

Supporting Information

Formal Synthesis of Disaccharide Repeating Unit (IdoA-GlcN) of Heparin/Heparan Sulfate

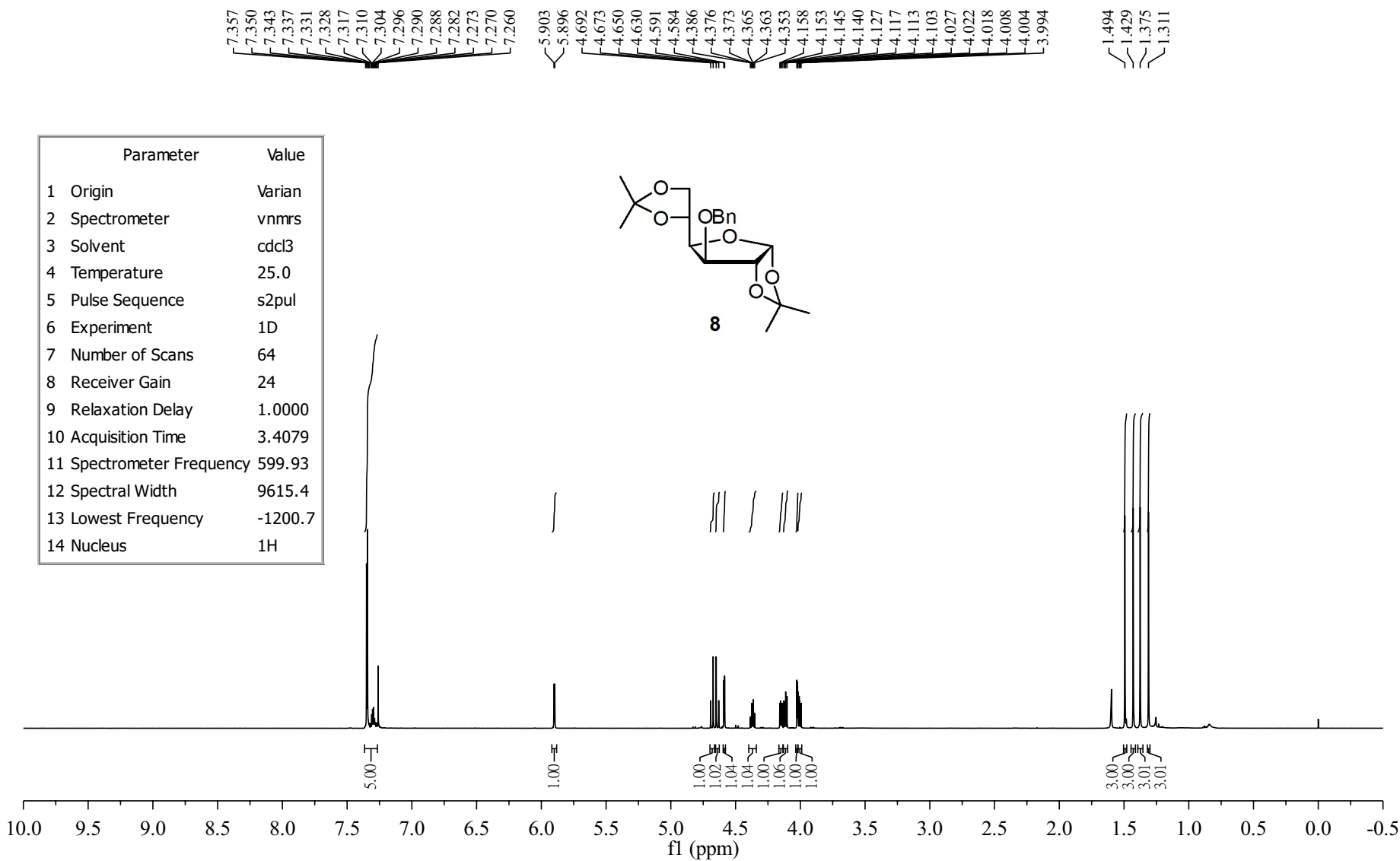
Ratnnadeep C. Sawant, Ying-Ju Liao, Satpal Singh Badsara, and Shun-Yuan Luo*

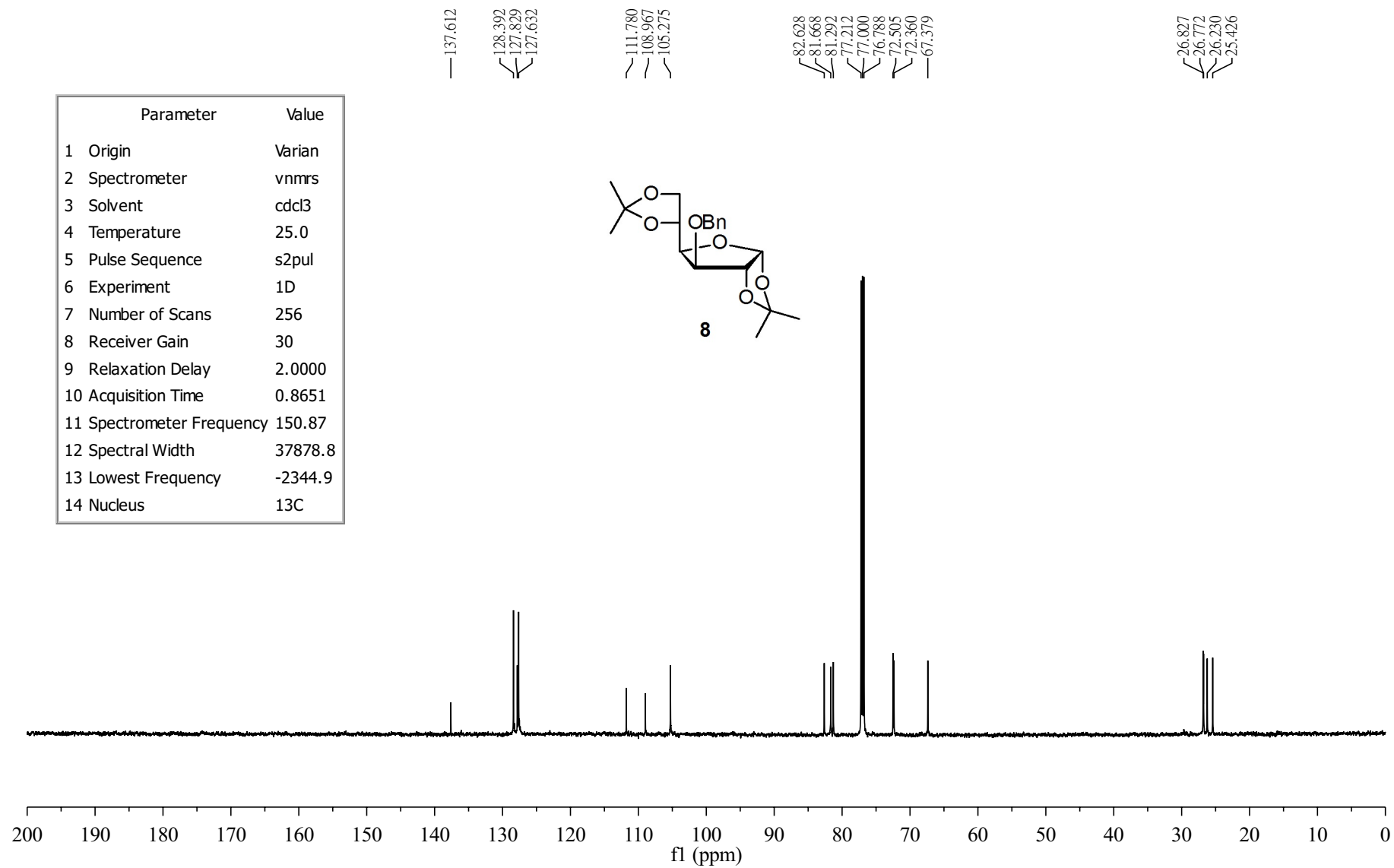
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Fax: +886(4)22862547; E-mail: syluo@dragon.nchu.edu.tw

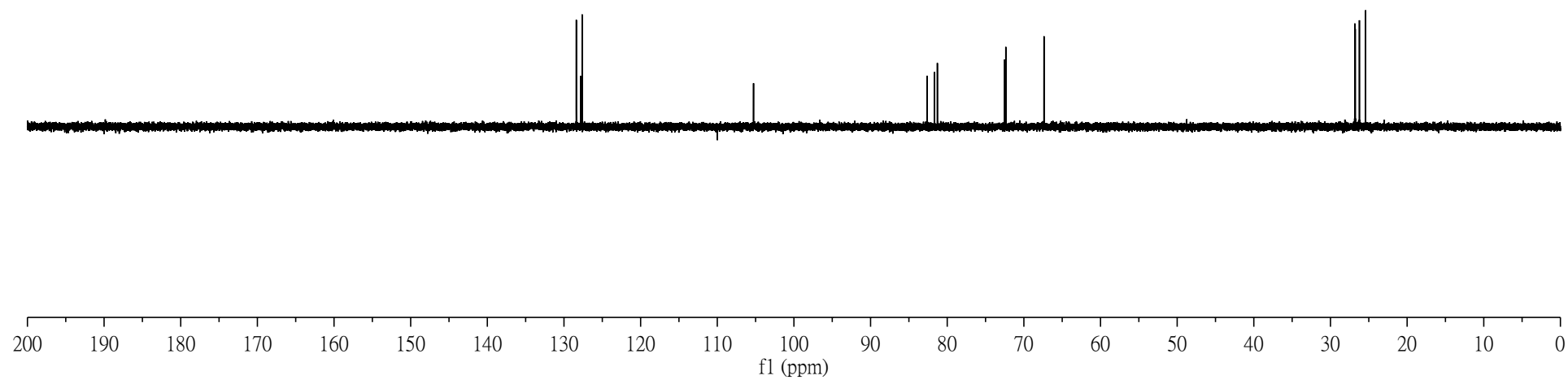
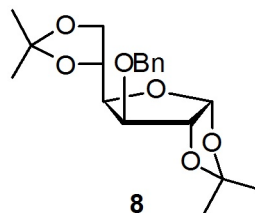
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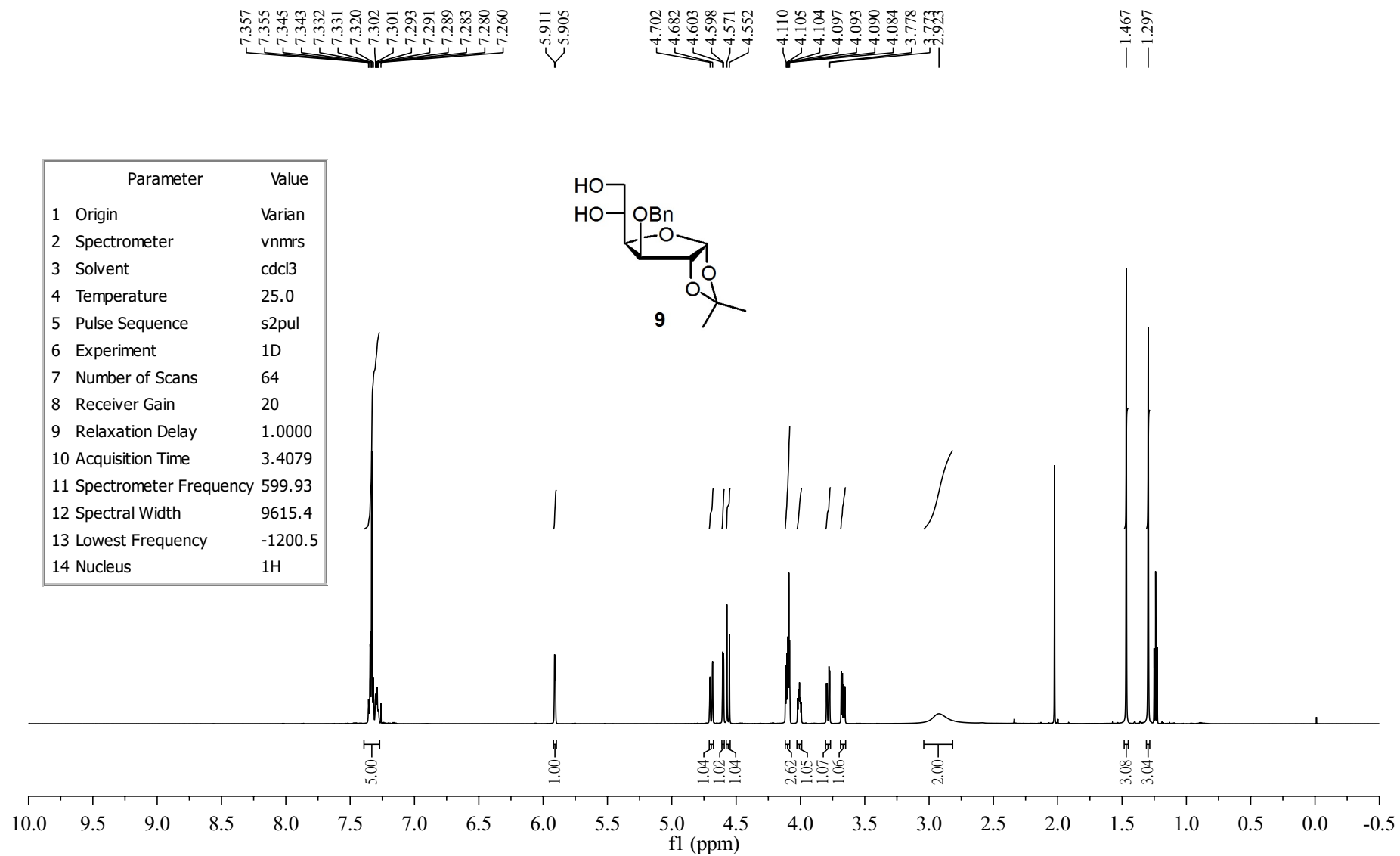
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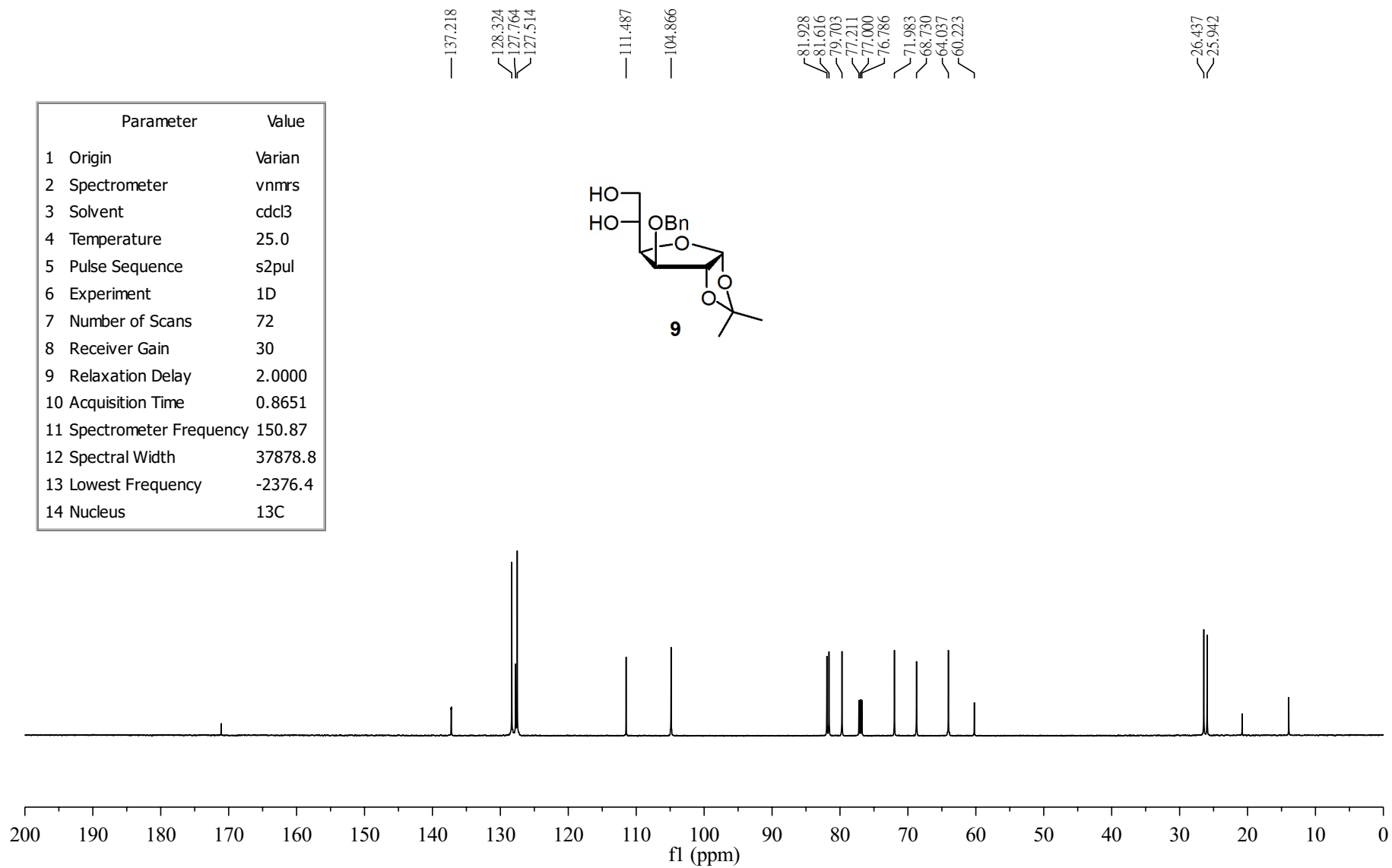




