Supporting Information NMR Spectra Part 1 for:

Complete stereodivergence in the synthesis of 2-amino-1,3-diols from allenes

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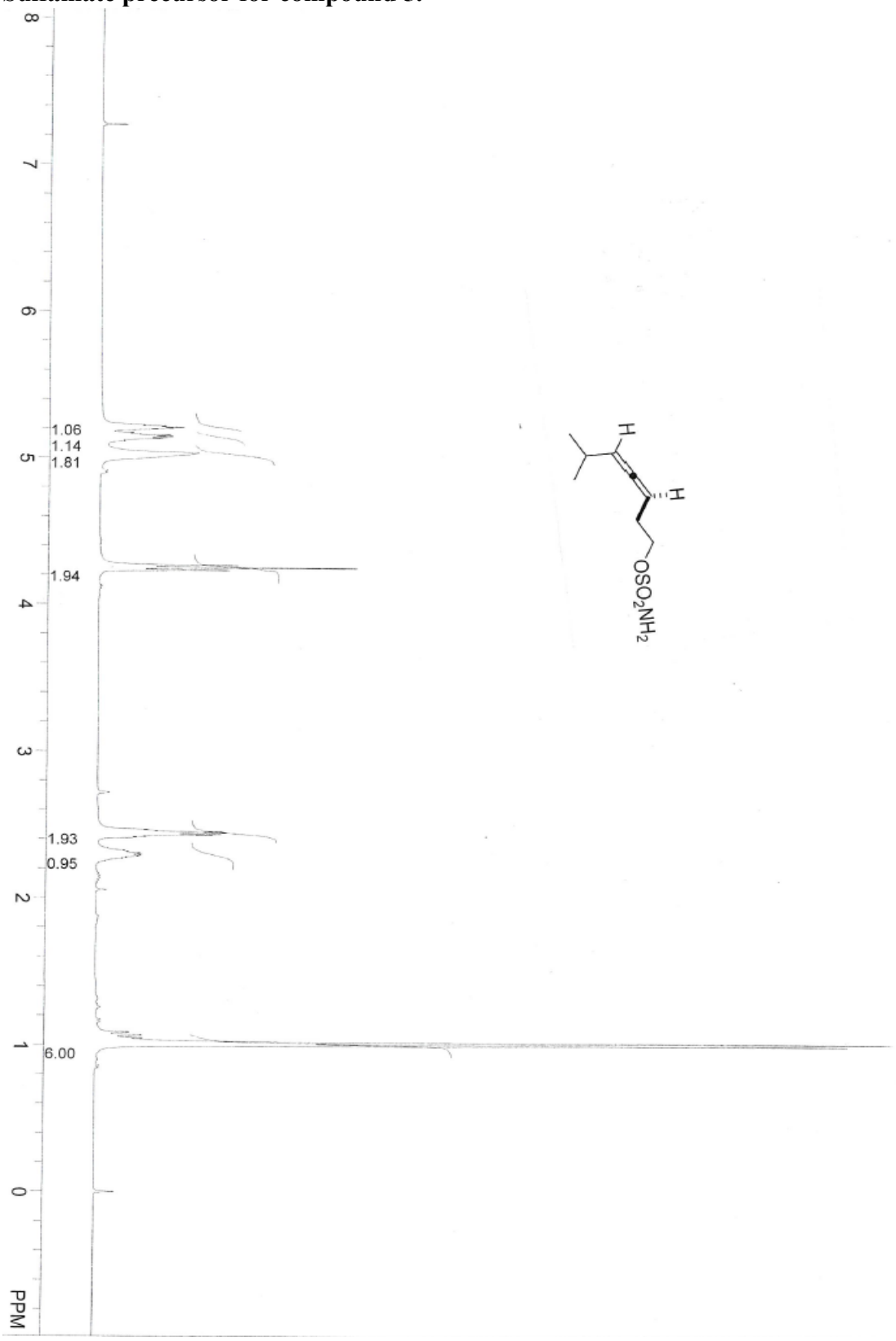
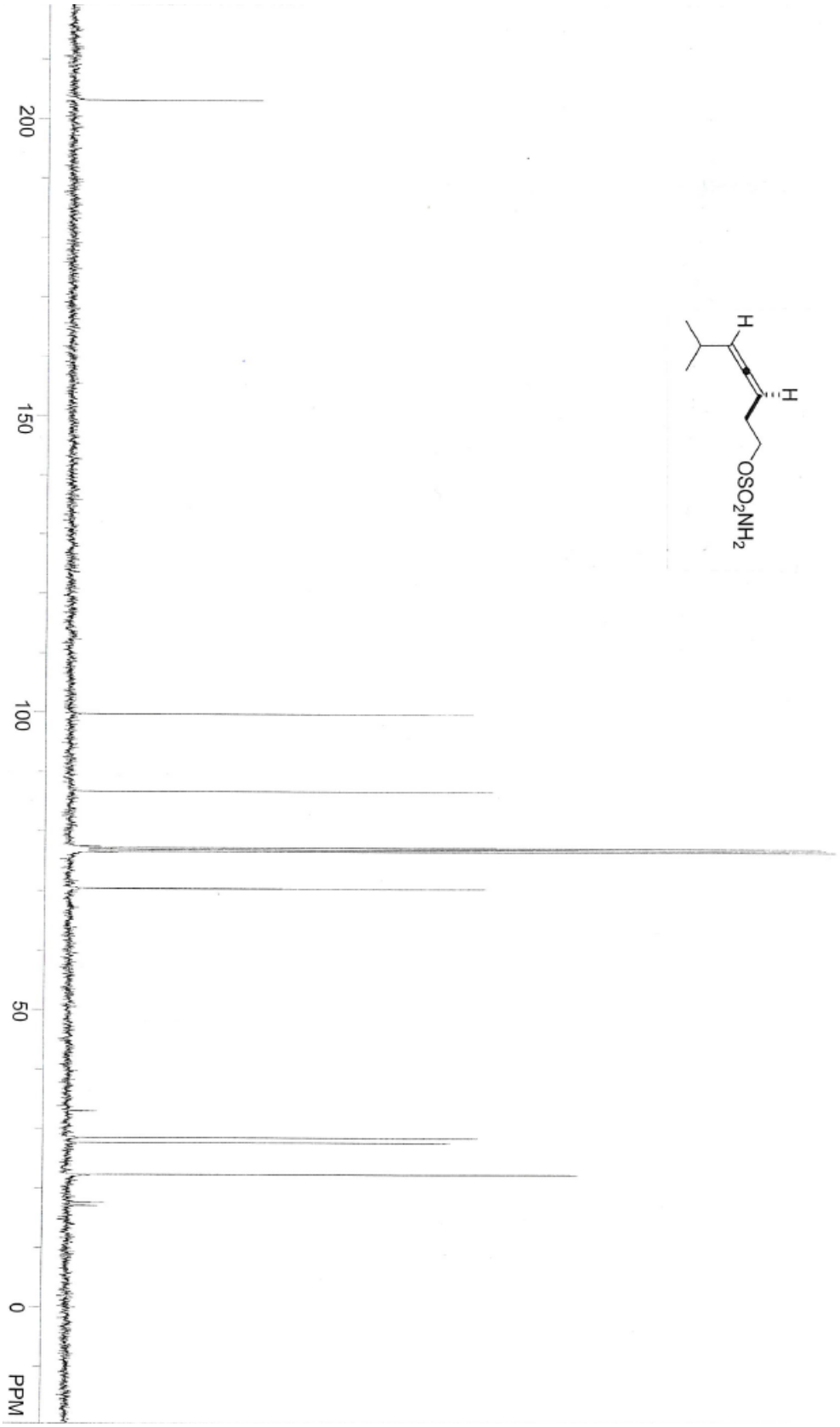
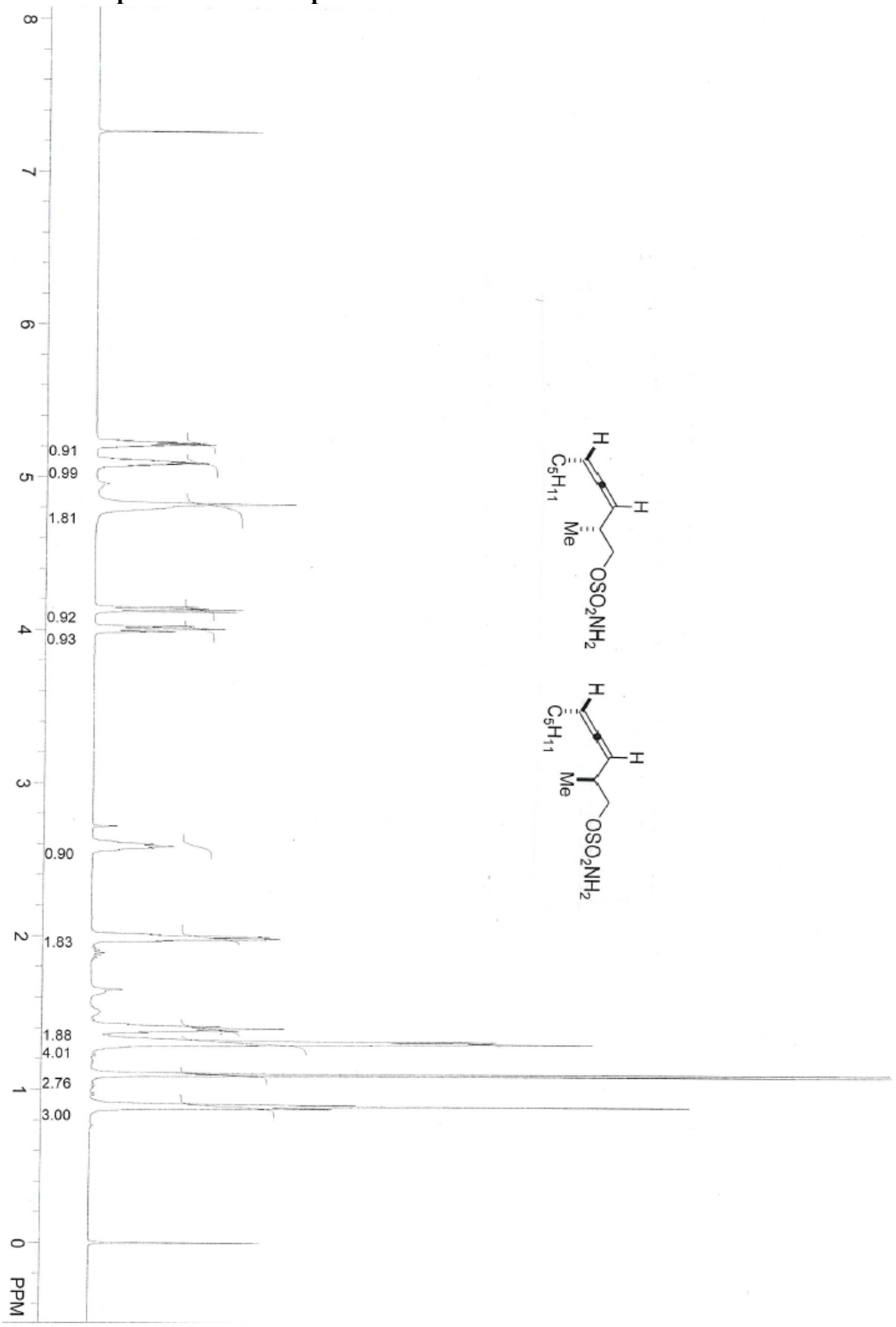
Department of Chemistry, University of Wisconsin-Madison, 1101 University Avenue
Madison, Wisconsin, 53706-1396

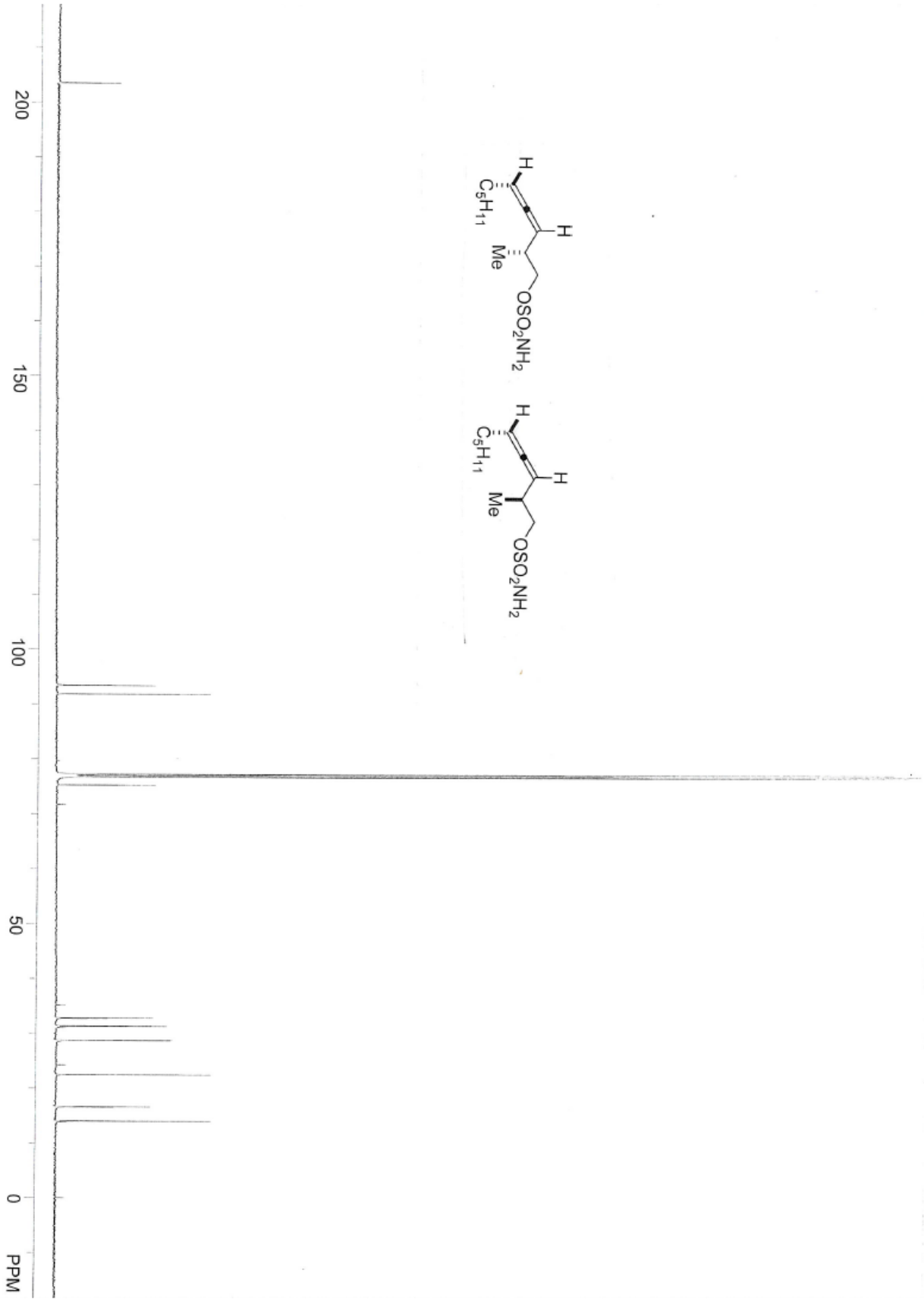
Sulfamate precursor for compound 5.



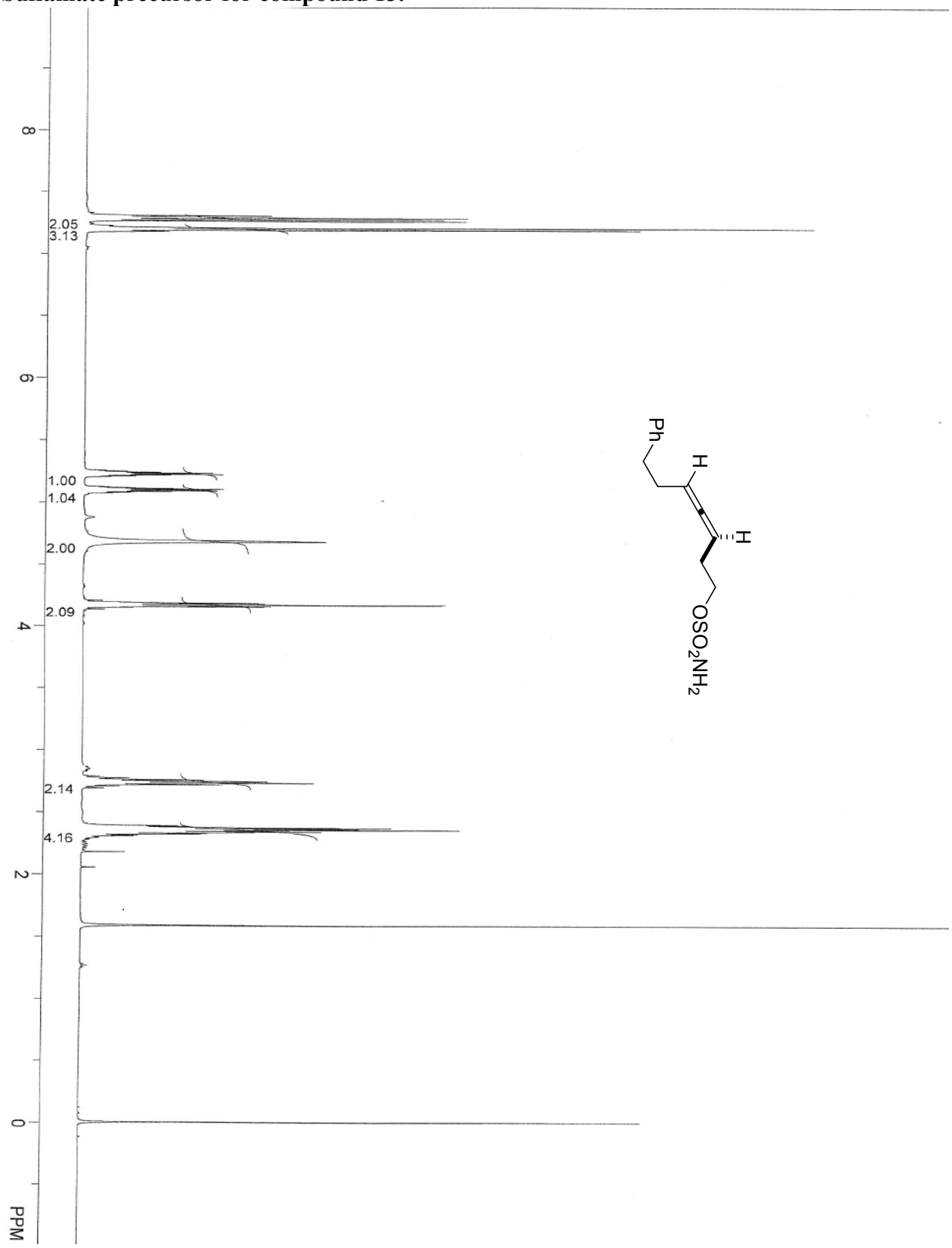

200
150
100
50
0
PPM
H
H
OSO2NH2

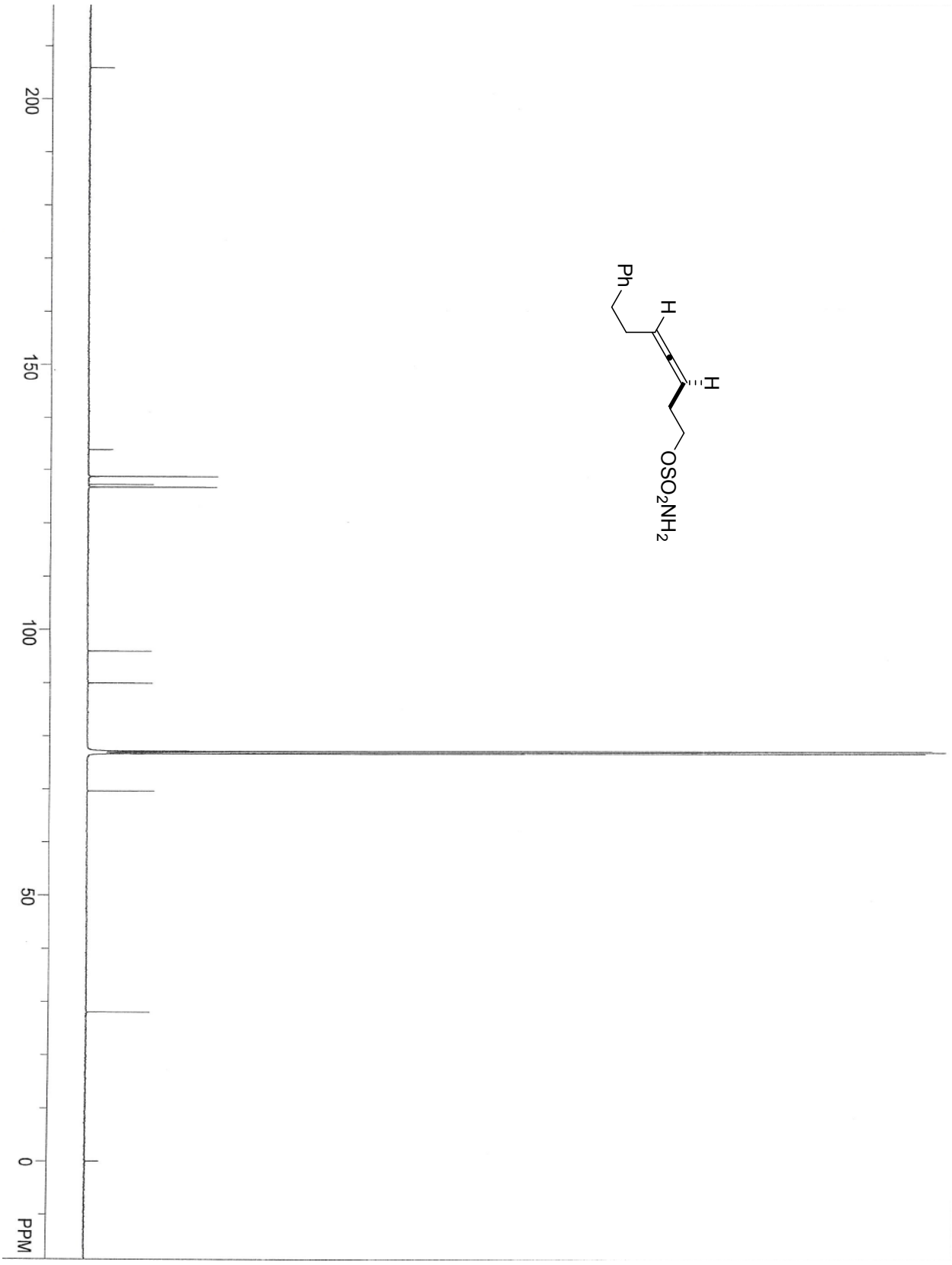
Sulfamate precursor for compounds 12.



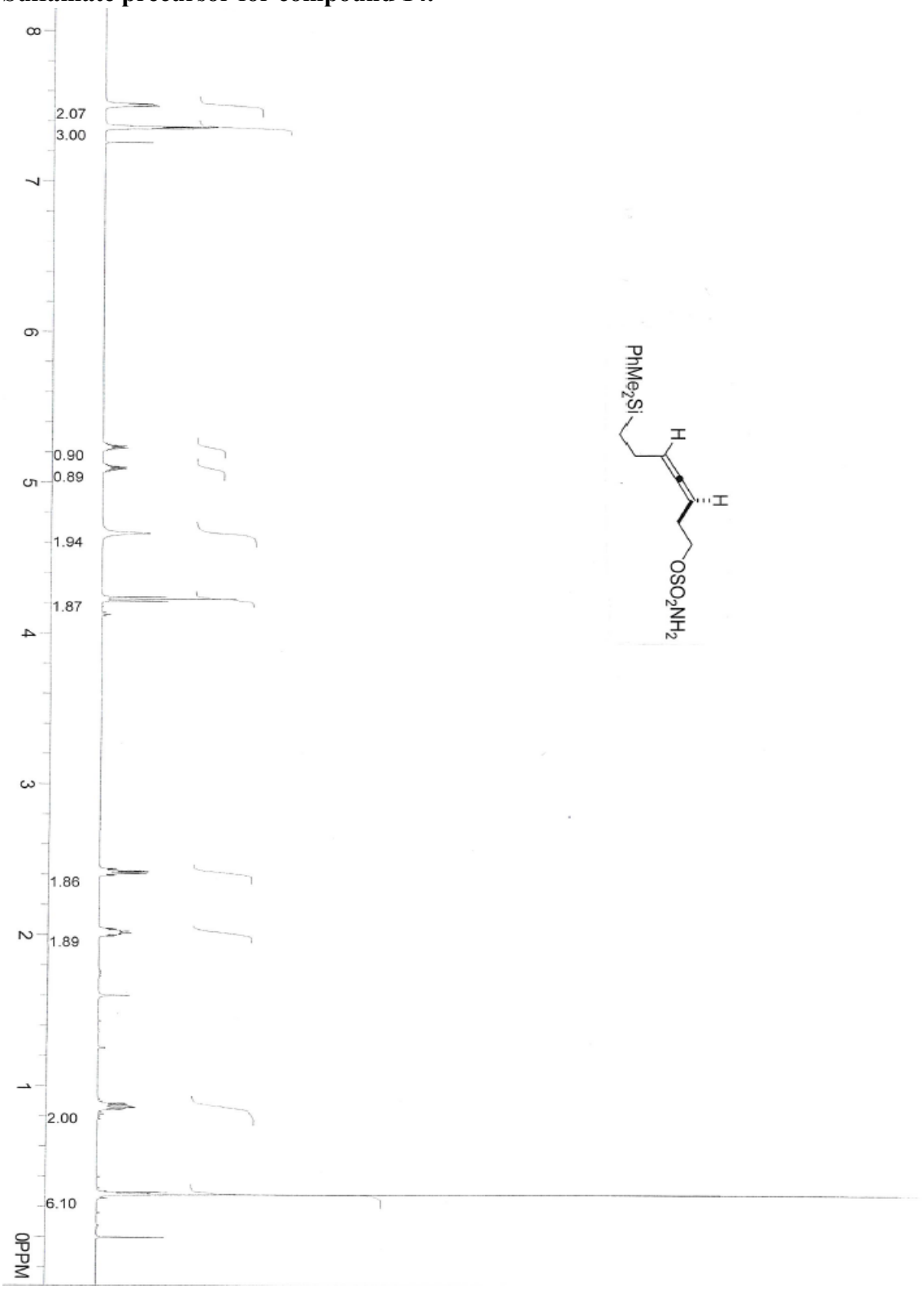

200
150
100
50
0
PPM
H
C5H11
Me
H
OSO2NH2
H
C5H11
Me
H
OSO2NH2

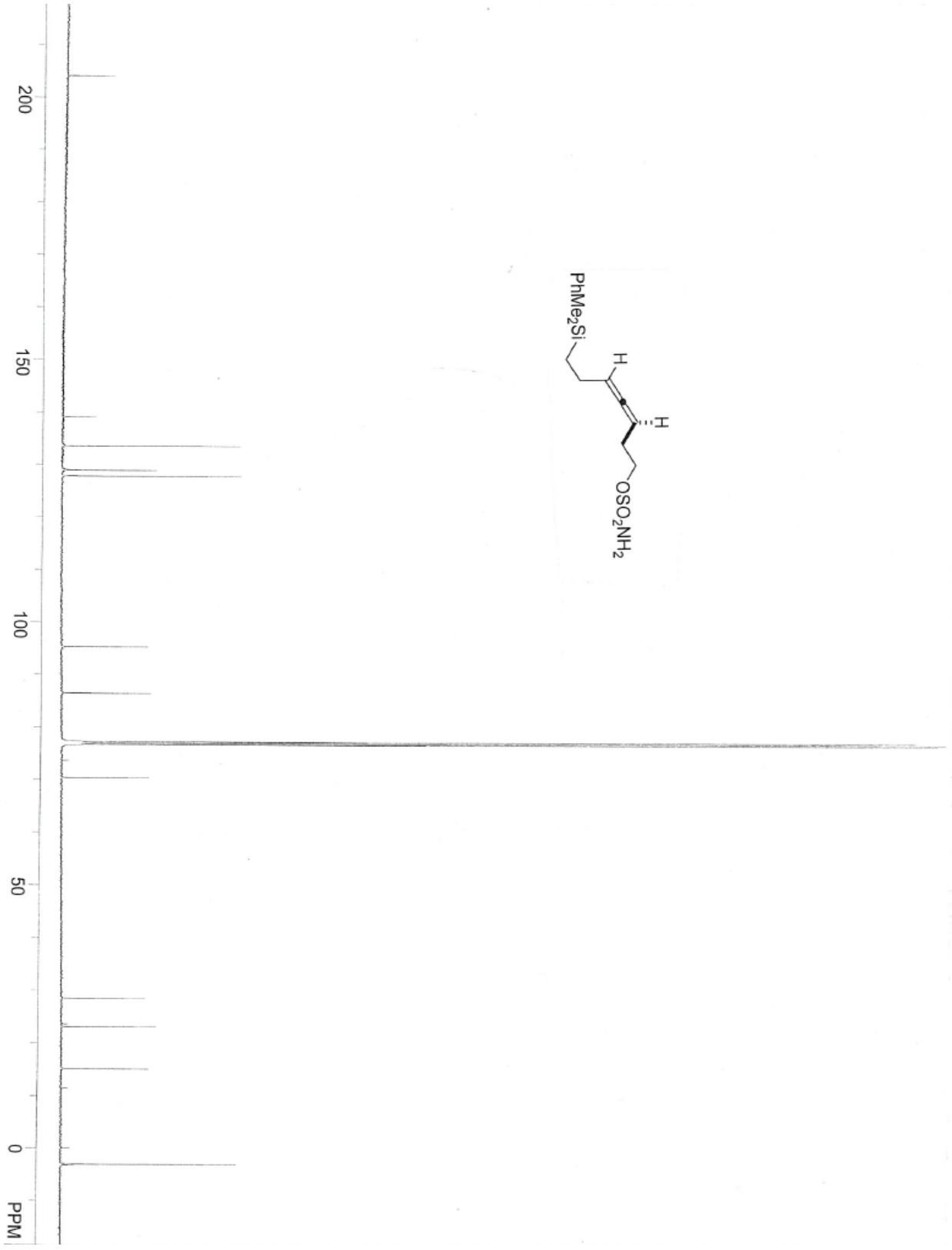
Sulfamate precursor for compound 13.



