

Supplementary Material

Bromodimethylsulfonium bromide (BDMS) catalyzed synthesis of 2,3-unsaturated-*O*-glycosides via Ferrier rearrangement

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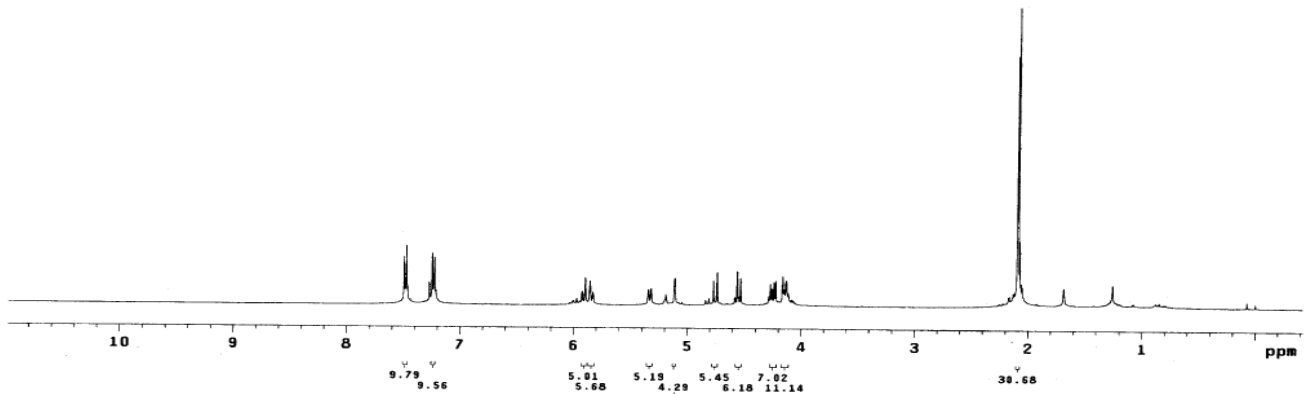
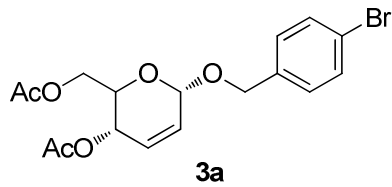
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**This paper is dedicated to my mentor, Prof. Dr. Richard R. Schmidt,
on the occasion of his 78th anniversary**

```

exp1 s2pu1
SAMPLE          SPECIAL
date Dec 3 2011 temp not used
solvent CDC13  gain not used
file           exp spin not used
ACQUISITION    hst 0.000
sw 8389.8      pw90 19.700
at 1.998       alfa 20.000
np 2528
fb not used    f1 11      FLAGS
bs 4           in 4       n
d1 1.000       dp 4       y
nt 64         hs 6       nn
ct
TRANSMITTER    lb 1b      fn 65536
tn             H1 1b      fn 65536
sfrq 399.853   sp 169.3  DISPLAY
tof 362.8      wp 4559.3
tpwr 57        rf1 790.6
pw 9.850       rfp 0
dn C13         rp 113.6
dof 0         lp -89.7
dm nnn         PLOT
dmm c         wc 250
dpuv 50       sc 0
dwt 15900     vs 60
                th 60
                nm cdc ph 20

```

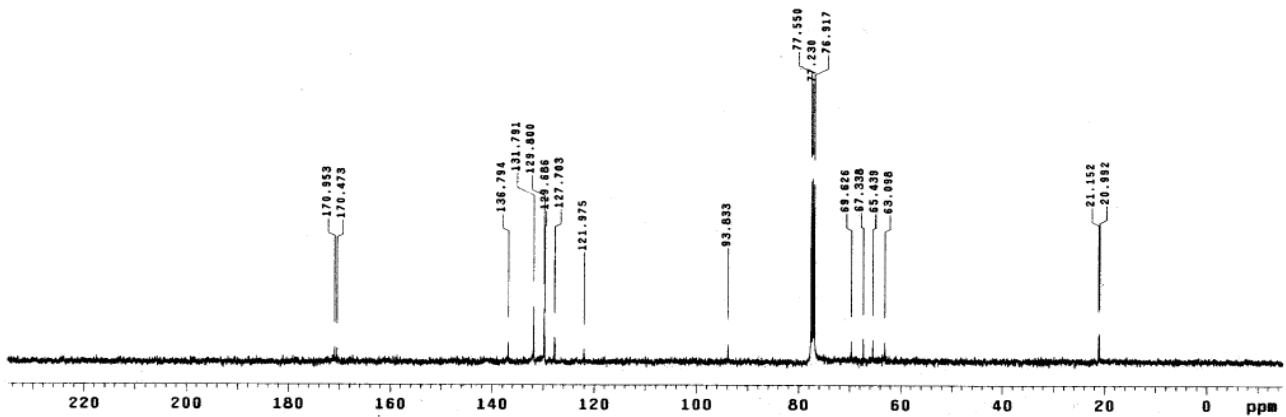
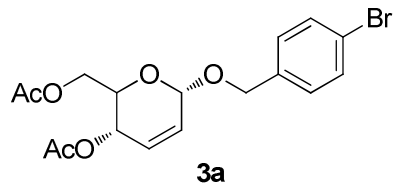


V

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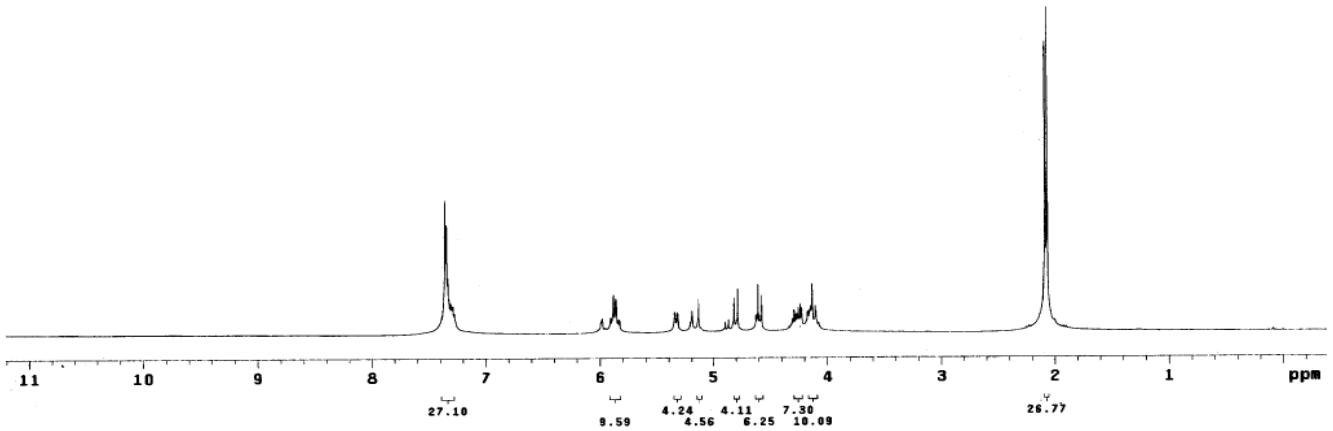
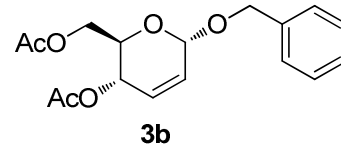
RSB_P5_S1
exp1 s2pu1
SAMPLE          SPECIAL
date Dec 4 2011 temp not used
solvent CDC13  gain not used
file           exp spin not used
ACQUISITION    hst 0.000
sw 25125.6     pw90 18.600
at 1.199       alfa 20.000
np 60270
fb 13800       f1 11      FLAGS
bs 10         in 4       n
d1 1.000       dp 4       y
nt 6000       hs 6       nn
ct
TRANSMITTER    lb 1b      fn 65536
tn             C13 1b      fn 65536
sfrq 100.554   sp 1587.2  DISPLAY
tof 1536.3     wp 25125.6
tpwr 61        rf1 9272.1
pw 9.300       rfp 7764.9
dn H1         rp -39.6
dof 0         lp -271.4
dm yyy        PLOT
dmm w         wc 250
dpuv 42       sc 0
dwt 8900     vs 38
                th 38
                nm no ph 3

```



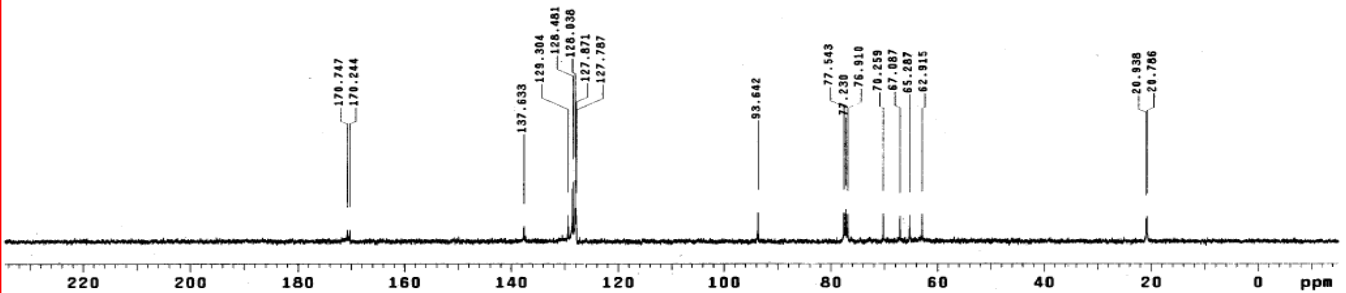
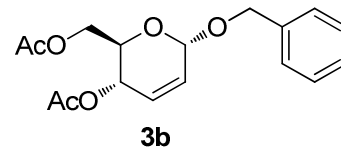
expt s2pu1

