

MS Data Review Active Chromatogram and Spectrum Plots - 6/27/2013 2:28 PM

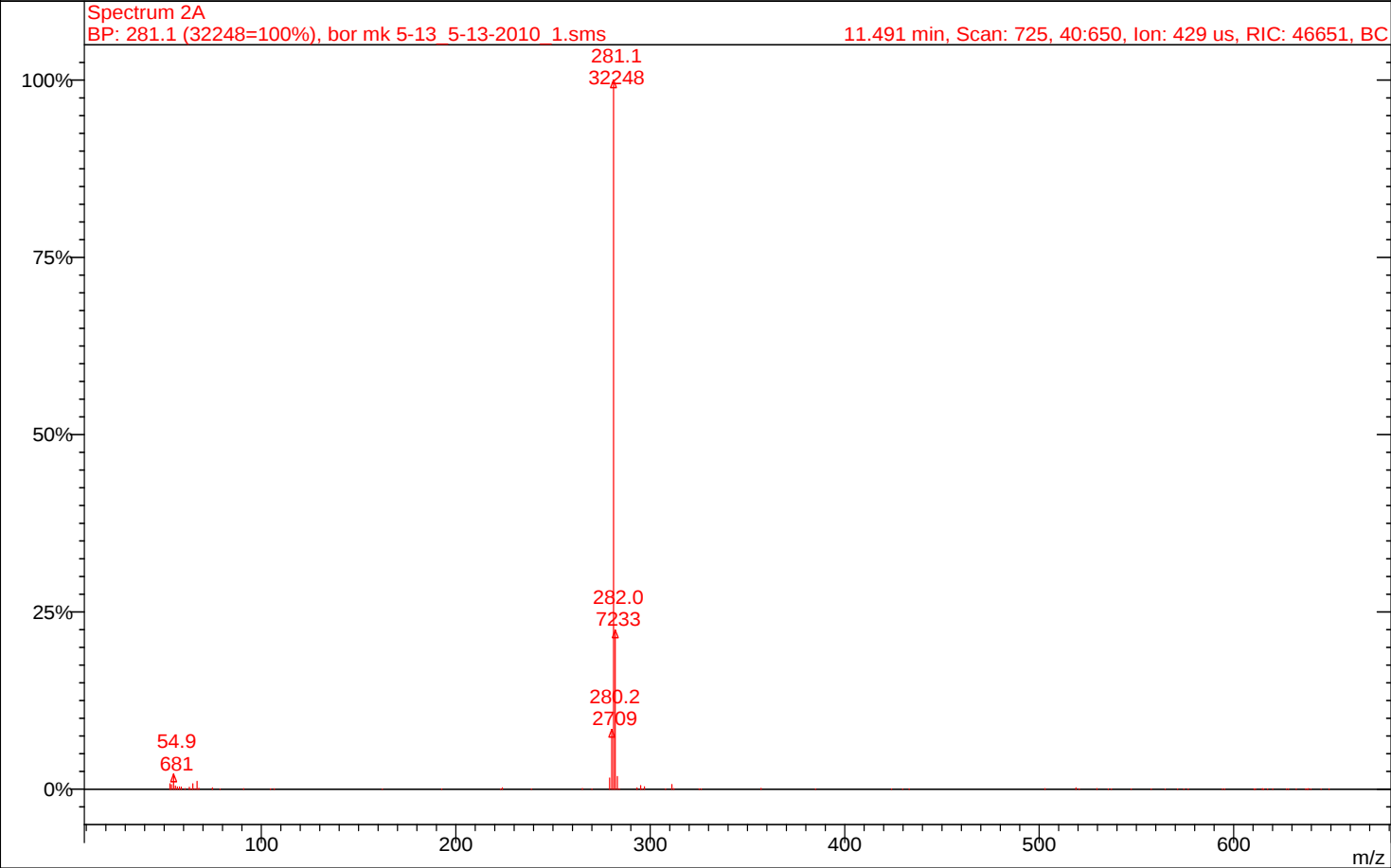
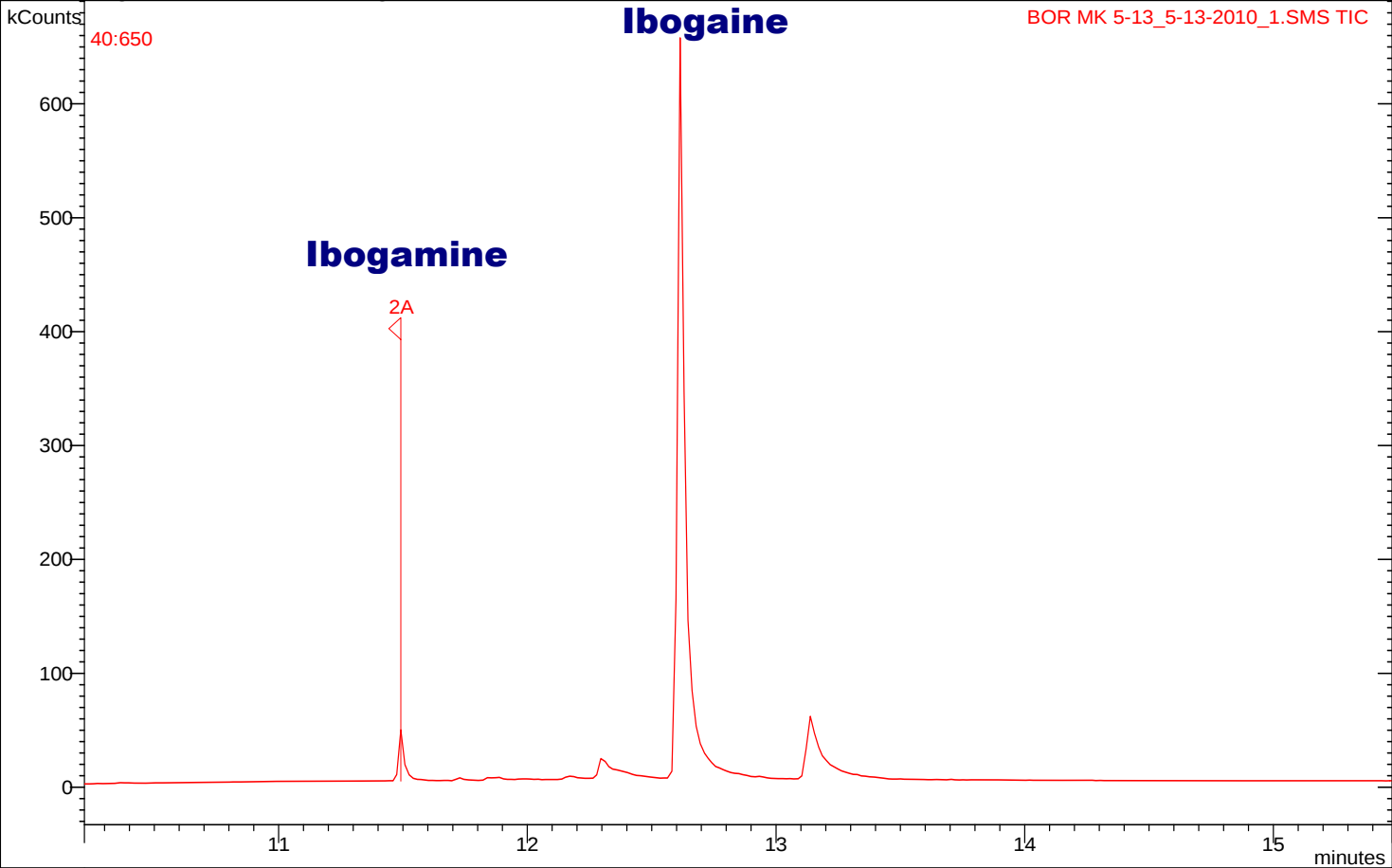
File: c:\varianws\data\martin kuehne\bor mk 5-13_5-13-2010_1.sms

Sample: BOR MK 5-13

Scan Range: 1 - 1625 Time Range: 0.00 - 25.64 min.

Operator: Bruce

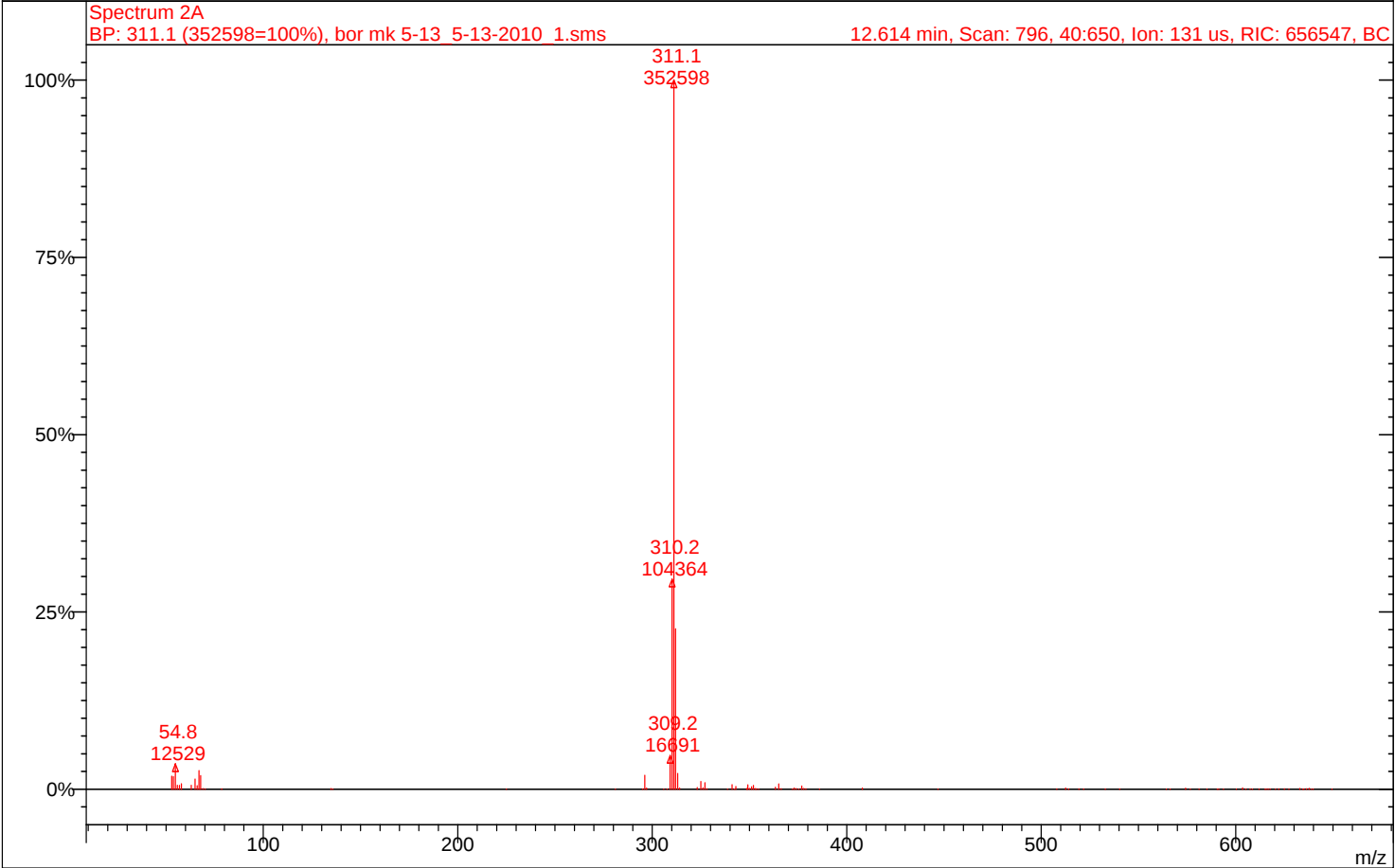
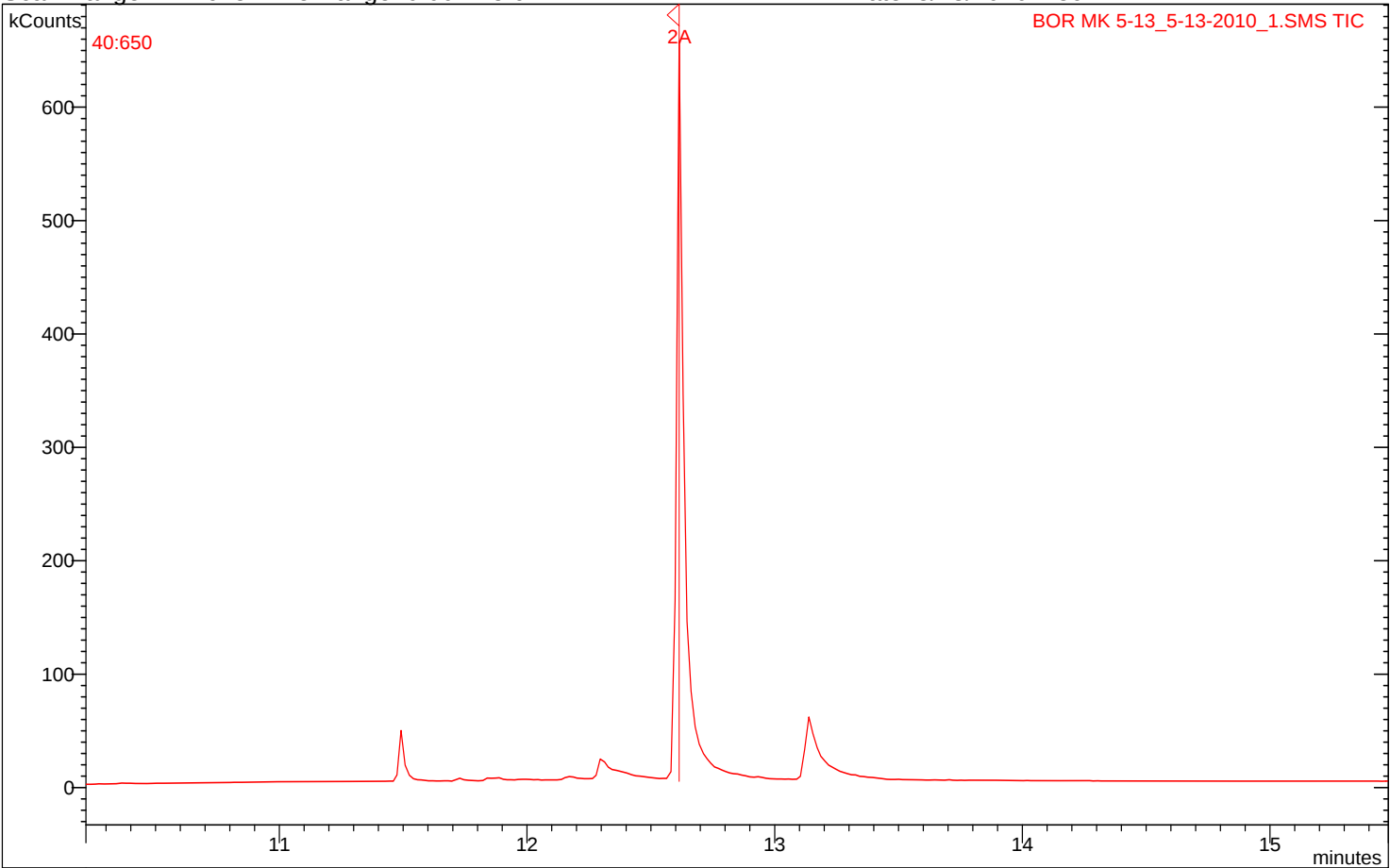
Date: 5/13/2010 1:59 PM



MS Data Review All Plots - 6/27/2013 2:30 PM

File: c:\varianws\data\martin kuehne\bor mk 5-13_5-13-2010_1.sms
Sample: BOR MK 5-13
Scan Range: 1 - 1625 Time Range: 0.00 - 25.64 min.

Operator: Bruce
Date: 5/13/2010 1:59 PM



MS Data Review Active Chromatogram and Spectrum Plots - 6/27/2013 2:31 PM

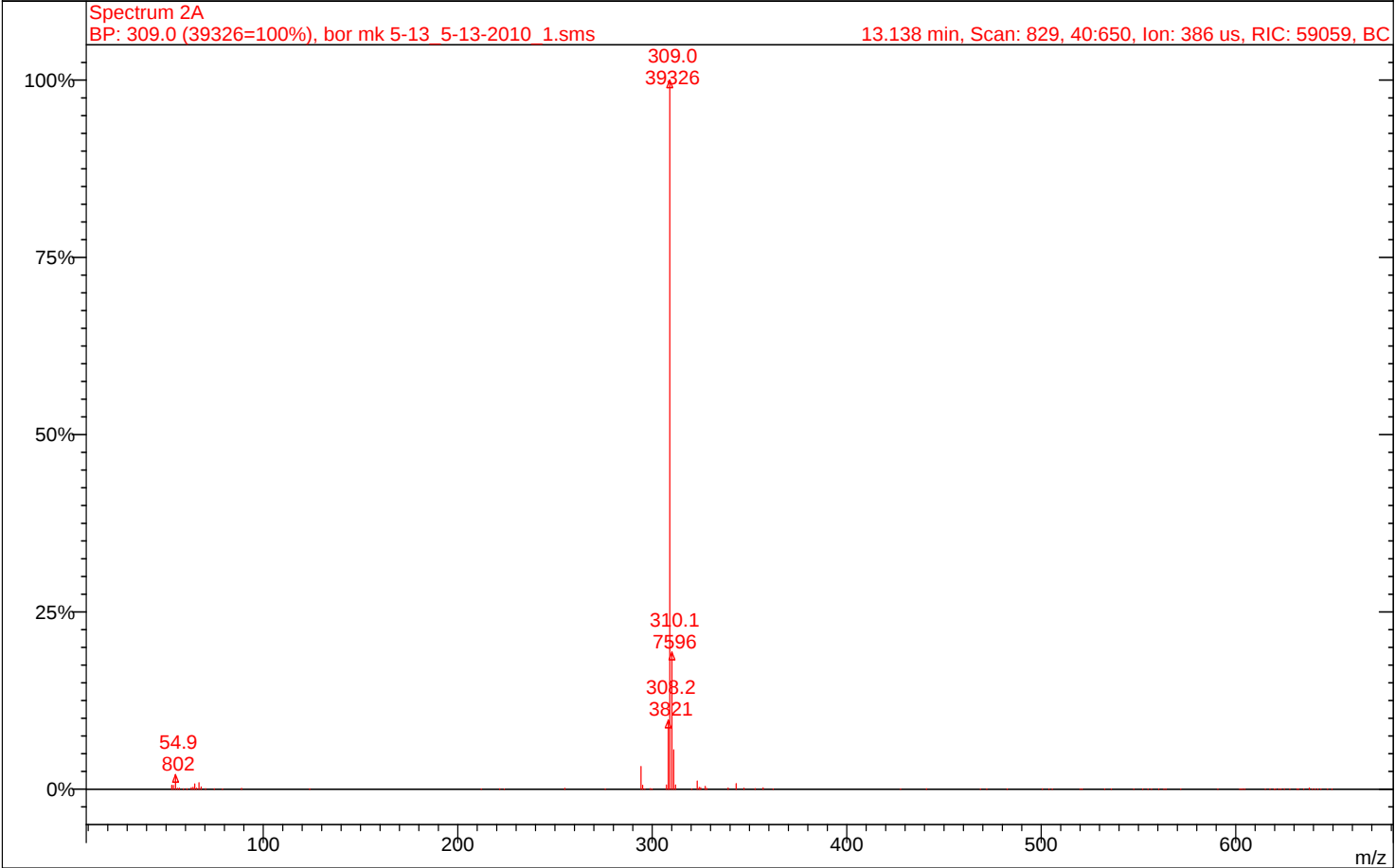
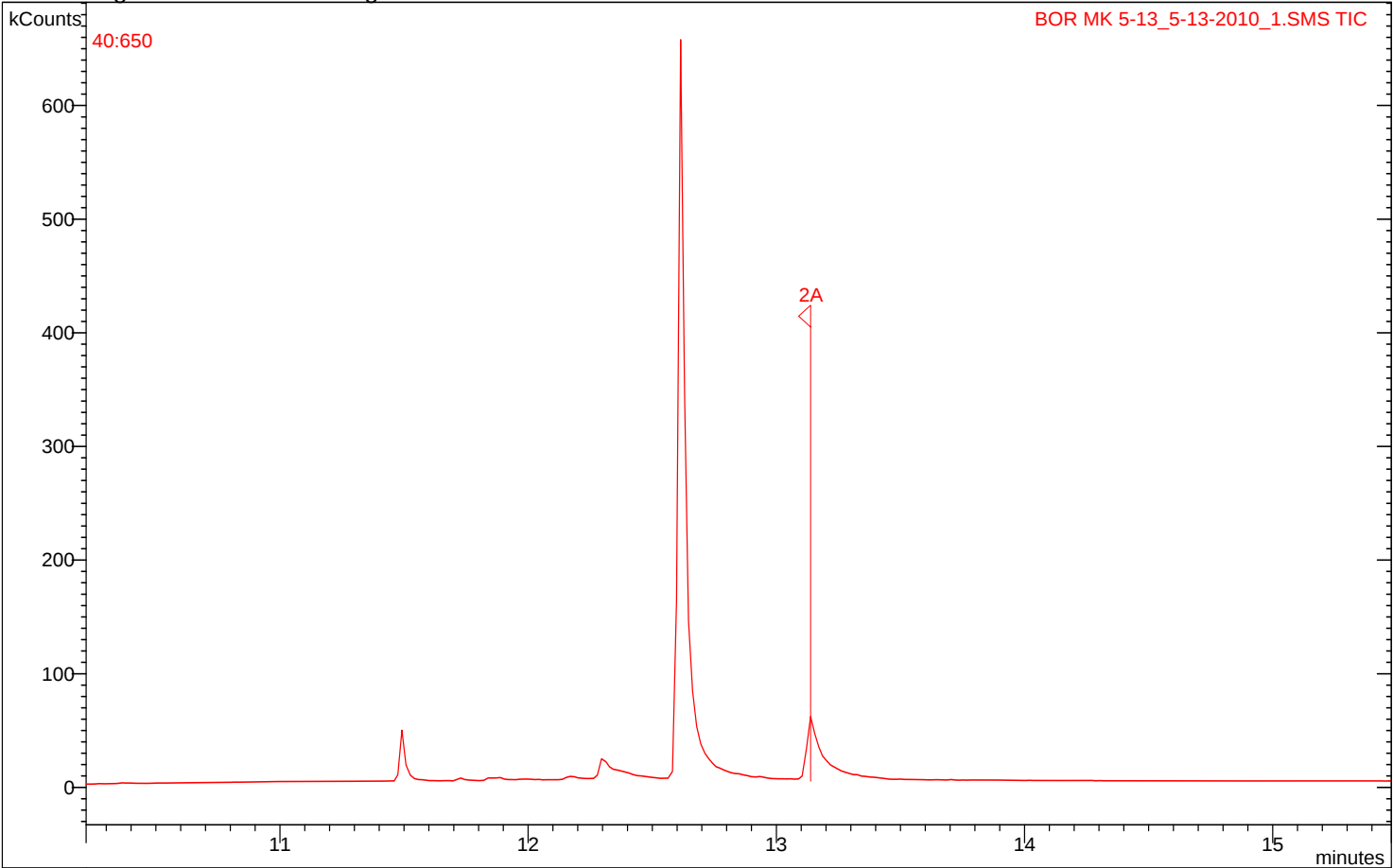
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Sample: BOR MK 5-13

Scan Range: 1 - 1625 Time Range: 0.00 - 25.64 min.

Operator: Bruce

Date: 5/13/2010 1:59 PM



RTI INTERNATIONAL*

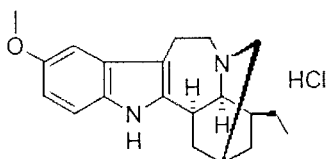
DATA SHEET

Ibogaine HCl

RTI Log Number: 3857-194 (Sigma Lot No. 32H0349)

Chemical Abstracts Name	12-Methoxyibogamine hydrochloride
DEA Drug Code Number	7260
DEA Schedule	1
CAS Number	36415-61-9
INN Name	None

Structure:

Molecular Formula: $C_{20}H_{26}N_2O \cdot HCl$

Molecular Weight: 346.9

Appearance: Beige crystalline powder

Analyses: Chromatographic Purity: $97.2 \pm 0.06\%$ pure by Reversed Phase HPLC (total area analysis)NMR: The 1H spectrum is consistent with the structure of Ibogaine HCl and identical to the respective spectrum provided by the supplier (performed in 2009).Mass Spectrometry: Mass spectrum matches with reference library and conforms to known structure.TLC: On Silica ($^{60}F_{254}$) using "Clarke's Isolation and Identification of Drugs" System TA (100 mL MeOH:1.5 mL ammonium hydroxide). Visualization by UV. Single spot Rf 0.50. No impurities detected.Water: $1.03 \pm 0.01\%$ (Karl Fischer)Melting Point: Mettler Toledo MP70 Melting Point System: darkened @ $256^\circ C$ Merck Index, 14th Edition, 2006; Decomposes at $299 - 300^\circ C$

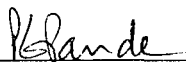
Analyses Performed: February 2012 (unless noted otherwise).

