

Supplementary material

An easy access to styrenes, *trans* aryl 1, 3-, 1, 4-, 1, 5-dienes and 1, 3, 5-trienes by Hiyama cross coupling catalyzed by palladium nanoparticles

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TC-185-1H (SR)

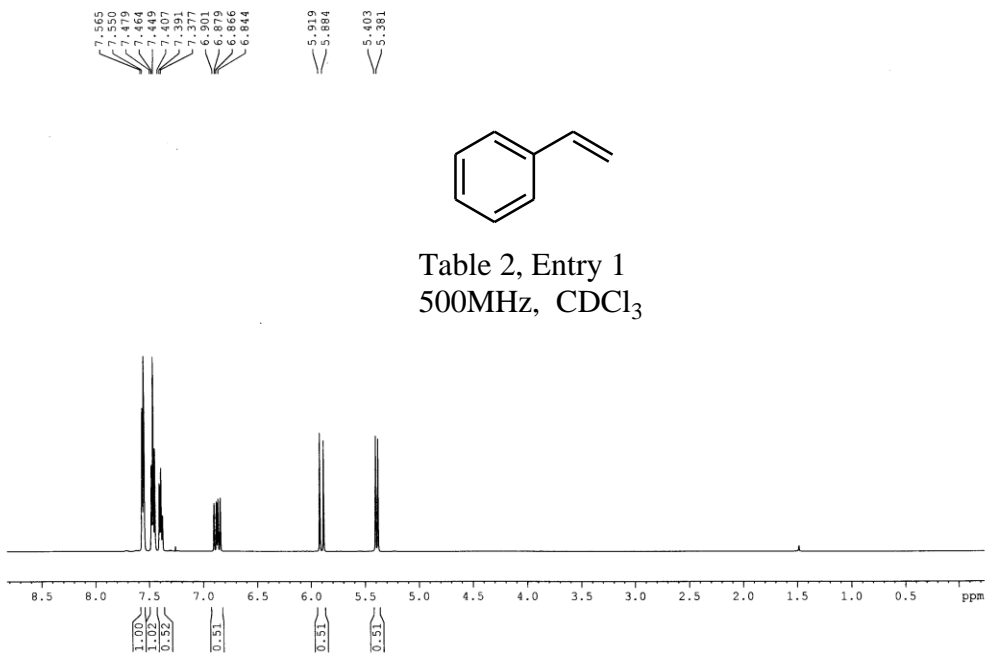


Table 2, Entry 1
 500MHz, CDCl₃

TC-185-13C (SR)

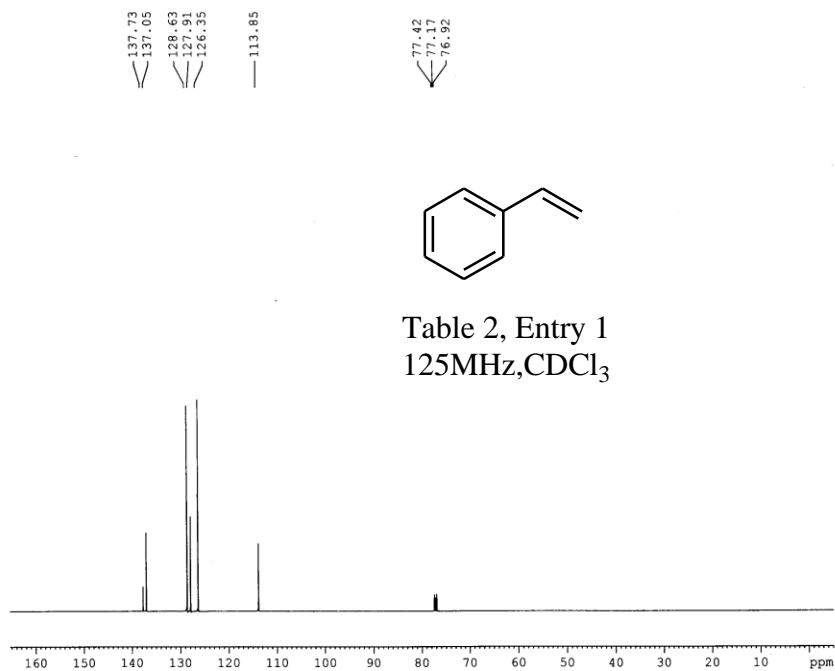


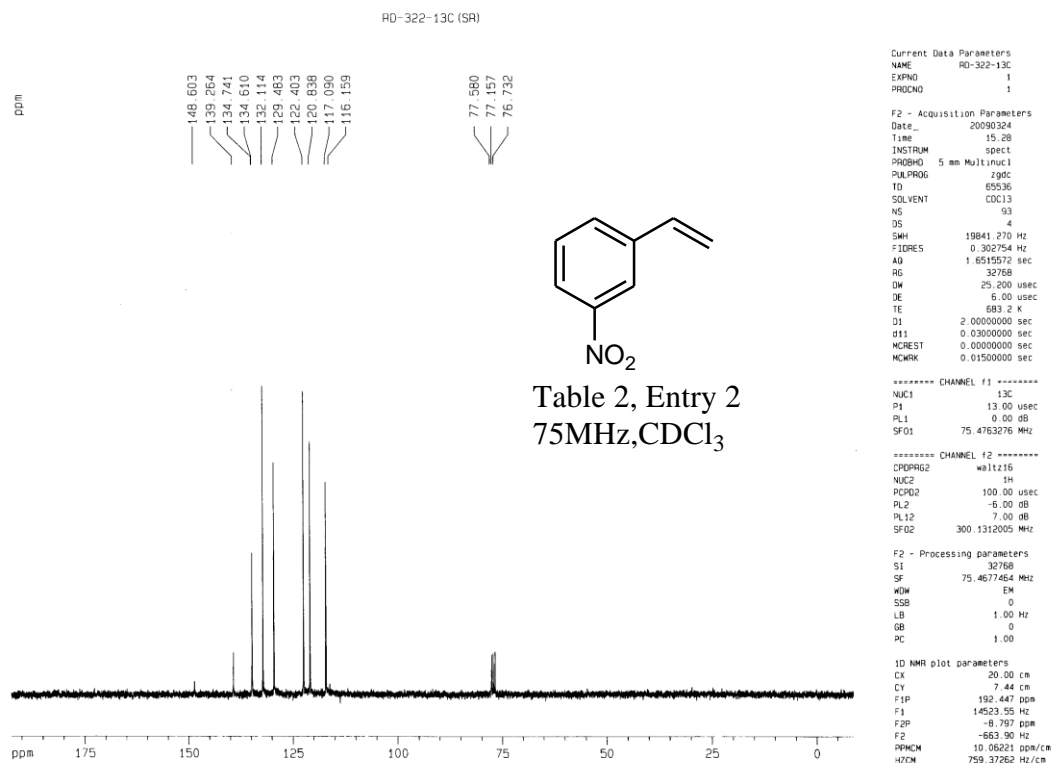
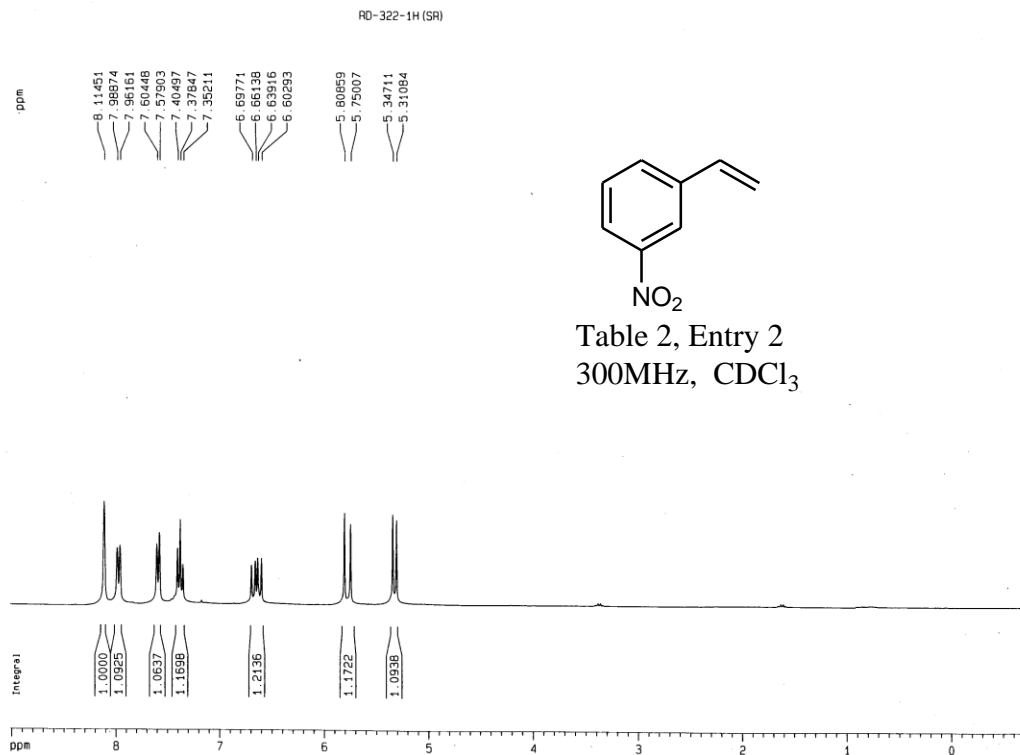
Table 2, Entry 1
 125MHz, CDCl₃

