

HF17188b

exp1 s2pul

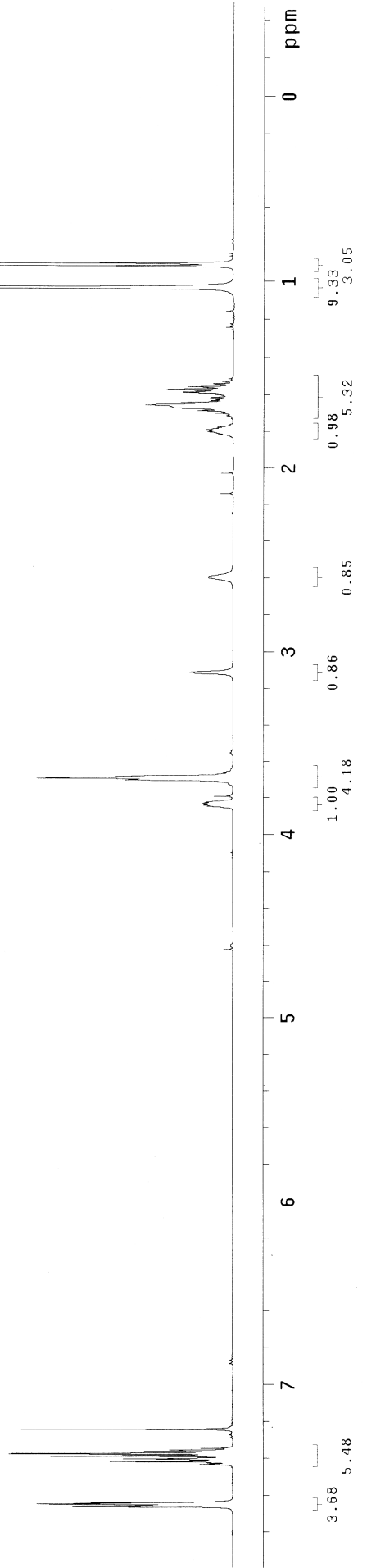
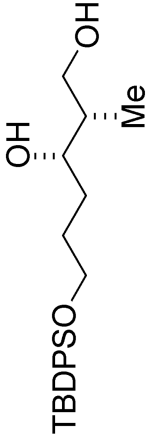
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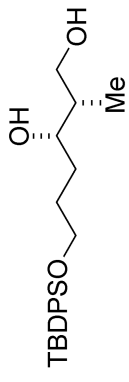
SAMPLE          DEC. & VT
date  Jul 30 2005  dfrq  499.862
solvent  CDC13    dn     H1
file     exp      dpwr   30
ACQUISITION    exp  0
499.862        dm     nnn
              dmm    C
              dn     200
              dmf    1.0
              dseq   200
              dres   1.0
              dres   1.0
              homo   n
              temp   20.0
PROCESSING
tpwr  54      wtfil  lp
pw    2.6    proc   not used
d1    1.000  fn     f
tof   -140.0 math   f
nt    16     werr   wft
ct    16     wexp   wft
alock not used  wbs   wft
gain  not used  wnt   wft
FLAG  FLAGS
il    n
in    n
dp    Y
hs    nn
DISPLAY
sp    -250.4
wp    4248.8
vs    277
sc    0
wc    250
hZmm  17.00
is    33.57
rfl   5277.2
rfp   3619.0
th    1.000
ins   1.000
nm    ph

```

10

(500 MHz, CDCl₃)





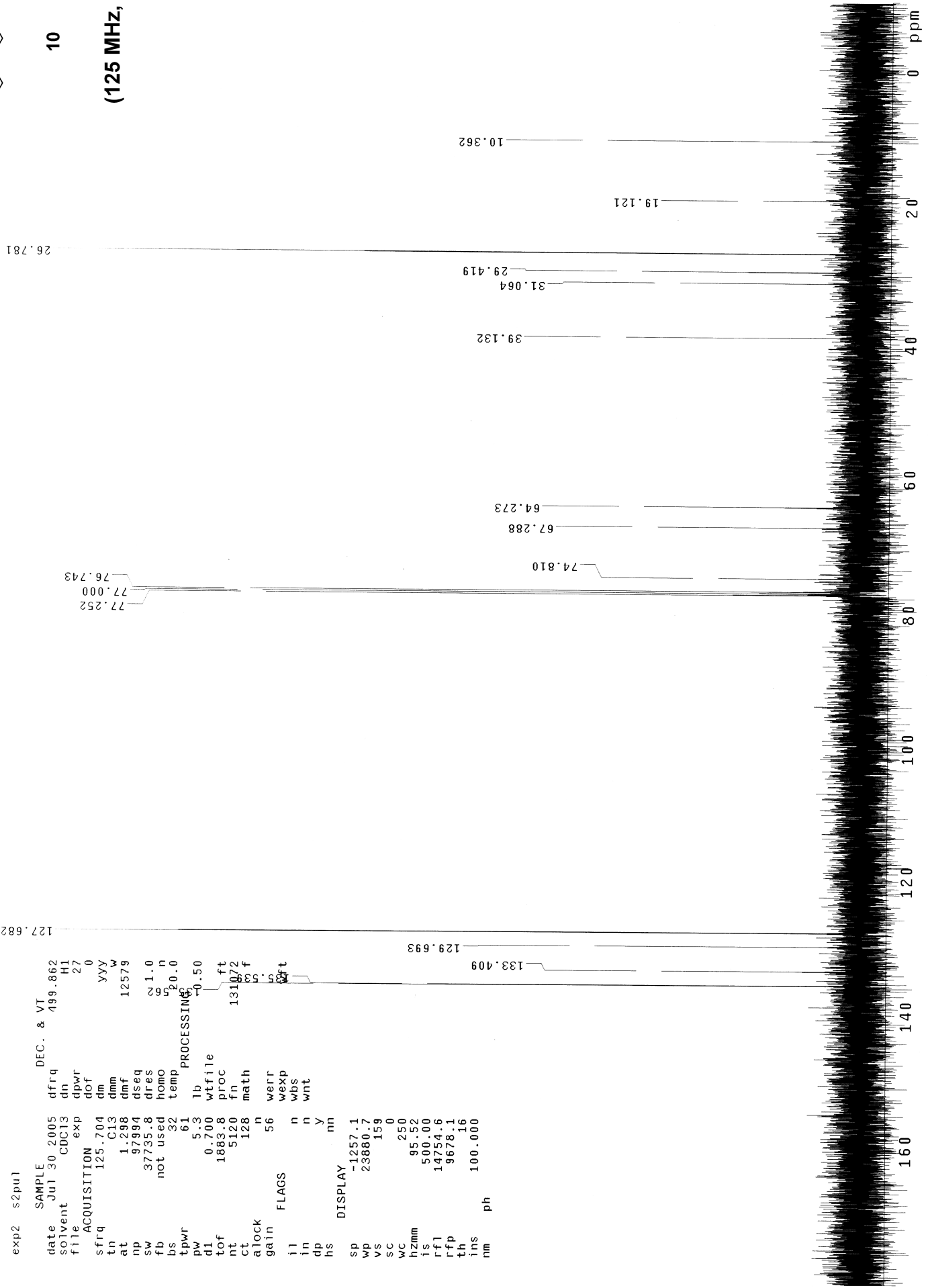
10

(125 MHz, CDCl₃)

STANDARD CARBON PARAMETERS

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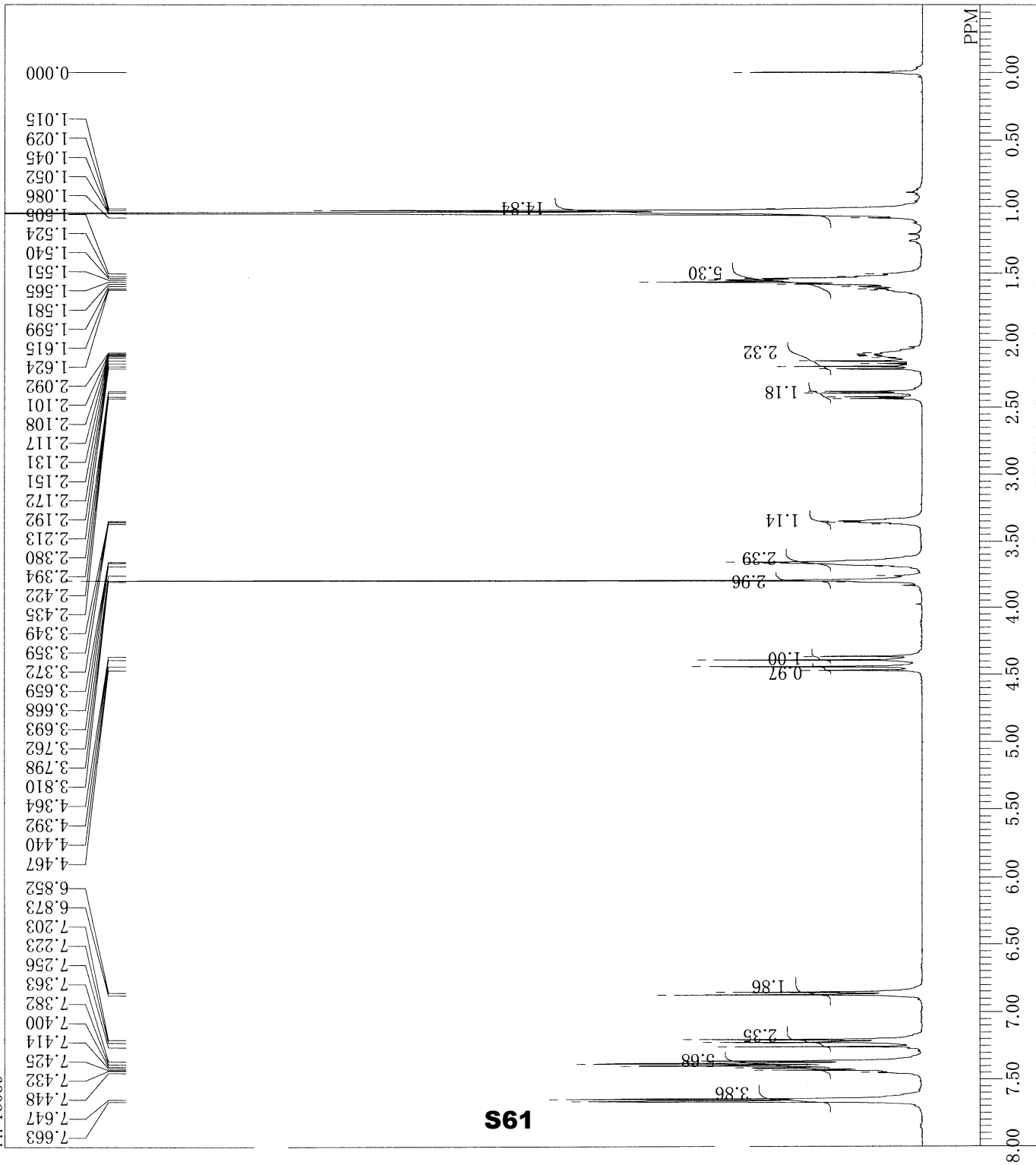
exp2 s2pu1
SAMPLE DEC. & VT
date Jul 30 2005 dfrq 499.862
solvent CDCl3 dn H1
file exp 27 dpwr 0
ACQUISITION dof 0
sfrq 125.704 dm yxy 12579 w
tn 1.298 dmm C13
at 97994 dseq 1.0 n
sw 37735.8 dres 20.0 n
fb not used homo 32
bs temp 61
tpwr 5.3 lb 0.50
pw d1 0.700 wfile
d1 1883.8 proc ft
tof 5120 fn 131072
ct 128 math 6.5 f
alock n n
gain 56 werr 0.5
flags n n n
il in n n
dp in n n
hs Y
DISPLAY mn
sp -1257.1
wp 23880.7
vs 159
sc 0
wc 250
hzmm 95.52
is 500.00
rfl 14754.6
rfp 9678.1
th 16
ins 100.000
nm ph
  
```



HF16039

DFILE
COMINT
DATIM
OBNUC
EXMOD
OBFRQ
OBSET
OBFIN
POINT
FREQU
SCANS
ACQTM
PD
PWI
IRNUC
CTEMP
SLVNT
EXREF
BF
RGAIN

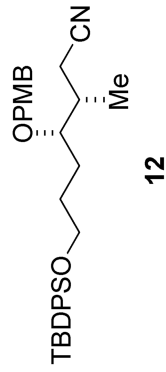
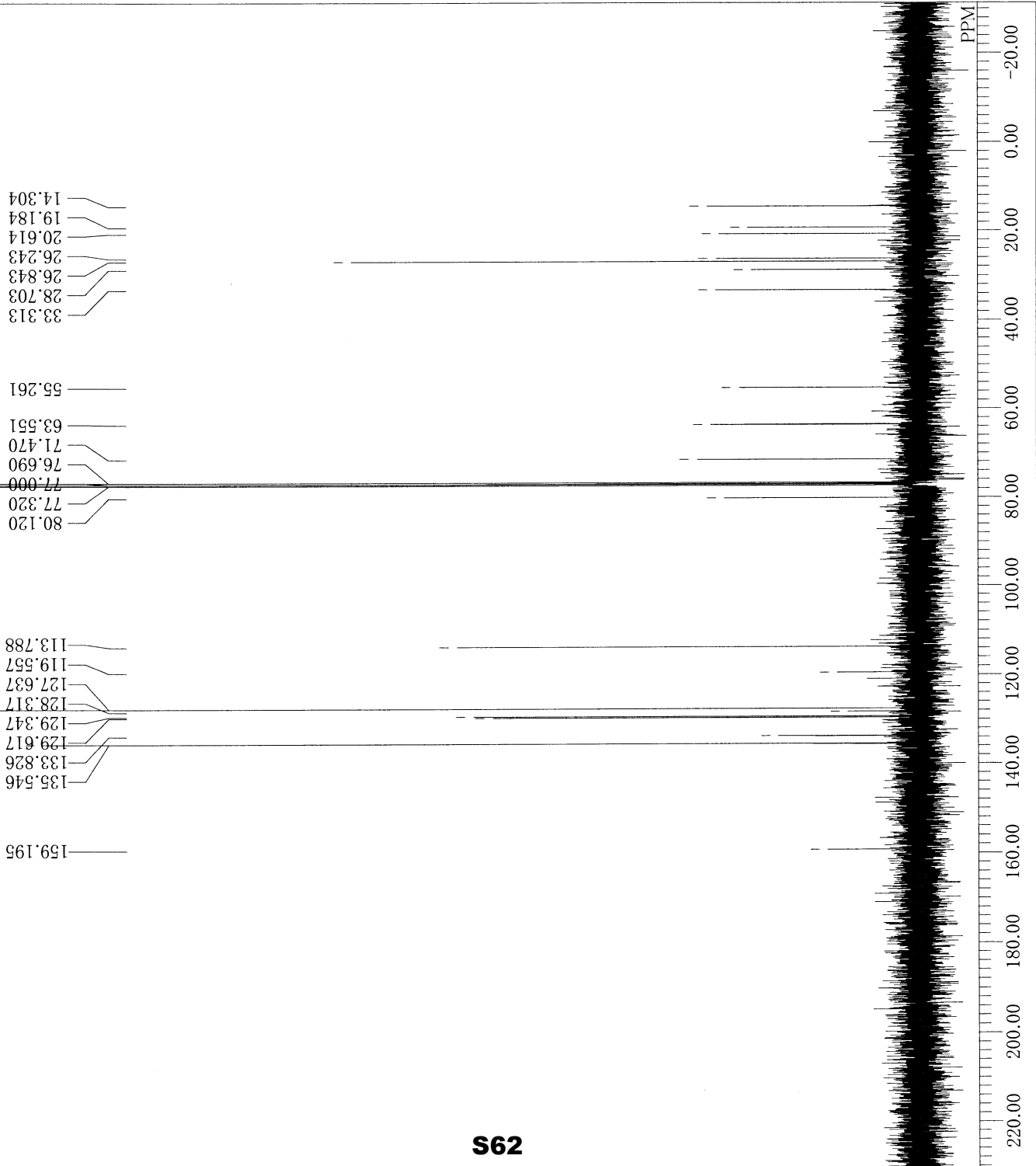
C:\Users\Yfuwa\HF16039.1
HF16039
01-12-2004 19:45:03
1H
single_pulse.ex2
399.78 MHz
4.19 KHz
7.29 Hz
8192
7503.00 Hz
16
1.0918 sec
30.0000 sec
5.85 usec
1H
18.3 c
CDCL3
0.00 ppm
0.12 Hz
40



199

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

C:\Users\Yfuwa\HF16039bcm.1
HF16039
01-12-2004 19:58:15
13C
single_pulse_dec
100.53 MHz
5.35 KHz
5.86 Hz
32768
32938.08 Hz
192
0.9948 sec
1.5000 sec
3.13 usec
1H
19.0 c
CDCL3
77.00 ppm
0.12 Hz
60

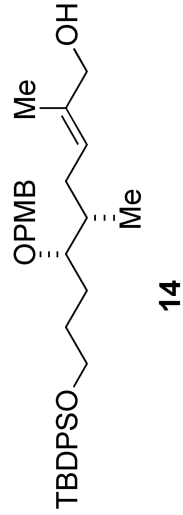
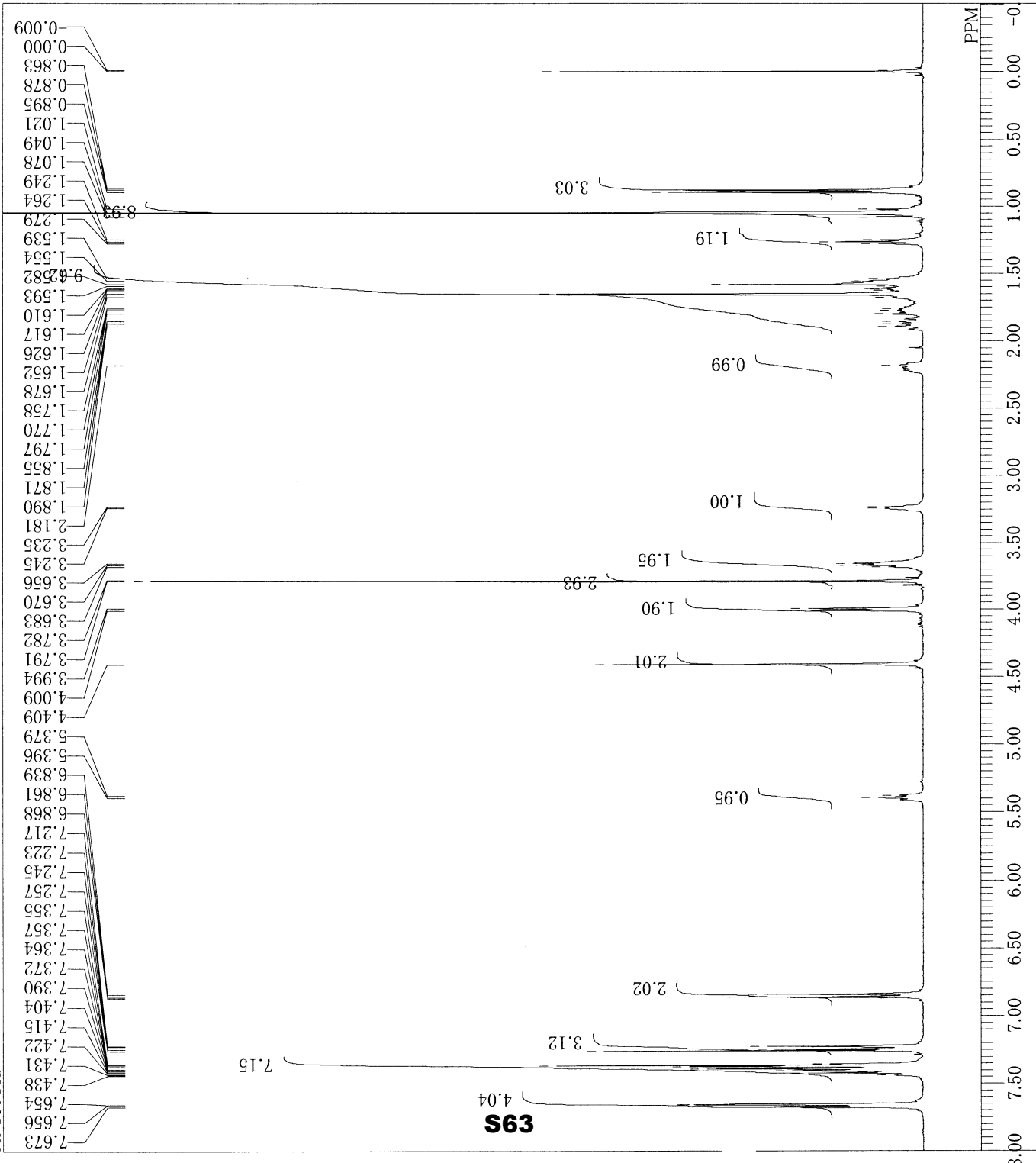


(100 MHz, CDCl₃)

HF16044a

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

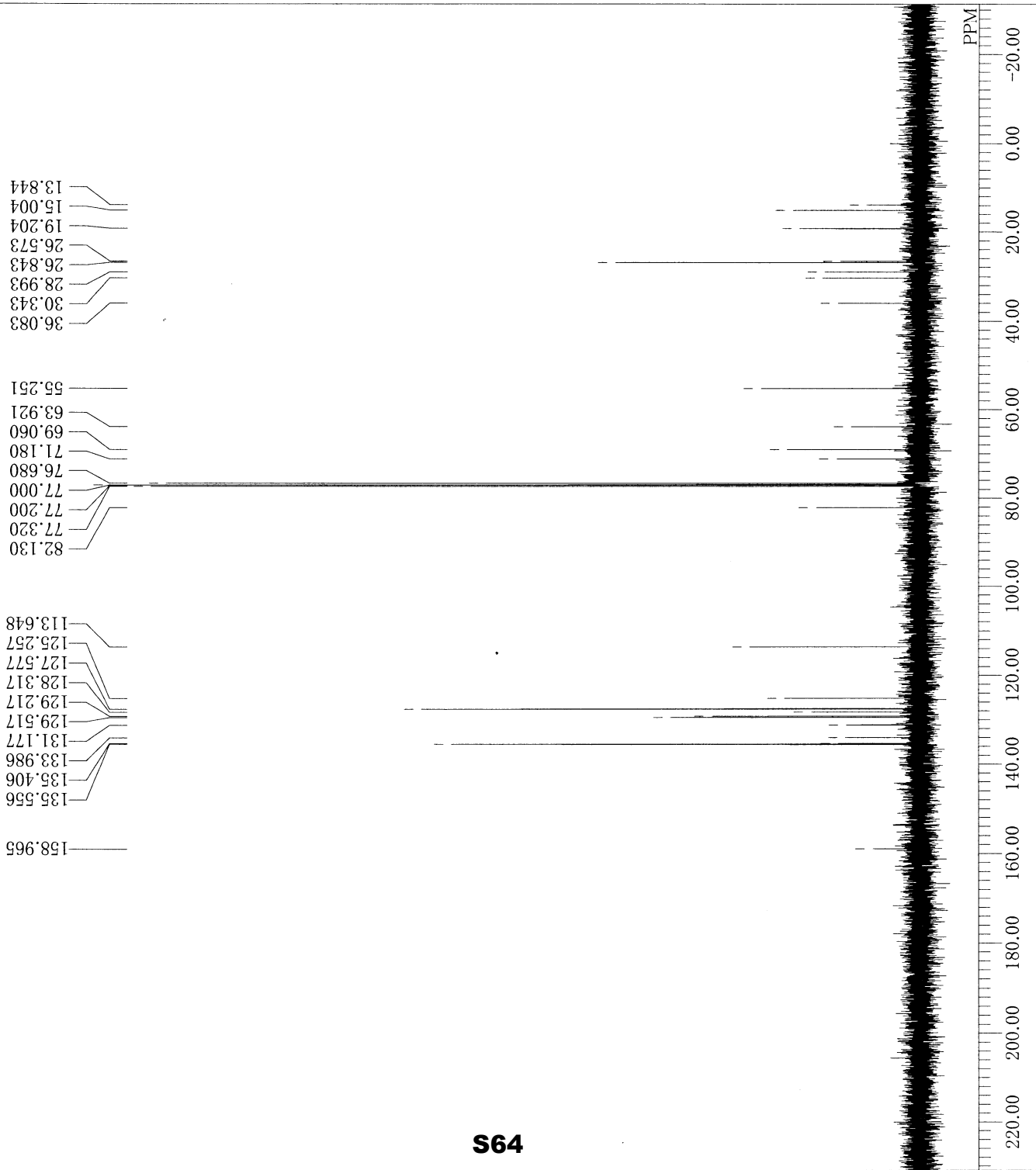
C:\Users\Yfuwa\HF16044a.1
 HF16044a
 06-12-2004 19:29:16
 1H
 single_pulse.ex2
 399.78 MHz
 4.19 KHz
 7.29 Hz
 32768
 7503.00 Hz
 8
 4.3673 sec
 5.0000 sec
 5.85 usec
 1H
 18.5 c
 CDCL3
 0.00 ppm
 0.12 Hz
 38



(400 MHz, CDCl₃)

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

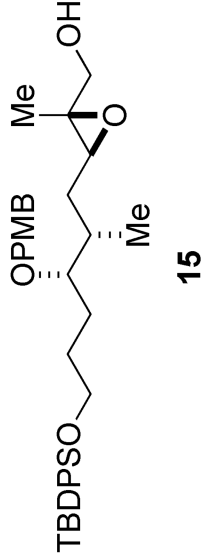
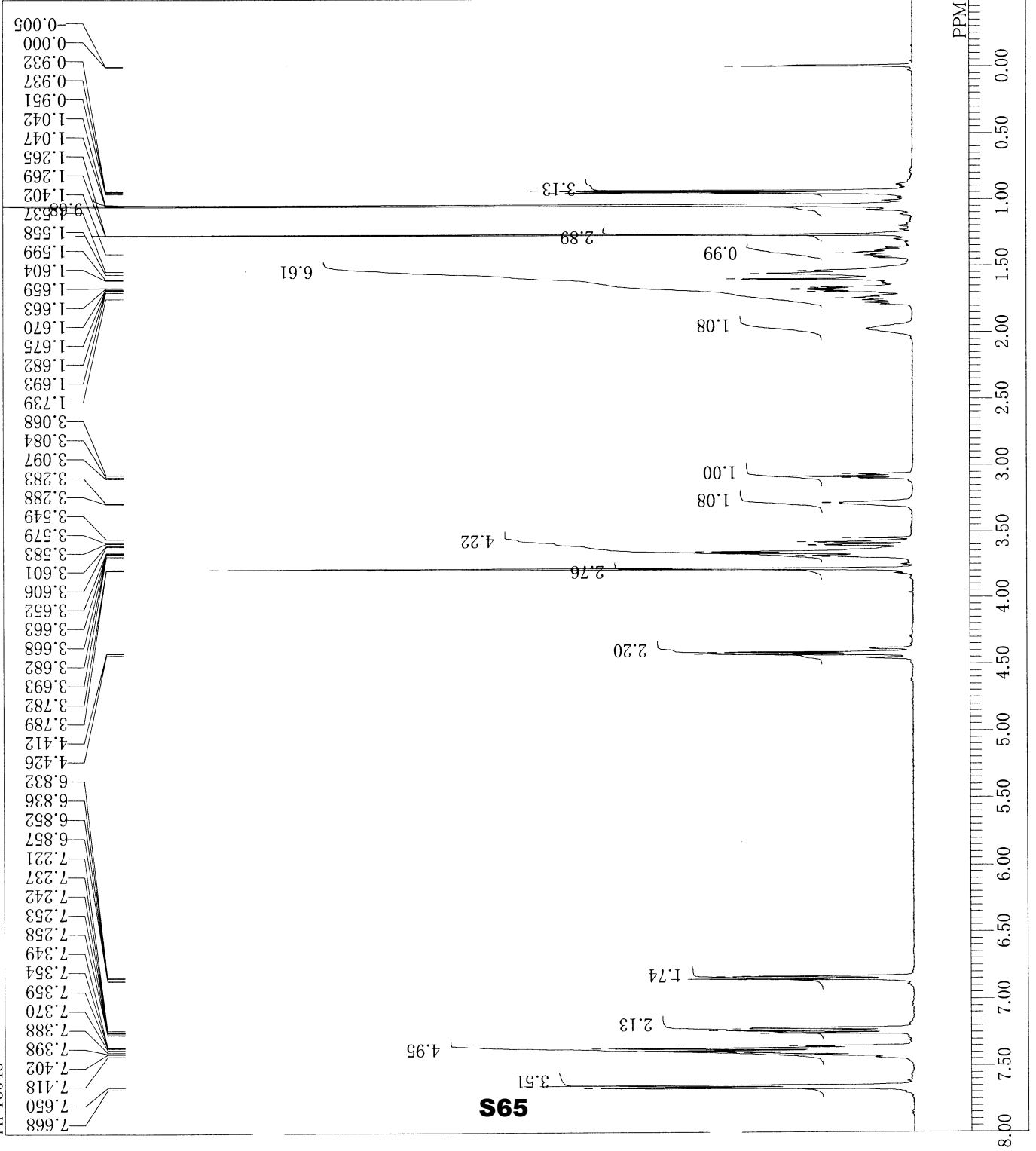
C:\Users\Yfuwa\HF16044bcm.1
HF16044
06-12-2004 19:25:40
13C
single_pulse_dec
100.53 MHz
5.35 KHz
5.86 Hz
32768
32938.08 Hz
128
0.9948 sec
1.5000 sec
3.13 usec
1H
19.1 c
CDCL3
77.00 ppm
0.12 Hz
60



HF16046

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

C:\Users\Yfuwa\HF16046.1
 HF16046
 06-12-2004 16:43:44
 1H
 single_pulse.ex2
 399.78 MHz
 4.19 KHz
 7.29 Hz
 8192
 7503.00 Hz
 8
 1.0918 sec
 30.0000 sec
 5.85 usec
 1H
 18.0 c
 CDCL3
 0.00 ppm
 0.12 Hz
 40

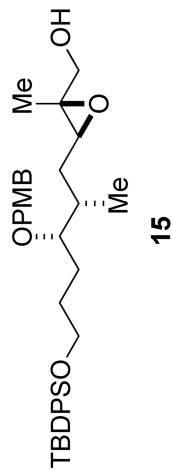
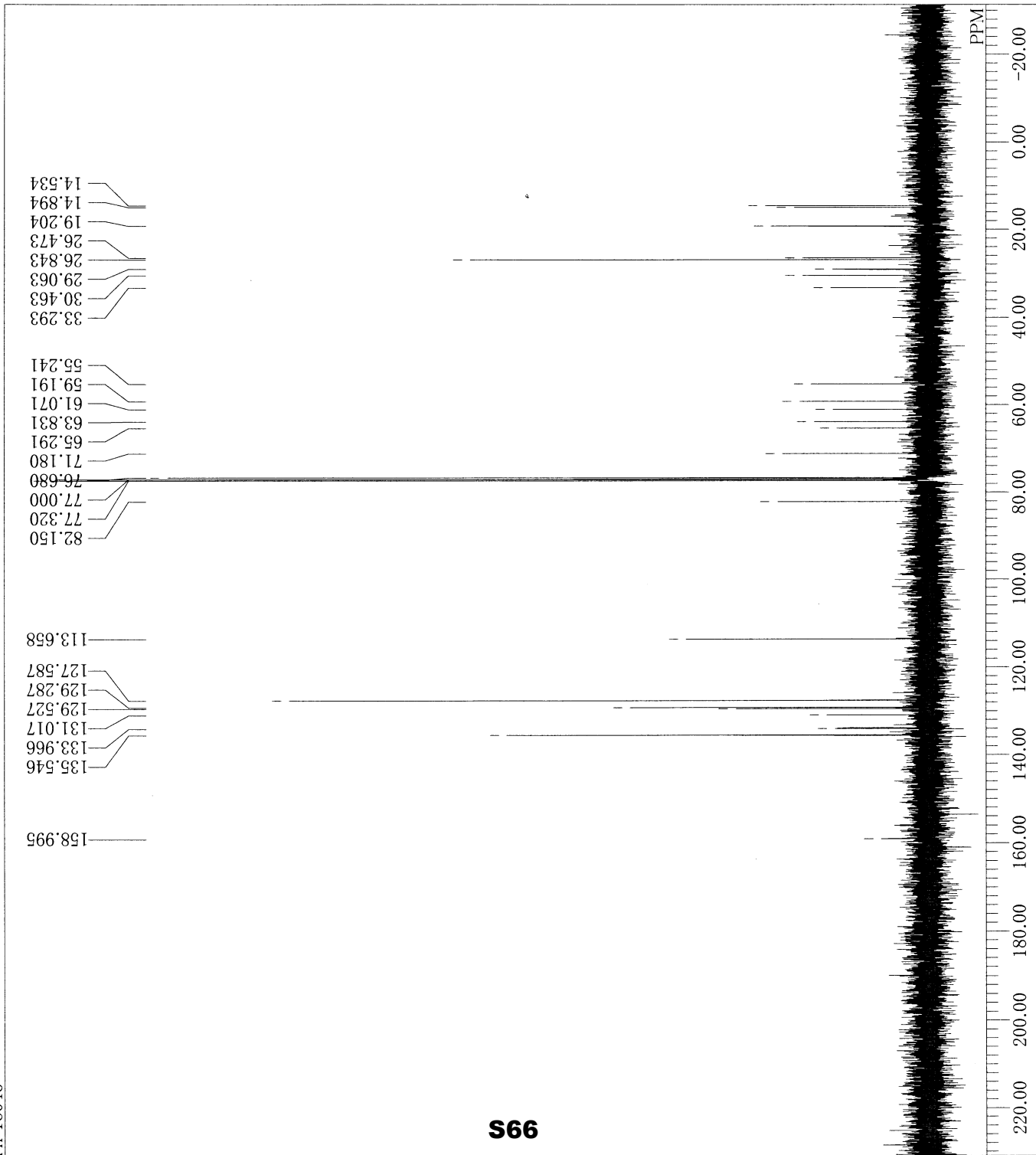


(400 MHz, CDCl₃)

D:FILE
COMINT
DATIM
OBNUC
EXMOD
OBRFQ
OBSET
OBFIN
POINT
FREQU
SCANS
ACQTM
PD
PWI
IRNUC
CTEMP
SLVNT
EXREF
BF
RGAIN

C:\Users\Yfuwa\HF16046bcm.als
HF16046
06-12-2004 17:01:42
13C
single_pulse_dec
100.53 MHz
5.35 KHz
5.86 Hz
26214
26350.06 Hz
128
0.9948 sec
1.5000 sec
3.13 usec
1H
18.5 c
CDCL3
77.00 ppm
0.12 Hz
60

14.534
14.894
19.204
26.473
26.843
29.063
30.463
33.293
33.293
55.241
59.191
61.071
63.831
65.291
71.180
76.680
77.000
77.320
82.150
113.658
127.587
129.287
129.527
131.017
133.966
135.546
158.995



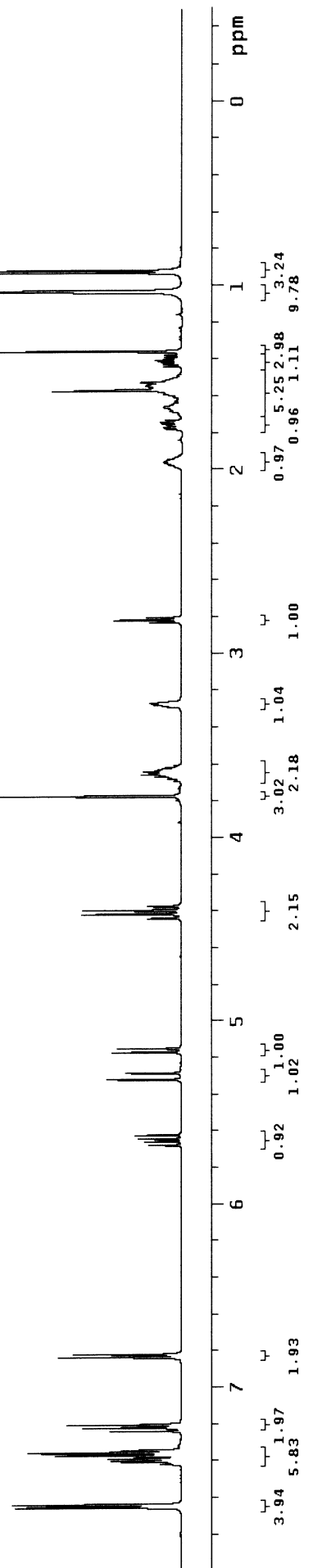
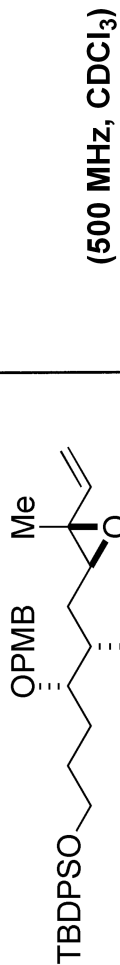
(100 MHz, CDCl₃)

