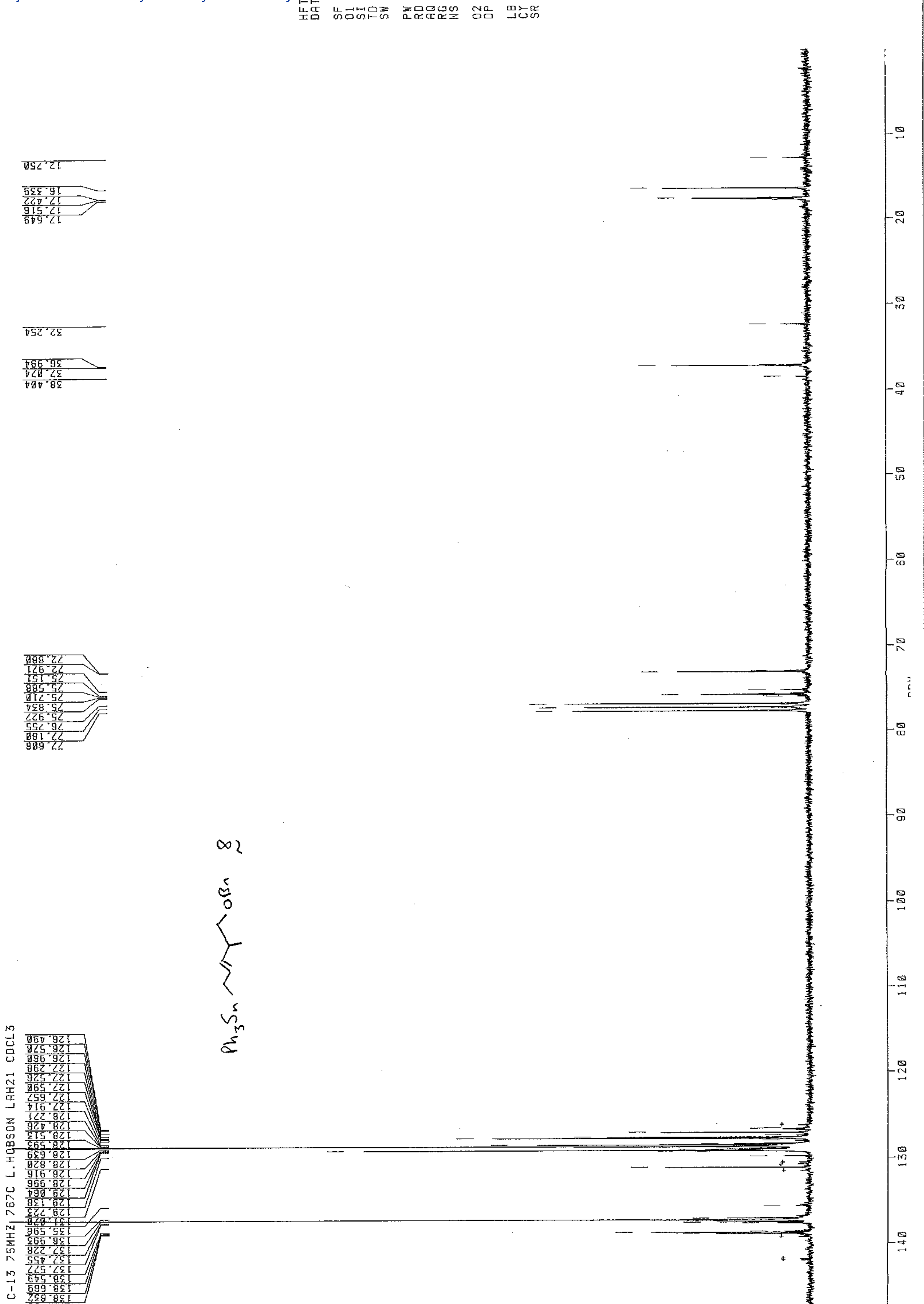
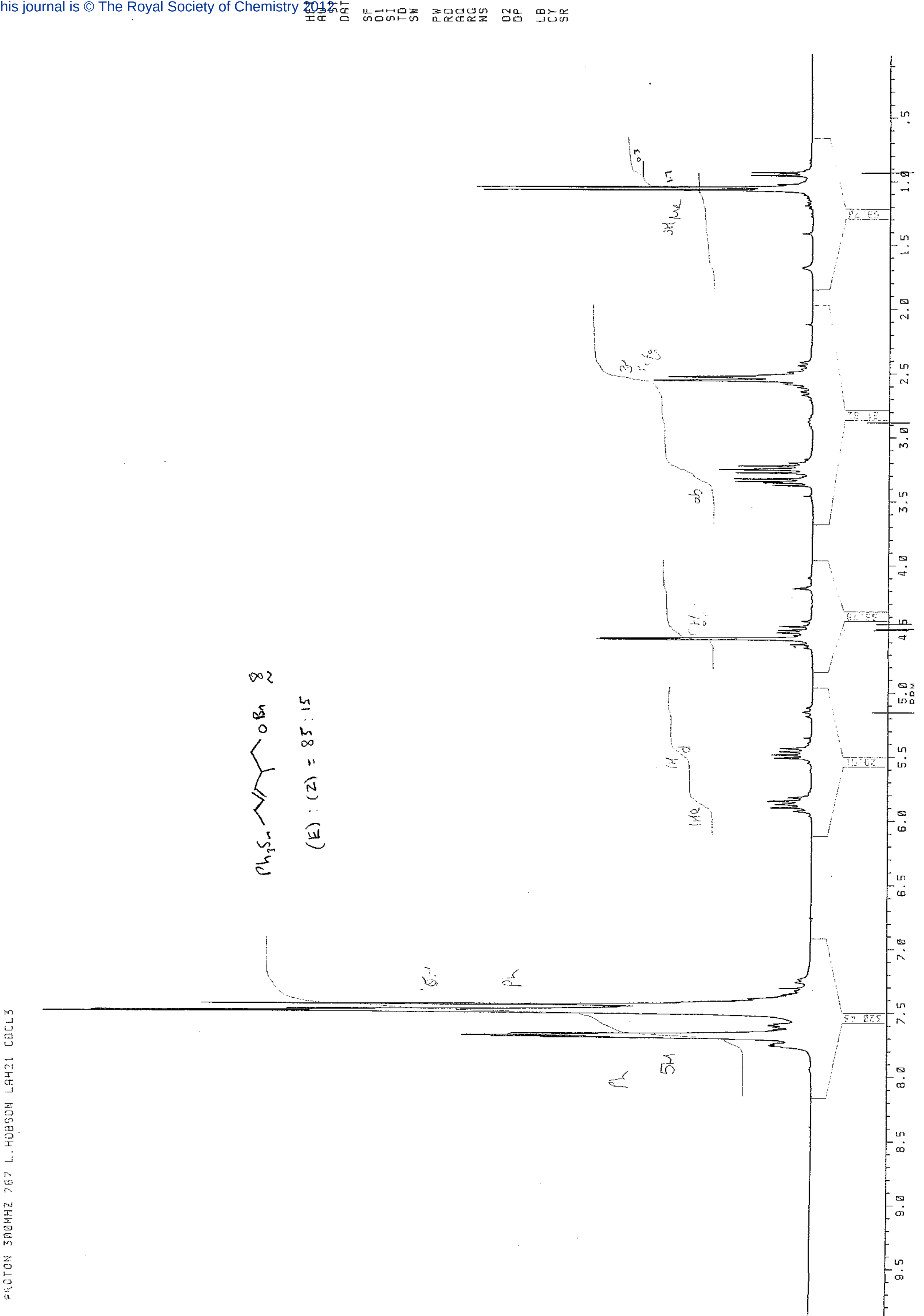
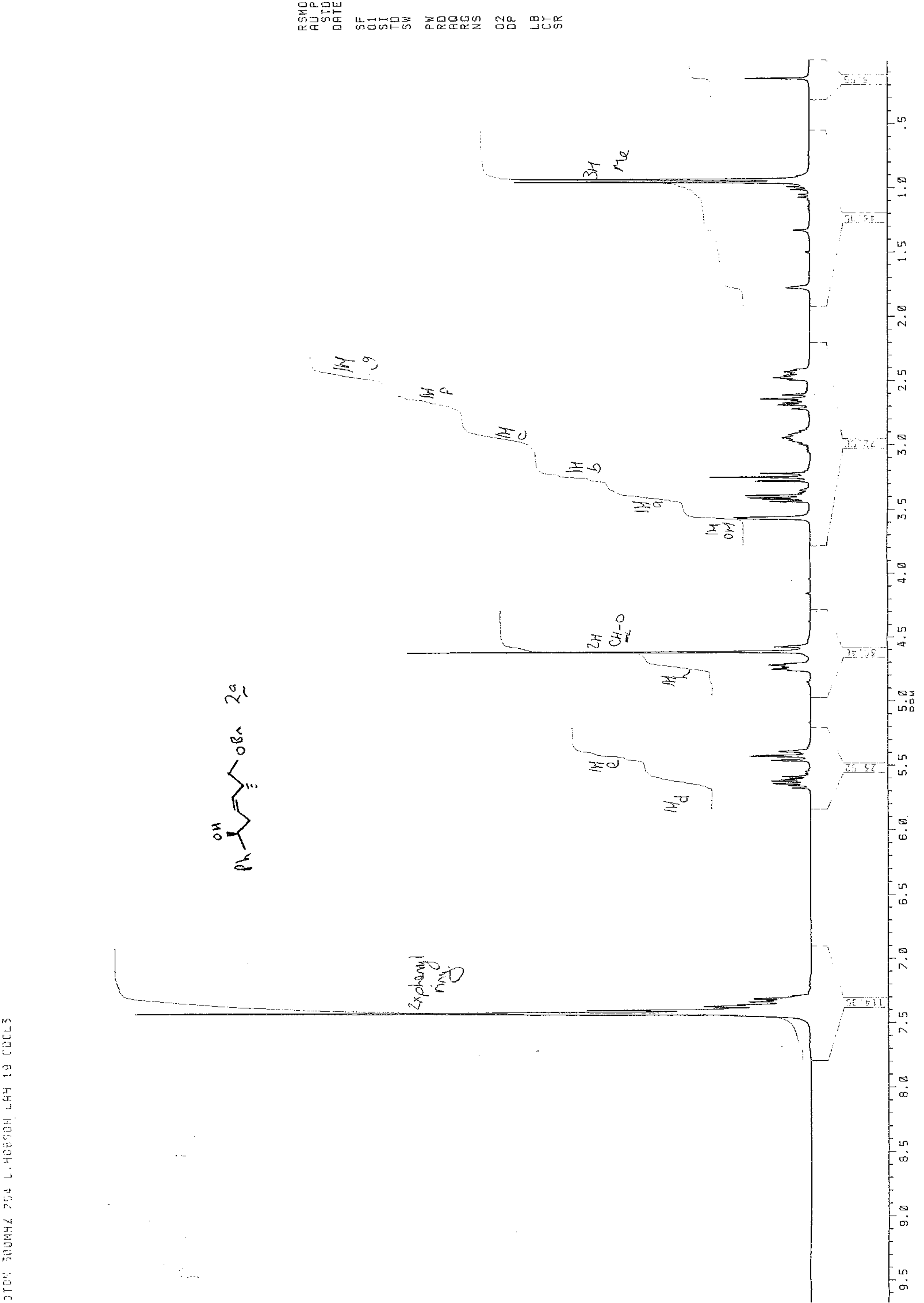
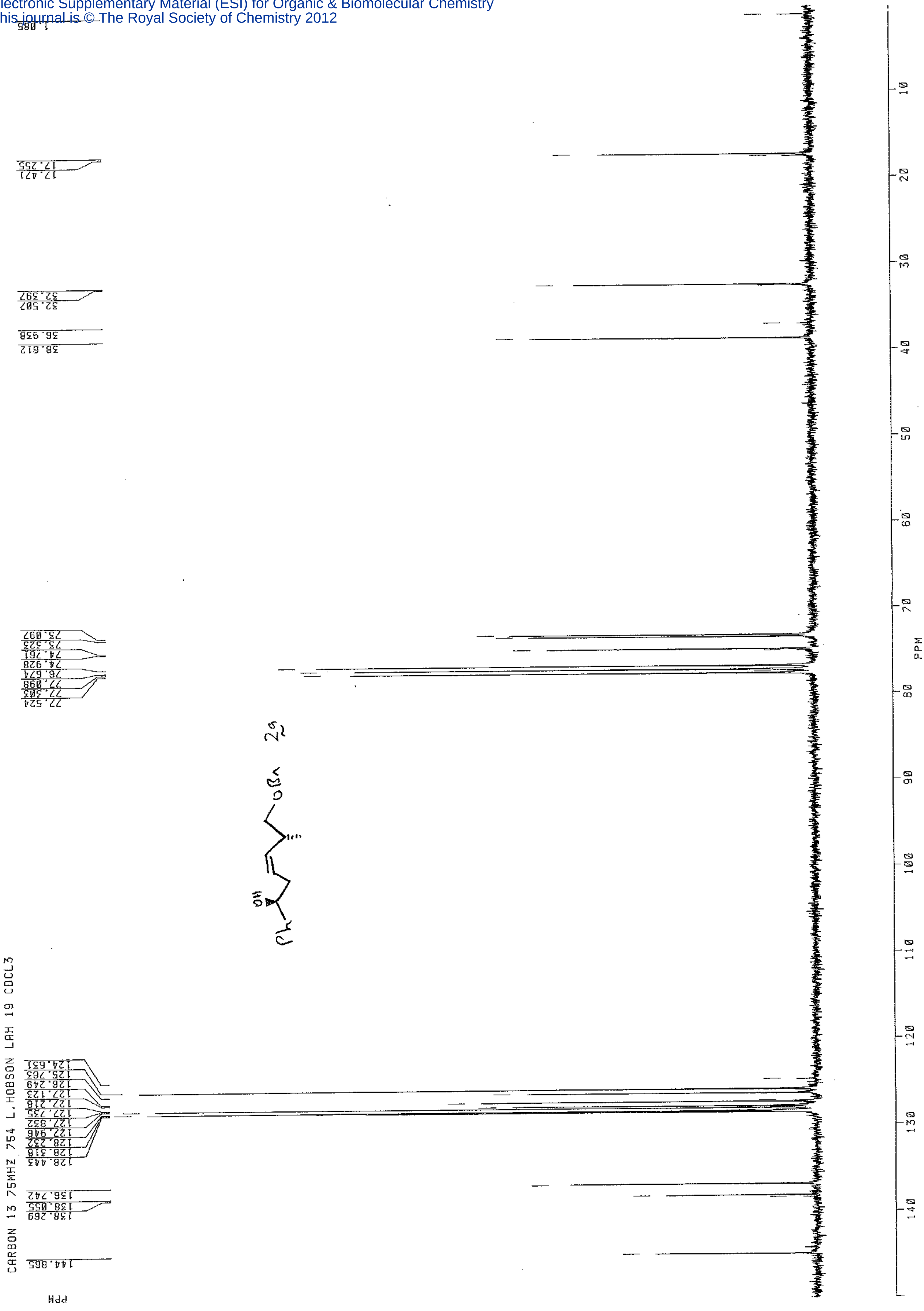
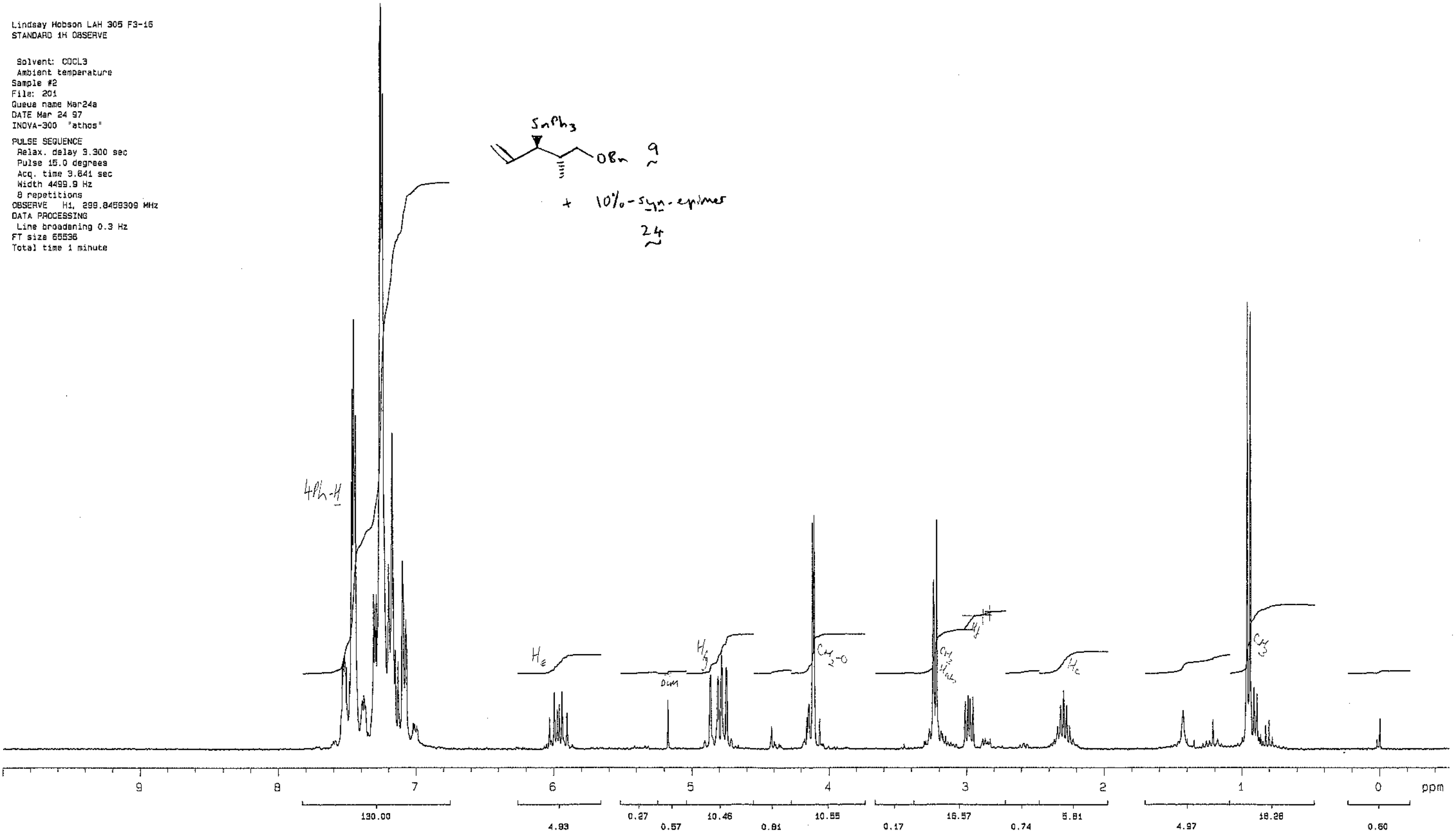

