Supporting Information

Iron-Catalyzed Divergent Tandem Radical Annulation of Aldehydes with Olefins towards Indolines and Dihydropyrans

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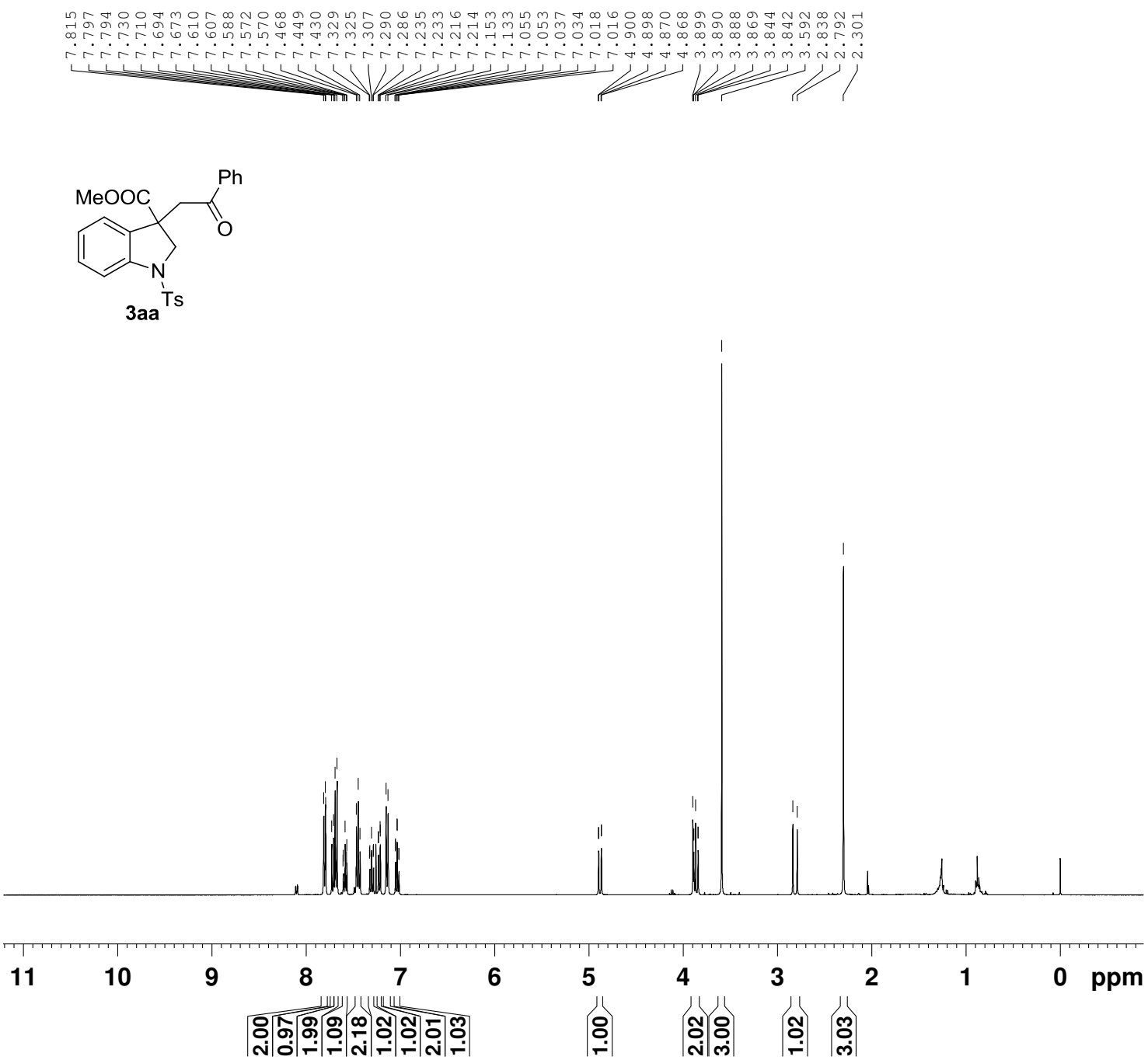
Contents

Copies of ^{1}H NMR and ^{13}C NMR spectra. S2

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PROCNO                      1
Date_               20140624
Time                     9.24
INSTRUM                 spect
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PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          0
SWH                  6393.862 Hz
FIDRES               0.195125 Hz
AQ                 2.5625076 sec
RG                        128
DW                     78.200 usec
DE                       6.50 usec
TE                      294.5 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      10.40 usec
PL1                     -1.00 dB
PL1W             17.01305389 W
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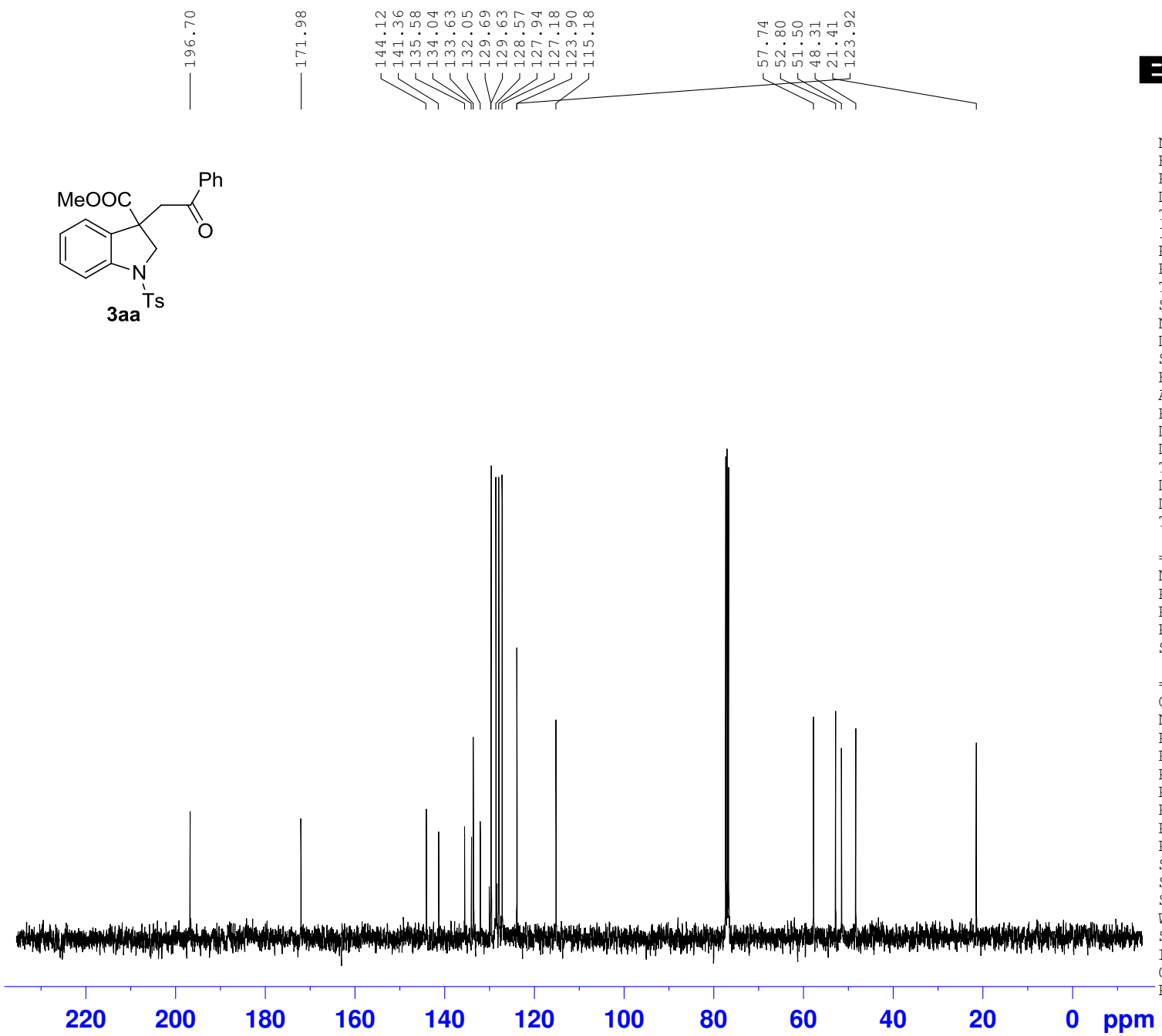


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PROCNO                        1
Date_               20140624
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INSTRUM                   spect
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PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           16
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       298.0 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127804 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
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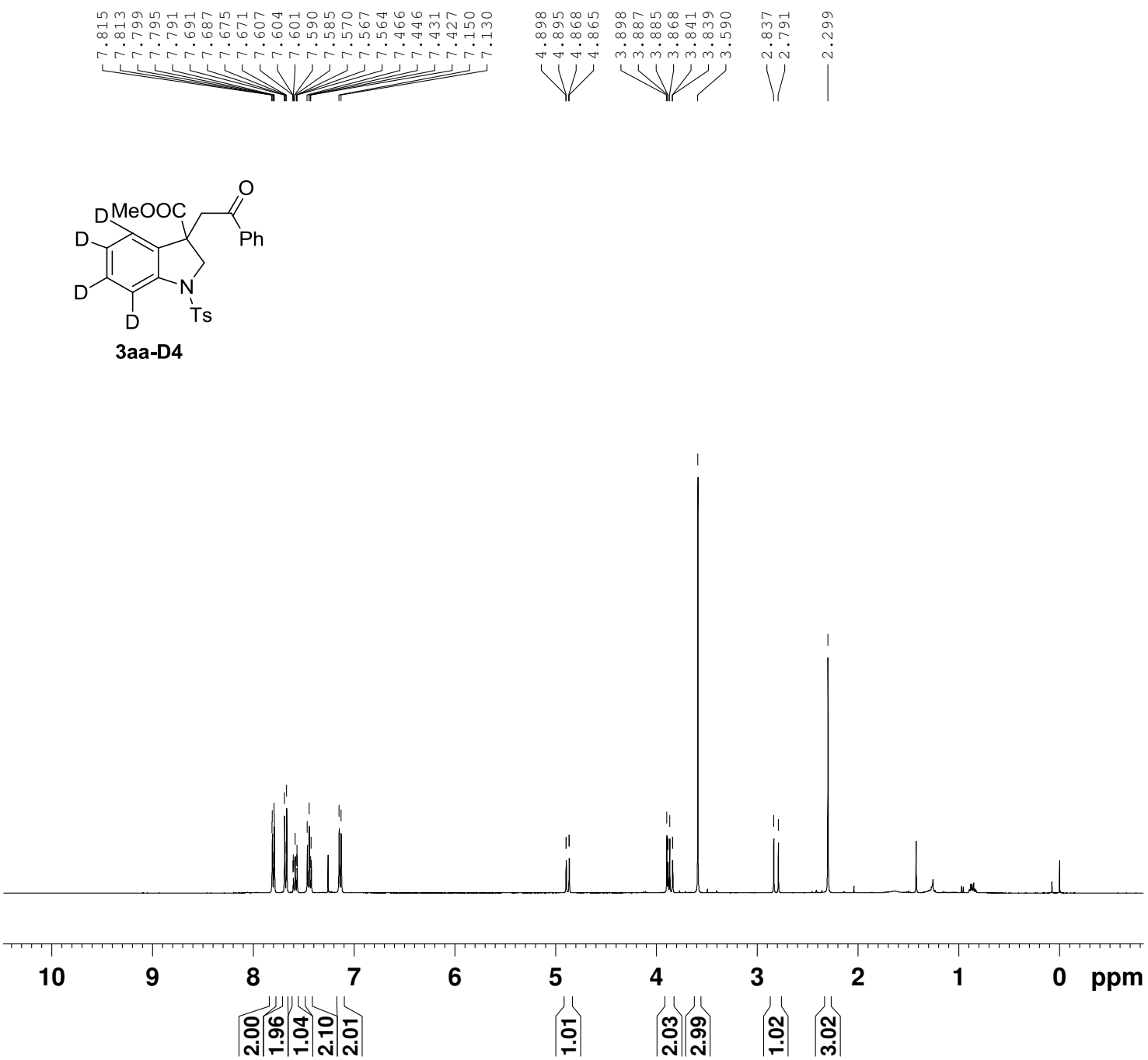


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INSTRUM                 spect
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PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          0
SWH                  6393.862 Hz
FIDRES               0.195125 Hz
AQ                 2.5625076 sec
RG                        161
DW                     78.200 usec
DE                       6.50 usec
TE                      296.1 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      13.10 usec
PL1                      1.80 dB
PL1W               8.92857742 W
SFO1              400.1326008 MHz
SI                      32768
SF                400.1300096 MHz
WDW                        EM
SSB                         0
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GB                          0
PC                       1.00
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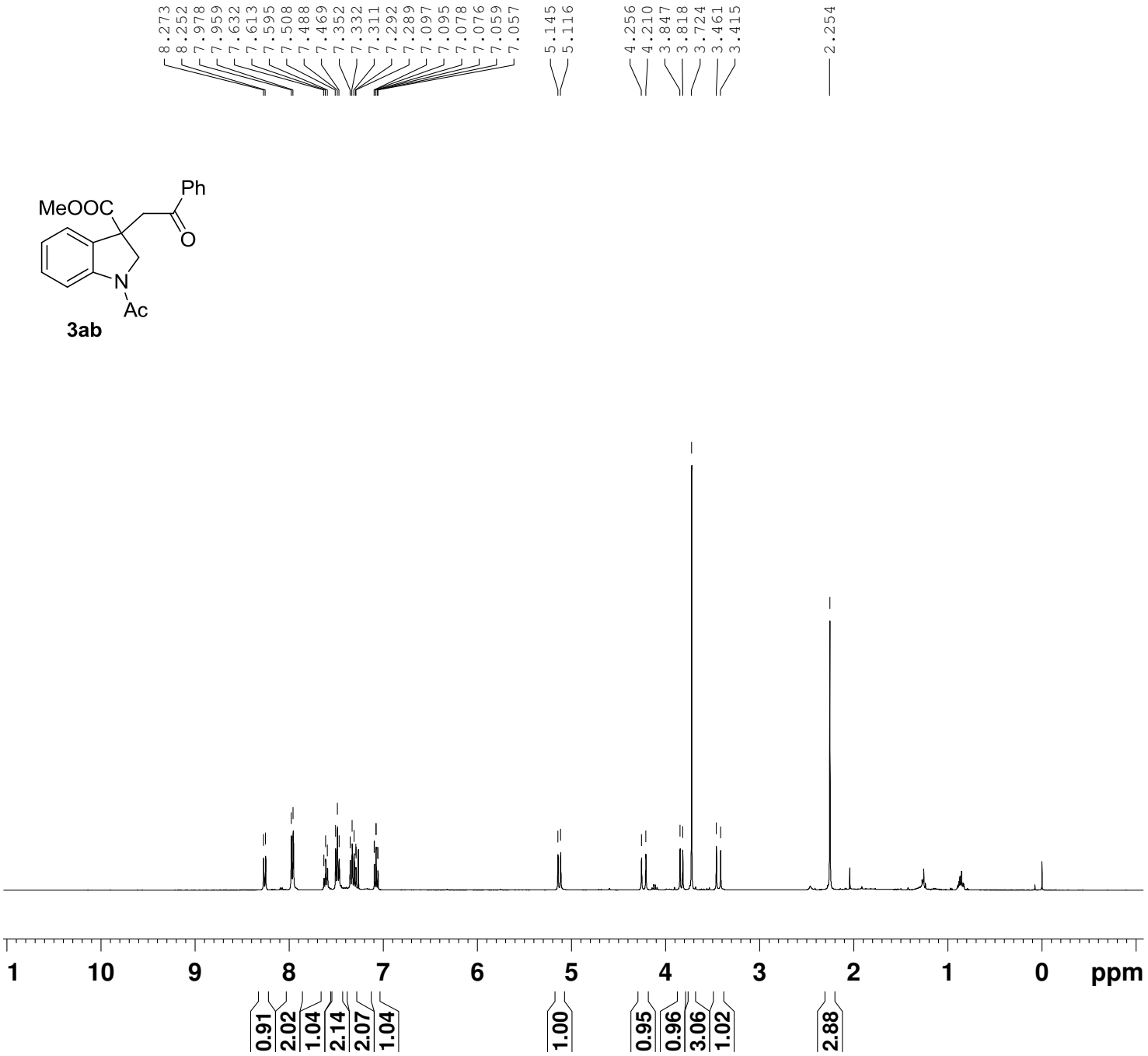


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EXPNO                         1
PROCNO                        1
Date_                  20140703
Time                       9.38
INSTRUM                   spect
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PULPROG                    zg30
TD                        32768
SOLVENT                   CDCl3
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                          161
DW                       78.200 usec
DE                         6.50 usec
TE                        295.6 K
D1                  1.00000000 sec
TD0                           1

======== CHANNEL f1 ========
NUC1                         1H
P1                        10.40 usec
PL1                       -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                        32768
SF                  400.1300070 MHz
WDW                          EM
SSB                           0
LB                         0.30 Hz
GB                            0
PC                         1.00
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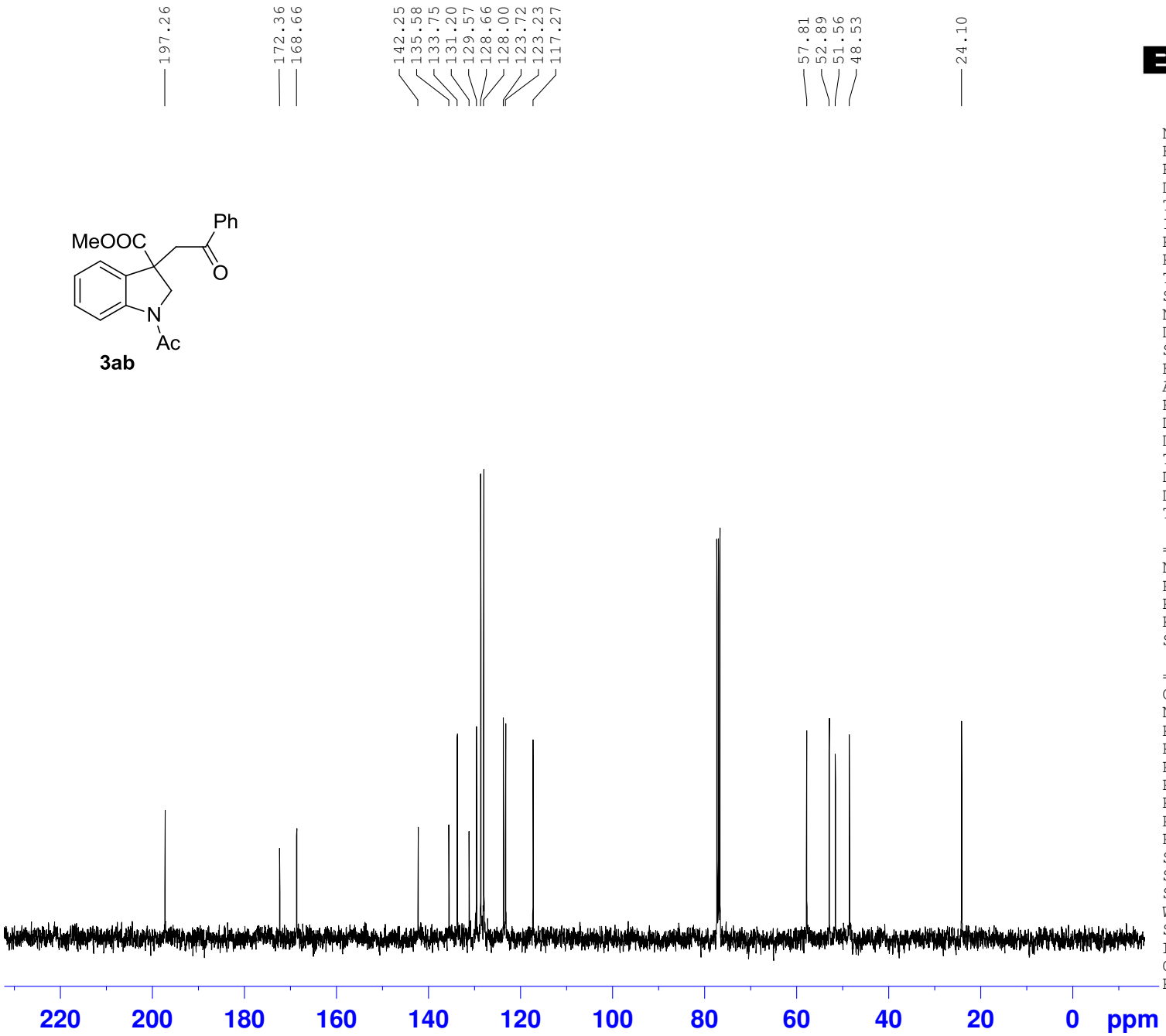


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PROCNO                        1
Date_                  20140703
Time                      17.18
INSTRUM                   spect
PROBHD        5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           16
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          322
DW                       19.800 usec
DE                        6.50 usec
TE                       298.1 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127851 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
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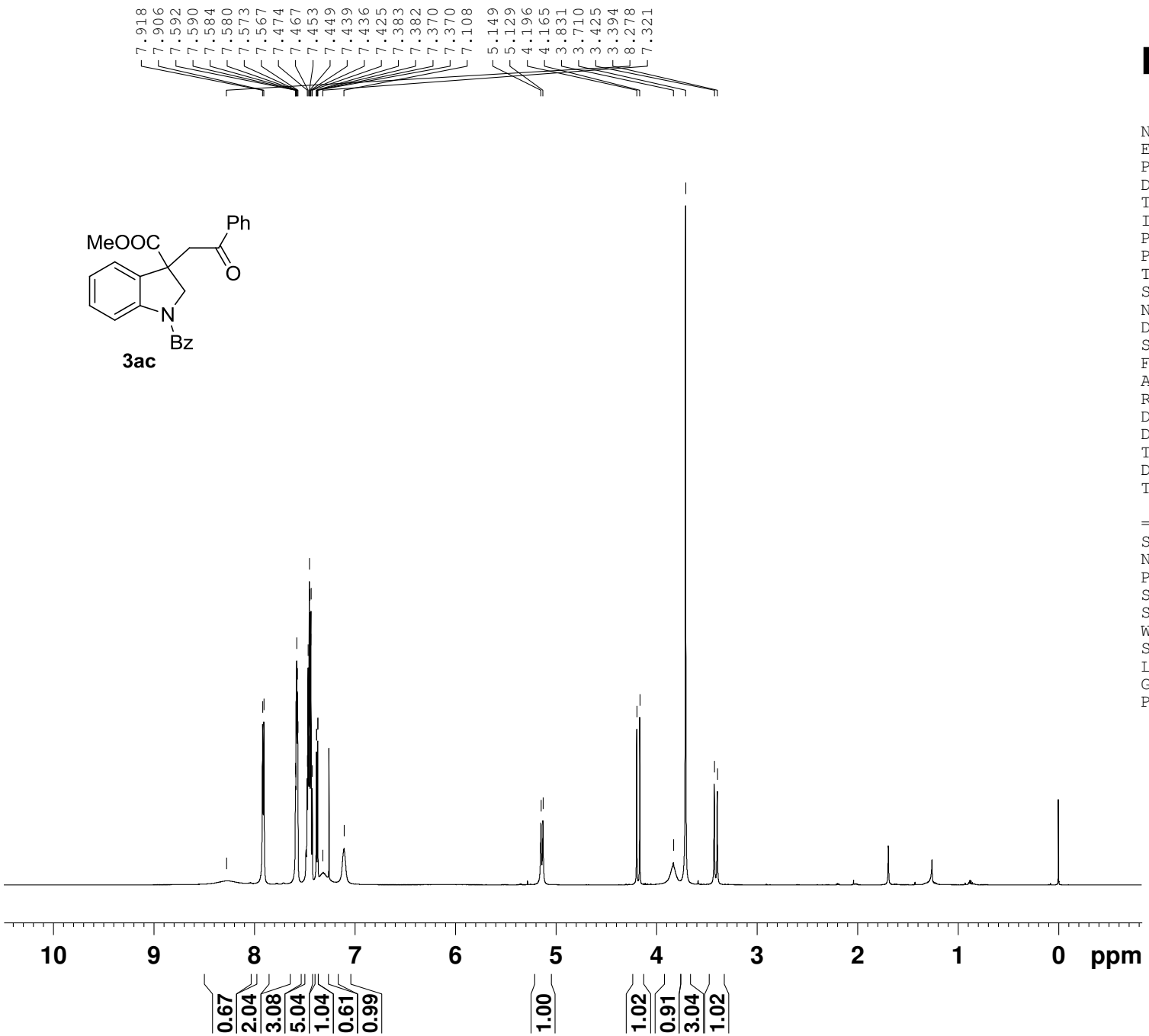


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PROCNO                    1
Date_            20150403
Time                 13.20
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG               zg30
TD                   65536
SOLVENT              CDCl3
NS                       8
DS                       0
SWH              9014.423 Hz
FIDRES           0.137549 Hz
AQ             3.6351135 sec
RG                   50.85
DW                  55.467 usec
DE                    6.50 usec
TE                   297.1 K
D1             1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          600.1739011 MHz
NUC1                   1H
P1                   9.77 usec
SI                   65536
SF            600.1700170 MHz
WDW                    EM
SSB                     0
LB                   0.30 Hz
GB                      0
PC                   1.00
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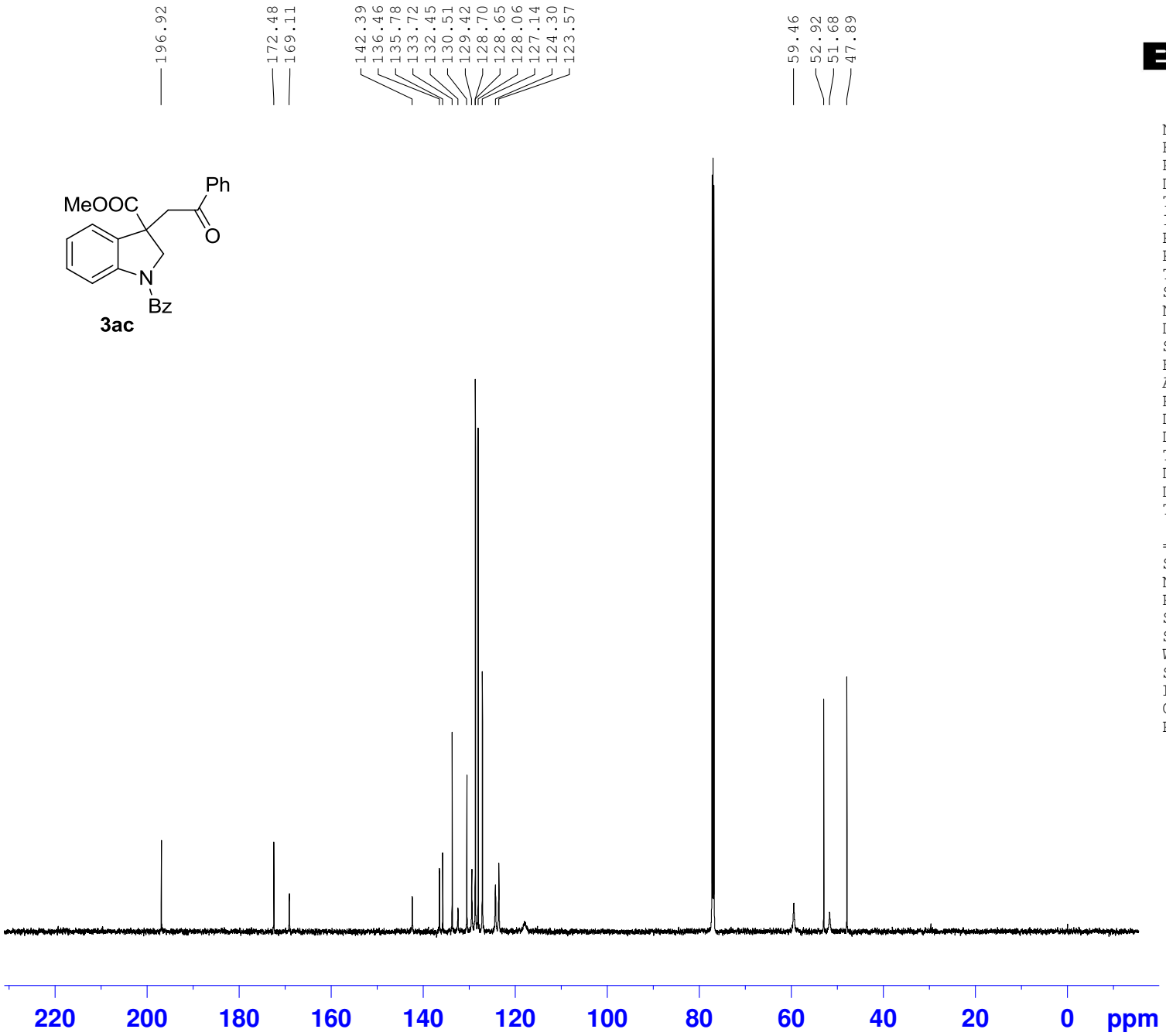


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EXPNO                       2
PROCNO                      1
Date_             20150403
Time                   13.21
INSTRUM                spect
PROBHD     5 mm PABBO BB/
PULPROG               zgpg30
TD                     65536
SOLVENT                CDCl3
NS                       616
DS                         4
SWH                37878.789 Hz
FIDRES              0.577984 Hz
AQ                 0.8651252 sec
RG                    190.02
DW                    13.200 usec
DE                      6.50 usec
TE                     297.1 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1            150.9294669 MHz
NUC1                    13C
P1                    11.90 usec
SI                    32768
SF              150.9128756 MHz
WDW                       EM
SSB                        0
LB                      3.00 Hz
GB                         0
PC                      1.40
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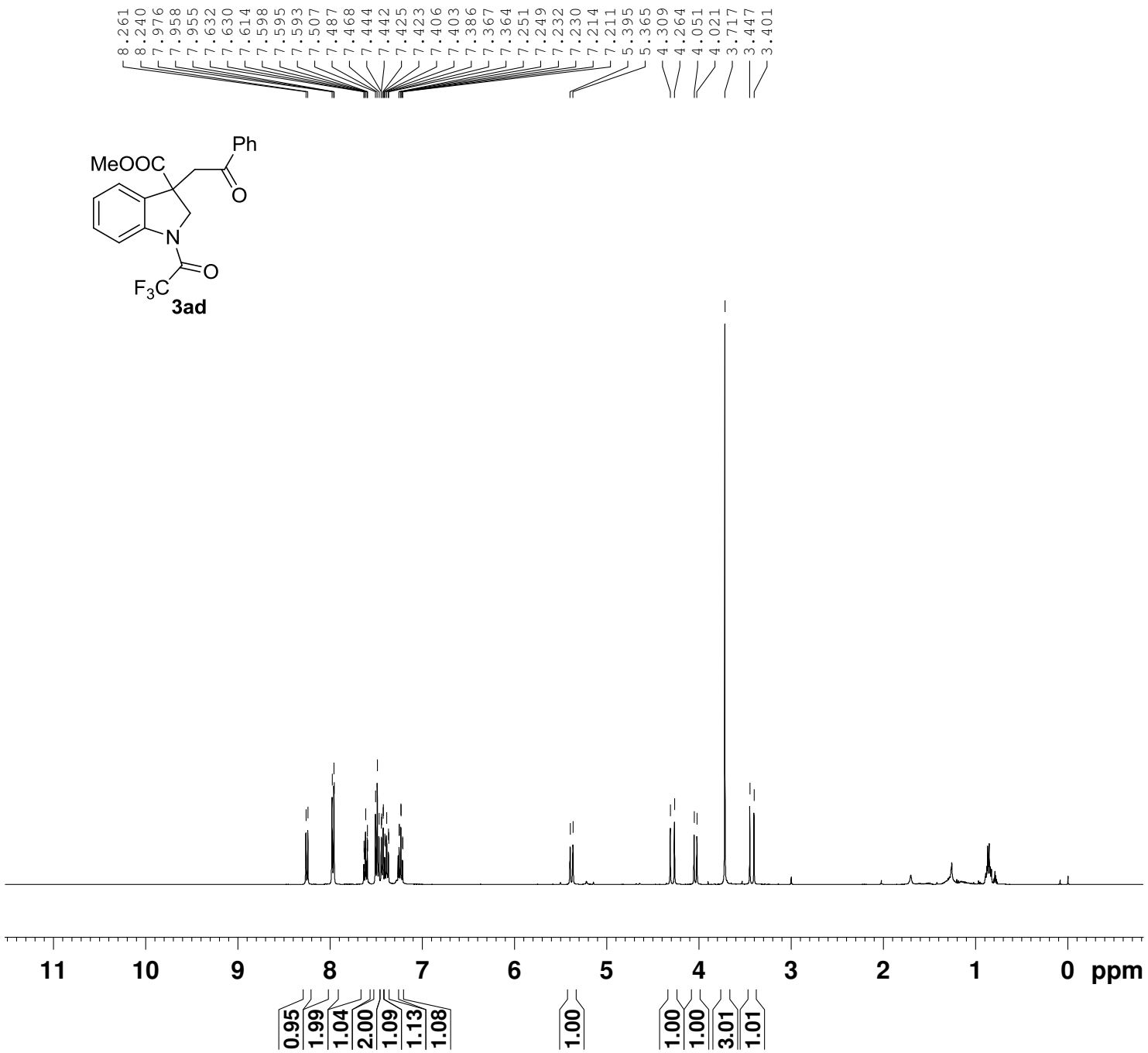


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EXPNO                       1
PROCNO                      1
Date_               20140926
Time                   10.02
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                 2.5625076 sec
RG                      90.5
DW                    78.200 usec
DE                      6.50 usec
TE                     296.9 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300092 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
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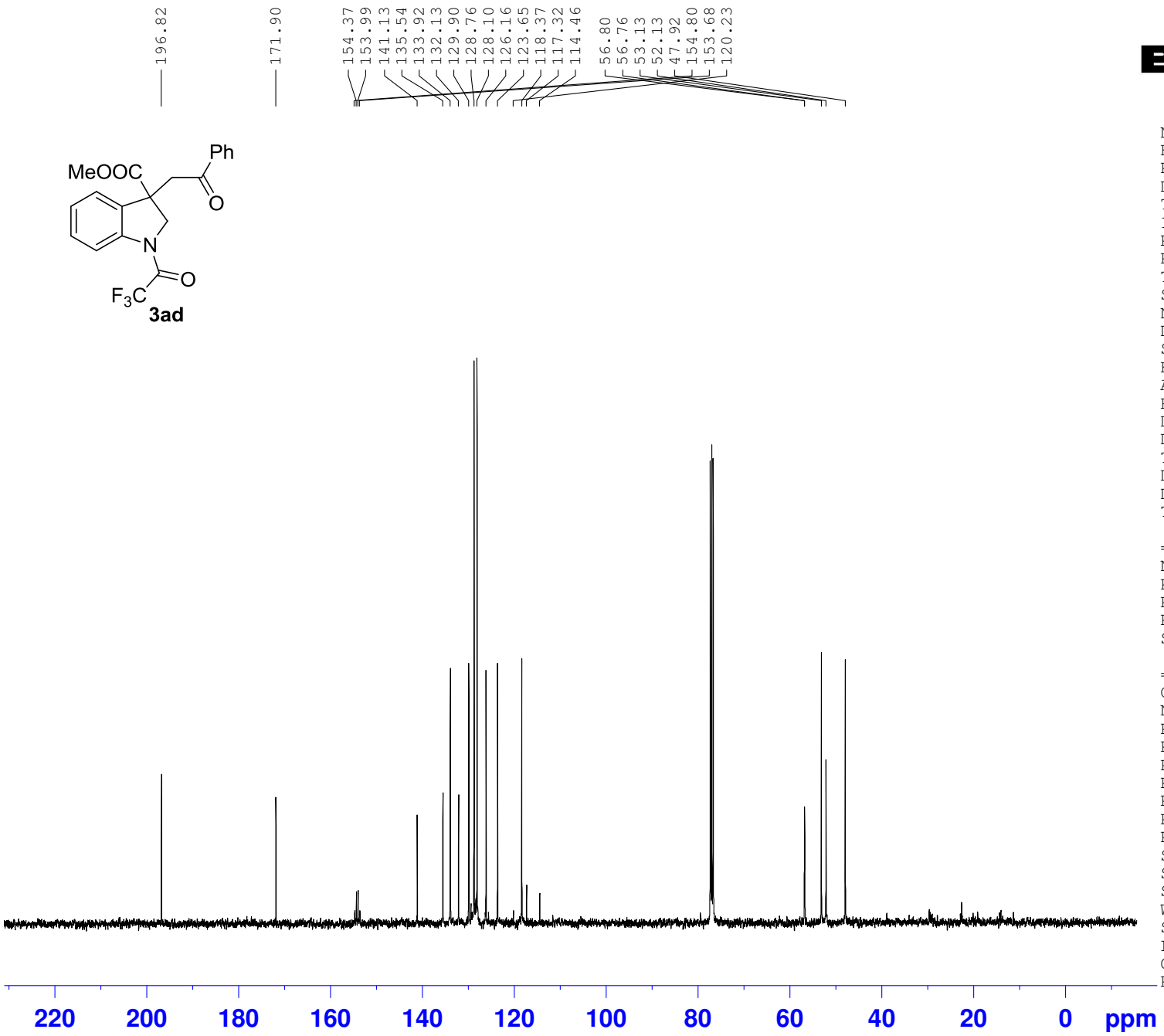


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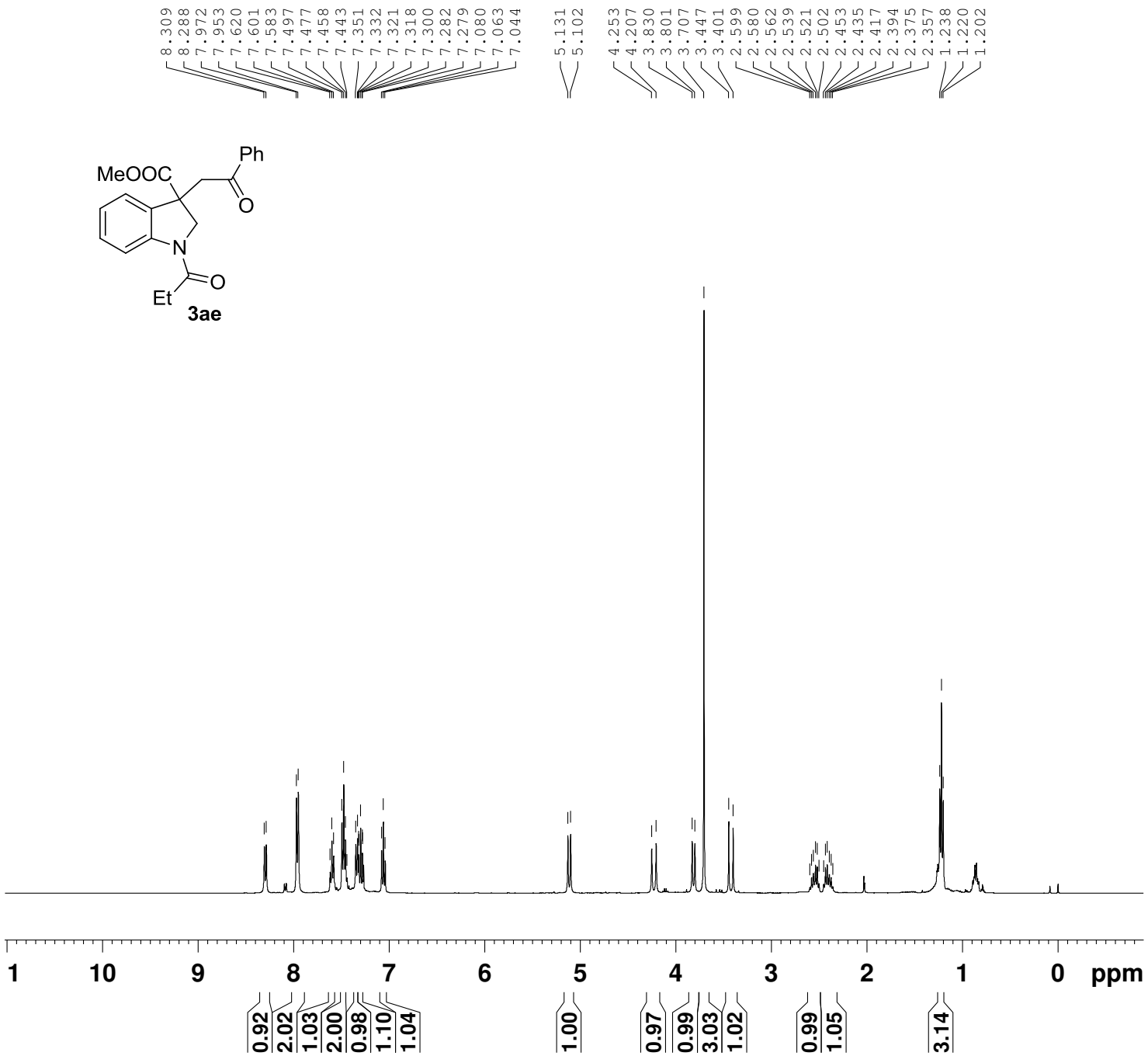
NAME        lly-550-1p-20140930
EXPNO                         2
PROCNO                        1
Date_               20140930
Time                      16.07
INSTRUM                   spect
PROBHD      5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                          176
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       300.0 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127766 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```

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PROCNO                       1
Date_                 20141015
Time                     17.38
INSTRUM                  spect
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                        50.8
DW                      78.200 usec
DE                        6.50 usec
TE                       296.6 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300058 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
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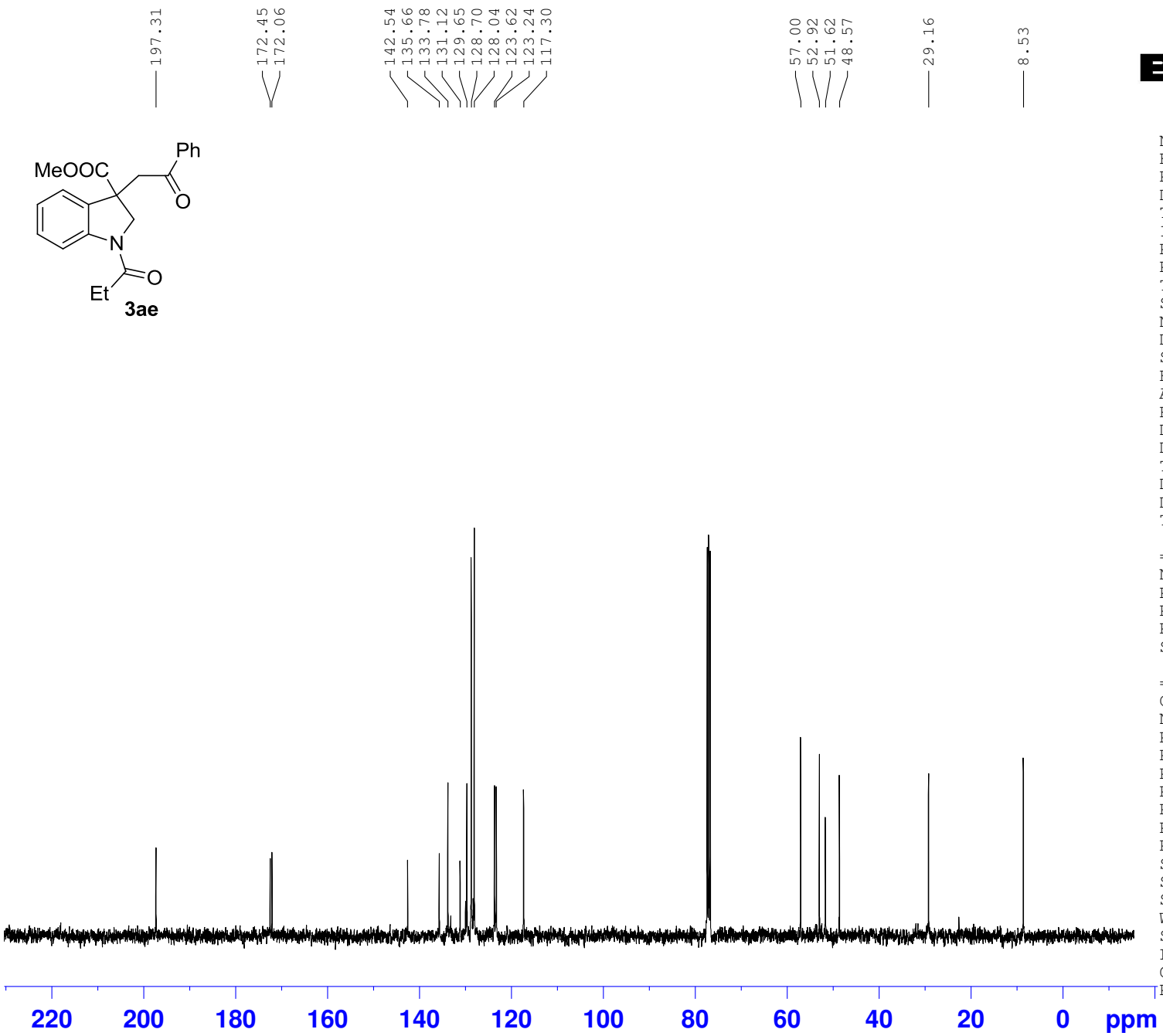


