

## Supplementary Material

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

Eduardo Alberch, Nazim Uddin, Maria Shevyrev, and M. Mahmum Hossain

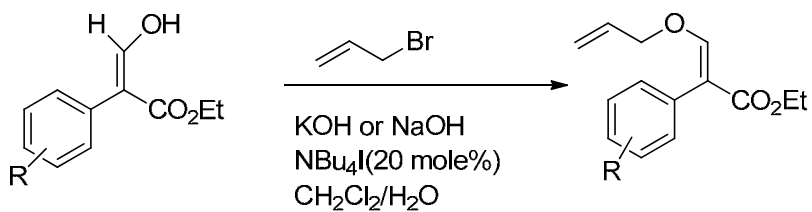
*Department of Chemistry and Biochemistry, University of Wisconsin-Milwaukee, 3210 N.*

*Cramer St, Milwaukee, WI 53211*

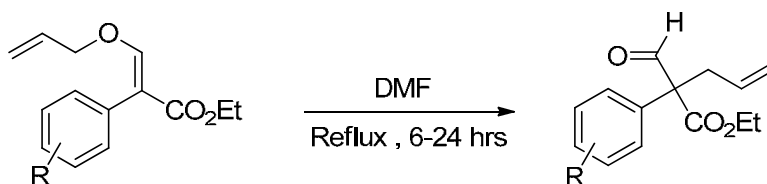
*E-mail: [mahmun@uwm.edu](mailto:mahmun@uwm.edu)*