C-13 75MHZ 767C L.HOBSON LAH21 CDCL3
HFT
DAT
SF
O1
SI
TD
SW
PW
RD
AQ
RG
NS
O2
DP
LB
CY
SR
12.750
16.339
17.422
17.516
17.649
32.254
36.994
37.024
38.404
72.880
72.971
75.151
75.588
75.710
75.834
75.927
76.755
77.180
77.606
126.490
126.570
126.960
127.290
127.526
127.590
127.657
127.914
128.271
128.426
128.513
128.593
128.639
128.820
128.916
128.996
129.064
129.138
129.723
131.020
135.596
136.993
137.228
137.455
137.577
138.549
138.669
138.832
Ph3Sn
OBn
8
10
20
30
40
50
60
70
80
90
100
110
120
130
140


PROTON 300MHZ 767 L.HOBSON LAH21 CDCL3
HZ
AQ
DAT
SF
O1
SI
TD
SW
PW
RD
AQ
RG
NS
O2
DP
LB
CY
SR
Ph3Sn OBn 8
(E) : (Z) = 85 : 15
5H
Ph
1H d
1He
CH2
ab
3H f,g
3H Me
1.7
0.3
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
PPM
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5


PROTON 300MHZ 754 L.HOBSON LAH 19 CDCL3
RSM07
AU PROG
STD1
DATE 30
SF 3
O1 52
SI 327
TD 163
SW 45
PW
RD
AQ
RC
NS
O2 416
DP 4L
LB
CY
SR 335
3H Me
1H g
1H f
1H c
1H b
1H a
1H OH
2H CH2-O
1H h
1H e
1H d
2xphenyl ring
Ph
OH
OBn
2a
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
PPM
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5


CARBON 13 75MHZ 754 L.HOBSON LAH 19 CDCL3
PPM
1.085
17.255
17.471
32.597
32.507
36.938
38.612
73.097
73.323
74.761
74.928
76.674
77.098
77.503
77.524
124.651
125.763
126.249
127.123
127.218
127.755
127.852
127.946
128.232
128.318
128.443
136.742
138.055
138.269
144.865
10
20
30
40
50
60
70
80
90
100
110
120
130
140
PPM
Ph
OH
OBn
29

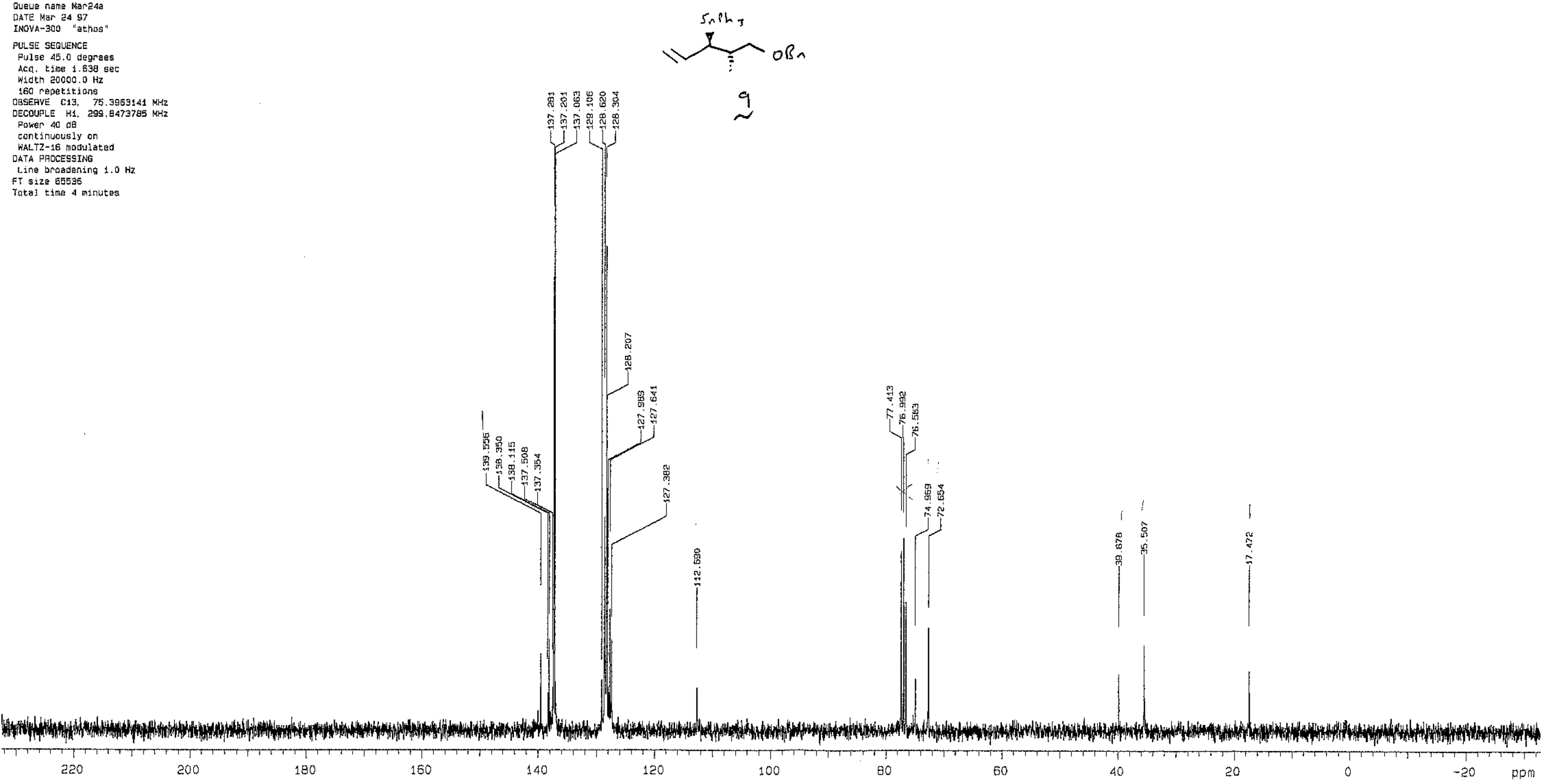


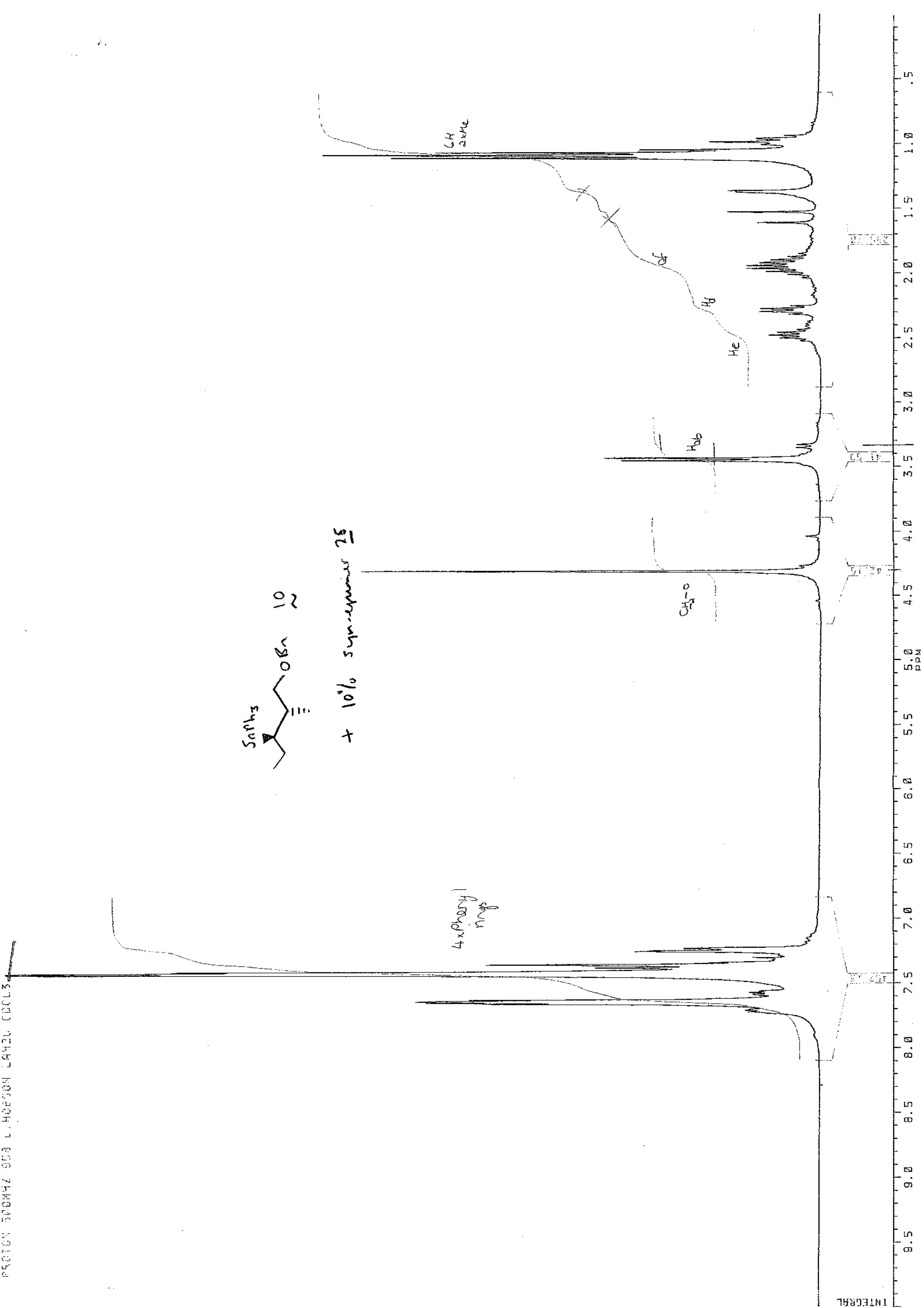
Lindsay Hobson LAH 305 F3-16
STANDARD 1H OBSERVE

