

Supporting Information

**Copper-Catalyzed Coupling of Acyl Chlorides with *gem*-Difluorinated Organozinc Reagents
via Acyl Dithiocarbamates**

Salavat S. Ashirbaev,^{†,‡} Vitalij V. Levin,[†] Marina I. Struchkova,[†] Alexander D. Dilman^{†,*}

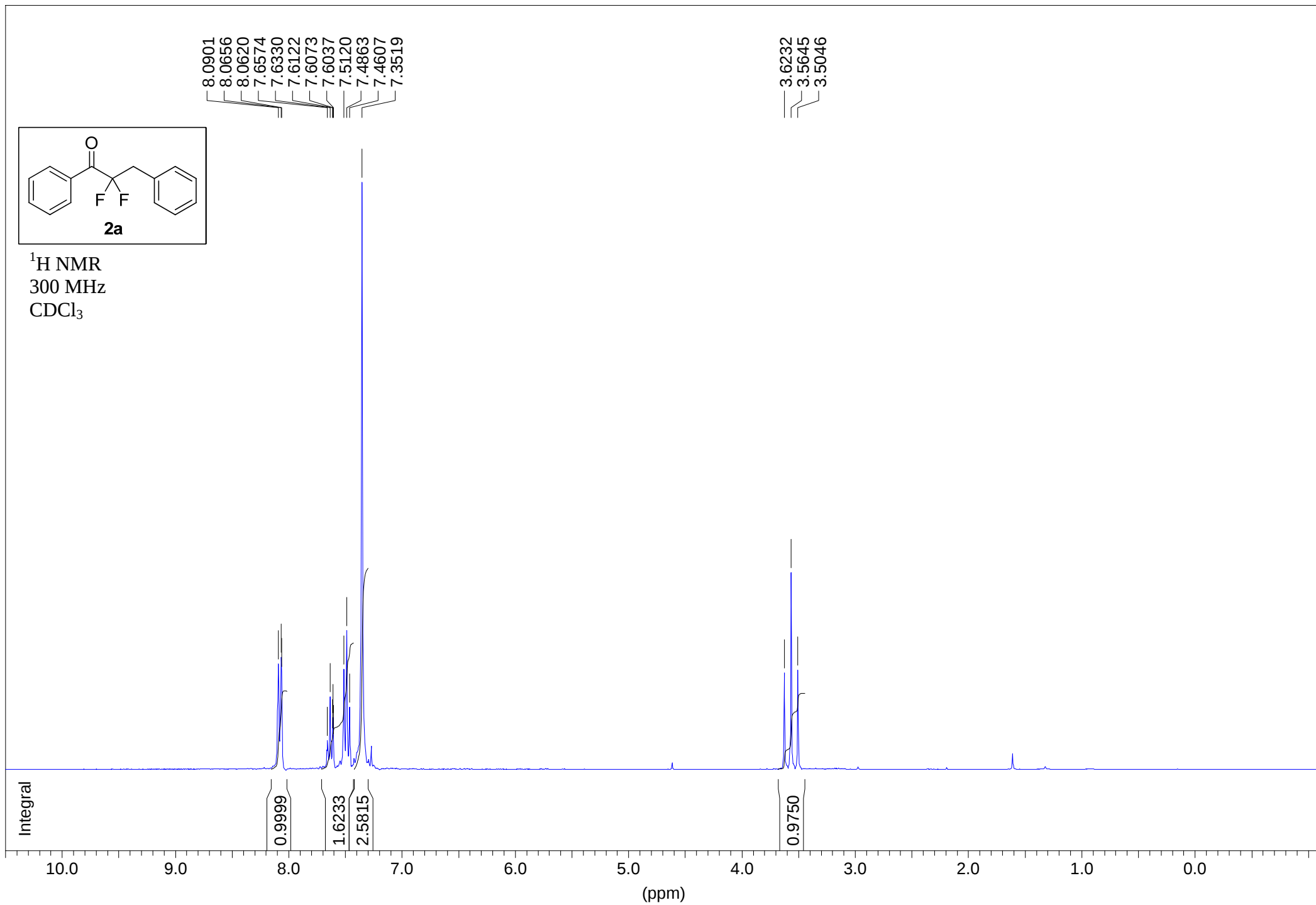
[†]*N. D. Zelinsky Institute of Organic Chemistry, 119991 Moscow, Leninsky prosp. 47, Russian Federation*

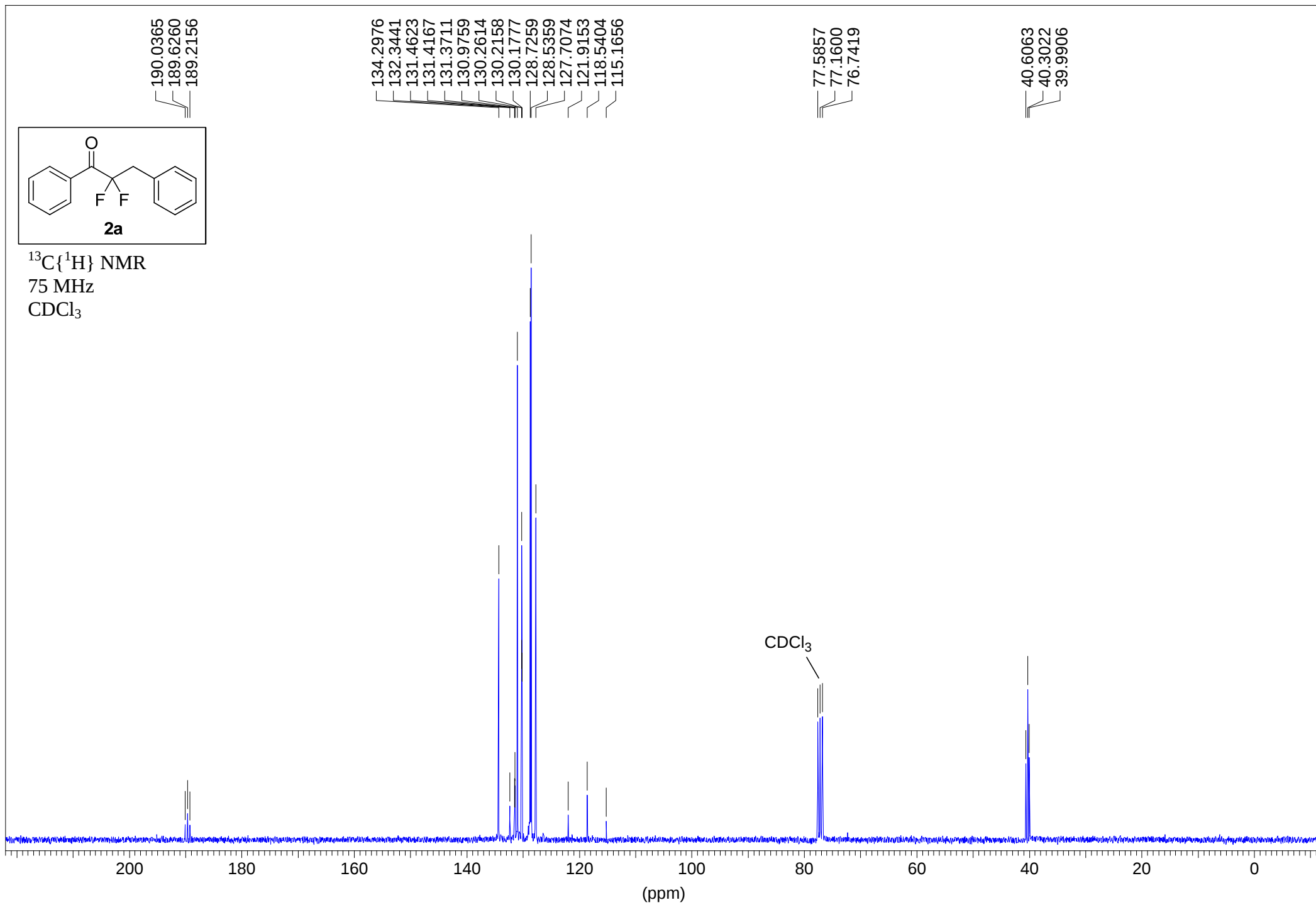
[‡]*Moscow State University, Department of Chemistry, 119991, Moscow, Leninskie Gory 1-3, Russian Federation*

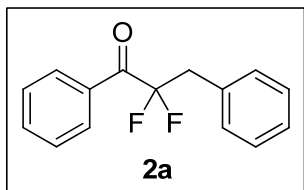
adil25@mail.ru

Content of NMR spectra

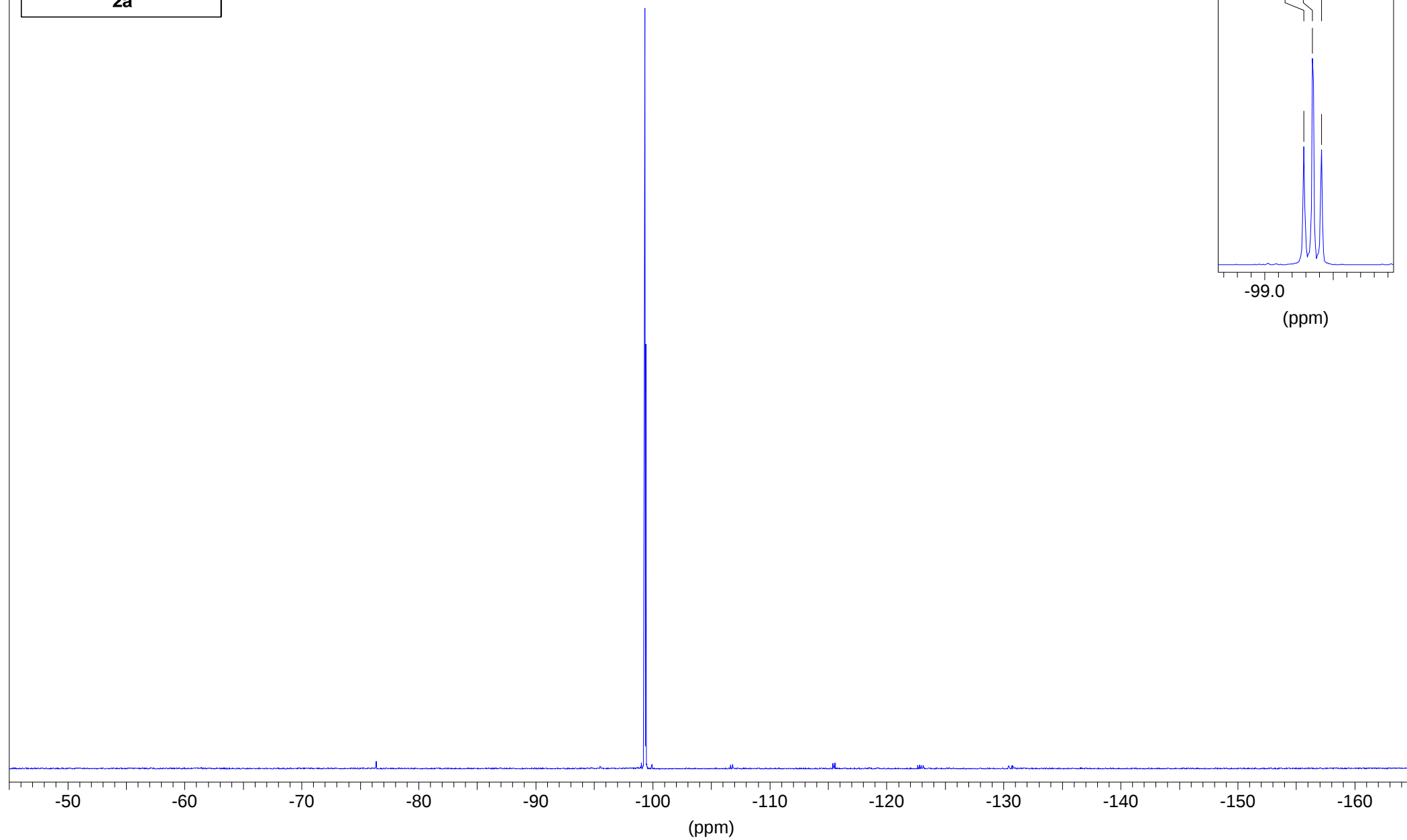
Spectrum	Page	Spectrum	Page	Spectrum	Page	Spectrum	Page
2a (¹ H NMR)	S2	2g (¹ H NMR)	S20	2m (¹ H NMR)	S38	2s (¹ H NMR)	S56
2a (¹³ C NMR)	S3	2g (¹³ C NMR)	S21	2m (¹³ C NMR)	S39	2s (¹³ C NMR)	S57
2a (¹⁹ F NMR)	S4	2g (¹⁹ F NMR)	S22	2m (¹⁹ F NMR)	S40	2s (¹⁹ F NMR)	S58
2b (¹ H NMR)	S5	2h (¹ H NMR)	S23	2n (¹ H NMR)	S41		
2b (¹³ C NMR)	S6	2h (¹³ C NMR)	S24	2n (¹³ C NMR)	S42		
2b (¹⁹ F NMR)	S7	2h (¹⁹ F NMR)	S25	2n (¹⁹ F NMR)	S43		
2c (¹ H NMR)	S8	2i (¹ H NMR)	S26	2o (¹ H NMR)	S44		
2c (¹³ C NMR)	S9	2i (¹³ C NMR)	S27	2o (¹³ C NMR)	S45		
2c (¹⁹ F NMR)	S10	2i (¹⁹ F NMR)	S28	2o (¹⁹ F NMR)	S46		
2d (¹ H NMR)	S11	2j (¹ H NMR)	S29	2p (¹ H NMR)	S47		
2d (¹³ C NMR)	S12	2j (¹³ C NMR)	S30	2p (¹³ C NMR)	S48		
2d (¹⁹ F NMR)	S13	2j (¹⁹ F NMR)	S31	2p (¹⁹ F NMR)	S49		
2e (¹ H NMR)	S14	2k (¹ H NMR)	S32	2q (¹ H NMR)	S50		
2e (¹³ C NMR)	S15	2k (¹³ C NMR)	S33	2q (¹³ C NMR)	S51		
2e (¹⁹ F NMR)	S16	2k (¹⁹ F NMR)	S34	2q (¹⁹ F NMR)	S52		
2f (¹ H NMR)	S17	2l (¹ H NMR)	S35	2r (¹ H NMR)	S53		
2f (¹³ C NMR)	S18	2l (¹³ C NMR)	S36	2r (¹³ C NMR)	S54		
2f (¹⁹ F NMR)	S19	2l (¹⁹ F NMR)	S37	2r (¹⁹ F NMR)	S55		

