

**Diastereo- and Enantioselective Copper-Catalyzed Intramolecular Carboamination of Alkenes for the Synthesis of Hexahydro-1*H*-Benz[f]indoles**

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**Supporting Information 2:  $^1\text{H}$  NMR and  $^{13}\text{C}$  NMR of substrates and products**

20100629dibenzyl lactone

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: PROTON

Pulse Sequence: PROTON (s2pul)

Solvent: cdc13

Data collected on: Jun 29 2010

Operator: Chemer

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 2.048 sec

Width 8000.0 Hz

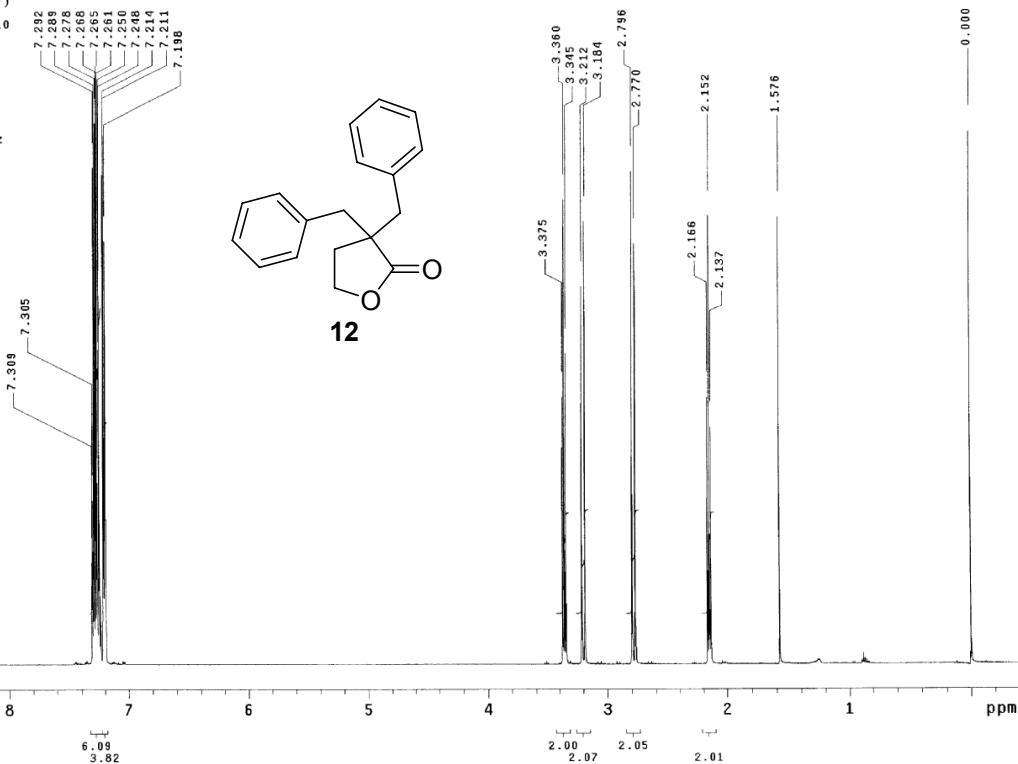
8 repetitions

OBSERVE H1, 499.8984254 MHz

DATA PROCESSING

FT size 32768

Total time 0 min 27 sec



20100629dibenzyl lactoneC13

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)

Solvent: cdc13

Data collected on: Jun 29 2010

Operator: Chemer

Relax. delay 1.000 sec

Pulse 15.0 degrees

Acq. time 1.000 sec

Width 31446.5 Hz

672 repetitions

OBSERVE C13, 125.6995565 MHz

DECOPPLE H1, 499.9008903 MHz

Power 36 dB

CONTRAST 1.0 On

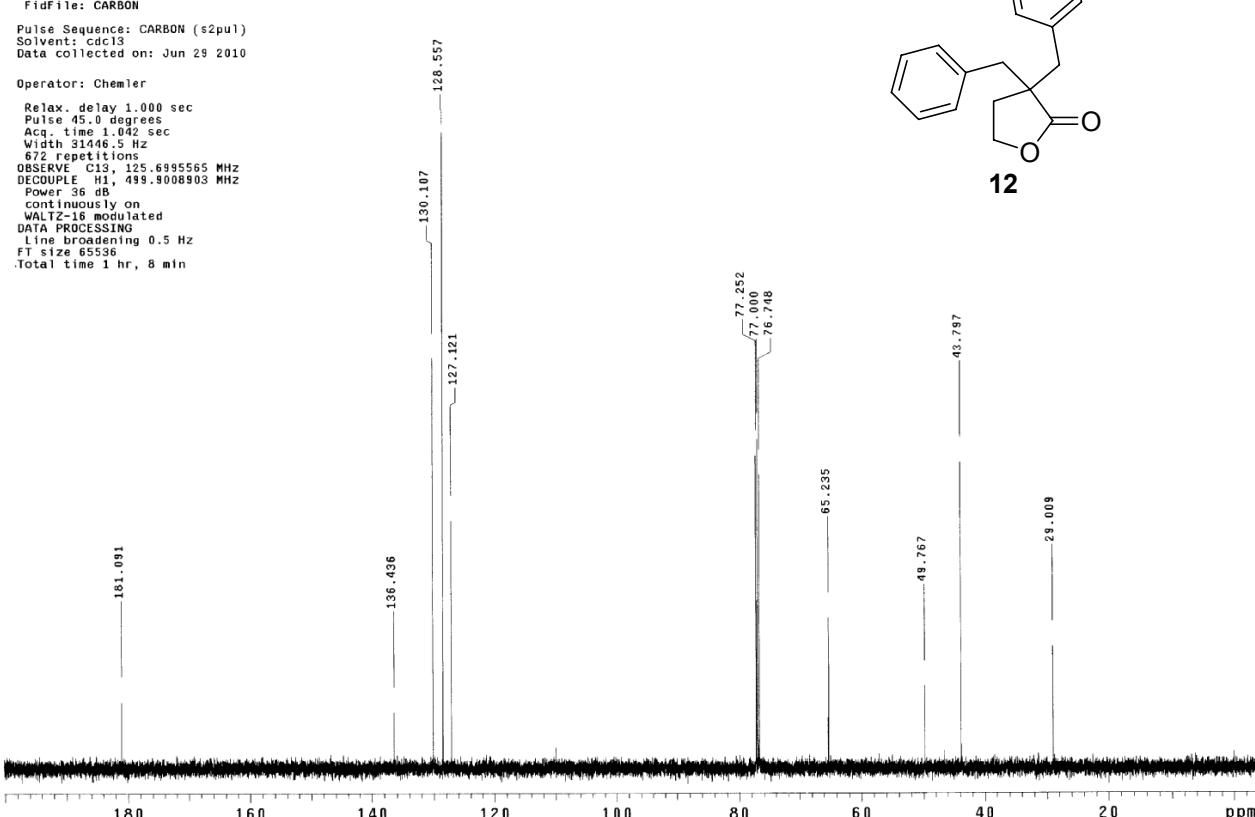
WALTZ-16 modulated

DATA PROCESSING

Line broadening 0.5 Hz

FT size 65536

Total time 1 hr, 8 min

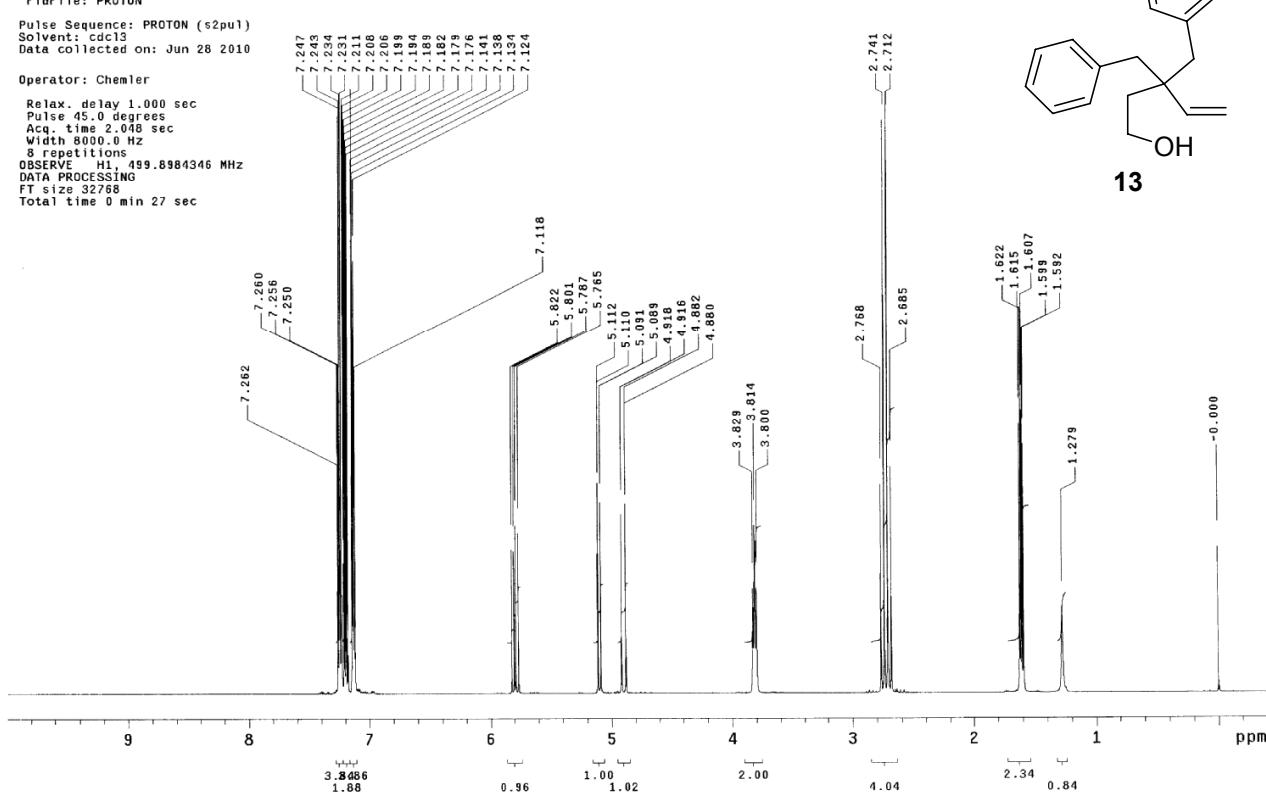


20100628dibenzylalcohol

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: PROTONPulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 28 2010

Operator: Chemler

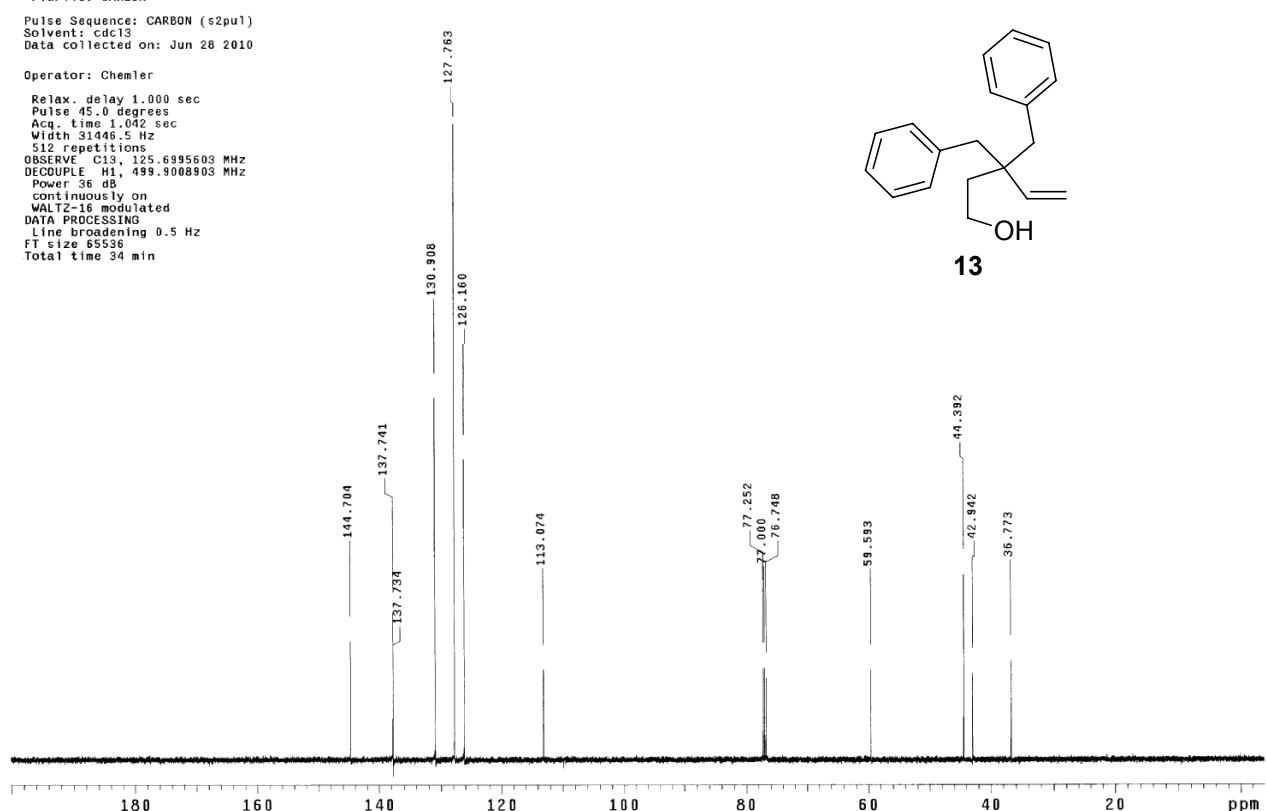
Relax delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984346 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 27 sec

20100628dibenzylalcoholC13

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: CARBONPulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 28 2010

Operator: Chemler

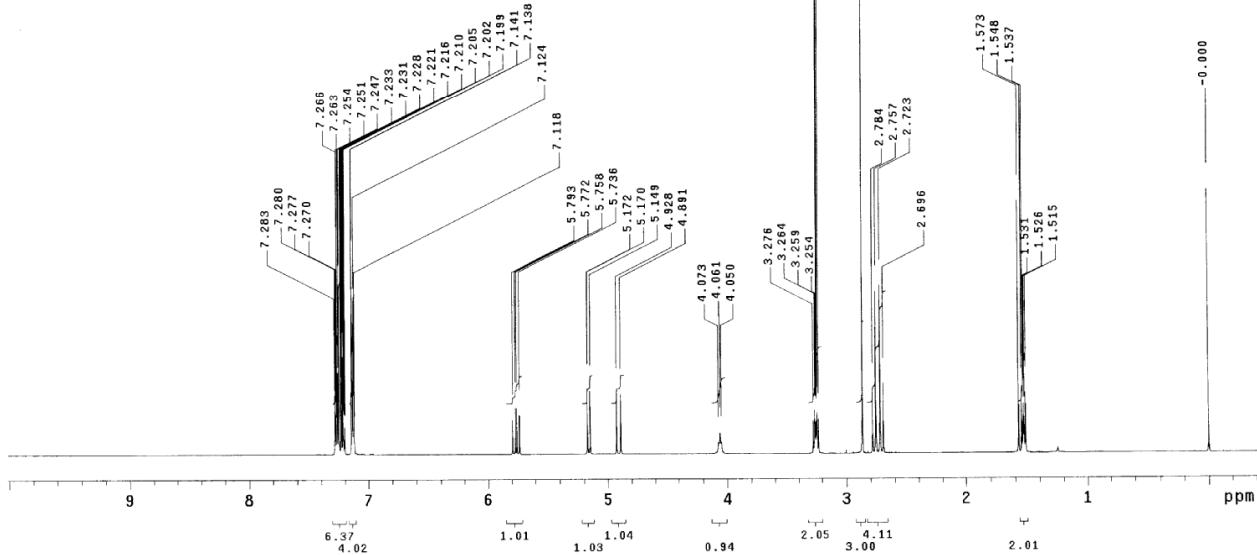
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
512 acquisitions  
OBSERVE C13, 125.6895603 MHz  
DECOUPLE H1, 499.9008803 MHz  
Power 36 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 34 min

20100628Ms dibenzylsubstrate

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: PROTONPulse Sequence: PROTON (s2pul)  
Solvent: cdc13  
Data collected on: Jun 28 2010

Operator: Chemer

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE F1 499.8984258 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 27 sec

20100628Ms dibenzylsubstrateC13

Sample Name:

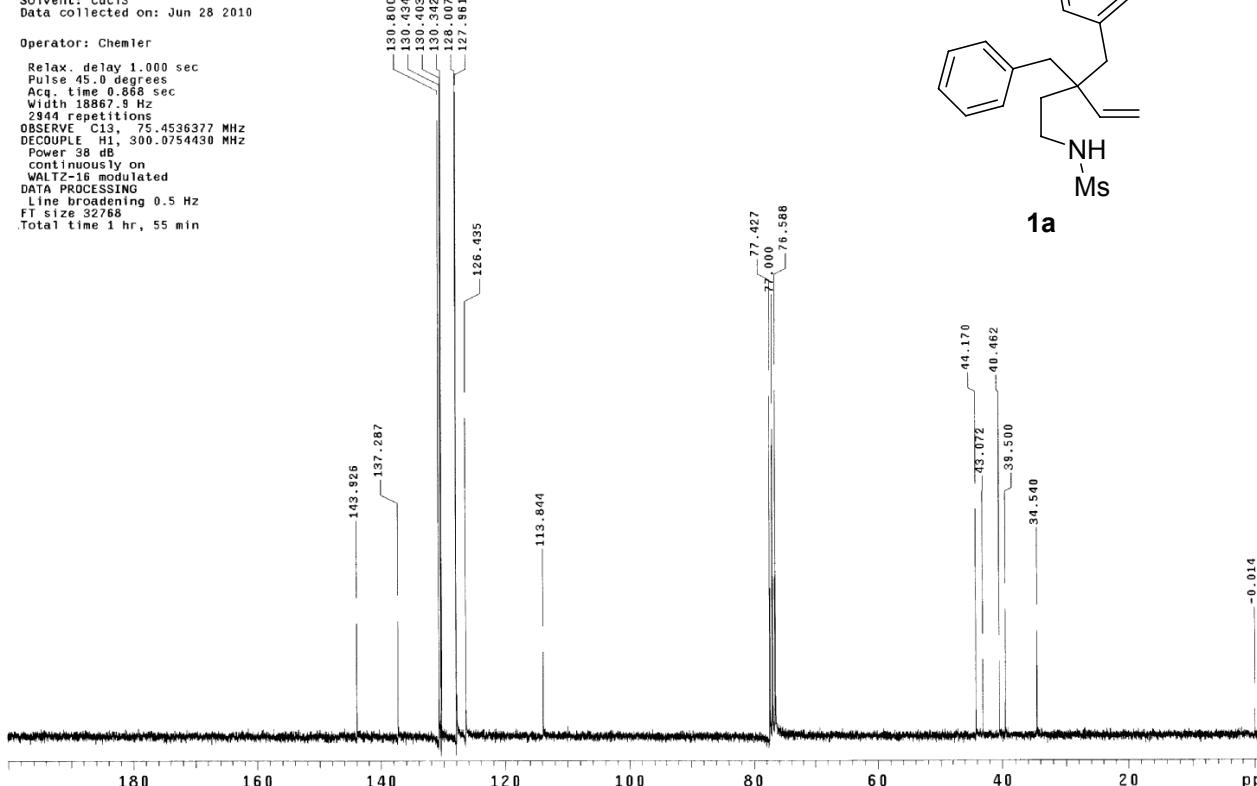
Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdc13  
Data collected on: Jun 28 2010

Operator: Chemer

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.668 sec  
Width 18867.8 Hz  
2944 repetitions  
OBSERVE C13, 75.4536377 MHz  
DECOPPLE H1, 300.0754430 MHz  
Power 38 dB  
CONTINUOUSLY ON  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 1 hr, 55 min

20100708SESdibenzylsubstrate

Sample Name:

Data Collected on:  
chemmrs500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: PROTON

Pulse Sequence: PROTON (s2pul)

Solvent: cdc13

Data collected on: Jul 8 2010

Operator: Chemer

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 2.048 sec

Width 0.00 Hz

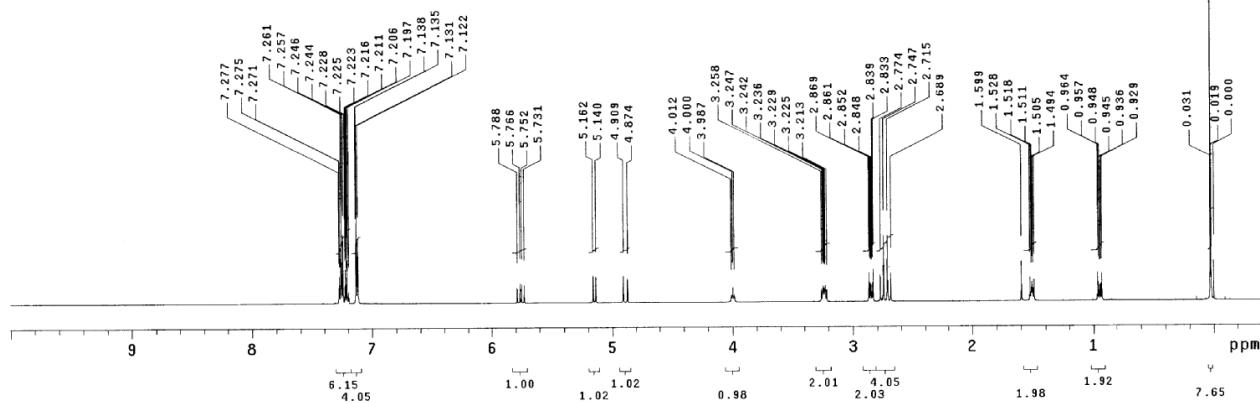
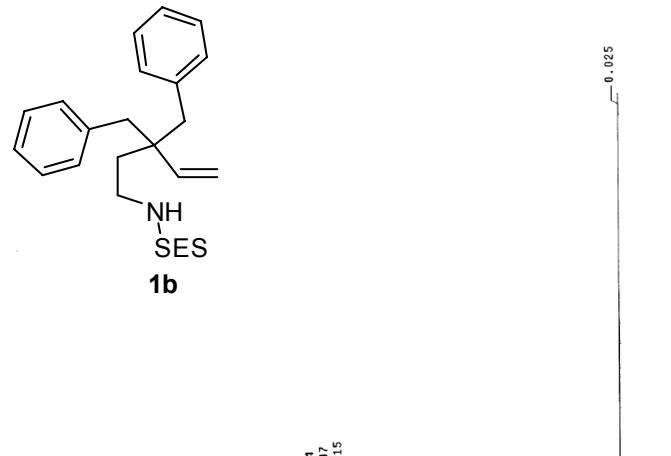
8 scans/point

OBSERVE H1, 499.8984293 MHz

DATA PROCESSING

FT size 32768

Total time 0 min 25 sec



20100708SESdibenzylsubstrateC13

Sample Name:

Data Collected on:  
chemmrs500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)

Solvent: cdc13

Data collected on: Jul 8 2010

Operator: Chemer

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 0.042 sec

Width 51446.0 Hz

768 repetitions

OBSERVE C13, 125.6995594 MHz

DECOPPLE H1, 499.9008903 MHz

Power 36 dB

continuously on

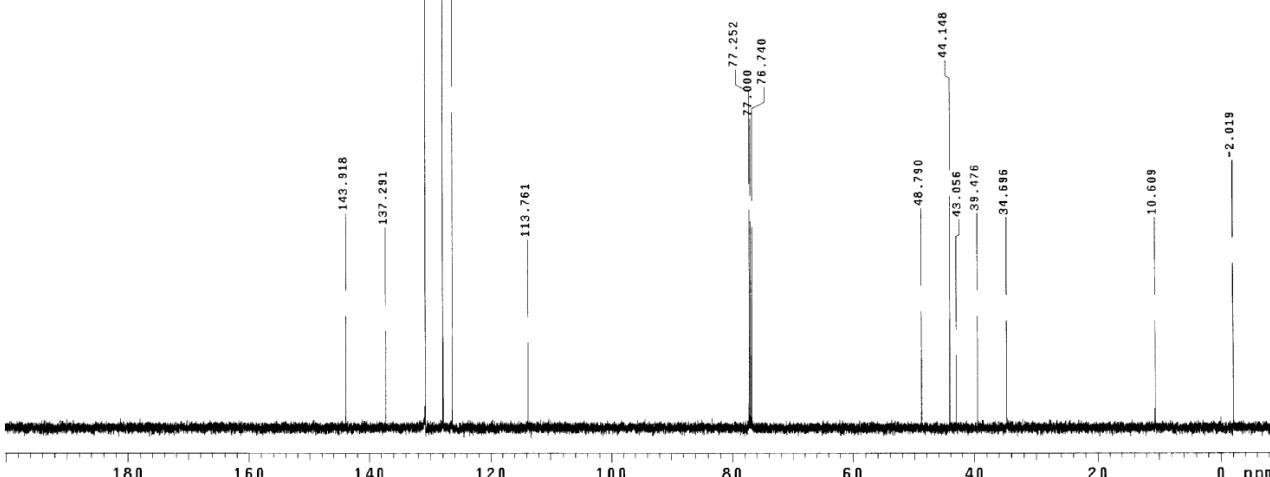
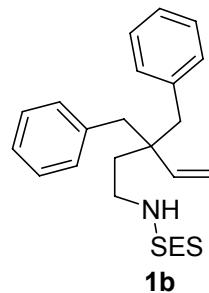
WALTZ-16 modulated

DATA PROCESSING

Line broadening 0.5 Hz

FT size 65536

Total time 1 hr, 2 min

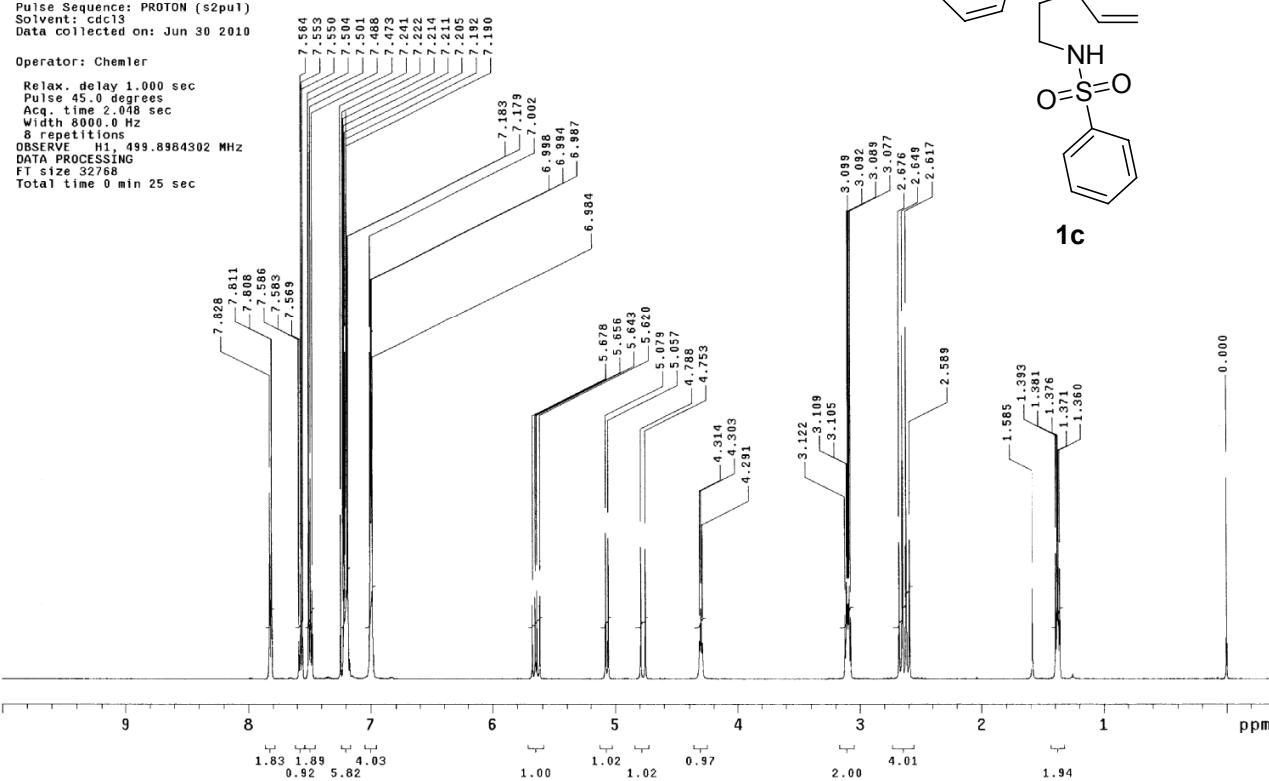


20100630Bssubstrate  
 Sample Name:  
 Data Collected on:  
 chemmr500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
 Solvent: cdc13  
 Data collected on: Jun 30 2010

Operator: Chemler

Relax, delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984302 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



20100628dibenzylalcoholC13

Sample Name:  
 Data Collected on:  
 chemmr500.chem.buffalo.edu-inova500  
 Archive directory:

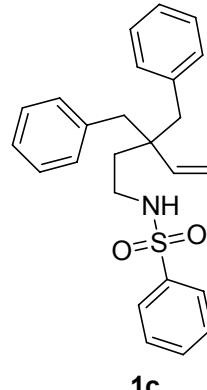
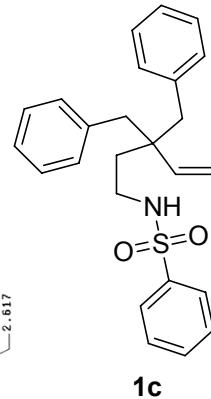
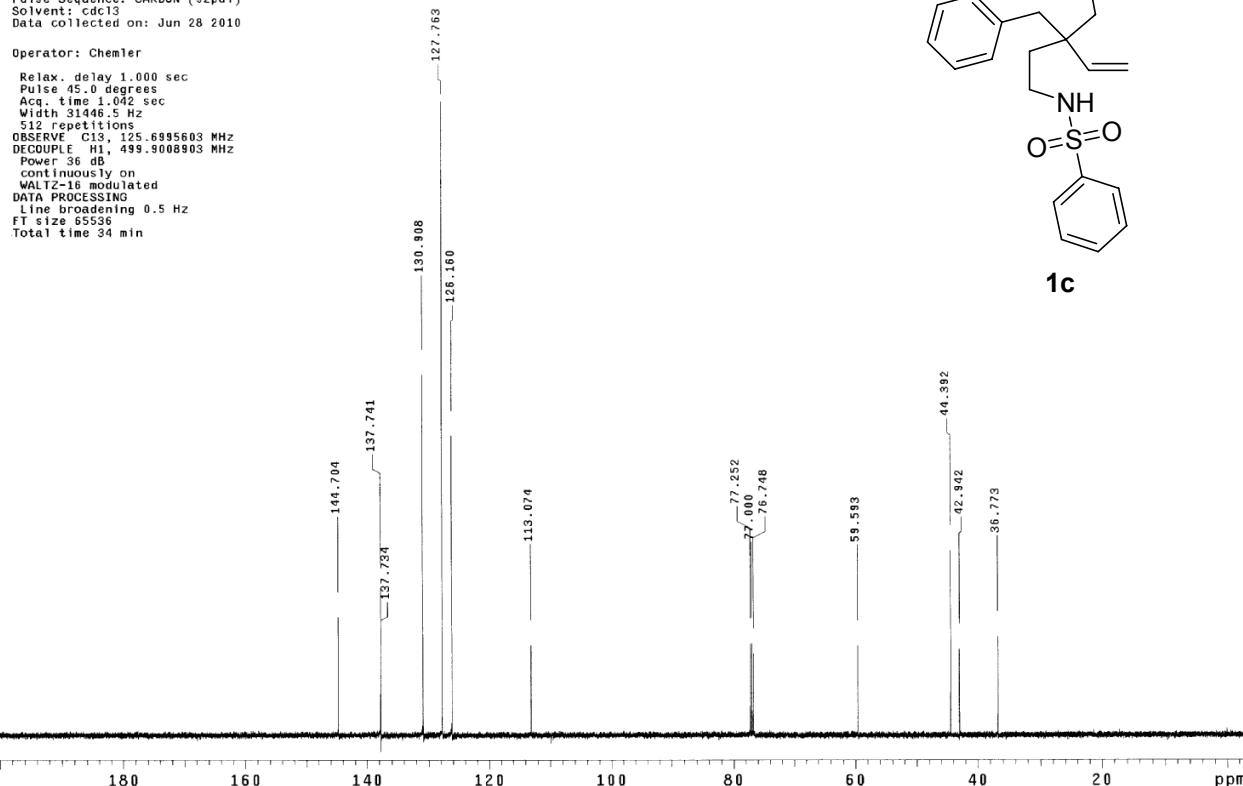
Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
 Solvent: cdc13  
 Data collected on: Jun 28 2010

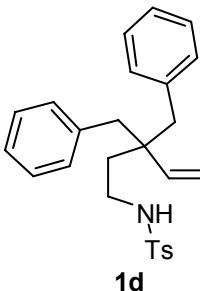
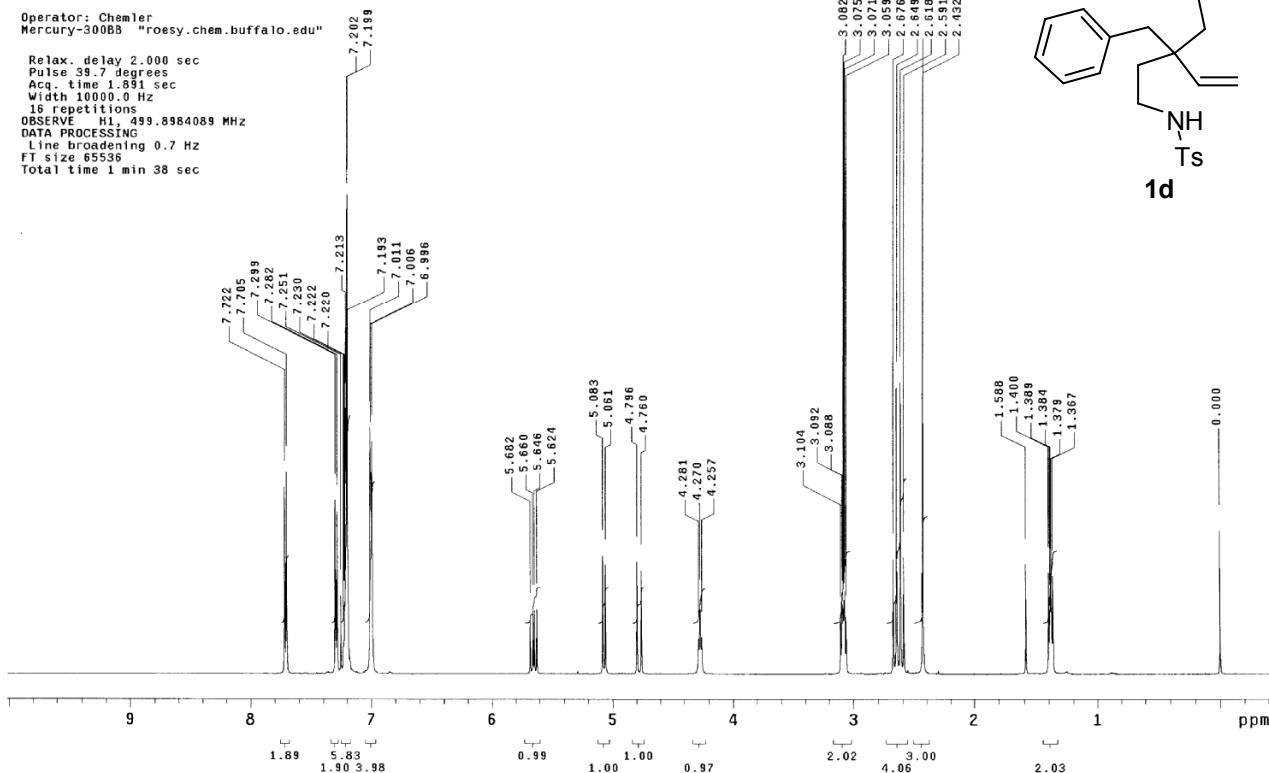
Operator: Chemler

Relax, delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 1.042 sec  
 Width 31446.5 Hz  
 512 repetitions  
 OBSERVE C13, 125.6995603 MHz  
 DECOUPLE H1, 499.9008903 MHz  
 Power 36 dB  
 continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 65536  
 Total time 34 min



20090921dibenzylsubstrate  
 Sample Name:  
 Archive directory:  
 Sample directory:  
 FidFile: HI  
 Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Data collected on: Sep 21 2009  
 Operator: Chemler  
 Mercury-300B8 "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec  
 Pulse 39.7 degrees  
 Acq. time 1.891 sec  
 Width 1000.0 Hz  
 16 repetitions  
 OBSERVE frequency 499.8984089 MHz  
 DATA PROCESSING  
 Line broadening 0.7 Hz  
 FT size 65536  
 Total time 1 min 38 sec

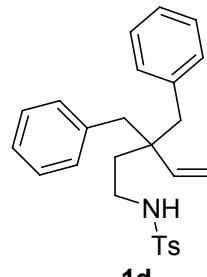
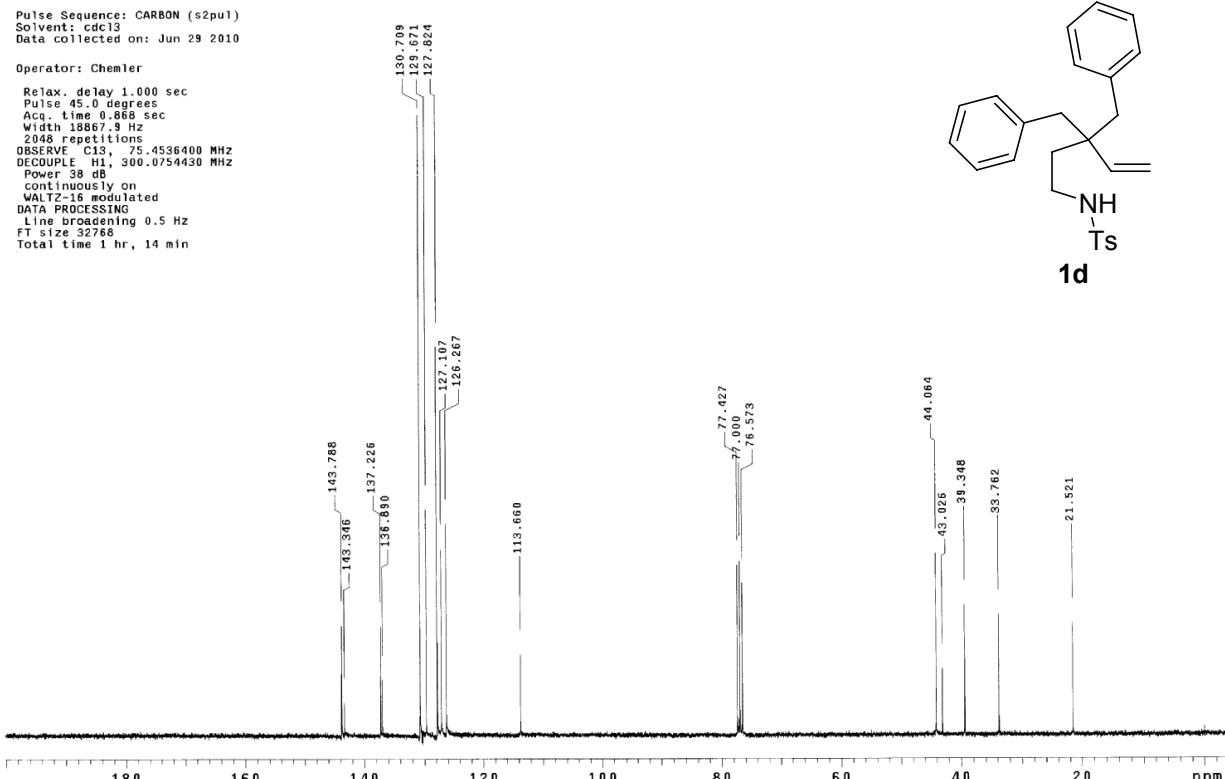


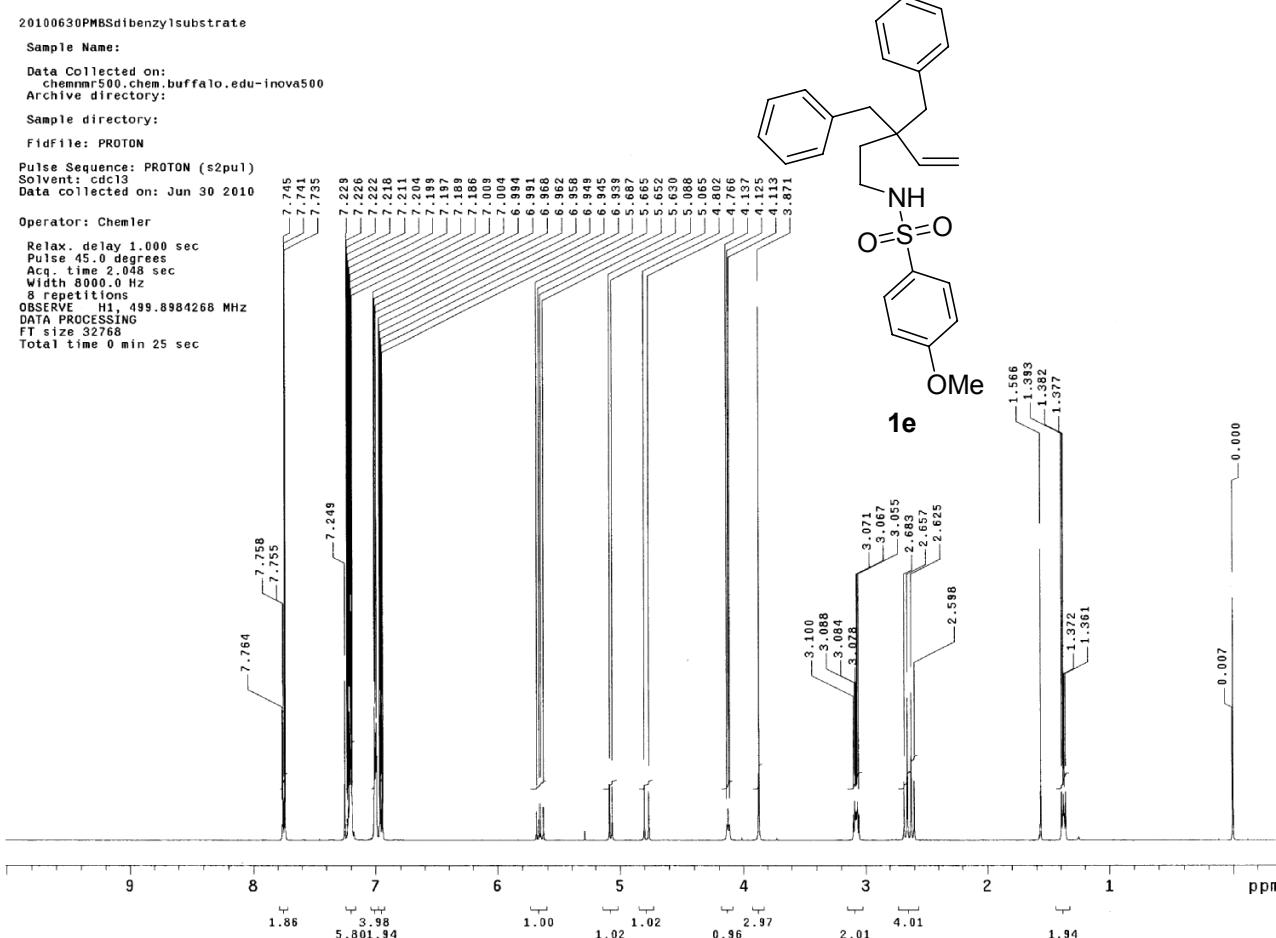
20100629dibenzylsubstrateC13

Sample Name:  
 Data Collected on:  
 roesy.chem.buffalo.edu-mercury300  
 Archive directory:

Sample directory:  
 Fidfile: CARBON  
 Pulse Sequence: CARBON (s2pul)  
 Solvent: cdcl<sub>3</sub>  
 Data collected on: Jun 29 2010

Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.886 sec  
 Width 1886.0 Hz  
 2048 repetitions  
 OBSERVE C13, 75.4536400 MHz  
 DECOUPLE H1, 300.0754430 MHz  
 Power 38 dB  
 Power 38 dB  
 Continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 1 hr, 14 min





20100701PCBSdibenzylsubstrate

Sample Name:

Data Collected on:  
chemmrs500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)