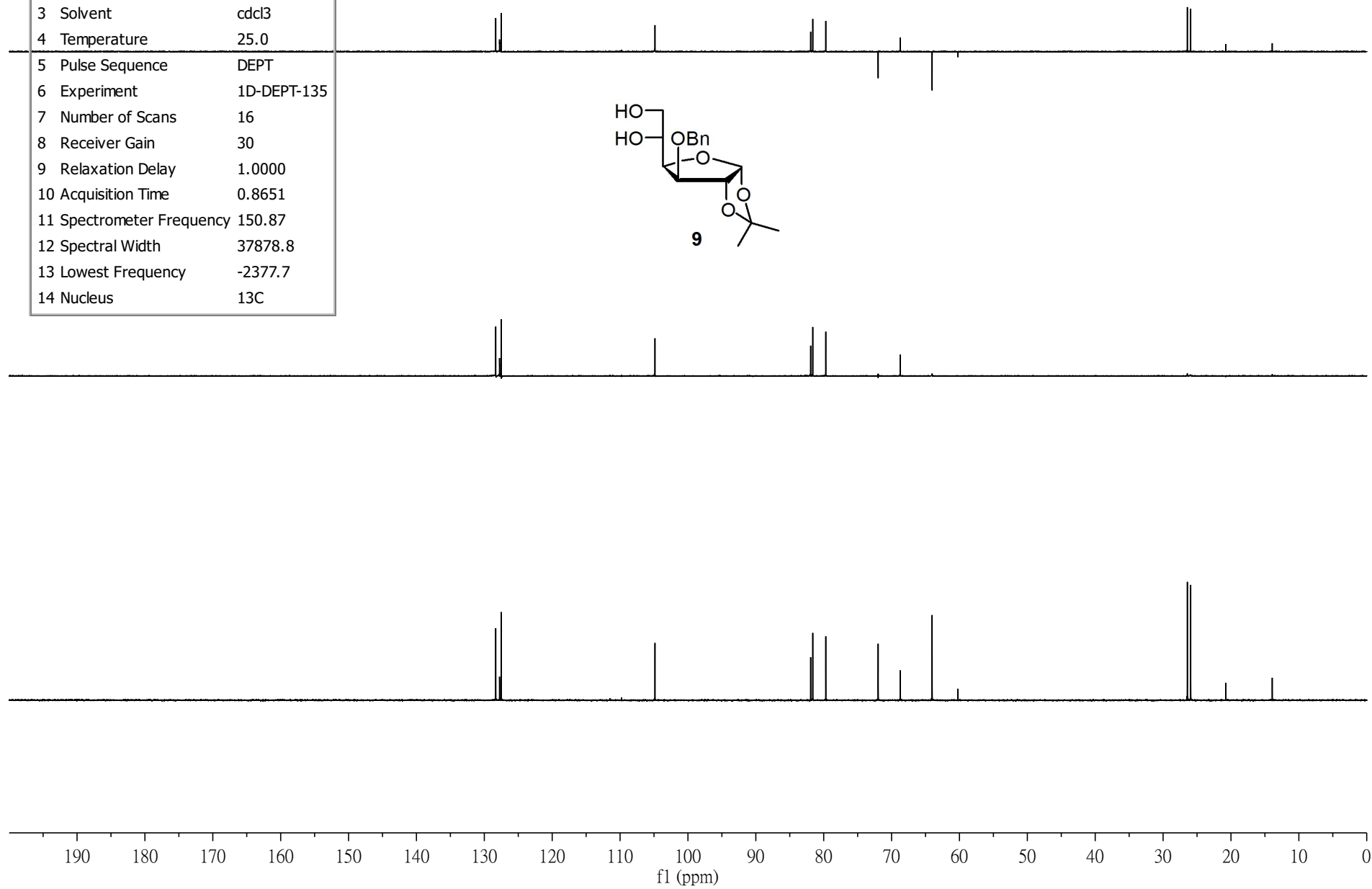
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1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	56
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2345.6
14 Nucleus	¹³ C

