

Supplementary Material

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

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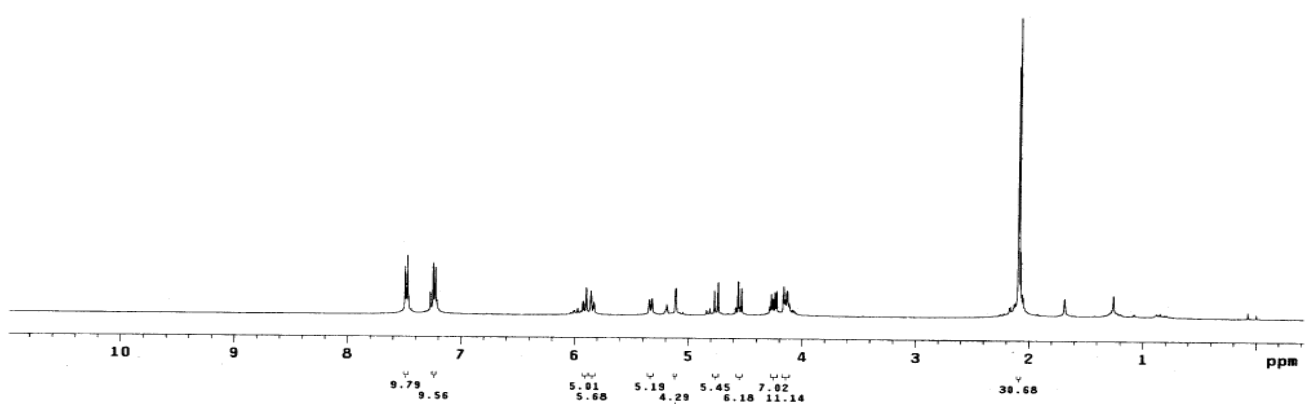
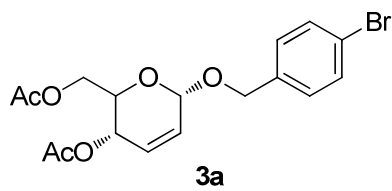
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This paper is dedicated to my mentor, Prof. Dr. Richard R. Schmidt, on the occasion of his 78th anniversary

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

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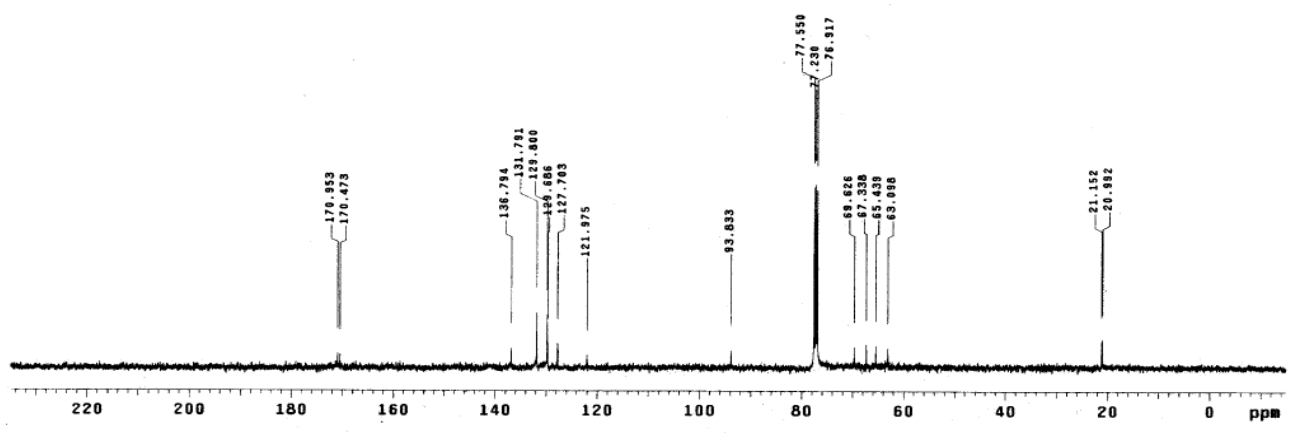
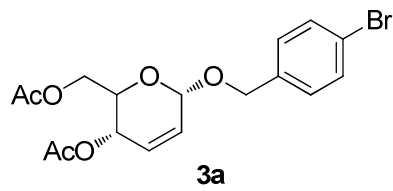


V

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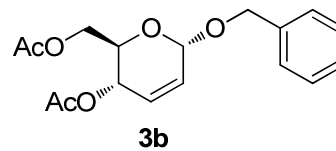
RSB_P5_S1
exp1 s2pu1
SAMPLE                SPECIAL
date   Dec  4 2011    temp   not used
solvent CDC13         gain    not used
file                                     not used
ACQUISITION           hst      0.000
sw        25125.6     pw90    18.600
at        1.199      alfa    20.000
np        60270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

```

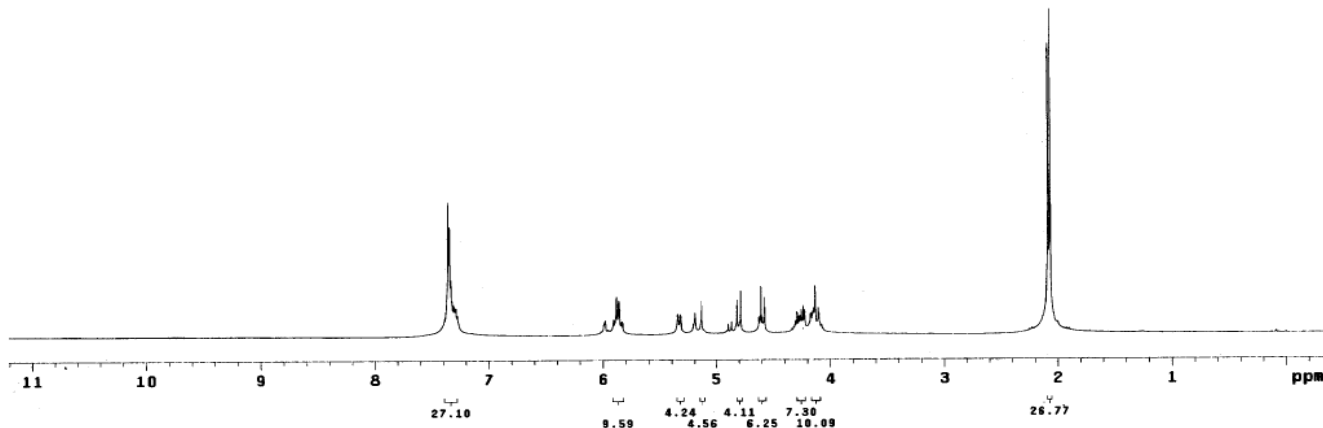


expl s2pu1