Analyses Reference: 13406-198

Storage: Store in a cool, dark place. Protect from moisture.

Caution: **NOT FOR HUMAN USE.**Please Note: Technical questions about this compound should be directed to:
Dr. Poonam Pande at (919) 541-7210.

Approved by: _____



Date

07/05/12

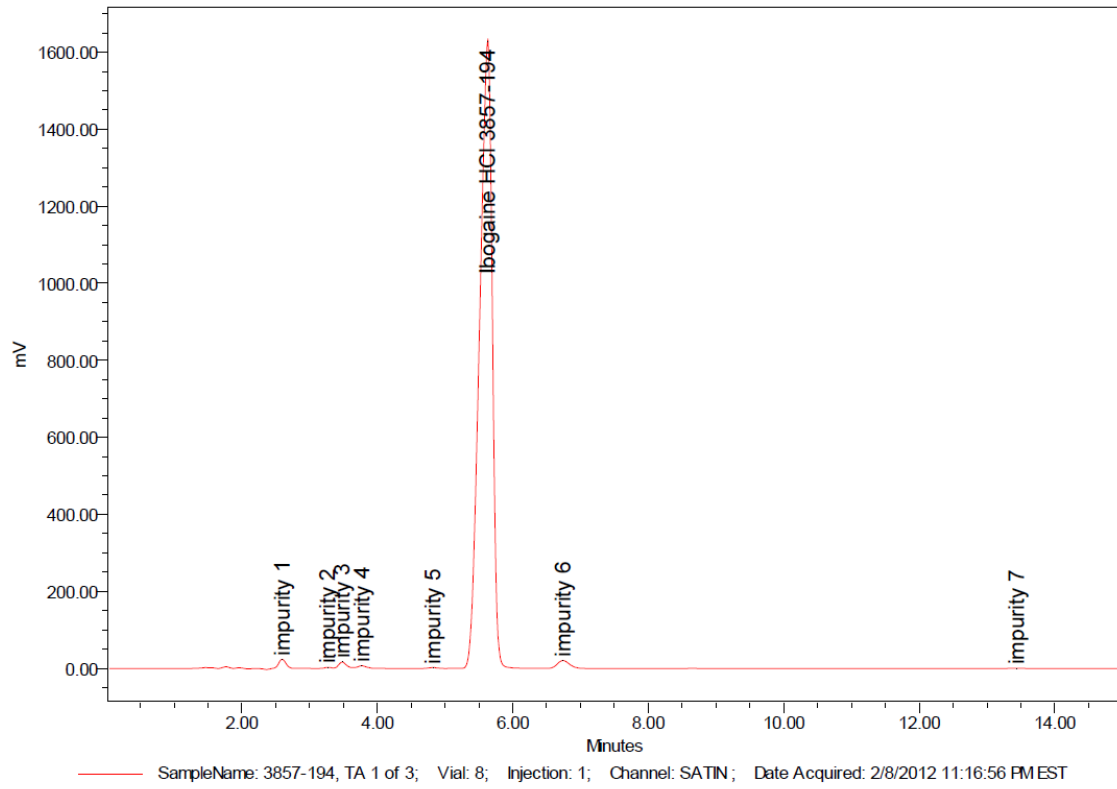
SHIPMENT REFERENCE ONLY

Quantity:

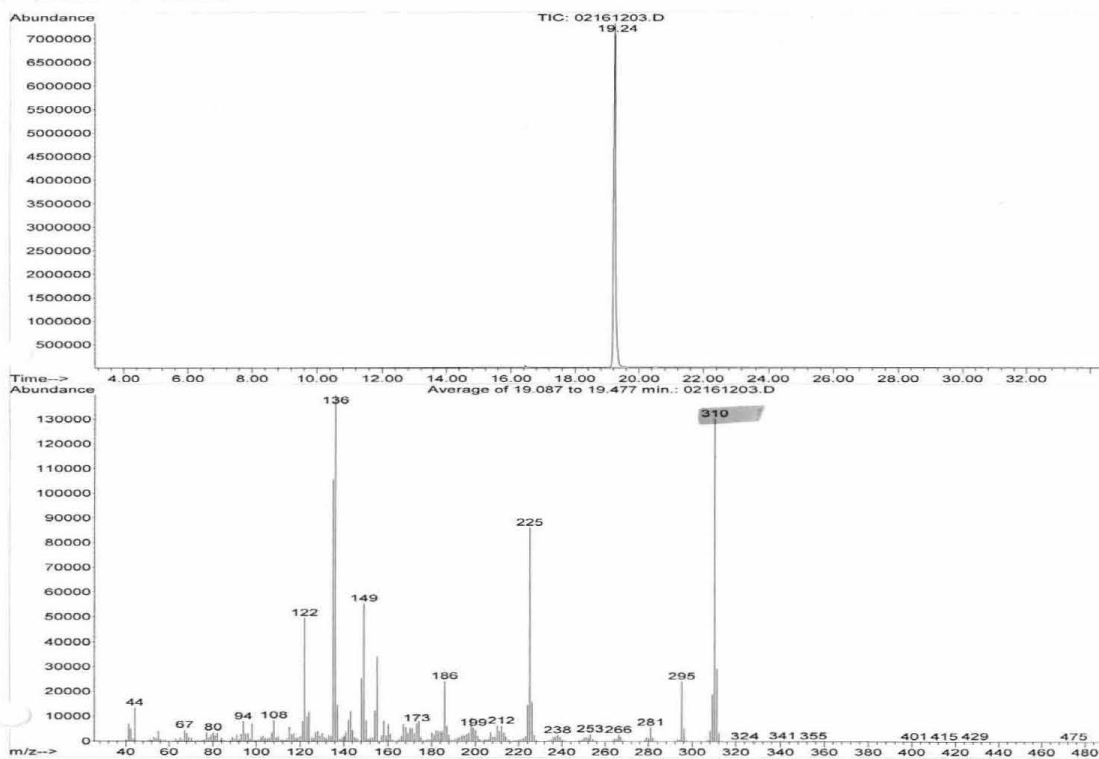
0.02097g

Reference:

SAF # 017618

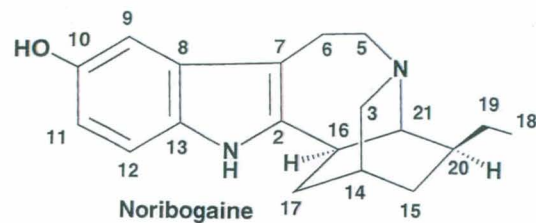


File : C:\MSDCHEM\1\DATA\ANTIMONY\NTP\Seq-2012-02-17-131222338UTC\02
 161203.D
 Operator : Anderson O. Cox
 Instrument : Antimony
 Acquired : 17 Feb 2012 9:35 using AcqMethod 012512A.M
 Sample Name: 3858-40-2 Ibogaine
 Misc Info : 13406





7.302
7.284
7.010
7.006
6.858
6.854
6.841
6.836
3.860
3.841
3.833
3.781
3.758
3.751
3.570
3.542
3.539
3.533
3.529
3.517
3.514
3.503
3.500
3.497
3.393
3.385
3.370
3.322
3.314
3.306
2.484
2.339
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1.821
1.804
1.239
1.224
1.210



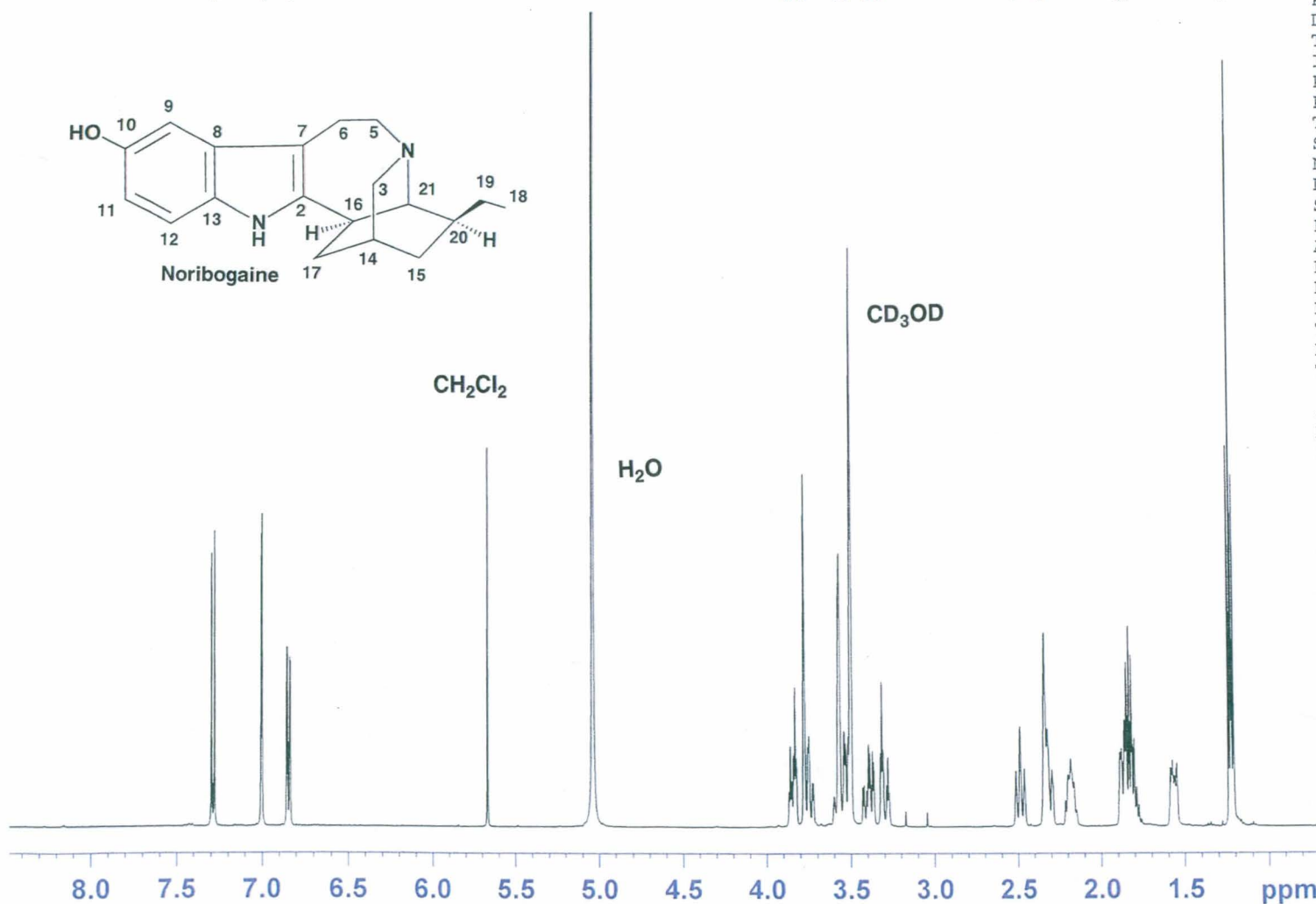
CH₂Cl₂

H₂O

CD₃OD

NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time_ 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



0.97

0.99

0.98

0.99

1.99

1.80

3.21

1.05

1.02

1.00

2.00

1.03

3.02

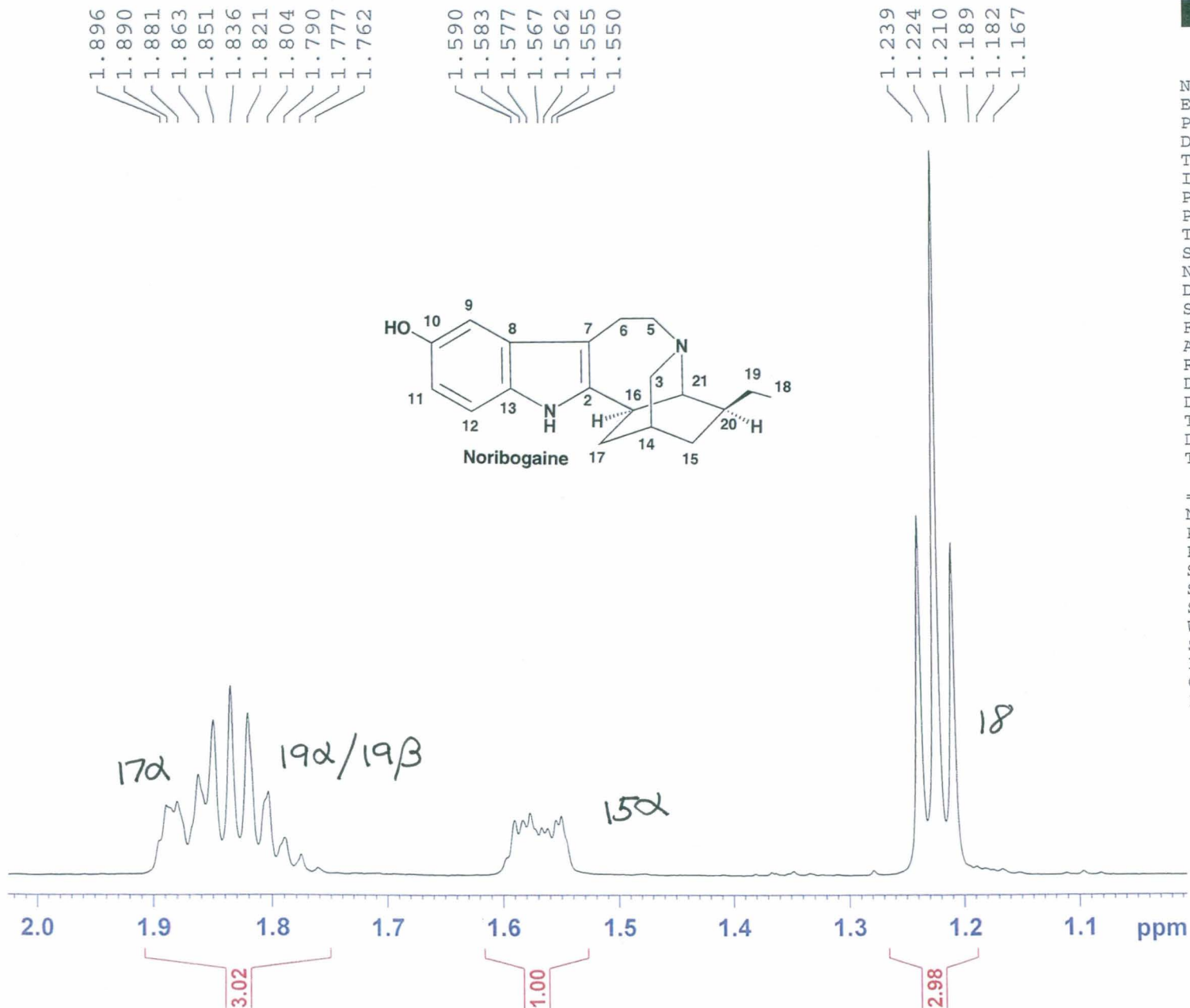
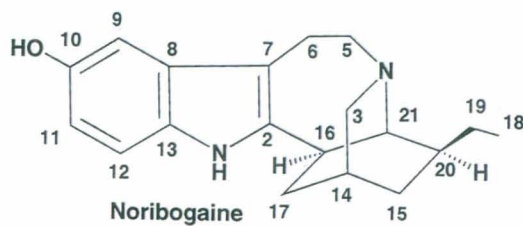
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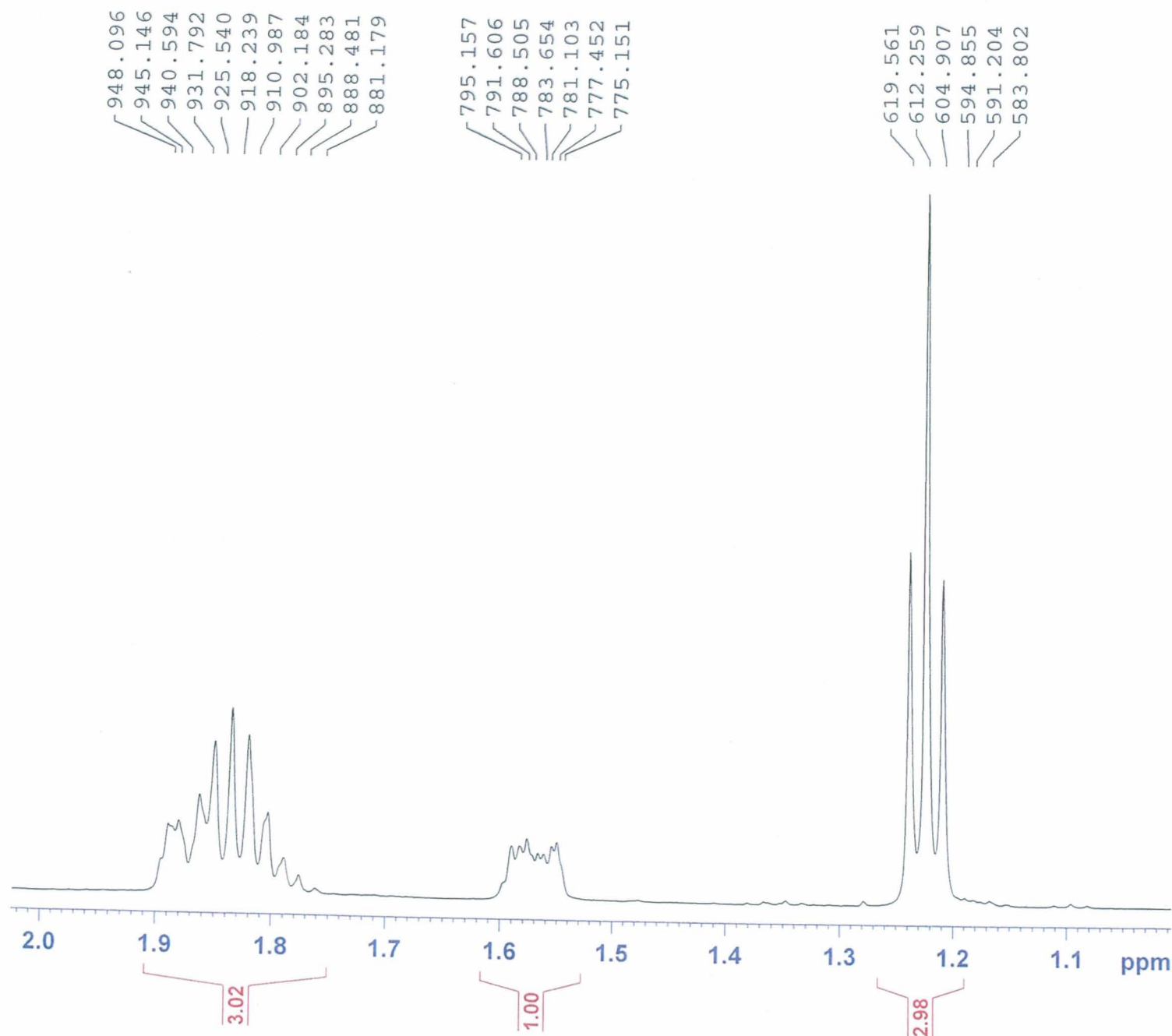
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NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time_ 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





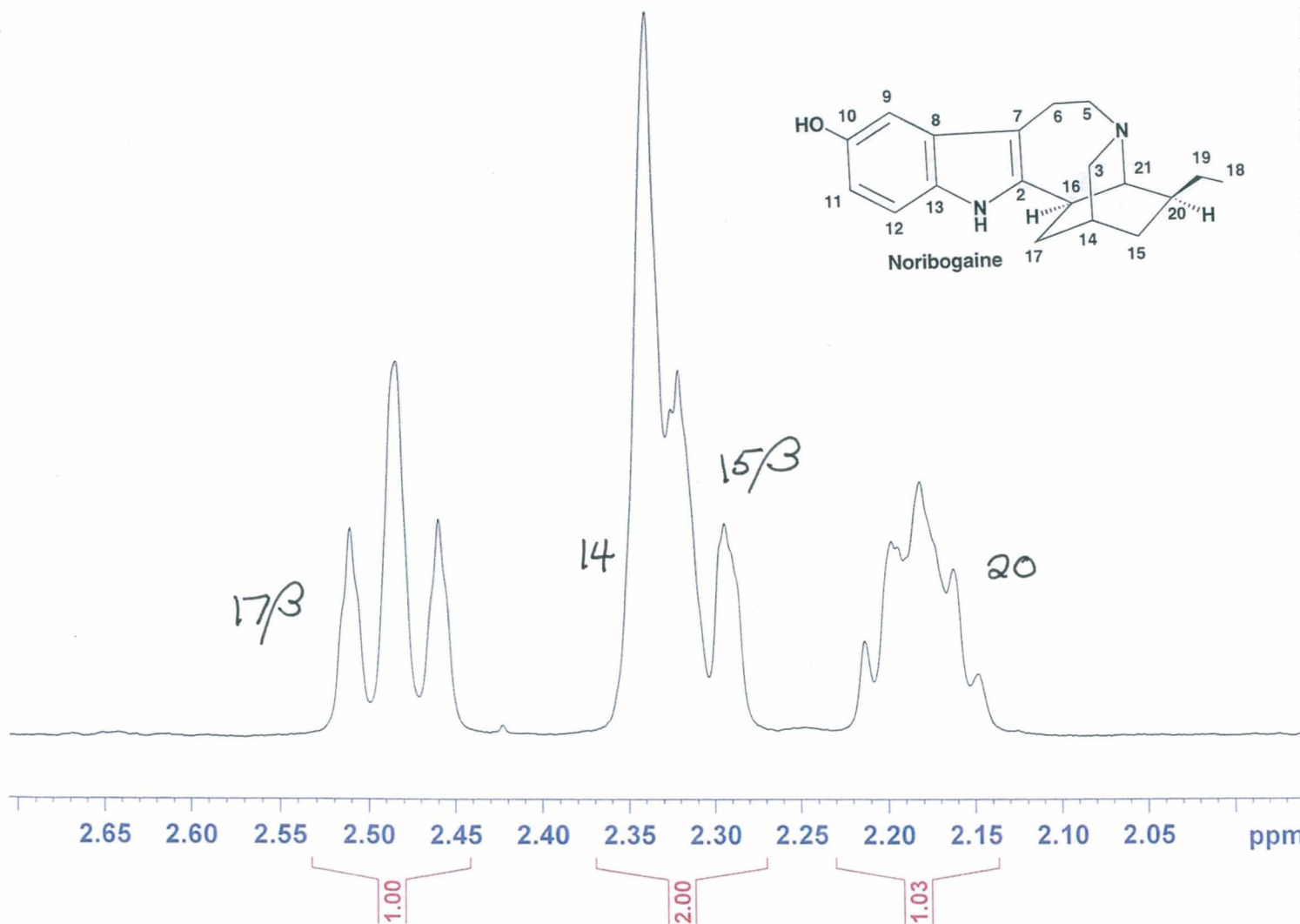
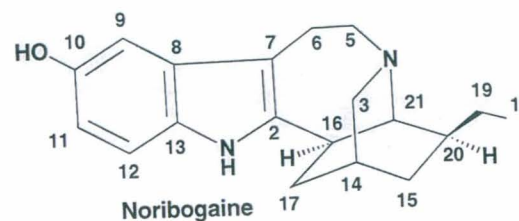
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PROCNO 1
Date_ 20110504
Time_ 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