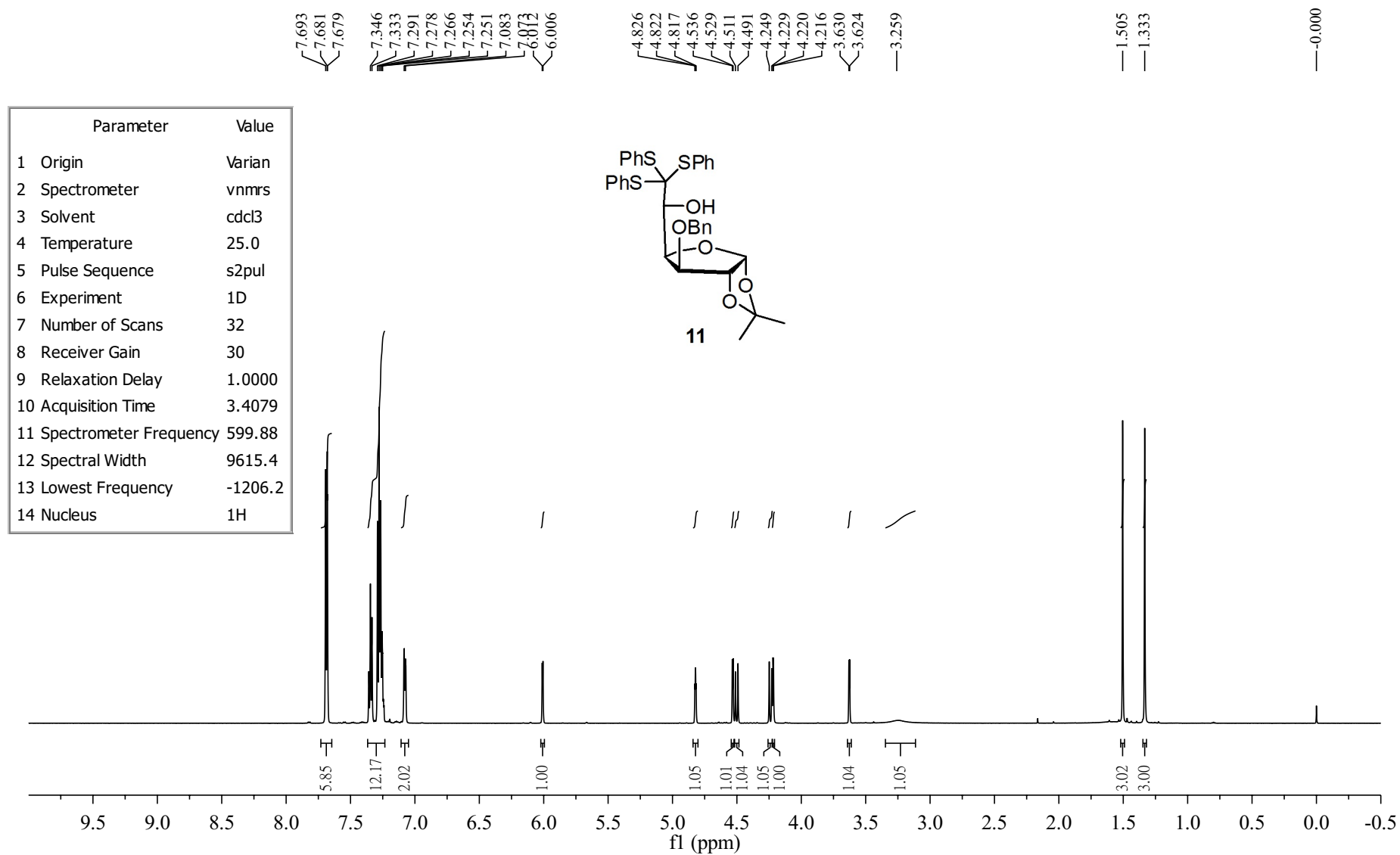


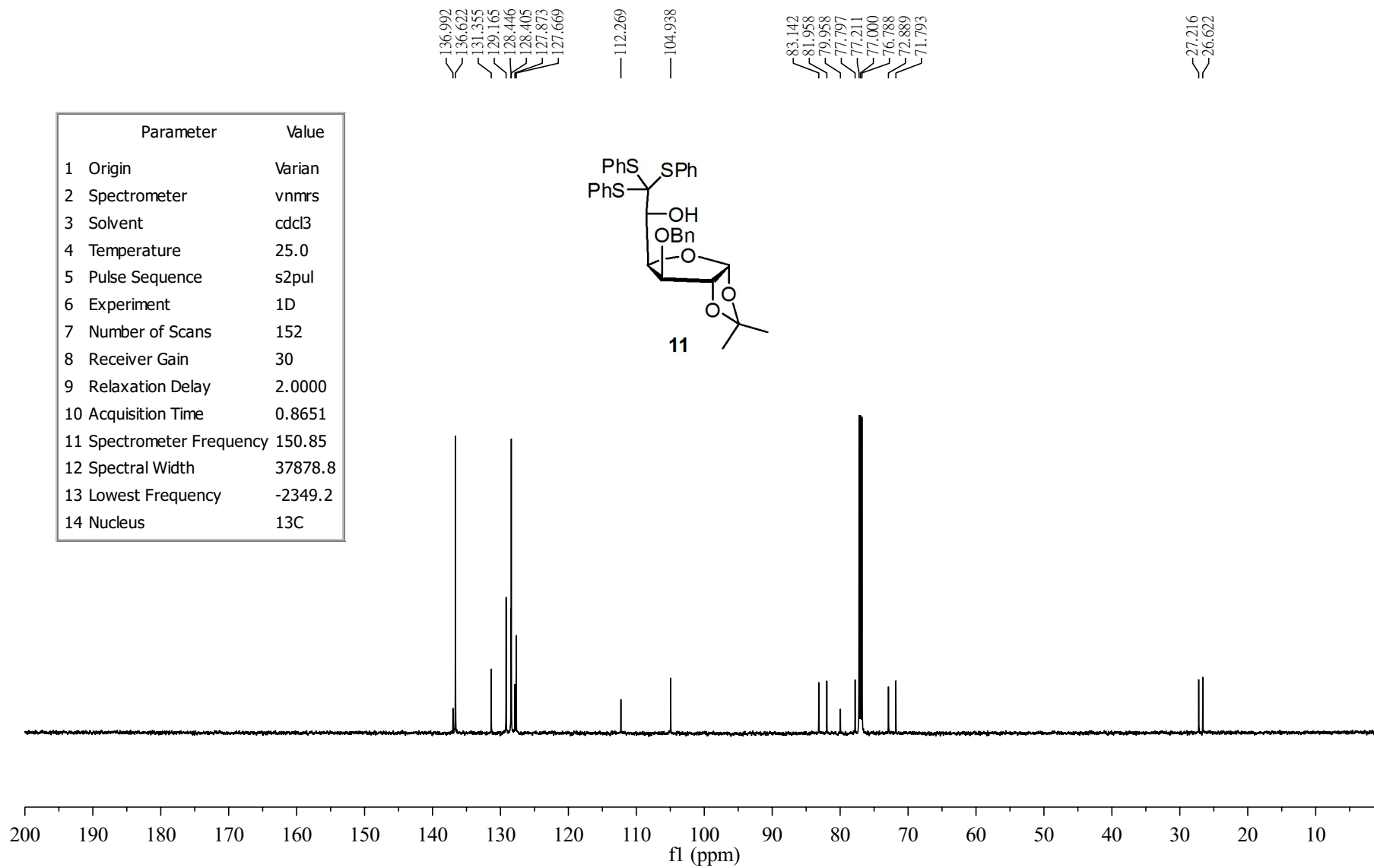


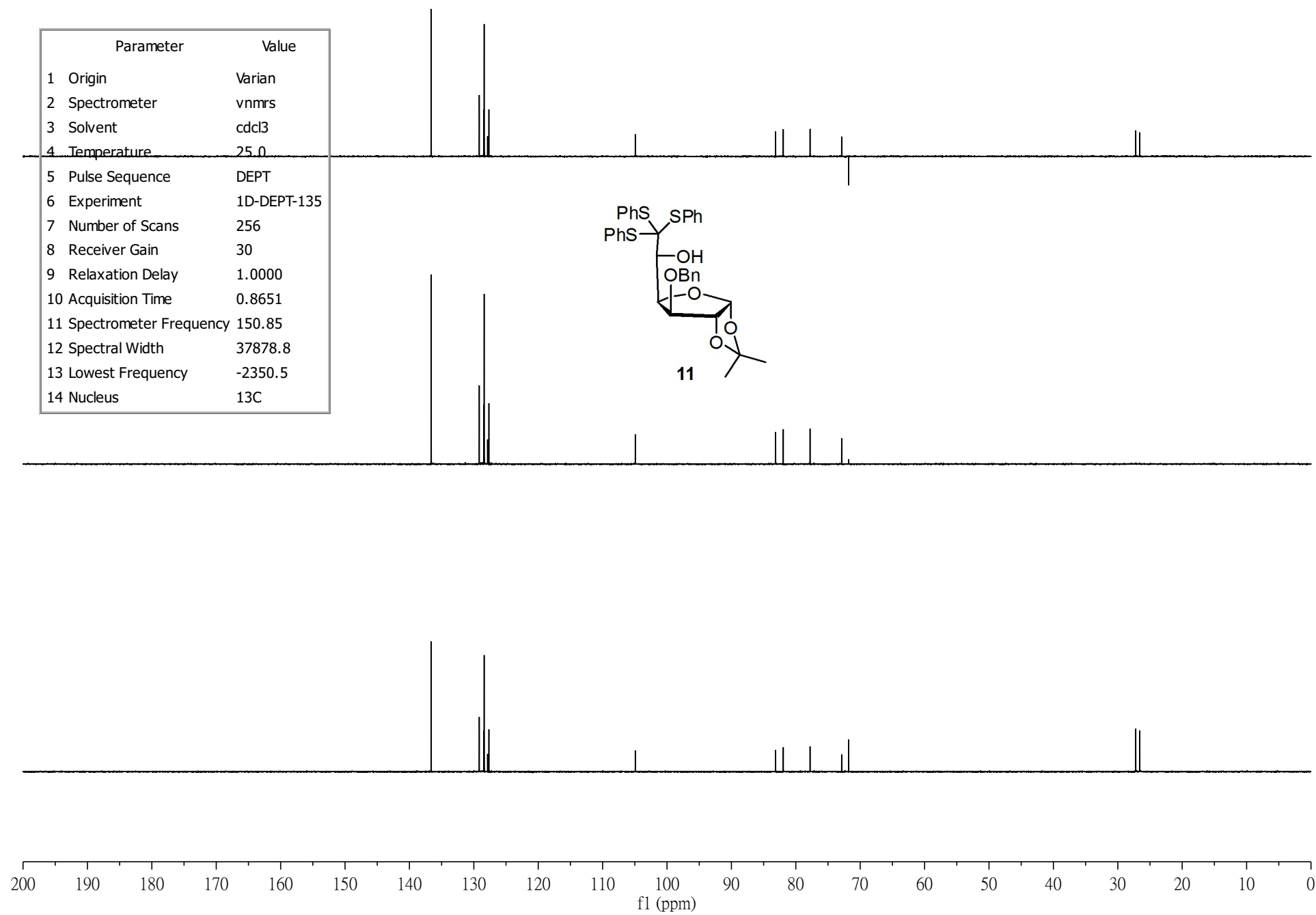


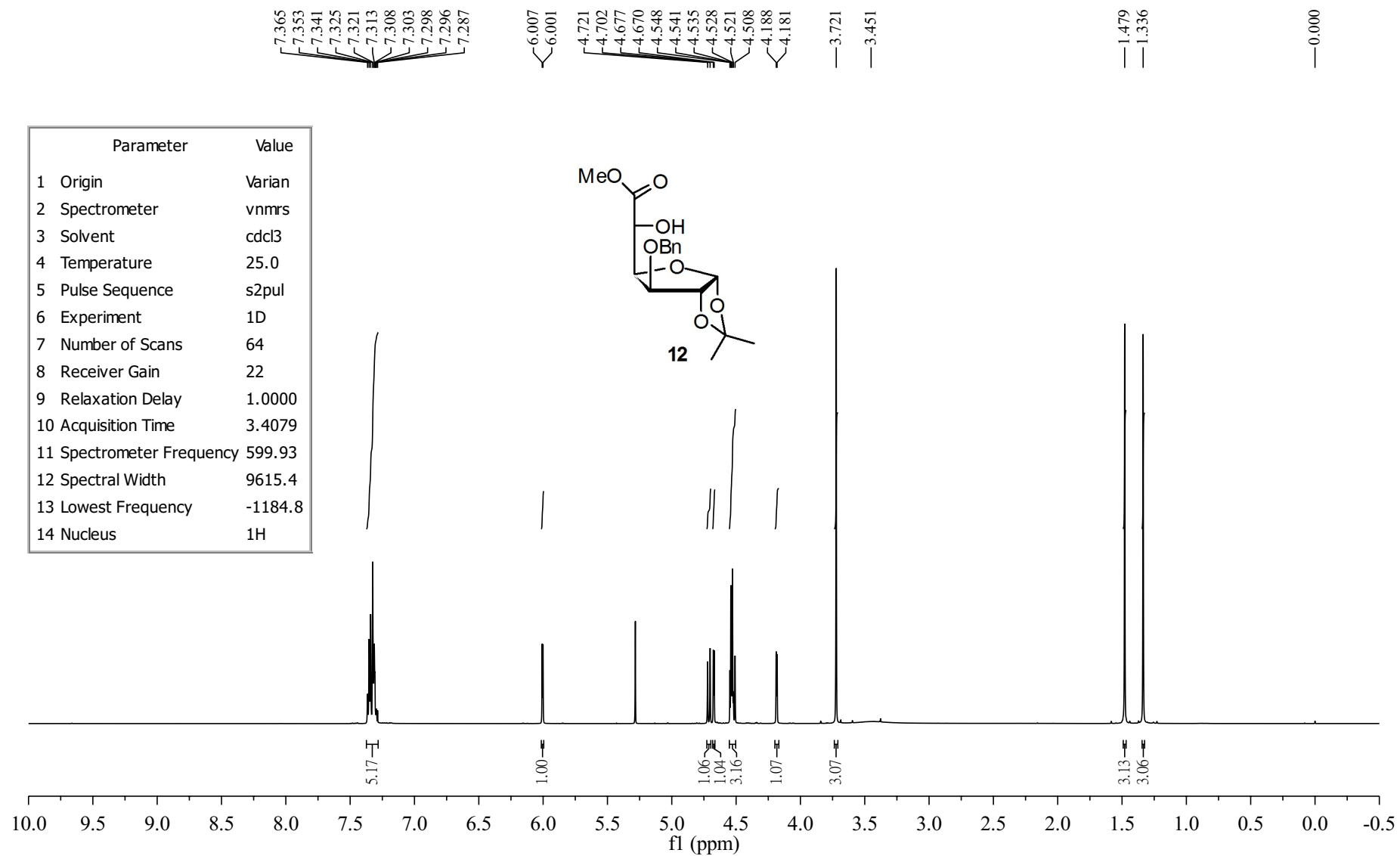
Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	16
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2377.7
14 Nucleus	¹³ C

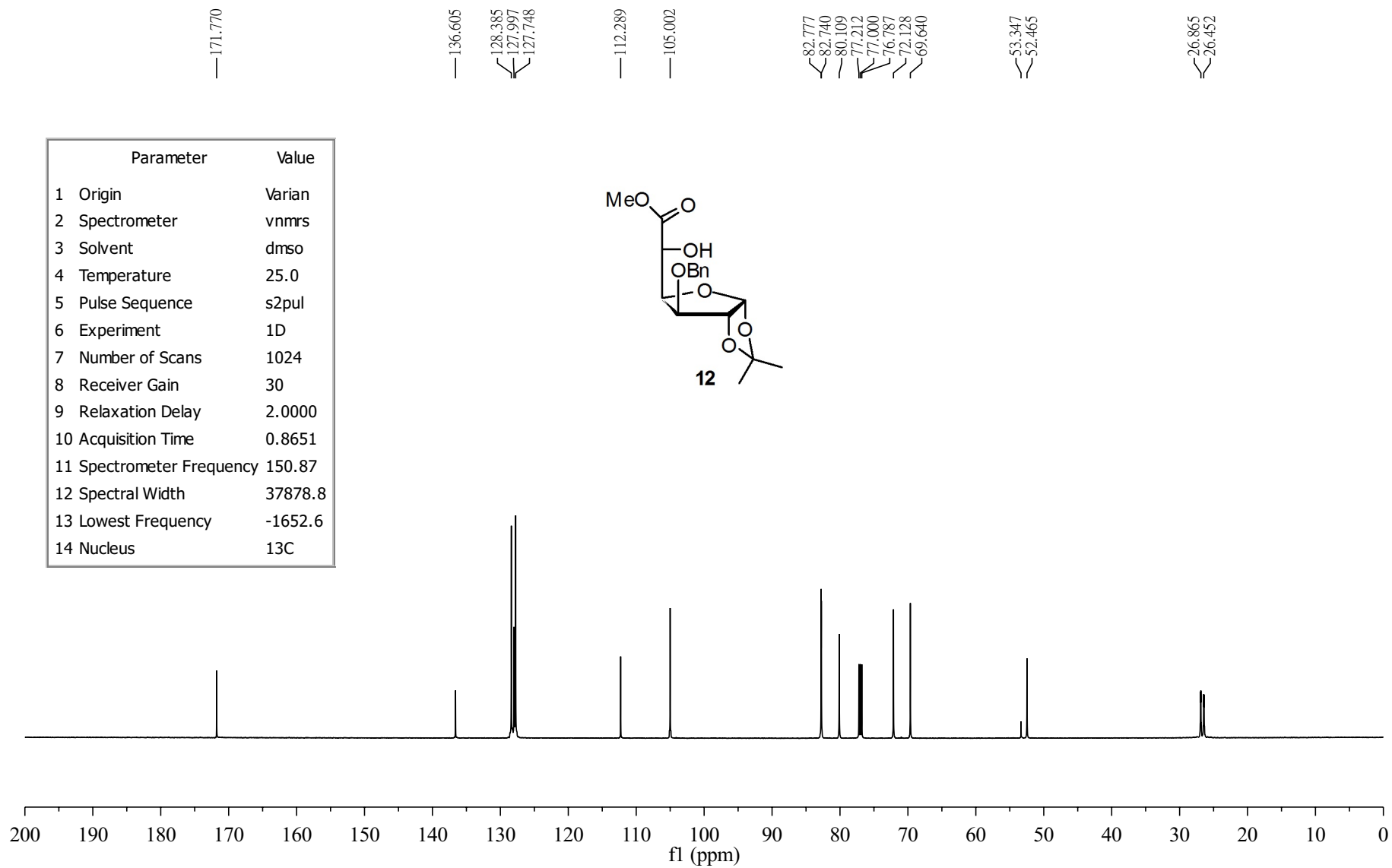




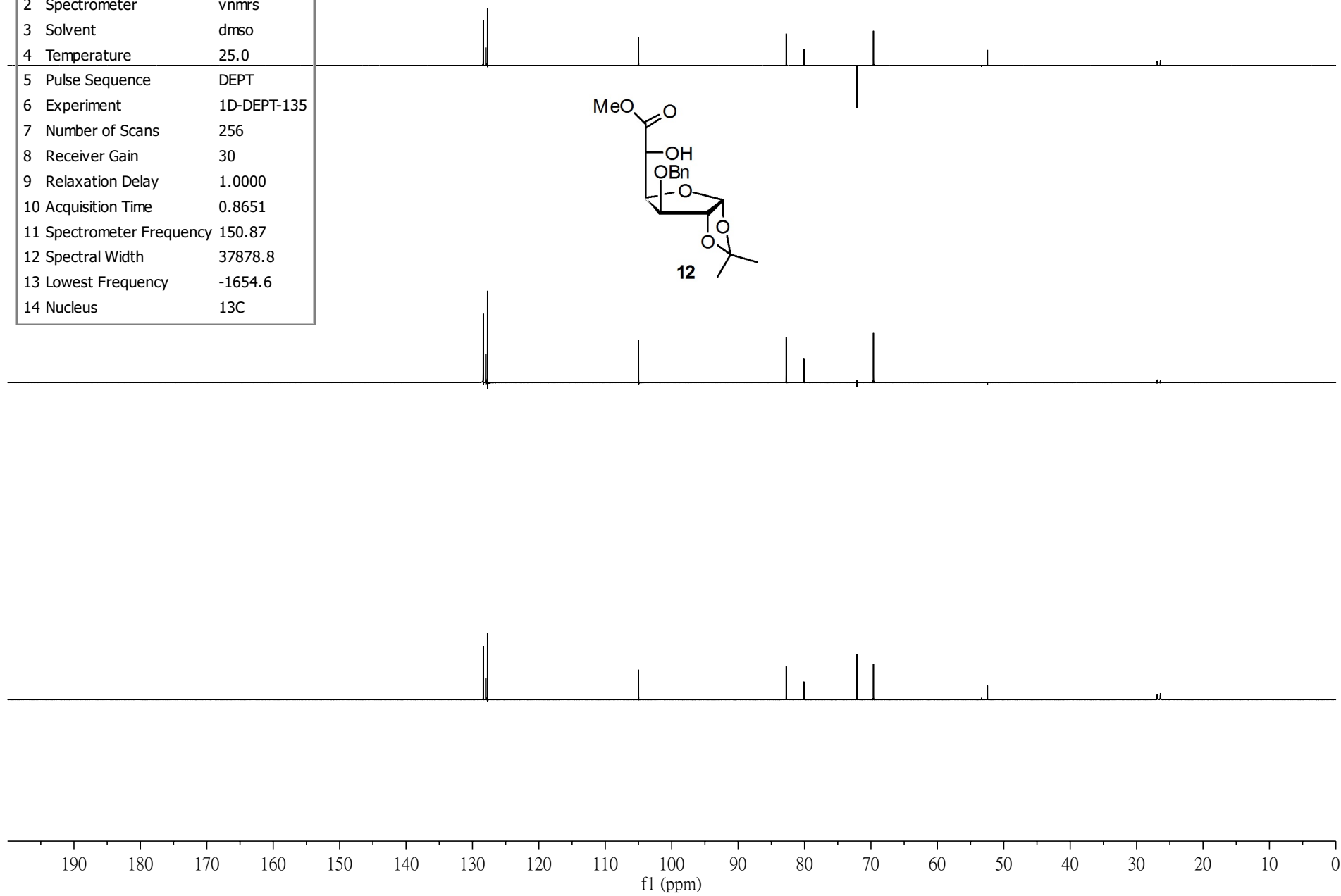
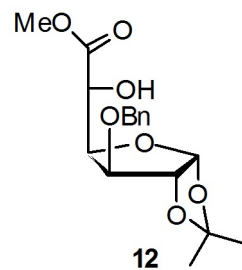