```
SAMPLE     SPECIAL
date Jan 24 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION exp hst 0.000
sw 6300.0 pw90 10.700
at 1.900 alfa 20.000
np 25520 FLAGS
fb not used l1 n
bs 4 l2 n
d1 1.000 dp y
nt 32 hs
ct 32 PROCESSING nn
TRANSMITTER lb 0.10
tn H1 fn 65536
sfrq 300.053 DISPLAY
tof 362.0 sp -152.5
tpwr 57 wp 4035.5
pw DECOUPLER rfl 700.0
dn C13 rfp 0
dof 0 lp -97.5
dm nnn PLOT 250
dmm c wc 0
dpwr 50 sc 0
daf 15900 vs 0
na th 18
na cdc_ph
```

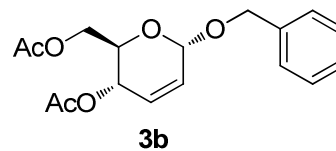


3b

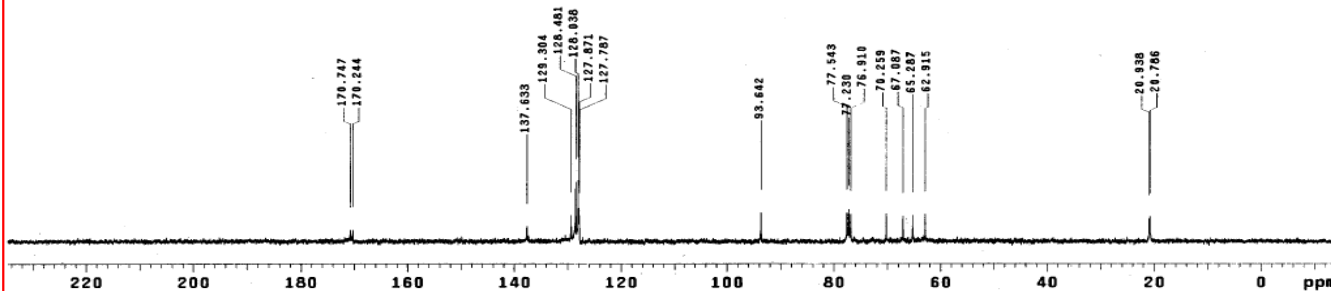


expl s2pu1

```
SAMPLE     SPECIAL
date Jan 24 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION exp hst 0.000
sw 25125.6 pw90 10.000
at 1.100 alfa 20.000
np 60270 FLAGS
fb 10000 l1 n
bs 10 l2 n
d1 1.000 dp y
nt 5000 hs
ct 200 PROCESSING nn
TRANSMITTER lb 2.00
tn C13 fn 65536
sfrq 100.554 DISPLAY
tof 1536.3 sp -1525.6
tpwr 61 wp 25125.6
pw DECOUPLER rfl 3200.0
dn H1 rfp 0
dof 0 lp -271.4
dm yyv PLOT 250
dmm w wc 0
dpwr 42 sc 0
daf 8900 vs 13
na th 2
na no ph
```

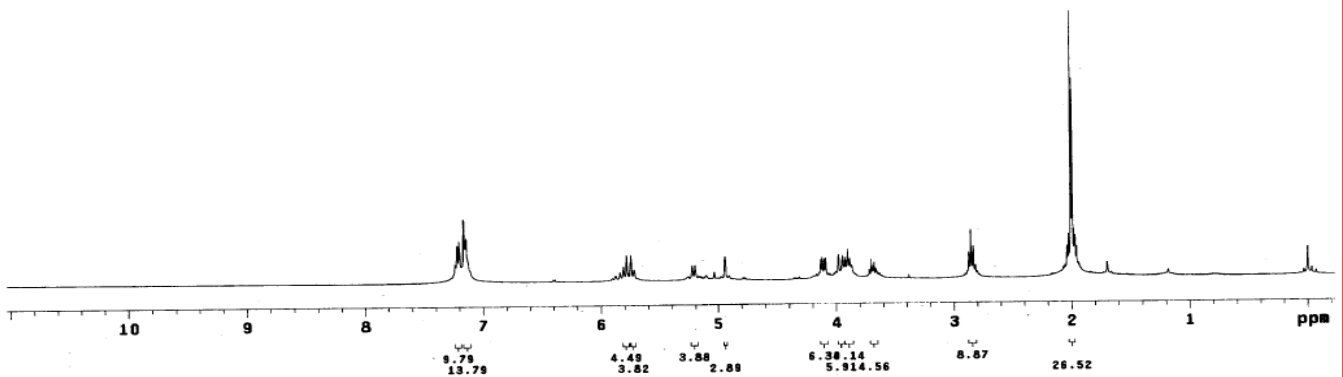
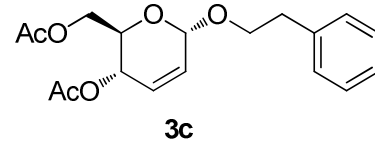


3b



exp13 s2d1h

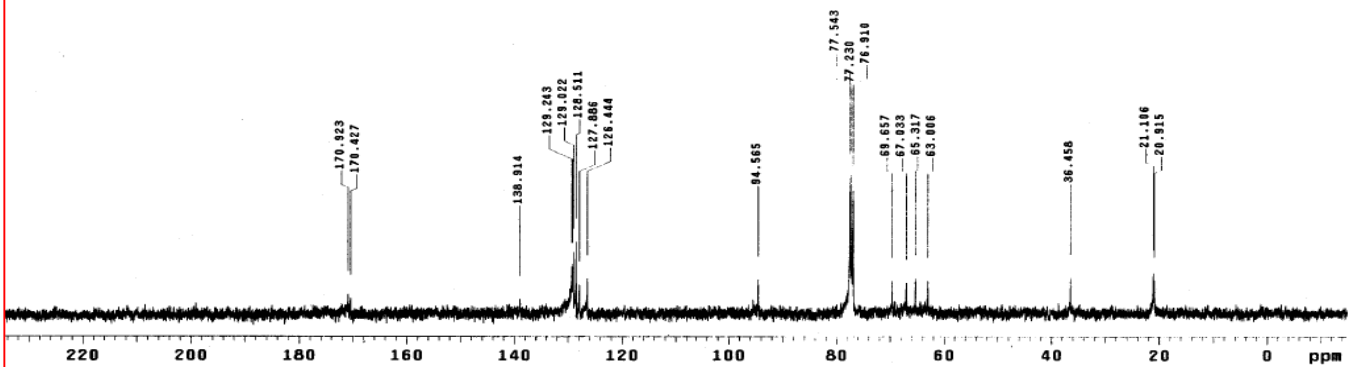
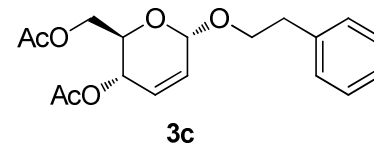
SAMPLE SPECIAL
date Jan 29 2012 temp not used
solvent CDC13 gain not used
file ACQUISITION exp spin not used
ACQUISITION hst 0.000
sw 5006.0 pw90 19.700
at 1.995 alpha 20.000
np 23864
fb not used ll n
bs 4 in n
d1 1.000 dp y
nt 32 hs nn
ct 32
TRANSMITTER fn not used
tn H1 DISPLAY
sfrq 399.653 sp -93.1
tof 0 wp 4506.2
tpwr 57 rfl 982.8
pw 7.000 rfp 0
DECOUPLER C13 rp 105.5
dn 0 lp -84.9
dof nnn wc PLOT 250
dm C sc 0
dmm 50 vs 57
dmf 15900 th 17
nm cdc ph



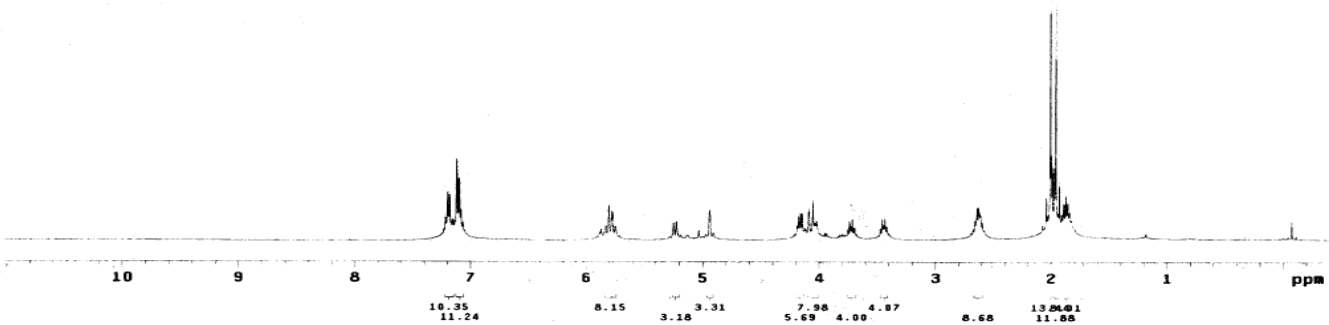
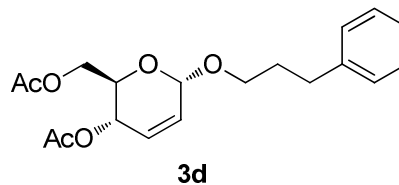
RSB_P5_S9

exp1 s2pu1

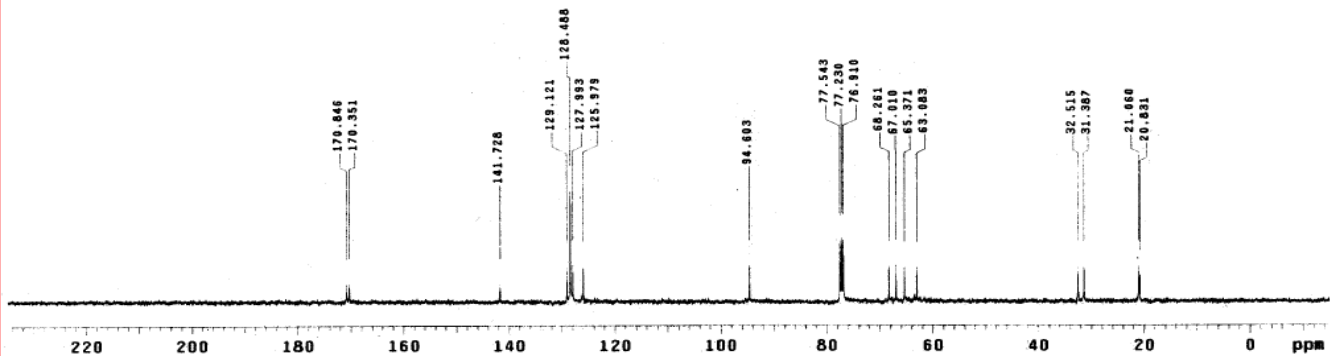
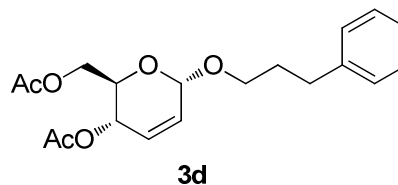
SAMPLE SPECIAL
date Jan 24 2012 temp not used
solvent CDC13 gain not used
file ACQUISITION exp spin not used
ACQUISITION hst 0.000
sw 25125.6 pw90 18.600
at 1.199 alpha 20.000
np 68279
fb 13800 ll n
bs 10 in n
d1 1.000 dp y
nt 5000 hs nn
ct 2340
TRANSMITTER lb PROCESSING 2.00
tn C13 fn 65536
sfrq 100.554 DISPLAY
tof 1536.3 sp -1512.6
tpwr 81 wp 25125.6
pw 9.300 rfl 9277.5
DECOUPLER H1 rp 7764.9
dn 0 lp -86.6
dof yyy wc PLOT 250
dm W sc 0
dmm 42 vs 36
dmf 8900 th 3
nm no ph



