF 0.12 Hz  
 B1 42  
 RGAIN

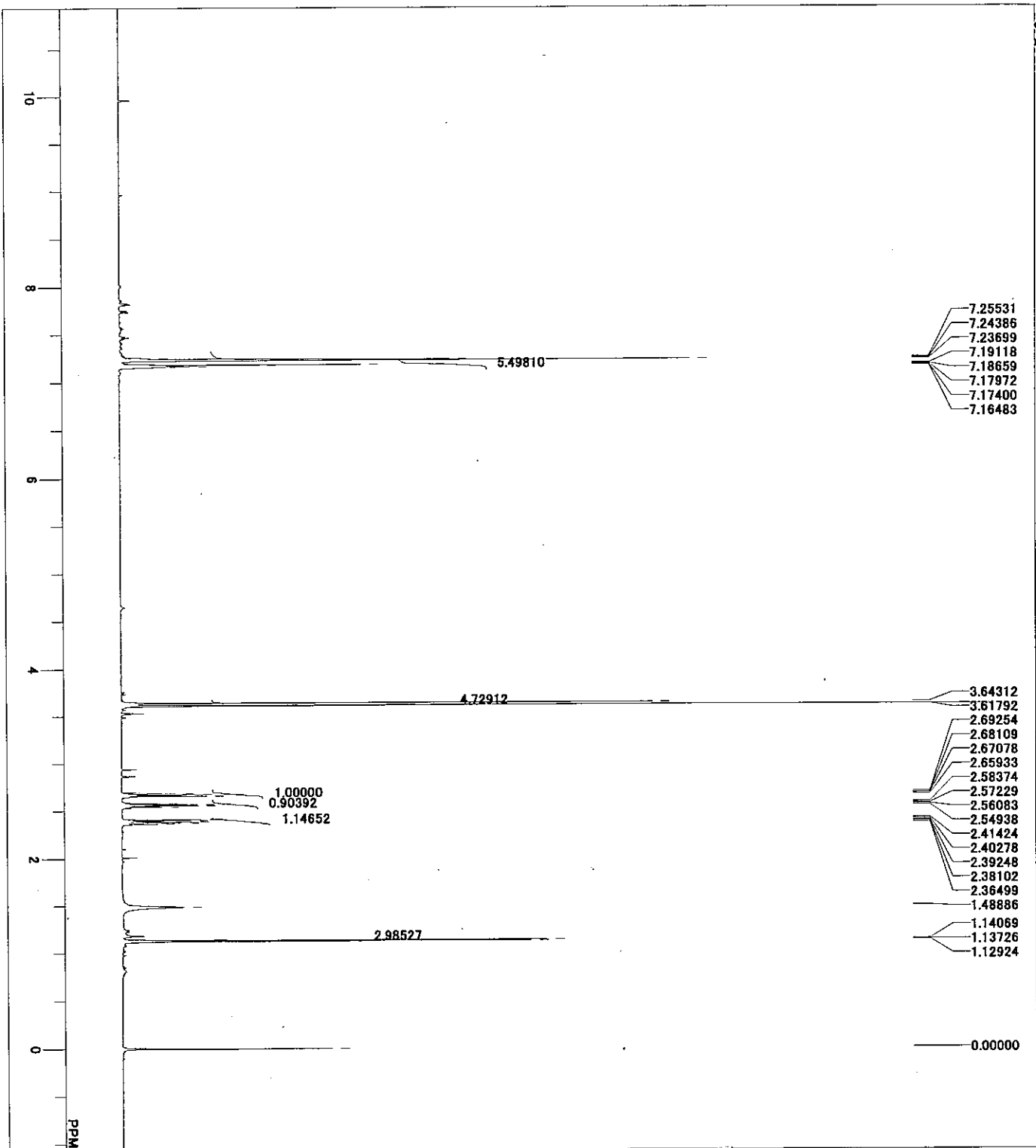




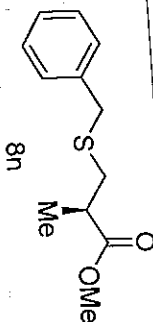
C:\Documents and Settings\delakmy\Documents\Perso

DFILE  
 COMNT 11-01-2012 10:16:17  
 DATIM 13C  
 OBNUC single\_pulse\_dec  
 EXMOD 150.92 MHz  
 OBFRQ 8.52 KHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.6921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PW1 1H  
 IRNUC 21.2 °C  
 CTEMP CDCL3  
 SLYNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN

