Supporting Information for

A Flexible Enantioselective Synthesis of the Isofurans

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General. ^1H NMR and ^{13}C NMR spectra were obtained as solutions in deuteriochloroform (CDCl_3) at 400 MHz and 100 MHz, respectively, with tetramethylsilane = 0.00 as an internal standard. ^{13}C multiplicities were determined with the aid of a JVERT pulse sequence, differentiating the signals for methyl and methine carbons as "d" from methylene and quaternary carbons as "u". The infrared (IR) spectra were determined as neat oils. Mass spectra (MS) were obtained by electrospray ionization. Optical rotations were determined as solutions in dichloromethane unless otherwise noted. R_f values indicated refer to thin layer chromatography (TLC) on 2.5×10 cm, 250 μm analytical plates coated with silica gel GF, unless otherwise noted, and developed in the solvent system indicated. Column chromatography was carried out following the procedure described by Taber.¹ The solvent mixtures used are volume/volume mixtures. All glassware was flame dried under a dry nitrogen stream immediately before use. Tetrahydrofuran (THF) and diethyl ether were distilled from sodium metal/benzophenone ketyl under dry nitrogen. Dichloromethane (CH_2Cl_2) and benzene were distilled from calcium hydride under dry nitrogen. All reaction mixtures were stirred magnetically, unless otherwise noted.

Current Data Parameters	
NAME	JP-1-1152
EXPNO	1
PROCNO	1
F2 - Acquisition Parameters	
Date_	20030328
Time	9.56
INSTRUM	spec1
PROBHD	5 mm QNP 1H
PULPROG	zgpg30
TD	32768
SOLVENT	CDCl3
NS	16
DS	0
SWH	5972.641 Hz
FIDRES	0.17080 Hz
AQ	2.9733972 sec
RG	6437
DW	89.480 nsec
DE	4.50 nsec
TE	300.2 K
D1	3.0000000 sec
CHANNEL f1	
NUC1	1H
P1	9.00 nsec
PL1	0.00 dB
SC1	400.130007 MHz
F2 - Processing parameters	
SI	16384
SE	400.130078 MHz
WDW	EM
SSB	0
LB	0.00 Hz
GB	0
RC	1.00

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

133.639
131.958
131.119
131.035

100.201

77.553
77.478
77.236
76.918

32.794
30.406

23.151
22.107

Current Data Parameters
NAME: JP-1-1152
EXPNO: 1
PROCNO: 1
P2 - Acquisition Parameters
Date_: 20080723
Time: 8.08
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 65536
SOLVENT: CDCl3
NS: 842
DS: 0
SWH: 27171.912 Hz
FIDRES: 0.414641 Hz
AQ: 1.269124 sec
RG: 655.13
RG2: 1.000000
DE: 4.50 sec
TE: 300.2 K
D1: 3.0000000 sec
D11: 0.0300000 sec
D15: 0.0000000 sec
D20: 6.0070000 sec
NAME: CHANNEL F1 -
NUC1: 13C
P1: 16.50 sec
P2: 21.00 sec
PL1: 0.00 dB
PL2: 0.00 dB
SFO1: 101.625375 MHz
NAME: CHANNEL F2 -
CPDPRG2: waltz16
NUC2: 1H
P2F2: 51.00 sec
F2F2: 120.00 dB
PL2: 18.00 dB
PL3: 18.00 dB
SFO2: 400.150007 MHz
P2 - Processing parameters
SI: 32768
SF: 400.617218 MHz
WDW: EM
SSB: 0
LB: 1.00 Hz
GB: 0
PC: 1.00

7

Current Data Parameters
NAME: 7p-1-3512
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20030326
Time: 20.55
INSTRUM: spect
PULPROG: zgpg30
FIDRES: 0.17080 Hz
AQ: 2.9750972 sec
RG: 71.8
DQ: 89.400 usec
DE: 4.50 usec
TE: 300.0 K
D1: 3.0000000 sec

NUC1: 1H
P1: 9.00 usec
PL1: 0.00 dB
SFO1: 400.130007 MHz

F2 - Processing parameters
SI: 16384
SF: 400.130061 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5592.441 Hz
FIDRES: 0.17080 Hz
AQ: 2.9750972 sec
RG: 71.8
DQ: 89.400 usec
DE: 4.50 usec
TE: 300.0 K
D1: 3.0000000 sec

Current Data Parameters
NAME JP-1-382
EXPNO 13
PROCNO 1

F2 - Acquisition Parameters
Date_ 20080826
Time 21.08
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
FIDRES 0.00136
SOLVENT CDCl3
NS 845
DS 0
SWH 27173.912 Hz
FIDRES 0.414641 Hz
AQ 1.2059124 sec
RG 2048
DWT 18.400 sec
DE 4.50 sec
TE 300.0 K
D1 1.0000000 sec
D11 0.0000000 sec
D13 0.0000000 sec
D20 0.0070000 sec

CHANNEL f1
NUC1 13C
P1 10.50 sec
PL 21.00 dB
PL1 0.00 dB
SFO1 100.62593 MHz

CHANNEL f2
NAME2 waltz16
NUC2 1H
PCPDZ 95.00 sec
PL2 120.00 dB
PL12 18.00 dB
SFO2 400.126057 MHz

F2 - Processing parameters
SI 32768
SF 400.126057 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
RC 1.00

7.268
6.424
6.398
6.385
6.359
6.094
6.068
6.057
6.056
6.030
6.029
5.795
5.779
5.761
5.741
5.724
5.718
5.692
5.680
5.674
5.669
5.658
5.650
5.638
5.631
5.611
5.599
4.899
4.887
4.107
4.098
3.666
3.663
3.641
3.638
3.515
3.489
2.855
2.840
2.827
1.650
1.386
1.209
0.754
0.742
0.715
0.000

8

1.027
0.984
3.884
1.000
2.040
2.196
2.215
2.070
0.898
3.495
3.314

Current Data Parameters
NAME: JP-1-17b
EXTR: 1
PROCNO: 1
F2 - Acquisition Parameters
Date_: 20030414
Time: 17:15
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 0
DS: 0
SWH: 5592.841 Hz
FIDRES: 0.170680 Hz
AQ: 2.8725972 sec
RG: 71.8
DVT: 39.400 sec
DE: 4.50 sec
TE: 300.2 K
D1: 3.0000000 sec
NAME: CHANNEL f1
NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.130007 MHz
F2 - Processing parameters
SI: 16384
SF: 400.130004 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

134.138
133.390
130.241
130.173
130.135
127.260

100.622

77.367
77.239
77.015
76.662

63.546

35.096

30.142

22.941
21.903

8

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

Current Data Parameters
NAME yp-1-147b
EXPNO 13
PROCNO 1

F2 - Acquisition Parameters

Date_ 20030418
Time 14:44

INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30

TD 65536
SOLVENT CDCl3

NS 2545
DS 0

SVH 22623.701 Hz
FIDRES 0.345210 Hz

AQ 1.4483898 sec
RG 16384

DW 22.101 msec
DE 31.57 msec

TE 300.0 K
P1 8.00 msec

CNSTZ 150.000000
CNST11 1.000000

D20 0.0066667 sec
S2 20 dB

HL1 3 dB
D1 3.0000000 sec

CPDPRG waltz16
P31 100.00 msec

D13 0.0000040 sec
P2 16.0 msec

SFO1 90.5648750
NUCLEUS 13C

F2 - Processing parameters
SI 32768

SF 90.5576391
WDW EM

SSB 0
LB 1.00 Hz

GB 0
PC 1.40

Current Data Parameters
NAME 7p-1-173b
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20060424
Time 12.38
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zg
TD 32768
SOLVENT CDCl3
NS 16
DS 0
SWH 5597.841 Hz
FIDRES 0.170660 Hz
AQ 2.979092 sec
RG 64
DWT 80.600 sec
DE 4.50 sec
TE 300.0 K
D1 3.0000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.135007 MHz

F2 - Processing parameters
SI 16384
SF 400.1350146 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