```
RSB_P5_S4
expl s2pu1
SAMPLE
date Dec 30 2011 temp SPECIAL not used
solvent CDCl3 gain not used
file /export/home/ spin not used
ciftemp/RSB_P5_S4 hst 0.000
1H-1F10 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 lb 65536
ct 32 fn
TRANSMITTER H1 sp DISPLAY -161.1
sfrq 399.853 wp 4567.6
tof 362.8 rf1 824.3
tpwr 57 rfp 0
pw 9.850 rp 111.0
DECOUPLER C13 lp PLOT -36.6
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
date Dec 29 2011 temp SPECIAL not used
solvent CDCl3 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 80270
fb 13000 f1 n
bs 10 in n
d1 1.000 dp y
nt 5000 hs nn
ct 840 PROCESSING 2.00
TRANSMITTER lb 65536
fn
t1 C13
sfrq 180.554 DISPLAY -1518.7
tof 1536.3 sp 25125.6
tpwr 61 rfp 9283.6
pw 9.300 rfp 7264.9
DECOUPLER H1 rp -66.0
dn 0 lp PLOT -355.7
dyv w wc 250
dm 42 sc 0
dmm vs 22
dpwr 8900 th 3
daf nm no ph
```



exp1 s2pu1

SAMPLE		SPECIAL	
date	Jan 3 2012	temp	not used
solvent	CDC13	gain	not used
file	/export/home/~	spin	not used
clftemp/RSB_P5_S5_	-	hst	0.008
IM.TiD	pwr0		19.700
			20.000

ACQUISITION

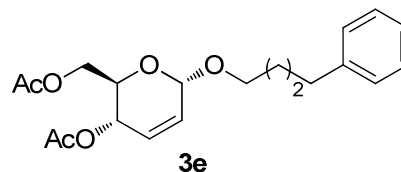
ACQUISITION		FLAGS	
sw	6389.8	fl	n
st	1.998	in	n
nd	25528	dp	y
bs	not used	hs	nn
d1	1.000	PROCESSING	
nt	32	lb	0.10
ct	32	fn	6536

TRANSMITTER

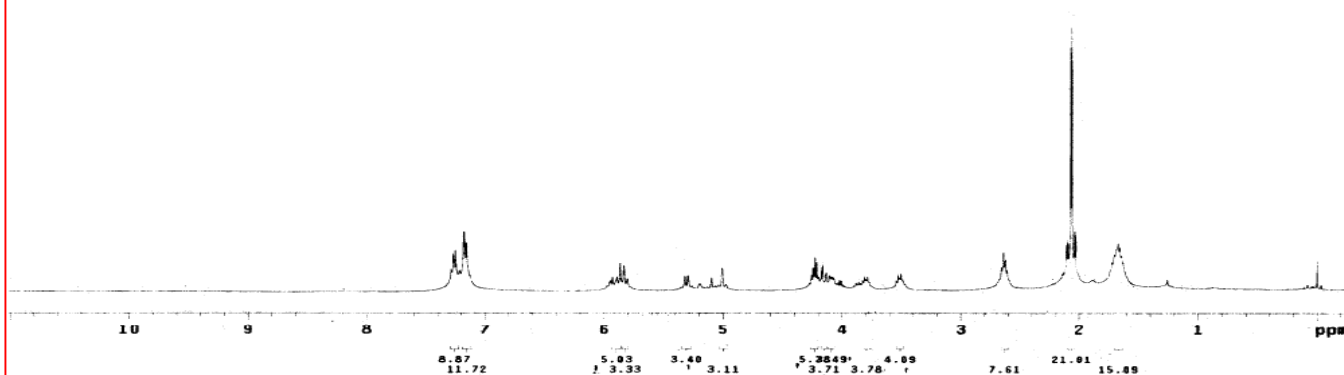
TRANSMITTER		DISPLAY	
tn	H1	sp	-123.6
stfq	399.853	wp	4525.7
tof	362.8	rfl	795.2
tpwr	S7	rfp	0
pw	9.850	rp	113.5
DECOUPLER	C13	lp	-103.3

PLOT

dn	0	wc	250
dof	nnn	sc	0
dsm	C	vs	62
dpwr	50	th	20
daf	15900	nm	cdc ph



3e



RSB_P5_S5

exp1 s2pu1

SAMPLE		SPECIAL	
date	Jan 3 2012	temp	not used
solvent	CDC13	gain	not used
file	/export/home/~	spin	not used
ACQUISITION	exp	hst	0.008
sw	25125.6	pwr0	-19.800
at	1.199	alfa	20.000

ACQUISITION

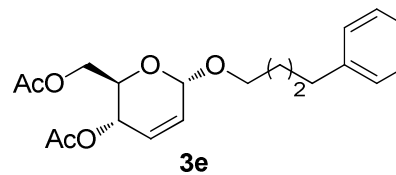
ACQUISITION		FLAGS	
np	68270	fl	n
fb	13800	in	n
bs	10	dp	y
d1	1.000	hs	nn
nt	5000	PROCESSING	
ct	1210	lb	2.00

TRANSMITTER

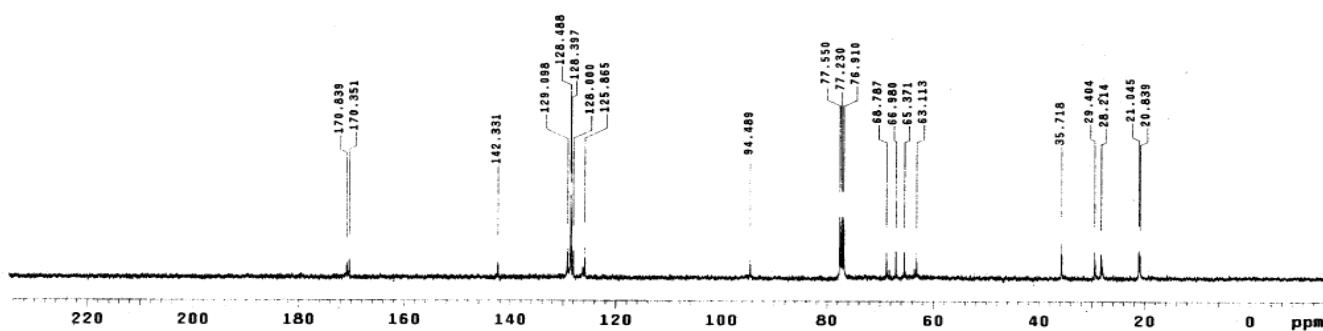
TRANSMITTER		DISPLAY	
tn	C13	fn	65536
stfq	100.554	sp	-1510.7