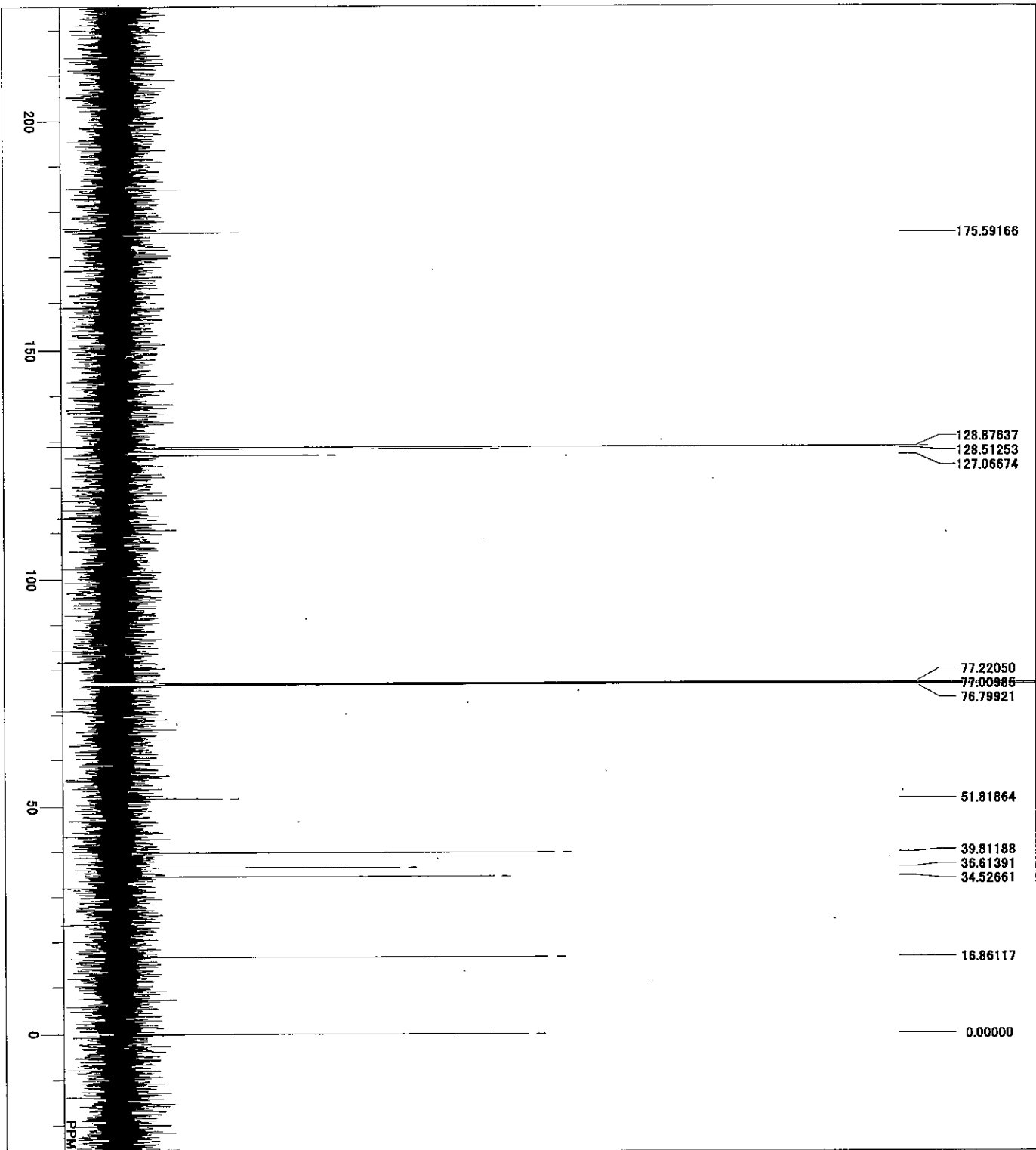




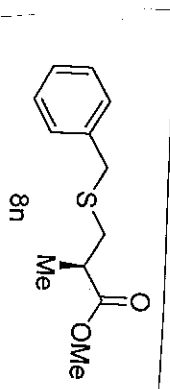
DFILE C:\Documents and Settings\deltakmy\Documents\pers  
 GOMT single pulse  
 DATM 16-06-2011 00:05:52  
 IN 1H  
 EXMOD single.pulse.ex2  
 OBNUC 1H  
 OBPRQ 600.17 MHz  
 OBSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 10465 Hz  
 FREQU 7206.99 Hz  
 SCANS 8  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PW1 6.50 usec  
 IRNUC 1H  
 CTEMP 25.7 °C  
 SLVNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 44