HF17193

exp1 s2pul

SAMPLE DEC. & VT
 date Aug 8 2005 dfrq 499.862
 solvent CDC13 dn HI
 file ACQUISITION exp dpr 30
 dof 0
 sfrq 499.862 dm nmh
 tn 1.892 H1 C
 at 30272 dmf 200
 np 8000.0 dseq 1.0
 sw not used dres n
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54
 pw 2.6 wtfile
 dl 1.000 proc lp
 tof -140.0 fn not used
 nt 16 math f
 ct 16
 alock n werr
 gain not used wexp wft
 flags wbs wft

DISPLAY
 sp -250.4
 wp 4248.8
 vs 214
 sc 0
 wc 250
 hzmm 17.00
 is 33.57
 rfl 5277.2
 rfp 3619.0
 th 7
 ins 1.000
 nm ph



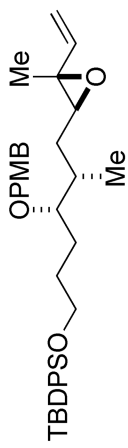
HF17193

exp2 s2pul

SAMPLE DEC. & VT
 date Aug 8 2005 dfrq 499.862
 solvent CDCl3 dn HI
 file exp dpwr 27
 ACQUISITION
 sfrq 125.704 dm
 tn C13 dmn
 at 1.298 dmf
 np 97994 dseq
 sw 37735.8 dres
 fb not used homo
 bs 32 temp
 tpwr 61
 pw 5.3 lb
 dl 0.700 wf file
 tof 1883.8 proc
 nt 5120 fn
 ct 160 math
 a lock n
 gain 56 werr
 flags n n wexp
 in n n wbs
 dp n y wnt
 hs nn

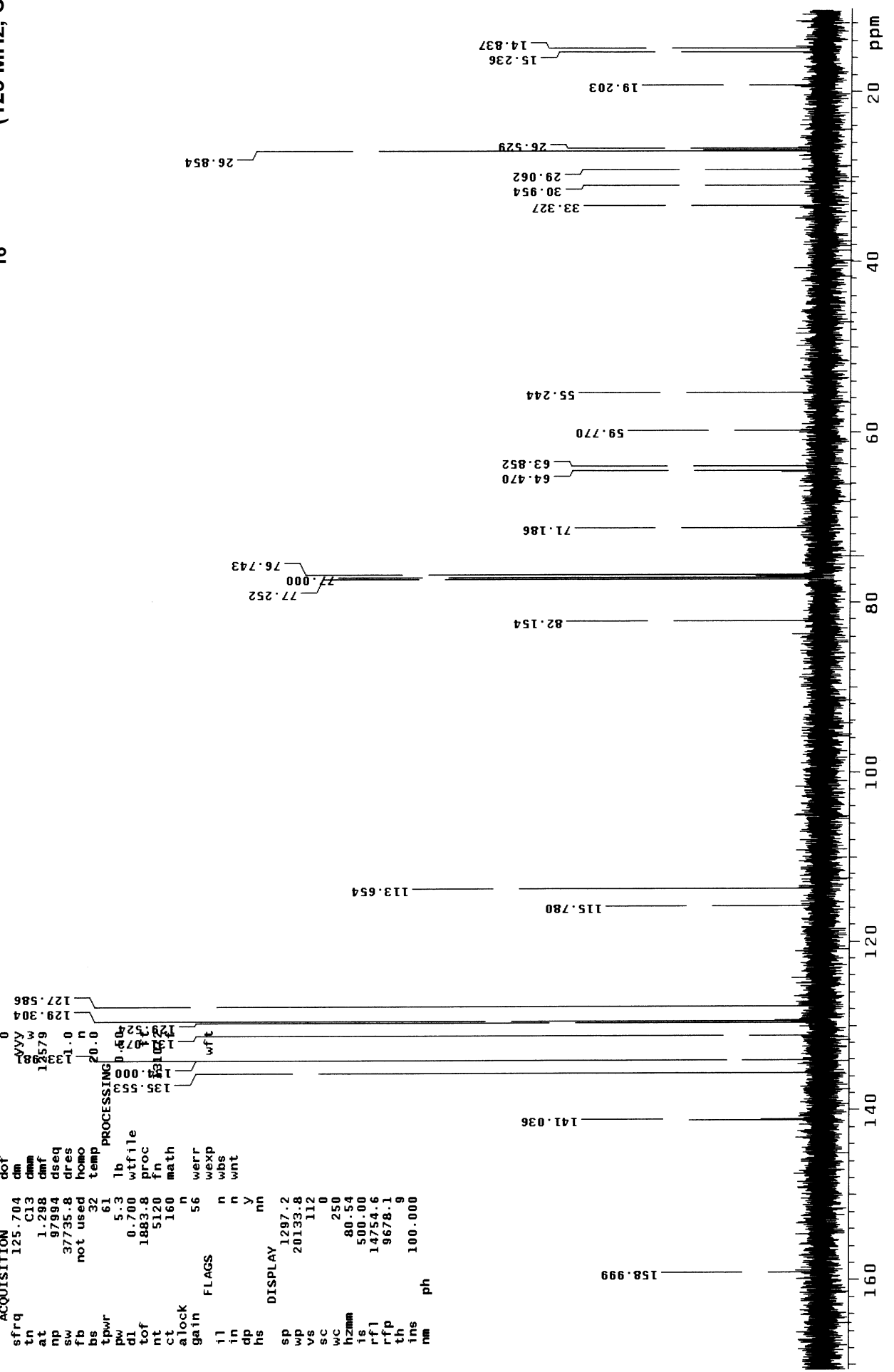
DISPLAY
 sp 1297.2
 wp 20133.8
 vs 112
 sc 0
 wc 250
 hzmm 80.54
 is 500.00
 rfl 14754.6
 rfp 9678.1
 th 9
 ins 100.000
 nm ph

PROCESSING
 p 60
 g 27
 f 2
 m 2
 s 2
 t 2
 w 2
 x 2
 y 2
 z 2
 aa 2
 ab 2
 ac 2
 ad 2
 ae 2
 af 2
 ag 2
 ah 2
 ai 2
 aj 2
 ak 2
 al 2
 am 2
 an 2
 ao 2
 ap 2
 aq 2
 ar 2
 as 2
 at 2
 au 2
 av 2
 aw 2
 ax 2
 ay 2
 az 2
 ba 2
 bb 2
 bc 2
 bd 2
 be 2
 bf 2
 bg 2
 bh 2
 bi 2
 bj 2
 bk 2
 bl 2
 bm 2
 bn 2
 bo 2
 bp 2
 bq 2
 br 2
 bs 2
 bt 2
 bu 2
 bv 2
 bw 2
 bx 2
 by 2
 bz 2
 ca 2
 cb 2
 cc 2
 cd 2
 ce 2
 cf 2
 cg 2
 ch 2
 ci 2
 cj 2
 ck 2
 cl 2
 cm 2
 cn 2
 co 2
 cp 2
 cq 2
 cr 2
 cs 2
 ct 2
 cu 2
 cv 2
 cw 2
 cx 2
 cy 2
 cz 2
 da 2
 db 2
 dc 2
 dd 2
 de 2
 df 2
 dg 2
 dh 2
 di 2
 dj 2
 dk 2
 dl 2
 dm 2
 dn 2
 do 2
 dp 2
 dq 2
 dr 2
 ds 2
 dt 2
 du 2
 dv 2
 dw 2
 dx 2
 dy 2
 dz 2
 ea 2
 eb 2
 ec 2
 ed 2
 ee 2
 ef 2
 eg 2
 eh 2
 ei 2
 ej 2
 ek 2
 el 2
 em 2
 en 2
 eo 2
 ep 2
 eq 2
 er 2
 es 2
 et 2
 eu 2
 ev 2
 ew 2
 ex 2
 ey 2
 ez 2
 fa 2
 fb 2
 fc 2
 fd 2
 fe 2
 ff 2
 fg 2
 fh 2
 fi 2
 fj 2
 fk 2
 fl 2
 fm 2
 fn 2
 fo 2
 fp 2
 fq 2
 fr 2
 fs 2
 ft 2
 fu 2
 fv 2
 fw 2
 fx 2
 fy 2
 fz 2
 ga 2
 gb 2
 gc 2
 gd 2
 ge 2
 gf 2
 gg 2
 gh 2
 gi 2
 gj 2
 gk 2
 gl 2
 gm 2
 gn 2
 go 2
 gp 2
 gq 2
 gr 2
 gs 2
 gt 2
 gu 2
 gv 2
 gw 2
 gx 2
 gy 2
 gz 2
 ha 2
 hb 2
 hc 2
 hd 2
 he 2
 hf 2
 hg 2
 hh 2
 hi 2
 hj 2
 hk 2
 hl 2
 hm 2
 hn 2
 ho 2
 hp 2
 hq 2
 hr 2
 hs 2
 ht 2
 hu 2
 hv 2
 hw 2
 hx 2
 hy 2
 hz 2
 ia 2
 ib 2
 ic 2
 id 2
 ie 2
 if 2
 ig 2
 ih 2
 ii 2
 ij 2
 ik 2
 il 2
 im 2
 in 2
 io 2
 ip 2
 iq 2
 ir 2
 is 2
 it 2
 iu 2
 iv 2
 iw 2
 ix 2
 iy 2
 iz 2
 ja 2
 jb 2
 jc 2
 jd 2
 je 2
 jf 2
 jg 2
 jh 2
 ji 2
 jj 2
 jk 2
 jl 2
 jm 2
 jn 2
 jo 2
 jp 2
 jq 2
 jr 2
 js 2
 jt 2
 ju 2
 jv 2
 jw 2
 jx 2
 jy 2
 jz 2
 ka 2
 kb 2
 kc 2
 kd 2
 ke 2
 kf 2
 kg 2
 kh 2
 ki 2
 kj 2
 kk 2
 kl 2
 km 2
 kn 2
 ko 2
 kp 2
 kq 2
 kr 2
 ks 2
 kt 2
 ku 2
 kv 2
 kw 2
 kx 2
 ky 2
 kz 2
 la 2
 lb 2
 lc 2
 ld 2
 le 2
 lf 2
 lg 2
 lh 2
 li 2
 lj 2
 lk 2
 ll 2
 lm 2
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 lr 2
 ls 2
 lt 2
 lu 2
 lv 2
 lw 2
 lx 2
 ly 2
 lz 2
 ma 2
 mb 2
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 md 2
 me 2
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 mi 2
 mj 2
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 ms 2
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 mu 2
 mv 2
 mw 2
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 my 2
 mz 2
 na 2
 nb 2
 nc 2
 nd 2
 ne 2
 nf 2
 ng 2
 nh 2
 ni 2
 nj 2
 nk 2
 nl 2
 nm 2
 no 2
 np 2
 nq 2
 nr 2
 ns 2
 nt 2
 nu 2
 nv 2
 nw 2
 nx 2
 ny 2
 nz 2
 oa 2
 ob 2
 oc 2
 od 2
 oe 2
 of 2
 og 2
 oh 2
 oi 2
 oj 2
 ok 2
 ol 2
 om 2
 on 2
 oo 2
 op 2
 oq 2
 or 2
 os 2
 ot 2
 ou 2
 ov 2
 ow 2
 ox 2
 oy 2
 oz 2
 pa 2
 pb 2
 pc 2
 pd 2
 pe 2
 pf 2
 pg 2
 ph 2
 pi 2
 pj 2
 pk 2
 pl 2
 pm 2
 pn 2
 po 2
 pp 2
 pq 2
 pr 2
 ps 2
 pt 2
 pu 2
 pv 2
 pw 2
 px 2
 py 2
 pz 2
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 qn 2
 qo 2
 qp 2
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 qr 2
 qs 2
 qt 2
 qu 2
 qv 2
 qw 2
 qx 2
 qy 2
 qz 2
 ra 2
 rb 2
 rc 2
 rd 2
 re 2
 rf 2
 rg 2
 rh 2
 ri 2
 rj 2
 rk 2
 rl 2
 rm 2
 rn 2
 ro 2
 rp 2
 rq 2
 rr 2
 rs 2
 rt 2
 ru 2
 rv 2
 rw 2
 rx 2
 ry 2
 rz 2
 sa 2
 sb 2
 sc 2
 sd 2
 se 2
 sf 2
 sg 2
 sh 2
 si 2
 sj 2
 sk 2
 sl 2
 sm 2
 sn 2
 so 2
 sp 2
 sq 2
 sr 2
 ss 2
 st 2
 su 2
 sv 2
 sw 2
 sx 2
 sy 2
 sz 2
 ta 2
 tb 2
 tc 2
 td 2
 te 2
 tf 2
 tg 2
 th 2
 ti 2
 tj 2
 tk 2
 tl 2
 tm 2
 tn 2
 to 2
 tp 2
 tq 2
 tr 2
 ts 2
 tt 2
 tu 2
 tv 2
 tw 2
 tx 2
 ty 2
 tz 2
 ua 2
 ub 2
 uc 2
 ud 2
 ue 2
 uf 2
 ug 2
 uh 2
 ui 2
 uj 2
 uk 2
 ul 2
 um 2
 un 2
 uo 2
 up 2
 uq 2
 ur 2
 us 2
 ut 2
 uu 2
 uv 2
 uw 2
 ux 2
 uy 2
 uz 2
 va 2
 vb 2
 vc 2
 vd 2
 ve 2
 vf 2
 vg 2
 vh 2
 vi 2
 vj 2
 vk 2
 vl 2
 vm 2
 vn 2
 vo 2
 vp 2
 vq 2
 vr 2
 vs 2
 vt 2
 vu 2
 vv 2
 vw 2
 vx 2
 vy 2
 vz 2
 wa 2
 wb 2
 wc 2
 wd 2
 we 2
 wf 2
 wg 2
 wh 2
 wi 2
 wj 2
 wk 2
 wl 2
 wm 2
 wn 2
 wo 2
 wp 2
 wq 2
 wr 2
 ws 2
 wt 2
 wu 2
 wv 2
 ww 2
 wx 2
 wy 2
 wz 2
 xa 2
 xb 2
 xc 2
 xd 2
 xe 2
 xf 2
 xg 2
 xh 2
 xi 2
 xj 2
 xk 2
 xl 2
 xm 2
 xn 2
 xo 2
 xp 2
 xq 2
 xr 2
 xs 2
 xt 2
 xu 2
 xv 2
 xw 2
 xx 2
 xy 2
 xz 2
 ya 2
 yb 2
 yc 2
 yd 2
 ye 2
 yf 2
 yg 2
 yh 2
 yi 2
 yj 2
 yk 2
 yl 2
 ym 2
 yn 2
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 yp 2
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 ys 2
 yt 2
 yu 2
 yv 2
 yw 2
 yx 2
 yy 2
 yz 2
 za 2
 zb 2
 zc 2
 zd 2
 ze 2
 zf 2
 zg 2
 zh 2
 zi 2
 zj 2
 zk 2
 zl 2
 zm 2
 zn 2
 zo 2
 zp 2
 zq 2
 zr 2
 zs 2
 zt 2
 zu 2
 zv 2
 zw 2
 zx 2
 zy 2
 zz 2



(125 MHz, CDCl₃)

16

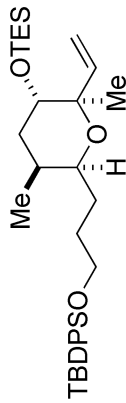


HF17195

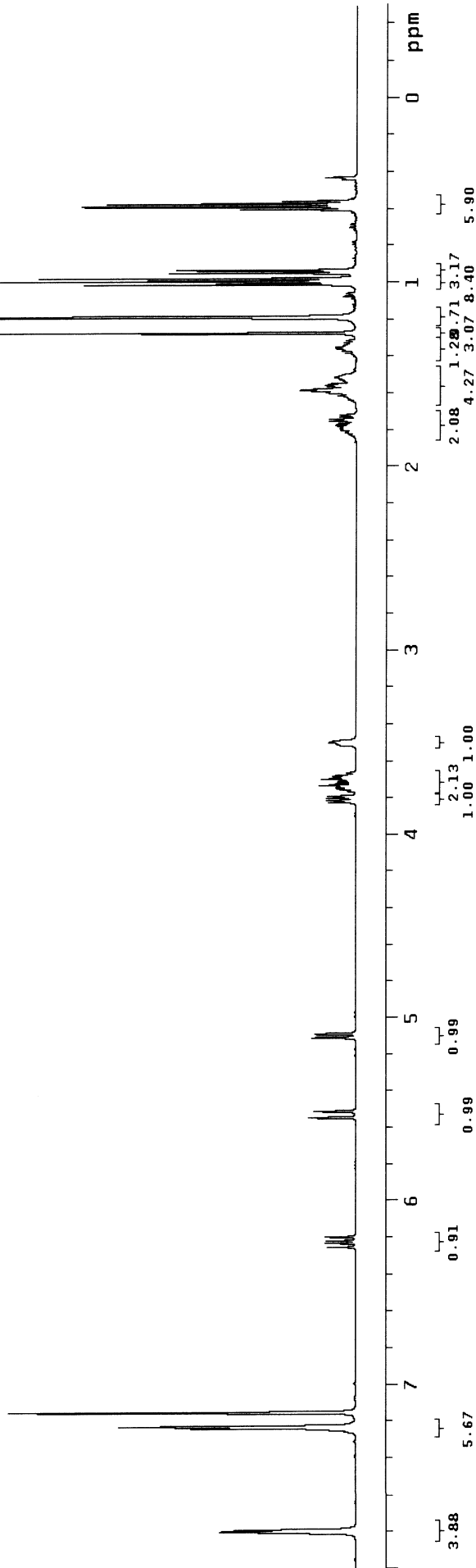
expl s2pul

SAMPLE DEC. & VT
 date Aug 10 2005 dfrq 499.862
 solvent Benzene dn H1
 file exp dpwr 30
 ACQUISITION exp dot 0
 sfrq 499.862 dm nnn
 tn H1 dnm C
 at 1.892 dmf 200
 np 30272 dseq 1.0
 sw 8000.0 dres n
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54
 pw 2.5 wfile
 dl 1.000 proc lp
 tof -140.0 fn not used
 nt 16 math f
 ct 16
 alock n
 gain not used werr wft
 flags not used wexp wft
 wnt wnt

DISPLAY
 sp -250.0
 wp 4248.8
 vs 169
 sc 0
 wc 250
 hzmm 17.00
 ls 33.57
 rfl 5204.4
 rfp 3574.0
 th ins
 nm 1.000
 ph



(500 MHz, C₆D₆)

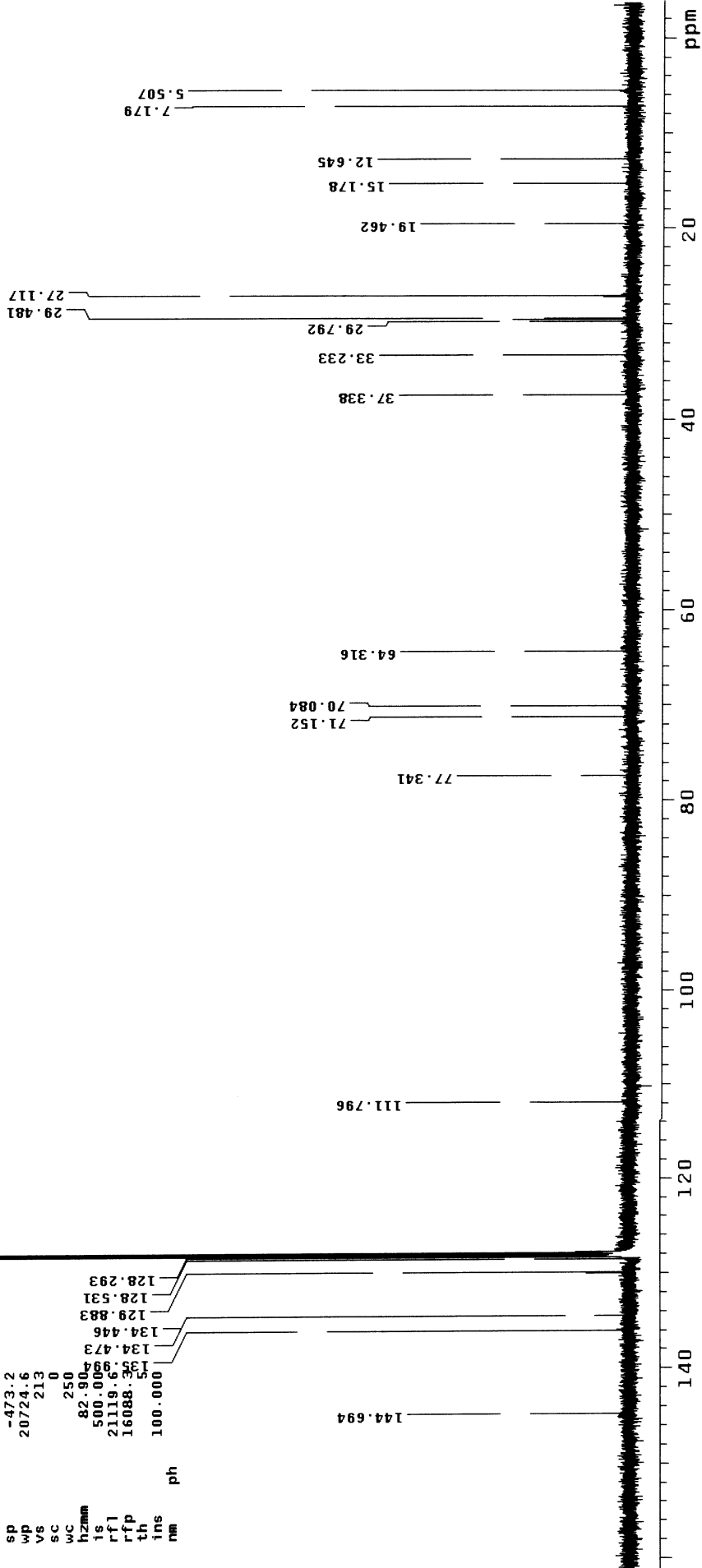
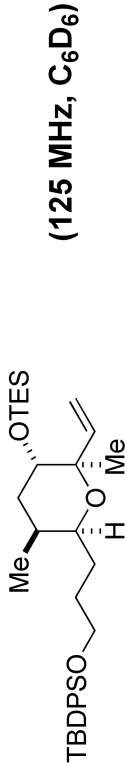


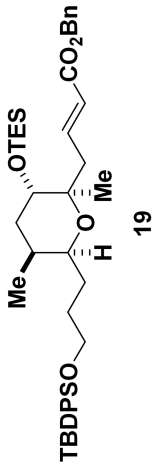
STANDARD CARBON PARAMETERS

```

exp3 s2pul
SAMPLE
date Aug 10 2005 dfrq DEC. 125.704
solvent Benzene dn 125.704
file exp dpwr 27
ACQUISITION
sfreq 125.704 dm VVY 12579
at 1.298 dmf w
np 07094 dseq
sw 37735.8 dres 1.0 n
fb not used homo n
bs 32 temp 20.0
tpwr 61
pw 5.3 lb 0.50
dl 0.700 wfile
tof 1883.8 proc ft
nt 5120 fn 131072 f
ct 256 math
alock n
gain 56 werr wft
FLAGS
ll n
in n wbs
dp y wnt
hs nn
DISPLAY
sp -473.2
wp 20724.6
vs 213
sc 0
wc 250
h2mm 82.90
ts 500.006
rfl 21119.6
rfp 16088.3
th 5
ins 100.000
nm ph
  
```

18





(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

```

exp1 s2pul
SAMPLE DEC. & VT
date Jan 4 2006 dfrq 499.862
solvent Benzene dn H1
file /export/home/~ dpwr 30
vnmr1/vnmrsws/data~ dof 0
/Sasaki_lab/Ebine/~ dm nnn
ebineIV-021-H.fid dmm c
ACQUISITION dmf 200
sfrq 499.862 dseq
tn H1 dres 1.0
at 1.892 homo n
np 30272 temp 20.0
sw 8000.0 PROCESSING
fb not used wfile
bs 4 proc lp
tpwr 54 fn not used f
pw 2.5 math
d1 1.000
tof -140.0 wepp
nt 128 wepp
ct 68 wbs
alock n wnt wft
gain not used
  
```

FLAGS

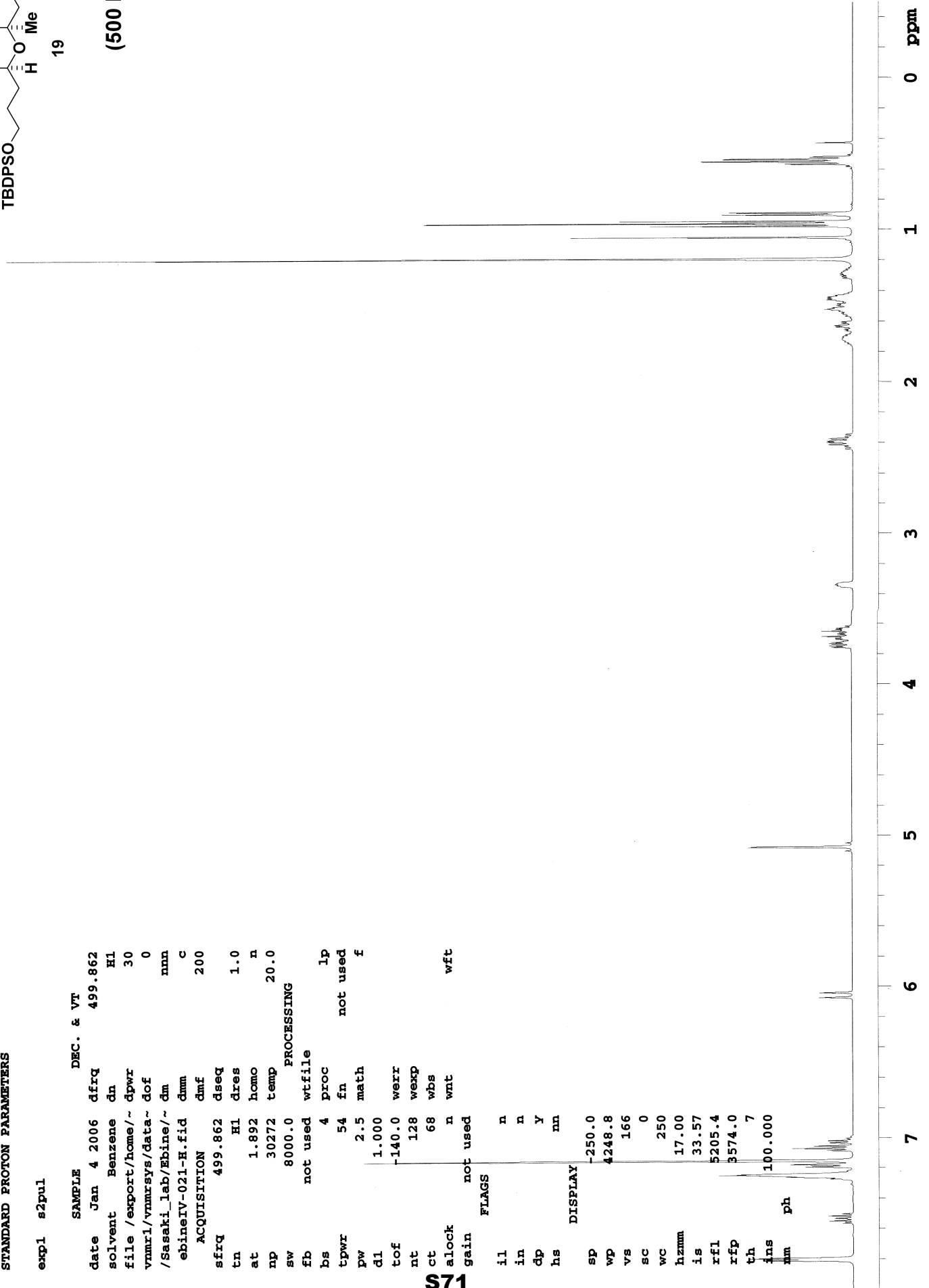
```

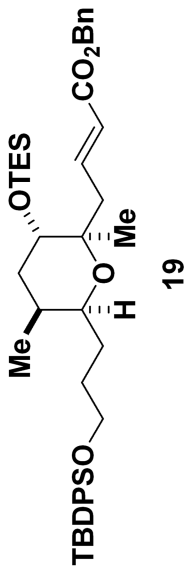
il n
in n
dp y
hs nn
  
```

DISPLAY

```

sp -250.0
wp 4248.8
vs 166
sc 0
wc 250
hzmm 17.00
is 33.57
rfl 5205.4
xfp 3574.0
th 7
ins 100.000
am ph
  
```



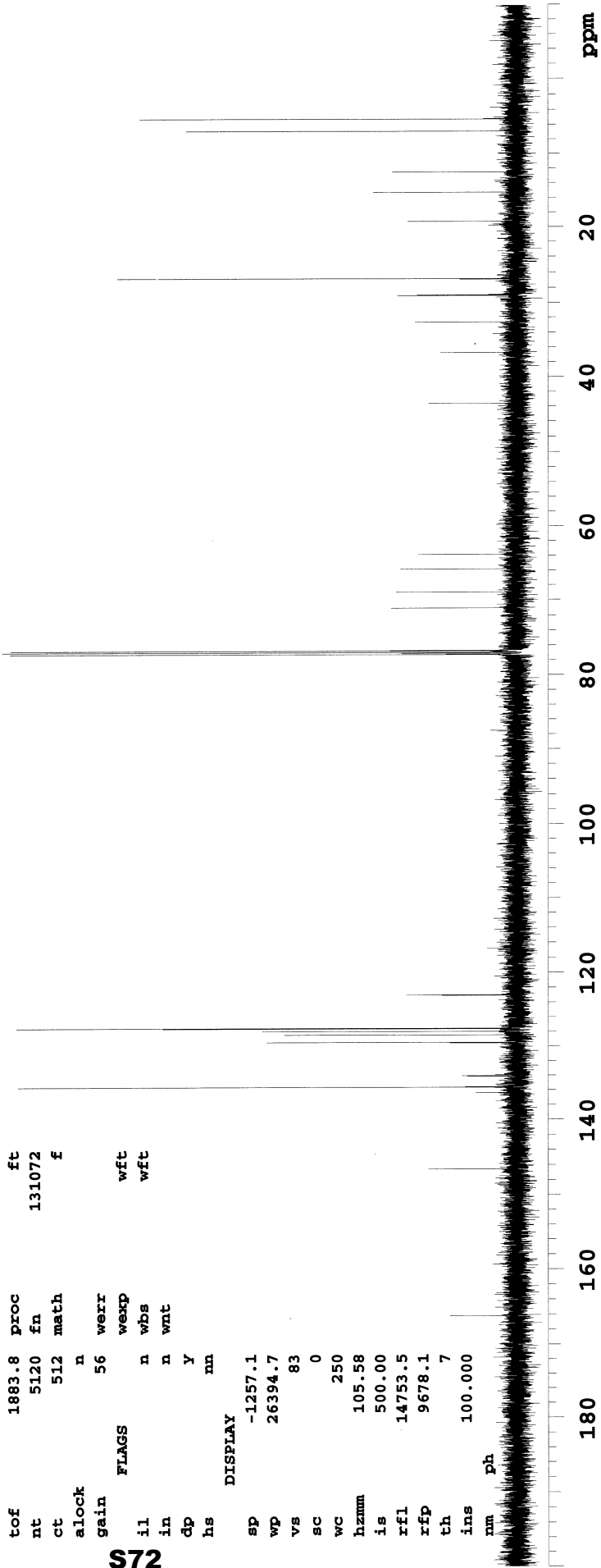


(125 MHz, CDCl₃)

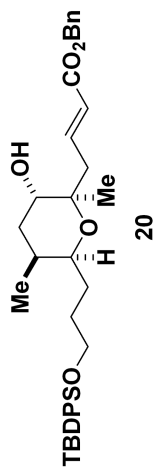
STANDARD CARBON PARAMETERS

exp3 s2pul

SAMPLE	DEC. & VT
date Jun 16 2006	dfrq 499.862
solvent CDCl3	dn H1
file exp	dpwr 27
ACQUISITION	dof 0
sfrq 125.704	dm YYY
tn C13	dmm w
at 1.298	dmf 12579
np 97994	dseq
sw 37735.8	dres 1.0
fb not used	homo n
bs 16	temp 20.0
tpwr 61	PROCESSING
pw 5.3	lb 0.50
d1 0.700	wtfile
tof 1883.8	proc ft
nt 5120	fn 131072
ct 512	math f
alock n	
gain 56	werr
il n	wexp wft
in n	wbs wft
dp y	wnt
hs nm	
DISPLAY	
sp -1257.1	
wp 26394.7	
vs 83	
sc 0	
wc 250	
hzmm 105.58	
is 500.00	
rfl 14753.5	
rfp 9678.1	
th 7	
ins 100.000	
nm ph	



S72



(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

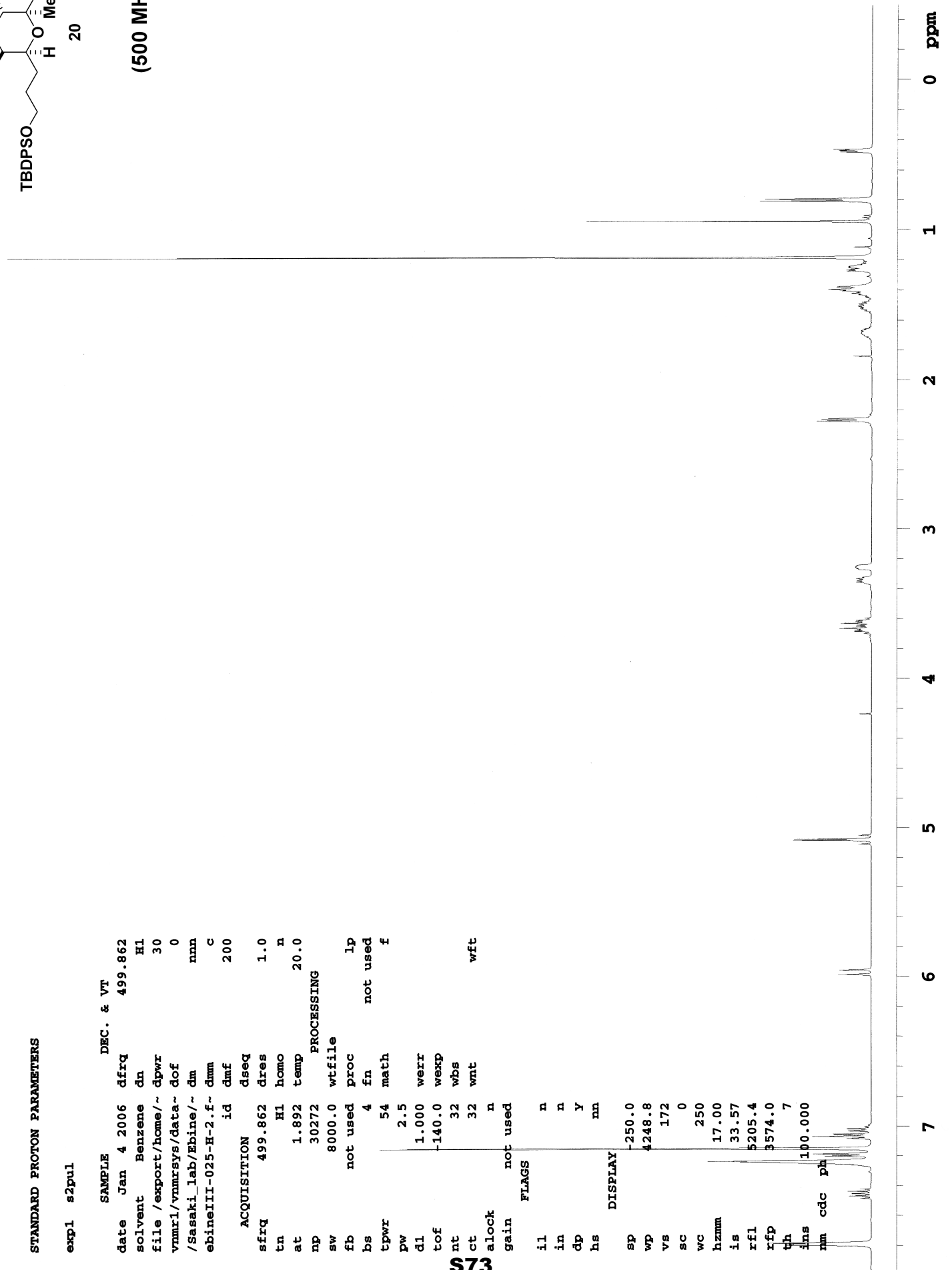
```

exp1 s2pul
SAMPLE DEC. & VT
date Jan 4 2006 dfrq 499.862
solvent Benzene dn H1
file /export/home/~ dpwr 30
vnmr1/vnmrSYS/data~ dof 0
/Sasaki_lab/Ebine/~ dm nnn
ebineIII-025-H-2.f~ dmm c
id dmf 200
ACQUISITION dseq
sfrq 499.862 dres 1.0
tn H1 homo n
at 1.892 temp 20.0
np 30272 PROCESSING
sw 8000.0 wfile
fb not used proc lp
bs 4 fn not used f
tpwr 54 math f
pw 2.5
dl 1.000 werr
tof -140.0 wexp
nt 32 wbs
ct 32 wnt wft
alock n
gain not used
  