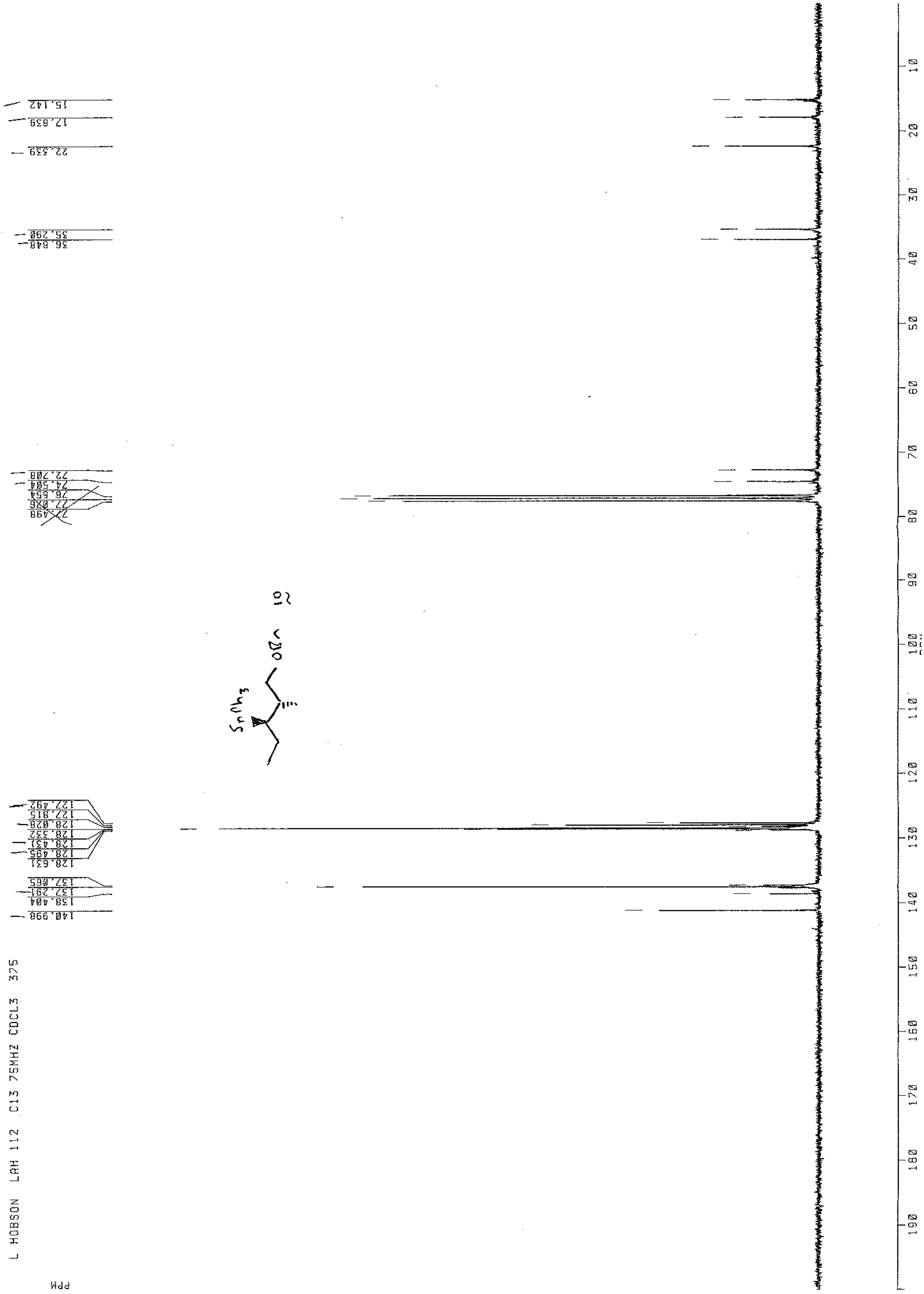
Solvent: CDCL3
Ambient temperature
Sample #2
File: 201
Queue name Mar24a
DATE Mar 24 97
INOVA-300 "athos"

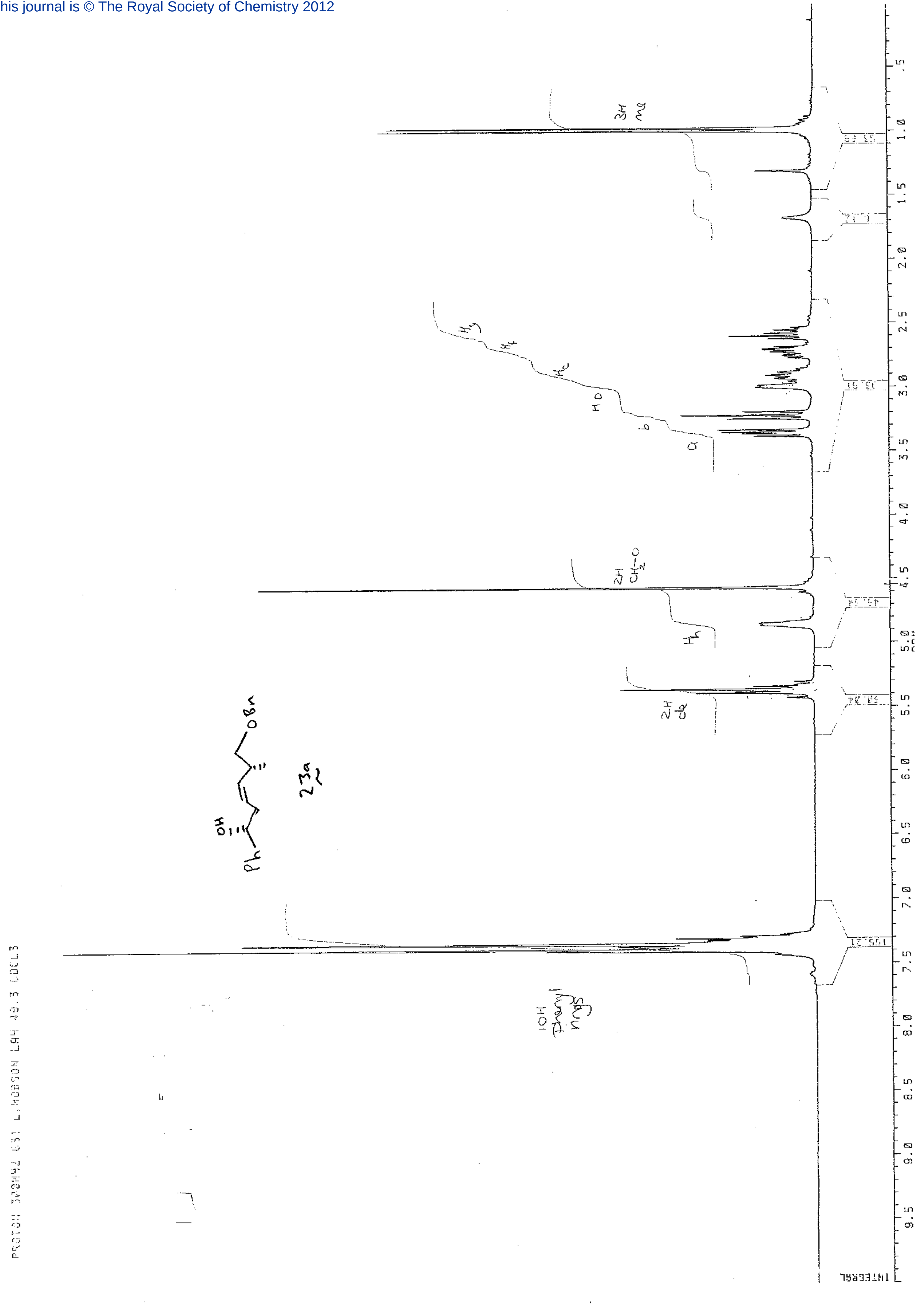
PULSE SEQUENCE
Relax. delay 3.300 sec
Pulse 15.0 degrees
Acq. time 3.641 sec
Width 4499.9 Hz
8 repetitions
OBSERVE H1, 299.8459309 MHz
DATA PROCESSING
Line broadening 0.3 Hz
FT size 65536
Total time 1 minute

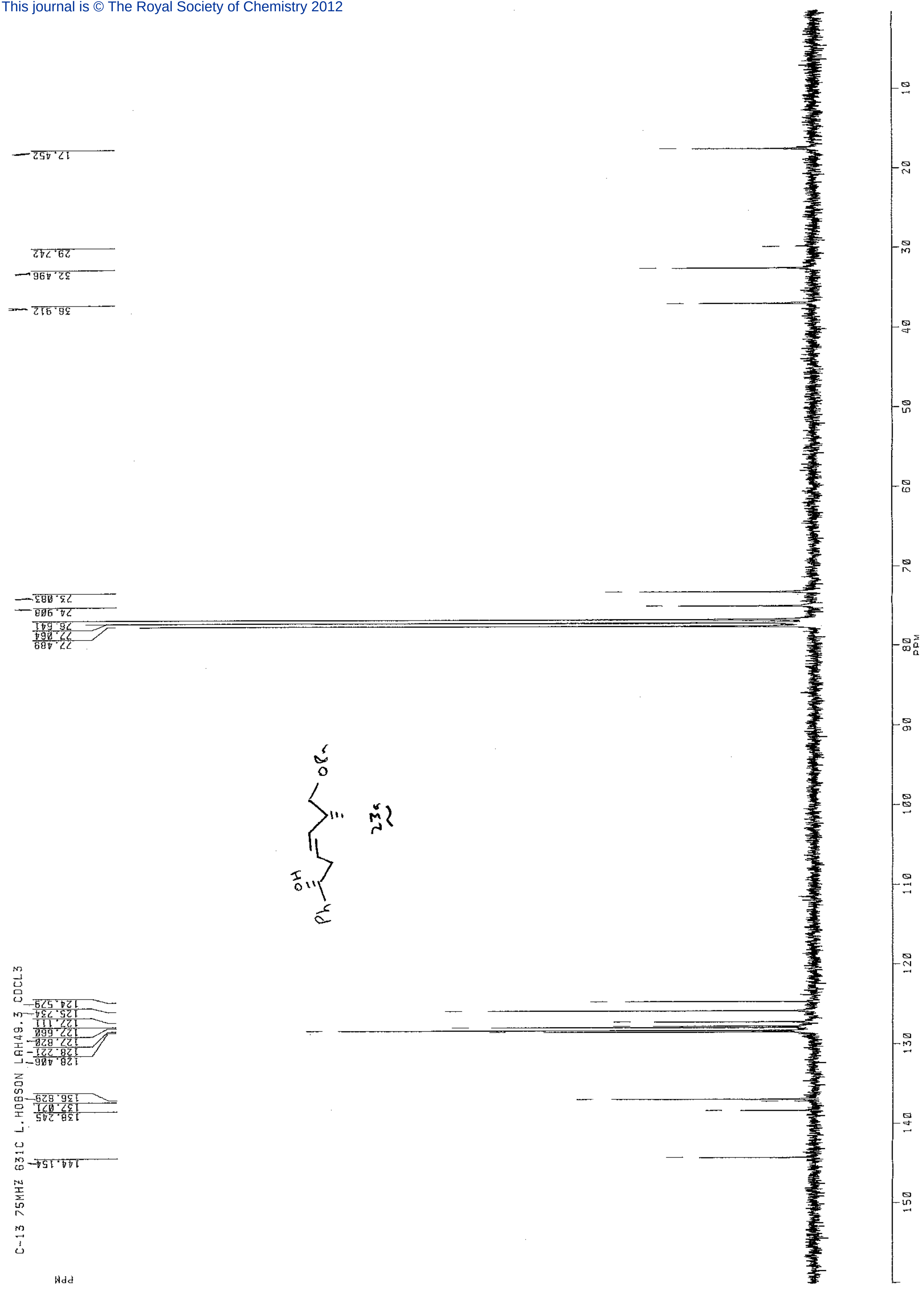
```
Lindsay Hobson LAH 305 F3-16
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #2
File: 202
Queue name Mar24a
DATE Mar 24 97
INOVA-300  "athos"
PULSE SEQUENCE
 Pulse 45.0 degrees
 Acq. time 1.638 sec
 Width 20000.0 Hz
 160 repetitions
OBSERVE  C13,  75.3963141 MHz
DECOUPLE  H1,  299.8473785 MHz
 Power 40 dB
 continuously on
 WALTZ-16 modulated
DATA PROCESSING
 Line broadening 1.0 Hz
FT size 65536
Total time 4 minutes
```




PROTON 500MHz 9C3 L.HODSON LAH2L CDCL3
SnPh3
OBn
10
+ 10% syn-epimer 25
CH
2xMe
Hf
Hd
He
Hab
CH2-O
4xPhenyl ring
INTEGRAL
PPM
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5


L HOBSON LAH 112 C13 75MHZ CDCL3 375
15.142
17.839
22.339
35.290
36.848
72.708
74.504
76.654
77.076
77.498
127.492
127.815
128.028
128.332
128.431
128.495
128.631
137.065
137.291
138.404
140.998
SnPh3
OBn
10
PPM
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190