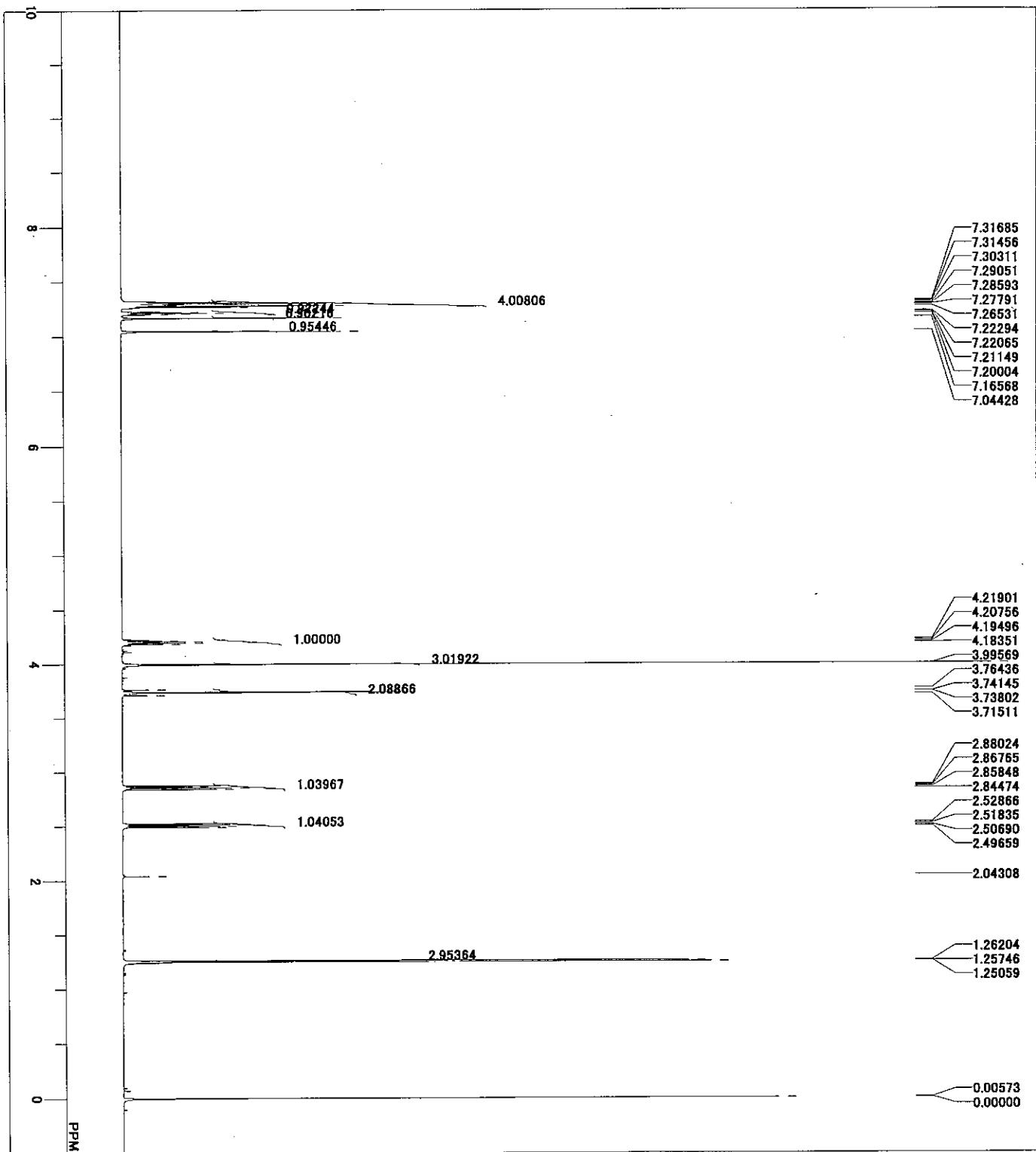


Asyform

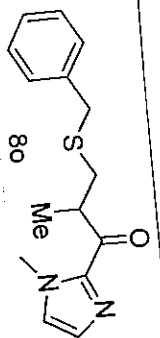


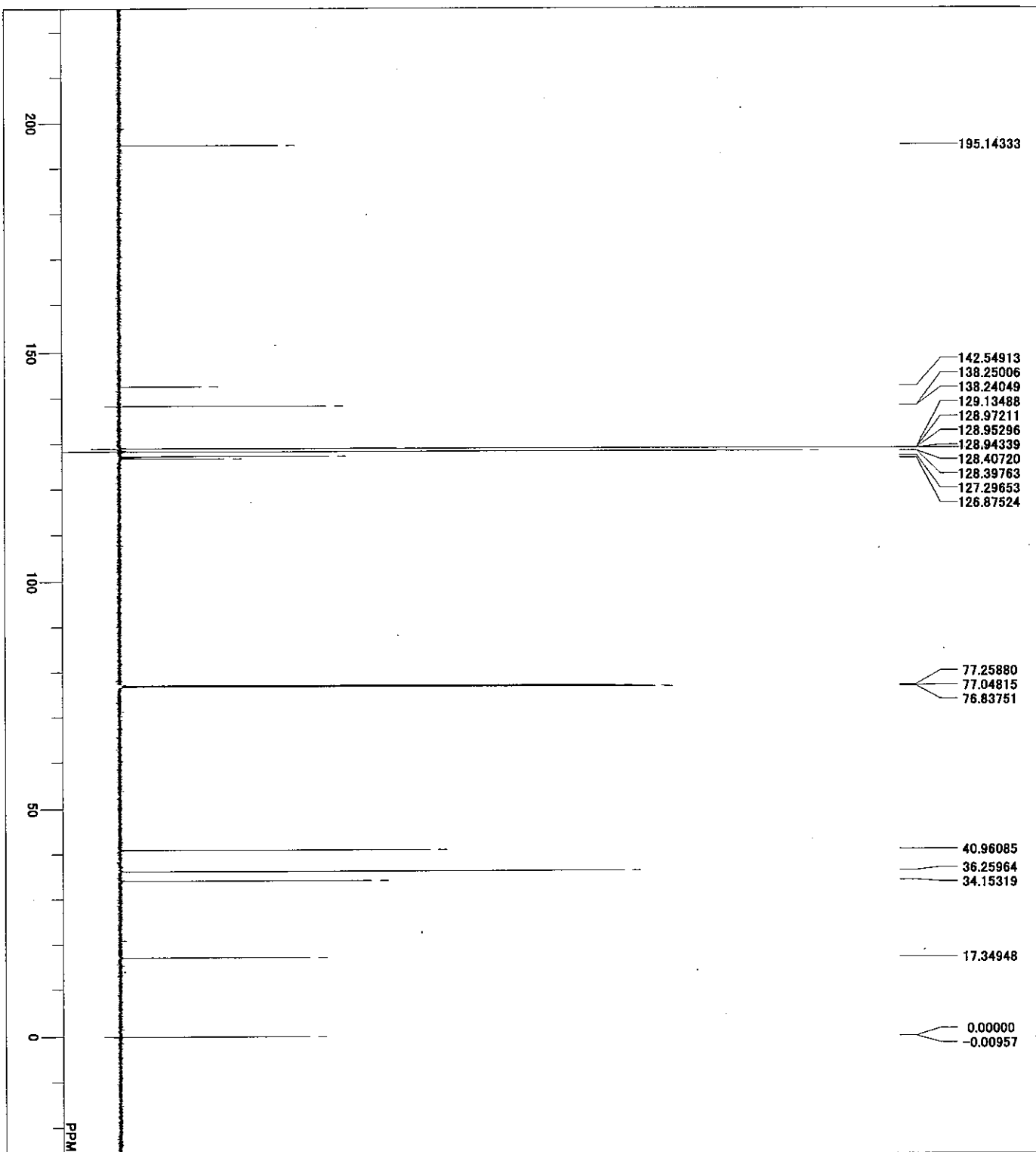
FILE 11-01-2012 16:40:48  
 COMMENT 13C  
 DATIM single.pulse.dec  
 OBNUC 150.92 MHz  
 EXMOD 8.52 KHz  
 OBFRQ 1.74 Hz  
 OBSSET 32768  
 OBFIN 47348.49 Hz  
 POINT 1024  
 FREQU 0.6921 sec  
 SCANS 2.0000 sec  
 ACQTM PD 2.87 usec  
 PW1 1H  
 IRNUC 21.7 °  
 QTEMP QDC13  
 SLVNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN



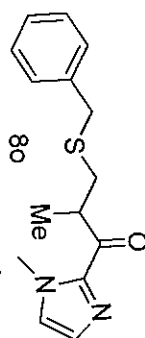


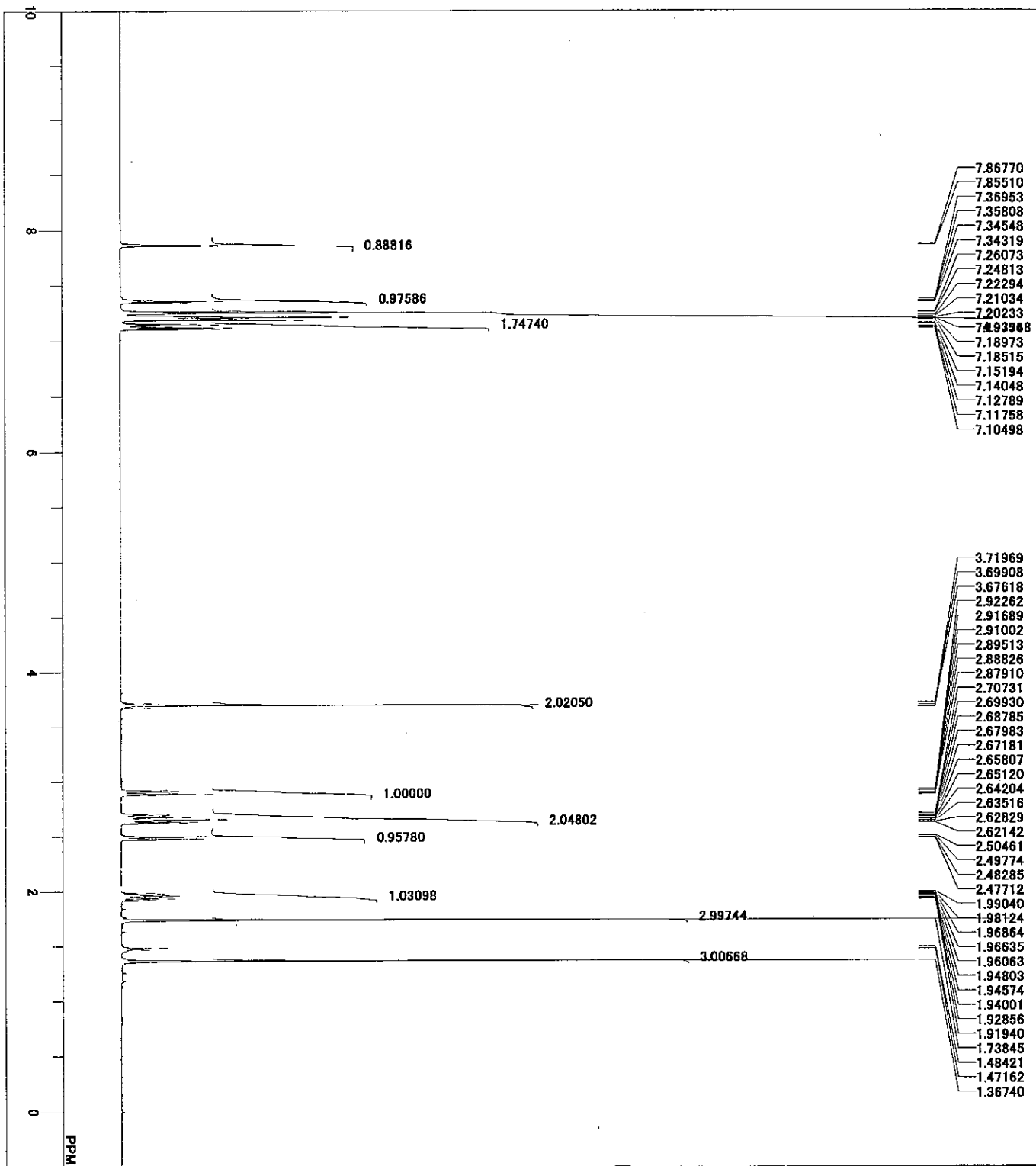
FILE C:\Documents and Settings\deltax\デスクトップ\7547\_PRO  
 COMNT 11-01-2012 10:26:09  
 DATIM 1H  
 EXMOD single pulse.ex2  
 OBNM 600.17 MHz  
 OBFREQ 5.30 KHz  
 OBSSET 5.47 Hz  
 OBFIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1.4549 sec  
 ACQTM 4.0000 sec  
 PD 0.50 usec  
 PM1 1H  
 IRNUC 20.1 °  
 CTEMP CDCL3  
 SLVNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 38  
 RGAIN



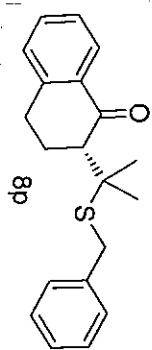


FILE COMNT  
 DATIM 11-01-2012 11:13:02  
 13C  
 EXMOD single\_pulse\_dec  
 OBNUC 150.92 MHz  
 OBFRQ 8.52 KHz  
 OBSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 1024  
 SCANS 0.8921 sec  
 ACQTM 2.0000 sec  
 PD 2.87 usec  
 PW1 1H  
 IRNUC 21.5 °  
 CTEMP CDCL3  
 SLVNT 0.00 ppm  
 EXREF 0.12 Hz  
 BF 60  
 RGAIN