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

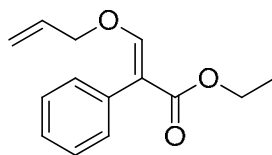


**Scheme S2.** Claisen rearrangement.

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

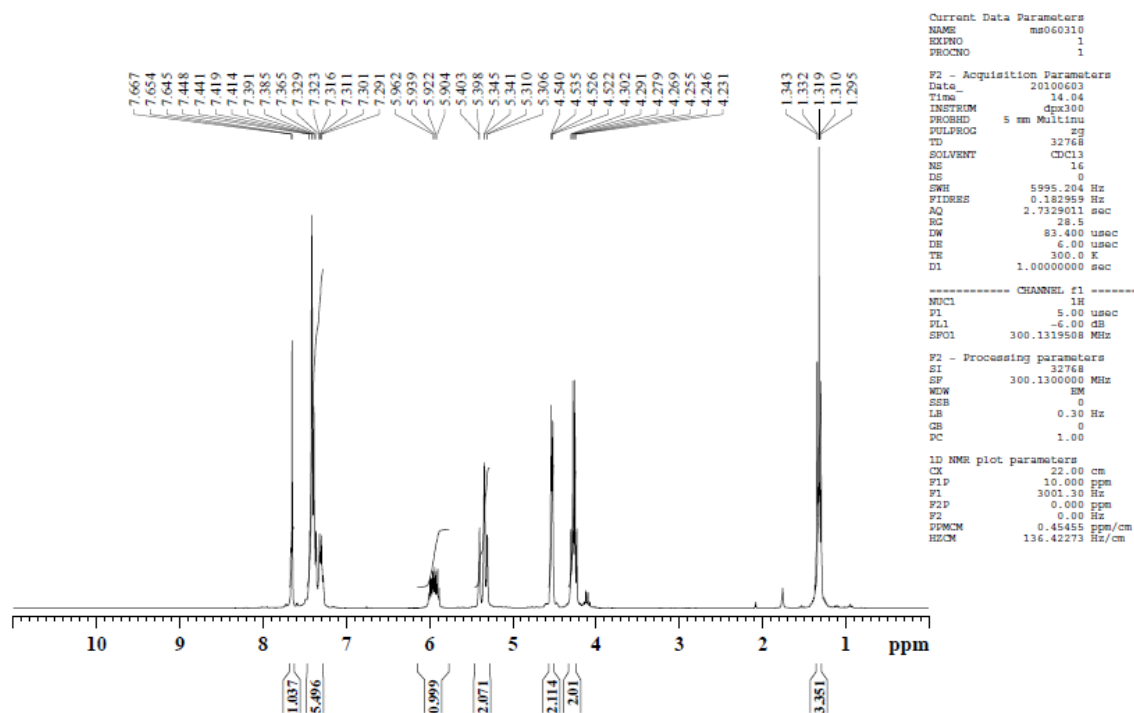
Products from Table 1: S2-S16

Products from Table 4: S17-S31

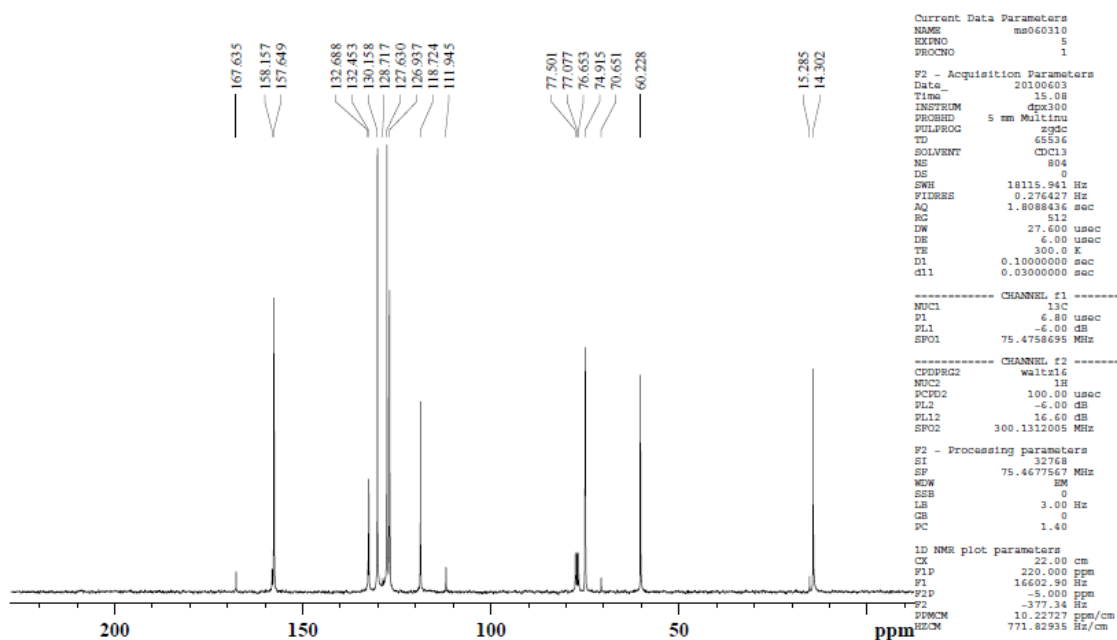


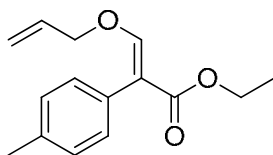
Entry 1, Table 1

## Proton Spectrum



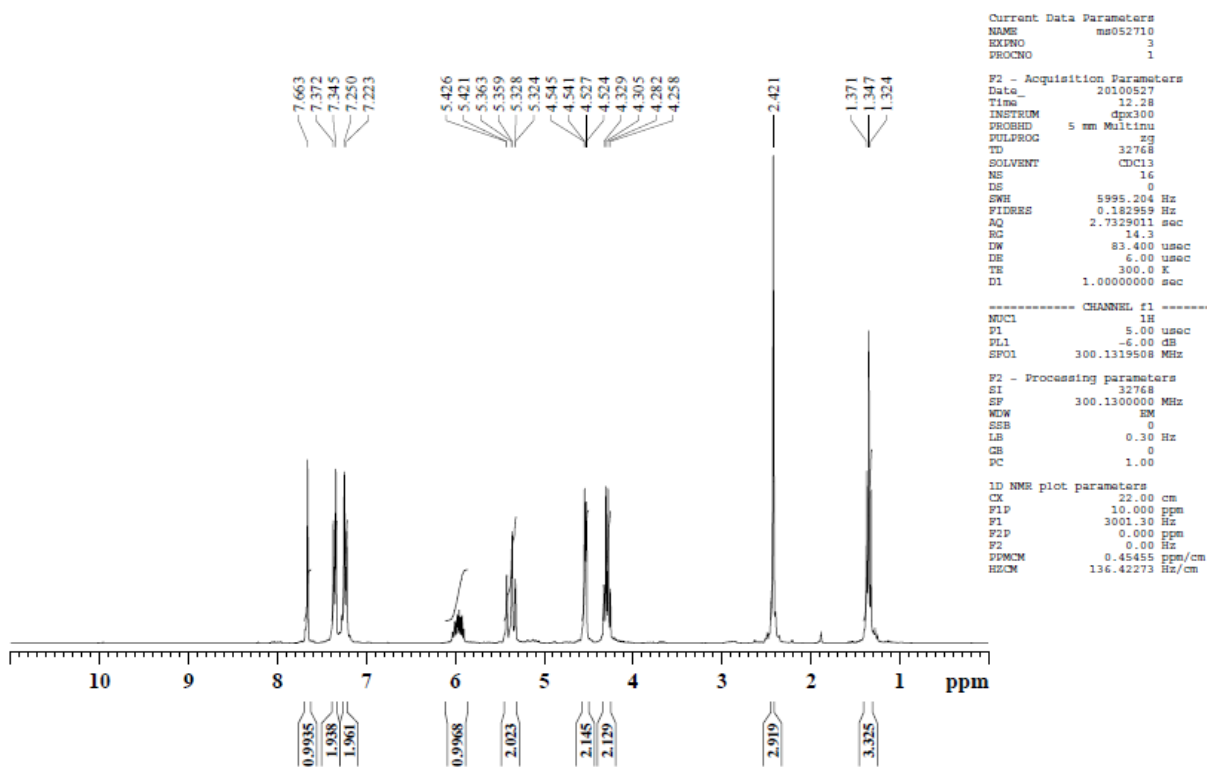
## Carbon Spectrum



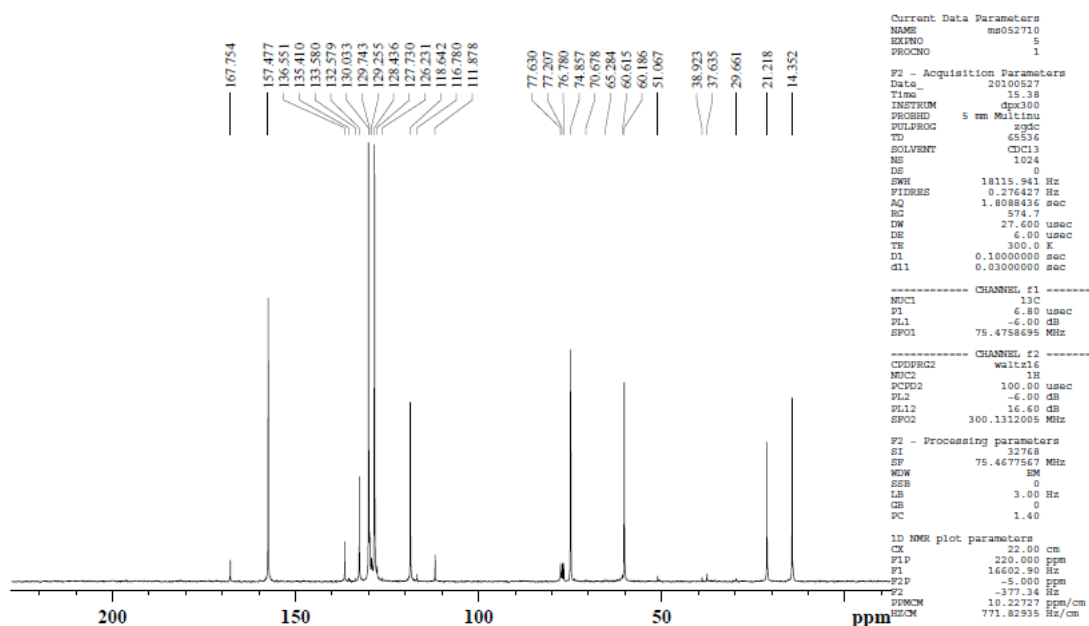


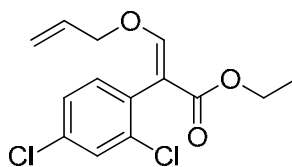
Entry 2, table 1

## Proton Spectrum



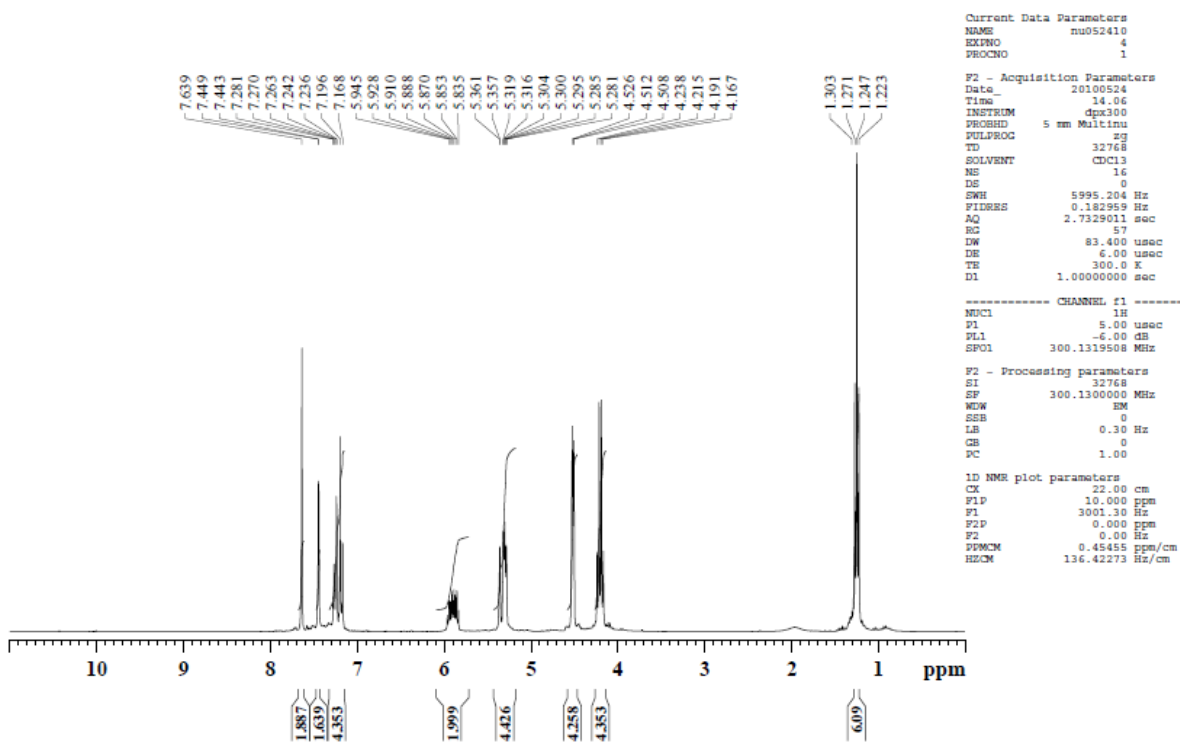
## Carbon Spectrum



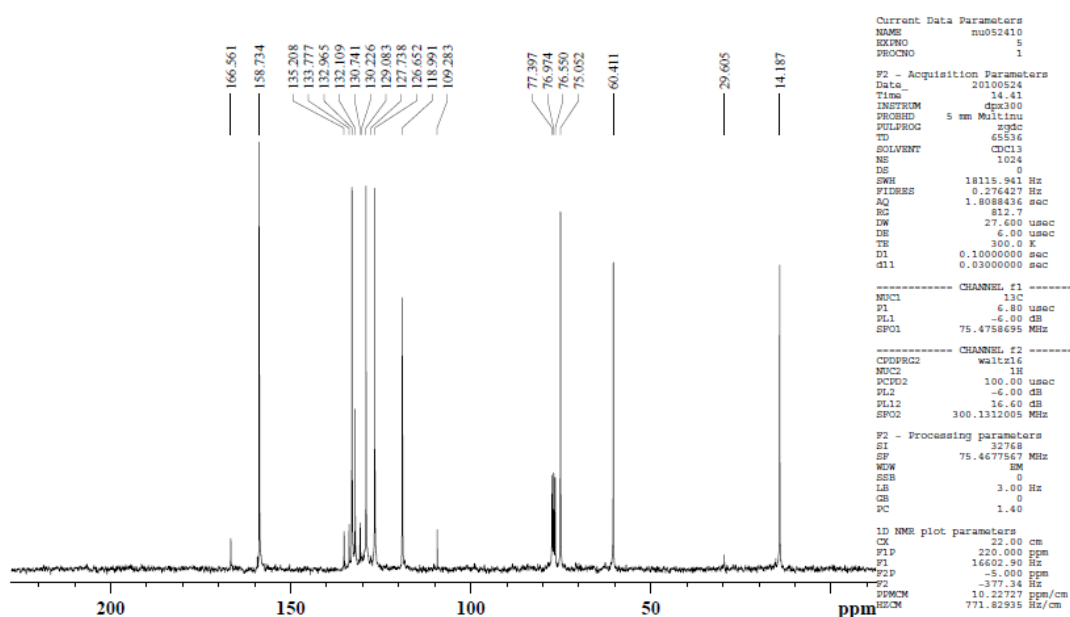


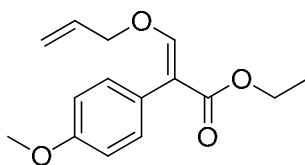
Entry 3, Table 1

## Proton Spectrum



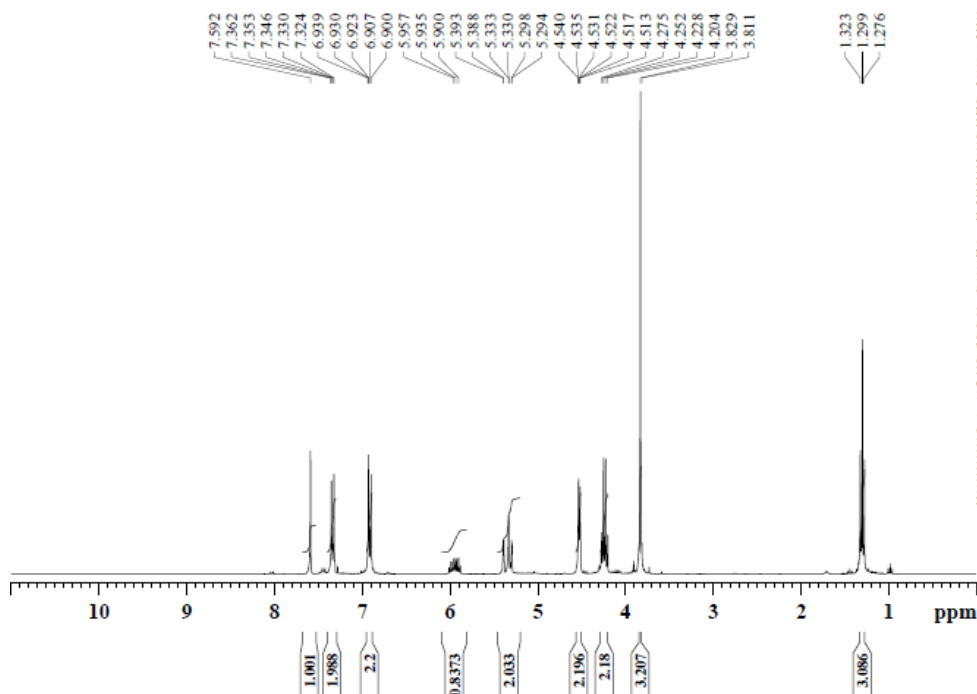
## Carbon Spectrum





Entry 4, Table 1

## Proton Spectrum



```

