*Supporting Information*

# Gold-catalyzed Stereoselective Synthesis of 9-Oxabicyclo[3.3.1]nona-4,7-dienes from Diverse 1-Oxo-4-oxy-5-ynes: A Viable Formal [4+2]-Cycloaddition on s-*trans*-Heterodiene Framework

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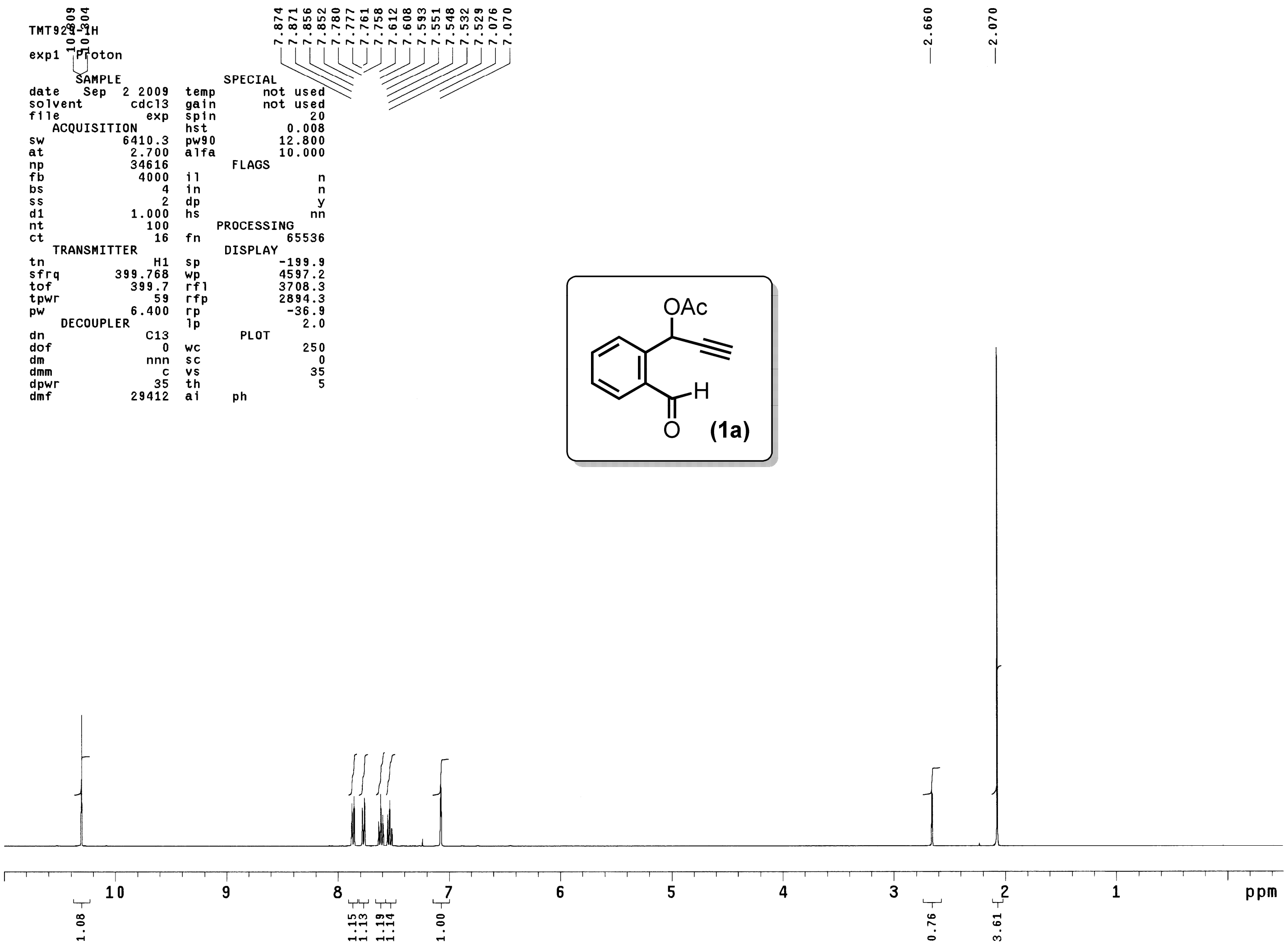
**Contents:**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10.304
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exp1 Proton
SAMPLE
date Sep 2 2009
solvent cdcl3
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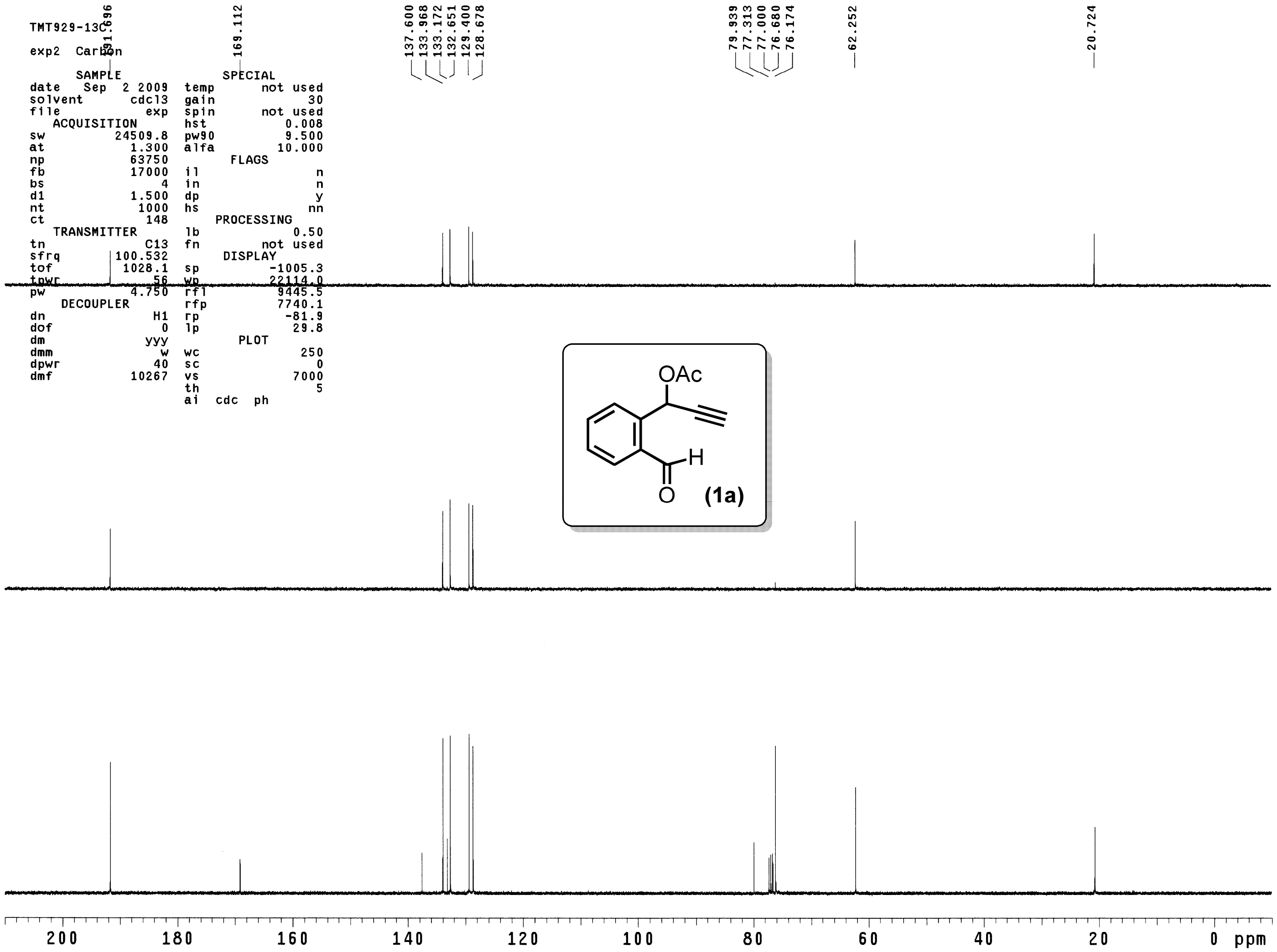
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 16
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin 20
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4597.2
rfl 3708.3
rfp 2894.3
rp -36.9
lp 2.0
PLOT
wc 250
sc 0
vs 35
th 5
ai ph
7.874
7.871
7.856
7.852
7.780
7.777
7.761
7.758
7.612
7.608
7.593
7.551
7.548
7.532
7.529
7.076
7.070
2.660
2.070
OAc
H
O
(1a)
10
9
8
7
6
5
4
3
2
1
ppm
1.08
1.15
1.13
1.19
1.14
1.00
0.76
3.61



TMT929-13C
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date Sep 2 2009
solvent cdcl3
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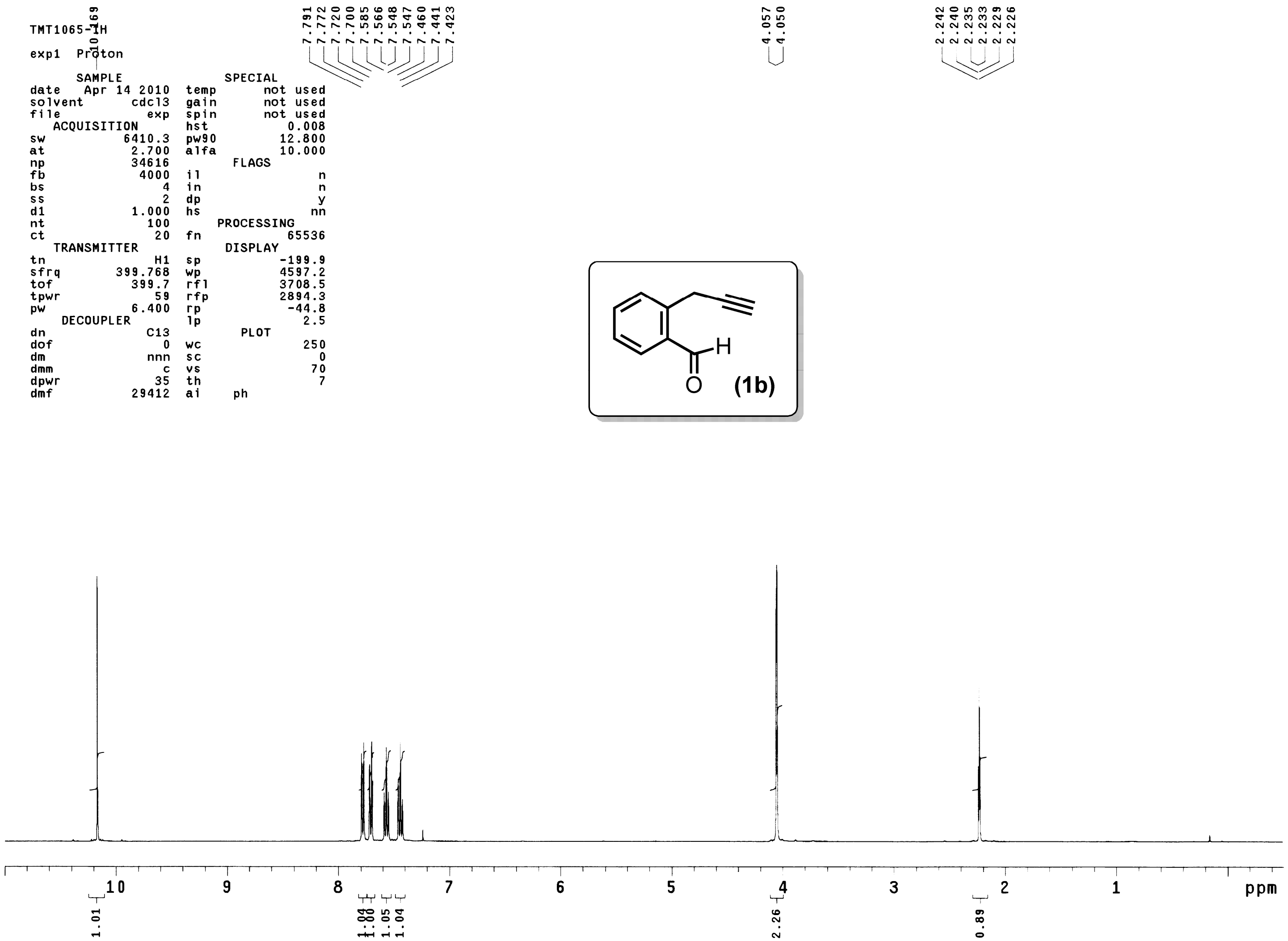
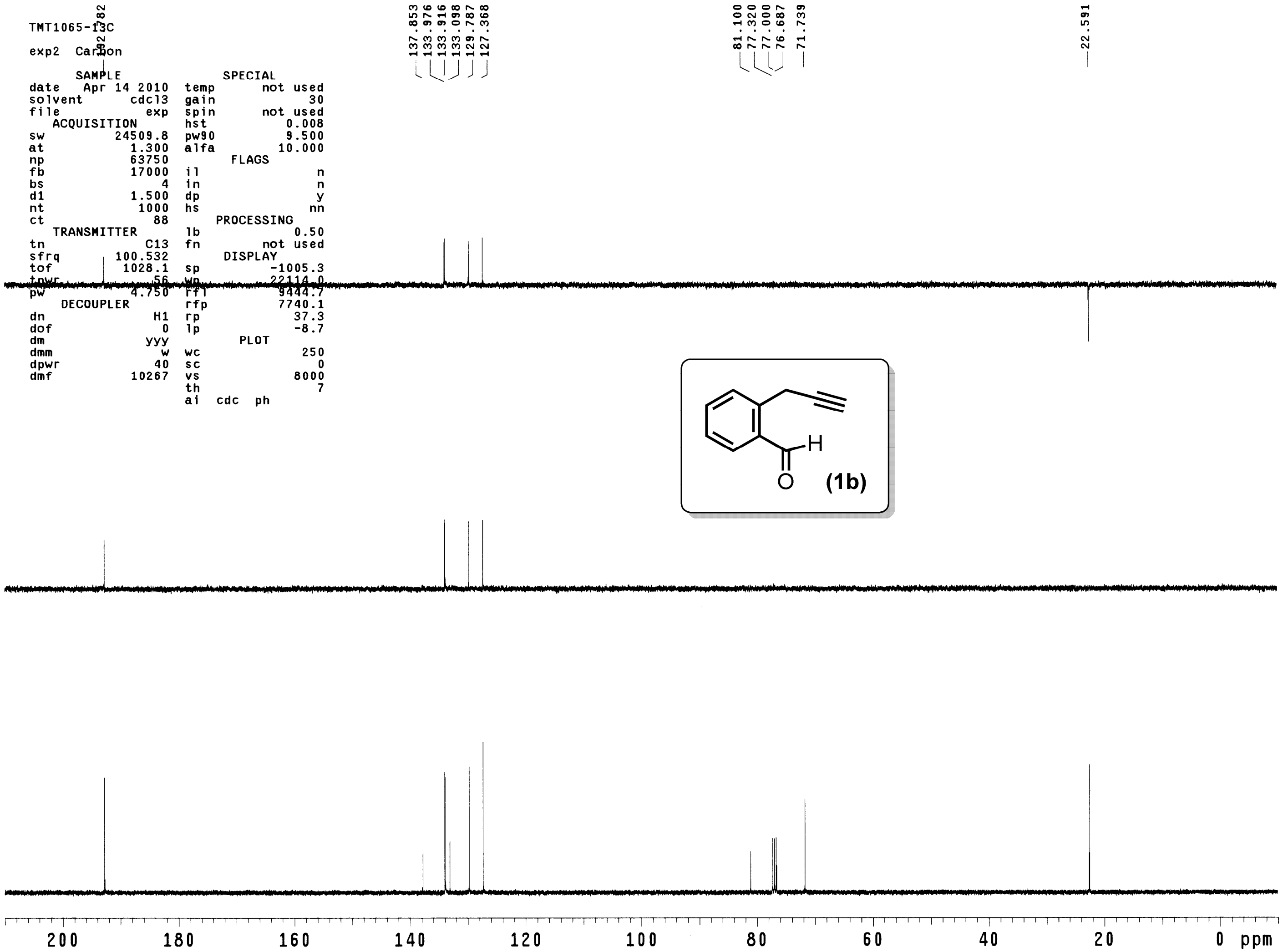
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 148
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9445.5
rfp 7740.1
rp -81.9
lp 29.8
PLOT
wc 250
sc 0
vs 7000
th 5
ai cdc ph
191.696
169.112
137.600
133.968
133.172
132.651
129.400
128.678
79.939
77.313
77.000
76.680
76.174
62.252
20.724
OAc
H
O
(1a)
200
180
160
140
120
100
80
60
40
20
0 ppm



TMT1065-1H
exp1 Proton
SAMPLE
date Apr 14 2010
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 20
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4597.2
rfl 3708.5
rfp 2894.3
rp -44.8
lp 2.5
PLOT
wc 250
sc 0
vs 70
th 7
ai ph
10.169
7.791
7.772
7.720
7.700
7.585
7.566
7.548
7.547
7.460
7.441
7.423
4.057
4.050
2.242
2.240
2.235
2.233
2.229
2.226
H
O
(1b)
10
9
8
7
6
5
4
3
2
1
ppm
1.01
1.04
1.00
1.05
1.04
2.26
0.89



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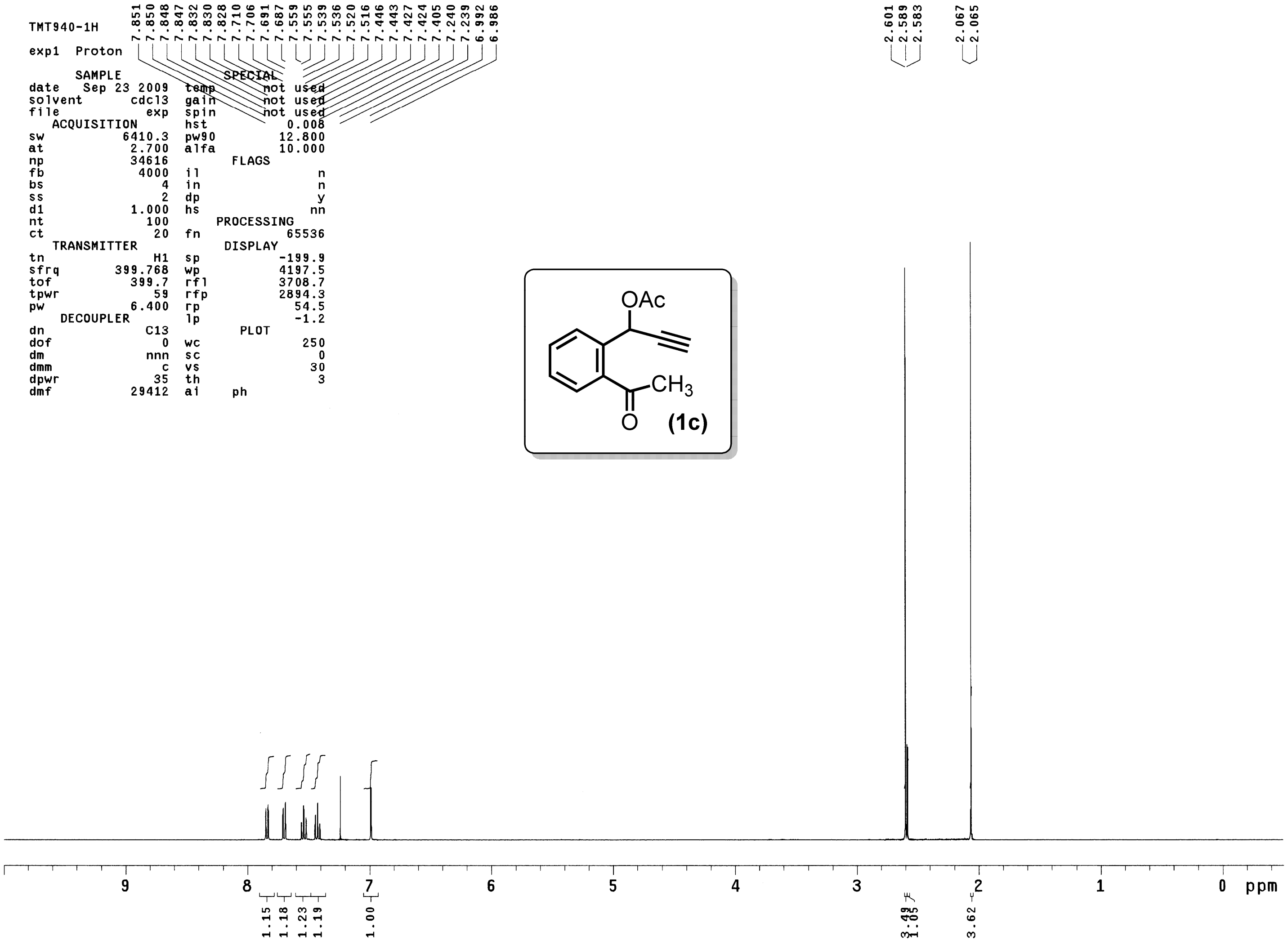
133.976
133.916
133.098
129.787
127.368
81.100
77.320
77.000
76.687
71.739
22.591
SAMPLE
date Apr 14 2010
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 88
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9444.7
rfp 7740.1
rp 37.3
lp -8.7
PLOT
wc 250
sc 0
vs 8000
th 7
ai cdc ph
(1b)
200
180
160
140
120
100
80
60
40
20
0 ppm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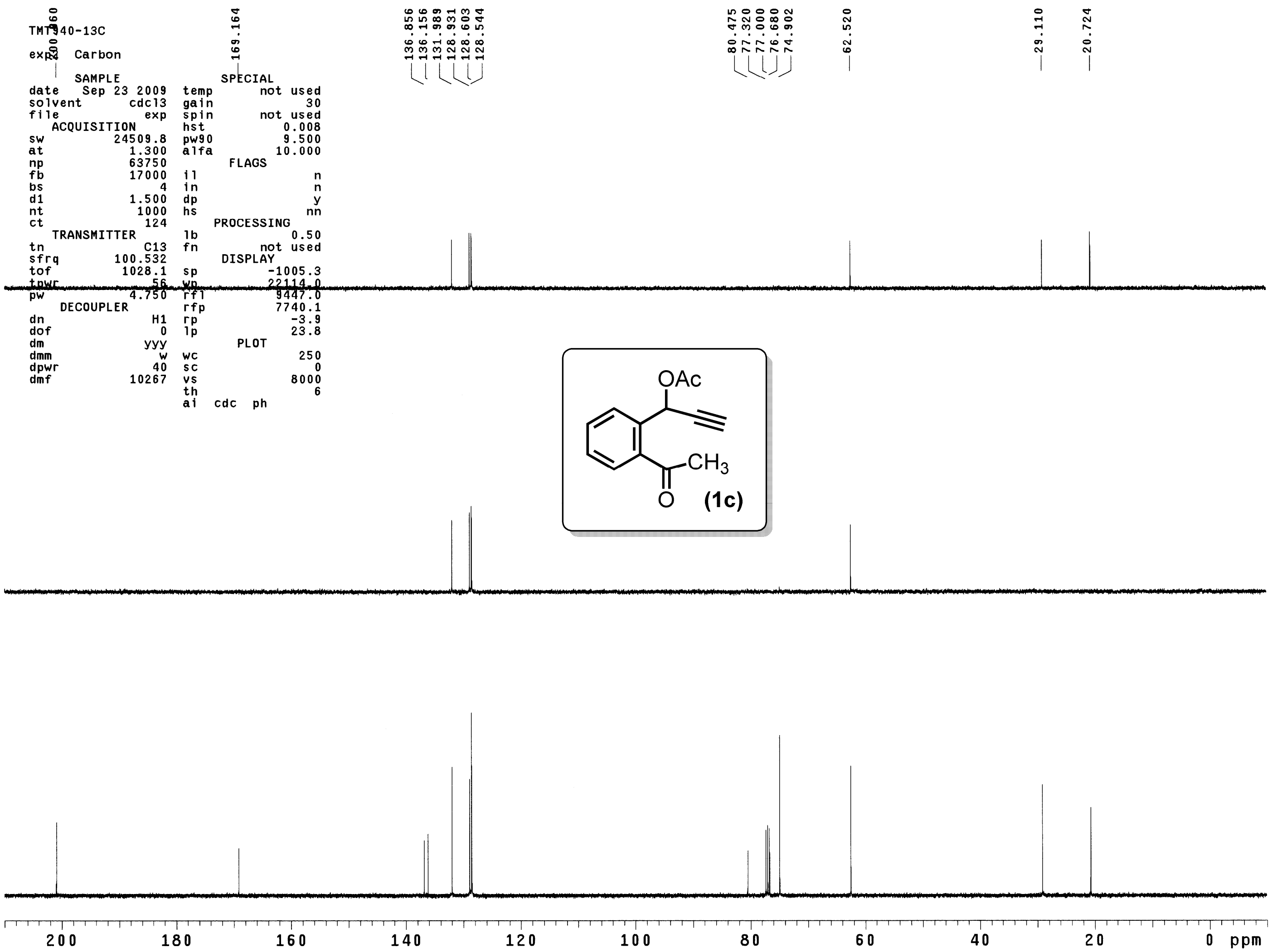
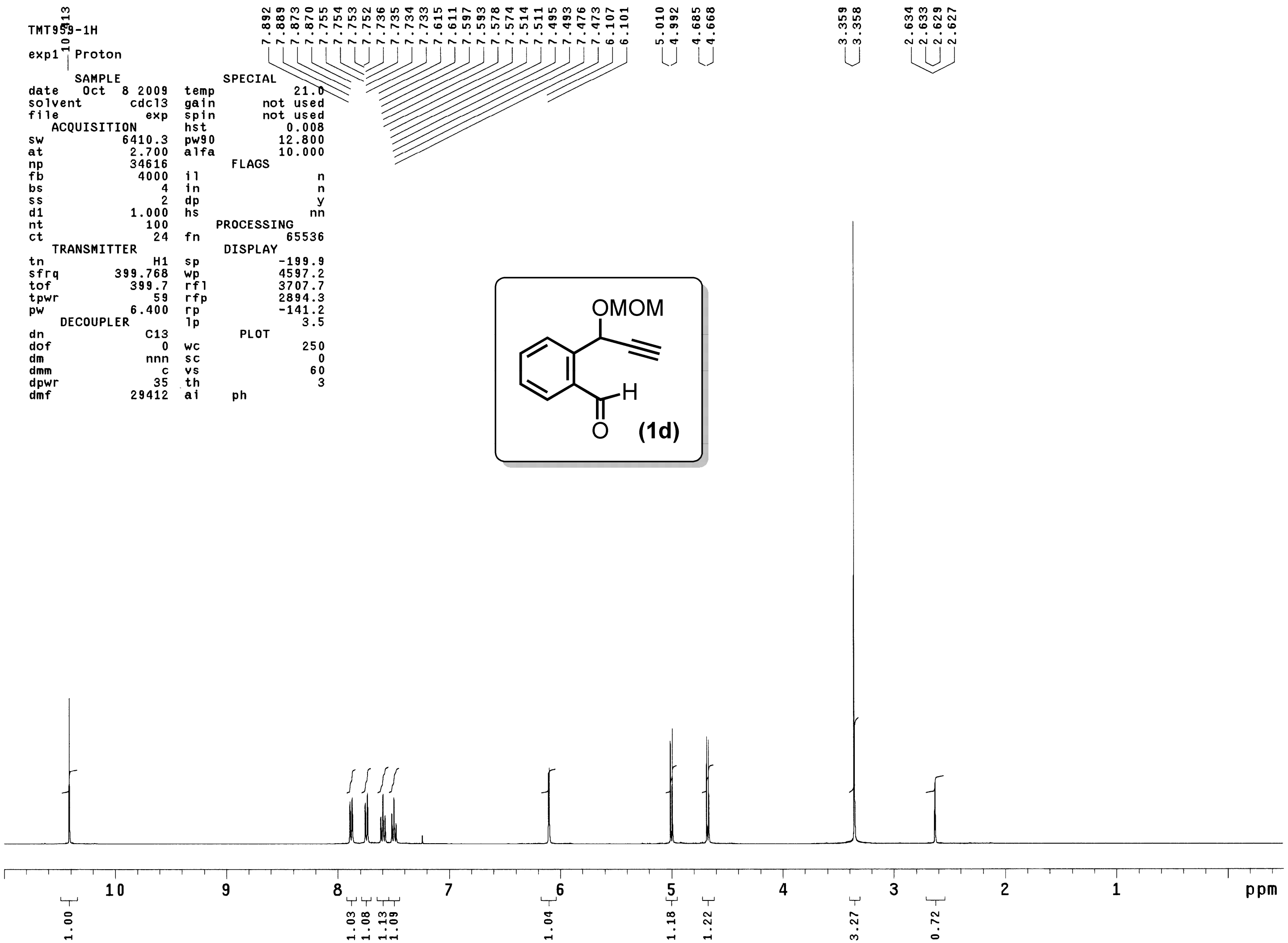
date Sep 23 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 20
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.7
rfp 2894.3
rp 54.5
lp -1.2
PLOT
wc 250
sc 0
vs 30
th 3
ai ph
7.851 7.850 7.848 7.847 7.832 7.830 7.828 7.710 7.706 7.691 7.687 7.559 7.555 7.539 7.536 7.520 7.516 7.446 7.443 7.427 7.424 7.405 7.240 7.239 6.992 6.986
2.601 2.589 2.583
2.067 2.065
OAc
CH3
O
(1c)
9 8 7 6 5 4 3 2 1 0 ppm
1.15 1.18 1.23 1.19 1.00 3.49 1.05 3.62



200.960
169.164
136.856
136.156
131.989
128.931
128.603
128.544
80.475
77.320
77.000
76.680
74.902
62.520
29.110
20.724
TMT940-13C
exp1 Carbon
SAMPLE
date Sep 23 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 124
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9447.0
rfp 7740.1
rp -3.9
lp 23.8
PLOT
wc 250
sc 0
vs 8000
th 6
ai cdc ph
OAc
CH3
O
(1c)
200
180
160
140
120
100
80
60
40
20
0 ppm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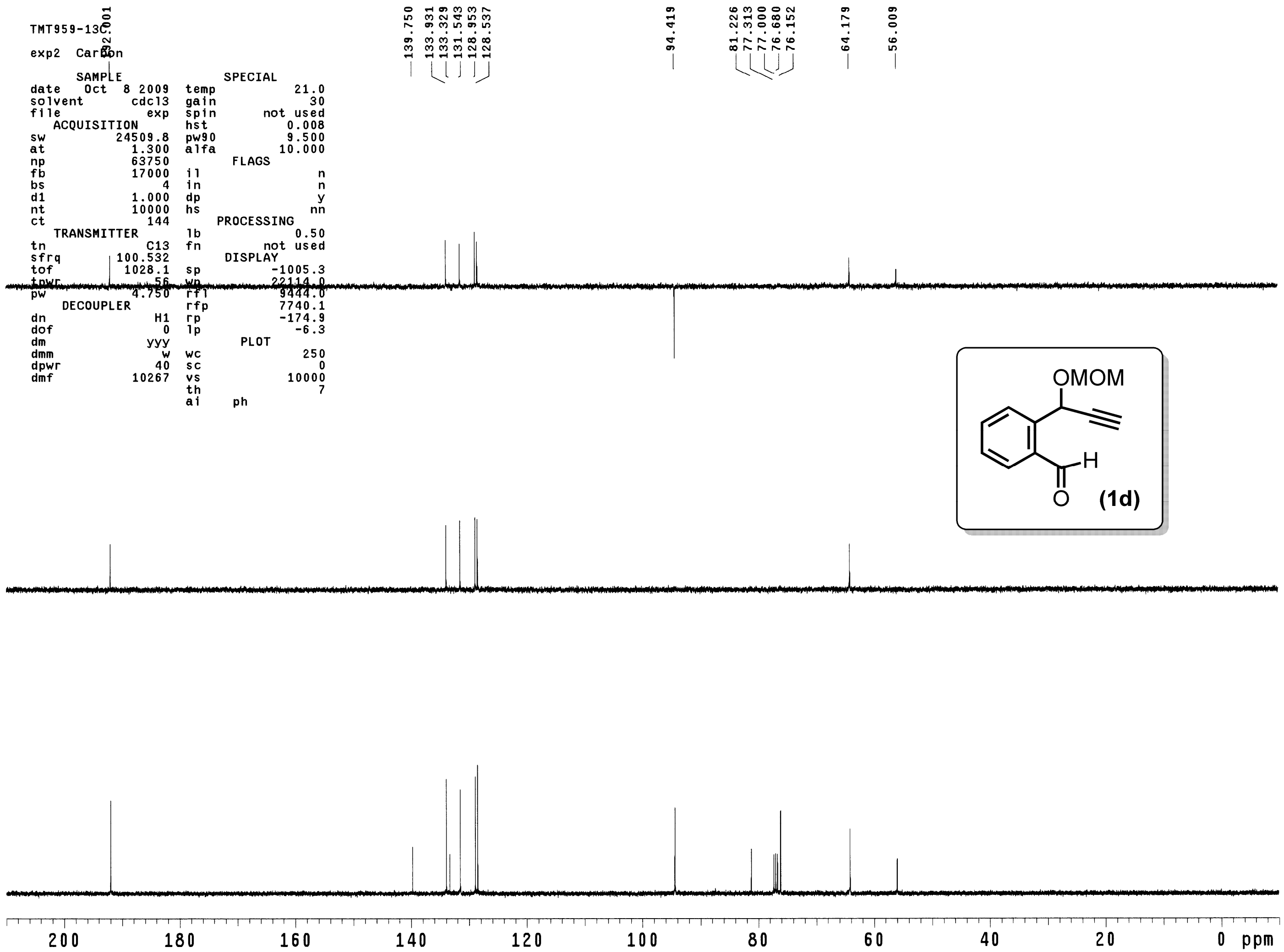
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 24
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4597.2
rfl 3707.7
rfp 2894.3
rp -141.2
lp 3.5
PLOT
wc 250
sc 0
vs 60
th 3
ai ph
10.313
7.892 7.889 7.873 7.870 7.755 7.754 7.753 7.752 7.736 7.735 7.734 7.733 7.615 7.611 7.597 7.593 7.578 7.574 7.511 7.514 7.495 7.493 7.476 7.473 6.107 6.101
5.010 4.992 4.685 4.668
3.359 3.358
2.634 2.633 2.629 2.627
OMOM
H
O
(1d)
10 9 8 7 6 5 4 3 2 1 ppm
1.00 1.03 1.08 1.13 1.09 1.04 1.18 1.22 3.27 0.72



TMT959-13C
exp2 Carbon
SAMPLE
date Oct 8 2009
solvent cdcl3
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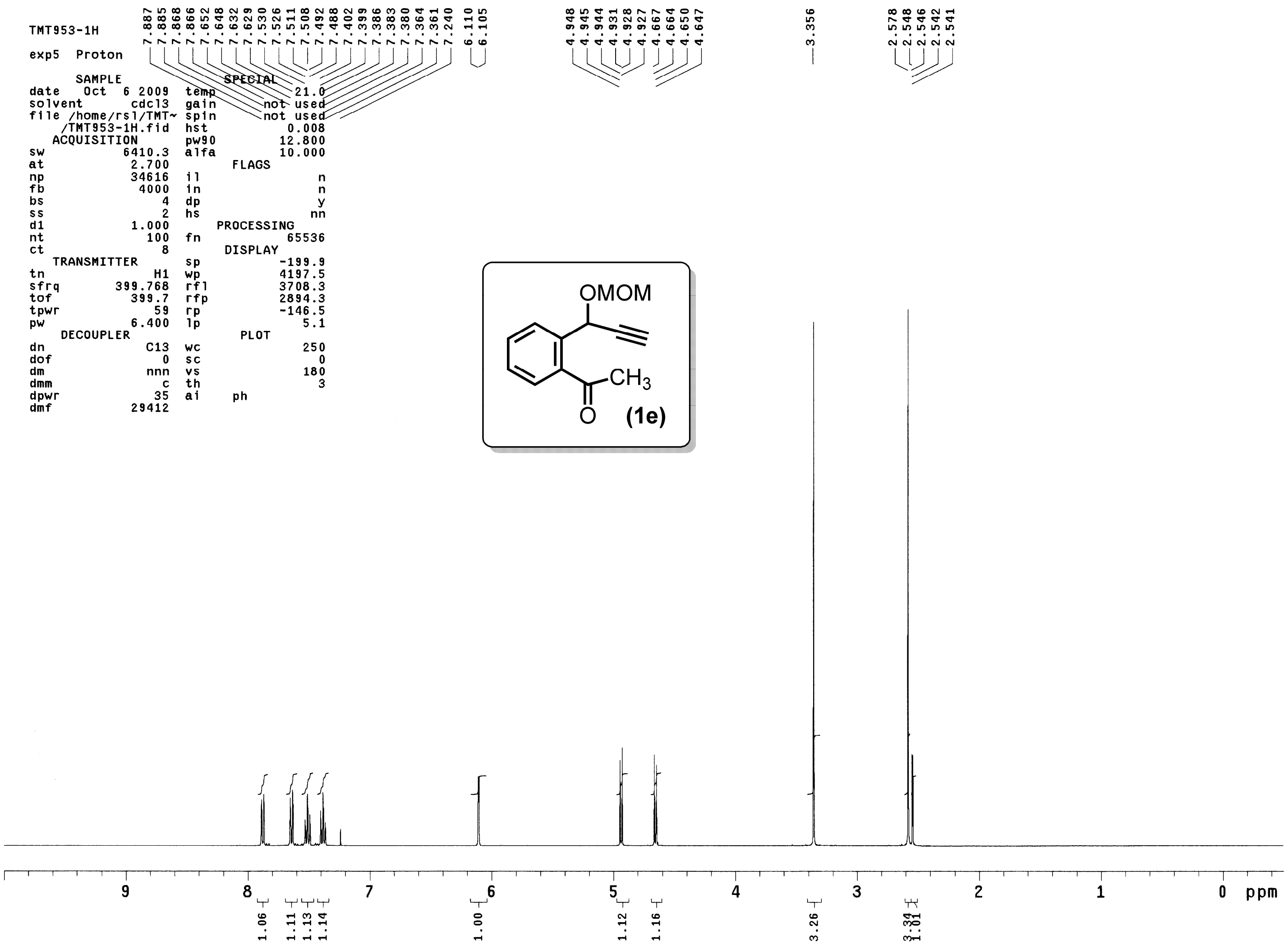
at 1.300
np 63750
fb 17000
bs 4
d1 1.000
nt 10000
ct 144
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9444.0
rfp 7740.1
rp -174.9
lp -6.3
PLOT
wc 250
sc 0
vs 10000
th 7
ai ph
192.001
139.750
133.931
133.329
131.543
128.953
128.537
94.419
81.226
77.313
77.000
76.680
76.152
64.179
56.009
OMOM
H
O
(1d)
200
180
160
140
120
100
80
60
40
20
0 ppm


TMT953-1H
exp5 Proton
SAMPLE
date Oct 6 2009
solvent cdcl3
file /home/rsl/TMT~
/TMT953-1H.fid
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 8
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.3
rfp 2894.3
rp -146.5
lp 5.1
PLOT
wc 250
sc 0
vs 180
th 3
ai ph
7.887 7.885 7.868 7.866 7.652 7.648 7.632 7.629 7.530 7.526 7.511 7.508 7.492 7.488 7.402 7.399 7.386 7.383 7.380 7.364 7.361 7.240
6.110 6.105
4.948 4.945 4.944 4.931 4.928 4.927 4.667 4.664 4.650 4.647
3.356
2.578 2.548 2.546 2.542 2.541
OMOM
CH3
O
(1e)
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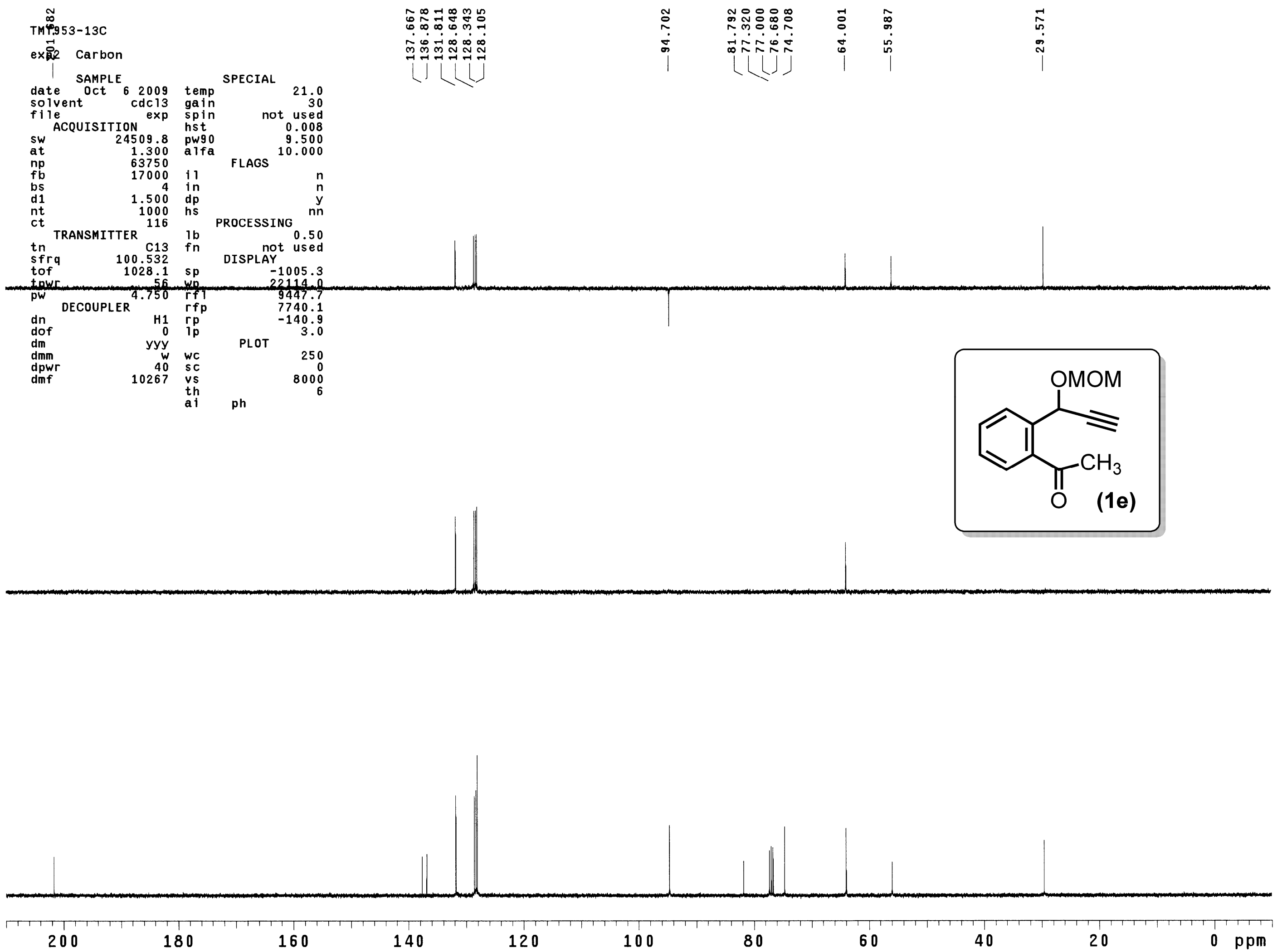
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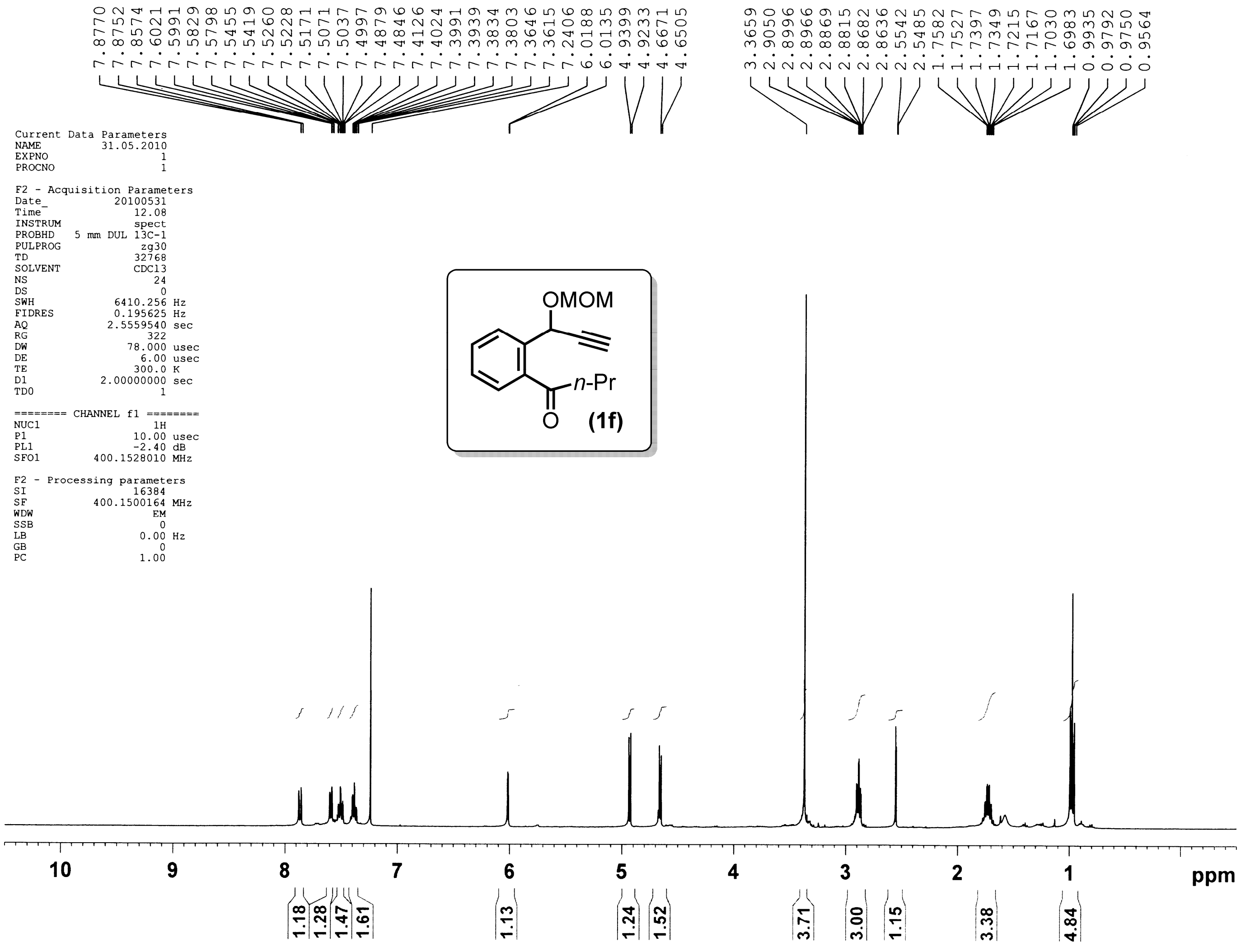
137.667
136.878
131.811
128.648
128.343
128.105
94.702
81.792
77.320
77.000
76.680
74.708
64.001
55.987
29.571
OMOM
CH3
O
(1e)
200
180
160
140
120
100
80
60
40
20
0 ppm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PROCNO 1
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PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 322
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500164 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
7.8770 7.8752 7.8574 7.6021 7.5991 7.5829 7.5798 7.5455 7.5419 7.5260 7.5228 7.5171 7.5071 7.5037 7.4997 7.4879 7.4846 7.4126 7.4024 7.3991 7.3939 7.3834 7.3803 7.3646 7.3615 7.2406 6.0188 6.0135 4.9399 4.9233 4.6671 4.6505
3.3659 2.9050 2.8996 2.8966 2.8869 2.8815 2.8682 2.8636 2.5542 2.5485 1.7582 1.7527 1.7397 1.7349 1.7215 1.7167 1.7030 1.6983 0.9935 0.9792 0.9750 0.9564
OMOM
n-Pr
O
(1f)
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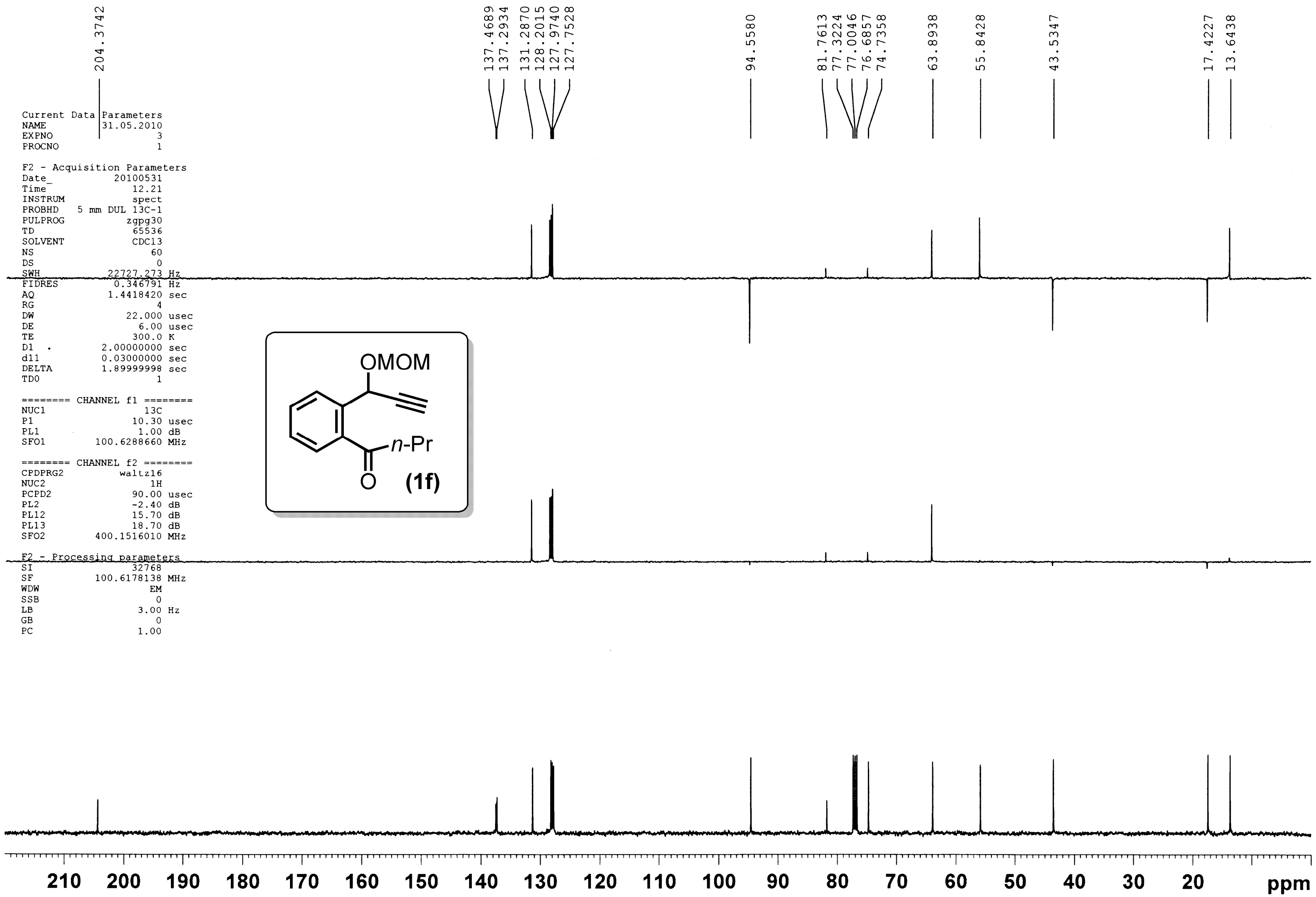
1.18 1.28 1.47 1.61 1.13 1.24 1.52 3.71 3.00 1.15 3.38 4.84



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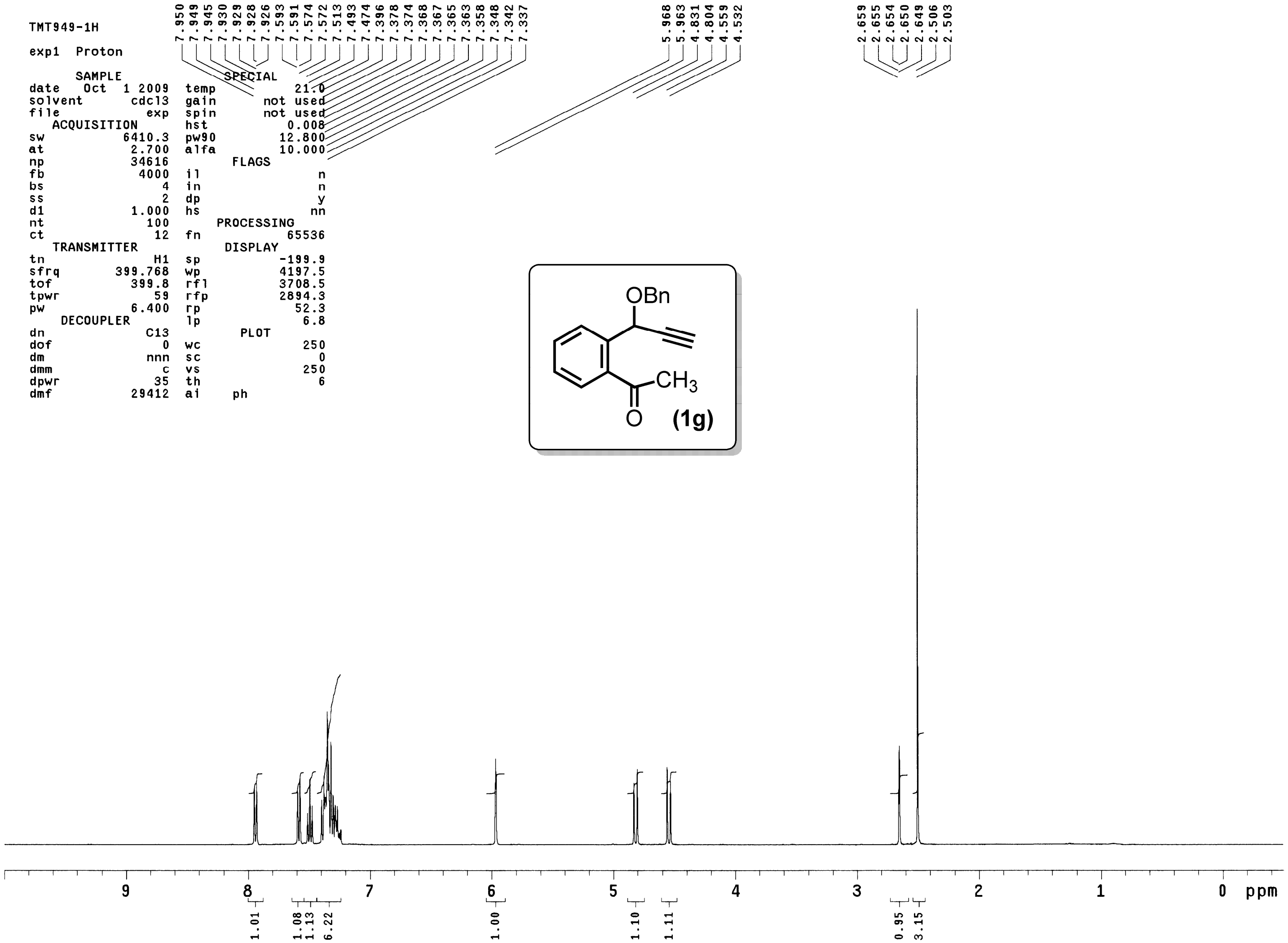
127.9740
127.7528
94.5580
81.7613
77.3224
77.0046
76.6857
74.7358
63.8938
55.8428
43.5347
17.4227
13.6438
Current Data Parameters
NAME 31.05.2010
EXPNO 3
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100531
Time 12.21
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 60
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 4
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178138 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
n-Pr
O
(1f)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm



TMT949-1H
exp1 Proton
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date Oct 1 2009
solvent cdcl3
file exp
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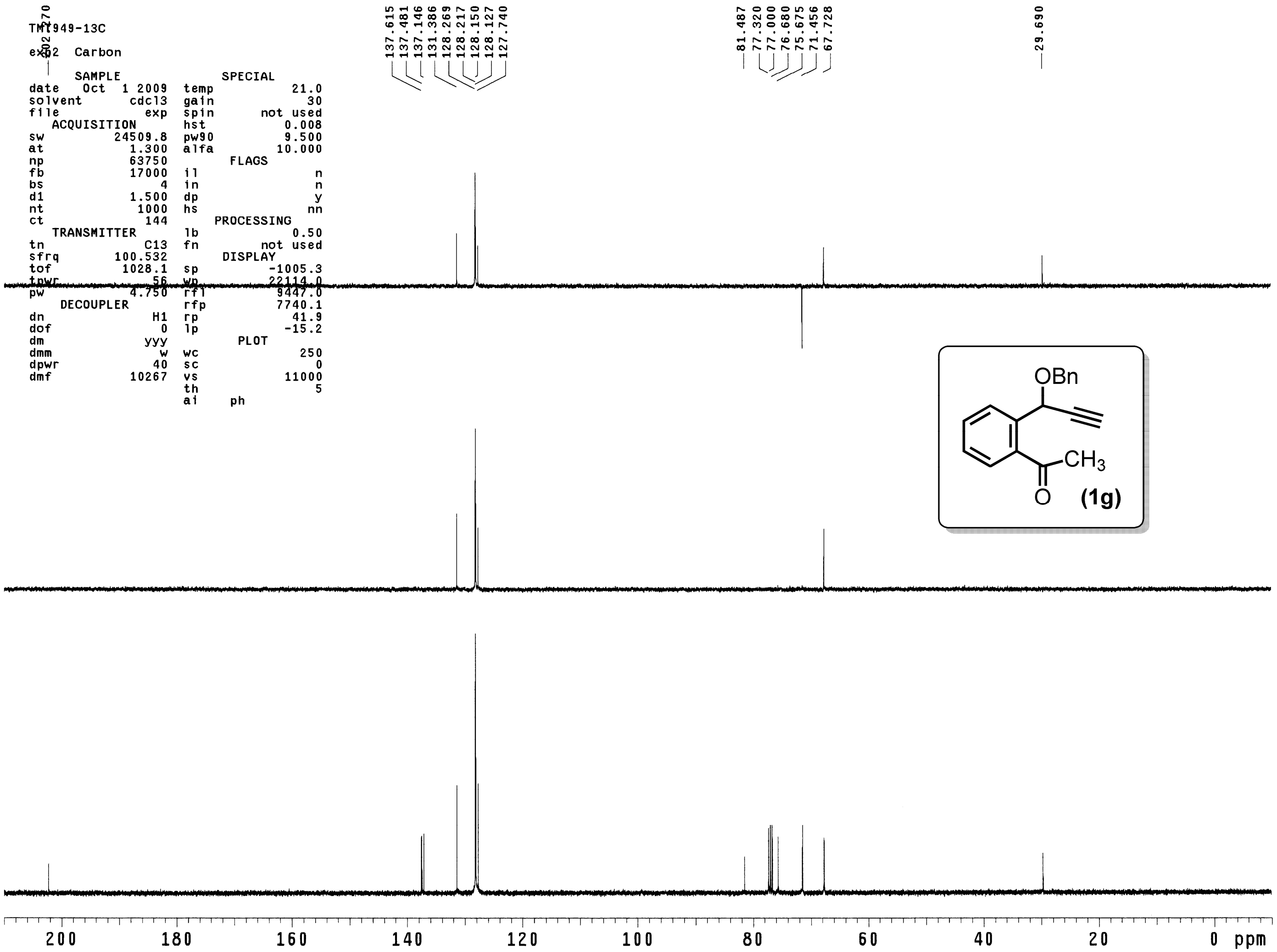
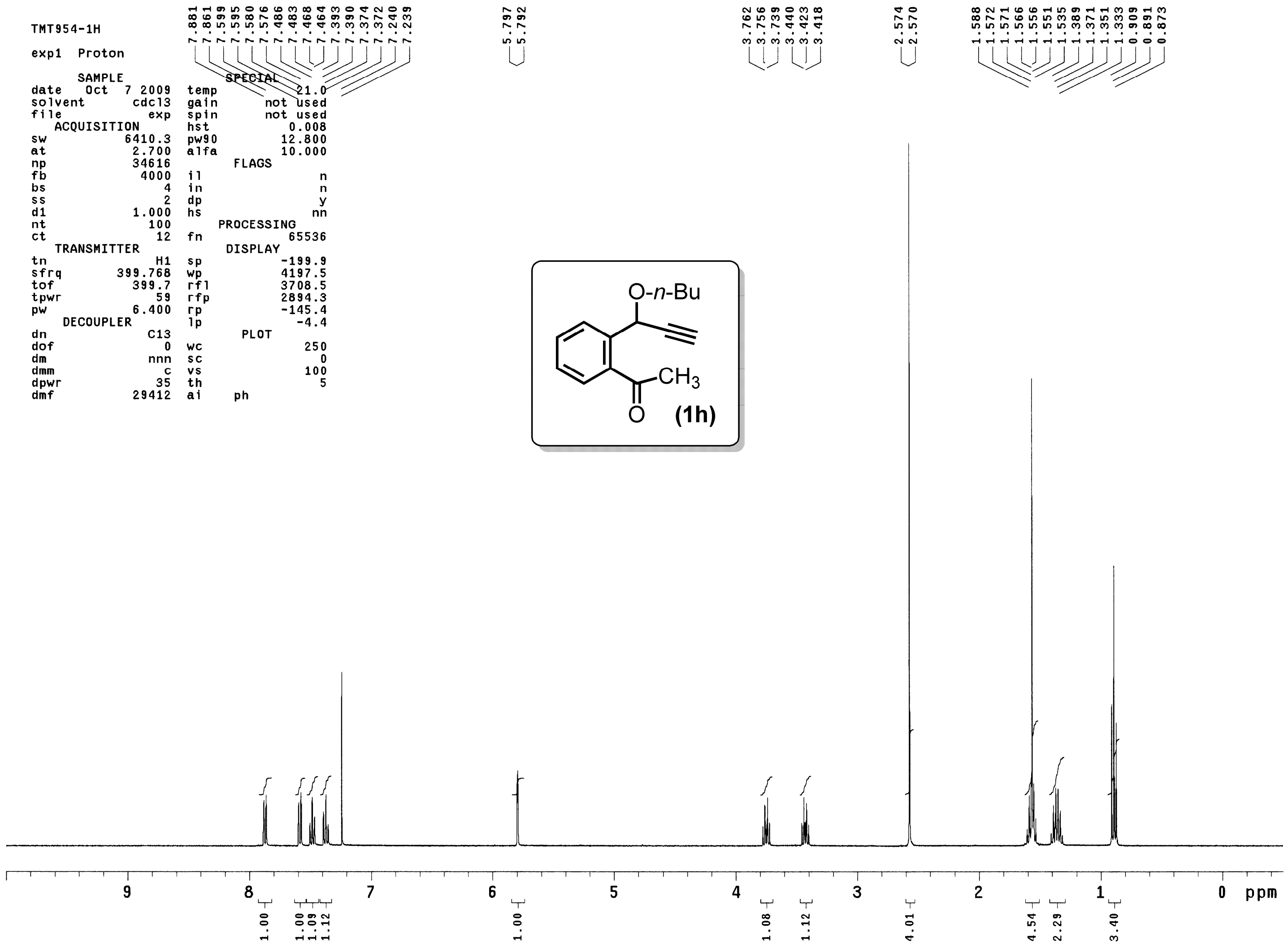
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 12
TRANSMITTER
tn H1
sfrq 399.768
tof 399.8
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.5
rfp 2894.3
rp 52.3
lp 6.8
PLOT
wc 250
sc 0
vs 250
th 6
ai ph
7.950 7.949 7.945 7.930 7.929 7.928 7.926 7.593 7.591 7.574 7.572 7.513 7.493 7.474 7.396 7.378 7.374 7.368 7.367 7.365 7.363 7.358 7.348 7.342 7.337
5.968 5.963 4.831 4.804 4.559 4.532
2.659 2.655 2.654 2.650 2.649 2.506 2.503
OBn
CH3
O
(1g)
9 8 7 6 5 4 3 2 1 0 ppm
1.01 1.08 1.13 6.22 1.00 1.10 1.11 0.95 3.15



(1g)


TMT954-1H
exp1 Proton
SAMPLE
date Oct 7 2009
solvent cdcl3
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ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 12
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.5
rfp 2894.3
rp -145.4
lp -4.4
PLOT
wc 250
sc 0
vs 100
th 5
ai ph
7.881 7.861 7.599 7.595 7.580 7.576 7.486 7.483 7.468 7.464 7.393 7.390 7.374 7.372 7.240 7.239
5.797 5.792
3.762 3.756 3.739 3.440 3.423 3.418
2.574 2.570
1.588 1.572 1.571 1.566 1.556 1.551 1.535 1.389 1.371 1.351 1.333 0.909 0.891 0.873
O-n-Bu
CH3
O
(1h)
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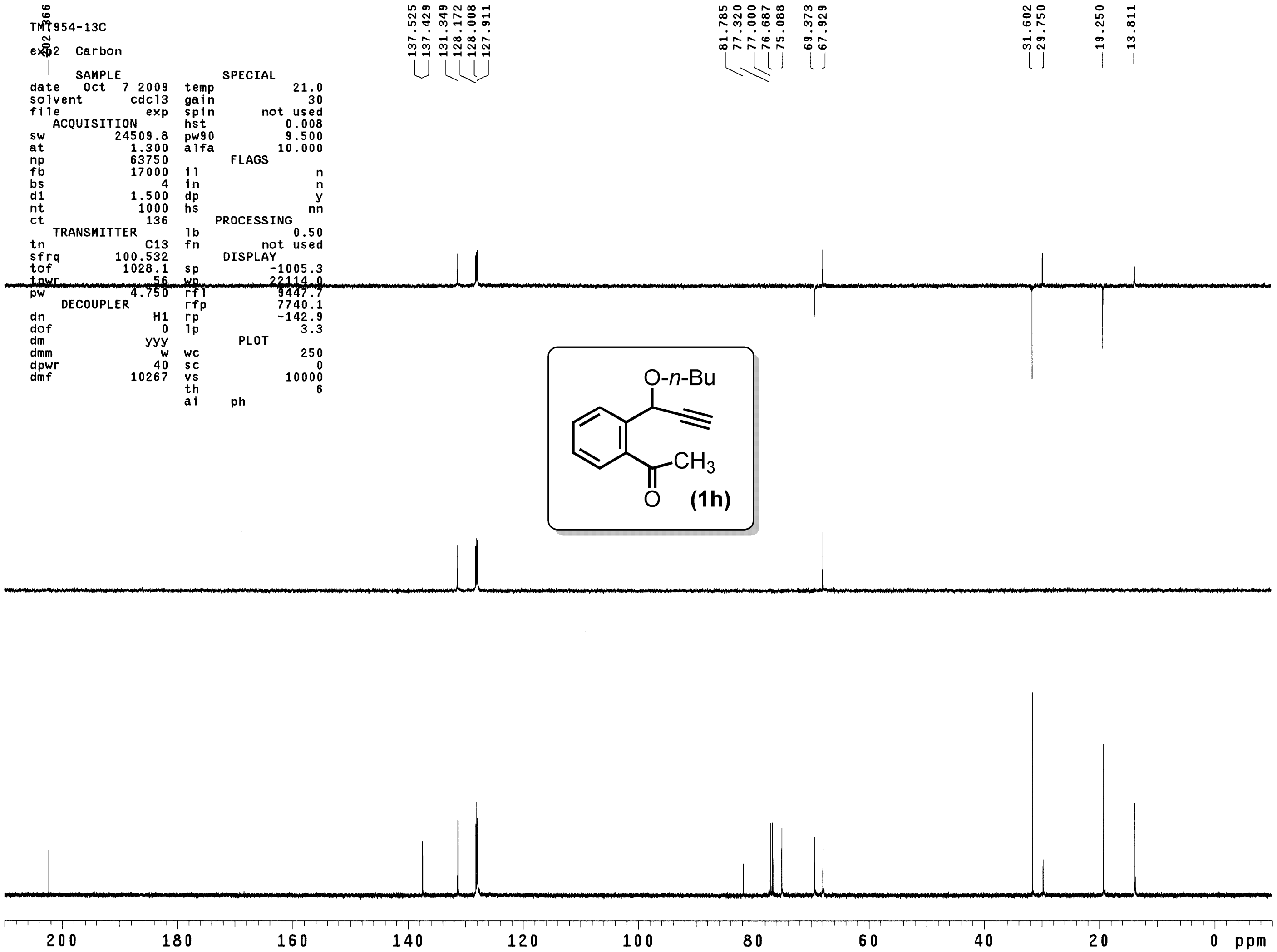
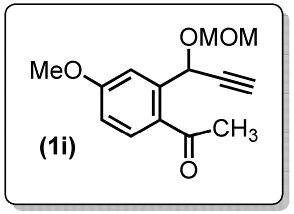
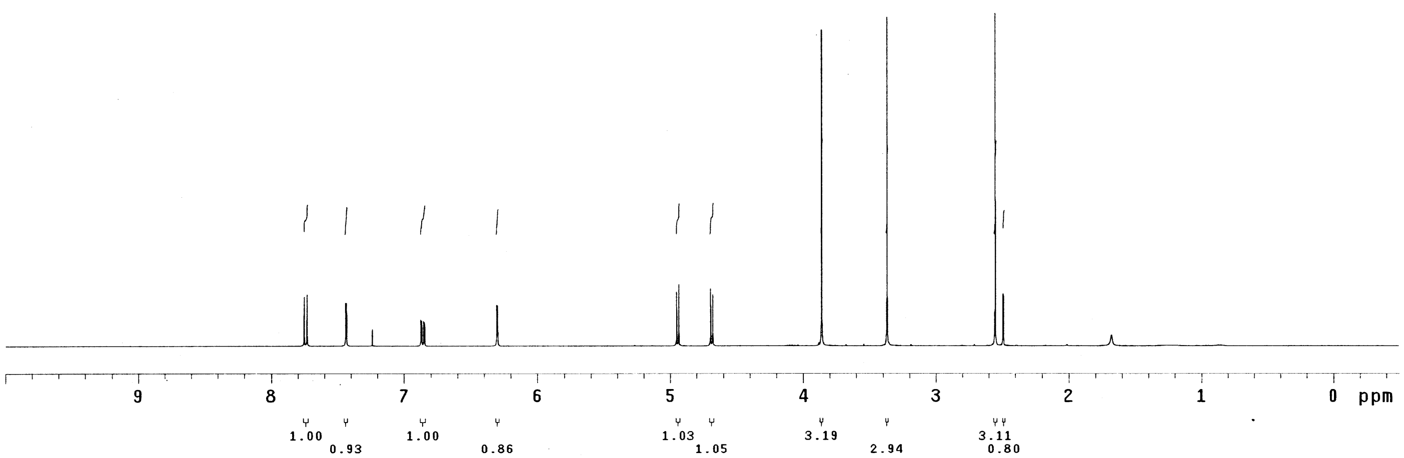
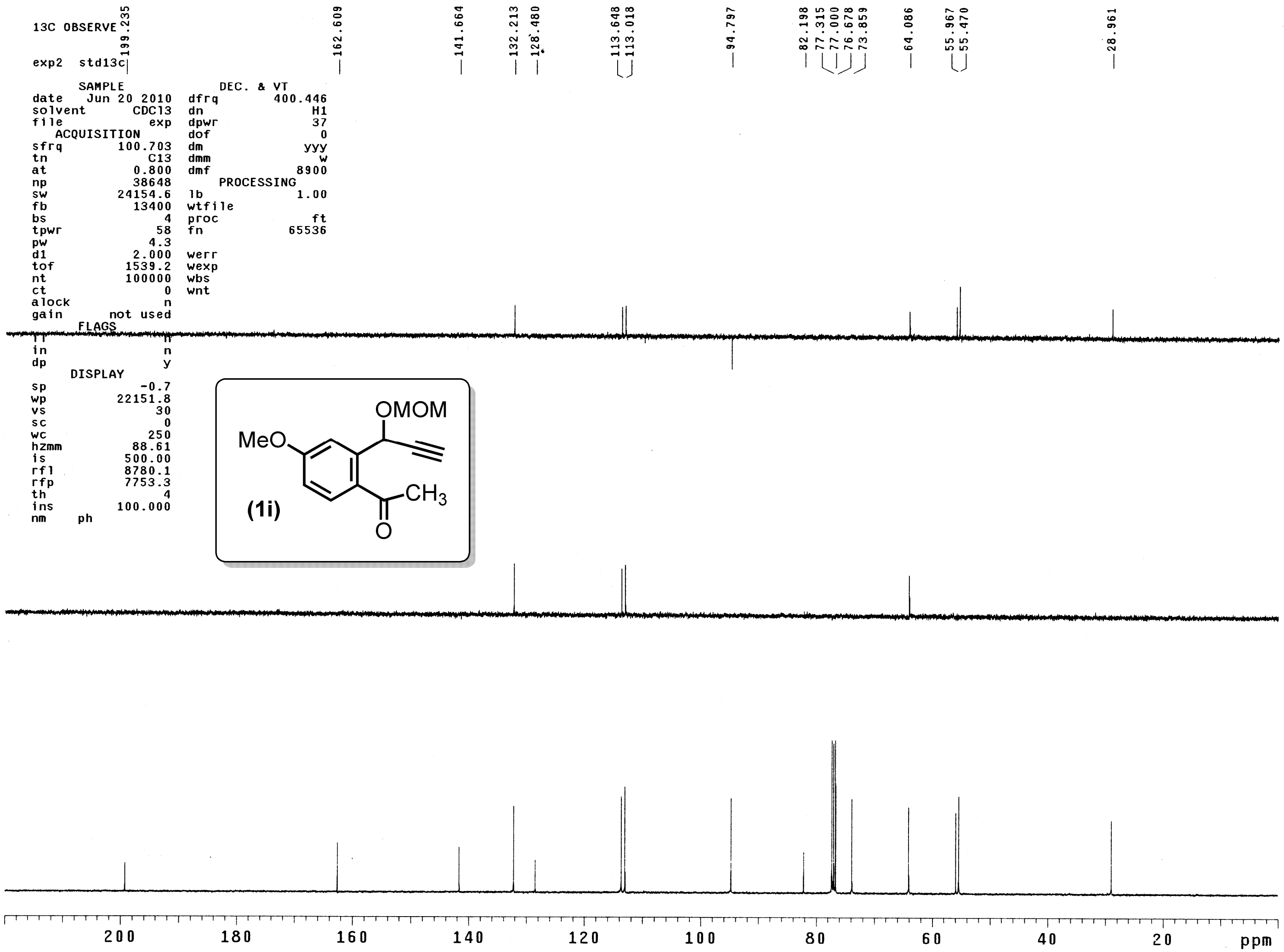