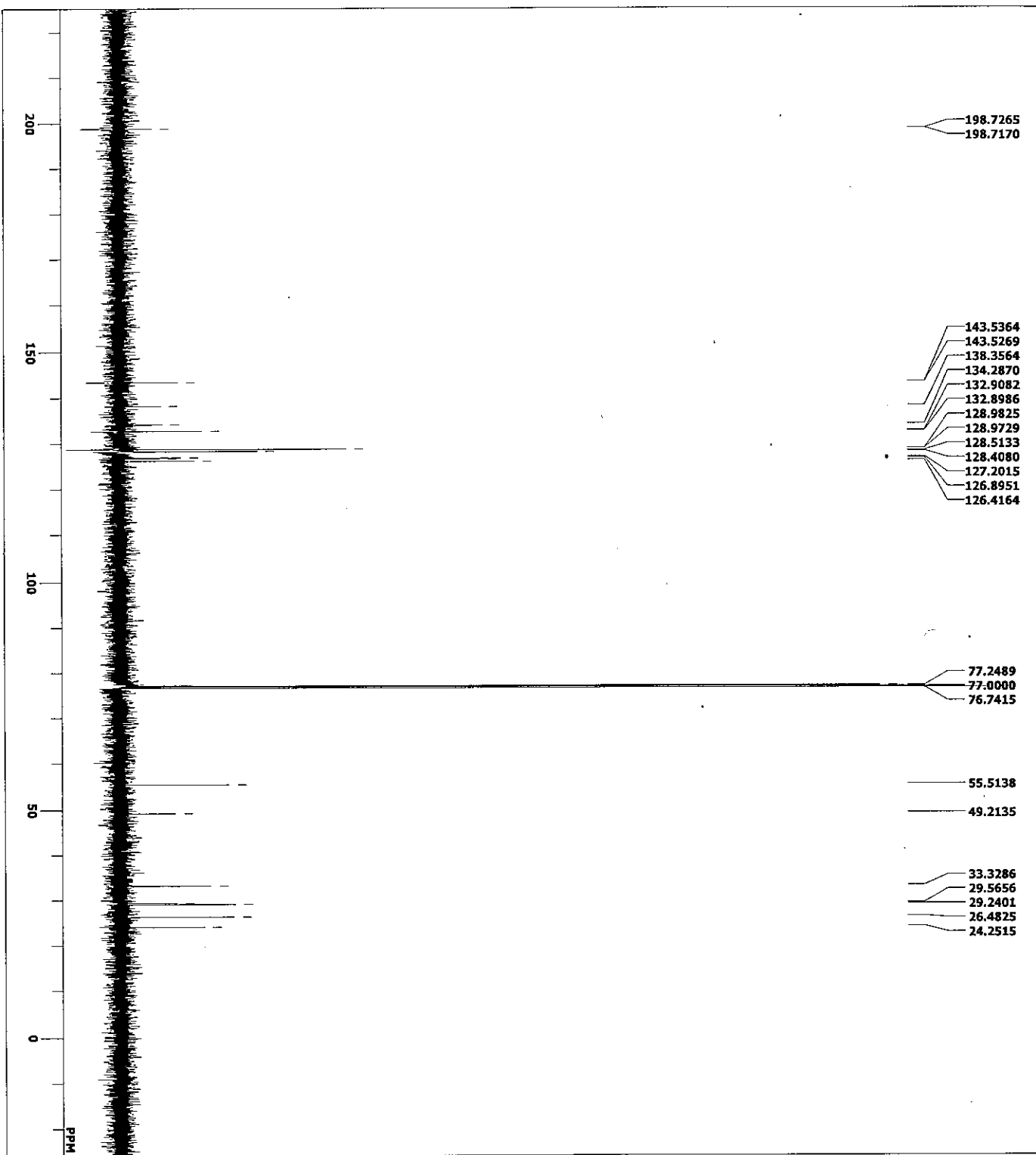




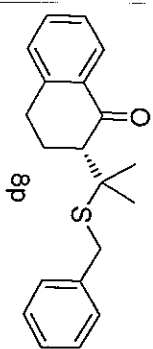
FILE C:\Documents and Settings\deltax\My Documents\Personal Folder\Sakai\44M\706.als  
 single.pulse  
 COMNT 1H  
 DATIM 28-08-2011 04:47:36  
 EXMOD 1H  
 OBNUC single.pulse.ex2  
 OBFRQ 600.17 MHz  
 OBSET 5.30 KHz  
 OBFIN 5.47 Hz  
 POINT 13107 Hz  
 FREQU 9008.87 Hz  
 SCANS 16  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PFI 6.50 usec  
 IRNUG 1H  
 QTEMP 402.9 c  
 SLYNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 42