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EXPRO    3
PROCNO   1

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Time     15.35
INSTRUM  dpx100
PROBHD   5 mm Multinu
PULPROG  zg3
TD       32768
SOLVENT  CDCl3
NS       16
DS       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

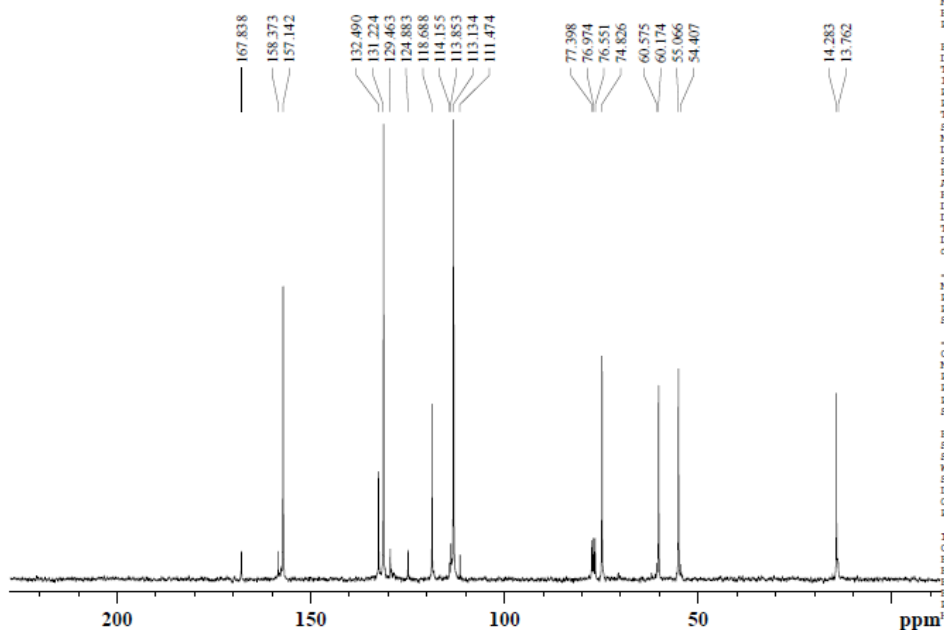
----- CHANNEL f1 -----
NUC1     1H
P1       5.00 usec
PL1     -6.00 dB
SFO1    300.1319508 MHz

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
DS       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

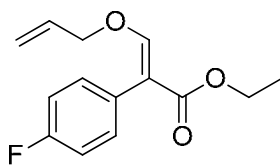
----- CHANNEL f1 -----
NUC1     13C
P1       6.80 usec
PL1     -6.00 dB
SFO1    75.4758695 MHz

----- 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

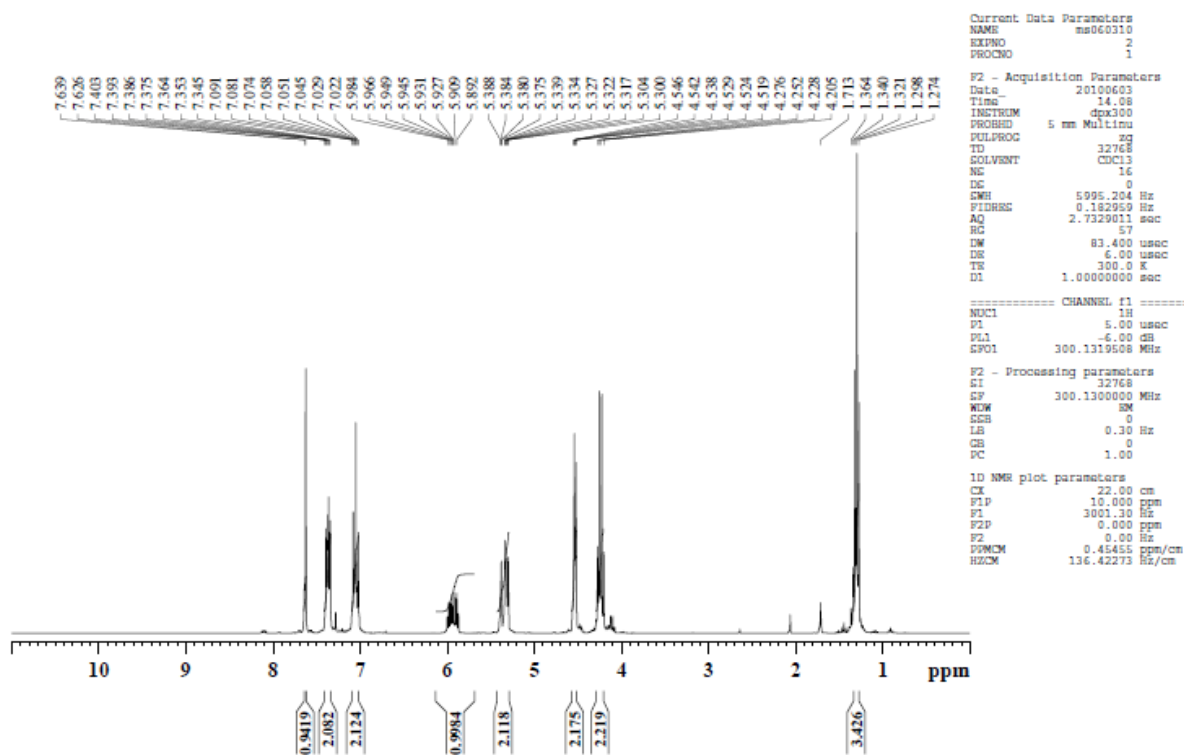
1D NMR plot parameters
CX       22.00 cm
F1P     230.000 ppm
F1      16602.90 Hz
F2P     -5.000 ppm
F2      -377.34 Hz
PPMCM   10.22727 ppm/cm
HZCM    771.82935 Hz/cm