```

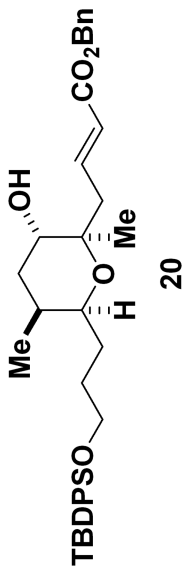
573

```

il n
in n
dp y
hs nn
DISPLAY
sp -250.0
wp 4248.8
vs 172
sc 0
wc 250
hzmm 17.00
is 33.57
rfl 5205.4
xfp 3574.0
th 7
ins 100.000
nm cdc ph
  
```



7 6 5 4 3 2 1 0 ppm



(125 MHz, CDCl₃)

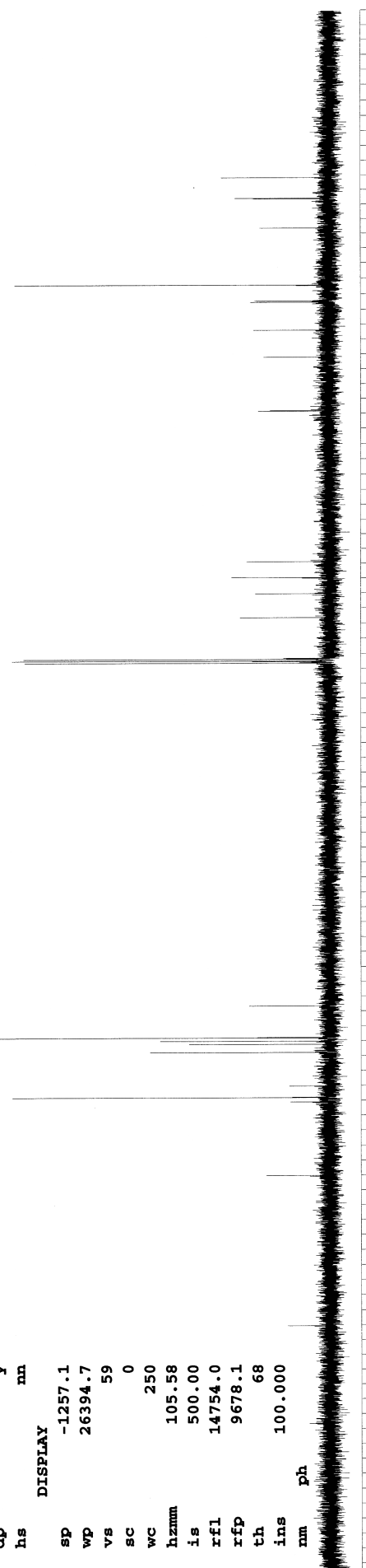
STANDARD CARBON PARAMETERS

exp3 s2pul

SAMPLE		DEC. & VT	
date	Jun 16 2006	dfrq	499.862
solvent	CDCl ₃	dn	H1
file	exp	dpwr	27
ACQUISITION			
sfrq	125.704	dm	YF
tn	C13	dmm	w
at	1.298	dmf	12579
np	97994	dseq	
sw	37735.8	dres	1.0
fb	not used	homo	n
bs	16	temp	20.0
tpwr	61	PROCESSING	
pw	5.3	lb	0.50
d1	0.700	wtfile	
tof	1883.8	proc	ft
nt	5120	fn	131072
ct	256	math	f
alock	n		
gain	56	werr	wft
FLAGS			
il	n	wexp	wft
in	n	wbs	
dp	y	wnt	
hs	nn		
DISPLAY			
sp	-1257.1		
wp	26394.7		
vs	59		
sc	0		
wc	250		
hzmm	105.58		
is	500.00		
rfl	14754.0		
rfp	9678.1		
th	68		
ins	100.000		
nm	ph		

S74

180 160 140 120 100 80 60 40 20 ppm



STANDARD PROTON PARAMETERS

Pulse Sequence: s2pul

Solvent: CDCl3

Temp. 20.0 C / 293.1 K

INOVA-500 "varian"

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

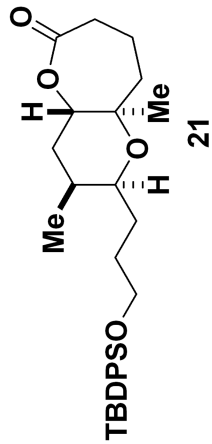
32 repetitions

OBSERVE H1, 499.8593218 MHz

DATA PROCESSING

FT size 32768

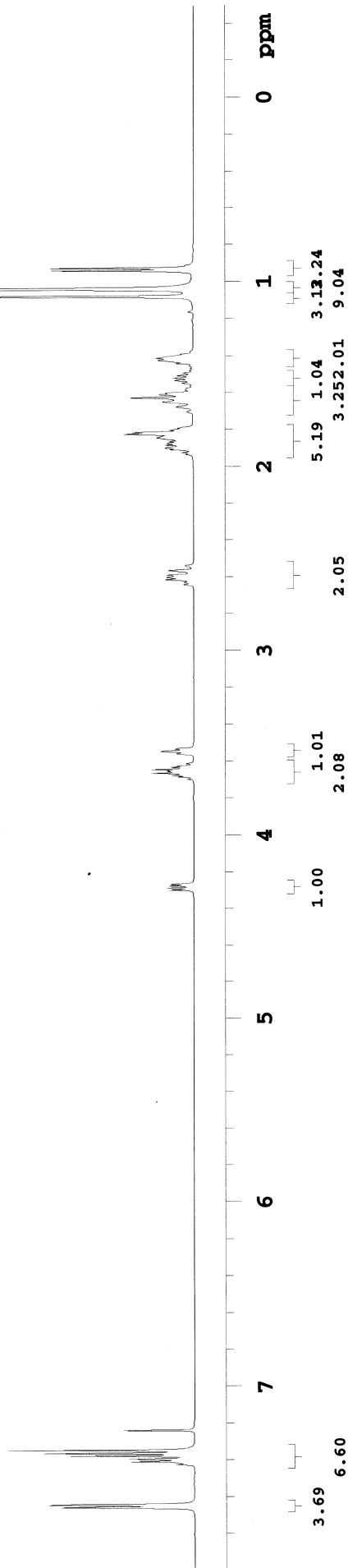
Total time 1 min, 32 sec



(500 MHz, CDCl₃)

TBDPSO

S75



HF17021

Pulse Sequence: s2pul

Solvent: CDC13

Temp: 20.0 C / 293.1 K

INOVA-500 "varian"

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

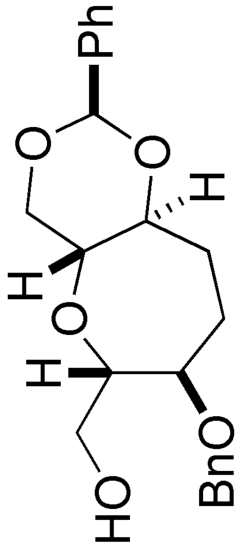
8 repetitions

OBSERVE H1, 499.8593228 MHz

DATA PROCESSING

FT size 32768

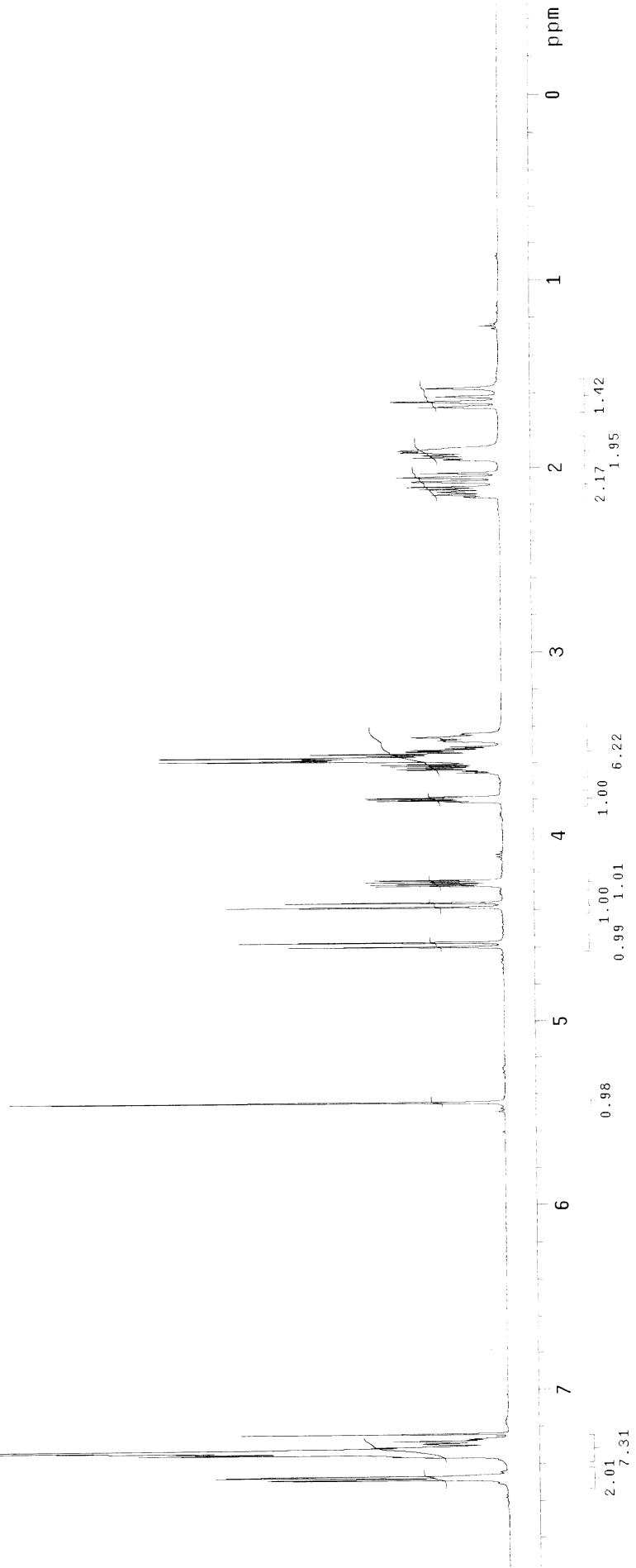
Total time 0 min, 23 sec



23

(500 MHz, CDCl₃)

S77



HF17021

Pulse Sequence: s2pul

Solvent: CDCl3

Temp: 20.0 C / 293.1 K

User: 1-14-87

INOVA-500 "varian"

Relax. delay 0.700 sec

Pulse 45.0 degrees

Acq. time 1.298 sec

Width 37735.8 Hz

608 repetitions

OBSERVE C13, 125.6897277 MHz

DECOUPLE H1, 499.8618041 MHz

Power 27 dB

continuously on

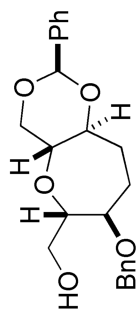
WALTZ-16 modulated

DATA PROCESSING

Line broadening 0.5 Hz

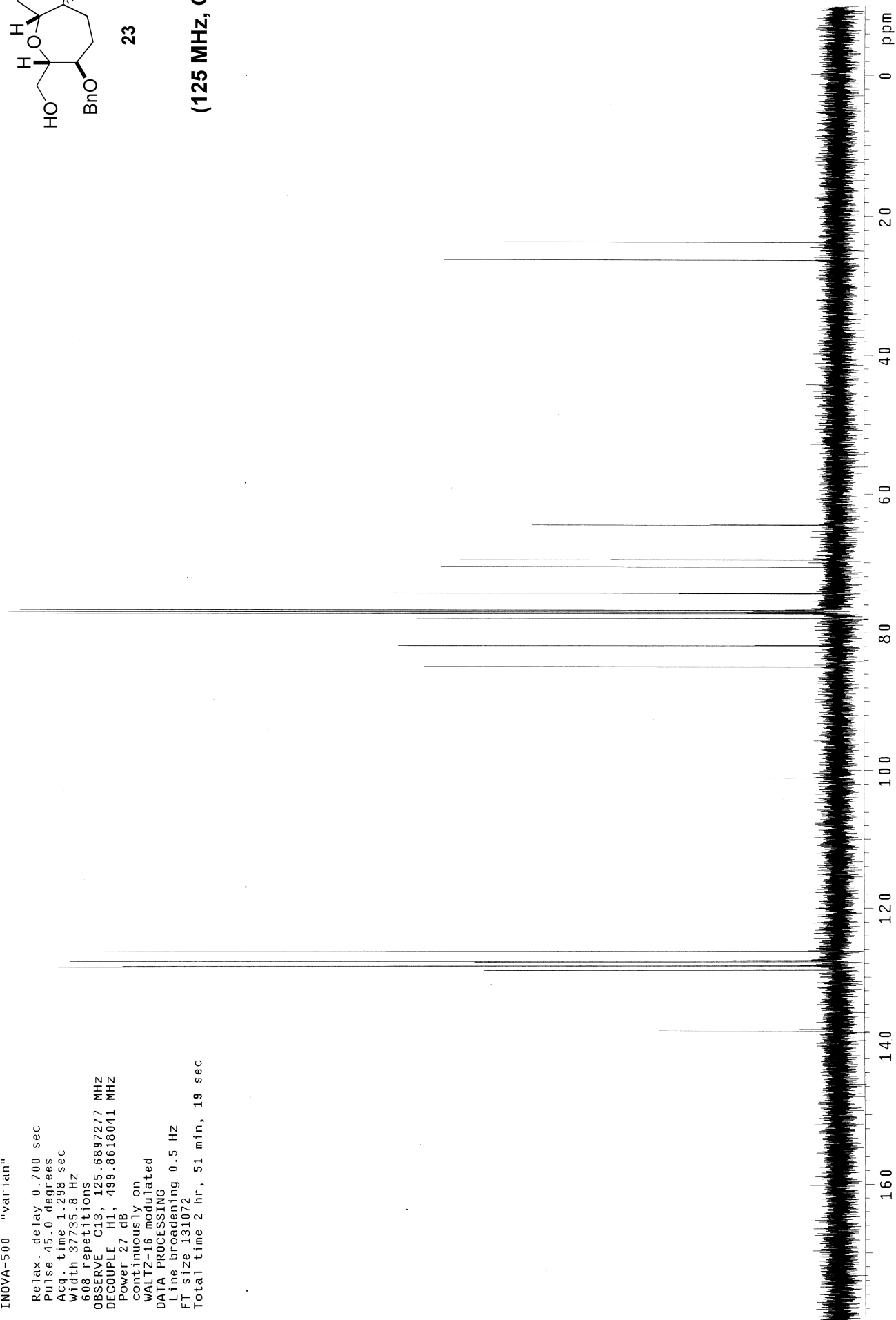
FT size 131072

Total time 2 hr, 51 min, 19 sec



23

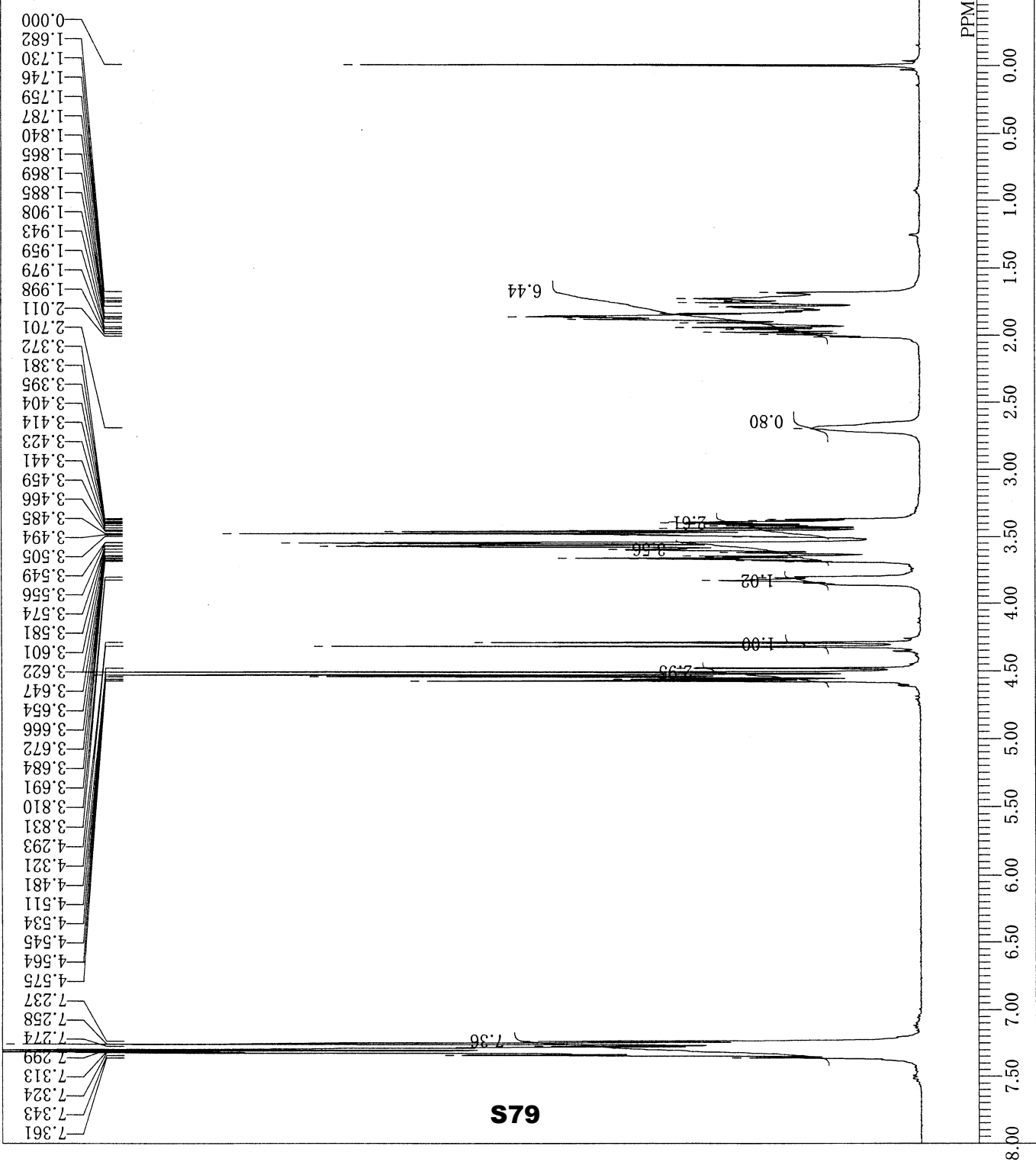
(125 MHz, CDCl₃)



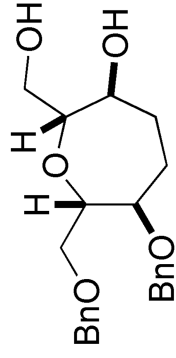
HF15143

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

C:\Users\ifuwa\HF15143.1
 HF15143
 27-09-2004 10:34:10
 1H
 single_pulse.ex2
 399.78 MHz
 4.19 KHz
 7.29 Hz
 8192
 7503.00 Hz
 16
 1.0918 sec
 30.0000 sec
 5.85 usec
 1H
 22.5 c
 CDCL3
 0.00 ppm
 0.12 Hz
 40



S79

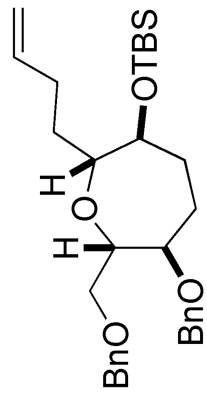


24

(400 MHz, CDCl₃)

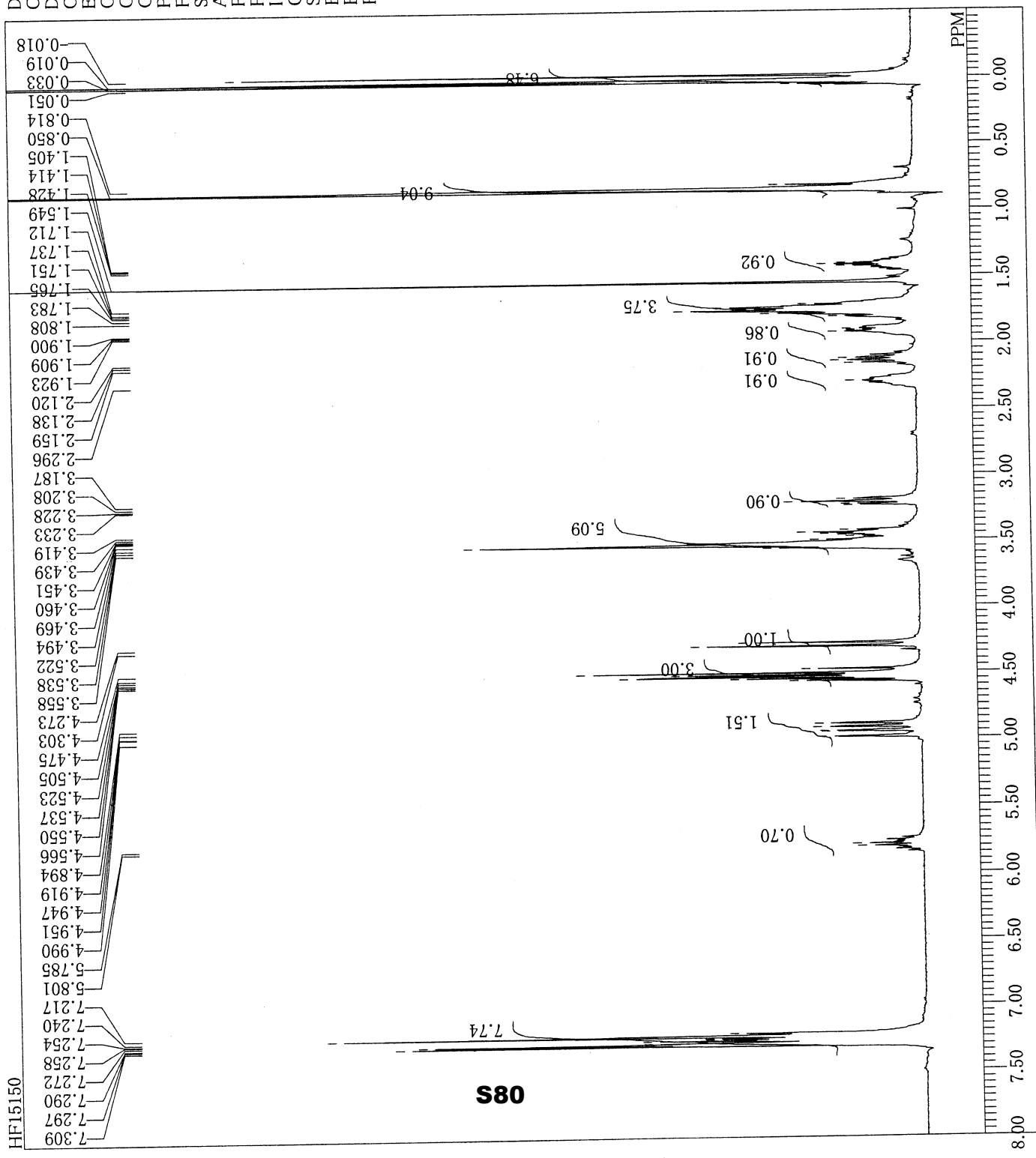
C:\Users\Yfuwa\HF15150.1

DFILE HF15150
COMNT HF15150
DATIM 27-09-2004 16:06:20
OBNUC 1H
EXMOD single_pulse.ex2
OBFRQ 399.78 MHz
OBSET 4.19 KHz
OBFIN 7.29 Hz
POINT 8192
FREQU 7503.00 Hz
SCANS 16
ACQTM 1.0918 sec
PD 30.0000 sec
PW1 5.85 usec
IRNUC 1H
CTEMP 22.8 c
CDCL3
SLVNT 7.24 ppm
EXREF 0.12 Hz
BF 40
RGAIN



25

(400 MHz, CDCl₃)

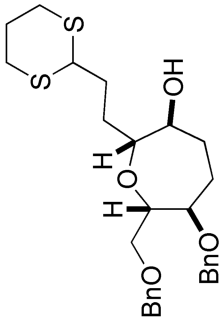


HF17032

exp1 s2pu1

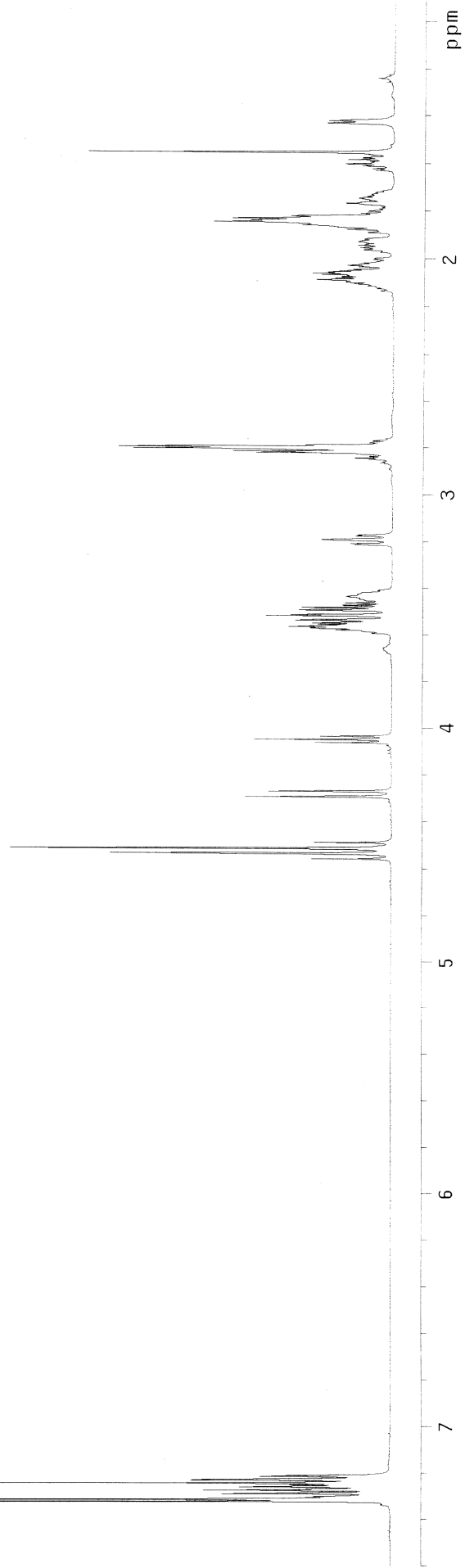
SAMPLE DEC. & VT
 date Mar 5 2005 dfrq 499.862
 solvent CDC13 dn HI
 file exp dpwr 30
 ACQUISITION dof 0
 sfrq 499.862 dm mnh
 tn H1 dmm C
 at 1.892 dmf 200
 mp 30272 dseq
 sw 8000.0 dres 1.0
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54
 pw 2.5 wfile
 d1 1.000 proc lp
 tof -140.0 fn not used
 nt 16 math f
 ct 16
 alock n
 gain not used werr wft
 FLAGS not used wbs wft
 i1 n
 in n
 dp y
 hs mn

DISPLAY 459.1
 sp 3340.5
 wp 105
 vs 0
 sc 250
 wc 13.36
 hzmm
 ls 1e+09
 rfl 5277.2
 rfp 3619.0
 th 7
 ins
 nm 100.000
 ph



26

(500 MHz, CDCl₃)



HF17032

exp3 s2pul

```

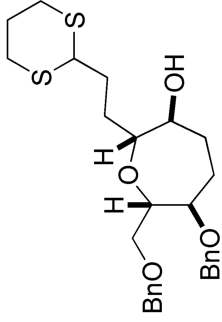
SAMPLE          DEC. & VT
date            5.2005
solvent         CDC13
file            exp
ACQUISITION    exp
sfrq           125.704
in             C13
at             1.298
np             97994
sw             37735.8
fb             not used
bs             32
tpwr           61
pw             5.3
d1             0.700
tof            1883.8
nt             5120
ct             384
alock          n
gain           56
FLAG          n
il             n
in             n
dp             y
hs             nn
DISPLAY
sp            1026.0
wp            19516.6
vs            153
sc            0
wc            250
hzmm         78.07
is            2790.32
rfl           14753.5
rfp           9678.1
th            9
ins           100.000
nm            ph

```

```

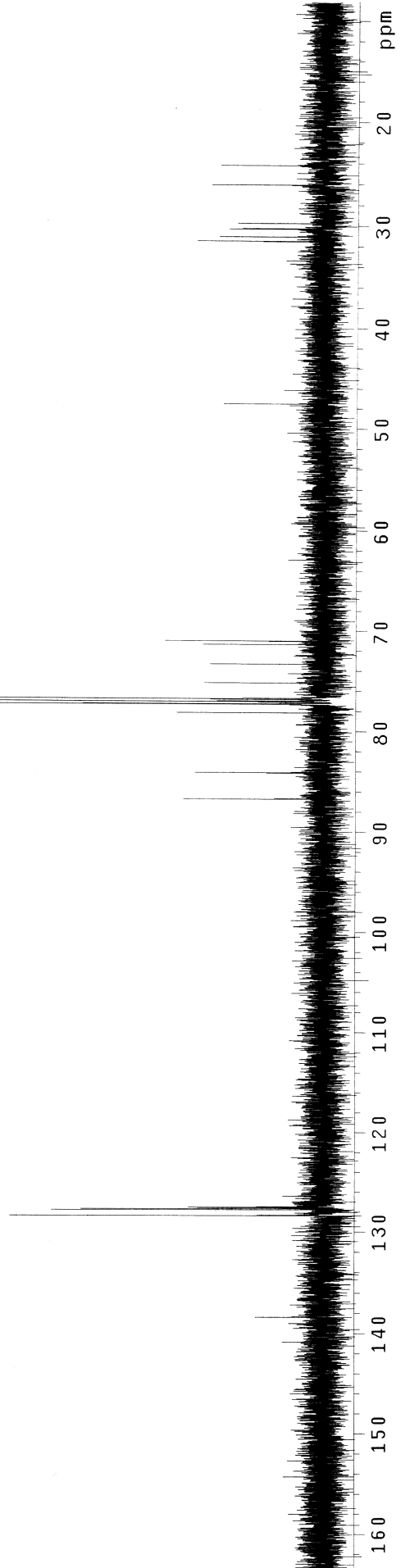
dfrq          499.862
dn            H1
dpwr          27
dof           0
dm            yyy
dmm           12579
dmf           w
dseq         1.0
dres         1.0
homo         n
temp         20.0
PROCESSING   0.50
lb           5.3
wtfile      ft
proc        131072
fn          f
math        f
werr        n
wexp        wft
wbs         wnt
wnt         wnt

```



26

(125 MHz, CDCl₃)



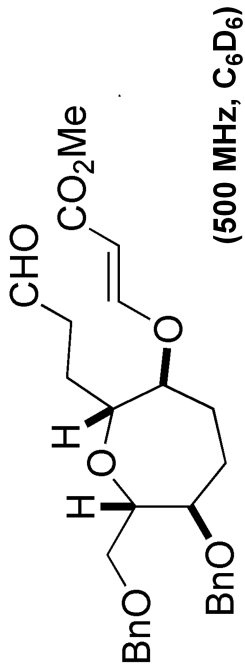
HF17033b

exp1 s2pu1

```

SAMPLE      DEC. & VT
date      8 2005      dfrq      499.862
solvent    Mar Benzene  dn      HI
file       exp      dpwr      30
ACQUISITION  dof      0
sfrq      499.862   dm      nmn
tn         H1      dmm      C
at         1.892   dmf      200
np         30272   dseq
sw         8000.0  dres      1.0
fb         not used homo      n
bs         not used temp      20.0
tpwr      54      PROCESSING
pw         2.5     wtfiler
d1         1.000   proc      lp
tof        -140.0  fn      not used
nt         16     math
ct         16     werr
a'lock     not used n
gain       not used wexp
          FLAGS    wbs
          l1      n   wft
          in      n   wft
          dp      y
          hs      nm
          DISPLAY
          sp      -250.0
          wp      5248.4
          vs      171
          SC      0
          VC      250
          hzmm    20.99
          fs      688.00
          rfl     5205.9
          rfp     3574.0
          th      7
          ins     1.000
          nm      ph

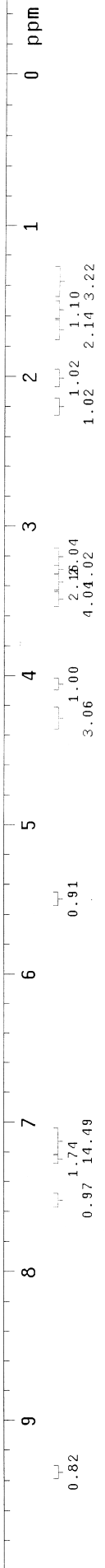
```



27

(500 MHz, C₆D₆)

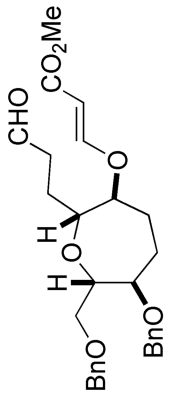
S83



HF17033b

exp3 s2pul

SAMPLE 8 2005 DEC. & VT
 date Mar 499.862
 solvent Benzene H1
 file ACQUISITION exp 27
 ACQUISITION exp 0
 sfrq 125.704 yyy w
 tn C13 dmm 12579
 at 1.298 dmf
 np 97994 dseq
 sw 37735.8 dres 1.0
 fb not used homo n
 bs 32 temp 20.0
 tpwr 61
 pw 5.3 lb
 DI 0.700 wtfile 0.50
 nt 1883.8 proc ft
 nt 5120 fn 131072
 ct 256 math f
 alock n
 gain 56 werr
 flags n wexp
 il n wbs
 in n wnt
 dp n
 hs nn
 DISPLAY
 sp -1256.9
 wp 27651.7
 vs 284
 sc 0
 wc 250
 hzmm 110.61
 is 500.00
 rfl 21120.2
 rfp 16088.3
 th 23
 ins 100.000
 nm ph



27

(125 MHz, C₆D₆)