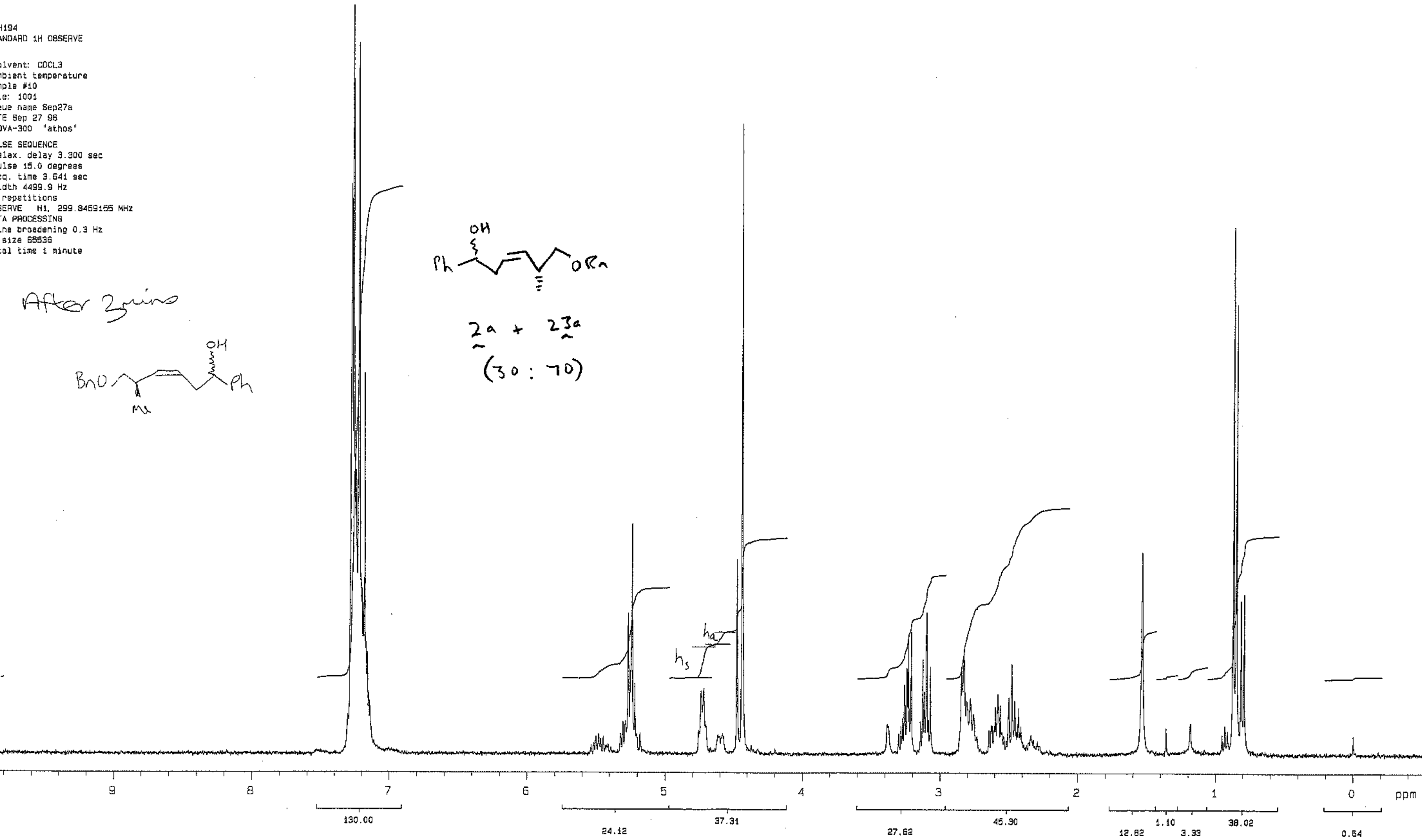

PROTON 300MHz CS1 L.HOBSON LAH 49.3 CDCL3
Ph
OH
OBn
23a
3H
Me
Hg
Hf
He
HO
b
a
2H
CH2-O
Hh
2H
de
10H
Phenyl
rings
INTEGRAL
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
PPM


C-13 75MHZ 631C L.HOBSON LAH49.3 CDCL3
17.452
29.742
32.496
36.912
75.083
74.908
76.641
77.064
77.489
124.529
125.754
127.111
127.660
127.820
128.221
128.406
136.829
137.071
138.245
144.154
PPM
10
20
30
40
50
60
70
80
PPM
90
100
110
120
130
140
150
Ph
OH
OBn
23a

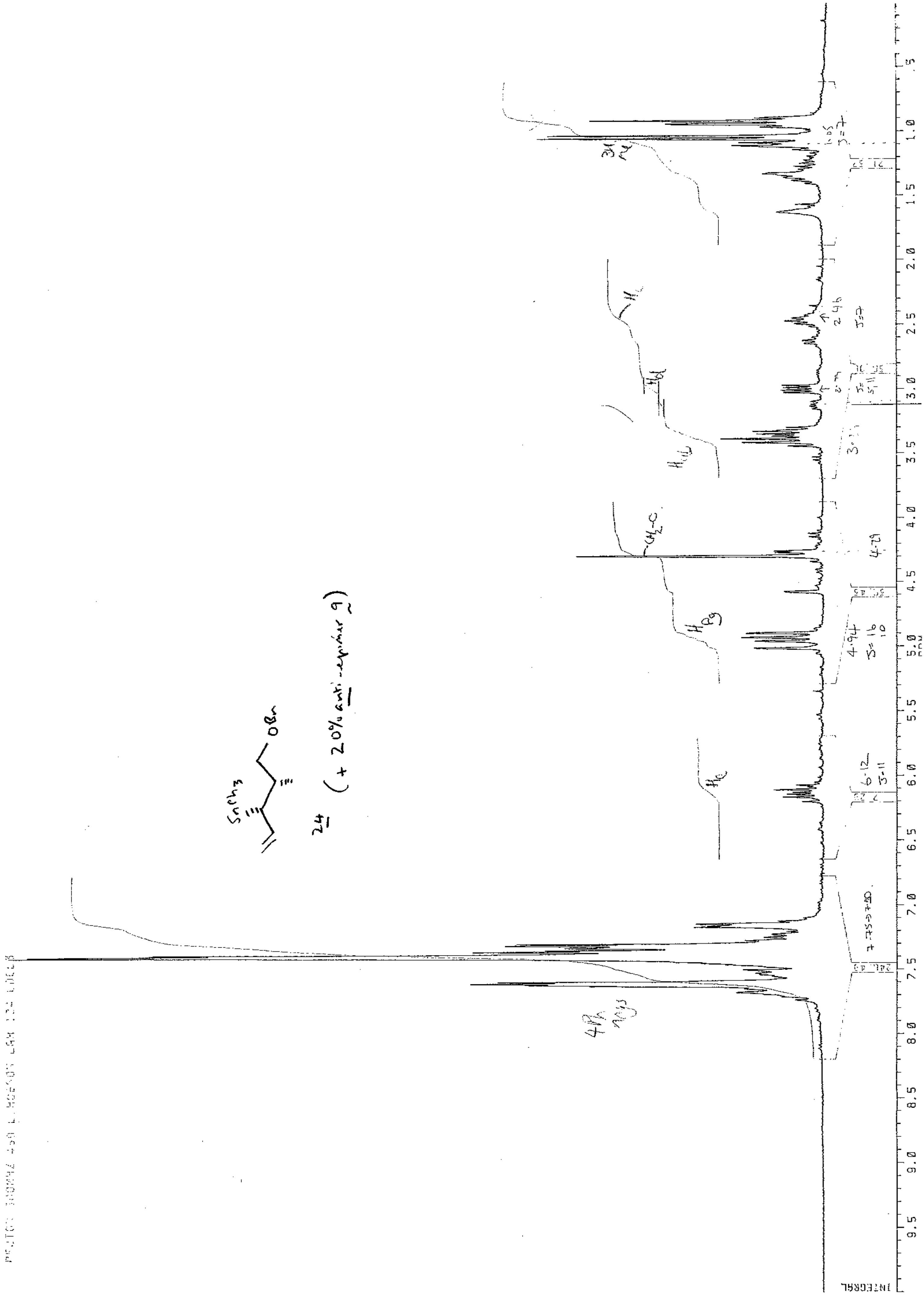
LAH194
STANDARD 1H OBSERVE

Solvent: CDCL3
Ambient temperature
Sample #10
File: 1001
Queue name Sep27a
DATE Sep 27 96
INOVA-300 "athos"

PULSE SEQUENCE
Relax. delay 3.300 sec
Pulse 15.0 degrees
Acq. time 3.641 sec
Width 4499.9 Hz
8 repetitions
OBSERVE H1, 299.8459155 MHz
DATA PROCESSING
Line broadening 0.3 Hz
FT size 65536
Total time 1 minute


After 2mins

2a + 23a
(30 : 70)



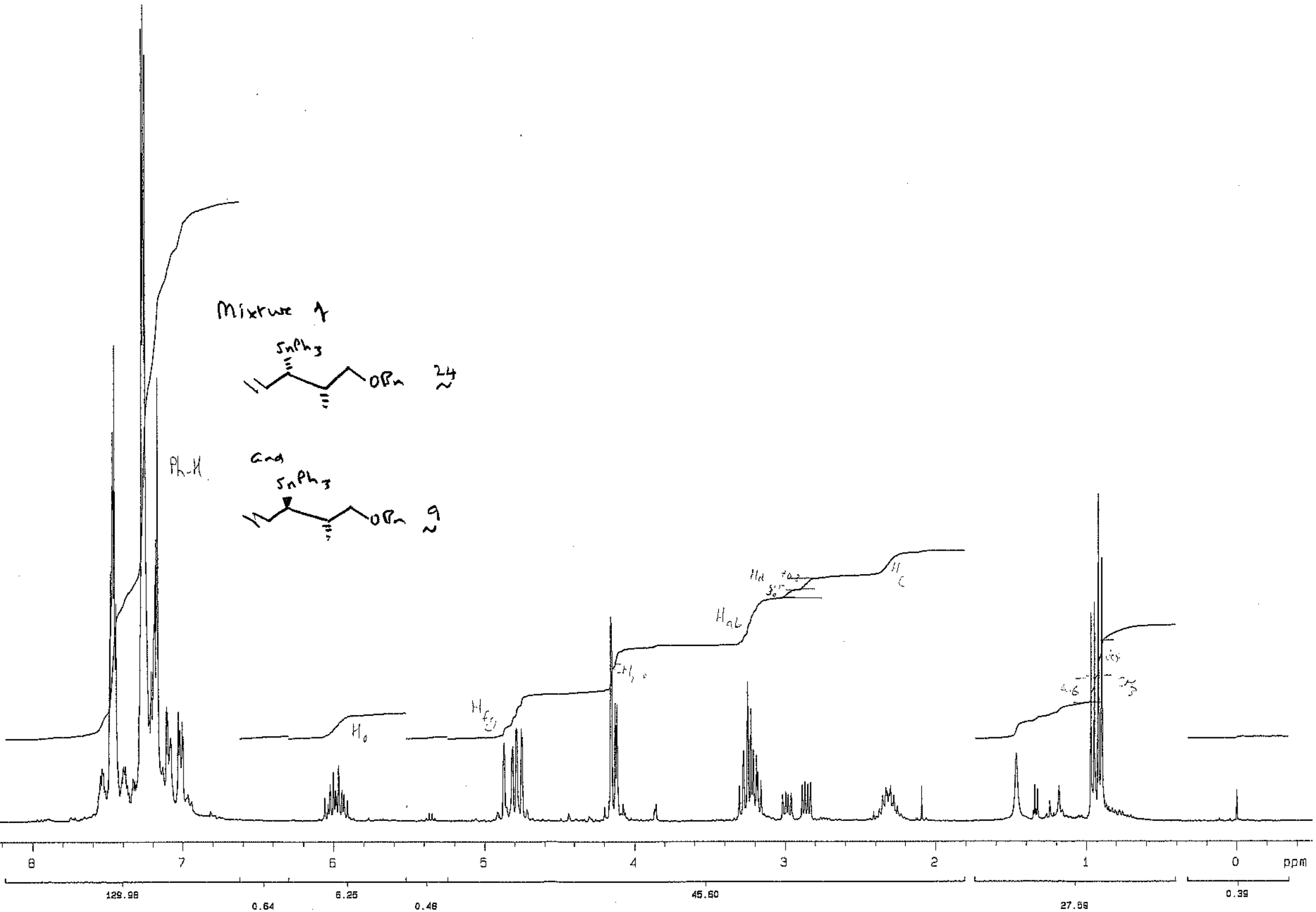
24

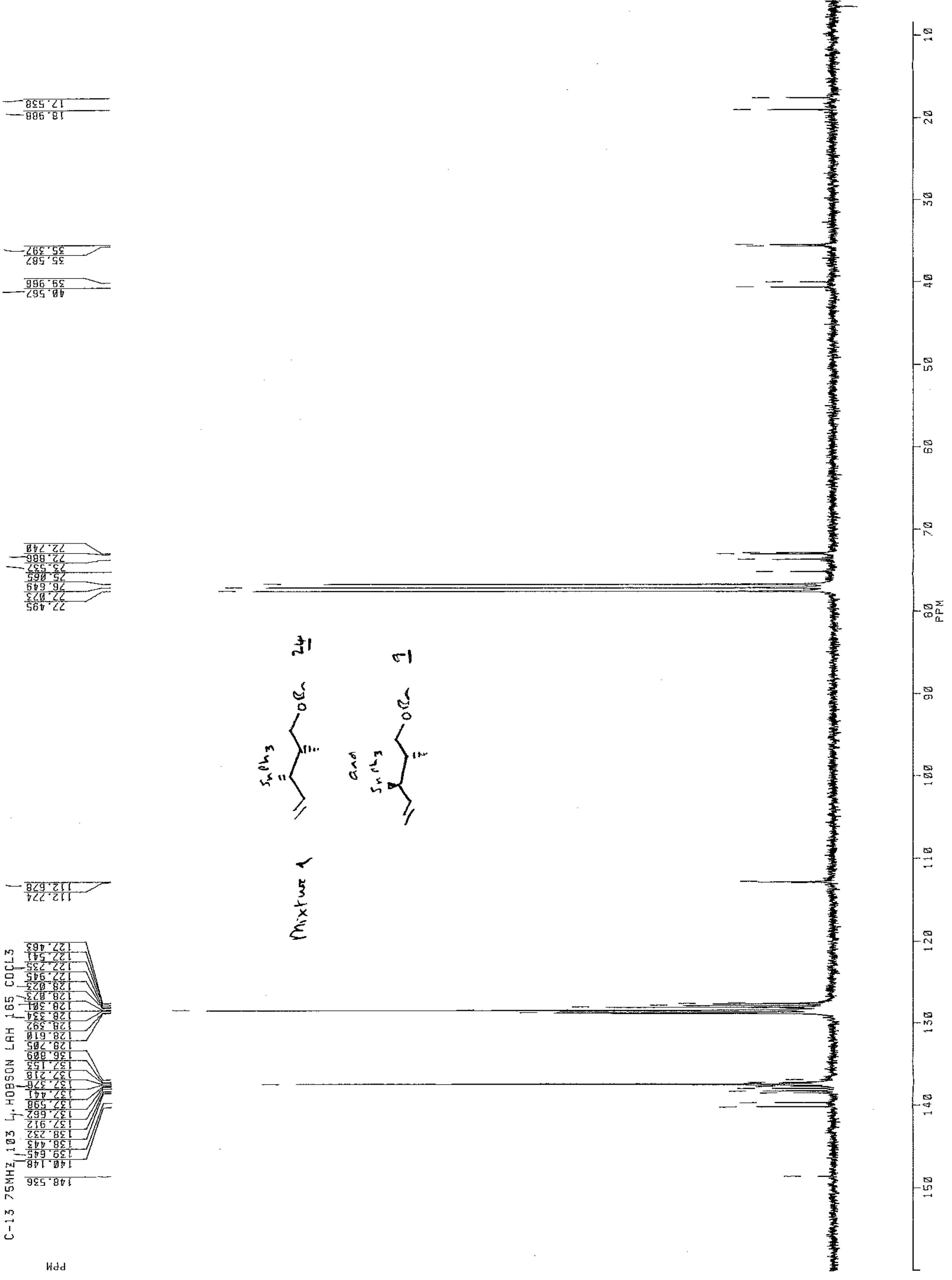
(+ 20% anti-epimer 9)