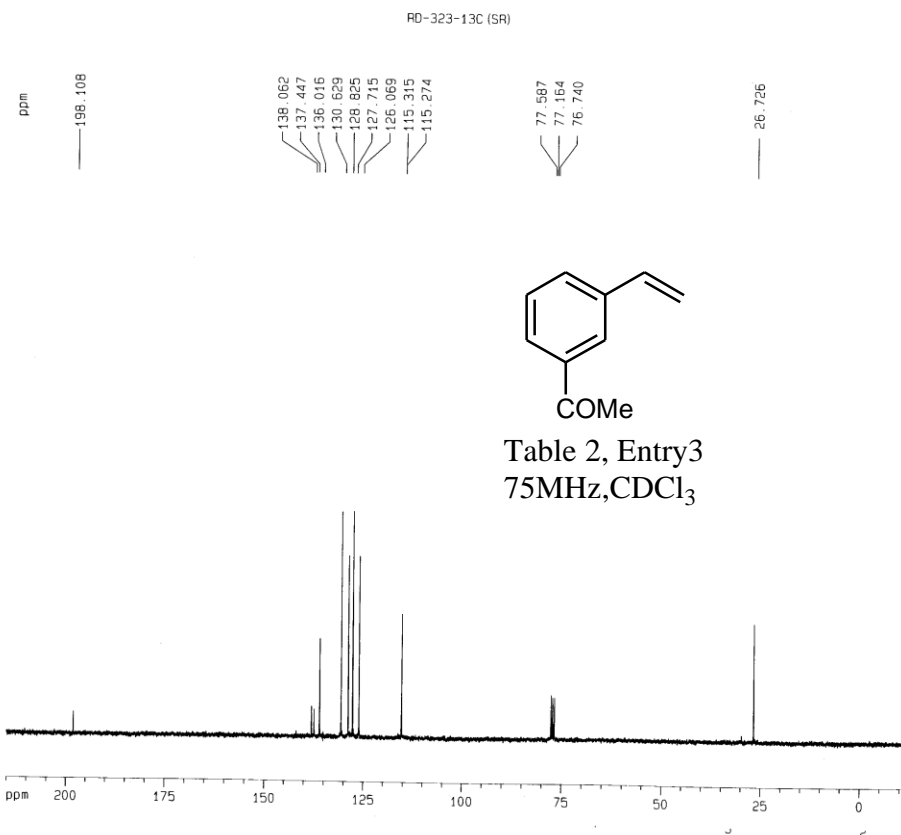
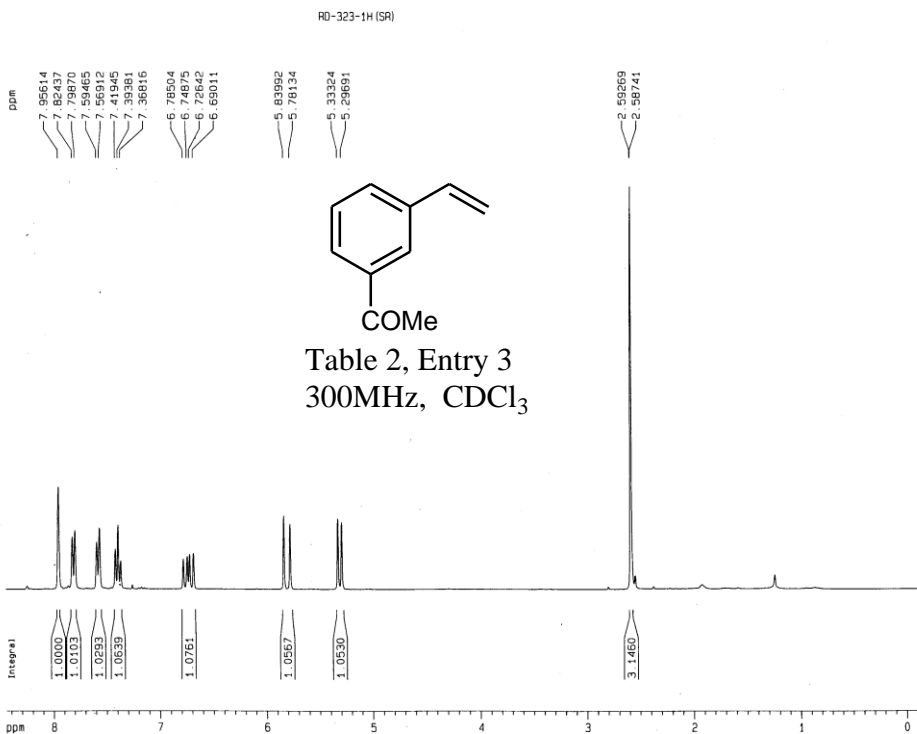
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NAME          TC-185-13C
EXPNO         1
PROCNO        1
Date_         20100514
Time          18.08
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            32768
SOLVENT       CDCl3
NS            1024
DS            4
SWH           29761.904 Hz
FIDRES        0.908261 Hz
AQ            0.5505524 sec
RG            32
SW           16.800 usec
DE            6.50 usec
TE            300.2 K
D1            2.0000000 sec
D11           0.0300000 sec
TD0           1

----- CHANNEL f1 -----
NUC1          13C
P1            9.88 usec
PL1           0.50 dB
PL1W          82.16106415 W
SFO1          125.7703643 MHz

----- CHANNEL f2 -----
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           1.00 dB
PL12          16.50 dB
PL13          20.00 dB
PL2W          15.50319813 W
PL12W         0.43693921 W
PL13W         0.19517358 W
SFO2          500.1320005 MHz
SI            16384
SF            125.7577933 MHz
WDW           EM
SSB           0
LB            1.00 Hz
GB            0
PC            1.00
    
