

NAME np-326
EXPNO 2
PROCNO 1
Date_ 20130613
Time_ 11.07
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zgpg30
TD 32768
SOLVENT Acetone
NS 254
DS 0
SWH 19531.250 Hz
FIDRES 0.596046 Hz
AQ 0.8389108 sec
RG 2050
DW 25.600 usec
DE 6.50 usec
TE 300.0 K
D1 0.10000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.00 usec
PL1 -3.00 dB
PL1W 70.66739655 W
SFO1 75.4662169 MHz

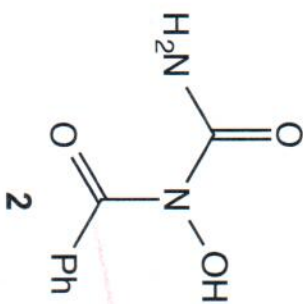
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 120.00 dB
PL12 15.90 dB
PL2W 0.00000000 W
PL12W 0.37964472 W
SFO2 300.0882901 MHz
SI 32768
SF 75.4570986 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.50



NAME np-326
EXPNO 1
PROCNO 1
Date_ 20130613
Time_ 11.04
INSTRUM spect
PROBHD 5 mm DUL 13C-1
PULPROG zg30
TD 32768
SOLVENT Acetone
NS 16
DS 0
SWH 4504.504 Hz
FIDRES 0.137467 Hz
AQ 3.6372981 sec
RG 812
DW 111.000 usec
DE 6.50 usec
TE 300.0 K
D1 0.10000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 10.25 usec
PL1 -3.00 dB
PL1W 29.46980858 W
SF01 300.0898506 MHz
SI 32768
SF 300.0879080 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.50

9.237
8.111
8.105
8.104
8.101
8.099
8.097
8.096
8.084
8.077
8.073
7.735
7.731
7.726
7.713
7.706
7.704
7.699
7.686
7.681
7.677
7.591
7.587
7.586
7.581
7.563
7.560
7.559
7.555
7.540
7.535
7.532
7.529
6.356
2.907
2.065
2.057
2.050
2.043
2.035
1.963



1.000

2.195

1.110

2.222

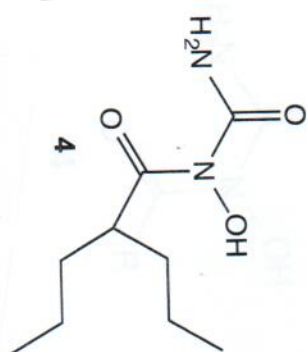
2.024

0.482

Scale: 0.7505 ppm/cm, 225.2 Hz/cm

174.656
160.088
77.314
77.132
76.950
43.401
34.399
20.535
13.898

13C-NMR



NAME NP-235-6
EXPNO 2
PROCNO 1
Date_ 20120920
Time_ 12.02
INSTRUM spect
PROBHD 5 mm CPTCI 1H-
PULPROG zgpg30
TD 65356
SOLVENT CDCl3
NS 333
DS 0
SWH 42613.637 Hz
FIDRES 0.652023 Hz
AQ 0.7668937 sec
RG 1620
DE 11.733 usec
TE 20.00 usec
D1 300.0 K
D11 0.3000001 sec
TD0 0.03000000 sec
1

===== CHANNEL f1 =====
NUC1 13C
P1 14.00 usec
PL1 7.00 dB
PL1W 18.94487762 W
SFO1 176.1476671 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 65.00 usec
PL2 4.00 dB
PL12 21.57 dB
PL2W 9.00000000 W
PL12W 0.15754785 W
SFO2 700.4531737 MHz
SI 65536
SF 176.1282890 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.40



9.140

7.297

5.852

2.986

2.543

2.535

2.530

2.522

2.515

2.510

2.502

1.683

1.670

1.660

1.657

1.654

1.650

1.641

1.637

1.628

1.531

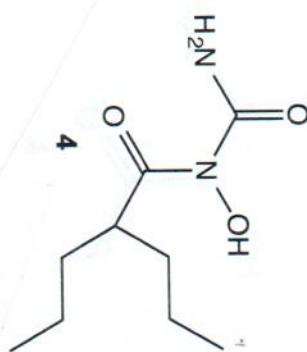
1.523

1.518

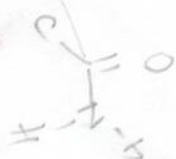
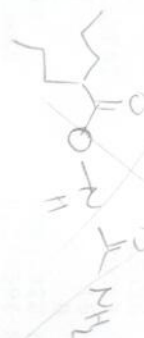
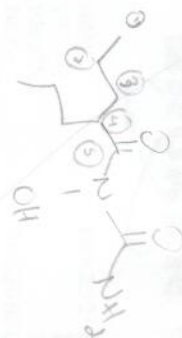
1.513