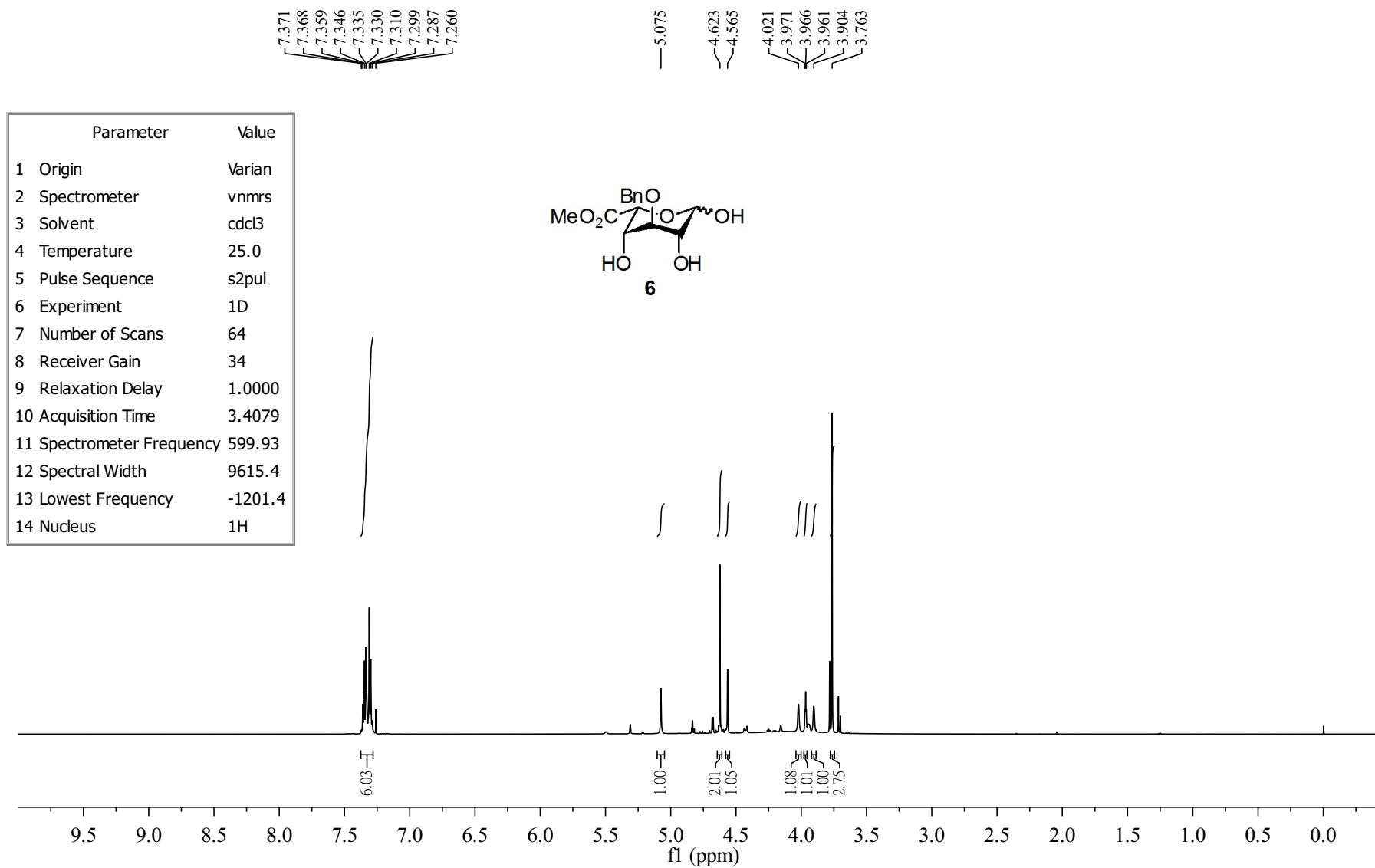


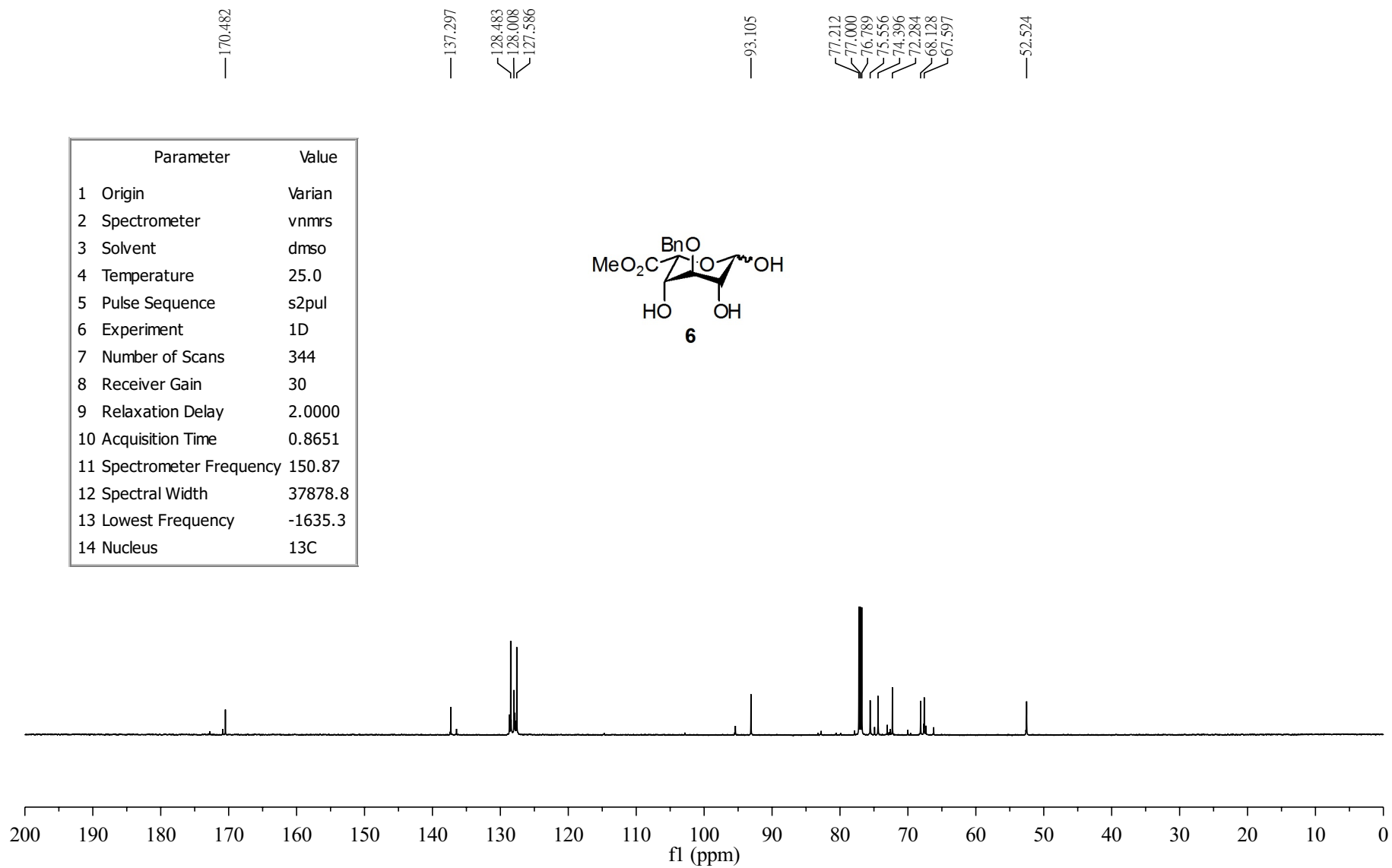




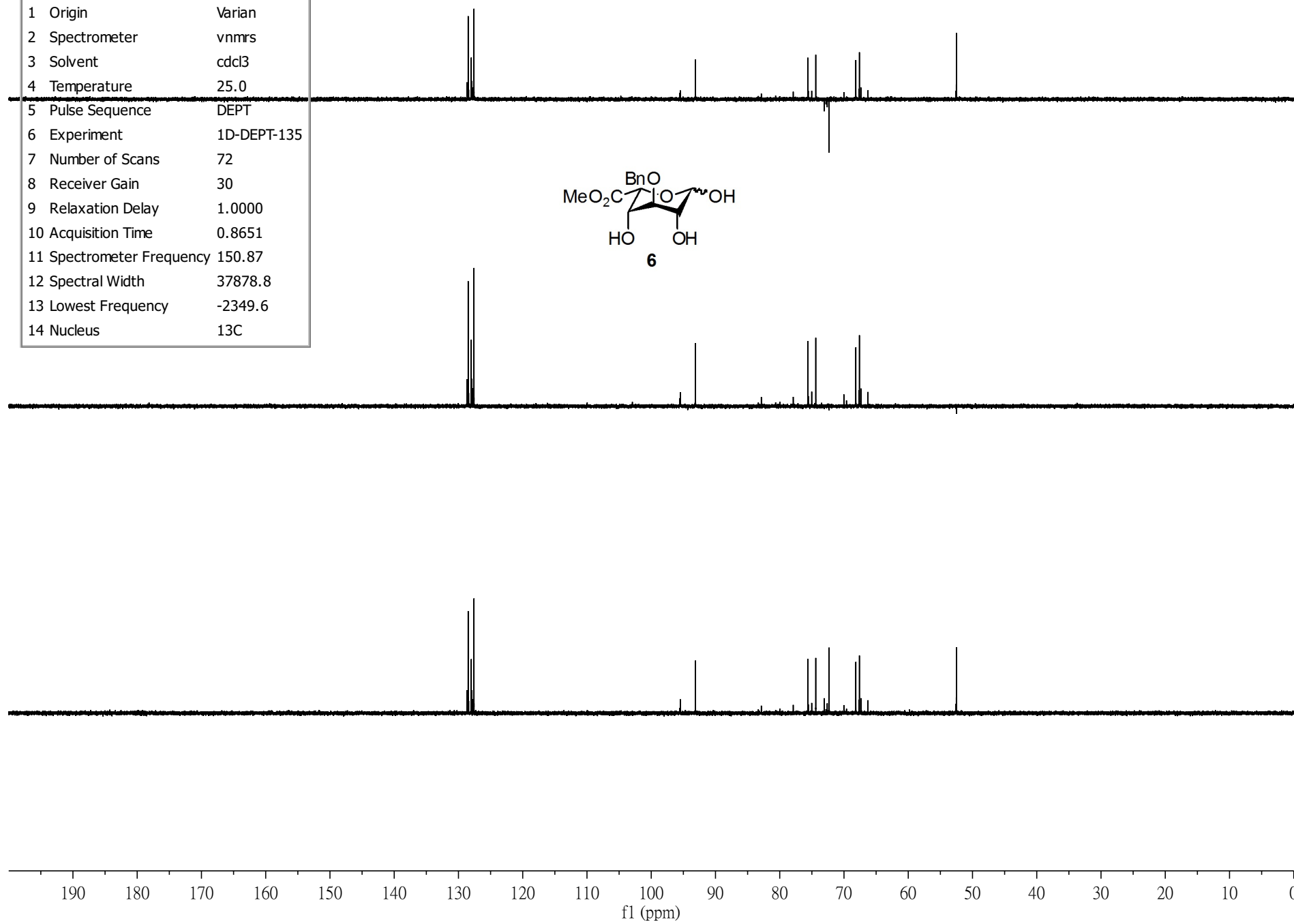
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2 Spectrometer	vnmrs
3 Solvent	dms
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	256
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-1654.6
14 Nucleus	13C

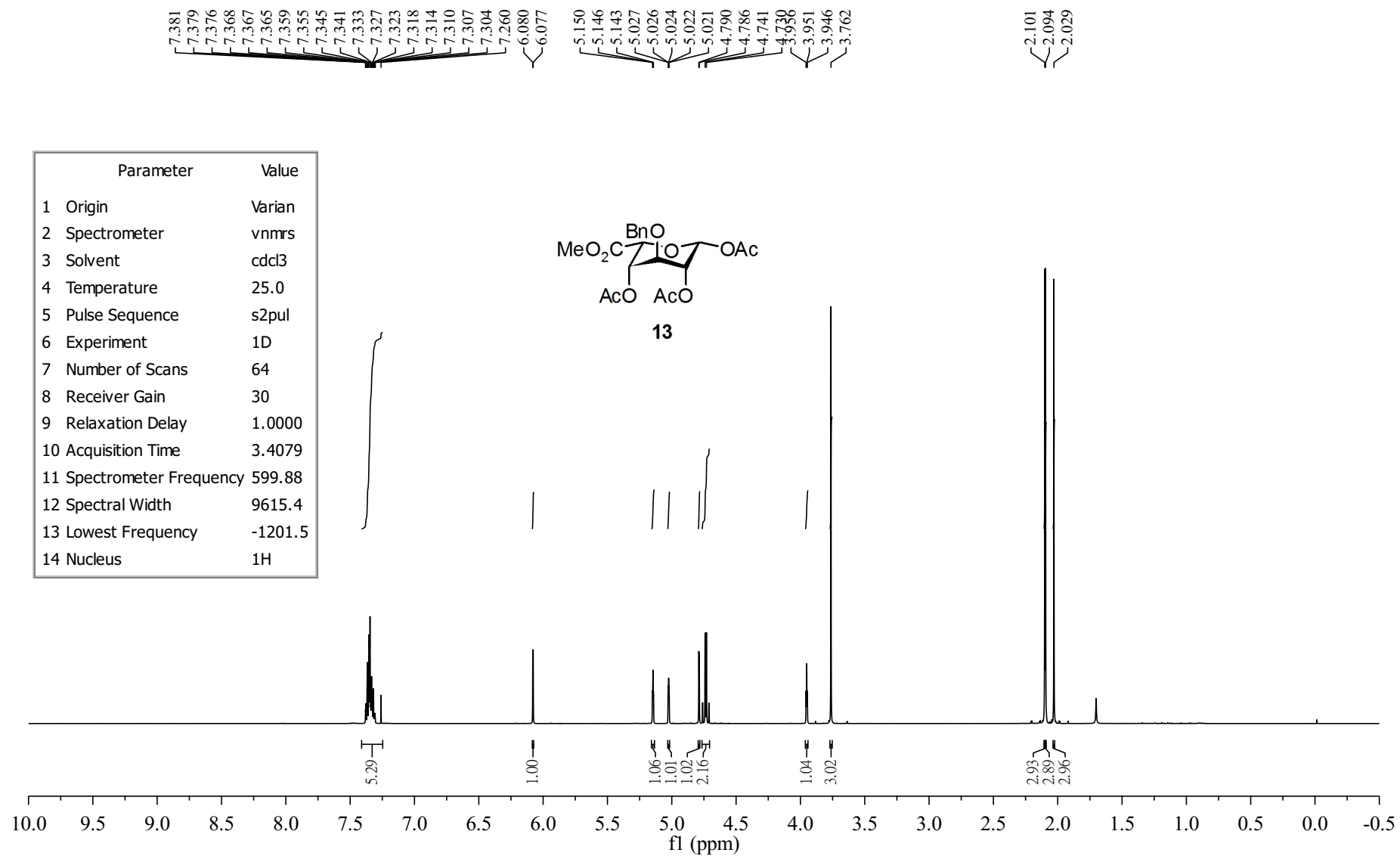


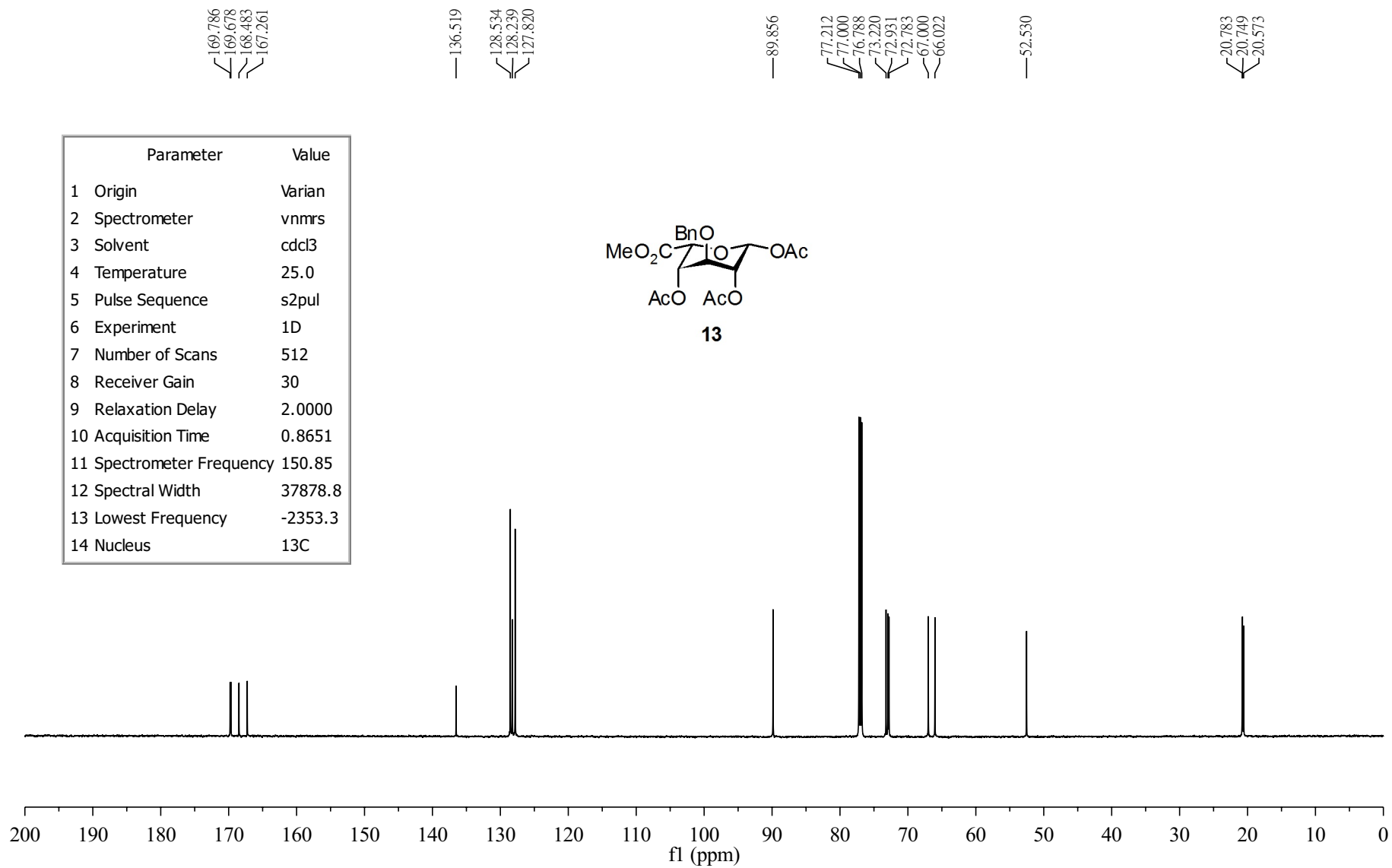




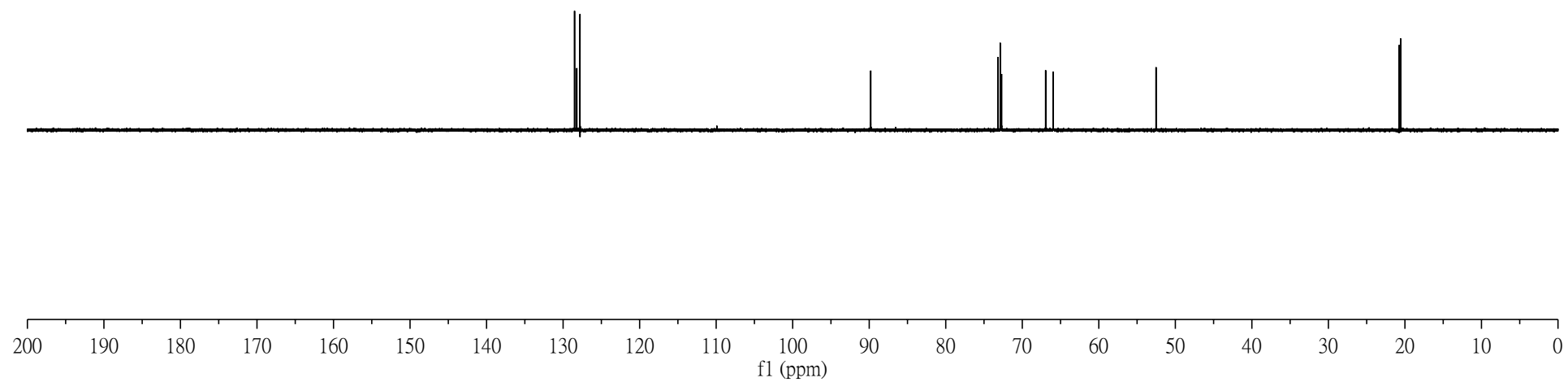
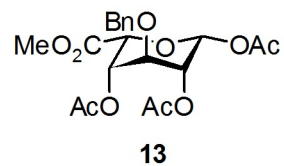
Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	72
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2349.6
14 Nucleus	13C

