

Supporting Information For

**SYNTHESIS AND EVALUATION OF THE ANTITUMOR
ACTIVITIES OF TWO SERIES OF JASPINE B ANALOGUES
BEARING 2-ALKYLOXYMETHYL GROUP**

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Shuai-Min Xu, ^a and Hong-Min Liu ^{a,b*}

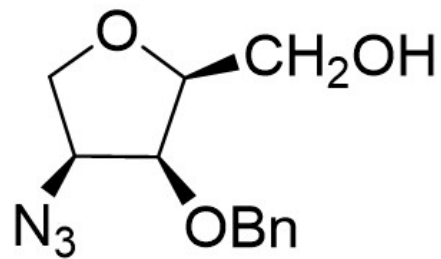
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China; Zhengzhou University, Zhengzhou 450001, PR China.*

*^bCollaborative Innovation Center of New Drug Research and Safety Evaluation,
Henan Province, Zhengzhou 450001, PR China*

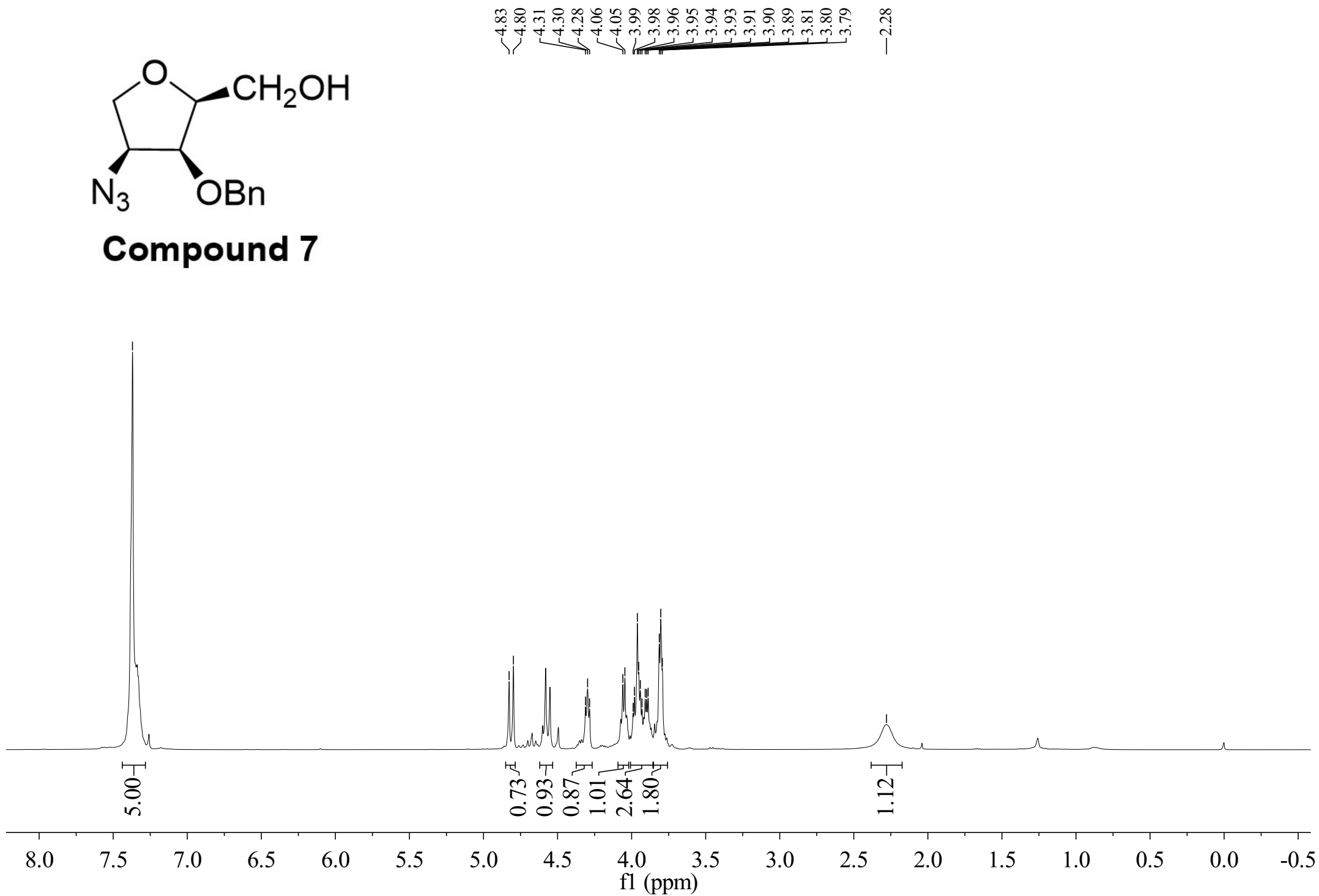
E-mail: zhangen@zzu.edu.cn (E. Z.), liuhm@zzu.edu.cn (H.-M. L.)

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¹H and ¹³C NMR Spectra for 7, 8a-8h, 9a-9h, 11, 12a-12h, 13a-13h



Compound 7



—137.03

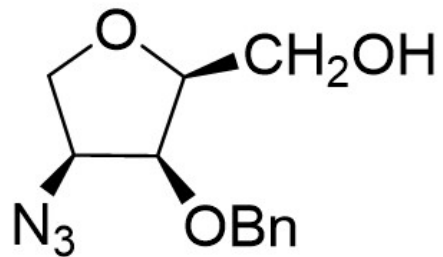
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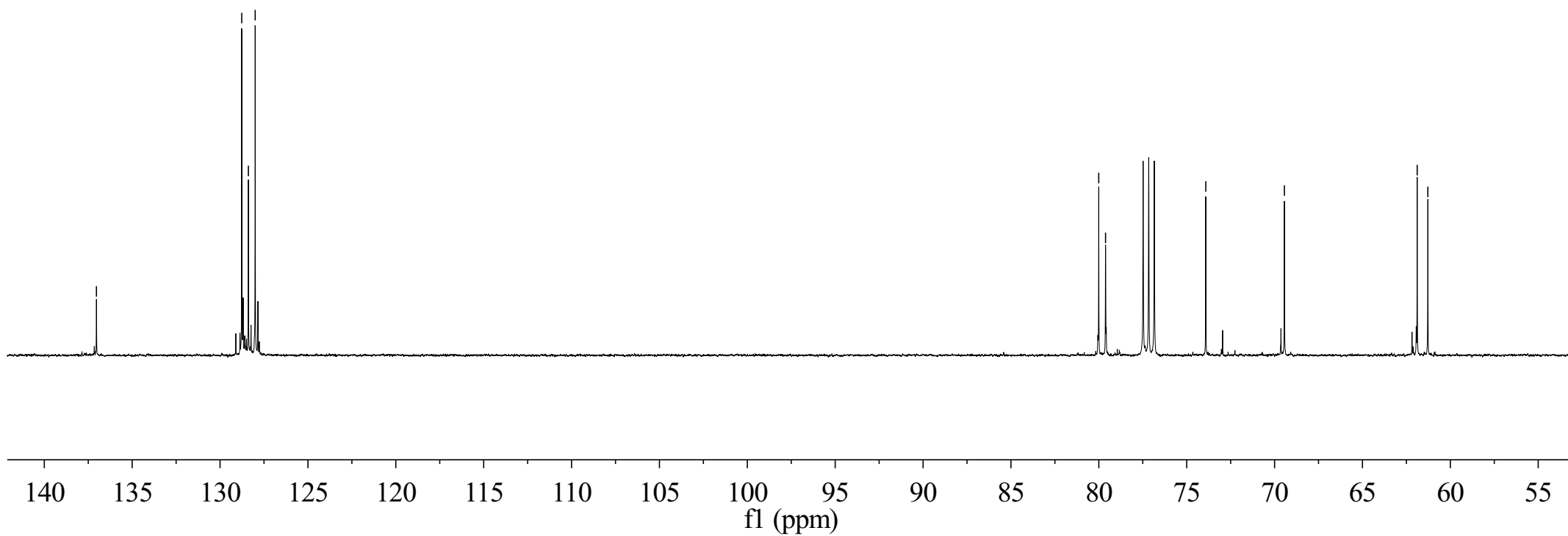
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—69.44

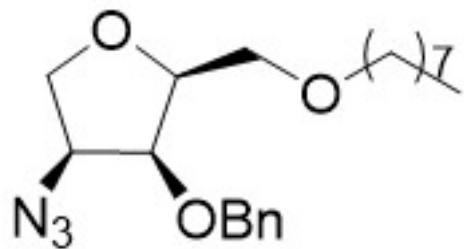
61.89
61.28



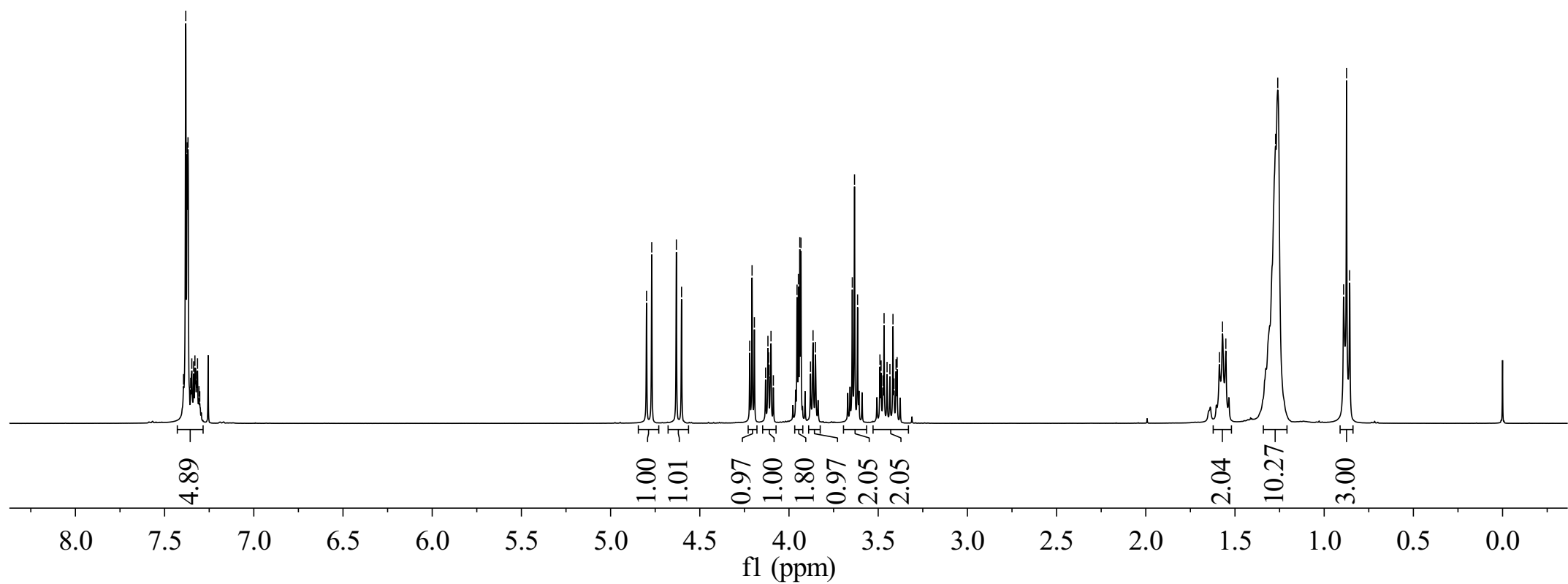
Compound 7

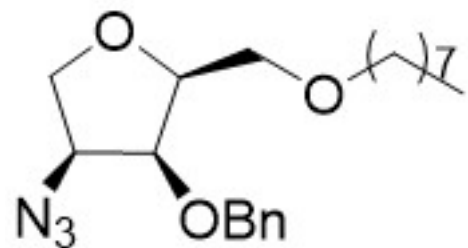


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7.38
7.37
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7.34
7.33
7.33
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4.77
4.63
4.60
4.22
4.21
4.19
4.13
4.12
4.11
4.10
4.10
4.09
3.95
3.95
3.94
3.93
3.88
3.87
3.85
3.65
3.63
3.62
3.49
3.48
3.47
3.45
3.43
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1.55
1.27
1.26
0.89
0.87
0.86



Compound 8b



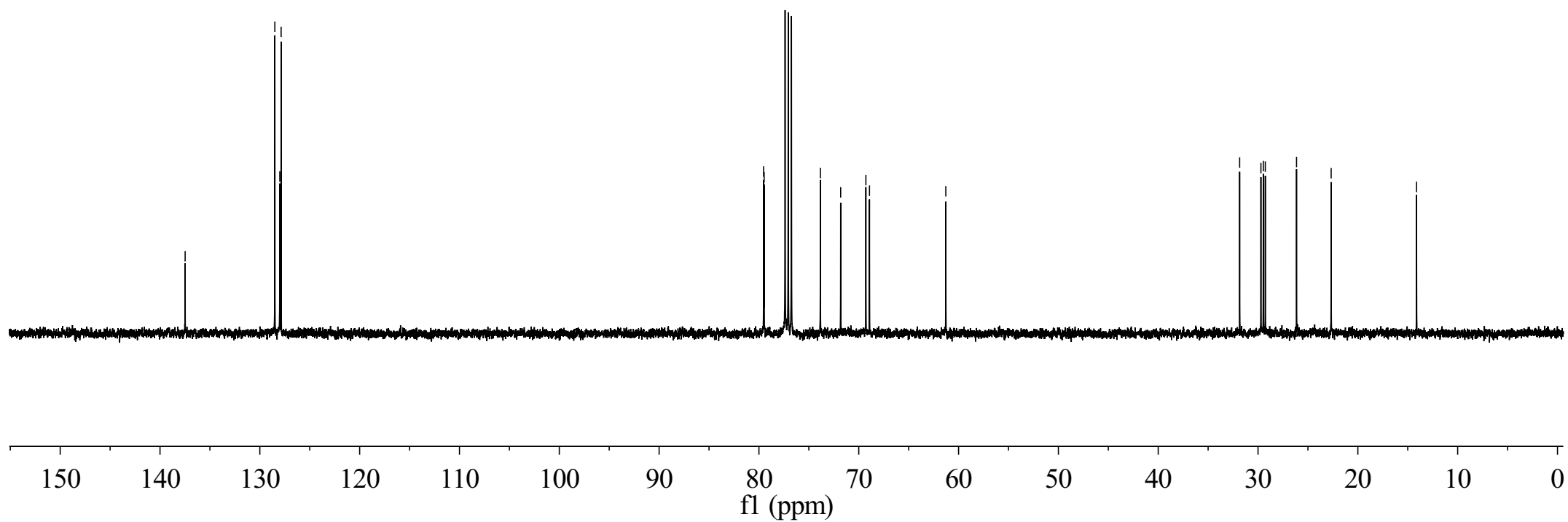


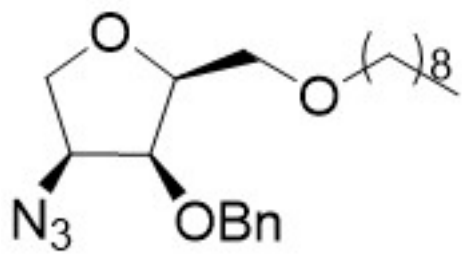
Compound 8b

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—128.00
—127.87

—79.53
—79.48
—73.84
—71.81
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—61.28

—31.84
—29.71
—29.47
—29.27
—26.14
—22.67
—14.12



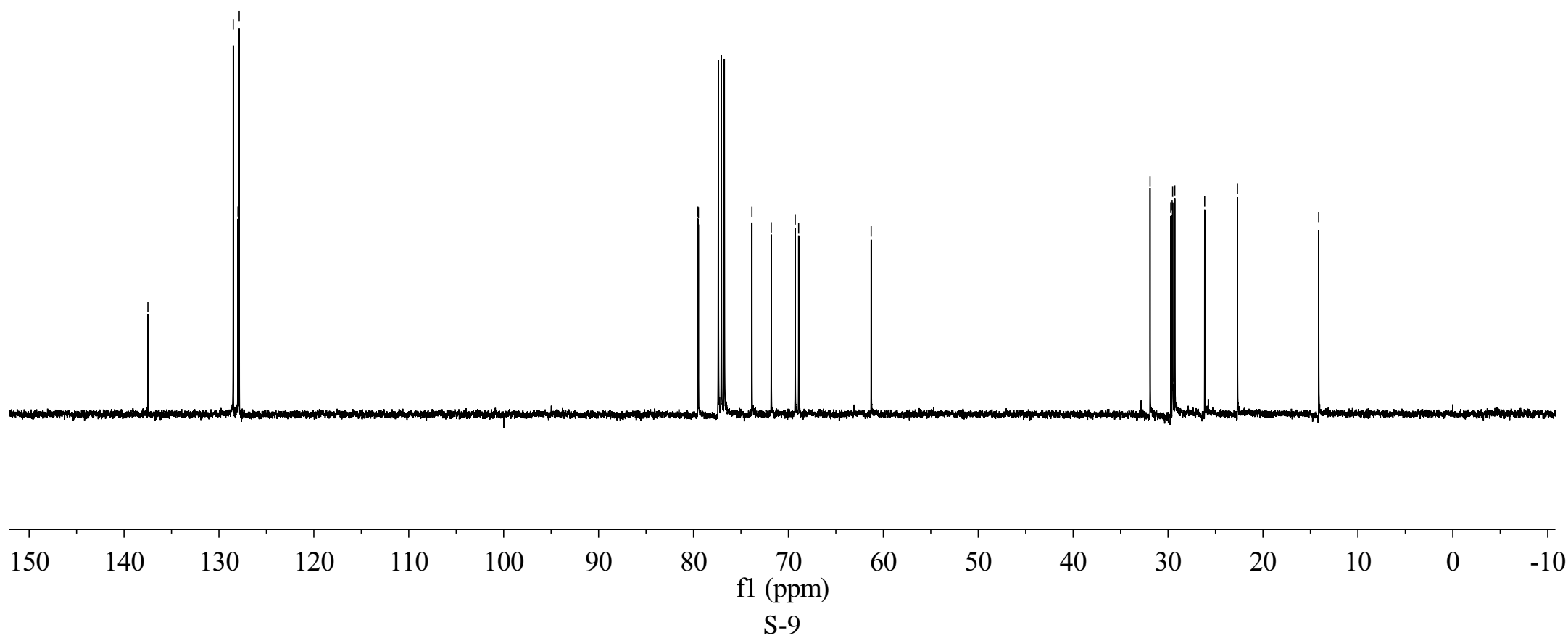


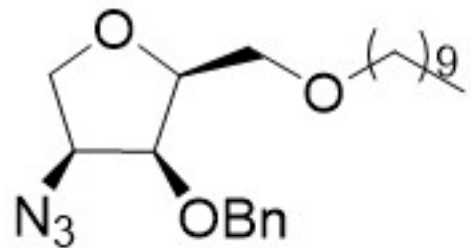
Compound 8c

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—127.87

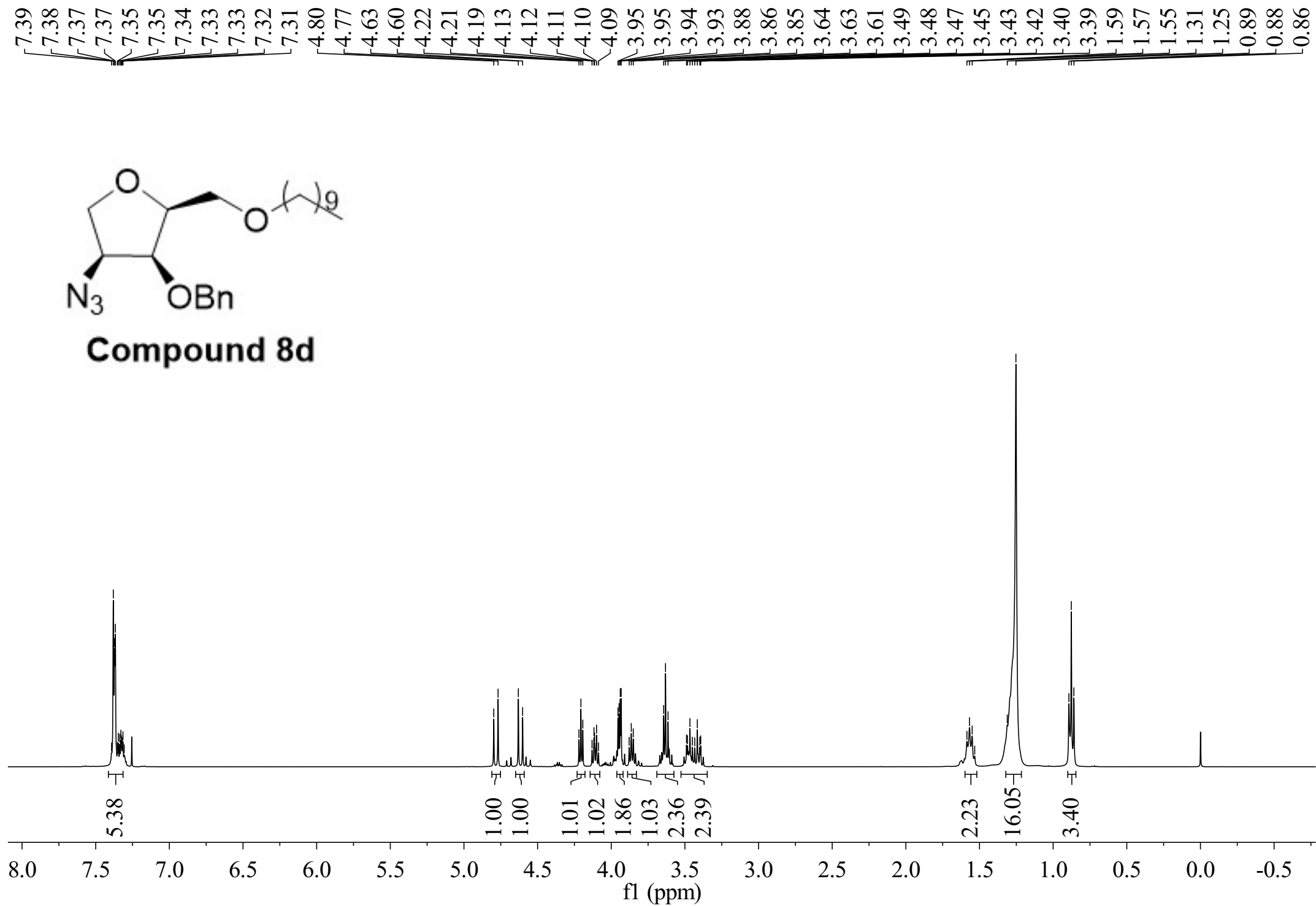
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—61.28

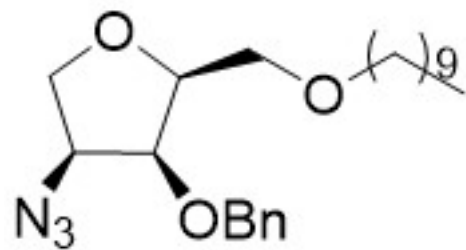
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—29.29
—26.14
—22.69
—14.13





Compound 8d



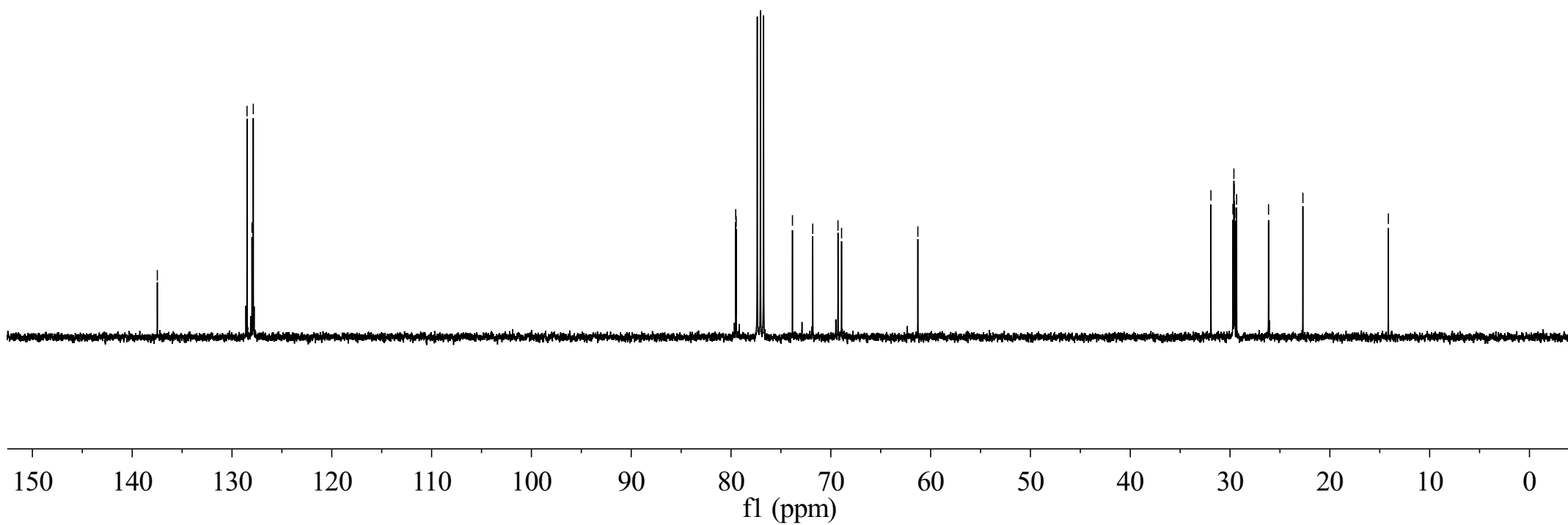


Compound 8d

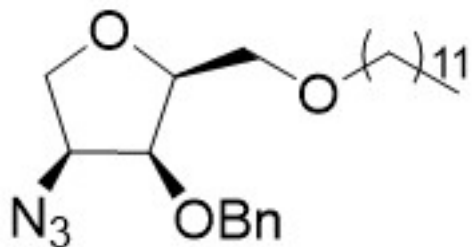
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—73.85
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—69.28
—68.92
—61.28

—31.92
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—29.59
—29.52
—29.34
—26.14
—22.70
—14.14