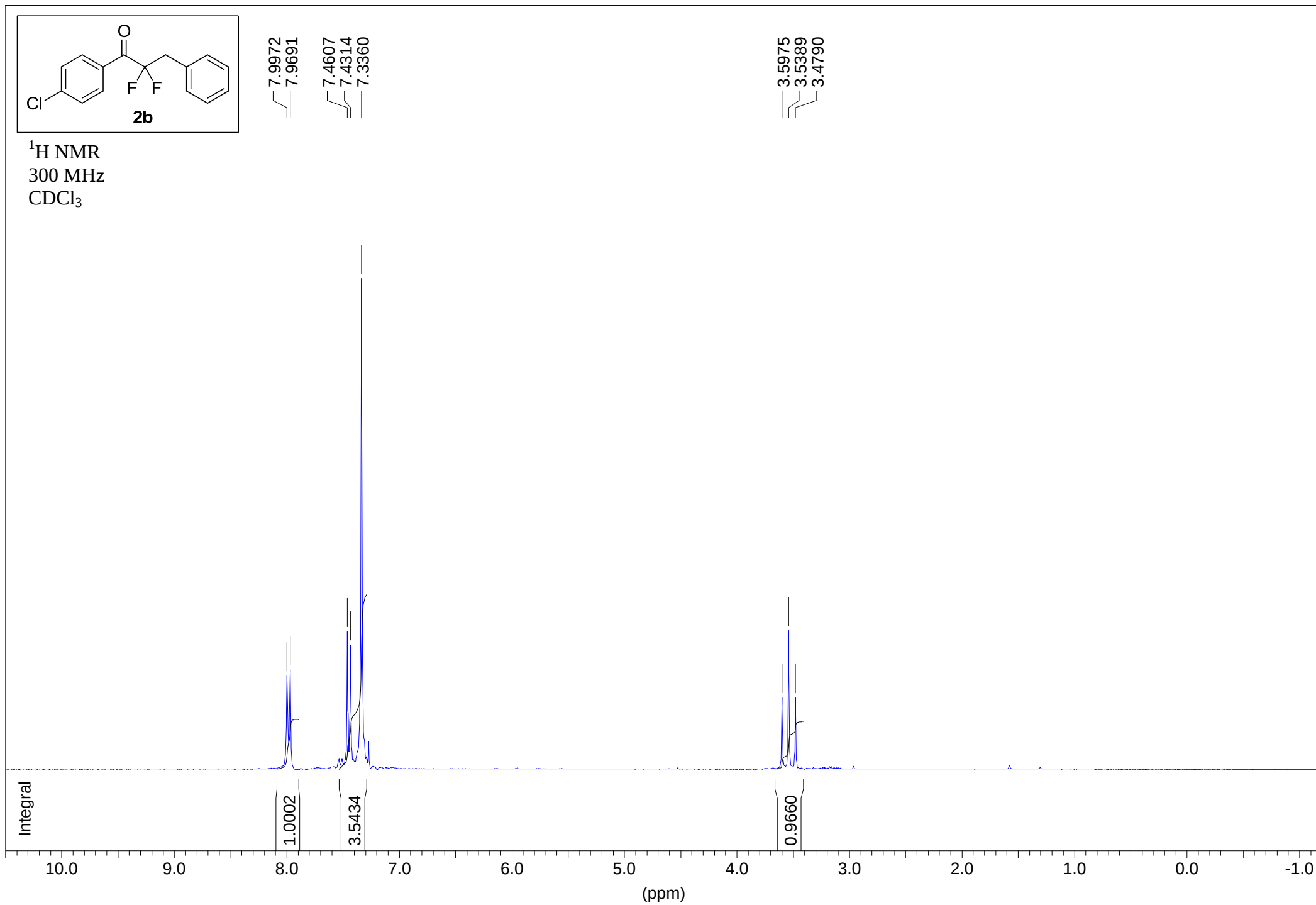


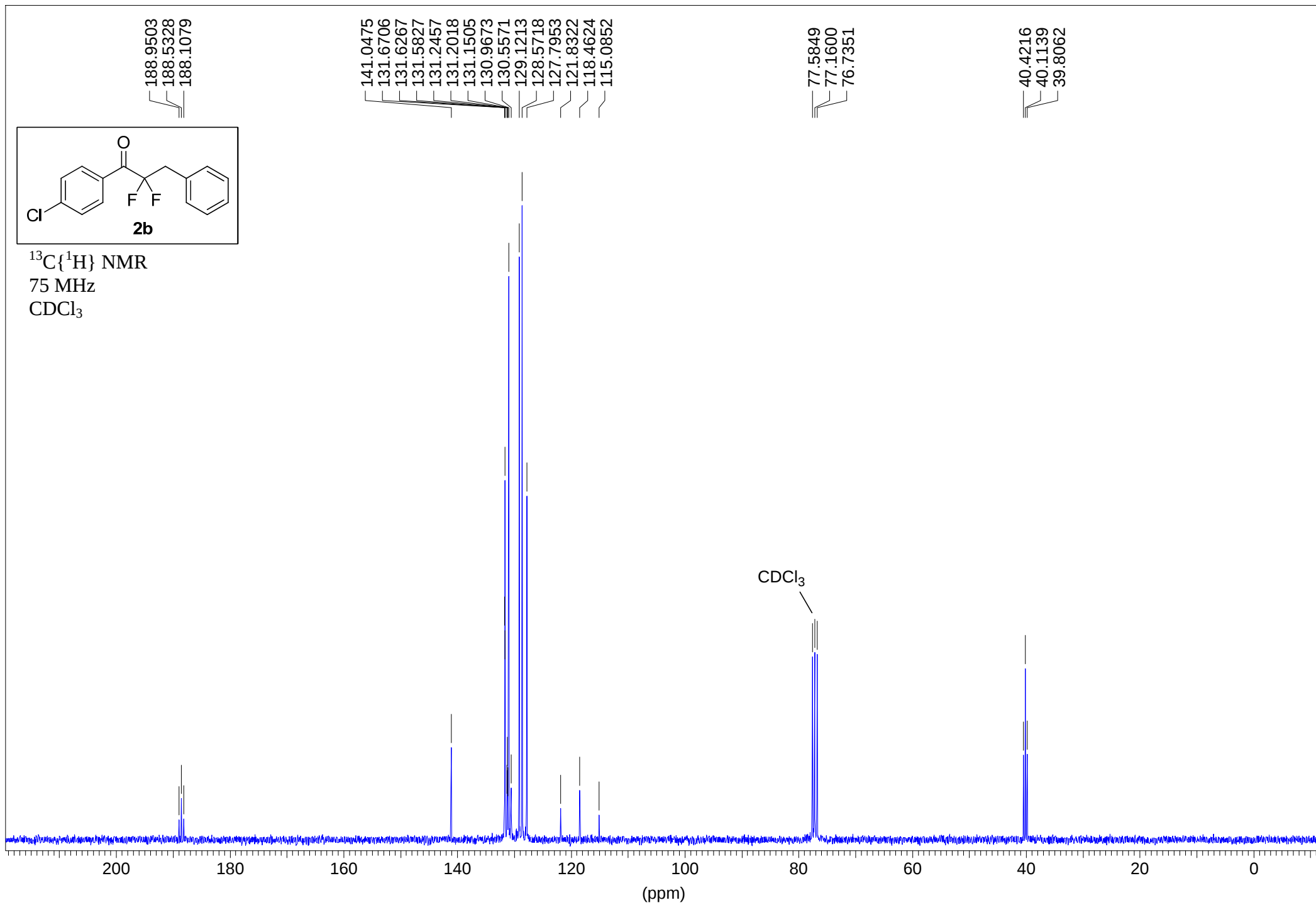


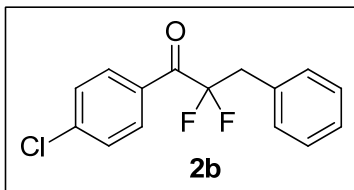


^{19}F NMR
282 MHz
 CDCl_3

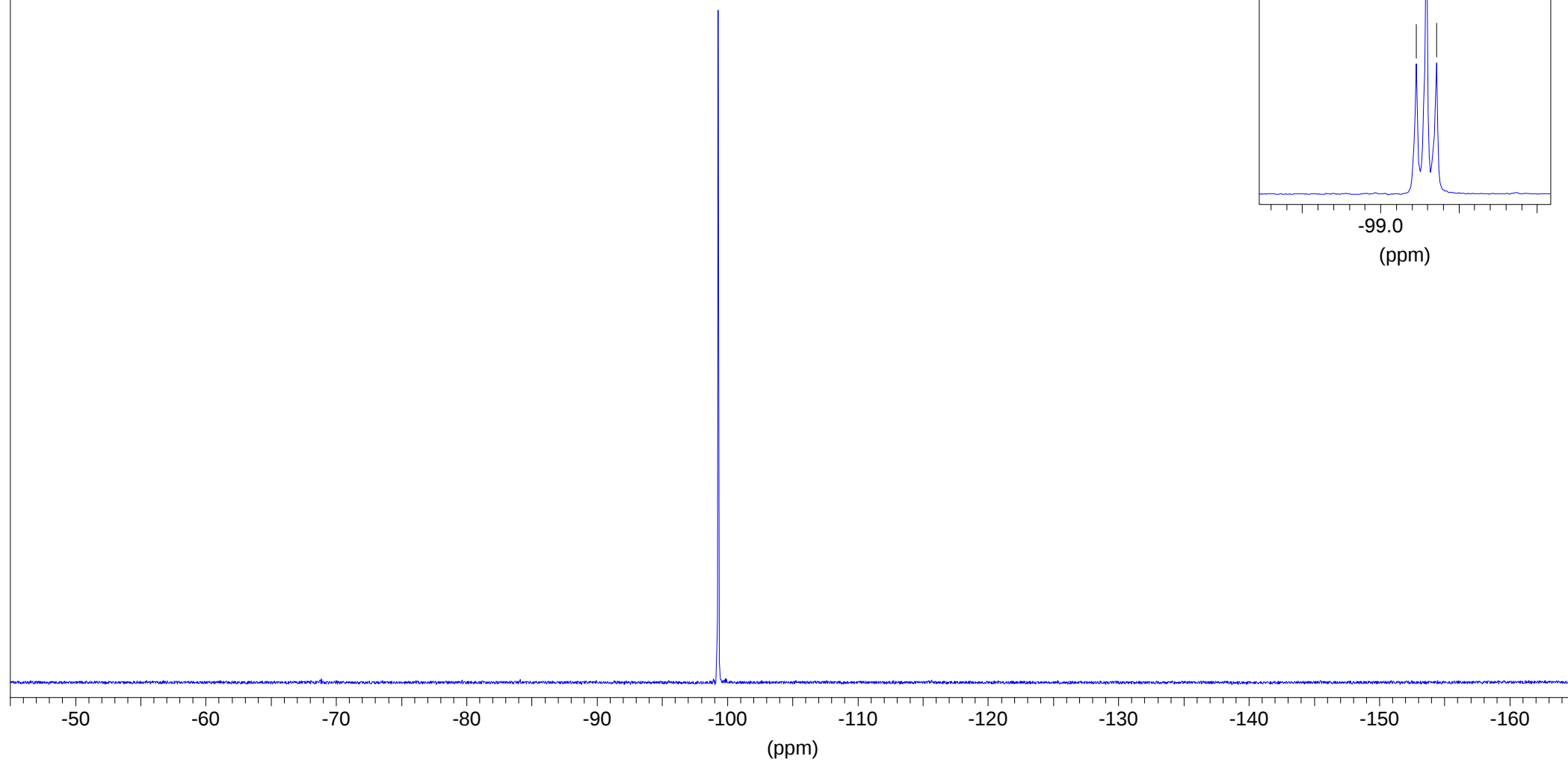


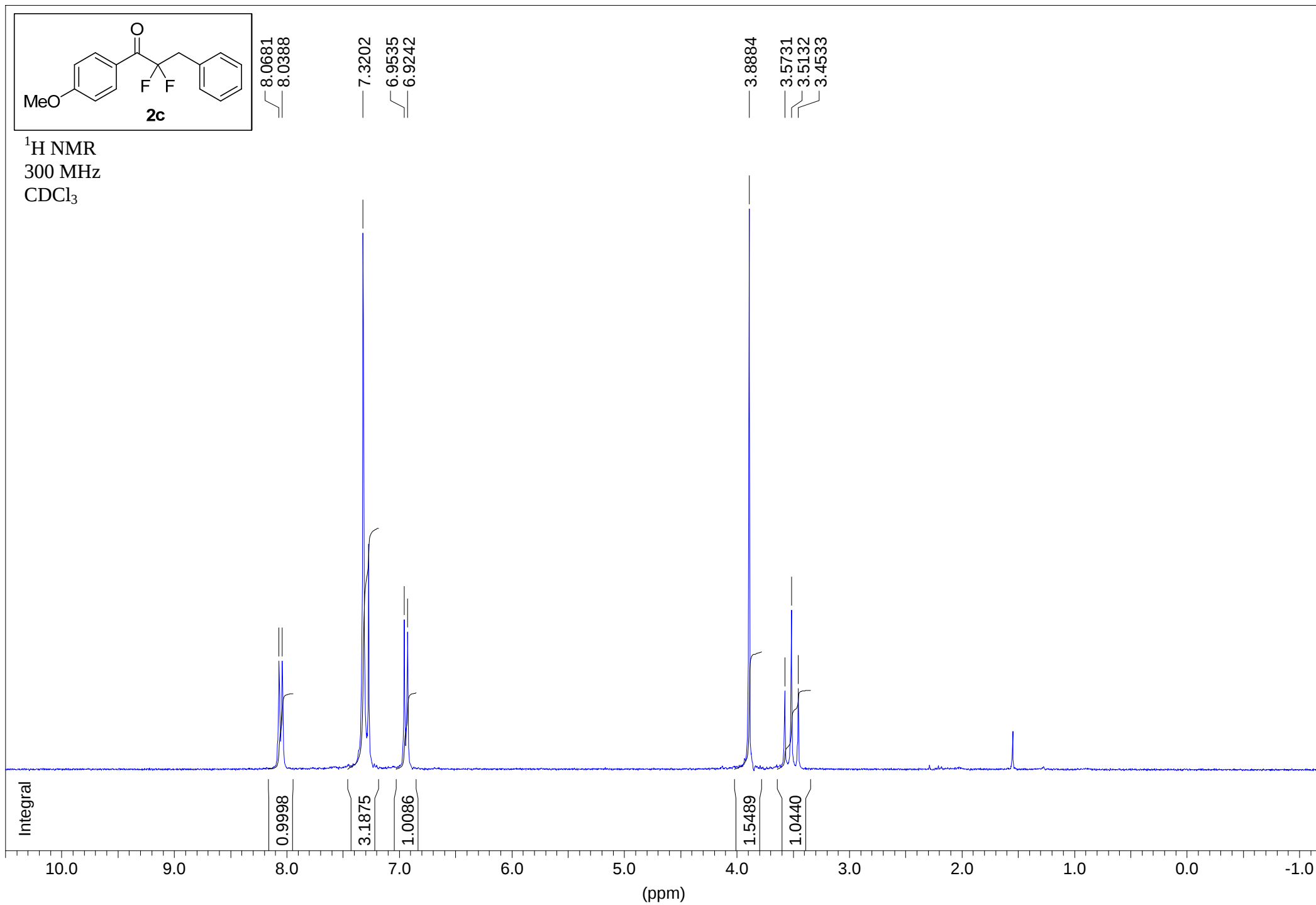


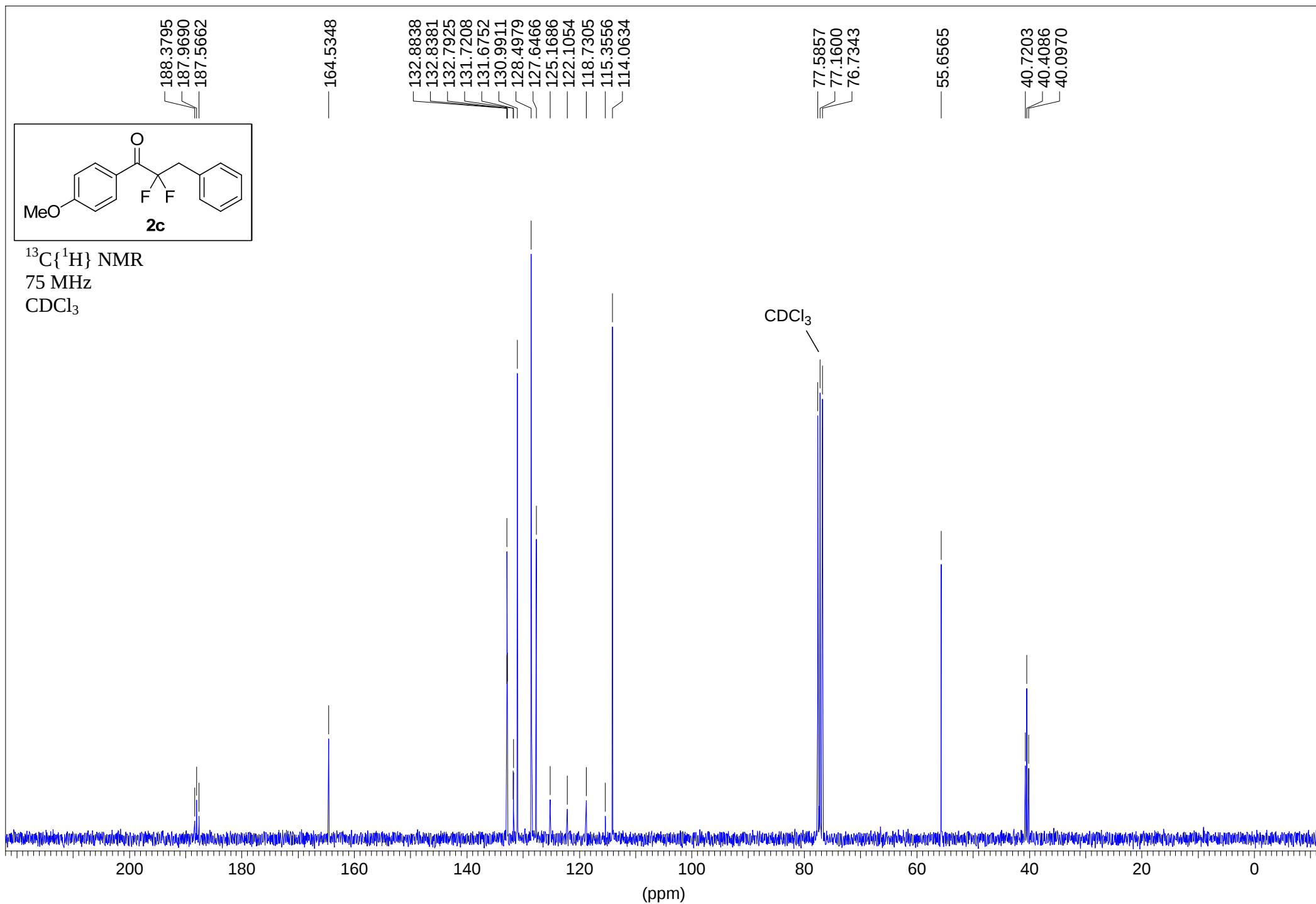


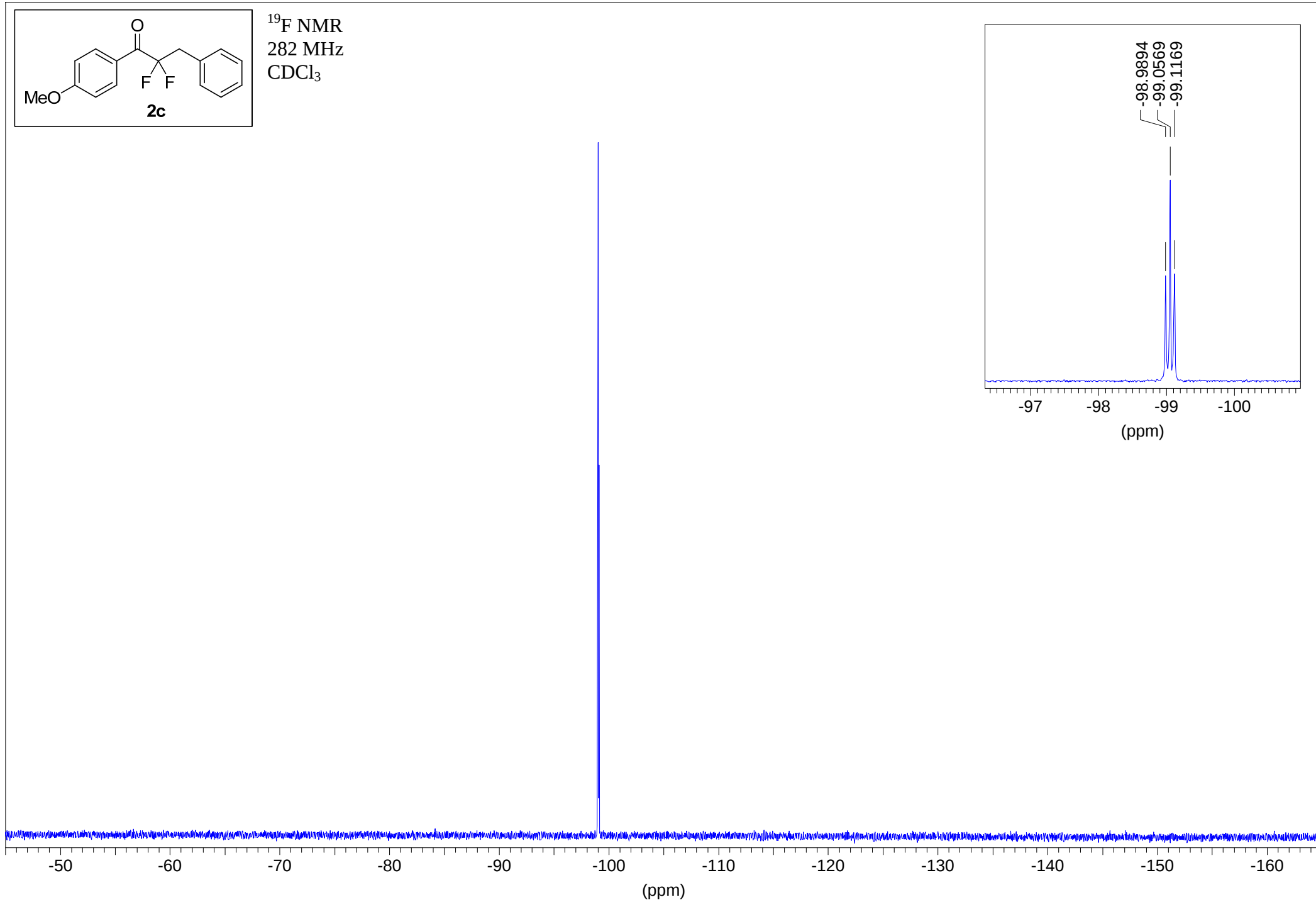


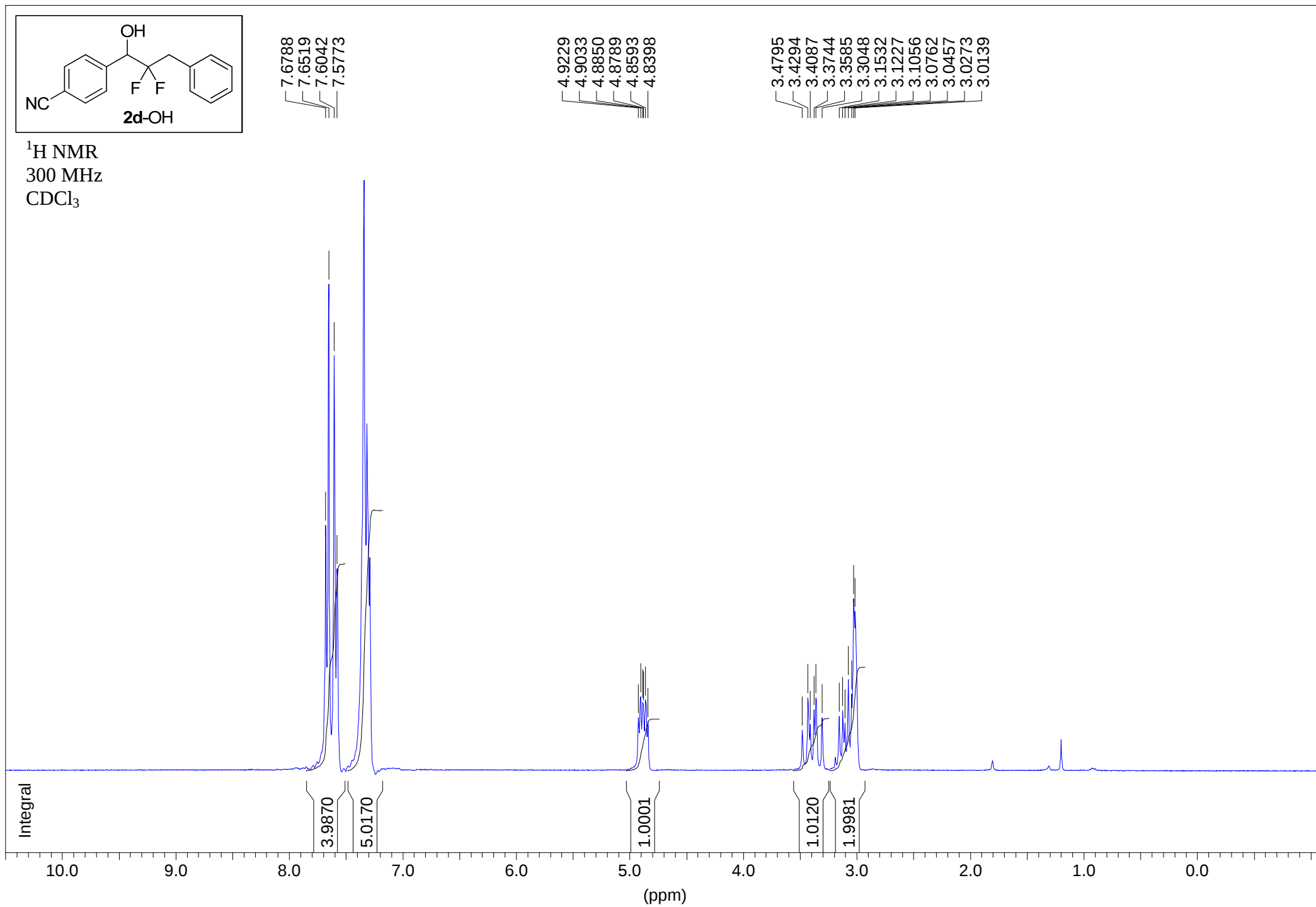
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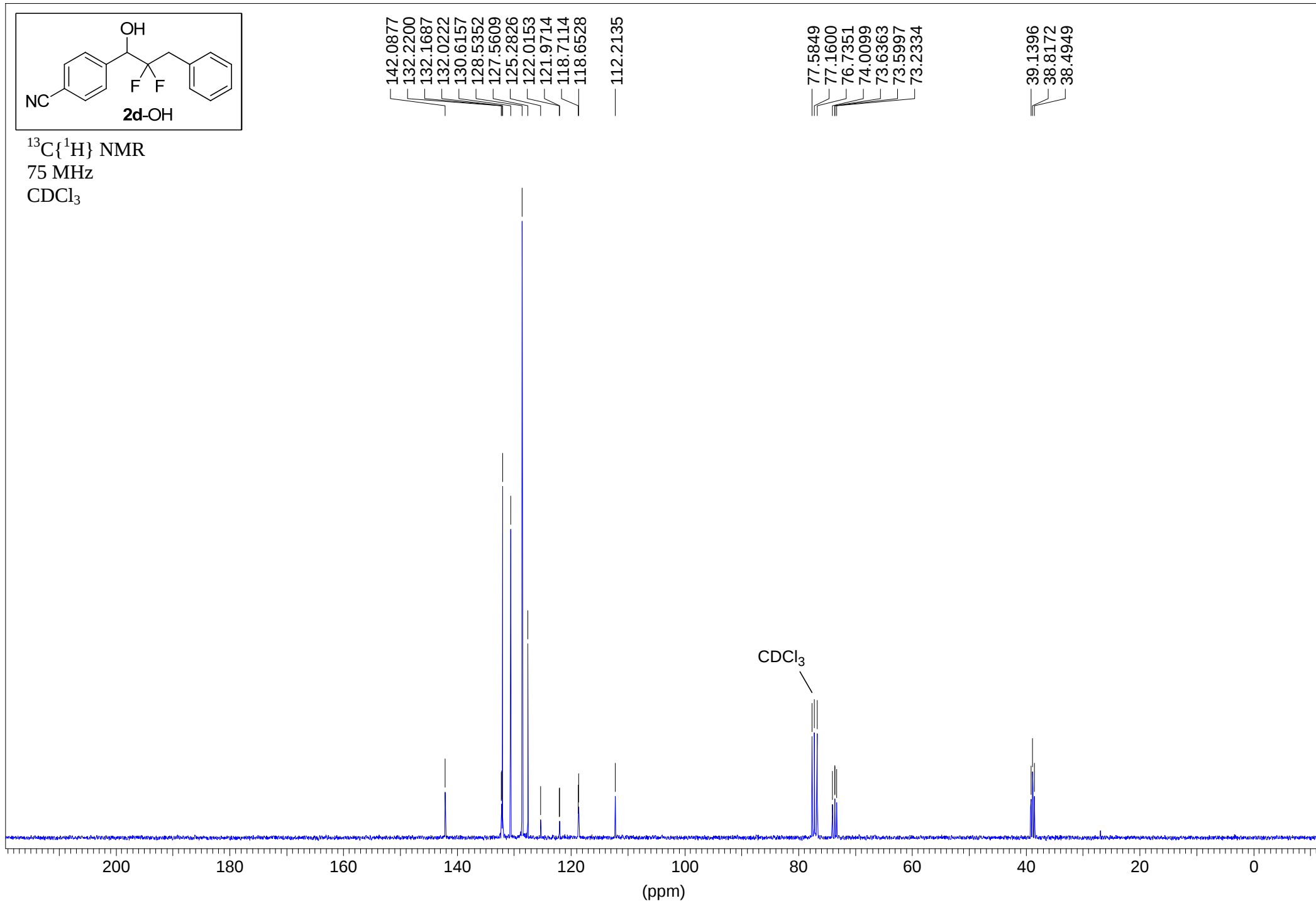