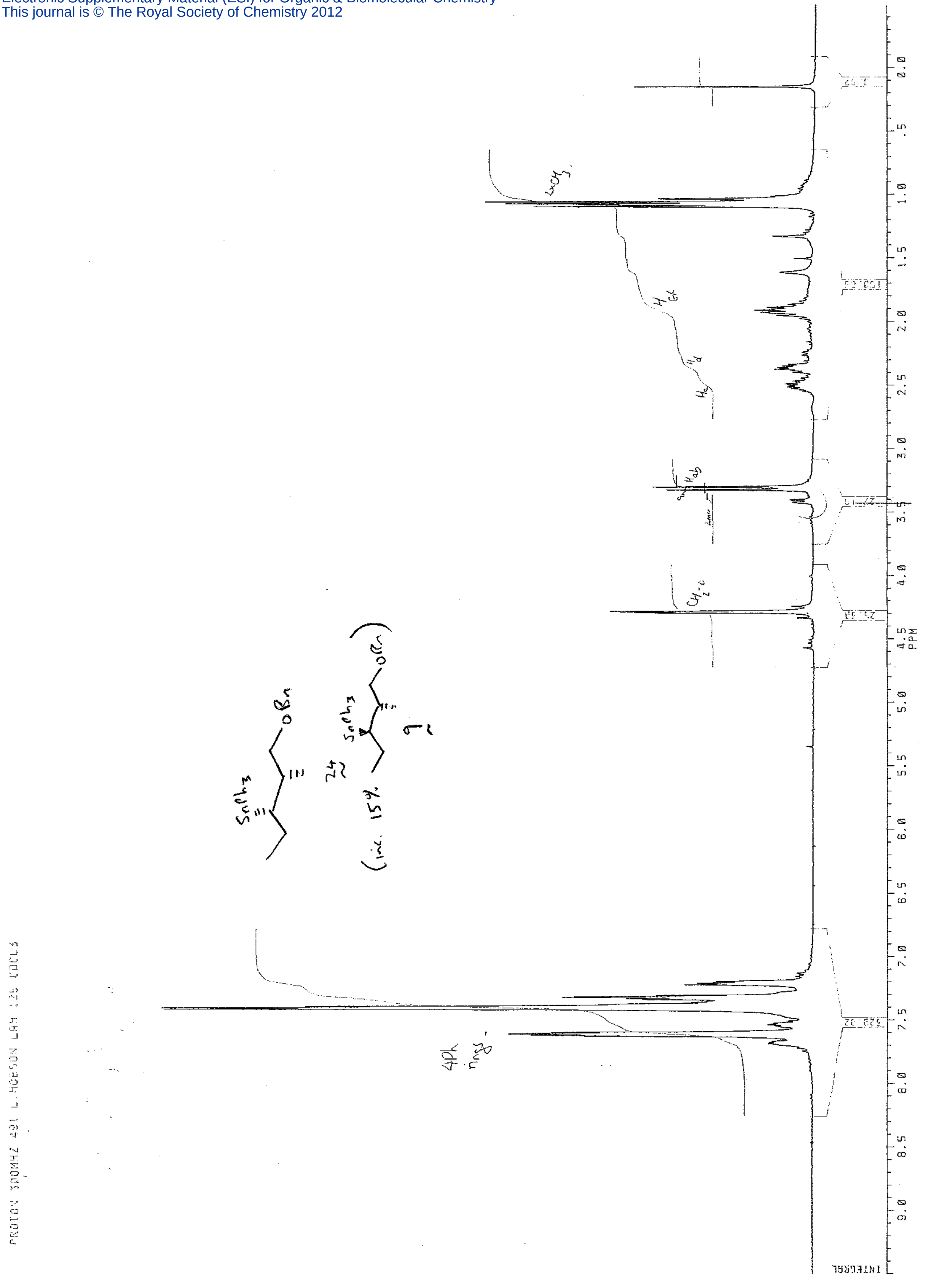
L.Hobson LAH 383
STANDARD 1H OBSERVE

Solvent: CDCL3
Ambient temperature
Sample #5
File: 501
Queue name Sep18a
DATE Sep 18 97
INOVA-300 "athos"

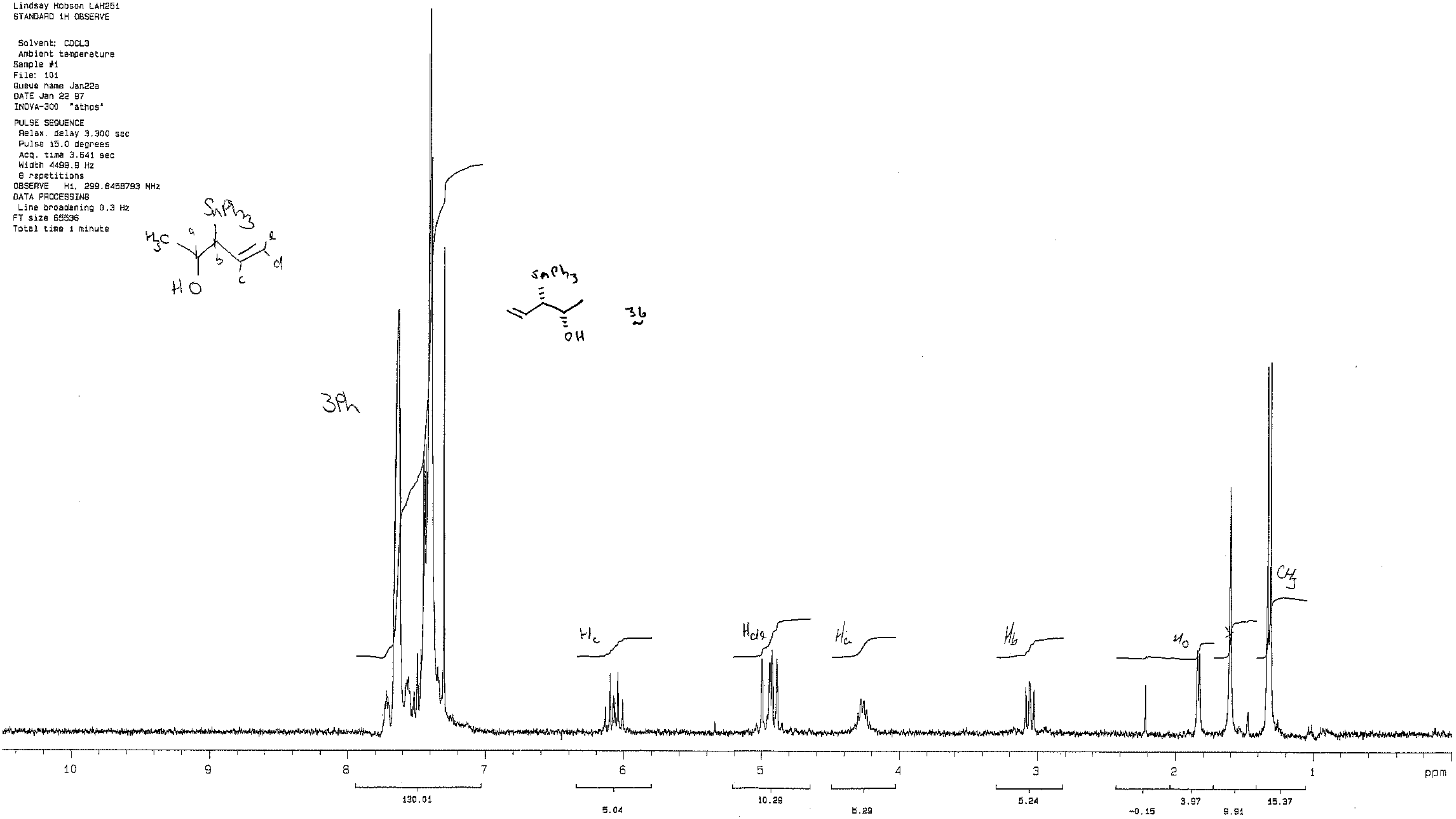
PULSE SEQUENCE
Relax. delay 3.300 sec
Pulse 90.0 degrees
Acq. time 3.641 sec
Width 4499.9 Hz
16 repetitions
OBSERVE H1, 299.8469192 MHz
DATA PROCESSING
Line broadening 0.3 Hz
FT size 65536
Total time 1 minutes