tof	1536.3	wp	25125.6
tpwr	61	rfl	9283.6
pw	9.300	rfp	7764.9
DECOUPLER	H1	rp	-84.3
dn	0	lp	-294.2

PLOT

de	yvy	wc	250
dsm	42	sc	0
dpwr	8900	vs	17
daf		th	3
		nm	no ph



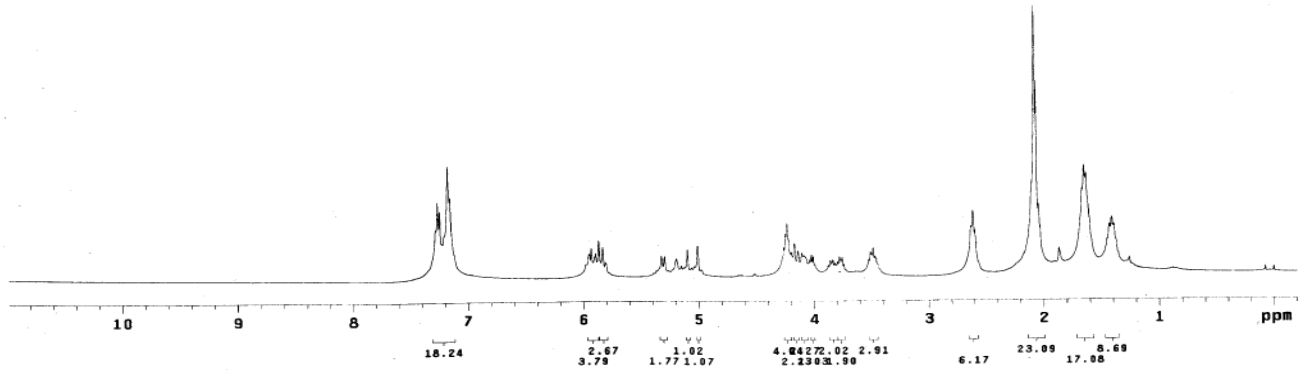
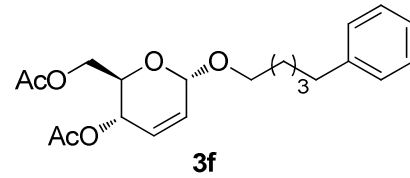
3e



STANDARD 1H OBSERVE

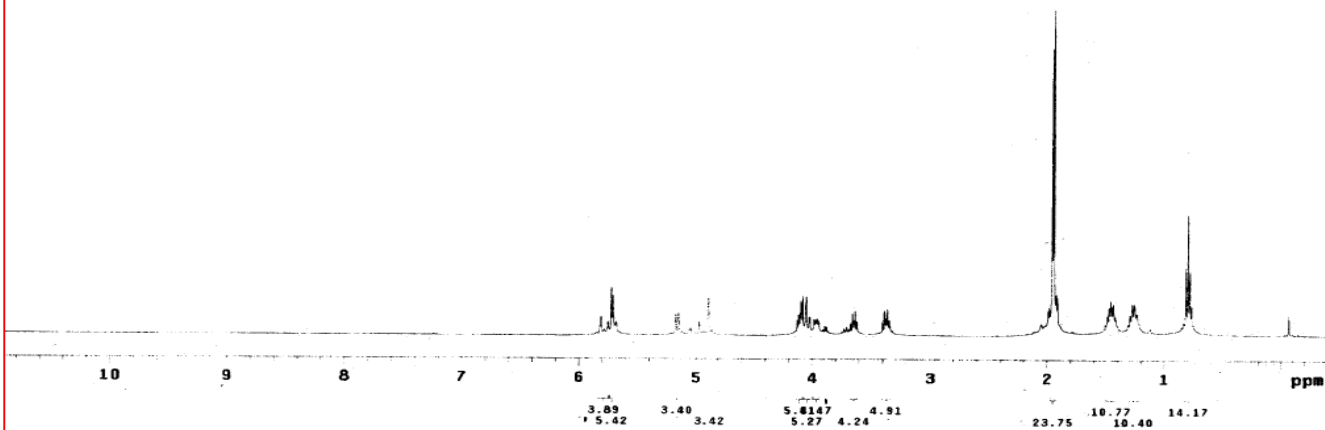
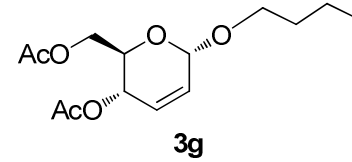
exp13 std1h

SAMPLE		SPECIAL	
date	Jan 28 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		hst	0.006
sw	6006.0	pw90	19.700
at	1.395	alfa	20.000
np	23964		
fb	not used	fl	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	9	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
daf	15900	th	67
	nm	cdc	ph



exp1 s2pu1

SAMPLE		SPECIAL	
date	Jan 28 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		hst	0.006
sw	6389.0	pw90	19.700
at	1.398	alfa	20.000
np	25528		
fb	not used	fl	n
bs	4	in	n
dl	1.000	dp	y
nt	32	hs	nn
ct			
TRANSMITTER		fn	not used
tn	H1	fn	8.18
sfrq	399.853	sp	65536
tof	362.0	wp	-185.7
tpwr	57	rfl	4558.3
pw	9.050	rfp	803.8
DECOUPLER		rp	0
dn	C13	lp	118.5
dof	0		-105.1
dm	nnn	wc	250
dmm	c	sc	0
dpwr	50	vs	71
daf	15900	th	36
	nm	cdc	ph

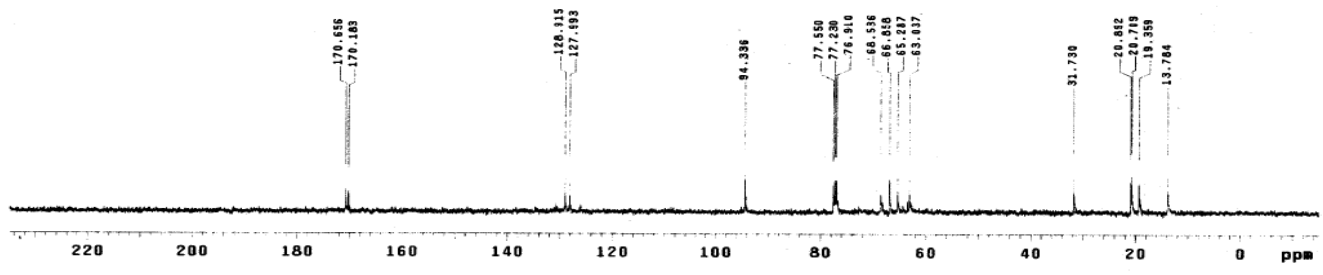
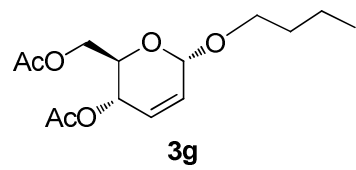


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exp1 s2pu1
SAMPLE
date Jan 17 2012 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 25125.6 pw90 18.000
at 1.299 alfa 20.000
np          FLAGS
fb 13000    ll             n
bs 10      fn             y
dl 1.000   dp             y
nt 5000    hs             nn
ct 190

TRANSMITTER      lb  fn      PROCESSING
tn               C13  fb      DISPLAY
sfrq 100.554     fn      -1518.7
tof 1536.3      sp      25125.6
tpwr 61         wp      9283.0
pw 9.300        rfl     7764.0
DECOUPLER        HI  rp      -88.6
dn              0   lp      -271.4
dof             VVV  PLOT
dm             w   wc      250
dpc            42  sc      0
dpcr           8000 vs  vc      0
daf            th   th      4
nm             no  ph      4