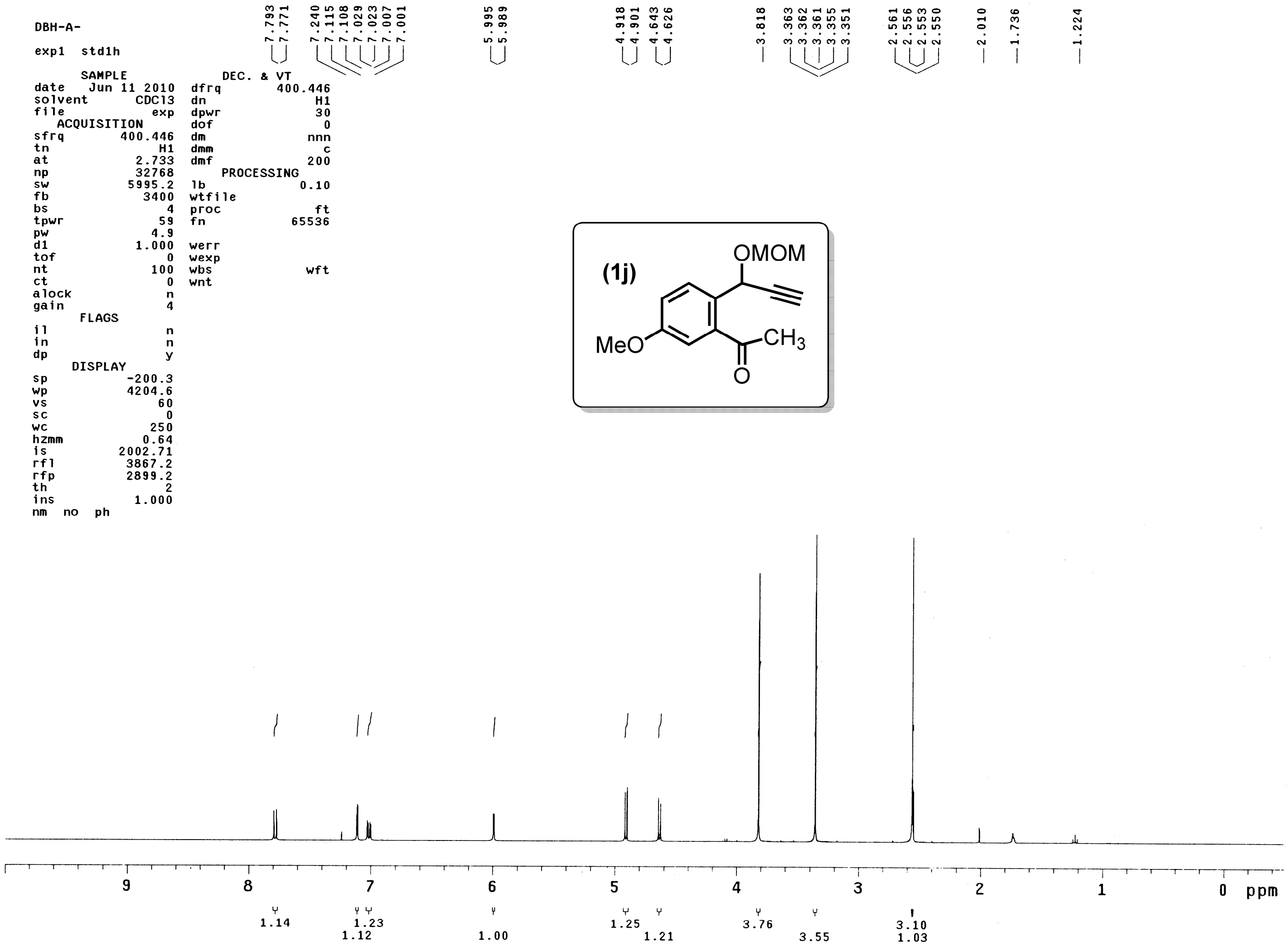
TMI954-13C
exp2 Carbon
SAMPLE
date Oct 7 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 136
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9447.7
rfp 7740.1
rp -142.9
lp 3.3
PLOT
wc 250
sc 0
vs 10000
th 6
ai ph
202.166
137.525
137.429
131.349
128.172
128.008
127.911
81.785
77.320
77.000
76.687
75.088
69.373
67.929
31.602
29.750
19.250
13.811
O-n-Bu
CH3
O
(1h)
200
180
160
140
120
100
80
60
40
20
0 ppm

```
DBH-A-126

exp1  std1h

      SAMPLE                  DEC. & VT
date    Jun 20 2010     dfrq      400.446
solvent       CDCl3     dn             H1
file            exp     dpwr           30
   ACQUISITION          dof             0
sfrq        400.446     dm            nnn
tn               H1     dmm             c
at            2.733     dmf           200
np            32768        PROCESSING
sw           5995.2     lb           0.10
fb             3400     wtfile
bs                4     proc           ft
tpwr             59     fn          65536
pw              4.9
d1            1.000     werr
tof               0     wexp
nt              100     wbs           wft
ct                0     wnt
alock             n
gain              4
      FLAGS
il                n
in                n
dp                y
     DISPLAY
sp           -200.3
wp           4204.6
vs               60
sc                0
wc              250
hzmm           0.40
is          2918.18
rfl          3867.2
rfp          2899.2
th                2
ins           1.000
nm  no  ph
```

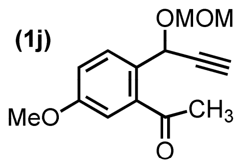


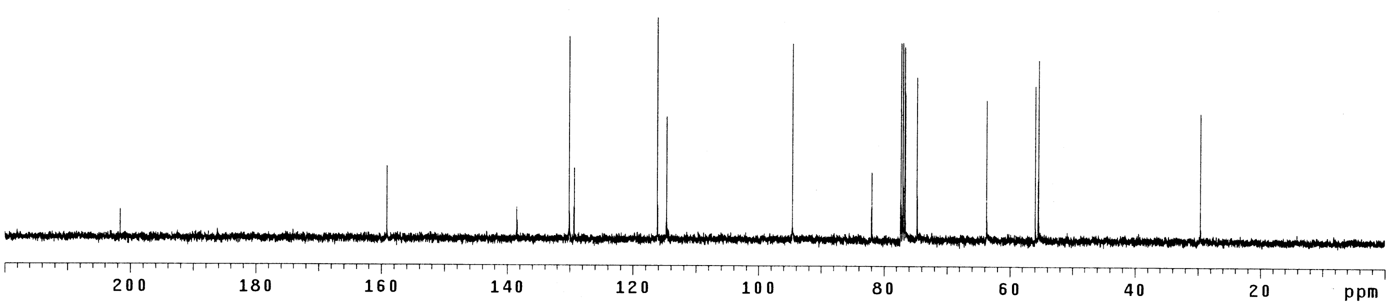

13C OBSERVE
exp2 std13c
199.235
162.609
141.664
132.213
128.480
113.648
113.018
94.797
82.198
77.315
77.000
76.678
73.859
64.086
55.967
55.470
28.961
SAMPLE
date Jun 20 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 30
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8780.1
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
OMOM
MeO
CH3
O
(1i)
200
180
160
140
120
100
80
60
40
20
ppm


DBH-A-
exp1 std1h
SAMPLE
date Jun 11 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 0
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 0.64
is 2002.71
rfl 3867.2
rfp 2899.2
th 2
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
7.793
7.771
7.240
7.115
7.108
7.029
7.023
7.007
7.001
5.995
5.989
4.918
4.901
4.643
4.626
3.818
3.363
3.362
3.361
3.355
3.351
2.561
2.556
2.553
2.550
2.010
1.736
1.224
(1j)
OMOM
MeO
CH3
O
9
8
7
6
5
4
3
2
1
0 ppm
1.14
1.23
1.12
1.00
1.25
1.21
3.76
3.55
3.10
1.03

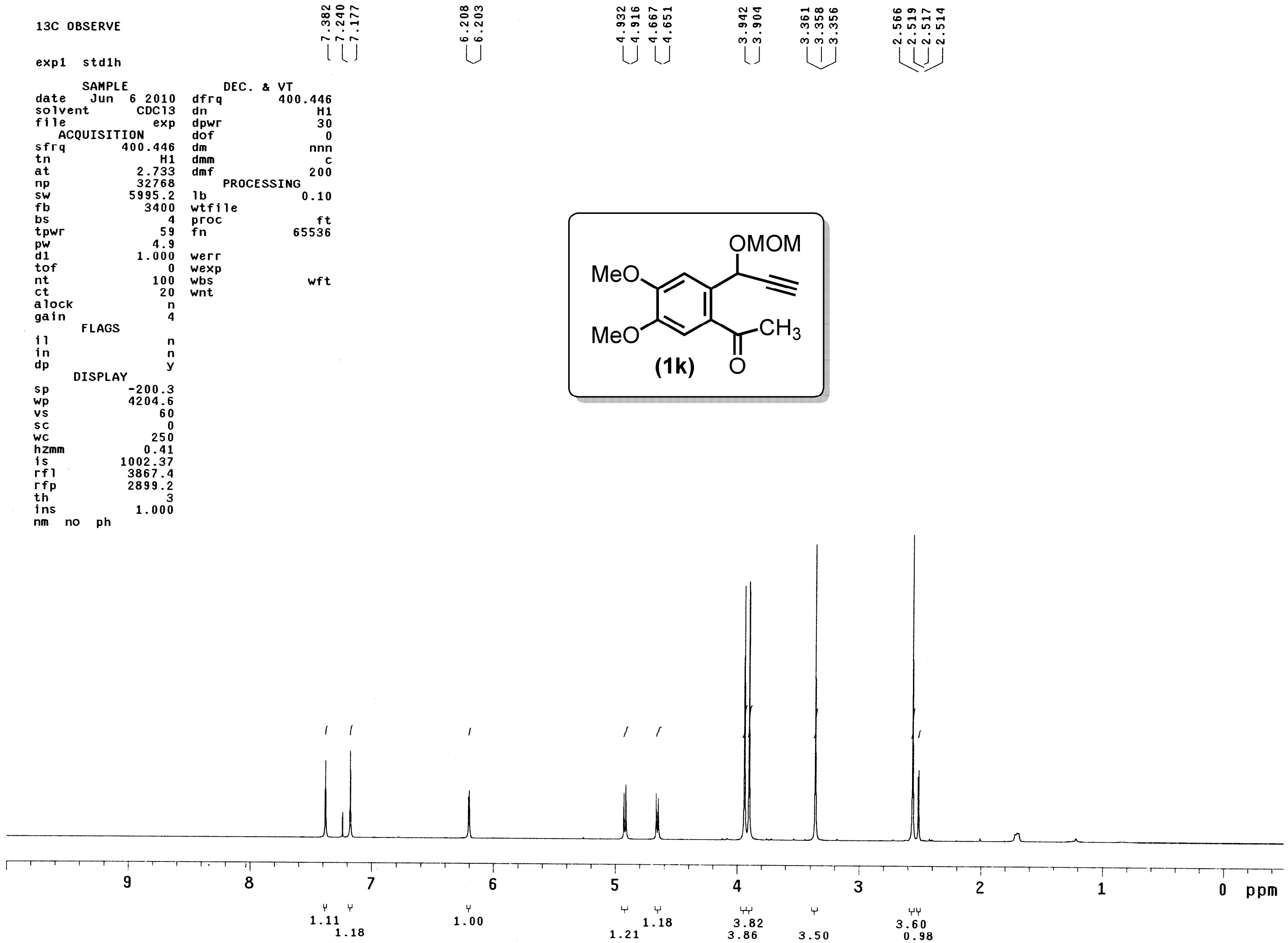
**(1j)**

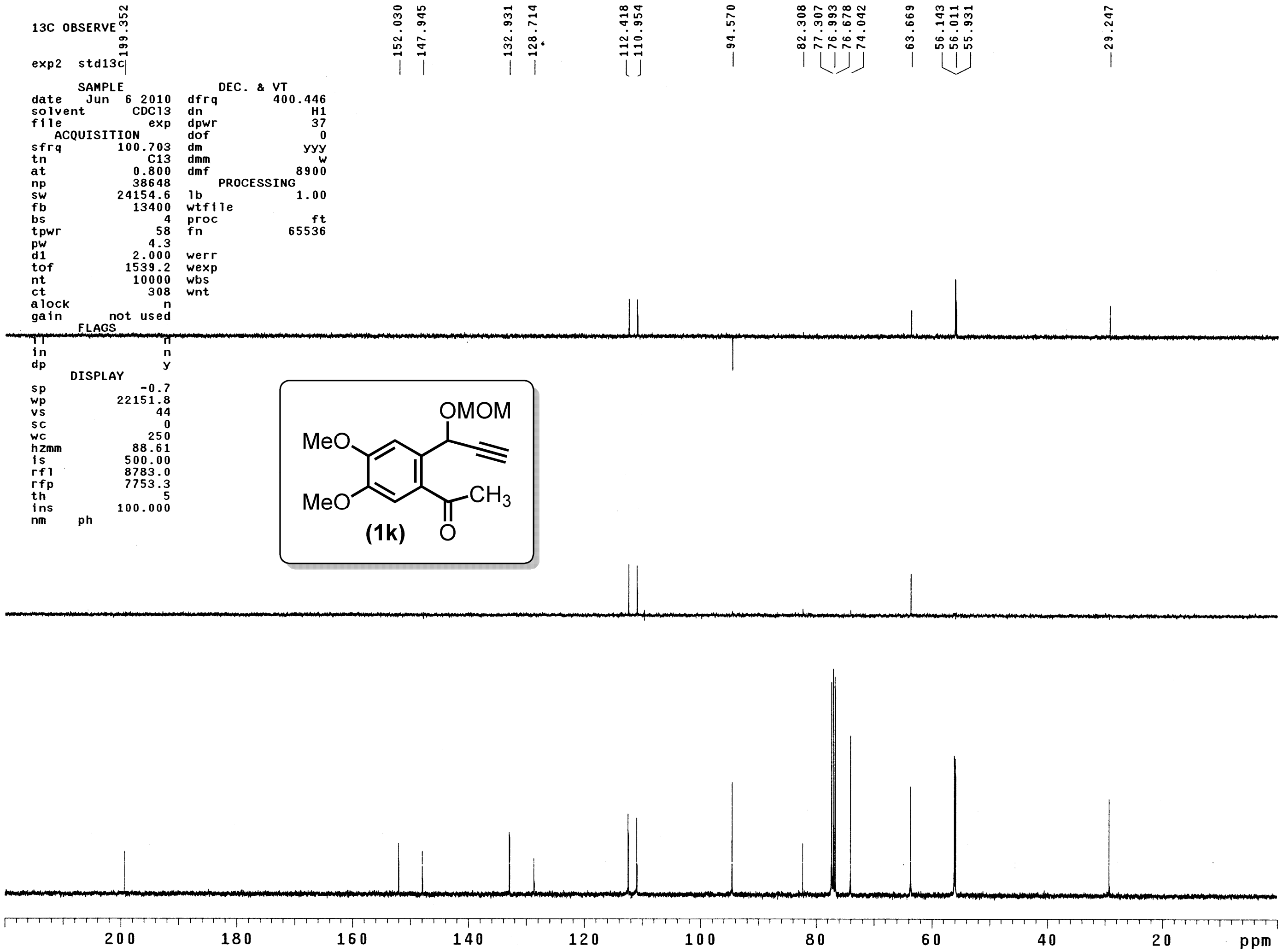


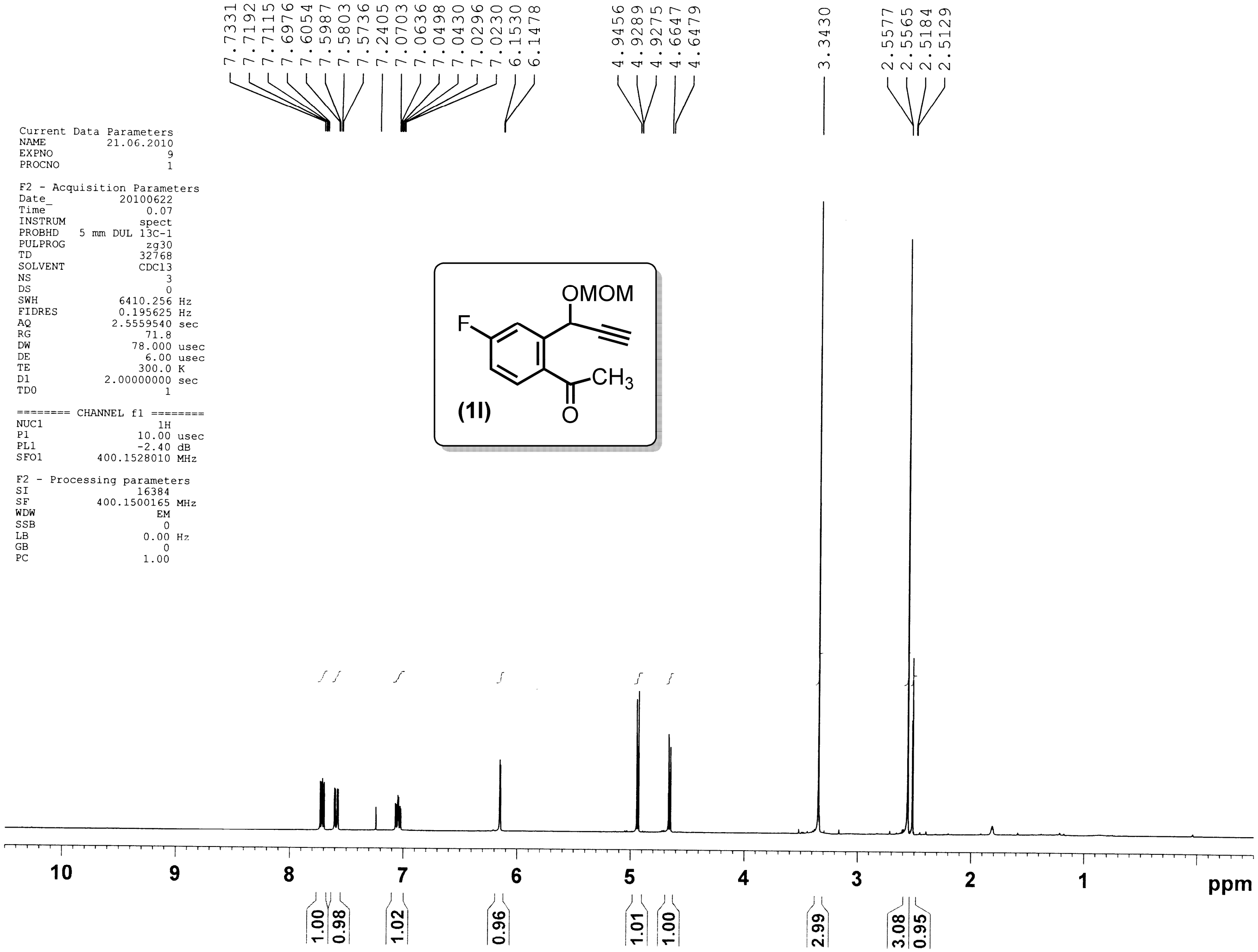
OMOM
MeO
$CH_3$
O

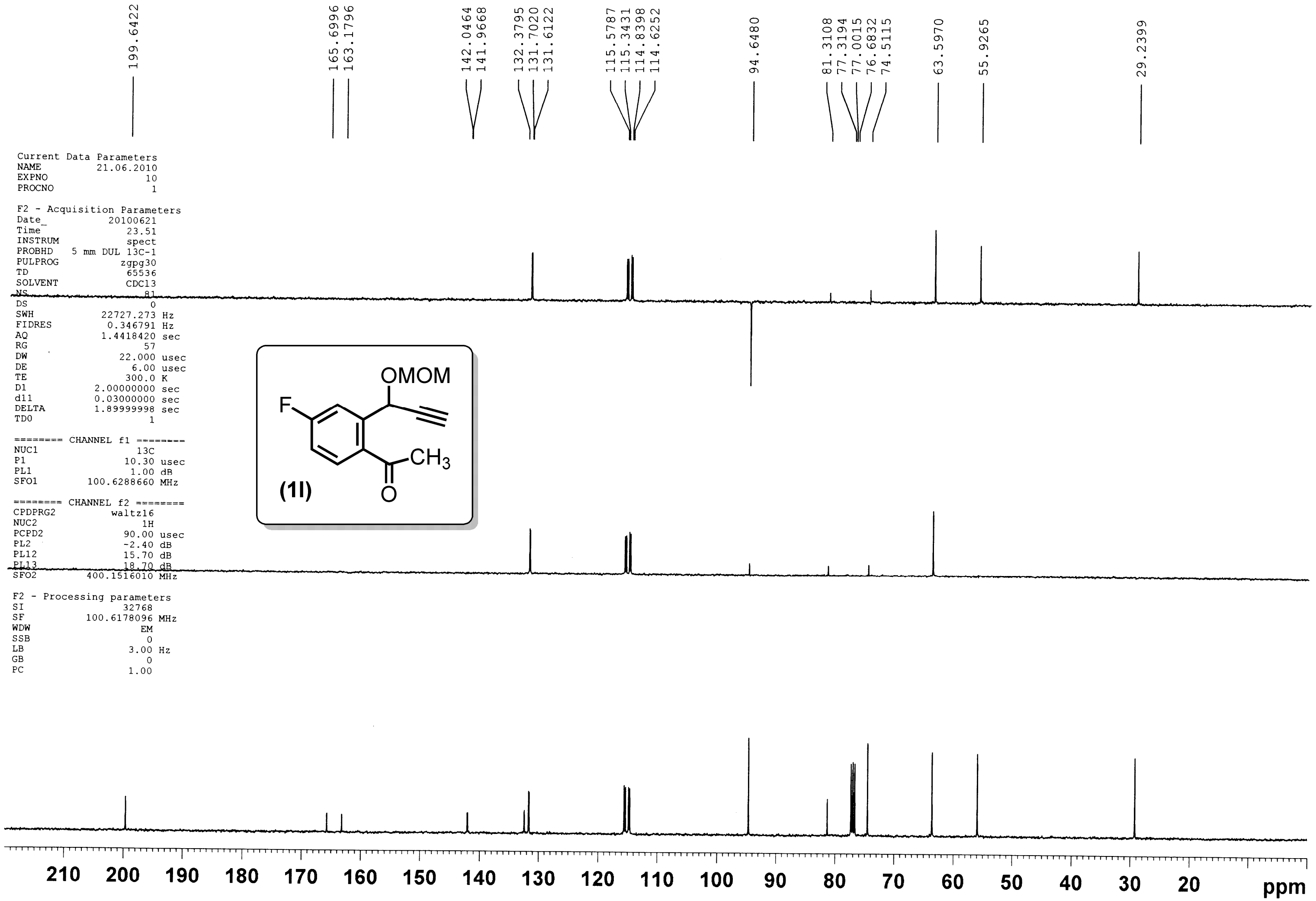



201.85
159.132
138.480
130.112
129.343
116.159
114.687
94.628
81.971
77.315
77.000
76.678
74.753
63.727
55.982
55.477
29.642
13C OBSERVE
exp2 std13c
SAMPLE
date Jun 11 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 40
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8783.0
rfp 7753.3
th 3
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
200
180
160
140
120
100
80
60
40
20
ppm

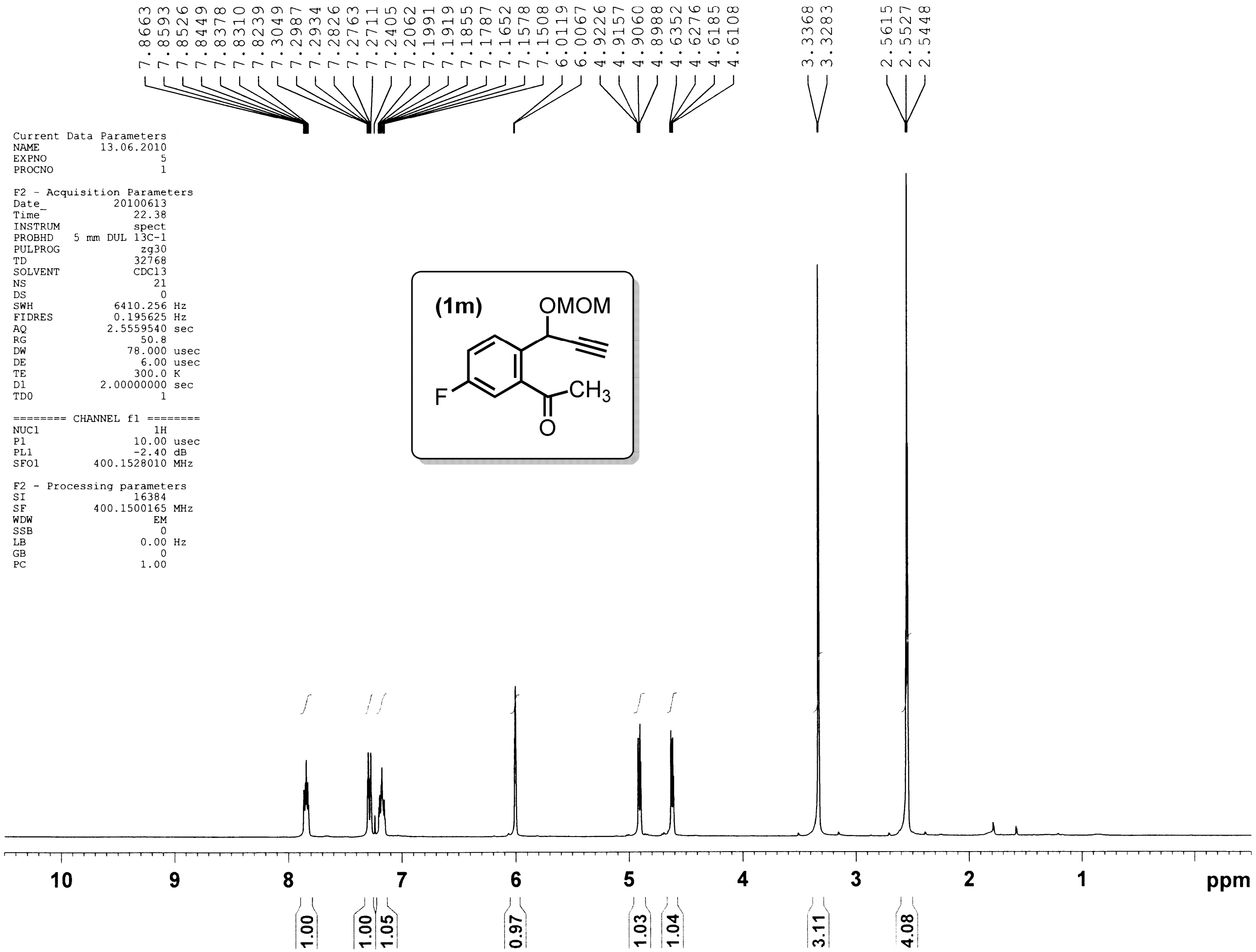

13C OBSERVE
exp1 std1h
SAMPLE
date Jun 6 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 20
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 0.41
is 1002.37
rfl 3867.4
rfp 2899.2
th 3
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
7.382
7.240
7.177
6.208
6.203
4.932
4.916
4.667
4.651
3.942
3.904
3.361
3.358
3.356
2.566
2.519
2.517
2.514
OMOM
MeO
MeO
CH3
O
(1k)
9
8
7
6
5
4
3
2
1
0 ppm
1.11
1.18
1.00
1.21
1.18
3.82
3.86
3.50
3.60
0.98

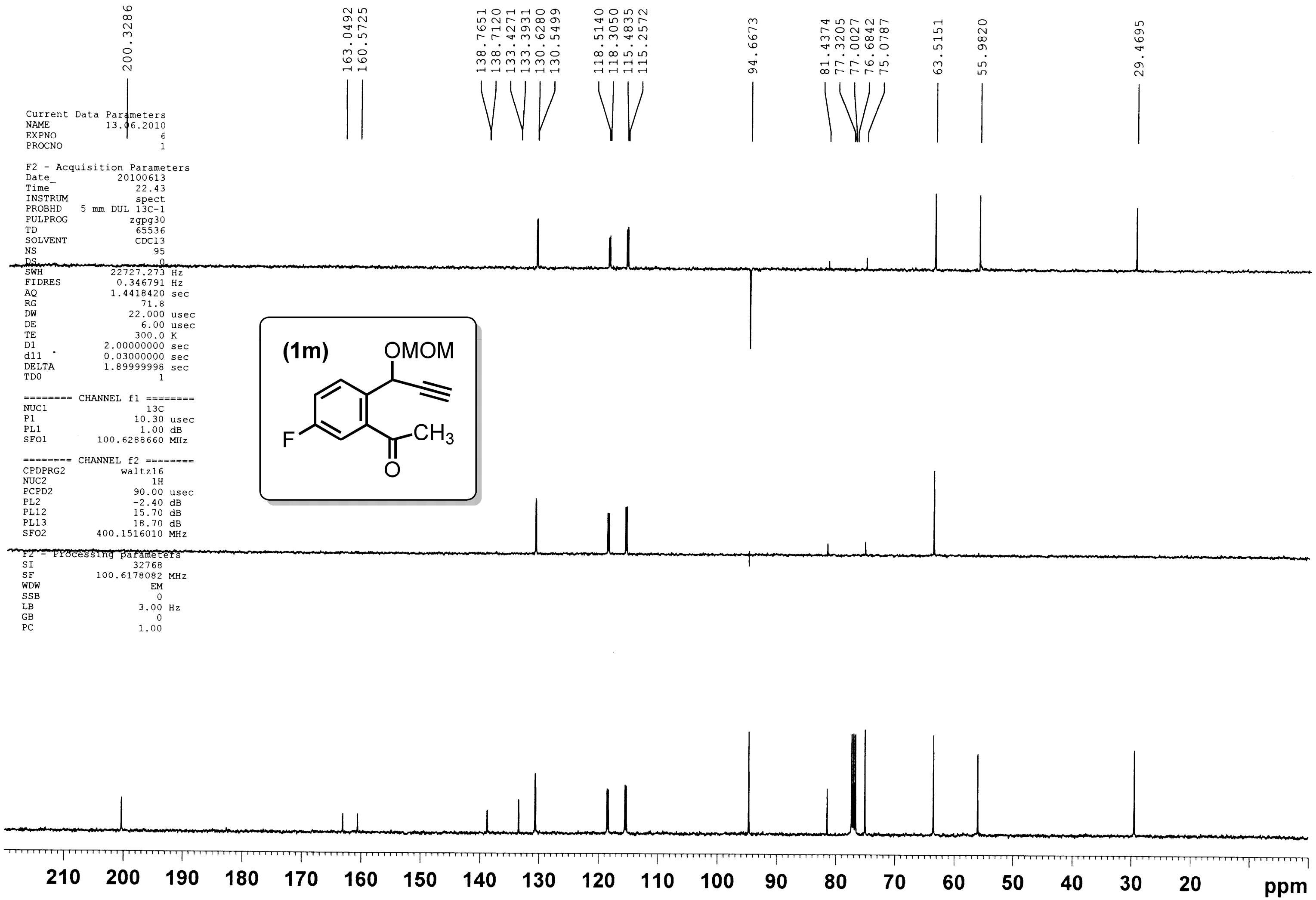

13C OBSERVE
exp2 std13c
SAMPLE
date Jun 6 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 10000
ct 308
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 44
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8783.0
rfp 7753.3
th 5
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
199.352
152.030
147.945
132.931
128.714
112.418
110.954
94.570
82.308
77.307
76.993
76.678
74.042
63.669
56.143
56.011
55.931
29.247
OMOM
MeO
MeO
CH3
O
(1k)
200
180
160
140
120
100
80
60
40
20
ppm


Current Data Parameters
NAME 21.06.2010
EXPNO 9
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100622
Time 0.07
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 3
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 71.8
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
7.7331
7.7192
7.7115
7.6976
7.6054
7.5987
7.5803
7.5736
7.2405
7.0703
7.0636
7.0498
7.0430
7.0296
7.0230
6.1530
6.1478
4.9456
4.9289
4.9275
4.6647
4.6479
3.3430
2.5577
2.5565
2.5184
2.5129
OMOM
F
CH3
O
(1l)
10
9
8
7
6
5
4
3
2
1
ppm
1.00
0.98
1.02
0.96
1.01
1.00
2.99
3.08
0.95

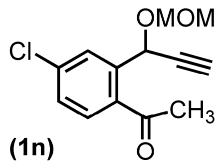


199.6422
165.6996
163.1796
142.0464
141.9668
132.3795
131.7020
131.6122
115.5787
115.3431
114.8398
114.6252
94.6480
81.3108
77.3194
77.0015
76.6832
74.5115
63.5970
55.9265
29.2399
Current Data Parameters
NAME 21.06.2010
EXPNO 10
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100621
Time 23.51
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 81
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 57
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178096 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
F
CH3
O
(1l)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

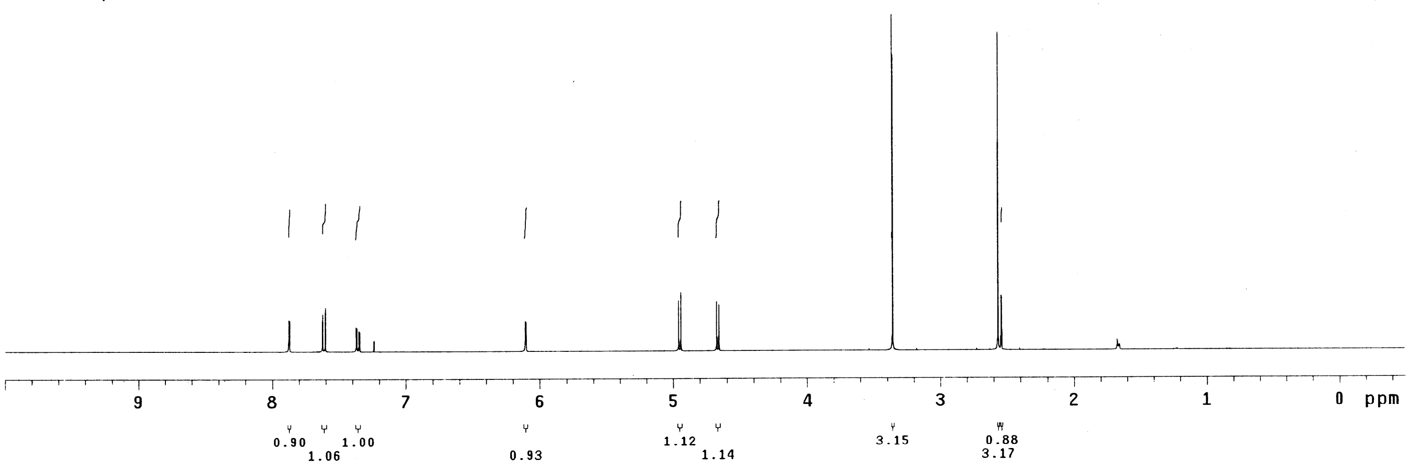

7.8663
7.8593
7.8526
7.8449
7.8378
7.8310
7.8239
7.3049
7.2987
7.2934
7.2826
7.2763
7.2711
7.2405
7.2062
7.1991
7.1919
7.1855
7.1787
7.1652
7.1578
7.1508
6.0119
6.0067
4.9226
4.9157
4.9060
4.8988
4.6352
4.6276
4.6185
4.6108
3.3368
3.3283
2.5615
2.5527
2.5448
Current Data Parameters
NAME 13.06.2010
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100613
Time 22.38
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 21
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 50.8
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
(1m)
OMOM
F
CH3
O
10
9
8
7
6
5
4
3
2
1
ppm
1.00
1.00
1.05
0.97
1.03
1.04
3.11
4.08

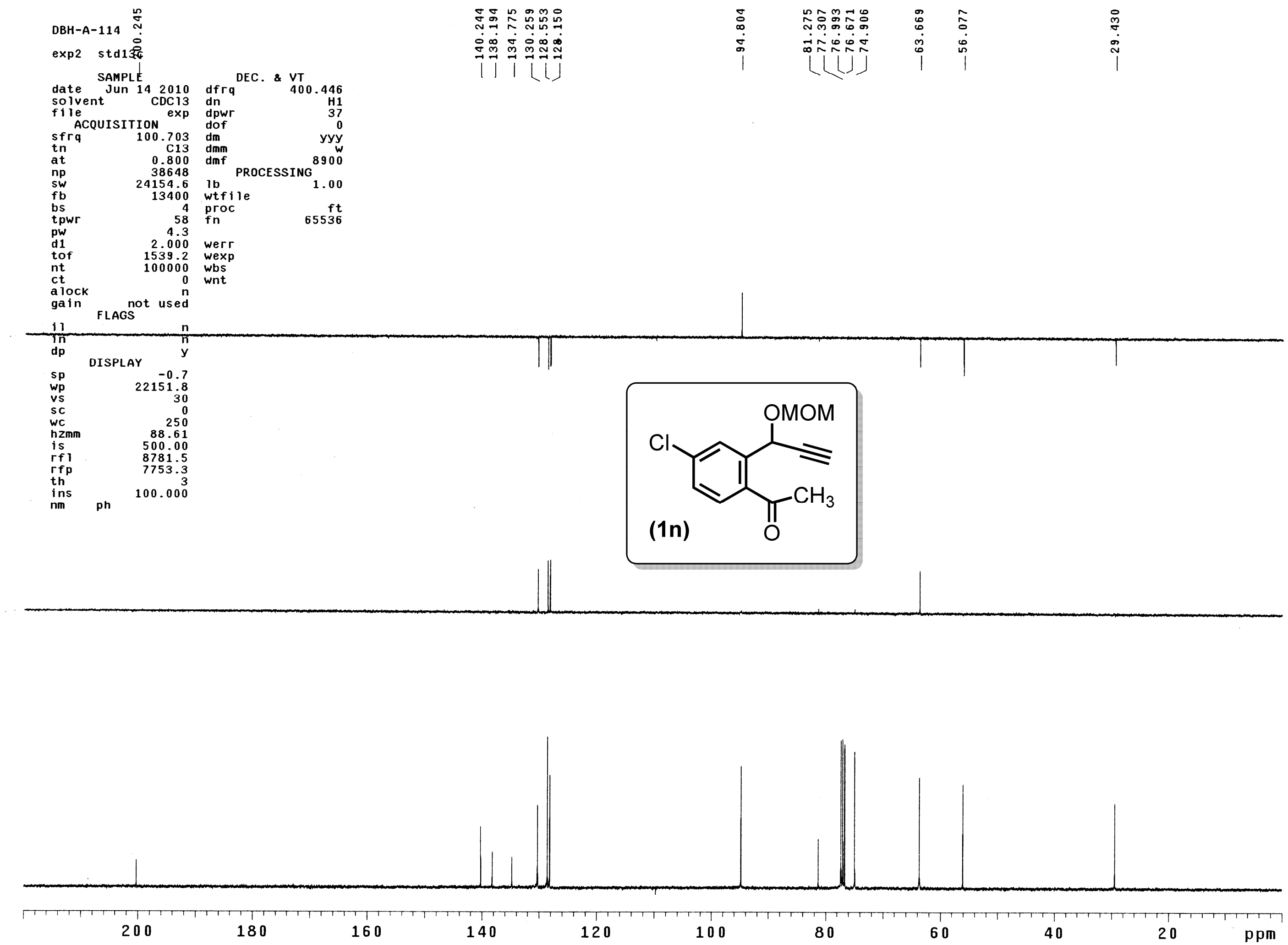

200.3286
163.0492
160.5725
138.7651
138.7120
133.4271
133.3931
130.6280
130.5499
118.5140
118.3050
115.4835
115.2572
94.6673
81.4374
77.3205
77.0027
76.6842
75.0787
63.5151
55.9820
29.4695
Current Data Parameters
NAME 13.06.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100613
Time 22.43
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 95
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178082 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
(1m)
OMOM
F
CH3
O
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

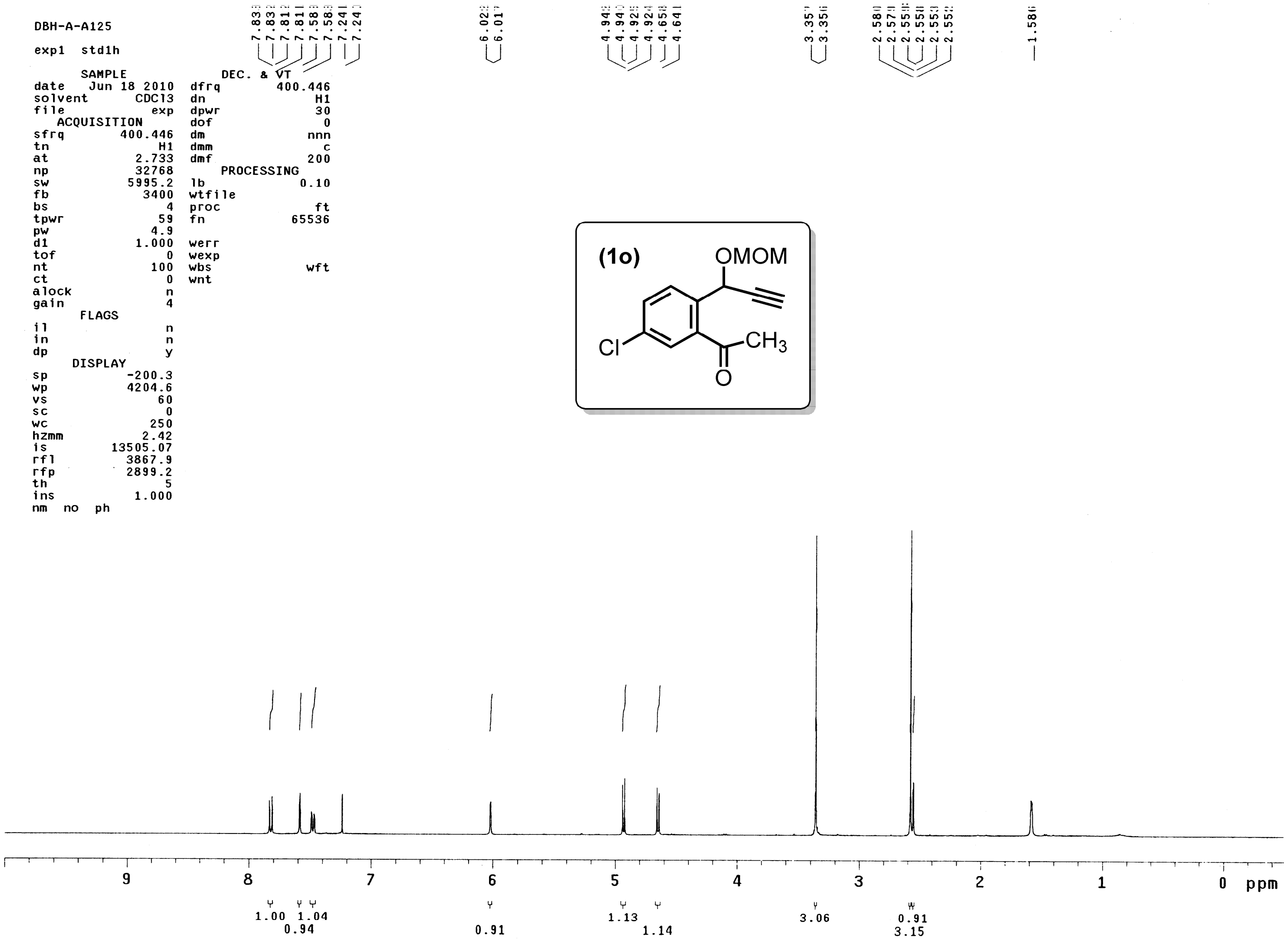
```
DBH-A-114

exp1  std1h

      SAMPLE               DEC. & VT
date   Jun 14 2010   dfrq       400.446
solvent      CDCl3   dn              H1
file           exp   dpwr            30
   ACQUISITION       dof              0
sfrq       400.446   dm             nnn
tn              H1   dmm              c
at           2.733   dmf            200
np           32768       PROCESSING
sw          5995.2   lb            0.10
fb            3400   wtfile
bs               4   proc            ft
tpwr            59   fn           65536
pw             4.9
d1           1.000   werr
tof              0   wexp
nt             100   wbs            wft
ct               0   wnt
alock            n
gain             4
      FLAGS
il               n
in               n
dp               y
     DISPLAY
sp          -200.3
wp          4204.6
vs              60
sc               0
wc             250
hzmm          2.52
is         2738.24
rfl         3867.4
rfp         2899.2
th               2
ins          1.000
nm  no  ph
```

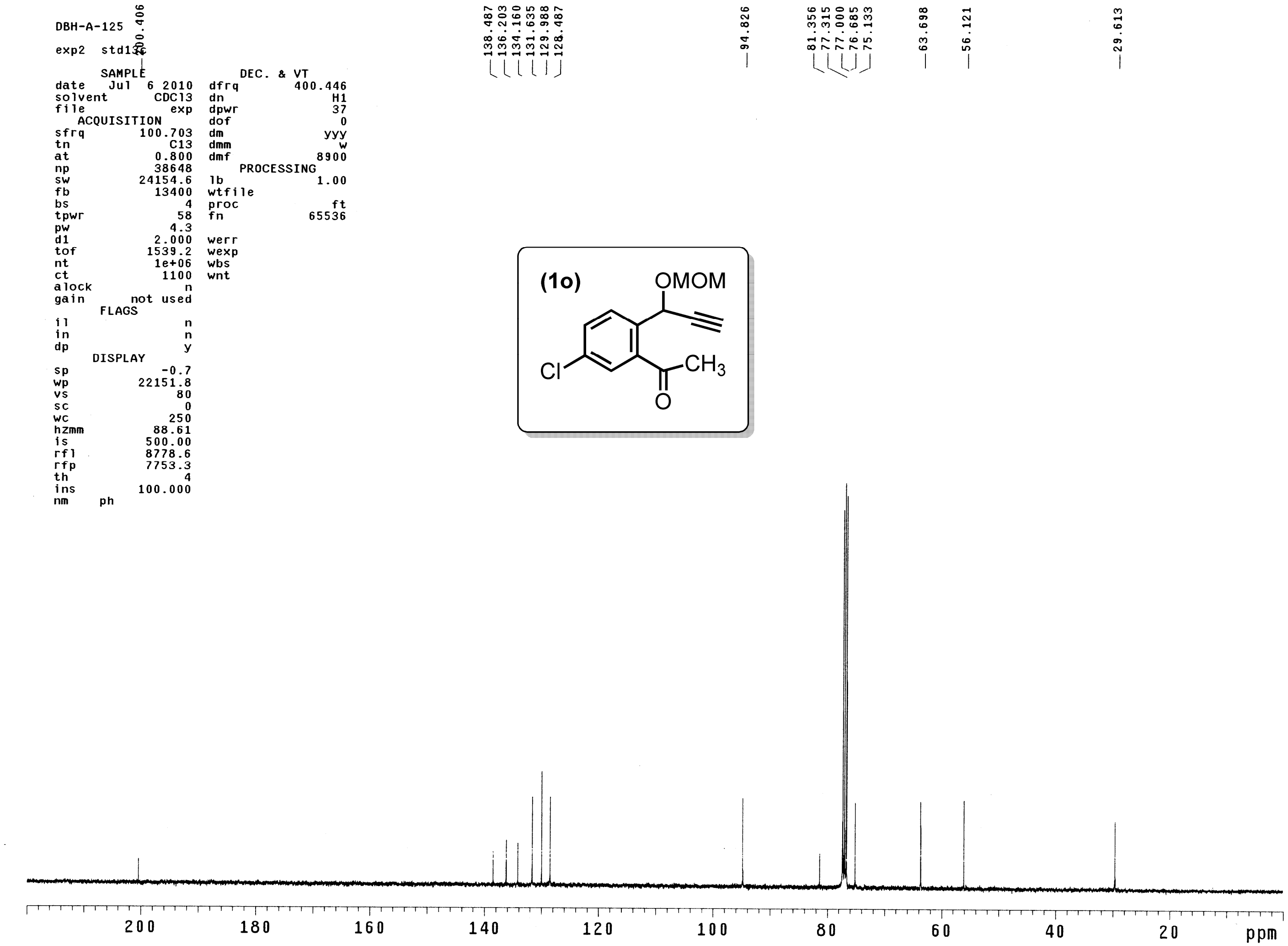


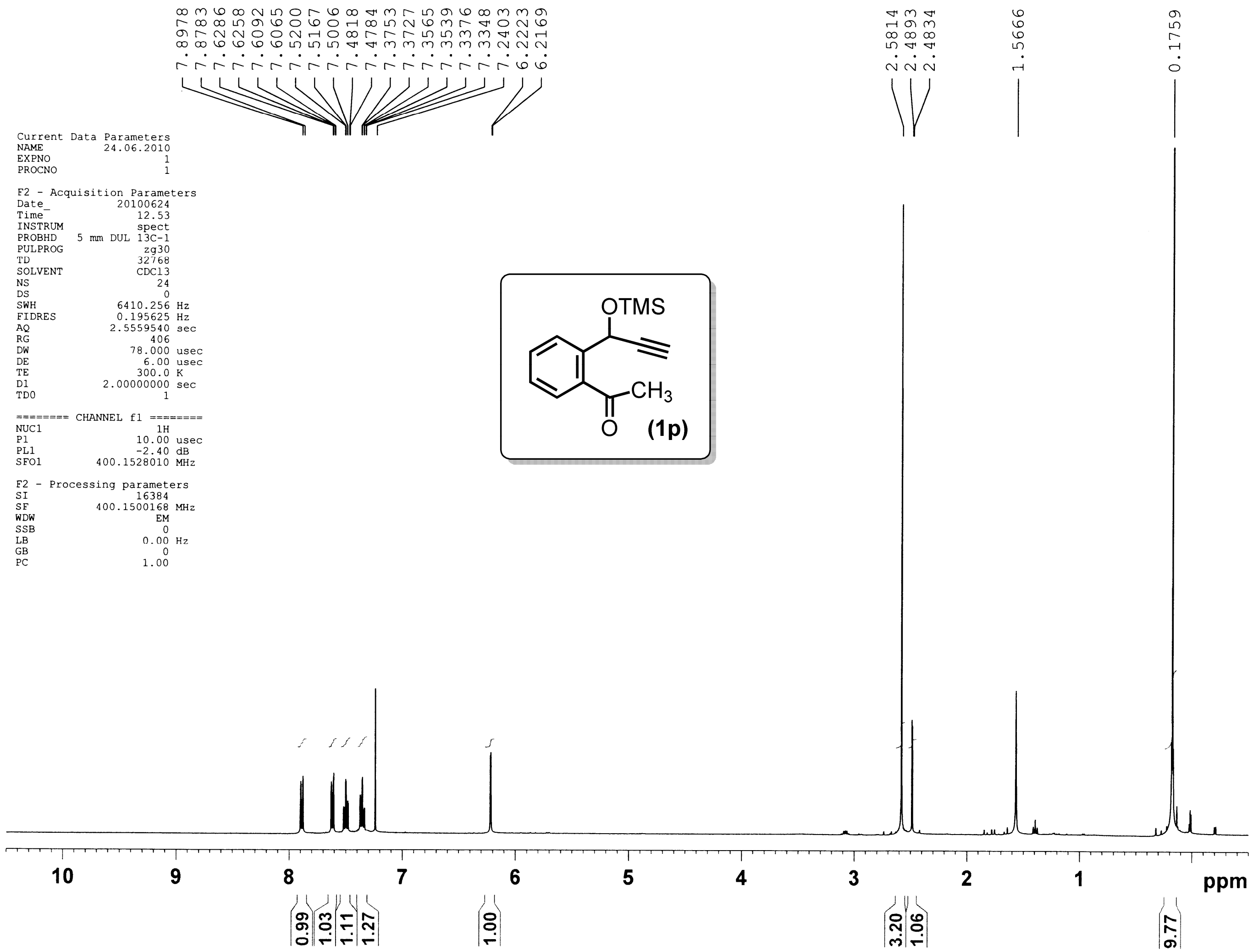

(1n)



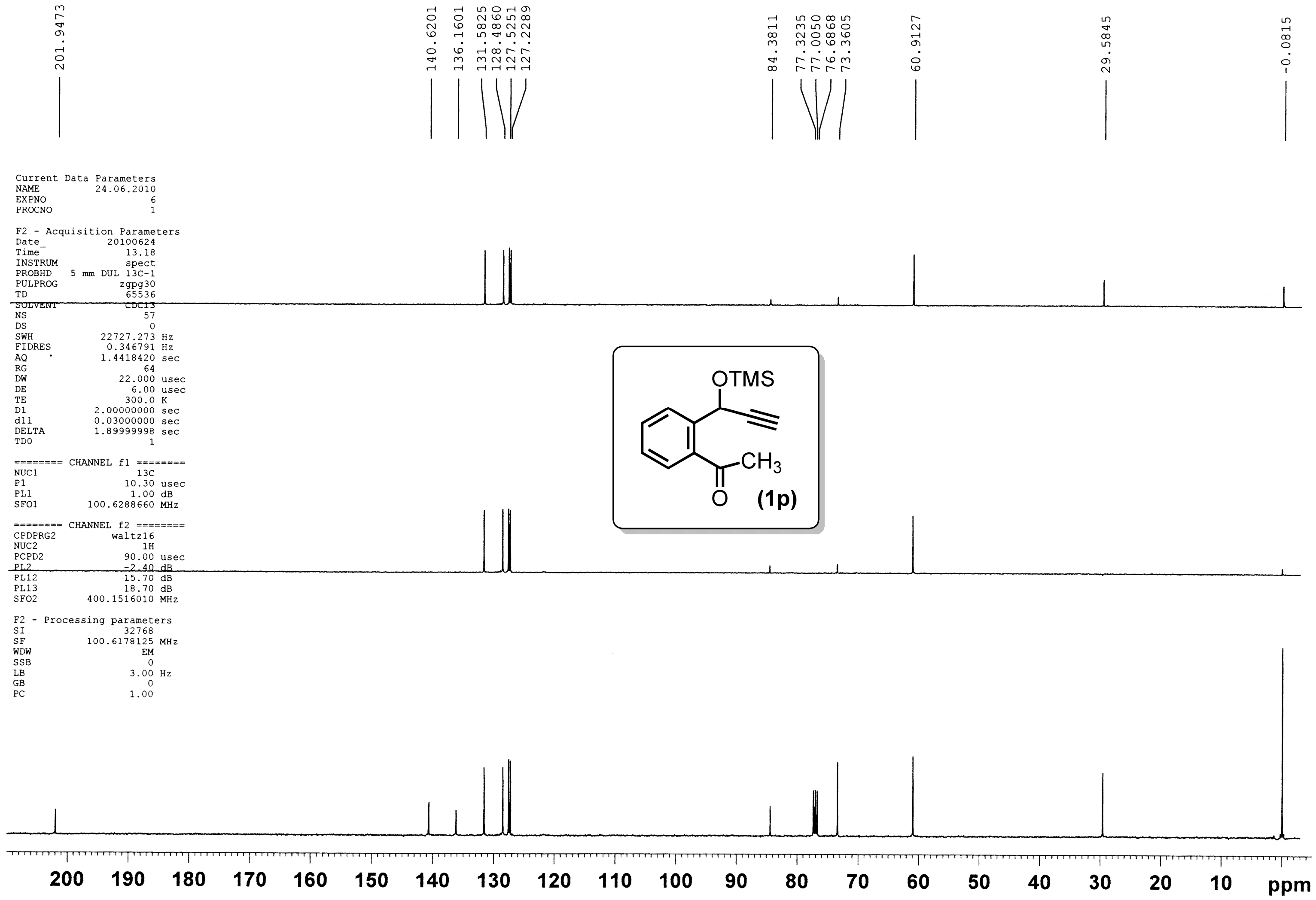

DBH-A-114
exp2 std13C
SAMPLE
date Jun 14 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 30
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8781.5
rfp 7753.3
th 3
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
200.245
140.244
138.194
134.775
130.259
128.553
128.150
94.804
81.275
77.307
76.993
76.671
74.906
63.669
56.077
29.430
OMOM
Cl
CH3
O
(1n)
200
180
160
140
120
100
80
60
40
20
ppm

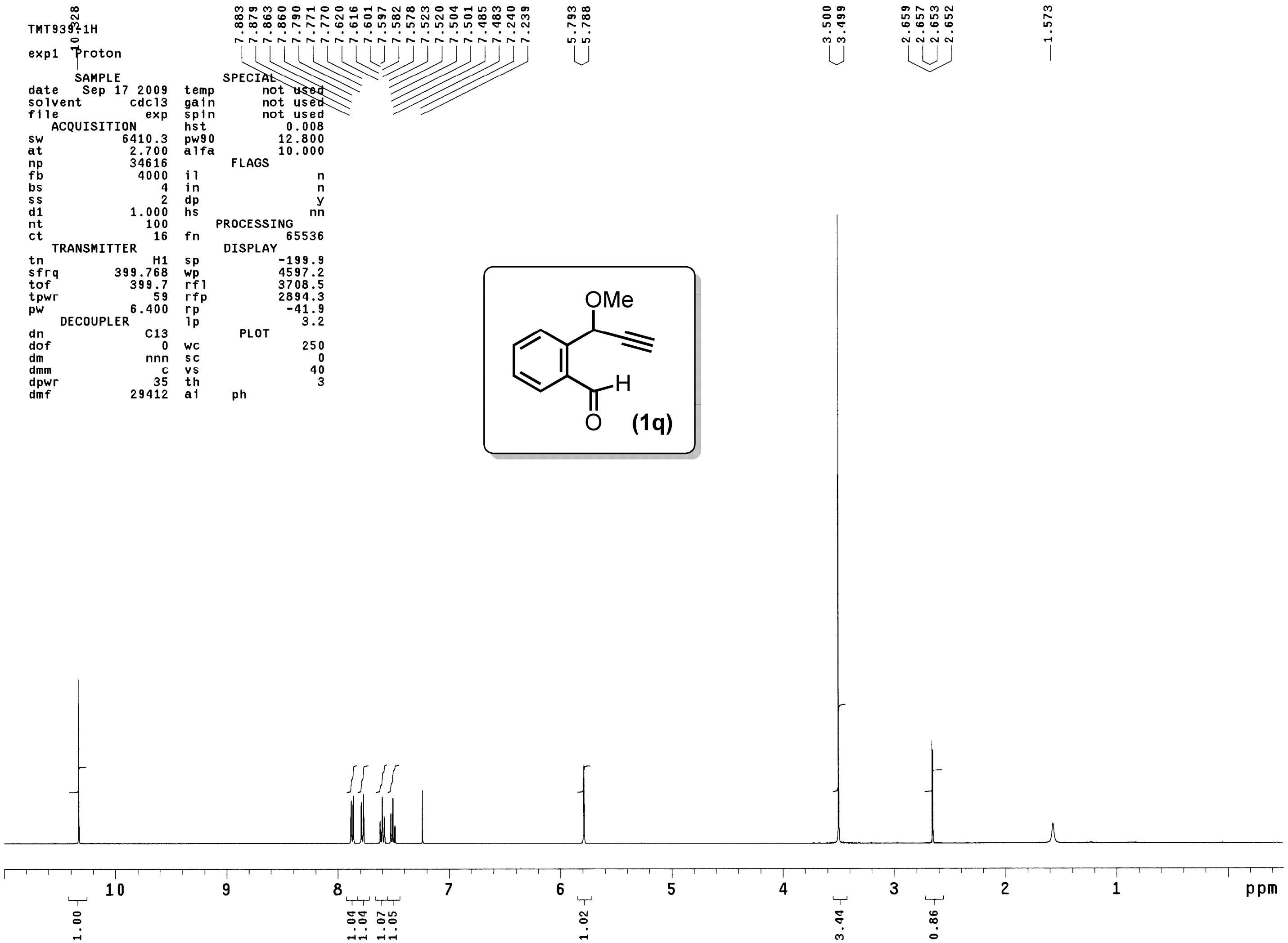

DBH-A-A125
exp1 std1h
SAMPLE
date Jun 18 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 0
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 2.42
is 13505.07
rfl 3867.9
rfp 2899.2
th 5
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
(1o)
OMOM
Cl
CH3
O
9 8 7 6 5 4 3 2 1 0 ppm
1.00 1.04
0.94
0.91
1.13
1.14
3.06
0.91
3.15

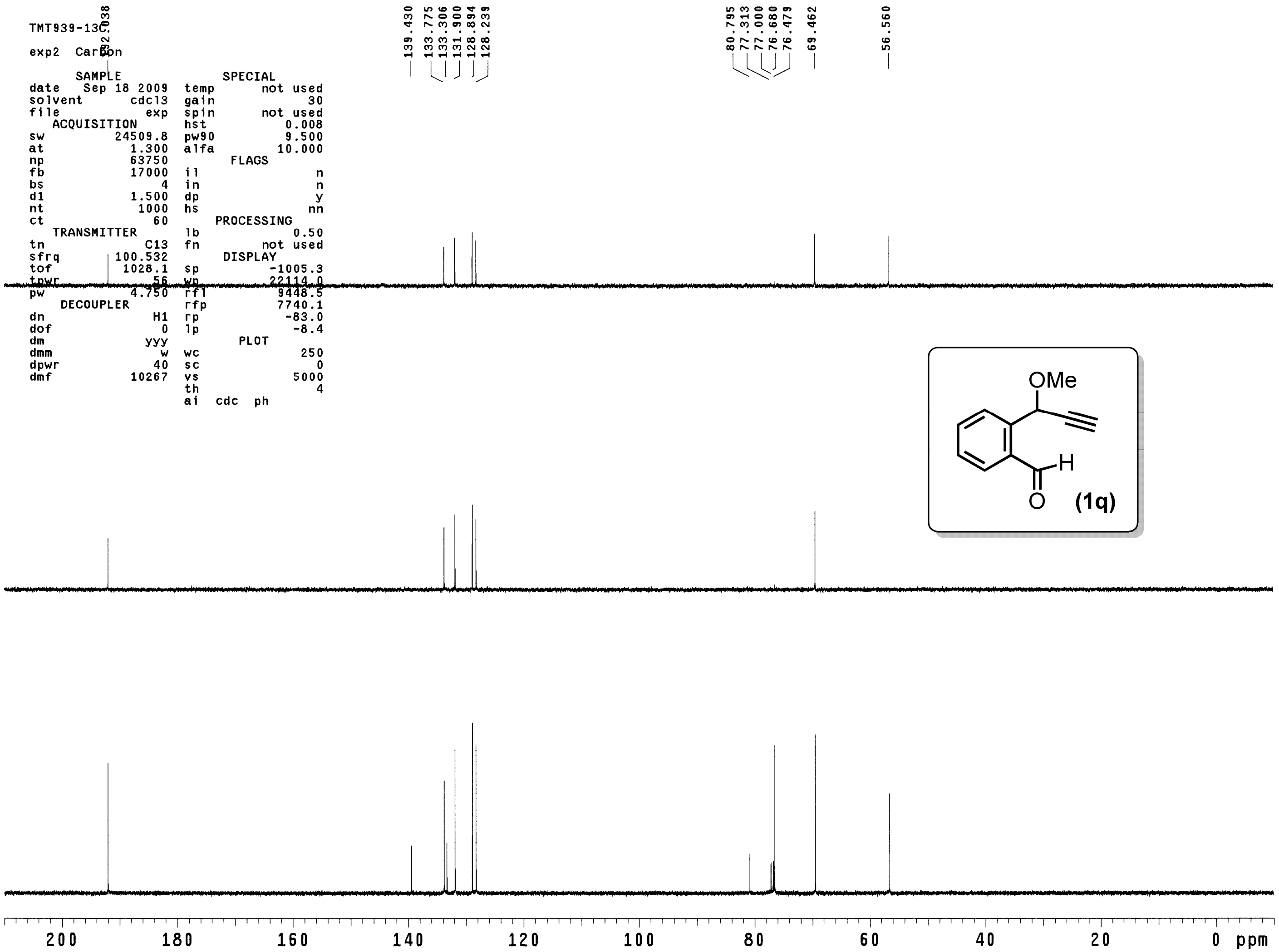

DBH-A-125
exp2 std13c
SAMPLE
date Jul 6 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 1e+06
ct 1100
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 80
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8778.6
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
200.406
138.487
136.203
134.160
131.635
129.988
128.487
94.826
81.356
77.315
77.000
76.685
75.133
63.698
56.121
29.613
(1o)
OMOM
Cl
CH3
O
200
180
160
140
120
100
80
60
40
20
ppm



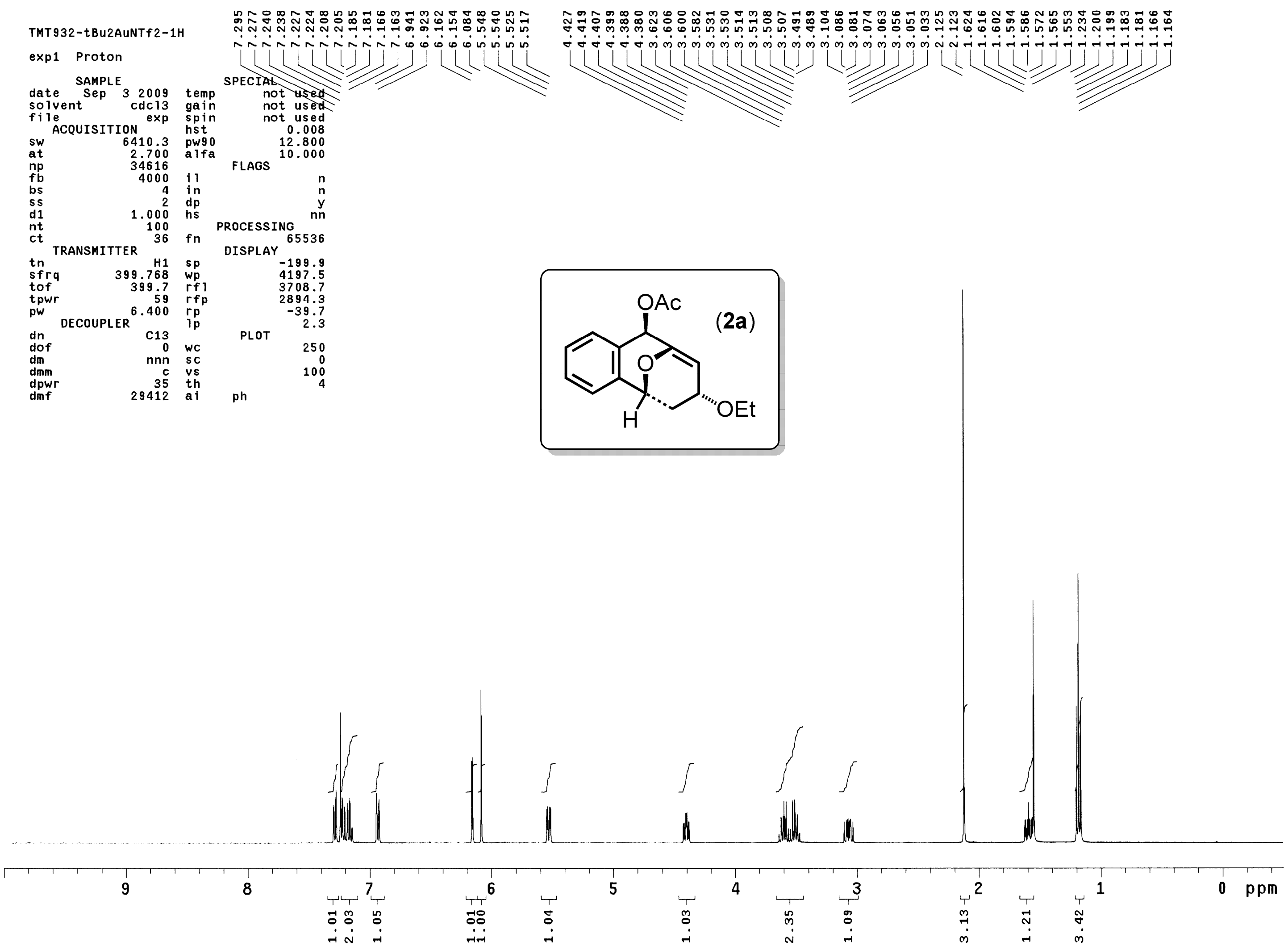
Current Data Parameters
NAME 24.06.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100624
Time 12.53
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 406
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
7.8978
7.8783
7.6286
7.6258
7.6092
7.6065
7.5200
7.5167
7.5006
7.4818
7.4784
7.3753
7.3727
7.3565
7.3539
7.3376
7.3348
7.2403
6.2223
6.2169
2.5814
2.4893
2.4834
1.5666
0.1759
OTMS
CH3
O
(1p)
10
9
8
7
6
5
4
3
2
1
ppm
0.99
1.03
1.11
1.27
1.00
3.20
1.06
9.77