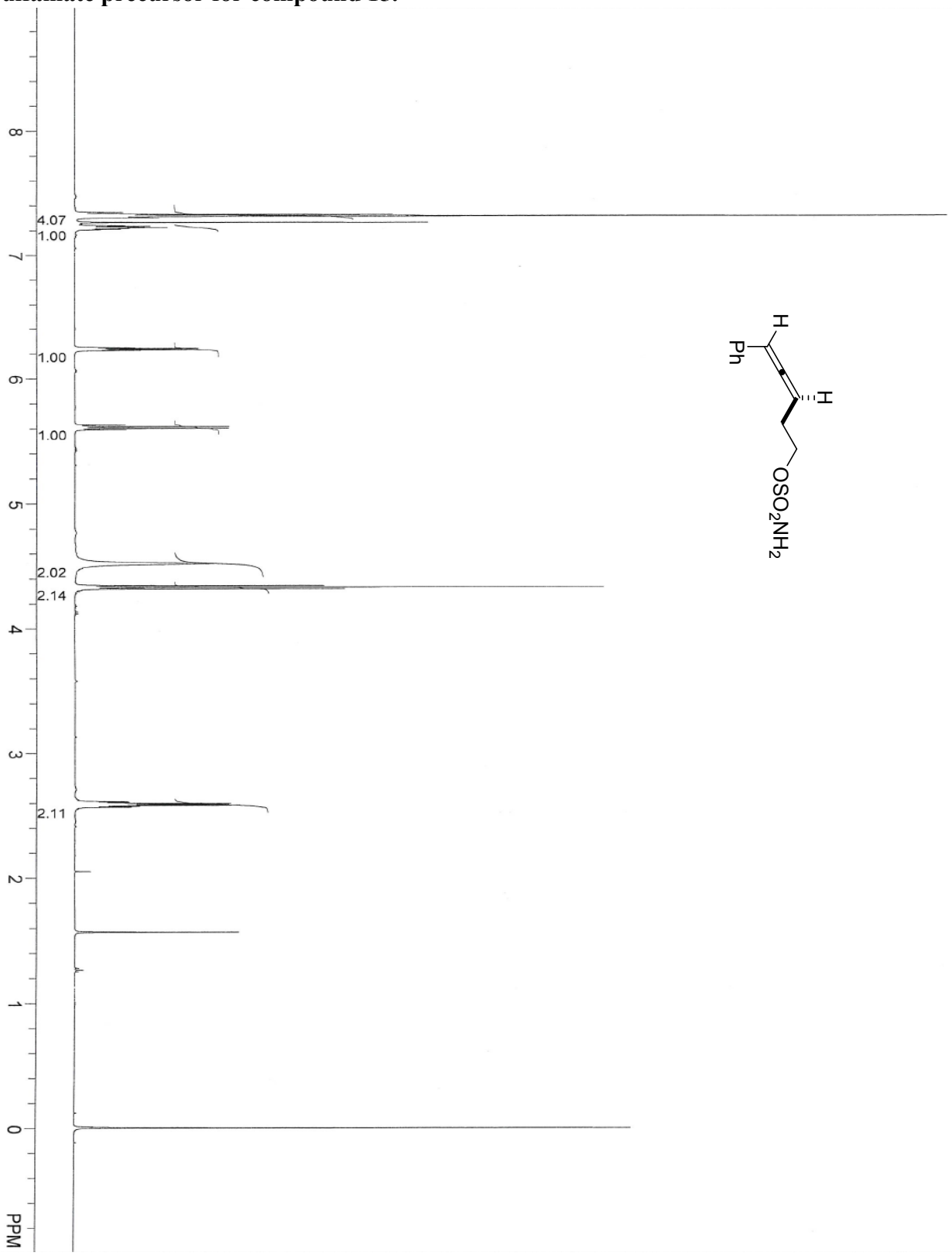

Ph
H
H
OSO2NH2
200
150
100
50
0
PPM

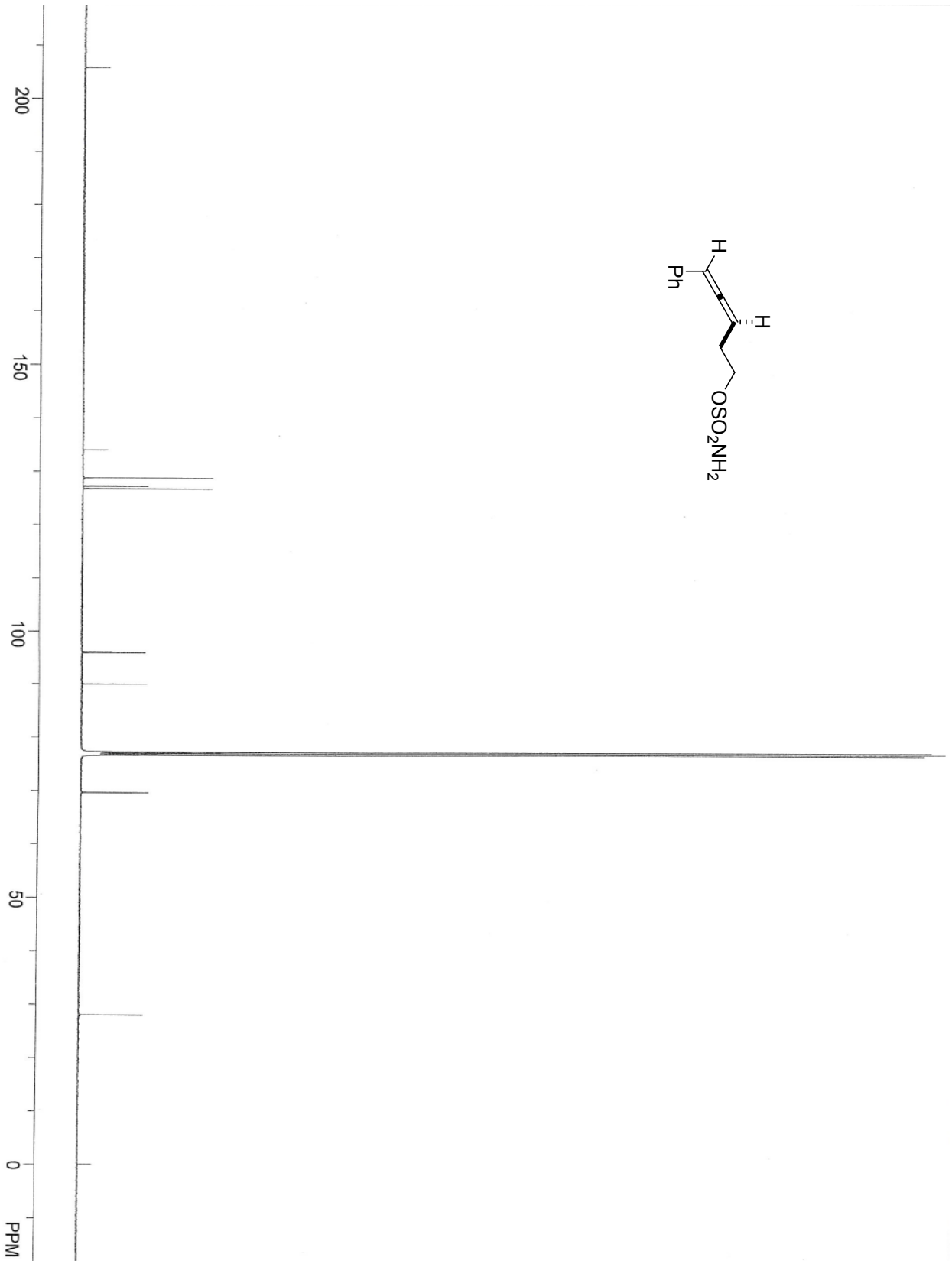
Sulfamate precursor for compound 14.



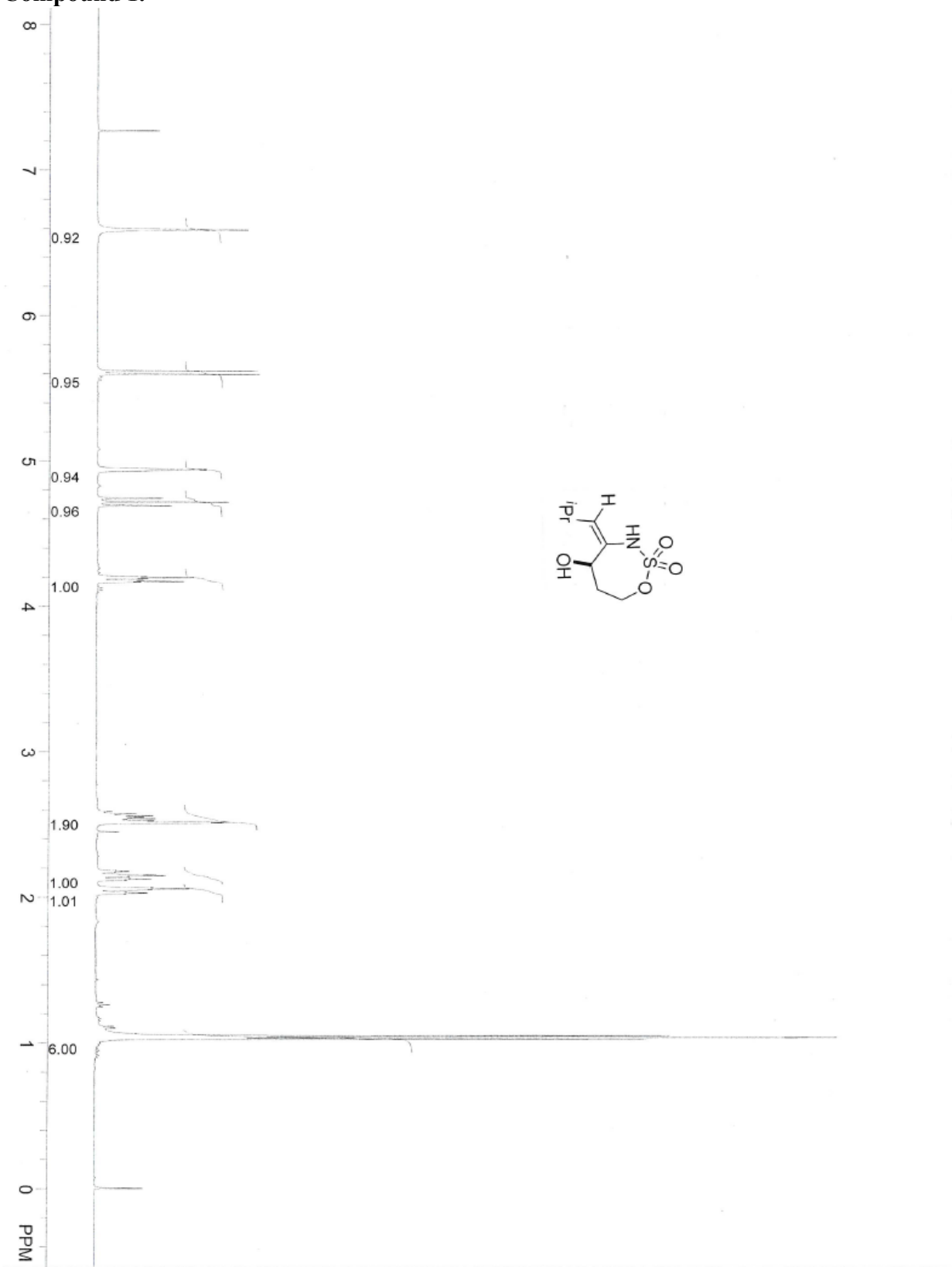

PhMe2Si
H
H
OSO2NH2
200
150
100
50
0
PPM

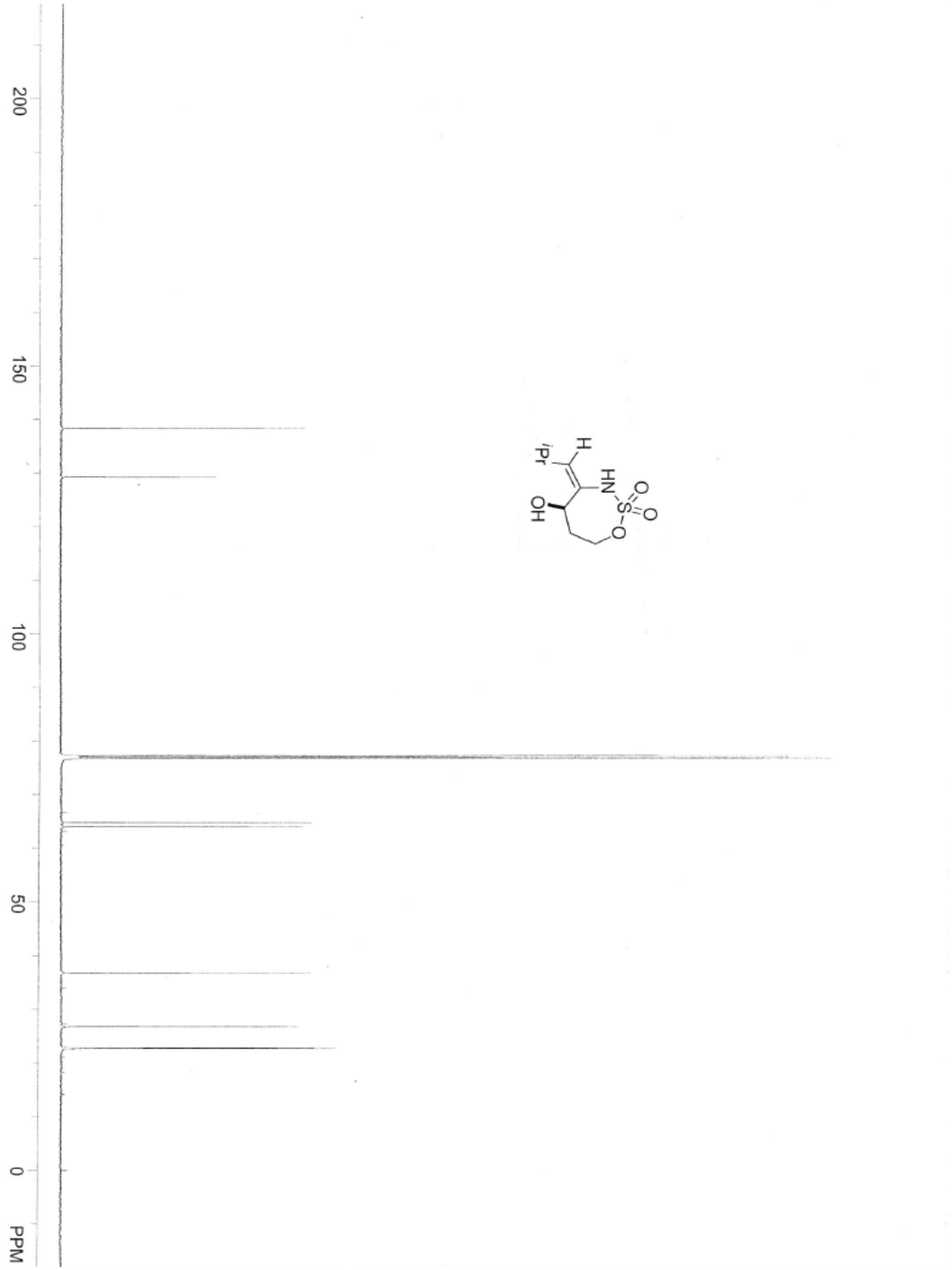
Sulfamate precursor for compound 15.



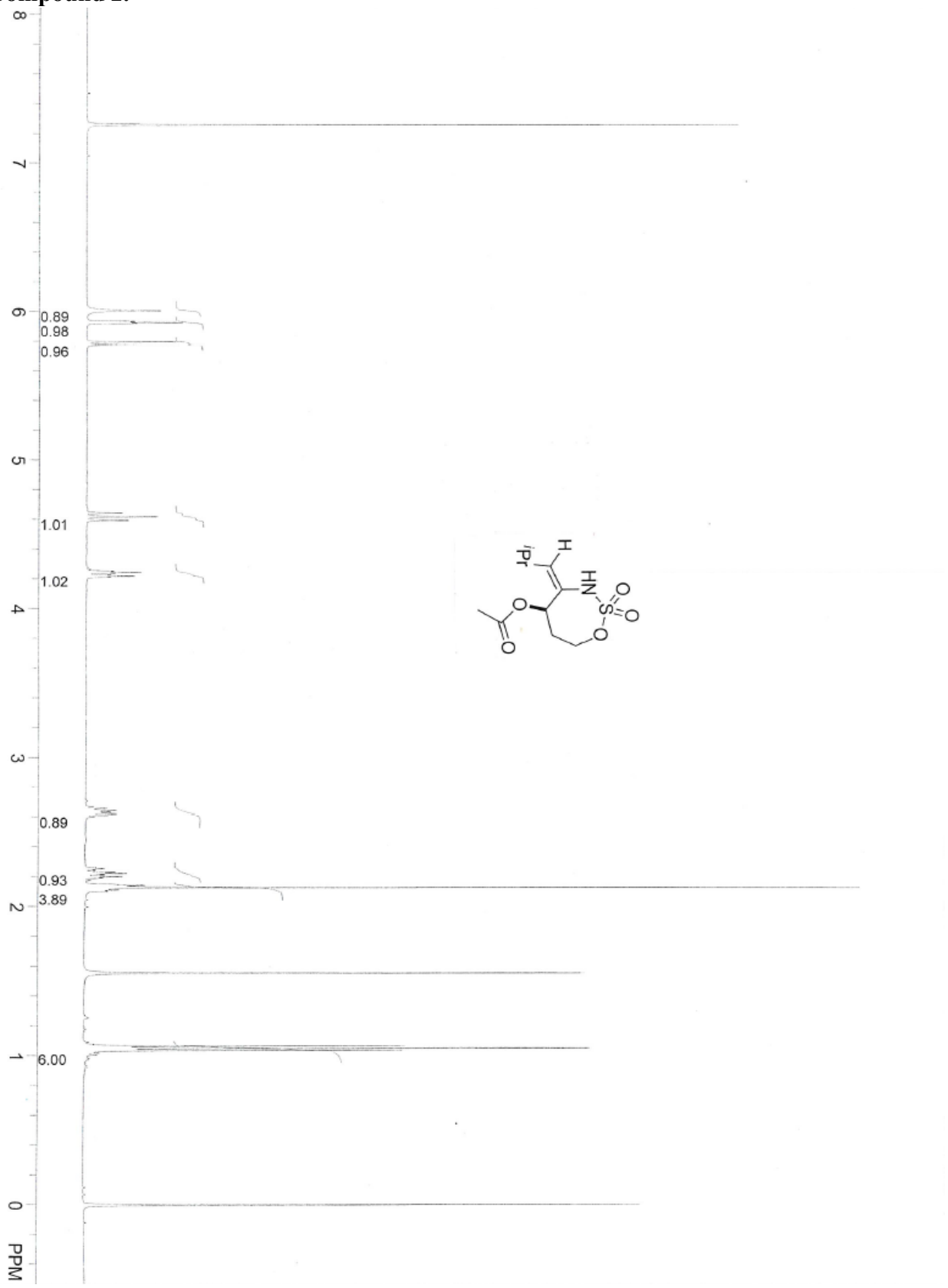

200
150
100
50
0
PPM
H
Ph
H
OSO2NH2

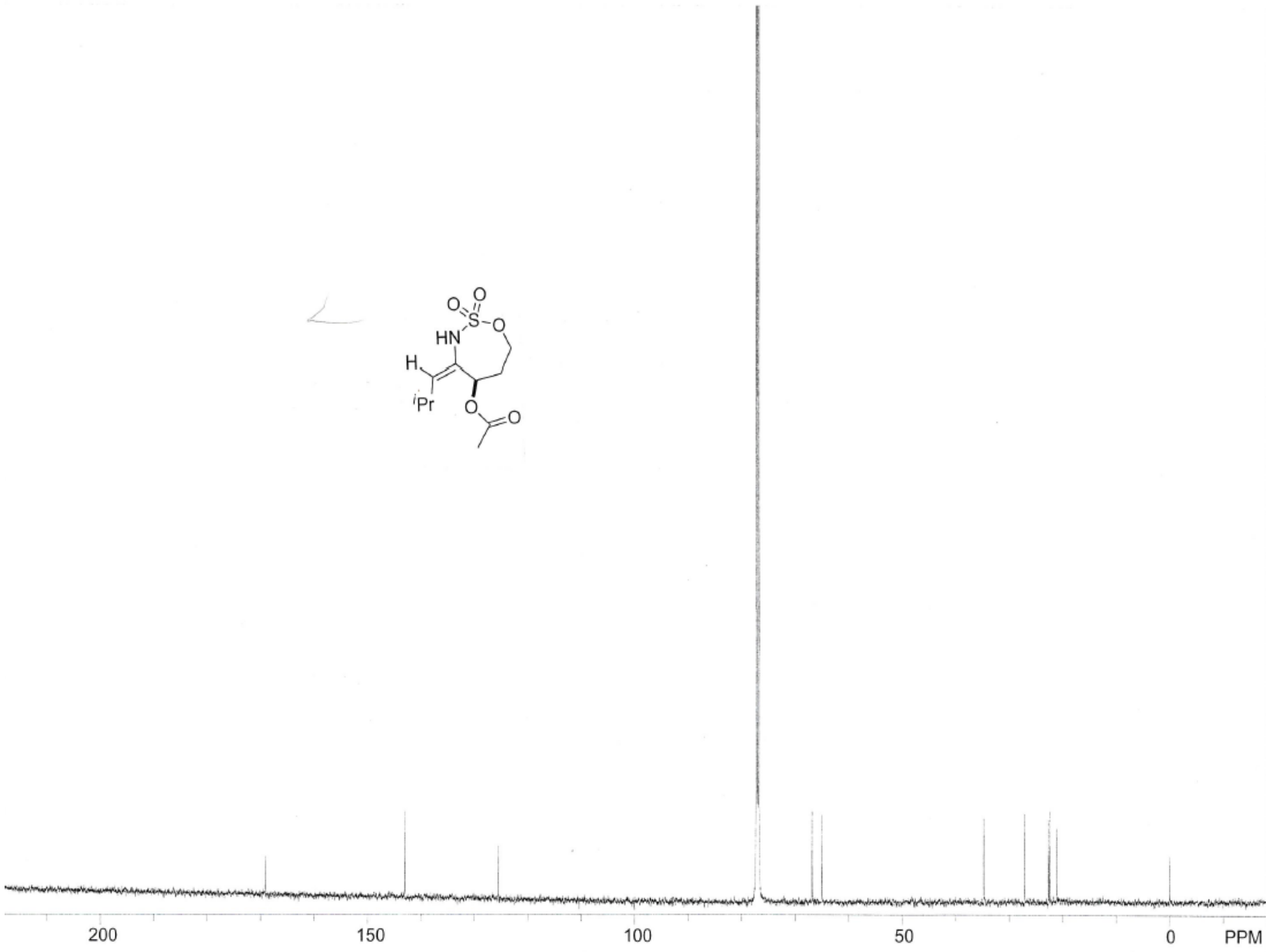
Compound 1.


8
7
6
5
4
3
2
1
0
PPM
0.92
0.95
0.94
0.96
1.00
1.90
1.00
1.01
6.00
H
iPr
HN
S
O
O
OH
O

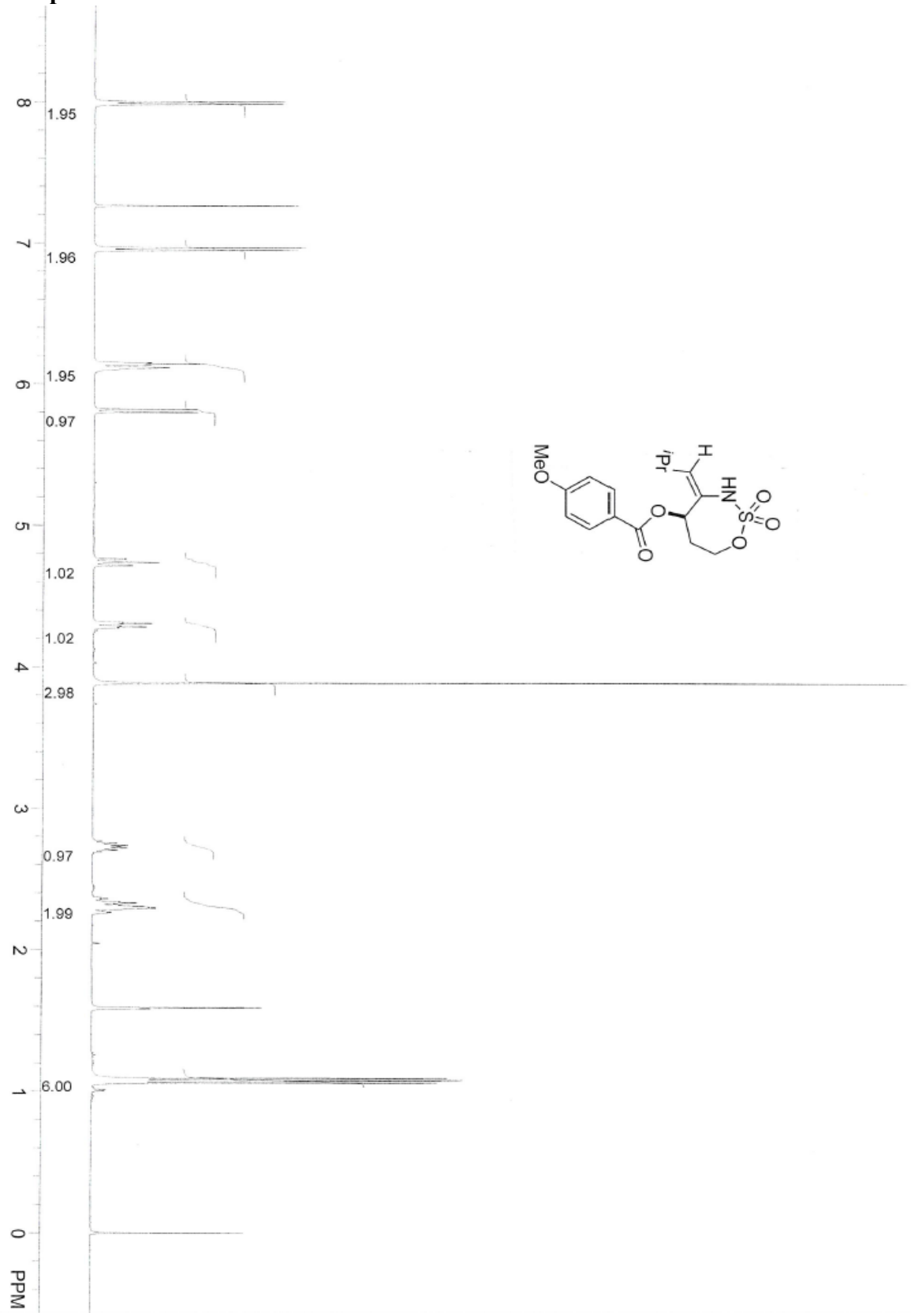

200
150
100
50
0
PPM
H
iPr
HN
S
O
O
O
OH

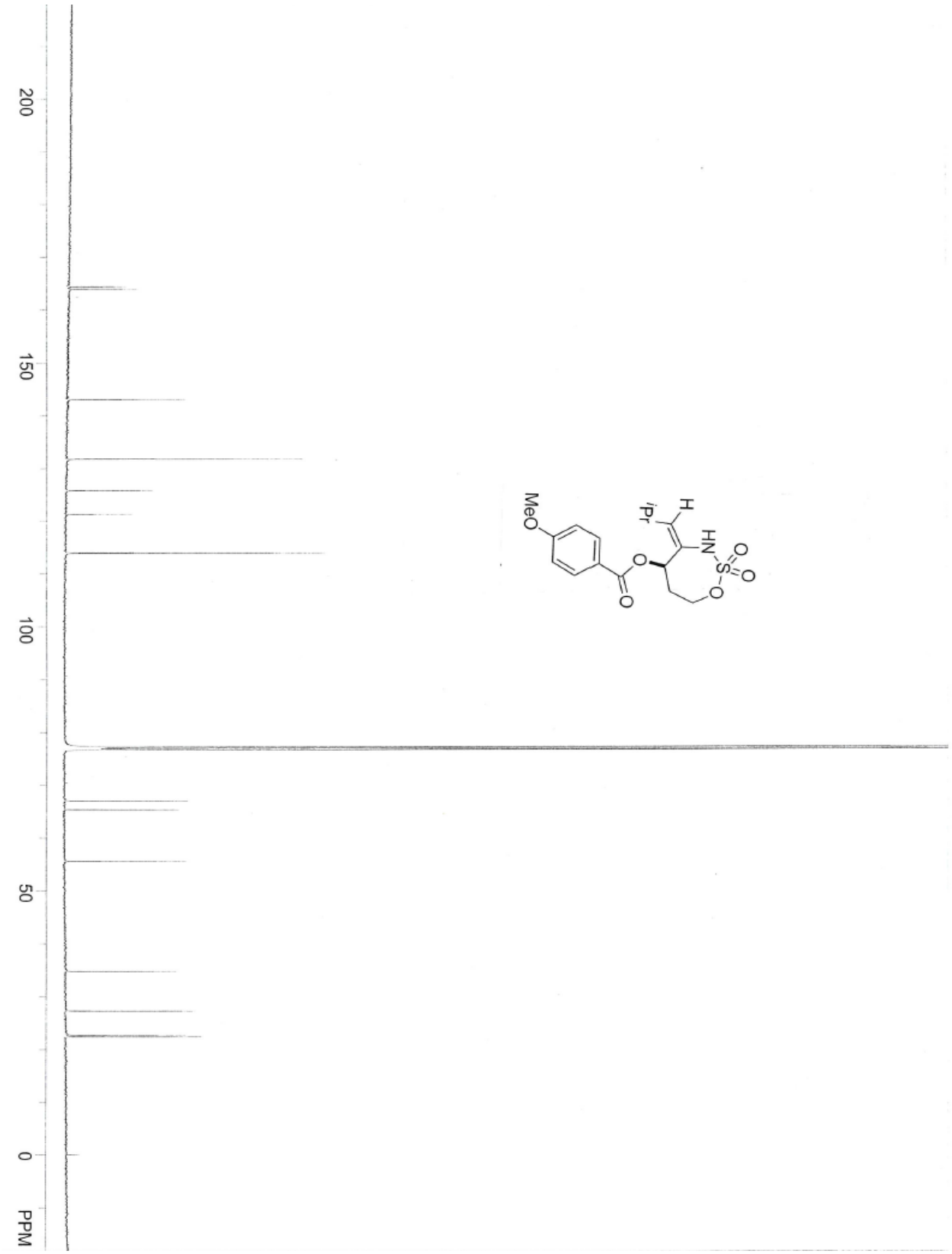
Compound 2.


8
7
6
5
4
3
2
1
0
PPM
0.89
0.98
0.96
1.01
1.02
0.89
0.93
3.89
6.00
H
iPr
HN
O
O
O
S
O
O


O
O
S
O
HN
H
iPr
O
O
200
150
100
50
0
PPM

Compound 3.