```

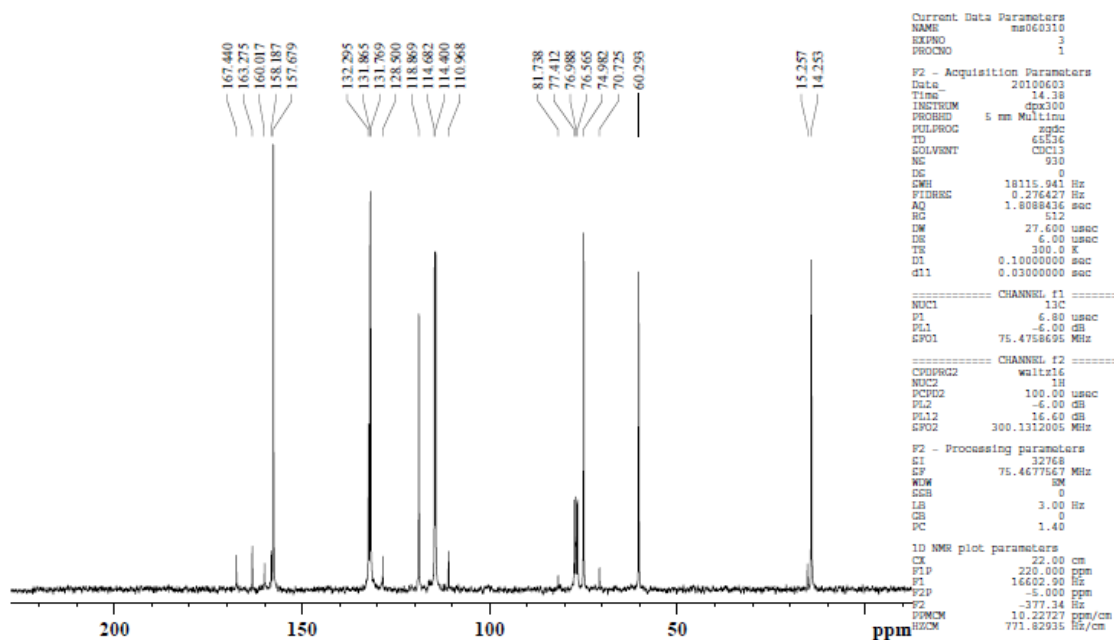


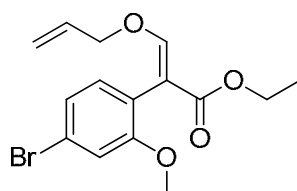
Entry 5, Table 1

## Proton Spectrum



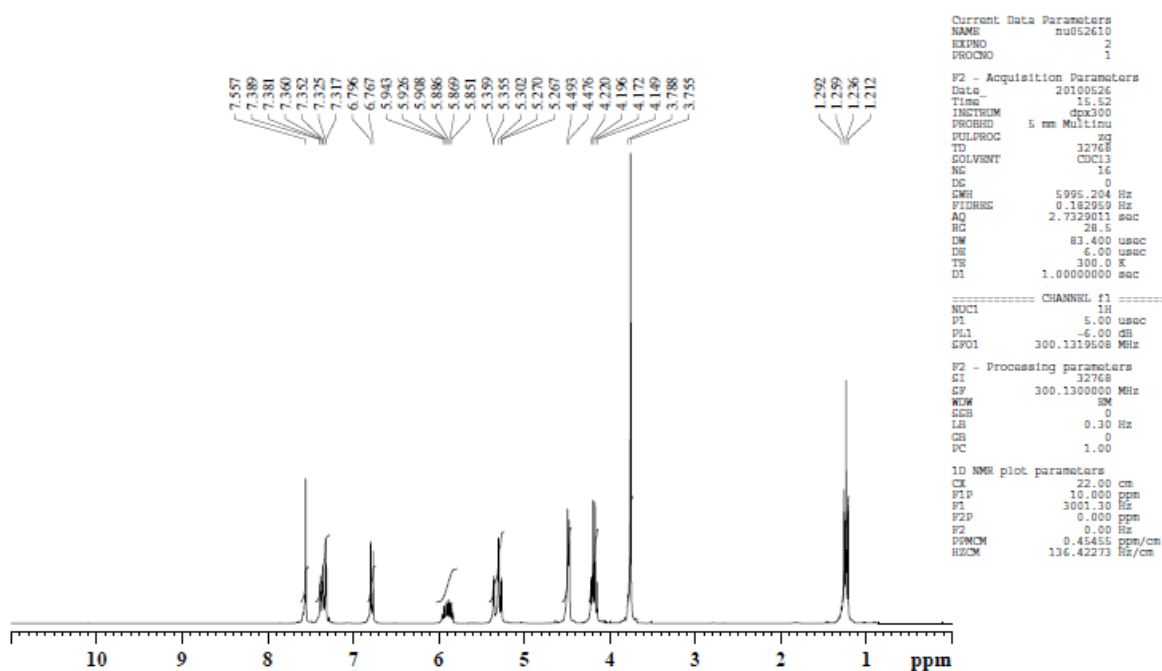
## Carbon Spectrum



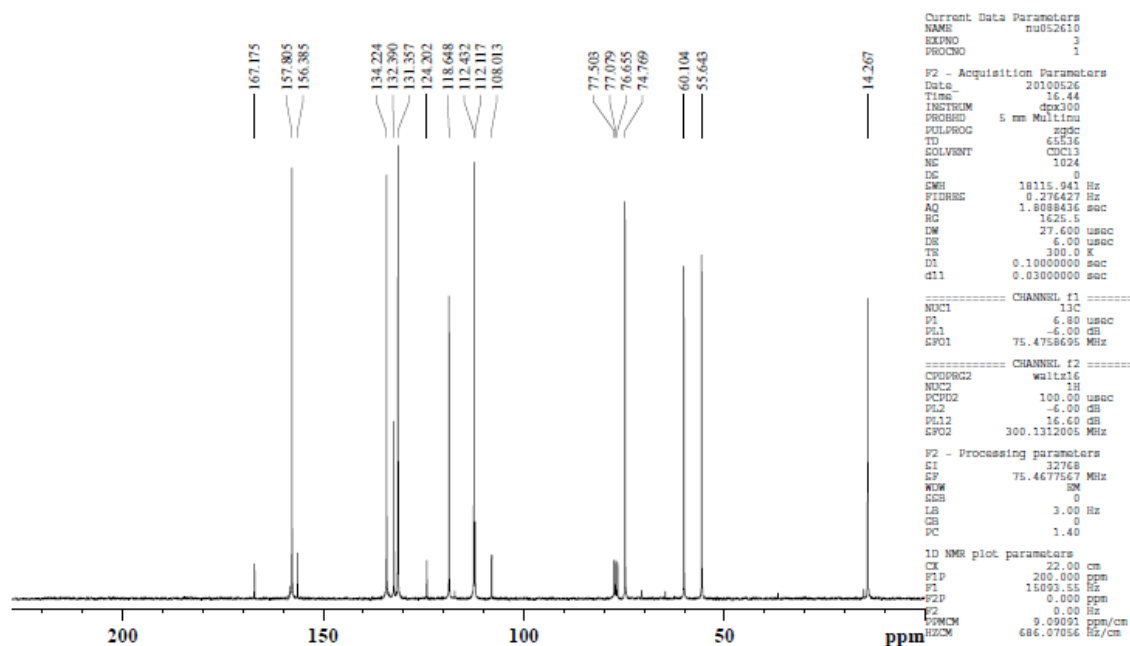


Entry 6, Table 1

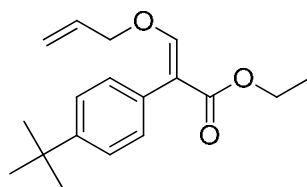
## Proton Spectrum



## Carbon Spectrum

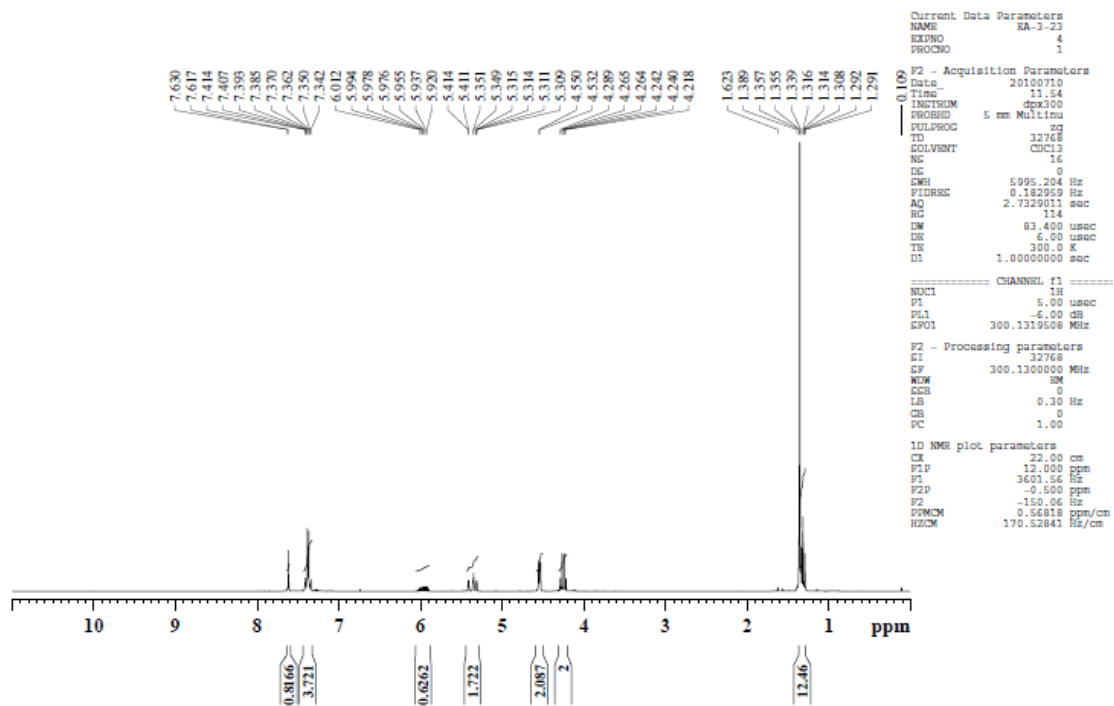




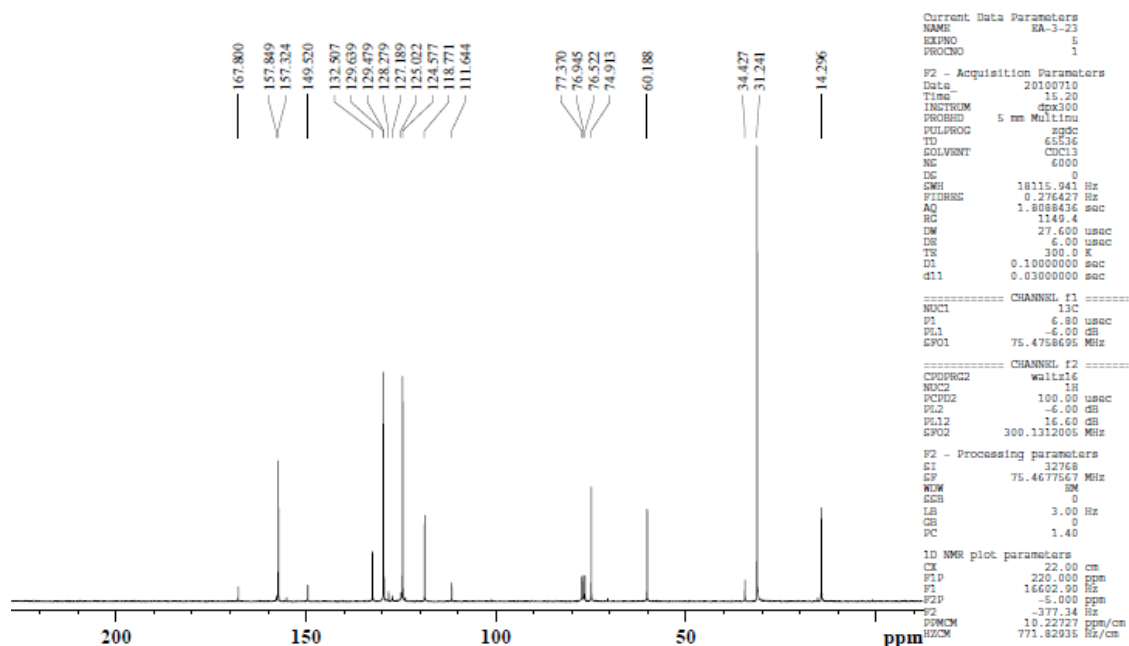


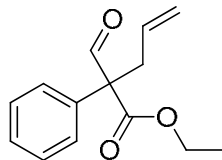
Entry 7, Table 1

## Proton Spectrum



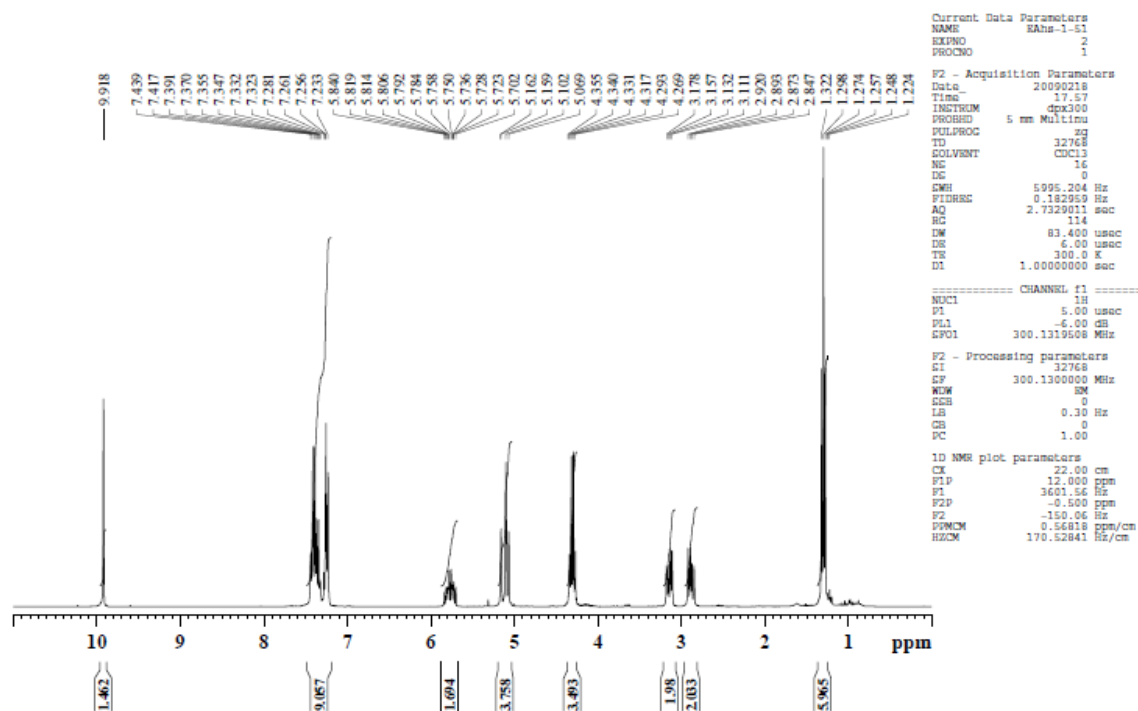
## Carbon Spectrum



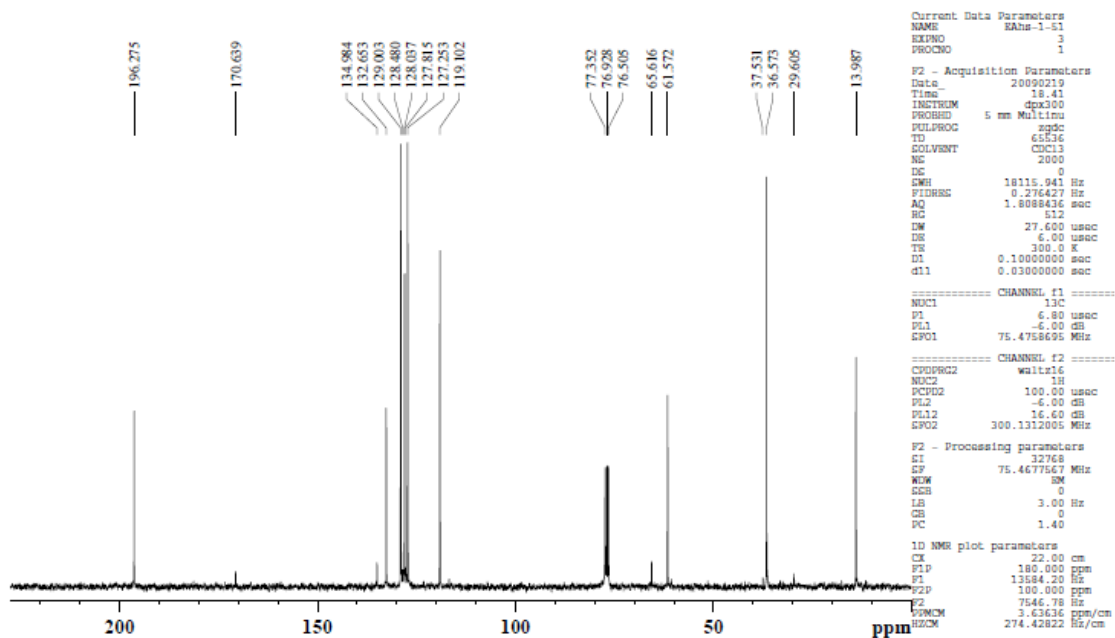


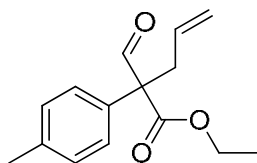
Entry 1, Table 2