```
SAMPLE          SPECIAL
date Jan 24 2012 temp not used
solvent CDC13   gain not used
file exp       spin not used
ACQUISITION    hst  0.000
sw  4388.0     pw90 19.700
at  1.998     a1fa 20.000
np  25528
fb not used   l1    n
bs  4         in    n
d1  1.000    dp    y
nt  32       hs    nn
ct  32
TRANSMITTER    lb    0.10
tn             fn    65536
sfrq  399.853 sp    DISPLAY -152.5
tof  362.8   wp    4635.5
tpwr  57     rfl    786.0
pw  9.850   rfp    0
DECOUPLER      C13  rp    113.9
dn             lp    -97.5
dm             nnn  PLOT  250
dmm           c    wc    250
dpwr         50   sc    0
daf         15900 vs    93
                        th    18
                        nm    cdc_ph
```



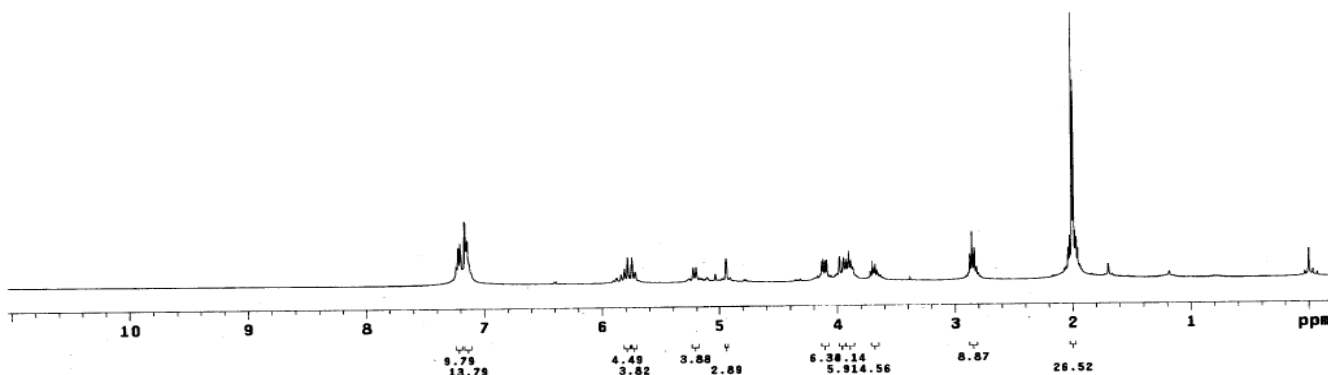
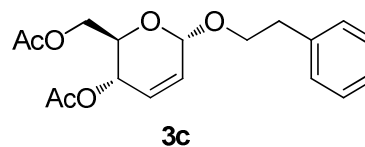
expt s2pu1

```
SAMPLE          SPECIAL
date Jan 24 2012 temp not used
solvent CDC13   gain not used
file exp       spin not used
ACQUISITION    hst  0.000
sw  25125.6    pw90 18.600
at  1.199     a1fa 20.000
np  60270
fb  13000    l1    n
bs  10       in    n
d1  1.000    dp    y
nt  5000     hs    nn
ct  290
TRANSMITTER    lb    2.00
tn             fn    65536
sfrq  100.554 sp    DISPLAY -1525.6
tof  1536.3   wp    25125.6
tpwr  61     rfl    3290.5
pw  9.300   rfp    7784.9
DECOUPLER      C13  rp    -88.6
dn             lp    -271.4
dm             yyy  PLOT  250
dmm           w    wc    250
dpwr         42   sc    0
daf         8900 vs    13
                        th    2
                        nm    no_ph
```



exp13 s2d1h

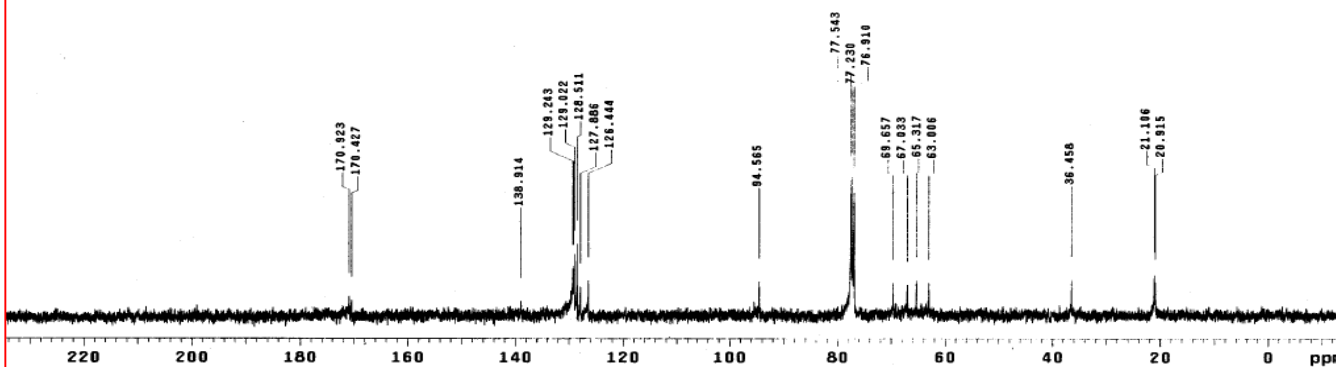
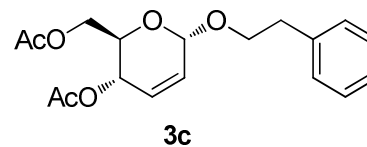
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SAMPLE SPECIAL
date Jan 29 2012 temp not used
solvent CDC13 gain not used
file exp sp in not used
ACQUISITION exp hst 0.000
sw 5006.0 pw90 19.700
at 1.995 alfa 20.000
np 23964
fb not used ll
bs 4 in n
d1 1.000 dp y
nt 32 hs
ct 32
TRANSMITTER fn not used
tn H1 DISPLAY
sfrq 399.653 sp -93.1
tof 0 wp 4506.2
tpwr 57 rfl 982.6
pw 7.000 rfp 0
DECOUPLER C13 rp 105.5
dn 0 lp -84.9
dof 0 PLOT
dm nnn wc 250
dmm c sc 0
dppr 50 vs 57
dmf 15900 th 17
nm cdc ph
```



RSB_P5_S9

exp1 s2pu1

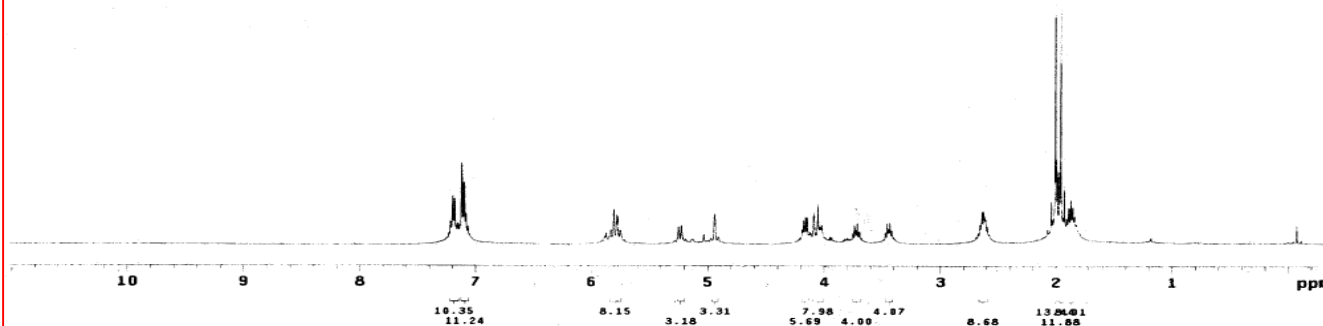
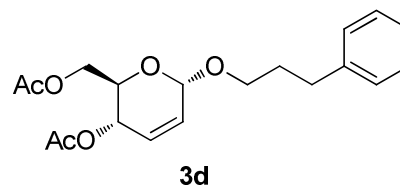
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SAMPLE SPECIAL
date Jan 24 2012 temp not used
solvent CDC13 gain not used
file exp sp in not used
ACQUISITION exp hst 0.000
sw 25125.6 pw90 18.600
at 1.199 alfa 20.000
np 68279
fb 13800 ll
bs 10 in n
d1 1.000 dp y
nt 5000 hs
ct 2340
TRANSMITTER lb PROCESSING 2.00
tn C13 fn DISPLAY 65536
sfrq 100.554 sp -1512.6
tof 1536.3 wp 25125.6
tpwr 61 rfl 9277.5
pw 9.300 rfp 7784.9
DECOUPLER H1 rp -88.6
dn 0 lp -271.4
dof 0 PLOT
dm yyy wc 250
dmm w sc 0
dppr 42 vs 36
dmf 8900 th 3
nm no ph
```



