

-SI-

## Supporting Informations

### Hypervalent iodine (III) mediated oxidation of aldoximes to *N*-acetoxy or *N*-hydroxy amides

Harisadhan Ghosh and Bhisma K. Patel\*

Department of Chemistry, Indian Institute of Technology Guwahati 781 039, Assam, India.

[patal@iitg.ernet.in](mailto:patal@iitg.ernet.in)

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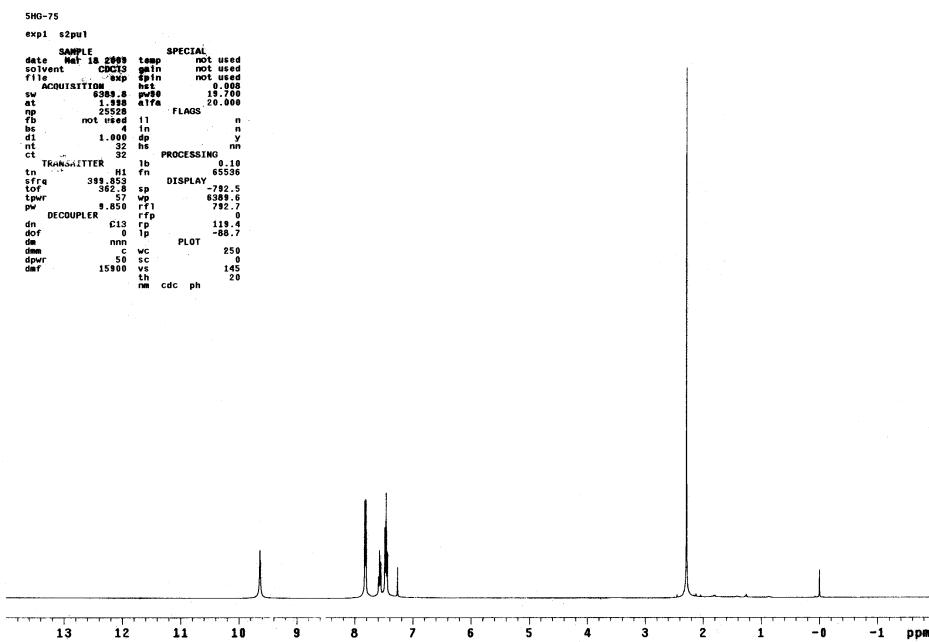
-S2-

**Preparation of starting aldoximes:**

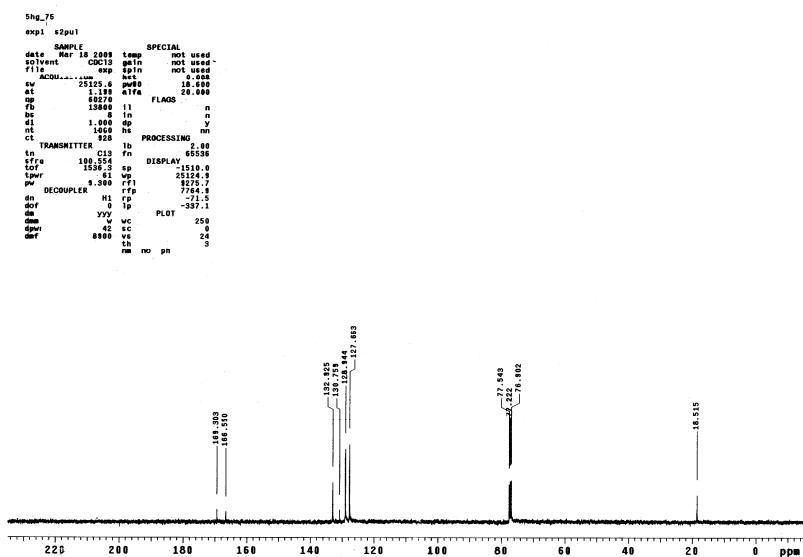
All aldoximes were prepared according to the reported procedure [see supporting information of B. A. Mendelsohn, S. Lee, S. Kim, F. Teyssier, V. S. Aulakh, M. A. Ciufolini *Org. Lett.*, **2009**, *11*, 1539–1542 or see E. Hauser in E. Muller, *Methoden der organischen Chemie (Houben-Weyl)* Vol. 2, p. 446. ThiemeVerlag, Stuttgart (1953)] and obtained as a mixture of *syn*- / *anti*- isomers, which were used without further purification.

Spectra

**N-Acetoxy-benzamide (1a):**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):



**N-Acetoxy-benzamide (1a):**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):



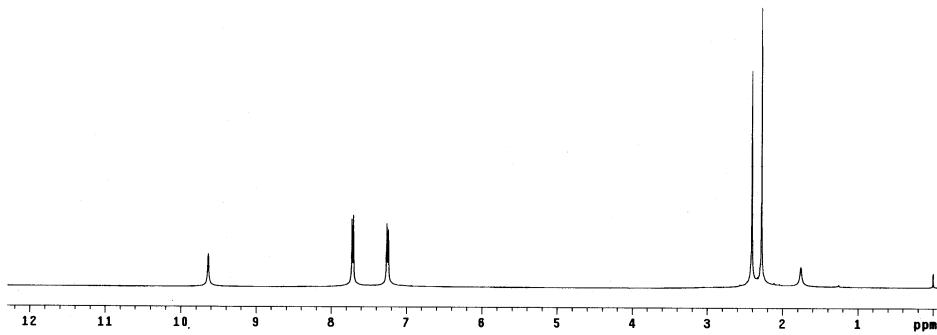
-S4-

**N-Acetoxy-4-methyl-benzamide (2a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):**

```

Shg_108
exp1 s2pul
SAMPLE CDCl3 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION exp hsqc 0.000
sw 6500.0 pw0 19.700
at 1.100 pdd 20.000
np 25528 flags
rb not used 11 in n
bs 16 in n
di 1.000 dp y
nt 32 ns m
ct 32 processing m
tn TRANSMITTER H1 fp 0.10
sfrq 399.853 fn DISPLAY 65536
tot 307.0 sp 3
tpwr 57 vrf 4992.2
pw 9.850 rrf1 792.3
DECOUPLER C13 rp 121.1
dof 0 lp -83.5
dm mm PLOT
dim c wc 250
dpwr 50 sc 0
dmr 15900 vs 75
dmf th 20
im cdc ph

```

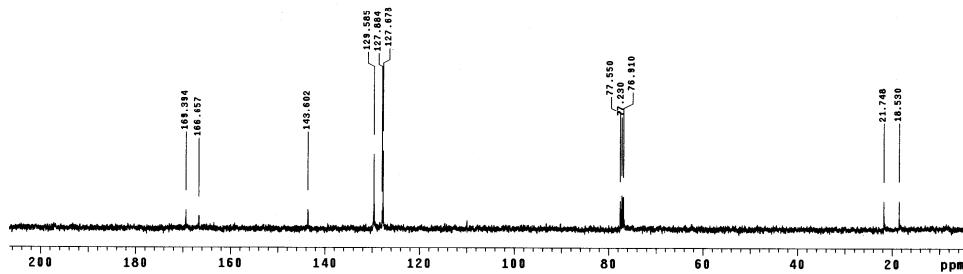


**N-Acetoxy-4-methyl-benzamide (2a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):**

```

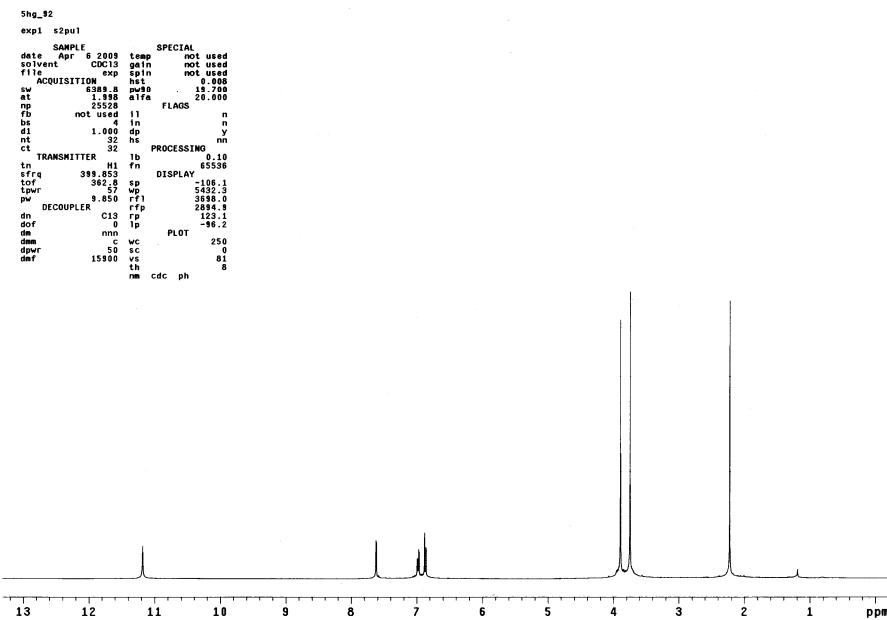
Shg_108
exp1 s2pul
SAMPLE CDCl3 temp not used
solvent CDCl3 gain not used
file exp spin not used
ACQUISITION exp hsqc 0.000
sw 25125.6 pw0 18.000
at 1.100 alfa 20.000
np 4096 flags
rb 13800 11 in n
bs 16 in n
di 1.000 dp y
nt 1000 ns m
ct 256 processing 2.00
tn TRANSMITTER C13 fp 65536
sfrq 100.554 fn DISPLAY 372.4
tot 1538.0 sp 20403.1
tpwr 8.300 vrf 924.3
pw 1.000 rrf1 774.3
DECOUPLER H1 rp -100.4
dof 0 lp -271.4
dm VVY PLOT
dim c wc 250
dpwr 42 sc 0
dmr 8900 vs 20
dmf th 2
im no ph

