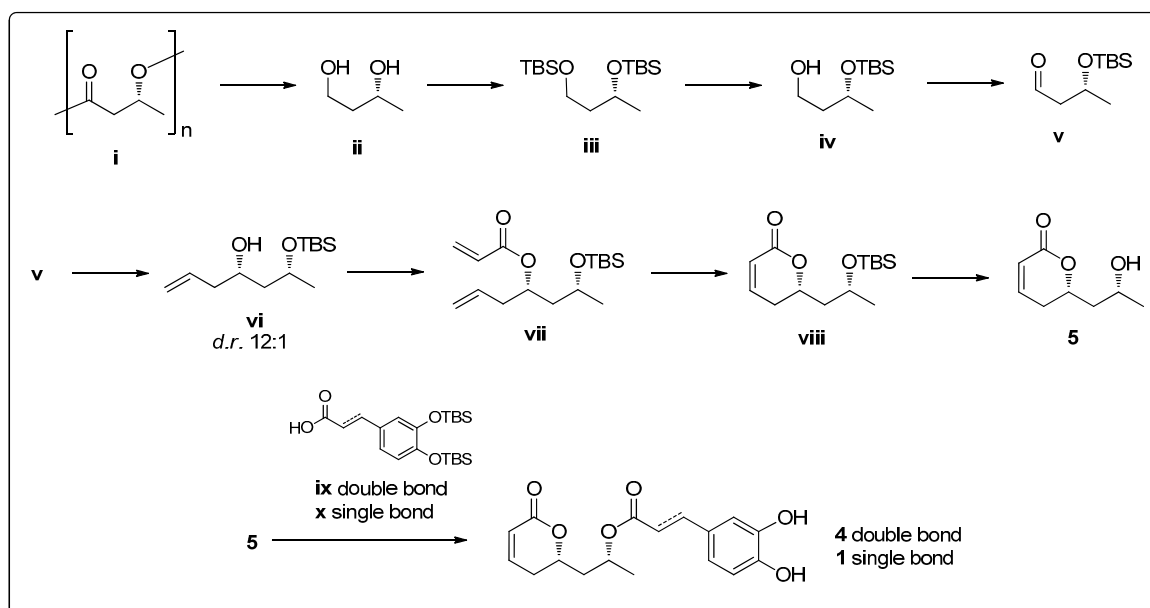


## Supplementary Materials



**Scheme S1.** Synthesis of tarchonanthuslactone **1** and analogue **4**.

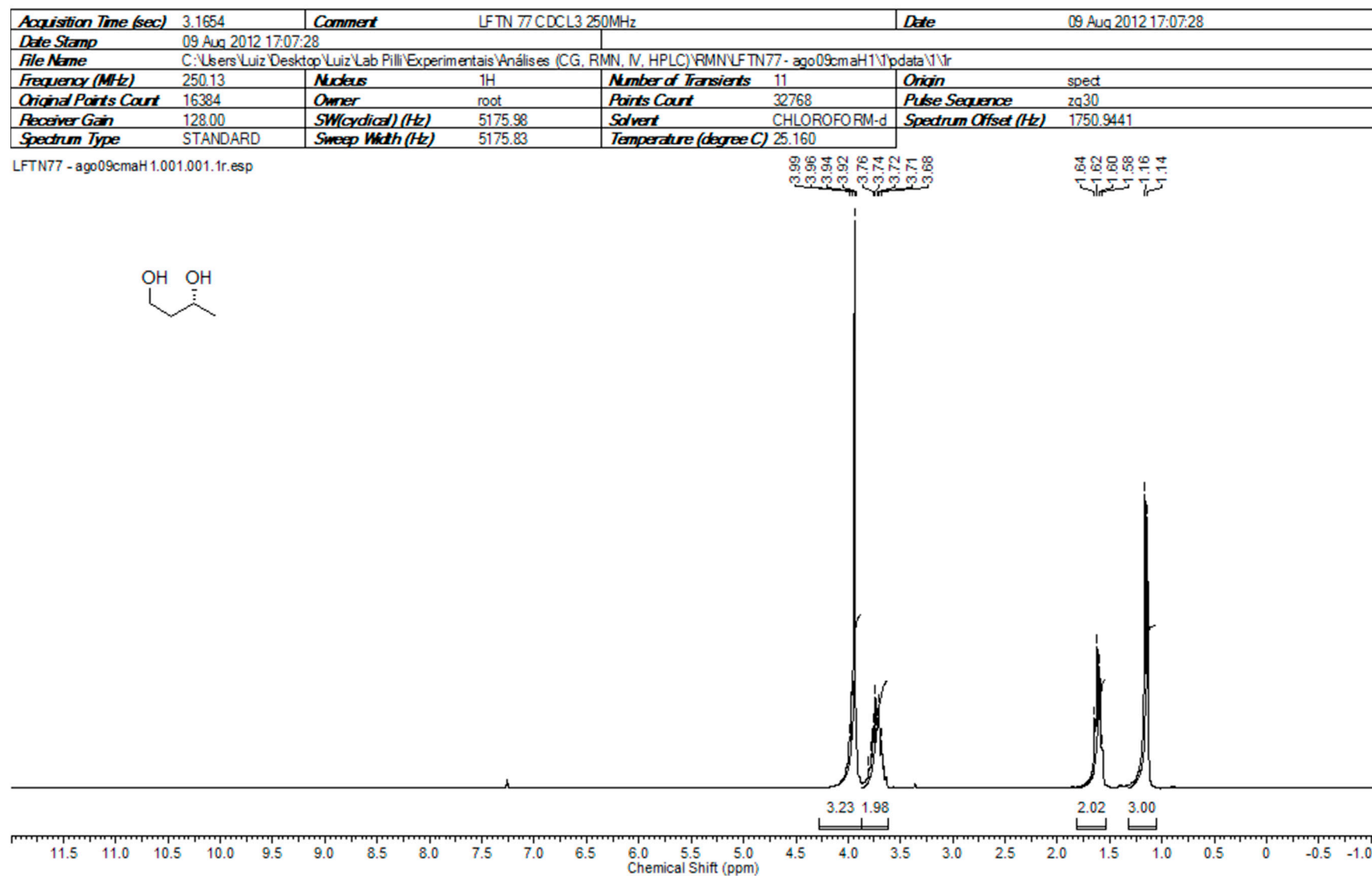
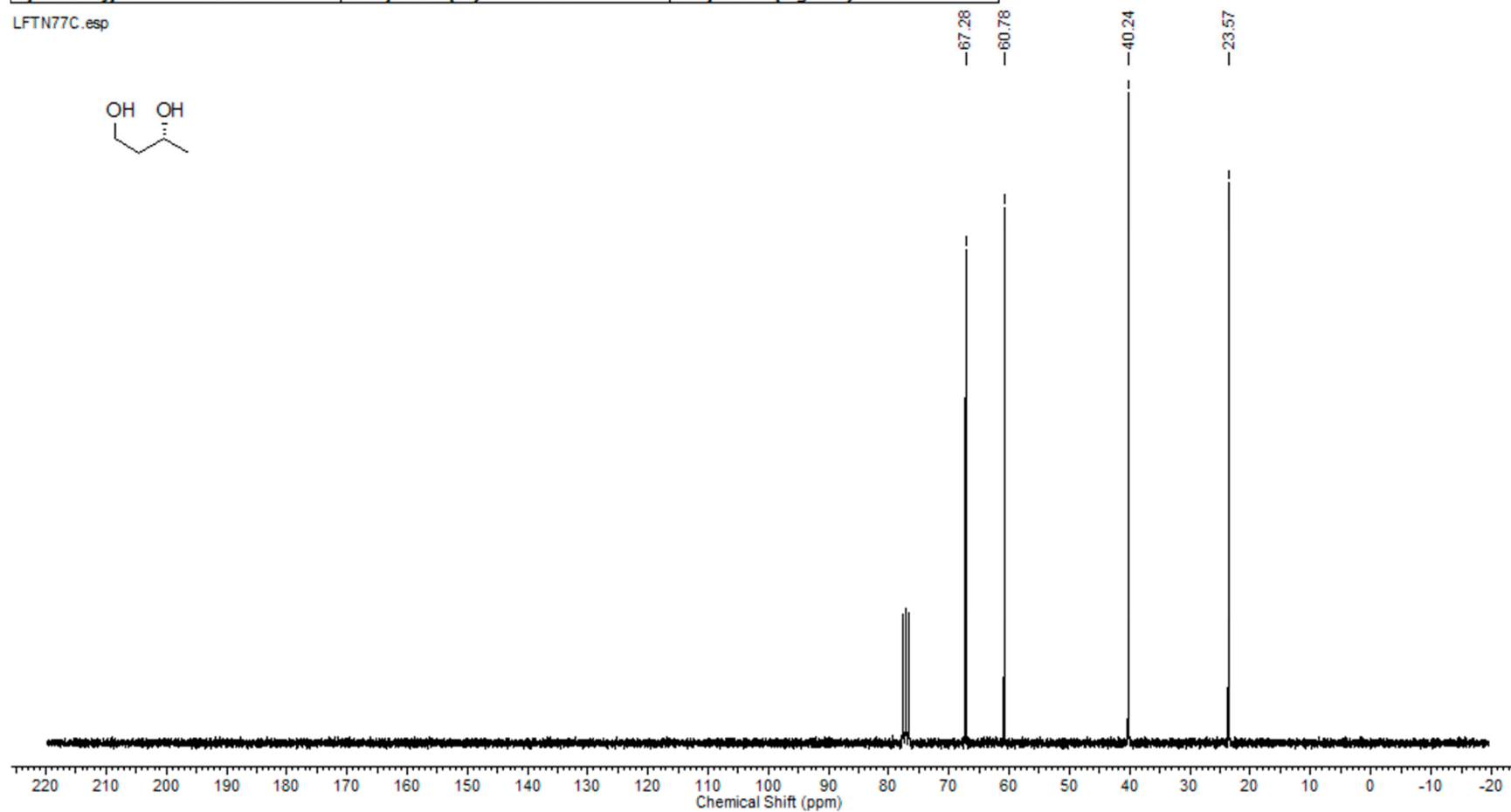


Figure S1. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound ii.

Acquisition Time (sec)	0.5439	Comment	LFTN 77 CDCL3 250MHz			Date	09 Aug 2012 17:26:40
Date Stamp	09 Aug 2012 17:26:40						
File Name	C:\Users\Luiz\Desktop\Luiz\Lab Pilli\Experimentais\Análises (CG, RMN, IV, HPLC)\RMN\LFTN77 - ago09cm aC\1\data\1\1r						
Frequency (MHz)	62.90	Nucleus	<sup>13</sup> C	Number of Transients	386	Origin	spec
Original Points Count	8192	Owner	root	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	362.00	SW(cyclical) (Hz)	15060.24	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	6295.4580
Spectrum Type	STANDARD	Sweep Width (Hz)	15059.78	Temperature (degree C)	25.160		

LFTN77C.esp

Figure S2. <sup>13</sup>C-NMR (62.9 MHz, CDCl<sub>3</sub>) of compound ii.