Current Data Parameters
NAME: 7F-1-151b
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 2009-07-25
Time: 13.15
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5397.841 Hz
FIDRES: 0.170680 Hz
AQ: 2.975992 sec
RG: 31.5
DWT: 87.400 sec
DE: 4.50 sec
TE: 300.0 K
D1: 3.0000000 sec

CHANNEL f1
NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.132007 MHz

F2 - Processing parameters
SI: 32768
SF: 400.1300156 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
RC: 1.00

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

134.467
133.281
132.844
129.818
129.781
128.823
128.369

100.813

77.776
77.703
77.457
77.140
70.400

55.902
54.286

34.505
30.608

23.393
22.346

Current Data Parameters
NAME: 7p-1-185A
EXPNO: 13
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20030429
Time: 9.42
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 65536
SOLVENT: M
CLOCK: 0
DS: 0
SWH: 27173.912 Hz
FIDRES: 0.041664 Hz
AQ: 1.2059124 sec
RG: 8192
DVW: 18.400 umsec
DE: 4.50 umsec
TE: 300.0 K
D1: 3.00000000 sec
D11: 0.03000000 sec
D13: 0.00000300 sec
D20: 0.00700000 sec

CHANNEL F1
NUC1: 13C
P1: 10.50 umsec
PL1: 21.00 umsec
PL12: 0.00 dB
SFO1: 100.626295 MHz

CHANNEL F2
CPDPRG2: waltz16
NUC2: 1H
PCPD2: 95.00 umsec
PL2: 120.00 dB
PL12: 18.00 dB
SFO2: 400.150007 MHz

F2 - Processing parameters
SI: 32768
SF: 100.617290 MHz
WDW: EM
SSB: 0
LB: 1.00 Hz
GB: 0
PC: 1.00

- 7.675
- 7.658
- 7.656
- 7.590
- 7.570
- 7.552
- 7.274
- 5.952
- 5.938
- 5.912
- 5.898
- 5.889
- 5.857
- 5.846
- 5.835
- 5.817
- 5.806
- 4.877
- 4.866
- 4.261
- 4.253
- 4.247
- 4.233
- 4.224
- 4.007
- 3.993
- 3.978
- 3.964
- 3.670
- 3.652
- 3.624
- 3.501
- 3.474
- 3.068
- 3.063
- 3.059
- 3.054
- 3.048
- 3.041
- 3.030
- 3.026
- 3.021
- 3.014
- 3.010
- 2.805
- 2.046
- 1.856
- 1.846
- 1.835
- 1.819
- 1.809
- 1.799
- 1.704
- 1.687
- 1.685
- 1.668
- 1.651
- 1.648
- 1.631
- 1.258
- 1.254
- 1.190
- 0.741
- 0.000

1

Current Data Parameters
NAME: JY-11554
EXTNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20030429
Time: 10.00
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zg
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5592.841 Hz
FIDRES: 0.170680 Hz
AQ: 2.6759092 sec
RG: 35.9
DPR: 39.400 sec
DE: 4.50 sec
TE: 300.0 K
D1: 3.0000000 sec

CHANNEL f1
NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.132007 MHz

F2 - Processing parameters
SI: 6544
SF: 400.130122 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

135.792
134.234
133.583
129.866
129.543
128.106

100.165

77.549
77.363
77.230
76.912
74.445
72.011
70.378

54.432
54.382

34.503
30.339

23.128
22.023

1

160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm

Current Data Parameters
NAME jp-1-183d
EXPNO 13
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030429
Time 10:07

INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30

TD 65536
FIDRES 0.414641 Hz
AQ 1.2059124 sec

RG 8192
DE 18.400 usec
TE 300.0 K

D1 3.00000000 sec
D11 0.03000000 sec
D13 0.00000300 sec
D20 0.00700000 sec

CHANEL F1
NUC1 13C
P1 10.50 usec
P2 21.00 usec
PL1 0.00 dB
SFO1 100.6242995 MHz

CHANEL I2
NUC2 1H
PCPD2 95.00 usec
P12 120.00 dB
P112 18.00 dB
SFO2 400.1320007 MHz

F2 - Processing parameters
SI 32768
SF 100.6127551 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

Current Data Parameters
NAME JP-1-259b
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030821
Time 16:40
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zg
TD 32768
SOLVENT CDCl3
NS 16
DS 0
SWH 5592.841 Hz
FIDRES 0.170680 Hz
AQ 2.9295092 sec
RG 35.9
BQ 89.400 usec
DWT 4.50 usec
DE 300.0 K
TE 300.000000 sec
DI 3.00000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 9.00 usec
PL1 0.00 dB
SFO1 400.1320007 MHz

F2 - Processing parameters
SI 16384
SF 400.1300122 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

11

135.841
134.201
132.643
129.519
128.102
126.346

101.511

77.534
77.313
77.228
76.899
73.894
70.853
70.274

55.661
54.102

33.974
30.674

23.095
21.843

Current Data Parameters	
NAME	JP-1-259b
EXPNO	13
PROCNO	1
F2 - Acquisition Parameters	
Date_	20030321
Time	16.48
INSTRUM	spect
PROBHD	5 mm QNP 1H
PULPROG	zgpg30
TD	65536
SOLVENT	CDCl3
NS	116
DS	0
SWH	27173.912 Hz
FIDRES	0.416641 Hz
AQ	1.209124 sec
RG	1024.3
DW	18.480 sec
DE	4.50 sec
TE	300.2 K
D1	3.00000000 sec
D11	0.05000000 sec
D13	0.00000000 sec
D20	0.00700000 sec
CHANNEL F1	
NUC1	13C
P1	10.50 sec
P2	21.00 sec
PL1	0.00 dB
PL2	0.00 dB
PL3	120.00 dB
PL12	18.00 dB
PL13	18.00 dB
SFO1	100.626995 MHz
CHANNEL F2	
CPDPRG2	zgpg30
NUC2	1H
PCPD2	5.00 sec
PL2	120.00 dB
PL12	18.00 dB
SFO2	400.150007 MHz
F2 - Processing parameters	
SI	32768
SF	100.617759 MHz
WDW	EM
SSB	0
LB	1.00 Hz
GB	0
PC	1.00

2

Current Data Parameters
NAME: 3p-1-207a
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20030308
Time: 11.30
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5592.941 Hz
FIDRES: 0.170680 Hz
AQ: 2.9753692 sec
RG: 301.5
SOL: SOL
DVT: 89.460 sec
DE: 4.50 sec
TE: 300.2 K
D1: 3.0000000 sec

CHANNEL f1
NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.130007 MHz

F2 - Processing parameters
SI: 32768
SF: 400.130015 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

130.896
130.015

100.358

83.892
77.945
77.545
77.390
77.228
76.909
73.077

53.795

46.008

35.831

30.349

23.177
22.080

2

Current Data Parameters
NAME JP-1-207a
EXPNO 15
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030508
Time 11:41
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 136
DS 0
SWH 27173.912 Hz
FIDRES 0.416641 Hz
AQ 1.2059124 sec
RG 11385.2
DQ 18.400 sec
DE 4.70 sec
TE 300.0 K
D1 3.0000000 sec
D11 0.0500000 sec
D13 0.0000000 sec
D20 0.0070000 sec