— 2.511
— 2.484
— 2.460

— 2.339
— 2.325
— 2.320
— 2.294

— 2.213
— 2.198
— 2.194
— 2.181
— 2.162
— 2.148



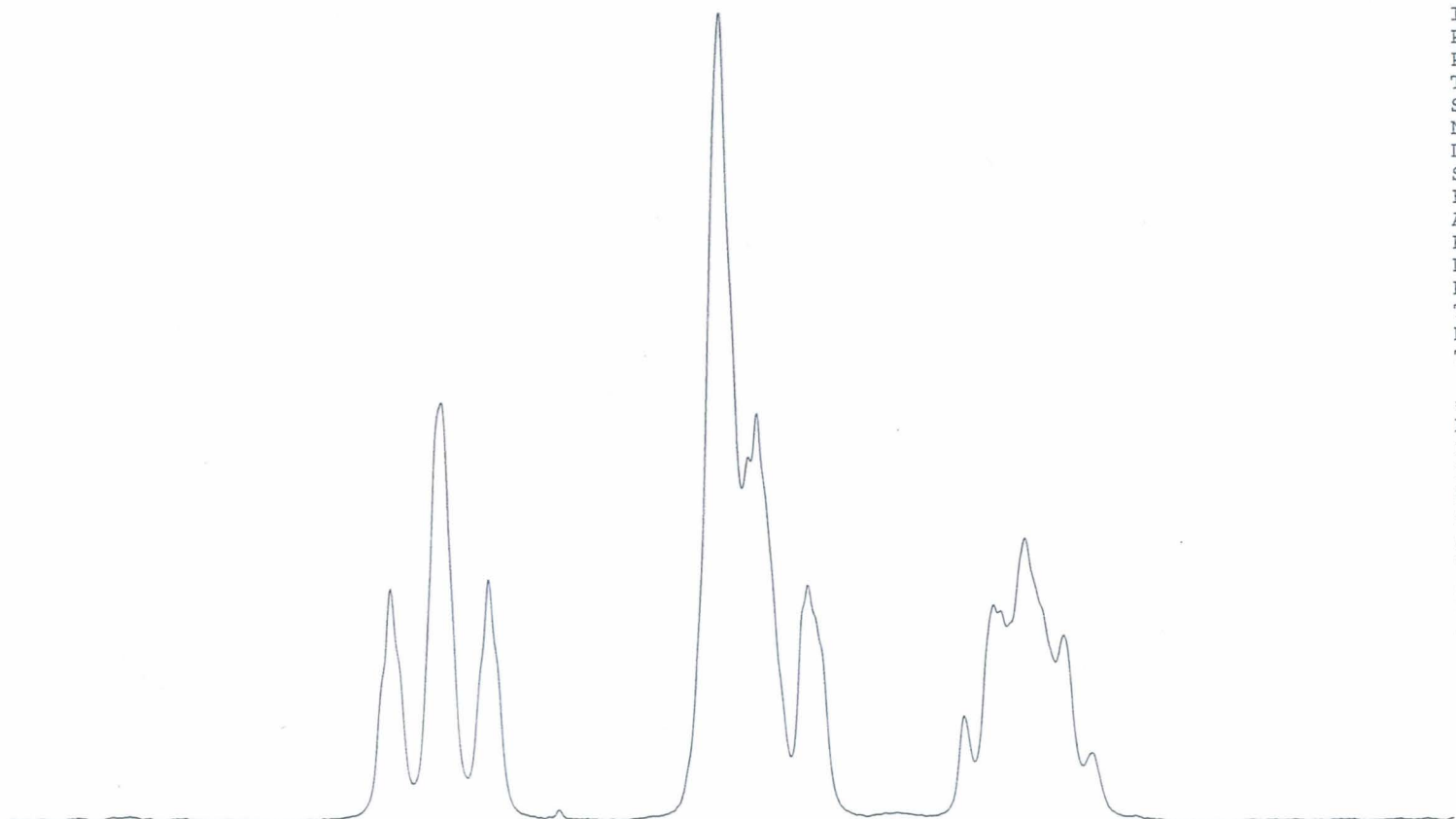
NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

—1255.876
—1242.423
—1230.170

—1169.604
—1162.552
—1160.401
—1147.298

—1106.988
—1099.186
—1097.485
—1090.933
—1081.231
—1074.179



2.65 2.60 2.55 2.50 2.45 2.40 2.35 2.30 2.25 2.20 2.15 2.10 2.05 ppm

1.00

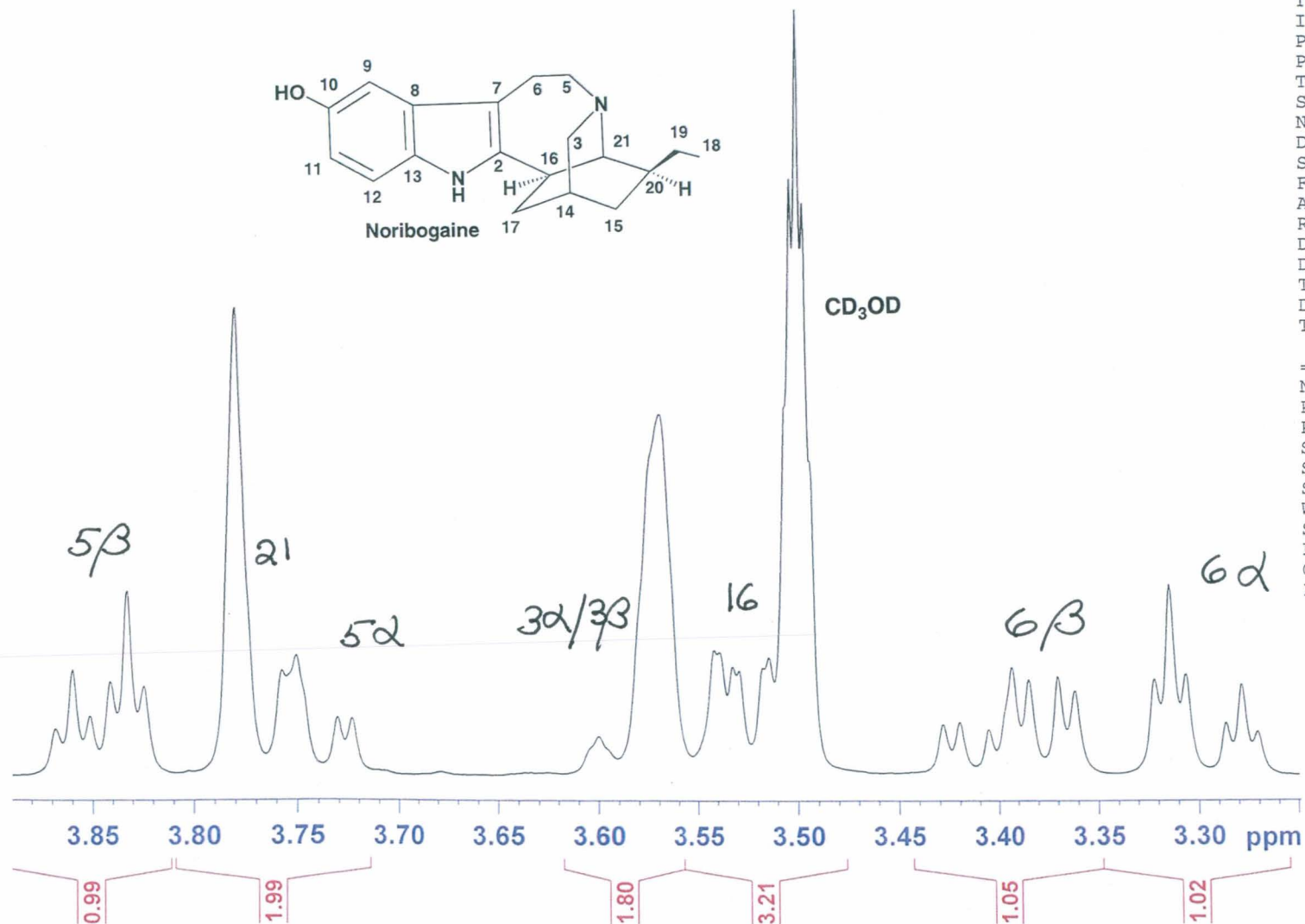
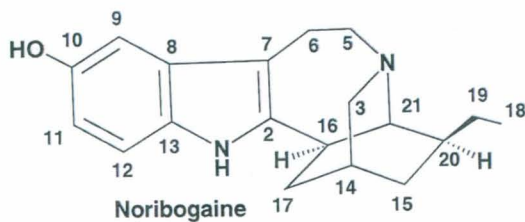
2.00

1.03



NAME zhp297
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PROCNO 1
Date_ 20110504
Time_ 16.43
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PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

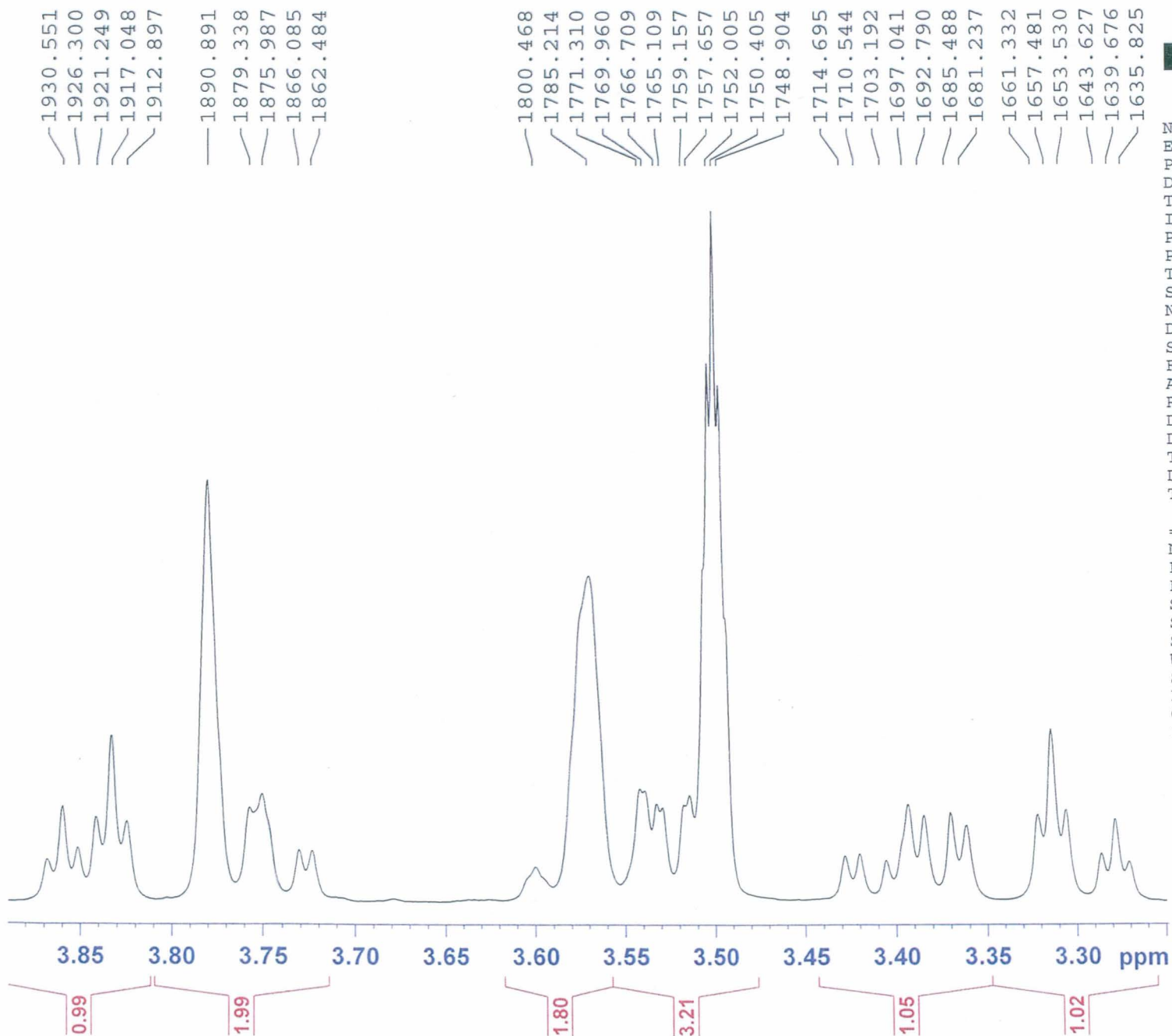


Noribogaine source C



NAME zhp297
 EXPNO 1
 PROCNO 1
 Date_ 20110504
 Time_ 16.43
 INSTRUM spect
 PROBHD 5 mm TXI 1H/D-
 PULPROG zg30
 TD 65536
 SOLVENT MeOD
 NS 16
 DS 2
 SWH 10330.578 Hz
 FIDRES 0.157632 Hz
 AQ 3.1720407 sec
 RG 161.3
 DW 48.400 usec
 DE 6.00 usec
 TE 300.2 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 8.65 usec
 PL1 -2.00 dB
 SFO1 500.1330885 MHz
 SI 32768
 SF 500.1299157 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

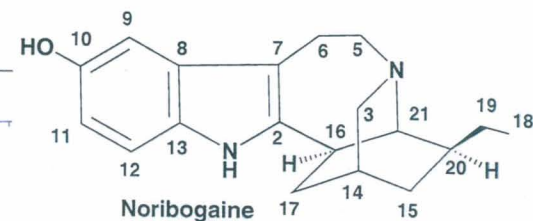
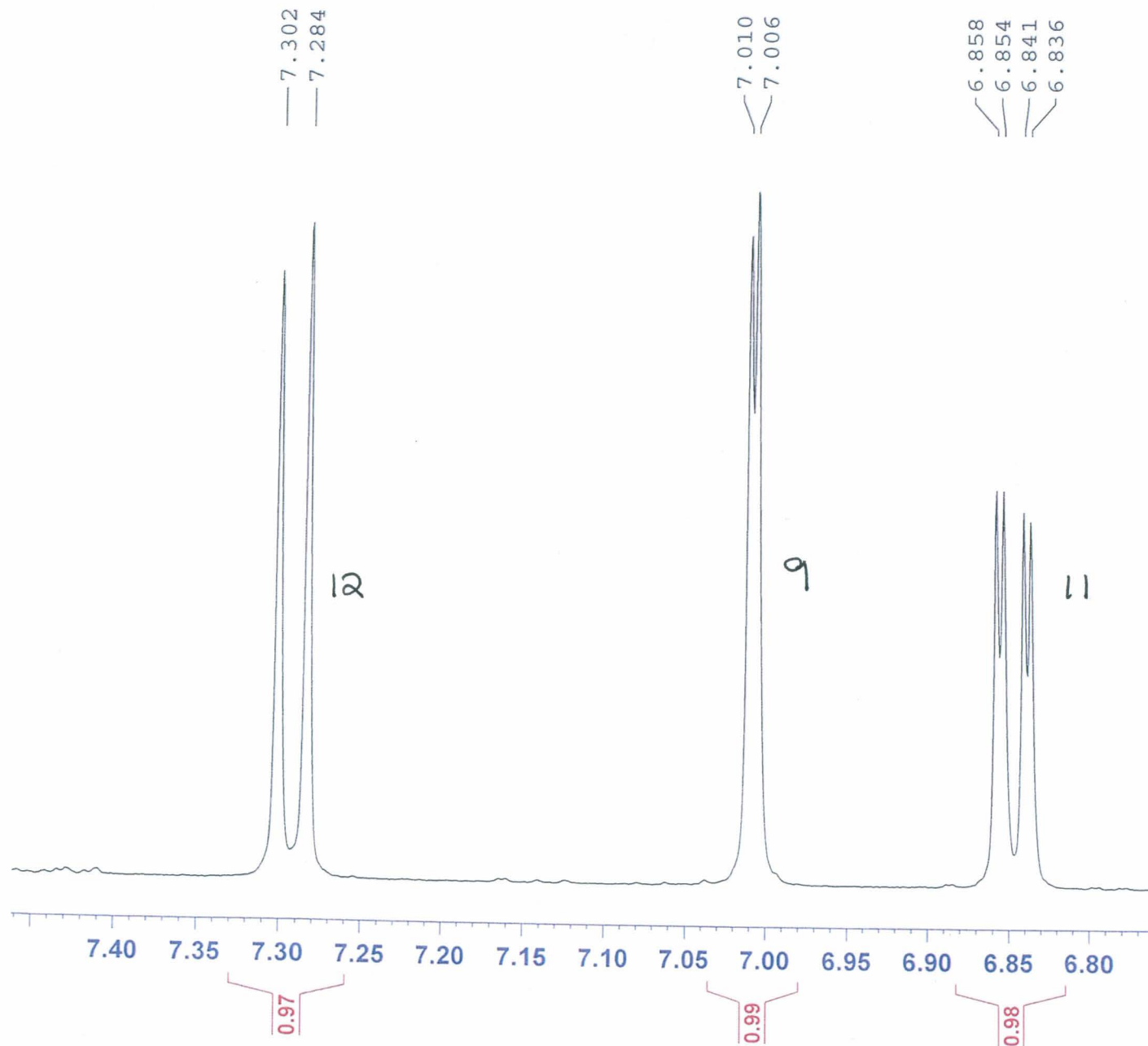


Noribogaine source C



NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

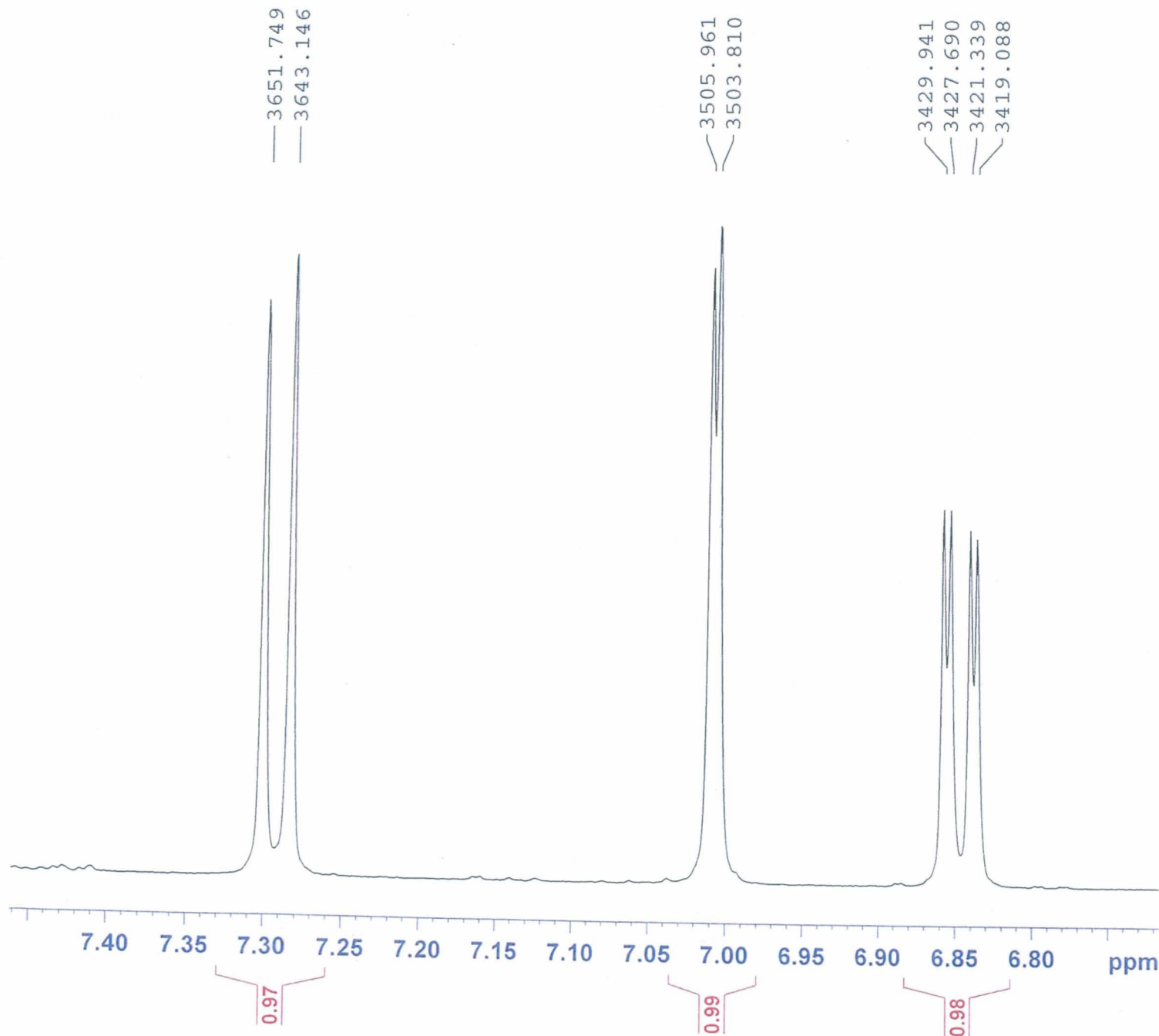
===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





NAME zhp297
EXPNO 1
PROCNO 1
Date_ 20110504
Time 16.43
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG zg30
TD 65536
SOLVENT MeOD
NS 16
DS 2
SWH 10330.578 Hz
FIDRES 0.157632 Hz
AQ 3.1720407 sec
RG 161.3
DW 48.400 usec
DE 6.00 usec
TE 300.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1330885 MHz
SI 32768
SF 500.1299157 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



