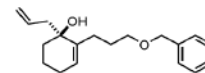


Enantioselective Conjugate Allylation of Cyclic Enones
Douglass F. Taber*, David A. Gerstenhaber and James F. Berry
Department of Chemistry and Biochemistry, University of Delaware, Newark, DE 19716

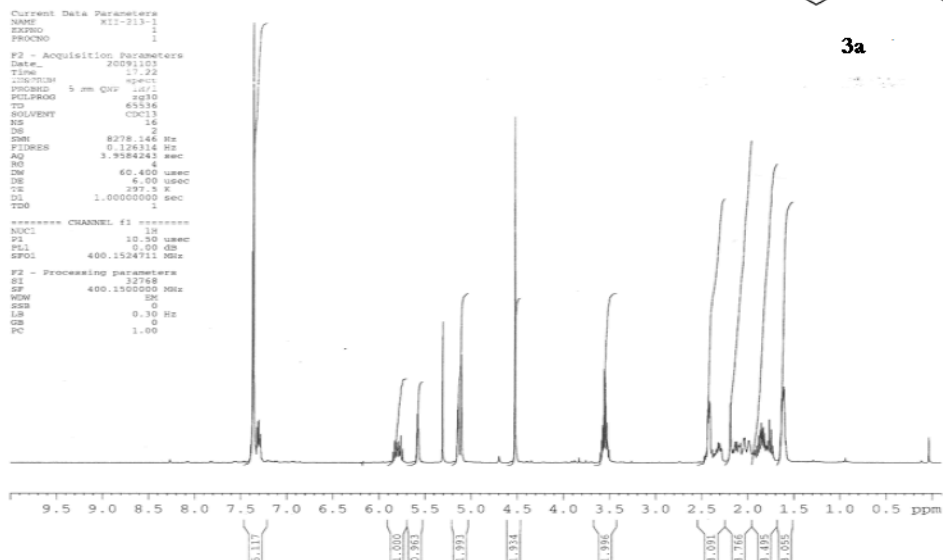
Supporting Information

¹H and ¹³C NMR Spectra

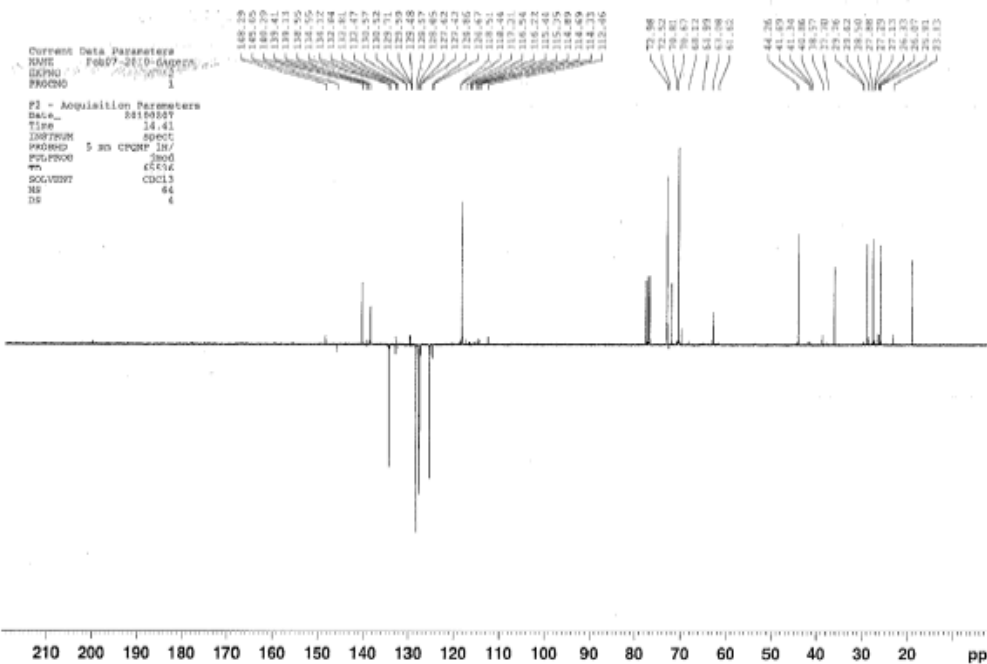
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3b	S-3
3c	S-4
3d	S-5
3e	S-6
4a	S-7
4b	S-8
4c	S-9
4d	S-10
4e	S-11
4f	S-12

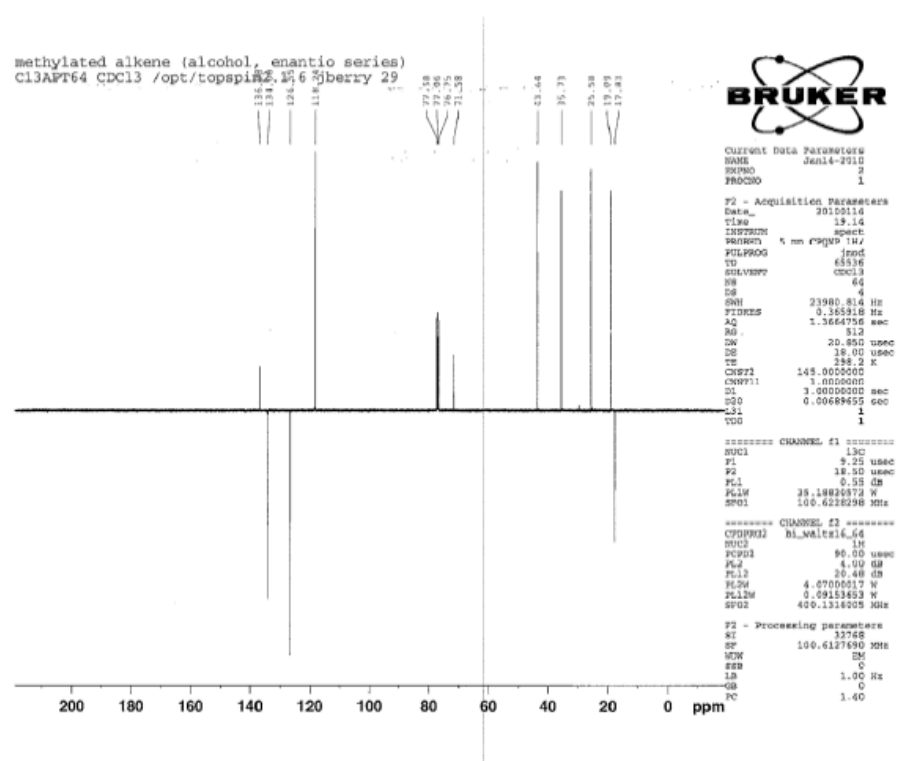
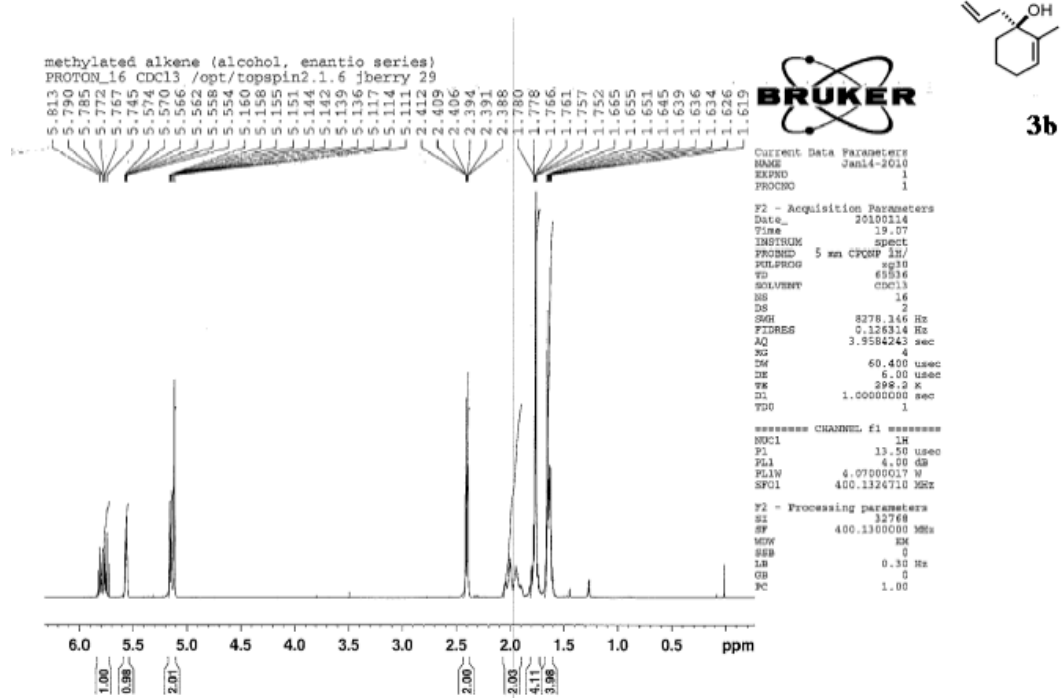