```

RSB_P5_S4
expl s2pu1
SAMPLE SPECIAL
date Dec 30 2011 temp not used
solvent CDCl3 gain not used
file /export/home/ spin not used
ciftemp/RSB_P5_S4_ hst 0.000
1H-Flid pw90 19.700
ACQUISITION alfa 20.000
sw 6309.8
at 1.998 f1 n
np 25528 in n
fb not used dp y
bs 4 hs n
d1 1.000 PROCESSING 0.10
nt 32 fb 65536
ct 32 fn
TRANSMITTER H1 sp DISPLAY -161.1
sfrq 399.853 wp 4567.6
tof 362.0 rfl 824.3
tpwr 57 rfp 0
pw 9.850 rp 111.0
DECOUPLER C13 lp PLOT -96.6
dn 0 wc 250
dm nnn sc 0
dmm c vs 50
dpwr 50 th 35
daf 15900 nm cdc ph

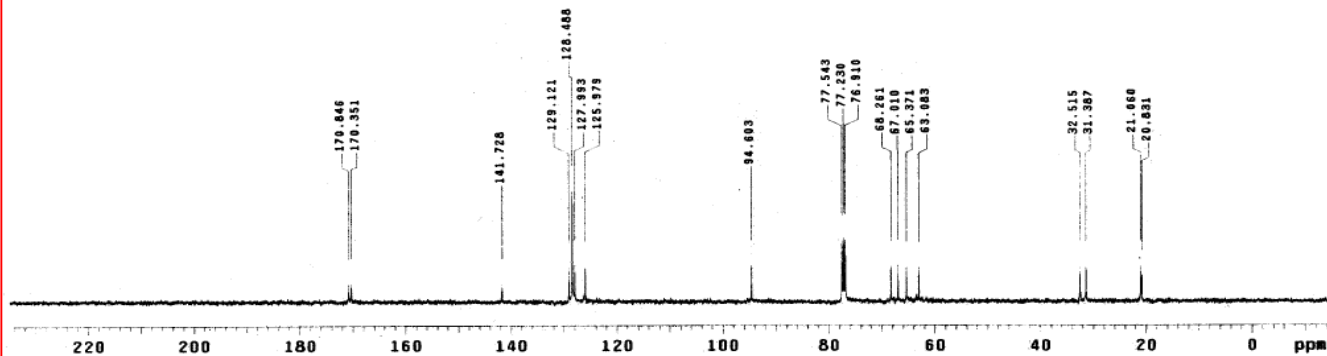
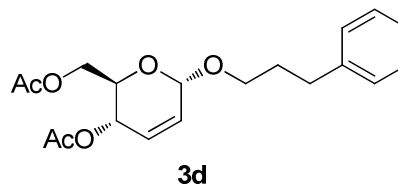
```



```

RSB_P5_S4
expl s2pu1
SAMPLE SPECIAL
date Dec 29 2011 temp not used
solvent CDCl3 gain not used
file /export/home/ exp spin not used
ACQUISITION hst 0.000
sw 25125.6 pw90 18.600
at 1.199 alfa 20.000
np 60270
fb 13000 f1 n
bs 10 in n
d1 1.000 dp y
nt 5000 hs nn
ct 840 PROCESSING 2.00
TRANSMITTER C13 fn 65536
sfrq 100.554 DISPLAY -1518.7
tof 1536.3 sp 25125.6
tpwr 61 rfl 9283.6
pw 9.300 rfp 7264.9
DECOUPLER H1 rp -66.0
dn 0 lp PLOT -355.7
dm yyv wc 250
dmm w sc 0
dpwr 42 vs 22
daf 8900 th 3
nm no ph

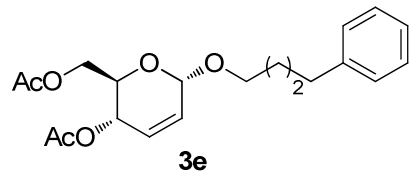
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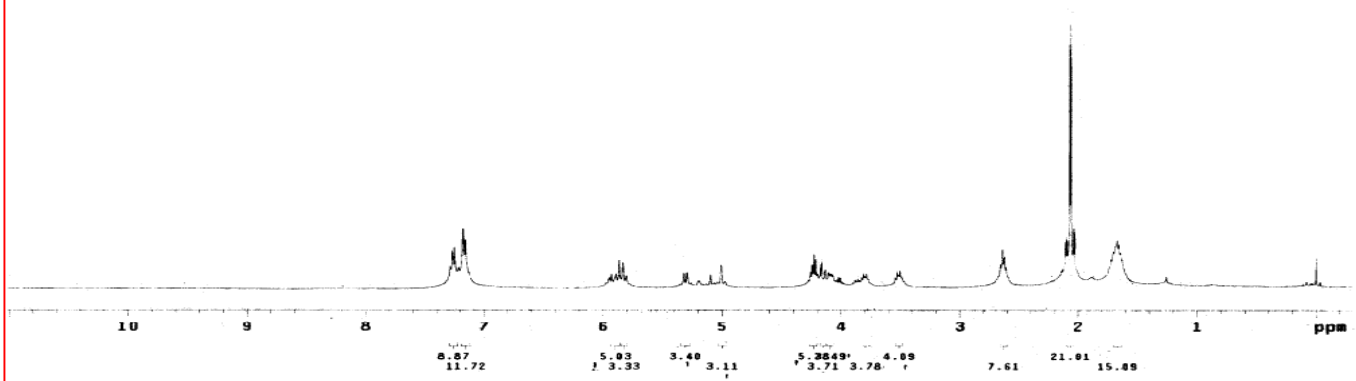
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exp1 s2pu1
SAMPLE
date Jan 3 2012 temp SPECIAL
solvent CDC13 gain not used
file /export/home/~ spin not used
ciftemp/RSB_P5_S5_ hst 0.008
IM.FID pw90 19.700
ACQUISITION alfa 20.000
sw 6389.8 FLAGS n
at 1.999 il n
nd 25528 in n
fb not used dp n
bs 4 hs nn
d1 1.000 PROCESSING nn
nt 32 lb 0.10
ct 32 fn 65536
TRANSMITTER H1 sp DISPLAY -123.6
tfrq 399.853 wp 4525.7
tof 362.8 rF1 795.2
tpwr 57 rfp 0
pw 9.850 rp 113.5
DECOUPLER C13 lp PLOT -103.3
dn 0 wc 250
dof nnn sc 0
dmc c vs 62
dpwr 50 th 20
daf 15900 nm cdc ph

```



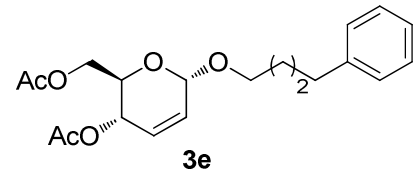
3e



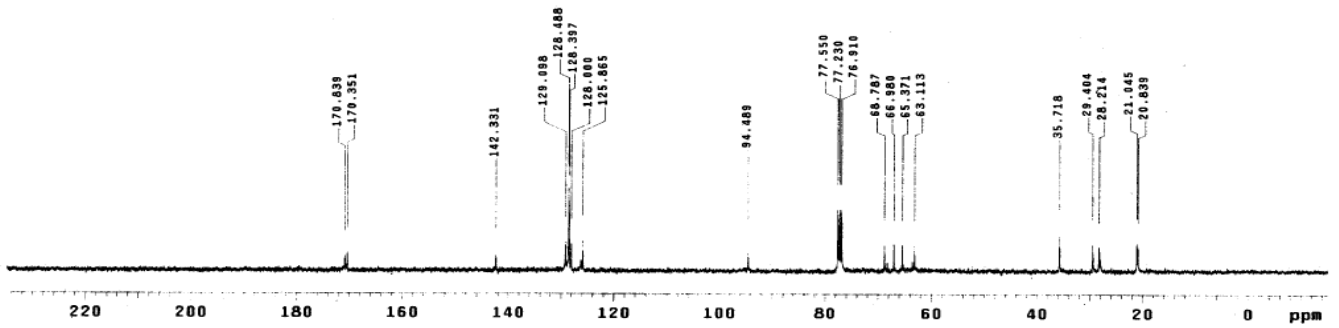
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RSB_P5_S5
exp1 s2pu1
SAMPLE
date Jan 3 2012 temp SPECIAL
solvent CDC13 gain not used
file /export/home/~ spin not used
ACQUISITION exp spin not used
IM.FID pw90 19.700
at 1.999 alfa 20.000
sw 25125.6 FLAGS n
np 68270 il n
fb 13800 in n
bs 10 dp n
d1 1.000 hs nn
nt 5000 PROCESSING nn
ct 1210
TRANSMITTER H1 sp DISPLAY -1510.7
tfrq 180.554 wp 25125.6
tof 1536.3 rF1 9283.6
tpwr 61 rfp 7764.9
pw 9.300 rp -84.3
DECOUPLER C13 lp PLOT -294.2
dn 0 wc 250
dof yyy vs 17
dmc 42 sc 0
dpwr 8900 th 3
daf nm no ph