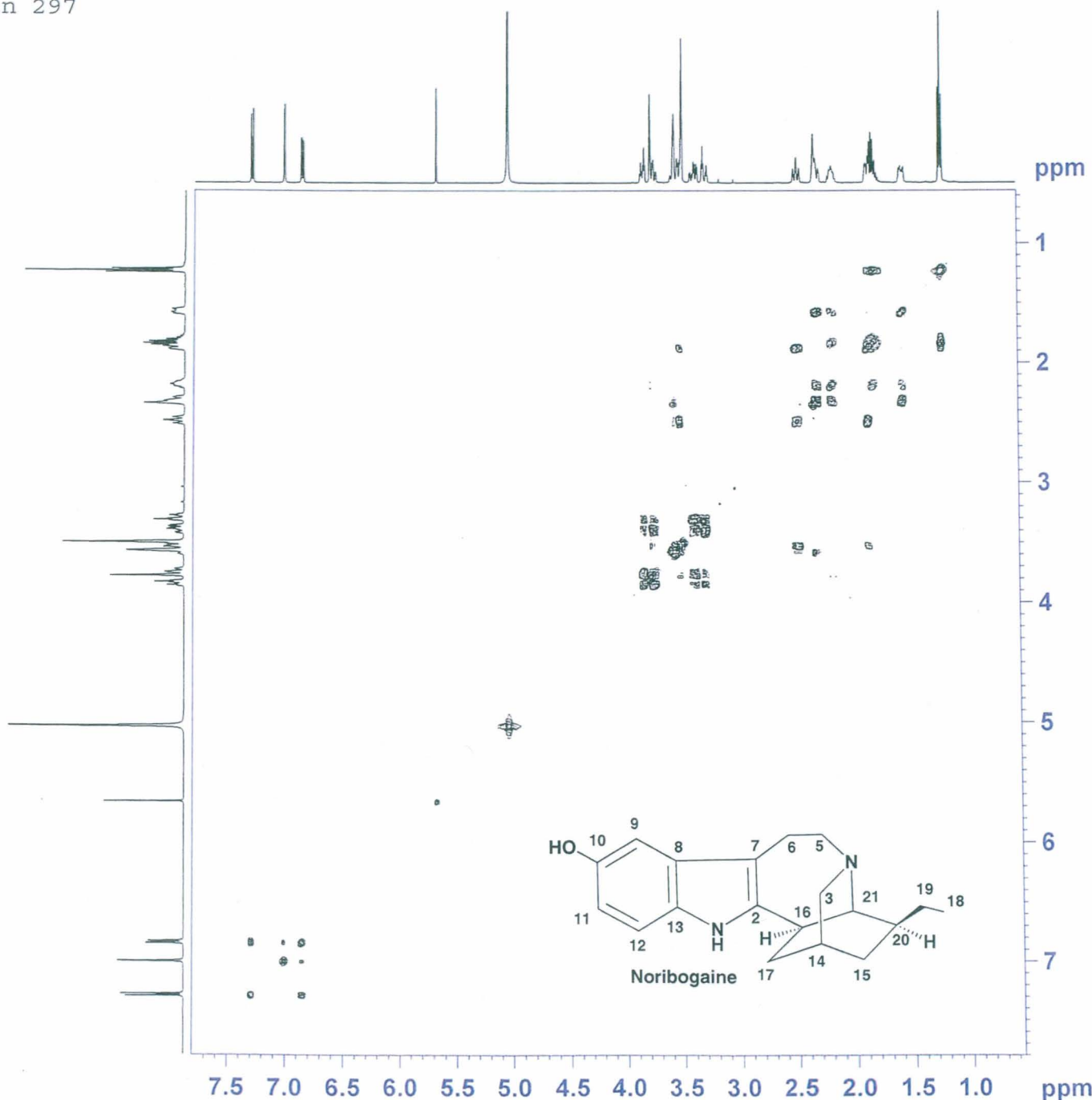
martin 297

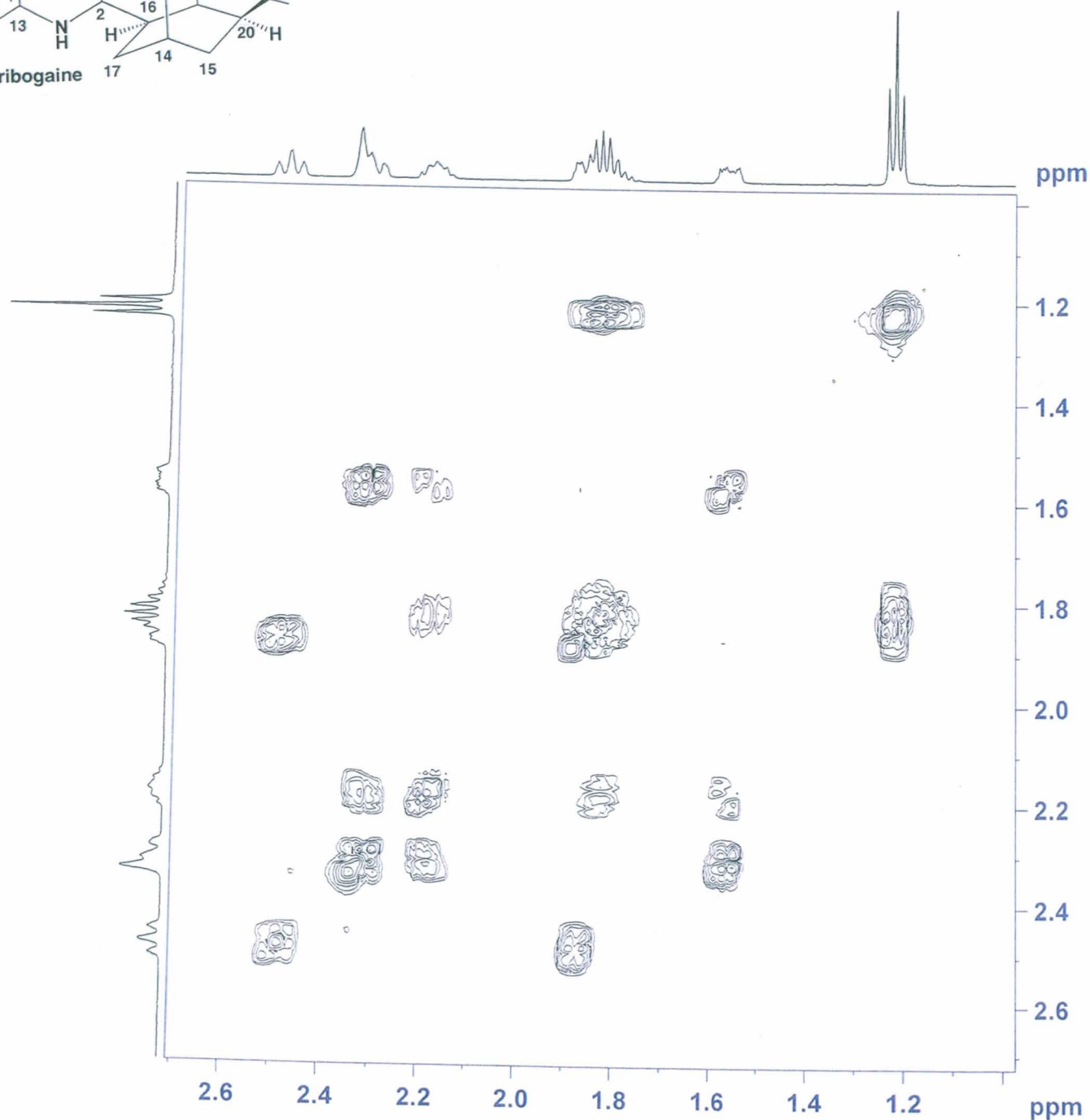
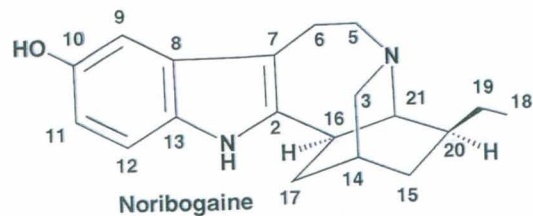


NAME zhp297
EXPNO 4
PROCNO 1
Date_ 20110504
Time_ 21.08
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG cosygpgqf
TD 2048
SOLVENT MeOD
NS 1
DS 8
SWH 3623.188 Hz
FIDRES 1.769135 Hz
AQ 0.2828120 sec
RG 64
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
d0 0.00000300 sec
D1 1.35786796 sec
d13 0.00000400 sec
D16 0.00020000 sec
IN0 0.00027600 sec

===== CHANNEL f1 =====
NUC1 1H
P0 8.65 usec
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

===== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPZ1 10.00 %
GPZ2 10.00 %
P16 1000.00 usec
ND0 1
TD 128
SFO1 500.132 MHz
FIDRES 28.306160 Hz
SW 7.244 ppm
FnMODE QF
SI 1024
SF 500.1299147 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 QF
SF 500.1299131 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0



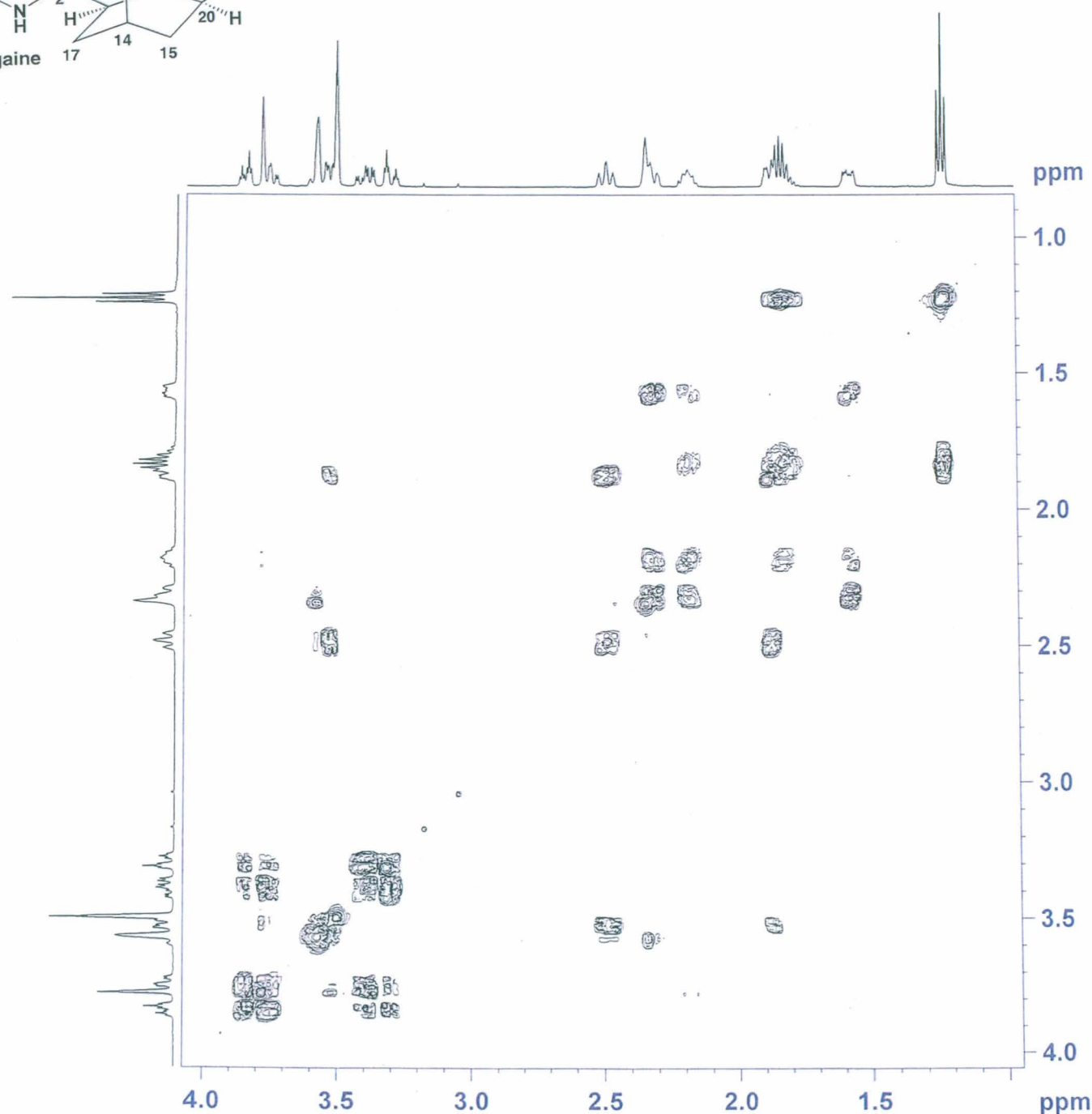
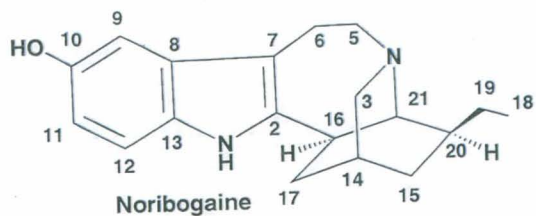


NAME zhp297
EXPNO 4
PROCNO 1
Date_ 20110504
Time 21.08
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG cosygpgqf
TD 2048
SOLVENT MeOD
NS 1
DS 8
SWH 3623.188 Hz
FIDRES 1.769135 Hz
AQ 0.2828120 sec
RG 64
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
d0 0.00000300 sec
d1 1.35786796 sec
d13 0.00000400 sec
d16 0.00020000 sec
IN0 0.00027600 sec

===== CHANNEL f1 =====
NUC1 1H
P0 8.65 usec
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

===== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPZ1 10.00 %
GPZ2 10.00 %
P16 1000.00 usec
ND0 1
TD 128
SFO1 500.132 MHz
FIDRES 28.306160 Hz
SW 7.244 ppm
FnMODE QF
SI 1024
SF 500.1299147 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 QF
SF 500.1299131 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

