

SUPPORTING INFORMATION

DOI: 10.1002/ejoc.201402207

Title: Mechanistic Insights into the Palladium-Catalyzed Domino Synthesis of 10,11-Dihydro-5H-dibenzo[b,e][1,4]diazepines

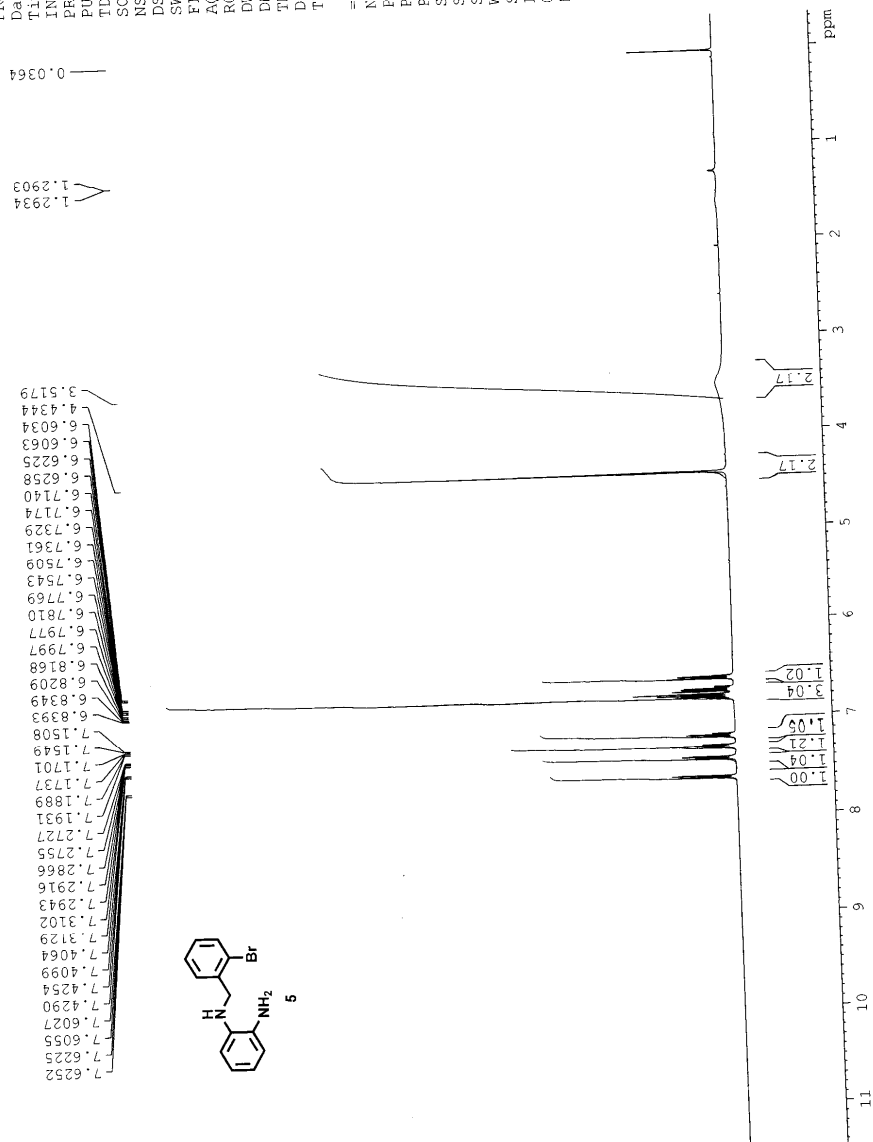
Author(s): Joydev K. Laha,* K. S. Satyanarayana Tummalapalli, Ankur Gupta

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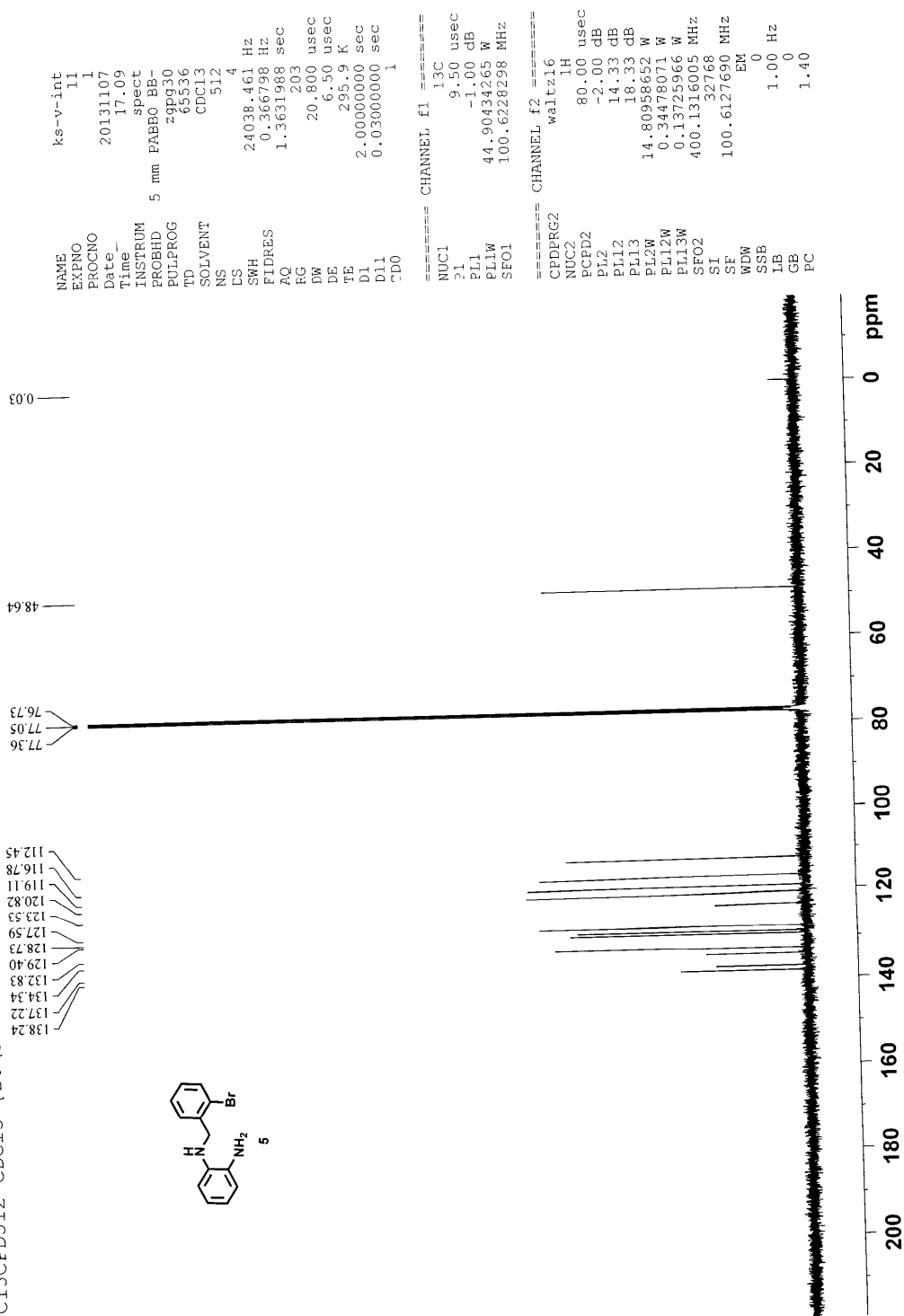
Copies of ^1HNMR and ^{13}C NMR spectra	2-49
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ks-v-int
PROTON CDC13 {D:\FACULTY\UKLaha\2013\Nov\} nipet 27

NAME ks-v-int
EXPNO 10
PROCNO 1
Date_ 2013.107
Time_ 13.17
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 64
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DM 60.800 usec
DE 6.50 usec
TE 294.6 K
D1 1.00000000 sec
D11 1
D10 1
===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
EM 0
WDW 0
SSE 0.30 Hz
LB 0
GB 0
PC 1.40

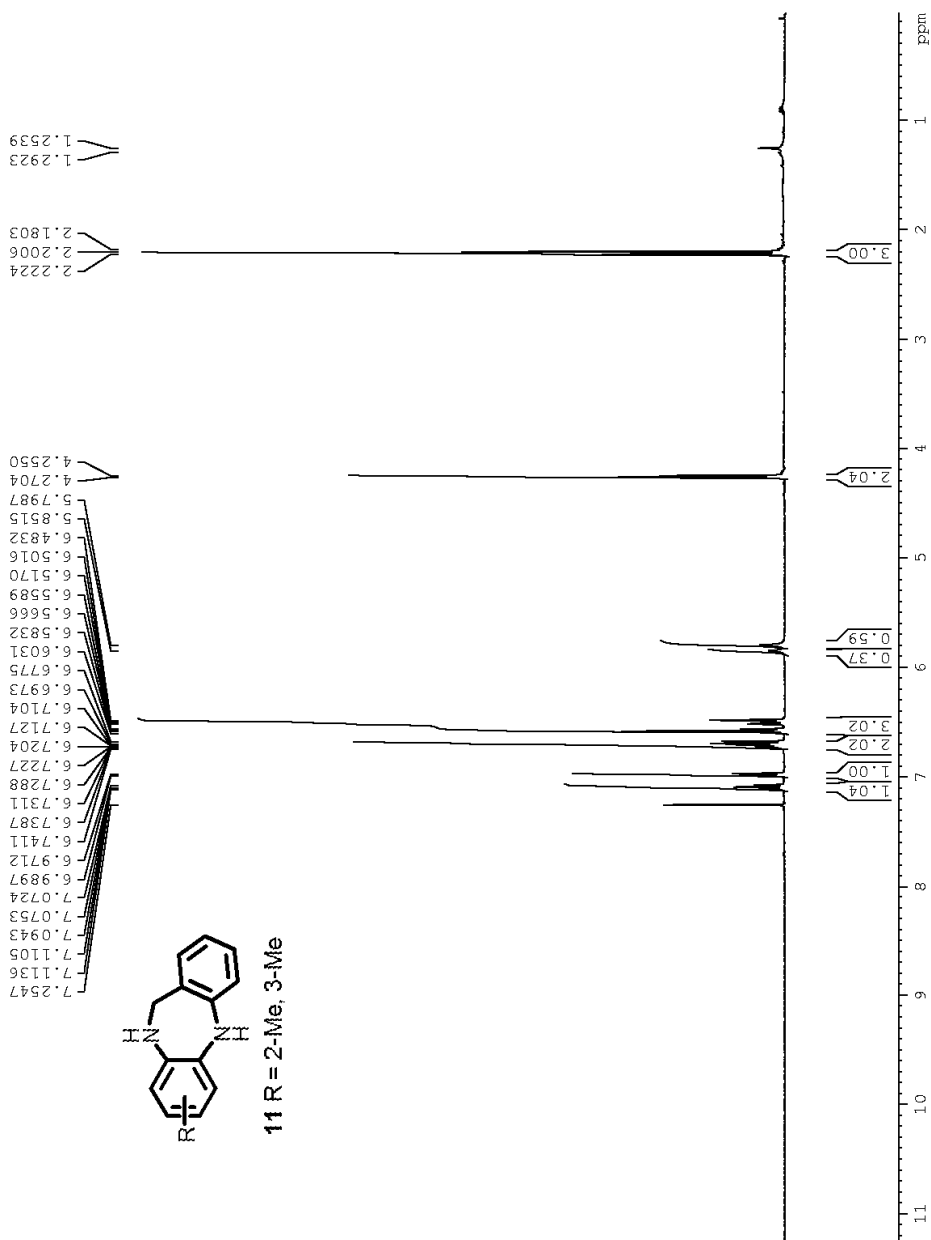


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ks-v-int
C13CPD512 CDC13 {D:\FACULTY\JKLaha\2013\Nov} niper 27
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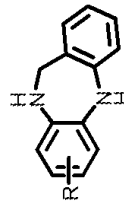
ks-v-79-me
PROTON CDC13 {D:\FACULTY\UKLaha2014\lan} niper 2

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EXPNO 10
PROCNO 1
Date_ 20140101
Time 12.50
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 63536
SOLVENT CDC13
NS 64
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 297.1 K
D1 1.00000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300130 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40



ks-v-79-pb

C13CPD CDCl3 {D:\FACULTY\JKLaba\2014\Mar\ niper 50



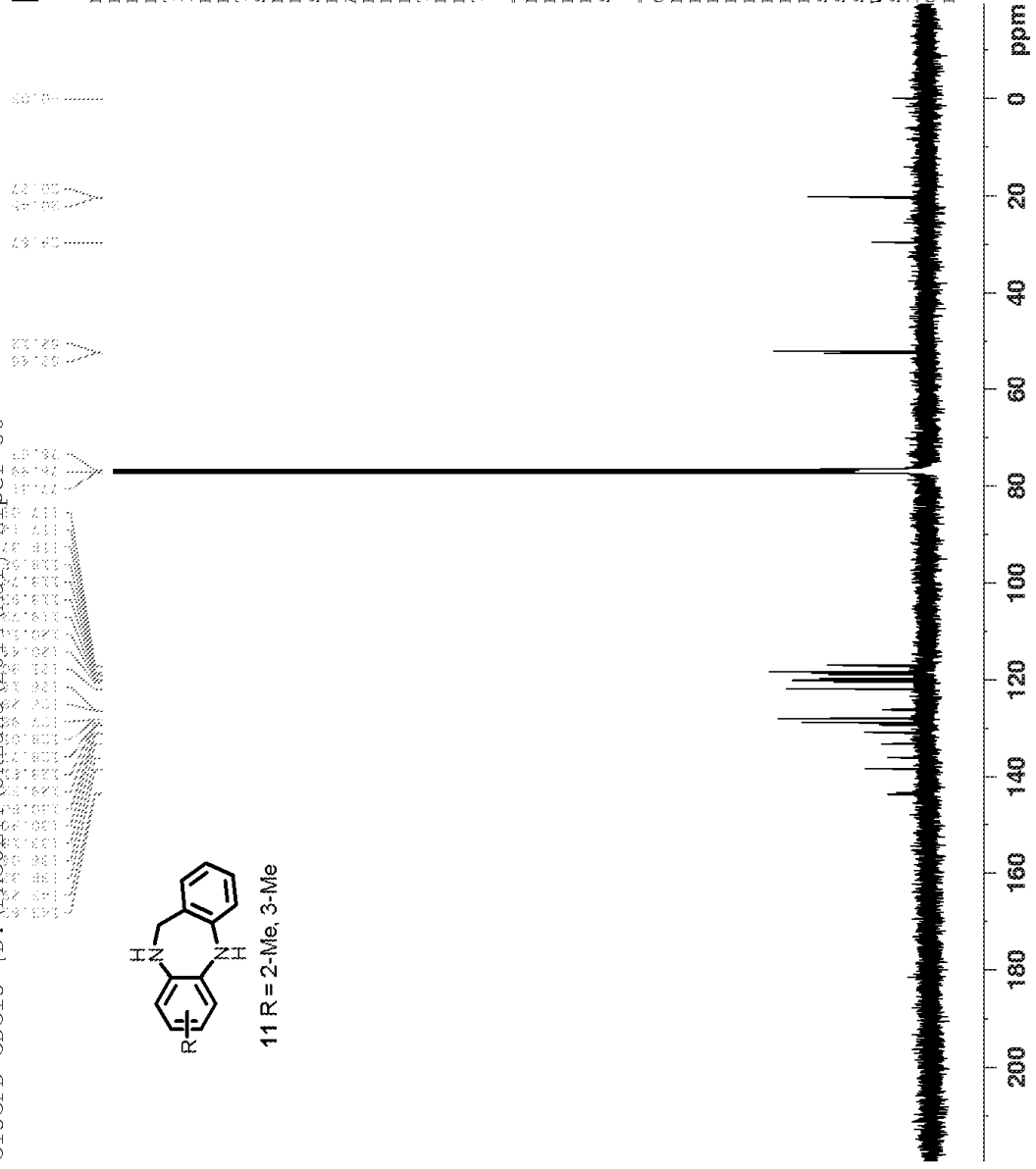
11 R = 2-Me, 3-Me



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PROCNO 1
Date_ 20140322
Time 12.12
INSTRUM spect
PROBHD 5 mm FAPBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 2048
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.0000000 sec
D11 0.0300000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

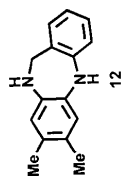
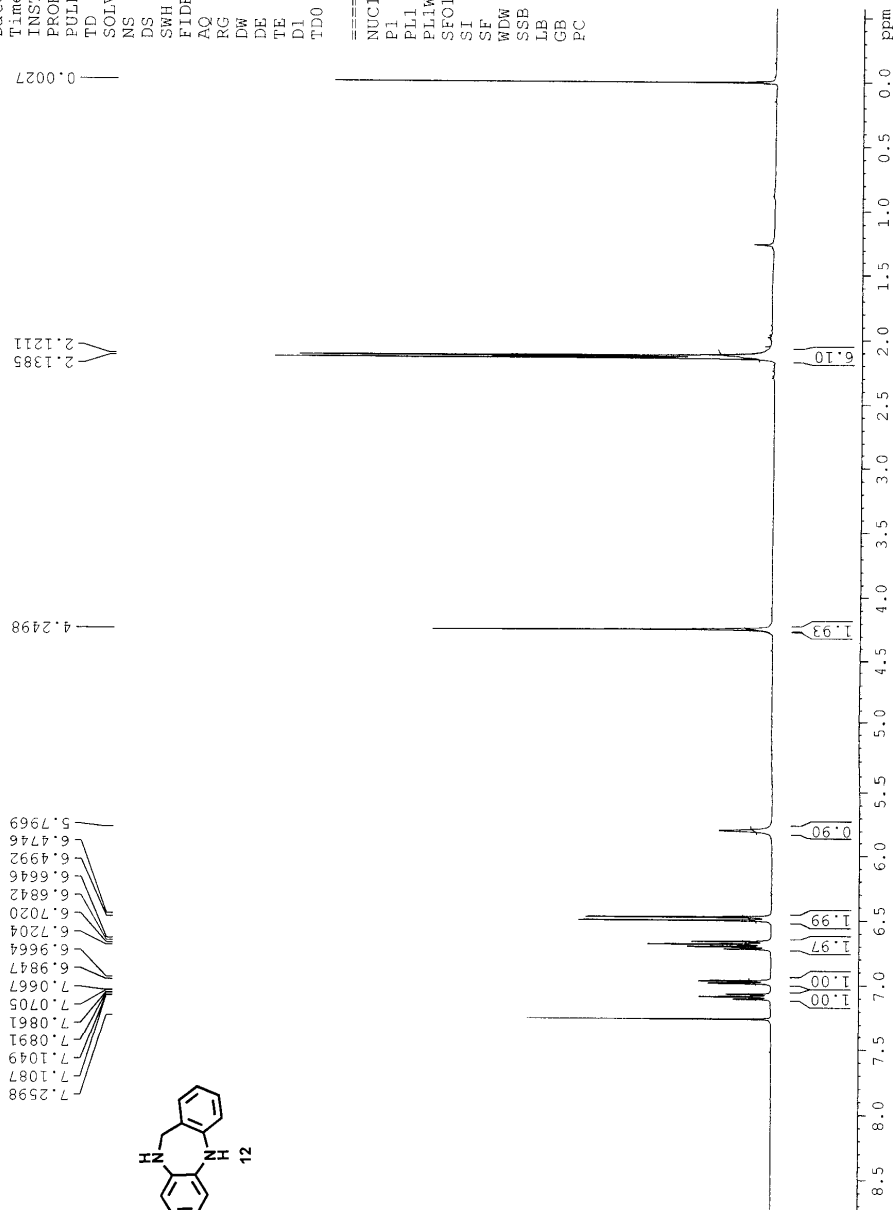
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CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127728 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



ks-v-36
PROTON CDCl3 {D:\FACULTY\JKLaha\2013\Sep} niper 40

NAME ks-v-36
EXPNO 10
PROCNO 1
Date_ 20130924
Time_ 19.31
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 295.0 K
D1 1.0000000 sec
TD0 1