8
7
6
5
4
3
2
1
0
PPM
1.95
1.96
1.95
0.97
1.02
1.02
2.98
0.97
1.99
6.00
MeO
iPr
H
HN
S
O
O
O
O
O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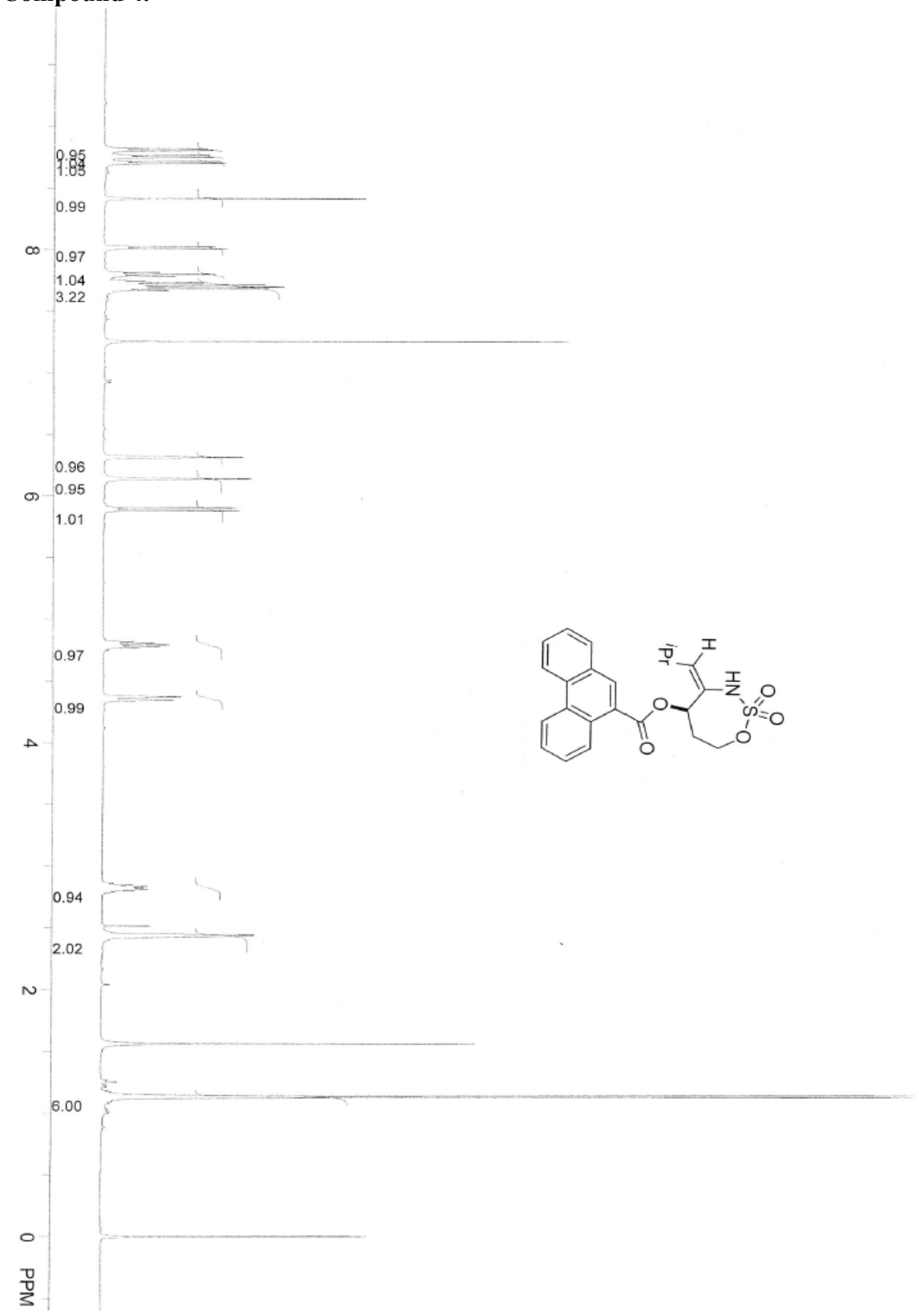
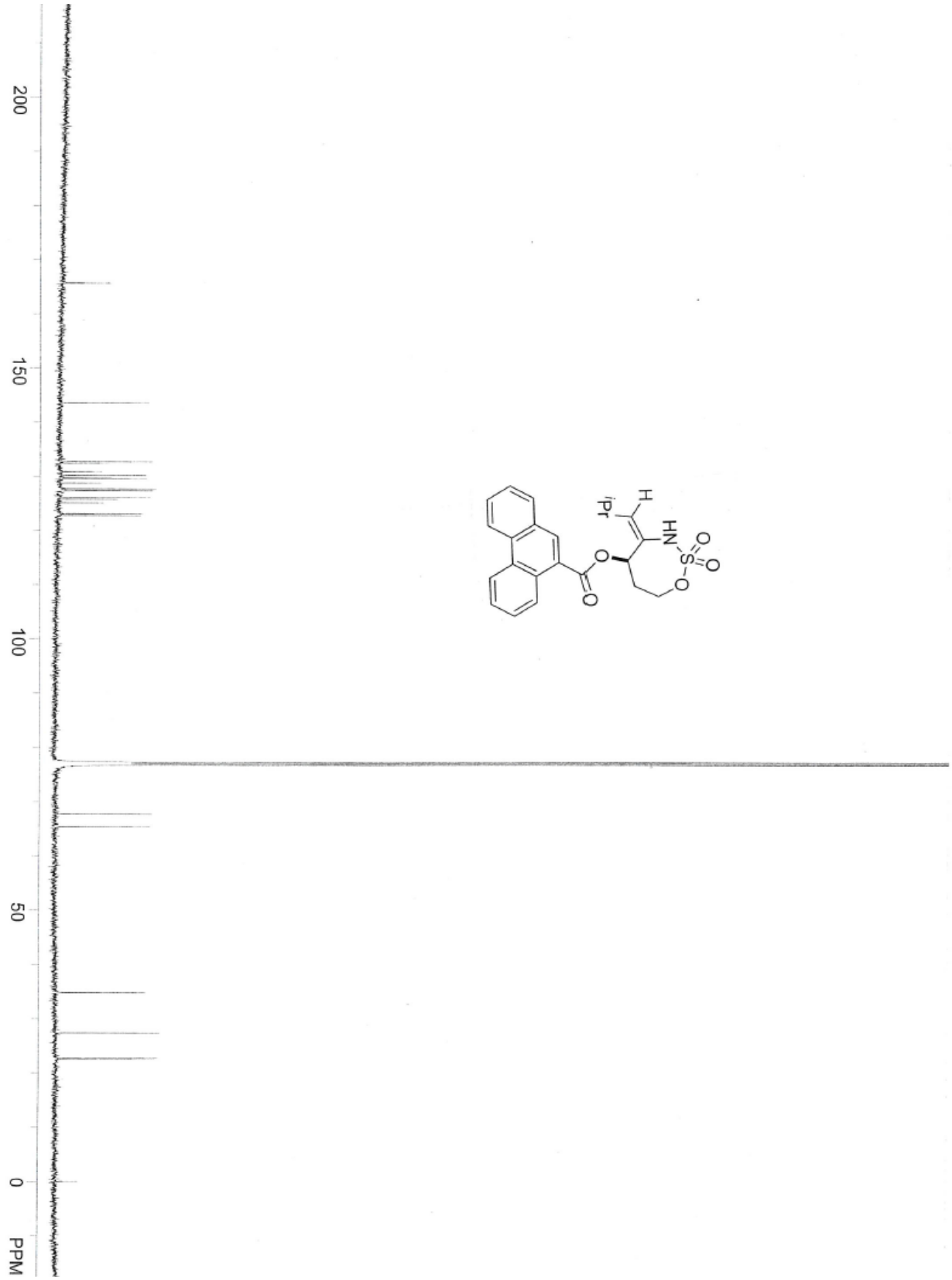
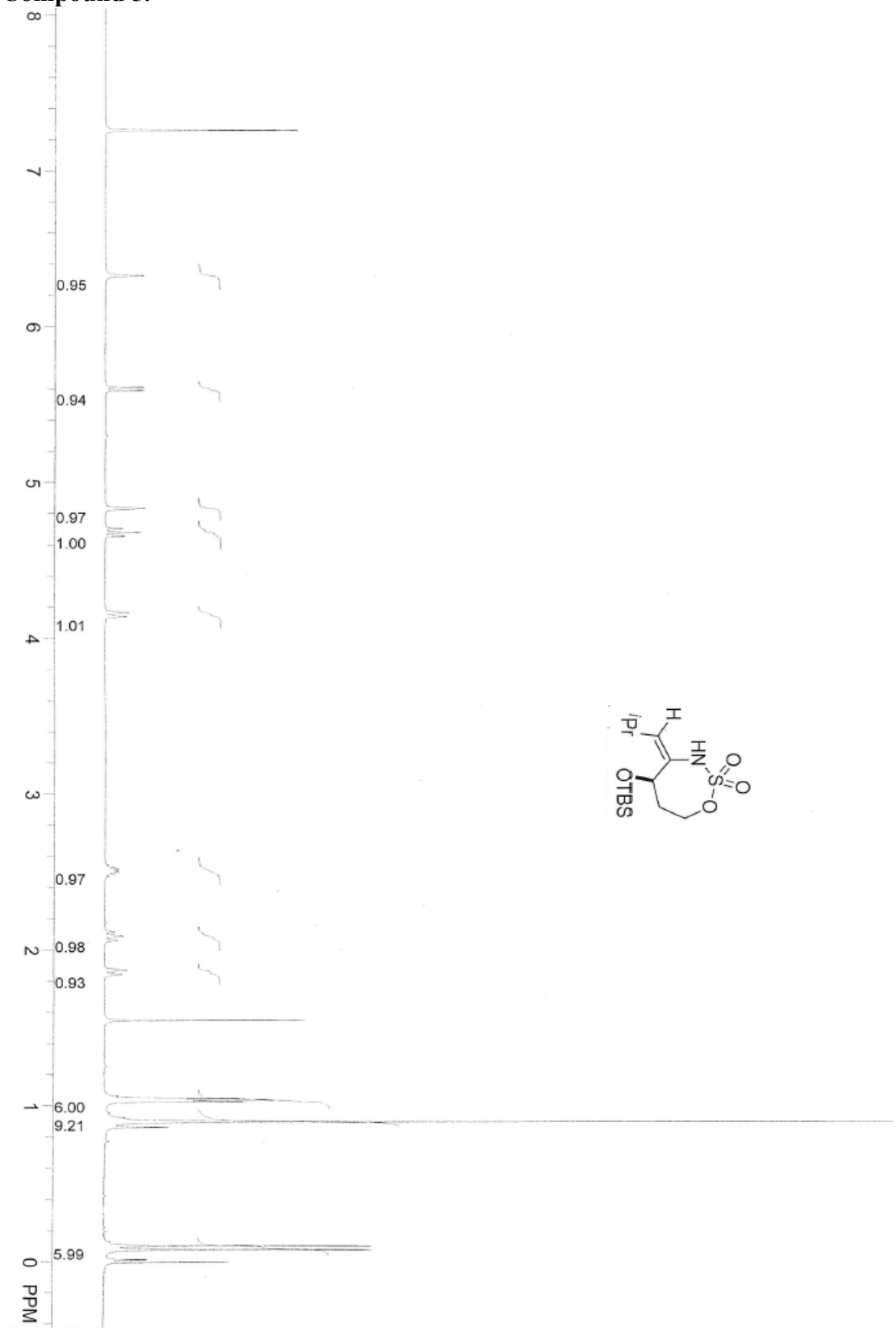
150
100
50
0
PPM
MeO
O
O
H
iPr
HN
S
O
O
O

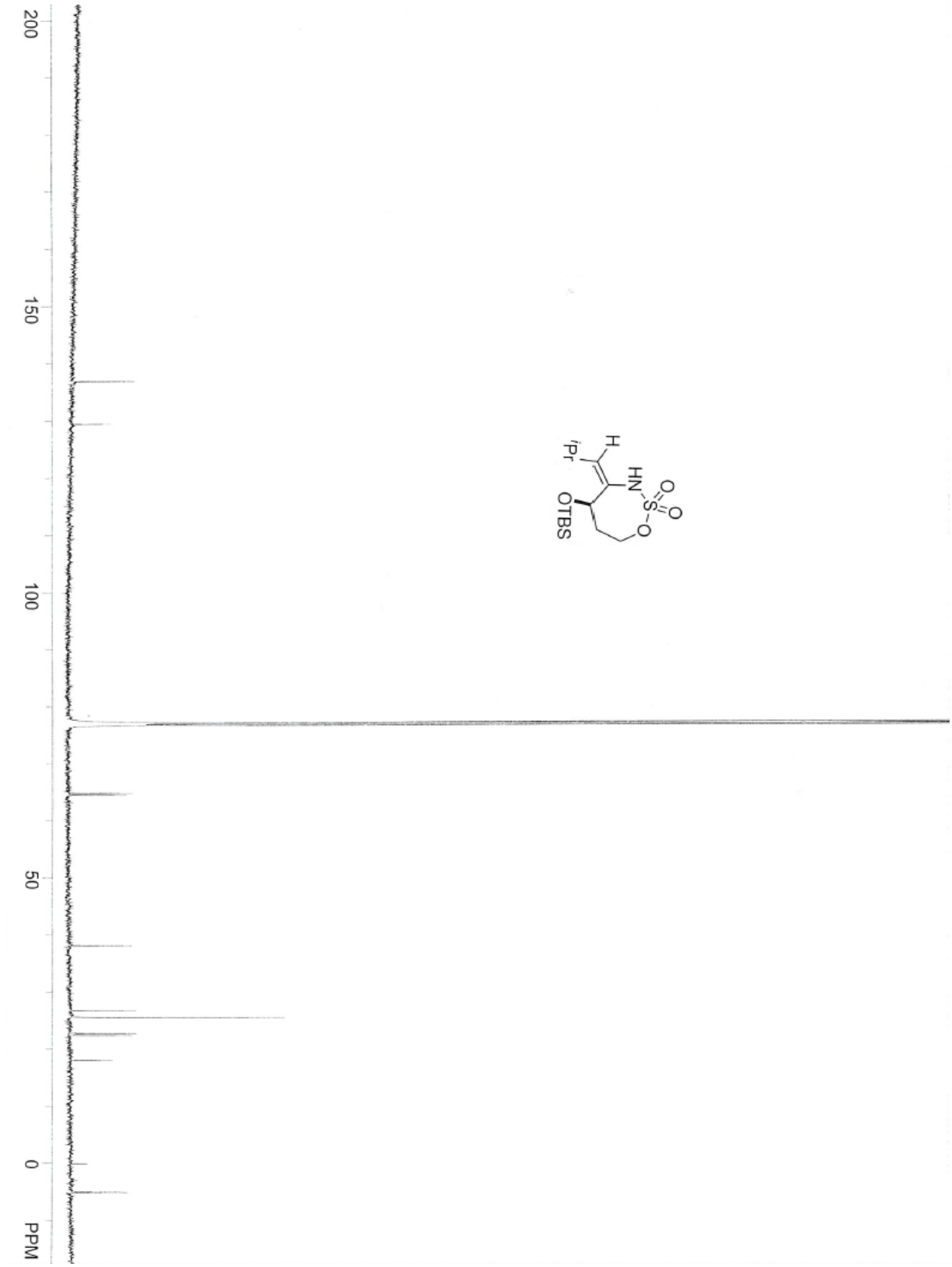
Compound 4.


0.95
1.04
1.05
0.99
0.97
1.04
3.22
0.96
0.95
1.01
0.97
0.99
0.94
2.02
6.00
8
6
4
2
0
PPM
iPr
H
HN
S
O
O
O
O
O

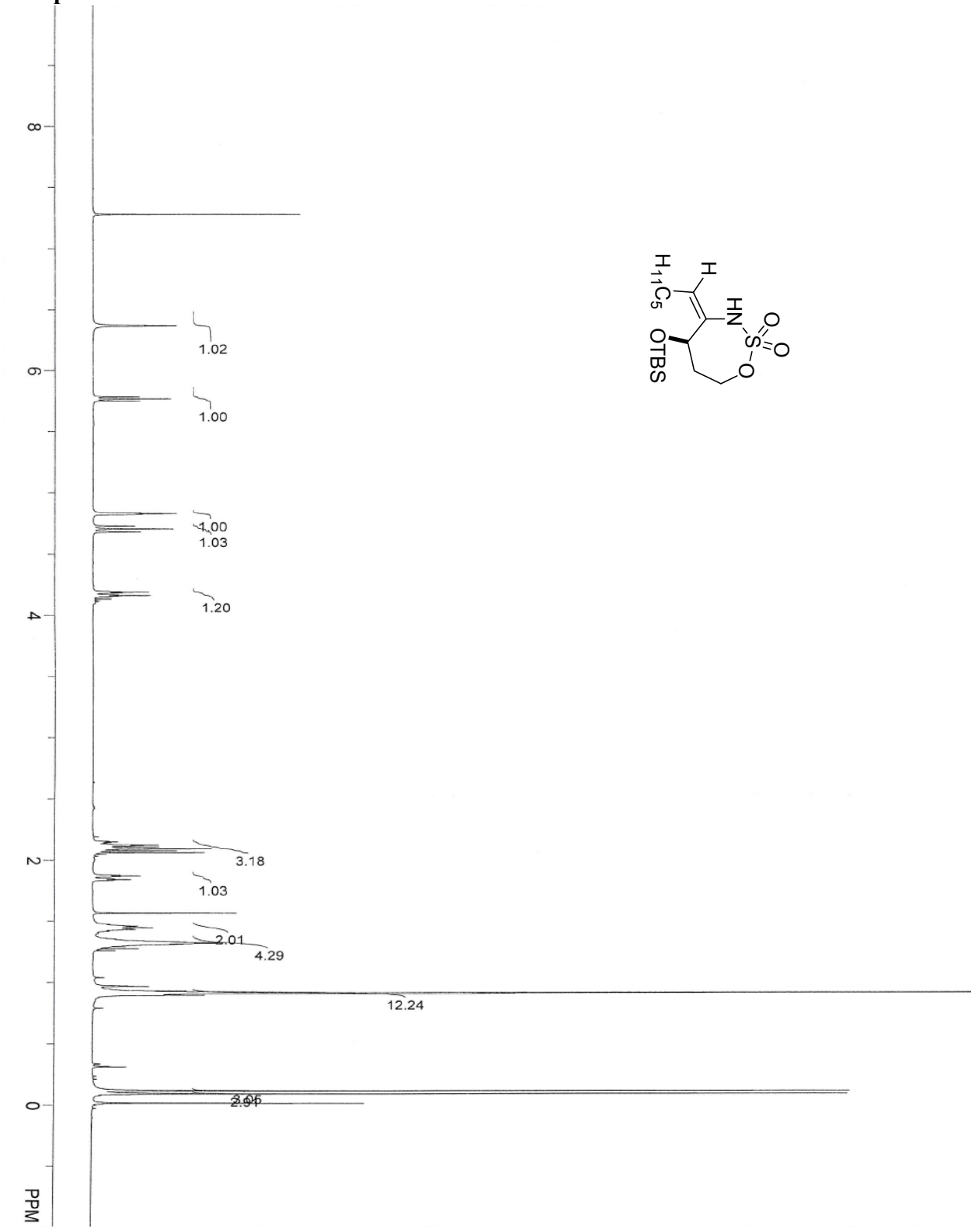

200
150
100
50
0
PPM
iPr
H
HN
S
O
O
O
O
O

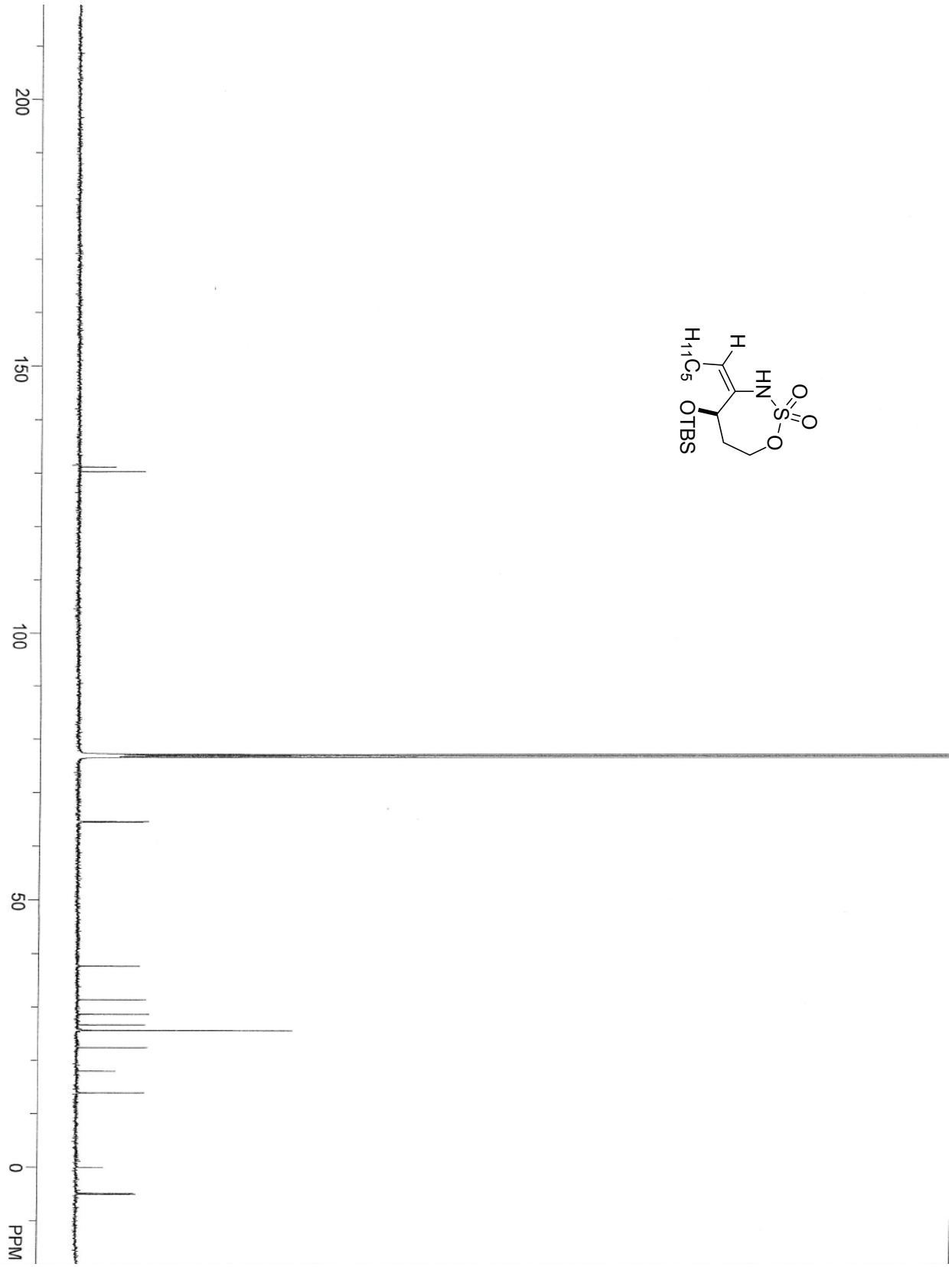
Compound 5.


8
7
6
5
4
3
2
1
0
PPM
0.95
0.94
0.97
1.00
1.01
0.97
0.98
0.93
6.00
9.21
5.99
H
iPr
OTBS
HN
S
O
O
O

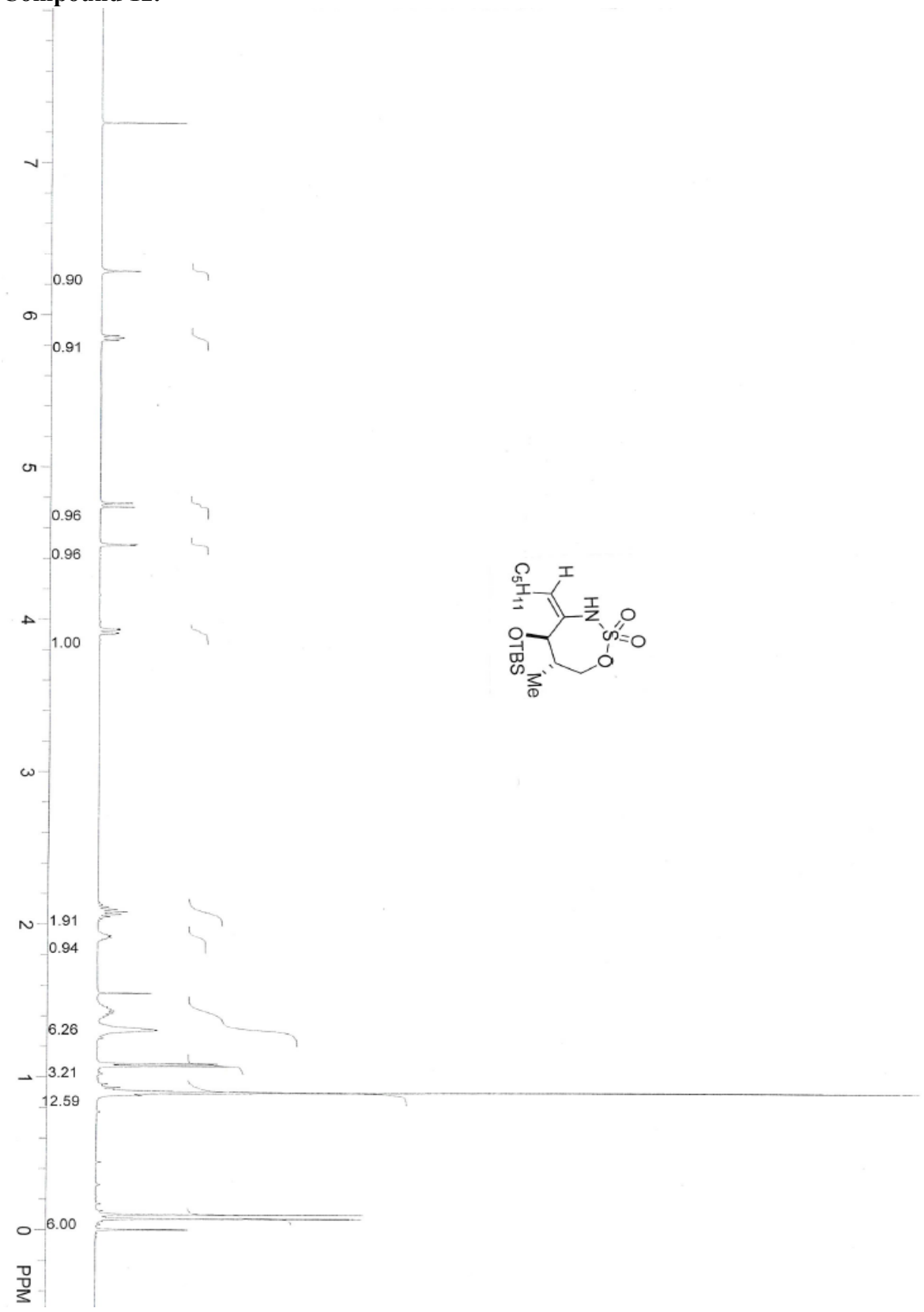

200
150
100
50
0
PPM
H
iPr
HN
S
O
O
O
OTBS

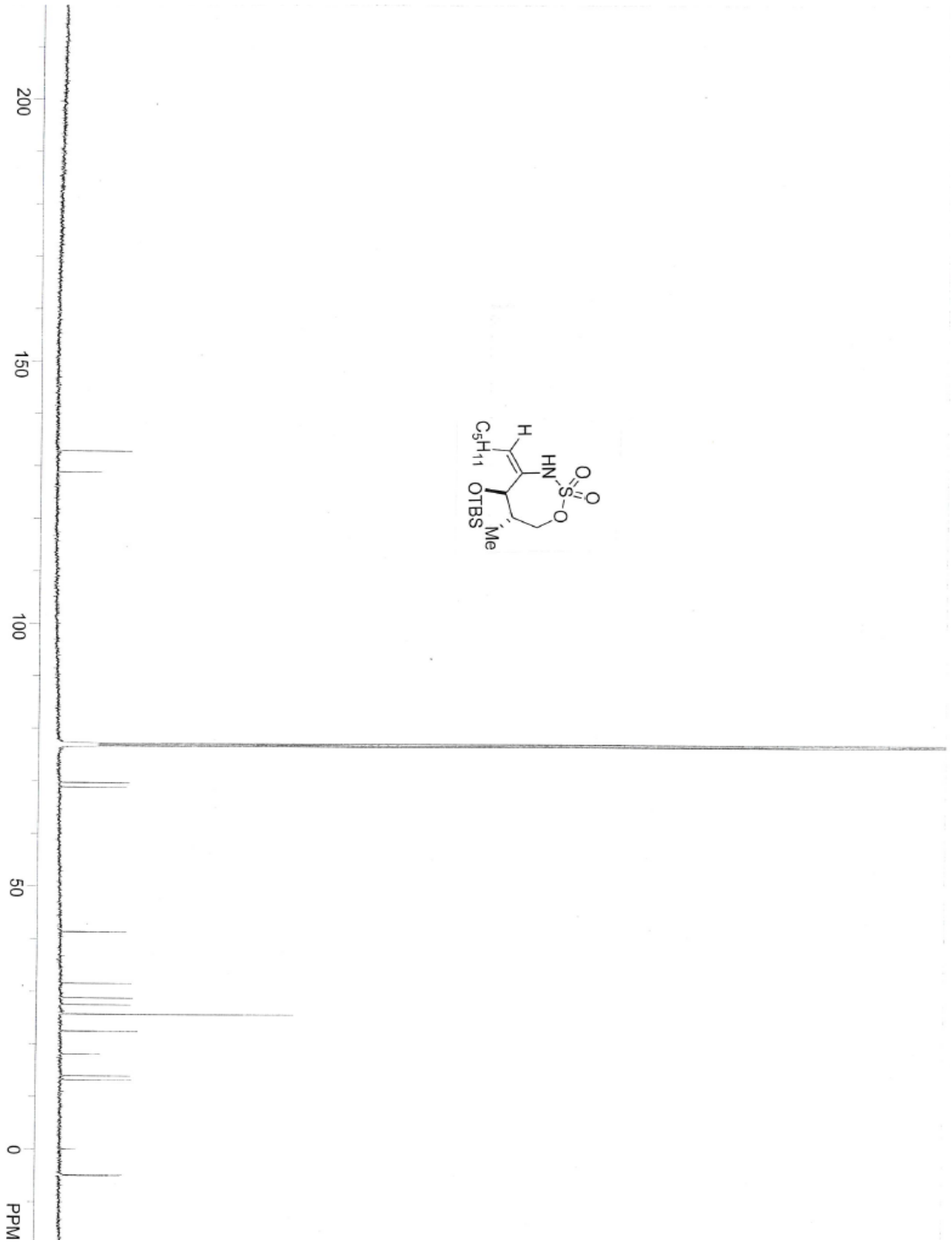
Compound 11.