Noribogaine source C



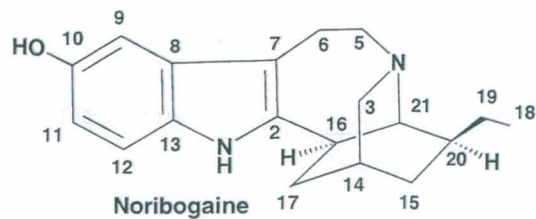
NAME		zhp297
EXPNO		4
PROCNO		1
Date_		20110504
Time		21.08
INSTRUM		spect
PROBHD	5 mm	TXI 1H/D-
PULPROG		cosygppqf
TD		2048
SOLVENT		MeOD
NS		1
DS		8
SWH		3623.188 Hz
FIDRES		1.769135 Hz
AQ		0.2828120 sec
RG		64
DW		138.000 usec
DE		6.00 usec
TE		301.2 K
d0		0.00000300 sec
D1		1.35786796 sec
d13		0.00000400 sec
D16		0.00020000 sec
IN0		0.00027600 sec

```
===== CHANNEL f1 =====
NUC1                1H
P0                   8.65 usec
P1                   8.65 usec
PL1                  -2.00 dB
SFO1                 500.1320027 MHz
```

```

===== GRADIENT CHANNEL =====
GPNAM1          SINE.100
GPNAM2          SINE.100
GPZ1            10.00 %
GPZ2            10.00 %
P16             1000.00 usec
ND0             1
TD              128
SFO1            500.132 MHz
FIDRES          28.306160 Hz
SW              7.244 ppm
FnMODE          QF
SI              1024
SF              500.1299147 MHz
WDW             SINE
SSB             0
LB              0.00 Hz
GB              0
PC              1.40
SI              1024
MC2             QF
SF              500.1299131 MHz
WDW             SINE
SSB             0
LB              0.00 Hz
GB              0

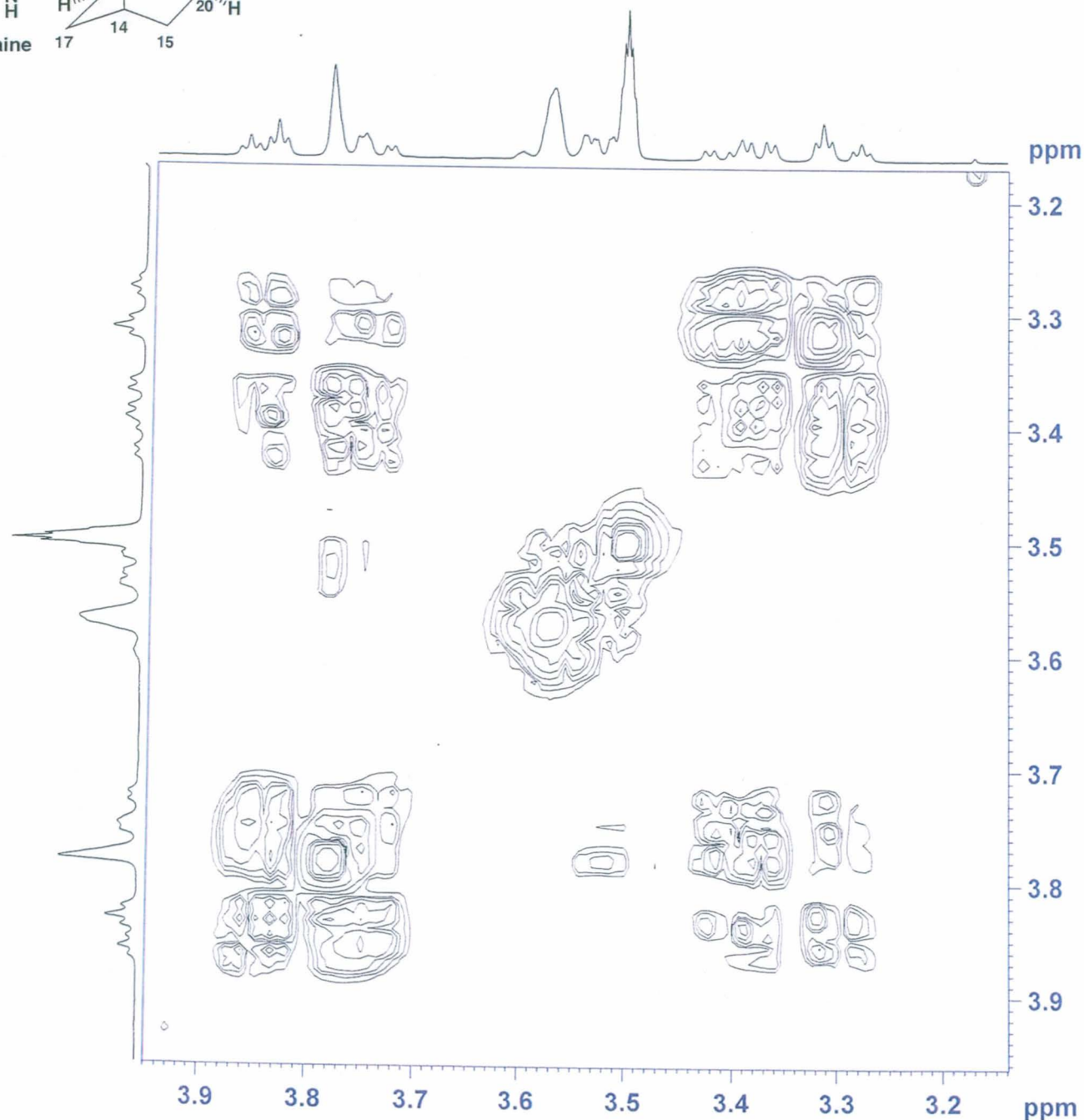
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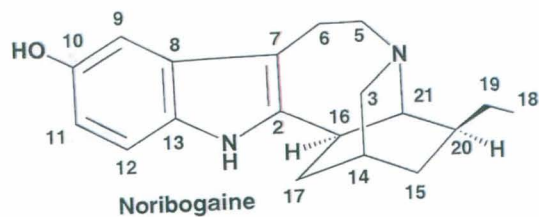


NAME zhp297
EXPNO 4
PROCNO 1
Date_ 20110504
Time_ 21.08
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG cosygpgf
TD 2048
SOLVENT MeOD
NS 1
DS 8
SWH 3623.188 Hz
FIDRES 1.769135 Hz
AQ 0.2828120 sec
RG 64
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
d0 0.00000300 sec
d1 1.35786796 sec
d13 0.00000400 sec
D16 0.00020000 sec
IN0 0.00027600 sec

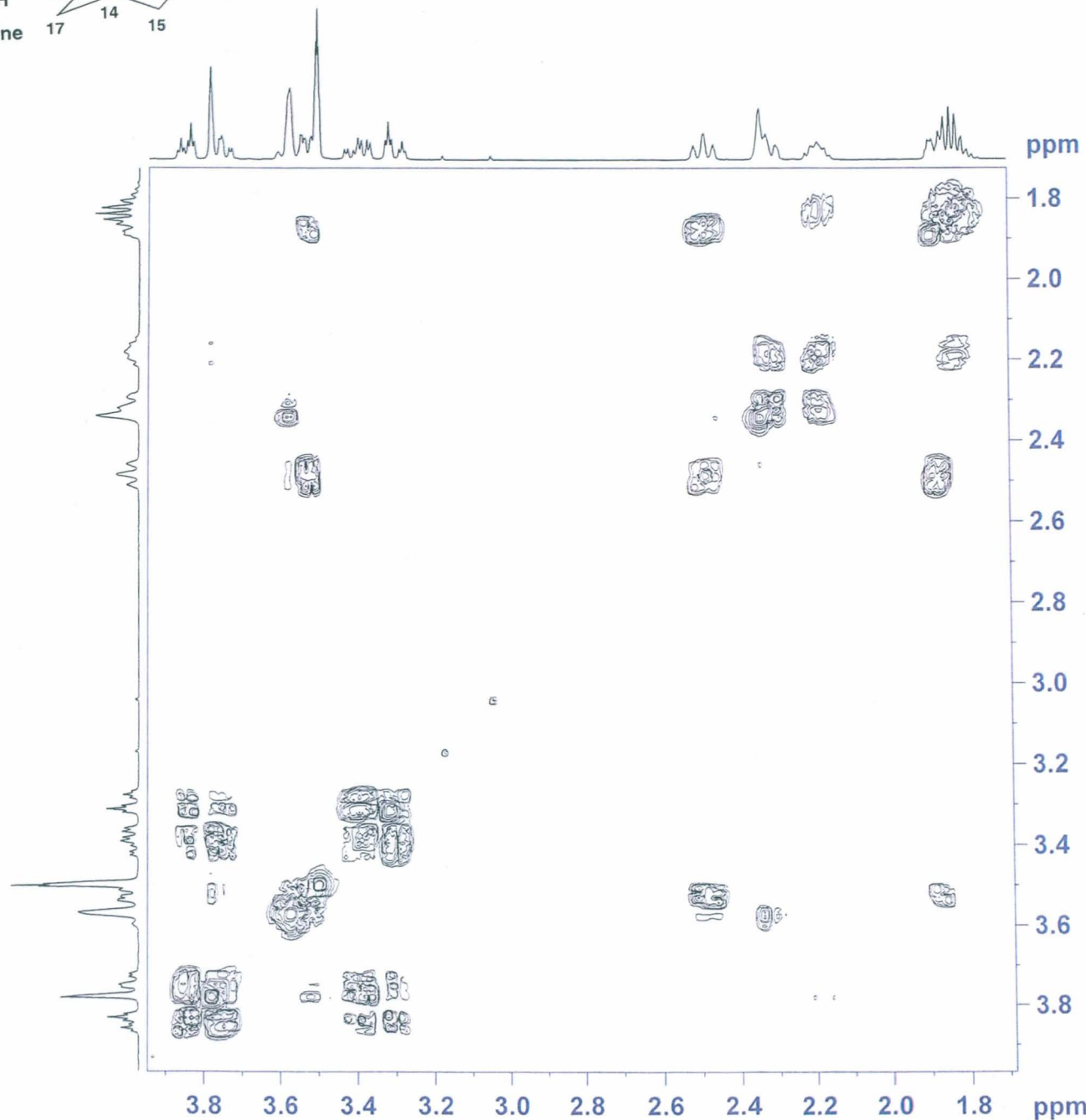
===== CHANNEL f1 =====
NUC1 1H
P0 8.65 usec
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

===== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPZ1 10.00 %
GPZ2 10.00 %
P16 1000.00 usec
ND0 1
TD 128
SFO1 500.132 MHz
FIDRES 28.306160 Hz
SW 7.244 ppm
FnMODE QF
SI 1024
SF 500.1299147 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 QF
SF 500.1299131 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0





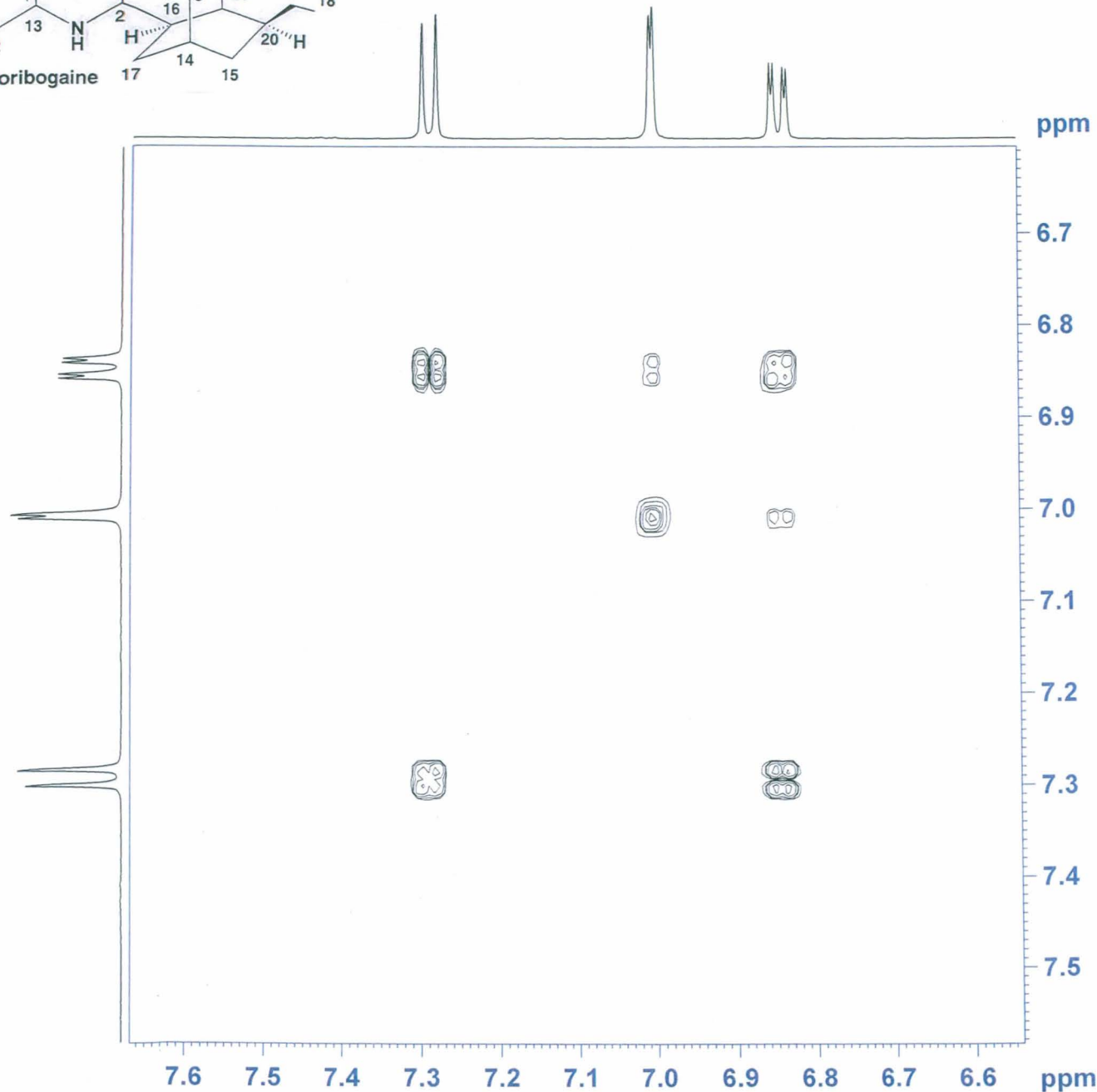
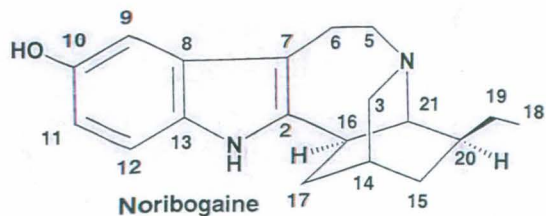
Noribogaine source C



NAME zhp297
 EXPNO 4
 PROCNO 1
 Date_ 20110504
 Time_ 21.08
 INSTRUM spect
 PROBHD 5 mm TXI 1H/D-
 PULPROG cosygpgf
 TD 2048
 SOLVENT MeOD
 NS 1
 DS 8
 SWH 3623.188 Hz
 FIDRES 1.769135 Hz
 AQ 0.2828120 sec
 RG 64
 DW 138.000 usec
 DE 6.00 usec
 TE 301.2 K
 d0 0.00000300 sec
 d1 1.35786796 sec
 d13 0.00000400 sec
 d16 0.00020000 sec
 IN0 0.00027600 sec

===== CHANNEL f1 =====
 NUC1 1H
 P0 8.65 usec
 P1 8.65 usec
 PL1 -2.00 dB
 SFO1 500.1320027 MHz

===== GRADIENT CHANNEL =====
 GPNAM1 SINE.100
 GPNAM2 SINE.100
 GPZ1 10.00 %
 GPZ2 10.00 %
 P16 1000.00 usec
 ND0 1
 TD 128
 SFO1 500.132 MHz
 FIDRES 28.306160 Hz
 SW 7.244 ppm
 FMODE QF
 SI 1024
 SF 500.1299147 MHz
 WDW SINE
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.40
 SI 1024
 MC2 QF
 SF 500.1299131 MHz
 WDW SINE
 SSB 0
 LB 0.00 Hz
 GB 0



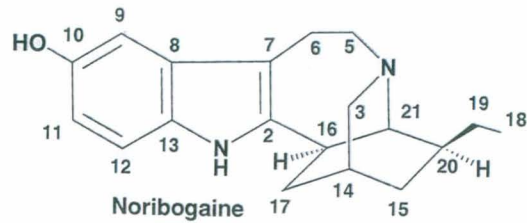
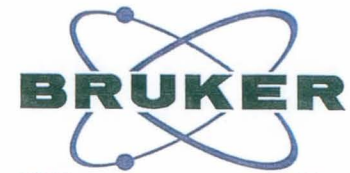
NAME zhp297
EXPNO 4
PROCNO 1
Date_ 20110504
Time 21.08
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG cosygpgf
TD 2048
SOLVENT MeOD
NS 1
DS 8
SWH 3623.188 Hz
FIDRES 1.769135 Hz
AQ 0.2828120 sec
RG 64
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
d0 0.00000300 sec
d1 1.35786796 sec
d13 0.00000400 sec
d16 0.00020000 sec
IN0 0.00027600 sec

===== CHANNEL f1 =====
NUC1 1H
P0 8.65 usec
P1 8.65 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

===== GRADIENT CHANNEL =====
GPNAM1 SINE.100
GPNAM2 SINE.100
GPZ1 10.00 %
GPZ2 10.00 %
P16 1000.00 usec
ND0 1
TD 128
SFO1 500.132 MHz
FIDRES 28.306160 Hz
SW 7.244 ppm
FnMODE QF
SI 1024
SF 500.1299147 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 QF
SF 500.1299131 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

Noribogaine source C

martin 297



152.01
140.67
131.84
130.59
112.80
112.58
107.10
103.31
61.84
57.80
52.31
49.81
49.64
49.47
49.30
49.13
48.96
48.79
40.64
36.72
32.83
30.43
27.52
25.57
19.70
12.17

NAME zhp297
EXPNO 3
PROCNO 1
Date_ 20110504
Time_ 16.51
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG jmod
TD 65536
SOLVENT MeOD
NS 5000
DS 4
SWH 30030.029 Hz
FIDRES 0.458222 Hz
AQ 1.0912410 sec
RG 16384
DW 16.650 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
d20 0.00689655 sec
DELTA 0.00001432 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.25 usec
p2 22.50 usec
PL1 -5.50 dB
SFO1 125.7703643 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.00 dB
PL12 18.50 dB
SFO2 500.1320005 MHz
SI 32768
SF 125.7575757 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

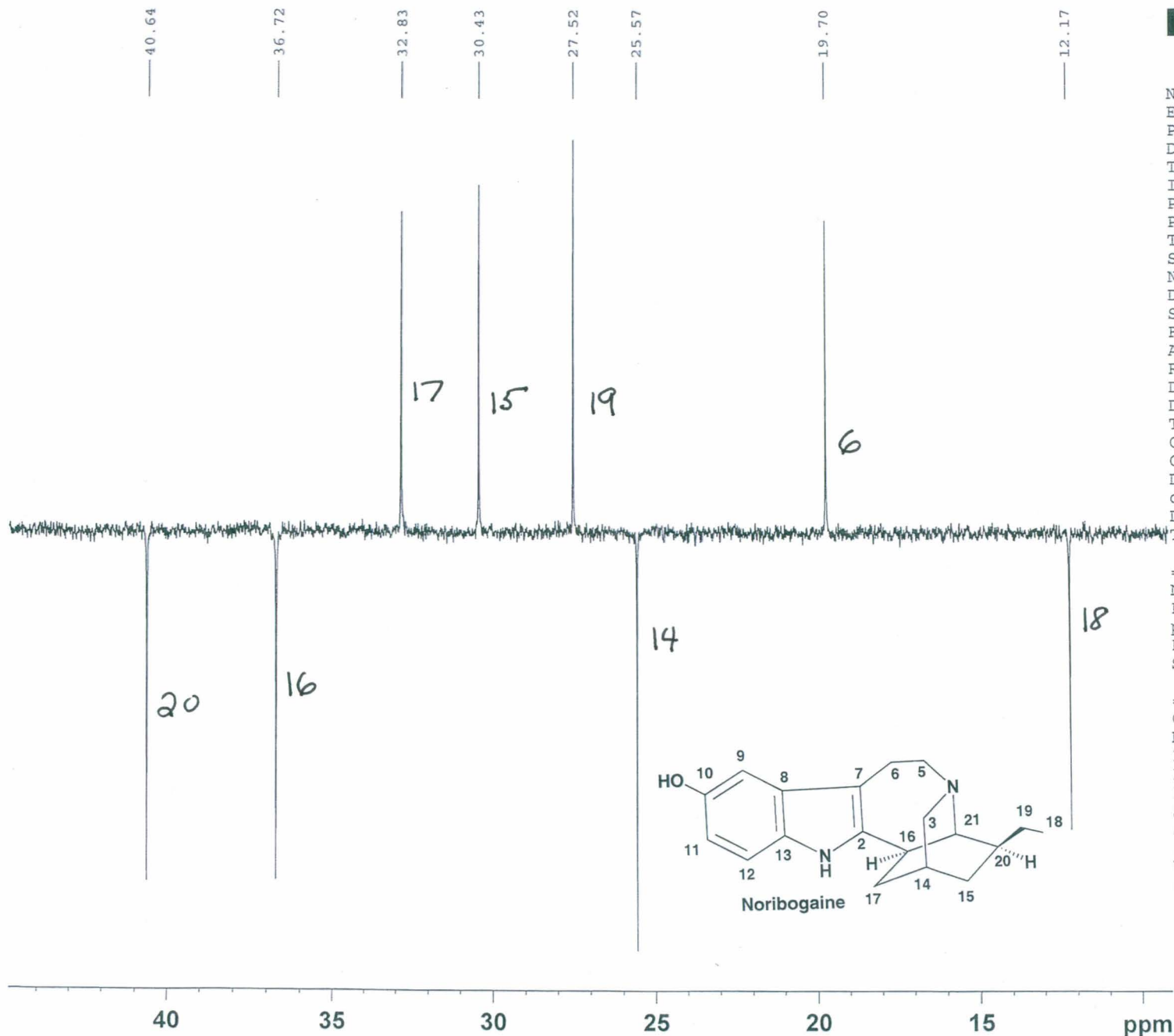
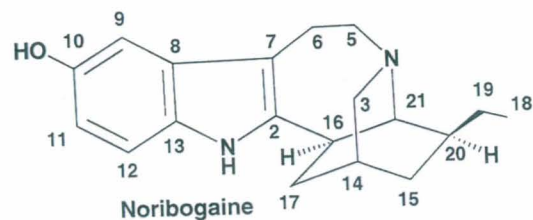
150 140 130 120 110 100 90 80 70 60 50 40 30 20 ppm



NAME zhp297
EXPNO 3
PROCNO 1
Date_ 20110504
Time_ 16.51
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG jmod
TD 65536
SOLVENT MeOD
NS 5000
DS 4
SWH 30030.029 Hz
FIDRES 0.458222 Hz
AQ 1.0912410 sec
RG 16384
DW 16.650 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
d20 0.00689655 sec
DELTA 0.00001432 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.25 usec
p2 22.50 usec
PL1 -5.50 dB
SFO1 125.7703643 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.00 dB
PL12 18.50 dB
SFO2 500.1320005 MHz
SI 32768
SF 125.7575757 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



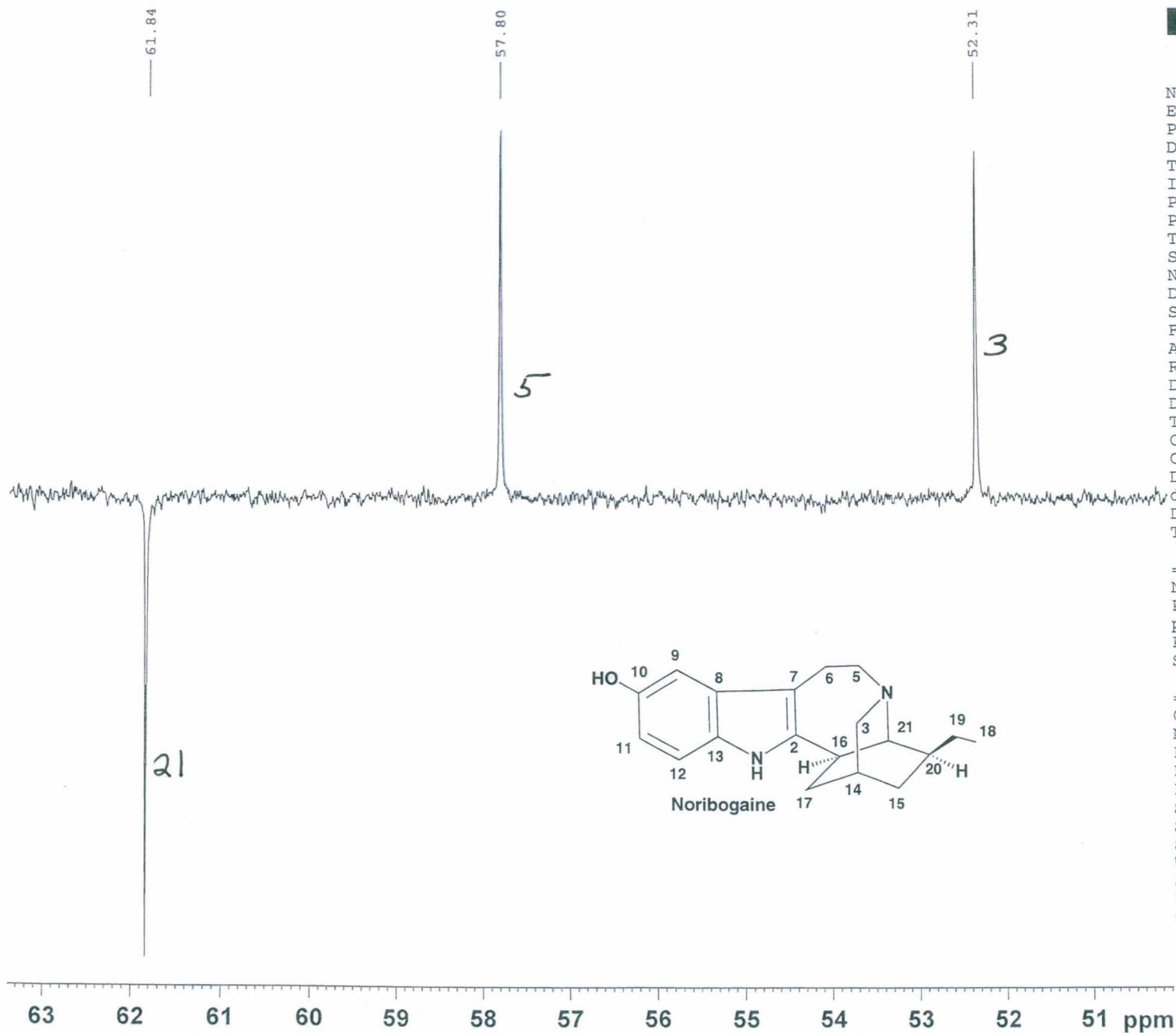
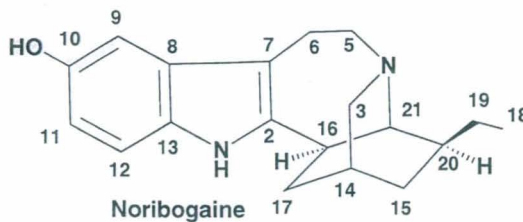
Noribogaine source C



NAME zhp297
 EXPNO 3