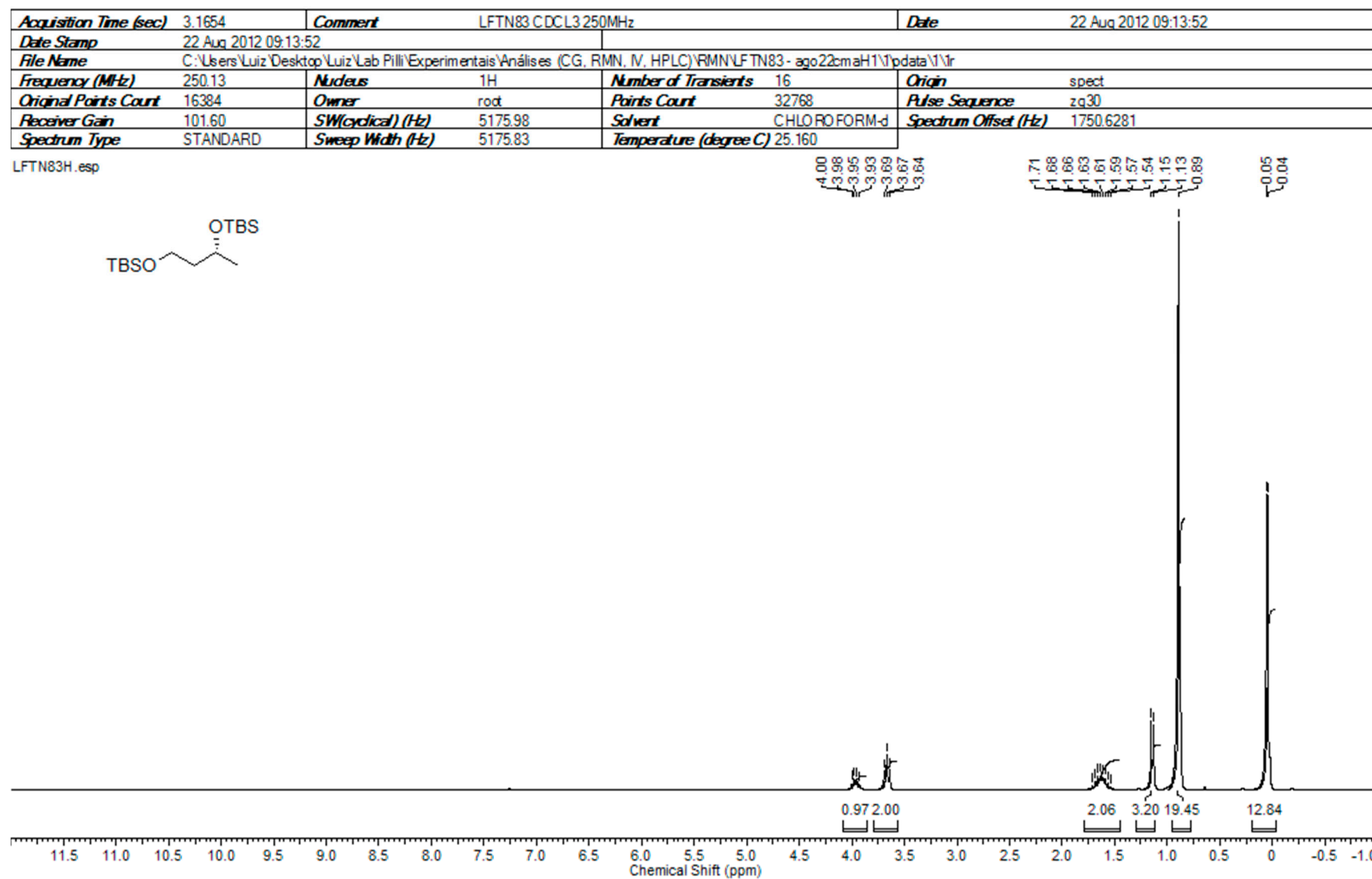
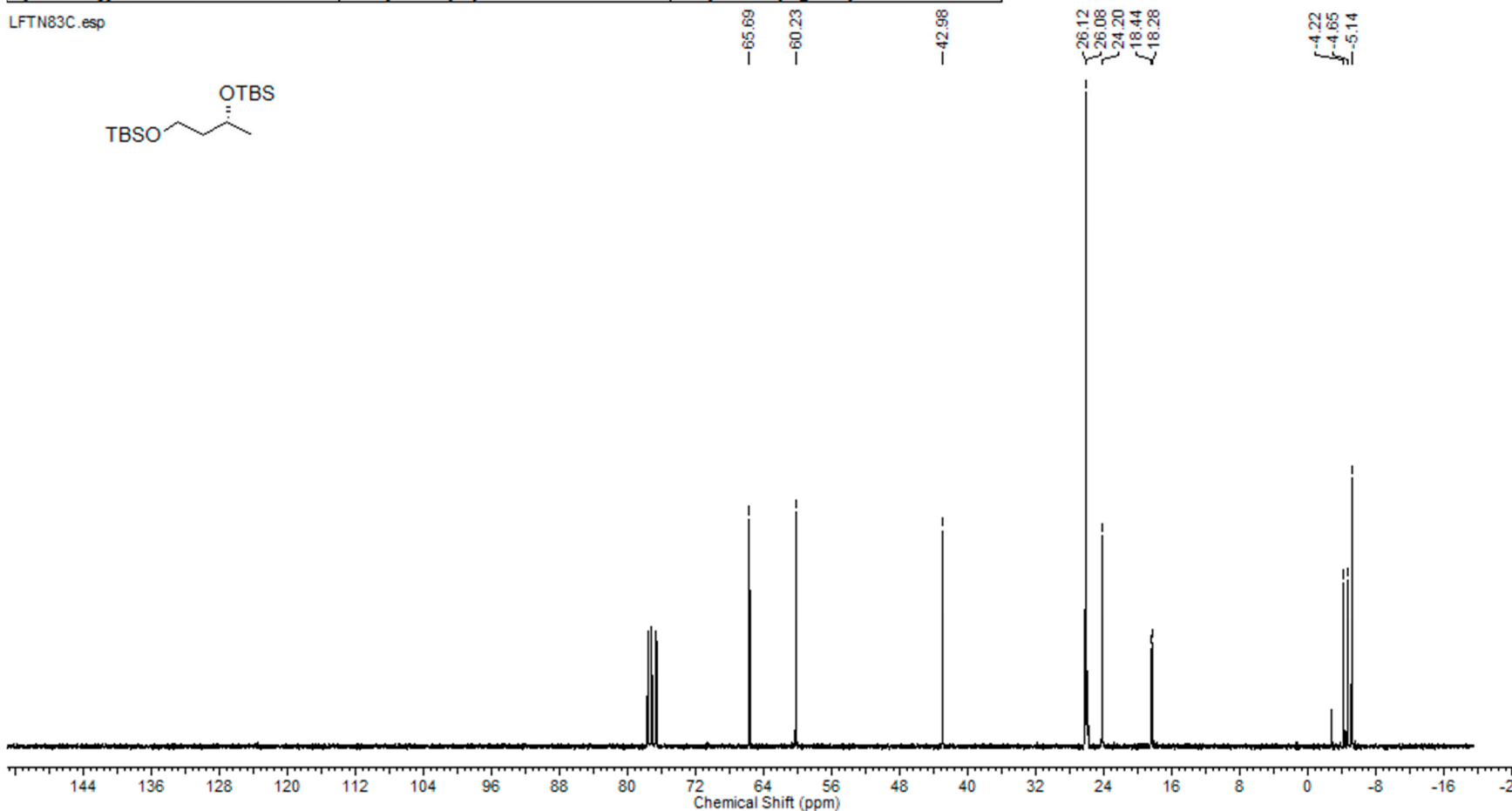


Figure S3. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound **iii**.

Acquisition Time (sec)	0.5439	Comment	LFTN83.CDCL3 250MHz C13	Date	22 Aug 2012 10:07:12
Date Stamp	22 Aug 2012 10:07:12				
File Name	C:\Users\Luiz\Desktop\Luiz\Lab Pilli\Experimentais\Analises (CG, RMN, IV, HPLC)\RMN\LFTN83 - ago22.cma\2\data\1\1r				
Frequency (MHz)	62.90	Nucleus	13C	Number of Transients	847
Original Points Count	8192	Owner	root	Points Count	32768
Receiver Gain	456.10	SW (Hz)	15060.24	Solvent	CHLOROFORM-d
Spectrum Type	STANDARD	Sweep Width (Hz)	15059.78	Temperature (degree C)	25.160
				Pulse Sequence	zgpg30
				Spectrum Offset (Hz)	6303.2710