3a



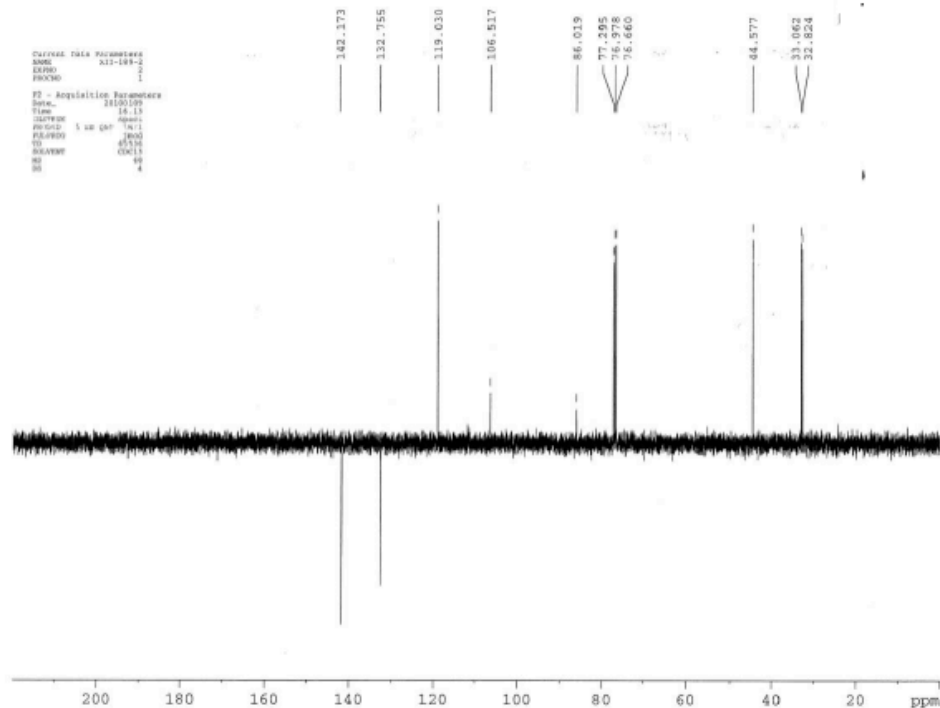
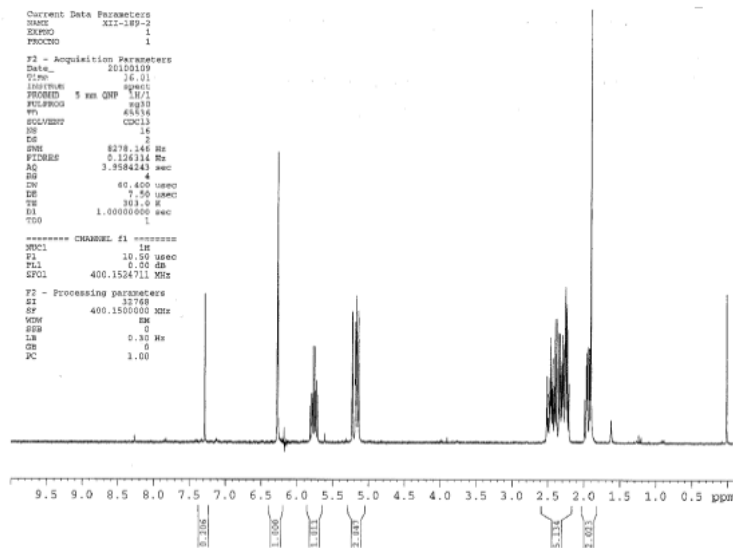
XIII-111-1
 C13APT64 CDCl3 /opt/topspin2.1.6 dager 49



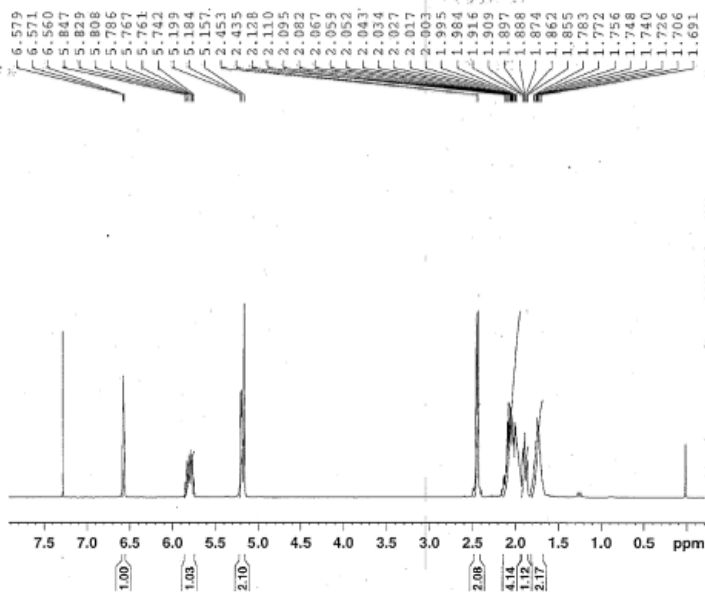




3c



iodo alcohol
 PROTON_16 CDCl3 /opt/topspin2.1.6 jberry 20

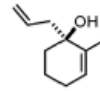


Current Data Parameters
 NAME Jan26-2010
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100126
 Time 15.08
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SFO1 8278.166 Hz
 FIDRES 0.130310 Hz
 AQ 3.9584743 sec
 RG 4
 SW 60.400 usec
 DE 6.00 usec
 VE 298.2 K
 D1 1.0000000 sec
 D10