8
6
4
2
0
PPM
1.02
1.00
1.00
1.03
1.20
3.18
1.03
2.01
4.29
12.24
2.05
H
HN
O
O
S
O
O
H11C5
OTBS

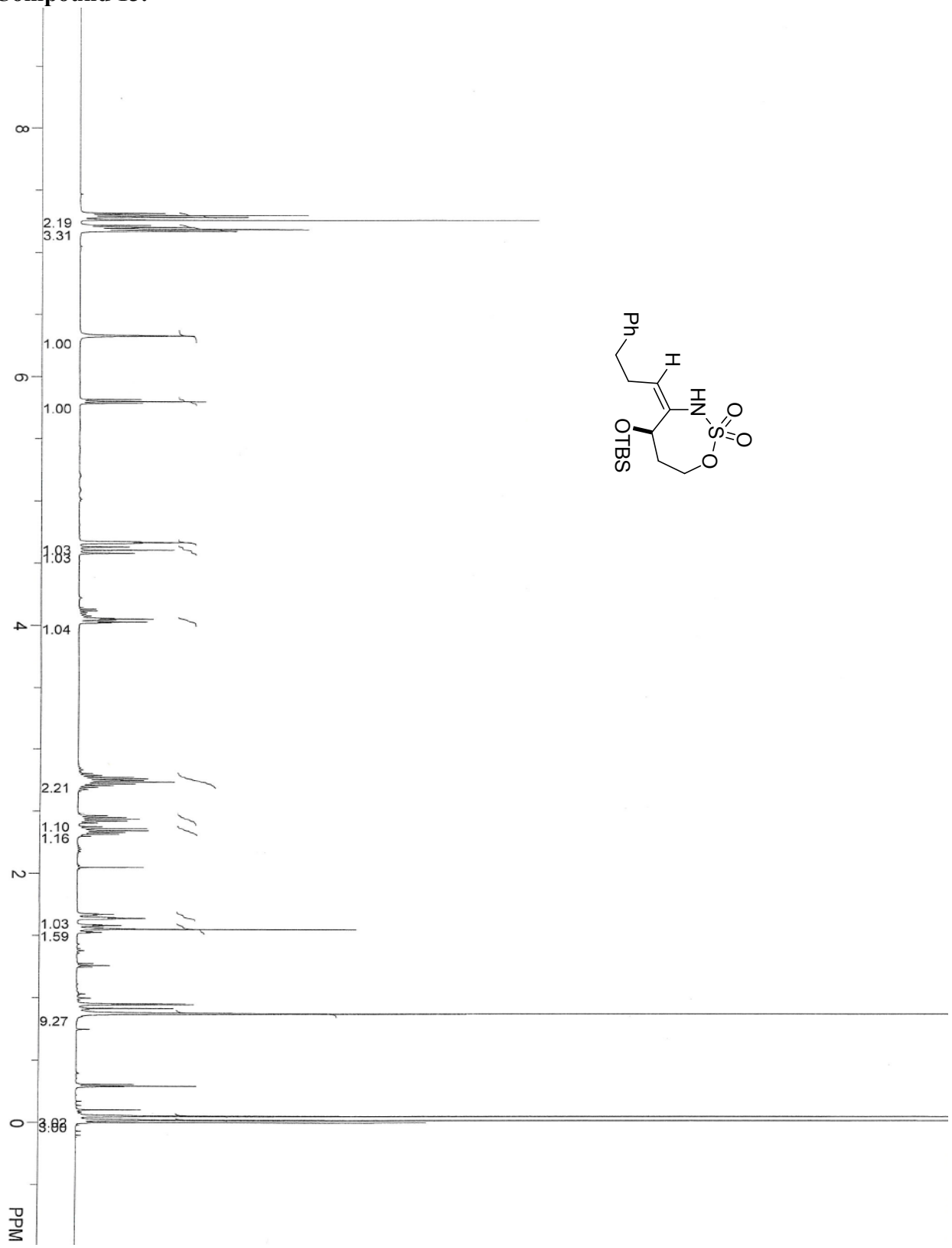

200
150
100
50
0
PPM
H
HN
S
O
O
O
H11C5
OTBS

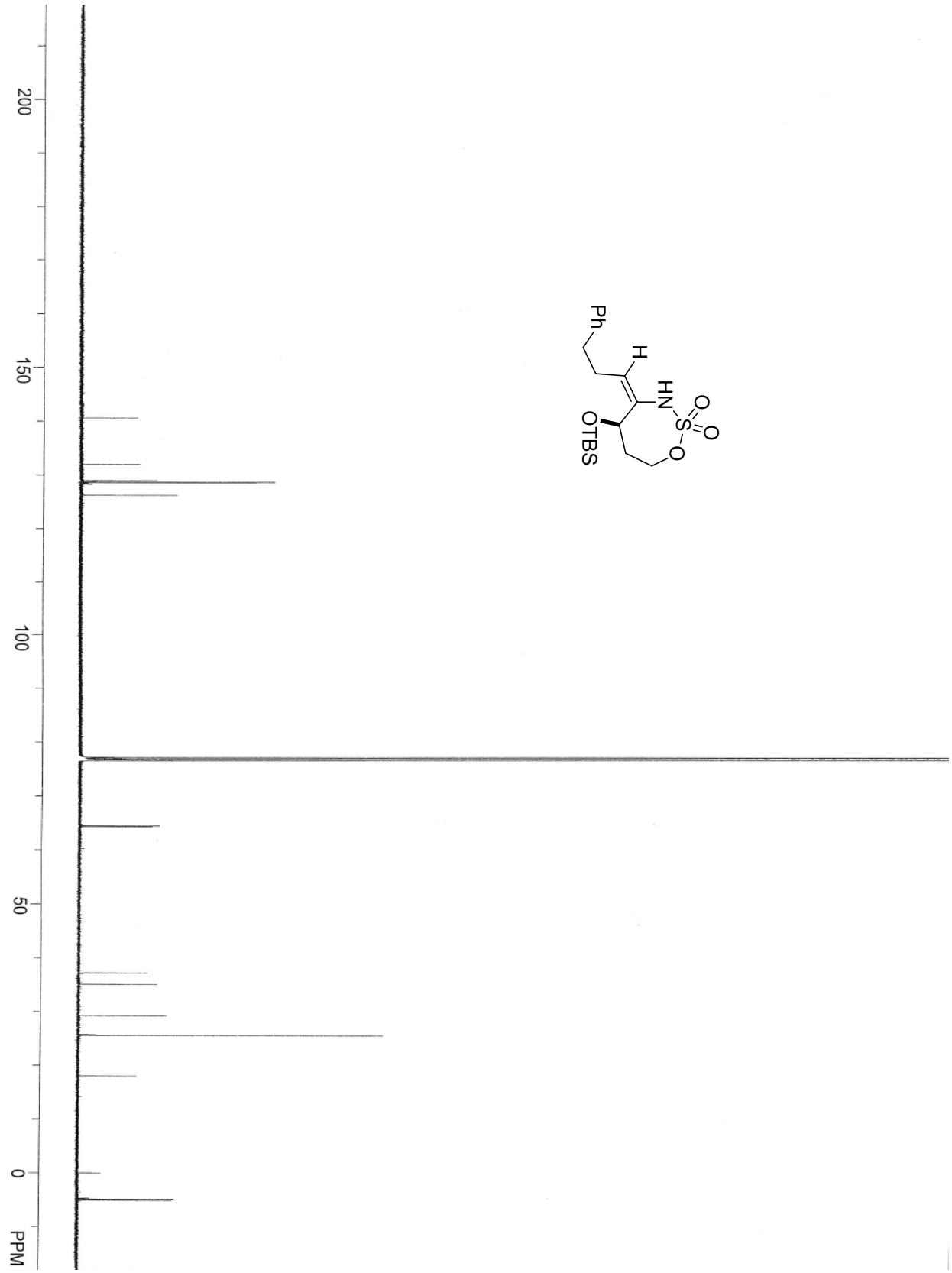
Compound 12.


7
6
5
4
3
2
1
0
PPM
0.90
0.91
0.96
0.96
1.00
1.91
0.94
6.26
3.21
12.59
6.00
H
HN
O
O
S
O
C5H11
OTBS
Me

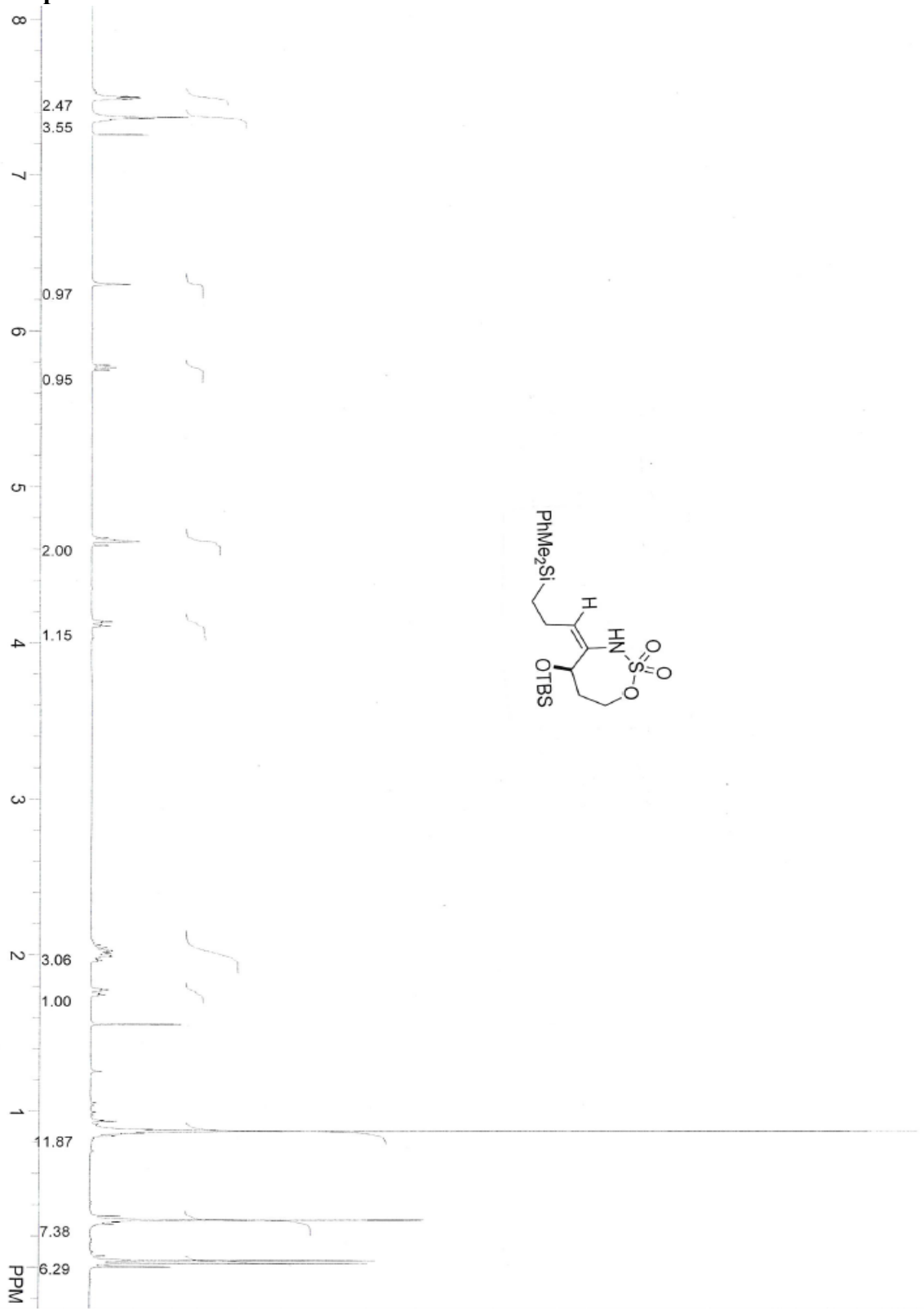

200
150
100
50
0
PPM
H
HN
O
O
S
O
C5H11
OTBS
Me

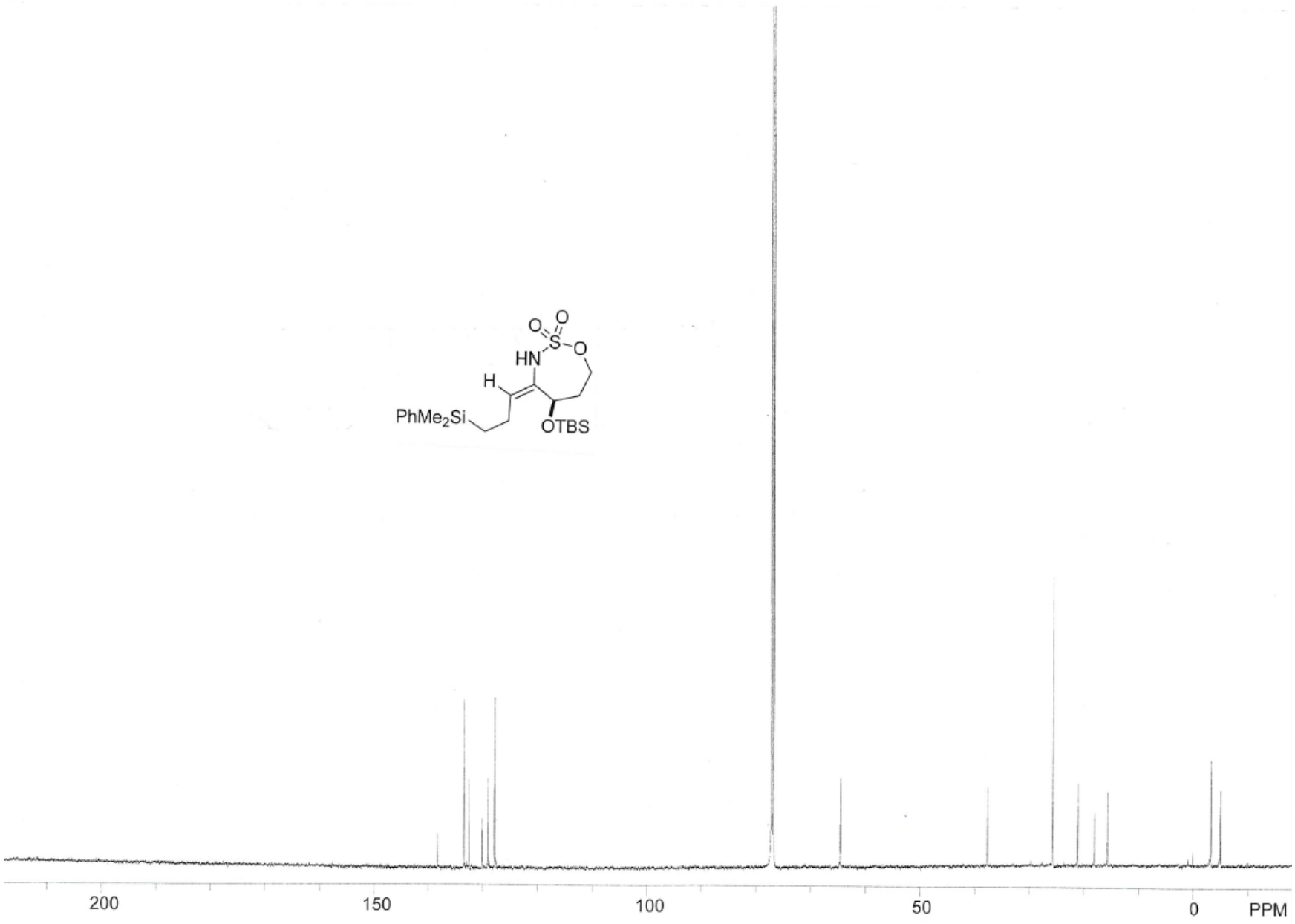
Compound 13.


8
6
4
2
0
PPM
2.19
3.31
1.00
1.00
1.03
1.03
1.04
2.21
1.10
1.16
1.03
1.59
9.27
3.00
Ph
H
HN
S
O
O
O
OTBS

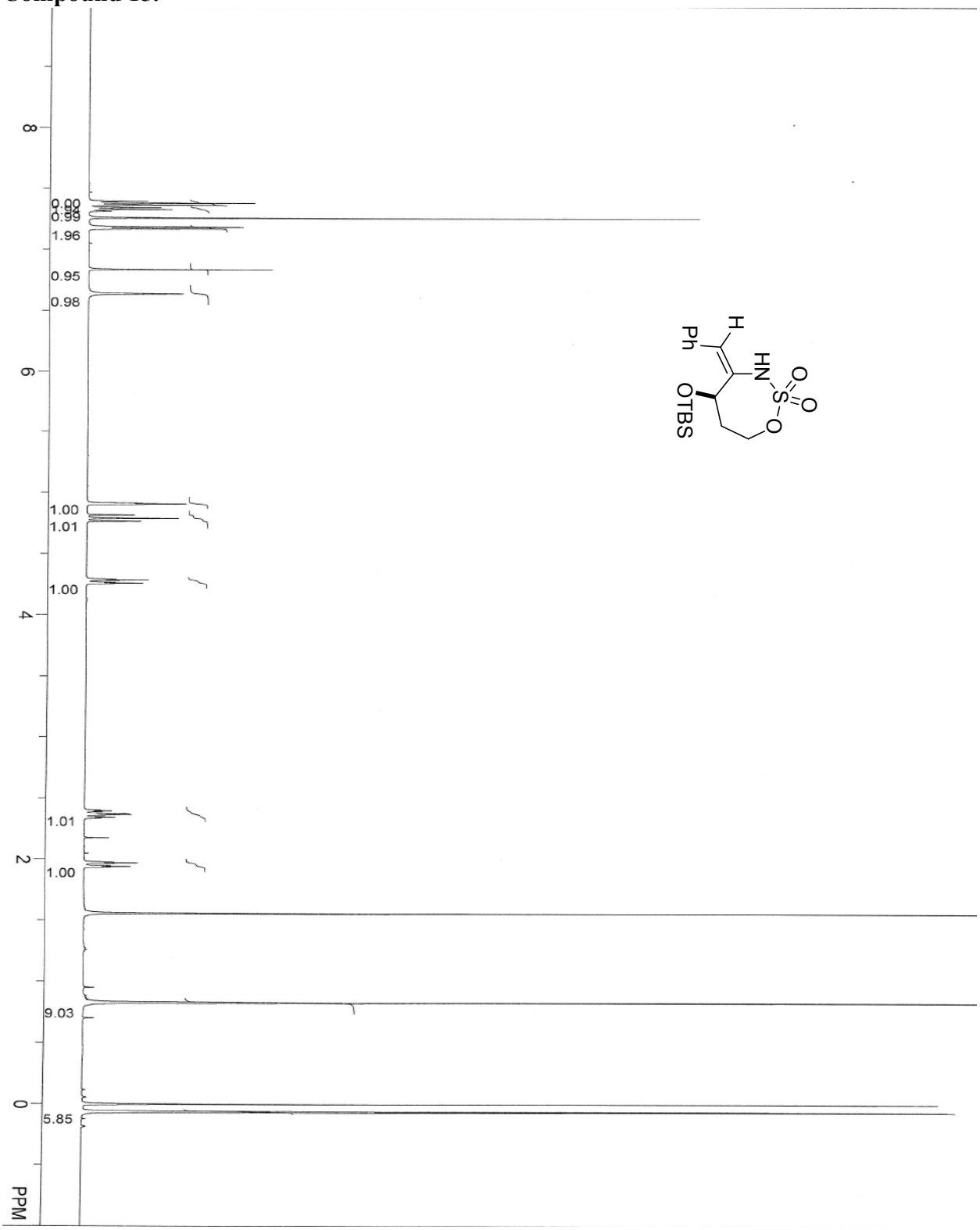

200
150
100
50
0
PPM
Ph
H
HN
S
O
O
O
OTBS

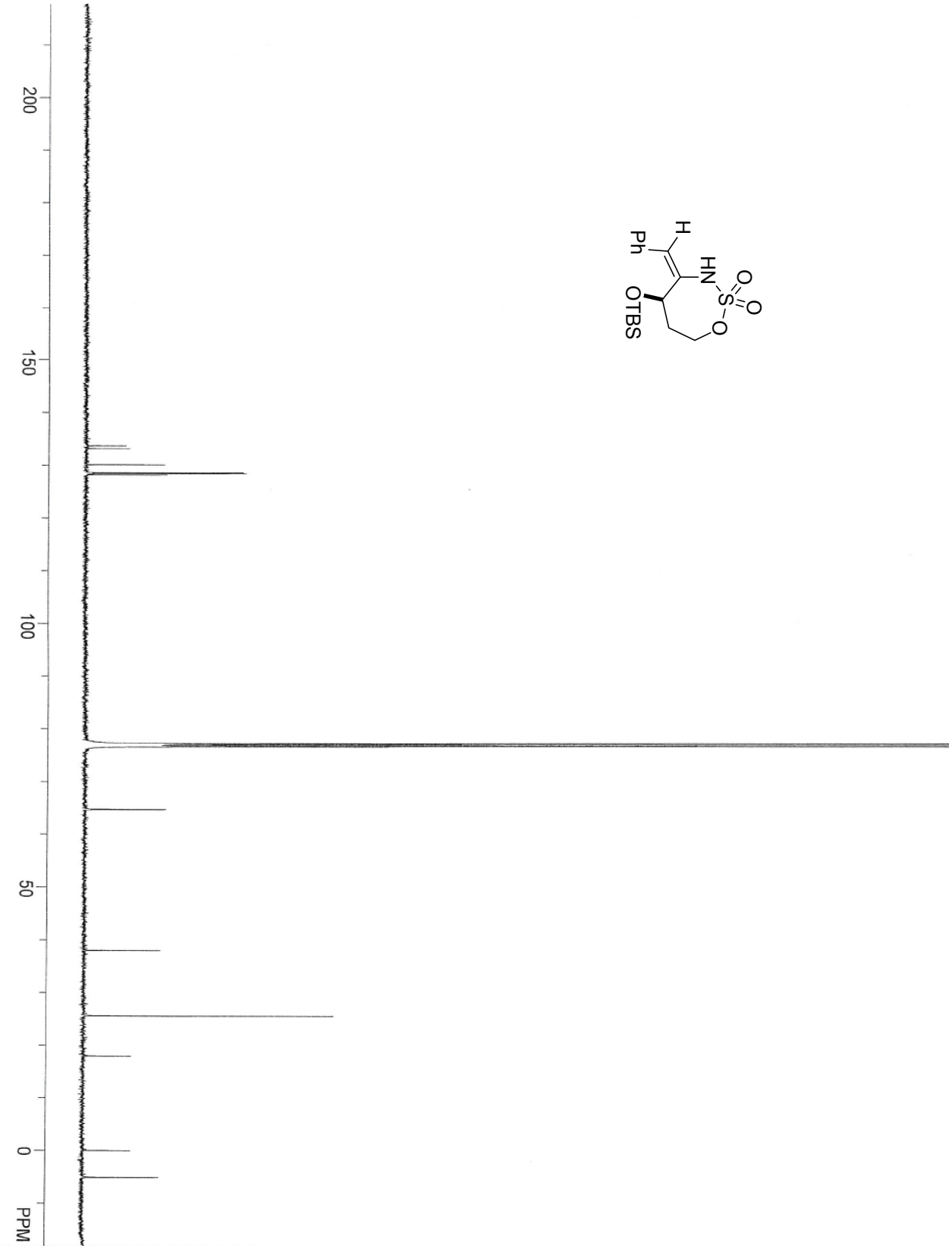
Compound 14.


8
7
6
5
4
3
2
1
PPM
2.47
3.55
0.97
0.95
2.00
1.15
3.06
1.00
11.87
7.38
6.29
PhMe2Si
H
HN
O
O
S
O
OTBS

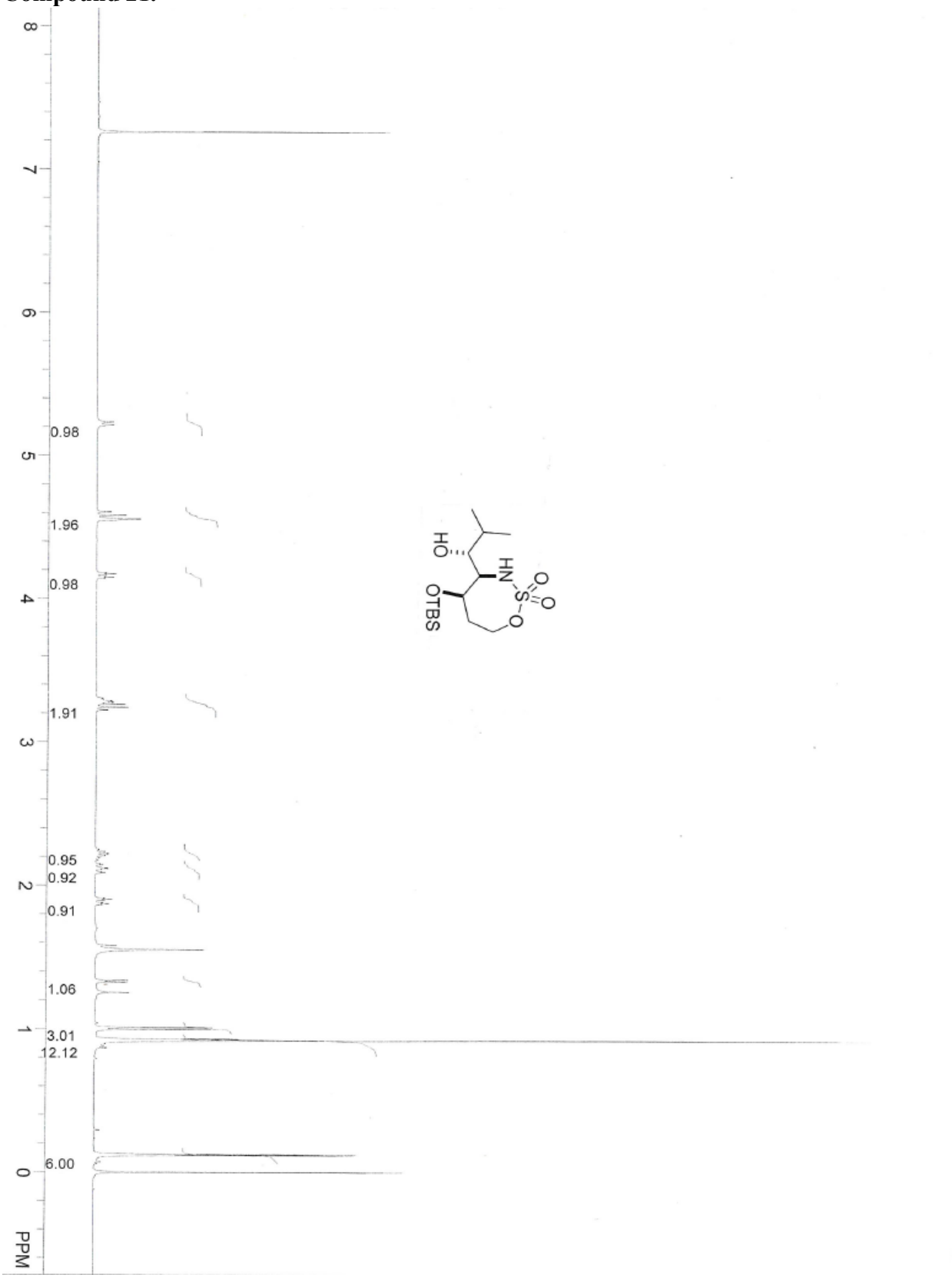

O
O
S
O
HN
H
PhMe2Si
OTBS
200
150
100
50
0
PPM

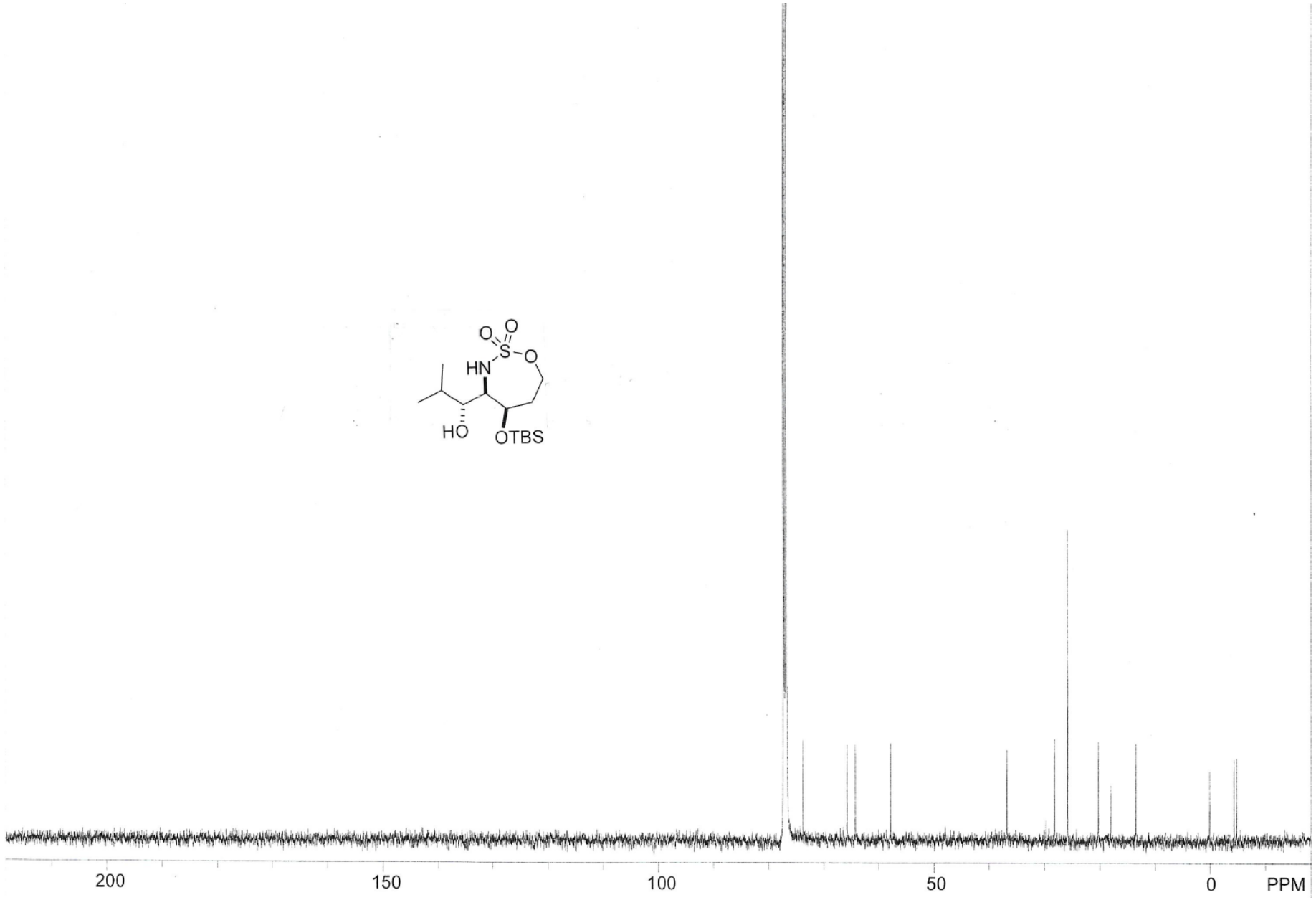
Compound 15.