1.500

1.492



if pure



1.000

1.983

0.142

1.273

2.237

2.101

4.721

6.493

NAME NP-235-6
EXPNO 1
PROCNO 1
Date_ 20120920
Time 11.57
INSTRUM spect
PROBHD 5 mm CPTCI 1H-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 0
SWH 9803.922 Hz
FIDRES 0.149596 Hz
AQ 3.3423860 sec
RG 4.5
DW 51.000 usec
DE 6.50 usec
TE 300.0 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.60 usec
PL1 4.00 dB
PL1W 9.00000000 W
SFO1 700.4542027 MHz
SI 65536
SF 700.4500043 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

NP-235-6

0003/30K

Scale: 0.6 ppm/cm, 420.3 Hz/cm



Current Data Parameters
NAME np-251-1
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters

Date_ 20121018
Time 11.56
INSTRUM spect
PROBHD 5 mm Dual 13C/
PULPROG zgdc
TD 32768
SOLVENT CDCl3
NS 311
DS 0
SWH 19723.865 Hz
FIDRES 0.601925 Hz
AQ 0.8307188 sec
RG 9195.2
DW 25.350 usec
DE 9.46 usec
TE 297.2 K
D1 0.10000000 sec
d11 0.03000000 sec
TD0 1

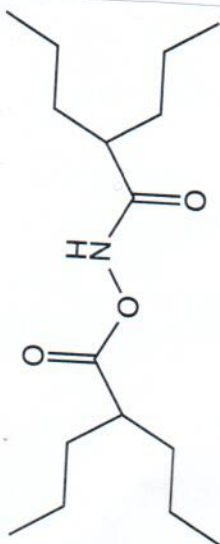
===== CHANNEL f1 =====
NUC1 13C
P1 3.00 usec
PL1 -5.00 dB
SFO1 75.4759867 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 100.00 usec
PL2 -6.00 dB
PL12 12.00 dB
SFO2 300.1312000 MHz

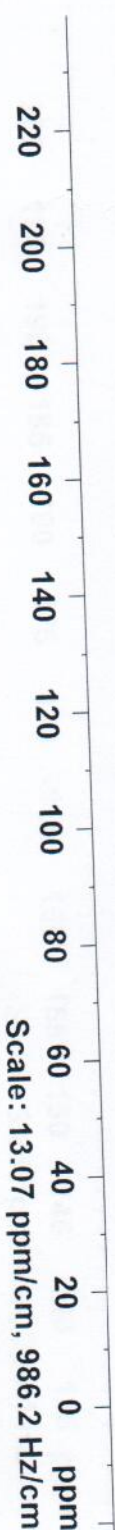
F2 - Processing parameters
SI 32768
SF 75.4677410 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