```

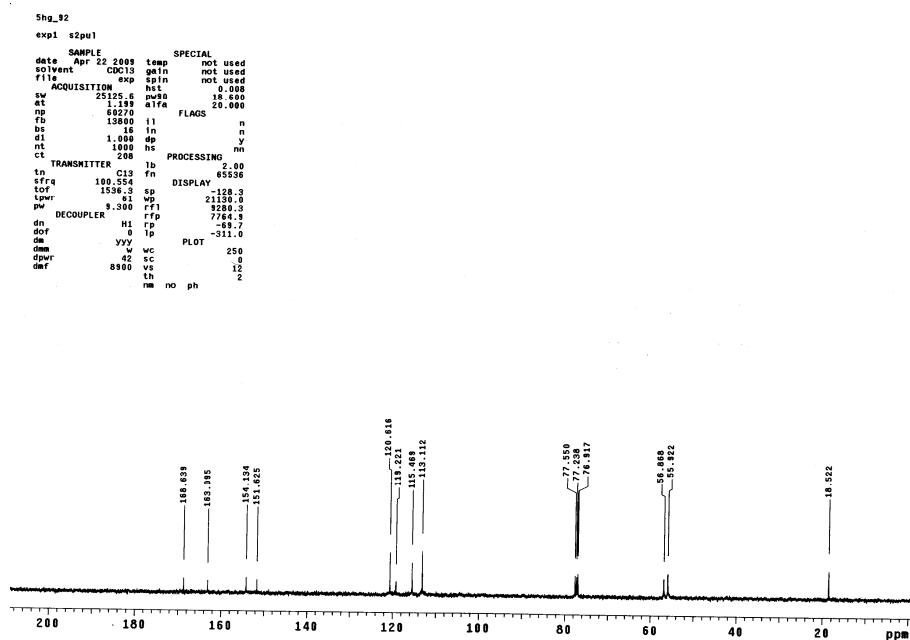


-S5-

**N-Acetoxy-2,5-dimethoxy-benzamide (3a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):**



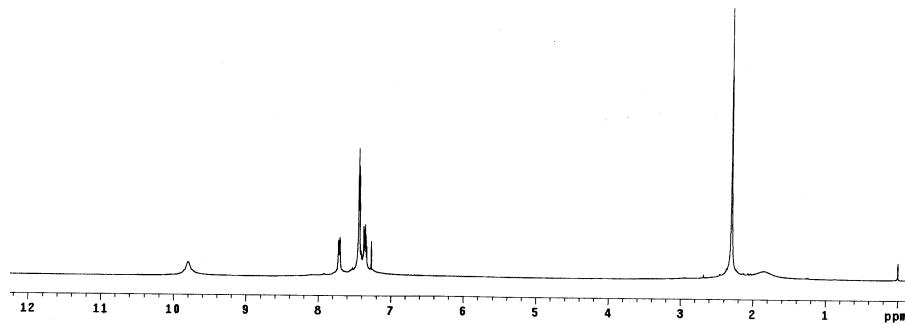
**N-Acetoxy-2,5-dimethoxy-benzamide (3a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):**



-S6-

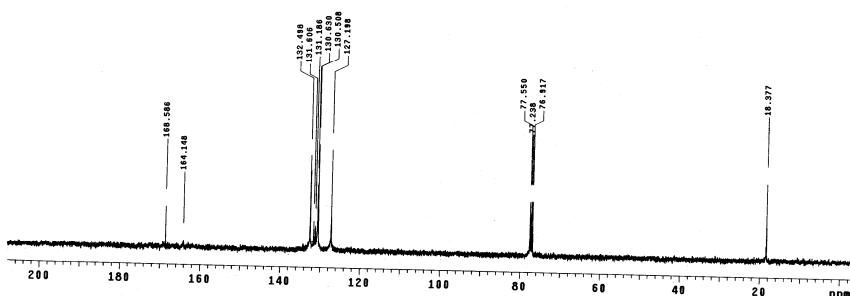
**N-Acetoxy-2-chloro-benzamide (4a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):**

```
Shg_81
expi 22pu1
SAMPLE SPECIAL
date May 18 2009 temp not used
solvent CDCl3 gain not used
f1frq 399.853 sp not used
f1dec 100.000 pw90 15.700
sw 6389.0 psw 19.700
at 25526 tfa 20.000
np 1
tr not used i1 n
bt 1.000 d1 n
d1 1.000 dp y
rt 32 hs nn
ct 32 PROCESSING
tn TRANSMITTER H1 lb 0.10
tn frq 65536
tn f1frq 399.853 sp DISPLAY
tn t1frq 1538.3 pw90 -7.5
tn t2frq 57 pw 5004.1
tn pw 9.850 r1 791.5
DECOUPLER C13 rfp 0
dn C13 rfp 116.1
dof 1.000 ip -106.9
dm nnn PLOT
dme c wc 250
dipr s rc 0
def 15900 vs 76
dfr 15900 th 76
rm cdc ph
```



**N-Acetoxy-2-chloro-benzamide (4a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):**

```
_R9
expi 22pu1
SAMPLE SPECIAL
date May 18 2009 temp not used
solvent CDCl3 gain not used
f1frq 100.000 sp not used
f1dec 1538.3 pw90 15.600
sw 2513.6 psw 18.600
at 1.199 tfa 20.000
np 1
tr 65536 i1 n
bt 1.000 d1 n
d1 1.000 hs y
rt 720 hs nn
ct 720 PROCESSING
tn TRANSMITTER H1 lb 2.00
tn frq 65536
tn f1frq 100.000 sp DISPLAY
tn t1frq 1538.3 pw90 -381.3
tn t2frq 57 pw 5278.7
tn pw 9.380 r1 7764.9
DECOUPLER C13 rfp 116.1
dn C13 rfp 116.1
dof 1.000 ip -344.7
dm vwc PLOT
dipr s rc 250
def 8900 vs 9
dfr 8900 th 31
rm no ph 2
```



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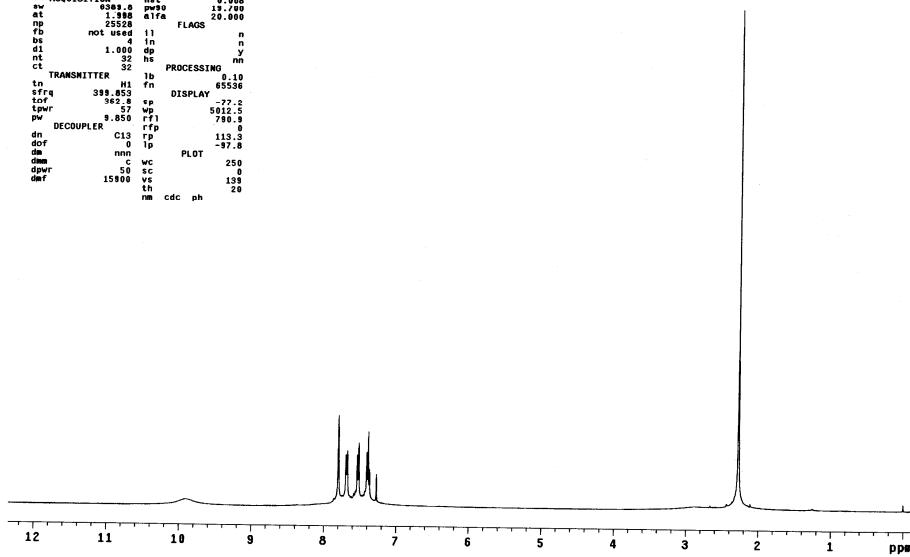
*N*-Acetoxy-3-chloro-benzamide (**5a**):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):

```

    .112
exp1 zpul

SAMPLE DATE May 14, 2008 LAMP SPECIAL
solvent CDCl3 gain not used
file spin not used
ACQUISITION pw03 13.7us
av 6383.0 pw05 20.00us
sc 25528 alfa 20.00us
fb not used 11 FLAG
t1 1.000 in r
dt 1.000 dp
ct 32 hs
tn TRANSMITTER 0.19
sfreq 398.835 DISPLAY 65536
tpw 362.5 up
tpwr 50.000 pmt 55.000
pw 3.850 rf1 790.000
DECOPPLER C13 rp 113.9
de mnm ip PLDT 1.000
dme mmc ip
dpm c wc 250.000
dpf 58 vc 139.000
dps 15800 ve 139.000
dpc 20 tc 139.000
dpc 20 tc 139.000

```



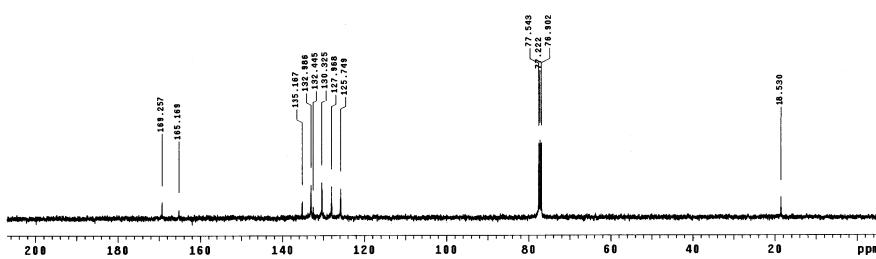
**N-Acetoxy-3-chloro-benzamide (5a):**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):

```

Shg_112
expl z2pul

date sample special
day 14 May 2008 temp not used
solvent CDCl3 gain not used
filler spin not used
sw acquisition 25125.6 pw0 18.600
            8.000 t90 20.000
np 8.000
tr 138.000 n n
dt 1.000 dp y
t1 50.000 p
ct 1392 PROCESSING 2.000
tn TRANSMITTER lb 65536
        rfra 100.154 nm DISPLAY -50.4
        tpfr 61 wp 2145.7
        tppr 61 rfp 7764.3
        dn H1 PLOT -48.0
        decoupler H1 PLOT -13.0
        dec H1 PLOT -13.0
        decy Y'Y" PLOT -13.0
        decdp 42 ZC 0.0
        decpw 8500 VS 2
        decrf 2500 nm 2
        decph 250 ph 2

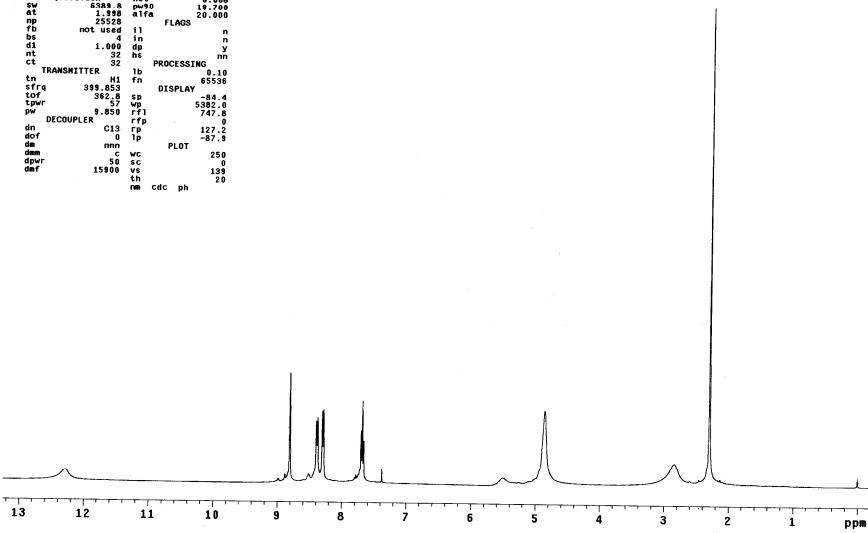
```