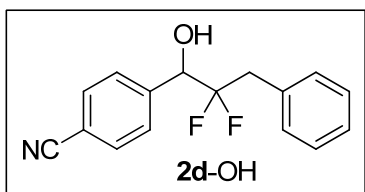




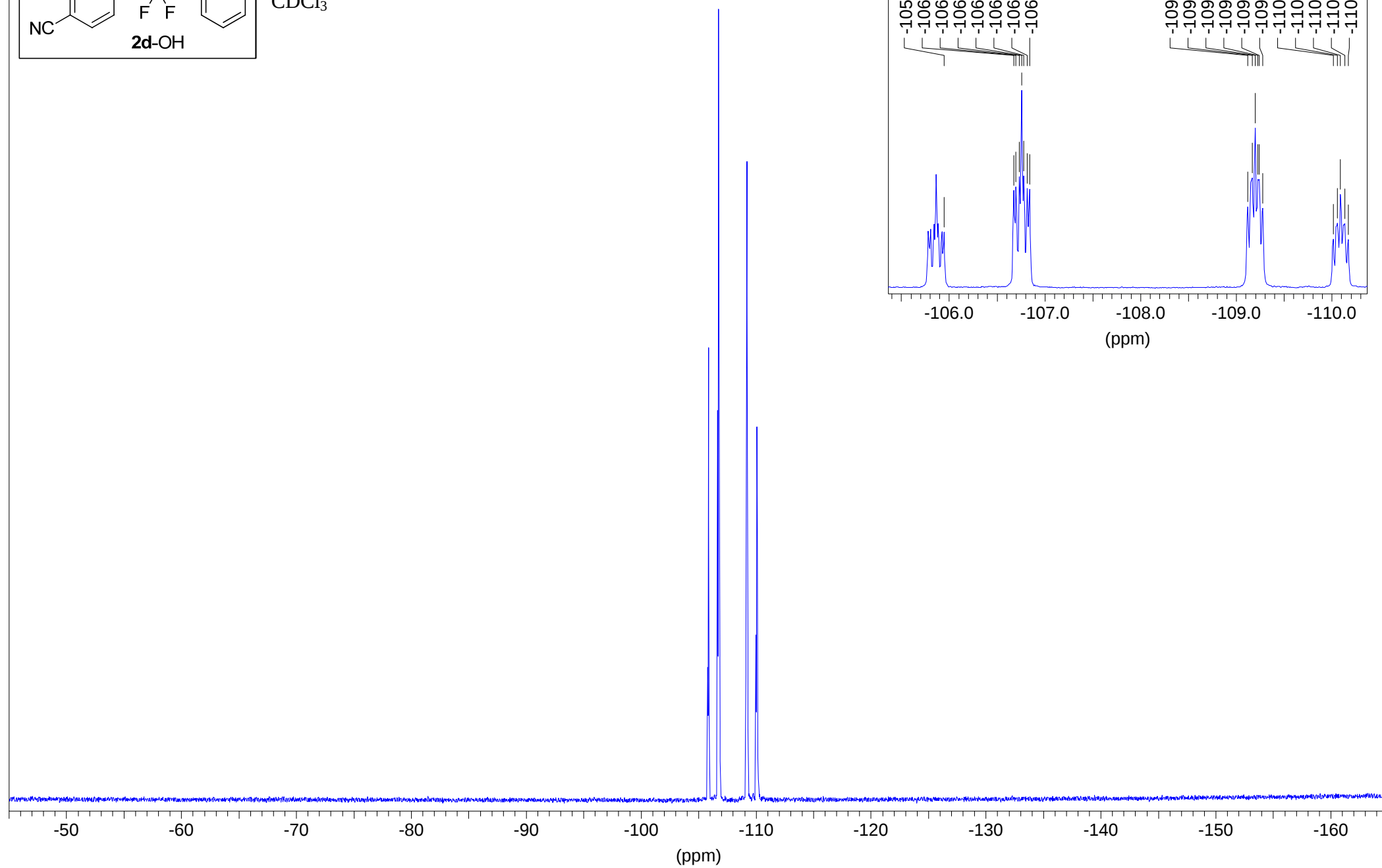


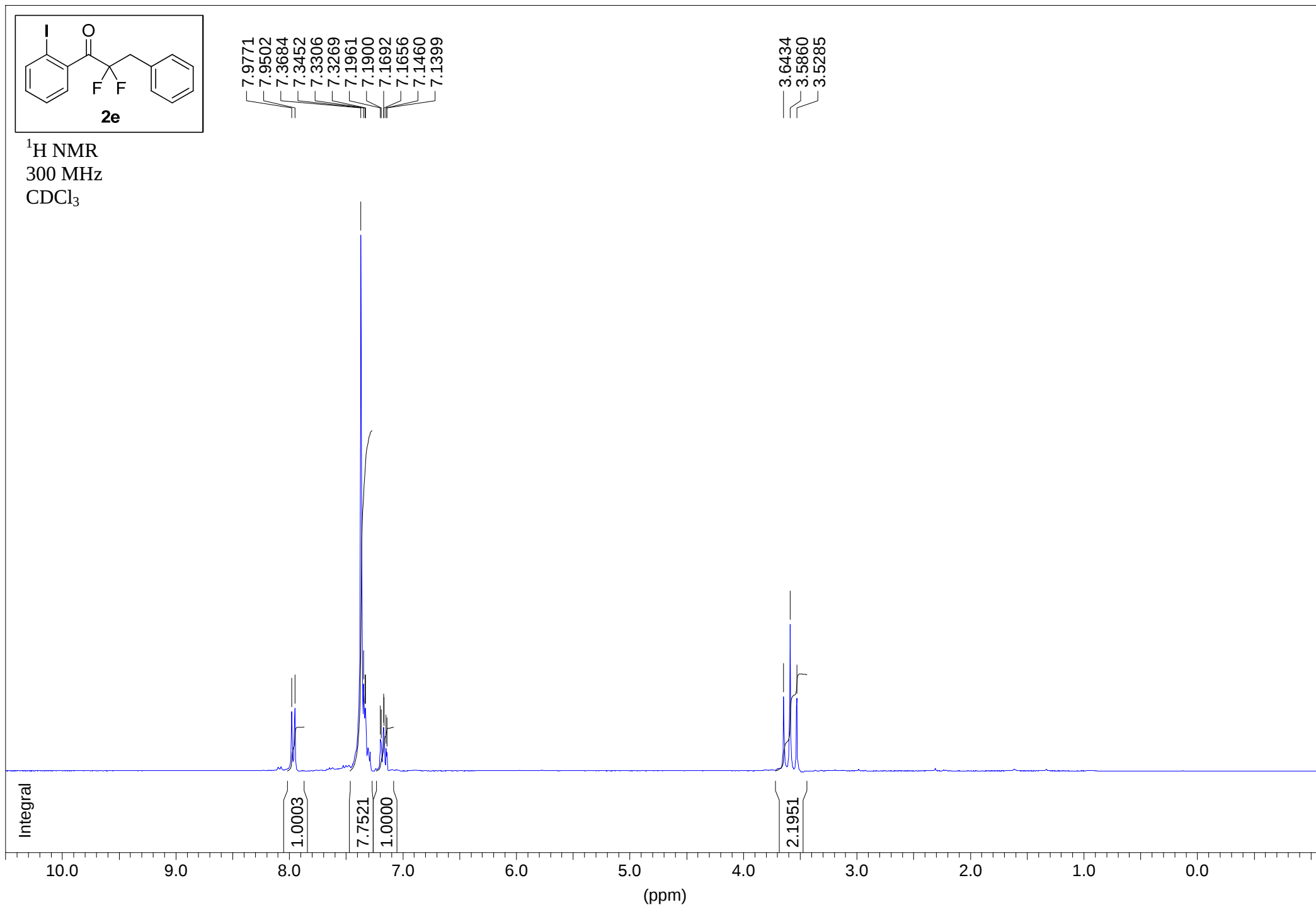


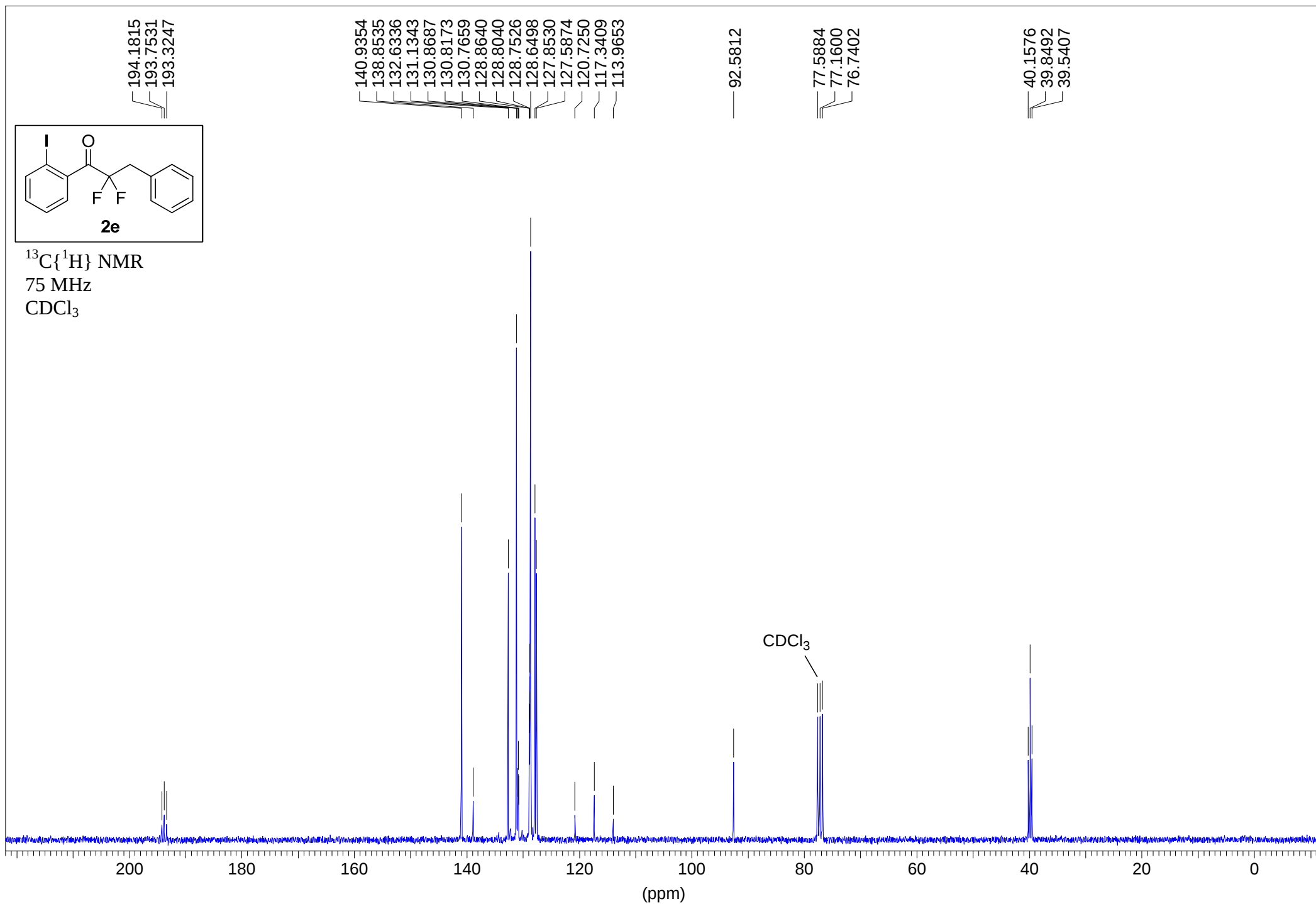


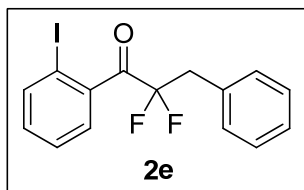


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282 MHz
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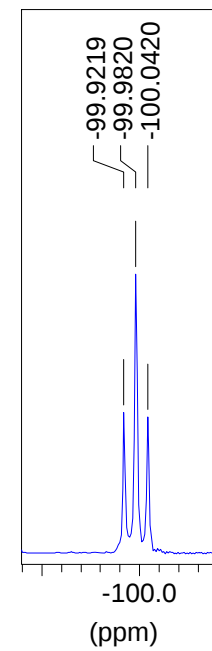
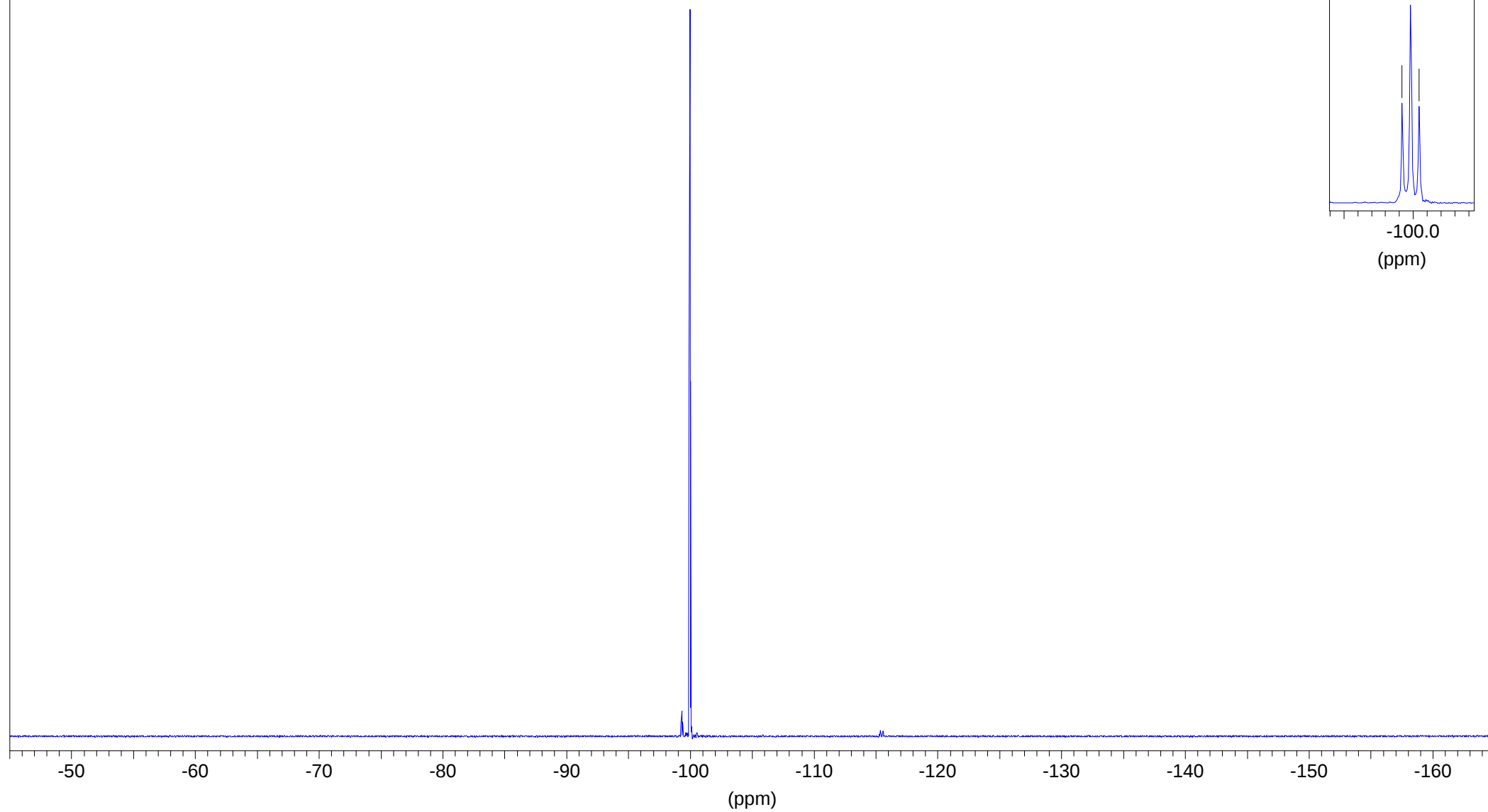


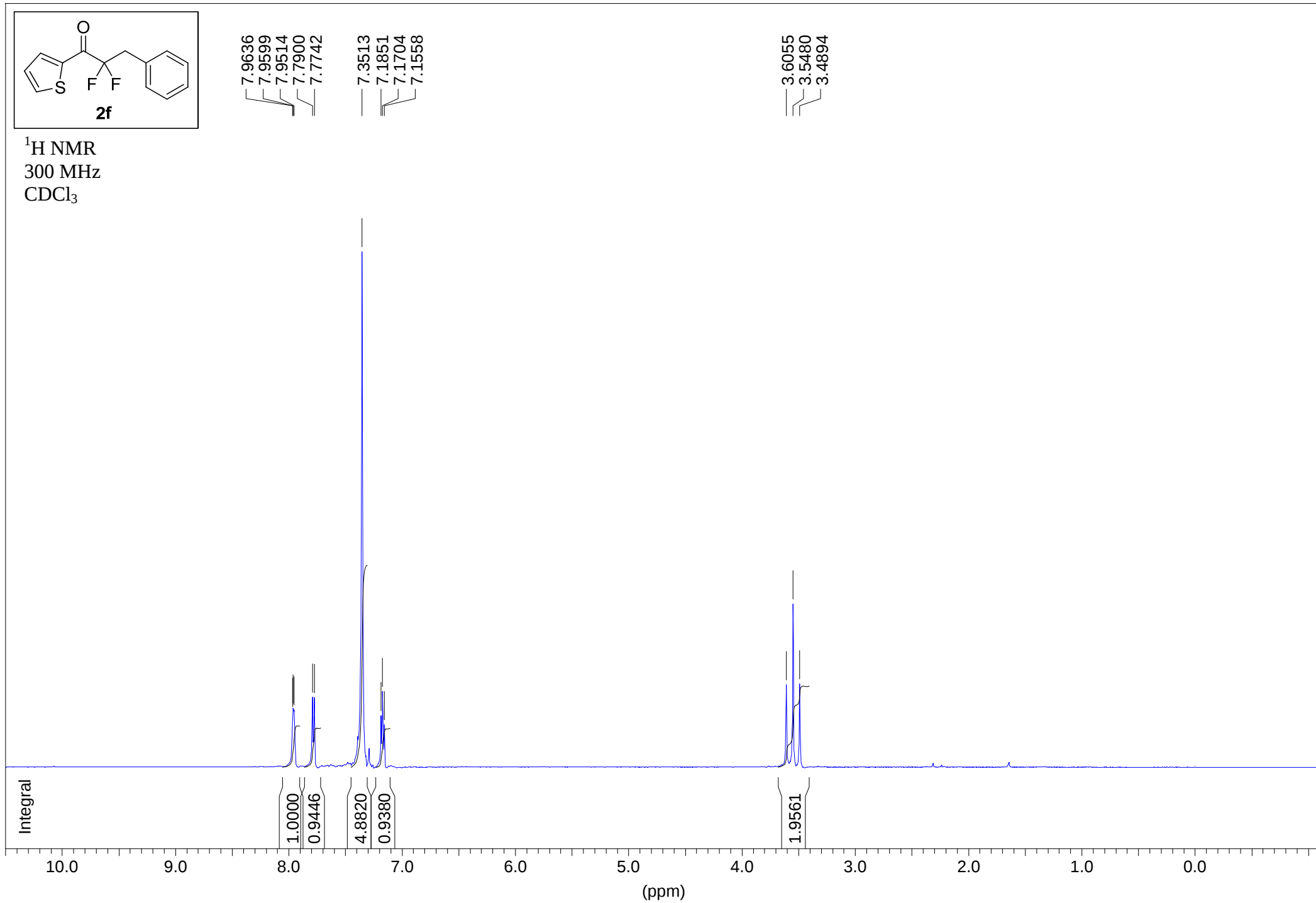


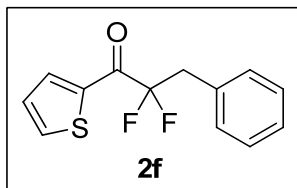




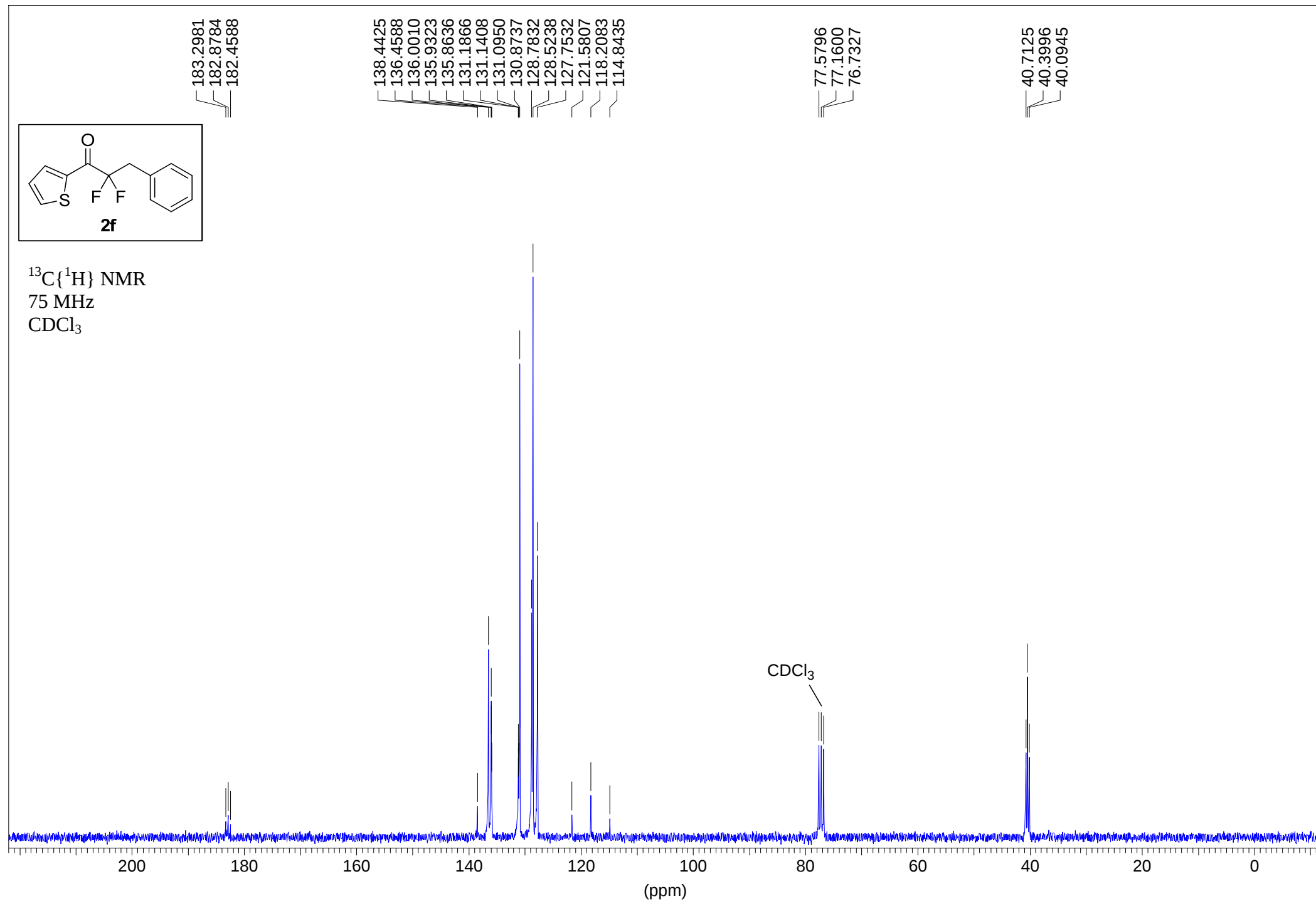
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282 MHz
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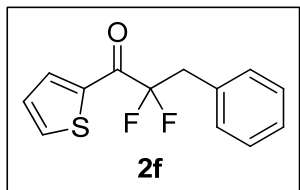