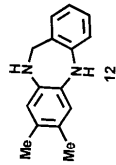
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NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300103 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40



ks-v-36
C13CPD512

{D:\FACULTY\JKLaha\2013\Sep} niper 40

143.5468
136.2208
130.9392
129.3333
128.9212
127.9888
127.7688
126.0729
121.0493
119.7069
118.4636
116.9861
77.3527
77.0355
76.7178
52.5899
18.8102
18.6216
0.0199



NAME ks-v-36
EXPNO 11
PROCNO 1
Date_ 20130925
Time_ 7.09
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 294.8 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.628298 MHz

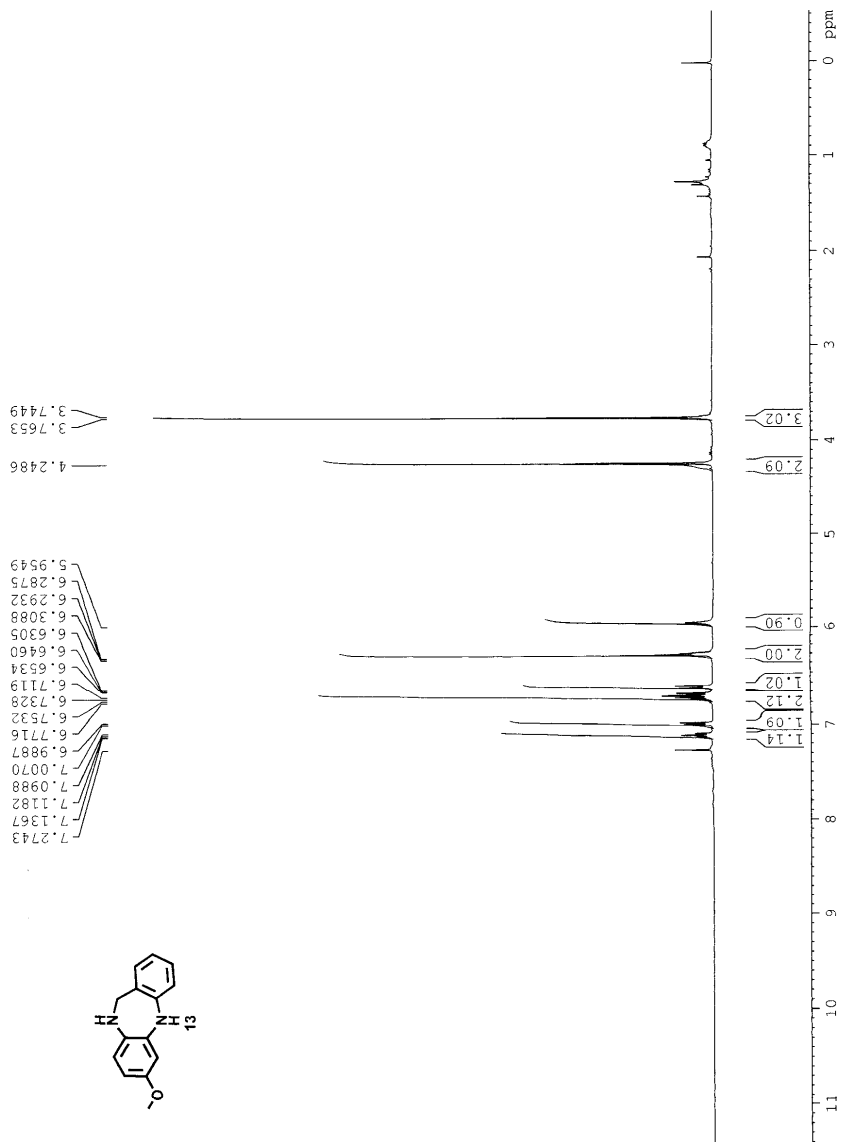
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

200 180 160 140 120 100 80 60 40 20 0 ppm

kss-59-b
PROTON CDCl3 {D:\Jan2013} niper 33

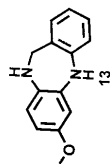
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EXPNO	10
PROCNO	1
Date_	20130112
Time_	20.25
INSTRUM	5 mm PABBO BB-
PROBHD	zg30
PULPROG	65536
TD	CDCl3
SOLVENT	16
DS	2
SWH	8223.685 Hz
FIDRES	0.125483 Hz
AQ	3.9846387 sec
RG	203
DW	60.800 usec
DE	6.50 usec
TE	673.2 K
D1	1.00000000 sec
TD0	1

===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40





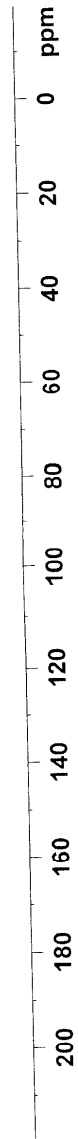
kss-59-b
C13CPD512 CDCl3 {D:\Jan2013} niper 33



NAME kss-59-b
EXPNO 11
PROCNO 1
Date_ 20130112
Time_ 20.56
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
RG 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.00000000 sec
Dil 0.03000000 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL1W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127630 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

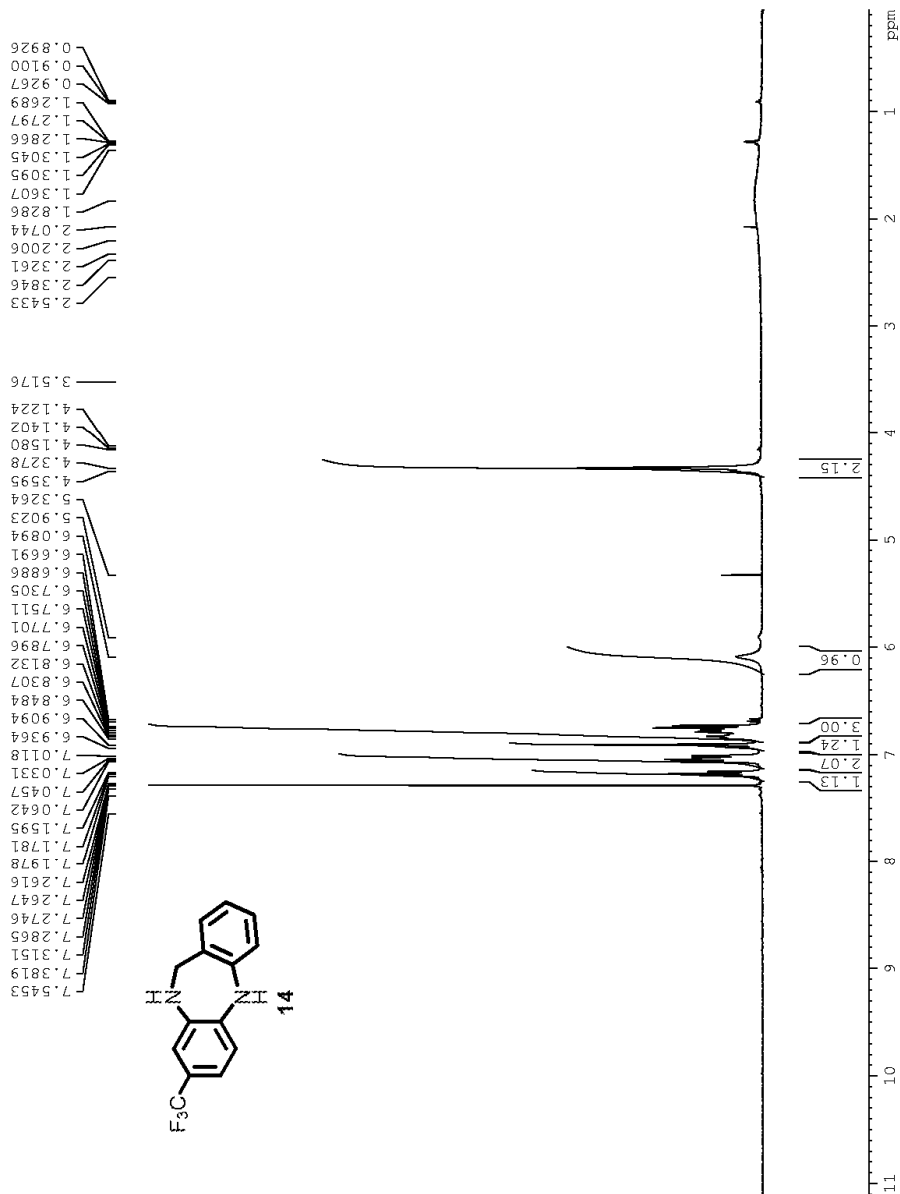


ks-v-38
PROTON CDC13 {D:\FACULTY\K\Laha\2013\Sep} niper 28

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NAME      ks-v-38
EXPNO     10
PROCNO    1
Date_     20131001
Time      13.04
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD         65536
SOLVENT   CDC13
NS         16
DS         2
SWH        8223.685 Hz
FIDRES     0.125483 Hz
AQ         3.9846387 sec
RG         203
DW         60.800 usec
DE         6.50 usec
TE         294.5 K
D1         1.00000000 sec
D10        1
===== CHANNEL f1 =====
NUC1       1H
P1         12.20 usec
PL1        -2.00 dB
PL1W       14.80958652 W
SF01       400.1324710 MHz
SI         32768
SF         400.1300000 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.40

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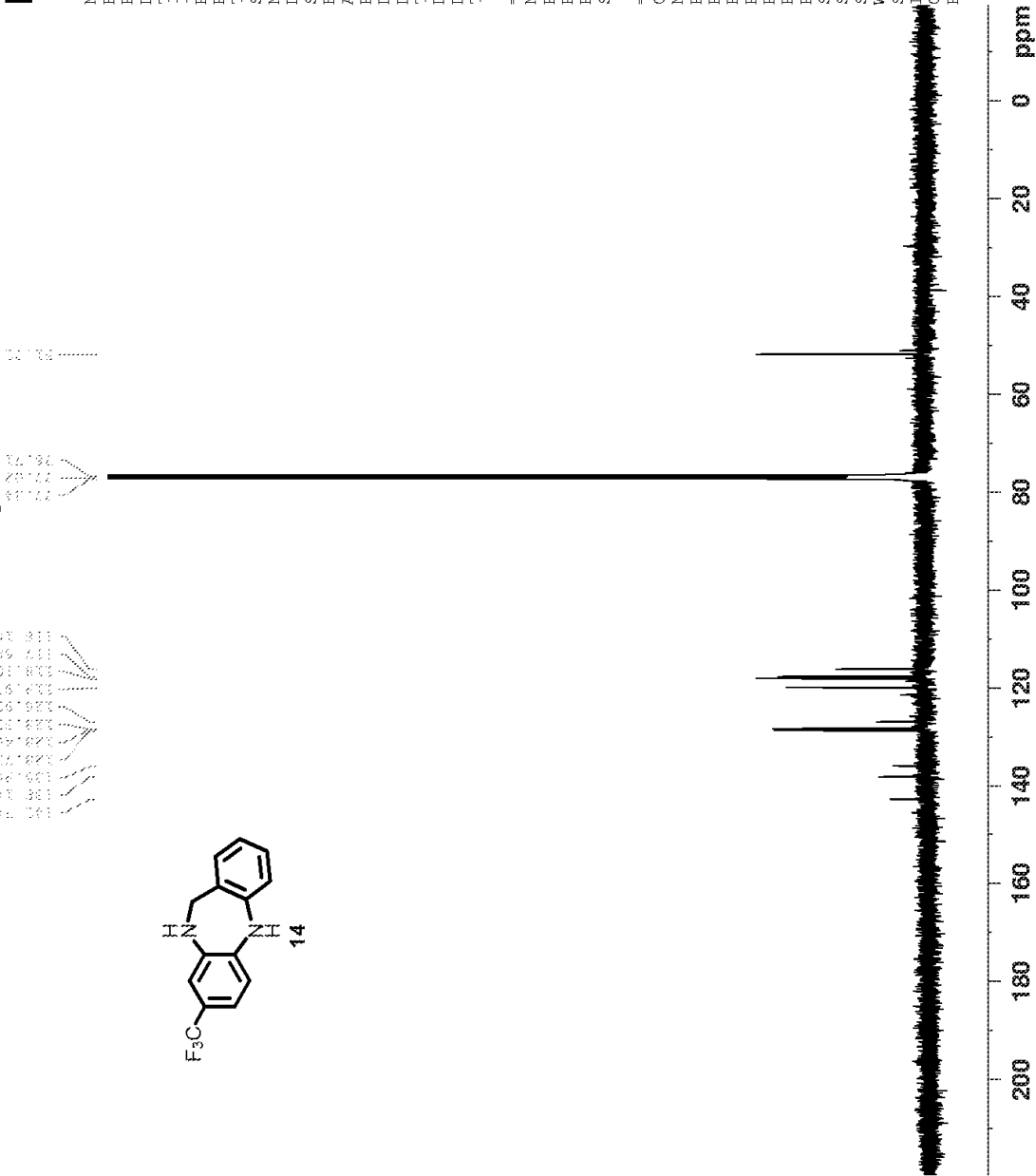
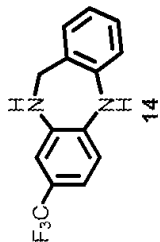
ks-v-cf-c
 C13CPD CDCl3 {D:\FACULTY\JKLaha\2014\Mar} niper 18



NAME ks-v-cf-c
 EXPNO 11
 PROCNO 1
 Date_ 20140327
 Time 7.11
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 2048
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 311.6 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TDO 1

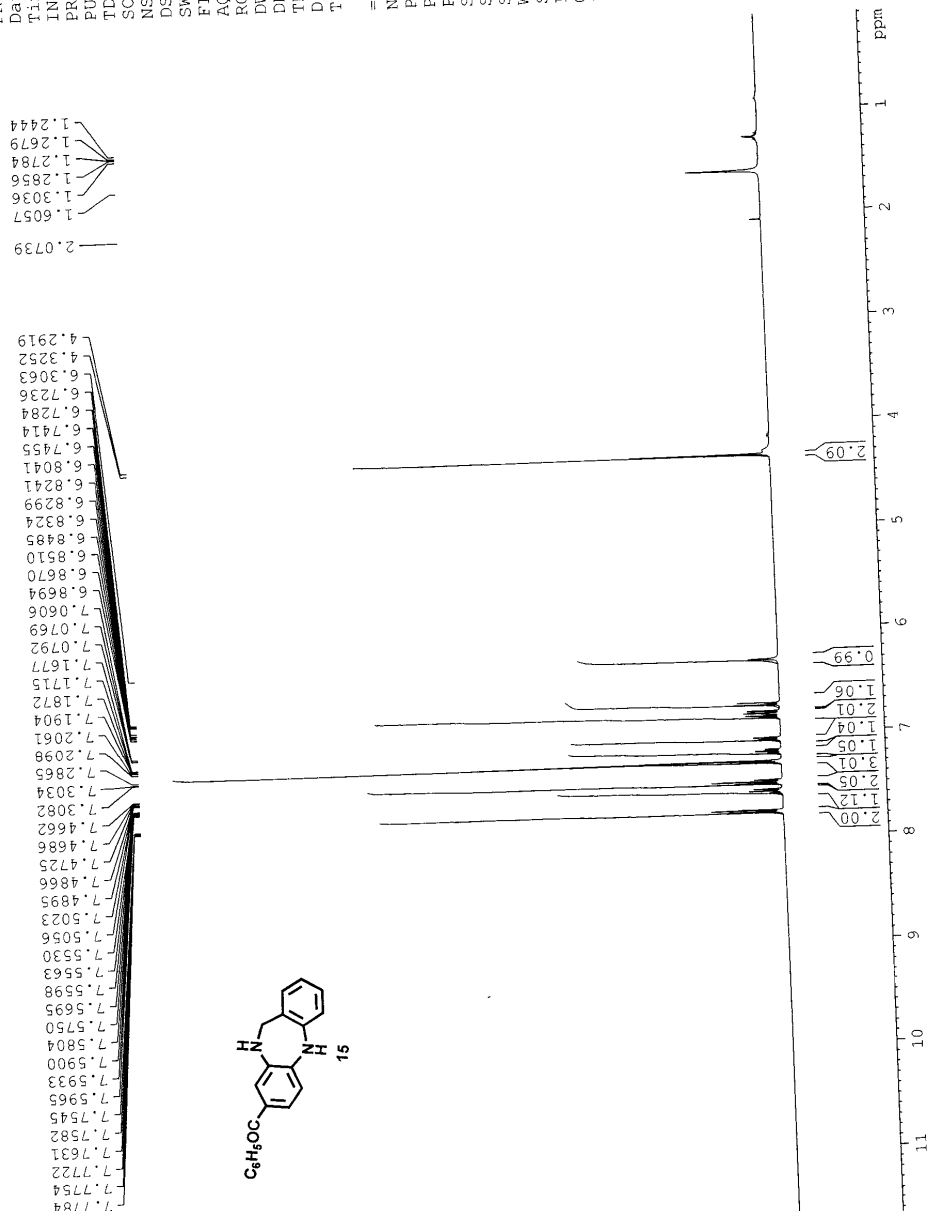
===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -1.00 dB
 PL1W 44.90434265 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -2.00 dB
 PL12 14.33 dB
 PL13 18.33 dB
 PL2W 14.80958652 W
 PL12W 0.34478071 W
 PL13W 0.13725966 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127690 MHz
 WDW EM
 SSB 0
 GB 0
 PC 1.40



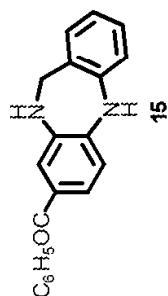
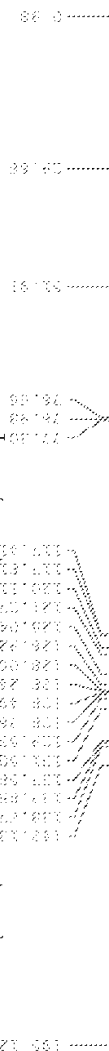
ks-v-80a
PROTON CDC13 {D:\FACULTY\JKLaha\2013\Nov\} niper 16