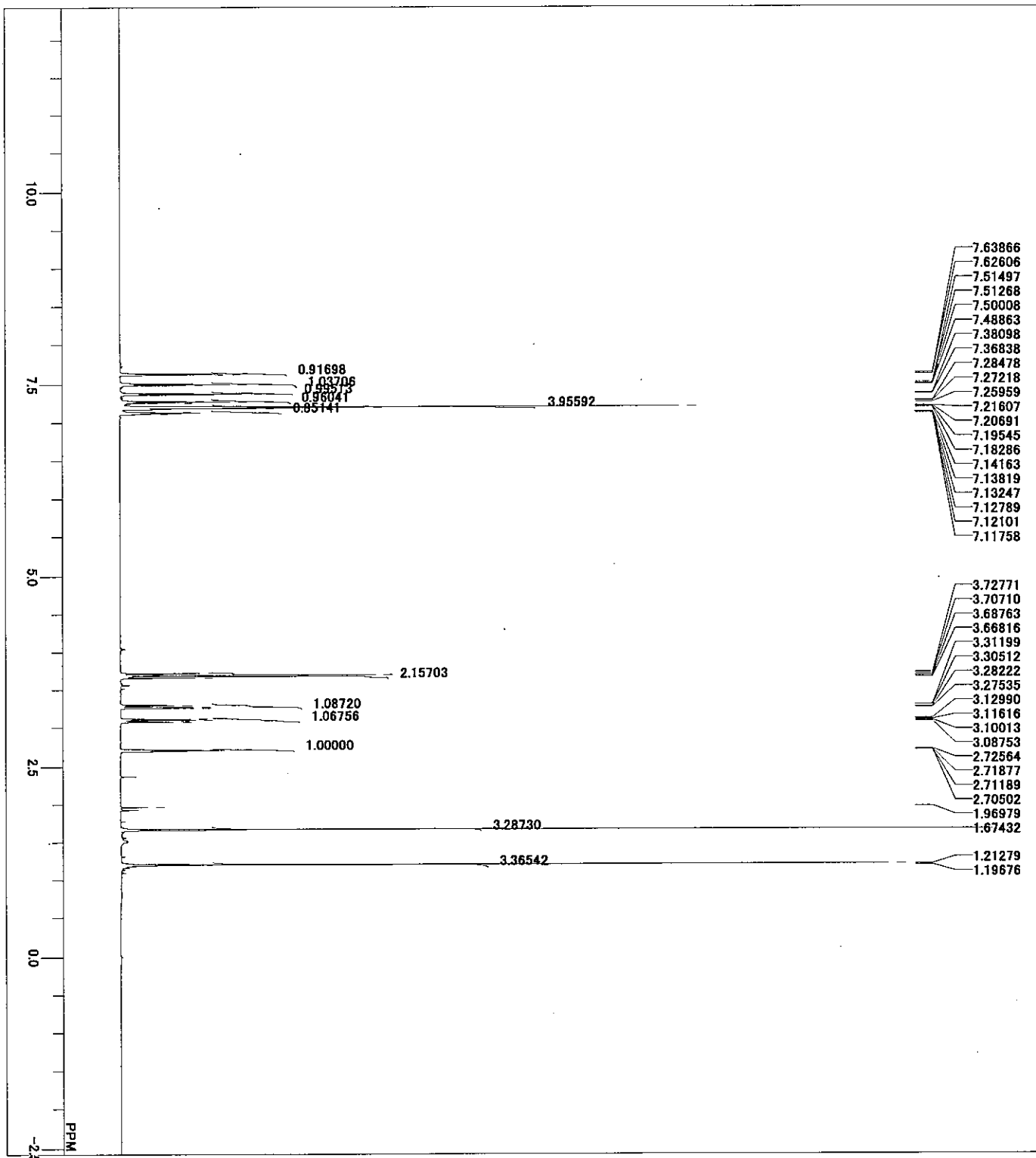




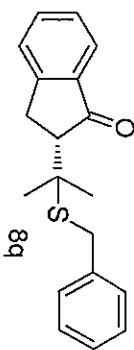


FILE 08-01-2012 19:17:03  
 COMNT 13C  
 DATIM 13C NMR,ex2  
 DAINUC EXMUD  
 13C NMR,ex2  
 OBFRQ 124.51 MHz  
 OBSET 3.45 KHz  
 OBFIN 6.00 Hz  
 POINT 32788  
 FREQU 39062.50 Hz  
 SCANS 204  
 ACQTM 0.8389 sec  
 PD 2.0000 sec  
 PVI 3.67 usec  
 IRNUC 1H  
 CTEMP 19.1 C  
 SLVNT CDCl3  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 50

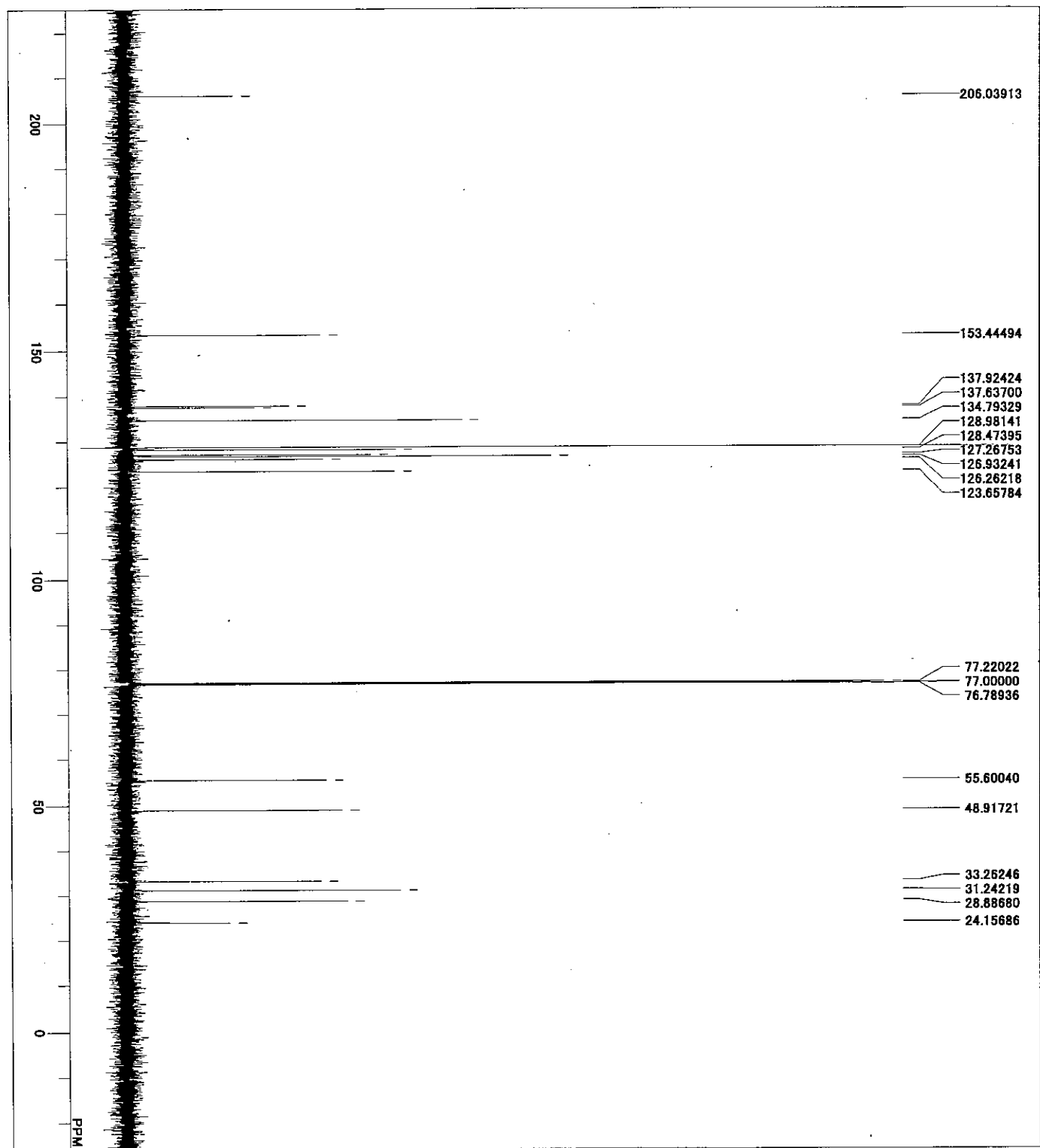




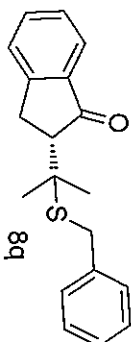
DFILE  
 COMMENT single\_pulse  
 DATIM 17-10-2011 23:11:07  
 ORNUC 1H  
 EXMOD single\_pulseex2  
 ORFRQ 600.17 MHz  
 ORSET 5.30 KHz  
 ORBIN 5.47 Hz  
 POINT 13107  
 FREQU 9008.87 Hz  
 SCANS 16  
 ACQTM 1.4549 sec  
 PD 2.0000 sec  
 PWT 6.50 usec  
 IRNUC 1H  
 QTEMP 402.9 e  
 SLVNT CDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 42