201.9473
140.6201
136.1601
131.5825
128.4860
127.5251
127.2289
84.3811
77.3235
77.0050
76.6868
73.3605
60.9127
29.5845
-0.0815
Current Data Parameters
NAME 24.06.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100624
Time 13.18
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 57
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178125 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OTMS
CH3
O
(1p)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm

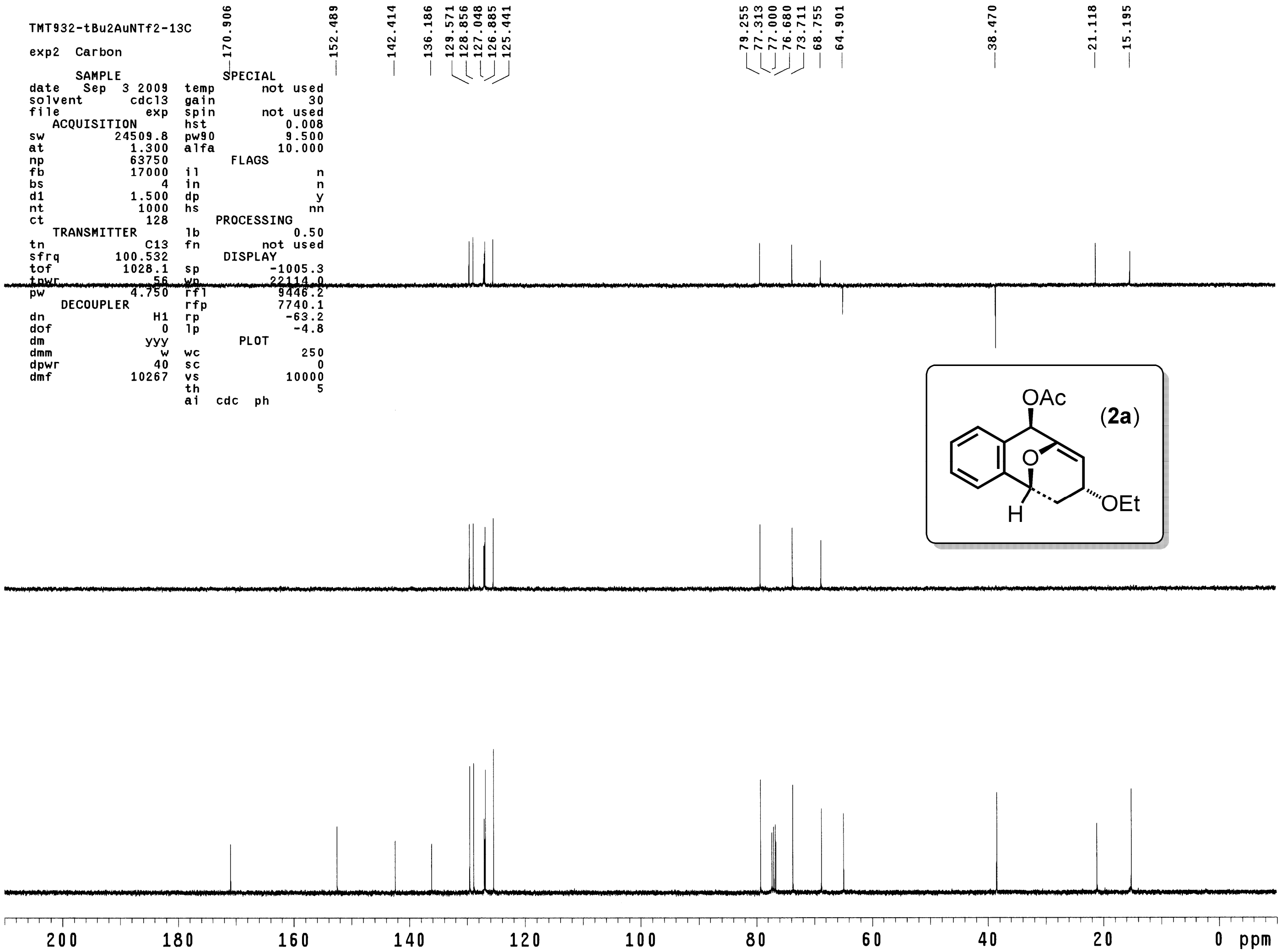

TMT939-1H
exp1 Proton
SAMPLE
date Sep 17 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 16
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4597.2
rfl 3708.5
rfp 2894.3
rp -41.9
lp 3.2
PLOT
wc 250
sc 0
vs 40
th 3
ai ph
10.328
7.883 7.879 7.863 7.860 7.790 7.771 7.770 7.620 7.616 7.601 7.597 7.582 7.578 7.523 7.520 7.504 7.501 7.485 7.483 7.240 7.239
5.793 5.788
3.500 3.499
2.659 2.657 2.653 2.652
1.573
OMe
H
O
(1q)
10 9 8 7 6 5 4 3 2 1 ppm
1.00 1.04 1.04 1.07 1.05 1.02 3.44 0.86

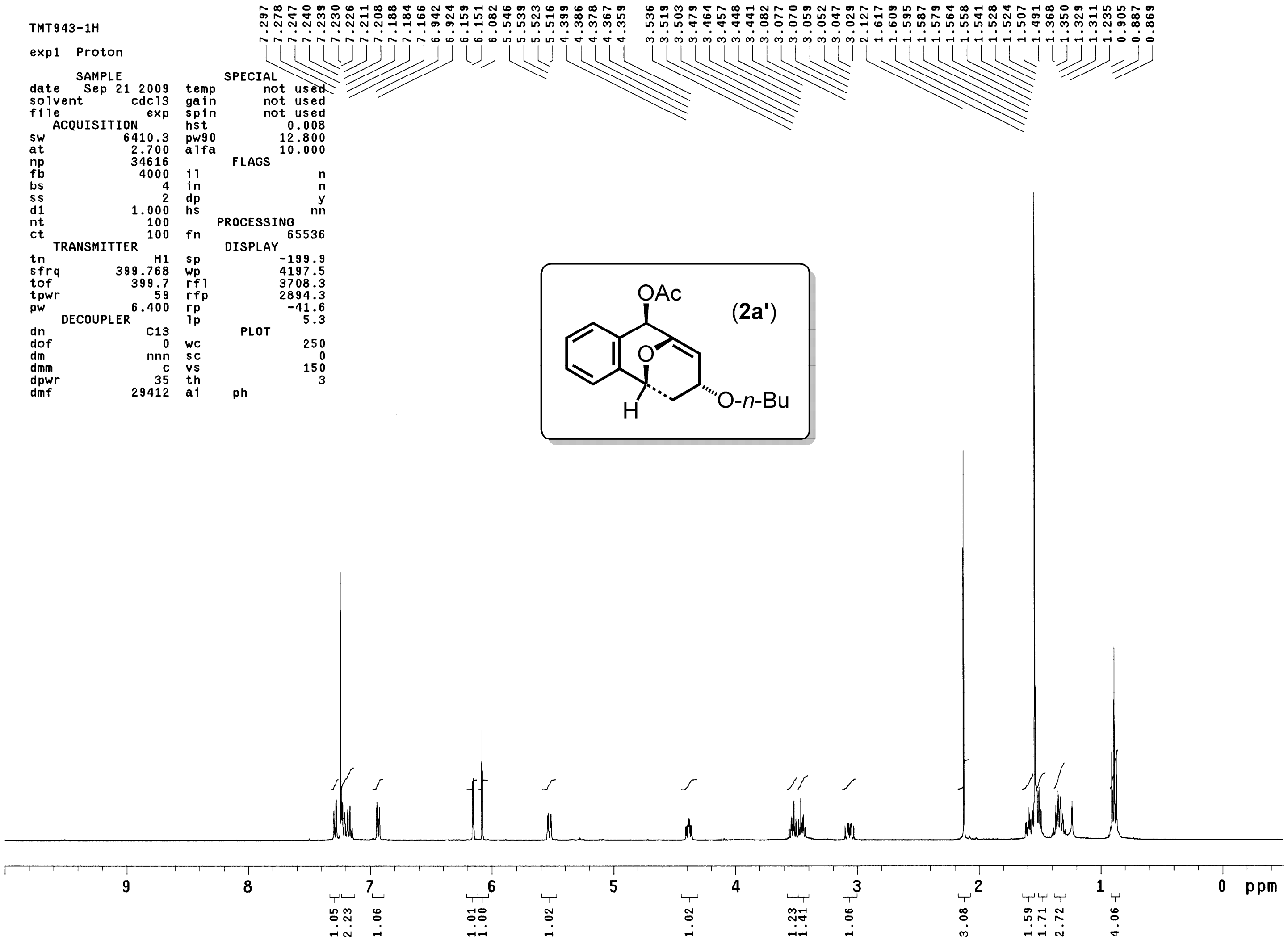


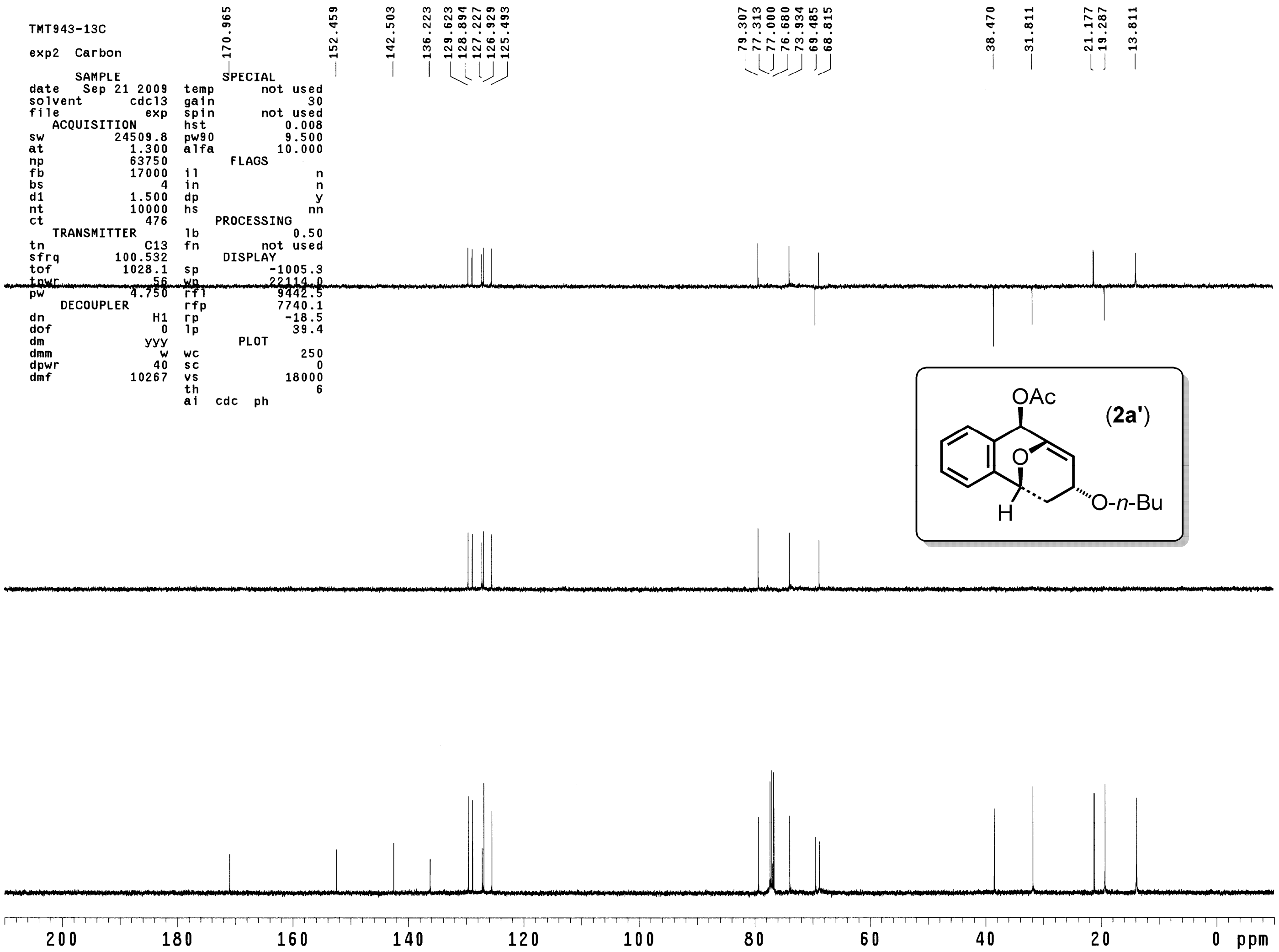
TMT939-13C
exp2 Carbon
SAMPLE
date Sep 18 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 60
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9448.5
rfp 7740.1
rp -83.0
lp -8.4
PLOT
wc 250
sc 0
vs 5000
th 4
ai cdc ph
192.038
139.430
133.775
133.306
131.900
128.894
128.239
80.795
77.313
77.000
76.680
76.479
69.462
56.560
OMe
H
O
(1q)
200
180
160
140
120
100
80
60
40
20
0 ppm

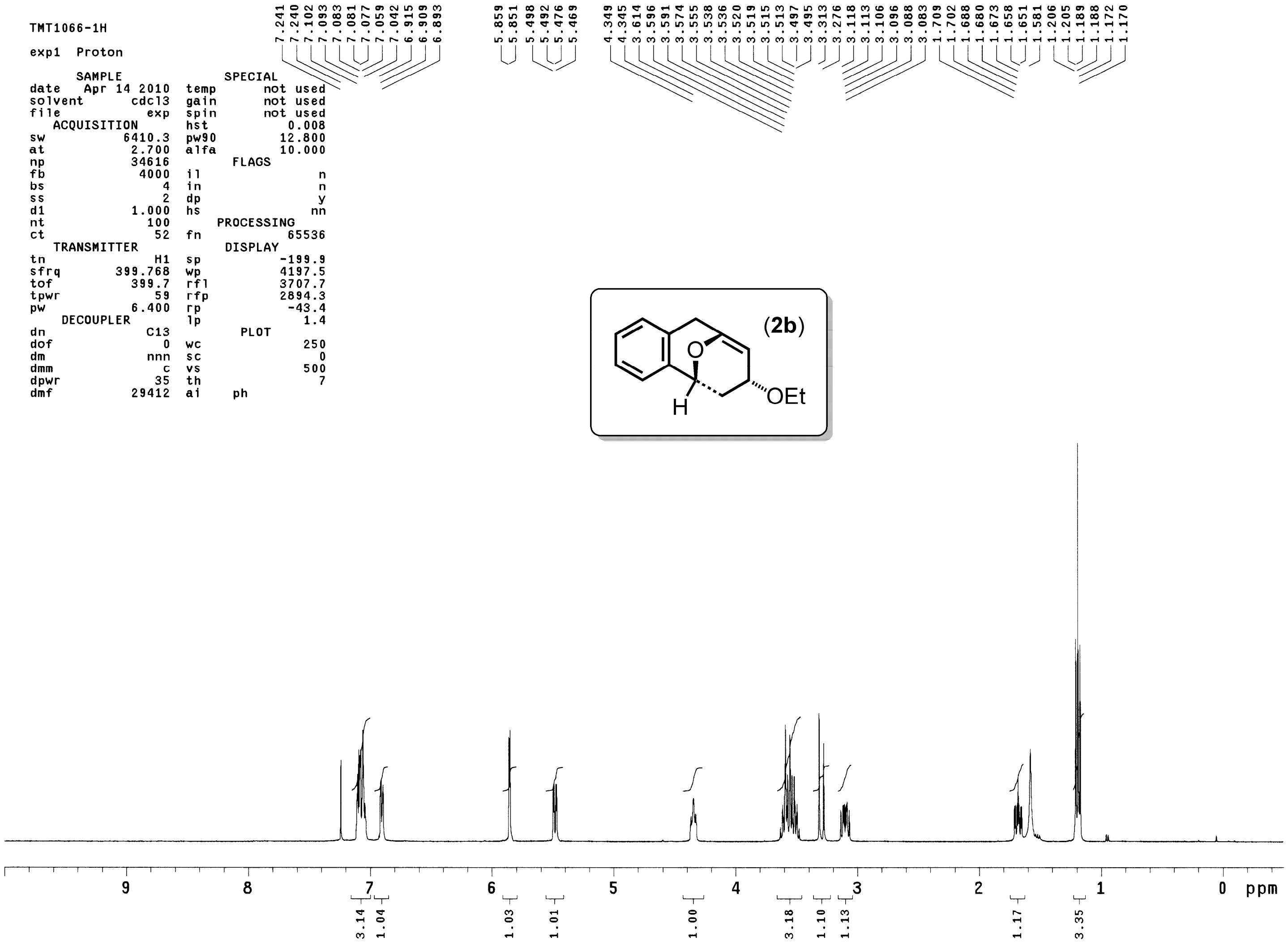


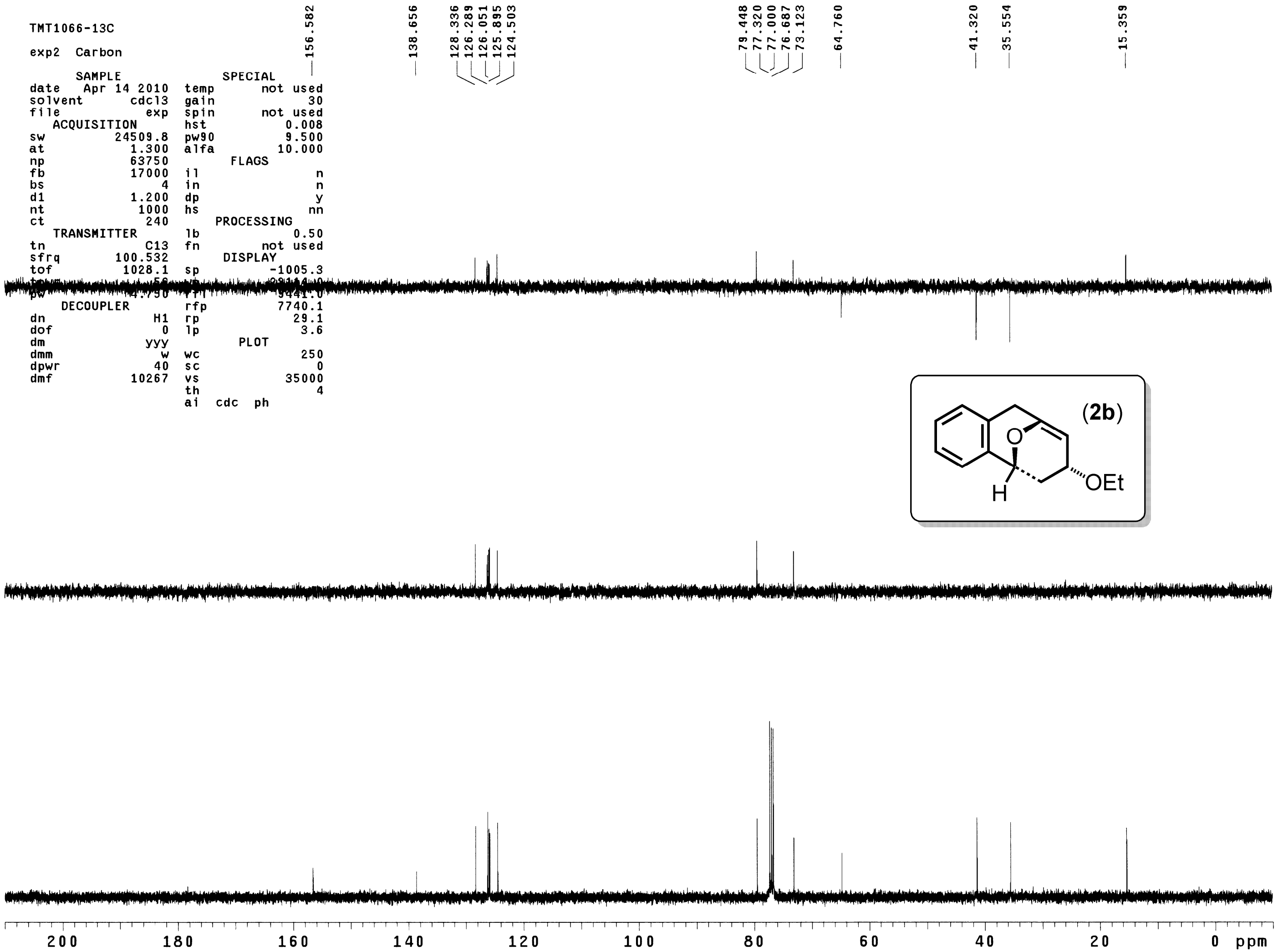
TMT932-tBu2AuNTf2-1H
exp1 Proton
SAMPLE
date Sep 3 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 36
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.7
rfp 2894.3
rp -39.7
lp 2.3
PLOT
wc 250
sc 0
vs 100
th 4
ai ph
7.295 7.277 7.240 7.238 7.227 7.224 7.208 7.205 7.185 7.181 7.166 7.163 6.941 6.923 6.162 6.154 6.084 5.548 5.540 5.525 5.517
4.427 4.419 4.407 4.399 4.388 4.380 3.623 3.606 3.600 3.582 3.531 3.530 3.514 3.513 3.508 3.507 3.491 3.489 3.104 3.086 3.081 3.074 3.063 3.056 3.051 3.033 2.125 2.123 1.624 1.616 1.602 1.594 1.586 1.572 1.565 1.553 1.234 1.200 1.199 1.183 1.181 1.166 1.164
OAc
(2a)
O
H
OEt
9
8
7
6
5
4
3
2
1
0 ppm
1.01
2.03
1.05
1.01
1.00
1.04
1.03
2.35
1.09
3.13
1.21
3.42

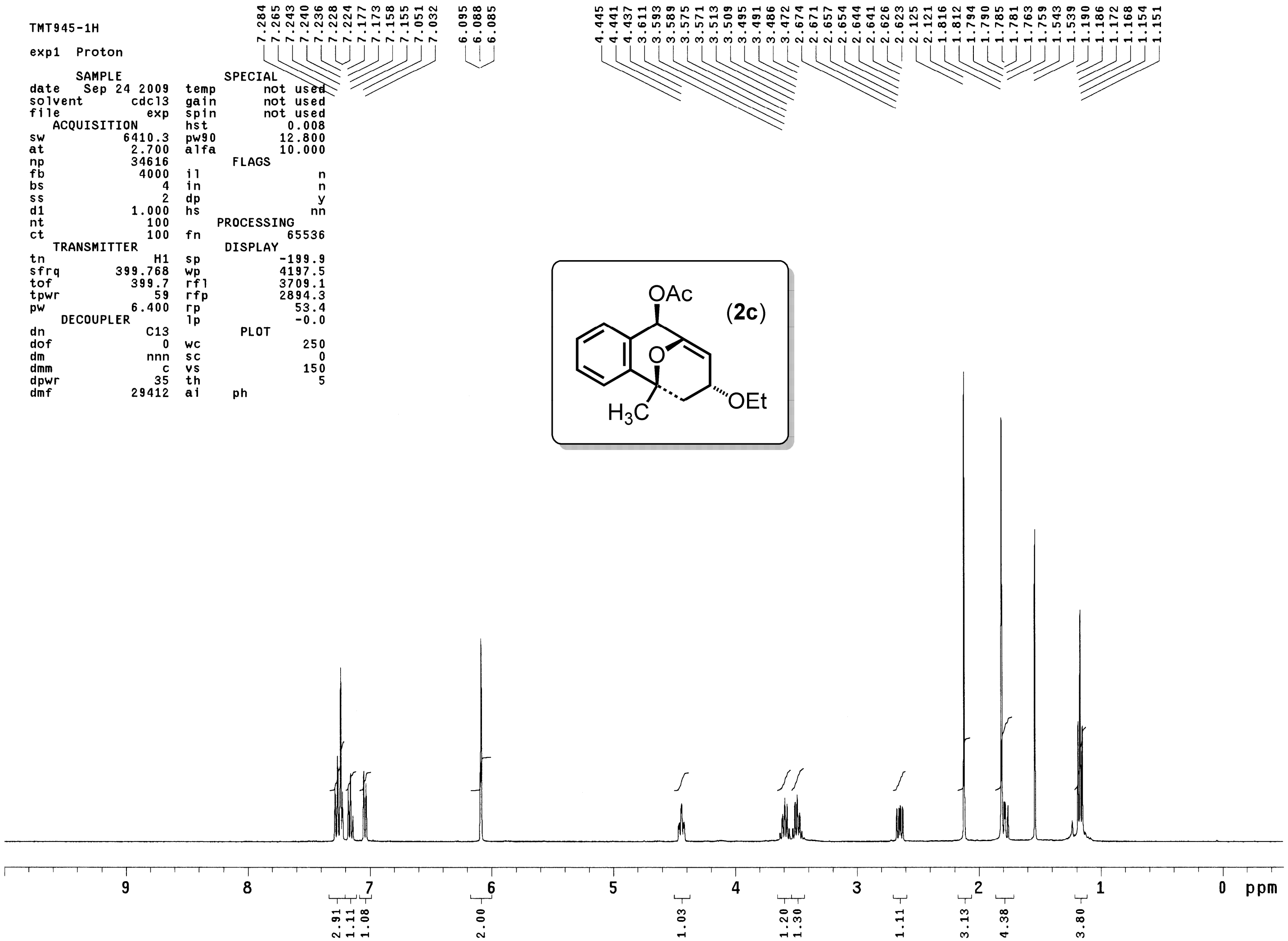

TMT932-tBu2AuNTf2-13C
exp2 Carbon
SAMPLE
date Sep 3 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 128
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9446.2
rfp 7740.1
rp -63.2
lp -4.8
PLOT
wc 250
sc 0
vs 10000
th 5
ai cdc ph
170.906
152.489
142.414
136.186
129.571
128.856
127.048
126.885
125.441
79.255
77.313
77.000
76.680
73.711
68.755
64.901
38.470
21.118
15.195
OAc
(2a)
O
H
OEt
200
180
160
140
120
100
80
60
40
20
0 ppm


TMT943-1H
exp1 Proton
SAMPLE
date Sep 21 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 100
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.3
rfp 2894.3
rp -41.6
lp 5.3
PLOT
wc 250
sc 0
vs 150
th 3
ai ph
OAc
O
H
O-n-Bu
(2a')
ppm

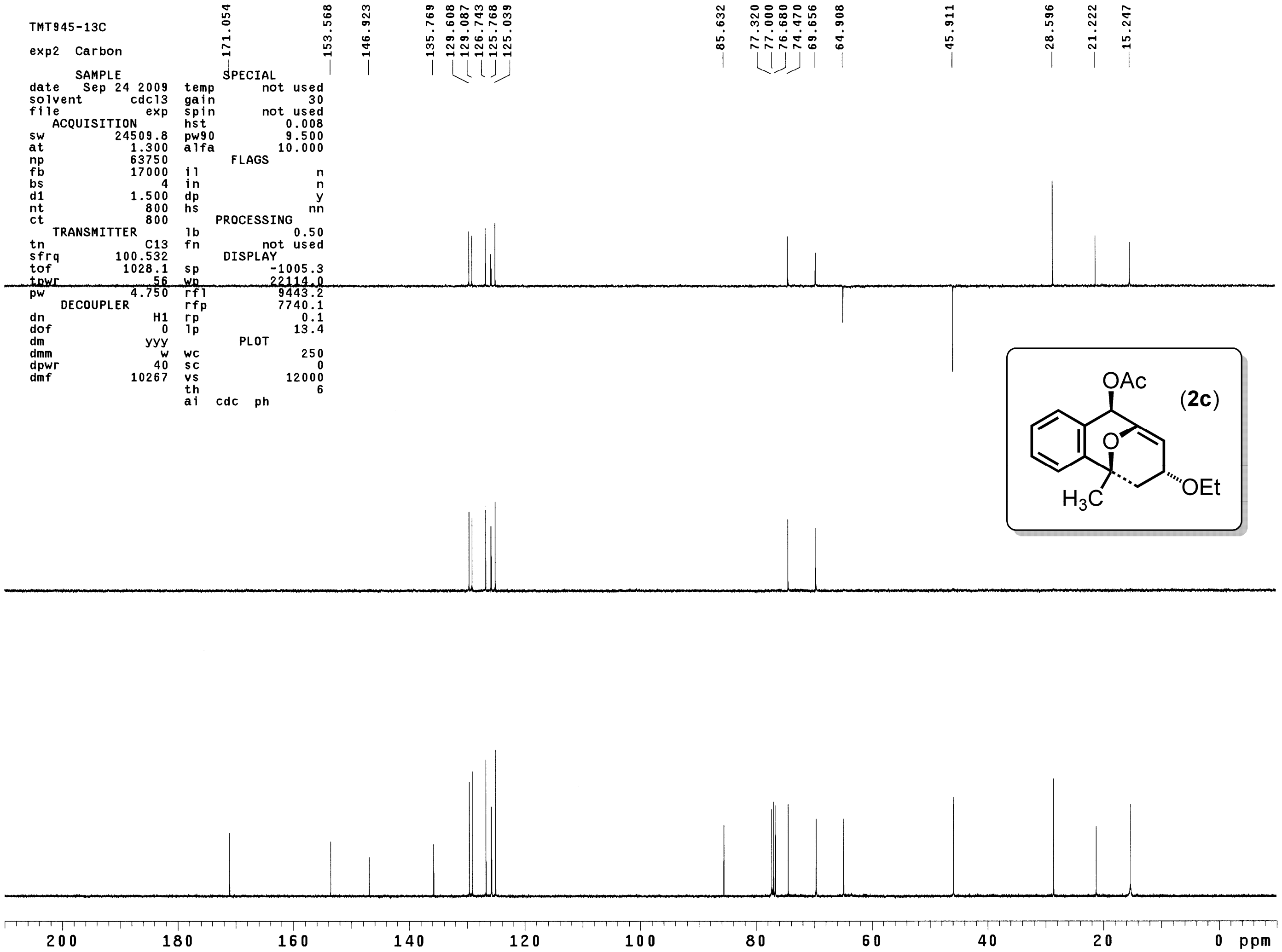

TMT943-13C
exp2 Carbon
SAMPLE
date Sep 21 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 10000
ct 476
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9442.5
rfp 7740.1
rp -18.5
lp 39.4
PLOT
wc 250
sc 0
vs 18000
th 6
ai cdc ph
170.965
152.459
142.503
136.223
129.623
128.894
127.227
126.929
125.493
79.307
77.313
77.000
76.680
73.934
69.485
68.815
38.470
31.811
21.177
19.287
13.811
OAc
(2a')
O
H
O-n-Bu
200
180
160
140
120
100
80
60
40
20
0 ppm

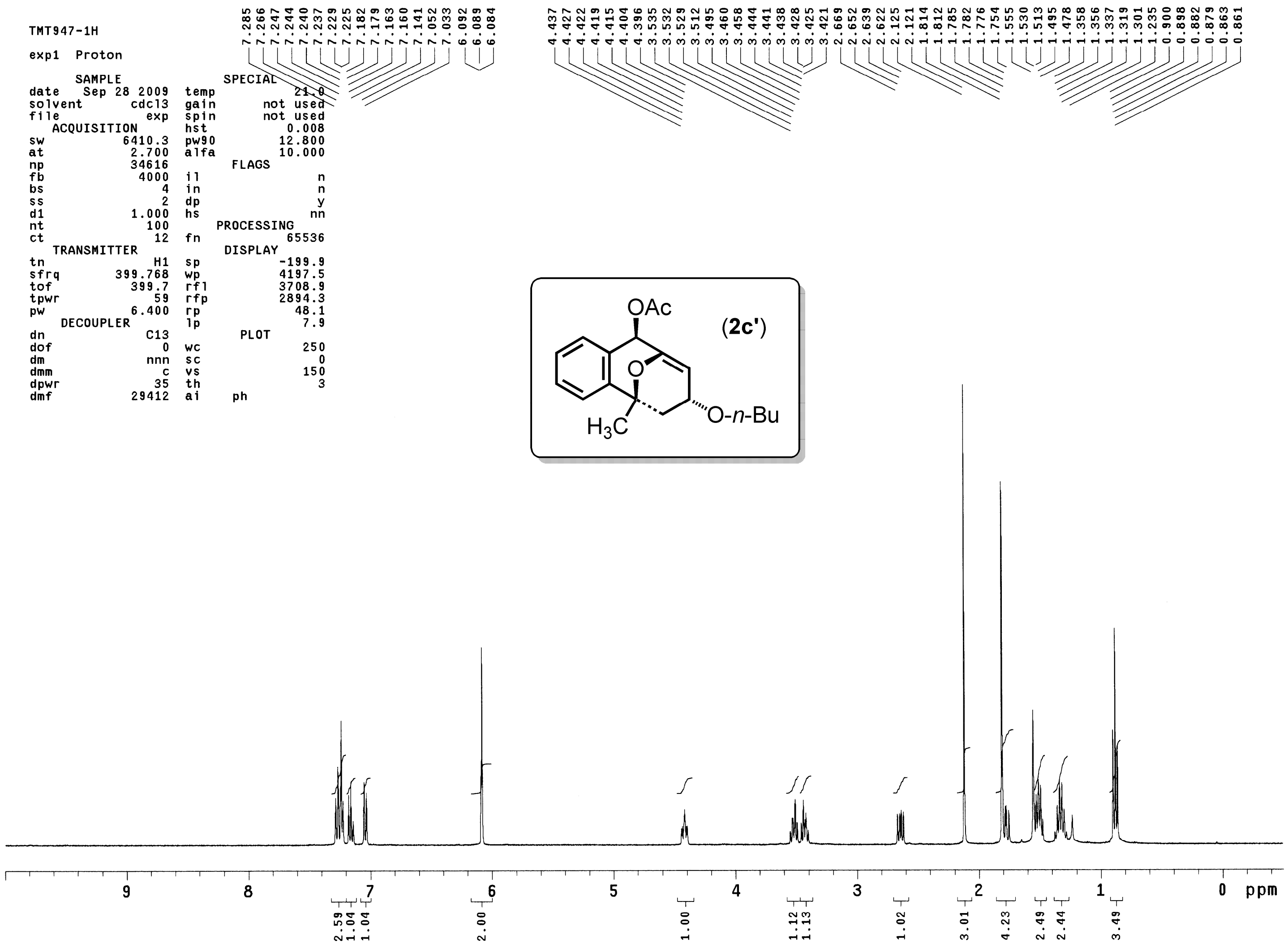

TMT1066-1H
exp1 Proton
SAMPLE
date Apr 14 2010
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 52
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3707.7
rfp 2894.3
rp -43.4
lp 1.4
PLOT
wc 250
sc 0
vs 500
th 7
ai ph
7.241 7.240 7.102 7.093 7.083 7.081 7.077 7.059 7.042 6.915 6.909 6.893
5.859 5.851 5.498 5.492 5.476 5.469
4.349 4.345 3.614 3.596 3.591 3.574 3.555 3.538 3.536 3.520 3.519 3.515 3.513 3.497 3.495 3.313 3.276 3.118 3.113 3.106 3.096 3.088 3.083 1.709 1.702 1.688 1.680 1.673 1.658 1.651 1.581 1.206 1.205 1.189 1.188 1.172 1.170
(2b)
O
OEt
H
9 8 7 6 5 4 3 2 1 0 ppm
3.14 1.04 1.03 1.01 1.00 3.18 1.10 1.13 1.17 3.35

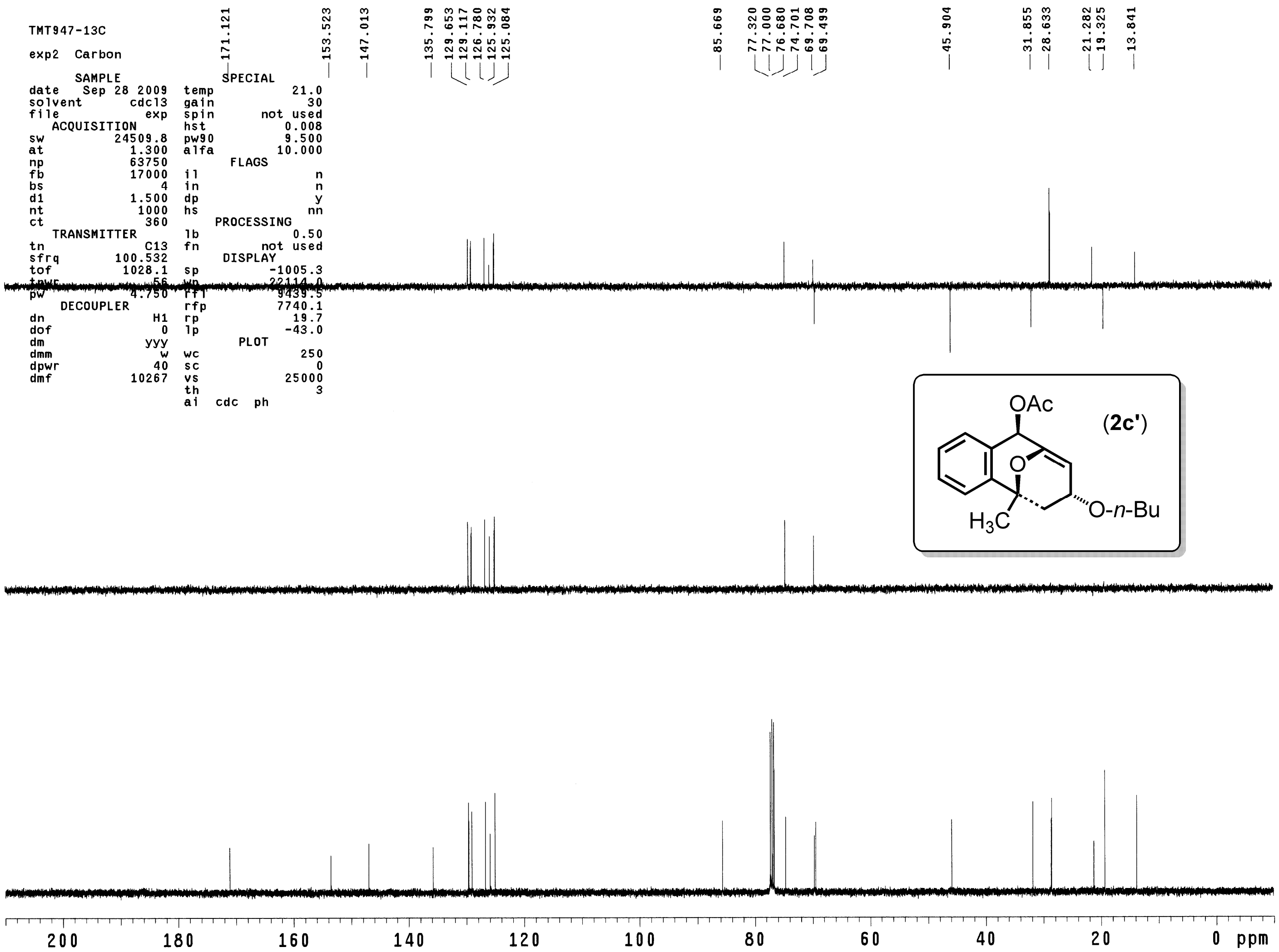

TMT1066-13C
exp2 Carbon
SAMPLE
date Apr 14 2010
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.200
nt 1000
ct 240
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
rfp 7740.1
rp 29.1
lp 3.6
PLOT
wc 250
sc 0
vs 35000
th 4
ai cdc ph
156.582
138.656
128.336
126.289
126.051
125.895
124.503
79.448
77.320
77.000
76.687
73.123
64.760
41.320
35.554
15.359
(2b)
O
OEt
H
200
180
160
140
120
100
80
60
40
20
0 ppm

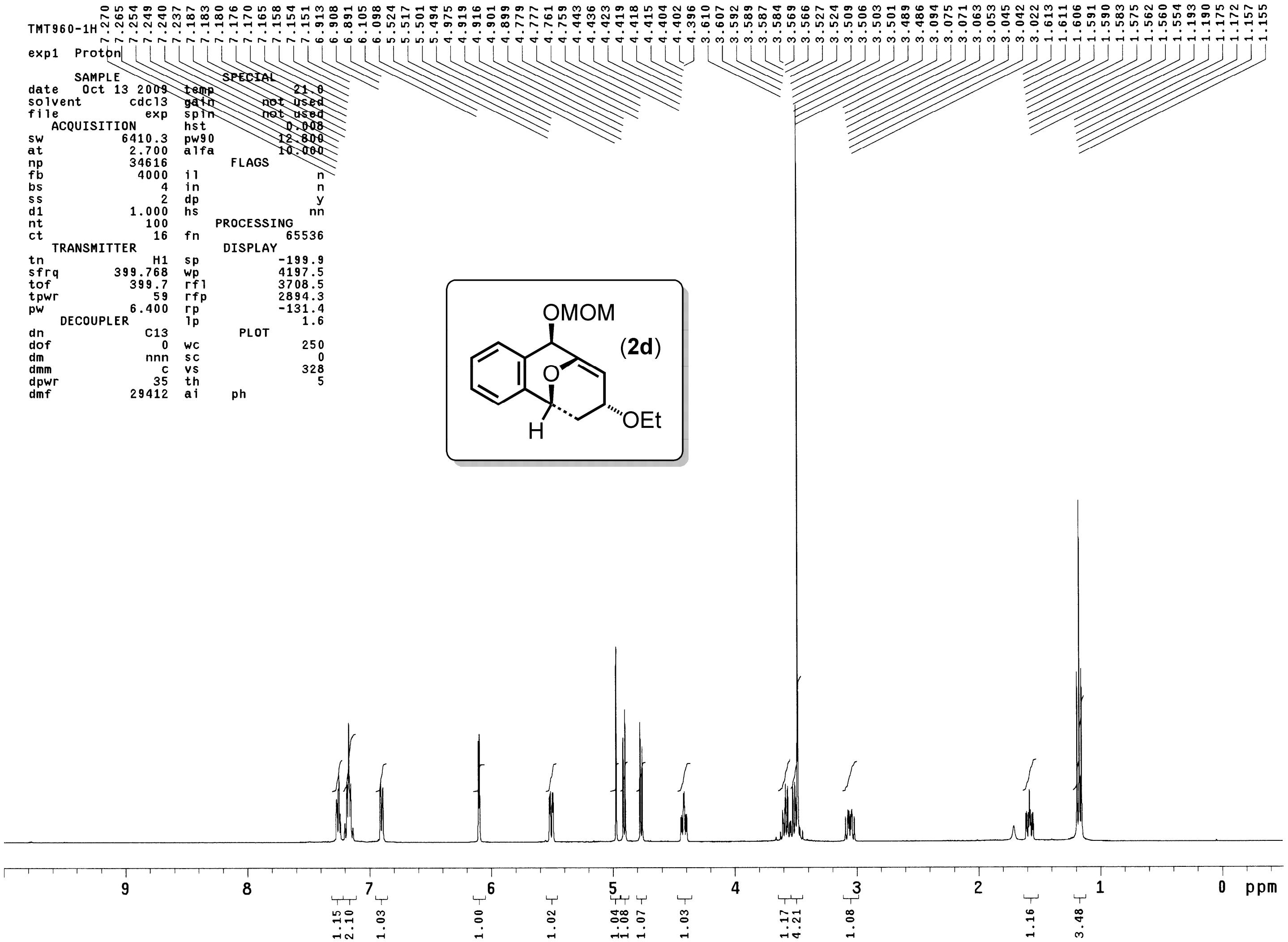


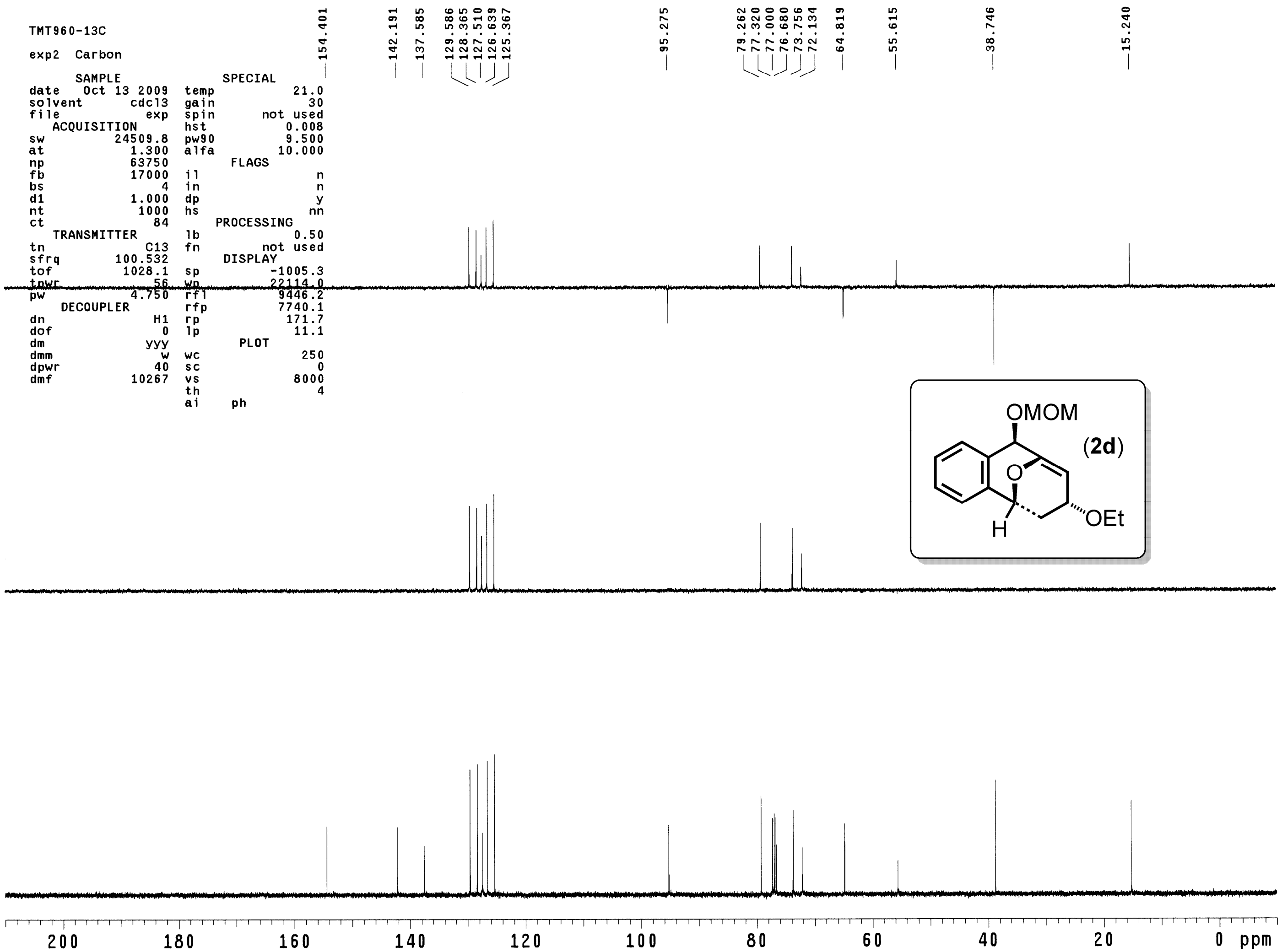
TMT945-1H
exp1 Proton
SAMPLE
date Sep 24 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 100
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3709.1
rfp 2894.3
rp 53.4
lp -0.0
PLOT
wc 250
sc 0
vs 150
th 5
ai ph
7.284 7.265 7.243 7.240 7.236 7.228 7.224 7.177 7.173 7.158 7.155 7.051 7.032
6.095 6.088 6.085
4.445 4.441 4.437 3.611 3.593 3.589 3.575 3.571 3.513 3.509 3.495 3.491 3.486 3.472 2.674 2.671 2.657 2.654 2.644 2.641 2.626 2.623 2.125 2.121 1.816 1.812 1.794 1.790 1.785 1.781 1.763 1.759 1.543 1.539 1.190 1.186 1.172 1.168 1.154 1.151
OAc
(2c)
O
OEt
$H_3C$
9 8 7 6 5 4 3 2 1 0 ppm
2.91 1.11 1.08 2.00 1.03 1.20 1.30 1.11 3.13 4.38 3.80

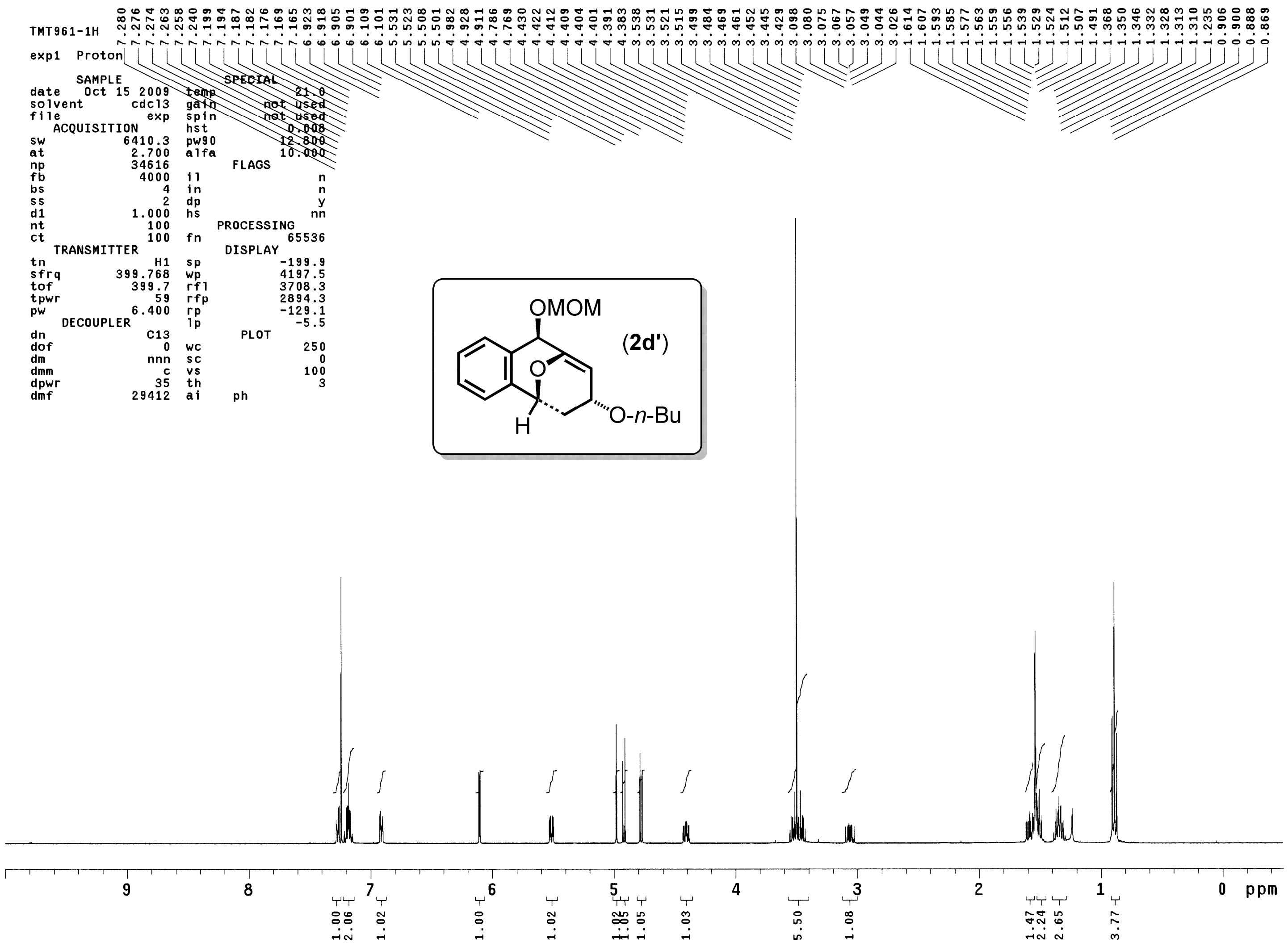

TMT945-13C
exp2 Carbon
SAMPLE
date Sep 24 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 800
ct 800
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9443.2
rfp 7740.1
rp 0.1
lp 13.4
PLOT
wc 250
sc 0
vs 12000
th 6
ai cdc ph
171.054
153.568
146.923
135.769
129.608
129.087
126.743
125.768
125.039
85.632
77.320
77.000
76.680
74.470
69.656
64.908
45.911
28.596
21.222
15.247
OAc
(2c)
O
H3C
OEt
200
180
160
140
120
100
80
60
40
20
0 ppm

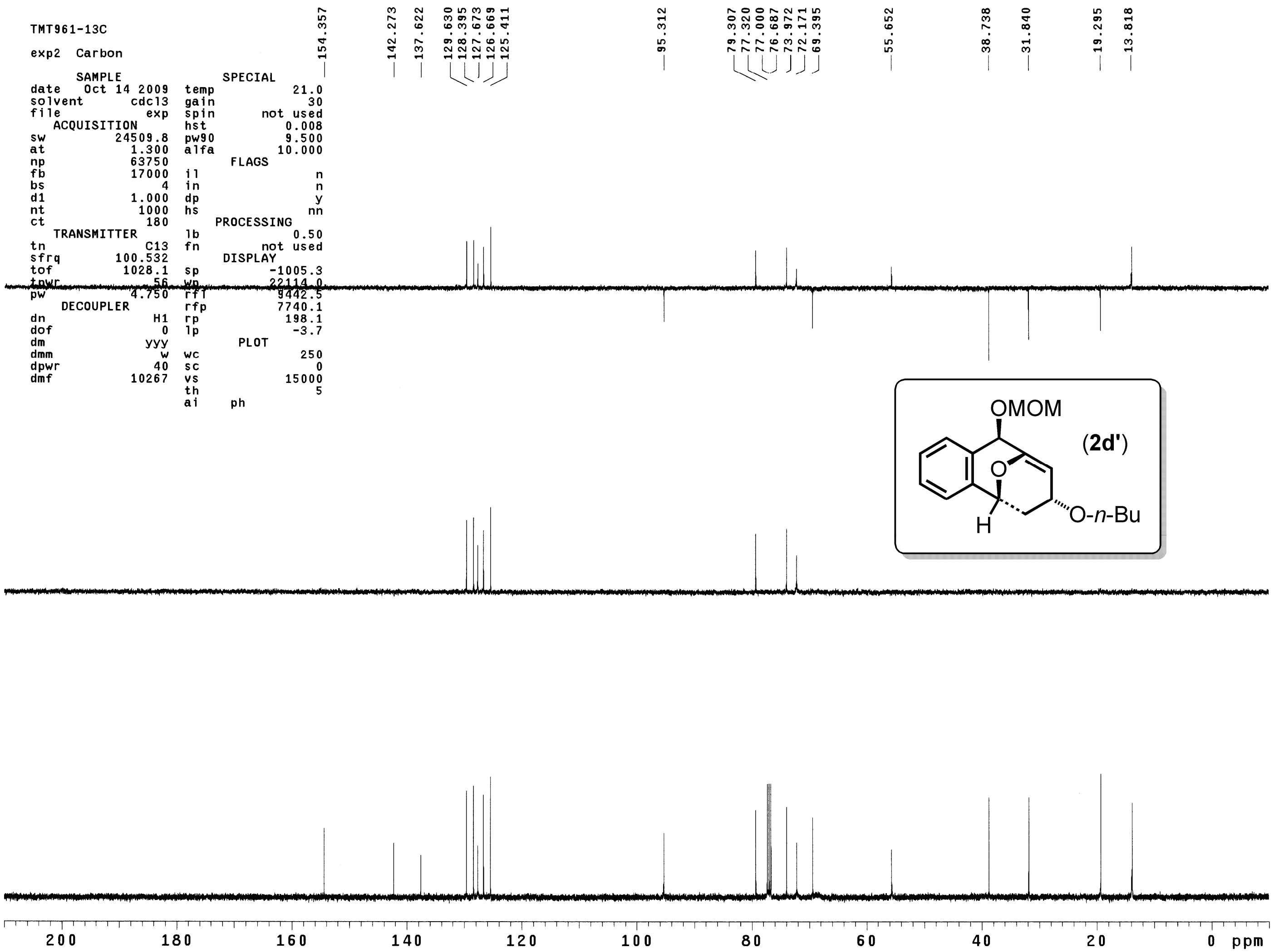

TMT947-1H
exp1 Proton
SAMPLE
date Sep 28 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 12
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.9
rfp 2894.3
rp 48.1
lp 7.9
PLOT
wc 250
sc 0
vs 150
th 3
ai ph
7.285 7.266 7.247 7.244 7.240 7.237 7.229 7.225 7.182 7.179 7.163 7.160 7.141 7.052 7.033 6.092 6.089 6.084
4.437 4.427 4.422 4.419 4.415 4.404 4.396 3.535 3.532 3.529 3.512 3.495 3.460 3.458 3.444 3.441 3.438 3.428 3.425 3.421 2.669 2.652 2.639 2.622 2.125 2.121 1.814 1.812 1.785 1.782 1.776 1.754 1.555 1.530 1.513 1.495 1.478 1.358 1.356 1.337 1.319 1.301 1.235 0.900 0.898 0.882 0.879 0.863 0.861
OAc
O
H3C
O-n-Bu
(2c')
9 8 7 6 5 4 3 2 1 0 ppm
2.59 1.04 1.04 2.00 1.00 1.12 1.13 1.02 3.01 4.23 2.49 2.44 3.49


TMT947-13C
exp2 Carbon
SAMPLE
date Sep 28 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 360
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9439.5
rfp 7740.1
rp 19.7
lp -43.0
PLOT
wc 250
sc 0
vs 25000
th 3
ai cdc ph
171.121
153.523
147.013
135.799
129.653
129.117
126.780
125.932
125.084
85.669
77.320
77.000
76.680
74.701
69.708
69.499
45.904
31.855
28.633
21.282
19.325
13.841
OAc
(2c')
O
O-n-Bu
H3C
200
180
160
140
120
100
80
60
40
20
0 ppm

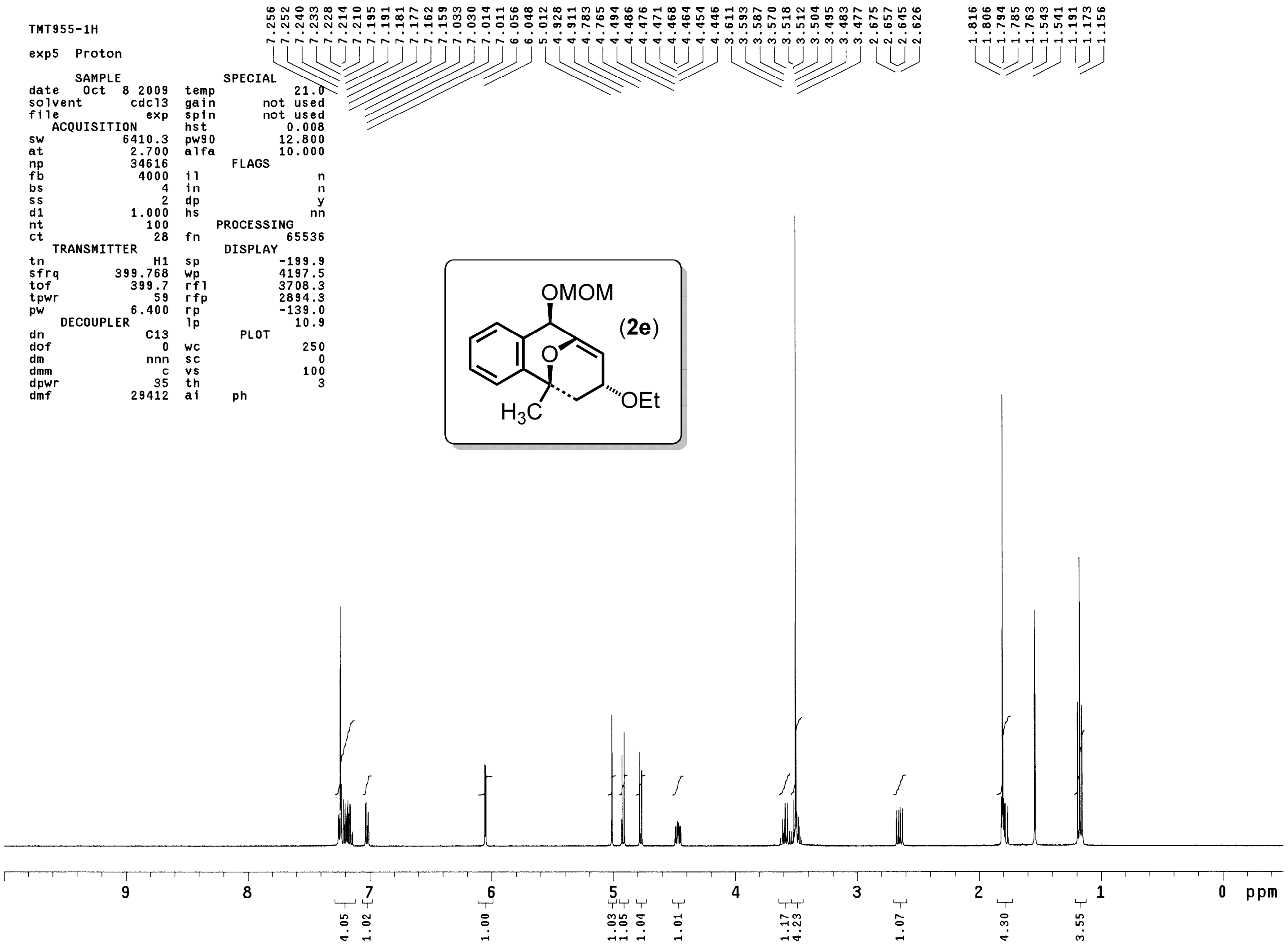

TMT960-1H
exp1 Proton
SAMPLE
date Oct 13 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 16
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.5
rfp 2894.3
rp -131.4
lp 1.6
PLOT
wc 250
sc 0
vs 328
th 5
ai ph
7.270 7.265 7.254 7.249 7.240 7.237 7.187 7.183 7.180 7.176 7.170 7.165 7.158 7.154 7.151 6.913 6.908 6.891 6.105 6.098 5.524 5.517 5.501 5.494 4.975 4.919 4.916 4.901 4.899 4.779 4.777 4.761 4.759 4.443 4.436 4.423 4.419 4.418 4.415 4.404 4.402 4.396 3.610 3.607 3.592 3.589 3.587 3.584 3.569 3.566 3.527 3.524 3.509 3.506 3.503 3.501 3.489 3.486 3.094 3.075 3.071 3.063 3.053 3.045 3.042 3.022 1.613 1.611 1.606 1.591 1.590 1.583 1.575 1.562 1.560 1.554 1.193 1.190 1.175 1.172 1.157 1.155
OMOM
(2d)
O
OEt
H
9 8 7 6 5 4 3 2 1 0 ppm
1.15 2.10 1.03 1.00 1.02 1.04 1.08 1.07 1.03 1.17 4.21 1.08 1.16 3.48


TMT960-13C
exp2 Carbon
SAMPLE
date Oct 13 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.000
nt 1000
ct 84
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9446.2
rfp 7740.1
rp 171.7
lp 11.1
PLOT
wc 250
sc 0
vs 8000
th 4
ai ph
154.401
142.191
137.585
129.586
128.365
127.510
126.639
125.367
95.275
79.262
77.320
77.000
76.680
73.756
72.134
64.819
55.615
38.746
15.240
OMOM
(2d)
O
H
OEt
200
180
160
140
120
100
80
60
40
20
0 ppm

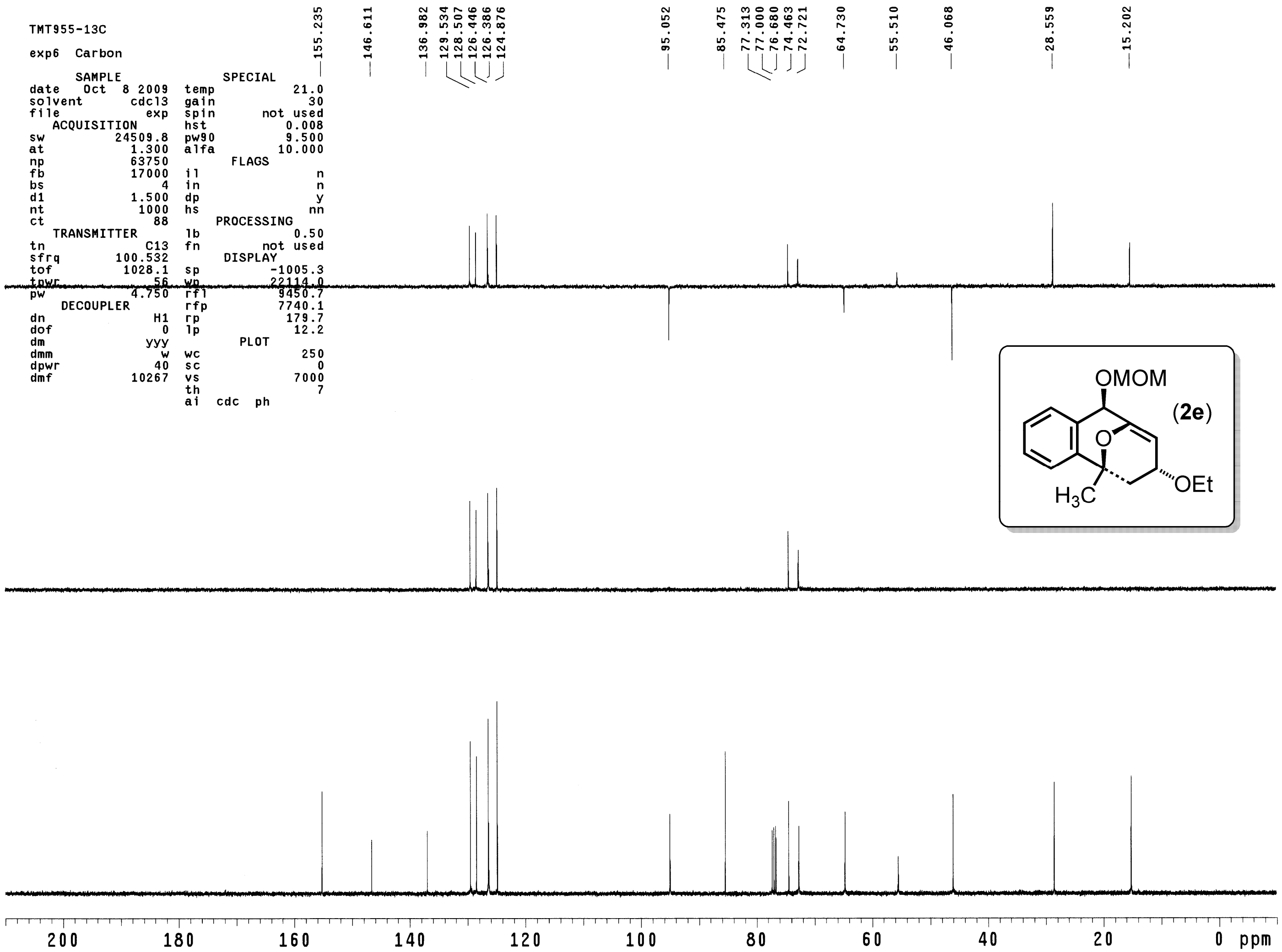

TMT961-1H
exp1 Proton
SAMPLE
date Oct 15 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 100
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.3
rfp 2894.3
rp -129.1
lp -5.5
PLOT
wc 250
sc 0
vs 100
th 3
ai ph
7.280 7.276 7.274 7.263 7.258 7.240 7.199 7.194 7.187 7.182 7.176 7.169 7.165 6.923 6.918 6.905 6.901 6.109 6.101 5.531 5.523 5.508 5.501 4.982 4.928 4.911 4.786 4.769 4.430 4.422 4.412 4.409 4.404 4.401 4.391 4.383 3.538 3.531 3.521 3.515 3.499 3.484 3.469 3.461 3.452 3.445 3.429 3.098 3.080 3.075 3.067 3.057 3.049 3.044 3.026 1.614 1.607 1.593 1.585 1.577 1.563 1.559 1.556 1.539 1.529 1.524 1.512 1.507 1.491 1.368 1.350 1.346 1.332 1.328 1.313 1.310 1.235 0.906 0.900 0.888 0.869
OMOM
(2d')
O
H
O-n-Bu
9 8 7 6 5 4 3 2 1 0 ppm
1.00 2.06 1.02 1.00 1.02 1.02 1.05 1.05 1.03 5.50 1.08 1.47 2.24 2.65 3.77