128.192
128.000
127.808

128.554
128.545
127.757

200 180 160 140 120 100 80 60 40 20 0 ppm

HF17034b

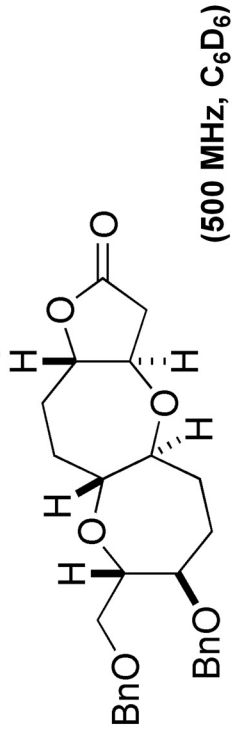
exp1 s2pul

```

SAMPLE      8 2005      DEC. & VT
date        Mar      499.862
solvent     Benzene   H1
file        exp      30
ACQUISITION
sfrq       499.862    mmh
tn         H1        C
at         1.892     dmf   200
np         30272     dseq
sw         8000.0    dres  1.0
fb         not used  homo  n
bs         4        temp  20.0
tpwr       54      PROCESSING
pw         2.6     wtfile
di         1.000   proc    lp
tof        -140.0  fn      not used
nt         16     math    f
ct         16     n       werr
alock      not used n       wexp
gain       not used wbs   wft
flags      n       wnt   wft
il         n
in         y
dp         y
hs         nn
DISPLAY    -250.0
sp         4248.8
wp         202
vs         0
sc         250
wc         17.00
zmm        33.57
f1         5203.9
f2         3574.0
th         1.000
lms
nm

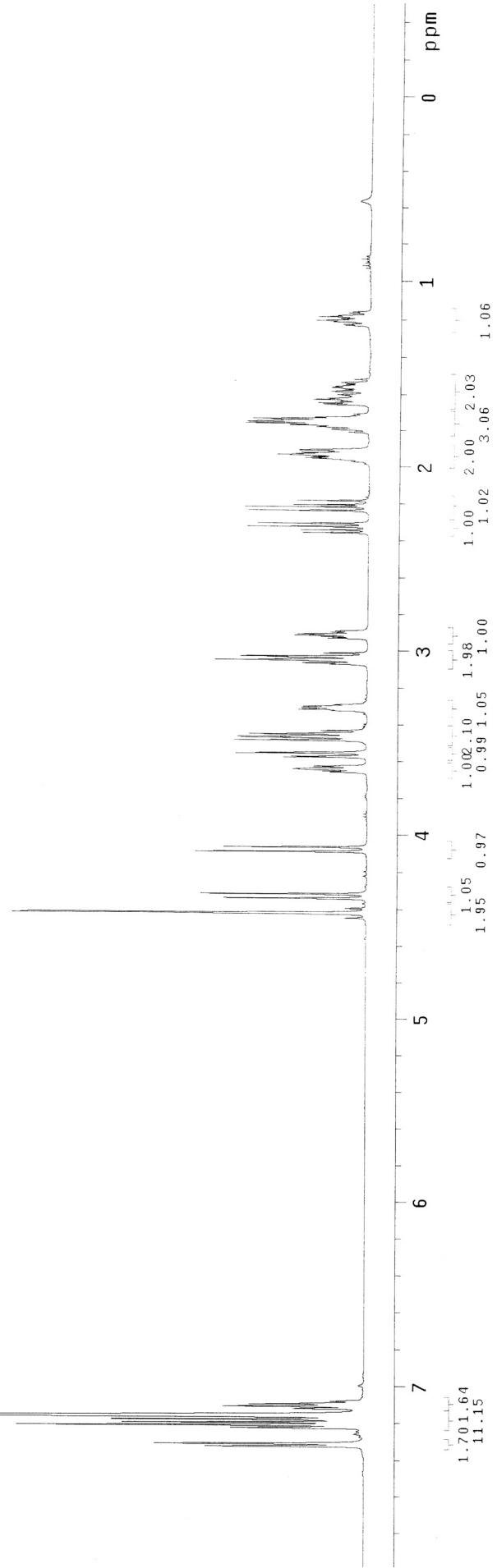
```

585



28

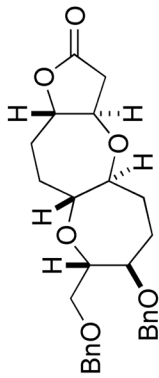
(500 MHz, C₆D₆)



STANDARD CARBON PARAMETERS

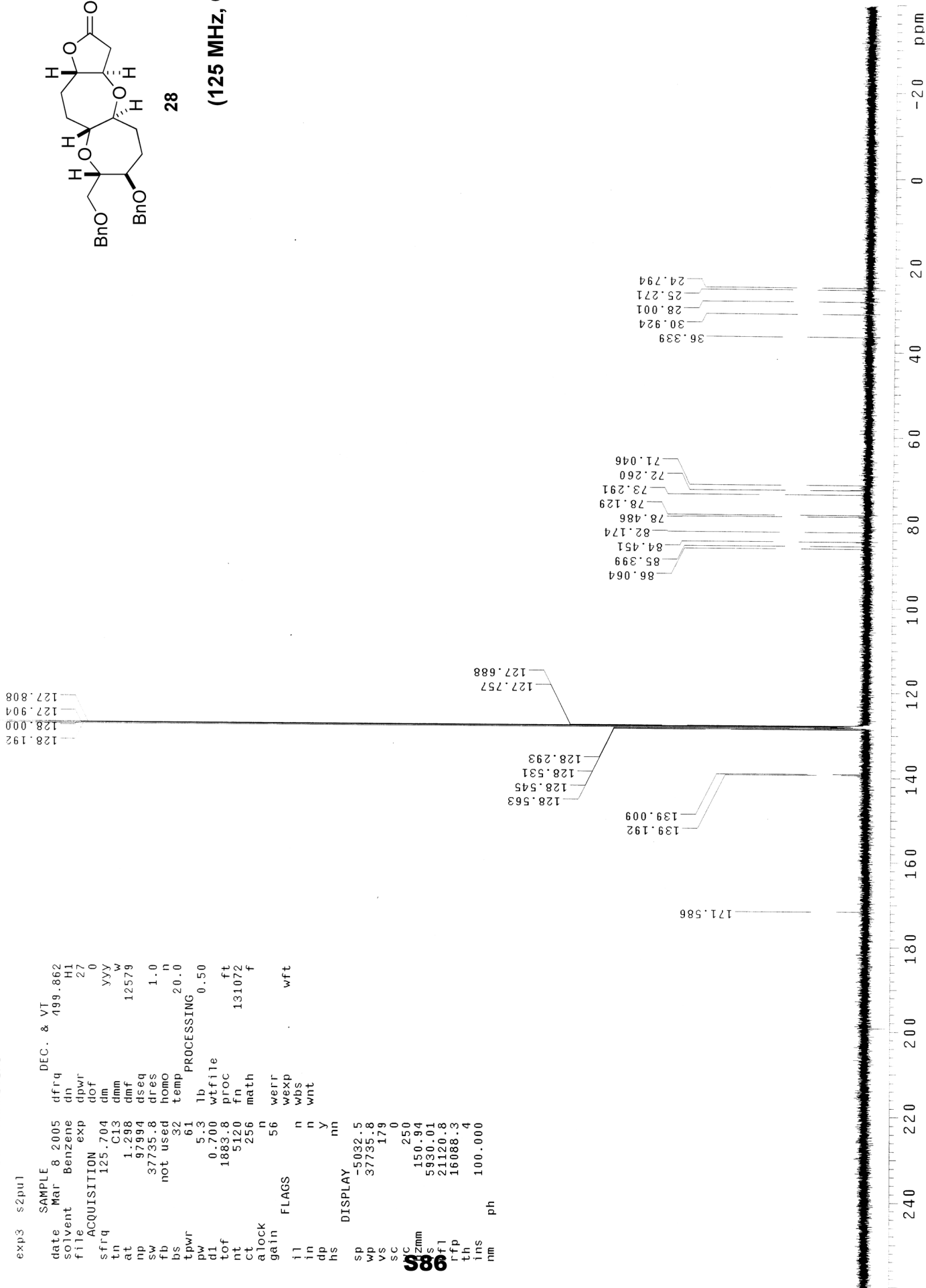
```

exp3 s2pu1
SAMPLE      DEC. & VT
date Mar 8 2005   dfrq 499.862
solvent Benzene  dn H1
file exp 27      dpwr 0
ACQUISITION  dof 0
sfrq 125.704   dm  yyy
tn C13         dmm 12579
at 1.288      dmf 0
np 97994     dseq 1.0
sw 37735.8   dres n
fb not used  homo n
bs 32        temp 20.0
PROCESSING
tpwr 61
pw 5.3      lb 0.50
d1 0.700   wtfile
tof 1883.8  proc ft
nt 5120    fn 131072
ct 256     math f
alock n
gain 56    werr
flags n     wexp
il n       wbs
in n       wnt
hs y
DISPLAY
sp -5032.5
wb 37735.8
vs 179
sc 0
cc 250
azmm 150.94
ss 5930.01
f1 21120.8
rfl 16088.3
th 100.000
ins
nm ph
  
```



28

(125 MHz, C₆D₆)



HF17040

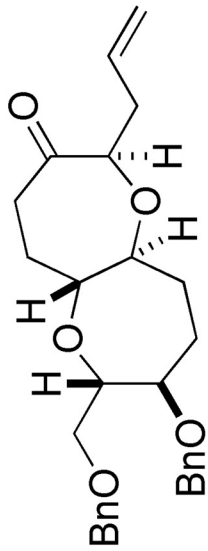
exp1 s2pul

```

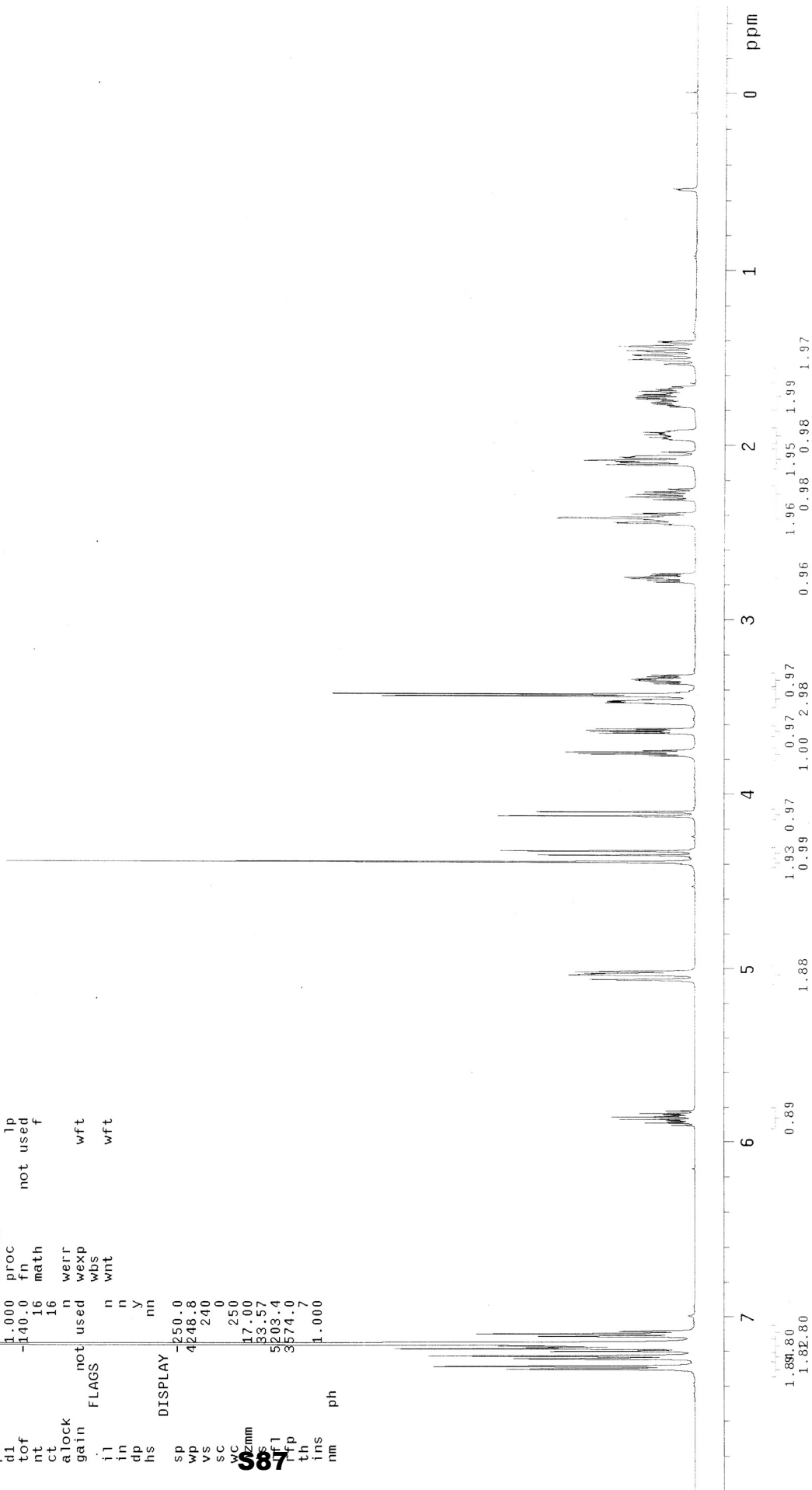
SAMPLE          DEC. & VT
date Mar 14 2005 dfrq 499.862
solvent Benzene dn H1
file exp dpwr 30
ACQUISITION    exp dof 0
sfrq 499.862 dm nnn
tn 1.892 dnm C
at 30272 dseq 200
np 8000.0 dres 1.0
sw not used homo n
fb temp 20.0
bs 54
tpwr 54
pw 2.6 wfile
d1 1.000 proc lp
tof -140.0 fn not used
nt 16 math f
ct 16
alock n
gain not used werr wft
flags not used wexp wft
il n
in n
dp y
hs mn
DISPLAY
sp -250.0
wp 4248.8
vs 240
sc 0
wc 250
z 17.00
33.57
5203.4
3574.0
1.000
nm
ph

```

S87



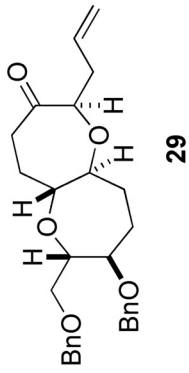
29 (500 MHz, C₆D₆)



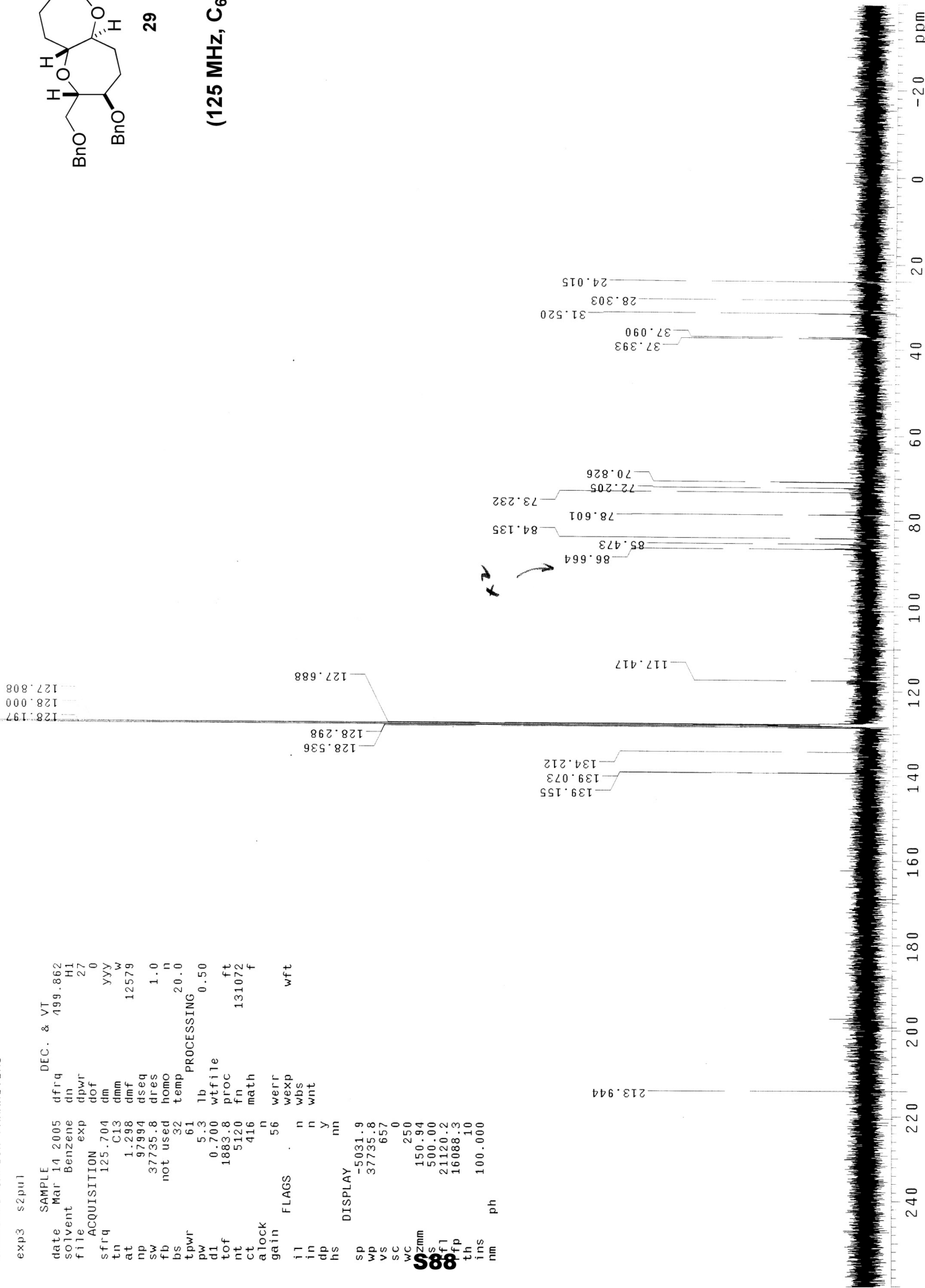
STANDARD CARBON PARAMETERS

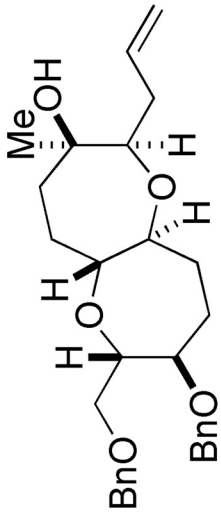
```

exp3  s2pu1
SAMPLE
date   Mar 14 2005
solvent Benzene
file   exp
ACQUISITION
sfrq   125.704
tn     C13
at     1.298
np     97994
sw     37735.8
fb     not used
bs     32
temp   20.0
tpwr   61
pw     5.3
dl     0.700
tof    1883.8
nt     5120
ct     416
a-lock n
gain   56
flags  n werr
      n wexp
      n wbs
      y wnt
hs     nn
DISPLAY
sp     -5031.9
wp     37735.8
vs     657
sc     0
wc     250
zmm    150.94
ss     500.00
ffl    21120.2
fp     16088.3
th     10
nm     100.000
ph
  
```



(125 MHz, C₆D₆)





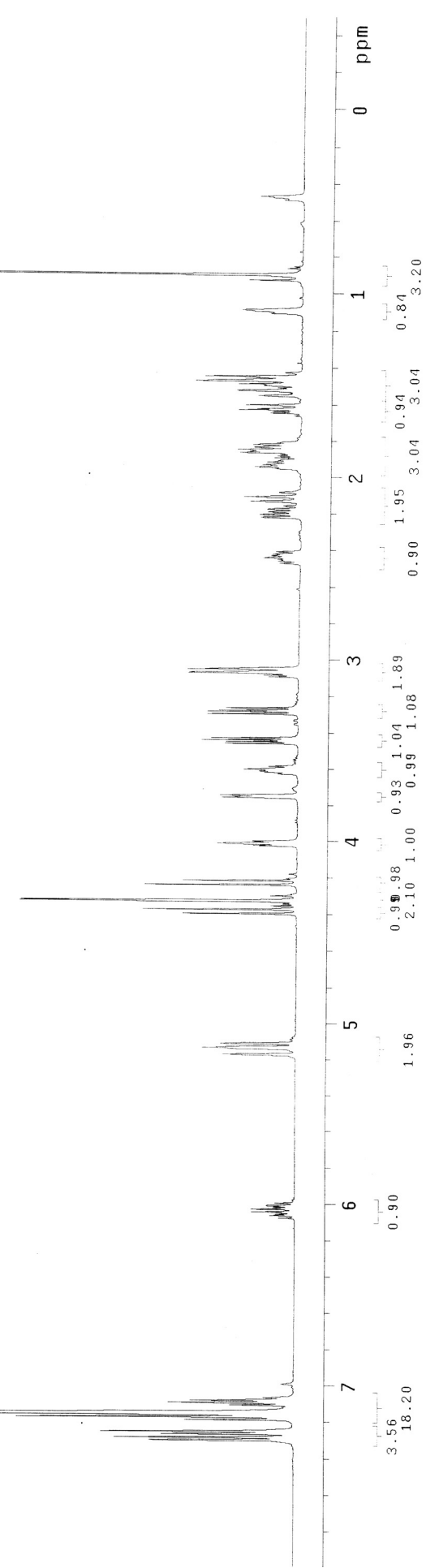
30a

(500 MHz, C₆D₆)

```

HF17049
exp1 s2pu1
SAMPLE
date Mar 18 2005
solvent Benzene
file H1
ACQUISITION
sfrq 499.862
tn H1
at 1.892
np 30272
sw 8000.0
fb not used
bs 4
tpwr 54
pw 2.6
d1 1.000
tof -140.0
nt 16
ct 16
gain not used
alock n
flags not used
il n
in n
hs y
DISPLAY
sp -250.0
vp 4248.8
vs 353
sc 0
wc 250
zmm 17.00
$ 83.57
f1 5205.9
fp 3574.0
th 1.000
ins
nm
ph
DEC. & VT
dfrq 499.862
dn H1
dpwr 30
dof 0
dm nnn
dmm C
dmf 200
dseq 1.0
dres n
homo n
temp 20.0
PROCESSING
wtfile lp
proc not used
fn f
math f
werr n
wexp wft
wbs wft
wnt wft

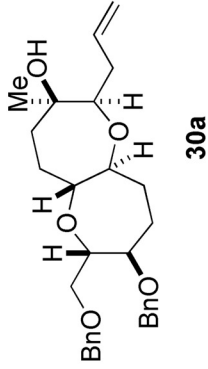
```



STANDARD CARBON PARAMETERS

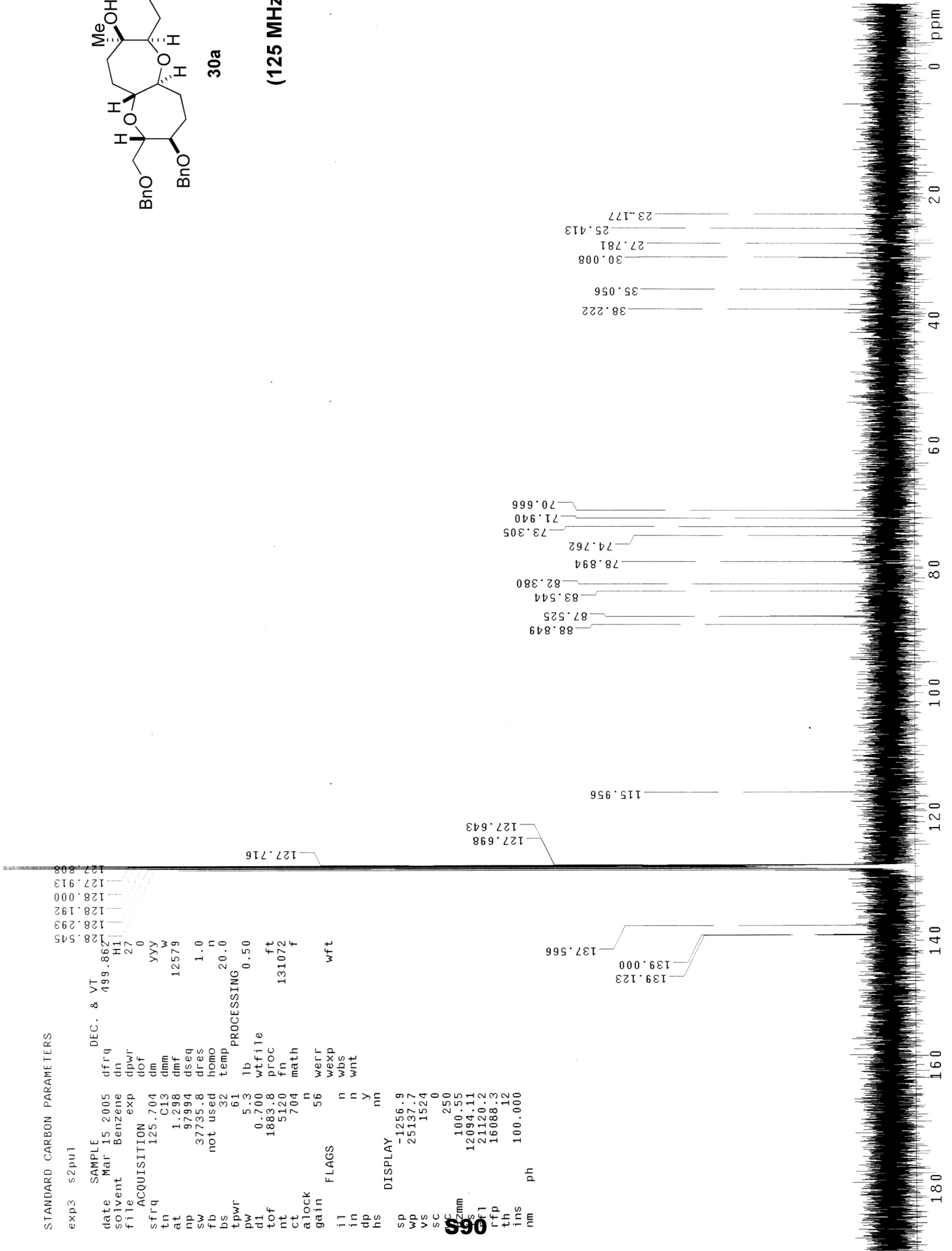
```

exp3  s2pul
SAMPLE Mar 15 2005  DEC. & VT 499.862
solvent Benzene  dn
file exp 27
ACQUISITION 0
sfrq 125.704  dm  vvy 12579
tn 1.298  dmf  w
at 97894  dseq 1.0
np 37735.8  dres 1.0
sw not used  homo n
bs 32  temp 20.0
tpwr 61  PROCESSING
pw 5.3  lb 0.50
d1 0.700  wtfile
tof 1883.8  proc  ft
nt 5120  fn 131072
ct 704  math  f
alock n
gain 56  werr  wft
il n
in n
dp n
hs y
DISPLAY nn
sp -1256.9
wp 25137.7
vs 1524
SC 0
C 250
Z 100.55
S 12094.11
F1 21120.2
rfl 16088.3
th 12
ins 100.000
nm ph
  
```



30a

(125 MHz, C₆D₆)

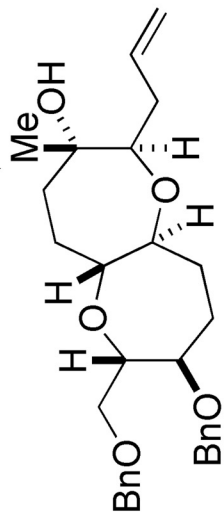


HF17047c

exp1 s2pul

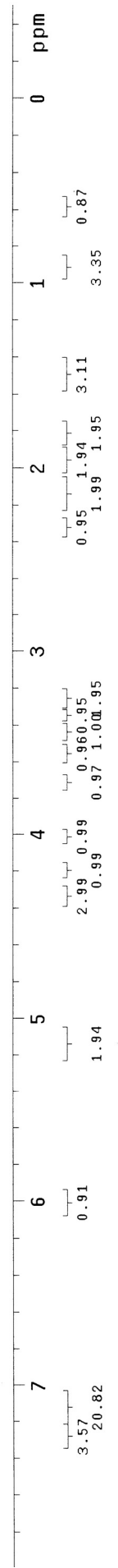
SAMPLE date 17 2005 DEC. & VI
 solvent Benzene H1 499.862
 file exp 30
 ACQUISITION dfrq 499.862
 tn dm nnn
 at 1.892 dm 200
 np 80272 dmf dseq
 sw 8000.0 dres 1.0
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54
 pw 2.5 wtfile
 di 1.000 proc lp
 tof -140.0 fn not used f
 nt 16 math
 ct 16 n werr
 alock not used n wexp
 gain not used wbs
 flags n wnt
 il n
 in n y
 hs nn

DISPLAY -250.0
 sp 4248.8
 wp 800
 vs 0
 sc 250
 wc 17.00
 99.1
 83.57
 5203.4
 3574.0
 1.000
 ph



(500 MHz, C₆D₆)

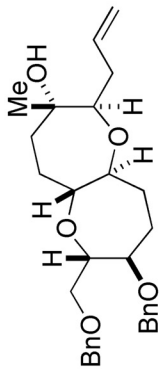
30b



STANDARD CARBON PARAMETERS

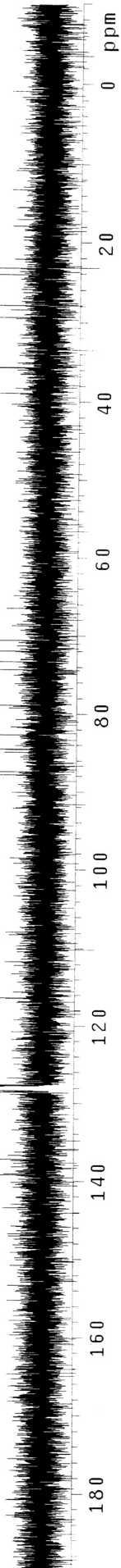
```

exp3 s2bu1
SAMPLE
date Mar 17 2005 DEC. & VT 499.862
solvent Benzene dn H1
file exp dpwr 27
ACQUISITION exp dof 0
sfrq 125.704 dm YVY
tn C13 dmm W
at 1.298 dmf 12579
np 97994 dseq
sw 37735.8 dres 1.0
fb not used homo n
bs 32 temp 20.0
tpwr 61 PROCESSING
pw 5.3 lb wfile 0.50
dl 0.700 wtfile
tof 1883.8 proc ft
nt 5120 fn 131072 f
ct 288 math
alock n
gain 56 wefr wexp wft
in n wbs
in n wnt
hs y
DISPLAY
sp -1256.9
wp 25137.7
vs 725
sc 0
wc 250
zmm 100.55
SS 500.00
OFF 21120.2
frip 16088.3
th 11
ins 100.000
nm ph
  
```



30b

(125 MHz, C₆D₆)

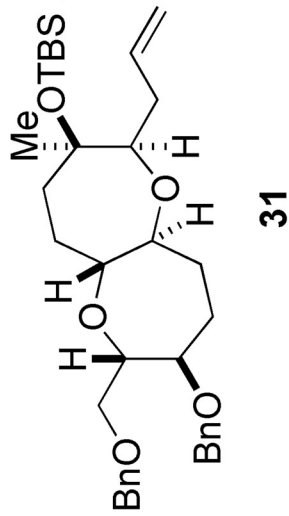


HF17045
exp1 s2pu1

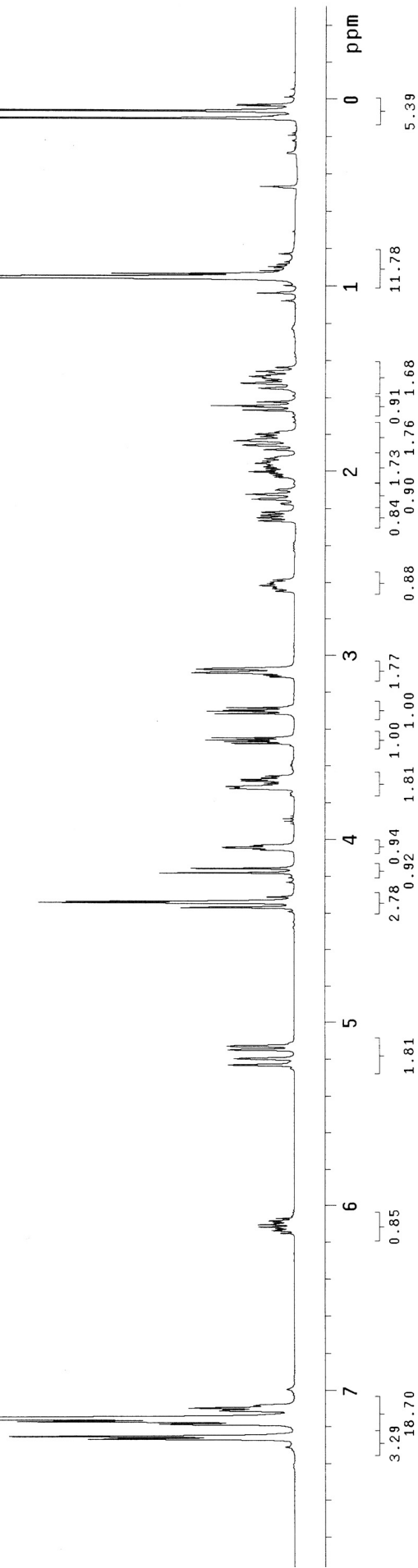
SAMPLE DEC. & VT
date Mar 16 2005 dfrq 499.862
solvent Benzene dn H1
file exp 30
ACQUISITION dof 0
499.862 dm nnn
sfrq 499.862 dm C
tn H1 dmm 200
at 1.892 dmf
np 50272 dseq
sw 8000.0 dres 1.0
fb not used homo n
bs not used temp 20.0
tpwr 54 PROCESSING
pw 2.5 wfile
d1 1.000 lp
tof -140.0 not used f
nt 16 math
ct 16 werr
gain not used n wft
flags not used wbs
il n wnt
in n
hs n

DISPLAY

sp -250.0
wd 4248.8
vs 756
wc 250
17.00
83.57
5203.9
3574.0
1.000
nm ph



(500 MHz, C₆D₆)



STANDARD CARBON PARAMETERS

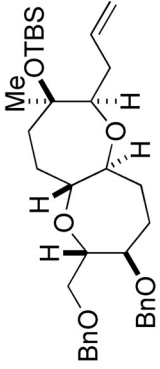
```

exp3 s2pu1
SAMPLE
date Mar 16 2005
solvent Benzene
file H1
ACQUISITION exp 27
sfrq 125.704
th C13
at 1.298
np 97994
sw 37735.8
fb not used
bs 32
temp 20.0
tpwr 61
pw 5.3
d1 0.700
tof 1883.8
nt 5120
ct 288
alock n
gain 56
flags n
il n
in n
dp n
hs y
DISPLAY
sp -1256.9
wp 26394.7
vs 274
sc 0
wc 250
zmm 105.58
ss 500.00
ffl 21120.2
ffp 16088.3
th 6
lms 100.000
nm ph
  
```

DEC. & VT

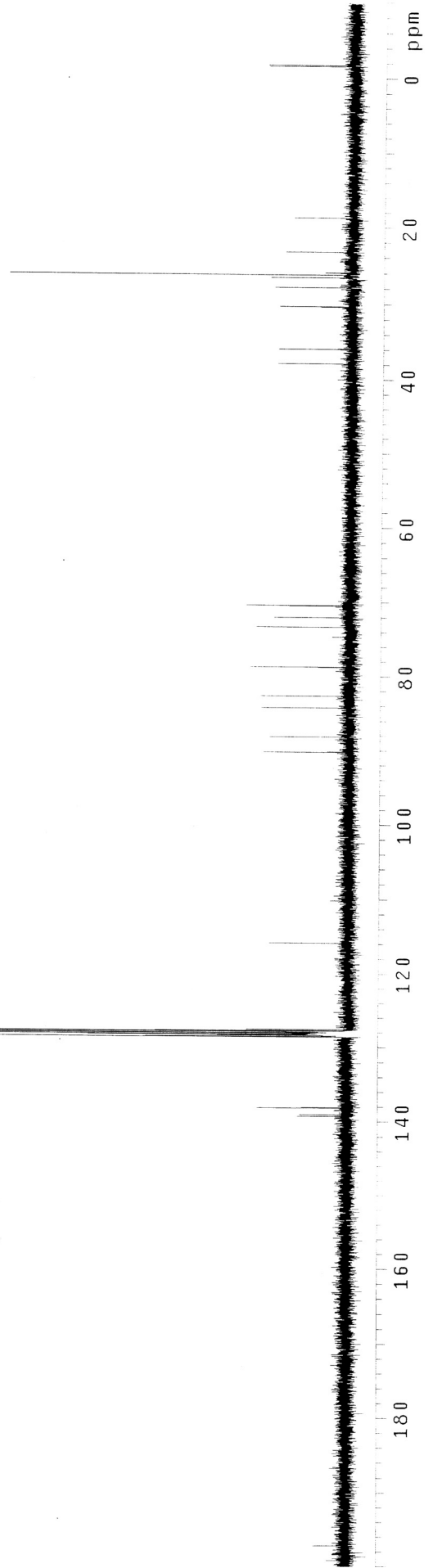
```

dfrq 499.862
dn H1
dpwr 27
dof 0
dm yyy
dmm w
dmf 12579
dseq 1.0
dres n
homo n
temp 20.0
PROCESSING
lb 0.50
wtfile ft
proc 131072
fn f
math f
werr n
wexp wft.
wbs n
wnt y
  