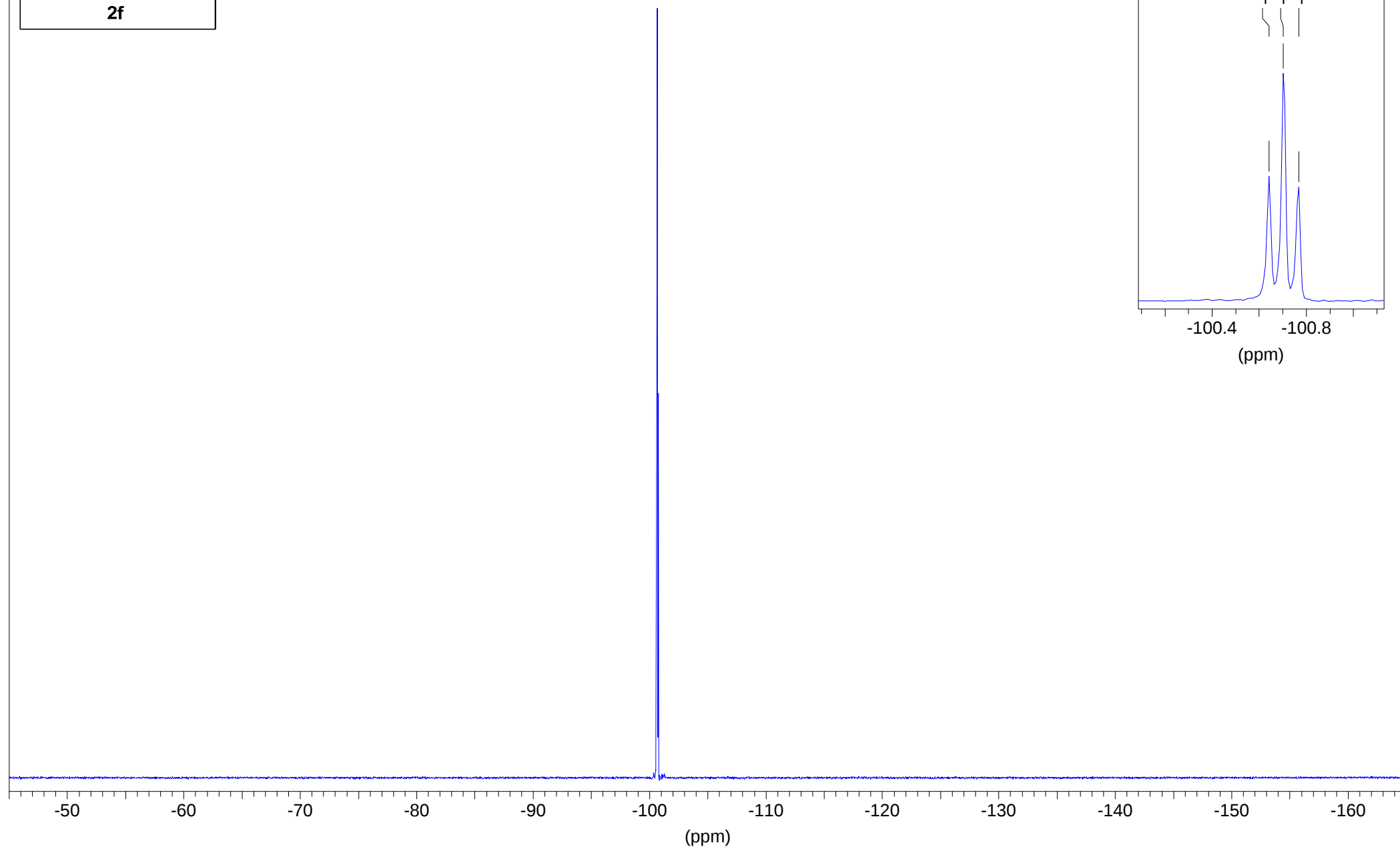


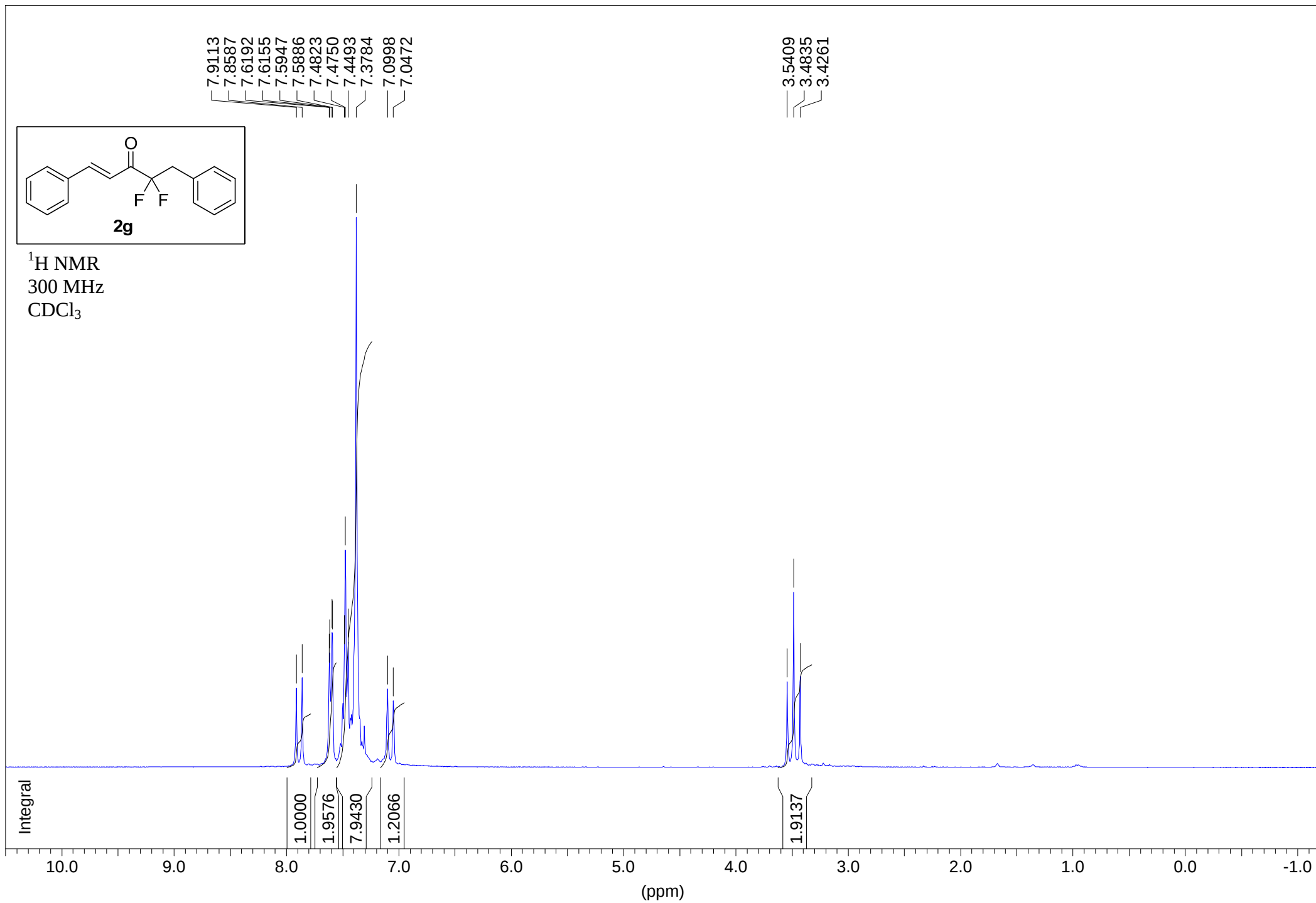
$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3

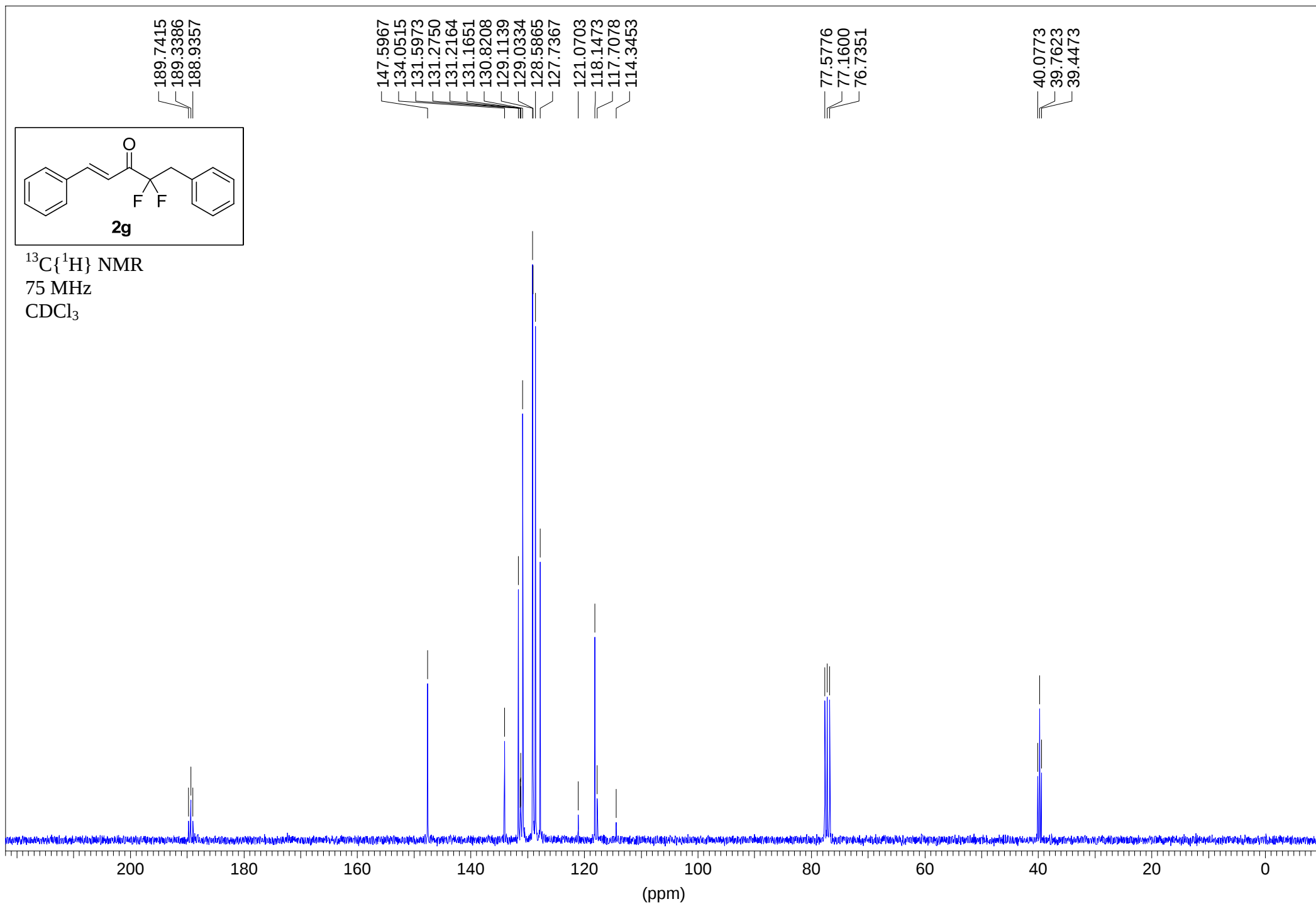


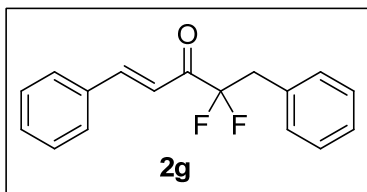


^{19}F NMR
282 MHz
 CDCl_3

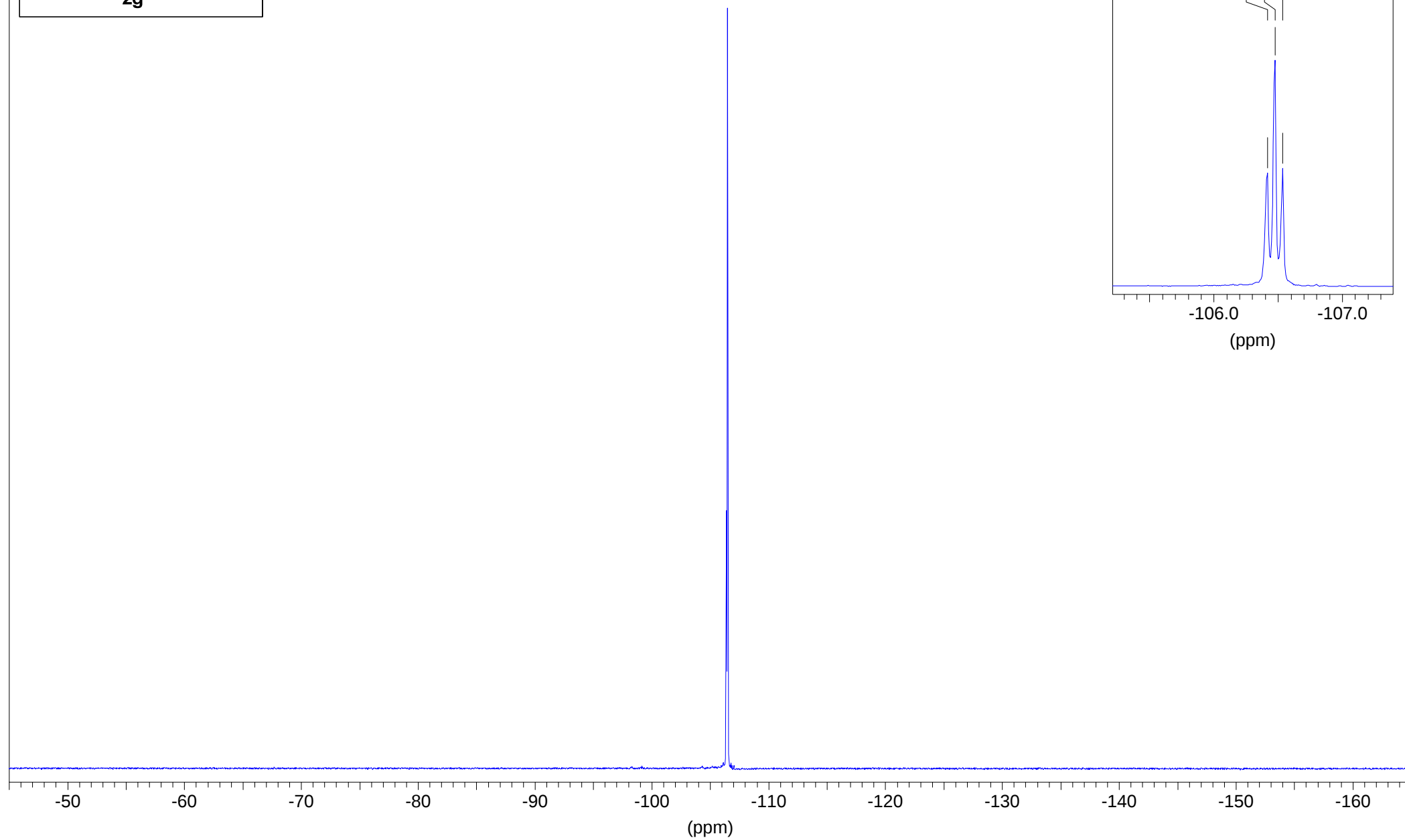


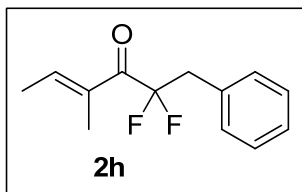




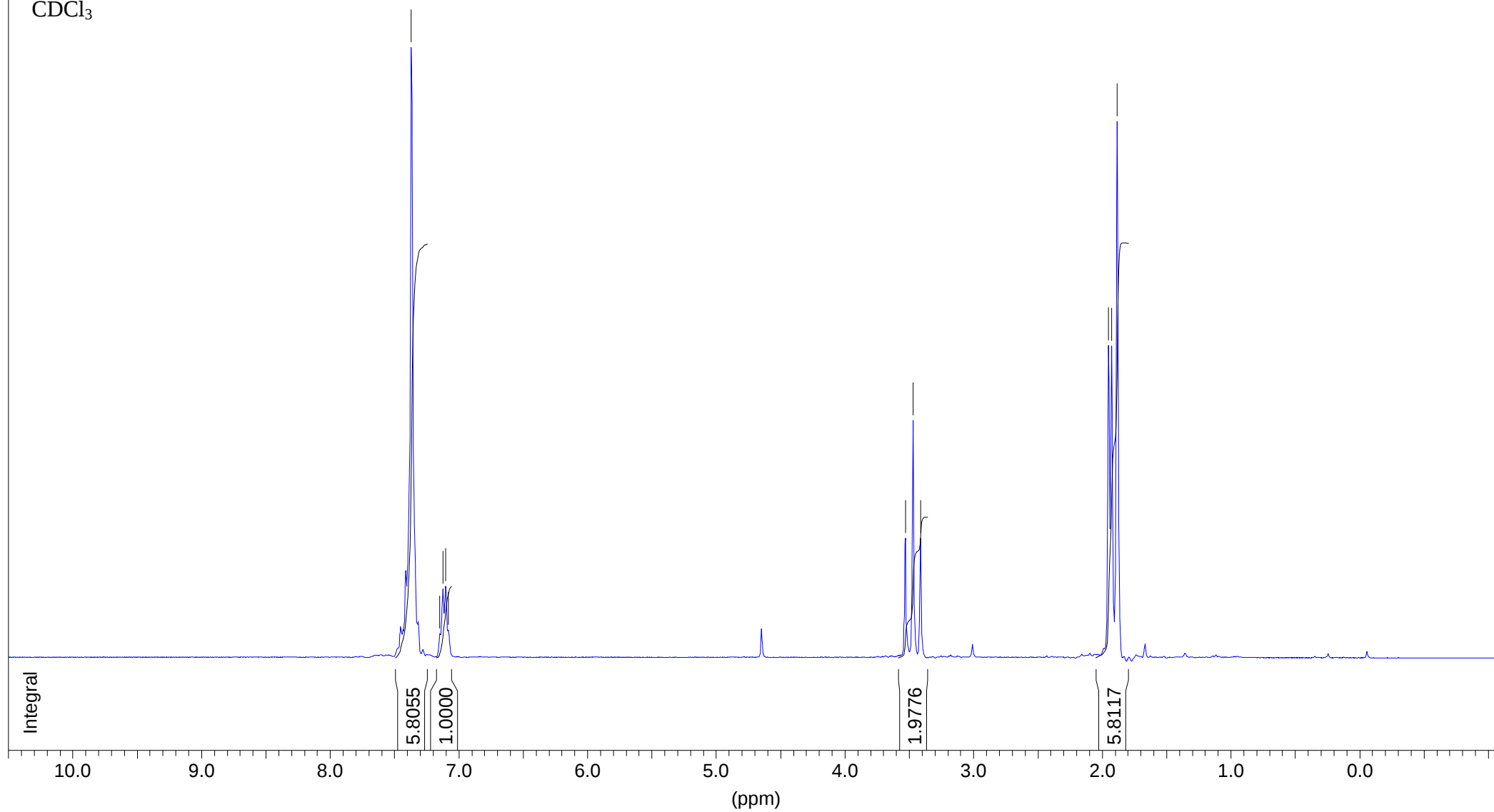


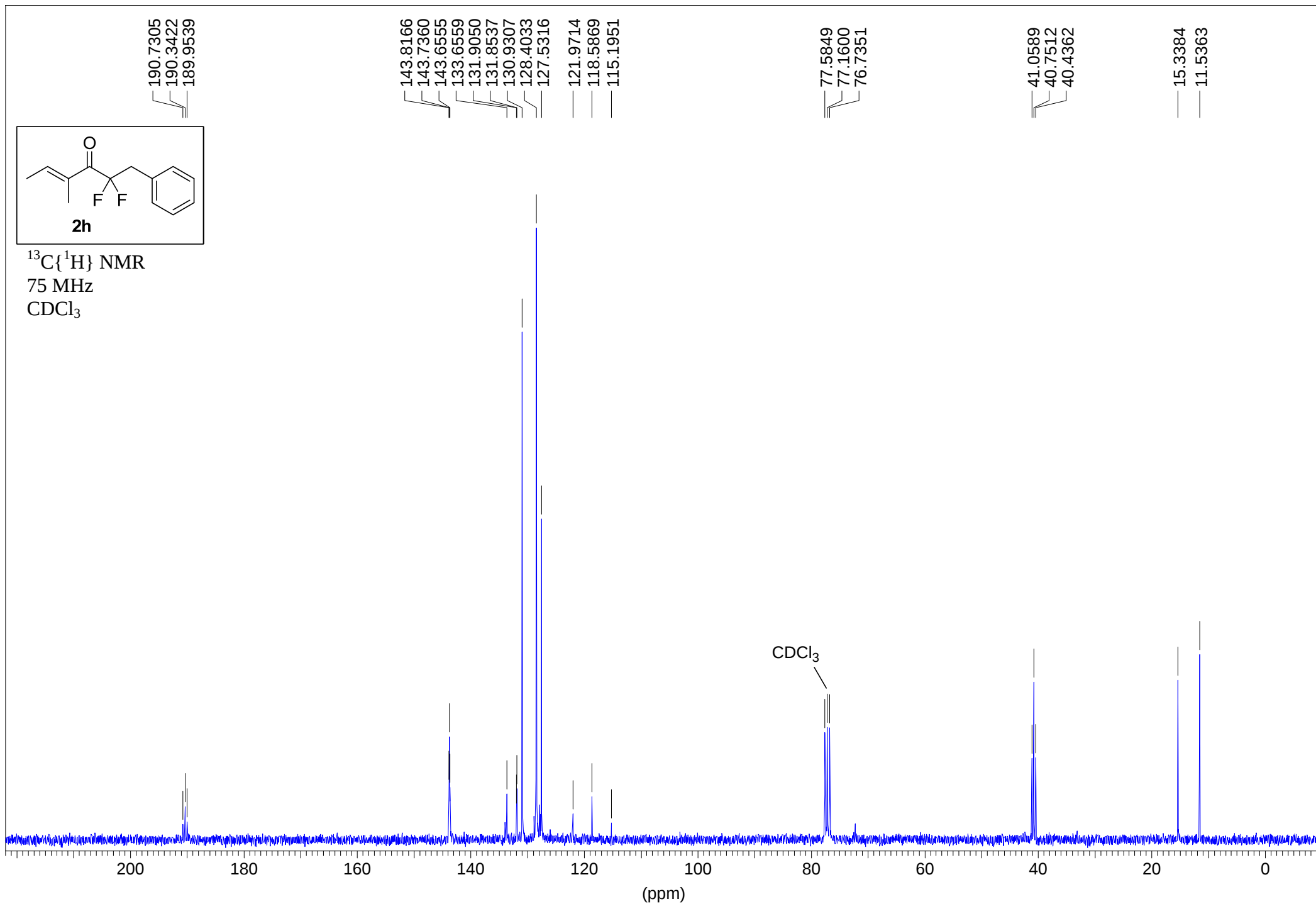
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282 MHz
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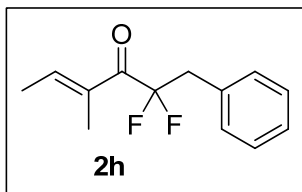