Solvent: cdcl3

Data collected on: Jul 1 2010

Operator: Chemler

Relax. delay 1.000 sec

Pulse 45.0 degrees

Acq. time 2.048 sec

Width 8000.0 Hz

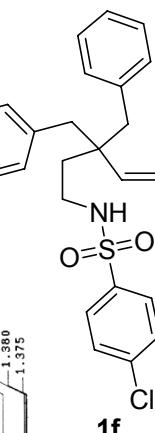
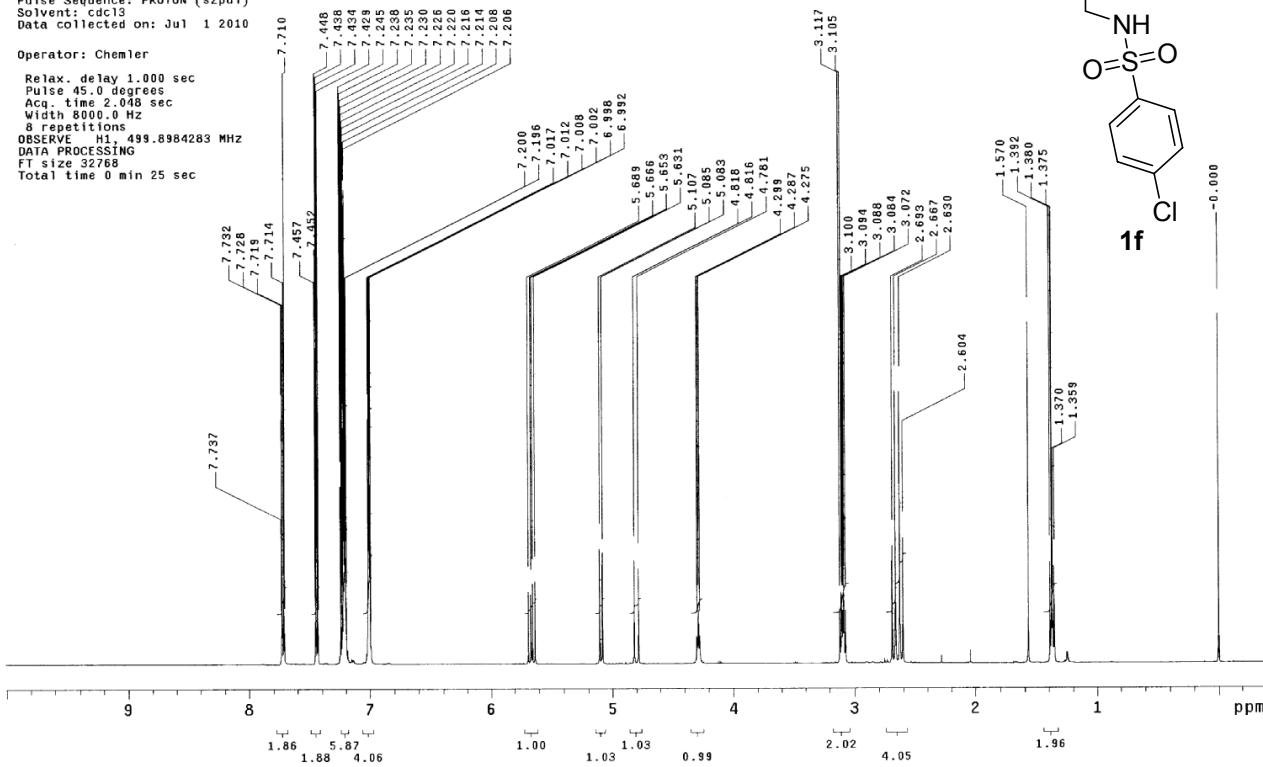
8 repetitions

OBSERVE H1, 499.8984283 MHz

DATA PROCESSING

FT size 32768

Total time 0 min 25 sec



20200701PCBSdibenzylsubstrateC13

Sample Name:

Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 1 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees

Acq. time 0.868 sec

Width 18867.9 Hz

6864 repetitions

OBSERVE C13, 75.4536400 MHz

DECOPLE H1, 300.0754430 MHz

Power 38 dB

Contrast w1 on

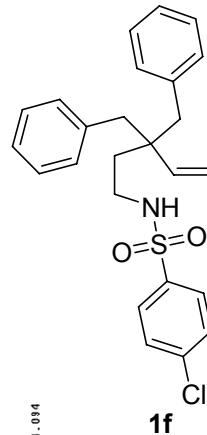
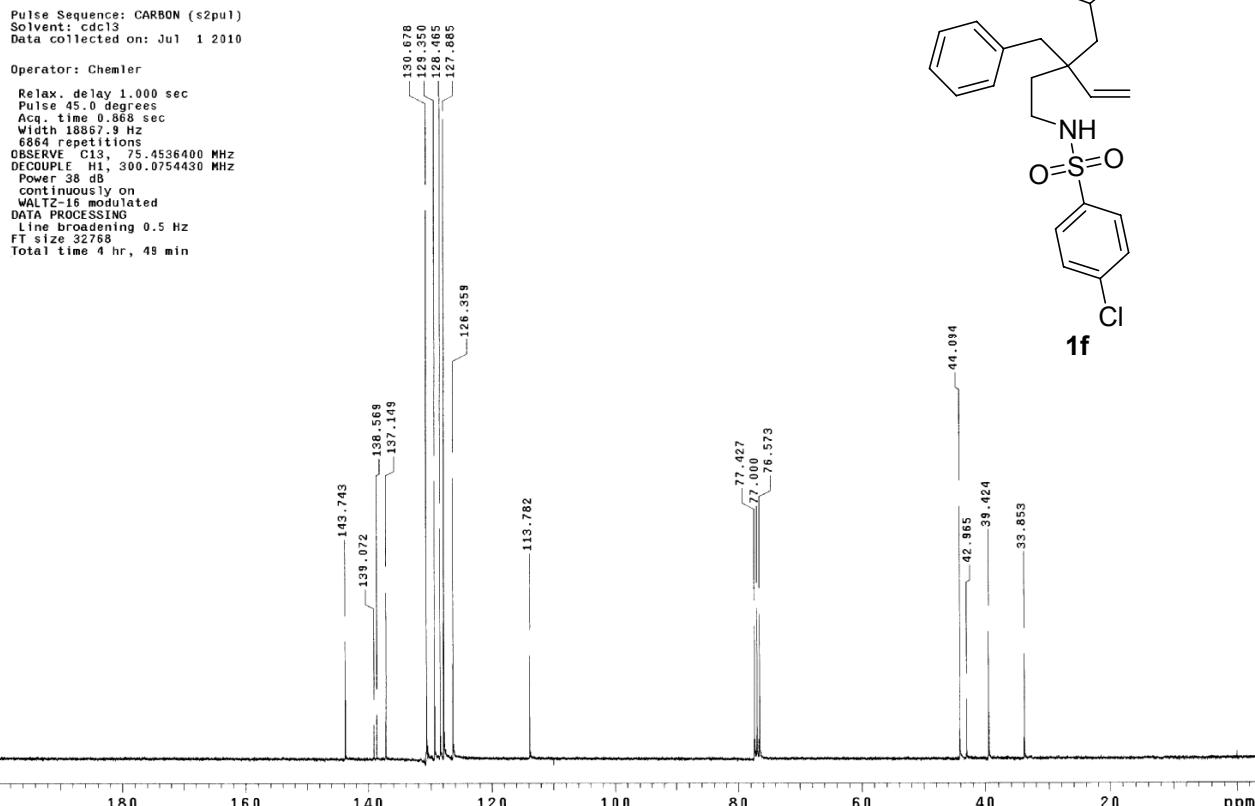
WALTZ-16 modulated

DATA PROCESSING

Line broadening 0.5 Hz

FT size 32768

Total time 4 hr, 48 min





## 20091030difluorobenzylbutyrolactone

Sample Name:

Archive directory:

Sample directory:

FidFile: HI

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 30 2009

Operator: Chemler  
Mercury-300B8 "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 39.7 degrees

Acq. time 1.891 sec

Width 10000.0 Hz

16 repetitions

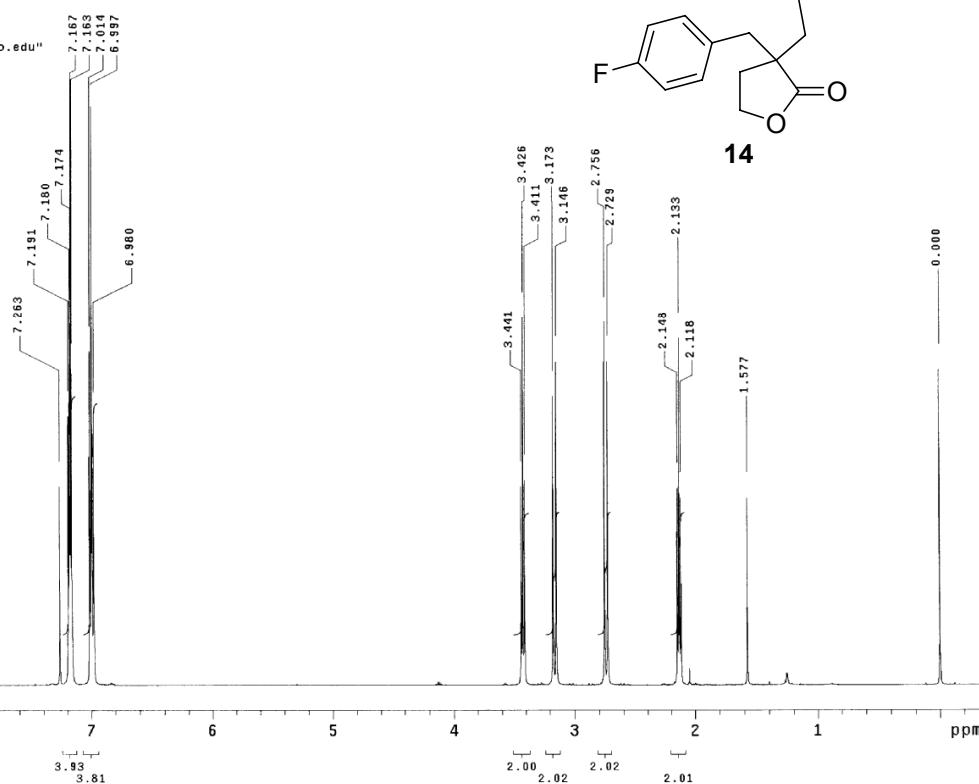
OBSERVE 11.499.8984013 MHz

DATA PROCESSING

Line broadening 0.7 Hz

FT size 65536

Total time 1 min 38 sec



## 20091031difluorobenzylbutyrolactoneC13

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 31 2009

Operator: Chemler  
Mercury-300B8 "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.706 sec

Width 18761.7 Hz

748 repetitions

OBSERVE C13, 75.4536598 MHz

DECIMPL 1000.000.0754431 MHz

Power 1023 dB

continuously on

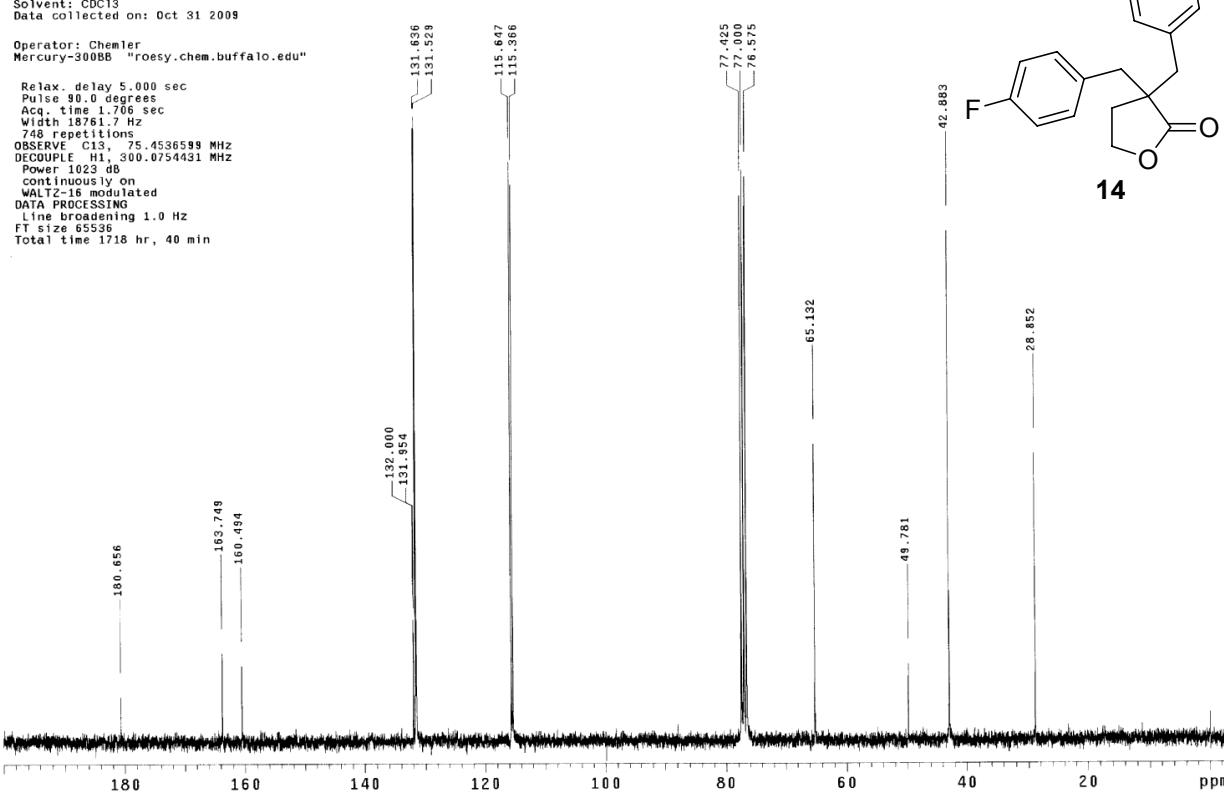
WALTZ-16 modulated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 1718 hr, 40 min



20100705difluorobenzylalcoholalkene

Sample Name:

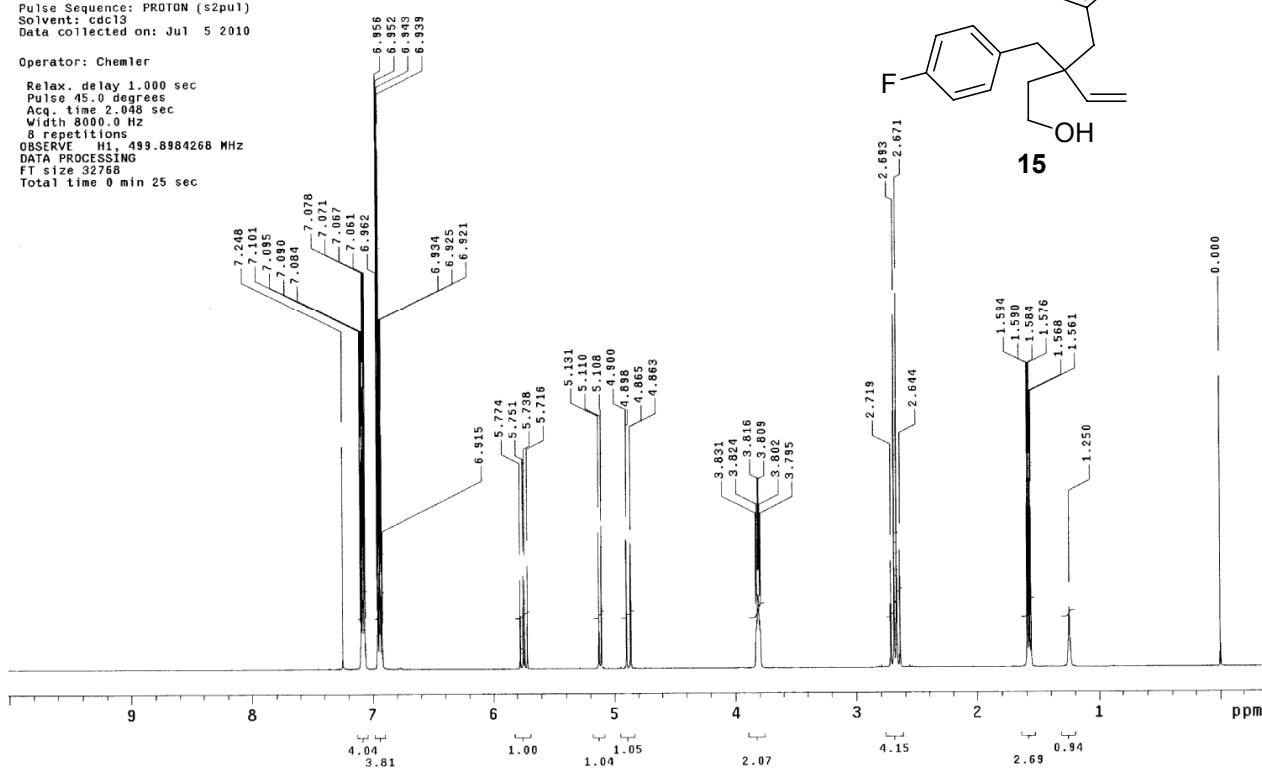
Data Collected on:  
chemnmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:  
FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 5 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984266 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec



20091105difluorobenzylalkenealcoholC13

Sample Name:

Archive directory:

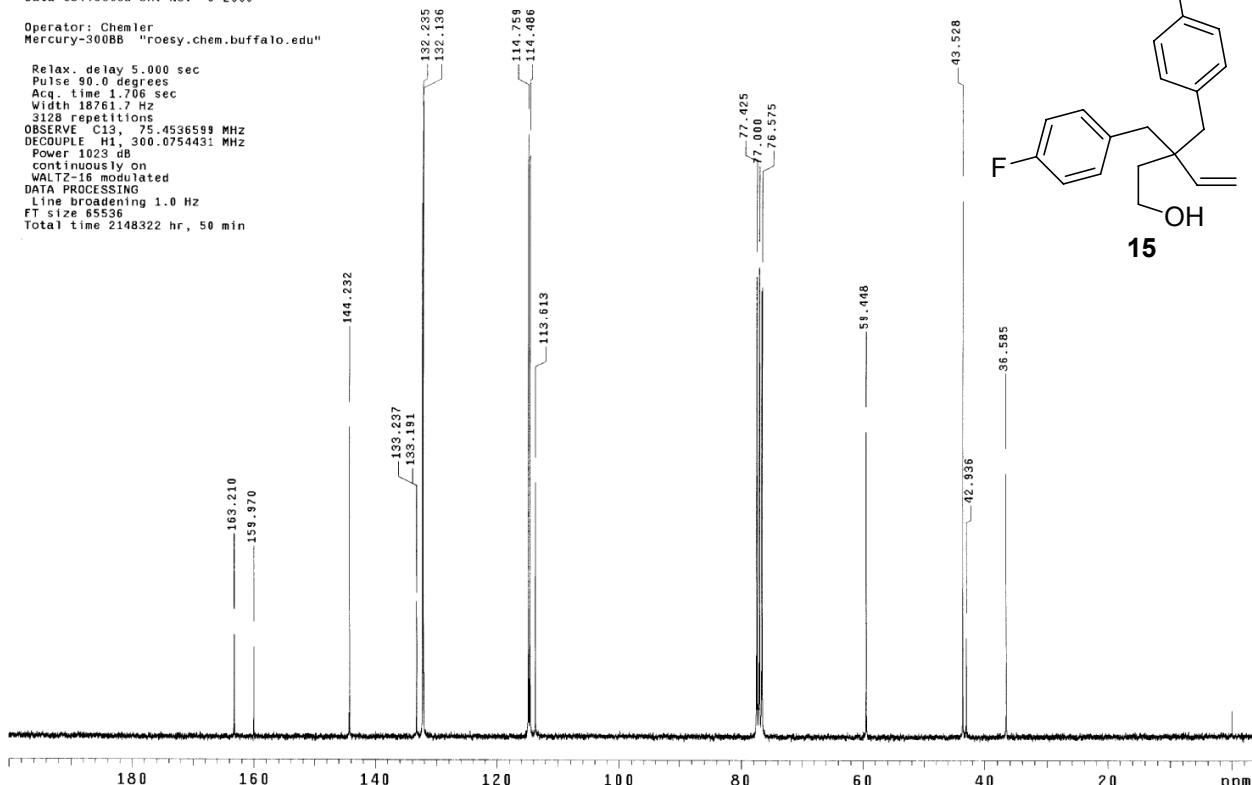
Sample directory:

FidFile: std13c

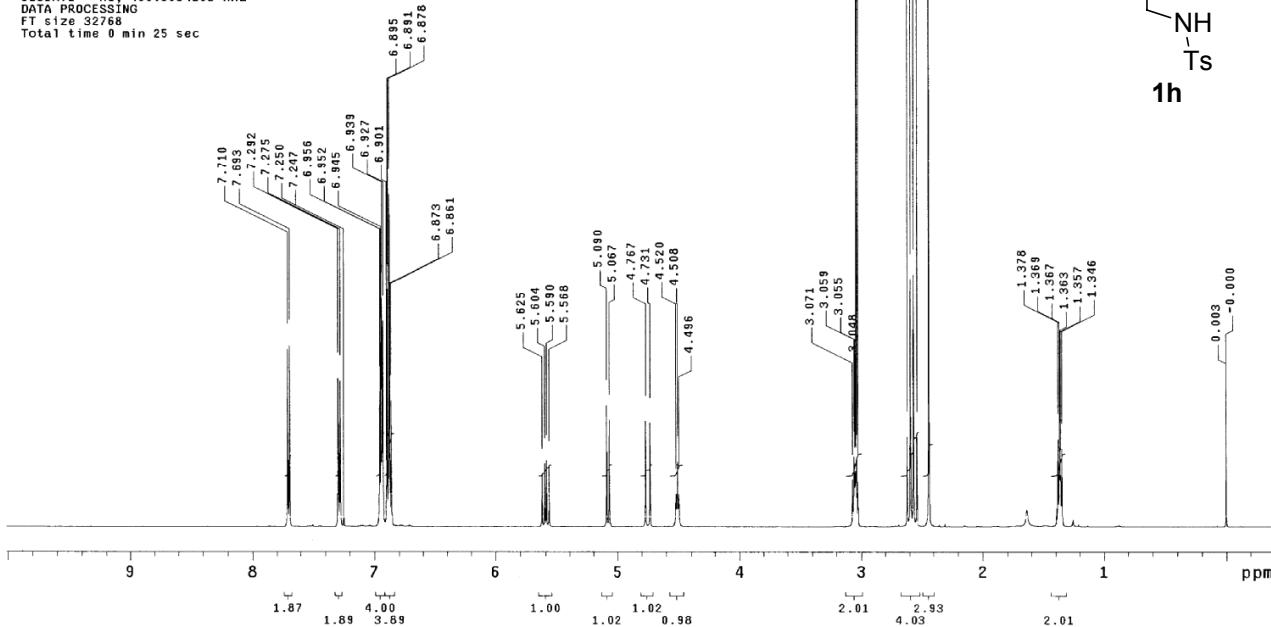
Pulse Sequence: std13c (s2pul)  
Solvent: CDCl3  
Data collected on: Nov 5 2009

Operator: Chemler  
Mercury-300BB "roesy.chem.buffalo.edu"

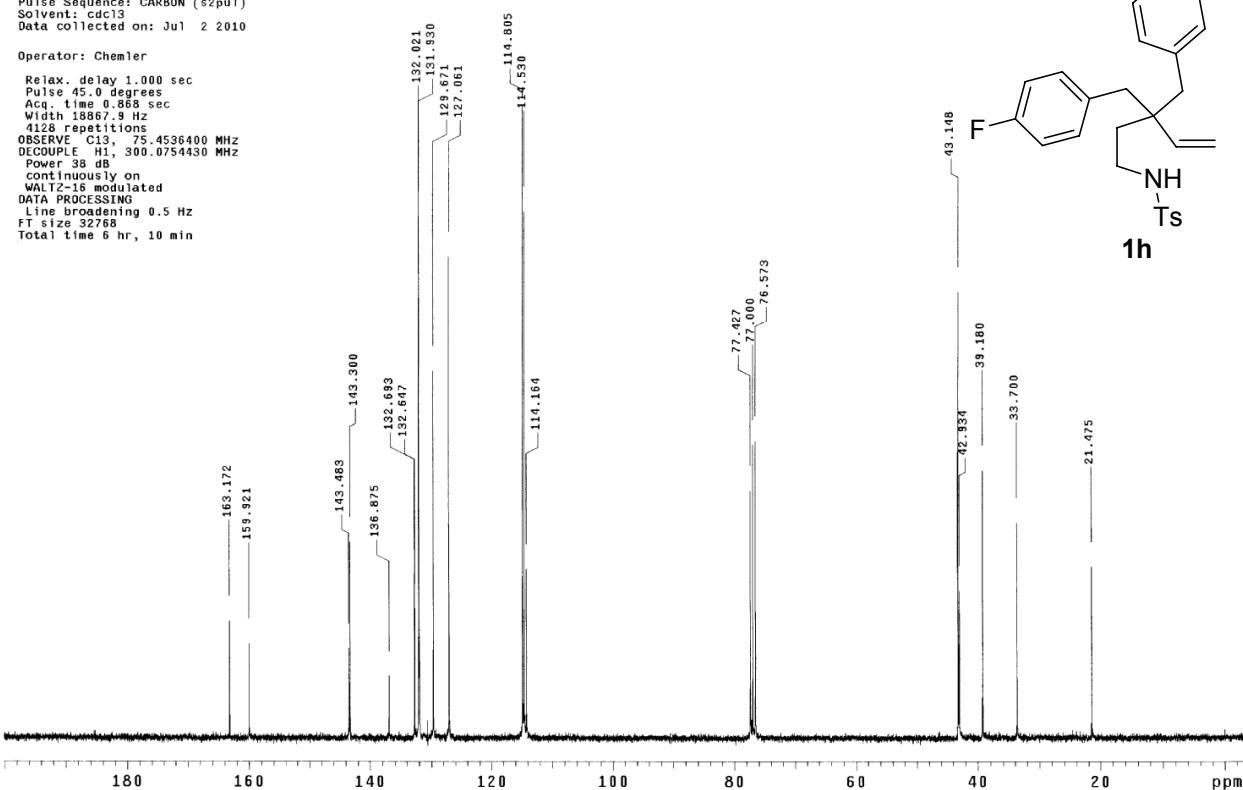
Relax. delay 5.000 sec  
Pulse 90.0 degrees  
Acq. time 1.706 sec  
Width 18761.7 Hz  
32768 repetitions  
OBSERVE C13, 75.4536598 MHz  
DECOUPLE H1, 300.0754431 MHz  
Power 1023 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 2148322 hr, 50 min



20100702difluorosubstrate  
 Sample Name:  
 Data Collected on: chemmrs500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 FidFile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdc13  
 Data collected on: Jul 2 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.000 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984263 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



20100702difluorosubstrateC13  
 Sample Name:  
 Data Collected on: roesy.chem.buffalo.edu-mercury300  
 Archive directory:  
 Sample directory:  
 FidFile: CARBON  
 Pulse Sequence: CARBON (s2pul)  
 Solvent: cdc13  
 Data collected on: Jul 2 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.868 sec  
 Width 18867.9 Hz  
 4128 repetitions  
 OBSERVE C13, 75.4536400 MHz  
 DECIMATE 1, 300.0754430 MHz  
 Power 88 dB  
 Continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 6 hr, 10 min



20100610diomethylactone

Sample Name:

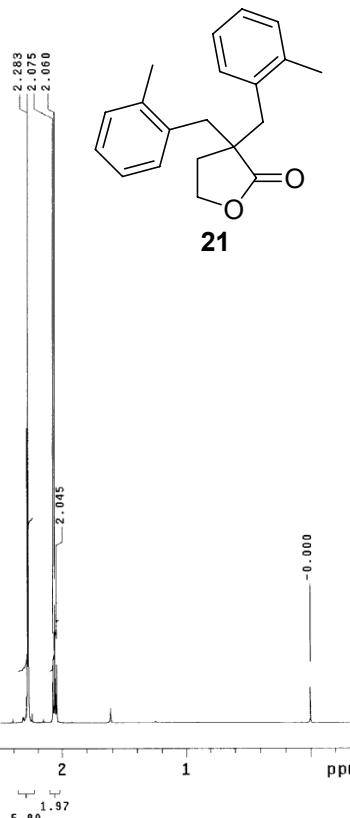
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 10 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 scans  
OBSERVE H1, 499.8984307 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 27 sec

20100610diomethylactoneC13

Sample Name:

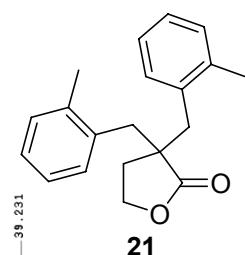
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 10 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
128 repetitions  
OBSERVE C13, 125.6895603 MHz  
DECOUPLE H1, 499.8008903 MHz  
Power 36 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 13 min

20091104diomethylalkenealcohol

Sample Name:

Archive directory:

Sample directory:

FidFile: H1

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Data collected on: Nov 4 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 39.7 degrees

Acq. time 1.891 sec

Width 10000.0 Hz

16 repetitions

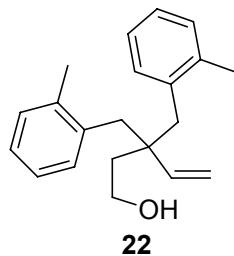
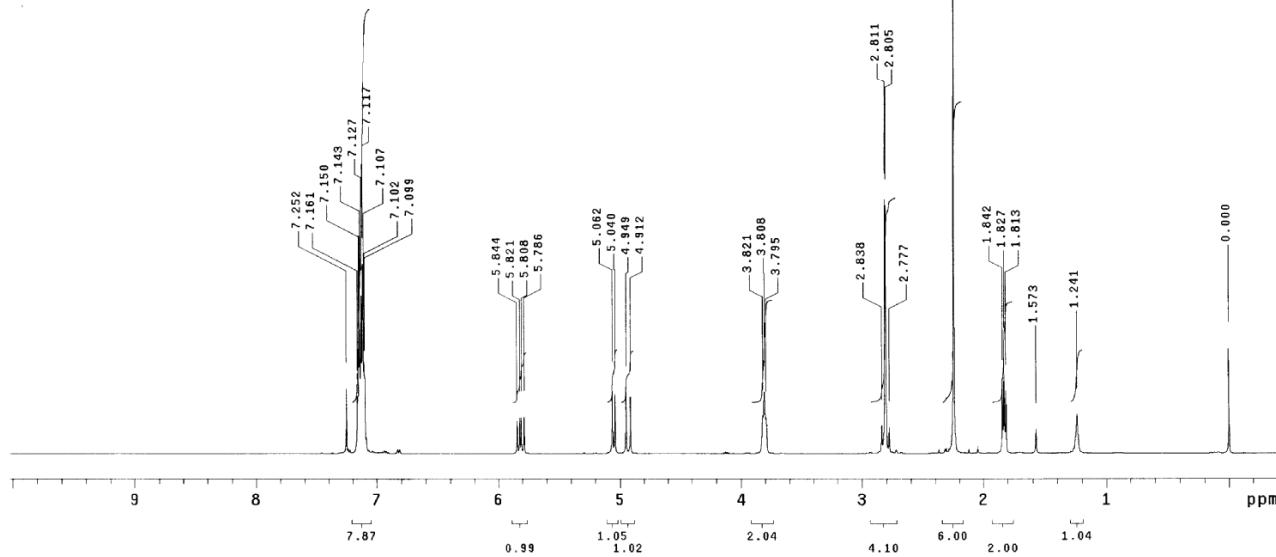
OBSERVE H1, 499.8984068 MHz

DATA PROCESSING

Line broadening 0.7 Hz

FT size 65536

Total time 1 min 38 sec

**22**

20091106diomethylalkenealcoholC13

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Nov 6 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.700 sec

Width 1876.0 Hz

3960 repetitions

OBSERVE C13, 75.4536604 MHz

DECOPULATE H1, 300.0754431 MHz

Power 1023 dB

continuously on

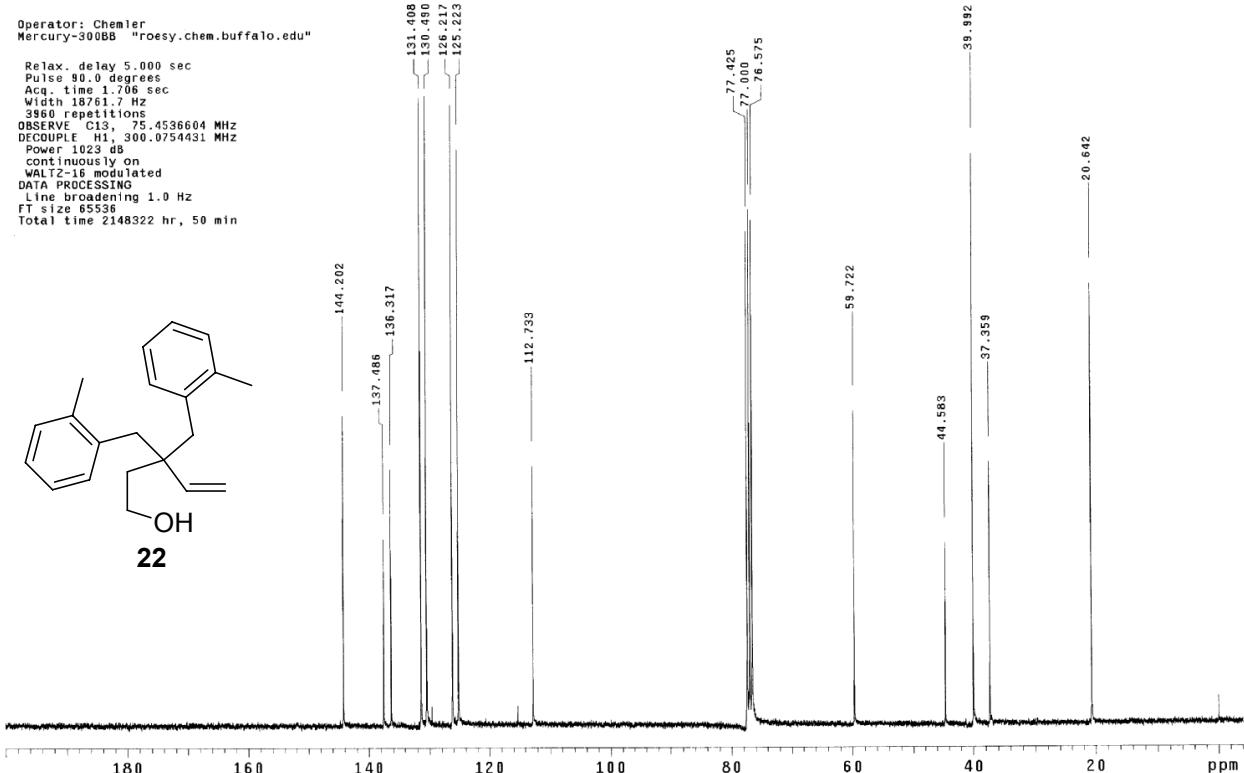
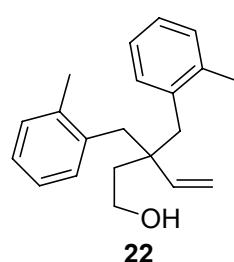
WATER SUPPRESS uncalibrated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 2148322 hr, 50 min



20091212diomethylsubstrate5

Sample Name:

Archive directory:

Sample directory:

Fidfile: H1

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Data collected on: Dec 12 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 39.7 degrees

Acq. time 1.851 sec

Width 10000.0 Hz

16 repetitions

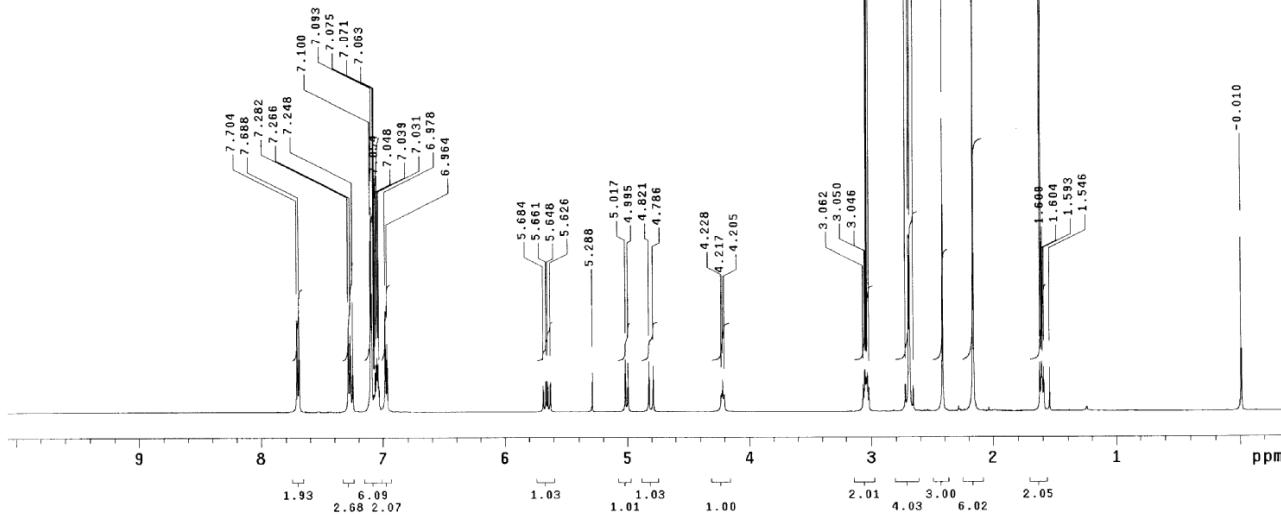
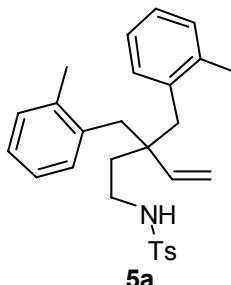
OBSERVE H1, 75.4536598 MHz

DATA PROCESSING

Line broadening 0.7 Hz

FT size 65536

Total time 1 min 38 sec



20091216diomethylsubstrateC13

Sample Name:

Archive directory:

Sample directory:

Fidfile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Dec 16 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.706 sec

Width 18761.7 Hz

3000 repetitions

OBSERVE H1, 75.4536598 MHz

DECOPPLE H1, 300.0754431 MHz

Power 1023 dB

continuously on

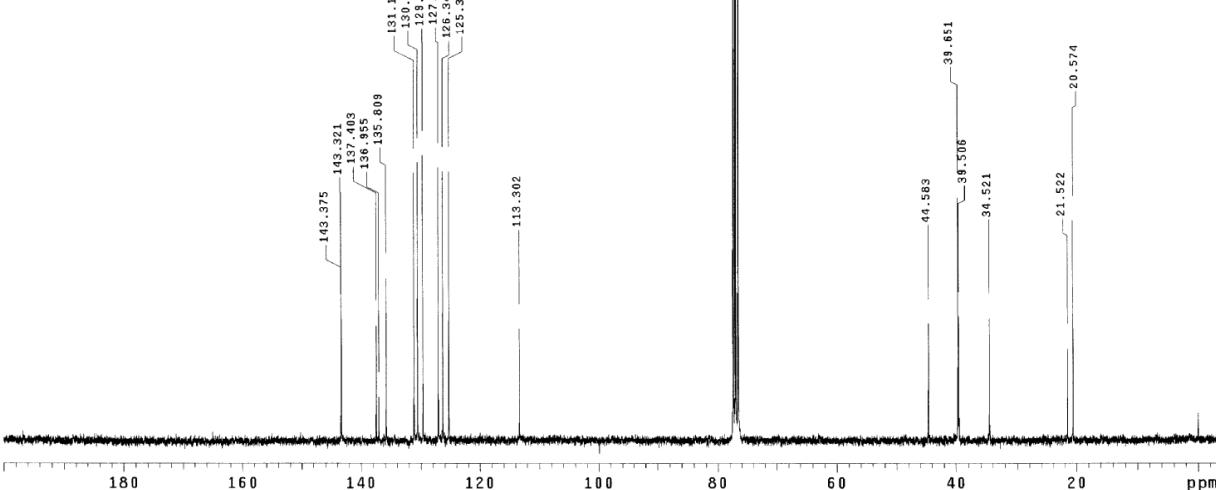
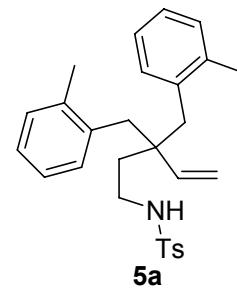
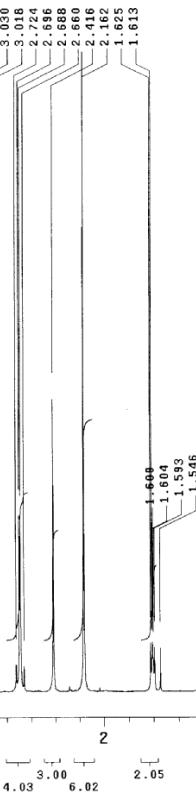
WALTZ-16 modulated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 2148322 hr, 50 min



20091012ditrifluoromethylbenzylbutyrolactone

Sample Name:

Archive directory:

Sample directory:

FidFile: std1h

Pulse Sequence: std1h (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 12 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 1.000 sec

Pulse 47.9 degrees

Acq. time 1.800 sec

Width 6000.6 Hz

16 repetitions

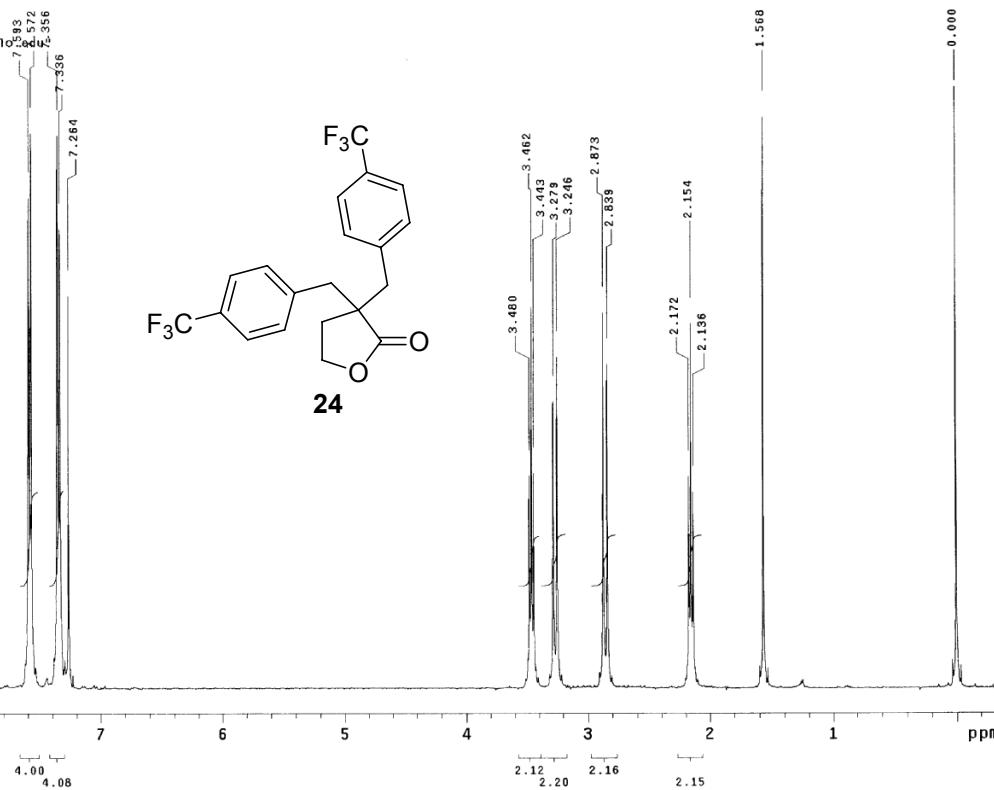
OBSERVE 399.9389018 MHz

DATA PROCESSING

Line broadening 0.9 Hz

FT size 32768

Total time 0 min 51 sec



20091016ditrifluoromethylbenzylbutyrolactoneC13

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 16 2009

Operator: Chemer

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.1.1 sec

Width 1876.17 Hz

5836 repetitions

OBSERVE C13, 75.4536593 MHz

DECOPPLER H1, 300.0754431 MHz

Power 1023 dB

continuously on

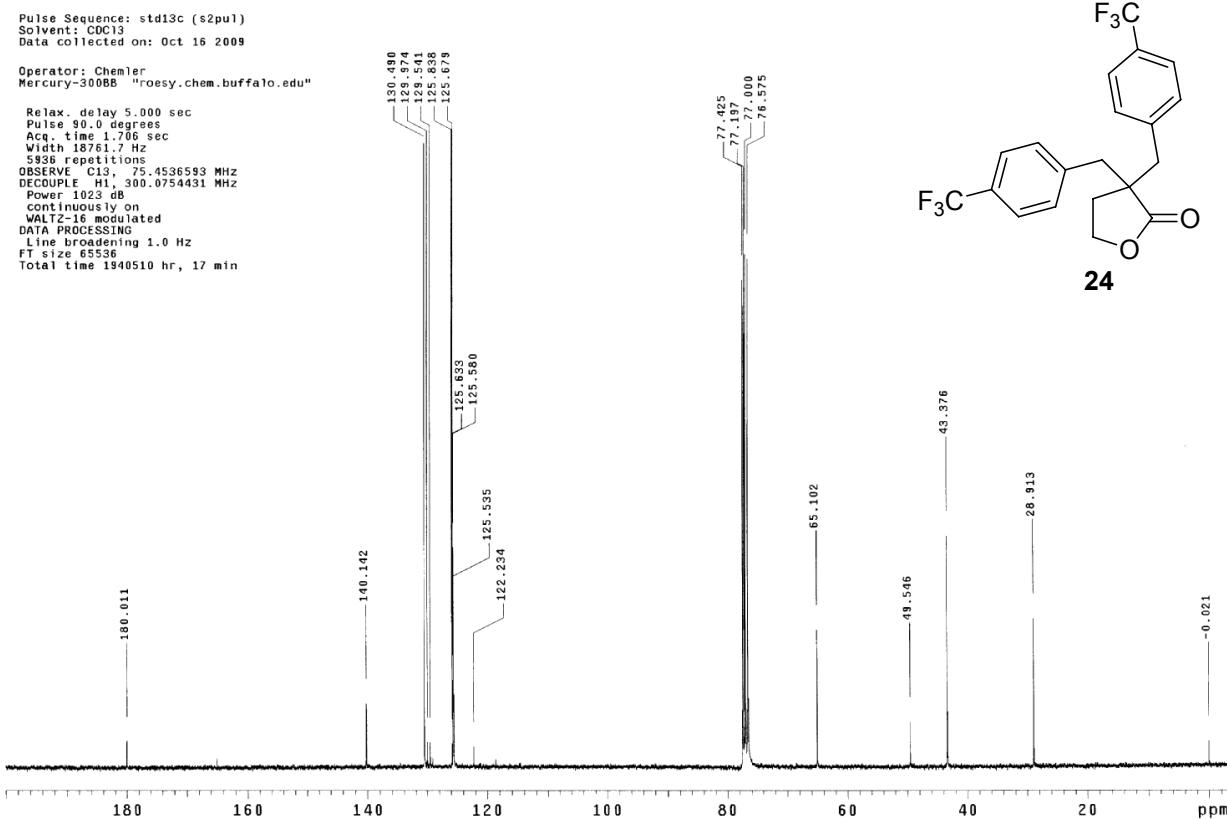
W1 16.00 ms gated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 1940510 hr, 17 min



