Supporting Information

Concise Synthesis of Novel Practical Sulfamide-Amine Alcohols for the Enantioselective Addition of Diethylzinc to Aldehydes

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General Experimental Methods

All reactions were carried out under an argon atmosphere condition and monitored by thin layer chromatography (TLC). Column chromatography purifications were performed using silica gel. All solvents were dried and degassed by standard methods and all aldehydes and diethylzinc were commercially available. Melting points were determined using a standard melting point apparatus and are uncorrected. ^1H and ^{13}C NMR spectra were measured on a 400 MHz NMR spectrometer with TMS as an internal reference. CDCl_3 was used as the solvent for all NMR spectra unless otherwise stated. Optical rotations were measured with a high sensitive polarimeter. High resolution mass spectra (HRMS) were measured with APCI. Enantiomeric excess (ee) determination was carried out using GC with a chiral cyclodex β -2, 3, 6-M, 30 m $\times$ 0.32 mm capillary column and HPLC with a Daicel Chiracel OD-H column; Solvent, 90:10 hexane/isopropanol; Flow rate 1 mL.min $^{-1}$; 219 nm UV Detection.

Determination of Enantiomeric Excesses¹⁻⁴

(±)-1-Phenyl-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 120 °C constant, t_R = 25.81 min for (*R*) and t_R = 27.44 min for (*S*).

(±)-1-(4-Chlorophenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 160 °C constant, t_R = 17.83 min for (*R*) and t_R = 18.16 min for (*S*).

(±)-1-(4-methylphenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 135 °C constant, t_R = 21.84 min for (*R*) and t_R = 22.69 min for (*S*).

(±)-1-(4-fluorophenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 135 °C constant, t_R = 18.60 min for (*R*) and t_R = 19.17 min for (*S*).

(±)-1-(4-methoxyphenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 150 °C constant, t_R = 34.29 min for (*R*) and t_R = 34.94 min for (*S*).

(±)-1-(4-Bromophenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 160 °C constant, t_R = 27.15 min for (*R*) and t_R = 27.61 min for (*S*).

(±)-1-(2-methoxyphenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 160 °C constant, t_R = 16.82 min for (*R*) and t_R = 18.25 min for (*S*).

(±)-1-(2-Chlorophenyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 135 °C constant, t_R = 26.52 min for (*R*) and t_R = 27.18 min for (*S*).

(±)-1-(1-Naphthyl)-1-propanol: GC analysis (Chiral cyclodex capillary β column), at 140 °C constant, t_R = 18.08 min for (*R*) and t_R = 24.05 min for (*S*).

(±)-5-Methylhexan-3-ol: GC analysis (Chiral cyclodex capillary β column), at 40 °C constant, t_R = 3.66 min for (*R*) and t_R = 5.65 min for (*S*).

(±)-1-Cyclohexyl-1-propanol: GC analysis of the acetate derivative of the product. (Chiral cyclodex capillary β column), at 120 °C constant, t_R = 20.07 min for (*R*) and t_R = 21.00 min for (*S*).

(±)-1-Phenyl-3-pentanol: HPLC analysis (Chiral OD-H column eluted with hexanes:2-propanol (90:10)), t_R = 7.56 min for (*R*) and t_R = 11.34 min for (*S*).

(±)-4-Phenyl-4-but-3-(E)-en-2-ol: HPLC analysis (Chiral OD-H column eluted with hexanes:2-propanol (90:10)), t_R = 4.60 min for (*R*) and t_R = 5.51 min for (*S*).

References:

1. (a) Huang, W. -S.; Hu, Q. -S.; Pu, L. *J. Org. Chem.* **1998**, *63*, 1364-1365 (see also supporting information therein). (b) Huang, W. -S.; Pu, L. *J. Org. Chem.* **1999**, *64*, 4222-4223.
2. Paquette, L. A.; Zhou, R. *J. Org. Chem.* **1999**, *64*, 7929-7934.
3. Dai, W.-M.; Zhu, H.-J.; Hao, X.-J. *Tetrahedron: Asymmetry* **2000**, *11*, 2315-2337.
4. Sprout, C. M.; Seto, C. T. *J. Org. Chem.* **2003**, *68*, 7788-7794.