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INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                65536
SOLVENT           CDCl3
NS                   40
DS                    4
SWH           25252.525 Hz
FIDRES         0.385323 Hz
AQ            1.2976629 sec
RG                  181
DW               19.800 usec
DE                8.00 usec
TE                297.5 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                13.47 usec
PL1                2.00 dB
PL1W        55.31277084 W
SFO1        100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2         waltz16
NUC2                 1H
PCPD2             80.00 usec
PL2               -1.00 dB
PL12              16.72 dB
PL13              15.50 dB
PL2W        17.01305389 W
PL12W        0.28759566 W
PL13W        0.38087484 W
SFO2        400.1316005 MHz
SI                32768
SF          100.6127804 MHz
WDW                  EM
SSB                   0
LB                 3.00 Hz
GB                    0
PC                 1.40
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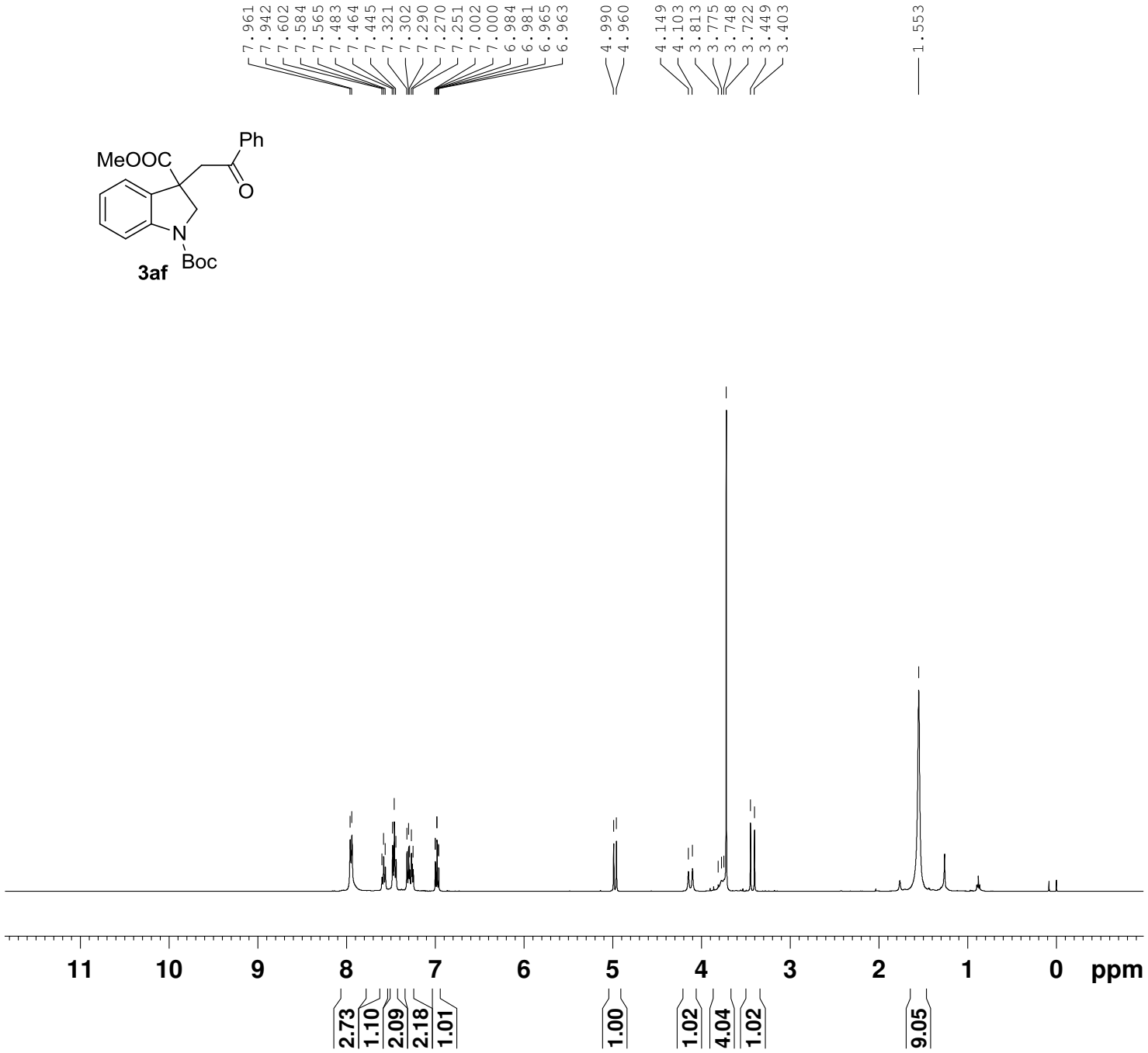


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PROCNO                      1
Date_               20140703
Time                   17.09
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                        64
DW                    78.200 usec
DE                      6.50 usec
TE                     297.3 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300092 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
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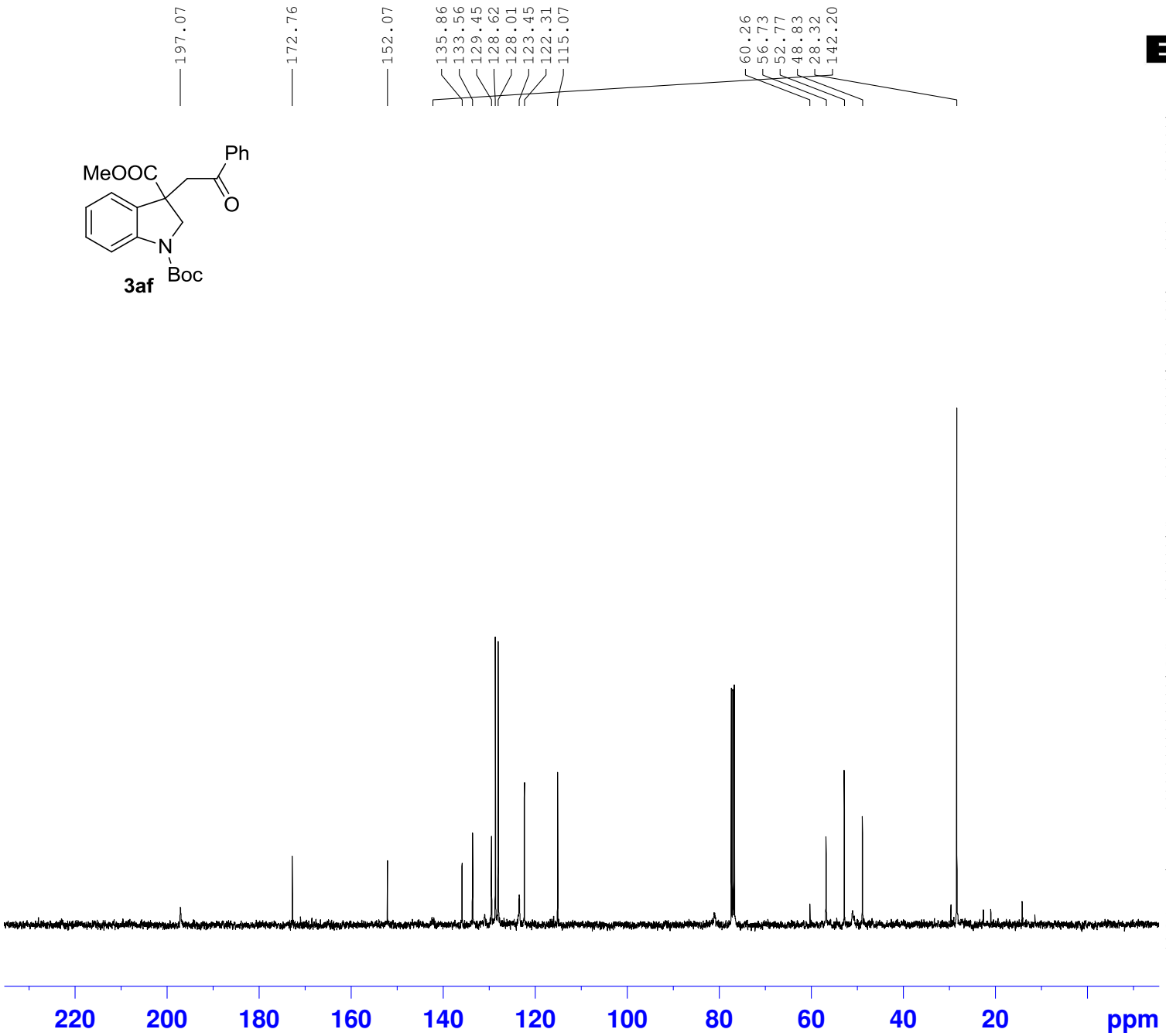
3af

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Time                     17.22
INSTRUM                  spect
PROBHD   5 mm PABBO BB-
PULPROG                 zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                          64
DS                           4
SWH                  25252.525 Hz
FIDRES                0.385323 Hz
AQ                   1.2976629 sec
RG                         362
DW                      19.800 usec
DE                        6.50 usec
TE                       298.7 K
D1                  2.00000000 sec
D11                 0.03000000 sec
TD0                         10

======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                    80.00 usec
PL2                      -1.00 dB
PL12                     16.72 dB
PL13                     15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127803 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
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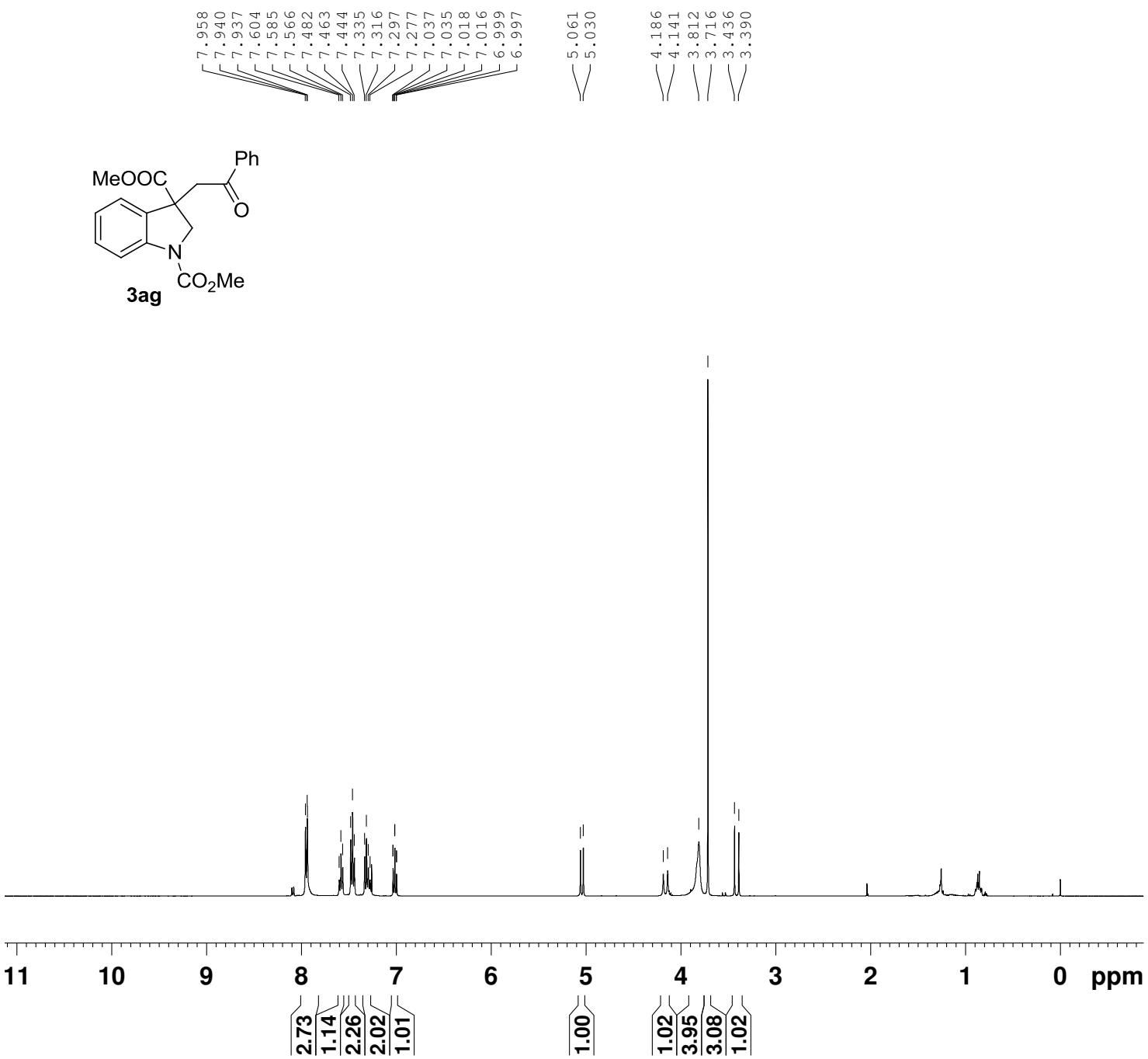


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NAME      lly-545-1p-20140923
EXPNO                       1
PROCNO                      1
Date_               20140923
Time                   17.49
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                       101
DW                    78.200 usec
DE                      6.50 usec
TE                     296.9 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300087 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
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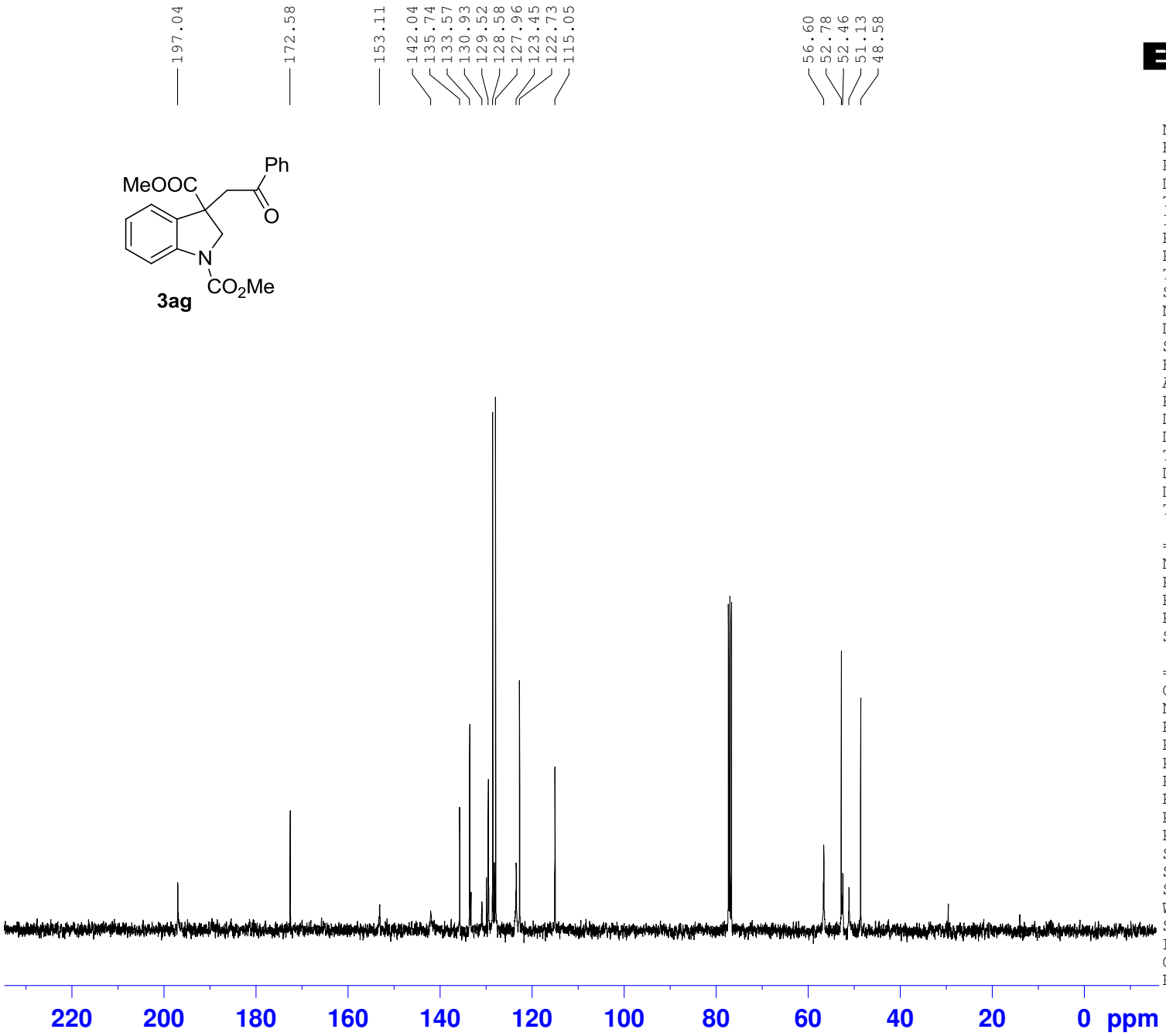


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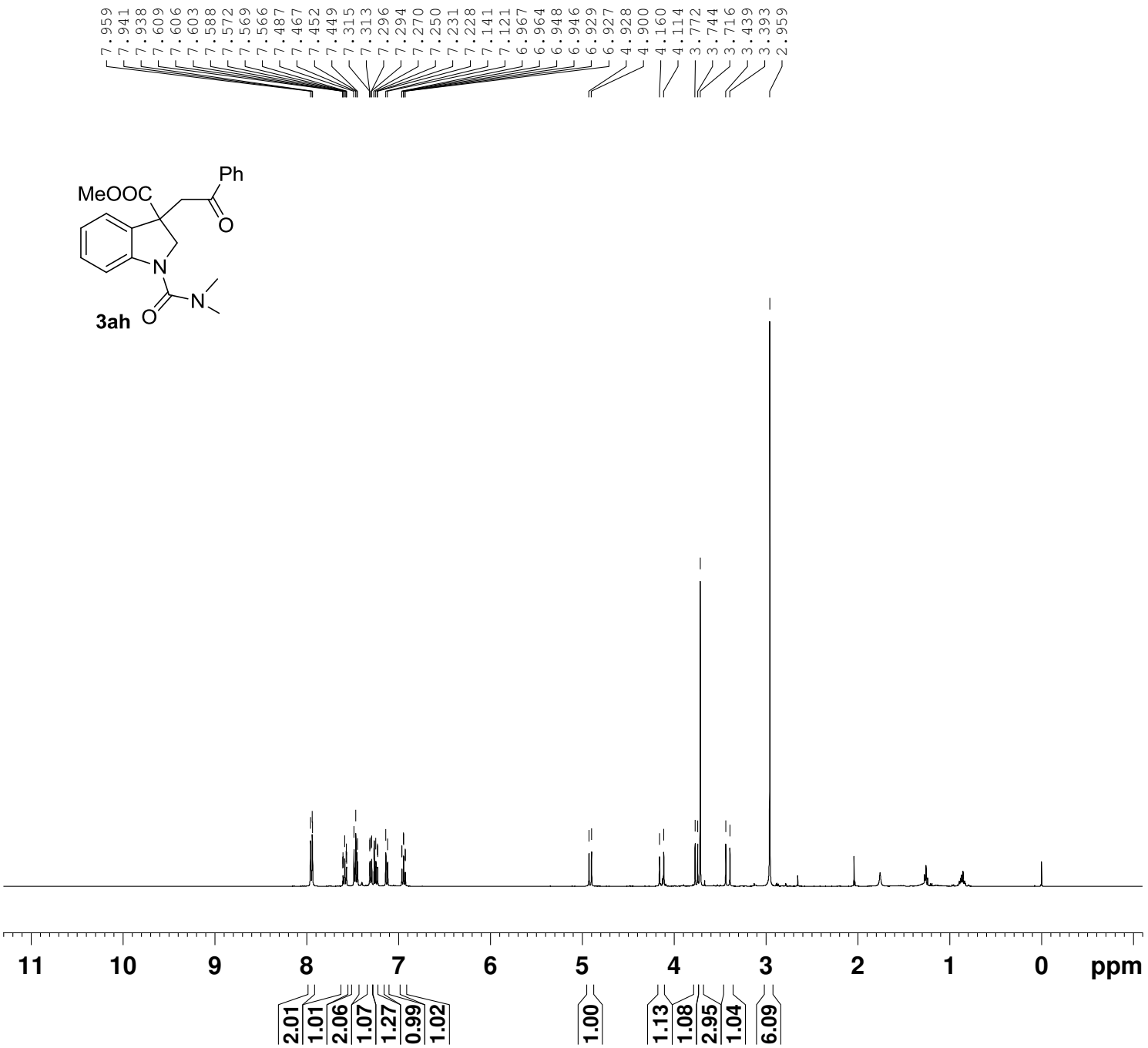
PROCNO                        1
Date_                  20140924
Time                      17.16
INSTRUM                   spect
PROBHD        5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           32
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.7 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

======== CHANNEL f1 ========
NUC1                         13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127850 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```

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EXPNO                       1
PROCNO                      1
Date_               20140926
Time                    9.56
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                      144
DW                    78.200 usec
DE                      6.50 usec
TE                     296.9 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300071 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
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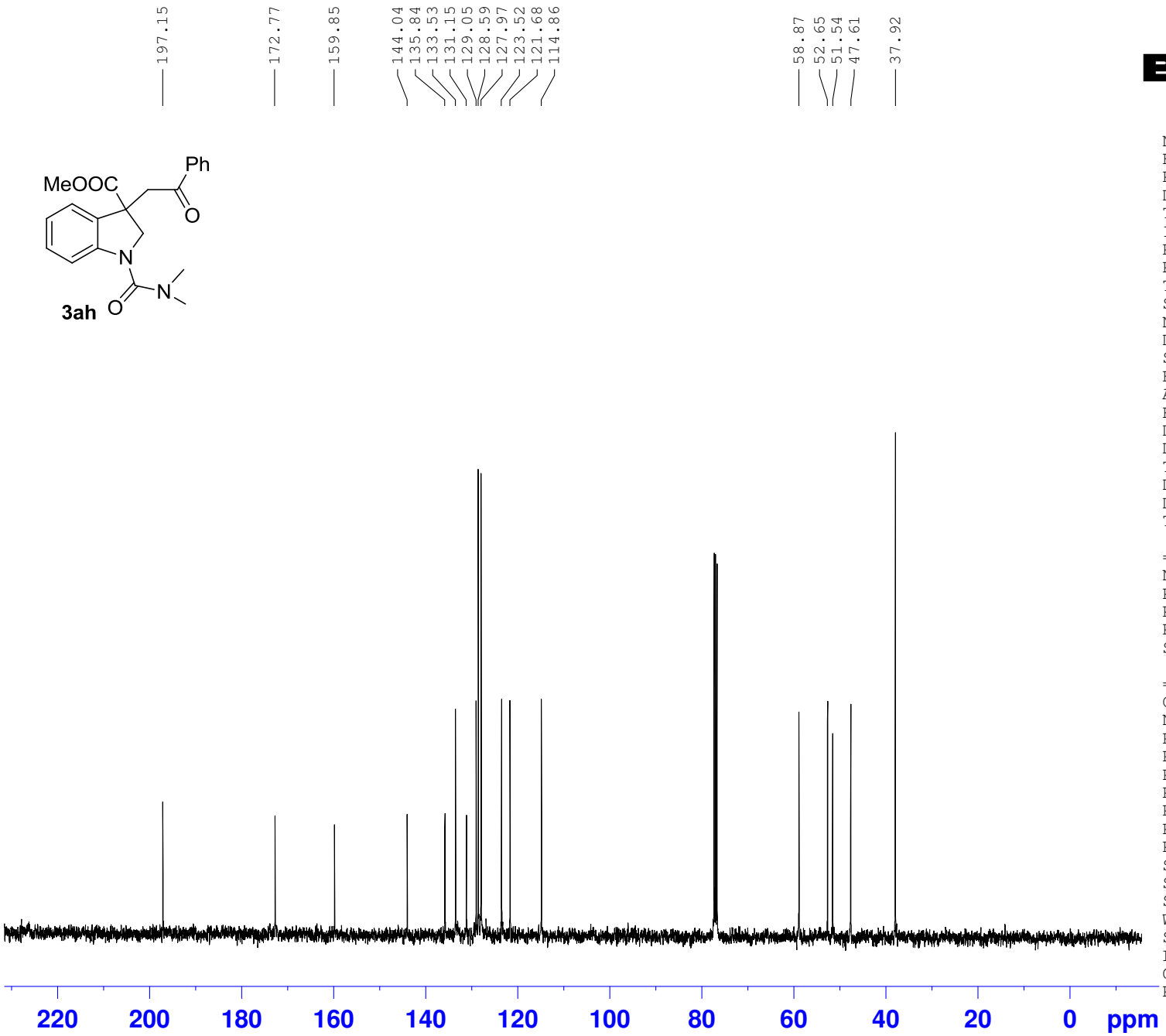


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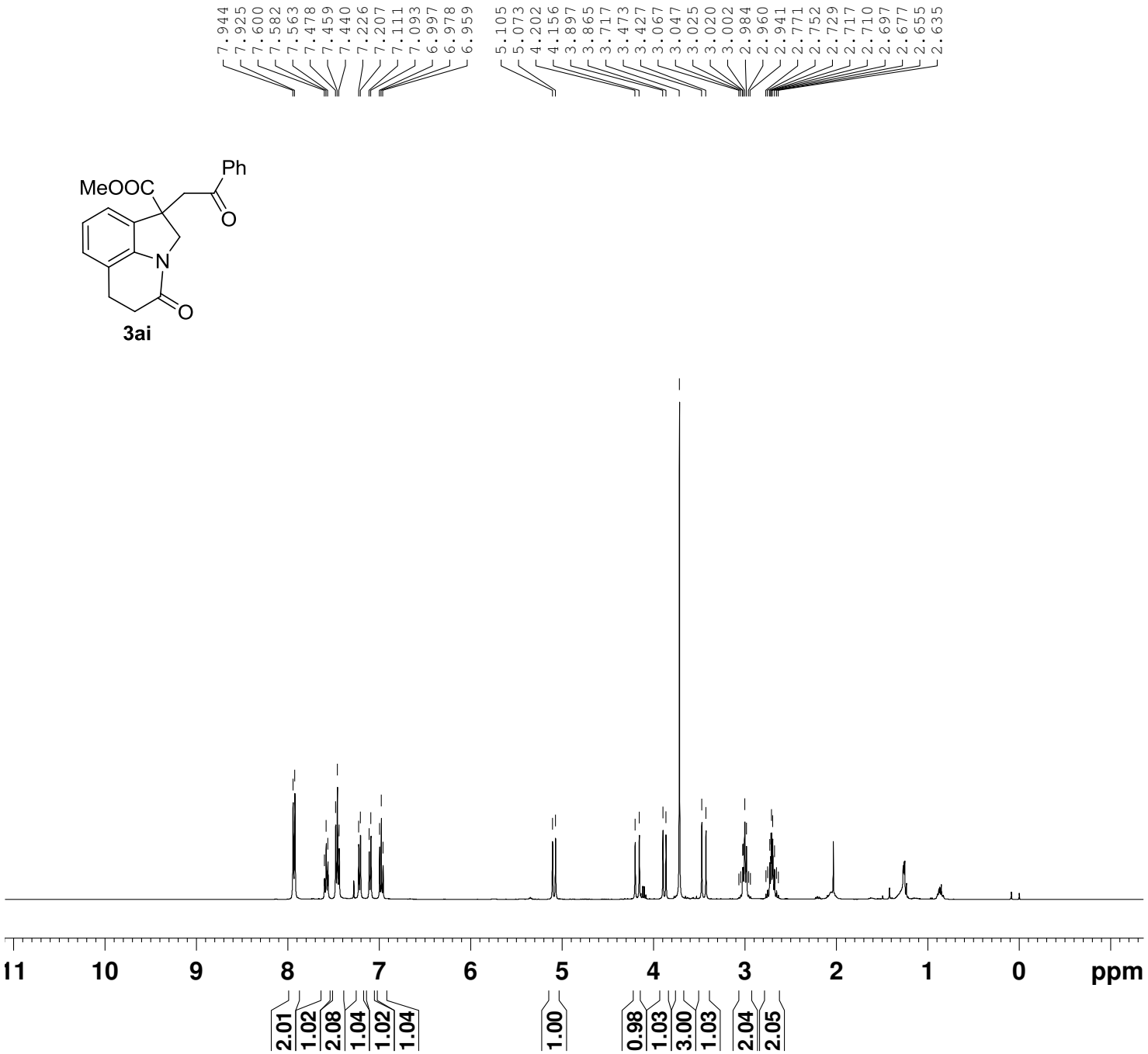
NAME        lly-550-2p-20140926
EXPNO                         2
PROCNO                        1
Date_               20140926
Time                      18.37
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           40
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.4 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

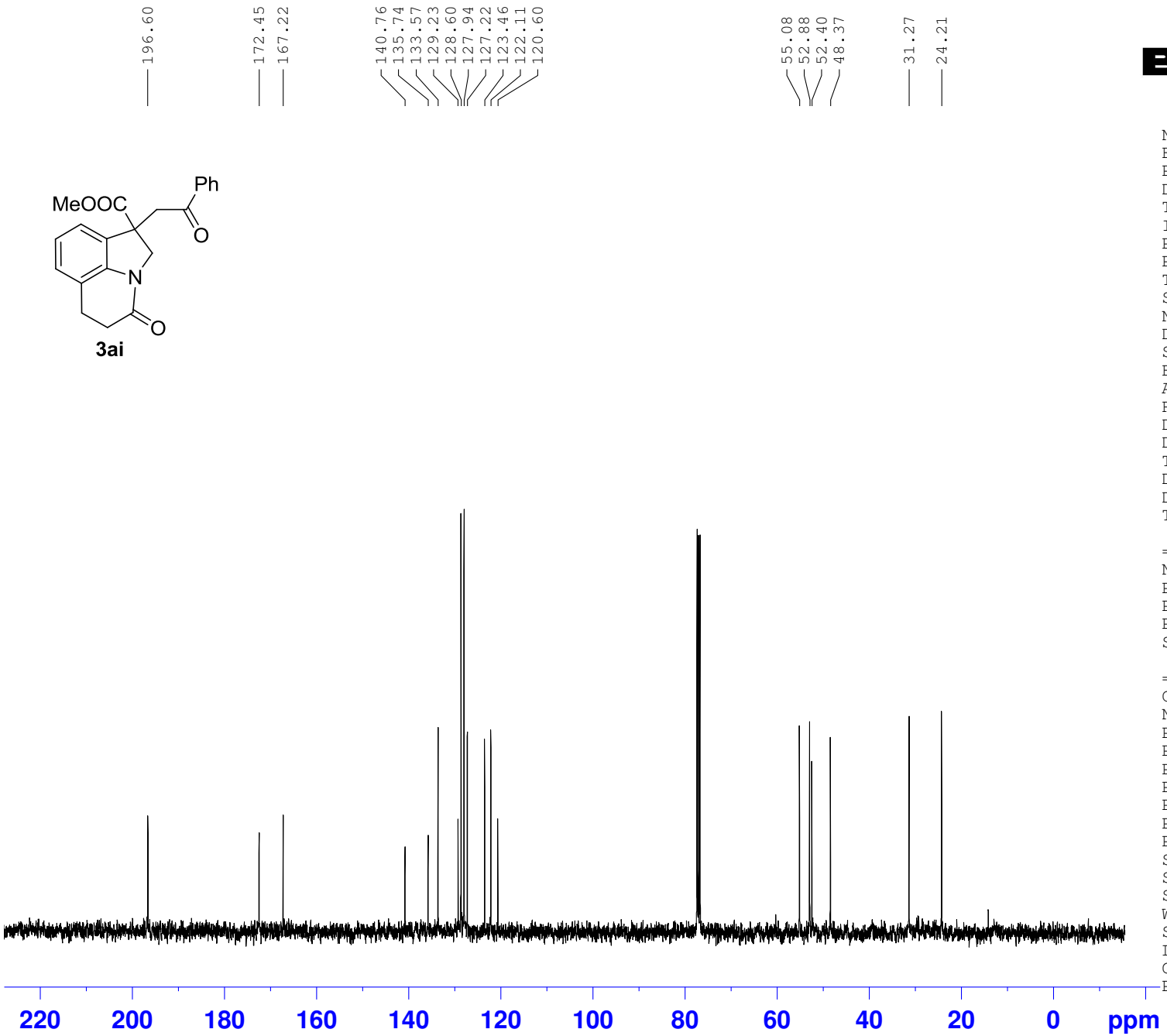
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127828 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```




```
NAME      lly-560-1p-20141011
EXPNO                       1
PROCNO                      1
Date_              20141011
Time                   18.07
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                      50.8
DW                    78.200 usec
DE                      6.50 usec
TE                     296.8 K
D1                1.00000000 sec
TD0                        1

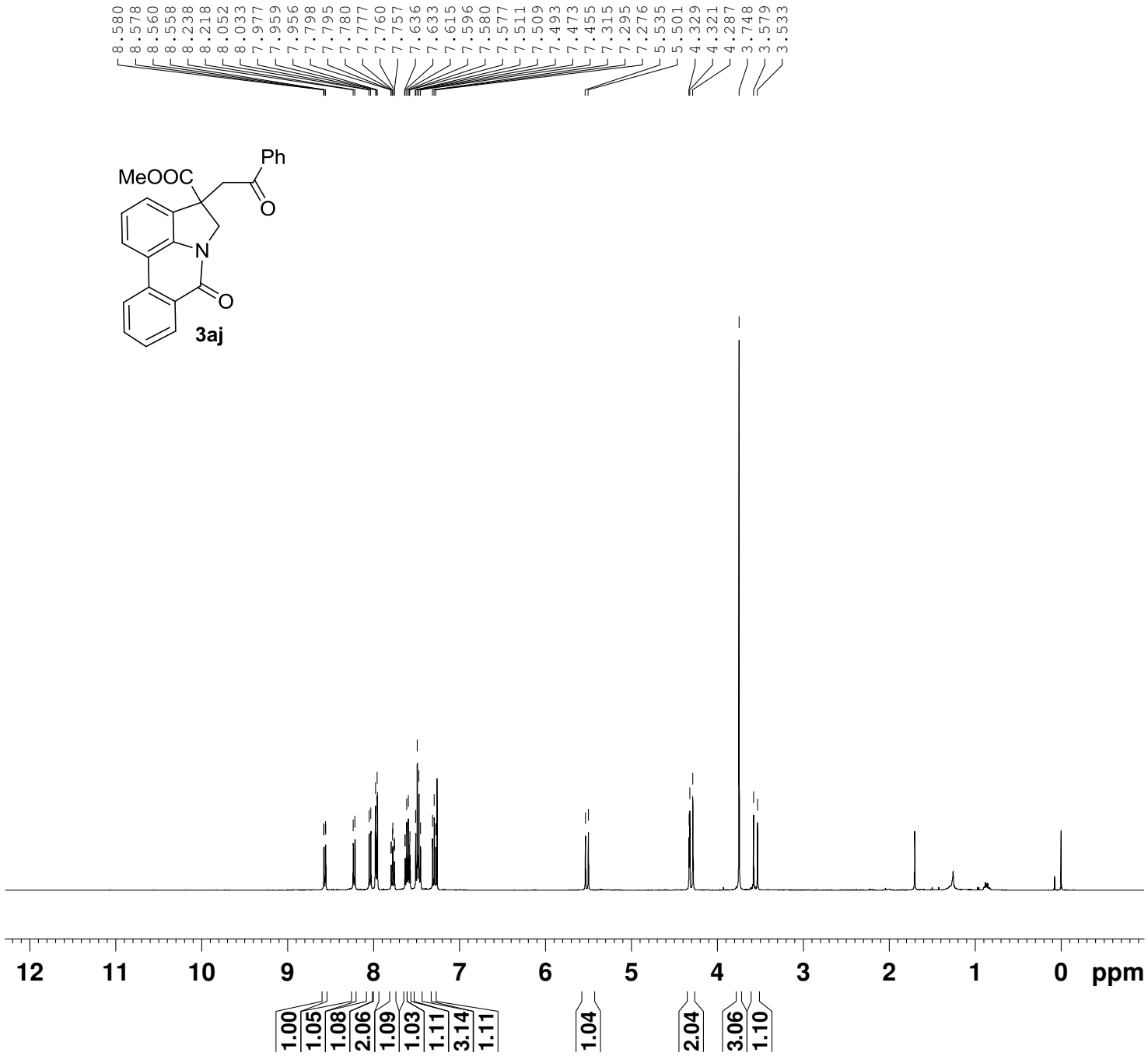
======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300013 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-560-1p-20141009
EXPNO                         2
PROCNO                        1
Date_                  20141011
Time                      18.12
INSTRUM                   spect
PROBHD        5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           24
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.5 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

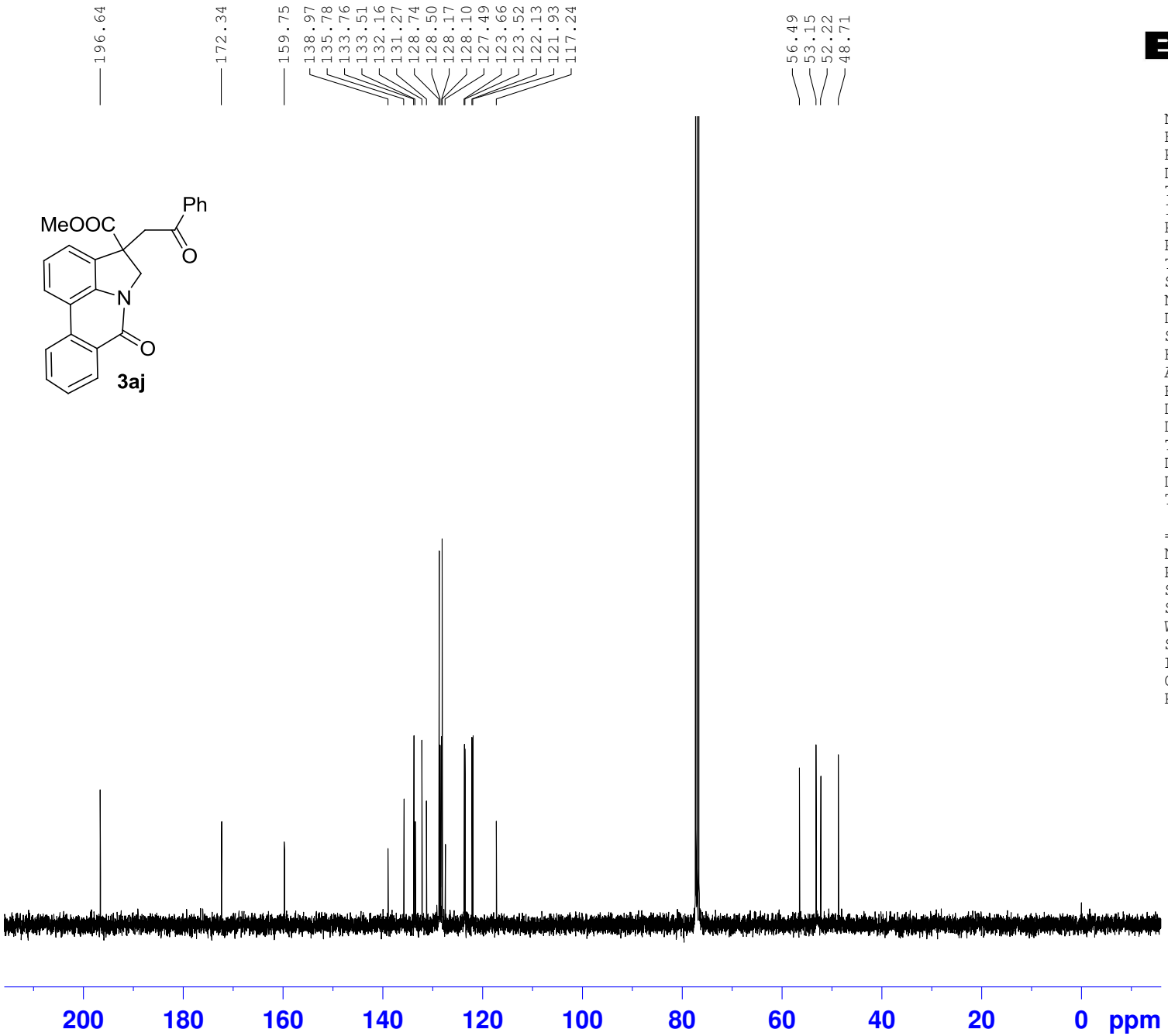
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127833 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```



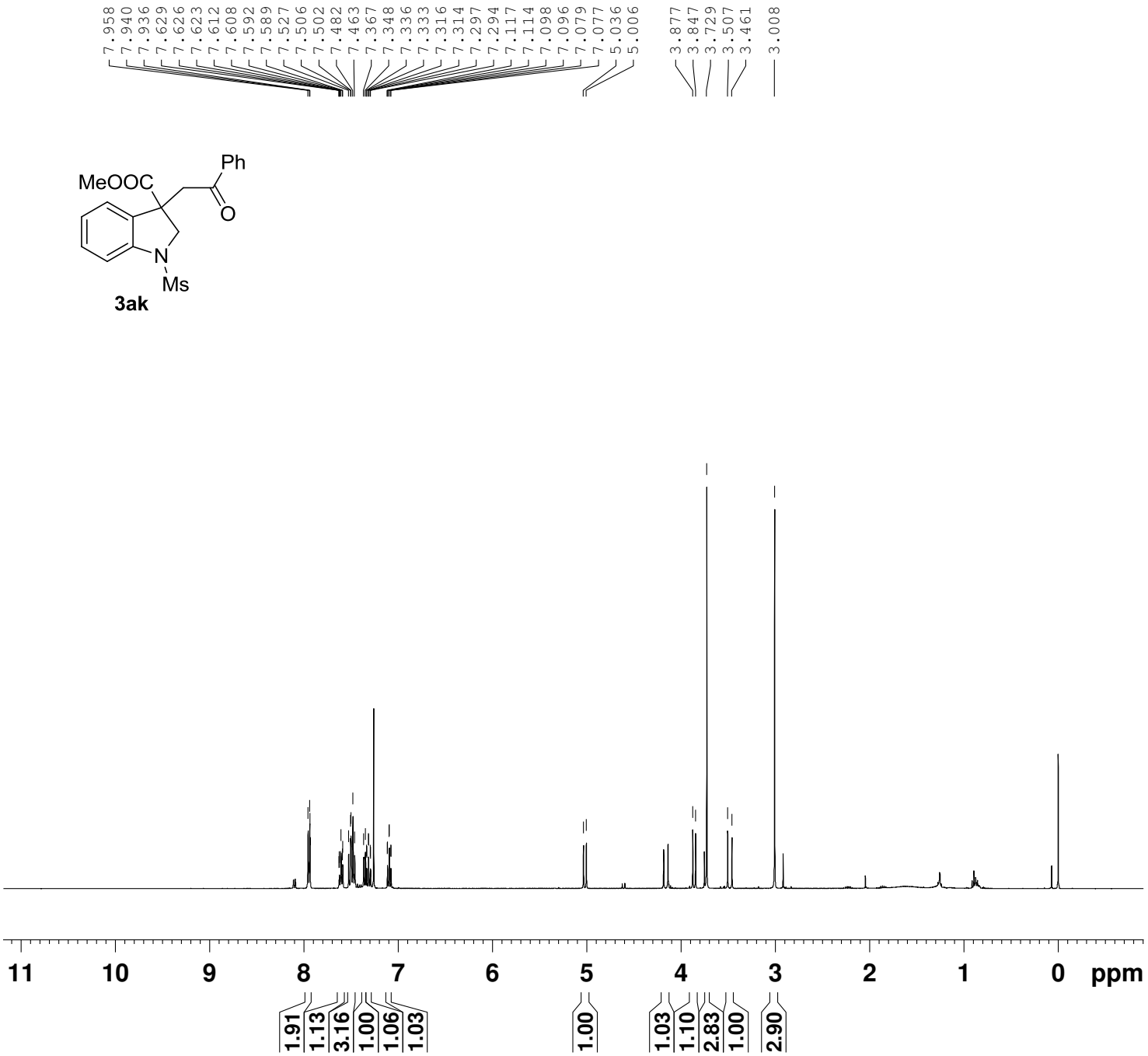

```
NAME          lly-567-3p
EXPNO                  1
PROCNO                 1
Date_           20141111
Time                3.10
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                   114
DW                60.800 usec
DE                 6.50 usec
TE                295.5 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300086 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```



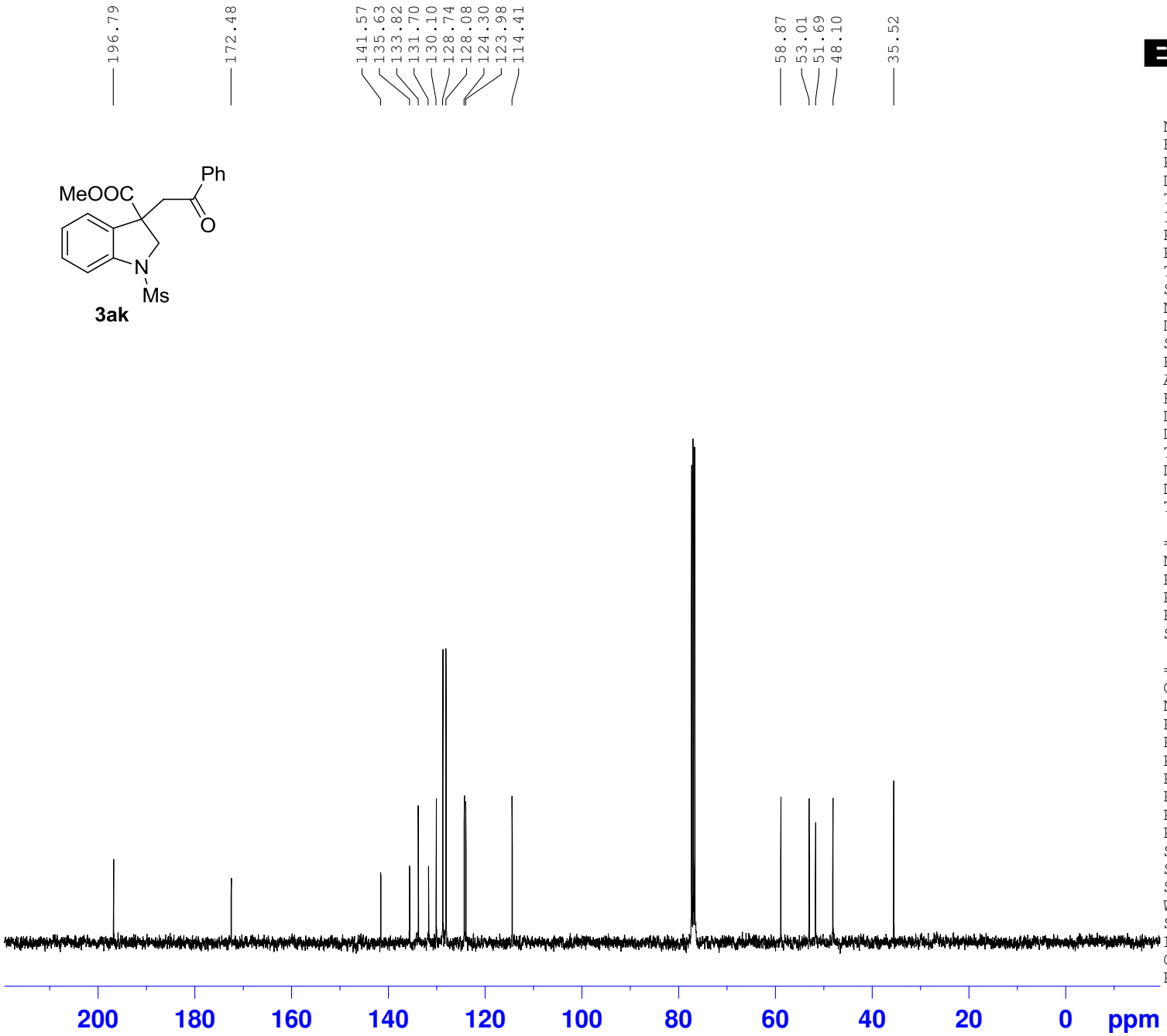

```
NAME          lly-567-3p
EXPNO                  2
PROCNO                 1
Date_           20141111
Time                3.22
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                   200
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                  90.5
DW                20.800 usec
DE                 6.50 usec
TE                296.4 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127739 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```