```



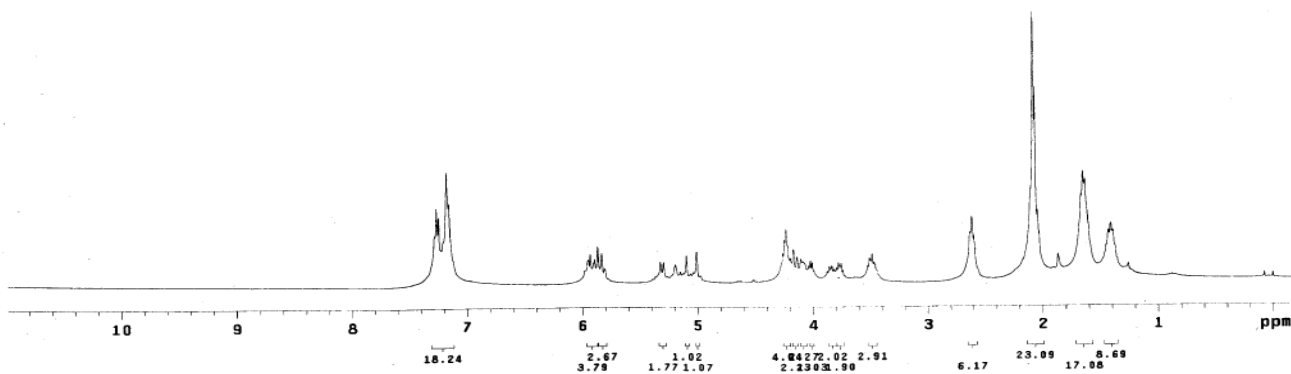
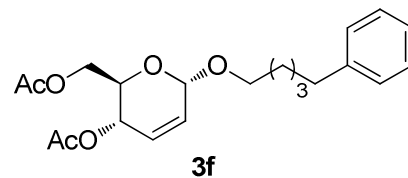
3e



STANDARD 1H OBSERVE

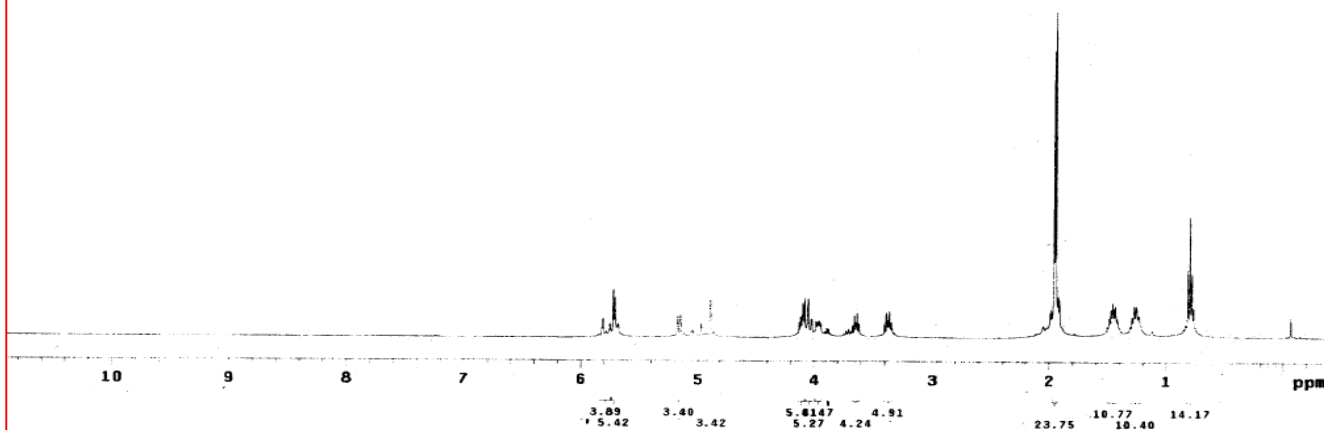
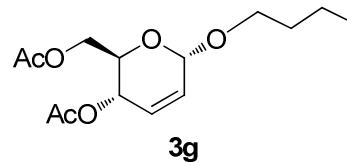
exp13 std1h

SAMPLE		SPECIAL	
date	Jan 28 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		hst	0.000
sw	6006.0	pw90	19.700
at	1.395	alfa	20.000
np	23964		
fb	not used	ll	n
bs	4	in	n
dl	1.000	dp	y
nt	32	hs	nn
ct			
TRANSMITTER		fn	not used
tn	H1	fn	not used
sfrq	399.853	sp	-81.4
tof	0	wp	4474.7
tpwr	57	rfl	965.3
pw	7.000	rfp	0
DECOUPLER		rp	114.3
dn	C13	lp	-97.7
dof	0		
dm	nnn	wc	250
dmm	c	sc	0
dpwr	50	vs	61
dwt	15900	th	67
		nm	cdc ph