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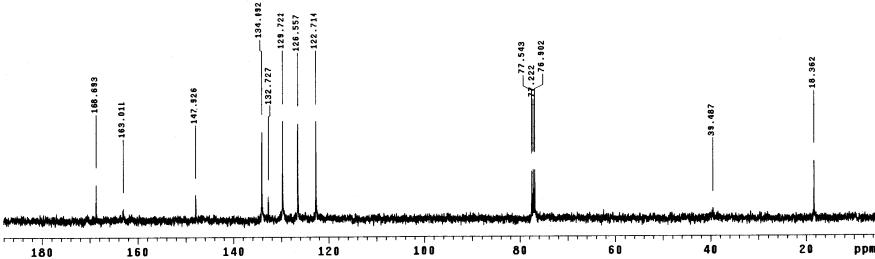
**N-Acetoxy-3-nitro-benzamide (6a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
5hg_115
exp1 s2pul
      SAMPLE          SPECIAL
date May 1 2009 temp   not used
tofile      exp   spin   not used
file       exp   spin   not used
sw ACQUISITION   hz    0.088
at        1.298   a1fa  17.29
sp        1.298   a1fa  20.000
rfb      not used  11   n
de        64      11   n
di        1.000   dp   X
nt        32      hs   nn
ct        32      hs   nn
TRANSMITTER   1b   PROCESSING 0.10
tn        11   fn   65536
sfrq     399.653  DISPLAY
tfrq     382.6   sp   44.4
tpr      747.6   sp   532.0
pw        9.850   r1f1  0
dn        C13   r1p  127.2
dotf      0      1p   -87.9
de        nnn   1p   PLOT
dmm      c   wc   250
dppr     15900  vs   0
dmf      15900  vs   139
      th   cdc  ph  20
      nm   no   sh
```



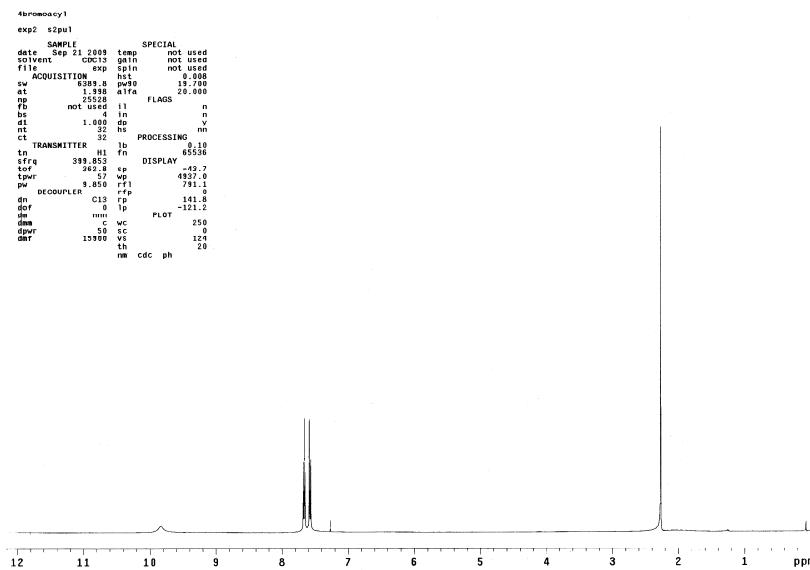
**N-Acetoxy-3-nitro-benzamide (6a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
5hg_115
exp1 s2pul
      SAMPLE          SPECIAL
date May 1 2009 temp   not used
tofile      exp   spin   not used
file       exp   spin   not used
sw ACQUISITION   hz    0.088
at        25125.6   a1fa  18.000
sp        1.198   a1fa  20.000
rfb      not used  11   n
de        13800   11   n
di        1.000   dp   X
nt        10000   hs   nn
ct        11   PROCESSING 2.00
tn        210   fn   65536
sfrq     100.554  DISPLAY
tfrq     1536.3   sp   453.0
tpr      18000  r1f1  18000.0
pw        9.380   r1f1  9291.6
dn        H1   r1p  7741.9
dotf      0      1p   -41.3
de        nnn   1p   PLOT
dmm      c   wc   250
dppr     42      vs   0
dmf      8500   vs   28
      th   cdc  ph  3
      nm   no   sh
```

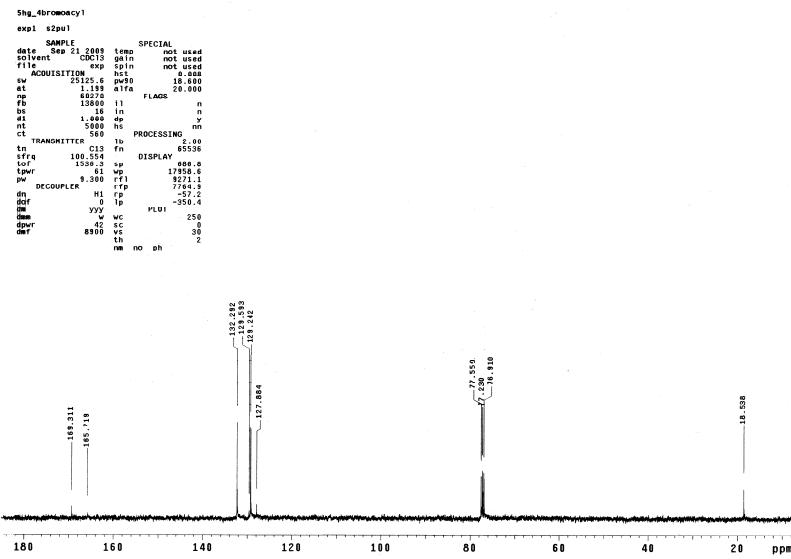


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**N-Acetoxy-4-bromo-benzamide (7a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):**



**N-Acetoxy-4-bromo-benzamide (7a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):**



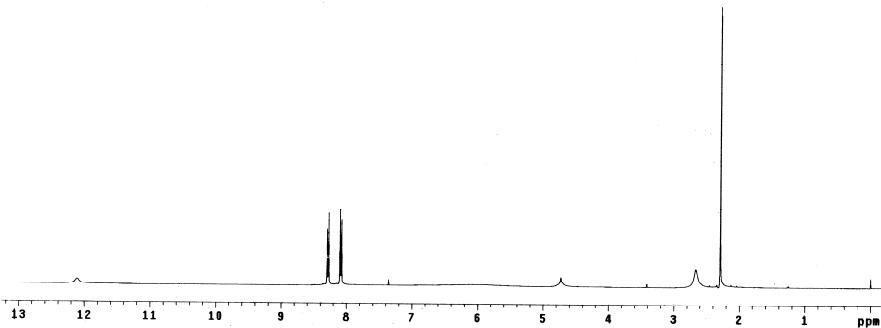
*N*-Acetoxy-4-nitro-benzamide (8a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):

```

Shg_193
exp1 s2pu

      DATE       SAMPLE          SPECIAL
      Aug 7, 2009
solvent   CDCl3    temp    not used
file      exp      rotor  not used
sw        638.8   pres    10.700
ACQUISITION      20.000
      25528
      32      FLAGs
fb        not used  t1      n
bs        not used  t2      v
dt        1.000   pds   1000
ct        32      PROCESSED
      0.10
tn        TRANSMITTER 1h      0.10
      DISPLAY    6556
sfreq     393.853   sp      882.0
      364.2   sp      553.4
tpwv     1.850   rfp    755.4
pw        0.850   rfp    755.4
      DECOUPLER
      C13   rp      123.8
dof      0      ip      -80.1
      mm
      mm
      C      w      250
dpow     58      sc      0
      15000   sc      0
      10000   sc      0
      5000   sc      0
      1000   sc      0
      500   sc      0
      100   sc      0
      50   sc      0
      10   sc      0
      5   sc      0
      1   sc      0

```



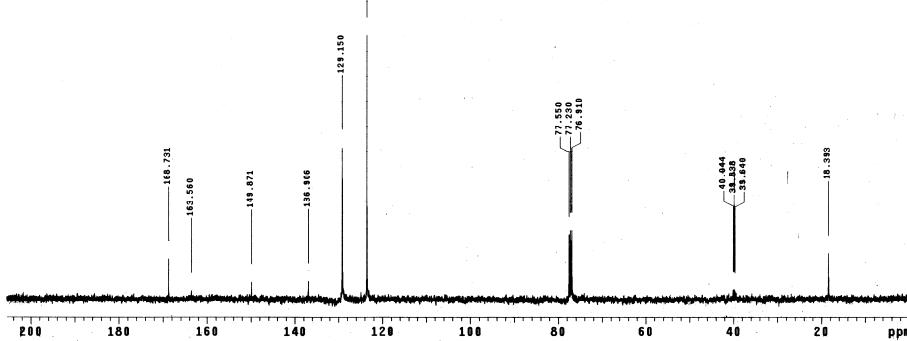
*N*-Acetoxy-4-nitro-benzamide (8a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):

```

Shu_183
expl s2pu

date sample temp SPECIAL
    7/2008          not used
solvent cdc12c gain not used
file      exp spin not used
acqmode      ex
acquisition      pw0 18.00
ew      2512.6 pw0 20.00
ewtime      1.000
ewspw      0.0270
rfb      1.0000 11   n
d1      1.0000 12   n
dt      1.0000 13   n
rt      1.0000 14   n
nt      1.0000 15   n
ns      1.0000 16   n
nsc      1.0000 17   n
process      18   n
transmitter      19   n
t1      1.0000 20   n
display      21   n
sfreq      100.0000 22   n
l1      1536.3 23   n
l2      1536.3 24   n
l3      1536.3 25   n
l4      1536.3 26   n
pw      9.0000 27   n
pwm      9.0000 28   n
decoupler      29   n
decouple      30   n
d1f      1.0000 31   n
dof      0       32   n
dm      1.0000 33   n
dpw      42       34   n
dpm      8900     35   n
plot      250     36   n
sc      78       37   n
vs      78       38   n

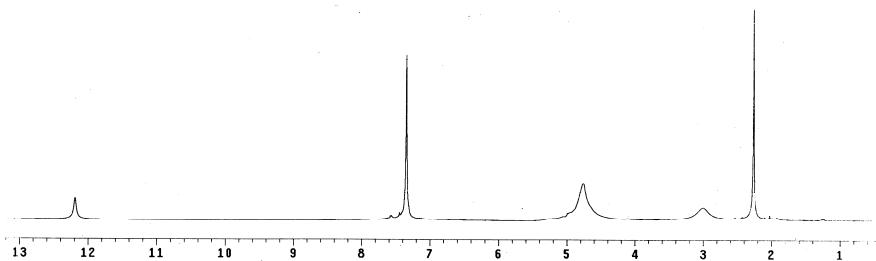
```