===== CHANNEL f1 =====
NUC1 13C
P1 10.50 sec
P2 21.00 sec
PL1 6.00 dB
PL2 10.00 dB
PL3 10.00 dB
PL4 10.00 dB
PL5 10.00 dB
PL6 10.00 dB
PL7 10.00 dB
PL8 10.00 dB
PL9 10.00 dB
PL10 10.00 dB
PL11 10.00 dB
PL12 10.00 dB
PL13 10.00 dB
PL14 10.00 dB
PL15 10.00 dB
PL16 10.00 dB
PL17 10.00 dB
PL18 10.00 dB
PL19 10.00 dB
PL20 10.00 dB
PL21 10.00 dB
PL22 10.00 dB
PL23 10.00 dB
PL24 10.00 dB
PL25 10.00 dB
PL26 10.00 dB
PL27 10.00 dB
PL28 10.00 dB
PL29 10.00 dB
PL30 10.00 dB
PL31 10.00 dB
PL32 10.00 dB
PL33 10.00 dB
PL34 10.00 dB
PL35 10.00 dB
PL36 10.00 dB
PL37 10.00 dB
PL38 10.00 dB
PL39 10.00 dB
PL40 10.00 dB
PL41 10.00 dB
PL42 10.00 dB
PL43 10.00 dB
PL44 10.00 dB
PL45 10.00 dB
PL46 10.00 dB
PL47 10.00 dB
PL48 10.00 dB
PL49 10.00 dB
PL50 10.00 dB
PL51 10.00 dB
PL52 10.00 dB
PL53 10.00 dB
PL54 10.00 dB
PL55 10.00 dB
PL56 10.00 dB
PL57 10.00 dB
PL58 10.00 dB
PL59 10.00 dB
PL60 10.00 dB
PL61 10.00 dB
PL62 10.00 dB
PL63 10.00 dB
PL64 10.00 dB
PL65 10.00 dB
PL66 10.00 dB
PL67 10.00 dB
PL68 10.00 dB
PL69 10.00 dB
PL70 10.00 dB
PL71 10.00 dB
PL72 10.00 dB
PL73 10.00 dB
PL74 10.00 dB
PL75 10.00 dB
PL76 10.00 dB
PL77 10.00 dB
PL78 10.00 dB
PL79 10.00 dB
PL80 10.00 dB
PL81 10.00 dB
PL82 10.00 dB
PL83 10.00 dB
PL84 10.00 dB
PL85 10.00 dB
PL86 10.00 dB
PL87 10.00 dB
PL88 10.00 dB
PL89 10.00 dB
PL90 10.00 dB
PL91 10.00 dB
PL92 10.00 dB
PL93 10.00 dB
PL94 10.00 dB
PL95 10.00 dB
PL96 10.00 dB
PL97 10.00 dB
PL98 10.00 dB
PL99 10.00 dB
PL100 10.00 dB

===== CHANNEL f2 =====
CPDPRG2 zgpg30
NUC2 1H
P1 10.00 sec
P2 10.00 sec
P3 10.00 sec
P4 10.00 sec
P5 10.00 sec
P6 10.00 sec
P7 10.00 sec
P8 10.00 sec
P9 10.00 sec
P10 10.00 sec
P11 10.00 sec
P12 10.00 sec
P13 10.00 sec
P14 10.00 sec
P15 10.00 sec
P16 10.00 sec
P17 10.00 sec
P18 10.00 sec
P19 10.00 sec
P20 10.00 sec
P21 10.00 sec
P22 10.00 sec
P23 10.00 sec
P24 10.00 sec
P25 10.00 sec
P26 10.00 sec
P27 10.00 sec
P28 10.00 sec
P29 10.00 sec
P30 10.00 sec
P31 10.00 sec
P32 10.00 sec
P33 10.00 sec
P34 10.00 sec
P35 10.00 sec
P36 10.00 sec
P37 10.00 sec
P38 10.00 sec
P39 10.00 sec
P40 10.00 sec
P41 10.00 sec
P42 10.00 sec
P43 10.00 sec
P44 10.00 sec
P45 10.00 sec
P46 10.00 sec
P47 10.00 sec
P48 10.00 sec
P49 10.00 sec
P50 10.00 sec
P51 10.00 sec
P52 10.00 sec
P53 10.00 sec
P54 10.00 sec
P55 10.00 sec
P56 10.00 sec
P57 10.00 sec
P58 10.00 sec
P59 10.00 sec
P60 10.00 sec
P61 10.00 sec
P62 10.00 sec
P63 10.00 sec
P64 10.00 sec
P65 10.00 sec
P66 10.00 sec
P67 10.00 sec
P68 10.00 sec
P69 10.00 sec
P70 10.00 sec
P71 10.00 sec
P72 10.00 sec
P73 10.00 sec
P74 10.00 sec
P75 10.00 sec
P76 10.00 sec
P77 10.00 sec
P78 10.00 sec
P79 10.00 sec
P80 10.00 sec
P81 10.00 sec
P82 10.00 sec
P83 10.00 sec
P84 10.00 sec
P85 10.00 sec
P86 10.00 sec
P87 10.00 sec
P88 10.00 sec
P89 10.00 sec
P90 10.00 sec
P91 10.00 sec
P92 10.00 sec
P93 10.00 sec
P94 10.00 sec
P95 10.00 sec
P96 10.00 sec
P97 10.00 sec
P98 10.00 sec
P99 10.00 sec
P100 10.00 sec

F2 - Processing parameters
SI 32768
SF 400.617542 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

Current Data Parameters
NAME: yp-4-73d
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 200605
Time: 2.11
INSTRUM: spect
PROBHD: 5 mm Widen
PULPROG: zg
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5592.841 Hz
FIDRES: 0.170680 Hz
AQ: 1.2553092 sec
RG: 90.5
DWT: 89.400 usec
DE: 4.50 usec
TE: 300.0 K
D1: 3.6000000 sec

CHANNEL f1
NUC1: 1H
P1: 9.00 usec
PL1: 0.00 dB
SFO1: 400.132007 MHz

F2 - Processing parameters
SI: 16384
SF: 400.1300143 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

132.811
129.015

100.219

86.256
78.592
77.545
77.449
77.228
76.910
76.308

53.107

45.719

35.820

30.374

23.175
22.074

2a

Current Data Parameters
NAME: 2a-773d
EXTNO: 13
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20040305
Time: 5.58
INSTRUM: spect
PROBHD: 5 mm MxHm
PULPROG: zgpg30
TD: 65536
SOLVENT: CDCl3
NS: 3184
DS: 0
SWH: 27713.912 Hz
FIDRES: 0.41641 Hz
AQ: 1.269124 sec
RG: 8192
DWT: 18.400 sec
DE: 4.50 sec
TE: 300.0 K
D1: 3.00000000 sec
D11: 0.05000000 sec
D13: 0.00000000 sec
D20: 0.00700000 sec

CHANNEL f1 ---
NUC1: 13C
P1: 10.50 usec
PL1: 21.00 usec
PL2: 0.00 usec
PL3: 0.00 usec
SFO1: 101.624295 MHz

CHANNEL f2 ---
CPDPRG2: waltz16
NUC2: 1H
PCPD2: 95.00 usec
PL2: 120.00 dB
PL3: 18.00 dB
SFO2: 400.150007 MHz

F2 - Processing parameters
SI: 32768
SF: 400.617734 MHz
WDW: EM
SSB: 0
LB: 1.00 Hz
GB: 0
PC: 1.00

Current Data Parameters		P1 - Acquisition Parameters	
NAME	IF-2-003b	NAME	2000b19
EXTNO	1	EXTNO	1
PRGNO	1	PRGNO	1
INSTNUM	spec	INSTNUM	1407
PROBNO	5 mm QNP 1H	PROBNO	
PULPROG	zgpg30	PULPROG	6036
TD	65536	TD	
SOLVENT	CDCl3	SOLVENT	748
NS		NS	
DS	0	DS	
SWH	27171.912 Hz	SWH	
F1	0.416641 Hz	F1	
F2	1.2059124 sec	F2	
RG	163713	RG	
RG2	18.400 sec	RG2	
DW	4.500 sec	DW	
DS	3500 K	DS	
TE	300.0 K	TE	
D1	0.0000000 sec	D1	
D11	0.0000000 sec	D11	
D13	0.0000000 sec	D13	
D20	0.0070000 sec	D20	