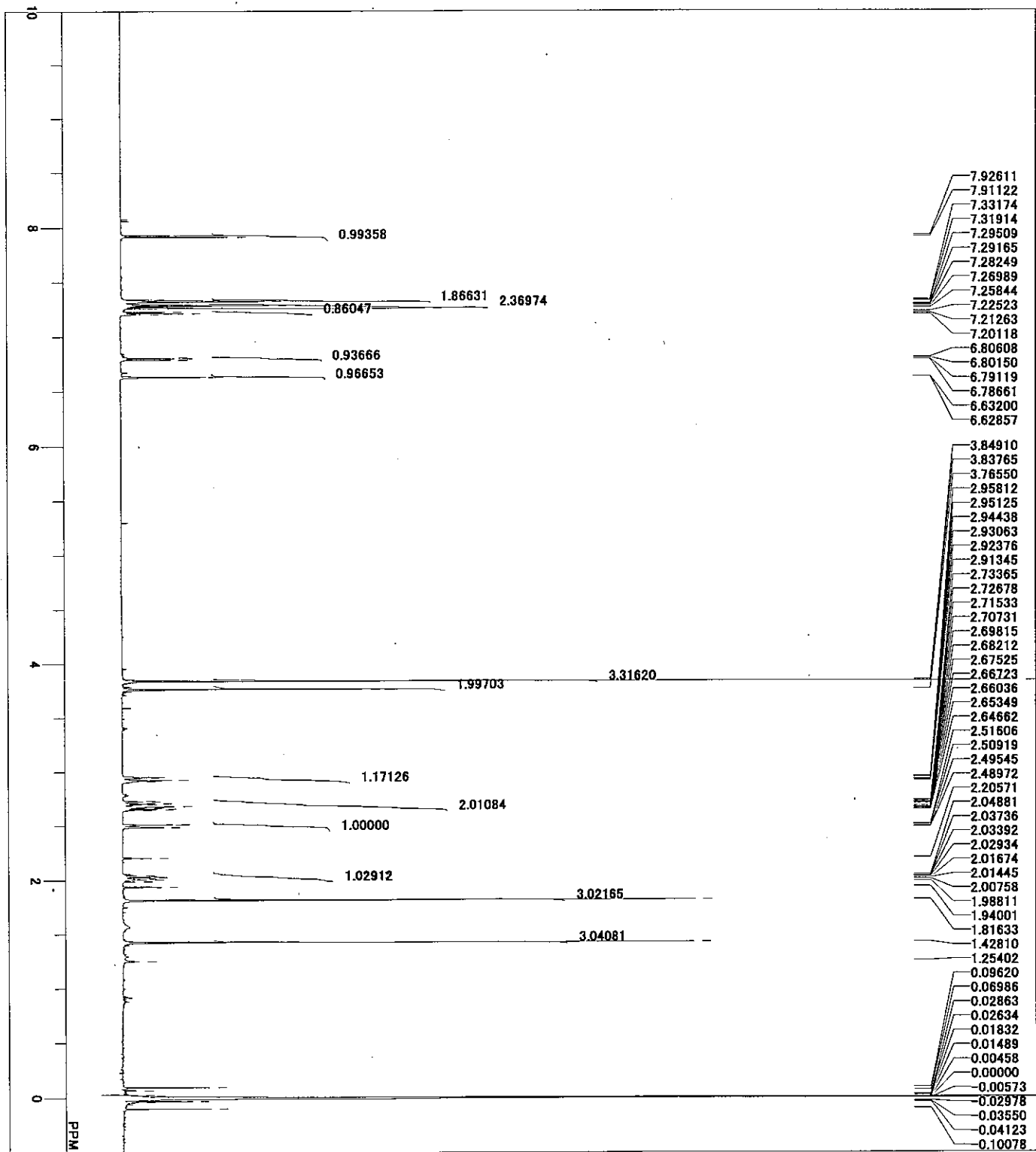


8q

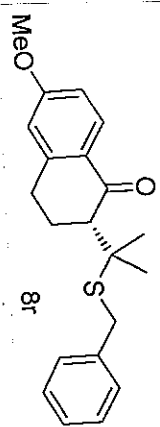


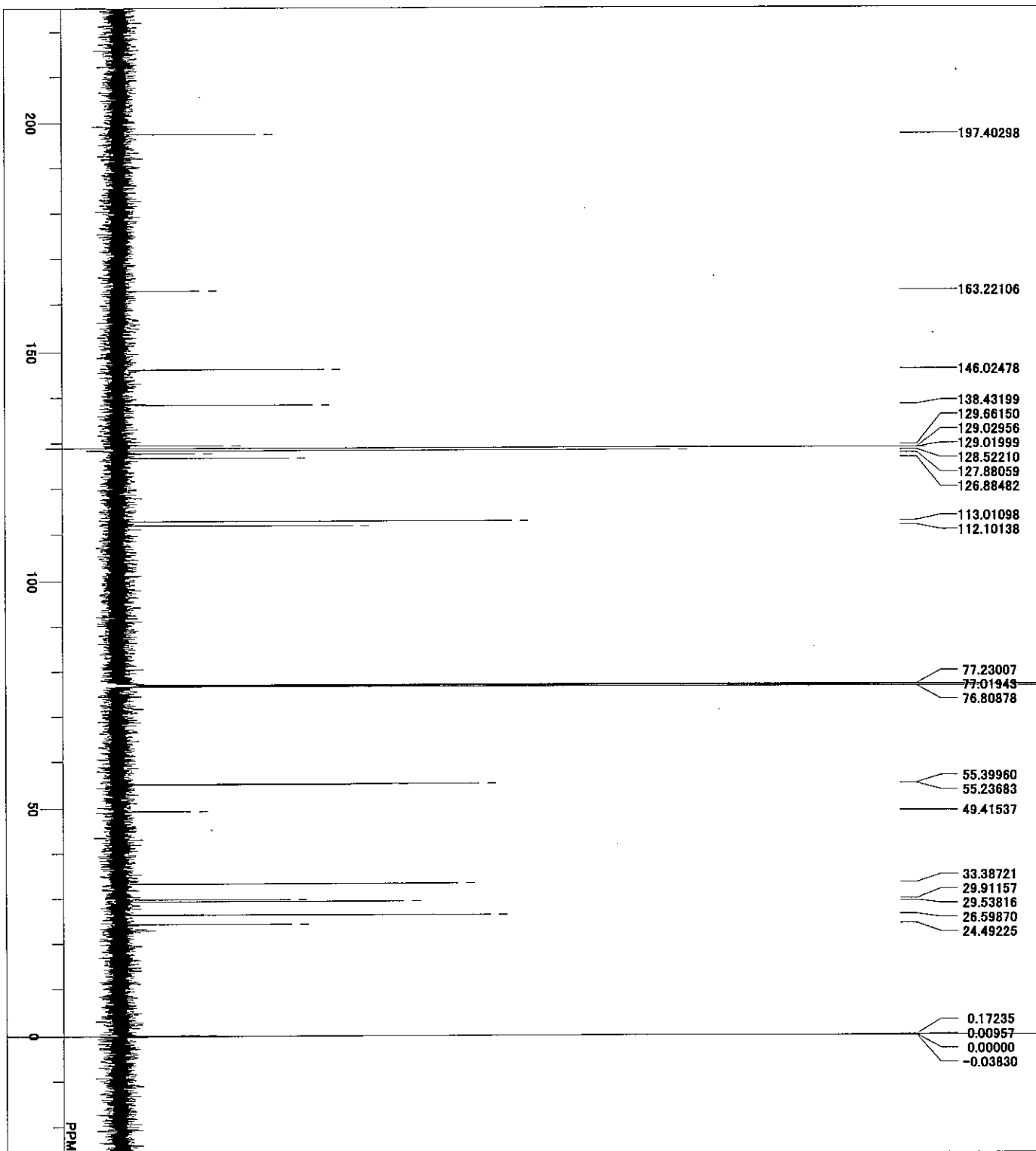
DFILE 18-01-2012 02:35:42  
 COMMENT  
 DATIM 13C  
 DENUC single\_pulse\_dec  
 EXMOD 150.92 MHz  
 OBFRQ 8.52 MHz  
 OBSSET 1.74 Hz  
 OBFIN 32768  
 POINT 47348.49 Hz  
 FREQU 94  
 SCANS 0.6921 sec  
 ACQT 2.0000 sec  
 PD 2.87 usec  
 PW1 21.0 °  
 IRNUC CDCL3  
 QTEMP 77.00 ppm  
 SLVNT EXREF 0.12 Hz  
 BF 58  
 RGAIN 58