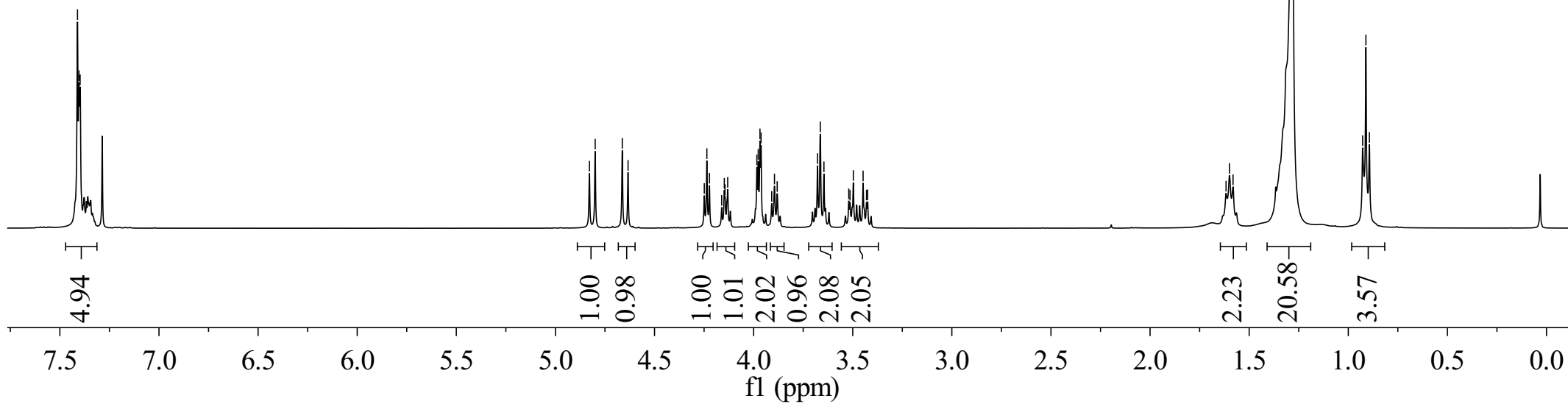
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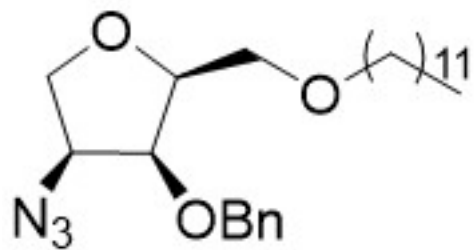


Compound 8e

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4.66
4.63

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4.24
4.22
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4.13
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3.88
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1.58
1.28
0.93
0.91
0.89



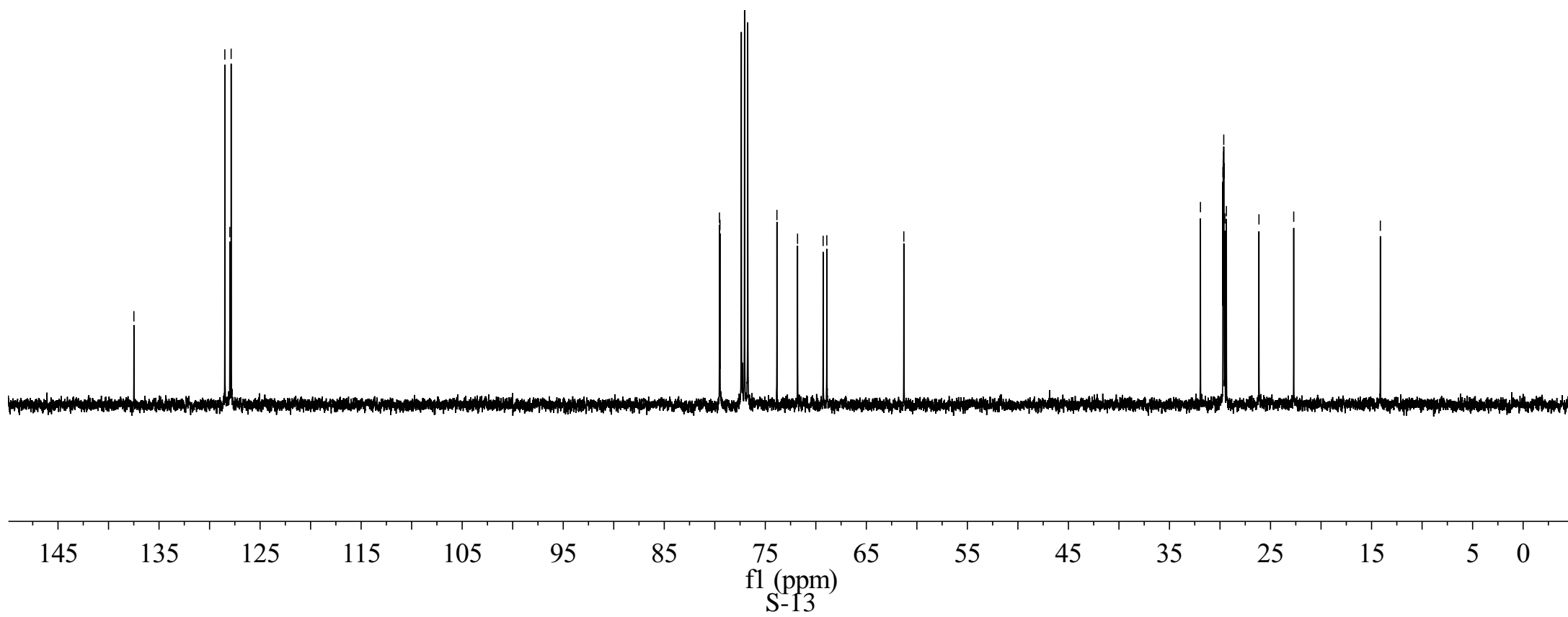


Compound 8e

—137.49
└─128.49
└─127.99
└─127.86

└─79.54
└─79.49
└─73.85
└─71.81
└─69.28
└─68.91
—61.29

└─31.93
└─29.71
└─29.68
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└─29.63
└─29.52
└─29.37
└─26.14
└─22.70
—14.13

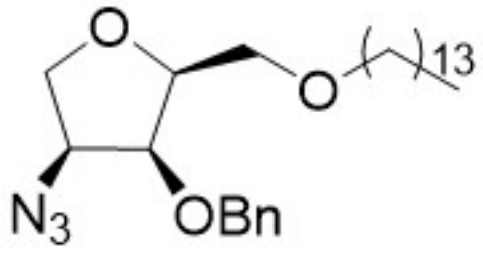


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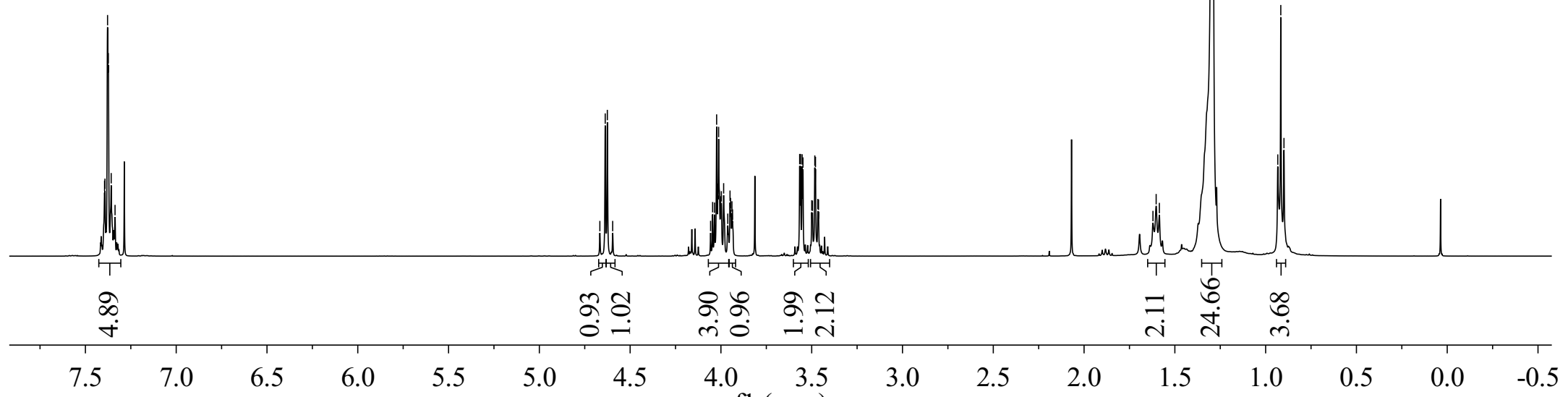
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3.50
3.50
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3.47
3.46

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1.59
1.29
0.93
0.92
0.90



Compound 8f

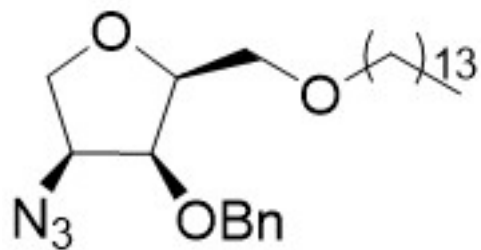


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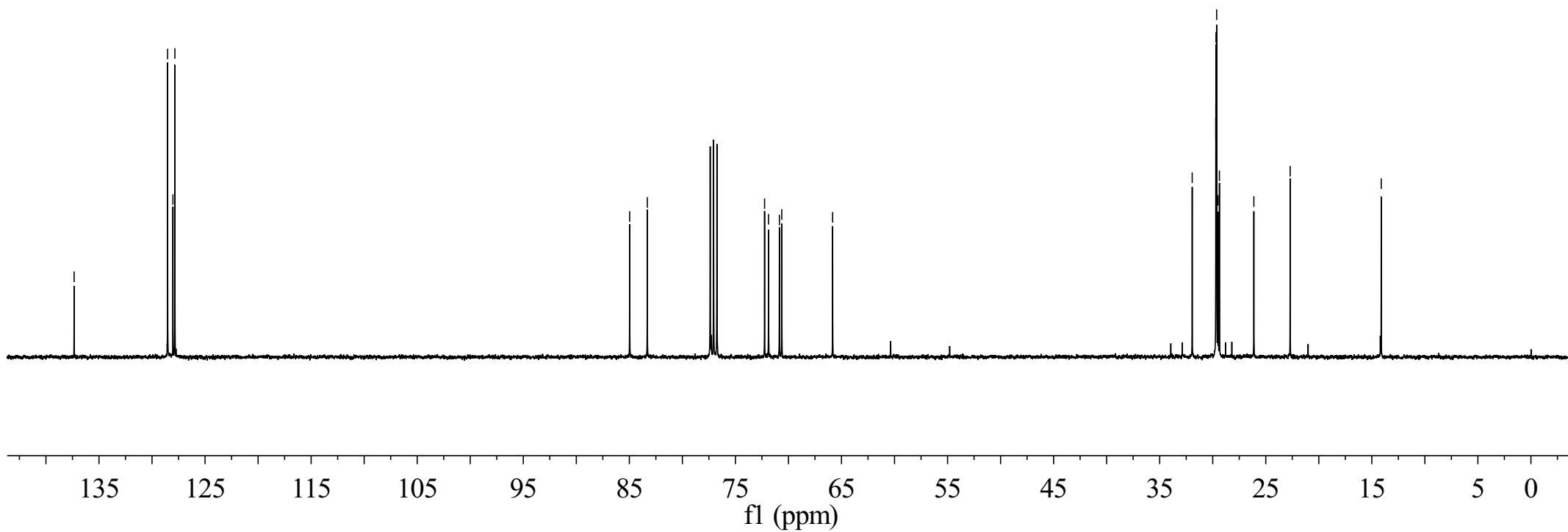
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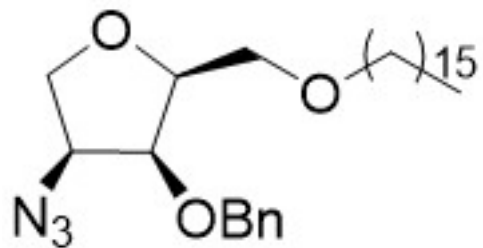
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71.88
70.85
70.63
65.84

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29.50
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26.12
22.70
-14.11



Compound 8f



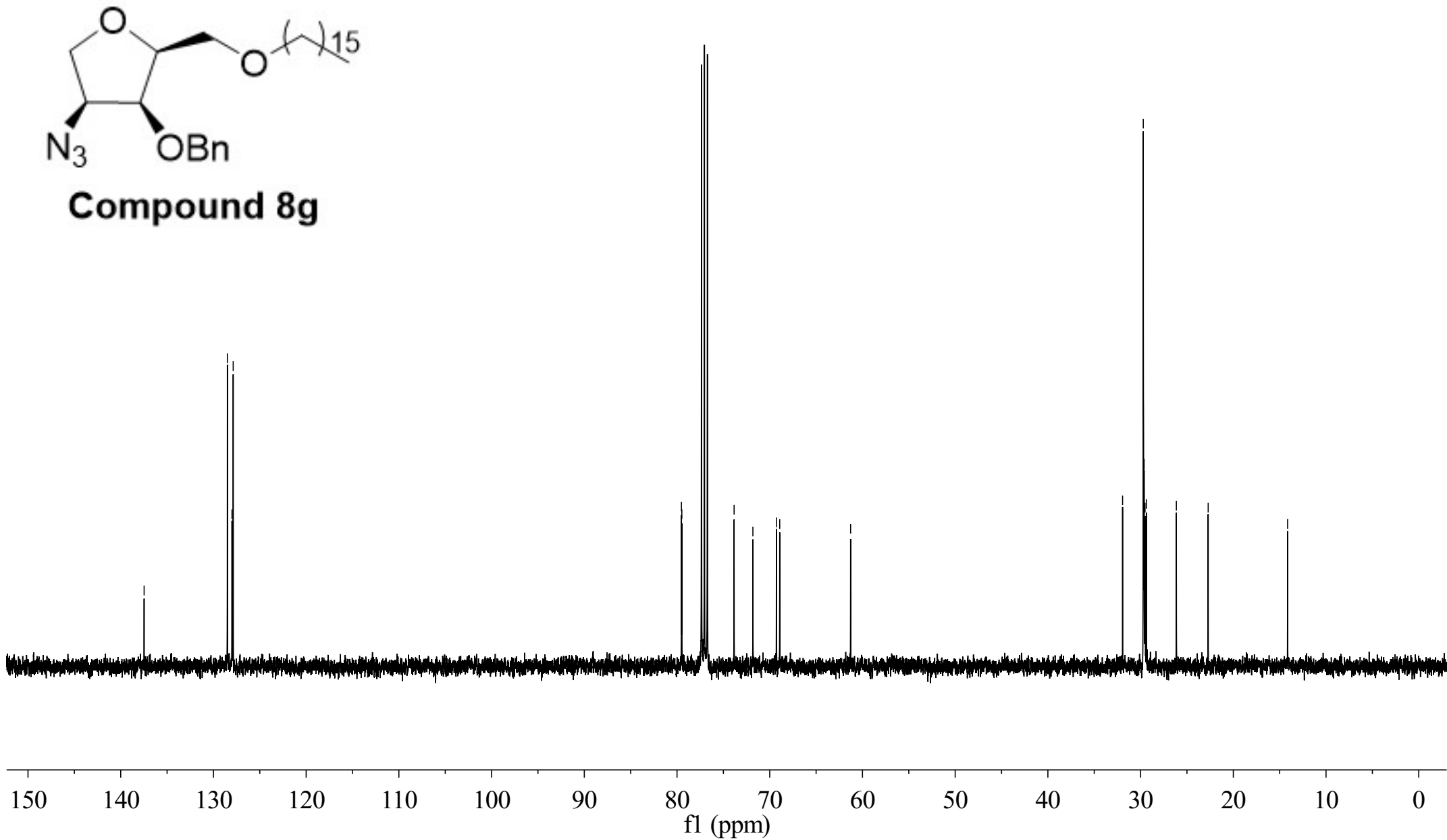


Compound 8g

—137.48
—128.50
—128.00
—127.87

—79.52
—79.48
—73.84
—71.82
—69.28
—68.92
—61.28

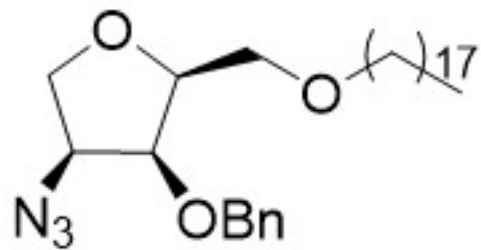
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—29.71
—29.64
—29.62
—29.52
—29.38
—26.15
—22.71
—14.14



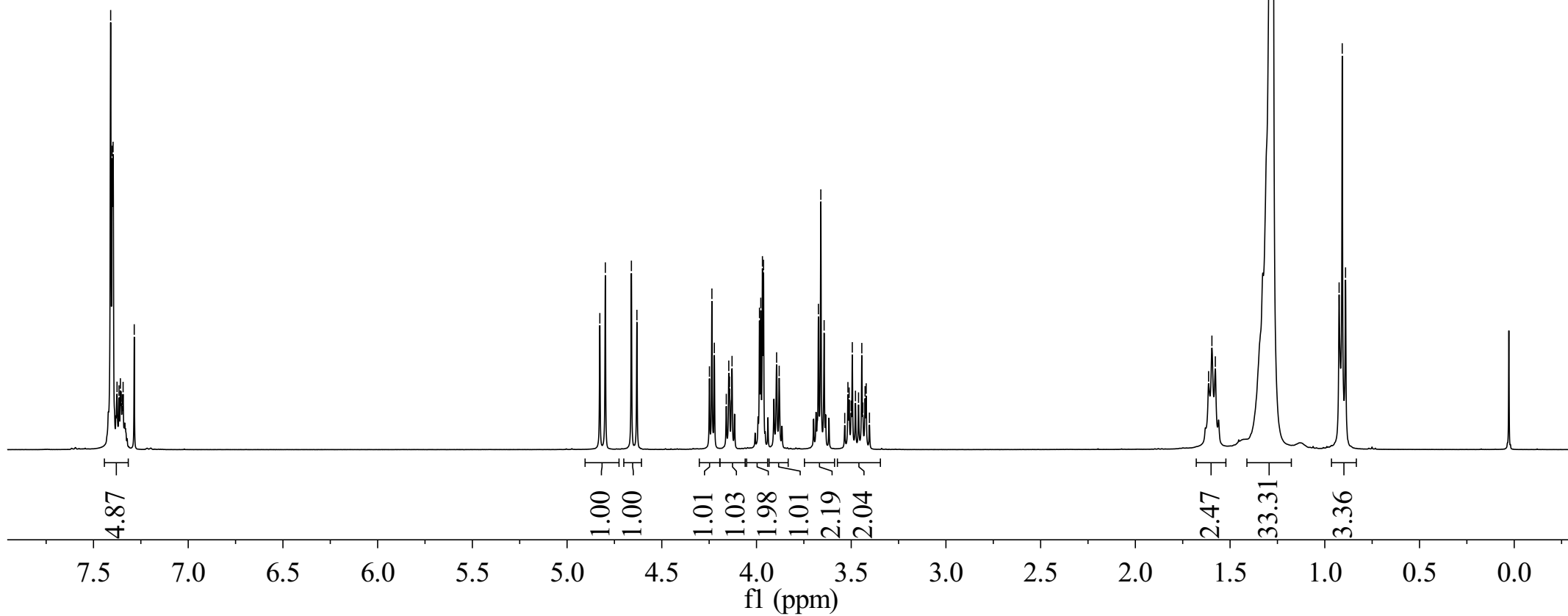
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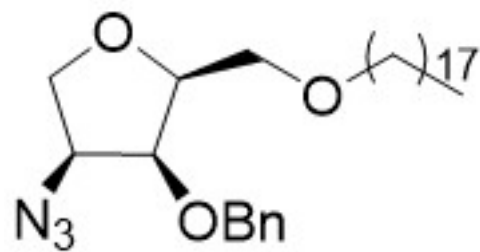
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4.63

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3.96
3.89
3.88
3.67
3.66
3.64
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3.44
1.61
1.60
1.58
1.28
0.92
0.91
0.89



Compound 8h

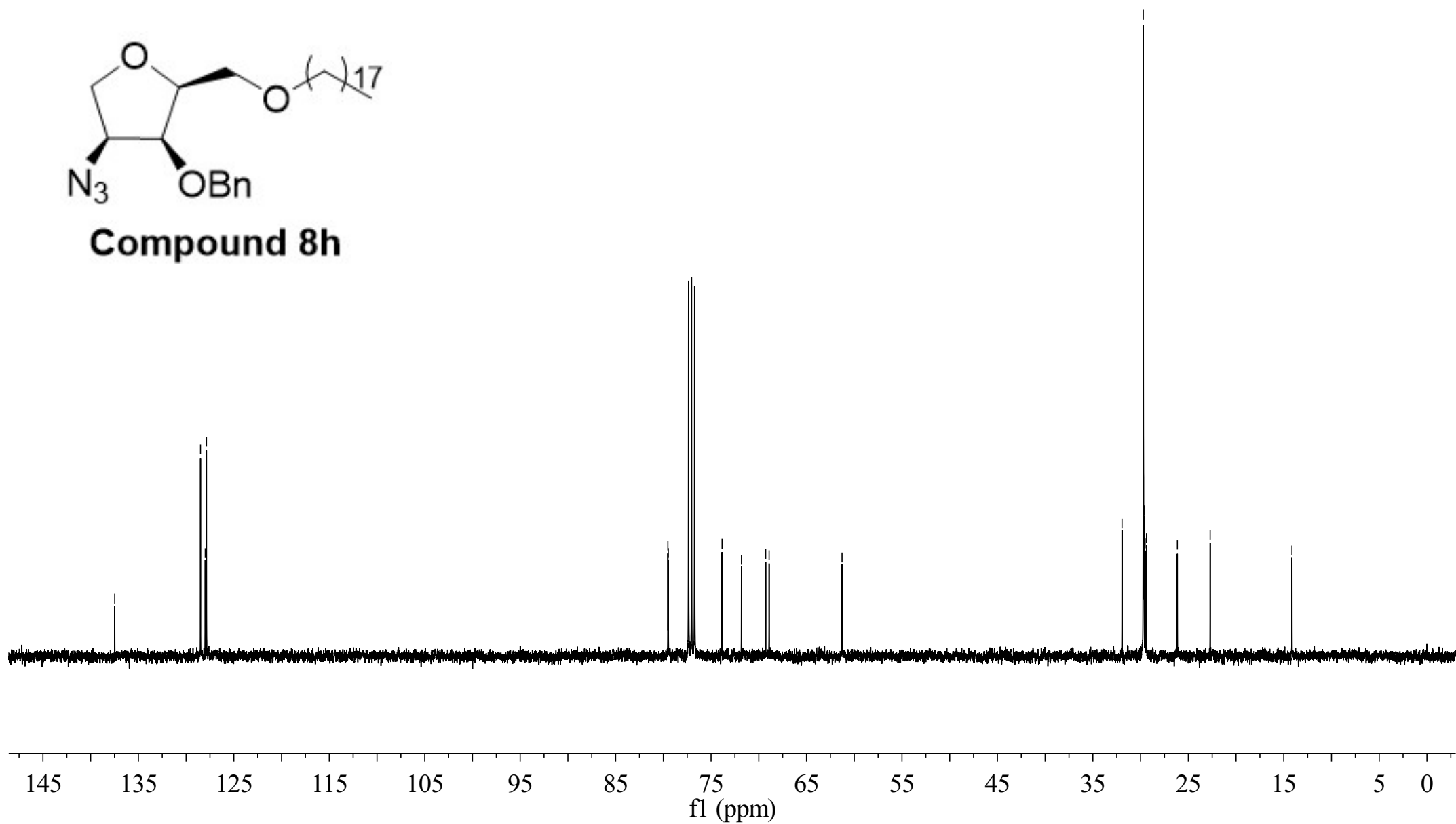




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—128.49
—128.00
—127.87

—79.53
—79.48
—73.85
—71.82
—69.28
—68.92
—61.28

—31.95
—29.72
—29.64
—29.62
—29.53
—29.38
—26.15
—22.71
—14.14



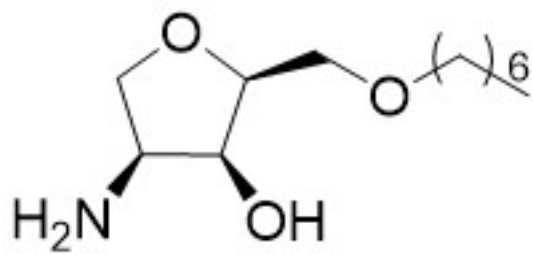
Compound 8h

fl (ppm)

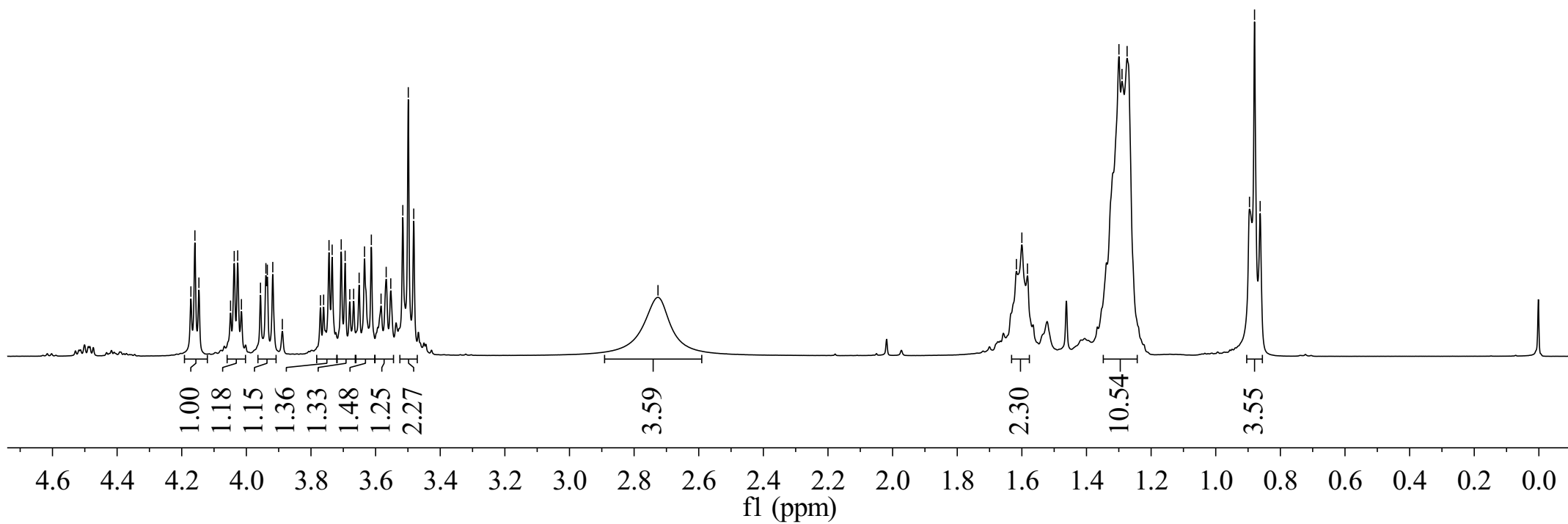
S-19

4.16
4.15
4.04
4.03
3.94
3.94
3.92
3.74
3.73
3.71
3.69
3.65
3.63
3.61
3.57
3.55
3.52
3.50
3.48
2.73

