

## Supplementary Material

### Synthesis of compounds containing $\alpha$ -aryl quaternary carbon centers

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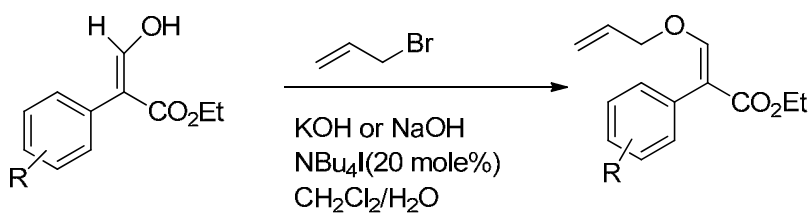
*Department of Chemistry and Biochemistry, University of Wisconsin-Milwaukee, 3210 N.*

*Cramer St, Milwaukee, WI 53211*

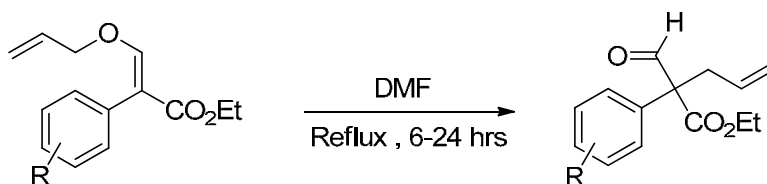
*E-mail: [mahmun@uwm.edu](mailto:mahmun@uwm.edu)*

#### Contents of Table

Scheme S1 and Scheme S2: O-allylation reaction and Claisen rearrangement	S2
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4a</b>	S3
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4b</b>	S4
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4c</b>	S5
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4d</b>	S6
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4e</b>	S7
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4f</b>	S8
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>4g</b>	S9
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5a</b>	S10
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5b</b>	S11
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5c</b>	S12
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5d</b>	S13
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5e</b>	S14
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5f</b>	S15
$^1\text{H}$ and $^{13}\text{C}$ NMR spectra of <b>5g</b>	S16