exp1 s2pu1

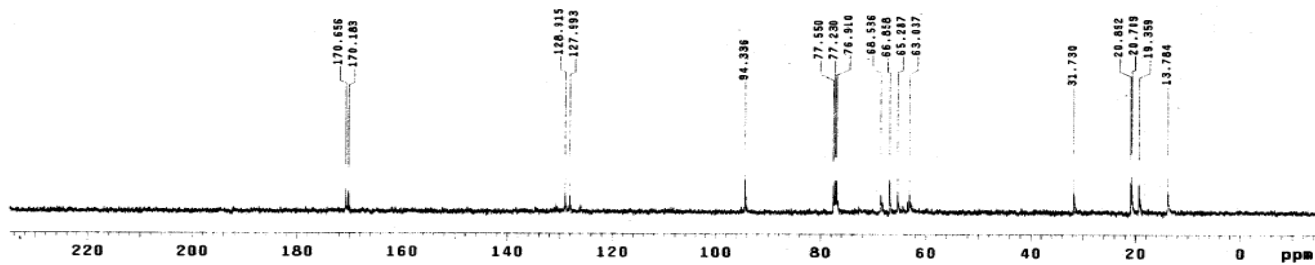
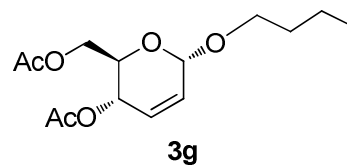
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date	Jan 28 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		hst	0.000
sw	6389.8	pw90	19.700
at	1.998	alfa	20.000
np	25528		
fb	not used	ll	n
bs	4	in	n
dl	1.000	dp	y
nt	32	hs	nn
ct			
TRANSMITTER		fn	not used
tn	H1	fn	not used
sfrq	399.853	sp	-155.7
tof	362.0	wp	4559.3
tpwr	57	rfl	803.8
pw	9.050	rfp	0
DECOUPLER		rp	118.5
dn	C13	lp	-105.1
dof	0		
dm	nnn	wc	250
dmm	c	sc	0
dpwr	50	vs	71
dwt	15900	th	36
		nm	cdc ph



```

exp1 s2pu1
SAMPLE
date Jan 17 2012 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 25125.6 pw90 10.000
at 1.299 alpha 20.000
np 88270
fb 13000
bs 10
dl 1.000 dp
nt 5000 hs
ct 190
TRANSMITTER lb fn
tn C13 fb 2.00
sfrq 100.554 fn 65536
tof 1536.3 sp DISPLAY -1518.7
tpwr 61 wp 25125.6
pw 9.300 rf1 9283.0
DECOUPLER rf2 7764.0
dn H1 rp -80.6
dof 0 lp PLOT -271.4
dm w wc 250
dpc 42 sc 0
dpr 8900 vs 0
daf th 4
nm no ph 4

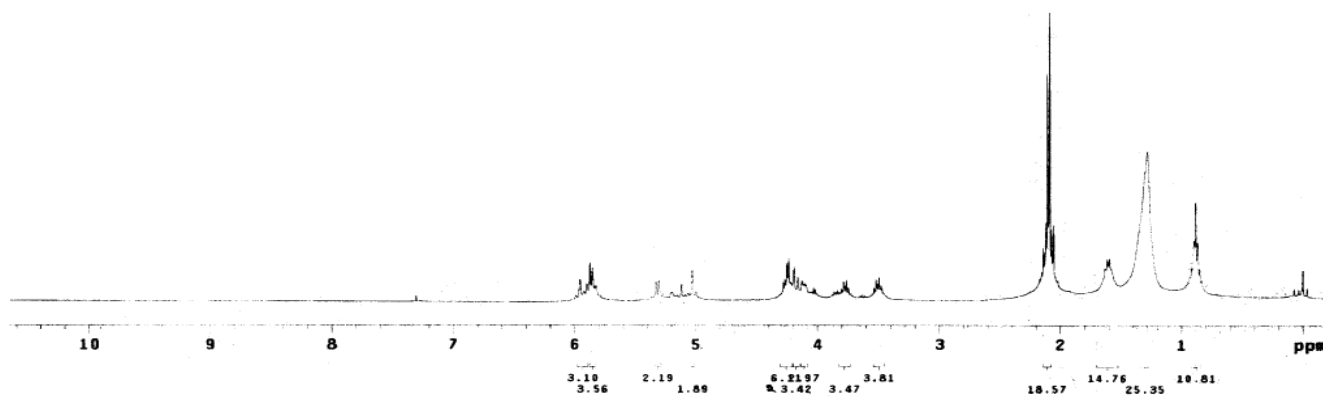
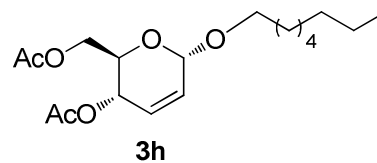
```



```

exp1 stdih
SAMPLE
date Jan 13 2012 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 600.0 pw50 15.700
at 1.995 alpha -20.000
np 23964
fb not used
bs 4
dl 1.000 dp
nt 32 hs
ct 32
TRANSMITTER fn
tn H1 fb not used
sfrq 399.853 sp DISPLAY -95.7
tof 0 wp 4350.3
tpwr 57 rf1 948.0
pw 7.000 rf2 0
DECOUPLER rf3 119.3
dn C13 lp PLOT -124.0
dof 0 wc 250
dm nnc c sc 0
dpc 50 vs 60
dpr 15900 th 24
daf nm cdc ph 4

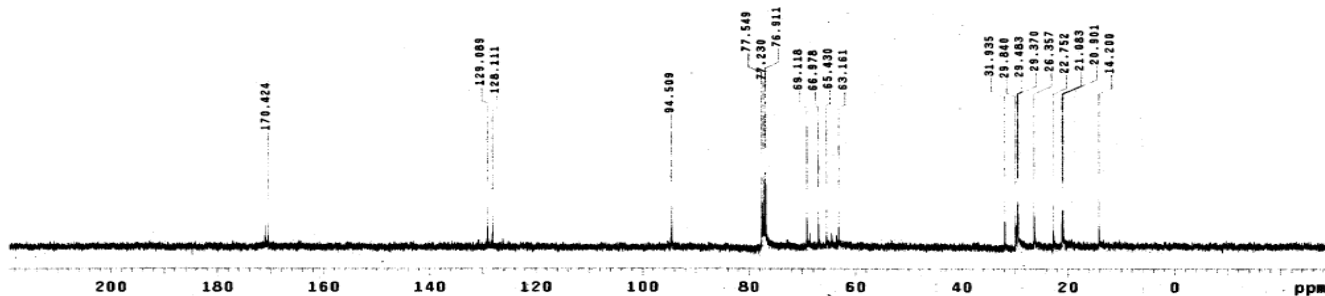
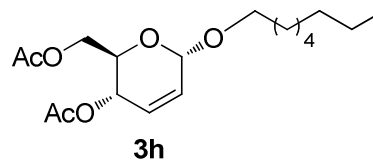
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RSB_PS_S7

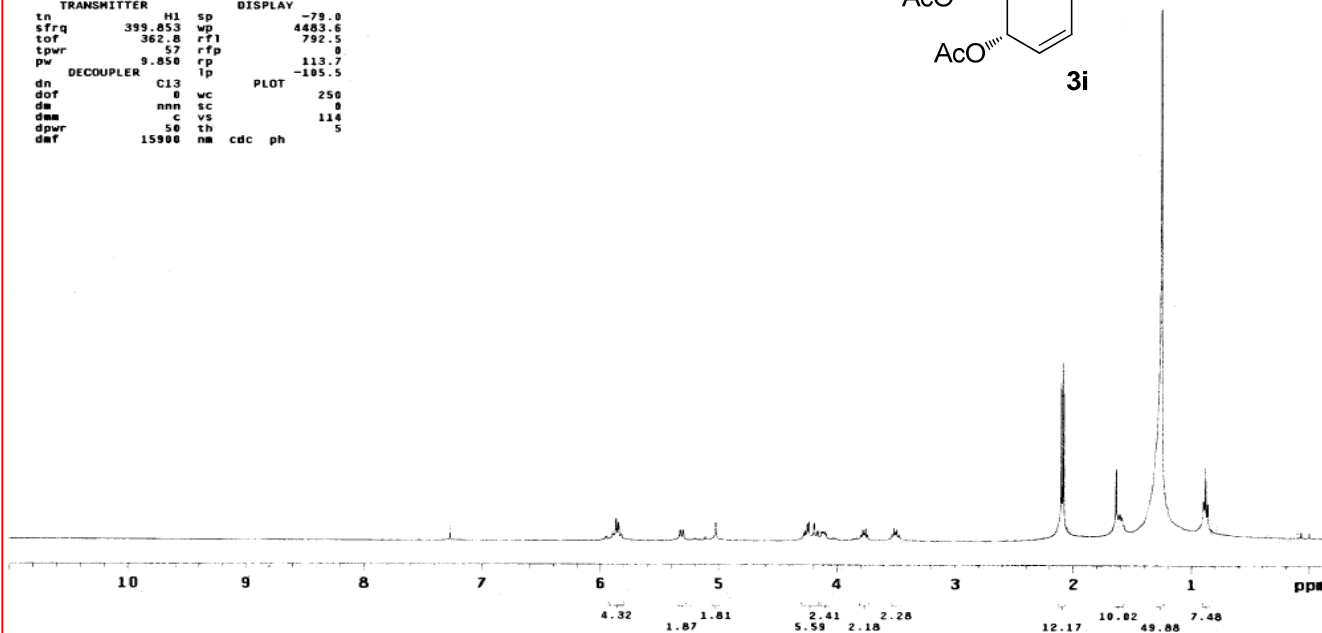
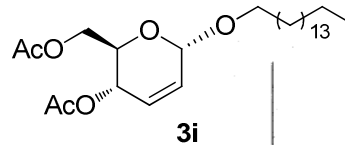
expt std13c

SAMPLE		SPECIAL	
date	Jan 12 2012	temp	not used
solvent	CDC13	gain	not used
file		spin	not used
ACQUISITION		hst	0.000
sw	25000.0	pw90	18.000
at	1.189	alfa	-20.000
np	59268	FLAGS	n
fb	13800	l1	n
bs	10	in	n
d1	0	dp	y
nt	5000	hs	nn
ct	1660	PROCESSING	nn
TRANSMITTER		lb	1.00
tn	C13	fn	not used
sfrq	100.552	DISPLAY	
tof	0	sp	-2983.7
tpwr	61	wp	25000.0
pw	8.667	rfl	10748.6
DECOUPLER		rtp	7764.9
dn	H1	rp	-114.4
dof	0	lp	-270.0
dm	yyy	PLOT	
dmm	w	wc	250
dpwr	42	sc	0
daf	8500	vs	16
		th	5
		nm	no ph



expt s2pu1

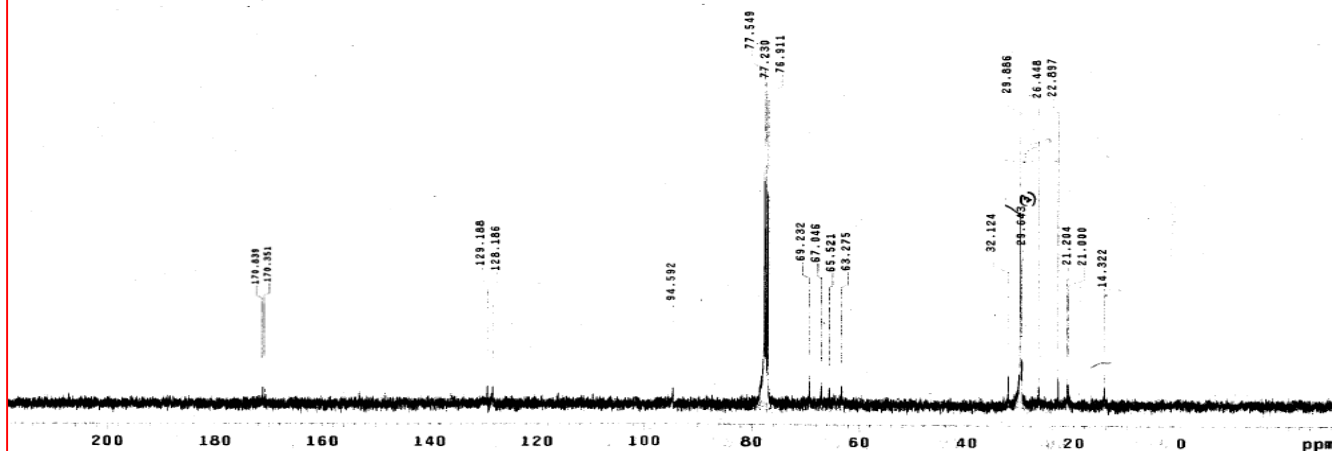
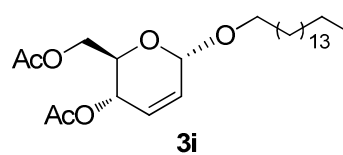