NAME ks-v-80a
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PROCNO 1
Date_ 20131105
Time_ 12.44
Spect
INSTRUM 5 mm PABBO BB-
PROBHD zg30
PULPROG 65536
TD CDC13
SOLVENT 64
NS 2
DS 8223.685 Hz
SWH 0.125483 Hz
FIDRES 3.9846387 sec
AQ 203
RG 60.800 usec
DW 6.50 usec
DE 292.7 K
TE 1.00000000 sec
D1 1
TD0
===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL -2.00 dB
PL1 14.80958652 W
PL1W 400.1324710 MHz
SF01 32768
SI 400.1300000 MHz
SF EM
WDW 0
SSB 0.30 Hz
LB 0
GB 0
PC 1.40





ks-v-80-pb
C13CPD CDC13 {D:\FACULTY\JKLaha\2014\Mar} niper 51



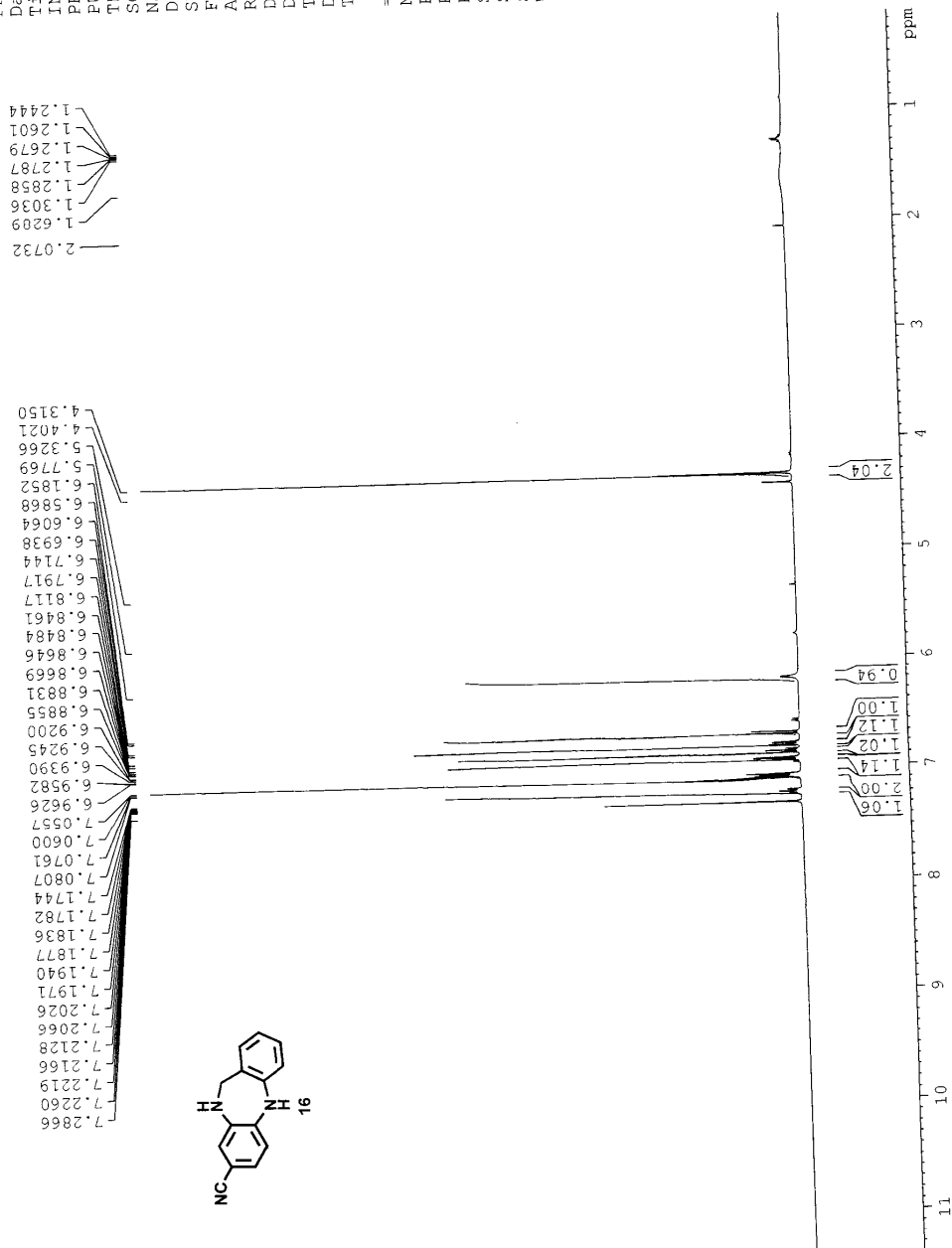
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PROCNO 1
Date_ 20140322
Time_ 14.13
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 2048
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80938652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127728 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

200 180 160 140 120 100 80 60 40 20 0 ppm

ks-v-74-z
PROTON CDC13 {D:\FACULTY\JKLaha\2013\Nov} niper 25



NAME ks-v-74-z
EXPNO 10
PROCNO 1
Date_ 20131107
Time 13.32
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 64
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 294.8 K
D1 1.0000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL -2.00 dB
PL1W 14.80958652 W
SF01 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40

ks-v-cf-a

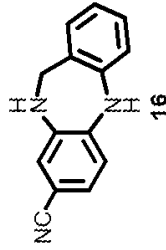
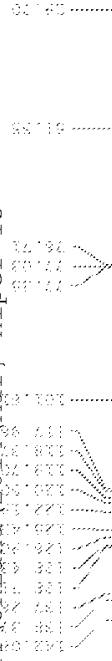
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NAME ks-v-cn-a
EXPNO 11
PROCNO 1
Date_ 20140326
Time 7.07
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 2048
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 299.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



200 180 160 140 120 100 80 60 40 20 0 ppm

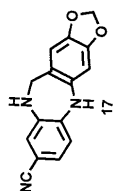
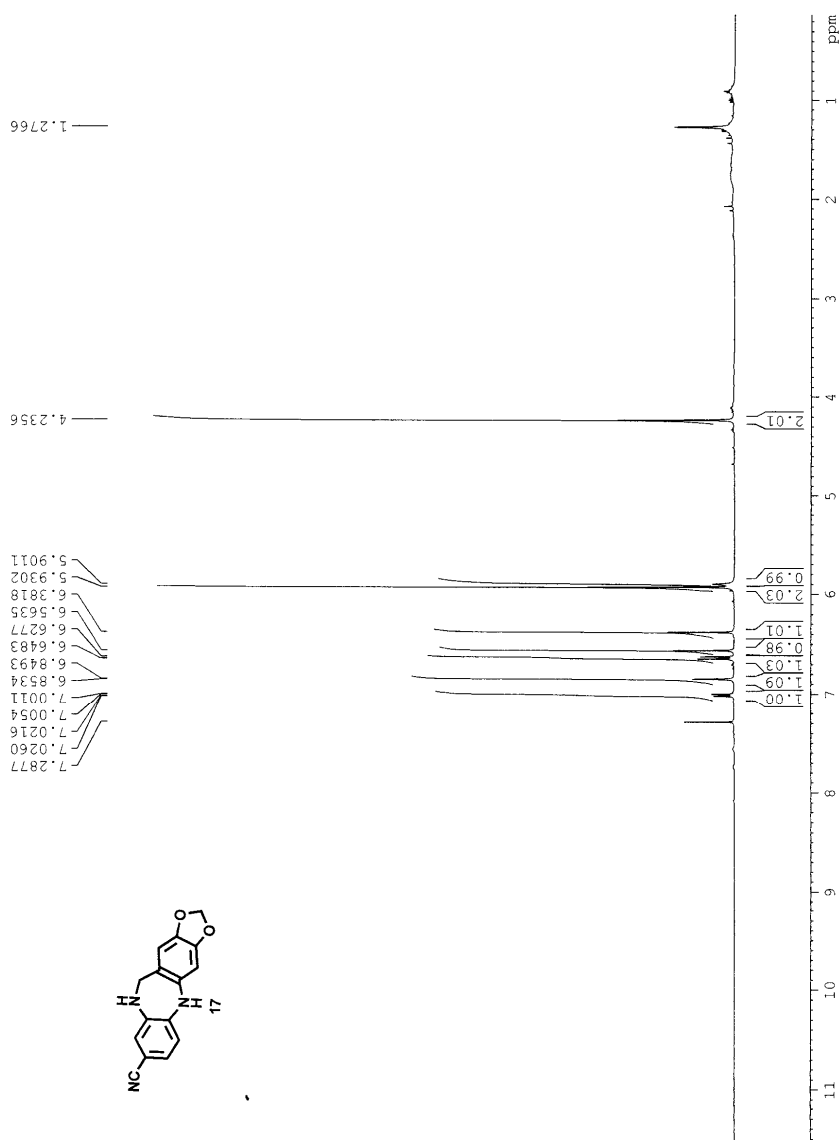
ks-v-82a
PROTON CDC13 {D:\FACULTY\JKLaha2013\Nov} niper 18

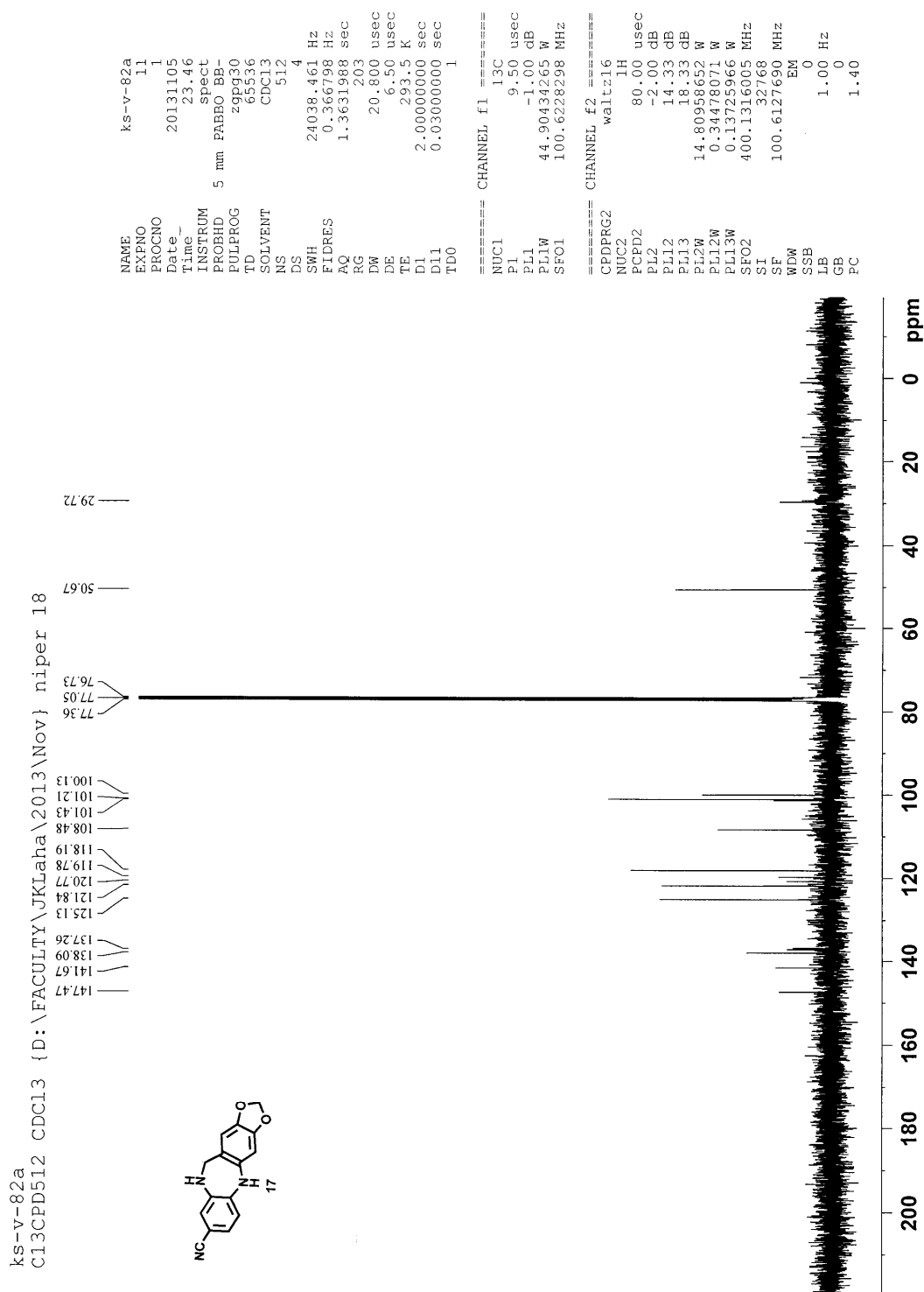
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EXPNO     10
PROCNO    1
Date_     20131105
Time_     13.16
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD         65536
SOLVENT   CDC13
NS         64
DS         2
SWH        8223.685 Hz
FIDRES     0.125483 Hz
AQ          3.9846387 sec
RG          203
DW          60.800 usec
DE          6.50 usec
TE         292.7 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         12.20 usec
PL1        -2.00 dB
PL1W       14.80958652 W
SFO1       400.1324710 MHz
SI         32768
SF         400.1300000 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.40

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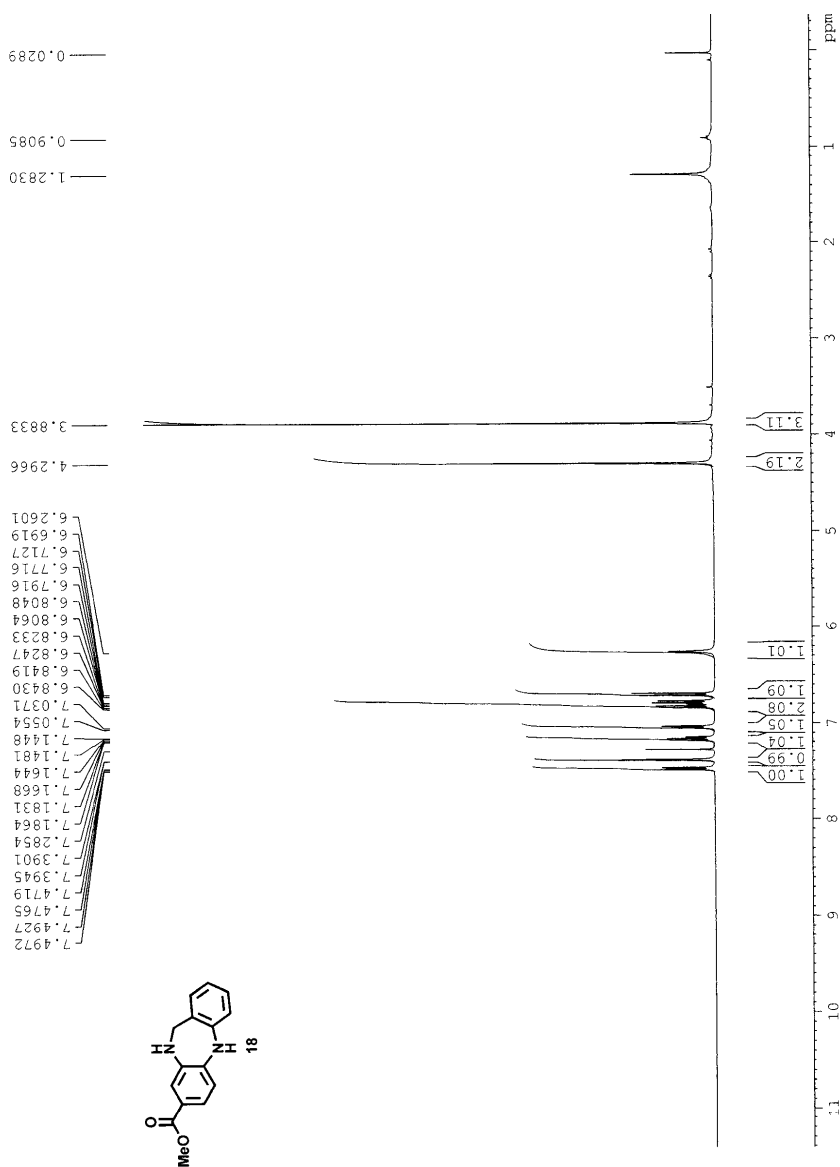




kss-dd-19
 PROTON CDCl3 {D:\Oct2012} niper 29

NAME kss-dd-19
 EXPNO 10
 PROCNO 1
 Date_ 20121019
 Time 14.50
 INSTRUM spect
 PROBD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 297.4 K
 D1 1.0000000 sec
 TD0 1

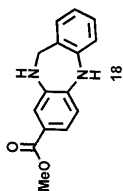
===== CHANNEL f1 =====
 NUC1 1H
 P1 12.20 usec
 PL1 -2.00 dB
 PL1W 14.80958652 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300000 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.40



ks-52-b
C13CPD512 CDCl3 {D:\Jan2013} niper 35

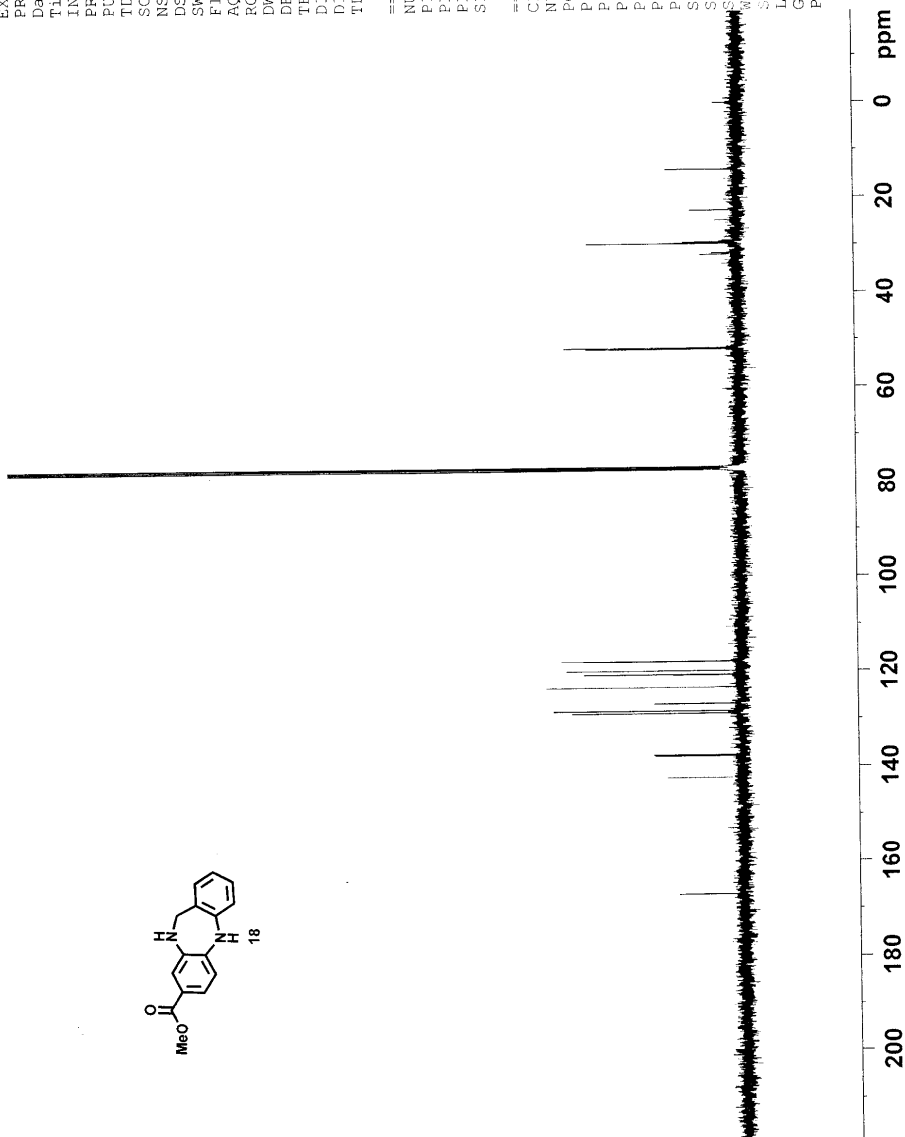


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EXPNO 11
PROCNO 1
Date_ 20130104
Time_ 21.01
INSTRUM spect
PROBHD 5 mm PABRO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TDO 1