```
NAME      lly-544-2p-20140922
EXPNO                       1
PROCNO                      1
Date_               20140922
Time                   16.27
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                 2.5625076 sec
RG                       362
DW                    78.200 usec
DE                      6.50 usec
TE                     296.9 K
D1                1.00000000 sec
TD0                        1

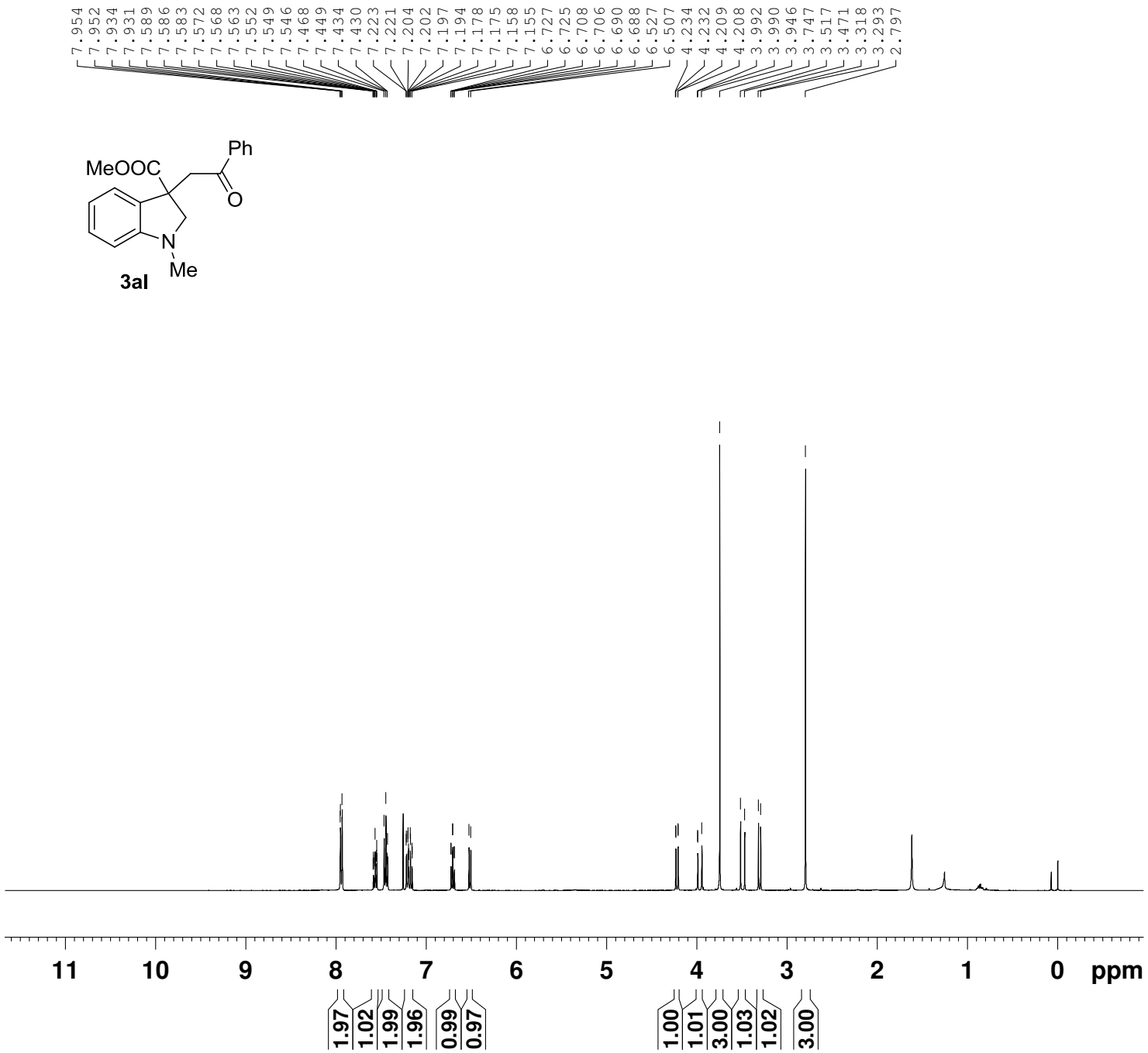
======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300091 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-698-1p-20150629
EXPNO                         2
PROCNO                        1
Date_               20150629
Time                     17.06
INSTRUM                  spect
PROBHD      5 mm PADUL 13C
PULPROG                 zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                          72
DS                           4
SWH                 24038.461 Hz
FIDRES               0.366798 Hz
AQ                  1.3631988 sec
RG                       2050
DW                     20.800 usec
DE                       8.00 usec
TE                      296.0 K
D1                 2.00000000 sec
D11                0.03000000 sec
TD0                          1

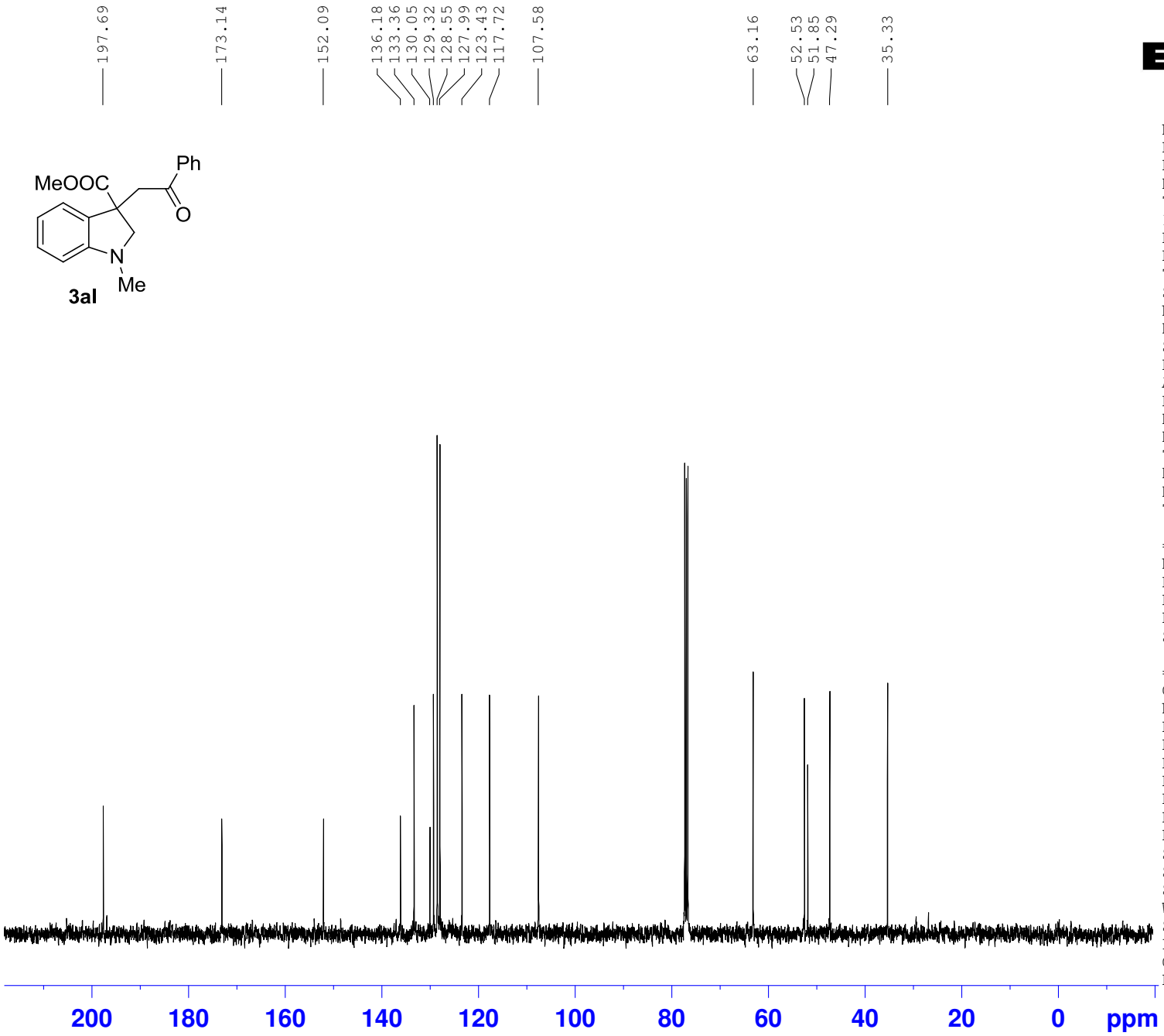
======== CHANNEL f1 ========
NUC1                       13C
P1                       13.50 usec
PL1                       3.00 dB
PL1W              43.93649673 W
SFO1              100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                        1H
PCPD2                    80.00 usec
PL2                       1.80 dB
PL12                     17.19 dB
PL13                     18.46 dB
PL2W               8.92857742 W
PL12W              0.25809658 W
PL13W              0.19265592 W
SFO2              400.1316005 MHz
SI                       32768
SF                100.6127759 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME      lly-529-1p-20140703
EXPNO                       1
PROCNO                      1
Date_               20140703
Time                   10.01
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                      161
DW                    78.200 usec
DE                      6.50 usec
TE                     295.7 K
D1                1.00000000 sec
TD0                        1

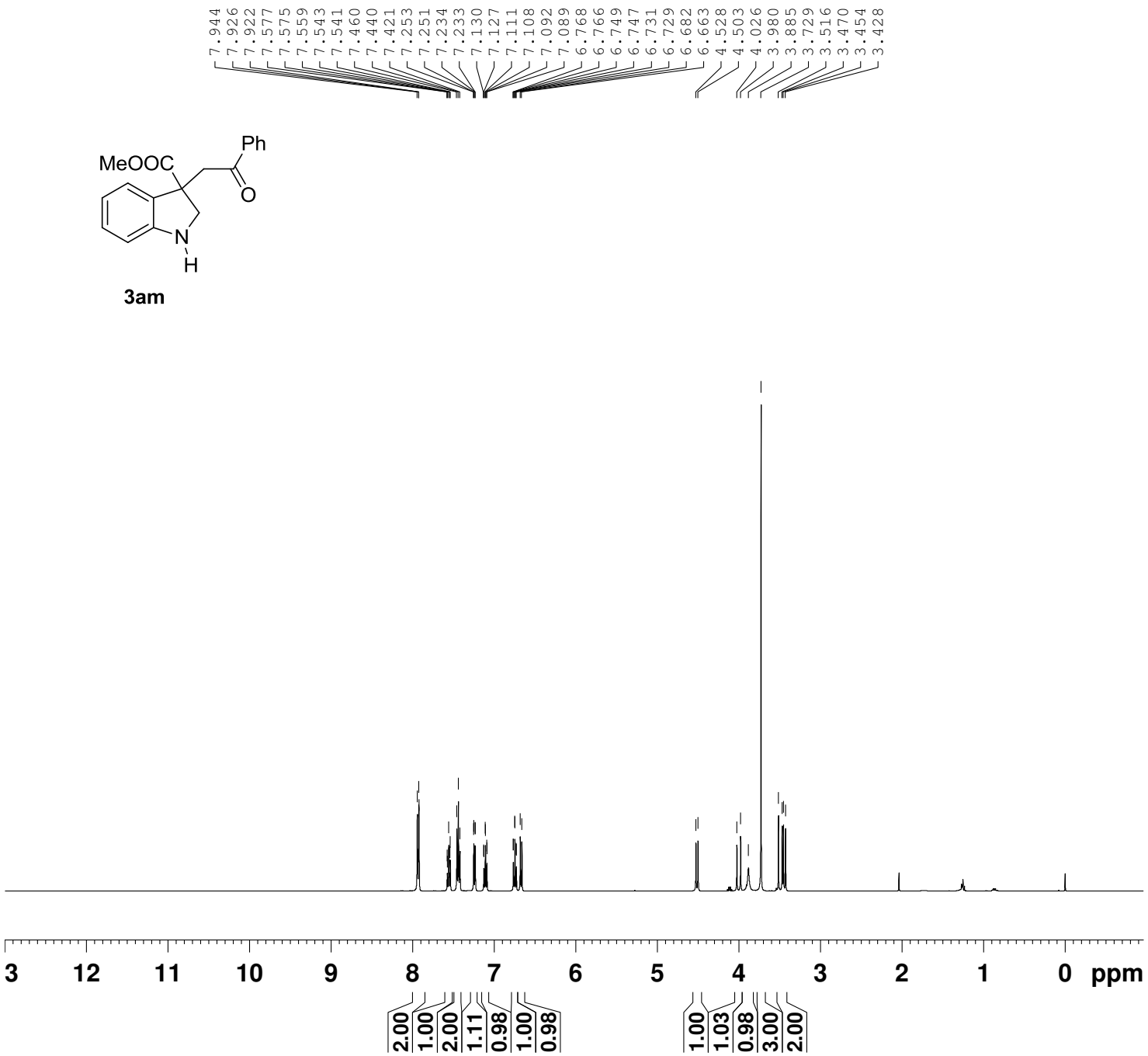
======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300103 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-700-1p-20150710
EXPNO                         2
PROCNO                        1
Date_                  20150710
Time                      17.12
INSTRUM                   spect
PROBHD        5 mm PADUL 13C
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           24
DS                            4
SWH                   24038.461 Hz
FIDRES                 0.366798 Hz
AQ                    1.3631988 sec
RG                         2050
DW                       20.800 usec
DE                        8.00 usec
TE                       296.7 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                           1

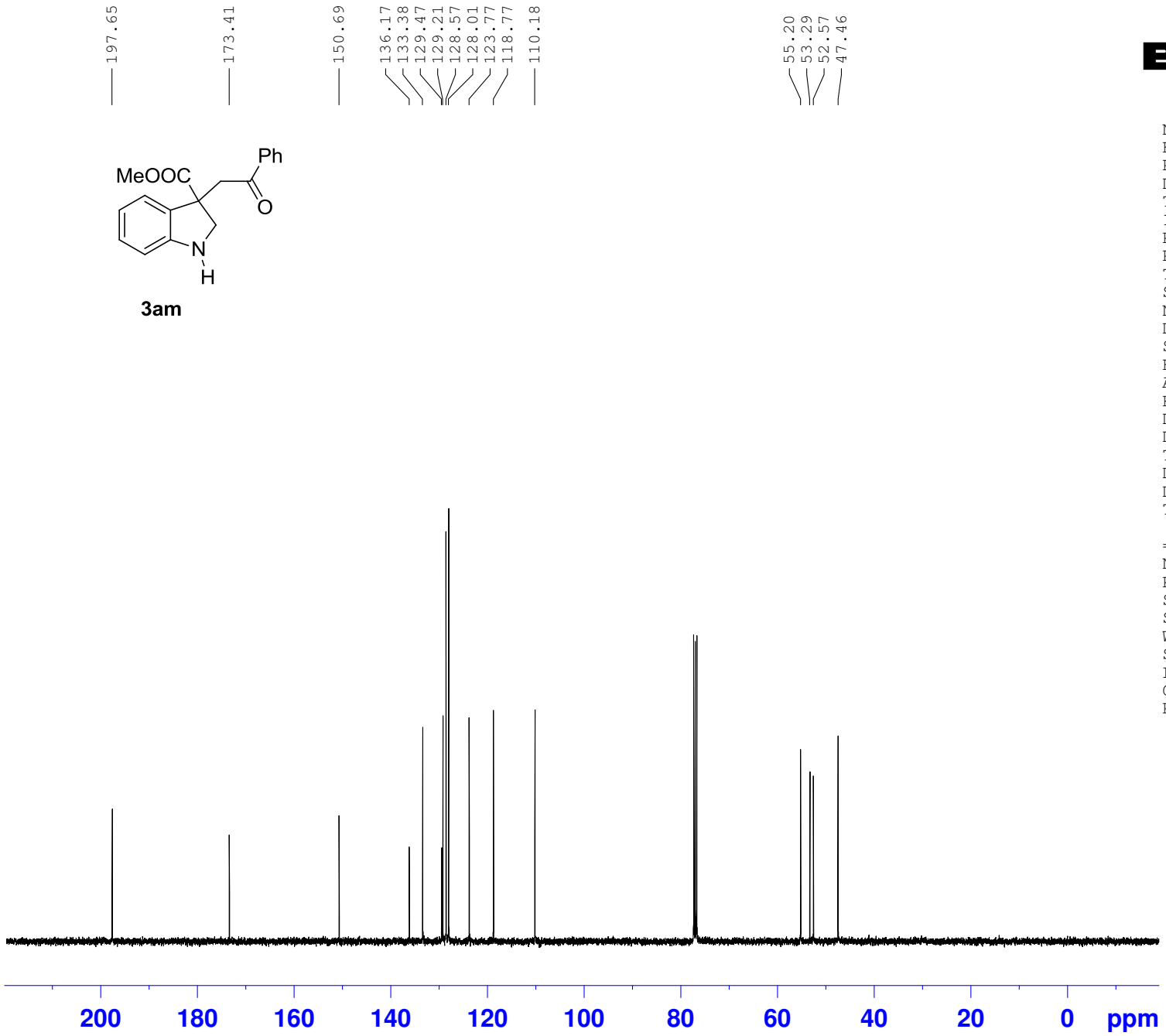
======== CHANNEL f1 ========
NUC1                         13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                43.93649673 W
SFO1                100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                 8.92857742 W
PL12W                0.25809658 W
PL13W                0.19265592 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127806 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```



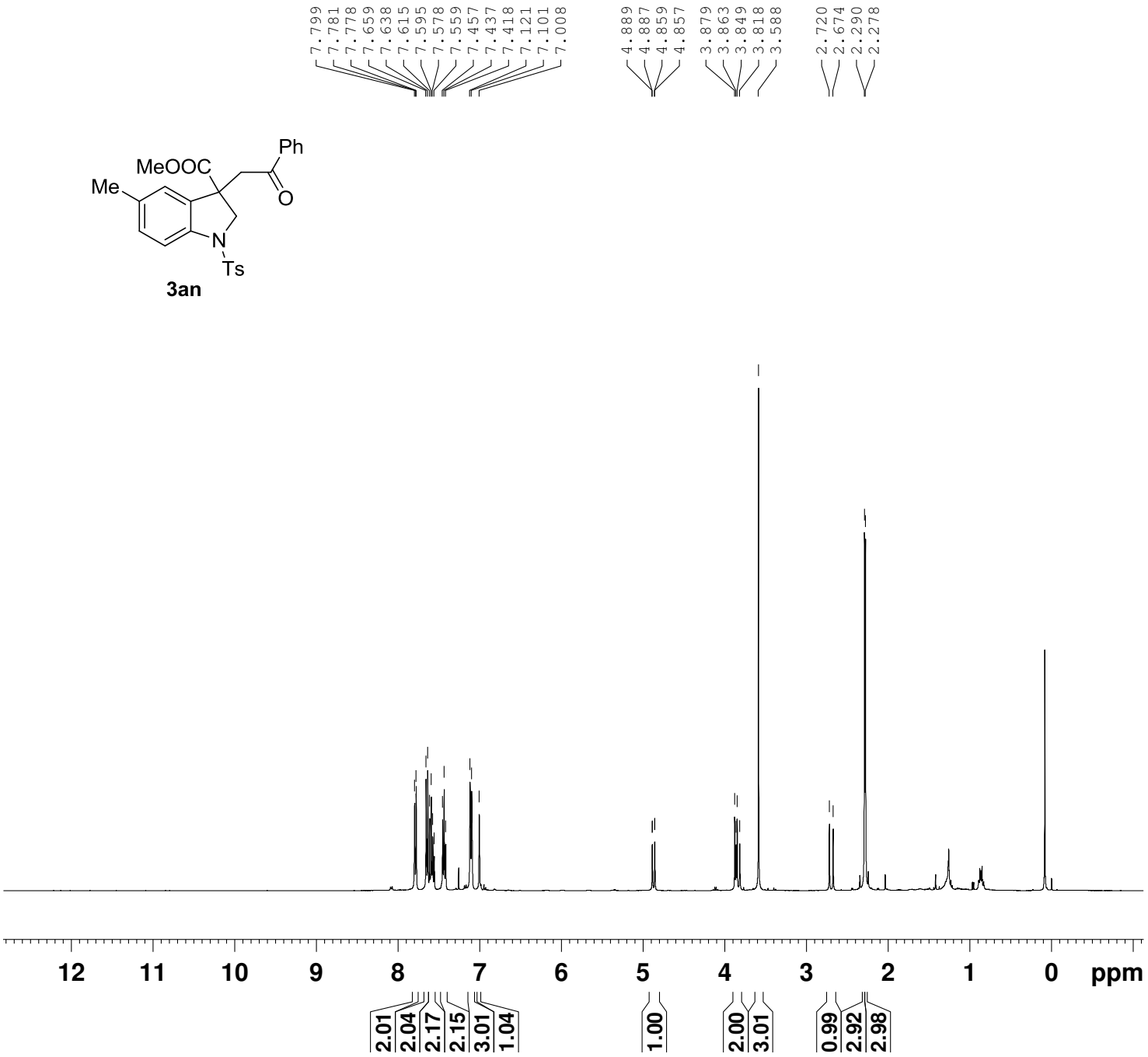

```
NAME          lly-576-2p
EXPNO                  1
PROCNO                 1
Date_           20141127
Time                3.40
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                    64
DW                60.800 usec
DE                 6.50 usec
TE                295.9 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300139 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME          lly-576-2p
EXPNO                  2
PROCNO                 1
Date_           20141127
Time                3.46
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                   100
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                  90.5
DW                20.800 usec
DE                 6.50 usec
TE                296.7 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

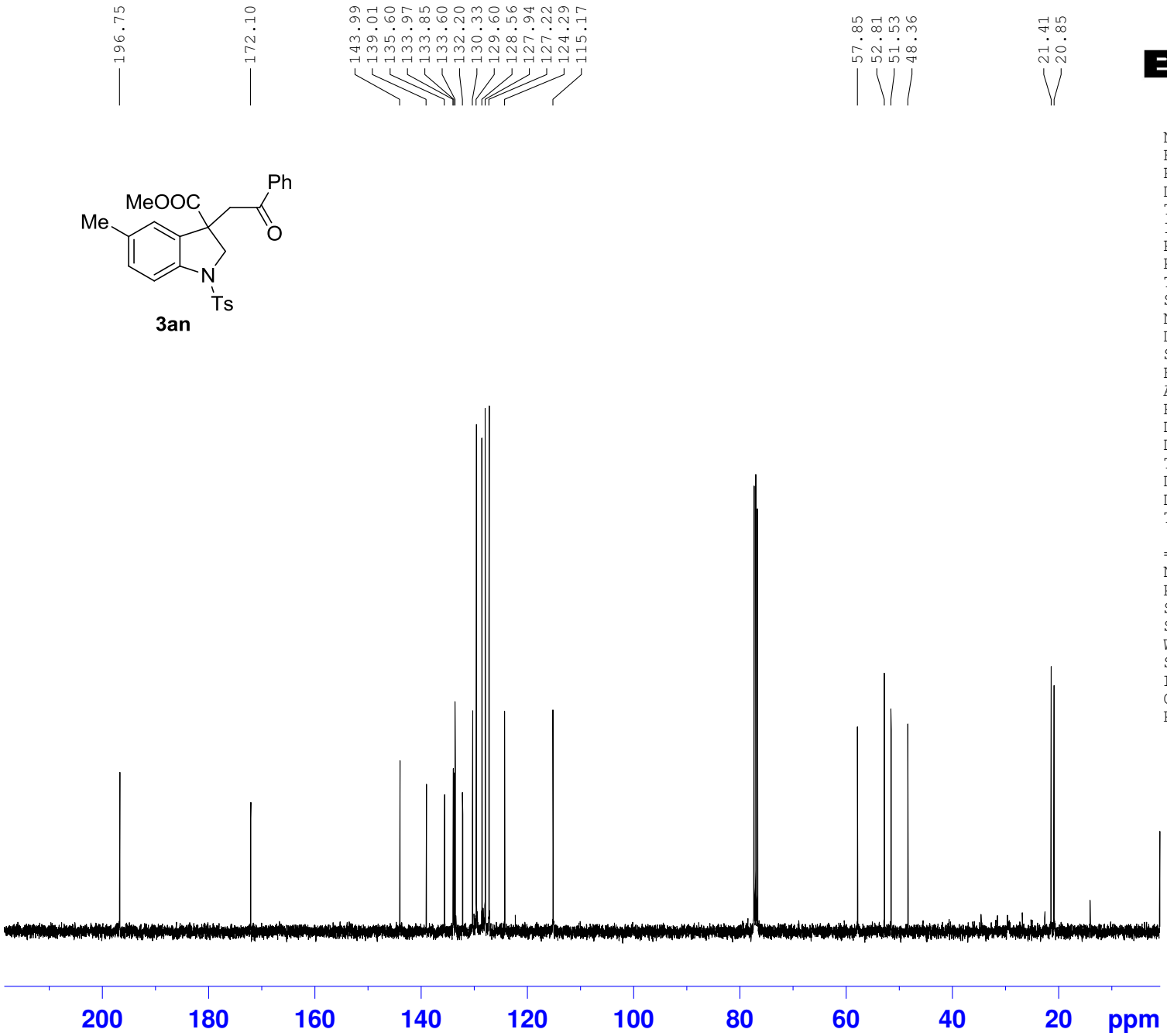
======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127783 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```




```
NAME          lly-577-2p
EXPNO                  1
PROCNO                 1
Date_           20141127
Time                3.15
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                    32
DW                60.800 usec
DE                 6.50 usec
TE                295.9 K
D1            1.00000000 sec
TD0                    1

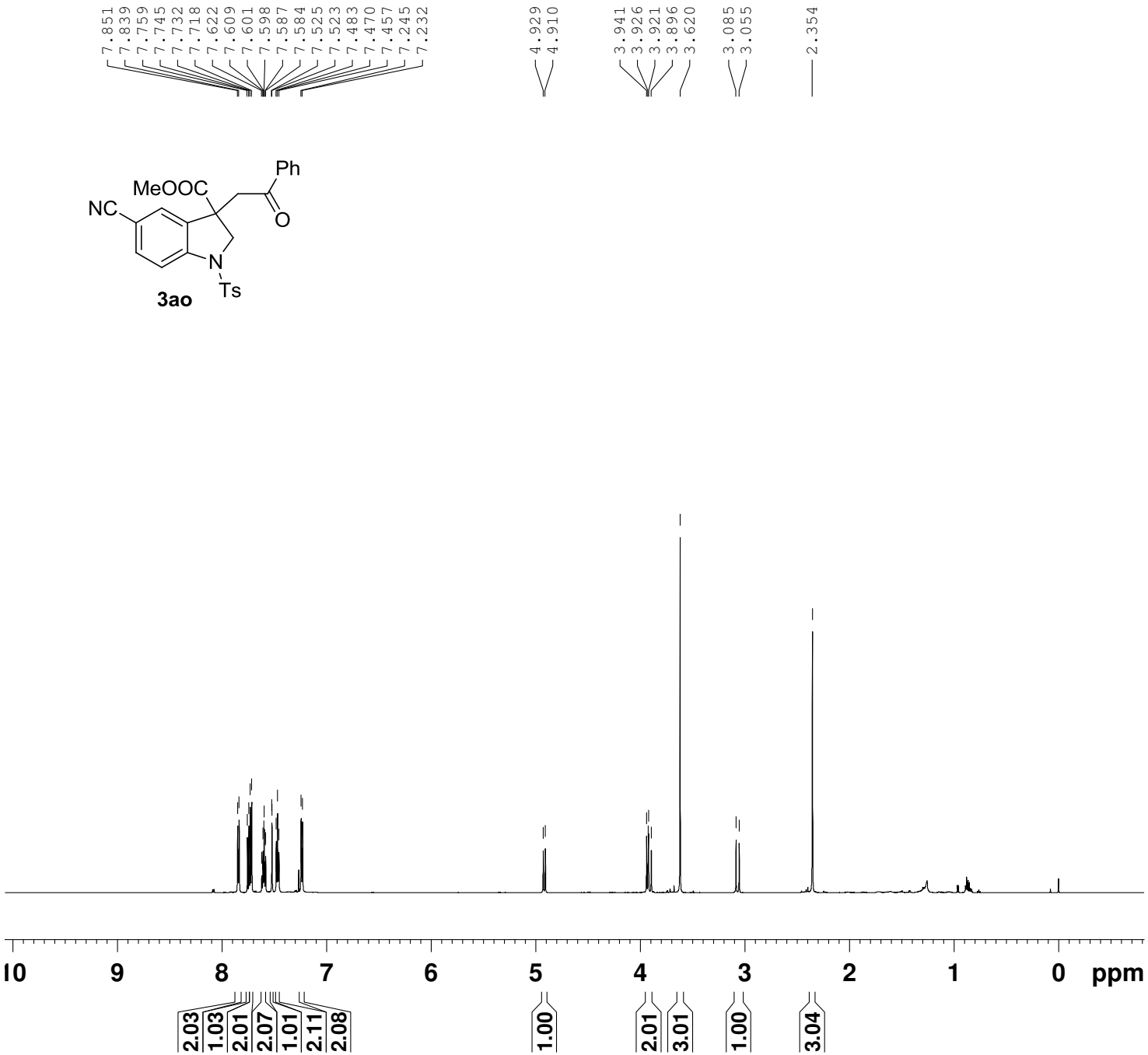
======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300094 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```

3an



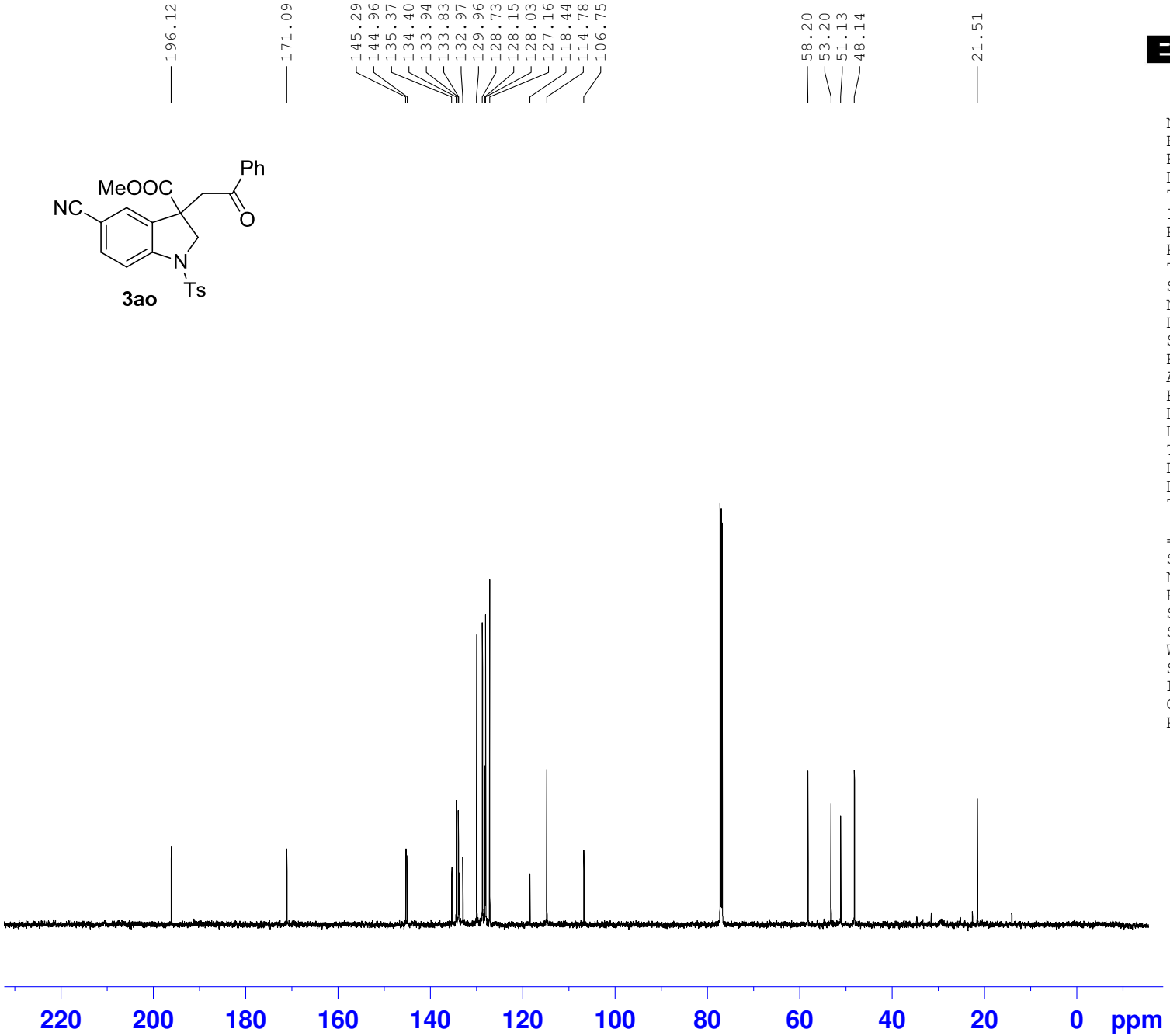

```
NAME          lly-577-2p
EXPNO                  2
PROCNO                 1
Date_           20141127
Time                3.20
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                    64
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                  45.2
DW                20.800 usec
DE                 6.50 usec
TE                296.6 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  13C
P1                 12.00 usec
SI                 32768
SF           100.6127797 MHz
WDW                   EM
SSB                    0
LB                  1.00 Hz
GB                     0
PC                  1.40
```



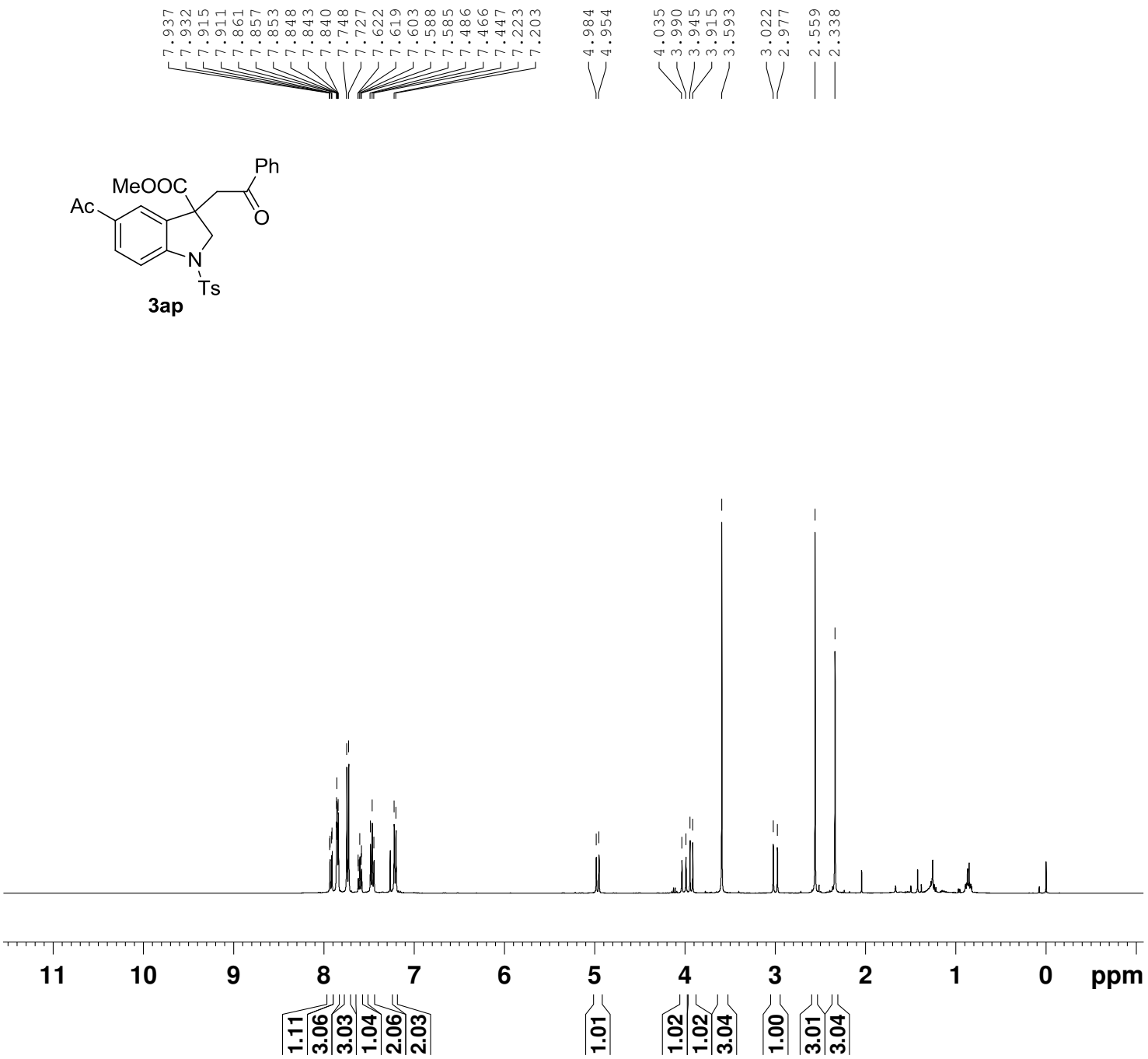

```
NAME          lly-586-3ap
EXPNO                   1
PROCNO                  1
Date_            20150701
Time                10.32
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  65536
SOLVENT             CDCl3
NS                      8
DS                      0
SWH              9014.423 Hz
FIDRES           0.137549 Hz
AQ             3.6351135 sec
RG                  30.73
DW                 55.467 usec
DE                   6.50 usec
TE                  297.7 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         600.1739011 MHz
NUC1                  1H
P1                  9.77 usec
SI                 65536
SF           600.1700106 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```



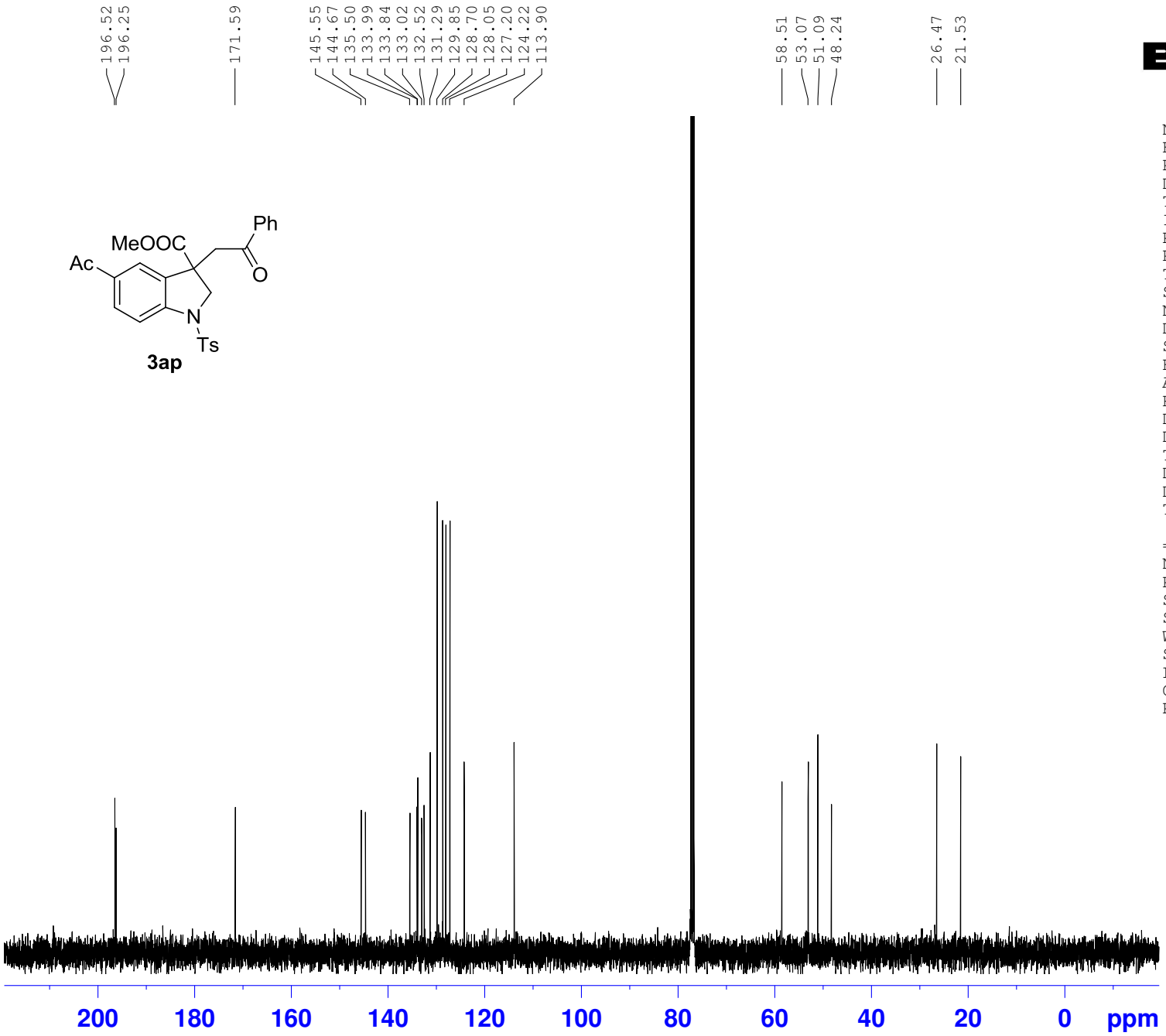

```
NAME          lly-586-3ap
EXPNO                   2
PROCNO                  1
Date_           20150701
Time               10.41
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                65536
SOLVENT           CDCl3
NS                  167
DS                    4
SWH           37878.789 Hz
FIDRES         0.577984 Hz
AQ            0.8651252 sec
RG               190.02
DW               13.200 usec
DE                6.50 usec
TE               298.3 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                  10

======== CHANNEL f1 ========
SFO1        150.9294669 MHz
NUC1                13C
P1                11.90 usec
SI                32768
SF          150.9128777 MHz
WDW                  EM
SSB                   0
LB                 3.00 Hz
GB                    0
PC                 1.40
```



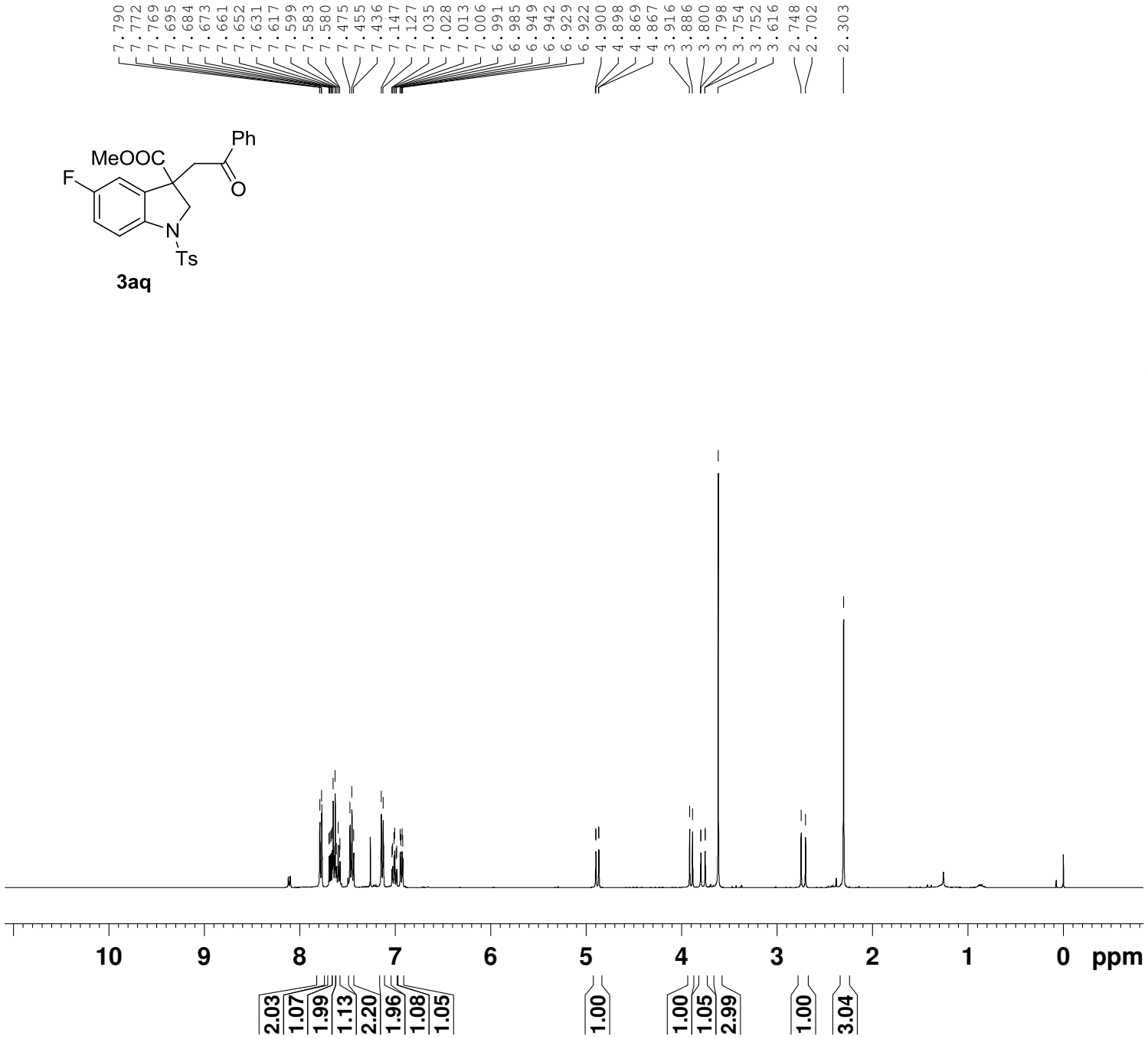

```
NAME          lly-591-1p
EXPNO                  1
PROCNO                 1
Date_           20141218
Time                6.01
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                  80.6
DW                60.800 usec
DE                 6.50 usec
TE                295.6 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300065 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME          lly-591-1p
EXPNO                  2
PROCNO                 1
Date_           20141218
Time                6.06
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                    64
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                   101
DW                20.800 usec
DE                 6.50 usec
TE                296.4 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