```



31

(125 MHz, C₆D₆)

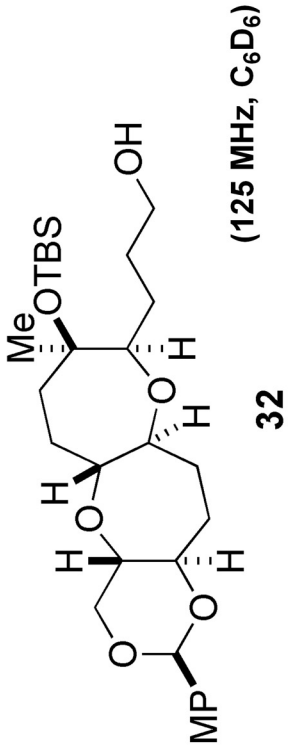


HF17054

exp1 s2pu1

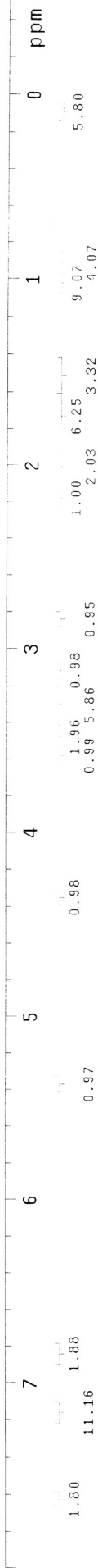
SAMPLE Mar 24 2005 DEC. & VT 499.862
 solvent Benzene H1
 file exp 30
 ACQUISITION exp 0
 sfrq 499.862 dm nnn C
 tn 1.892 dmm 200
 at 80272 dmf 50272 dseq 8000.0 dres 1.0 n
 sw not used homo n
 fb not used temp 20.0
 bs 4
 tpwr 54
 pw 2.5 wfile
 dl 1.000 proc lp
 tof -140.0 not used f
 nt 16 math
 ct 16
 alock n wevr
 gain not used wbs wft
 flags n wnt wft

DISPLAY
 sp -250.0
 wd 4248.8
 vs 267
 sc 0
 cc 250
 azmm 17.00
 ss 83.57
 mfl 5205.9
 rfp 3574.0
 th
 ins 1.000
 nm ph



(125 MHz, C₆D₆)

32



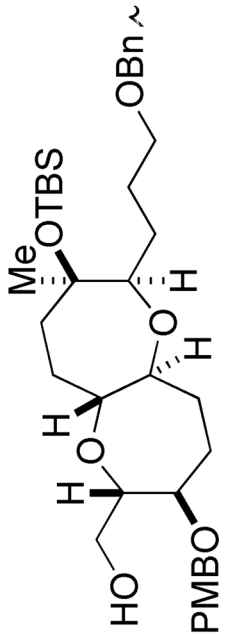
HF17056

exp1 s2pul

```

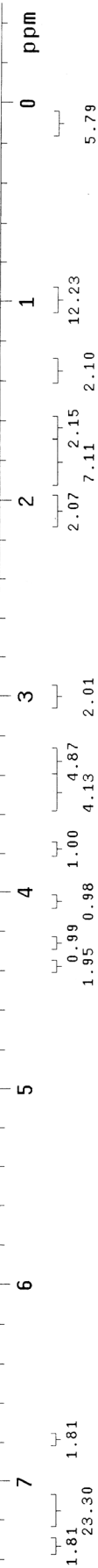
SAMPLE          DEC. & VT
date   Mar 24 2005   dfrq   499.862
solvent Benzene      H1
file    exp          dn     30
ACQUISITION      exp  dpwr   0
sfrq   499.862      dm     nnn
tn      1.892       dmm     c
at      80272       dseq   200
np      8000.0      dres   1.0
sw      not used    homo   n
fb      not used    temp  20.0
bs      54          wtfile
tpwr    2.5         wfproc lp
pw      1.000      proc   not used
d1      -140.0     fn     math f
tof     16         math   f
nt      16         werr   n
ct      16         wexp   n
alock   not used   wbs   wft
gain    not used   wnt   wft
        FLAGS      n     y
        il         n     nn
        in         y
        hs         n
        DISPLAY   -250.0
        sp         4248.8
        wp         323
        vs         0
        wc         250
        sc         17.00
        sc         83.57
        f1         5205.9
        f2         3574.0
        f3         1.000
        ph

```



33

(500 MHz, C₆D₆)



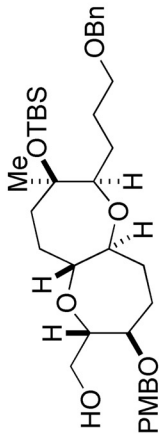
HF17056

exp3 s2pu1

```

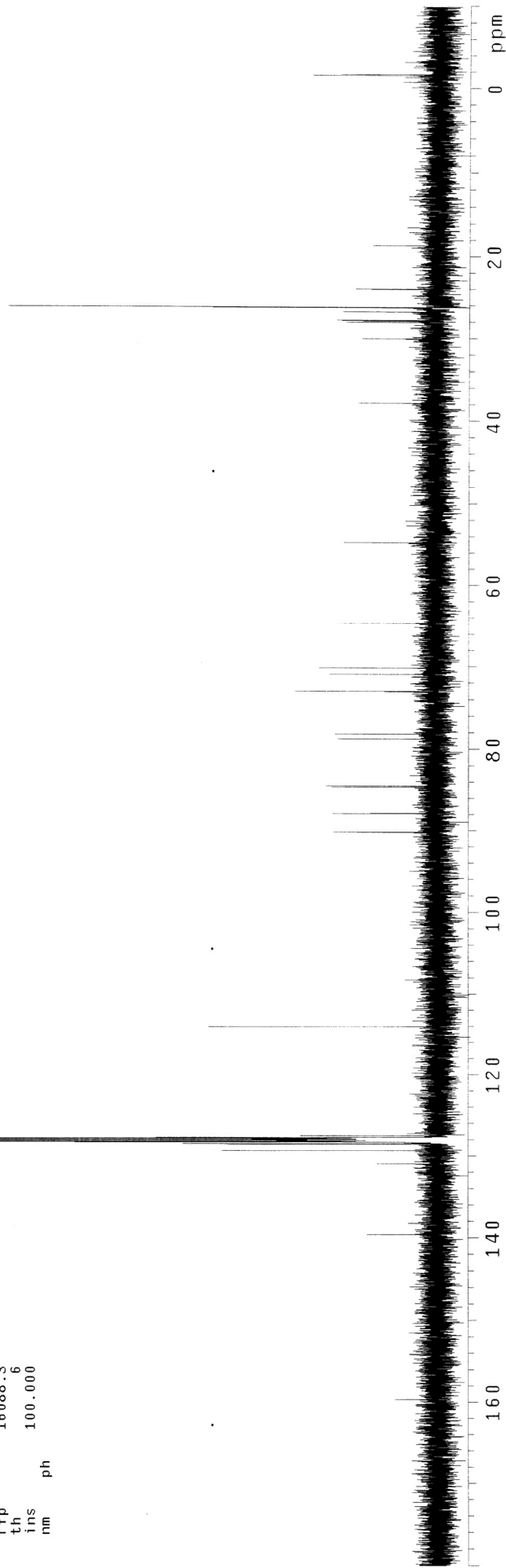
SAMPLE      DEC. & VT
date Mar 24 2005  dfrq 499.862
solvent Benzene  dn    HI
file      exp    dpwr 27
          dof    dm    0
ACQUISITION  sfrq 125.704  dmm  YVY
          tn    1.298  dmf  w
          at    97994  dseq 12579
          np    37735.8  dres 1.0
          sw    not used  homo n
          fb    32      temp 20.0
          bs    61      PROCESSING
          tpwr  5.3     lb    0.50
          pw    0.700  wfile
          tof   1883.8  proc  ft
          nt    5120   fn    131072
          ct    704   math  f
          alock  n
          gain  56    werr  wft
          flags  n
          in    n
          dp    y
          hs    nm
DISPLAY
sp    -1256.9
wp    23880.7
vs    917
sc    0
vc    250
wzmm 95.52
ps    500.00
f1    21120.2
f2    16088.3
th    6
ins   100.000
nm    ph

```



33

(125 MHz, C₆D₆)



STANDARD 1H OBSERVE

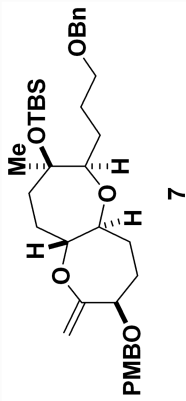
```

exp4 stdlh
SAMPLE
date May 7 05
solvent Benzene
file H1
ACQUISITION exp
sfrq 300.137
tn H1
at 3.498
np 31488
sw 4500.5
fb 2250
bs 11.3
pw 1.502
dl 700.0
tof 64
nt 64
ct 64
alock not used
gain n
flags n
il n
in n
dp y
DISPLAY
sp -150.3
wp 2551.2
vs 267
sc 0
wc 250
hzmm 10.20
ts 5375.00
rfl 2607.5
rfp 2146.0
th 20
ins 1.830
nm ph
  
```

DEC. & VT

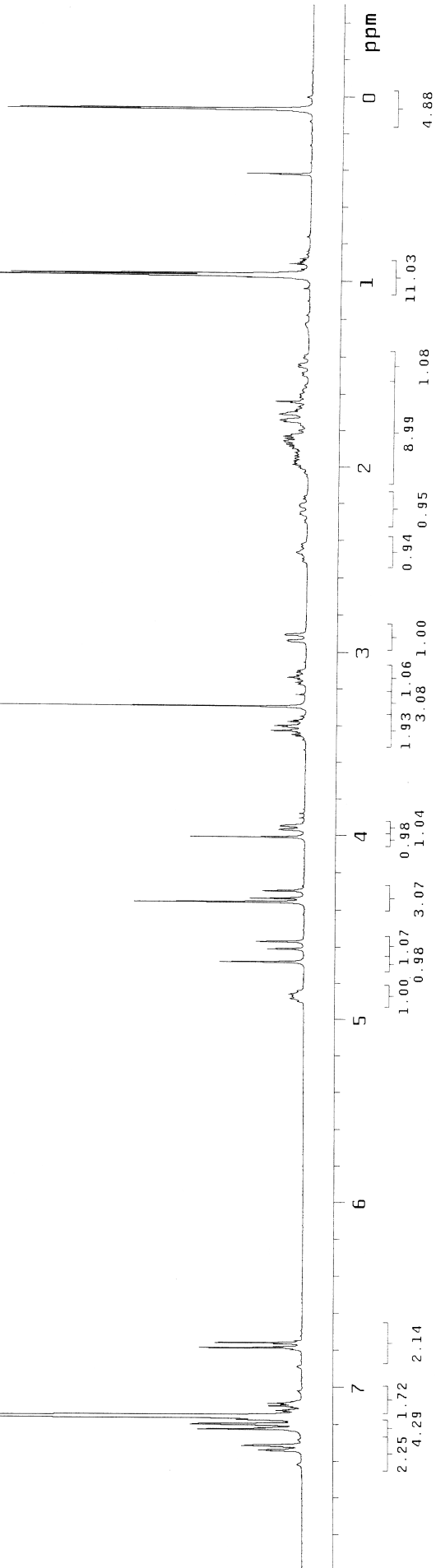
```

dfrq 300.136
dn H1
dof 0
dm nnn
dmm C
dmf 200
wtfile
proc ft
fn not used
werr react
wexp procpilot
wbs
wnt
  
```



(300 MHz, C₆D₆)

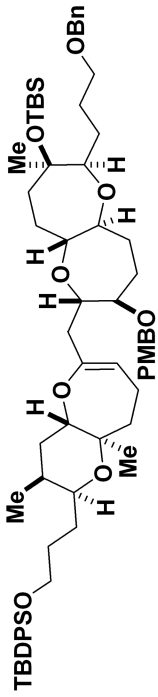
S99



STANDARD PROTON PARAMETERS

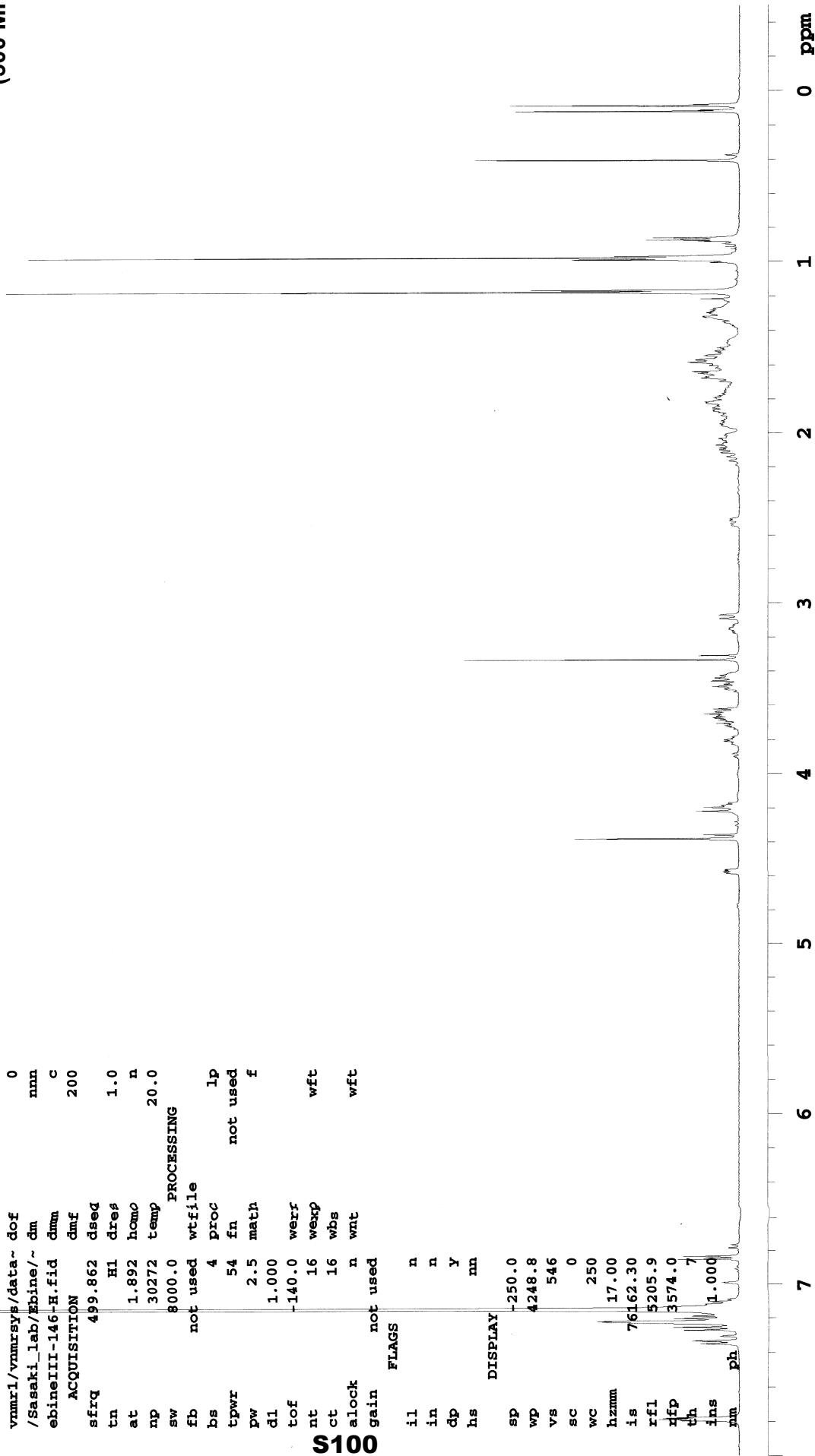
exp2 s2pul
 SAMPLE DEC. & VT
 date May 19 2005 dfrd 499.862
 solvent Benzene dn H1
 file /export/home/~dpwr 30
 vnmr1/vnmrsys/data~ dof 0
 /Sasaki_lab/Ebine/~ dm nnn
 ebineIII-146-H.fid dnm c
 ACQUISITION dmf 200
 sfrq 499.862 dsed
 tn H1 dres 1.0
 at 1.892 homo n
 np 30272 temp 20.0
 sw 8000.0 PROCESSING
 fb not used wtfile
 bs 4 proc lp
 tpwr 54 fn not used
 pw 2.5 math f
 dl 1.000
 tof -140.0 werrf
 nt 16 wexp wft
 ct 16 wbs
 alock n wnt wft
 gain not used

il n
 in n
 cp Y
 hs mn
 DISPLAY
 sp -250.0
 wp 4248.8
 vs 546
 sc 0
 wc 250
 hzmm 17.00
 is 76162.30
 rfl 5205.9
 rfp 3574.0
 th 7
 ins 1.000
 mn ph



34

(500 MHz, C₆D₆)



S100

STANDARD CARBON PARAMETERS

exp6 s2pul

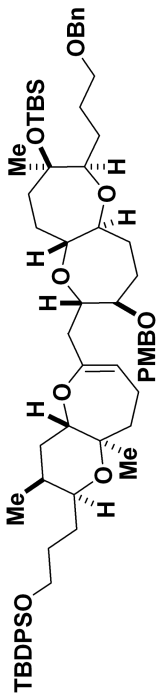
SAMPLE DEC. & VT
 date Nov 25 2005 dfrq 499.862
 solvent Benzene d1 H1
 file /export/home/~ dpwr 27
 vnmr1/vnmrSYS/data~ dof 0
 /Sasaki_lab/Ebine/~ dm YYY
 ebineIV-037-C.fid dnm w
 ACQUISITION dmf 12579
 sfrq 125.704 dseq
 tn C13 dres 1.0
 at 1.298 homo n
 np 97994 temp 20.0
 sw 37735.8 PROCESSING
 fb not used lb 0.50
 bs 32 wtfile
 tpwr 61 proc ft
 pw 5.3 fn 131072
 d1 0.700 math f
 tof 1883.8
 nt 20000 werr
 ct 18816 wexp wft
 alock n wbs wft
 gain 56 wnt

FLAGS

il n
 in n
 dp y
 hs nn

DISPLAY

sp -1256.9
 wp 26394.7
 vs 2095
 sc 0
 wc 250
 hzmm 105.58
 is 500.00
 rfl 21119.6
 rfp 16088.3
 th 129
 ins 100.000
 nm ph

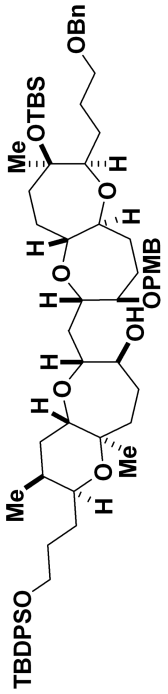


34

(125 MHz, C₆D₆)

128.197
 129.000
 127.808

180 160 140 120 100 80 60 40 20 ppm



35

(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

exp1 s2pul

SAMPLE DEC. & VT

date Nov 27 2005 dfrq 499.862

solvent Benzene dn H1

file /export/home/~ dpwr 30

vnmr1/vnmrSYS/data~ dof 0

/Sasaki_lab/Ebine/~ dm nnn

ebineIII-15I-H.fid dmm c

ACQUISITION dmf 200

sfrq 499.862 dseq

tn H1 dres 1.0

at 1.892 homo n

np 30272 temp 20.0

sw 8000.0 PROCESSING

fb not used wfile

bs 4 proc lp

tpwr 54 fn not used

pw 2.5 math f

d1 1.000

tof -140.0 werr

nt 64 wexp

ct 64 wbs

alock n wnt

gain not used wft

FLAGS

il n

in n

dp y

hs nn

DISPLAY

sp -250.0

wp 4248.8

vs 198

sc 0

wc 250

hznm 17.00

is 33.57

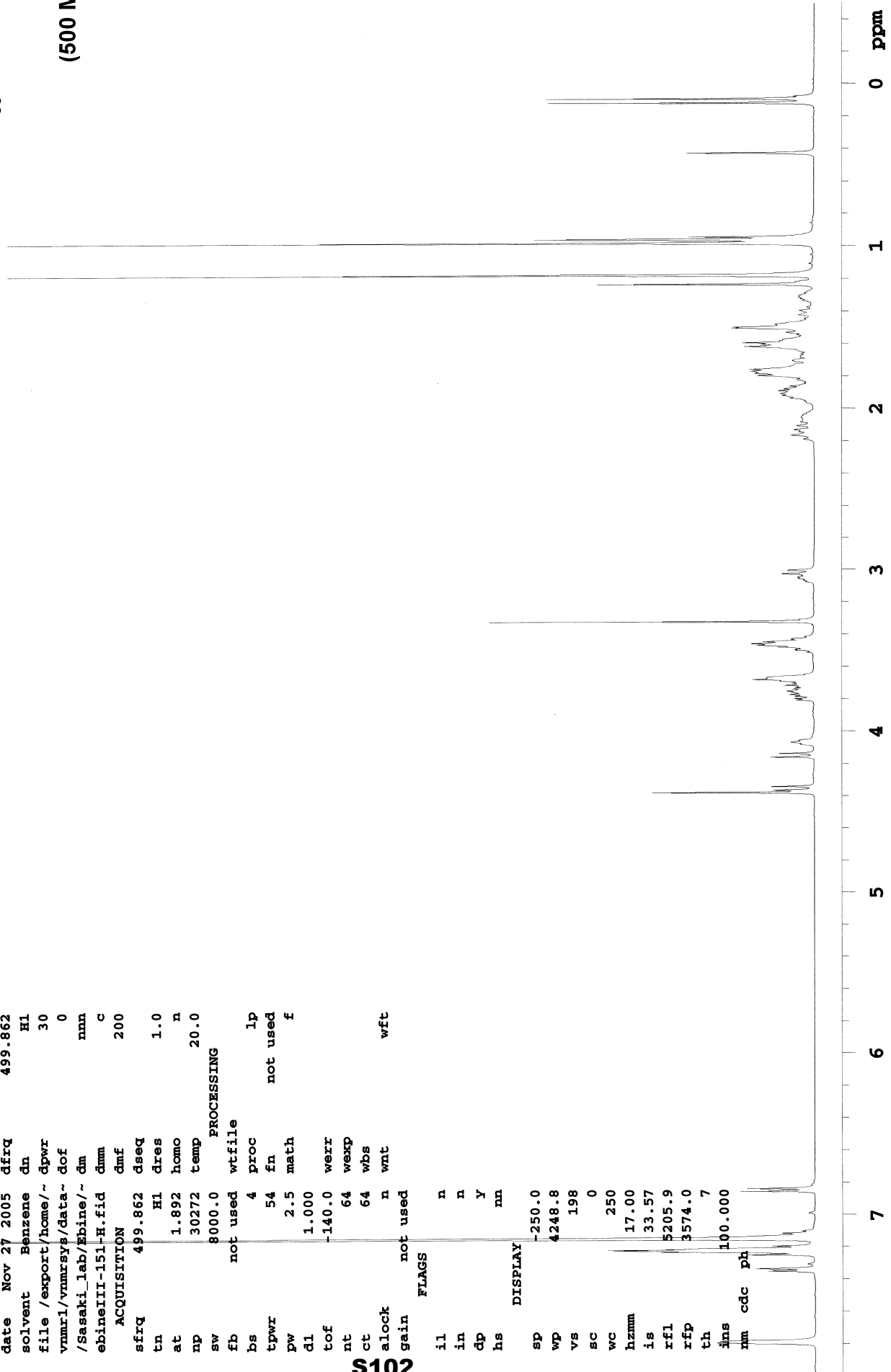
rfl 5205.9

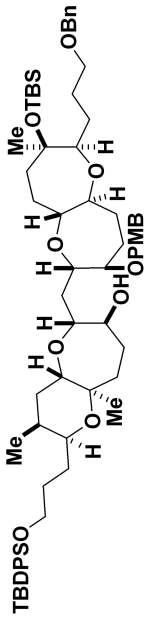
rfp 3574.0

th 7

ins 100.000

nm cdc ph





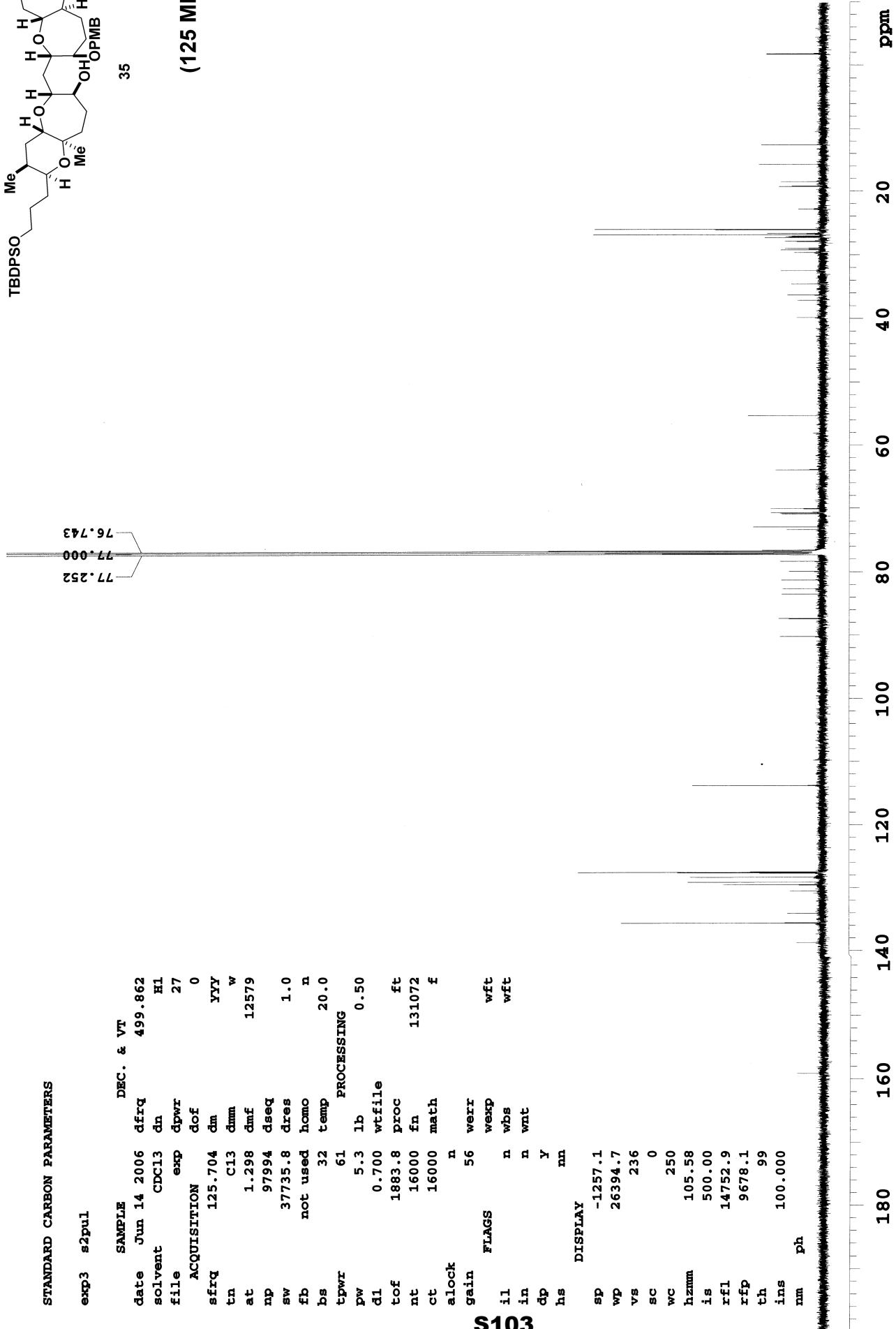
35

(125 MHz, CDCl₃)

STANDARD CARBON PARAMETERS

```

exp3 s2pul
SAMPLE
date Jun 14 2006 dfrq 499.862
solvent CDCl3 dn H1
file exp dpwr 27
ACQUISITION dof 0
sfrq 125.704 dm YYY
tn C13 dnm w
at 1.298 dmf 12579
np 97994 dseq
sw 37735.8 dres 1.0
fb not used homo n
bs 32 temp 20.0
tpwr 61 PROCESSING
pw 5.3 lb 0.50
d1 0.700 wtfile
tof 1883.8 proc ft
nt 16000 fn 131072
ct 16000 math f
alock n
gain 56 werr wft
il n wexp wft
in n wbs
dp n wnt
hs y
hs nn
DISPLAY
sp -1257.1
wp 26394.7
vs 236
sc 0
wc 250
hzmm 105.58
is 500.00
rfl 14752.9
xfp 9678.1
th 99
ins 100.000
nm ph
  
```



S103

STANDARD PROTON PARAMETERS

```

exp3 s2pu1
SAMPLE
date May 21 2005
solvent Benzene
file exp
ACQUISITION
sfrq 499.862
tn H1
dm dmm
at 1.892
np 30272
sw 8000.0
bs not used
tpwr 54
pw 2.5
d1 1.000
tof -140.0
nt 16
ct 16
gain not used
alock n
flags not used
il n
in n
hs nm
DISPLAY
sp -250.0
wp 4248.8
vs 242
sc 0
wc 250
hzmm 17.00
is 33.57
rfl 5205.9
rfp 3574.0
th ns
ins 1.000
nm ph
    
```

DEC. & VT

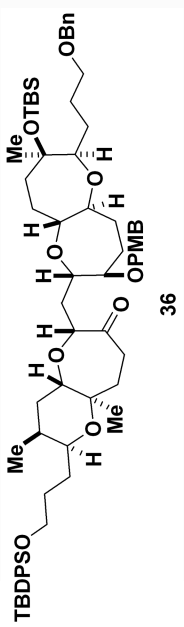
```

dfrq 499.862
dn H1
dpwr 30
dof 0
dm nmh
dmm C
dmf 200
dseq 1.0
dres n
temp 20.0
    
```

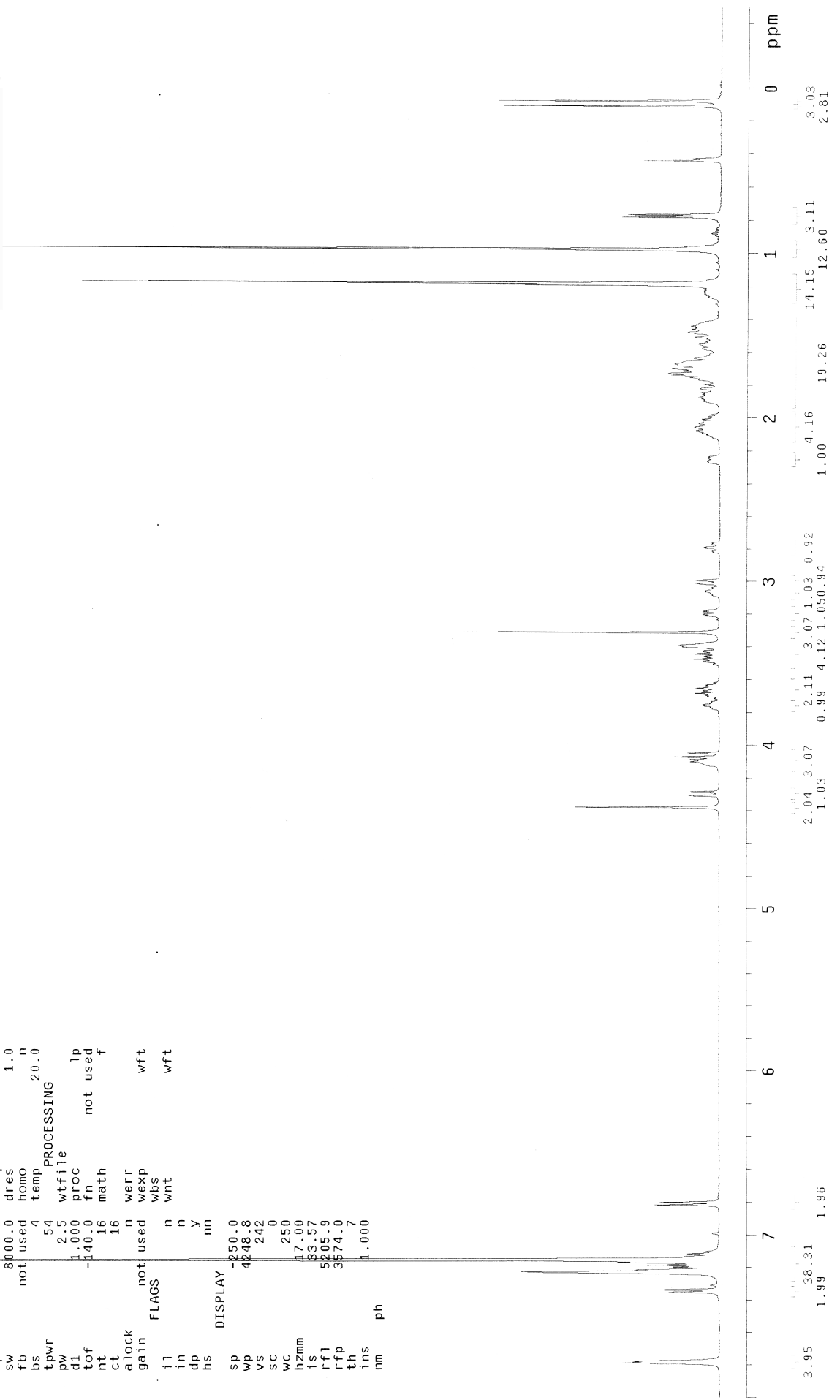
PROCESSING

```

wf file
proc lp
fn not used
math f
werr n
wexp n
wbs wft
wnt wft
    
```



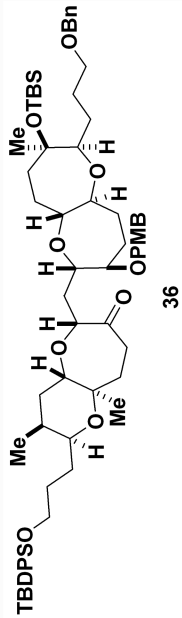
(500 MHz, C₆D₆)