===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

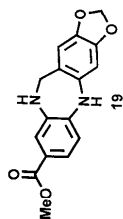
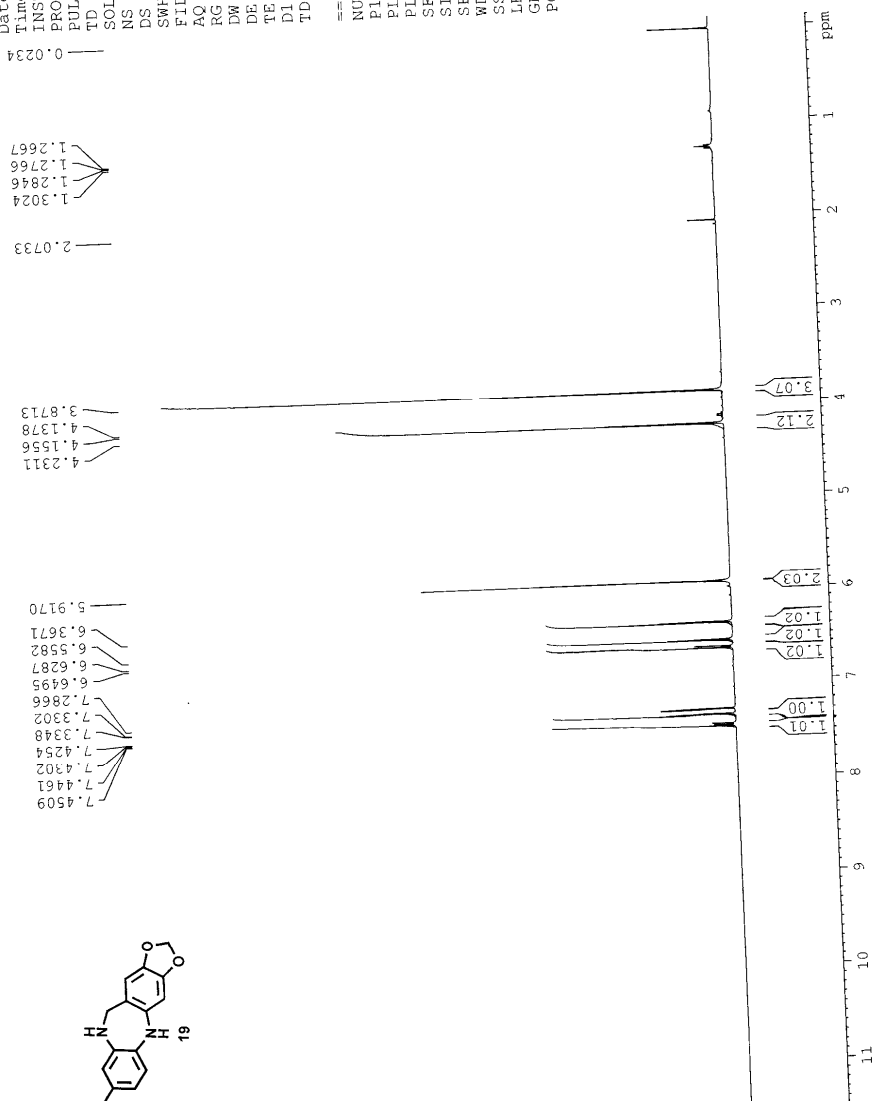
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
EM 0
SSB 1.00 Hz
LB 0
GB 0
PC 1.40



ks-v-81b
PROTON CDC13 {D:\FACULTY\JKLaha\2013\Nov\} niper 17

NAME ks-v-81b
EXPNO 10
PROCNO 1
Date_ 20131105
Time 13.05
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDC13
NS 64
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 292.7 K
D1 1.00000000 sec
TD0 1

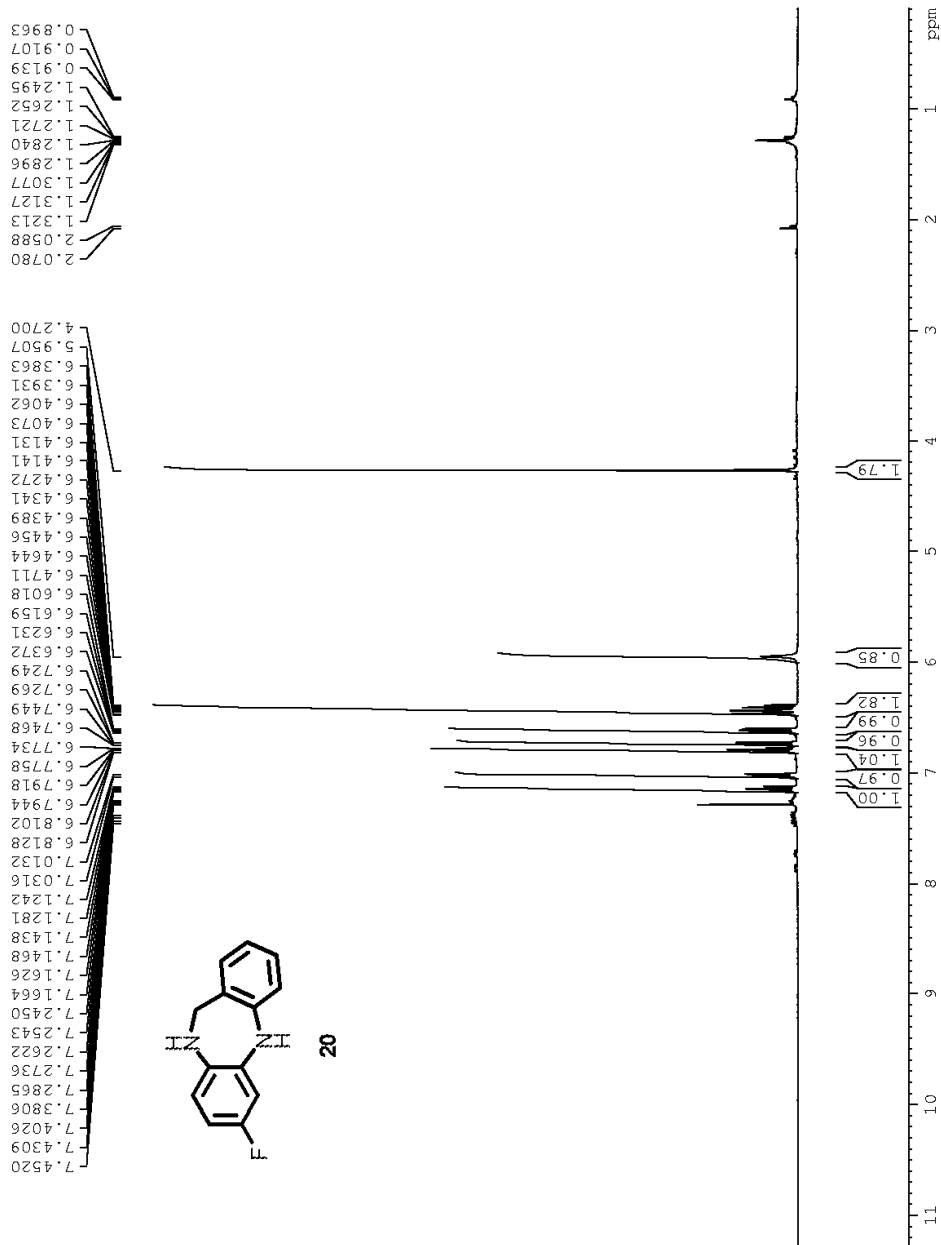
===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SE 400.1300000 MHz
EM 0
WDW 0
SSB 0.30 Hz
LB 0
GB 0
PC 1.40



ks-v-75-b
PROTON CDC13 {D:\FACULTY\YUKLaha\2013\Oct} niper: 59

NAME ks-v-75-b
EXPNO 10
PROCNO 1
Date_ 20131028
Time_ 19.21
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
DS 16
NS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 294.1 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40



ks-v-75-b
C13CPD512 CDC13 {D:\FACULTY\JKLaha\2013\Oct}

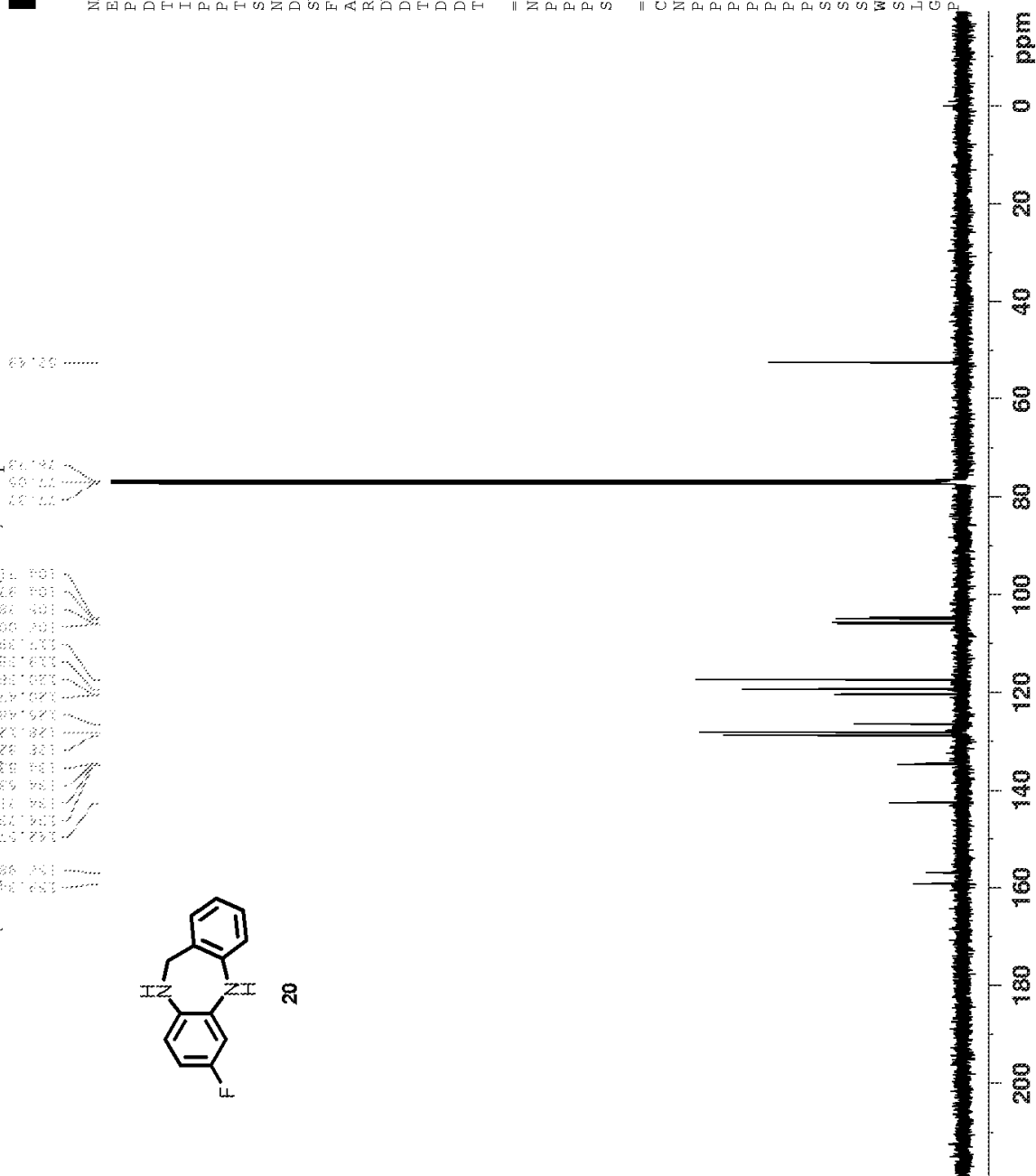
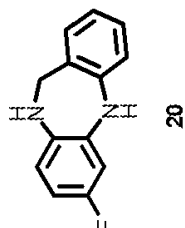
niper 59

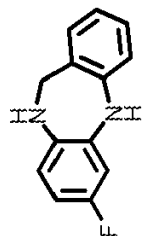


NAME ks-v-75-b
EXPNO 11
PROCNO 1
Date_ 20131029
Time 8.56
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

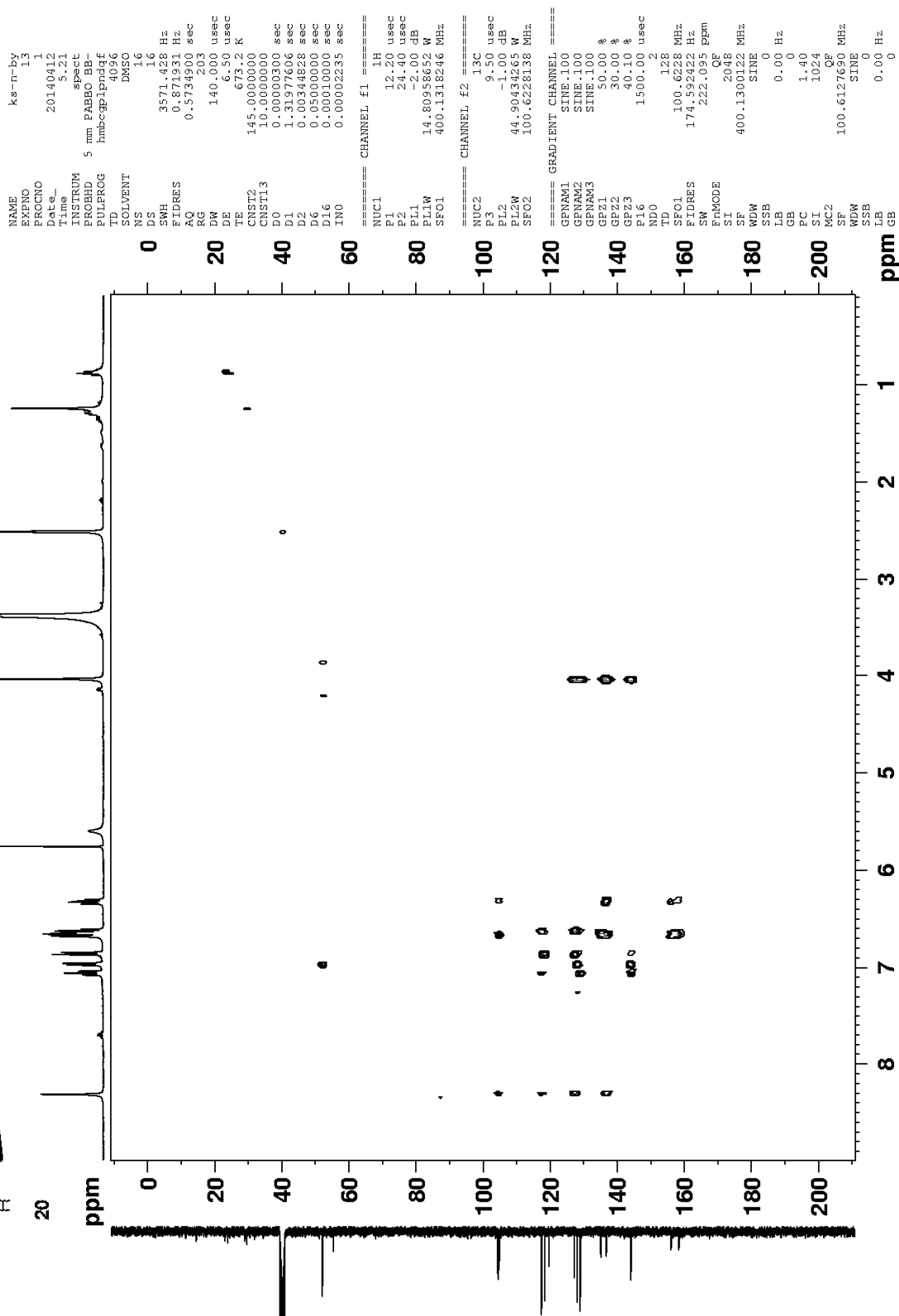
===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