```

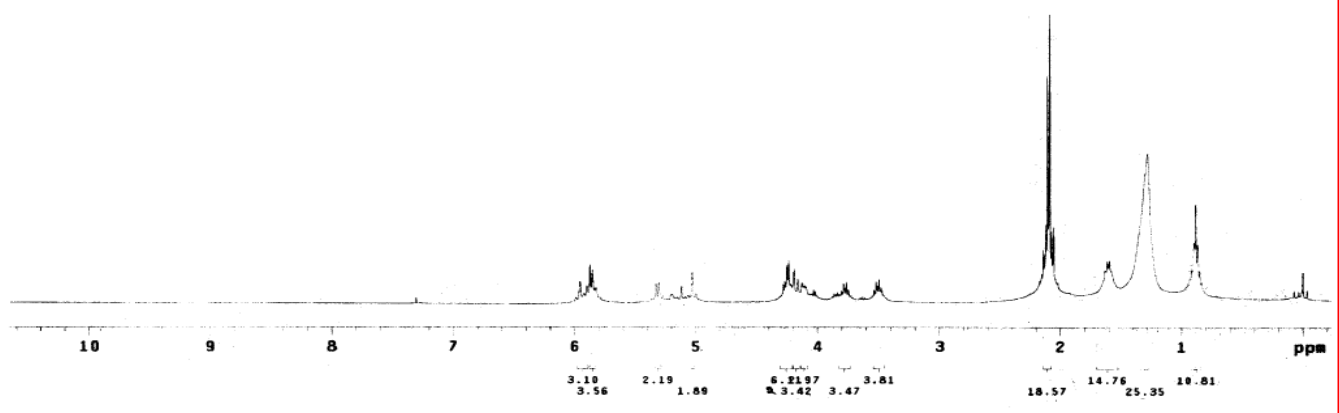
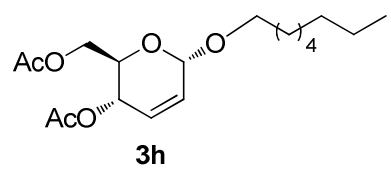


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exp1 stdih
SAMPLE
date Jan 13 2012 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION hst 0.000
sw 600.0 pw50 19.700
at 1.995 alfa -20.000
np 23964    FLAGS
fb not used ll             n
bs 4       in             n
dl 1.000   dp             y
nt 32      hs             nn
ct

TRANSMITTER      fn  not used
tn               H1
sfrq 399.853     sp  DISPLAY
tof 57          wp  4350.3
tpwr 57         rfl 948.0
pw 7.000       rfp 0
DECOUPLER        C13 lp  -124.0
dn              0   PLOT
dm             nn  wc   250
dpc            50  sc   0
dpcr           15900 vs  vc  60
daf            th  th   24
nm             cdc ph 24

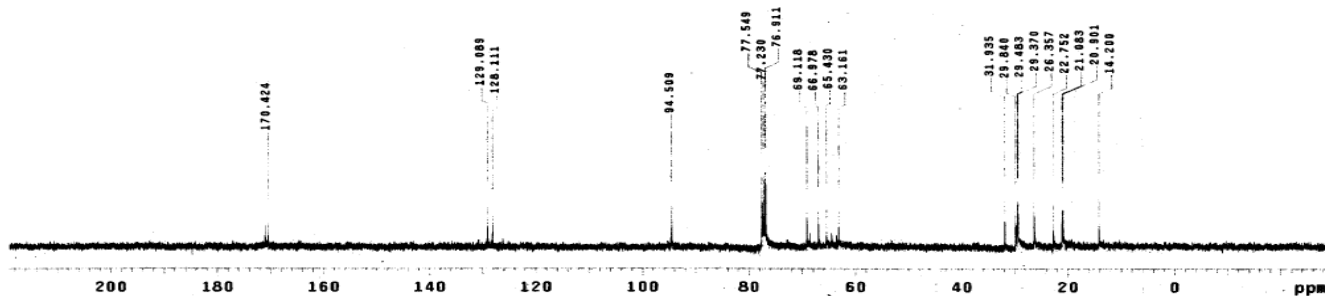
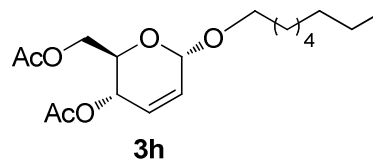
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RSB_PS_S7