LFTN83C.esp



**Figure S4.**  $^{13}\text{C}$ -NMR (62.9 MHz,  $\text{CDCl}_3$ ) of compound **iii**.

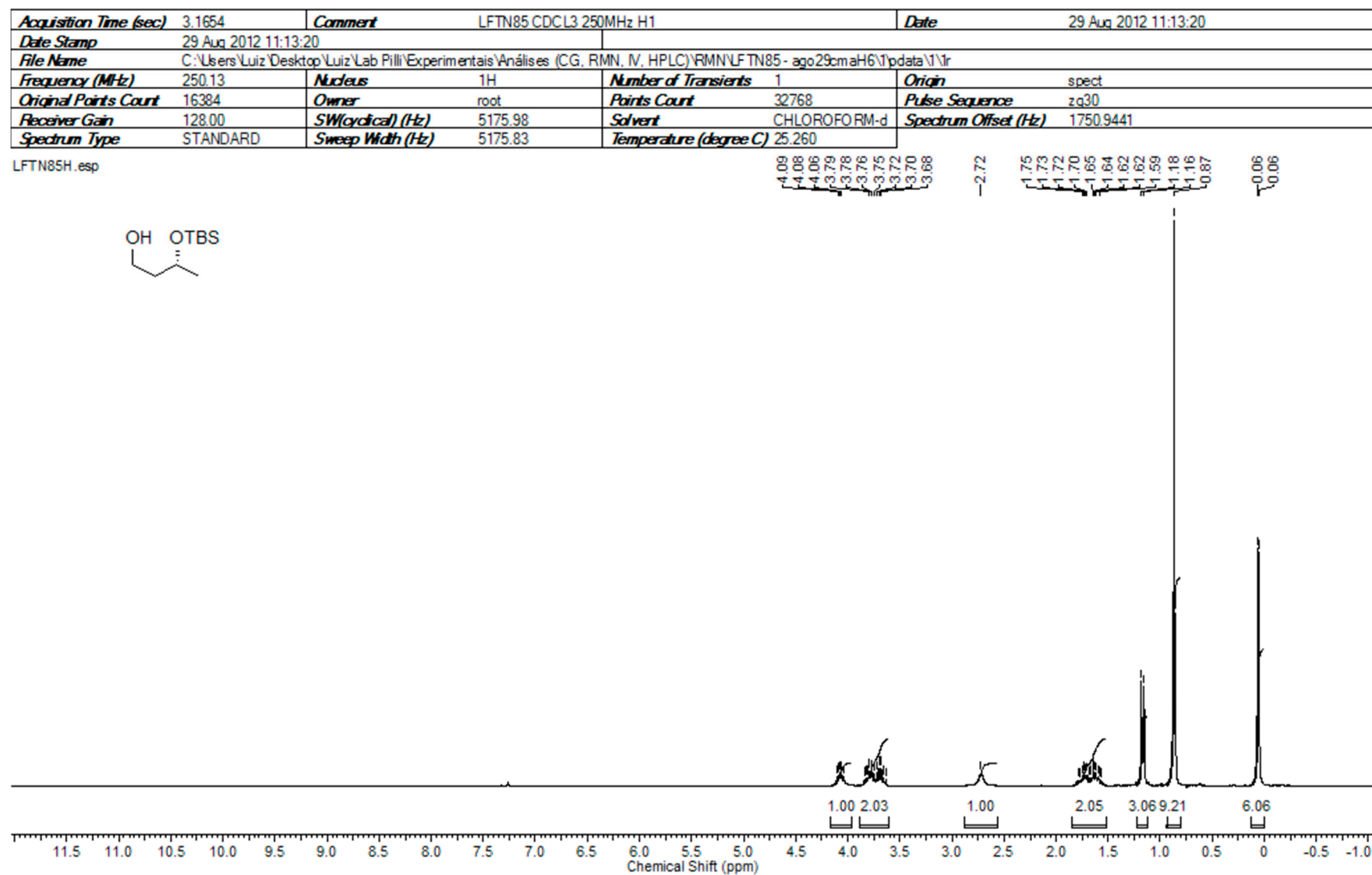
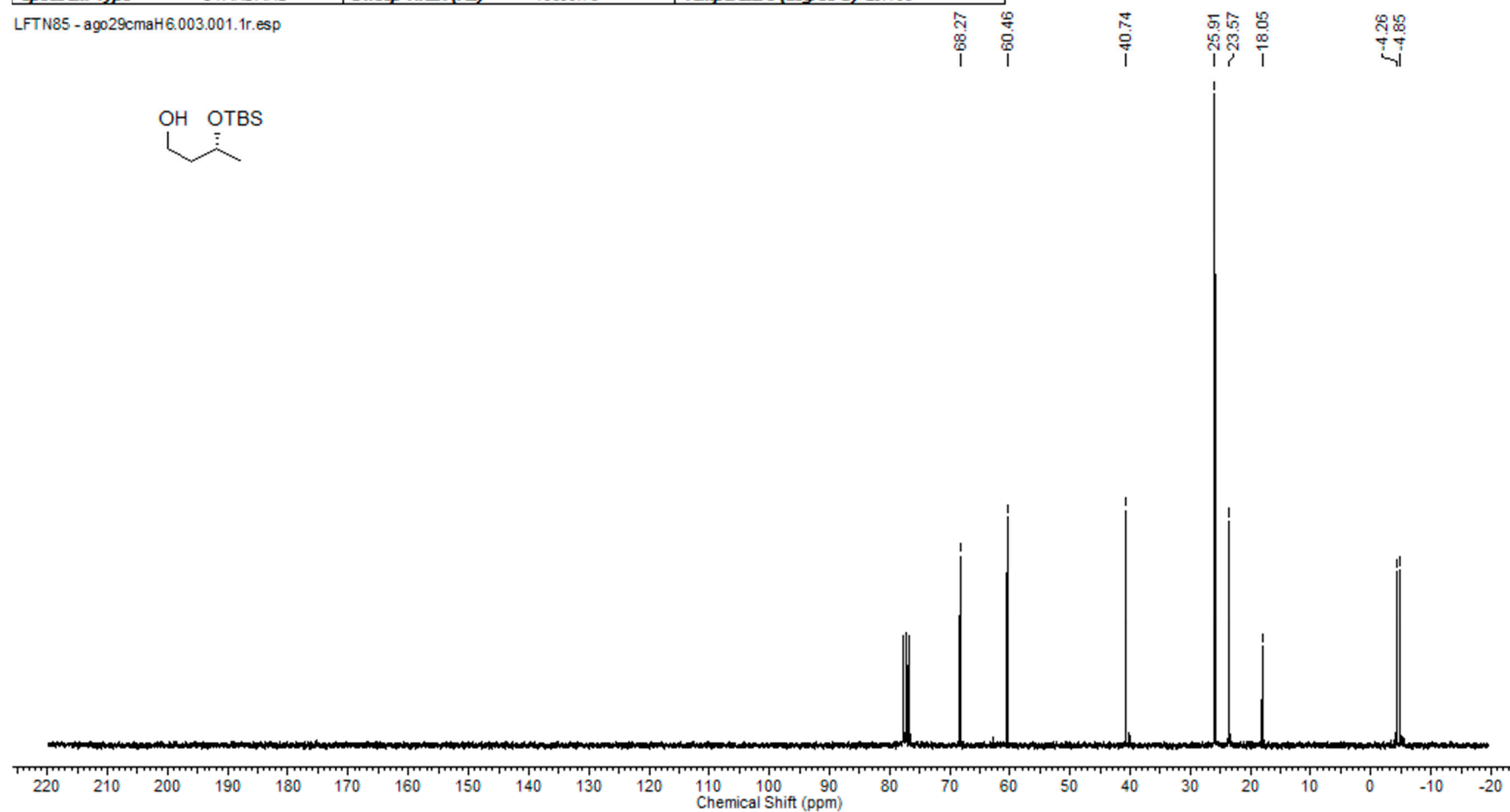


Figure S5. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound **iv**.

Acquisition Time (sec)	0.5439	Comment	LFTN85 CDCL3 250MHz C13	Date	29 Aug 2012 11:43:12
Date Stamp	29 Aug 2012 11:43:12				
File Name	C:\Users\Luiz\Desktop\Luiz\Lab Pilli\Experimentais\Análises (CG, RMN, IV, HPLC)\RMN\LFTN85 - ago29cmah6\3pdata\1\1r				
Frequency (MHz)	62.90	Nucleus	13C	Number of Transients	538
Original Points Count	8192	Owner	root	Points Count	32768
Receiver Gain	512.00	SW(cyclical) (Hz)	15060.24	Solvent	CHLOROFORM-d
Spectrum Type	STANDARD	Sweep Width (Hz)	15059.78	Temperature (degree C)	25.160
				Origin	spect
				Pulse Sequence	zgpg30
				Spectrum Offset (Hz)	6299.1348

LFTN85 - ago29cmah6.003.001.1r.esp

Figure S6. <sup>13</sup>C-NMR (62.9 MHz, CDCl<sub>3</sub>) of compound **iv**.

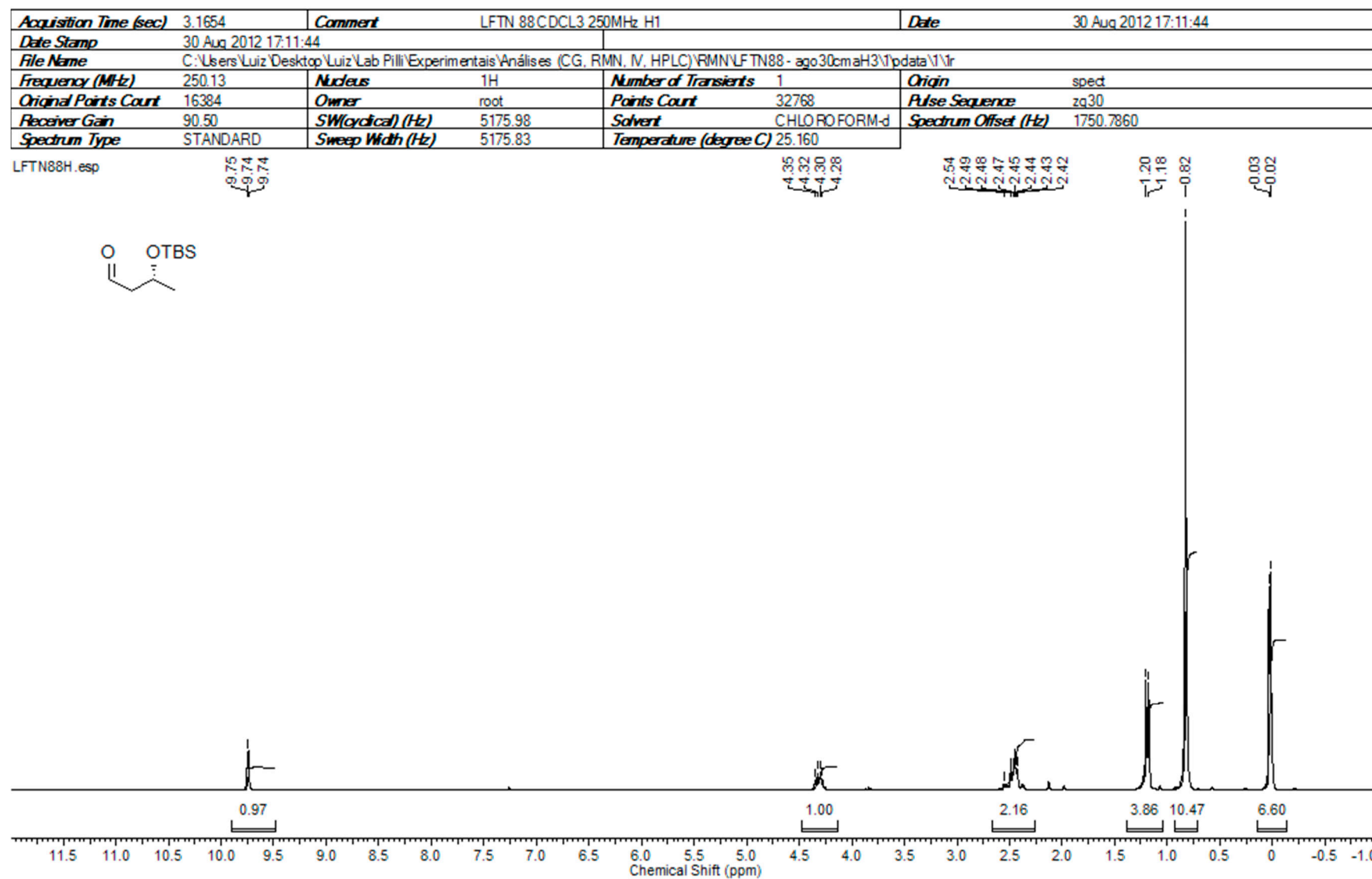


Figure S7. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound v.

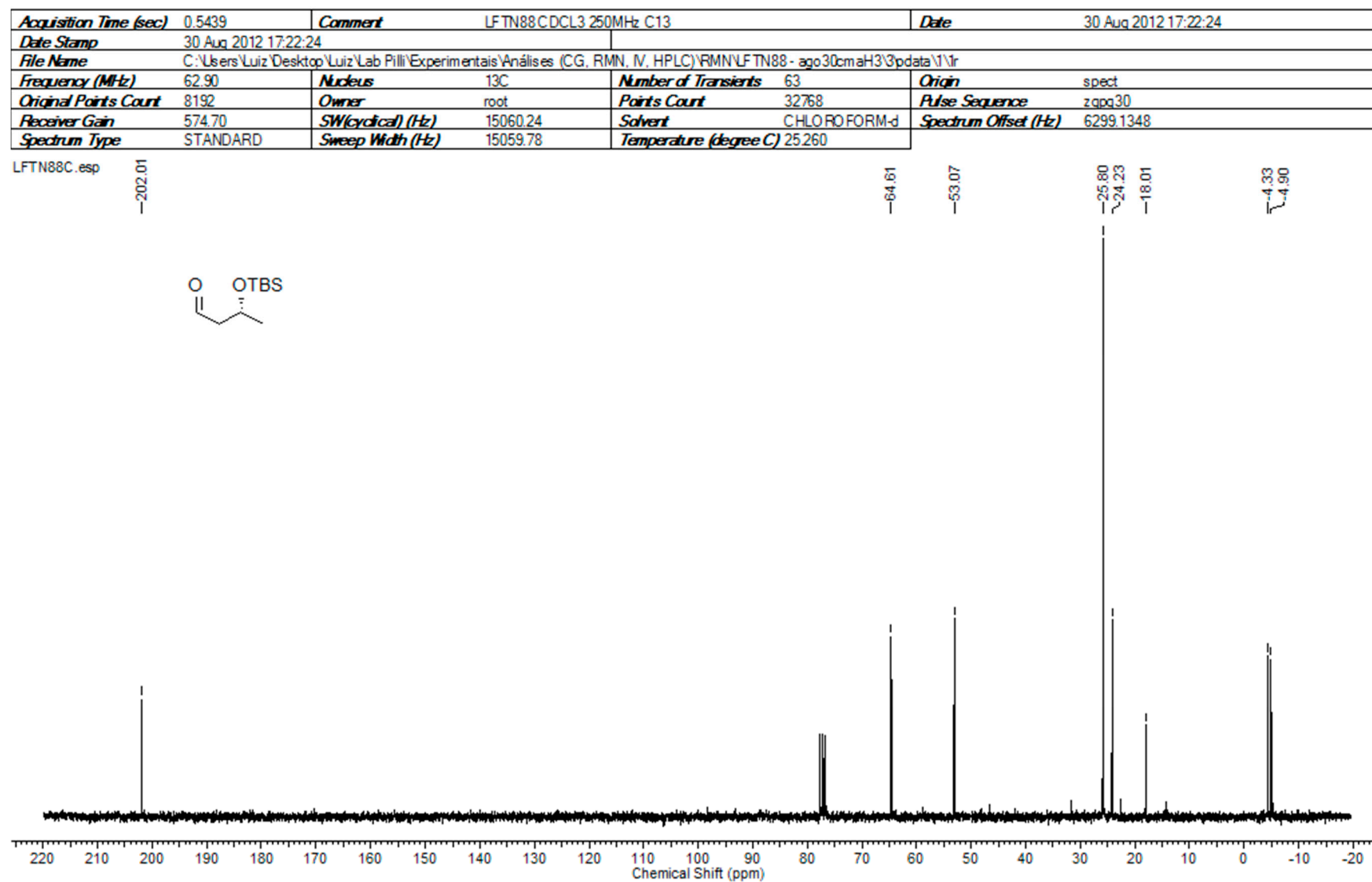


Figure S8. <sup>13</sup>C-NMR (62.9 MHz, CDCl<sub>3</sub>) of compound v.