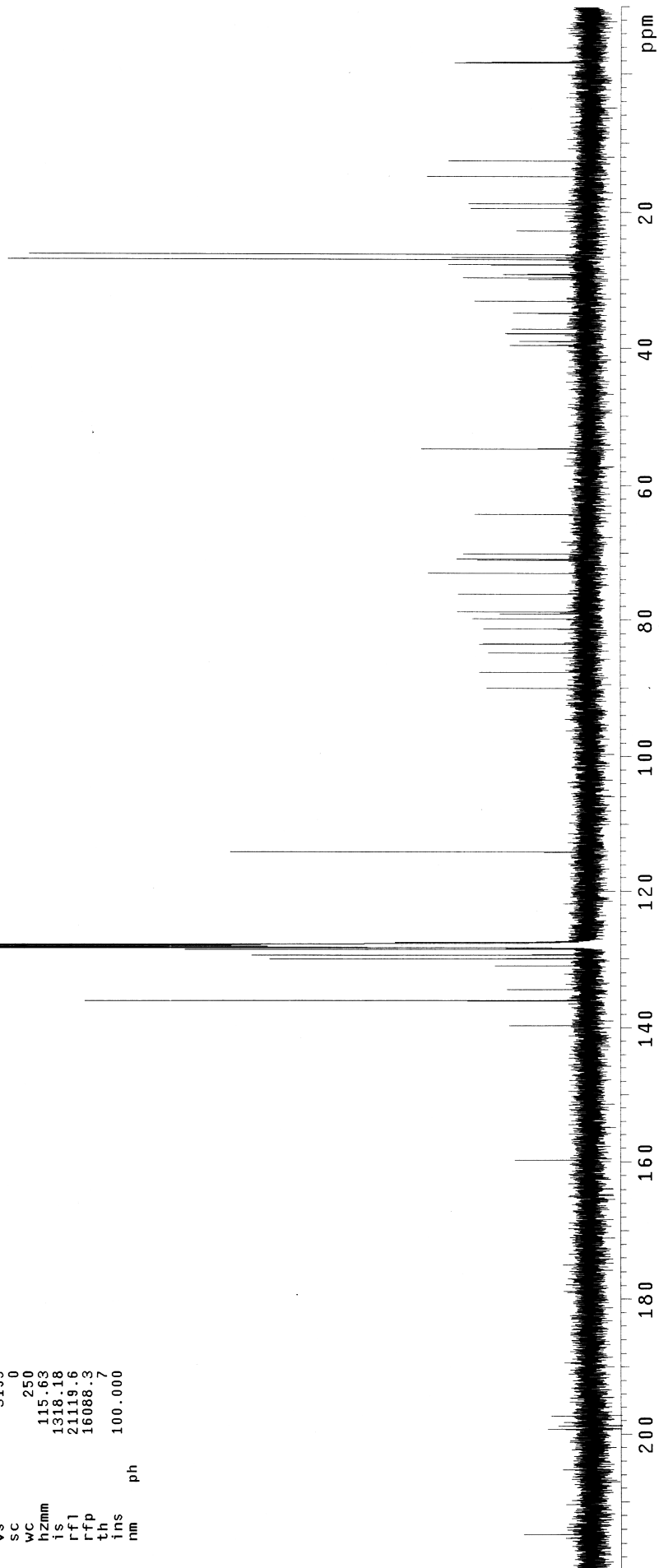
STANDARD CARBON PARAMETERS

```

exp1 s2pul
SAMPLE Nov 19 2005 DEC. & VT 499.862
solvent Benzene H1
file exp dpwr 27
ACQUISITION dof 0
sfrq 125.704 dm YYY 12579
tn 1.298 dnm W
at 1.298 dmf 12579
np 97994 dseq
sw 37735.8 dres 1.0
fb not used homo n
bs 32 temp 20.0
tpwr 61 PROCESSING
pw 5.3 lb 0.50
di 0.700 wfile
tof 1883.8 proc ft
nt 20000 fn 131072
ct 16000 math f
alock n
gain 56 weff n
il FLAGS wexp wft
in n wbs wft
dp n y
hs nn
DISPLAY
sp -1256.9
wp 28908.1
vs 3195
sc 0
wc 250
hzmh 115.63
is 1318.18
rfl 21119.6
rfp 16088.3
th 100.000
ins nm ph
  
```



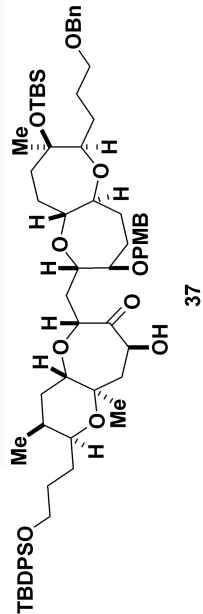
(125 MHz, C₆D₆)



STANDARD PROTON PARAMETERS

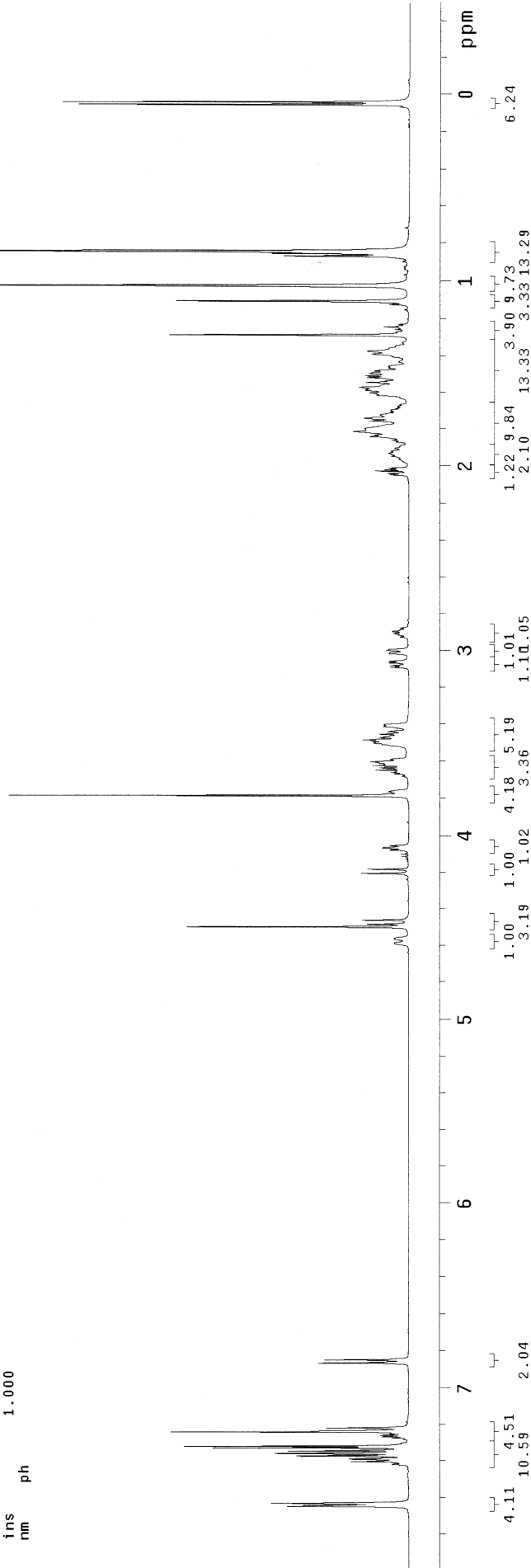
```

exp2 s2pu1
SAMPLE May 26 2005 DEC. & VT 499.862
solvent CDC13 dn H1
file exp dpwr 30
ACQUISITION dof 0
sfrq 499.862 dm nmn
tn 1.892 dm 200
at 30272 dmf
sw 8000.0 dres 1.0
fb not used homo n
bs 4 temp 20.0
tpwr 54 PROCESSING
pw 2.5 wtfile
d1 1.000 proc lp
tof -140.0 fn not used f
nt 16 math
ct 16 werr n
gain not used wexp wft
alock n wbs wft
il n
in n
dp y
hs nh
DISPLAY -250.4
wp 4248.8
vs 147
sc 0
wc 250
hzmm 17.00
is 33.57
rf1 5277.2
rfp 3619.0
th
ins
nm ph
  
```



37

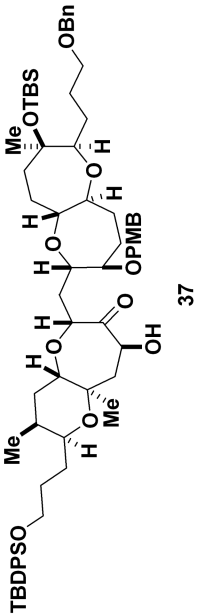
(500 MHz, CDCl₃)



STANDARD CARBON PARAMETERS

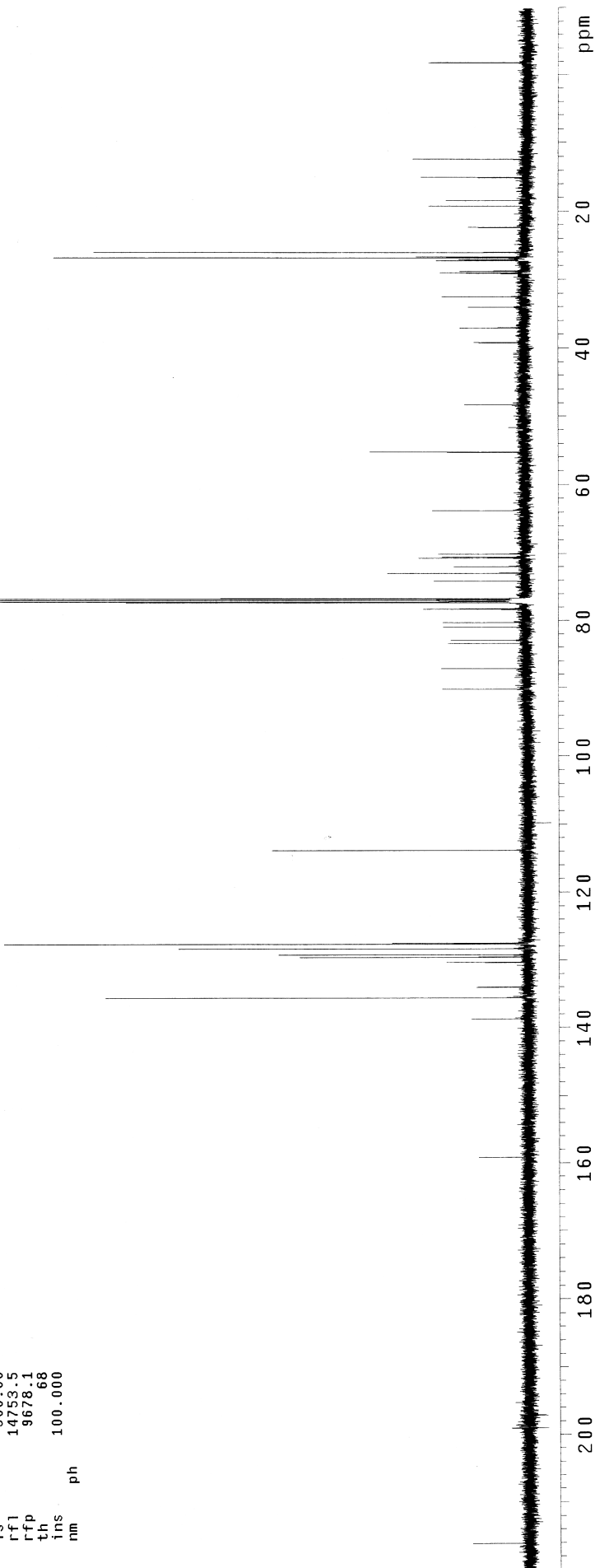
```

exp4 s2pu1
SAMPLE date Nov 27 2005 DEC. & VT 499.862
solvent CDC13 dn H1
file exp dpwr 27
ACQUISITION dof 0
sfrq 125.704 dm yyy
tn 1.288 dmm 12579
at 97994 dmf
np 37735.8 dseq 1.0
sw not used dres n
fb 32 temp 20.0
bs 61 PROCESSING
tpwr 5.3 lb 0.50
pw 0.700 wtfile
di 1883.8 proc ft
tof 20000 fn 131072
nt 19552 math f
alock n
gain 56 verr n
il in n wexp wft
dp in n wbs wft
hs n y wnt wft
DISPLAY
SP -1257.1
WP 28908.1
VS 310
WC 250
WZ 115.63
IS 500.00
RF1 14753.5
RFP 9678.1
TH 68
INS 100.000
NM ph
  
```



37

(125 MHz, CDCl₃)



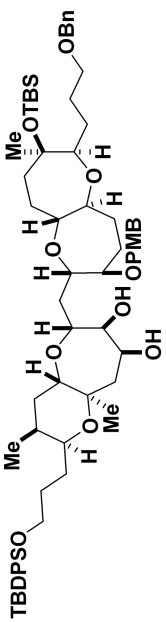
STANDARD PROTON PARAMETERS

exp1 s2pul

SAMPLE DEC. & VT
 date Jun 10 2006 dfreq 499.862
 solvent CDCl3 dn H1
 file exp dpwr 30
 ACQUISITION dof 0
 sfrq 499.862 dm nnn
 tn H1 dnm C
 at 1.892 dmf 200
 np 30272 dseq
 sw 8000.0 dres 1.0
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54 PROCESSING
 pw 2.5 wtfile
 dl 1.000 proc lp
 tof -140.0 fn not used
 nt 64 math f
 ct 64

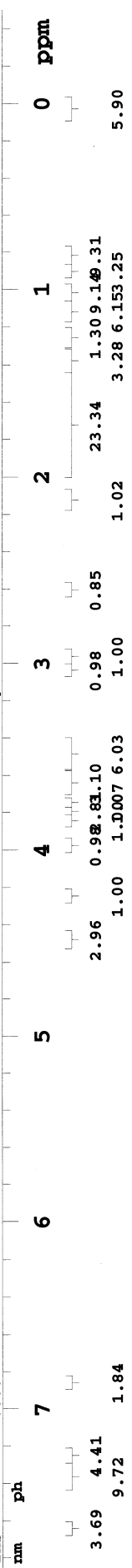
alock n werr
 gain not used wexp
 FLAGS wbs wft
 il n wnt
 in n
 dp y
 hs nn

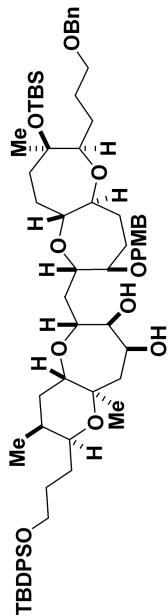
DISPLAY
 sp -250.4
 wp 4248.8
 vs 142
 SC 0
 WC 250
 hzmm 17.00
 is 65212.57
 rfl 5277.2
 rfp 3619.0
 th



38

(500 MHz, CDCl₃)





38

(125 MHz, CDCl₃)

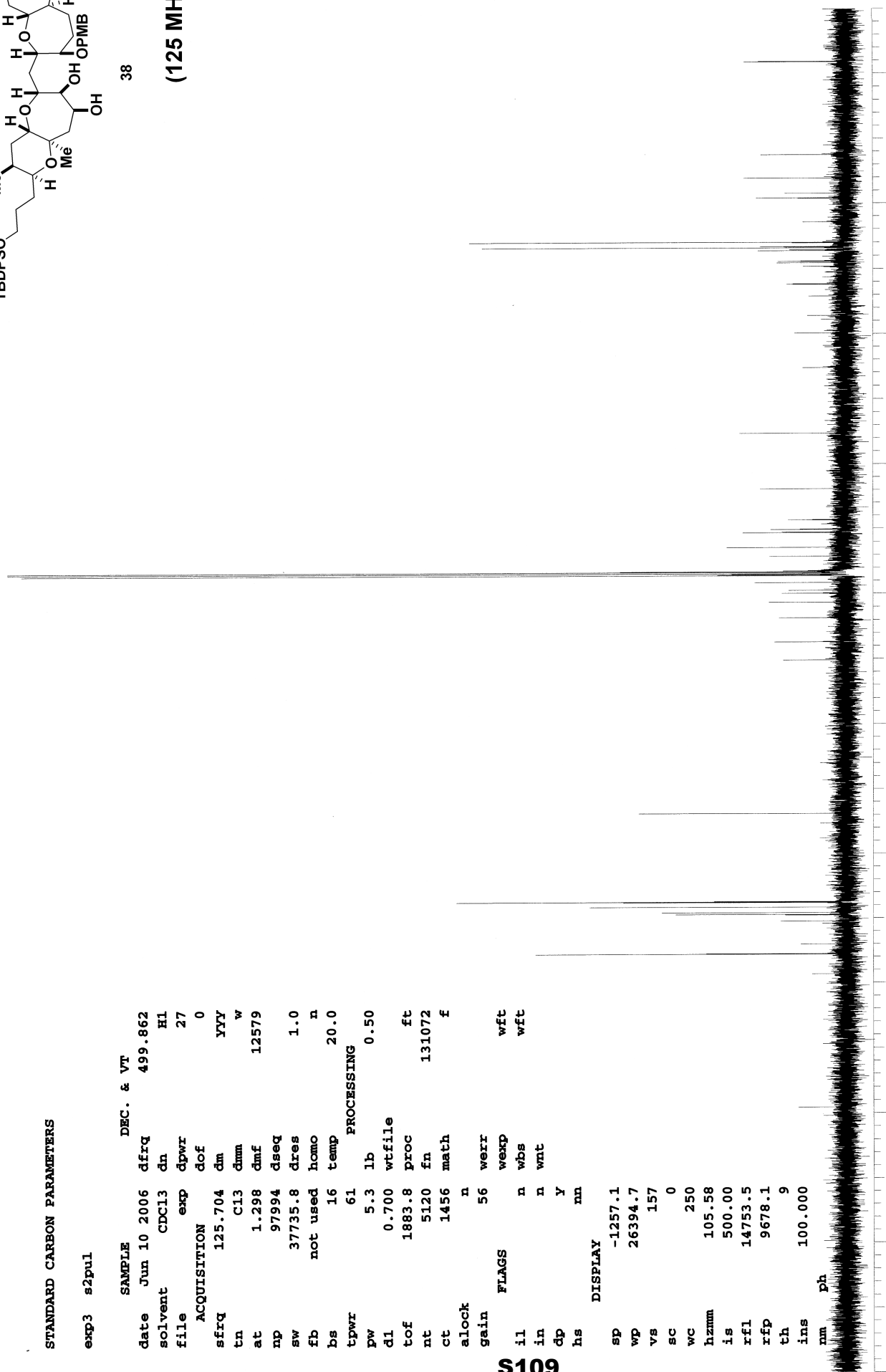
STANDARD CARBON PARAMETERS

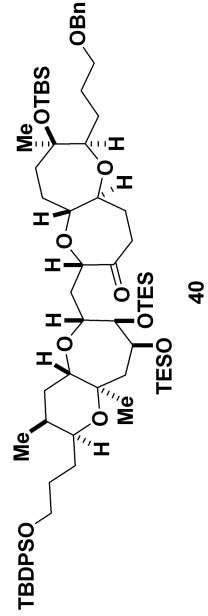
exp3 s2pul

SAMPLE		DEC. & VT	
date	Jun 10 2006	dfrq	499.862
solvent	CDCl ₃	dn	H1
file	exp	dpwr	27
ACQUISITION			
sfrq	125.704	dm	YYY
tn	CI3	dmw	w
at	1.298	dmf	12579
np	97994	dseq	
sw	37735.8	dres	1.0
fb	not used	homo	n
bs	16	temp	20.0
tpwr	61	PROCESSING	
pw	5.3	lb	0.50
d1	0.700	wtfile	
tof	1983.8	proc	ft
nt	5120	fn	131072
ct	1456	math	f
alock	n		
gain	56	werr	wft
		wexp	wft
il	n	wbs	
in	n	wnt	
dp	y		
hs	nn		
DISPLAY			
sp	-1257.1		
wp	26394.7		
vs	157		
sc	0		
wc	250		
hzmm	105.58		
is	500.00		
rfl	14753.5		
rfp	9678.1		
th	9		
ins	100.000		
nm	ph		

S109

180 160 140 120 100 80 60 40 20 ppm





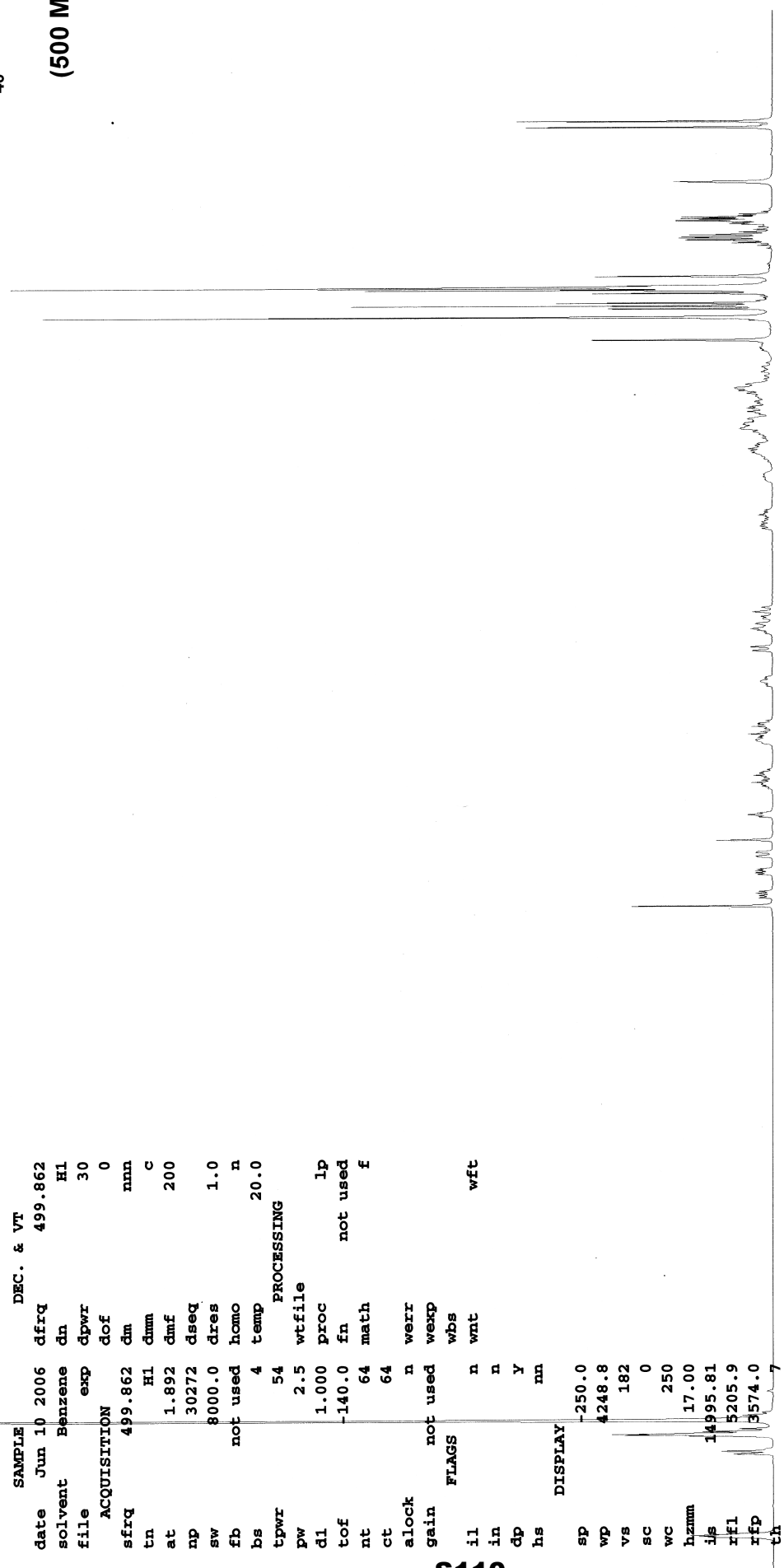
(500 MHz, C₆D₆)

40

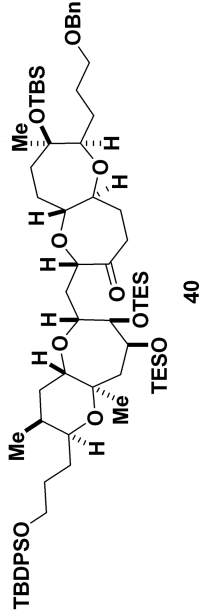
STANDARD PROTON PARAMETERS

```

exp2 s2pul
SAMPLE
date Jun 10 2006 dfrq 499.862
solvent Benzene dn H1
file exp dpwr 30
ACQUISITION dof 0
sfrq 499.862 dm nnn
tn H1 dnm c
at 1.892 dmf 200
np 30272 dseq
sw 8000.0 dres 1.0
fb not used homo n
bs 4 temp 20.0
tpwr 54 PROCESSING
pw 2.5 wfile
d1 1.000 proc lp
tof -140.0 fn not used
nt 64 math f
ct 64
alock n werr
gain not used wexp
FLAGS wbs wft
il n wnt
in n
cp y
hs nn
DISPLAY
sp -250.0
wp 4248.8
vs 182
sc 0
wc 250
hzmm 17.00
is 14995.81
ifl 5205.9
ifp 3574.0
ch 7
ins 1.000
nm ph
  
```



Chemical Shift (ppm)	Integration
7.42	1.89
3.86	1.01100102
3.16	1.00
2.09	2.02104000
2.07	2.07
1.828	1.05
1.26611	1.00
0.97126611	1.00
0.6989339	1.00
0.596	1.00



(125 MHz, C₆D₆)

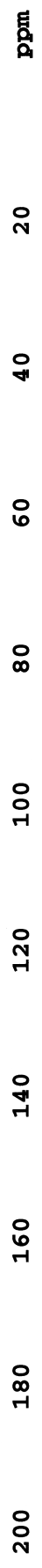
STANDARD CARBON PARAMETERS

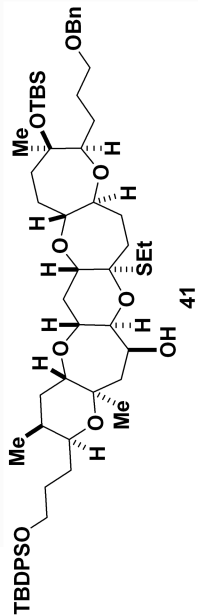
exp4 s2pul

SAMPLE DEC. & VT
 date Jun 10 2006 dfrq 499.862
 solvent Benzene dn H1
 file exp dpwr 27
 ACQUISITION dof 0
 sfrq 125.704 dm YYY w
 tn C13 dmm 12579
 at 1.298 dmf
 np 97994 dseq 1.0
 sw 37735.8 dres n
 fb not used homo n
 bs 16 temp 20.0
 tpwr 61 PROCESSING
 pw 5.3 lb 0.50
 dl 0.700 wtfile
 tof 1883.8 proc ft
 nt 5120 fn 131072
 ct 5120 math f
 alock n
 gain 56 werr
 FLAGS wexp wft
 il n wbs wft
 in n wnt
 dp y
 hs nn

DISPLAY
 sp -1256.9
 wp 28908.1
 vs 1608
 sc 0
 wc 250
 hzmm 115.63
 is 50.00
 rfl 21120.2
 rfp 16088.3
 th 68
 ins 100.000
 nm ph

S111





(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

INOVA-500 "varian"

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

68 repetitions

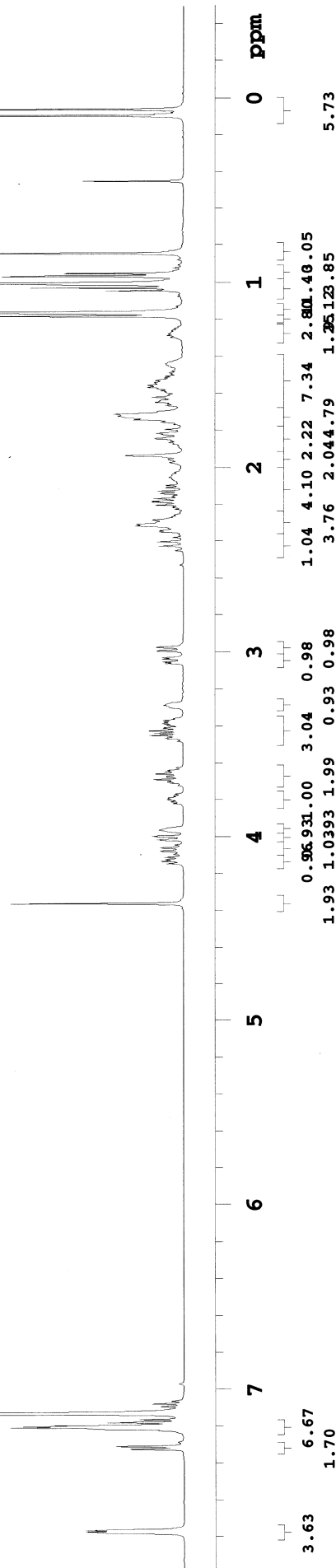
OBSERVE H1, 499.8593497 MHz

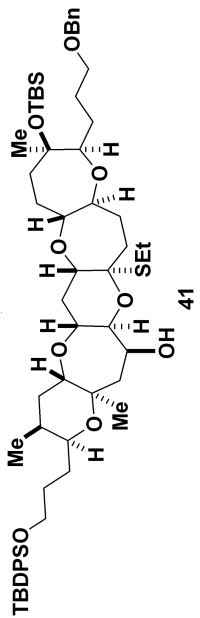
DATA PROCESSING

FT size 32768

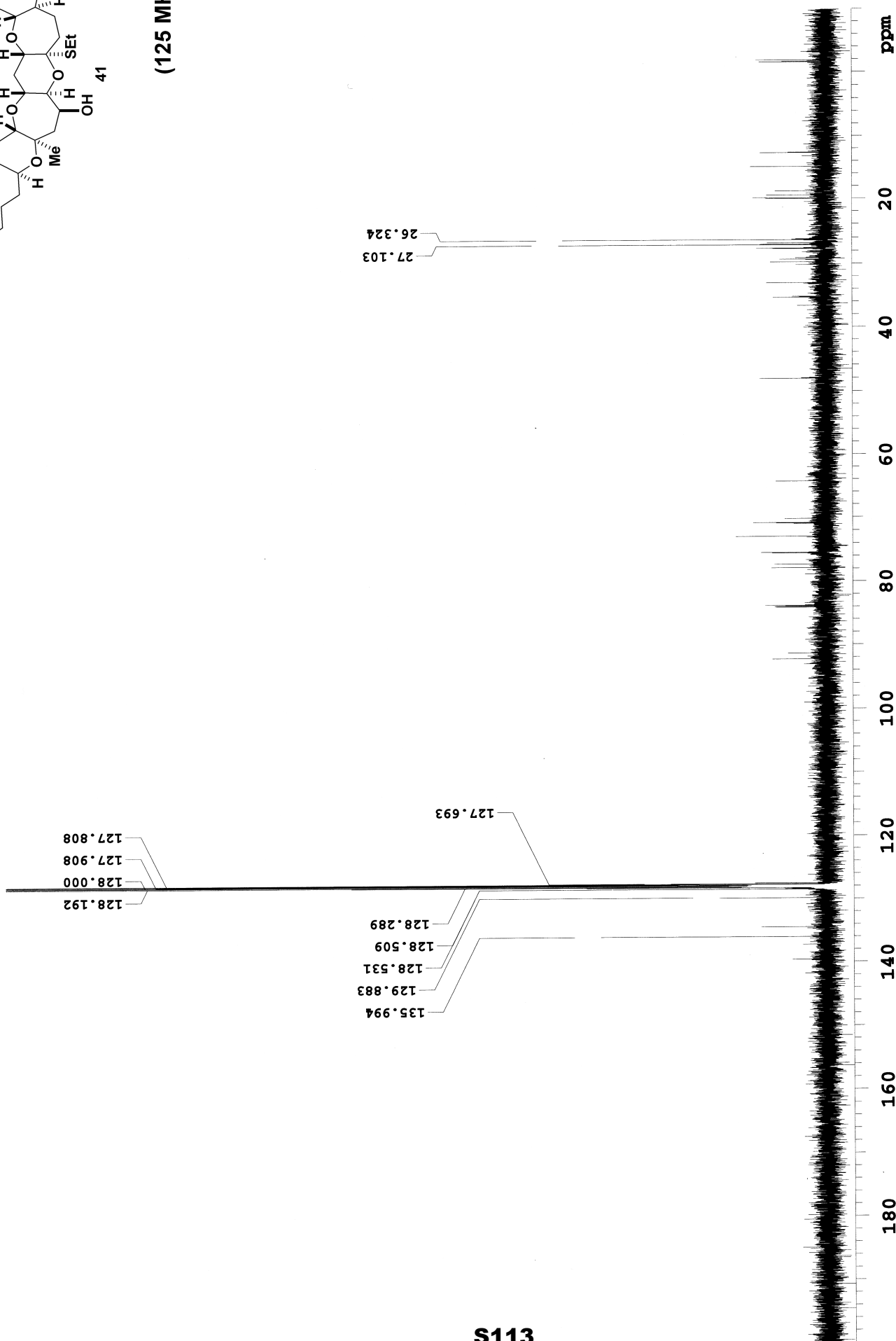
Total time 12 min, 22 sec

S112





(125 MHz, C₆D₆)



STANDARD PROTON PARAMETERS

exp7 s2pul

SAMPLE DEC. & VT
 date Mar 14 2006 dfrq 499.862
 solvent Benzene d1 H1
 file /export/home/~ dpwr 30
 vnmr1/vnmrSYS/data~ dof 0
 /Sasaki_lab/Ebine/~ dm nnn
 ebineIV-050-H.fid dnm c
 ACQUISITION dmf 200
 sfrq 499.862 dseq
 tn H1 dres 1.0
 at 1.892 hcmo n
 np 30272 temp 20.0
 sw 8000.0 PROCESSING
 fb not used wfile
 bs 4 proc lp
 tpwr 54 fn not used
 pw 2.5 math f
 d1 1.000
 tof -140.0 werr
 nt 64 wexp
 ct 64 wbs
 alock n wnt wft
 gain not used

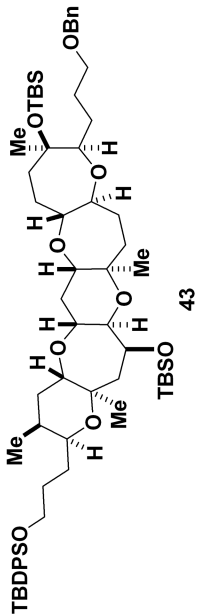
FLAGS

il n
 in n
 dp y
 hs nn

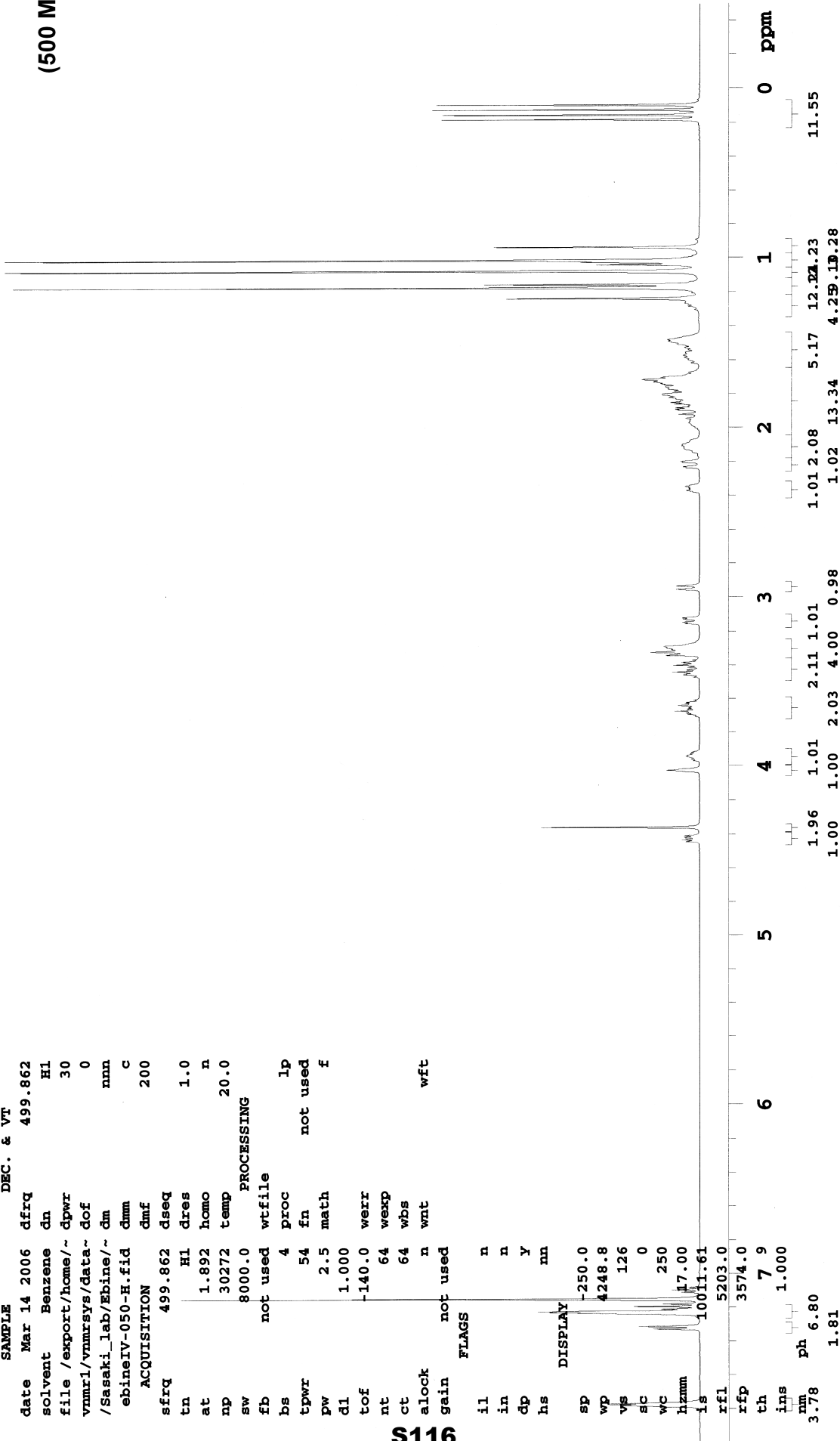
DISPLAY

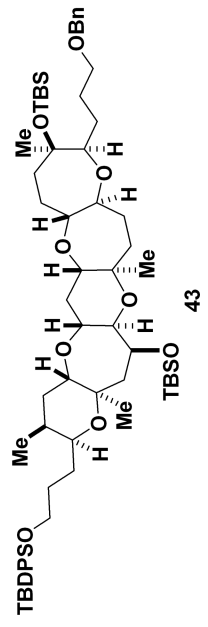
sp -250.0
 wp 4248.8
 vs 126
 sc 0
 wc 250
 hzmm 17.00
 fs 10011.61

rfl 5203.0
 rfp 3574.0
 th 7 9
 ins 1.000
 rm ph 6.80
 3.78 1.81



(500 MHz, C₆D₆)