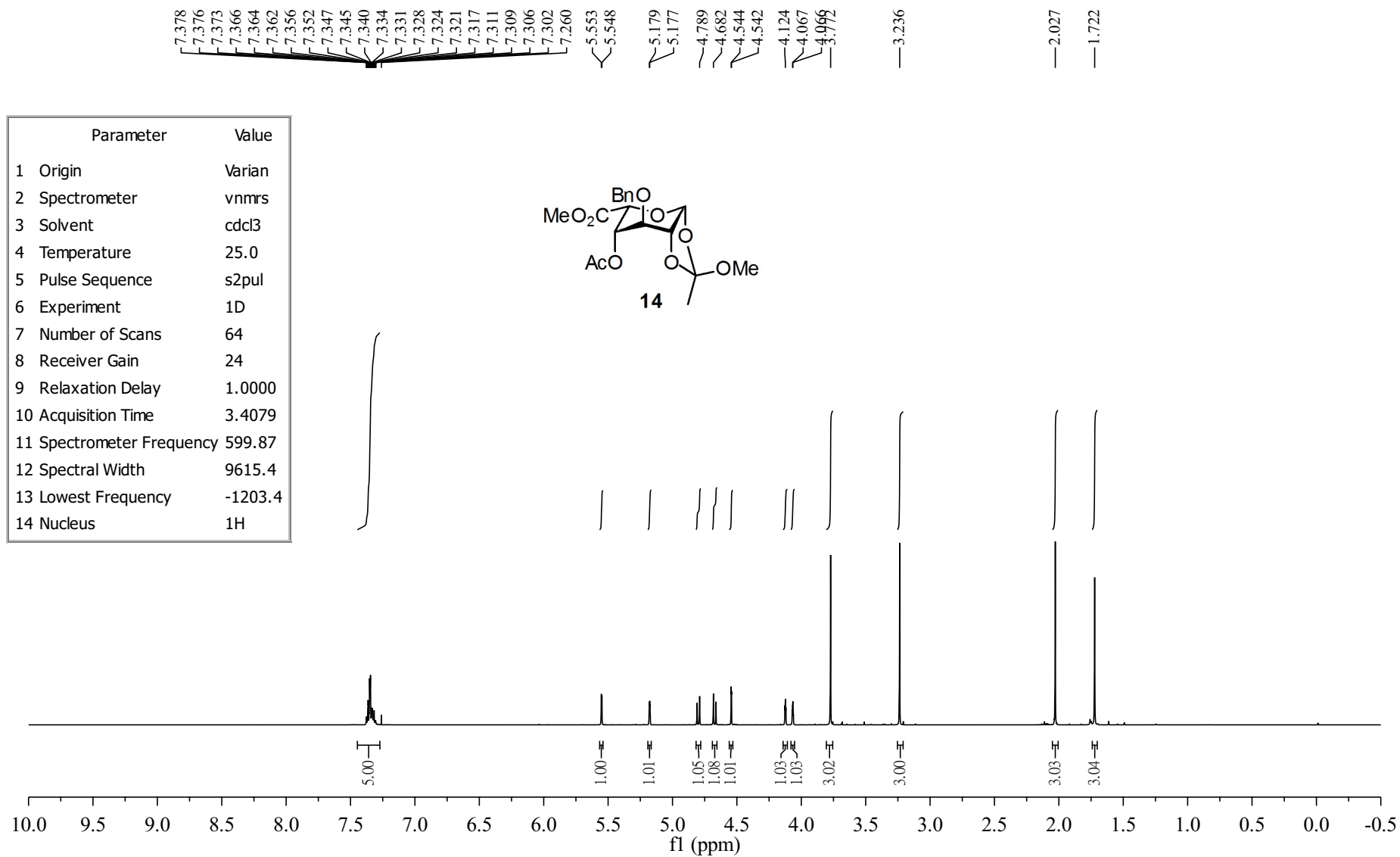






Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	40.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	48
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2357.2
14 Nucleus	¹³ C





170.057
168.010

136.742

128.536
128.231
127.922
124.126

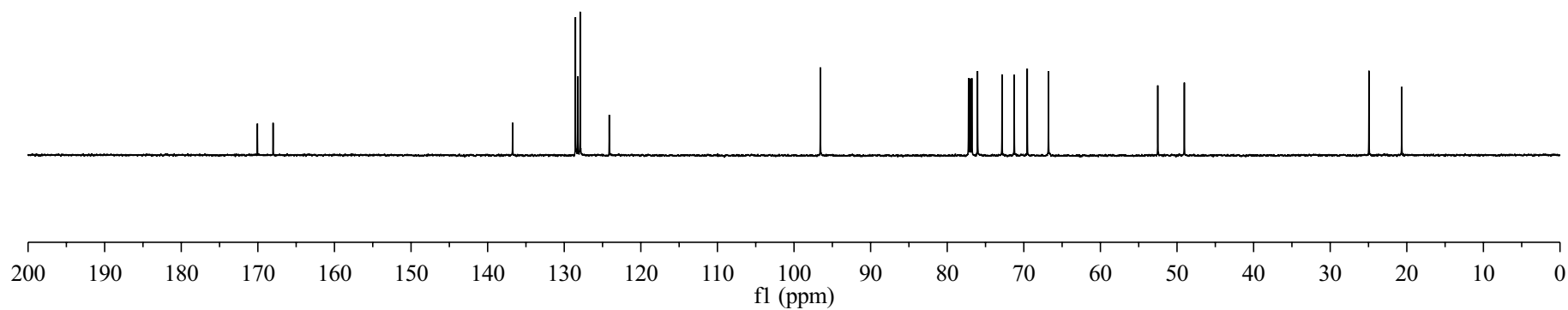
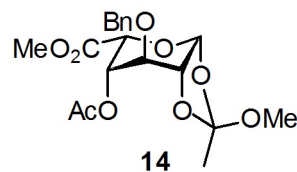
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69.549
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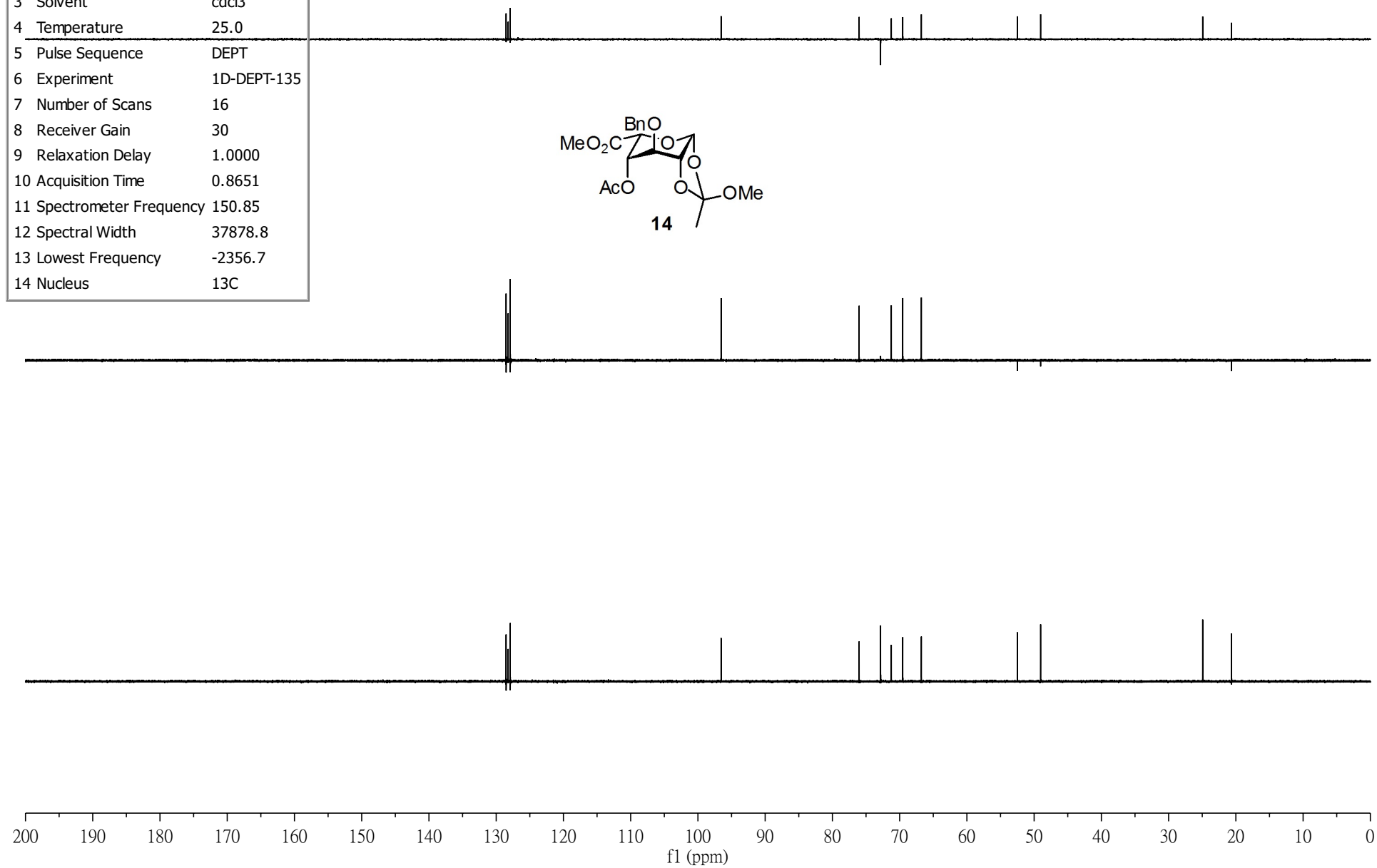
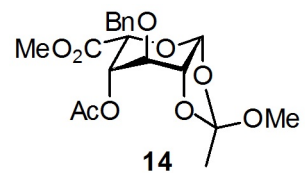
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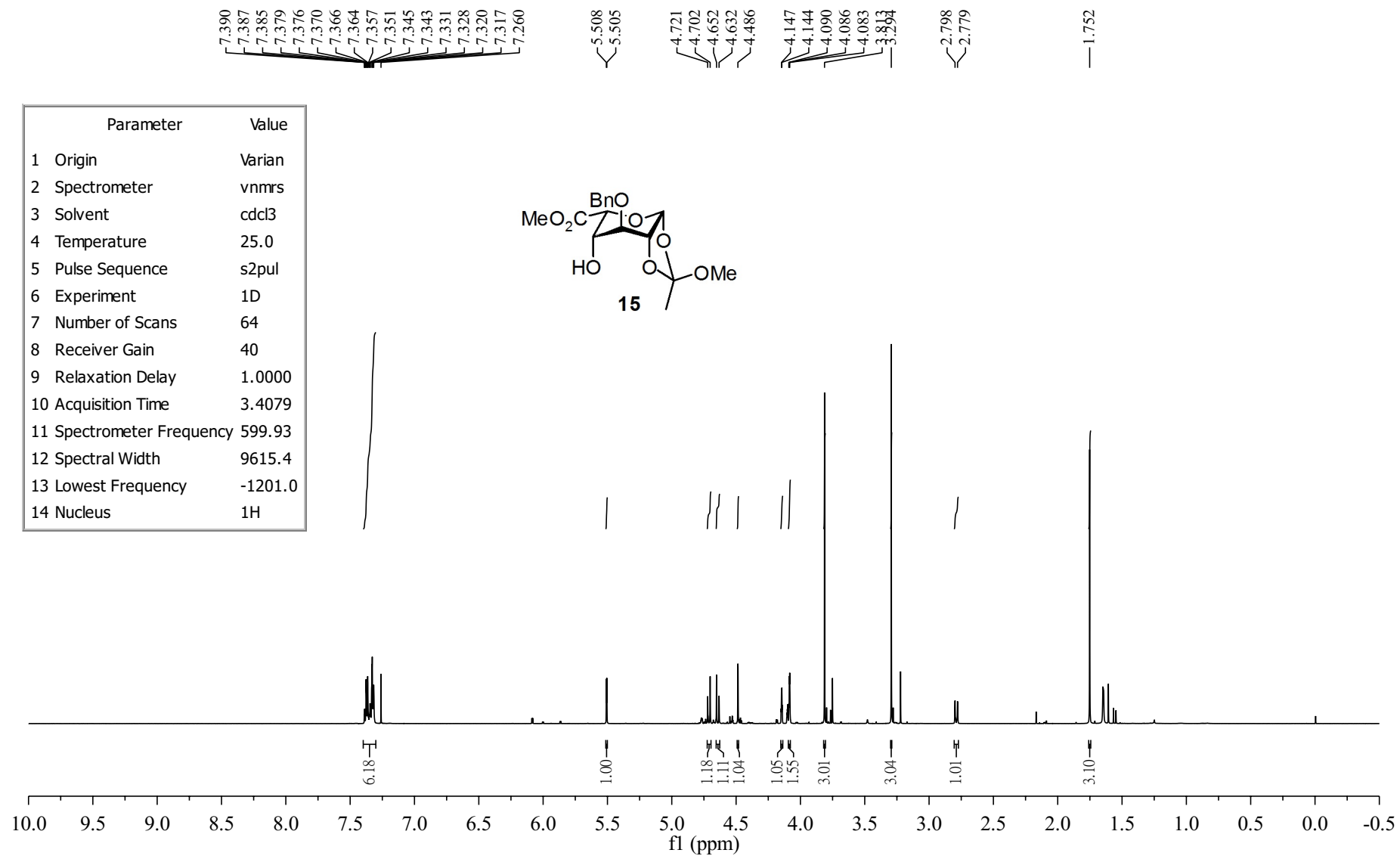
24.943
20.663

Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmr5
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	s2pul
6 Experiment	1D
7 Number of Scans	64
8 Receiver Gain	30
9 Relaxation Delay	2.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.85
12 Spectral Width	37878.8
13 Lowest Frequency	-2355.1
14 Nucleus	¹³ C