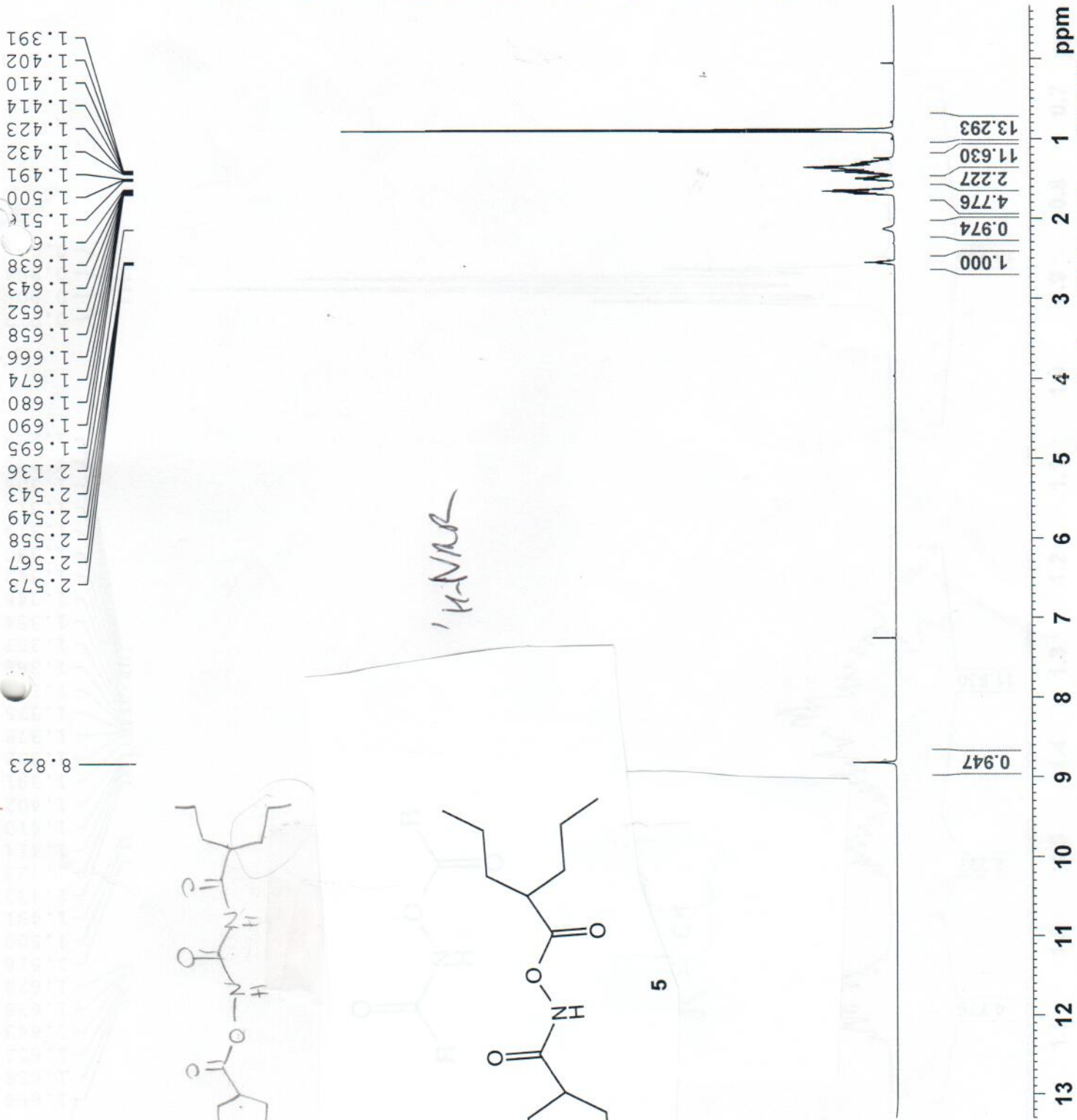
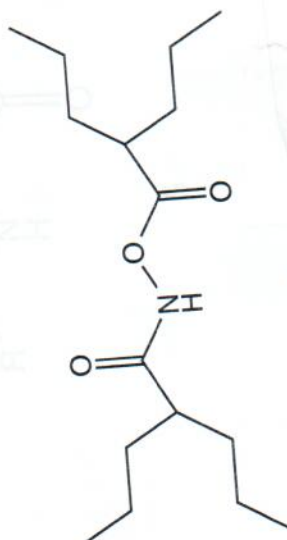
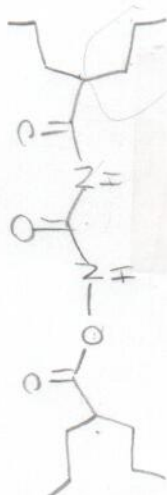
174.906
174.388

44.150
43.247
34.911
34.472
20.688
20.552
14.087
13.980



5





```

Current Data Parameters
NAME      NP232-1
EXPNO     1
PROCNO    1

F2 - Acquisition Parameters
Date_     20120725
Time      10.27
INSTRUM   spect
PROBHD     5 mm QNP 1H/1
PULPROG    zg
TD          65536
SOLVENT     CDC13
NS          24
DS          0
SWH          8389.262 Hz
FIDRES      0.128010 Hz
AQ          3.9059956 sec
RG          128
DW          59.600 usec
DE          5.50 usec
TE          297.7 K
D1          0.50000000 sec
TD0         1

===== CHANNEL f1 =====
NUC1        1H
P1          7.00 usec
PL1         0.00 dB
SFO1        600.1338000 MHz

F2 - Processing parameters
SI          32768
SF          600.1300107 MHz
WDW          EM
SSB          0
LB          0.00 Hz
GB          0
PC          1.00