20091018ditrifluoromethylbenzylalkenealcohol12

Sample Name:

Archive directory:

Sample directory:

Fidfile: H1

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 18 2009

Operator: Chemler

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 99.7 degrees

Acq. time 1.881 sec

Width 10000.0 Hz

16 repetitions

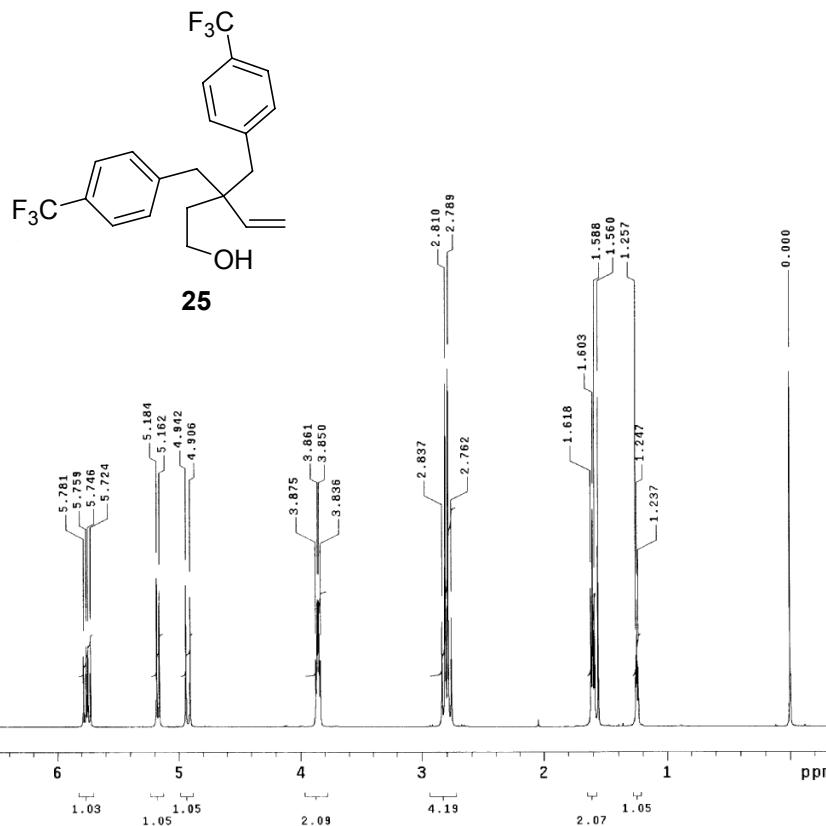
OBSERVE H1, 499.8984031 MHz

DATA PROCESSING

Line broadening 0.7 Hz

FT size 65536

Total time 1 min 38 sec



20091018ditrifluoromethylbenzylalkenealcoholC13

Sample Name:

Archive directory:

Sample directory:

Fidfile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 18 2009

Operator: Chemler

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.708 sec

Width 10000.0 Hz

5392 repetitions

OBSERVE C13, 75.4536583 MHz

DECOPPLE H1, 300.0754431 MHz

Power 1023 dB

contINUOUSLY on

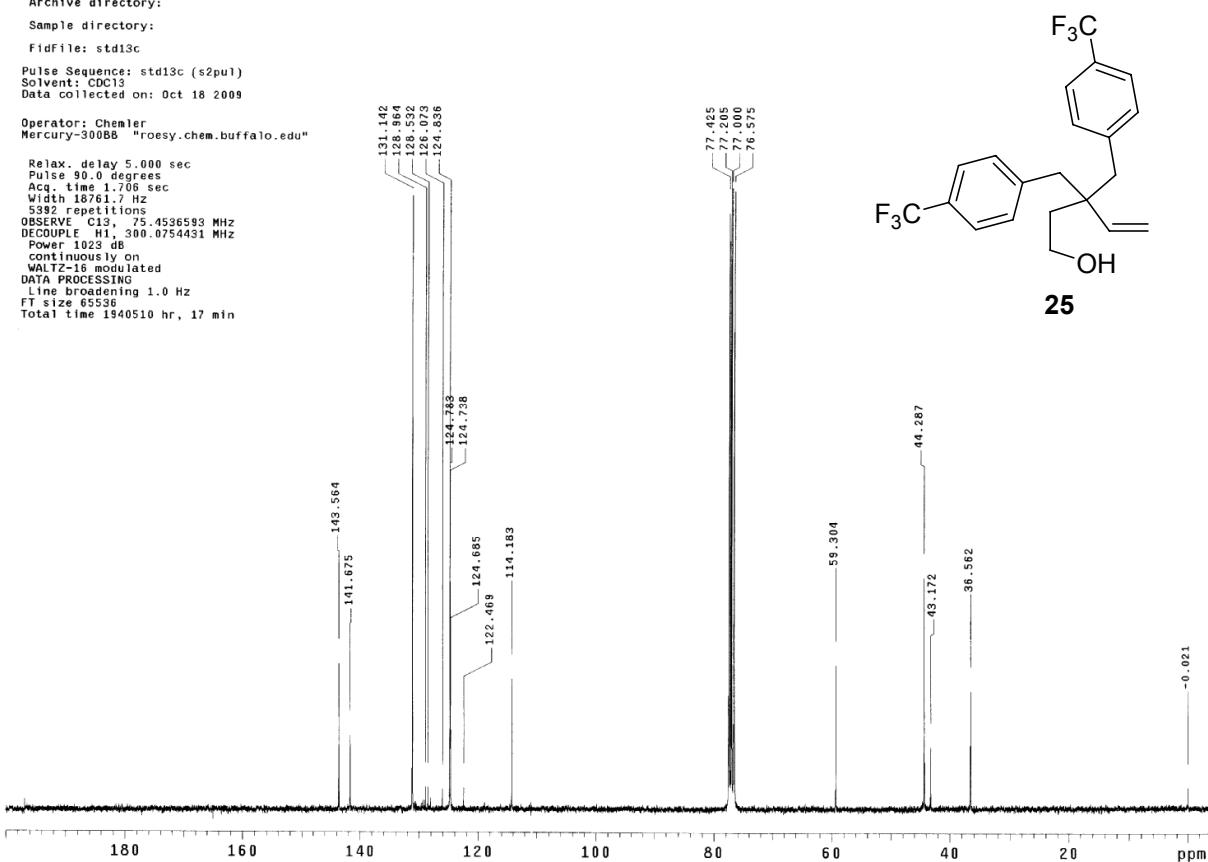
W1,T2,SW1,D1,D2,D3

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 1940510 hr, 17 min





20090829Tsbutyrolactam

Sample Name:

Archive directory:

Sample directory:

FidFile: std1h

Pulse Sequence: std1h (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Sep 29 2009

Operator: Chem3D

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 1.000 sec

Pulse 47.9 degrees

Acq. time 1.800 sec

Width 6000.6 Hz

16 repetitions

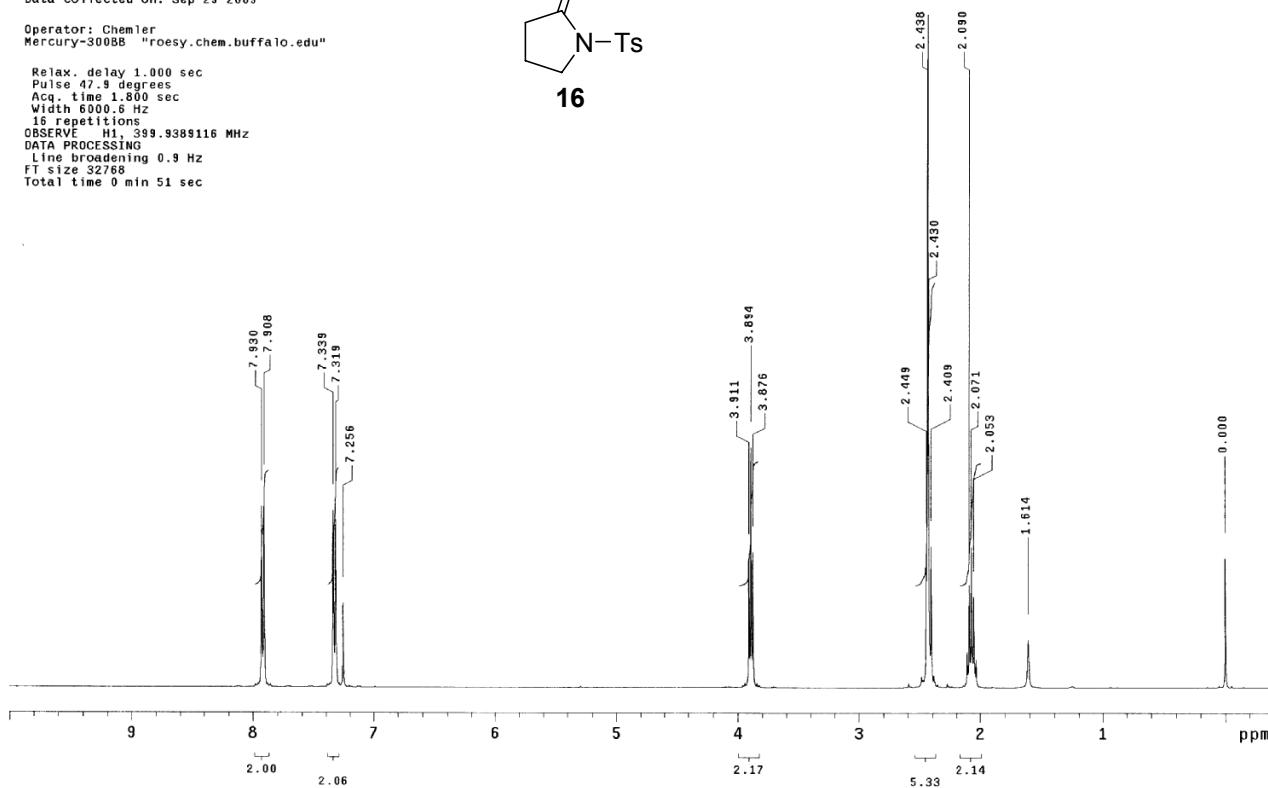
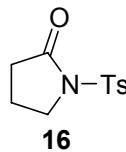
OBSERVE 399.9389116 MHz

DATA PROCESSING

Line broadening 0.9 Hz

FT size 32768

Total time 0 min 51 sec



20091022TsbutyrolactamC13

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Oct 22 2009

Operator: Chem3D

Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.706 sec

Width 1875.7 Hz

96 repetitions

OBSERVE C13, 75.4536679 MHz

DECOPPLE H1, 300.0754431 MHz

Power 1023 dB

continuously on

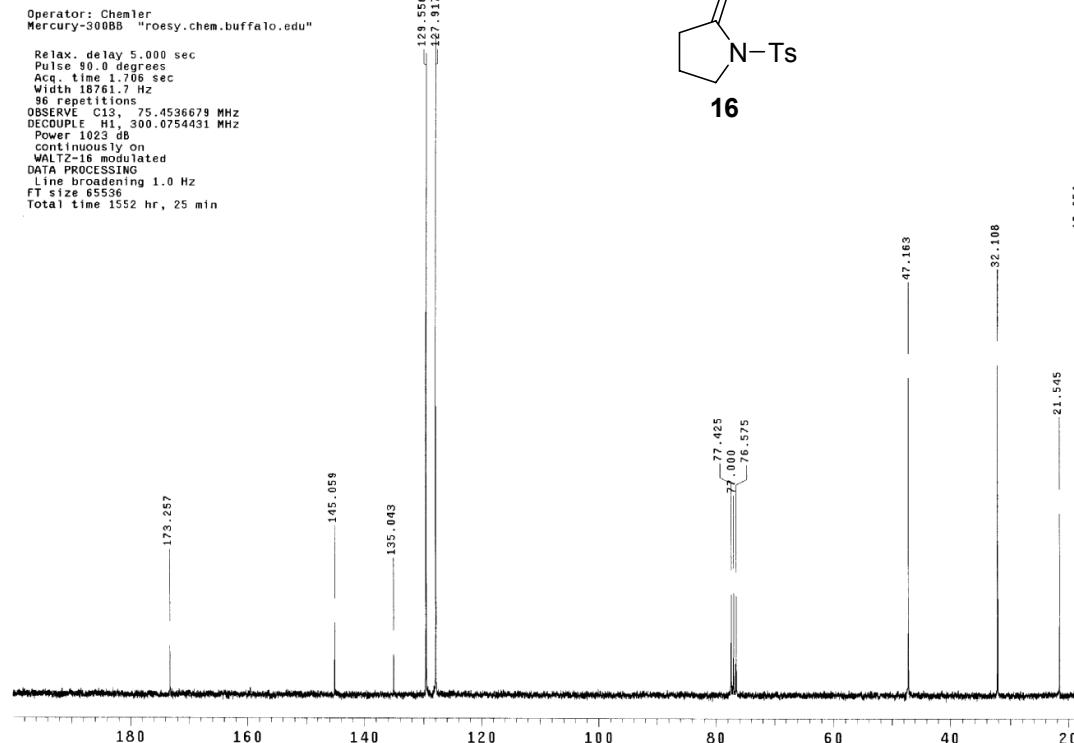
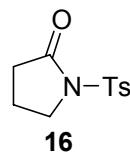
UNBALANCED gated

DATA PROCESSING

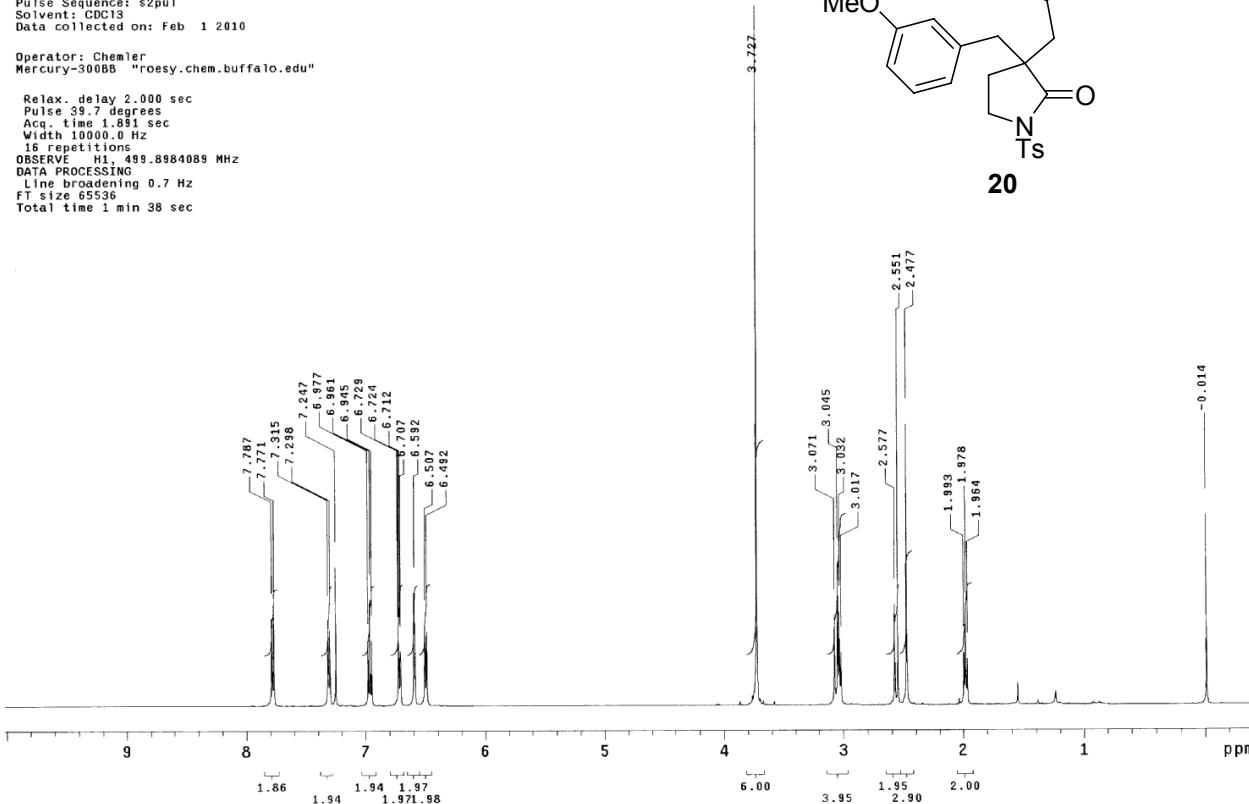
Line broadening 1.0 Hz

FT size 65536

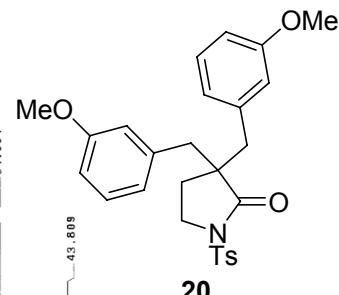
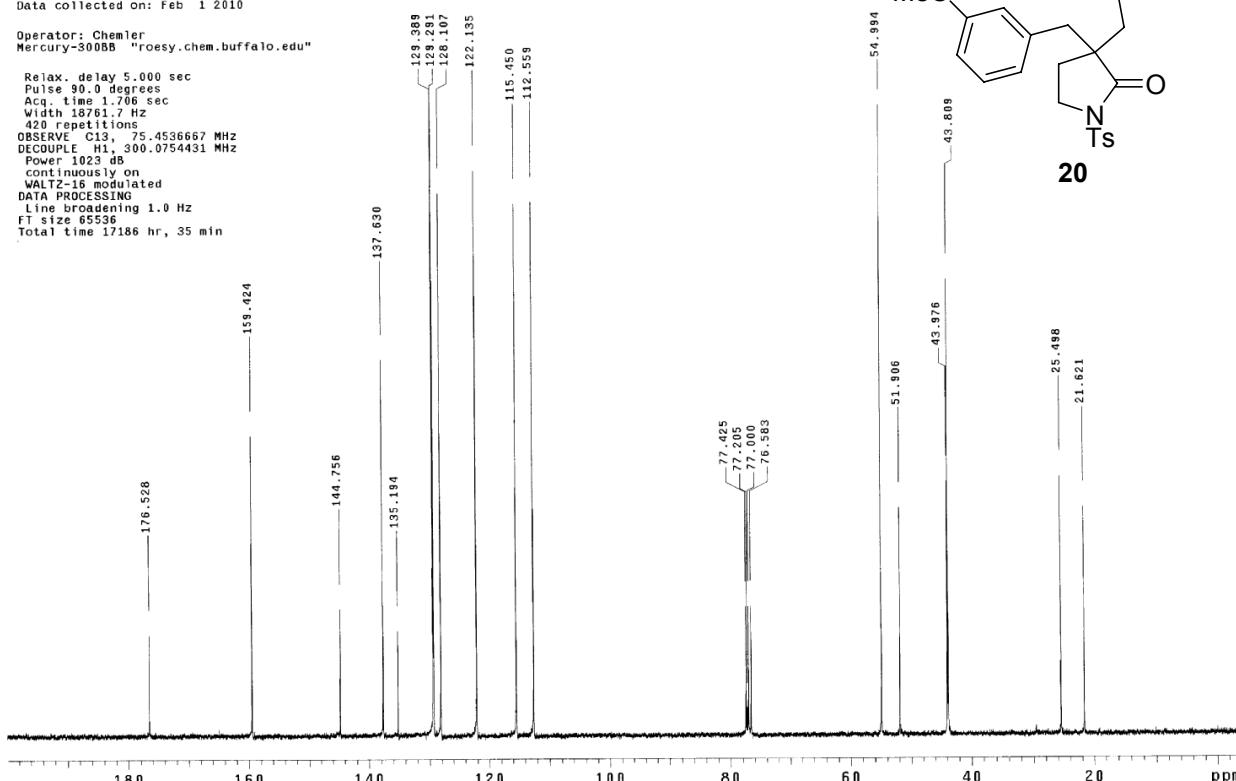
Total time 1552 hr, 25 min



20100201di3methoxyllactam  
 Sample Name:  
 Archive directory:  
 Sample directory:  
 FidFile: H1  
 Pulse Sequence: s2pul  
 Solvent: CDCl3  
 Data collected on: Feb 1 2010  
 Operator: Chemer  
 Mercury-300BB "roesy.chem.buffalo.edu"  
 Relax. delay 2.000 sec  
 Pulse 39.7 degrees  
 Acq. time 1.000 sec  
 Width 10000.0 Hz  
 16 repetitions  
 OBSERVE\_H1, 499.8984089 MHz  
 DATA PROCESSING  
 Line broadening 0.7 Hz  
 FT size 65536  
 Total time 1 min 38 sec



20100201di3methoxyllactamC13  
 Sample Name:  
 Archive directory:  
 Sample directory:  
 FidFile: std13c  
 Pulse Sequence: std13c (s2pul)  
 Solvent: CDCl3  
 Data collected on: Feb 1 2010  
 Operator: Chemer  
 Mercury-300BB "roesy.chem.buffalo.edu"  
 Relax. delay 5.000 sec  
 Pulse 90.0 degrees  
 Acq. time 1.706 sec  
 Width 18761.7 Hz  
 420 repetitions  
 OBSERVE\_H1, 75.4536667 MHz  
 DECOUPLE\_H1, 300.0754431 MHz  
 Power 1023 dB  
 continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 1.0 Hz  
 FT size 65536  
 Total time 17186 hr, 35 min



```

20100224di3methoxy!substrate

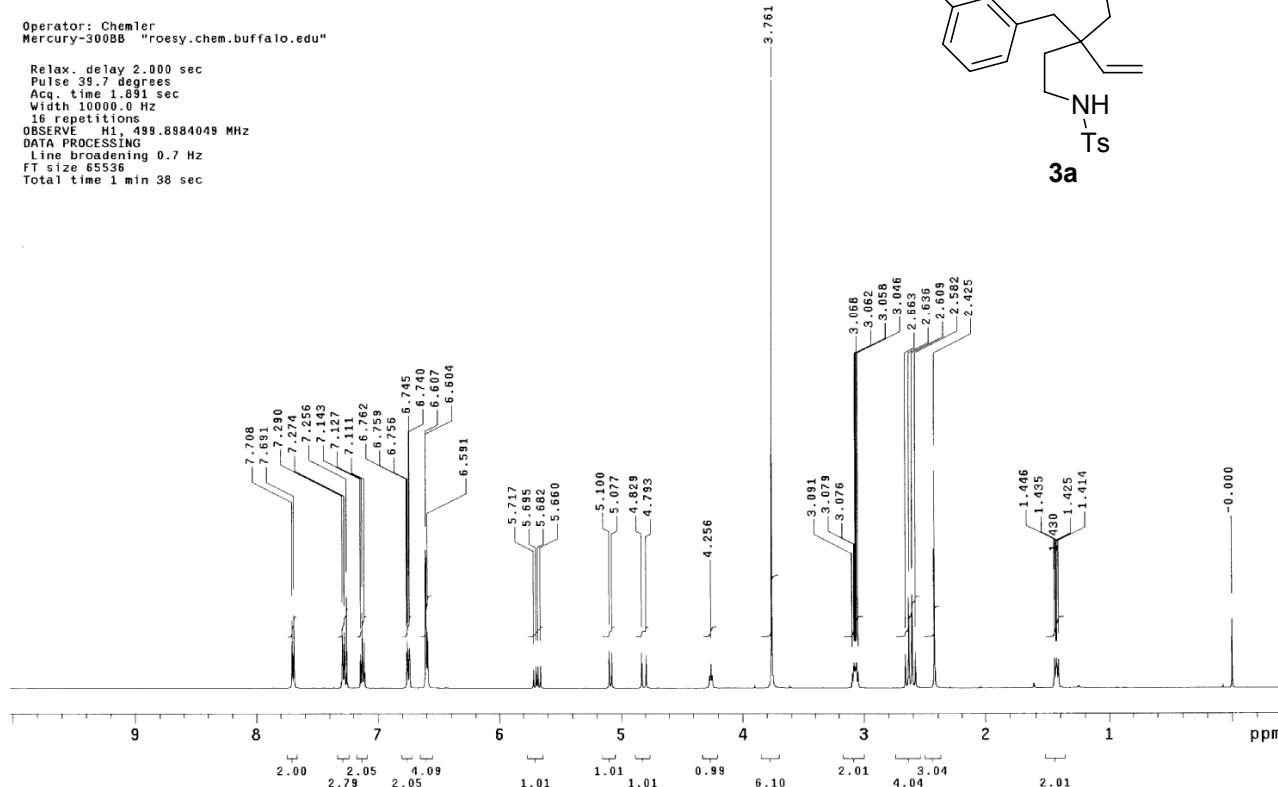
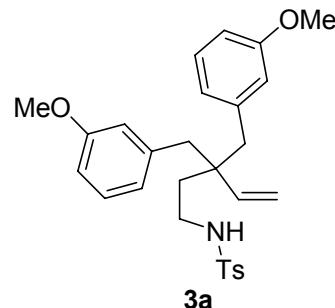
Sample Name:
Archive directory:
Sample directory:
FidFile: H1

Pulse Sequences: s2pul
Solvent: CDCl3
Data collected on: Feb 24 2010

Operator: Chemler
Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec
Pulse 90.7 degrees
Acq. time 0.01 sec
Width 10000.0 Hz
16 repetitions
OBSERVE H1, 499.8884049 MHz
DATA PROCESSING
Line broadening 0.7 Hz
FT size 65536
Total time 1 min 38 sec

```



20100224di3methoxy1substrateC13

Sample Name:

Archive directory:

### Sample directory:

FidFile: std13c

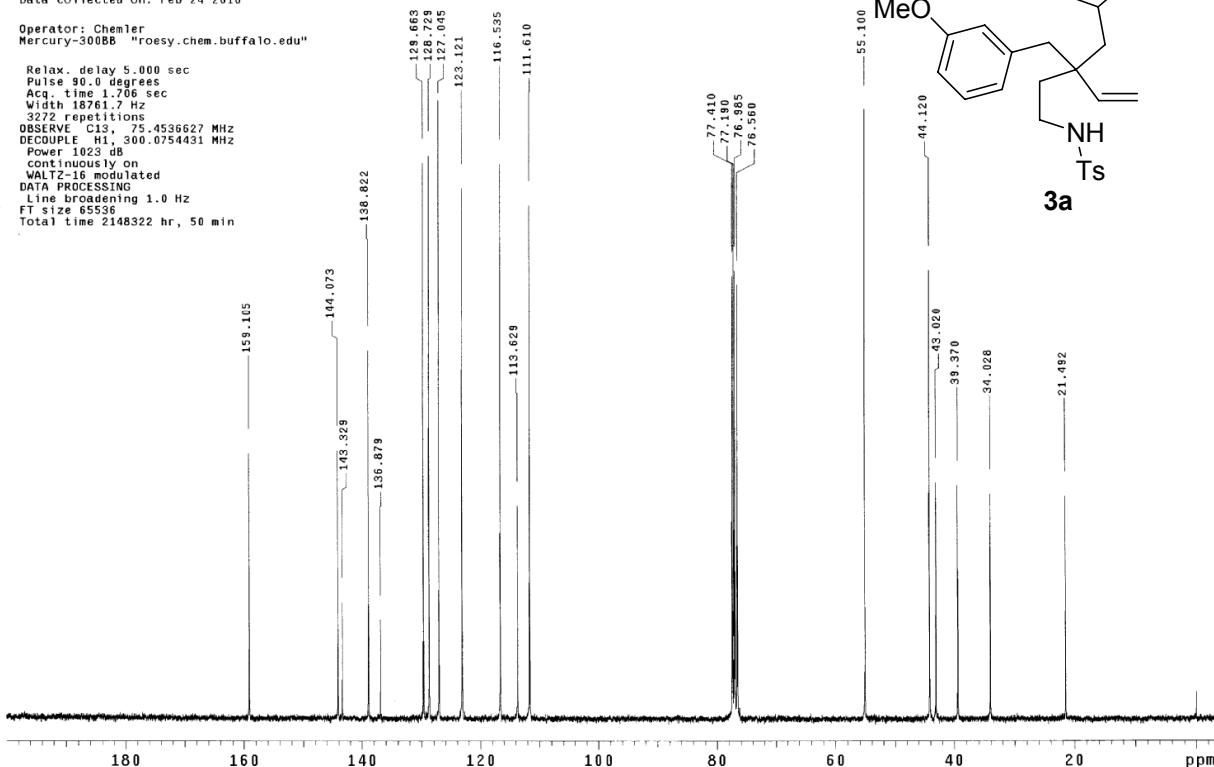
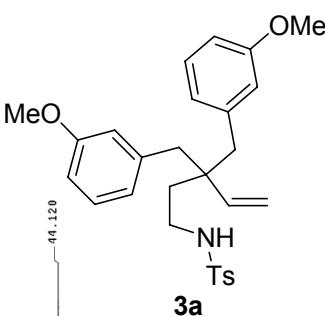
Pulse Sequence: std13c (s2pul)  
Solvent: CDCl3  
Date collected on: Feb 24, 2010

Operator: Chemler  
MERCURY-300BB "goesv.chem.buffalo.edu"

```

Relax, delay 5.000 sec
Pulse 90.0 degrees
Aq. time 1.706 sec
Width 18761.7 Hz
3272 repetitions
OBSERVE C13, 75.4536627 MHz
DECOPPLE H, 300.0754431 MHz
Pulse width 100.000 sec
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 65536
Total time 2148322 hr, 50 min

```



20100726dithiomethylactamB

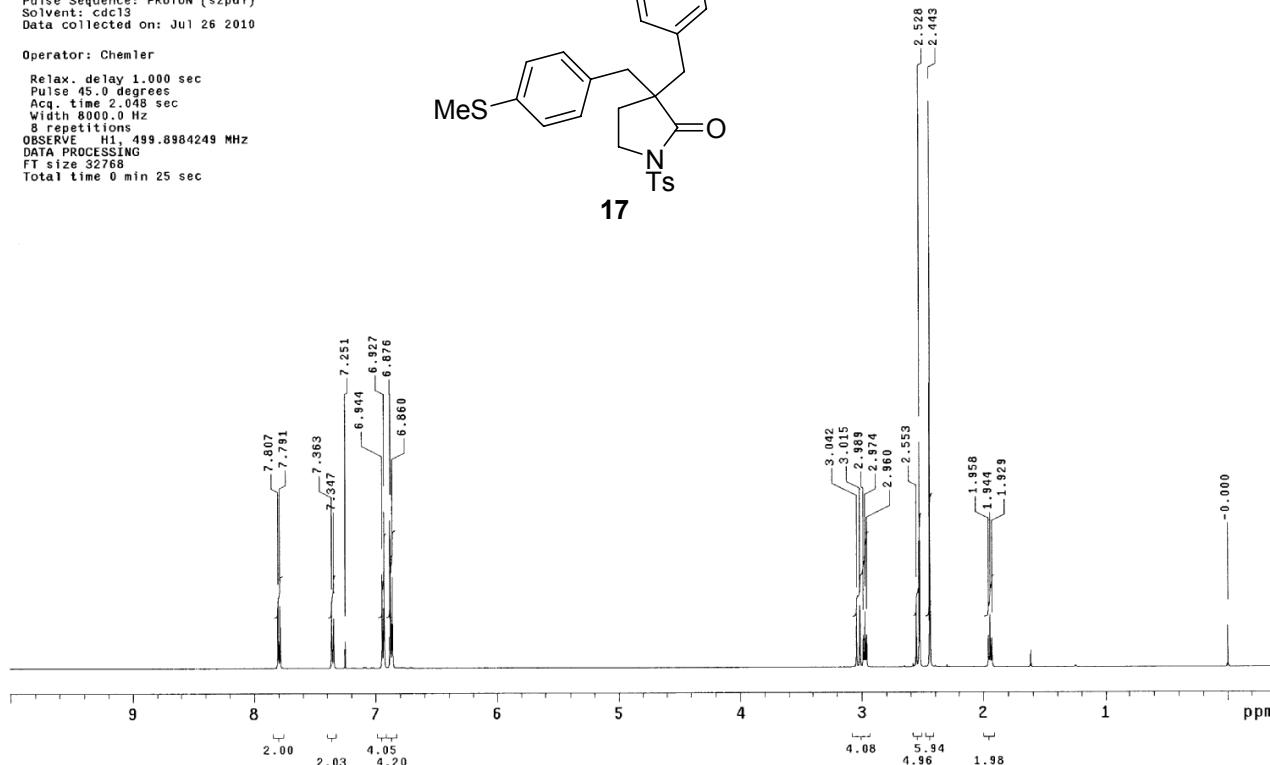
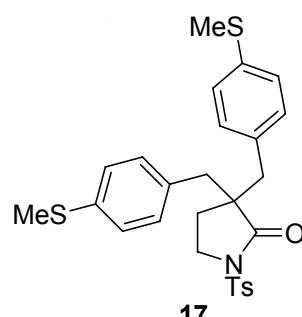
Sample Name:  
 Data Collected on:  
 Chemmr500.chem.buffalo.edu-inova500  
 Archive directory:

Sample directory:  
 FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
 Solvent: CDCl<sub>3</sub>  
 Data collected on: Jul 26 2010

Operator: Chemler

Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.008 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984249 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



20100727dithiomethylactamC13B

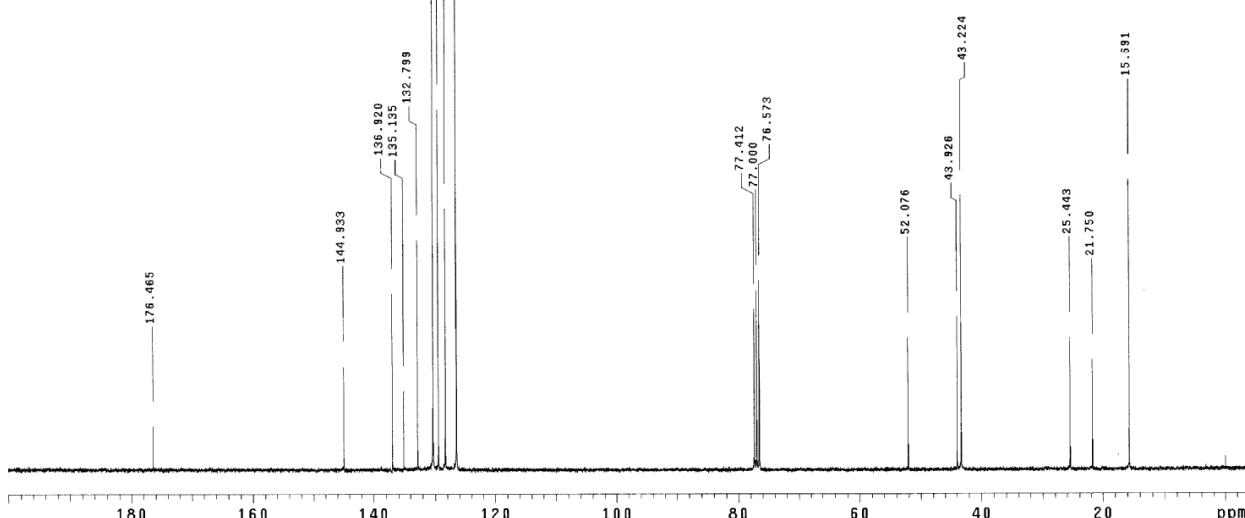
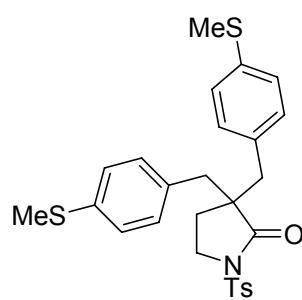
Sample Name:  
 Data Collected on:  
 roesy.chem.buffalo.edu-mercury300  
 Archive directory:

Sample directory:  
 FidFile: CARBON

Pulse Sequence: CARBON (s2pul)  
 Solvent: CDCl<sub>3</sub>  
 Data collected on: Jul 27 2010

Operator: Chemler

Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.868 sec  
 Width 18867.9 Hz  
 4000 repetitions  
 OBSERVE C13, 75.4536412 MHz  
 DECOSY T1, 300.0754430 MHz  
 Power 58 dB  
 continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 3 hr, 51 min



20100817dithiomethylsubstrate

Sample Name:

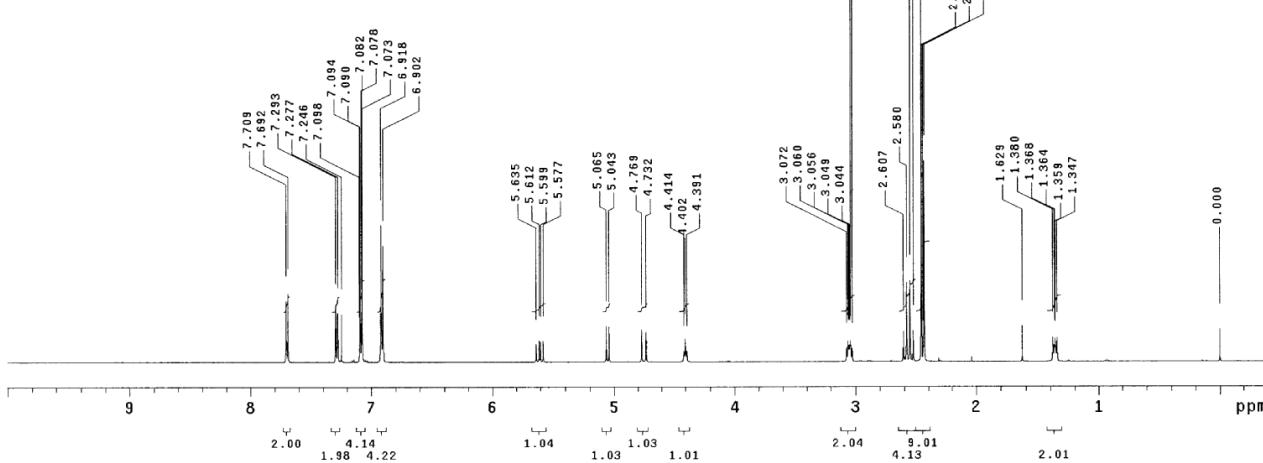
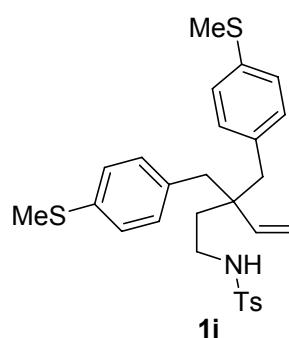
Data Collected on:  
chemnmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Aug 17 2010

Operator: Chemler

Relax, delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE F1 499.8984278 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

20100817dithiomethylsubstrateC13

Sample Name:

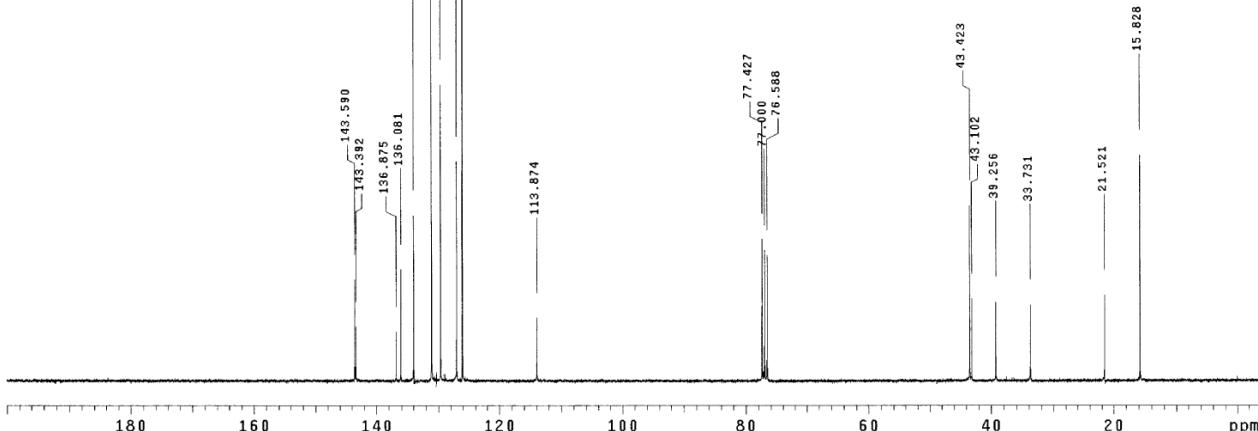
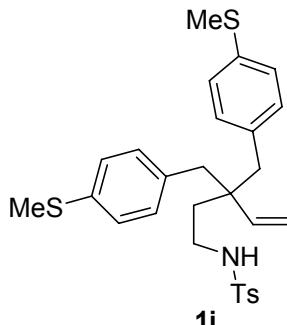
Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

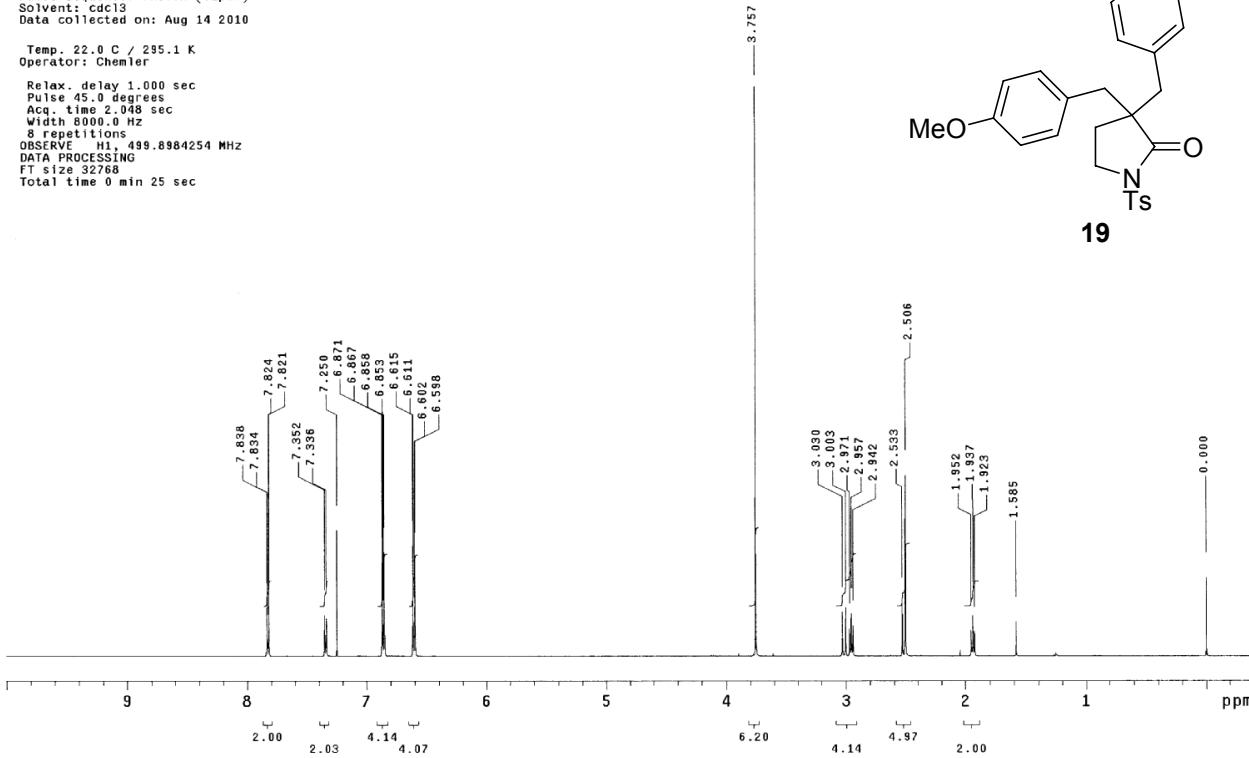
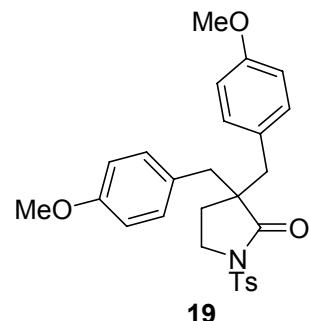
Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: CdCl3  
Data collected on: Aug 17 2010