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date	Jun 16 2011	temp	not used
solvent	CDC13	gain	not used
file	/export/home/~	spin	not used
ciftemp	RSB_P4_S2	hst	0.000
ACQUISITION		pw90	19.700
sw	6389.8	alfa	20.000
at	1.996	FLAGS	n
np	25528	in	n
fb	not used	dp	y
bs	4	hs	nn
d1	1.000	PROCESSING	
nt	64	lb	0.10
ct	64	fn	65536
TRANSMITTER		DISPLAY	
tn	H1	sp	-79.0
sfrq	399.853	wp	4483.6
tof	362.8	rfl	792.5
tpwr	57	rtp	0
pw	9.850	rp	113.7
DECOUPLER		lp	-109.5
dn	C13	PLOT	
dof	0	wc	250
dm	nmn	sc	0
dmm	C	vs	114
dpwr	50	th	5
daf	15900	nm	cdc ph



13C OBSERVE

expl std13c

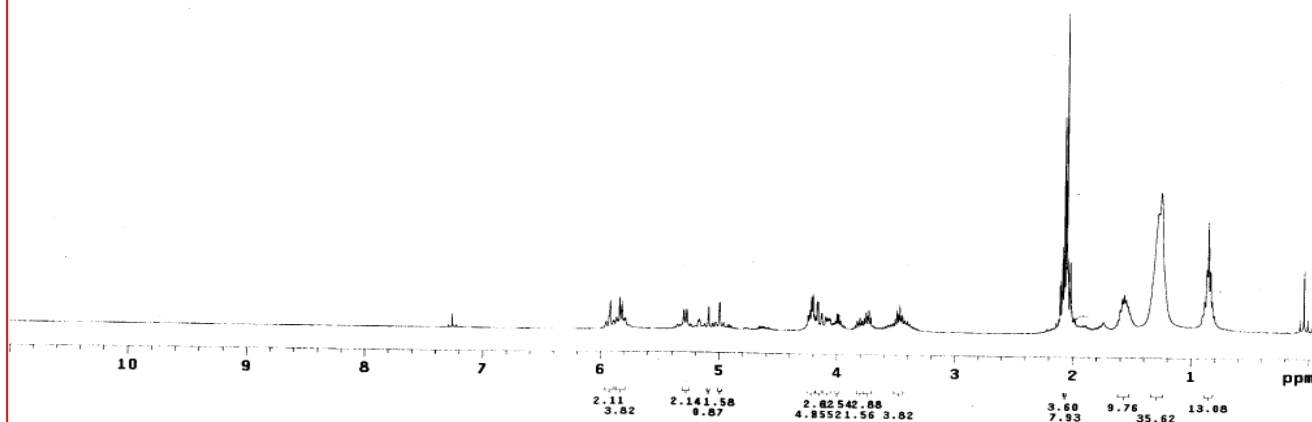
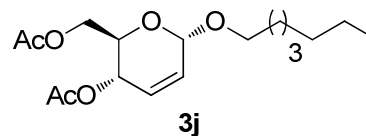
SAMPLE		SPECIAL	
date	Jan 16 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		exp	hst
sw	25000.0	pw90	18.000
at	1.199	altfa	20.000
np	59968	FLAGS	
fb	13800	i1	n
bs	10	in	n
d1	0	dp	y
nt	15000	hs	nn
ct	11790	PROCESSING	
TRANSMITTER		lb	1.00
tn	C13	fn	not used
sfrq	100.532	DISPLAY	
tof	0	sp	-2979.1
tpwr	61	wp	25000.0
pw	8.687	rfl	10744.0
DECOUPLER		rfp	7764.9
dn	H1	rp	-75.5
dof	0	lp	-297.7
dm	vyv	wc	250
dwm	42	sc	0
dpwr	8900	vs	55
dmf		th	3
		na	no ph



RSB_PS_S13

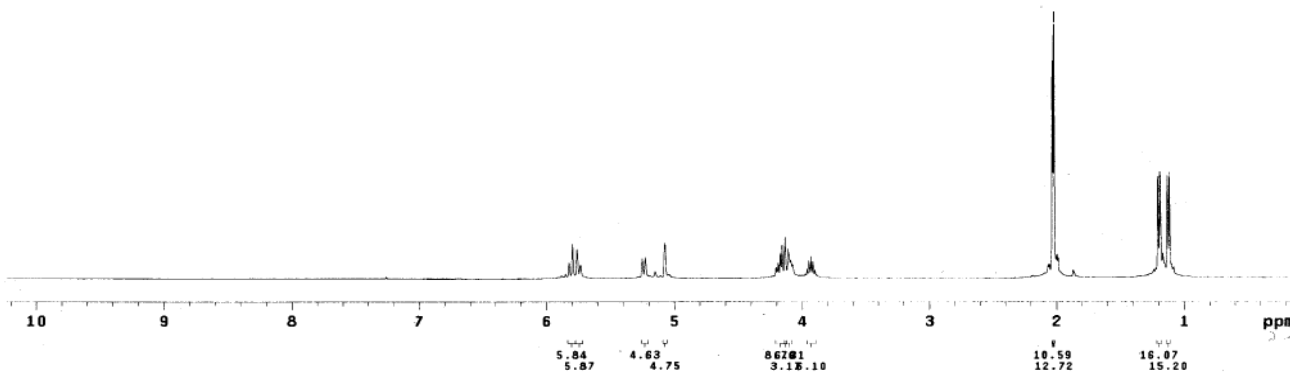
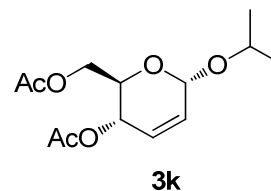
expl s2pu1

SAMPLE		SPECIAL	
date	Mar 27 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		exp	hst
sw	8369.8	pw90	18.700
at	1.998	altfa	20.000
np	25528	FLAGS	
fb	not used	i1	n
bs	4	in	n
d1	1.000	dp	y
nt	32	hs	nn
ct	32	PROCESSING	
TRANSMITTER		lb	0.10
tn	H1	fn	85536
sfrq	399.853	DISPLAY	
tof	362.8	sp	-40.1
tpwr	57	wp	4441.7
pw	9.850	rfl	795.8
DECOUPLER		rfp	0
dn	C13	rp	111.7
dof	0	lp	-108.3
dm	nnn	wc	250
dwm	c	sc	0
dpwr	50	vs	71
dmf	15900	th	20
		na	cdc ph



exp1 s2pu1

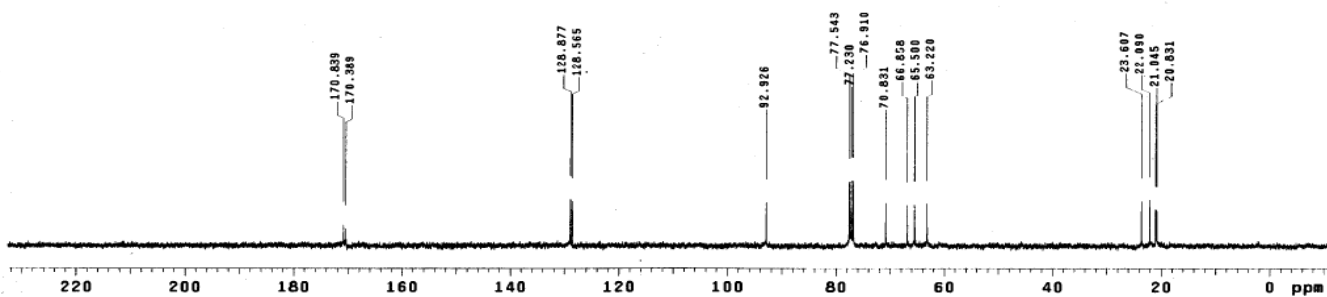
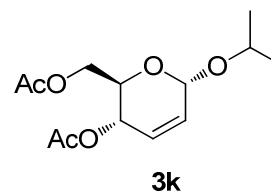
```
SAMPLE SPECIAL
date Mar 1 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION hst 0.008
sw 6389.8 pw90 19.700
at 1.988 alfa 20.000
np 25528 FLAGS
fb not used il n
bs 4 in n
d1 1.000 dp y
nt 32 hs nn
ct 32 PROCESSING
TRANSMITTER lb 0.10
tn H1 fn 65536
sfrq 399.853 DISPLAY
tof 362.8 sp 35.3
tpwr 57 wp 4055.4
pw 9.850 rF1 795.8
DECOUPLER rfp 0
dn C13 rp 116.5
dof 0 lp -98.9
dm nnn PLOT
dmm c wc 250
dpwr 50 sc 0
dmf 15900 vs 56
nm cdc ph 20
```

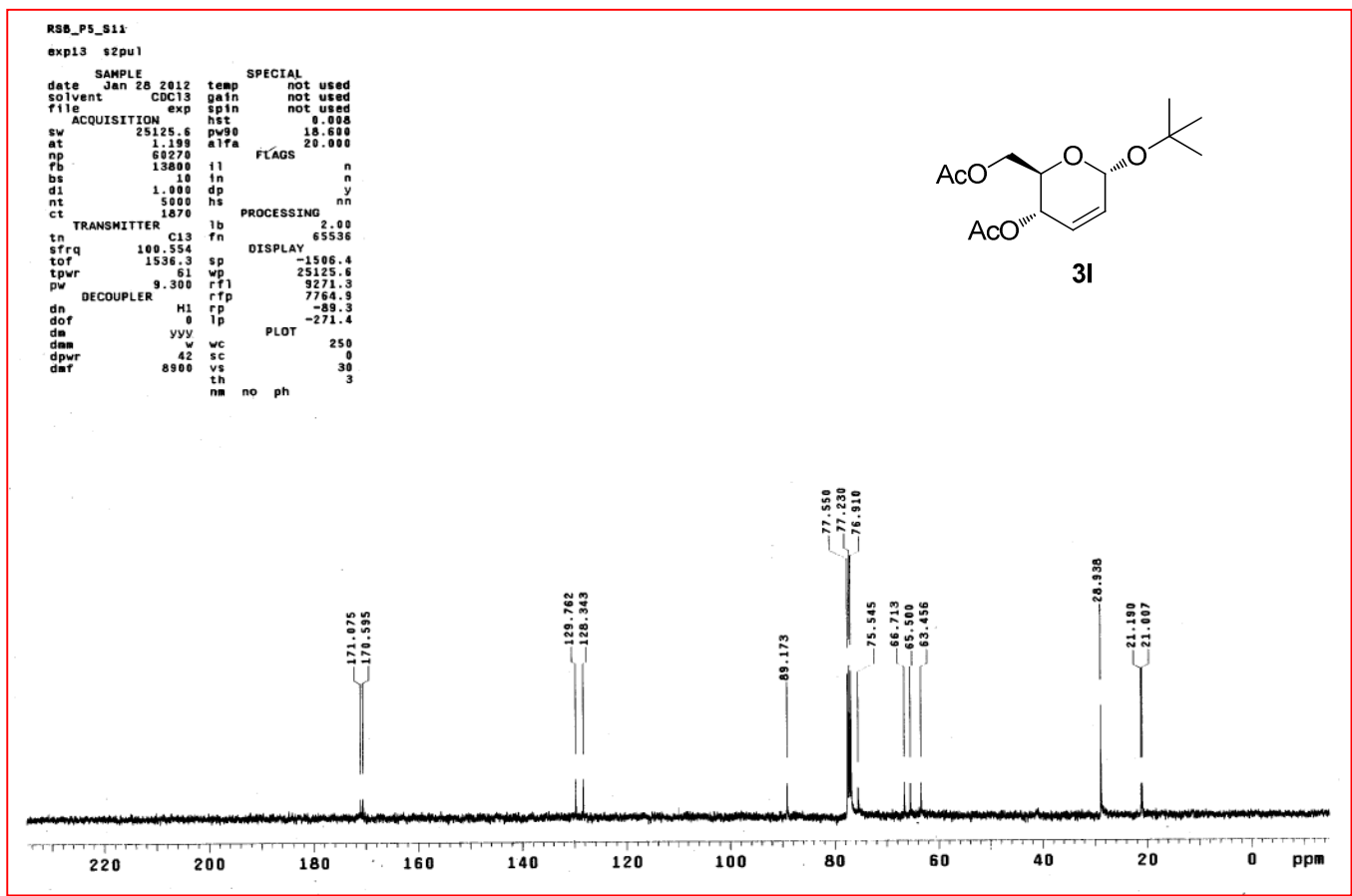
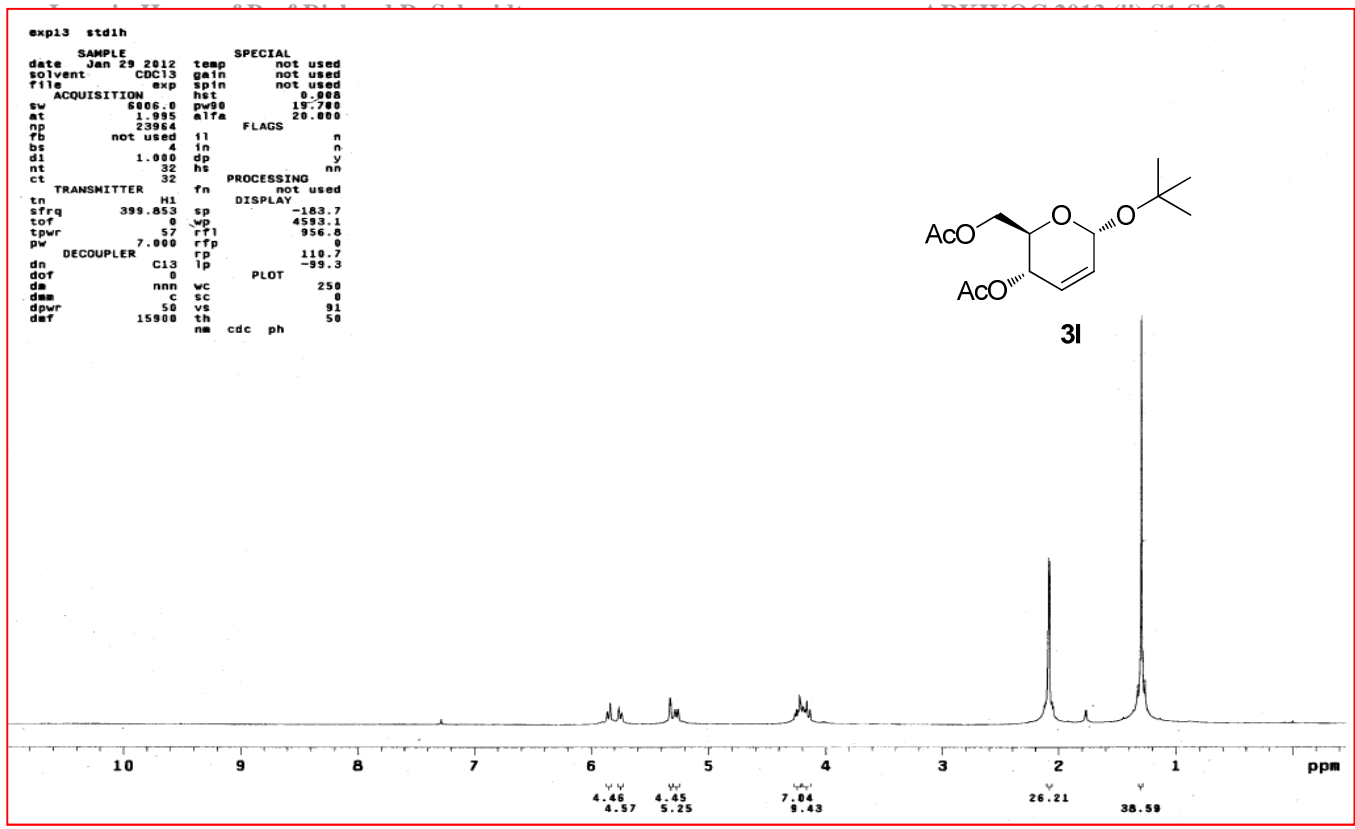


RSB_P5_S14

exp1 s2pu1