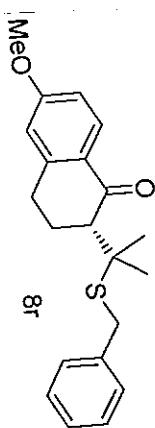


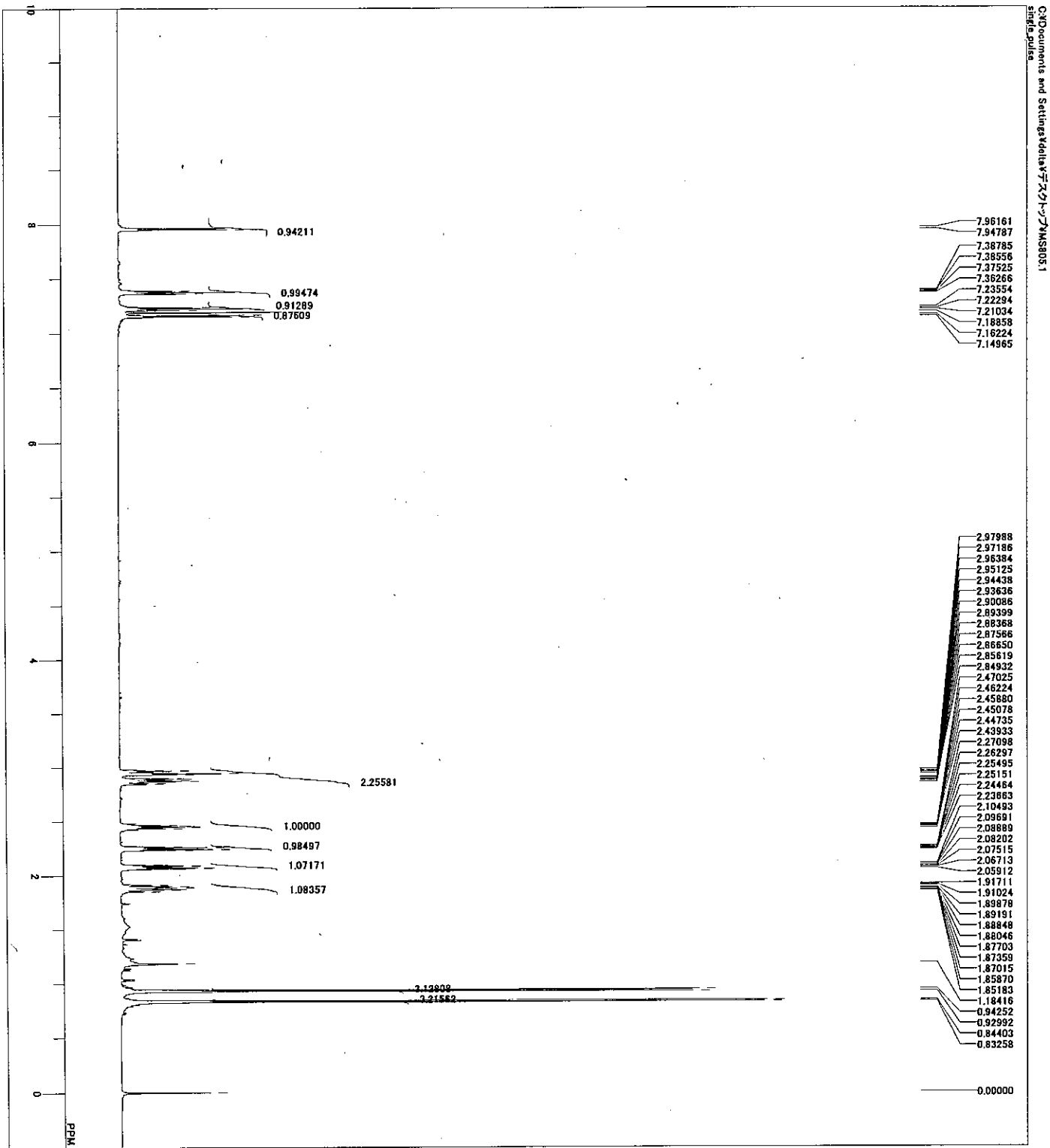
DFILE C:\Documents and Settings\deltaelta\My Documents\k\Par  
 COMMENT 11-01-2012 12:19:52  
 DATIM 1H  
 DEINUC single-pulse.ex2  
 EXMOD 600.17 MHz  
 OBSFRQ 5.30 KHz  
 OBSSET 5.47 Hz  
 ORBIN 16384  
 POINT 11261.26 Hz  
 FREQU 16  
 SCANS 1  
 ACOPTM 1.4549 sec  
 PD 4.0000 sec  
 PWT 6.50 usec  
 IRNUC 1H  
 QTEMP 20.4 °C  
 SLVNT GDCL3  
 EXREF 0.00 ppm  
 BF 0.12 Hz  
 RGAIN 40



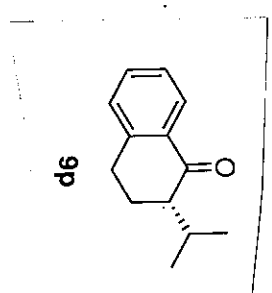


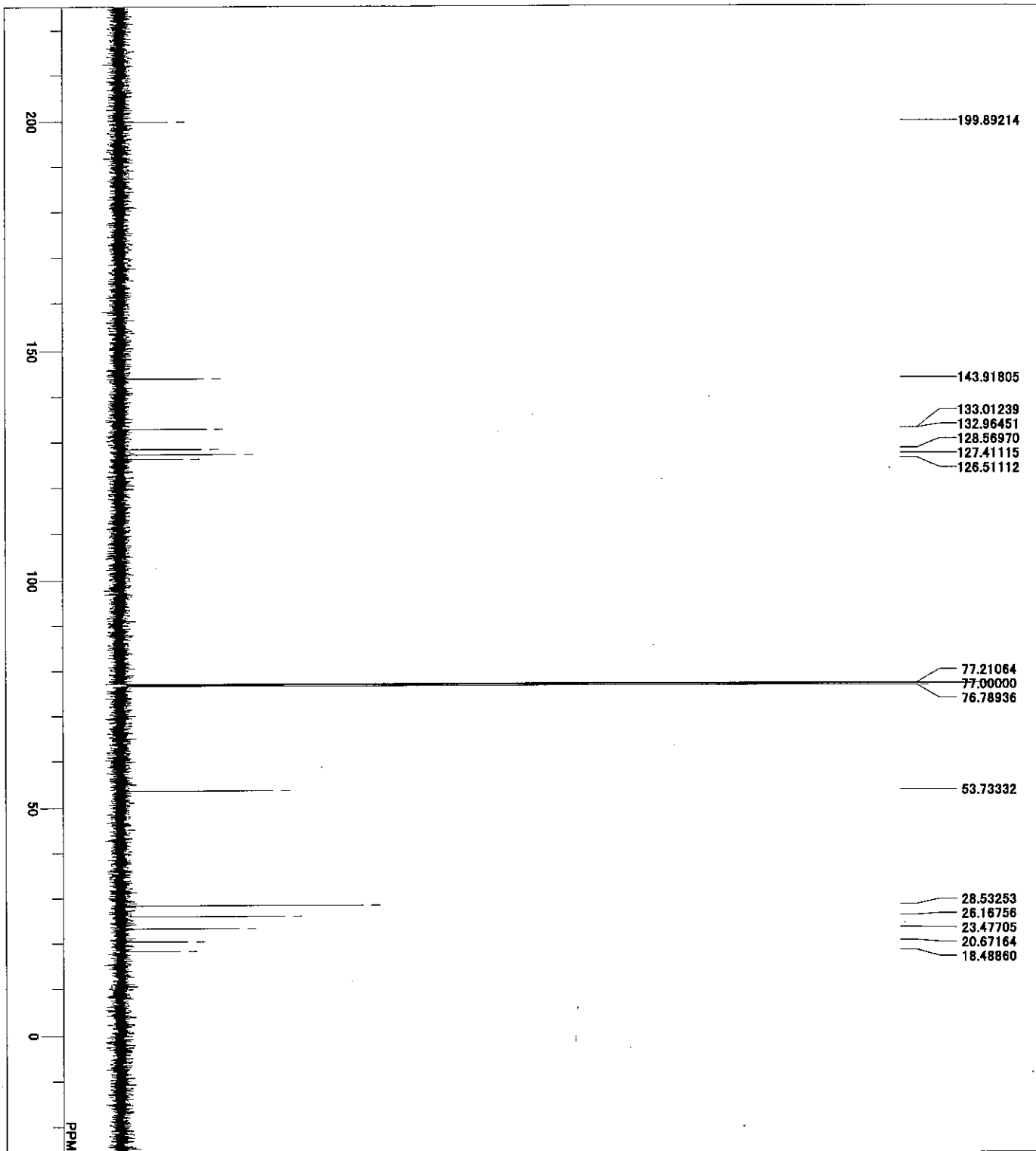
C:\Documents and Settings\delakmy\Documents\Personal Folder\Sakait\2\765c\_CARBONals  
 FILE 11-01-2012 13:07:25  
 COMNT 13C  
 DATM single-pulse, dec  
 ORNUC 150.92 MHz  
 EXMOD 8.52 KHz  
 OFFRQ 1.74 Hz  
 OBSRT 32768  
 OBFIN 47348.49 Hz  
 POINT 1024  
 FREQU 2.0000 sec  
 SCANS 2.87 usec  
 ACQTM 21.3 °  
 PD 0.00 ppm  
 IRNUC CDCl3  
 CTEMP 0.12 Hz  
 SLVNT EXREF  
 BF 56  
 RGAIN