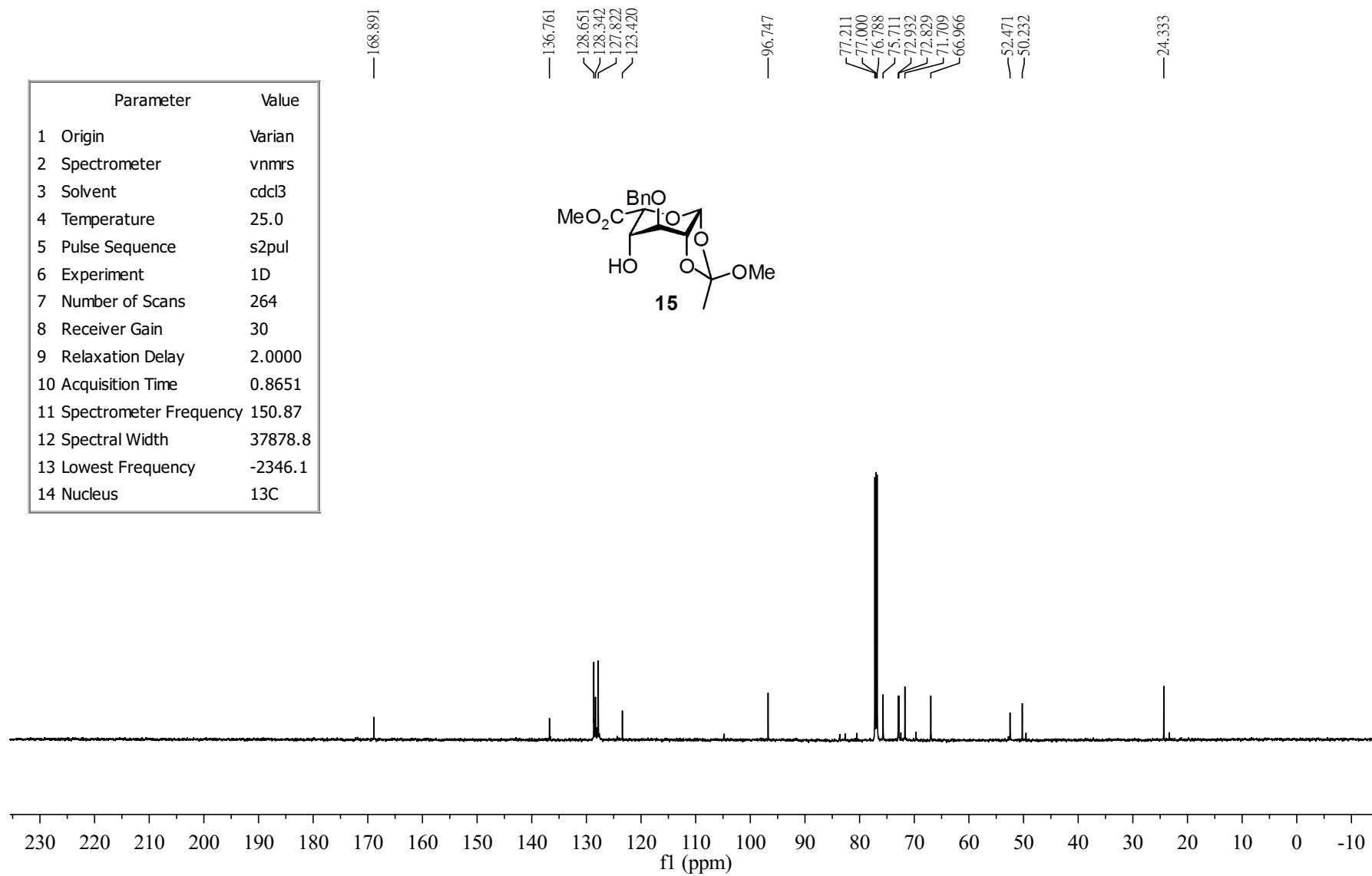


Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	16
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.85
12 Spectral Width	37878.8
13 Lowest Frequency	-2356.7
14 Nucleus	13C

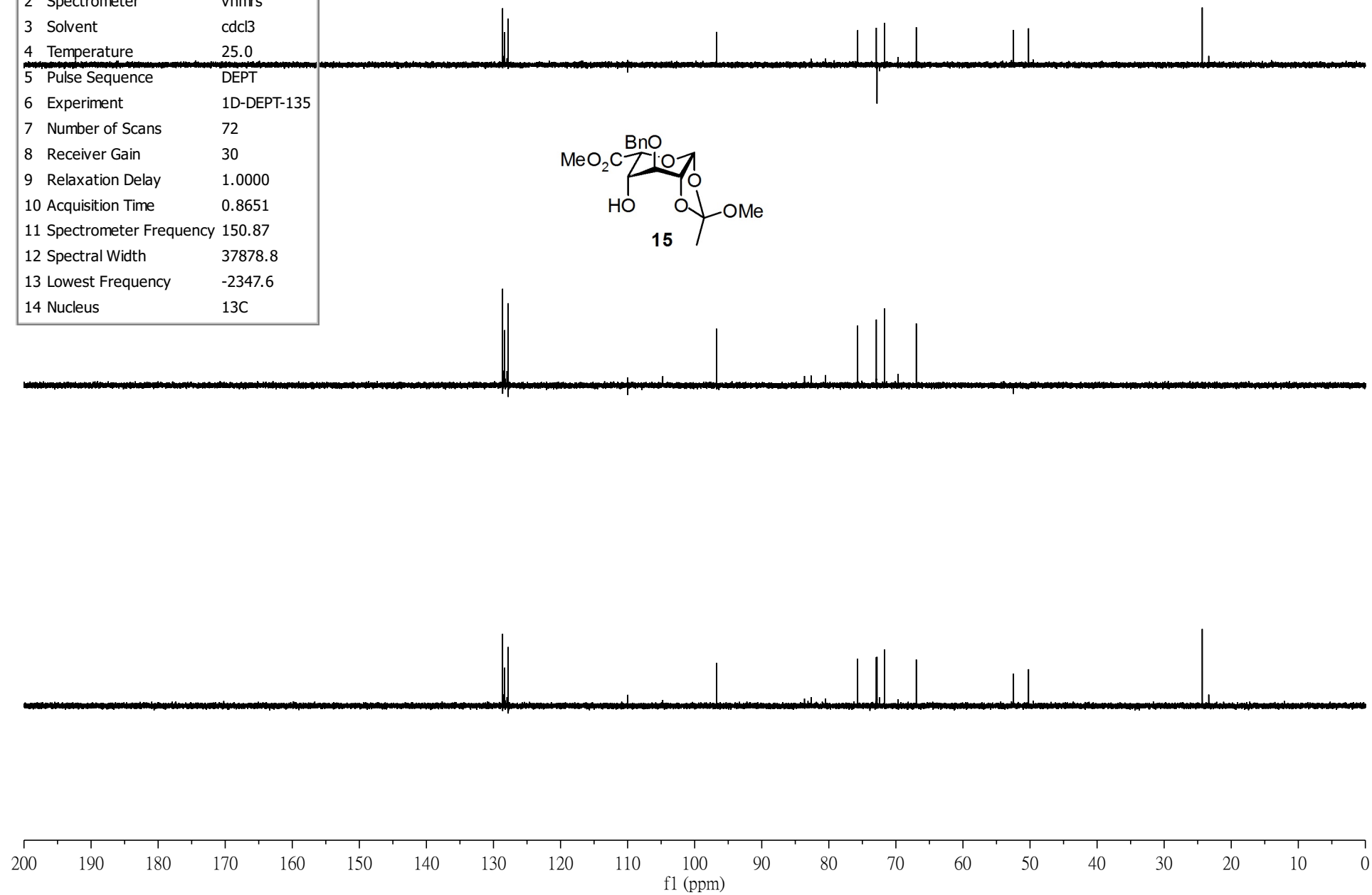
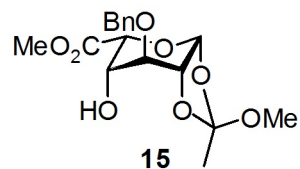


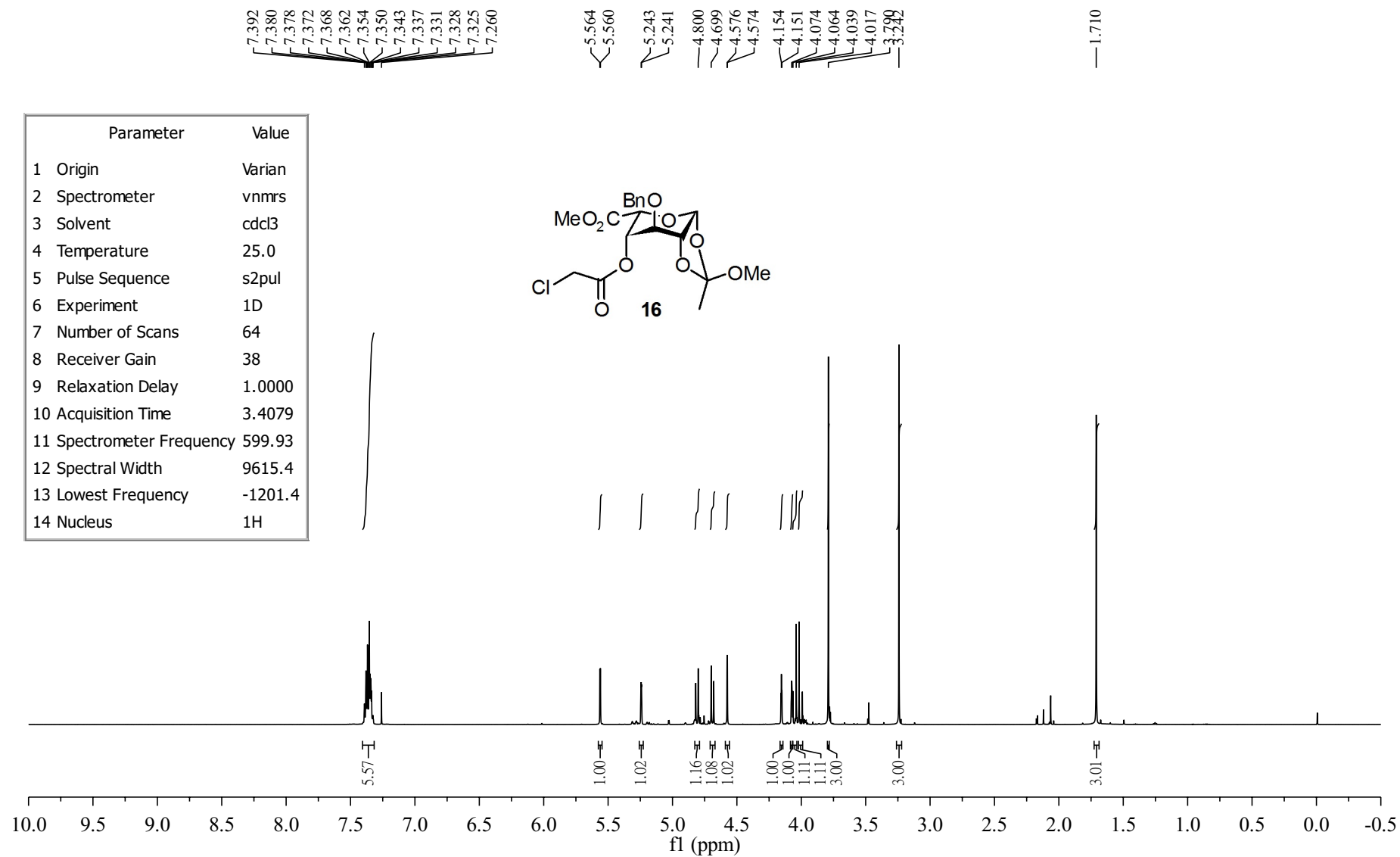


Parameter	Value
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2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	s2pul
6 Experiment	1D
7 Number of Scans	264
8 Receiver Gain	30
9 Relaxation Delay	2.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2346.1
14 Nucleus	13C



Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	72
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2347.6
14 Nucleus	13C





Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	s2pul
6 Experiment	1D
7 Number of Scans	400
8 Receiver Gain	30
9 Relaxation Delay	2.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2349.4
14 Nucleus	13C