8
6
4
2
0
PPM
0.99
1.96
0.95
0.98
1.00
1.01
1.00
1.01
1.00
9.03
5.85
H
Ph
HN
O
O
S
O
OTBS

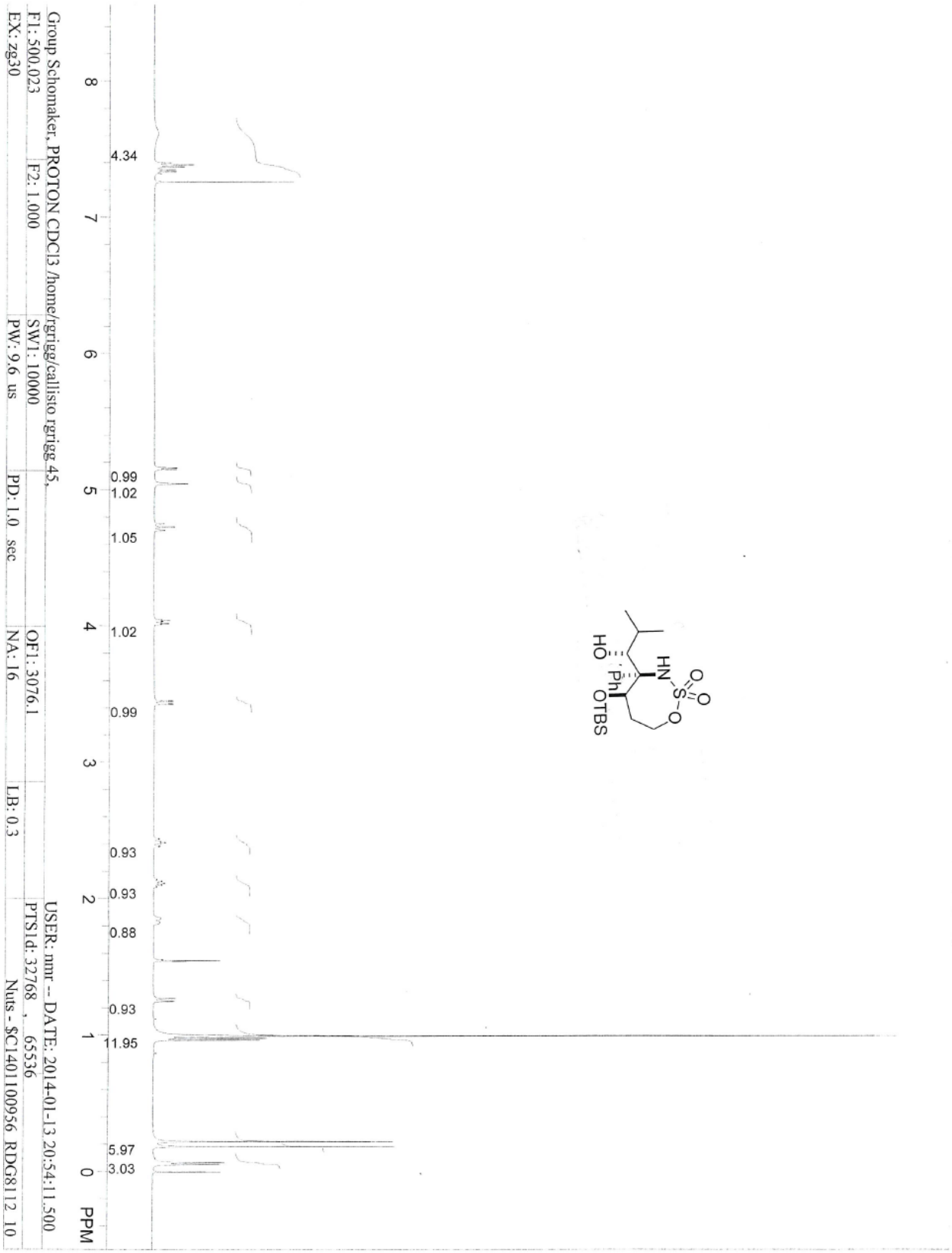

200
150
100
50
0
PPM
H
Ph
HN
O
O
S
O
OTBS

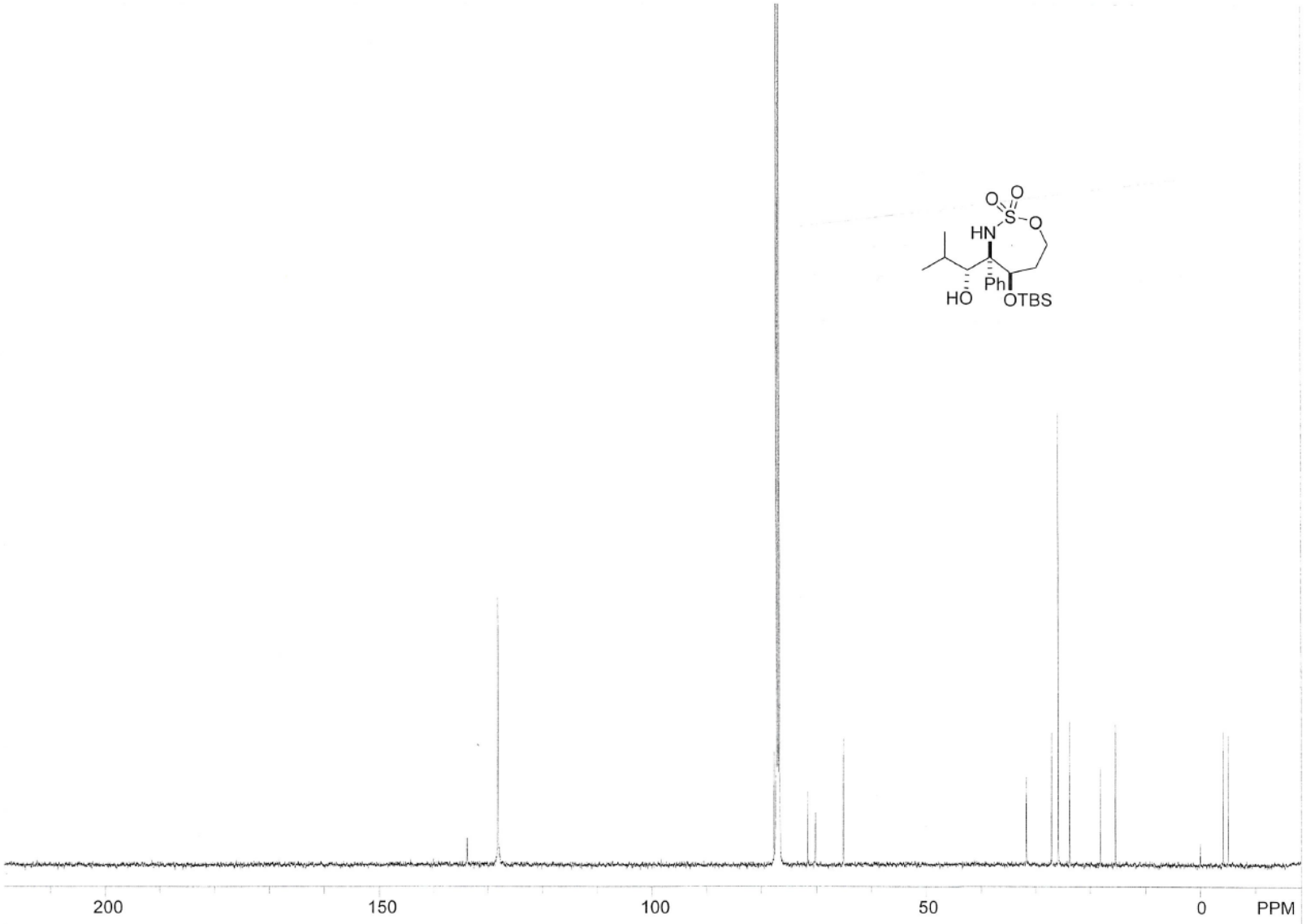
Compound 21.


8
7
6
5
4
3
2
1
0
PPM
0.98
1.96
0.98
1.91
0.95
0.92
0.91
1.06
3.01
12.12
6.00
HO
HN
OTBS
O
O
S
O


O
O
S
O
HN
HO
OTBS
200
150
100
50
0
PPM

Compound 22.

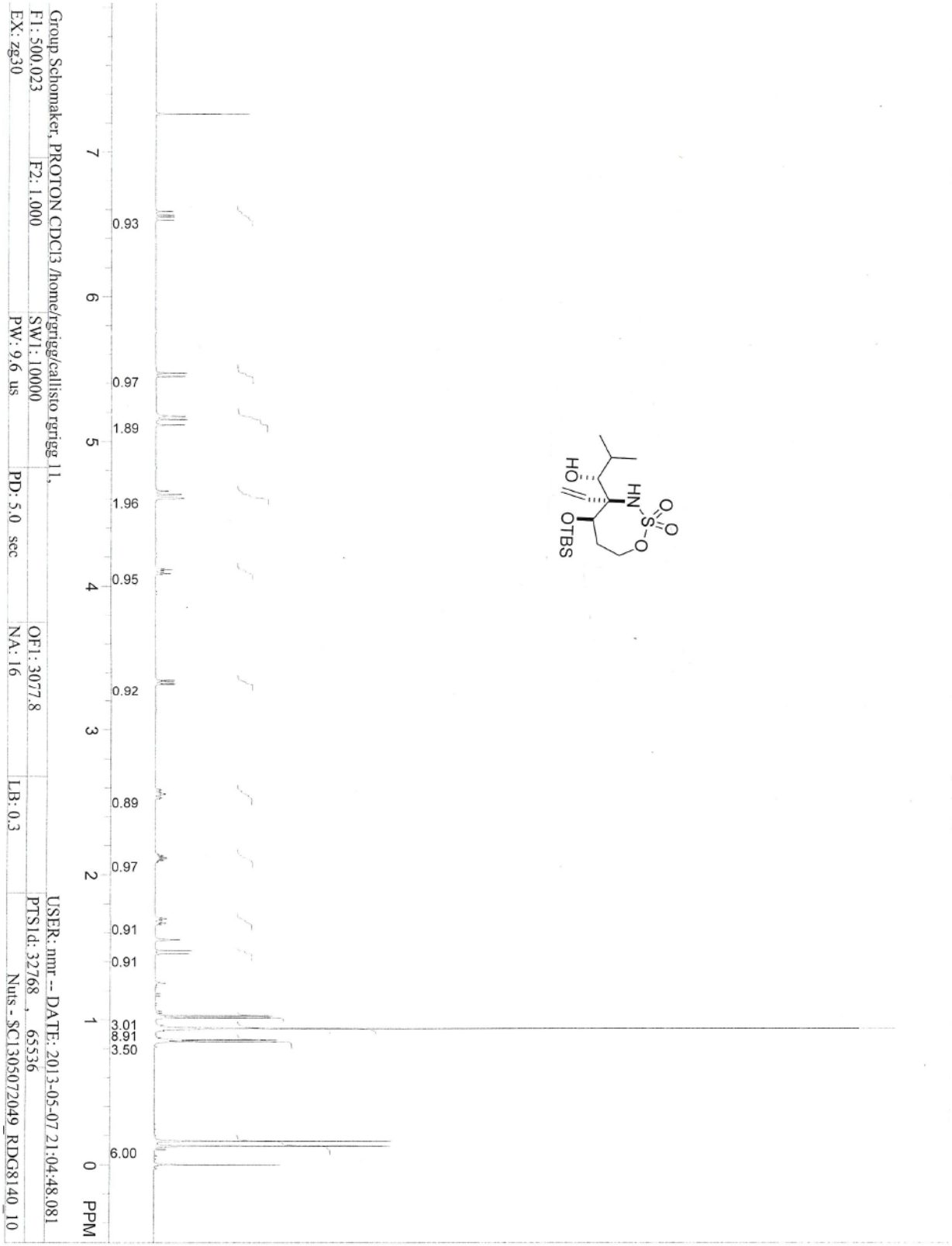

Group Schomaker, PROTON CDCl3 /home/rgrigg/callisto rgrigg 45.
F1: 500.023
F2: 1.000
EX: zg30
SW1: 10000
PW: 9.6 us
PD: 1.0 sec
OF1: 3076.1
NA: 16
LB: 0.3
USER: nmr -- DATE: 2014-01-13 20:54:11.500
PTS1d: 32768 , 65536
Nuts - $C140110956_RDG8112_10
8
7
6
5
4
3
2
1
0
PPM
4.34
0.99
1.02
1.05
1.02
0.99
0.93
0.93
0.88
0.93
11.95
5.97
3.03
HO
Ph
OTBS
HN
S
O
O
O

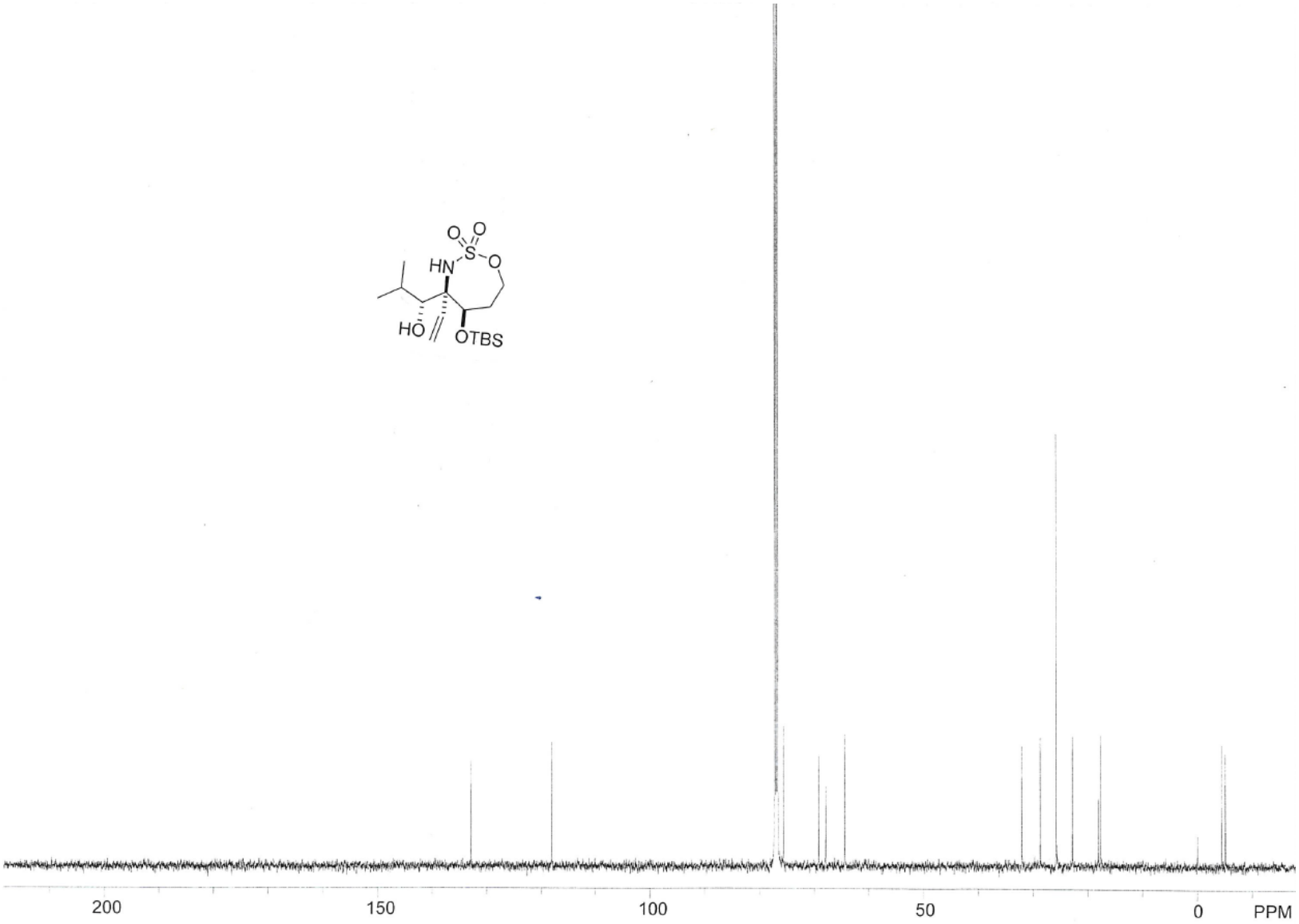


Group Schomaker, C13CPD32 CDCl3 /home/rgrigg/callisto rgrigg 45, USER: nmr -- DATE: 2014-01-13 21:02:15.391

F1: 125.743	F2: 1.000	SW1: 29762		OF1: 12569.1		PTS1d: 32768 , 32768
EX: zgpg30		PW: 10.0 us	PD: 2.0 sec	NA: 128	LB: 2.0	Nuts - $C1401100956_RDG8112_11

Compound 23.

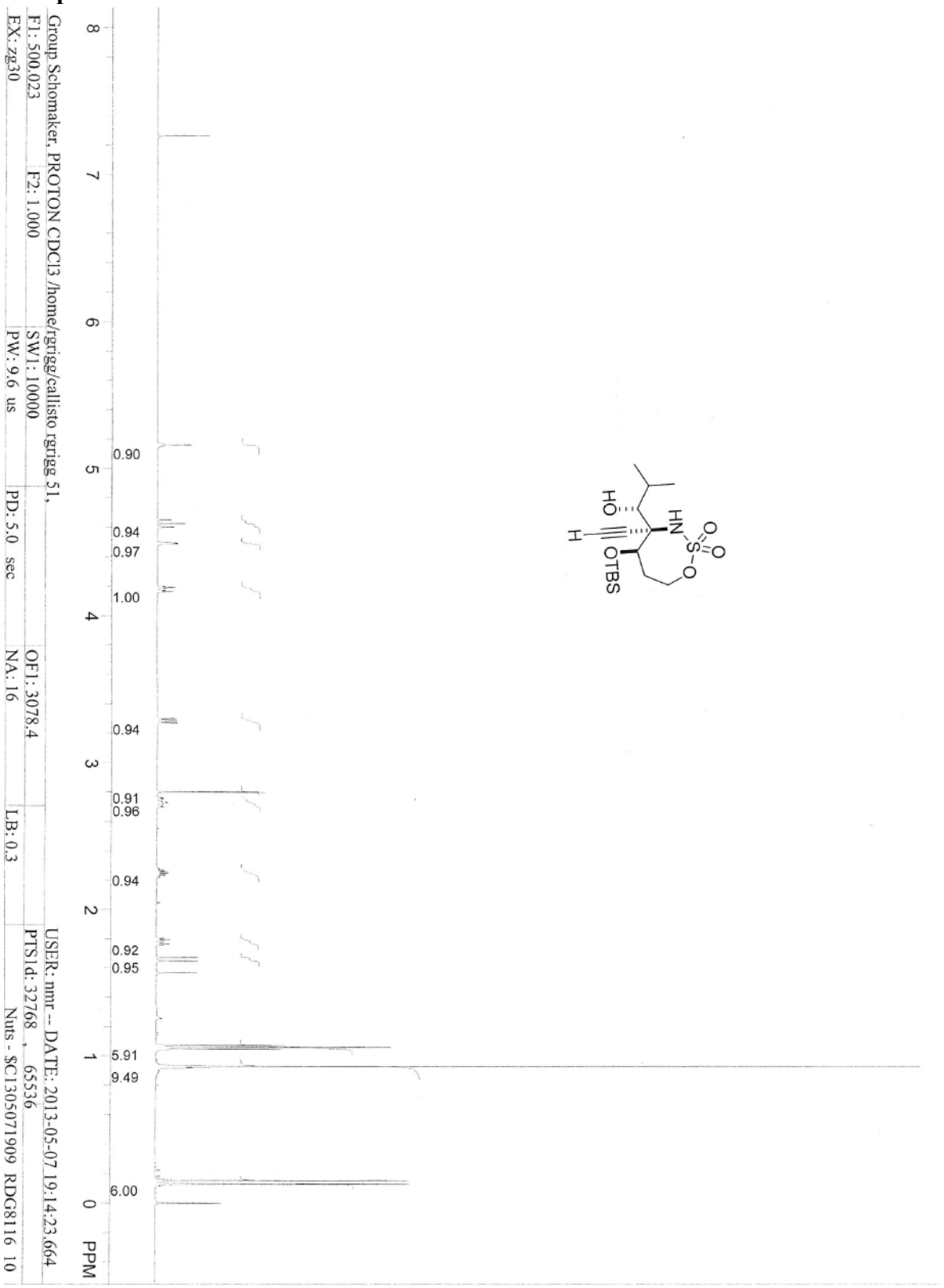

HO
OTBS
HN
S
O
O
O
O
7
6
5
4
3
2
1
0
PPM
0.93
0.97
1.89
1.96
0.95
0.92
0.89
0.97
0.91
0.91
3.01
8.91
3.50
6.00
Group Schomaker, PROTON CDCl3 /home/rgrigg/callisto.rgrigg 11,
USER: nmr -- DATE: 2013-05-07 21:04:48.081
F1: 500.023
F2: 1.000
SW1: 10000
PW: 9.6 us
PD: 5.0 sec
OF1: 3077.8
NA: 16
LB: 0.3
PTS1d: 32768 , 65536
EX: zg30
Nuts - SC1305072049_RDG8140_10

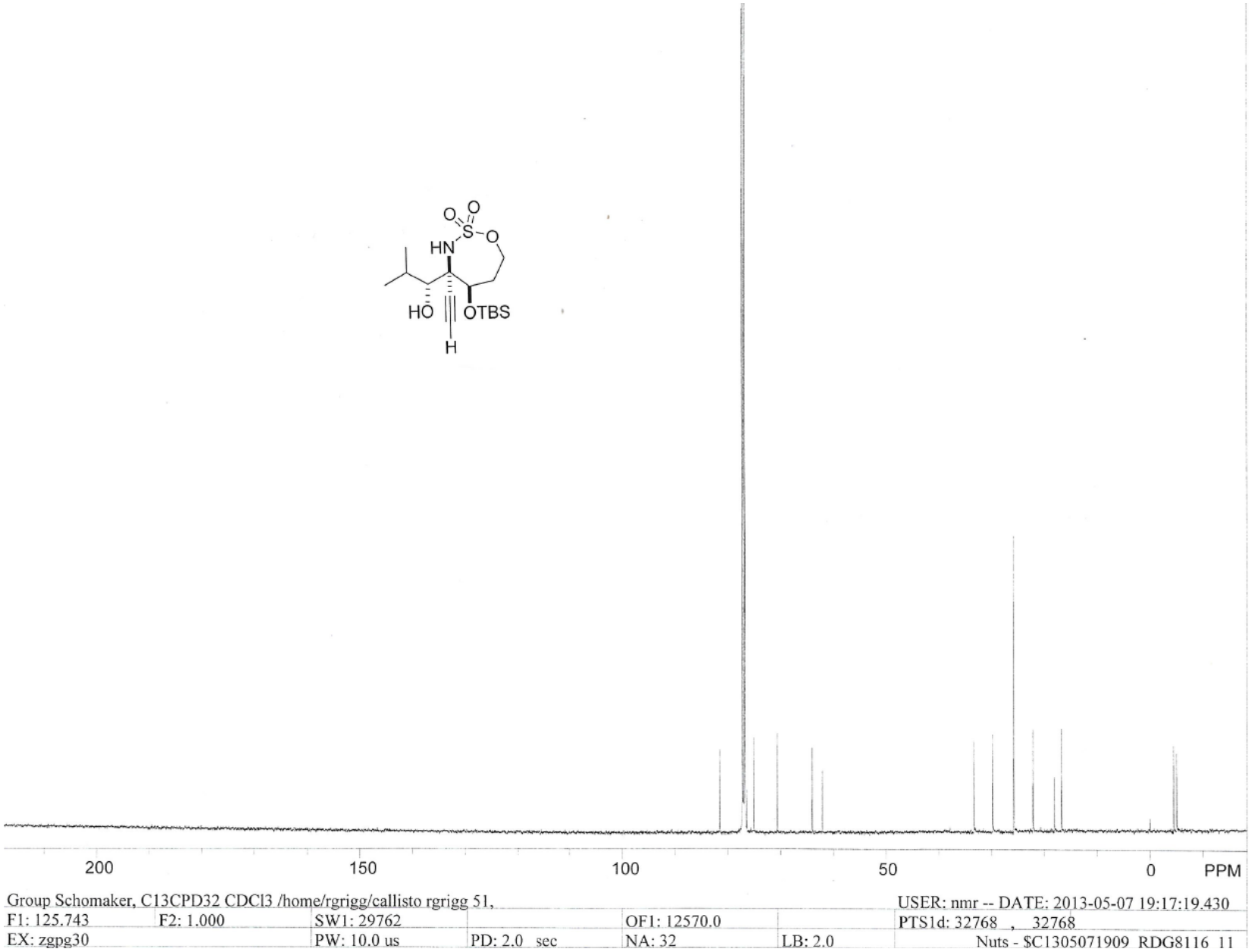


Group Schomaker, C13CPD32 CDCl3 /home/rgrigg/callisto rgrigg 11, USER: nmr -- DATE: 2013-05-07 21:07:43.350

F1: 125.743	F2: 1.000	SW1: 29762		OF1: 12570.0		PTS1d: 32768 , 32768
EX: zgpg30		PW: 10.0 us	PD: 2.0 sec	NA: 32	LB: 2.0	Nuts - $C1305072049_RDG8140_11

Compound 24.

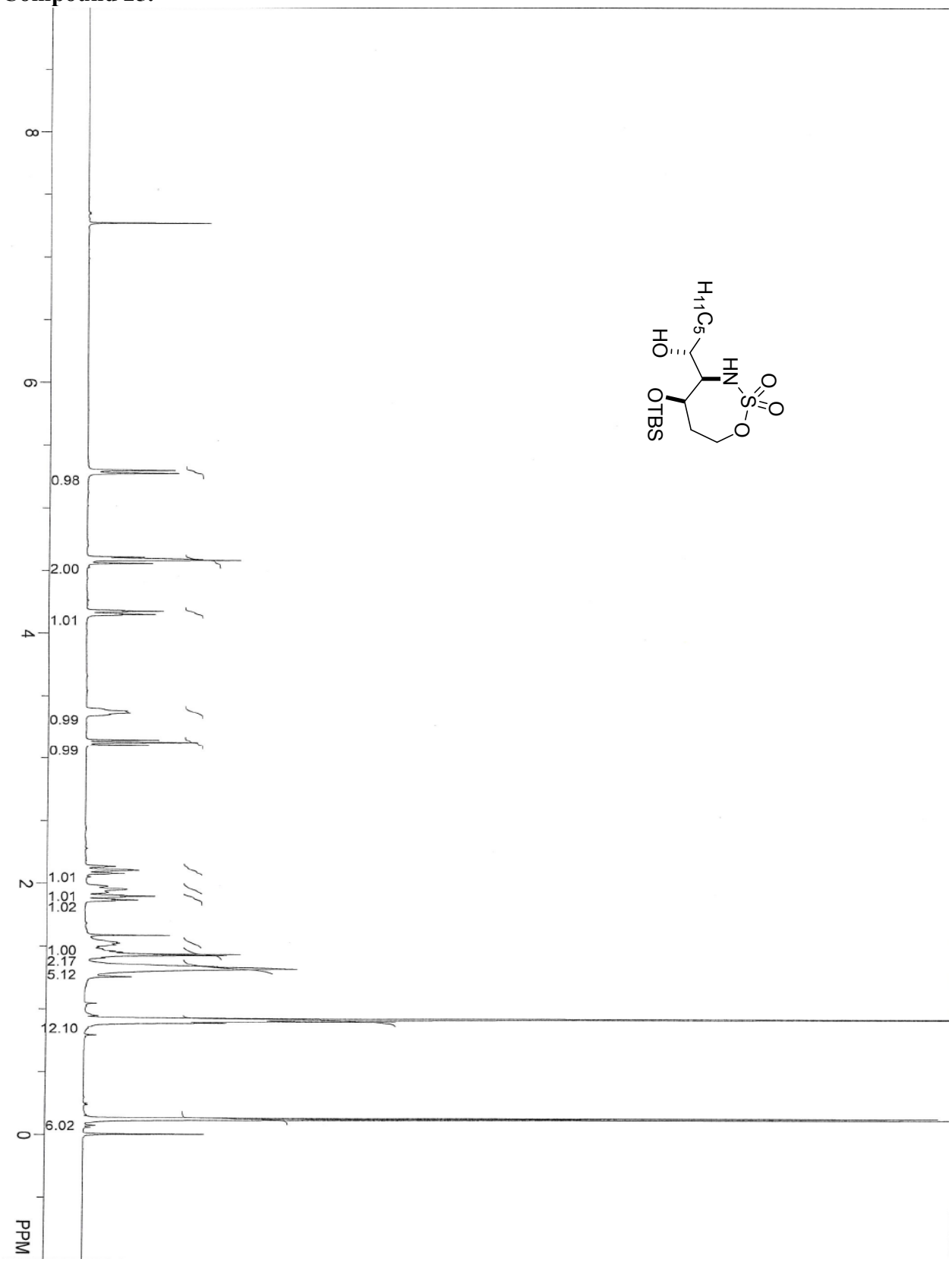

Group Schomaker, PROTON CDCl3 /home/rgrigg/callisto rgrigg 51,
F1: 500.023
F2: 1.000
SW1: 10000
PW: 9.6 us
PD: 5.0 sec
OF1: 3078.4
NA: 16
LB: 0.3
USER: nmr -- DATE: 2013-05-07 19:14:23.664
PTS1d: 32768 , 65536
Nuts - $C1305071909 RDG8116 10
EX: zg30
8
7
6
5
4
3
2
1
0
PPM
0.90
0.94
0.97
1.00
0.94
0.91
0.96
0.94
0.92
0.95
5.91
9.49
6.00
HO
H
HN
O
S
O
O
OTBS

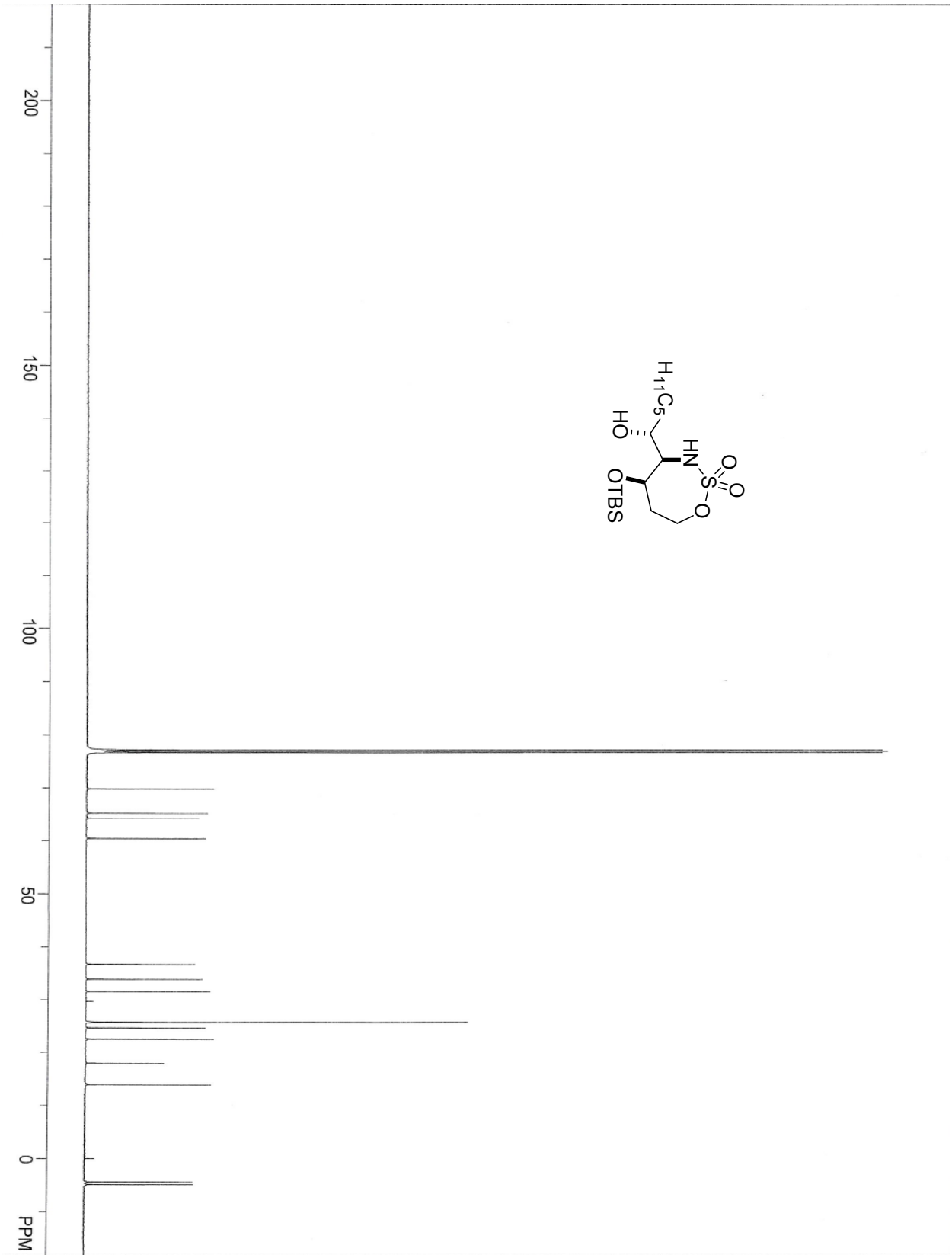


Group Schomaker, C13CPD32 CDCl3 /home/rgrigg/callisto rgrigg 51, USER: nmr -- DATE: 2013-05-07 19:17:19.430