¹H NMR (Mao21 in CDCl₃)

2.823
2.809
2.795
2.730
2.713
2.697
2.477
2.439
2.396
1.946
1.008
0.991

4.570
4.587
5.288

7.562
7.542
7.372
7.353
7.328
7.311
7.296
7.293
7.276
7.252
7.232

ppm

¹³C NMR (Mao21 in CDCl₃)

Modelo base: $\ln(\text{PI}) = 0.000000 + 0.000000 \cdot \ln(\text{PI}) - 1.03 \cdot 10^{-5} \cdot \ln(\text{PI}) - 1.65 \cdot 10^{-6} \cdot \ln(\text{PI}) - 4.99 \cdot 10^{-6} \cdot \ln(\text{PI})$ $\Delta C^2 = 0.000000$ $\Delta C^2_{\text{PI}} = 0.000000$

Printed: 15:15, April 23, 2004

¹H NMR (Maol3 in CDCl3)

¹³C NMR (Mao13 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Spec (15100) (T 4.0004.00) 0.00 (T 4.0004.00) 100.000 (T 4.0004.00) ASC => MCI (P = 342.3, 353)

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--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCIEX Heater         300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass             100.00
Last Mass              1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode       Manual
Syringe Pump Mode      Disabled
Min Analyzer Mass      40.00
Max Analyzer Mass      4000.00
```

Acquired: Apr 23 14:53:00 2004
Mariner Mass Spectrum
E:\WP2\MJC\04-04-23\2-001.dat

Printed: 15:10, April 23, 2004

¹H NMR (MeOH-*d*₄ in CDCl₃)

¹³C NMR (Maol1 in CDCl₃)

ppm

Applied Biosystems Mariner System 5303

```
--> Mariner System State <--
Instrument State      ON
Ion Polarity         NEG
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0246848E-007
Calibration Constant B 65.189335
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   3502.15
SCIEX Heater         300.05
--> API Interface Settings <--
Nozzle Potential      80.08
Skimmer 1 Potential   10.01
Quadrupole DC Potential 5.49
Deflection Voltage    -0.29
Einzel Lens Potential -24.00
Quadrupole RF Voltage 999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   199.99
Pull Bias Potential     5.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1949.98
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Seconds Per Spectrum    3.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra      OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra        OFF
--> System Settings <--
Gas Control Mode        Manual
Syringe Pump Mode       Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
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Acquired: Apr 22 09:13:00 2004
 Mariner Mass Spectrum
 E:\WF2\MJC\04-04-22\2-001.dat

Printed: 10:29, April 22, 2004

¹H NMR (Mao12 in CDCl₃)

¹³C NMR (Mao12 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Scan (33.36 (T) 1.42 (1.76) ASC = >MC(EP = 437.2, 487)

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--> Mariner System State <--
Instrument State      ON
Ion Polarity          NEG
Auxiliary Gas         ON
Curtain Gas           ON
Nebulizer Gas         ON
Calibration Constant A 5.0246848E-007
Calibration Constant B 65.189335
TDC Deadtime          10
--> Source Settings <--
Spray Tip Potential    3502.15
SCIEX Heater          300.05
--> API Interface Settings <--
Nozzle Potential       80.08
Skimmer 1 Potential    10.01
Quadrupole DC Potential 5.49
Deflection Voltage     -0.29
Einzel Lens Potential  -24.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature     140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   199.99
Pull Bias Potential     5.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1949.98
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   3.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass              1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode        Manual
Syringe Pump Mode       Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
```

Acquired: Apr 22 09:06:00 2004
Mariner Mass Spectrum
E:\WF2\UJC\04-04-22\1-002.dat

Printed: 10:30, April 22, 2004

¹H NMR (Mao3 in CDCl₃)

¹³C NMR (Mao3 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Spec 7104200 (T 2.810.00) 27.100 (T 2.810.00) 240.240 (T 4.000.00) AXC -> MC [SF = 479.2, 101]