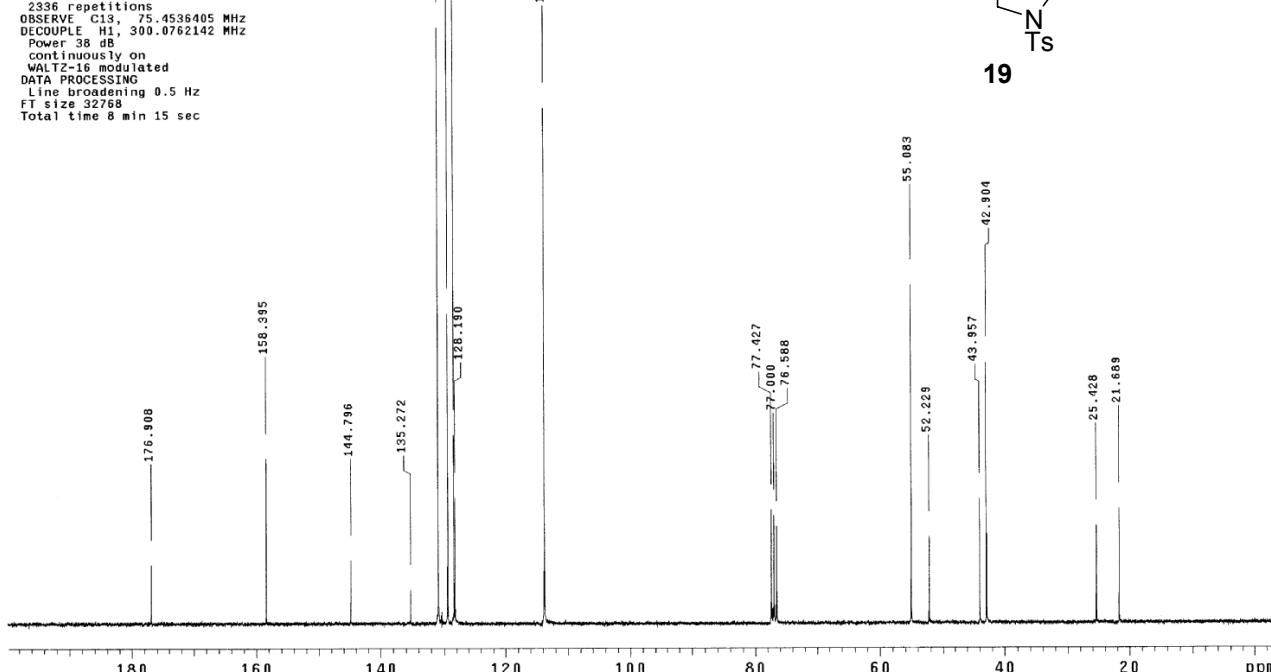
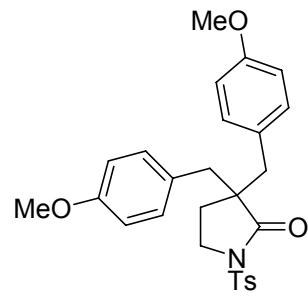
Operator: Chemler

Relax, delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.868 sec  
Width 1886.9 Hz  
3200 repetitions  
OBSERVE C13, 75.4536412 MHz  
DECOPPLE H1, 300.0754430 MHz  
Power 38 dB  
continuously on  
WALTZ-16 modulated  
DEPHASING 90°  
Line broadening 0.5 Hz  
FT size 32768  
Total time 8 min 15 sec

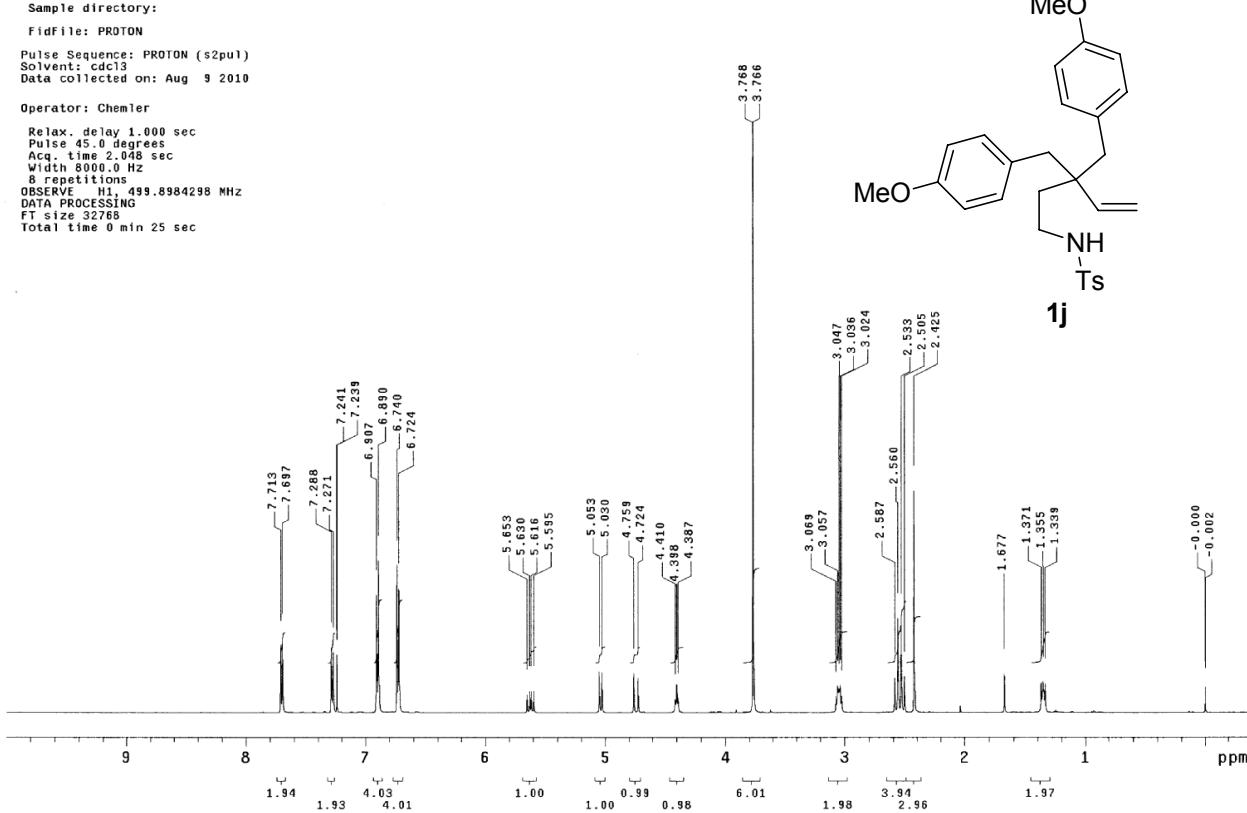
20100814dimethoxylactam  
 Sample Name:  
 Data Collected on:  
 Chem3D:500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 FidFile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdcl3  
 Data collected on: Aug 14 2010  
 Temp. 22.0 C / 295.1 K  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984254 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



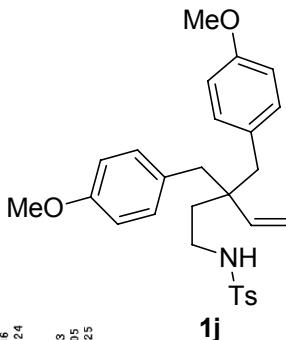
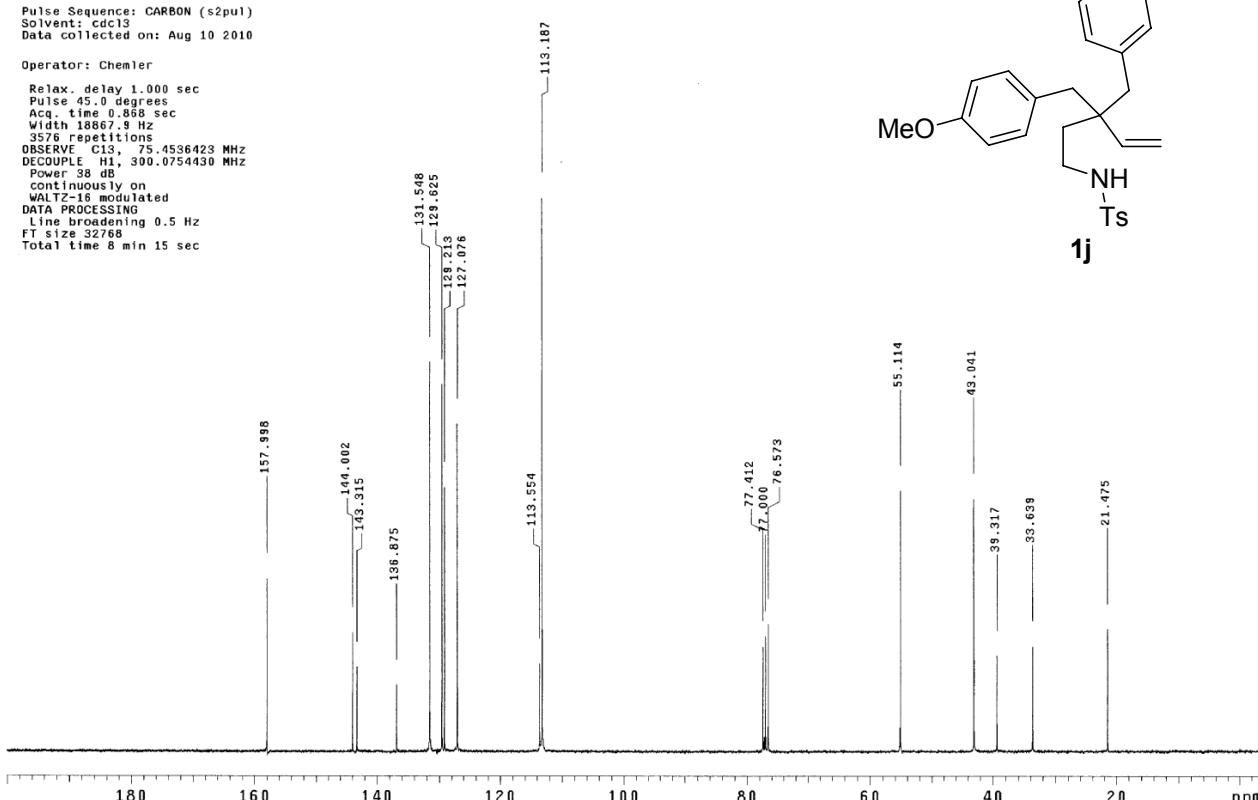
20100816dimethoxylactamC13  
 Sample Name:  
 Data Collected on:  
 roesy.chem.buffalo.edu-mercury300  
 Archive directory:  
 Sample directory:  
 Fidfile: CARBON  
 Pulse Sequence: CARBON (s2pul)  
 Solvent: D2O  
 Data collected on: Aug 16 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.868 sec  
 Width 18800.0 Hz  
 2336 repetitions  
 OBSERVE C13, 75.4536405 MHz  
 DECOUPLE H1, 300.0762142 MHz  
 Power 38 dB  
 continuously on  
 WALTZ-16 modulated  
 DATA AVERAGING 1  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 8 min 15 sec



20100809dimethoxylsubstrate  
 Sample Name:  
 Data Collected on:  
 chemnm500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 Fidfile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdcl<sub>3</sub>  
 Data collected on: Aug 9 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 32768 repetitions  
 OBSERVE 1H 498.8984298 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



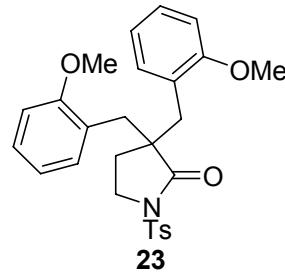
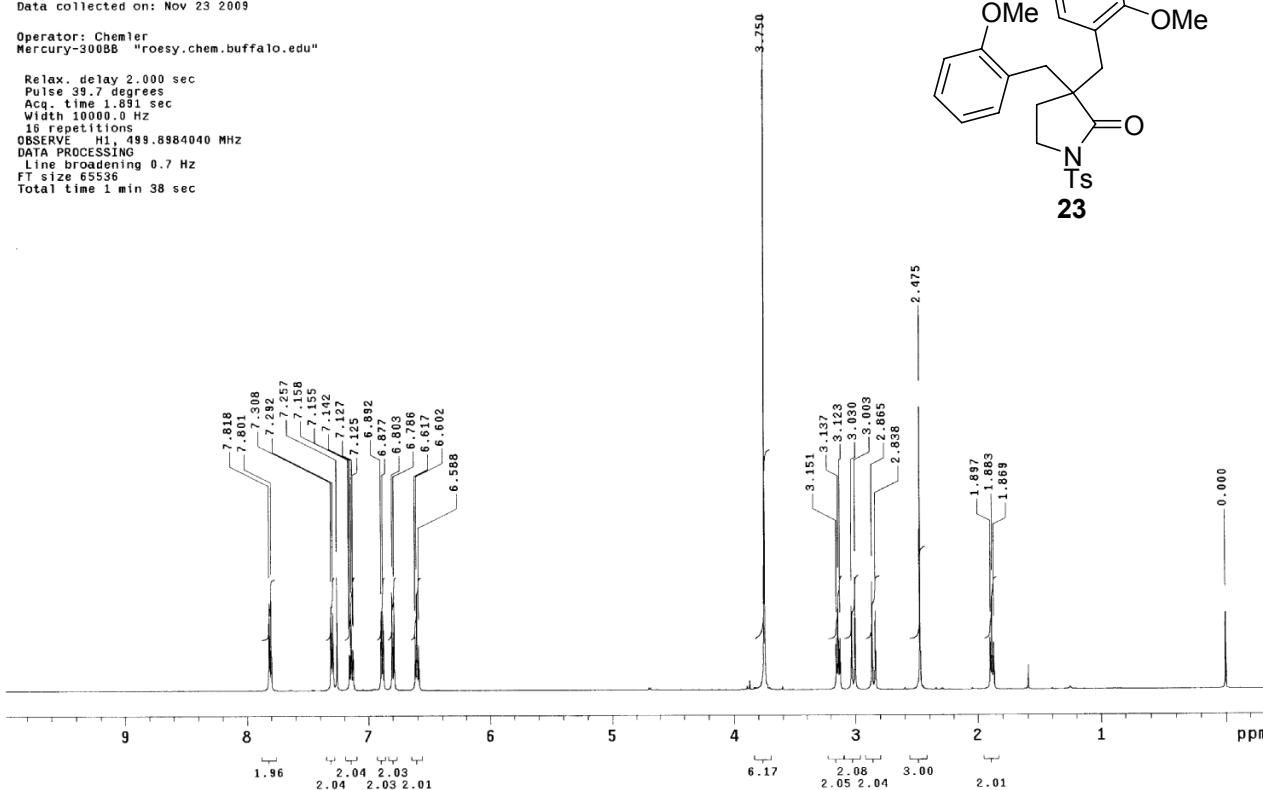
20100810dimethoxylsubstrateC13  
 Sample Name:  
 Data Collected on:  
 roesy.chem.buffalo.edu-mercury300  
 Archive directory:  
 Sample directory:  
 Fidfile: CARBON  
 Pulse Sequence: CARBON (s2pul)  
 Solvent: cdcl<sub>3</sub>  
 Data collected on: Aug 10 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.868 sec  
 Width 18867.9 Hz  
 32768 repetitions  
 OBSERVE C13, 135.4536423 MHz  
 DECOUPLE 1H, 300.0754430 MHz  
 Power 38 dB  
 Continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 8 min 15 sec



## 20091123diomethoxybutyrolactam

Sample Name:  
Archive directory:  
Sample directory:  
FidFile: H1  
Pulse Sequence: s2pul  
Solvent: CDCl<sub>3</sub>  
Data collected on: Nov 23 2009  
Operator: Chemler  
Mercury-300BB "roesy.chem.buffalo.edu"

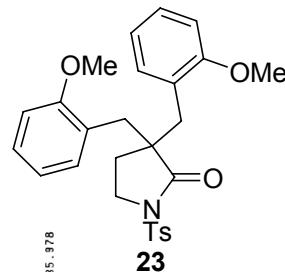
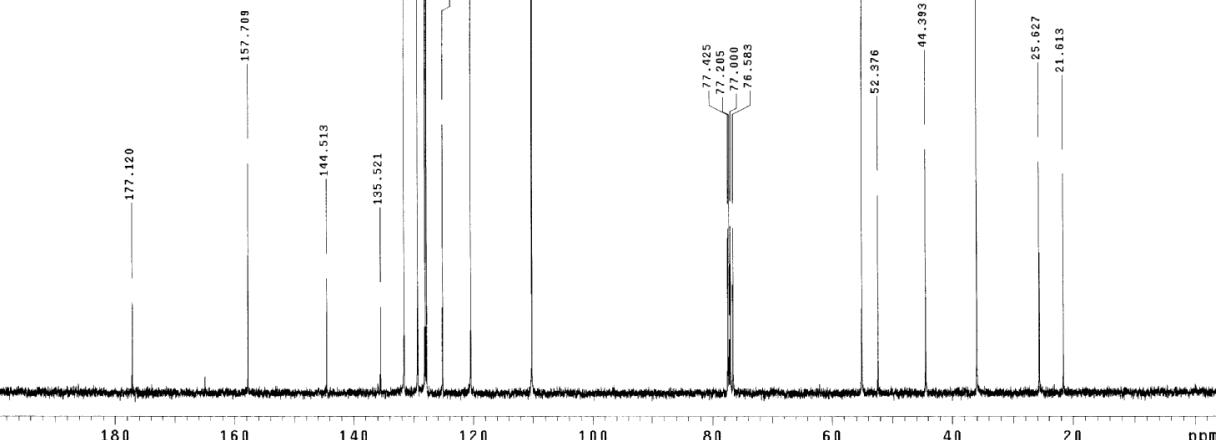
Relax. delay 2.000 sec  
Pulse 39.7 degrees  
Acq. time 1.891 sec  
Width 10000.0 Hz  
16 repetitions  
OBSERVE H1 499.8984040 MHz  
DATA PROCESSING  
Line broadening 0.7 Hz  
FT size 65536  
Total time 1 min 38 sec



## 20091123diomethoxybutyrolactamC13

Sample Name:  
Archive directory:  
Sample directory:  
Fidfile: std13c  
Pulse Sequence: std13c (s2pul)  
Solvent: CDCl<sub>3</sub>  
Data collected on: Nov 23 2009

Operator: Chemler  
Mercury-300BB "roesy.chem.buffalo.edu"  
Relax. delay 5.000 sec  
Pulse 90 degrees  
Acq. time 1.706 sec  
Width 18761.7 Hz  
180 repetitions  
OBSERVE C13, 75.4536650 MHz  
DECOPPLE H1 300.0754431 MHz  
PWR 1024.0 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 171 hr, 52 min

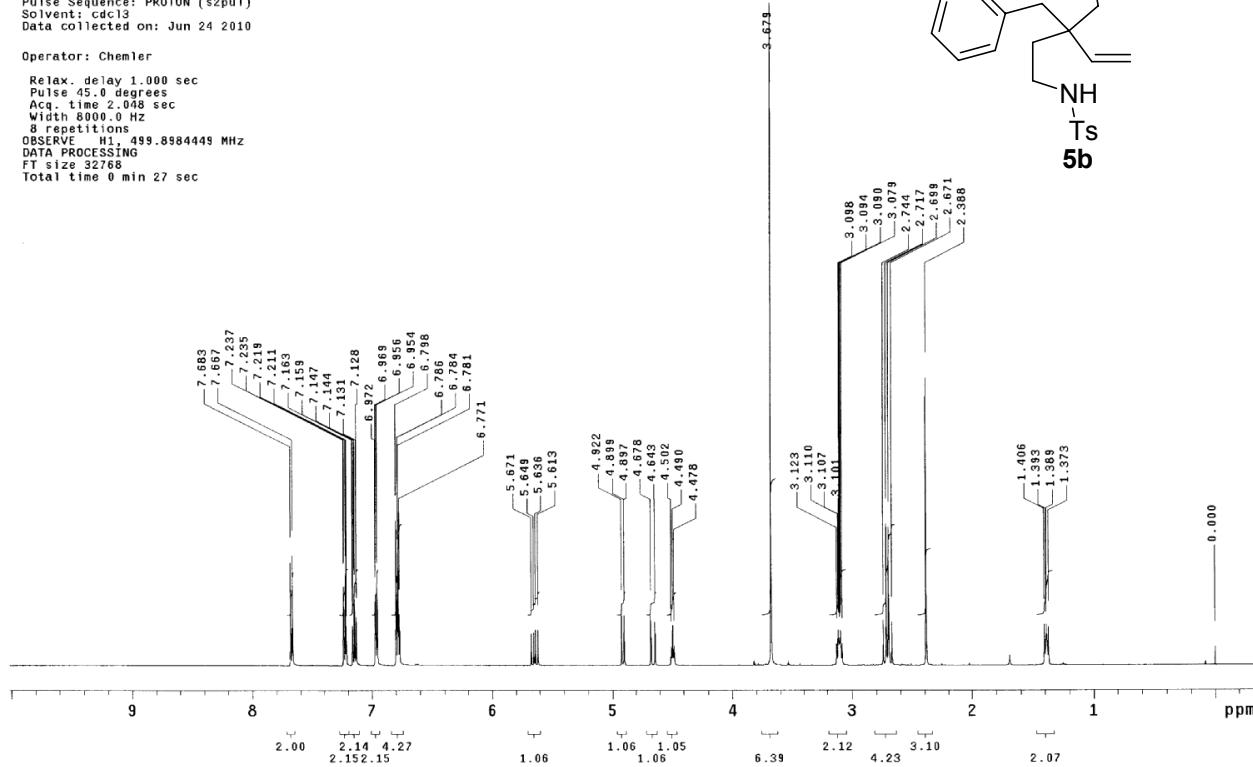
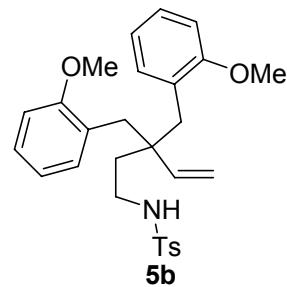


## 20100624diomethoxysubstrate

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
FidFile: PROTONPulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 24 2010

Operator: Chemler

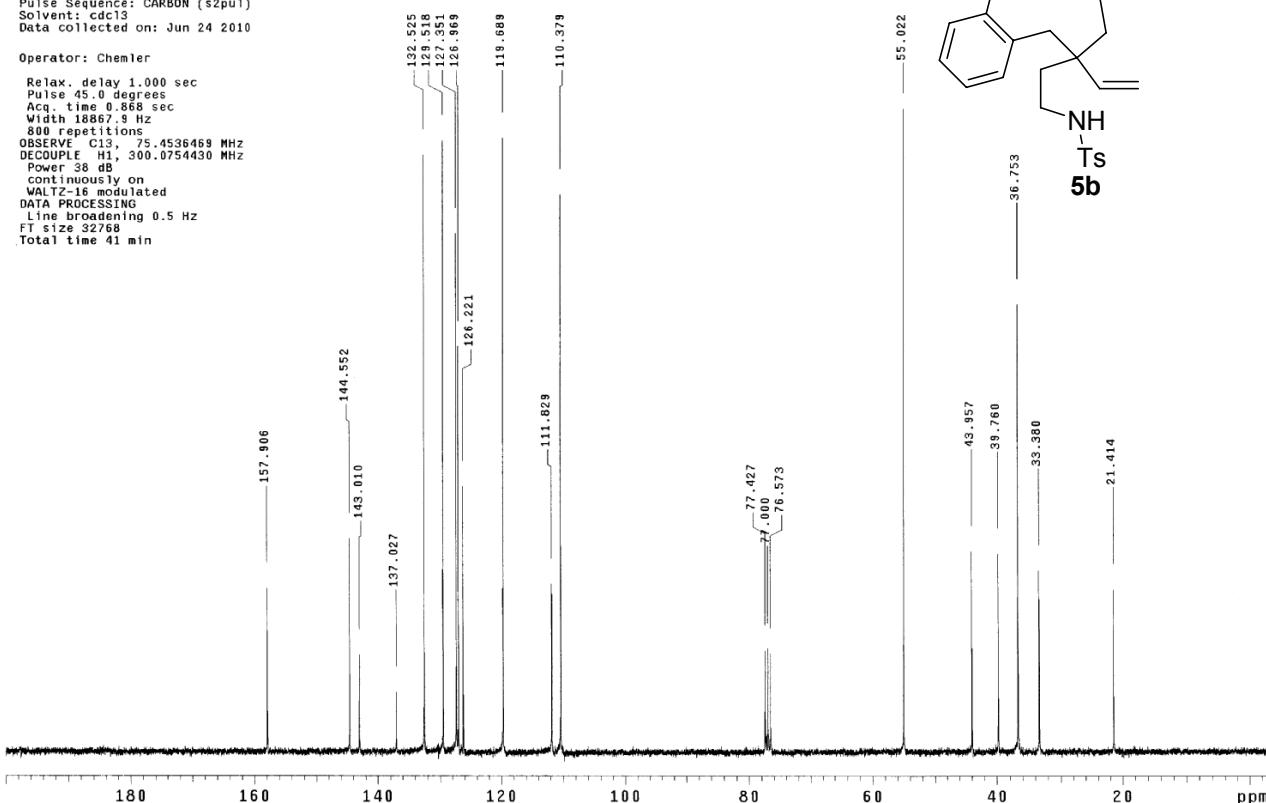
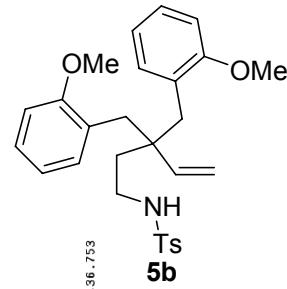
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984449 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 27 sec

## 20100624diomethoxysubstrateC13

Sample Name:

Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:Sample directory:  
Fidfile: CARBONPulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 24 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.860 sec  
Width 18867.9 Hz  
800 repetitions  
OBSERVE C13, 75.4536469 MHz  
DECUPLE H1, 300.0754430 MHz  
Power 36 dB  
continuously on  
W1=15 Hz modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 41 min

```

20100802omethoxylactone1

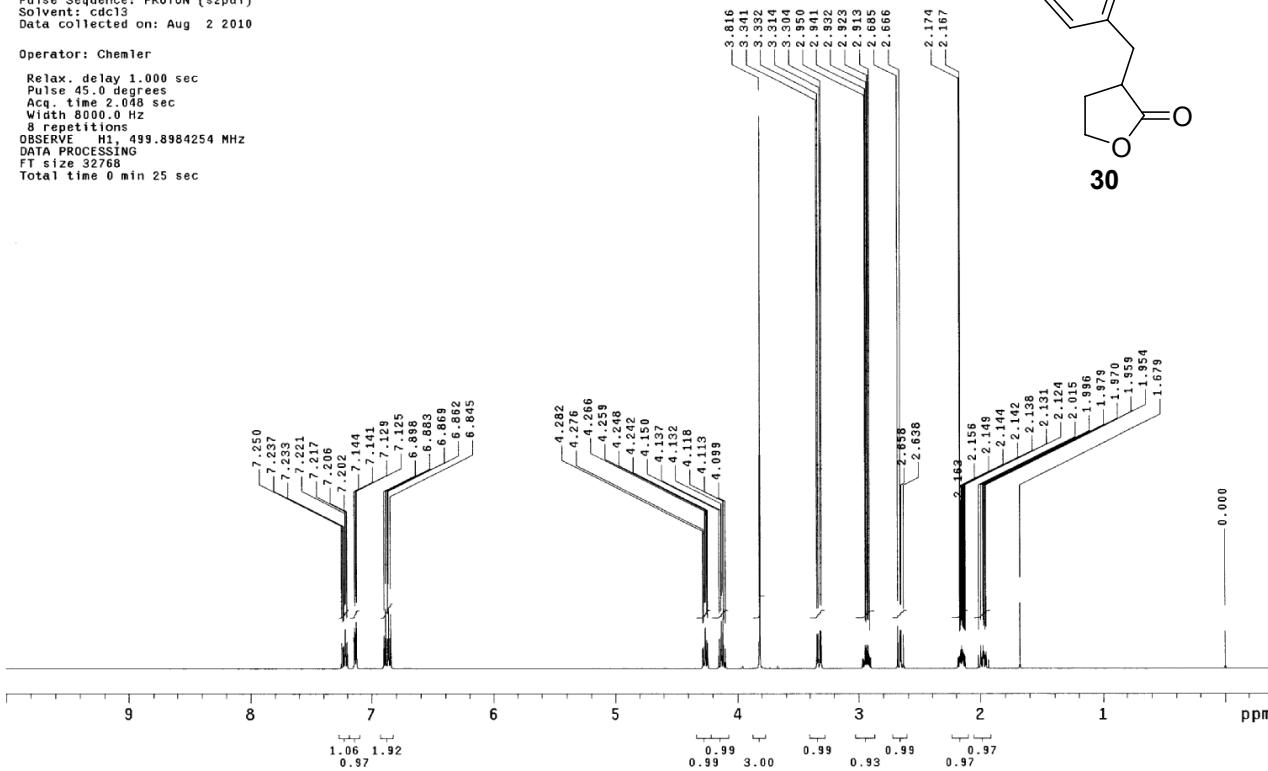
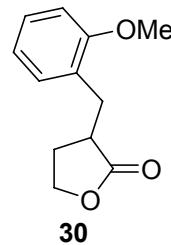
Sample Name:
Data Collected on:
chemmr500.chem.buffalo.edu-inova500
Archive directory:
Sample directory:
Fidfile: PROTON

Pulse Sequence: PROTON (s2pul)
Solvent: Cdc13
Data collected on: Aug 2 2010

Operator: Chemler

Relax, delay 1.000 sec
Pulse 45.0 degrees
Acq time 0.048 sec
Width 8000 Hz
8 acquisition
OBSERVE H2, 499.8884254 MHz
DATA PROCESSING
FT size 32768
Total time 0 min 25 sec

```



```

201008020methoxyllactoneC13

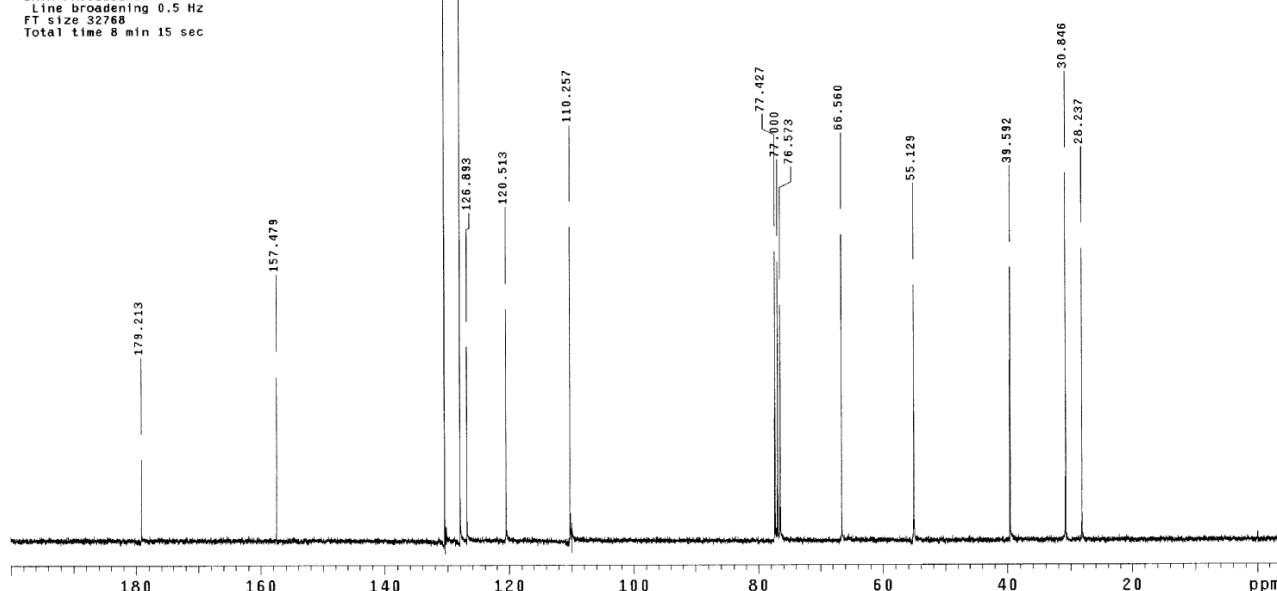
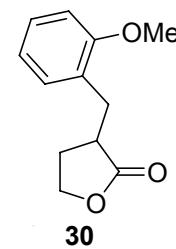
Sample Name:
Data Collected on:
  roesy.chem.buffalo.edu-mercury300
Archive directory:
Sample directory:
FidFile: CARBON

Pulse Sequence: CARBON (s2pul)
Solvent: Cdc13
Data collected on: Aug 2 2010

Operator: Chemerl

Relax delay 1.000 sec
Pulse 45.0 degrees
Acq time 0.368 sec
Width 18867.9 Hz
4000 repetitions
OBSERVE C13, 75.4536412 MHz
DECUPLE CH, 300.0754430 MHz
Power 38 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 0.5 Hz
FT size 32768
Total time 8 min 15 sec

```

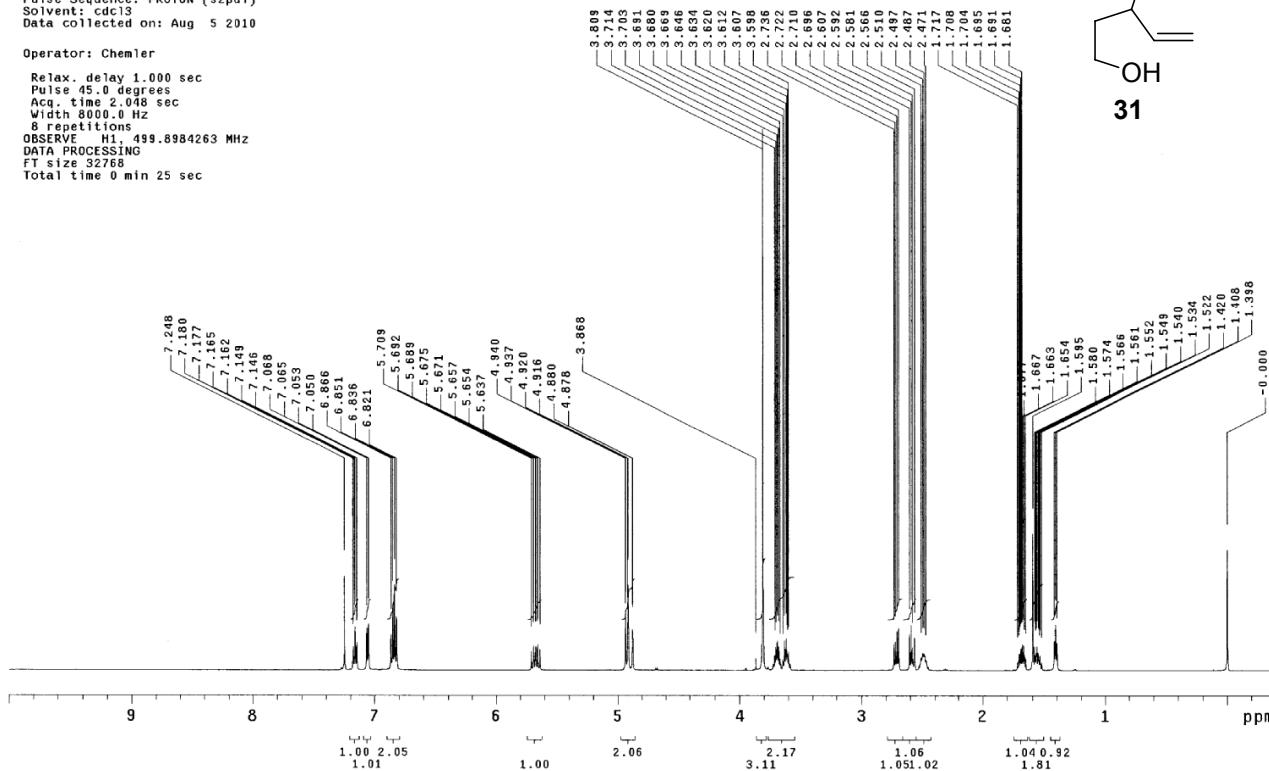
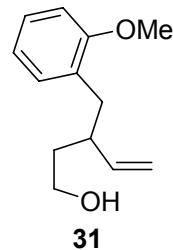


20100805methoxylalcohol

Sample Name:

Data Collected on:  
chemnar500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: PROTONPulse Sequence: PROTON (s2pul)  
Solvent: cdc13  
Data collected on: Aug 5 2010

Operator: Chemler

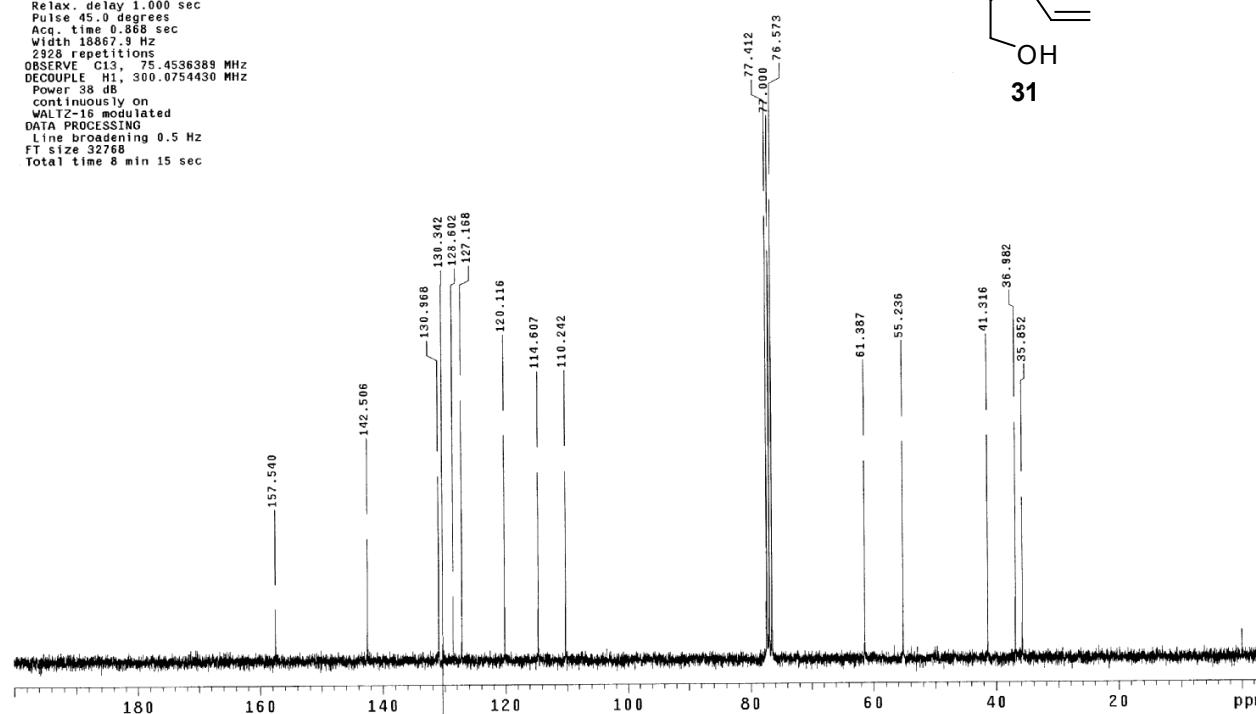
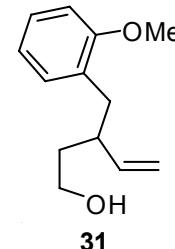
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984263 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

20100805methoxylalcoholC13

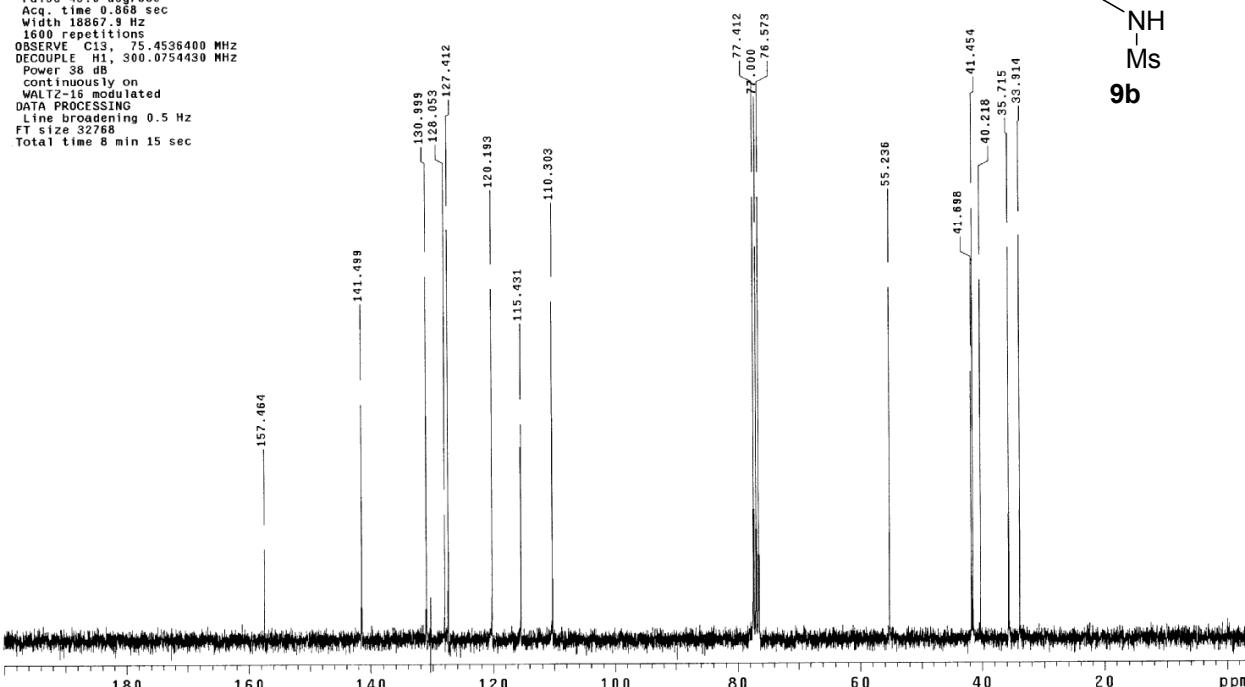
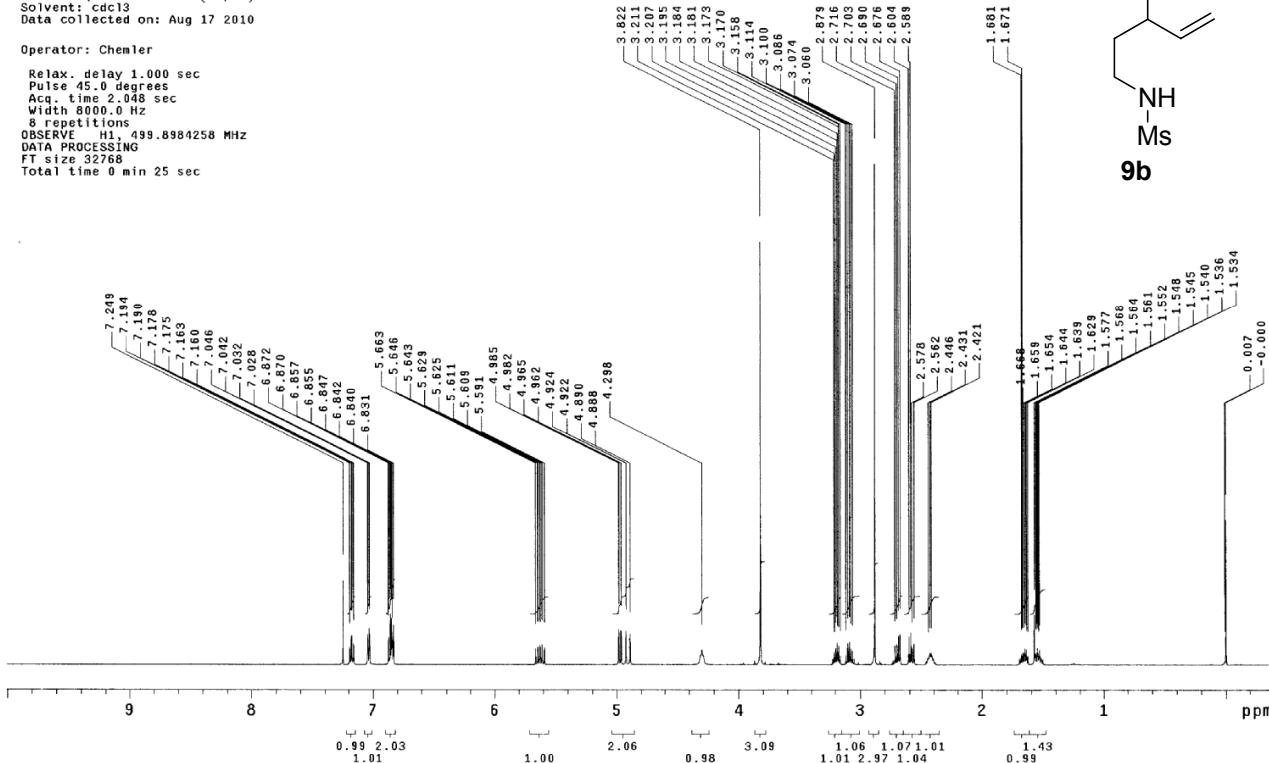
Sample Name:

Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:Sample directory:  
Fidfile: CARBONPulse Sequence: CARBON (s2pul)  
Solvent: cdc13  
Data collected on: Aug 5 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.868 sec  
Width 18867.9 Hz  
2328 repetitions  
OBSERVE C13, 75.4536389 MHz  
DECOPPLE C13, 300.0754430 MHz  
Power 38 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 8 min 15 sec

20100817omethoxylsubstrate  
 Sample Name:  
 Data Collected on: chemnmr500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 FidFile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdcl3  
 Data collected on: Aug 17 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8884258 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



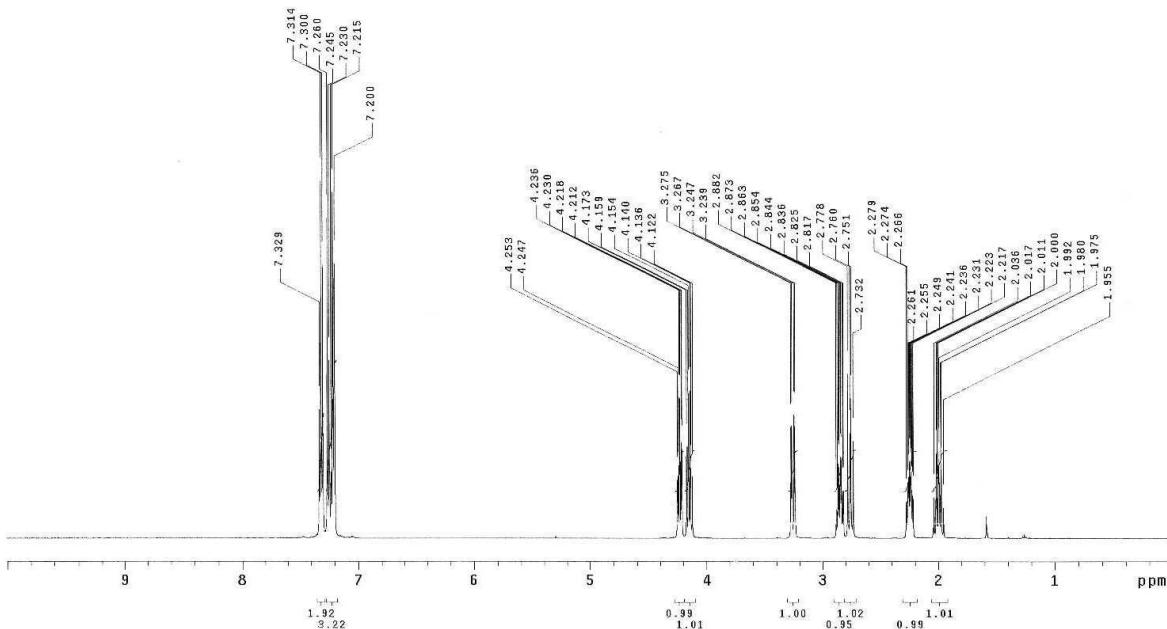
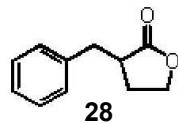
J-215-P

Pulse Sequence: s2pul  
Solvent: CDCl<sub>3</sub>  
Ambient temperature  
INOVA-500 "tocsy.chem.buffalo.edu"

```

Relax. delay 2.000 sec
Pulse 39.7 degrees
Acq. time 1.891 sec
Width 10000.0 Hz
16 repetitions
OBSERVE H1 499.8984024 MHz
DATA PROCESSING
Line broadening 0.7 Hz
FT size 65536
Total time 1 min, 18 sec

```



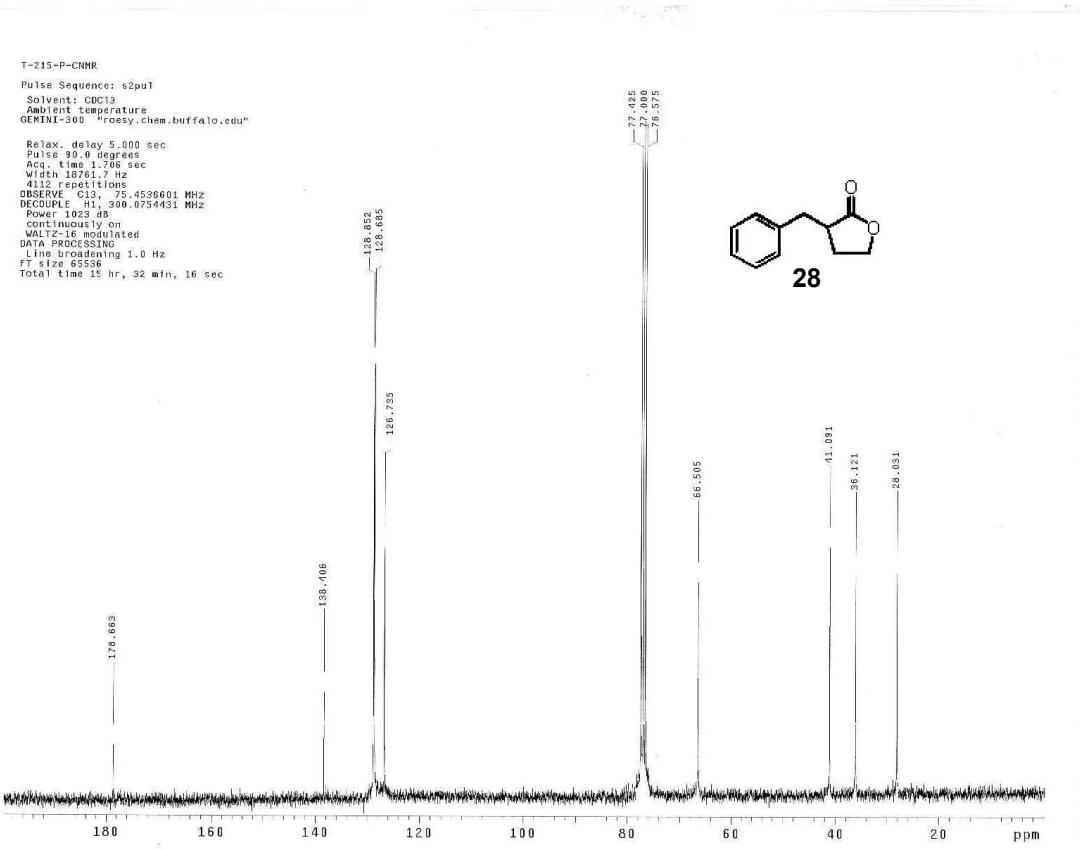
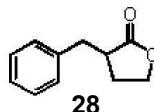
T-215-P-CNMR

Pulse Sequence: s2pul  
Solvent: CDCl<sub>3</sub>  
Ambient temperature  
GEMINI-300 "roesy.chem.buffalo.edu"

```

Relax. delay 5.000 sec
Pulse 90.0 degrees
Acq. time 1.706 sec
Width 18761.7 Hz
4112 repetitions
OBSERVE C13, 75.45936601 MHz
DECOUPLE F1, 300.7054431 MHz
Pulse 1023.49
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 65536
Total_time.15 hr. 32 min. 16 sec

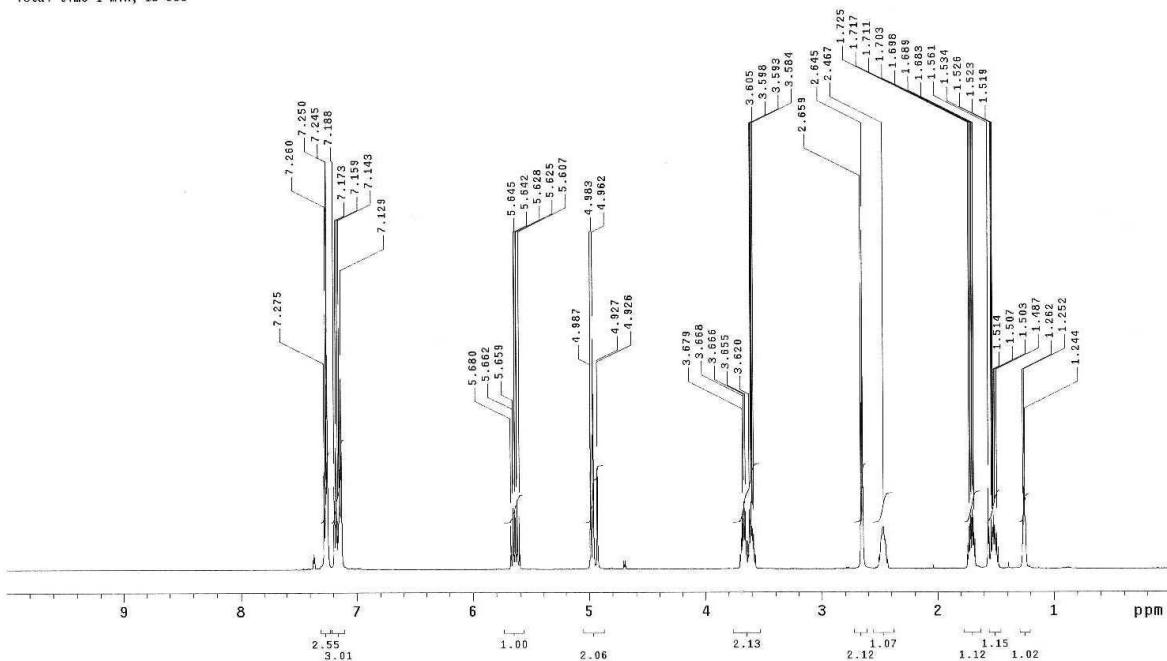
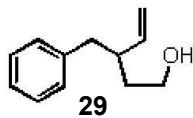
```



T-233-P2

Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Ambient temperature  
 INOVA-500 "tocsy.chem.buffalo.edu"

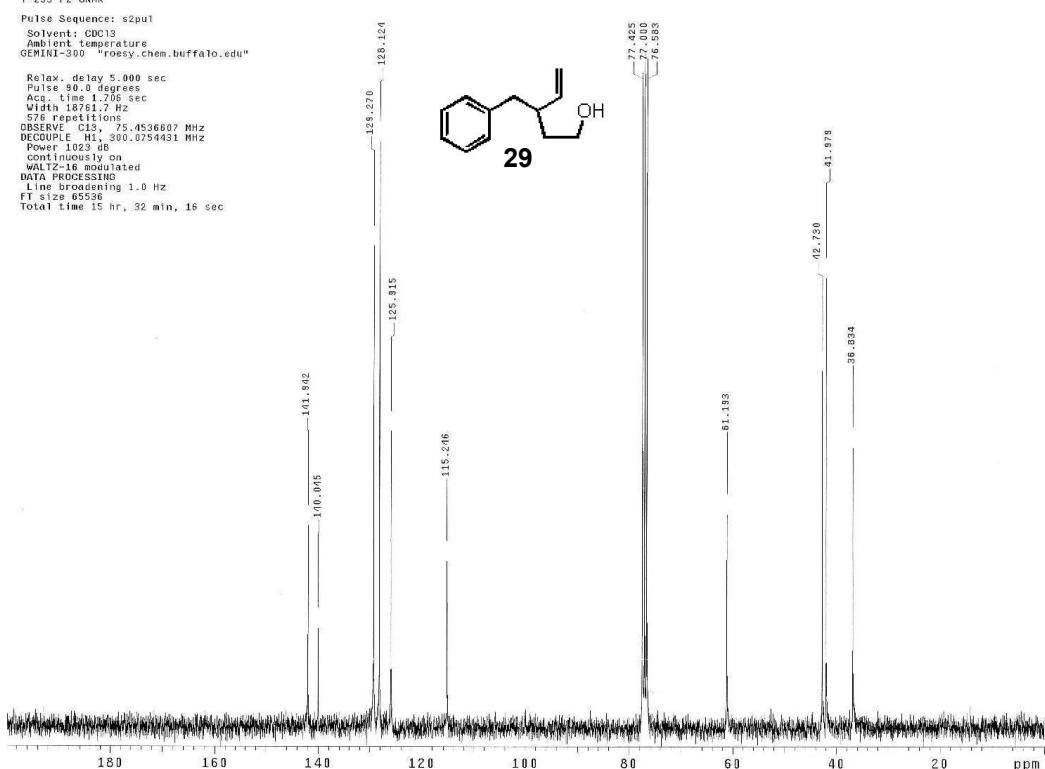
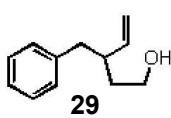
Relax. delay 2.000 sec  
 Pulse 35.7 degrees  
 Acq. time 1.881 sec  
 Width 1000.0 Hz  
 18 repetitions  
 OBSERVE H<sub>1</sub>, 499.8984103 MHz  
 DATA PROCESSING  
 Line broadening 0.7 Hz  
 FT size 65536  
 Total time 1 min, 18 sec



T-233-P2-CNMR

Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Ambient temperature  
 GEMINI-300 "trosy.chem.buffalo.edu"

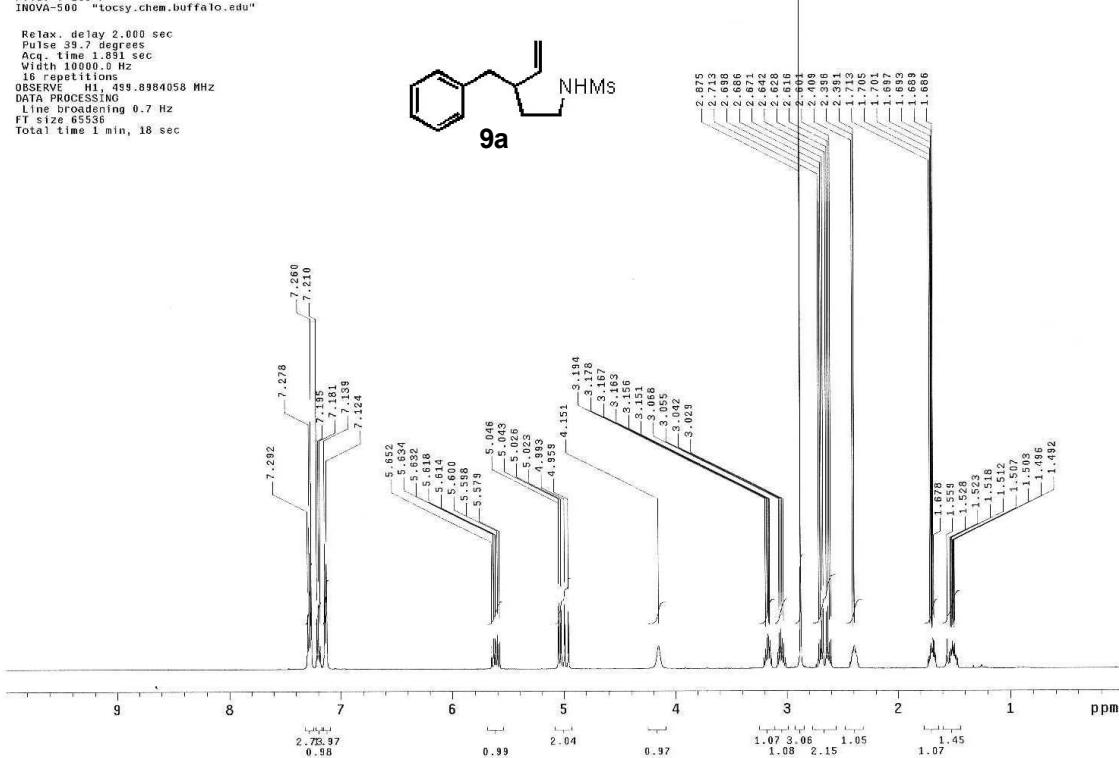
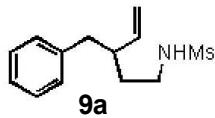
Relax. delay 5.000 sec  
 Pulse 90.0 degrees  
 Acc. time 1.705 sec  
 Width 1875.0 Hz  
 576 repetitions  
 OBSERVE C13, 75.4536607 MHz  
 DECOPPLE H<sub>1</sub>, 300.0754431 MHz  
 Power 100% off  
 continuously on  
 WALTZ-16 modulated  
 DATA 16384 points  
 Line broadening 1.0 Hz  
 FT size 65536  
 Total time 15 hr, 32 min, 16 sec



T-195-P

Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Ambient temperature  
 File: T-195-p  
 INOVA-500 "tocsy.chem.buffalo.edu"

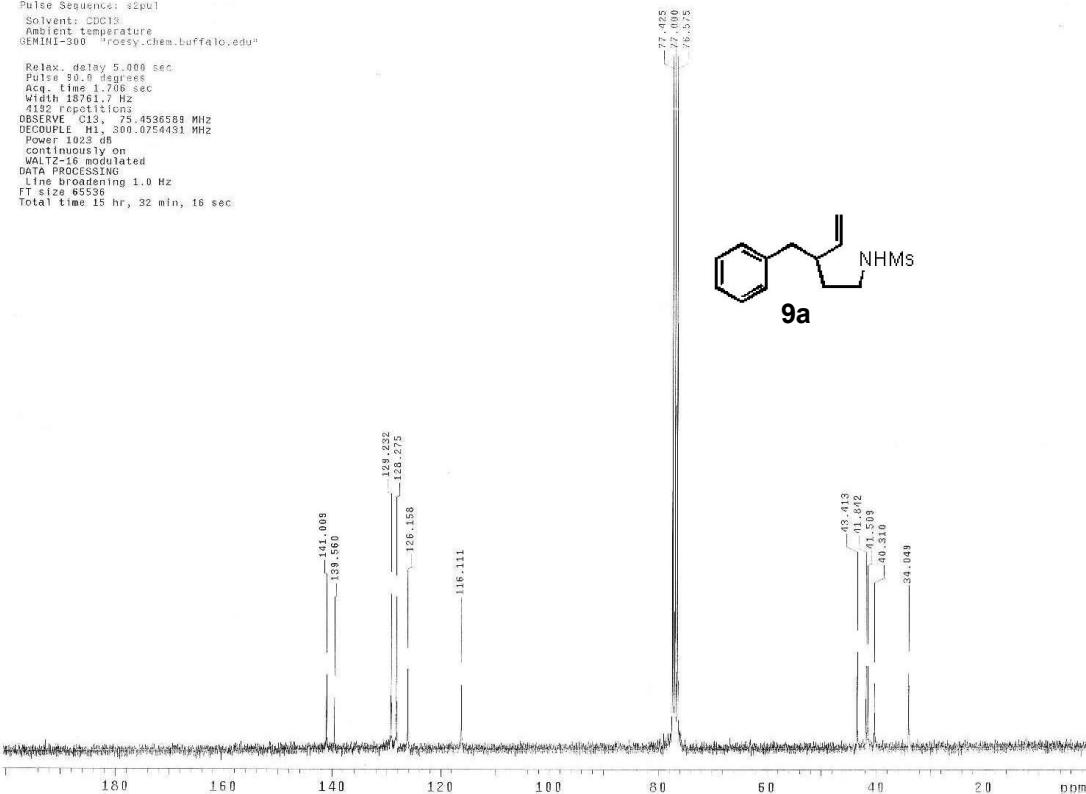
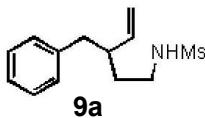
Relax. delay 2.000 sec  
 Pulse 39.7 degrees  
 Acq. time 1.851 sec  
 Width 1000.0 Hz  
 16 repetitions  
 OBSERVE: H1, 499.8984058 MHz  
 DATA PROCESSING  
 Line broadening 0.7 Hz  
 FT size 65536  
 Total time 1 min, 18 sec



T-195-P-C13NMR

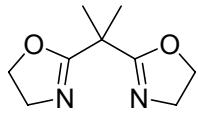
Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Ambient temperature  
 GEMINI-300 "tocsy.chem.buffalo.edu"

Relax. delay 5.000 sec  
 Pulse 90.0 degrees  
 Acq. time 1.706 sec  
 Width 1000.0 Hz  
 4192 repetitions  
 OBSERVE: C13, 75.4536588 MHz  
 DECOUPLE: H1, 300.0754431 MHz  
 Power: 100.000000  
 Continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 1.0 Hz  
 FT size 65536  
 Total time 15 hr, 32 min, 16 sec

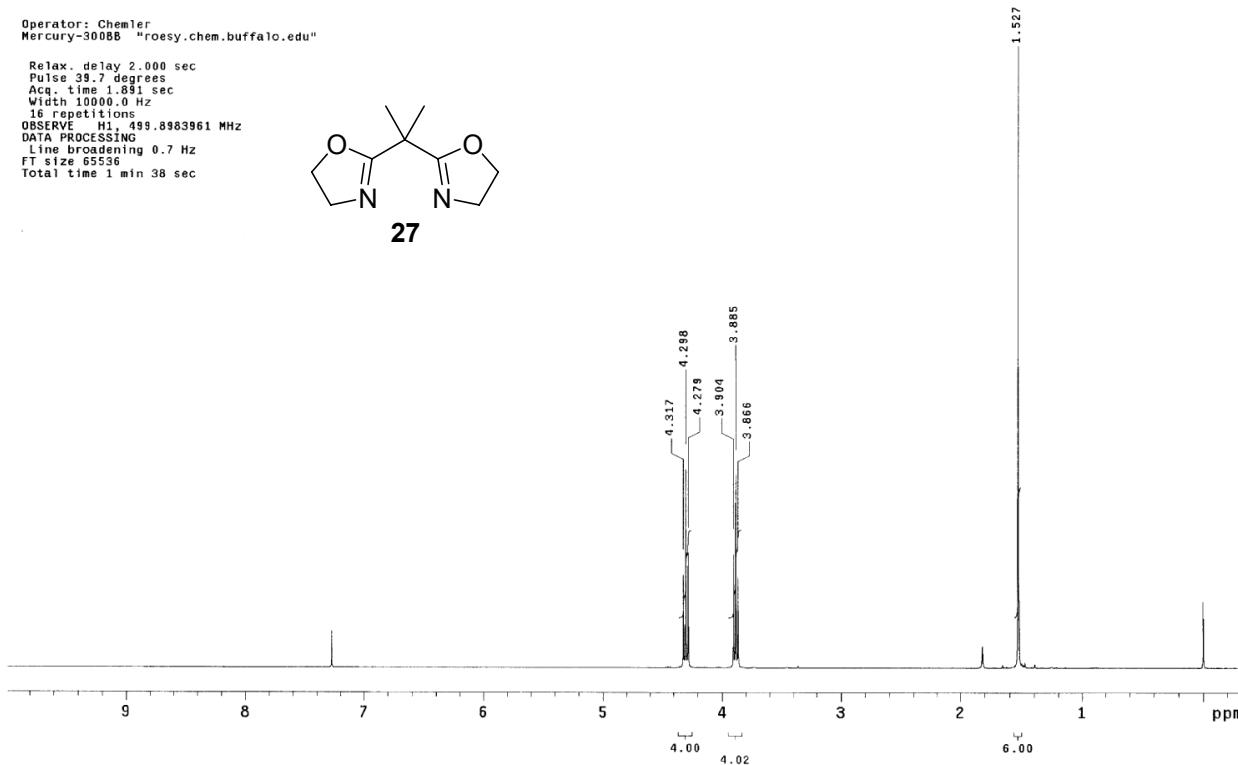


20091118ligand  
 Sample Name:  
 Archive directory:  
 Sample directory:  
 FidFile: H1  
 Pulse Sequence: s2pul  
 Solvent: CDCl<sub>3</sub>  
 Data collected on: Nov 18 2009  
 Operator: Chemler  
 Mercury-300BB "roesy.chem.buffalo.edu"

Relax. delay 2.000 sec  
 Pulse 39.7 degrees  
 Acq. time 1.001 sec  
 Width 1000.0 Hz  
 16 repetitions  
 OBSERVE H1, 499.8983961 MHz  
 DATA PROCESSING  
 Line broadening 0.7 Hz  
 FT size 65536  
 Total time 1 min 38 sec

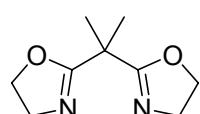


27

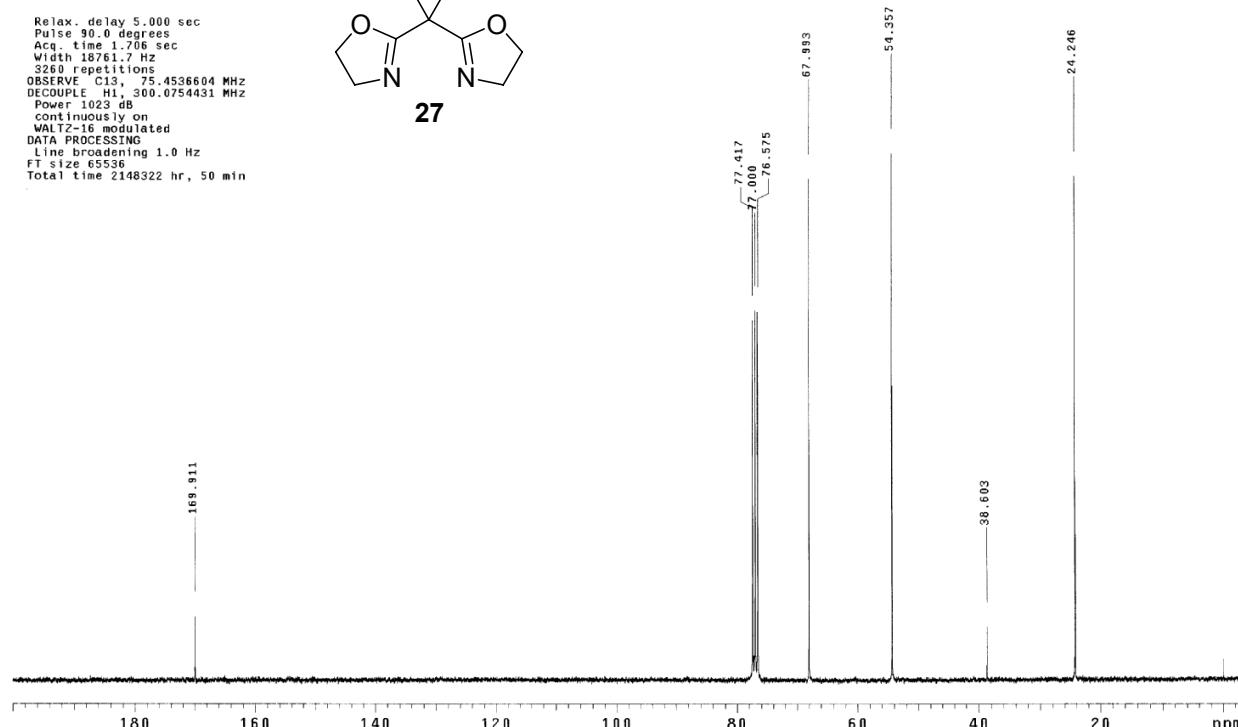


20091119ligandC13  
 Sample Name:  
 Archive directory:  
 Sample directory:  
 FidFile: std13c  
 Pulse Sequence: std13c (s2pul)  
 Solvent: CDCl<sub>3</sub>  
 Data collected on: Nov 19 2009

Operator: Chemler  
 Mercury-300BB "roesy.chem.buffalo.edu"  
 Relax. delay 5.000 sec  
 Pulse 90.0 degrees  
 Acq. time 1.706 sec  
 Width 18761.7 Hz  
 3260 repetitions  
 OBSERVE C13, 75.4536604 MHz  
 DECIMATION 300.0754431 MHz  
 Power 1023 dB  
 continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 1.0 Hz  
 FT size 65536  
 Total time 2148322 hr, 50 min



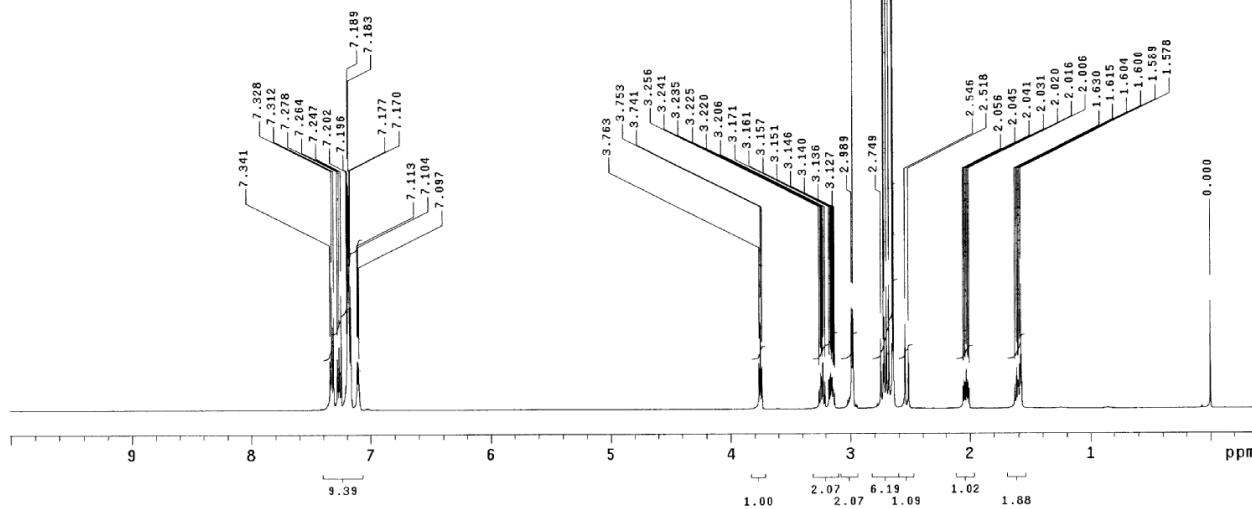
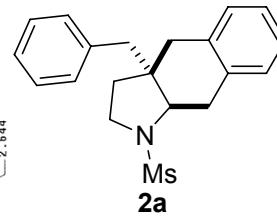
27



20100713Msdbenzylproduct  
 Sample Name:  
 Data Collected on:  
 chemmer500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 Fidfile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdc13  
 Data collected on: Jul 13 2010

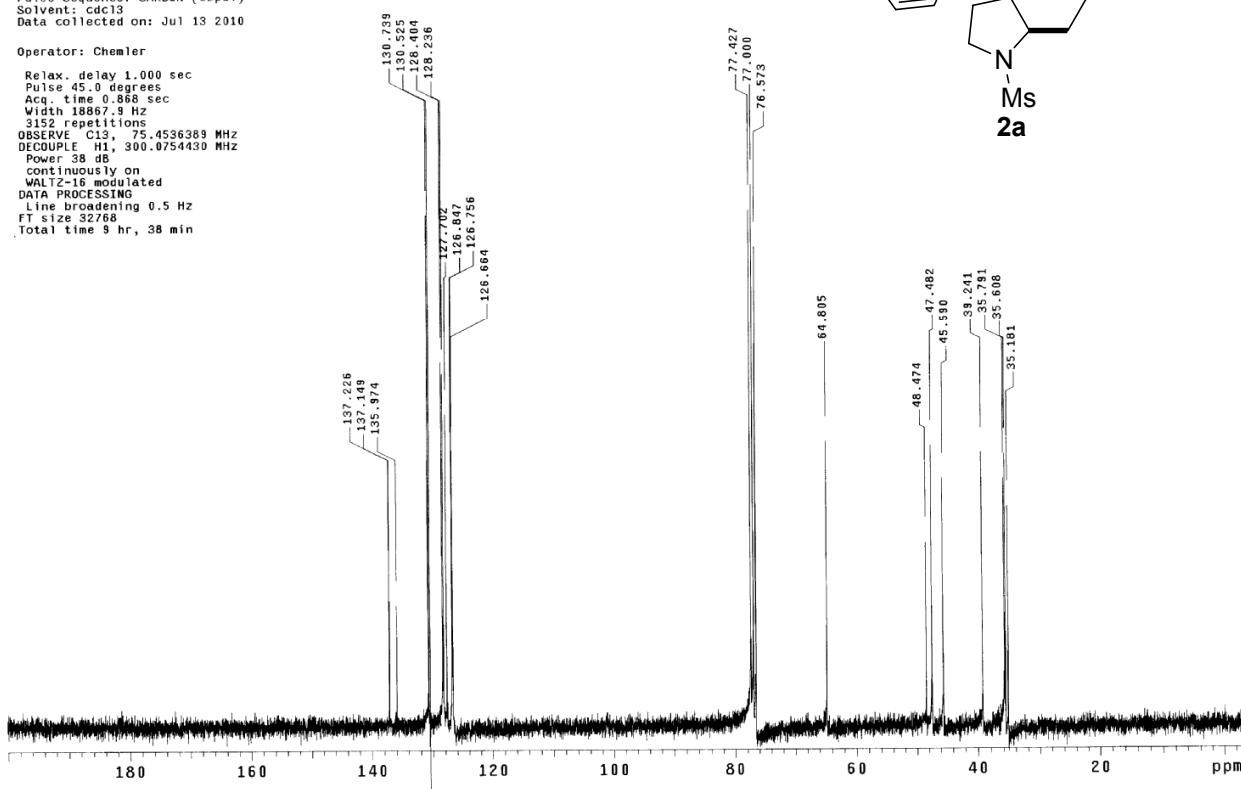
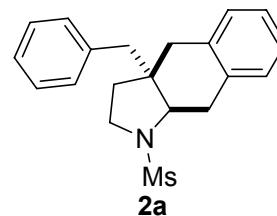
Operator: Chemler

Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984268 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



Operator: Chemler

Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.868 sec  
 Width 18867.9 Hz  
 3152 repetitions  
 OBSERVE C13, 75.4536389 MHz  
 DECOUPLE H1, 300.0754430 MHz  
 PFG90 88 degrees  
 continuously on  
 WALTZ-16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 9 hr, 38 min



## 20100713SESdibenzylproduct

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

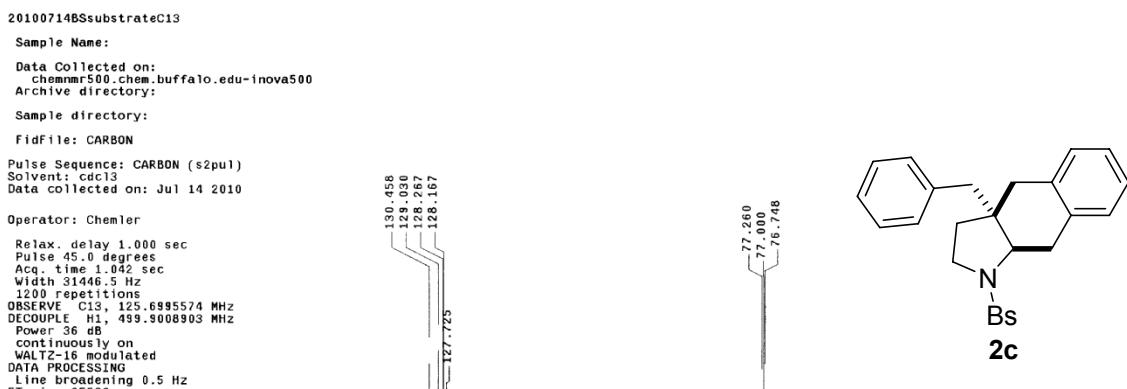
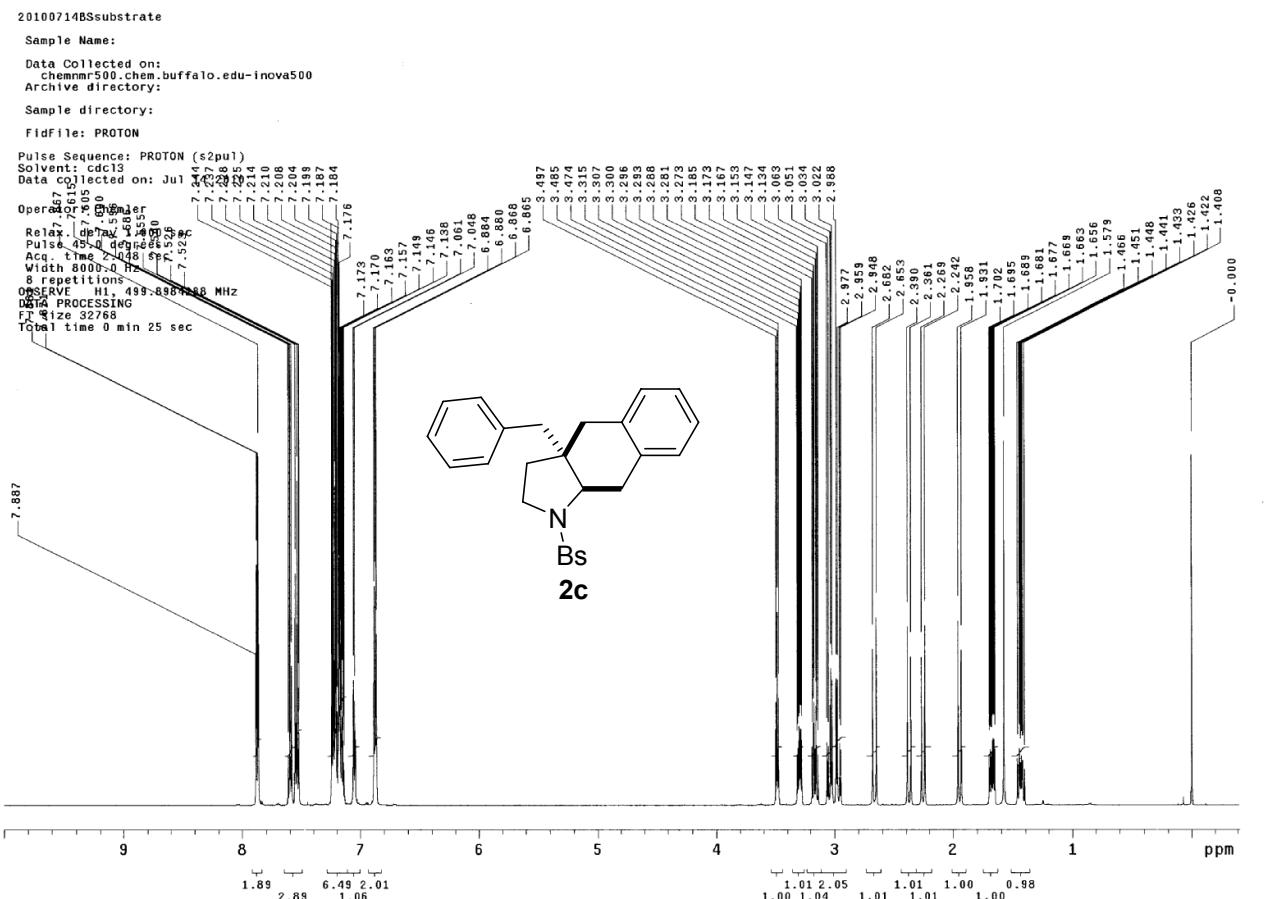
Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 13 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.049 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984273 MHz  
DATA PROCESSING:  
FT size 32768  
Total time 0 min 0 sec

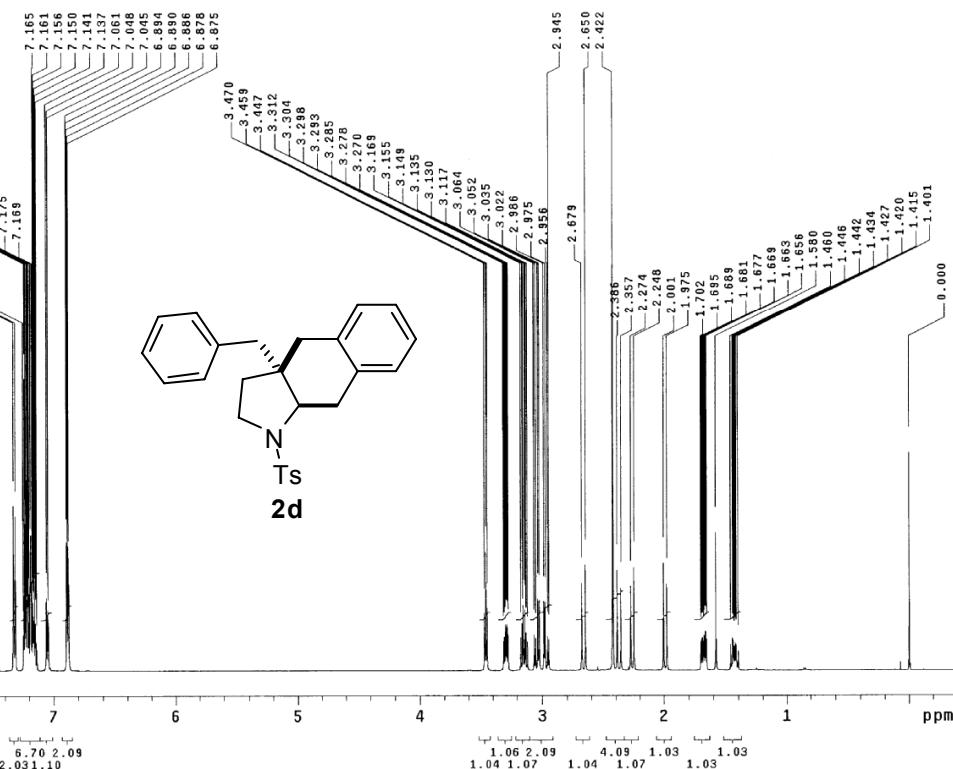


## 20100719dibenzylproduct

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: PROTONPulse Sequence: PRDT0N (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 19 2010

Operator: Chemler

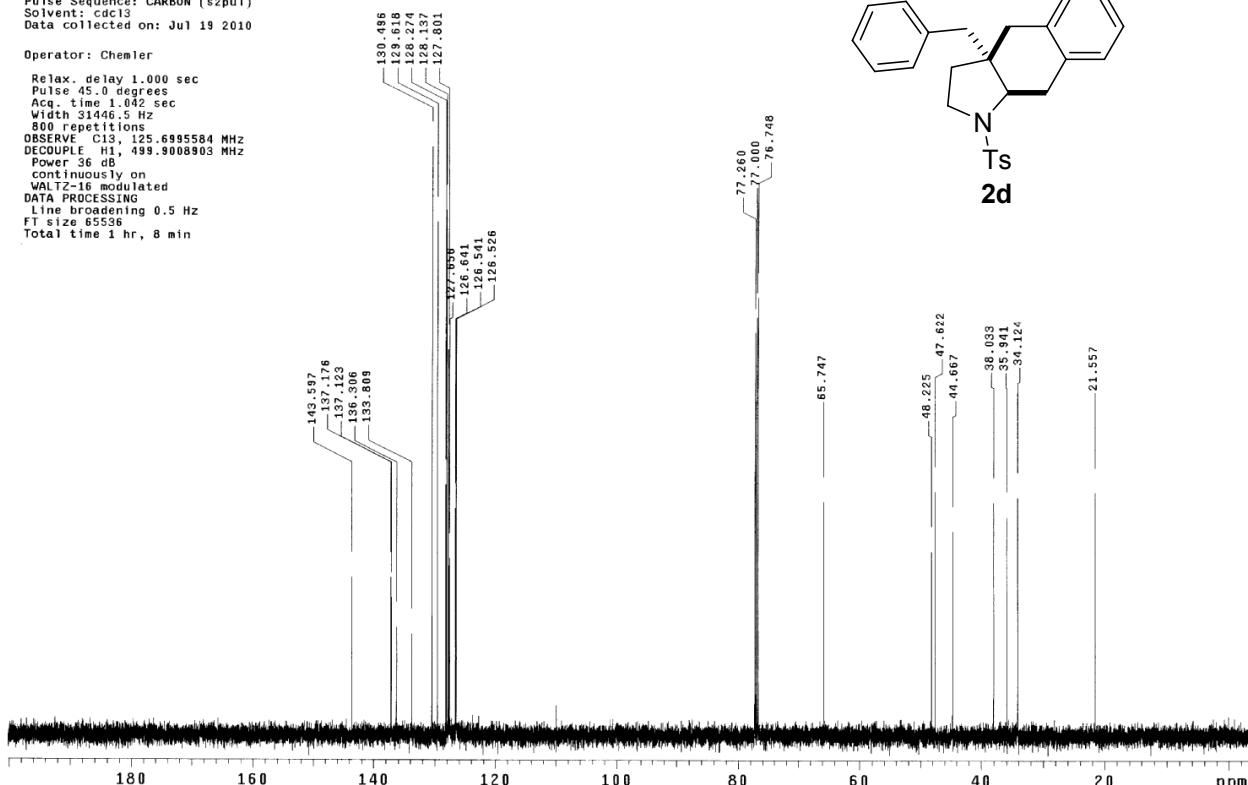
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitionsOBSERVE H1, 499.8826 MHz  
DATA PROCESSING  
FT size 65536Total time 1 hr, 8 min  
25 7.208  
26 7.203  
27 7.201  
28 7.192  
29 7.188  
30 7.182  
31 7.178  
32 7.175  
33 7.169