-S11-

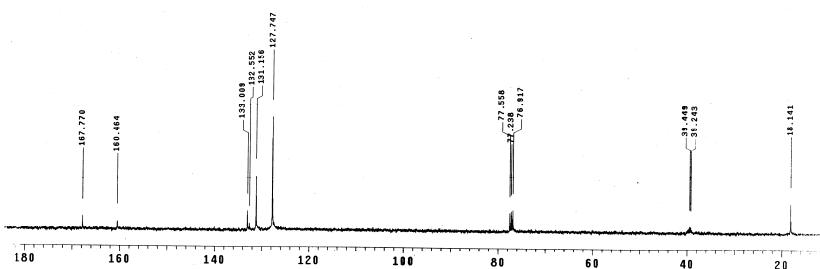
**N-Acetoxy-2,6-dichloro-benzamide (9a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
sng_162_DMSO
exp1 s2pul
SAMPLE SPECIAL
date Jul 10 2009 temp not used
solvent CDCl3 gain not used
f1frq 399.853 sp 65338
f1exp 362.000 exp not used
f1spin 1.000 not used
ACQUISITION hft 0.000
sw 6381.8 pw0 13.700
at 1.000 20.000
np 25528 FLAGS
td not used 11 n
bs 4 in n
dt 1.000 dp y
nt 32 mm
ct 32 PROCESSING
TRANSMITTER lb 1.0 0.10
tn H1 TN 65338
sfrq 399.853 DISPLAY -73.7
tor 362.000 sp 5262.0
tpw 3.850 rfp 726.3
pw 3.850 rfp 0
DECOUPLER C13 rfp 138.4
dof 1.000 1P -93.2
dmn nnn PLOT
dmw c vc 250
dmc 50 uc 0
dmt 15900 vs 0
dpr 10000 th 58
nm cdc ph 4
```



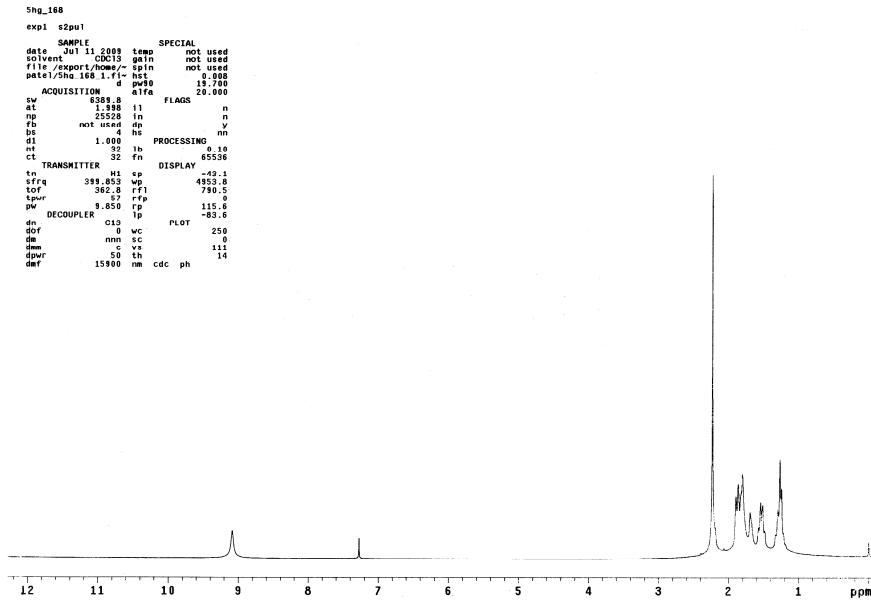
**N-Acetoxy-2,6-dichloro-benzamide (9a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
sng_162
exp1 s2pul
SAMPLE SPECIAL
date Jul 10 2009 temp not used
solvent CDCl3 gain not used
f1frq 100.000 sp 65338
f1exp 153.633 exp not used
f1spin 1.000 not used
ACQUISITION hft 0.000
sw 22125.0 pw0 13.800
at 1.000 20.000
np 60270 FLAGS
td 10000 11 n
bs 8 in n
dt 1.000 dp y
nt 10000 mm
ct 376 PROCESSING
TRANSMITTER C13 lb 2.00
tn H1 TN 65338
sfrq 100.000 DISPLAY 65338
tor 153.633 sp 572.6
tpw 1.000 rfp 100.1
pw 0.300 rfp 9305.6
DECOUPLER C13 rfp 7764.9
dm 1.000 1P -348.2
dof 1.000 1P -348.2
dmw 13C vc 250
dmc 13C uc 0
dmt 8800 vs 34
dpr 8800 th 2
nm no ph 2
```

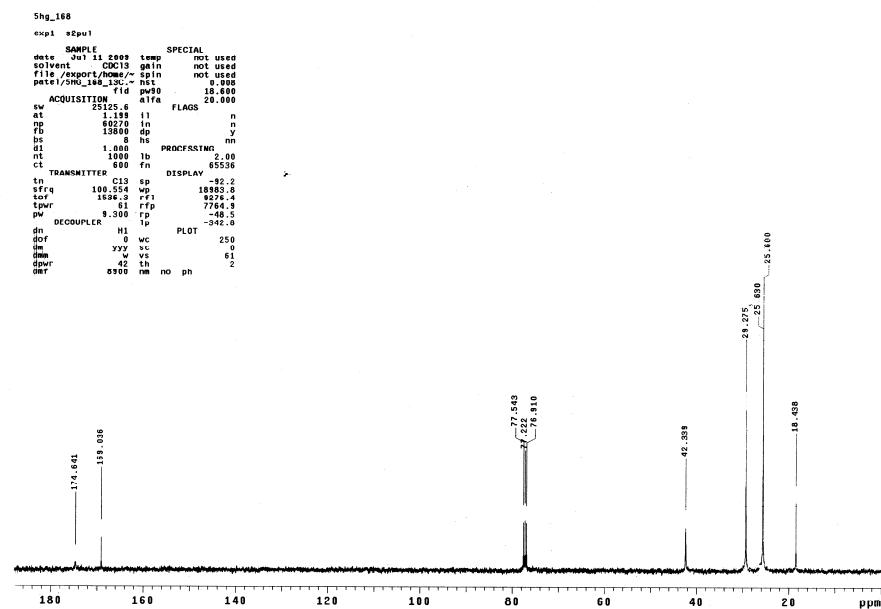


-S12-

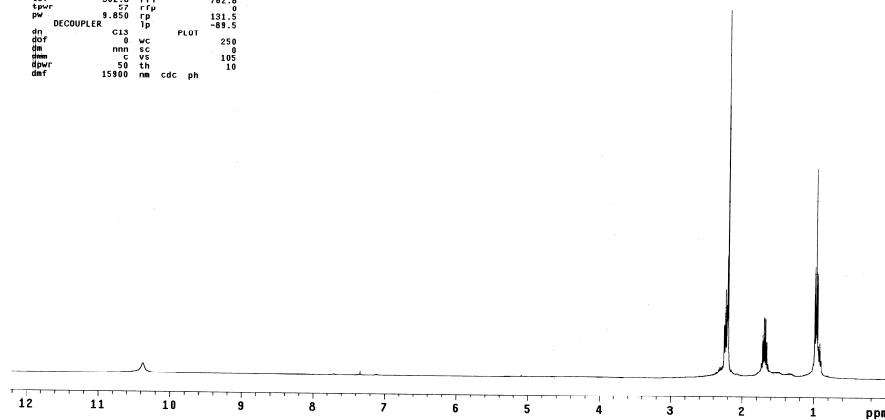
Cyclohexanecarboxylic acid acetoxy-amide (10a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):



Cyclohexanecarboxylic acid acetoxy-amide (10a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):



*N*-Acetoxy-butyramide (11a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):



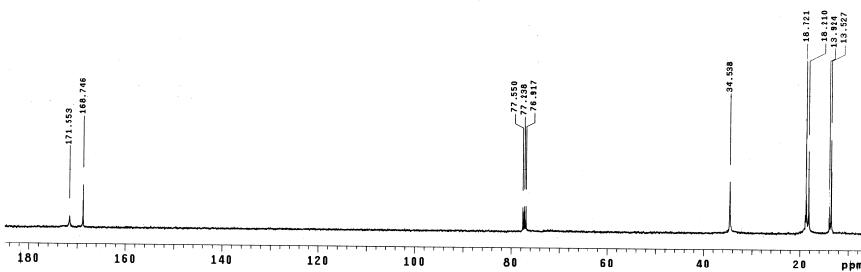
**N-Acetoxy-butyramide (11a):**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):

```

Shg_169
exp1 >pwl

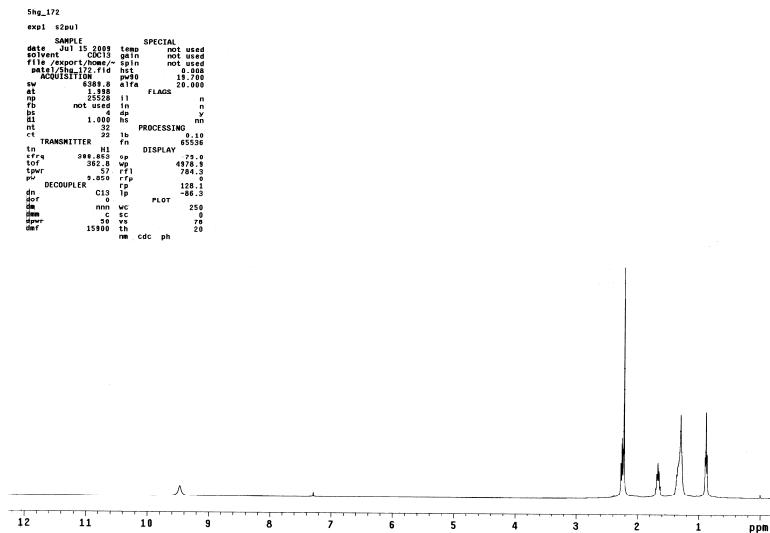
date Jul14 2008      SAMPLE          SPECIAL
stwver 1.00           DC103          not used
stlver 1.00           gain           not used
stlver 1.00           tdc             not used
stlver 1.00           hst             a m/s
stlver 1.00           tld             a m/s
stlver 1.00           alra            25.0000
ACQUISITION
sw 251256          11   FLAGS
n 00270          in
np 13860          in
bs 16             n
dt 1.000          PROCESSING
t 56000          1h
ts 1380          1h
tn TRANSMITTER      disp 603.2
sfreq 100.554      wp 1793.1
tphase 1536.0      sp 35.0
tpwr 6.1           fp 7764.9
tdecoupler 1.300    fpl 48.9
DECOPPLER
dncoupler H1        plot 31.9
dn 100             H1
dc 100             wc 0
dc 100             yyy 25.0
dc 100             vyy 0
dc 42              vc 3
dc 42              ph 3
daf 8900          no ph