1.62
1.60
1.58
1.30
1.29
1.27
0.90
0.88
0.86



Compound 9a

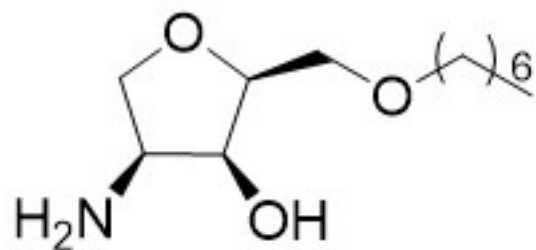


—80.22
~72.35
~72.11
~70.03

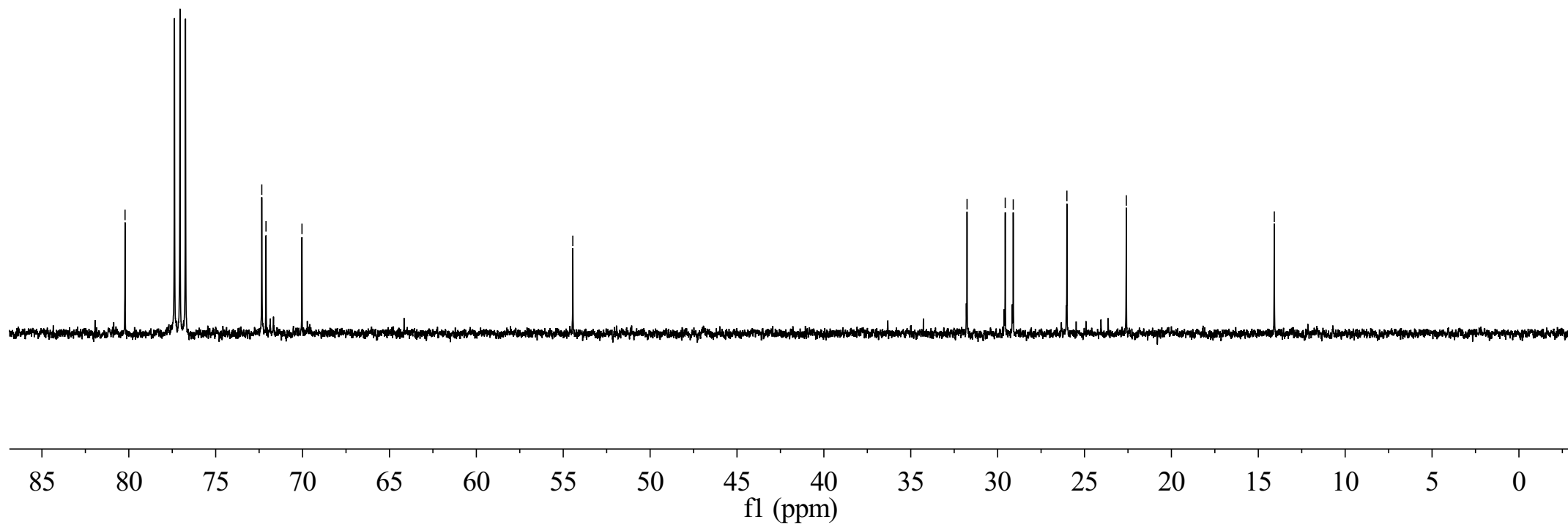
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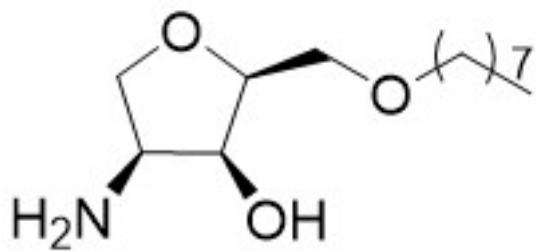
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~29.56
~29.10
~26.01
~22.59

—14.08

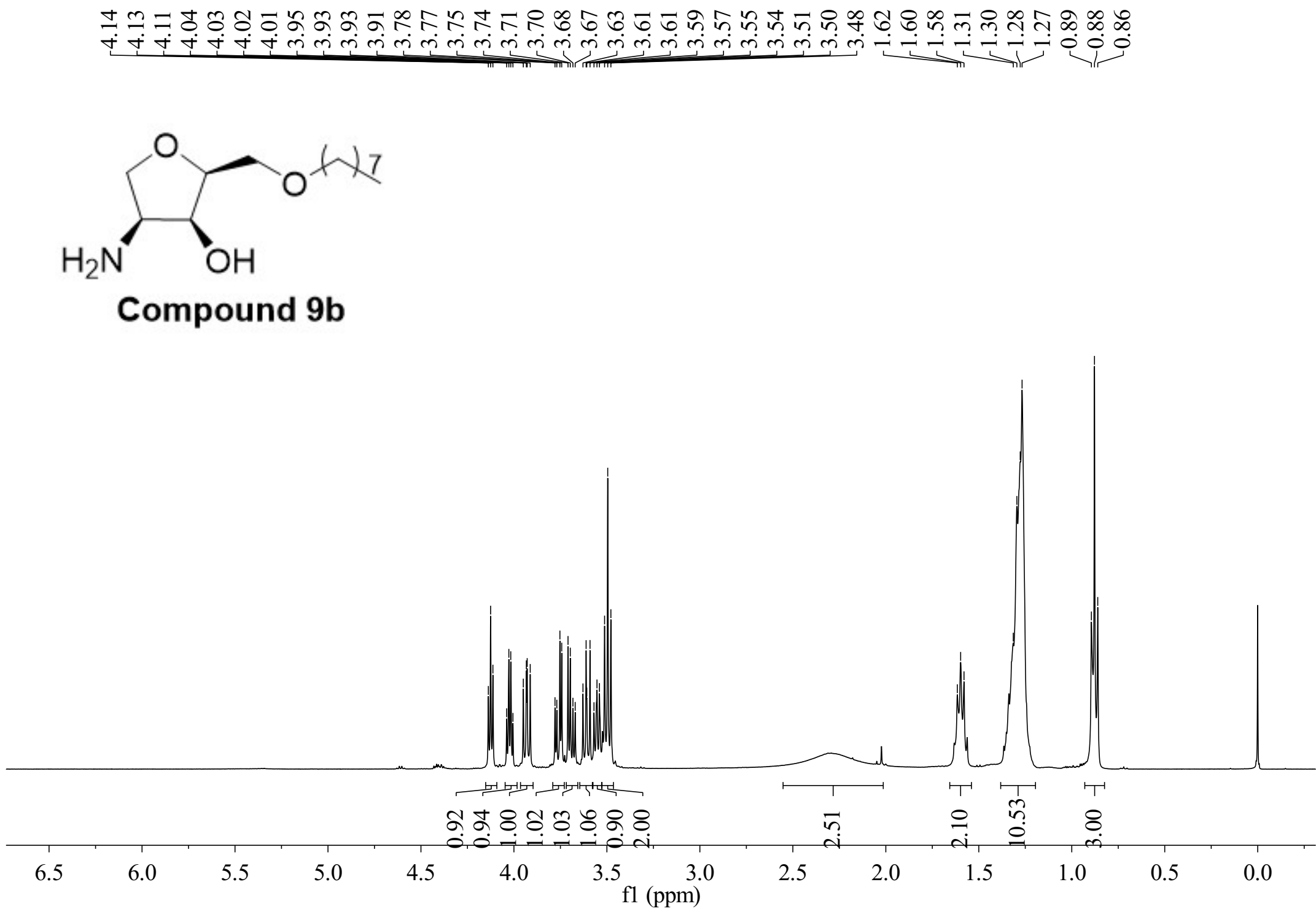


Compound 9a





Compound 9b



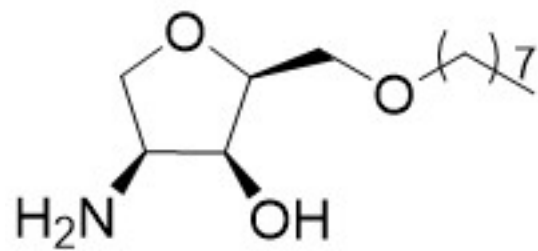
—80.28

┌72.56
└72.52
┌72.13
└70.14

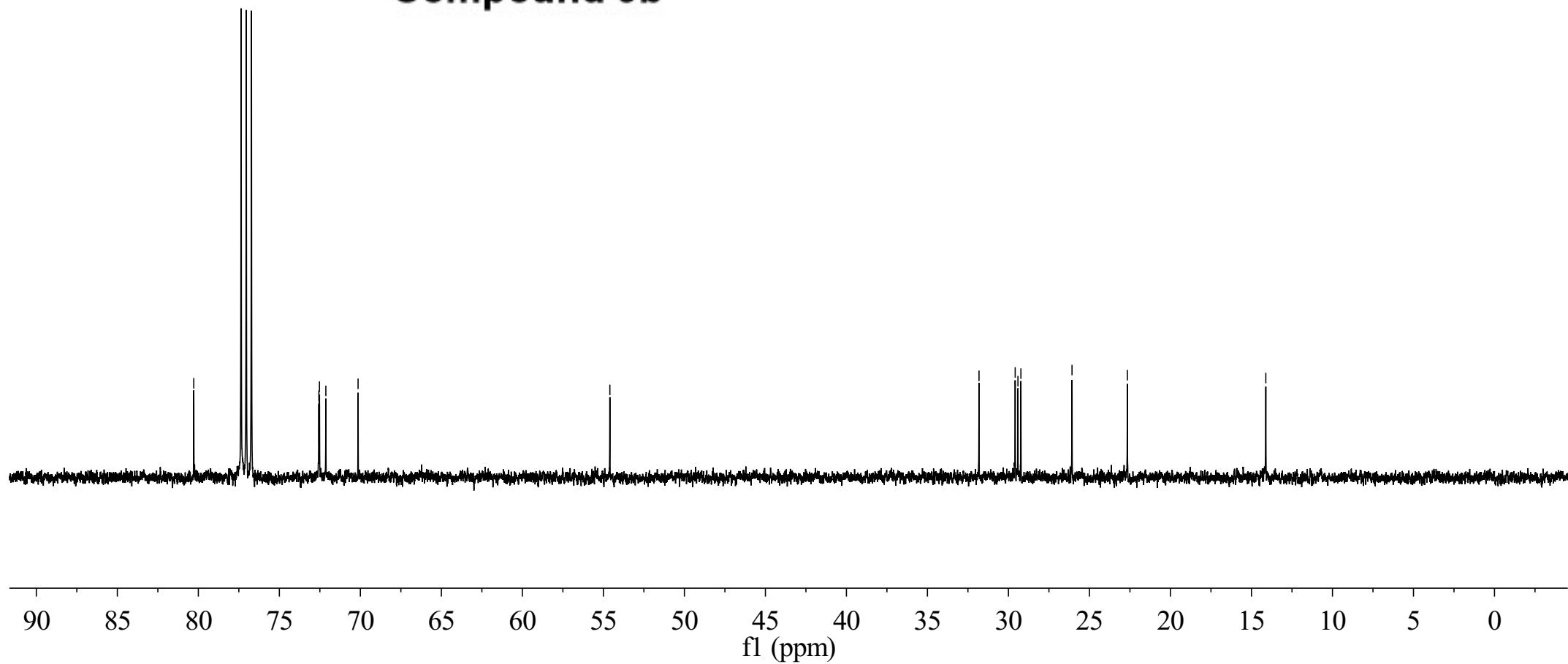
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~31.82
┌29.58
└29.41
┌29.23
└26.08
~22.66

—14.11

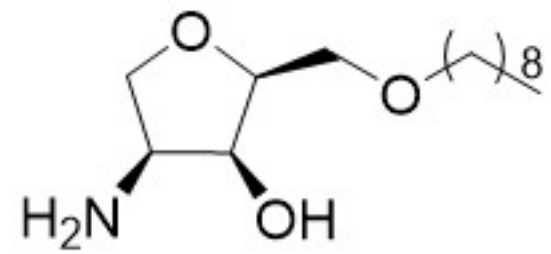


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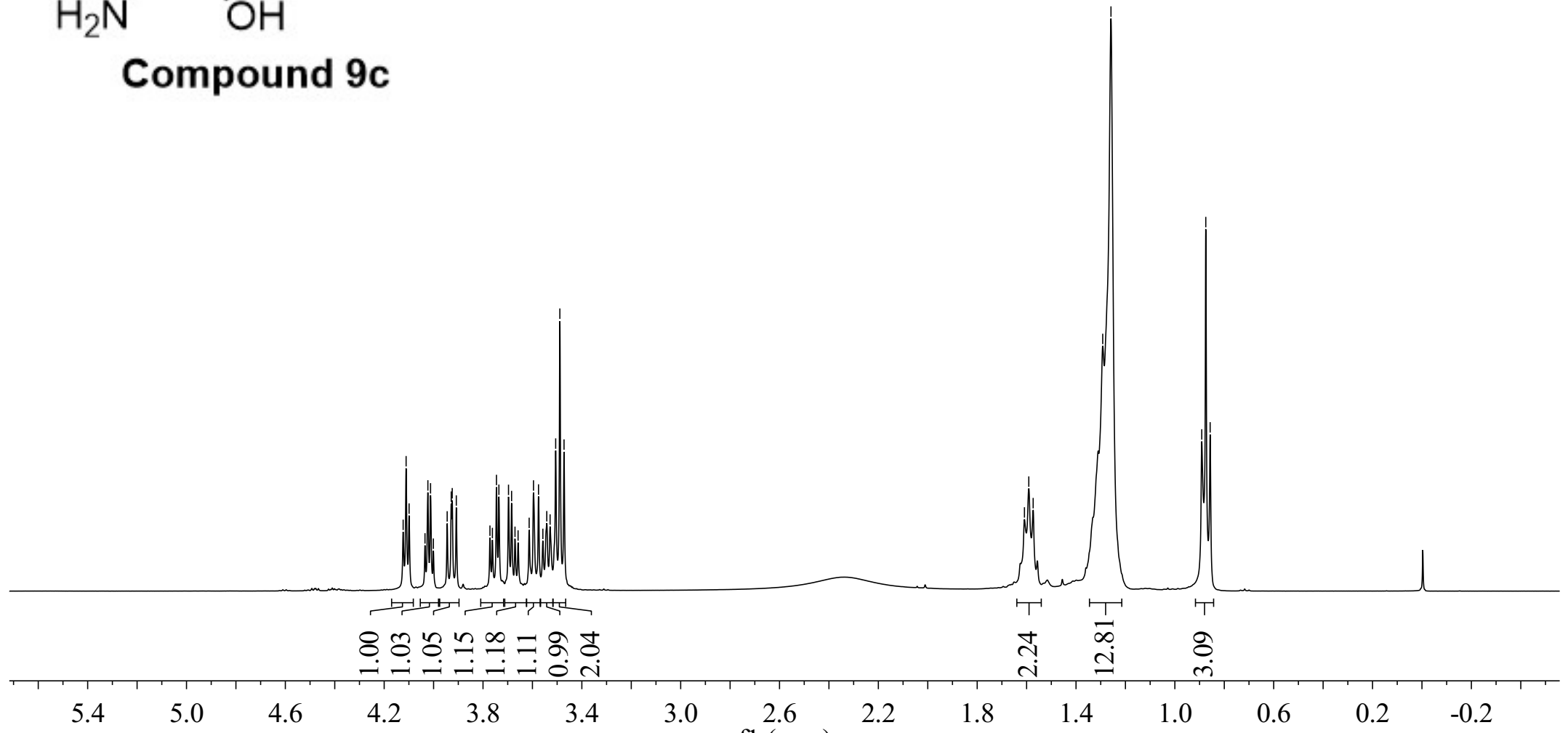


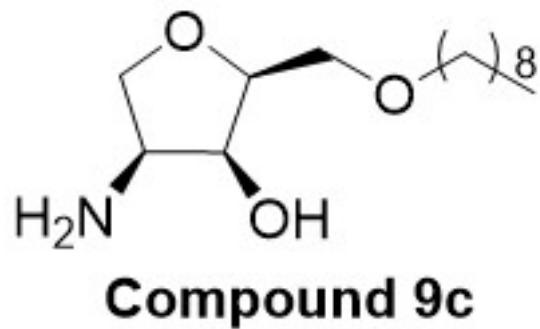
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3.68
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3.60
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3.56
3.54
3.53
3.51
3.49
3.47

1.61
1.59
1.57
1.29
1.26
0.89
0.87
0.86



Compound 9c





—80.33

72.56

72.47

72.09

70.12

—54.63

31.86

29.58

29.51

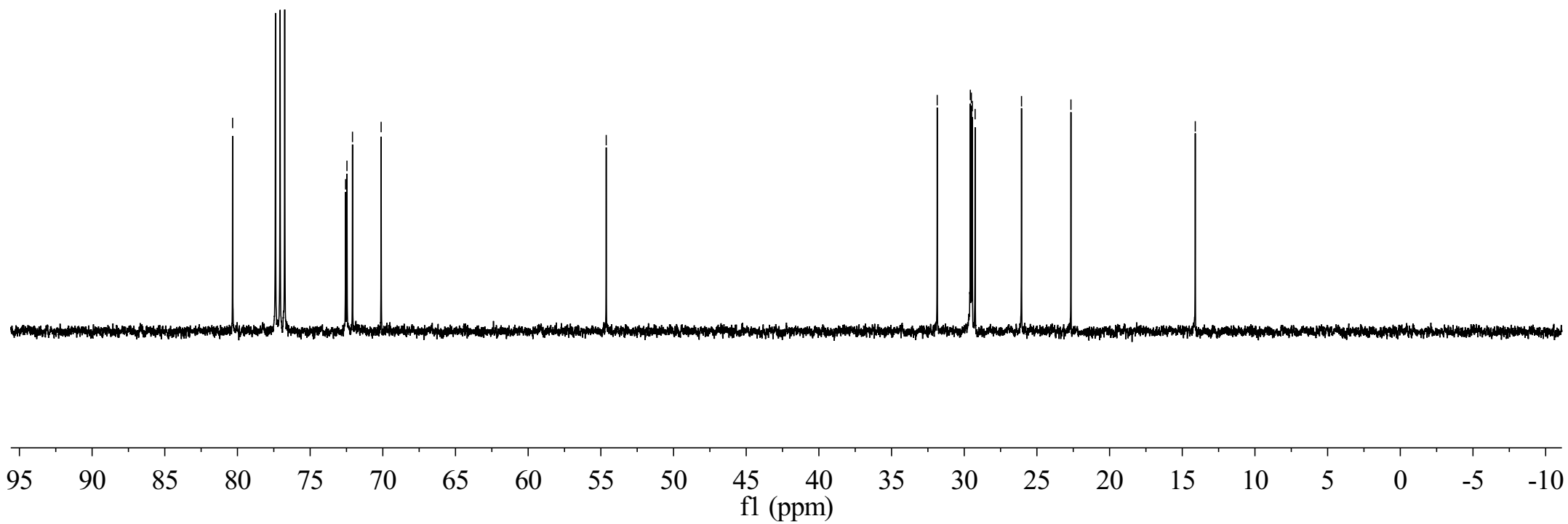
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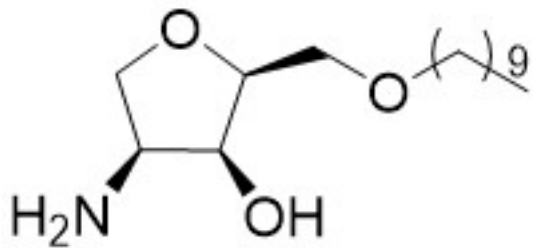
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22.66

—14.10

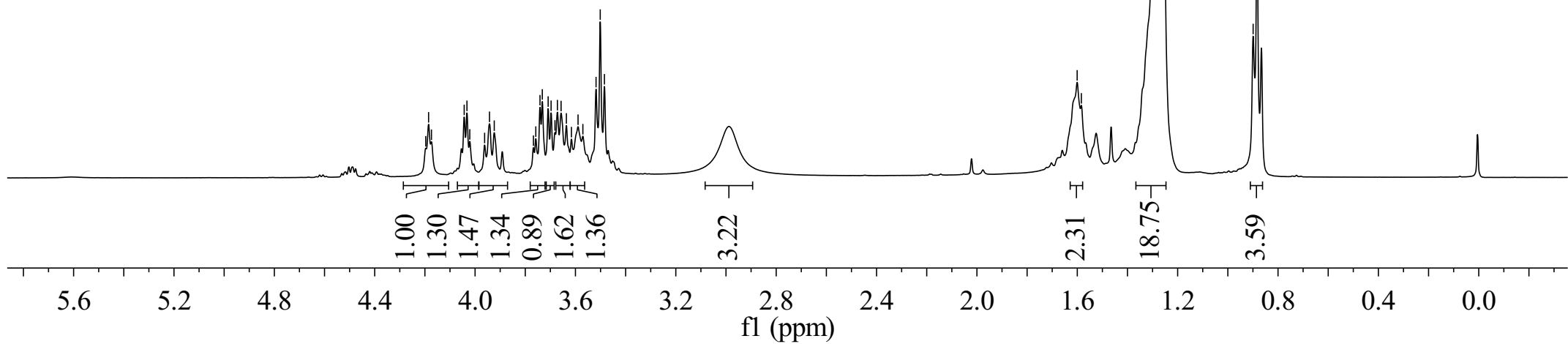


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3.71
3.70
3.68
3.67
3.66
3.64
3.62
3.59
3.57
3.52
3.50
3.48



Compound 9d

1.60
1.58
1.26
0.90
0.88



—80.15

—72.29

—72.14

—69.99

—54.35

—31.90

—29.56

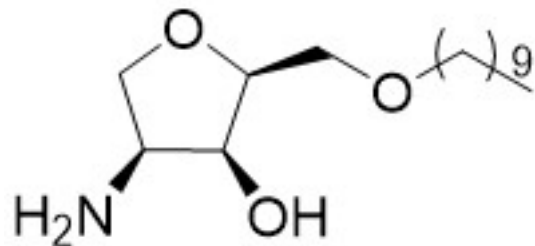
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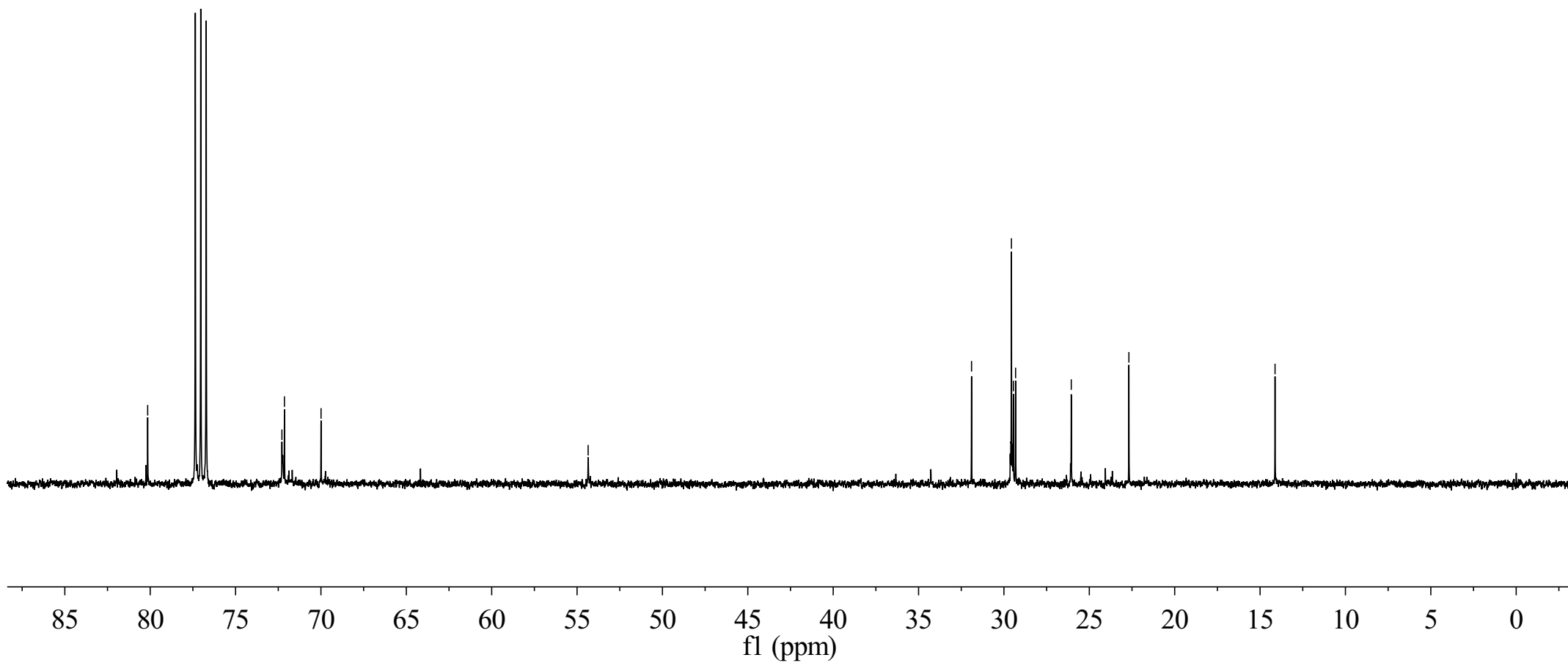
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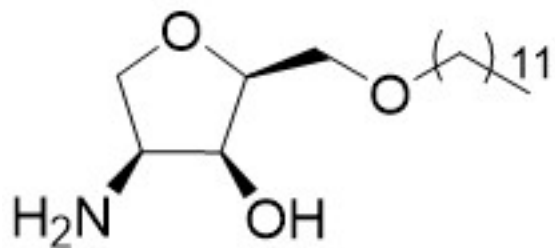
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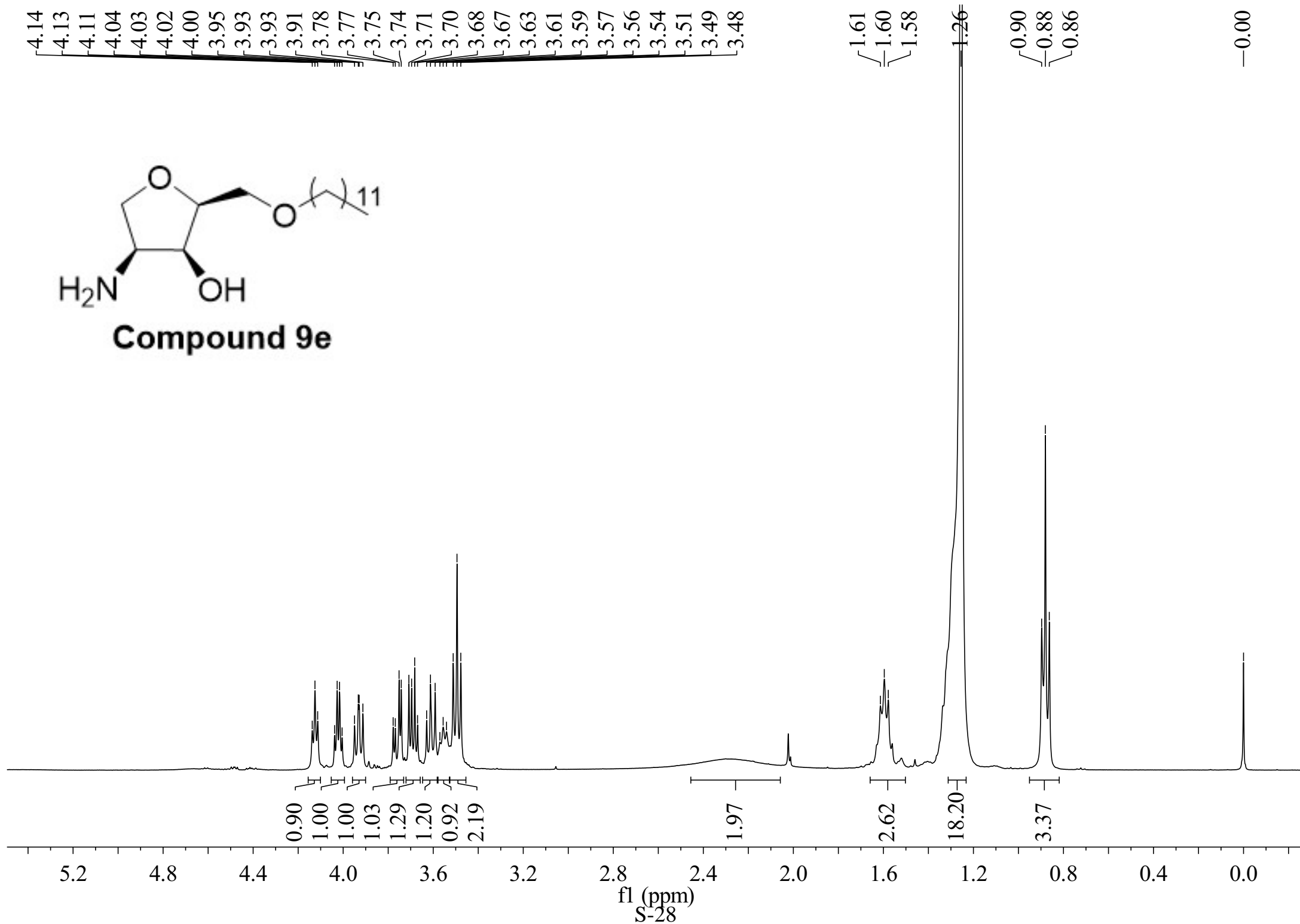