CHANNEL		CHANNEL	
NAME	13C	NAME	13C
NUC1	13C	NUC1	13C
F1	101.50 MHz	F1	101.50 MHz
F2	21.00 MHz	F2	21.00 MHz
FL1	0.00 dB	FL1	0.00 dB
FL2	0.00 dB	FL2	0.00 dB
FL3	0.00 dB	FL3	0.00 dB
FL4	0.00 dB	FL4	0.00 dB
FL5	0.00 dB	FL5	0.00 dB
FL6	0.00 dB	FL6	0.00 dB
FL7	0.00 dB	FL7	0.00 dB
FL8	0.00 dB	FL8	0.00 dB
FL9	0.00 dB	FL9	0.00 dB
FL10	0.00 dB	FL10	0.00 dB
FL11	0.00 dB	FL11	0.00 dB
FL12	0.00 dB	FL12	0.00 dB
FL13	0.00 dB	FL13	0.00 dB
FL14	0.00 dB	FL14	0.00 dB
FL15	0.00 dB	FL15	0.00 dB
FL16	0.00 dB	FL16	0.00 dB
FL17	0.00 dB	FL17	0.00 dB
FL18	0.00 dB	FL18	0.00 dB
FL19	0.00 dB	FL19	0.00 dB
FL20	0.00 dB	FL20	0.00 dB
FL21	0.00 dB	FL21	0.00 dB
FL22	0.00 dB	FL22	0.00 dB
FL23	0.00 dB	FL23	0.00 dB
FL24	0.00 dB	FL24	0.00 dB
FL25	0.00 dB	FL25	0.00 dB
FL26	0.00 dB	FL26	0.00 dB
FL27	0.00 dB	FL27	0.00 dB
FL28	0.00 dB	FL28	0.00 dB
FL29	0.00 dB	FL29	0.00 dB
FL30	0.00 dB	FL30	0.00 dB
FL31	0.00 dB	FL31	0.00 dB
FL32	0.00 dB	FL32	0.00 dB
FL33	0.00 dB	FL33	0.00 dB
FL34	0.00 dB	FL34	0.00 dB
FL35	0.00 dB	FL35	0.00 dB
FL36	0.00 dB	FL36	0.00 dB
FL37	0.00 dB	FL37	0.00 dB
FL38	0.00 dB	FL38	0.00 dB
FL39	0.00 dB	FL39	0.00 dB
FL40	0.00 dB	FL40	0.00 dB
FL41	0.00 dB	FL41	0.00 dB
FL42	0.00 dB	FL42	0.00 dB
FL43	0.00 dB	FL43	0.00 dB
FL44	0.00 dB	FL44	0.00 dB
FL45	0.00 dB	FL45	0.00 dB
FL46	0.00 dB	FL46	0.00 dB
FL47	0.00 dB	FL47	0.00 dB
FL48	0.00 dB	FL48	0.00 dB
FL49	0.00 dB	FL49	0.00 dB
FL50	0.00 dB	FL50	0.00 dB
FL51	0.00 dB	FL51	0.00 dB
FL52	0.00 dB	FL52	0.00 dB
FL53	0.00 dB	FL53	0.00 dB
FL54	0.00 dB	FL54	0.00 dB
FL55	0.00 dB	FL55	0.00 dB
FL56	0.00 dB	FL56	0.00 dB
FL57	0.00 dB	FL57	0.00 dB
FL58	0.00 dB	FL58	0.00 dB
FL59	0.00 dB	FL59	0.00 dB
FL60	0.00 dB	FL60	0.00 dB
FL61	0.00 dB	FL61	0.00 dB
FL62	0.00 dB	FL62	0.00 dB
FL63	0.00 dB	FL63	0.

5.813
5.805
5.803
5.776
5.774
5.765
5.764
5.305
4.876
4.875
4.867
4.865
4.262
4.254
4.245
4.242
4.232
4.222
4.213
4.208
4.199
4.189
4.160
4.153
4.141
4.135
3.918
3.648
3.620
3.496
3.469
3.058
3.052
2.496
2.478
2.471
2.460
2.456
2.429
2.423
2.414
2.409
2.364
2.358
2.352
2.347
2.341
2.336
2.330
2.325
2.319
2.310
2.305
2.292
2.286
2.263
2.245
2.232
2.210
2.198
2.187
2.175
2.047
2.044
2.037

7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0 ppm

1.000
1.001
1.034
2.117
1.066
1.039
2.143
2.169
1.029
2.491
0.726
2.793
1.536
1.077
2.171
3.245
9.620
3.189
6.113

Current Data Parameters
NAME: JP-2-045c
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 200908
Time: 1202
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 5592.841 Hz
FIDRES: 0.170680 Hz
AQ: 0.3
RG: 89.400 sec
DWT: 4.50 sec
DE: 300.0 K
TE: 300.0000 sec
D1: 1.000000 sec

CHARGE: 0.11

NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.150007 MHz

F2 - Processing parameters
SI: 16384
SF: 400.1500126 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
PC: 1.00

- 130.580
- 130.435
- 119.505
- 100.052
- 83.565
- 80.319
- 79.636
- 78.410
- 77.542
- 77.415
- 77.319
- 77.224
- 76.907
- 74.537
- 71.259
- 35.369
- 30.355
- 25.939
- 24.886
- 24.241
- 23.128
- 22.080
- 18.364
- 18.141
- 16.333