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(125 MHz, C₆D₆)

STANDARD CARBON PARAMETERS

```

exp6 s2pul
SAMPLE DEC. & VT
date Mar 15 2006 dfrq 499.862
solvent Benzene dn H1
file /export/home/~ dpwr 27
vnmr1/vnmrSYS/data~ dof 0
/Sasaki_lab/Ebine/~ dm YYY
ebineIV-050-C.fid dnm w
12579 dmf
ACQUISITION
sfrq 125.704 dseq
tn C13 dres 1.0
at 1.298 hcmo n
np 97994 temp 20.0
sw 37735.8 PROCESSING
fb not used lb 0.50
bs 16 wtfile
tpwr 61 proc ft
pw 5.3 fn 131072
d1 0.700 math f
tof 1883.8
nt 5120 werr
ct 128 wexp wft
alock n wbs wft
gain 56 wnt

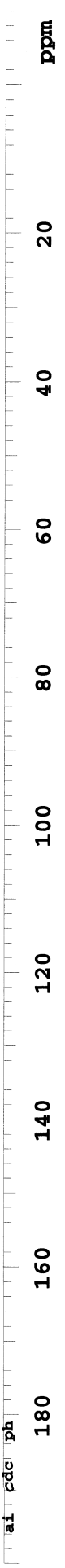
```

```

FLAGS
il n
in n
dp y
hs nn
DISPLAY
sp -1256.9
wp 26394.7
vs 282
sc 0
wc 250
hzmm 105.58
is 500.00
rfl 21119.6
rfp 16088.3
ins 100.000

```

S117



STANDARD PROTON PARAMETERS

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

INOVA-500 "varian"

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

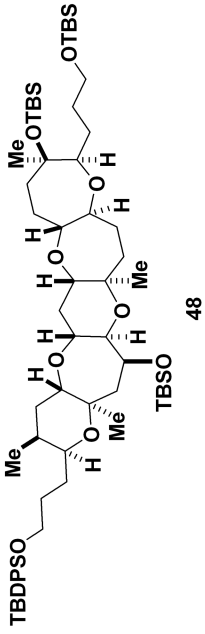
64 repetitions

OBSERVE H1, 499.8593385 MHz

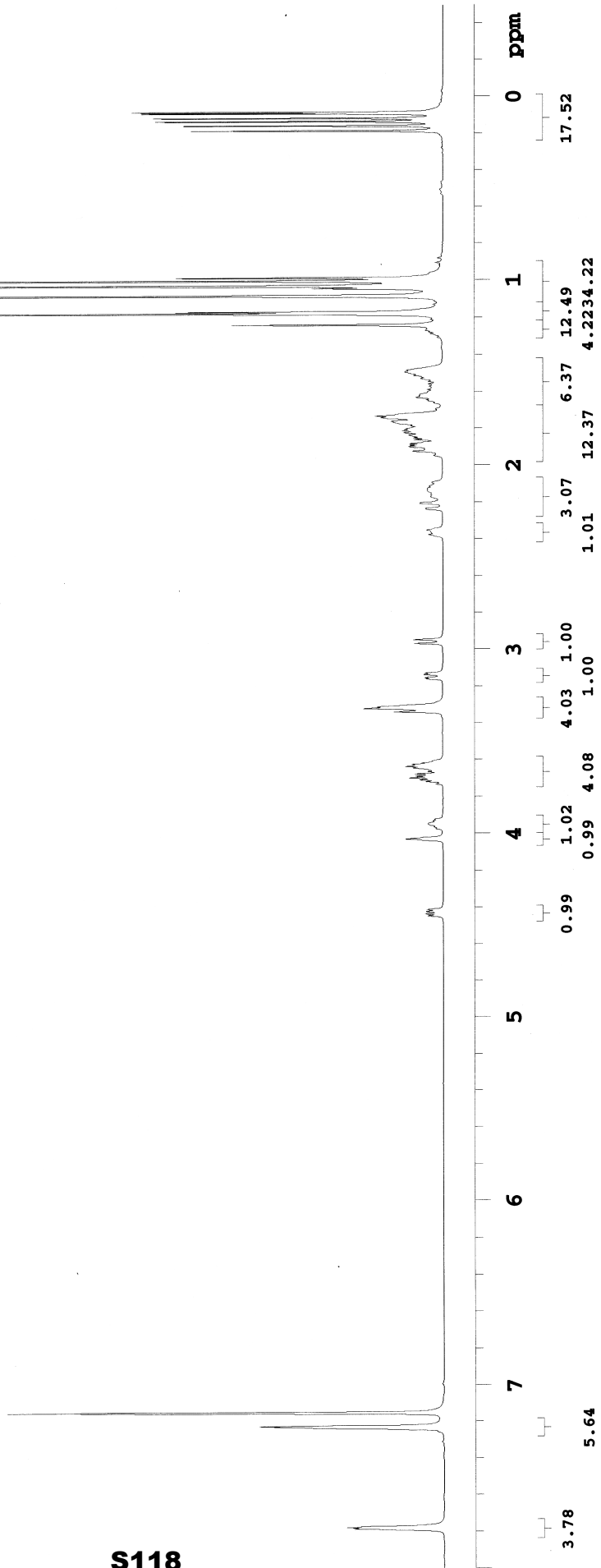
DATA PROCESSING

FT size 32768

Total time 3 min, 5 sec



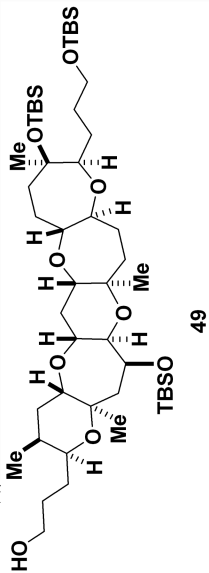
(500 MHz, C₆D₆)



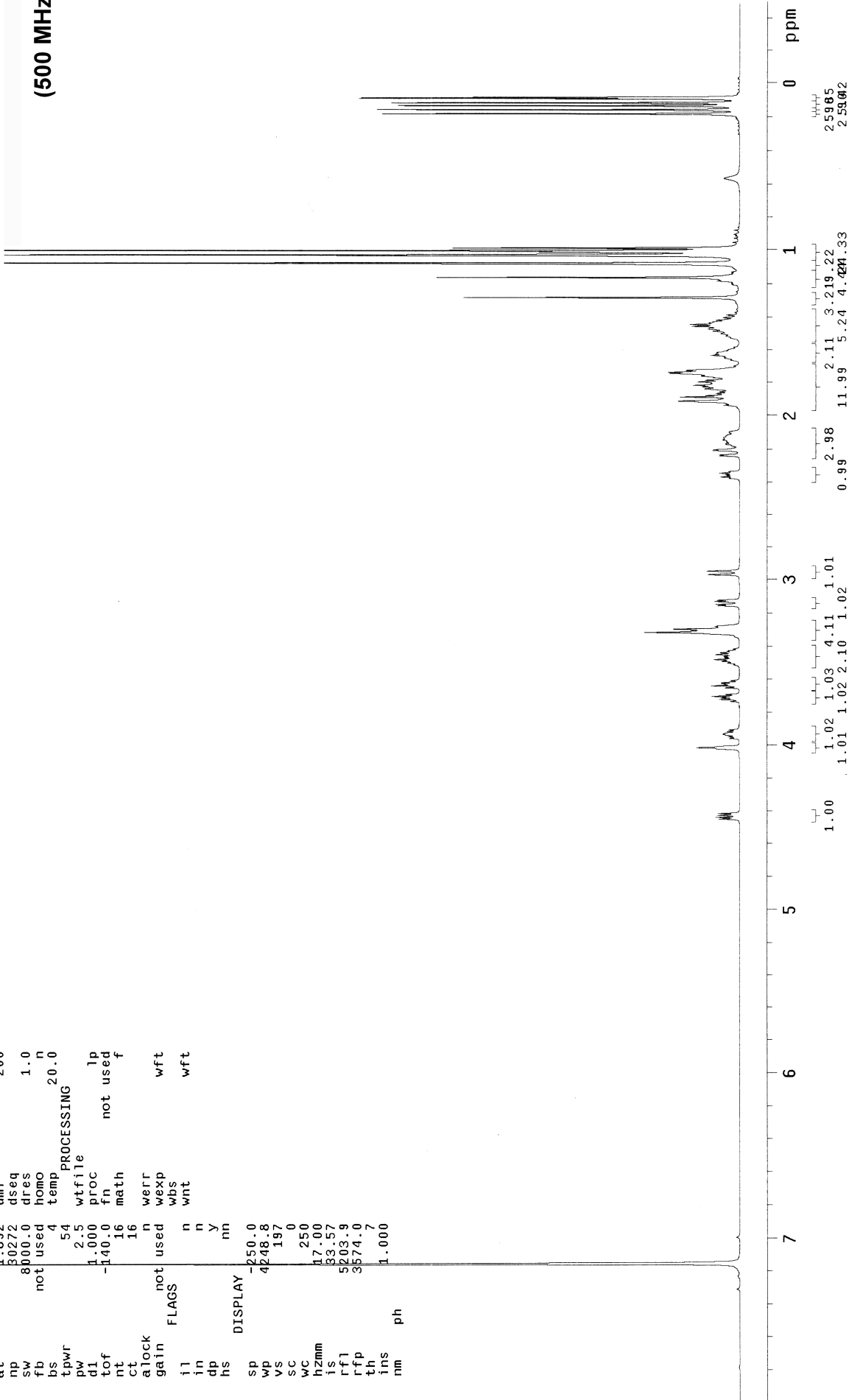
STANDARD PROTON PARAMETERS

```

exp1 s2pul
SAMPLE date Oct 29 2005 DEC. & VT 499.862
solvent Benzene H1
file exp 30
ACQUISITION exp 0
sfrq 499.862 dm nnn
tn H1 dnm C
at 1.892 dmf 200
np 30272 dseq
sw 8000.0 dres 1.0
fb not used homo n
bs 4 temp 20.0
tpwr 54 PROCESSING
pw 2.5 wtfile
di 1.000 proc lp
tof -140.0 fn not used f
nt 16 math
ct 16 n verr
alock not used n wexp
gain n wbs
flags n wnt
il n
in n
dp y
hs nh
DISPLAY -250.0
wp 4248.8
vs 197
sc 0
wc 250
hzmnm 17.00
is 33.57
rf1 5203.9
rfp 3574.0
th
ins 1.000
nm ph
    
```



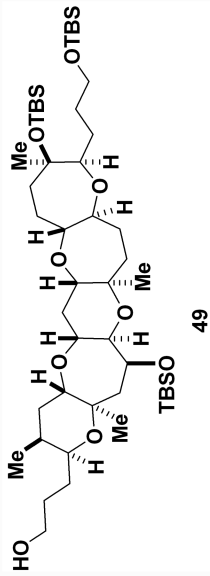
(500 MHz, C₆D₆)



STANDARD CARBON PARAMETERS

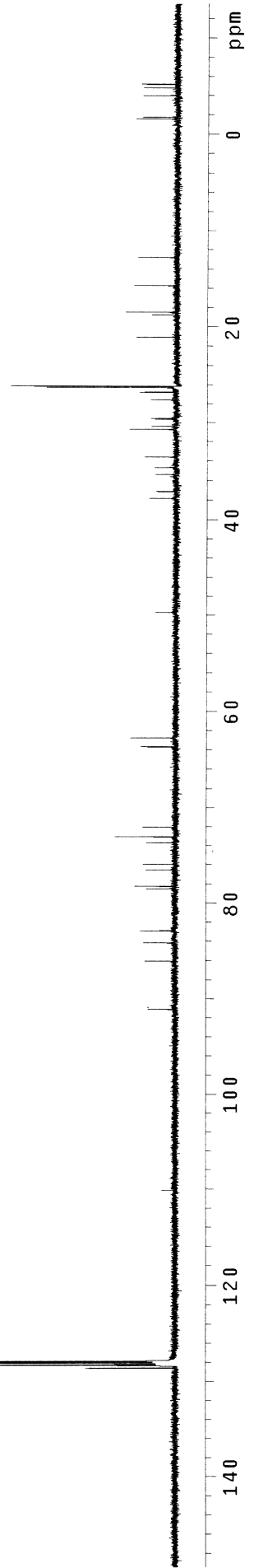
```

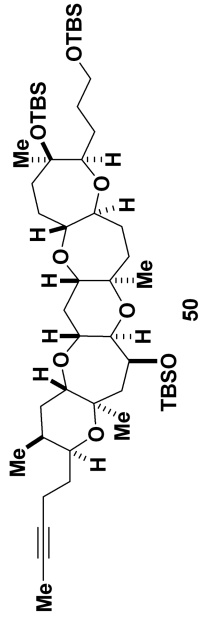
exp3 s2pu1
SAMPLE DEC. & VT
date Oct 29 2005 dfrq 499.862
solvent Benzene dn HI
file exp 27 dpwr 0
ACQUISITION dof 0
sfrq 125.704 dm vvy w
tn C13 dmm 12579
at 1.298 dmf 18579
np 97994 dseq
sw 37735.8 dres 1.0 n
fb not used homo 20.0
bs 32 temp
tpwr 61 PROCESSING
pw 5.3 lb 0.50
d1 0.700 wfile
tof 1883.8 proc ft
nt 5120 fn 131072
ct 800 math f
alock n
gain 56 werr wft
il n
in n
dp n
hs y
DISPLAY nm
sp -1710.6
wp 20485.1
vs 175
sc 0
wc 250
hzmm 81.94
is 500.00
rfl 21119.6
rfp 16088.3
th 5
ins 100.000
nm ph
  
```



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(125 MHz, C₆D₆)



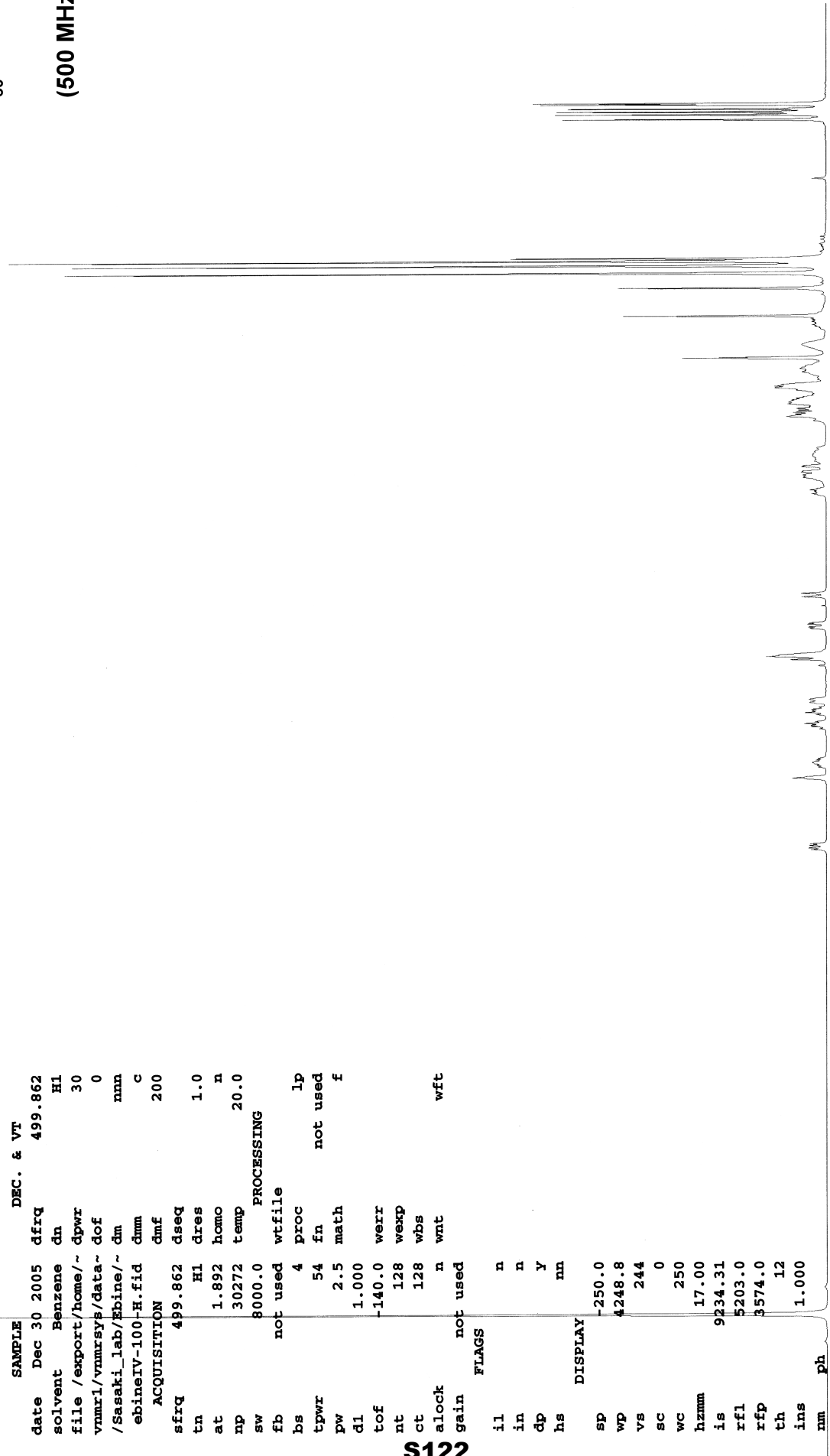


(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

```

exp2  s2pul
SAMPLE
date  Dec 30 2005  dfrq  499.862  DEC. & VT
solvent  Benzene  dn  H1
file  /export/home/~ dpwr  30
vnmr1/vnmrsys/data/~ dof  0
/Sasaki_lab/Ebine/~ dm  nnn
ebineIV-100-H.fid  dmm  c
ACQUISITION  dmf  200
sfrq  499.862  dseq  H1  dres  1.0
at  1.892  homo  n
np  30272  temp  20.0
sw  8000.0  PROCESSING
fb  not used  wfile
bs  4  proc  lp
tpwr  54  fn  not used
pw  2.5  math  f
d1  1.000
tof  -140.0  werr
nt  128  wexp
ct  128  wbs
alock  n  wnt
gain  not used  wft
FLAGS
il  n
in  n
dp  y
hs  nn
DISPLAY
sp  -250.0
wp  4248.8
vs  244
sc  0
wc  250
hzum  17.00
is  9234.31
rfl  5203.0
xfp  3574.0
th  12
ins  1.000
nm  ph
  
```



STANDARD CARBON PARAMETERS

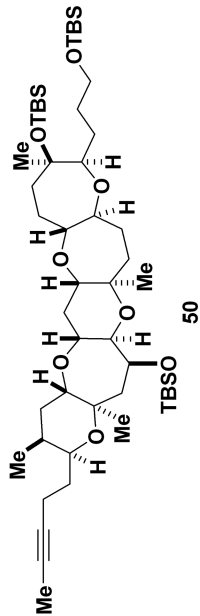
exp1 s2pul

SAMPLE DEC. & VT
 date Dec 30 2005 dfrq 499.862
 solvent Benzene dn H1
 file /export/home/~ dpwr 27
 vnmr1/vnmrSYS/data~ dof 0
 /Sasaki_lab/Ebine/~ dm YYY
 ebineIV-100-C.fid dmm w
 ACQUISITION dmf 12579

sfrq 125.704 dseq
 tn C13 dres 1.0
 at 1.298 homo n
 np 97994 temp 20.0
 sw 37735.8 PROCESSING
 fb not used lb 0.50
 bs 16 wtfile
 tpwr 61 proc ft
 pw 5.3 fn 131072
 dl 0.700 math f
 tof 1883.8
 nt 5120 verr
 ct 1600 wexp wft
 alock n wbs wft
 gain 56 wnt

FLAGS
 il n
 in n
 dp y
 hs nm

DISPLAY
 sp -1256.9
 wp 26394.7
 vs 949
 sc 0
 wc 250
 hzmm 105.58
 is 4607.14
 rfl 21119.1
 rfp 16088.3
 th 132
 ins 100.000
 nm ph

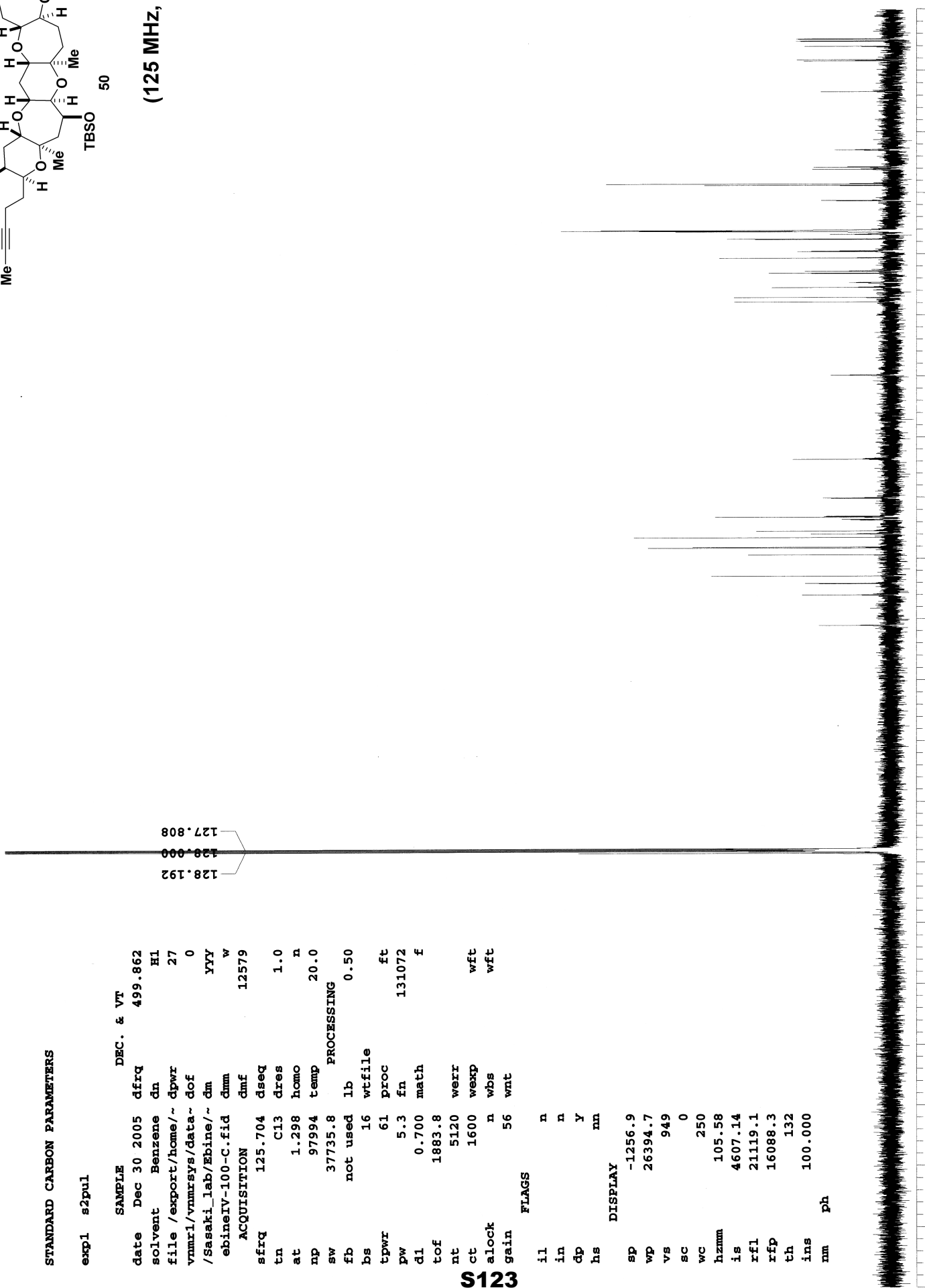


(125 MHz, C₆D₆)

128.192
 128.000
 127.898

S123

180 160 140 120 100 80 60 40 20 ppm

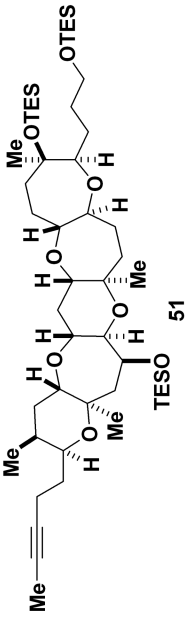


STANDARD PROTON PARAMETERS

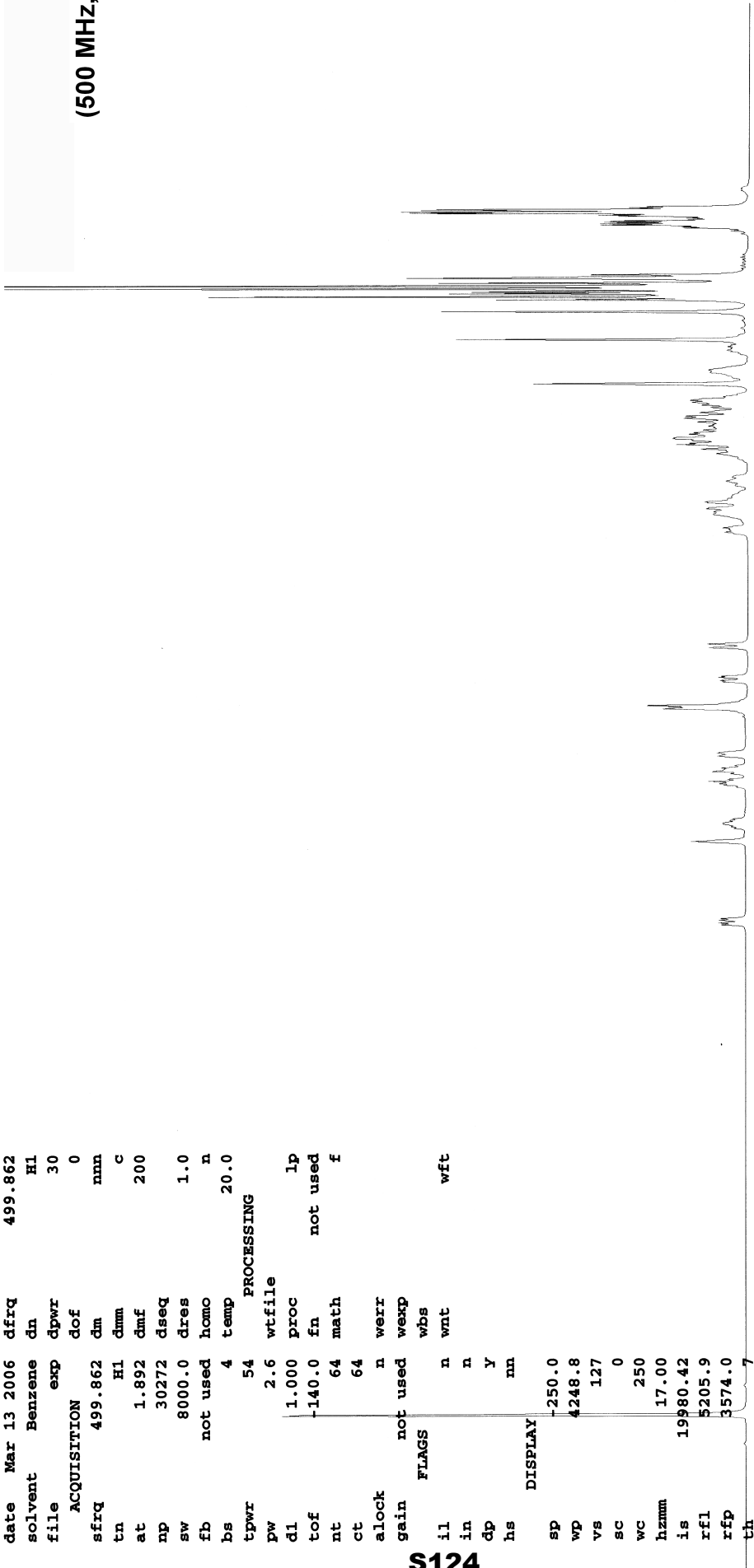
exp1 s2pul

```

SAMPLE          DEC. & VT
date Mar 13 2006  dfrq 499.862
solvent Benzene  dn  H1
file exp 30
ACQUISITION    dof 0
sfrq 499.862  dn  nnn
tn H1 dnm  c
at 1.892  dmf 200
np 30272  dseq
sw 8000.0  dres 1.0
fb not used  hcmo n
bs 4  temp 20.0
tpwr 54  PROCESSING
pw 2.6  wtfile
d1 1.000  proc lp
tof -140.0  fn  not used
nt 64  math f
ct 64
alock n  werr
gain not used  wexp
flags wbs
il n  wnt
in n
dp y
hs nn
DISPLAY
sp -250.0
wp 4248.8
vs 127
sc 0
wc 250
hzmm 17.00
is 19880.42
rfl 5205.9
rfp 3574.0
th 7
ins 1.000
nm ph
  
```



(500 MHz, C₆D₆)



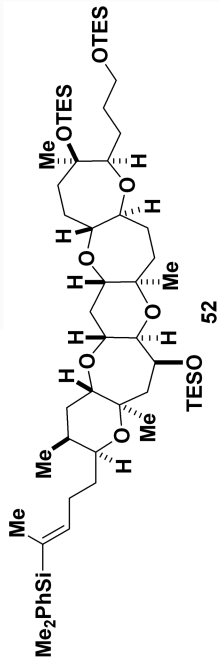
STANDARD PROTON PARAMETERS

exp1 s2pul

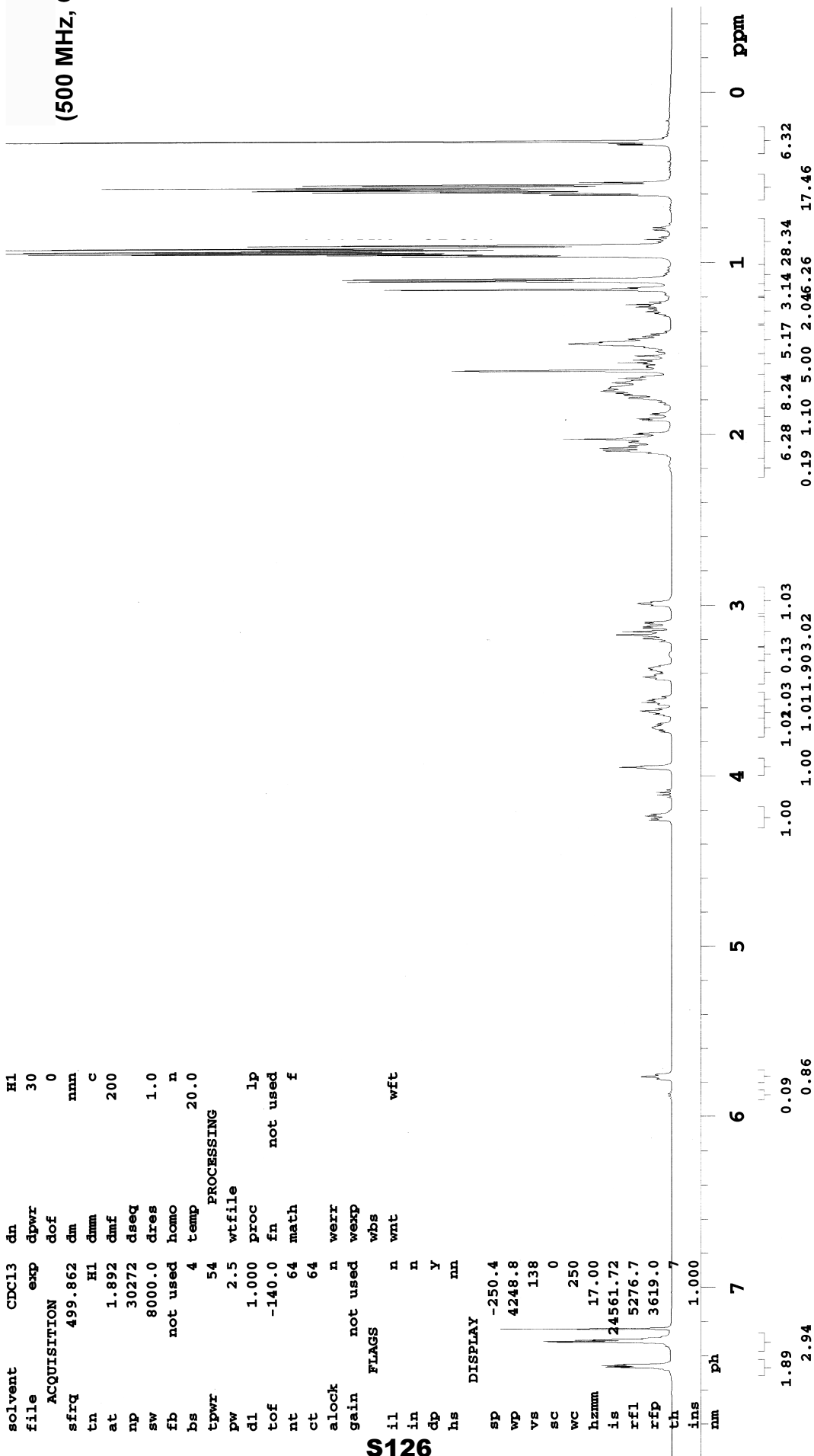
SAMPLE DEC. & VT
 date Mar 14 2006 dfrq 499.862
 solvent CDCl3 dn H1
 file exp dpwr 30
 ACQUISITION dof 0
 sfrq 499.862 dm nna
 tn H1 dmm c
 at 1.892 dmf 200
 np 30272 dseq
 sw 8000.0 dres 1.0
 fb not used homo n
 bs 4 temp 20.0
 tpwr 54 PROCESSING
 pw 2.5 wfile
 dl 1.000 proc lp
 tof -140.0 fn not used
 nt 64 math f
 ct 64

alock n wevr
 gain not used wexp
 FLAGS wbs wft
 il n
 in n
 dp Y
 hs nn

DISPLAY
 sp -250.4
 wp 4248.8
 vs 138
 SC 0
 WC 250
 hzmm 17.00
 is 24561.72
 rfl 5276.7
 rfp 3619.0
 th 7
 ins 1.000
 nm ph



(500 MHz, CDCl₃)



STANDARD CARBON PARAMETERS

exp3 s2pul

SAMPLE DEC. & VT
 date Mar 14 2006 dfrq 499.862
 solvent CDCl3 dn H1
 file /export/home/~ dpwr 27
 vnmr1/vnmrSYS/data~ dof 0
 /Sasaki_lab/Ebine/~ dm YYY
 ebineIV-142-C.fid dmm w
 ACQUISITION dmf 12579
 sfrq 125.704 dseq
 tn C13 dres 1.0
 at 1.298 homo n
 np 97994 temp 20.0
 sw 37735.8 PROCESSING
 fb not used lb 0.50
 bs 16 wtfile
 tpwr 61 proc ft
 pw 5.3 fn 131072
 dl 0.700 math f
 tof 1883.8
 nt 5120 werr
 ct 384 wexp wft
 alock n wbs wft
 gain 56 wnt