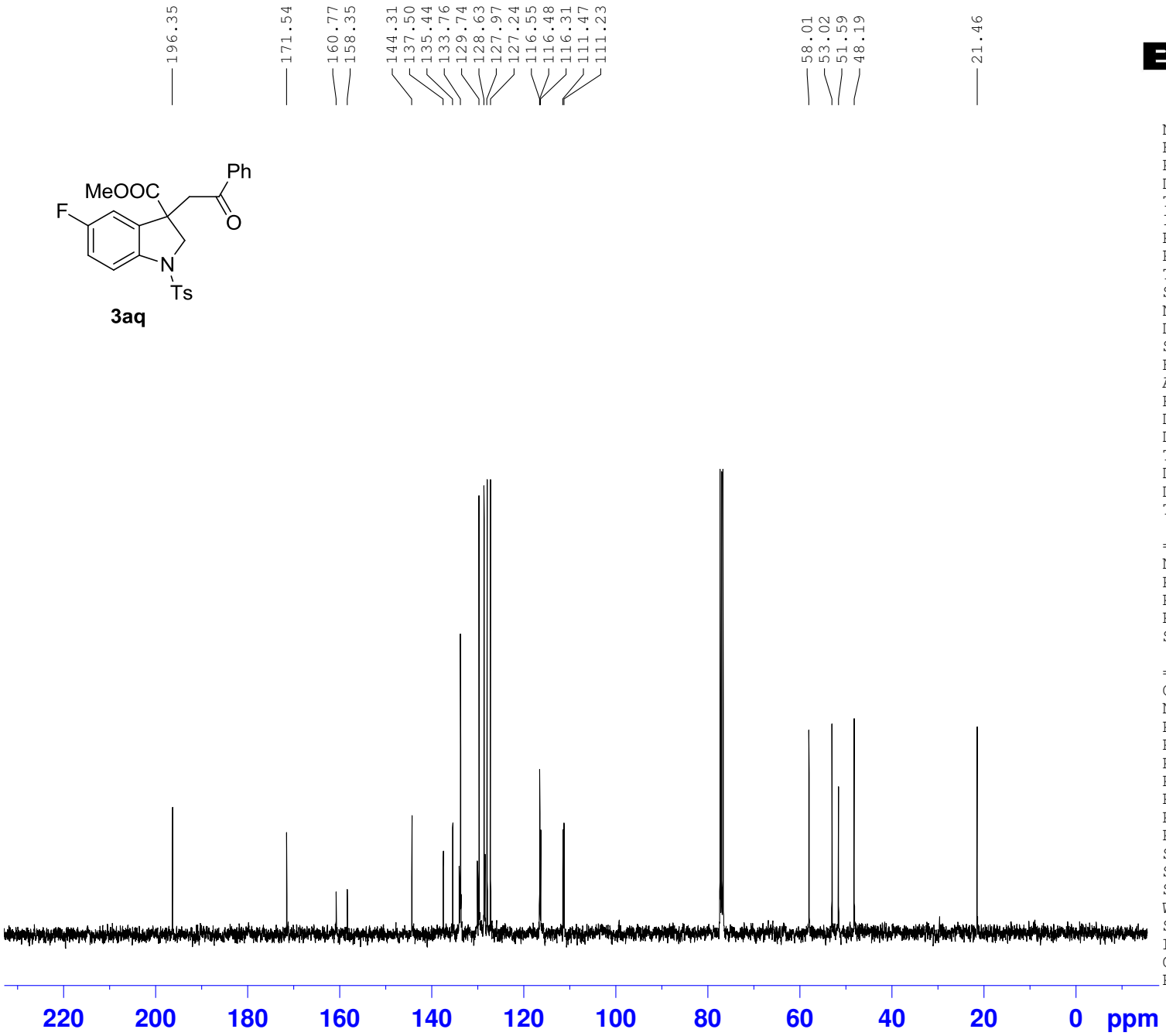
======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127746 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```




```
NAME          lly-587-1p
EXPNO                  1
PROCNO                 1
Date_           20141218
Time                6.28
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                   101
DW                60.800 usec
DE                 6.50 usec
TE                295.4 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300087 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```

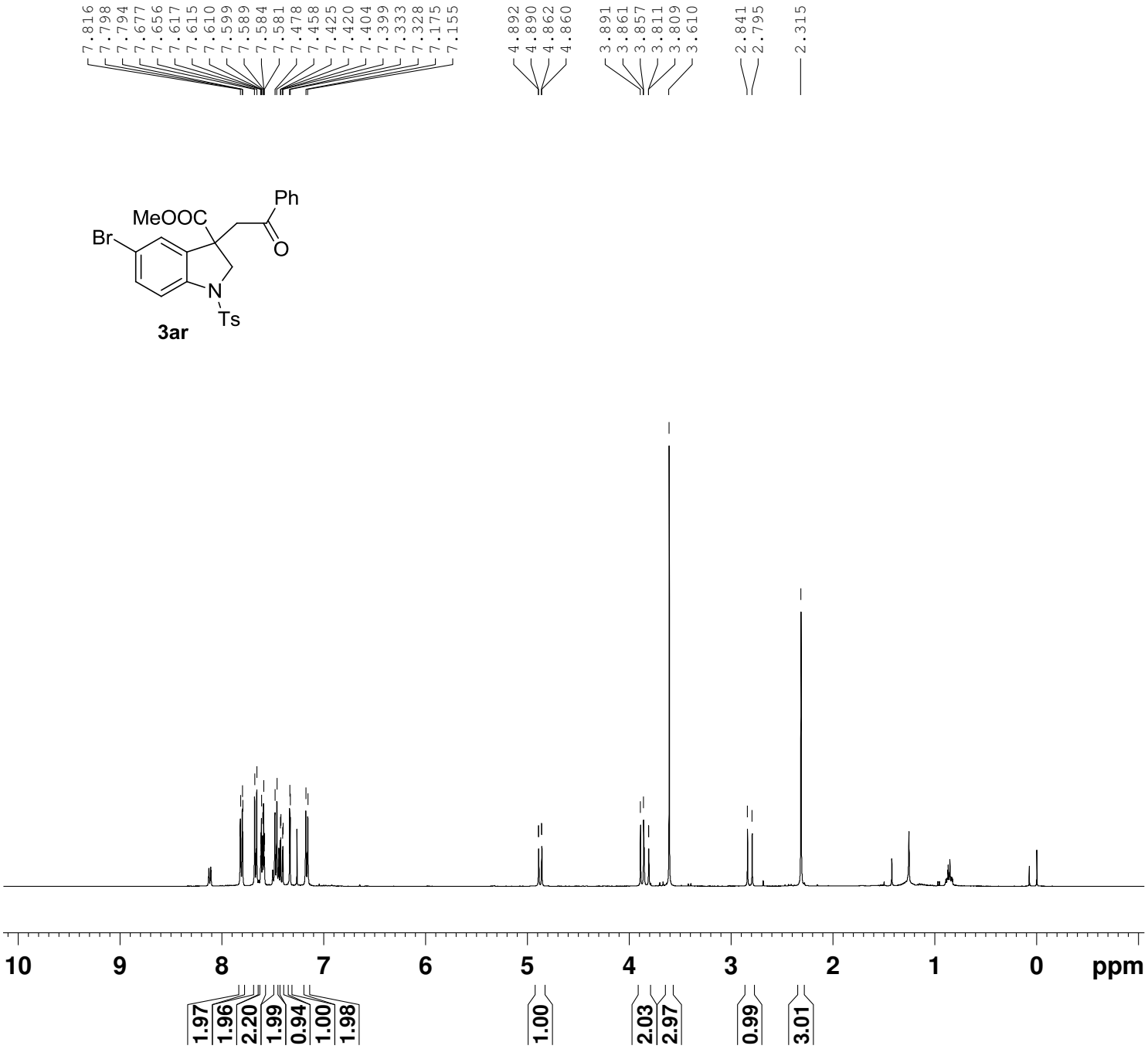
3aq




```
NAME          lly-587-1p
EXPNO                  2
PROCNO                 1
Date_           20141216
Time               13.33
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                65536
SOLVENT           CDCl3
NS                   64
DS                    4
SWH           25252.525 Hz
FIDRES         0.385323 Hz
AQ            1.2976629 sec
RG                  181
DW               19.800 usec
DE                8.00 usec
TE                296.2 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                  10

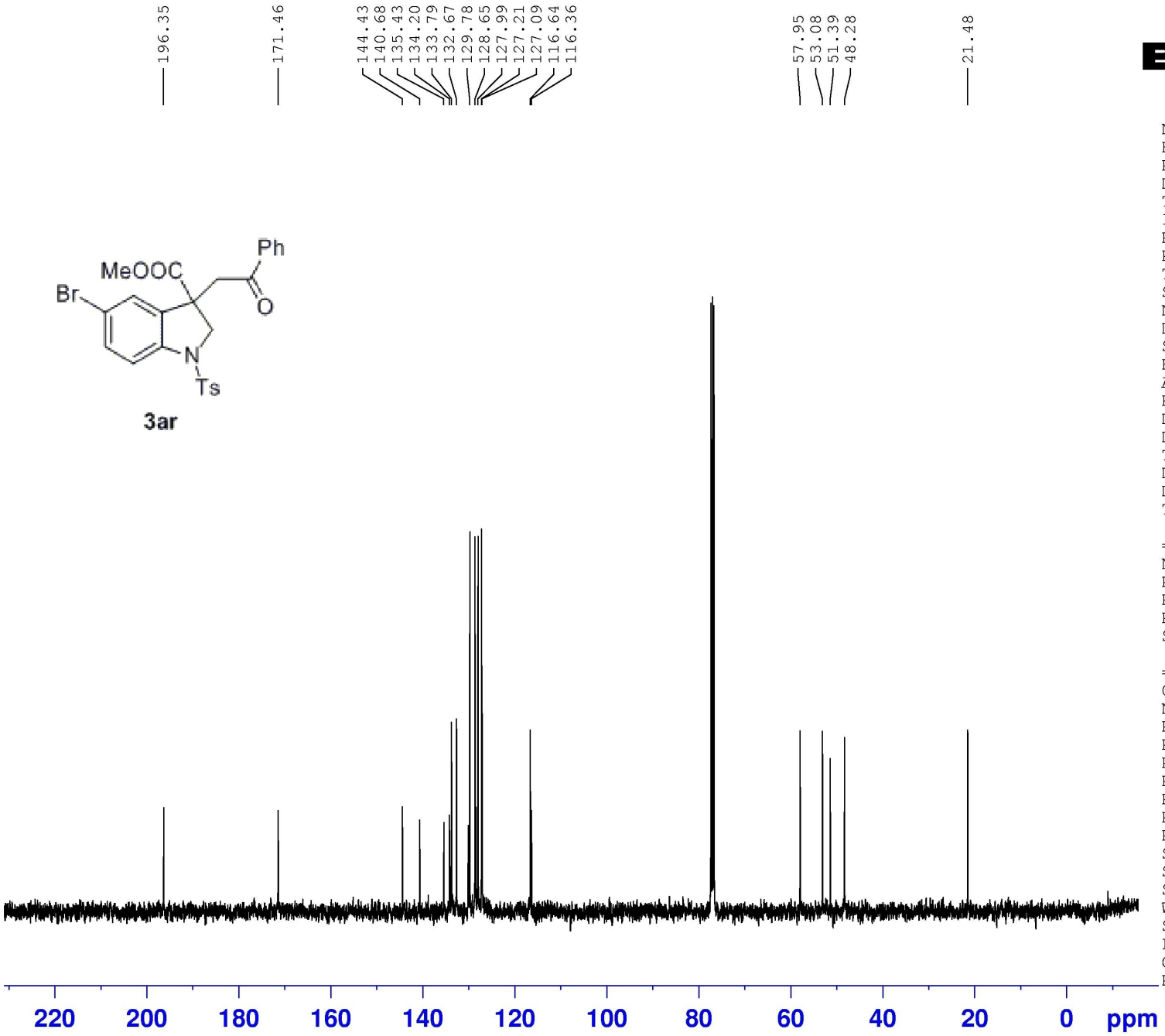
======== CHANNEL f1 ========
NUC1                13C
P1                15.00 usec
PL1                2.00 dB
PL1W        55.31277084 W
SFO1        100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2         waltz16
NUC2                 1H
PCPD2             80.00 usec
PL2               -1.00 dB
PL12              16.72 dB
PL13              15.50 dB
PL2W        17.01305389 W
PL12W        0.28759566 W
PL13W        0.38087484 W
SFO2        400.1316005 MHz
SI                32768
SF          100.6127776 MHz
WDW                  EM
SSB                   0
LB                 3.00 Hz
GB                    0
PC                 1.40
```




```
NAME          lly-586-4p
EXPNO                  1
PROCNO                 1
Date_           20141218
Time                6.20
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ            3.9846387 sec
RG                   101
DW                60.800 usec
DE                 6.50 usec
TE                295.6 K
D1           1.00000000 sec
TD0                    1

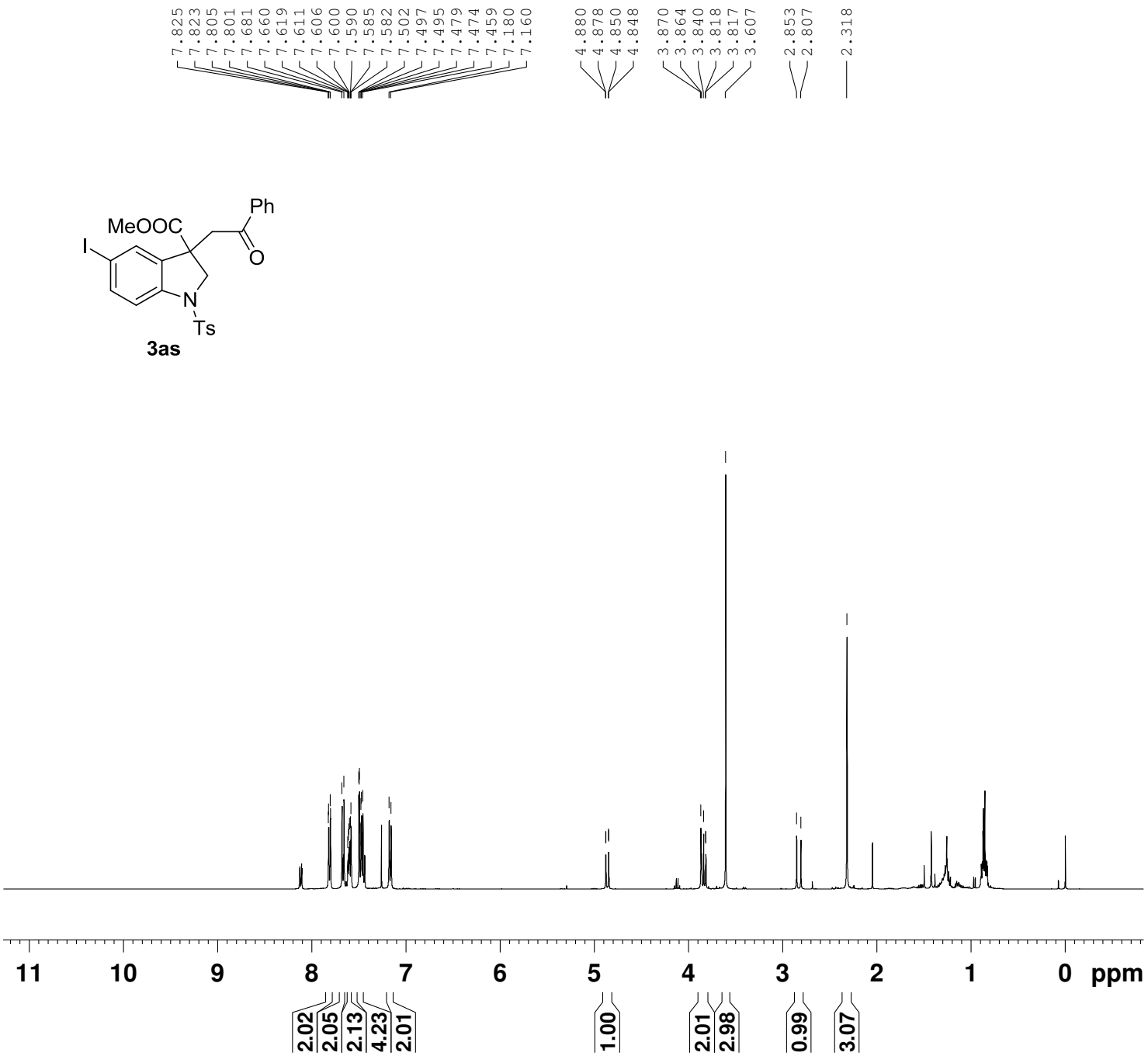
======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300091 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME          lly-586-4p
EXPNO                  2
PROCNO                 1
Date_           20141216
Time               11.10
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                65536
SOLVENT           CDCl3
NS                   56
DS                    4
SWH           25252.525 Hz
FIDRES         0.385323 Hz
AQ            1.2976629 sec
RG                  181
DW               19.800 usec
DE                8.00 usec
TE               296.3 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                  10

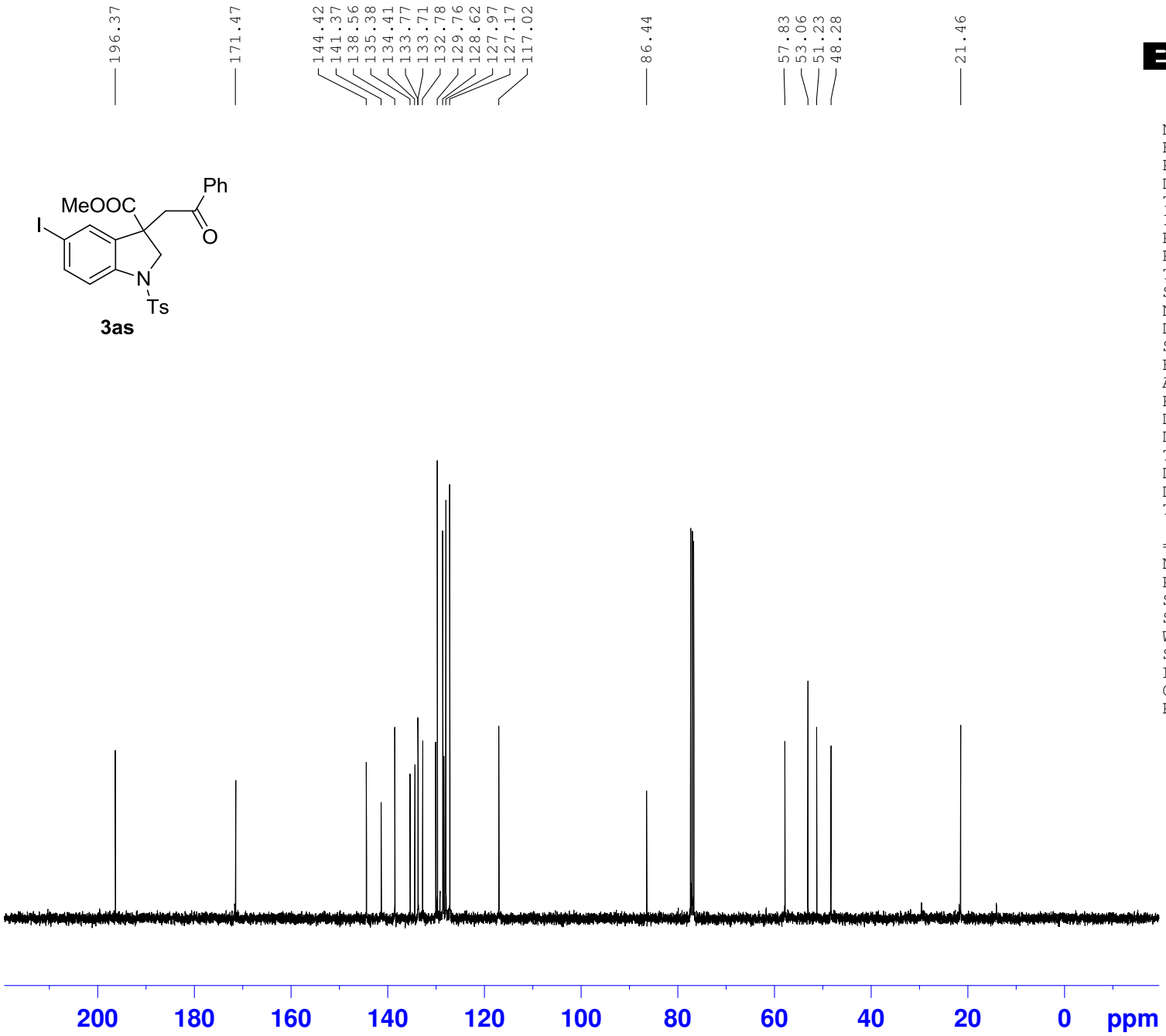
======== CHANNEL f1 ========
NUC1                13C
P1                15.00 usec
PL1                2.00 dB
PL1W        55.31277084 W
SFO1        100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2         waltz16
NUC2                 1H
PCPD2             80.00 usec
PL2               -1.00 dB
PL12              16.72 dB
PL13              15.50 dB
PL2W        17.01305389 W
PL12W        0.28759566 W
PL13W        0.38087484 W
SFO2        400.1316005 MHz
SI                32768
SF          100.6127775 MHz
WDW                  EM
SSB                   0
LB                 3.00 Hz
GB                    0
PC                 1.40
```



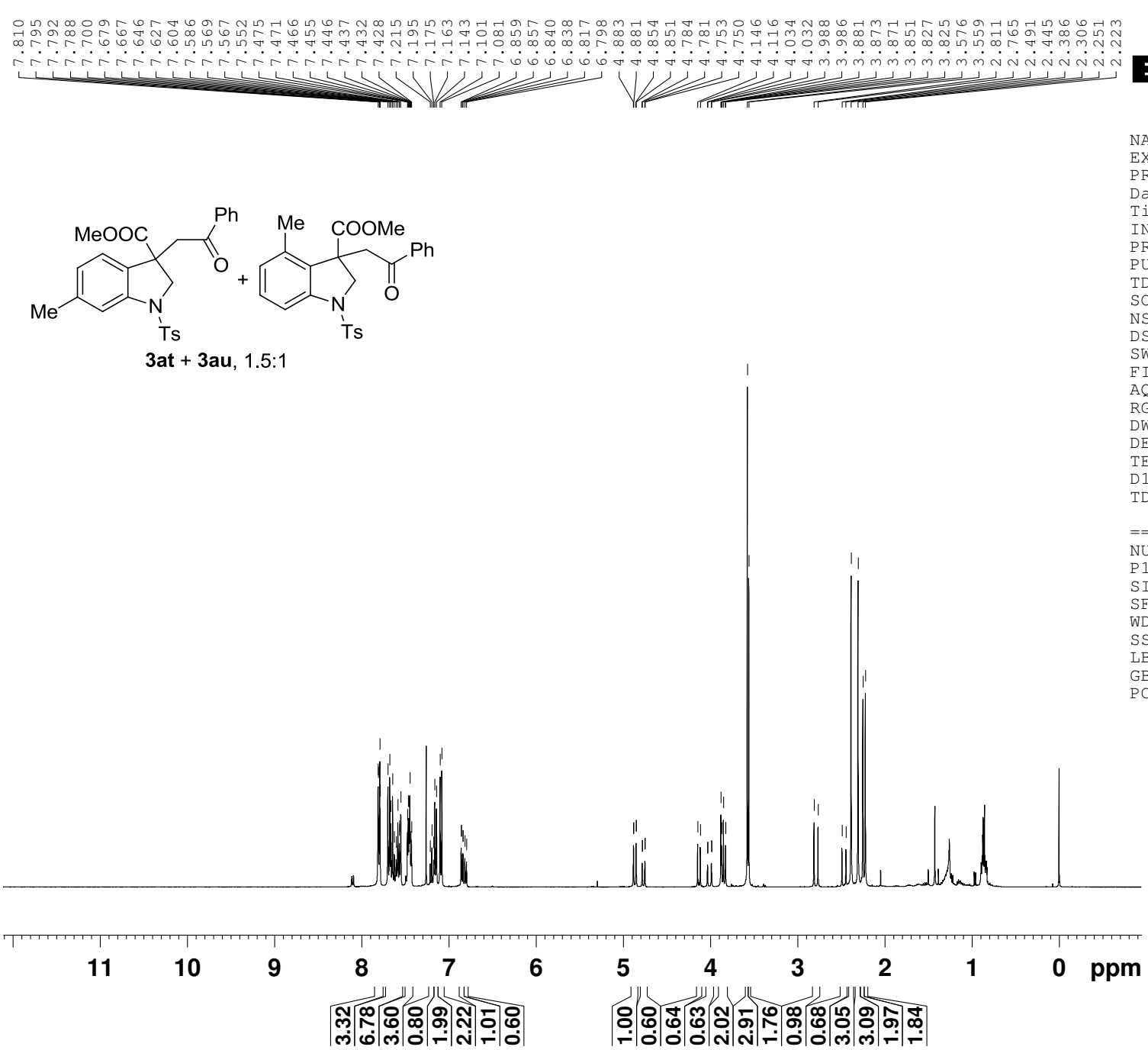

```
NAME          lly-580-2p
EXPNO                  1
PROCNO                 1
Date_           20141202
Time                4.04
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ            3.9846387 sec
RG                 90.5
DW                60.800 usec
DE                 6.50 usec
TE                294.5 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300088 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME          lly-580-2p
EXPNO                  2
PROCNO                 1
Date_           20141212
Time                9.52
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                    64
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                   101
DW                20.800 usec
DE                 6.50 usec
TE                294.9 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

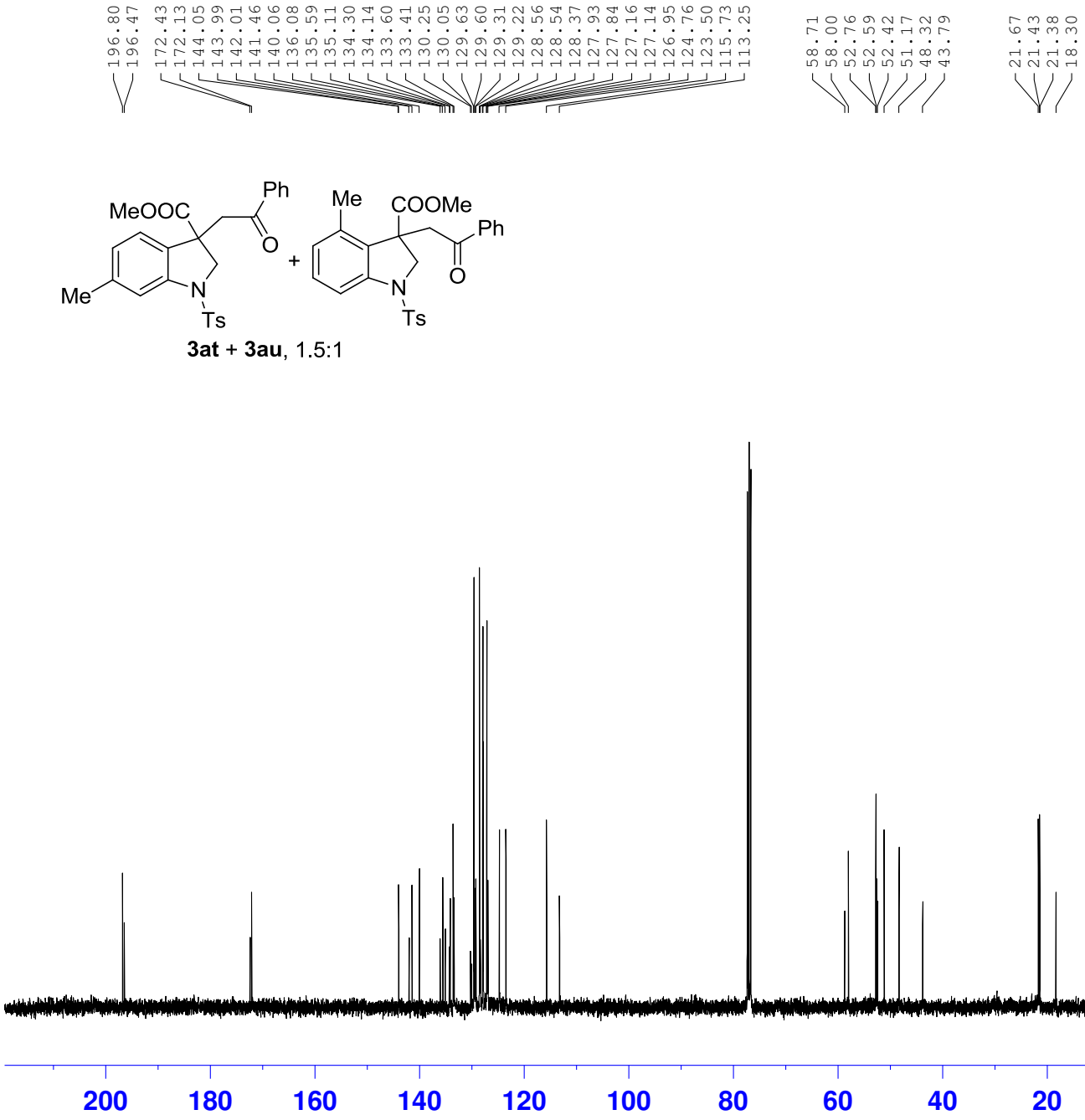
======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127812 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```




```
NAME          lly-580-1p
EXPNO                  1
PROCNO                 1
Date_           20141202
Time                3.21
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                   101
DW                60.800 usec
DE                 6.50 usec
TE                294.4 K
D1            1.00000000 sec
TD0                    1

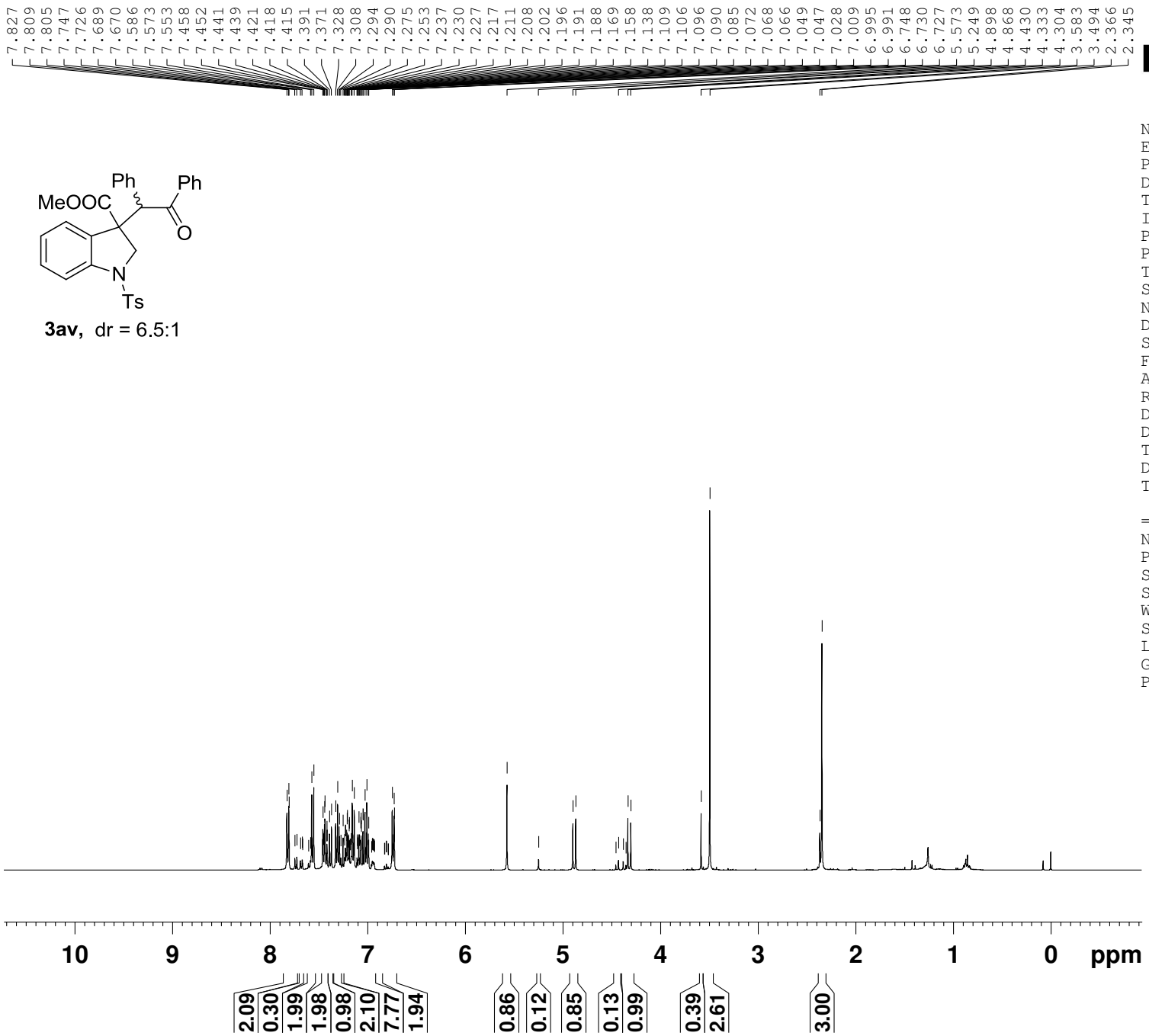
======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300094 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```

3at + **3au**, 1.5:1



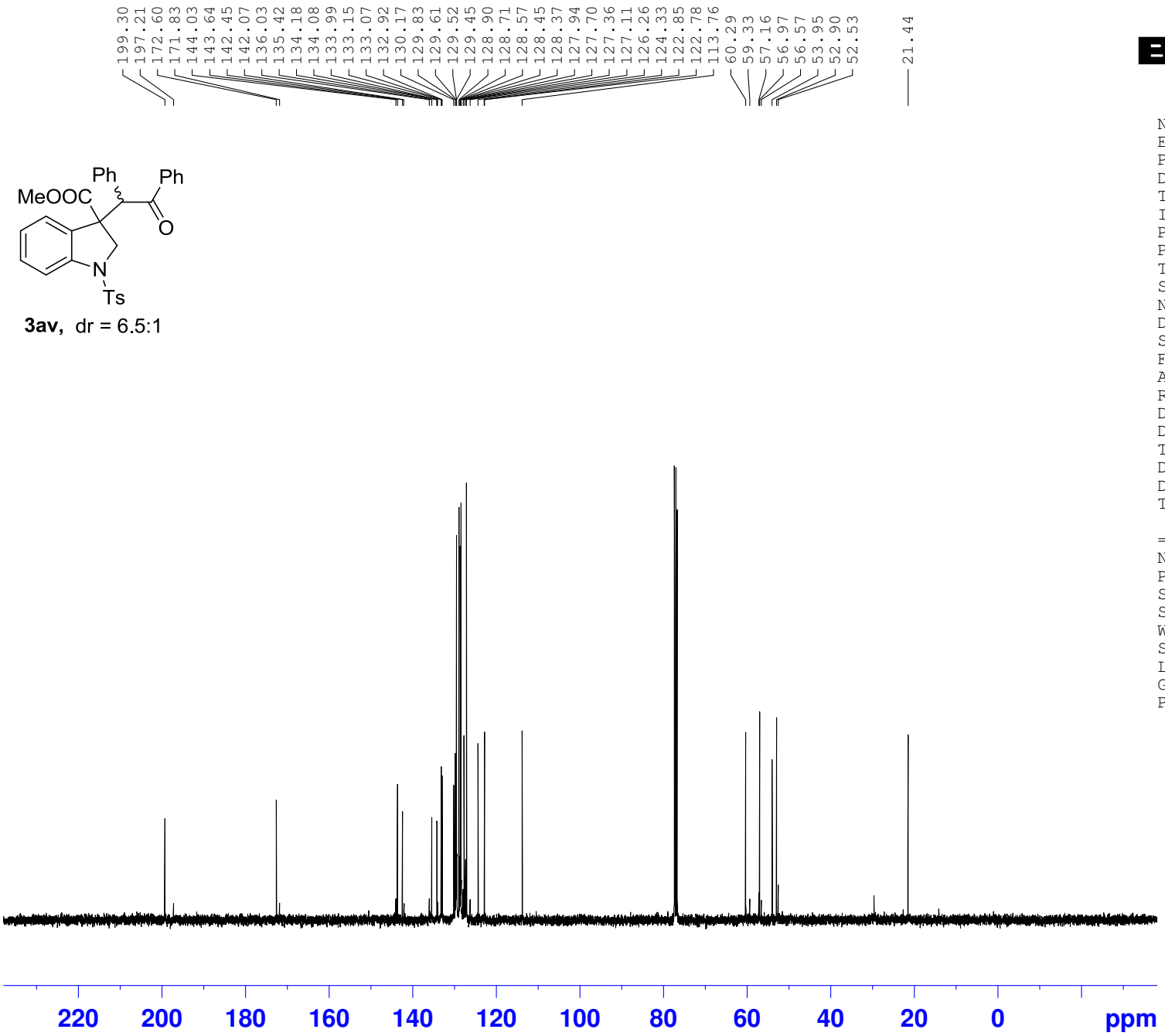

```
NAME          lly-580-1p
EXPNO                  2
PROCNO                 1
Date_           20141212
Time                9.45
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                    64
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                   128
DW                20.800 usec
DE                 6.50 usec
TE                295.1 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127804 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```



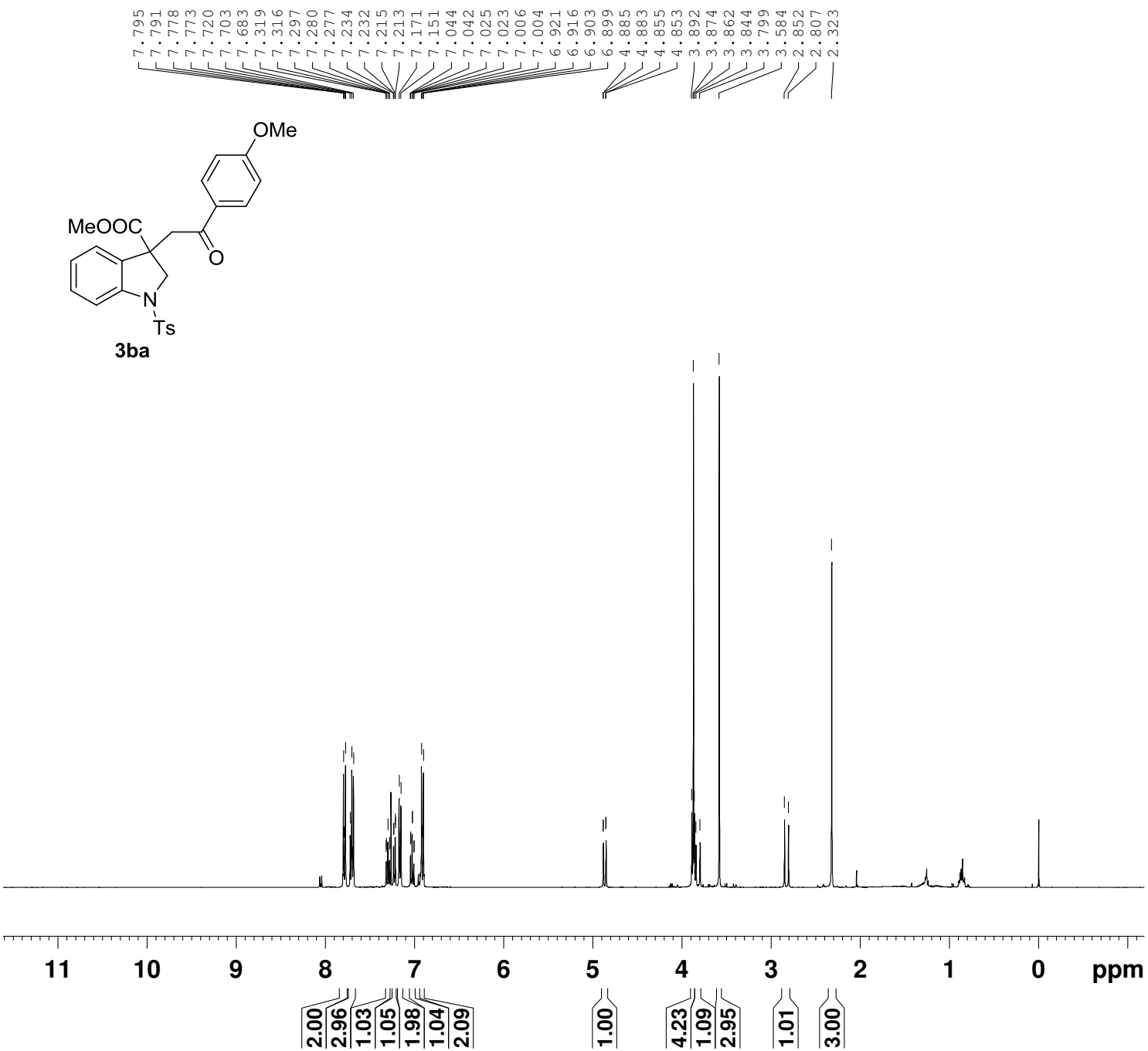

```
NAME          lly-578-4p
EXPNO                  1
PROCNO                 1
Date_           20141202
Time                3.30
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                  50.8
DW                60.800 usec
DE                 6.50 usec
TE                294.3 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300123 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```



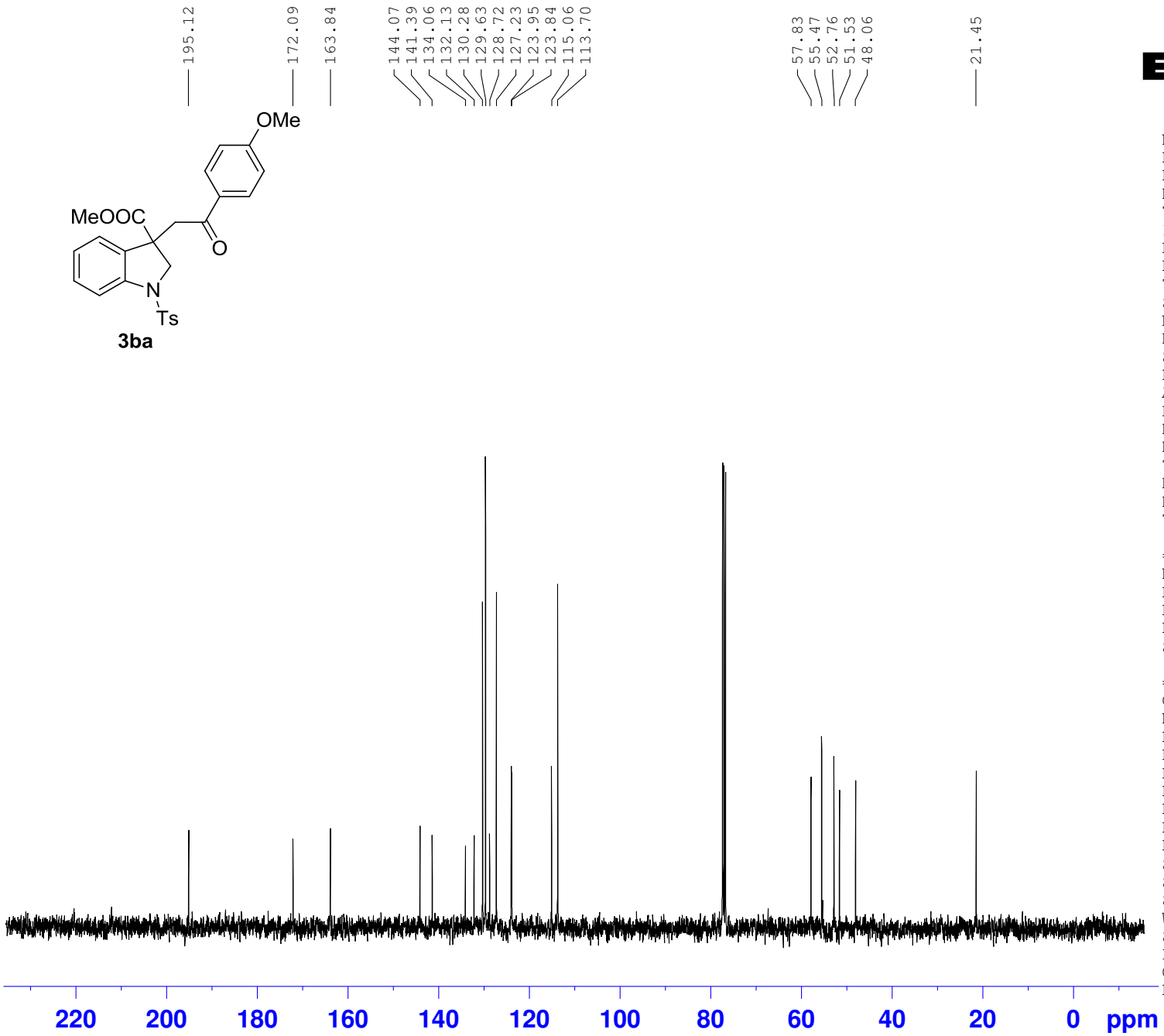

```
NAME          lly-578-4p-2
EXPNO                    1
PROCNO                   1
Date_             20141212
Time                  9.27
INSTRUM              spect
PROBHD    5 mm PADUL 13C
PULPROG             zgpg30
TD                   65536
SOLVENT              CDCl3
NS                     100
DS                       4
SWH              27777.777 Hz
FIDRES            0.423855 Hz
AQ               1.1796980 sec
RG                     128
DW                  18.000 usec
DE                    6.50 usec
TE                   295.6 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                   13C
P1                   12.00 usec
SI                   32768
SF            100.6127801 MHz
WDW                     EM
SSB                      0
LB                    1.00 Hz
GB                       0
PC                    1.40
```




```
NAME      lly-531-2p-20140708
EXPNO                       1
PROCNO                      1
Date_               20140708
Time                    17.42
INSTRUM                 spect
PROBHD    5 mm PABBO BB-
PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                 2.5625076 sec
RG                        144
DW                     78.200 usec
DE                       6.50 usec
TE                      296.6 K
D1                 1.00000000 sec
TD0                         1