Compound 9d





Compound 9e



-80.28

~72.51

~72.13

~70.13

-54.59

31.92

29.66

29.64

29.61

29.58

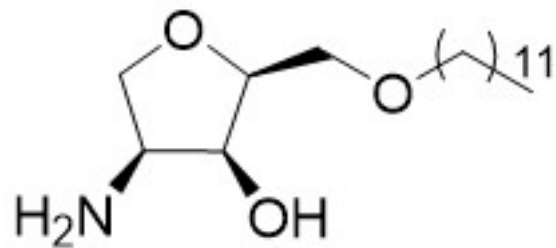
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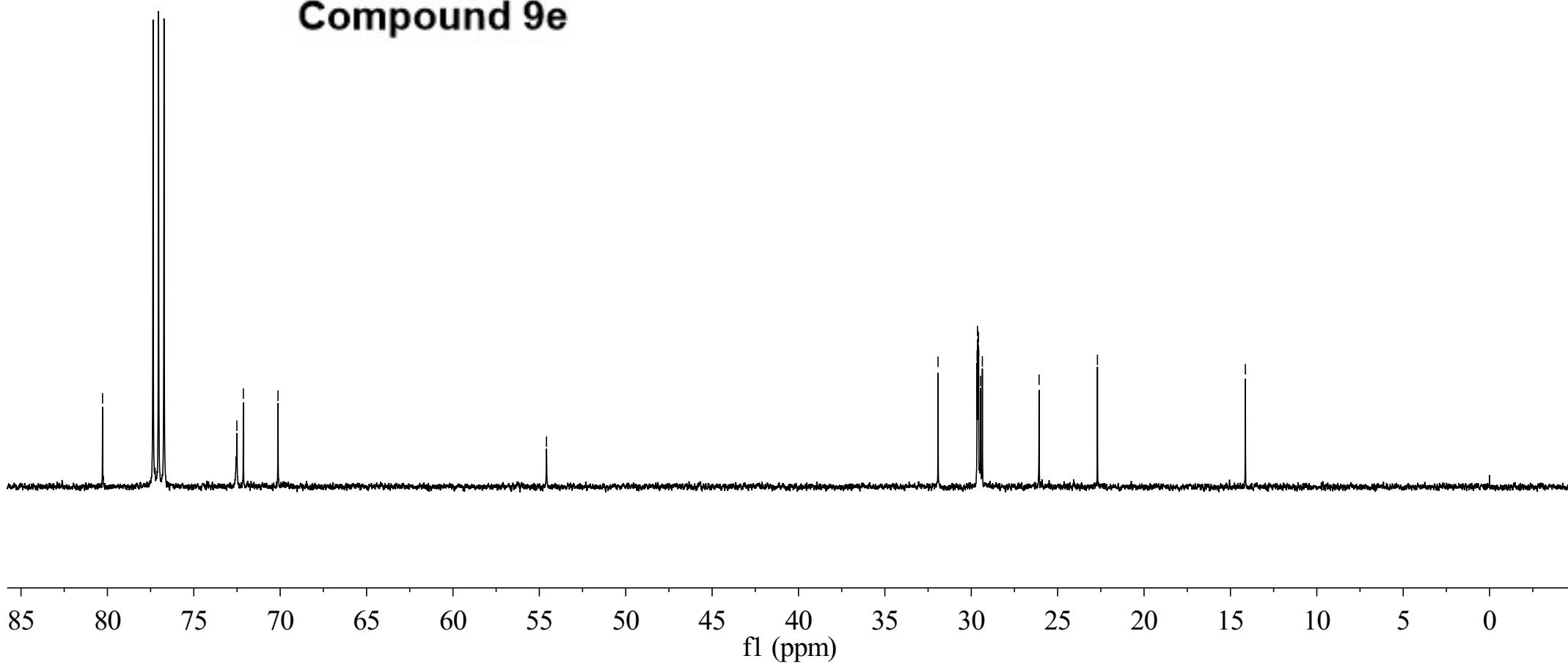
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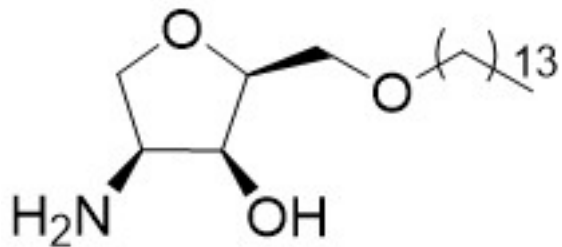
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Compound 9e



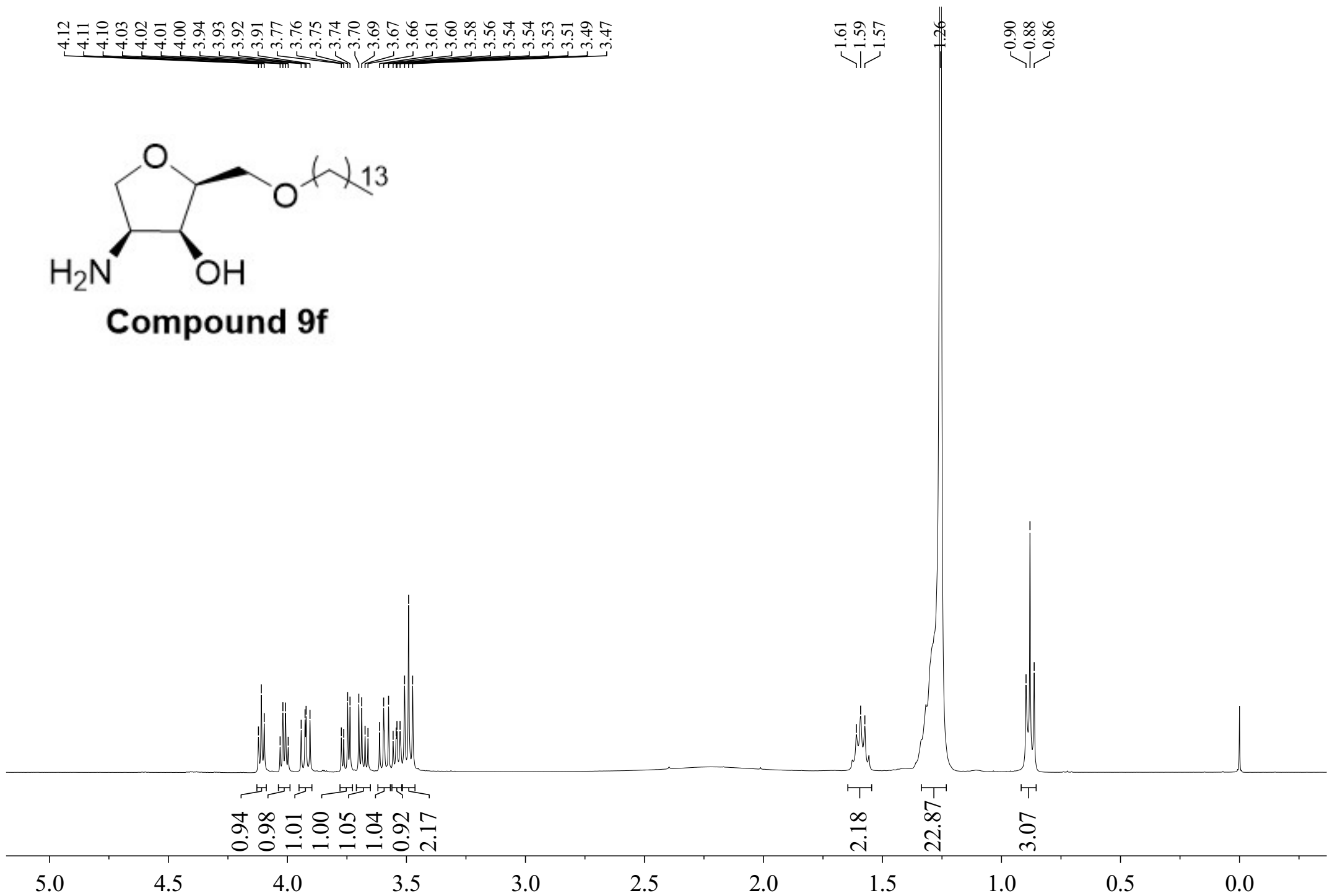
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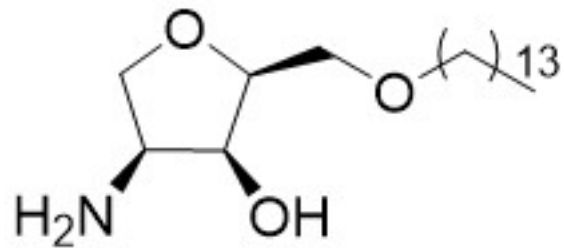


Compound 9f

1.61
1.59
1.57

0.90
0.88
0.86





Compound 9f

—80.48

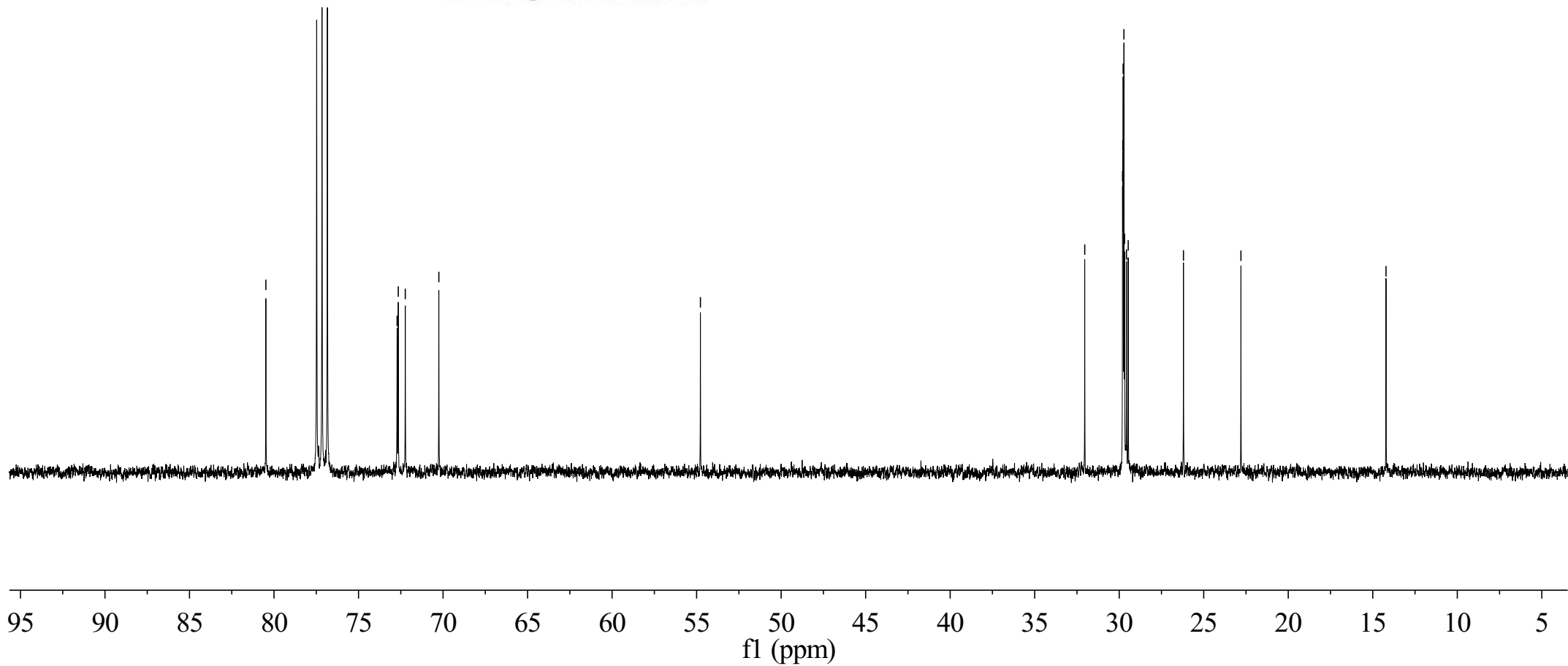
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72.23
70.25

—54.78

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29.47
—26.20

—22.80

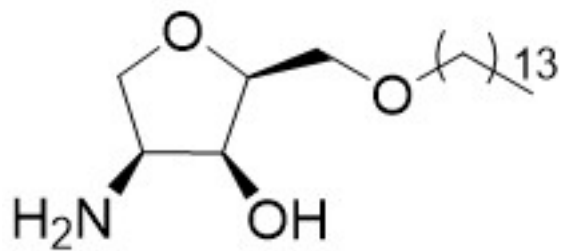
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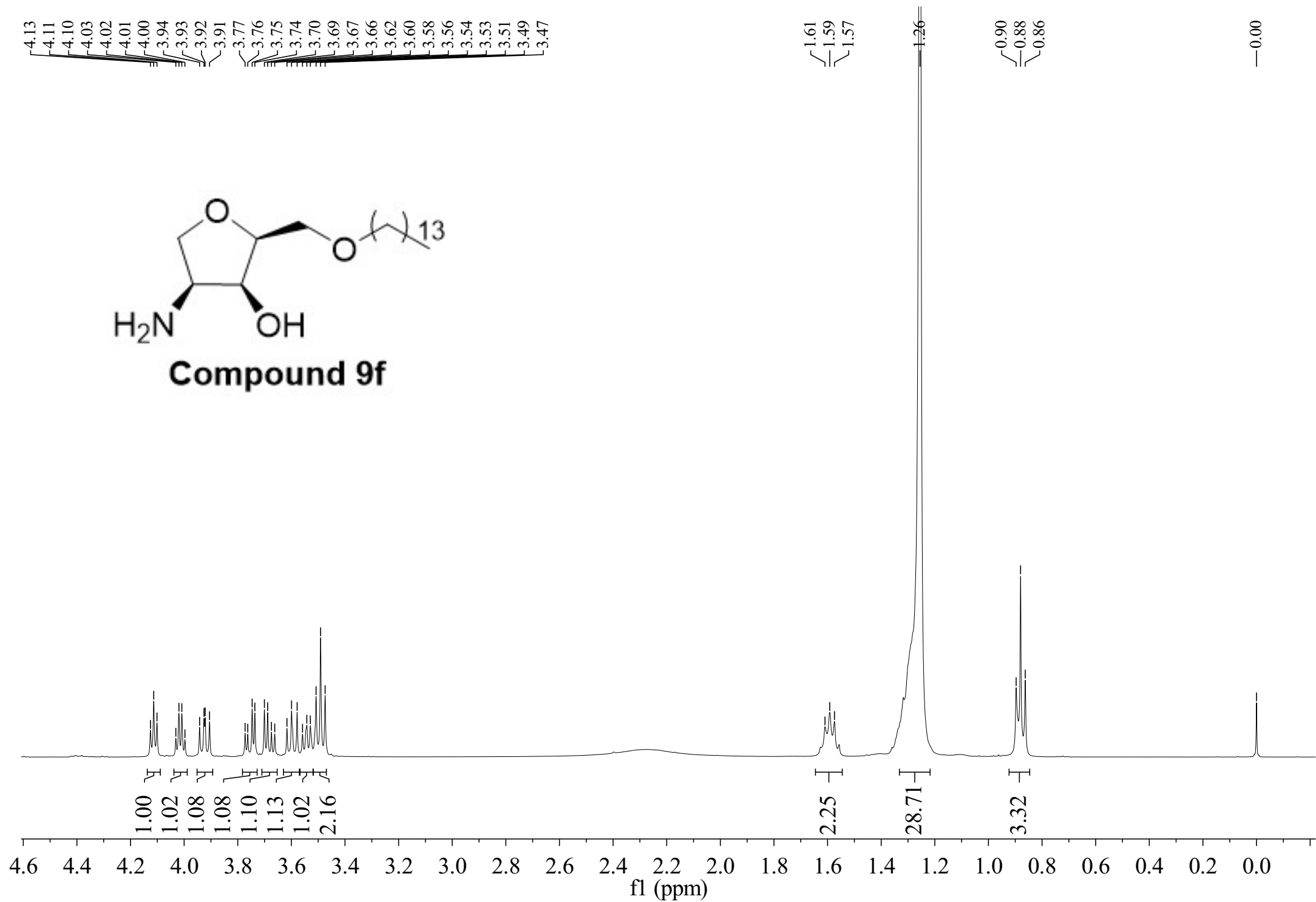
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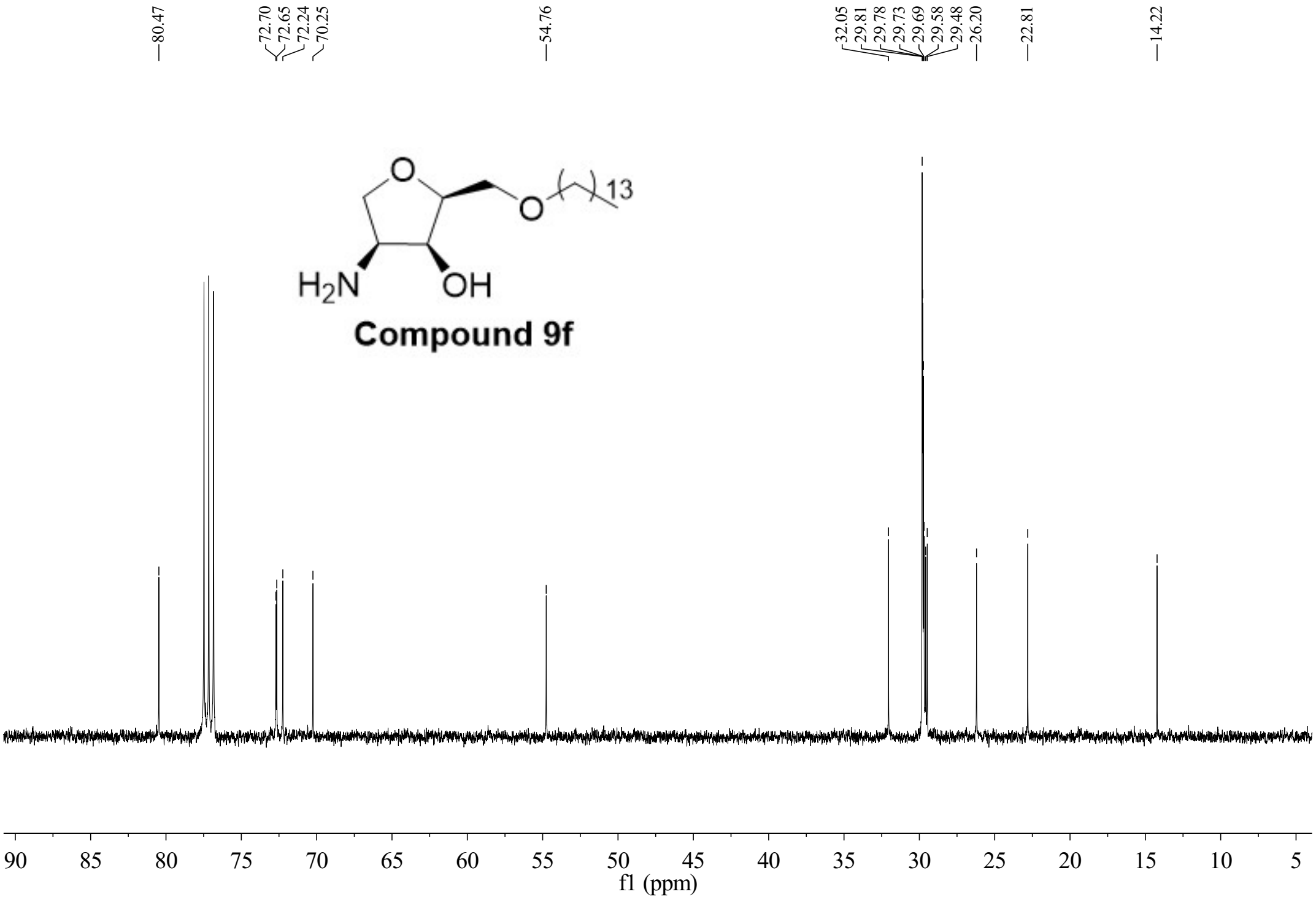
S-31

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3.69
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3.51
3.49
3.47



Compound 9f

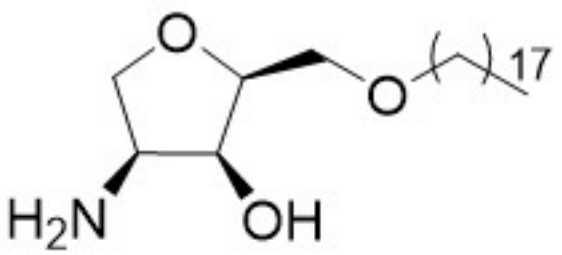




fl (ppm)

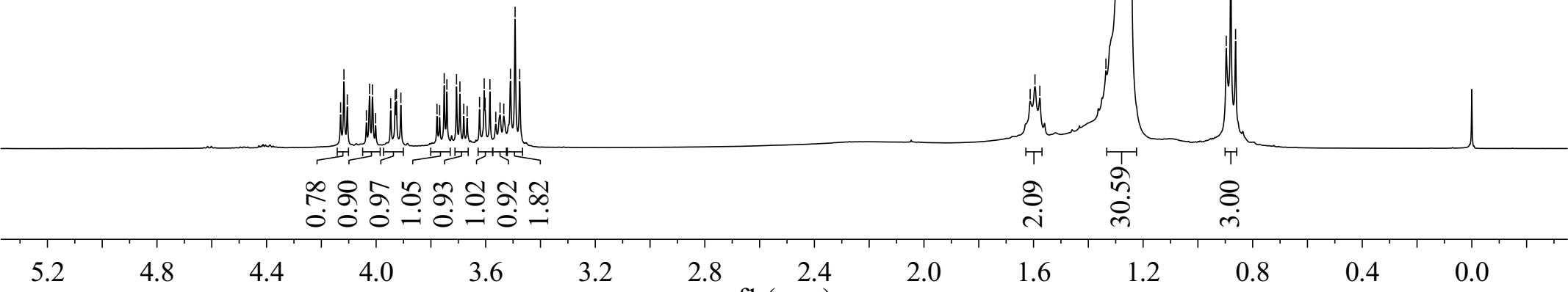
S-33

4.13
4.12
4.11
4.04
4.02
4.01
4.00
3.95
3.93
3.93
3.91
3.78
3.77
3.75
3.74
3.71
3.69
3.68
3.67
3.62
3.61
3.60
3.58
3.56
3.55
3.53
3.51
3.49
3.48