```





Current Data Parameters
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 PROCNO 1

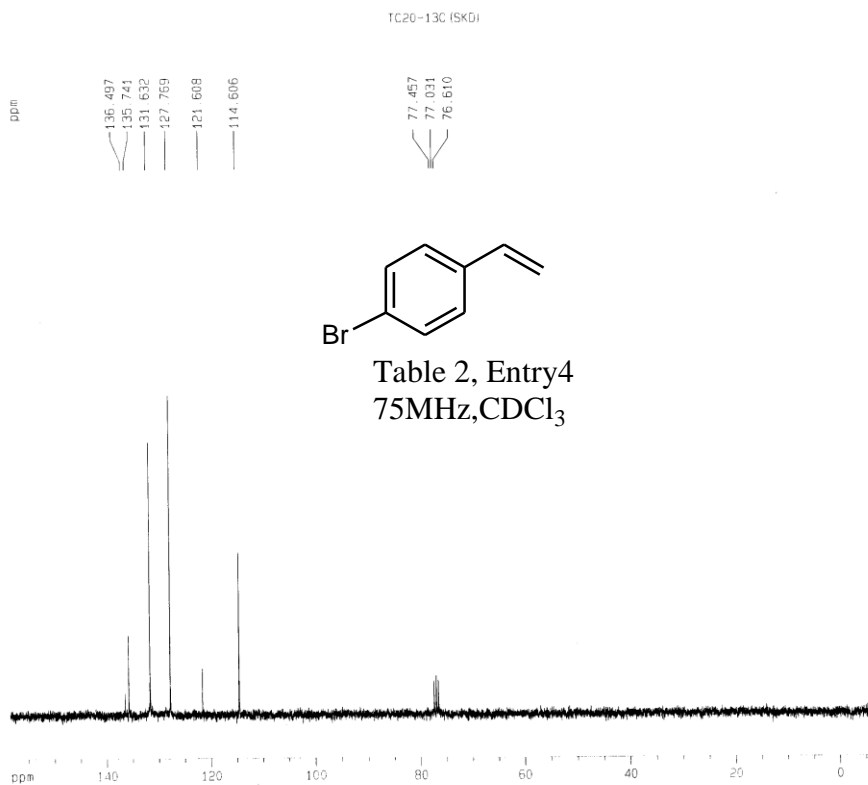
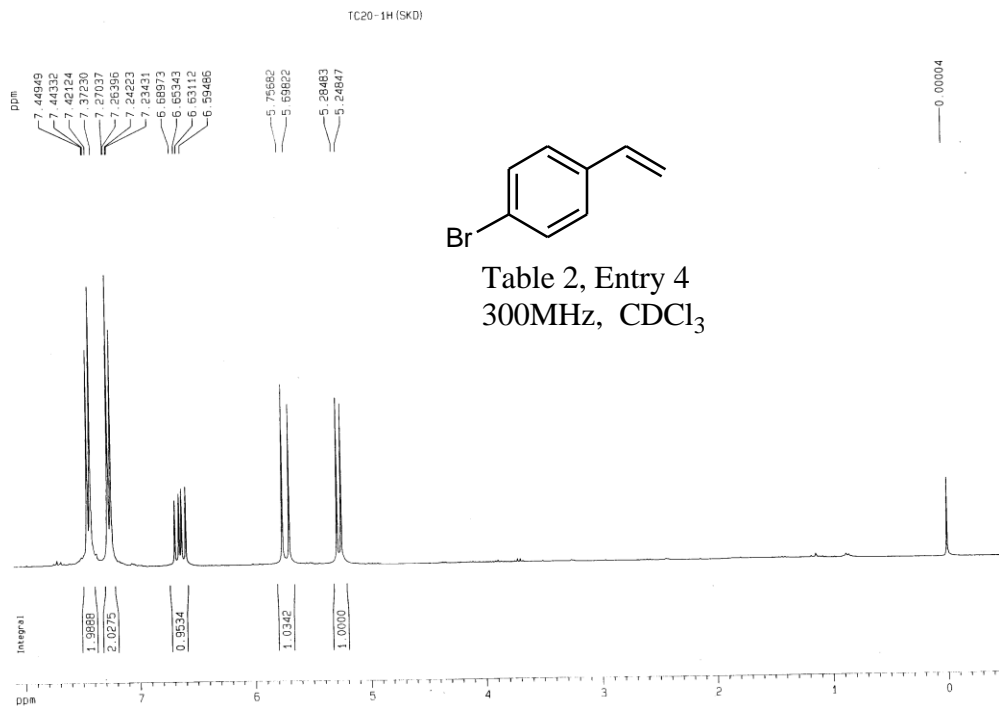
F2 - Acquisition Parameters
 Date_ 20090324
 Time 18.21
 INSTRUM spect
 PROBN 5 mm Multinucl
 PULPROG zgpg
 ID 65336
 SOLVENT CDCl3
 NS 89
 DS 4
 SWH 19841.270 Hz
 FIDRES 0.302754 Hz
 AQ 1.6515572 sec
 RG 32768
 DW 25.200 usec
 DE 6.00 usec
 TE 0.0 K
 D1 2.00000000 sec
 d11 0.03000000 sec
 MCREST 0.00000000 sec
 MCWK 0.01500000 sec

***** CHANNEL f1 *****
 NUC1 13C
 P1 13.00 usec
 PL1 0.00 dB
 SF01 75.4763276 MHz

***** CHANNEL f2 *****
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 100.00 usec
 PL2 -6.00 dB
 PL12 7.00 dB
 SF02 300.1312005 MHz

F2 - Processing parameters
 S1 32768
 SF 75.4677452 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

ID NMR plot parameters
 CX 20.00 cm
 CY 5.03 cm
 F1P 215.008 ppm
 F1 16226.16 Hz
 F2P -10.439 ppm
 F2 -787.79 Hz
 PPMCH 11.27233 ppm/cm
 HZCM 850.69751 Hz/cm



Current Data Parameters
 NAME TC20-13C
 EXPNO 1
 PROCNO 1

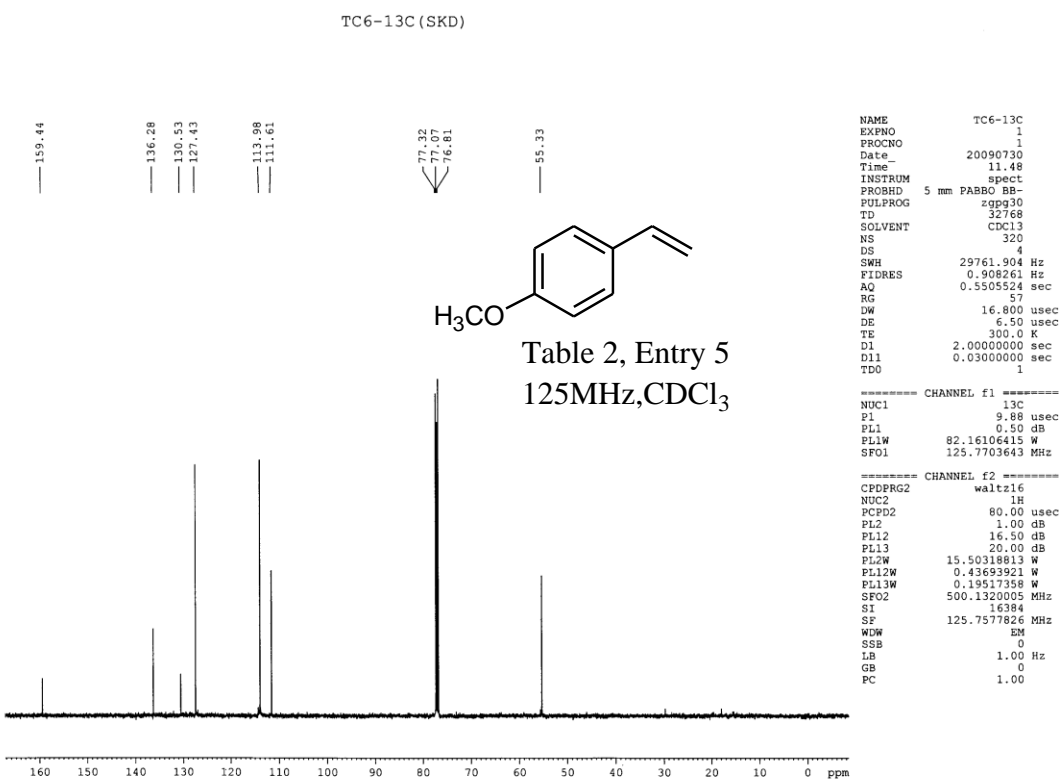
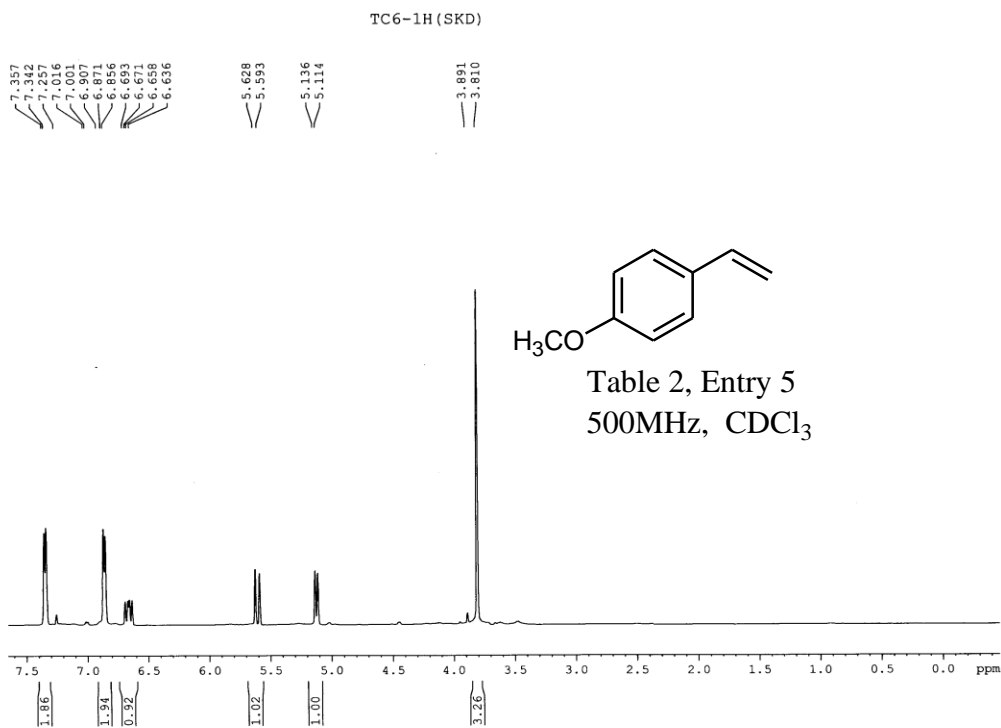
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 Date_ 20090810
 Time 12.16
 INSTRUM spect
 PROBHD 5 mm Multinuc1
 PULPROG zgpg
 TD 65536
 SOLVENT CDCl3
 NS 70
 DS 4
 SWH 19841.270 Hz
 FIDRES 0.302754 Hz
 AQ 1.6519572 sec
 RG 32768
 DW 25.200 usec
 DE 6.00 usec
 TE 300.2 K
 D1 2.0000000 sec
 d11 0.0300000 sec
 ACQRES 0.0000000 sec
 MCWRT 0.01500000 sec

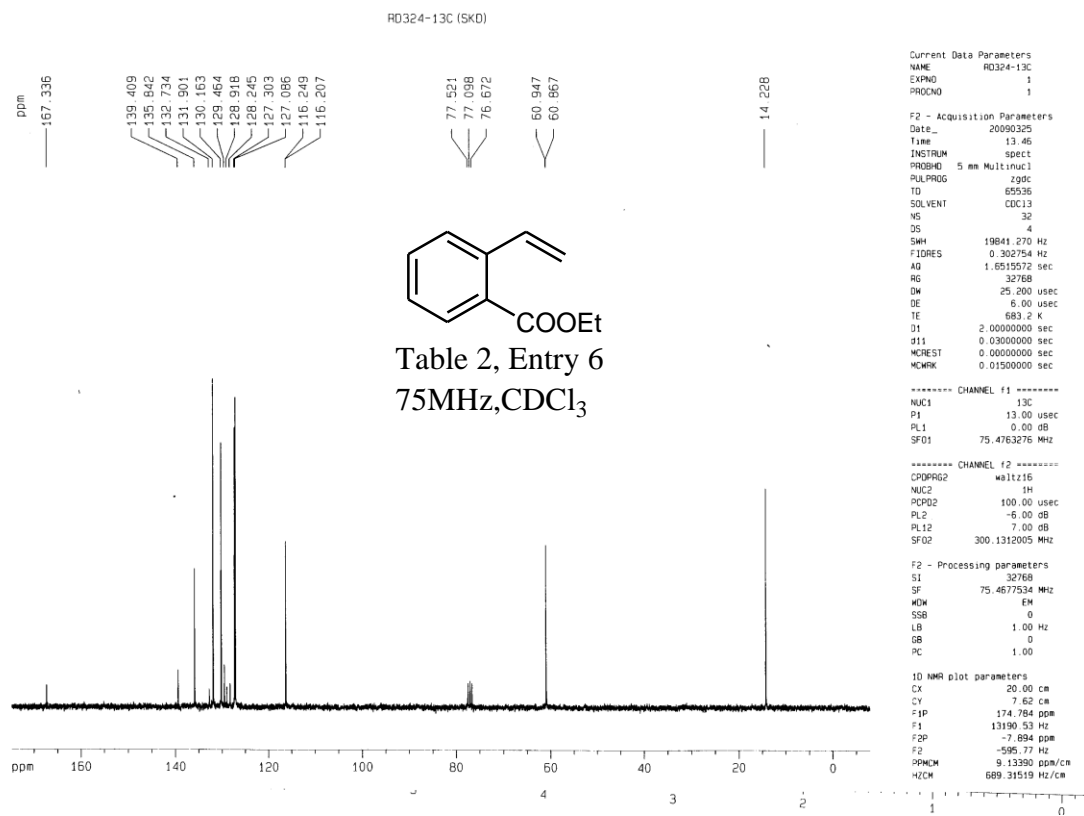
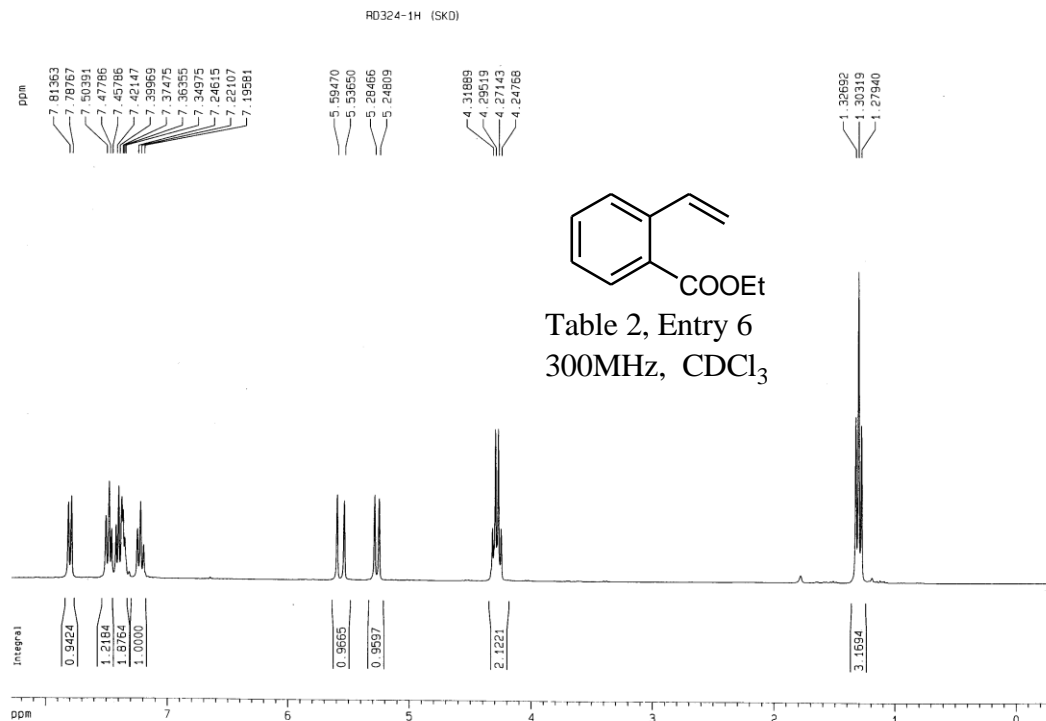
***** CHANNEL f1 *****
 NUC1 13C
 P1 13.00 usec
 PL1 0.00 dB
 SFO1 75.4763276 MHz

***** CHANNEL f2 *****
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 100.00 usec
 PL2 -8.00 dB
 PL12 7.00 dB
 SFO2 300.1312005 MHz

F2 - Processing parameters
 SI 32768
 SF 75.4677490 MHz
 WDM EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.00

ID NMR plot parameters
 CX 29.00 cm
 CY 7.34 cm
 F1P 158.391 ppm
 F1 11953.41 Hz
 F2P -6.645 ppm
 F2 -501.50 Hz
 FWHM 8.25181 ppm/cm
 -ZCM 622.74591 Hz/cm





TC-106-1H (SR)

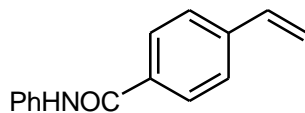
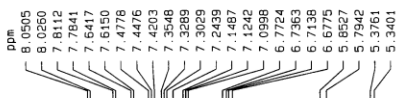
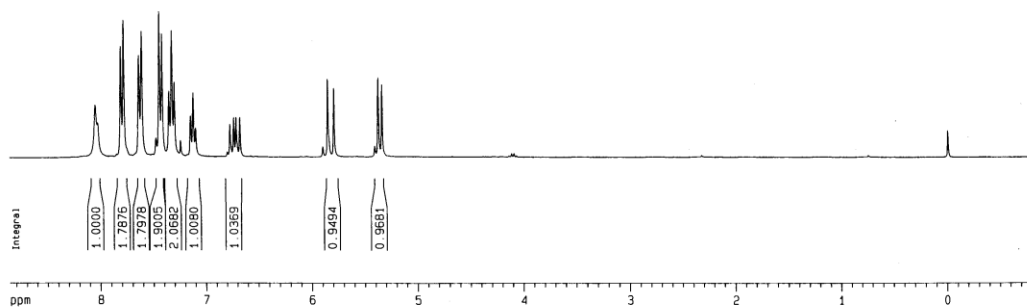


Table 2, Entry 7
 300MHz, CDCl₃



TC-106-13C (SR)

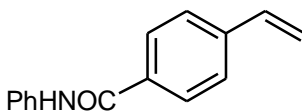
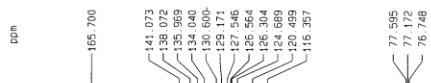
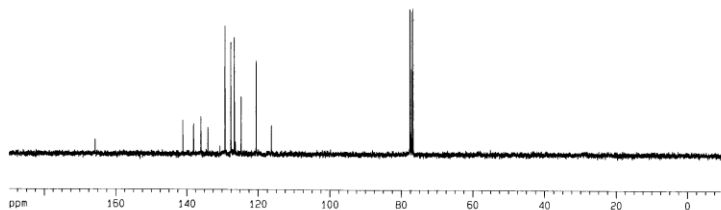


Table 2, Entry 7
 75MHz, CDCl₃



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Current Data Parameters
NAME          TC-106-13C
EXPNO        1
PROCNO       1

F2 - Acquisition Parameters
Date_        20091209
Time         16.06
INSTRUM      spect
PROBHD       5 mm MUX11nc1
PULPROG      zgpg30
TD           65536
SOLVENT      CDCl3
NS           65
DS           4
SHE         18939.305 Hz
FIDRES      0.288992 Hz
AQ          1.7302004 sec
RG          919.2
DM          26.400 usec
DE          6.00 usec
TE          298.2 K
D1          2.0000000 sec
d11         0.2000000 sec
DELTA       1.8999999 sec
WCHST1      0.0000000 sec
MORPH       0.0100000 sec

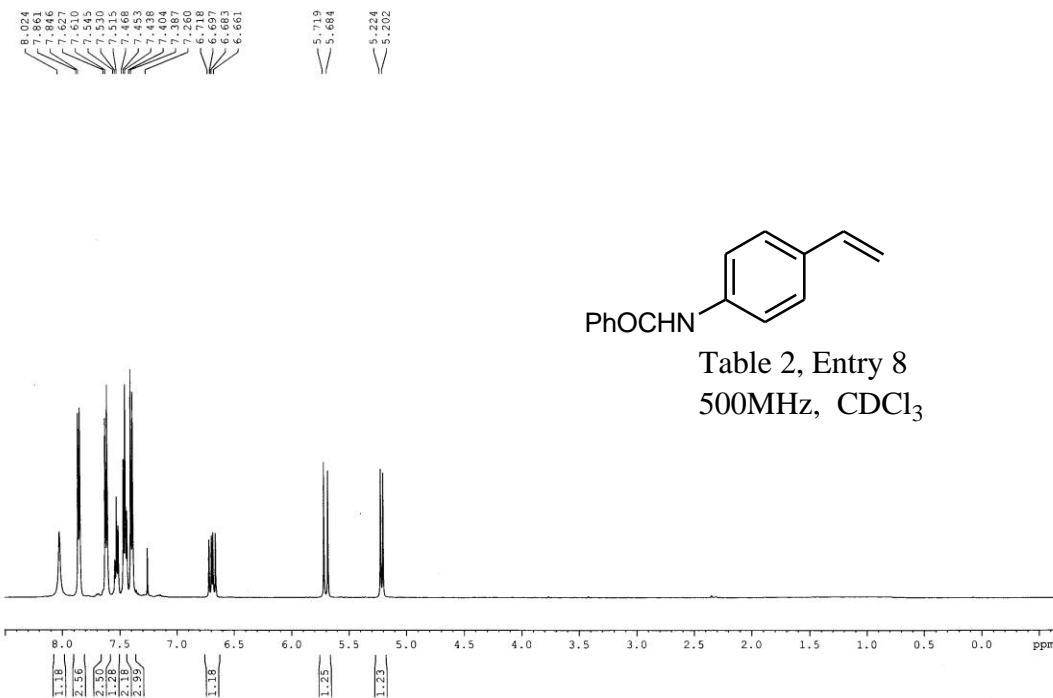
***** CHANNEL f1 *****
NUC1         13C
P1           15.75 usec
PL1          0.00 dB
SFO1         75.4761211 MHz

***** CHANNEL f2 *****
CPDPRG2     waltz16
NUC2         1H
P2           100.00 usec
PL2          -6.00 dB
PL12         6.00 dB
PL13         12.00 dB
SFO2         300.1312005 MHz

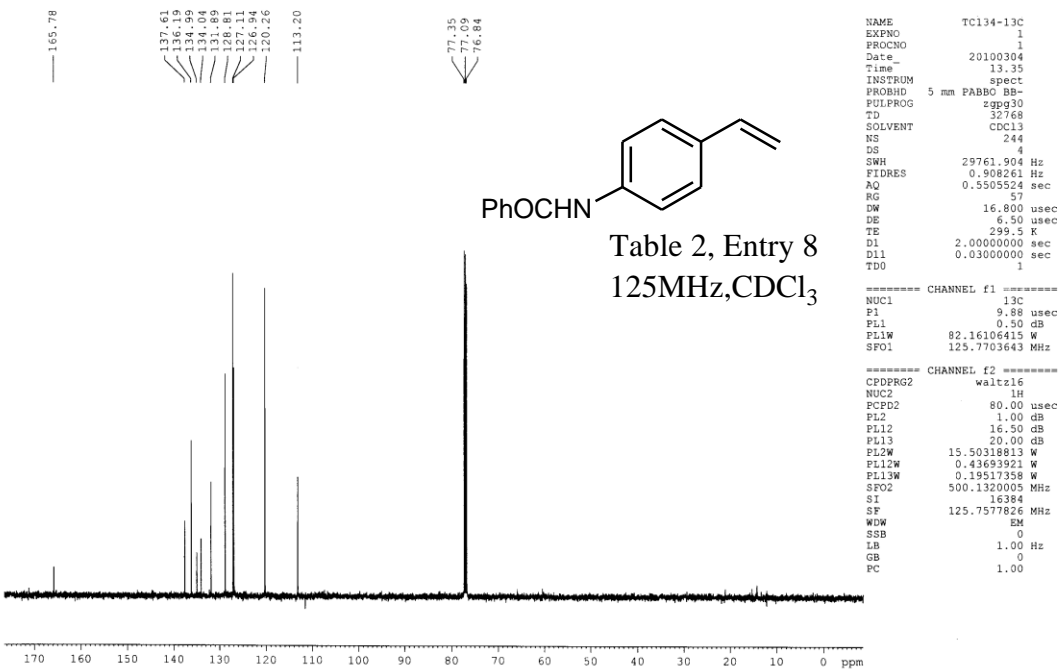
F2 - Processing parameters
SI           32768
SF           75.4677410 MHz
WDW          EM
SSB          0
LB           1.00 Hz
GB           0
PC           1.40

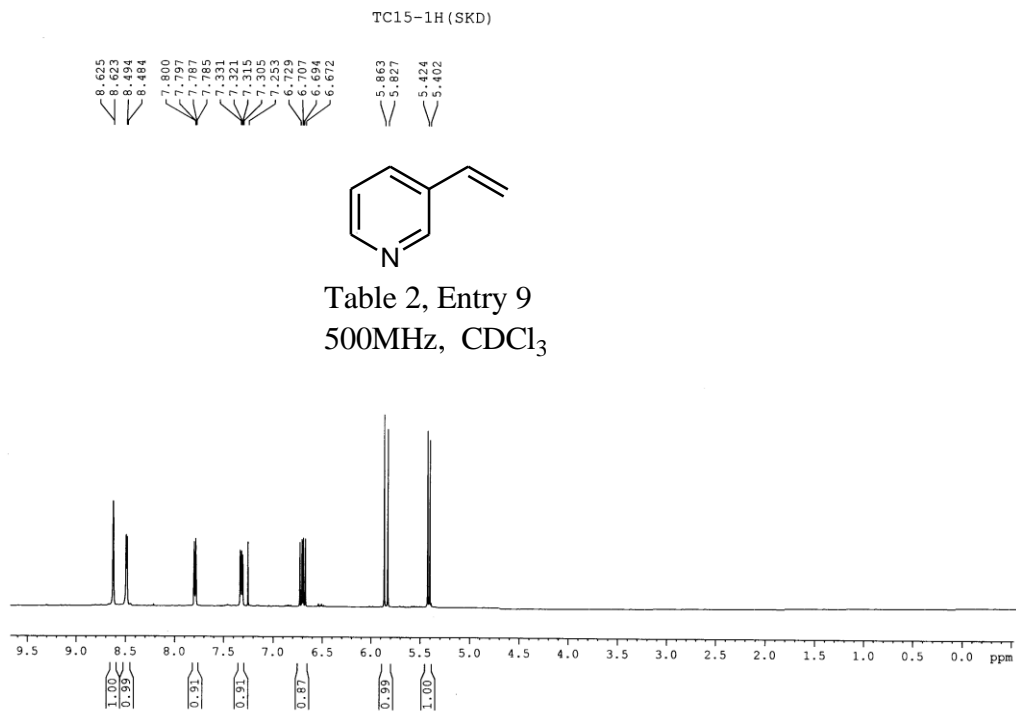
1D NMR plot parameters
CX           20.00 cm
CY           4.12 cm
F1P         189.9465008 MHz
F1          14327.25 Hz
F2P         -9.5895000 MHz
F2          -723.82 Hz
SFOH        6.9717200 MHz/cm
HZOH        752.5439200 Hz/cm
    
```