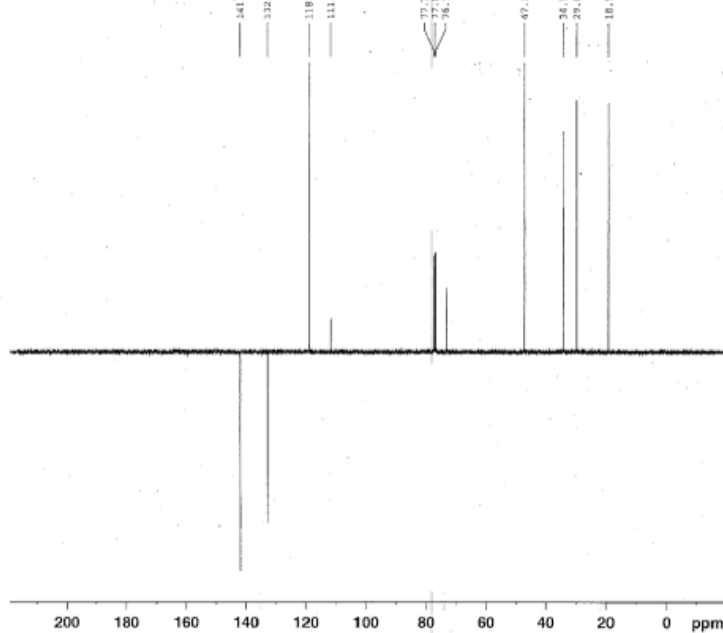
----- CHANNEL f1 -----
 NUCL1 1H
 P1 13.50 usec
 PL1 4.00 dB
 PL1W 4.0700017 W
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 WD 4
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



3d

iodo alcohol
 C13APT64 CDCl3 /opt/topspin2.1.6 jberry 20



Current Data Parameters
 NAME Jan26-2010
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100126
 Time 15.15
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 64
 DS 4
 SFO1 23980.814 Hz
 FIDRES 0.365918 Hz
 AQ 1.3644756 sec
 RG 512
 SW 20.860 usec
 DE 18.00 usec
 VE 298.1 K
 CWFT1 145.000000
 CWFT1 1.0000000
 D1 3.0000000 sec
 SFO 0.0000000 sec
 L31 1
 TDO 1

----- CHANNEL f1 -----
 NUCL1 13C
 P1 9.20 usec
 PL1 18.30 dB
 PL1W 0.18 dB
 PL1W 35.18820572 W
 SFO1 100.6228298 MHz

----- CHANNEL f2 -----
 CPDPRG2 hi_waltz16_64
 NUCL2 1H
 P2P2 90.00 usec
 PL2 4.00 dB
 PL2 20.48 dB
 PL2W 4.0700017 W
 PL1W 0.09132653 W
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127699 MHz
 WD 9
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

```

Current Data Parameters
NAME      XIII-033-3 dist
EXPNO    1
PROCNO   1

F2 - Acquisition Parameters
Date_    20091204
Time     17.10
INSTRUM  spect
PROBHD   5 mm QNP 1H/1
PULPROG  zg30
TD       65536
SOLVENT  CDCl3
NS       16
DS       2
SWH      8278.146 Hz
FIDRES   0.126314 Hz
AQ       3.9584243 s
RG       4
Dw       40.400 usec
DE       0.00 usec
TE       302.2 K
D1       1.0000000 sec
TDO      1