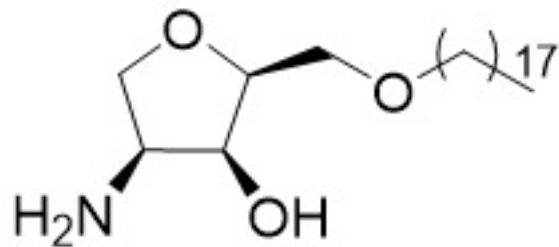


Compound 9h

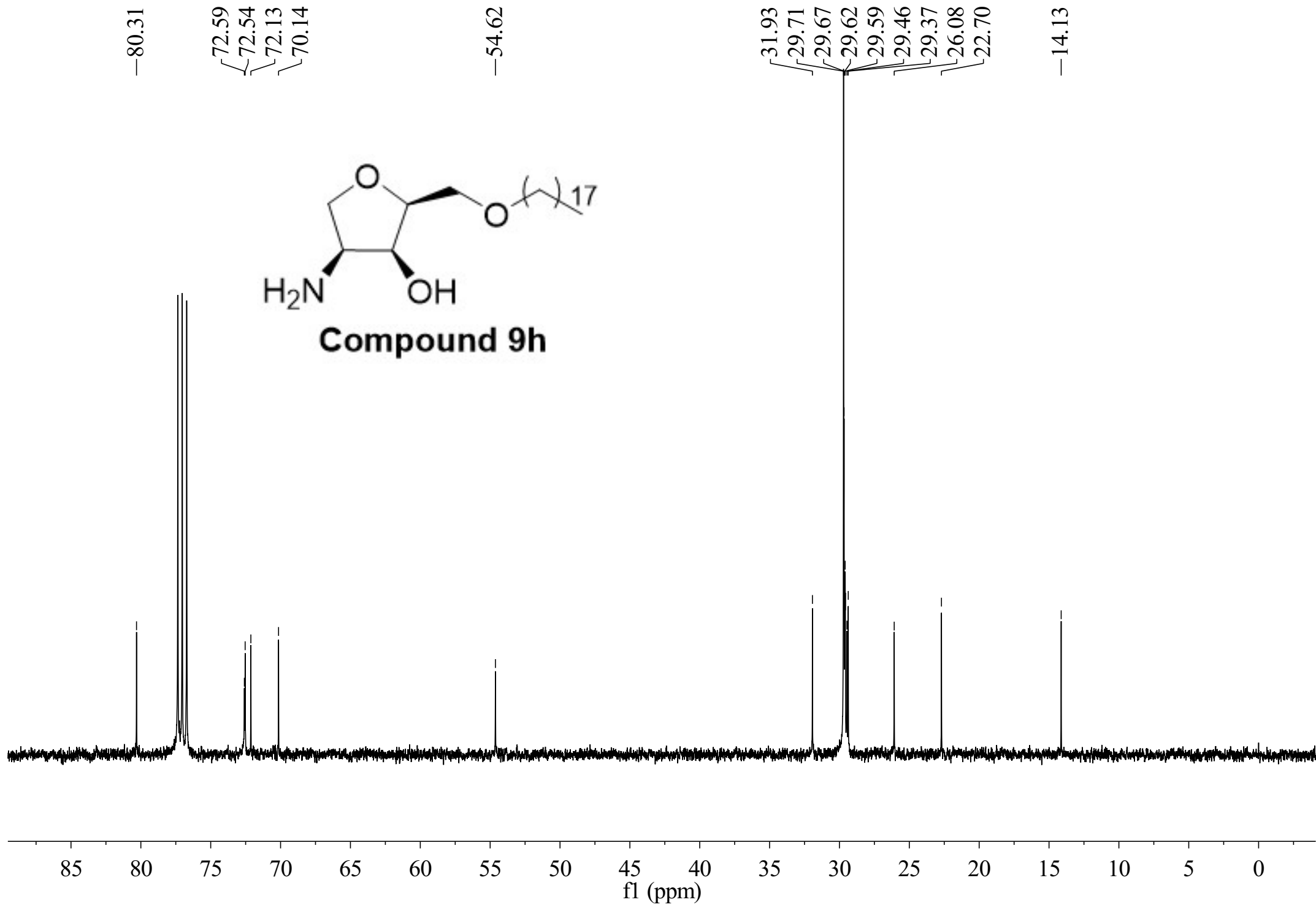
1.61
1.59
1.58
1.34
1.25
0.90
0.88
0.86



fl (ppm)



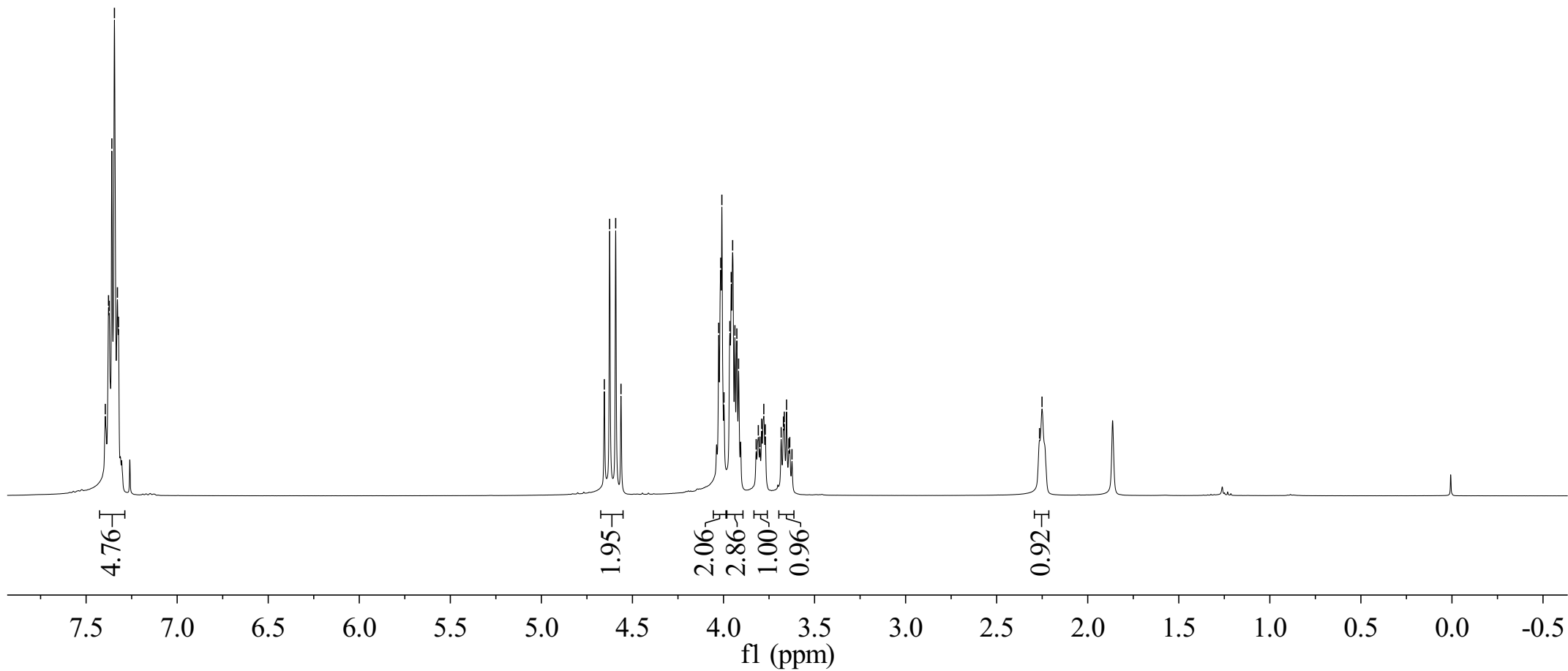
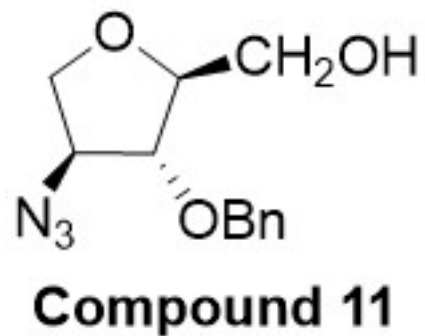
Compound 9h



7.39
7.38
7.37
7.36
7.34
7.33
7.32

4.65
4.63
4.59
4.56

4.03
4.02
4.01
4.00
3.97
3.96
3.95
3.94
3.93
3.92
3.79
3.78
3.67
3.67
3.65
2.26
2.25



—137.17

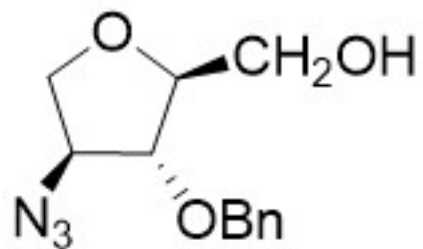
—128.71
—128.27
—127.93

—84.90
—84.26

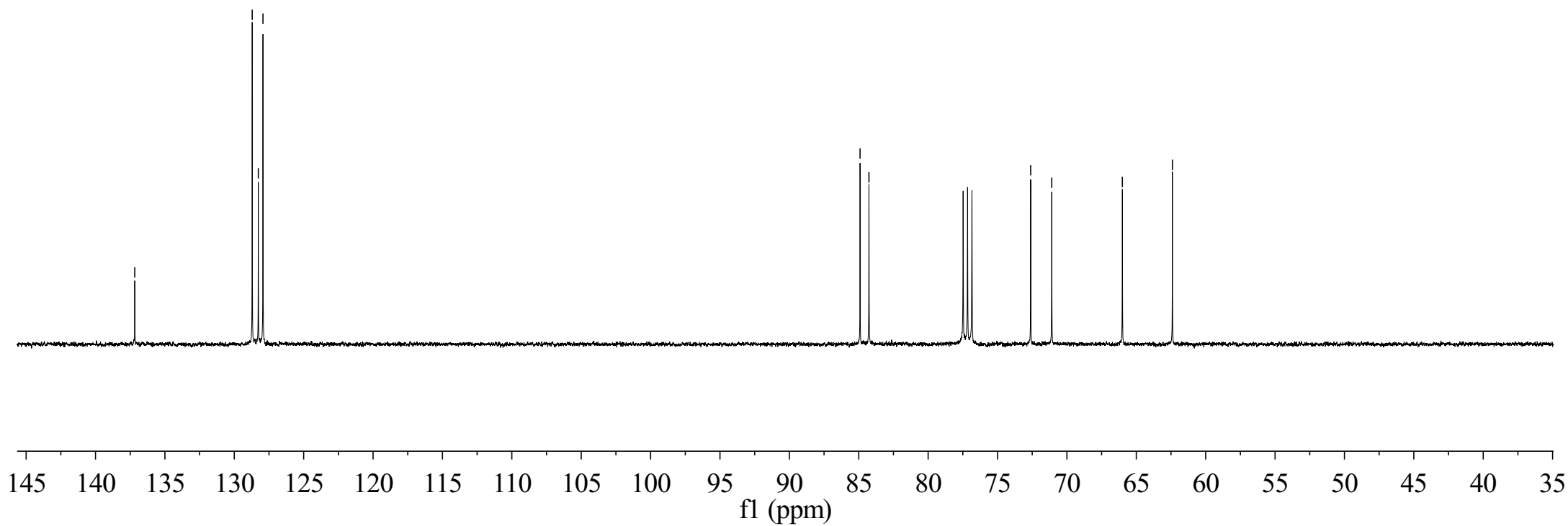
—72.61
—71.09

—66.00

—62.40



Compound 11



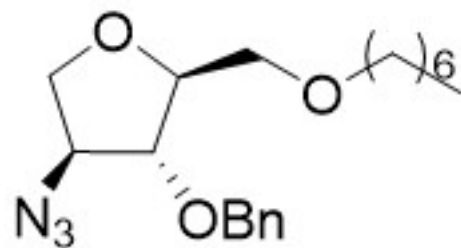
7.40
7.39
7.38
7.37
7.36
7.36
7.34

4.66
4.63
4.62
4.59

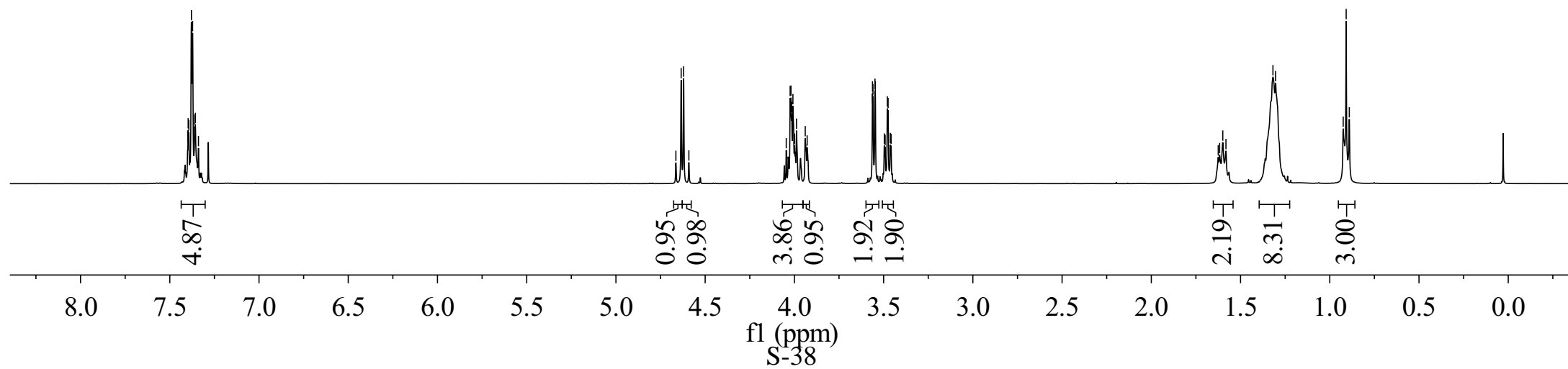
4.02
4.02
4.01

3.56
3.56
3.55
3.55
3.50
3.48
3.47
3.46
3.46

1.62
1.62
1.60
1.58
1.32
1.30
0.92
0.91
0.89



Compound 12a

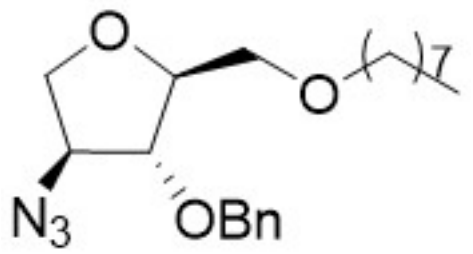


7.40
7.40
7.38
7.38
7.36
7.34

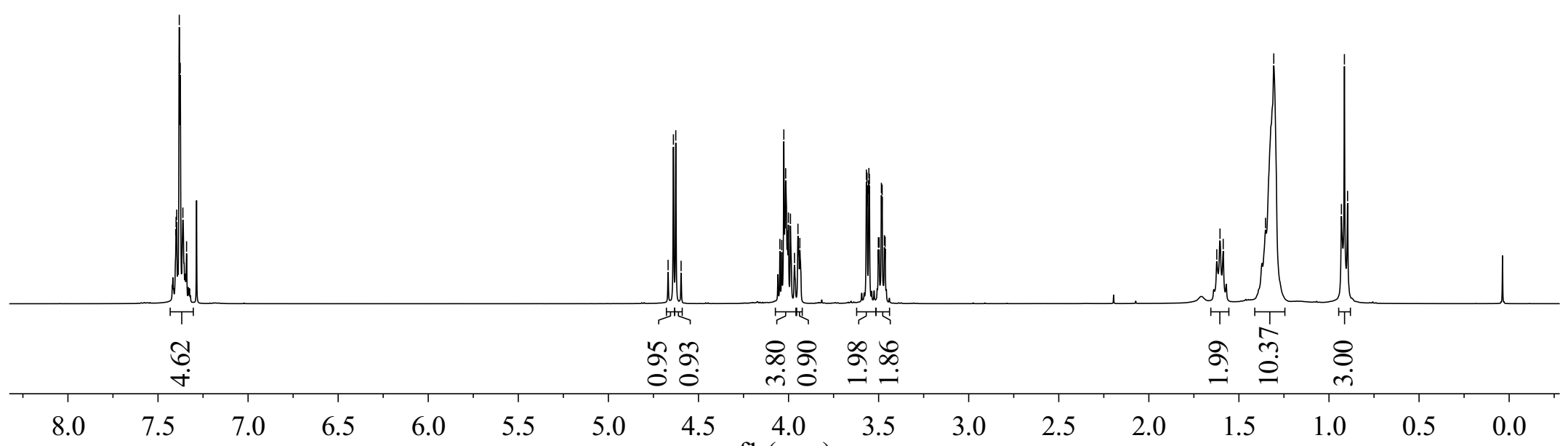
4.67
4.64
4.63
4.60

4.03
4.02
4.02
3.57
3.56
3.55
3.55
3.50
3.50
3.48
3.48
3.47
3.46

1.62
1.61
1.59
1.35
1.31
0.93
0.91
0.90



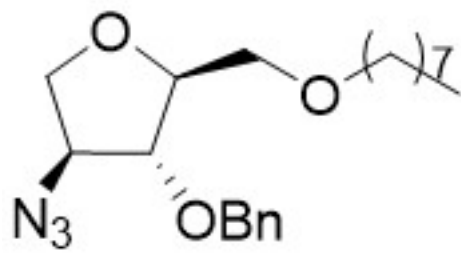
Compound 12b



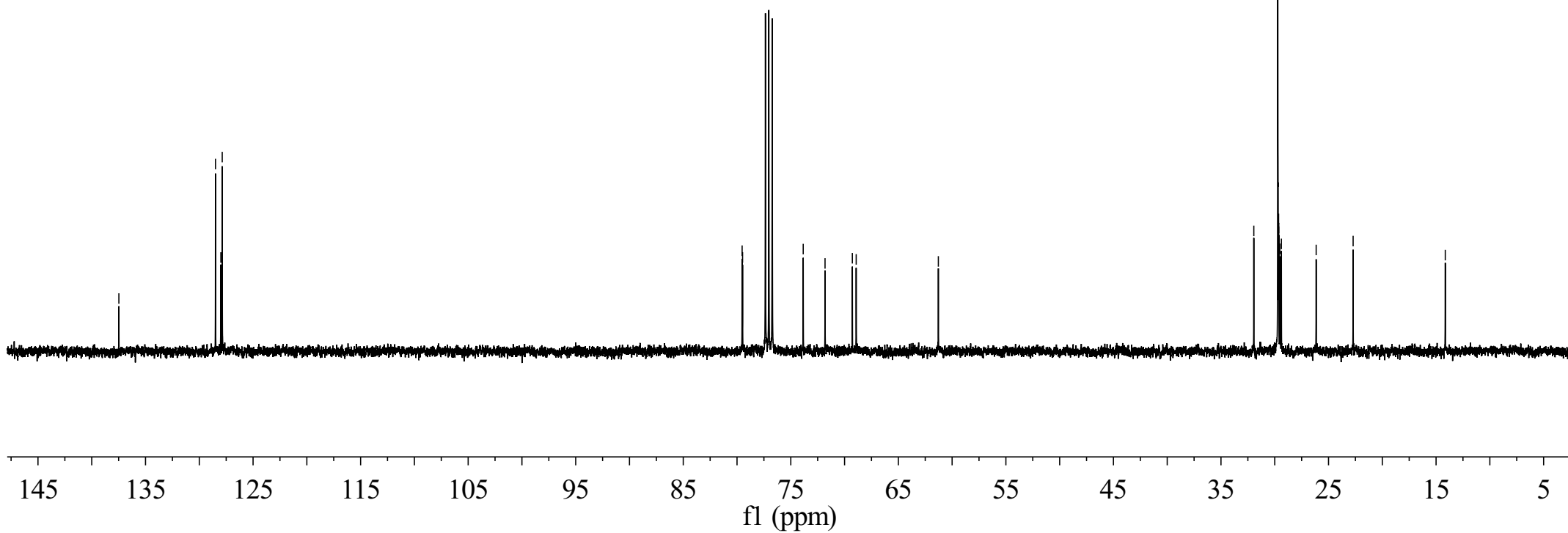
—137.48
—128.49
—128.00
—127.87

—79.53
—79.48
—73.85
—71.82
—69.28
—68.92
—61.28

—31.95
—29.72
—29.64
—29.62
—29.53
—29.38
—26.15
—22.71
—14.14



Compound 12b

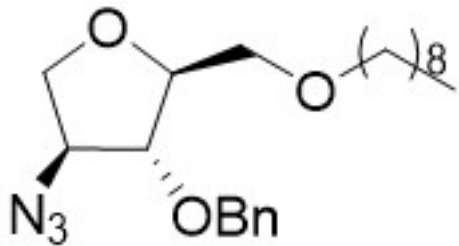


7.40
7.40
7.38
7.38
7.36

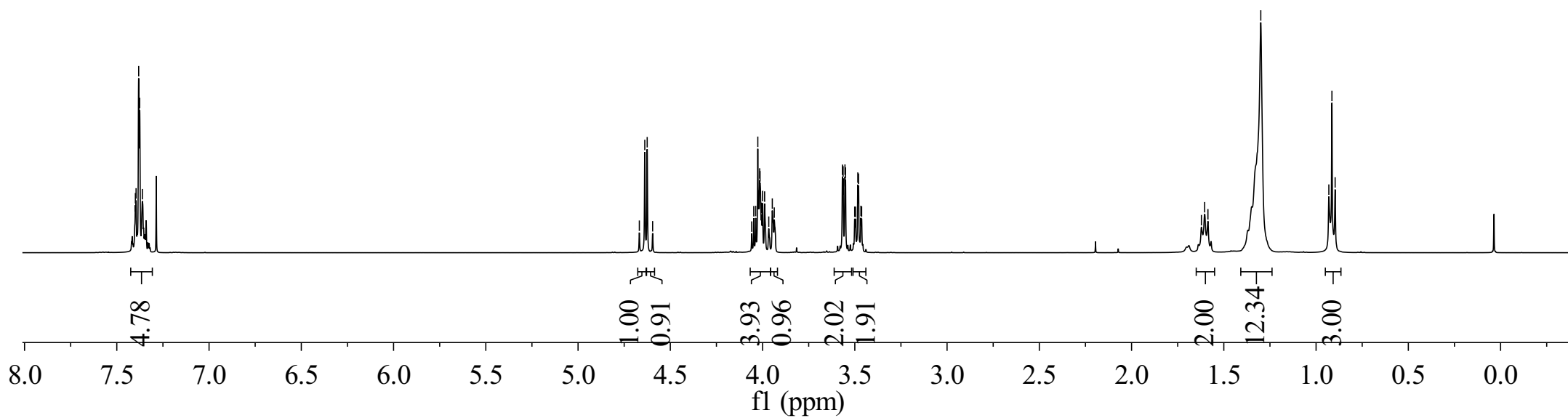
4.67
4.64
4.63
4.60

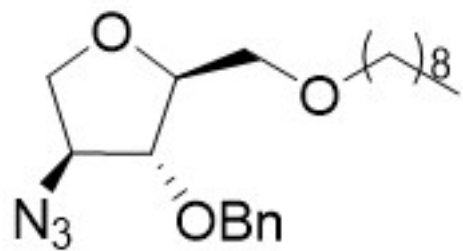
4.03
4.02
4.01
3.57
3.56
3.55
3.55
3.50
3.50
3.48
3.48
3.47
3.46

1.62
1.60
1.59
1.30
0.93
0.91
0.90



Compound 12c





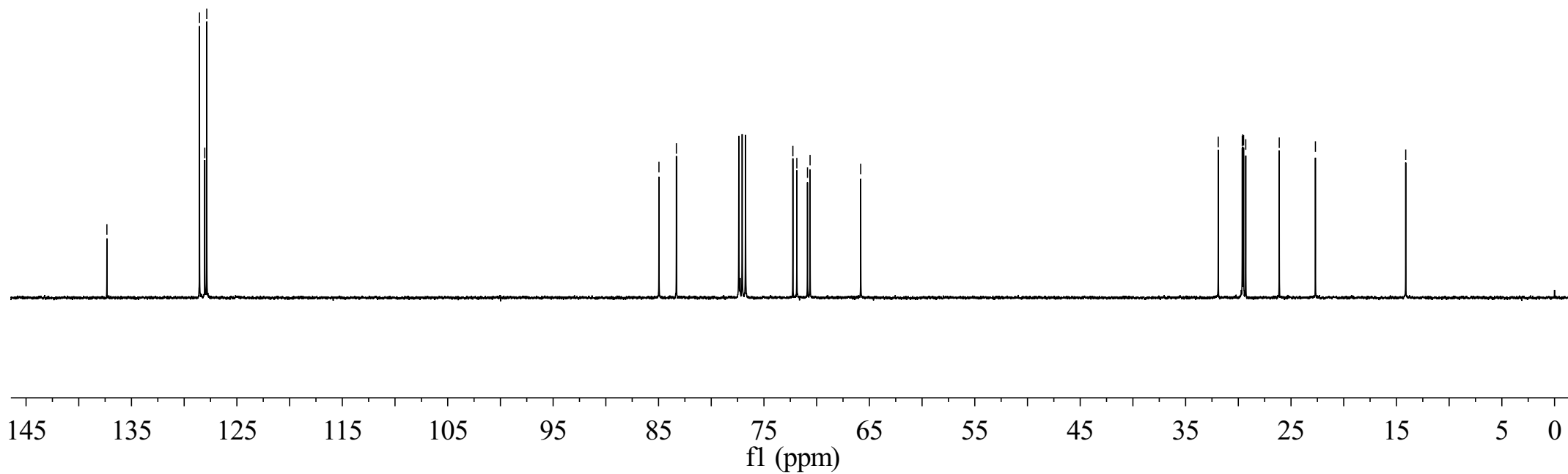
Compound 12c

137.33
128.55
128.05
127.86

84.96
83.31

72.26
71.88
70.87
70.62
65.82

31.90
29.62
29.58
29.50
29.29
26.12
22.69
14.12

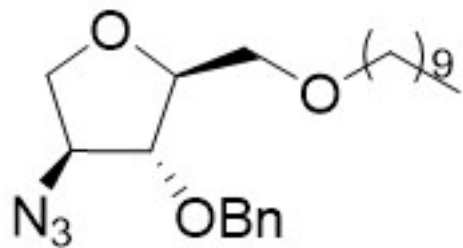


7.40
7.40
7.38
7.38
7.36
7.35
7.34

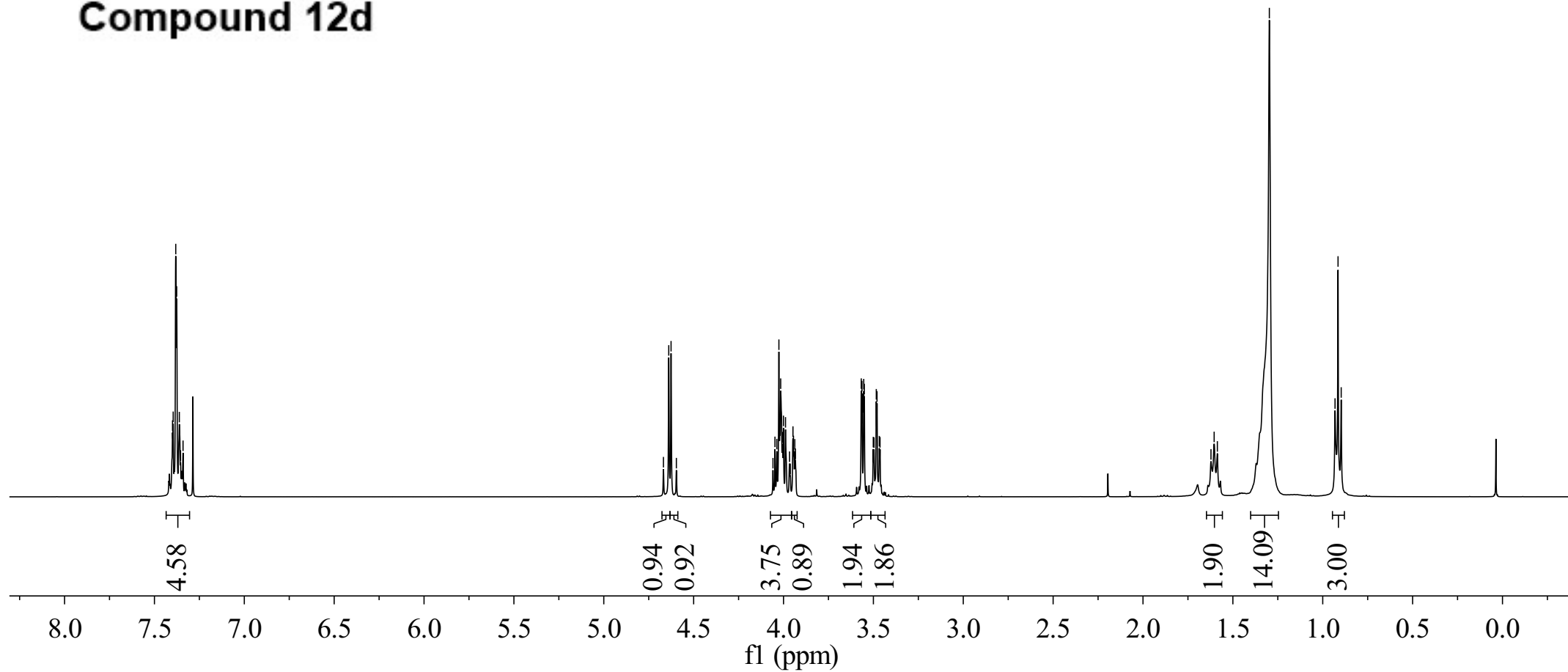
4.67
4.64
4.63
4.60

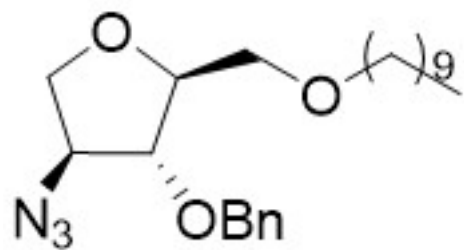
4.03
4.02
4.02
3.57
3.56
3.55
3.55
3.50
3.50
3.48
3.48
3.47
3.46