 PROCNO 1
 Date_ 20110504
 Time_ 16.51
 INSTRUM spect
 PROBHD 5 mm TXI 1H/D-
 PULPROG jmod
 TD 65536
 SOLVENT MeOD
 NS 5000
 DS 4
 SWH 30030.029 Hz
 FIDRES 0.458222 Hz
 AQ 1.0912410 sec
 RG 16384
 DW 16.650 usec
 DE 6.00 usec
 TE 301.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 d20 0.00689655 sec
 DELTA 0.00001432 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.25 usec
 p2 22.50 usec
 PL1 -5.50 dB
 SFO1 125.7703643 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL2 -2.00 dB
 PL12 18.50 dB
 SFO2 500.1320005 MHz
 SI 32768
 SF 125.7575757 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



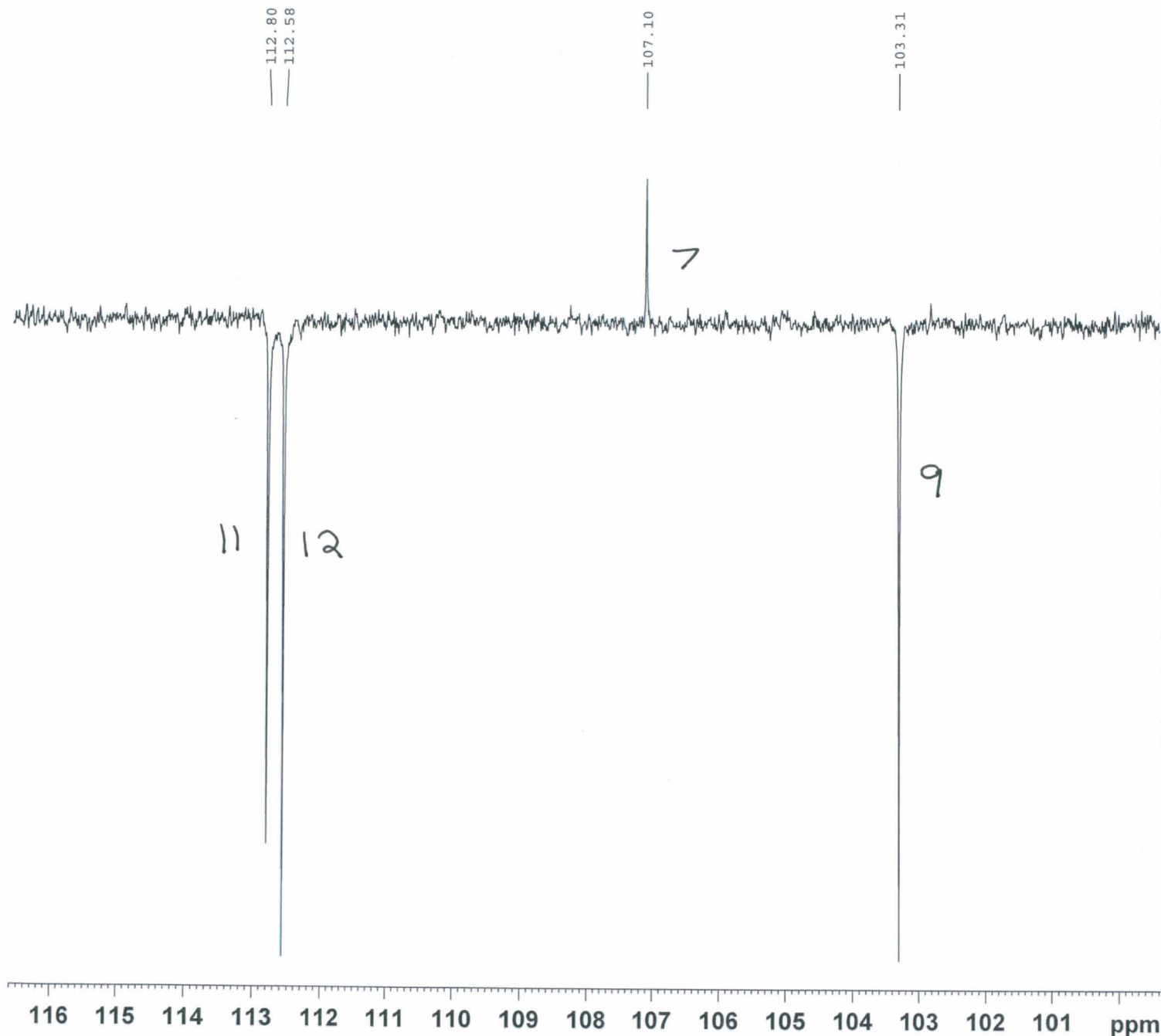
Noribogaine source C



NAME zhp297
 EXPNO 3
 PROCNO 1
 Date_ 20110504
 Time_ 16.51
 INSTRUM spect
 PROBHD 5 mm TXI 1H/D-
 PULPROG jmod
 TD 65536
 SOLVENT MeOD
 NS 5000
 DS 4
 SWH 30030.029 Hz
 FIDRES 0.458222 Hz
 AQ 1.0912410 sec
 RG 16384
 DW 16.650 usec
 DE 6.00 usec
 TE 301.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 d20 0.00689655 sec
 DELTA 0.00001432 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.25 usec
 p2 22.50 usec
 PL1 -5.50 dB
 SFO1 125.7703643 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 90.00 usec
 PL2 -2.00 dB
 PL12 18.50 dB
 SFO2 500.1320005 MHz
 SI 32768
 SF 125.7575757 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40

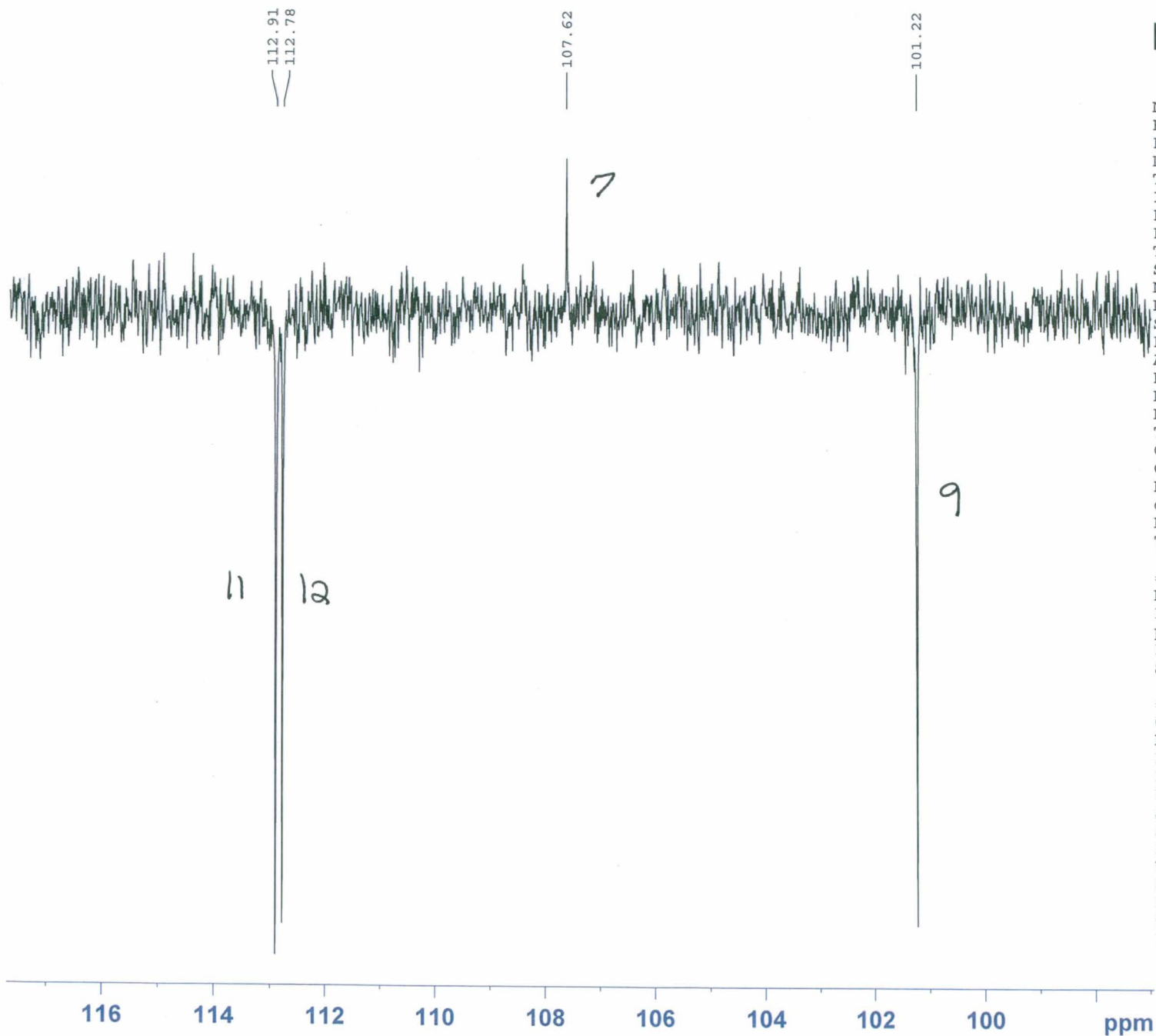




NAME zhp311
EXPNO 3
PROCNO 1
Date_ 20110505
Time_ 7.11
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG jmod
TD 65536
SOLVENT MeOD
NS 5000
DS 4
SWH 30030.029 Hz
FIDRES 0.458222 Hz
AQ 1.0912410 sec
RG 16384
DW 16.650 usec
DE 6.00 usec
TE 300.2 K
CNST2 145.000000
CNST11 1.0000000
D1 2.00000000 sec
d20 0.00689655 sec
DELTA 0.00001432 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.25 usec
p2 22.50 usec
PL1 -5.50 dB
SFO1 125.7703643 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.00 dB
PL12 18.50 dB
SFO2 500.1320005 MHz
SI 32768
SF 125.7575794 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

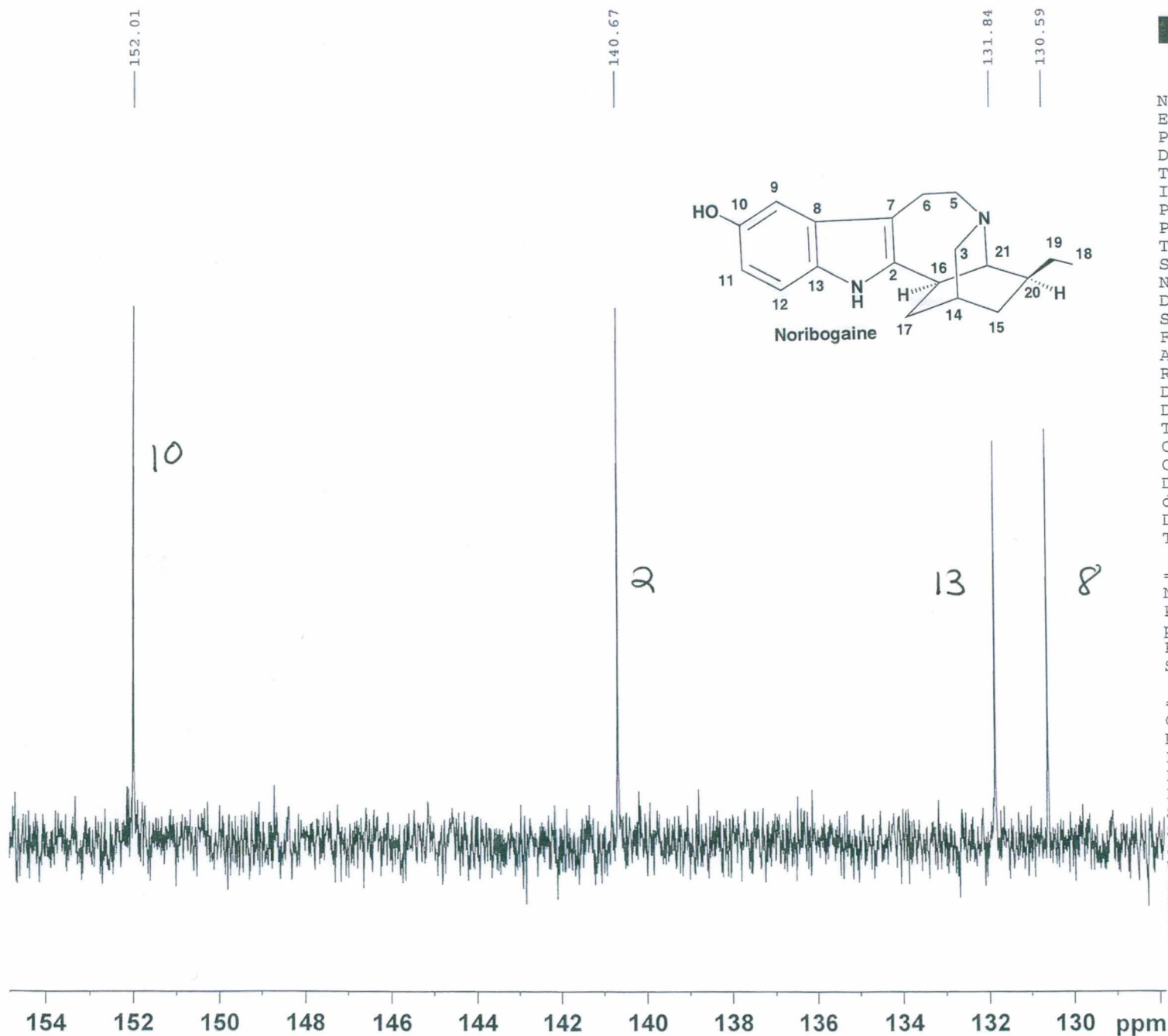
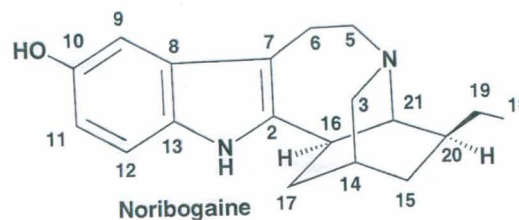




NAME zhp297
EXPNO 3
PROCNO 1
Date_ 20110504
Time_ 16.51
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG jmod
TD 65536
SOLVENT MeOD
NS 5000
DS 4
SWH 30030.029 Hz
FIDRES 0.458222 Hz
AQ 1.0912410 sec
RG 16384
DW 16.650 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.000000
CNST11 1.0000000
D1 2.00000000 sec
d20 0.00689655 sec
DELTA 0.00001432 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.25 usec
p2 22.50 usec
PL1 -5.50 dB
SFO1 125.7703643 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 90.00 usec
PL2 -2.00 dB
PL12 18.50 dB
SFO2 500.1320005 MHz
SI 32768
SF 125.7575757 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



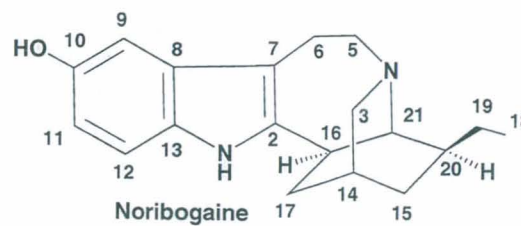


NAME zhp297
EXPNO 5
PROCNO 1
Date_ 20110504
Time_ 21.12
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG hsqcetgps12
TD 1024
SOLVENT MeOD
NS 4
DS 16
SWH 3623.188 Hz
FIDRES 3.538270 Hz
AQ 0.1415000 sec
RG 18390.4
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
d0 0.00000300 sec
D1 1.43548799 sec
d4 0.00172414 sec
d11 0.03000000 sec
d13 0.00000400 sec
D16 0.00020000 sec
D24 0.00086207 sec
DELTA 0.00127330 sec
DELTA1 0.00120800 sec
DELTA2 0.00006207 sec
DELTA3 0.00052414 sec
IN0 0.00002400 sec
ST1CNT 0
ZGPTNS

***** CHANNEL f1 *****
NUC1 1H
P1 8.65 usec
p2 17.30 usec
P28 0.10 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

***** CHANNEL f2 *****
CPDPRG2 garp
NUC2 13C
P3 11.25 usec
P4 22.50 usec
PCPD2 75.00 usec
PL2 -5.50 dB
PL12 10.98 dB
SFO2 125.7672177 MHz

***** GRADIENT CHANNEL *****
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPNAM4 SINE.100
GP21 80.00 %
GP22 20.10 %
GP23 11.00 %
GP24 -5.00 %
P14 1000.00 usec
P19 600.00 usec
NDO 2
TD 256
SFO1 125.7672 MHz
FIDRES 81.380211 Hz
SW 165.650 ppm
FMODE Echo-Antiecho
SI 1024
SF 500.1299131 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 echo-antiecho
SF 125.757947 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0



Noribogaine source C

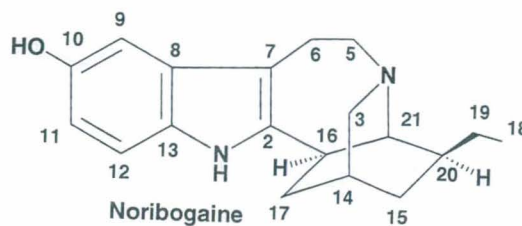


NAME zhp297
 EXPNO 5
 PROCNO 1
 Date_ 20110504
 Time 21.12
 INSTRUM spect
 PROBHD 5 mm TXI 1H/D-
 PULPROG hsqcetgps12
 TD 1024
 SOLVENT MeOD
 NS 4
 DS 16
 SWH 3623.188 Hz
 FIDRES 3.538270 Hz
 AQ 0.1415000 sec
 RG 18390.4
 DW 138.000 usec
 DE 6.00 usec
 TE 301.2 K
 CNST2 145.0000000
 d0 0.00000300 sec
 D1 1.43548799 sec
 d4 0.00172414 sec
 d11 0.03000000 sec
 d13 0.00000400 sec
 D16 0.00020000 sec
 D24 0.00086207 sec
 DELTA 0.00127330 sec
 DELTA1 0.00120800 sec
 DELTA2 0.00006207 sec
 DELTA3 0.00052414 sec
 IN0 0.00002400 sec
 ST1CNT 0
 ZGOFINS

===== CHANNEL f1 =====
 NUC1 1H
 P1 8.65 usec
 p2 17.30 usec
 P28 0.10 usec
 PL1 -2.00 dB
 SFO1 500.1320027 MHz

===== CHANNEL f2 =====
 CPDPRG2 garp
 NUC2 13C
 P3 11.25 usec
 P4 22.50 usec
 PCPD2 75.00 usec
 PL2 -5.50 dB
 PL12 10.98 dB
 SFO2 125.7672177 MHz

===== GRADIENT CHANNEL =====
 GPNAM1 SINE.100
 GPNAM2 SINE.100
 GPNAM3 SINE.100
 GPNAM4 SINE.100
 GPZ1 80.00 %
 GPZ2 20.10 %
 GPZ3 11.00 %
 GPZ4 -5.00 %
 P16 1000.00 usec
 P19 600.00 usec
 NDO 2
 TD 256
 SFO1 125.7672 MHz
 FIDRES 81.380211 Hz
 SW 165.650 ppm
 FMODE Echo-Antiecho
 S1 1024
 SF 500.1299131 MHz
 WDW QSINE
 SSB 2
 LB 0.00 Hz
 GB 0
 PC 1.40
 S1 1024
 MC2 echo-antiecho
 SF 125.7575747 MHz
 WDW QSINE
 SSB 2
 LB 0.00 Hz
 GB 0



4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2 ppm

Noribogaine source C

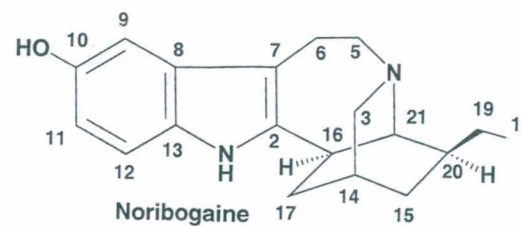


NAME zhp297
EXPNO 5
PROCNO 1
Date_ 20110504
Time 21.12
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG hsqcetgps12
TD 1024
SOLVENT MeOD
DS 4
NS 16
SWH 3623.188 Hz