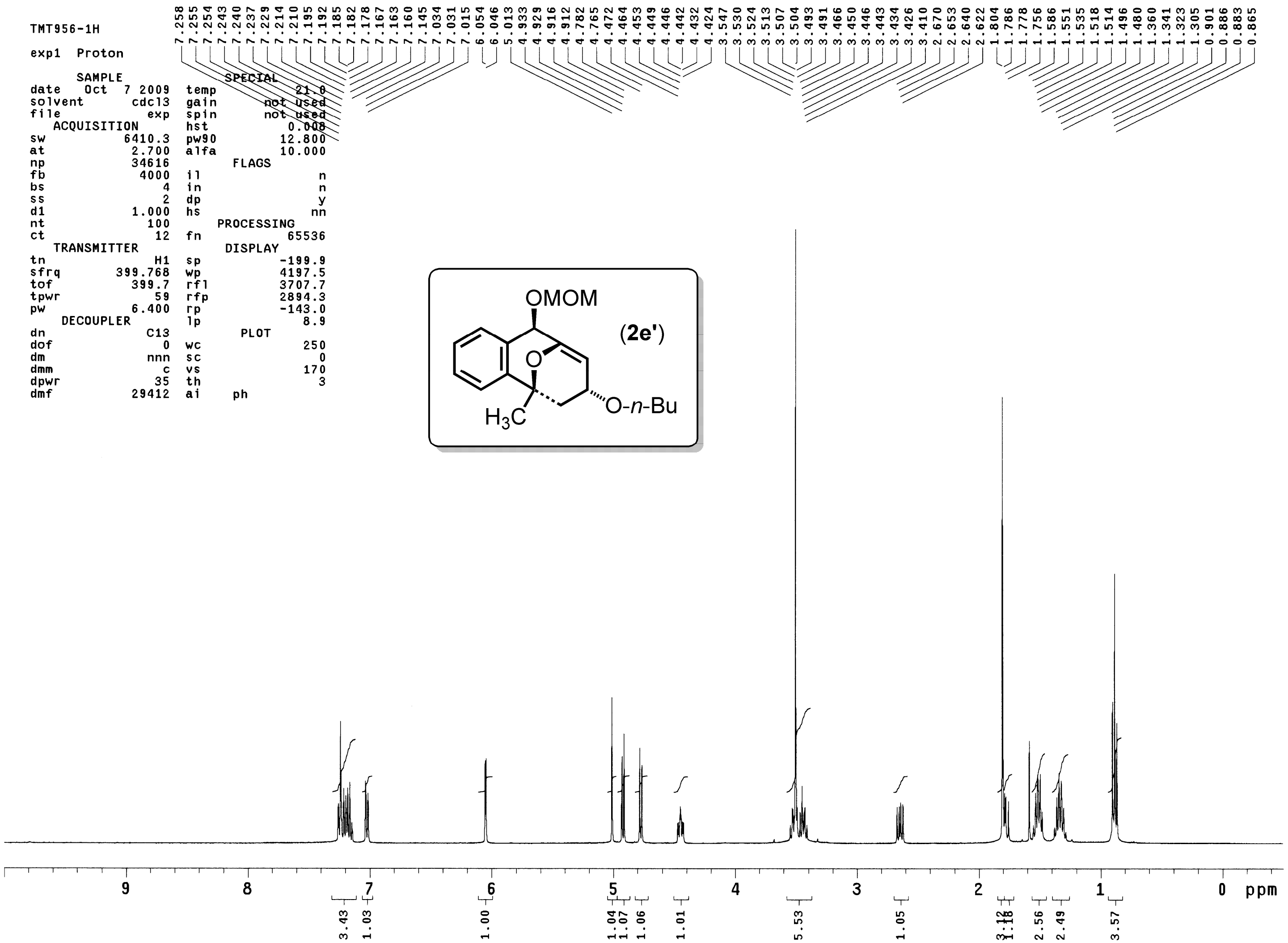


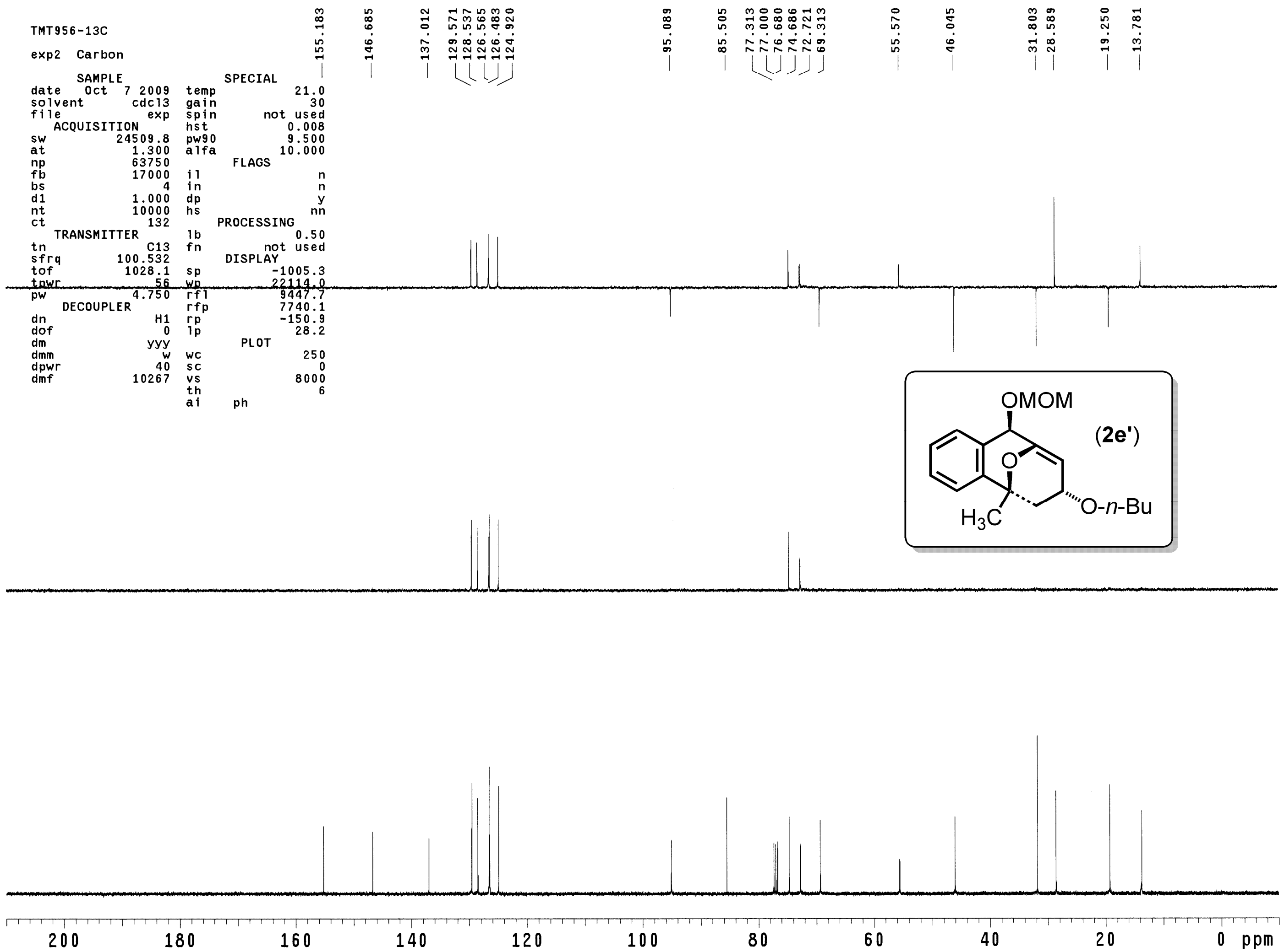
TMT961-13C
exp2 Carbon
SAMPLE
date Oct 14 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.000
nt 1000
ct 180
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9442.5
rfp 7740.1
rp 198.1
lp -3.7
PLOT
wc 250
sc 0
vs 15000
th 5
ai ph
154.357
142.273
137.622
129.630
128.395
127.673
126.669
125.411
95.312
79.307
77.320
77.000
76.687
73.972
72.171
69.395
55.652
38.738
31.840
19.295
13.818
OMOM
(2d')
O
H
O-n-Bu
200
180
160
140
120
100
80
60
40
20
0 ppm

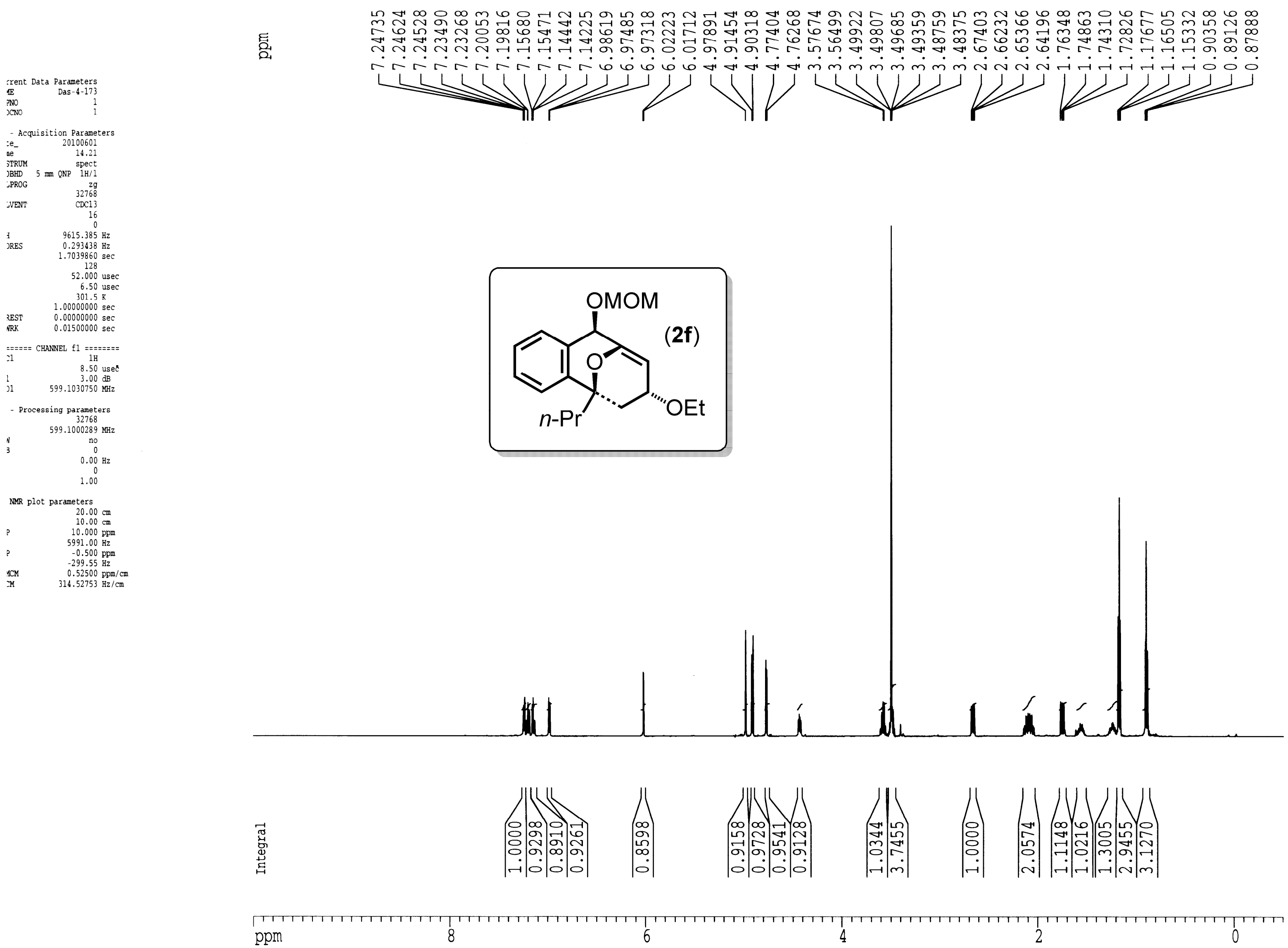


TMT955-1H
exp5 Proton
SAMPLE
date Oct 8 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 28
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.3
rfp 2894.3
rp -139.0
lp 10.9
PLOT
wc 250
sc 0
vs 100
th 3
ai ph
7.256 7.252 7.240 7.233 7.228 7.214 7.210 7.195 7.191 7.181 7.177 7.162 7.159 7.033 7.030 7.014 7.011 6.056 6.048 5.012 4.928 4.911 4.783 4.765 4.494 4.486 4.476 4.471 4.468 4.464 4.454 4.446 3.611 3.593 3.587 3.570 3.518 3.512 3.504 3.495 3.483 3.477 2.675 2.657 2.645 2.626 1.816 1.806 1.794 1.785 1.763 1.543 1.541 1.191 1.173 1.156
OMOM
(2e)
O
OEt
H3C
9 8 7 6 5 4 3 2 1 0 ppm
4.05 1.02 1.00 1.03 1.05 1.04 1.01 1.17 4.23 1.07 4.30 3.55


TMT955-13C
exp6 Carbon
SAMPLE
date Oct 8 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 88
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9450.7
rfp 7740.1
rp 179.7
lp 12.2
PLOT
wc 250
sc 0
vs 7000
th 7
ai cdc ph
155.235
146.611
136.982
129.534
128.507
126.446
126.386
124.876
95.052
85.475
77.313
77.000
76.680
74.463
72.721
64.730
55.510
46.068
28.559
15.202
OMOM
(2e)
O
OEt
H3C
200
180
160
140
120
100
80
60
40
20
0 ppm


TMT956-1H
exp1 Proton
SAMPLE
date Oct 7 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 12
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3707.7
rfp 2894.3
rp -143.0
lp 8.9
PLOT
wc 250
sc 0
vs 170
th 3
ai ph
7.258 7.255 7.254 7.243 7.240 7.237 7.229 7.214 7.210 7.195 7.192 7.185 7.182 7.178 7.167 7.163 7.160 7.145 7.034 7.031 7.015 6.054 6.046 5.013 4.933 4.929 4.916 4.912 4.782 4.765 4.472 4.464 4.453 4.449 4.446 4.442 4.432 4.424 3.547 3.530 3.524 3.513 3.507 3.504 3.493 3.491 3.466 3.450 3.446 3.443 3.434 3.426 3.410 2.670 2.653 2.640 2.622 1.804 1.786 1.778 1.756 1.586 1.551 1.535 1.518 1.514 1.496 1.480 1.360 1.341 1.323 1.305 0.901 0.886 0.883 0.865
OMOM
(2e')
O
H3C
O-n-Bu
9
8
7
6
5
4
3
2
1
0 ppm
3.43
1.03
1.00
1.04
1.07
1.06
1.01
5.53
1.05
3.12
1.18
2.56
2.49
3.57


TMT956-13C
exp2 Carbon
SAMPLE
date Oct 7 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.000
nt 10000
ct 132
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9447.7
rfp 7740.1
rp -150.9
lp 28.2
PLOT
wc 250
sc 0
vs 8000
th 6
ai ph
155.183
146.685
137.012
129.571
128.537
126.565
126.483
124.920
95.089
85.505
77.313
77.000
76.680
74.686
72.721
69.313
55.570
46.045
31.803
28.589
19.250
13.781
OMOM
(2e')
O
O-n-Bu
H3C
200
180
160
140
120
100
80
60
40
20
0 ppm


OMOM
(2f)
O
OEt
n-Pr
ppm
7.24735 7.24624 7.24528 7.23490 7.23268 7.20053 7.19816 7.15680 7.15471 7.14442 7.14225 6.98619 6.97485 6.97318 6.02223 6.01712 4.97891 4.91454 4.90318 4.77404 4.76268 3.57674 3.56499 3.49922 3.49807 3.49685 3.49359 3.48759 3.48375 2.67403 2.66232 2.65366 2.64196 1.76348 1.74863 1.74310 1.72826 1.17677 1.16505 1.15332 0.90358 0.89126 0.87888
Integral
1.0000 0.9298 0.8910 0.9261 0.8598 0.9158 0.9728 0.9541 0.9128 1.0344 3.7455 1.0000 2.0574 1.1148 1.0216 1.3005 2.9455 3.1270
ppm 8 6 4 2 0

ırrent Data Parameters
ıME Das-4-173
(PNO 2
ROCNO 1

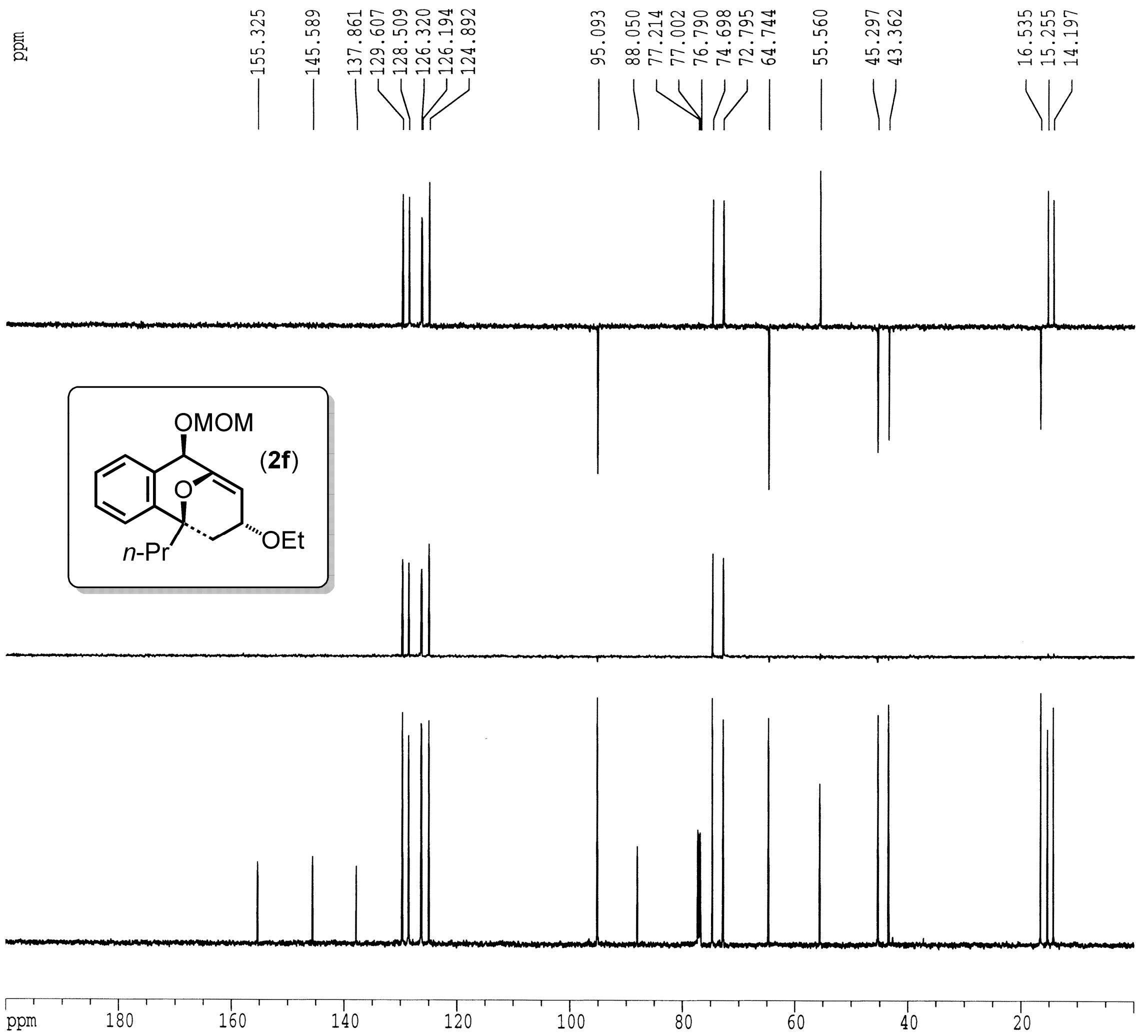
ɩ - Acquisition Parameters
ate_ 20100601
.me 14.23
ISTRUM spect
ROBHD 5 mm QNP 1H/1
JLPROG zgpg
) 32768
)LVENT H2O+D2O
; 45
; 0
VH 45045.047 Hz
[DRES 1.374666 Hz
) 0.3637748 sec
; 2048
V 11.100 usec
E 6.50 usec
E 301.6 K
L 3.50000000 sec
L1 0.03000000 sec
ELTA 3.40000010 sec
CREST 0.00000000 sec
CWRK 0.01500000 sec

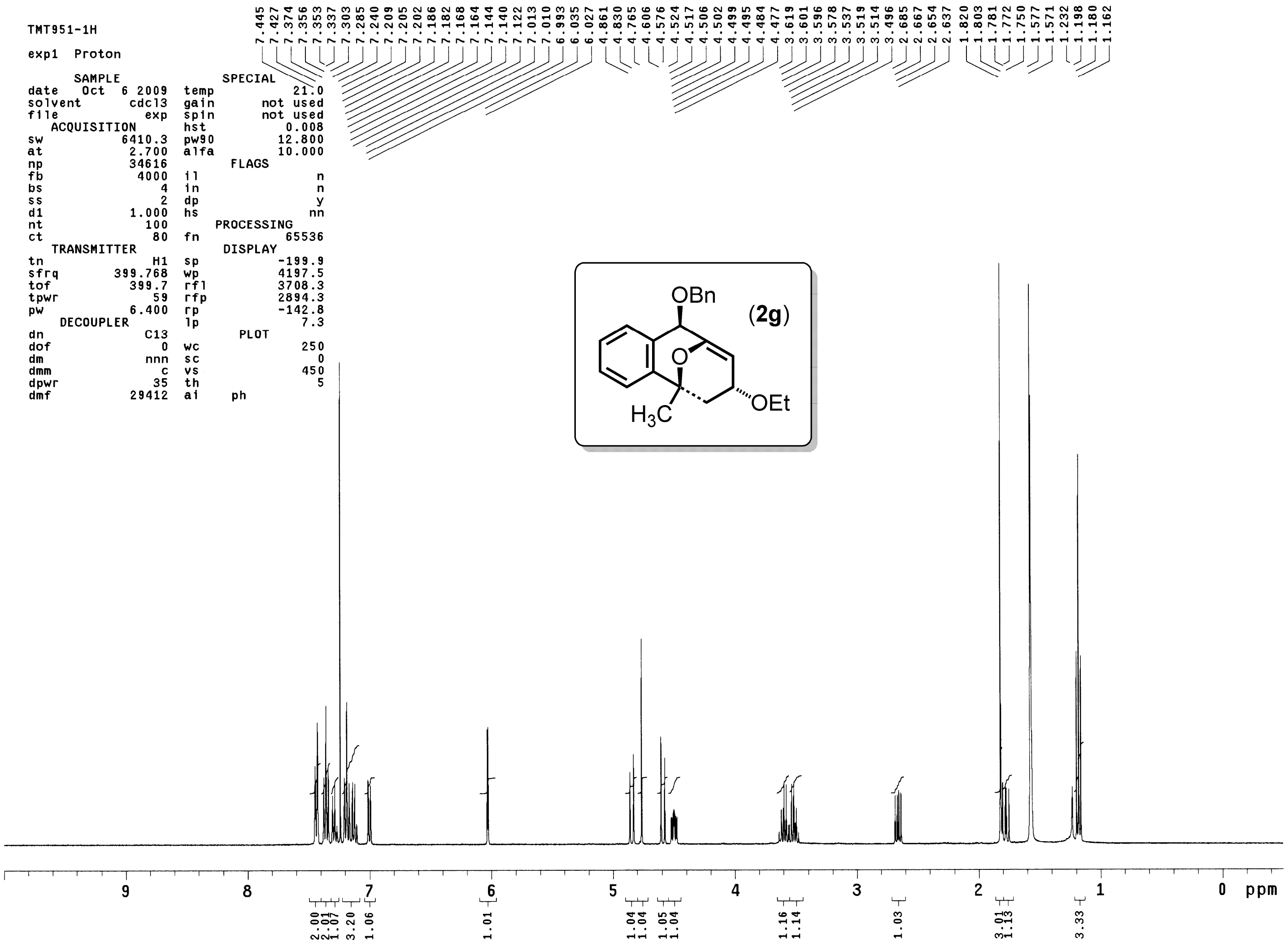
======= CHANNEL f1 ========
JC1 13C
L 4.80 usec
L1 0.00 dB
FO1 150.6603858 MHz

======= CHANNEL f2 ========
PDPRG2 waltz16
JC2 1H
CPD2 92.00 usec
L2 120.00 dB
L12 9.00 dB
L13 14.00 dB
FO2 599.1029955 MHz

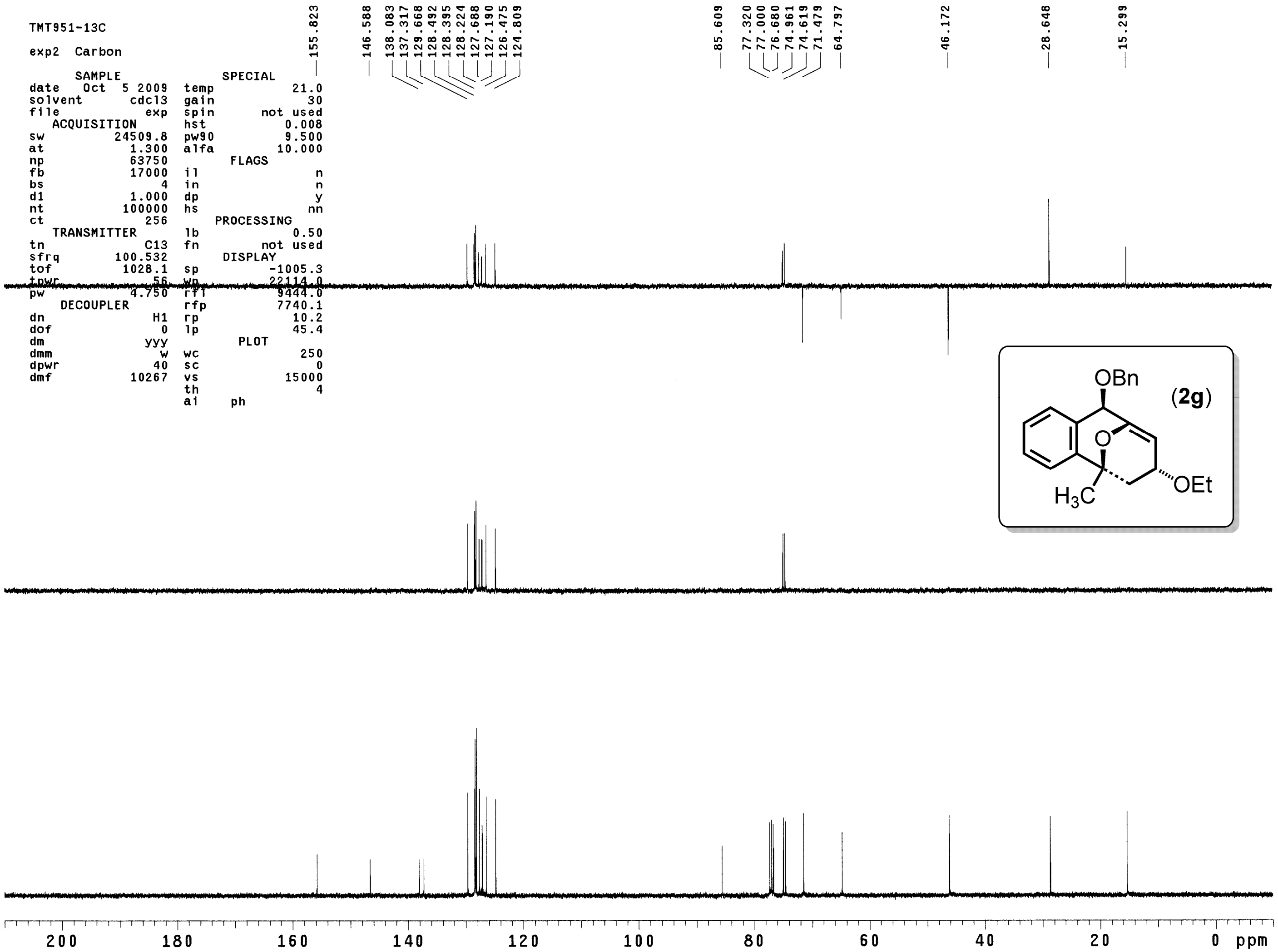
2 - Processing parameters
I 65536
F 150.6438285 MHz
DW EM
SB 0
B 3.00 Hz
B 0
C 1.00

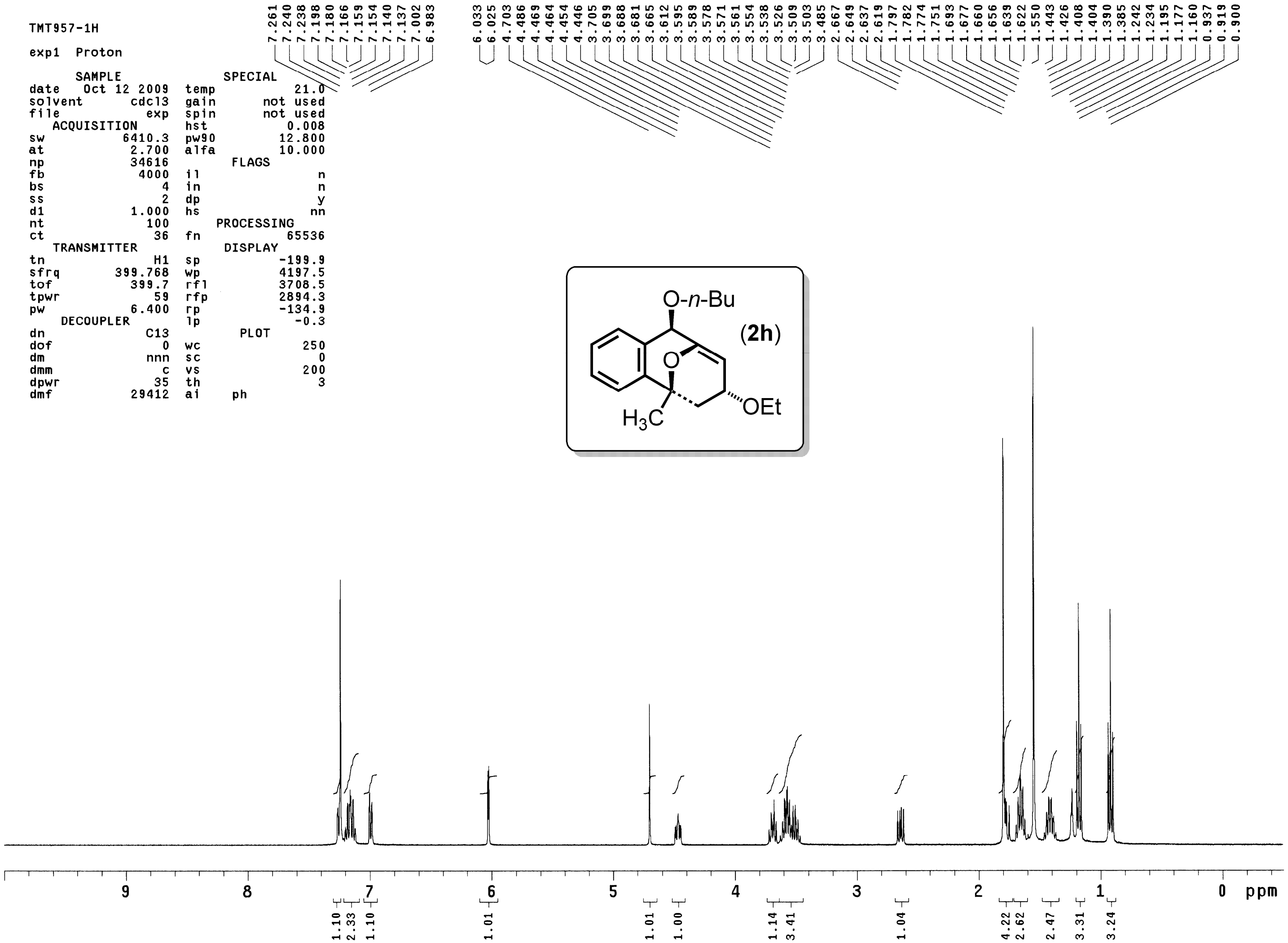
D NMR plot parameters
X 20.00 cm
Y 4.50 cm
1P 200.000 ppm
1 30128.77 Hz
2P 0.000 ppm
2 0.00 Hz
PMCM 10.00000 ppm/cm
ZCM 1506.43823 Hz/cm

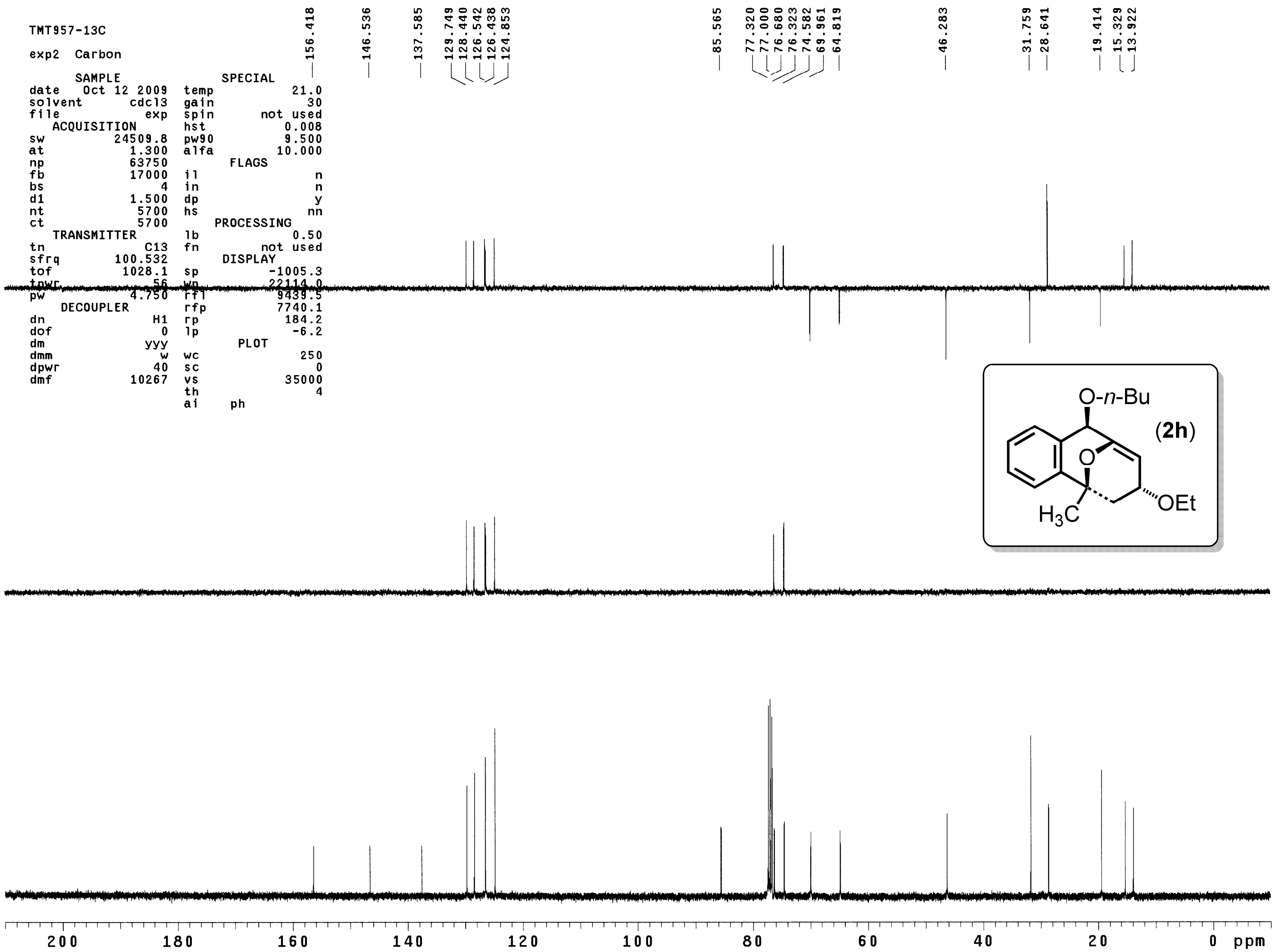


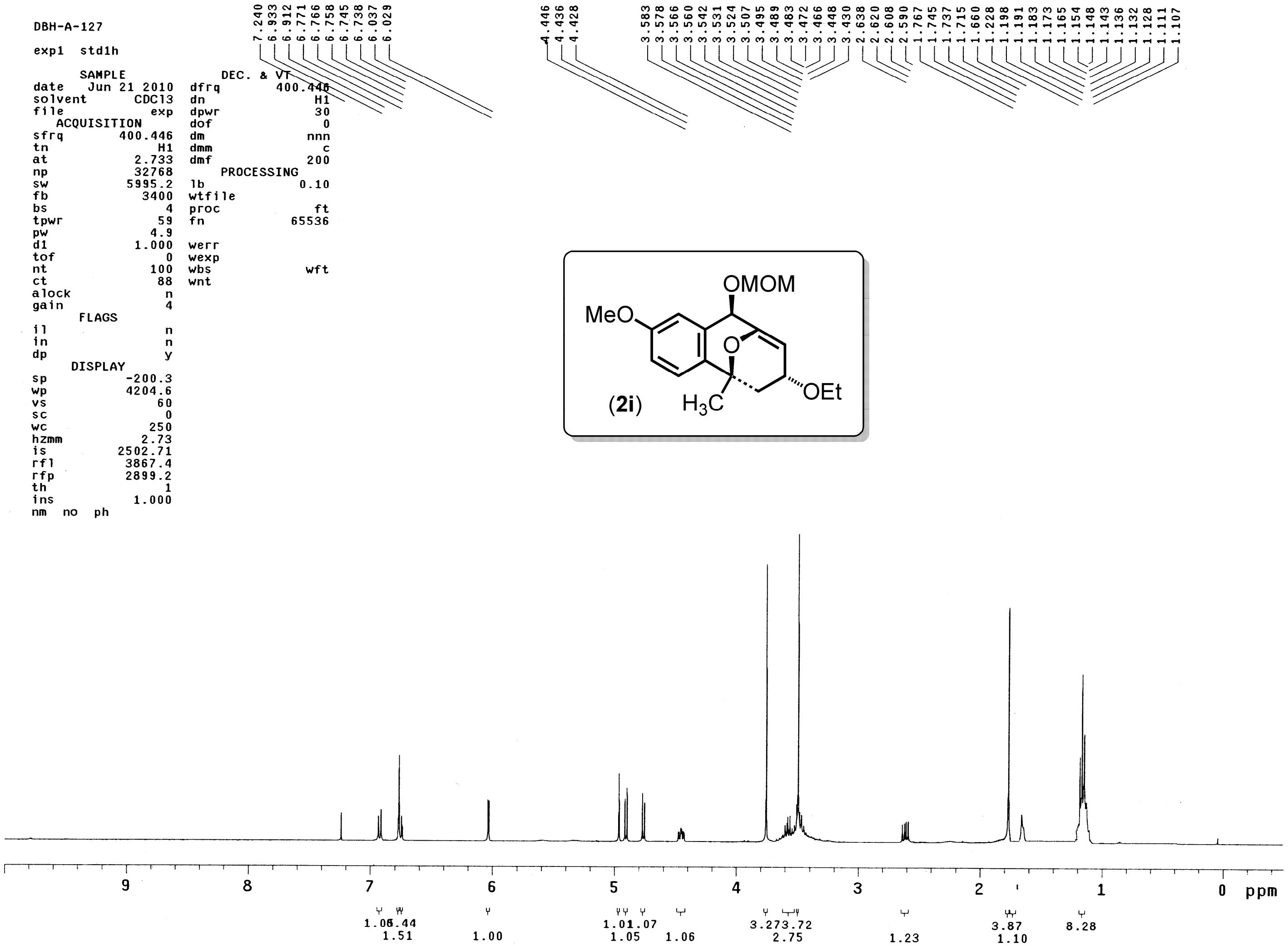


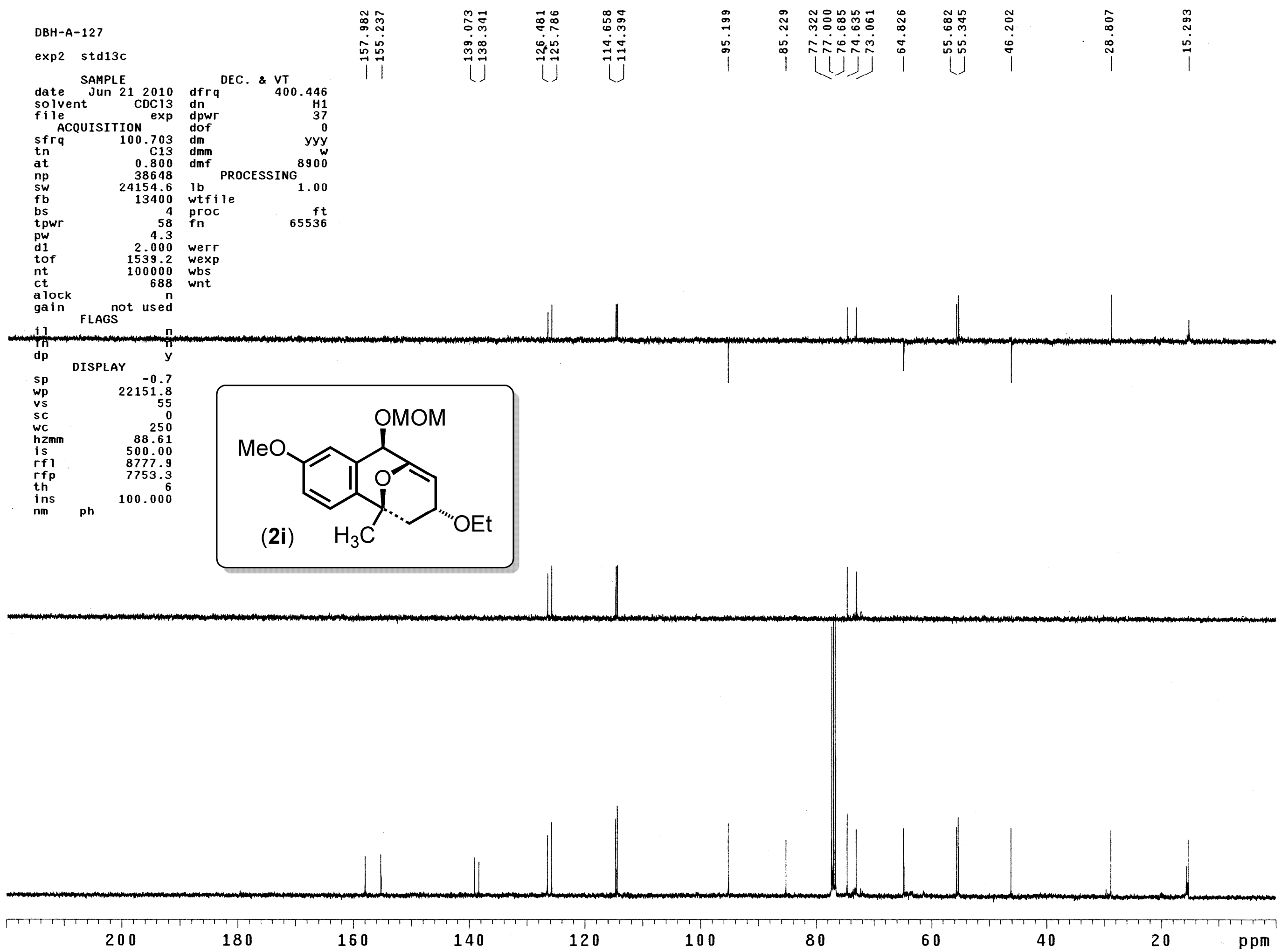
TMT951-1H
exp1 Proton
SAMPLE
date Oct 6 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 80
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.3
rfp 2894.3
rp -142.8
lp 7.3
PLOT
wc 250
sc 0
vs 450
th 5
ai ph
7.445 7.427 7.374 7.356 7.353 7.337 7.303 7.285 7.240 7.209 7.205 7.202 7.186 7.182 7.168 7.164 7.144 7.140 7.122 7.013 7.010 6.993 6.035 6.027 4.861 4.830 4.765 4.606 4.576 4.524 4.517 4.506 4.502 4.499 4.495 4.484 4.477 3.619 3.601 3.596 3.578 3.537 3.519 3.514 3.496 2.685 2.667 2.654 2.637 1.820 1.803 1.781 1.772 1.750 1.577 1.571 1.232 1.198 1.180 1.162
OBn
(2g)
O
OEt
H3C
9 8 7 6 5 4 3 2 1 0 ppm
2.00 2.01 1.07 3.20 1.06 1.01 1.04 1.04 1.05 1.04 1.16 1.14 1.03 3.01 1.13 3.33

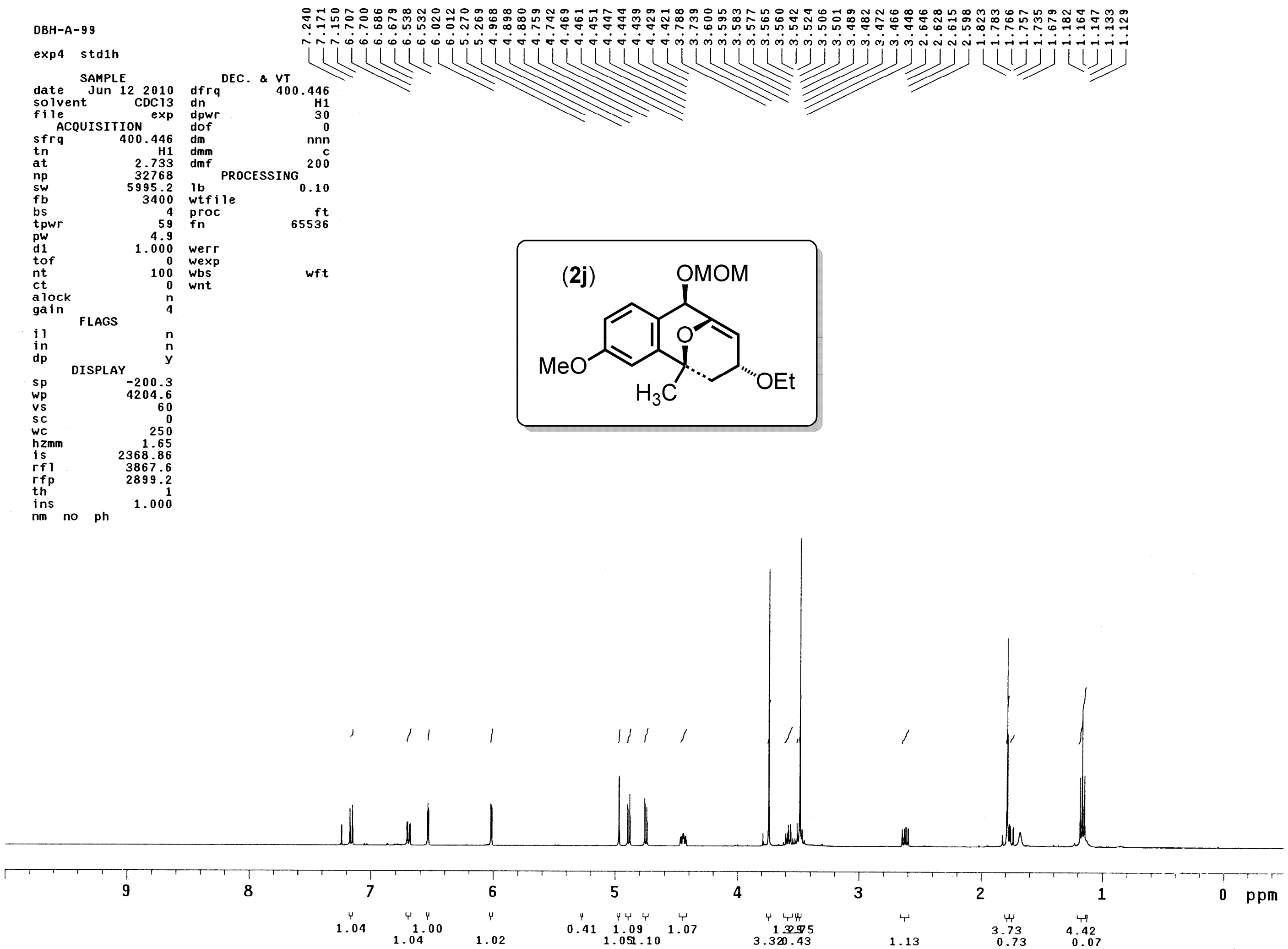

TMT951-13C
exp2 Carbon
SAMPLE
date Oct 5 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.000
nt 100000
ct 256
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9444.0
rfp 7740.1
rp 10.2
lp 45.4
PLOT
wc 250
sc 0
vs 15000
th 4
ai ph
155.823
146.588
138.083
137.317
129.668
128.492
128.395
128.224
127.688
127.190
126.475
124.809
85.609
77.320
77.000
76.680
74.961
74.619
71.479
64.797
46.172
28.648
15.299
OBn
(2g)
O
H3C
OEt
200
180
160
140
120
100
80
60
40
20
0 ppm

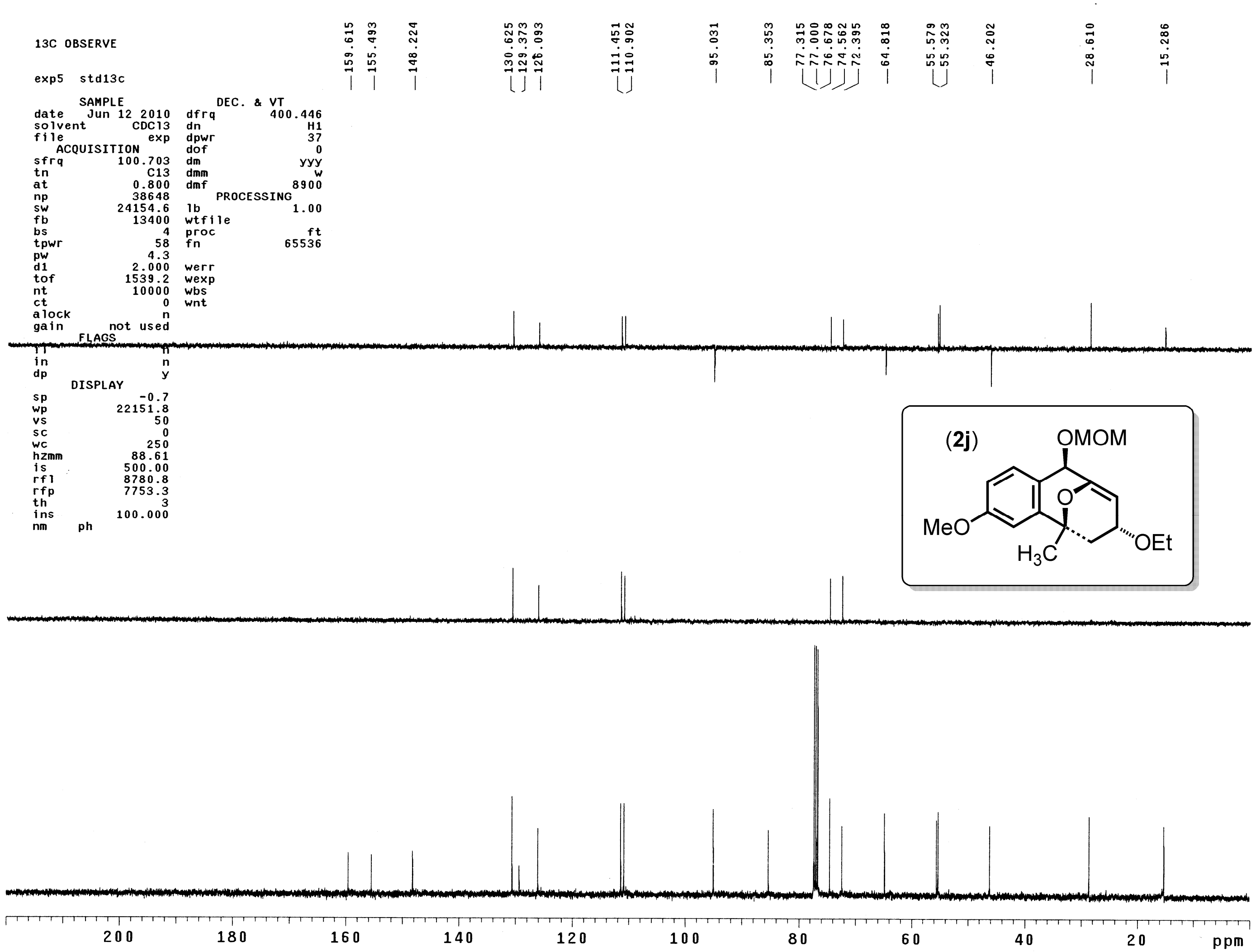

TMT957-1H
exp1 Proton
SAMPLE
date Oct 12 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 36
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp 21.0
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.5
rfp 2894.3
rp -134.9
lp -0.3
PLOT
wc 250
sc 0
vs 200
th 3
ai ph
7.261 7.240 7.238 7.198 7.180 7.166 7.159 7.154 7.140 7.137 7.002 6.983
6.033 6.025 4.703 4.486 4.469 4.464 4.454 4.446 3.705 3.699 3.688 3.681 3.665 3.612 3.595 3.589 3.578 3.571 3.561 3.554 3.538 3.526 3.509 3.503 3.485 2.667 2.649 2.637 2.619 1.797 1.782 1.774 1.751 1.693 1.677 1.660 1.656 1.639 1.622 1.550 1.443 1.426 1.408 1.404 1.390 1.385 1.242 1.234 1.195 1.177 1.160 0.937 0.919 0.900
O-n-Bu
(2h)
O
OEt
H3C
9 8 7 6 5 4 3 2 1 0 ppm
1.10 2.33 1.10 1.01 1.01 1.00 1.14 3.41 1.04 4.22 2.62 2.47 3.31 3.24


TMT957-13C
exp2 Carbon
SAMPLE
date Oct 12 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 5700
ct 5700
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp 21.0
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9439.5
rfp 7740.1
rp 184.2
lp -6.2
PLOT
wc 250
sc 0
vs 35000
th 4
ai ph
156.418
146.536
137.585
129.749
128.440
126.542
126.438
124.853
85.565
77.320
77.000
76.680
76.323
74.582
69.961
64.819
46.283
31.759
28.641
19.414
15.329
13.922
O-n-Bu
(2h)
O
OEt
H3C
200
180
160
140
120
100
80
60
40
20
0 ppm


DBH-A-127
exp1 std1h
SAMPLE
date Jun 21 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 88
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 2.73
is 2502.71
rfl 3867.4
rfp 2899.2
th 1
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
OMOM
MeO
O
OEt
$H_3C$
(2i)
ppm


DBH-A-127
exp2 std13c
SAMPLE
date Jun 21 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 688
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 55
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8777.9
rfp 7753.3
th 6
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
157.982
155.237
139.073
138.341
126.481
125.786
114.658
114.394
95.199
85.229
77.322
77.000
76.685
74.635
73.061
64.826
55.682
55.345
46.202
28.807
15.293
OMOM
MeO
O
OEt
H3C
(2i)
200
180
160
140
120
100
80
60
40
20
ppm


DBH-A-99
exp4 std1h
SAMPLE
date Jun 12 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 0
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 1.65
is 2368.86
rfl 3867.6
rfp 2899.2
th 1
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
7.240 7.171 7.150 6.707 6.700 6.686 6.679 6.538 6.532 6.020 6.012 5.270 5.269 4.968 4.898 4.880 4.759 4.742 4.469 4.461 4.451 4.447 4.444 4.439 4.429 4.421 3.788 3.739 3.600 3.595 3.583 3.577 3.565 3.560 3.542 3.524 3.506 3.501 3.489 3.482 3.472 3.466 3.448 2.646 2.628 2.615 2.598 1.823 1.783 1.766 1.757 1.735 1.679 1.182 1.164 1.147 1.133 1.129
(2j)
OMOM
MeO
OEt
O
$H_3C$
9 8 7 6 5 4 3 2 1 0 ppm
1.04 1.04 1.00 1.02 0.41 1.05 1.09 1.10 1.07 3.32 1.32 0.43 2.75 1.13 3.73 0.73 4.42 0.07

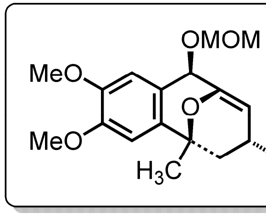

13C OBSERVE
exp5 std13c
SAMPLE
date Jun 12 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 10000
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 50
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8780.8
rfp 7753.3
th 3
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
159.615
155.493
148.224
130.625
129.373
126.093
111.451
110.902
95.031
85.353
77.315
77.000
76.678
74.562
72.395
64.818
55.579
55.323
46.202
28.610
15.286
(2j)
OMOM
MeO
O
H3C
OEt
200
180
160
140
120
100
80
60
40
20
ppm

DBH-A-98

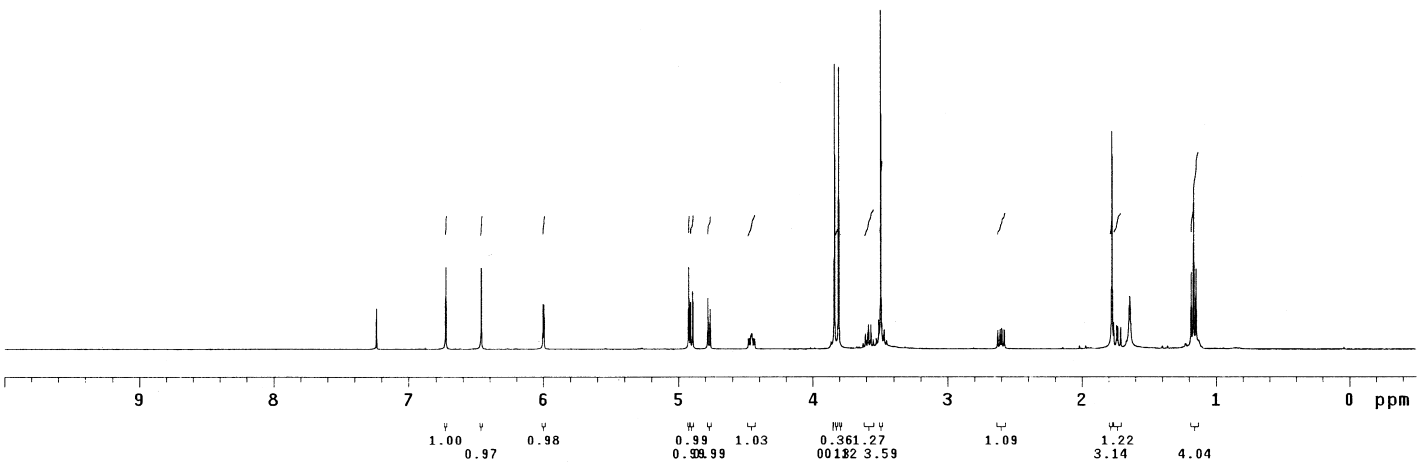
exp1 std1h

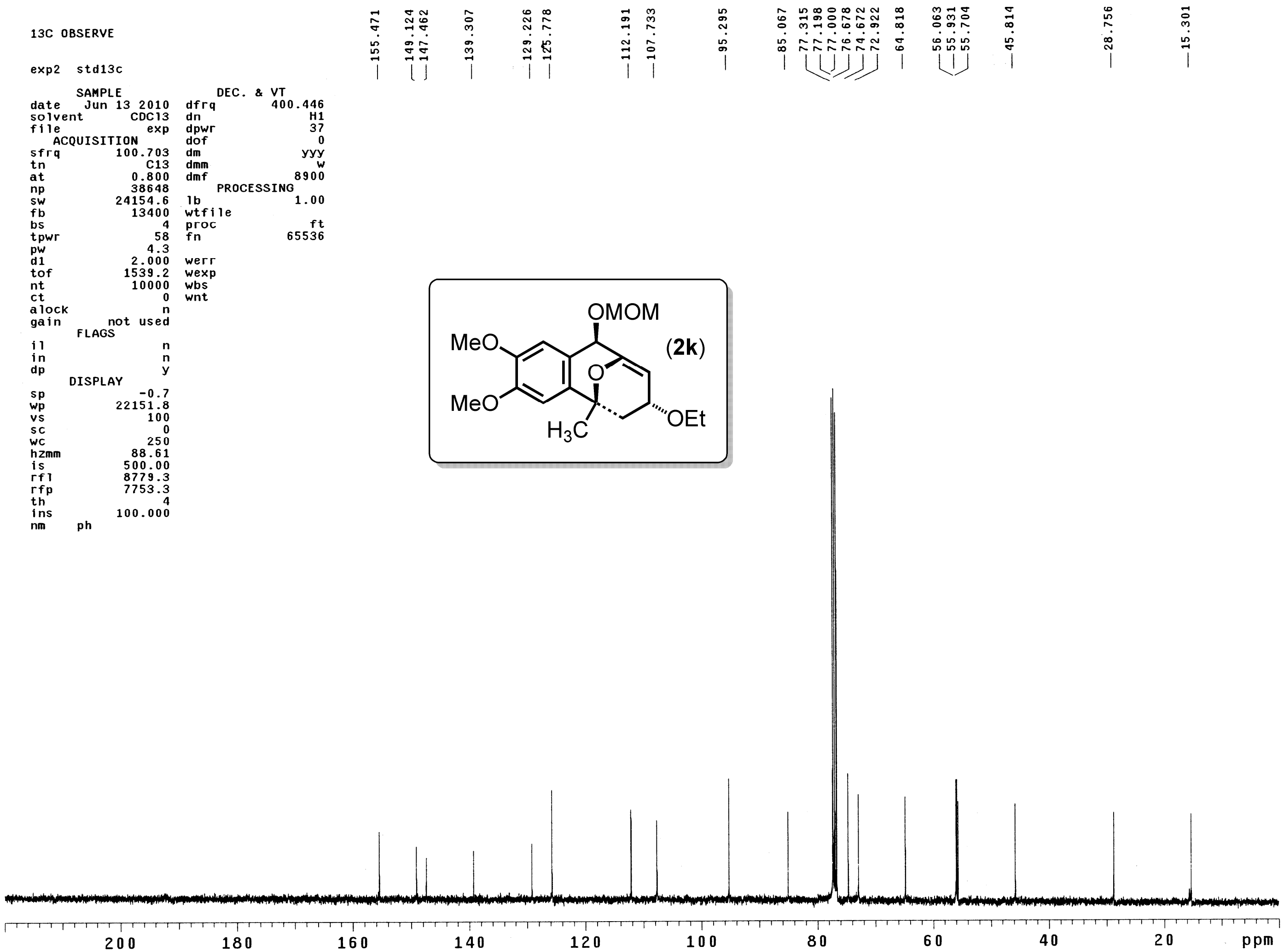
| SAMPLE | | DEC. & VT | |
|---|---|---|---|
| date | Jun 13 2010 | dfrq | 400.446 |
| solvent | CDCl3 | dn | H1 |
| file | exp | dpwr | 30 |
| ACQUISITION | | dof | 0 |
| sfrq | 400.446 | dm | nnn |
| tn | H1 | dmm | c |
| at | 2.733 | dmf | 200 |
| np | 32768 | PROCESSING | |
| sw | 5995.2 | lb | 0.10 |
| fb | 3400 | wtfile | |
| bs | 4 | proc | ft |
| tpwr | 59 | fn | 65536 |
| pw | 4.9 | | |
| d1 | 1.000 | werr | |
| tof | 0 | wexp | |
| nt | 100 | wbs | wft |
| ct | 0 | wnt | |
| alock | n | | |
| gain | 4 | | |
| FLAGS | | | |
| il | n | | |
| in | n | | |
| dp | y | | |
| DISPLAY | | | |
| sp | -200.3 | | |
| wp | 4204.6 | | |
| vs | 60 | | |
| sc | 0 | | |
| wc | 250 | | |
| hzmm | 0.93 | | |
| is | 5967.11 | | |
| rfl | 3867.4 | | |
| rfp | 2899.2 | | |
| th | 1 | | |
| ins | 1.000 | | |
| nm no ph | | | |

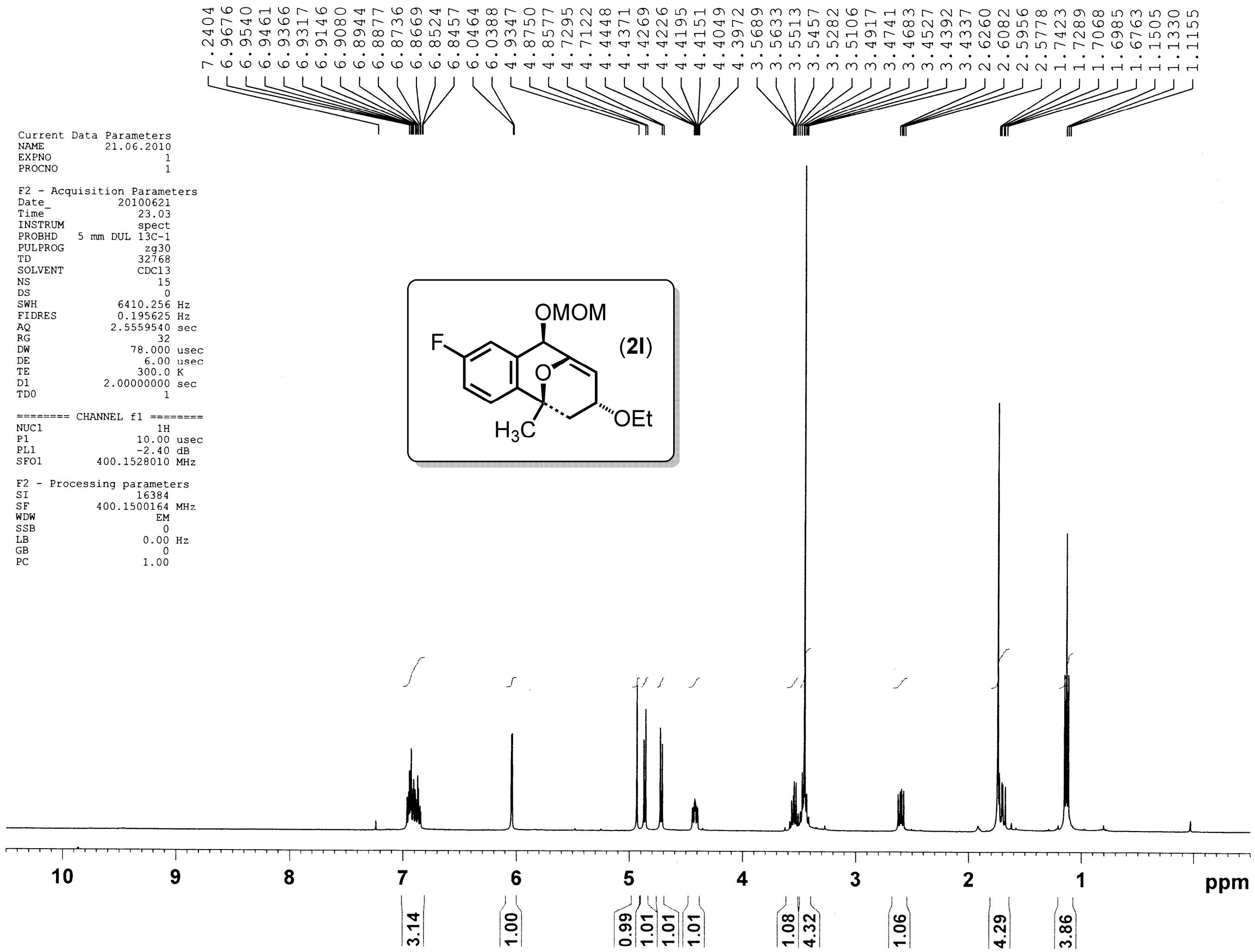
7.240, 7.238, 6.726, 6.464, 6.003, 5.995, 5.272, 5.270, 4.911, 4.894, 4.782, 4.765, 4.481, 4.473, 4.463, 4.459, 4.456, 4.451, 4.441, 4.433, 3.862, 3.838, 3.806, 3.608, 3.602, 3.590, 3.585, 3.573, 3.567, 3.550, 3.527, 3.510, 3.495, 3.493, 3.487, 3.475, 3.469, 3.452, 2.628, 2.610, 2.598, 2.580, 1.775, 1.762, 1.740, 1.732, 1.710, 1.668, 1.643, 1.186, 1.168, 1.151, 1.131



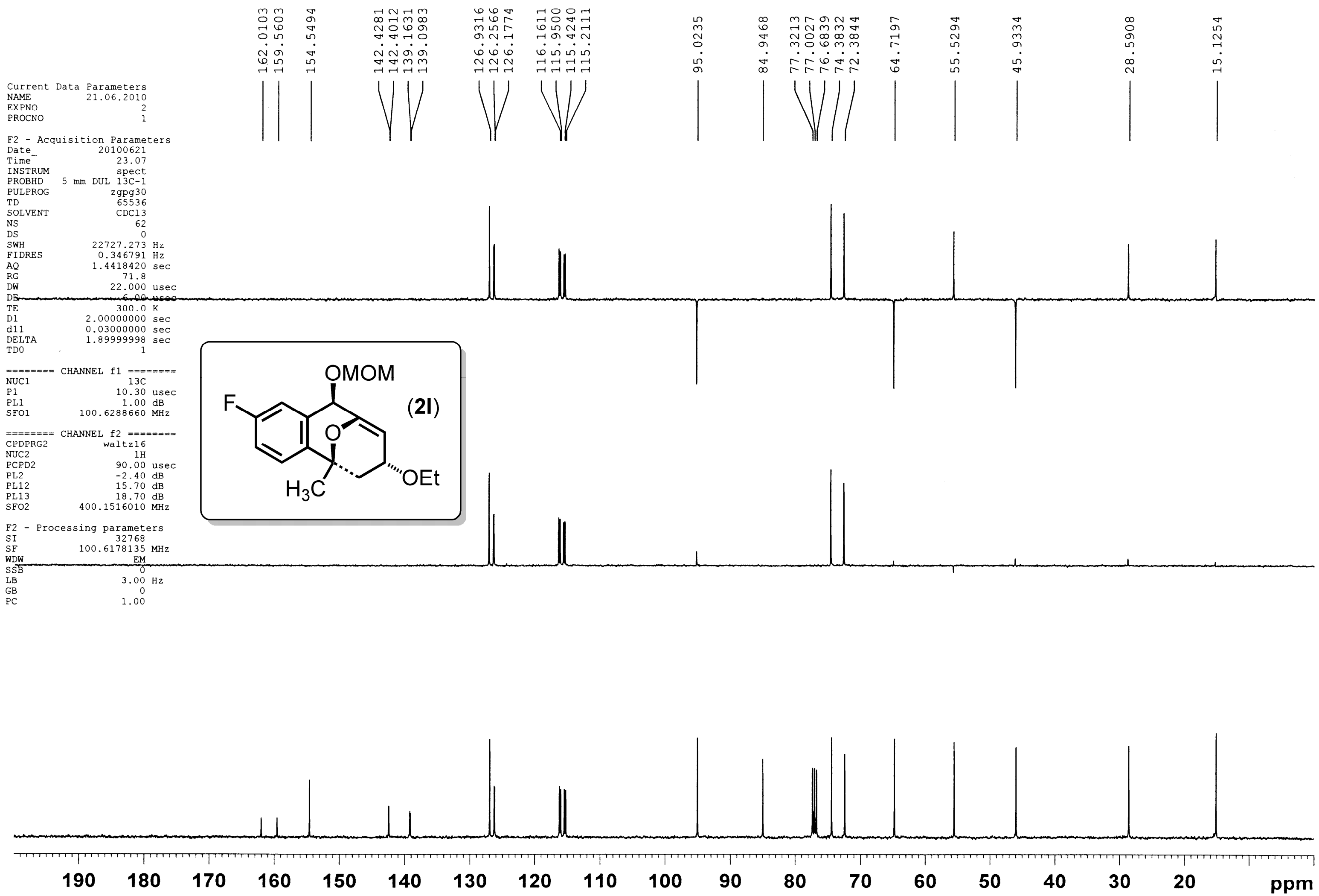

(**2k**)