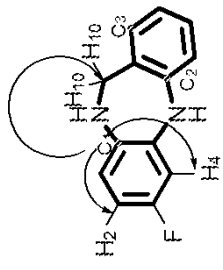
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL12W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40





ks-n-by
HMBCGP DMSO {D:\FACULTY\JKLaha\2014\Apr } niper 7





ks-n-by
HMBCGP DMSO {D:\FACULTY\YUKLaha\2014\Apr} niper 7

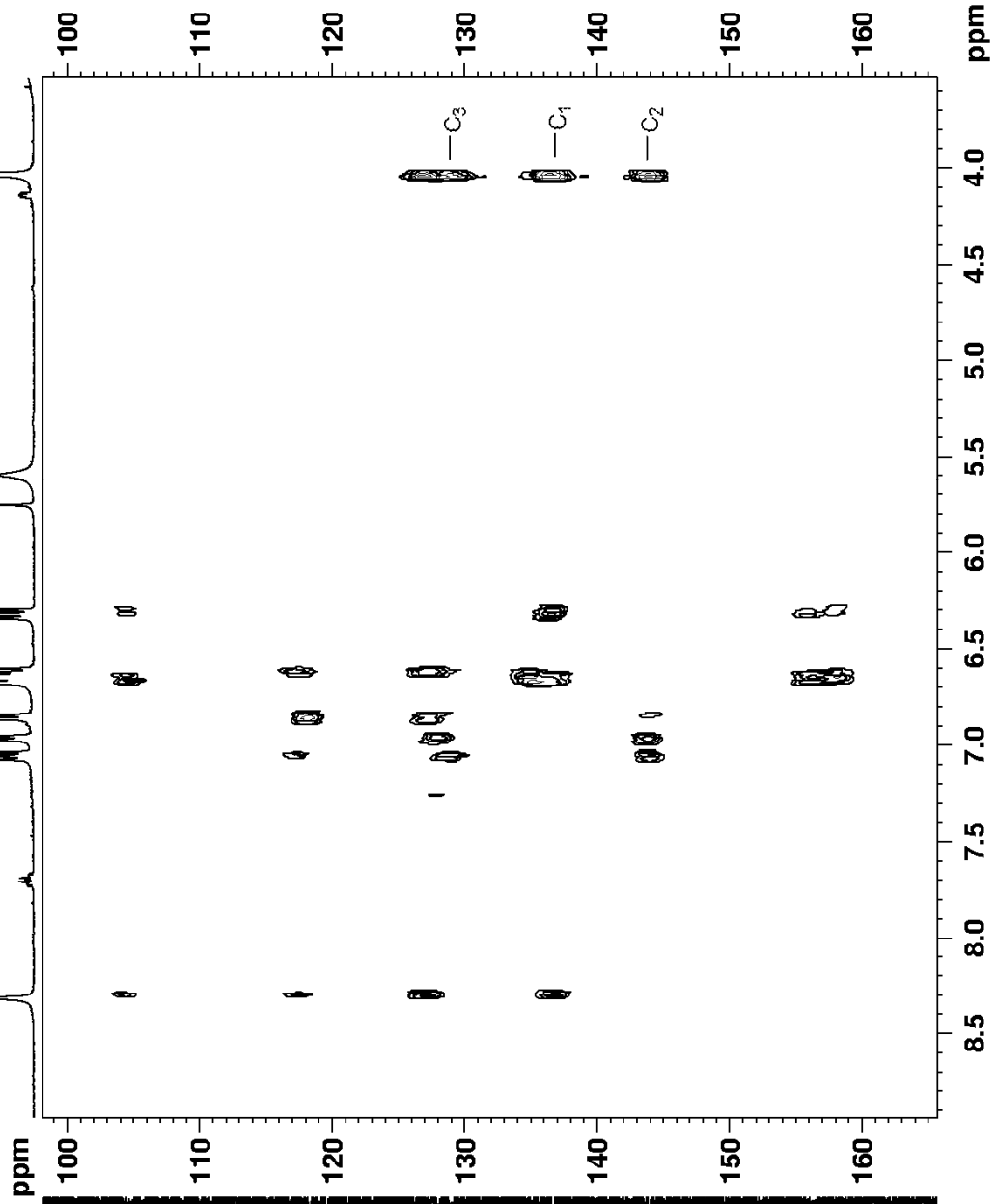
```

NAME ks-n-by
EXPNO 13
PROCNO 20140412
Date_ 5.21
INSTRUM spect
PROBHD 5 mm PABBO BB
PULPROG hmbcgp1p2d4f
TD 4096
SOLVENT DMSO
NS 16
DS 16
SMH 3571.428 Hz
FIDRES 0.871931 Hz
AQ 0.5734900 sec
RG 203
DE 140.000 usec
TE 673.2 K
CNST2 145.0000000
CNST13 10.0000000
D0 0.00000300 sec
D1 1.31977606 sec
D2 0.00344828 sec
D6 0.05000000 sec
D16 0.00010000 sec
IN0 0.00002235 sec

===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
P2 24.40 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SF01 400.1318246 MHz

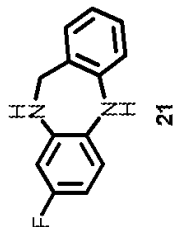
===== CHANNEL f2 =====
NUC2 13C
P3 9.50 usec
P2 -1.00 dB
PL2W 44.90434265 W
SF02 100.6228138 MHz

===== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPZ1 50.00 %
GPZ2 30.00 %
GPZ3 40.10 %
P16 1500.00 usec
ND0 2
TD 128
SF01 100.6228 MHz
FIDRES 174.592422 Hz
SW 222.095 PPM
F1MODE QF
SI 2048
SF 400.1300122 MHz
WDW SINE
SSB 0
GB 0
PC 0
PR 1.40
SI 1024
MC2 1024
SF 100.6127690 MHz
WDW SINE
SSB 0
LB 0
GB 0.00 Hz
  
```



ks-v-75-a

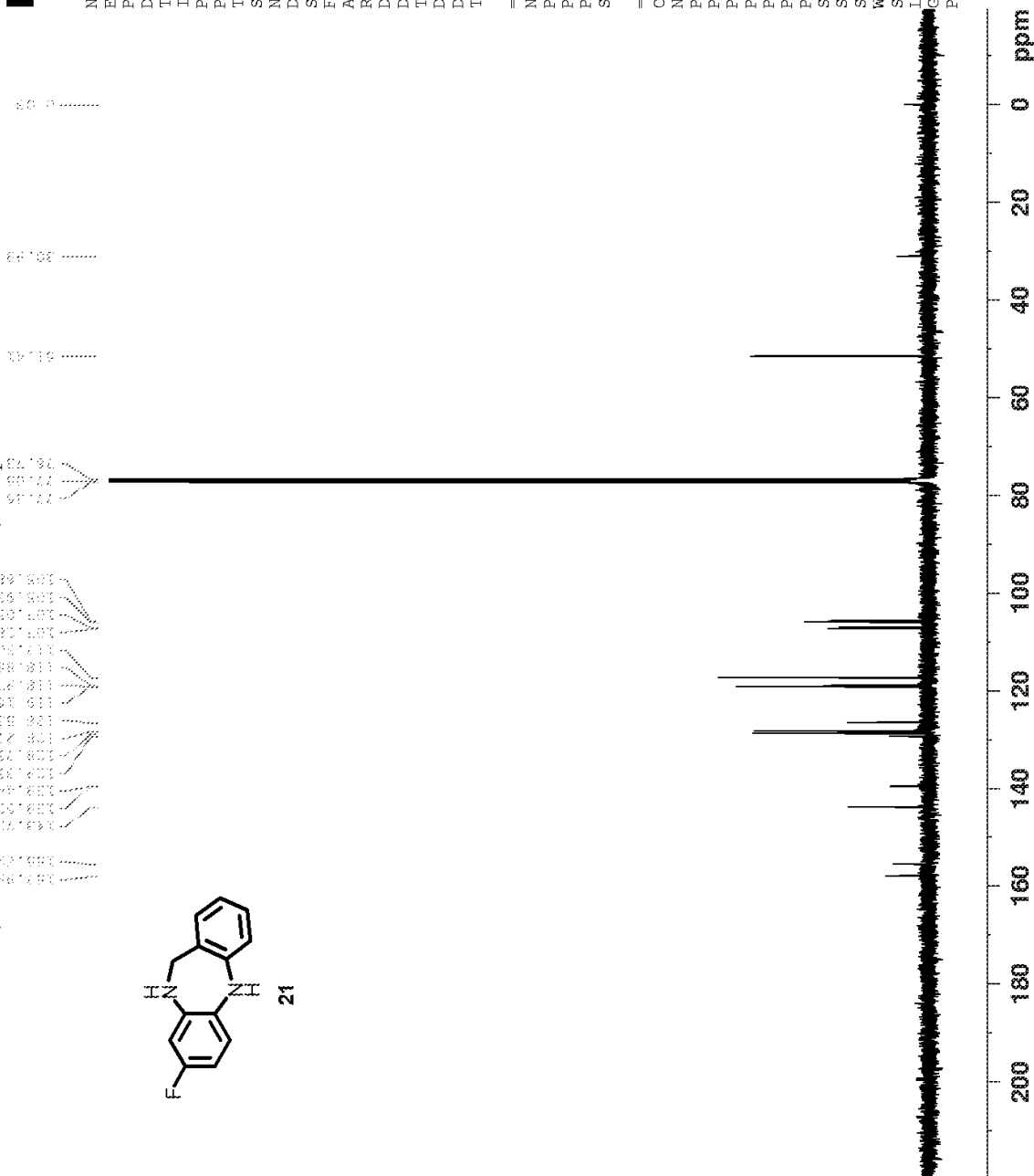
C13CPD512 CDCL3 {D:\FACULTY\JKLaha\2013\Oct} niper 58

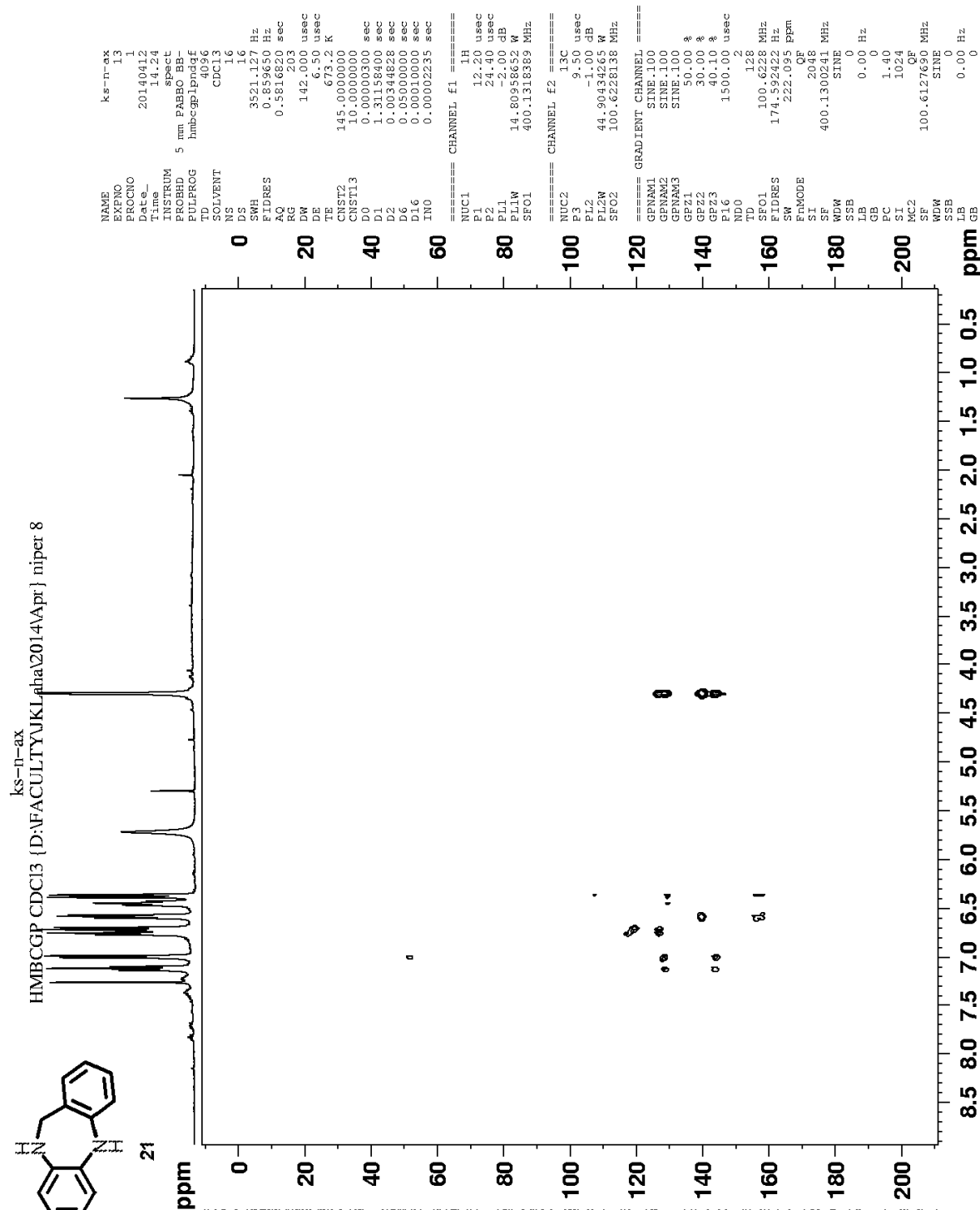
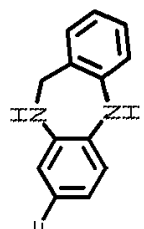


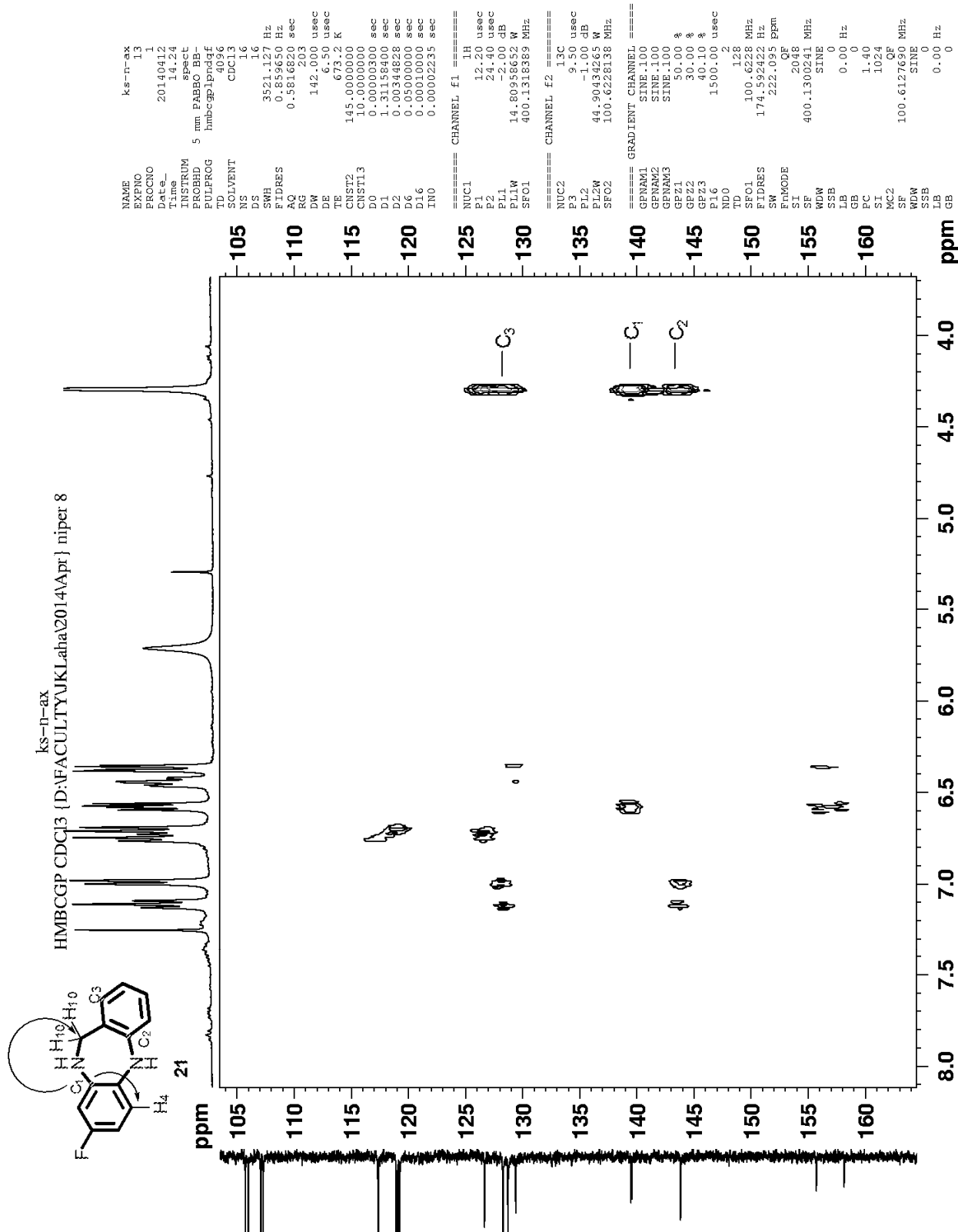
NAME	
EXPNO	1
PROCNO	1
Date_	20131029
Time	8.23
INSTRUM	spect
PULPROG	5 mm PABBO Bb-
TD	zgpg30
SOLVENT	65536
NS	CDC13
DS	4
SWH	24038.461 Hz
FIDRES	0.366798 Hz
AQ	1.363198 sec
RG	203
DW	20.800 usec
DE	6.50 usec
TE	673.2 K
DD1	2.00000000 sec
DD11	0.03000000 sec
TD0	1

```
===== CHANNEL f1 =====
NUC1      13C
P1        9.50 usec
PL1       -1.00 dB
PL1W      44.90434265 W
SF01     100.6228298 MHz
```

===== CHANNEL f2 =====	
CFDPRG2	waltz16
NUC7	1H
	80.00 usec
PCPD2	-2.00 dB
PL12	14.33 dB
PL11	18.33 dB
PL13	14.80958652 W
PL12W	0.34478071 W
PL12W	0.13725966 W
PL13W	400.1316005 MHz
SF	32768
SI	100.6127690 MHz
SW	EM
WSW	0
LB	1.00 Hz
GB	0
PC	1.40

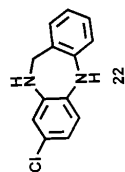






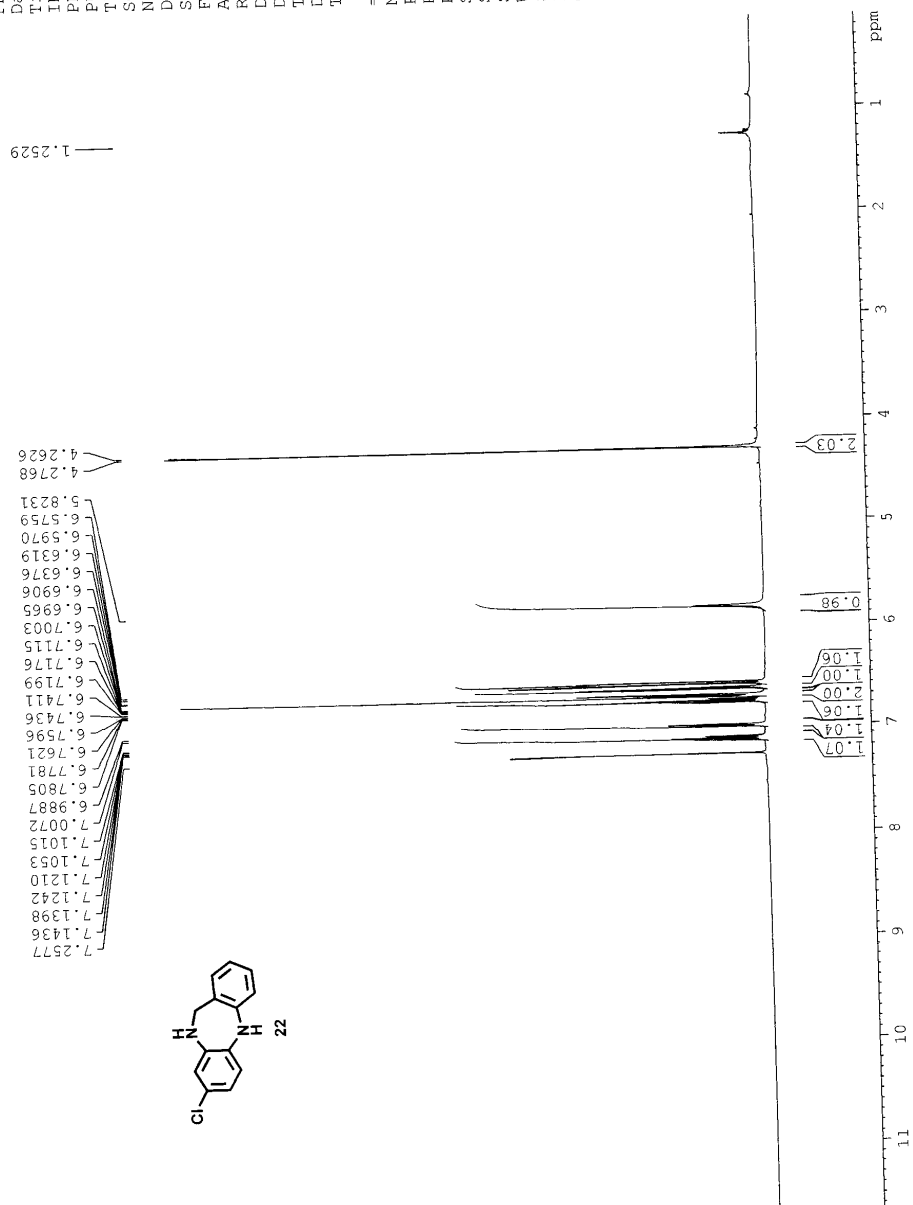
ks-v-76-a
 PROTON CDC13 {D:\FACULTY\JKLaha\2013\Oct\ niper 54