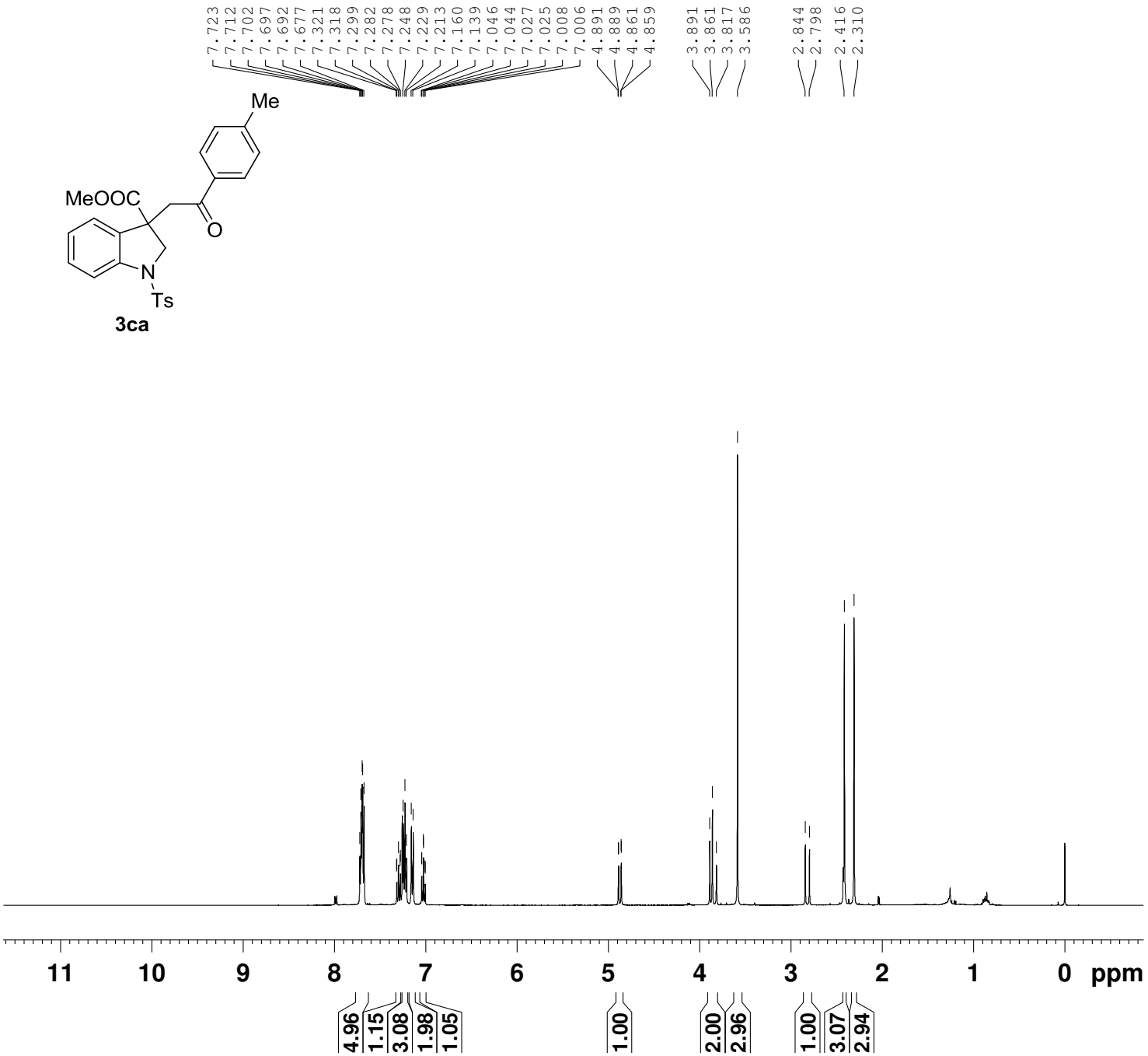
======== CHANNEL f1 ========
NUC1                       1H
P1                      10.40 usec
PL1                     -1.00 dB
PL1W             17.01305389 W
SFO1             400.1326008 MHz
SI                      32768
SF               400.1300089 MHz
WDW                        EM
SSB                         0
LB                       0.30 Hz
GB                          0
PC                       1.00
```




```
NAME        lly-531-2p-20140709
EXPNO                         2
PROCNO                        1
Date_               20140709
Time                      9.52
INSTRUM                  spect
PROBHD       5 mm PABBO BB-
PULPROG                 zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                          24
DS                           4
SWH                 25252.525 Hz
FIDRES               0.385323 Hz
AQ                  1.2976629 sec
RG                        362
DW                     19.800 usec
DE                       6.50 usec
TE                      296.7 K
D1                 2.00000000 sec
D11                0.03000000 sec
TD0                         10

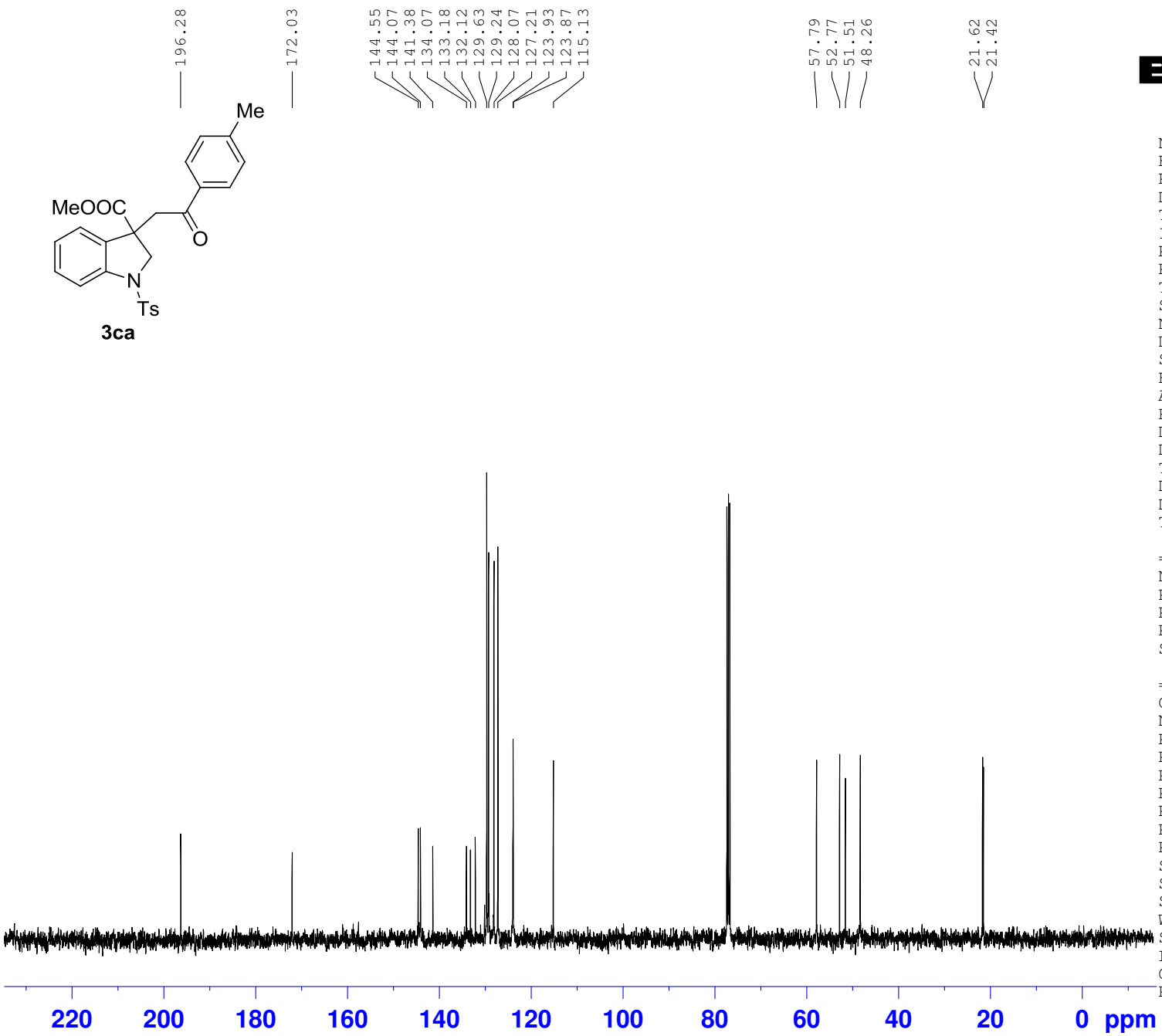
======== CHANNEL f1 ========
NUC1                       13C
P1                       13.47 usec
PL1                       2.00 dB
PL1W              55.31277084 W
SFO1              100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                        1H
PCPD2                    80.00 usec
PL2                      -1.00 dB
PL12                     16.72 dB
PL13                     15.50 dB
PL2W              17.01305389 W
PL12W              0.28759566 W
PL13W              0.38087484 W
SFO2              400.1316005 MHz
SI                       32768
SF                100.6127789 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME      lly-562-2p-201410115
EXPNO                        1
PROCNO                       1
Date_                 20141015
Time                      9.44
INSTRUM                  spect
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         128
DW                      78.200 usec
DE                        6.50 usec
TE                       296.6 K
D1                  1.00000000 sec
TD0                          1

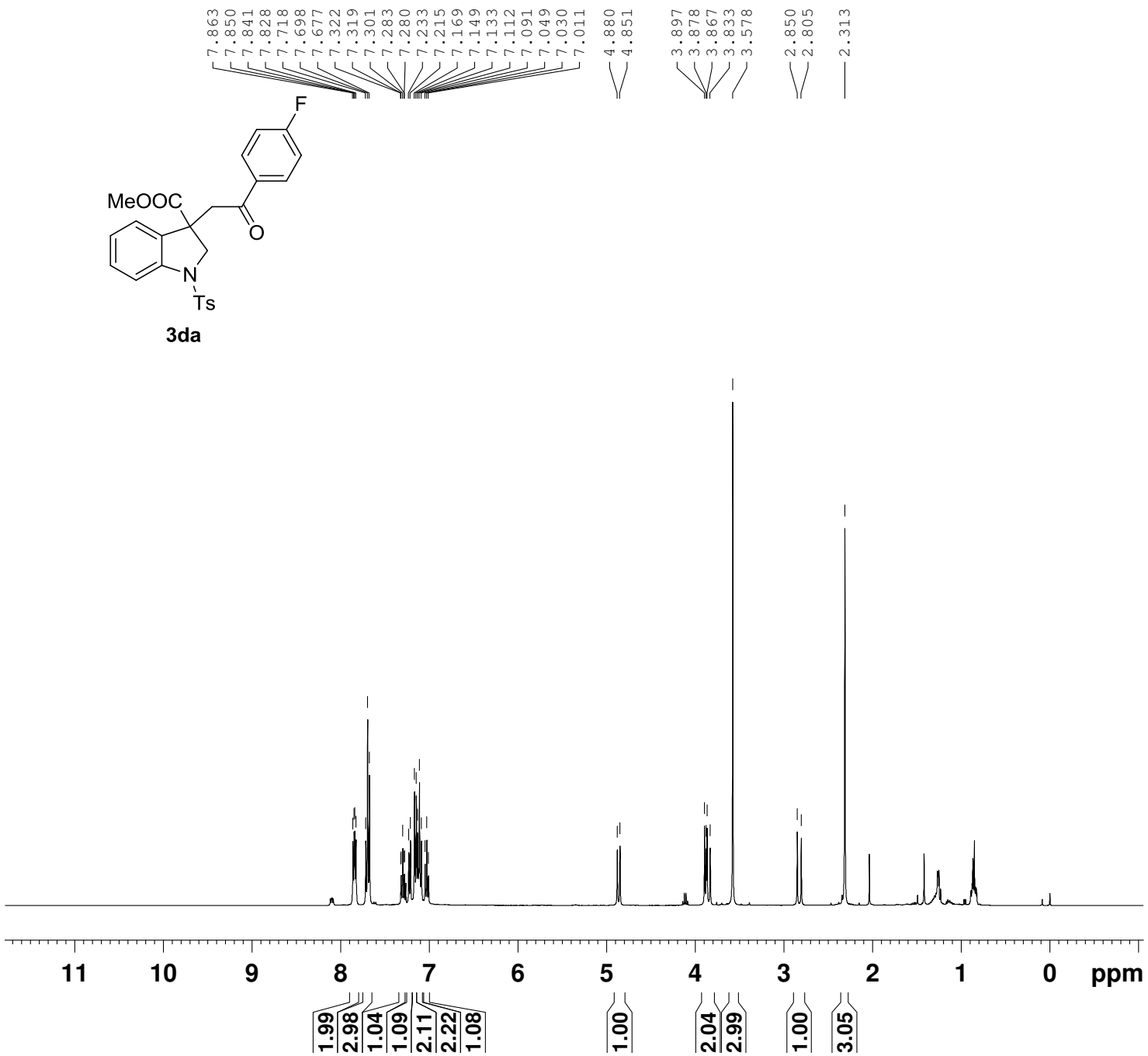
======== CHANNEL f1 ========
NUC1                        1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300096 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```




```
NAME        lly-562-2p-20141015
EXPNO                         2
PROCNO                        1
Date_               20141015
Time                     17.44
INSTRUM                  spect
PROBHD      5 mm PABBO BB-
PULPROG                 zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                          32
DS                           4
SWH                 25252.525 Hz
FIDRES               0.385323 Hz
AQ                  1.2976629 sec
RG                        362
DW                     19.800 usec
DE                       6.50 usec
TE                      297.5 K
D1                 2.00000000 sec
D11                0.03000000 sec
TD0                         10

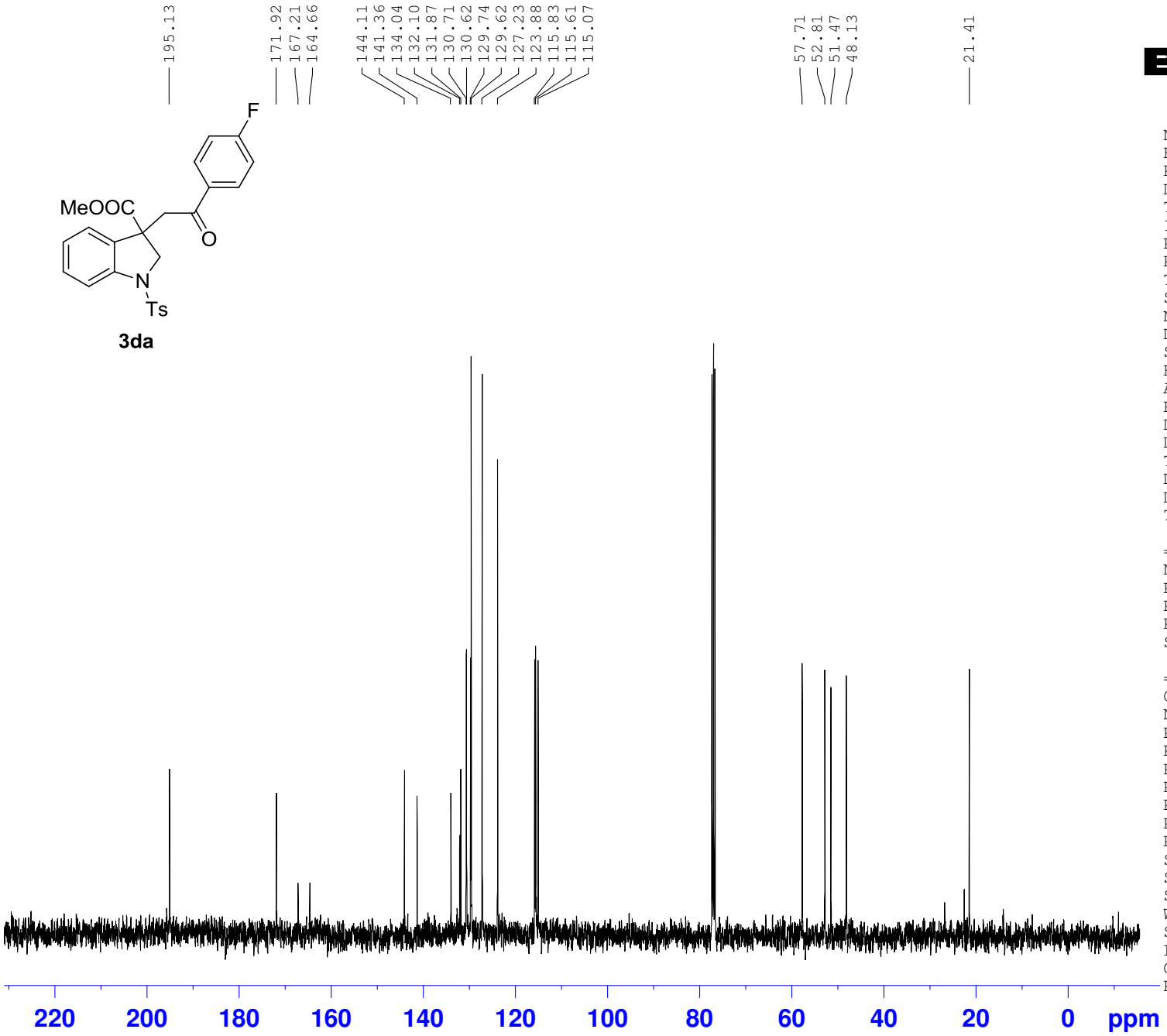
======== CHANNEL f1 ========
NUC1                       13C
P1                       13.47 usec
PL1                       2.00 dB
PL1W              55.31277084 W
SFO1              100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                        1H
PCPD2                    80.00 usec
PL2                      -1.00 dB
PL12                     16.72 dB
PL13                     15.50 dB
PL2W              17.01305389 W
PL12W              0.28759566 W
PL13W              0.38087484 W
SFO2              400.1316005 MHz
SI                       32768
SF                100.6127794 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME      lly-564-3p-201410116
EXPNO                        1
PROCNO                       1
Date_                 20141016
Time                     17.32
INSTRUM                  spect
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                        45.2
DW                      78.200 usec
DE                        6.50 usec
TE                       296.5 K
D1                  1.00000000 sec
TD0                          1

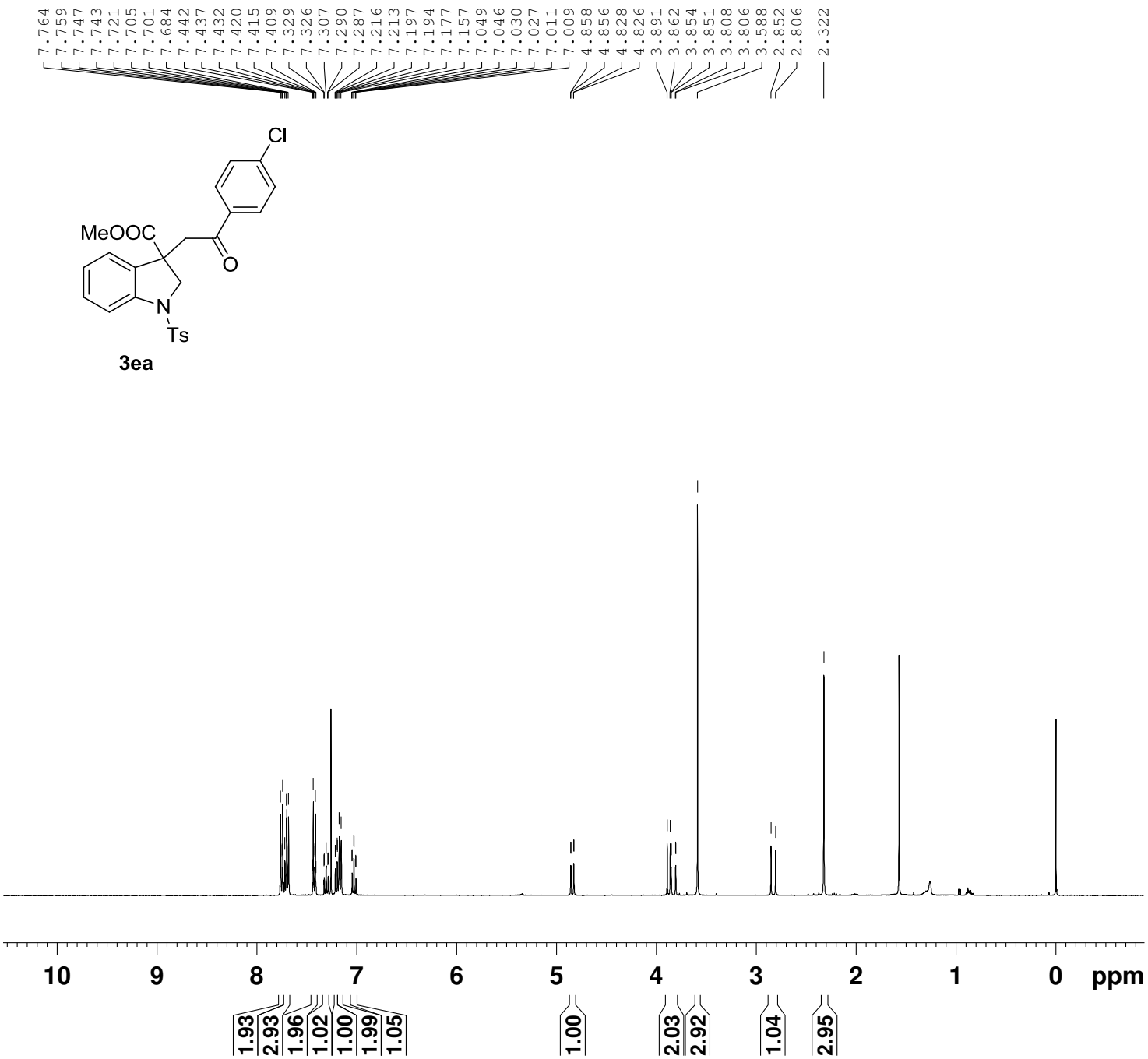
======== CHANNEL f1 ========
NUC1                        1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300068 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```




```
NAME        lly-564-3p-20141016
EXPNO                         2
PROCNO                        1
Date_                  20141016
Time                      17.35
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           24
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.2 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

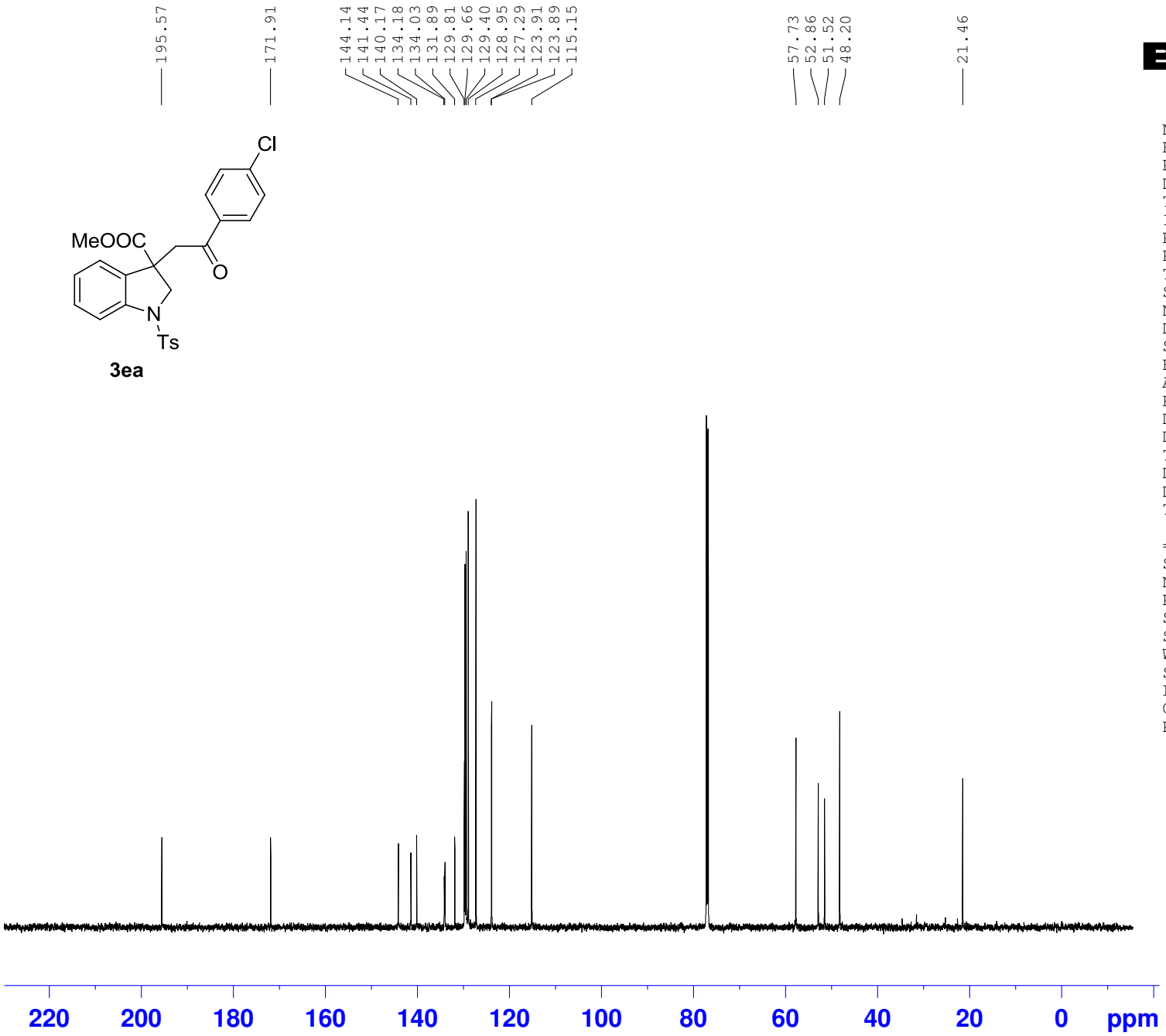
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127799 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```



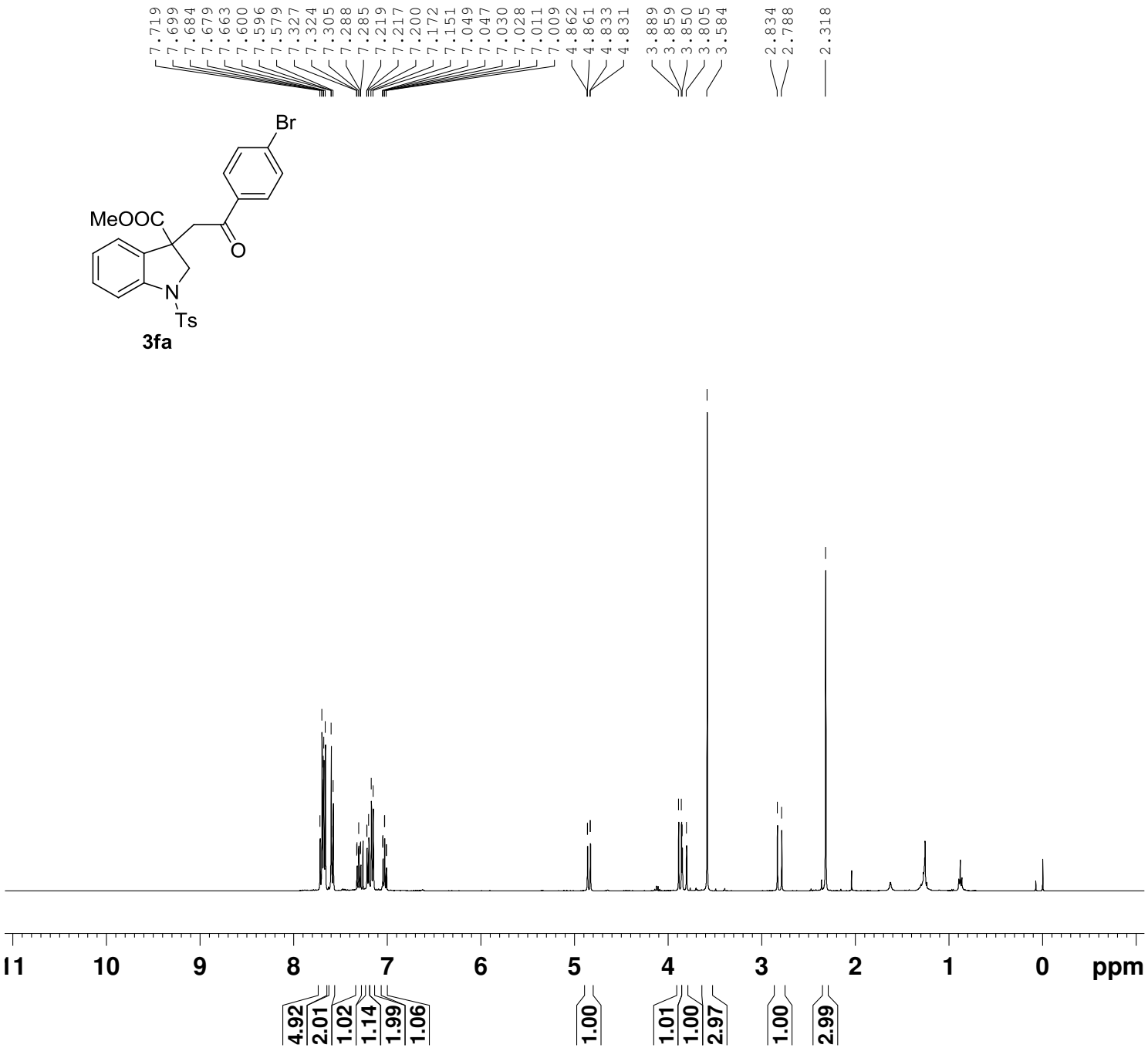

```
NAME        lly-698-2p-20150630
EXPNO                         1
PROCNO                        1
Date_                  20150630
Time                      17.06
INSTRUM                   spect
PROBHD        5 mm PADUL 13C
PULPROG                    zg30
TD                        32768
SOLVENT                   CDCl3
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                          406
DW                       78.200 usec
DE                         6.50 usec
TE                        295.2 K
D1                  1.00000000 sec
TD0                           1

======== CHANNEL f1 ========
NUC1                         1H
P1                        13.10 usec
PL1                        1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                        32768
SF                  400.1300096 MHz
WDW                          EM
SSB                           0
LB                         0.30 Hz
GB                            0
PC                         1.00
```



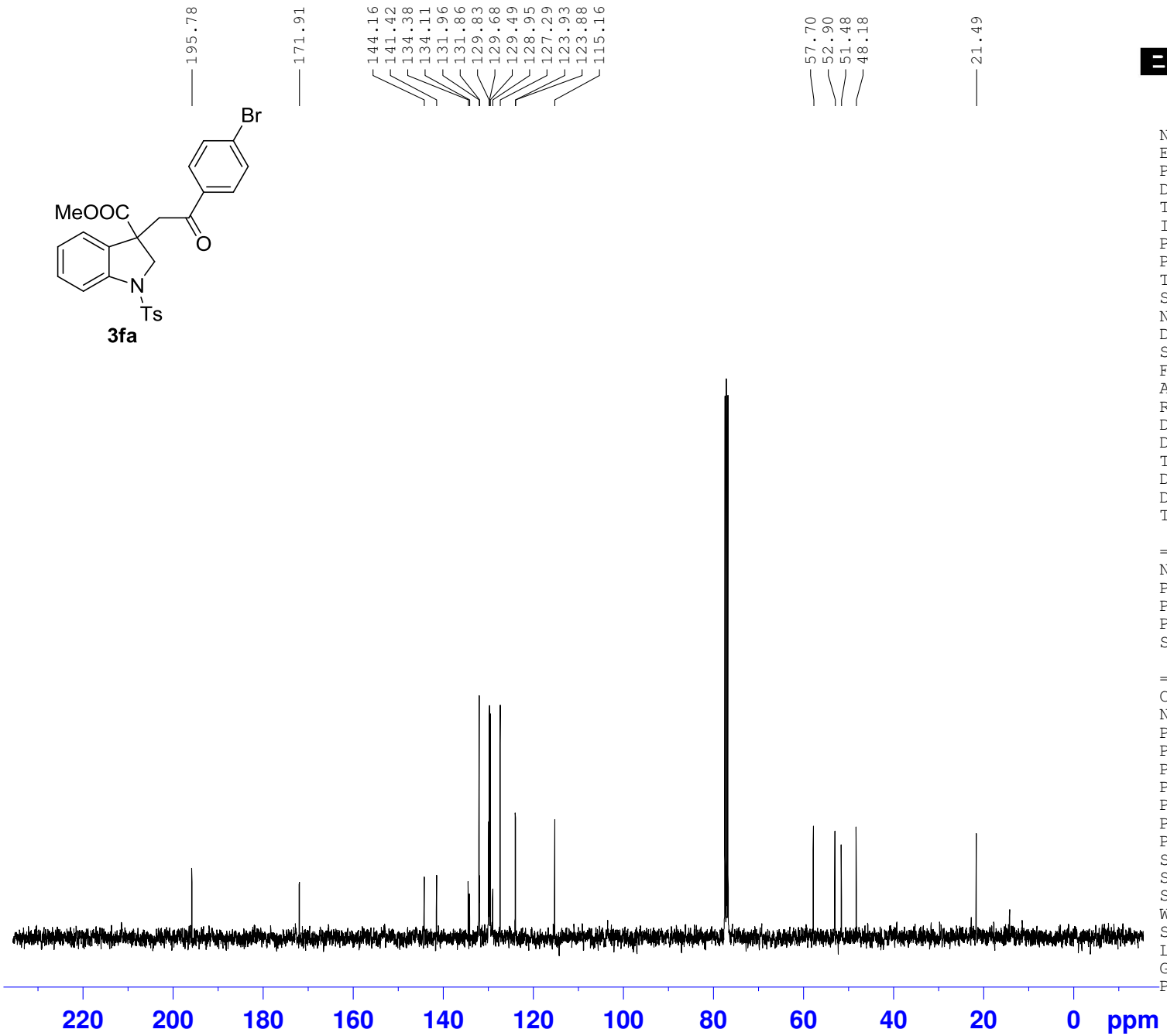

```
NAME          lly-698-2p
EXPNO                  1
PROCNO                 1
Date_           20150701
Time                9.58
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                   187
DS                     4
SWH            37878.789 Hz
FIDRES          0.577984 Hz
AQ             0.8651252 sec
RG                190.02
DW                13.200 usec
DE                 6.50 usec
TE                297.9 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                   10

======== CHANNEL f1 ========
SFO1         150.9294669 MHz
NUC1                 13C
P1                11.90 usec
SI                32768
SF           150.9128756 MHz
WDW                   EM
SSB                    0
LB                  3.00 Hz
GB                     0
PC                  1.40
```




```
NAME        lly-531-3p-20140708
EXPNO                         1
PROCNO                        1
Date_                  20140708
Time                      17.32
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                    zg30
TD                        32768
SOLVENT                   CDCl3
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                          144
DW                       78.200 usec
DE                         6.50 usec
TE                        296.6 K
D1                  1.00000000 sec
TD0                           1

======== CHANNEL f1 ========
NUC1                         1H
P1                        10.40 usec
PL1                       -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                        32768
SF                  400.1300087 MHz
WDW                          EM
SSB                           0
LB                         0.30 Hz
GB                            0
PC                         1.00
```

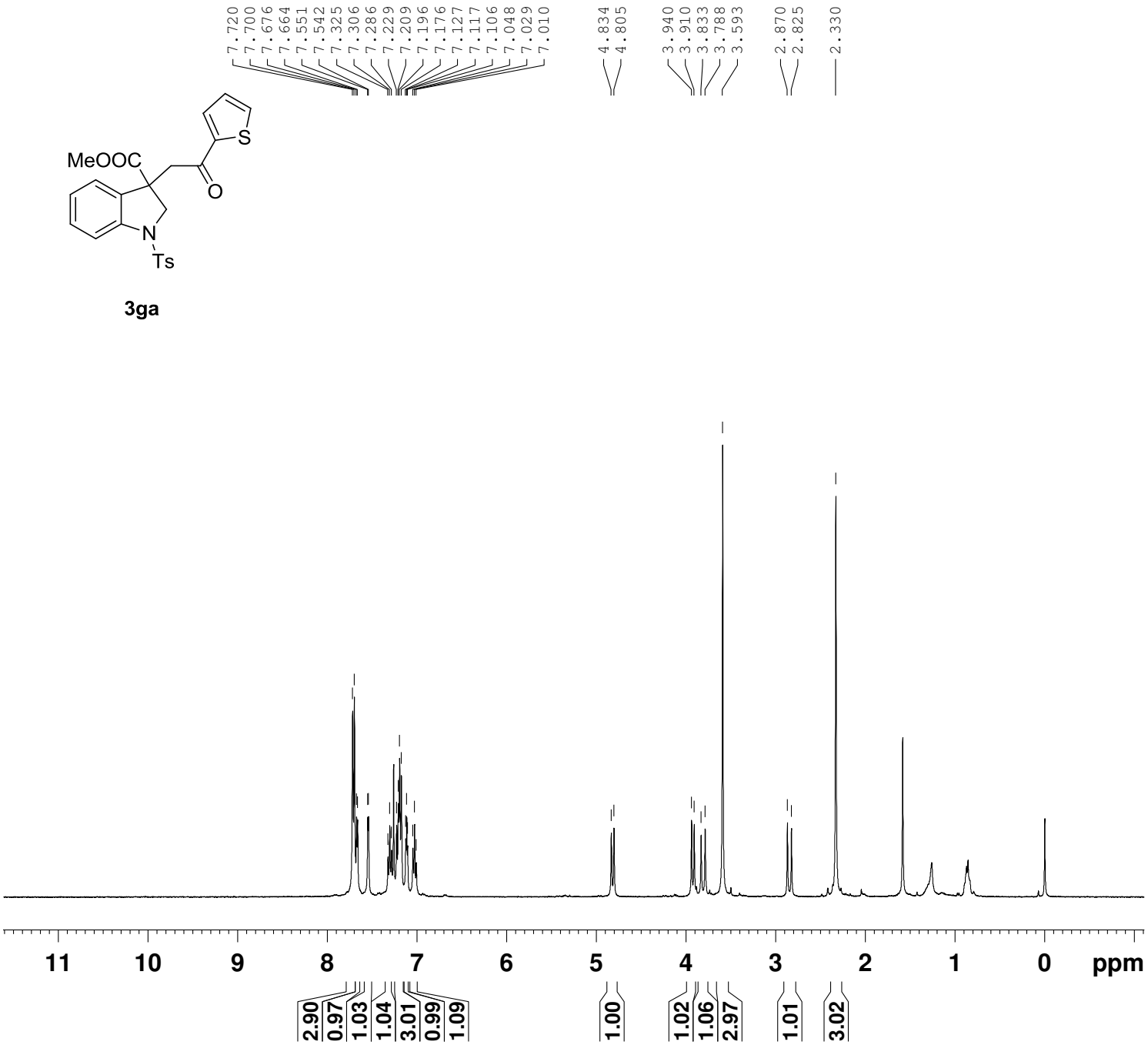



```
NAME        lly-531-3p-20140708
EXPNO                         2
PROCNO                        1
Date_               20140708
Time                      18.39
INSTRUM                   spect
PROBHD      5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           48
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.0 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

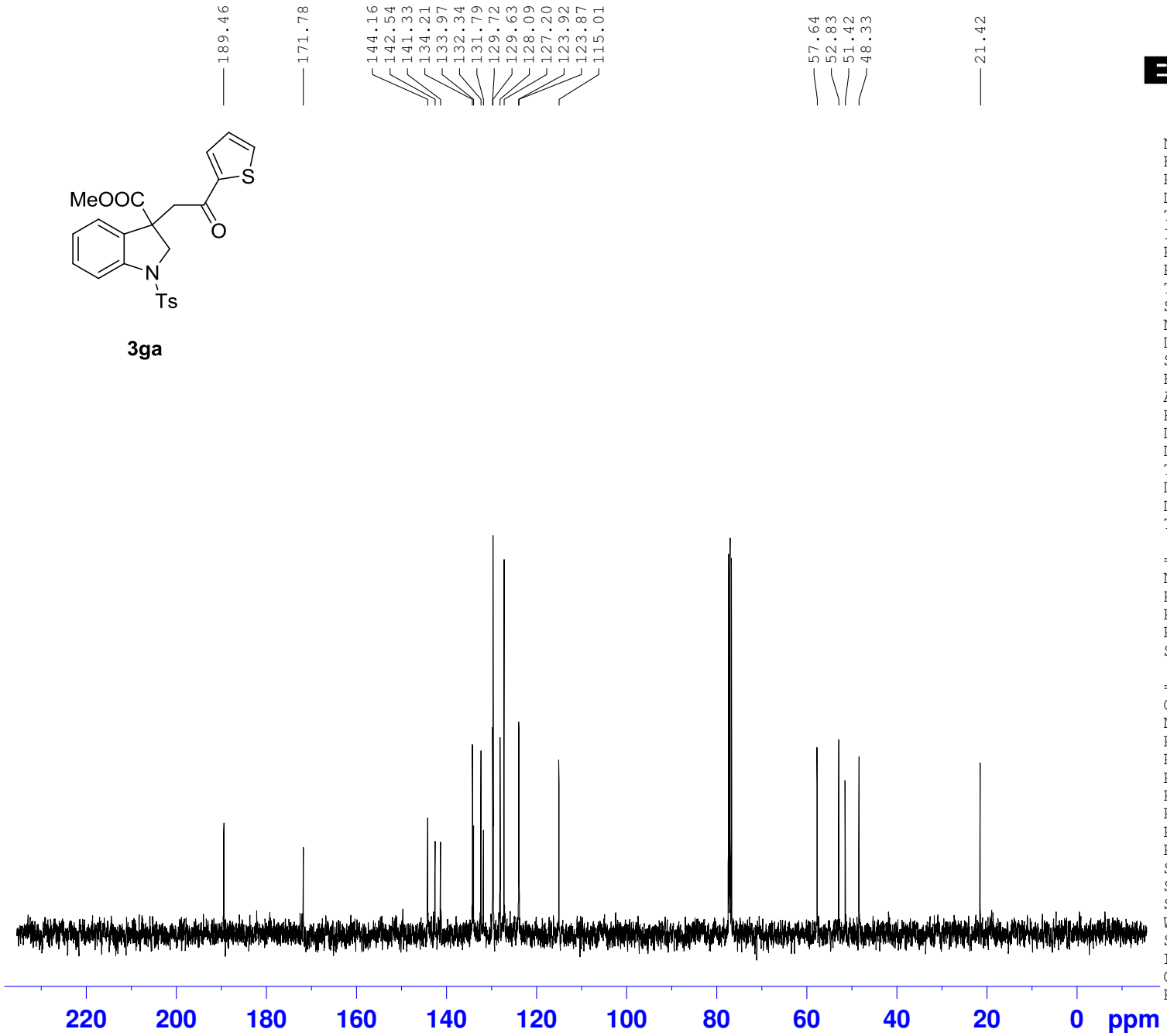
======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127743 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```

3ga




```
NAME      lly-532-2p-20140710
EXPNO                       1
PROCNO                      1
Date_               20140710
Time                     9.53
INSTRUM                 spect
PROBHD    5 mm PABBO BB-
PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          0
SWH                  6393.862 Hz
FIDRES               0.195125 Hz
AQ                 2.5625076 sec
RG                        181
DW                     78.200 usec
DE                       6.50 usec
TE                      295.8 K
D1                 1.00000000 sec
TD0                         1

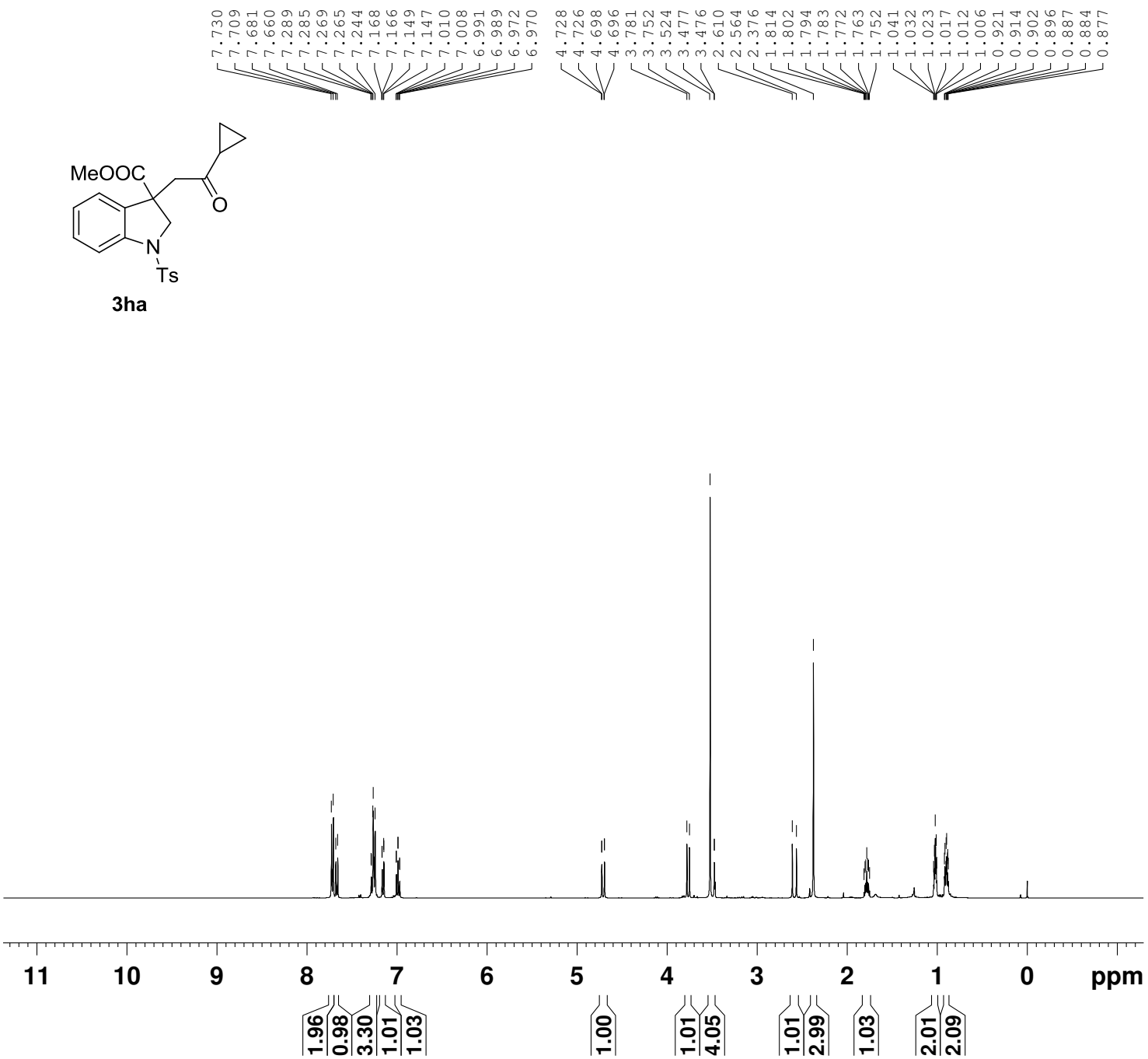
======== CHANNEL f1 ========
NUC1                       1H
P1                      10.40 usec
PL1                     -1.00 dB
PL1W             17.01305389 W
SFO1             400.1326008 MHz
SI                      32768
SF               400.1300089 MHz
WDW                        EM
SSB                         0
LB                       0.30 Hz
GB                          0
PC                       1.00
```