Channel Data Parameters	
NAME	JP-2-045c
EXPNO	13
PROCNO	1
F2 - Acquisition Parameters	
Time	12.08
INSTRUM	spec
PROBHD	5 mm QNP 1H
PULPROG	zgpg30
TD	65536
SOLVENT	CDCl3
NS	1216
DS	0
SWH	27171.912 Hz
FIDRES	0.414441 Hz
AQ	1.2059124 sec
RG	9193.2
DDW	18.480 sec
DE	4.30 sec
TE	300.6 K
TD1	1.00000000 sec
TD2	0.00000000 sec
TD3	0.00000000 sec
TD4	0.00000000 sec
Channel 11	
NUC1	13C
PI	16.50 sec
P2	21.00 sec
PL1	0.00 dB
PL2	0.00 dB
PL3	0.00 dB
PL4	0.00 dB
PL5	0.00 dB
PL6	0.00 dB
PL7	0.00 dB
PL8	0.00 dB
PL9	0.00 dB
PL10	0.00 dB
PL11	0.00 dB
PL12	0.00 dB
PL13	0.00 dB
PL14	0.00 dB
PL15	0.00 dB
PL16	0.00 dB
PL17	0.00 dB
PL18	0.00 dB
PL19	0.00 dB
PL20	0.00 dB
PL21	0.00 dB
PL22	0.00 dB
PL23	0.00 dB
PL24	0.00 dB
PL25	0.00 dB
PL26	0.00 dB
PL27	0.00 dB
PL28	0.00 dB
PL29	0.00 dB
PL30	0.00 dB
PL31	0.00 dB
PL32	0.00 dB
PL33	0.00 dB
PL34	0.00 dB
PL35	0.00 dB
PL36	0.00 dB
PL37	0.00 dB
PL38	0.00 dB
PL39	0.00 dB
PL40	0.00 dB
PL41	0.00 dB
PL42	0.00 dB
PL43	0.00 dB
PL44	0.00 dB
PL45	0.00 dB
PL46	0.00 dB
PL47	0.00 dB
PL48	0.00 dB
PL49	0.00 dB
PL50	0.00 dB
PL51	0.00 dB
PL52	0.00 dB
PL53	0.00 dB
PL54	0.00 dB
PL55	0.00 dB
PL56	0.00 dB
PL57	0.00 dB
PL58	0.00 dB
PL59	0.00 dB
PL60	0.00 dB
PL61	0.00 dB
PL62	0.00 dB
PL63	0.00 dB
PL64	0.00 dB
PL65	0.00 dB
PL66	0.00 dB
PL67	0.00 dB
PL68	0.00 dB
PL69	0.00 dB
PL70	0.00 dB
PL71	0.00 dB
PL72	0.00 dB
PL73	0.00 dB
PL74	0.00 dB
PL75	0.00 dB
PL76	0.00 dB
PL77	0.00 dB
PL78	0.00 dB
PL79	0.00 dB
PL80	0.00 dB
PL81	0.00 dB
PL82	0.00 dB
PL83	0.00 dB
PL84	0.00 dB
PL85	0.00 dB
PL86	0.00 dB
PL87	0.00 dB
PL88	0.00 dB
PL89	0.00 dB
PL90	0.00 dB
PL91	0.00 dB
PL92	0.00 dB
PL93	0.00 dB
PL94	0.00 dB
PL95	0.00 dB
PL96	0.00 dB
PL97	0.00 dB
PL98	0.00 dB
PL99	0.00 dB
PL100	0.00 dB
PL101	0.00 dB
PL102	0.00 dB
PL103	0.00 dB
PL104	0.00 dB
PL105	0.00 dB
PL106	0.00 dB
PL107	0.00 dB
PL108	0.00 dB
PL109	0.00 dB
PL110	0.00 dB
PL111	0.00 dB
PL112	0.00 dB
PL113	0.00 dB
PL114	0.00 dB
PL115	0.00 dB
PL116	0.00 dB
PL117	0.00 dB
PL118	0.00 dB
PL119	0.00 dB
PL120	0.00 dB
PL121	0.00 dB
PL122	0.00 dB
PL123	0.00 dB
PL124	0.00 dB
PL125	0.00 dB
PL126	0.00 dB
PL127	0.00 dB
PL128	0.00 dB
PL129	0.00 dB
PL130	0.00 dB
PL131	0.00 dB
PL132	0.00 dB
PL133	0.00 dB
PL134	0.00 dB
PL135	0.00 dB
PL136	0.00 dB
PL137	0.00 dB
PL138	0.00 dB
PL139	0.00 dB
PL140	0.00 dB
PL141	0.00 dB
PL142	0.00 dB
PL143	0.00 dB
PL144	0.00 dB
PL145	0.00 dB
PL146	0.00 dB
PL147	0.00 dB
PL148	0.00 dB
PL149	0.00 dB
PL150	0.00 dB
PL151	0.00 dB
PL152	0.00 dB
PL153	0.00 dB
PL154	0.00 dB
PL155	0.00 dB
PL156	0.00 dB
PL157	0.00 dB
PL158	0.00 dB
PL159	0.00 dB
PL160	0.00 dB
PL161	0.00 dB
PL162	0.00 dB
PL163	0.00 dB
PL164	0.00 dB
PL165	0.00 dB
PL166	0.00 dB
PL167	0.00 dB
PL168	0.00 dB
PL169	0.00 dB
PL170	0.00 dB
PL171	0.00 dB
PL172	0.00 dB
PL173	0.00 dB
PL174	0.00 dB
PL175	0.00 dB
PL176	0.00 dB
PL177	0.00 dB
PL178	0.00 dB
PL179	0.00 dB
PL180	0.00 dB
PL181	0.00 dB
PL182	0.00 dB
PL183	0.00 dB
PL184	0.00 dB
PL185	0.00 dB
PL186	0.00 dB
PL187	0.00 dB
PL188	0.00 dB
PL189	0.00 dB
PL190	0.00 dB
PL191	0.00 dB
PL192	0.00 dB
PL193	0.00 dB
PL194	0.00 dB
PL195	0.00 dB
PL196	0.00 dB
PL197	0.00 dB
PL198	0.00 dB
PL199	0.00 dB
PL200	0.00 dB
PL201	0.00 dB
PL202	0.00 dB
PL203	0.00 dB
PL204	0.00 dB
PL205	0.00 dB
PL206	0.00 dB
PL207	0.00 dB
PL208	0.00 dB
PL209	0.00 dB
PL210	0.00 dB
PL211	0.00 dB
PL212	0.00 dB
PL213	0.00 dB
PL214	0.00 dB
PL215	0.00 dB
PL216	0.00 dB
PL217	0.00 dB
PL218	0.00 dB
PL219	0.00 dB
PL220	0.00 dB
PL221	0.00 dB
PL222	0.00 dB
PL223	0.00 dB
PL224	0.00 dB
PL225	0.00 dB
PL226	0.00 dB
PL227	0.00 dB
PL228	0.00 dB
PL229	0.00 dB
PL230	0.00 dB
PL231	0.00 dB
PL232	0.00 dB
PL233	0.00 dB
PL234	0.00 dB
PL235	0.00 dB
PL236	0.00 dB
PL237	0.00 dB
PL238	0.00 dB
PL239	0.00 dB
PL240	0.00 dB
PL241	0.00 dB
PL242	0.00 dB
PL243	0.00 dB
PL244	0.00 dB
PL245	0.00 dB
PL246	0.00 dB
PL247	0.00 dB
PL248	0.00 dB
PL249	0.00 dB
PL250	0.00 dB
PL251	0.00 dB
PL252	0.00 dB
PL253	0.00 dB
PL254	0.00 dB
PL255	0.00 dB
PL256	0.00 dB
PL257	0.00 dB
PL258	0.00 dB
PL259	0.00 dB
PL260	0.00 dB
PL261	0.00 dB
PL262	0.00 dB
PL263	0.00 dB
PL264	0.00 dB
PL265	0.00 dB
PL266	0.00 dB
PL267	0.00 dB
PL268	0.00 dB
PL269	0.00 dB
PL270	0.00 dB
PL271	0.00 dB
PL272	0.00 dB
PL273	0.00 dB
PL274	0.00 dB
PL275	0.00 dB
PL276	0.00 dB
PL277	0.00 dB
PL278	0.00 dB
PL279	0.00 dB
PL280	0.00 dB
PL281	0.00 dB
PL282	0.00 dB
PL283	0.00 dB
PL284	0.00 dB
PL285	0.00 dB
PL286	0.00 dB
PL287	0.00 dB
PL288	0.00 dB
PL289	0.00 dB
PL290	0.00 dB
PL291	0.00 dB
PL292	0.00 dB
PL293	0.00 dB
PL294	0.00 dB
PL295	0.00 dB
PL296	0.00 dB
PL297	0.00 dB
PL298	0.00 dB
PL299	0.00 dB
PL300	0.00 dB
PL301	0.00 dB
PL302	0.00 dB
PL303	0.00 dB
PL304	0.00 dB
PL305	0.00 dB
PL306	0.00 dB
PL307	0.00 dB
PL308	0.00 dB
PL309	0.00 dB
PL310	0.00 dB
PL311	0.00 dB
PL312	0.00 dB
PL313	0.00 dB
PL314	0.00 dB
PL315	0.00 dB
PL316	0.00 dB
PL317	0.00 dB
PL318	0.00 dB
PL319	0.00 dB
PL320	0.00 dB
PL321	0.00 dB
PL322	0.00 dB
PL323	0.00 dB
PL324	0.00 dB
PL325	0.00 dB
PL326	0.00 dB
PL327	0.00 dB
PL328	0.00 dB
PL329	0.00 dB
PL330	0.00 dB
PL331	0.00 dB
PL332	0.00 dB
PL333	0.00 dB
PL334	0.00 dB
PL335	0.00 dB
PL336	0.00 dB
PL337	0.00 dB
PL338	0.00 dB
PL339	0.00 dB
PL340	0.00 dB
PL341	0.00 dB
PL342	0.00 dB
PL343	0.00 dB
PL344	0.00 dB
PL345	0.00 dB
PL346	0.00 dB
PL347	0.00 dB
PL348	0.00 dB
PL349	0.00 dB
PL350	0.00 dB
PL351	0.00 dB
PL352	0.00 dB
PL353	0.00 dB
PL354	0.00 dB
PL355	0.00 dB
PL356	0.00 dB
PL357	0.00 dB
PL358	0.00 dB
PL359	0.00 dB
PL360	0.00 dB
PL361	0.00 dB
PL362	0.00 dB
PL363	0.00 dB
PL364	0.00 dB
PL365	0.00 dB
PL366	0.00 dB
PL367	0.00 dB
PL368	0.00 dB
PL369	0.00 dB
PL370	0.00 dB
PL371	0.00 dB
PL372	0.00 dB
PL373	0.00 dB
PL374	0.00 dB
PL375	0.00 dB
PL376	0.00 dB
PL377	0.00 dB
PL378	0.00 dB
PL379	0.00 dB
PL380	0.00 dB
PL381	0.00 dB
PL382	0.00 dB
PL383	0.00 dB
PL384	0.00 dB
PL385	0.00 dB
PL386	0.00 dB
PL387	0.00 dB
PL388	0.00 dB
PL389	0.00 dB
PL390	0.00 dB
PL391	0.00 dB
PL392	0.00 dB
PL393	0.00 dB
PL394	0.00 dB
PL395	0.00 dB
PL396	0.00 dB
PL397	0.00 dB
PL398	0.00 dB
PL399	0.00 dB
PL400	0.00 dB
PL401	0.00 dB
PL402	0.00 dB
PL403	0.00 dB
PL404	0.00 dB
PL405	0.00 dB
PL406	0.00 dB
PL407	0.00 dB
PL408	0.00 dB
PL409	0.00 dB
PL410	0.00 dB
PL411	0.00 dB
PL412	0.00 dB
PL413	0.00 dB
PL414	0.00 dB
PL415	0.00 dB
PL416	0.00 dB
PL417	0.00 dB
PL418	0.00 dB
PL419	0.00 dB
PL420	0.00 dB
PL421	0.00 dB
PL422	0.00 dB
PL423	0.00 dB
PL424	0.00 dB
PL425	0.00 dB
PL426	0.00 dB
PL427	0.00 dB
PL428	0.00 dB
PL429	0.00 dB
PL430	0.00 dB
PL431	0.00 dB
PL432	0.00 dB
PL433	0.00 dB
PL434	0.00 dB
PL435	0.00 dB
PL436	0.00 dB
PL437	0.00 dB
PL438	0.00 dB
PL439	0.00 dB
PL440	0.00 dB
PL441	0.00 dB
PL442	0.00 dB
PL443	0.00 dB
PL444	0.00 dB
PL445	0.00 dB
PL446	0.00 dB
PL447	0.00 dB
PL448	