7.2577
 7.1436
 7.1398
 7.1242
 7.1210
 7.1053
 7.1015
 7.0072
 6.9887
 6.9805
 6.7781
 6.7621
 6.7596
 6.7436
 6.7411
 6.7199
 6.7176
 6.7115
 6.7003
 6.6965
 6.6906
 6.6376
 6.6319
 6.5970
 6.5759
 5.8231
 4.2768
 4.2626



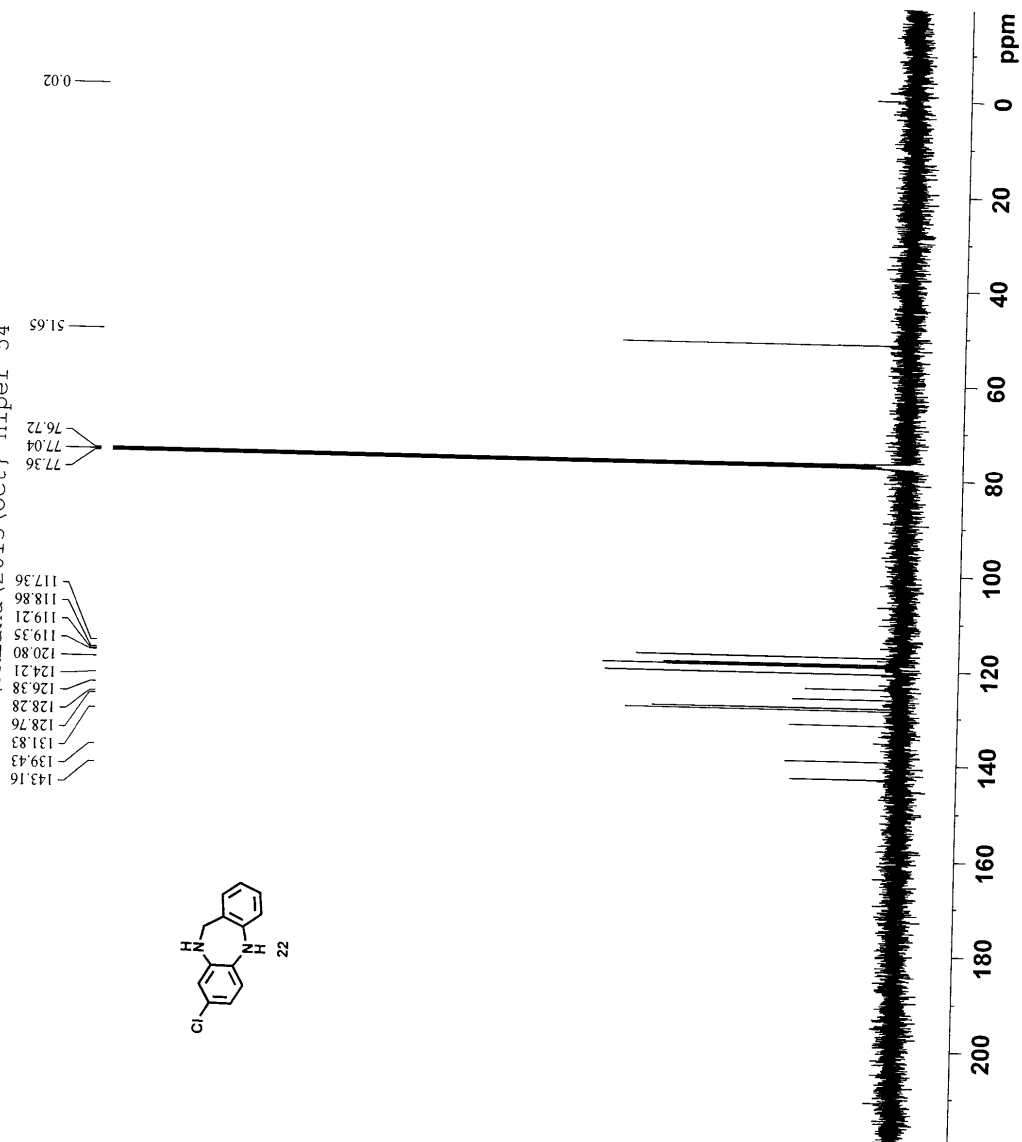
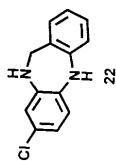
NAME ks-v-76-a
 EXPNO 10
 PROCNO 1
 Date_ 20131031
 Time 12.31
 INSTRUM spect
 PROBD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDC13
 NS 64
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 294.1 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 12.20 usec
 PL1 -2.00 dB
 PL1W 14.80958652 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300113 MHz
 EM 0
 SSB 0.30 Hz
 LB 0
 GB 0
 PC 1.40



ks-v-76-a

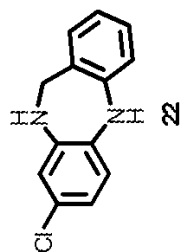
CL3CPD512 CDCl3 {D:\FACULTY\JKLaha\2013\Oct} niper 54



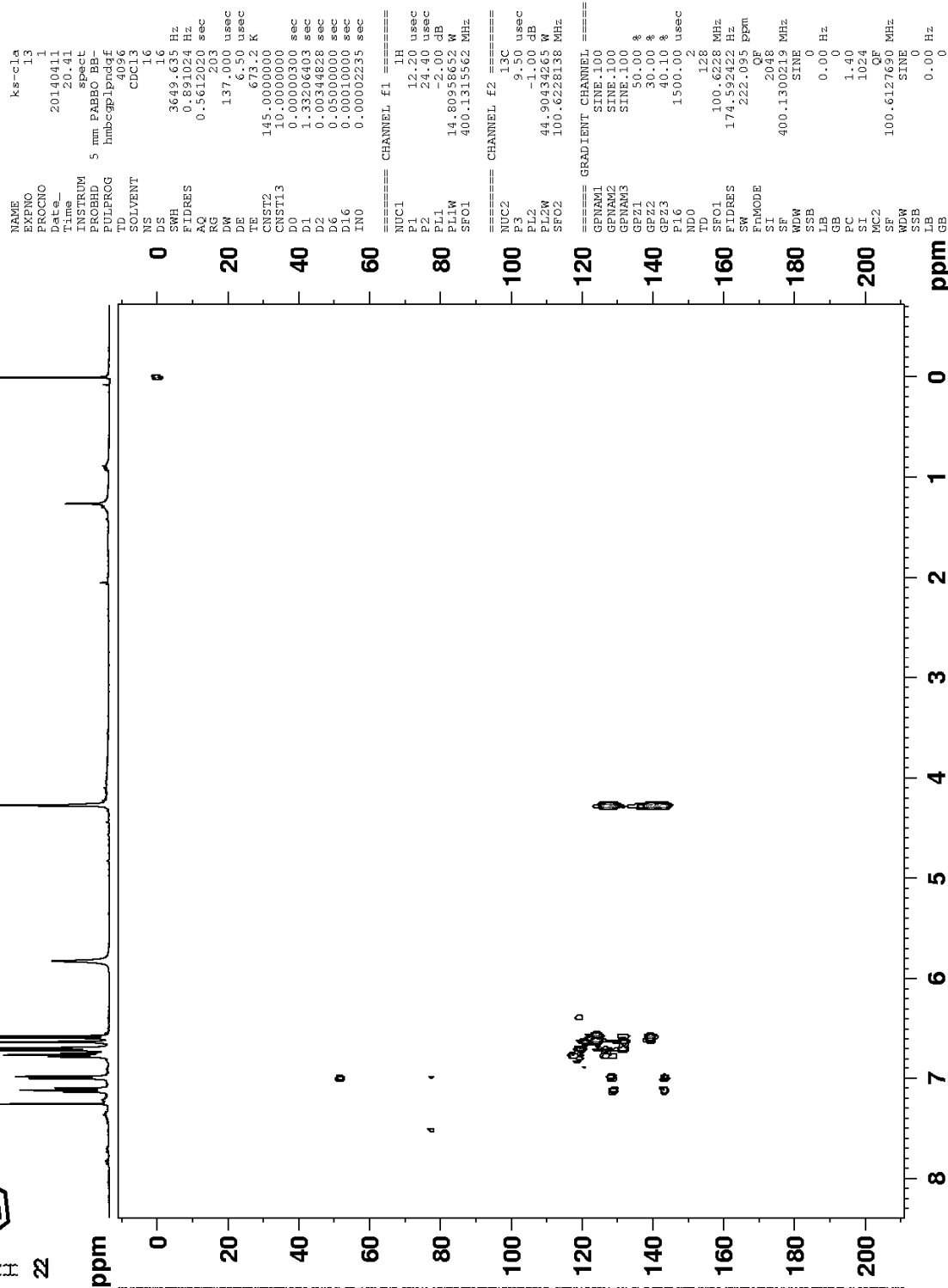
```
NAME ks-v-76-a
EXPNO 11
PROCNO 1
Date_ 20131031
Time_ 14.47
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 512
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DE 20.800 usec
TE 294.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

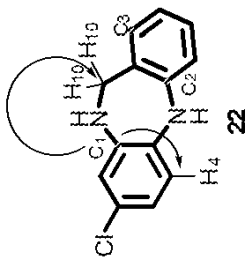
===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
```

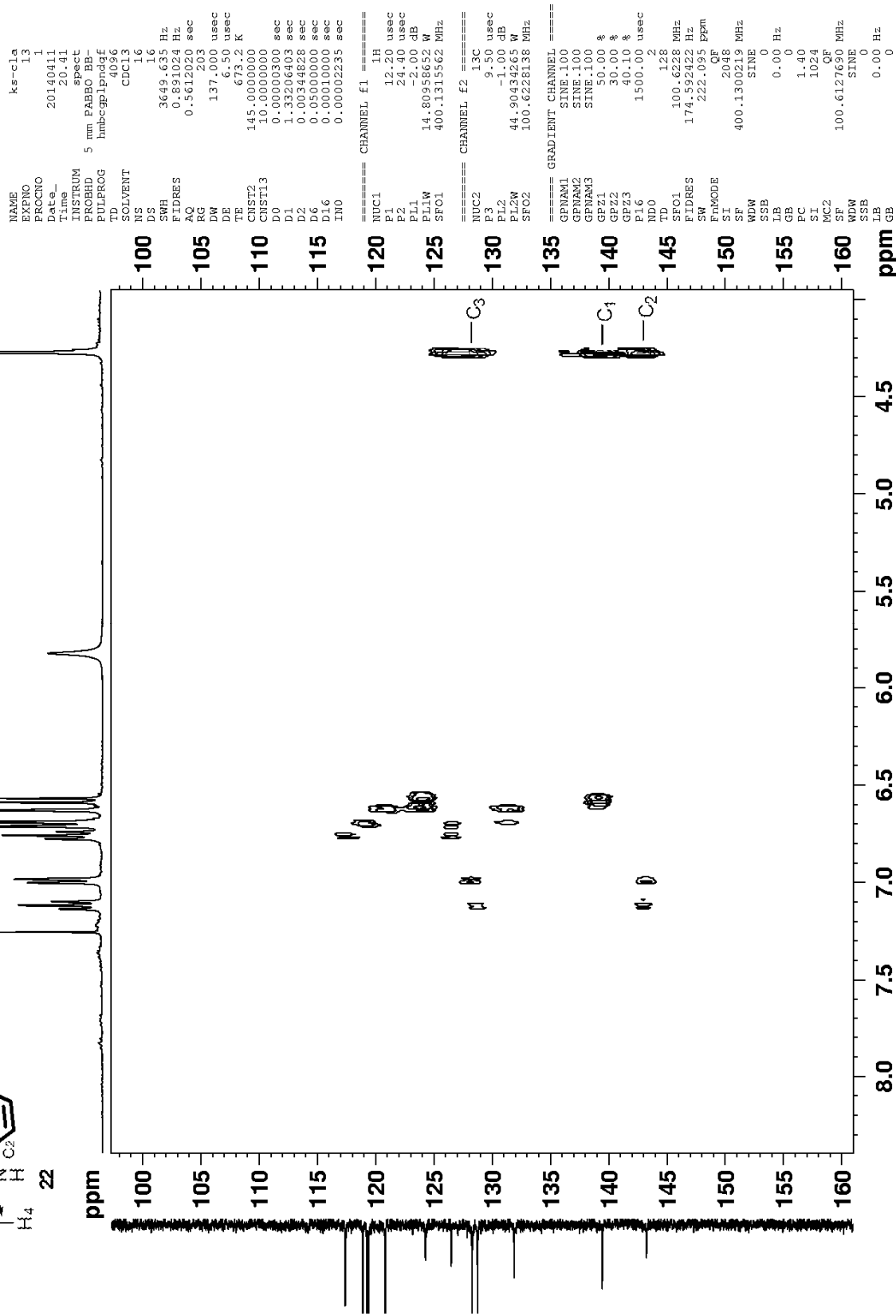


ks-cla
HMBCGP CDCI3 [D:\FACULTY\YUKLaha\2014\Apr\} niper 47

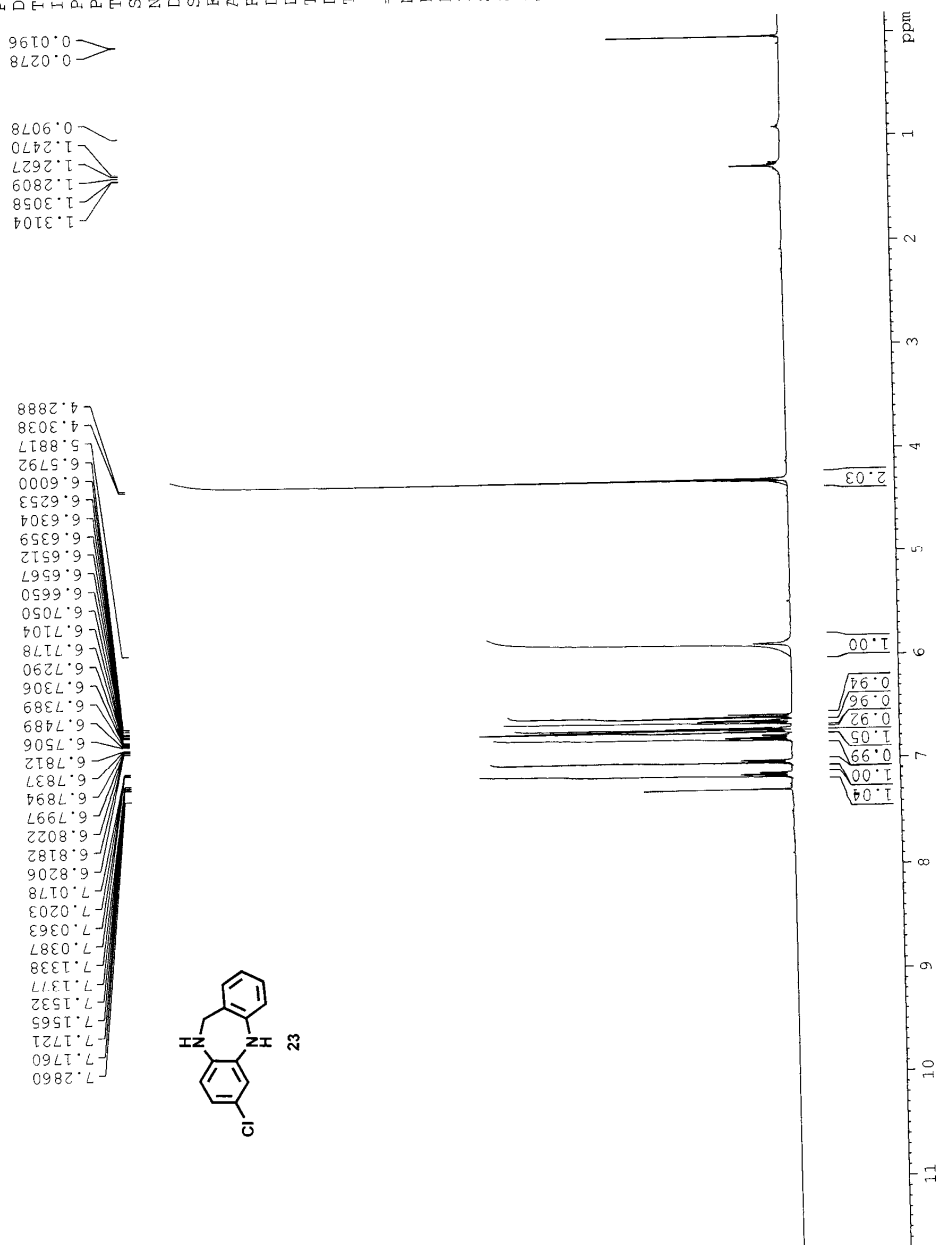




HMBCGP CDC13 {D:AFACULTYUKLaha2014AApr} niper 47

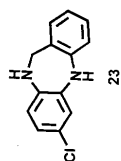


ks-v-76-b
PROTON CDC13 {D:\FACULTY\JKLaha\2013\Oct\} niper 55



ks-v-76-b
 C13CPD512 CDC13 {D:\FACULTY\JKLaha\2013\Oct} niper 55

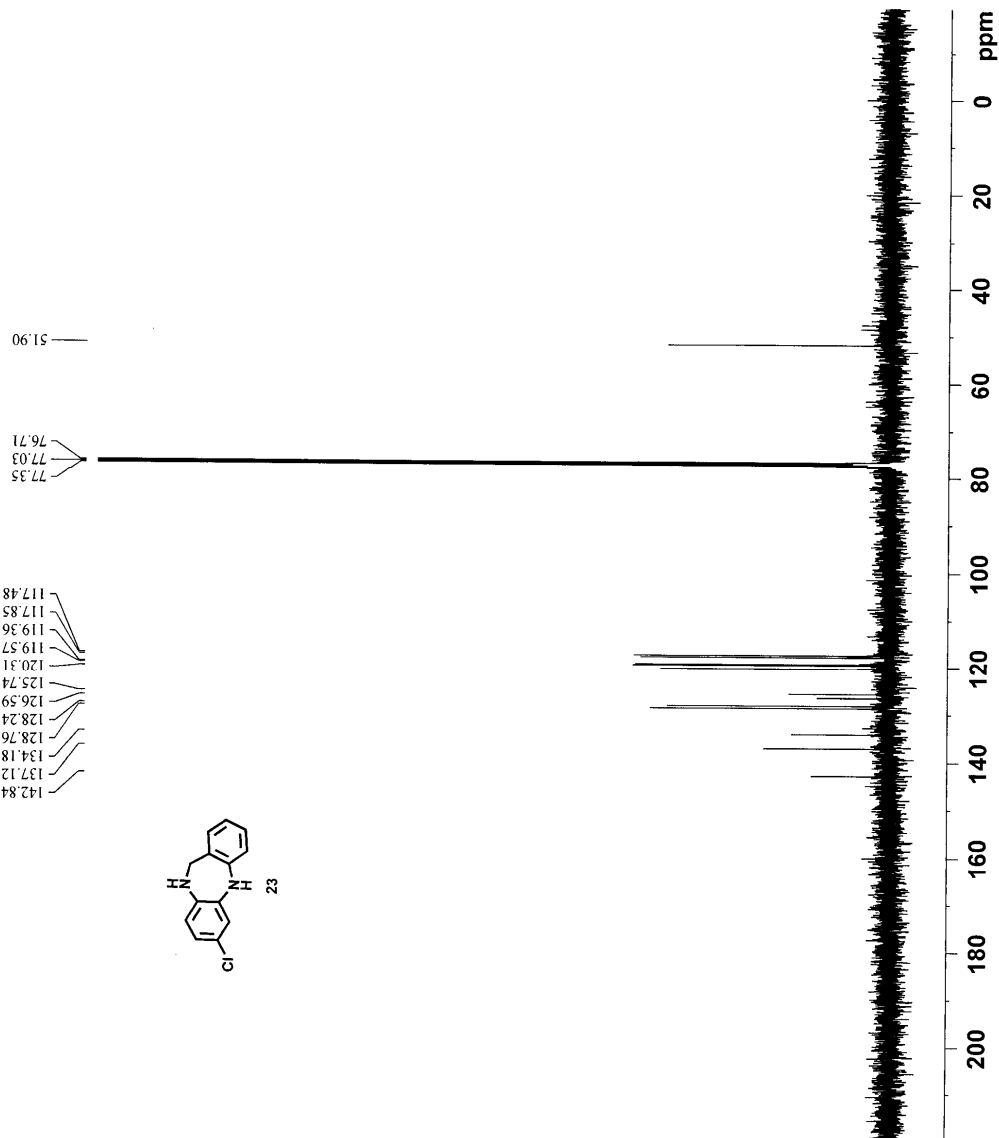
117.48
 117.85
 119.36
 119.57
 120.31
 125.74
 126.59
 128.24
 128.76
 134.18
 137.12
 142.84