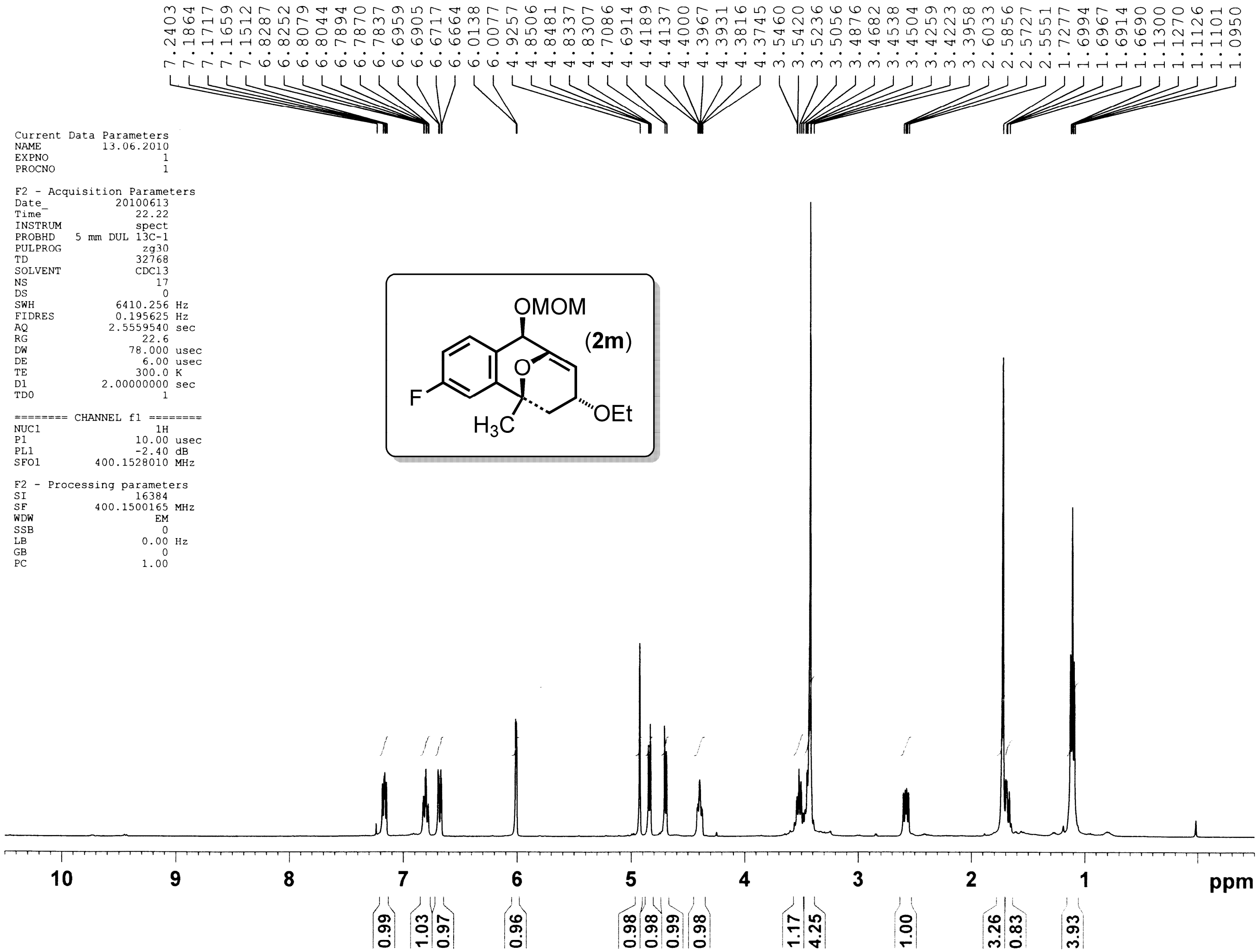


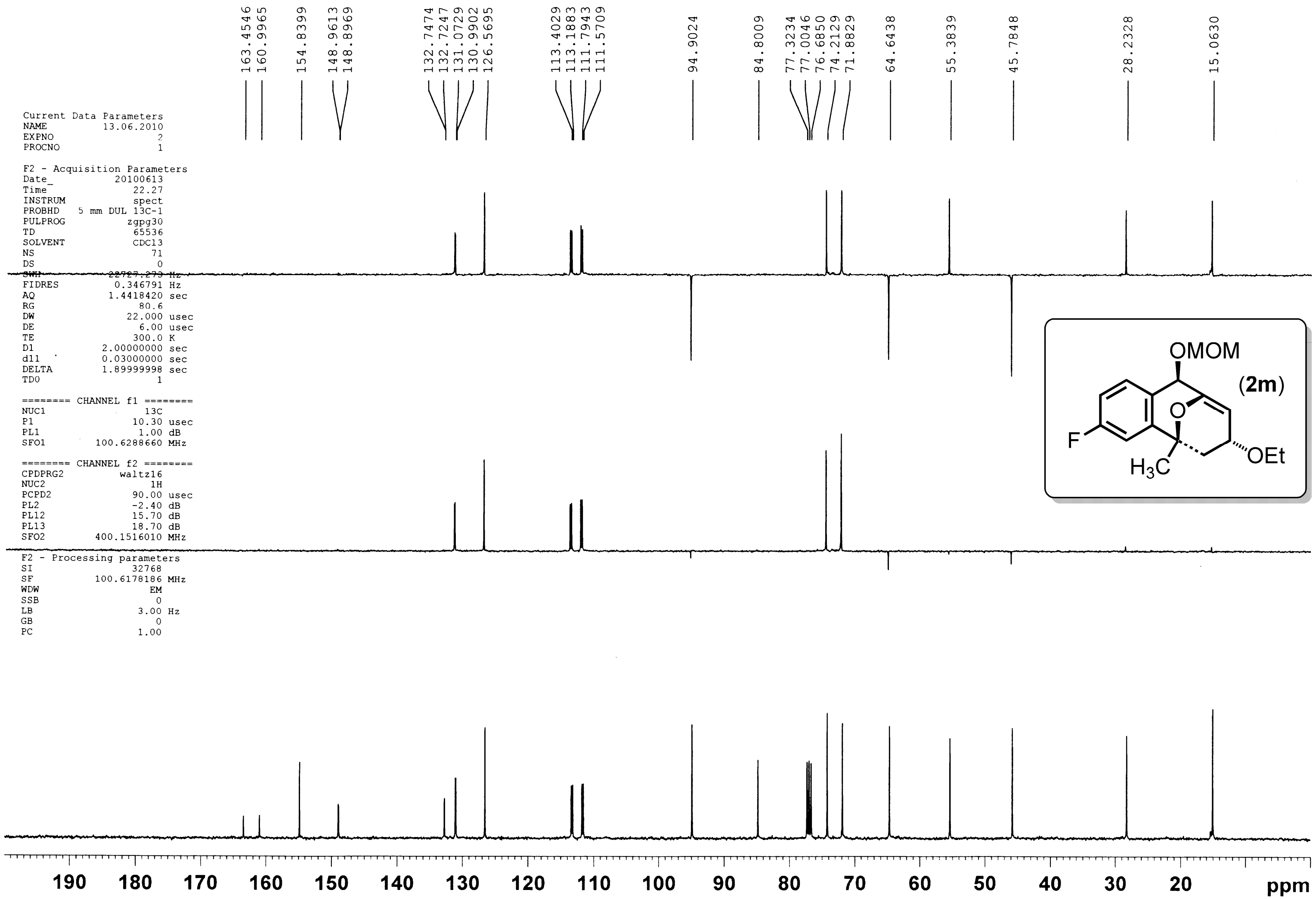

13C OBSERVE
exp2 std13c
SAMPLE
date Jun 13 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 10000
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 100
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8779.3
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
155.471
149.124
147.462
139.307
129.226
125.778
112.191
107.733
95.295
85.067
77.315
77.198
77.000
76.678
74.672
72.922
64.818
56.063
55.931
55.704
45.814
28.756
15.301
OMOM
MeO
MeO
O
H3C
OEt
(2k)
200
180
160
140
120
100
80
60
40
20
ppm



Current Data Parameters
NAME 21.06.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100621
Time 23.03
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 15
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 32
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500164 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
7.2404 6.9676 6.9540 6.9461 6.9366 6.9317 6.9146 6.9080 6.8944 6.8877 6.8736 6.8669 6.8524 6.8457 6.0464 6.0388 4.9347 4.8750 4.8577 4.7295 4.7122 4.4448 4.4371 4.4269 4.4226 4.4195 4.4151 4.4049 4.3972 3.5689 3.5633 3.5513 3.5457 3.5282 3.5106 3.4917 3.4741 3.4683 3.4527 3.4392 3.4337 2.6260 2.6082 2.5956 2.5778 1.7423 1.7289 1.7068 1.6985 1.6763 1.1505 1.1330 1.1155
OMOM
F
O
H3C
OEt
(2l)
10 9 8 7 6 5 4 3 2 1 ppm
3.14 1.00 0.99 1.01 1.01 1.01 1.08 4.32 1.06 4.29 3.86

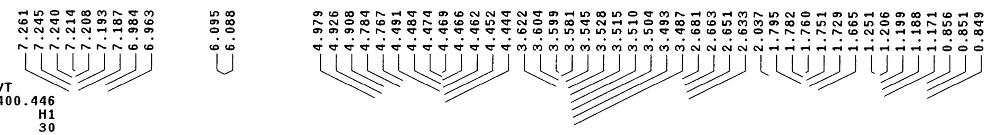

Current Data Parameters
NAME 21.06.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100621
Time 23.07
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 62
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178135 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
162.0103
159.5603
154.5494
142.4281
142.4012
139.1631
139.0983
126.9316
126.2566
126.1774
116.1611
115.9500
115.4240
115.2111
95.0235
84.9468
77.3213
77.0027
76.6839
74.3832
72.3844
64.7197
55.5294
45.9334
28.5908
15.1254
OMOM
F
O
H3C
OEt
(2l)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

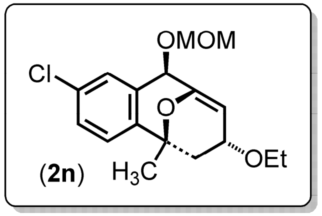

Current Data Parameters
NAME 13.06.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100613
Time 22.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 17
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 22.6
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
7.2403 7.1864 7.1717 7.1659 7.1512 6.8287 6.8252 6.8079 6.8044 6.7894 6.7870 6.7837 6.6959 6.6905 6.6717 6.6664 6.0138 6.0077 4.9257 4.8506 4.8481 4.8337 4.8307 4.7086 4.6914 4.4189 4.4137 4.4000 4.3967 4.3931 4.3816 4.3745 3.5460 3.5420 3.5236 3.5056 3.4876 3.4682 3.4538 3.4504 3.4259 3.4223 3.3958 2.6033 2.5856 2.5727 2.5551 1.7277 1.6994 1.6967 1.6914 1.6690 1.1300 1.1270 1.1126 1.1101 1.0950
OMOM
(2m)
O
F
H3C
OEt
10 9 8 7 6 5 4 3 2 1 ppm
0.99 1.03 0.97 0.96 0.98 0.98 0.99 0.98 1.17 4.25 1.00 3.26 0.83 3.93

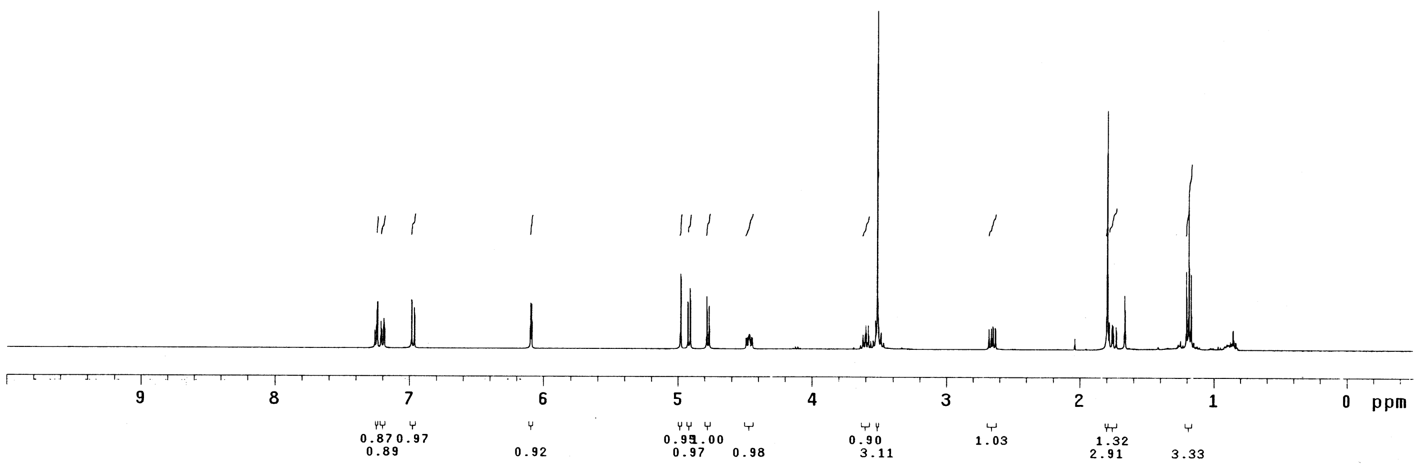


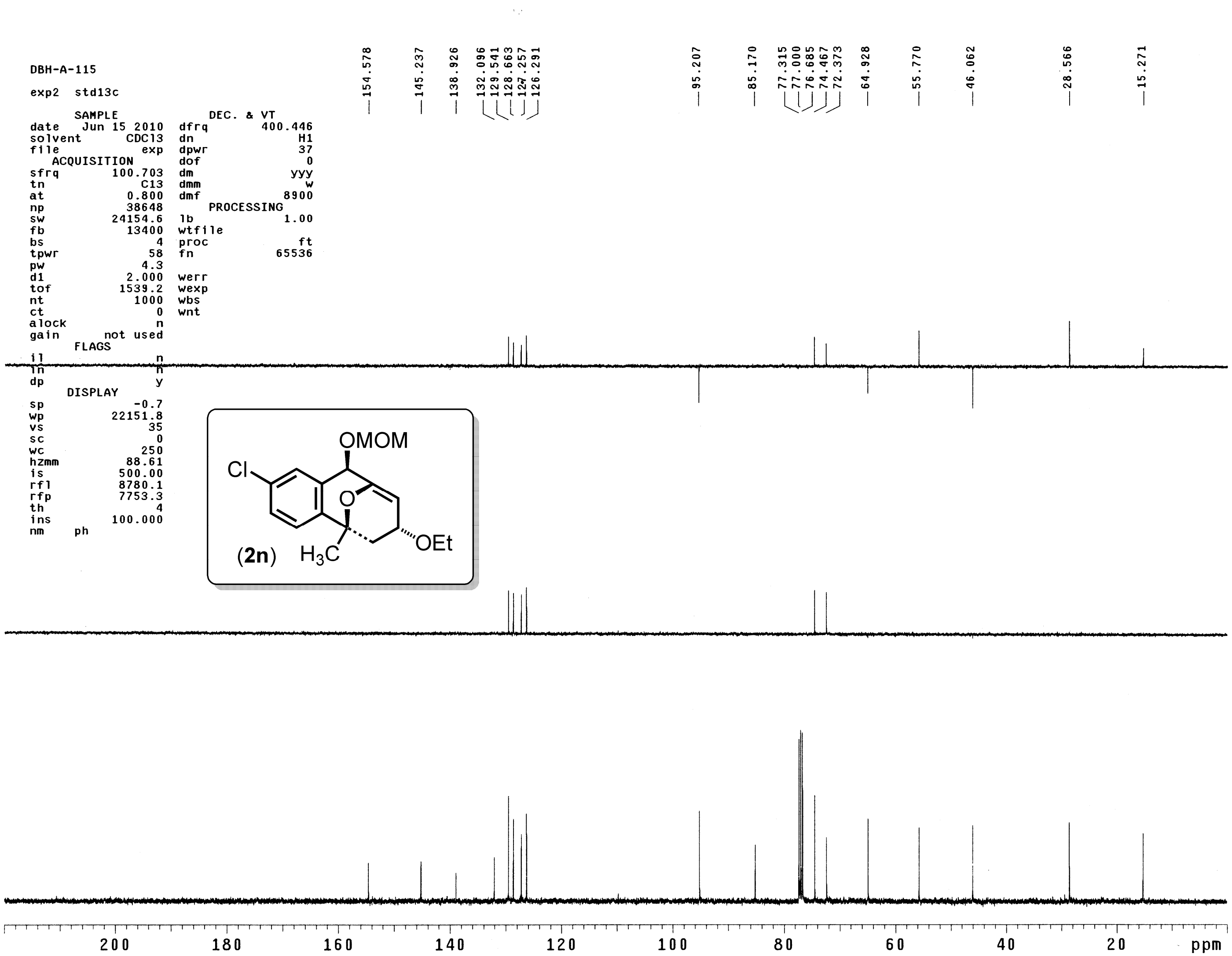
163.4546
160.9965
154.8399
148.9613
148.8969
132.7474
132.7247
131.0729
130.9902
126.5695
113.4029
113.1883
111.7943
111.5709
94.9024
84.8009
77.3234
77.0046
76.6850
74.2129
71.8829
64.6438
55.3839
45.7848
28.2328
15.0630
Current Data Parameters
NAME 13.06.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100613
Time 22.27
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 71
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 80.6
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178186 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
(2m)
F
O
$H_3C$
OEt
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

```
DBH-A-115

exp1  std1h

      SAMPLE                  DEC. & VT
date   Jun 15 2010    dfrq         400.446
solvent      CDCl3    dn                H1
file           exp    dpwr              30
   ACQUISITION        dof                0
sfrq       400.446    dm               nnn
tn              H1    dmm                c
at           2.733    dmf              200
np           32768         PROCESSING
sw          5995.2    lb              0.10
fb            3400    wtfile
bs               4    proc              ft
tpwr            59    fn             65536
pw             4.9
d1           1.000    werr
tof              0    wexp
nt             100    wbs              wft
ct               0    wnt
alock            n
gain             4
      FLAGS
il               n
in               n
dp               y
     DISPLAY
sp          -200.3
wp          4204.6
vs              60
sc               0
wc             250
hzmm          0.93
is         2516.93
rfl         3859.3
rfp         2899.2
th               2
ins          1.000
nm  no  ph
```




DBH-A-115
exp2 std13c
SAMPLE
date Jun 15 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 1000
ct 0
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 35
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8780.1
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
154.578
145.237
138.926
132.096
129.541
128.663
127.257
126.291
95.207
85.170
77.315
77.000
76.685
74.467
72.373
64.928
55.770
46.062
28.566
15.271
OMOM
Cl
O
OEt
H3C
(2n)
200
180
160
140
120
100
80
60
40
20
ppm

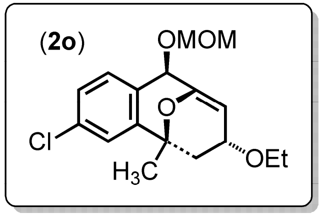
DBH-A-128

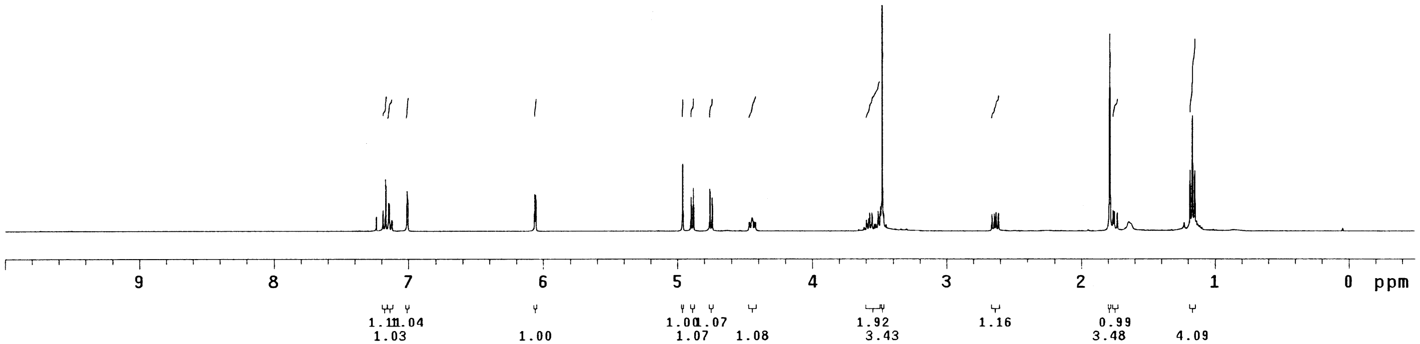
exp1 std1h

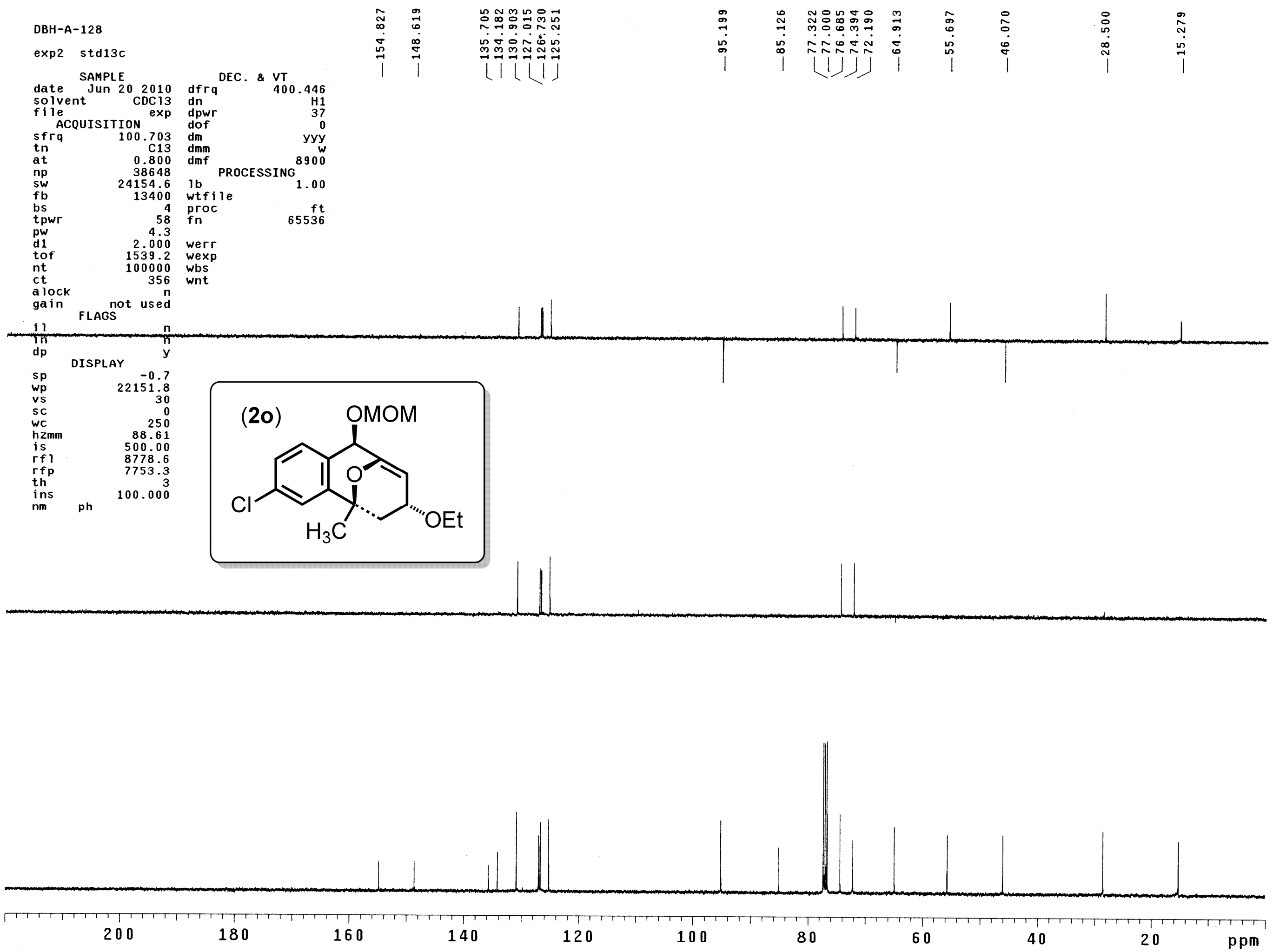
SAMPLE
date Jun 20 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 68
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 40
sc 0
wc 250
hzmm 0.85
is 2626.87
rfl 3867.0
rfp 2899.2
th 2
ins 1.000
nm no ph

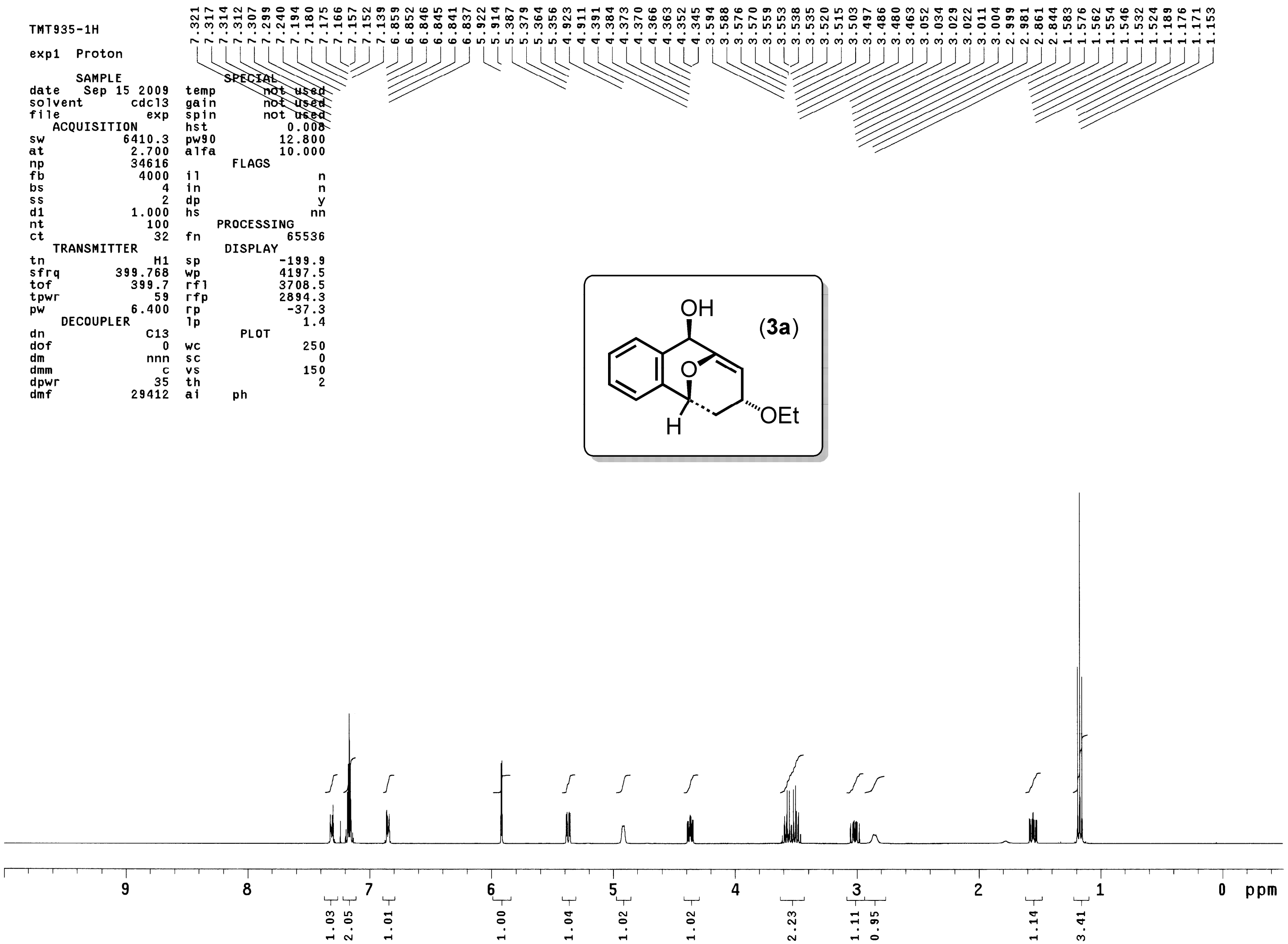
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt

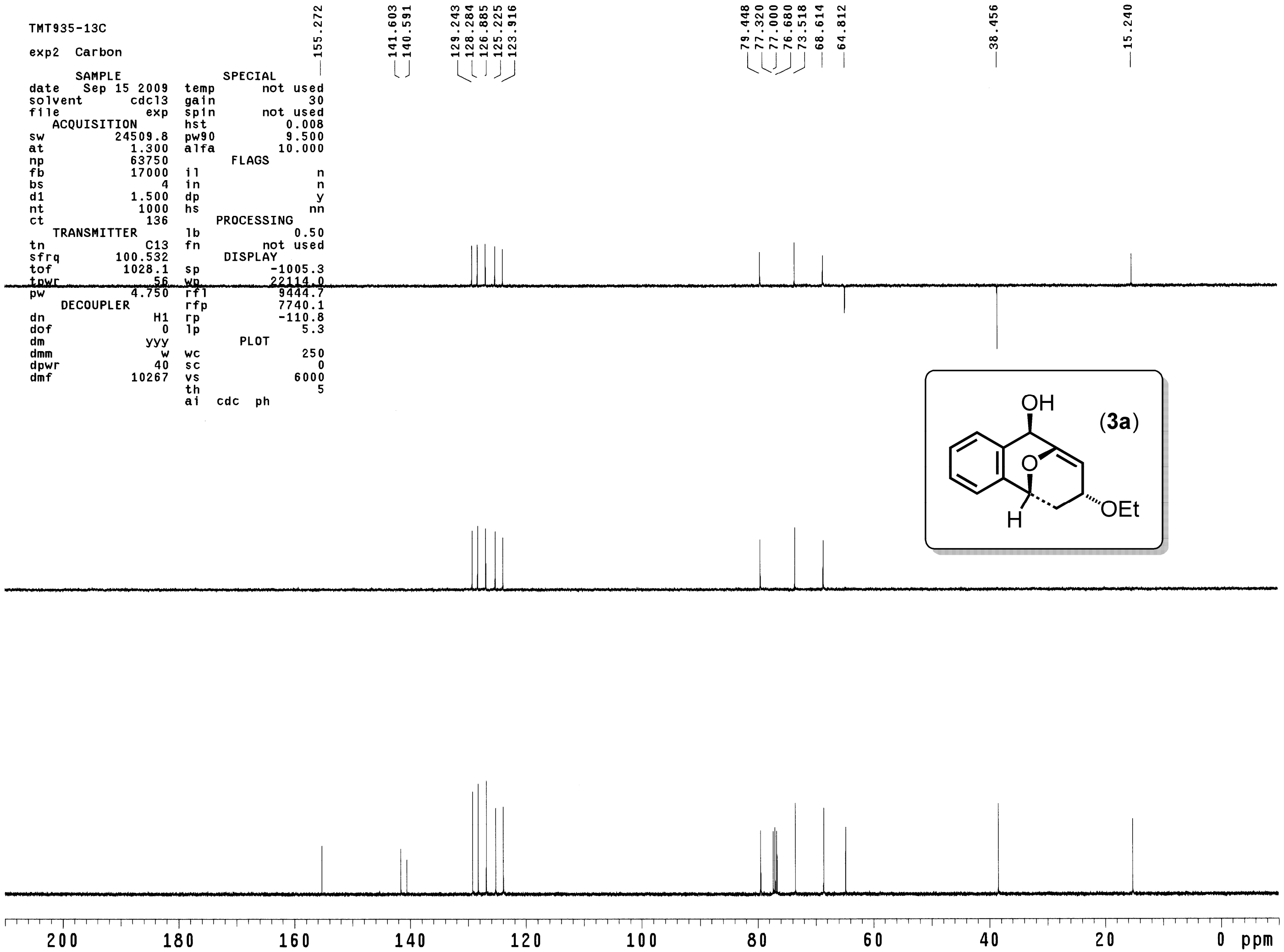
7.240 7.190 7.170 7.149 7.148 7.144 7.143 7.128 7.124 7.123 7.011 7.006 6.063 6.055 4.961 4.899 4.898 4.882 4.881 4.759 4.742 4.450 4.444 4.439 4.428 3.596 3.579 3.574 3.556 3.510 3.492 3.486 3.481 3.480 3.471 2.662 2.645 2.632 2.614 1.787 1.762 1.754 1.732 1.185 1.169 1.168 1.151 1.138

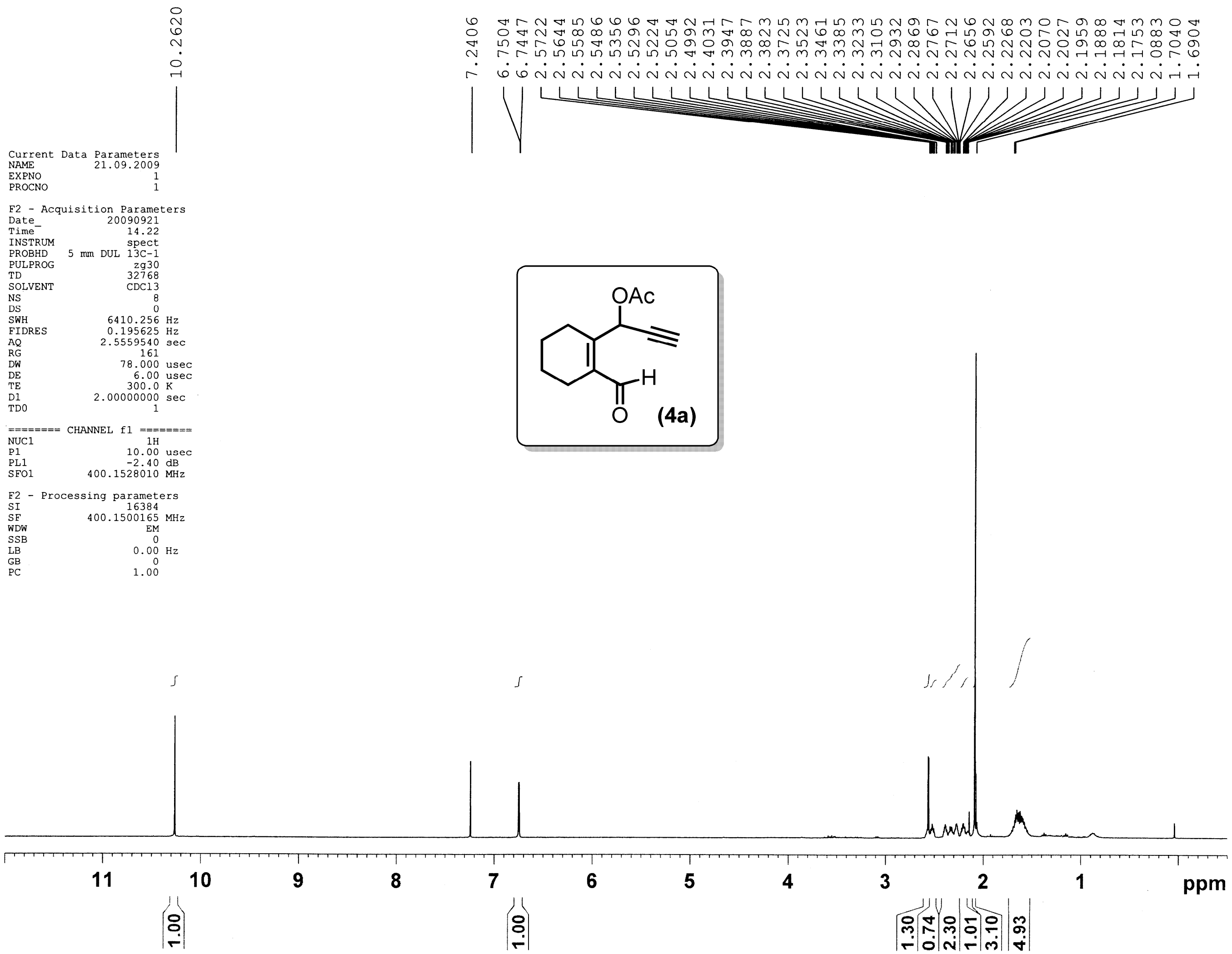


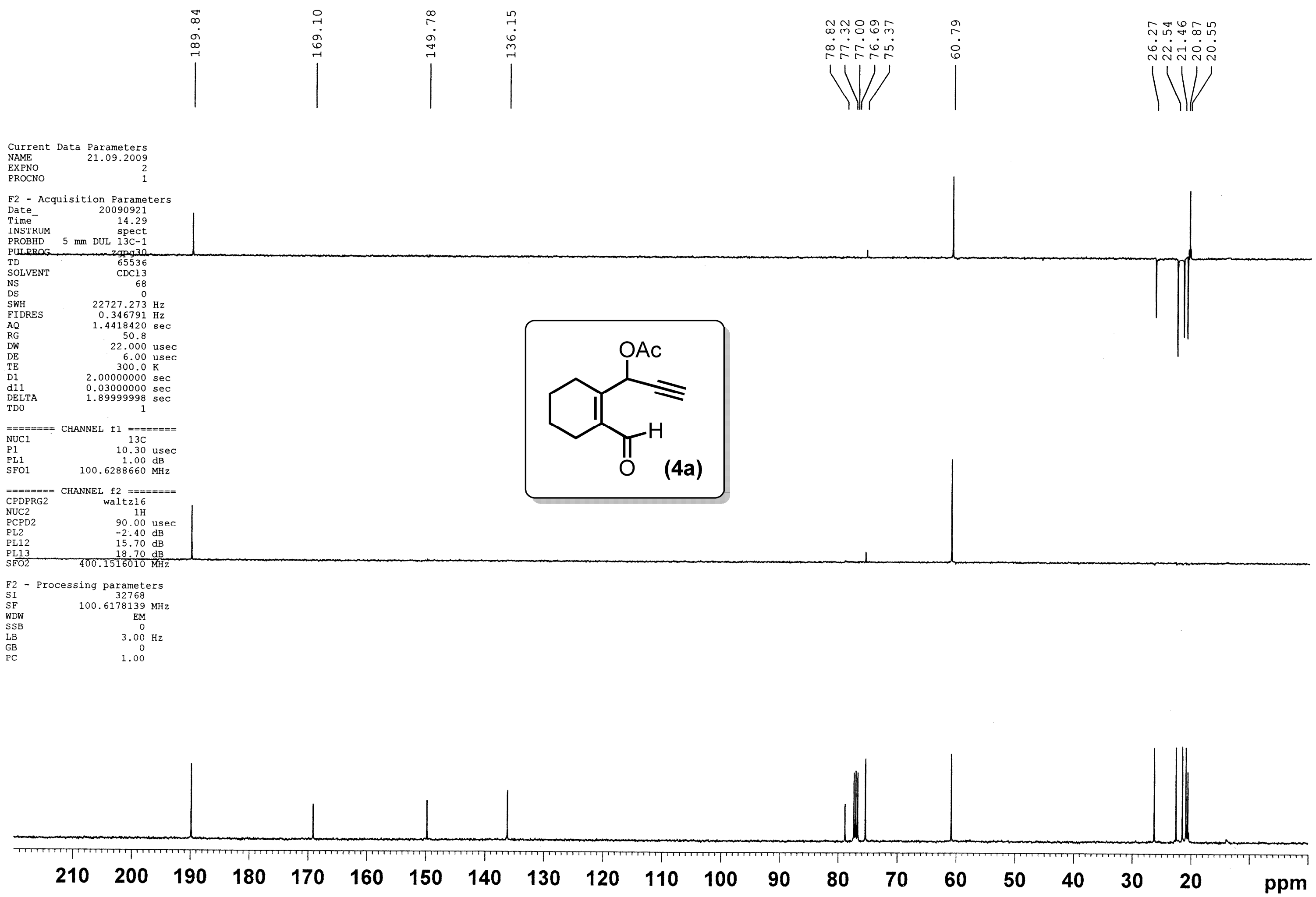



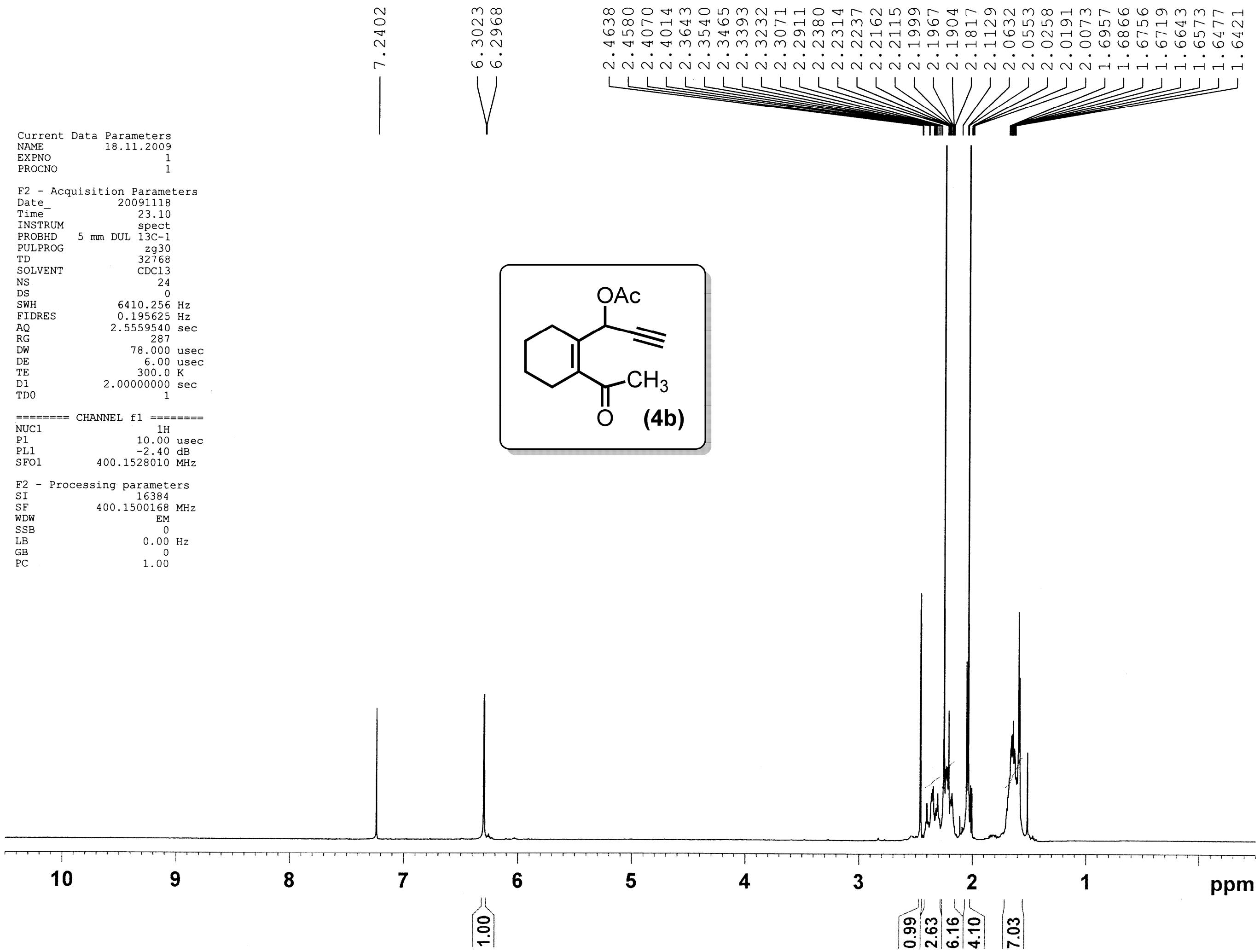

DBH-A-128
exp2 std13c
SAMPLE
date Jun 20 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 356
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 30
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8778.6
rfp 7753.3
th 3
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
154.827
148.619
135.705
134.182
130.903
127.015
126.730
125.251
95.199
85.126
77.322
77.000
76.685
74.394
72.190
64.913
55.697
46.070
28.500
15.279
(2o)
OMOM
O
Cl
H3C
OEt
200
180
160
140
120
100
80
60
40
20
ppm

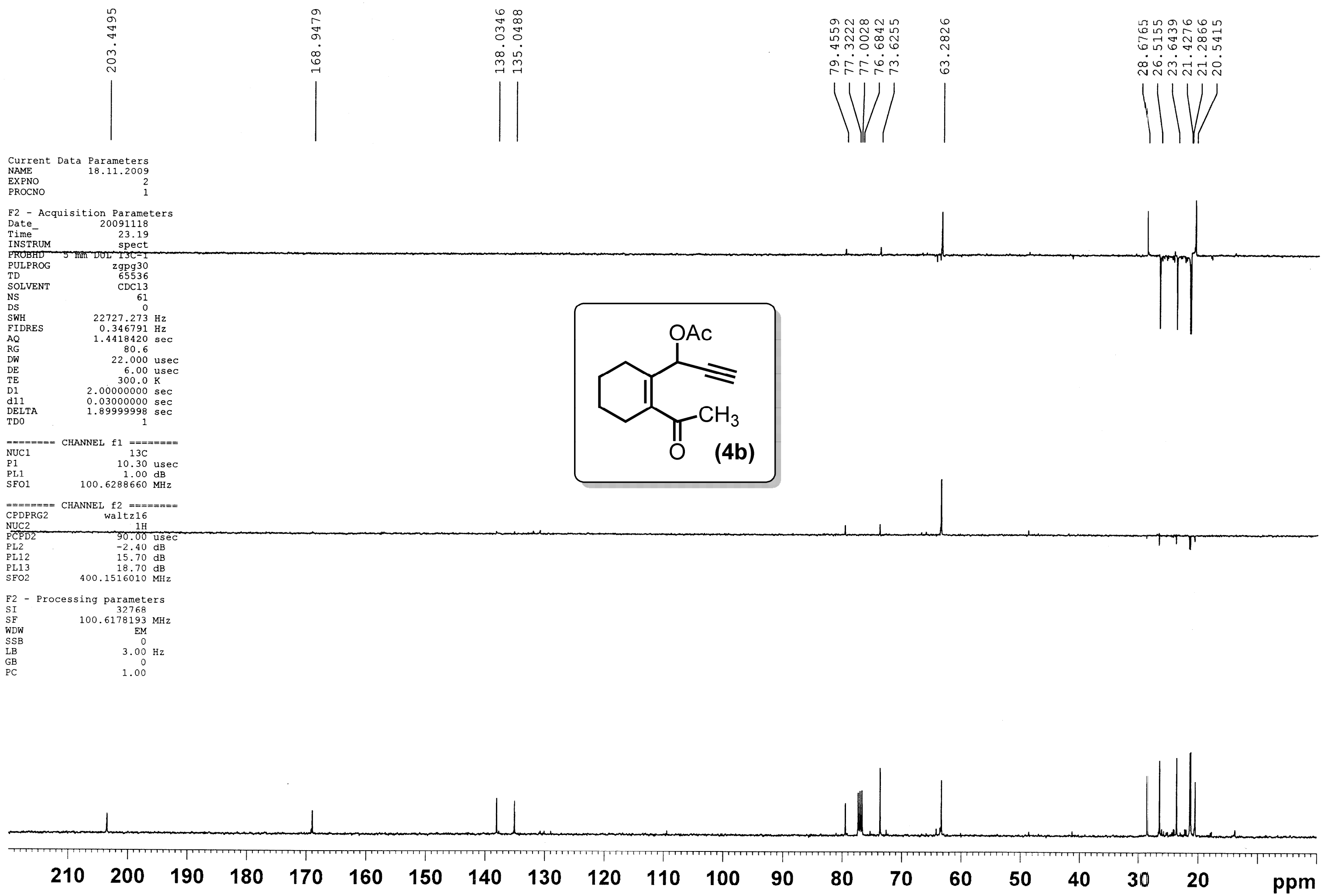

TMT935-1H
exp1 Proton
SAMPLE
date Sep 15 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 32
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.5
rfp 2894.3
rp -37.3
lp 1.4
PLOT
wc 250
sc 0
vs 150
th 2
ai ph
7.321 7.317 7.314 7.312 7.307 7.299 7.240 7.194 7.180 7.175 7.166 7.157 7.152 7.139 6.859 6.852 6.846 6.845 6.841 6.837 5.922 5.914 5.387 5.379 5.364 5.356 4.923 4.911 4.391 4.384 4.373 4.370 4.366 4.363 4.352 4.345 3.594 3.588 3.576 3.570 3.559 3.553 3.538 3.535 3.520 3.515 3.503 3.497 3.486 3.480 3.463 3.052 3.034 3.029 3.022 3.011 3.004 2.999 2.981 2.861 2.844 1.583 1.576 1.562 1.554 1.546 1.532 1.524 1.189 1.176 1.171 1.153
OH
(3a)
O
H
OEt
9 8 7 6 5 4 3 2 1 0 ppm
1.03 2.05 1.01 1.00 1.04 1.02 1.02 2.23 1.11 0.95 1.14 3.41

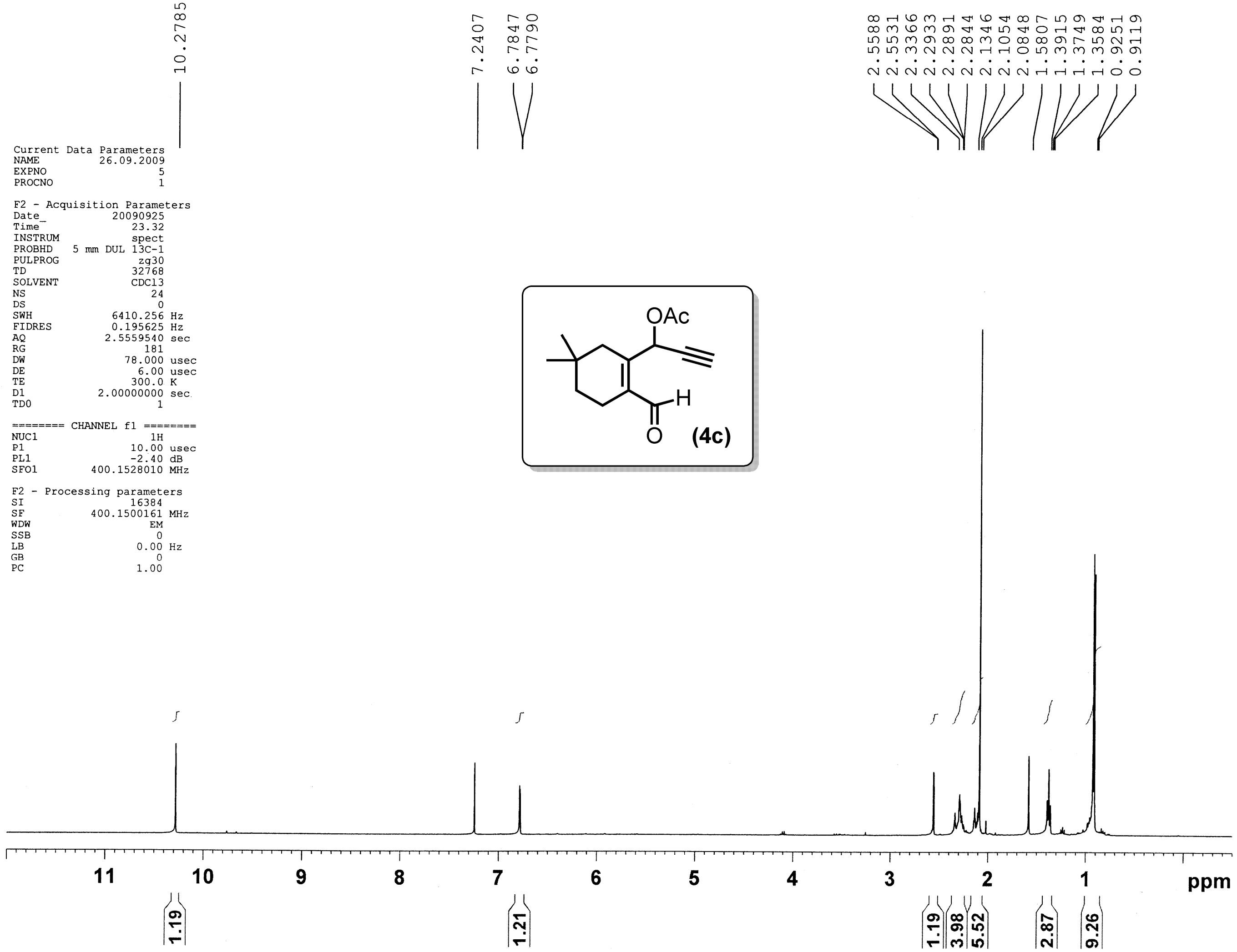

TMT935-13C
exp2 Carbon
SAMPLE
date Sep 15 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 136
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.1
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9444.7
rfp 7740.1
rp -110.8
lp 5.3
PLOT
wc 250
sc 0
vs 6000
th 5
ai cdc ph
155.272
141.603
140.591
129.243
128.284
126.885
125.225
123.916
79.448
77.320
77.000
76.680
73.518
68.614
64.812
38.456
15.240
OH
(3a)
O
OEt
H
200
180
160
140
120
100
80
60
40
20
0 ppm


Current Data Parameters
NAME 21.09.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090921
Time 14.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 161
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
10.2620
7.2406
6.7504
6.7447
2.5722
2.5644
2.5585
2.5486
2.5356
2.5296
2.5224
2.5054
2.4992
2.4031
2.3947
2.3887
2.3823
2.3725
2.3523
2.3461
2.3385
2.3233
2.3105
2.2932
2.2869
2.2767
2.2712
2.2656
2.2592
2.2268
2.2203
2.2070
2.2027
2.1959
2.1888
2.1814
2.1753
2.0883
1.7040
1.6904
OAc
H
O
(4a)
11
10
9
8
7
6
5
4
3
2
1
ppm
1.00
1.00
1.30
0.74
2.30
1.01
3.10
4.93

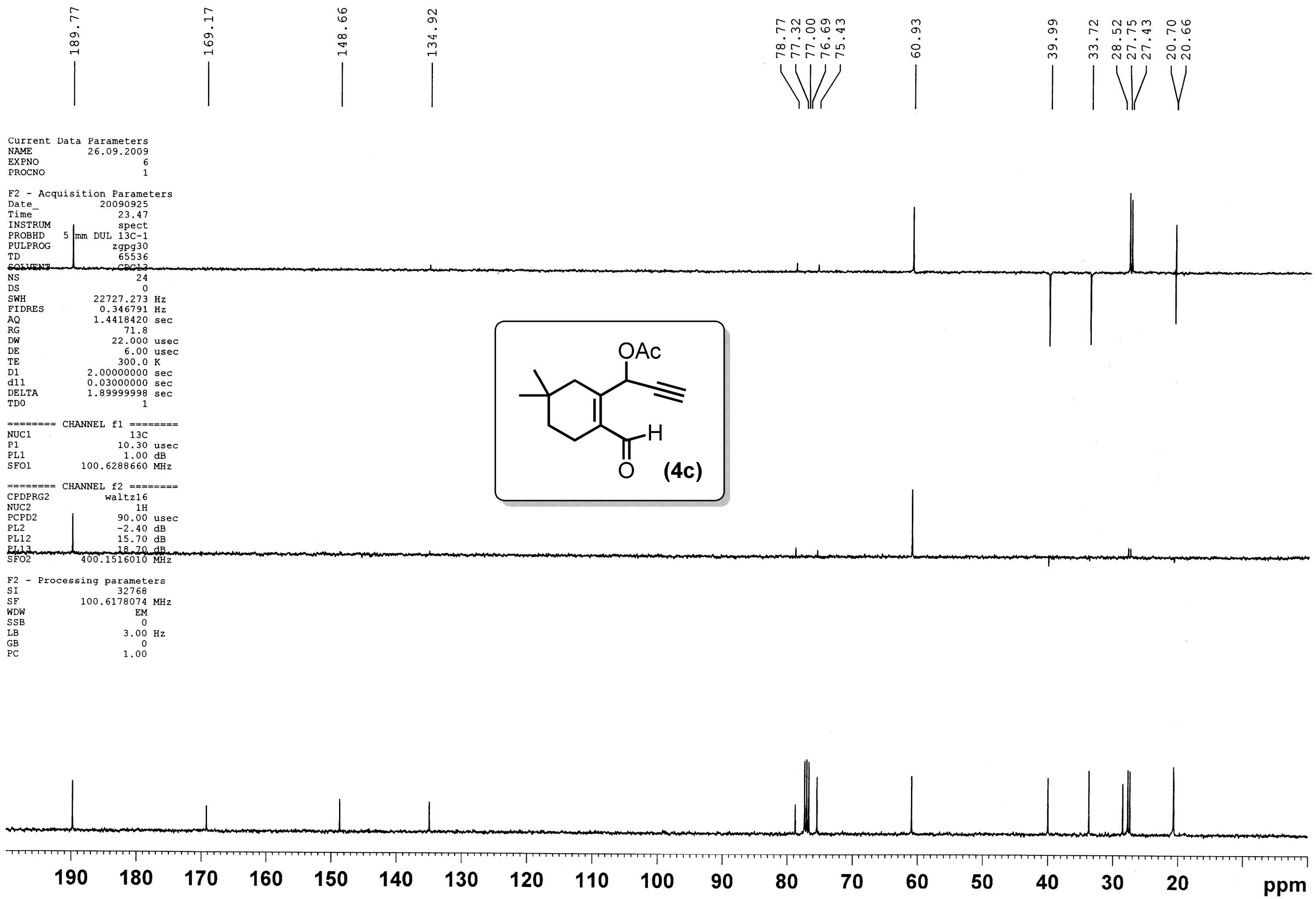

189.84
169.10
149.78
136.15
78.82
77.32
77.00
76.69
75.37
60.79
26.27
22.54
21.46
20.87
20.55
Current Data Parameters
NAME 21.09.2009
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090921
Time 14.29
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 68
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 50.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178139 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
H
O
(4a)
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm


7.2402
6.3023
6.2968
2.4638
2.4580
2.4070
2.4014
2.3643
2.3540
2.3465
2.3393
2.3232
2.3071
2.2911
2.2380
2.2314
2.2237
2.2162
2.2115
2.1999
2.1967
2.1904
2.1817
2.1129
2.0632
2.0553
2.0258
2.0191
2.0073
1.6957
1.6866
1.6756
1.6719
1.6643
1.6573
1.6477
1.6421
Current Data Parameters
NAME 18.11.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20091118
Time_ 23.10
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 287
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
CH3
O
(4b)
10
9
8
7
6
5
4
3
2
1
ppm
1.00
0.99
2.63
6.16
4.10
7.03

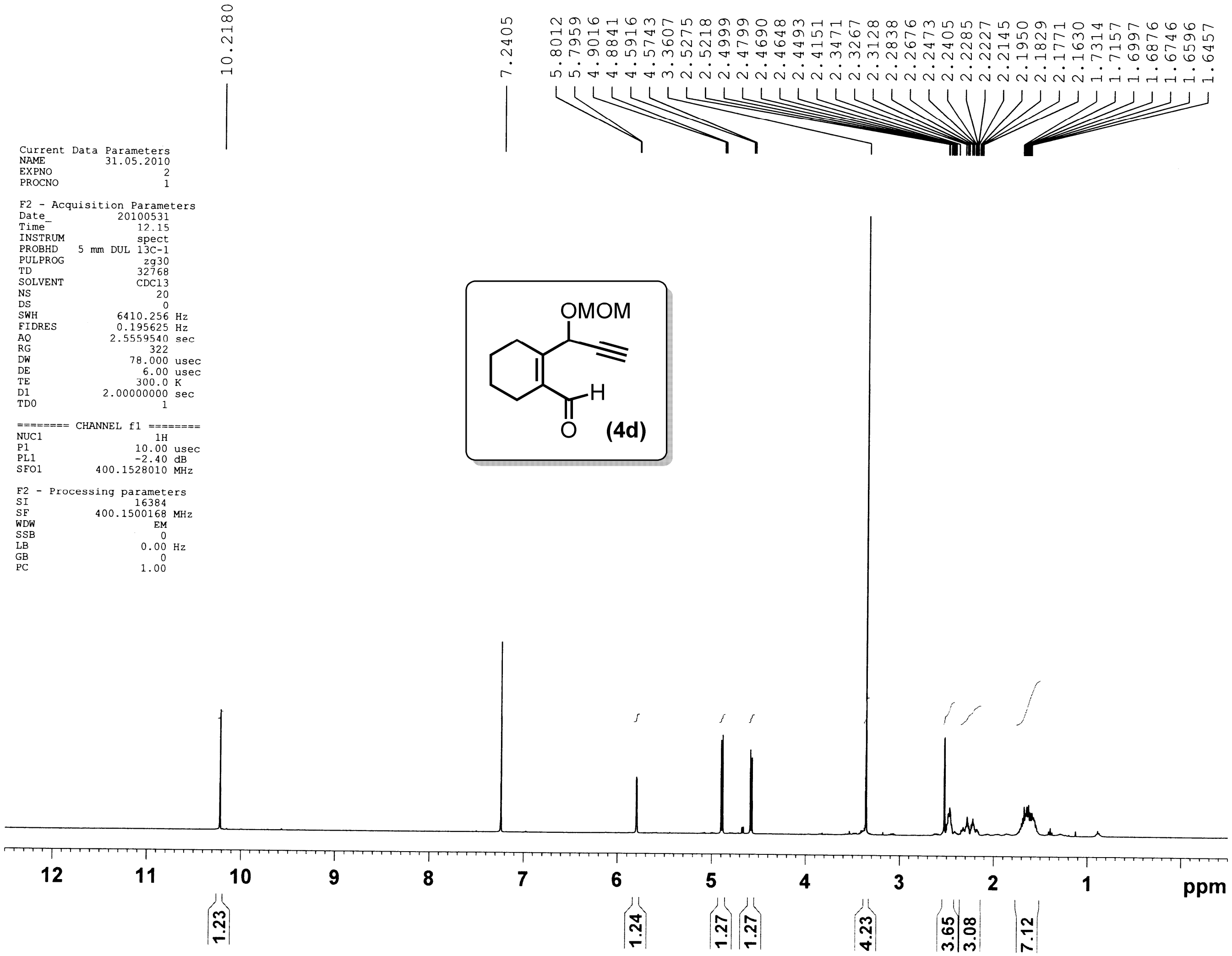

203.4495
168.9479
138.0346
135.0488
79.4559
77.3222
77.0028
76.6842
73.6255
63.2826
28.6765
26.5155
23.6439
21.4276
21.2866
20.5415
Current Data Parameters
NAME 18.11.2009
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20091118
Time 23.19
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 61
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 80.6
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178193 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
CH3
O
(4b)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

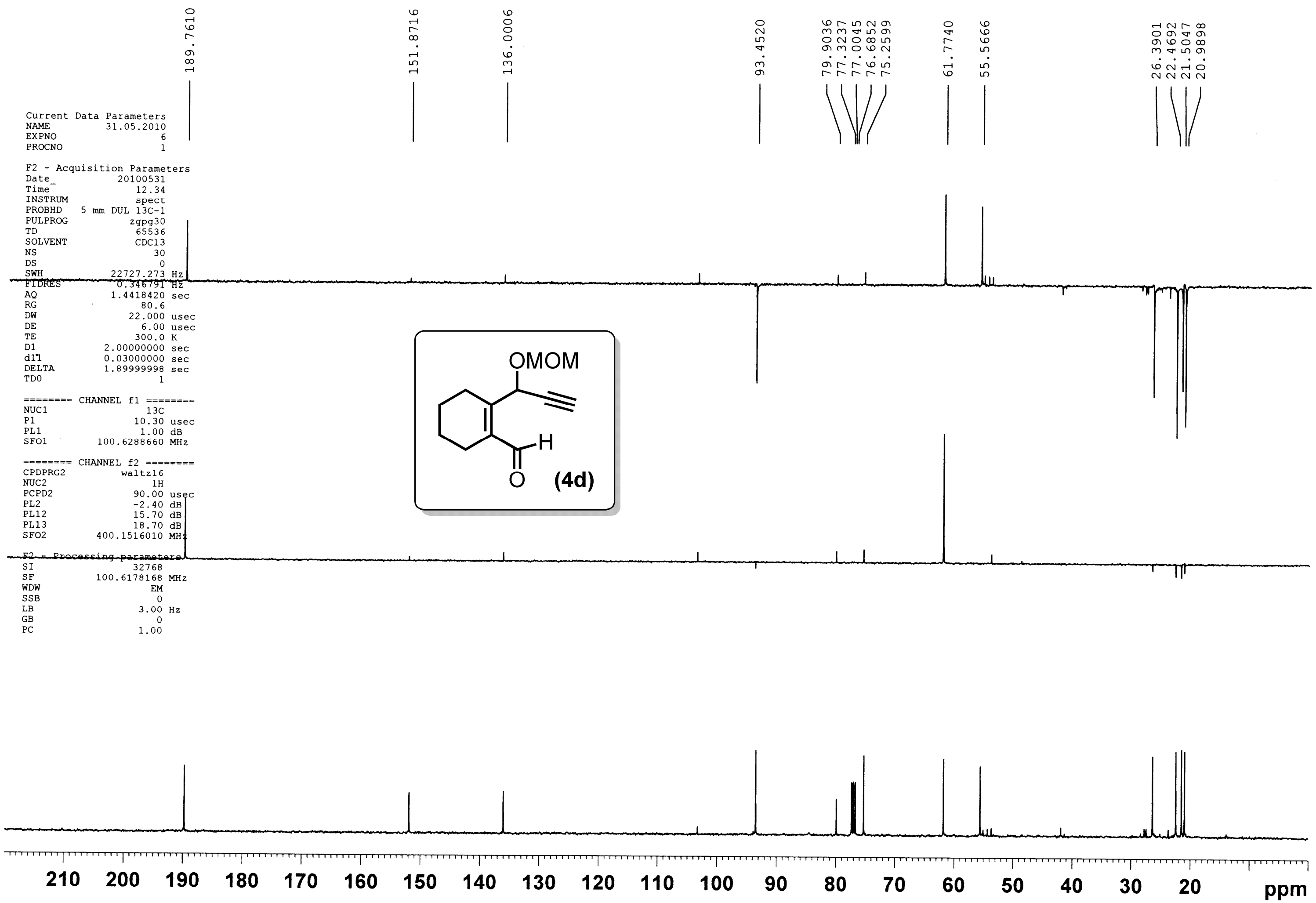


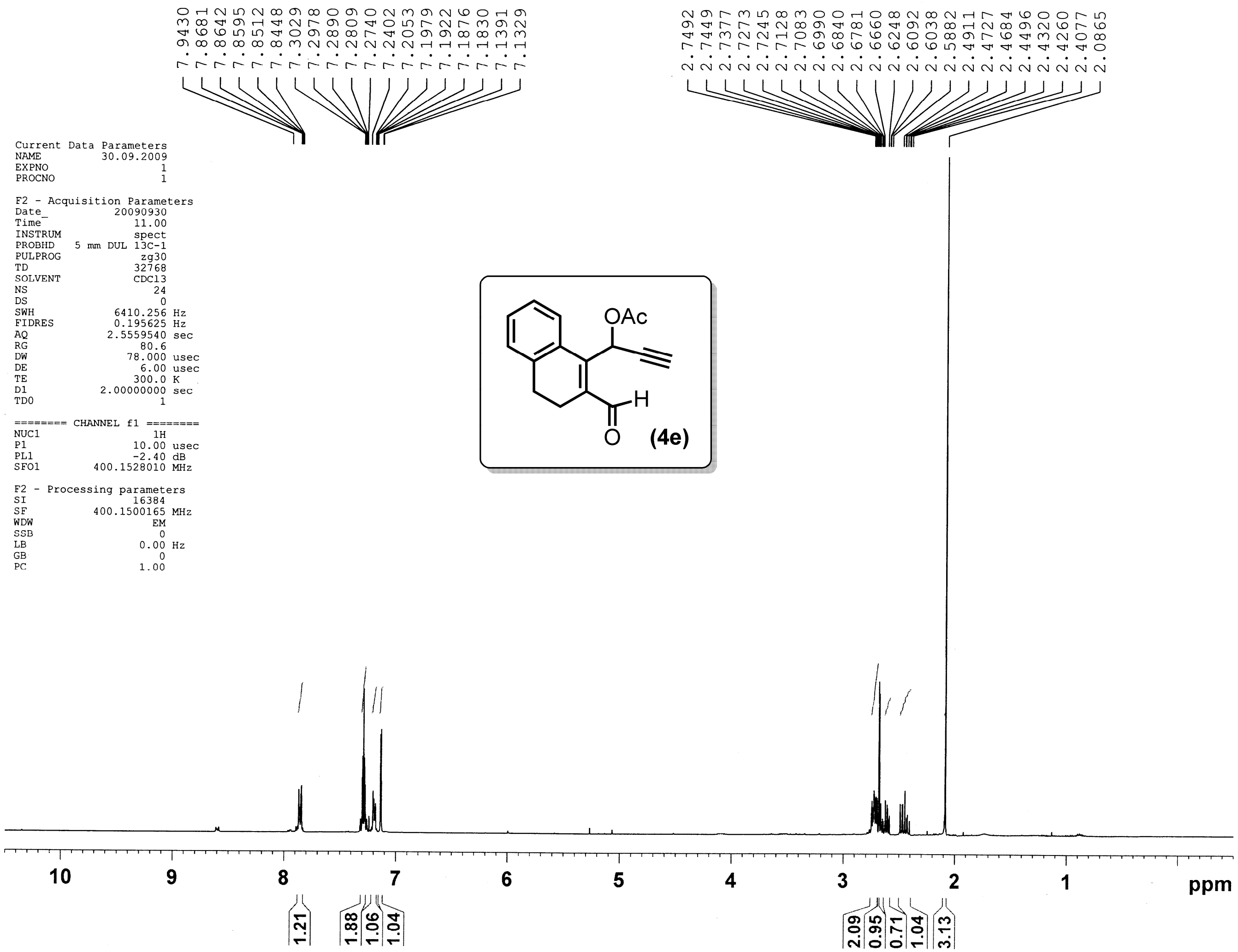
10.2785
7.2407
6.7847
6.7790
2.5588
2.5531
2.3366
2.2933
2.2891
2.2844
2.1346
2.1054
2.0848
1.5807
1.3915
1.3749
1.3584
0.9251
0.9119
Current Data Parameters
NAME 26.09.2009
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090925
Time 23.32
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 181
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500161 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
H
O
(4c)
11
10
9
8
7
6
5
4
3
2
1
ppm
1.19
1.21
1.19
3.98
5.52
2.87
9.26