```

```

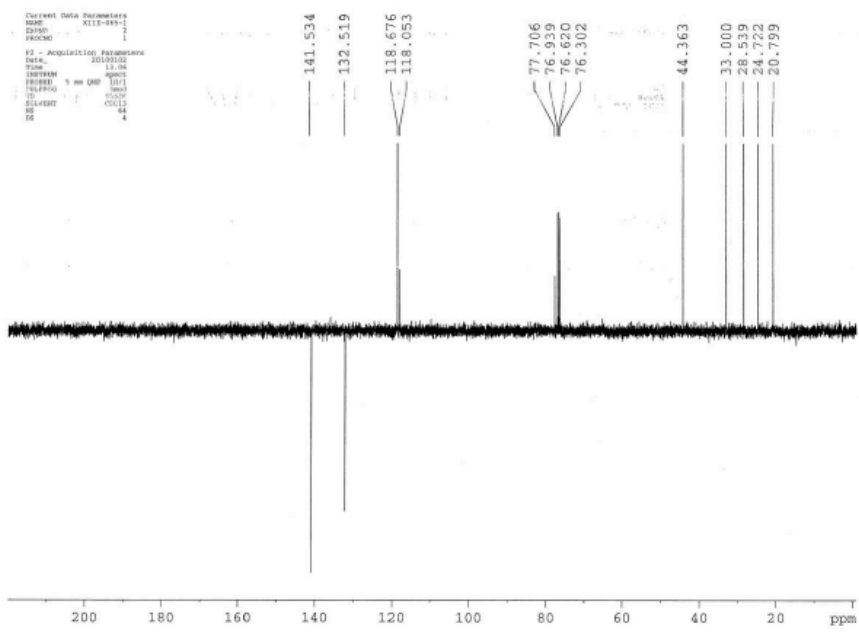
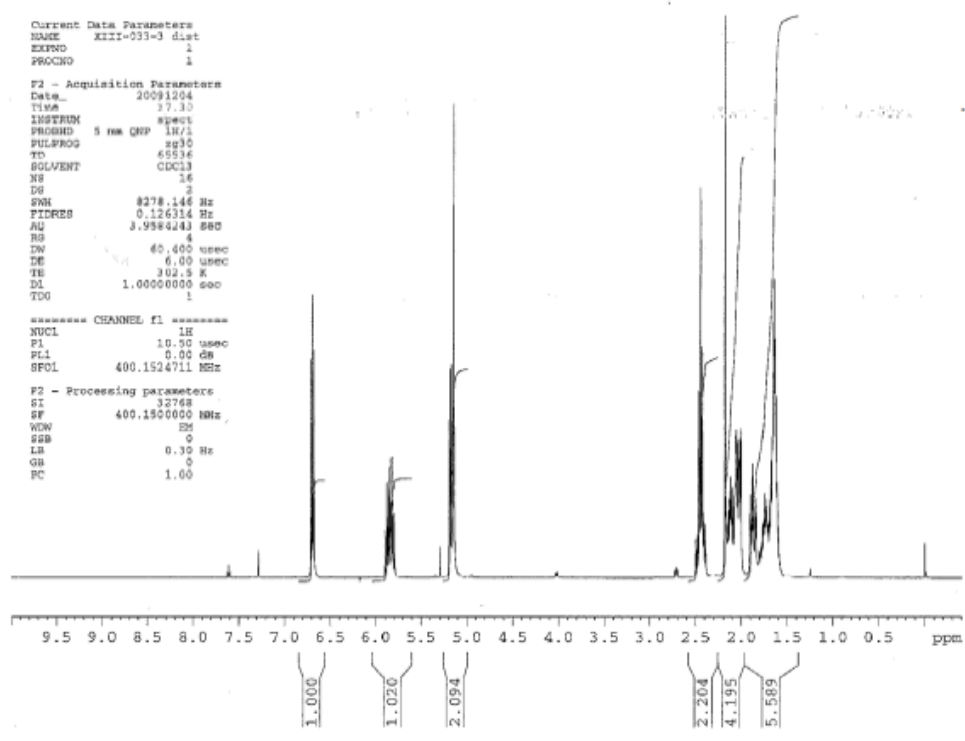
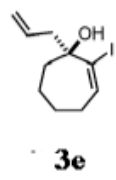
===== CHANNEL f1 =====
NUCL1    1H
P1       10.00 usec
PL1      0.00 dB
SFO1     400.1524711 MHz

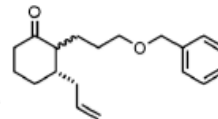
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```

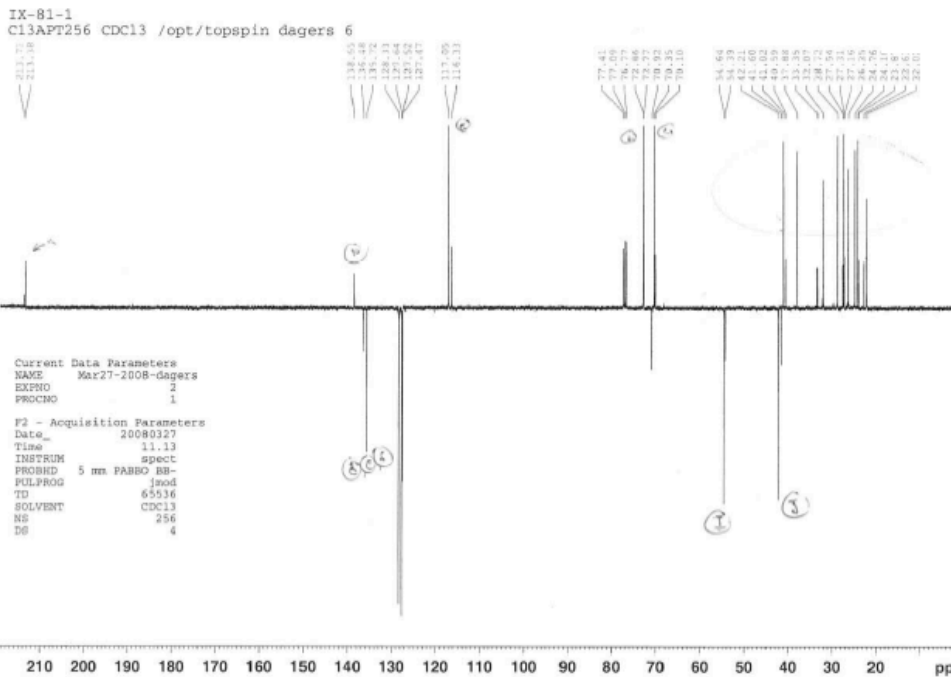
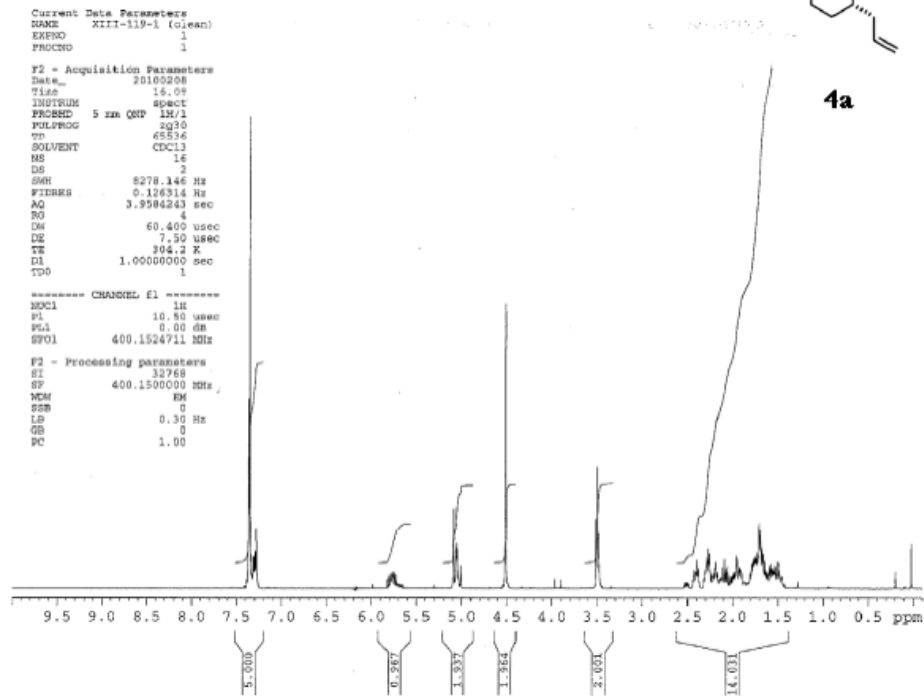
F2 - Processing parameters
SI       32768
SF       400.1500000 MHz
WDW      EM
SSB      0
LB       0.10 Hz
GB       0
PC       1.00

```

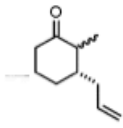
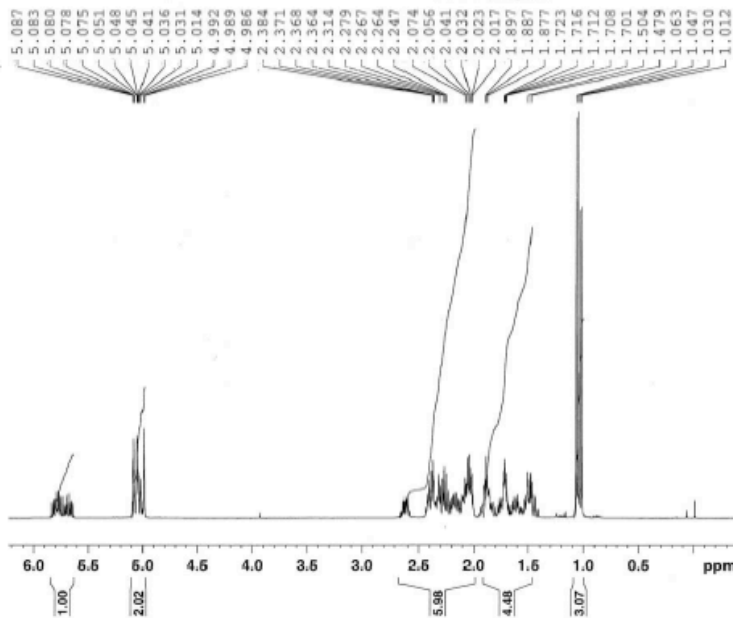