## Proton Spectrum



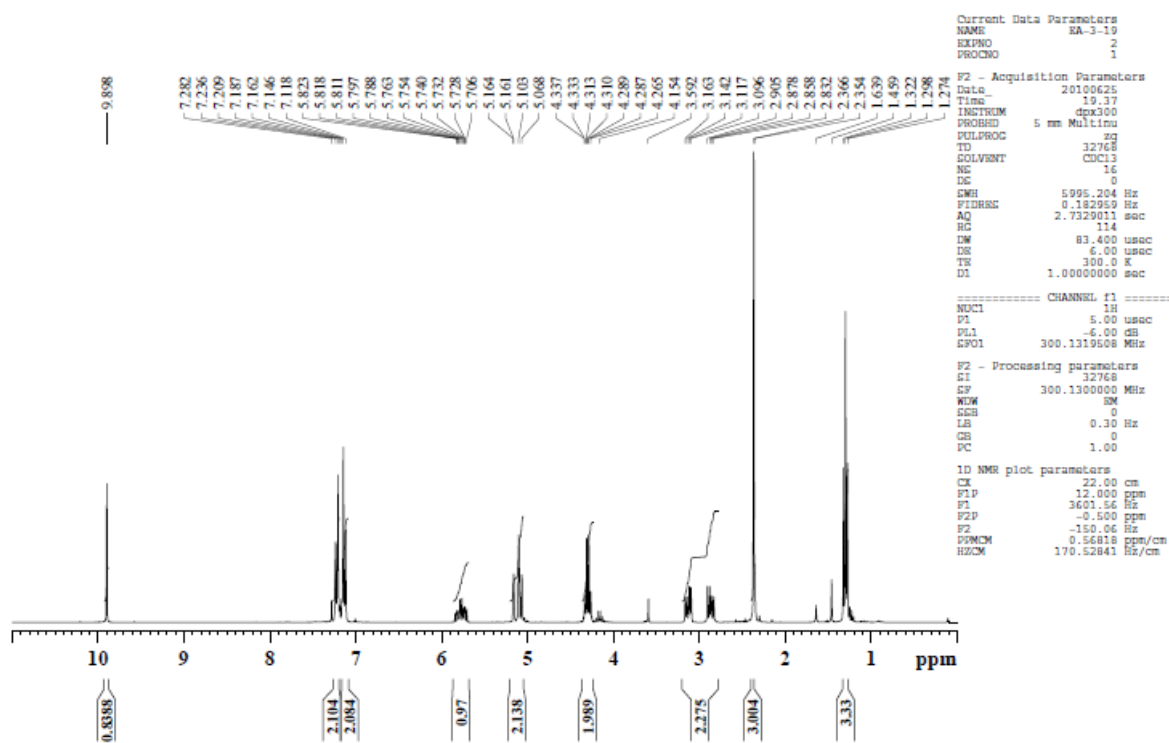
## Carbon Spectrum



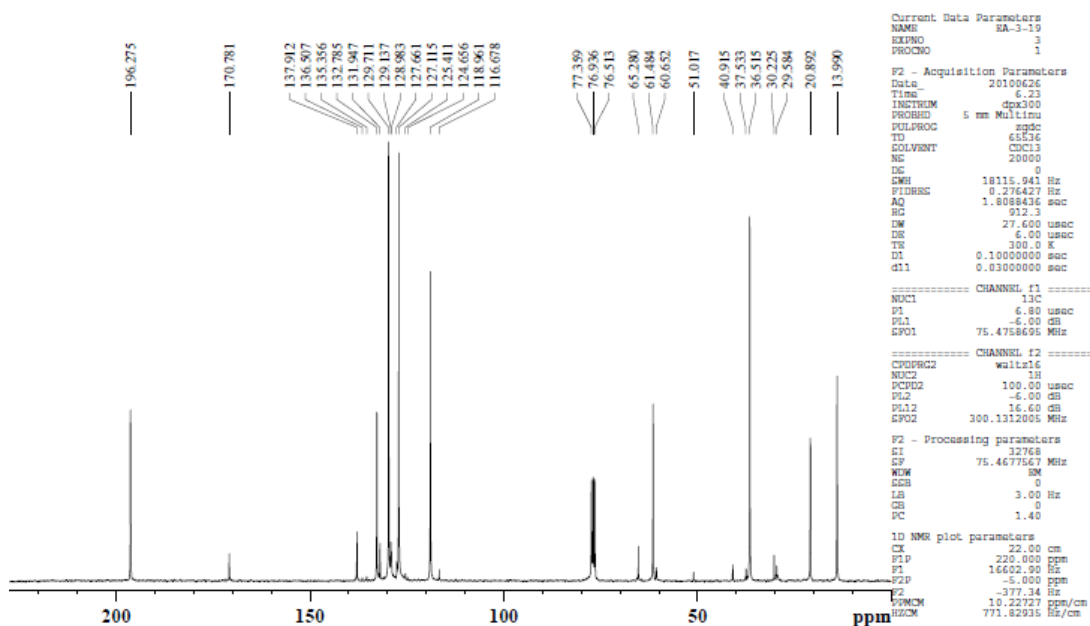


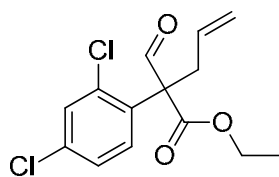
Entry 2, Table 2

## Proton Spectrum



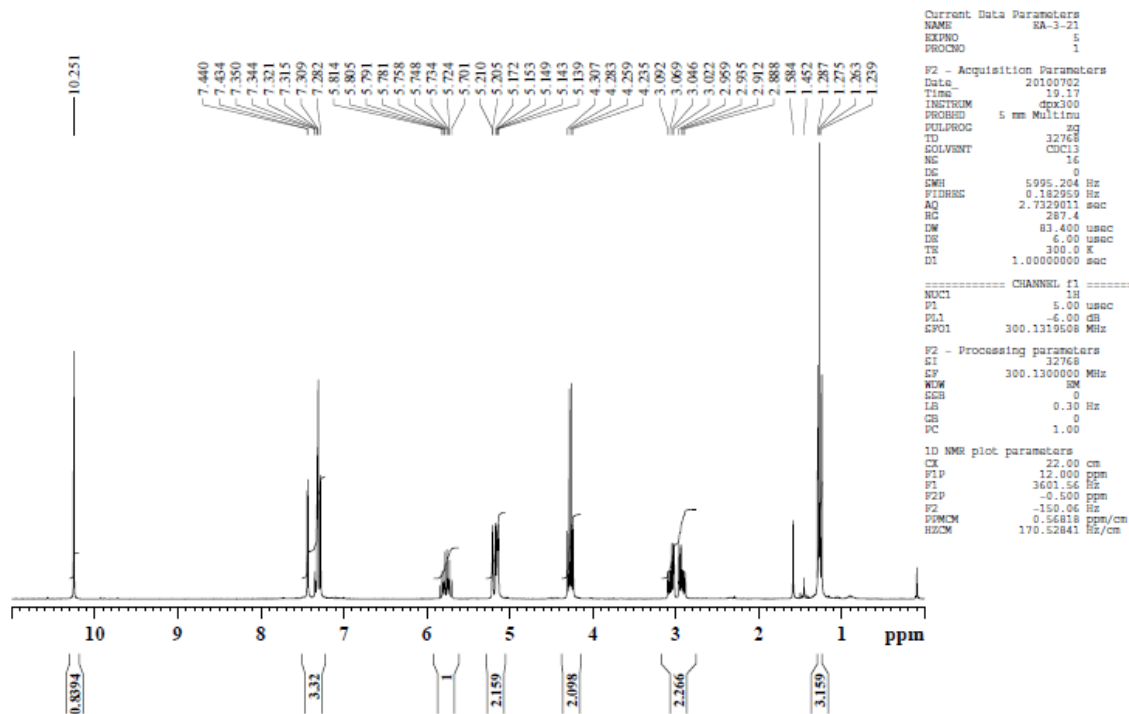
## Carbon Spectrum





Entry 3, Table 2

Proton Spectrum



```

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EXPNO 5
PROCNO 1

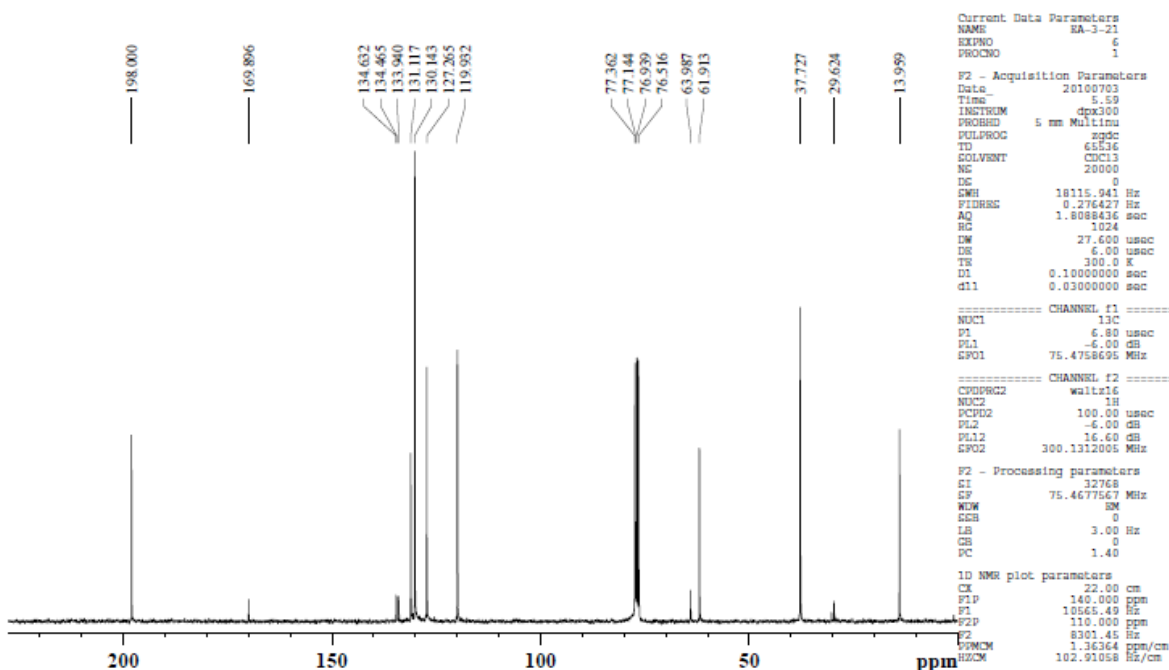
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Time 19.17
INSTRUM dpx300
PROBHD 5 mm Multinu
PULPROG zg
TD 32768
SOLVENT CDCl3
NS 16
DS 0
SWH 5995.204 Hz
FIDRES 0.182959 Hz
AQ 2.7329011 sec
RG 287.4
DM 83.400 usec
DE 6.00 usec
TE 300.0 K
D1 1.00000000 sec

===== CHANNEL f1 =====
NUC1 13C