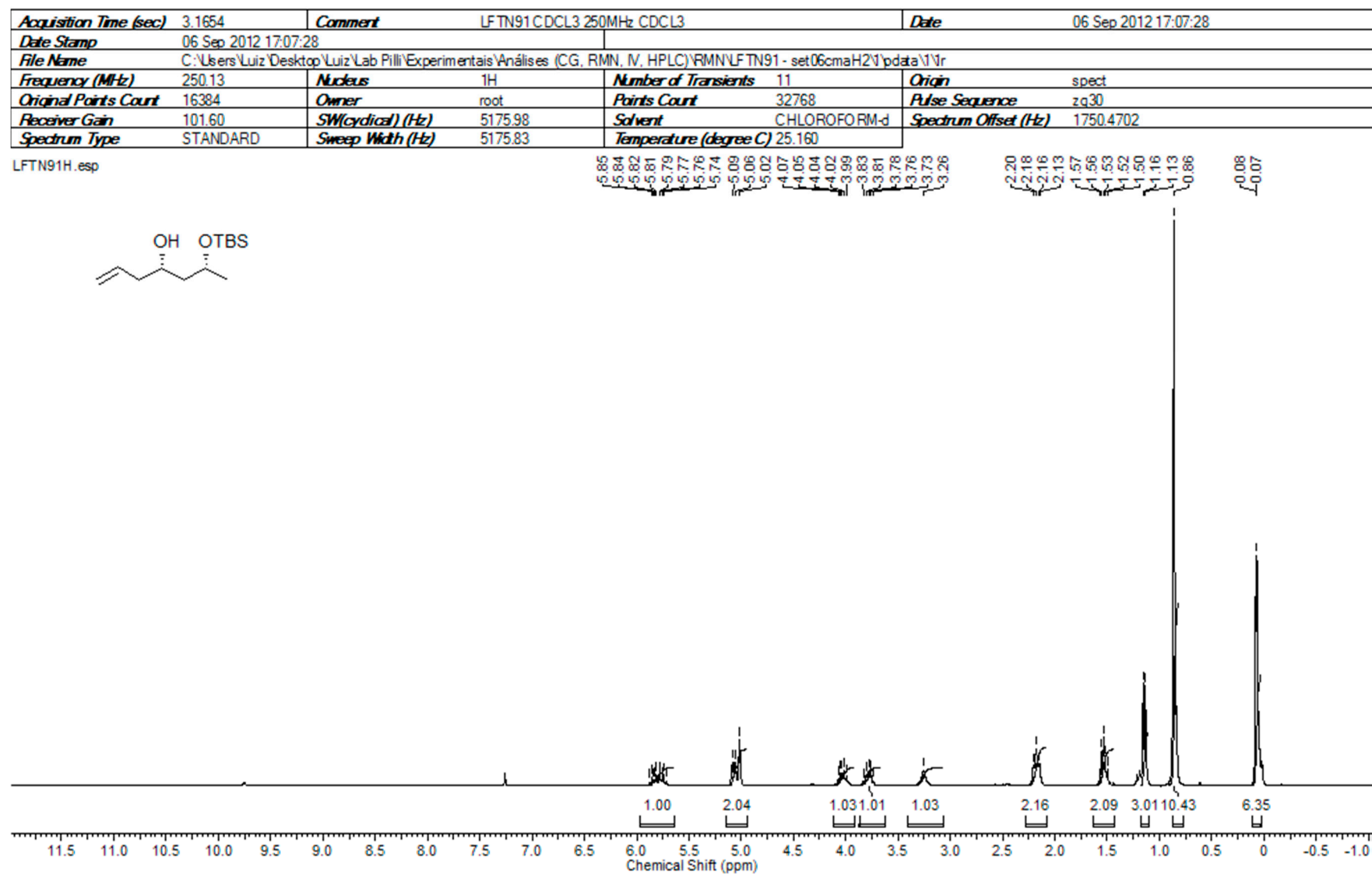
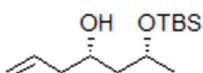
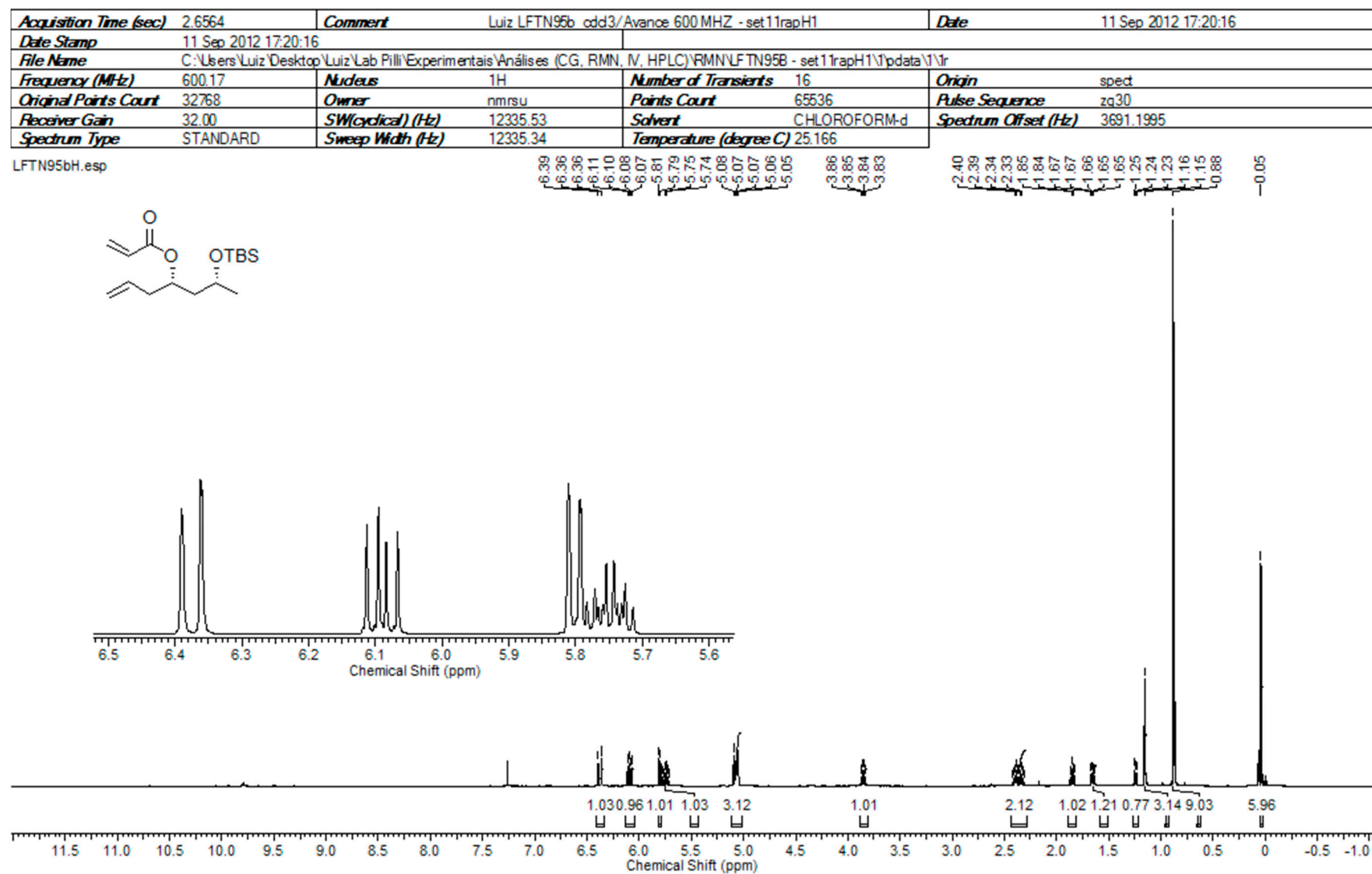


Figure S9. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound vi.



**Figure S10.**  $^{13}\text{C}$ -NMR (62.9 MHz,  $\text{CDCl}_3$ ) of compound **vi**.

Figure S11. <sup>1</sup>H-NMR (600 MHz, CDCl<sub>3</sub>) of compound vii.