1.62
1.60
1.59
1.30
0.93
0.91
0.90

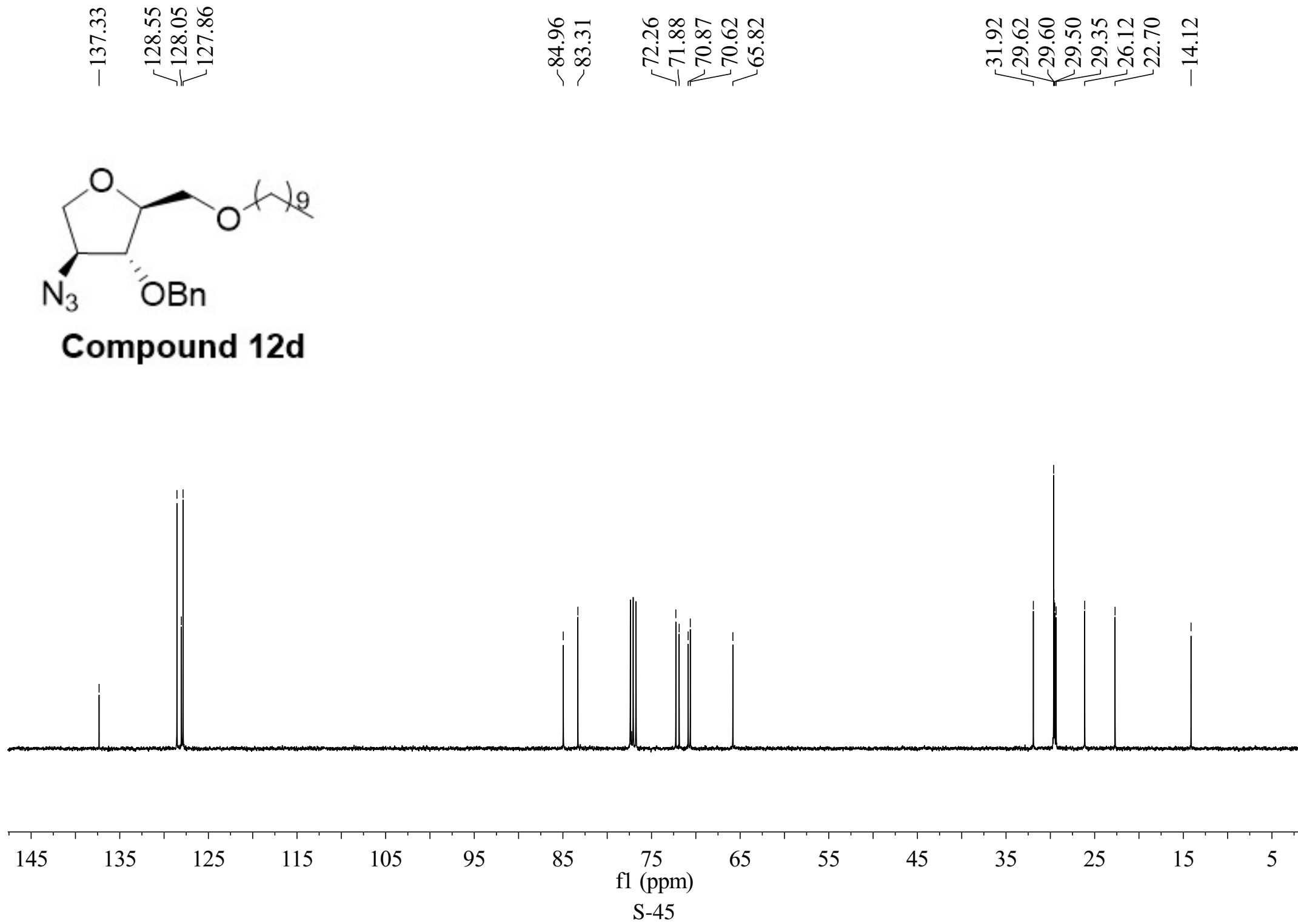


Compound 12d





Compound 12d

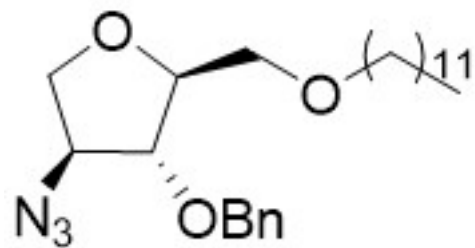


7.36
7.36
7.35
7.35
7.34
7.33
7.31
7.31

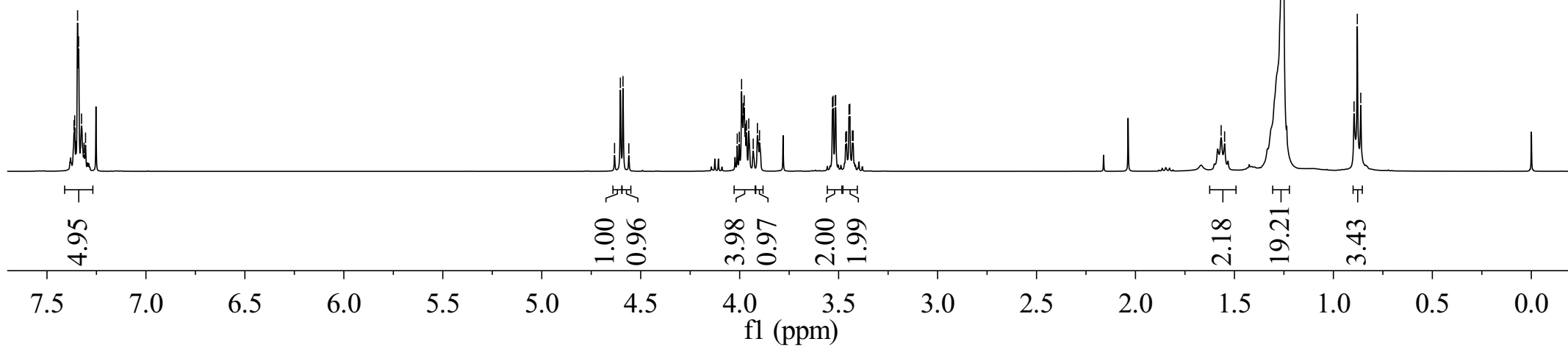
4.63
4.60
4.59
4.56

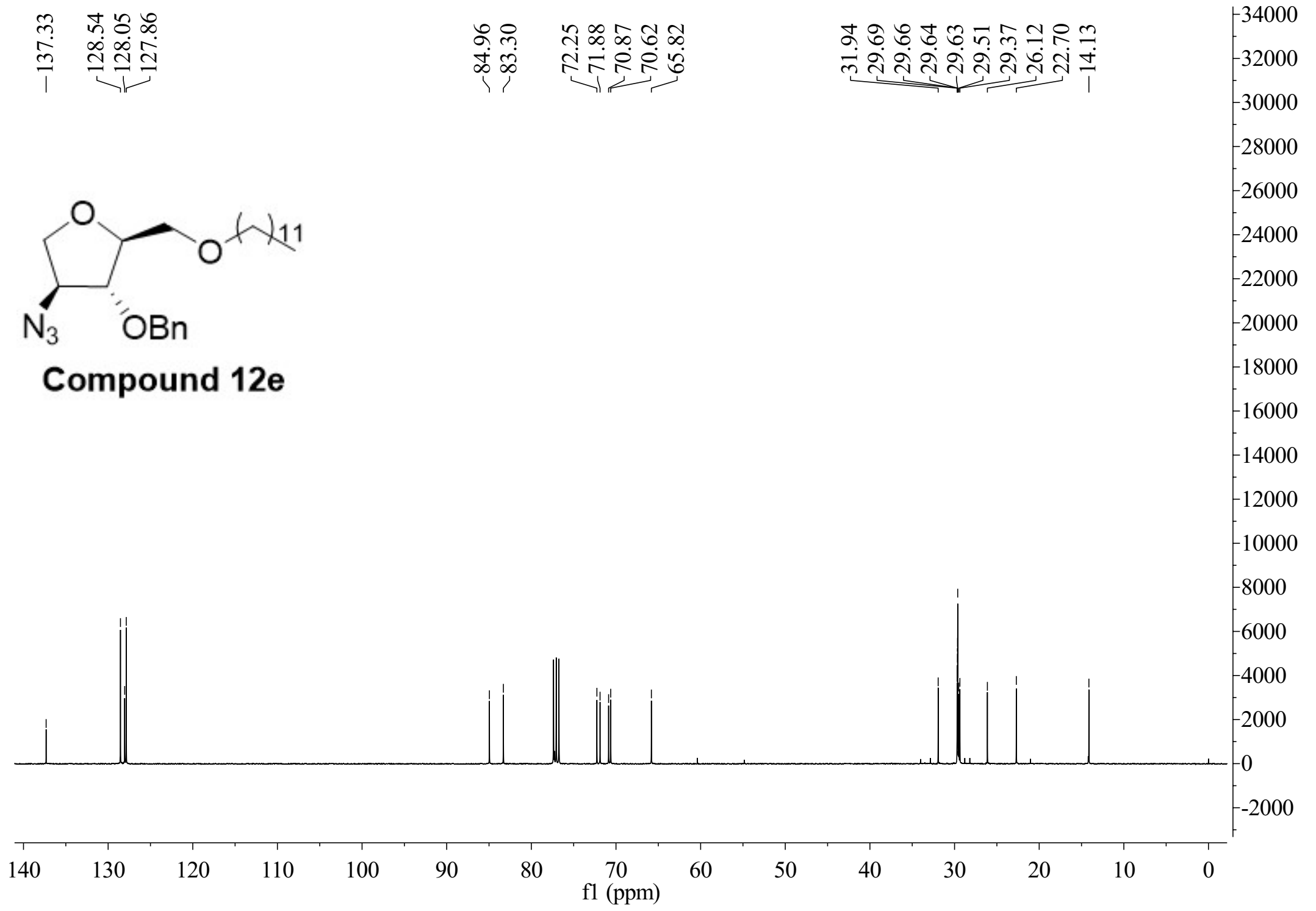
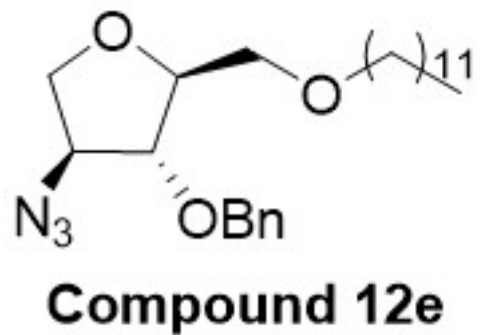
3.99
3.98
3.98
3.53
3.53
3.52
3.51
3.46
3.46
3.45
3.44
3.43
3.43

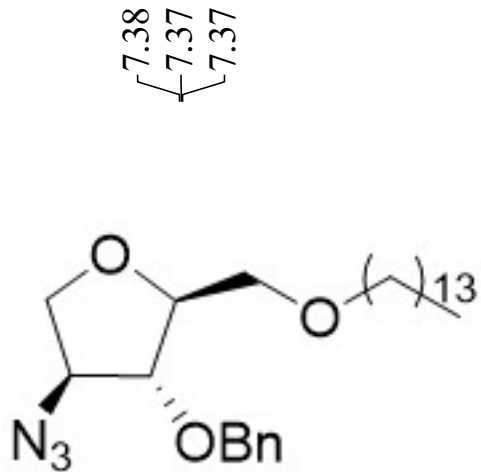
1.57
1.55
1.26
0.90
0.88
0.86



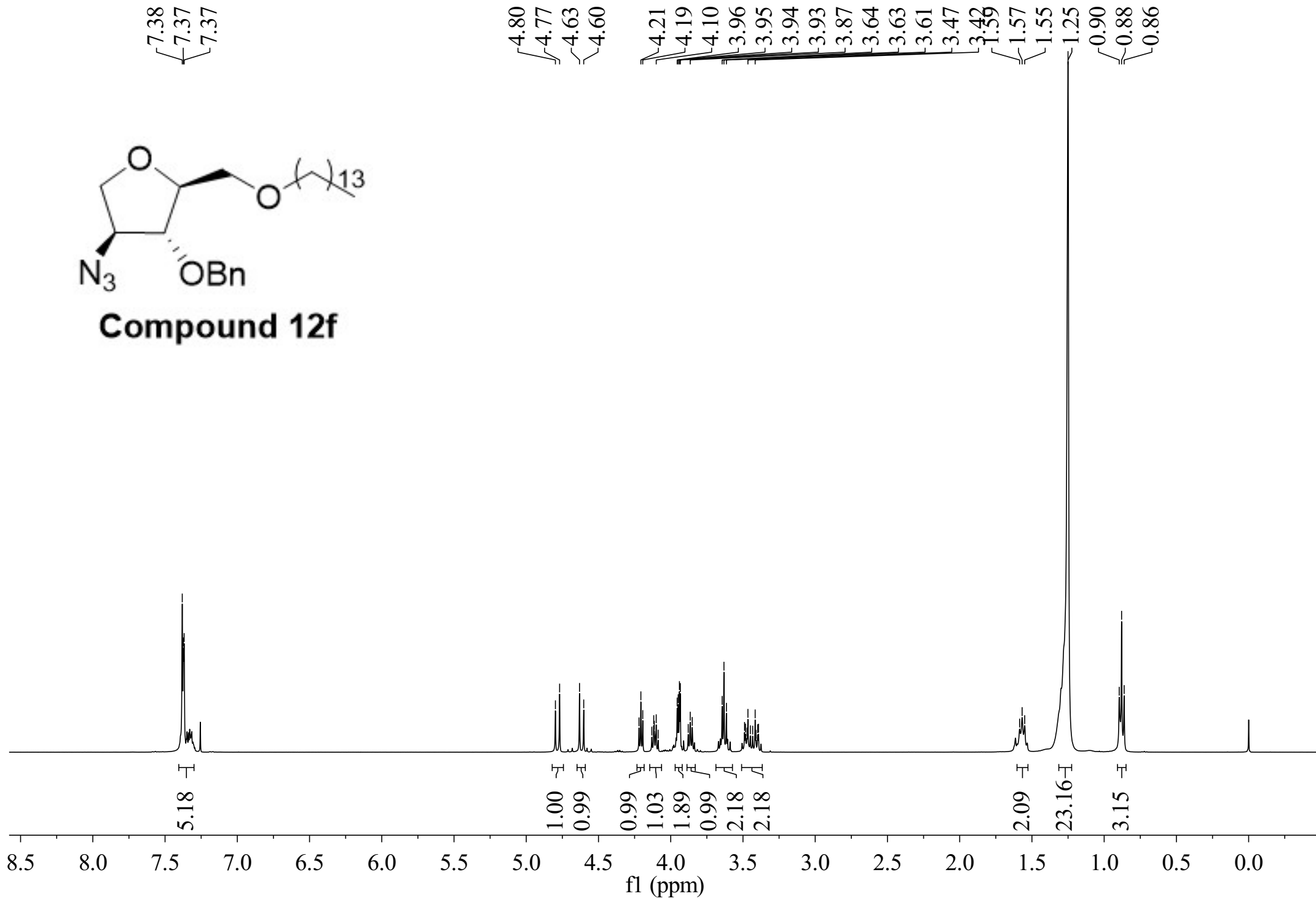
Compound 12e

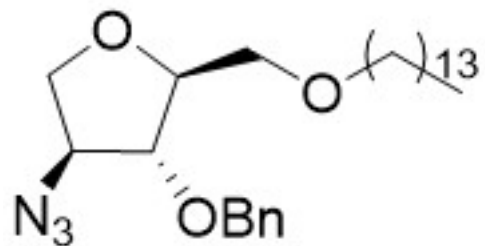






Compound 12f



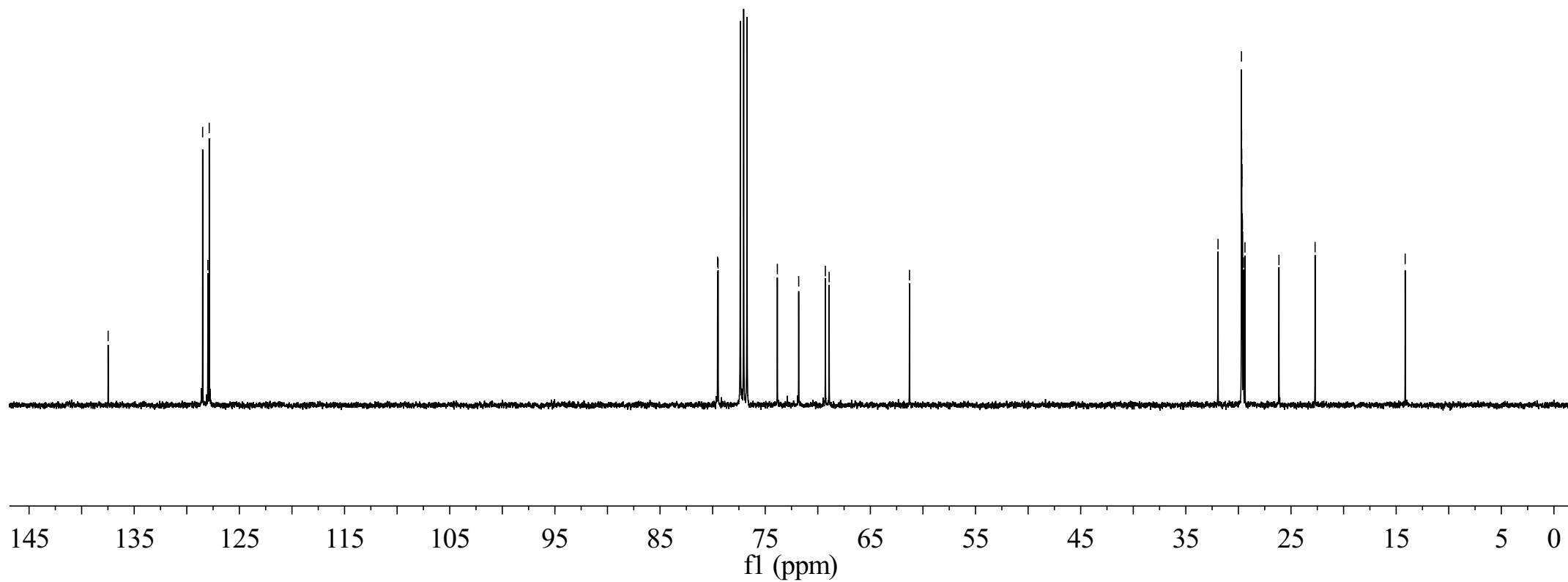


Compound 12f

—137.48
 {128.49
 {128.00
 {127.87

{79.53
 {79.48
 {73.85
 {71.81
 {69.28
 {68.92
 —61.28

{31.94
 {29.71
 {29.70
 {29.69
 {29.68
 {29.64
 {29.62
 {29.52
 {29.38
 {26.15
 {22.71
 —14.14

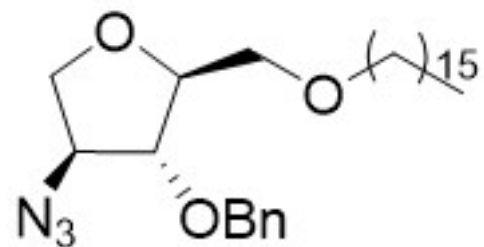


7.37
7.37
7.36
7.35
7.35
7.33
7.33
7.32
7.31

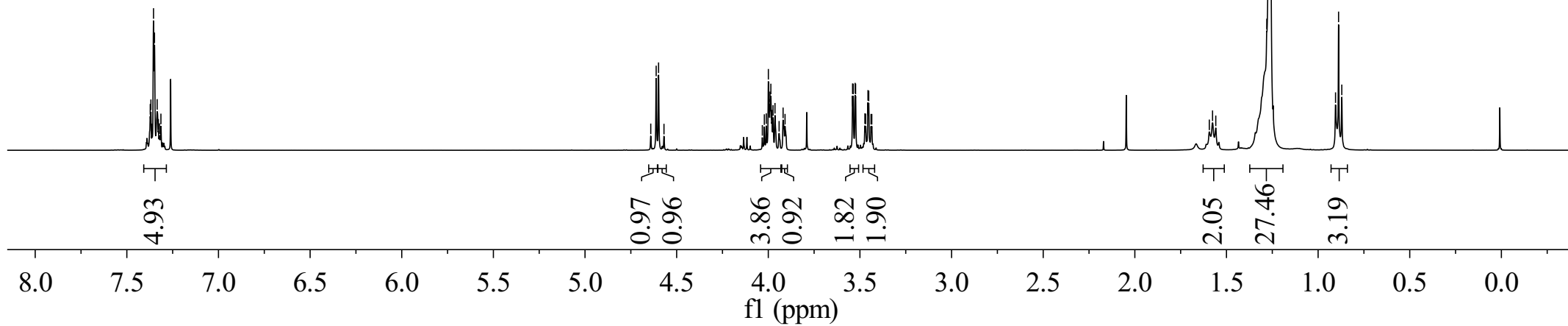
4.64
4.61
4.60
4.57

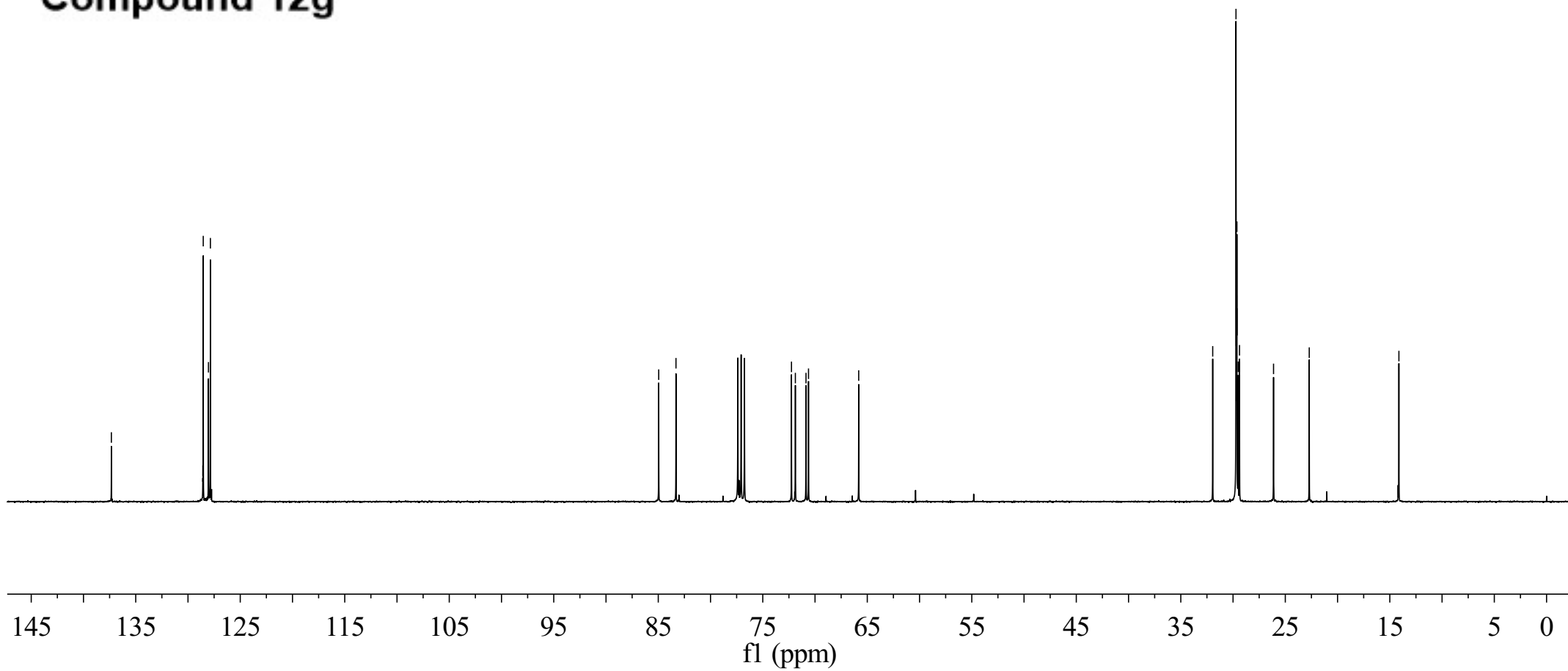
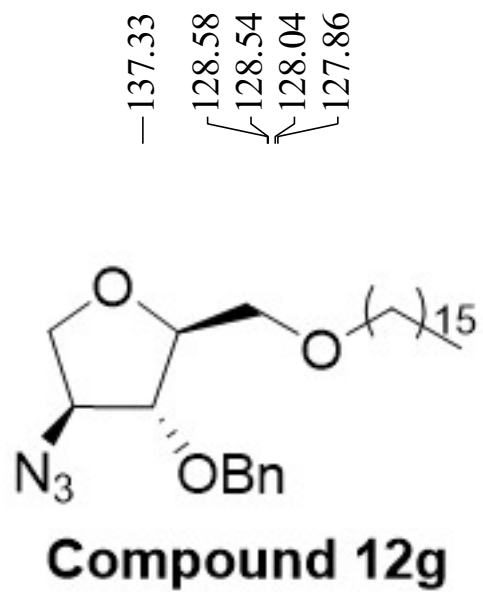
4.00
3.99
3.99
3.54
3.54
3.53
3.52
3.47
3.47
3.46
3.45
3.44
3.44