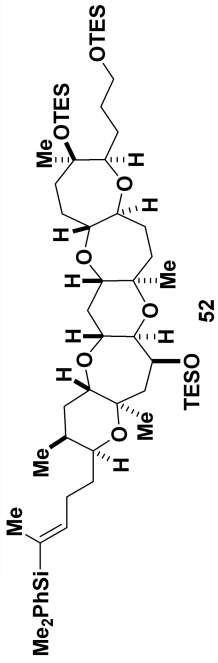
FLAGS

il n
 in n
 dp Y
 hs nn

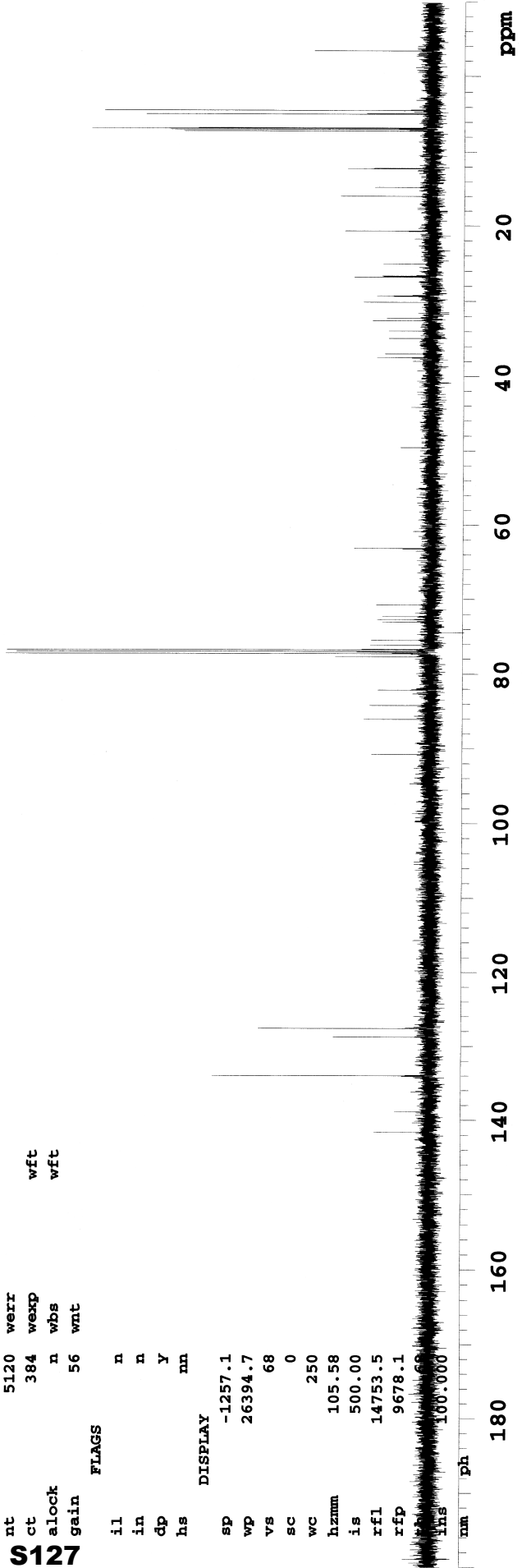
DISPLAY

sp -1257.1
 wp 26394.7
 vs 68
 SC 0
 WC 250
 hzmm 105.58
 is 500.00
 rfl 14753.5
 rfp 9678.1

nmr 100.000



(125 MHz, CDCl₃)

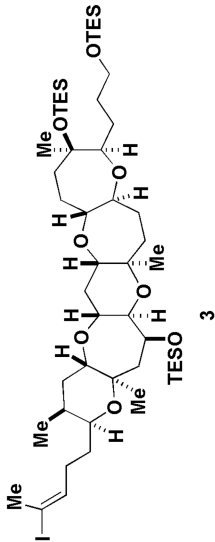


S127

STANDARD PROTON PARAMETERS

exp2 s2pul
 SAMPLE DEC. & VT
 date Dec 30 2005 dfrq 499.862
 solvent Benzene d1 H1
 file /export/home/~ dpwr 30
 vmr1/vmrsys/data~ dof 0
 /Sasaki_lab/Ebine/~ dm nnn
 ebineIV-101-H.fid dmm c
 ACQUISITION dmf 200
 sfrq 499.862 dseq
 tn H1 dres 1.0
 at 1.892 homo n
 np 30272 temp 20.0
 sw 8000.0 PROCESSING
 fb not used wfile
 bs 4 proc lp
 tpwr 54 fn not used
 pw 2.5 math f
 d1 1.000
 tof -140.0 werr
 nt 256 wexp
 ct 256 wbs
 alock n wnt wft
 gain not used

FLAGS
 il n
 in n
 dp y
 hs nn
 DISPLAY
 sp -250.0
 wp 4248.8
 vs 231
 sc 0
 wc 250
 hzmm 17.00
 is 31399.61
 rfl 5205.4
 rfp 3574.0
 th 7
 ins 1.000
 nm ph



(500 MHz, C₆D₆)

S128

7 6 5 4 3 2 1 0 ppm

STANDARD CARBON PARAMETERS

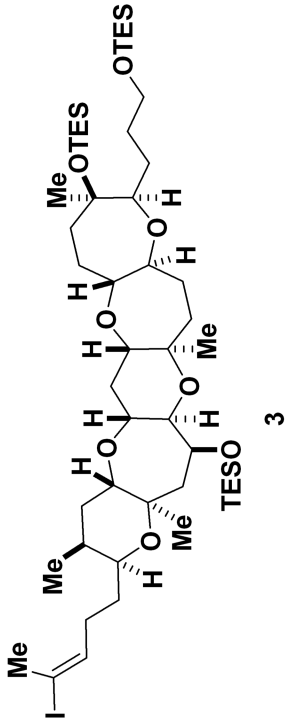
```

exp3 s2pul
SAMPLE DEC. & VT
date Jan 11 2006 dfrq 499.862
solvent Benzene dn H1
file /export/home/~ dpwr 27
vnmr1/vnmrSYS/data~ dof 0
/Sasaki_lab/Ebine/~ dm YYY
ebineIV-109-C.fid dnm w
ACQUISITION dmf 12579
sfrq 125.704 dseq
tn C13 dres 1.0
at 1.298 homo n
np 97994 temp 20.0
sw 37735.8 PROCESSING
fb not used lb 0.50
bs 16 wtfile
tpwr 61 proc ft
pw 5.3 fn 131072
d1 0.700 math f
tof 1883.8
nt 5120 werr
ct 480 wexp wft
alock n wbs wft
gain 56 wnt
  
```

S129

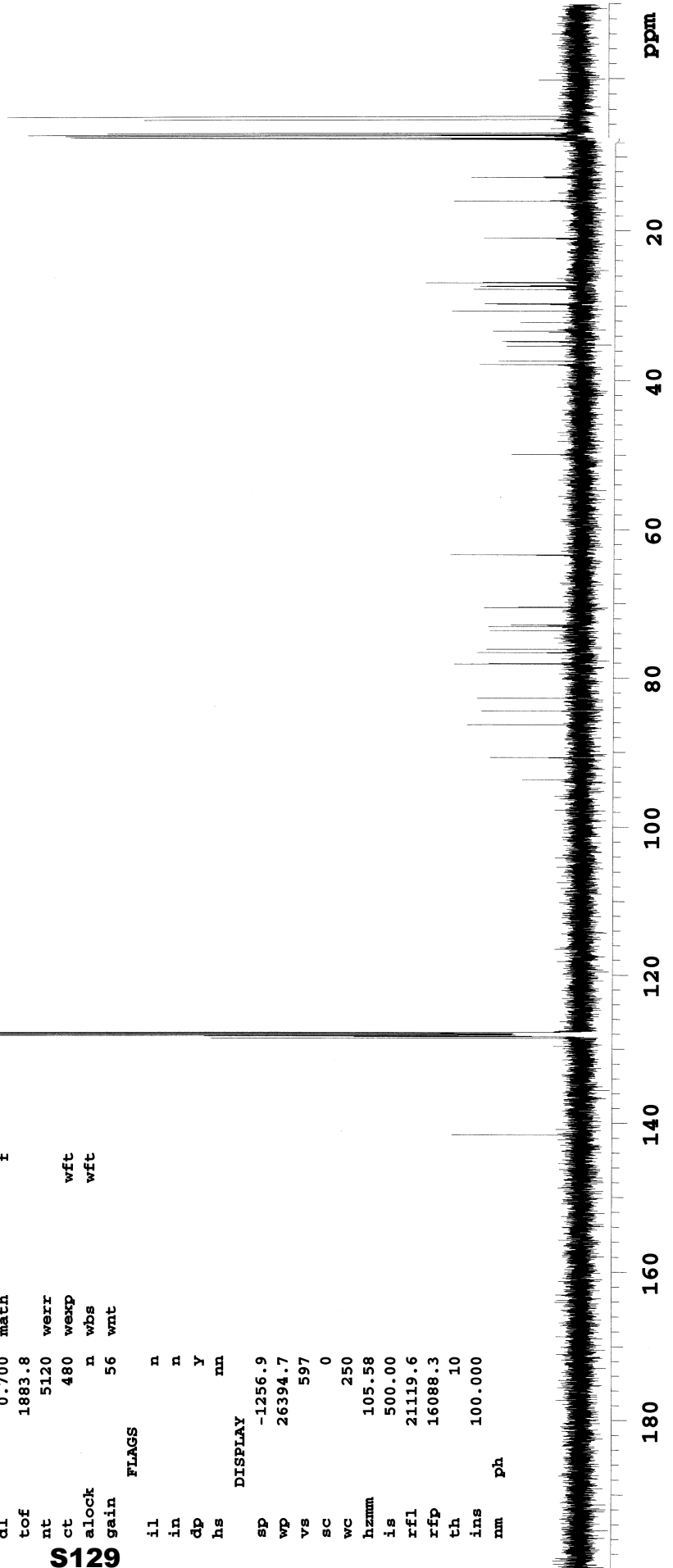
```

DISPLAY
sp -1256.9
wp 26394.7
vs 597
sc 0
wc 250
hzmm 105.58
is 500.00
rfl 21119.6
rfp 16088.3
th 10
ins 100.000
nm ph
  
```



3

(125 MHz, C₆D₆)



STANDARD PROTON PARAMETERS

exp2 s2pul

SAMPLE DEC. & VT
 date Jan 13 2006 dfrq 499.862
 solvent Benzene dn H1
 file /export/home/~ dpwr 30
 vnmr1/vnmrSYS/data~ dof 0
 /Sasaki_lab/Ebine/~ dm nnn
 ebineIV-110-postco~ dmm c
 lumu-H.fid dmf 200

ACQUISITION
 sfrq 499.862 dseq 1.0
 tn H1 homo n
 at 1.892 temp 20.0

PROCESSING

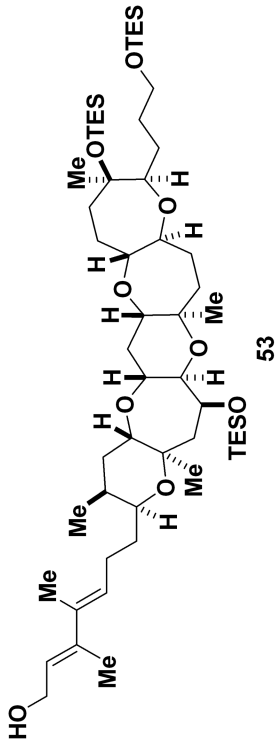
np 30272
 sw 8000.0 wfile
 fb not used proc lp
 bs 4 fn not used f
 tpwr 54 math
 pw 2.5
 d1 1.000 werr
 tof -140.0 wekp
 nt 128 wbs
 ct 128 wnt
 alock n
 gain not used
 wft

il n
 in n
 dp y
 hs nn

DISPLAY

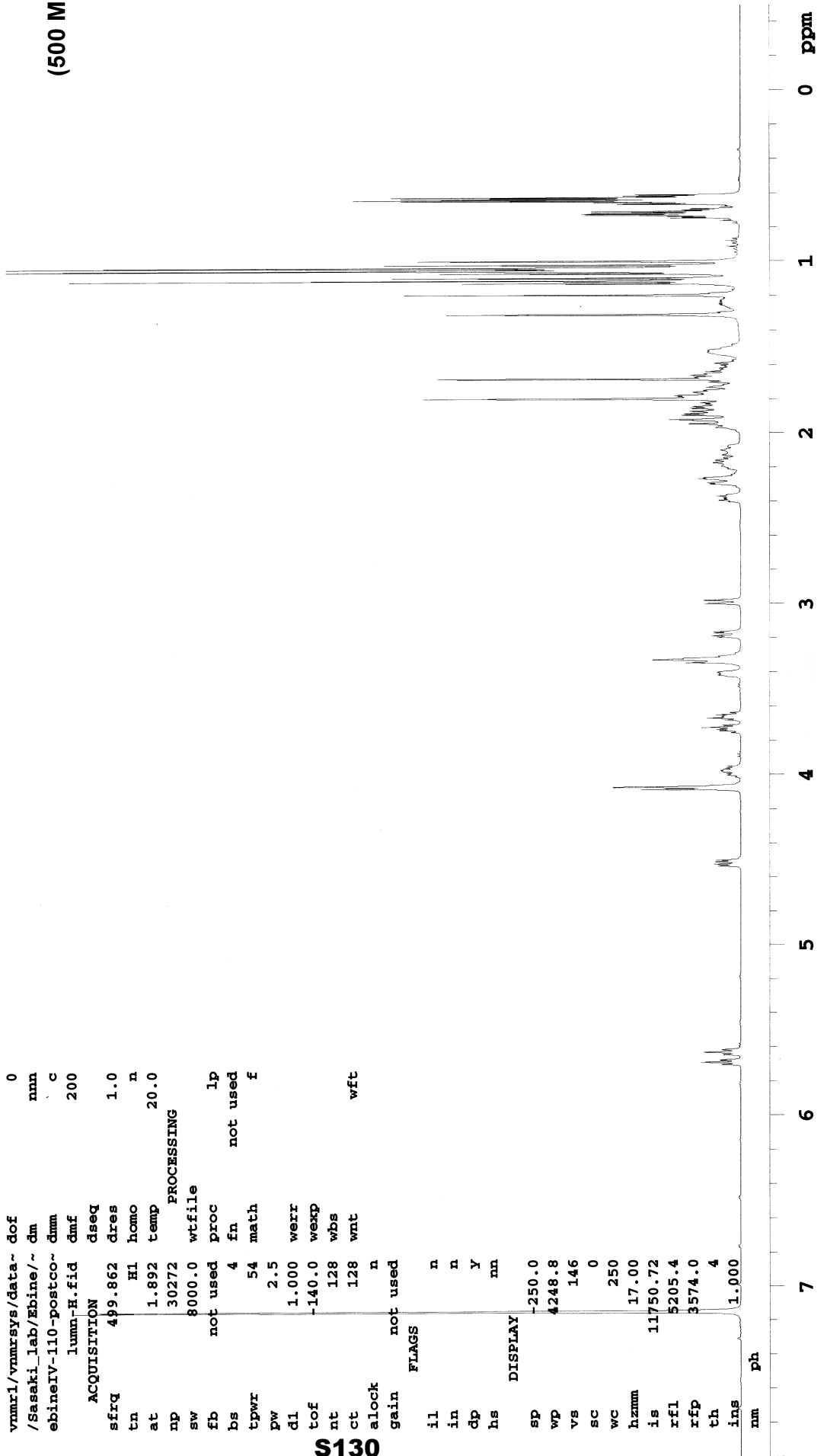
sp -250.0
 wp 4248.8
 vs 146
 sc 0
 wc 250
 hzmm 17.00
 is 11750.72
 rfl 5205.4
 rfp 3574.0
 th 4
 ins 1.000

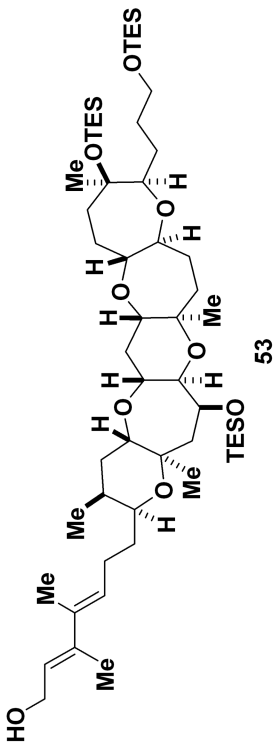
S130



53

(500 MHz, C₆D₆)





(125 MHz, C₆D₆)

TESO 53

STANDARD CARBON PARAMETERS

```

exp2 s2pul
SAMPLE DEC. & VT
date Jan 13 2006 dfrq 499.862
solvent Benzene dn H1
file /export/home/~ dpwr 27
vnmr1/vnmrSYS/data~ dof 0
/Sasaki_lab/Ebina/~ dm YYY
ebineIV-110-C.fid dnm w
ACQUISITION dmf 12579
sfrq 125.704 dseq
tn C13 dres 1.0
at 1.298 homo n
np 97994 temp 20.0
sw 37735.8 PROCESSING
fb not used lb 0.50
bs 16 wtfile
tpwr 61 proc ft
pw 5.3 fn 131072
d1 0.700 math f
tof 1883.8
nt 5120 werr
ct 400 wexp wft
alock n wbs wft
gain 56 wnt

```

FLAGS

```

il n
in n
dp y
hs nn

```

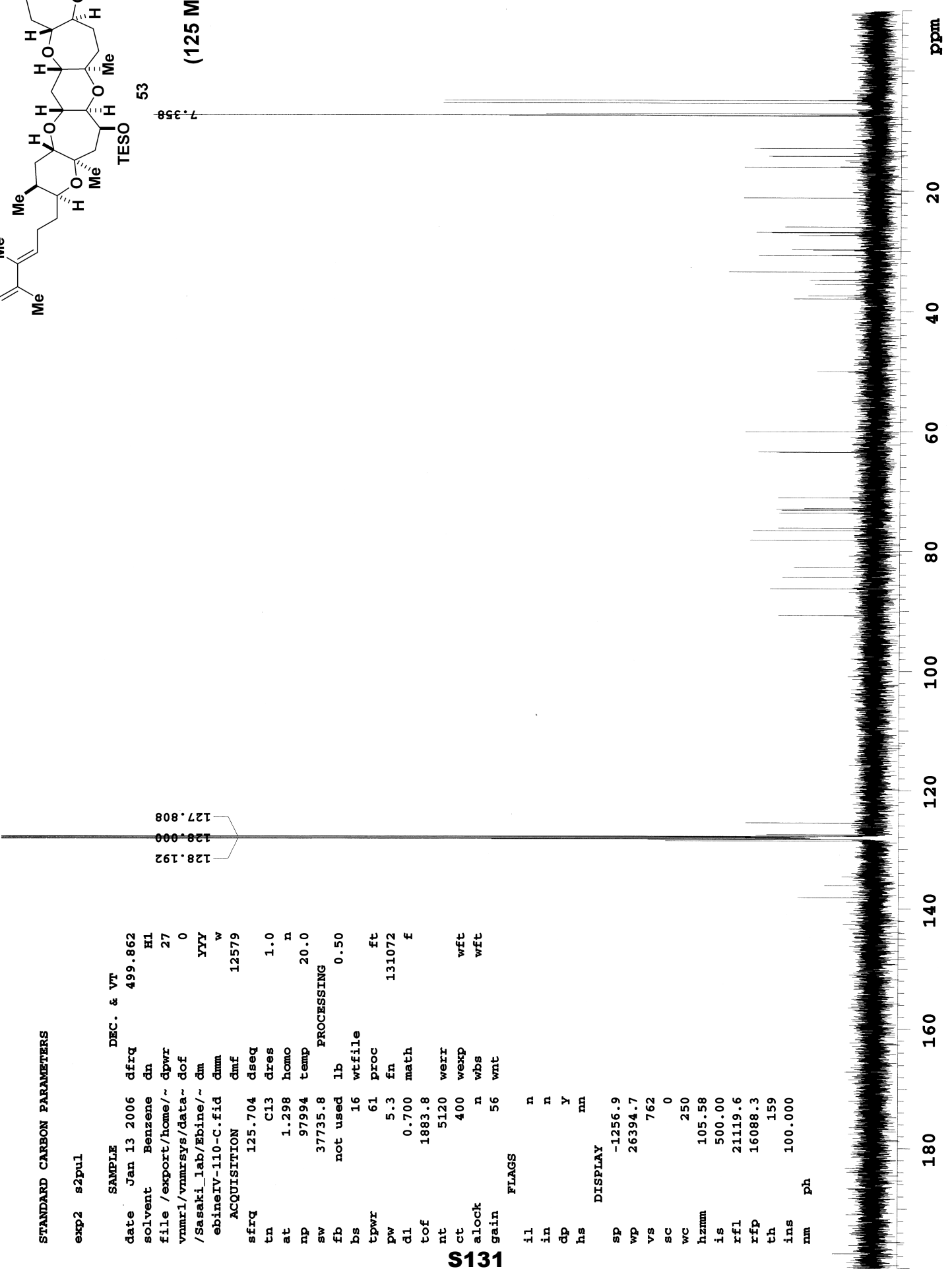
DISPLAY

```

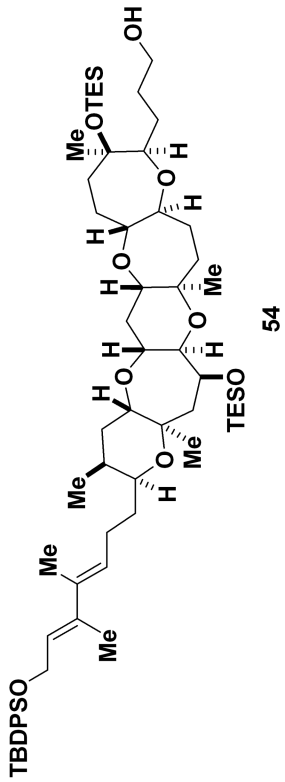
sp -1256.9
wp 26394.7
vs 762
sc 0
wc 250
hzmm 105.58
is 500.00
rfl 21119.6
rfp 16088.3
th 159
ins 100.000
nm ph

```

127.808
128.192
128.192



S131



(500 MHz, C₆D₆)

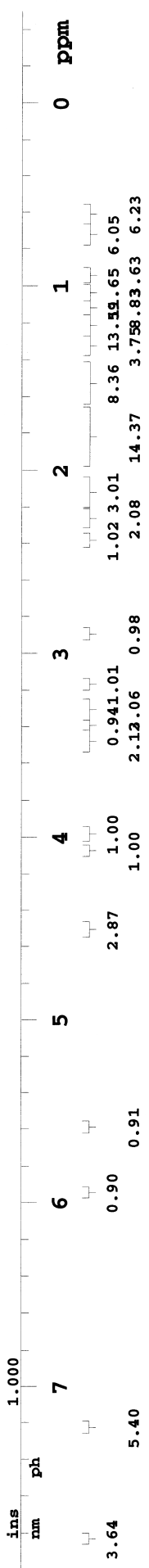
STANDARD PROTON PARAMETERS

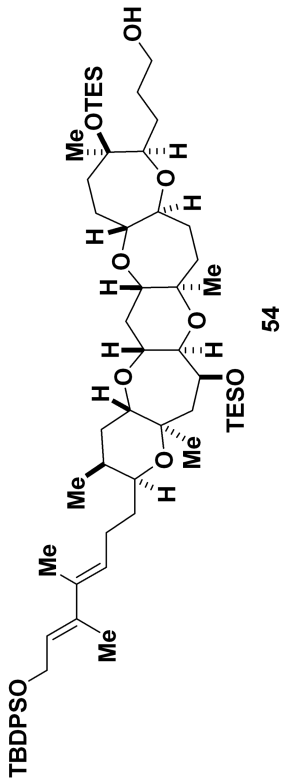
exp1 s2pul

SAMPLE	DEC. & VT
date Jun 11 2006	dfrq 499.862
solvent Benzene	dn H1
file exp	dpwr 30
ACQUISITION	dof 0
sfrq 499.862	dm nnn
tn H1	dmm c
at 1.892	dmf 200
np 30272	dseq
sw 8000.0	dres 1.0
fb not used	homo n
bs 4	temp 20.0
tpwr 54	PROCESSING
pw 2.5	wfile
d1 1.000	proc lp
tof -140.0	fn not used
nt 64	math f
ct 64	
alock n	werr
gain not used	wexp
FLAGS	wbs
il n	wnt
in n	
dp y	
hs nn	

DISPLAY

sp	-250.0
wp	4248.8
vs	140
sc	0
wc	250
hzmm	17.00
fs	18180.04
rfl	5205.9
rfp	3574.0
th	7
ins	1.000





(125 MHz, C₆D₆)

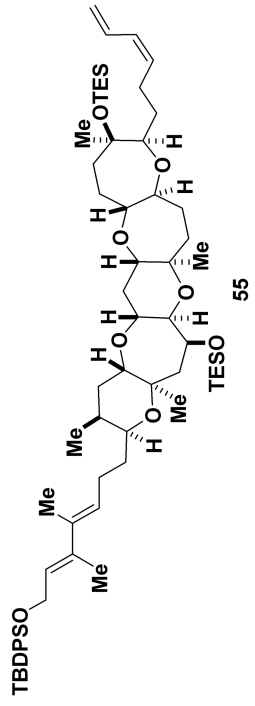
STANDARD CARBON PARAMETERS

```

exp3 s2pul
SAMPLE
date Jun 11 2006 dfreq 499.862
solvent Benzene d1 H1
file exp dpwr 27
ACQUISITION dof 0
sfrq 125.704 dm YFY
tn C13 dnm w
at 1.298 dmf 12579
np 97994 dseq
sw 37735.8 dres 1.0
fb not used homo n
bs 16 temp 20.0
tpwr 61 PROCESSING
pw 5.3 lb 0.50
d1 0.700 wfile
tof 1883.8 proc ft
nt 5120 fn 131072
ct 512 math f
alock n
gain 56 werr
il in n wexp wft
dp in n wbs wft
hs dp y
hs DISPLAY
sp -1256.9
wp 26394.7
vs 686
sc 0
wc 250
hzmm 105.58
is 500.00
xf1 21119.6
xfp 16088.3
th 9
ins 100.000
nm ph
  
```

S133





55

(125 MHz, C₆D₆)

STANDARD CARBON PARAMETERS

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

User: 1-14-87

INOVA-500 "varian"

Relax. delay 0.700 sec

Pulse 45.0 degrees

Acq. time 1.298 sec

Width 37735.8 Hz

1232 repetitions

OBSERVE C13, 125.6896927 MHz

DECOUPLE H1, 499.8618491 MHz

Power 27 dB

continuously on

WALTZ-16 modulated

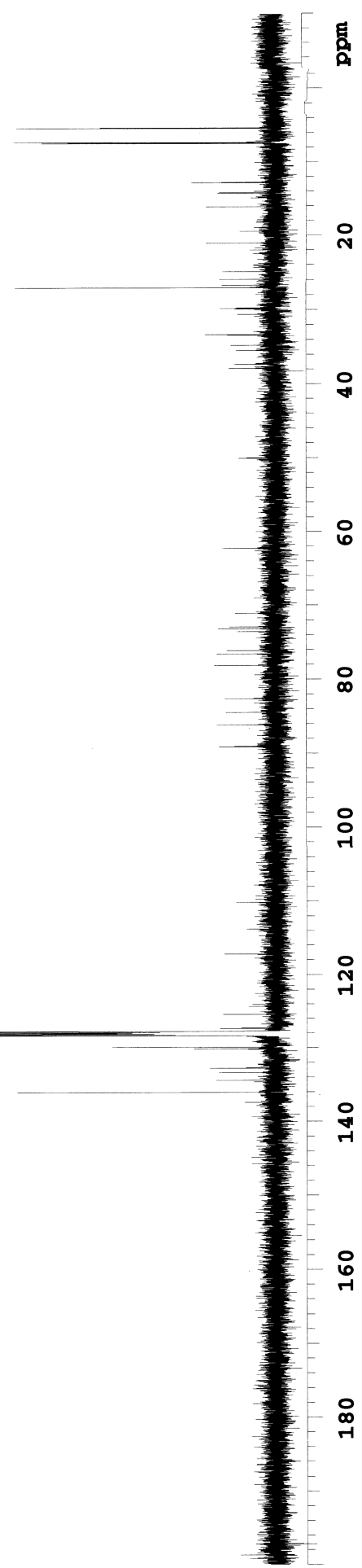
DATA PROCESSING

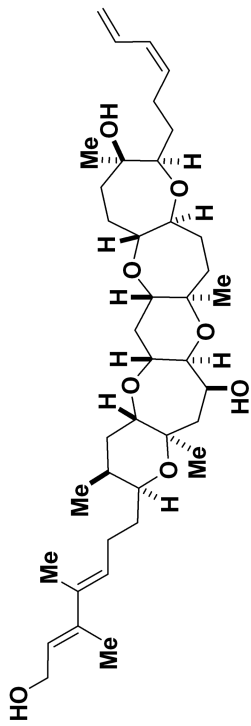
Line broadening 0.5 Hz

FT size 131072

Total time 2 hr, 51 min, 19 sec

S135





56

(150 MHz, C₆D₆)

C13 STD parameter

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

User: 1-14-87

INOVA-600 "inova600"

Relax. delay 1.00 sec

Pulse 45.0 degrees

Acq. time 0.867 sec

Width 34632.0 Hz

24832 repetitions

OBSERVE C13, 150.8482658 MHz

DECOUPLE H1, 599.9153002 MHz

Power 38 dB

continuously on

WALTZ-16 modulated

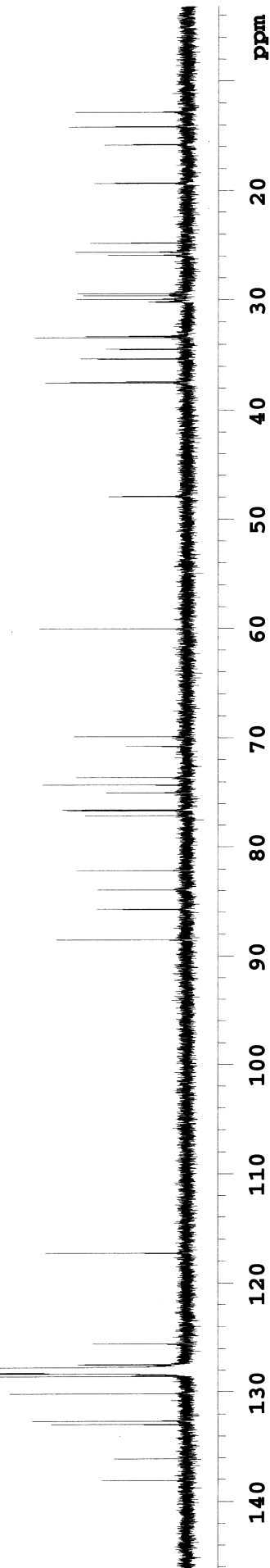
DATA PROCESSING

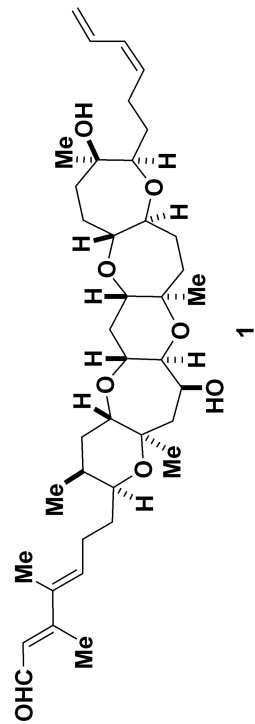
Line broadening 0.5 Hz

FT size 131072

Total time 26 hr. 3 min, 0 sec

S137





(500 MHz, C₆D₆)

STANDARD PROTON PARAMETERS

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

INOVA-500 "varian"

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 1.992 sec

Width 8000.0 Hz

128 repetitions

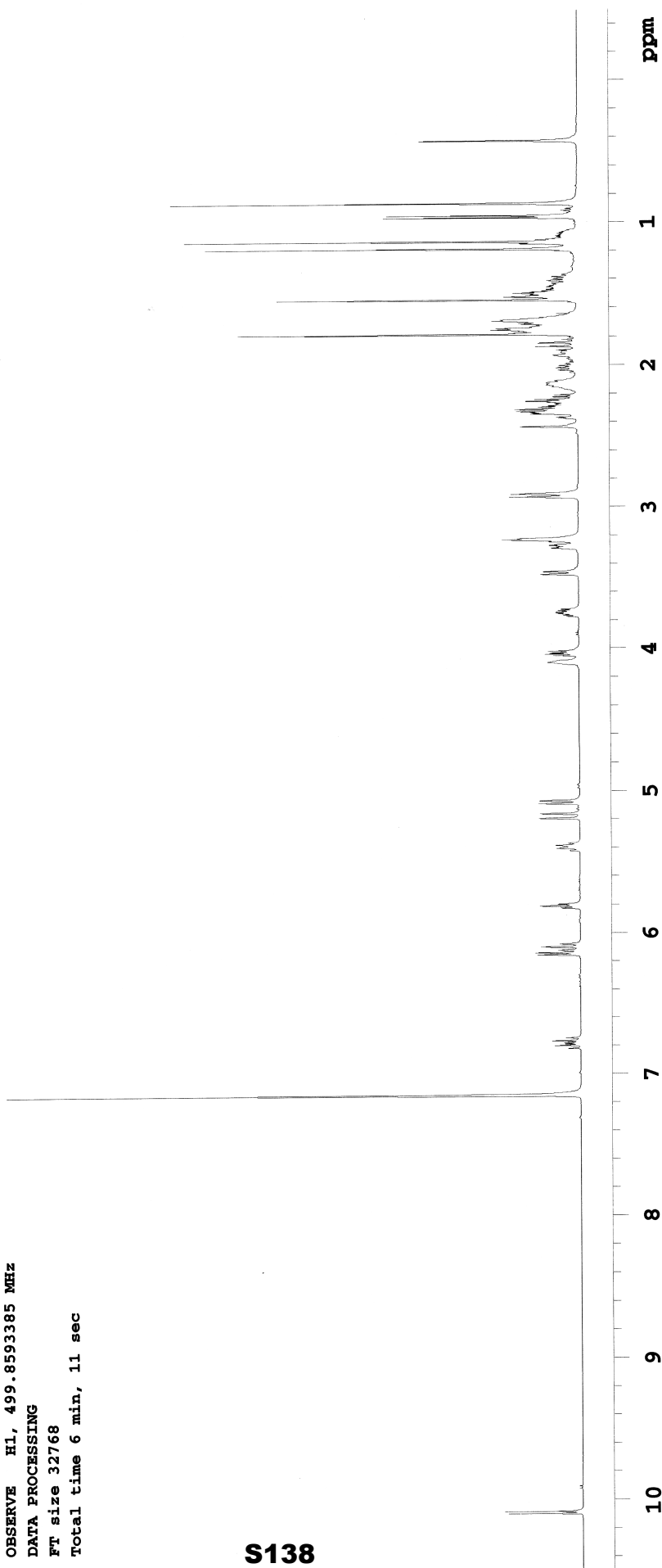
OBSERVE H1, 499.8593385 MHz

DATA PROCESSING

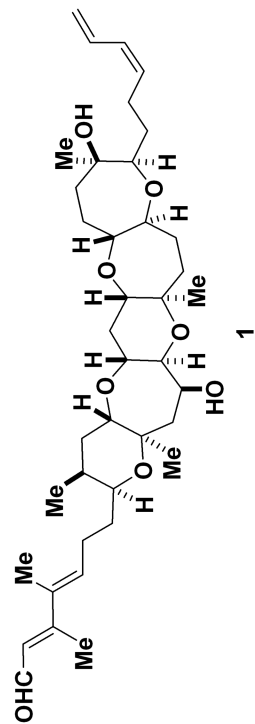
FT size 32768

Total time 6 min, 11 sec

S138



10 9 8 7 6 5 4 3 2 1 ppm



(125 MHz, C₆D₆)

STANDARD CARBON PARAMETERS

Pulse Sequence: s2pul

Solvent: Benzene

Temp. 20.0 C / 293.1 K

User: 1-14-87

INOVA-500 "varian"

Relax. delay 0.700 sec

Pulse 45.0 degrees

Acq. time 1.298 sec

Width 37735.8 Hz

20368 repetitions

OBSERVE C13, 125.6896933 MHz

DECOUPLE H1, 499.8618491 MHz

Power 27 dB

continuously on

WALTZ-16 modulated

DATA PROCESSING

Line broadening 0.5 Hz

FT size 131072

Total time 13 hr, 56 min, 32 sec