5.584
5.580
5.575
5.560
5.556
5.538
5.462
5.444
5.440
5.426
5.421
5.417
4.875
4.873
4.865
4.864
4.256
4.248
4.239
4.236
4.125
4.118
4.106
4.100
4.078
4.071
4.067
4.060
4.054
4.047
4.044
4.037
3.879
3.865
3.851
3.843
3.647
3.644
3.619
3.493
3.467
2.977
2.367
2.349
2.332
2.245
2.232
2.227
2.223
2.215
2.208
2.202
2.197
2.190
2.179
2.168
2.156
2.145
2.133
2.051
2.047
2.040
2.037
2.017

12a

1.000
1.016
0.994
0.991
1.027
1.119
1.082
1.061
1.043
2.210
2.188
0.943
2.240
5.241
1.174
3.721
5.647
10.441
3.423
6.412

F1 - Acquisition Parameters
 Date: 20030715
 Time: 22:00
 INSTRUM: spect
 PROBRD: 5 mm QNP 1H
 PULPROG: zgpg30
 ID: 12a
 SOLVENT: CDCl3
 NS: 16
 DS: 0
 SWH: 5592.341 Hz
 FIDRES: 0.170680 Hz
 AQ: 2.925092 sec
 RG: 35.9
 DW: 89.400 sec
 DE: 4.50 sec
 TE: 300.0 K
 DI: 1.0000000 sec
 CHANNEL f1
 NUC1: 1H
 P1: 9.00 sec
 PL1: 0.00 dB
 SFO1: 400.132007 MHz
 F2 - Processing parameters
 SI: 16384
 SF: 400.130133 MHz
 WDW: EM
 SSF: 0
 LB: 0.00 Hz
 GB: 0
 PC: 1.00

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 ppm

- 130.599
- 130.484
- 129.352
- 128.118
- 119.959
- 100.080
- 83.428
- 81.021
- 77.546
- 77.418
- 77.321
- 77.229
- 76.910
- 74.559
- 72.055
- 35.077
- 32.096
- 30.356
- 29.889
- 26.277
- 25.944
- 25.420
- 23.136
- 22.088
- 18.372
- 16.640

- 4.750
- 4.764

Current Data Parameters
NAME JP-2-125c
EXPNO 13
PROCNO 1

F2 - Acquisition Parameters
Date_ 20070715
Time 17:16
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 0
DS 0
SWH 2773.912 Hz
FIDRES 0.014641 Hz
AQ 1.209124 sec
RG 919.2
DWT 18.400 sec
DE 4.50 sec
TE 300.0 K
D1 3.0000000 sec
D11 0.0000000 sec
D13 0.0000000 sec
D15 0.0000000 sec
D16 0.0000000 sec
D17 0.0000000 sec
D18 0.0000000 sec

CHARGE 11
NAME 12
EXPNO 13
PROCNO 1

CHARGE 12
NAME 12
EXPNO 13
PROCNO 1

F2 - Processing parameters
SI 32768
SF 400.146360 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

9.568
7.285
6.957
6.945
6.917
6.906
6.429
6.425
6.409
6.405
6.390
6.386
6.369
6.366
5.553
5.544
5.526
5.512
5.498
5.480
5.470
4.510
4.493
4.489
4.486
4.482
4.478
4.474
4.470
4.332
4.324
4.320
4.311
4.300
4.295
4.219
4.212
4.206
4.194
4.188
4.181
3.933
3.925
3.920
3.913
3.906
3.763
3.754
2.393
2.385
2.376
2.358
2.349
2.347
2.336
2.325
2.312
2.259
2.242
2.224
2.206
2.193
2.179
2.163
2.137

13

Current Data Parameters
NAME: 7p-2-183b
EXPNO: 1
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20100811
Time: 20.47
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 16
DS: 0
SWH: 25972.441 Hz
FIDRES: 0.170680 Hz
AQ: 2.9293992 sec
RG: 32
RW: 89.400 sec
DB: 4.50 sec
TE: 300.0 K
D1: 3.0000000 sec

CHANNEL f1
NUC1: 1H
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 400.150007 MHz

F2 - Processing parameters
SI: 16384
SF: 400.1500074 MHz
WDW: EM
SSB: 0
CB: 0.00 Hz
GC: 1.00

194.162

153.089

133.049
130.413
127.11783.047
80.938
77.543
77.226
76.907
72.754
71.98234.753
32.105
26.179
25.106

16.597

13

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

Current Data Parameters
NAME JP-2-135b
EXTNO 13
PROCNO 1F2 - Acquisition Parameters
Date_ 2003/7/16
Time 17:24INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30TD 65536
SOLVENT CDCl3NS 0
DS 0SWH 27173.912 Hz
FIDRES 0.416461 HzAQ 1.2059124 sec
RG 919.3DWE 18.400 umsec
DE 4.50 umsecTE 300.0 K
D1 3.00000000 secD11 0.05000000 sec
D15 0.00000000 sec

D20 0.00700000 sec

NAME JP-2-135b
EXTNO 13
PROCNO 1F2 - Processing Parameters
SI 32768
SF 800.617576 MHzWDW 0
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

Current Data Parameters
NAME: 13a
EXPNO: 1
PROCNO: 1

13C NMR Parameters
Date_: 20090118
Time: 10.11
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 32768
SOLVENT: CDCl3
NS: 32
DS: 0
SWH: 25978.41 Hz
FIDRES: 0.170660 Hz
AQ: 2.955072 sec
RG: 40.3
DVT: 68.400 sec
DE: 4.50 sec
TE: 300.0 K
D1: 3.0000000 sec

CHANNEL f1
NUC1: 13C
P1: 9.00 sec
PL1: 0.00 dB
SFO1: 401.32007 MHz

PC-Processing parameters
SI: 16384
SF: 401.300187 MHz
WDW: EM
SSB: 0
LB: 0.00 Hz
GB: 0
RC: 1.00

193.614

154.333
136.245
136.202
135.999
135.900
134.177
133.755
133.441
133.401
132.810
130.282
130.187
129.987
129.957
129.847
129.291
128.059
127.933
127.822
127.787
127.714
127.070
119.863