**Scheme S1.** O-allylation reaction of hydroxyarylacrylates.

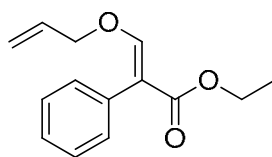


**Scheme S2.** Claisen rearrangement.

### <sup>1</sup>H and <sup>13</sup>C NMR spectral data for all products

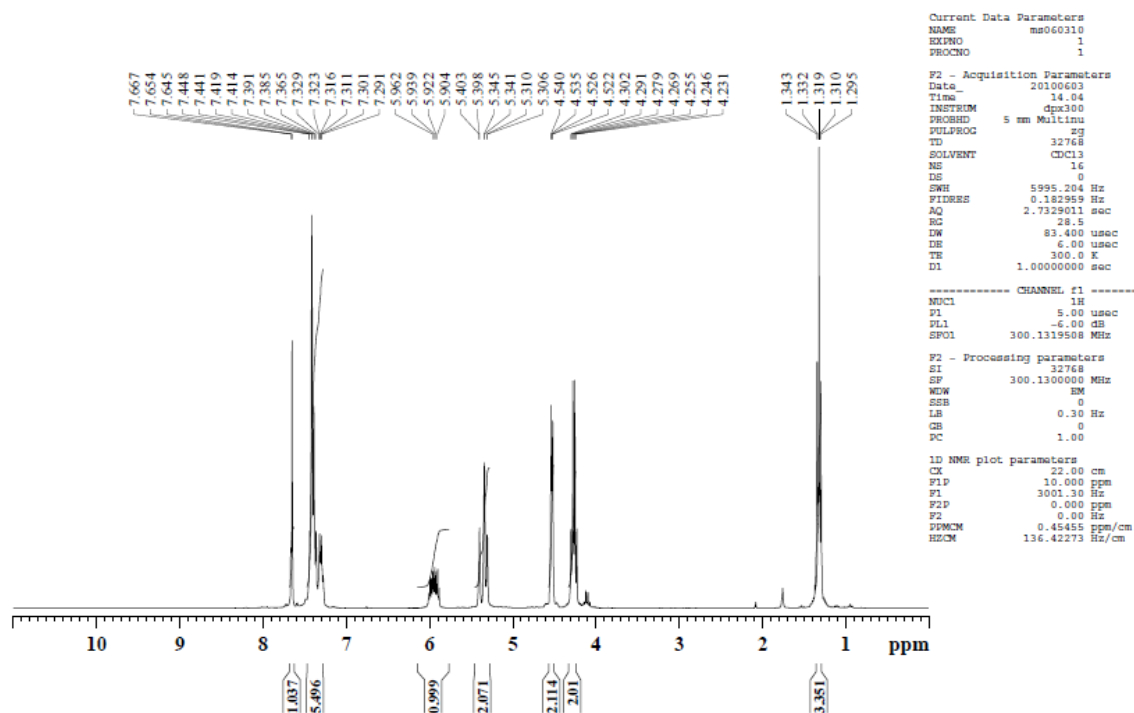
Products from Table 1: S2-S16

Products from Table 4: S17-S31

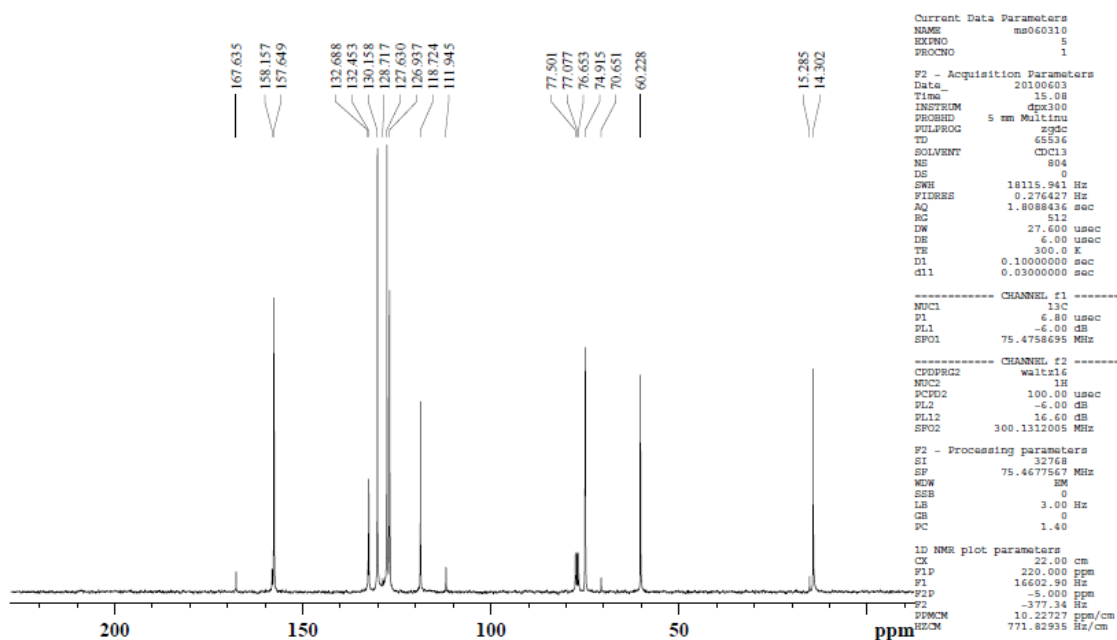


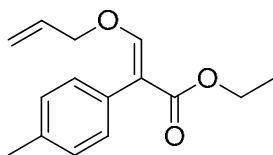
Entry 1, Table 1

## Proton Spectrum



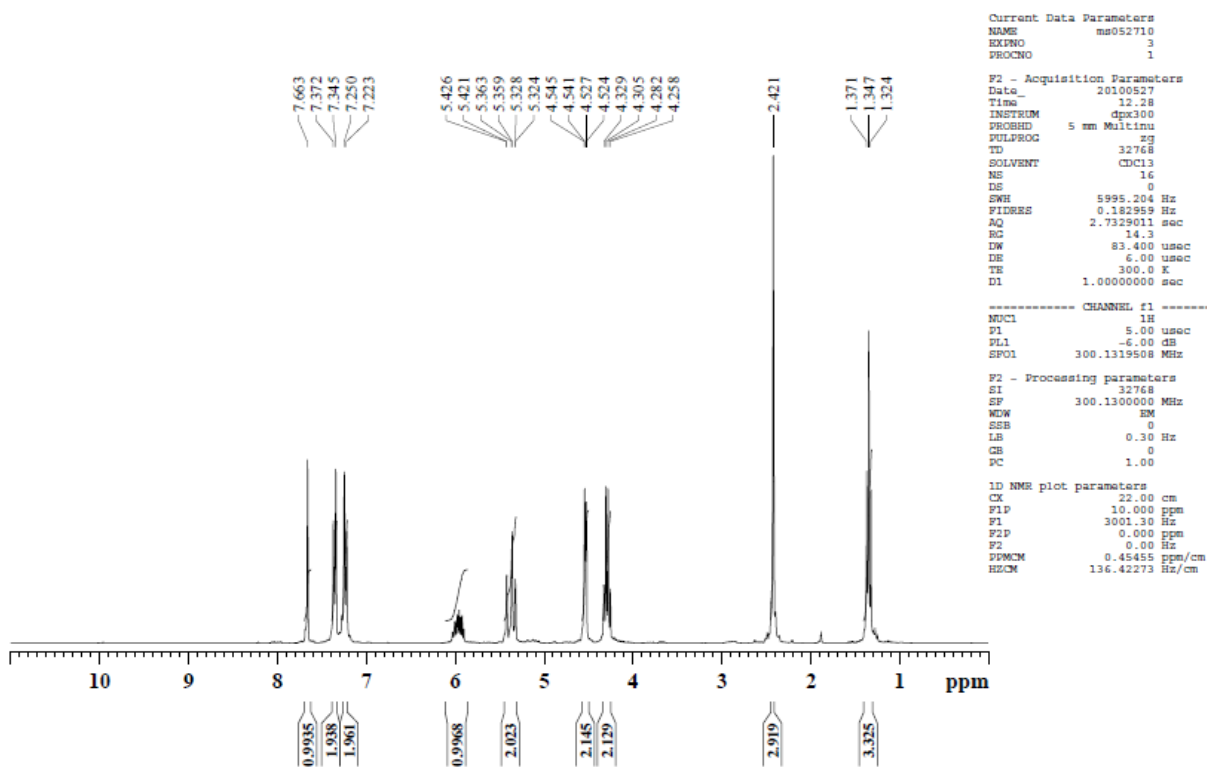
## Carbon Spectrum



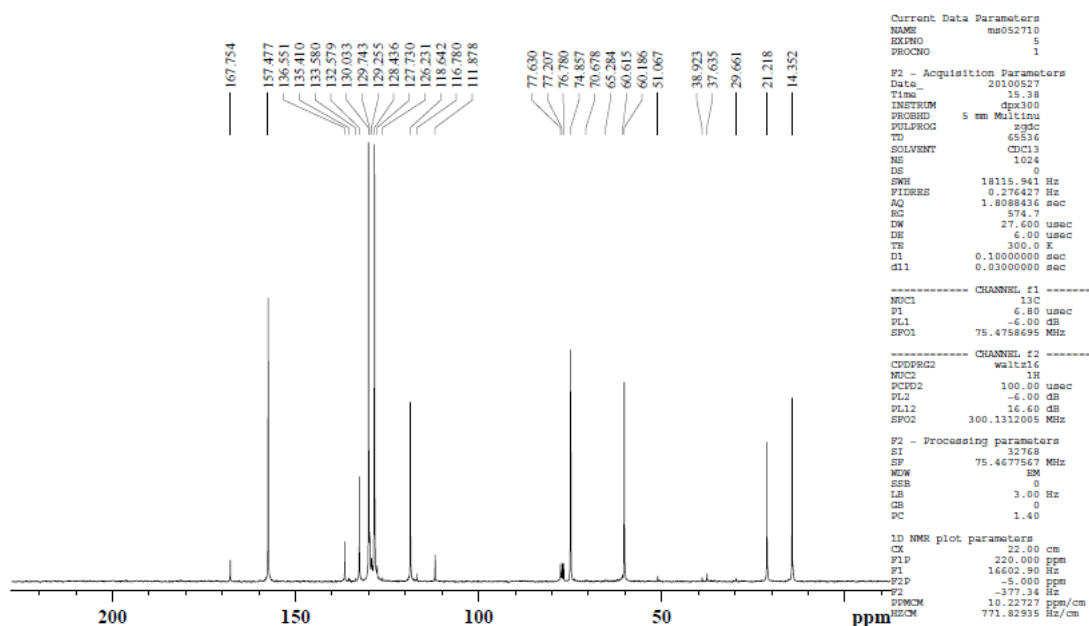


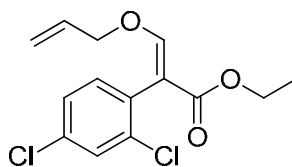
Entry 2, table 1

## Proton Spectrum



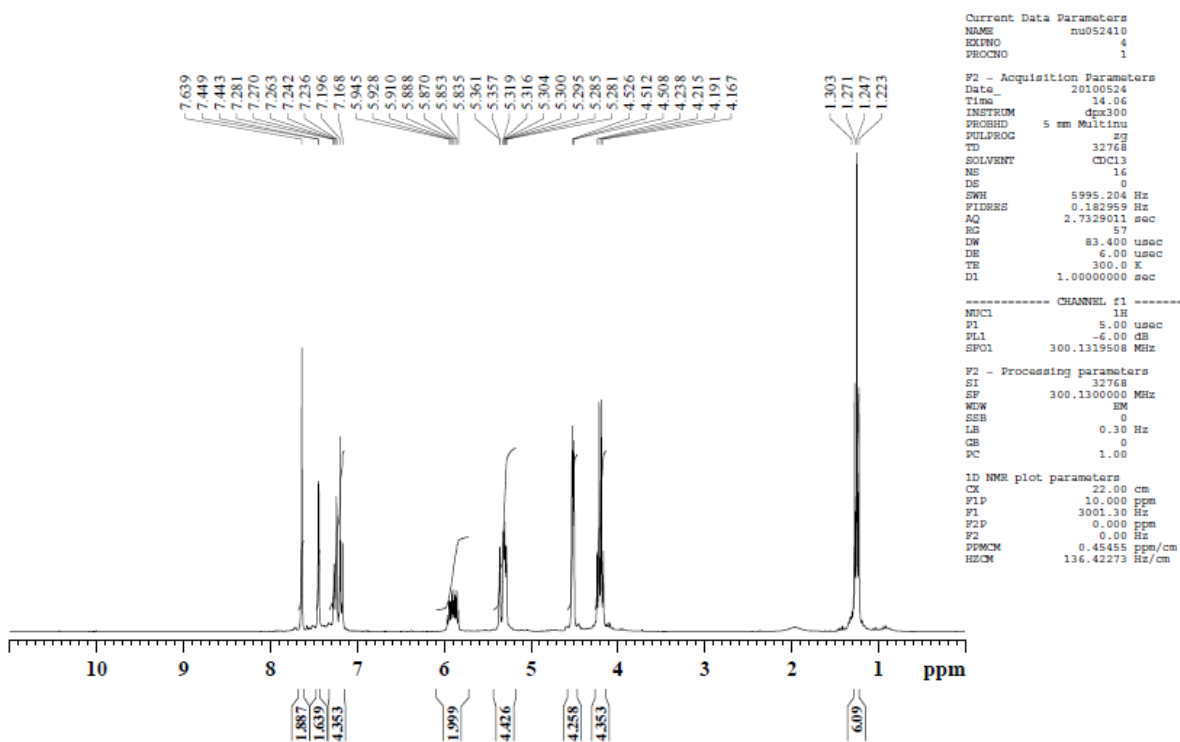
## Carbon Spectrum



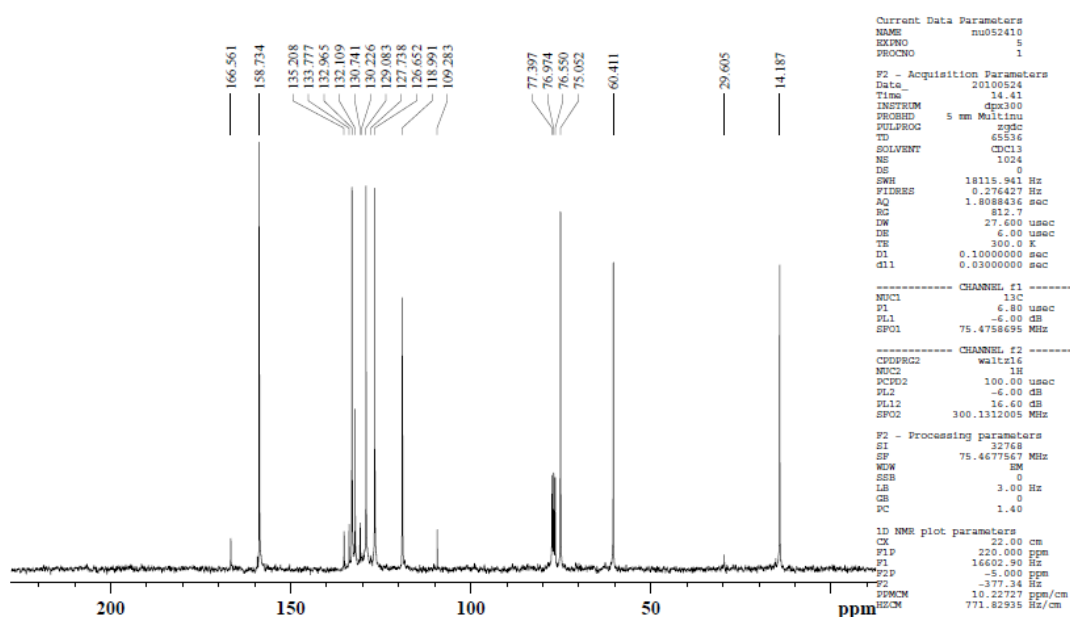


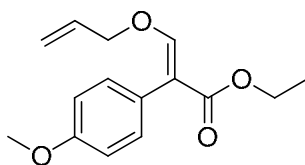
Entry 3, Table 1

## Proton Spectrum



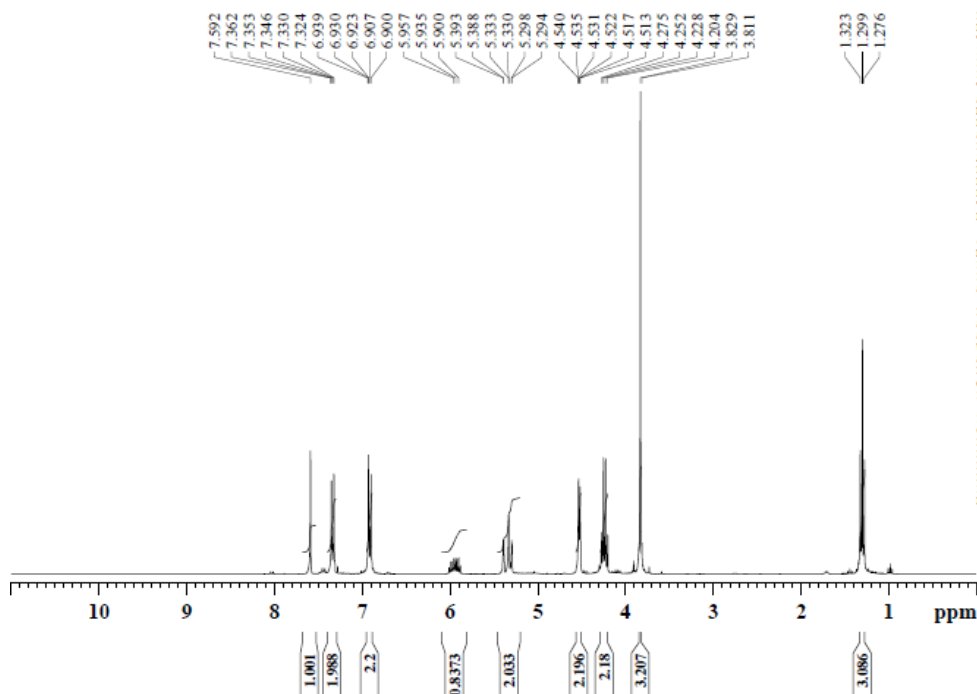
## Carbon Spectrum





Entry 4, Table 1

## Proton Spectrum



```

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EXPRO    3
PROCNO   1

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Date_    20100611
Time     15.35
INSTRUM  dpx100
PROBHD   5 mm Multinu
PULPROG  zg3
TD        32768
SOLVENT  CDCl3
NS        16
DE        0
SWH       5995.204 Hz
FIDRES   0.182959 Hz
AQ        2.7329011 sec
RG        57
WDW       83.400 usec
DE        6.00 usec
TE        300.0 K
D1        1.00000000 sec

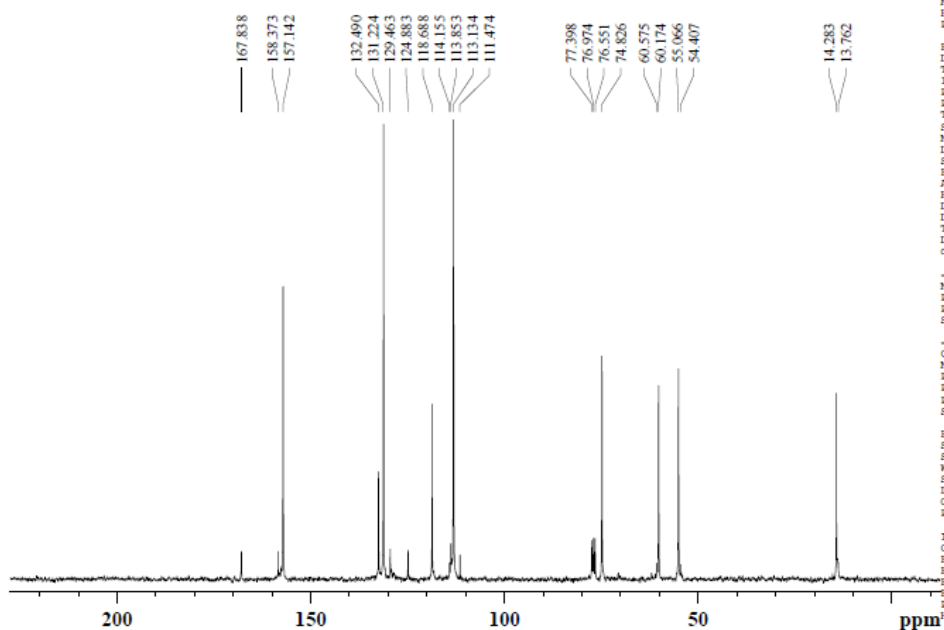
----- CHANNEL f1 -----
NUC1     1H