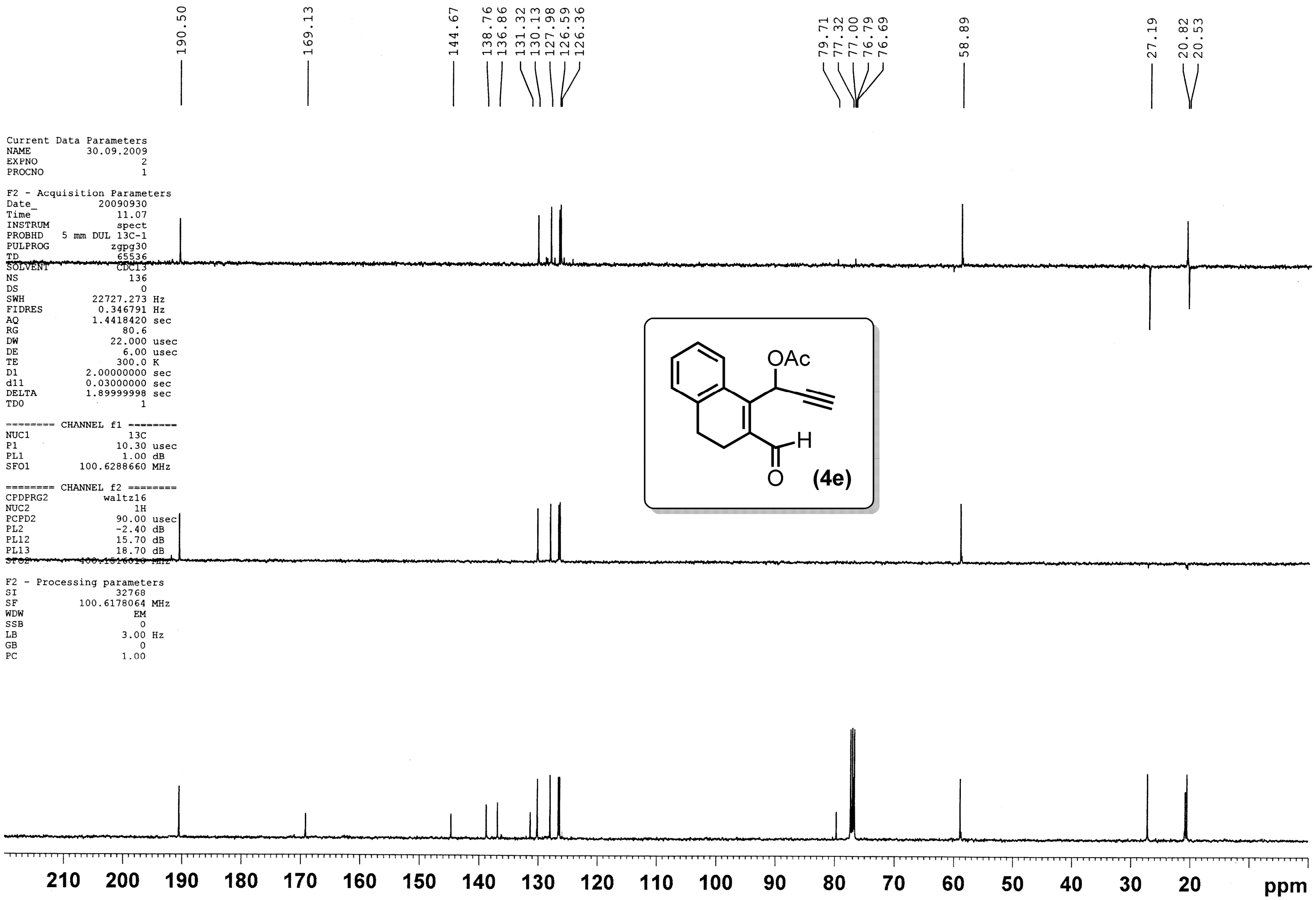


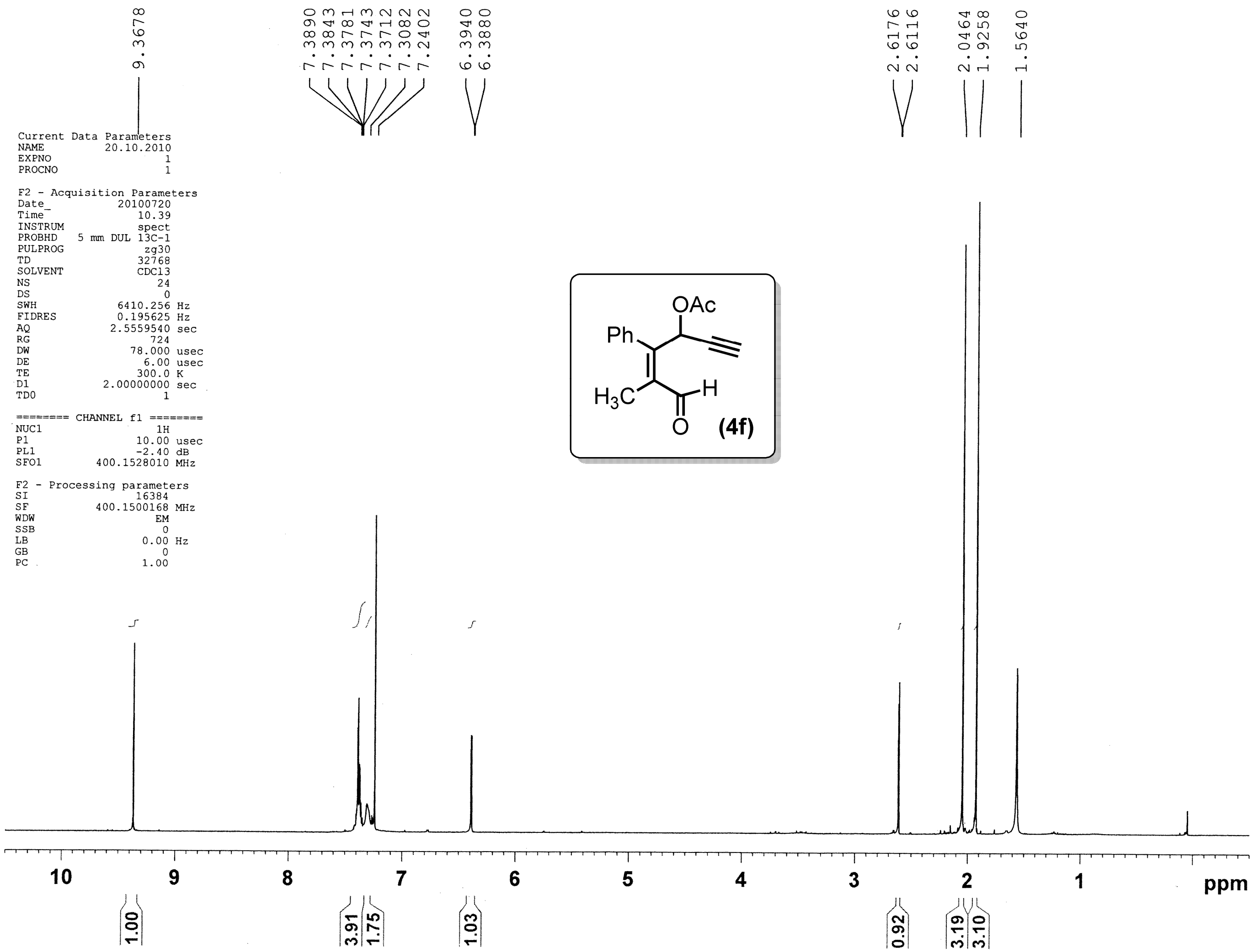
189.77
169.17
148.66
134.92
78.77
77.32
77.00
76.69
75.43
60.93
39.99
33.72
28.52
27.75
27.43
20.70
20.66
Current Data Parameters
NAME 26.09.2009
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090925
Time 23.47
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 24
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178074 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
H
O
(4c)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

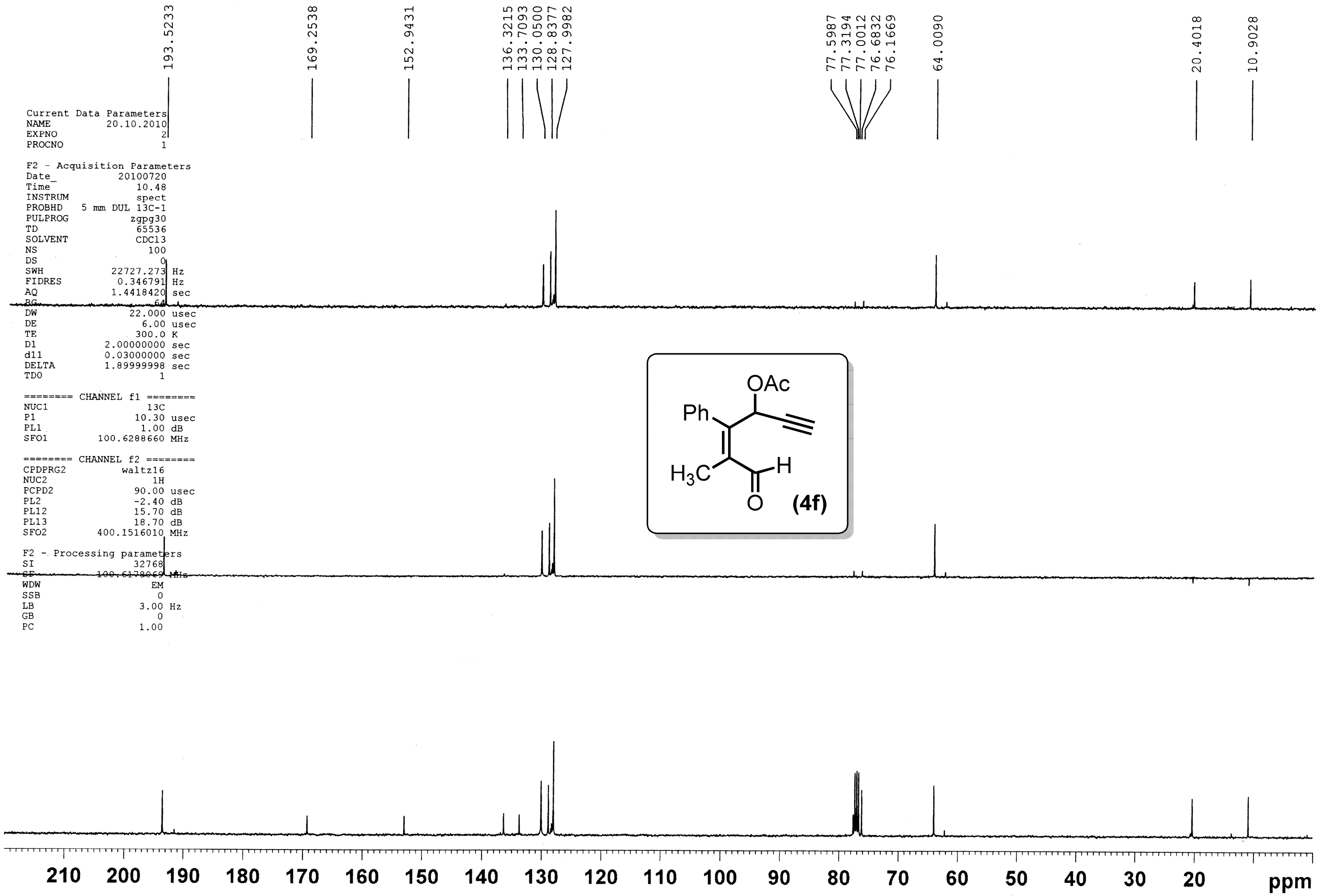

10.2180
7.2405
5.8012
5.7959
4.9016
4.8841
4.5916
4.5743
3.3607
2.5275
2.5218
2.4999
2.4799
2.4690
2.4648
2.4493
2.4151
2.3471
2.3267
2.3128
2.2838
2.2676
2.2473
2.2405
2.2285
2.2227
2.2145
2.1950
2.1829
2.1771
2.1630
1.7314
1.7157
1.6997
1.6876
1.6746
1.6596
1.6457
Current Data Parameters
NAME 31.05.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100531
Time 12.15
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 20
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 322
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OMOM
H
O
(4d)
12
11
10
9
8
7
6
5
4
3
2
1
ppm
1.23
1.24
1.27
1.27
4.23
3.65
3.08
7.12

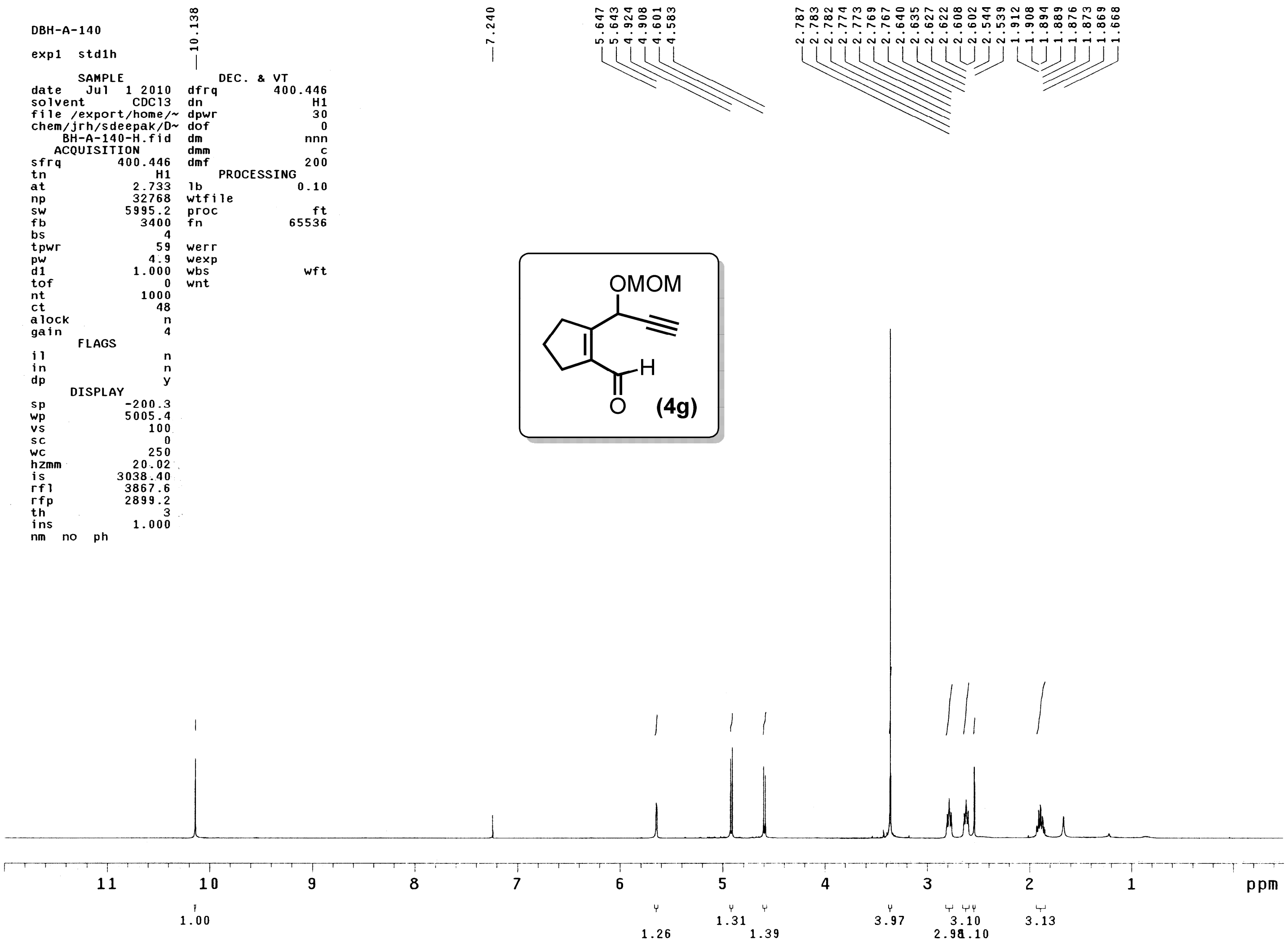

189.7610
151.8716
136.0006
93.4520
79.9036
77.3237
77.0045
76.6852
75.2599
61.7740
55.5666
26.3901
22.4692
21.5047
20.9898
Current Data Parameters
NAME 31.05.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100531
Time 12.34
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 30
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 80.6
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178168 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
H
O
(4d)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

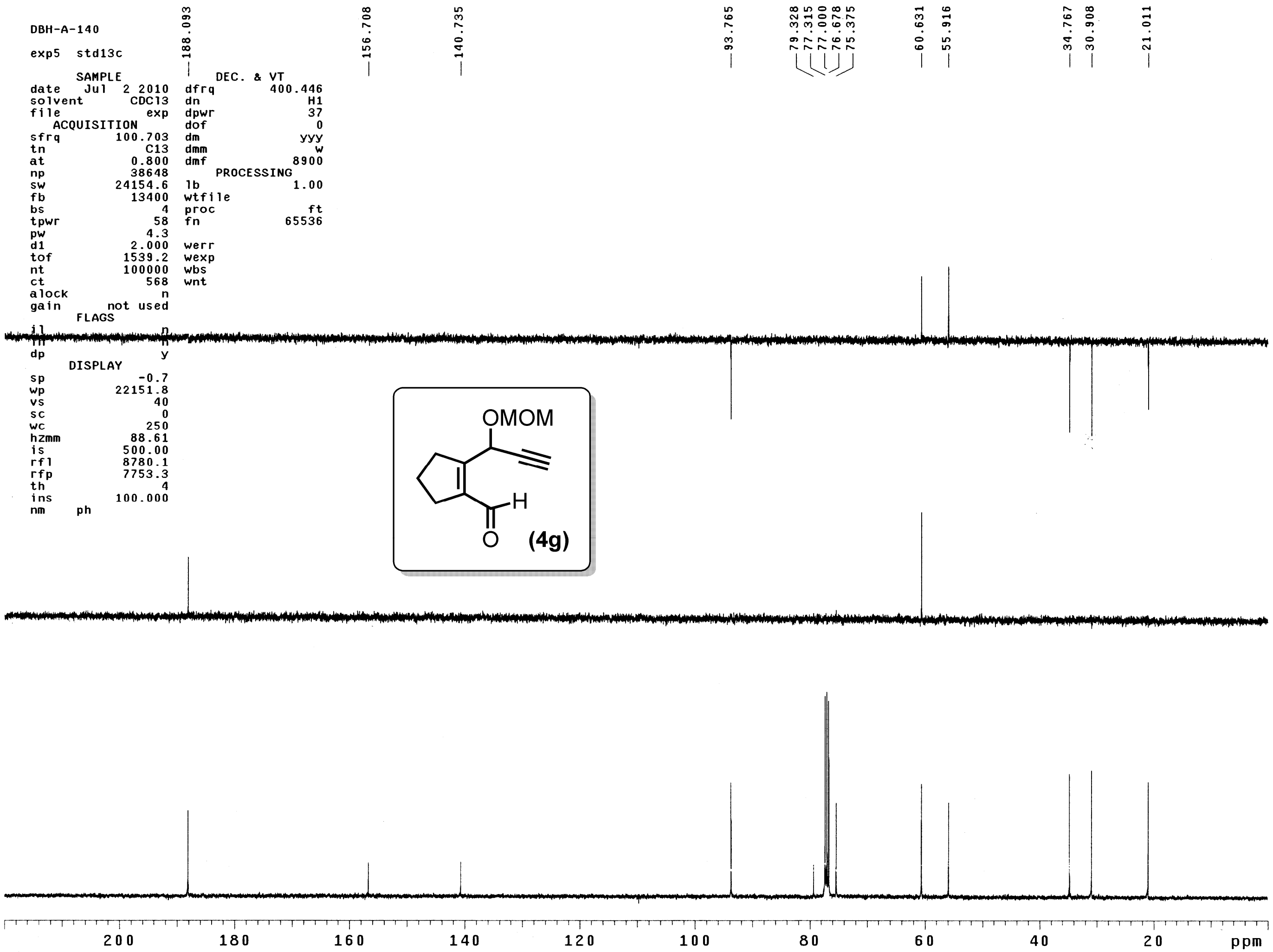

Current Data Parameters
NAME 30.09.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090930
Time 11.00
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 80.6
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
H
O
(4e)
7.9430
7.8681
7.8642
7.8595
7.8512
7.8448
7.3029
7.2978
7.2890
7.2809
7.2740
7.2402
7.2053
7.1979
7.1922
7.1876
7.1830
7.1391
7.1329
2.7492
2.7449
2.7377
2.7273
2.7245
2.7128
2.7083
2.6990
2.6840
2.6781
2.6660
2.6248
2.6092
2.6038
2.5882
2.4911
2.4727
2.4684
2.4496
2.4320
2.4260
2.4077
2.0865
10
9
8
7
6
5
4
3
2
1
ppm
1.21
1.88
1.06
1.04
2.09
0.95
0.71
1.04
3.13

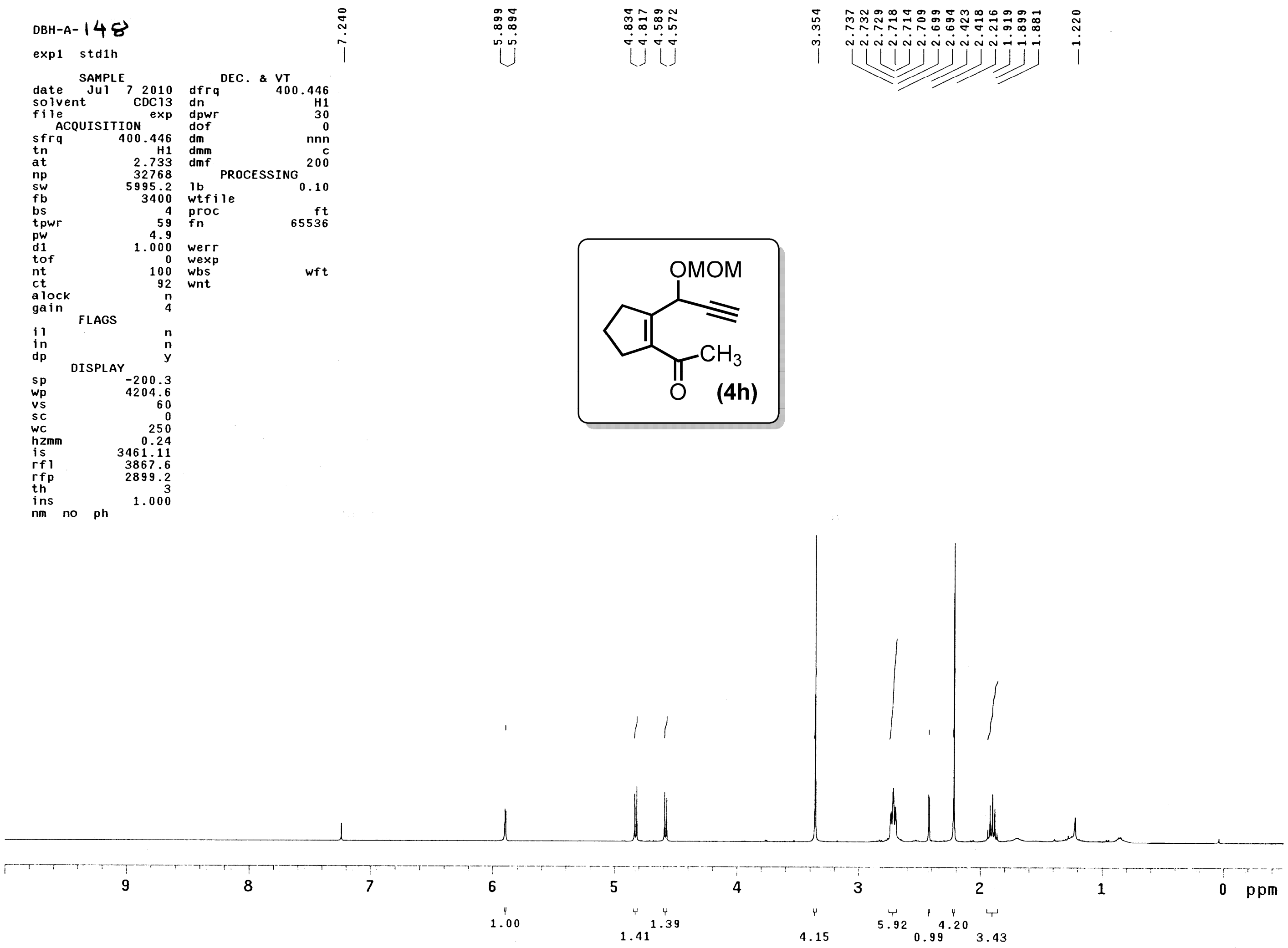

190.50
169.13
144.67
138.76
136.86
131.32
130.13
127.98
126.59
126.36
79.71
77.32
77.00
76.79
76.69
58.89
27.19
20.82
20.53
Current Data Parameters
NAME 30.09.2009
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090930
Time 11.07
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 136
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 80.6
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
F2 - Processing parameters
SI 32768
SF 100.6178064 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
H
O
(4e)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm


9.3678
7.3890
7.3843
7.3781
7.3743
7.3712
7.3082
7.2402
6.3940
6.3880
2.6176
2.6116
2.0464
1.9258
1.5640
Current Data Parameters
NAME 20.10.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100720
Time 10.39
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 724
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
Ph
H
$H_3C$
O
(4f)
10
9
8
7
6
5
4
3
2
1
ppm
1.00
3.91
1.75
1.03
0.92
3.19
3.10

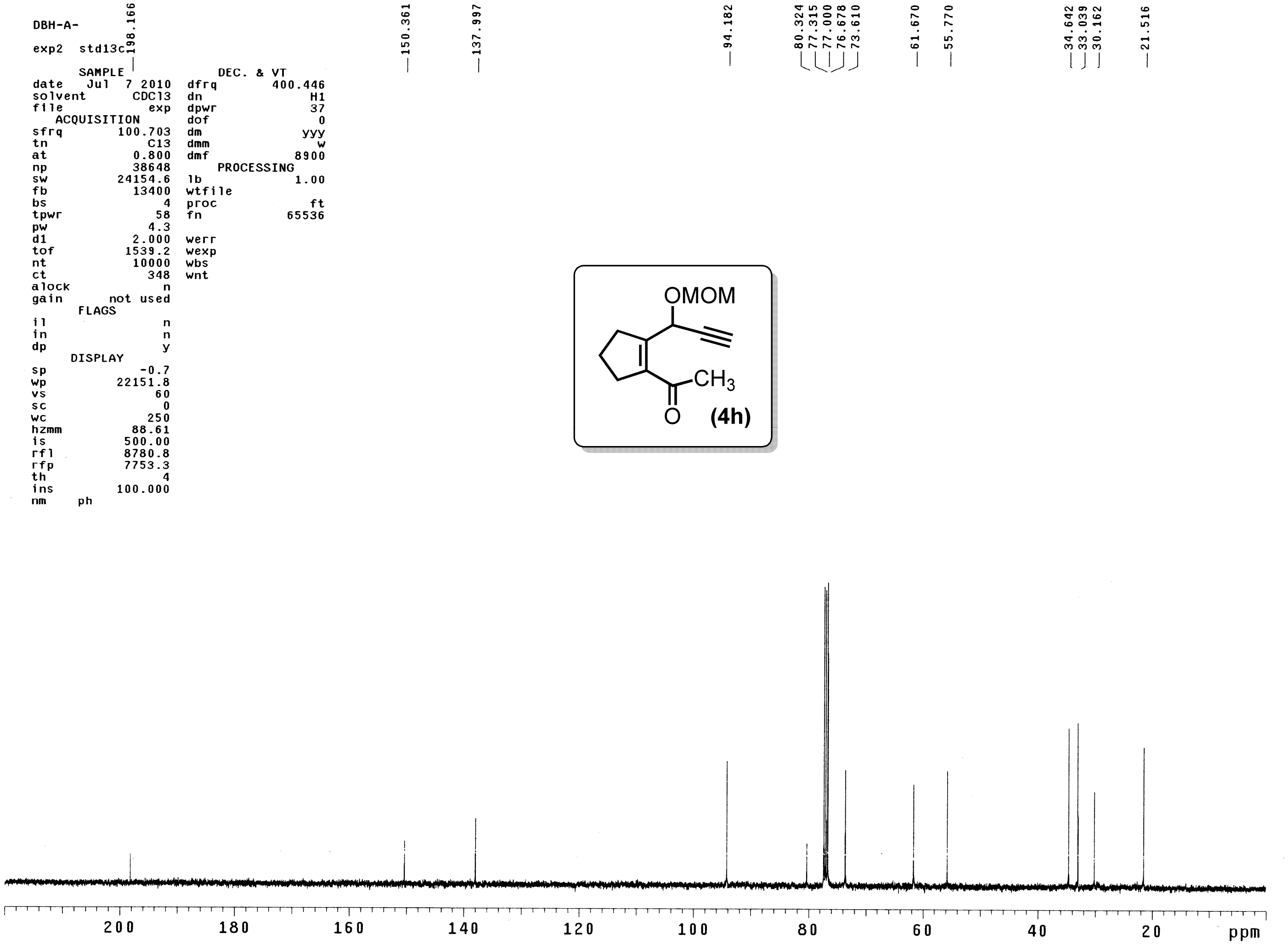

193.5233
169.2538
152.9431
136.3215
133.7093
130.0500
128.8377
127.9982
77.5987
77.3194
77.0012
76.6832
76.1669
64.0090
20.4018
10.9028
Current Data Parameters
NAME 20.10.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100720
Time 10.48
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 100
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178069 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
Ph
H
H3C
O
(4f)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

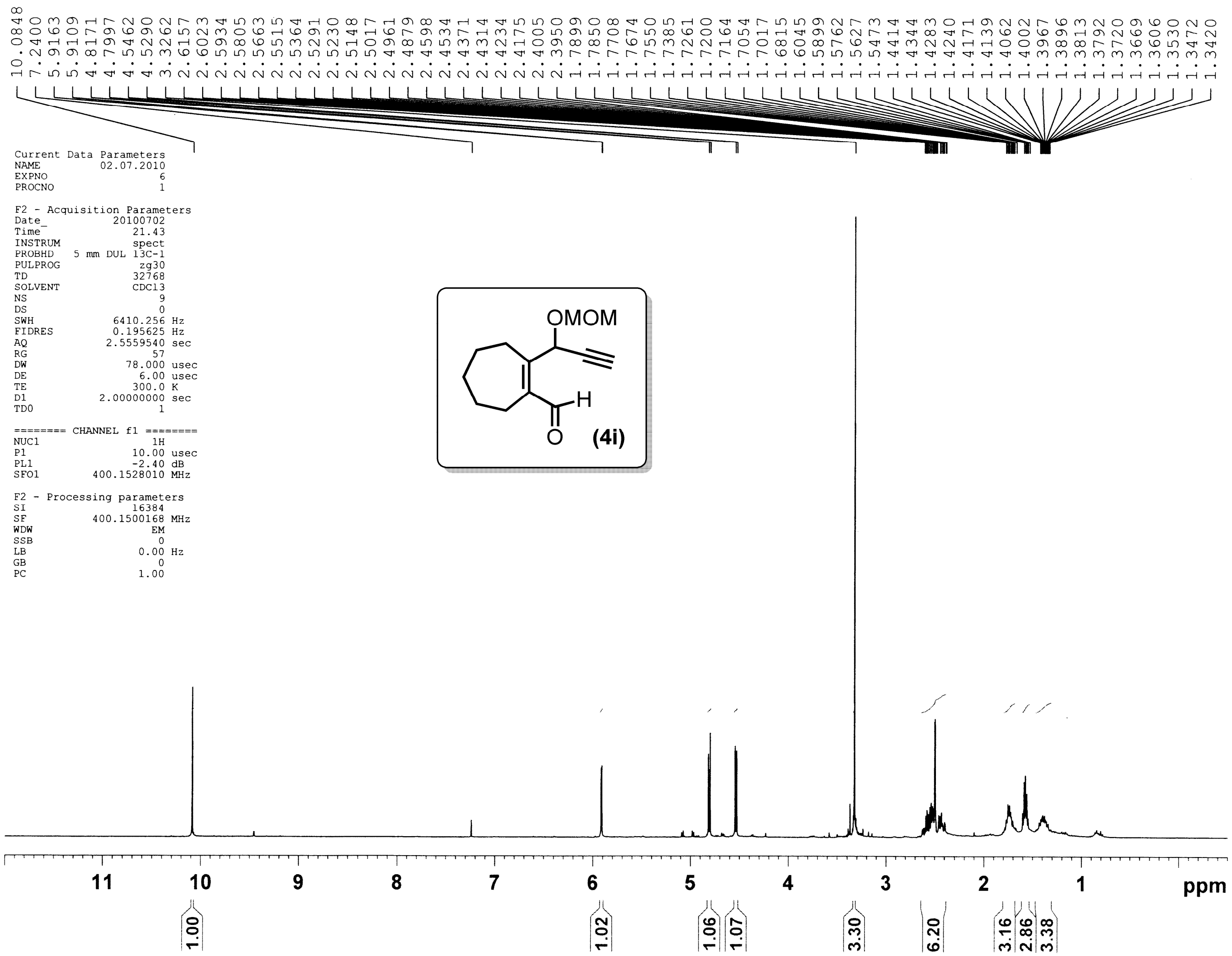

DBH-A-140
exp1 std1h
SAMPLE
date Jul 1 2010
solvent CDCl3
file /export/home/~
chem/jrh/sdeepak/D~
BH-A-140-H.fid
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 1000
ct 48
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 5005.4
vs 100
sc 0
wc 250
hzmm 20.02
is 3038.40
rfl 3867.6
rfp 2899.2
th 3
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
10.138
7.240
5.647
5.643
4.924
4.908
4.601
4.583
2.787
2.783
2.782
2.774
2.773
2.769
2.767
2.640
2.635
2.627
2.622
2.608
2.602
2.544
2.539
1.912
1.908
1.894
1.889
1.876
1.873
1.869
1.668
OMOM
H
O
(4g)
11
10
9
8
7
6
5
4
3
2
1
ppm
1.00
1.26
1.31
1.39
3.97
3.10
2.98
3.10
3.13

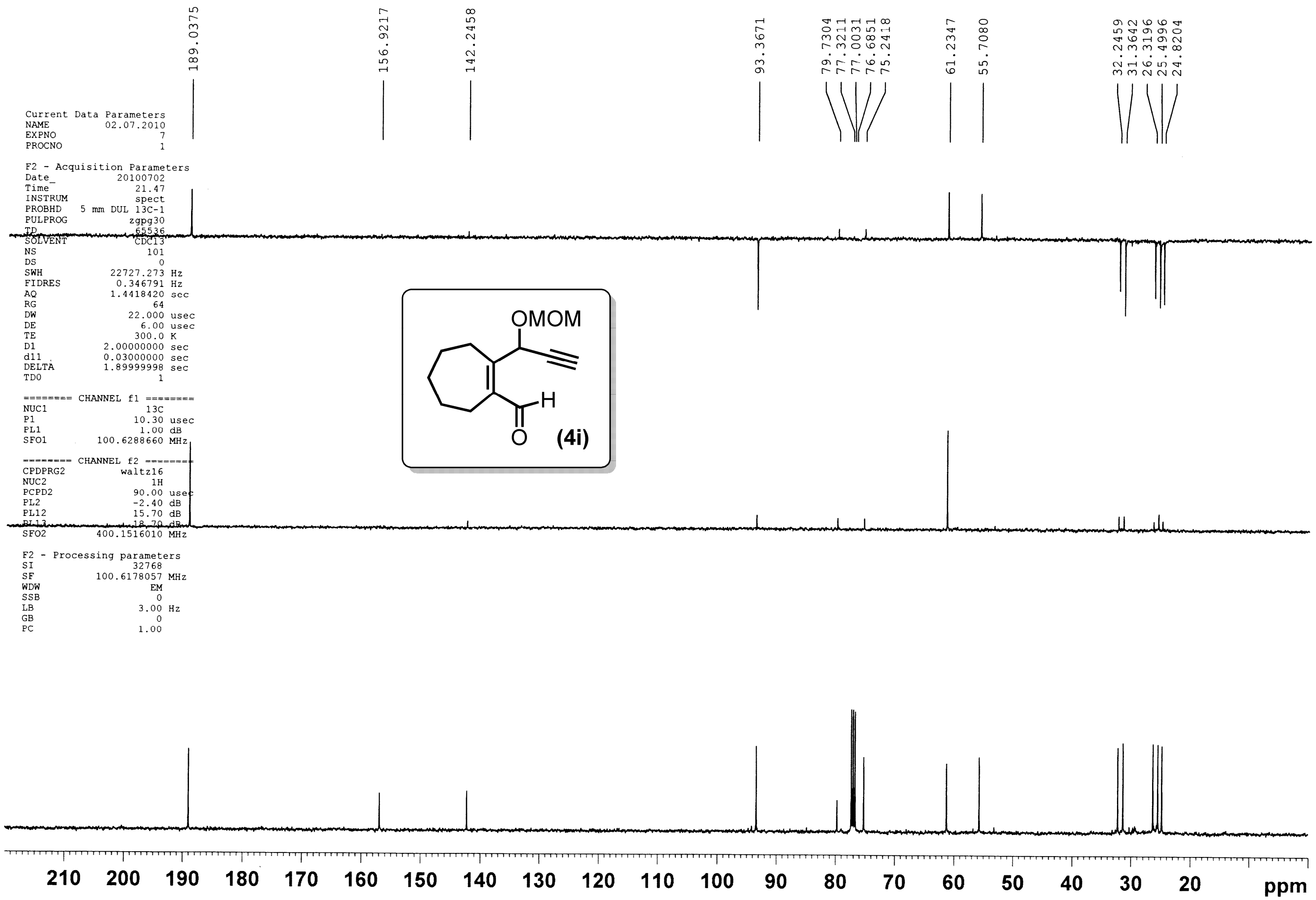

DBH-A-140
exp5 std13c
SAMPLE
date Jul 2 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 568
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 40
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8780.1
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
188.093
156.708
140.735
93.765
79.328
77.315
77.000
76.678
75.375
60.631
55.916
34.767
30.908
21.011
OMOM
H
O
(4g)
200
180
160
140
120
100
80
60
40
20
ppm



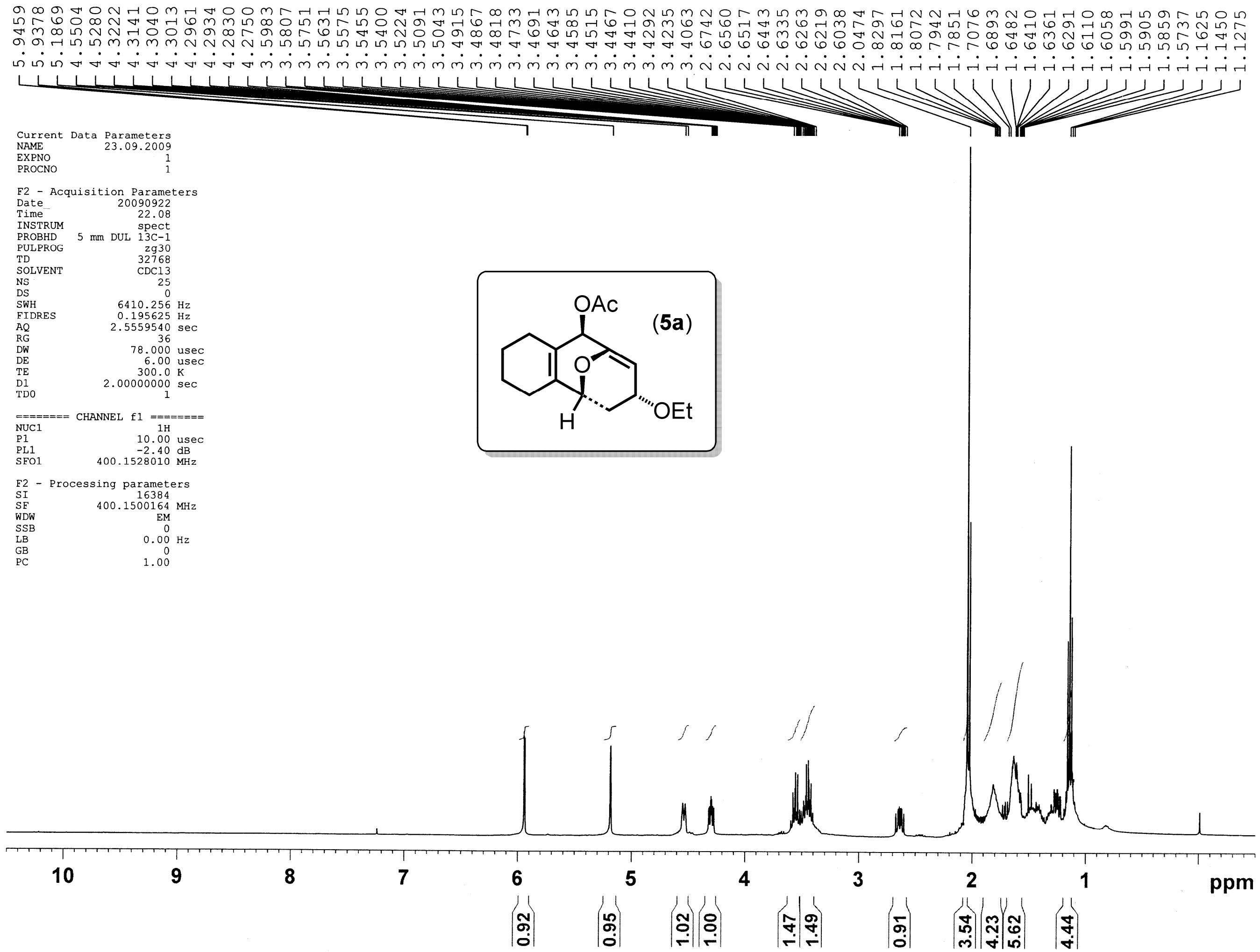
DBH-A-148
exp1 std1h
SAMPLE
date Jul 7 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 400.446
tn H1
at 2.733
np 32768
sw 5995.2
fb 3400
bs 4
tpwr 59
pw 4.9
d1 1.000
tof 0
nt 100
ct 92
alock n
gain 4
FLAGS
il n
in n
dp y
DISPLAY
sp -200.3
wp 4204.6
vs 60
sc 0
wc 250
hzmm 0.24
is 3461.11
rfl 3867.6
rfp 2899.2
th 3
ins 1.000
nm no ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 30
dof 0
dm nnn
dmm c
dmf 200
PROCESSING
lb 0.10
wtfile
proc ft
fn 65536
werr
wexp
wbs wft
wnt
7.240
5.899
5.894
4.834
4.817
4.589
4.572
3.354
2.737
2.732
2.729
2.718
2.714
2.709
2.699
2.694
2.423
2.418
2.216
1.919
1.899
1.881
1.220
9 8 7 6 5 4 3 2 1 0 ppm
1.00
1.41
1.39
4.15
5.92
0.99
4.20
3.43
OMOM
CH3
O
(4h)

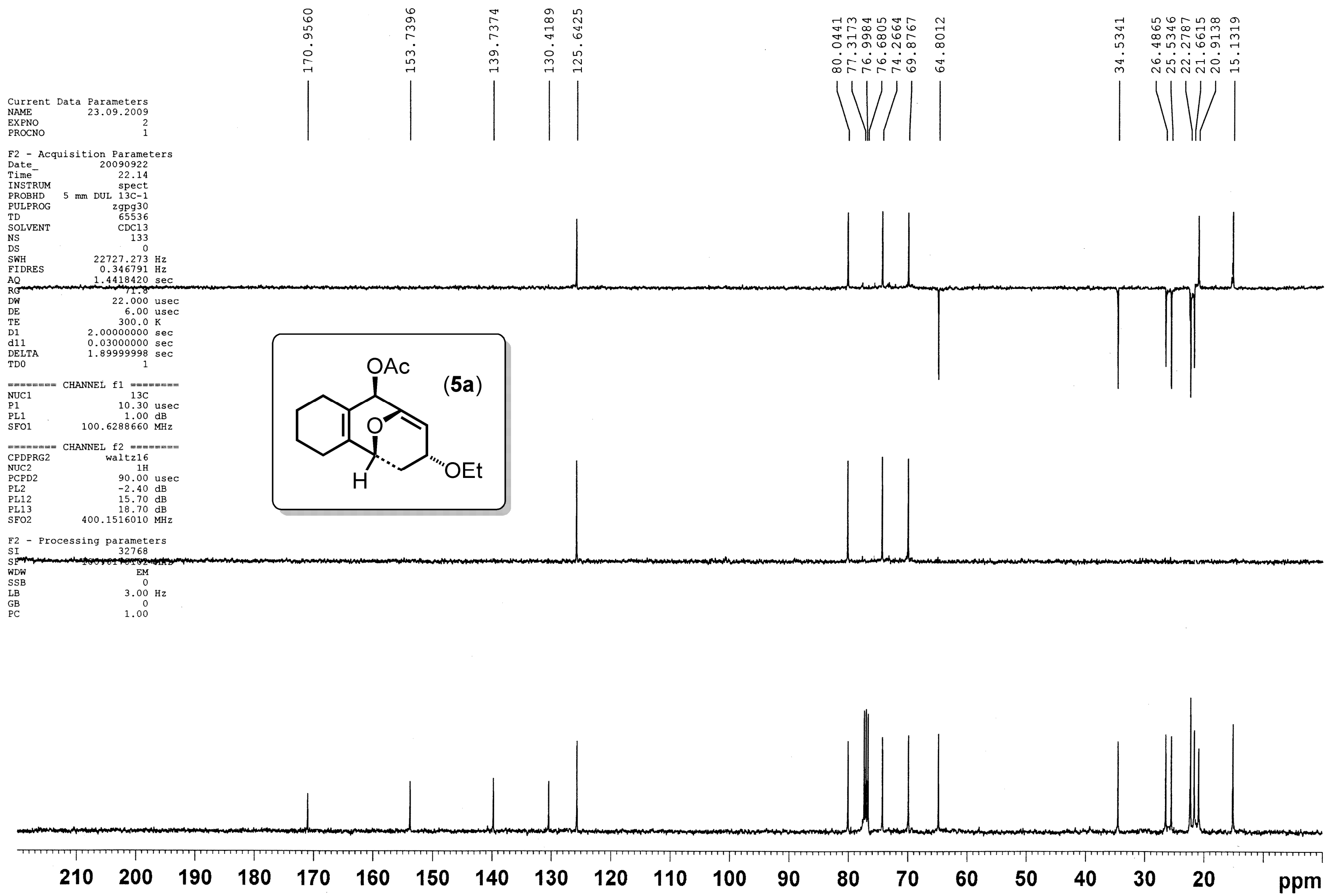

DBH-A-
exp2 std13c
SAMPLE
date Jul 7 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 10000
ct 348
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 60
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8780.8
rfp 7753.3
th 4
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
198.166
150.361
137.997
94.182
80.324
77.315
77.000
76.678
73.610
61.670
55.770
34.642
33.039
30.162
21.516
OMOM
CH3
O
(4h)
200
180
160
140
120
100
80
60
40
20
ppm

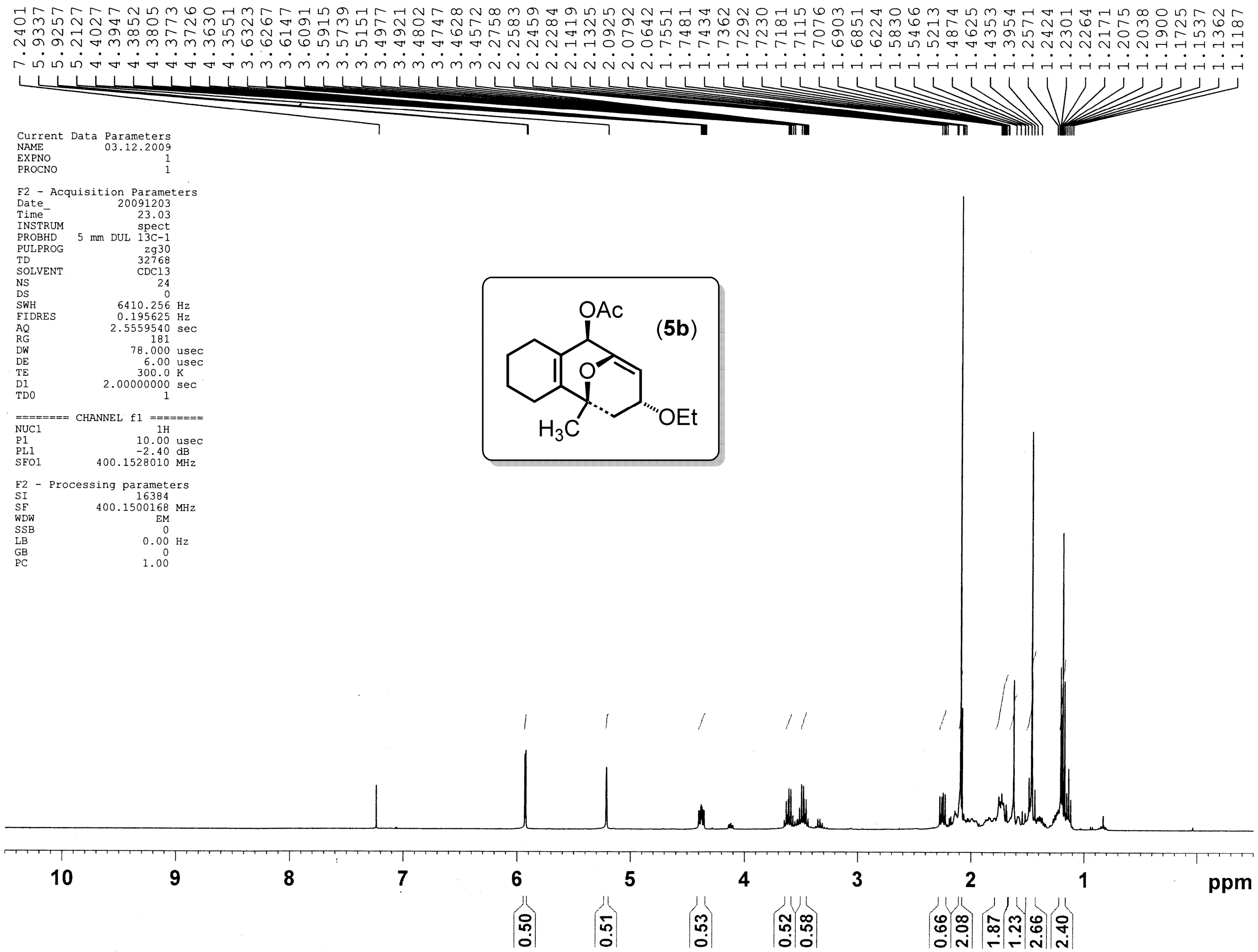

10.0848
7.2400
5.9163
5.9109
4.8171
4.7997
4.5462
4.5290
3.3262
2.6157
2.6023
2.5934
2.5805
2.5663
2.5515
2.5364
2.5291
2.5230
2.5148
2.5017
2.4961
2.4879
2.4598
2.4534
2.4371
2.4314
2.4234
2.4175
2.4005
2.3950
1.7899
1.7850
1.7708
1.7674
1.7550
1.7385
1.7261
1.7200
1.7164
1.7054
1.7017
1.6815
1.6045
1.5899
1.5762
1.5627
1.5473
1.4414
1.4344
1.4283
1.4240
1.4171
1.4139
1.4062
1.4002
1.3967
1.3896
1.3813
1.3792
1.3720
1.3669
1.3606
1.3530
1.3472
1.3420
Current Data Parameters
NAME 02.07.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100702
Time 21.43
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 9
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 57
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OMOM
H
O
(4i)
11 10 9 8 7 6 5 4 3 2 1 ppm
1.00
1.02
1.06
1.07
3.30
6.20
3.16
2.86
3.38



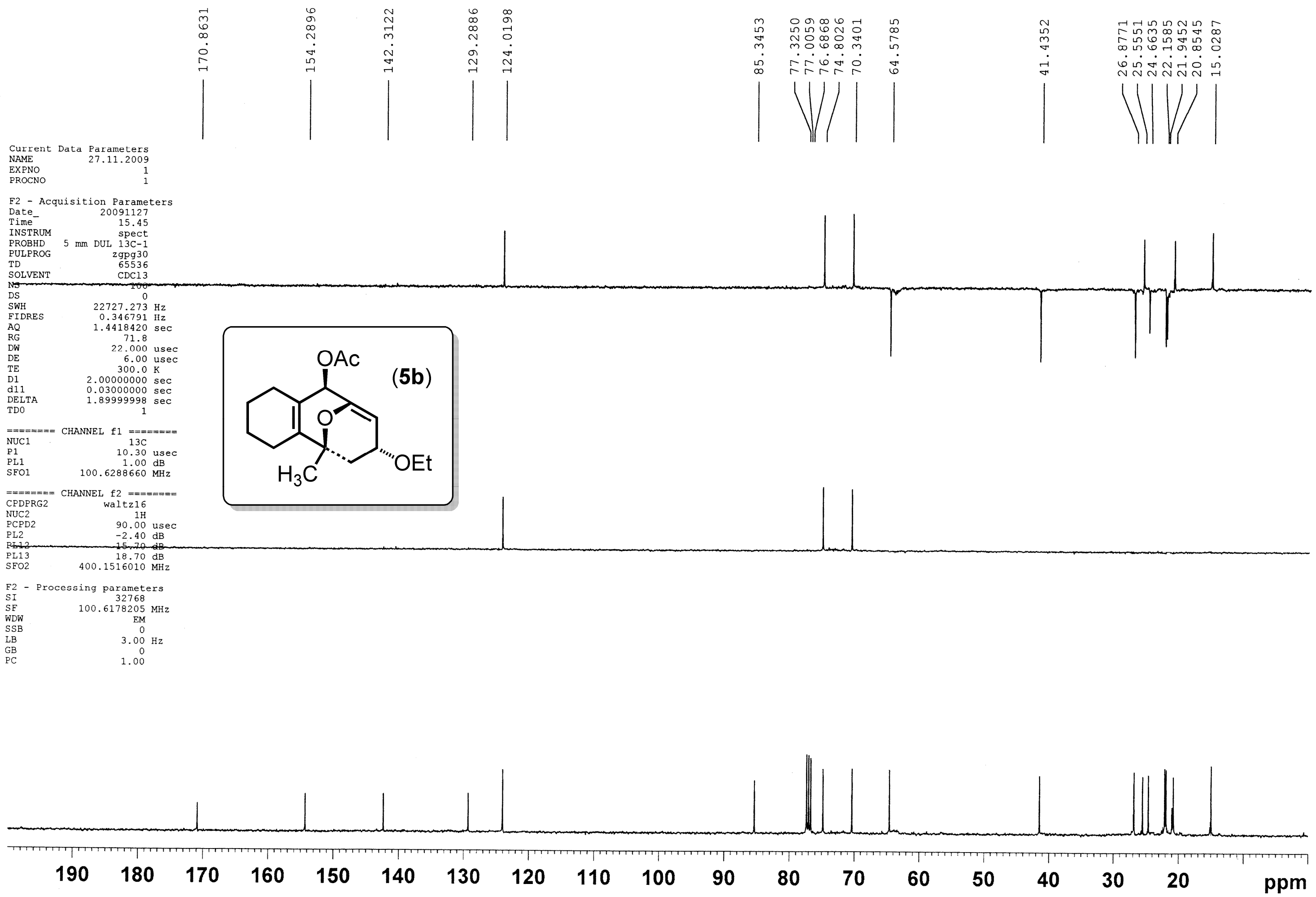
189.0375
156.9217
142.2458
93.3671
79.7304
77.3211
77.0031
76.6851
75.2418
61.2347
55.7080
32.2459
31.3642
26.3196
25.4996
24.8204
Current Data Parameters
NAME 02.07.2010
EXPNO 7
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100702
Time 21.47
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 101
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178057 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
H
O
(4i)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm



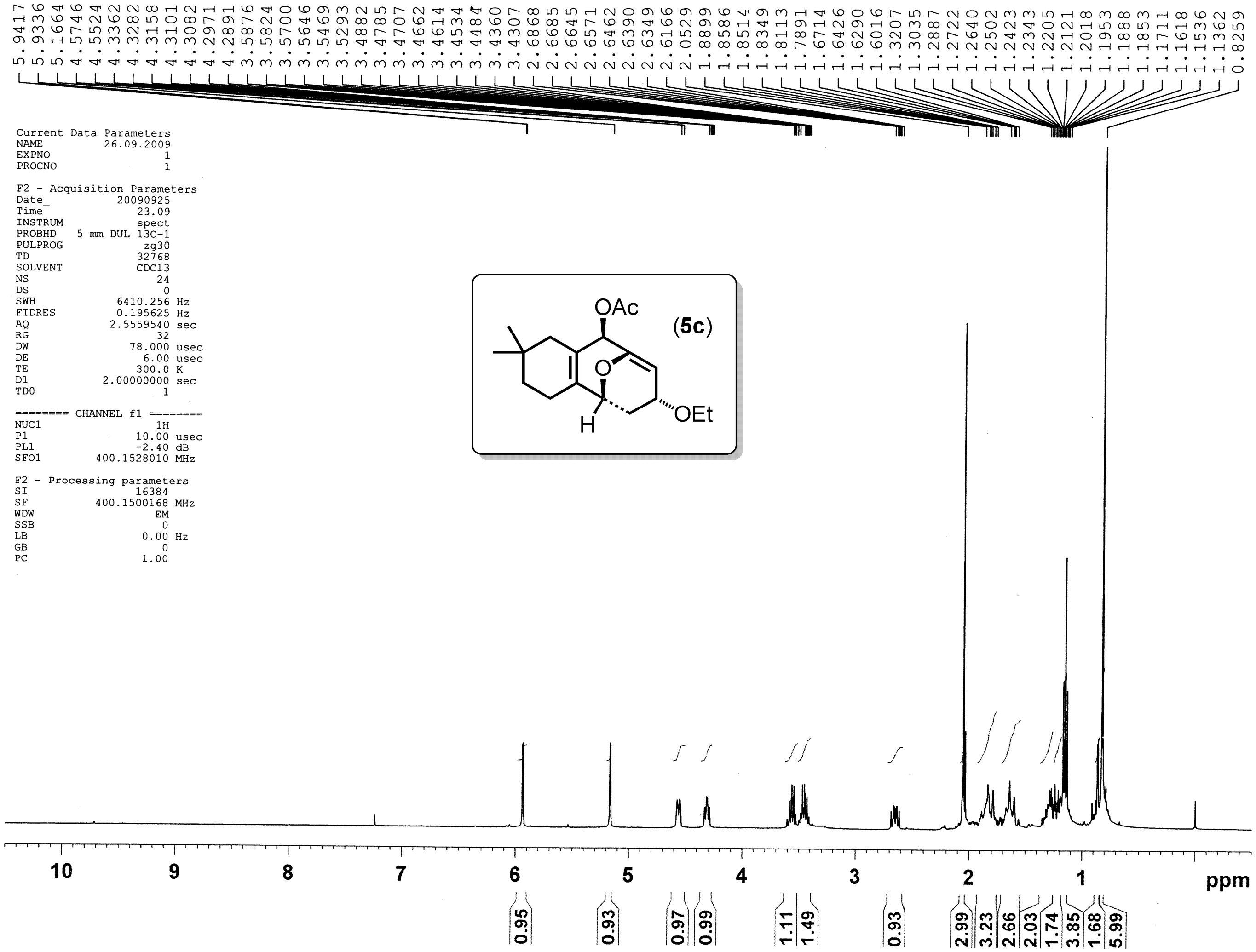

170.9560
153.7396
139.7374
130.4189
125.6425
80.0441
77.3173
76.9984
76.6805
74.2664
69.8767
64.8012
34.5341
26.4865
25.5346
22.2787
21.6615
20.9138
15.1319
Current Data Parameters
NAME 23.09.2009
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090922
Time 22.14
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 133
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
(5a)
O
H
OEt
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm



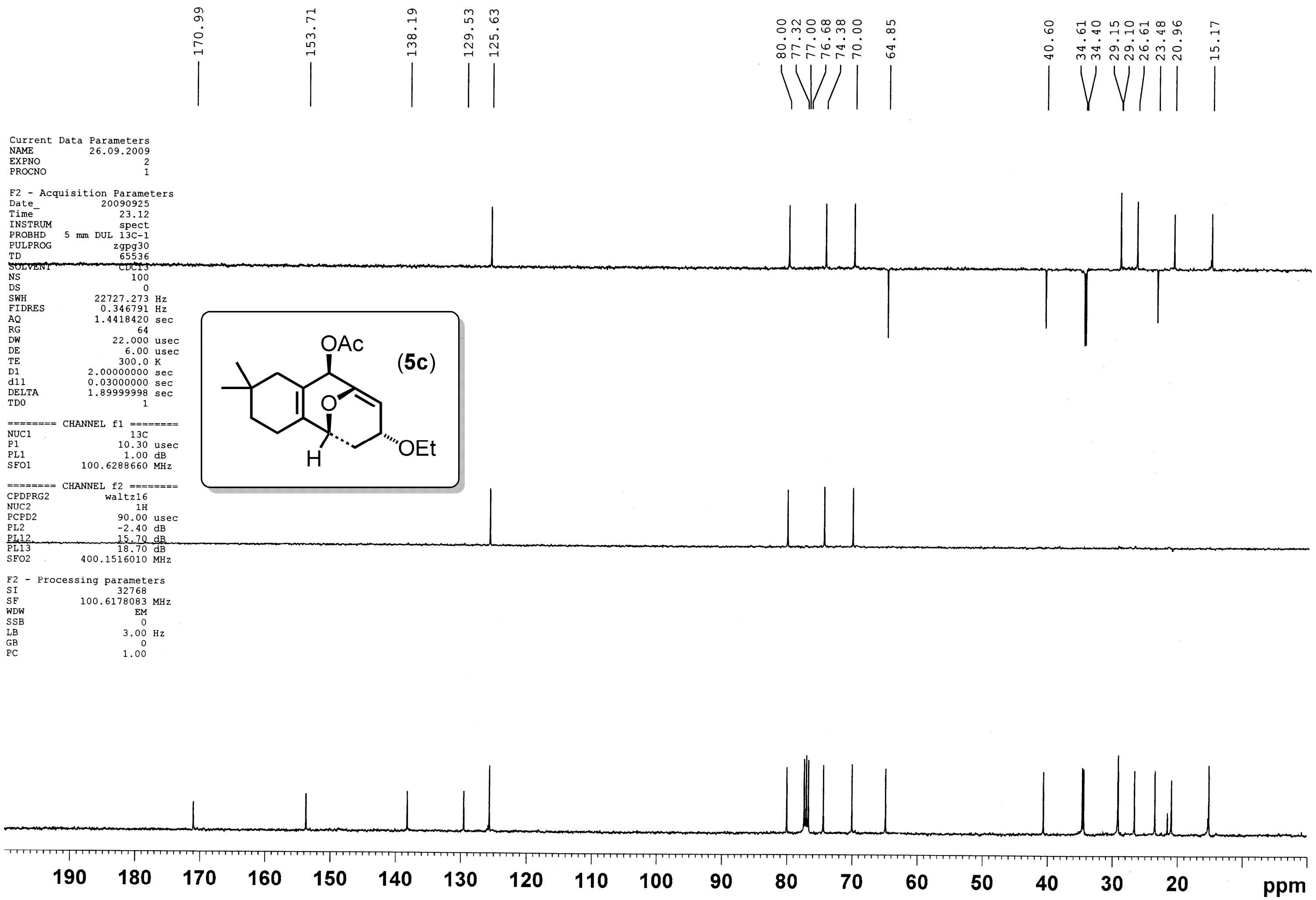
7.2401 5.9337 5.9257 5.2127 4.4027 4.3947 4.3852 4.3805 4.3773 4.3726 4.3630 4.3551 3.6323 3.6267 3.6147 3.6091 3.5915 3.5739 3.5151 3.4977 3.4921 3.4802 3.4747 3.4628 3.4572 2.2758 2.2583 2.2459 2.2284 2.1419 2.1325 2.0925 2.0792 2.0642 1.7551 1.7481 1.7434 1.7362 1.7292 1.7230 1.7181 1.7115 1.7076 1.6903 1.6851 1.6224 1.5830 1.5466 1.5213 1.4874 1.4625 1.4353 1.3954 1.2571 1.2424 1.2301 1.2264 1.2171 1.2075 1.2038 1.1900 1.1725 1.1537 1.1362 1.1187
Current Data Parameters
NAME 03.12.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20091203
Time 23.03
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 181
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
(5b)
O
OEt
H3C
10 9 8 7 6 5 4 3 2 1 ppm
0.50 0.51 0.53 0.52 0.58 0.66 2.08 1.87 1.23 2.66 2.40



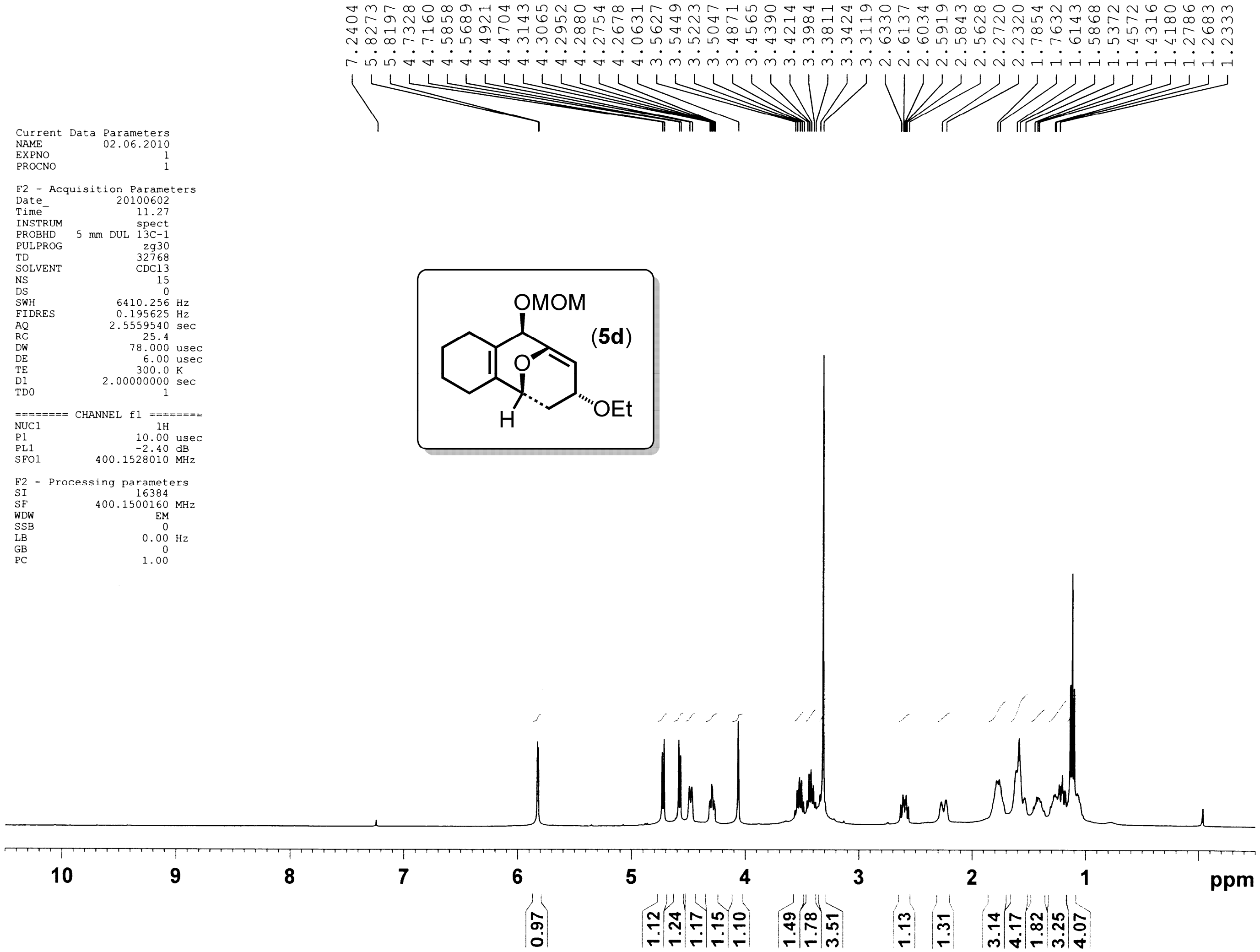
170.8631
154.2896
142.3122
129.2886
124.0198
85.3453
77.3250
77.0059
76.6868
74.8026
70.3401
64.5785
41.4352
26.8771
25.5551
24.6635
22.1585
21.9452
20.8545
15.0287
Current Data Parameters
NAME 27.11.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20091127
Time 15.45
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 100
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178205 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
(5b)
O
OEt
H3C
190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm

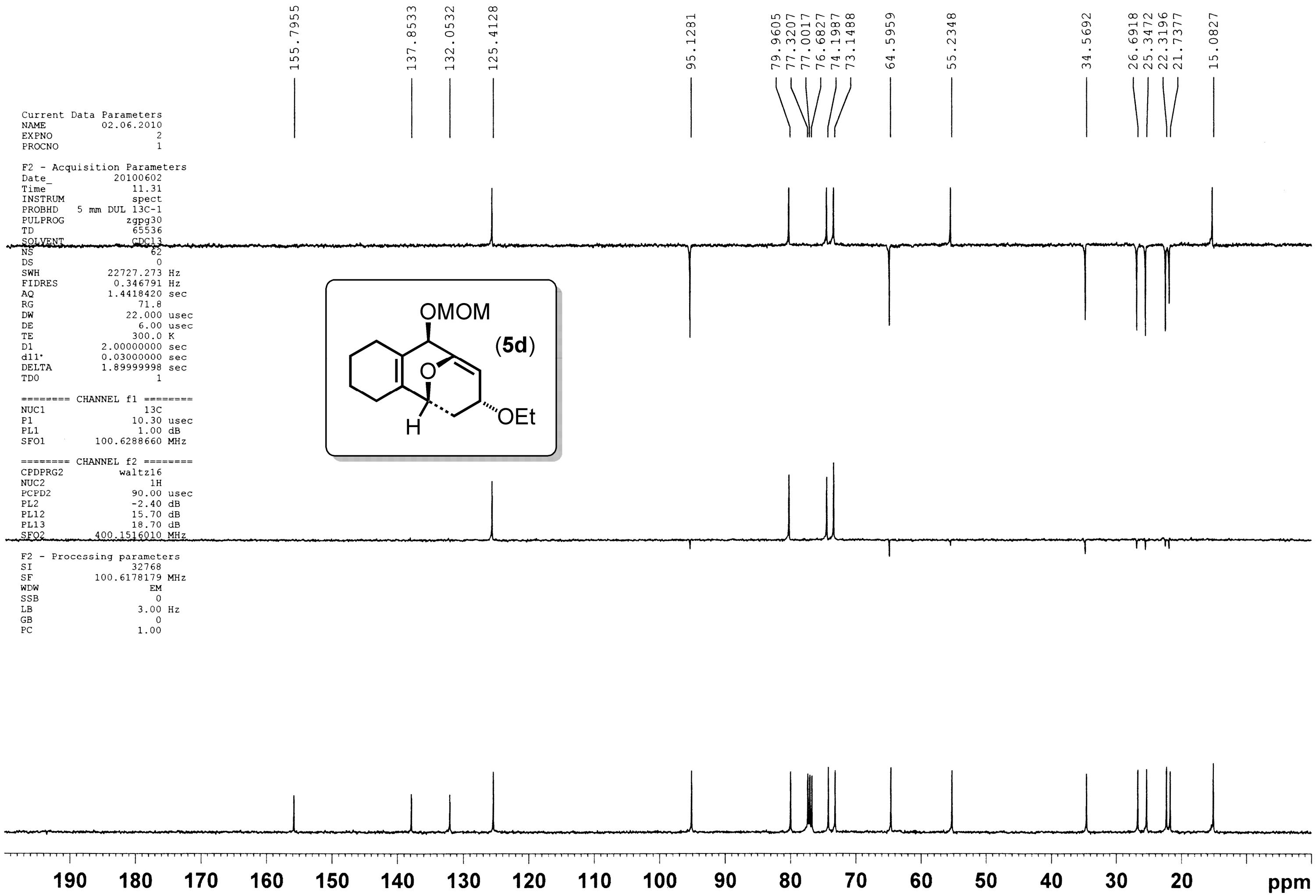


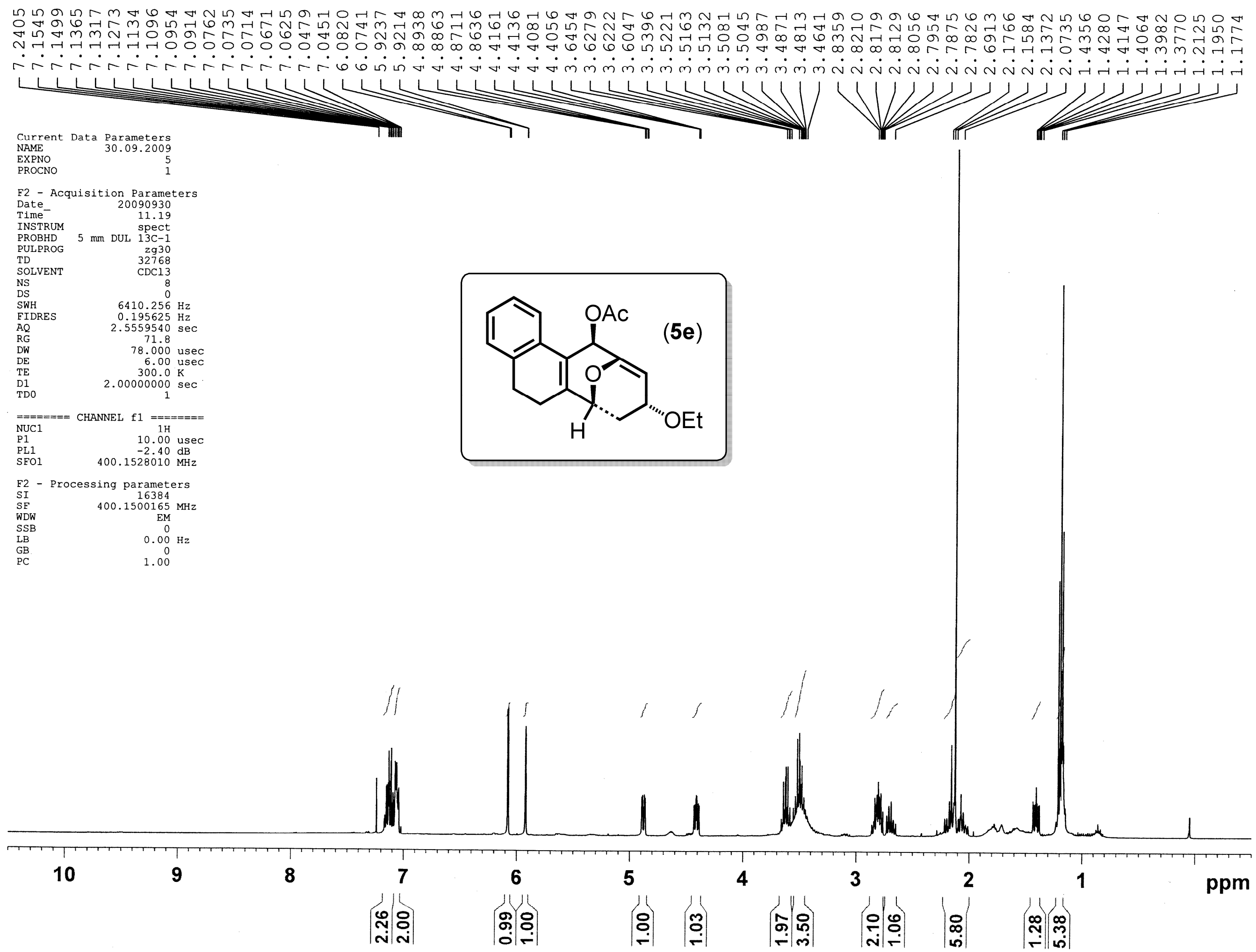
5.9417
5.9336
5.1664
4.5746
4.5524
4.3362
4.3282
4.3158
4.3101
4.3082
4.2971
4.2891
3.5876
3.5824
3.5700
3.5646
3.5469
3.5293
3.4882
3.4785
3.4707
3.4662
3.4614
3.4534
3.4484
3.4360
3.4307
2.6868
2.6685
2.6645
2.6571
2.6462
2.6390
2.6349
2.6166
2.0529
1.8899
1.8586
1.8514
1.8349
1.8113
1.7891
1.6714
1.6426
1.6290
1.6016
1.3207
1.3035
1.2887
1.2722
1.2640
1.2502
1.2423
1.2343
1.2205
1.2121
1.2018
1.1953
1.1888
1.1853
1.1711
1.1618
1.1536
1.1362
0.8259
Current Data Parameters
NAME 26.09.2009
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090925
Time 23.09
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 32
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
(5c)
O
H
OEt
10
9
8
7
6
5
4
3
2
1
ppm
0.95
0.93
0.97
0.99
1.11
1.49
0.93
2.99
3.23
2.66
2.03
1.74
3.85
1.68
5.99

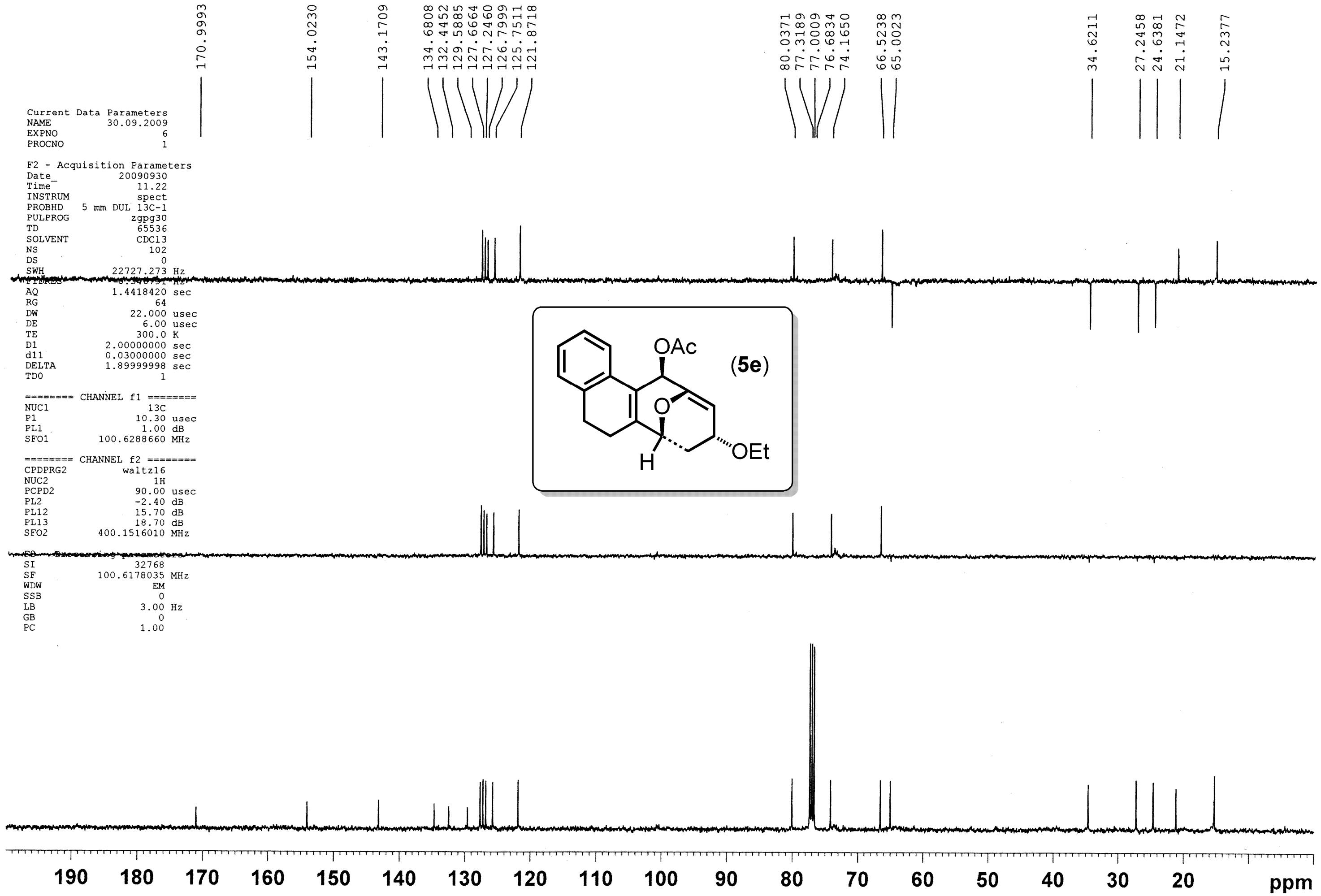

170.99
153.71
138.19
129.53
125.63
80.00
77.32
77.00
76.68
74.38
70.00
64.85
40.60
34.61
34.40
29.15
29.10
26.61
23.48
20.96
15.17
Current Data Parameters
NAME 26.09.2009
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090925
Time 23.12
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 100
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178083 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
(5c)
O
H
OEt
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

```
Current Data Parameters
NAME          02.06.2010
EXPNO                  1
PROCNO                 1

F2 - Acquisition Parameters
Date_           20100602
Time               11.27
INSTRUM            spect
PROBHD   5 mm DUL 13C-1
PULPROG             zg30
TD                 32768
SOLVENT            CDCl3
NS                    15
DS                     0
SWH            6410.256 Hz
FIDRES         0.195625 Hz
AQ            2.5559540 sec
RG                  25.4
DW                78.000 usec
DE                  6.00 usec
TE                 300.0 K
D1            2.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                 10.00 usec
PL1                -2.40 dB
SFO1         400.1528010 MHz

F2 - Processing parameters
SI                 16384
SF           400.1500160 MHz
WDW                   EM
SSB                    0
LB                  0.00 Hz
GB                     0
PC                  1.00
```

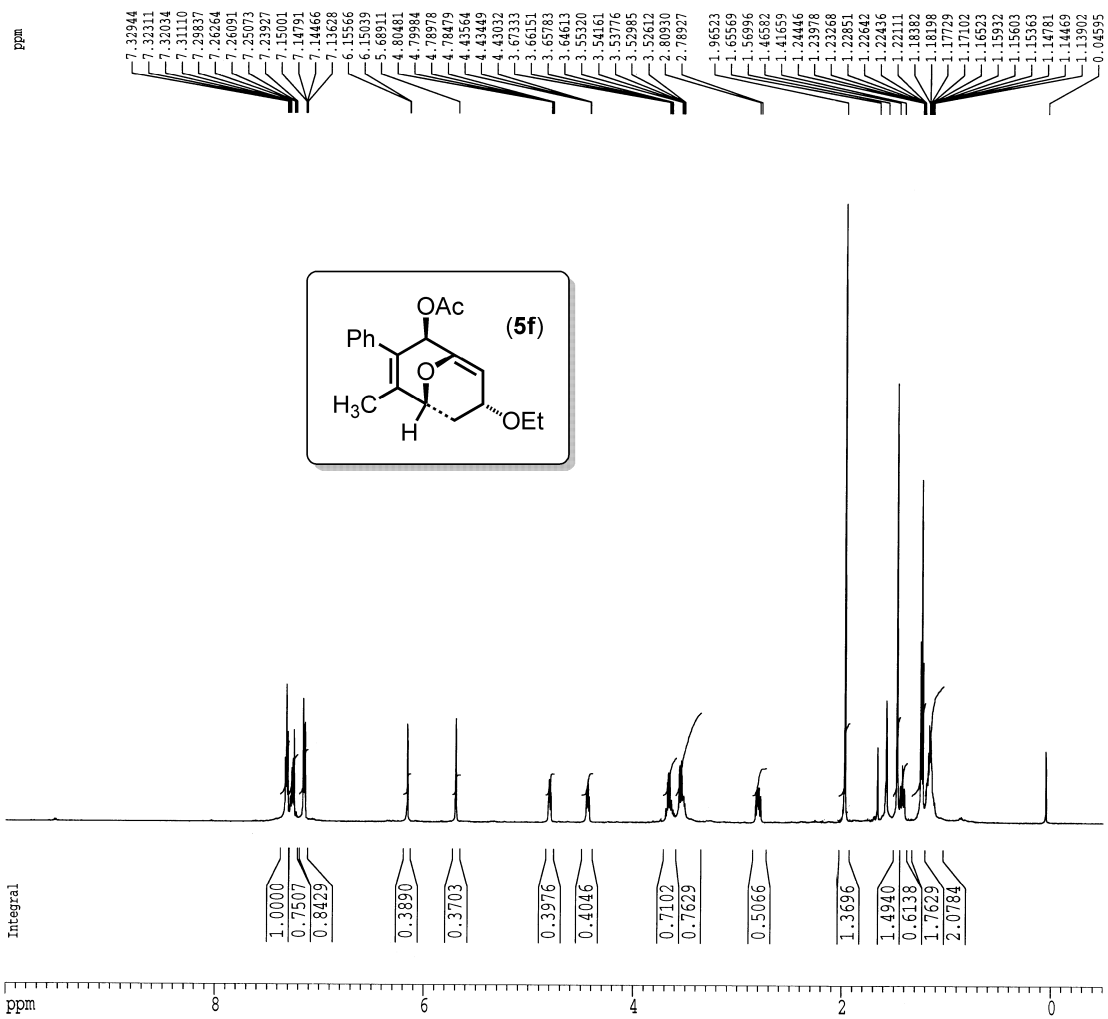



155.7955
137.8533
132.0532
125.4128
95.1281
79.9605
77.3207
77.0017
76.6827
74.1987
73.1488
64.5959
55.2348
34.5692
26.6918
25.3472
22.3196
21.7377
15.0827
Current Data Parameters
NAME 02.06.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100602
Time 11.31
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 62
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178179 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
(5d)
O
H
OEt
190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm


7.2405
7.1545
7.1499
7.1365
7.1317
7.1273
7.1134
7.1096
7.0954
7.0914
7.0762
7.0735
7.0714
7.0671
7.0625
7.0479
7.0451
6.0820
6.0741
5.9237
5.9214
4.8938
4.8863
4.8711
4.8636
4.4161
4.4136
4.4081
4.4056
3.6454
3.6279
3.6222
3.6047
3.5396
3.5221
3.5163
3.5132
3.5081
3.5045
3.4987
3.4871
3.4813
3.4641
2.8359
2.8210
2.8179
2.8129
2.8056
2.7954
2.7875
2.7826
2.6913
2.1766
2.1584
2.1372
2.0735
1.4356
1.4280
1.4147
1.4064
1.3982
1.3770
1.2125
1.1950
1.1774
Current Data Parameters
NAME 30.09.2009
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090930
Time 11.19
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 71.8
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
(5e)
O
H
OEt
10
9
8
7
6
5
4
3
2
1
ppm
2.26
2.00
0.99
1.00
1.00
1.03
1.97
3.50
2.10
1.06
5.80
1.28
5.38


170.9993
154.0230
143.1709
134.6808
132.4452
129.5885
127.6664
127.2460
126.7999
125.7511
121.8718
80.0371
77.3189
77.0009
76.6834
74.1650
66.5238
65.0023
34.6211
27.2458
24.6381
21.1472
15.2377
Current Data Parameters
NAME 30.09.2009
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20090930
Time 11.22
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 102
DS 0
SWH 22727.273 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
SI 32768
SF 100.6178035 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
(5e)
O
H
OEt
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

```
urrent Data Parameters
AME         Das-4-108P
XPNO                 1
ROCNO                1

2 - Acquisition Parameters
ate_          20091027
ime              21.35
NSTRUM           spect
ROBHD   5 mm QNP  1H/1
ULPROG              zg
D                16384
OLVENT           CDCl3
S                   16
S                    0
WH            8389.262 Hz
IDRES         0.512040 Hz
Q            0.9765364 sec
G                  128
V               59.600 usec
E                 6.50 usec
E                300.8 K
1           1.00000000 sec
CREST       0.00000000 sec
CWRK        0.01500000 sec

======= CHANNEL f1 ========
UC1                  1H
1                  9.20 usec
L1                 3.00 dB
FO1         599.1028161 MHz

2 - Processing parameters
I                 16384
F           599.1000296 MHz
DW                   no
SB                    0
B                  0.00 Hz
B                     0
C                  0.10

D NMR plot parameters
X                 20.00 cm
Y                 12.00 cm
1P               10.000 ppm
1               5991.00 Hz
2P               -0.500 ppm
2               -299.55 Hz
PMCM            0.52500 ppm/cm
ZCM           314.52753 Hz/cm
```



Current Data Parameters
NAME Das-4-108P
EXPNO 2
PROCNO 1

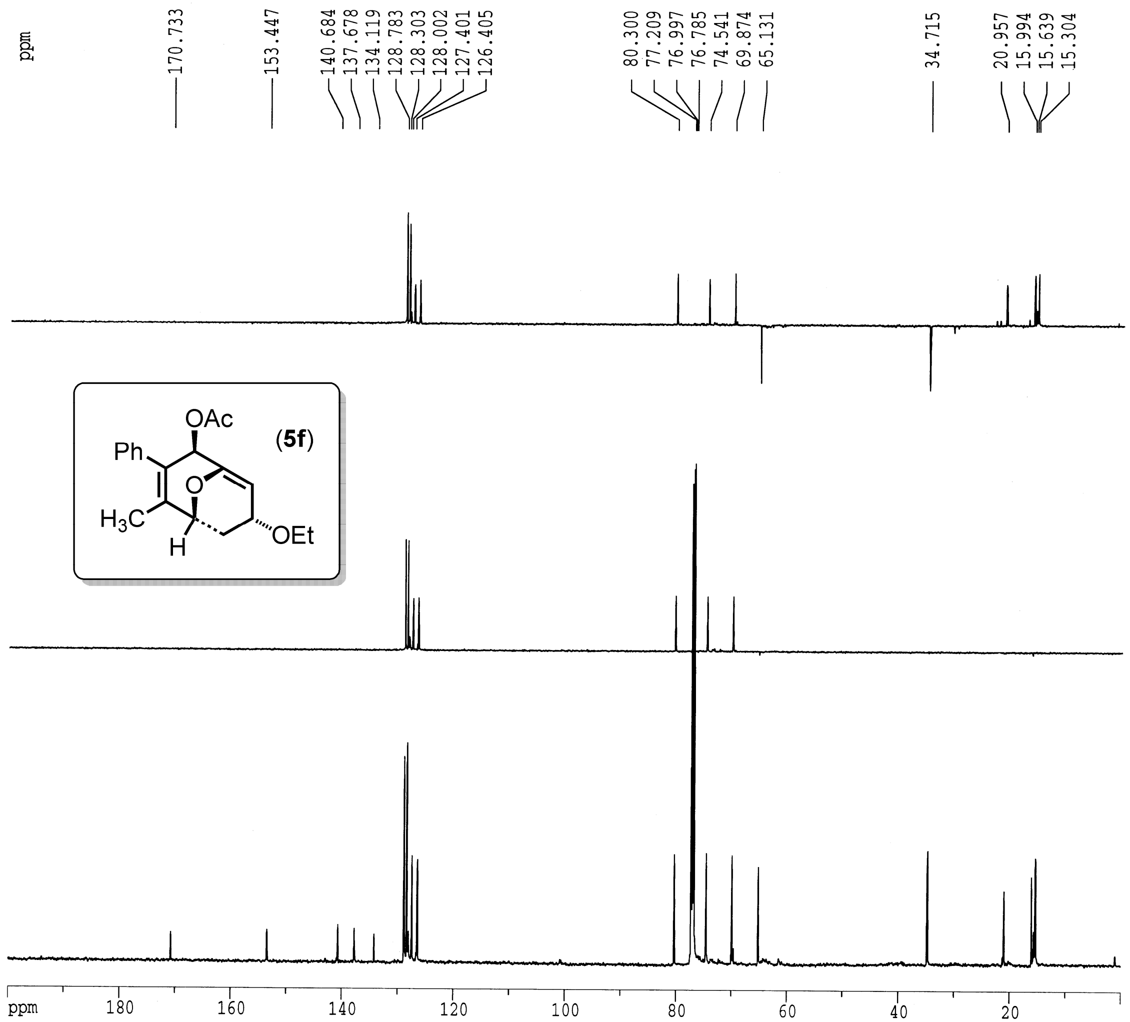
F2 - Acquisition Parameters
Date_ 20091027
Time 21.35
INSTRUM spect
PROBHD 5 mm QNP 1H/1
PULPROG zgpg
TD 32768
SOLVENT CDCl3
NS 6144
DS 0
SWH 45045.047 Hz
FIDRES 1.374666 Hz
AQ 0.3637748 sec
RG 2048
DW 11.100 usec
DE 6.50 usec
TE 300.9 K
D1 3.50000000 sec
d11 0.03000000 sec
DELTA 3.40000010 sec
MCREST 0.00000000 sec
MCWRK 0.01500000 sec

======== CHANNEL f1 ========
NUC1 13C
P1 4.80 usec
PL1 0.00 dB
SFO1 150.6603858 MHz

======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 92.00 usec
PL2 120.00 dB
PL12 9.00 dB
PL13 14.00 dB
SFO2 599.1029955 MHz

F2 - Processing parameters
SI 65536
SF 150.6438189 MHz
WDW EM
SSB 0
LB 5.00 Hz
GB 0
PC 1.00

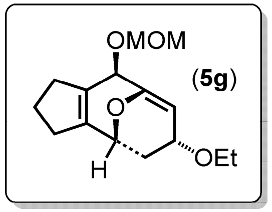
1D NMR plot parameters
CX 20.00 cm
CY 9.00 cm
F1P 200.000 ppm
F1 30128.76 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 10.00000 ppm/cm
HZCM 1506.43811 Hz/cm

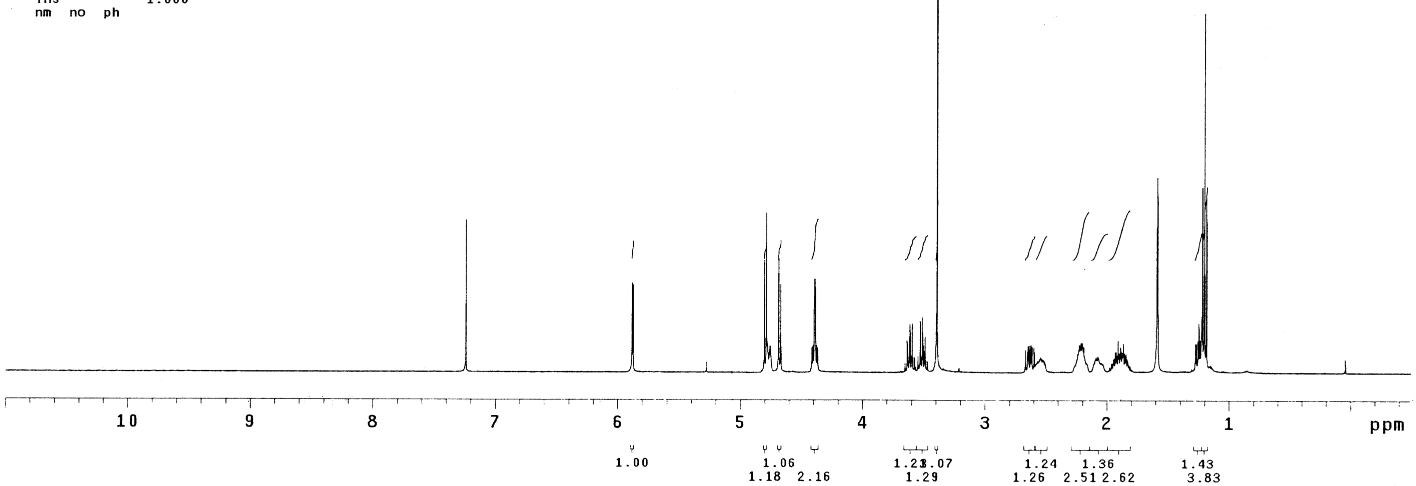


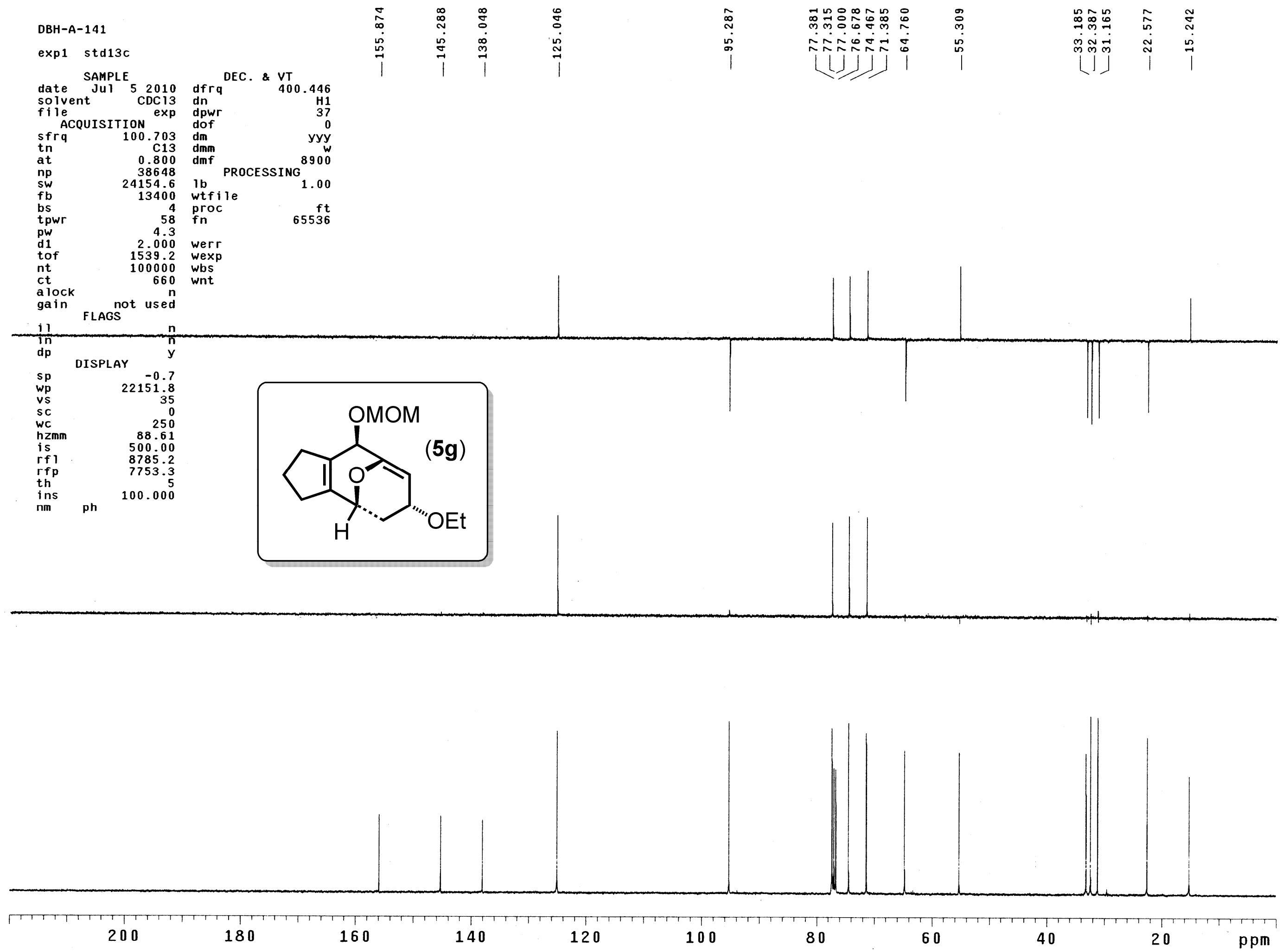
DBH-A-141

exp3 std1h

```
      SAMPLE                DEC. & VT
date   Jul 16 2010  dfrq       400.446
solvent      CDCl3  dn              H1
file           exp  dpwr            30
   ACQUISITION      dof              0
sfrq       400.446  dm             nnn
tn              H1  dmm              c
at           2.733  dmf            200
np           32768       PROCESSING
sw          5995.2  lb            0.10
fb            3400  wtfile
bs               4  proc            ft
tpwr            59  fn           65536
pw             4.9
d1           1.000  werr
tof              0  wexp
nt             100  wbs            wft
ct              68  wnt
alock            n
gain             4
      FLAGS
il               n
in               n
dp               y
     DISPLAY
sp          -200.3
wp          4605.1
vs             150
sc               0
wc             250
hzmm          3.23
is         8325.65
rfl         3867.8
rfp         2899.2
th               3
ins          1.000
nm  no  ph
```



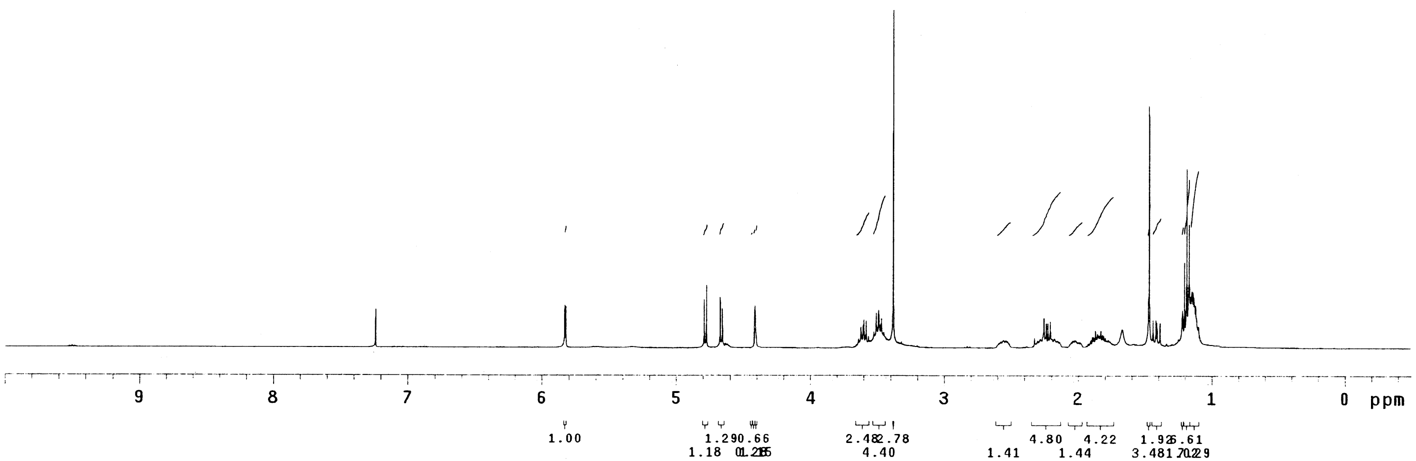



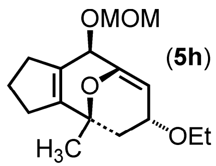

DBH-A-141
exp1 std13c
SAMPLE
date Jul 5 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 100000
ct 660
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 35
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8785.2
rfp 7753.3
th 5
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
155.874
145.288
138.048
125.046
95.287
77.381
77.315
77.000
76.678
74.467
71.385
64.760
55.309
33.185
32.387
31.165
22.577
15.242
OMOM
(5g)
O
H
OEt
200
180
160
140
120
100
80
60
40
20
ppm

DBH-A-149

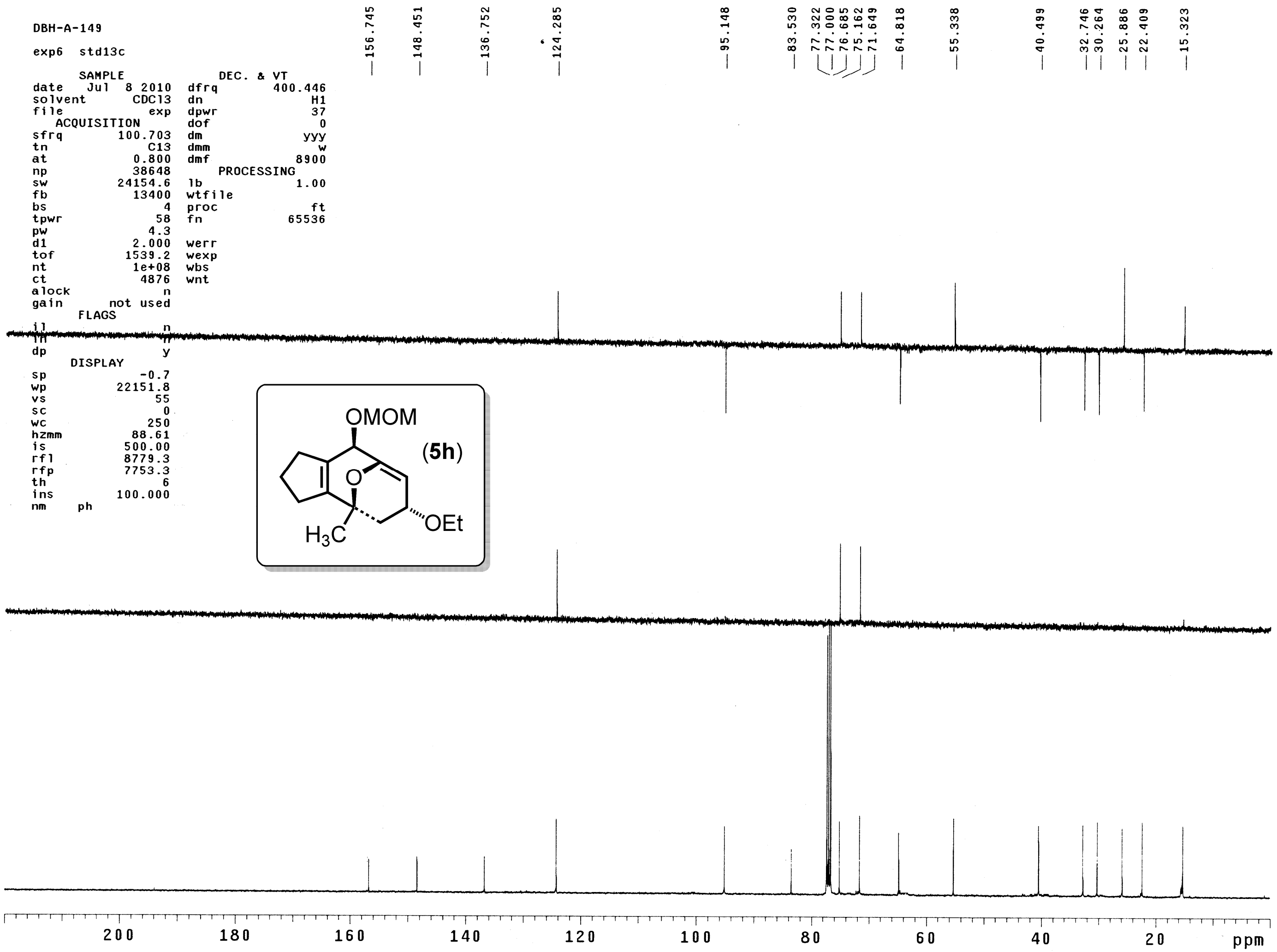
exp1 std1h

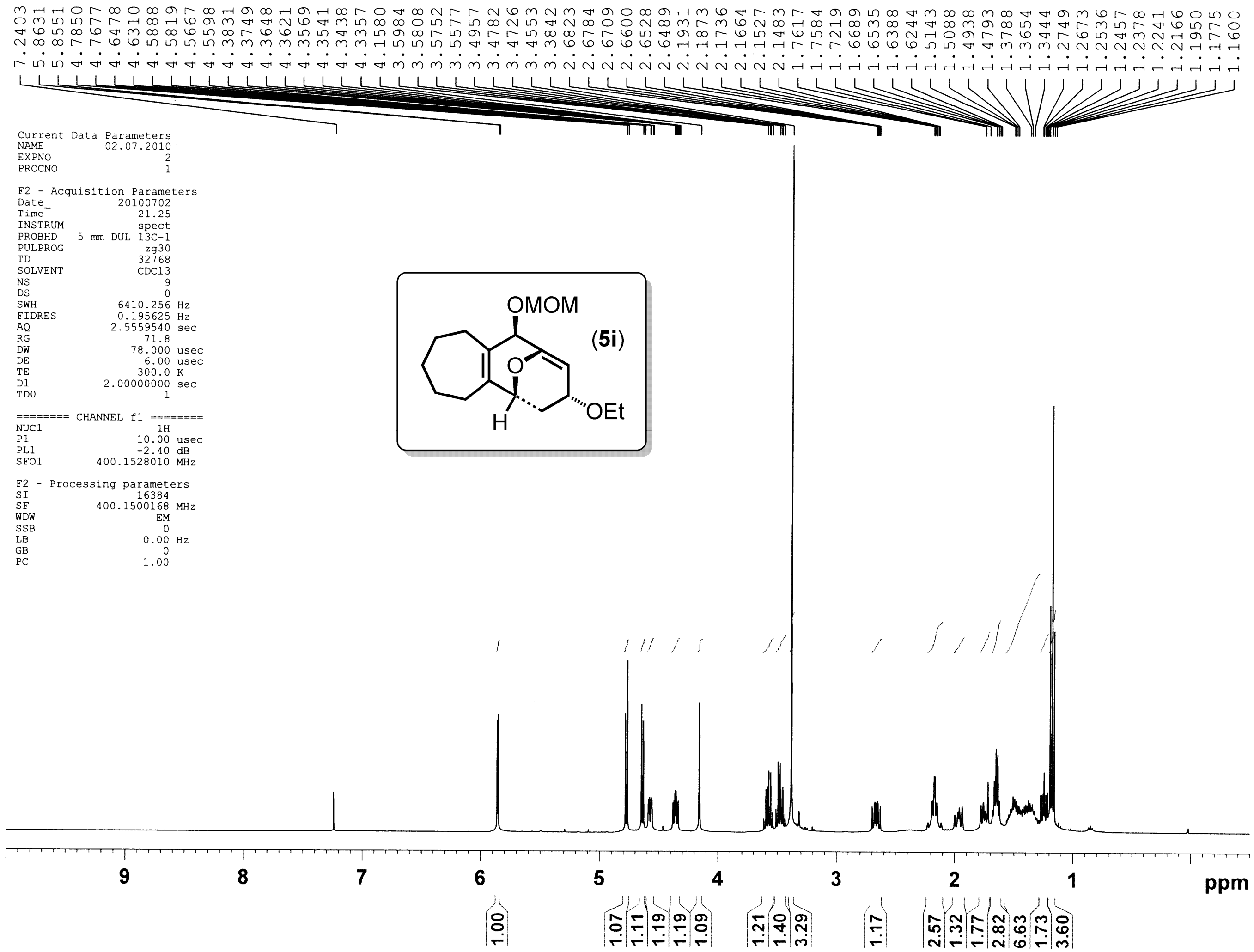
| SAMPLE | | DEC. & VT | |
|---|---|---|---|
| date | Jul 7 2010 | dfrq | 400.446 |
| solvent | CDCl3 | dn | H1 |
| file | exp | dpwr | 30 |
| ACQUISITION | | dof | 0 |
| sfrq | 400.446 | dm | nnn |
| tn | H1 | dmm | c |
| at | 2.733 | dmf | 200 |
| np | 32768 | PROCESSING | |
| sw | 5995.2 | lb | 0.10 |
| fb | 3400 | wtfile | |
| bs | 4 | proc | ft |
| tpwr | 59 | fn | 65536 |
| pw | 4.9 | | |
| d1 | 1.000 | werr | |
| tof | 0 | wexp | |
| nt | 100 | wbs | wft |
| ct | 80 | wnt | |
| alock | n | | |
| gain | 4 | | |
| FLAGS | | | |
| il | n | | |
| in | n | | |
| dp | y | | |
| DISPLAY | | | |
| sp | -200.3 | | |
| wp | 4204.6 | | |
| vs | 60 | | |
| sc | 0 | | |
| wc | 250 | | |
| hzmm | 3.37 | | |
| is | 2505.46 | | |
| rfl | 3867.2 | | |
| rfp | 2899.2 | | |
| th | 2 | | |
| ins | 1.000 | | |
| nm no ph | | | |

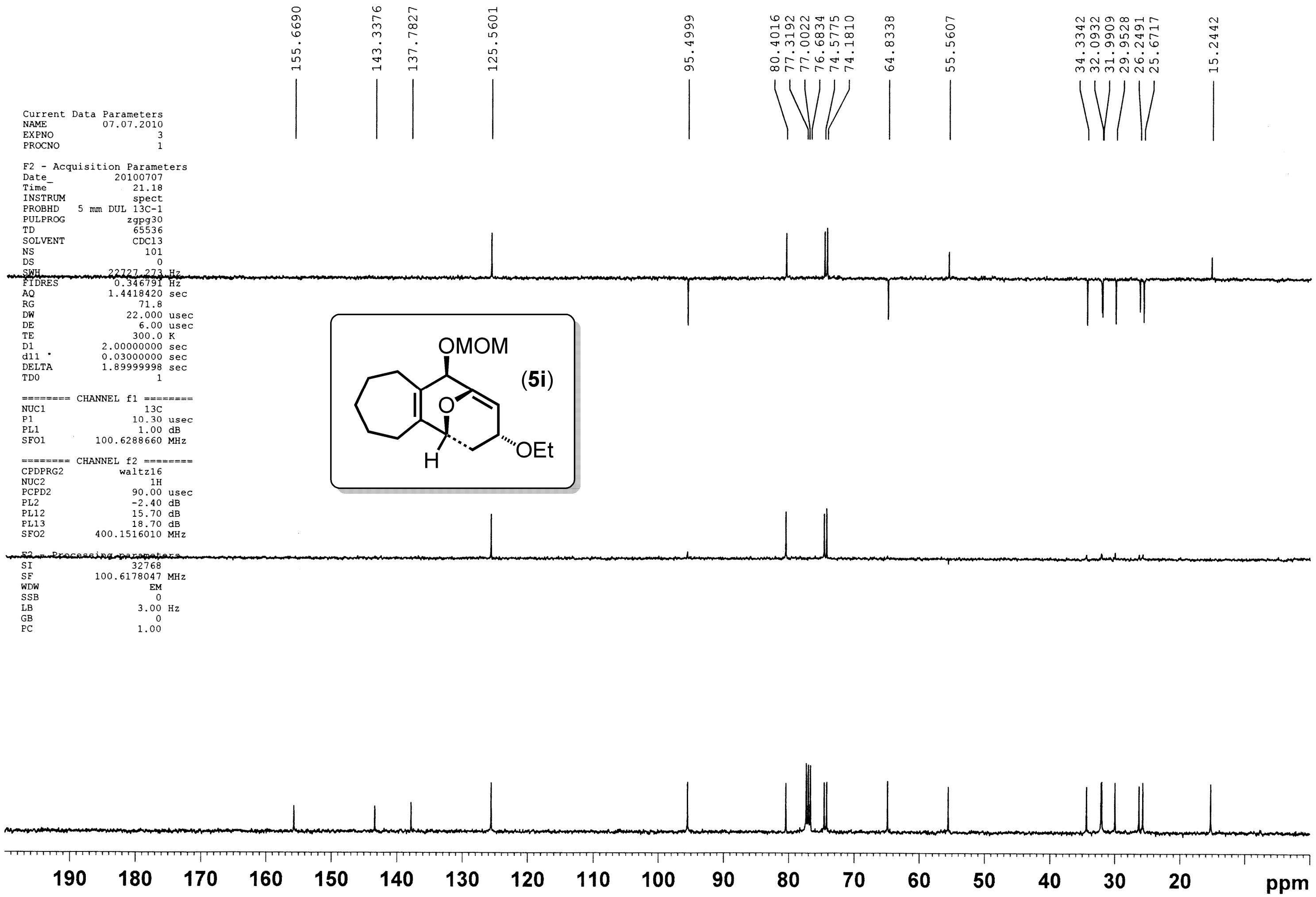


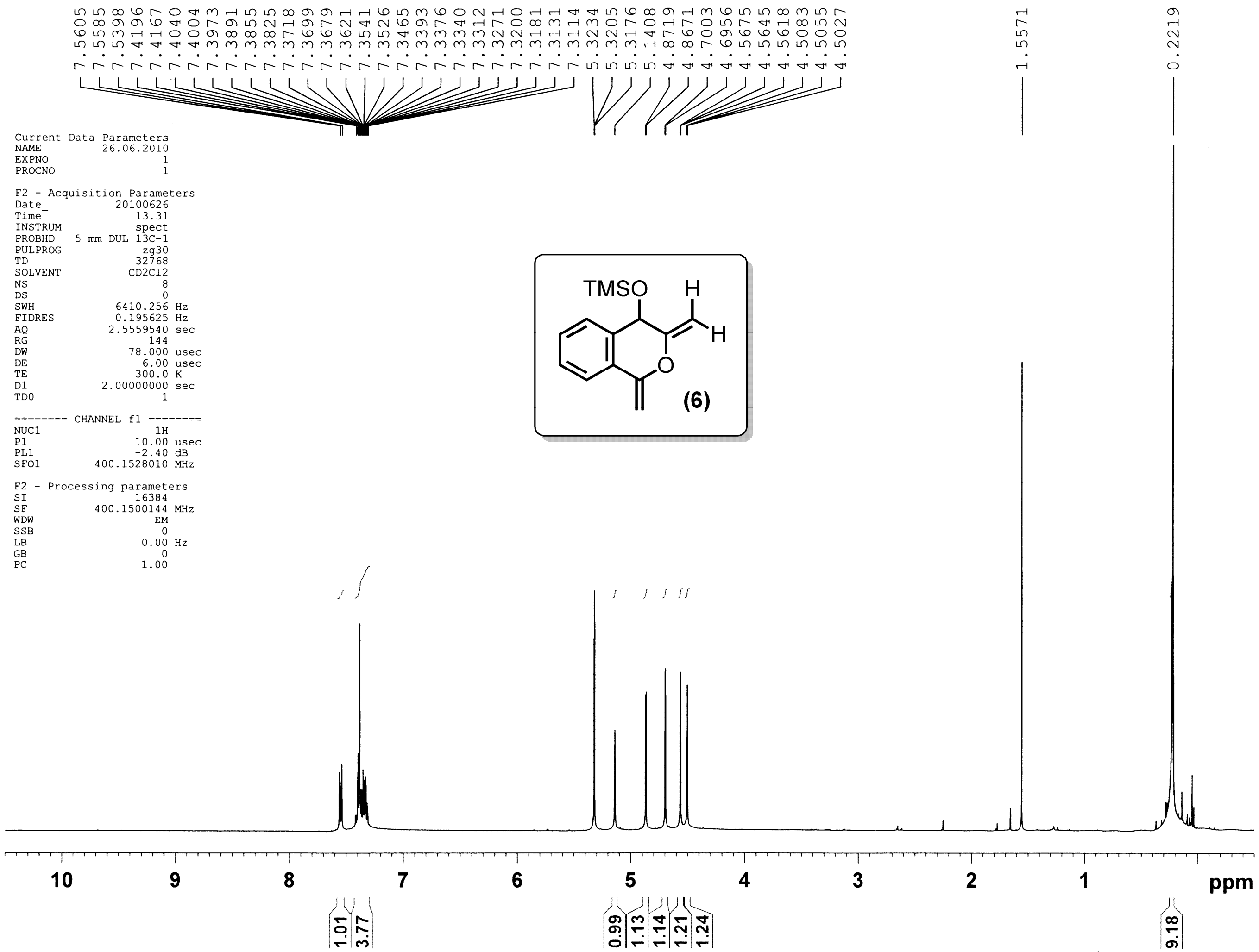




(**5h**)

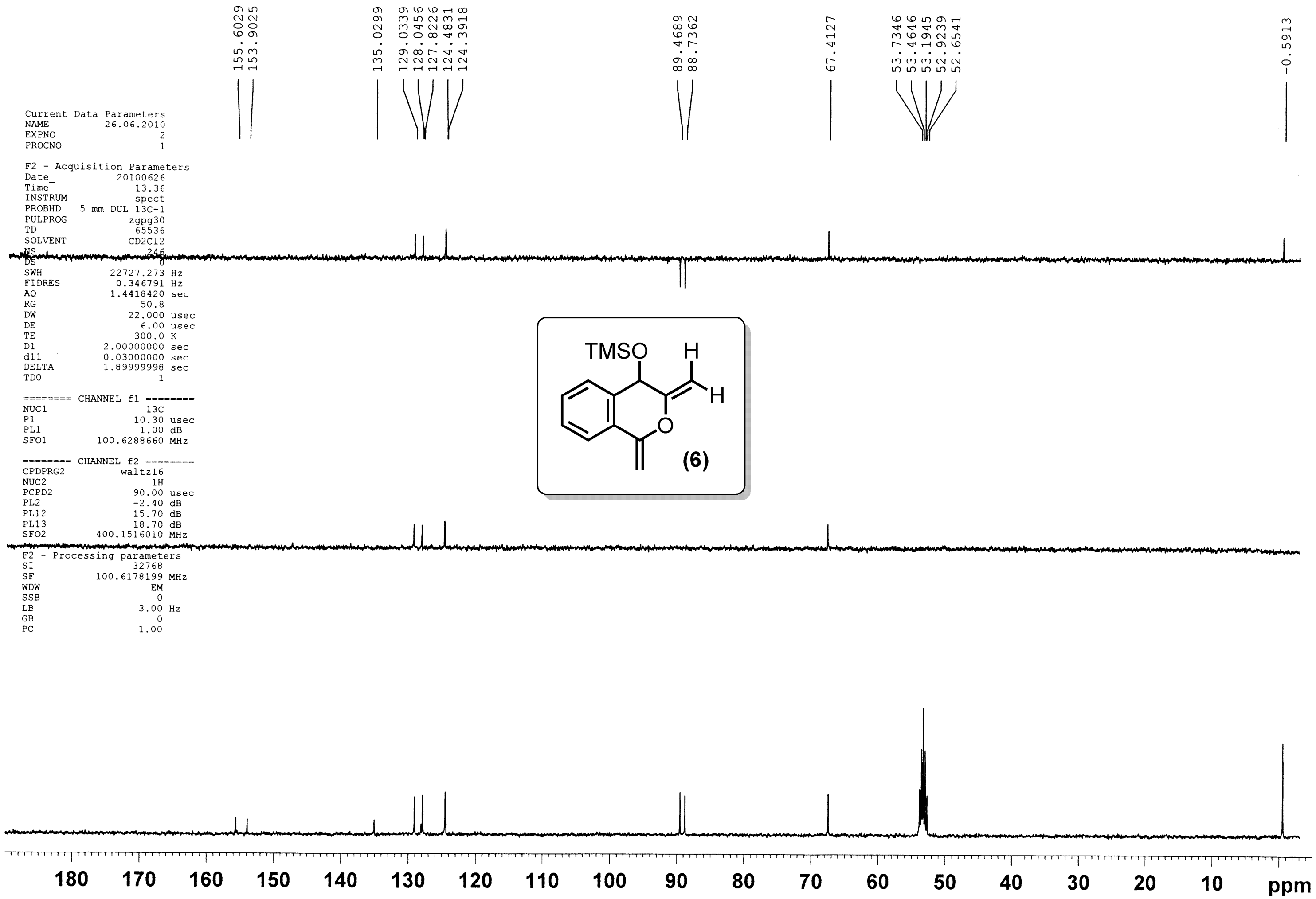

DBH-A-149
exp6 std13c
SAMPLE
date Jul 8 2010
solvent CDCl3
file exp
ACQUISITION
sfrq 100.703
tn C13
at 0.800
np 38648
sw 24154.6
fb 13400
bs 4
tpwr 58
pw 4.3
d1 2.000
tof 1539.2
nt 1e+08
ct 4876
alock n
gain not used
FLAGS
il n
in n
dp y
DISPLAY
sp -0.7
wp 22151.8
vs 55
sc 0
wc 250
hzmm 88.61
is 500.00
rfl 8779.3
rfp 7753.3
th 6
ins 100.000
nm ph
DEC. & VT
dfrq 400.446
dn H1
dpwr 37
dof 0
dm yyy
dmm w
dmf 8900
PROCESSING
lb 1.00
wtfile
proc ft
fn 65536
werr
wexp
wbs
wnt
156.745
148.451
136.752
124.285
95.148
83.530
77.322
77.000
76.685
75.162
71.649
64.818
55.338
40.499
32.746
30.264
25.886
22.409
15.323
OMOM
(5h)
O
OEt
H3C
200
180
160
140
120
100
80
60
40
20
ppm

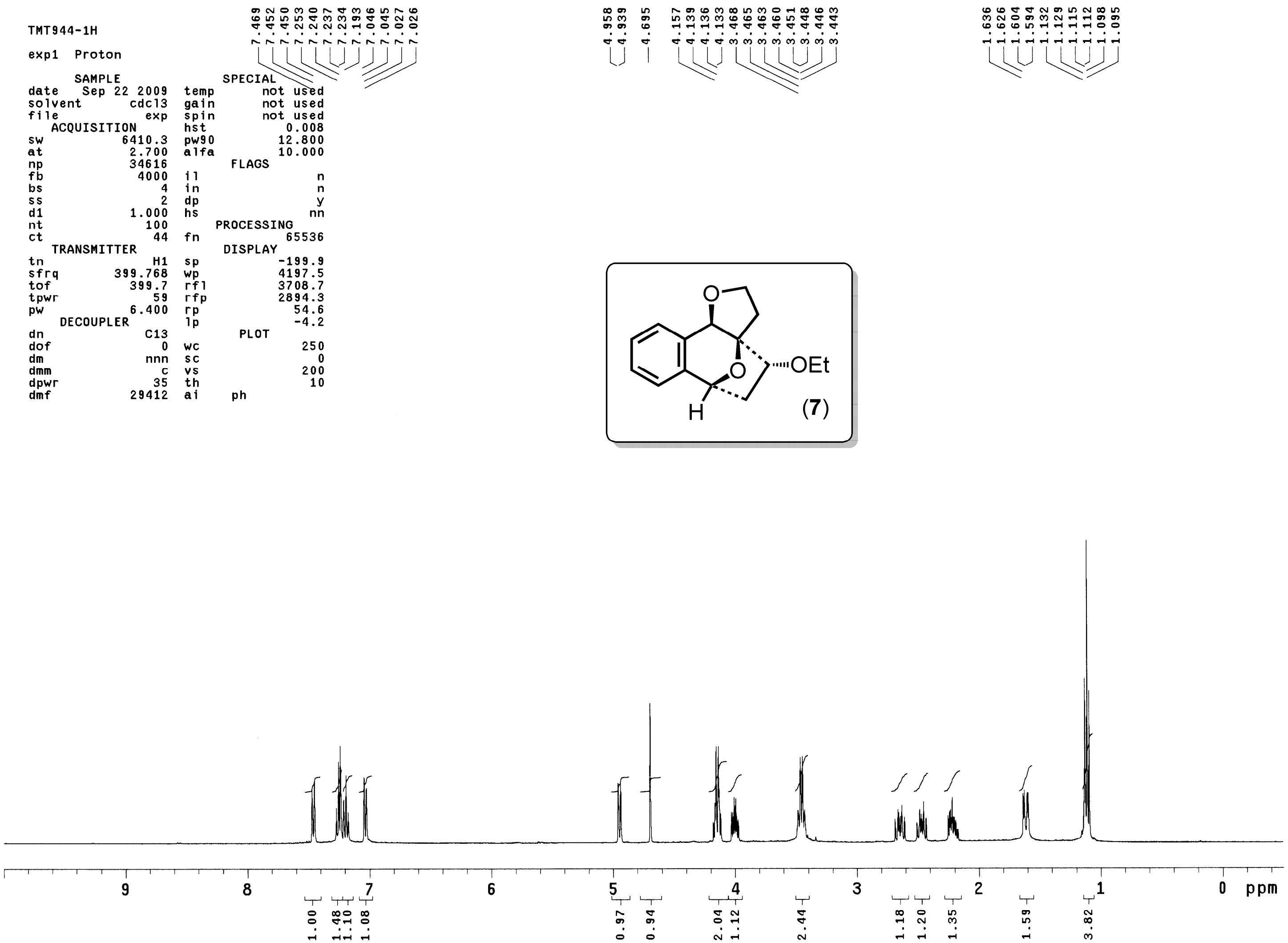

7.2403 5.8631 5.8551 4.7850 4.7677 4.6478 4.6310 4.5888 4.5819 4.5667 4.5598 4.3831 4.3749 4.3648 4.3621 4.3569 4.3541 4.3438 4.3357 4.1580 3.5984 3.5808 3.5752 3.5577 3.4957 3.4782 3.4726 3.4553 3.3842 2.6823 2.6784 2.6709 2.6600 2.6528 2.6489 2.1931 2.1873 2.1736 2.1664 2.1527 2.1483 1.7617 1.7584 1.7219 1.6689 1.6535 1.6388 1.6244 1.5143 1.5088 1.4938 1.4793 1.3788 1.3654 1.3444 1.2749 1.2673 1.2536 1.2457 1.2378 1.2241 1.2166 1.1950 1.1775 1.1600
Current Data Parameters
NAME 02.07.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100702
Time 21.25
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 9
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 71.8
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OMOM
(5i)
O
H
OEt
9 8 7 6 5 4 3 2 1 ppm
1.00 1.07 1.11 1.19 1.19 1.09 1.21 1.40 3.29 1.17 2.57 1.32 1.77 2.82 6.63 1.73 3.60

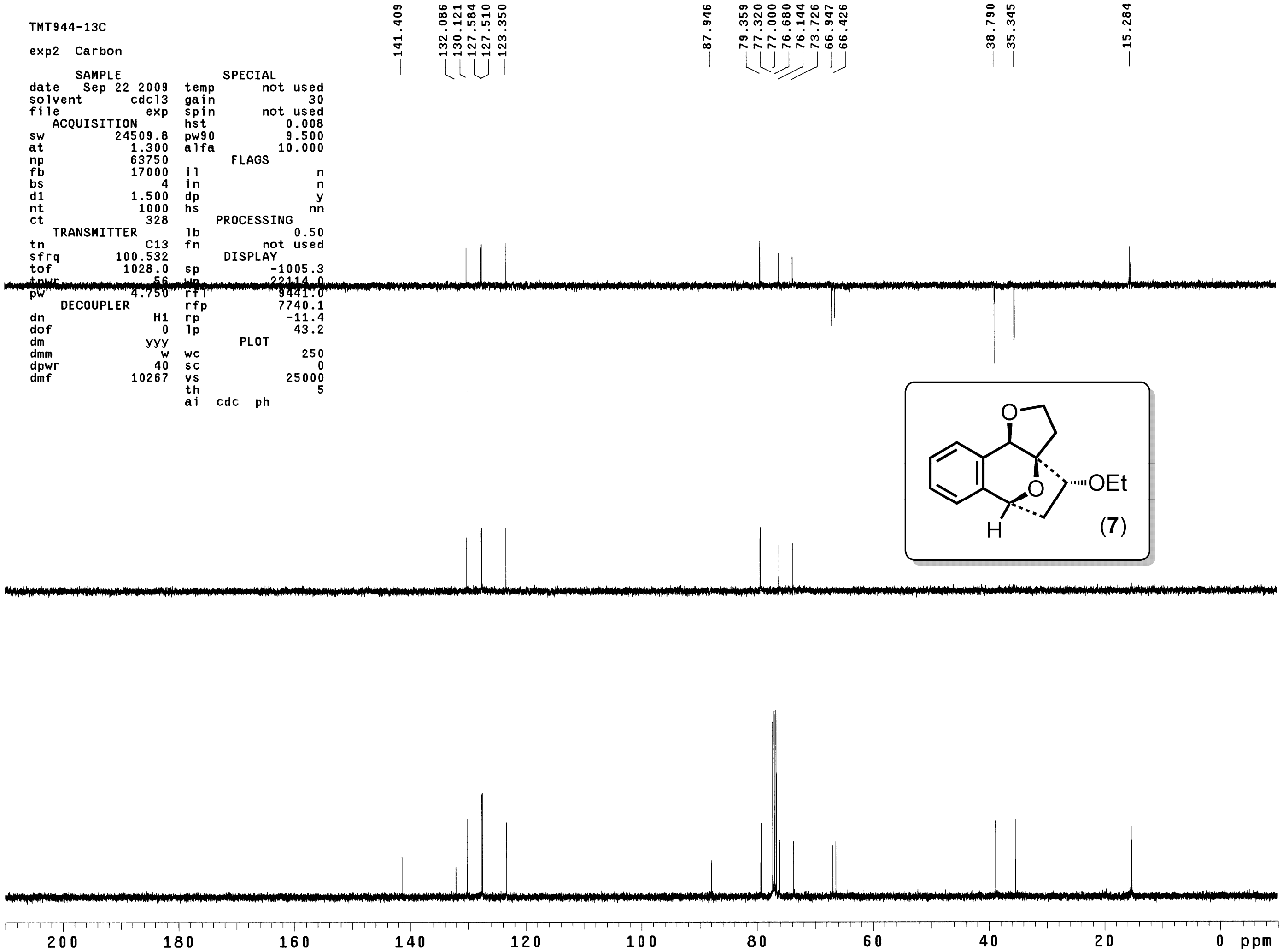

155.6690
143.3376
137.7827
125.5601
95.4999
80.4016
77.3192
77.0022
76.6834
74.5775
74.1810
64.8338
55.5607
34.3342
32.0932
31.9909
29.9528
26.2491
25.6717
15.2442
Current Data Parameters
NAME 07.07.2010
EXPNO 3
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100707
Time 21.18
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 101
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178047 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
(5i)
O
H
OEt
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm



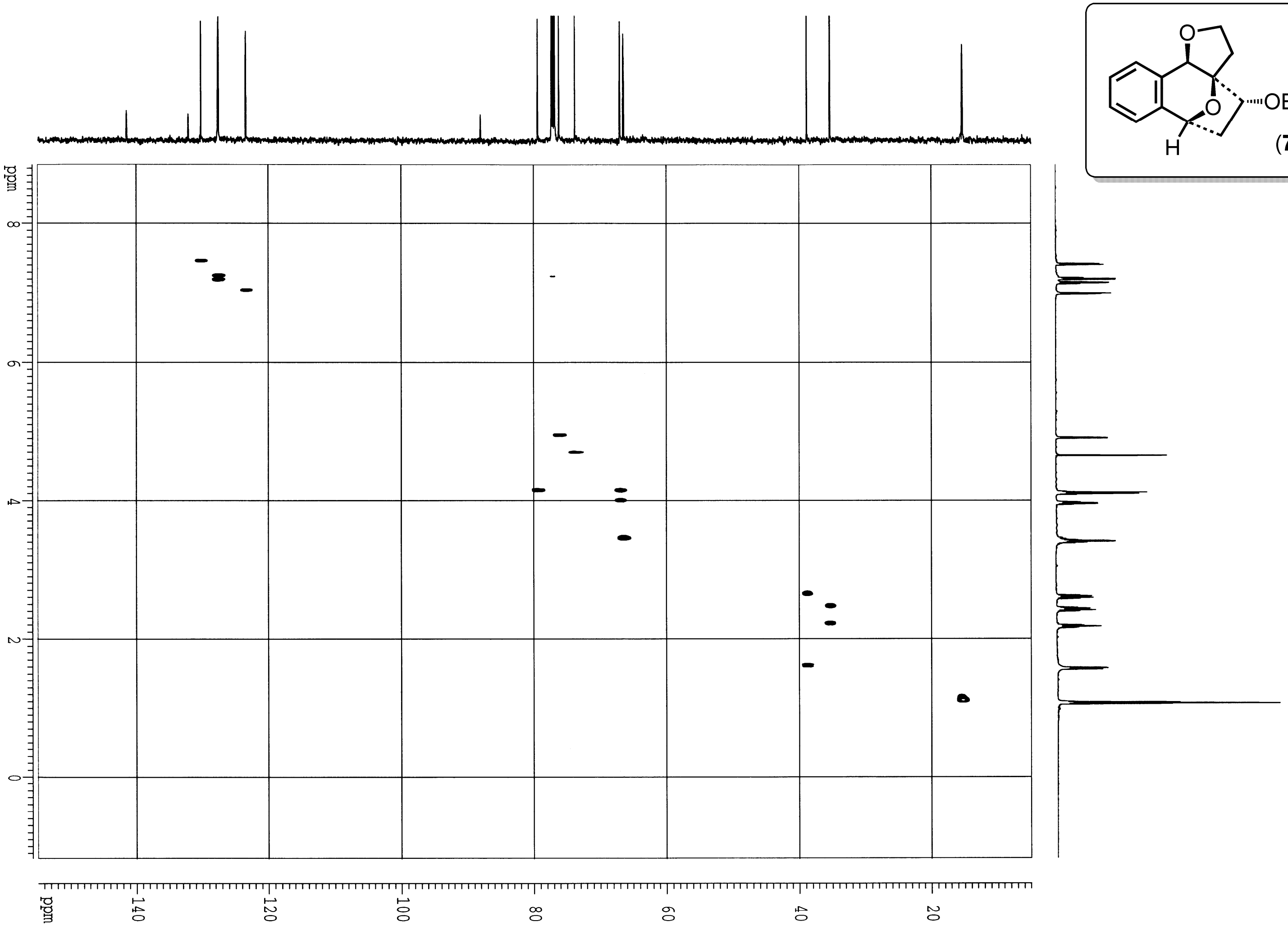
7.5605
7.5585
7.5398
7.4196
7.4167
7.4040
7.4004
7.3973
7.3891
7.3855
7.3825
7.3718
7.3699
7.3679
7.3621
7.3541
7.3526
7.3465
7.3393
7.3376
7.3340
7.3312
7.3271
7.3200
7.3181
7.3131
7.3114
5.3234
5.3205
5.3176
5.1408
4.8719
4.8671
4.7003
4.6956
4.5675
4.5645
4.5618
4.5083
4.5055
4.5027
1.5571
0.2219
Current Data Parameters
NAME 26.06.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100626
Time 13.31
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CD2Cl2
NS 8
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 144
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500144 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
TMSO
H
H
O
(6)
10
9
8
7
6
5
4
3
2
1
ppm
1.01
3.77
0.99
1.13
1.14
1.21
1.24
9.18


155.6029
153.9025
135.0299
129.0339
128.0456
127.8226
124.4831
124.3918
89.4689
88.7362
67.4127
53.7346
53.4646
53.1945
52.9239
52.6541
-0.5913
Current Data Parameters
NAME 26.06.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100626
Time 13.36
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CD2Cl2
NS 246
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 50.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178199 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
TMSO
H
H
O
(6)
180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

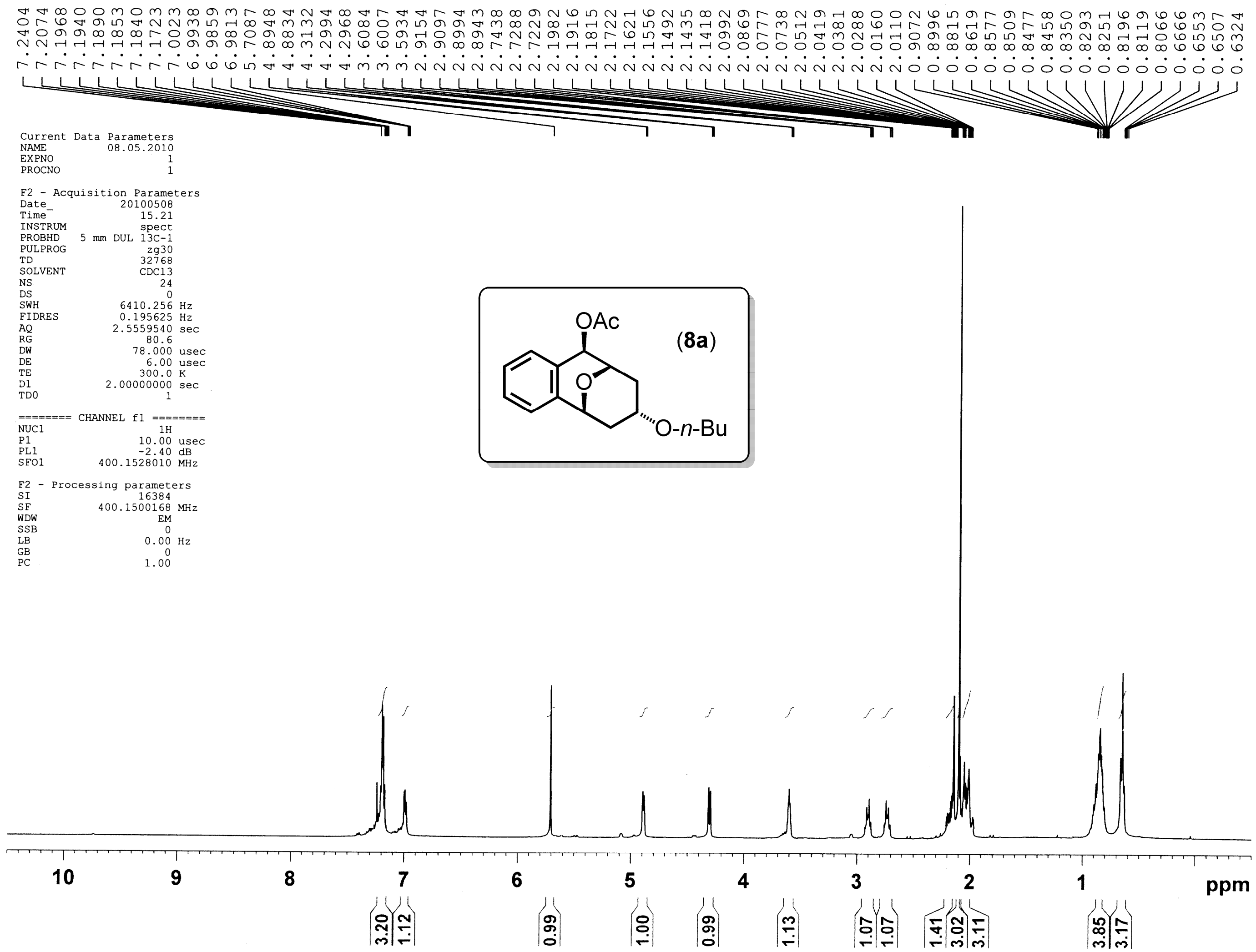

TMT944-1H
exp1 Proton
SAMPLE
date Sep 22 2009
solvent cdcl3
file exp
ACQUISITION
sw 6410.3
at 2.700
np 34616
fb 4000
bs 4
ss 2
d1 1.000
nt 100
ct 44
TRANSMITTER
tn H1
sfrq 399.768
tof 399.7
tpwr 59
pw 6.400
DECOUPLER
dn C13
dof 0
dm nnn
dmm c
dpwr 35
dmf 29412
SPECIAL
temp not used
gain not used
spin not used
hst 0.008
pw90 12.800
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
fn 65536
DISPLAY
sp -199.9
wp 4197.5
rfl 3708.7
rfp 2894.3
rp 54.6
lp -4.2
PLOT
wc 250
sc 0
vs 200
th 10
ai ph
7.469 7.452 7.450 7.253 7.240 7.237 7.234 7.193 7.046 7.045 7.027 7.026
4.958 4.939
4.695
4.157 4.139 4.136 4.133 3.468 3.465 3.463 3.460 3.451 3.448 3.446 3.443
1.636 1.626 1.604 1.594 1.132 1.129 1.115 1.112 1.098 1.095
O
O
OEt
H
(7)
9 8 7 6 5 4 3 2 1 0 ppm
1.00 1.48 1.10 1.08 0.97 0.94 2.04 1.12 2.44 1.18 1.20 1.35 1.59 3.82