```
SAMPLE SPECIAL
date Mar 1 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION hst 0.008
sw 25125.6 pw90 18.600
at 1.199 alfa 20.000
np 60270 FLAGS
fb 13800 il n
bs 10 in n
d1 1.000 dp y
nt 5000 hs nn
ct 470 PROCESSING
TRANSMITTER lb 2.00
tn C13 fn 65536
sfrq 100.554 DISPLAY
tof 1536.3 sp -1116.1
tpwr 61 wp 24497.6
pw 9.300 rF1 9276.7
DECOUPLER rfp 7764.9
dn H1 rp -86.9
dof 0 lp -271.4
dm yyj PLOT
dmm w wc 250
dpwr 42 sc 0
dmf 8900 vs 14
nm no ph 3
```

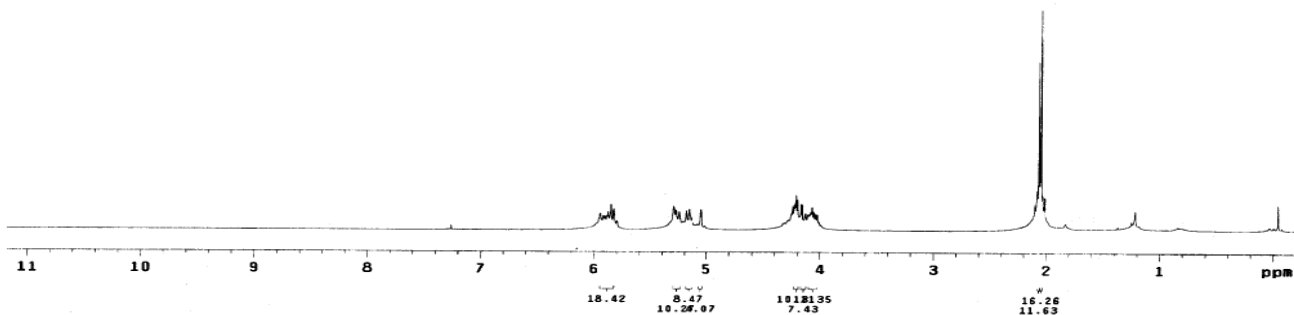
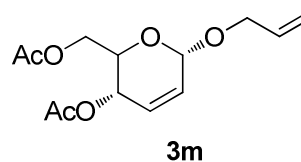