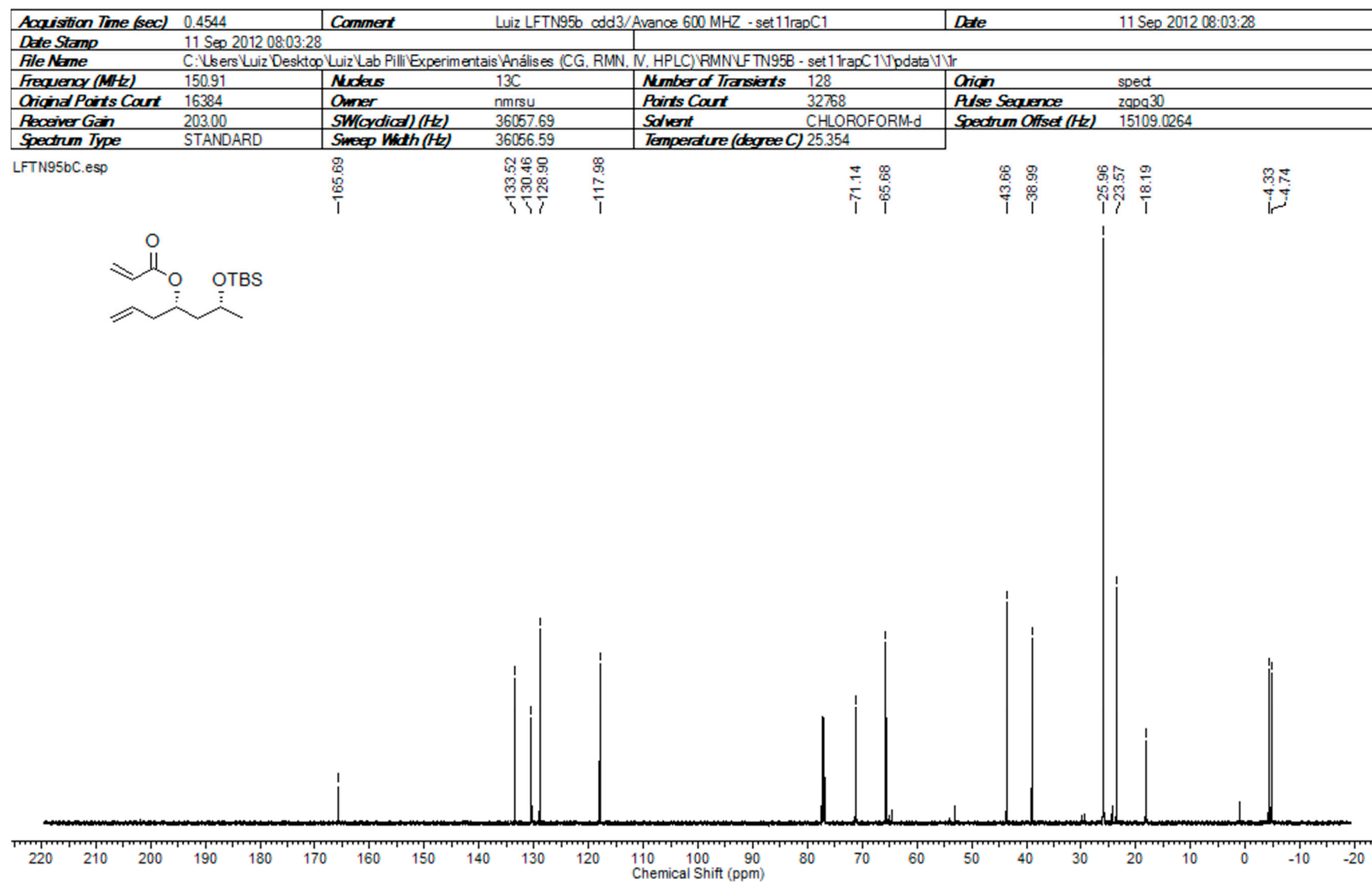


Figure S12. <sup>13</sup>C-NMR (150 MHz, CDCl<sub>3</sub>) of compound vii.

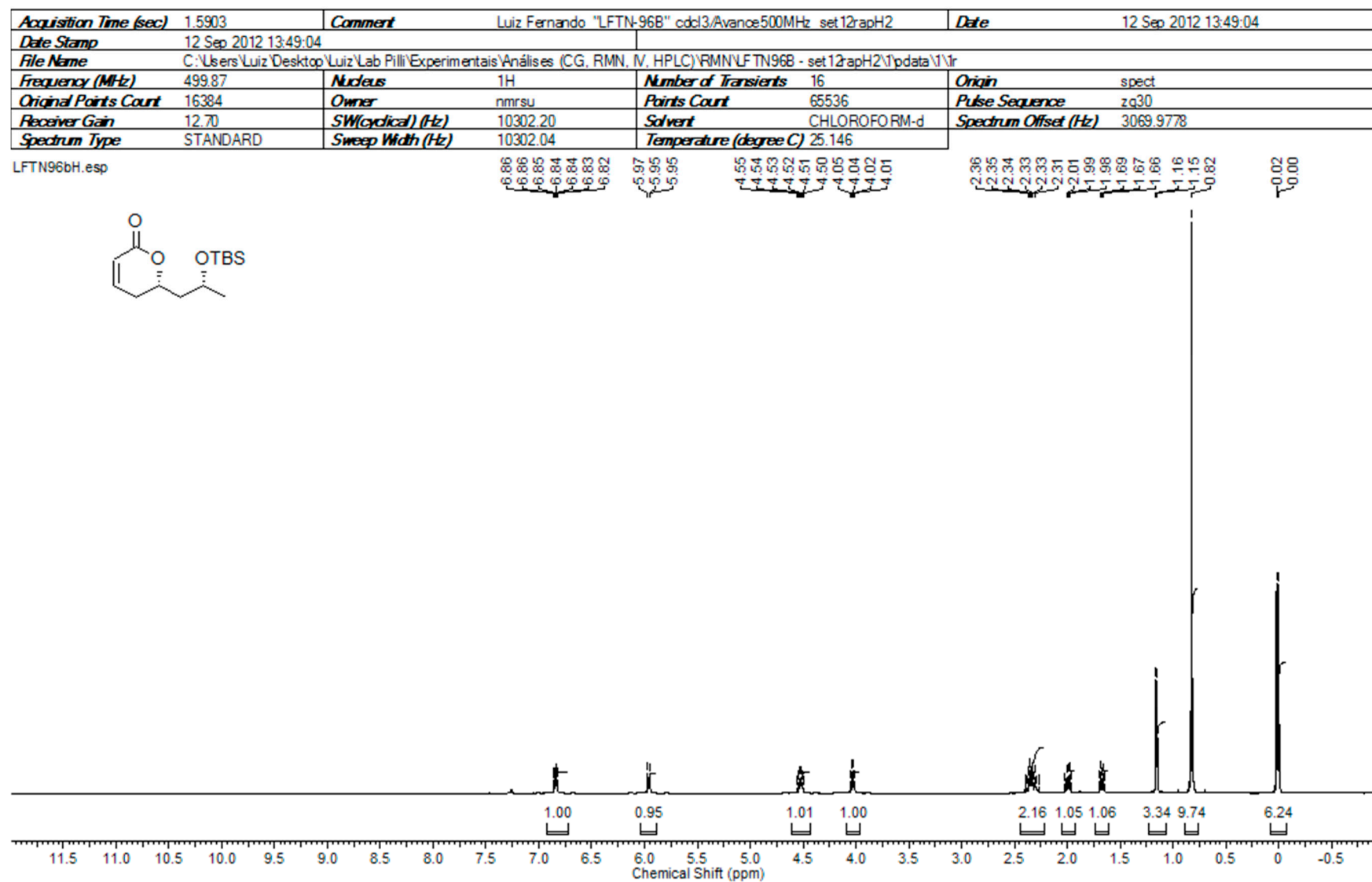


Figure S13.  $^1\text{H}$ -NMR (500 MHz,  $\text{CDCl}_3$ ) of compound viii.

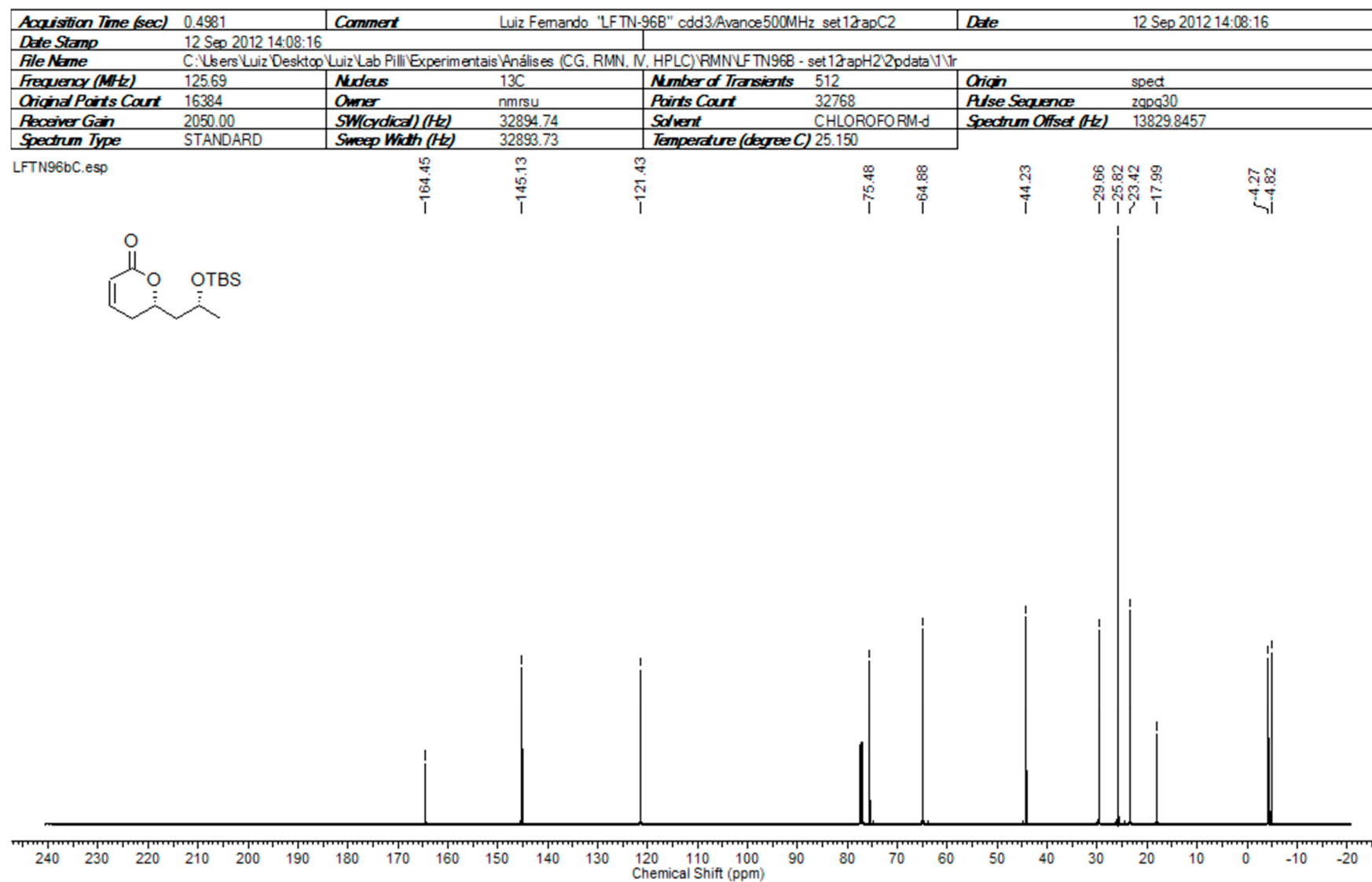
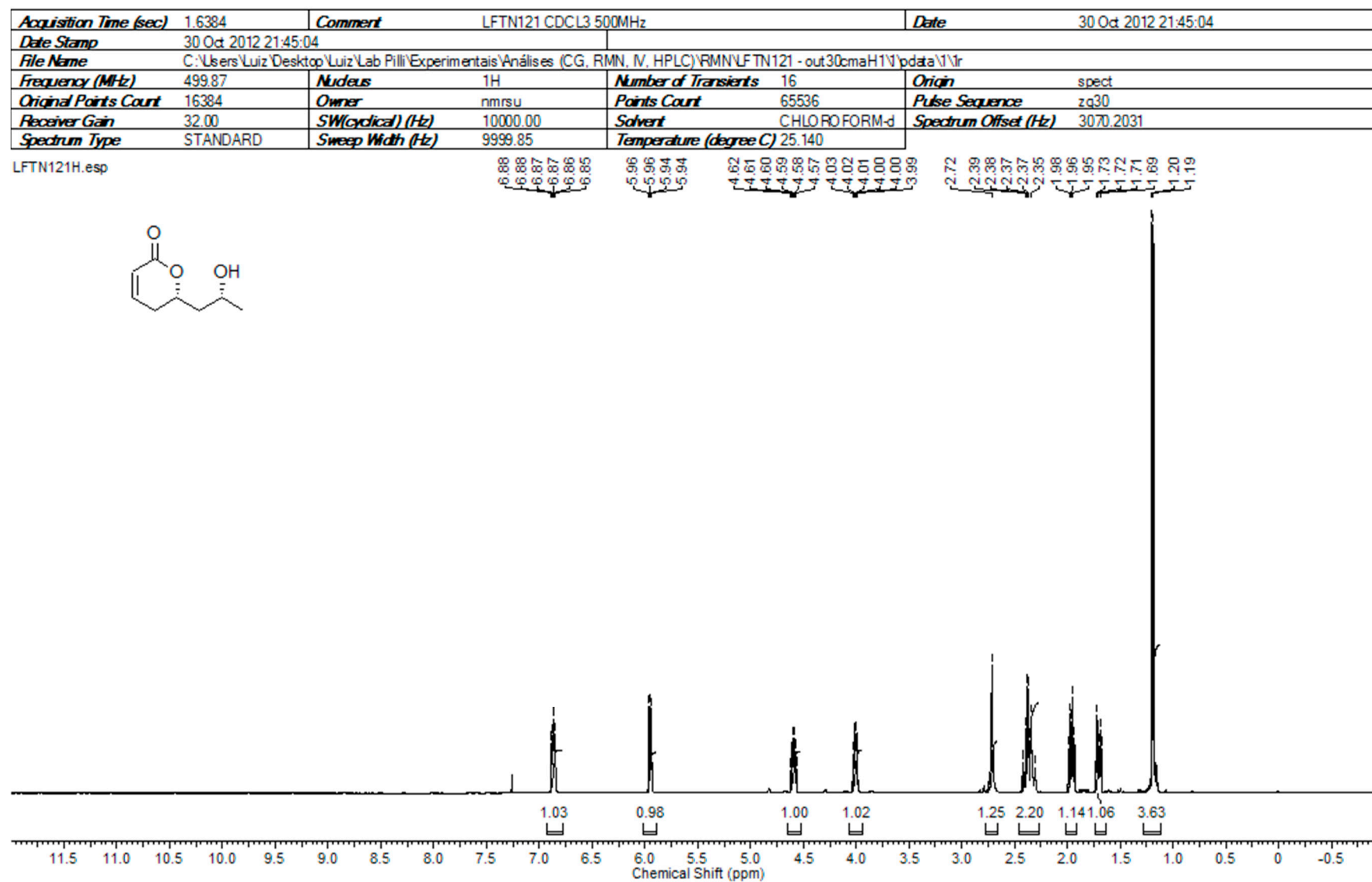