```
NAME        lly-532-2p-20140711
EXPNO                         2
PROCNO                        1
Date_                  20140711
Time                      17.59
INSTRUM                   spect
PROBHD        5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           16
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       296.8 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

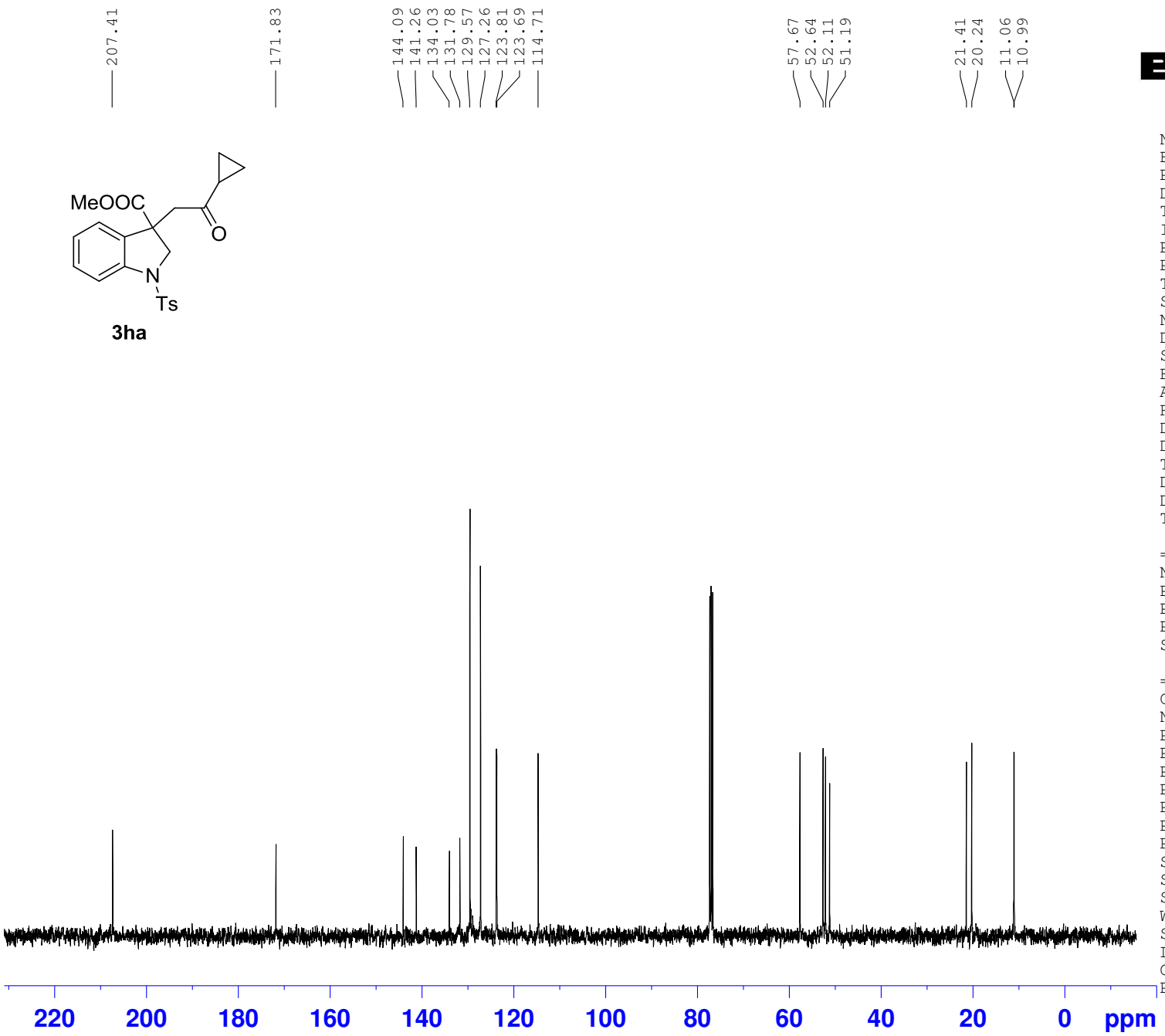
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127820 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```




```
NAME      lly-558-2p-20141010
EXPNO                       1
PROCNO                      1
Date_               20141010
Time                   16.29
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                 2.5625076 sec
RG                       114
DW                    78.200 usec
DE                      6.50 usec
TE                     296.7 K
D1                1.00000000 sec
TD0                        1

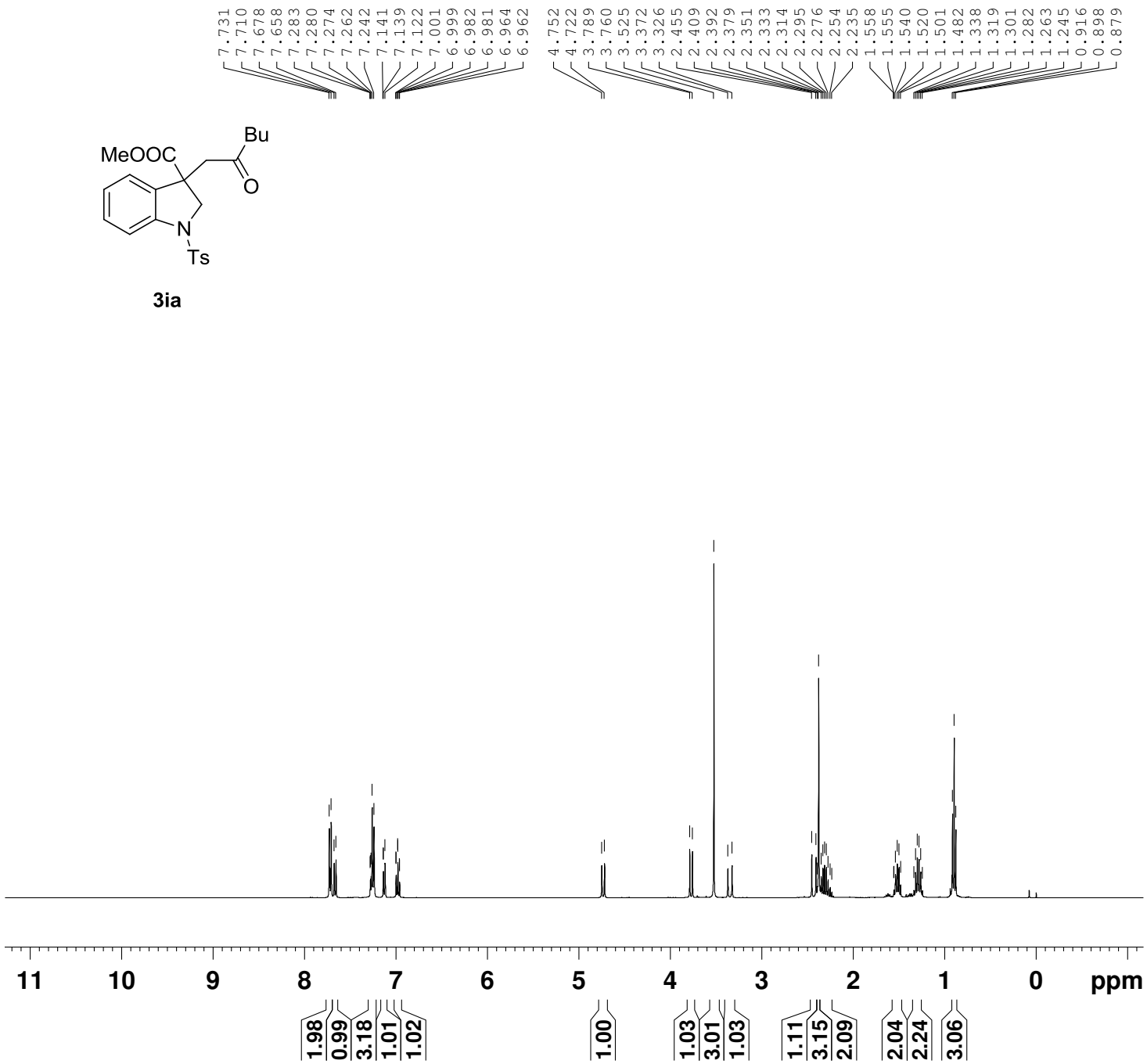
======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300058 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-558-2p-20141013
EXPNO                         2
PROCNO                        1
Date_                  20141013
Time                      10.05
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           24
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.7 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

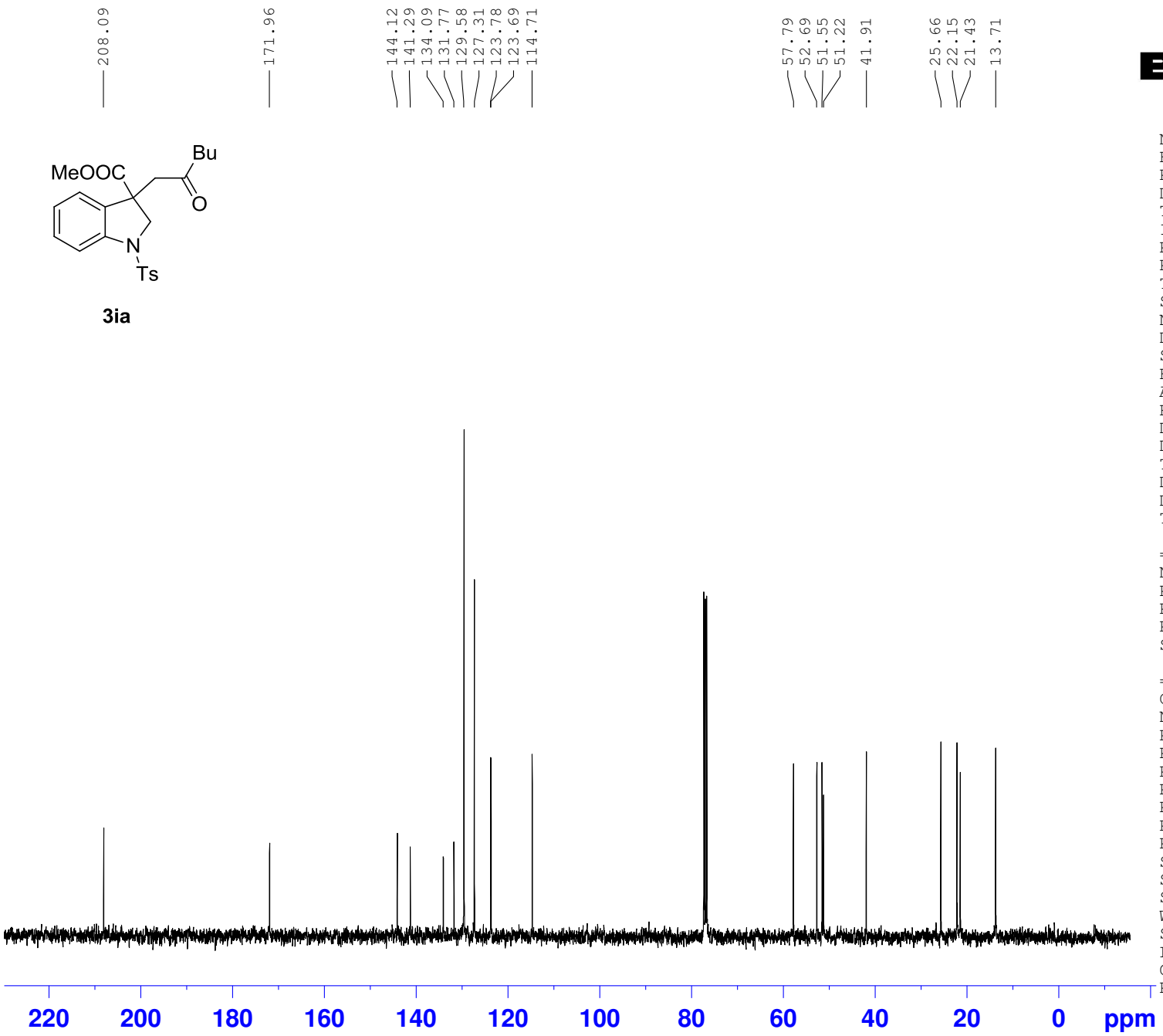
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127813 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```




```
NAME        lly-558-1p-20141011
EXPNO                         1
PROCNO                        1
Date_                  20141011
Time                      16.57
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                    zg30
TD                        32768
SOLVENT                   CDCl3
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                         50.8
DW                       78.200 usec
DE                        6.50 usec
TE                       296.7 K
D1                   1.00000000 sec
TD0                           1

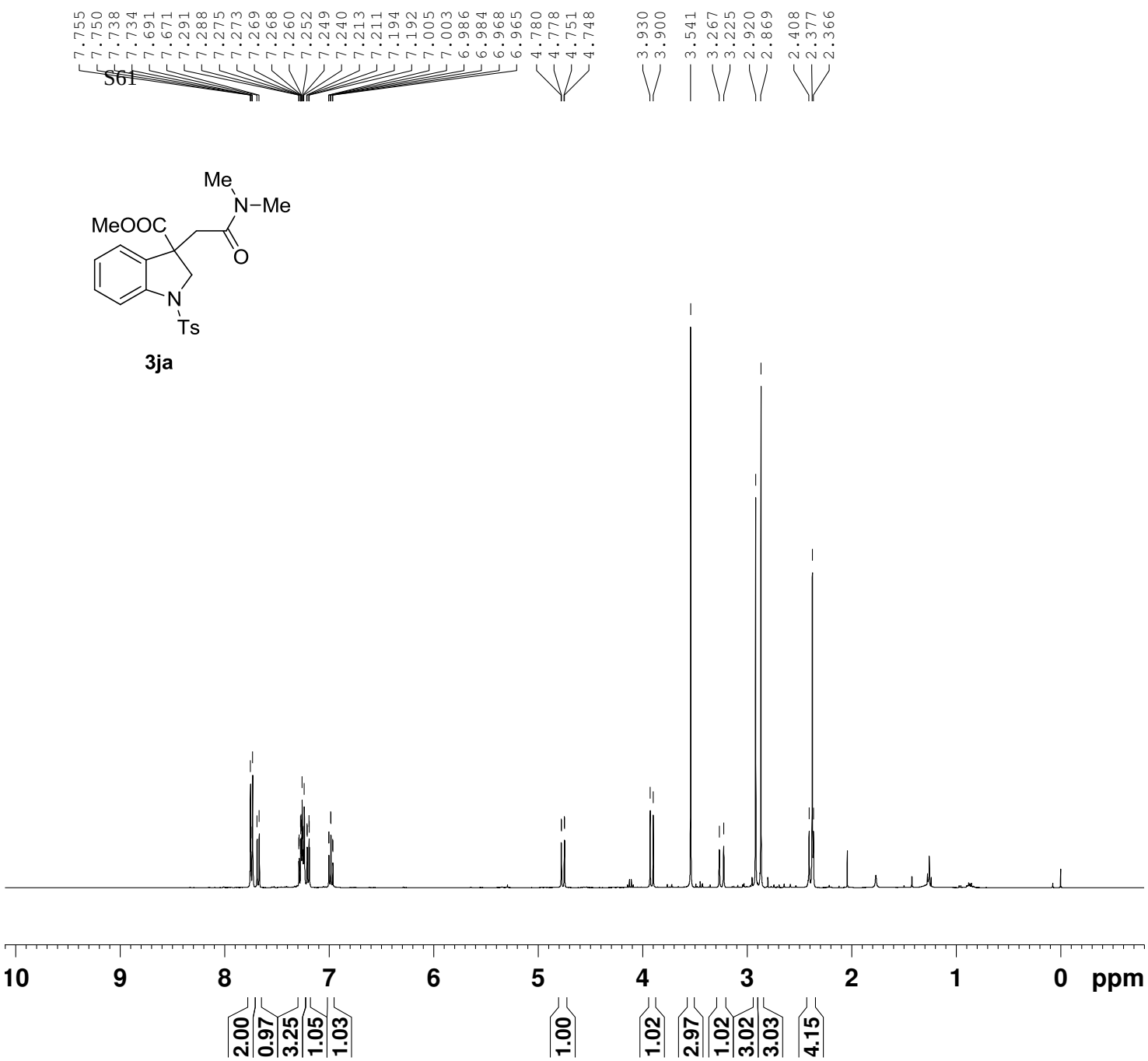
======== CHANNEL f1 ========
NUC1                         1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                        32768
SF                  400.1300040 MHz
WDW                          EM
SSB                           0
LB                        0.30 Hz
GB                            0
PC                        1.00
```




```
NAME        lly-558-1p-20141013
EXPNO                         2
PROCNO                        1
Date_                  20141013
Time                      17.47
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                   CDCl3
NS                           32
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          362
DW                       19.800 usec
DE                        6.50 usec
TE                       297.5 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

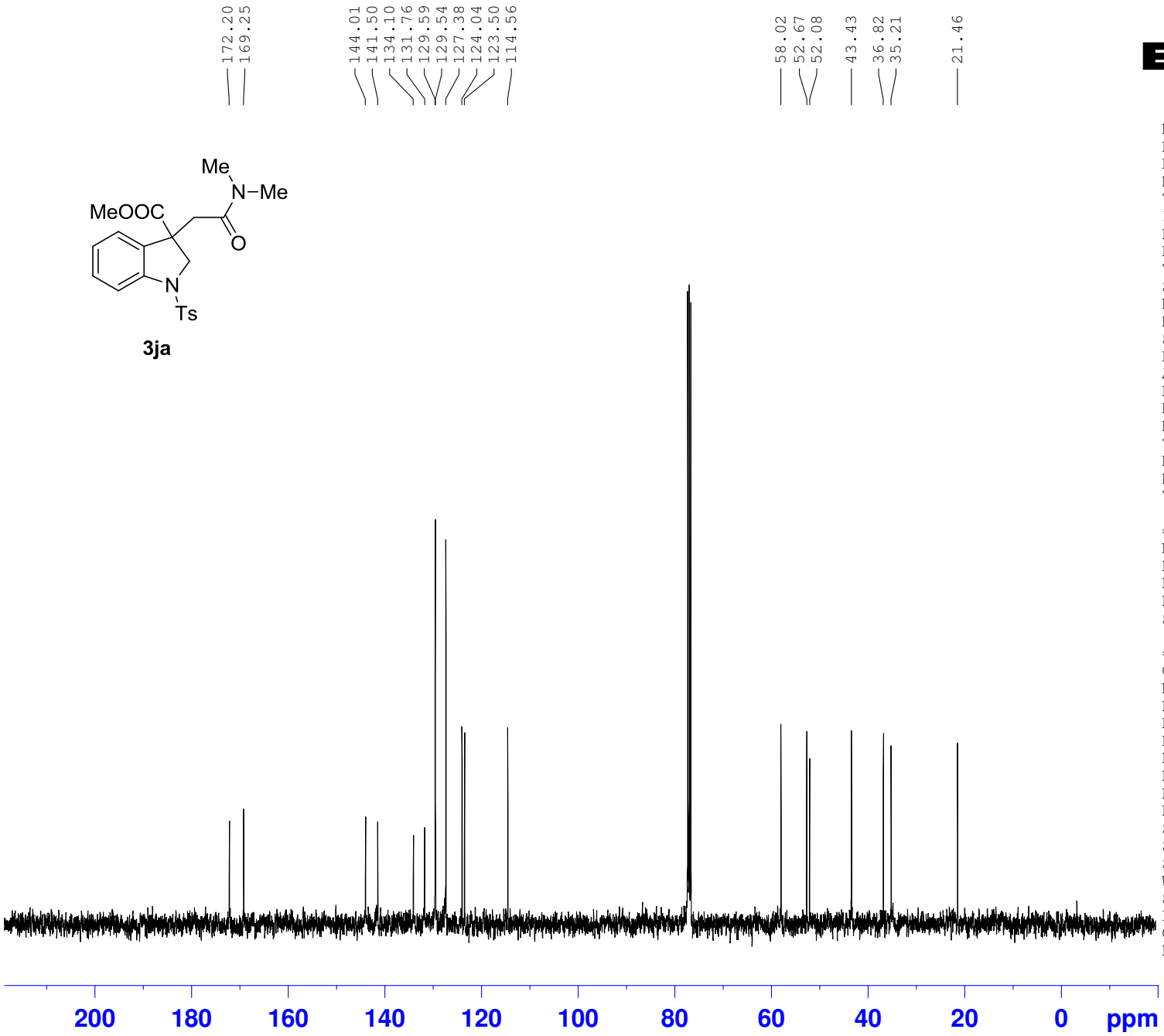
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.47 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                    80.00 usec
PL2                      -1.00 dB
PL12                     16.72 dB
PL13                     15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127787 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME      lly-707-2p-20150909
EXPNO                       1
PROCNO                      1
Date_               20150909
Time                   16.26
INSTRUM                spect
PROBHD    5 mm PADUL 13C
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                 2.5625076 sec
RG                       114
DW                    78.200 usec
DE                      6.50 usec
TE                     295.8 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     13.10 usec
PL1                     1.80 dB
PL1W             8.92857742 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300035 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```

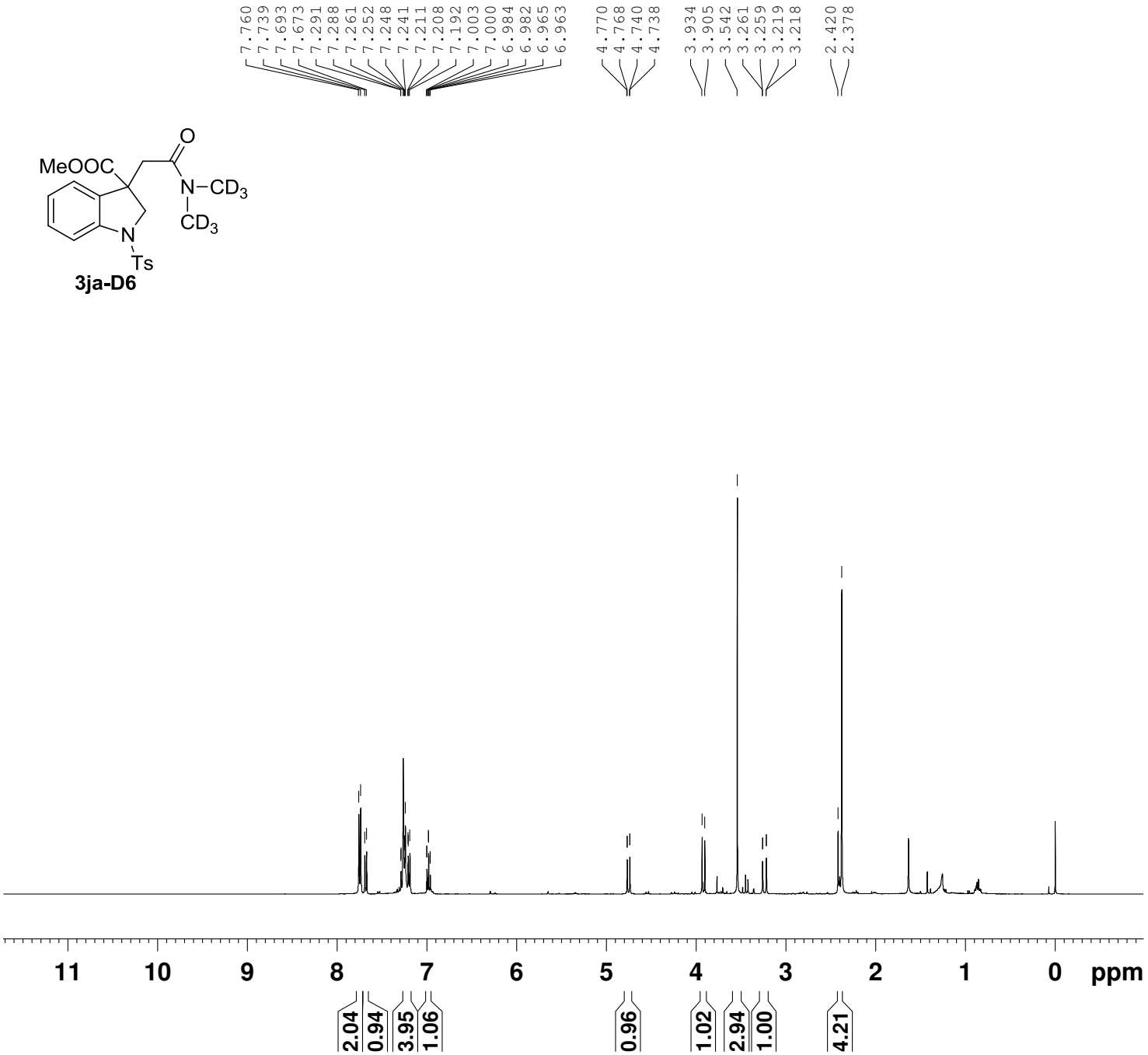



```
NAME        lly-707-2ap-20150910
EXPNO                          2
PROCNO                         1
Date_                   20150910
Time                        9.54
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            32
DS                             4
SWH                    24038.461 Hz
FIDRES                  0.366798 Hz
AQ                     1.3631988 sec
RG                          2050
DW                        20.800 usec
DE                         8.00 usec
TE                        296.9 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                            1

======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6228298 MHz

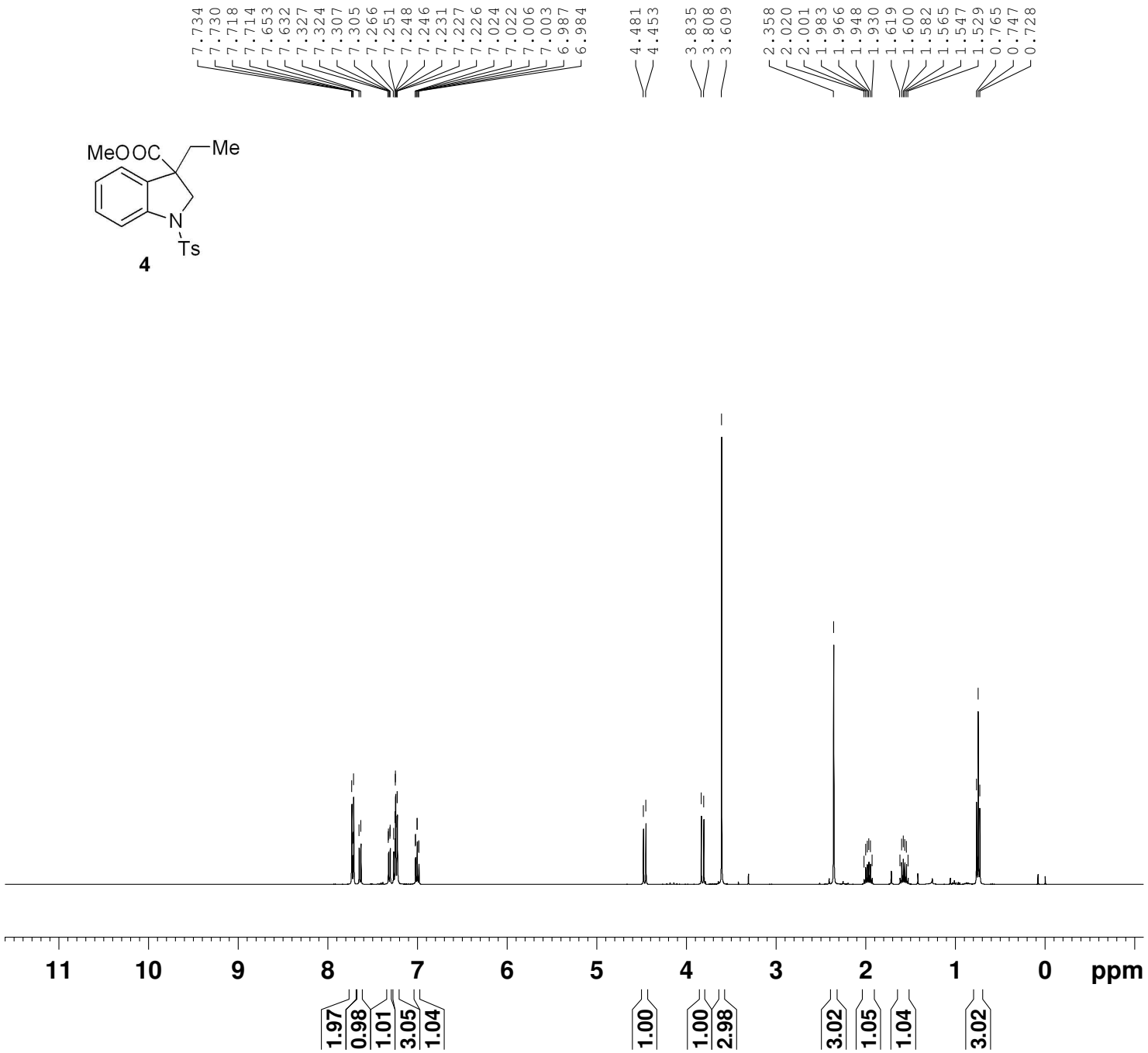
======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                  8.92857742 W
PL12W                 0.25809658 W
PL13W                 0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127781 MHz
WDW                           EM
SSB                            0
LB                         3.00 Hz
GB                             0
PC                          1.40
```