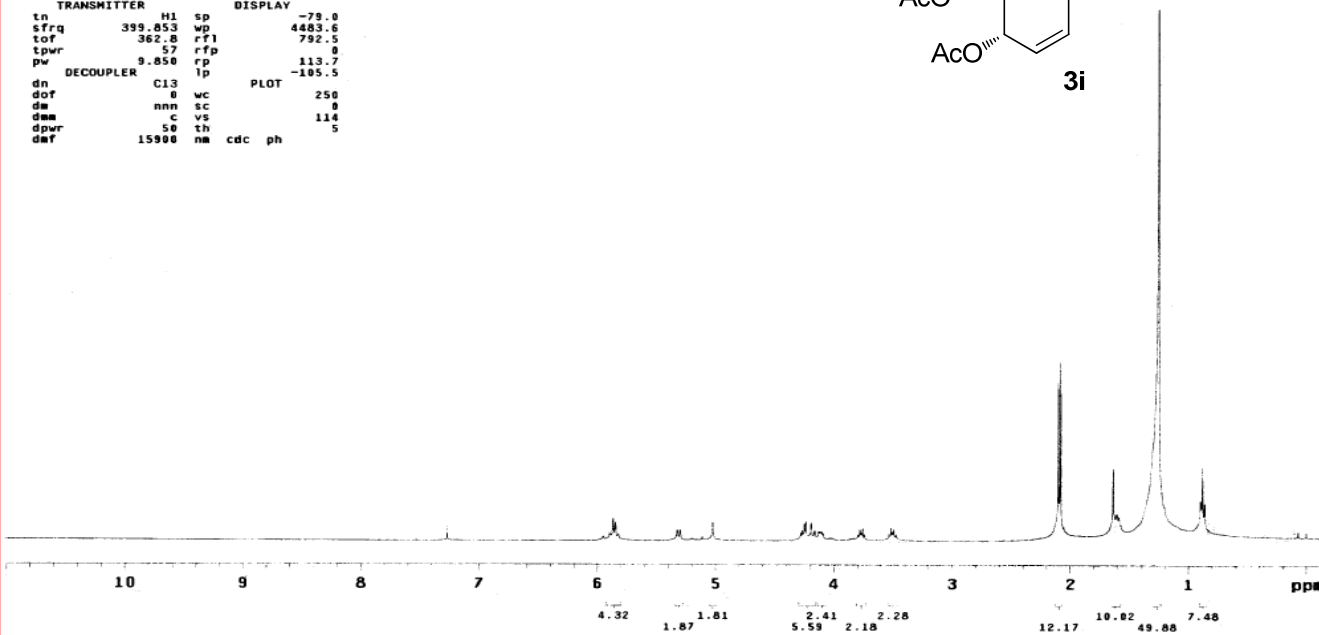
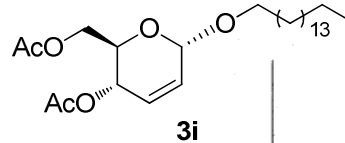
expt std13c

SAMPLE		SPECIAL	
date	Jan 12 2012	temp	not used
solvent	CDC13	gain	not used
file	exp	spin	not used
ACQUISITION		hst	0.000
sw	25000.0	pw90	18.000
at	1.189	alfa	-20.000
np	59268	FLAGS	
fb	13800	l1	n
bs	10	in	n
d1	0	dp	y
nt	5000	hs	nn
ct	1660	PROCESSING	
tn	C13	fb	1.00
sfrq	100.552	fn	not used
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

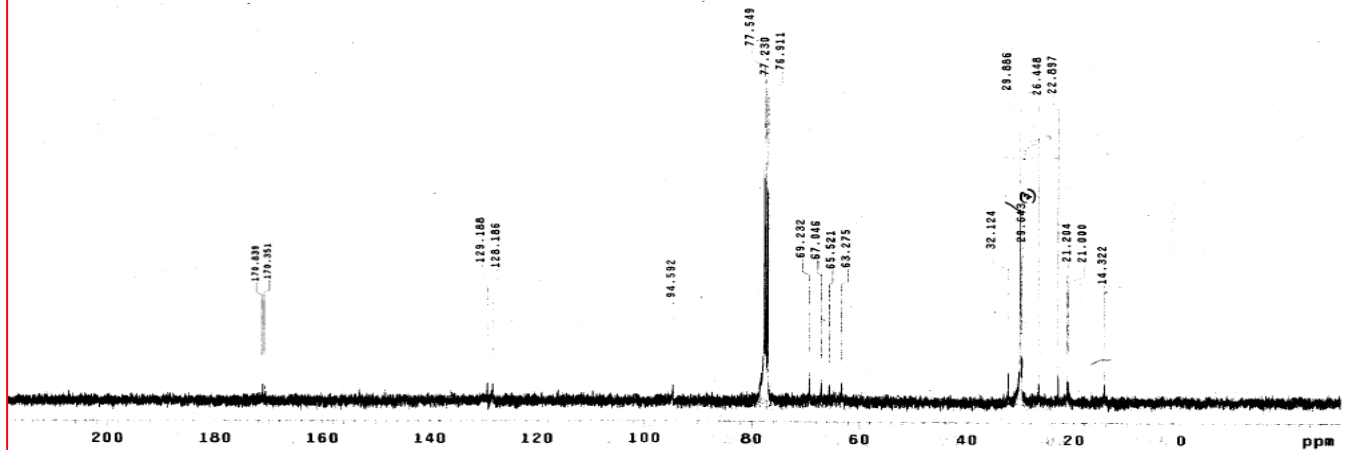
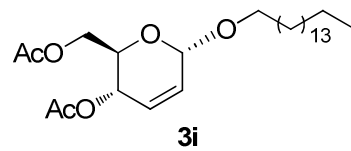
SAMPLE		SPECIAL	
date	Jun 16 2011	temp	not used
solvent	CDC13	gain	not used
file	/export/home/~	spin	not used
ciftemp	RSB_P4_S2	hst	0.000
ACQUISITION		pw90	19.700
sw	6389.8	alfa	20.000
at	1.996	FLAGS	
np	25528	l1	n
fb	not used	in	n
bs	4	dp	y
d1	1.000	hs	nn
nt	64	lb	0.10
ct	64	fn	65536
TRANSMITTER		DISPLAY	
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

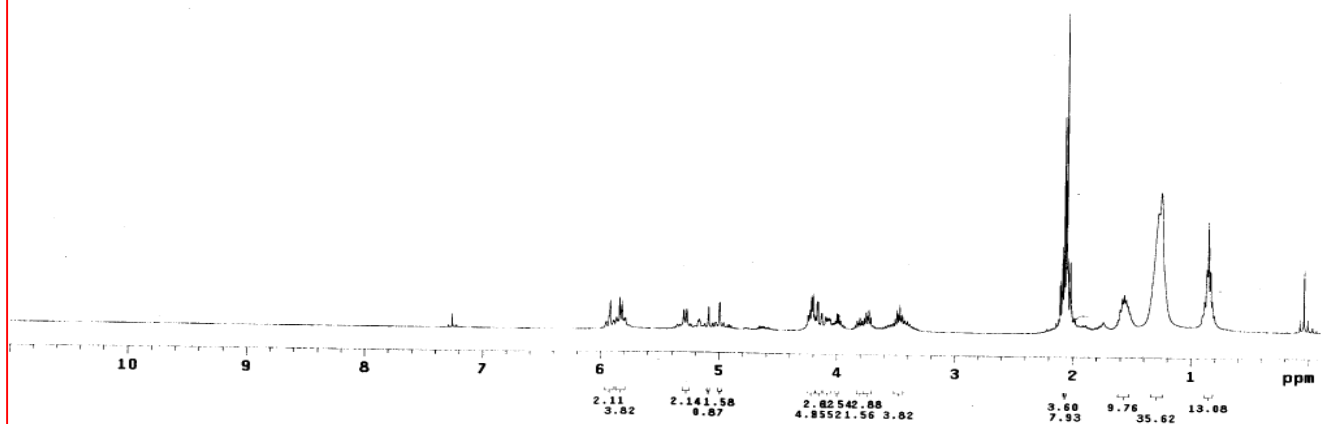
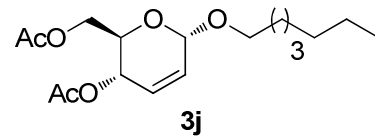
SAMPLE		SPECIAL	
date	Jan 16 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		SPECIAL	
sw	25000.0	pu90	18.000
at	1.199	al7a	20.000
np	59968	flags	
fb	13800	i1	n
bs	10	in	n
d1	0	dp	y
nt	15000	hs	nn
ct	11790		
TRANSMITTER		PROCESSING	
tn	C13	fb	1.00
stfq	100.532	fn	not used
tof	0	sp	-2979.1
tpwr	81	wp	25000.0
pw	8.687	rfl	10744.0
DECOUPLER		SPECIAL	
dn	H1	rfp	7764.9
dof	0	lp	-75.5
dm	vyv	pl	-297.7
dwa	w	wc	250
dpwr	42	sc	0
dwt	8900	vs	55
	th	nh	no ph
			3