```
--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCEX Heater          300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage    0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage 999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential  499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra      OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode       Manual
Syringe Pump Mode      Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass      4000.00
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Acquired: Apr 23 14:47:00 2004
Mariner Mass Spectrum
E:\WF2\MC\04-04-23\1-001.dar

Printed: 15:03, April 23, 2004

¹³C NMR (Mao24 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Syste /1364594/ (T 43.2555,78) -443 (T -2.112,78) -171281 (T -4.884,88) ABC=>MC[MF = 439.2, 318]

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--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCIEX Heater         300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage 999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential  499.97
Pull Pulse Potential  198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum  1.00
Ion Count Threshold    0.00
First Mass             100.00
Last Mass              1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode       Manual
Syringe Pump Mode      Disabled
Min Analyzer Mass      40.00
Max Analyzer Mass      4000.00
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Acquired: May 18 09:26:00 2004
Mariner Mass Spectrum
E:\WF2\MJC\04-05-18\2-001.dat

Printed: 11:26, May 19, 2004

¹H NMR (Mao8 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Scan 1500000 (T 1.062.66) (-2.48 (T -1.062.66) ASC => MC2(RF = 377.3, 963)

```
--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCIEX Heater         300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum    1.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra      OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra        OFF
--> System Settings <--
Gas Control Mode        Manual
Syringe Pump Mode       Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
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Acquired: May 19 10:38:00 2004
Mariner Mass Spectrum
E:\WF2\UMJC\04-05-19\1-001.dat

Printed: 11:07, May 19, 2004

¹H NMR (Mao7 in CDCl₃)

¹³C NMR (Mao7 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner System 5303 (T-1.10-3.30) - 01-172 (T-1.10-3.30) ASC => MZBP = 453.3, 334

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--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCEX Heater          300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode        Manual
Syringe Pump Mode       Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
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Acquired: May 18 09:15:00 2004
Mariner Mass Spectrum
E:\WF2\MJC\04-05-18\1-001.dat

Printed: 11:23, May 19, 2004

¹H NMR (Mao23 in CDCl₃)

¹³C NMR (Mao23 in CDCl₃)

21.642
23.824
27.344
40.552
54.108
54.344
57.959
63.661
64.732
76.882
77.517
77.199

126.549
127.387
128.529
129.629
137.358
137.718
143.233

ppm

Applied Biosystems Mariner System 5303

Modeler Size: 80000 (IT 2.00(0.70) -0.75 (IT -1.04(1.70) -130.268 (IT -0.00(0.00) ASC => MCTSP = 307.1, 396)

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--> Mariner System State <--
Instrument State                ON
Ion Polarity                    POS
Auxiliary Gas                   ON
Curtain Gas                     ON
Nebulizer Gas                  ON
Calibration Constant A         5.0255052E-007
Calibration Constant B         68.020555
TDC Deadtime                   10
--> Source Settings <--
Spray Tip Potential             4988.67
SCIEX Heater                   300.05
--> API Interface Settings <--
Nozzle Potential                90.09
Skimmer 1 Potential            10.01
Quadrupole DC Potential        6.01
Deflection Voltage              0.29
Einzel Lens Potential           -25.00
Quadrupole RF Voltage          999.76
Quadrupole Temperature         140.01
Nozzle Temperature              140.01
--> Analyzer Settings <--
Push Pulse Potential            499.97
Pull Pulse Potential            198.94
Pull Bias Potential             10.00
Acceleration Potential          3999.94
Reflector Potential             1549.99
Detector Voltage                1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum            1.00
Ion Count Threshold             0.00
First Mass                      100.00
Last Mass                       1000.00
Accumulate Spectra              OFF
Standby at End of Acquisition   OFF
--> Centroid Spectra Settings <--
Centroid Spectra                OFF
--> System Settings <--
Gas Control Mode                Manual
Syringe Pump Mode              Disabled
Min Analyzer Mass                40.00
Max Analyzer Mass               4000.00