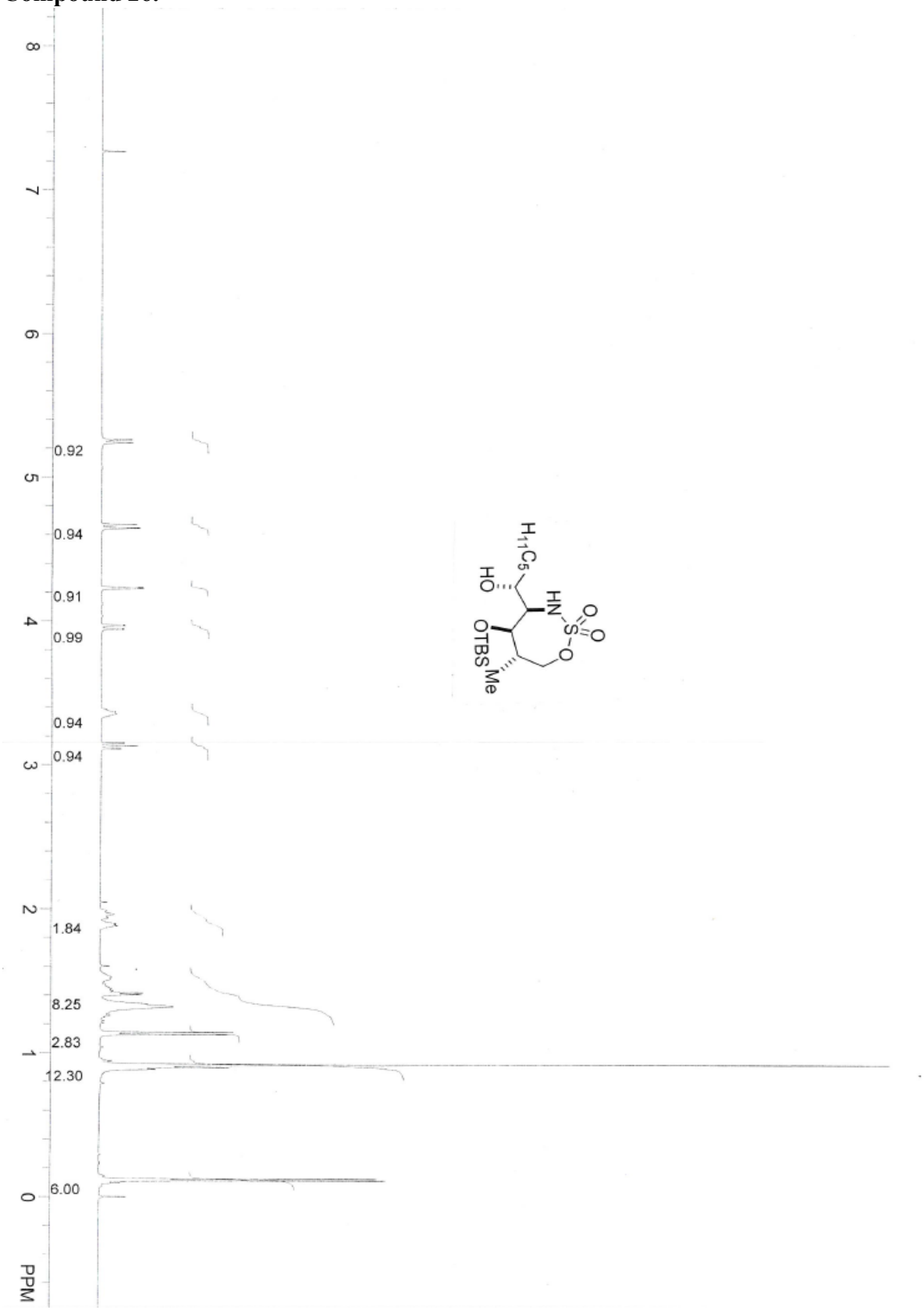
F1: 125.743	F2: 1.000	SW1: 29762		OF1: 12570.0		PTS1d: 32768 , 32768
EX: zgpg30		PW: 10.0 us	PD: 2.0 sec	NA: 32	LB: 2.0	Nuts - $C1305071909 RDG8116 11

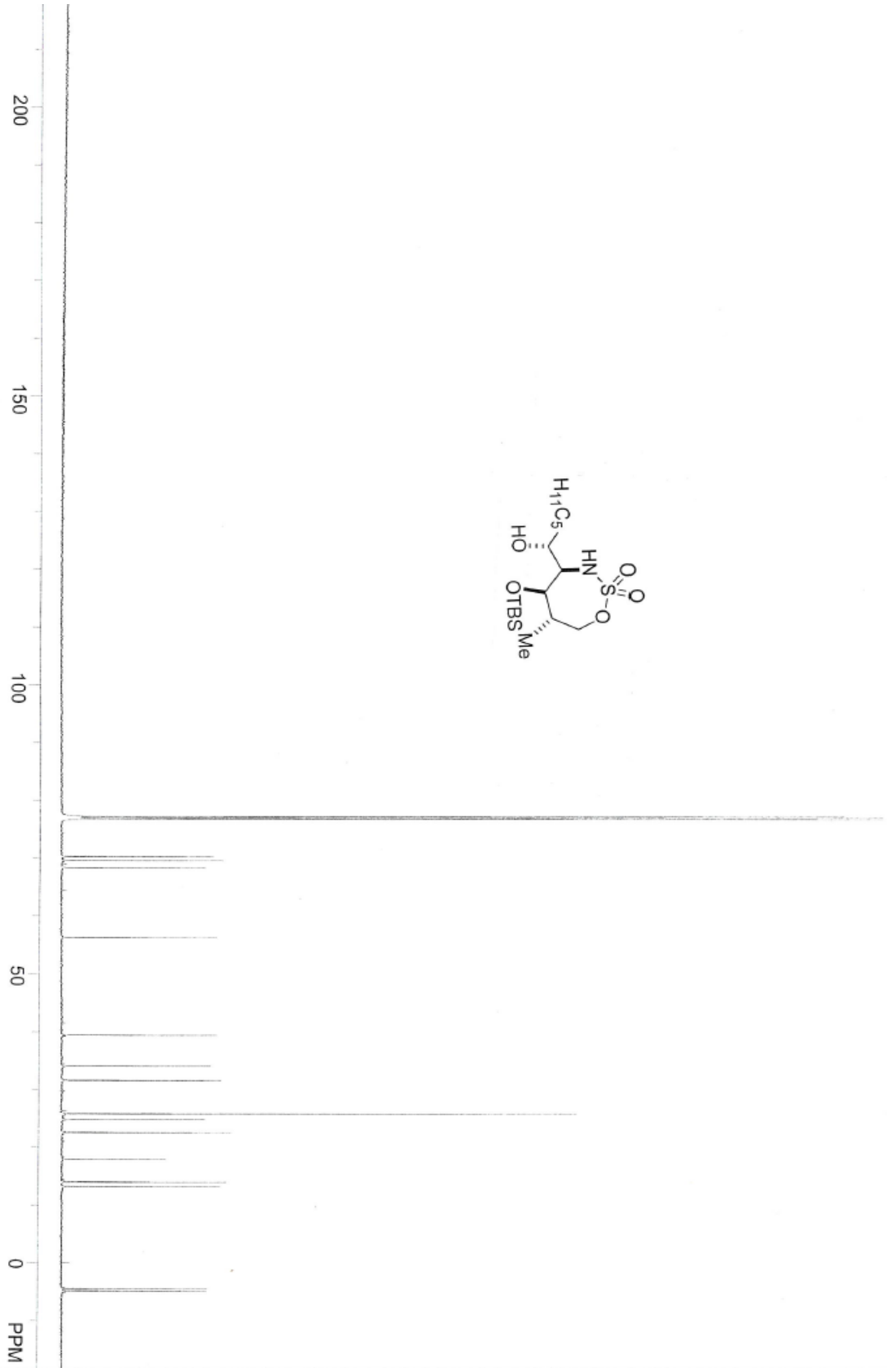
Compound 25.


H11C5
HO
HN
O
O
S
O
OTBS
8
6
4
2
0
PPM
0.98
2.00
1.01
0.99
0.99
1.01
1.01
1.02
1.00
2.17
5.12
12.10
6.02

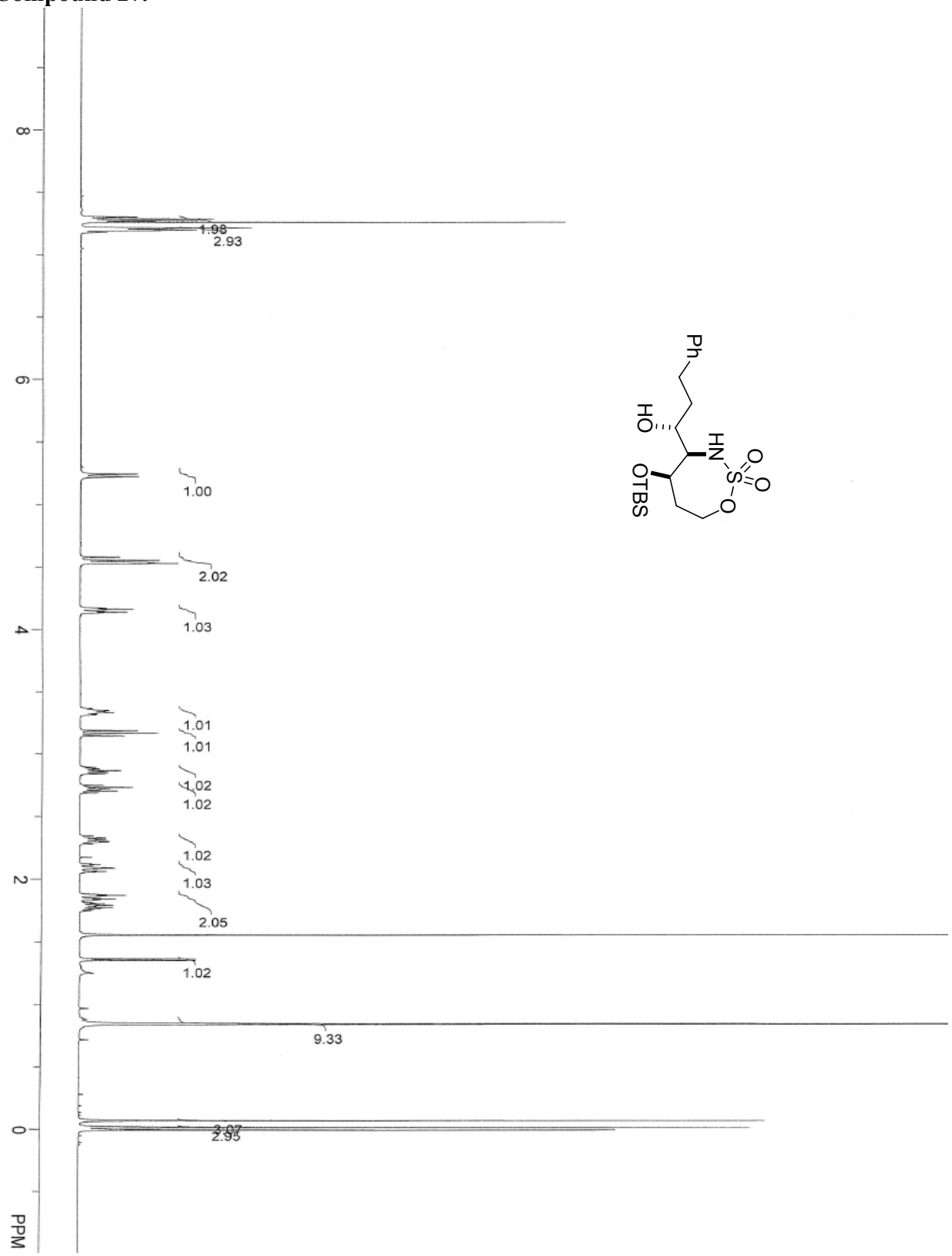

200
150
100
50
0
PPM
H11C5
HO
HN
S
O
O
O
OTBS

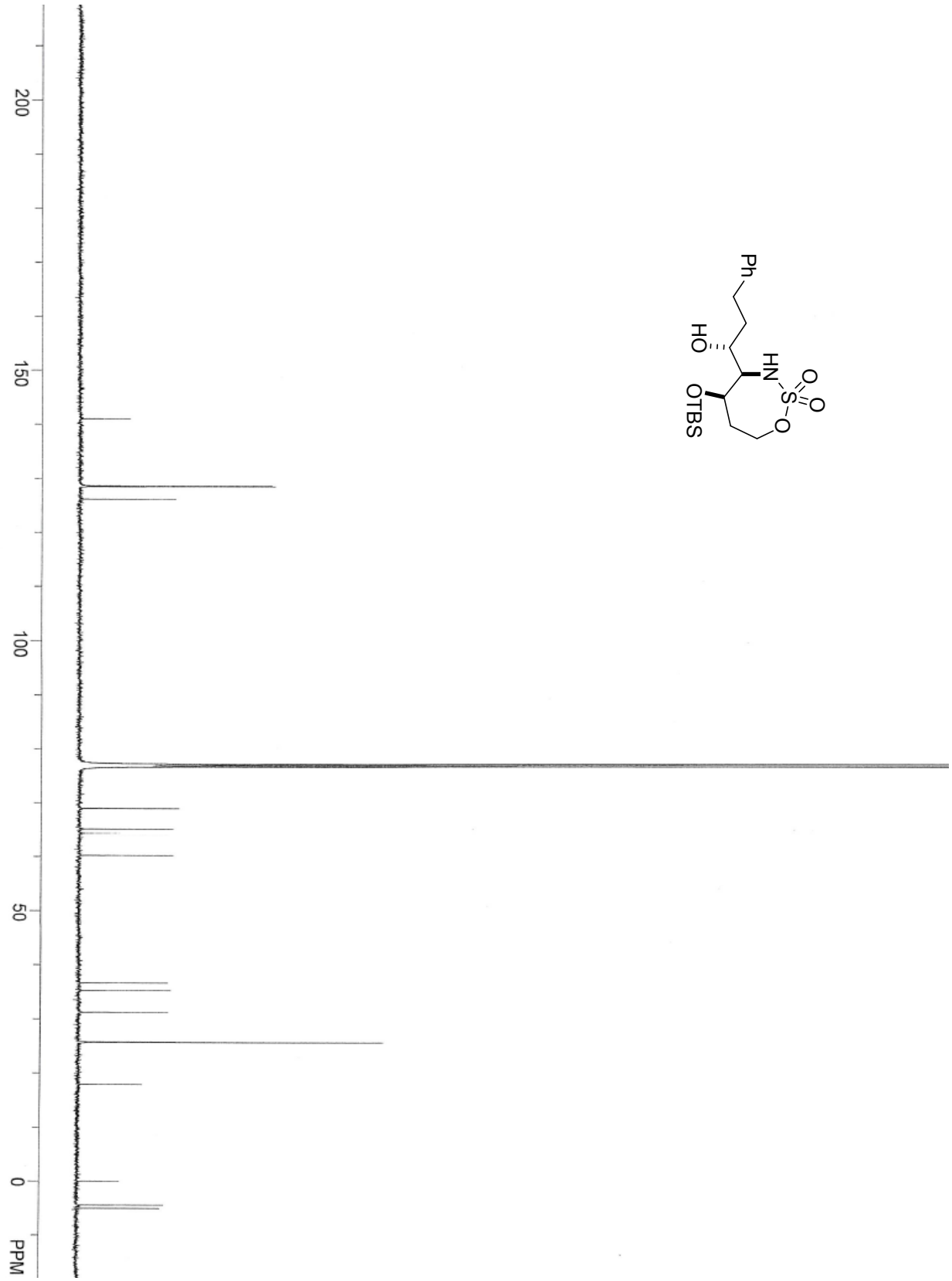
Compound 26.


8
7
6
5
4
3
2
1
0
PPM
0.92
0.94
0.91
0.99
0.94
0.94
1.84
8.25
2.83
12.30
6.00
H11C5
HO
HN
O
O
S
O
OTBS
Me

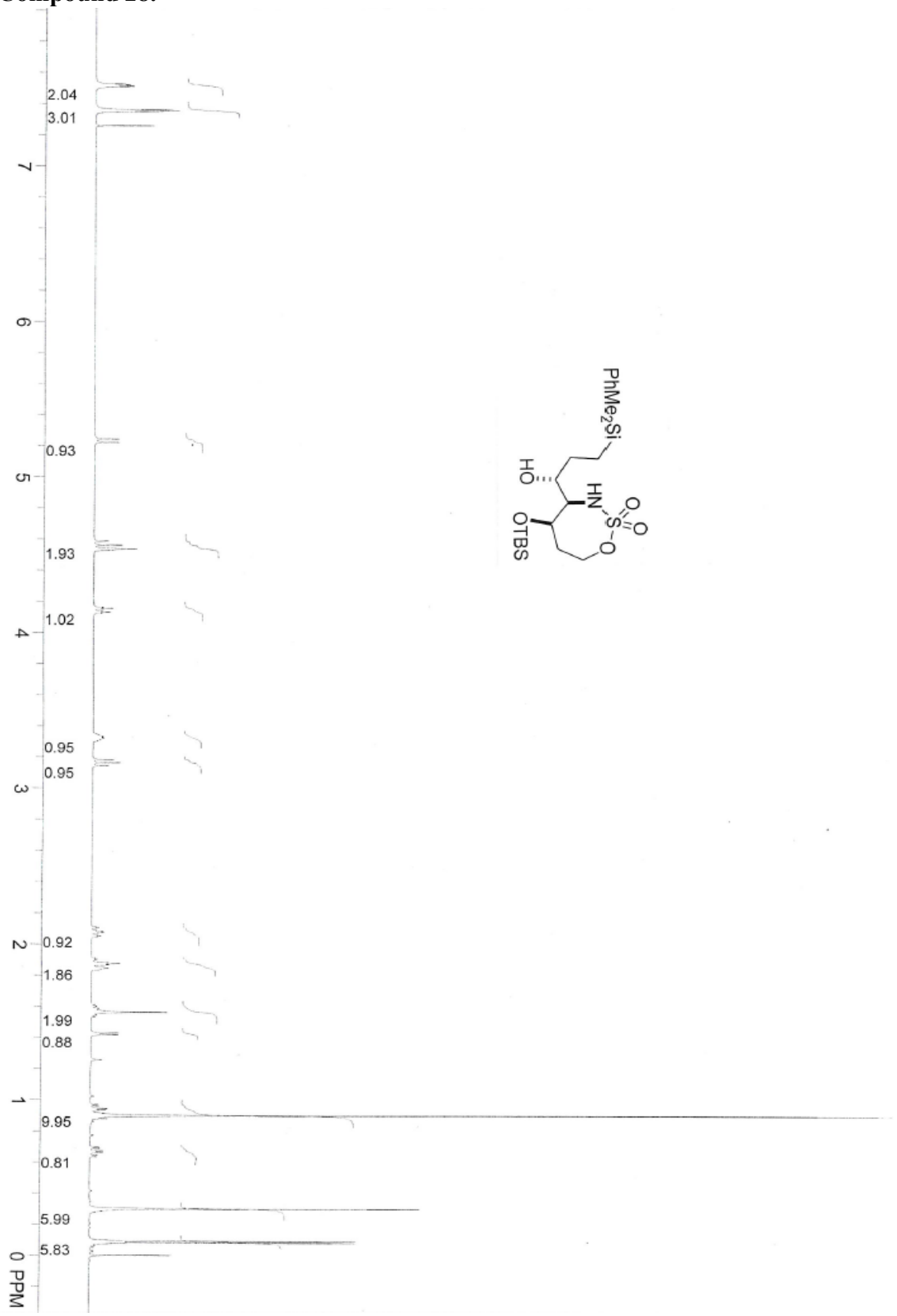

200
150
100
50
0
PPM
H11C5
HO
HN
O
O
S
O
OTBS
Me

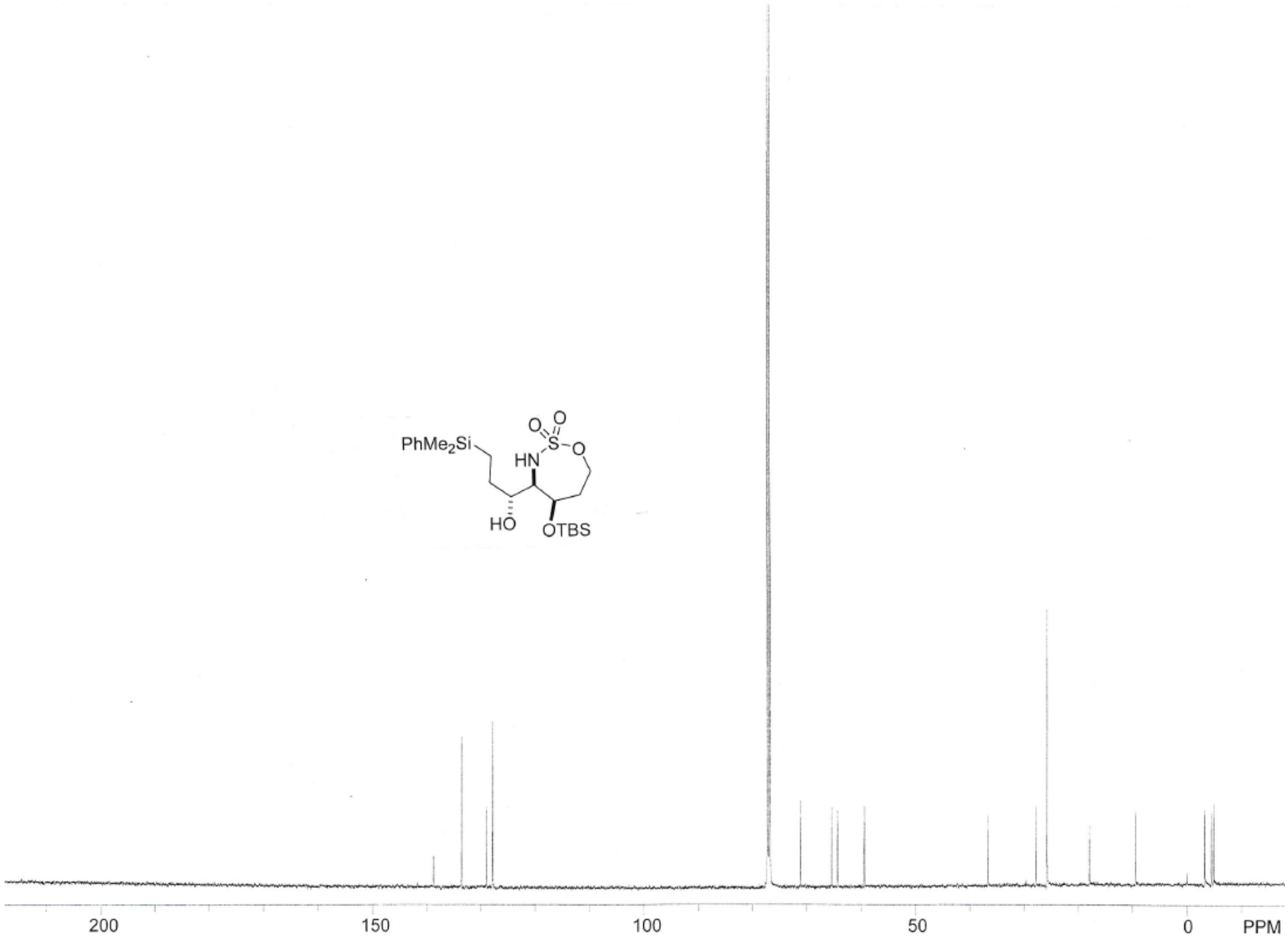
Compound 27.


8
6
4
2
0
PPM
1.98
2.93
1.00
2.02
1.03
1.01
1.01
1.02
1.02
1.02
1.03
2.05
1.02
9.33
3.07
2.95
Ph
HO
HN
O
O
S
O
OTBS

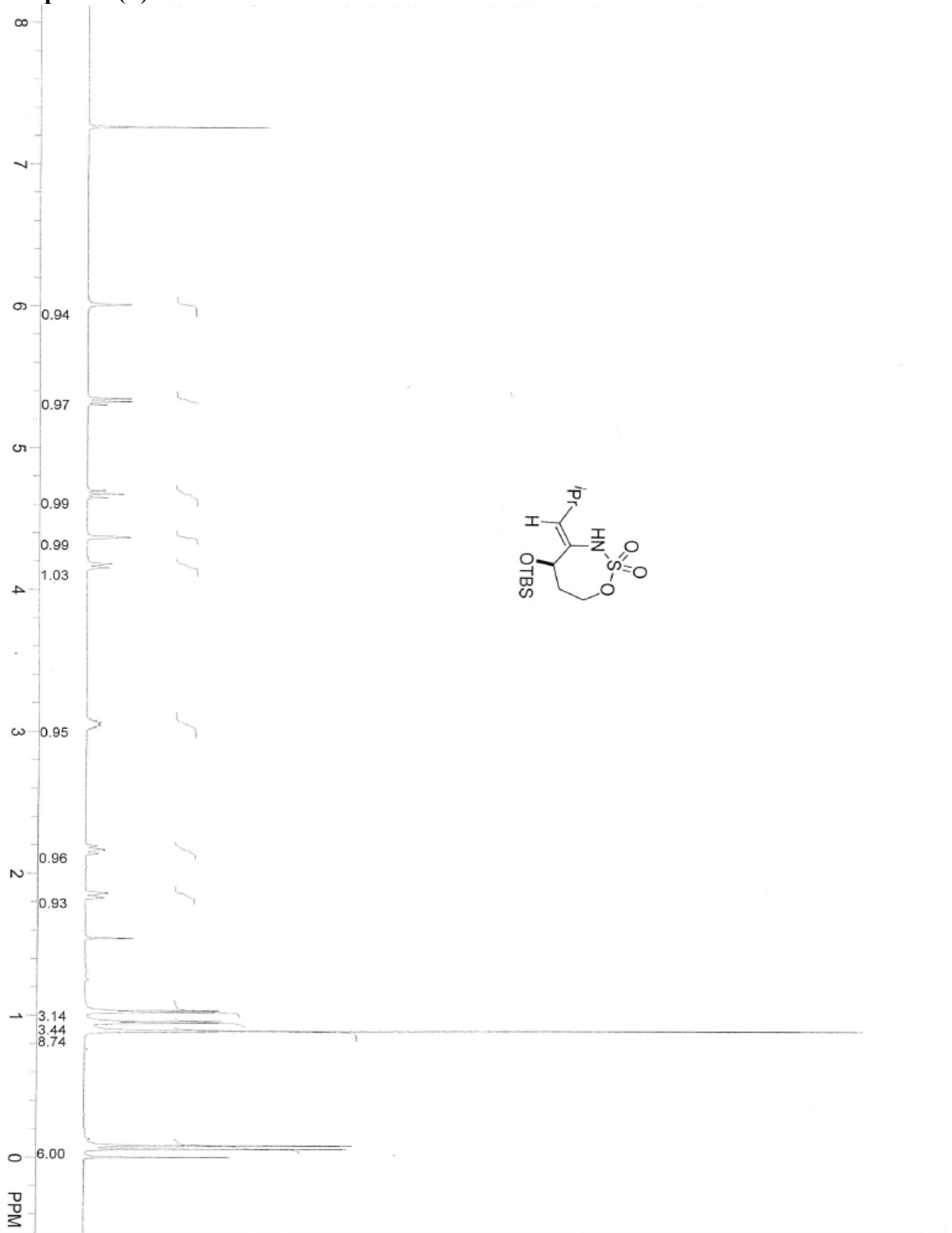

200
150
100
50
0
PPM
Ph
HO
HN
O
O
S
O
OTBS

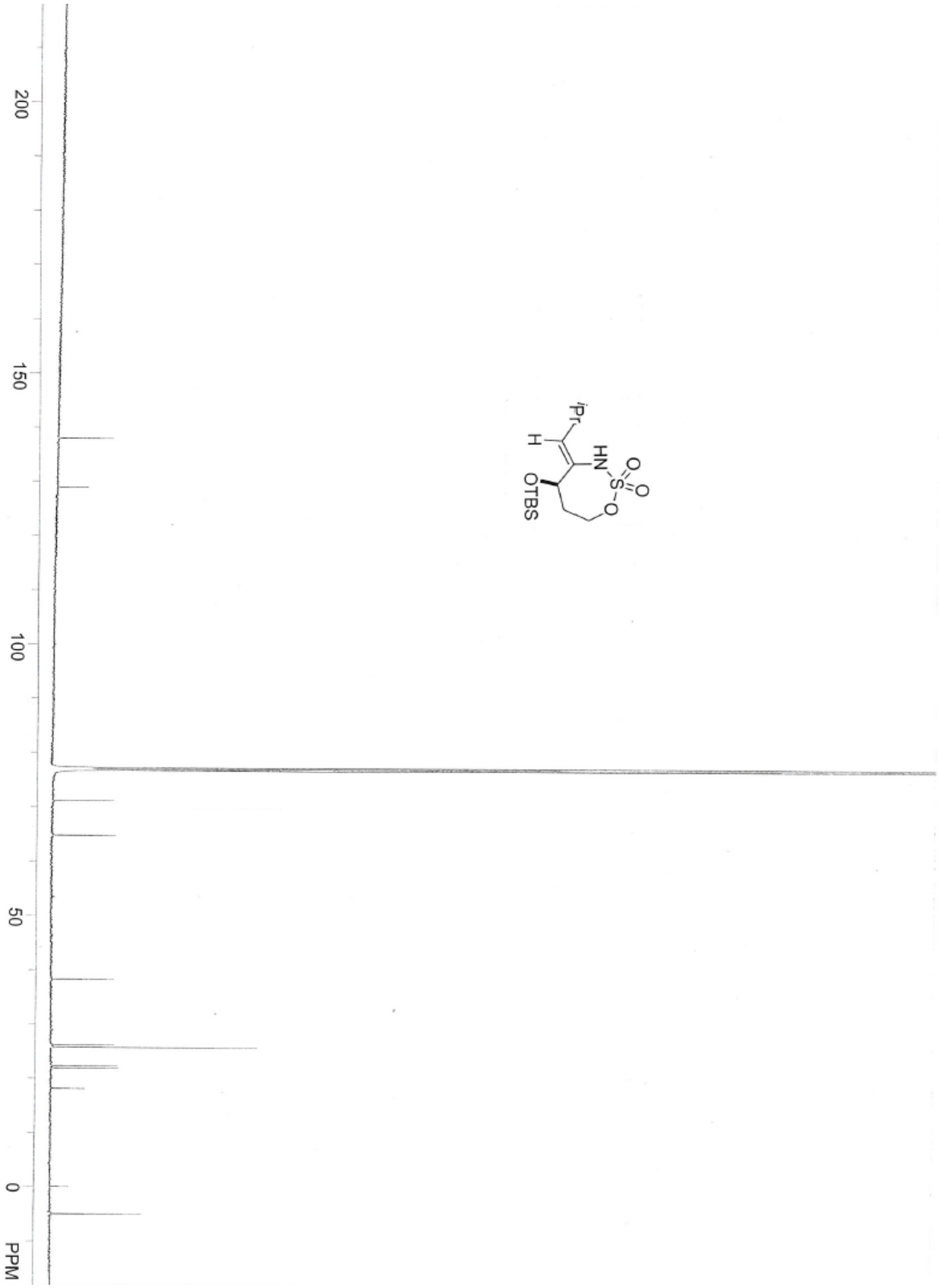
Compound 28.