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
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EXPNO 5
PROCNO 1

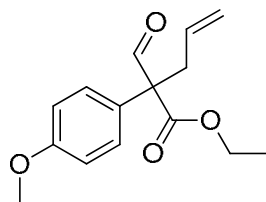
F2 - Acquisition Parameters
Date_ 20100703
Time 5.59
INSTRUM dpx300
PROBHD 5 mm Multinu
PULPROG zgdc
TD 65536
SOLVENT CDCl3
NS 20000
DS 0
SWH 18115.941 Hz
FIDRES 0.276427 Hz
AQ 1.8088436 sec
RG 1024
DM 27.600 usec
DE 6.00 usec
TE 300.0 K
D1 0.10000000 sec
d11 0.03000000 sec

===== 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

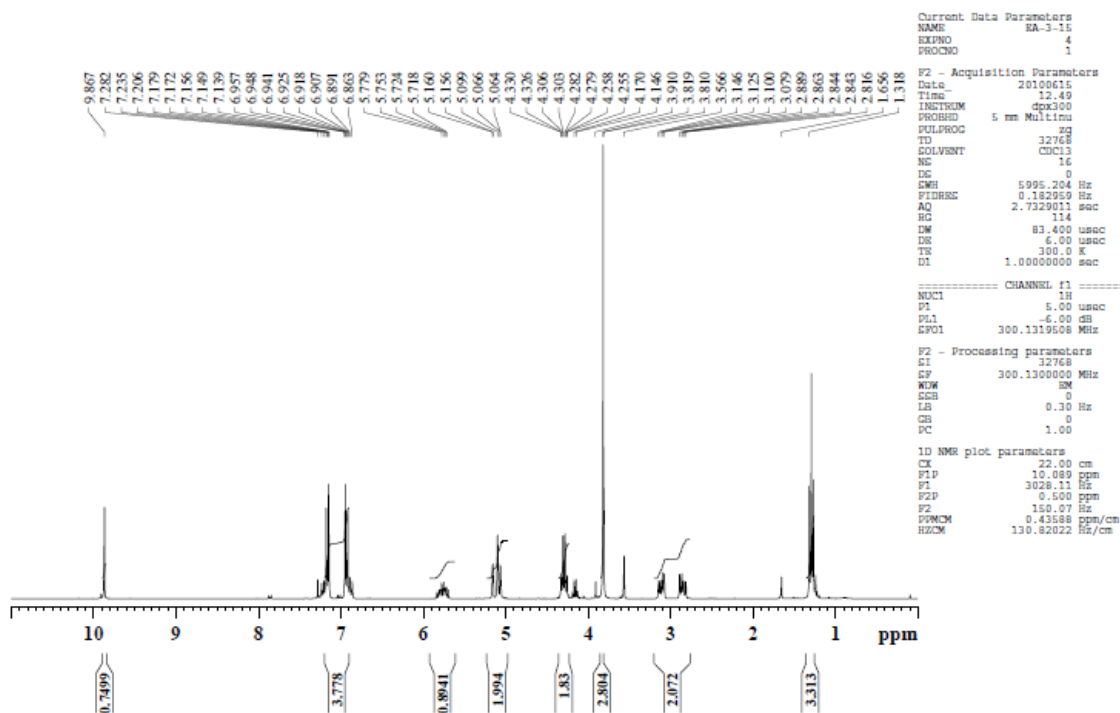
F2 - Processing parameters
SI 32768
SF 75.4677567 MHz
WDW RM
SSB 0
LB 3.00 Hz
GB 0
PC 1.40

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
    
```