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136.511
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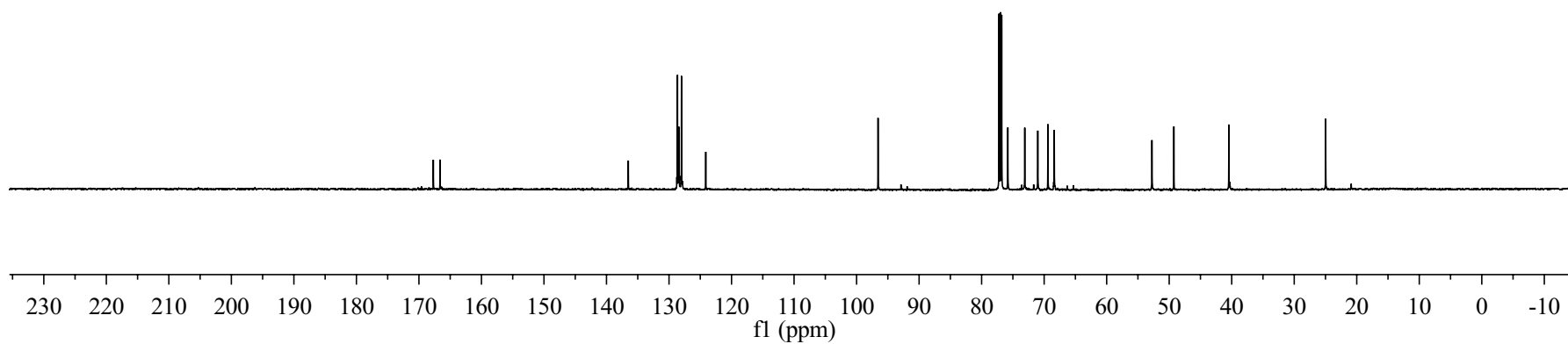
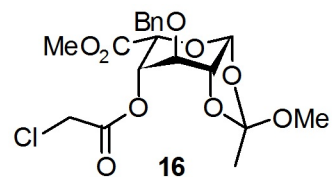
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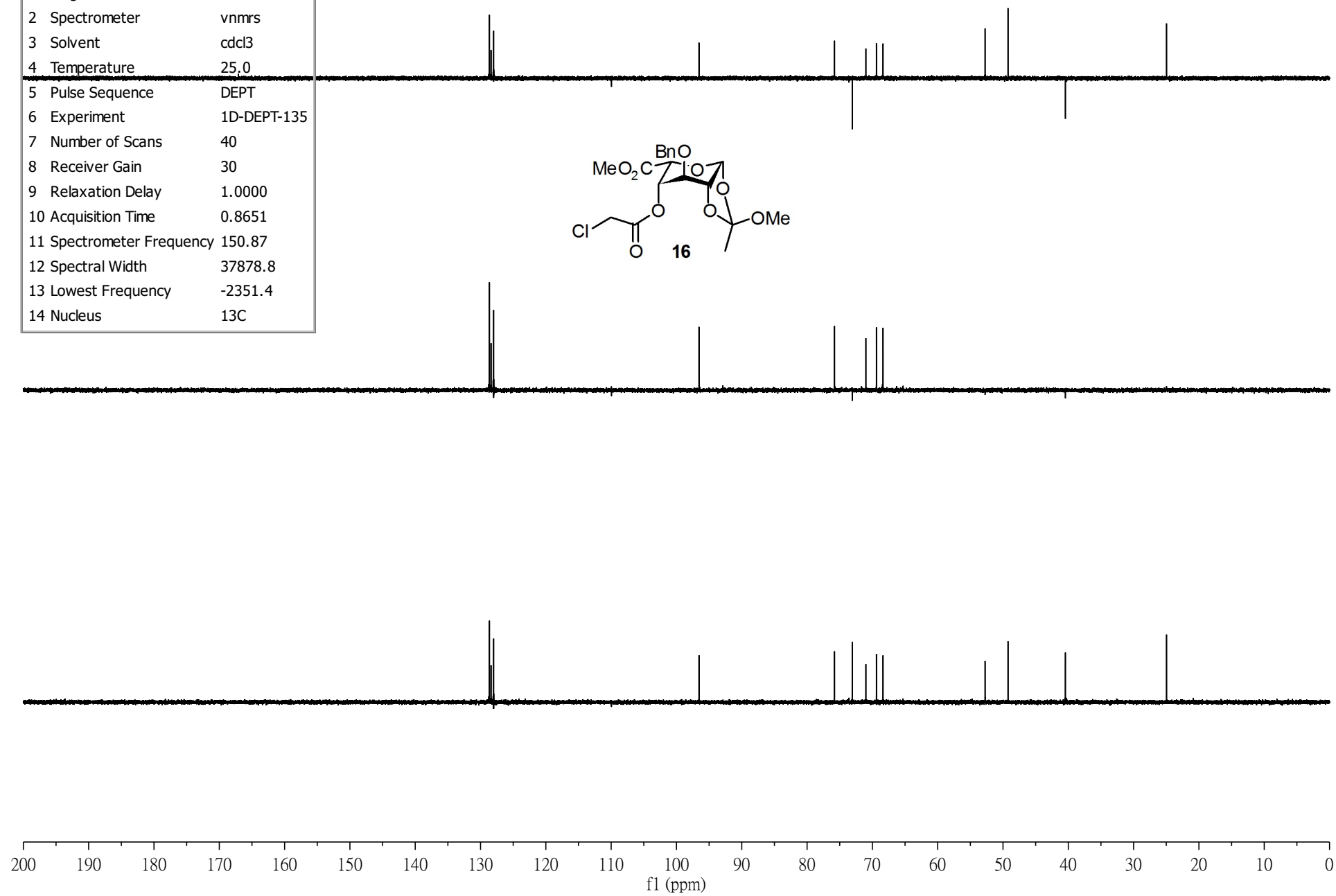
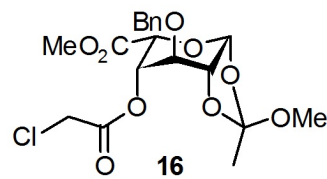
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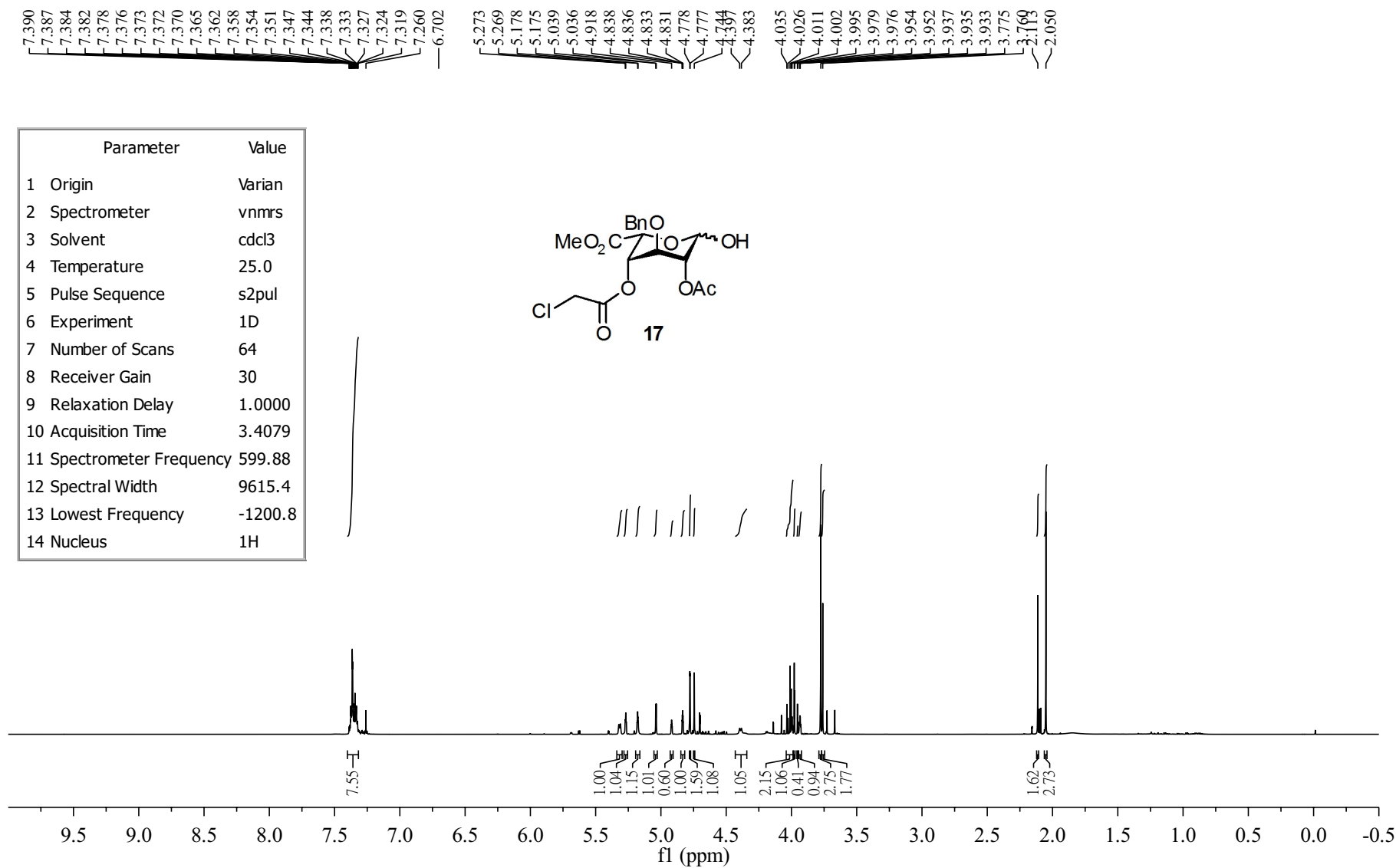
40.458

24.968



Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25,0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	40
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2351.4
14 Nucleus	13C





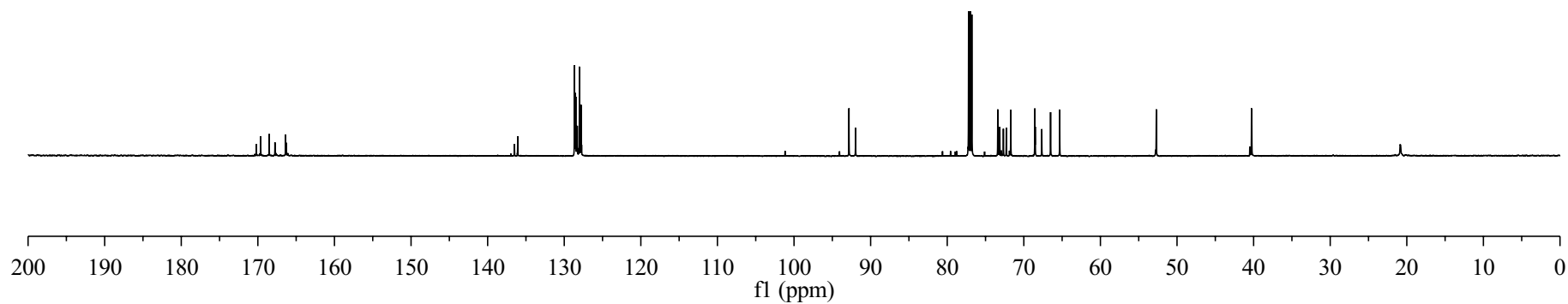
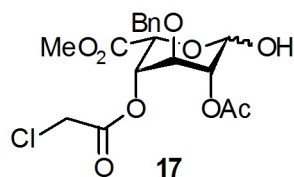
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166.391

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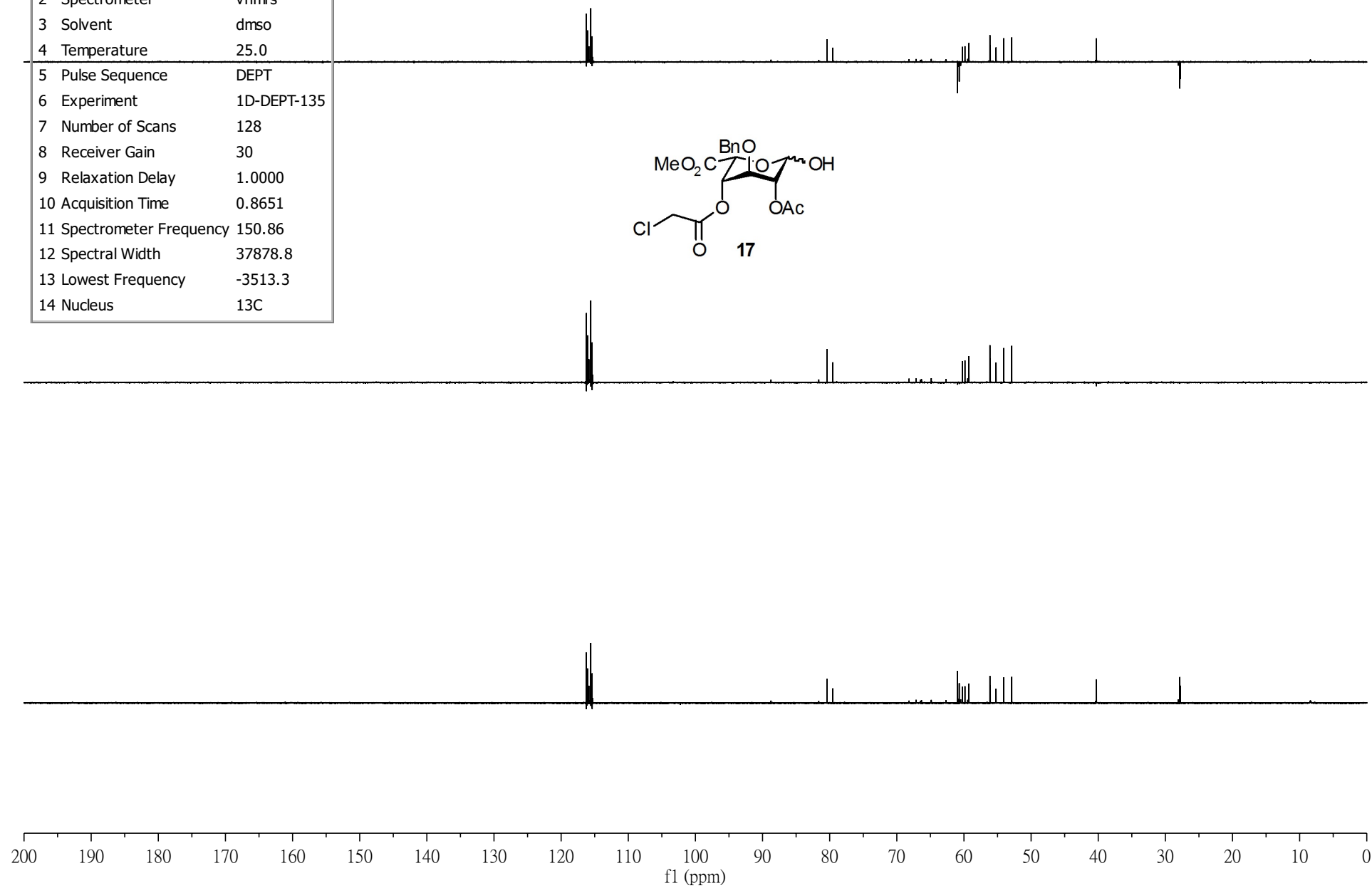
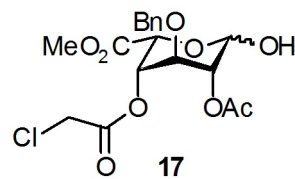
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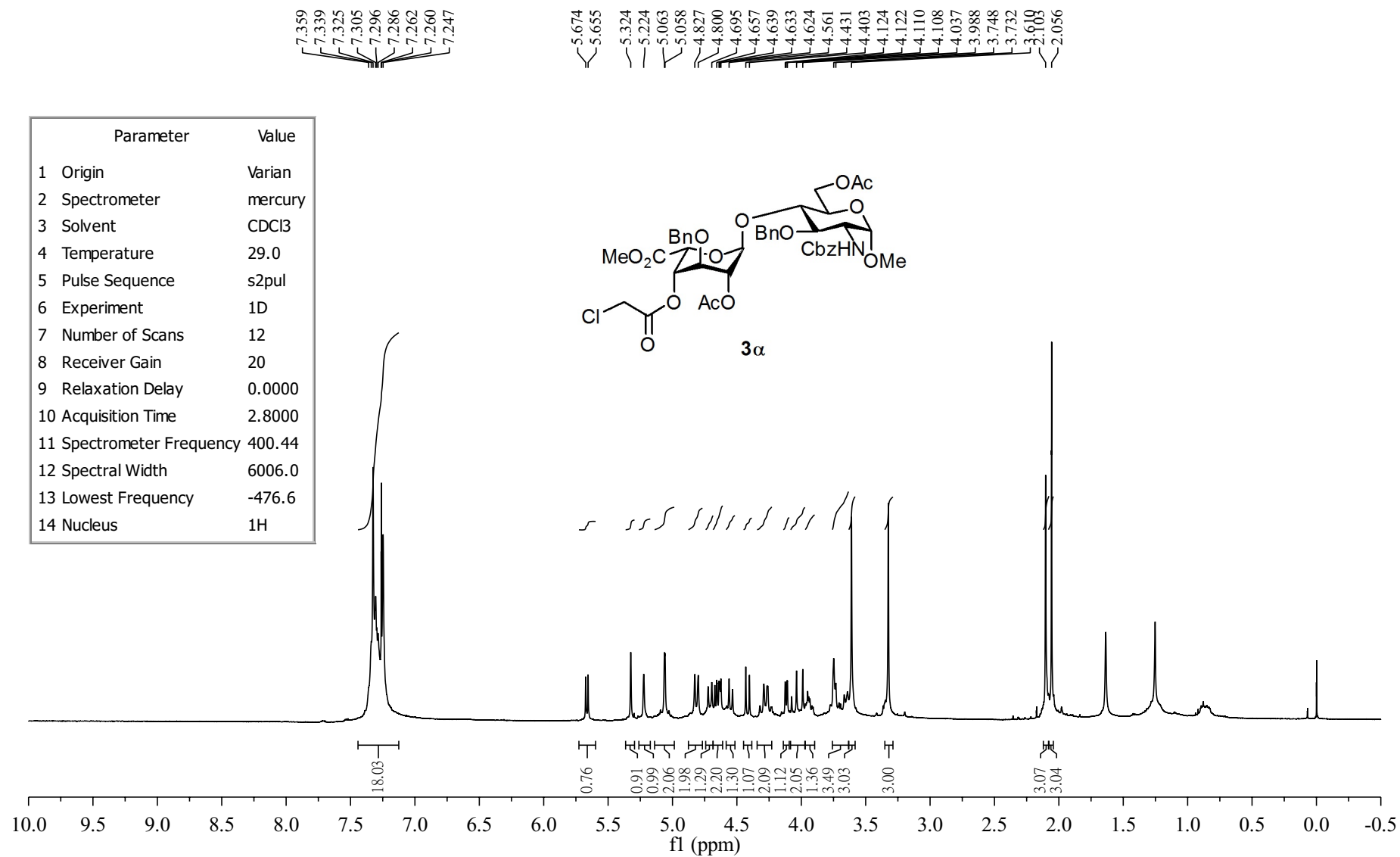
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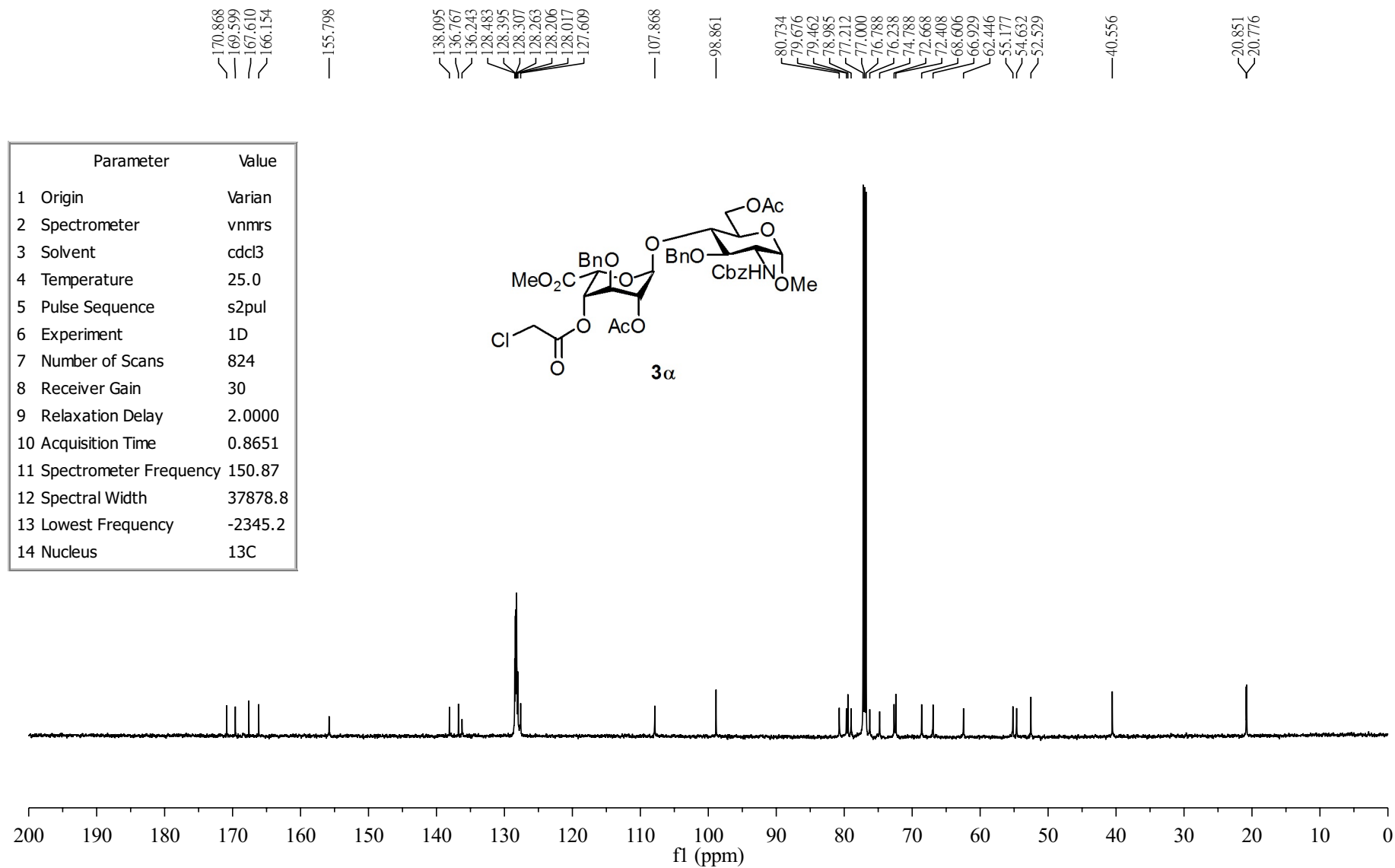
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1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	dmsd
4 Temperature	25.0
5 Pulse Sequence	s2pul
6 Experiment	1D
7 Number of Scans	920
8 Receiver Gain	30
9 Relaxation Delay	2.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.86
12 Spectral Width	37878.8
13 Lowest Frequency	-1637.9
14 Nucleus	¹³ C