TC134-1H (SKD)

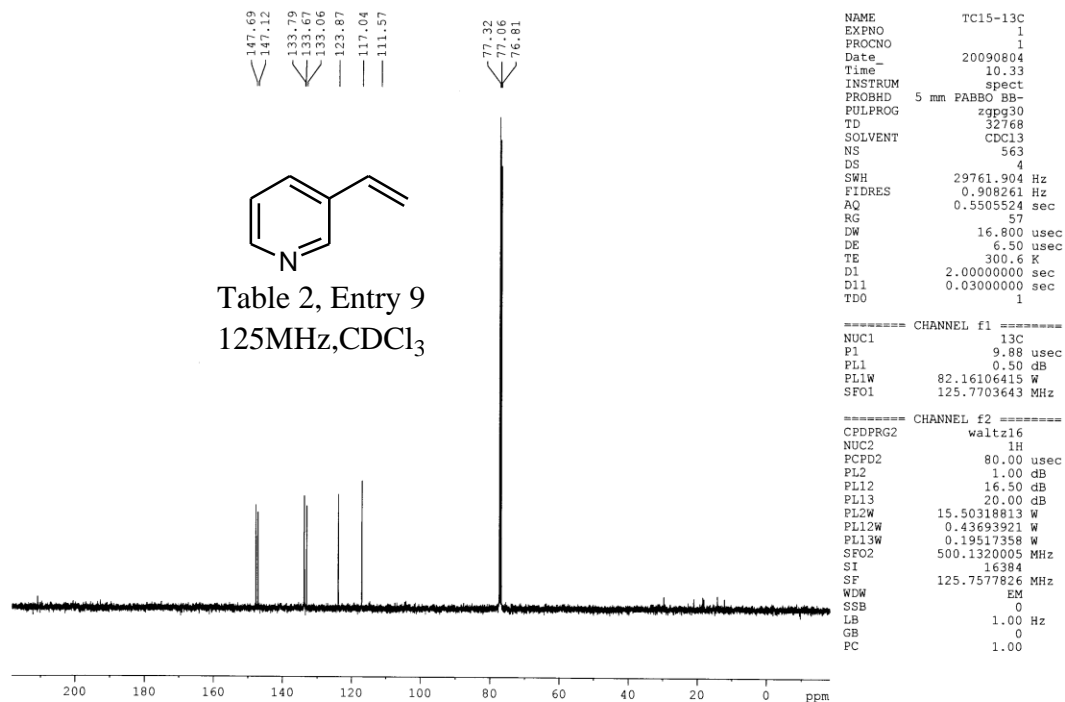


TC134-13C (SKD)