4a



ketone
 PROTON_16 CDC13 /opt/topspin2.1.6 jberry 35



4b

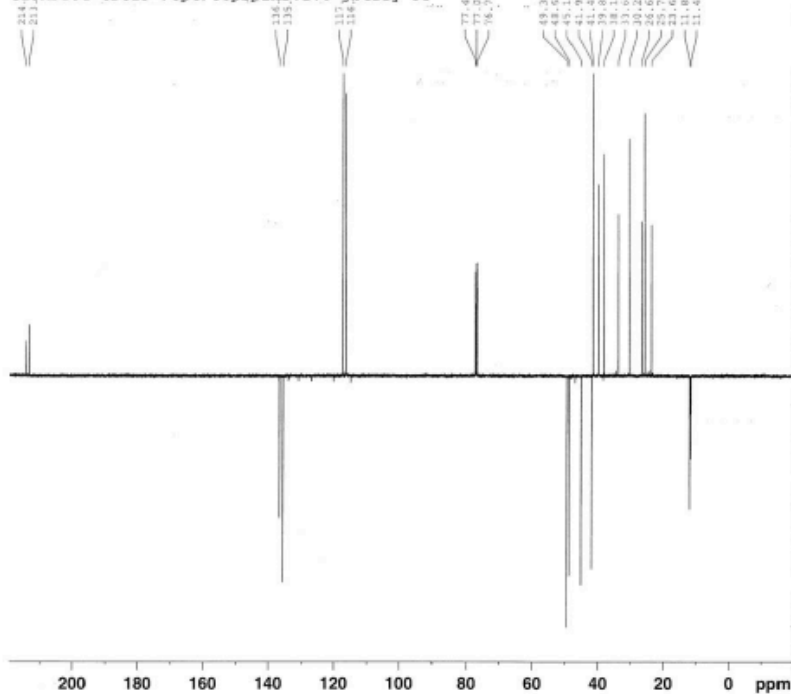
Current Data Parameters
 NAME Feb09-2010
 EXPNO 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100209
 Time 19.34
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG zg30
 TD 65536
 SOLVENT CDC13
 NS 16
 DS 2
 SMI 8278.146 Hz
 FIDRES 0.126314 Hz
 AQ 3.9584243 sec
 RG 4
 DM 60.400 usec
 DE 6.00 usec
 TE 298.1 K
 D1 1.00000000 sec
 TD0 1

***** CHANNEL f1 *****
 NUC1 1H
 P1 13.50 usec
 PL1 4.00 dB
 PL1W 4.0700017 W
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 NMR EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

ketone
 C13-APT64 CDC13 /opt/topspin2.1.6 jberry 35



Current Data Parameters
 NAME Feb09-2010
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100209
 Time 19.41
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 64
 DS 4
 SMI 23980.814 Hz
 FIDRES 0.145918 Hz
 AQ 1.3664755 sec
 RG 512
 DM 20.850 usec
 DE 18.00 usec
 TE 298.1 K
 CRF12 145.0000000
 CHFT1 1.0000000
 D1 1.00000000 sec
 D20 0.00689453 sec
 L31 1
 TD0 1

***** CHANNEL f1 *****
 NUC1 13C
 P1 9.25 usec
 P2 18.50 usec
 PL1 0.55 dB
 PL1W 35.18620572 W
 SFO1 100.6228298 MHz

***** CHANNEL f2 *****
 CPDPRG2 bi_waltz16.64
 NUC2 1H
 P2D2 90.00 usec
 PL2 4.00 dB
 PL12 20.48 dB
 PL2W 4.0700017 W
 PL12W 0.09153453 W
 SFO2 400.1316005 MHz

F2 - Processing parameters
 SI 32768
 SF 100.6127690 MHz
 NMR EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

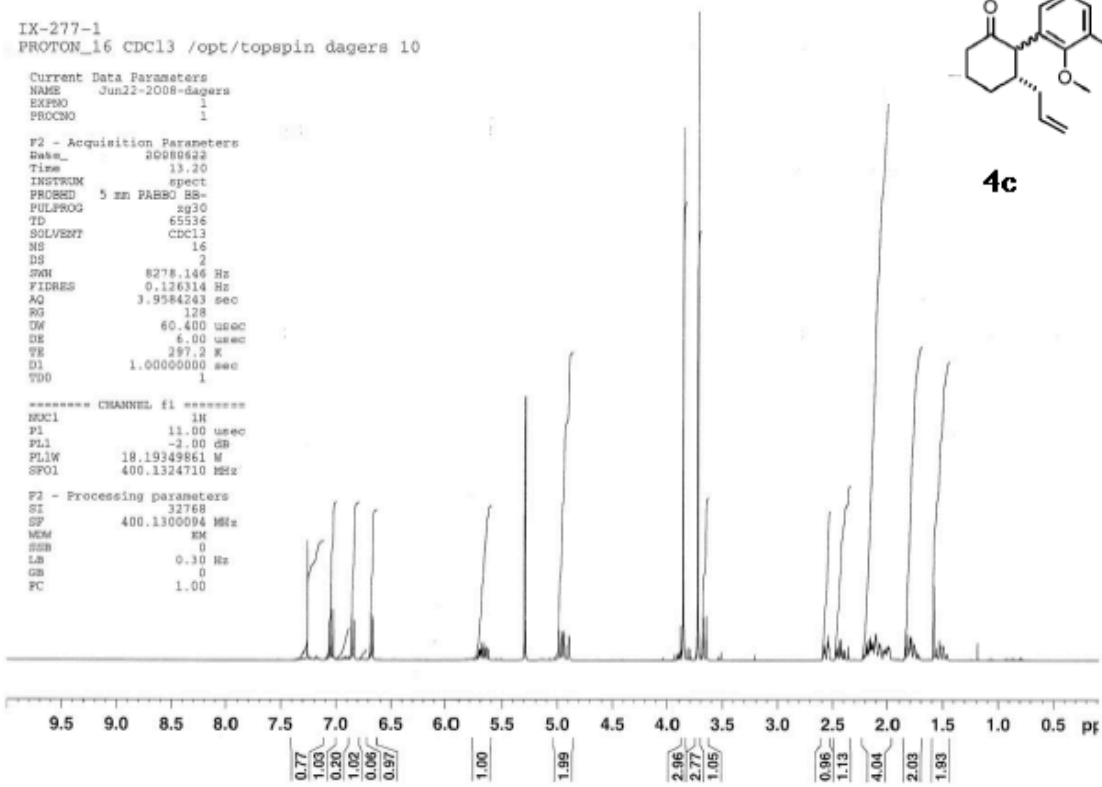
IX-277-1
 PROTON_16 CDC13 /opt/topspin dagers 10