FIDRES 3.538270 Hz
AQ 0.1415000 sec
RG 18390.4
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
d0 0.00000300 sec
d1 1.43548799 sec
d4 0.00172414 sec
d11 0.03000000 sec
d13 0.00000400 sec
d16 0.00020000 sec
D24 0.00086207 sec
DELTA 0.00127330 sec
DELTA1 0.00120800 sec
DELTA2 0.0006207 sec
DELTA3 0.00052414 sec
INO 0.00002400 sec
STICNT 0
ZGPTNS

***** CHANNEL f1 *****
NUC1 1H
P1 8.65 usec
p2 17.30 usec
P28 0.10 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

***** CHANNEL f2 *****
CPDPRG2 garp
NUC2 13C
P3 11.25 usec
P4 22.50 usec
PCPD2 75.00 usec
PL2 -5.50 dB
PL12 10.96 dB
SFO2 125.7672177 MHz

***** GRADIENT CHANNEL *****
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPNAM4 SINE.100
GPZ1 80.00 %
GPZ2 20.10 %
GPZ3 11.00 %
GPZ4 -5.00 %
P16 1000.00 usec
P19 600.00 usec
ND0 2
TD 256
SFO1 125.7672 MHz
FIDRES 81.280211 Hz
SW 165.650 ppm
FMODE Echo-Antiecho
SI 1024
SF 500.1299131 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 echo-antiecho
SF 125.7575747 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0



2.6 2.5 2.4 2.3 2.2 2.1 2.0 1.9 1.8 1.7 1.6 ppm

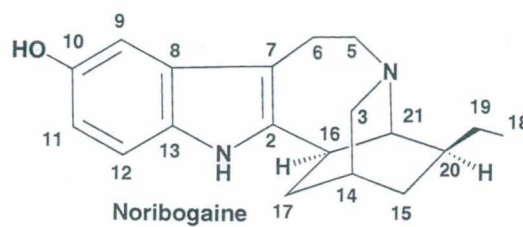


NAME zhp297
EXPNO 5
PROCNO 1
Date_ 20110504
Time 21.12
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG hsqcetgpgs12
TD 1024
SOLVENT MeOD
NS 4
DS 16
SWH 3623.186 Hz
FIDRES 3.538270 Hz
AQ 0.1415000 sec
RG 18390.4
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
d0 0.00000300 sec
D1 1.43548799 sec
d4 0.00172414 sec
d11 0.03000000 sec
d13 0.00000400 sec
D16 0.00020000 sec
D24 0.00086207 sec
DELTA 0.00127330 sec
DELTA1 0.00120800 sec
DELTA2 0.0006207 sec
DELTA3 0.00082414 sec
INO 0.00002400 sec
ST1CNT 0
ZGPTNS

***** CHANNEL f1 *****
NUC1 1H
P1 8.65 usec
p2 17.30 usec
P28 0.10 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

***** CHANNEL f2 *****
CPDPRG2 garp
NUC2 13C
P3 11.25 usec
p4 22.50 usec
PCPD2 75.00 usec
PL2 -5.50 dB
PL12 10.98 dB
SFO2 125.7672177 MHz

***** GRADIENT CHANNEL *****
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPNAM4 SINE.100
GPZ1 80.00 %
GPZ2 20.10 %
GPZ3 11.00 %
GPZ4 -5.00 %
P16 1000.00 usec
P19 600.00 usec
ND0 2
TD 256
SFO1 125.7672 MHz
FIDRES 81.380211 Hz
SW 165.650 ppm
FnMODE Echo-Antiecho
SI 1024
SF 500.1299131 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 echo-antiecho
SF 125.7575747 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0



3.90 3.85 3.80 3.75 3.70 3.65 3.60 3.55 3.50 3.45 3.40 ppm

Noribogaine source C



NAME zhp297
EXPNO 5
PROCNO 1
Date_ 20110504
Time_ 21.12
INSTRUM spect
PROBHD 5 mm TXI 1H/D-
PULPROG hsqcetpsi2
TD 1024
SOLVENT MeOD
NS 4
DS 16
SWH 3623.188 Hz
FIDRES 3.538270 Hz
AQ 0.1415000 sec
RG 18390.4
DW 138.000 usec
DE 6.00 usec
TE 301.2 K
CNST2 145.0000000
d0 0.00000300 sec
D1 1.43548799 sec
d4 0.00172414 sec
d11 0.03000000 sec
d13 0.00000400 sec
D16 0.00020000 sec
D24 0.00086207 sec
DELTA 0.00127330 sec
DELTA1 0.00120800 sec
DELTA2 0.00006207 sec
DELTA3 0.00052414 sec
INO 0.00002400 sec
ST1CNT 0
ZGPTNS

ppm

17

18

19

20

21

22

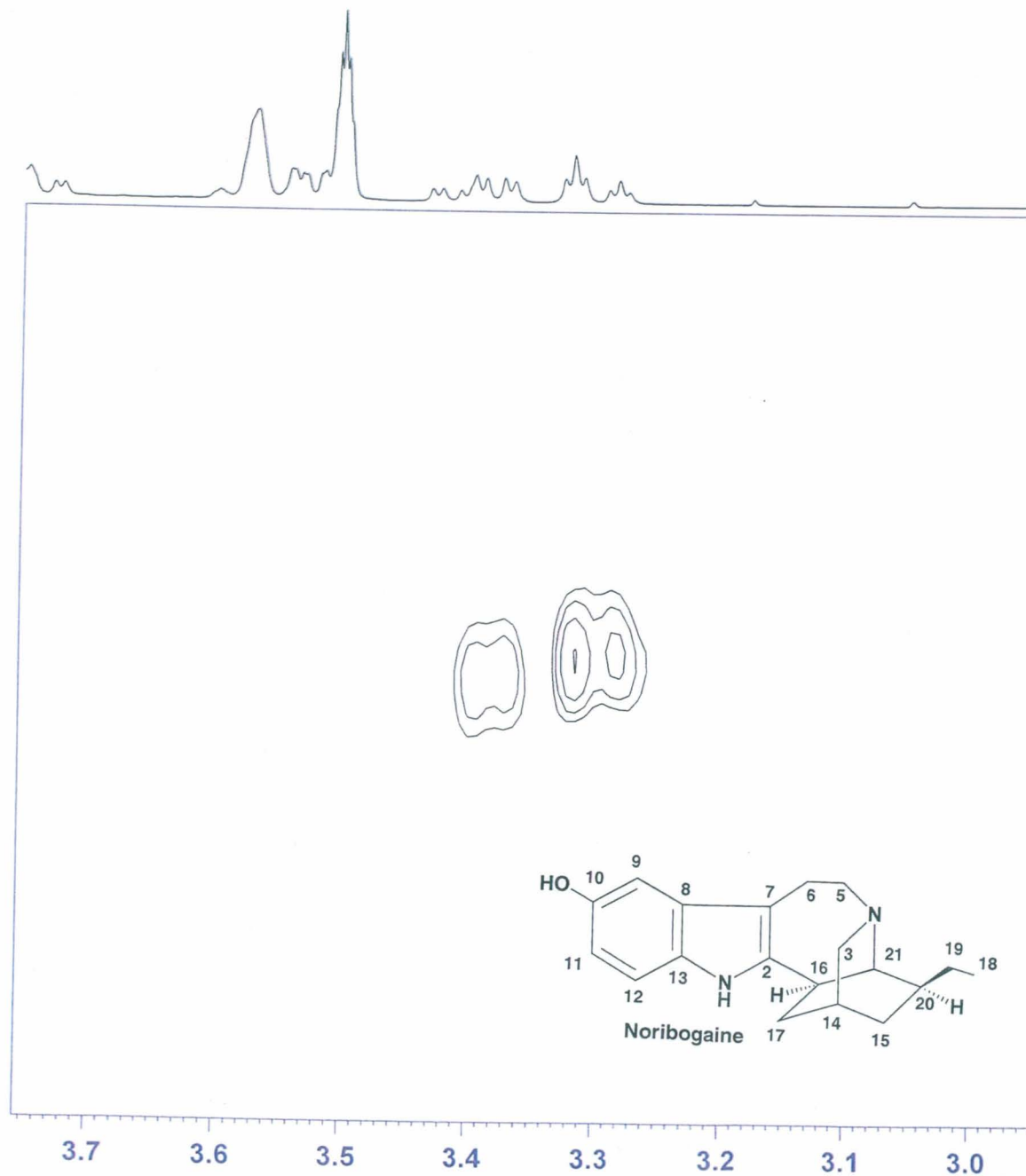
23

ppm

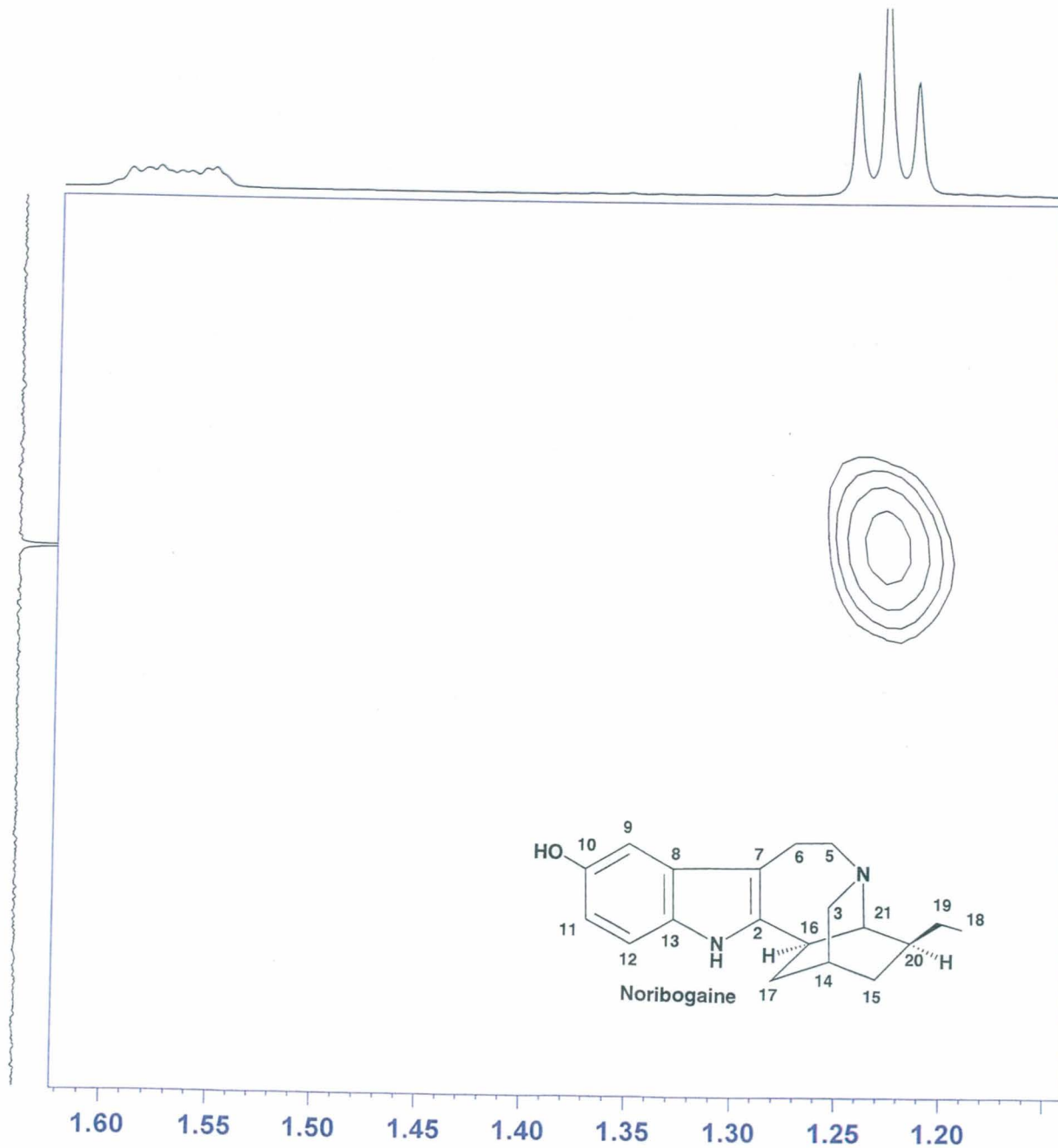
***** CHANNEL f1 *****
NUC1 1H
P1 8.65 usec
P2 17.30 usec
P28 0.10 usec
PL1 -2.00 dB
SFO1 500.1320027 MHz

***** CHANNEL f2 *****
CPDPRG2 garp
NUC2 13C
P3 11.25 usec
P4 22.50 usec
PCPD2 75.00 usec
PL2 -5.50 dB
PL12 10.96 dB
SFO2 125.7672177 MHz

***** GRADIENT CHANNEL *****
GPNAM1 SINE.100
GPNAM2 SINE.100
GPNAM3 SINE.100
GPNAM4 SINE.100
GPZ1 80.00 %
GPZ2 20.10 %
GPZ3 11.00 %
GPZ4 -5.00 %
P16 1000.00 usec
P19 600.00 usec
NDC 2
TD 256
SFO1 125.7672 MHz
FIDRES 81.380211 Hz
SW 165.650 ppm
FhMODE Echo-Antiecho
SI 1024
SF 500.1299131 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40
SI 1024
MC2 echo-antiecho
SF 125.7575747 MHz
WDW QSINE
SSB 2
LB 0.00 Hz
GB 0



Noribogaine source C



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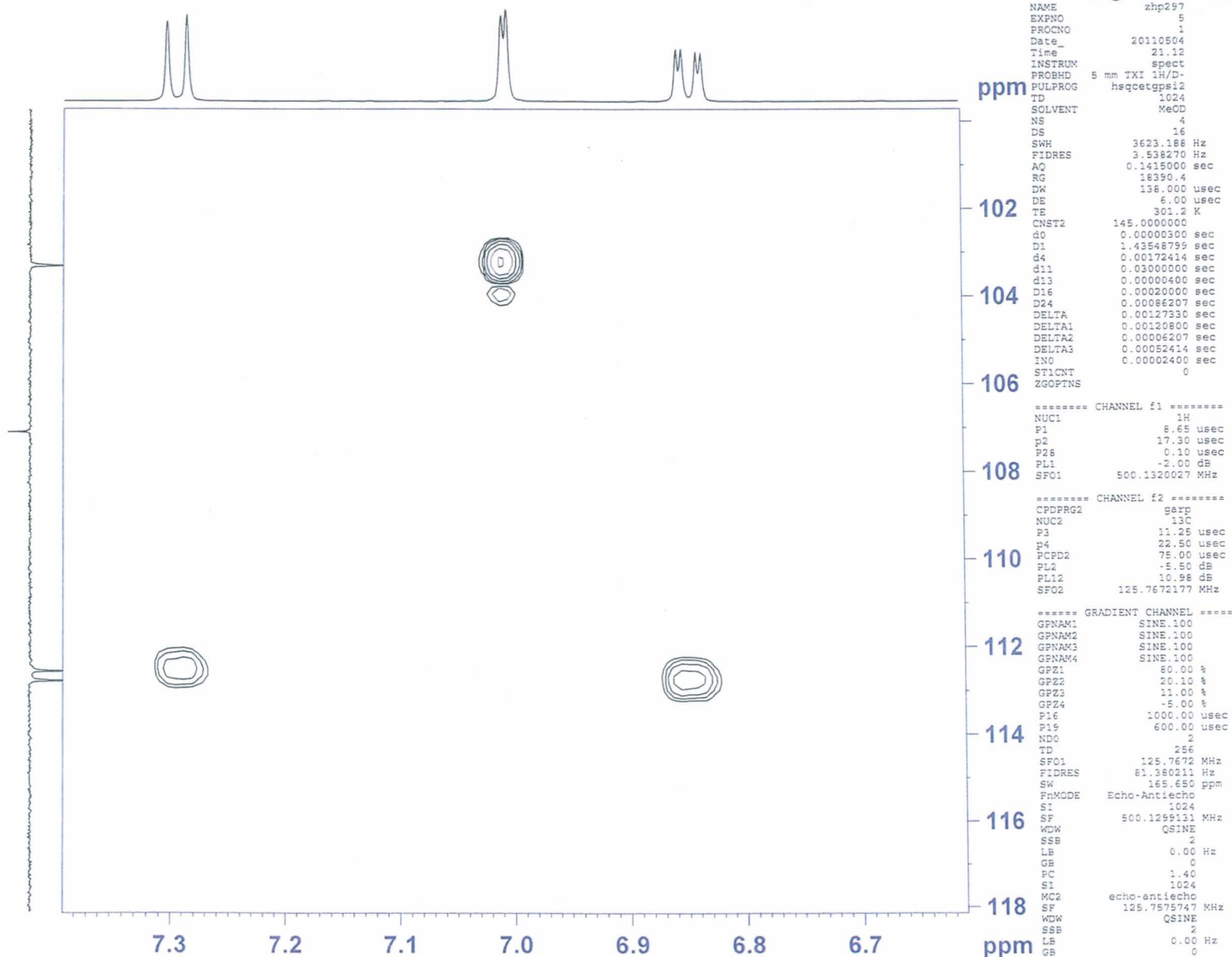
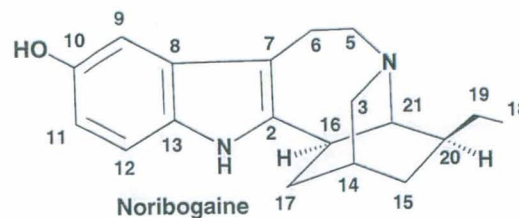
NAME                               zhp297
EXPNO                               5
PROCNO                               1
Date_                               20110504
Time                               21.12
INSTRUM                             spect
PROBHD                             5 mm TXI 1H/D
PULPROG                             hsqcetgpsi2
TD                                  1024
SOLVENT                             Me2O
NS                                  4
DS                                  16
SWH                                 3623.188 Hz
FIDRES                             3.538270 Hz
AQ                                 0.1415000 sec
RG                                 18390.4
DW                                 138.000 usec
DE                                 6.00 usec
TE                                 301.2 K
CNST2                             145.0000000
d0                                0.00000300 sec
D1                                1.43548795 sec
d4                                0.00172414 sec
d11                               0.03000000 sec
d13                               0.00000400 sec
D16                               0.00020000 sec
D24                               0.00086207 sec
DELTA                             0.00127330 sec
DELTA1                           0.00120800 sec
DELTA2                           0.00006207 sec
DELTA3                           0.00052414 sec
INO                               0.00002400 sec
ST1CNT                             0
ZGCOPTS                             0

===== CHANNEL f1 =====
NUC1                               1H
P1                                 8.65 usec
p2                                 17.30 usec
P28                                0.10 usec