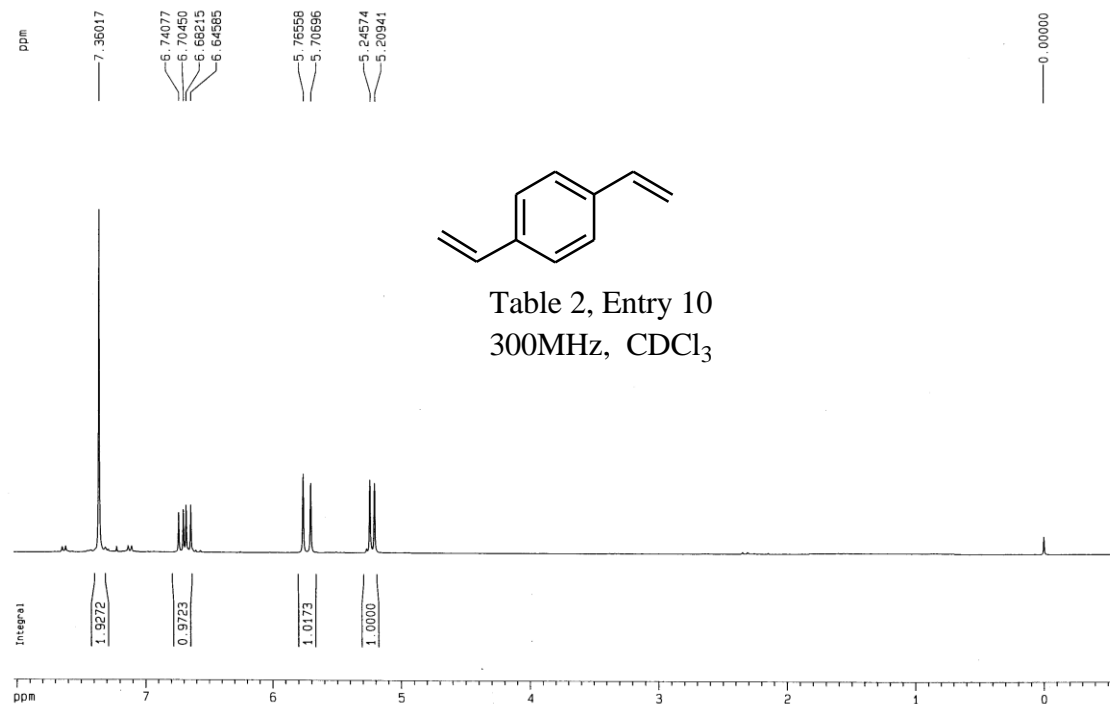


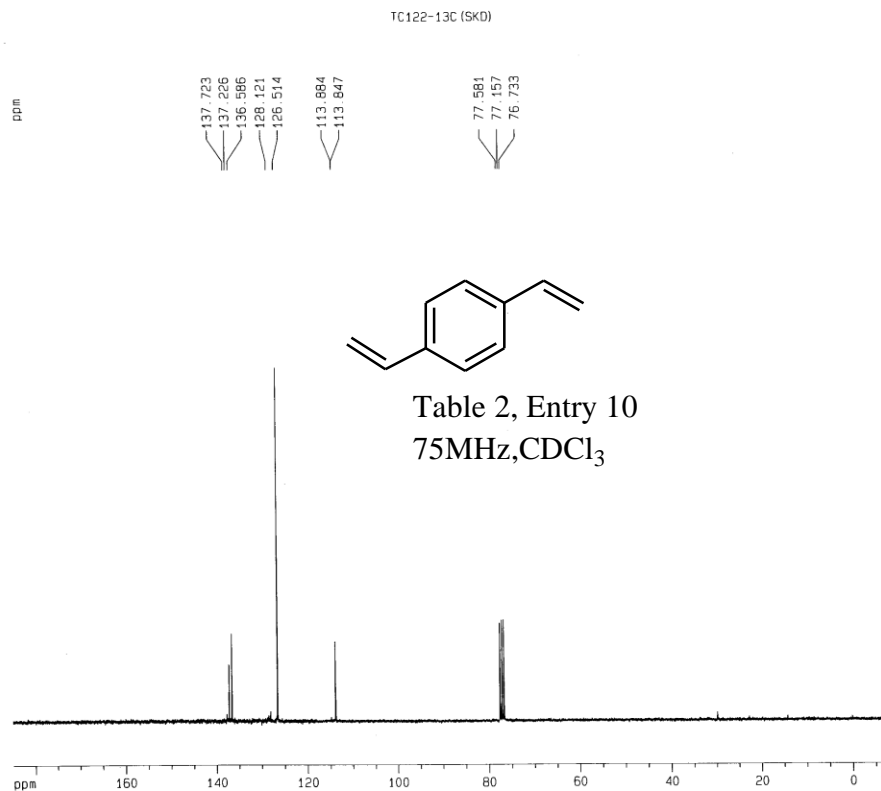


TC15-13C (SKD)



TC122-1H (SKD)





Current Data Parameters
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EXPNO 1
PROCNO 1

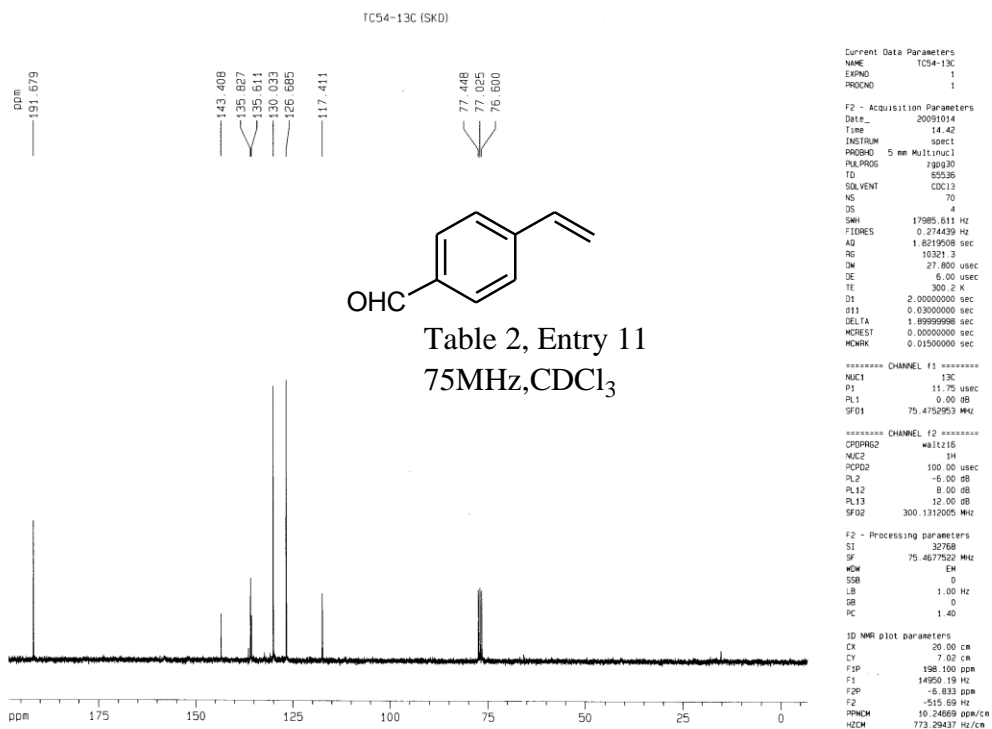
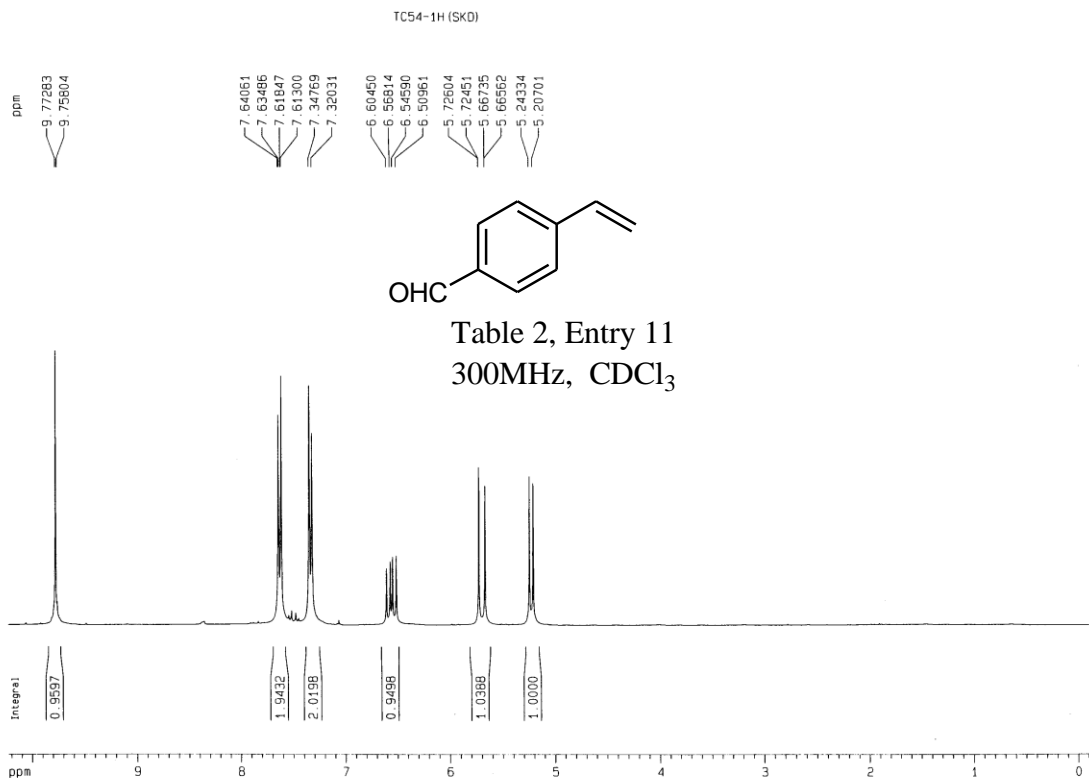
F2 - Acquisition Parameters
Date_ 20100127
Time 14.16
INSTRUM spect
PROBHD 5 mm Multinuc1
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 190
DS 4
SWH 18939.395 Hz
FIDRES 0.288992 Hz
AQ 1.732204 sec
RG 9195.2
DW 26.400 usec
DE 6.00 usec
TE 297.2 K
D1 2.0000000 sec
d11 0.0300000 sec
DELTA 1.89999998 sec
MDELTA 0.0000000 sec
MCWRR 0.0150000 sec