```

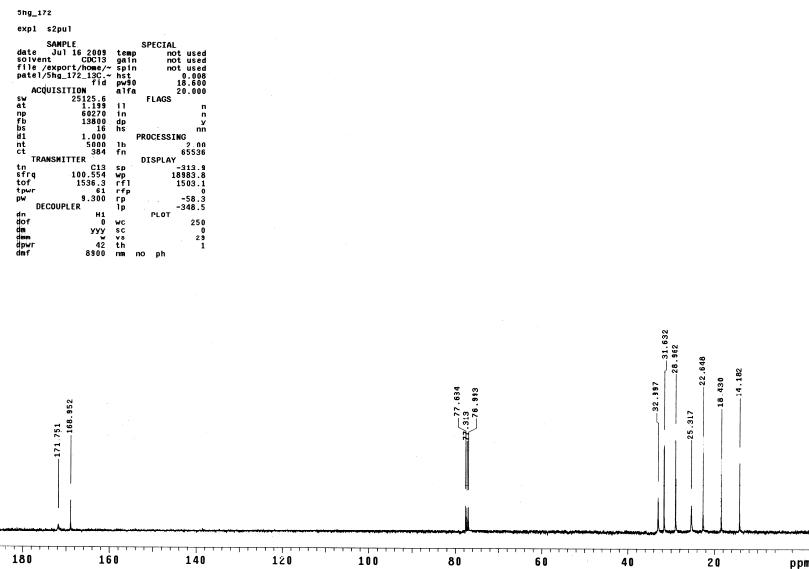


-S14-

### Heptanoic acid acetoxy-amide (12a): $^1\text{H}$ NMR (400 MHz, $\text{CDCl}_3$ ):

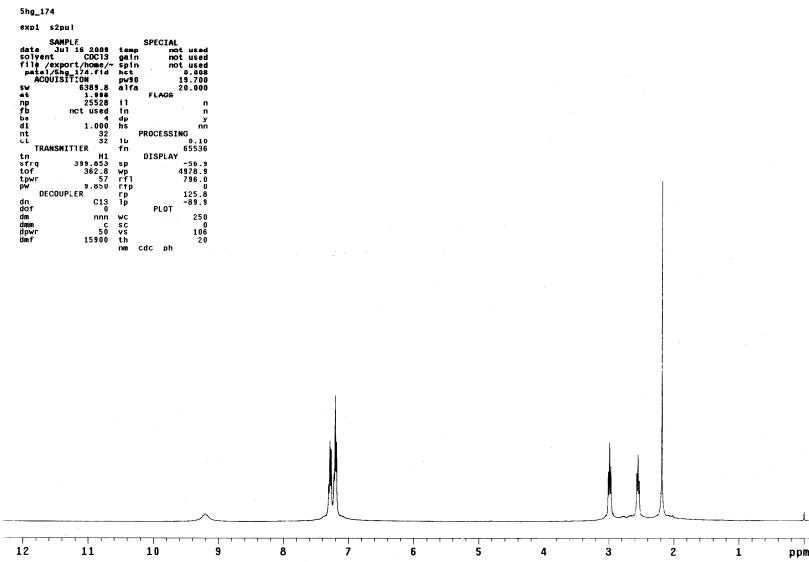


### Heptanoic acid acetoxy-amide (12a): $^{13}\text{C}$ NMR (100 MHz, $\text{CDCl}_3$ ):

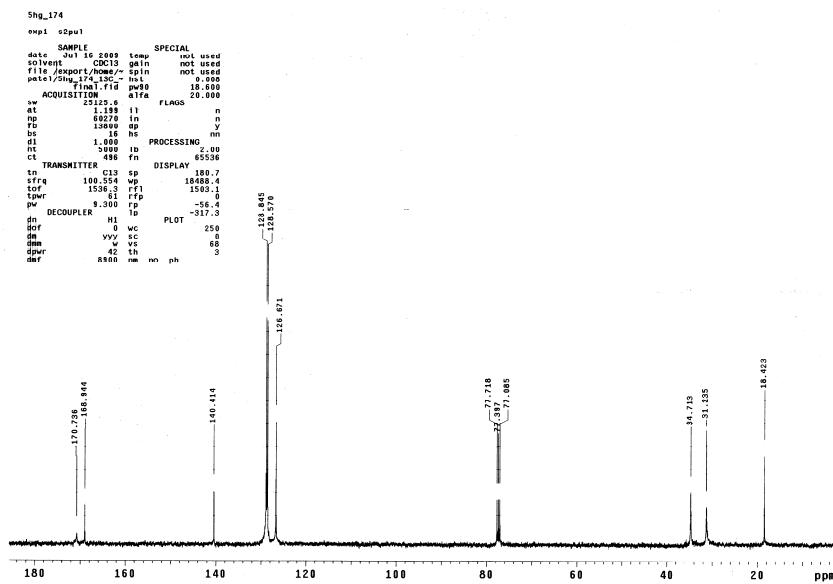


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**N-Acetoxy-3-phenyl-propionamide (13a):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):**



**N-Acetoxy-3-phenyl-propionamide (13a):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ):**



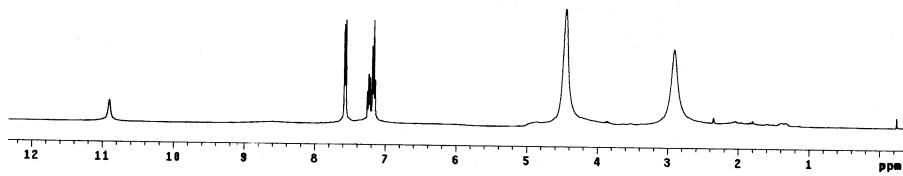
*N*-Hydroxy-benzamide (1b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):

```

Shg_116
exp1 s2pu

          NAME      EXAMPLE          SPECIAL
          date    May 2, 2008   temp    not used
          solvent   CDCl3    gain    not used
          pres     1.000      hz     not used
          ACQUISITION
          pres     6381.5    pw0     19.780
          at       25528    pw1     20.000
          np       10        flags
          t1       0.000    in      n
          dt       1.000    dp      y
          ac       1          n
          ct       32        PROCESSING
          t1      1b      0.10
          TRANSMITTER   HI      DISPLAY
          sfreq   398.855    w1     118.1
          t1      1b      0.10
          tppw   57 wp     5078.5
          pw     1.50      r1f    785.0
          DECOUPLER
          freq    C13      rp     124.8
          pres    1.000    ip      -72.7
          dec     nnn      PLOT
          dec    15800    c      250
          dec    15800    v      34
          dec    15800    s      8
          dec    15800    R      Cde nh

```



**N-Hydroxy-benzamide (1b):**  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):

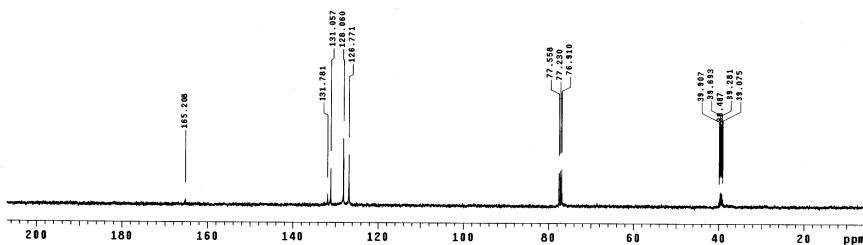
```

59g_116
exp1 zpsi1

      sample          SPECIAL
      DATE May 2, 2008 temp    not used
      solvent        CDCl3 gain   not used
      filte          espin  not used
      ACQUISITION    25125.6 pw03  16.000
      np             60270   pres  20.000
      fwhm          1380.0   t1    11.0
      s               5       t2    n
      sl             1.000   dt    1.000
      ct             1000.0   dh    y
      ct             1000.0   PROCESSING

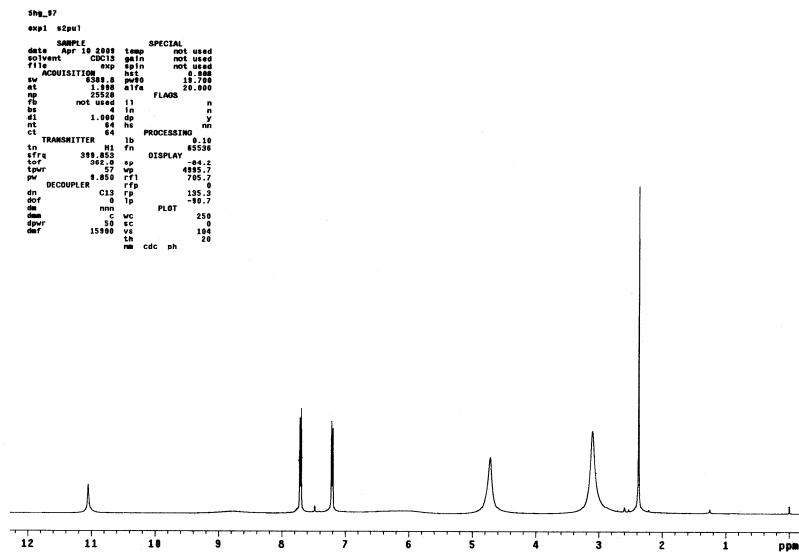
      TRANSMITTER    1b
      C12            65536
      sfreq          100.554 DISPLAY
      tmax           1536.3   t0ff   488.1
      t90             10.000   t90f   2930.2
      pw             3.000   rrf1   9310.2
      decoupler      61.000   rrf2   1000.0
      decoupling     11.000   t90d   -53.4
      d0f            YYY      PLOT   -282.1
      dme            ZW      wc    250
      dpmt           42      vs    19
      dmft           8500    ph    1