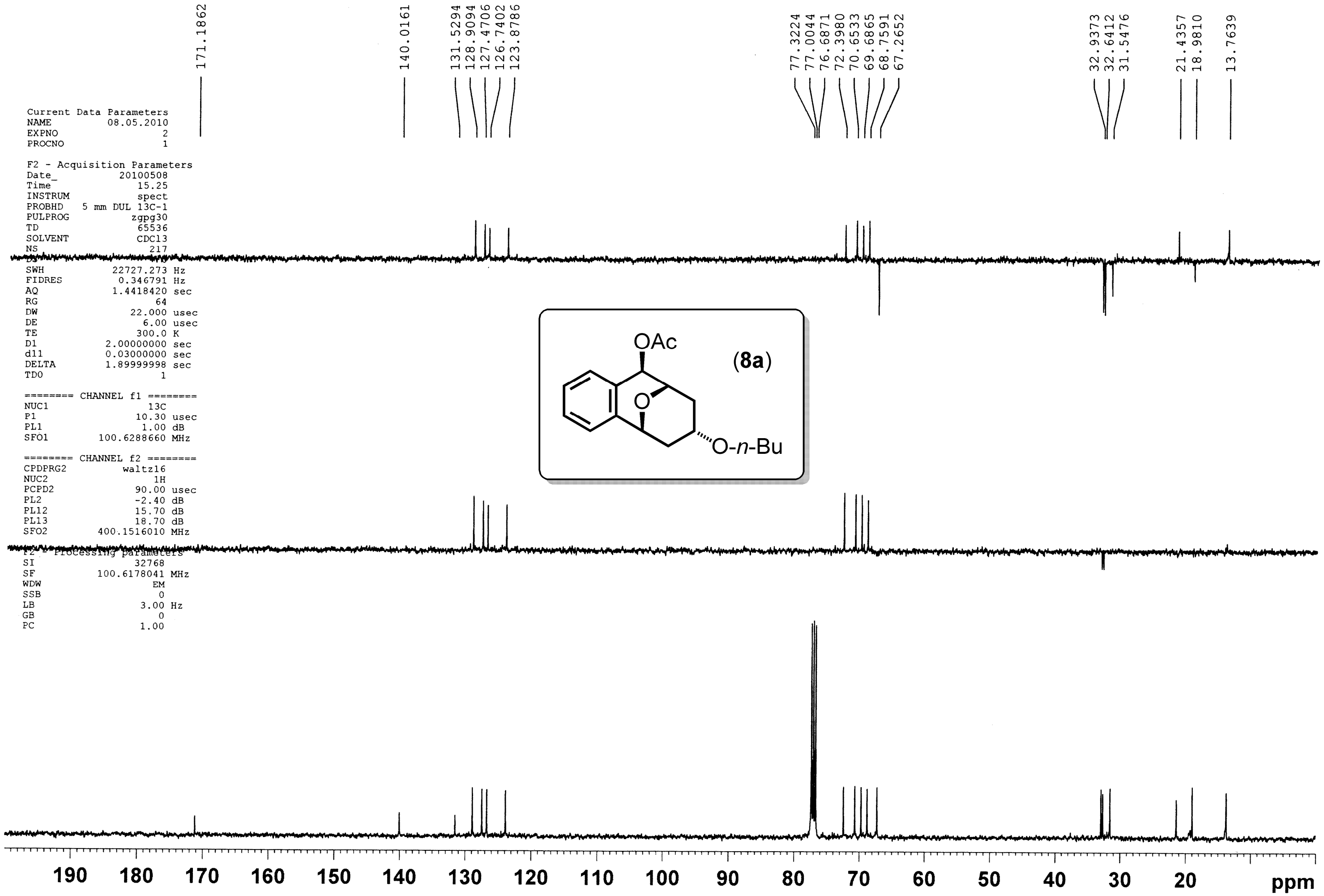

TMT944-13C
exp2 Carbon
SAMPLE
date Sep 22 2009
solvent cdcl3
file exp
ACQUISITION
sw 24509.8
at 1.300
np 63750
fb 17000
bs 4
d1 1.500
nt 1000
ct 328
TRANSMITTER
tn C13
sfrq 100.532
tof 1028.0
tpwr 56
pw 4.750
DECOUPLER
dn H1
dof 0
dm yyy
dmm w
dpwr 40
dmf 10267
SPECIAL
temp not used
gain 30
spin not used
hst 0.008
pw90 9.500
alfa 10.000
FLAGS
il n
in n
dp y
hs nn
PROCESSING
lb 0.50
fn not used
DISPLAY
sp -1005.3
wp 22114.0
rfl 9441.0
rfp 7740.1
rp -11.4
lp 43.2
PLOT
wc 250
sc 0
vs 25000
th 5
ai cdc ph
141.409
132.086
130.121
127.584
127.510
123.350
87.946
79.359
77.320
77.000
76.680
76.144
73.726
66.947
66.426
38.790
35.345
15.284
200
180
160
140
120
100
80
60
40
20
0 ppm
O
O
OEt
H

(7)

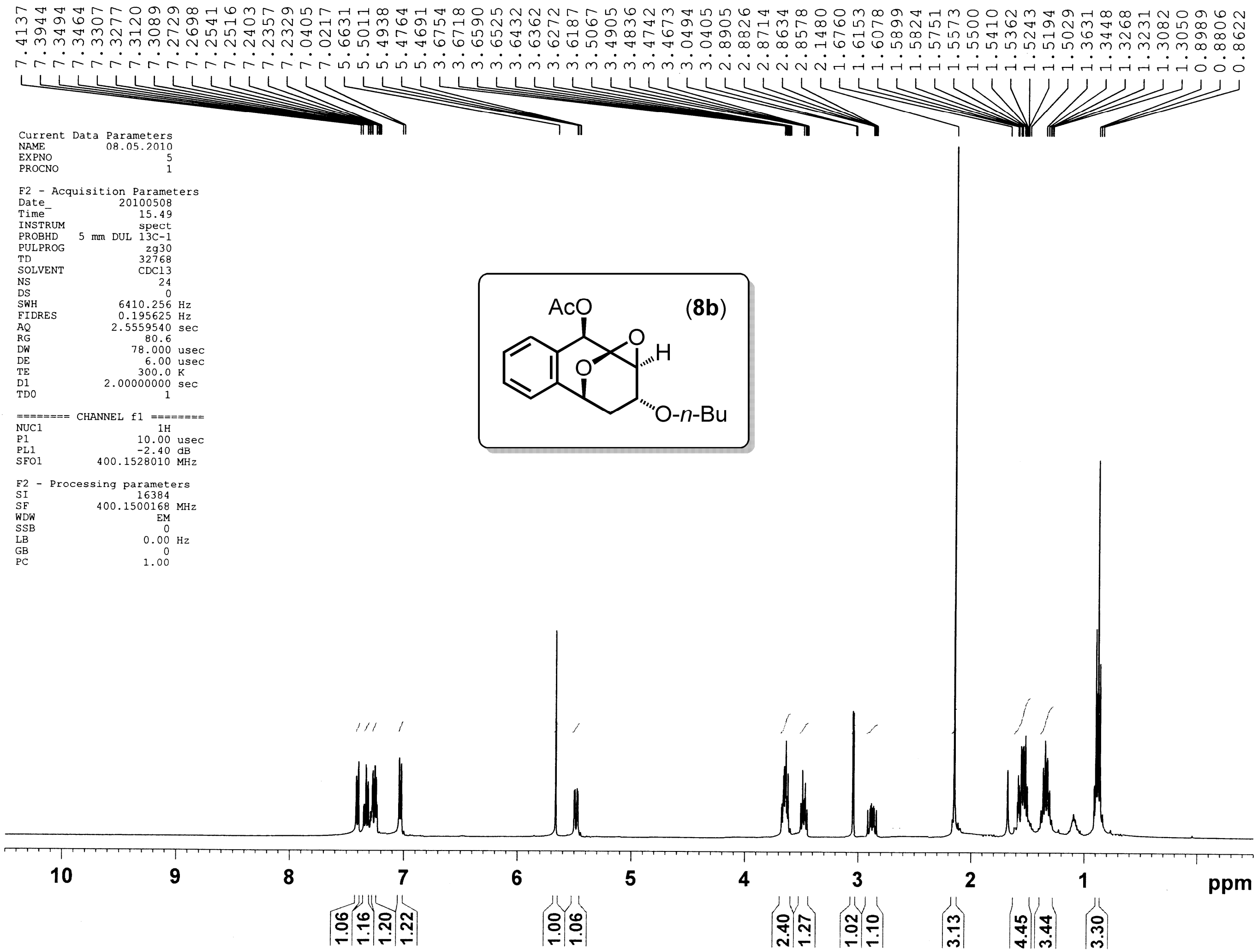

ppm
8
6
4
2
0
ppm
140
120
100
80
60
40
20

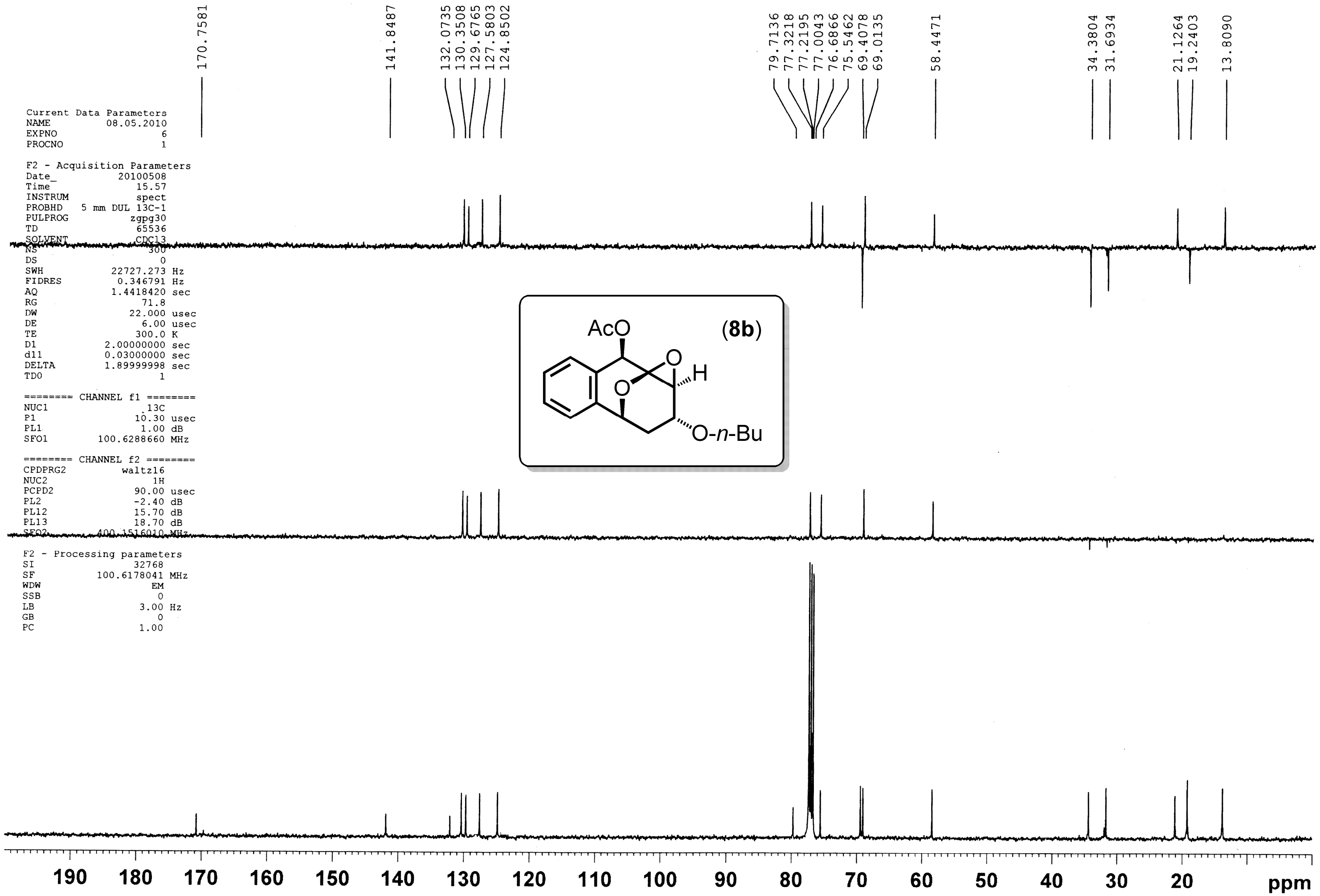
O
O
OEt
H
(7)


7.2404
7.2074
7.1968
7.1940
7.1890
7.1853
7.1840
7.1723
7.0023
6.9938
6.9859
6.9813
5.7087
4.8948
4.8834
4.3132
4.2994
4.2968
3.6084
3.6007
3.5934
2.9154
2.9097
2.8994
2.8943
2.7438
2.7288
2.7229
2.1982
2.1916
2.1815
2.1722
2.1621
2.1556
2.1492
2.1435
2.1418
2.0992
2.0869
2.0777
2.0738
2.0512
2.0419
2.0381
2.0288
2.0160
2.0110
0.9072
0.8996
0.8815
0.8619
0.8577
0.8509
0.8477
0.8458
0.8350
0.8293
0.8251
0.8196
0.8119
0.8066
0.6666
0.6553
0.6507
0.6324
Current Data Parameters
NAME 08.05.2010
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100508
Time 15.21
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 80.6
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
OAc
O
O-n-Bu
(8a)
10
9
8
7
6
5
4
3
2
1
ppm
3.20
1.12
0.99
1.00
0.99
1.13
1.07
1.07
1.41
3.02
3.11
3.85
3.17

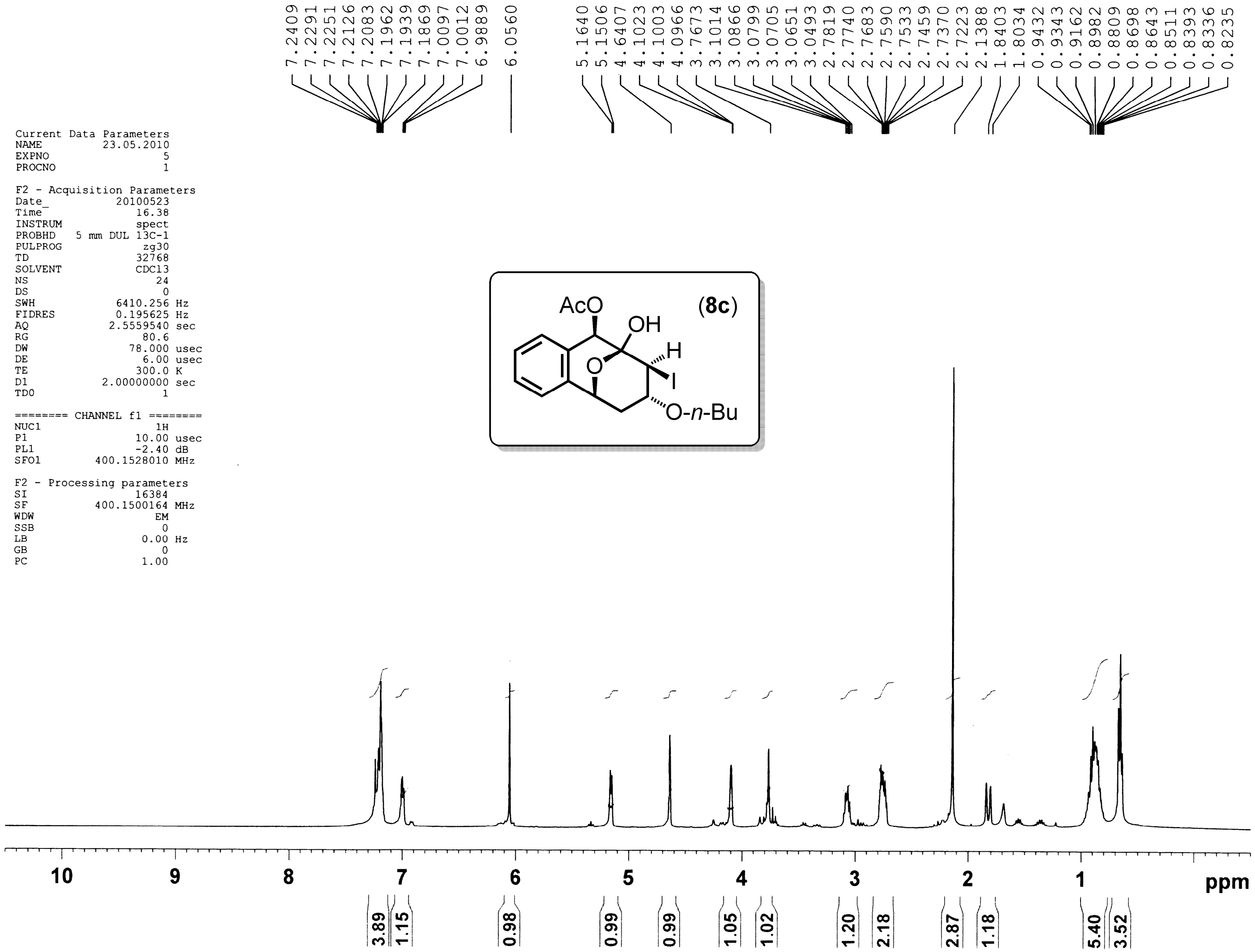


171.1862
140.0161
131.5294
128.9094
127.4706
126.7402
123.8786
77.3224
77.0044
76.6871
72.3980
70.6533
69.6865
68.7591
67.2652
32.9373
32.6412
31.5476
21.4357
18.9810
13.7639
Current Data Parameters
NAME 08.05.2010
EXPNO 2
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100508
Time 15.25
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 217
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 64
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178041 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OAc
O
O-n-Bu
(8a)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm


7.4137
7.3944
7.3494
7.3464
7.3307
7.3277
7.3120
7.3089
7.2729
7.2698
7.2541
7.2516
7.2403
7.2357
7.2329
7.0405
7.0217
5.6631
5.5011
5.4938
5.4764
5.4691
3.6754
3.6718
3.6590
3.6525
3.6432
3.6362
3.6272
3.6187
3.5067
3.4905
3.4836
3.4742
3.4673
3.0494
3.0405
2.8905
2.8826
2.8714
2.8634
2.8578
2.1480
1.6760
1.6153
1.6078
1.5899
1.5824
1.5751
1.5573
1.5500
1.5410
1.5362
1.5243
1.5194
1.5029
1.3631
1.3448
1.3268
1.3231
1.3082
1.3050
0.8989
0.8806
0.8622
Current Data Parameters
NAME 08.05.2010
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100508
Time 15.49
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 80.6
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
AcO
(8b)
O
H
O
O-n-Bu
10
9
8
7
6
5
4
3
2
1
ppm
1.06
1.16
1.20
1.22
1.00
1.06
2.40
1.27
1.02
1.10
3.13
4.45
3.44
3.30



170.7581
141.8487
132.0735
130.3508
129.6765
127.5803
124.8502
79.7136
77.3218
77.2195
77.0043
76.6866
75.5462
69.4078
69.0135
58.4471
34.3804
31.6934
21.1264
19.2403
13.8090
Current Data Parameters
NAME 08.05.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100508
Time 15.57
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 300
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178041 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
AcO
(8b)
O
H
O
O-n-Bu
190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm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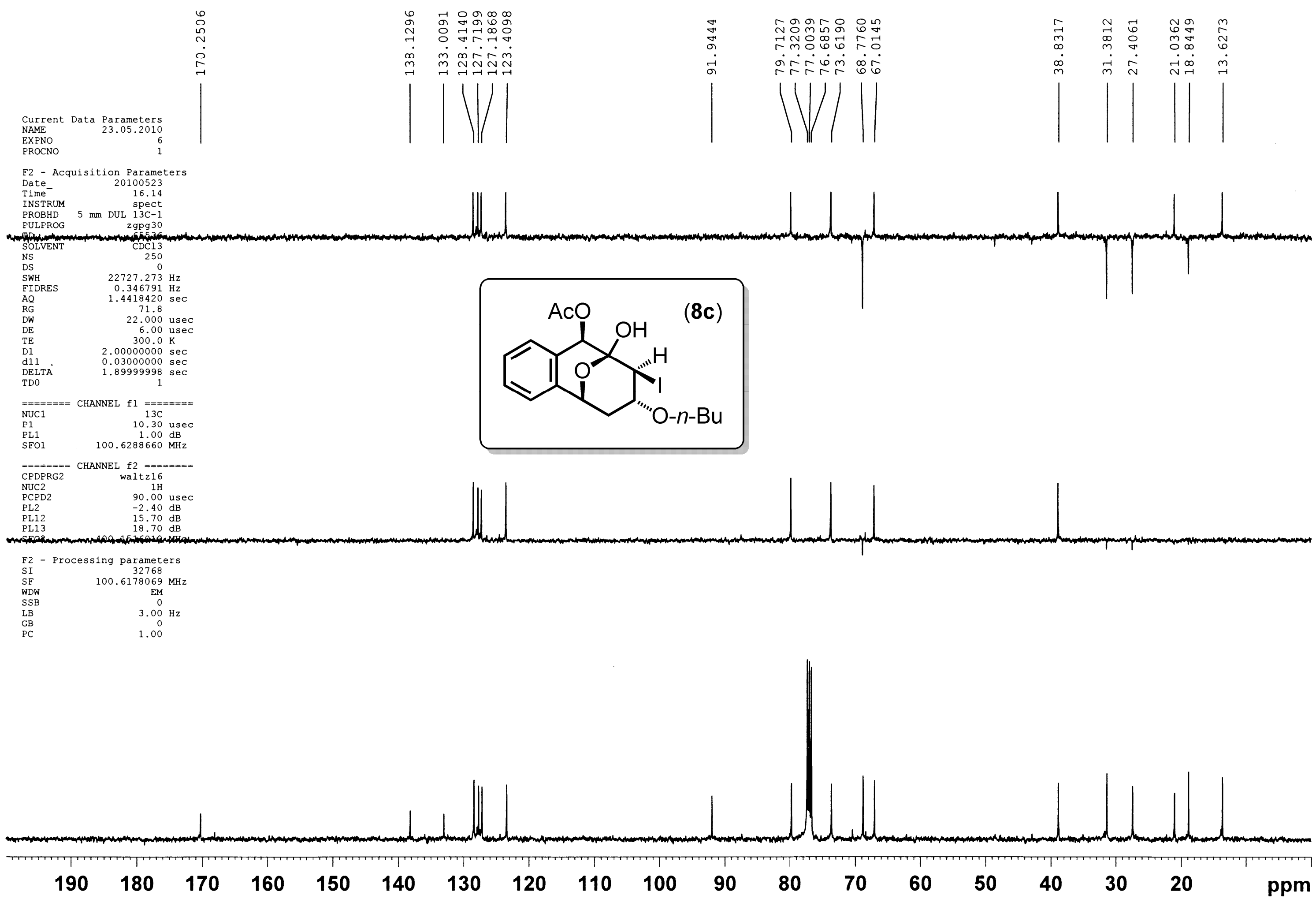
6.0560
5.1640 5.1506 4.6407 4.1023 4.1003 4.0966 3.7673 3.1014 3.0866 3.0799 3.0705 3.0651 3.0493 2.7819 2.7740 2.7683 2.7590 2.7533 2.7459 2.7370 2.7223 2.1388 1.8403 1.8034 0.9432 0.9343 0.9162 0.8982 0.8809 0.8698 0.8643 0.8511 0.8393 0.8336 0.8235
Current Data Parameters
NAME 23.05.2010
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100523
Time 16.38
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 24
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 80.6
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500164 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
AcO
OH
H
I
O
O-n-Bu
(8c)
10 9 8 7 6 5 4 3 2 1 ppm
3.89 1.15 0.98 0.99 0.99 1.05 1.02 1.20 2.18 2.87 1.18 5.40 3.52

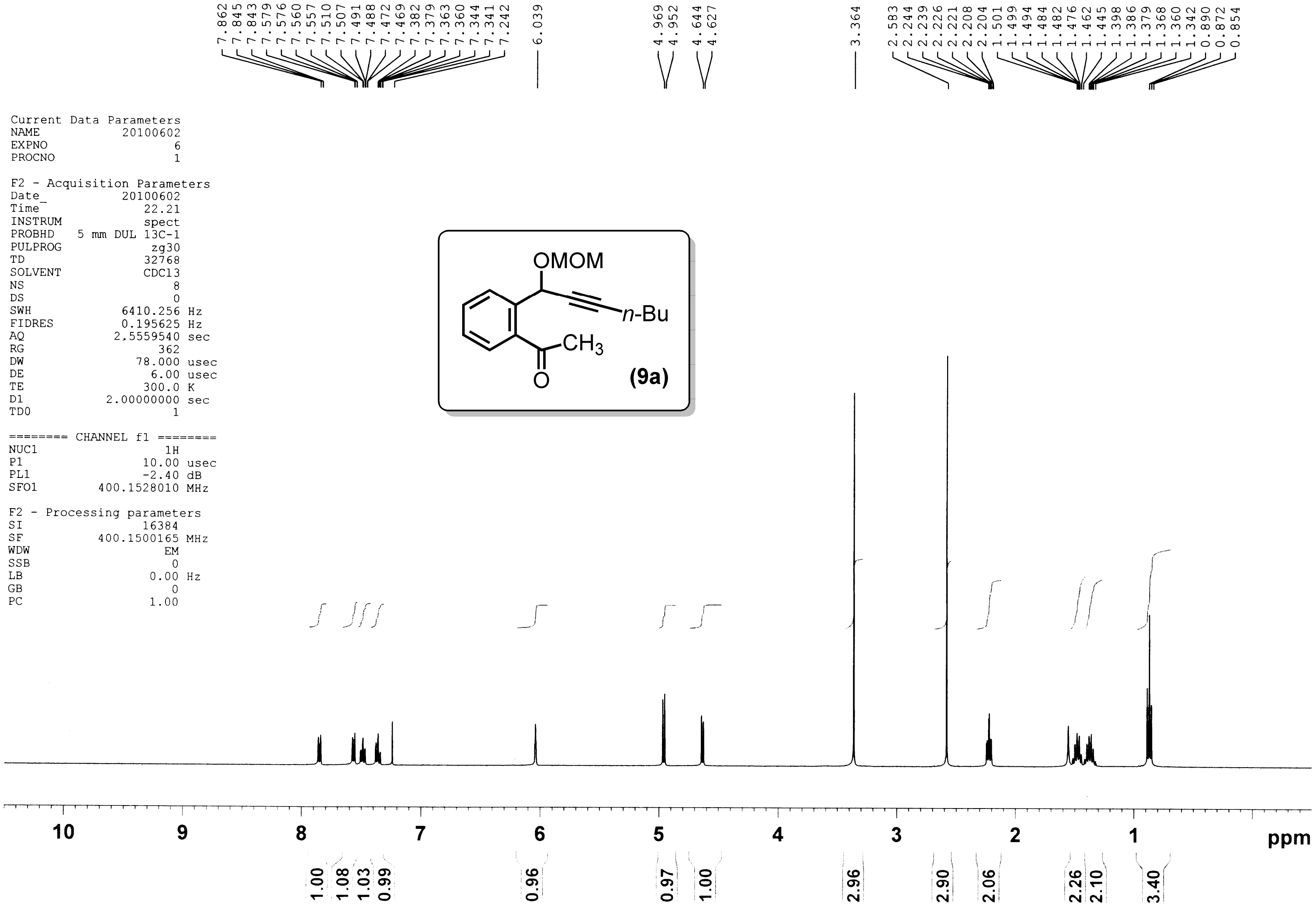

170.2506
138.1296
133.0091
128.4140
127.7199
127.1868
123.4098
91.9444
79.7127
77.3209
77.0039
76.6857
73.6190
68.7760
67.0145
38.8317
31.3812
27.4061
21.0362
18.8449
13.6273
Current Data Parameters
NAME 23.05.2010
EXPNO 6
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100523
Time 16.14
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
SOLVENT CDCl3
NS 250
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 71.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
F2 - Processing parameters
SI 32768
SF 100.6178069 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
AcO
OH
H
I
O
O-n-Bu
(8c)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
ppm

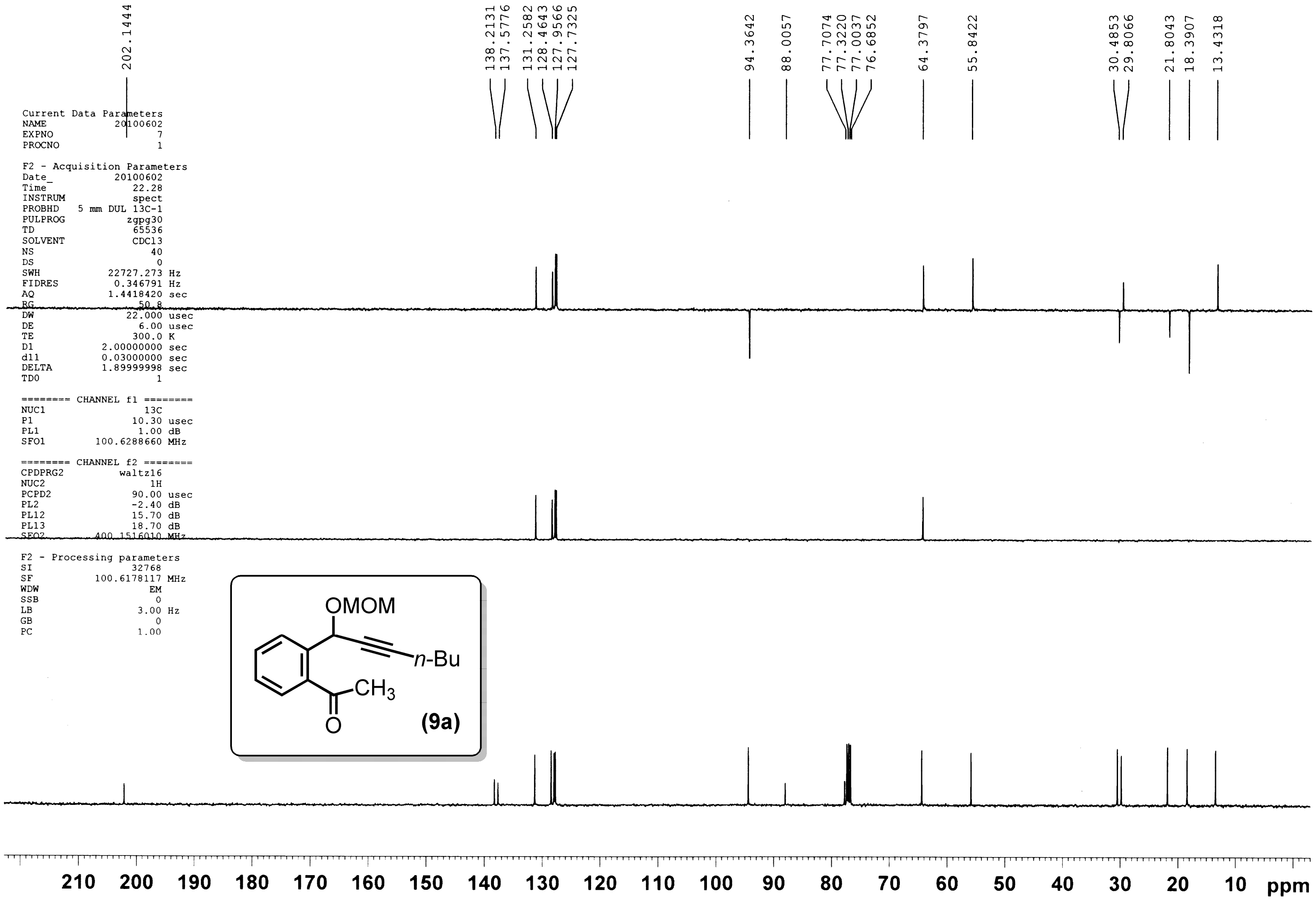
Current Data Parameters
NAME 20100602
EXPNO 6
PROCNO 1

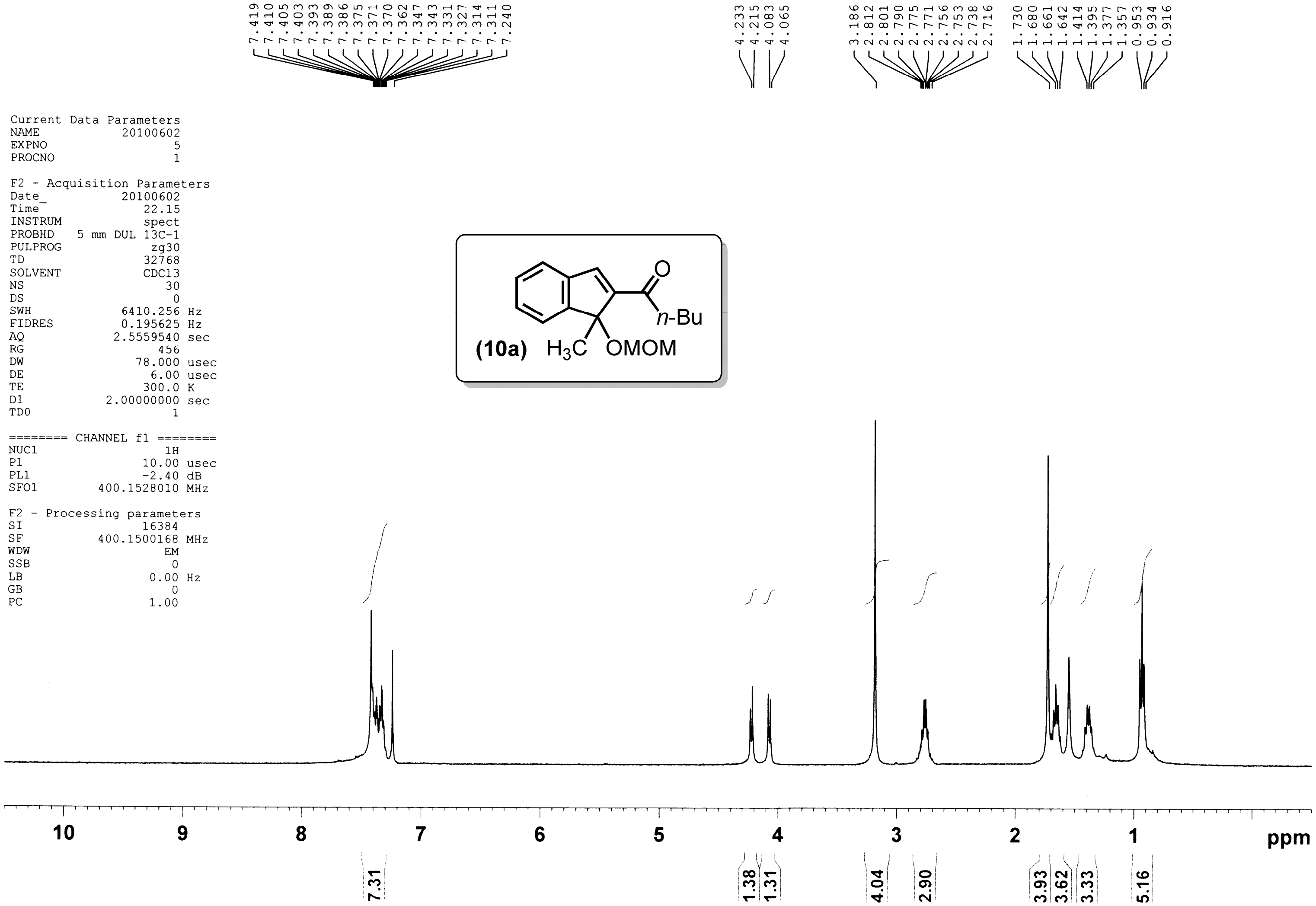
F2 - Acquisition Parameters
Date_ 20100602
Time 22.21
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 8
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 362
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1

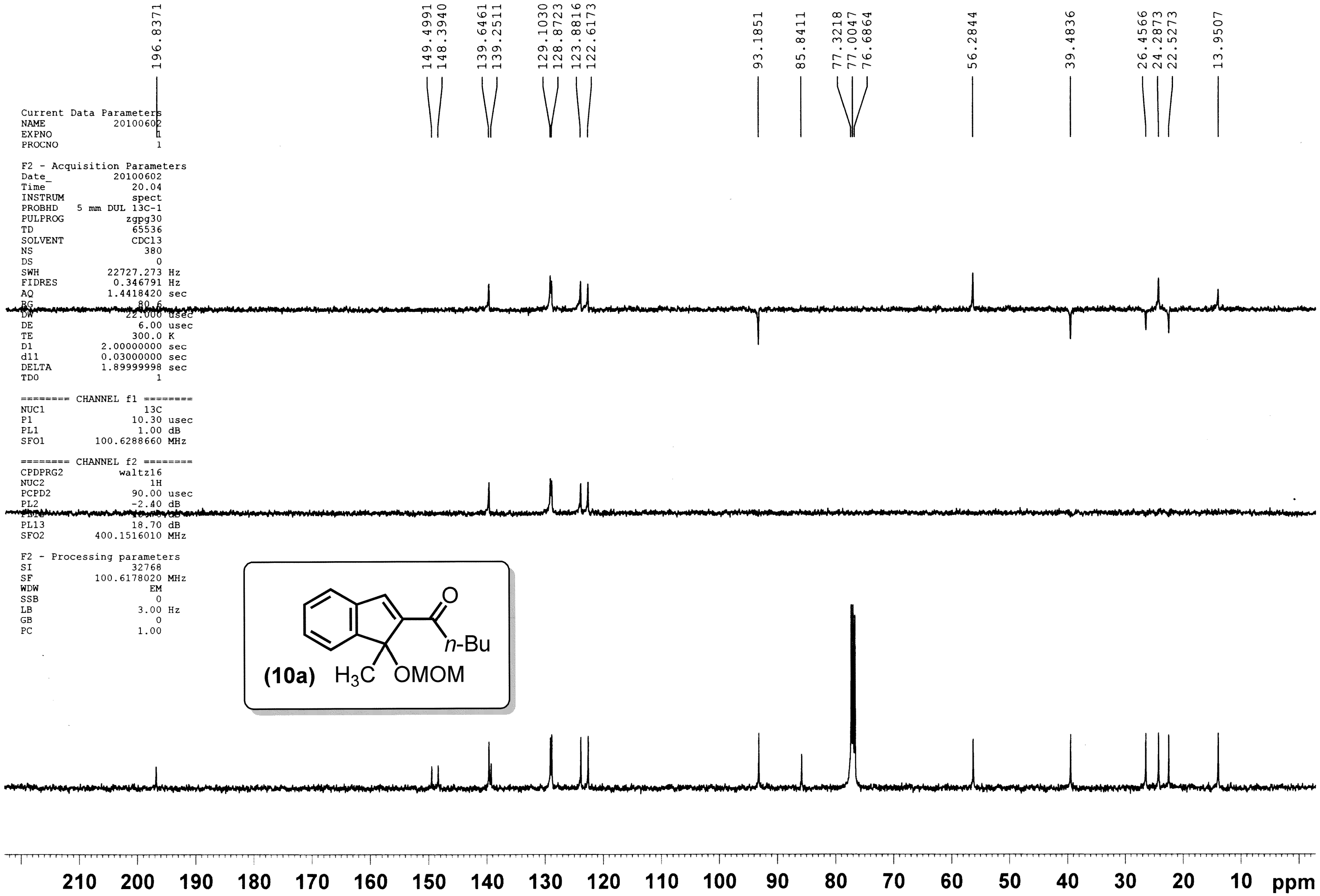
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz

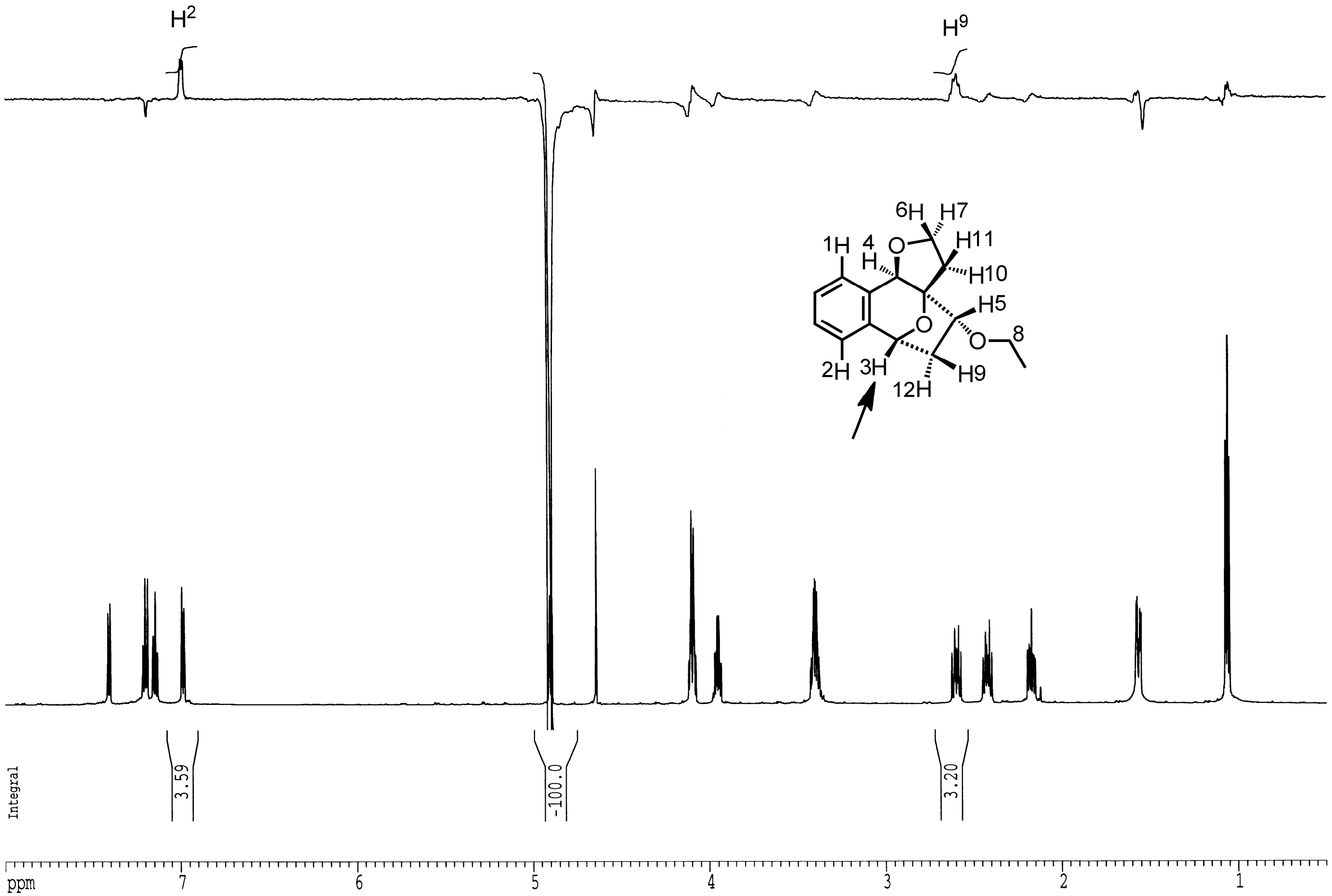
F2 - Processing parameters
SI 16384
SF 400.1500165 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00



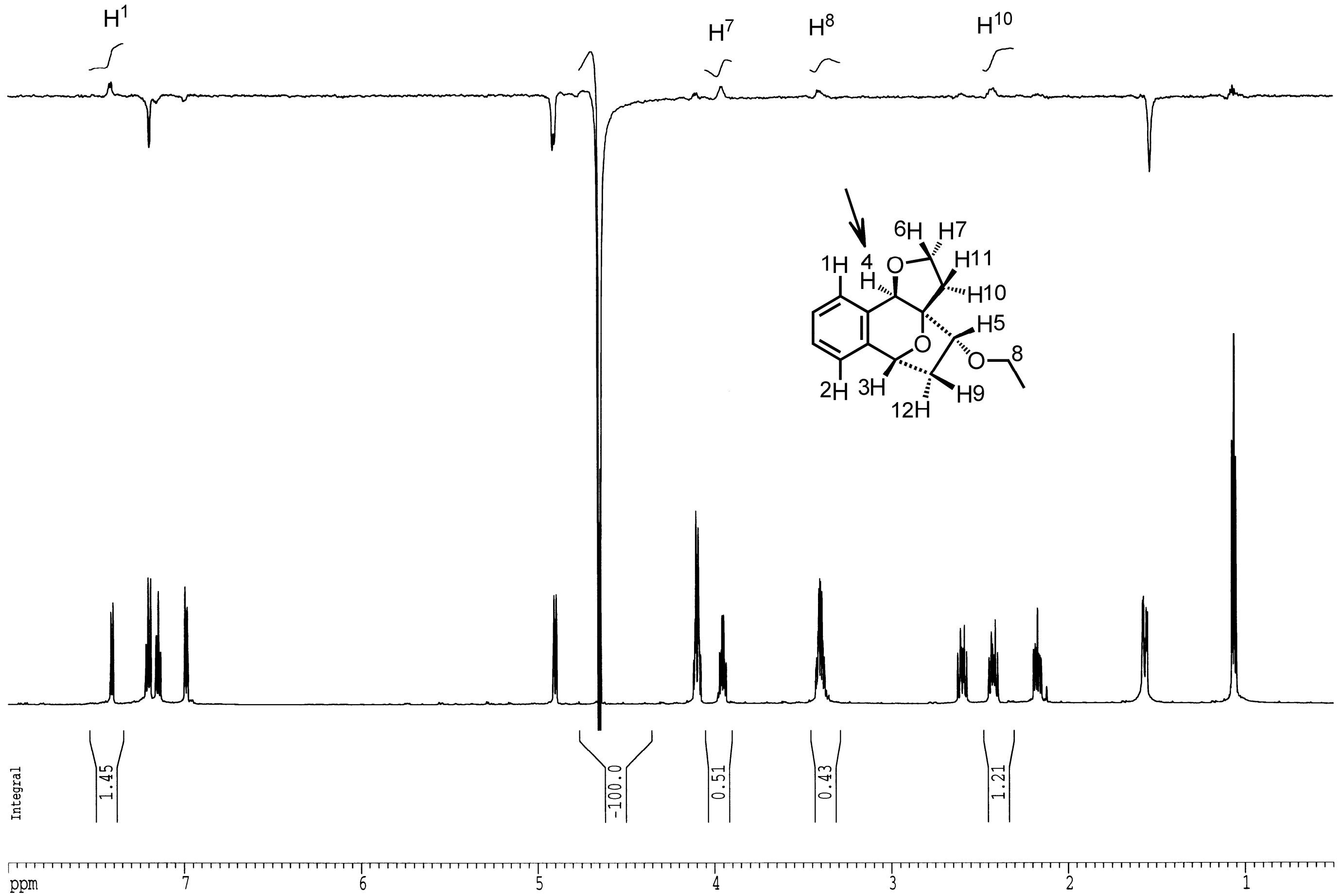

202.1444
138.2131
137.5776
131.2582
128.4643
127.9566
127.7325
94.3642
88.0057
77.7074
77.3220
77.0037
76.6852
64.3797
55.8422
30.4853
29.8066
21.8043
18.3907
13.4318
Current Data Parameters
NAME 20100602
EXPNO 7
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100602
Time 22.28
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 40
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 50.8
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL12 15.70 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178117 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
OMOM
n-Bu
CH3
O
(9a)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

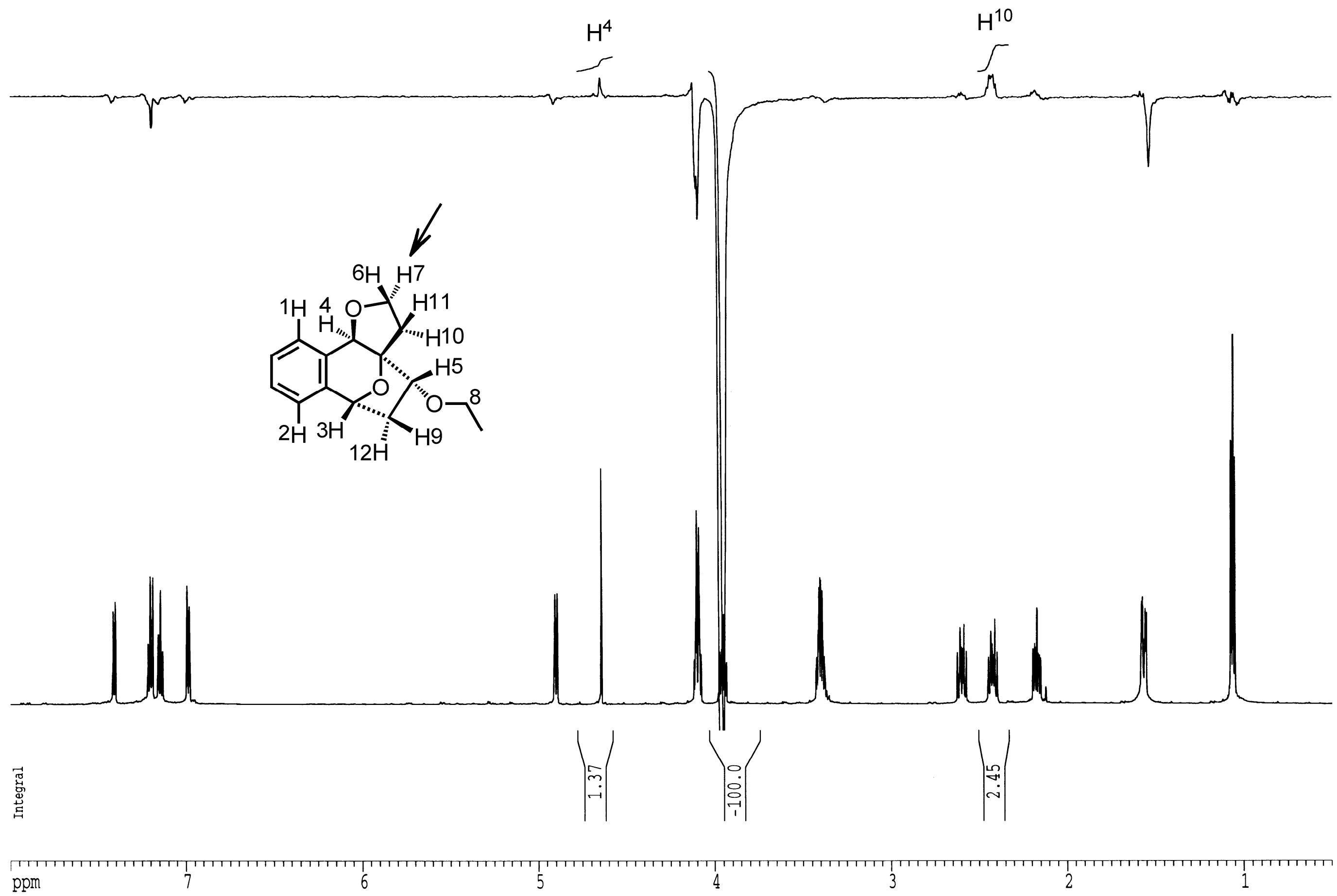

7.419
7.410
7.405
7.403
7.393
7.389
7.386
7.375
7.371
7.370
7.362
7.347
7.343
7.331
7.327
7.314
7.311
7.240
4.233
4.215
4.083
4.065
3.186
2.812
2.801
2.790
2.775
2.771
2.756
2.753
2.738
2.716
1.730
1.680
1.661
1.642
1.414
1.395
1.377
1.357
0.953
0.934
0.916
Current Data Parameters
NAME 20100602
EXPNO 5
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100602
Time 22.15
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT CDCl3
NS 30
DS 0
SWH 6410.256 Hz
FIDRES 0.195625 Hz
AQ 2.5559540 sec
RG 456
DW 78.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
TD0 1
======== CHANNEL f1 ========
NUC1 1H
P1 10.00 usec
PL1 -2.40 dB
SFO1 400.1528010 MHz
F2 - Processing parameters
SI 16384
SF 400.1500168 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
(10a)
H3C
OMOM
O
n-Bu
10
9
8
7
6
5
4
3
2
1
ppm
7.31
1.38
1.31
4.04
2.90
3.93
3.62
3.33
5.16

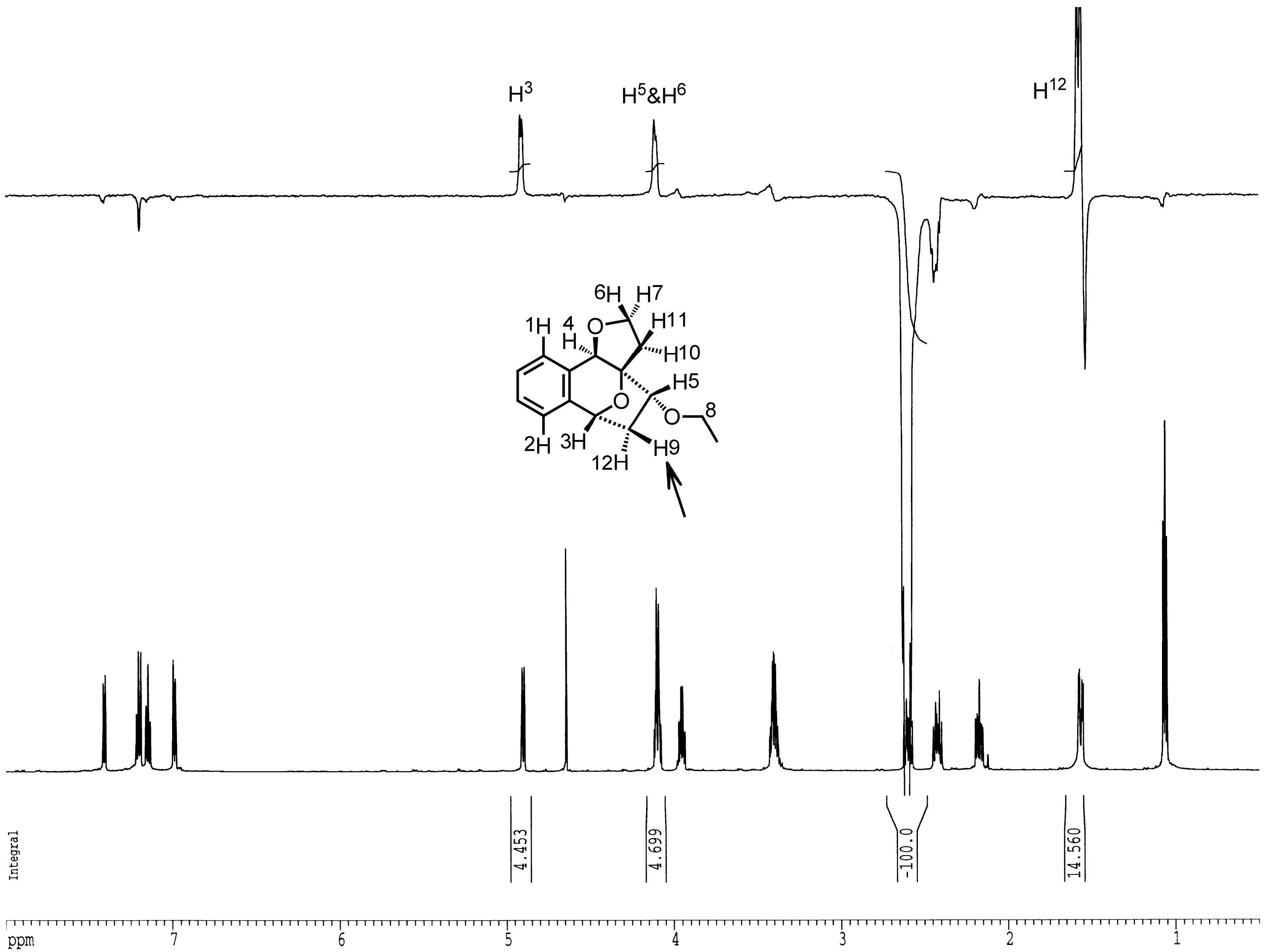

196.8371
149.4991
148.3940
139.6461
139.2511
129.1030
128.8723
123.8816
122.6173
93.1851
85.8411
77.3218
77.0047
76.6864
56.2844
39.4836
26.4566
24.2873
22.5273
13.9507
Current Data Parameters
NAME 20100602
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20100602
Time 20.04
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 380
DS 0
SWH 22727.273 Hz
FIDRES 0.346791 Hz
AQ 1.4418420 sec
RG 80.6
DW 22.000 usec
DE 6.00 usec
TE 300.0 K
D1 2.00000000 sec
d11 0.03000000 sec
DELTA 1.89999998 sec
TD0 1
======== CHANNEL f1 ========
NUC1 13C
P1 10.30 usec
PL1 1.00 dB
SFO1 100.6288660 MHz
======== CHANNEL f2 ========
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.40 dB
PL13 18.70 dB
SFO2 400.1516010 MHz
F2 - Processing parameters
SI 32768
SF 100.6178020 MHz
WDW EM
SSB 0
LB 3.00 Hz
GB 0
PC 1.00
(10a)
O
n-Bu
H3C
OMOM
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm



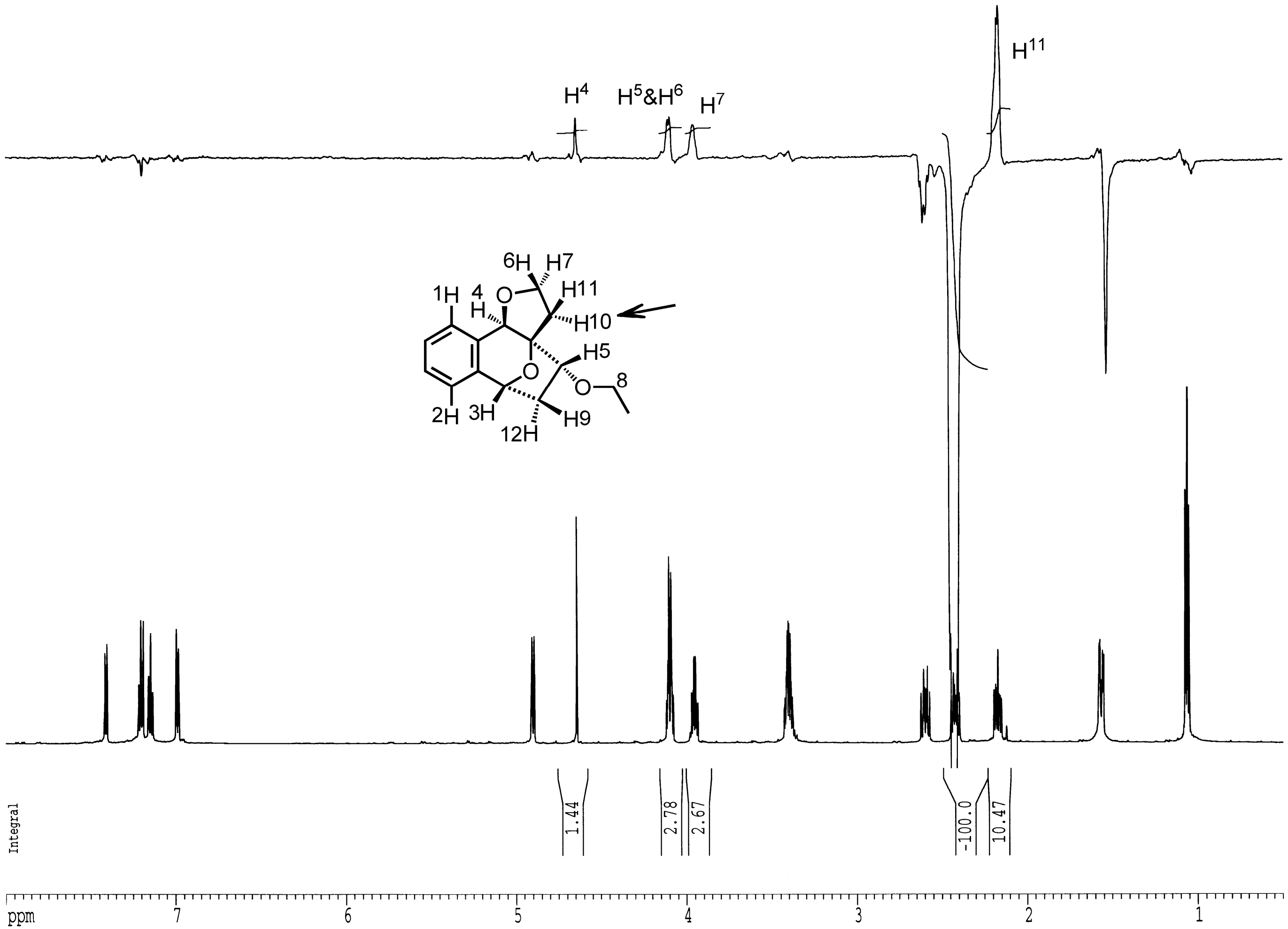
H2
H9
1H
4
H
6H
H7
H11
H10
H5
8
2H
3H
H9
12H
Integral
3.59
-100.0
3.20
ppm
7
6
5
4
3
2
1


H1
H7
H8
H10
1H
4
H
6H
H7
H11
H10
H5
O
O
8
2H
3H
12H
H9
Integral
1.45
-100.0
0.51
0.43
1.21
ppm
7
6
5
4
3
2
1

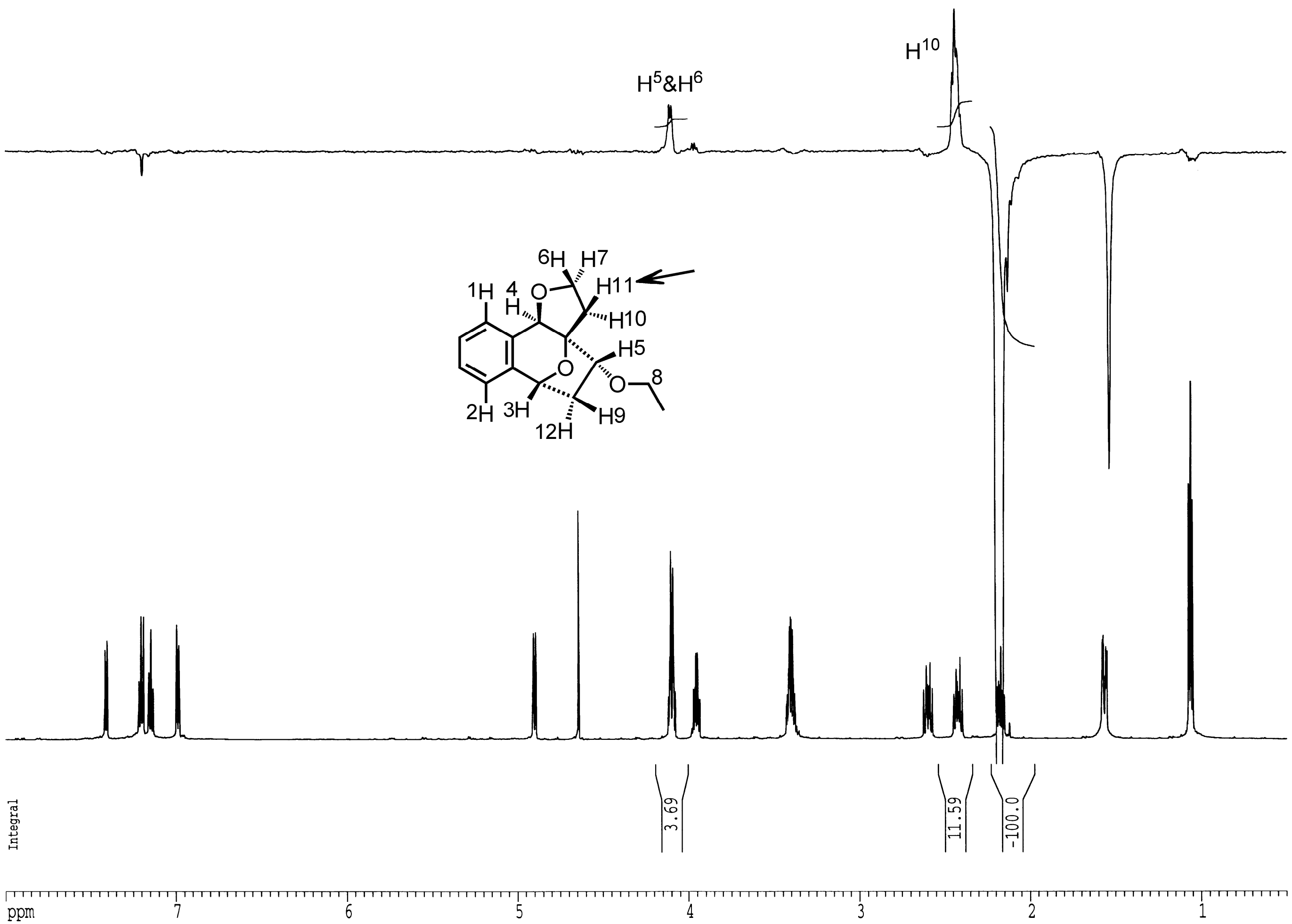

H4
H10
6H
H7
1H
4
H
O
H11
H10
H5
O
O
8
2H
3H
H9
12H
Integral
1.37
-100.0
2.45
ppm
7
6
5
4
3
2
1

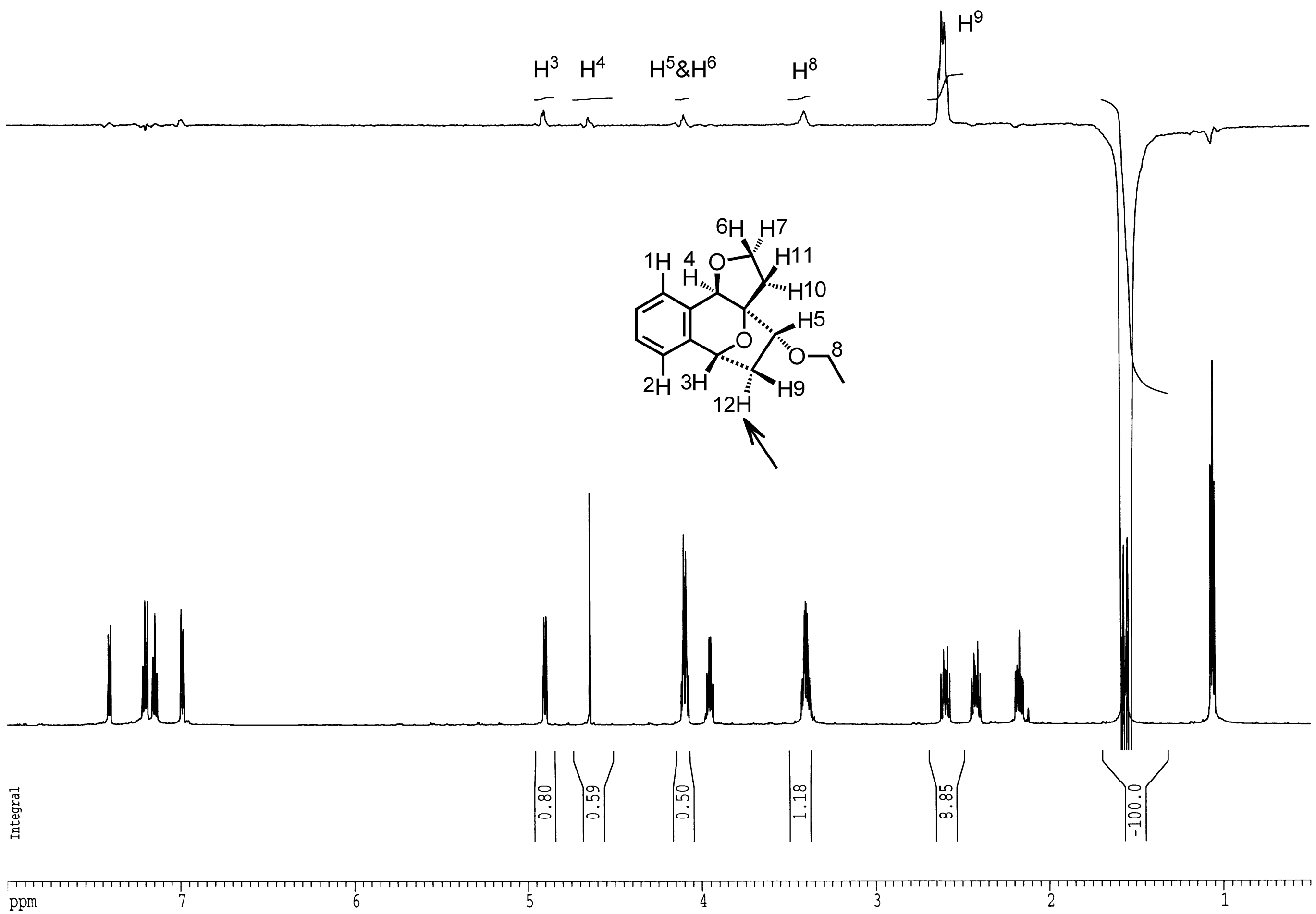


H3
H5&H6
H12
6H
H7
1H
4
H
H11
H10
H5
O
O
O
8
2H
3H
12H
H9
Integral
4.453
4.699
-100.0
14.560
ppm
7
6
5
4
3
2
1



H4
H5&H6
H7
H11
6H
H7
1H
4
H
O
H11
H10
H5
O
O
8
2H
3H
12H
H9
1.44
2.78
2.67
-100.0
10.47
Integral
ppm
7
6
5
4
3
2
1


H5&H6
H10
6H
H7
H11
1H
4
H
O
H10
H5
O
O
8
2H
3H
H9
12H
3.69
11.59
-100.0
Integral
ppm
7
6
5
4
3
2
1


H3
H4
H5&H6
H8
H9
6H
H7
1H
4
H
O
H11
H10
H5
O
O
8
2H
3H
H9
12H
0.80
0.59
0.50
1.18
8.85
-100.0
Integral
ppm
7
6
5
4
3
2
1