RSB_PS_S13

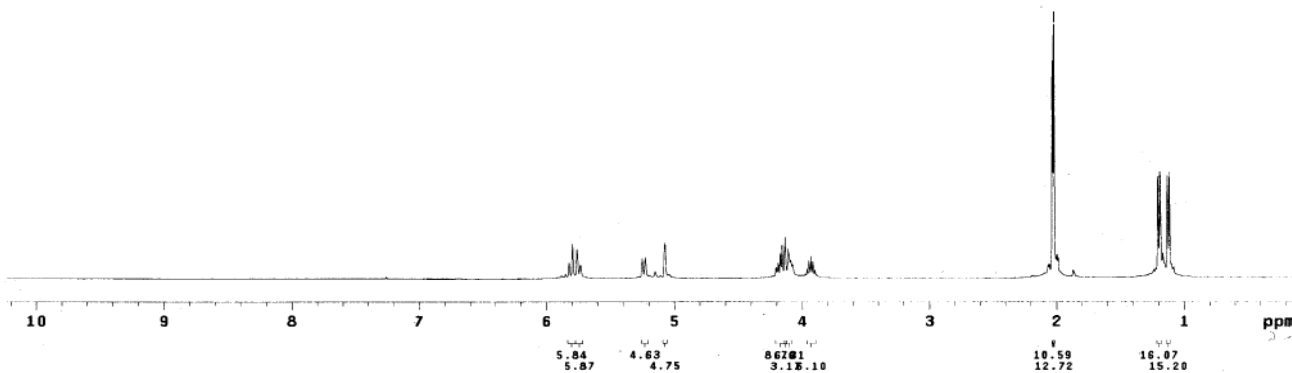
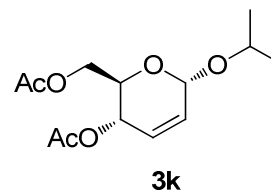
expl s2pu1

SAMPLE		SPECIAL	
date	Mar 27 2012	temp	not used
solvent	CDCl3	gain	not used
file		spin	not used
ACQUISITION		SPECIAL	
sw	8369.8	pu90	18.700
at	1.998	al7a	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		
TRANSMITTER		PROCESSING	
tn	H1	fb	0.10
stfq	399.853	fn	85536
tof	362.8	sp	-40.1
tpwr	57	wp	4441.7
pw	9.850	rfl	795.8
DECOUPLER		SPECIAL	
dn	C13	rfp	111.7
dof	0	lp	-108.3
dm	nnn	pl	
dwa	c	wc	250
dpwr	50	sc	0
dwt	15900	vs	71
	th	nh	cdc ph
			20



exp1 s2pu1

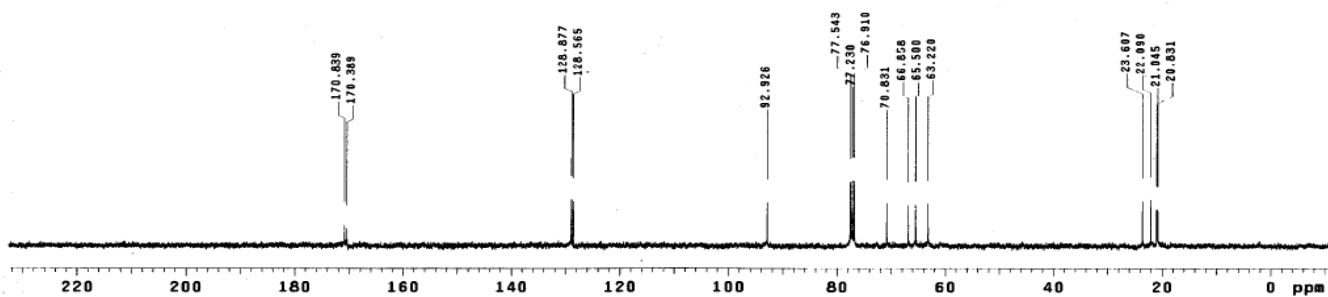
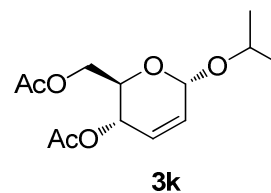
```
SAMPLE SPECIAL
date Mar 1 2012 temp not used
solvent CDC13 gain not used
file exp spin not used
ACQUISITION hst 0.008
sw 6389.8 pw90 19.700
at 1.988 alfa 20.000
np 25528 FLAGS
fb not used il n
bs 4 in n
d1 1.000 dp y
nt 32 hs nn
ct 32 PROCESSING
TRANSMITTER lb 0.10
tn H1 fn 65536
sfrq 399.853 DISPLAY
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
```