P1       5.00 usec
PL1     -6.00 dB
SFO1    300.1319508 MHz

F2 - Processing parameters
SI       32768
SF       300.1300000 MHz
WDW      EM
SSB      0
LB       0.30 Hz
GB       0
PC       1.00

1D NMR plot parameters
CX       22.00 cm
F1P      10.000 ppm
F1       3001.30 Hz
F2P      0.000 ppm
F2       0.00 Hz
PPMCM    0.45455 ppm/cm
HZCM     136.42273 Hz/cm

```

## Carbon Spectrum



```

Current Data Parameters
NAME      ms061110
EXPRO    4
PROCNO   1

F2 - Acquisition Parameters
Date_    20100611
Time     16.08
INSTRUM  dpx300
PROBHD   5 mm Multinu
PULPROG  zgpgc
TD        65536
SOLVENT  CDCl3
NS        1024
DE        0
SWH      18115.941 Hz
FIDRES   0.276427 Hz
AQ        1.8088436 sec
RG       512
WDW      27.600 usec
DE        6.00 usec
TE        300.0 K
D1        0.10000000 sec
d11       0.03000000 sec

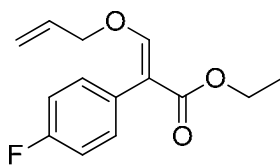
----- CHANNEL f1 -----
NUC1     13C
P1       6.80 usec
PL1     -6.00 dB
SFO1    75.4758695 MHz

----- CHANNEL f2 -----
CPDPRG2  waltz16
NUC2     1H
PCPD2    100.00 usec
PL2     -6.00 dB
PL12    16.60 dB
SFO2    300.1312005 MHz

F2 - Processing parameters
SI       32768
SF       75.4677567 MHz
WDW      EM
SSB      0
LB       3.00 Hz
GB       0
PC       1.40

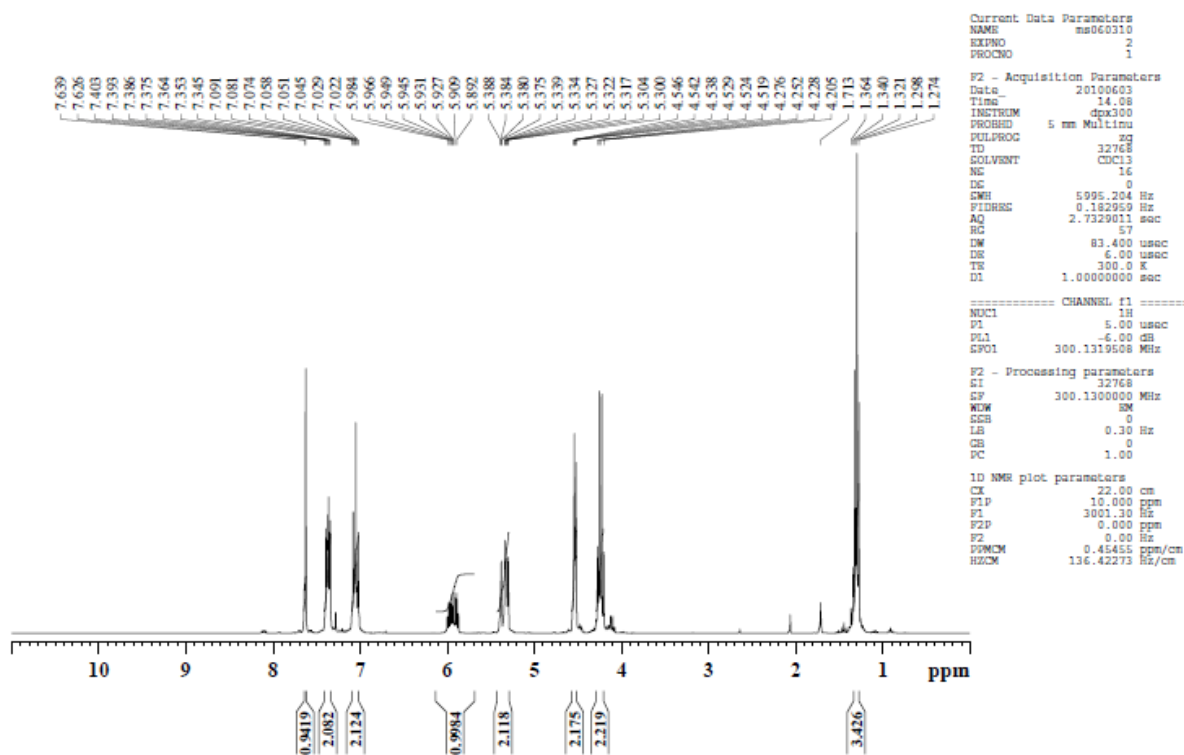
1D NMR plot parameters
CX       22.00 cm
F1P      230.000 ppm
F1       16602.90 Hz
F2P      -5.000 ppm
F2       -377.34 Hz
PPMCM    10.22727 ppm/cm
HZCM     771.82935 Hz/cm