```

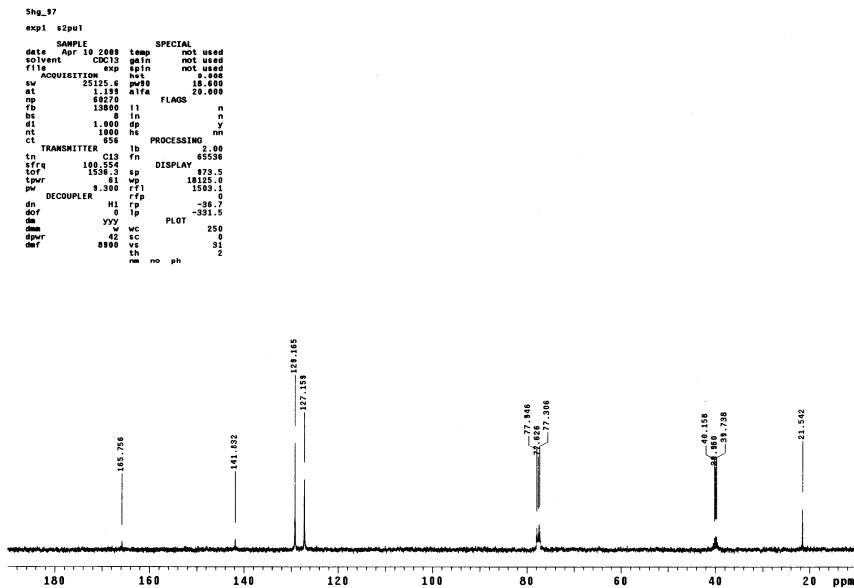


-S17-

**N-Hydroxy-4-methyl-benzamide (2b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

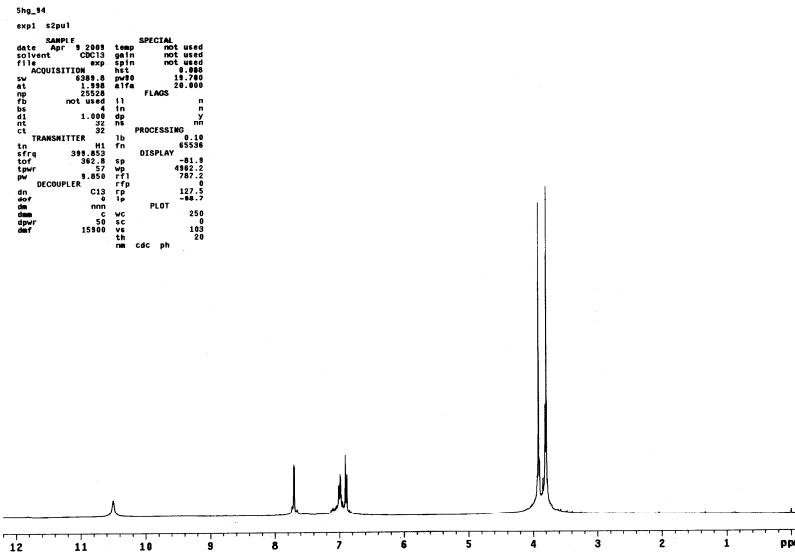


**N-Hydroxy-4-methyl-benzamide (2b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

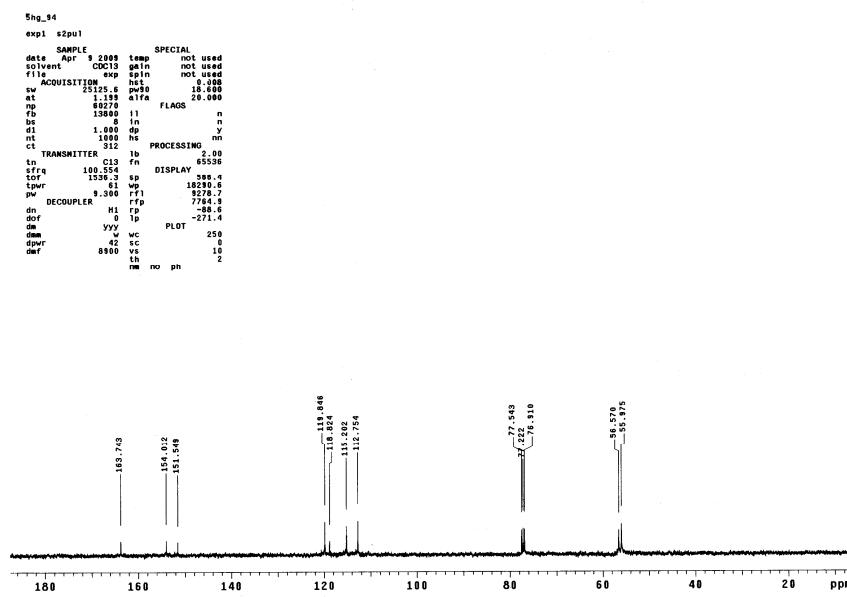


-S18-

**N-Hydroxy-2,5-dimethoxy-benzamide (3b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**



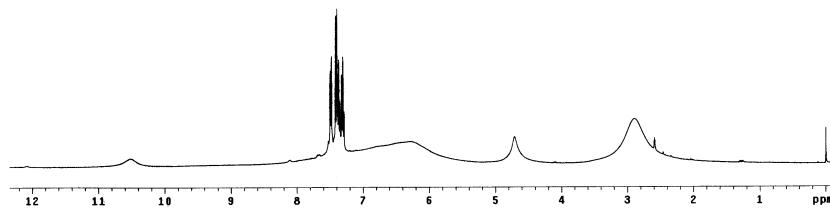
**N-Hydroxy-2,5-dimethoxy-benzamide (3b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**



-S19-

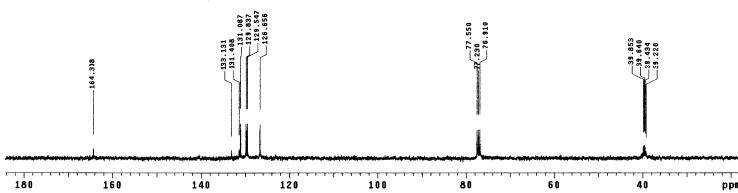
**2-Chloro-N-hydroxy-benzamide (4b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
Shg_134
exp1 s2pul
SAMPLE      SPECIAL
date May 19 2009 temp    not used
solvent   CDCl3   spin   not used
file       exp   spin   not used
        spc   not used
        sw   not used
        sw_acquisition 6388.6   pw05   19.700
        at     25528   alfa   20.700
        np     1024   flags
        tb     not used
        re     4   in
        de     1.000   out
        dt     32   mn
        ct     32   ih   PROCESSING 0.10
tn  TRANSMITTER H1   fm 65536
trfq  393.250   DISPLAY -60.0
torf  392.0   sp
tppw  8.850   rfp  732.2
        DECODULER C13   rfp  104.8
dn   15400   id  58.2
dof   10000   plot 250
dm   10000   wc
dswr  50   vs
def   15400   th  49
        nm cdc  ph
        nm
```



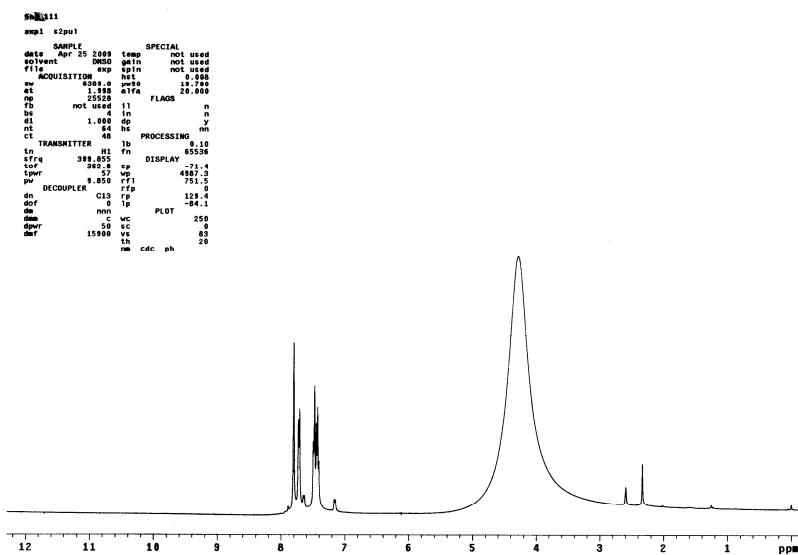
**2-Chloro-N-hydroxy-benzamide (4b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ )**

```
Shg_134
exp1 s2pul
SAMPLE      SPECIAL
date May 19 2009 temp    not used
solvent   CDCl3   spin   not used
file       exp   spin   not used
        spc   not used
        sw   not used
        sw_acquisition 13123.8   pw05   16.000
        at     66276   alfa   20.000
        np     1024   flags
        tb     not used
        re     32   in
        de     1.000   out
        dt     10000   mn
        nt     10000   ih   PROCESSING 0.00
tn  TRANSMITTER C13   fm 65536
trfq  100.554   DISPLAY 711.0
torf  61   sp
tppw  8.850   rfp  774.9
        DECODULER H1   rfp  104.8
dn   8190   id  333.2
dme   10000   plot 250
dswr  50   vs
def   8190   th  12
        nm no ph
```



-S20-

**3-Chloro-N-hydroxy-benzamide (5b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**



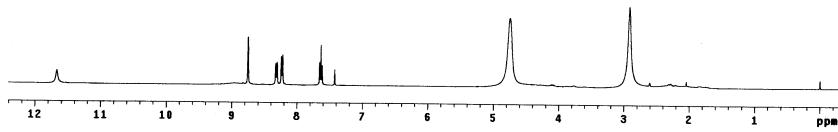
-S21-

**N-Hydroxy-3-nitro-benzamide (6b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```

Shg_114
exp1 s2pul
SAMPLE E SPECIAL
date Apr 28 2008 temp not used
solvent CDCl3 gain not used
filter/export/13C= not used
pate1/Shg_114_c1d= hst a.000
pate1/Shg_114_r1d= p1f 16.700
ACQUISITION a1f4 20.000
sw 1398.8 Hz flags
at 1.138 l1 n
np 25528 in n
ps not used dp y
bs 1000.0 he mn
dt 1.000 lb PROCESSING 0.10
nt 64 fn 0.000
ct 64 0.10
ACQUISITION a1f4 16.700
sw 1398.8 Hz flags
at 1.138 l1 n
np 25528 in n
ps not used dp y
bs 1000.0 he mn
dt 1.000 lb PROCESSING 0.10
nt 64 fn 0.000
ct 64 0.10
TRANSMITTER H1 fp -138.6
trf4 398.3 r1f1 138.2
trf4 362.6 r1f1 729.7
trpr 100.0 r1f1 776.3
pw 9.850 fp 138.6
DECOUPLER C13 fp -14.6
dn C13 PLOT
dof 0 wc 250
de 0 vs 0
dmw 0 vs 25
dmt 50 th 12
dmf 15900 nm cdc ph