PL1                                -2.00 dB
SFO1                             500.1320027 MHz

===== CHANNEL f2 =====
CPDPRG2                           garp
NUC2                               13C
P3                                 11.25 usec
p4                                 22.50 usec
PCPD2                             75.00 usec
PL2                                -5.50 dB
PL12                               10.98 dB
SFO2                             125.7672177 MHz

===== GRADIENT CHANNEL =====
GPNAM1                           SINE.100
GPNAM2                           SINE.100
GPNAM3                           SINE.100
GPNAM4                           SINE.100
GPZ1                               80.00 %
GPZ2                               20.10 %
GPZ3                               11.00 %
GPZ4                               -5.00 %
P16                               1000.00 usec
P19                               600.00 usec
NDO                                2
TD                                 256
SFO1                             125.7672 MHz
FIDRES                             81.380211 Hz
SW                                 165.650 ppm
FrMODE                             Echo-Antiecho
SI                                  1024
SF                               500.1299121 MHz
WDW                                 QSINE
SSB                                 2
LB                                 0.00 Hz
GB                                 0
PC                                 1.40
SI                                  1024
MC2                               echo-antiecho
SF                               125.7575747 MHz
WDW                                 QSINE
SSB                                 2
LB                                 0.00 Hz
GB                                 0

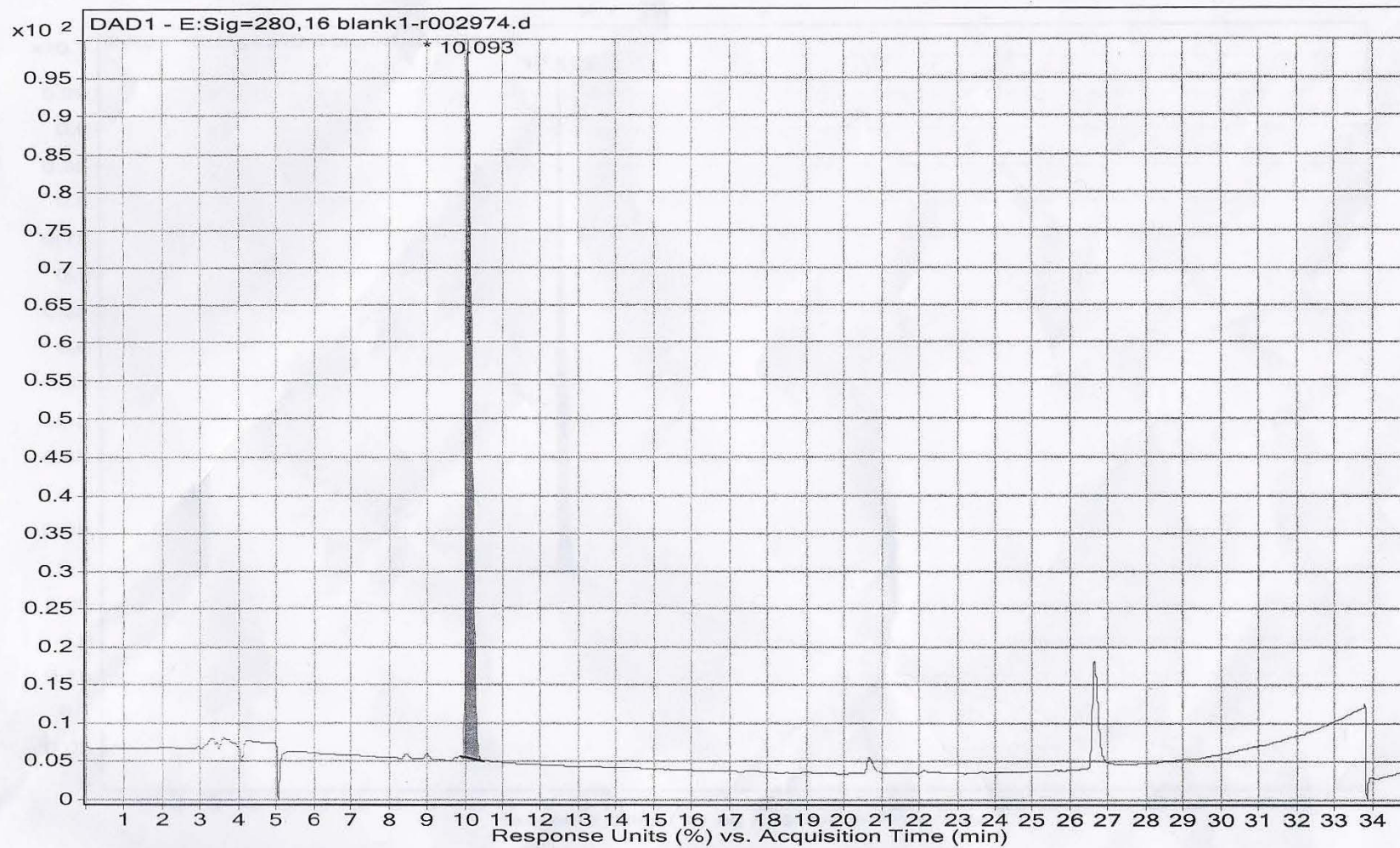
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BB1

Sample Name	martin1297	Position	Vial 2	Instrument Name	Instrument 1	User Name	
Inj Vol	5	InjPosition		SampleType	Sample	IRM Calibration Status	All Ions Missed
Data Filename	blank1-r002974.d	ACQ Method	hplconly3hcoohacn.m	Comment		Acquired Time	5/4/2011 4:33:21 PM

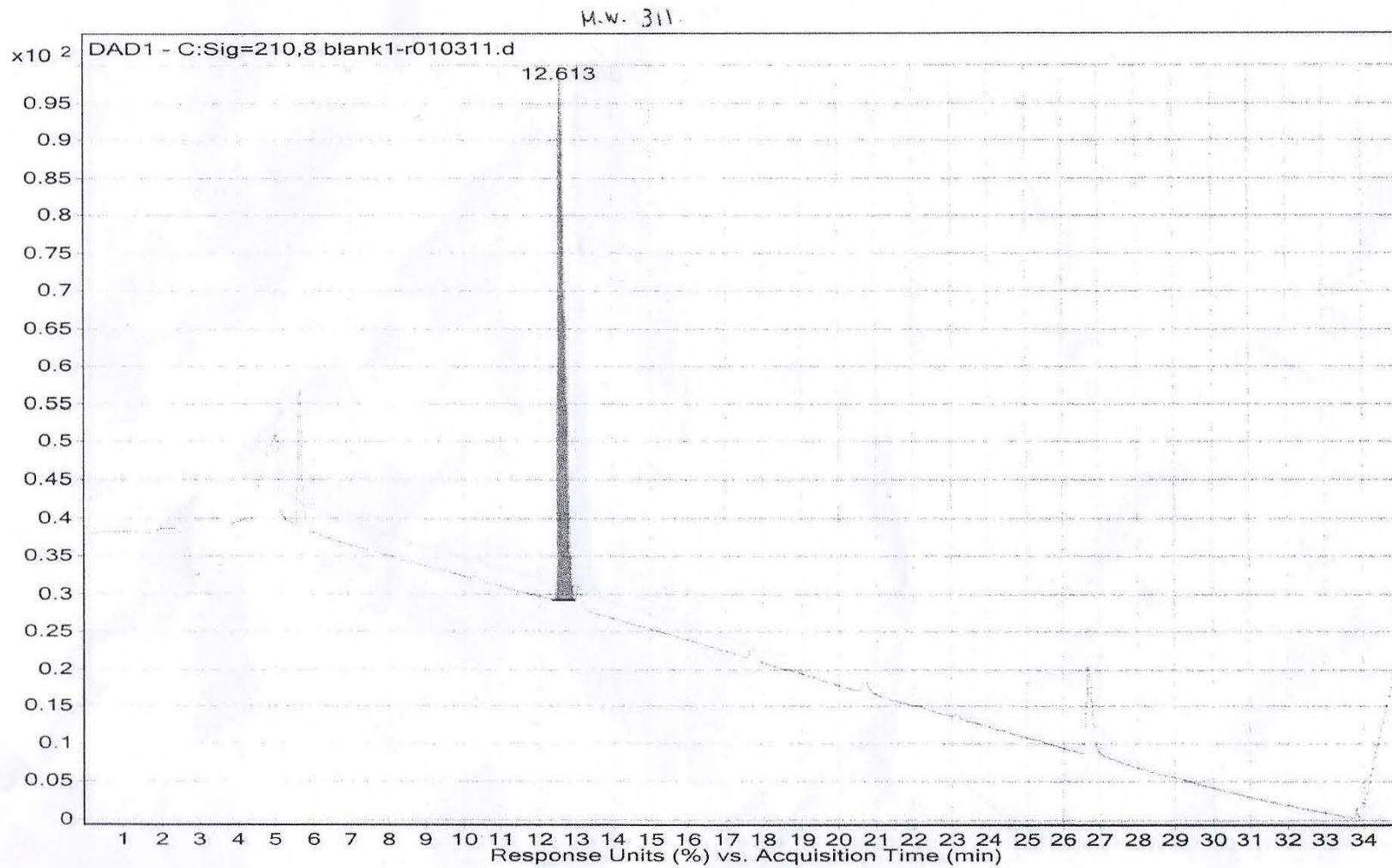
peak 297



NOR-Ibogaine

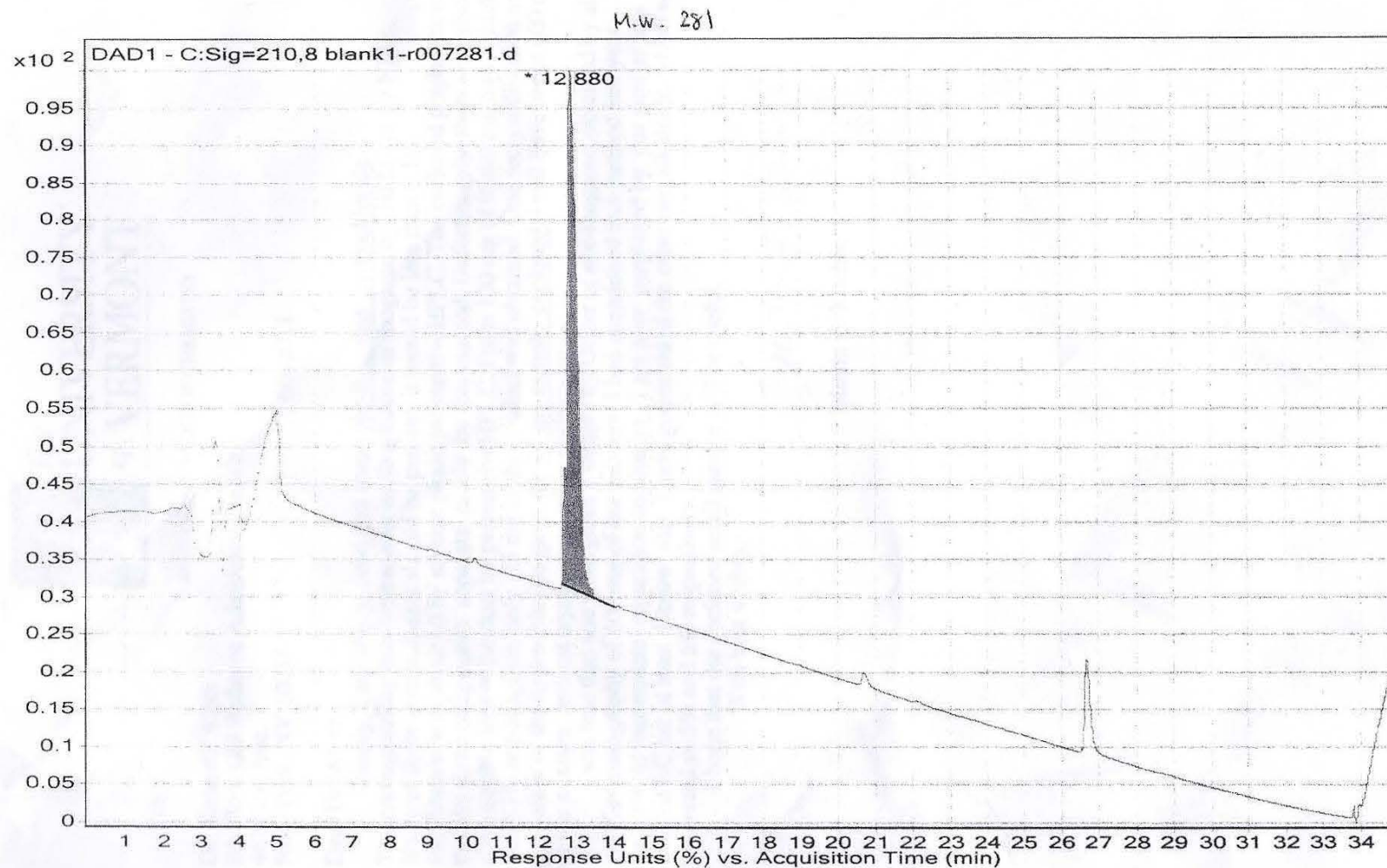
(noribogaine)

Sample Name	martin1311	Position	Vial 4	Instrument Name	Instrument 1	User Name	
Inj Vol	1	InjPosition		SampleType	Sample	IRM Calibration Status	All Ions Missed
Data Filename	blank1-r010311.d	ACQ Method	hplconly3hcoohacn.m	Comment		Acquired Time	5/4/2011 8:11:59 PM



Ibogaine
(ibogaine)

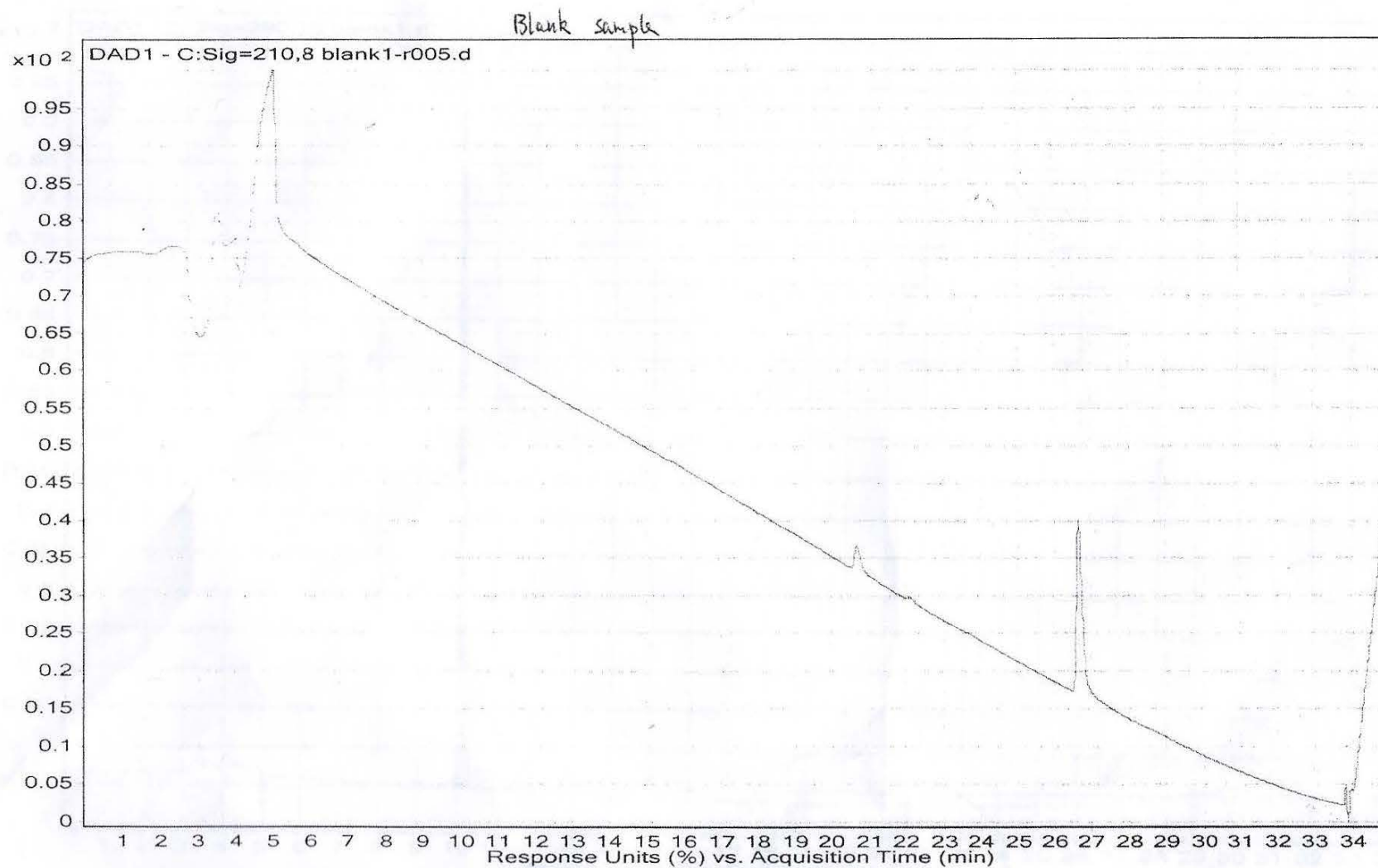
Sample Name	martin1281	Position	Vial 3	Instrument Name	Instrument 1	User Name	
Inj Vol	2	InjPosition		SampleType	Sample	IRM Calibration Status	All Ions Missed
Data Filename	blank1-r007281.d	ACQ Method	hplconly3hcoohacn.m	Comment		Acquired Time	5/4/2011 6:22:33 PM



Ibogamine

(ibogamine)

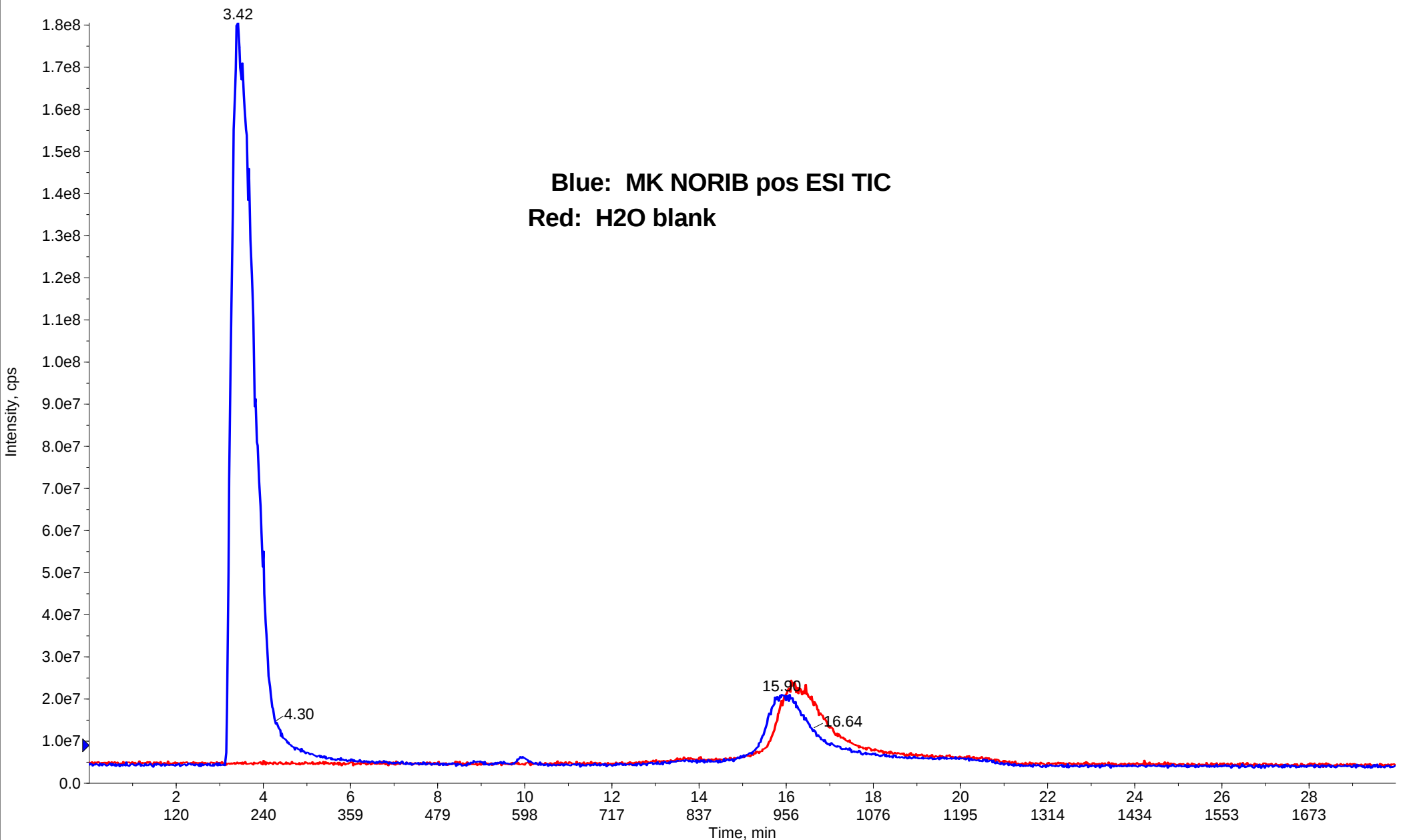
Sample Name	martin1blnak1	Position	Vial 1	Instrument Name	Instrument 1	User Name	
Inj Vol	1	InjPosition		SampleType	Sample	IRM Calibration Status	All Ions Missed
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(blank sample)

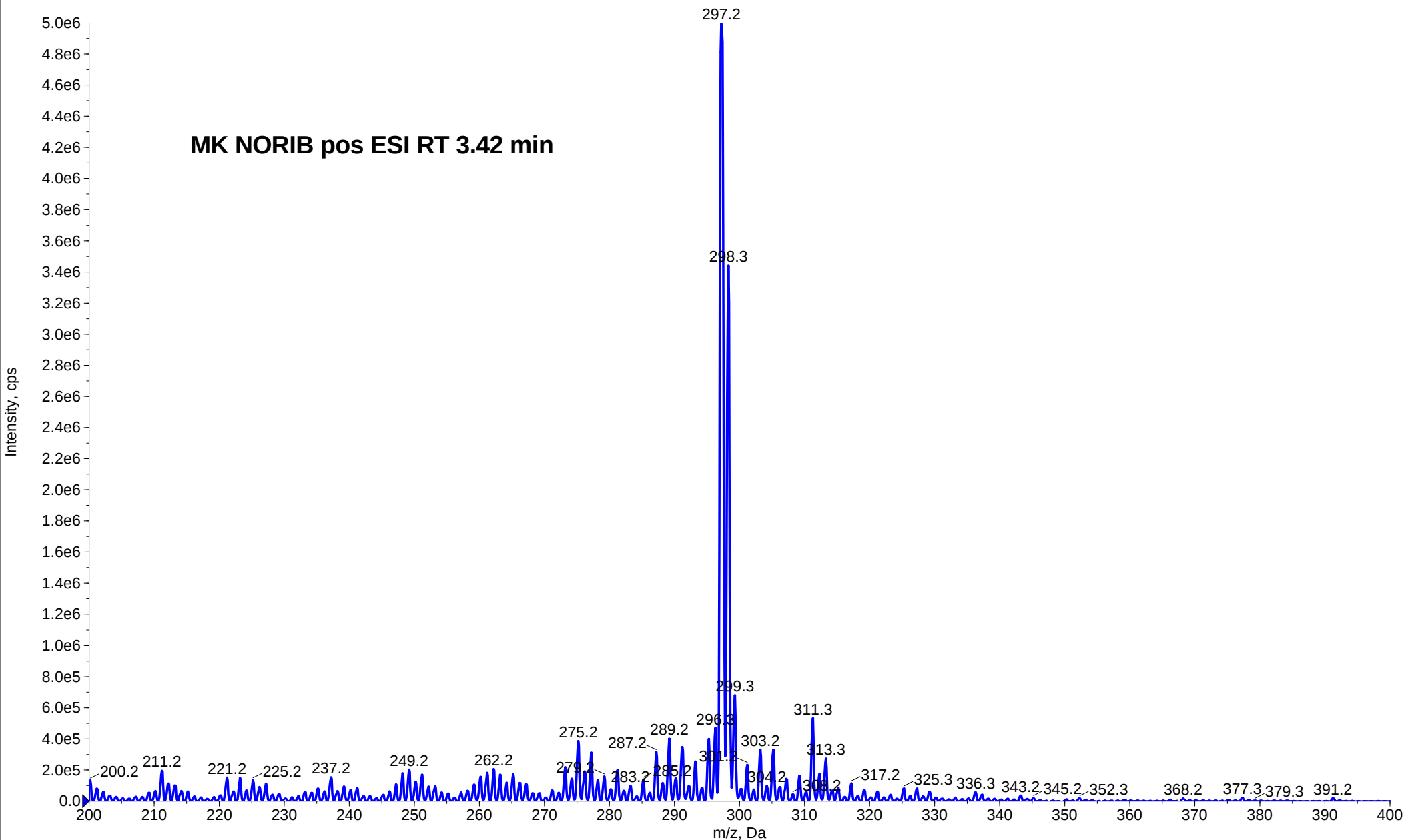
TIC of +Q1: from Sample 8 (MK 500 NORIB 03) of MK110831.wiff (Heated Nebulizer)

Max. 1.8e8 cps.



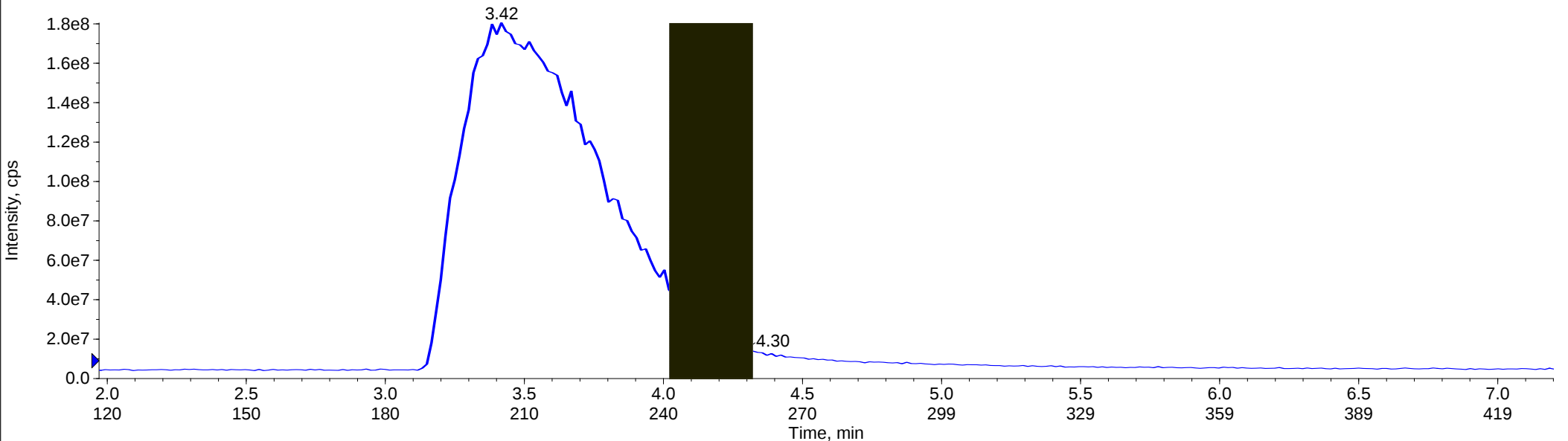
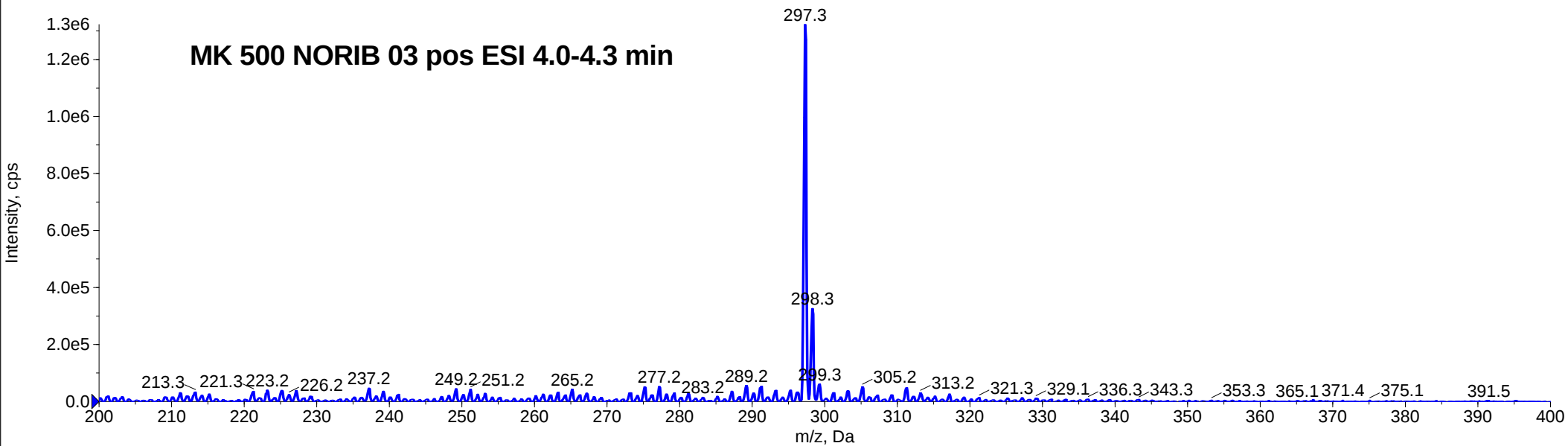
+Q1: 3.166 to 3.953 min from Sample 8 (MK 500 NORIB 03) of MK110831.wiff (Heated Nebulizer), subtract...

Max. 5.0e6 cps.



Workstation: 4000QTRAP
Operator: ABT4000

Analyst Version: 1.5

HPLC/MS analysis for the tail end of the noribogaine peak graph for source D**TIC of +Q1: from Sample 8 (MK 500 NORIB 03) of MK110831.wiff (Heated Nebulizer)** Max. 1.8e8 cps.**+Q1: 4.020 to 4.322 min from Sample 8 (MK 500 NORIB 03) of MK110831.wiff (Heated Nebulizer), subtract...** Max. 1.3e6 cps.Acq. Date: Wednesday, August 31, 2011
Acq. File: MK110831.wiff

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OBITER
RESEARCH, LLC

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CERTIFICATE OF ANALYSIS

July 16, 2013

Obiter Research obtained the following results from analysis of the material described below:

COMPOUND NAME: 18-Methoxycoronaridine Hydrochloride

COMPOUND DESCRIPTION: White Powder

LOT NUMBER: OBI-220-158-1

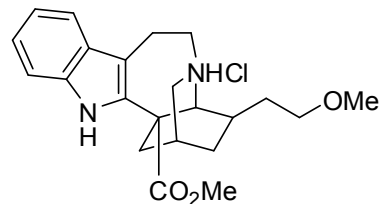
LAST SOLVENT: CH₂Cl₂/Ether

FORMULA WEIGHT: 404.93

CHEMICAL FORMULA: C₂₂H₂₉ClN₂O₃

CAS NUMBER:

PROJECT/PRODUCT NAME: OBT-195



¹H-NMR:

Spectrometer Frequency:

Solvent: DMSO-*d*₆

Spectrum: Consistent with expected structure (attached)

HPLC:

Column: Phenomenex C18 150 mm x 4.6 mm

Adsorbent: Columbus 5 μ C-18, 110A

Flow Rate: 1.0 mL/min.

Solvent System: 75% ACN:25%H₂O

Injection Volume: 15 μL

Temperature: 26°C

λ observed: 254 nm

Purity: > 99.0%

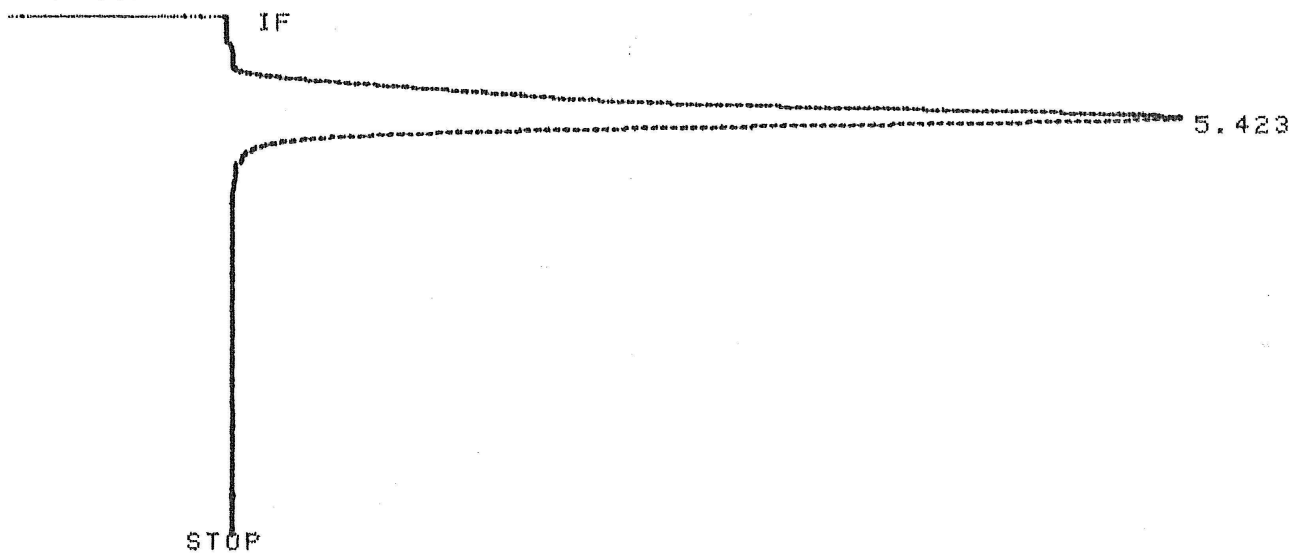
Retention Time: 5.423 min

(Spectrum attached)

Submitted by: _____ Date: _____

Approved by: _____ Date: _____

* ATT 2^ 6 0
* RUN # 196 DEC 23, 2010 14:58:49
START



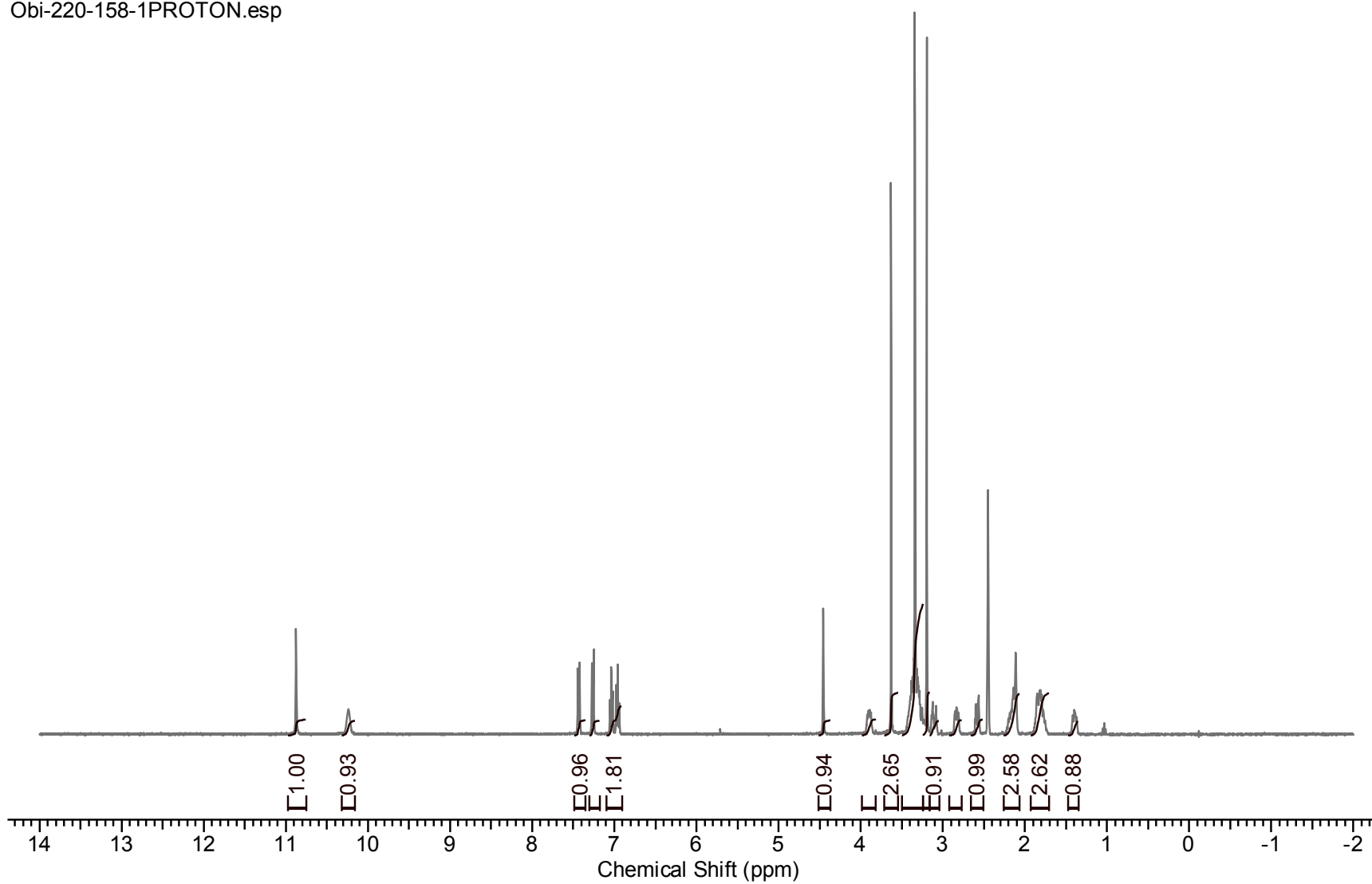
RUN# 196 DEC 23, 2010 14:58:49

AREA%

RT	AREA	TYPE	WIDTH	AREA%
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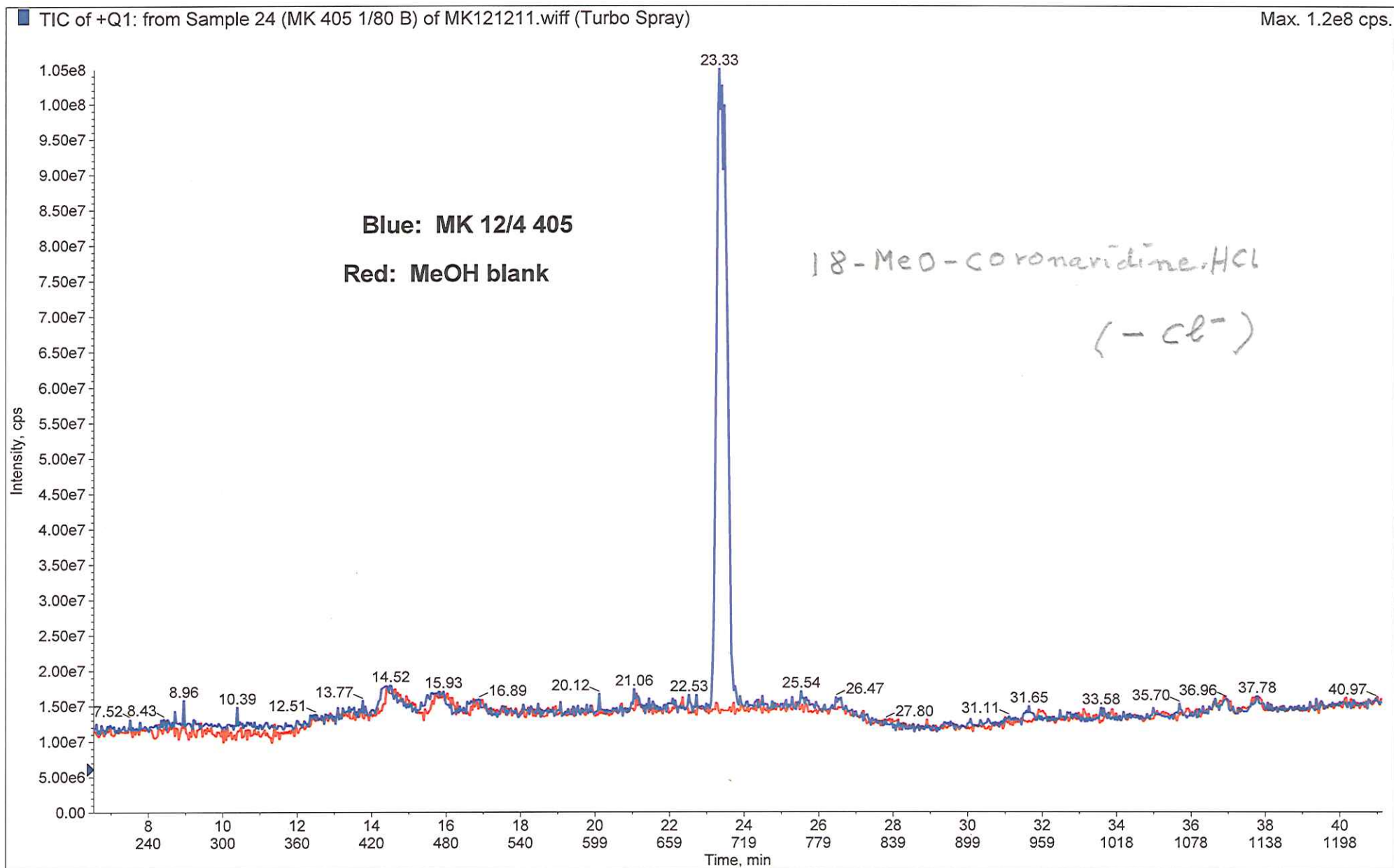
TOTAL AREA=3.1222E+07
MUL FACTOR=1.0000E+00

Obi-220-158-1PROTON.esp



Workstation: 4000QTRAP
Operator: ABI4000

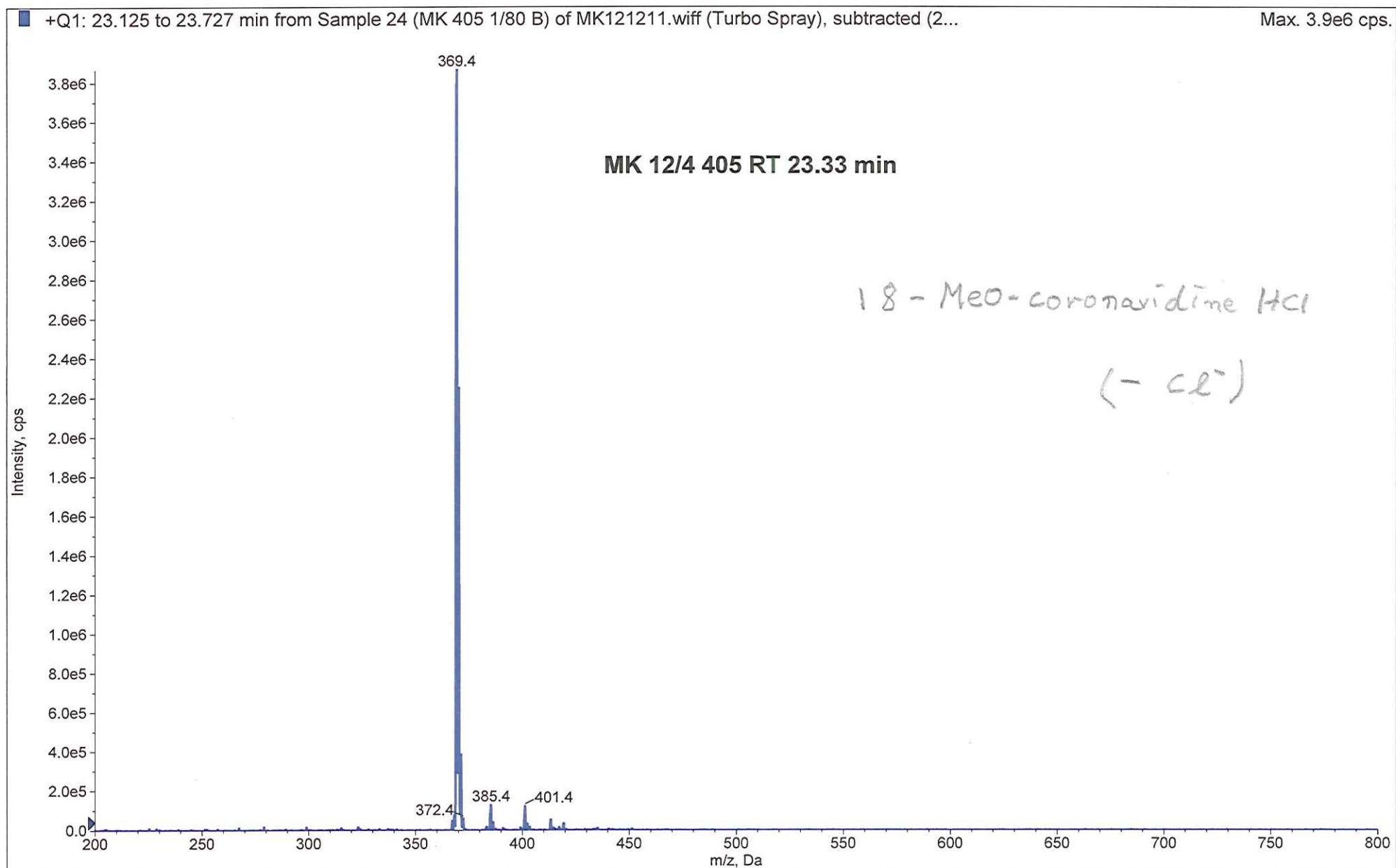
Analyst Version: 1.5



Acq. Date: Wednesday, December 12, 2012
Acq. File: MK121211.wiff

Workstation: 4000QTRAP
Operator: ABI4000

Analyst Version: 1.5



Acq. Date: Wednesday, December 12, 2012
Acq. File: MK121211.wiff