1.59
1.58
1.56
1.28
1.26
0.90
0.89
0.87

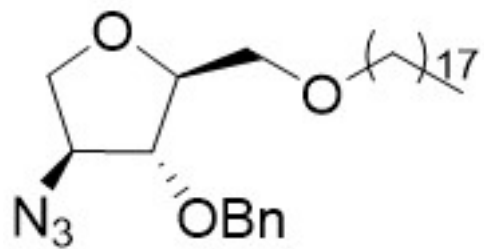


Compound 12g





7.40
7.39
7.38
7.37
7.36

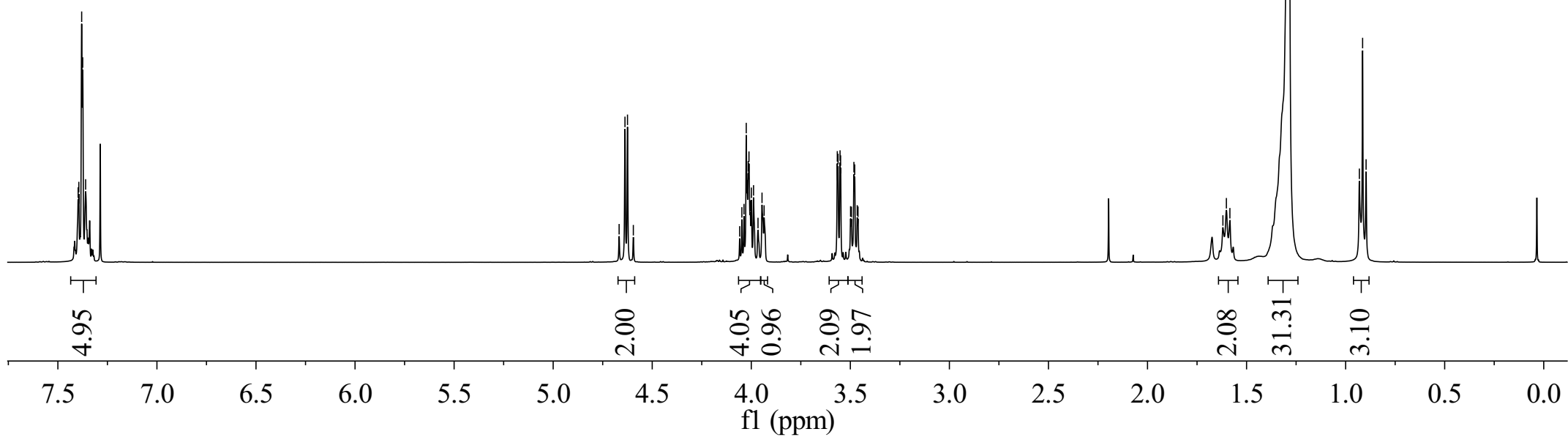


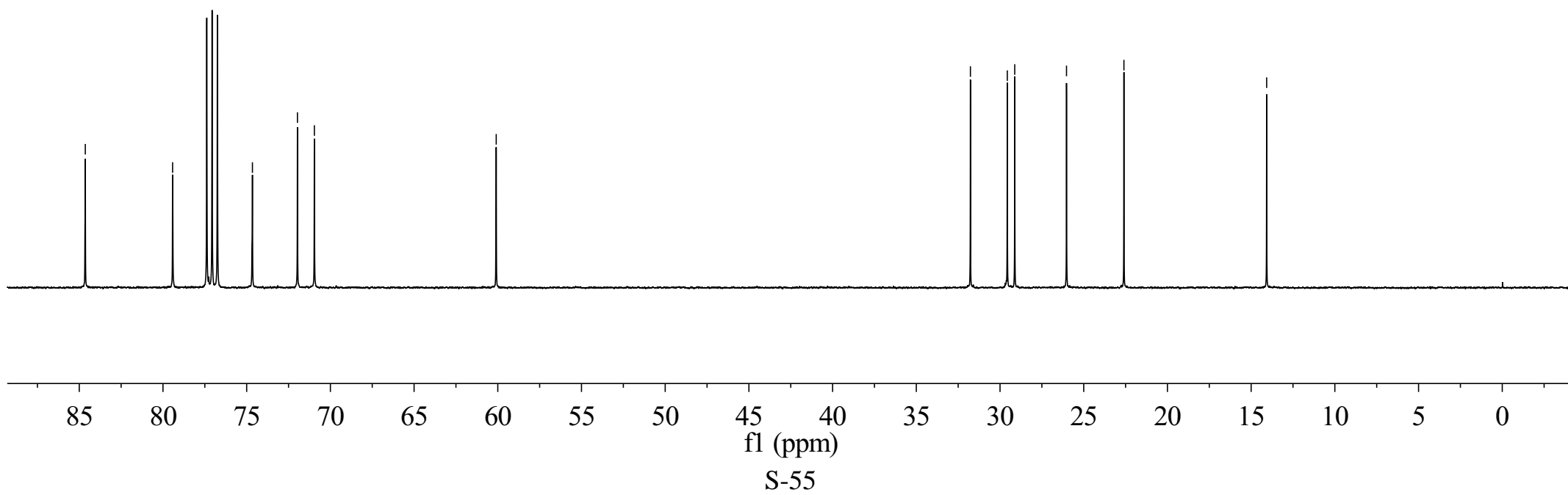
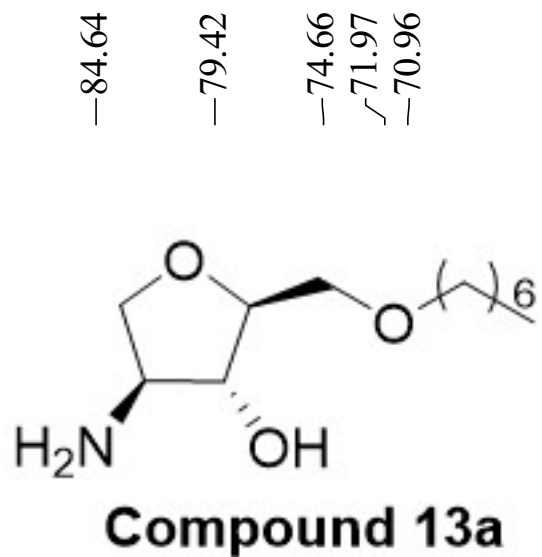
Compound 12h

4.67
4.64
4.62
4.60

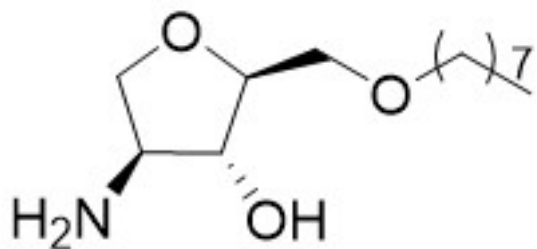
4.03
4.02
4.01
3.57
3.56
3.55
3.55
3.50
3.49
3.48
3.48
3.47
3.46

1.62
1.60
1.58
1.29
0.93
0.91
0.90

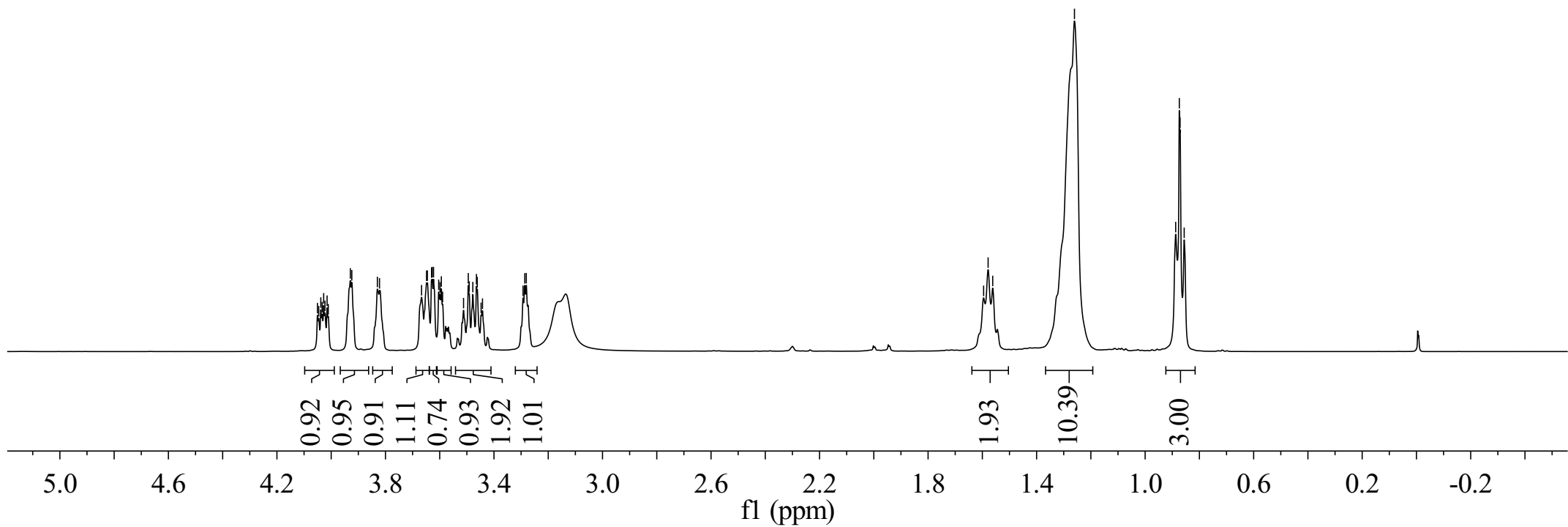


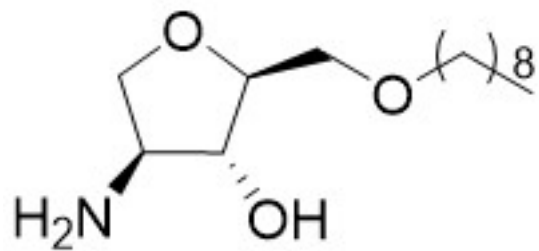


4.04
4.03
4.03
4.02
4.02
3.93
3.92
3.83
3.82
3.67
3.65
3.65
3.63
3.63
3.62
3.60
3.60
3.59
3.59
3.51
3.49
3.49
3.48
3.46
3.46
3.44
3.29
3.29
3.28
1.60
1.58
1.56
-1.26
0.89
0.87
0.87
0.86

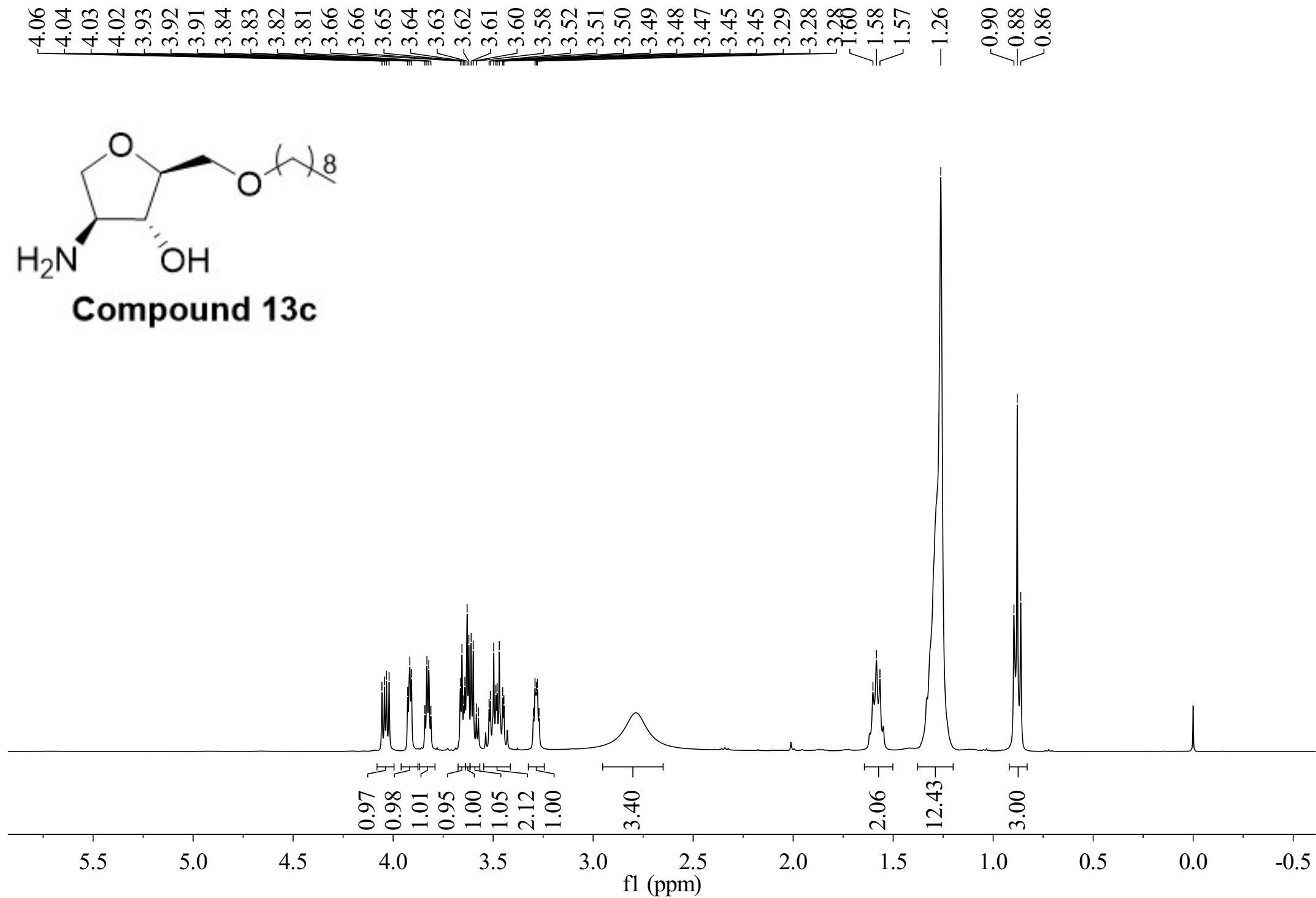


Compound 13b





Compound 13c

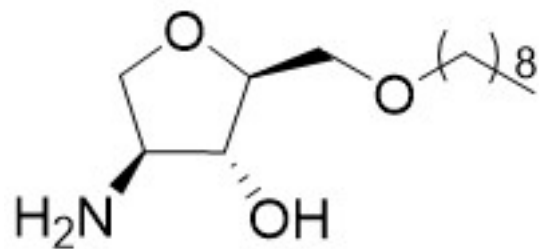


-84.68
-79.38
-74.65
-71.97
-70.96

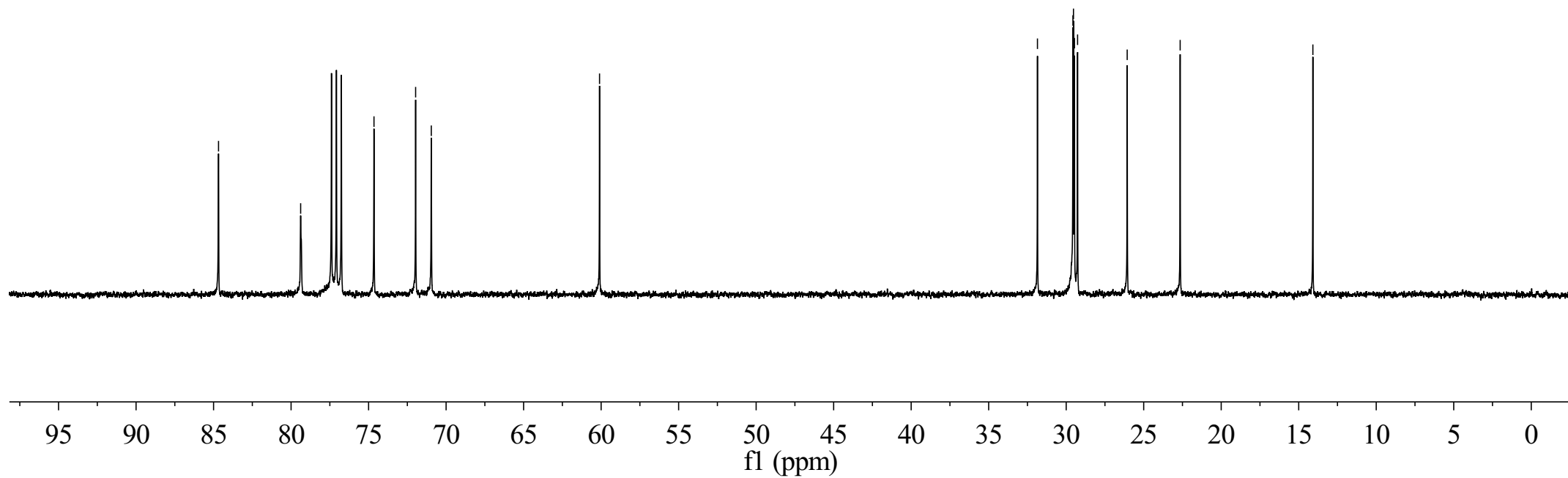
-60.10

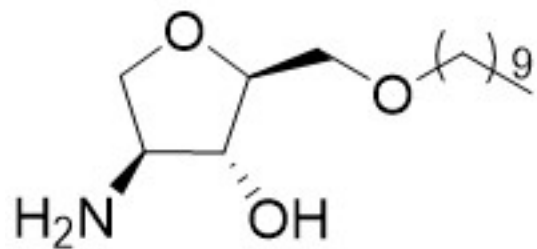
31.85
29.57
29.53
29.47
29.27
26.06
22.65