```

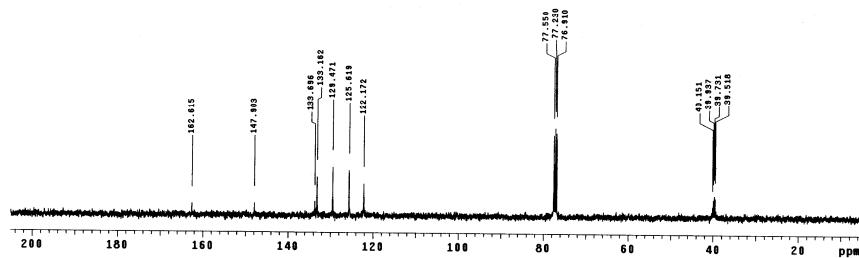


**N-Hydroxy-3-nitro-benzamide (6b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ )**

```

Shg_114
exp1 s2pul
SAMPLE E SPECIAL
date Apr 28 2008 temp not used
solvent CDCl3 gain not used
filter/export/13C= not used
pate1/Shg_114_c1d= hst a.000
pate1/Shg_114_r1d= p1f 20.000
ACQUISITION a1f4 20.000
sw 1398.8 Hz flags
at 1.138 l1 n
np 68270 in n
ps 1398.8 he mn
bs 1000.0 he mn
dt 1.000 lb PROCESSING 2.00
nt 1000 fn 0.000
ct 488 0.000
TRANSMITTER C13 fp 447.0
trf4 100.0 r1f1 282.0
trf4 1536.3 r1f1 5256.7
trpr 100.0 r1f1 776.3
pw 9.300 fp 12.0
DECOUPLER H1 fp -360.3
dn C13 PLOT
dof 0 wc 250
de 0 vs 0
dmw 0 vs 25
dmt 42 th 3
dmf 65536 im no g-

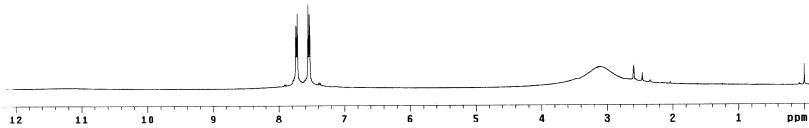
```



-S22-

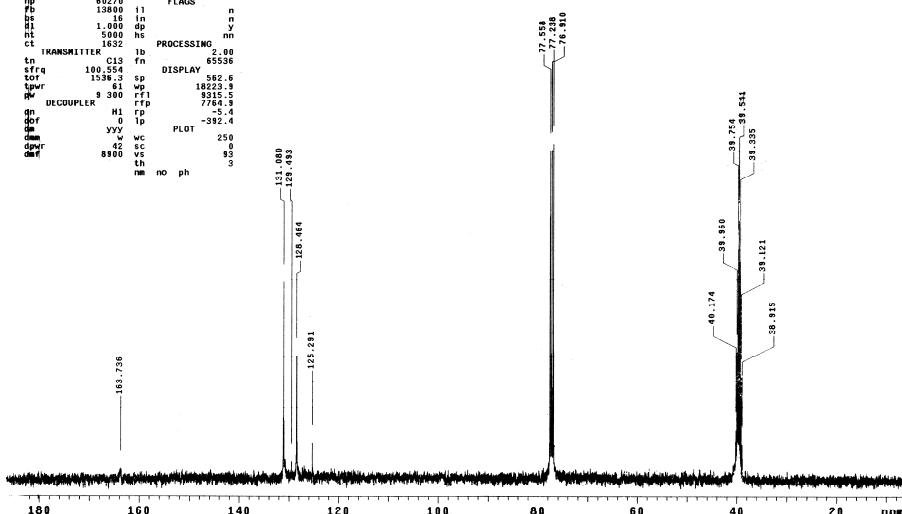
**4-Bromo-N-hydroxy-benzamide (7b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**

```
Shg_4bromoacid
exp2 s2pul
SAMPLE          SPECIAL
date Sep 21 2009 temp    not used
solvent   CDCl3  gain    not used
file    exp  spin    not used
ACQUISITION      0.000
sw      6389.5  pw90    15.700
at      1.000    11      0.000
np      25600   flags
dp      not used 11      n
fb      1.000    4      in
ht      1.000    32      7
nt      32      hs      nn
ct      32      1b      PROCESSING 0.10
TRANSMITTER      1b      fm      65536
sfra  399.853  DISPLAY
tora  362.0    sp      42.1
tora  362.0    sp      42.1
tpwr  8.850   rf1      688.7
DECOUPLER        C13   rfp      0
dn     1.000    11      0.000
dpw1  25125.6  pw90    18.600
at     0.000    11      0.000
np     60270   flags
fb     13800   11      n
ht     1.000    dp      y
nt     32      hs      nn
ct     1632    1b      PROCESSING 2.00
TRANSMITTER      1b      fm      65536
sfra  100.554  DISPLAY 65536
tora  153.6    sp      582.6
tpwr  8.310   rf1      1024.3
pw   8.300   rfp      9315.5
DECOUPLER        H1    rfp      7744.8
dn     1.000    11      -5.4
dof    0.0      1p      -392.4
dpw1  25125.6  pw90    250
at     0.000    11      0
dpw1  8980    vs      93
at     0.000    th      3
nm    no      ph
nm    cdc    ph
nm    ph
```



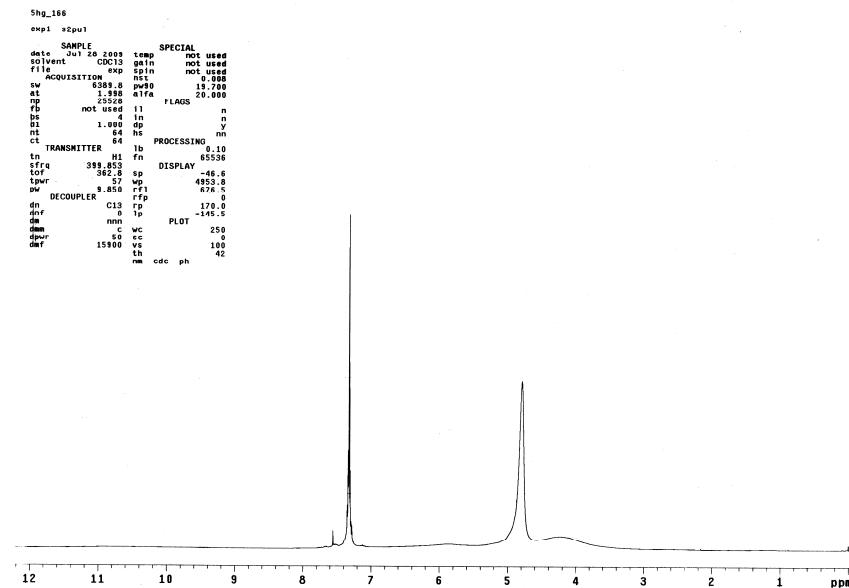
**4-Bromo-N-hydroxy-benzamide (7b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ )**

```
Shg_4bromoacid
exp1 s2pul
SAMPLE          SPECIAL
date Sep 21 2009 temp    not used
solvent   CDCl3  gain    not used
file    exp  spin    not used
ACQUISITION      0.000
sw      25125.6  pw90    18.600
at      1.000    11      0.000
np      60270   flags
fb      13800   11      n
ht     1.000    dp      y
nt     32      hs      nn
ct     1632    1b      PROCESSING 2.00
TRANSMITTER      1b      fm      65536
sfra  100.554  DISPLAY 65536
tora  153.6    sp      582.6
tpwr  8.310   rf1      1024.3
pw   8.300   rfp      9315.5
DECOUPLER        H1    rfp      7744.8
dn     1.000    11      -5.4
dof    0.0      1p      -392.4
dpw1  25125.6  pw90    250
at     0.000    11      0
dpw1  8980    vs      93
at     0.000    th      3
nm    no      ph
nm    cdc    ph
nm    ph
```