Current Data Parameters
 NAME Jun22-2008-dagers
 EXPR0 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20080622
 Time 13:20
 INSTRUM spect
 PROBRD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT cdcl3
 NS 16
 DS 2
 SWH 8278.146 Hz
 FIDRES 0.126314 Hz
 AQ 3.9584243 sec
 RG 128
 DM 60.400 usec
 DE 6.00 usec
 TE 297.2 K
 D1 1.00000000 sec
 TDO 1

***** CHANNEL f1 *****
 NUC1 1H
 P1 11.00 usec
 PL1 -2.00 dB
 PL1W 18.19349861 M
 SFO1 400.1324710 MHz

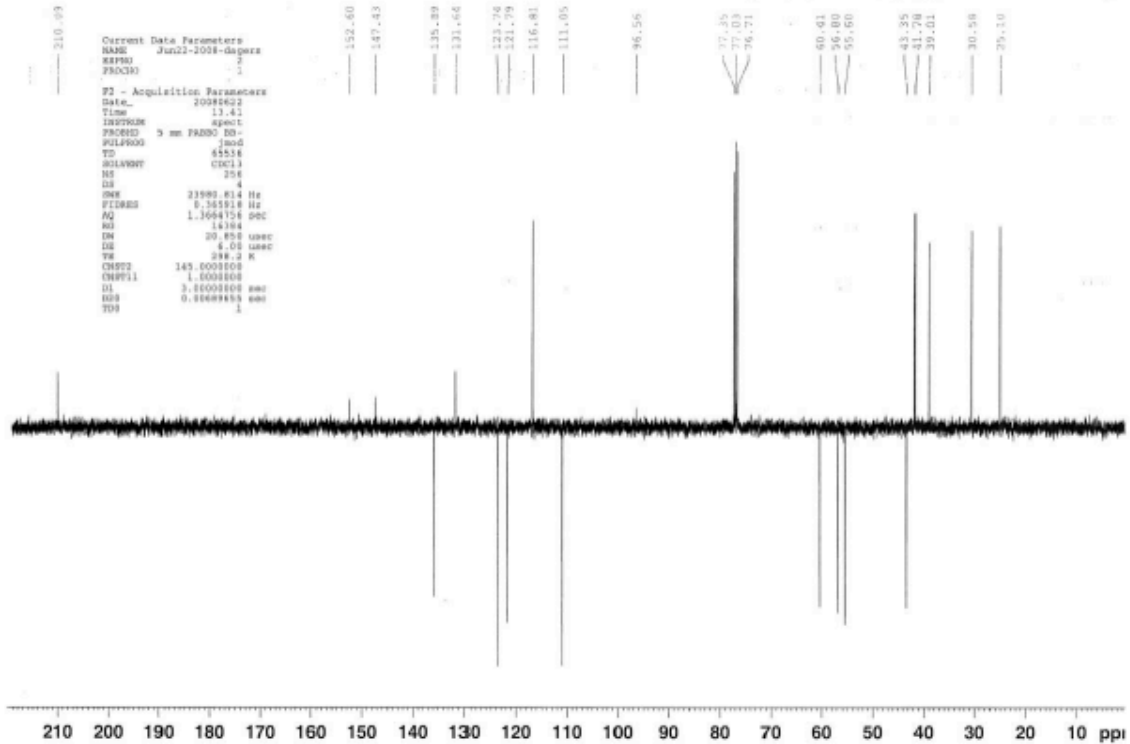
F2 - Processing parameters
 SI 32768
 SF 400.1300094 MHz
 WSM RM
 SSB 0
 LB 0.30 Hz
 GB 0
 FC 1.00