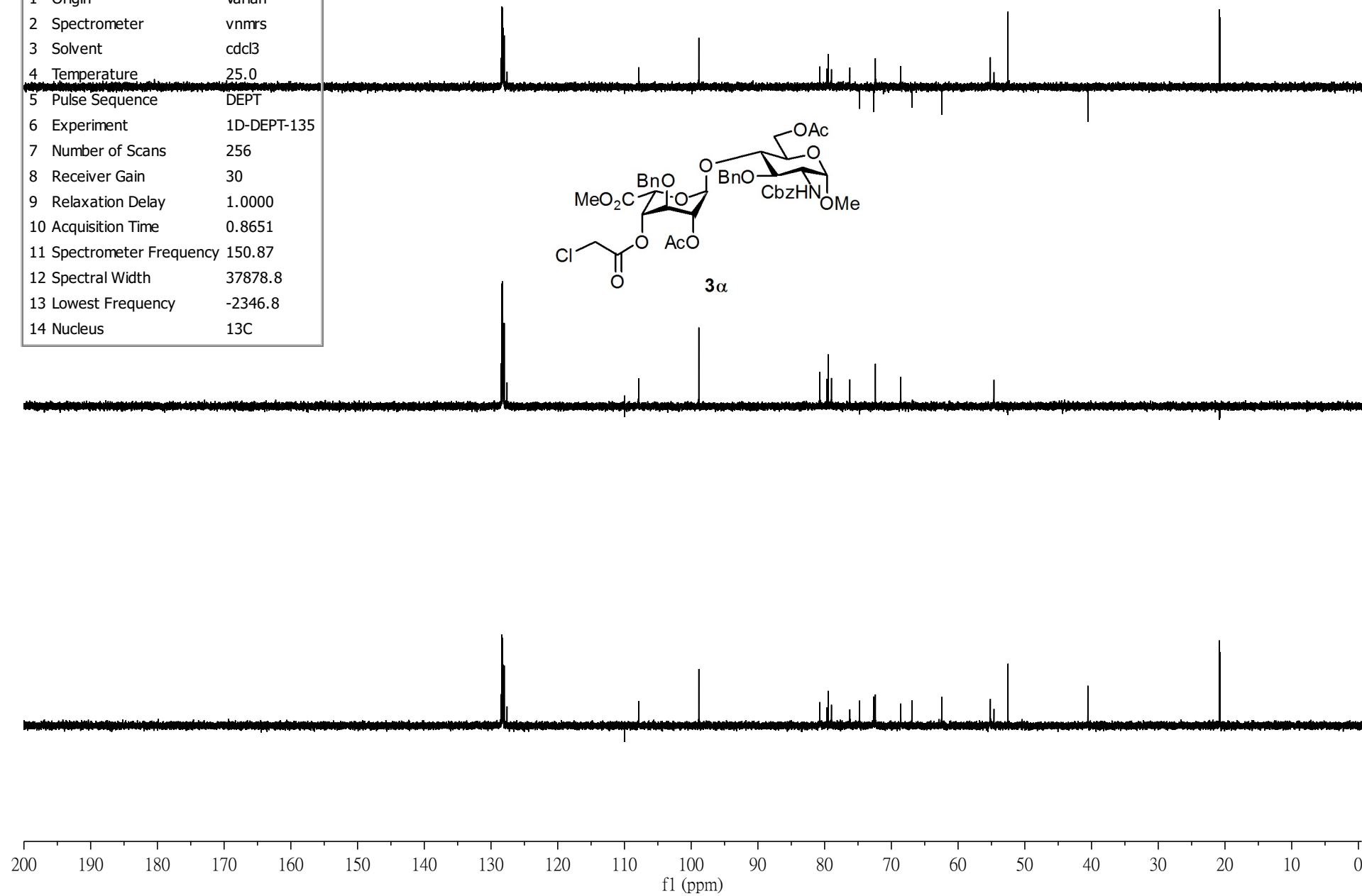
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1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	dmsO
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	128
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.86
12 Spectral Width	37878.8
13 Lowest Frequency	-3513.3
14 Nucleus	13C

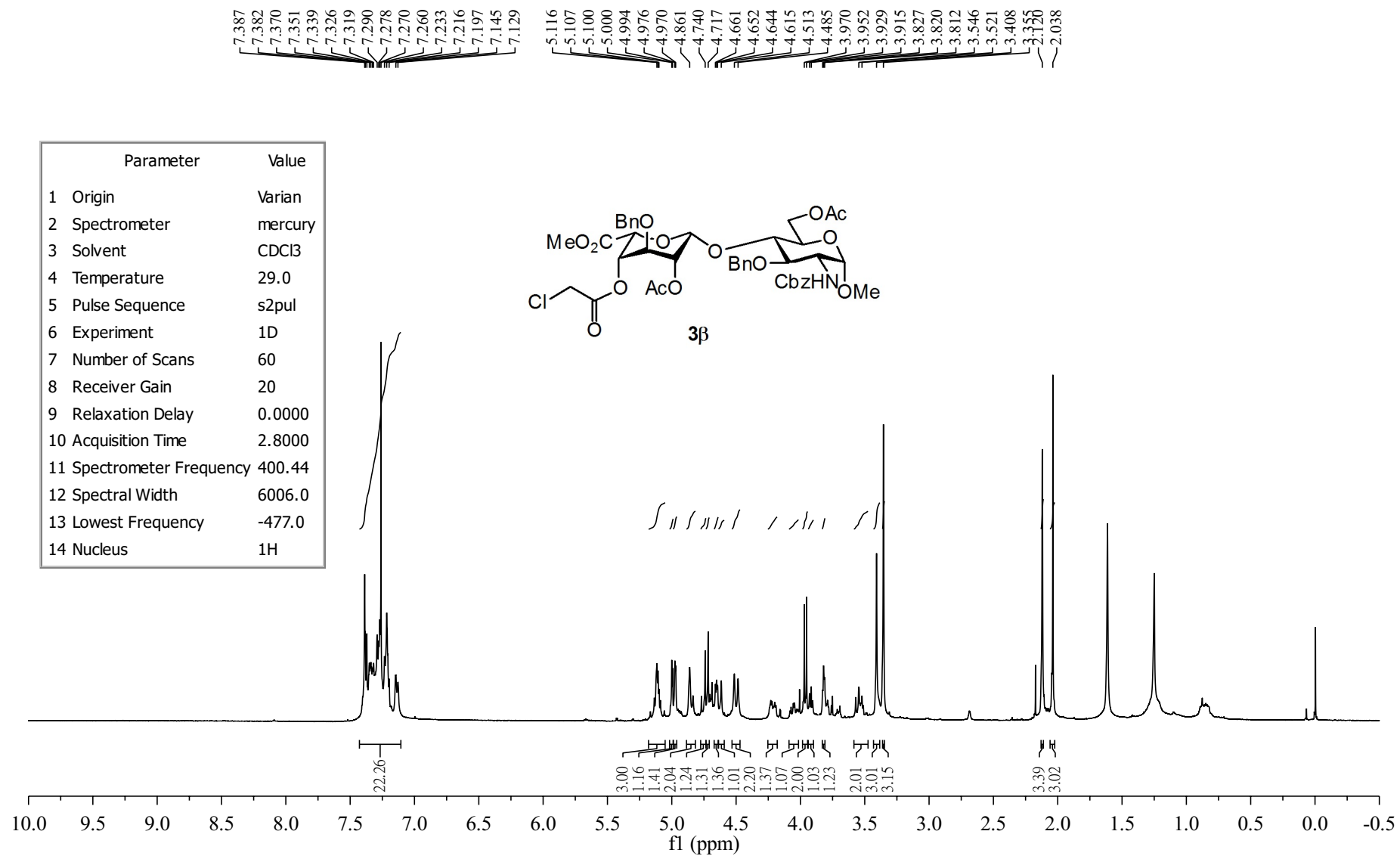


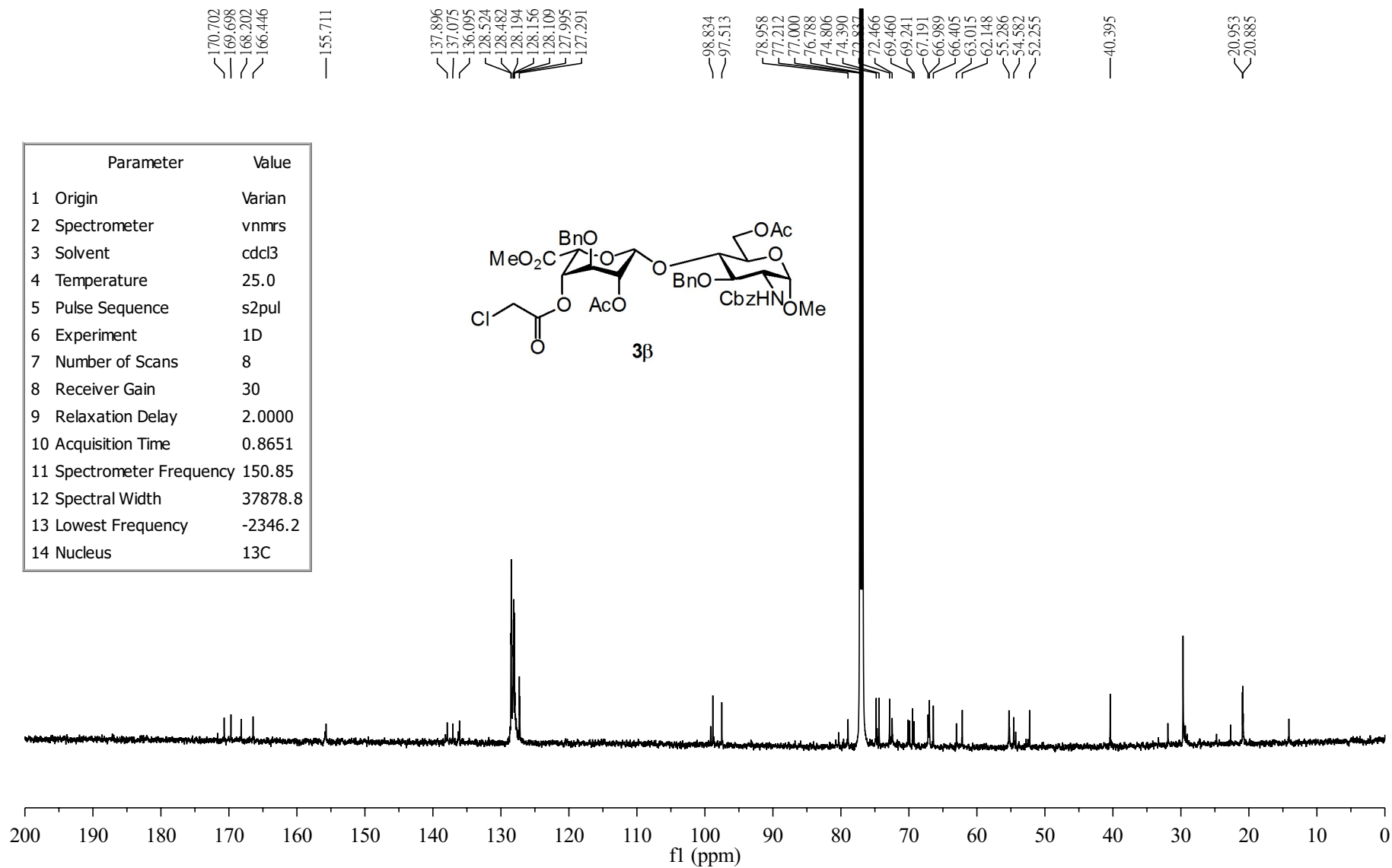




Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmrs
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	256
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2346.8
14 Nucleus	13C







Parameter	Value
1 Origin	Varian
2 Spectrometer	vnmr5
3 Solvent	cdcl3
4 Temperature	25.0
5 Pulse Sequence	DEPT
6 Experiment	1D-DEPT-135
7 Number of Scans	8
8 Receiver Gain	30
9 Relaxation Delay	1.0000
10 Acquisition Time	0.8651
11 Spectrometer Frequency	150.87
12 Spectral Width	37878.8
13 Lowest Frequency	-2358.5
14 Nucleus	13C