```

Acquired: Jun 01 10:03:00 2004
Mariner Mass Spectrum
E:\WF2\MJC\04-06-01\3-001.dat

Printed: 10:37, June 01, 2004

¹H NMR (Mao22 in CDCl₃)

¹³C NMR (Mao22 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Spec 1406070 (T 77.350.000) -276.487 (T -7.323.500) -048.077 (T -4.860.000) ASC = > MC107 = 313.3, 341

```
--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCEX Heater          300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential   499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra      OFF
Standby at End of Acquisition
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode        Manual
Syringe Pump Mode       Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
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(S,R) 10

Acquired: Jun 01 10:07:00 2004
Mariner Mass Spectrum
E:\WF2\MJC\04-06-01\4-001.dat

Printed: 10:41, June 01, 2004

¹³C NMR (Mao9 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Spec 00079 (T 0.12(1.20) 4:40 (T 0.12(1.30) ASC -> MC[BP = 375.2, 799])

```
--> Mariner System State <--
Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCEX Heater          300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage 999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential  499.97
Pull Pulse Potential  198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass             100.00
Last Mass              1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode       Manual
Syringe Pump Mode      Disabled
Min Analyzer Mass      40.00
Max Analyzer Mass      4000.00
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Acquired: May 19 10:43:00 2004
Mariner Mass Spectrum
E:\WP2\MJC\04-05-19\2-001.dat

Printed: 11:10, May 19, 2004

¹H NMR (Mao10 in CDCl₃)

¹³C NMR (Mao10 in CDCl₃)

Applied Biosystems Mariner System 5303

Mariner Spec 05x127 (T 0.000.00) 4.125 (T 1.812.82) 250.442 (T 4.860.00) ABC-->MCTP = 375.2, 391

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Instrument State      ON
Ion Polarity         POS
Auxiliary Gas        ON
Curtain Gas          ON
Nebulizer Gas        ON
Calibration Constant A 5.0255052E-007
Calibration Constant B 68.020555
TDC Deadtime         10
--> Source Settings <--
Spray Tip Potential   4988.67
SCEIX Heater         300.05
--> API Interface Settings <--
Nozzle Potential      90.09
Skimmer 1 Potential   10.01
Quadrupole DC Potential 6.01
Deflection Voltage     0.29
Einzel Lens Potential -25.00
Quadrupole RF Voltage  999.76
Quadrupole Temperature 140.01
Nozzle Temperature    140.01
--> Analyzer Settings <--
Push Pulse Potential  499.97
Pull Pulse Potential   198.94
Pull Bias Potential    10.00
Acceleration Potential 3999.94
Reflector Potential    1549.99
Detector Voltage       1750.06
--> Spectrum Acquisition Settings <--
Seconds Per Spectrum   1.00
Ion Count Threshold     0.00
First Mass              100.00
Last Mass               1000.00
Accumulate Spectra     OFF
Standby at End of Acquisition OFF
--> Centroid Spectra Settings <--
Centroid Spectra       OFF
--> System Settings <--
Gas Control Mode       Manual
Syringe Pump Mode      Disabled
Min Analyzer Mass       40.00
Max Analyzer Mass       4000.00
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Acquired: May 19 10:46:00 2004
Mariner Mass Spectrum
E:\WF2\MFC\04-05-19\3-001.dat

Printed: 11:16, May 19, 2004

¹H NMR (Mao25 in CDCl₃)

¹³C NMR (Mao25 in CDCl₃)