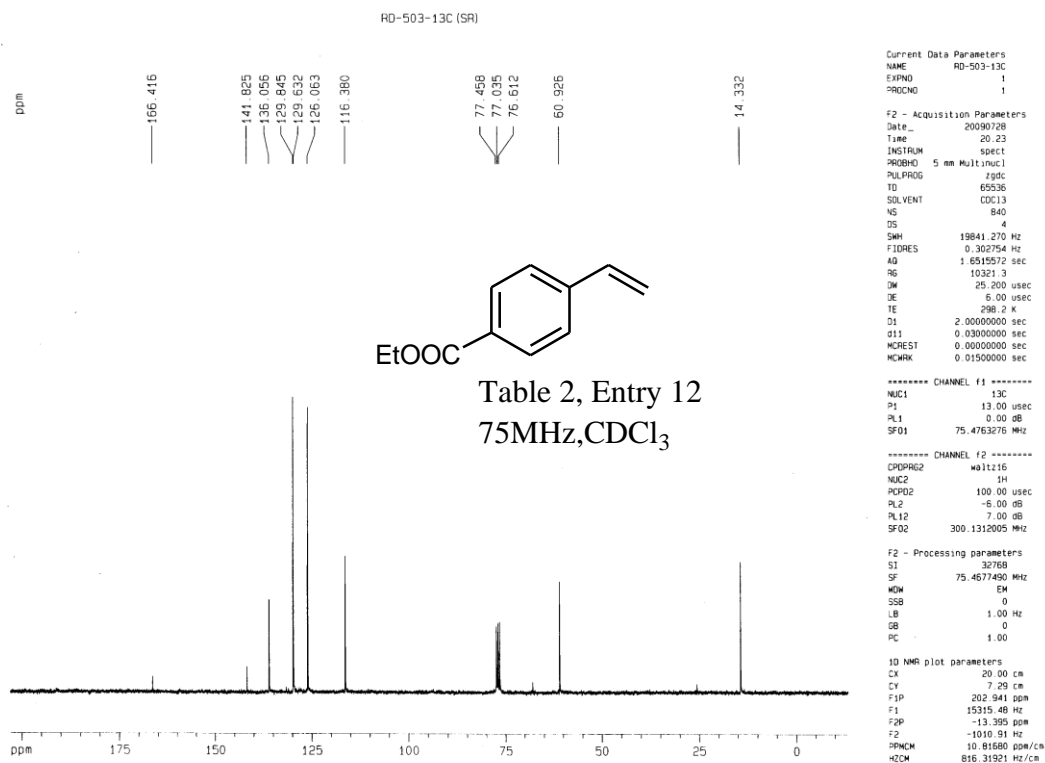
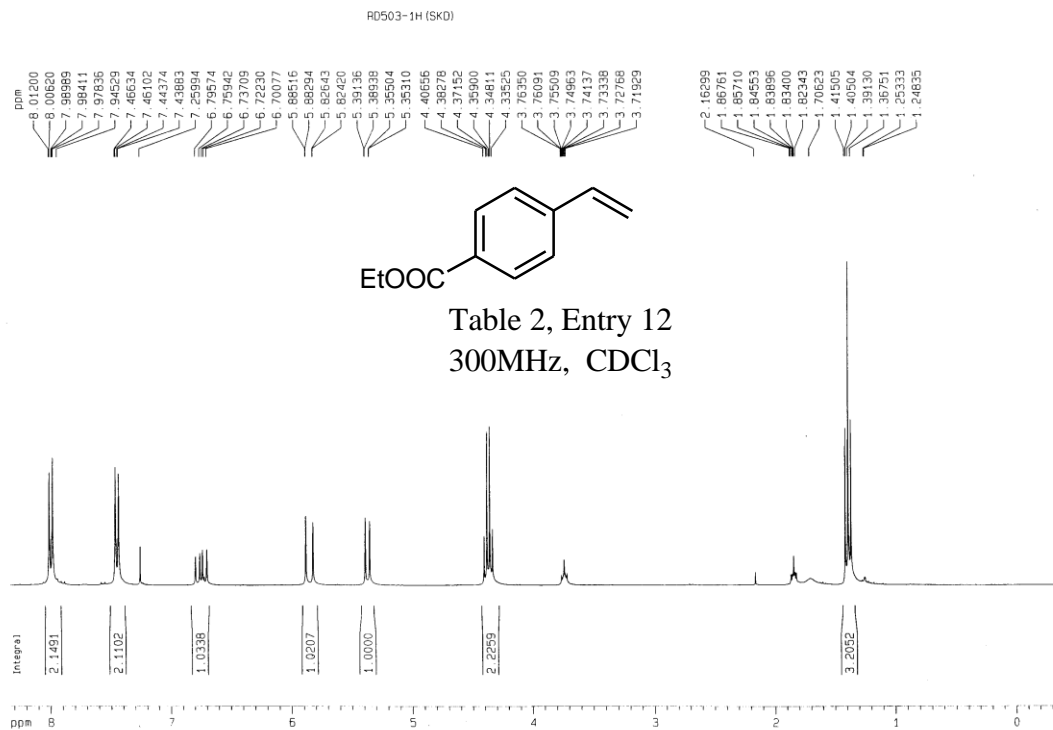
***** CHANNEL f1 *****
NUC1 13C
P1 11.75 usec
PL1 0.00 dB
SFO1 75.4783276 MHz

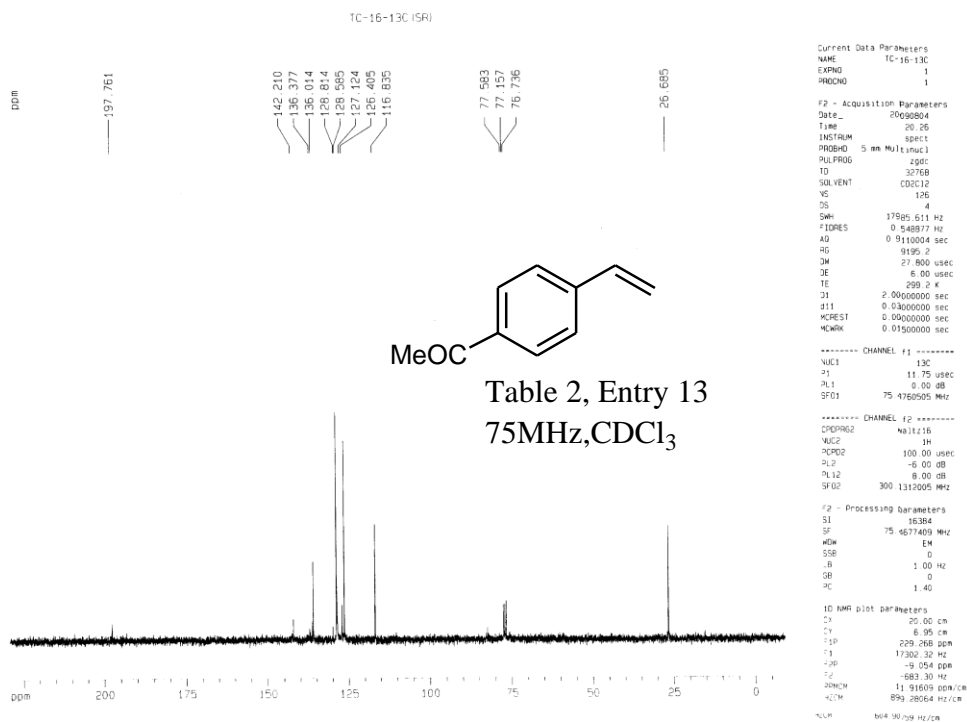
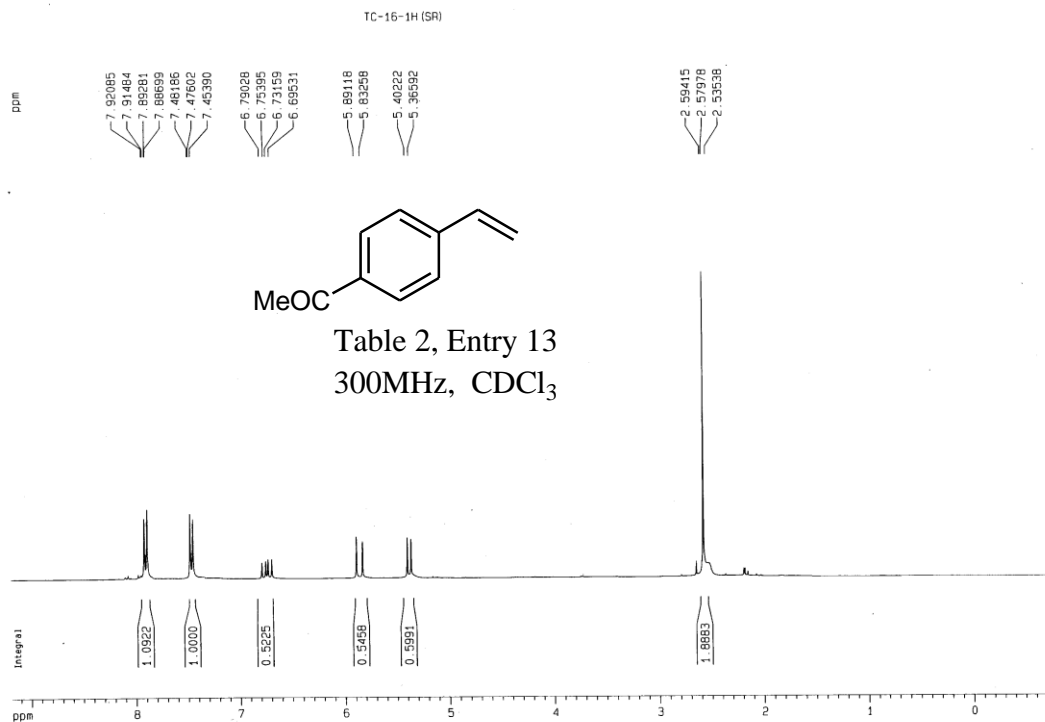
***** CHANNEL f2 *****
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -6.00 dB
PL12 8.00 dB
PL13 12.00 dB
SFO2 300.1312005 MHz

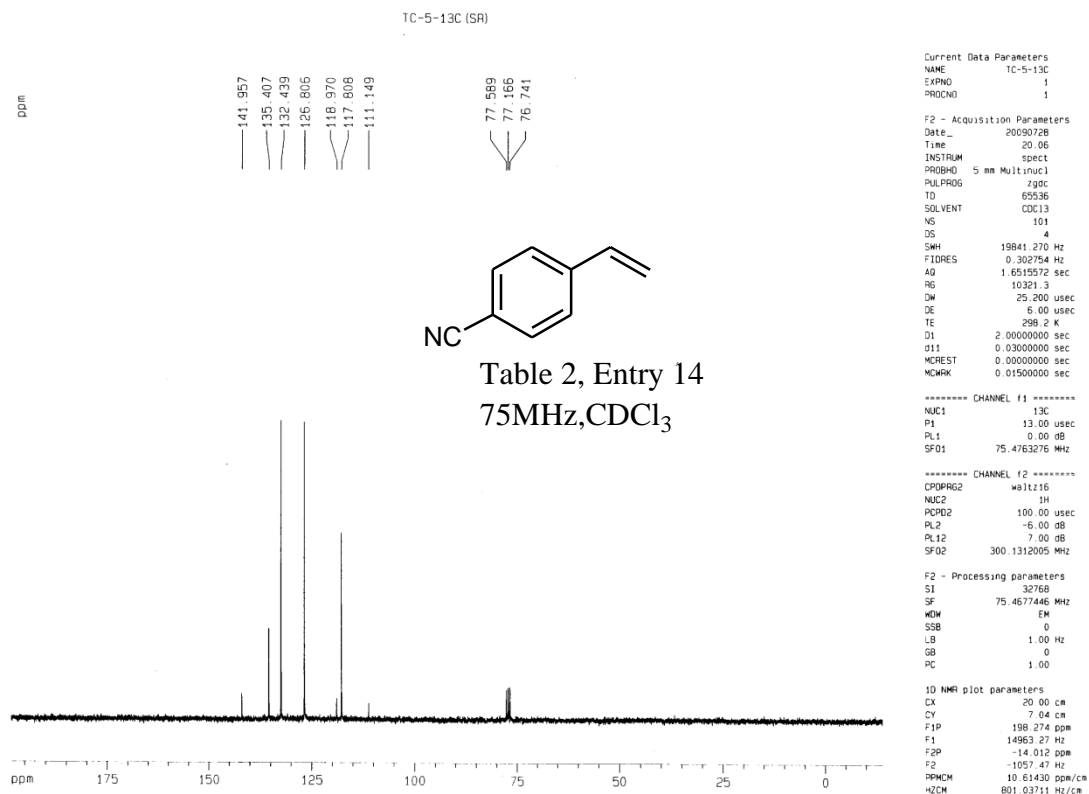
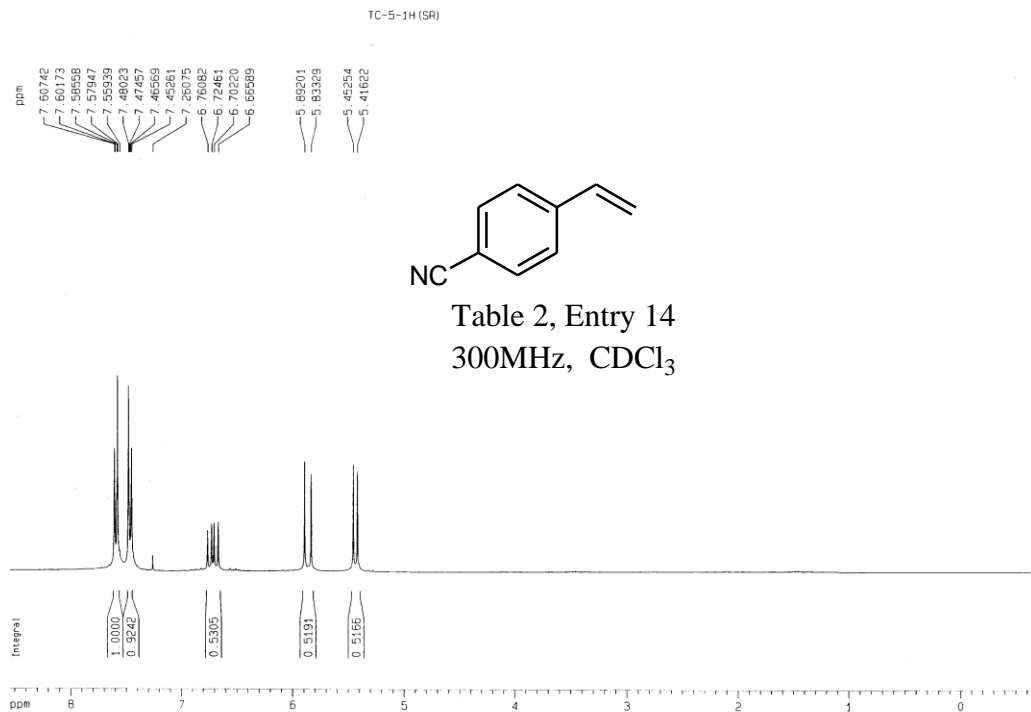
F2 - Processing parameters
S1 32768
SF 75.4677416 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