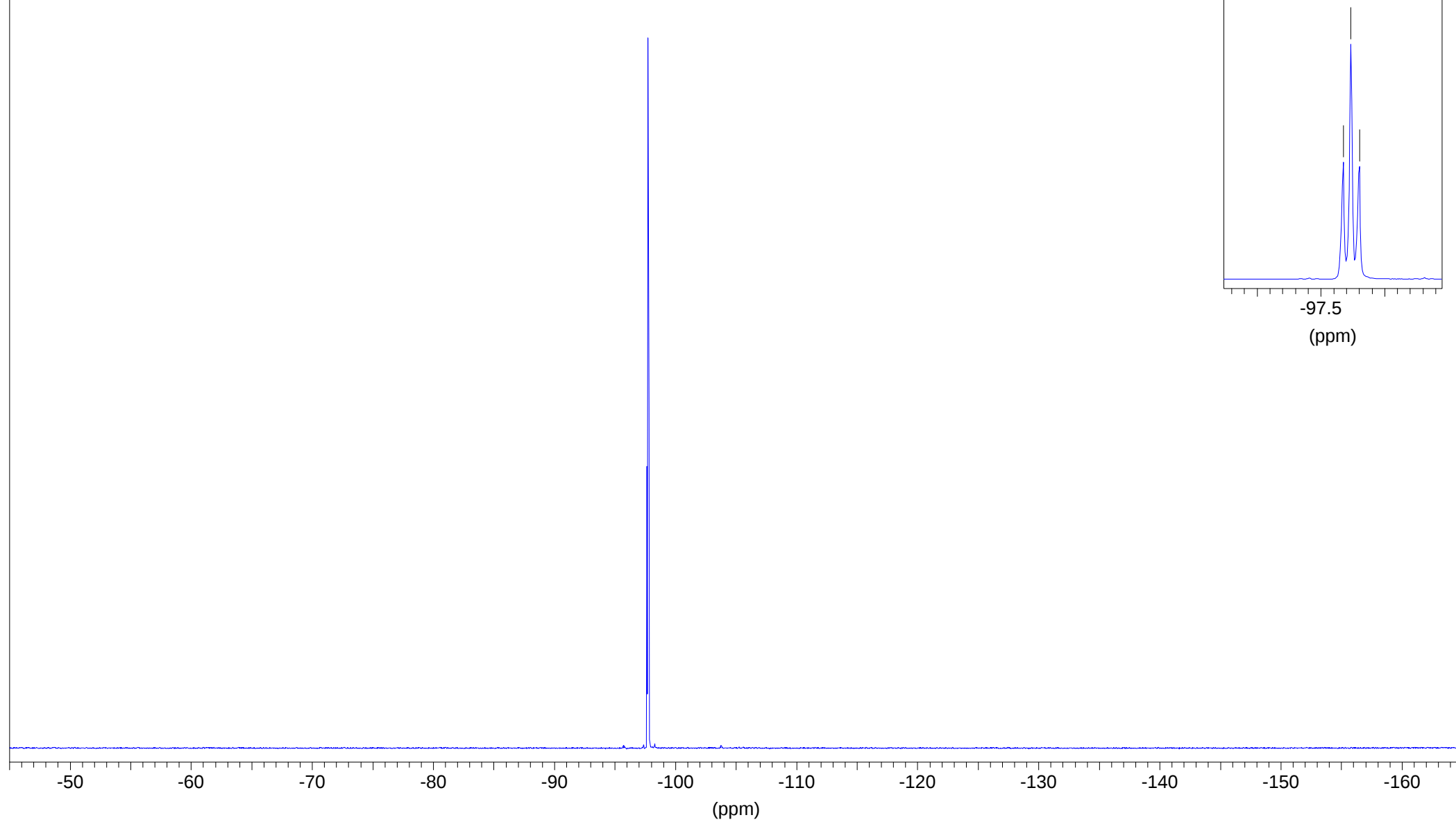
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300 MHz
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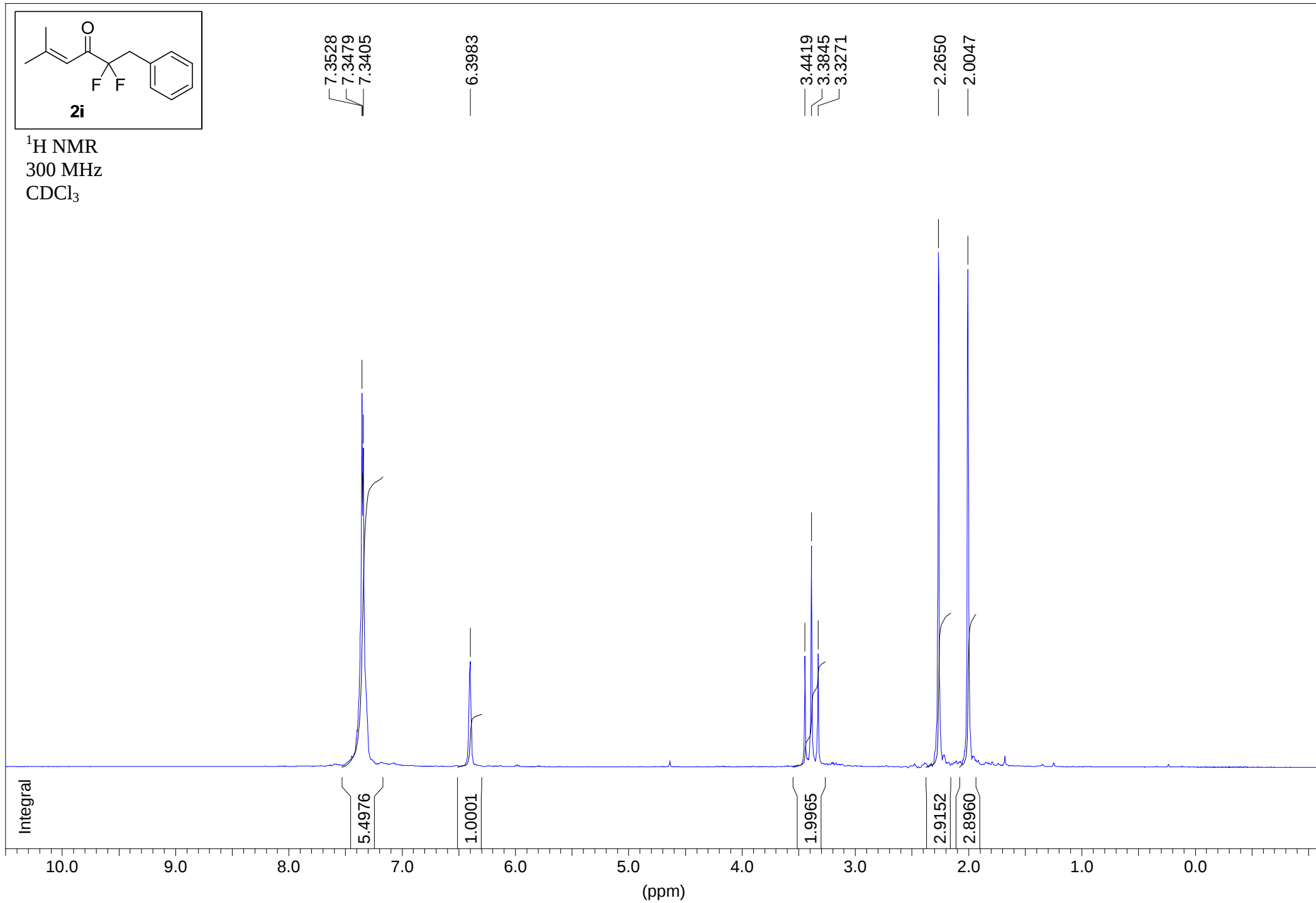


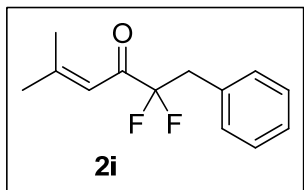




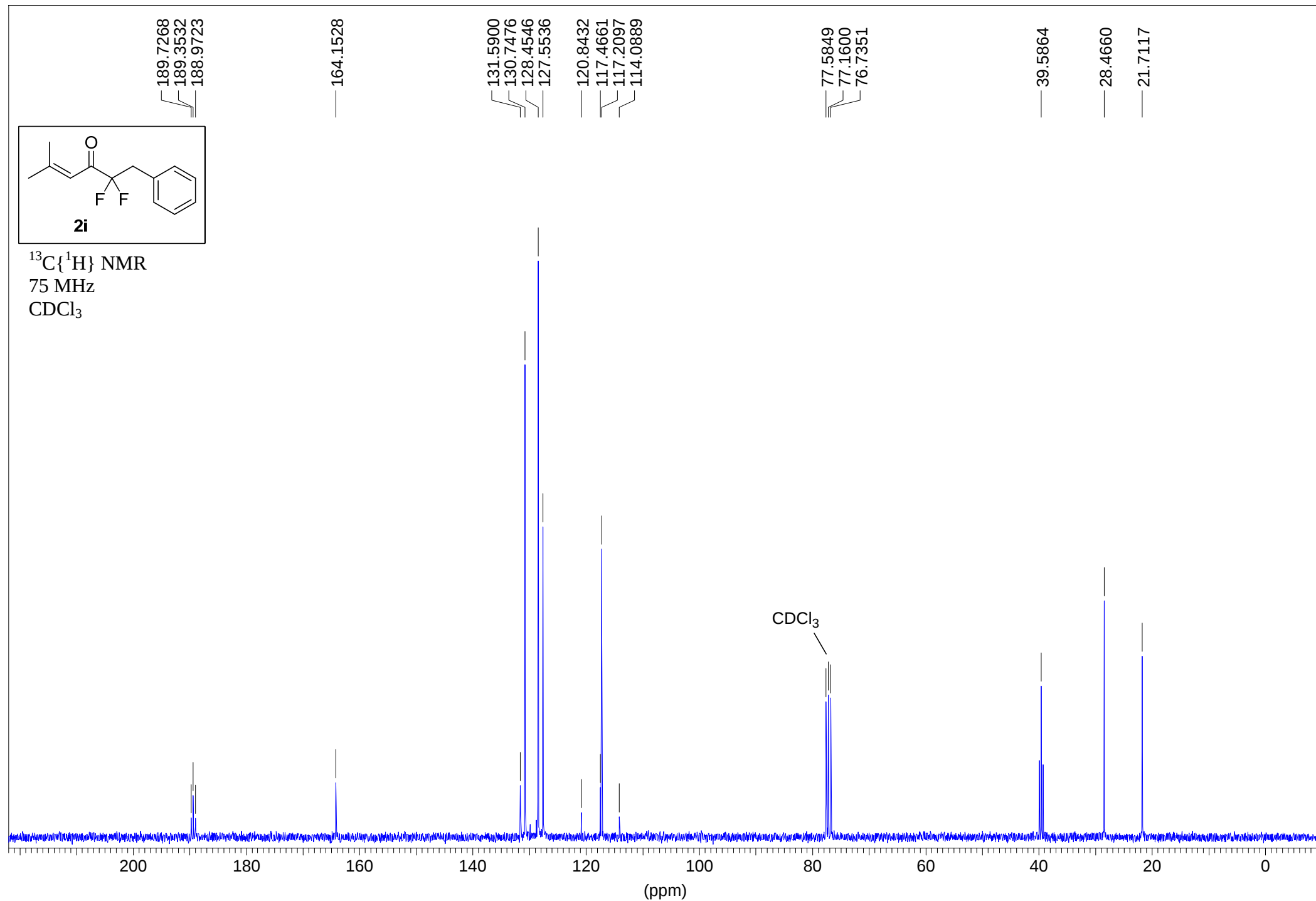
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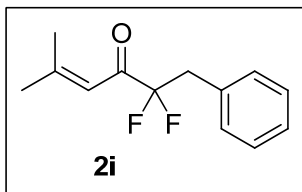




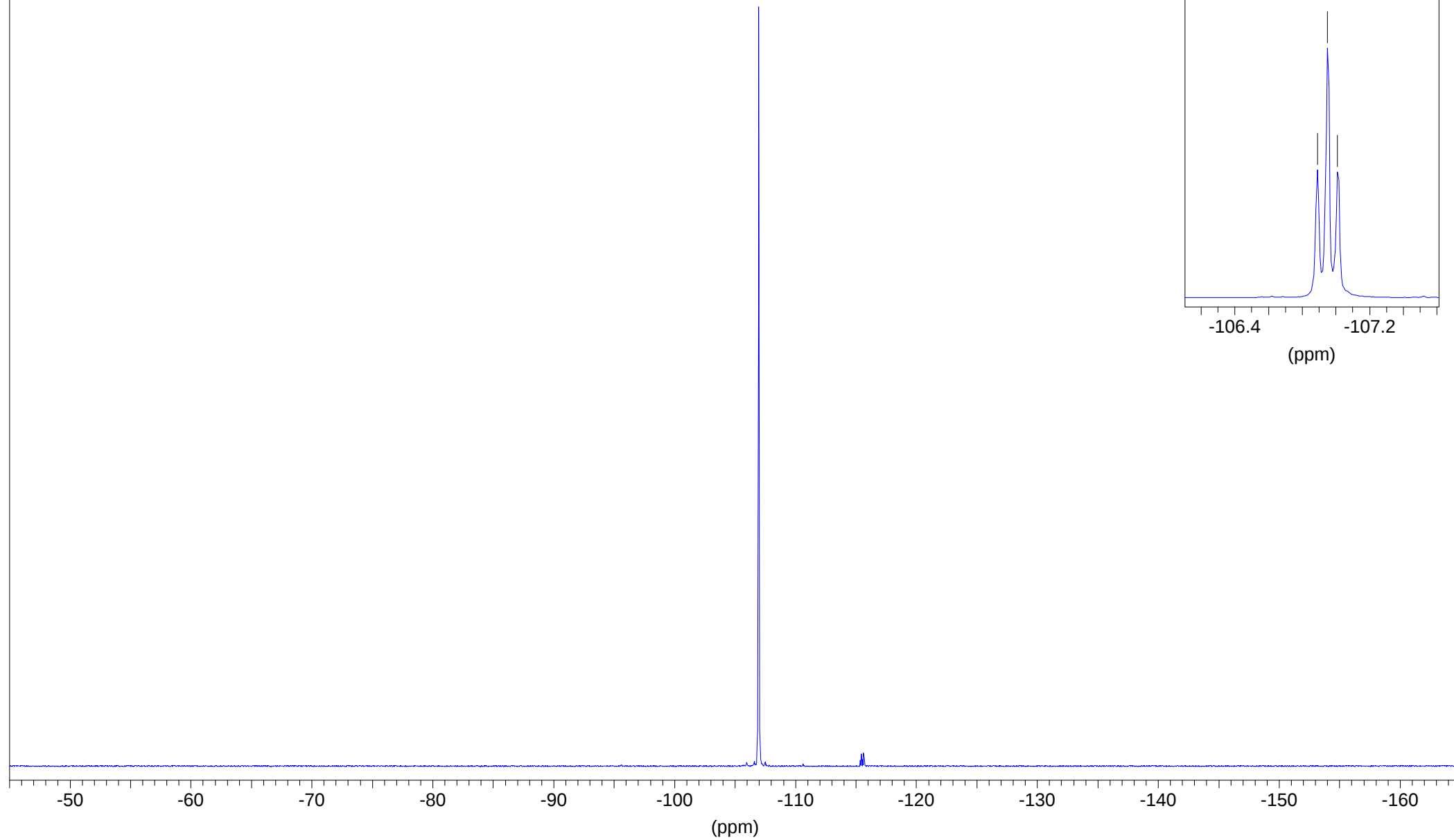


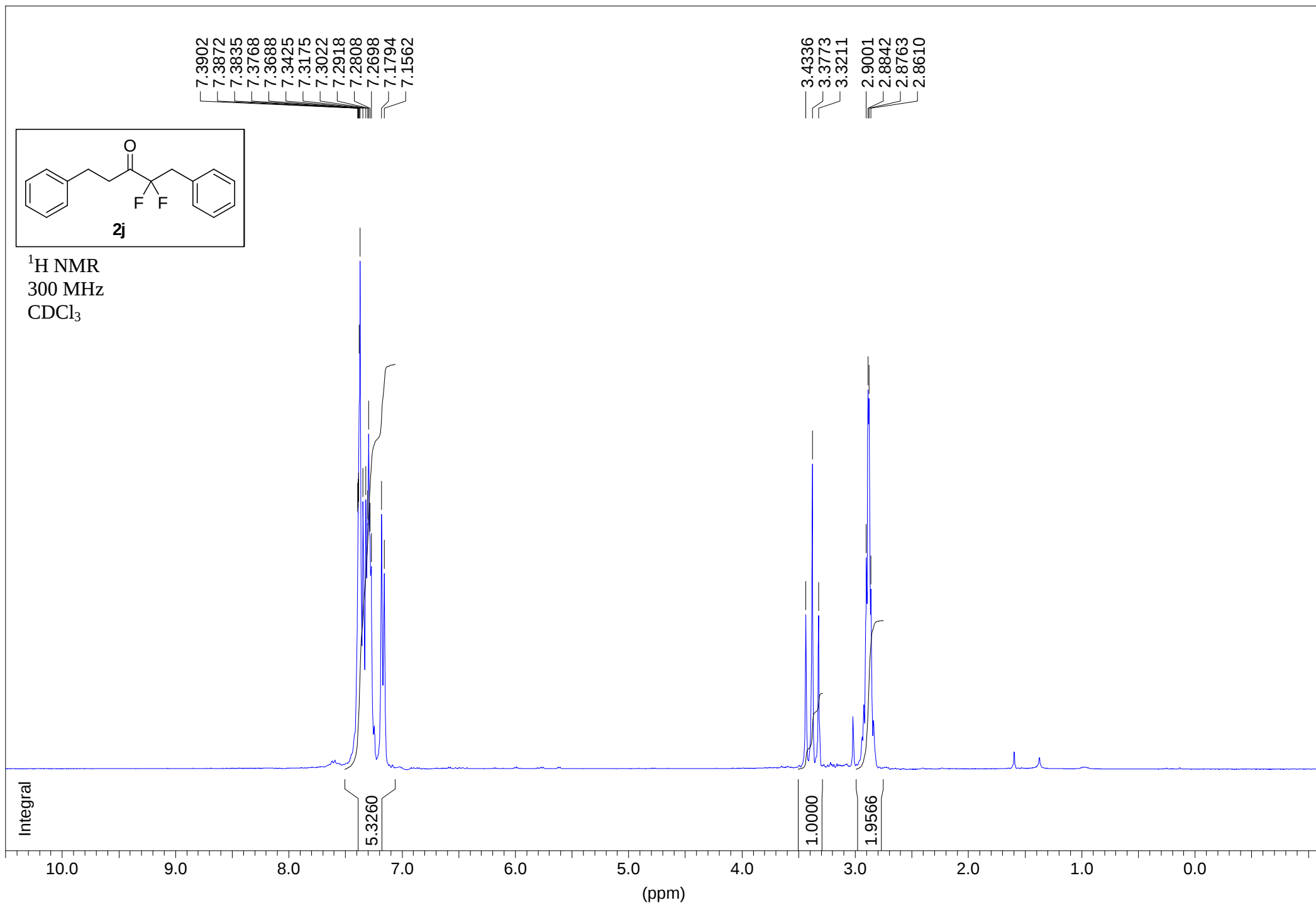
$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3