```

```

===== CHANNEL f1 =====
NUC1      1H
P1         7.00 usec
PL1        0.00 dB
SFO1       600.1338000 MHz

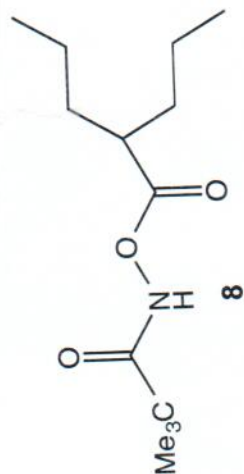
F2 - Processing parameters
SI         32768
SF         600.1300107 MHz
WDW        EM
SSB        0
LB         0.00 Hz
GB         0
PC         1.00

```



43.335
38.805
34.522
27.332
20.604
14.039

176.966
175.281



¹³C-NMR

NAME NP-322
EXPNO 4
PROCNO 1
Date_ 20130513
Time_ 14.31
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgdc30
TD 32768
SOLVENT CDC13
NS 341
DS 0
SWH 24154.590 Hz
FIDRES 0.737140 Hz
AQ 0.6783476 sec
RG 71.8
DW 20.700 usec
DE 12.00 usec
TE 300.8 K
D1 0.10000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.20 usec
PL1 3.00 dB
SFO1 100.6162926 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 18.00 dB
SFO2 400.1009202 MHz
SI 32768
SF 100.6052113 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

ppm 220 200 180 160 140 120 100 80 60 40 20
Scale: 42 ppm/cm 1208 Hz/cm

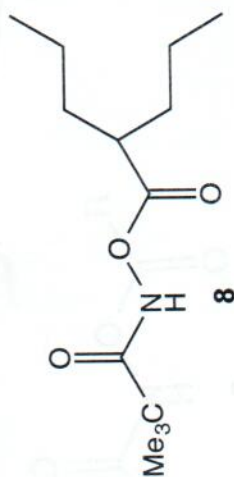


NAME NP-322
 EXPNO 3
 PROCNO 1
 Date_ 20130513
 Time_ 14.25
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 28
 DS 0
 SWH 7183.908 Hz
 FIDRES 0.109618 Hz
 AQ 4.5613556 sec
 RG 71.8
 DW 69.600 usec
 DE 6.50 usec
 TE 299.9 K
 D1 0.10000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 10.10 usec
 PL1 0.00 dB
 SFO1 400.1032008 MHz
 SI 32768
 SF 400.1000105 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00

2.582
2.573
2.568
2.560
2.551
2.546
2.538
1.700
1.694
1.689
1.684
1.675
1.665
1.652
1.643
1.629
1.484
1.392
1.385
1.373
1.367