2.04
3.01
0.93
1.93
1.02
0.95
0.95
0.92
1.86
1.99
0.88
9.95
0.81
5.99
5.83
7
6
5
4
3
2
1
0 PPM
PhMe2Si
HO
HN
O
O
S
O
OTBS

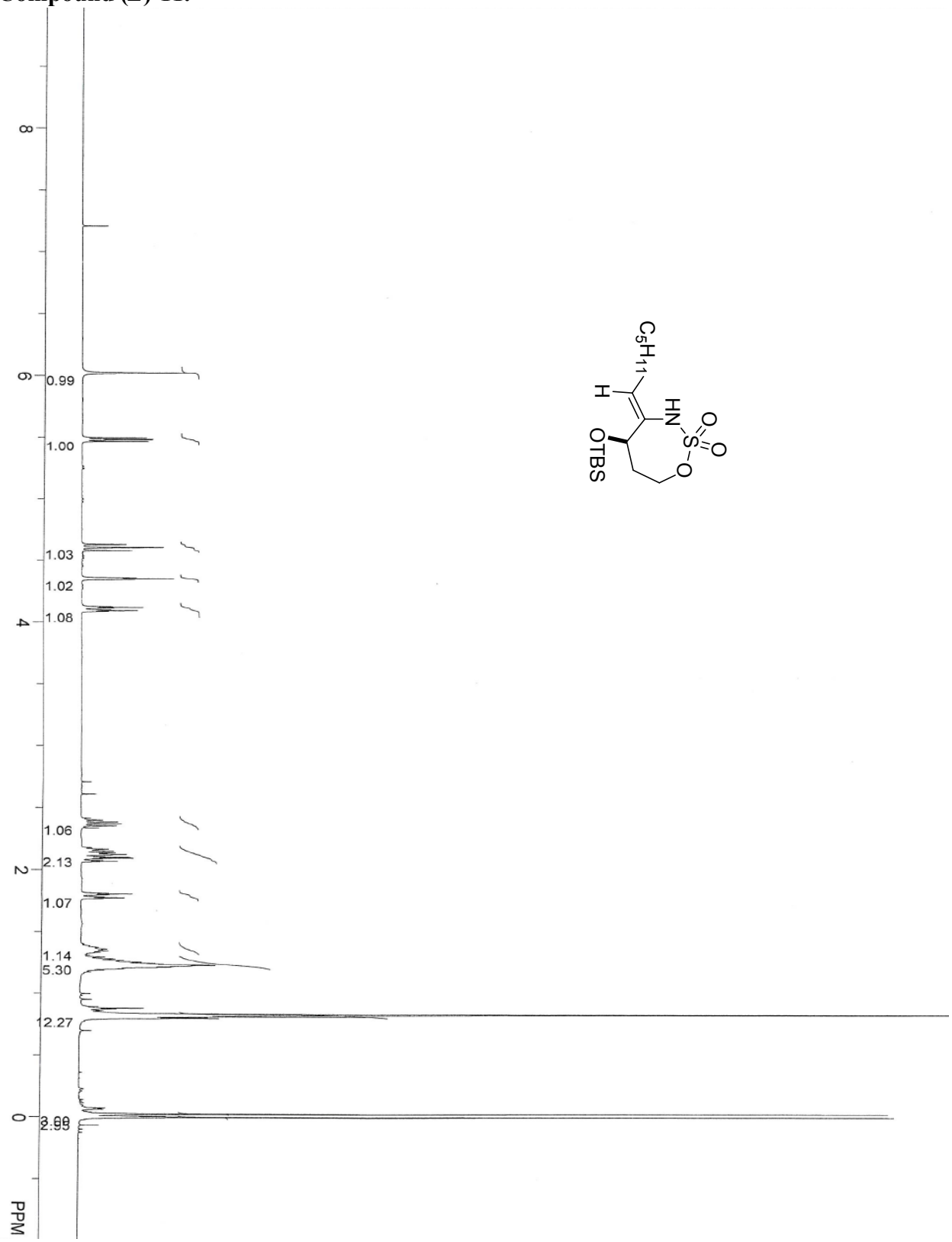

PhMe2Si
HN
O
O
S
O
HO
OTBS
200
150
100
50
0
PPM

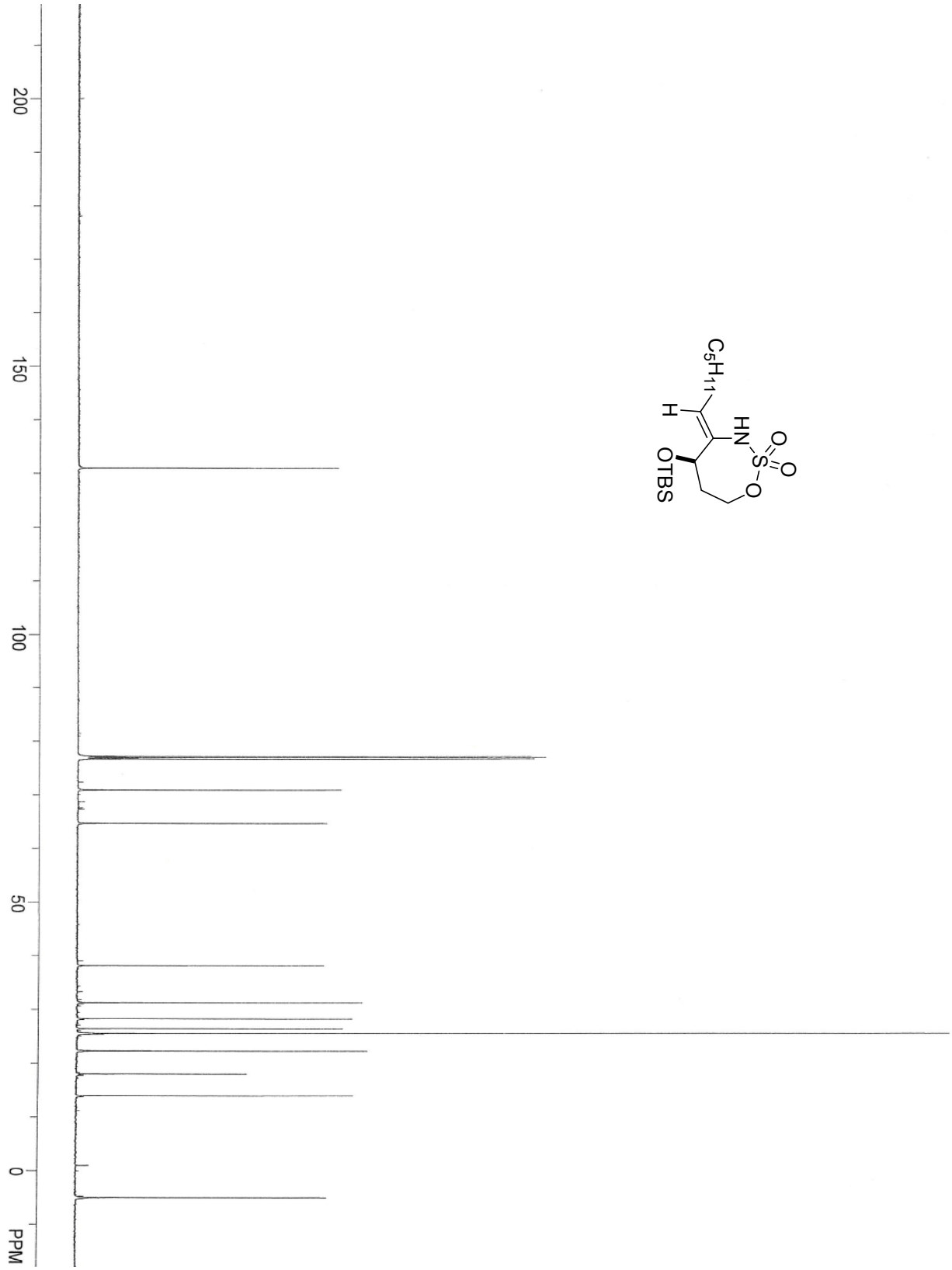
Compound (*Z*)-5.


8
7
6
5
4
3
2
1
0
PPM
0.94
0.97
0.99
0.99
1.03
0.95
0.96
0.93
3.14
3.44
8.74
6.00
iPr
H
HN
S
O
O
O
OTBS

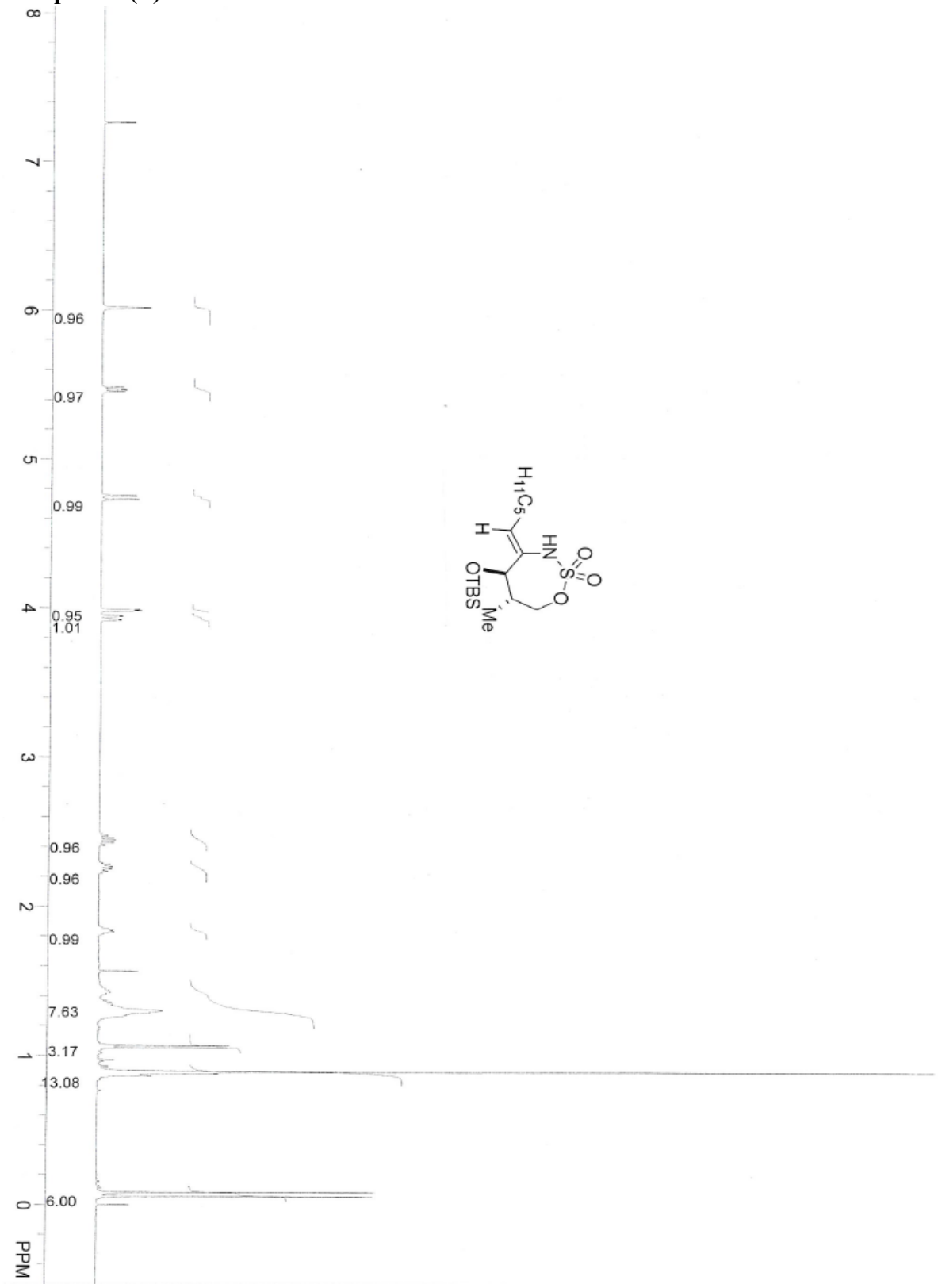

200
150
100
50
0
PPM
iPr
H
HN
S
O
O
O
OTBS

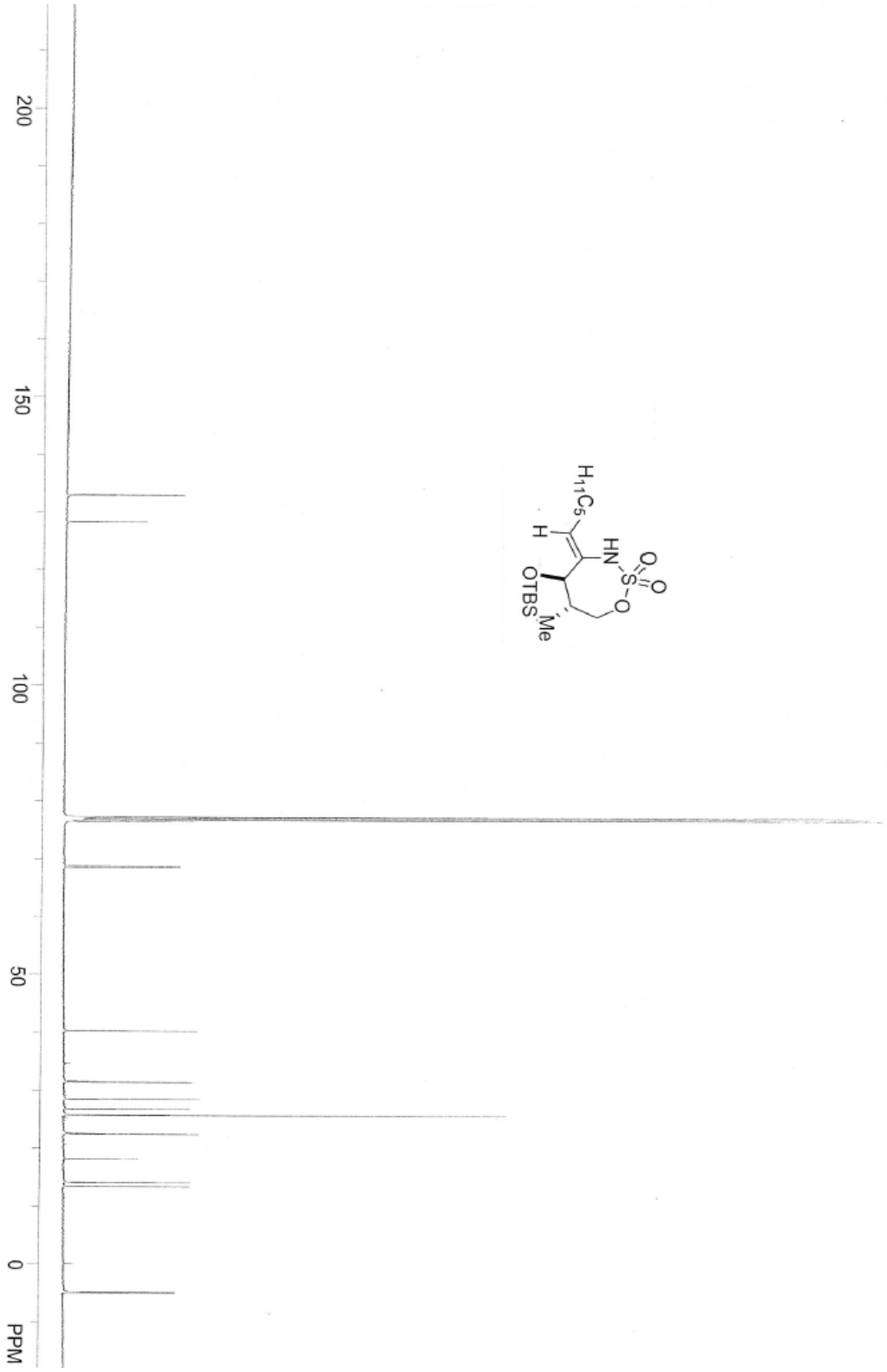
Compound (*Z*)-11.



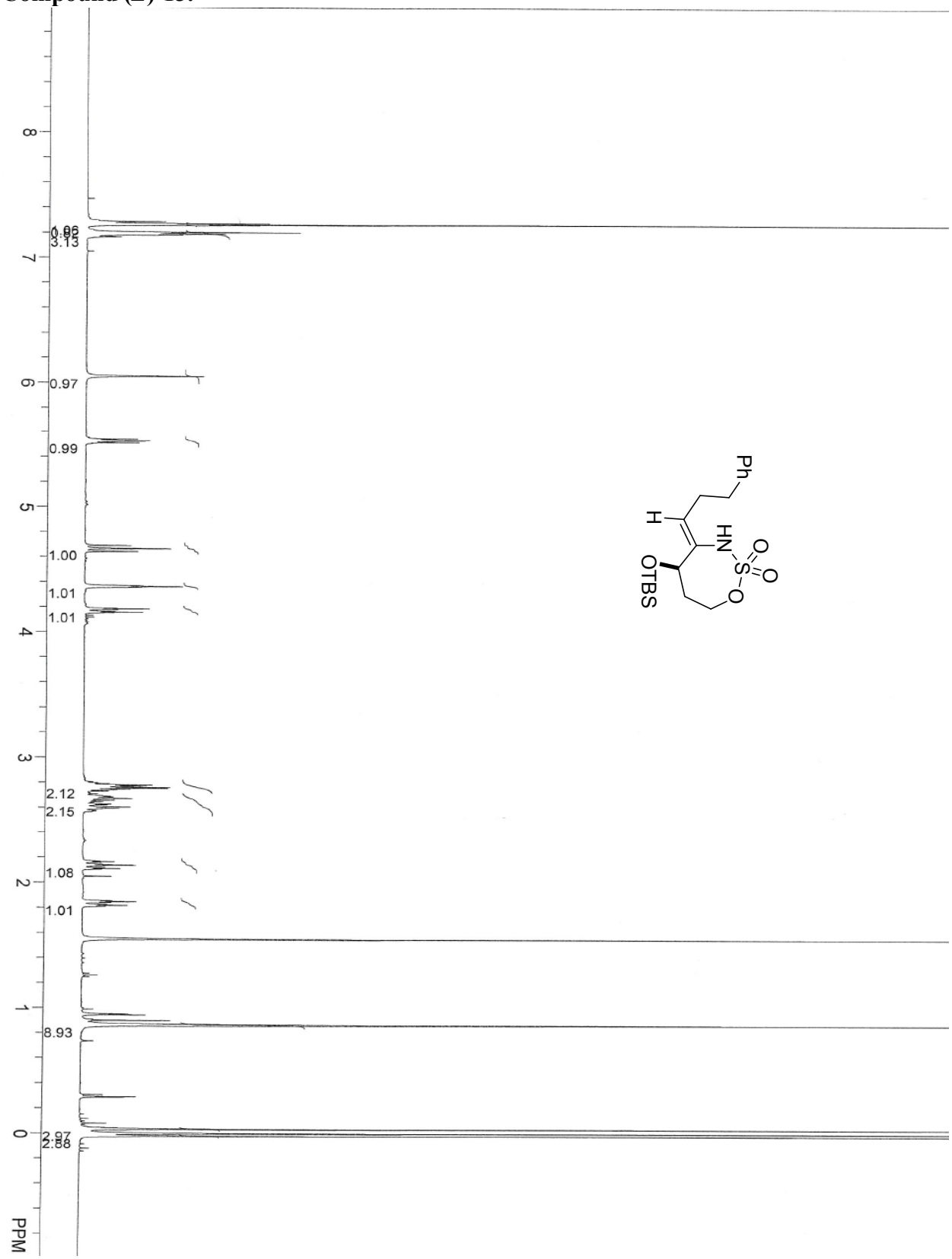

200
150
100
50
0
PPM
C5H11
H
HN
O
O
S
O
OTBS

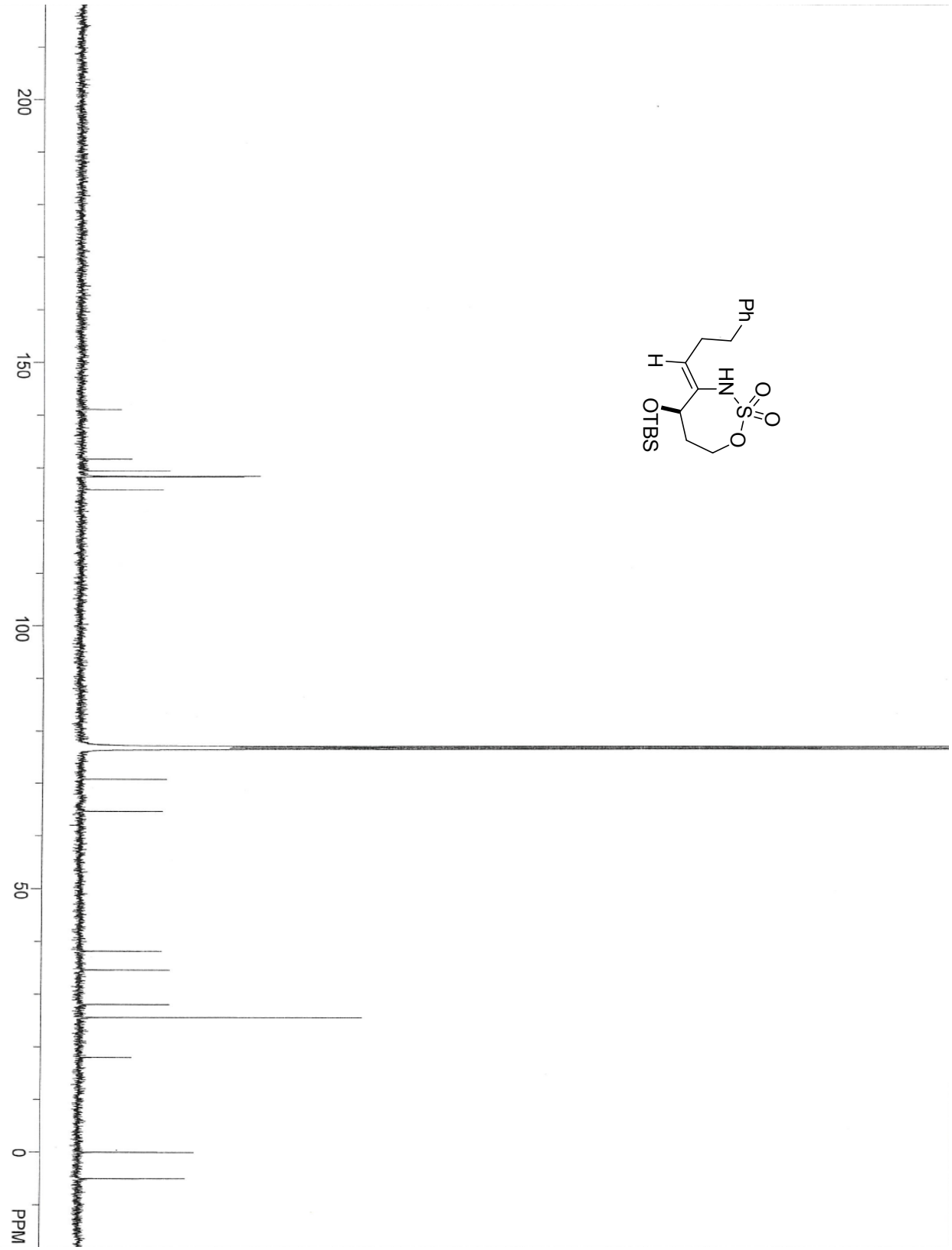
Compound (*Z*)-12.



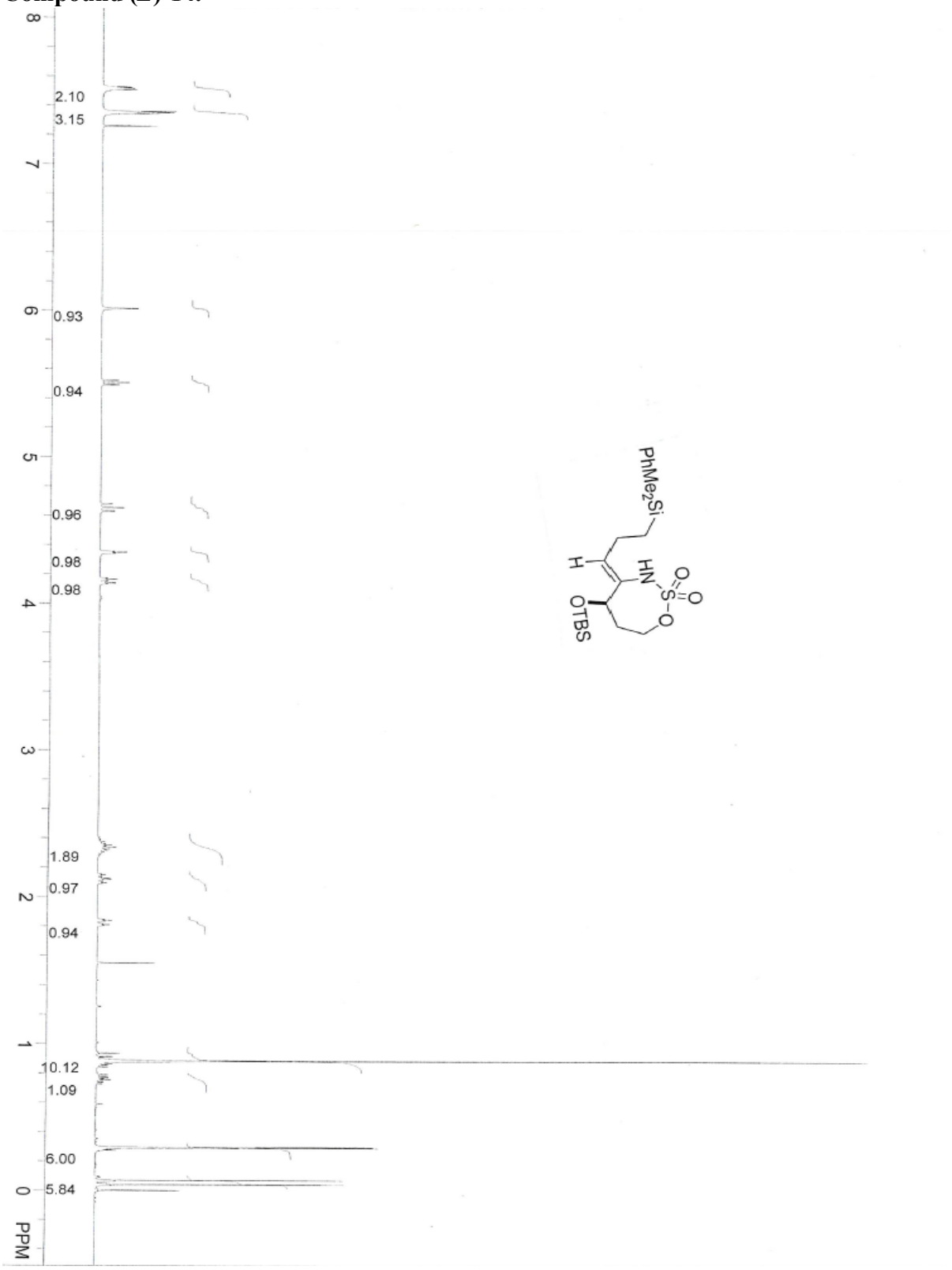

200
150
100
50
0
PPM
H11C5
H
HN
S
O
O
O
OTBS
Me

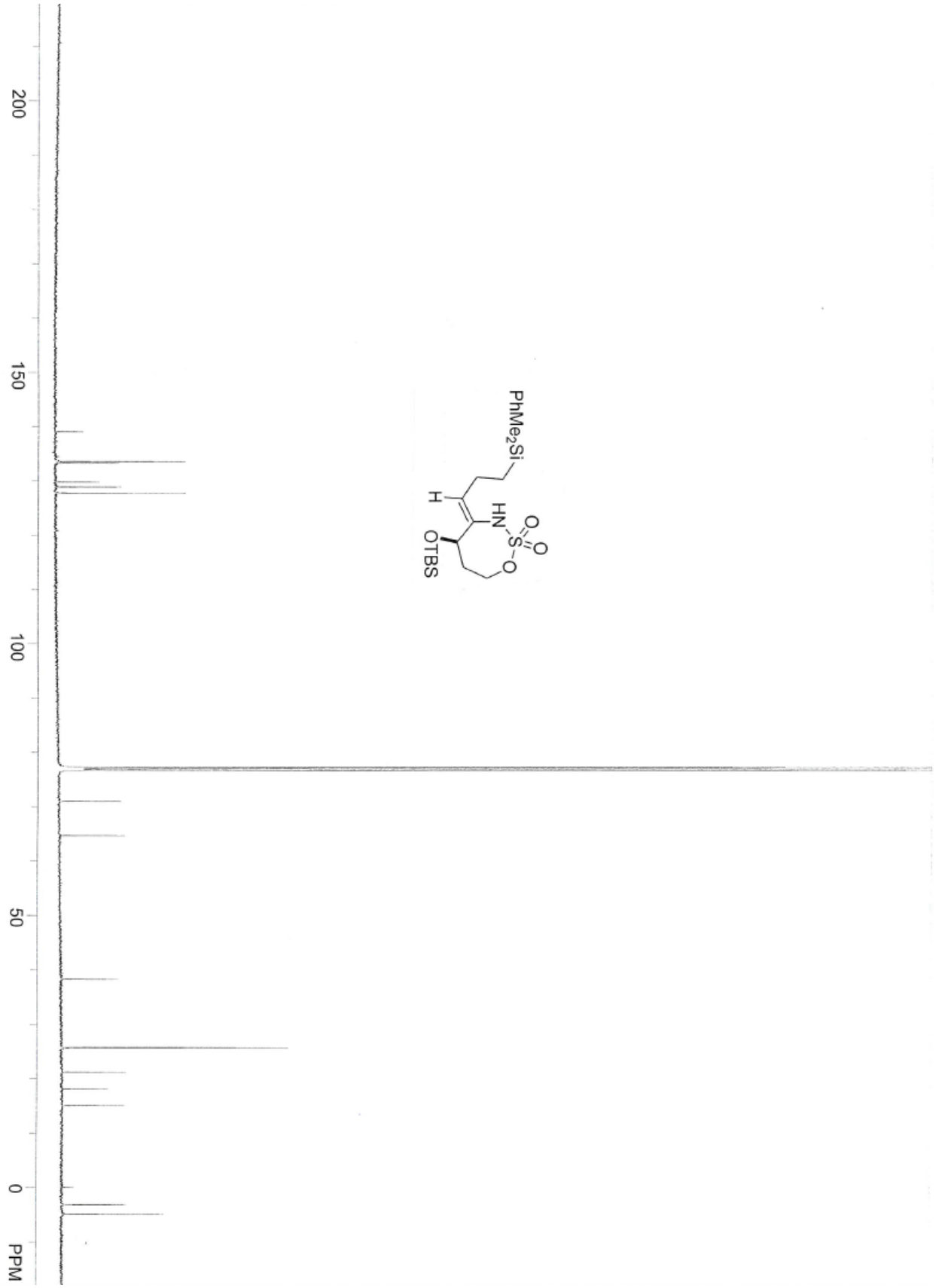
Compound (*Z*)-13.