```

RSB_PS_S2
expl s2pu1
SAMPLE
date Dec 21 2011 temp SPECIAL
solvent CDC13 gain not used
file exp sp1n not used
ACQUISITION
sw 6389.8 hst 0.000
at 1.998 alfa 20.000
np not used
fb not used i1 n
bs 4 in n
d1 1.000 dp y
nt 32 hs PROCESSING
ct 32 hs 0.10
tn M1 fn 65536
sfrq 399.853 DISPLAY
tof 362.8 sp -89.7
tpwr 57 wp 4560.4
pw 9.850 rfp 795.8
DECOUPLER rfp 0
dn C13 rp 110.0
dof 8 wp -64.0
dm nnn PLOT
dms c wc 250
dpr 50 sc 0
dwt 15900 vs 52
th 20
nm cdc ph

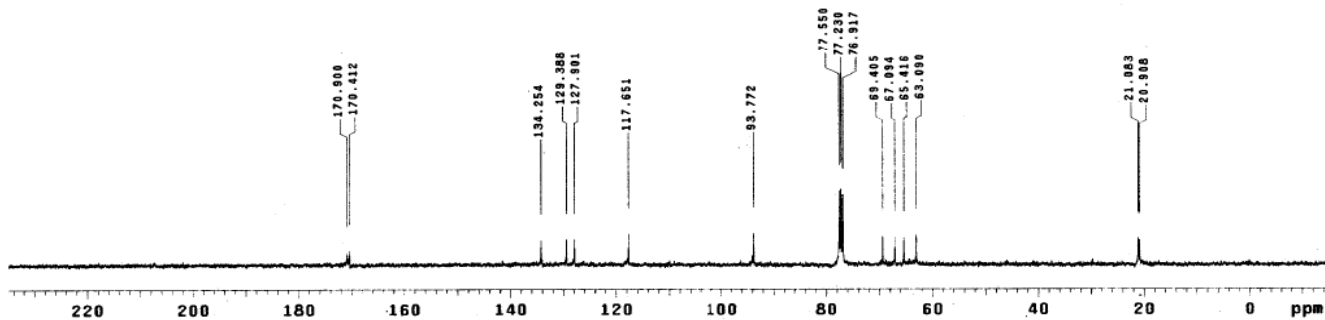
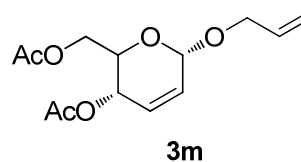
```



```

RSB_PS_S2
expl s2pu1
SAMPLE
date Dec 21 2011 temp SPECIAL
solvent CDC13 gain not used
file exp sp1n not used
ACQUISITION
sw 25125.6 hst 18.600
at 1.199 alfa 20.000
np 60270
fb 13800 i1 n
bs 10 in n
d1 1.000 dp y
nt 5000 hs PROCESSING
ct 1790 hs 2.00
tn C13 fn 65536
sfrq 100.554 DISPLAY
tof 1538.3 sp -1510.3
tpwr 61 wp 25125.6
pw 9.300 rfp 9275.2
DECOUPLER rfp 7764.9
dn H1 rp -88.6
dof 0 lp -271.4
dm vvy wc PLOT
dms w sc 250
dpr 42 sc 0
dwt 8900 vs 15
th 2
nm no ph

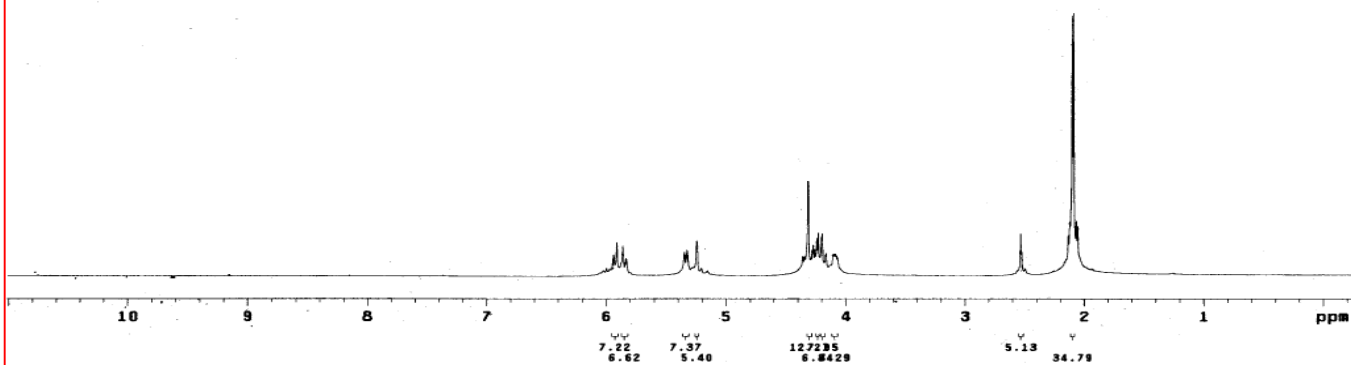
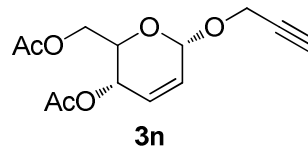
```



```

exp1 s2p1
SAMPLE
date Jan 31 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 6389.0 pw90 19.700
at 1.990 alfa 20.000
np 25528
fb not used il n
bs 4 in n
d1 1.000 dp y
nt 32 hs
ct
TRANSMITTER lb 0.10
tn H1 fn 65536
sfrq 399.853 DISPLAY
tof 362.0 sp -106.3
tpwr 57 wp 4500.9
pw 9.850 rF1 752.7
DECOUPLER rfp 0
dn C13 rp 103.9
dof 0 lp -69.0
dm nnn PLOT
dms C wc 250
dpwr 50 sc 0
dmf 15900 vs 59
nm cdc ph 20

```



```

exp1 s2p1
SAMPLE
date Jan 31 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 25125.6 pw90 10.000
at 1.199 alfa 20.000
np 88270
fb 13000
bs 10 in n
d1 1.000 dp y
nt 5000 hs
ct
TRANSMITTER lb 2.00
tn C13 fn 65536
sfrq 100.554 DISPLAY
tof 1536.3 sp -1521.0
tpwr 61 wp 25125.6
pw 9.300 rF1 9286.7
DECOUPLER rfp 7764.9
dn H1 rp -72.5
dof 0 lp -328.0
dm yyy PLOT
dms 42 wc 250
dpwr 8900 sc 0
dmf vs 10
nm th 3
nm no ph

```