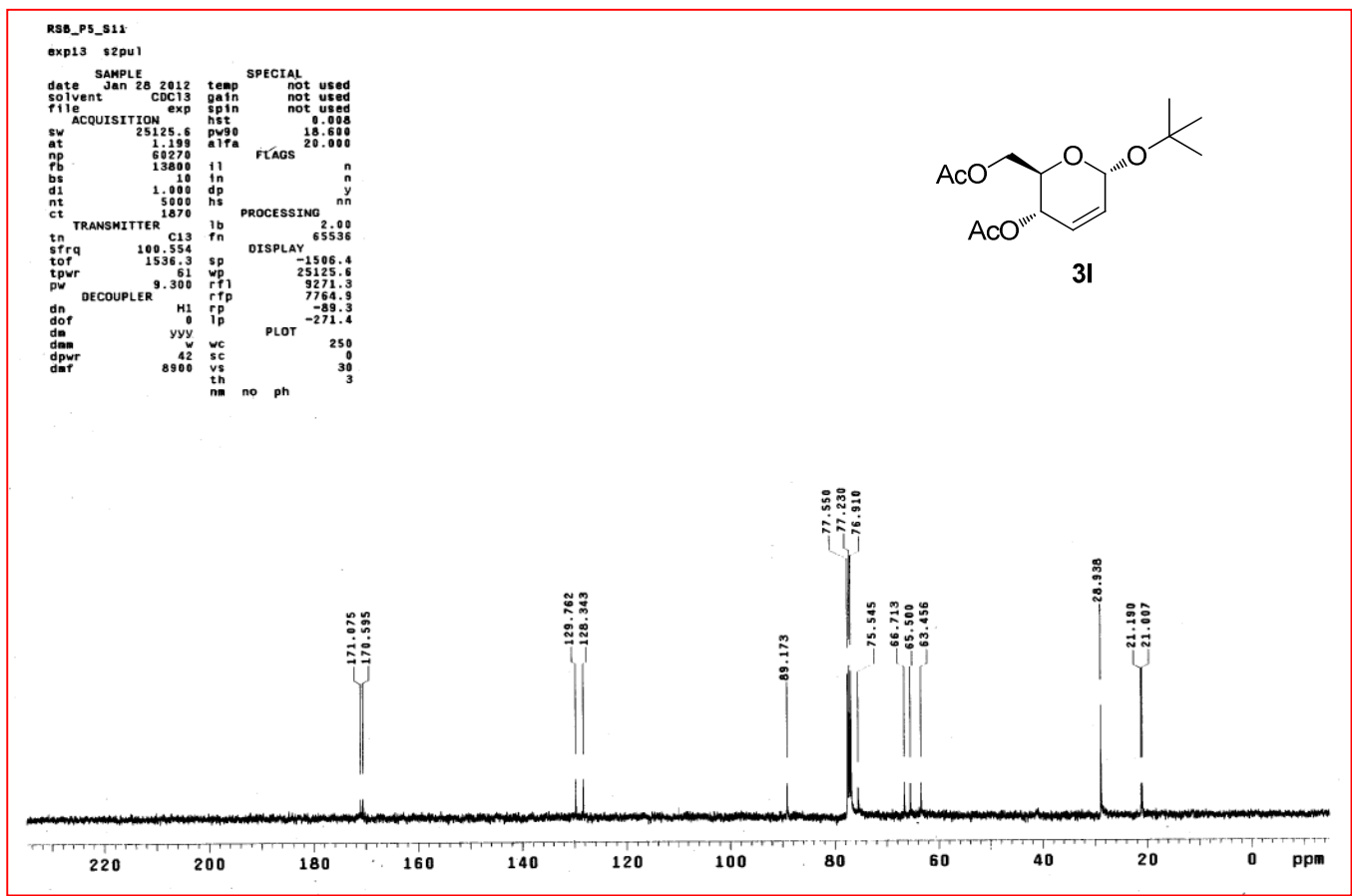
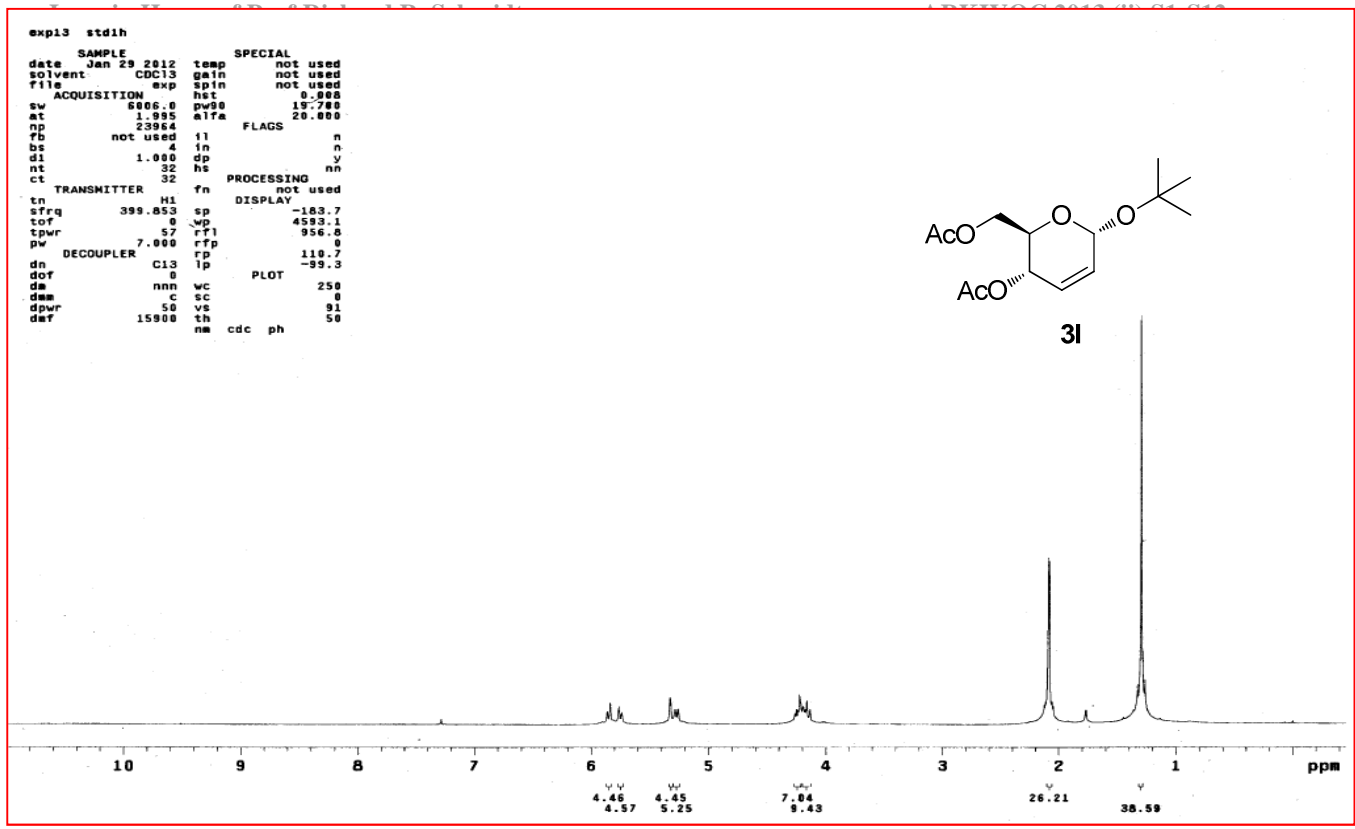


RSB_P5_S14

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
```

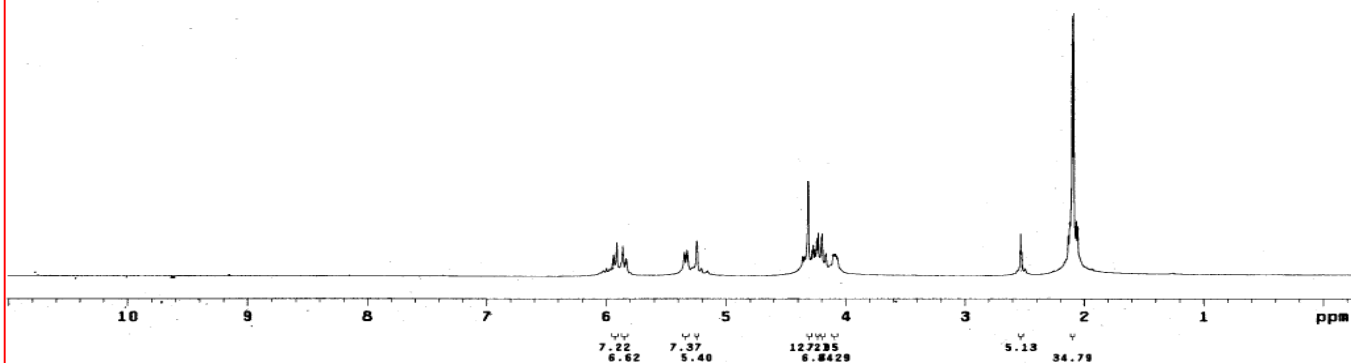
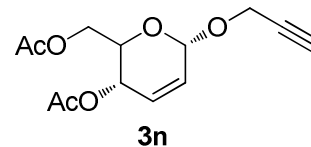





```

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 i1 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 -106.3
tof 362.0 sp 4500.9
tpwr 57 wp 752.7
pw 9.850 rF1 0
DECOUPLER C13 rfp 103.9
dn 0 rp -69.0
dof 0 lp
dm nnn PLOT 250
dms C wc 0
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 -1521.0
tof 1536.3 sp 25125.6
tpwr 61 wp 9286.7
pw 9.300 rF1 7764.9
DECOUPLER H1 rfp -72.5
dn 0 rp -328.0
dof 0 lp
dm yyy PLOT 250
dms 42 sc 0
dpwr 8900 vs 10
dmf th 3
nm no ph

```