NAME ks-v-76-b
 EXPNO 11
 PROCNO 1
 Date_ 20131031
 Time_ 23.45
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT CDCl3
 NS 512
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 295.6 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -1.00 dB
 PL1W 44.90434265 W
 SFO1 100.6228298 MHz

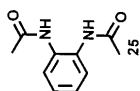
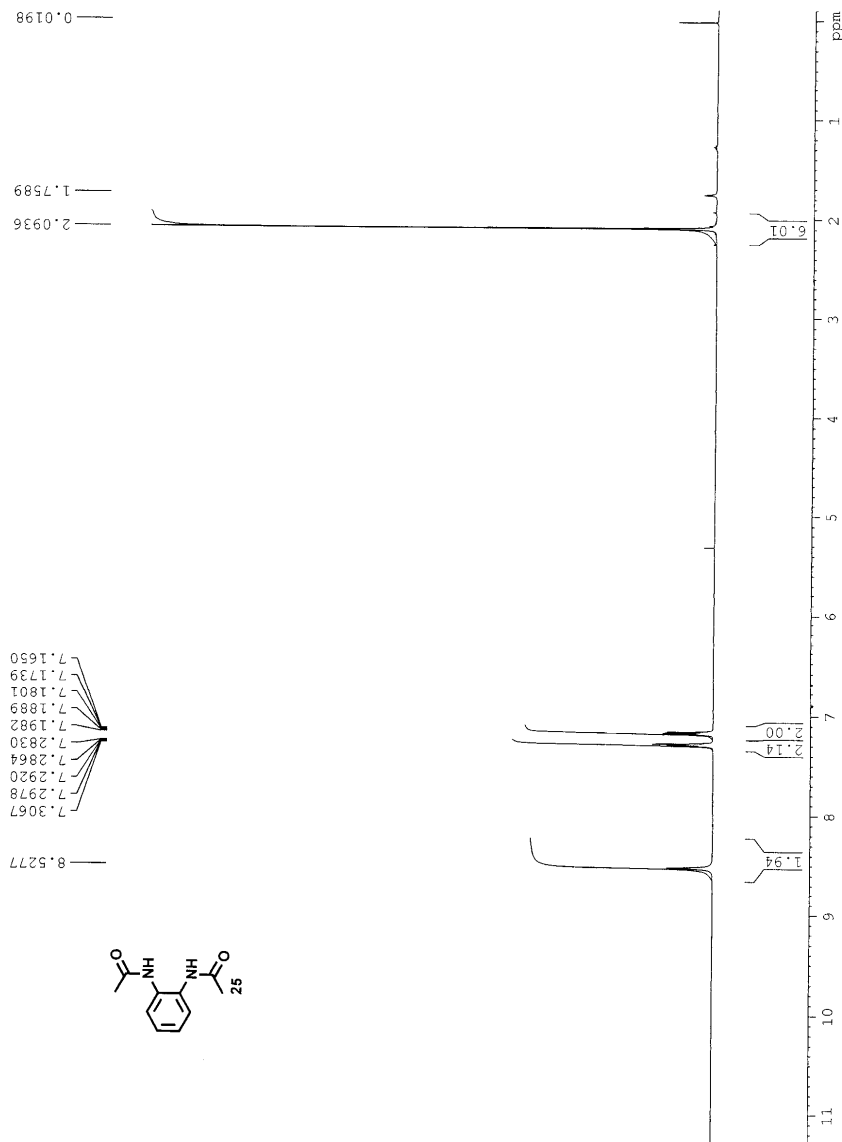
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -2.00 dB
 PL12 14.33 dB
 PL13 18.33 dB
 PL2W 14.80958652 W
 PL12W 0.34478071 W
 PL13W 0.13725966 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127690 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



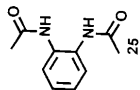
ks-nn-ace
 PROTON CDC13 {D:\FACULTY\JKLaha\2013\Dec} niper 42

NAME	ks-nn-ace
EXPNO	10
PROCNO	1
Date_	20131226
Time	18.23
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	zg30
TD	65536
SOLVENT	CDC13
NS	16
DS	2
SWH	8223.685 Hz
FIDRES	0.125483 Hz
AQ	3.9846387 sec
RG	203
DW	60.800 usec
DE	6.50 usec
TE	297.1 K
D1	1.00000000 sec
TD0	1

===== CHANNEL f1 =====	
NUC1	1H
P1	12.20 usec
PL1	-2.00 dB
PL1W	14.80958652 W
SFO1	400.1324710 MHz
SI	32768
SF	400.1300000 MHz
WDW	EM
SSB	0
LB	0.30 Hz
GB	0
PC	1.40



ks-nn-ace
 C13CPD512 CDCl3 {D:\FACULTY\JKLaha\2013\Dec} niper 42

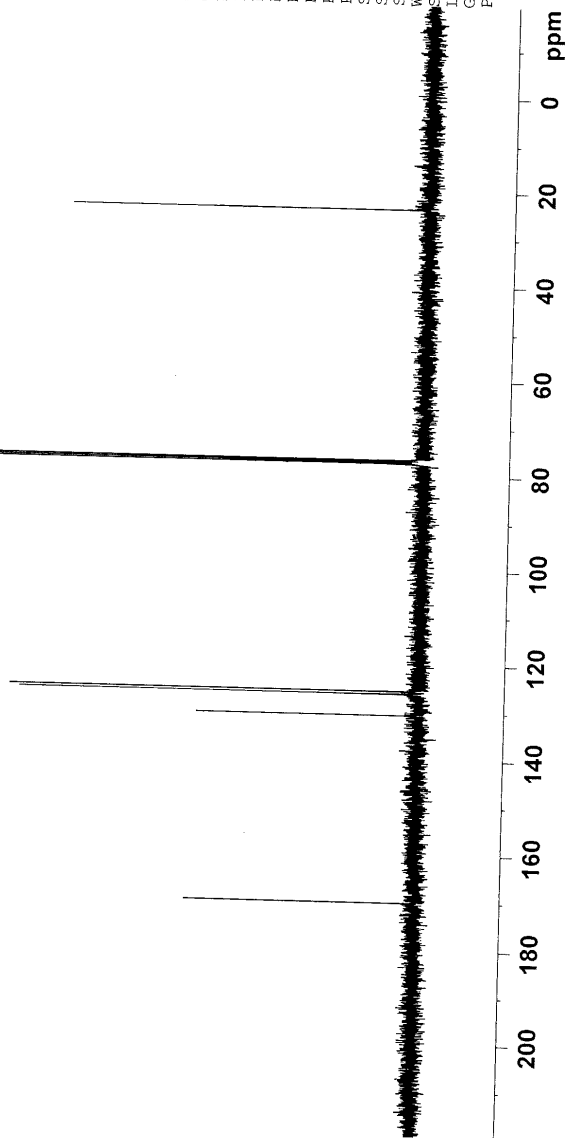


```

NAME ks-nn-ace
EXPNO 11
PROCNO 1
Date_ 20131227
Time 7.49
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 298.4 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

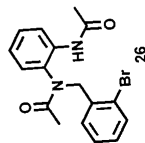
===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.628298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2K 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127690 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40
  
```

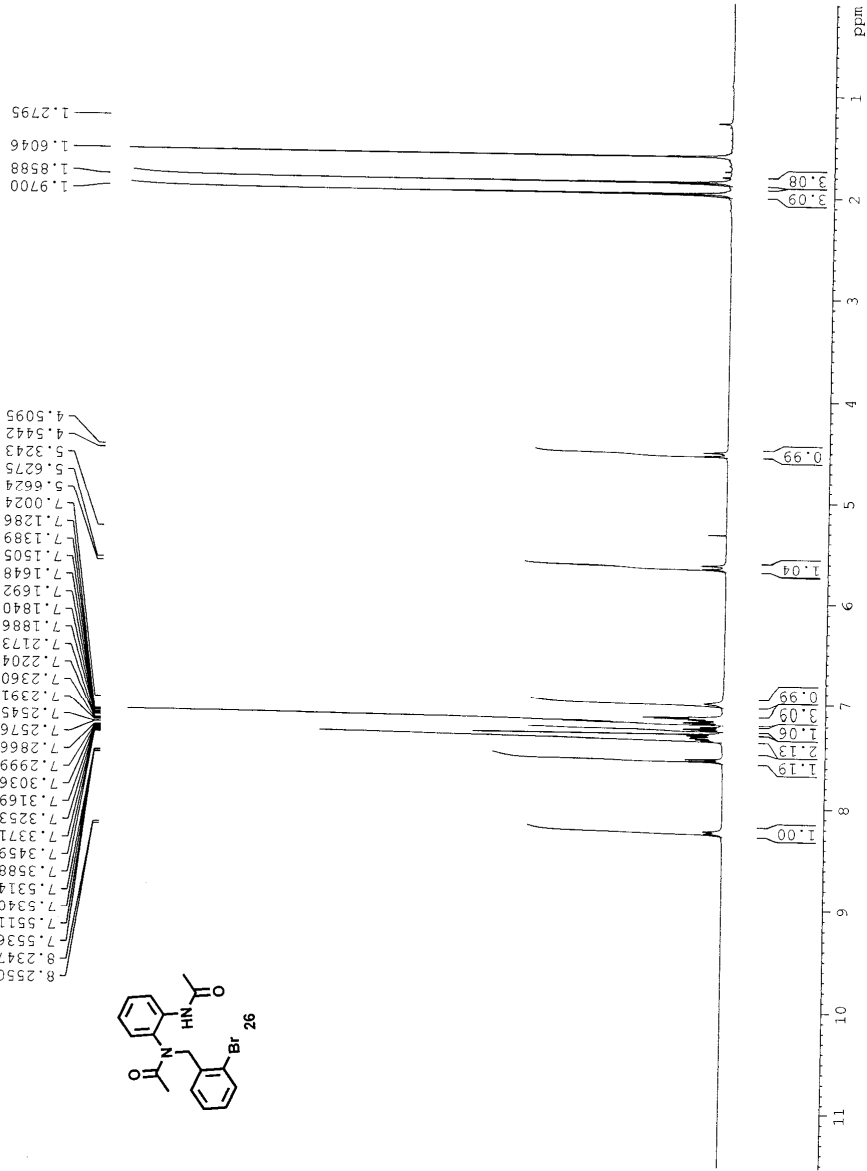


ks-n-ac-d
PROTON CDC13 {D:\FACULTY\UKLaha\2013\Sep} niper 22

8.2550
8.2347
8.2347
7.5536
7.5511
7.5340
7.5314
7.5388
7.3459
7.3371
7.3253
7.3169
7.3036
7.2999
7.2866
7.2576
7.2545
7.2391
7.2360
7.2204
7.2173
7.1886
7.1840
7.1692
7.1648
7.1505
7.1389
7.1286
7.0024
9.6624
9.6275
5.3243
4.5442
4.5095



NAME ks-n-ac-d
EXPNO 10
PROCNO 1
Date_ 20130923
Time_ 13.28
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 298.6 K
D1 1.00000000 sec
TD0 1
===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SF01 400.1324710 MHz
SI 32768
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40



ks-int-pb
C13CPD CDC13

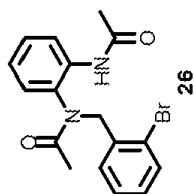
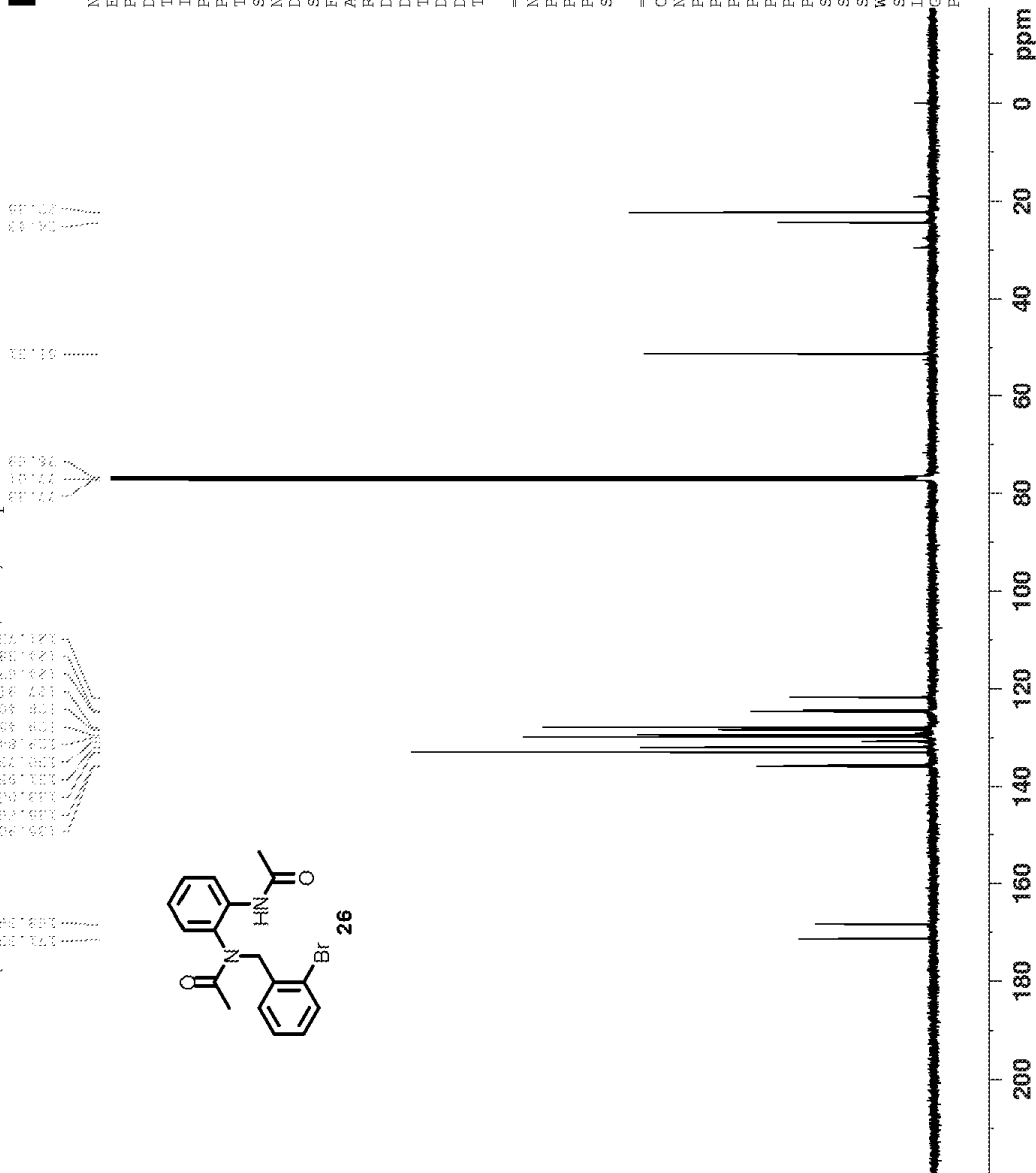
{D:\FACULTY\JKLaba\2014\Mar} niper 55



NAME ks-int-pb
EXPNO 10
PROCNO 1
Date_ 20140322
Time 16.14
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 65536
SOLVENT CDC13
NS 2048
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.50 usec
PL1 -1.00 dB
PL1W 44.90434265 W
SFO1 100.6228298 MHz

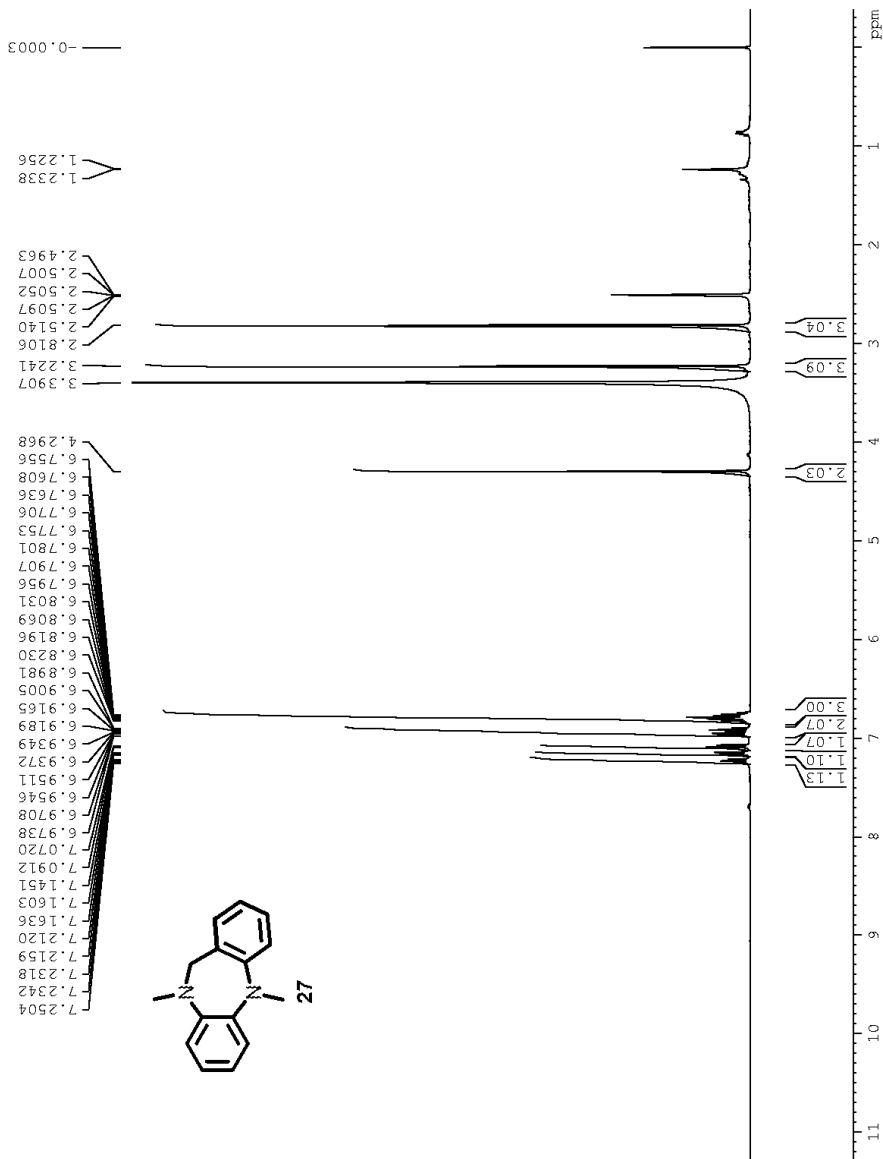
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -2.00 dB
PL12 14.33 dB
PL13 18.33 dB
PL2W 14.80958652 W
PL12W 0.34478071 W
PL13W 0.13725966 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127728 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



ks-v-ndd
PROTON DMSO {D:\FACULTY\UKLaha\2014\Mar} niper 4

NAME ks-v-ndd
EXNO 10
PROCNO 1
Date_ 20140328
Time 11.40
INSTRUM spect
PROHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT DMSO
NS 64
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 161
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 12.20 usec
PL1 -2.00 dB
PL1W 14.80958652 W
SF01 400.1324710 MHz
SI 32768
SF 400.1300029 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.40