```

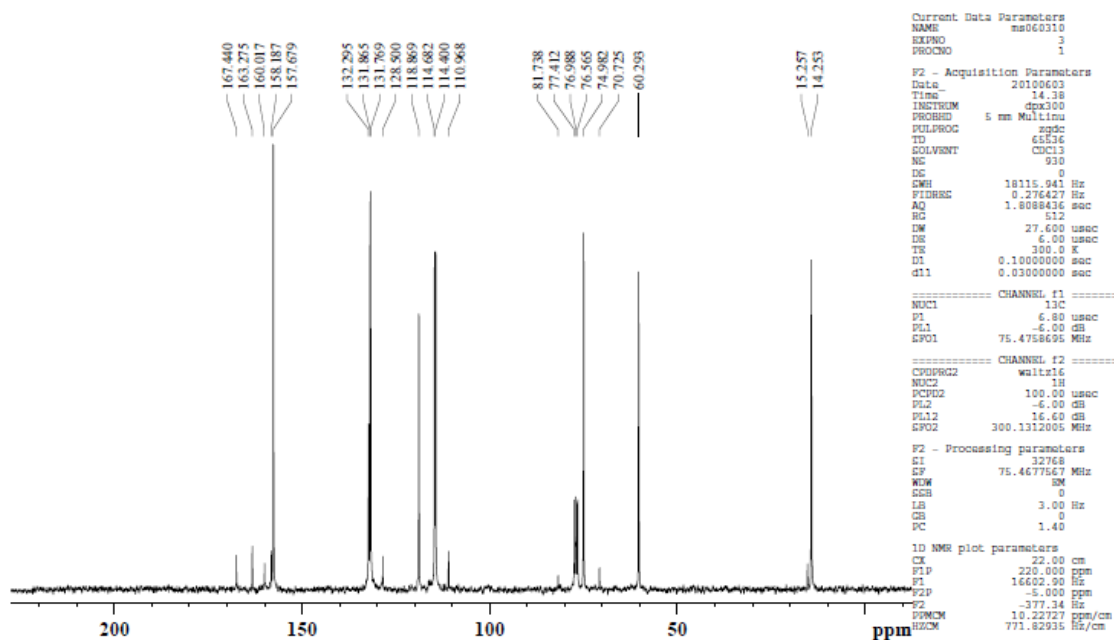


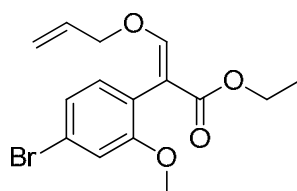
Entry 5, Table 1

## Proton Spectrum



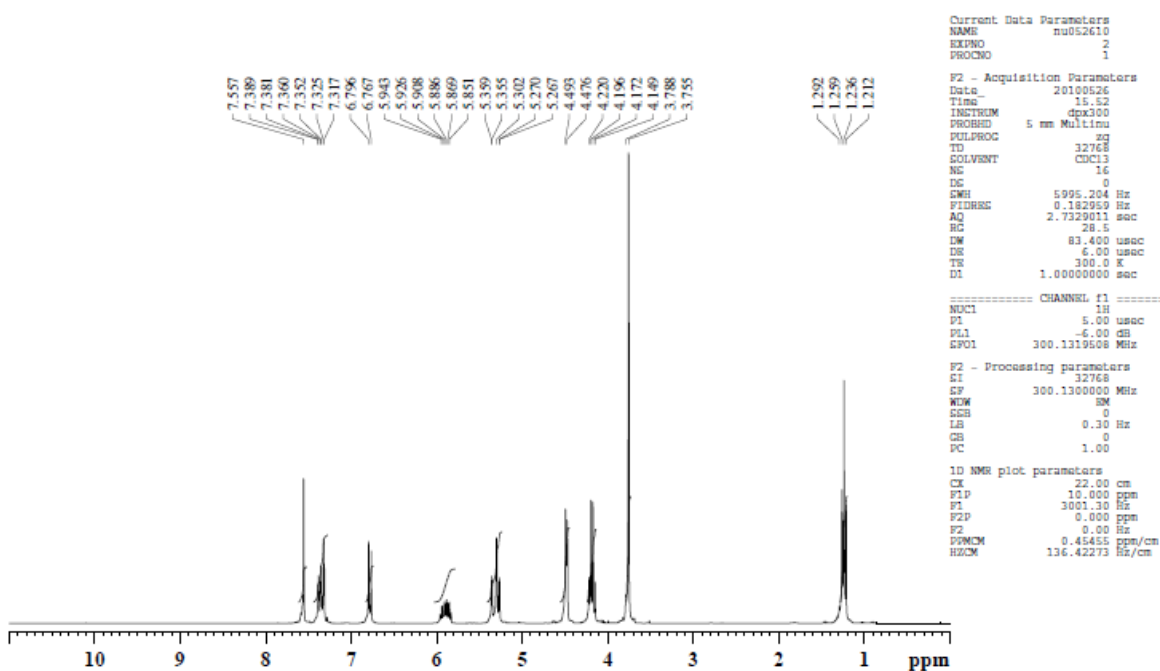
## Carbon Spectrum



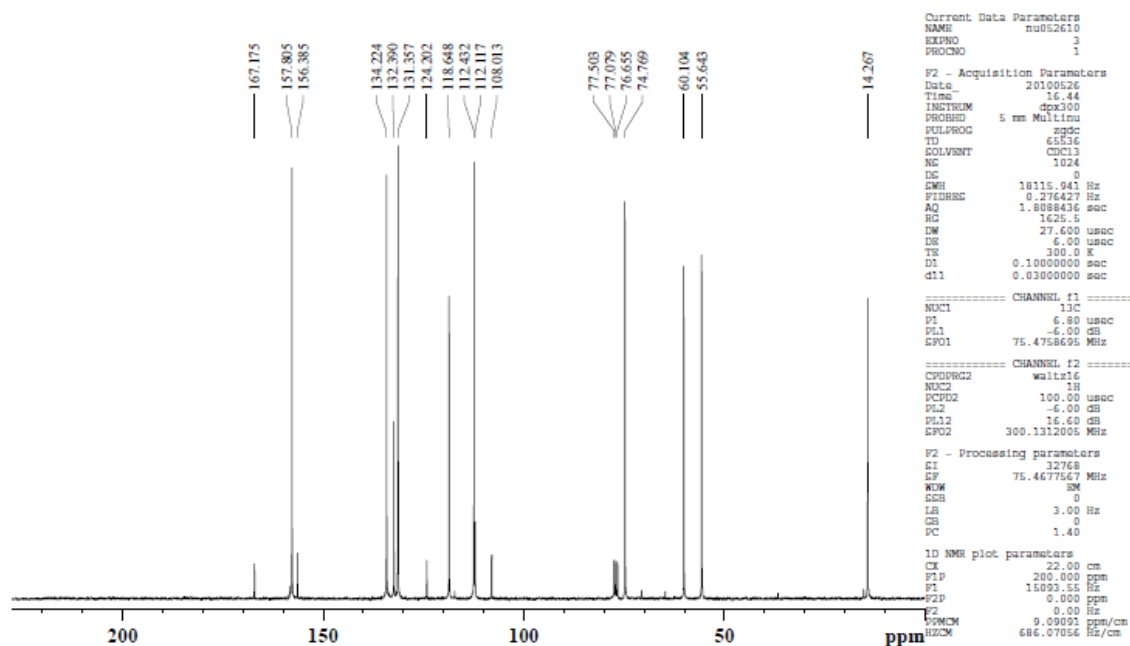


Entry 6, Table 1

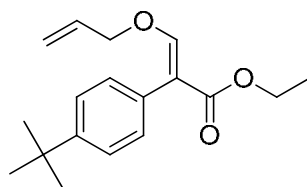
## Proton Spectrum



## Carbon Spectrum

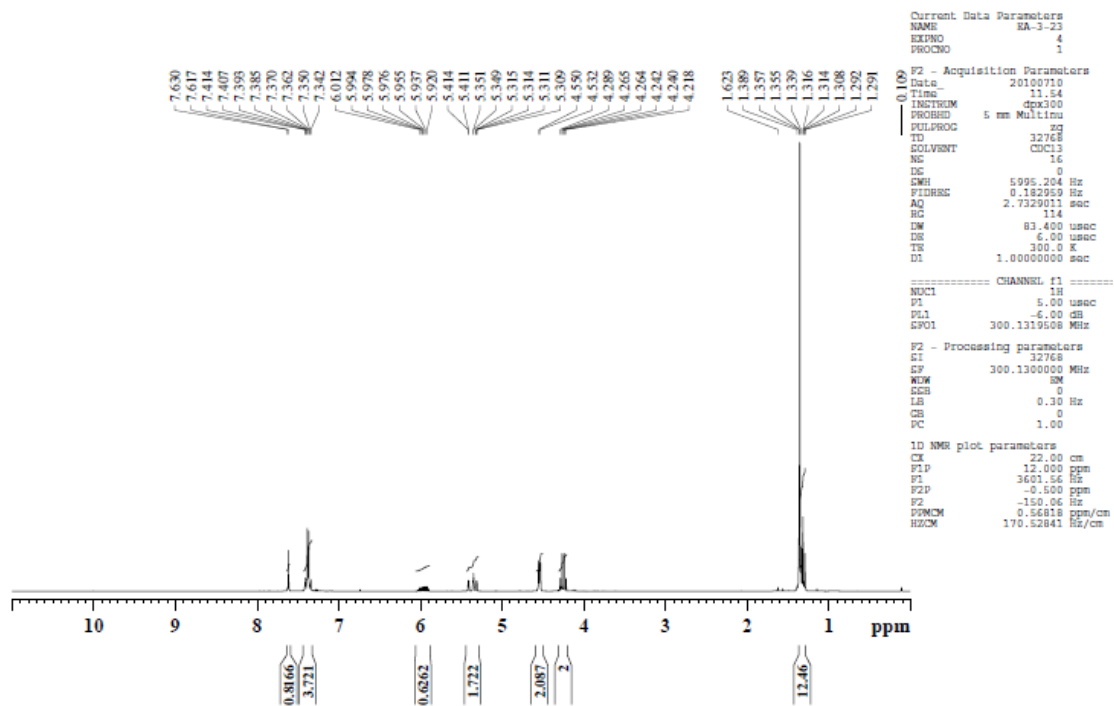




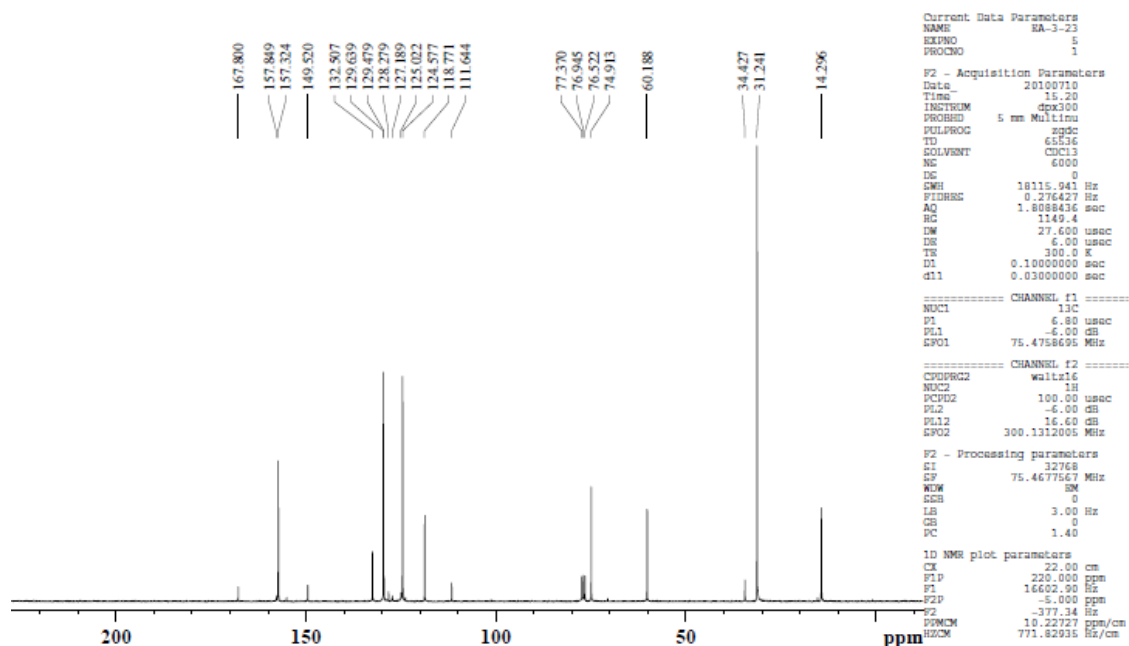


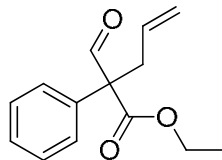
Entry 7, Table 1

## Proton Spectrum



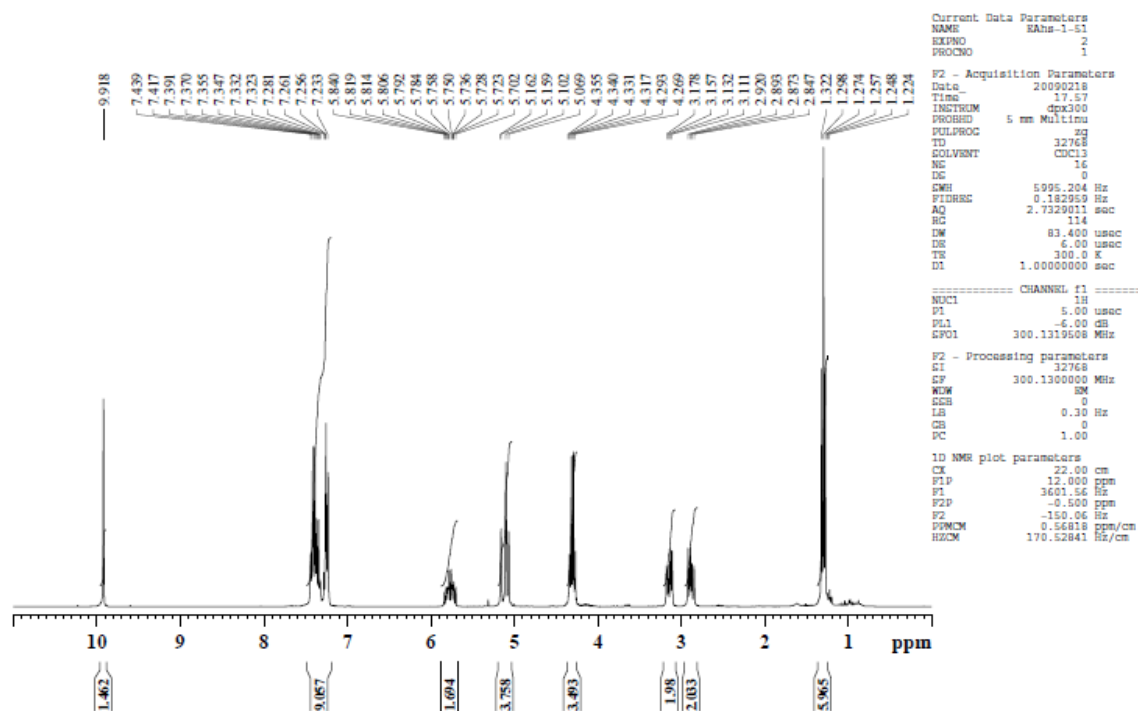
## Carbon Spectrum



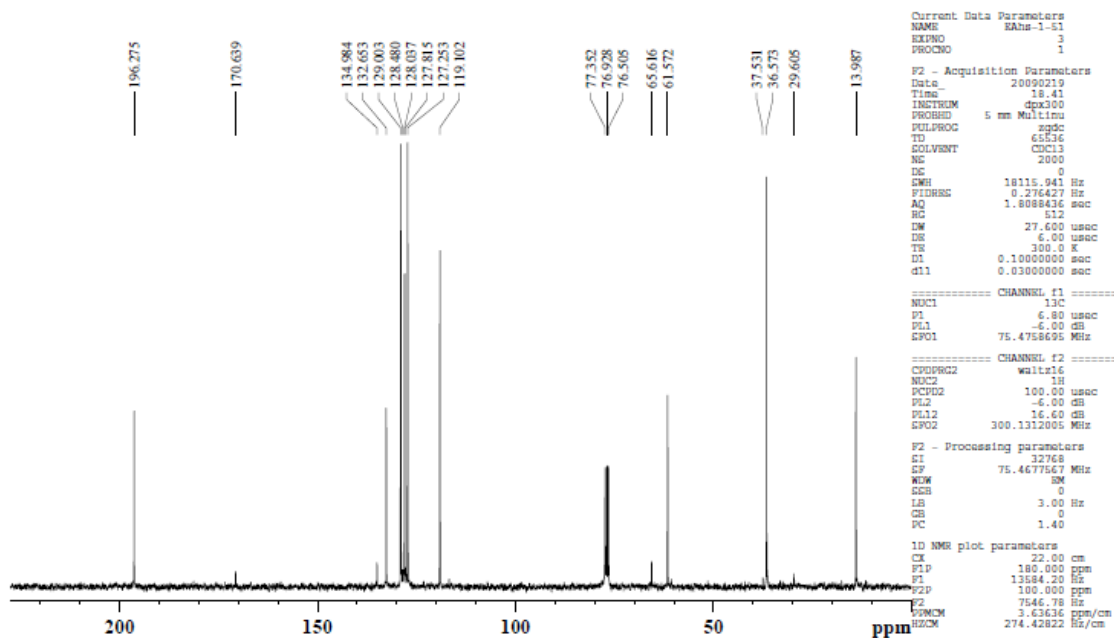


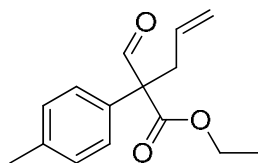