-14.09

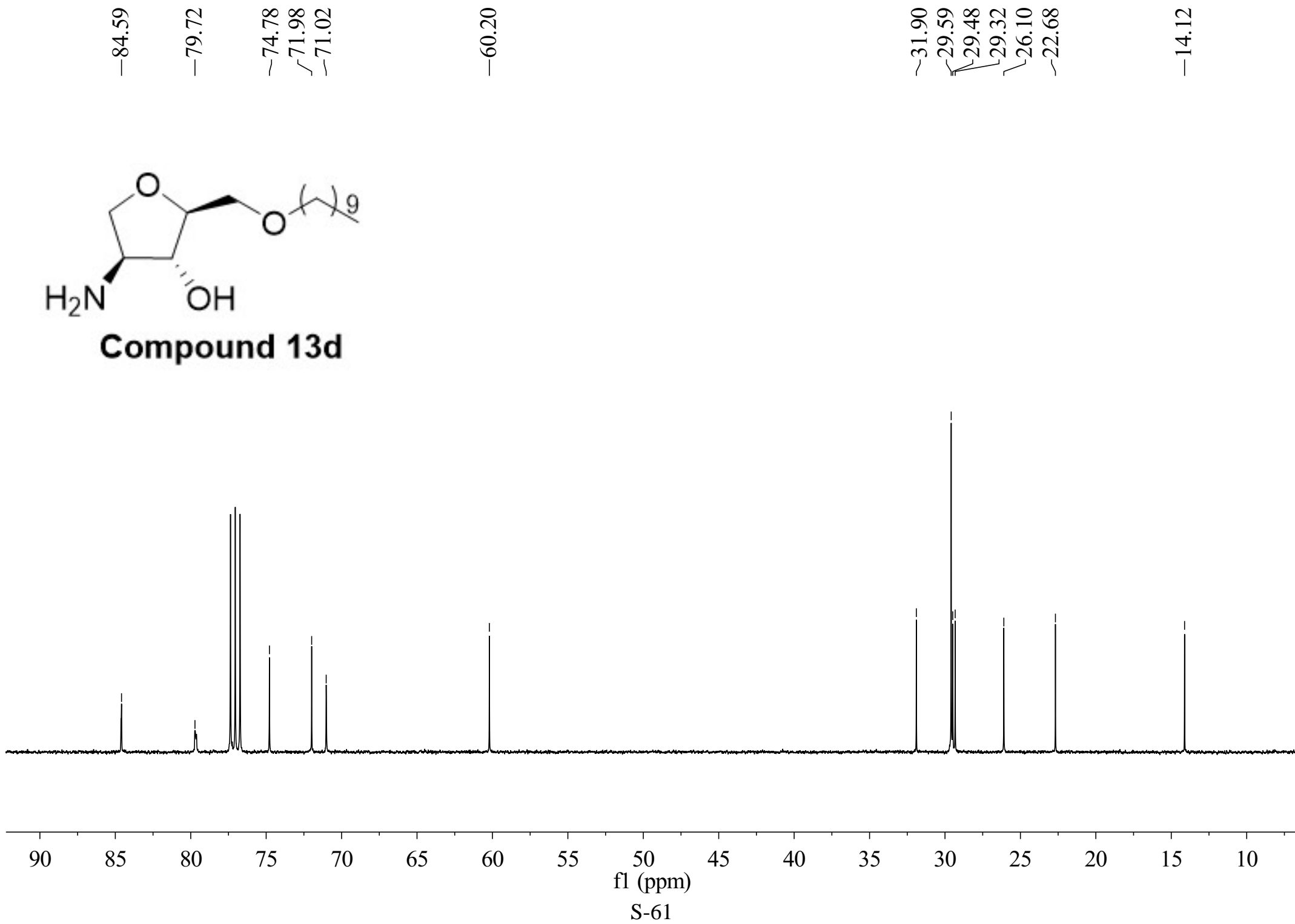


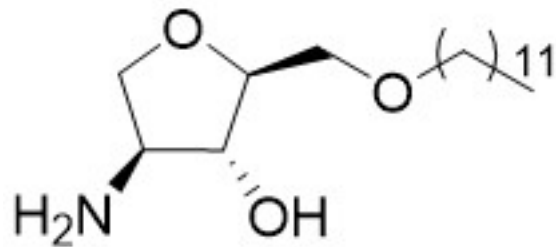
Compound 13c



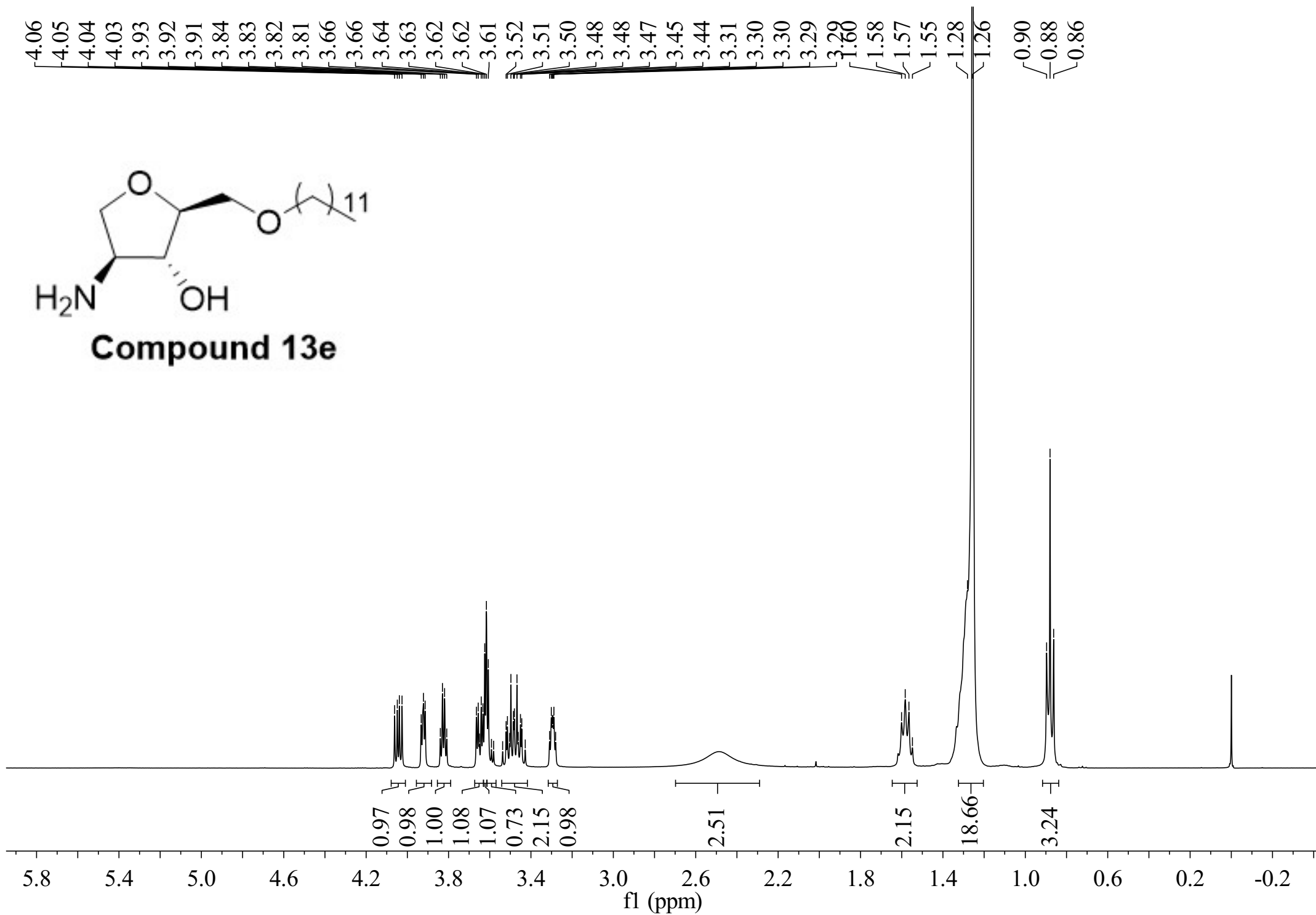


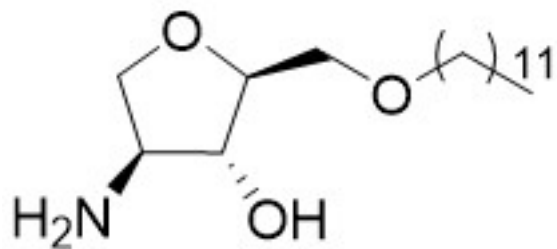
Compound 13d





Compound 13e





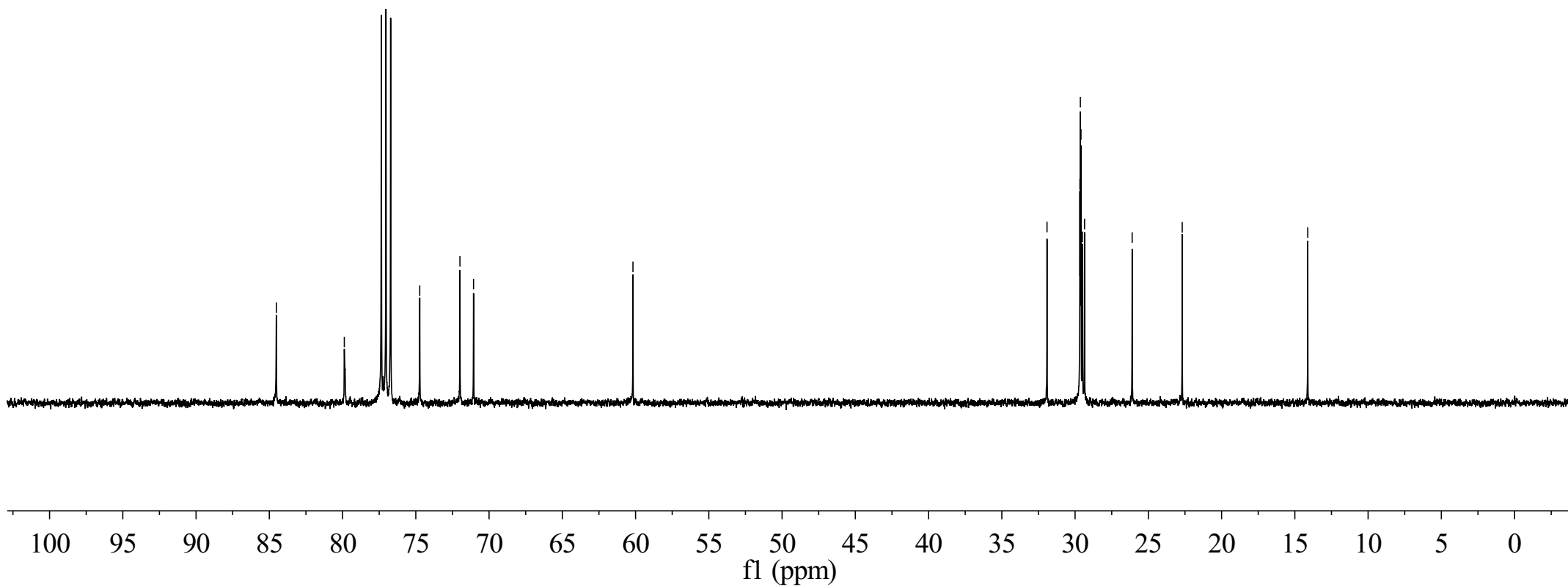
Compound 13e

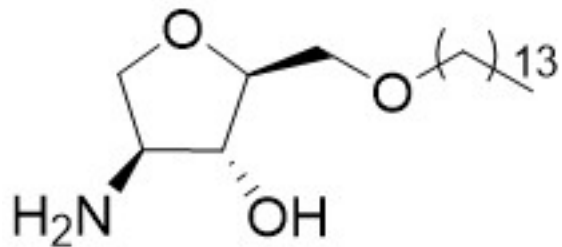
—84.52
—79.88
~74.73
~71.99
~71.06

—60.18

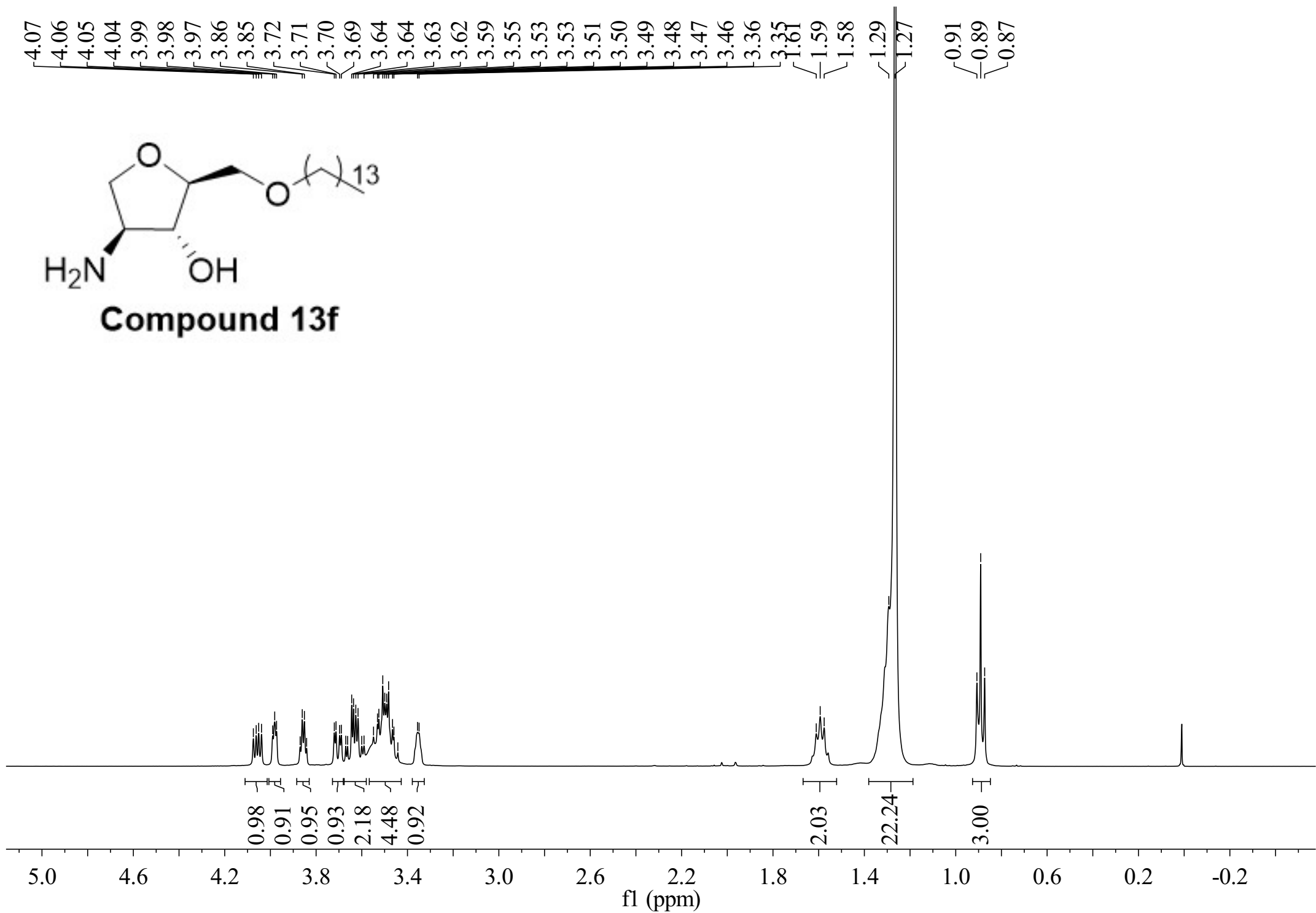
31.92
29.67
29.64
29.60
29.49
29.35
26.10
22.69

—14.12



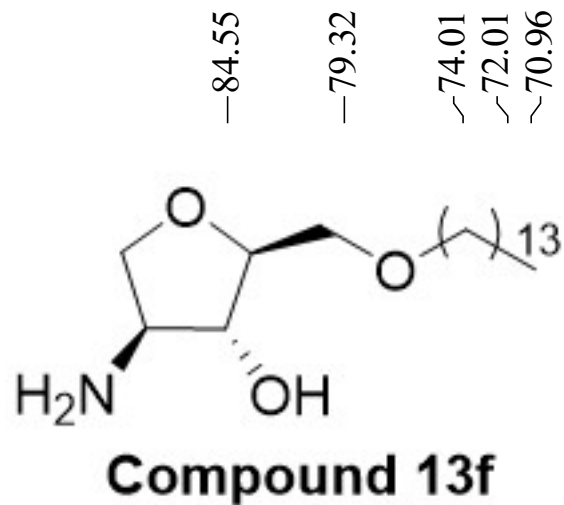


Compound 13f



fl (ppm)

S-64



—84.55

—79.32

~74.01

~72.01

~70.96

—59.82

31.92

29.69

29.67

29.65

29.60

29.55

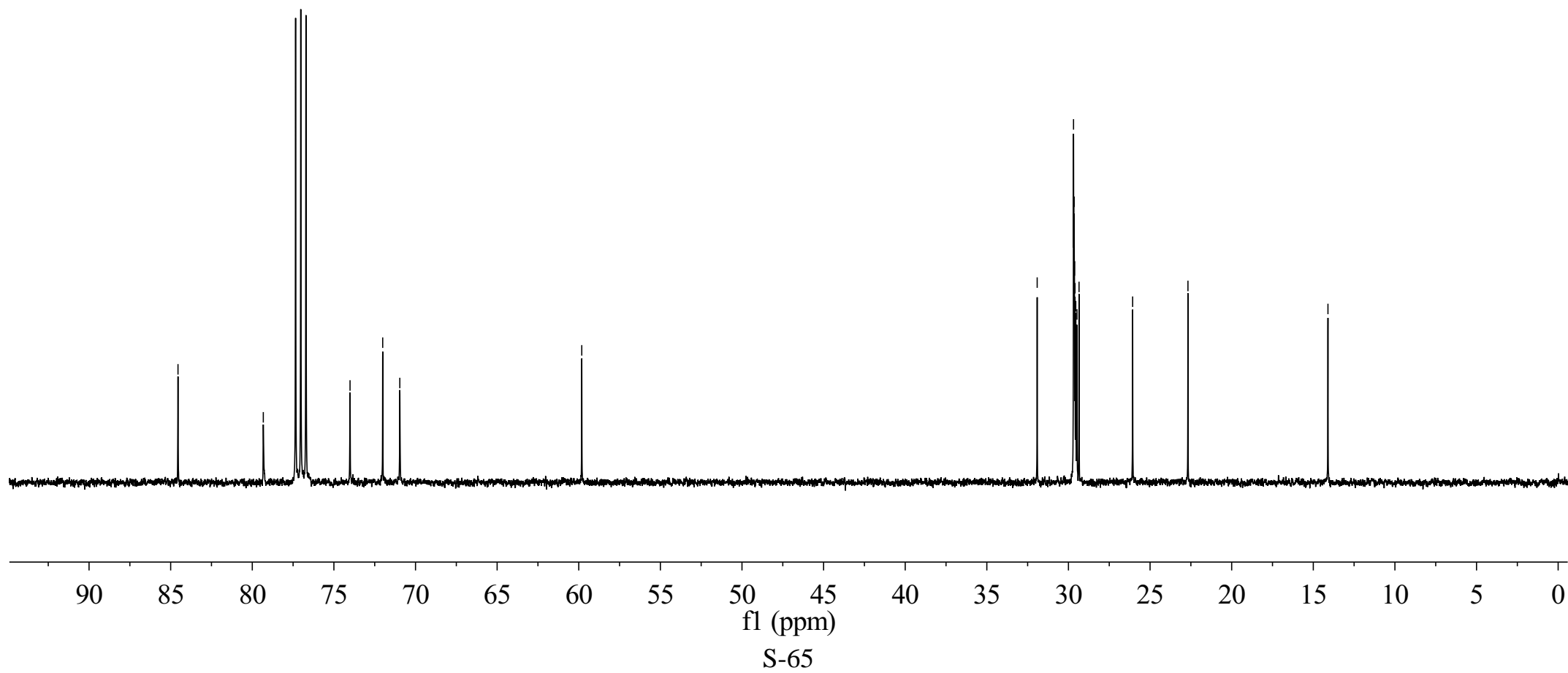
29.48

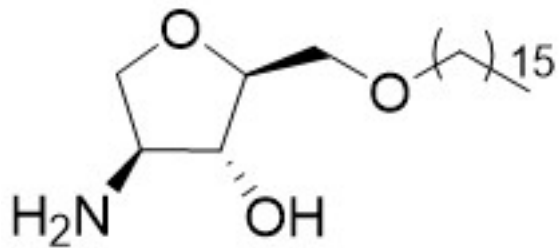
29.35

26.07

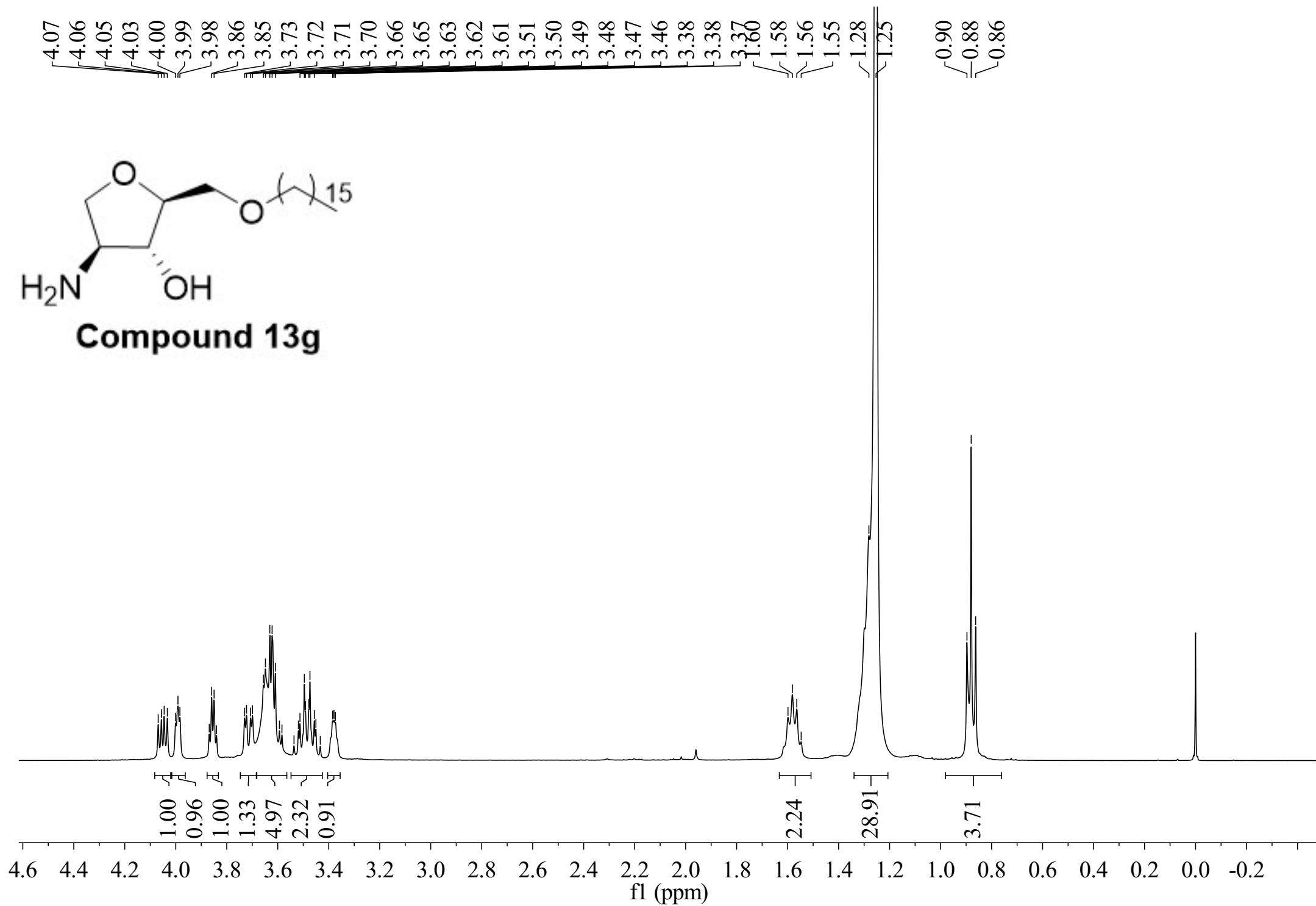
22.68

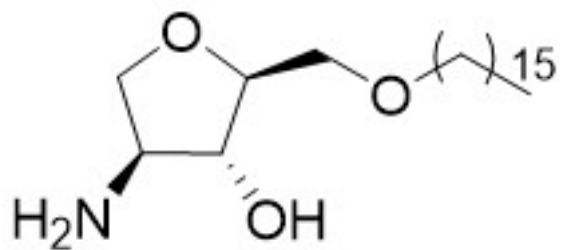
—14.10





Compound 13g





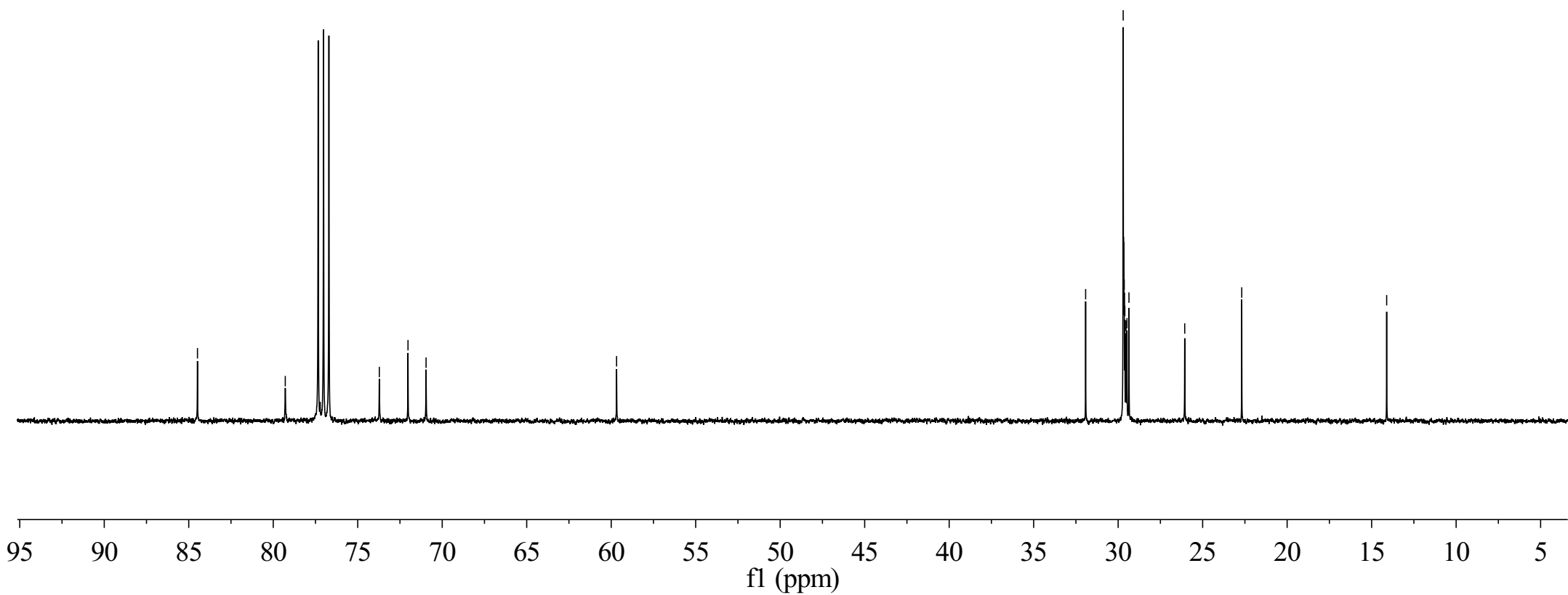
Compound 13g

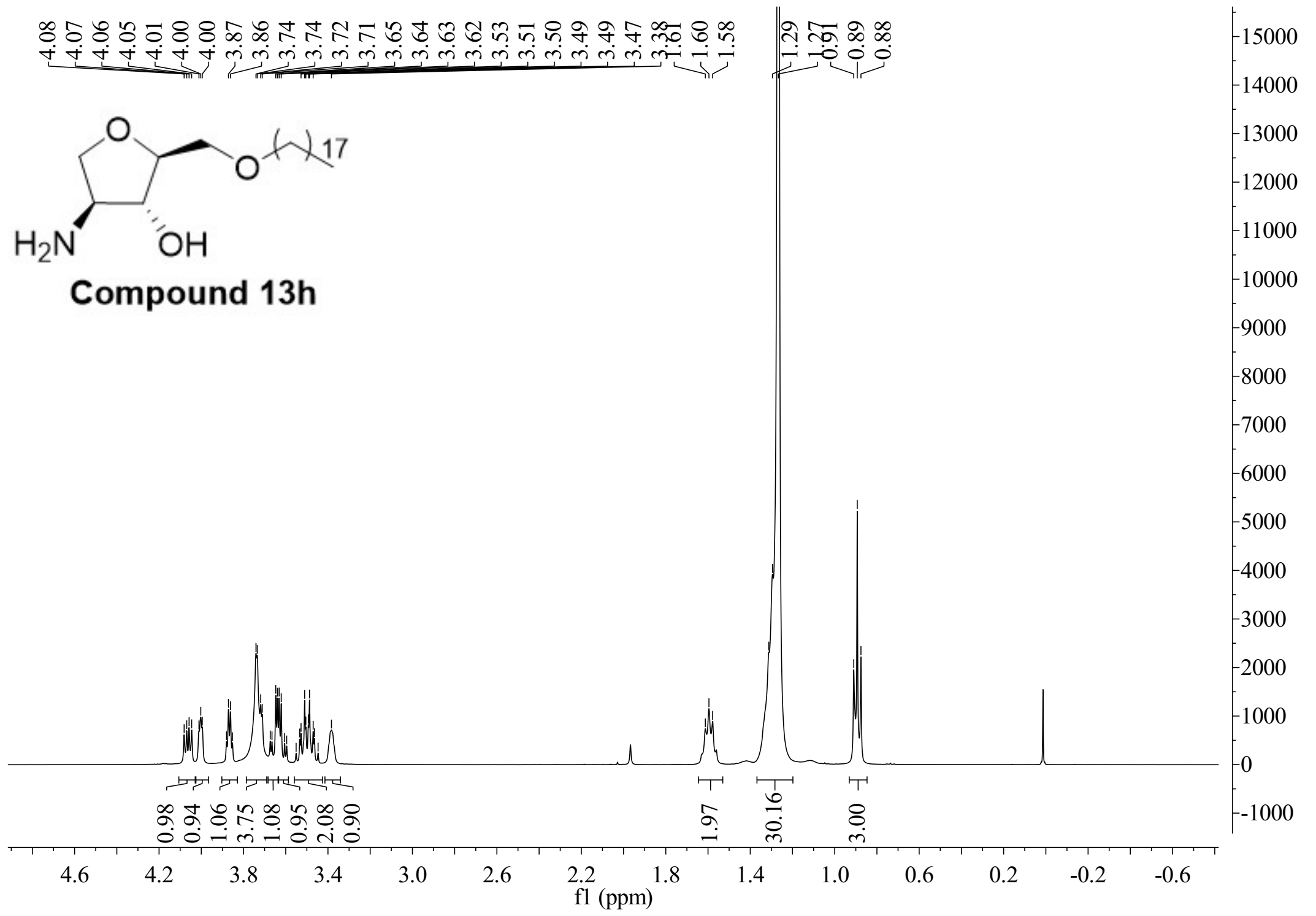
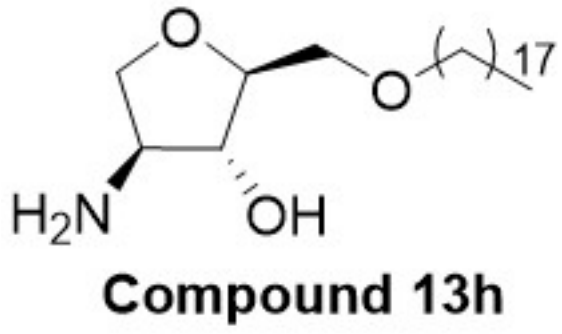
—84.48
—79.29
~73.72
~72.02
~70.96

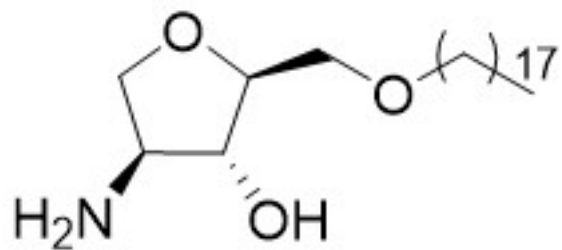
—59.68

31.92
29.70
29.68
29.66
29.64
29.60
29.54
29.48
29.36
26.06
22.69

—14.11







Compound 13h

—84.51

—79.36

~73.94

~72.02

~70.97

—59.78

31.92

29.70

29.66

29.60

29.55

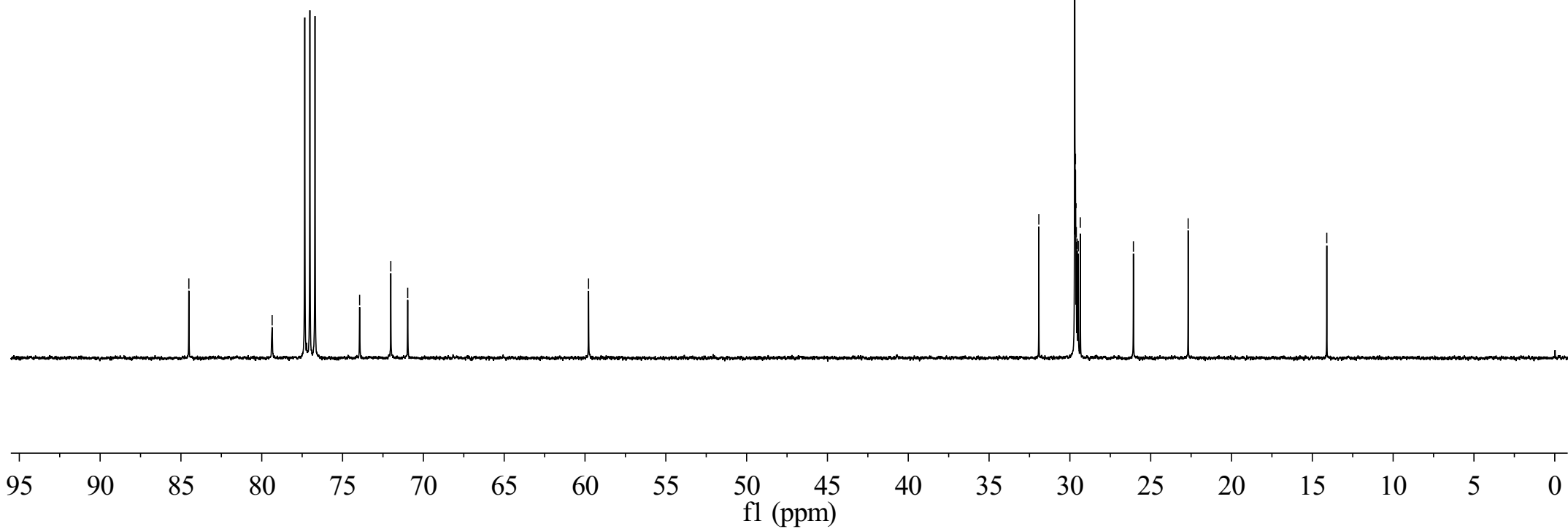
29.48

29.36

26.07

22.68

—14.11



fl (ppm)

S-69