Figure S14. <sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>) of compound viii.

Figure S15. <sup>1</sup>H-NMR (500 MHz, CDCl<sub>3</sub>) of compound 5.

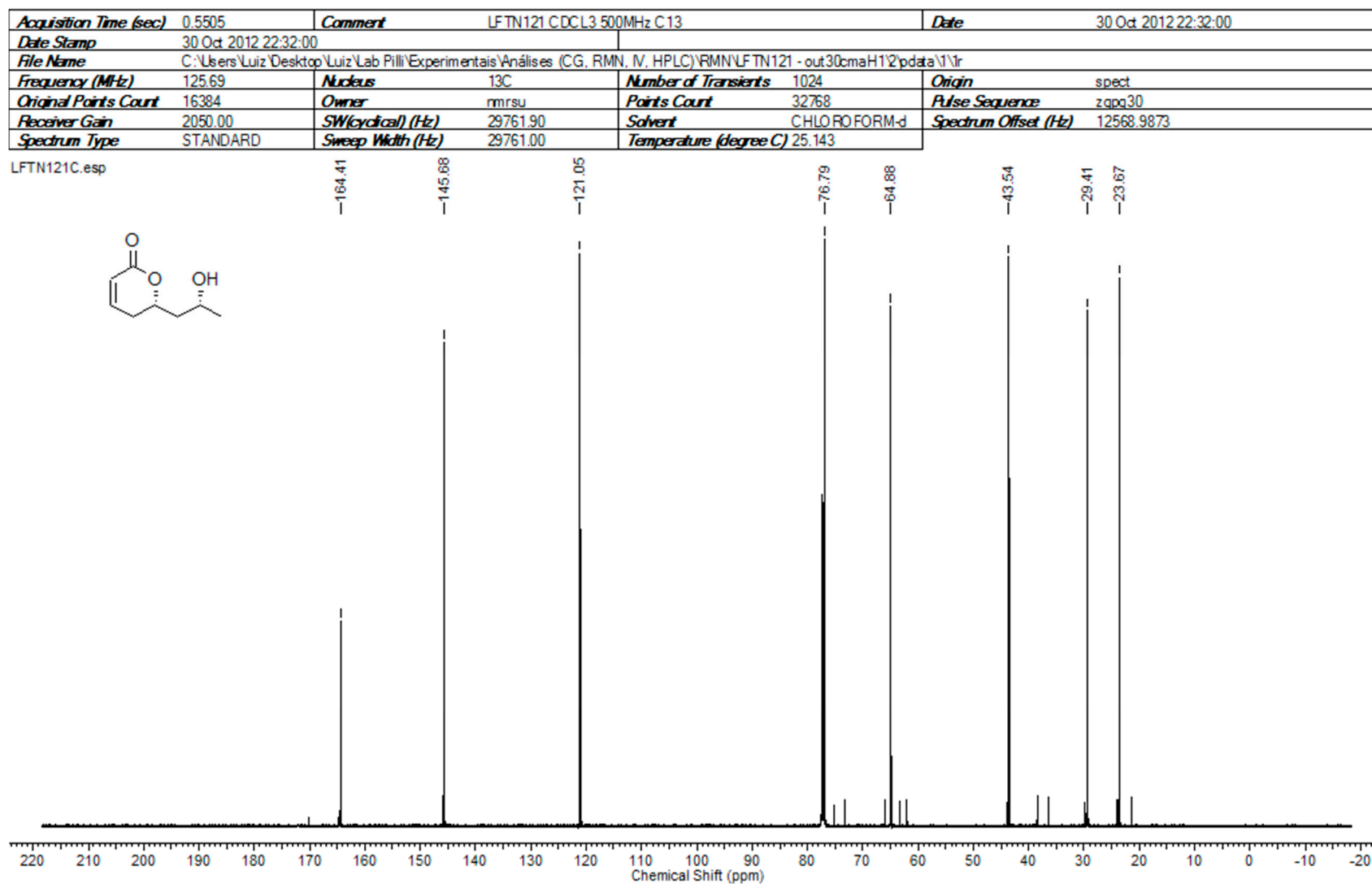


Figure S16. <sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>) of compound 5.

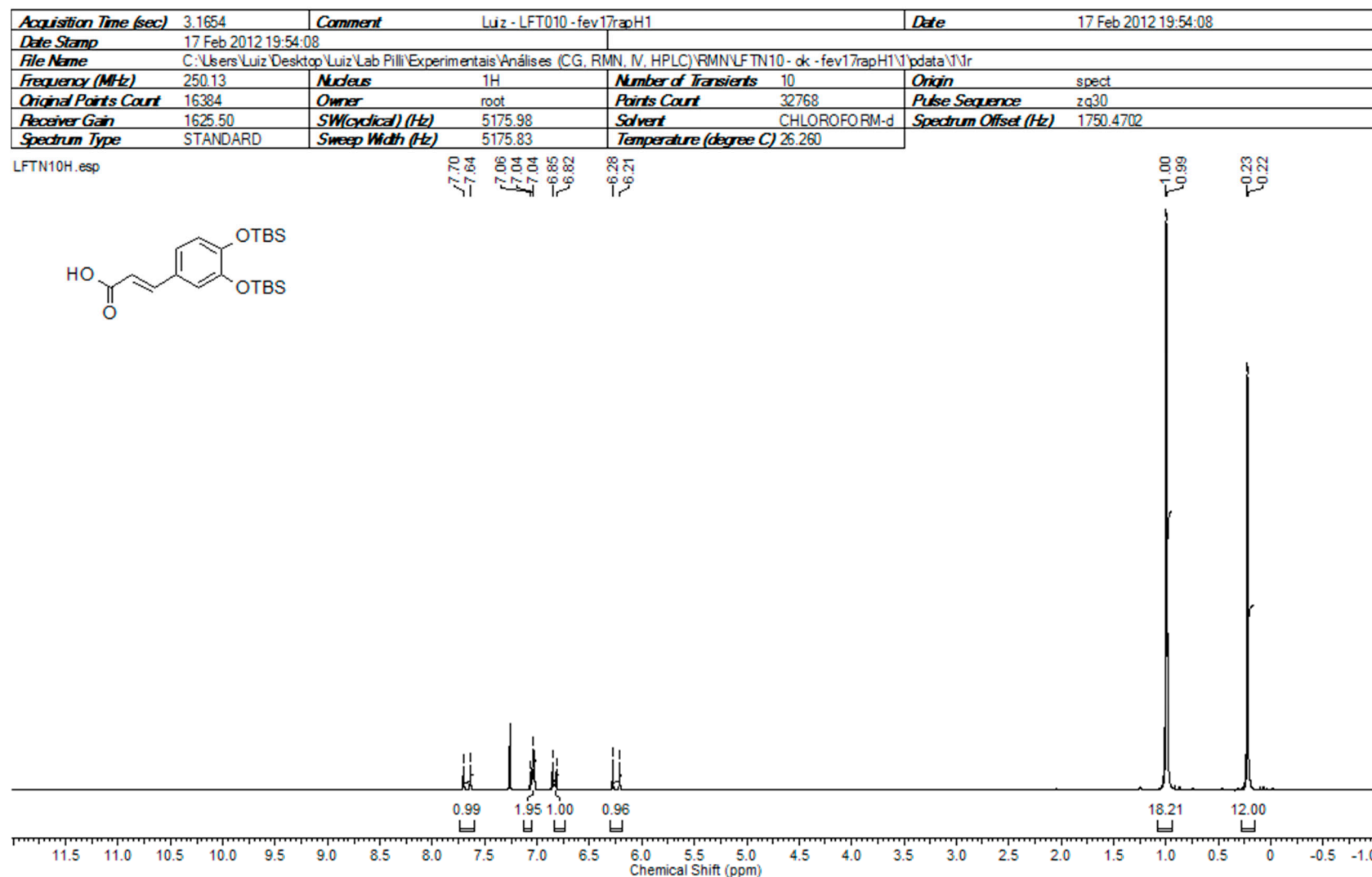


Figure S17.  $^1\text{H}$ -NMR (250 MHz,  $\text{CDCl}_3$ ) of compound ix.