Entry 1, Table 2

## Proton Spectrum



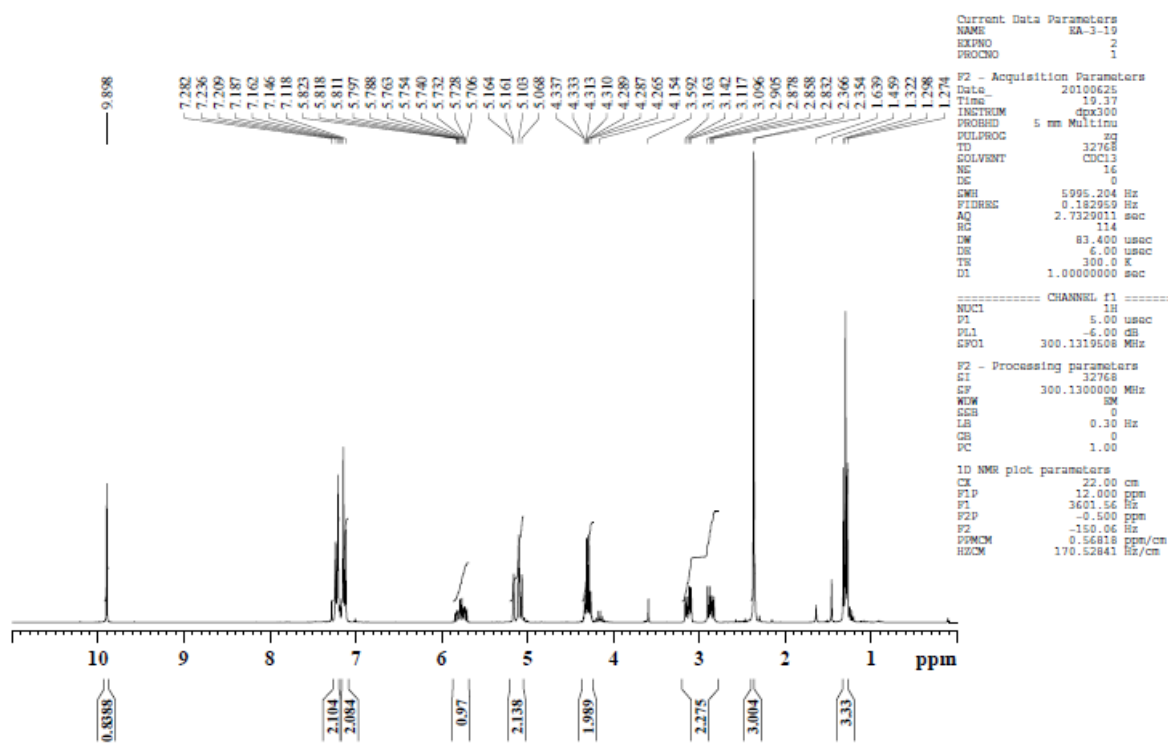
## Carbon Spectrum



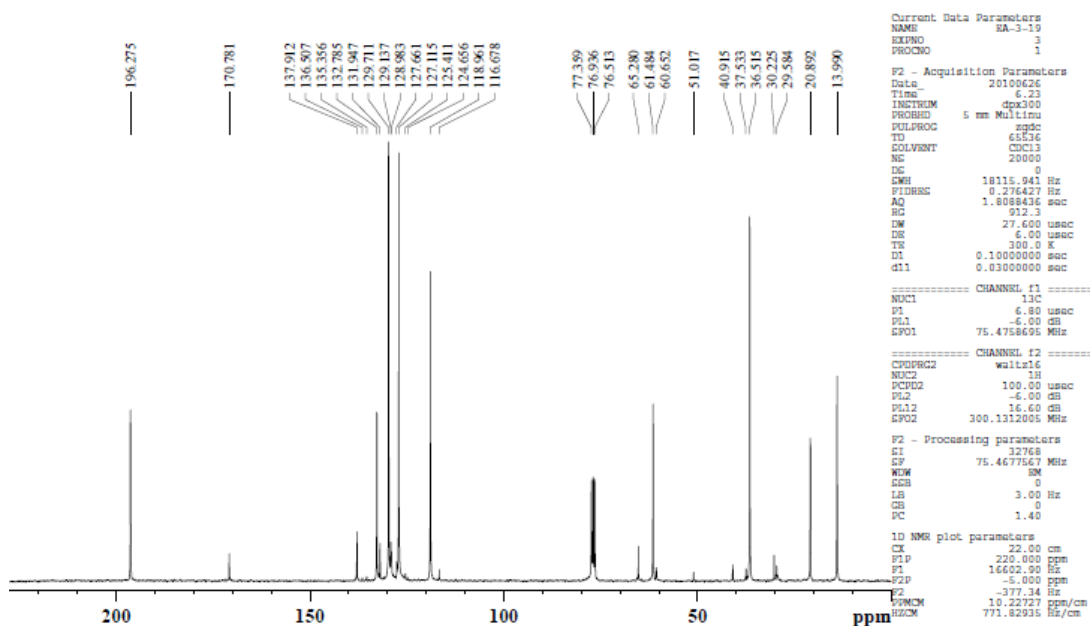


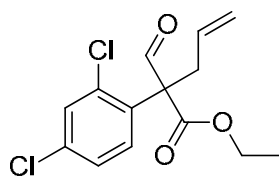
Entry 2, Table 2

## Proton Spectrum



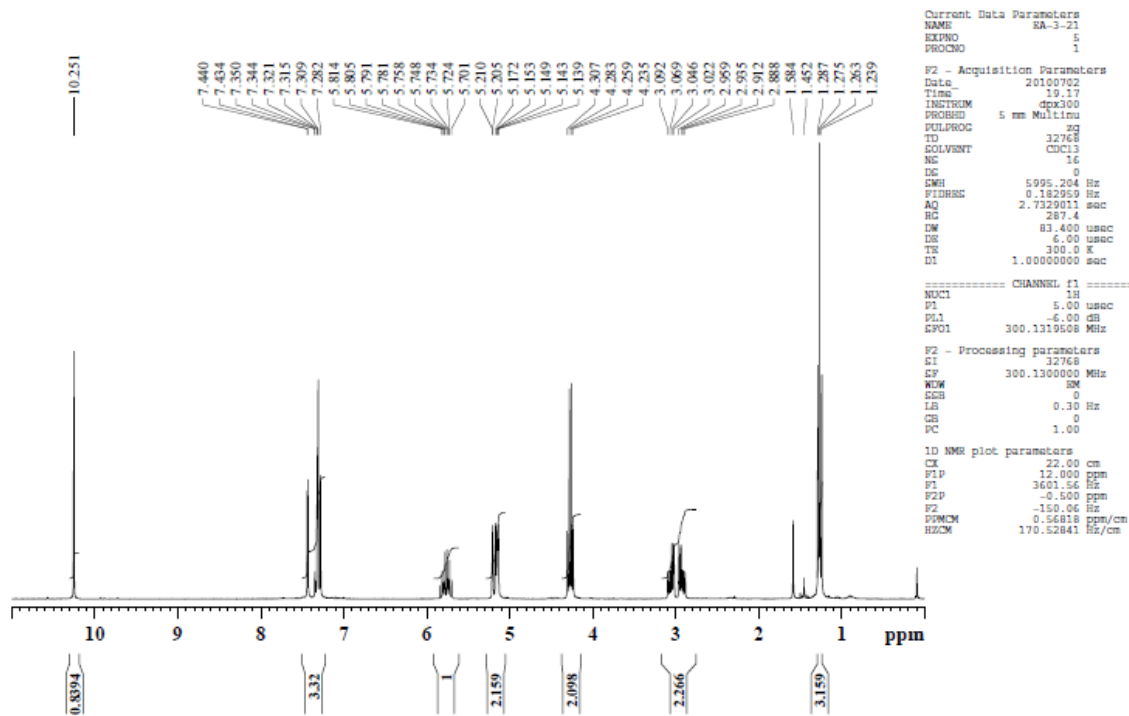
## Carbon Spectrum





Entry 3, Table 2

Proton Spectrum



```

Current Data Parameters
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PROCNO    1

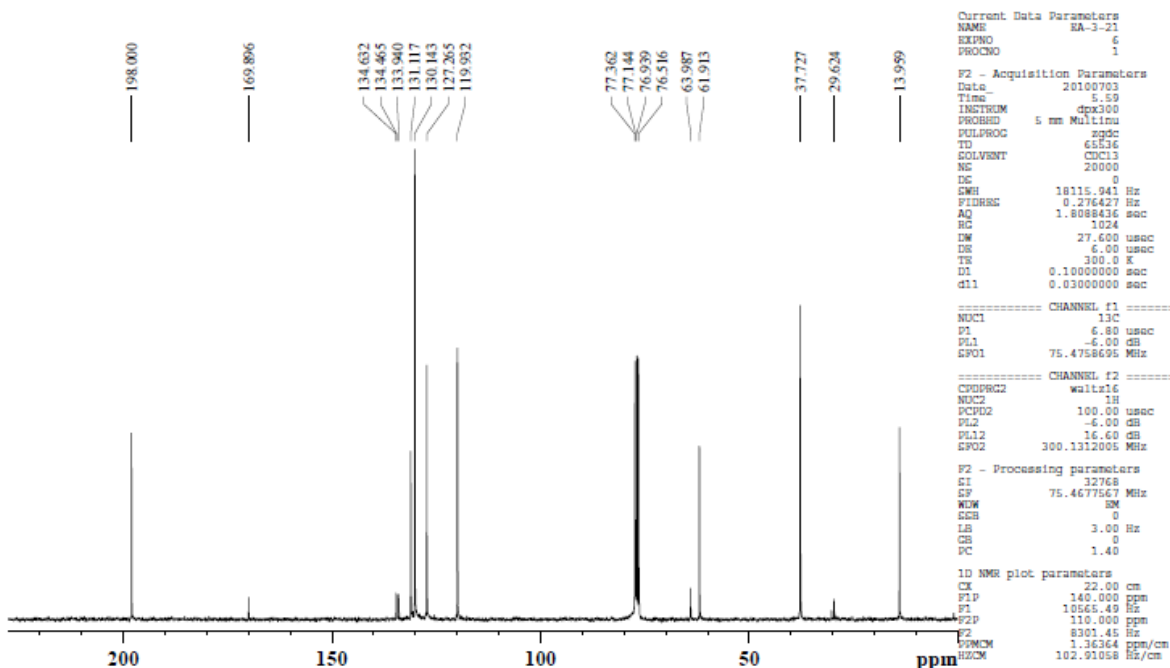
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Time      19.17
INSTRUM   dpx300
PROBHD    5 mm Multinu
PULPROG   zg
TD         32768
SOLVENT   CDCl3
NS         16
DS         0
SWH        5995.204 Hz
FIDRES     0.182959 Hz
AQ         2.7329011 sec
RG         287.4
DM         83.400 usec
DE         6.00 usec
TE         300.0 K
D1         1.00000000 sec

===== CHANNEL f1 =====
NUC1      1H
P1         5.00 usec
PL1        -6.00 dB
SFO1      300.1319508 MHz

F2 - Processing parameters
SI         32768
SF         300.1300000 MHz
WDW        RM
SSB         0
LB         0.30 Hz
GB         0
PC         1.00

1D NMR plot parameters
CX         22.00 cm
F1P        12.000 ppm
F1         3601.56 Hz
F2P        -0.500 ppm
F2         -150.06 Hz
F0MCM      0.56818 ppm/cm
HZCM       170.52841 Hz/cm
    
```