## 20100719dibenzylproductC13

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: CARBONPulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 19 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
800 repetitions  
OBSERVE C13, 125.6995584 MHz  
DECOPPLE H1, 499.9008903 MHz  
Power 36 dB  
continuously on  
W1 7.162, modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 1 hr, 8 min

20100717PMBSdibenzylproduct

Sample Name:

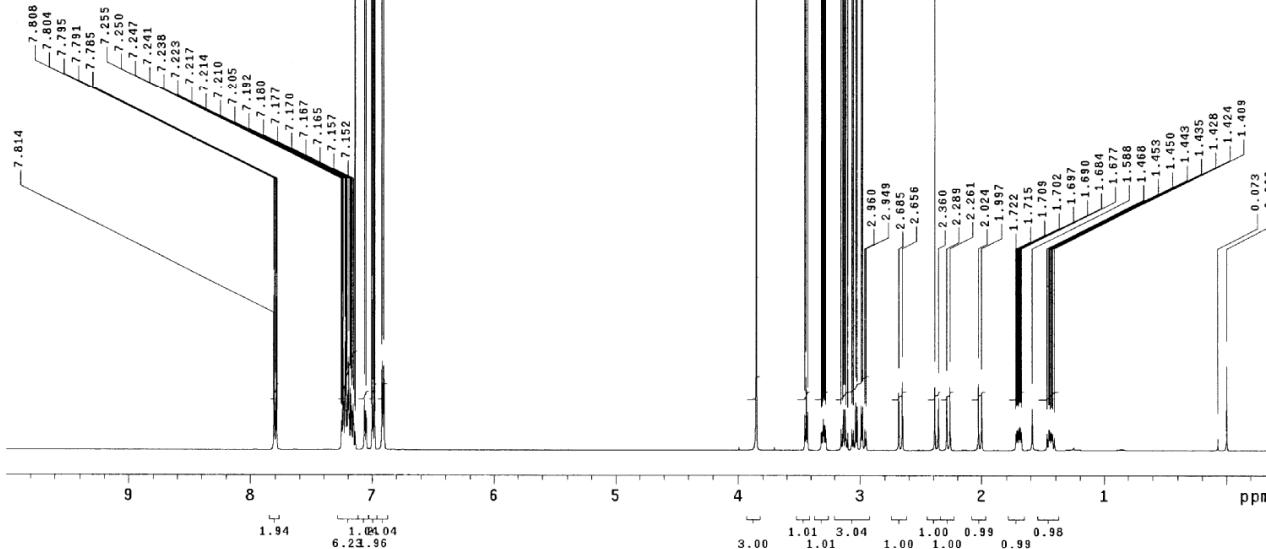
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdc13  
Data collected on: Jul 17 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984302 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

20100717PMBSdibenzylproductC13

Sample Name:

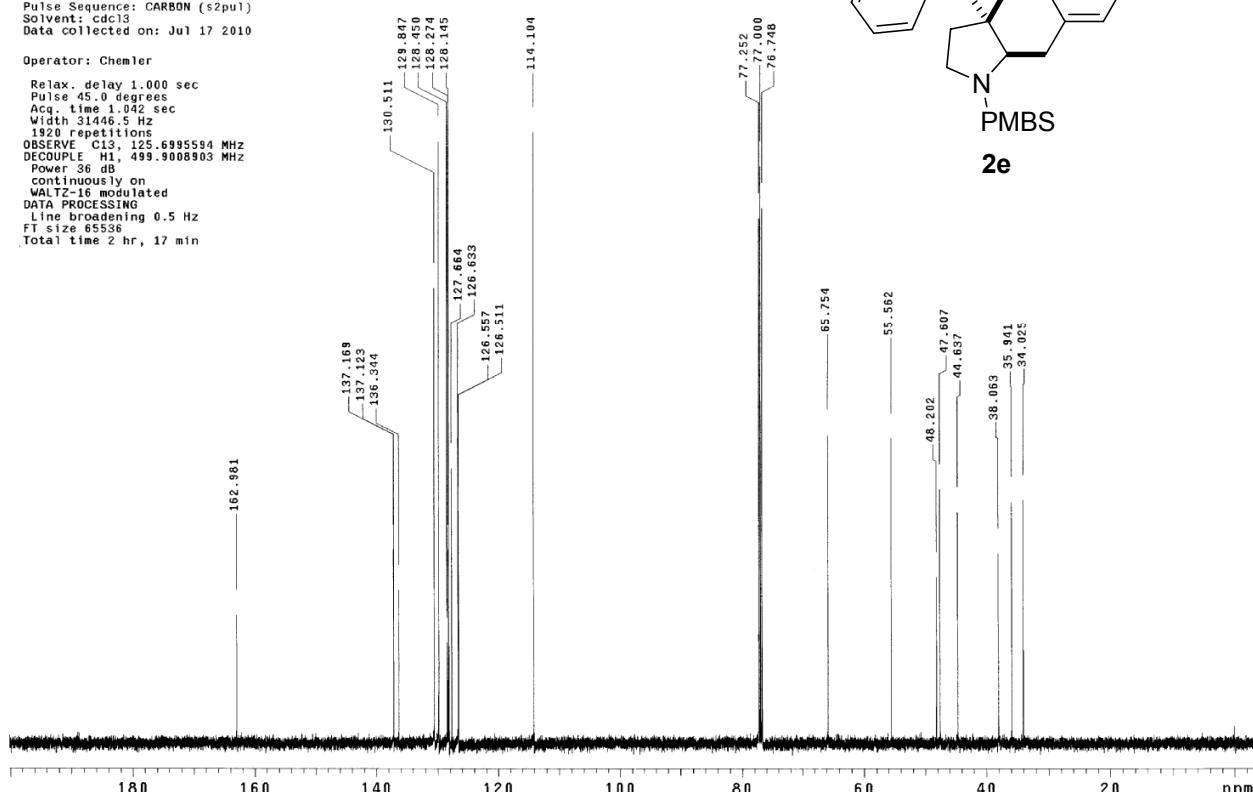
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

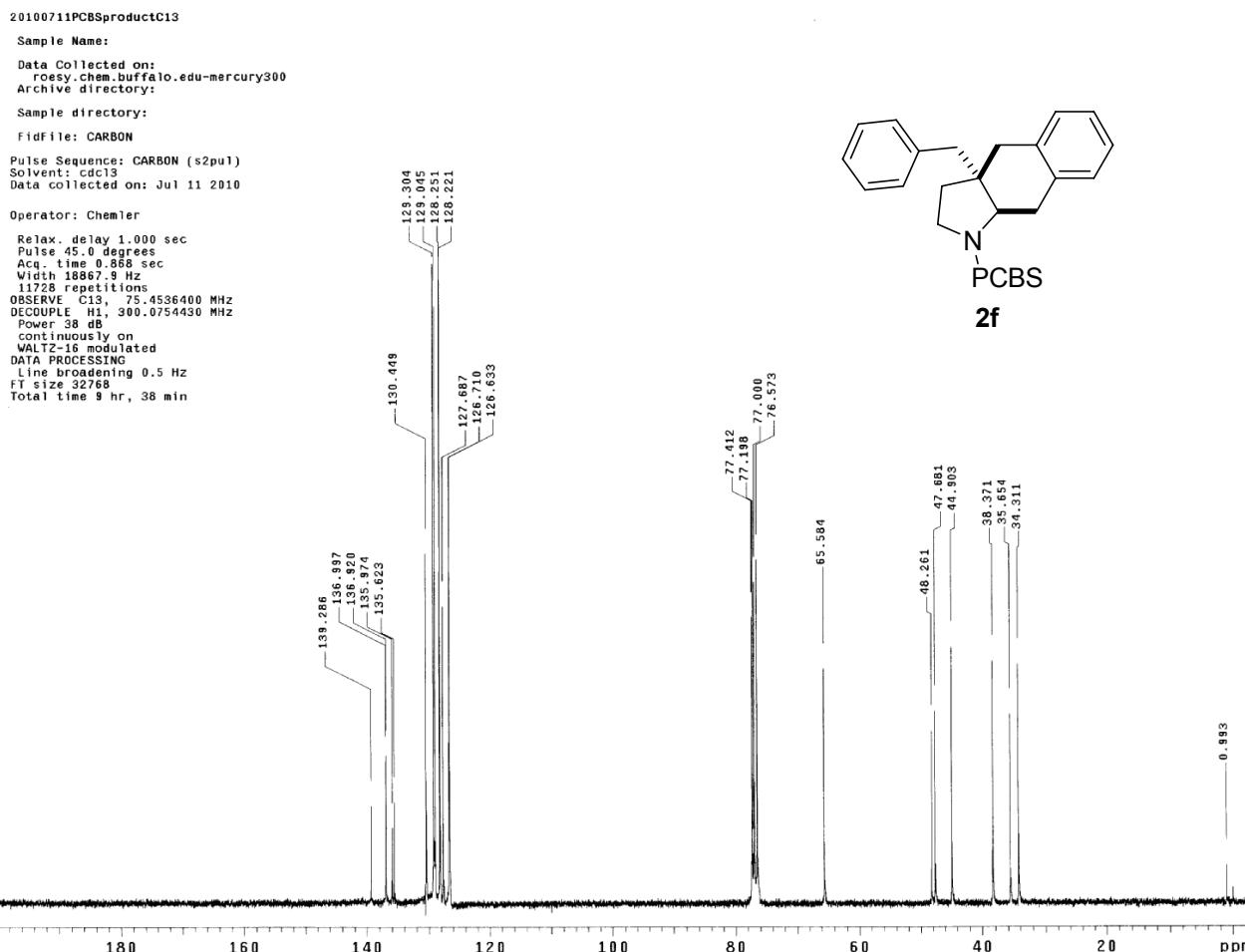
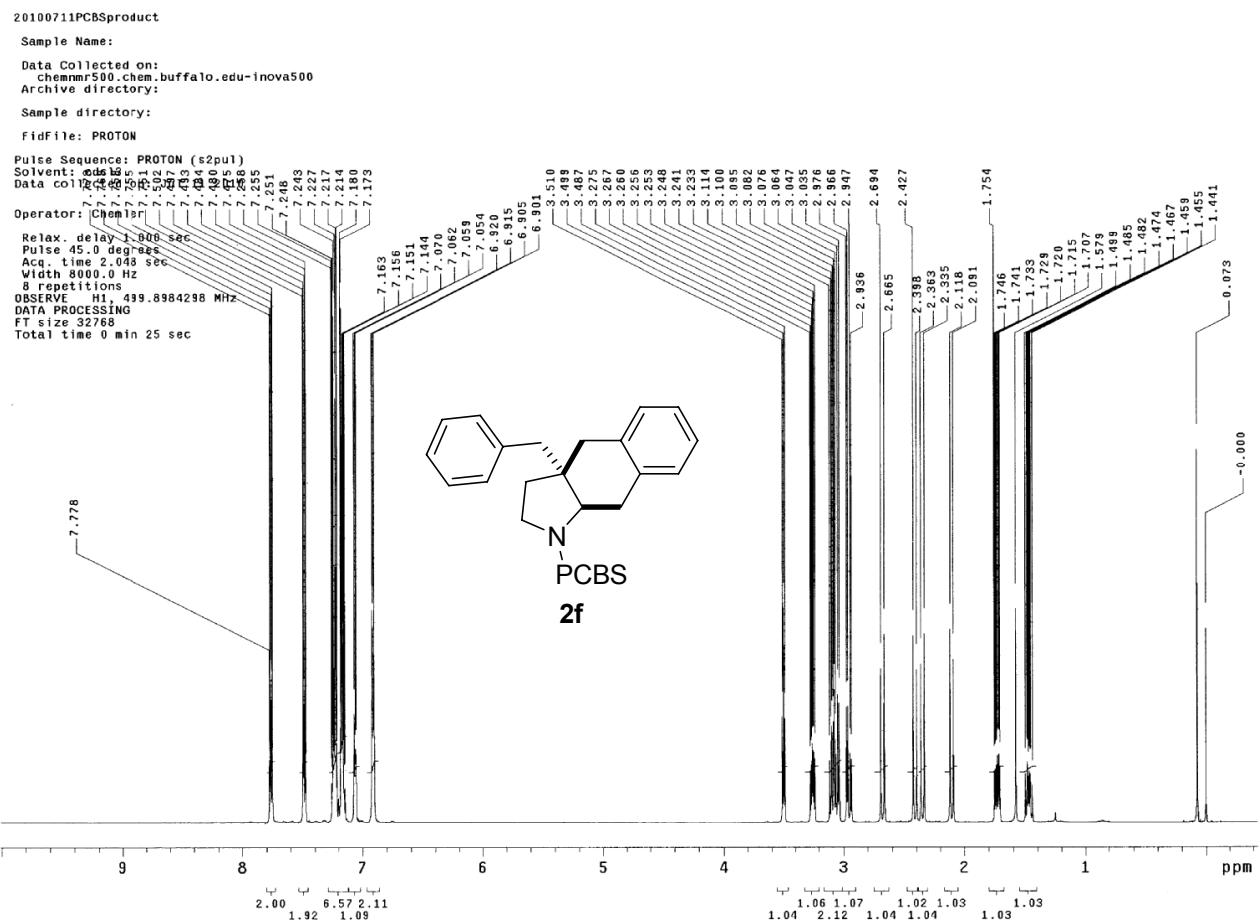
Sample directory:

Fidfile: CARBON

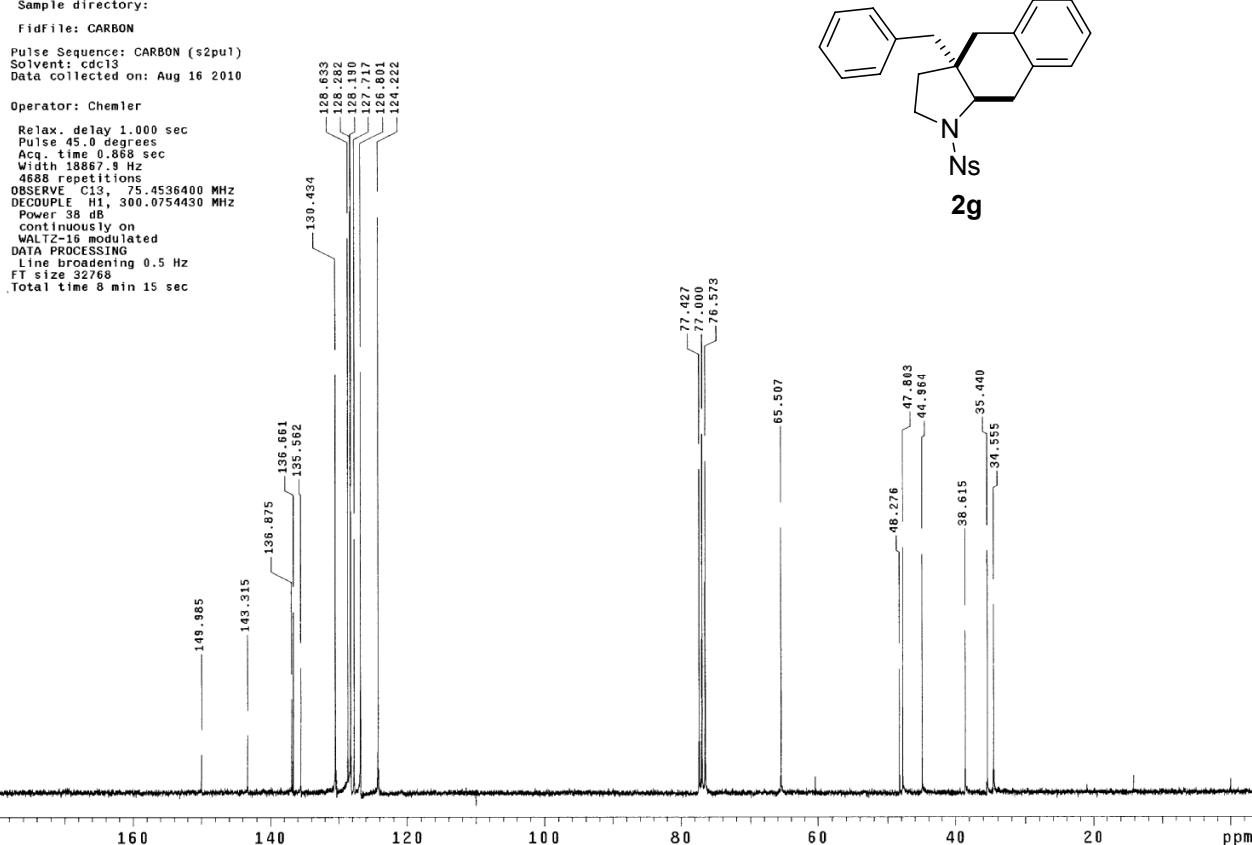
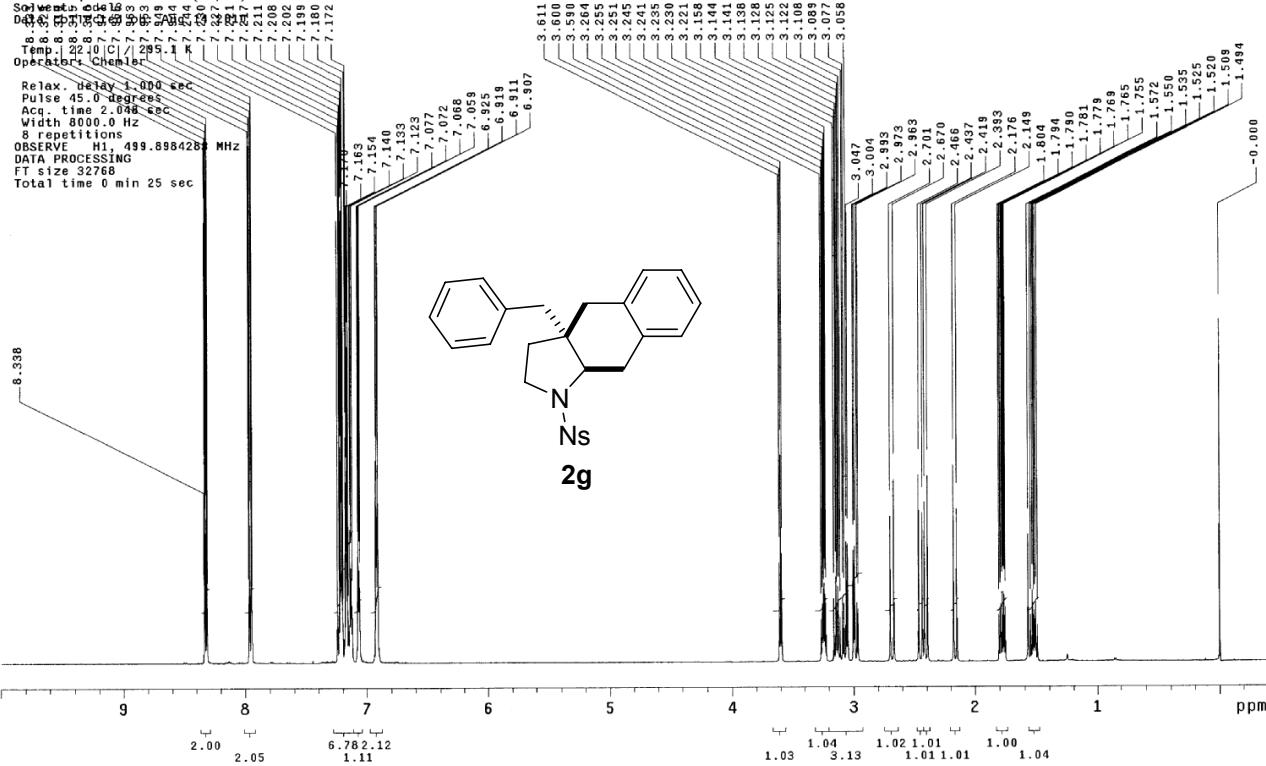
Pulse Sequence: CARBON (s2pul)  
Solvent: cdc13  
Data collected on: Jul 17 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
1920 repetitions  
OBSERVE C13, 125.6995594 MHz  
DECOUPLE F1, 499.9008903 MHz  
Power 36 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 2 hr, 17 min



20100814Nsproduct  
 Sample Name:  
 Data Collected on:  
 chemmr500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 Fidfile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdc13  
 Date: 2010-08-14 10:54:40  
 Time: 10:54:40  
 Temp: 22.10 [C] / 285.1 K  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 8000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984280 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



## 20100711difluorobenzylproduct

Sample Name:

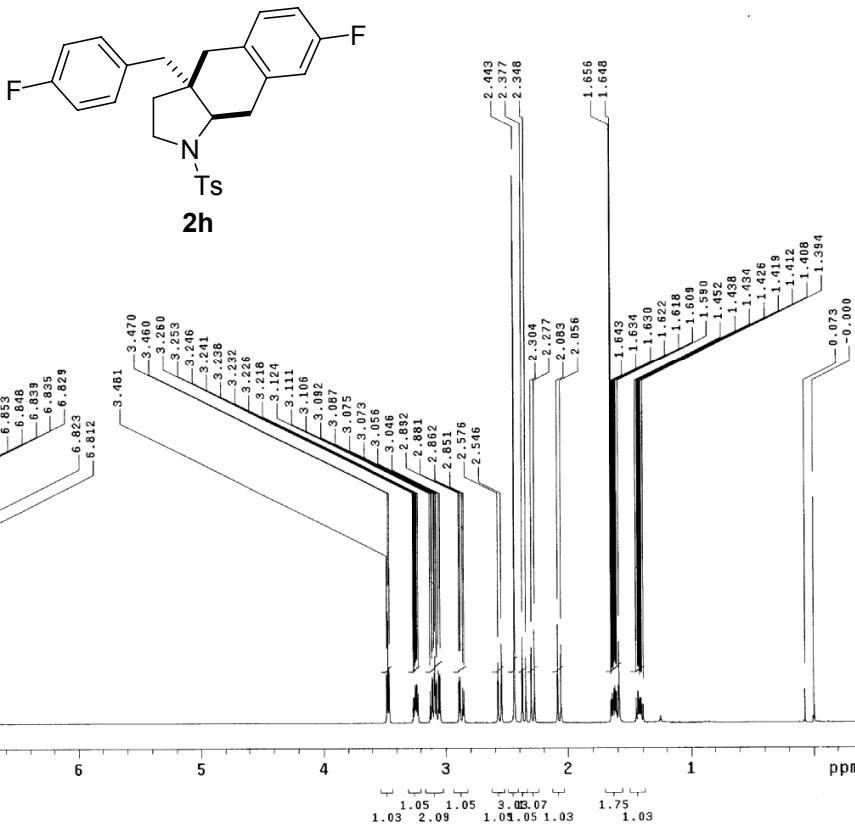
Data Collected on:  
chemnmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: PROTON

Pulse Sequence: PROTON ( $\delta^2\mu$ pul)  
Solvent: cdc13  
Data collected on: Jul 11 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984263 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

## 20100711difluorobenzylproductC13

Sample Name:

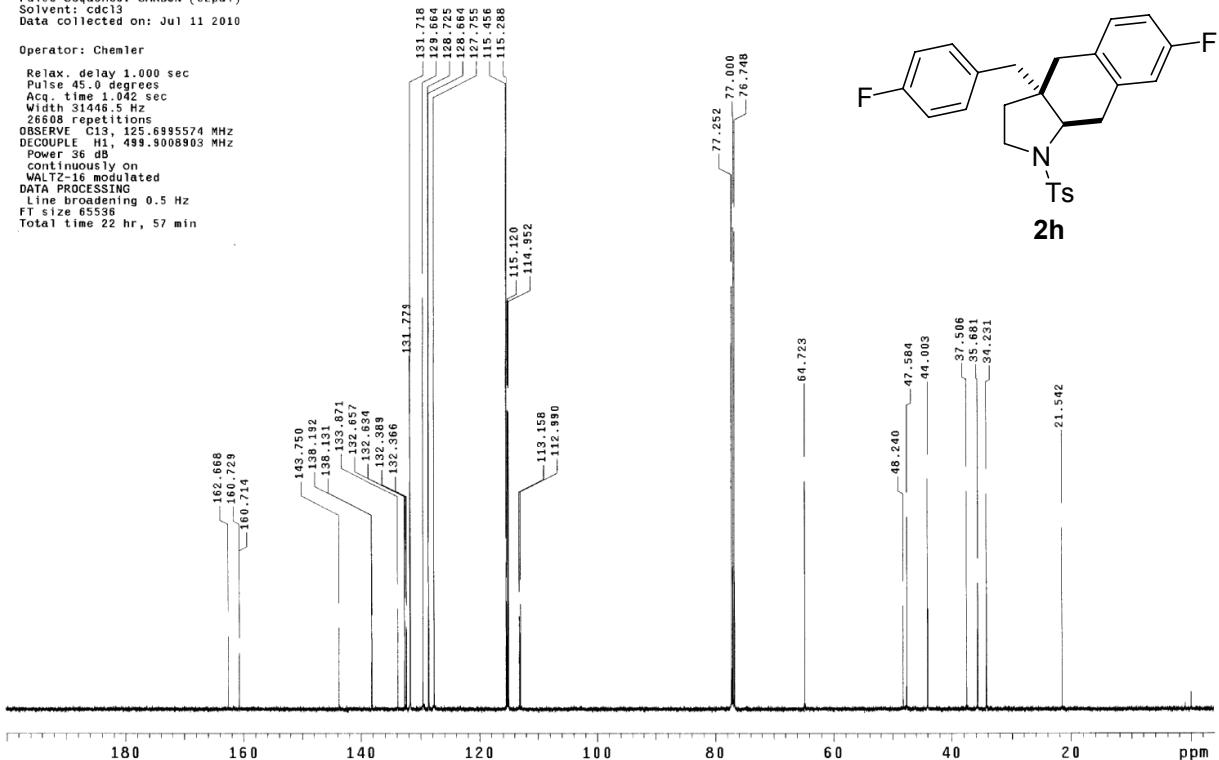
Data Collected on:  
chemnmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON ( $\delta^2\mu$ pul)  
Solvent: cdc13  
Data collected on: Jul 11 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
26608 repetitions  
OBSERVE C13, 125.6885574 MHz  
DOUBLE FID, 499.9008903 MHz  
Power 36 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 22 hr, 57 min

## STANDARD PROTON PARAMETERS

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Ambient temperature

INOVA-500 "tocsy.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 39.7 degrees

Acq. time 1.891 sec

Width 10000.0 Hz

18 repetitions

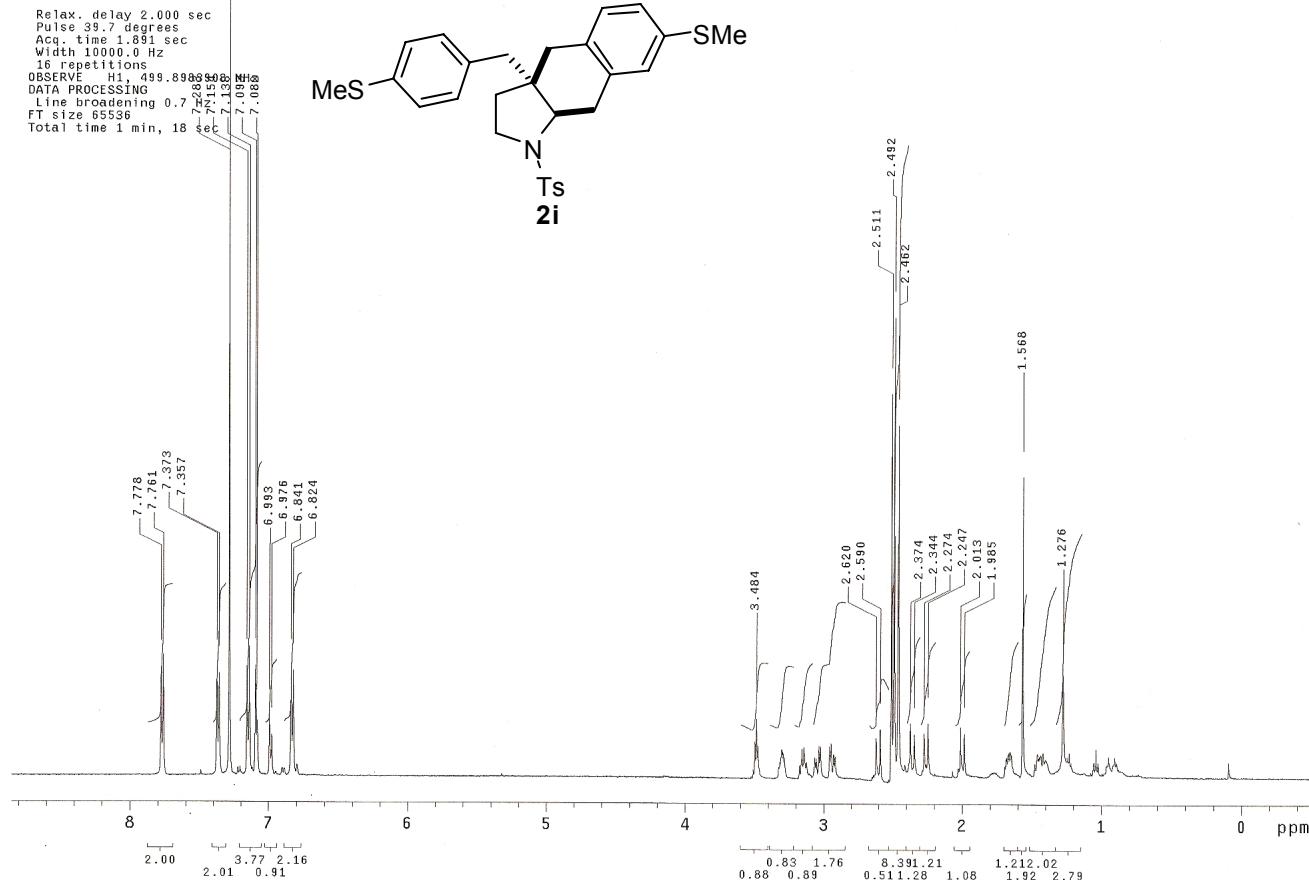
OBSERVE H1, 499.89889081 MHz

DATA PROCESSING

Line broadening 0.7

FT size 65536

Total time 1 min, 18 sec



Imran-040209

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Ambient temperature

GEMINI-300 "roesey.chem.buffalo.edu"

Relax. delay 5.000 sec

Pulse 90.0 degrees

Acq. time 1.000 sec

Width 1876.7 Hz

4432 repetitions

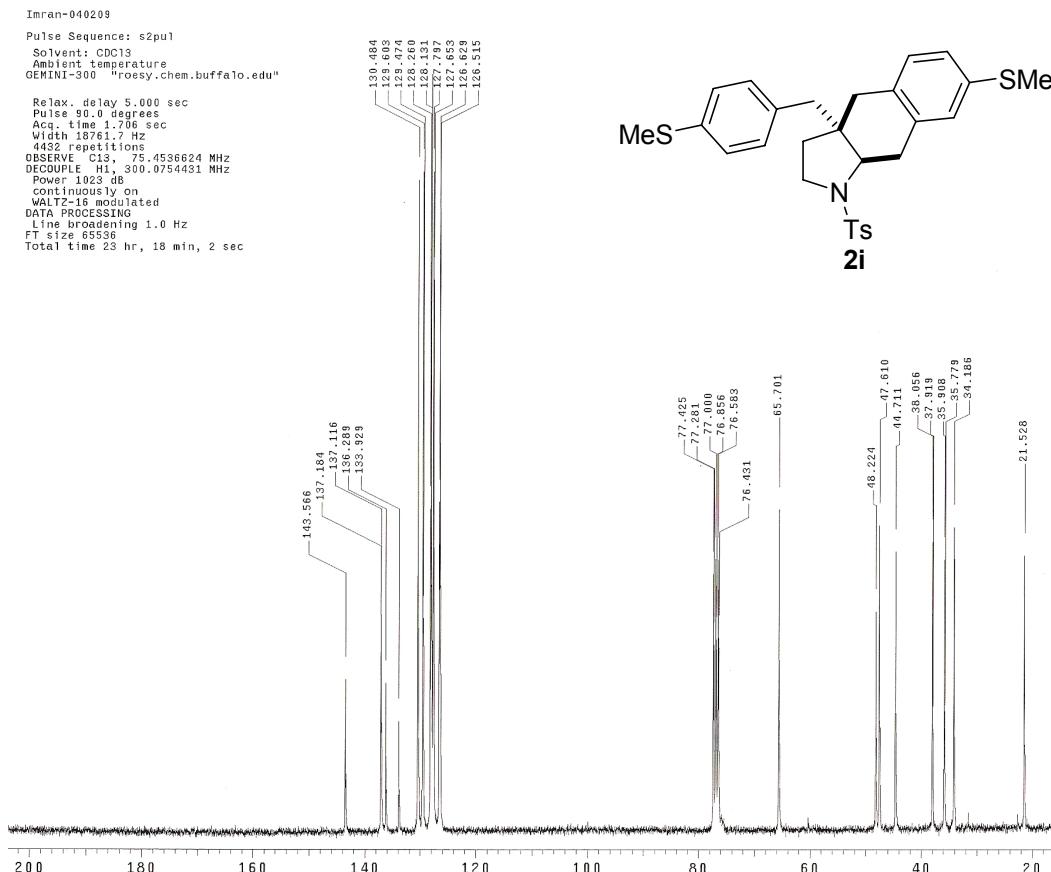
OBSERVE C13, 75.4536624 MHz

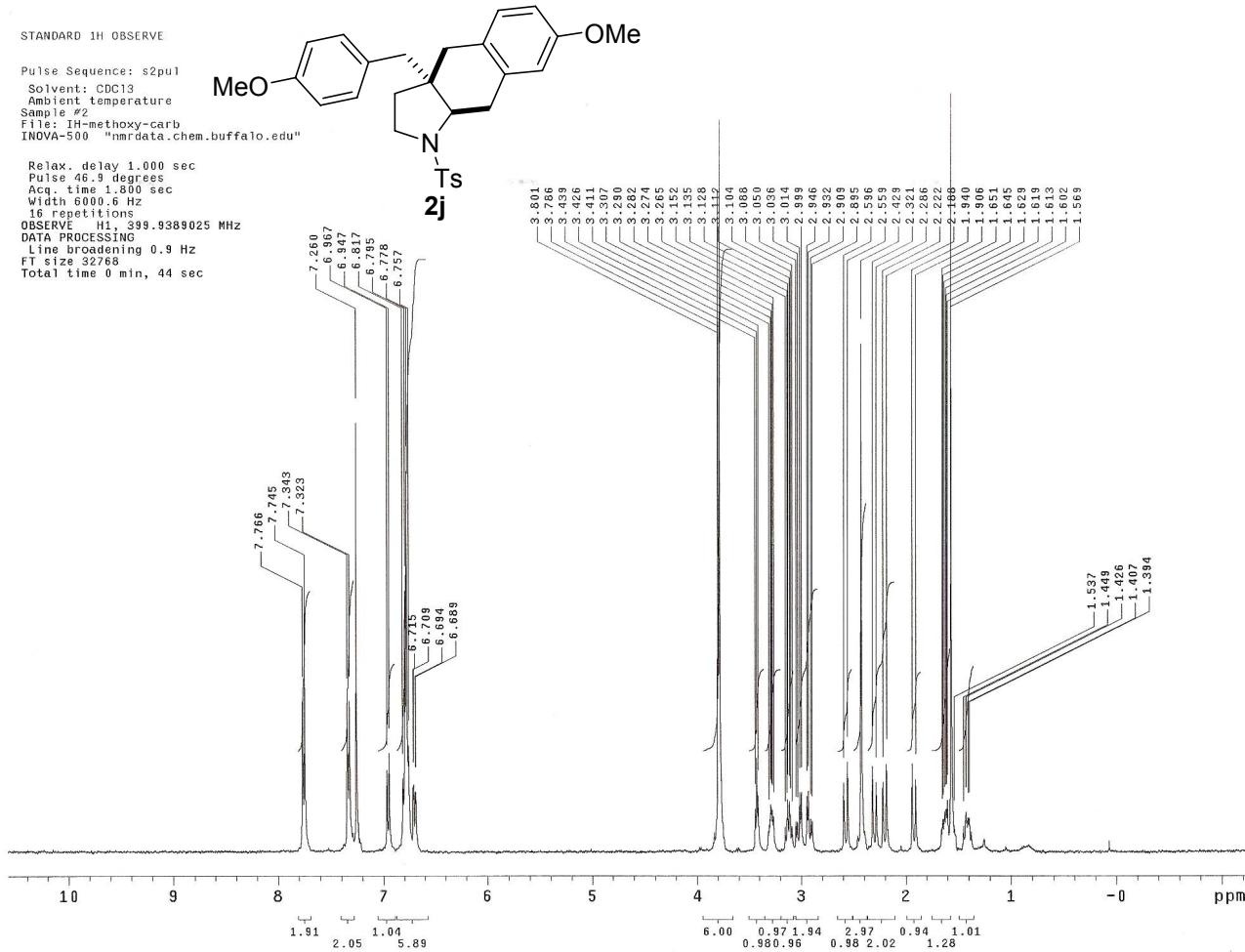
DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

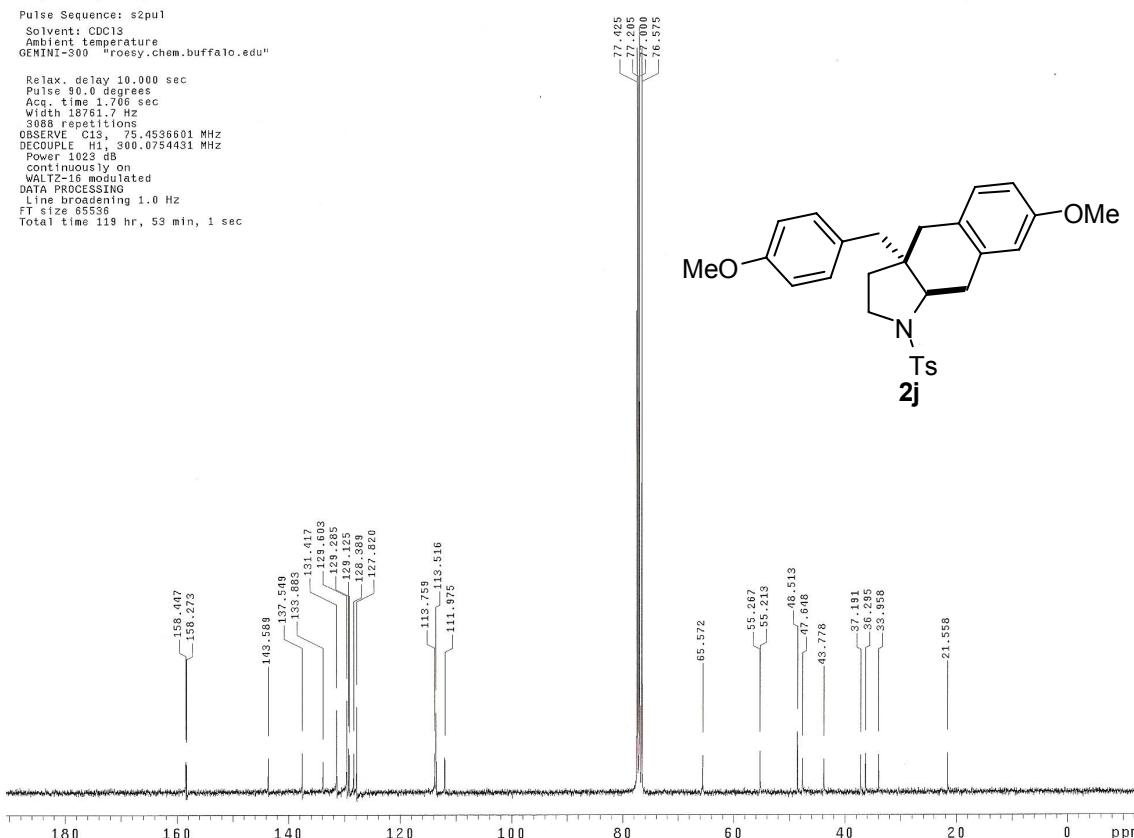
Total time 23 hr, 18 min, 2 sec





1H-p-methoxy-carb-prod  
Pulse Sequence: s2pul  
Solvent: CDCl<sub>3</sub>  
Ambient temperature  
GEMINI-300 "roesy.chem.buffalo.edu"

Relax. delay 10.000 sec  
Pulse 90.0 degrees  
Acq. time 1.700 sec  
Width 1876.1 Hz  
3088 repetitions  
OBSERVE C13, 75.4536601 MHz  
DECOPPLE H1, 300.0754431 MHz  
POWER 100%  
Continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 119 hr, 53 min, 1 sec



## 20100708di3methoxy!paraproduct

Sample Name:

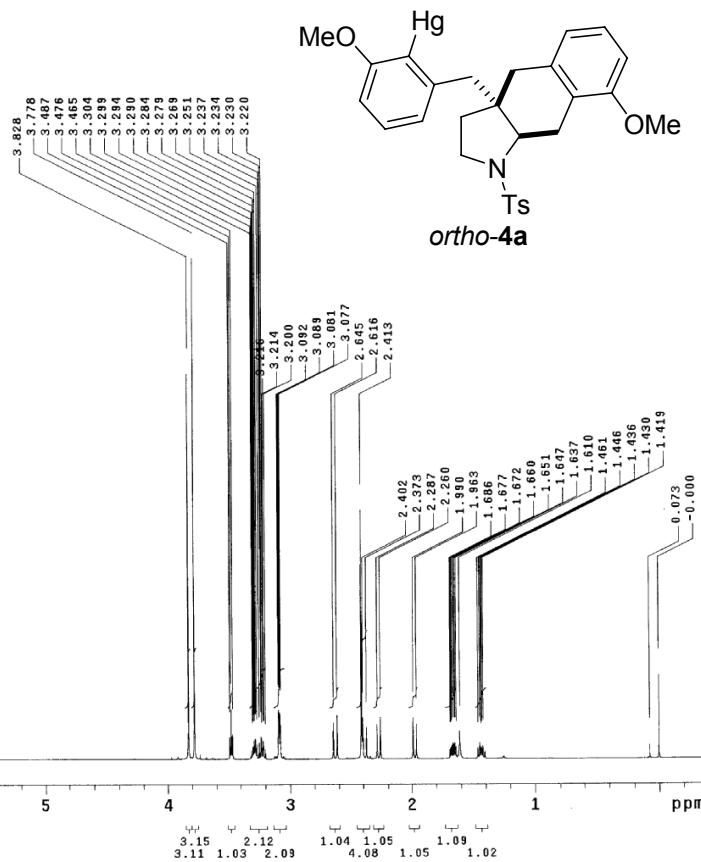
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100708di3methoxy!paraproduct

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 8 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acc. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984283 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

## 20100617di3methoxy!orthoproductC13

Sample Name:

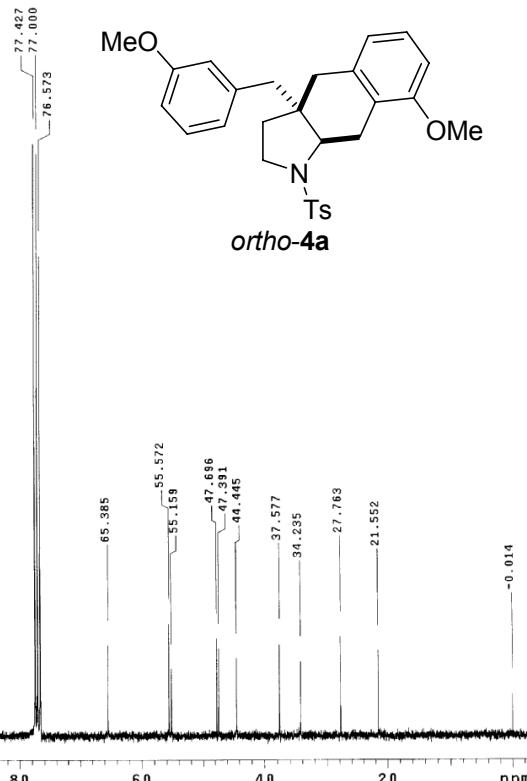
Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