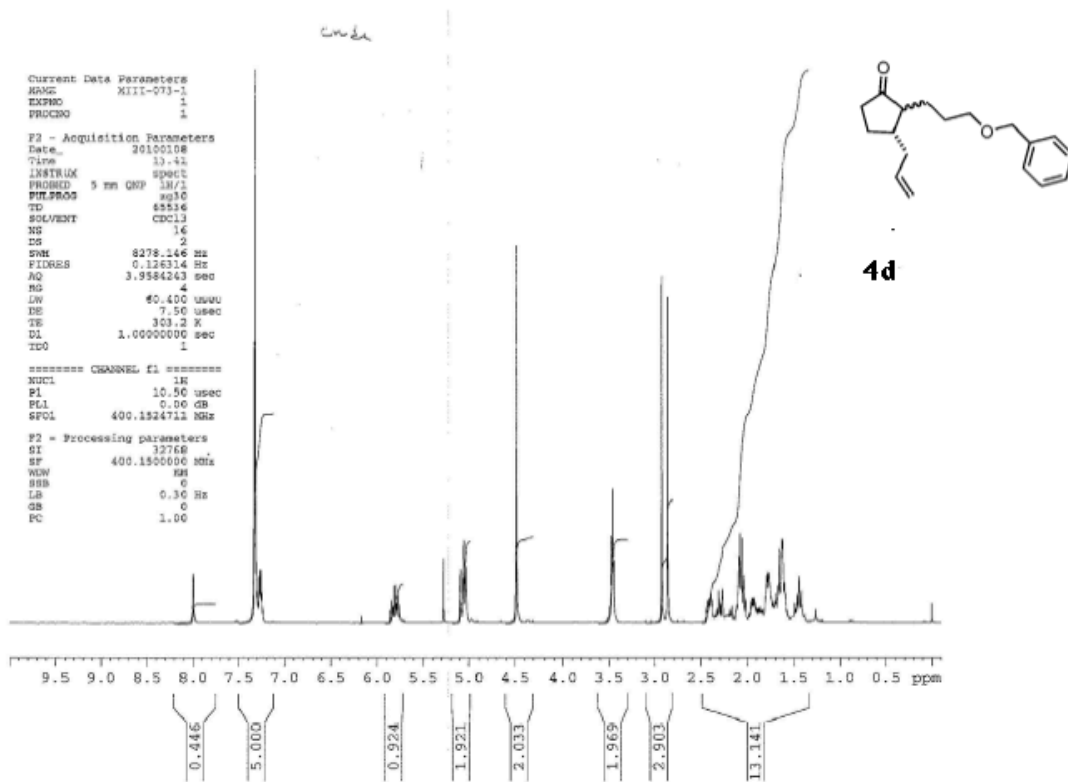


IX-277-1
 C13APT256 CDC13 /opt/topspin dagers 10

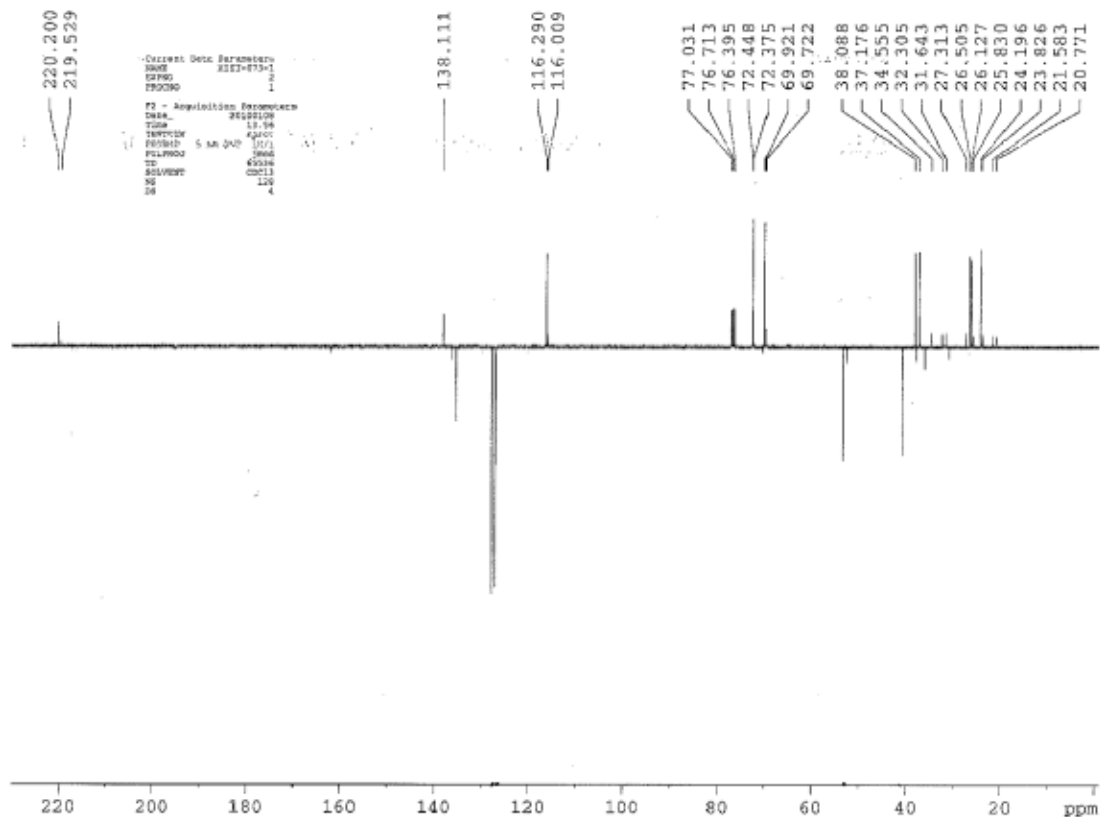
Current Data Parameters
 NAME Jun22-2008-dagers
 EXPR0 1
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20080622
 Time 13:41
 INSTRUM spect
 PROBRD 5 mm PABBO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT cdcl3
 NS 32
 DS 4
 SWH 21880.814 Hz
 FIDRES 0.365918 Hz
 AQ 1.1664758 sec
 RG 14384
 DM 20.850 usec
 DE 6.00 usec
 TE 298.2 K
 CHFT2 145.0003508
 CHFT1 1.0000000
 D1 3.80000000 sec
 D2 0.00000000 sec
 TDO 1





n



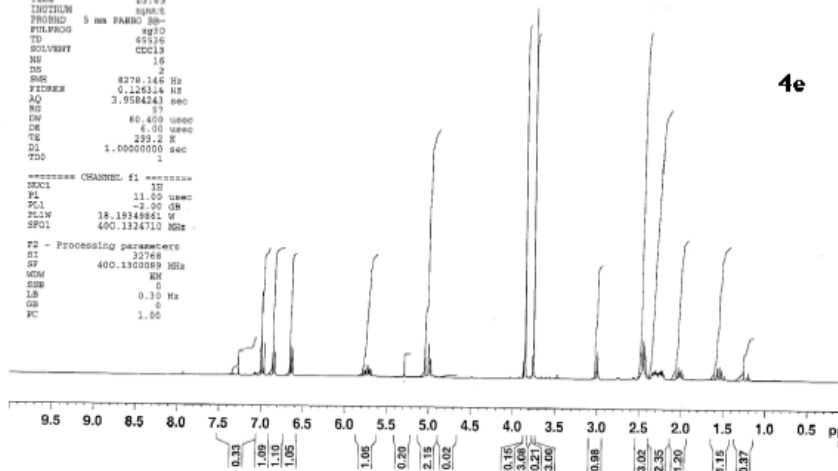
VIII-231-1
 PROTON_16 CDC13 /opt/topspin dagers 44

Current Data Parameters
 NAME Jan23-2008-dagers
 EXPNO 2
 PROCNO 1

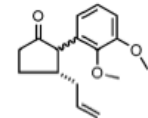
F2 - Acquisition Parameters
 Date_ 20080123
 Time 23:59
 INSTRUM spect
 PULPROG 5 mm PABBO BBO-
 TD 65536
 SOLVENT CDC13
 NS 16
 DS 2
 SFO 8278.146 Hz
 FIDRES 0.126314 Hz
 AQ 3.9584243 sec
 RG 57
 DW 60.400 usec
 DE 4.00 usec
 TE 299.2 K
 D1 1.00000000 sec
 D2 1

***** CHANNEL f1 *****
 NUC1 1H
 P1 11.00 usec
 PC1 -2.00 dB
 PL1W 18.19349861 W
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300889 MHz
 SCALING RM
 SUB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



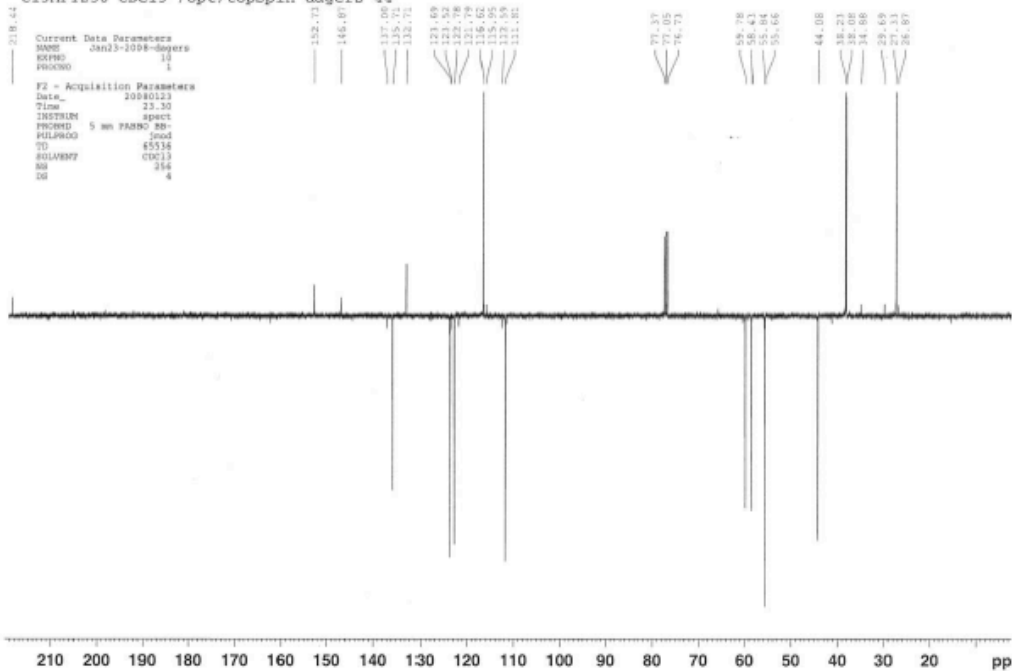
4e



VIII-231-1
 C13APT256 CDC13 /opt/topspin dagers 44

Current Data Parameters
 NAME Jan23-2008-dagers
 EXPNO 11
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20080123
 Time 23:30
 INSTRUM spect
 PULPROG 5 mm PABBO BBO-
 TD 65536
 SOLVENT CDC13
 NS 354
 DS 4