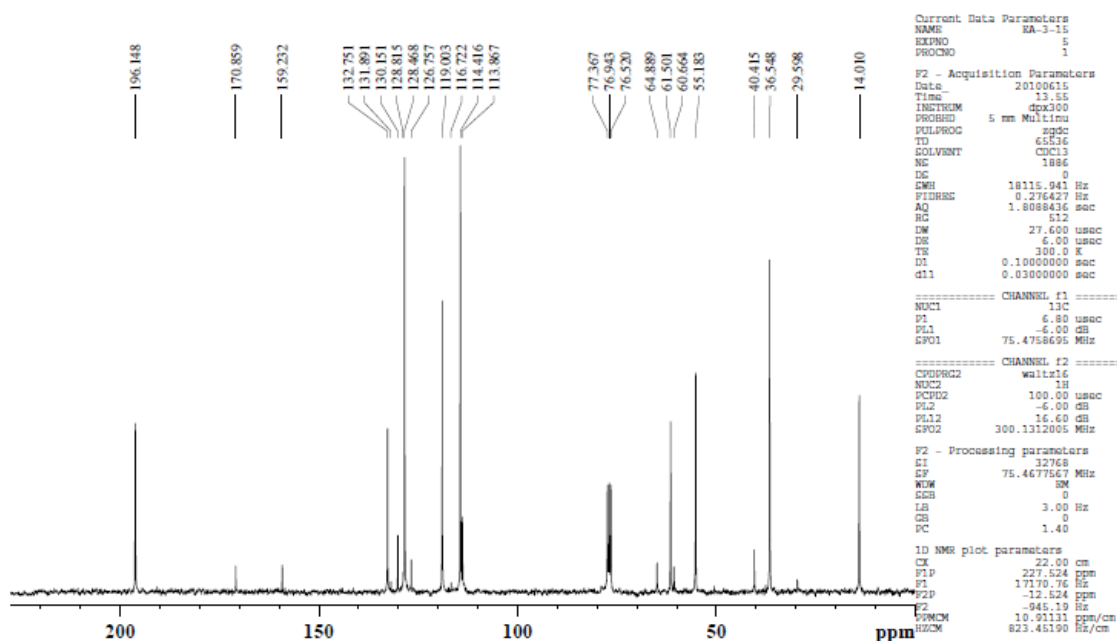


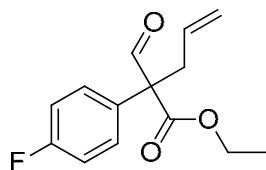
Entry 4, Table 2

## Proton Spectrum



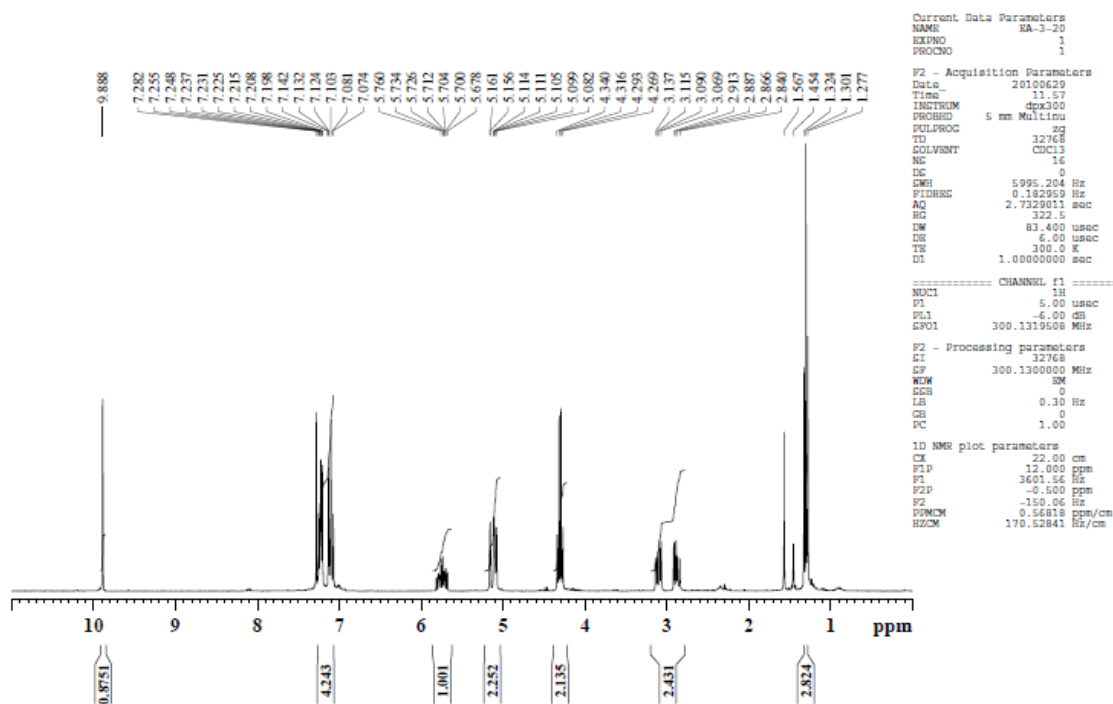
## Carbon Spectrum



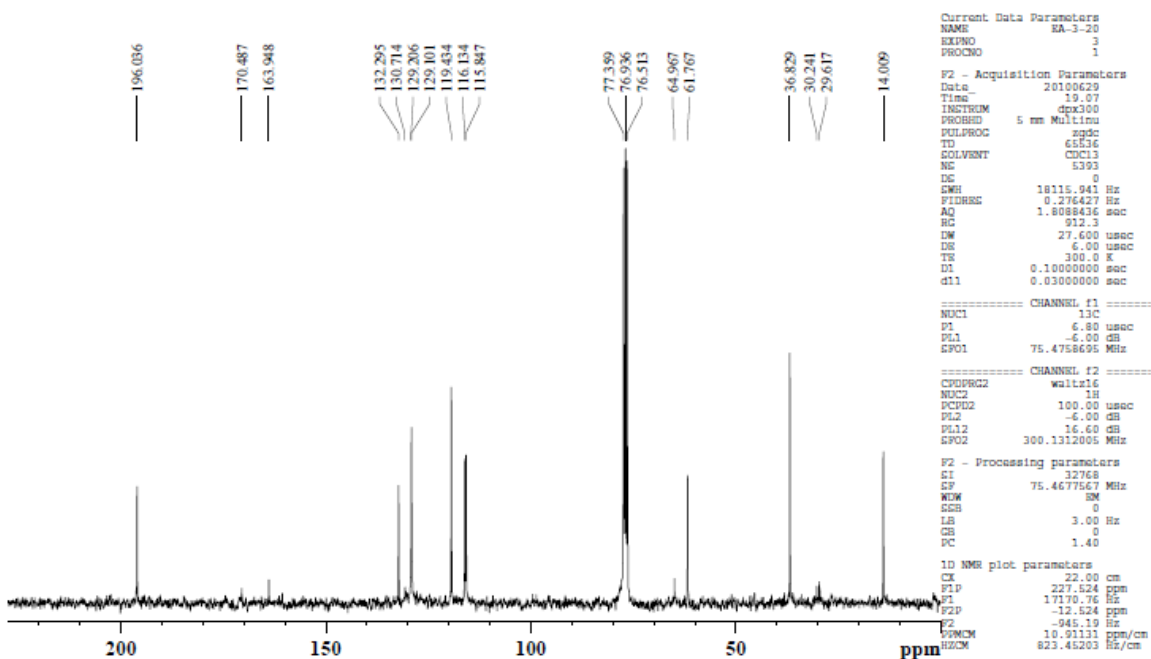


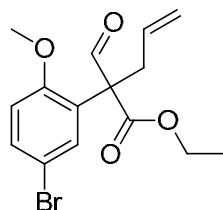
Entry 5, Table 2