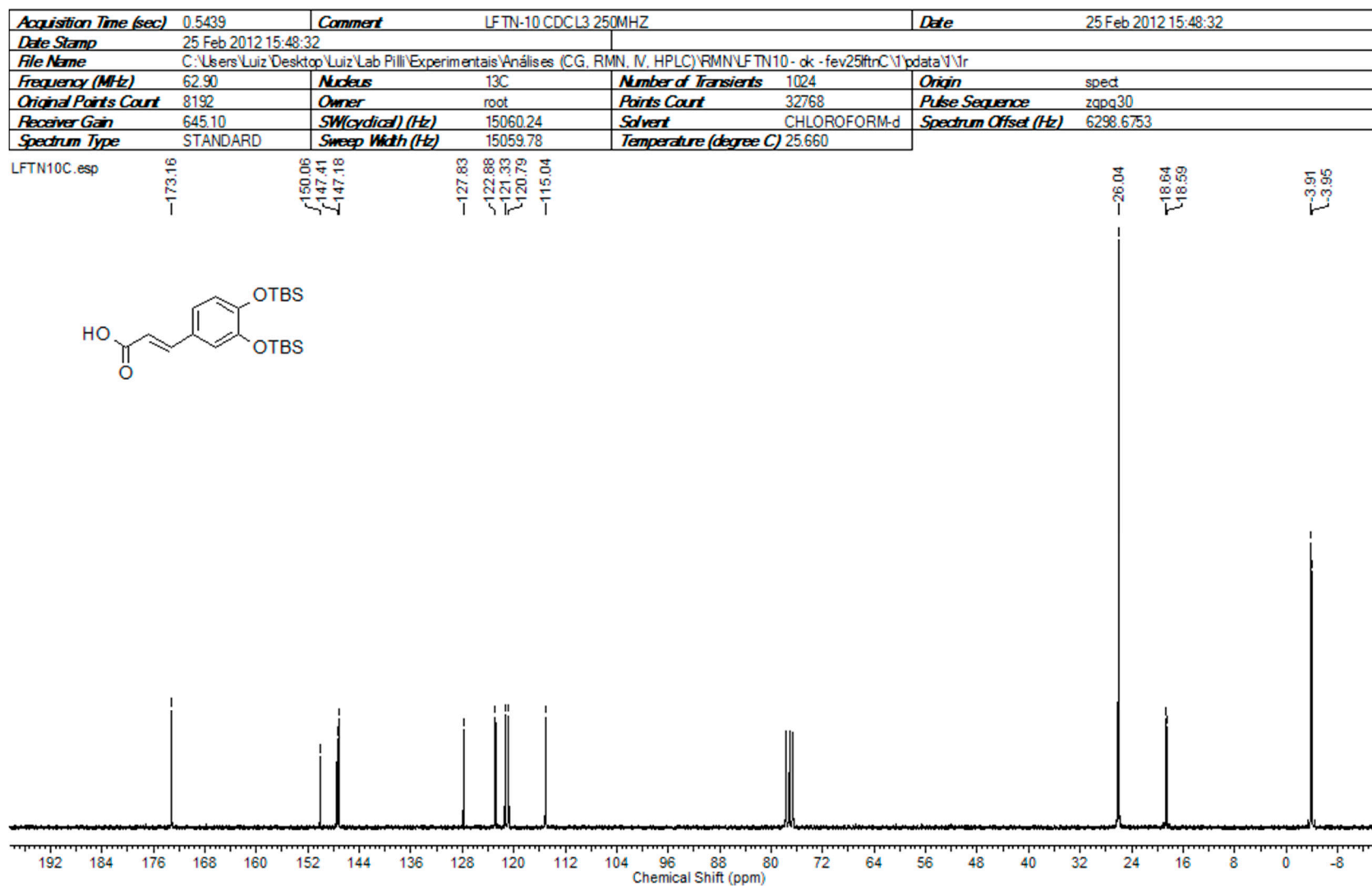


Figure S18. <sup>13</sup>C-NMR (62.9 MHz, CDCl<sub>3</sub>) of compound ix.

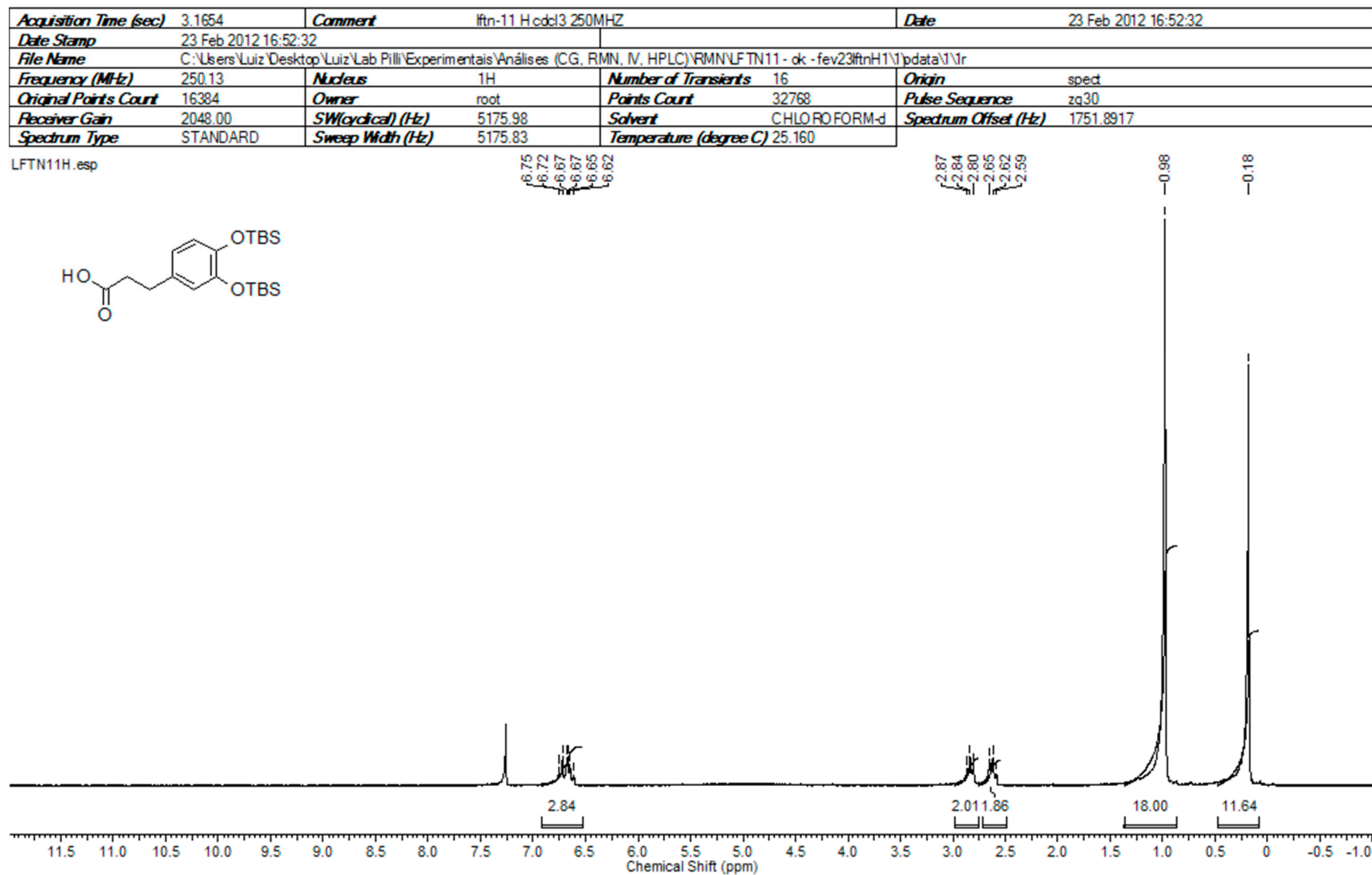


Figure S19. <sup>1</sup>H-NMR (250 MHz, CDCl<sub>3</sub>) of compound x.

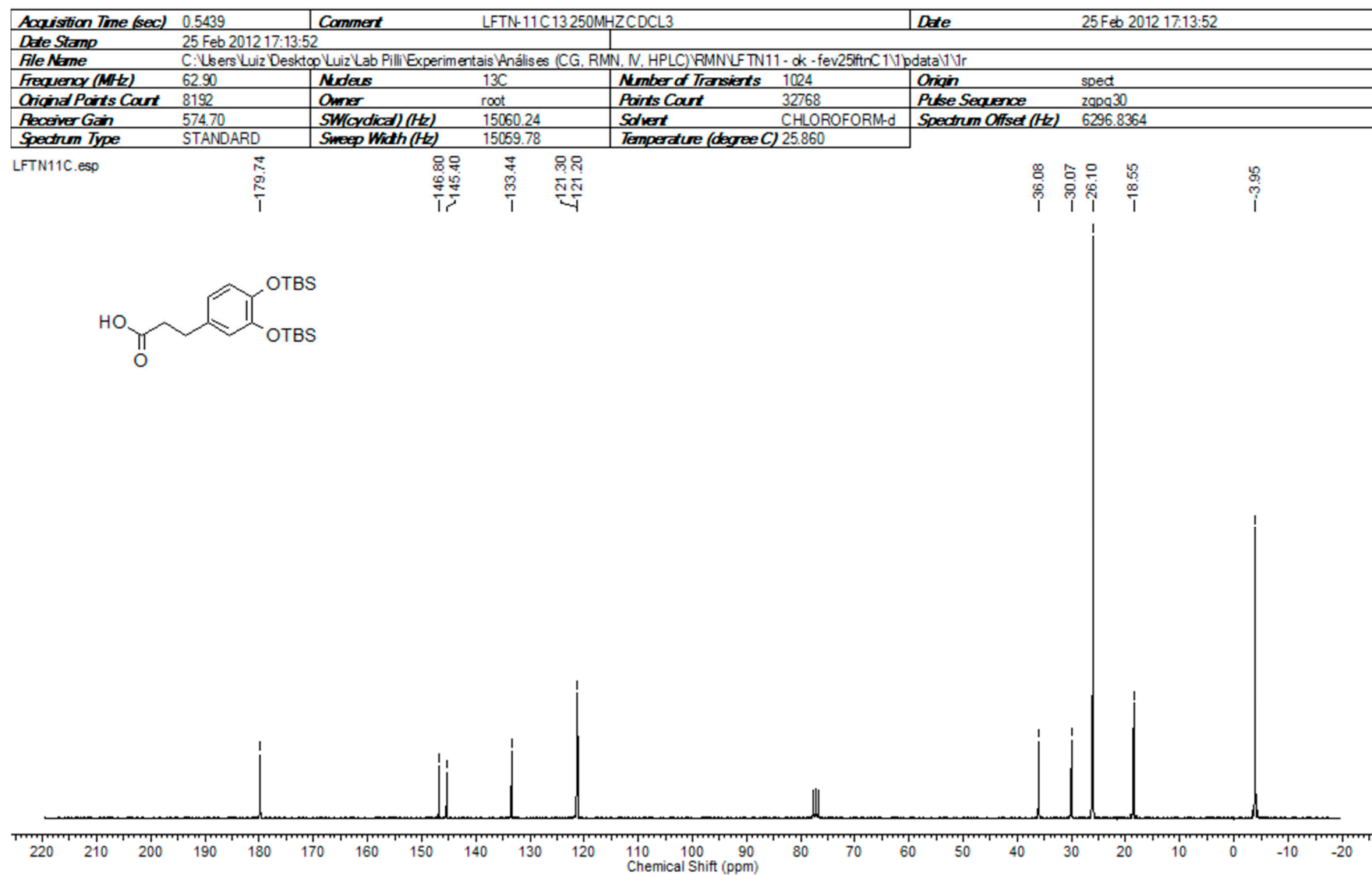


Figure S20. <sup>13</sup>C-NMR (62.9 MHz, CDCl<sub>3</sub>) of compound x.