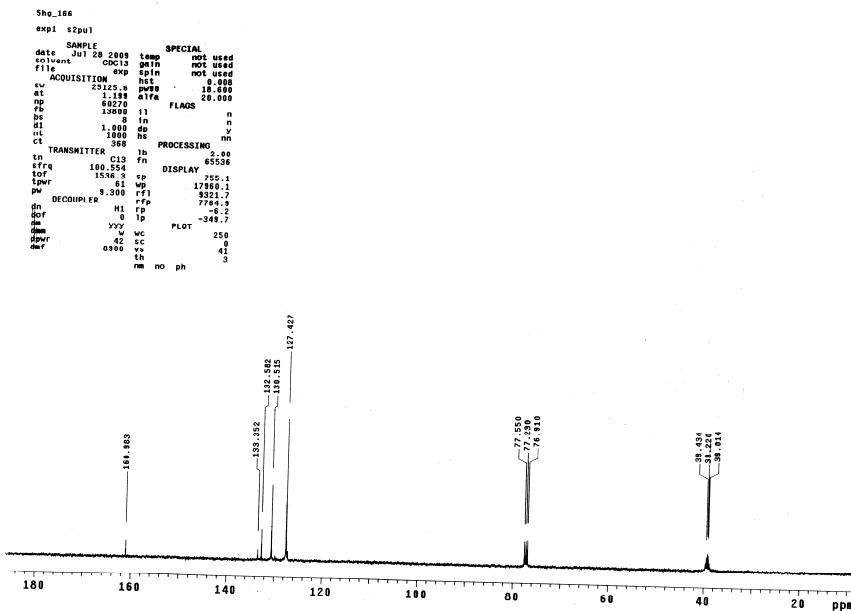


-S23-

**2,6-Dichloro-N-hydroxybenzamide (9b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ ):**



**2,6-Dichloro-N-hydroxybenzamide (9b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ )**

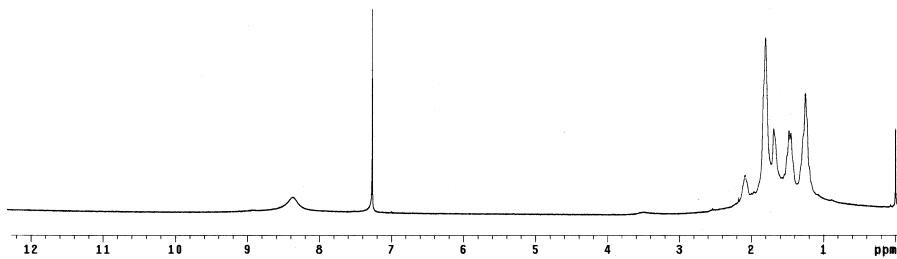


*N*-hydroxycyclohexanecarboxamide (10b):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):

```

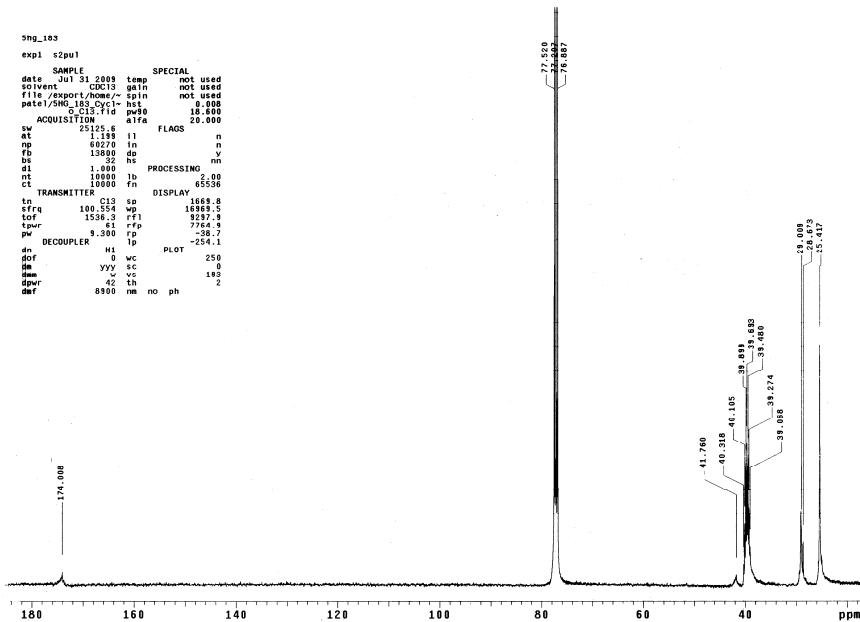
5hg_183
ex12 s2p1

    date   SAMPLE          SPECIAL
    JUN 26 2008
    solvent  CDCl3      tare    not used
    filer    exp        gain    not used
    ACQUISITION      hsi      0.800
    sw       6583.6    pw030  15.780
    dec      6552.8    pw117  20.000
    rb      not used    flags
    t1      not used    in      n
    dt      1.000     dp      y
    ct      64        processing
    tn TRANSMITTER      Tb
    tfqz 399.855    DISPLAY
    tfrq 2625.000    -30.0
    tpwr 57          wp      4982.0
    pw     8550.000    r1f      794.2
    DECOUPLER      C13      rfp
    dmt      100.000    ip      109.6
    dmm      mnm      plot
    dm      c          250
    dppr 15500.000    ve      9
                                vs      59
                                v0      29
                                v1      20
                                v2      19
                                v3      18
                                v4      17
                                v5      16
                                v6      15
                                v7      14
                                v8      13
                                v9      12
                                v10      11
                                v11      10
                                v12      9
                                v13      8
                                v14      7
                                v15      6
                                v16      5
                                v17      4
                                v18      3
                                v19      2
                                v20      1
                                v21      0
                                v22      -1
                                v23      -2
                                v24      -3
                                v25      -4
                                v26      -5
                                v27      -6
                                v28      -7
                                v29      -8
                                v30      -9
                                v31      -10
                                v32      -11
                                v33      -12
                                v34      -13
                                v35      -14
                                v36      -15
                                v37      -16
                                v38      -17
                                v39      -18
                                v40      -19
                                v41      -20
                                v42      -21
                                v43      -22
                                v44      -23
                                v45      -24
                                v46      -25
                                v47      -26
                                v48      -27
                                v49      -28
                                v50      -29
                                v51      -30
                                v52      -31
                                v53      -32
                                v54      -33
                                v55      -34
                                v56      -35
                                v57      -36
                                v58      -37
                                v59      -38
                                v60      -39
                                v61      -40
                                v62      -41
                                v63      -42
                                v64      -43
                                v65      -44
                                v66      -45
                                v67      -46
                                v68      -47
                                v69      -48
                                v70      -49
                                v71      -50
                                v72      -51
                                v73      -52
                                v74      -53
                                v75      -54
                                v76      -55
                                v77      -56
                                v78      -57
                                v79      -58
                                v80      -59
                                v81      -60
                                v82      -61
                                v83      -62
                                v84      -63
                                v85      -64
                                v86      -65
                                v87      -66
                                v88      -67
                                v89      -68
                                v90      -69
                                v91      -70
                                v92      -71
                                v93      -72
                                v94      -73
                                v95      -74
                                v96      -75
                                v97      -76
                                v98      -77
                                v99      -78
                                v100      -79
                                v101      -80
                                v102      -81
                                v103      -82
                                v104      -83
                                v105      -84
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                                v107      -86
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                                v109      -88
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                                v116      -95
                                v117      -96
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                                v121      -100
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                                v126      -105
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                                v131      -110
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                                v191      -170
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                                v194      -173
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                                v197      -176
                                v198      -177
                                v199      -178
                                v200      -179
                                v201      -180
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                                v203      -182
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                                v205      -184
                                v206      -185
                                v207      -186
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                                v209      -188
                                v210      -189
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                                v213      -192
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                                v219      -198
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                                v221      -200
                                v222      -201
                                v223      -202
                                v224      -203
                                v225      -204
                                v226      -205
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                                v231      -210
                                v232      -211
                                v233      -212
                                v234      -213
                                v235      -214
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                                v237      -216
                                v238      -217
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                                v240      -219
                                v241      -220
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                                v243      -222
                                v244      -223
                                v245      -224
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                                v247      -226
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                                v249      -228
                                v250      -229
                                v251      -230
                                v252      -231
                                v253      -232
                                v254      -233
                                v255      -234
                                v256      -235
                                v257      -236
                                v258      -237
                                v259      -238
                                v260      -239
                                v261      -240
                                v262      -241
                                v263      -242
                                v264      -243
                                v265      -244
                                v266      -245
                                v267      -246
                                v268      -247
                                v269      -248
                                v270      -249
                                v271      -250
                                v272      -251
                                v273      -252
                                v274      -253
                                v275      -254
                                v276      -255
                                v277      -256
                                v278      -257
                                v279      -258
                                v280      -259
                                v281      -260
                                v282      -261
                                v283      -262
                                v284      -263
                                v285      -264
                                v286      -265
                                v287      -266
                                v288      -267
                                v289      -268
                                v290      -269
                                v291      -270
                                v292      -271
                                v293      -272
                                v294      -273
                                v295      -274
                                v296      -275
                                v297      -276
                                v298      -277
                                v299      -278
                                v300      -279
                                v301      -280
                                v302      -281
                                v303      -282
                                v304      -283
                                v305      -284
                                v306      -285
                                v307      -286
                                v308      -287
                                v309      -288
                                v310      -289
                                v311      -290
                                v312      -291
                                v313      -292
                                v314      -293
                                v315      -294
                                v316      -295
                                v317      -296
                                v318      -297
                                v319      -298
                                v320      -299
                                v321      -300
                                v322      -301
                                v323      -302
                                v324      -303
                                v325      -304
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                                v328      -307
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                                v331      -310
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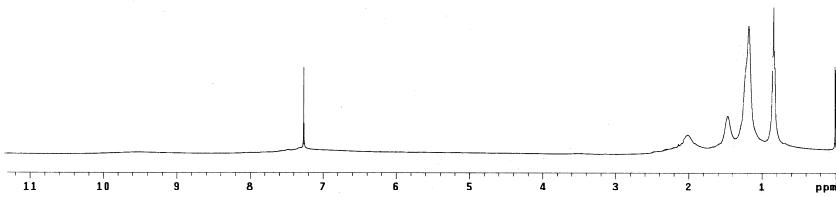


*N*-hydroxycyclohexanecarboxamide (10b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3 + \text{DMSO-d}_6$ )

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dr	1.8800	l3	
bs	3.23	hs	
ai	1.00	PROCESSING	
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tof	100.000	ppm	18885.51
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pw	9.300	ppm	36.71
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dof	0	Y	
dim	1	Y	
dec	2	Y	
dec2	2	Y	
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**N-hydroxyheptanamide (12b):**  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ):



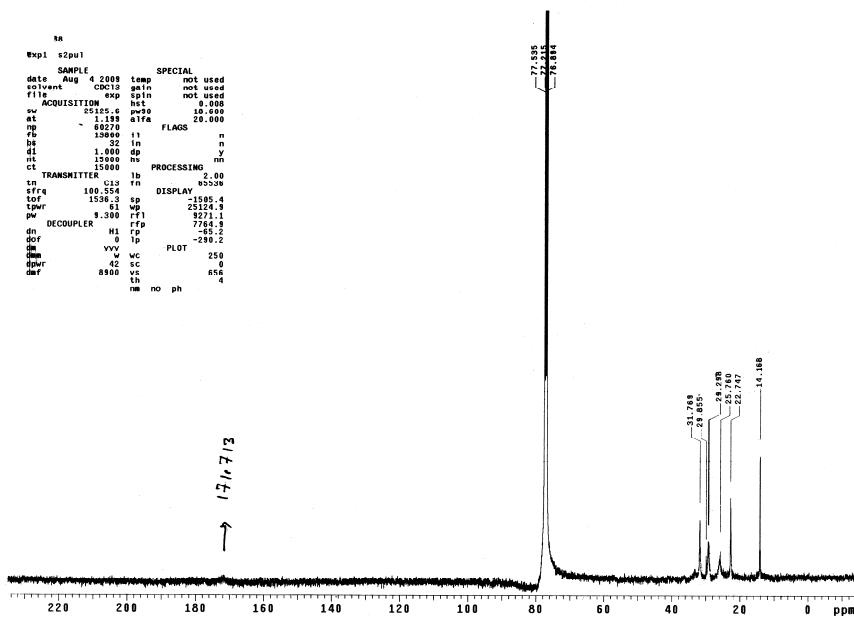
**N-hydroxyheptanamide (12b):  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )**

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      Exp1 s2pu

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solvent C6D6       atm    not used
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      rb            18000    !      FLAGS
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      ct           15000    out   nn
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      TRANSMITTER  G13
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      srfrg 13.554    SR    25124.3
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      DECOUPLER    Hz    7764.2
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      dm           VVV    PLOT  250
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      drf     8900    !      55.4

```



**N-Acetoxy-benzamide (1a) + N-Propionyloxy-benzamide (1c):  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ): (59:41)**