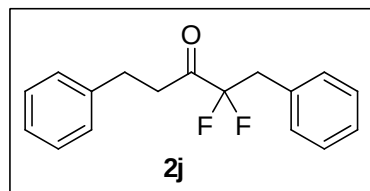




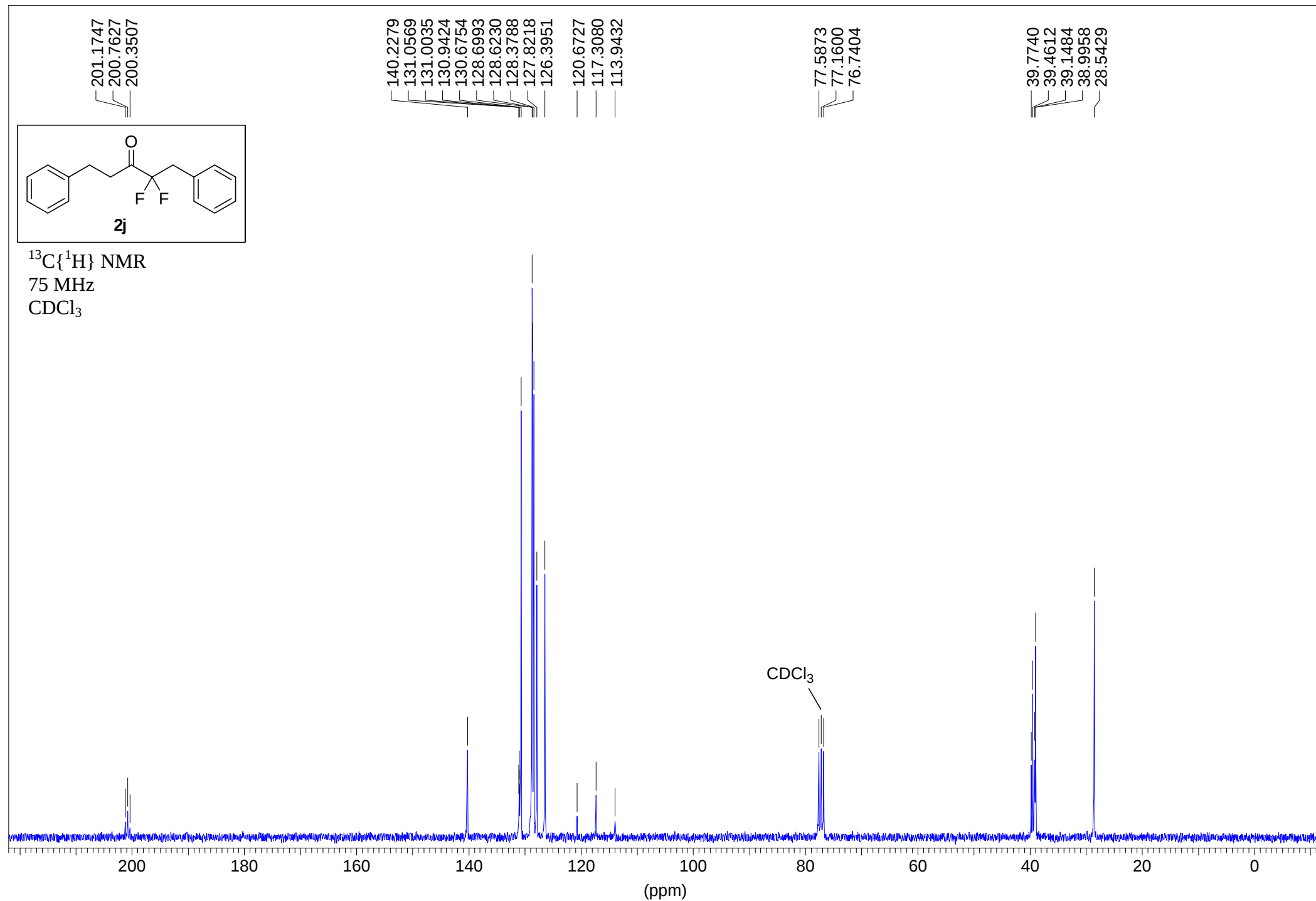
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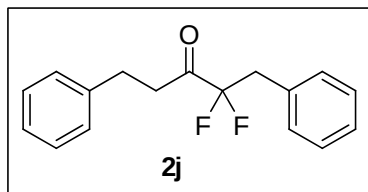




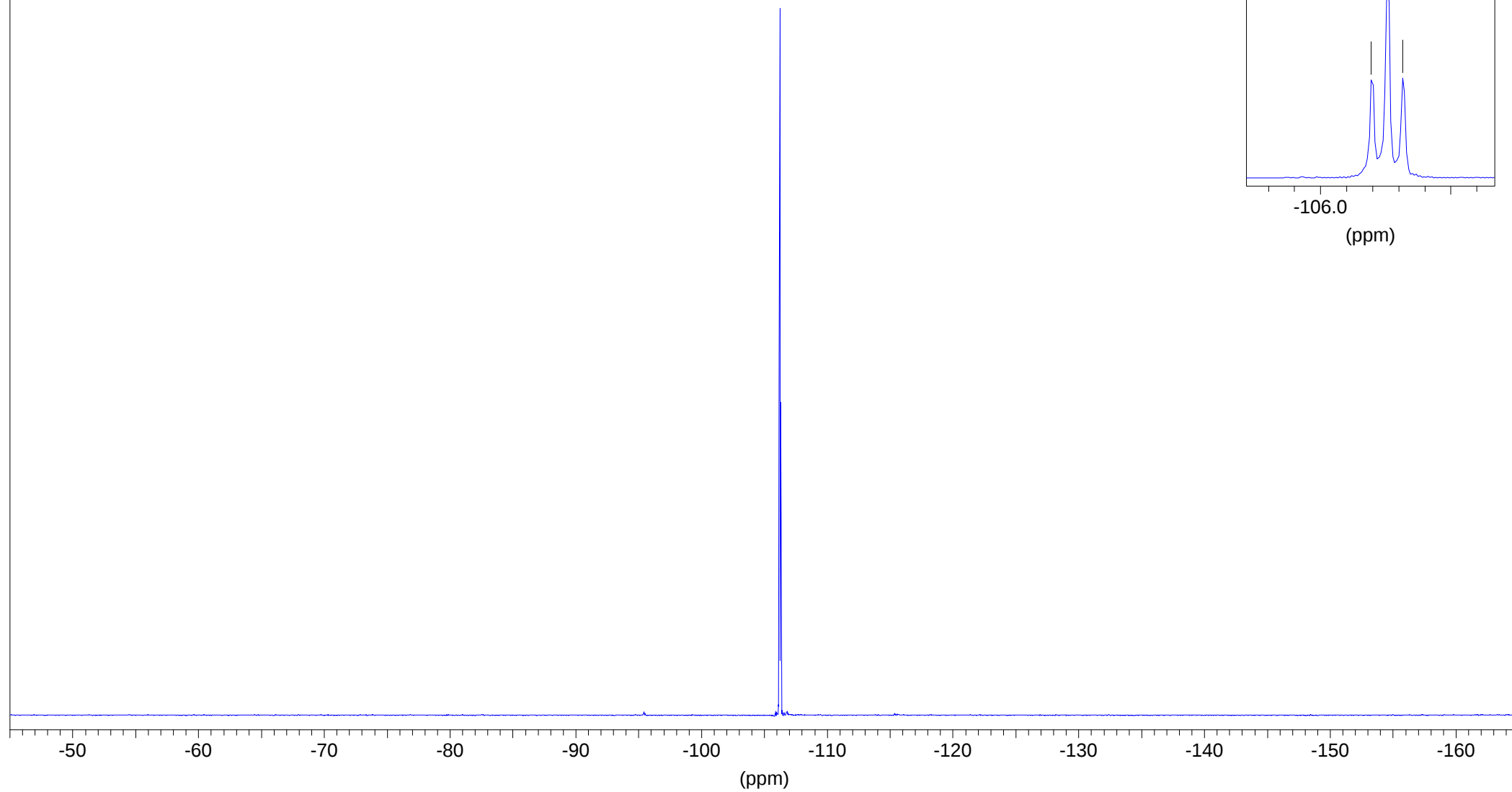


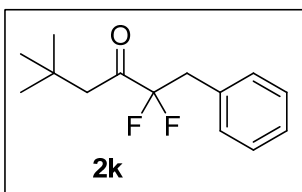
$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3





^{19}F NMR
282 MHz
 CDCl_3





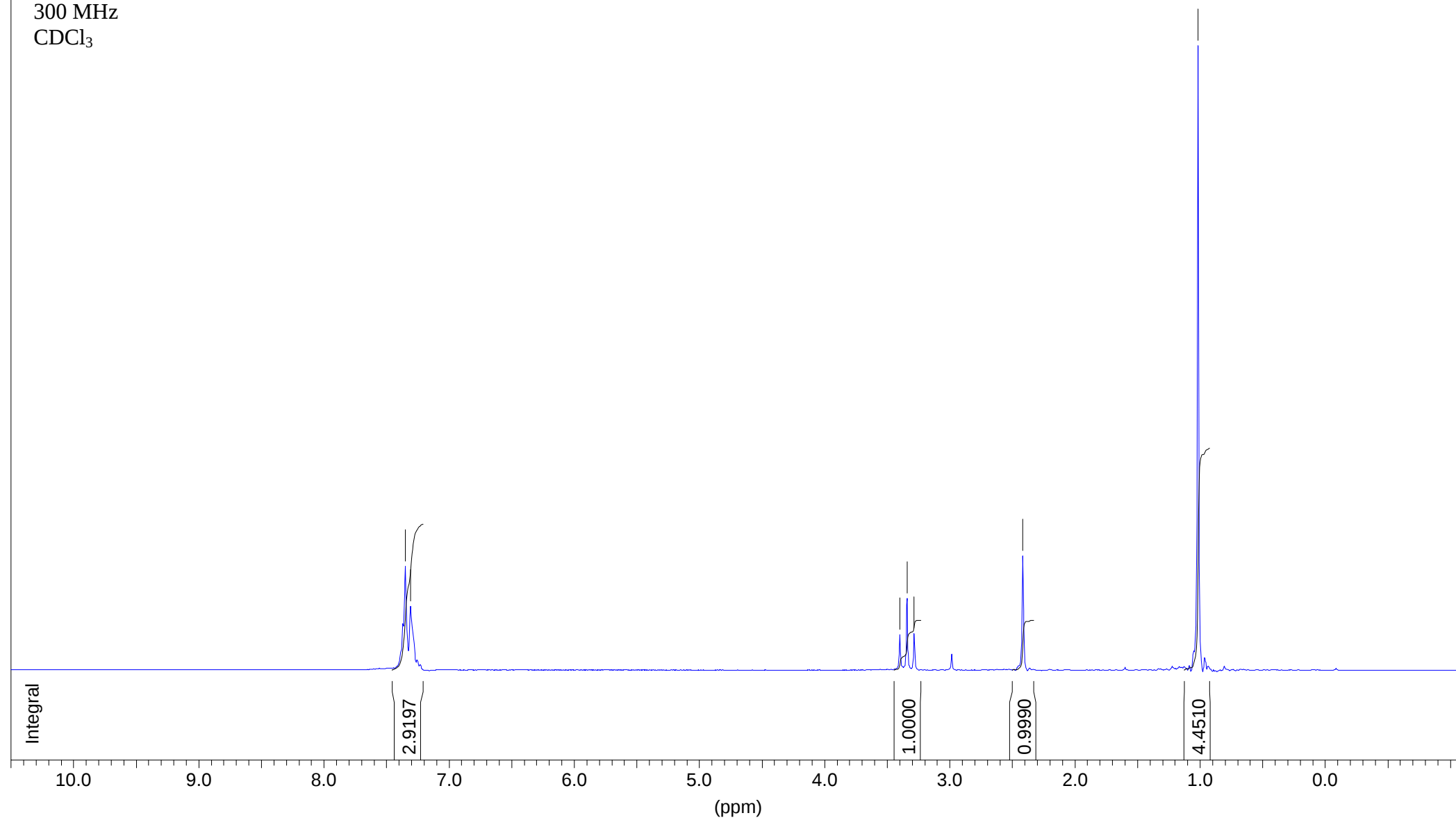
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300 MHz
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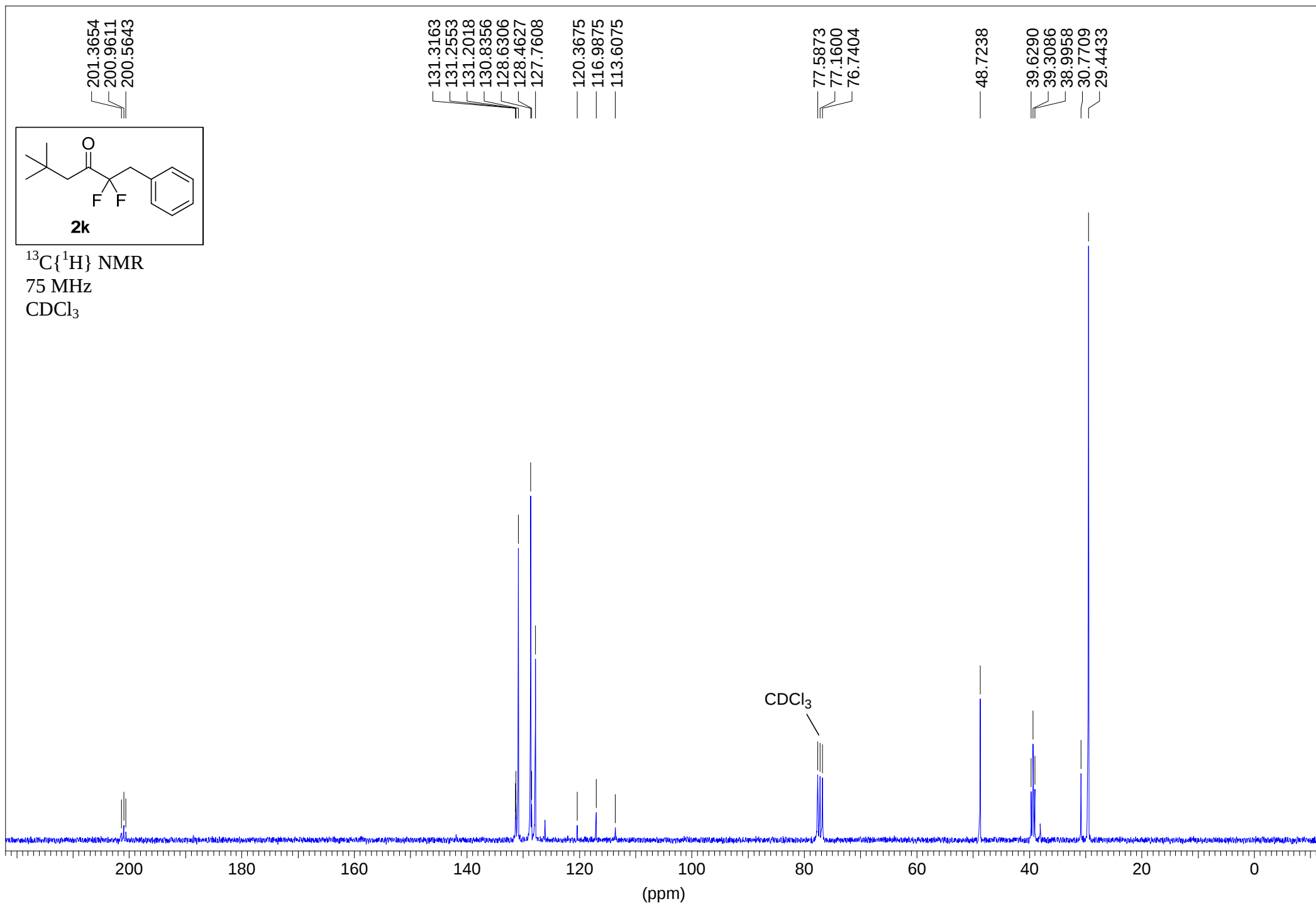
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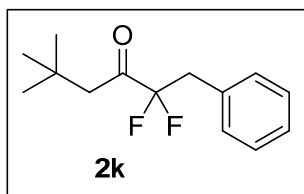
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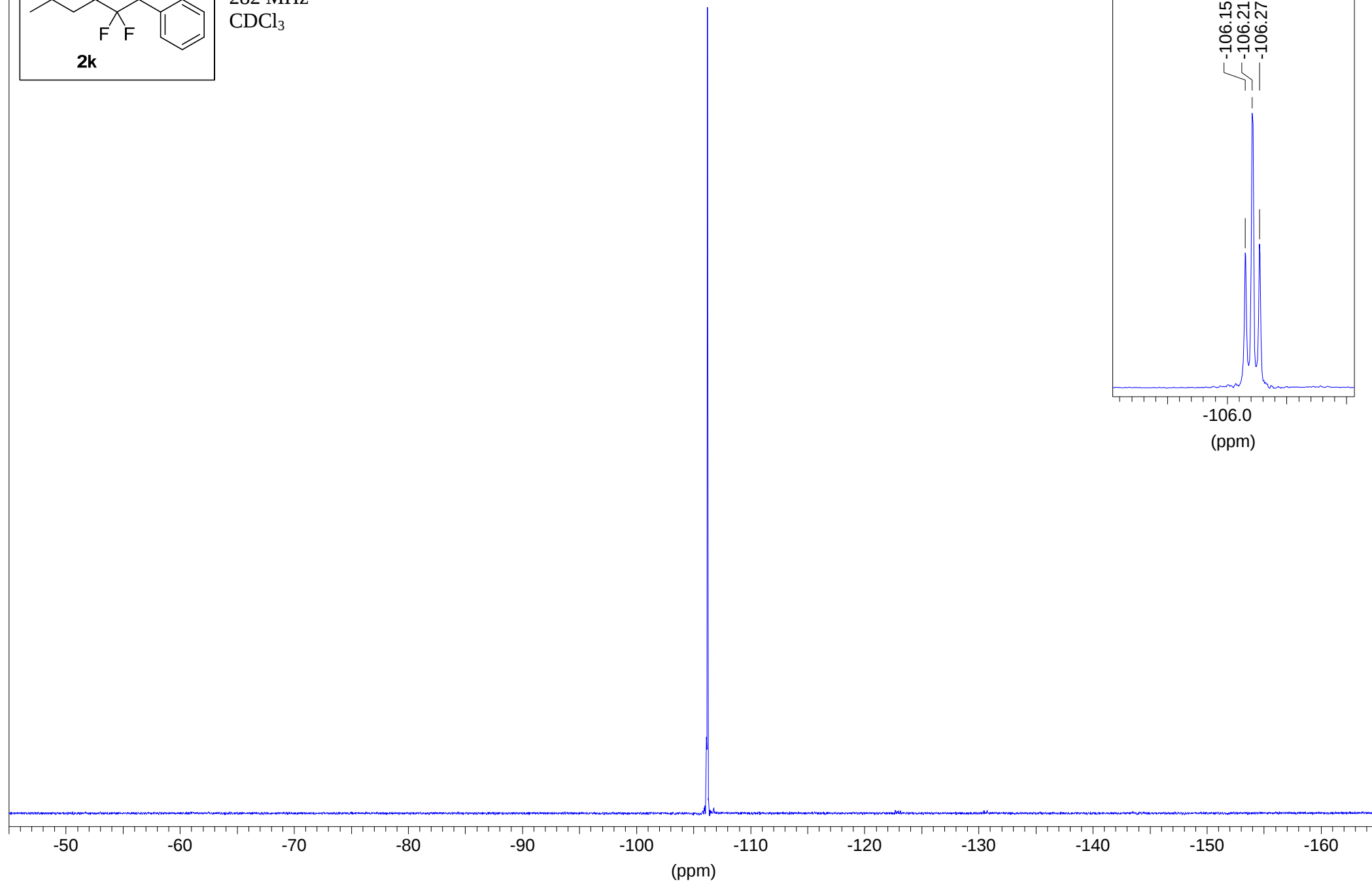
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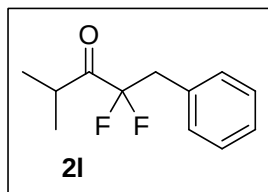