80.831
79.750
77.543
77.227
76.909
74.882
74.700

37.819
32.257
29.902
27.239
27.183
27.065
26.325
25.361
19.684
19.265
16.562

13a

190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 ppm

Current Data Parameters
NAME JP-2-21b
EXPNO 13
PROCNO 1
F2 - Acquisition Parameters
Date_ 20080118
Time 18.18
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 975
DS 0
SWH 27713.912 Hz
FIDRES 0.416641 Hz
AQ 1.2099124 sec
RG 1158.2
DV 16.400 sec
DE 4.50 sec
TE 300.2 K
D1 3.00000000 sec
D11 0.05000000 sec
D13 0.00000000 sec
D20 0.00700000 sec

CHANNEL F1
NUC1 13C
IC 13C
P1 16.50 sec
P2 21.00 sec
PL1 0.00 dB
PL2 0.00 dB
SFO1 100.62593 MHz

CHANNEL 2
CHRG2 1H
NUC2 1H
IC 1H
P1 9.00 sec
P2 120.00 dB
PL1 18.00 dB
PL2 18.00 dB
SFO2 400.150007 MHz

F2 - Processing parameters
SI 32768
SF 1006.1705 MHz
WDW 0
SSB 0
GB 1.00 Hz
PC 1.00

5.675
5.601
5.585
5.562
5.546
5.440
5.420
5.413
5.397
5.394
5.377
5.297
5.245
5.226
5.208
5.199
5.181
4.456
4.441
4.425
4.410
3.986
3.968
3.953
3.931
3.915
3.900
3.888
3.874
3.632
3.617
3.608
3.603
3.594
3.579
2.303
2.291
2.281
2.272
2.267
2.252
2.245
2.234
2.209
2.144
2.125
2.107
2.093
2.074
2.064
2.047
2.032
2.016
1.999
1.894
1.880
1.863
1.856
1.848
1.839
1.824
1.589
1.579
1.560
1.542
1.523

14a

Channel Data Parameters
NAME JP-2-23a
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030901
Time 23.56
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 16
DS 0
SWH 5972.841 Hz
FIDRES 0.170680 Hz
AQ 2.9750971 sec
RG 319
RG 319
DWT 97.400 sec
DE 4.50 sec
TE 300.0 K
D1 3.000000 sec

CHANNEL f1
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.133007 MHz

F2 - Processing parameters
SI 16384
SF 400.133007 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
PC 1.00

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm

136.73
136.35
136.22
136.12
136.02
134.47
134.08
133.89
129.99
129.83
129.04
128.04
127.82
127.77
127.71
127.70
127.36

82.731
79.322
77.543
77.226
76.908
74.980
74.706
72.647

38.050
36.94
32.344
32.000
29.91
27.26
27.12
26.28
25.41
25.36
22.808
19.72
19.40
16.54
14.30

Current Data Parameters
NAME 14a
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 20050602
Time 0.08
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 6751
DS 0
SWH 21713.912 Hz
FIDRES 0.614641 Hz
AQ 1.2059124 sec
RG 9195.2
DVI 16.400 sec
DE 4.50 sec
TE 300.0 K
D1 3.0000000 sec
D11 0.0500000 sec
D13 0.0500000 sec
D20 0.0070000 sec

CHANNEL F1
NUC1 13C
P1 16.50 sec
PL1 21.00 dB
PL2 0.00 dB
SFO1 100.6261250 MHz

CHANNEL F2
CPDPRG2 waltz16
NUC2 1H
P2 9.10 sec
PL2 120.00 dB
PL3 18.00 dB
SFO2 400.1500007 MHz

F2 - Processing parameters
SI 32768
SF 100617.250 MHz
WDW 0
SSB 0
LB 1.00 Hz
GB 0
PC 1.00

Current Data Parameters
NAME JP-2-243b
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20050902
Time 21:34
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 32768
FIDRES 0.170680 Hz
SOLVENT CDCl3
NS 0
DS 0
SWH 5592.241 Hz
FIDRES 0.170680 Hz
AQ 2.8725092 sec
RG 313
RG 89.400 sec
DE 4.50 sec
TE 300.0 K
D1 1.0000000 sec

===== CHANNEL f1 =====
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.152007 MHz

F2 - Processing parameters
SI 16384
SF 400.1500180 MHz
WDW 0
SSB 0
LB 0.00 Hz
GB 0
RC 1.00

136.900
136.716
136.343
136.232
136.158
136.080
136.004
134.447
133.974
133.947
133.861
129.987
129.937
129.879
129.852
129.745
129.072
128.102
128.051
127.817
127.779
127.730
127.715
127.367
120.025

82.771
79.817
79.302
77.551
77.234
76.916
74.839
72.630

38.136
36.998
32.269
32.145
32.025
29.915
29.582
28.592
27.284
27.123
26.308
25.344
25.322
22.911
22.788
19.70
19.41
17.21
16.56
14.30

14b

160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm

Current Data Parameters:
NAME: JP-2-75B
EXTNO: 15
PROCNO: 1

F2 - Acquisition Parameters
Date_: 20080902
Time: 21.44
INSTRUM: spect
PROBHD: 5 mm QNP 1H
PULPROG: zgpg30
TD: 65536
SOLVENT: CDCl3
NS: 667
DS: 0
SWH: 2173.912 Hz
FIDRES: 0.416641 Hz
AQ: 1.259124 sec
RG: 115812
DQ: 18.400 sec
DV: 4.50 sec
TE: 300.0 K
D1: 3.0000000 sec
D11: 0.0500000 sec
D13: 0.0000000 sec
D20: 0.0070000 sec

CHANNEL F1 --
NUC1: 13C
P1: 10.50 sec
PL1: 21.00 sec
PL12: 0.00 dB
SFO1: 100.6285 MHz

CHANNEL F2 --
CROSS2: VARIAS
NUC2: 1H
P2: 9.50 sec
PL2: 19.00 dB
PL12: 18.00 dB
SFO2: 400.150007 MHz

F2 - Processing parameters
SI: 32768
SF: 806.617518 MHz
WDW: EM
SSB: 0
LB: 1.00 Hz
GB: 0
PC: 1.00

Current Data Parameters
NAME JP-2-245a
EXPNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 200903
Time 21.24
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 64
DS 0
SWH 597.244 Hz
FIDRES 0.170680 Hz
AQ 2.675092 sec
RG 81.5
RG2 89.470 sec
DE 4.90 sec
TE 300.2 K
D1 3.0000000 sec

CHANNEL f1
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.150007 MHz

F2 - Processing parameters
SI 16384
SF 400.130077 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
RC L00

180.513
173.985
166.050
160.493
142.999
142.063
136.271
136.191
136.021
135.937
134.321
133.763
133.610
133.382
131.266
130.120
129.938
129.908
129.845
129.232
127.944
127.884
127.761
127.12
114.76

86.790
81.352
79.652
77.543
77.226
76.905
75.008
74.619
66.861

52.45
44.10
39.75
37.87
32.27
31.67
29.90
27.23
27.05
26.30
25.35
23.88
22.68
19.70
19.21
16.54
14.11
5.68

14c

Current Data Parameters
NAME JP-2-245
EXPNO 13
PROCNO 1

F2 - Acquisition Parameters
Date_ 20090903
Time 21.36
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 0
DS 0
SWH 20713.912 Hz
FIDRES 0.414641 Hz
AQ 1.2059134 sec
RG 9195.2
DE 18.400 umsec
TE 300.0 K
D1 3.0000000 sec
D11 6.0000000 sec
D13 6.0000000 sec
D20 6.0070000 sec

CHANNEL f1
NUC1 13C
P1 16.50 umsec
PL1 21.00 umsec
PL2 0.00 dB
SFO1 100.62575 MHz

CHANNEL f2
CPDPRG2 waltz16
NUC2 1H
PCPD2 95.00 umsec
PL2 120.00 dB
PL12 18.00 dB
SFO2 400.130007 MHz