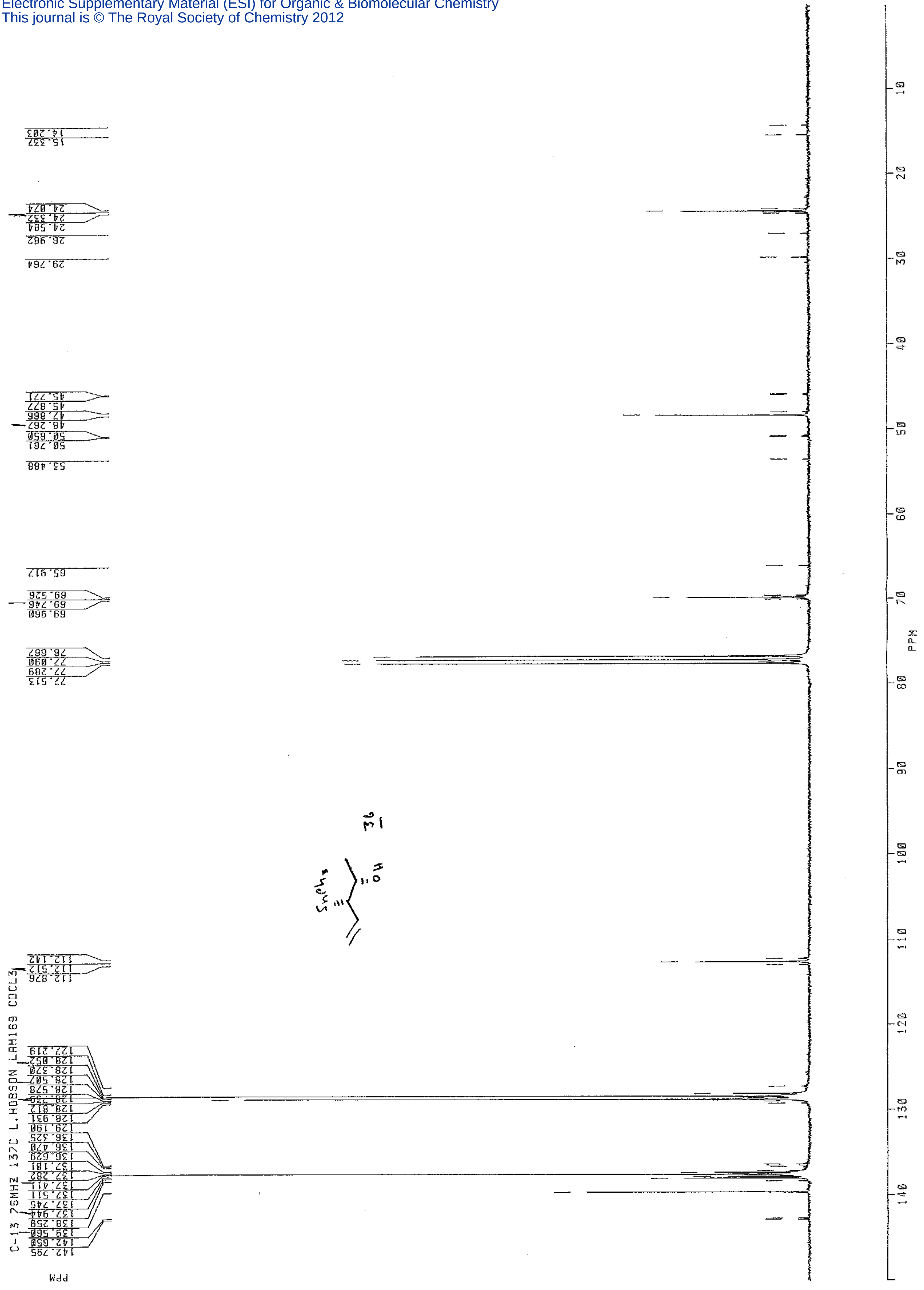


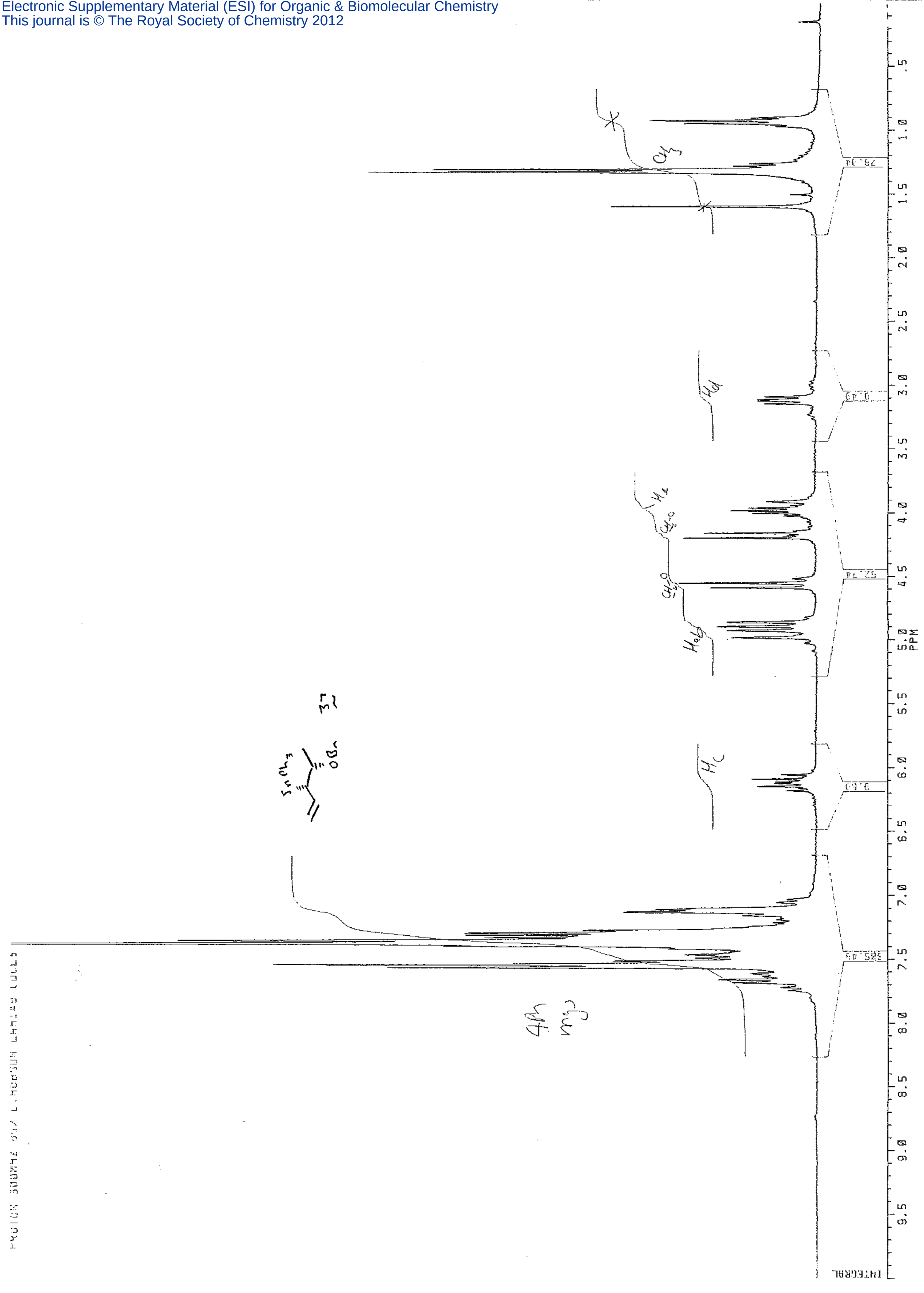

C-13 75MHZ 103 L.HOBSON LAH 165 CDCL3
PPM
17.538
18.988
35.392
35.587
39.966
40.567
72.740
72.886
73.537
75.065
76.649
77.073
77.495
112.628
112.724
127.463
127.541
127.735
127.945
128.023
128.073
128.301
128.334
128.592
128.610
128.705
136.809
137.153
137.218
137.376
137.441
137.598
137.662
137.912
138.232
138.443
139.645
140.148
148.536
10
20
30
40
50
60
70
80
PPM
90
100
110
120
130
140
150
Mixture A
SnPh3
OBn
24
and
SnPh3
OBn
9

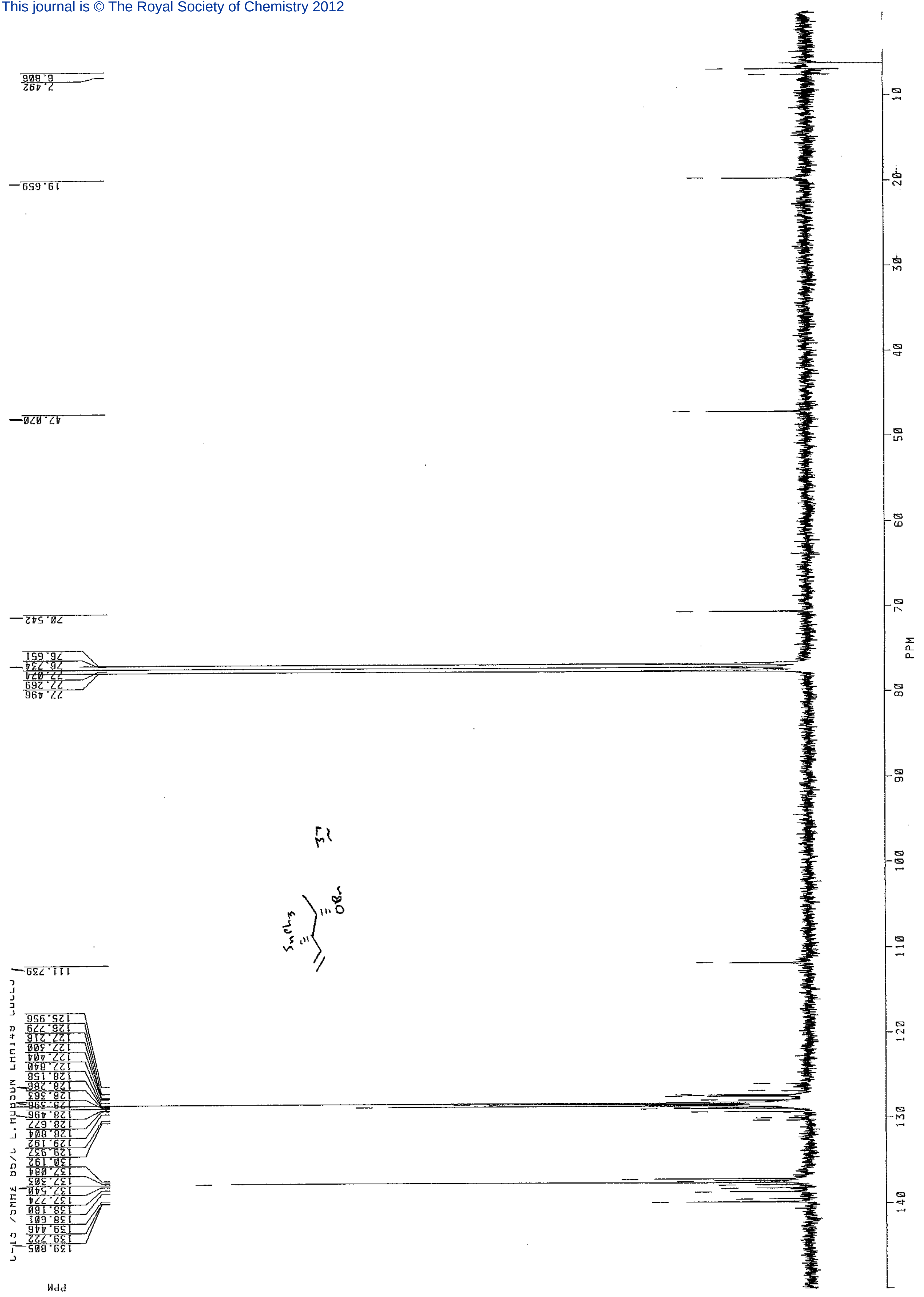

PROTON 300MHZ 491 L.HOBSON LAM 12b CDCL3
PPM
INTEGRAL
0.0
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
2×CH3
Hcd
Hd
He
Hab
CH2-O
4Ph rings
SnPh3
OBn
24
(inc. 15%
7

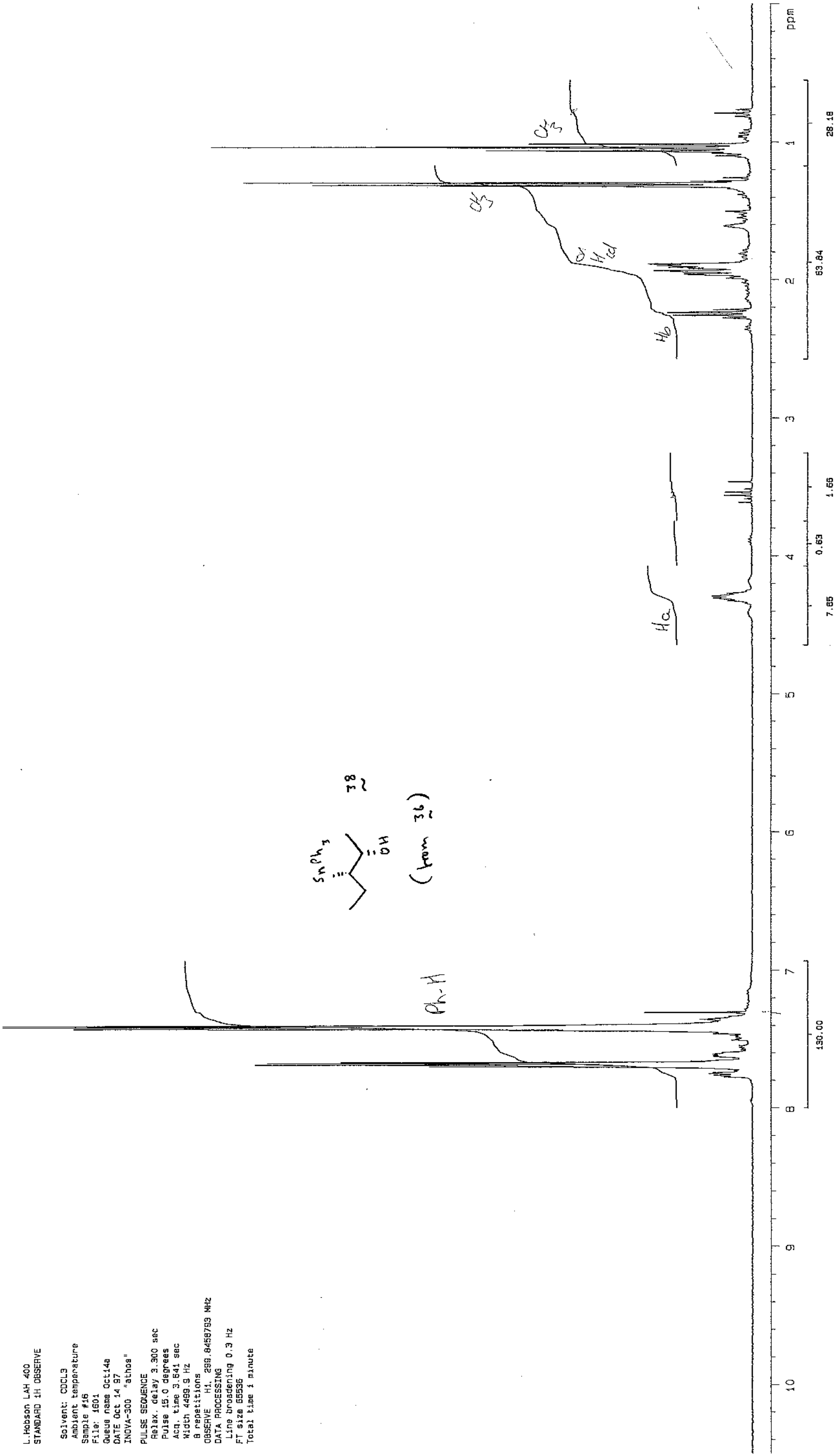
```
Lindsay Hobson LAH251
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #1
File: 101
Queue name Jan22a
DATE Jan 22 97
INOVA-300  "athos"
PULSE SEQUENCE
 Relax. delay 3.300 sec
 Pulse 15.0 degrees
 Acq. time 3.641 sec
 Width 4499.9 Hz
 8 repetitions
OBSERVE   H1, 299.8458793 MHz
DATA PROCESSING
 Line broadening 0.3 Hz
FT size 65536
Total time 1 minute
```




C-13 75MHZ 137C L.HOBSON LAH169 CDCL3
14.203
15.337
24.074
24.332
24.584
26.982
29.764
45.721
45.877
47.866
48.267
50.650
50.761
53.488
65.917
69.526
69.746
69.960
76.662
77.090
77.289
77.513
112.142
112.512
112.826
127.219
128.052
128.320
128.507
128.578
128.739
128.812
128.931
129.190
136.325
136.470
136.629
137.101
137.282
137.411
137.511
137.745
137.944
138.259
139.560
142.650
142.795
PPM
SnPh3
HO
36
10
20
30
40
50
60
70
80
90
100
110
120
130
140
PPM


PROTON 300MHz 9/7 L.HOBSON LH14B CDCl3
PPM
.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
INTEGRAL
78.34
9.43
52.74
9.69
385.45
CH3
Hd
He
CH2O
CH2O
Hab
Hc
SnPh3
OBn
32
4Ph
mj

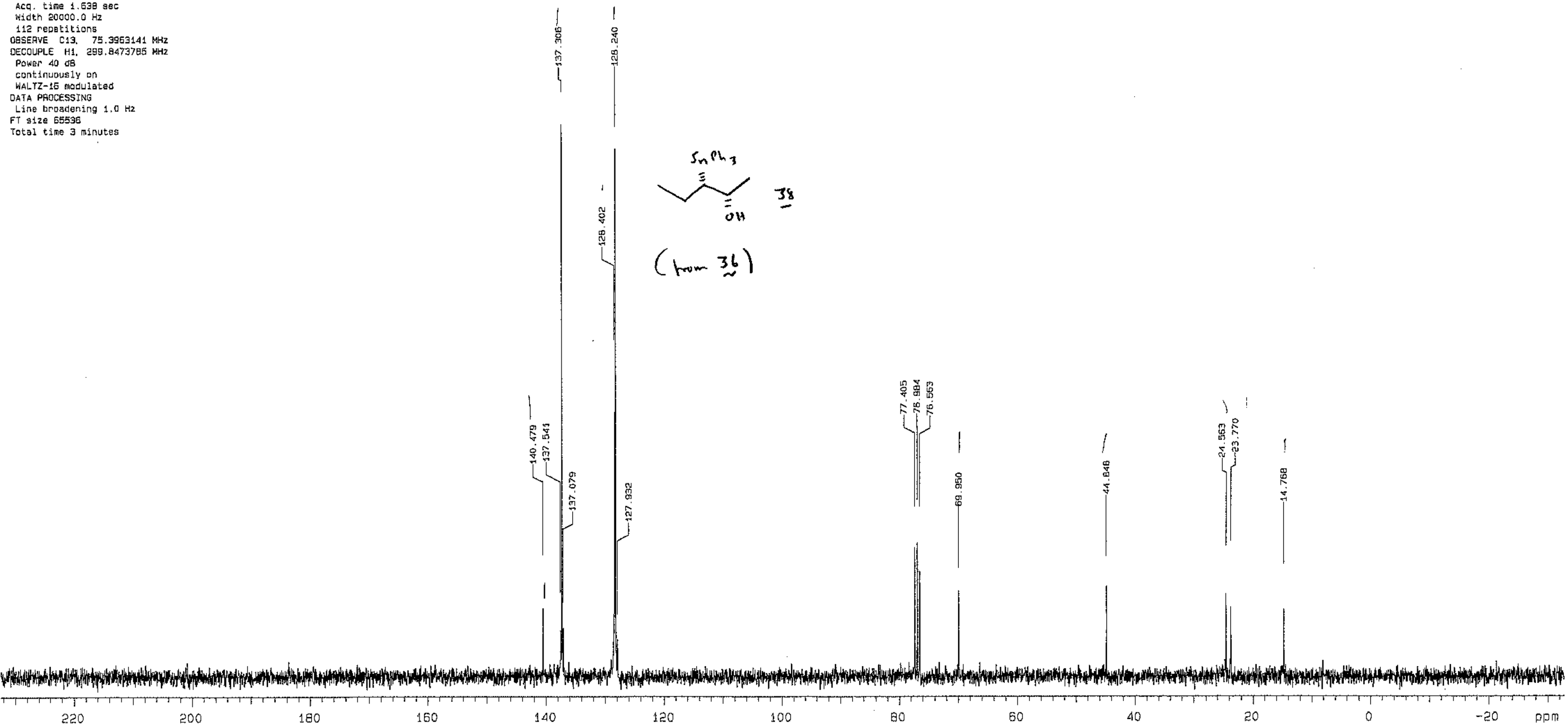

6.806
7.492
19.659
47.020
70.542
76.651
76.734
77.024
77.269
77.496
111.239
125.956
126.729
127.216
127.300
127.404
127.840
128.158
128.286
128.363
128.396
128.496
128.672
128.804
129.192
129.937
130.192
137.084
137.303
137.540
137.724
138.180
138.601
139.446
139.722
139.805
PPM
10
20
30
40
50
60
70
80
90
100
110
120
130
140
PPM
SnPh3
OBn
37