## Proton Spectrum



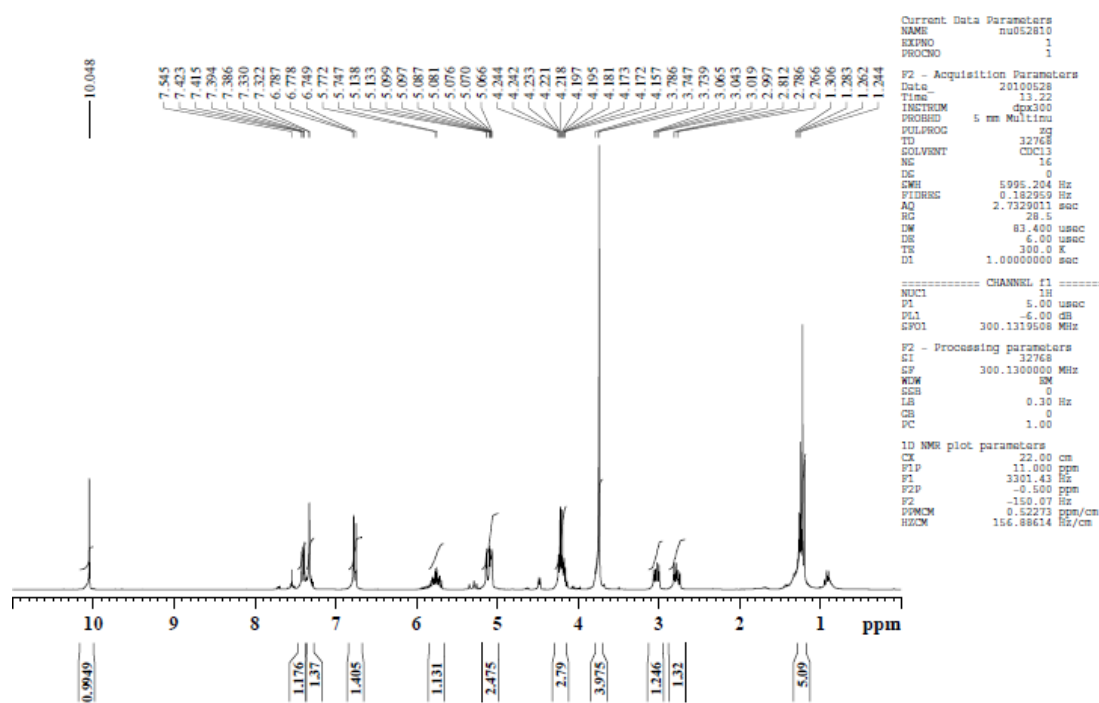
## Carbon Spectrum



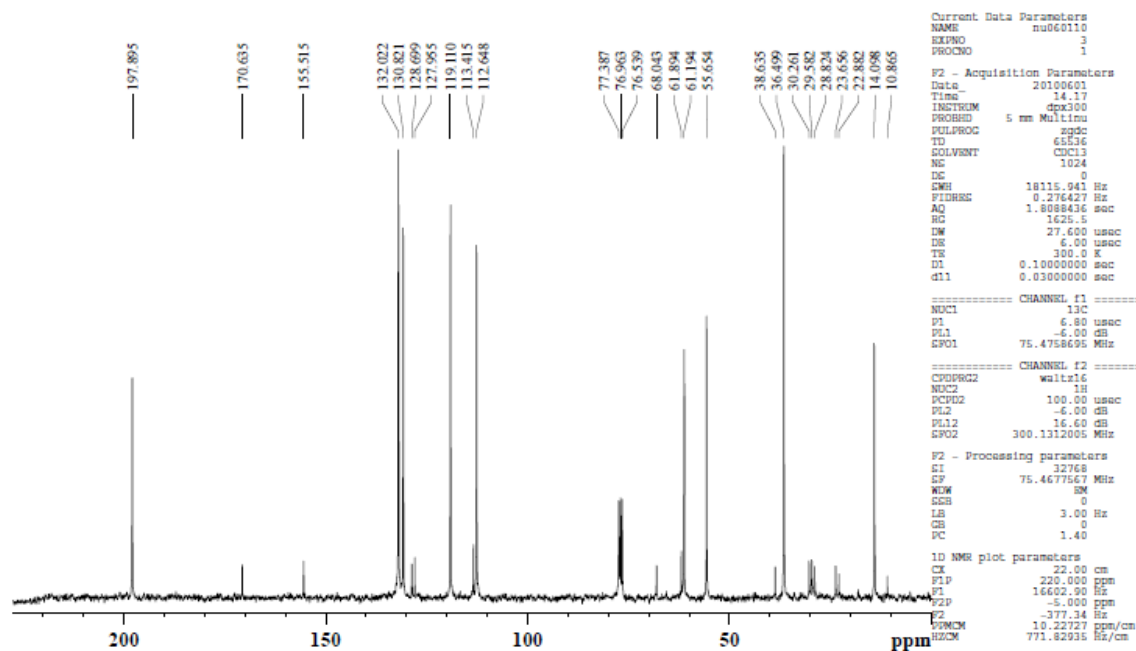


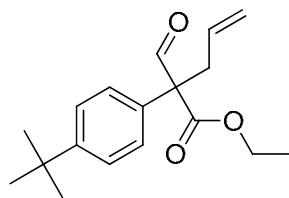
Entry 6, Table 2

## Proton Spectrum



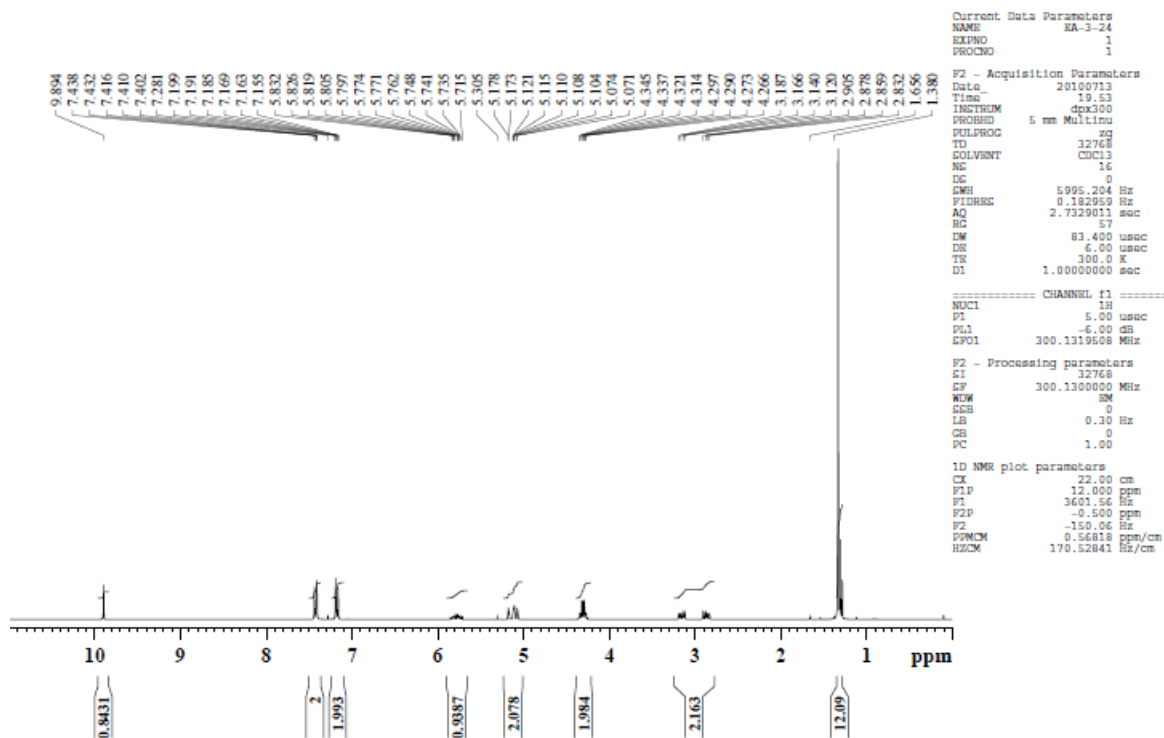
## Carbon Spectrum





Entry 7, table 2

## Proton Spectrum



## Carbon Spectrum