^{19}F NMR
282 MHz
 CDCl_3



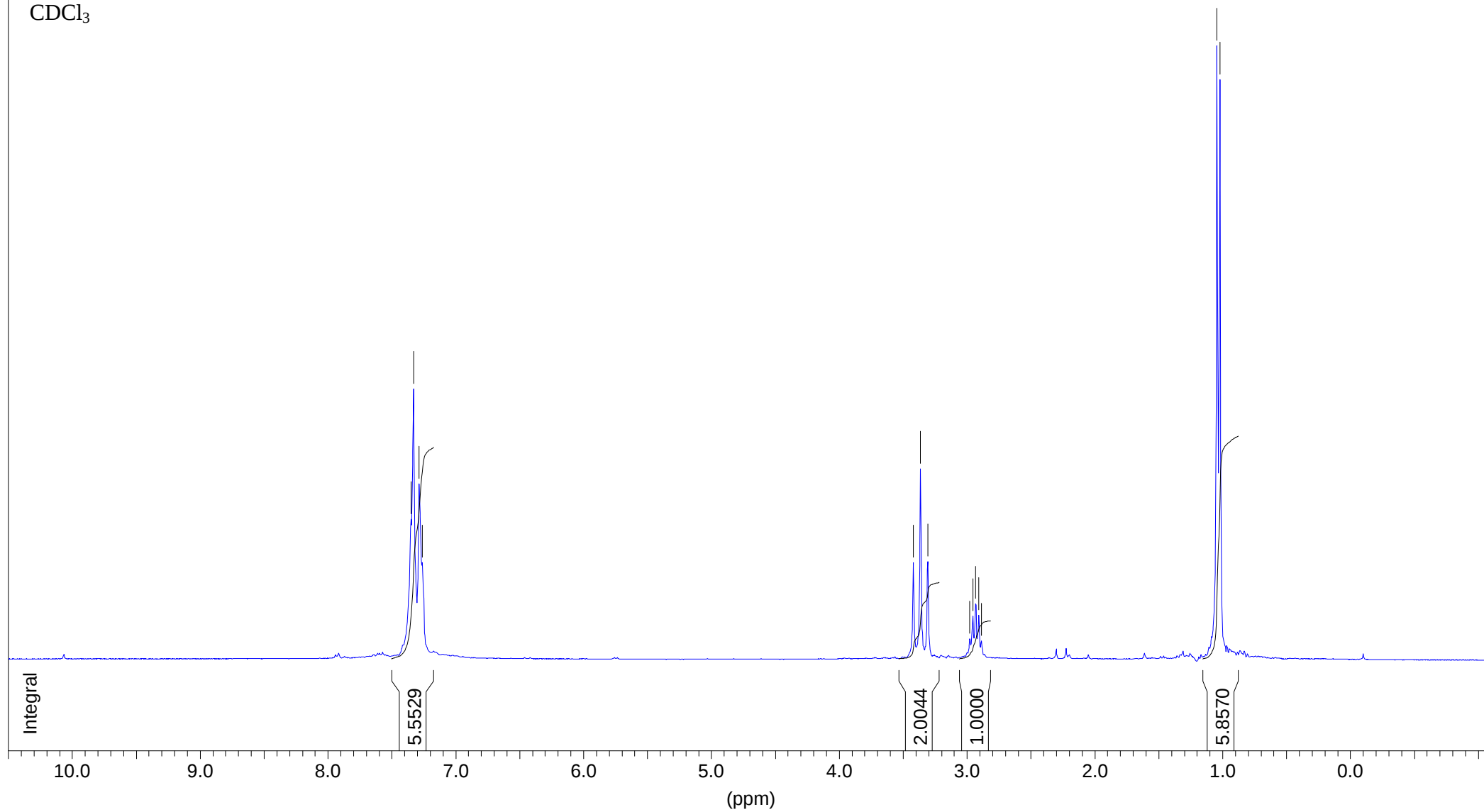


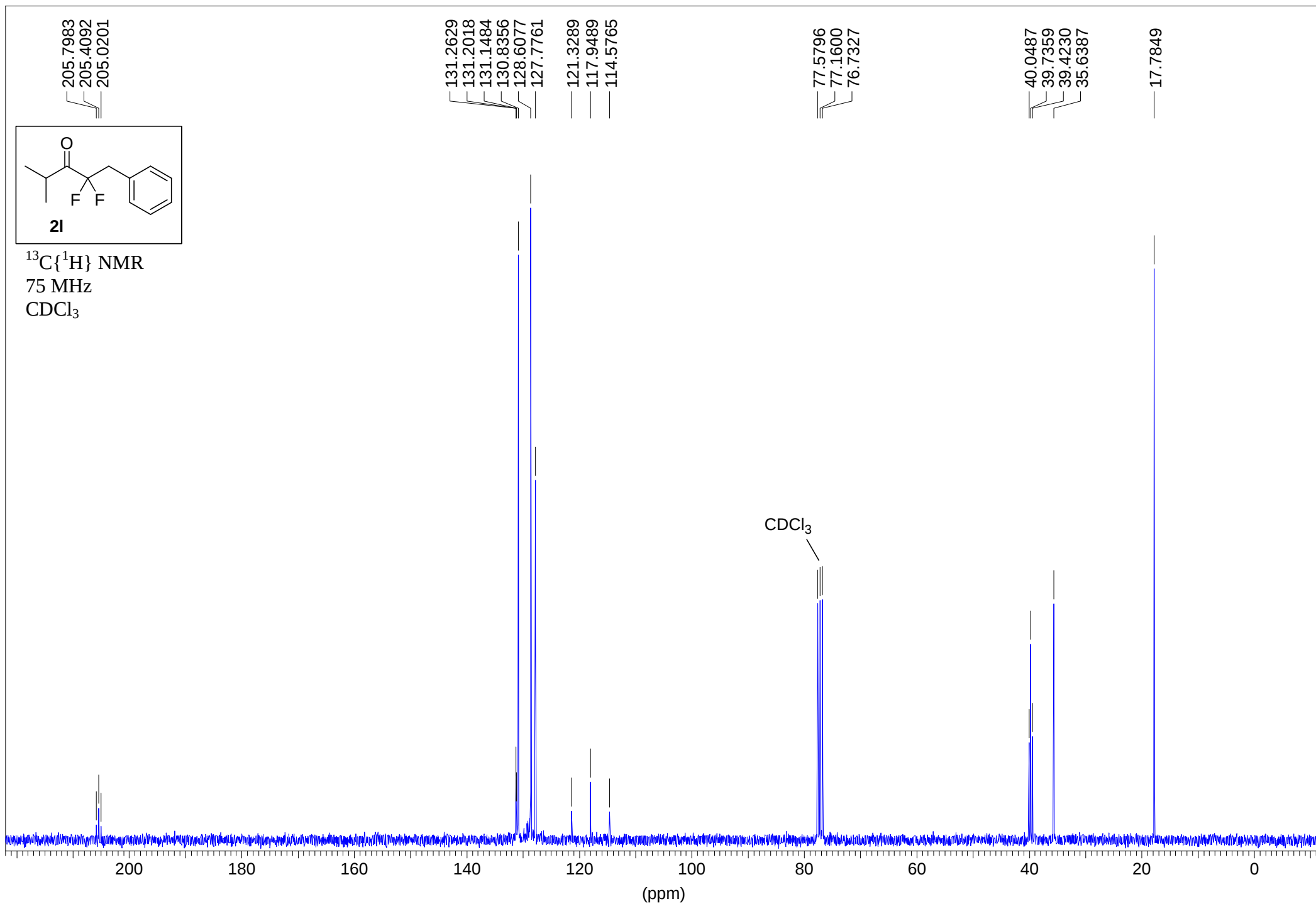
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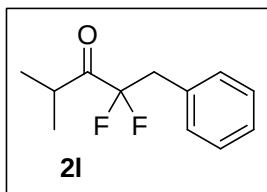
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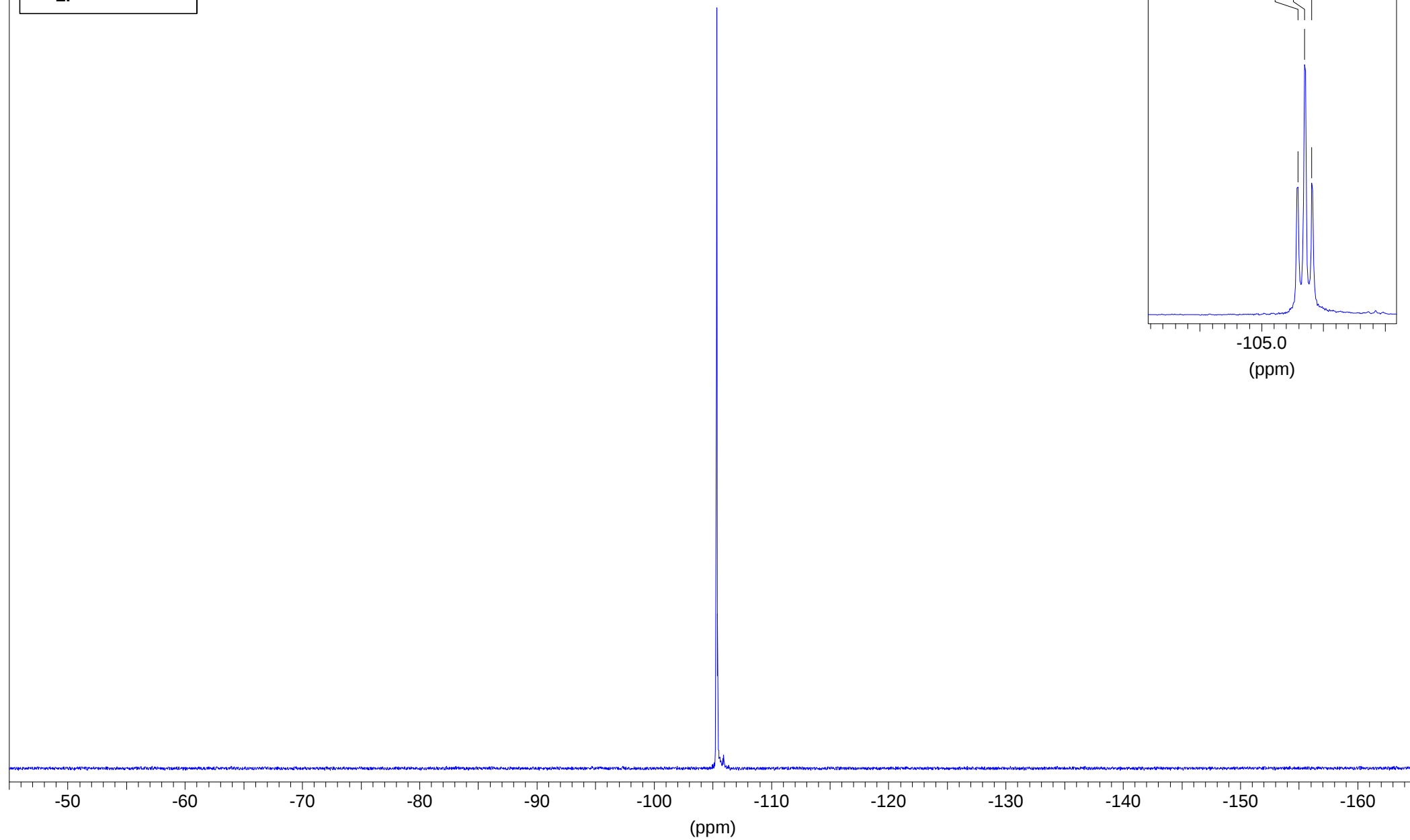
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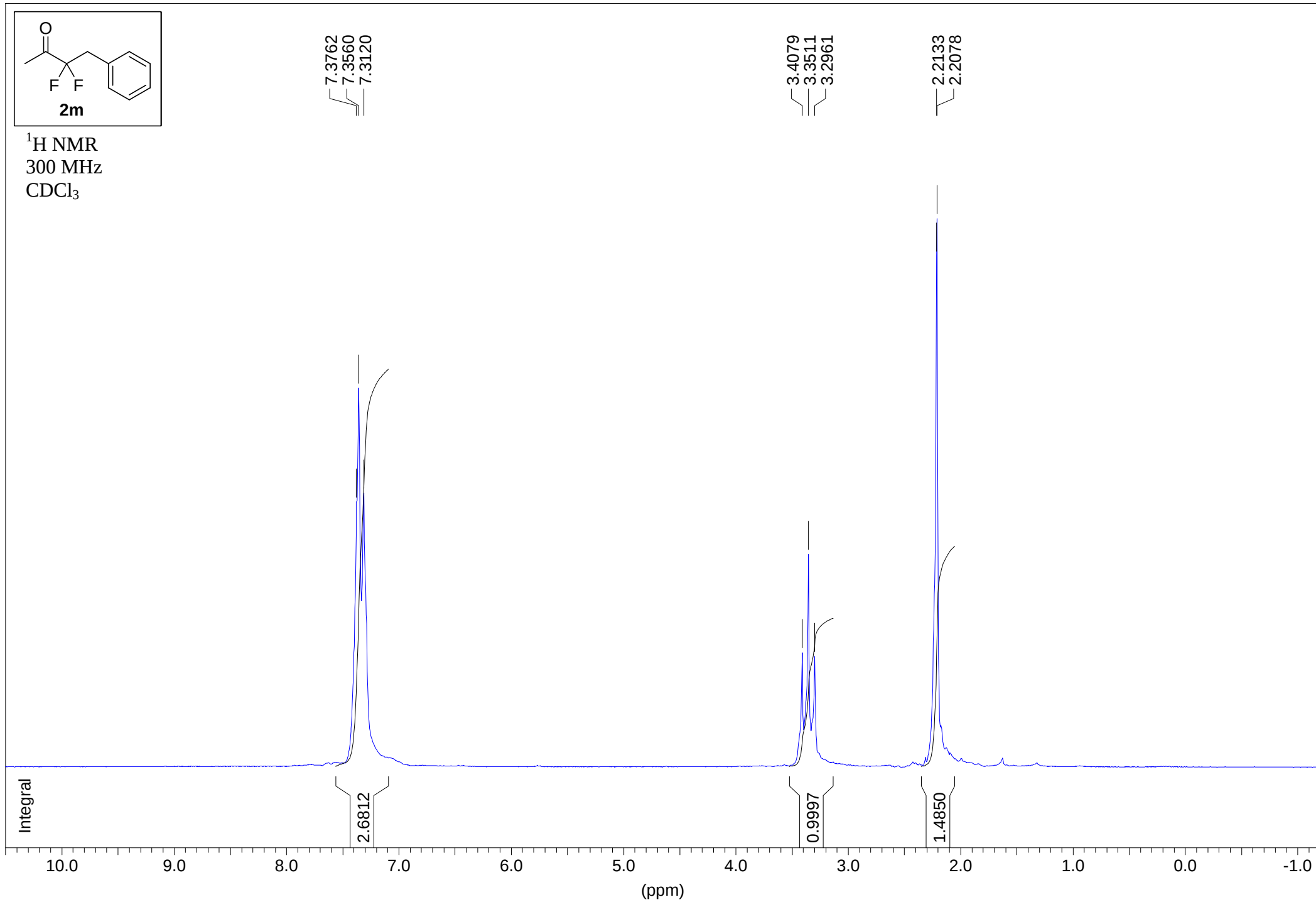


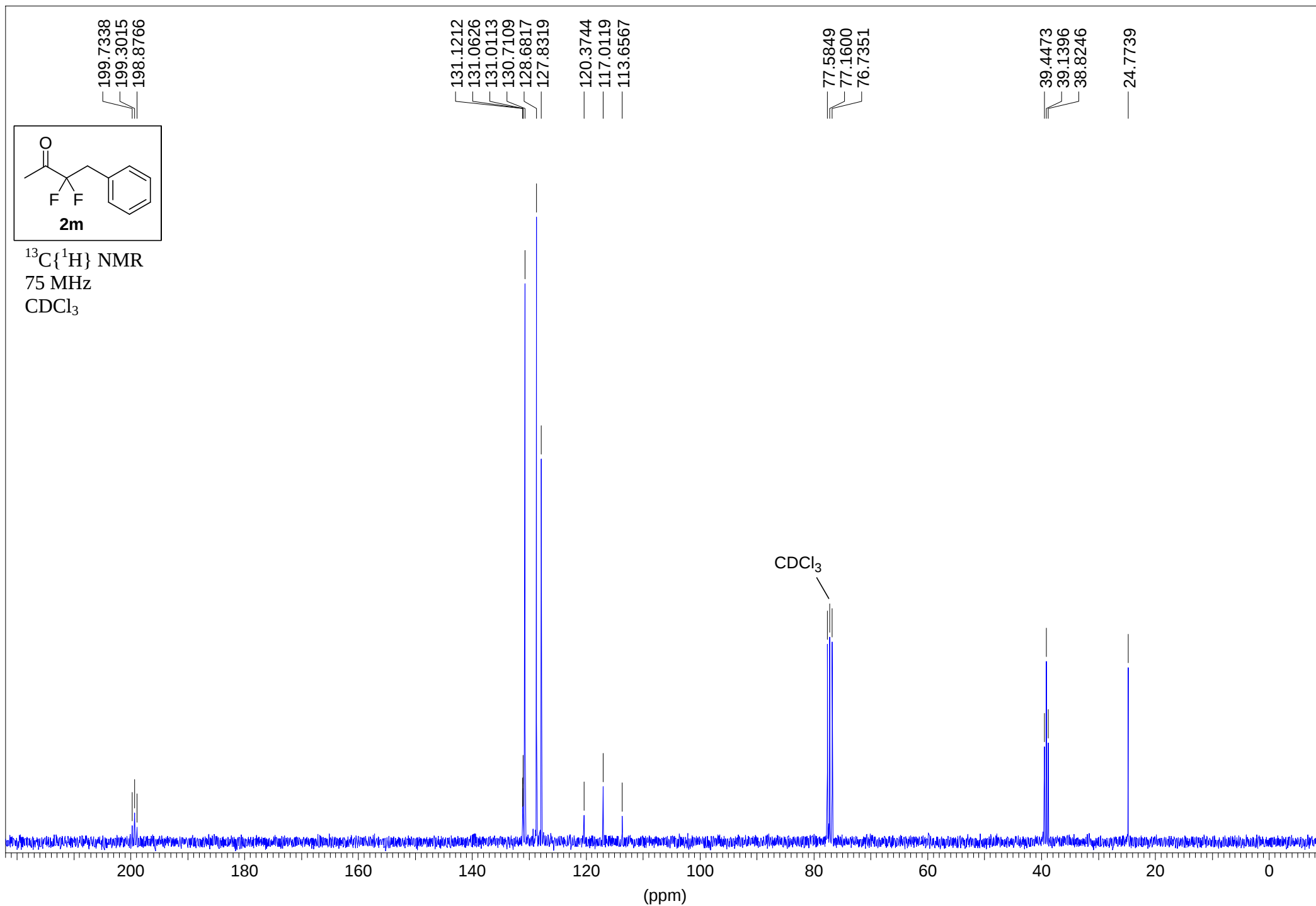


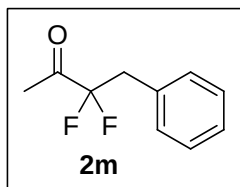


^{19}F NMR
282 MHz
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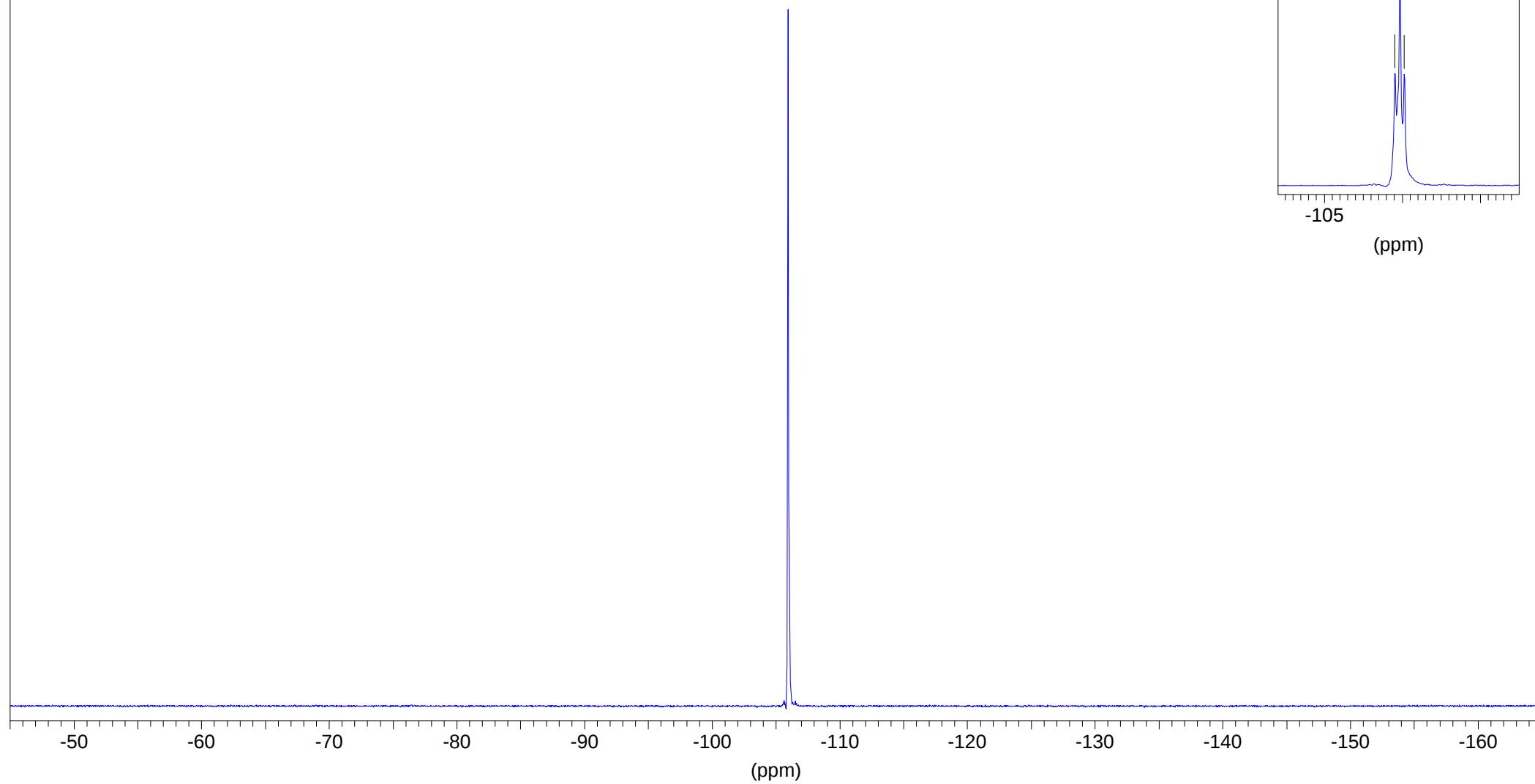