9.011



¹H-NMR

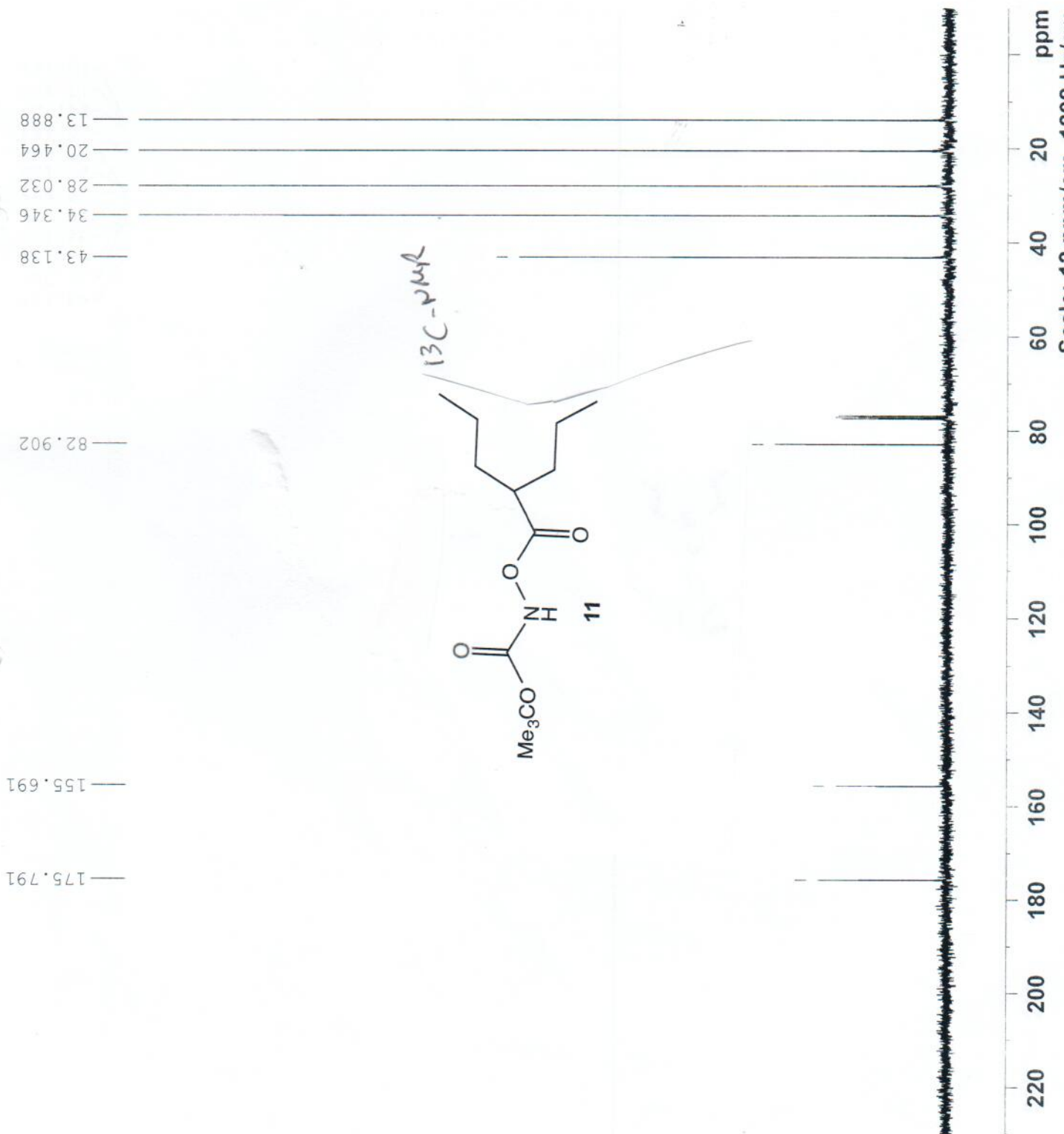




NP-306-2
EXPNO 4
PROCNO 1
Date_ 20130317
Time 10.42
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 71
DS 0
SWH 24154.590 Hz
FIDRES 0.737140 Hz
AQ 0.6783476 sec
RG 71.8
DW 20.700 usec
DE 12.00 usec
TE 300.0 K
D1 0.10000000 sec
D11 0.03000000 sec
TD0 1

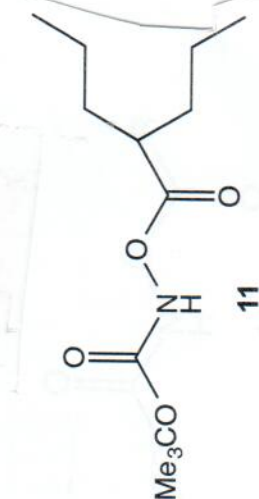
===== CHANNEL f1 =====
NUC1 13C
P1 9.20 usec
PL1 3.00 dB
SFO1 100.6162926 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 18.00 dB
SFO2 400.1009202 MHz
SI 32768
SF 100.6052169 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00



major

2.491
2.483
2.478
2.470
2.461
2.456
2.447
1.929
1.665
1.649
1.643
1.631
1.627
1.620
1.617
1.608
1.605
1.594
1.585
1.571
1.477
1.464
1.460
1.454
1.446
1.441
1.430
1.412
1.410
1.404
1.391
1.347
1.341
1.333
1.329
1.323
1.314
1.310
1.308
1.305
1.299
1.296
1.292
1.289
1.287
1.282
1.278
1.273
1.264
0.871
0.853
0.835



1H-NMR

NAME NP-306-2
EXPNO 3
PROCNO 1
Date_ 20130317
Time_ 10.39
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 4
DS 0
SWH 7183.908 Hz
FIDRES 0.109618 Hz
AQ 4.5613556 sec
RG 9
DW 69.600 usec
DE 6.50 usec
TE 299.5 K
D1 0.10000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 10.10 usec
PL1 0.00 dB
SFO1 400.1032008 MHz
SI 32768
SF 400.1000101 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

1.023
2.213
11.889
4.808
6.668

16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 ppm
Scale: 0.8978 nm/cm 359.2 Hz/cm