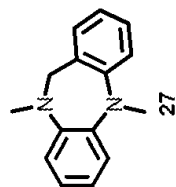
ks-v-ndd
 C13CPD DMSO {D:\FACULTY\JKLaha\2014\Mar\ niper 4



NAME ks-v-ndd
 EXPNO 11
 PROCNO 1
 Date_ 20140329
 Time_ 0.07
 INSTRUM spect
 PROBD 5 mm PABBO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT DMSO
 NS 2048
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 299.9 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TD0 1

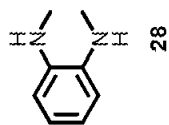
===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -1.00 dB
 PL1W 44.90434265 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -2.00 dB
 PL12 14.33 dB
 PL13 18.33 dB
 PL2W 14.80958652 W
 PL12W 0.34478071 W
 PL13W 0.13725966 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6128193 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



200 180 160 140 120 100 80 60 40 20 0 ppm

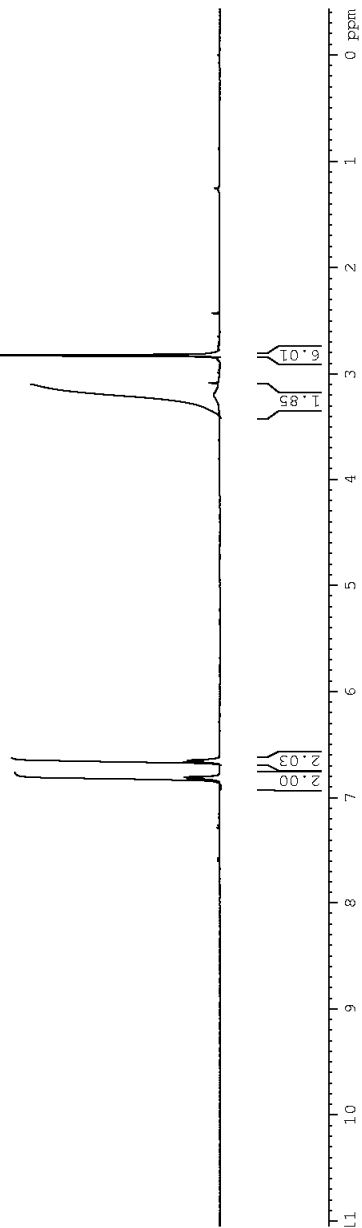
ks-v-cf-a
 PROTON CDCl3 {D:\FACULTY\UKLaha\2014\Mar} niper 12



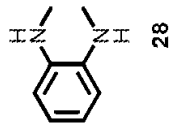
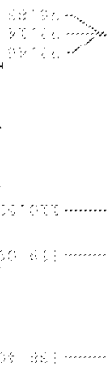
6.8297
 6.8211
 6.8155
 6.8069
 6.6657
 6.6569
 6.6516
 6.6429

3.0841
 2.8208

NAME ks-v-cf-a
 EXPNO 10
 PROCNO 1
 Date_ 20140325
 Time_ 12.45
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 64
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 57
 DW 60.800 usec
 DE 6.50 usec
 TE 296.6 K
 D1 1.00000000 sec
 TD0 1
 ===== CHANNEL f1 =====
 NUC1 1H
 P1 12.20 usec
 PL1 -2.00 dB
 PL1W 14.80958652 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300385 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.40



ks-v-cf-a
 C13CPD CDC13 {D:\FACULTY\JKLaha\2014\Mar} niper 12



NAME ks-v-cf-a
 EXPNO 11
 PROCNO 1
 Date_ 20140326
 Time_ 5.07
 INSTRUM spect
 PROHD 5 mm PABO BB-
 PULPROG zgpg30
 TD 65536
 SOLVENT CDC13
 NS 2048
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 299.3 K
 D1 2.00000000 sec
 D11 0.03000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 9.50 usec
 PL1 -1.00 dB
 PL1W 44.90434265 W
 SF01 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 -2.00 dB
 PL12 14.33 dB
 PL13 18.33 dB
 PL12W 14.80958652 W
 PL12W 0.34478071 W
 PL13W 0.13725966 W
 SF02 400.1316005 MHz
 SI 32768
 SF 100.6127690 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

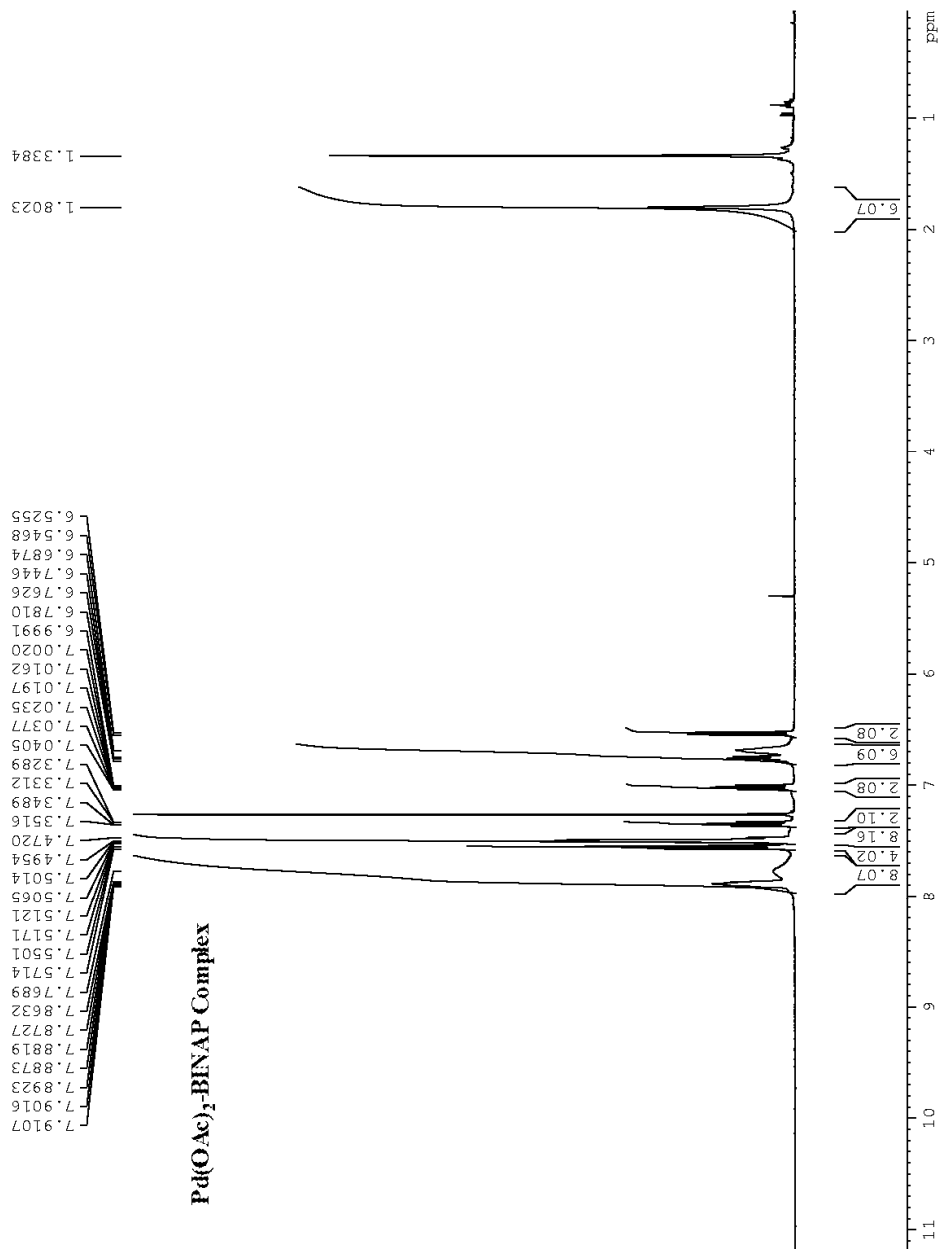
ag-cry
PROTON CDC13 {DA\FACULTY\K\aha\2013\Nov } niper 53

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NAME      ag-cry
EXPNO     10
PROCNO    1
Date_     20131118
Time      15.04
INSTRUM   spect
PROBHD    5 mm PABBO BB-
PULPROG   zg30
TD         65536
SOLVENT   CDCl3
NS         64
DS         2
SWH        8223.685 Hz
FIDRES     0.125483 Hz
AQ         3.9846387 sec
RG         203
DW         60.800 usec
DE         6.50 usec
TE         673.2 K
D1         1.00000000 sec
TD0        1

===== CHANNEL f1 =====
NUC1       1H
P1         12.20 usec
PL1        -2.00 dB
PL1W       14.80958652 W
SF01       400.1324710 MHz
SI         32768
SF         400.1300095 MHz
WDW        EM
SSB        0
LB         0.30 Hz
GB         0
PC         1.40

```



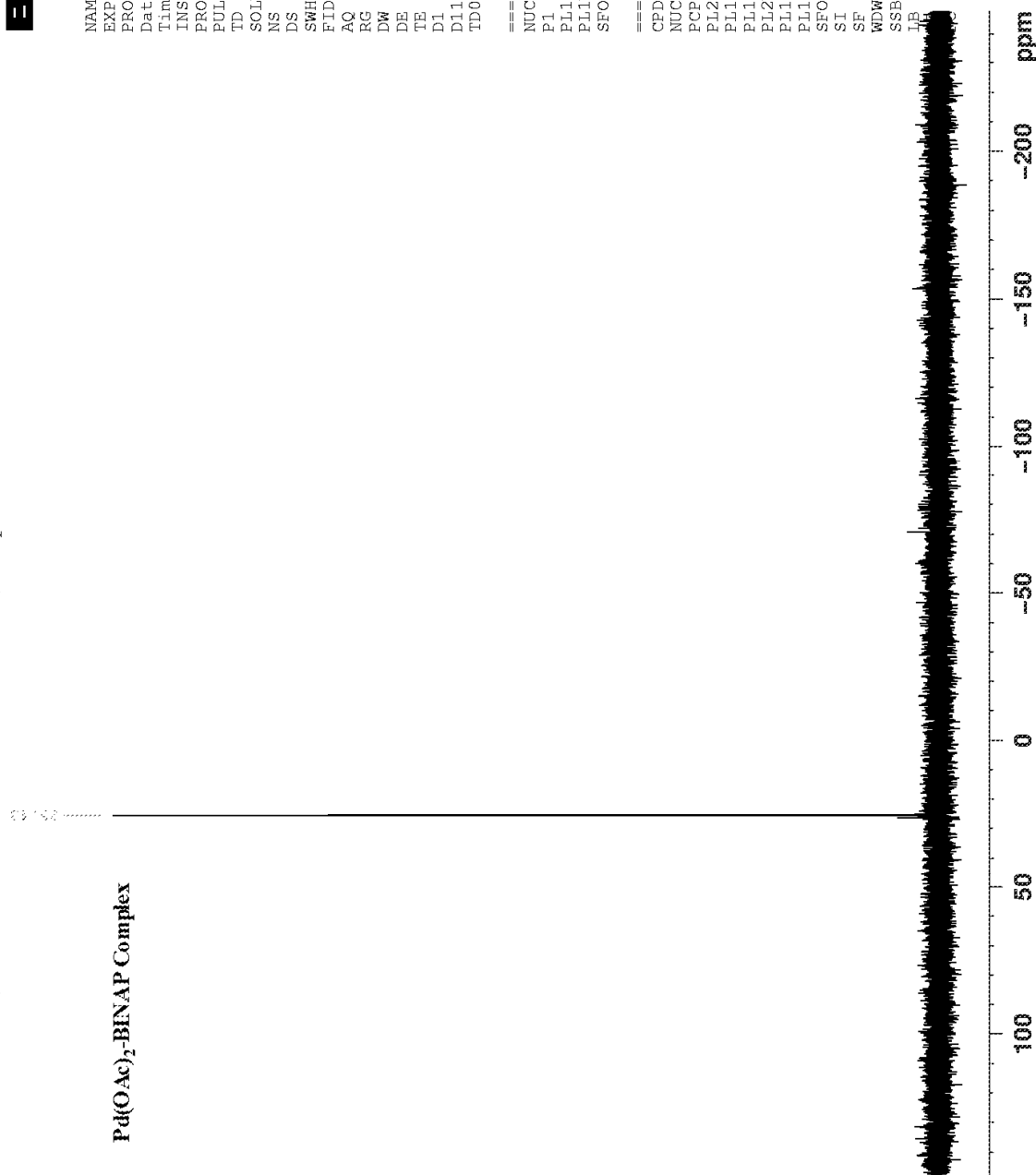
ag-cry
P31CPD CDCl3 {D:\FACULTY\JKLaha\2013\Nov} niper 53

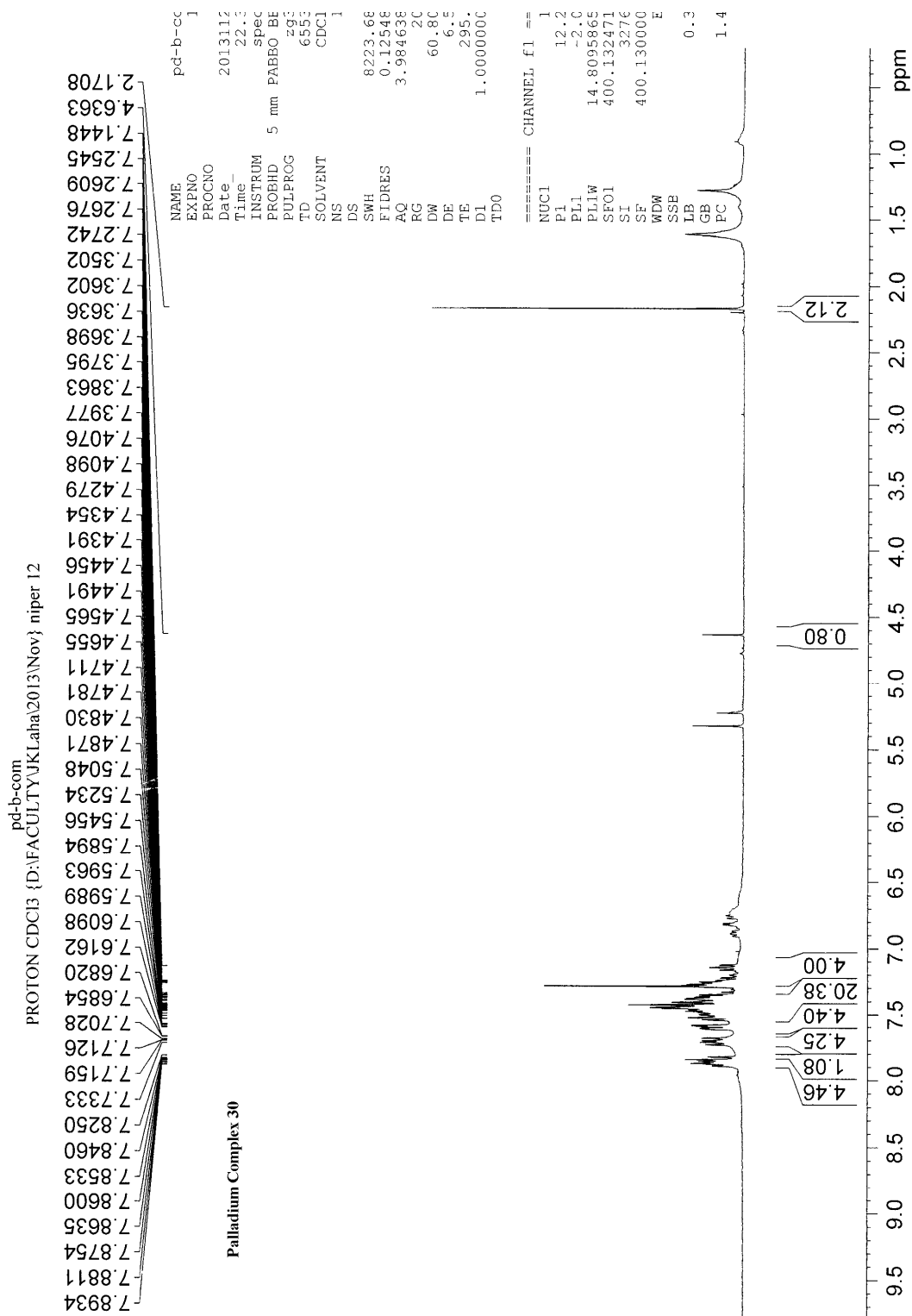


Pd(OAc)₂-BINAP Complex

```

NAME          ag-cry
EXPNO         11
PROCNO        1
Date_         20131118
Time          15.11
INSTRUM       spect
PROBHD        5 mm PABBO BB-
PULPROG       zgpg30
TD            65536
SOLVENT       CDCl3
NS            16
DS            4
SWH           64102.563 Hz
FIDRES        0.978127 Hz
AQ            0.5112308 sec
RG            203
DW            7.800 usec
DE            6.50 usec
TE            673.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0           1
===== CHANNEL f1 =====
NUC1          31P
P1            12.68 usec
PL1           3.00 dB
PL1W          12.96693134 W
SFO1          161.9674942 MHz
===== CHANNEL f2 =====
CPDPRG2       waltz16
NUC2          1H
PCPD2         80.00 usec
PL2           -2.00 dB
PL12          14.33 dB
PL13          18.33 dB
PL1W          14.80958652 W
PL12W         0.34478071 W
PL13W         0.13725966 W
SFO2          400.1316005 MHz
SI            32768
SF            161.9755930 MHz
WDW           EM
SSB           0
GB            1.00 Hz
TB            0
LB            1.40
  
```





pd-b-com
P31CPD CDC13 {D:\FACULTY\JKLaha\2013\Nov} niper 12

Palladium complex30