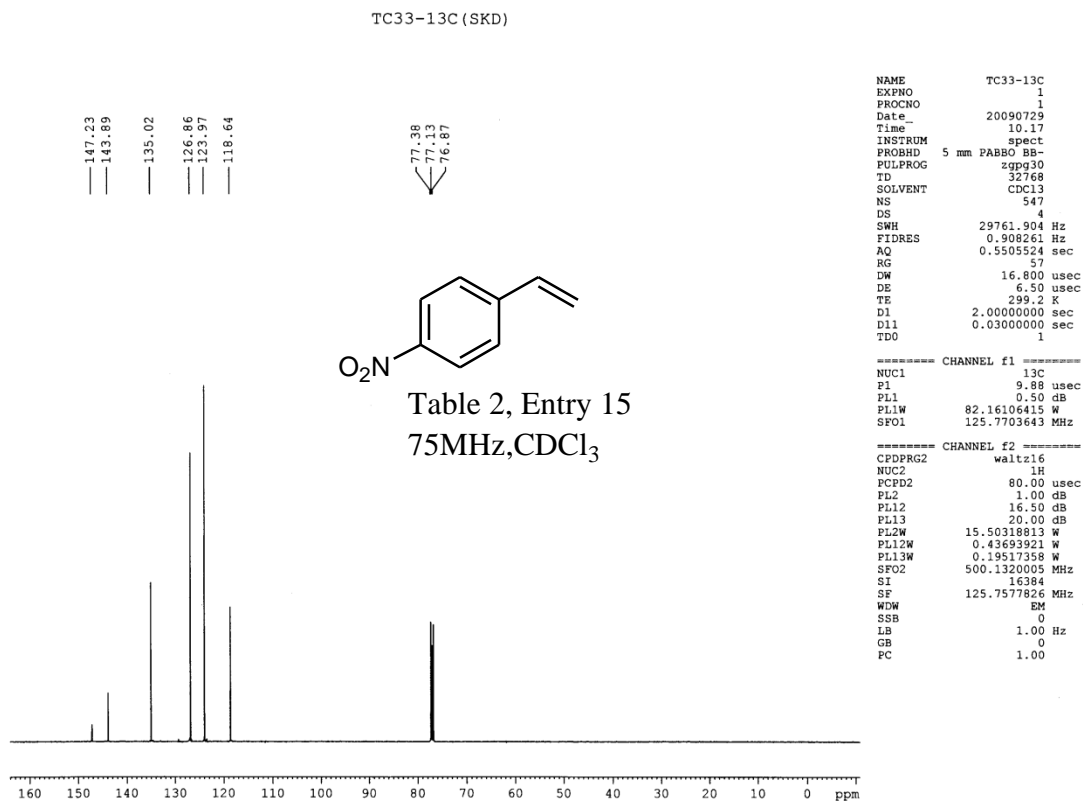
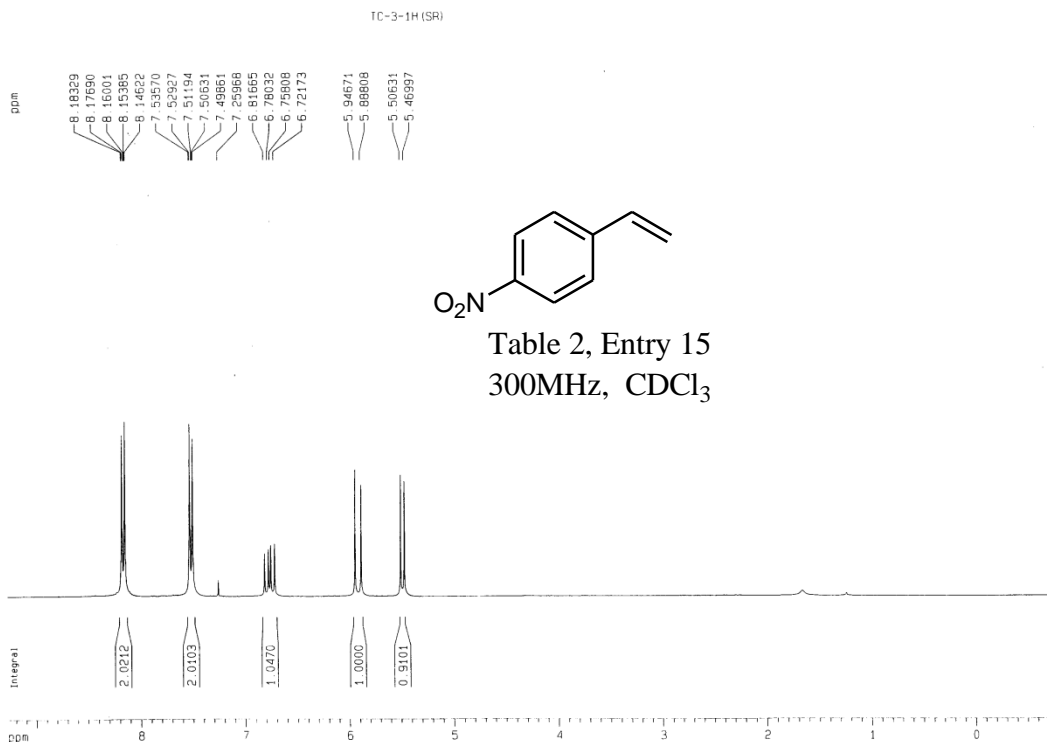
1D NMR plot parameters
CX 20.00 cm
CY 8.05 cm
F1P 184.997 ppm
F1 13961.34 Hz
F2P -7.466 ppm
F2 -563.44 Hz
SFOCM 9.62317 ppm/cm
HZCM 726.23683 Hz/cm

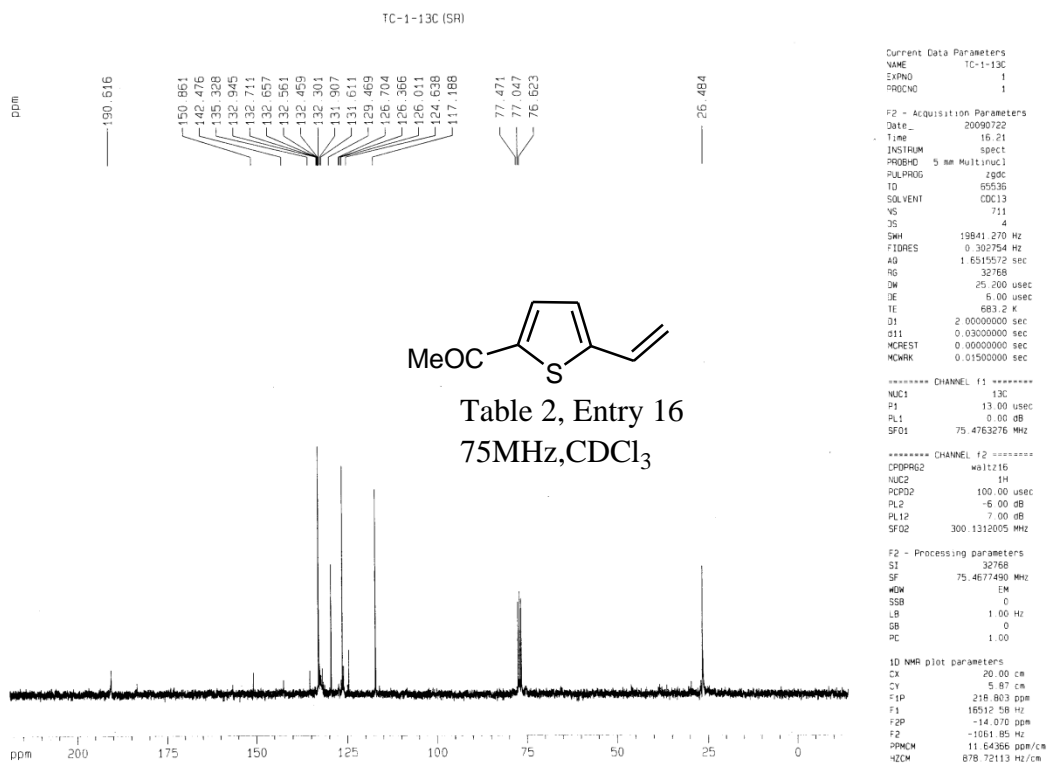
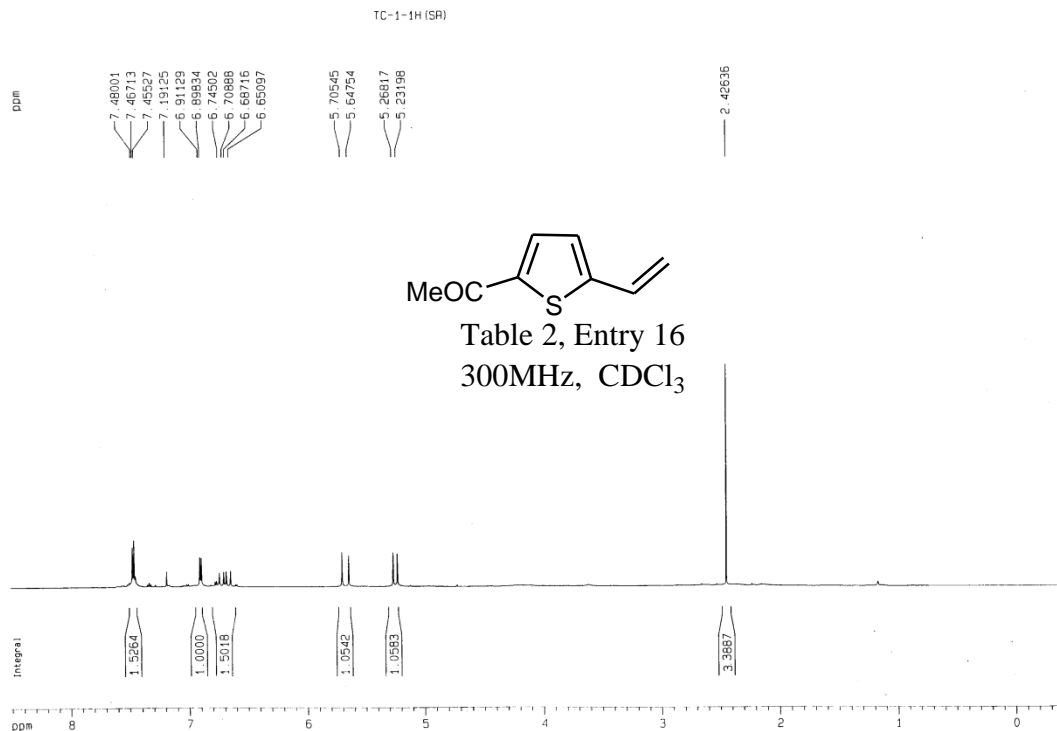