3ja-D6



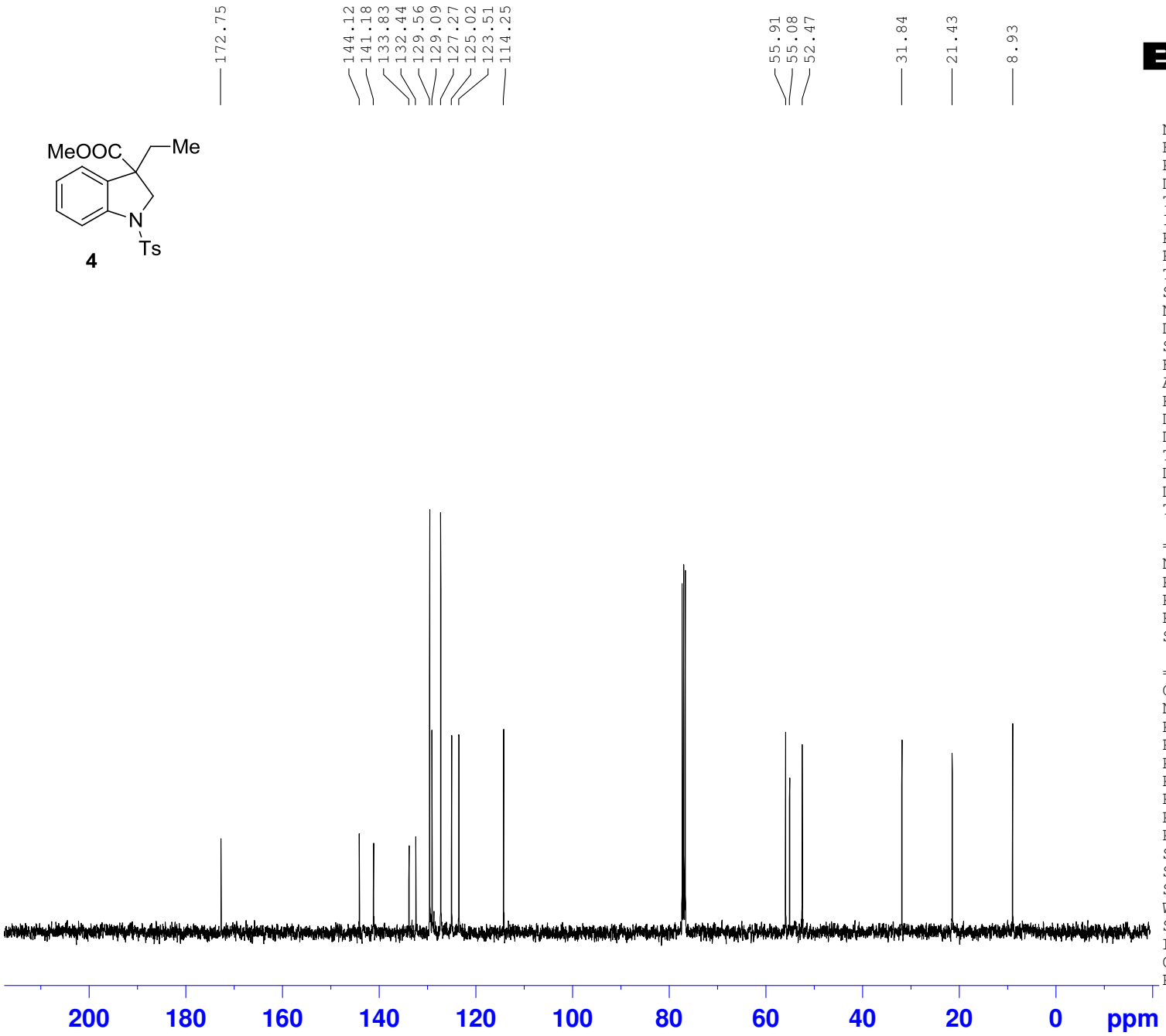

```
NAME          lly-719-1p
EXPNO                  1
PROCNO                 1
Date_           20151017
Time               14.45
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ            3.9846387 sec
RG                   144
DW                60.800 usec
DE                 6.50 usec
TE                297.2 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                14.50 usec
SI                65536
SF          400.1300077 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME      lly-699-1p-20150707
EXPNO                       1
PROCNO                      1
Date_              20150707
Time                    9.48
INSTRUM               spect
PROBHD    5 mm PADUL 13C
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                      71.8
DW                    78.200 usec
DE                      6.50 usec
TE                     295.4 K
D1                1.00000000 sec
TD0                        1

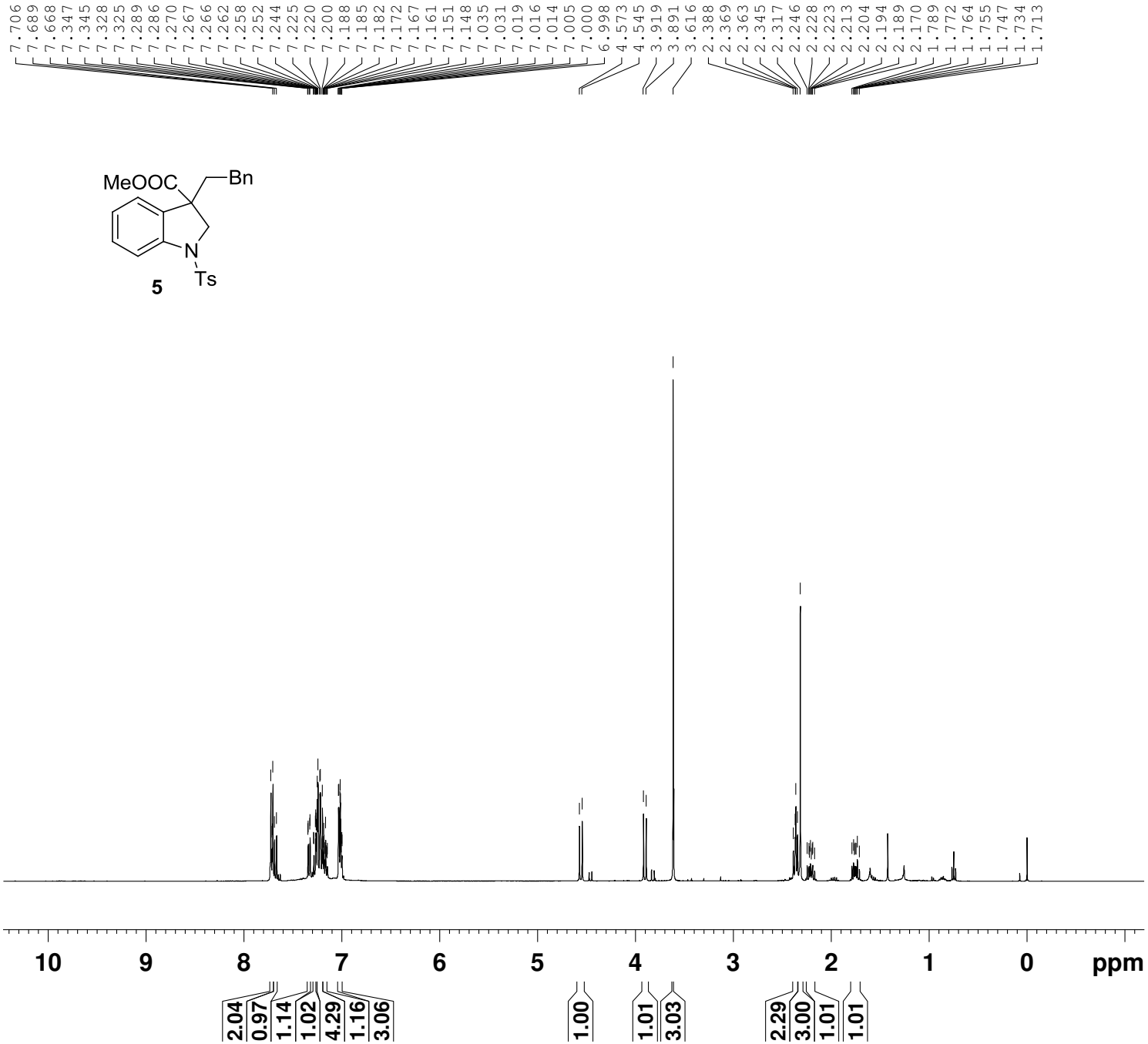
======== CHANNEL f1 ========
NUC1                      1H
P1                     13.10 usec
PL1                     1.80 dB
PL1W             8.92857742 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300069 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-699-1p-20150707
EXPNO                         2
PROCNO                        1
Date_               20150707
Time                      9.51
INSTRUM                  spect
PROBHD       5 mm PADUL 13C
PULPROG                 zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                          24
DS                           4
SWH                 24038.461 Hz
FIDRES               0.366798 Hz
AQ                  1.3631988 sec
RG                       2050
DW                     20.800 usec
DE                       8.00 usec
TE                      296.0 K
D1                 2.00000000 sec
D11                0.03000000 sec
TD0                          1

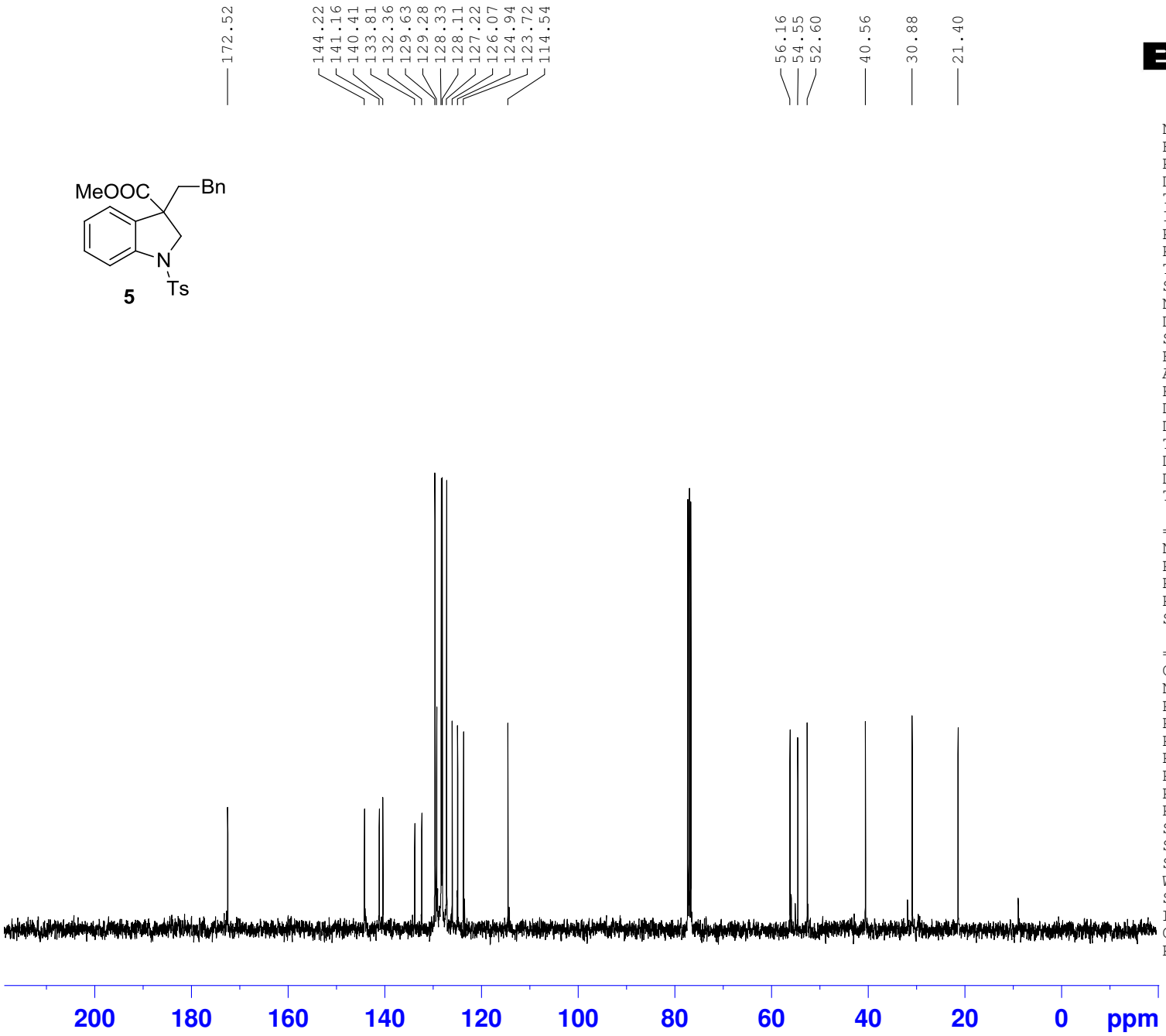
======== CHANNEL f1 ========
NUC1                       13C
P1                       13.50 usec
PL1                       3.00 dB
PL1W              43.93649673 W
SFO1              100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2                waltz16
NUC2                        1H
PCPD2                    80.00 usec
PL2                       1.80 dB
PL12                     17.19 dB
PL13                     18.46 dB
PL2W               8.92857742 W
PL12W              0.25809658 W
PL13W              0.19265592 W
SFO2              400.1316005 MHz
SI                       32768
SF                100.6127796 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME        lly-705-1p-20150911
EXPNO                         1
PROCNO                        1
Date_                  20150911
Time                       9.31
INSTRUM                   spect
PROBHD        5 mm PADUL 13C
PULPROG                    zg30
TD                        32768
SOLVENT                   CDCl3
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                          114
DW                       78.200 usec
DE                         6.50 usec
TE                        295.2 K
D1                  1.00000000 sec
TD0                           1

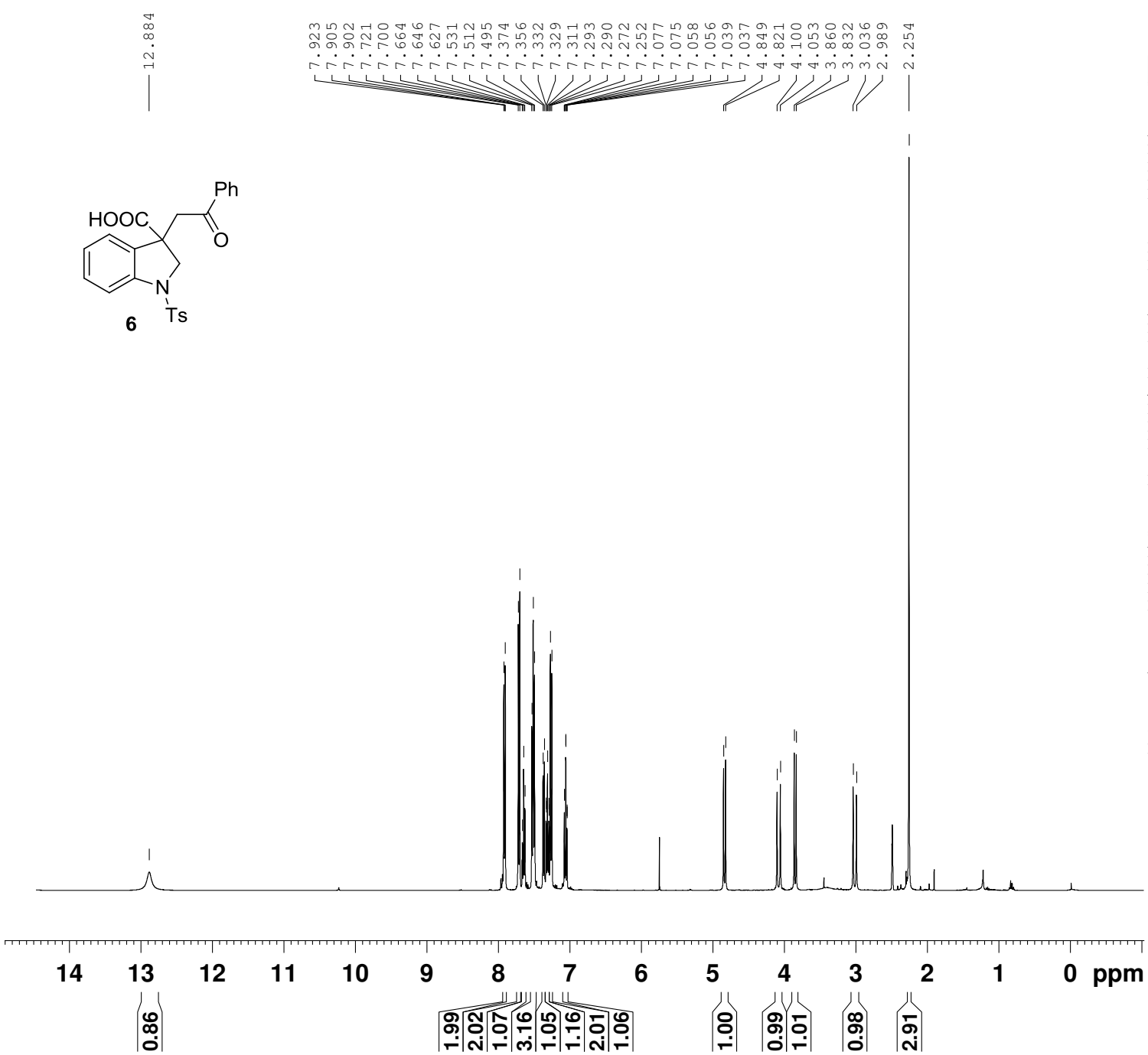
======== CHANNEL f1 ========
NUC1                         1H
P1                        13.10 usec
PL1                        1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                        32768
SF                  400.1300128 MHz
WDW                          EM
SSB                           0
LB                         0.30 Hz
GB                            0
PC                         1.00
```




```
NAME        lly-705-1pa-20150911
EXPNO                          2
PROCNO                         1
Date_                   20150911
Time                       17.11
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            32
DS                             4
SWH                    24038.461 Hz
FIDRES                  0.366798 Hz
AQ                     1.3631988 sec
RG                          2050
DW                        20.800 usec
DE                         8.00 usec
TE                        296.3 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                            1

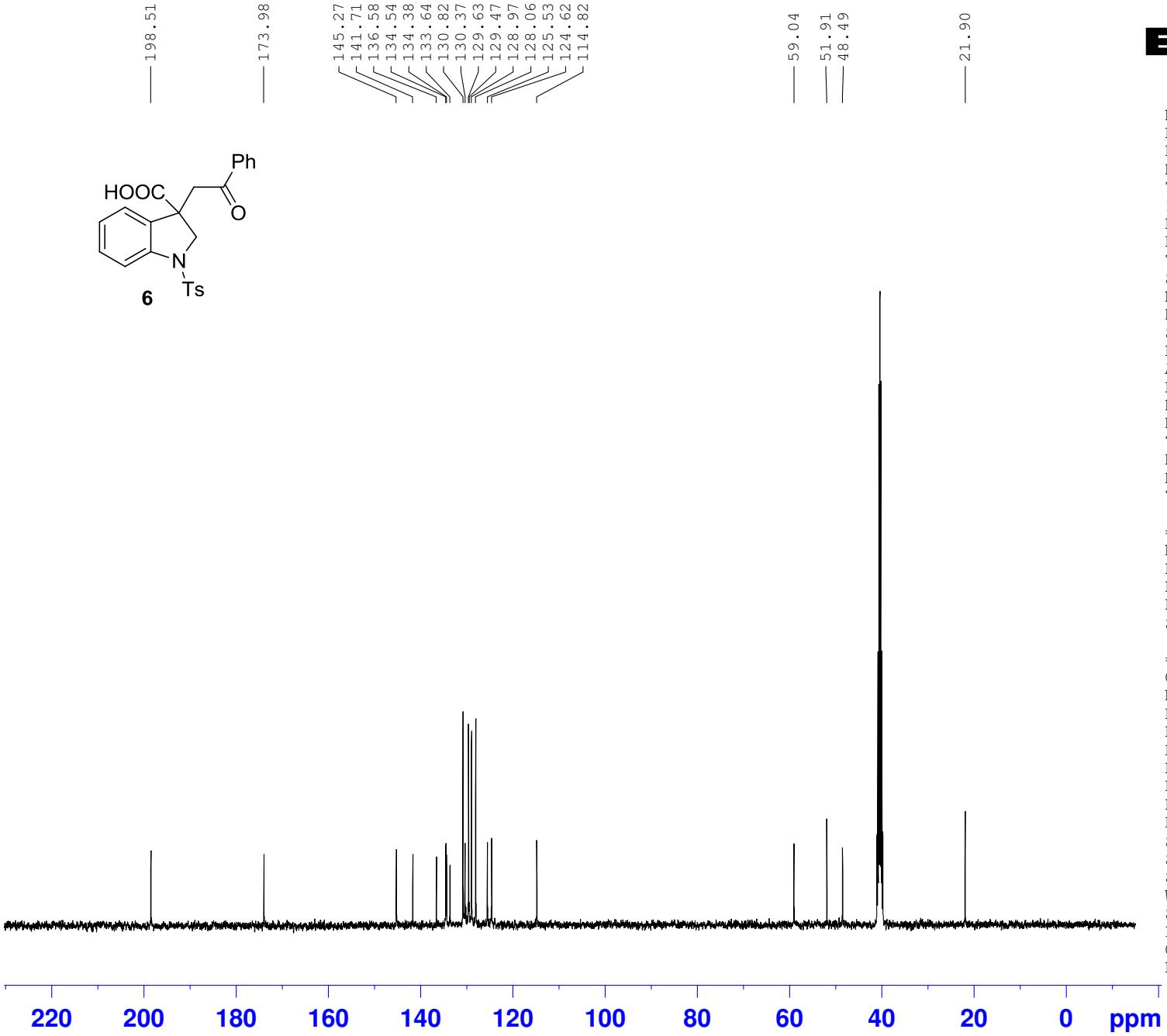
======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6228298 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                  8.92857742 W
PL12W                 0.25809658 W
PL13W                 0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127825 MHz
WDW                           EM
SSB                            0
LB                         3.00 Hz
GB                             0
PC                          1.40
```




```
NAME        lly-664-4p-20150409
EXPNO                         1
PROCNO                        1
Date_               20150409
Time                      10.10
INSTRUM                   spect
PROBHD      5 mm PABBO BB-
PULPROG                    zg30
TD                        32768
SOLVENT                    DMSO
NS                            8
DS                            0
SWH                    6393.862 Hz
FIDRES                 0.195125 Hz
AQ                   2.5625076 sec
RG                         90.5
DW                       78.200 usec
DE                        6.50 usec
TE                       294.5 K
D1                  1.00000000 sec
TD0                           1

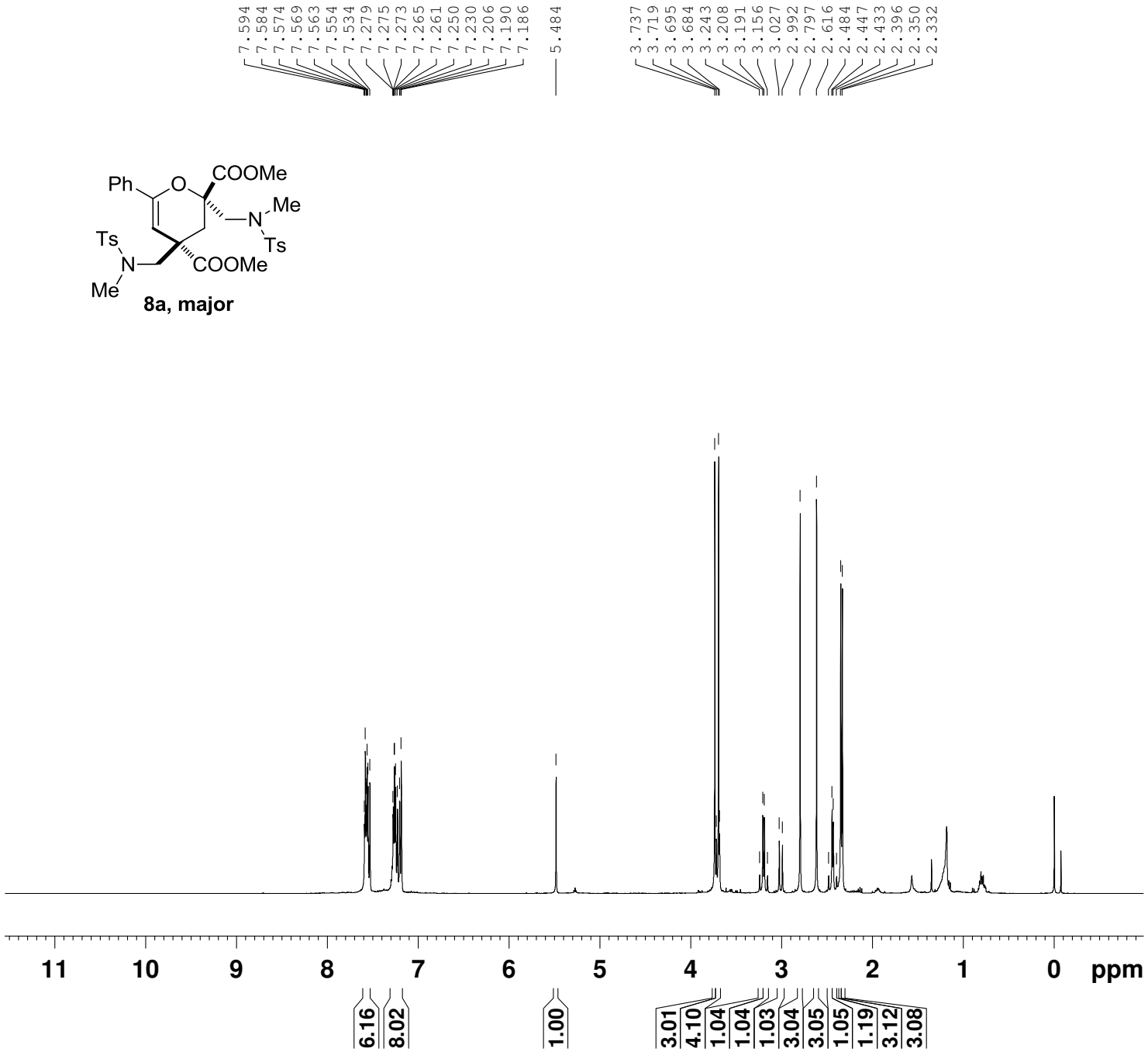
======== CHANNEL f1 ========
NUC1                         1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W               17.01305389 W
SFO1               400.1326008 MHz
SI                        32768
SF                 400.1300096 MHz
WDW                          EM
SSB                           0
LB                        0.30 Hz
GB                            0
PC                        1.00
```




```
NAME        lly-664-4p-20150402
EXPNO                         2
PROCNO                        1
Date_               20150409
Time                      17.29
INSTRUM                   spect
PROBHD       5 mm PABBO BB-
PULPROG                  zgpg30
TD                        65536
SOLVENT                    DMSO
NS                           72
DS                            4
SWH                   25252.525 Hz
FIDRES                 0.385323 Hz
AQ                    1.2976629 sec
RG                          181
DW                       19.800 usec
DE                        8.00 usec
TE                       296.0 K
D1                   2.00000000 sec
D11                  0.03000000 sec
TD0                          10

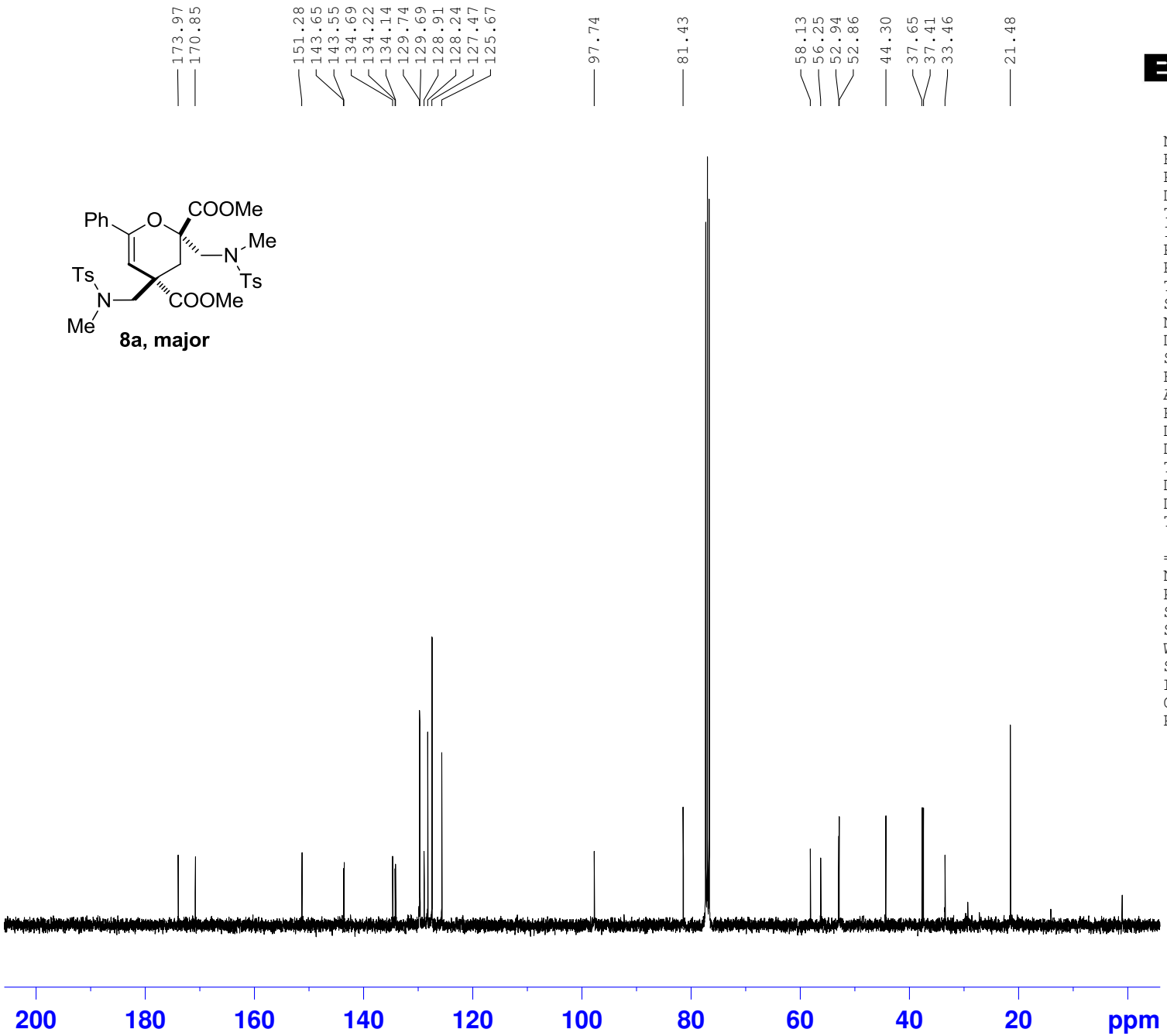
======== CHANNEL f1 ========
NUC1                        13C
P1                        15.00 usec
PL1                        2.00 dB
PL1W                55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                       -1.00 dB
PL12                      16.72 dB
PL13                      15.50 dB
PL2W                17.01305389 W
PL12W                0.28759566 W
PL13W                0.38087484 W
SFO2                400.1316005 MHz
SI                        32768
SF                  100.6127244 MHz
WDW                          EM
SSB                           0
LB                         3.00 Hz
GB                            0
PC                         1.40
```




```
NAME          lly-575-2p
EXPNO                  3
PROCNO                 1
Date_           20141127
Time                3.25
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8223.685 Hz
FIDRES          0.125483 Hz
AQ             3.9846387 sec
RG                  90.5
DW                60.800 usec
DE                 6.50 usec
TE                295.8 K
D1            1.00000000 sec
TD0                    1

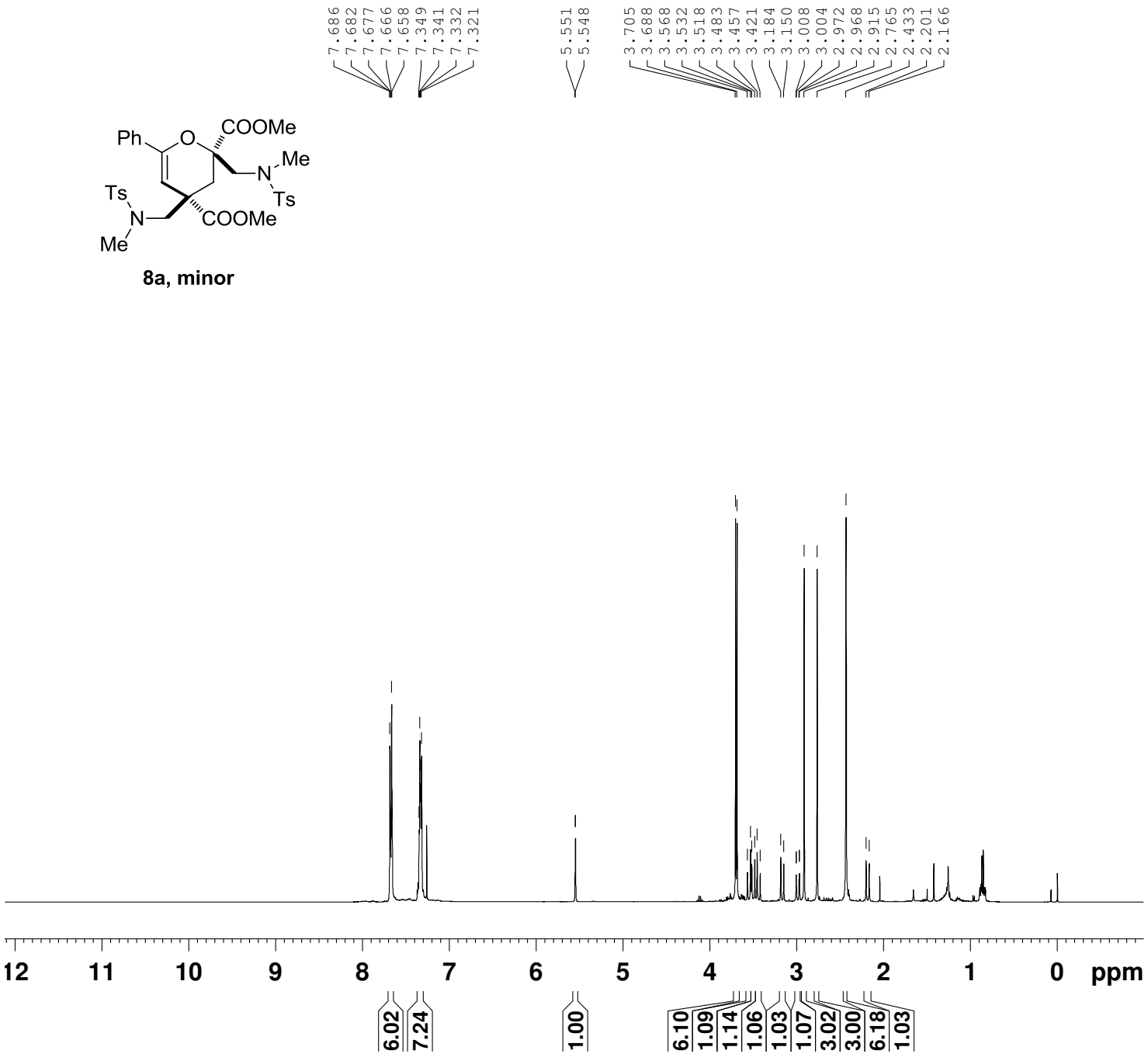
======== CHANNEL f1 ========
NUC1                  1H
P1                12.00 usec
SI                65536
SF          400.1300376 MHz
WDW                   EM
SSB                    0
LB                  0.30 Hz
GB                     0
PC                  1.00
```




```
NAME          lly-575-2p
EXPNO                  2
PROCNO                 1
Date_           20141127
Time                3.34
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                   160
DS                     4
SWH            24038.461 Hz
FIDRES          0.366798 Hz
AQ             1.3631988 sec
RG                   101
DW                20.800 usec
DE                 6.50 usec
TE                296.7 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

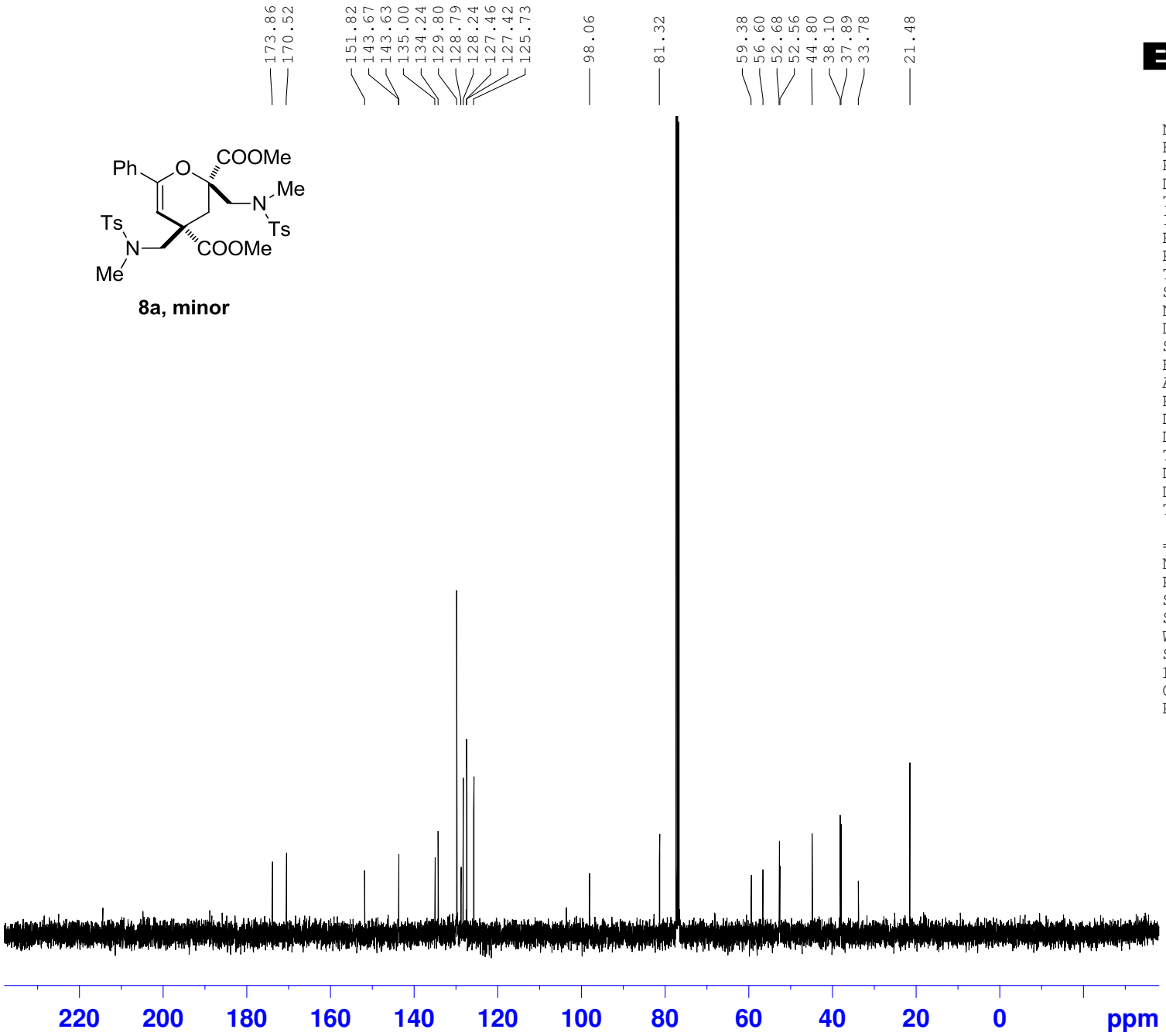
======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127740 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```

8a, minor



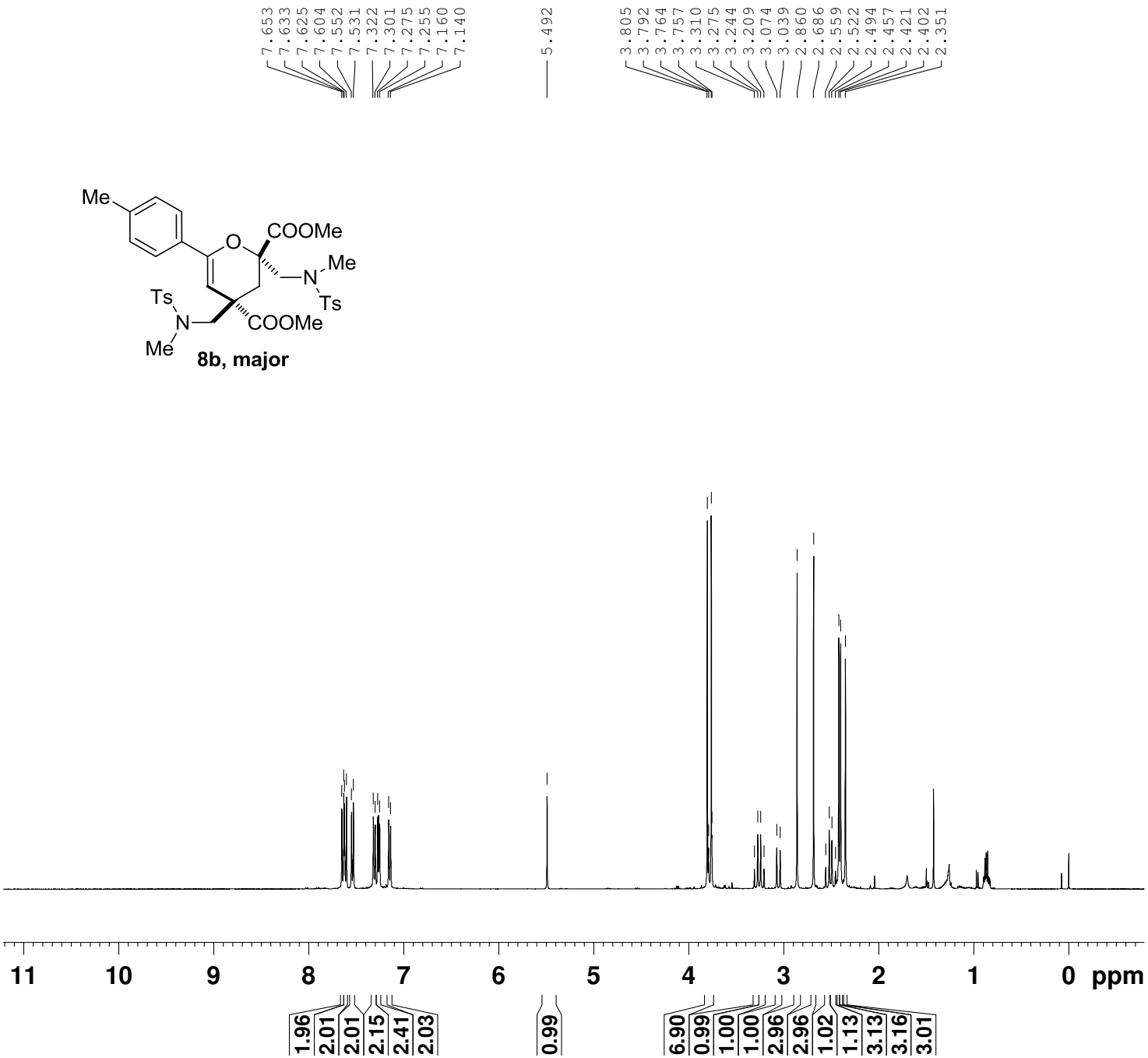

```
NAME      lly-575-2bp-20141210
EXPNO                        1
PROCNO                       1
Date_                 20141210
Time                     17.00
INSTRUM                  spect
PROBHD    5 mm PABBO BB-
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         161
DW                      78.200 usec
DE                        6.50 usec
TE                       292.8 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       10.40 usec
PL1                      -1.00 dB
PL1W                17.01305389 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300096 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```



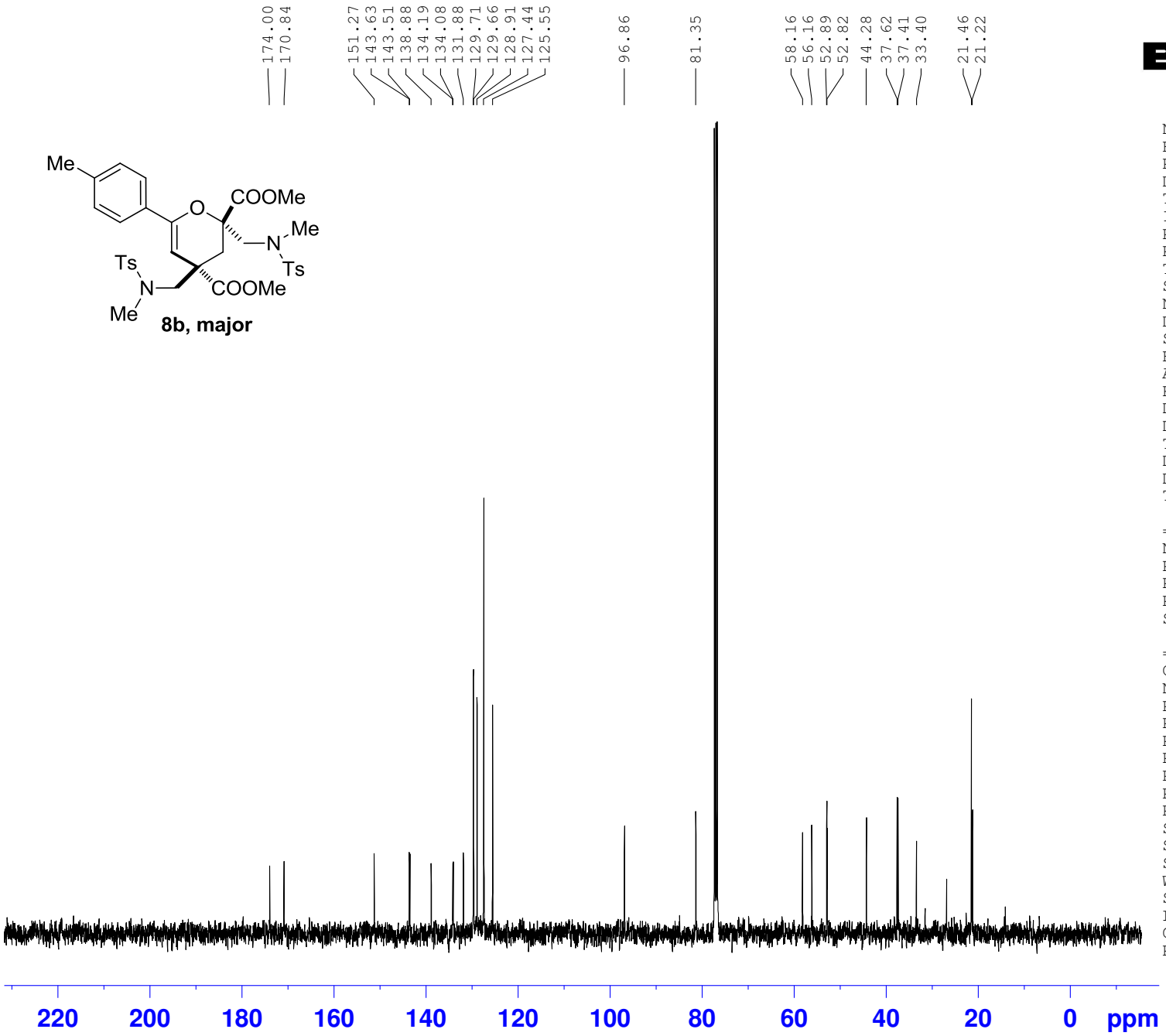

```
NAME          lly-575-2bp
EXPNO                   1
PROCNO                  1
Date_           20141212
Time                9.38
INSTRUM            spect
PROBHD   5 mm PADUL 13C
PULPROG           zgpg30
TD                 65536
SOLVENT            CDCl3
NS                    64
DS                     4
SWH            27777.777 Hz
FIDRES          0.423855 Hz
AQ             1.1796980 sec
RG                   128
DW                18.000 usec
DE                 6.50 usec
TE                295.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                12.00 usec
SI                32768
SF          100.6127751 MHz
WDW                  EM
SSB                   0
LB                 1.00 Hz
GB                    0
PC                 1.40
```




```
NAME      lly-721-4ap-20151022
EXPNO                        1
PROCNO                       1
Date_                 20151022
Time                     10.14
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         128
DW                      78.200 usec
DE                        6.50 usec
TE                       293.8 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300077 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```

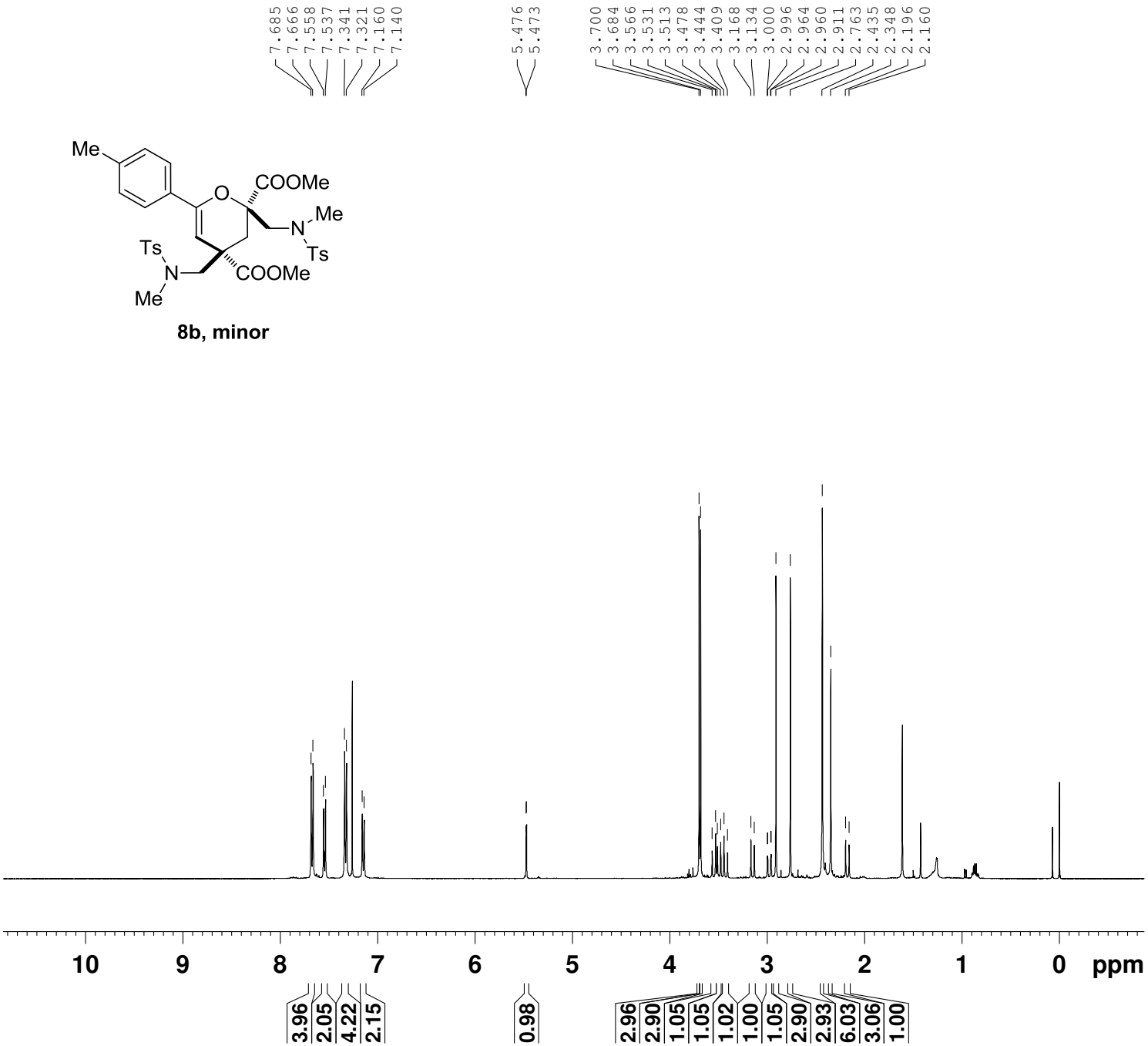



```
NAME        lly-721-4ap-20151022
EXPNO                          2
PROCNO                         1
Date_                   20151022
Time                       10.18
INSTRUM                    spect
PROBHD     5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            64
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                          2050
DW                        19.800 usec
DE                         8.00 usec
TE                        294.7 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                 8.92857742 W
PL12W                0.25809658 W
PL13W                0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127760 MHz
WDW                           EM
SSB                            0
LB                          3.00 Hz
GB                             0
PC                          1.40
```

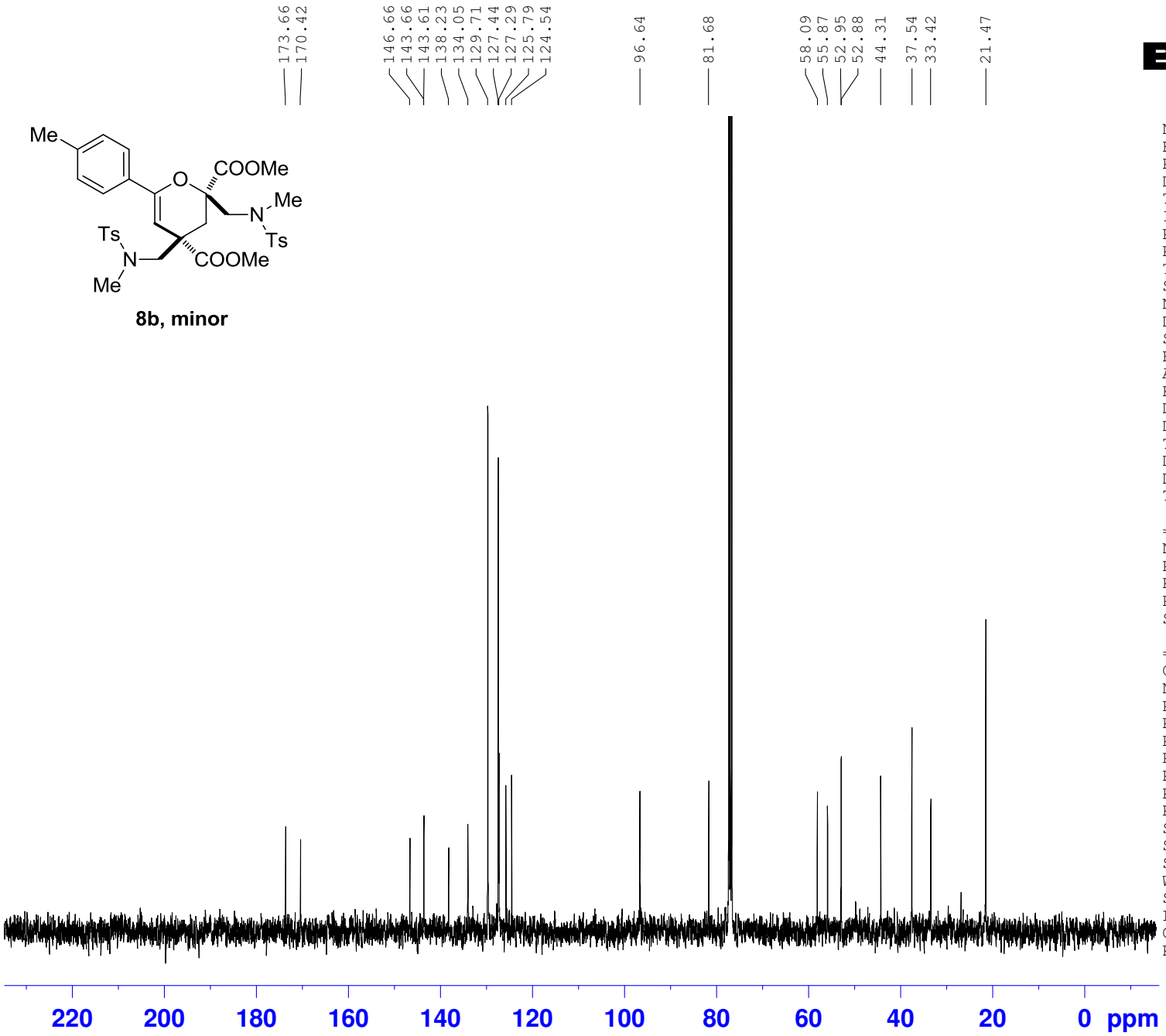
8b, minor




```
NAME      lly-721-4bp-20151022
EXPNO                        1
PROCNO                       1
Date_                 20151022
Time                     12.04
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         287
DW                      78.200 usec
DE                        6.50 usec
TE                       294.1 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300083 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```

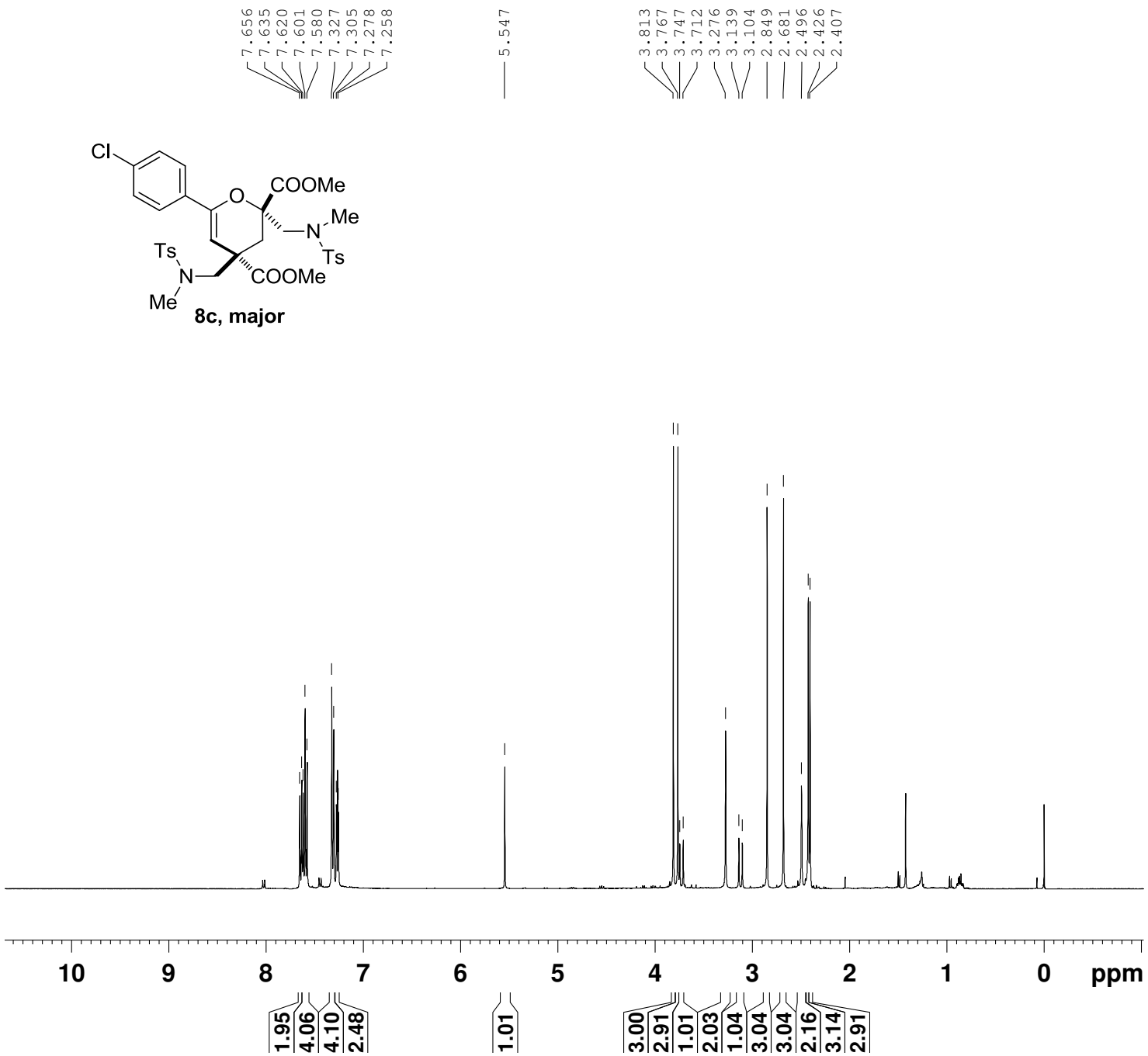
8b, minor




```
NAME        lly-721-3ap-20151022
EXPNO                          2
PROCNO                         1
Date_                   20151022
Time                       10.06
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            72
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                          2050
DW                        19.800 usec
DE                         8.00 usec
TE                        294.5 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

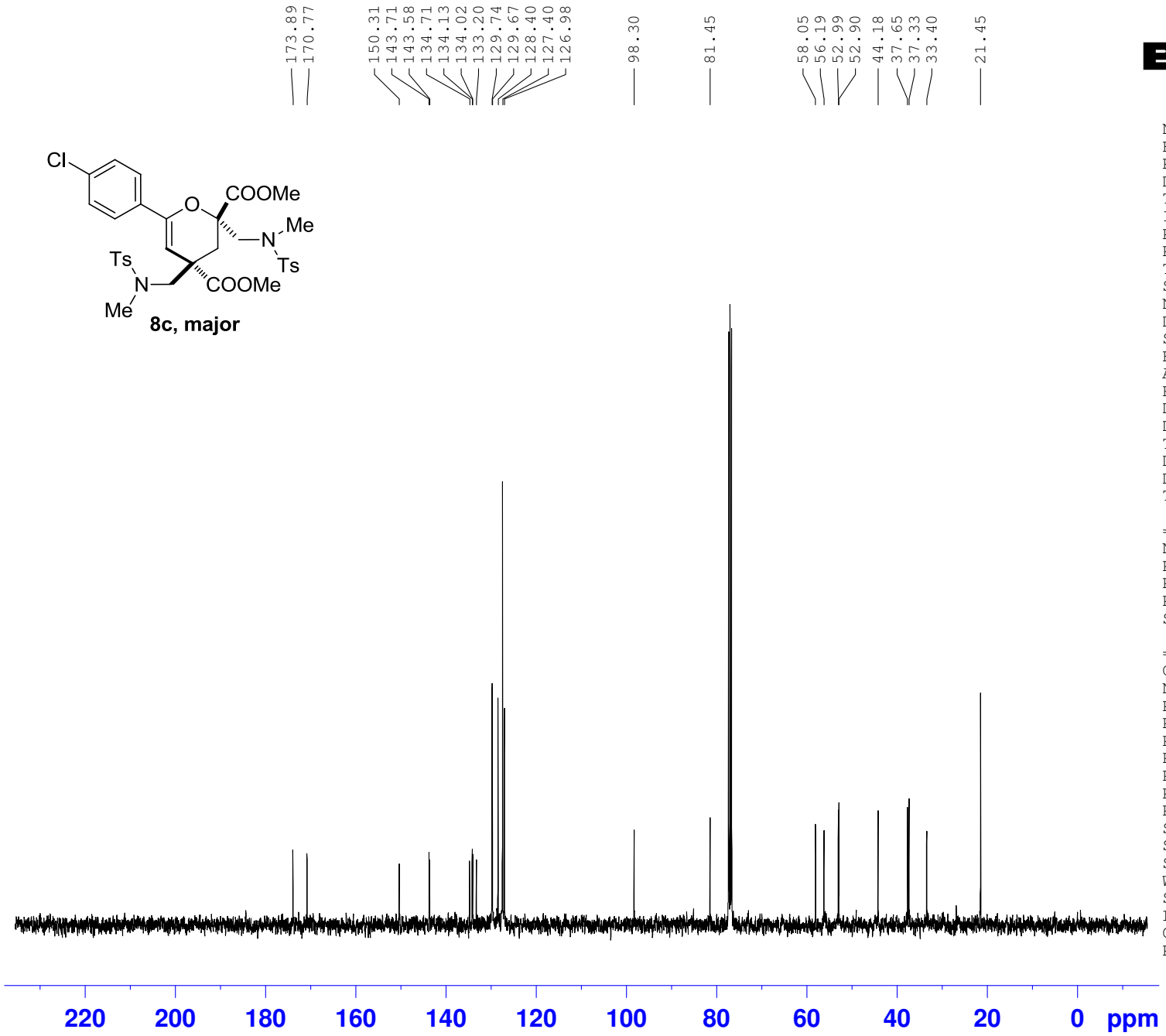
======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                 8.92857742 W
PL12W                0.25809658 W
PL13W                0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127761 MHz
WDW                           EM
SSB                            0
LB                          3.00 Hz
GB                             0
PC                          1.40
```




```
NAME      lly-721-2ap-20151021
EXPNO                        1
PROCNO                       1
Date_                 20151021
Time                     16.46
INSTRUM                  spect
PROBHD   5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         203
DW                      78.200 usec
DE                        6.50 usec
TE                       294.9 K
D1                  1.00000000 sec
TD0                          1

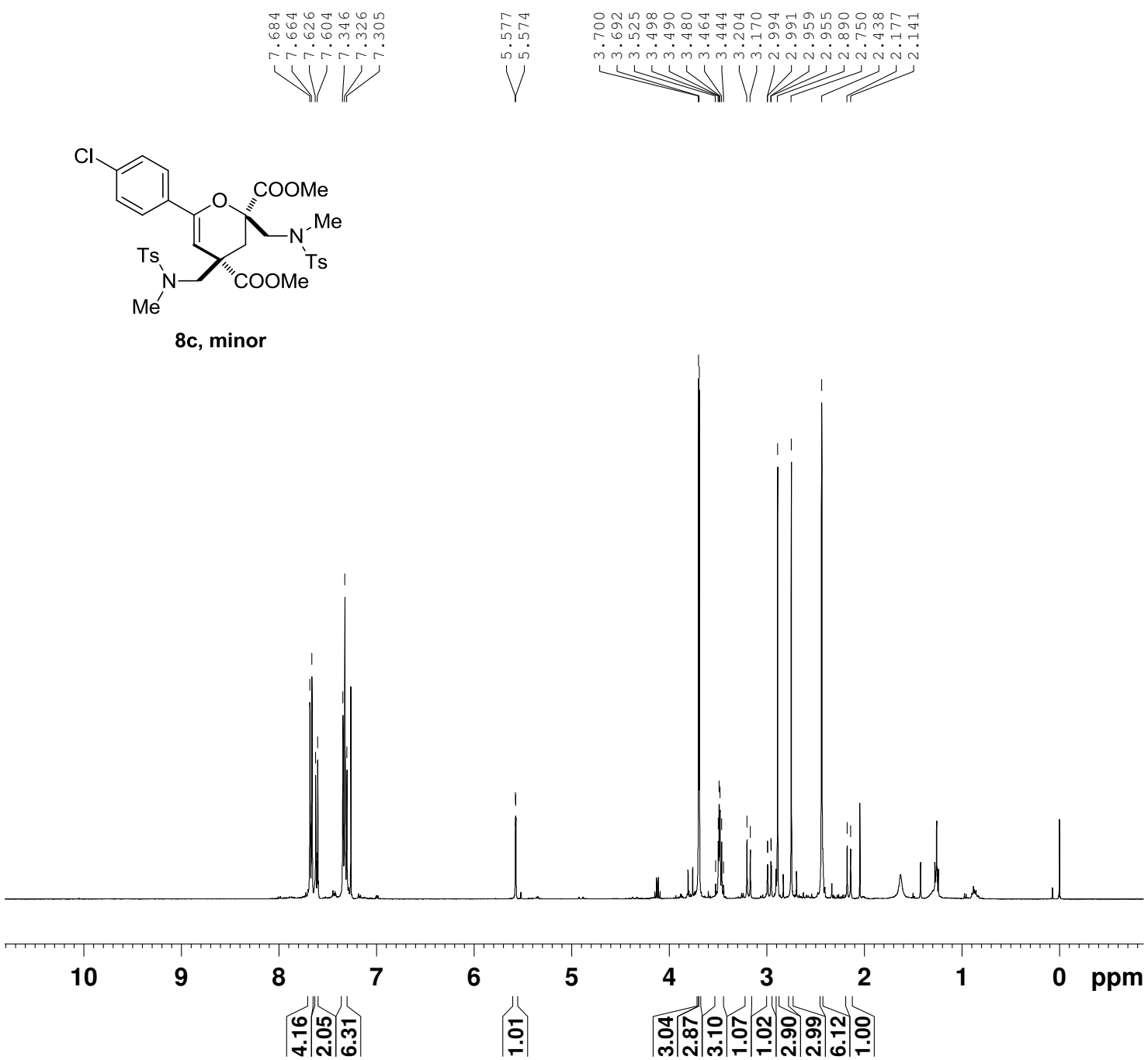
======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300071 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```