FidFile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 17 2010

Operator: Chemler

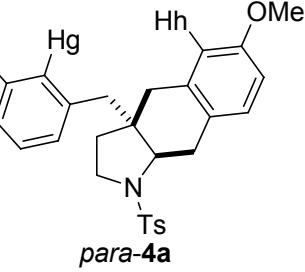
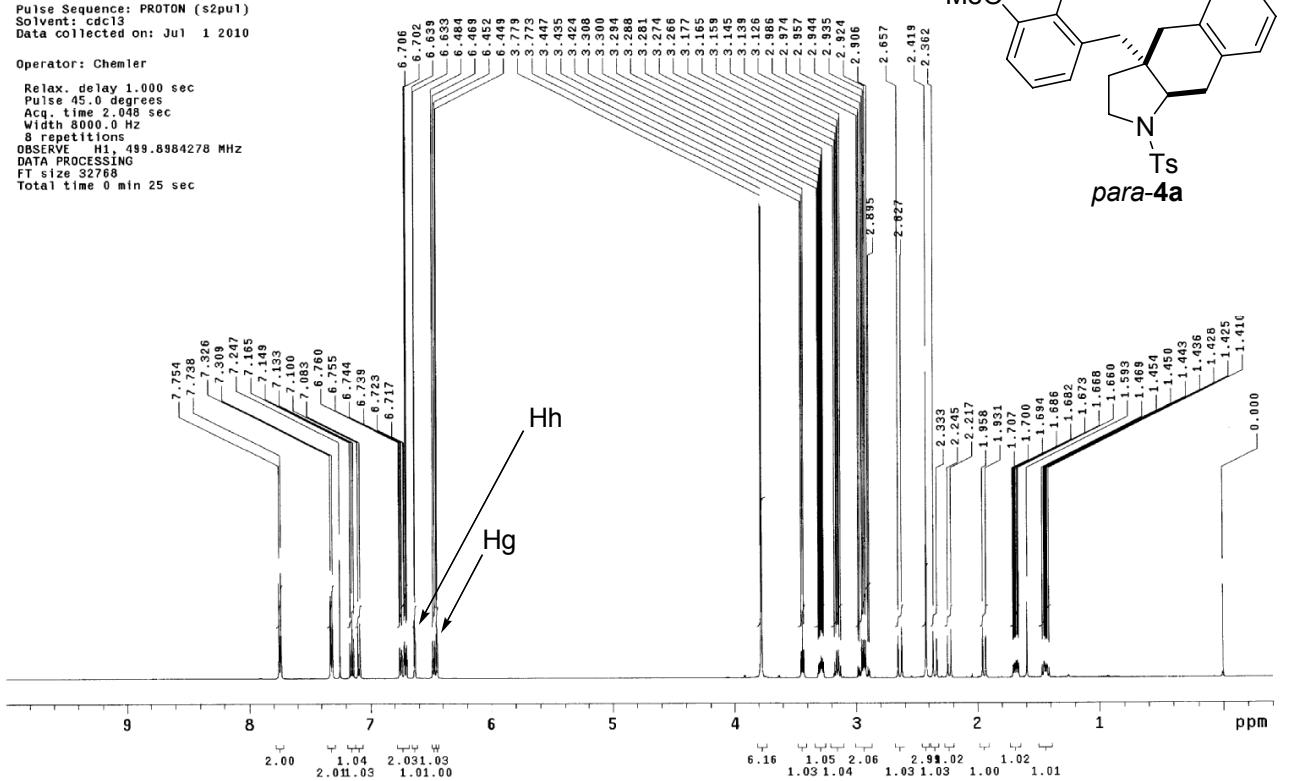
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acc. time 0.868 sec  
Width 1886.0 Hz  
7988 repetitions  
OBSERVE C13, 75.4536377 MHz  
DECUPLE H1, 300.0754430 MHz  
Power 38 dB  
continuously on  
WALTZ16 gated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 5420 hr, 38 min

## 20100701di3methoxy1paraproduct

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
FidFile: 20100701di3methoxy1paraproductPulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 1 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.00 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984278 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

## 20100701di3methoxy1paraproductC13

Sample Name:

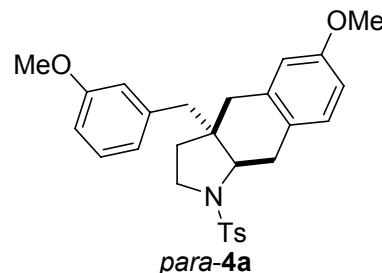
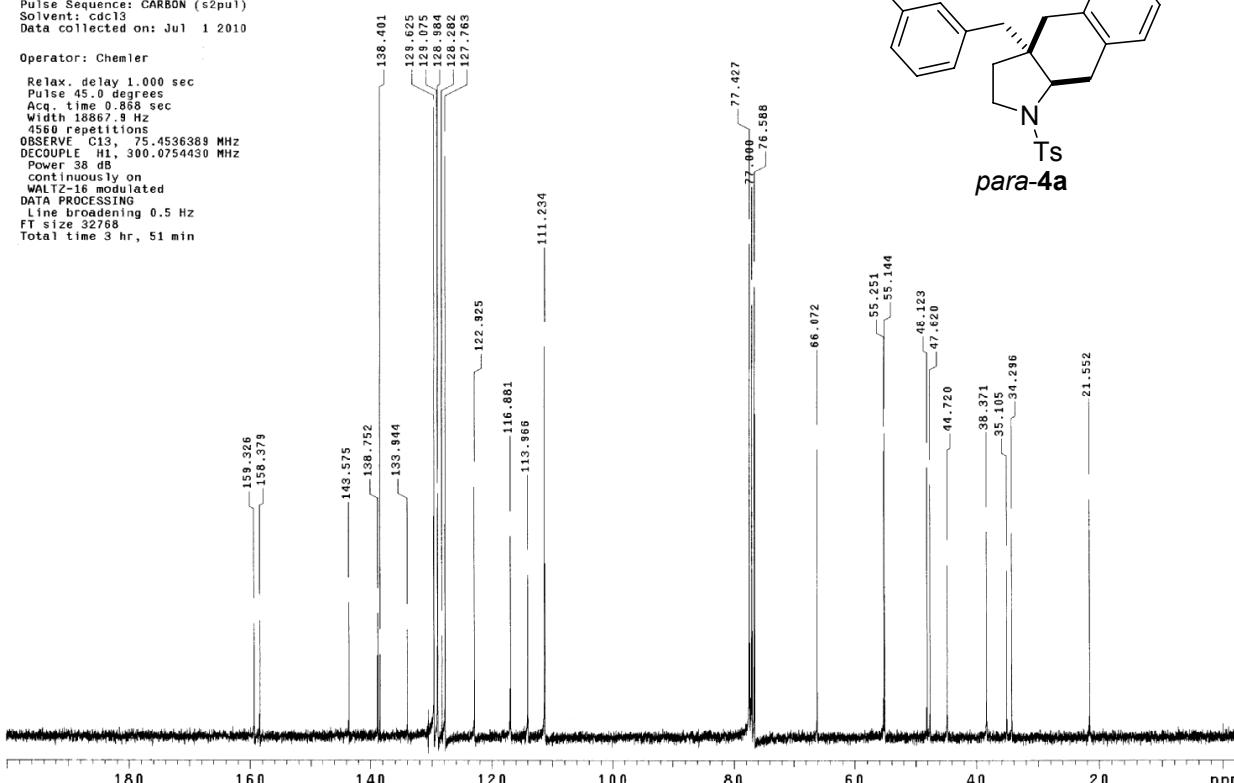
Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

FidFile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 1 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.868 sec  
Width 18867.9 Hz  
4500 repetitions  
OBSERVE C13, 73.4536388 MHz  
DECUPLE H1, 300.0754430 MHz  
Power 38 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 3 hr, 51 min

20100617di3methoxylorthoproductNOESY1D

Sample Name:

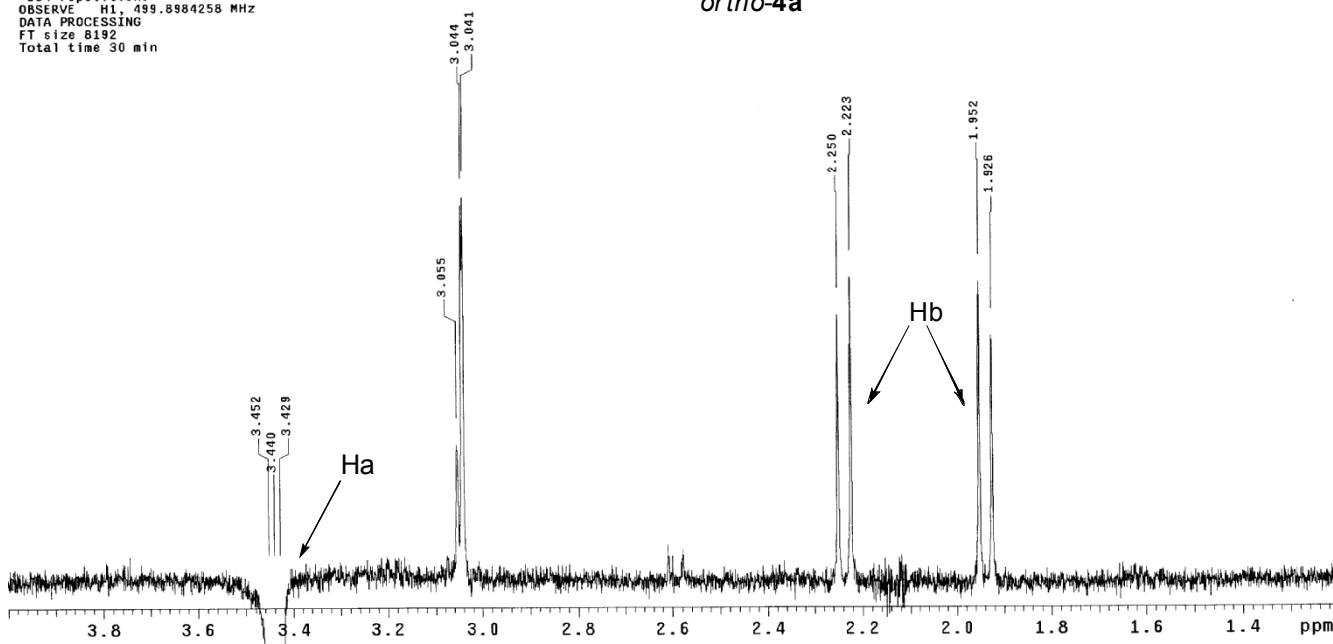
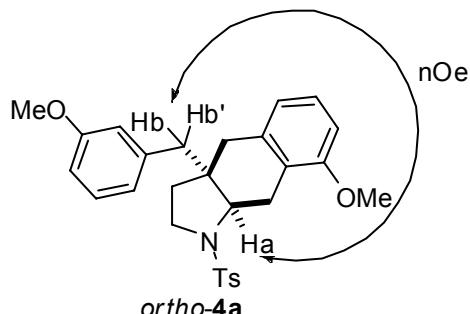
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100617di3methoxylorthoproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: cdcl3  
Data collected on: Jun 17 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.925 sec  
Width 1400.6 Hz  
384 repetitions  
OBSERVE H1, 499.8984258 MHz  
DATA PROCESSING  
FT size 8192  
Total time 30 min

20100701di3methoxylparaproductNOESY1D

Sample Name:

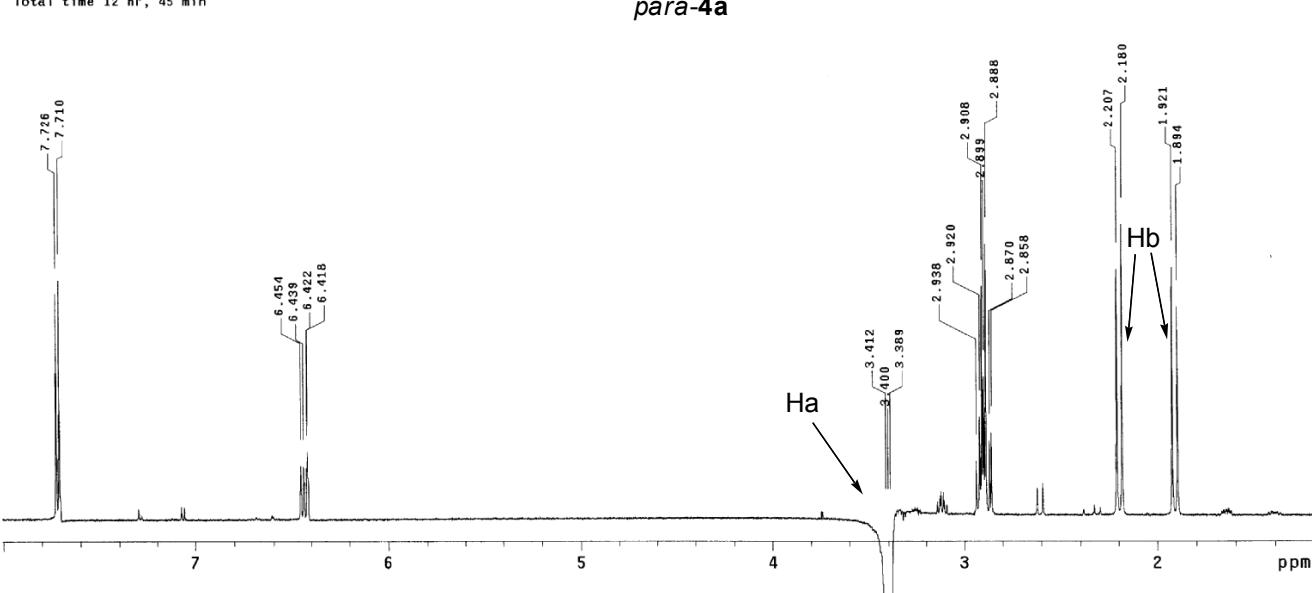
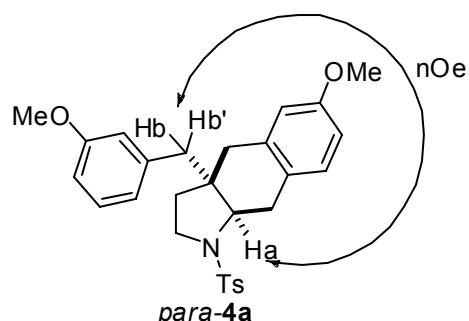
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100701di3methoxylparaproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: CdCl3  
Data collected on: Jul 1 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.402 sec  
Width 3410.1 Hz  
10752 repetitions  
OBSERVE H1, 499.8984268 MHz  
DATA PROCESSING  
FT size 16384  
Total time 12 hr, 45 min

## 20100620diomethylcisprom

Sample Name:

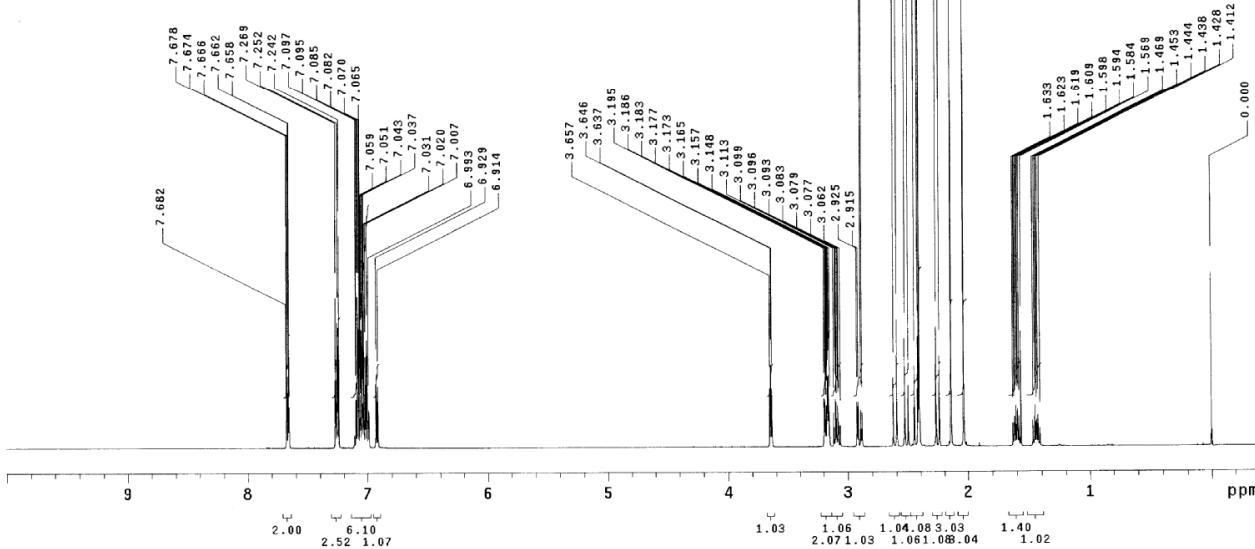
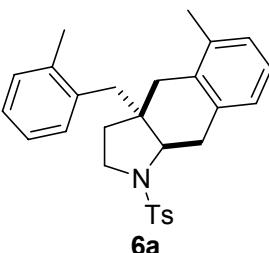
Data Collected on:  
chemmer500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 20 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1 499.8884293 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 27 sec

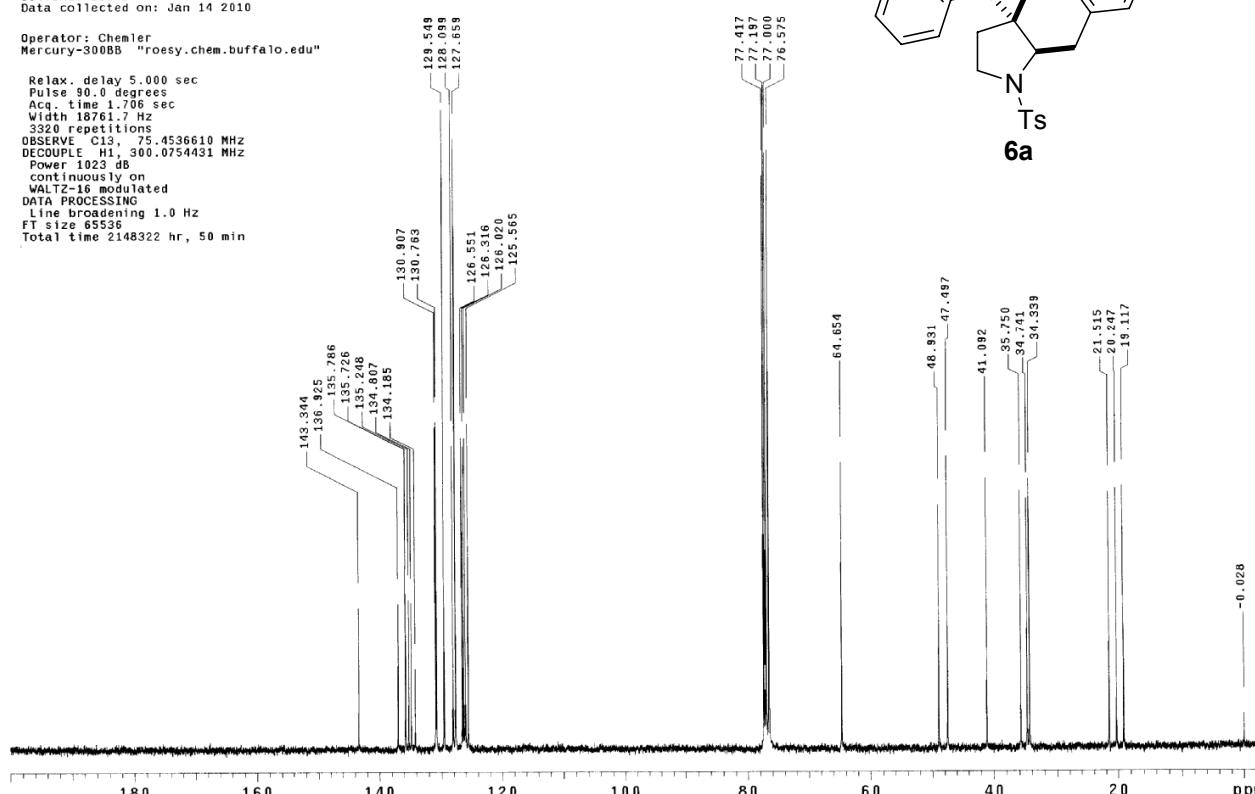
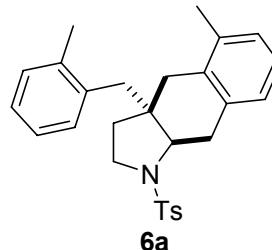
## 20100114diomethylmajorproductC13

Sample Name:

Archive directory:

Sample directory:

Fidfile: std13c

Pulse Sequence: std13c (s2pul)  
Solvent: CDCl3  
Data collected on: Jan 14 2010Operator: Chemler  
Mercury-300BB "roesy.chem.buffalo.edu"Relax. delay 5.000 sec  
Pulse 90.0 degrees  
Acq. time 1.706 sec  
Width 18761.7 Hz  
3324 repetitions  
OBSERVE C13, 75.4536610 MHz  
DECOUPLE F1, 300.0754431 MHz  
Power 1023 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 2148322 hr, 50 min



20100620diomethylcisproductcosyNOESY1D

Sample Name:

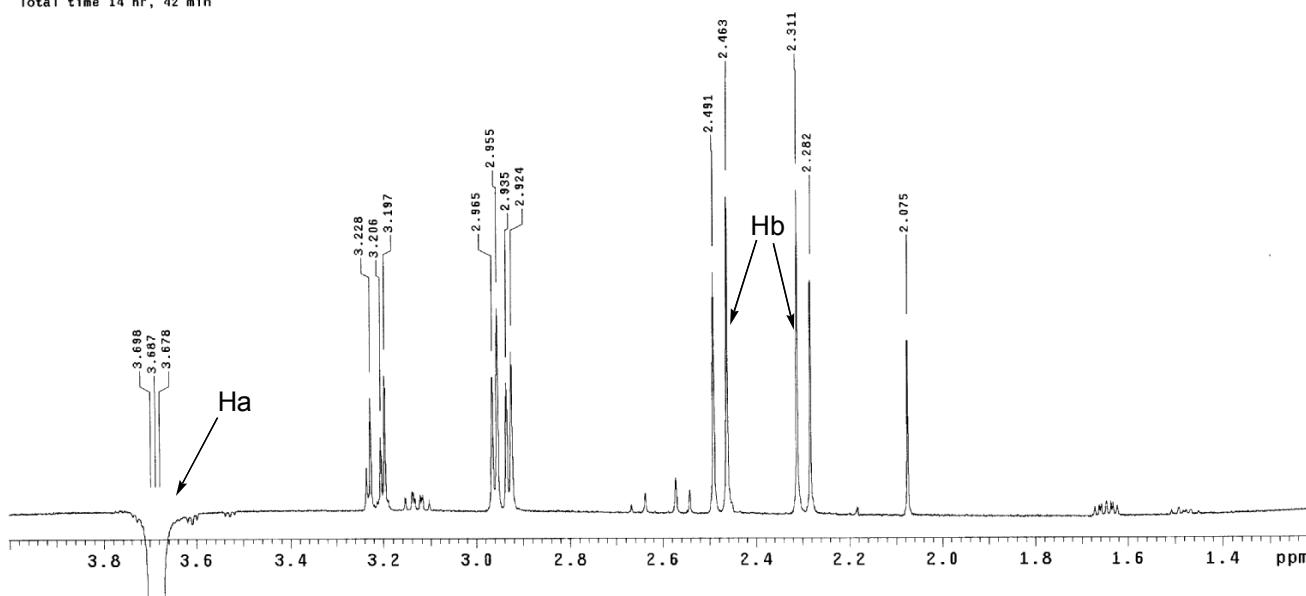
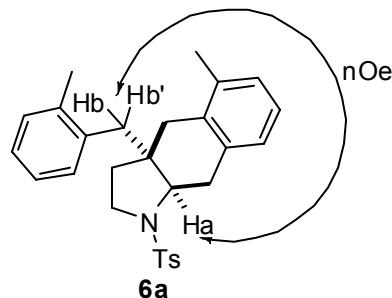
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100620diomethylcisproductcosyNOESY1D

Pulse Sequence: NOESY1D  
Solvent: CDCl<sub>3</sub>  
Data collected on: Jun 20 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.928 sec  
Width 1388.9 Hz  
11200 repetitions  
OBSERVE H<sub>1</sub>, 499.8983908 MHz  
DATA PROCESSING  
FT size 8192  
Total time 14 hr, 42 min

20100621diomethyltransproductNOESY1D

Sample Name:

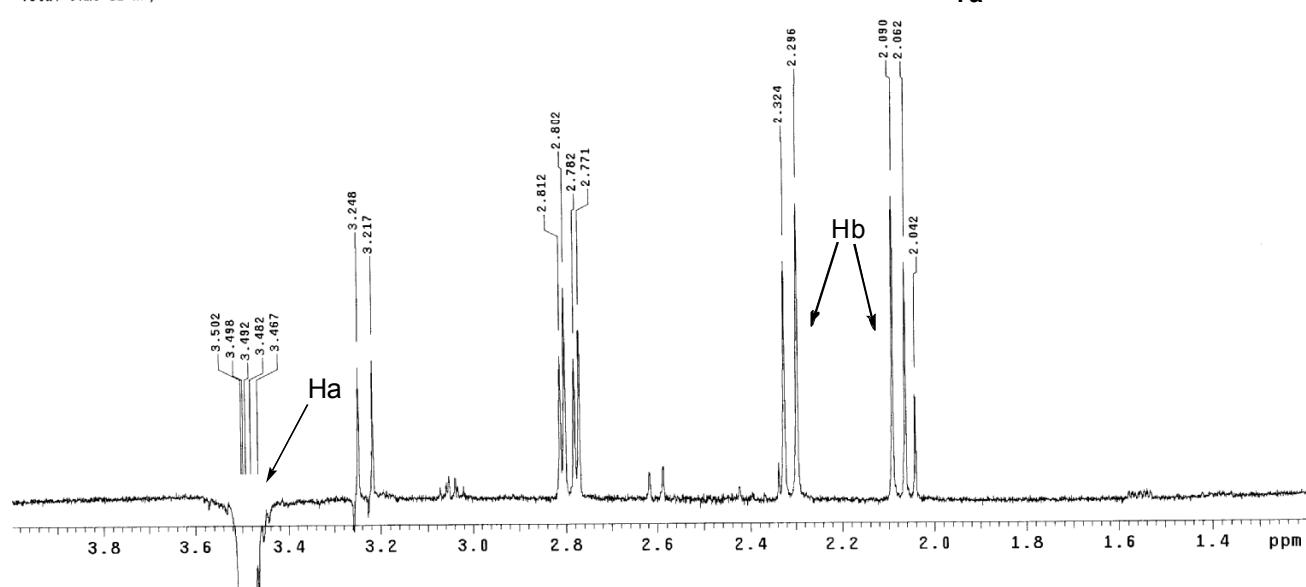
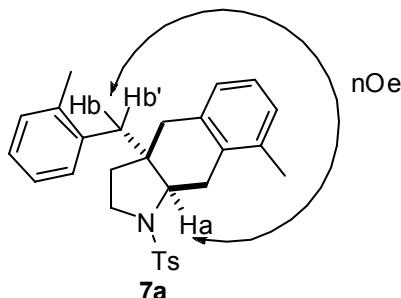
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100621diomethyltransproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: CDCl<sub>3</sub>  
Data collected on: Jun 21 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.928 sec  
Width 1388.9 Hz  
9600 repetitions  
OBSERVE H<sub>1</sub>, 499.8984259 MHz  
DATA PROCESSING  
FT size 8192  
Total time 12 hr, 41 min

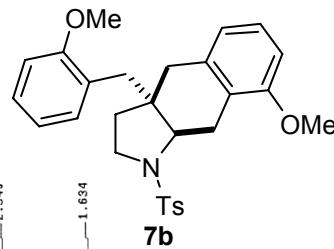
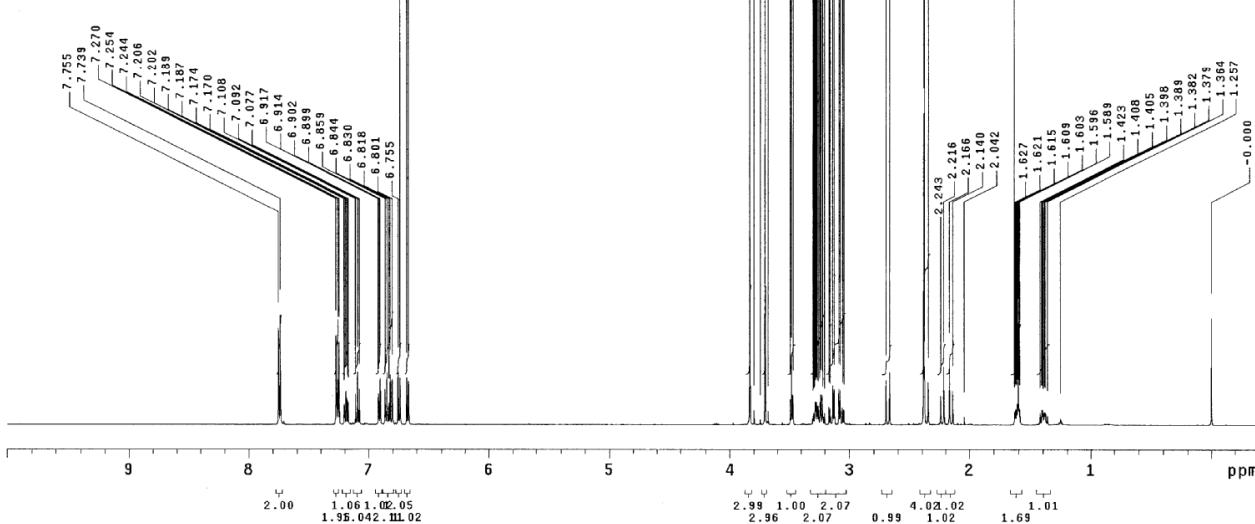


20100727diomethoxyiminorproduct

Sample Name:

Data Collected on:  
chemmmr500.chem.buffalo.edu-inova500  
Archive directory:Sample directory:  
Fidfile: PROTONPulse Sequence: PROTON (s2pul)  
Solvent: cdc13  
Data collected on: Jul 27 2010

Operator: Chemler

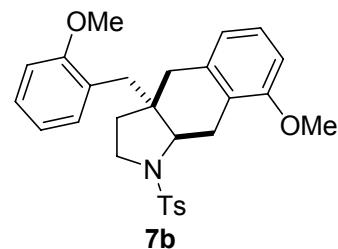
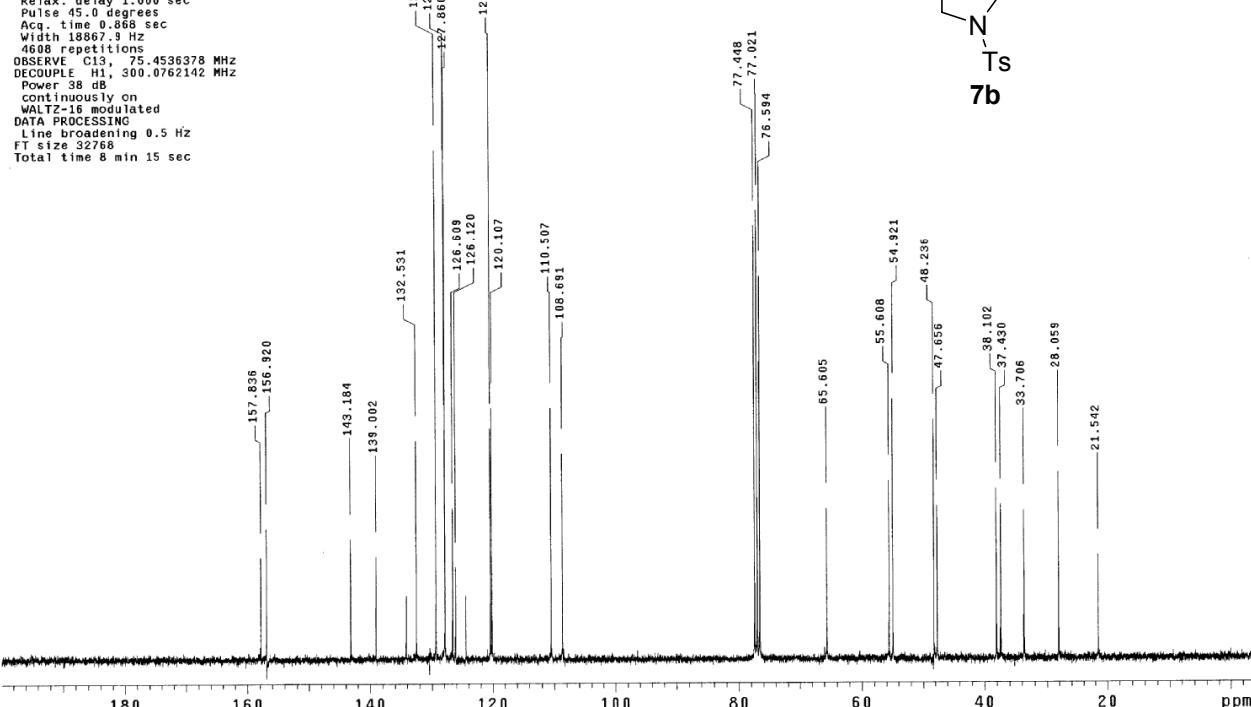
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984283 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

20100728diomethoxyiminorproductC13

Sample Name:

Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:Sample directory:  
Fidfile: CARBONPulse Sequence: CARBON (s2pul)  
Solvent: D2O  
Data collected on: Jul 28 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 0.668 sec  
Width 18667.9 Hz  
4608 repetitions  
OBSERVE C13, 75.4536378 MHz  
DECUPLE H1, 300.0762142 MHz  
Power 38 dB  
continuously on  
WALTZ-16 modulated  
DEPHASE 90°  
Line broadening 0.5 Hz  
FT size 32768  
Total time 8 min 15 sec

20100630diomethoxymajorproductNOESY1Db

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

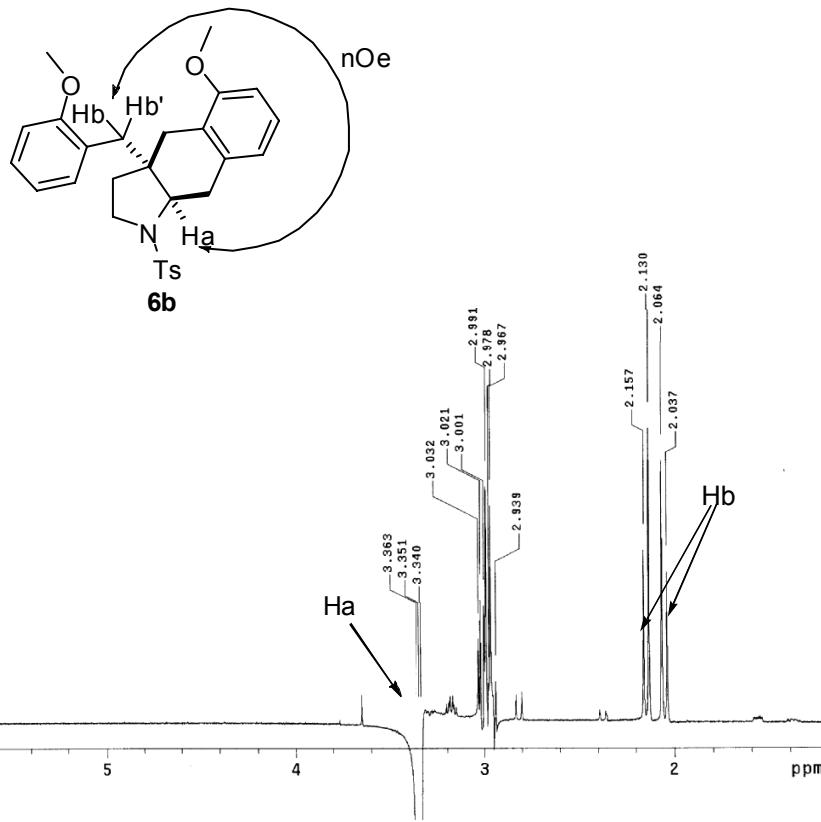
Sample directory:

FidFile: 20100630diomethoxymajorproductNOESY1Db

Pulse Sequence: NOESY1D  
Solvent: cdc13  
Data collected on: Jun 30 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.409 sec  
Width 3401.2 Hz  
10240 repetitions  
OBSERVE H1, 499.8984298 MHz  
DATA PROCESSING  
FT size 16384  
Total time 12 hr, 3 min



20100628diomethoxymajorproductNOESY1D

Sample Name:

Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

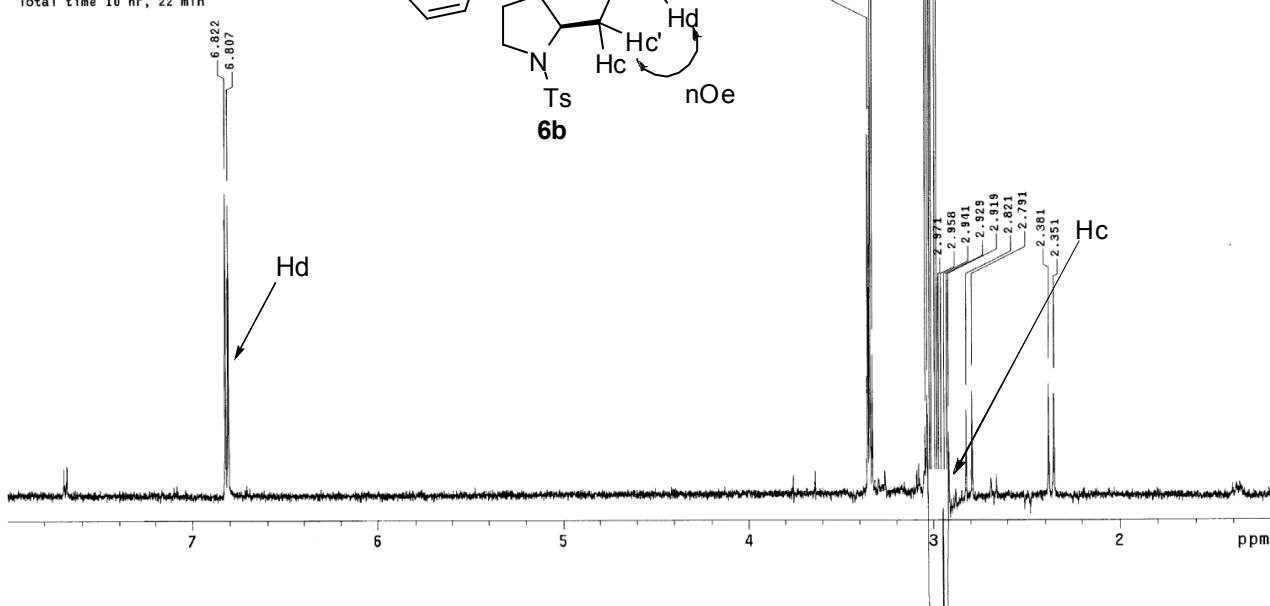
Sample directory:

FidFile: 20100628diomethoxymajorproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: cdc13  
Data collected on: Jun 28 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.409 sec  
Width 3401.2 Hz  
9088 repetitions  
OBSERVE H1, 499.8984278 MHz  
DATA PROCESSING  
FT size 16384  
Total time 10 hr, 22 min



20100703diomethoxyiminorproductNOESY1D

Sample Name:

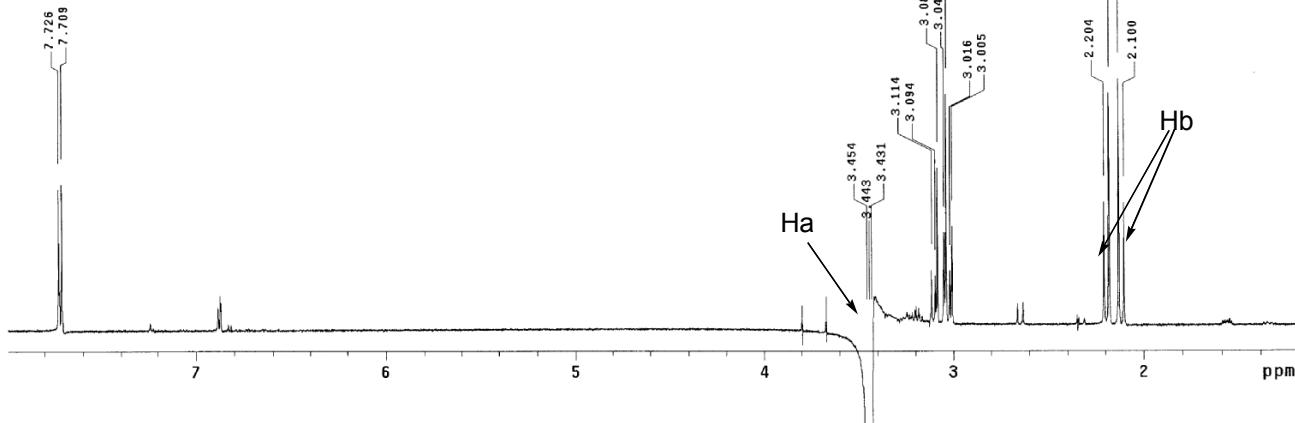
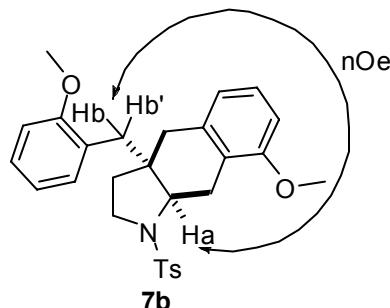
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100703diomethoxyiminorproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: cdc13  
Data collected on: Jul 3 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.409 sec  
Width 3400.2 Hz  
1176 repetitions  
OBSERVE H1, 499.8984273 MHz  
DATA PROCESSING  
FT size 16384  
Total time 14 hr, 18 min

20100703diomethoxyiminorproductNOESY1D

Sample Name:

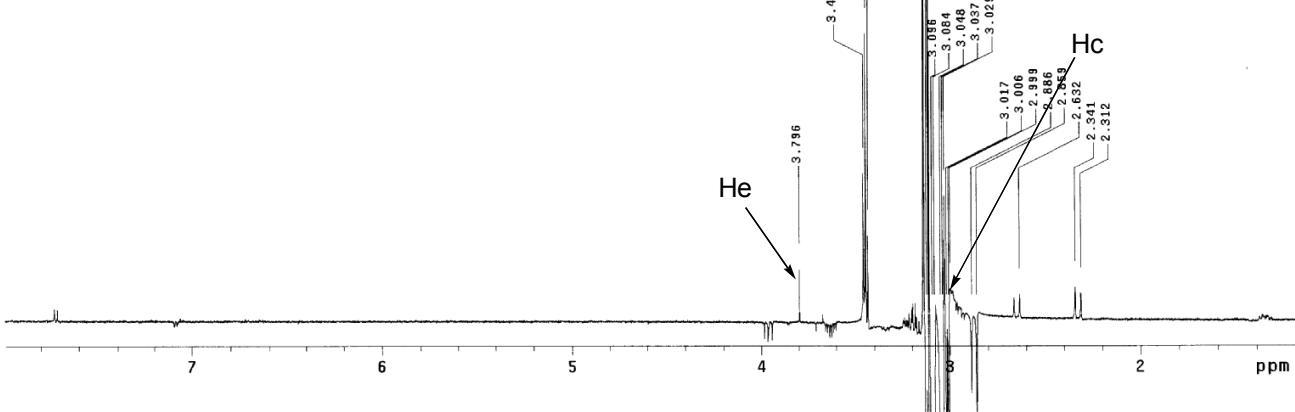
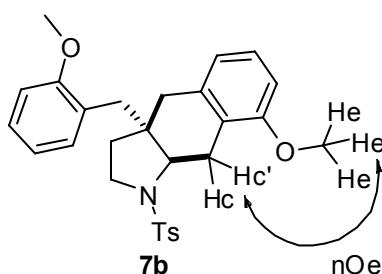
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100703diomethoxyiminorproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: cdc13  
Data collected on: Jul 4 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acq. time 2.416 sec  
Width 3390.4 Hz  
9600 repetitions  
OBSERVE H1, 499.8984273 MHz  
DATA PROCESSING  
FT size 16384  
Total time 10 hr, 56 min

20100704ditrifluoromethylmajorproduct

Sample Name:

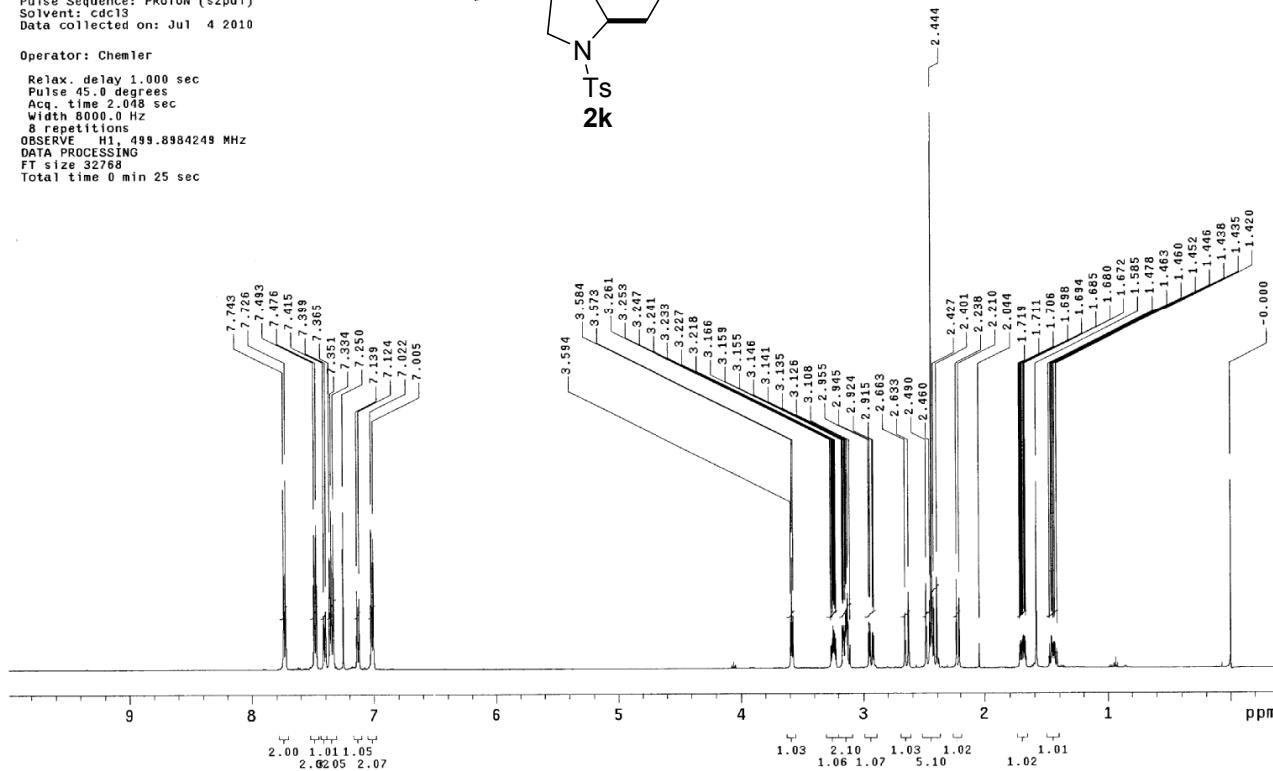
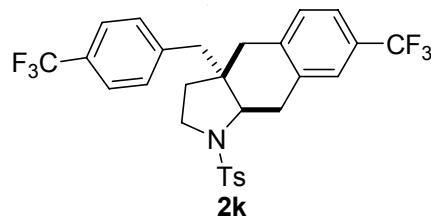
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Jul 4 2010

Operator: Chemler

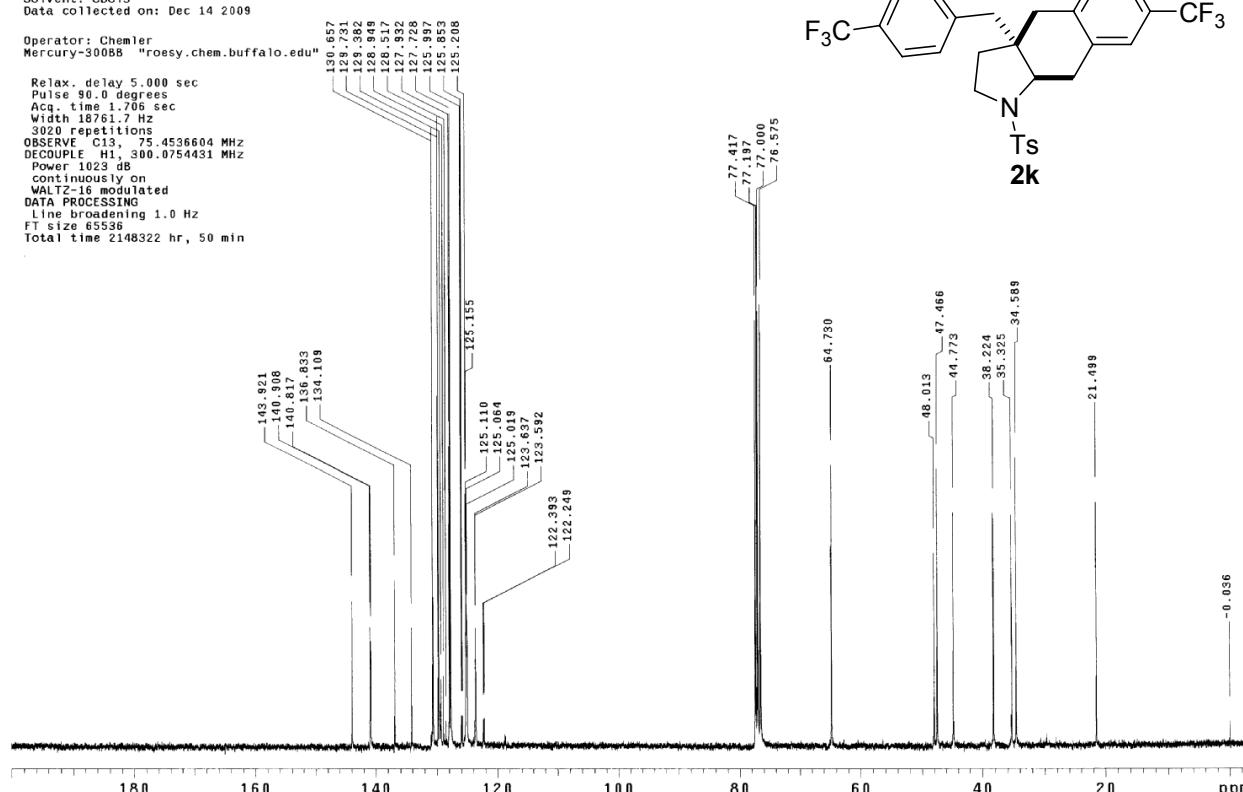
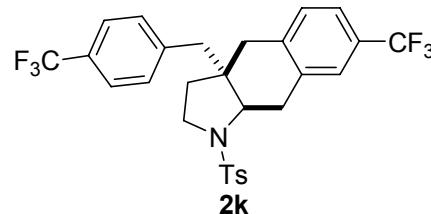
Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984249 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)  
Solvent: CDCl3  
Data collected on: Dec 14 2009Operator: Chemler  
Mercury-3008B "roesy.chem.buffalo.edu"Relax. delay 5.000 sec  
Pulse 90.0 degrees  
Acq. time 1.706 sec  
Width 18761.7 Hz  
3000 repetitions  
OBSERVE C13, 135.4536604 MHz  
DECOUPLE H1, 300.0754431 MHz  
Power 1023 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
LINE BROADENING 1.0 Hz  
FT size 65536  
Total time 2148322 hr, 50 min

## 20100705ditrifluoromethylminorproduct

Sample Name:

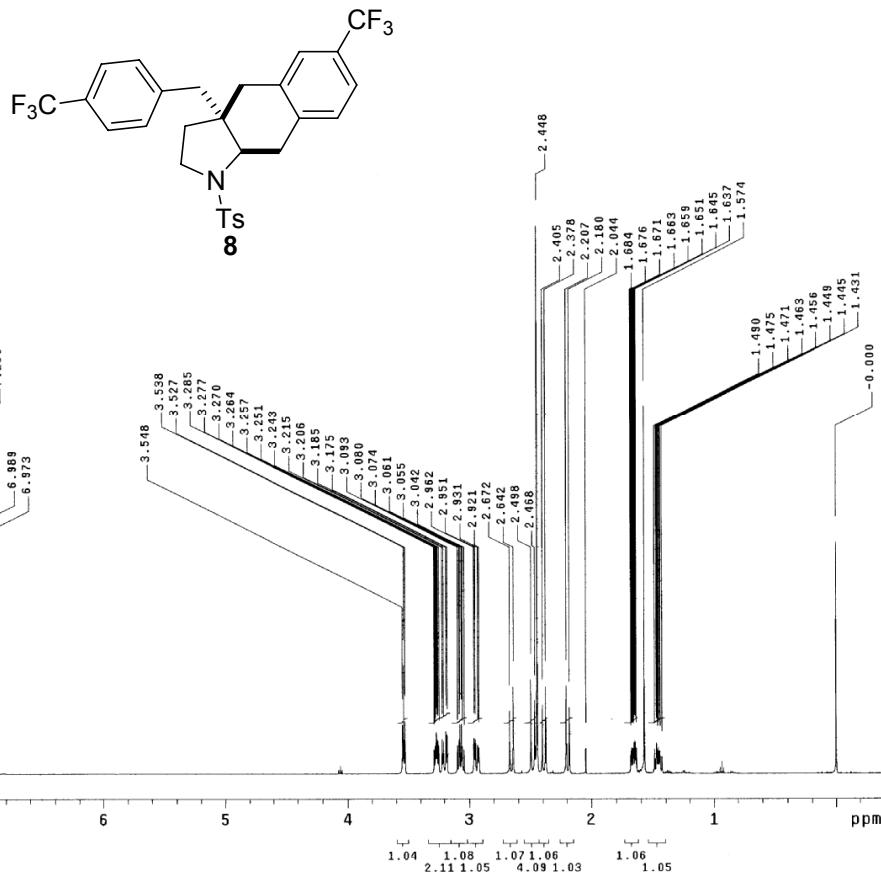
Data Collected on:  
chemmmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdc13  
Data collected on: Jul 5 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 2.048 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984249 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 25 sec

## 2010ditrifluoromethylminorproductC13

Sample Name:

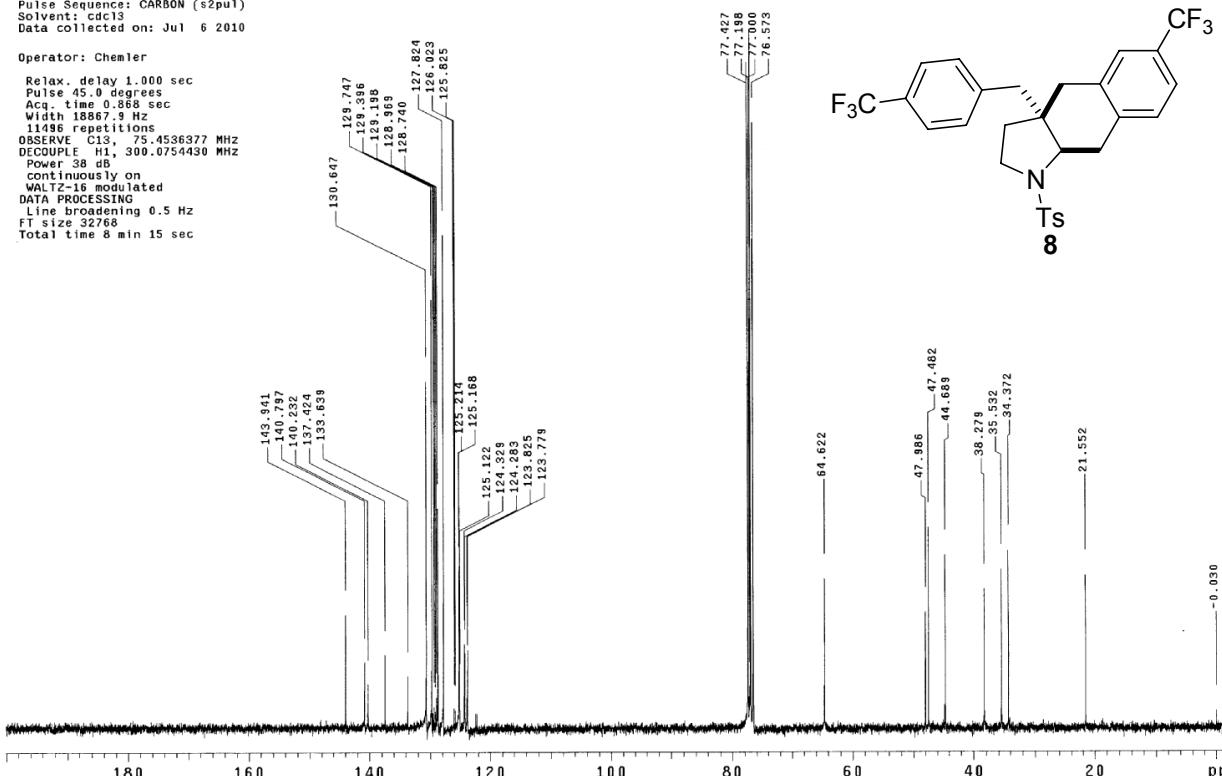
Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdc13  
Data collected on: Jul 6 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90 degrees  
Acq. time 0.668 sec  
Width 18867.9 Hz  
11496 repetitions  
OBSERVE C13, 75.4536377 MHz  
DECOPPLE H1, 300.0754430 MHz  
Power 38 dB  
Contrast: 100.000000 on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 32768  
Total time 8 min 15 sec

20100704ditrifluoromethylmajorproductNOESY1D

Sample Name:

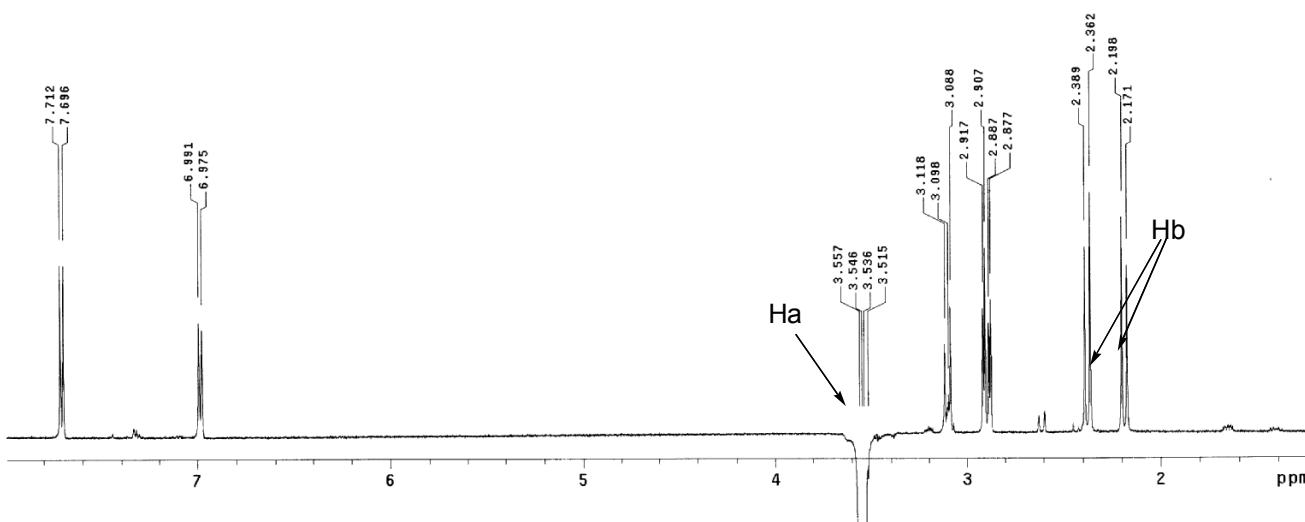
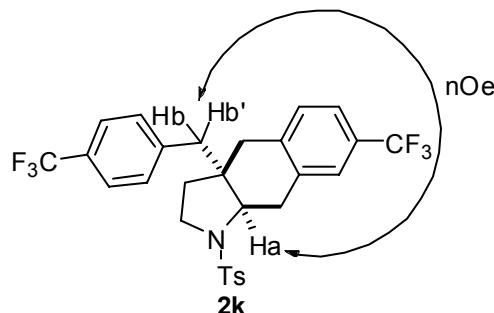
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100704ditrifluoromethylmajorproductNOESY1D

Pulse Sequence: NOESY1D  
Solvent: cdcl3  
Data collected on: Jul 5 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acc. time 2.416 sec  
Width 3390.4 Hz  
17424 repetitions  
OBSERVE H1, 499.8984249 MHz  
DATA PROCESSING  
FT size 16384  
Total time 8 hr, 43 min

Sample Name:

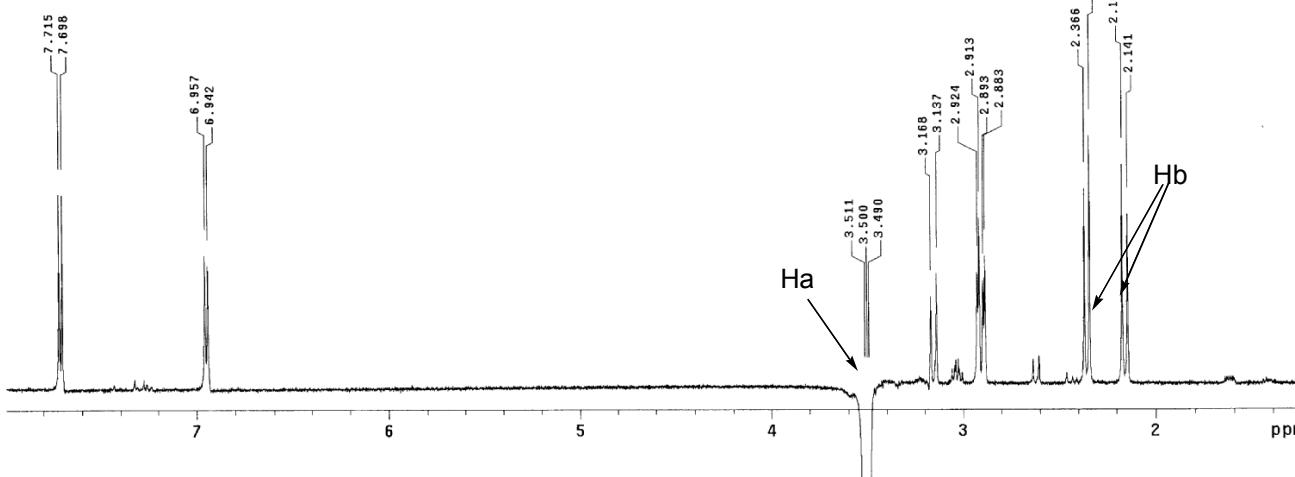
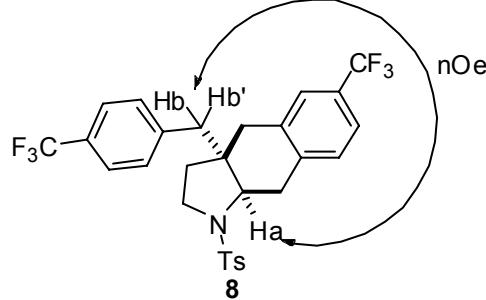
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

FidFile: 20100705ditrifluoromethylminorproductNOESY1D

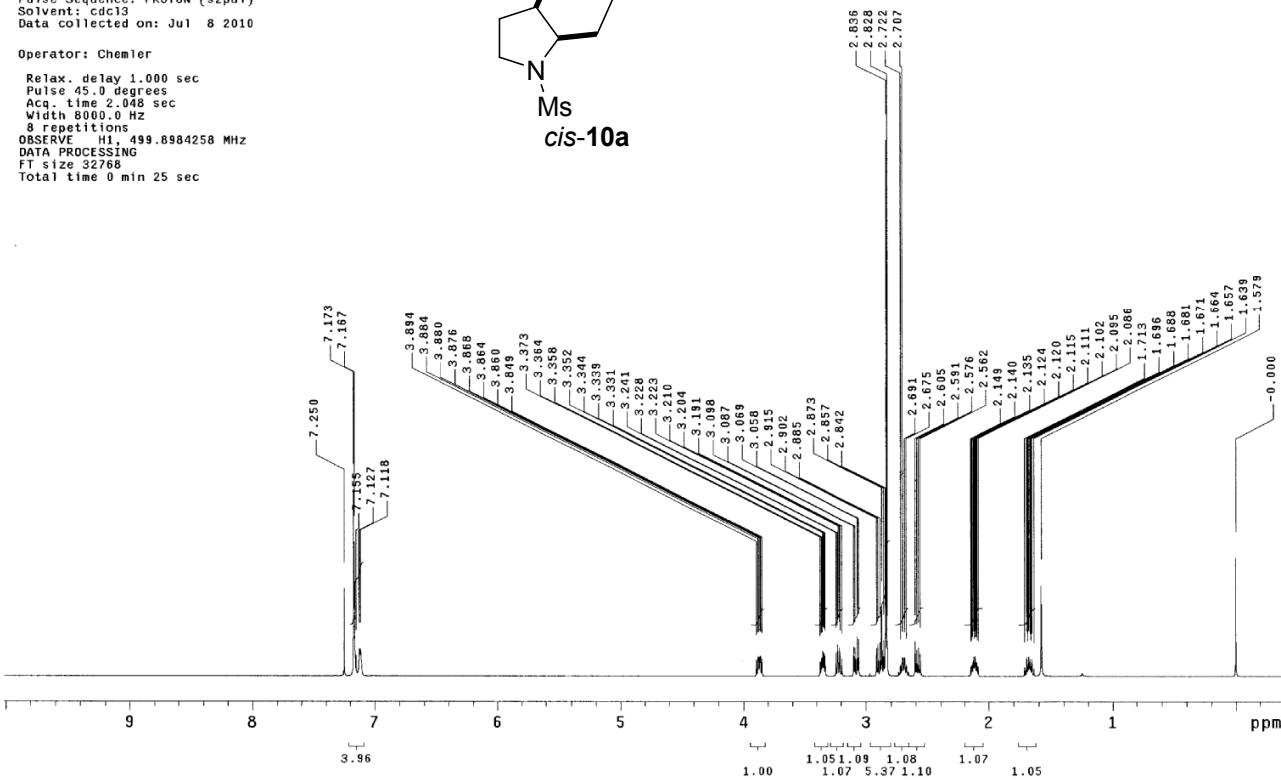
Pulse Sequence: NOESY1D  
Solvent: cdcl3  
Data collected on: Jul 5 2010

Operator: Chemler

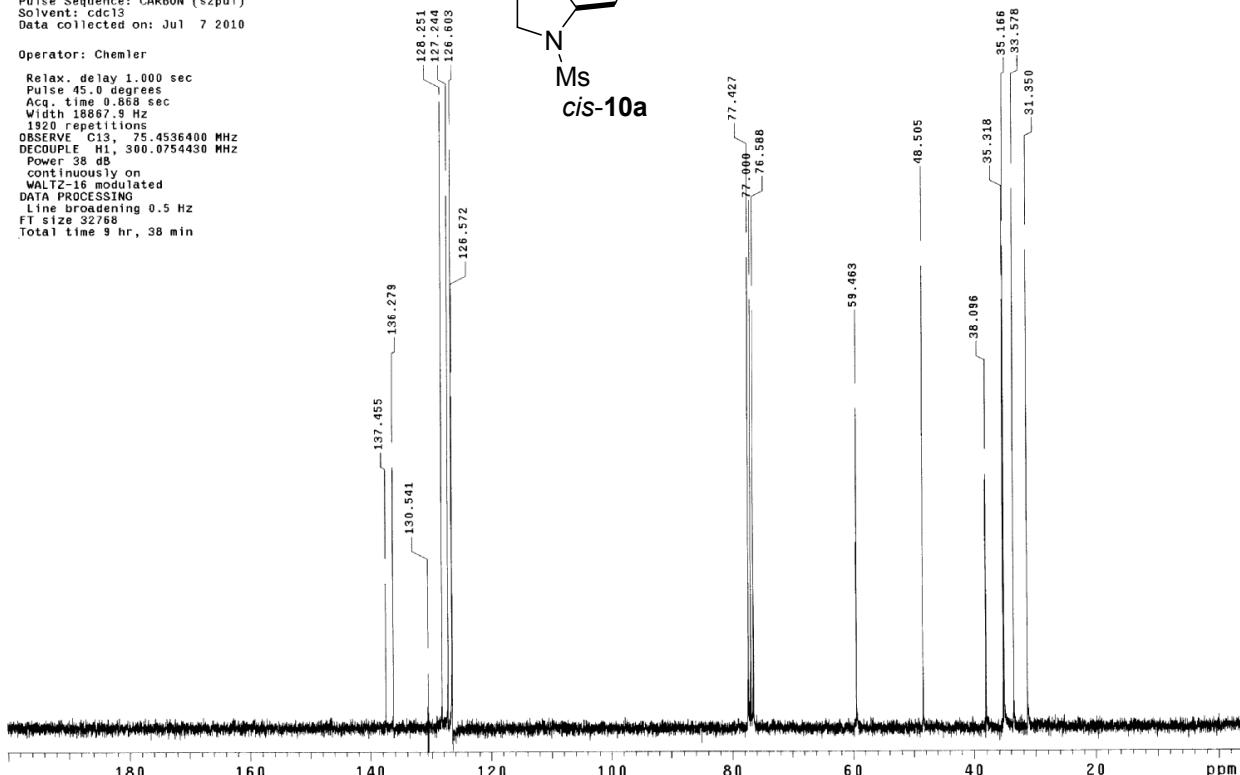
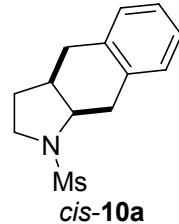
Relax. delay 1.000 sec  
Pulse 90.0 degrees  
Acc. time 2.416 sec  
Width 3390.4 Hz  
10752 repetitions  
OBSERVE H1, 499.8984249 MHz  
DATA PROCESSING  
FT size 16384  
Total time 12 hr, 40 min



20100708benzylcisprompt  
 Sample Name:  
 Data Collected on: chemmr500.chem.buffalo.edu-inova500  
 Archive directory:  
 Sample directory:  
 FidFile: PROTON  
 Pulse Sequence: PROTON (s2pul)  
 Solvent: cdcl3  
 Data collected on: Jul 8 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 2.048 sec  
 Width 1000.0 Hz  
 8 repetitions  
 OBSERVE H1, 499.8984258 MHz  
 DATA PROCESSING  
 FT size 32768  
 Total time 0 min 25 sec



20100707benzylcispromptC13  
 Sample Name:  
 Data Collected on: roesy.chem.buffalo.edu-mercury300  
 Archive directory:  
 Sample directory:  
 FidFile: CARBON  
 Pulse Sequence: CARBON (s2pul)  
 Solvent: cdcl3  
 Data collected on: Jul 7 2010  
 Operator: Chemler  
 Relax. delay 1.000 sec  
 Pulse 45.0 degrees  
 Acq. time 0.000 sec  
 Width 18867.9 Hz  
 1920 repetitions  
 OBSERVE C13, 75.4536400 MHz  
 DECOUPLE H1, 300.0754430 MHz  
 Power 38 dB  
 continuously on  
 WALTZ16 modulated  
 DATA PROCESSING  
 Line broadening 0.5 Hz  
 FT size 32768  
 Total time 9 hr, 38 min



20100609methoxytransproduct

Sample Name:

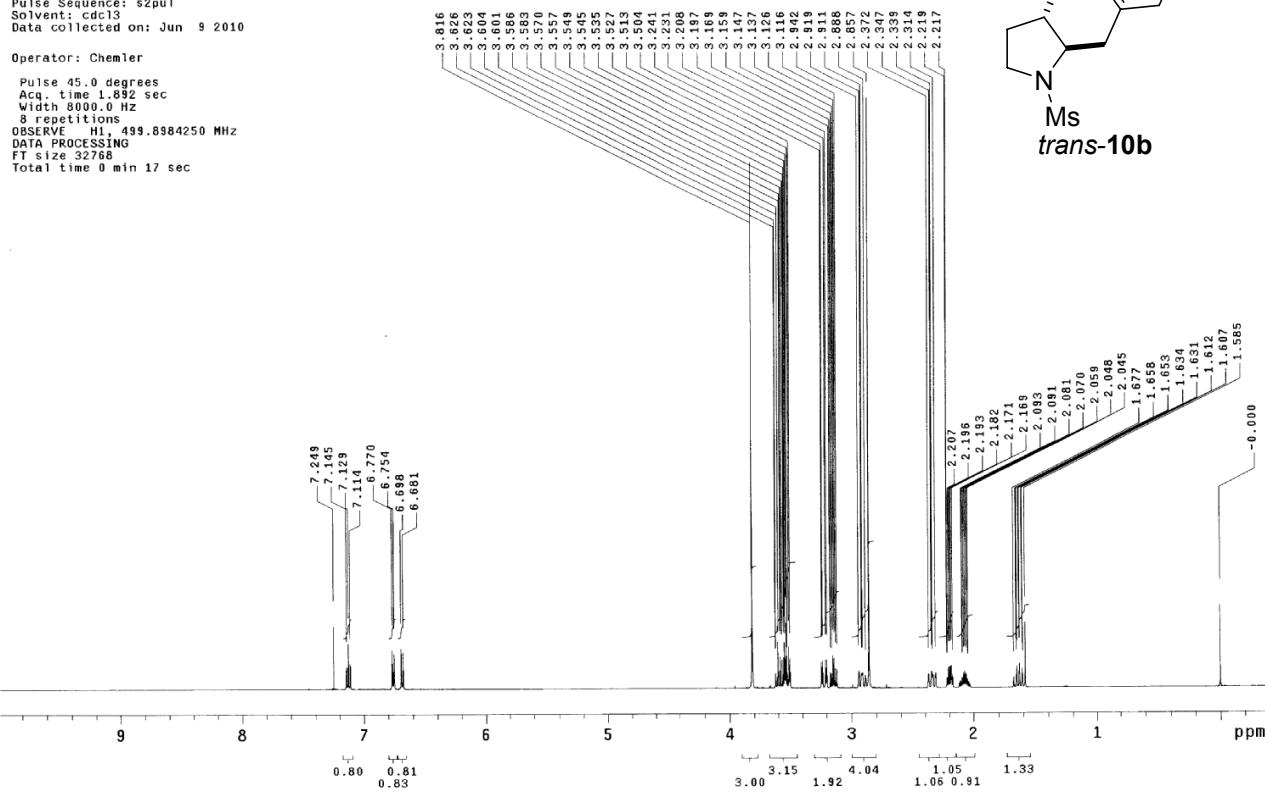
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: H1

Pulse Sequence: s2pul  
Solvent: cdcl3  
Data collected on: Jun 9 2010

Operator: Chemler

Pulse 45.0 degrees  
Acq. time 1.892 sec  
Width 8000.0 Hz  
8 repetitions  
OBSERVE H1, 499.8984250 MHz  
DATA PROCESSING  
FT size 32768  
Total time 0 min 17 sec

20100610methoxytransproductC13

Sample Name:

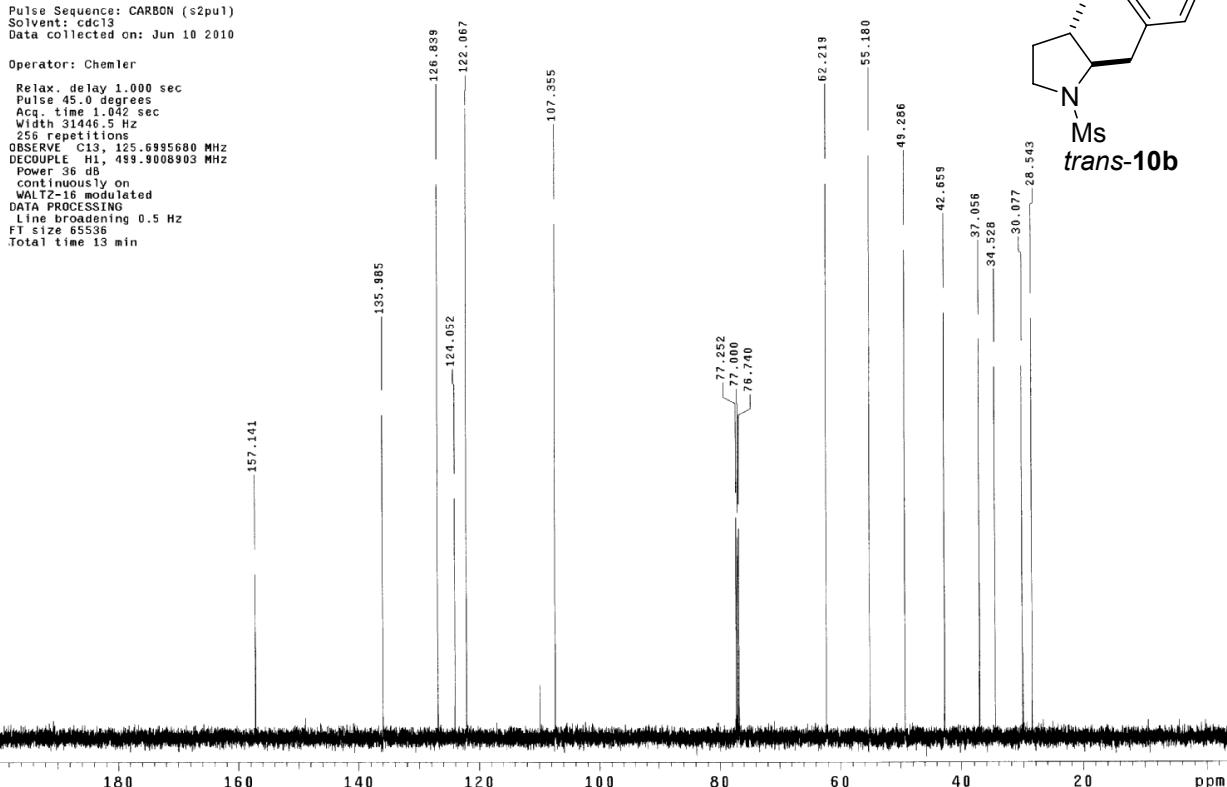
Data Collected on:  
chemmr500.chem.buffalo.edu-inova500  
Archive directory:

Sample directory:

Fidfile: CARBON

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Jun 10 2010

Operator: Chemler

Relax. delay 1.000 sec  
Pulse 45.0 degrees  
Acq. time 1.042 sec  
Width 31446.5 Hz  
256 repetitions  
OBSERVE C13, 125.6995680 MHz  
DECOPPLE H1, 499.9008903 MHz  
POCSIG 96  
Continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 0.5 Hz  
FT size 65536  
Total time 13 min

20100818omethoxylcisproduct

Sample Name:

Data Collected on:  
chemnmr500.chem.buffalo.edu-inova500  
Archive directory:

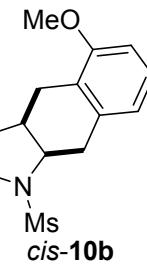
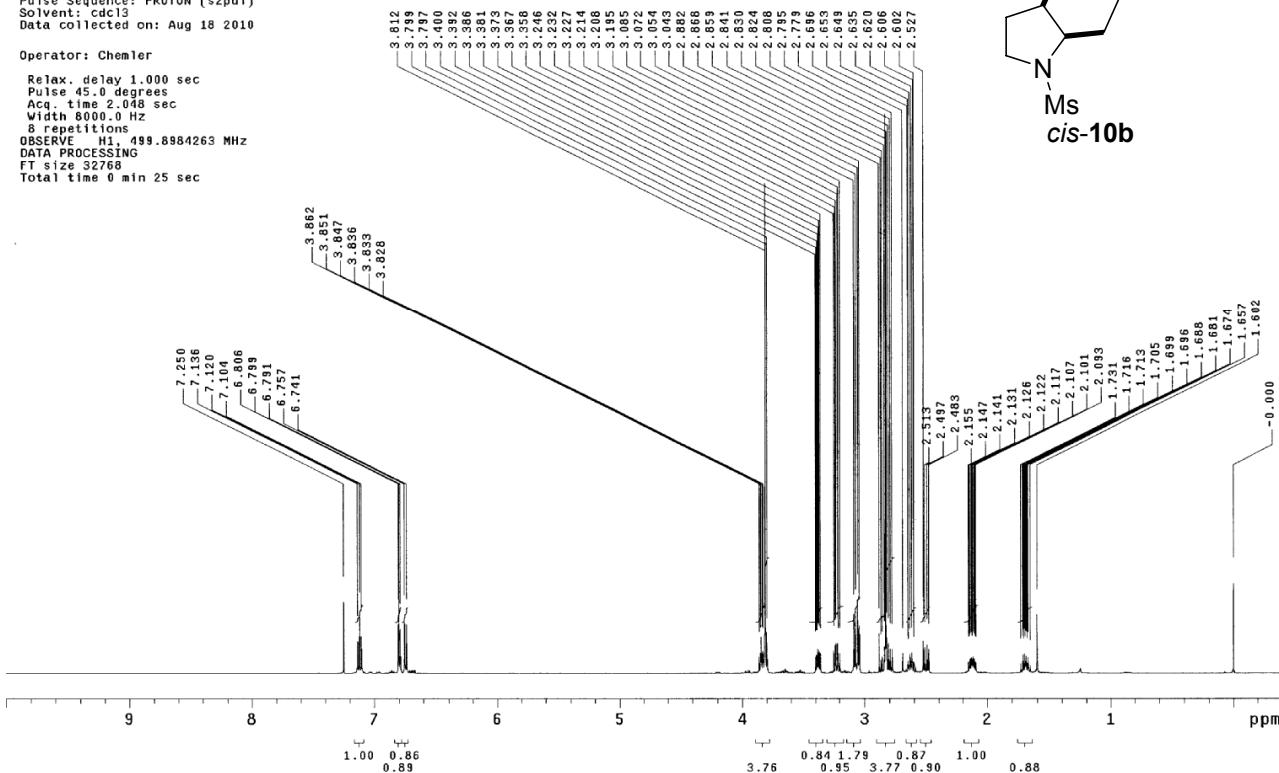
### Sample directory:

FidFile: PROTON

Pulse Sequence: PROTON (s2pul)  
Solvent: cdcl3  
Data collected on: Aug 18 2010

Operator: Chemler

```
Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 2.048 sec
Width 8000.0 Hz
8 repetitions
OBSERVE H1, 499.8884263 MHz
DATA PROCESSING
FT size 32768
Total time 0 min 25 sec
```



2010818omethoxylcisproductC13

Sample Name:

Data Collected on:  
roesy.chem.buffalo.edu-mercury300  
Archive directory:

### Sample directory:

FidFile: CARBON

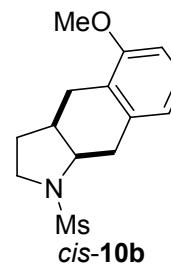
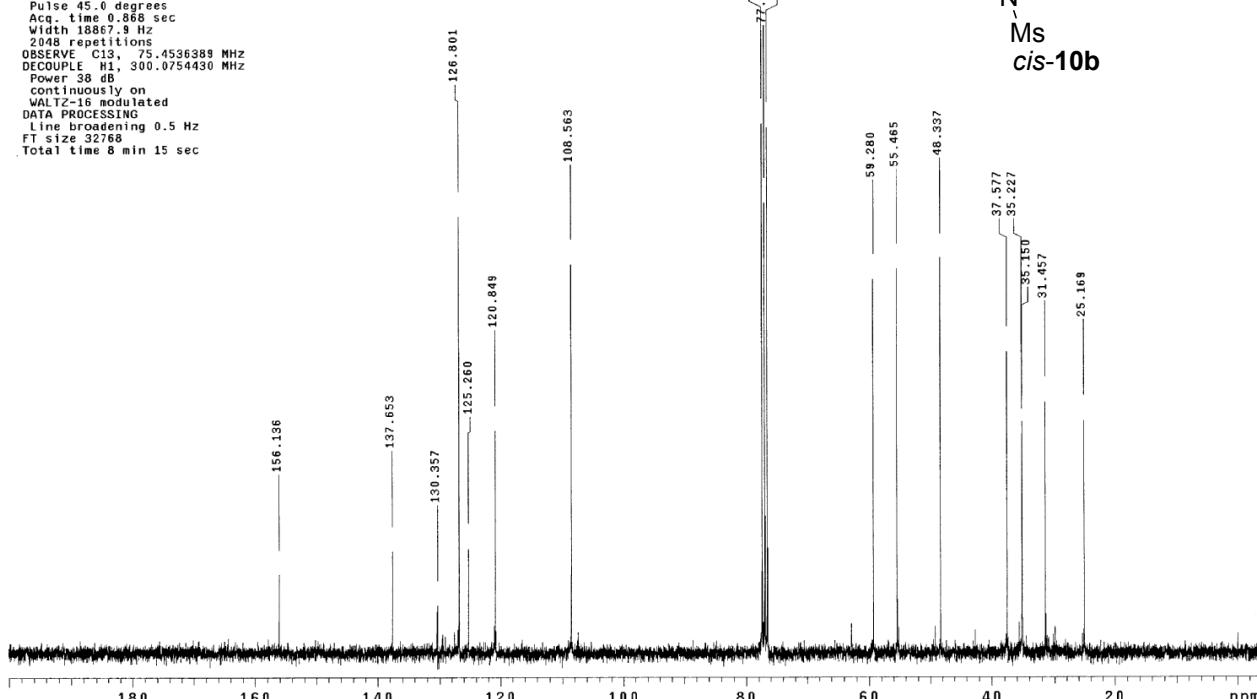
Pulse Sequence: CARBON (s2pu1)  
Solvent: cdc13  
Data collected on: Aug 18 2010

Operator: Chemler

```

Relax. delay 1.000 sec
Pulse 45.0 degrees
Acq. time 0.868 sec
width 1886.9 Hz
2000 repetitions
OBSERVE C13, 75.4536388 MHz
DECOUPLER H1, 300.0754430 MHz
Power 38 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 0.5 Hz
FT size 32768
Total time 8 min 15 sec

```



20100316methoxylpropyl

Sample Name:

Archive directory:

Sample directory:

FidFile: H1

Pulse Sequence: s2pul

Solvent: CDCl<sub>3</sub>

Data collected on: Mar 16 2010

Operator: Chemler

Mercury-300BB "roesys.chem.buffalo.edu"

Relax. delay 2.000 sec

Pulse 39.7 degrees

Acq. time 1.881 sec

Width 10000.0 Hz

16 repetitions

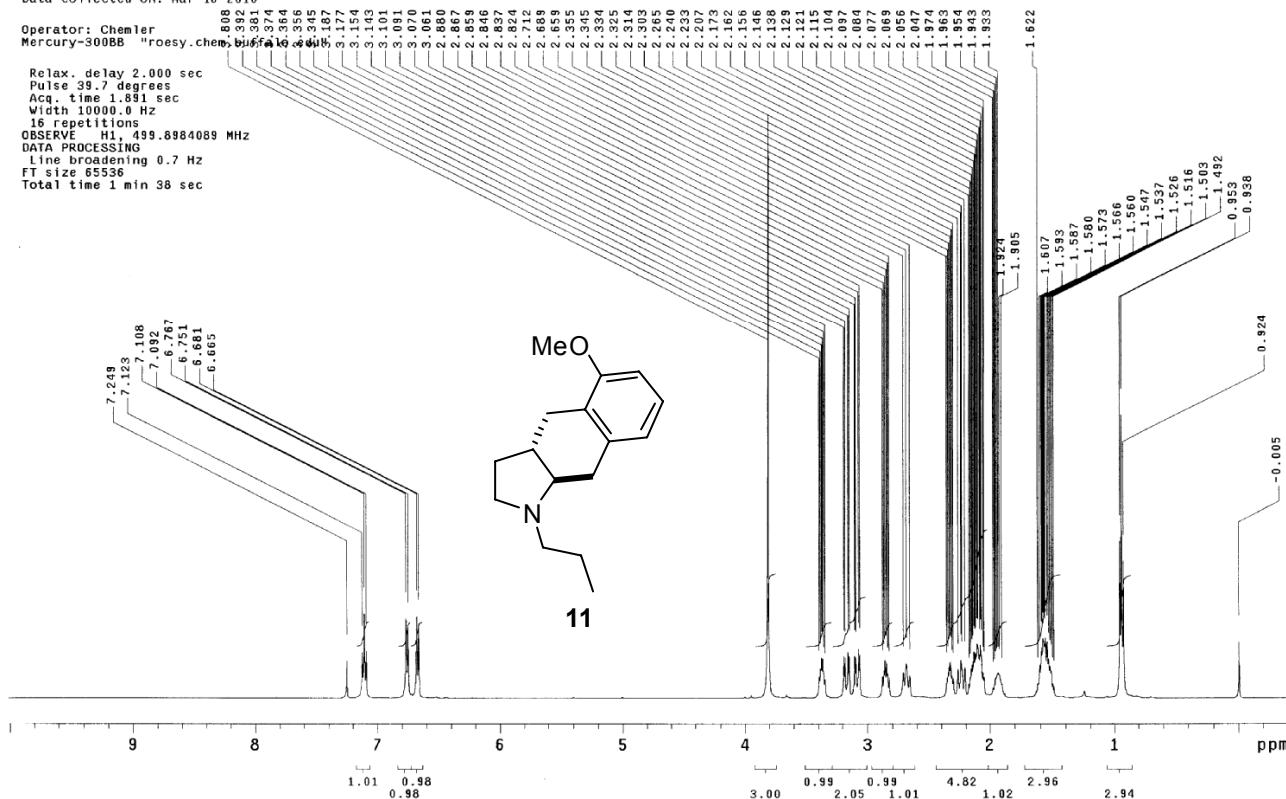
OBSERVE H1, 499.8984089 MHz

DATA PROCESSING

Line broadening 0.7 Hz

FT size 65536

Total time 1 min 38 sec



20100316methoxylpropylC13

Sample Name:

Archive directory:

Sample directory:

FidFile: std13c

Pulse Sequence: std13c (s2pul)

Solvent: CDCl<sub>3</sub>

Data collected on: Mar 16 2010

Operator: Chemler

Mercury-300BB "roesys.chem.buffalo.edu"

Pulse 35.5 degrees

Acq. time 1.706 sec

Width 18761.7 Hz

2080 repetitions

OBSERVE H1, 499.4538627 MHz

DECOUPLE H1, 300.0754431 MHz

Power 1023 dB

continuously on

WAV 2-16 modulated

DATA PROCESSING

Line broadening 1.0 Hz

FT size 65536

Total time 607 hr, 32 min