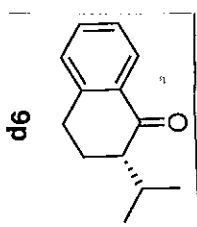


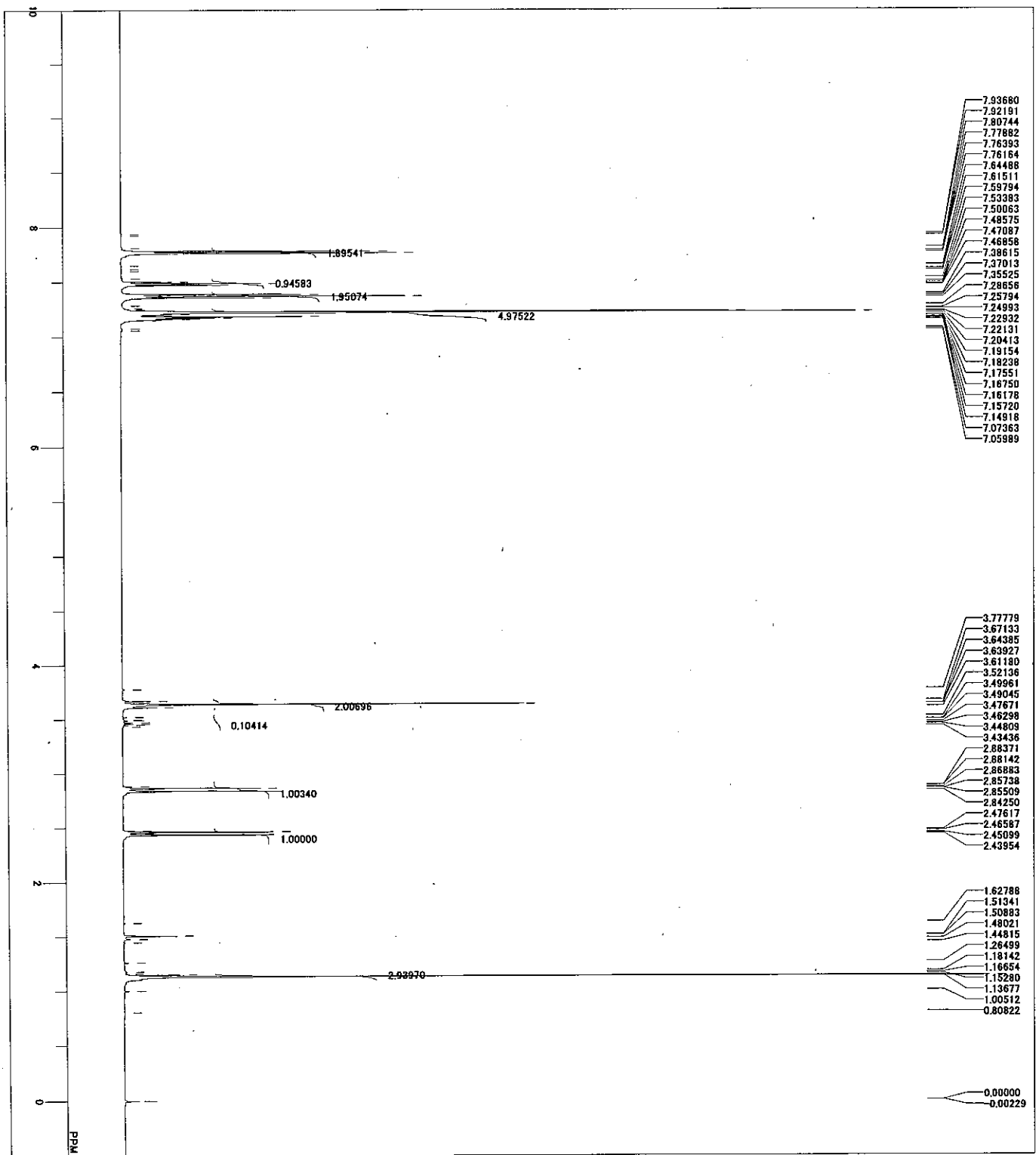
DPFILE  
 COAINT  
 DATEM  
 ORNLIC  
 EXMOD  
 ORFREQ  
 ORSET  
 ORIN  
 FREQ  
 SCANS  
 ACQTIM  
 PD  
 PWT  
 IRNUC  
 STEMP  
 STANT  
 EXREF  
 RGAIN  
 12-04-2012 01:05:02  
 1H  
 single-pulse  
 6001.71 MHz  
 3.00 KHz  
 139.94 Hz  
 11261.28 Hz  
 8  
 1.4549 sec  
 2.0000 sec  
 6.50 usec  
 1H  
 24.4 °C  
 CDCL3  
 0.00 ppm  
 412 Hz  
 42





FILE C:\Documents and Settings\delatx\My Documents\Personal  
 COMNT 12-04-2012 01:15:42  
 DATIM 13C  
 OBNUC 13C  
 EXMOD sine,pulse,dec  
 OBFRQ 150.92 MHz  
 OBSSET 8.52 KHz  
 OBFIN 1.74 Hz  
 POINT 32768  
 FREQU 47348.49 Hz  
 SCANS 189  
 ACQTM 0.6921 sec  
 PD 2.0000 sec  
 PFI 2.87 usec  
 IRNUC 1H  
 OTEMP 25.1 e  
 SLVNT CDCl<sub>3</sub>  
 EXREF 77.00 ppm  
 BF 0.12 Hz  
 RGAIN 80





FILE 17-12-2011 15:50:42  
 COM1 1H NMR.ms2  
 DATM 495131.MHz  
 ORB1 4.88 KHz  
 ORB2 131.07 Hz  
 POINT 7428.31 Hz  
 FREQU 16  
 SCANS 5.0000 sec  
 ACQTM 5.80 usec  
 PD  
 PVI 1H  
 IRNUC 21.3 °C  
 CTMP  
 ODLU 0.00 ppm  
 SLEN 0.12 Hz  
 BE  
 RGAIN 42