Carbon Spectrum



```

Current Data Parameters
NAME      RA-3-21
EXPNO     4
PROCNO    1

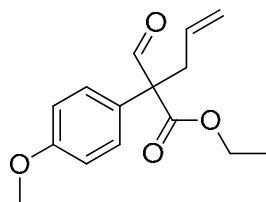
F2 - Acquisition Parameters
Date_     20100703
Time      5.59
INSTRUM   dpx300
PROBHD    5 mm Multinu
PULPROG   zgdc
TD         65536
SOLVENT   CDCl3
NS         20000
DS         0
SWH        18115.941 Hz
FIDRES     0.276427 Hz
AQ         1.8088436 sec
RG         1024
DM         27.600 usec
DE         6.00 usec
TE         300.0 K
D1         0.10000000 sec
d11        0.03000000 sec

===== CHANNEL f1 =====
NUC1      13C
P1         6.80 usec
PL1        -6.00 dB
SFO1      75.4758695 MHz

===== CHANNEL f2 =====
CPDPRG2   waltz16
NUC2      1H
PCPD2     100.00 usec
PL2        -6.00 dB
PL12       16.60 dB
SFO2      300.1312005 MHz

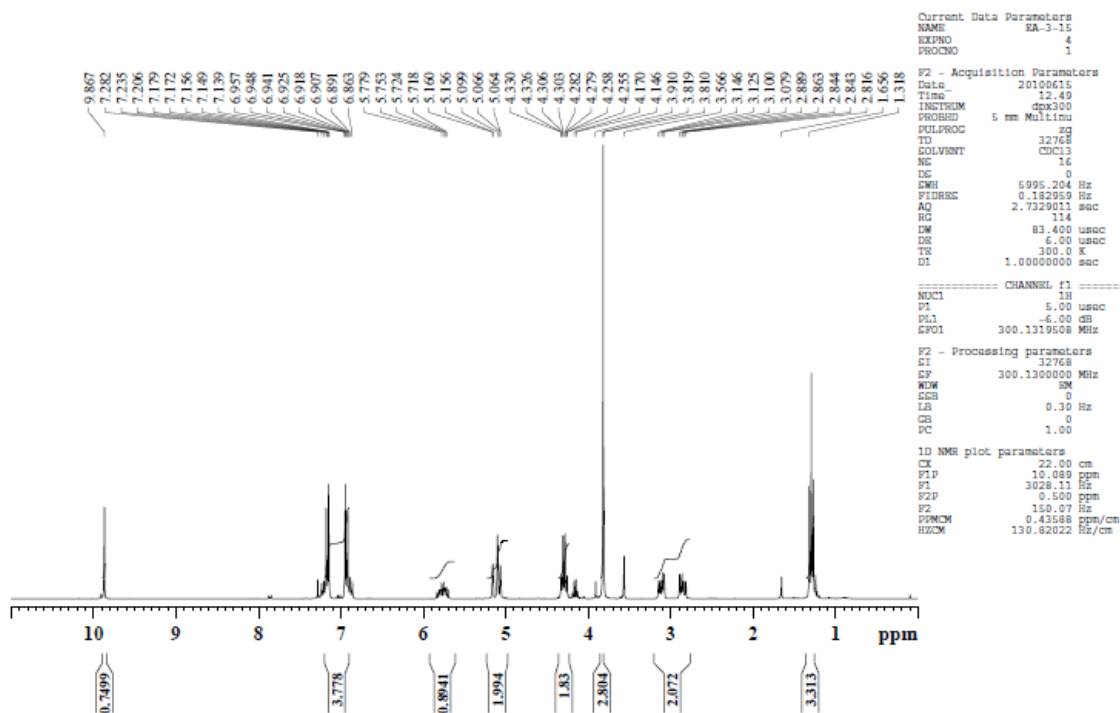
F2 - Processing parameters
SI         32768
SF         75.4677567 MHz
WDW        RM
SSB         0
LB         3.00 Hz
GB         0
PC         1.40

1D NMR plot parameters
CX         22.00 cm
F1P        140.000 ppm
F1         10565.49 Hz
F2P        110.000 ppm
F2         8301.45 Hz
F0MCM      1.36364 ppm/cm
HZCM       102.91058 Hz/cm
    
```