F2 - Processing parameters
SI 3746
SF 400.130007 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
RC 1.00

Current Data Parameters
NAME 7P-2-1364
EXPNO 1
PROCNO 1
F2 - Acquisition Parameters
Date_ 200804
Time 1:57
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 112
DS 0
SWH 5597.841 Hz
FIDRES 0.170680 Hz
AQ 2.625062 sec
RG 90.5
DVI 88.400 sec
DE 4.50 sec
TE 300.0 K
D1 3.0000000 sec
===== CHANNEL f1 =====
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.150007 MHz
F2 - Processing parameters
SI 16384
SF 400.150006 MHz
WDW EM
SSB 0
LB 0.00 Hz
GB 0
RC 1.00

C:\msdchem\1\164c
 NAME 164c
 EXPNO 1
 PROCNO 1
 F2 - Acquisition Parameters
 Date_ 200803
 Time 0.20
 INSTRUM spect
 PROBRD 5 mm QNP 1H
 PULPROG zgpg30
 TD 32768
 SCALED 373
 NS 0
 DS 0
 SWH 5592.441 Hz
 FIDRES 0.170680 Hz
 AQ 1.975092 sec
 RG 64
 DVI 320.400 mm
 DE 4.50 mm
 TE 300.0 K
 D1 3.0000000 sec
 CHANNEL f1
 NUC1 1H
 P1 9.00 sec
 PL1 0.00 dB
 SFO1 400.13007 MHz
 F2 - Processing parameters
 SI 16384
 SF 400.130053 MHz
 WDW EM
 SSB 0
 LB 0.00 Hz
 GB 0
 RC 1.00

Current Data Parameters
NAME 15a
EXTNO 1
PROCNO 1

F2 - Acquisition Parameters
Date_ 20030814
Time 23.46
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 32768
SOLVENT CDCl3
NS 2
DS 0
SWH 3572.441 Hz
FIDRES 0.170680 Hz
AQ 1.2923092 sec
RG 90.5
DWT 89.400 sec
DE 4.50 sec
TE 300.2 K
D1 3.000000 sec

CHANNEL f1
NUC1 1H
P1 9.00 sec
PL1 0.00 dB
SFO1 400.150007 MHz

F2 - Processing parameters
SI 16384
SF 400.150070 MHz
WDW EM
SSB 0
GB 0.00 Hz
PC 1.00

174.281

137.923

132.071

126.093

125.954

84.203

80.511

77.551

77.234

76.916

73.141

72.301

72.153

51.765

37.131

34.500

33.620

32.136

32.012

29.920

26.920

25.343

24.907

22.799

14.247

15a

Current Data Parameters	
NAME	JP-2-201a
EXTNO	13
PROCNO	1
F2 - Acquisition Parameters	
Date_	200814
Time	23.55
INSTRUM	spec
PROBHD	5 mm QNP 1H
PULPROG	zgpg30
TD	65536
SOLVENT	CDCl3
NS	765
DS	0
SWH	2717.912 Hz
FREQH	0.414641 Hz
AQ	1.2059124 sec
RG	115812
DTW	18.400 sec
DES	4.50 sec
TE	300.2 K
D1	3.0000000 sec
D11	0.0500000 sec
D13	0.0500000 sec
D20	0.0070000 sec
CHANNEL 1	
NUC1	13C
P1	18.50 sec
P2	21.00 sec
PL1	0.00 dB
PL2	0.00 dB
PL3	0.00 dB
PL4	0.00 dB
PL5	0.00 dB
PL6	0.00 dB
PL7	0.00 dB
PL8	0.00 dB
PL9	0.00 dB
PL10	0.00 dB
PL11	0.00 dB
PL12	0.00 dB
PL13	0.00 dB
PL14	0.00 dB
PL15	0.00 dB
PL16	0.00 dB
PL17	0.00 dB
PL18	0.00 dB
PL19	0.00 dB
PL20	0.00 dB
PL21	0.00 dB
PL22	0.00 dB
PL23	0.00 dB
PL24	0.00 dB
PL25	0.00 dB
PL26	0.00 dB
PL27	0.00 dB
PL28	0.00 dB
PL29	0.00 dB
PL30	0.00 dB
PL31	0.00 dB
PL32	0.00 dB
PL33	0.00 dB
PL34	0.00 dB
PL35	0.00 dB
PL36	0.00 dB
PL37	0.00 dB
PL38	0.00 dB
PL39	0.00 dB
PL40	0.00 dB
PL41	0.00 dB
PL42	0.00 dB
PL43	0.00 dB
PL44	0.00 dB
PL45	0.00 dB
PL46	0.00 dB
PL47	0.00 dB
PL48	0.00 dB
PL49	0.00 dB
PL50	0.00 dB
PL51	0.00 dB
PL52	0.00 dB
PL53	0.00 dB
PL54	0.00 dB
PL55	0.00 dB
PL56	0.00 dB
PL57	0.00 dB
PL58	0.00 dB
PL59	0.00 dB
PL60	0.00 dB
PL61	0.00 dB
PL62	0.00 dB
PL63	0.00 dB
PL64	0.00 dB
PL65	0.00 dB
PL66	0.00 dB
PL67	0.00 dB
PL68	0.00 dB
PL69	0.00 dB
PL70	0.00 dB
PL71	0.00 dB
PL72	0.00 dB
PL73	0.00 dB
PL74	0.00 dB
PL75	0.00 dB
PL76	0.00 dB
PL77	0.00 dB
PL78	0.00 dB
PL79	0.00 dB
PL80	0.00 dB
PL81	0.00 dB
PL82	0.00 dB
PL83	0.00 dB
PL84	0.00 dB
PL85	0.00 dB
PL86	0.00 dB
PL87	0.00 dB
PL88	0.00 dB
PL89	0.00 dB
PL90	0.00 dB
PL91	0.00 dB
PL92	0.00 dB
PL93	0.00 dB
PL94	0.00 dB
PL95	0.00 dB
PL96	0.00 dB
PL97	0.00 dB
PL98	0.00 dB
PL99	0.00 dB
PL100	0.00 dB

15b

Current Data Parameters
NAME 7p-2-157a
EXTNO 1
PROCNO 1

PT - Acquisition Parameters
Date_ 20130814
Time 138
INSTRUM spect
PROBHD 5 mm QNP 1H
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 2
DS 0
SWH 5592.841 Hz
FIDRES 0.170800 Hz
AQ 2.9720972 sec
RG 50.5
DE 87.400 mmsec
TE 300.2 K
D1 3.00000000 sec

NUC1 1H
P1 9.00 mmsec
PL1 0.00 dB
SFO1 400.150007 MHz

PT - Processing parameters
SI 16384
SF 400.150150 MHz
WDW EM
SSB 0
LB 6.00 Hz
GB 0
PC 1.00

- 174.26
- 136.499
- 131.334
- 126.724
- 126.378

- 83.175
- 80.363
- 77.543
- 77.228
- 76.910
- 73.055
- 72.322
- 71.947

- 51.766

- 36.660
- 34.193
- 33.609
- 32.369
- 31.924
- 29.911
- 26.918
- 25.532
- 24.893
- 22.807
- 14.341
- 14.274

Channel 11	
NAME	15b
EXPNO	1
PROCNO	1
F2 - Acquisition Parameters	
Date_	20080114
Time	1.48
INSTRUM	spec
PROBHD	5 mm QNP 1H
PULPROG	zgpg30
TD	65536
SOLVENT	CDCl3
NS	648
DS	0
SWH	2173.912 Hz
FIDRES	0.414641 Hz
AQ	1.209124 sec
RG	115812
DW	18.400 sec
DE	4.50 sec
TE	300.0 K
D1	3.0000000 sec
D11	0.0000000 sec
D13	0.0000000 sec
D28	0.0070000 sec
Channel 12	
NAME	15b
EXPNO	1
PROCNO	1
F2 - Processing Parameters	
SI	32768
SF	100.627518 MHz
WDW	EM
SF0	0
GB	1.00 Hz
PC	1.00