LFTN122H.esp

CC[C@H]1CC[C@@H](C(=O)OCC2=CC=C(O)C=C2)OC(=O)C=C1

Chemical Shift (ppm)

6.83, 6.81, 6.74, 6.73, 6.71, 6.56, 6.54, 6.54, 5.99, 5.97, 5.05, 5.05, 5.05, 5.04, 5.03, 5.02, 4.22, 4.22, 4.21, 4.20, 4.19, 4.18, 4.17, 2.81, 2.80, 2.78, 2.60, 2.58, 2.57, 2.25, 2.18, 2.16, 2.06, 2.05, 2.04, 1.75, 1.73, 1.71, 1.23, 1.22

Chemical Shift (ppm)

6.85, 6.80, 6.75, 6.70, 6.65, 6.60, 6.55

Chemical Shift (ppm)

11.5, 11.0, 10.5, 10.0, 9.5, 9.0, 8.5, 8.0, 7.5, 7.0, 6.5, 6.0, 5.5, 5.0, 4.5, 4.0, 3.5, 3.0, 2.5, 2.0, 1.5, 1.0, 0.5, 0, -0.5, -1

1.10, 1.05, 0.93, 1.06, 1.12, 1.00, 0.98, 2.01, 2.01, 3.06, 1.05, 3.23

**Figure S21.**  $^1\text{H}$ -NMR (500 MHz,  $\text{CDCl}_3$ ) of compound **1**.

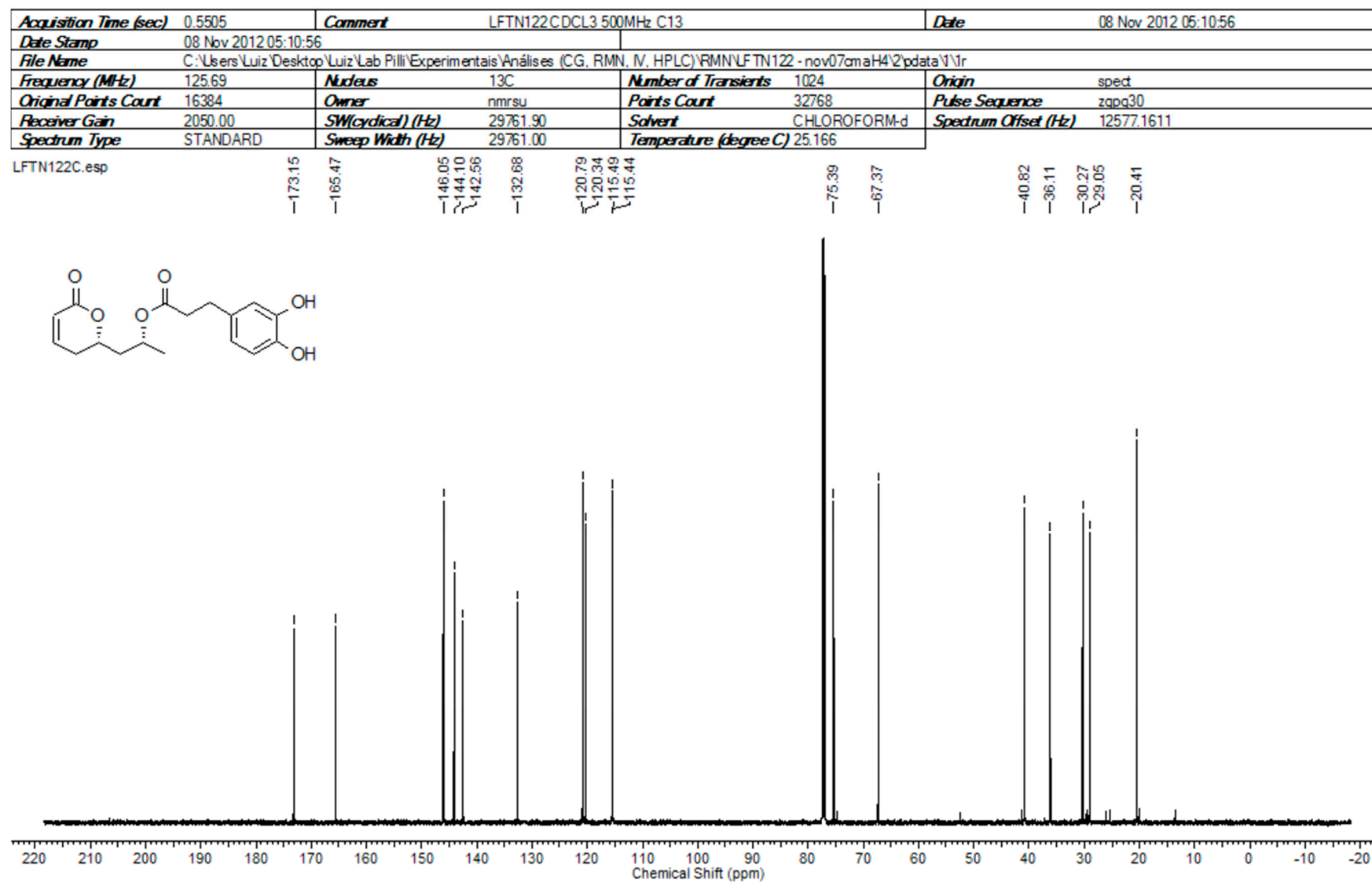


Figure S22. <sup>13</sup>C-NMR (125 MHz, CDCl<sub>3</sub>) of compound 1.

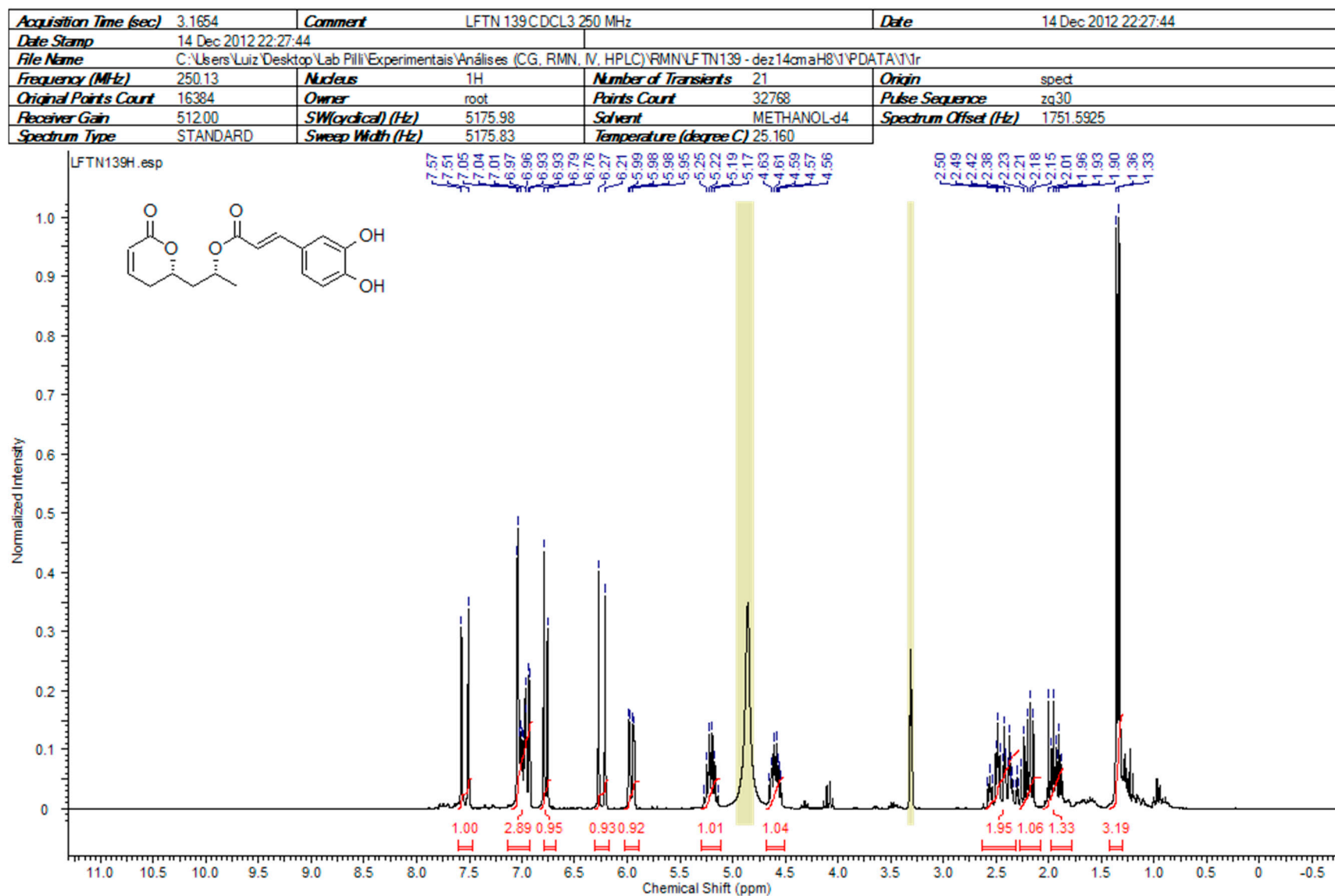
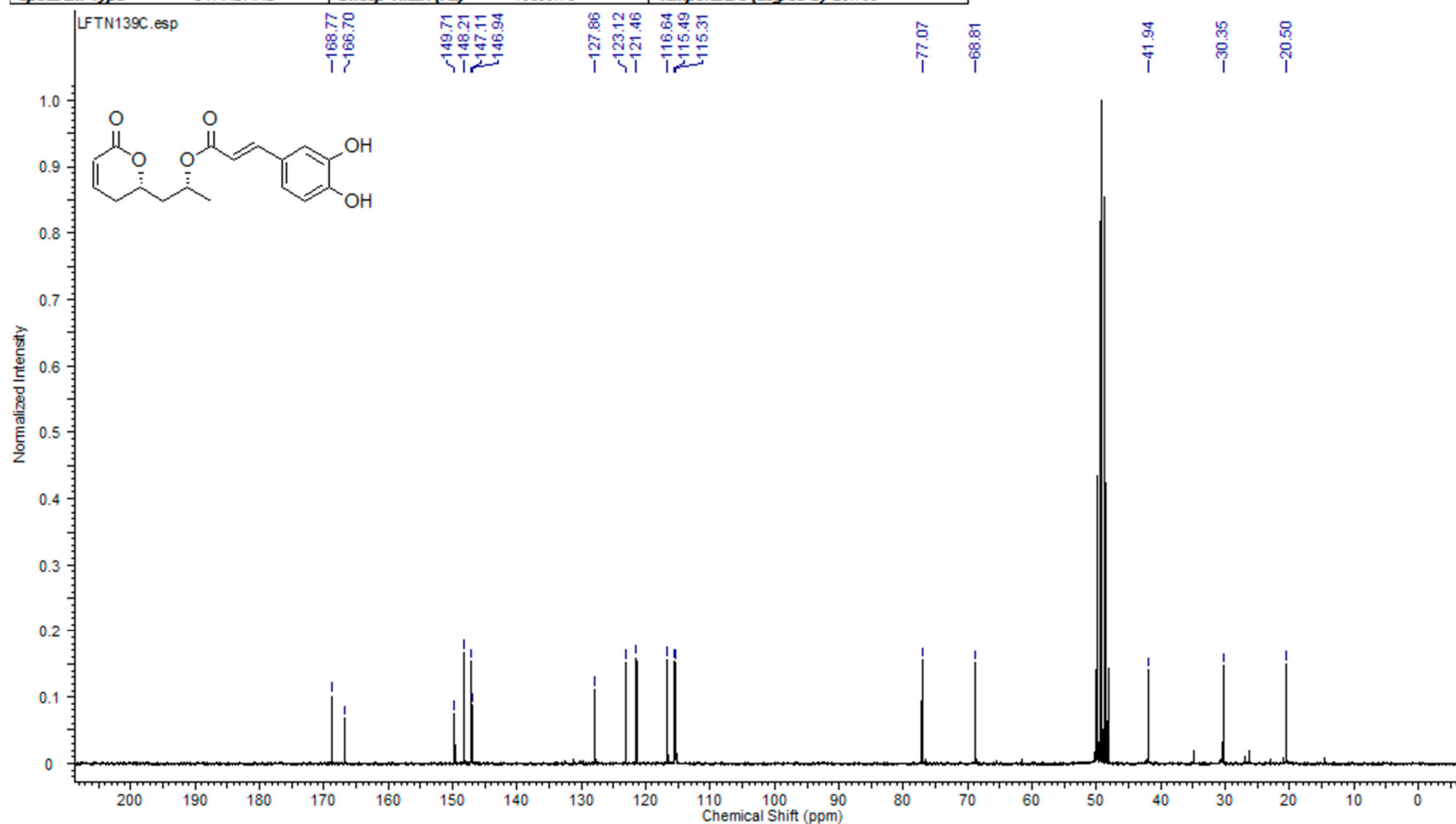


Figure S23.  $^1\text{H}$ -NMR (250 MHz, methanol-d<sub>4</sub>) of compound 4.



**Figure S24.**  $^{13}\text{C}$ -NMR (62.9 MHz, methanol- $\text{d}_4$ ) of compound **4**.