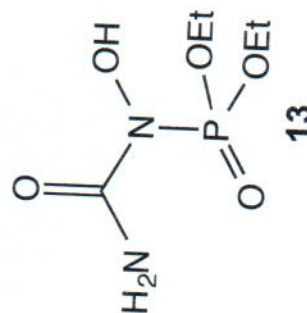
NAME NP-302-B
EXPNO 1
PROCNO 1
Date_ 20130306
Time_ 8.54
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgdc30
TD 32768
SOLVENT Acetone
NS 591
DS 0
SWH 24154.590 Hz
FIDRES 0.737140 Hz
AQ 0.6783476 sec
RG 71.8
DW 20.700 usec
DE 12.00 usec
TE 299.7 K
D1 0.10000000 sec
D11 0.03000000 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 9.20 usec
PL1 3.00 dB
SFO1 100.6162926 MHz

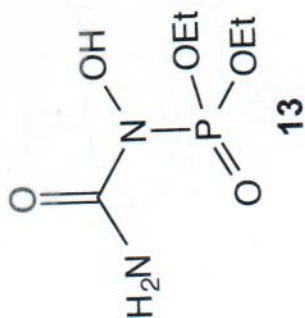
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 18.00 dB
SFO2 400.1009202 MHz
SI 32768
SF 100.6051385 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

^{13}C -NMR

161.588
65.760
65.700
29.842
16.427
16.364



220 200 180 160 140 120 100 80 60 40 20 ppm
Scale: 12 ppm/cm, 1208 Hz/cm



9.178

6.442
4.271
4.267
4.253
4.250
4.249
4.232
4.230
4.229
4.215
4.211
4.197
4.194
3.018
1.347
1.346
1.345
1.330
1.327
1.312
1.309



NAME NP-302-B
EXPNO 2
PROCNO 1
Date_ 20130306
Time_ 8.50
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT Acetone
NS 32
DS 0
SWH 7183.908 Hz
FIDRES 0.109618 Hz
AQ 4.5613556 sec
RG 71.8
DW 69.600 usec
DE 6.50 usec
TE 299.1 K
D1 0.1000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 10.10 usec
PL1 0.00 dB
SF01 400.1032008 MHz
SI 32768
SF 400.1000028 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

¹H-NMR

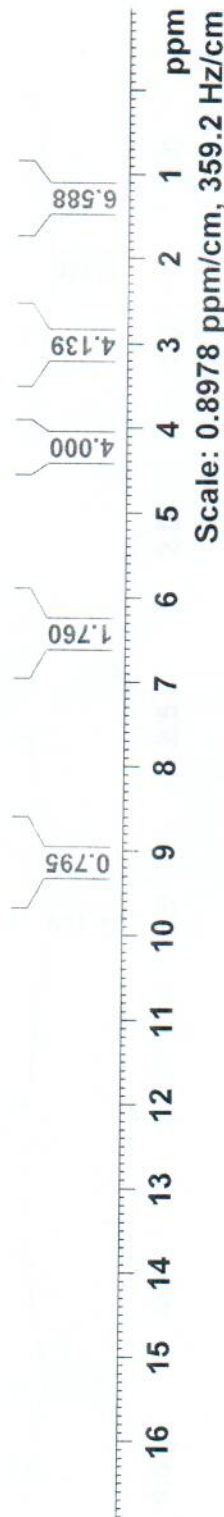
CH₃

HO

CH₂

NH₂

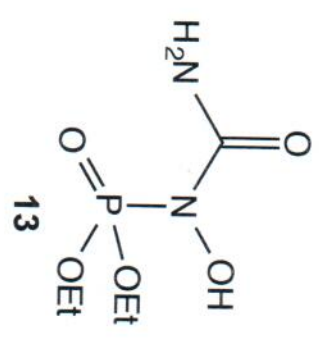
OH





31P-NMR

1.164



NAME NP-302-B
EXPNO 4
PROCNO 1
Date_ 20130306
Time 9.10
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgdc30
TD 32768
SOLVENT Acetone
NS 120
DS 0
SWH 48661.801 Hz
FIDRES 1.485040 Hz
AQ 0.3367412 sec
RG 11585.2
DW 10.275 usec
DE 14.68 usec
TE 299.6 K
D1 0.10000000 sec
D11 0.03000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 31P
PI 7.70 usec
PL1 3.00 dB
SFO1 161.9634490 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 18.00 dB
SFO2 400.1009202 MHz
SI 32768
SF 161.9633359 MHz
WDW EM
SSB 0
LB 2.00 Hz
GB 0
PC 1.00

100 50 0 -50 -100 ppm
Scale: 15.02 ppm/cm, 2433 Hz/cm