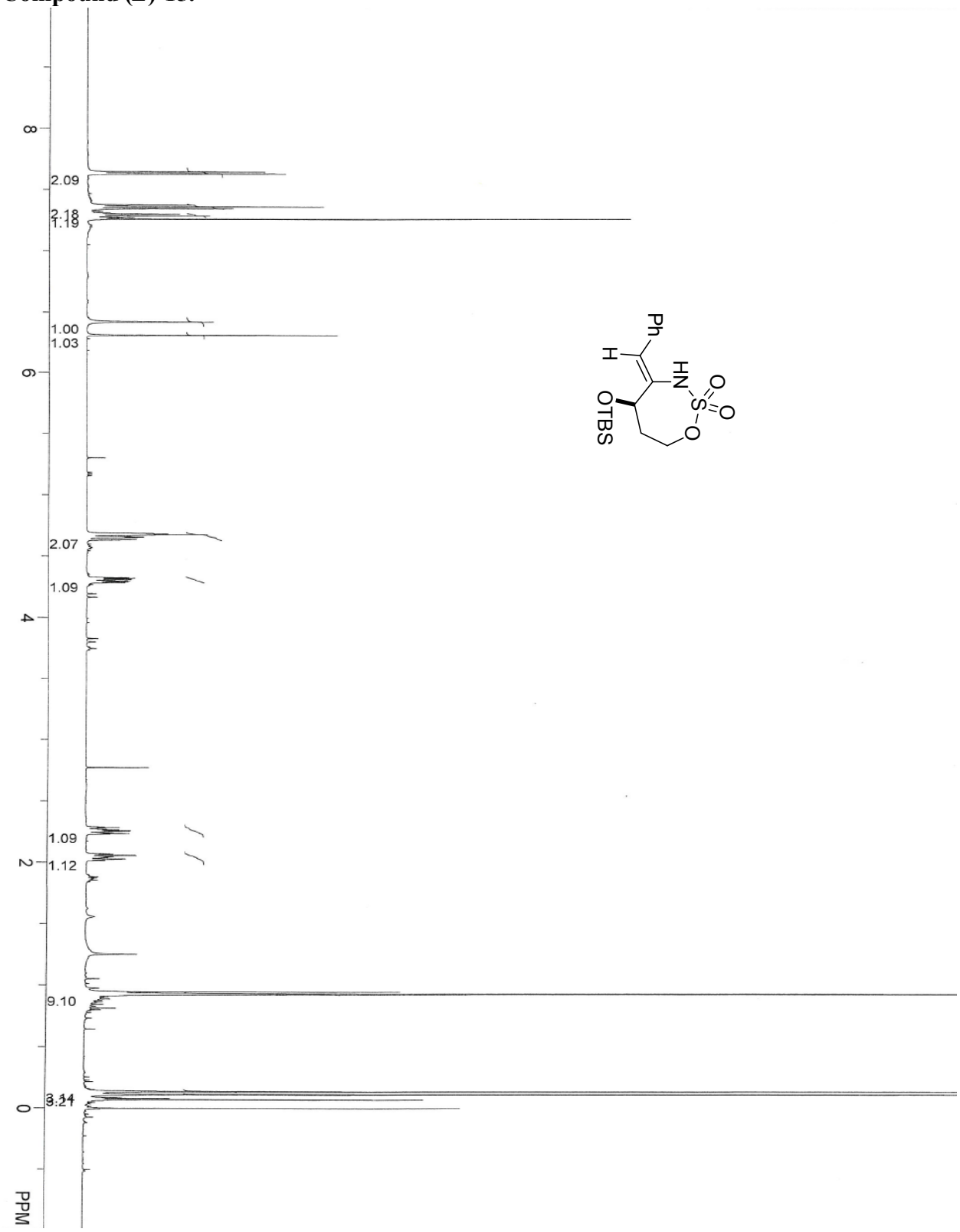

Ph
H
HN
O
O
S
O
OTBS
200
150
100
50
0
PPM

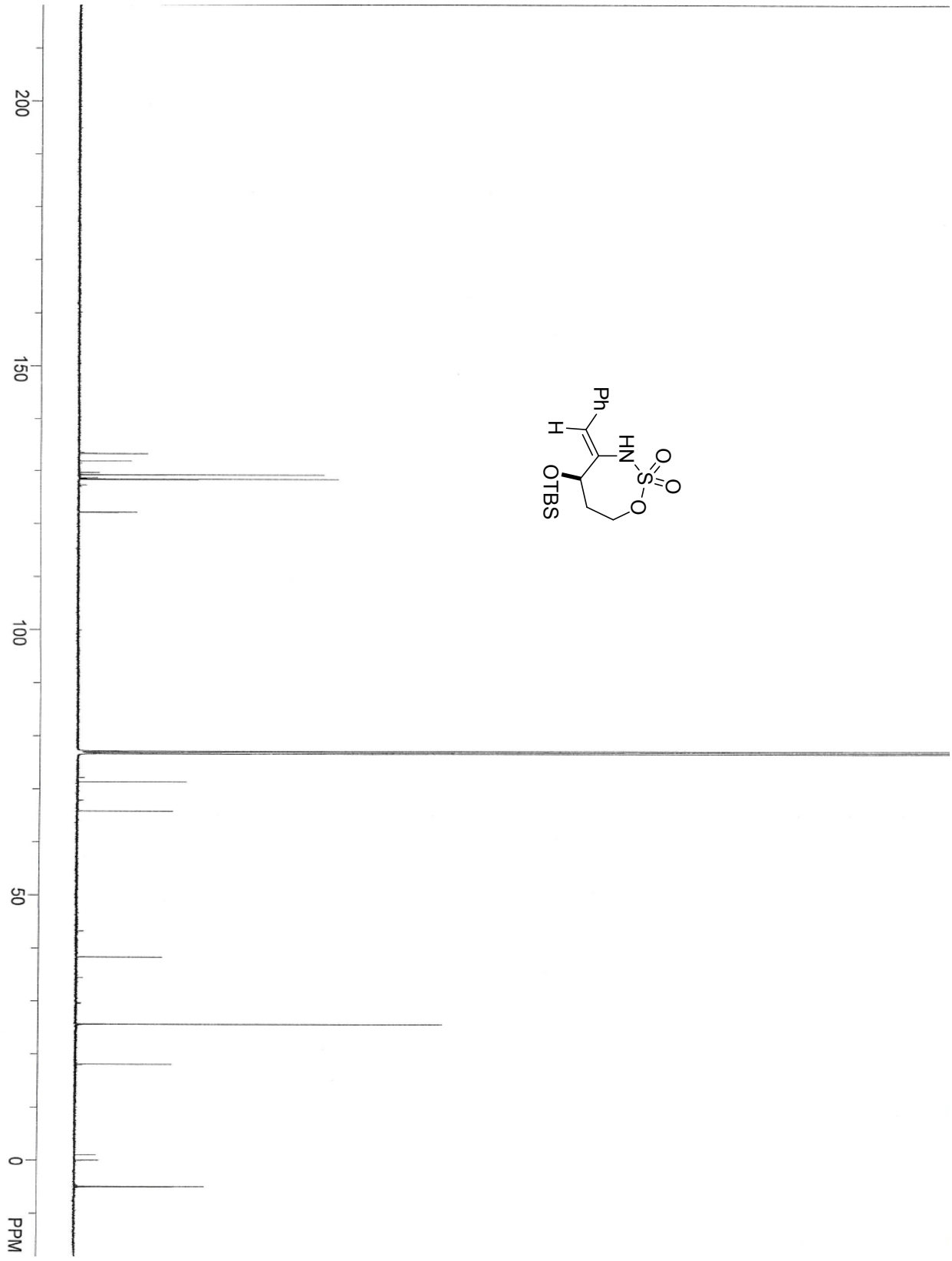
Compound (*Z*)-14.



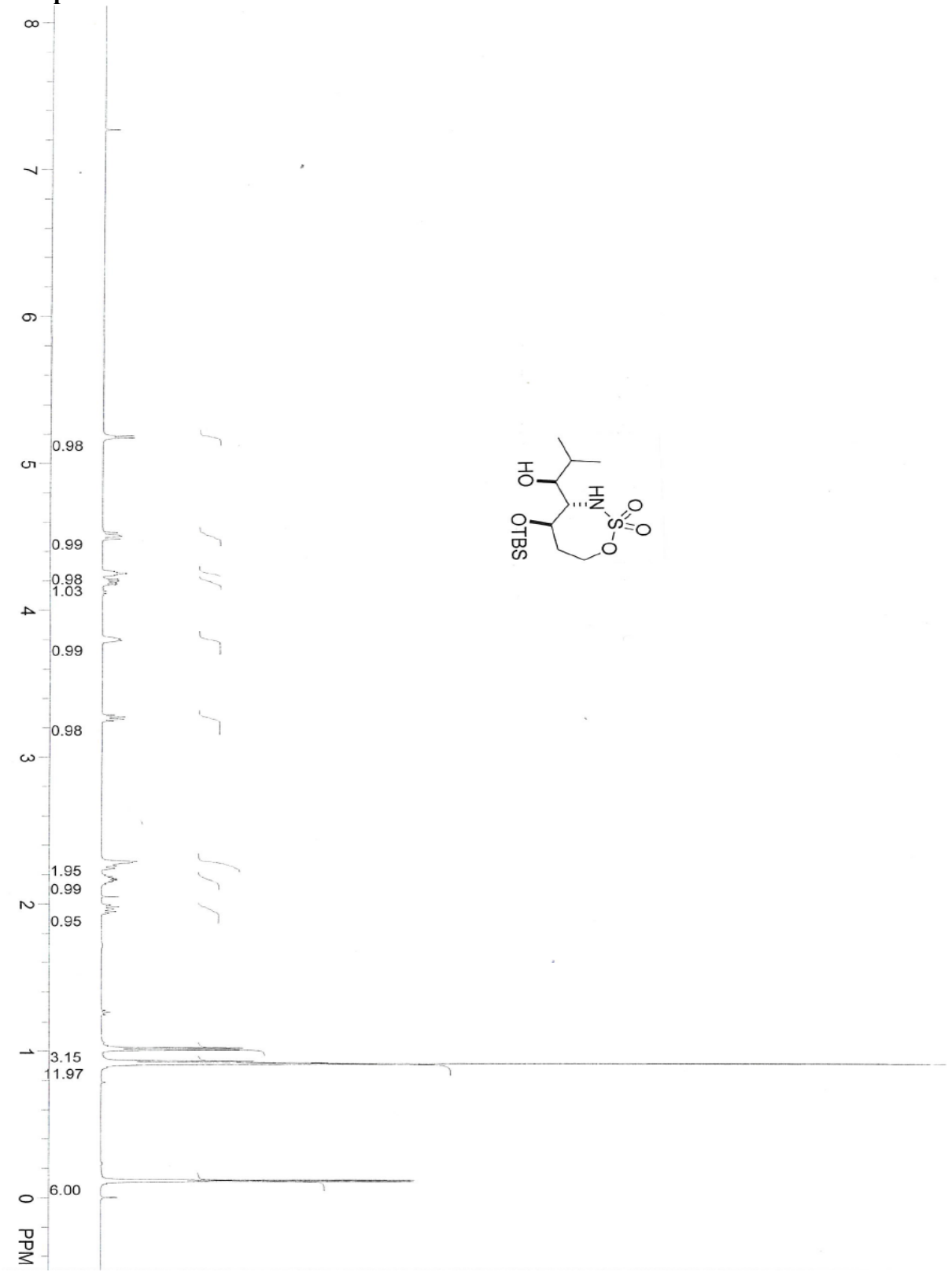

PhMe2Si
H
HN
S
O
O
O
OTBS
200
150
100
50
0
PPM

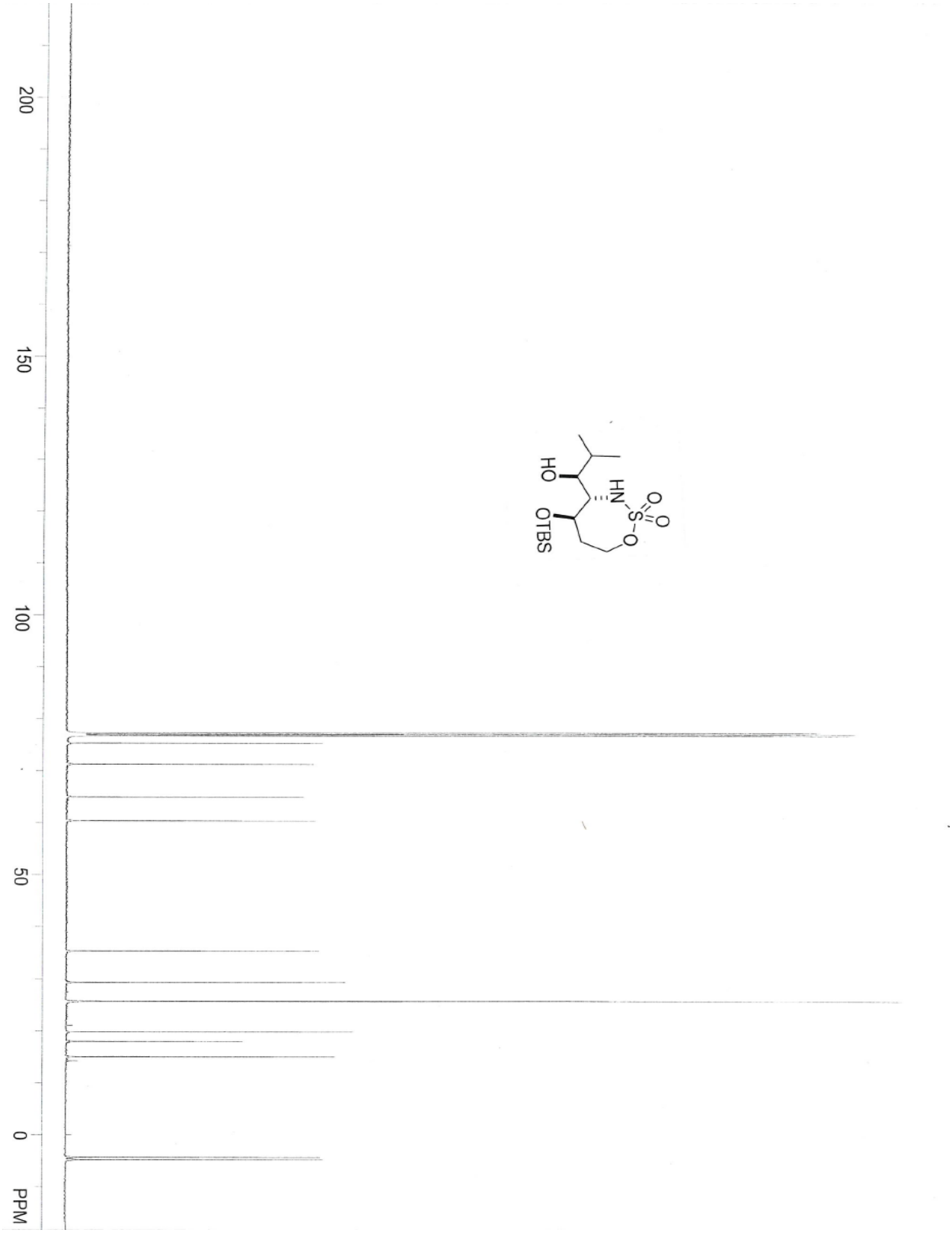
Compound (*Z*)-15.



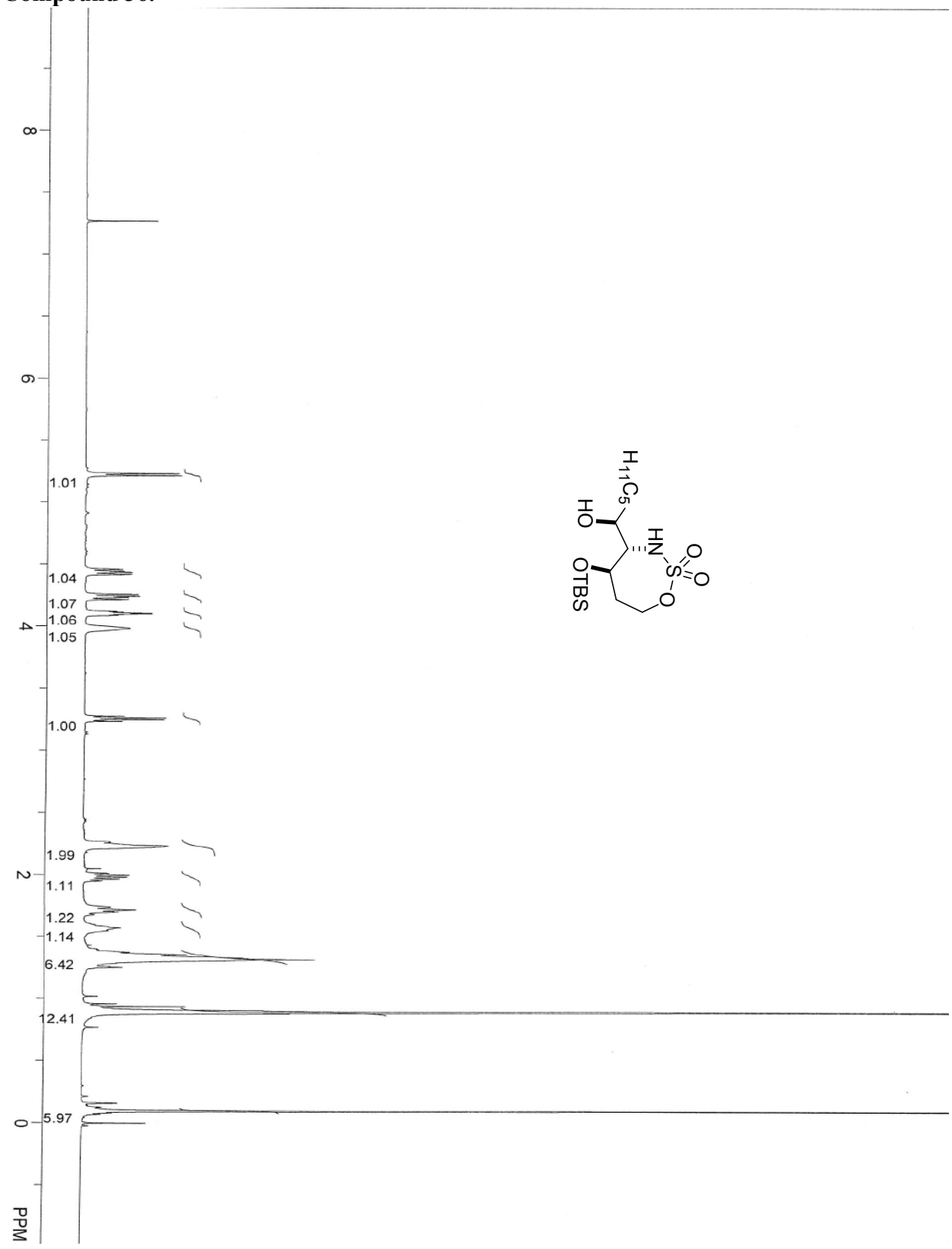

200
150
100
50
0
PPM
Ph
H
HN
S
O
O
O
OTBS

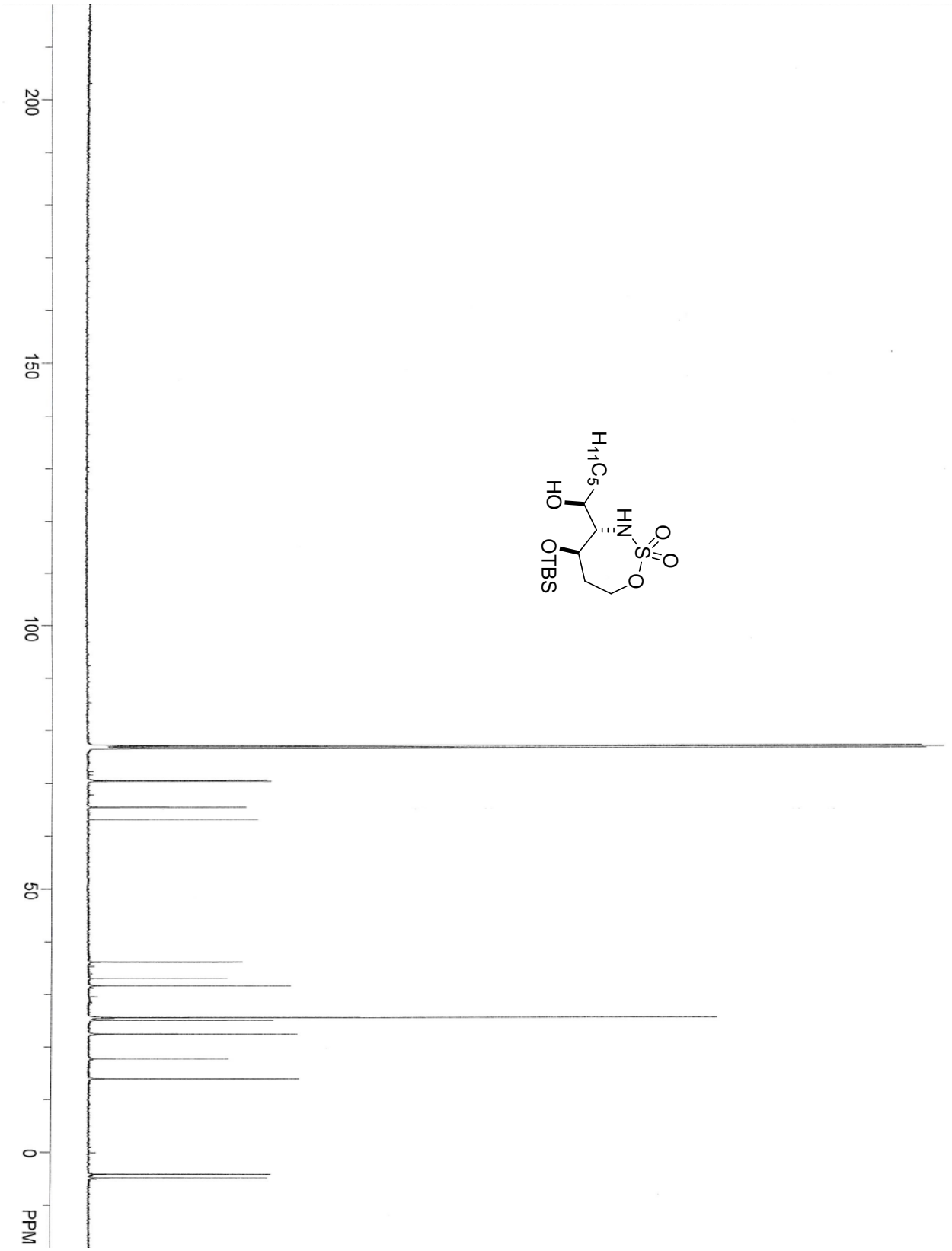
Compound 35.


8
7
6
5
4
3
2
1
0
PPM
0.98
0.99
0.98
1.03
0.99
0.98
1.95
0.99
0.95
3.15
11.97
6.00
HO
OTBS
HN
S
O
O
O

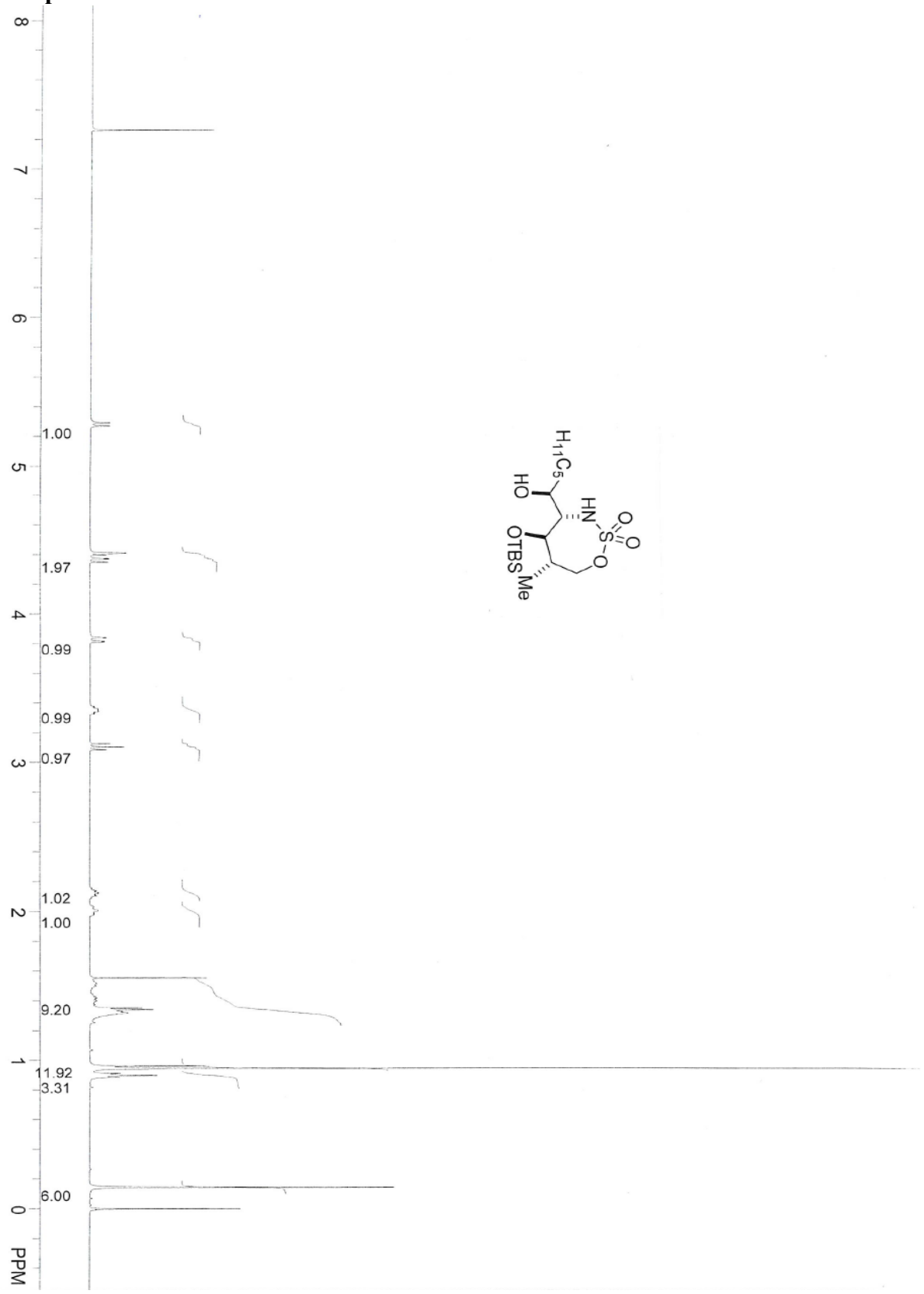

200
150
100
50
0
PPM
HO
HN
O
O
S
O
OTBS

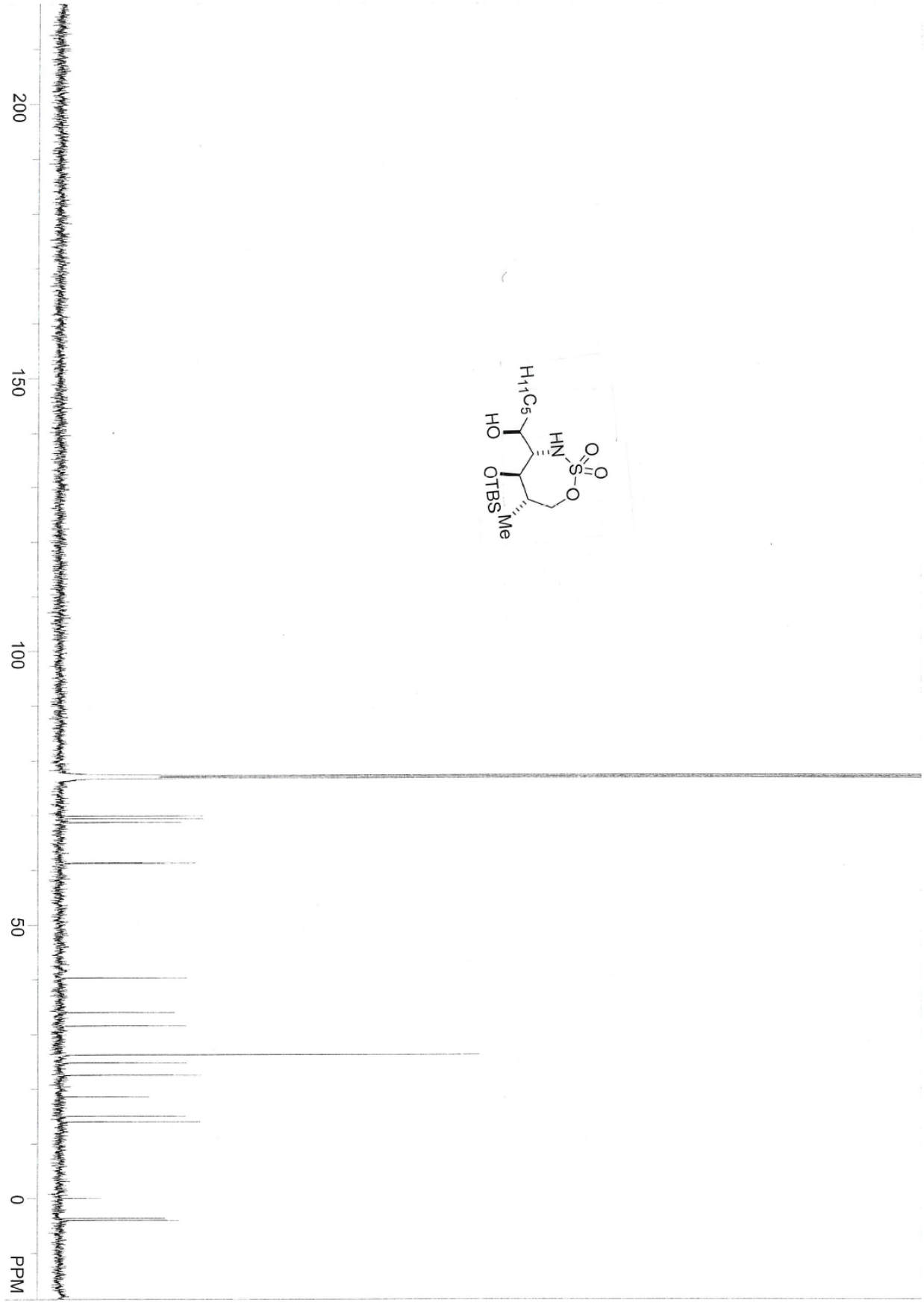
Compound 36.


8
6
4
2
0
PPM
1.01
1.04
1.07
1.06
1.05
1.00
1.99
1.11
1.22
1.14
6.42
12.41
5.97
H11C5
HO
OTBS
HN
S
O
O
O


200
150
100
50
0
PPM
H11C5
HO
OTBS
HN
S
O
O
O

Compound 37.


8
7
6
5
4
3
2
1
0
PPM
1.00
1.97
0.99
0.99
0.97
1.02
1.00
9.20
11.92
3.31
6.00
H11C5
HO
HN
O
O
S
O
OTBS
Me


200
150
100
50
0
PPM
H11C5
HO
HN
S
O
O
O
OTBS
Me