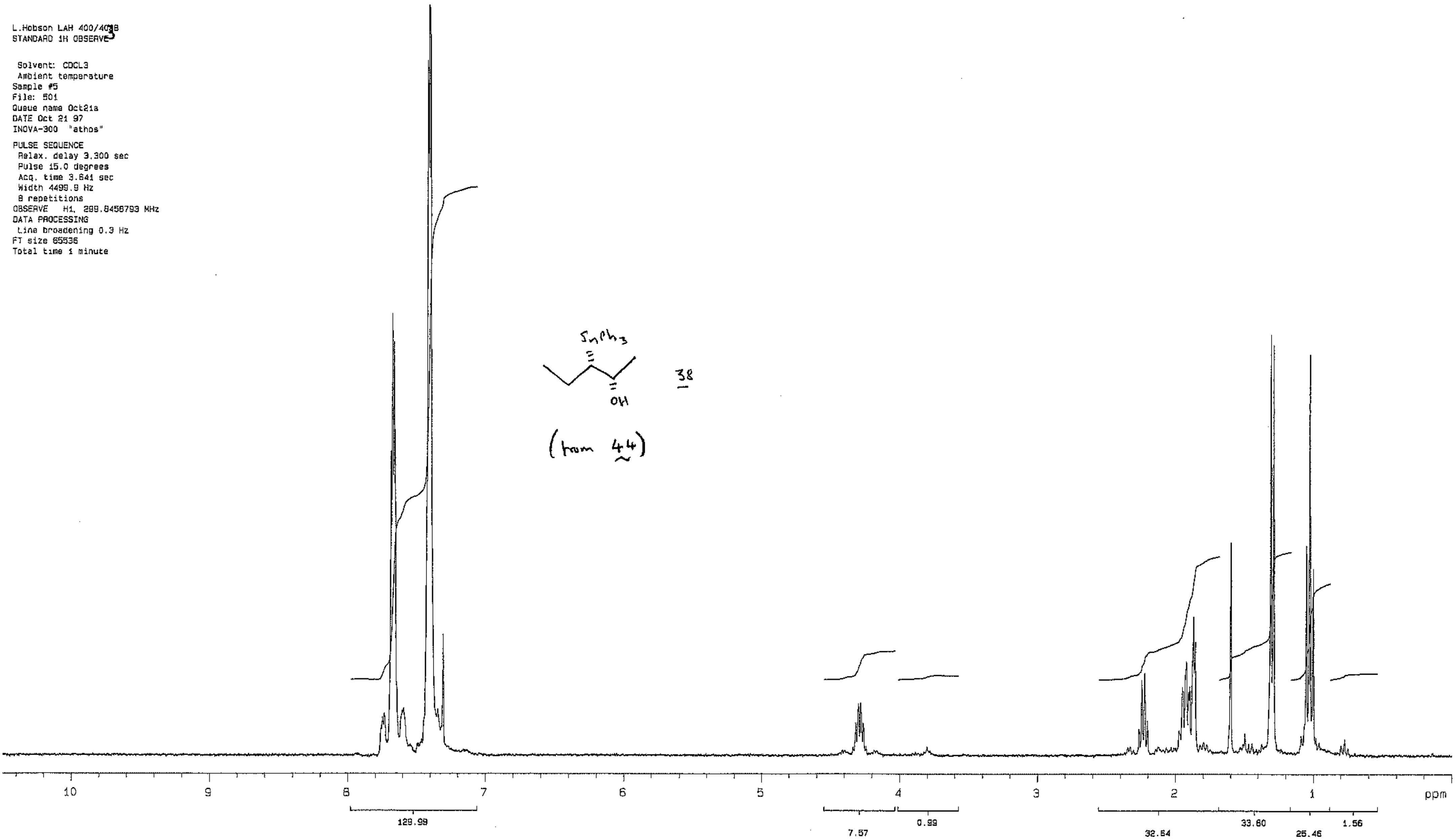
L.Hobson LAH 400
STANDARD 1H OBSERVE

Solvent: CDCL3
Ambient temperature
Sample #16
File: 1601
Queue name Oct14a
DATE Oct 14 97
INOVA-300 "athos"
PULSE SEQUENCE
Relax. delay 3.300 sec
Pulse 15.0 degrees
Acq. time 3.641 sec
Width 4499.9 Hz
8 repetitions
OBSERVE H1, 299.8458793 MHz
DATA PROCESSING
Line broadening 0.3 Hz
FT size 65536
Total time 1 minute

```
L.Hobson LAH 400
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #16
File:  1602
Queue name Oct14a
DATE Oct 14 97
INOVA-300  "athos"
PULSE SEQUENCE
 Pulse 45.0 degrees
 Acq. time 1.638 sec
 Width 20000.0 Hz
 112 repetitions
OBSERVE  C13,  75.3963141 MHz
DECOUPLE  H1, 299.8473785 MHz
 Power 40 dB
 continuously on
 WALTZ-16 modulated
DATA PROCESSING
 Line broadening 1.0 Hz
FT size 65536
Total time 3 minutes
```



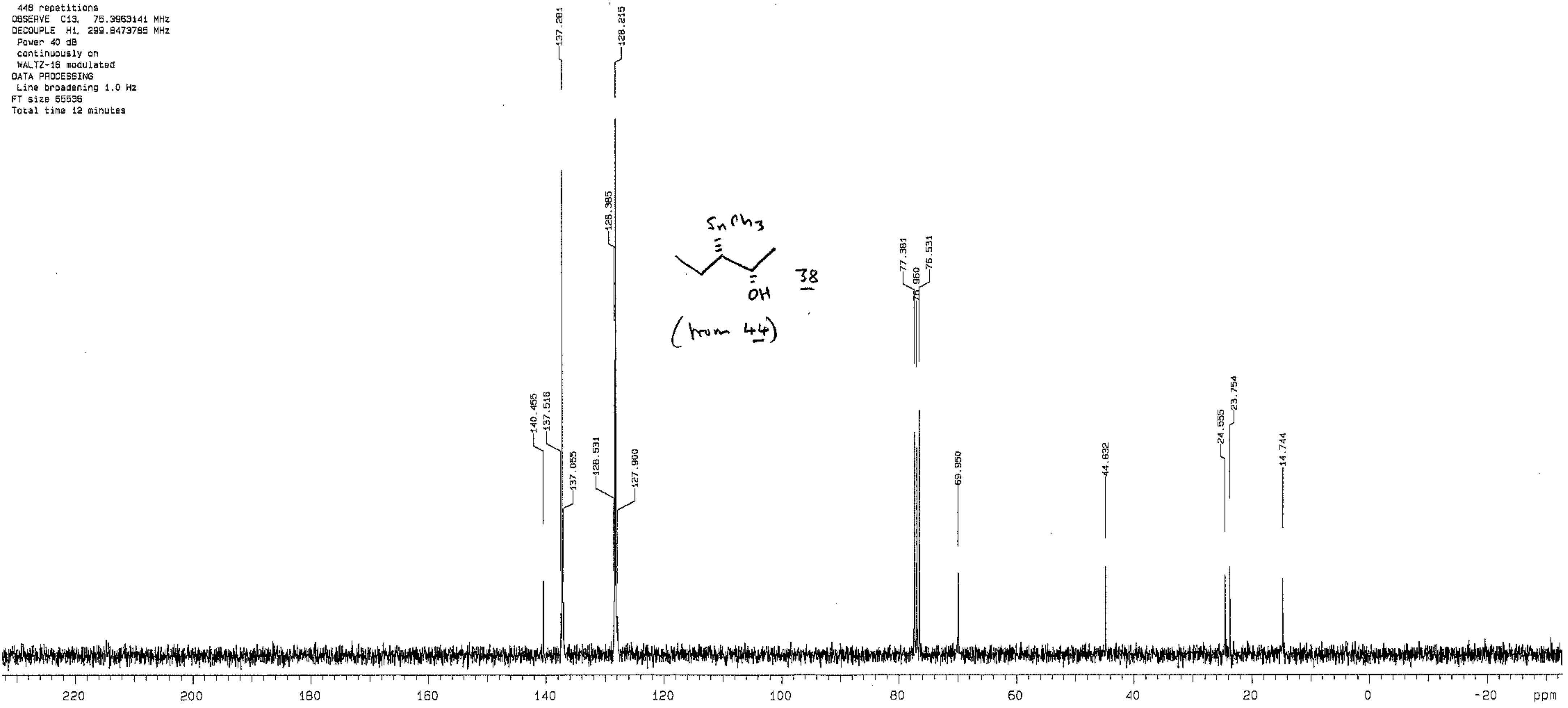
```
L.Hobson LAH 400/4038
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #5
File: 501
Queue name Oct21a
DATE Oct 21 97
INOVA-300  "athos"

PULSE SEQUENCE
 Relax. delay 3.300 sec
 Pulse 15.0 degrees
 Acq. time 3.641 sec
 Width 4499.9 Hz
 8 repetitions
OBSERVE   H1, 299.8458793 MHz
DATA PROCESSING
 Line broadening 0.3 Hz
FT size 65536
Total time 1 minute
```

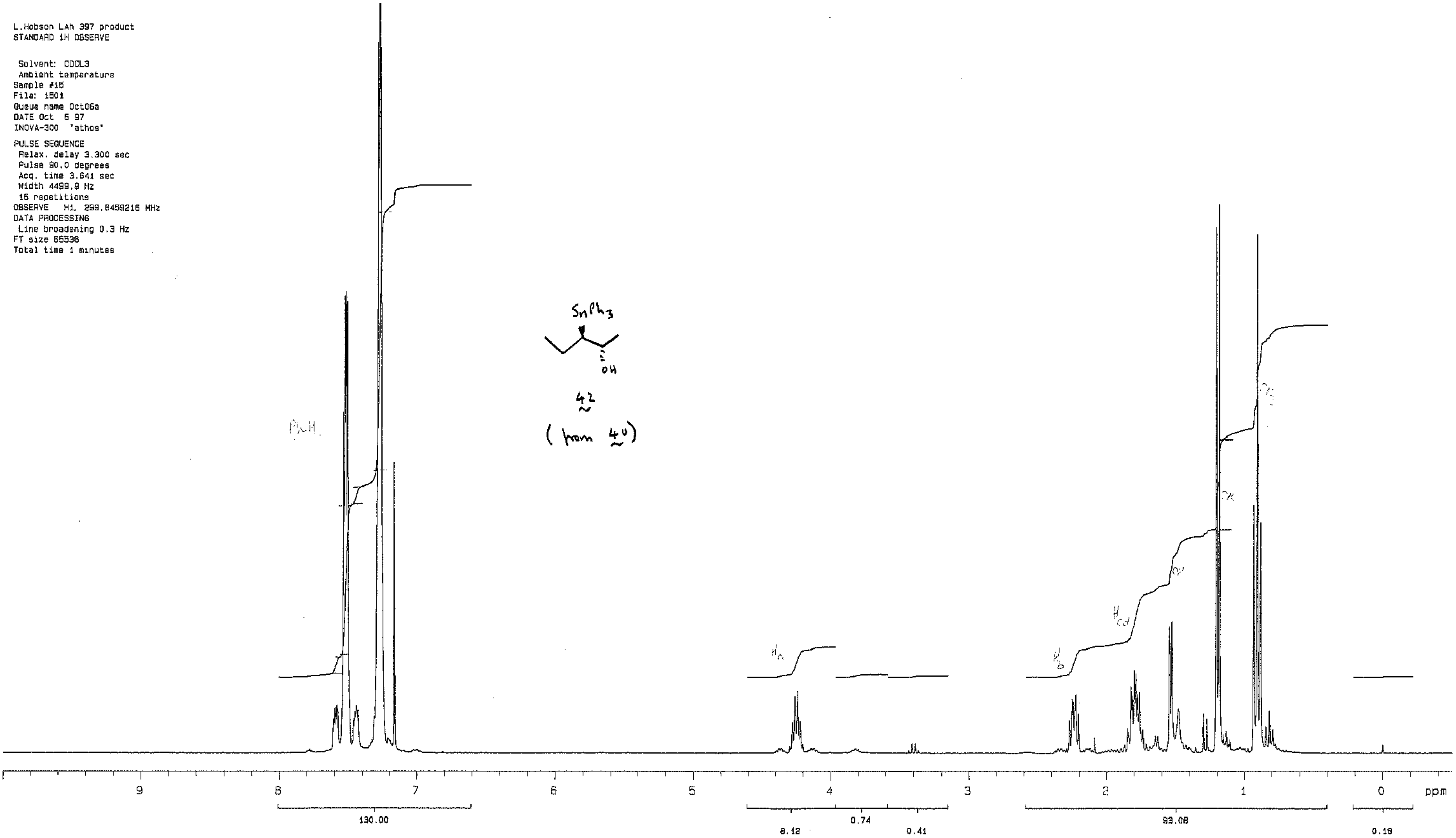


L.Hobson LAH 400/402B
STANDARD 1H OBSERVE

Solvent: CDCL3
Ambient temperature
Sample #5
File: 502
Queue name Oct21a
DATE Oct 21 97
INOVA-300 "athos"