```
NAME        lly-721-2ap-20151022
EXPNO                          2
PROCNO                         1
Date_                   20151022
Time                        9.58
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            64
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                          2050
DW                        19.800 usec
DE                         8.00 usec
TE                        294.5 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

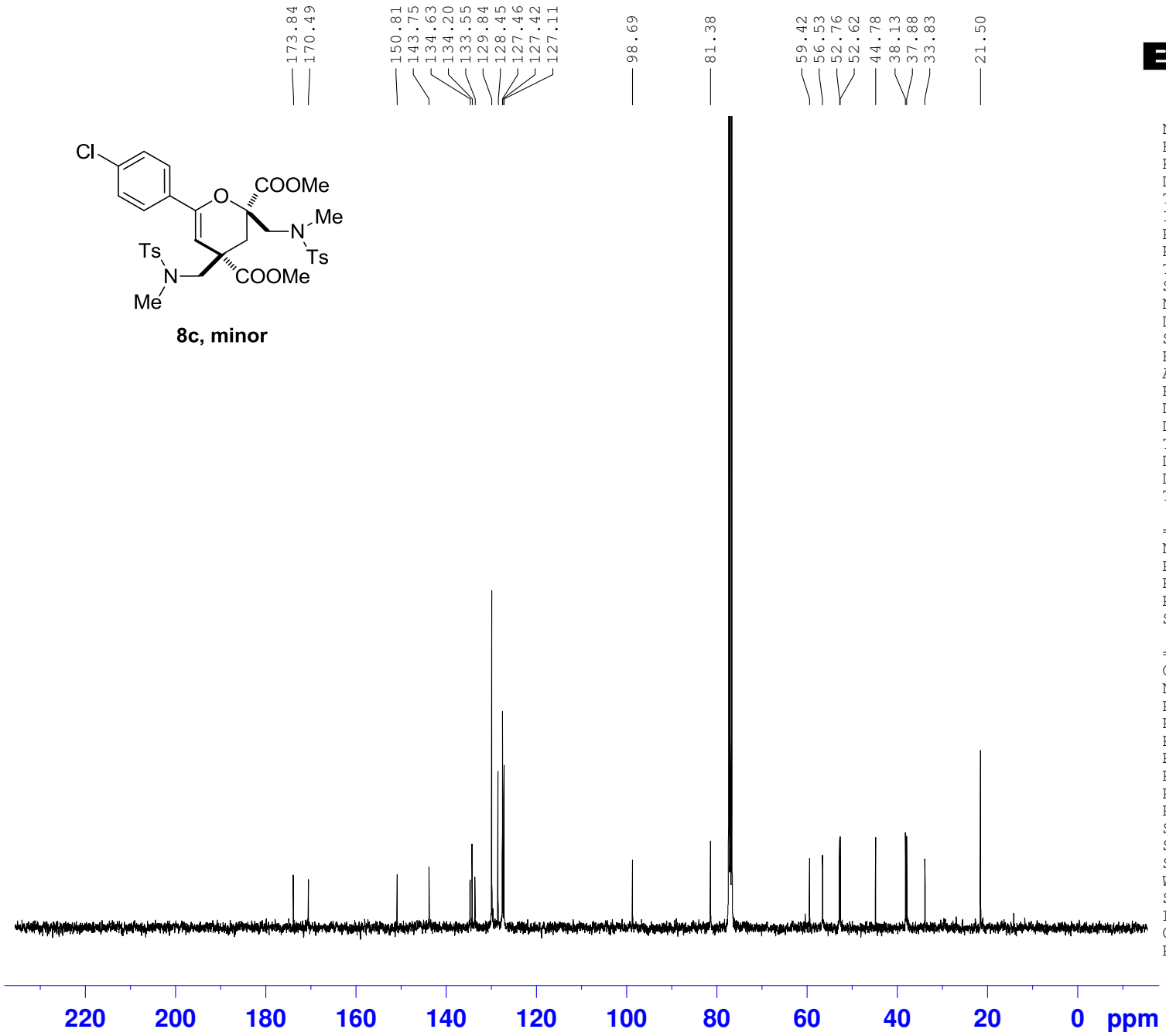
======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                 8.92857742 W
PL12W                0.25809658 W
PL13W                0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127774 MHz
WDW                           EM
SSB                            0
LB                         3.00 Hz
GB                             0
PC                          1.40
```




```
NAME      lly-721-2bp-20151021
EXPNO                        1
PROCNO                       1
Date_                 20151021
Time                     17.43
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         228
DW                      78.200 usec
DE                        6.50 usec
TE                       294.9 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300075 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```

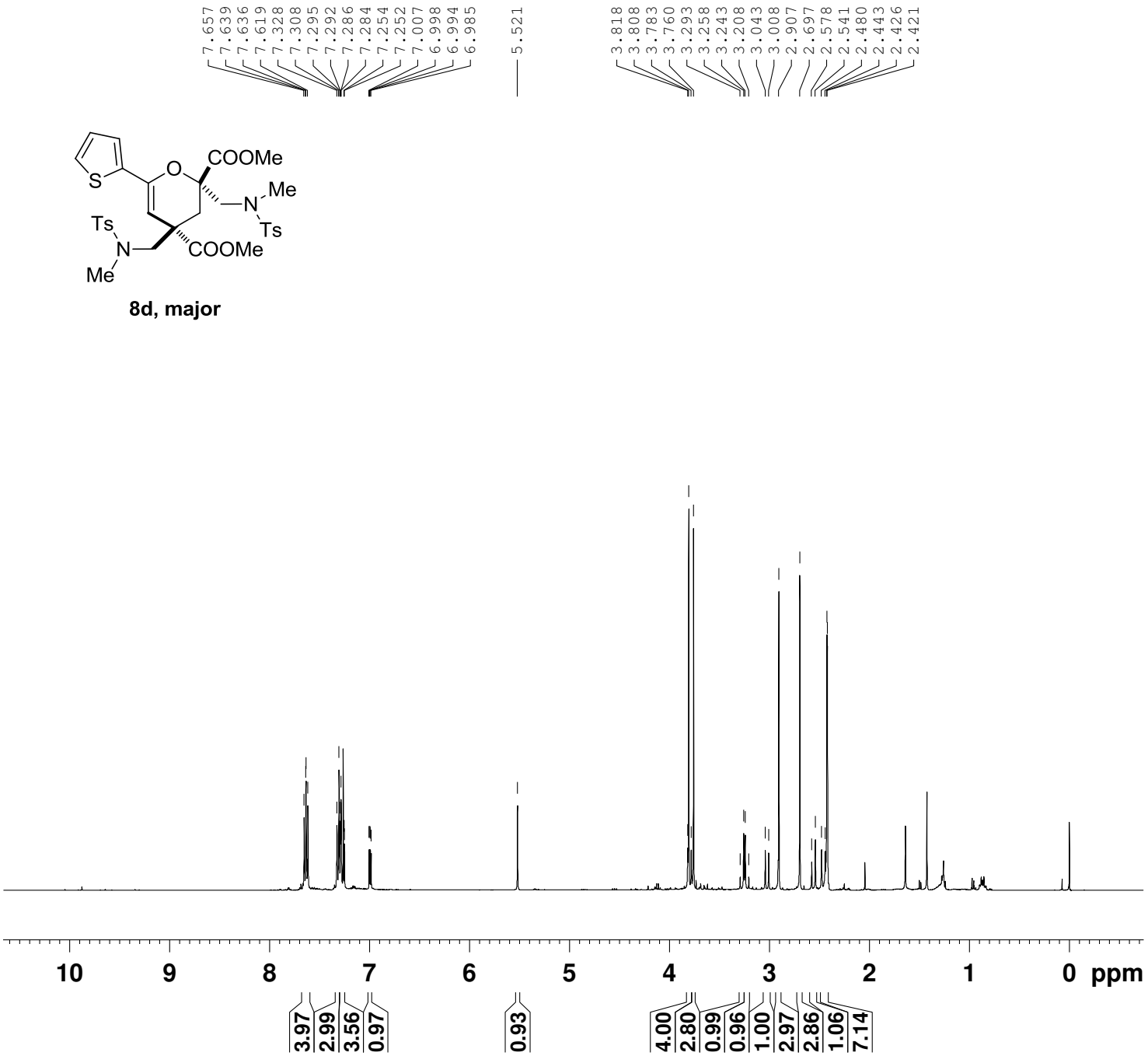



```
NAME        lly-721-2bp-20151022
EXPNO                          2
PROCNO                         1
Date_                   20151022
Time                       10.53
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                           656
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                          2050
DW                        19.800 usec
DE                         8.00 usec
TE                        294.7 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6238364 MHz

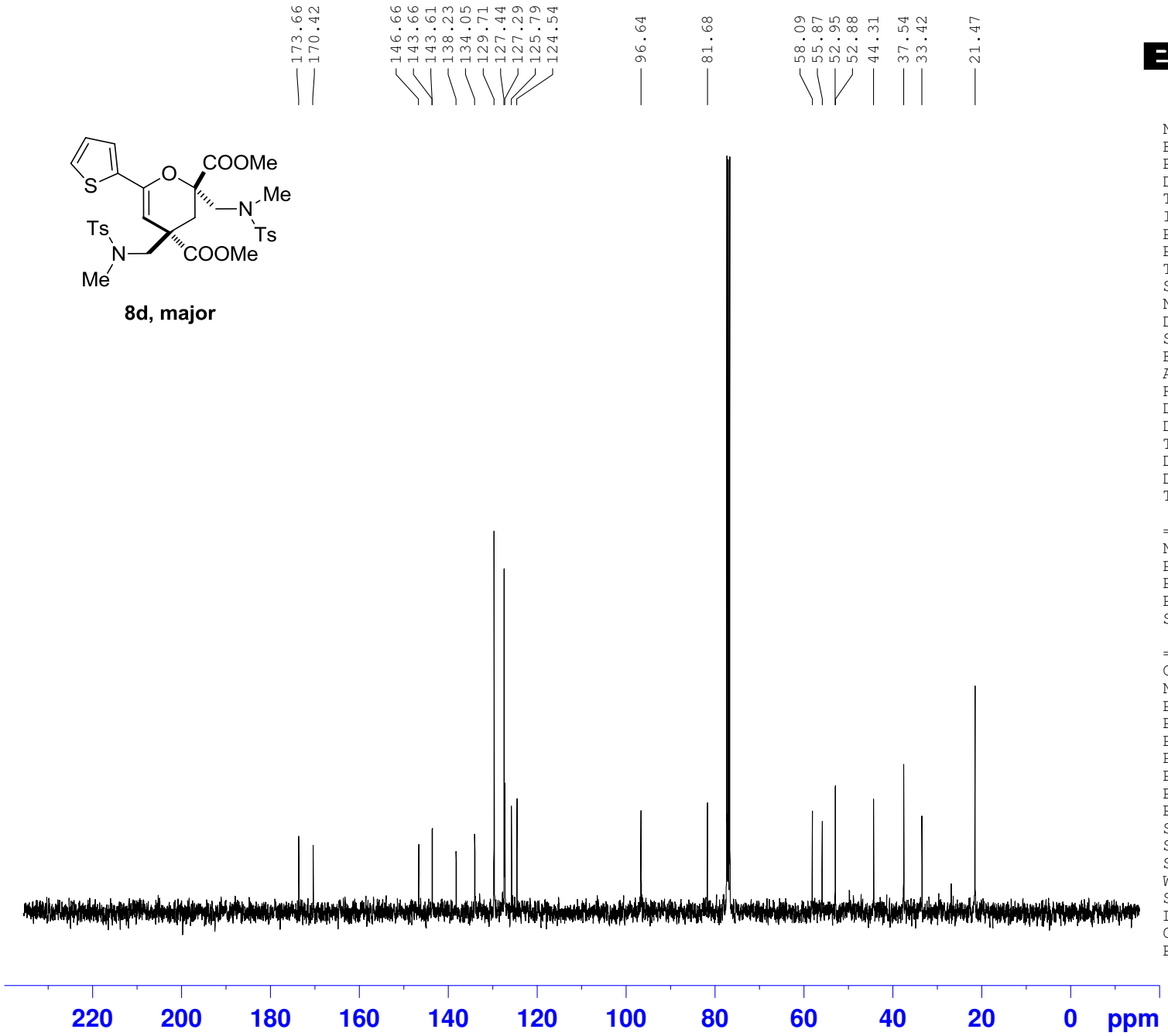
======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                  8.92857742 W
PL12W                 0.25809658 W
PL13W                 0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127735 MHz
WDW                           EM
SSB                            0
LB                          3.00 Hz
GB                             0
PC                          1.40
```

8d, major




```
NAME      lly-721-3ap-20151021
EXPNO                        1
PROCNO                       1
Date_                 20151021
Time                     17.47
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         228
DW                      78.200 usec
DE                        6.50 usec
TE                       294.9 K
D1                  1.00000000 sec
TD0                          1

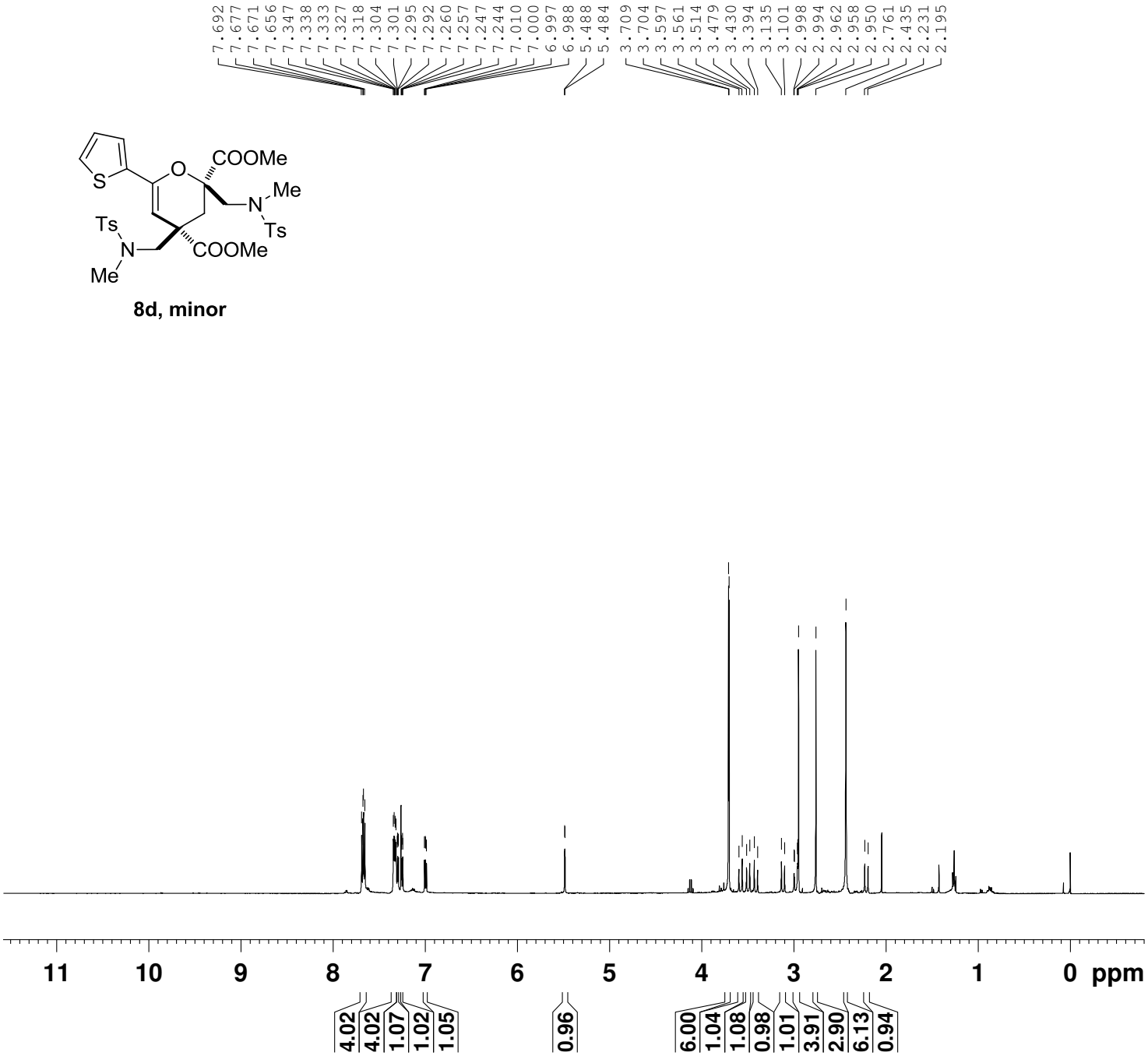
======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300073 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```




```
NAME        lly-721-3ap-20151022
EXPNO                          2
PROCNO                         1
Date_                   20151022
Time                       10.06
INSTRUM                    spect
PROBHD        5 mm PADUL 13C
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            72
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                          2050
DW                        19.800 usec
DE                         8.00 usec
TE                        294.5 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

======== CHANNEL f1 ========
NUC1                          13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W                 43.93649673 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                 8.92857742 W
PL12W                0.25809658 W
PL13W                0.19265592 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127761 MHz
WDW                           EM
SSB                            0
LB                         3.00 Hz
GB                             0
PC                         1.40
```

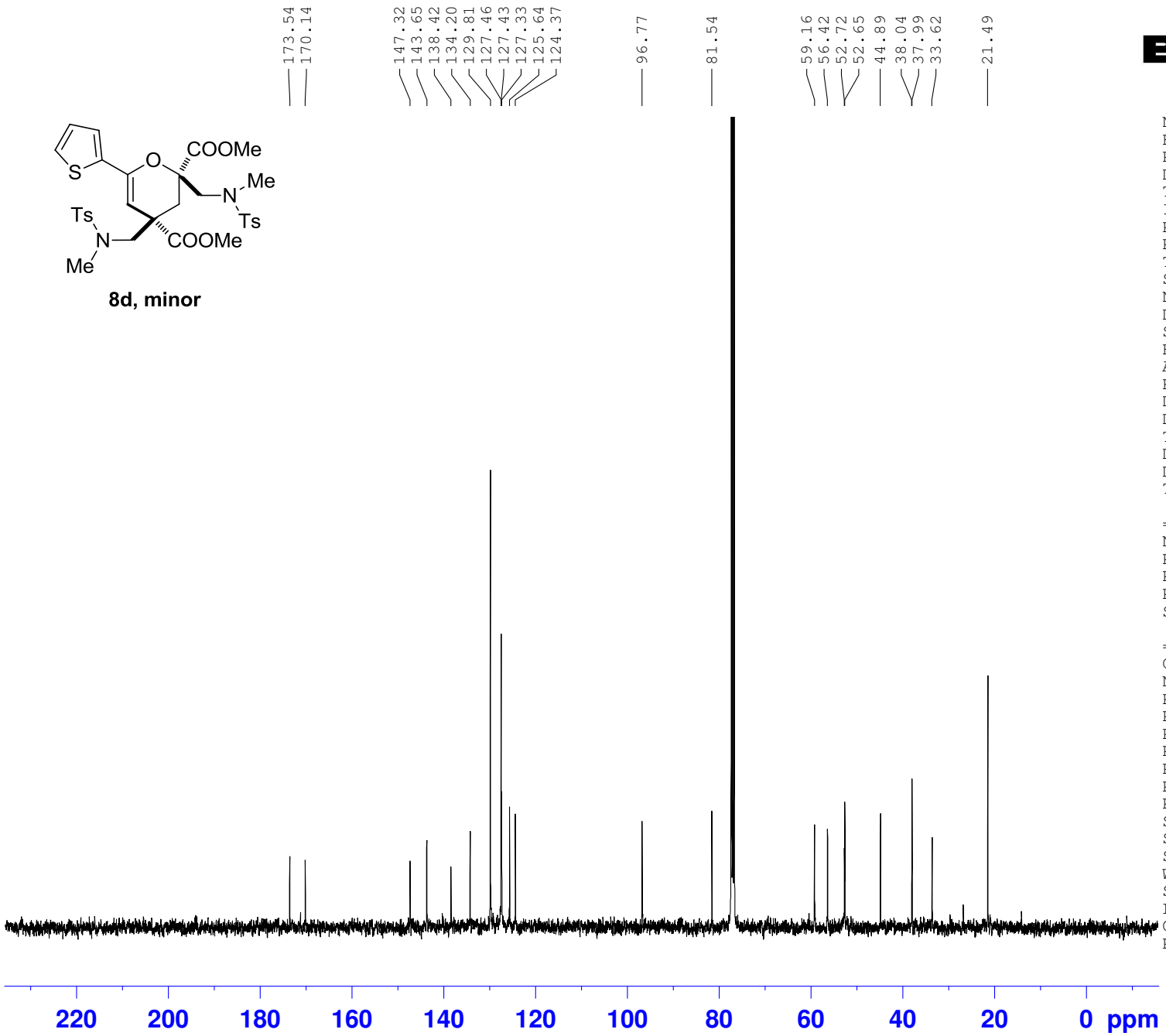


8d, minor

```
NAME      lly-721-3bp-20151021
EXPNO                        1
PROCNO                       1
Date_                 20151021
Time                     17.51
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           0
SWH                   6393.862 Hz
FIDRES                0.195125 Hz
AQ                   2.5625076 sec
RG                         228
DW                      78.200 usec
DE                        6.50 usec
TE                       294.9 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       13.10 usec
PL1                       1.80 dB
PL1W                 8.92857742 W
SFO1                400.1326008 MHz
SI                       32768
SF                  400.1300072 MHz
WDW                         EM
SSB                          0
LB                        0.30 Hz
GB                           0
PC                        1.00
```

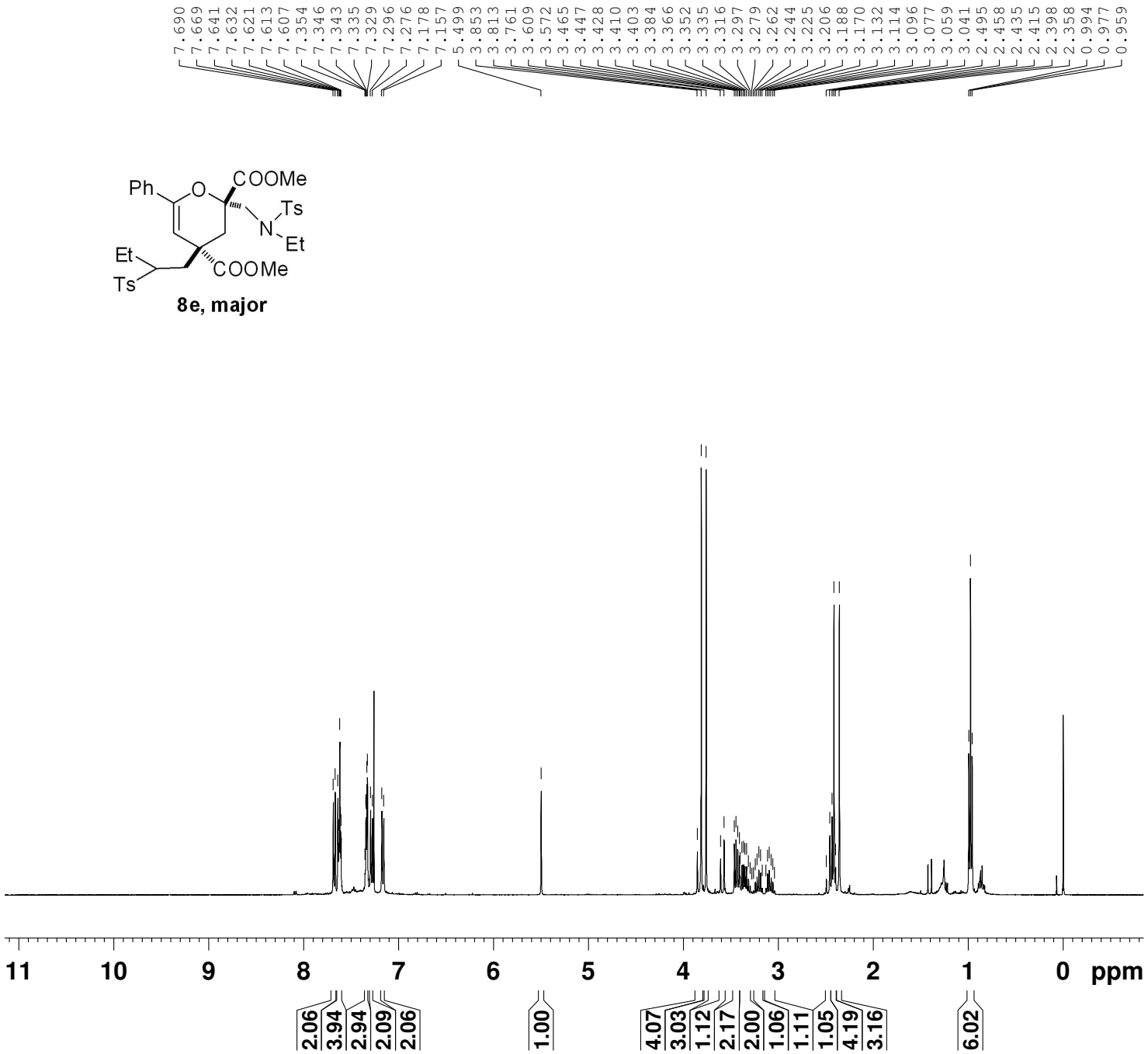
8d, minor




```
NAME      lly-721-3bp-20151022
EXPNO                        2
PROCNO                       1
Date_             20151022
Time                     10.25
INSTRUM                  spect
PROBHD    5 mm PADUL 13C
PULPROG                zgpg30
TD                       65536
SOLVENT                  CDCl3
NS                         408
DS                           4
SWH                 25252.525 Hz
FIDRES               0.385323 Hz
AQ                  1.2976629 sec
RG                        2050
DW                      19.800 usec
DE                        8.00 usec
TE                       294.3 K
D1                 2.00000000 sec
D11                0.03000000 sec
TD0                         10

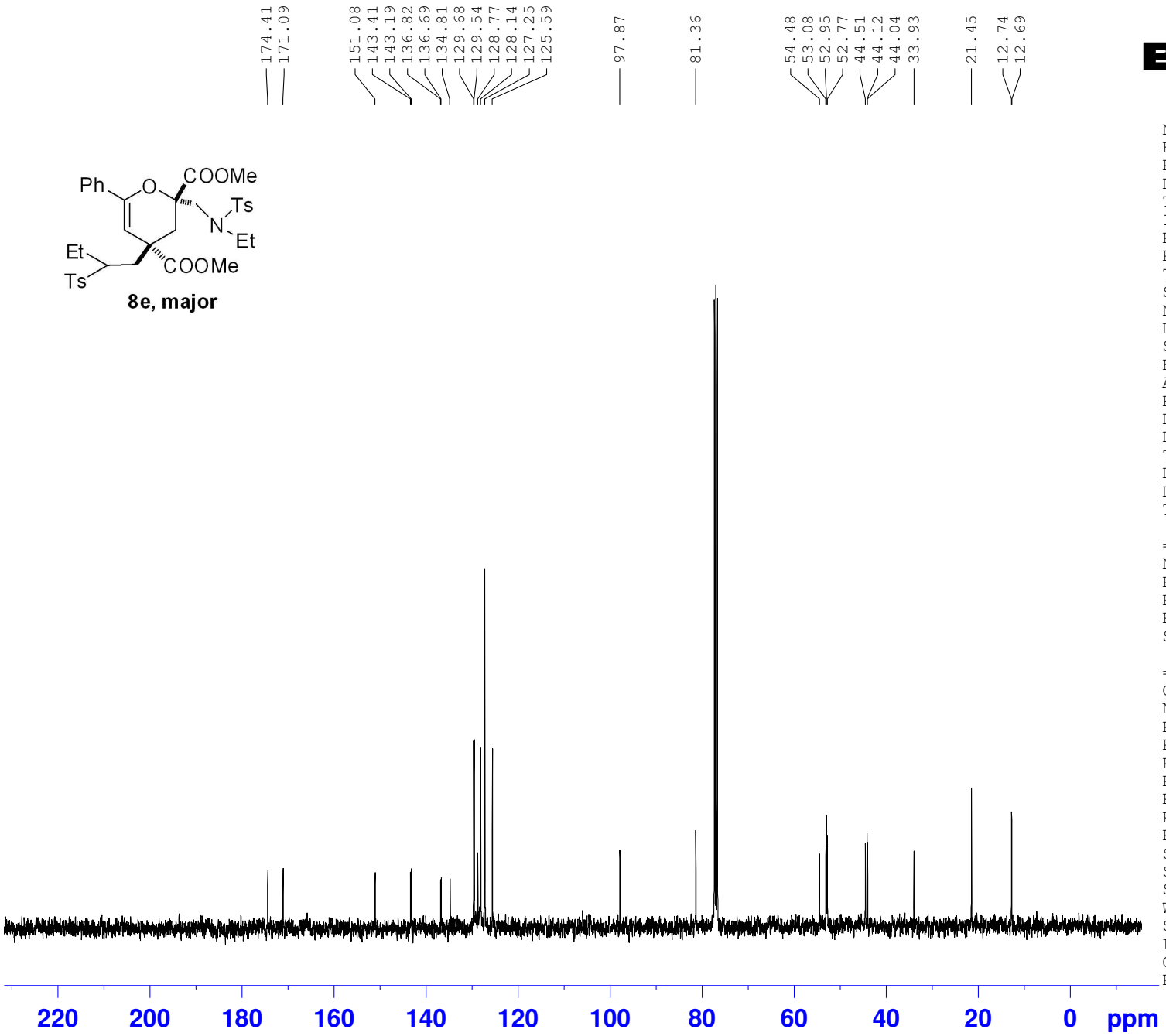
======== CHANNEL f1 ========
NUC1                        13C
P1                        13.50 usec
PL1                        3.00 dB
PL1W               43.93649673 W
SFO1               100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                 waltz16
NUC2                         1H
PCPD2                     80.00 usec
PL2                        1.80 dB
PL12                      17.19 dB
PL13                      18.46 dB
PL2W                8.92857742 W
PL12W               0.25809658 W
PL13W               0.19265592 W
SFO2               400.1316005 MHz
SI                        32768
SF                 100.6127743 MHz
WDW                         EM
SSB                          0
LB                        3.00 Hz
GB                           0
PC                        1.40
```




```
NAME        lly-605-1ap-20150104
EXPNO                          1
PROCNO                         1
Date_                   20150104
Time                        9.49
INSTRUM                    spect
PROBHD        5 mm PABBO BB-
PULPROG                     zg30
TD                         32768
SOLVENT                    CDCl3
NS                             8
DS                             0
SWH                     6393.862 Hz
FIDRES                  0.195125 Hz
AQ                     2.5625076 sec
RG                           322
DW                        78.200 usec
DE                          6.50 usec
TE                         295.3 K
D1                    1.00000000 sec
TD0                            1

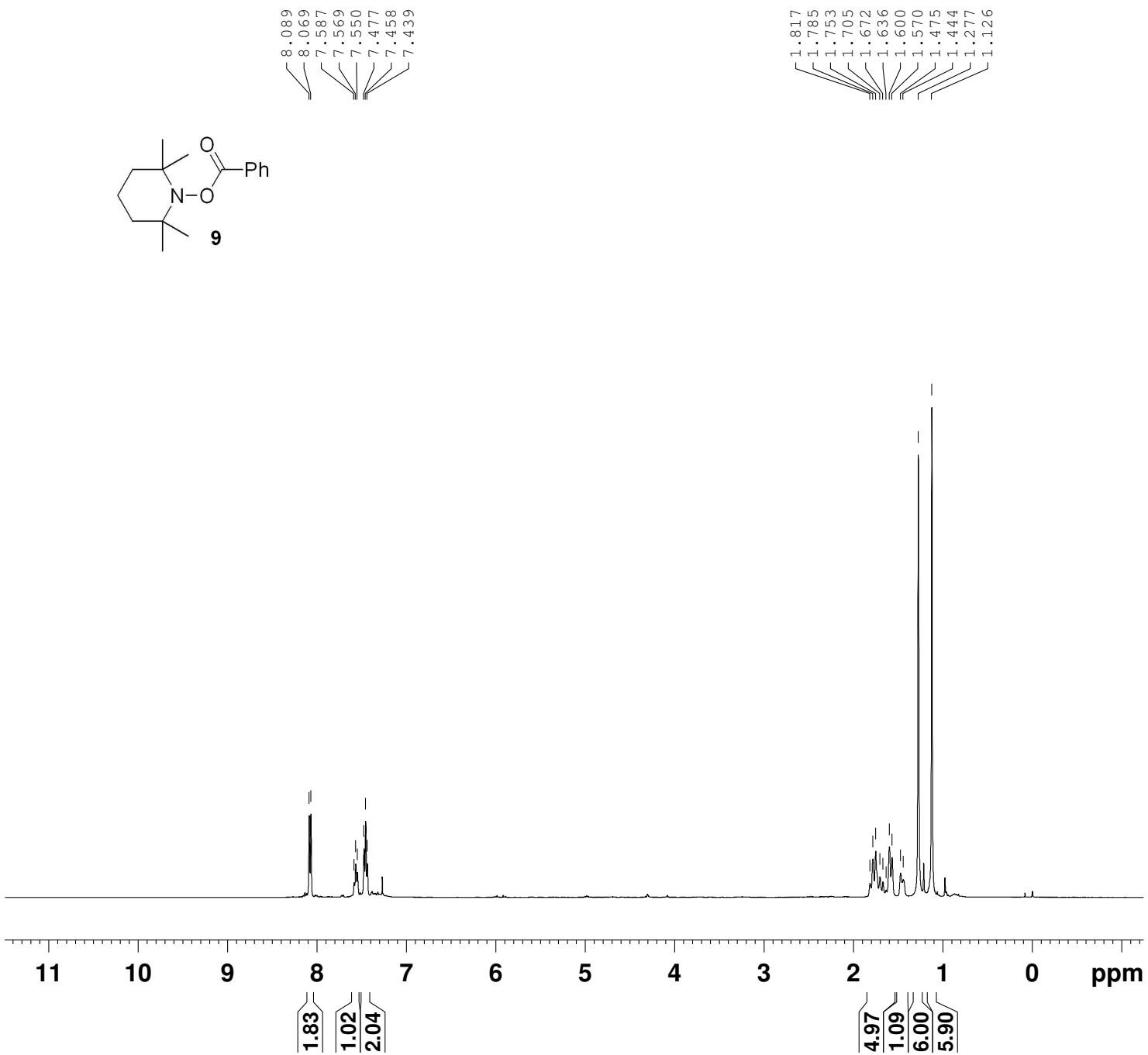
======== CHANNEL f1 ========
NUC1                          1H
P1                         10.40 usec
PL1                        -1.00 dB
PL1W                 17.01305389 W
SFO1                 400.1326008 MHz
SI                         32768
SF                   400.1300096 MHz
WDW                           EM
SSB                            0
LB                          0.30 Hz
GB                             0
PC                          1.00
```




```
NAME          lly-605-1ap
EXPNO                   2
PROCNO                  1
Date_            20150105
Time                18.07
INSTRUM             spect
PROBHD    5 mm PABBO BB-
PULPROG            zgpg30
TD                  65536
SOLVENT             CDCl3
NS                     64
DS                      4
SWH             25252.525 Hz
FIDRES           0.385323 Hz
AQ              1.2976629 sec
RG                    181
DW                 19.800 usec
DE                  8.00 usec
TE                 296.1 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                    10

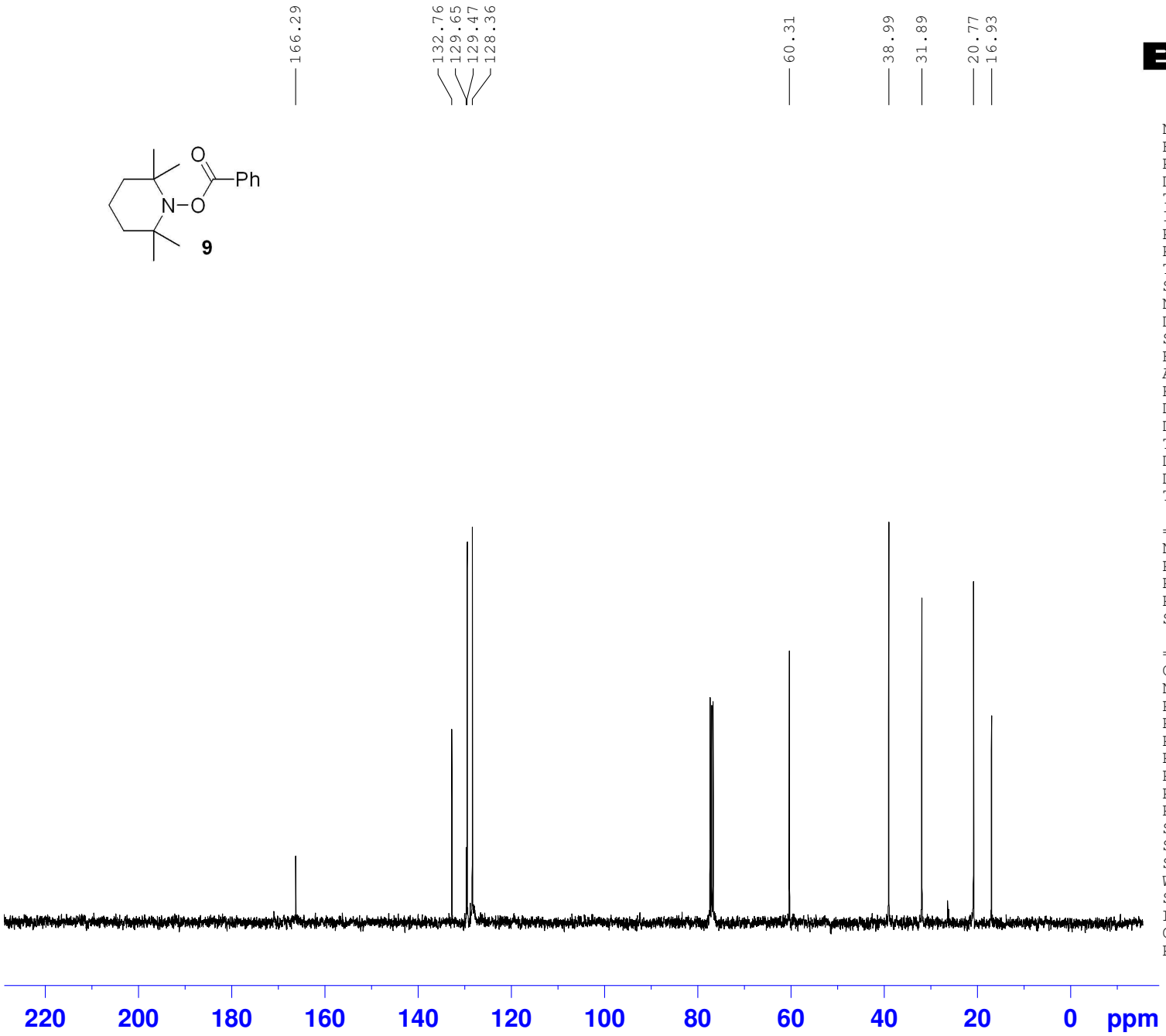
======== CHANNEL f1 ========
NUC1                  13C
P1                 15.00 usec
PL1                 2.00 dB
PL1W         55.31277084 W
SFO1         100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2          waltz16
NUC2                  1H
PCPD2              80.00 usec
PL2                -1.00 dB
PL12               16.72 dB
PL13               15.50 dB
PL2W         17.01305389 W
PL12W         0.28759566 W
PL13W         0.38087484 W
SFO2         400.1316005 MHz
SI                 32768
SF           100.6127752 MHz
WDW                   EM
SSB                    0
LB                  3.00 Hz
GB                     0
PC                  1.40
```




```
NAME      lly-TEMPO-Aldehyde
EXPNO                      1
PROCNO                     1
Date_               20110311
Time                   16.34
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         0
SWH                 6393.862 Hz
FIDRES              0.195125 Hz
AQ                2.5625076 sec
RG                      50.8
DW                    78.200 usec
DE                      6.50 usec
TE                     296.3 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     10.40 usec
PL1                    -1.00 dB
PL1W            17.01305389 W
SFO1            400.1326008 MHz
SI                     32768
SF              400.1300052 MHz
WDW                       EM
SSB                        0
LB                      0.30 Hz
GB                         0
PC                      1.00
```




```
NAME        lly-TEMPO-Aldehyde-1
EXPNO                          2
PROCNO                         1
Date_                   20110312
Time                       14.00
INSTRUM                    spect
PROBHD        5 mm PABBO BB-
PULPROG                   zgpg30
TD                         65536
SOLVENT                    CDCl3
NS                            29
DS                             4
SWH                    25252.525 Hz
FIDRES                  0.385323 Hz
AQ                     1.2976629 sec
RG                           256
DW                        19.800 usec
DE                         6.50 usec
TE                        297.6 K
D1                    2.00000000 sec
D11                   0.03000000 sec
TD0                           10

======== CHANNEL f1 ========
NUC1                         13C
P1                         13.12 usec
PL1                         2.00 dB
PL1W                 55.31277084 W
SFO1                100.6238364 MHz

======== CHANNEL f2 ========
CPDPRG2                  waltz16
NUC2                          1H
PCPD2                      80.00 usec
PL2                        -1.00 dB
PL12                       15.79 dB
PL13                       15.50 dB
PL2W                 17.01305389 W
PL12W                 0.35627249 W
PL13W                 0.38087484 W
SFO2                400.1316005 MHz
SI                         32768
SF                  100.6127777 MHz
WDW                           EM
SSB                            0
LB                          3.00 Hz
GB                             0
PC                          1.40
```