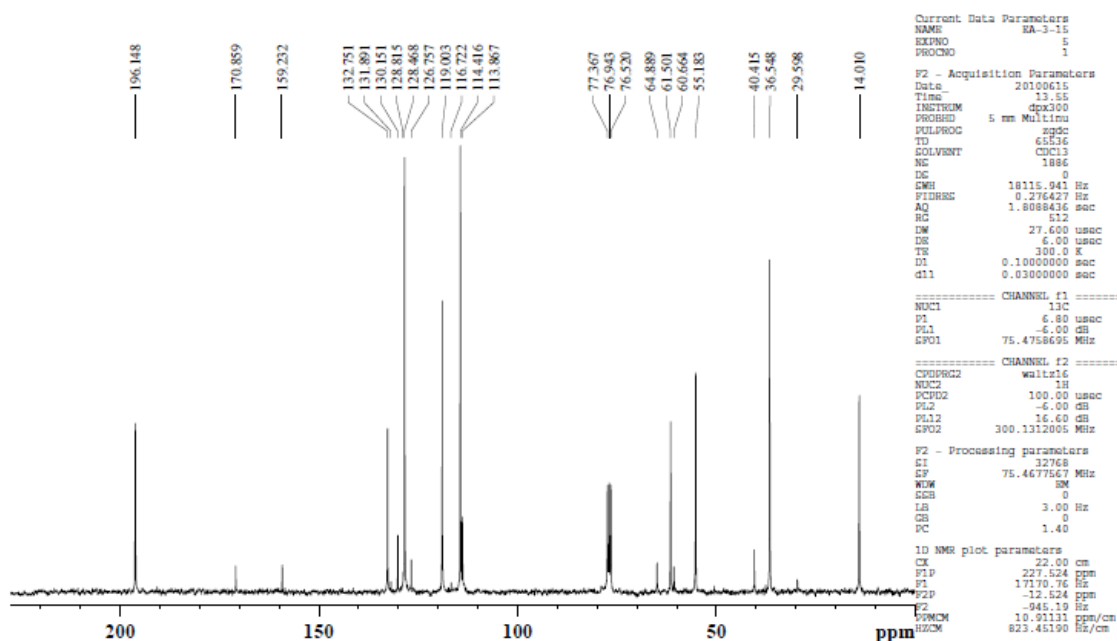


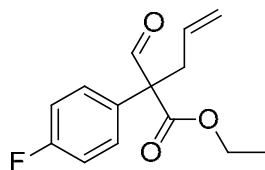
Entry 4, Table 2

## Proton Spectrum



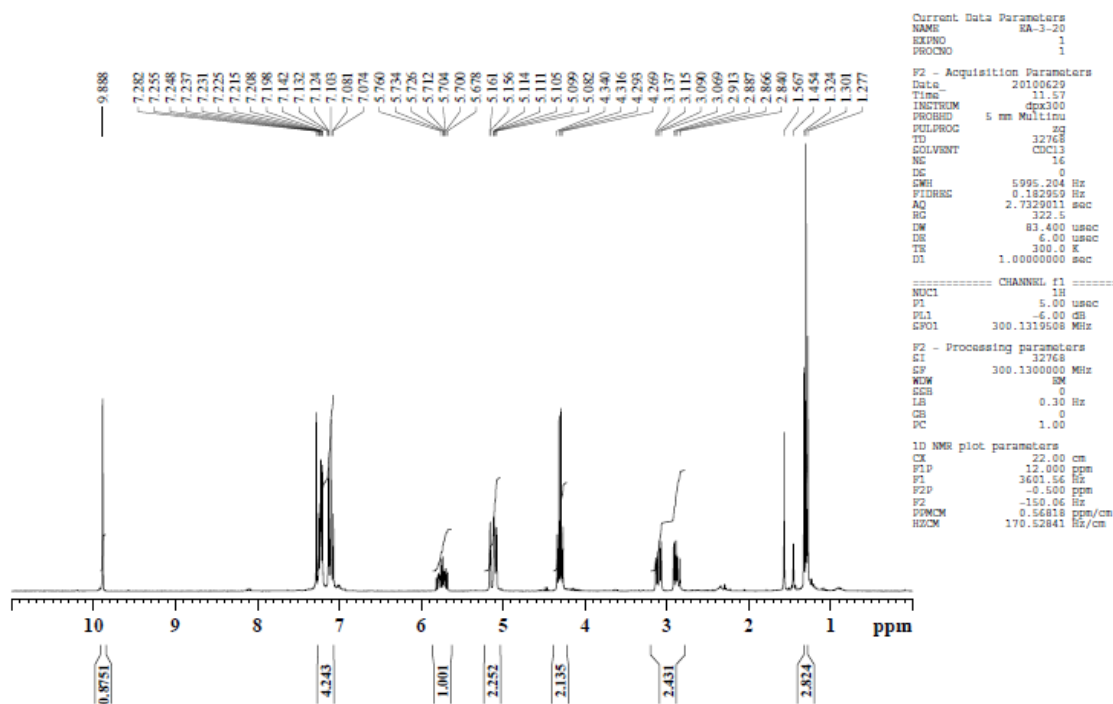
## Carbon Spectrum



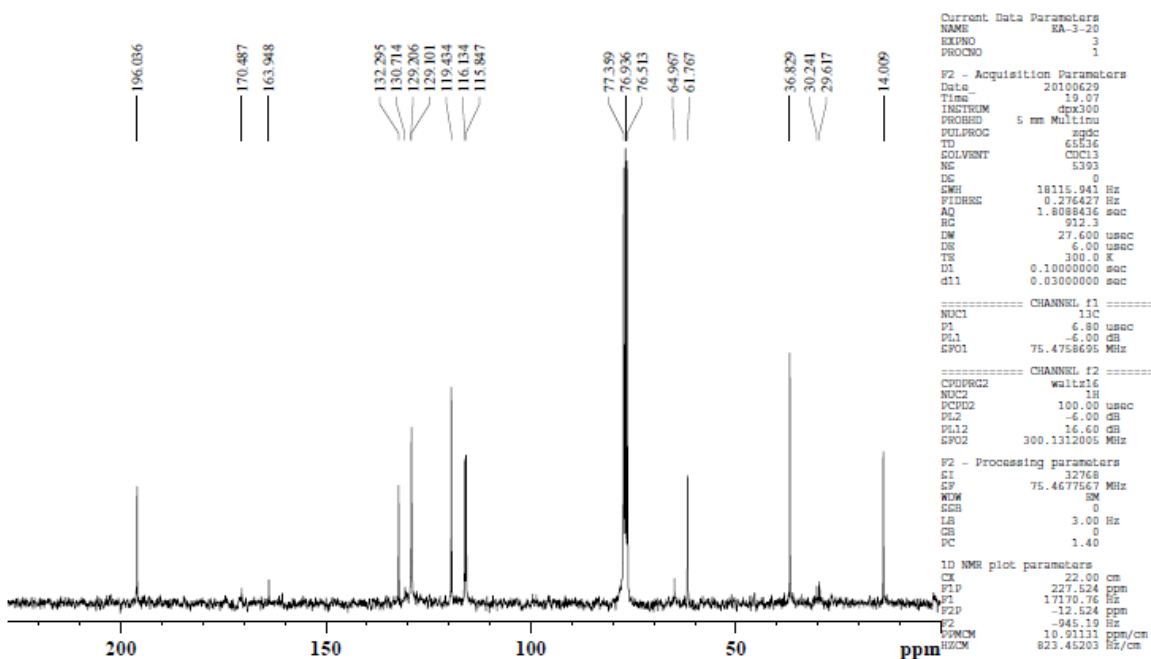


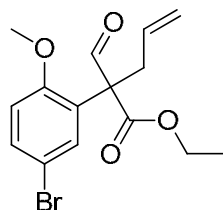
Entry 5, Table 2

## Proton Spectrum



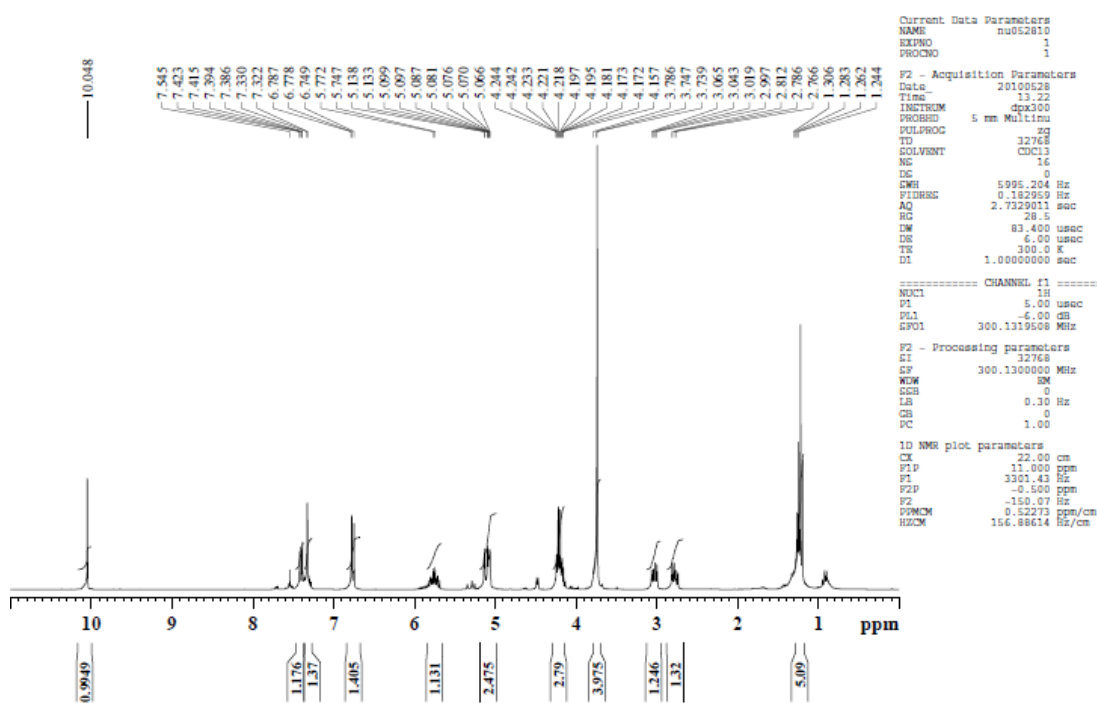
## Carbon Spectrum



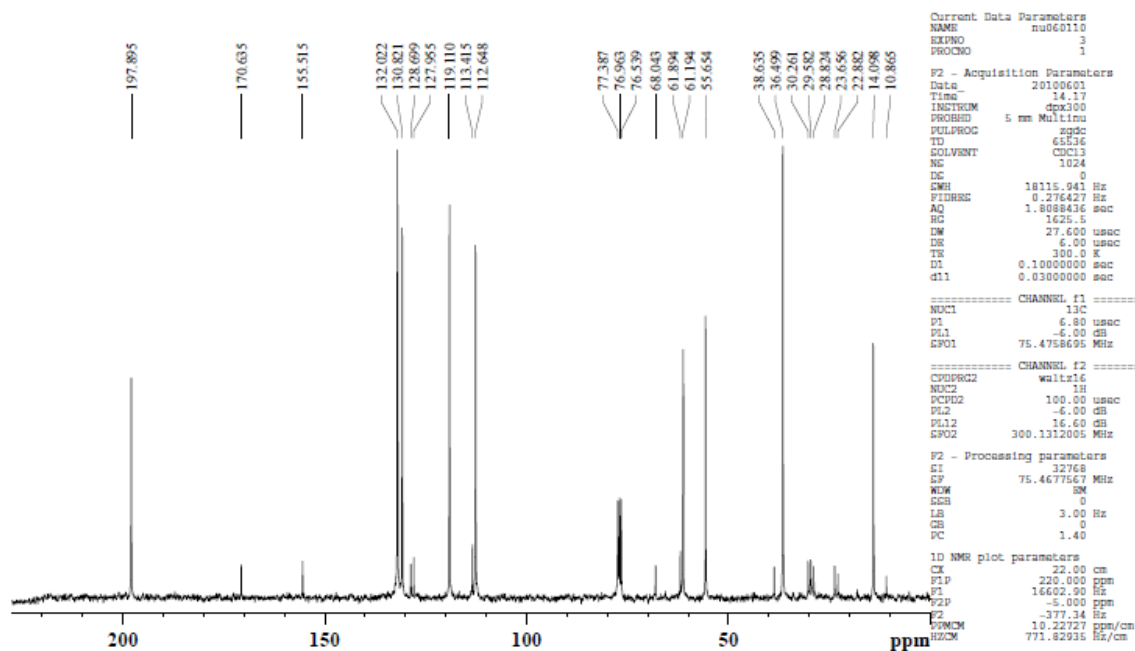


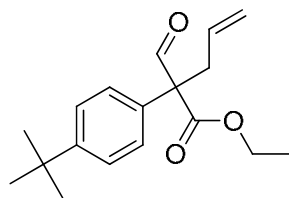
Entry 6, Table 2

## Proton Spectrum



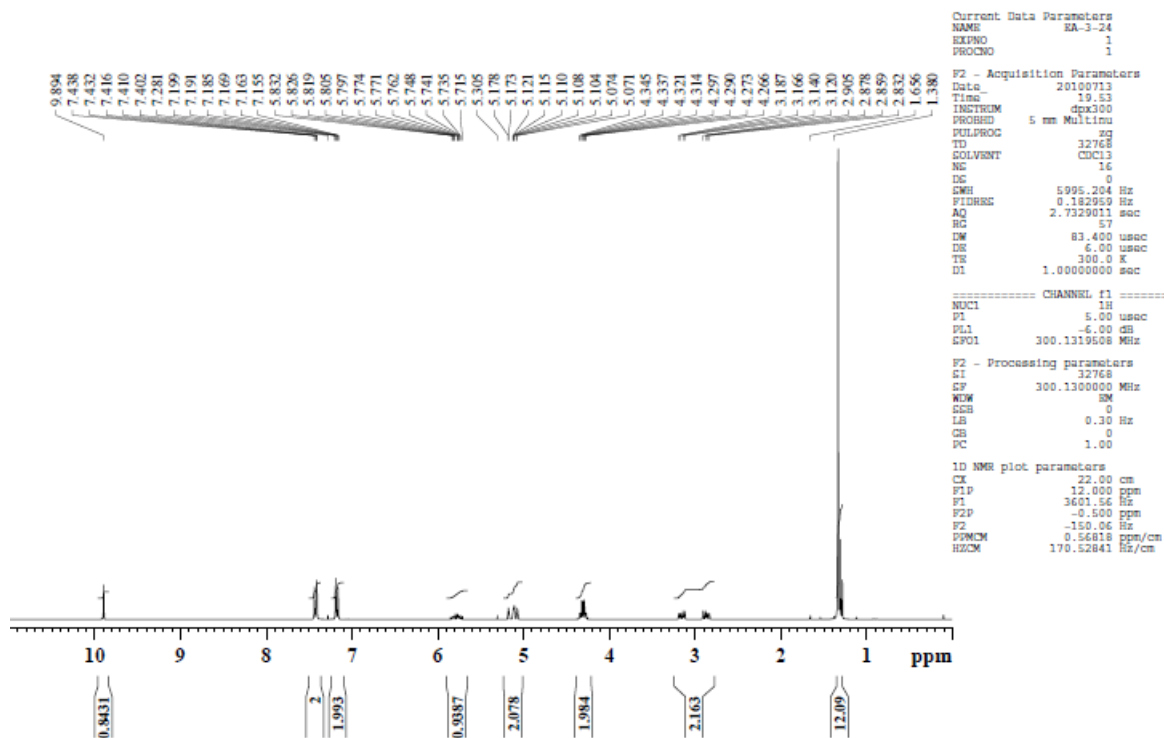
## Carbon Spectrum





Entry 7, table 2

## Proton Spectrum



## Carbon Spectrum