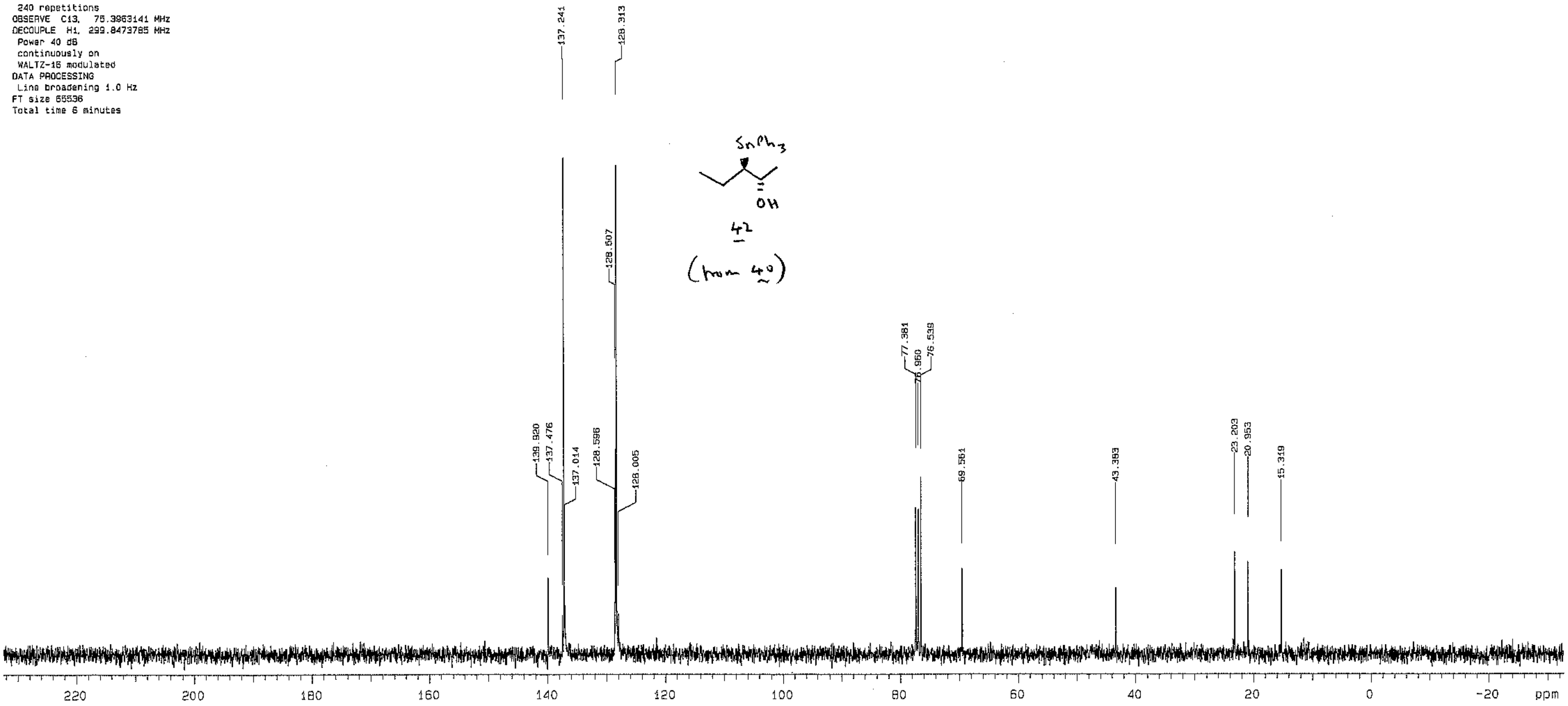
PULSE SEQUENCE
Pulse 45.0 degrees
Acq. time 1.638 sec
Width 20000.0 Hz
448 repetitions
OBSERVE C13, 75.3963141 MHz
DECOUPLE H1, 299.8473785 MHz
Power 40 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 1.0 Hz
FT size 65536
Total time 12 minutes





```
L.Hobson LAh 397 product
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #15
File: 1501
Queue name Oct06a
DATE Oct  6 97
INOVA-300  "athos"
PULSE SEQUENCE
 Relax. delay 3.300 sec
 Pulse 90.0 degrees
 Acq. time 3.641 sec
 Width 4499.9 Hz
 16 repetitions
OBSERVE   H1, 299.8459216 MHz
DATA PROCESSING
 Line broadening 0.3 Hz
FT size 65536
Total time 1 minutes
```

```
L.Hobson LAH 397 bottom spot
STANDARD 1H OBSERVE


 Solvent: CDCL3
 Ambient temperature
Sample #32
File: 3202
Queue name Oct03a
DATE Oct  3 97
INOVA-300  "athos"

PULSE SEQUENCE
 Pulse 45.0 degrees
 Acq. time 1.638 sec
 Width 20000.0 Hz
 240 repetitions
OBSERVE  C13,  75.3963141 MHz
DECOUPLE  H1,  299.8473785 MHz
 Power 40 dB
 continuously on
 WALTZ-16 modulated
DATA PROCESSING
 Line broadening 1.0 Hz
FT size 65536
Total time 6 minutes
```



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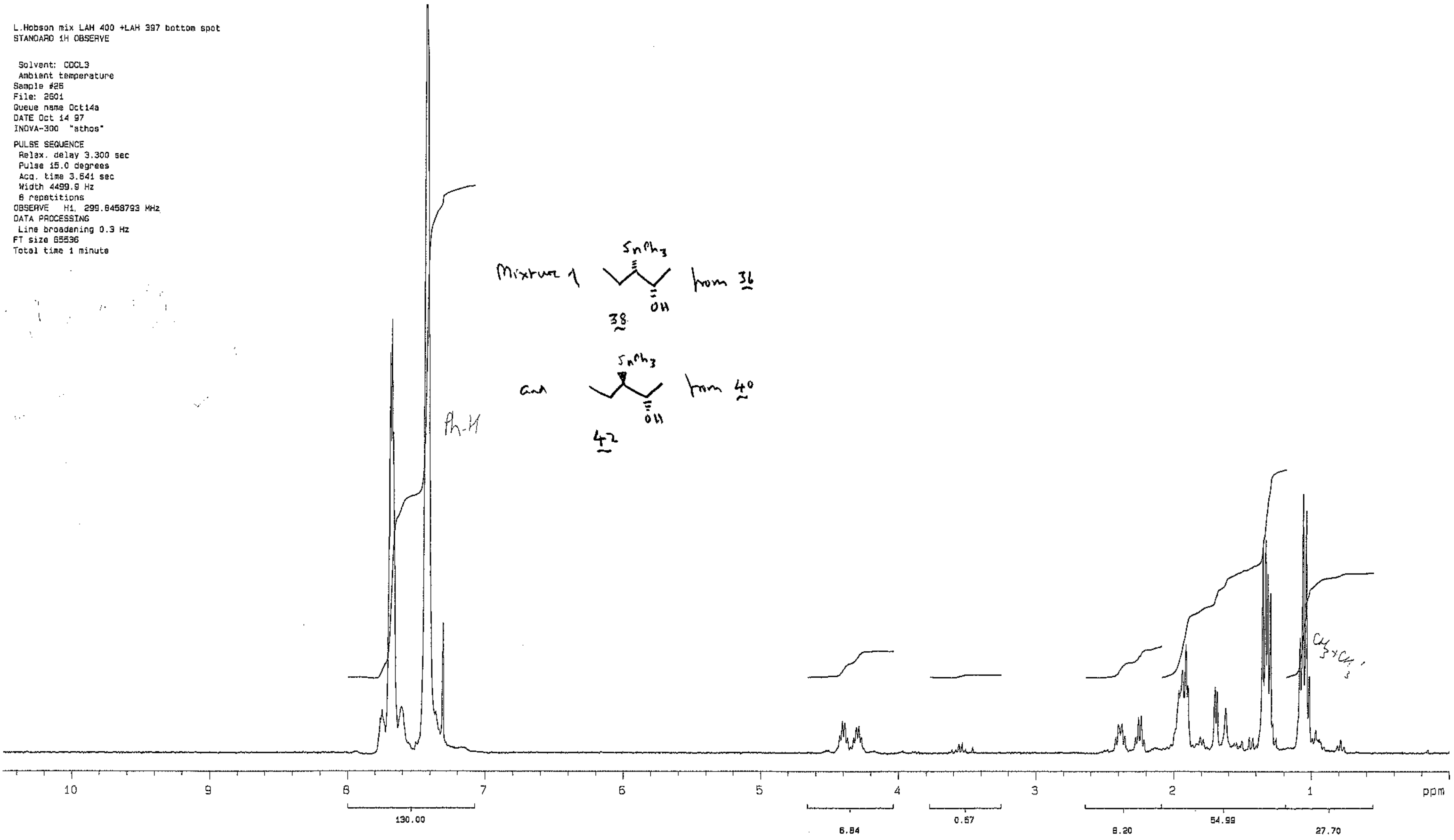
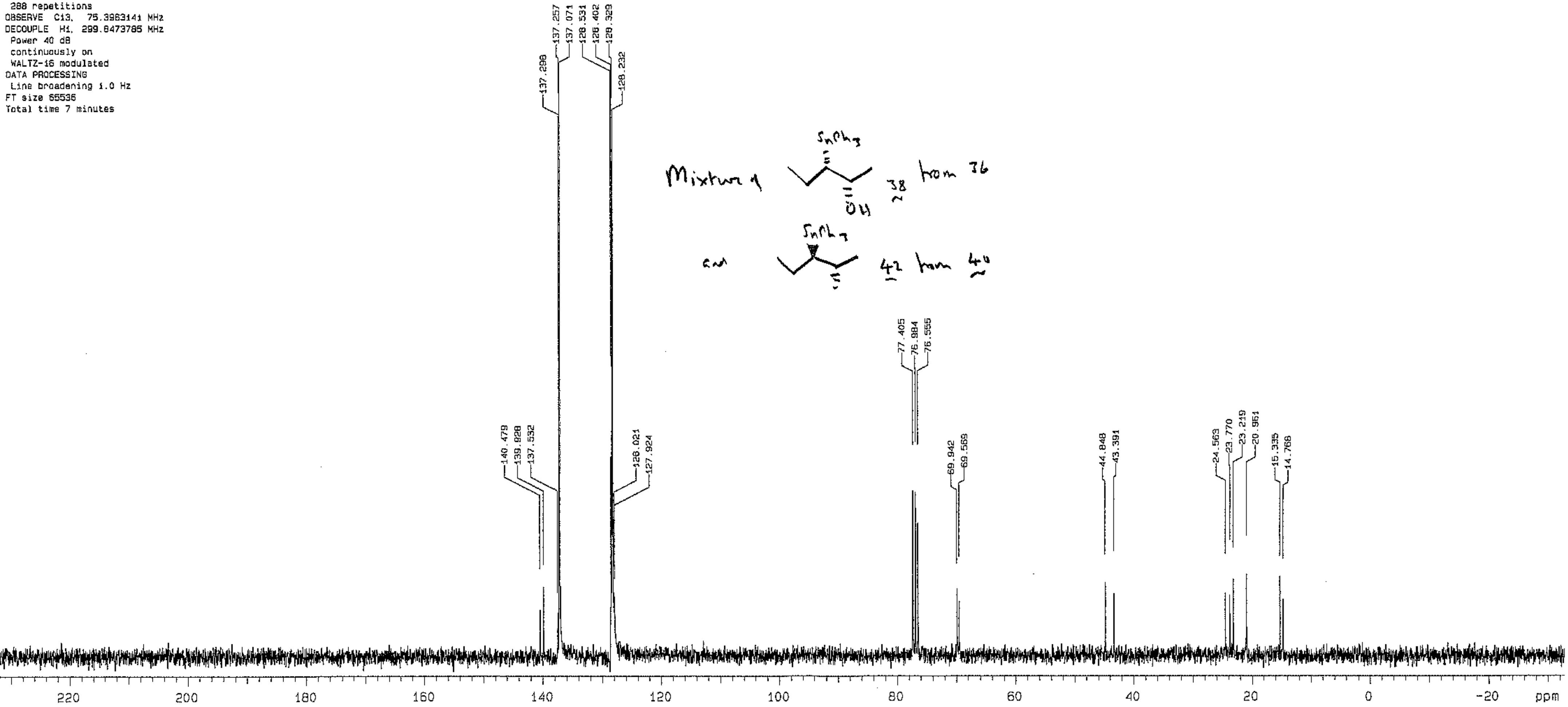
(from 40)

```
L.Hobson mix LAH 400 +LAH 397 bottom spot
STANDARD 1H OBSERVE

 Solvent: CDCL3
 Ambient temperature
Sample #26
File: 2601
Queue name Oct14a
DATE Oct 14 97
INOVA-300  "athos"
PULSE SEQUENCE
 Relax. delay 3.300 sec
 Pulse 15.0 degrees
 Acq. time 3.641 sec
 Width 4499.9 Hz
 8 repetitions
OBSERVE   H1, 299.8458793 MHz
DATA PROCESSING
 Line broadening 0.3 Hz
FT size 65536
Total time 1 minute
```



```
L.Hobson mix LAH 400 +LAH 397 bottom spot
STANDARD 1H OBSERVE


 Solvent: CDCL3
 Ambient temperature
Sample #26
File: 2602
Queue name Oct14a
DATE Oct 14 97
INOVA-300  "athos"

PULSE SEQUENCE
 Pulse 45.0 degrees
 Acq. time 1.638 sec
 Width 20000.0 Hz
 288 repetitions
OBSERVE  C13,  75.3963141 MHz
DECOUPLE  H1,  299.8473785 MHz
 Power 40 dB
 continuously on
 WALTZ-16 modulated
DATA PROCESSING
 Line broadening 1.0 Hz
FT size 65536
Total time 7 minutes
```



Mixture of 38 from 36

and 42 from 40