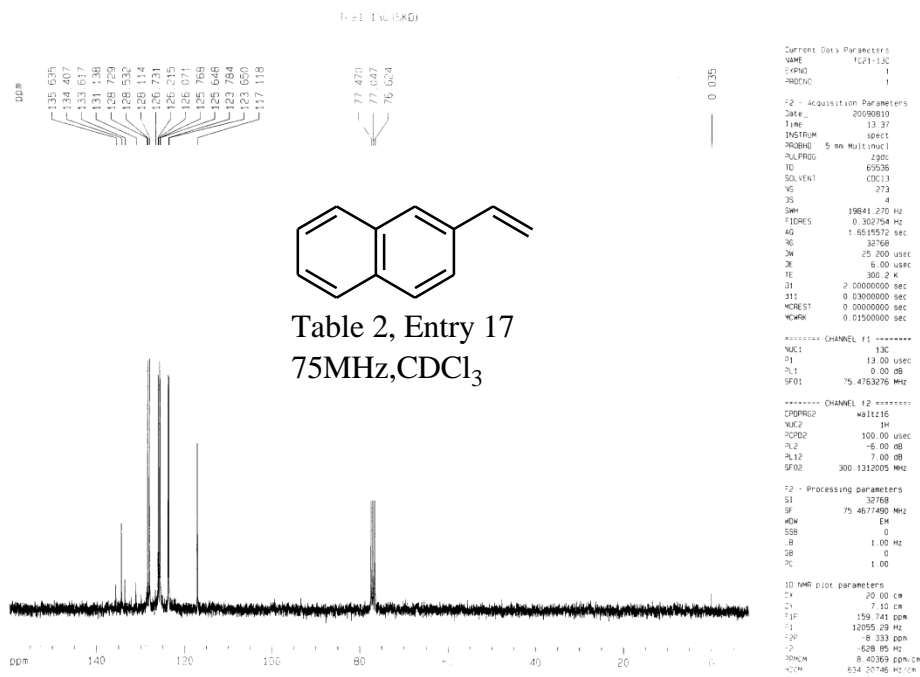
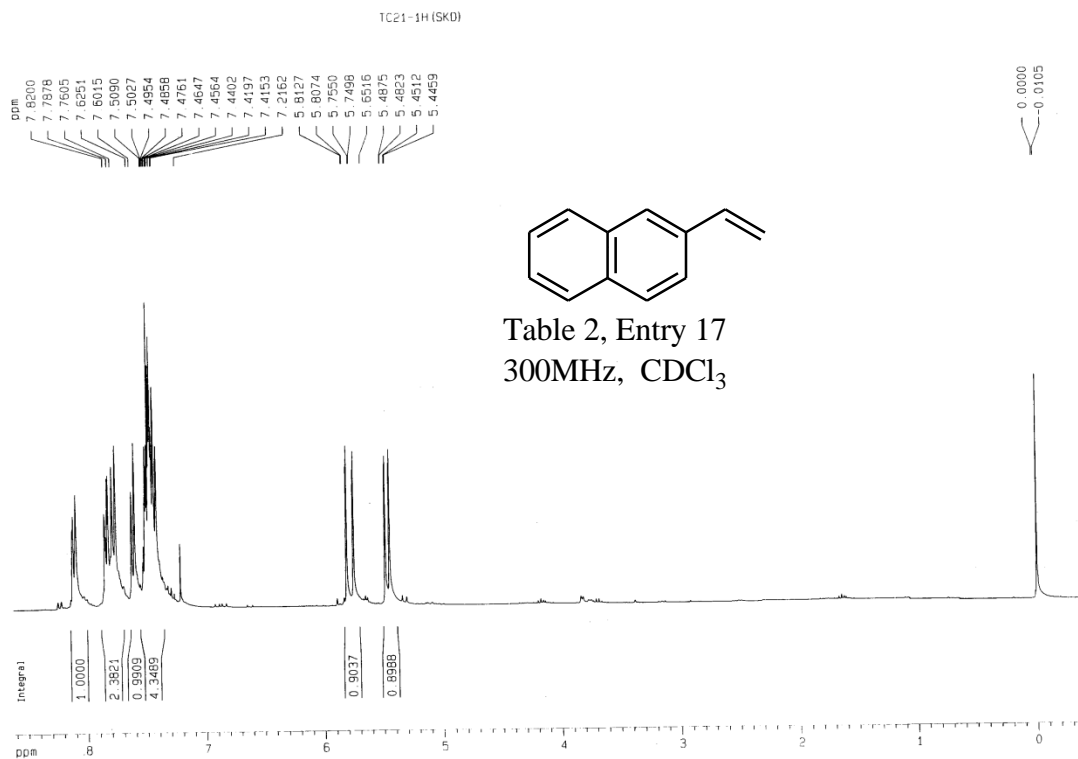


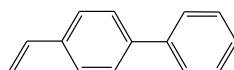
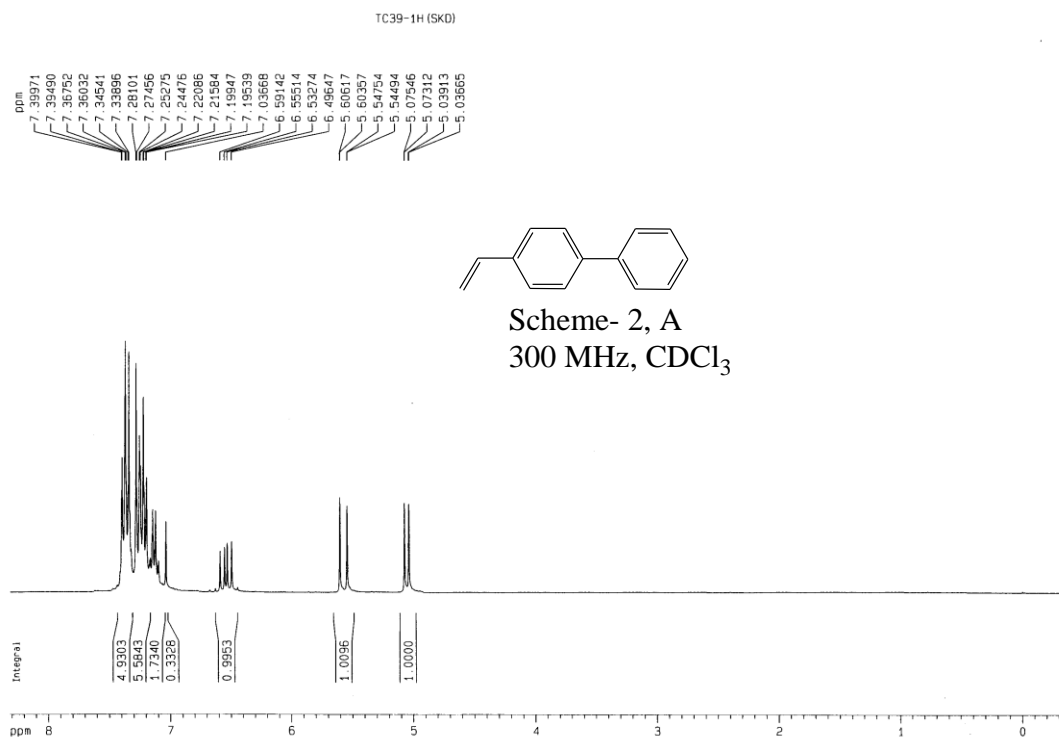




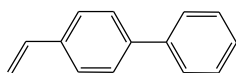
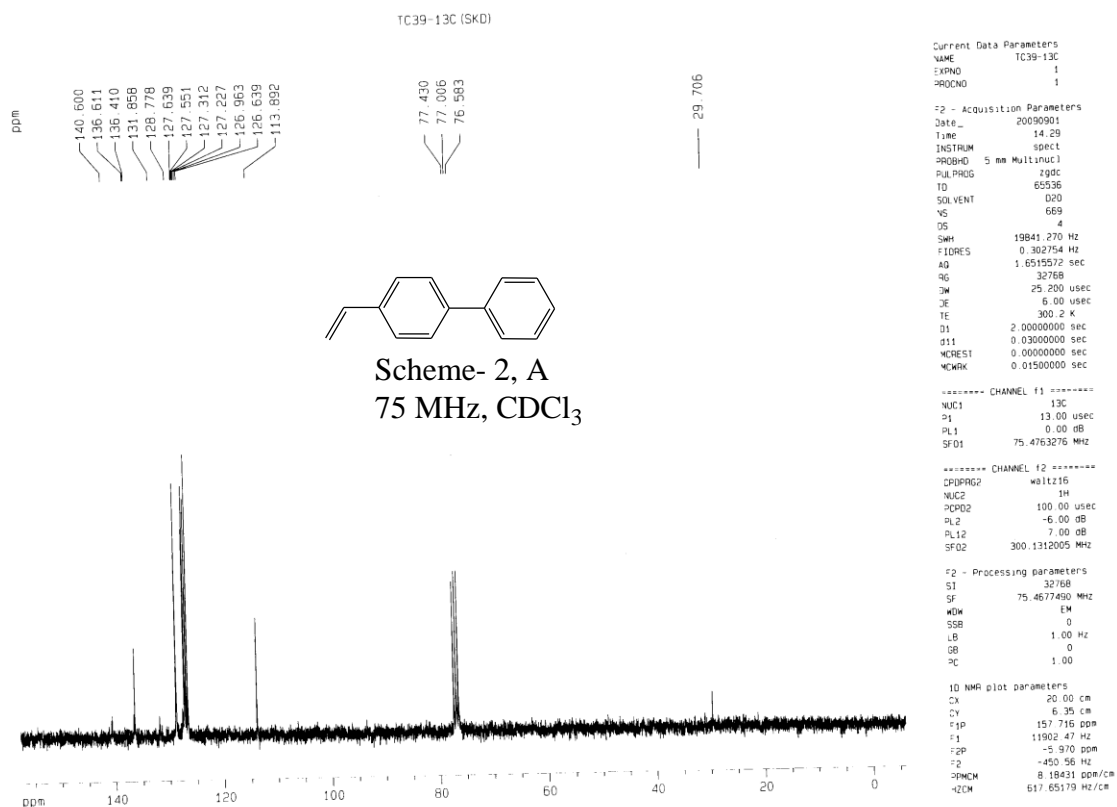








Scheme- 2, A
 300 MHz, CDCl₃



Scheme- 2, A
 75 MHz, CDCl₃