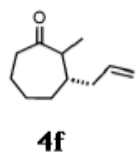
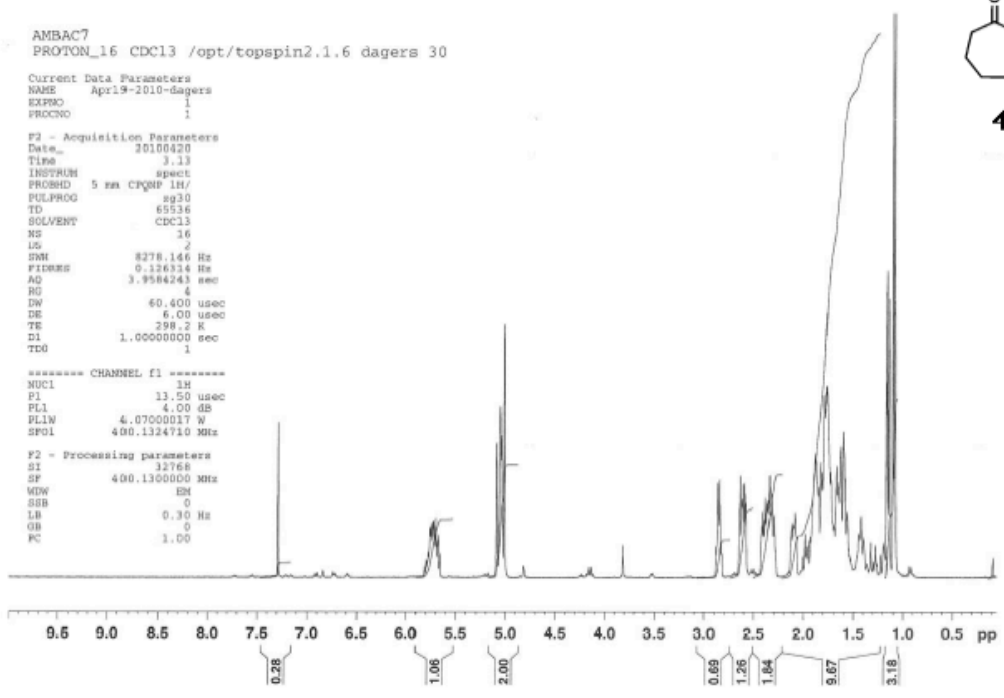
AMBAC7
 PROTON_16 CDC13 /opt/topspin2.1.6 dagers 30

Current Data Parameters
 NAME Apr19-2010-dagers
 EXPNO 1
 PROCNO 1

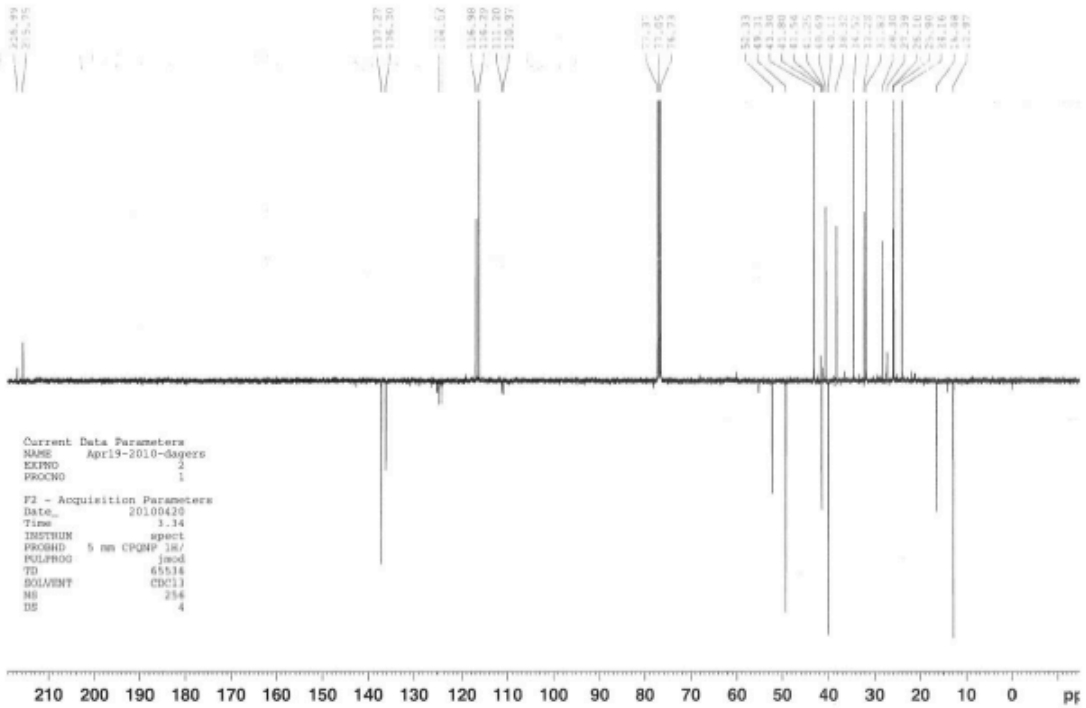
F2 - Acquisition Parameters
 Date_ 20100420
 Time 3.13
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG zg30
 TD 65536
 SOLVENT CDC13
 NS 16
 IS 2
 SWH 8276.146 Hz
 FIDRES 0.126314 Hz
 AQ 3.9584243 sec
 RG 4
 DW 60.400 usec
 DE 6.00 usec
 TE 298.2 K
 D1 1.00000000 sec
 TEO 1

***** CHANNEL f1 *****
 NUC1 1H
 P1 13.50 usec
 PL1 4.00 dB
 PL1W 4.0700017 W
 SFO1 400.1324710 MHz

F2 - Processing parameters
 SI 32768
 SF 400.1300000 MHz
 MDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



AMBAC7
 C13APT256 CDC13 /opt/topspin2.1.6 dagers 30



Current Data Parameters
 NAME Apr19-2010-dagers
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 20100420
 Time 1.14
 INSTRUM spect
 PROBHD 5 mm CPQNP 1H/
 PULPROG jmod
 TD 65536
 SOLVENT CDC13
 NS 256
 DS 4