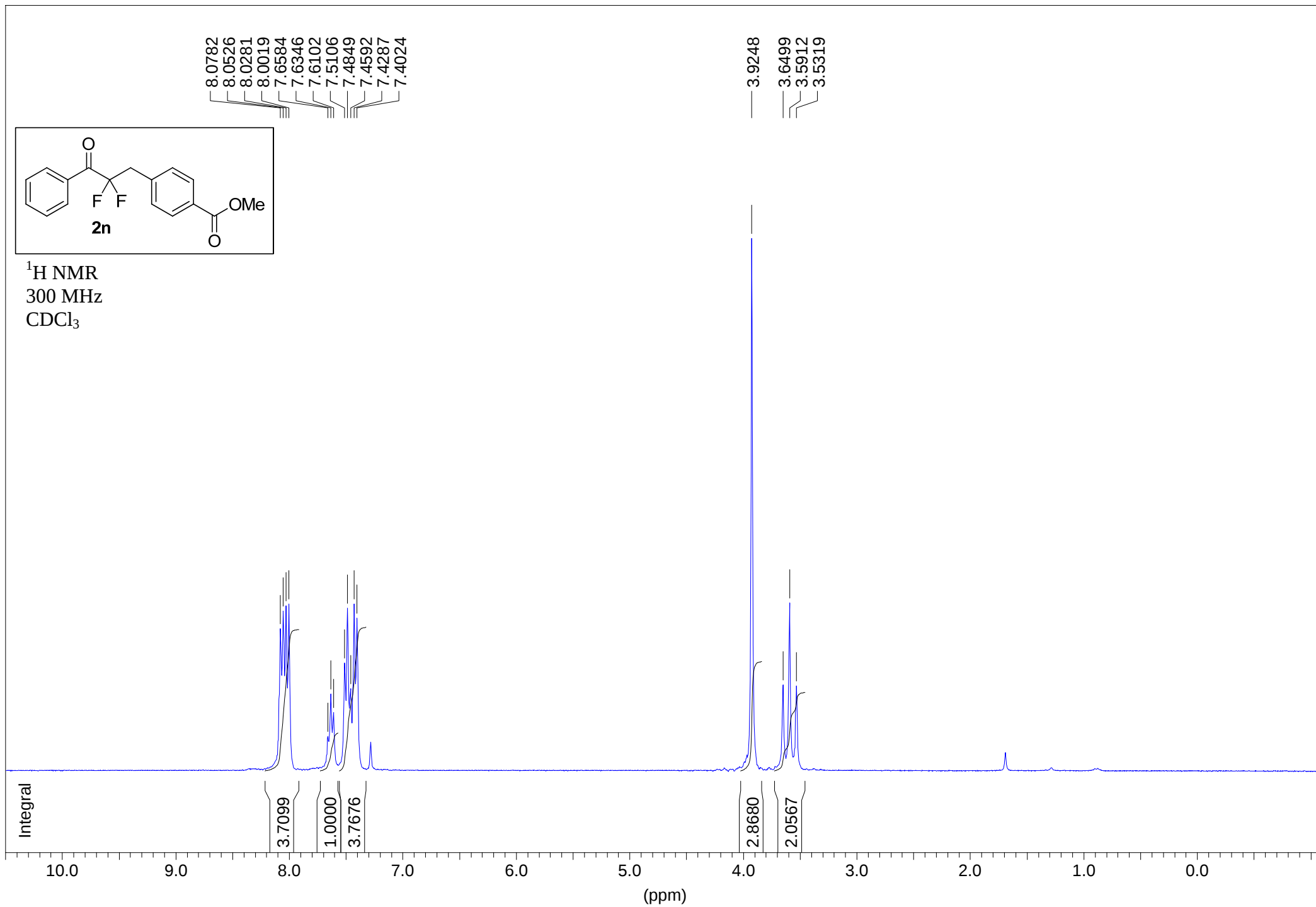


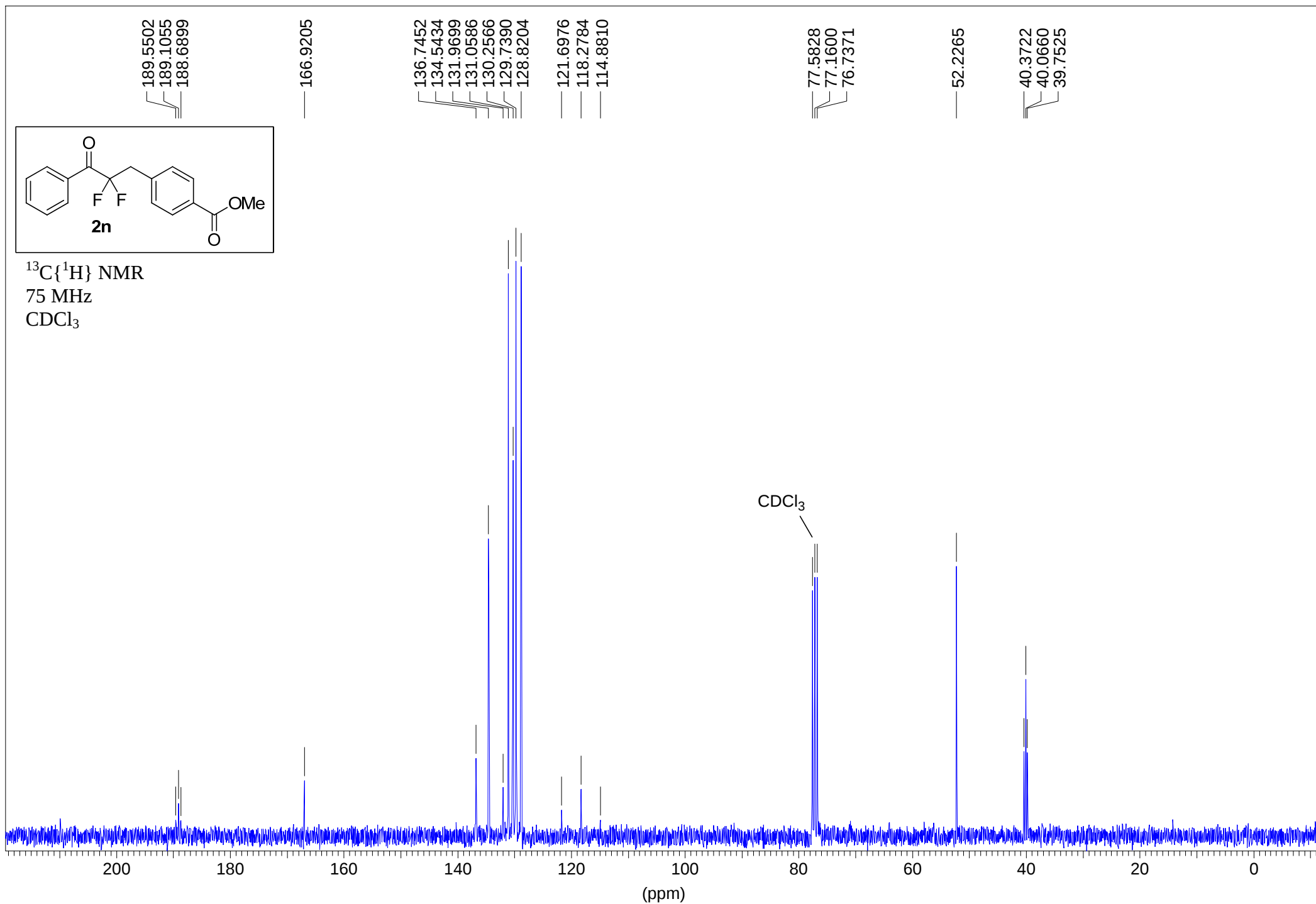


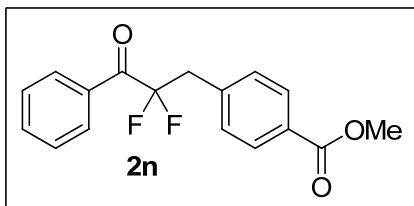


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282 MHz
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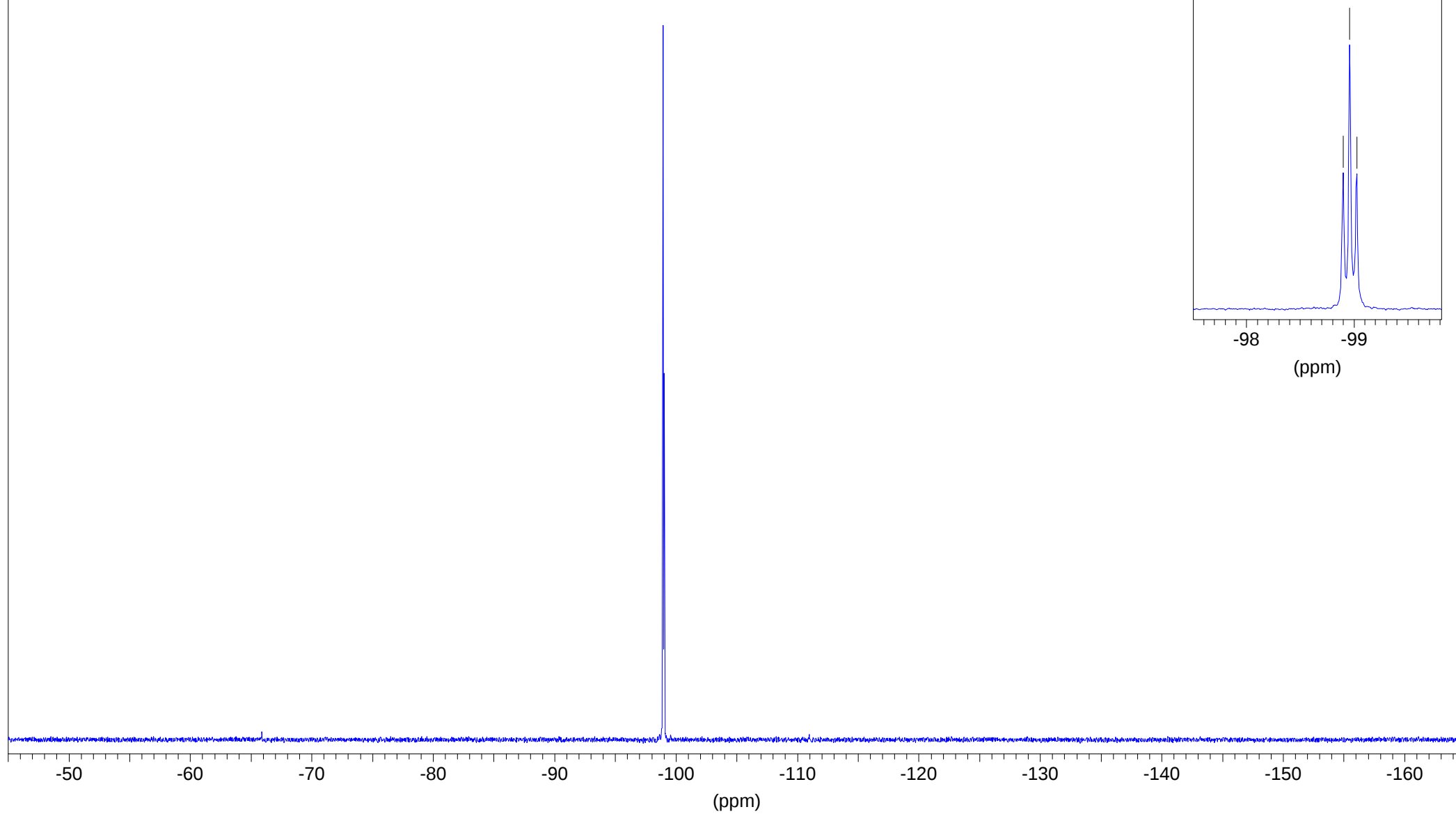


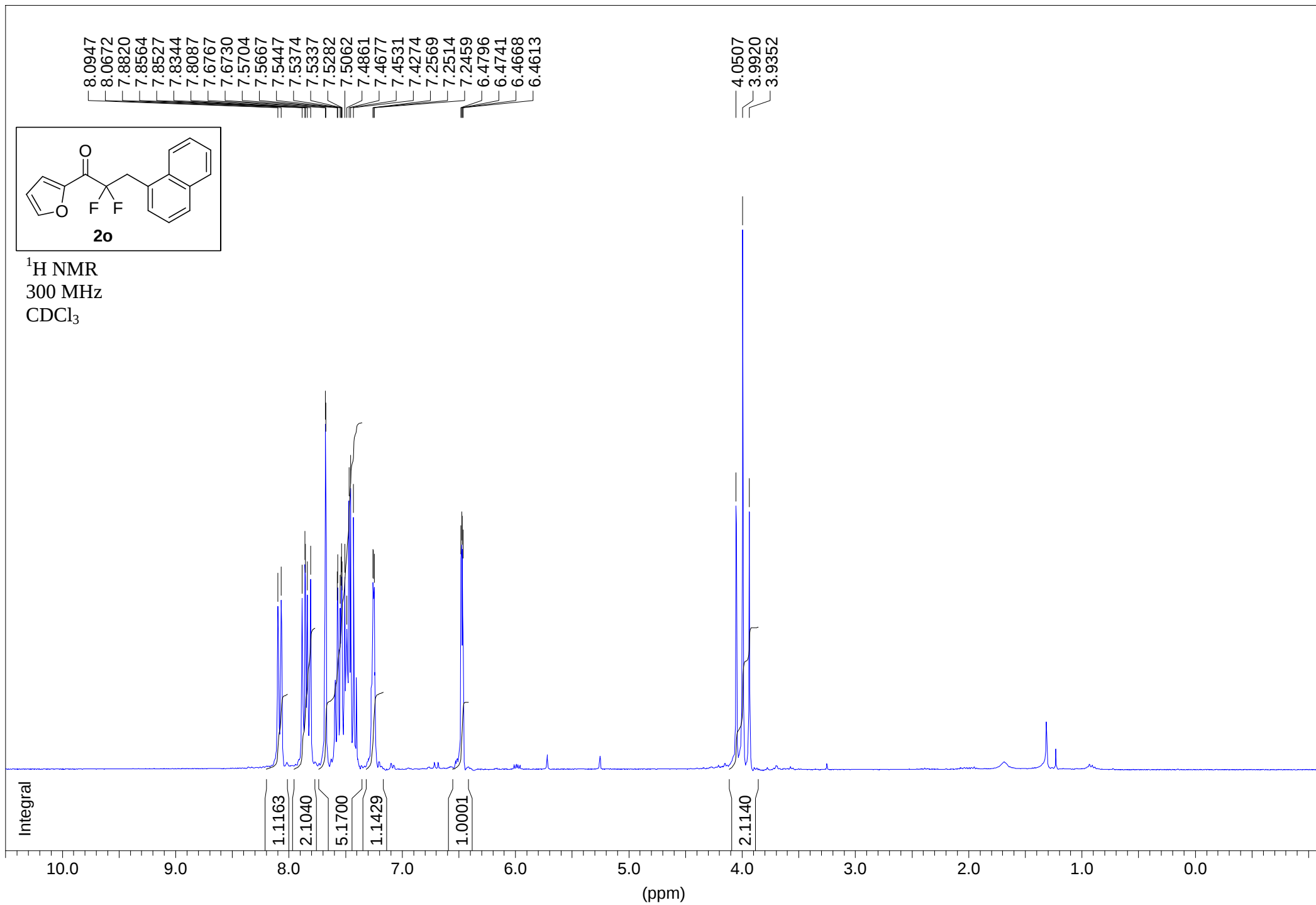


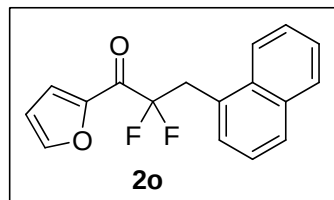




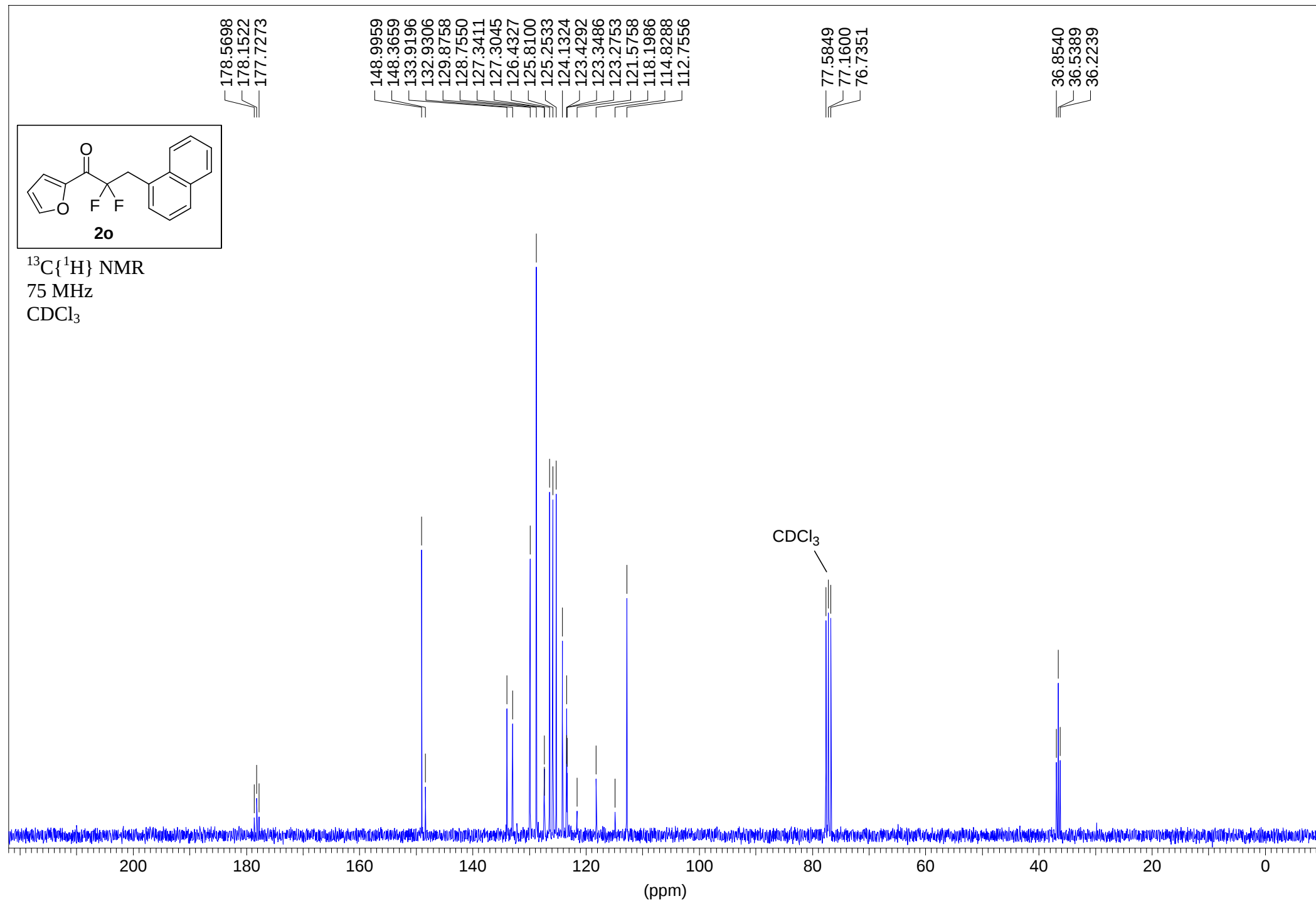
¹⁹F NMR
282 MHz
CDCl₃

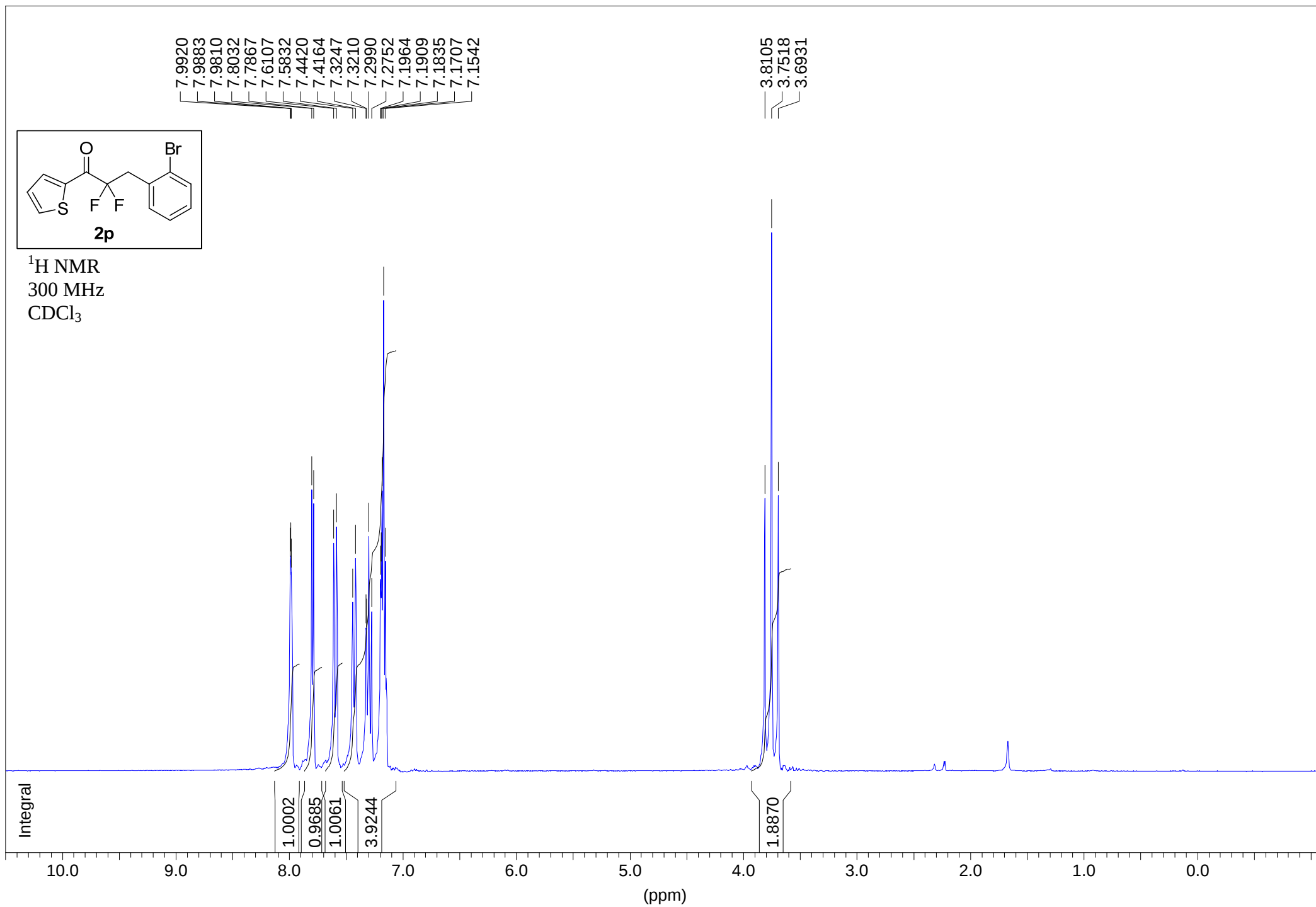


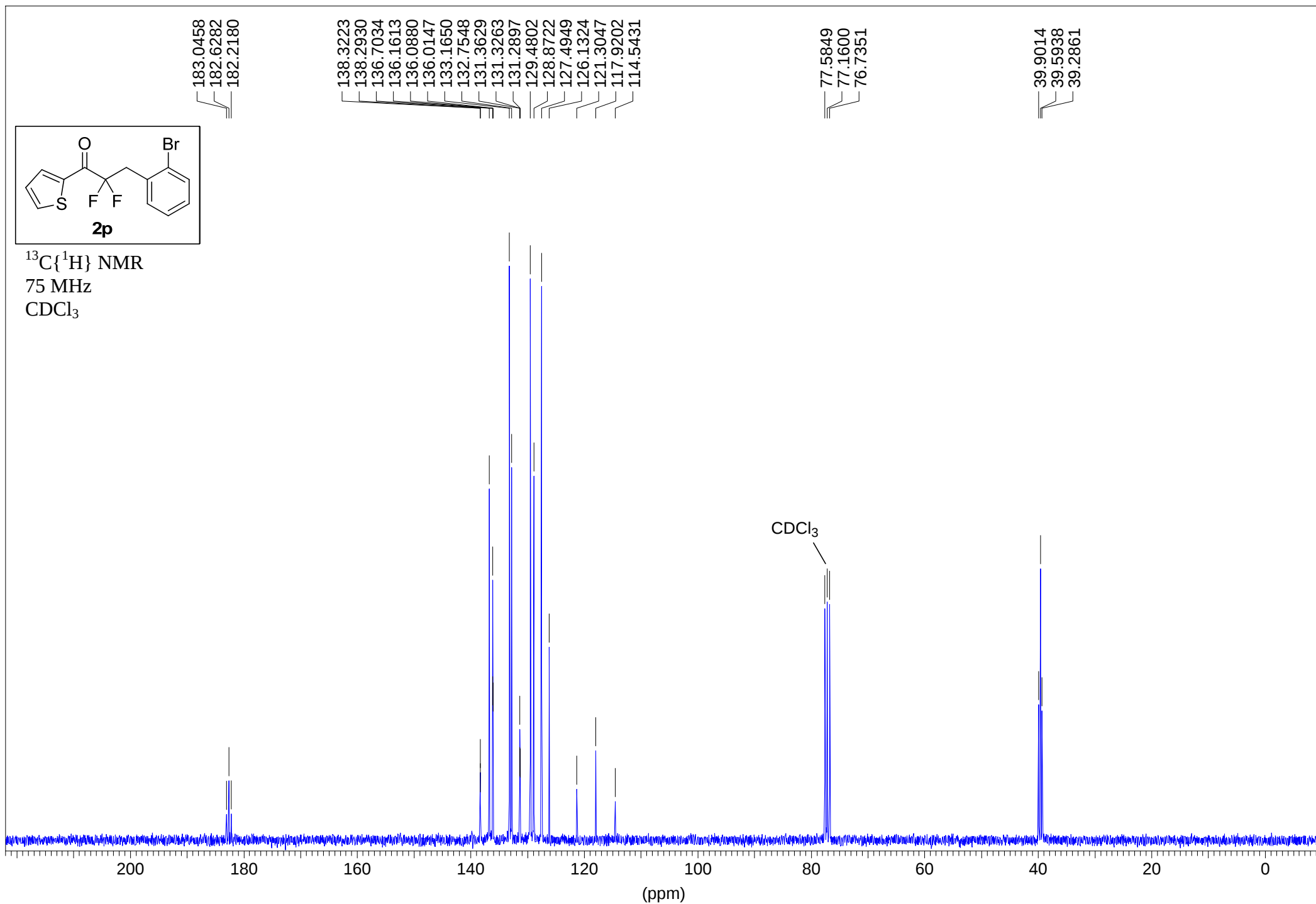


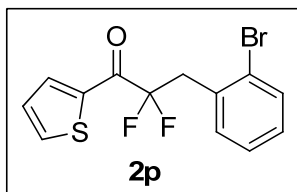


$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3

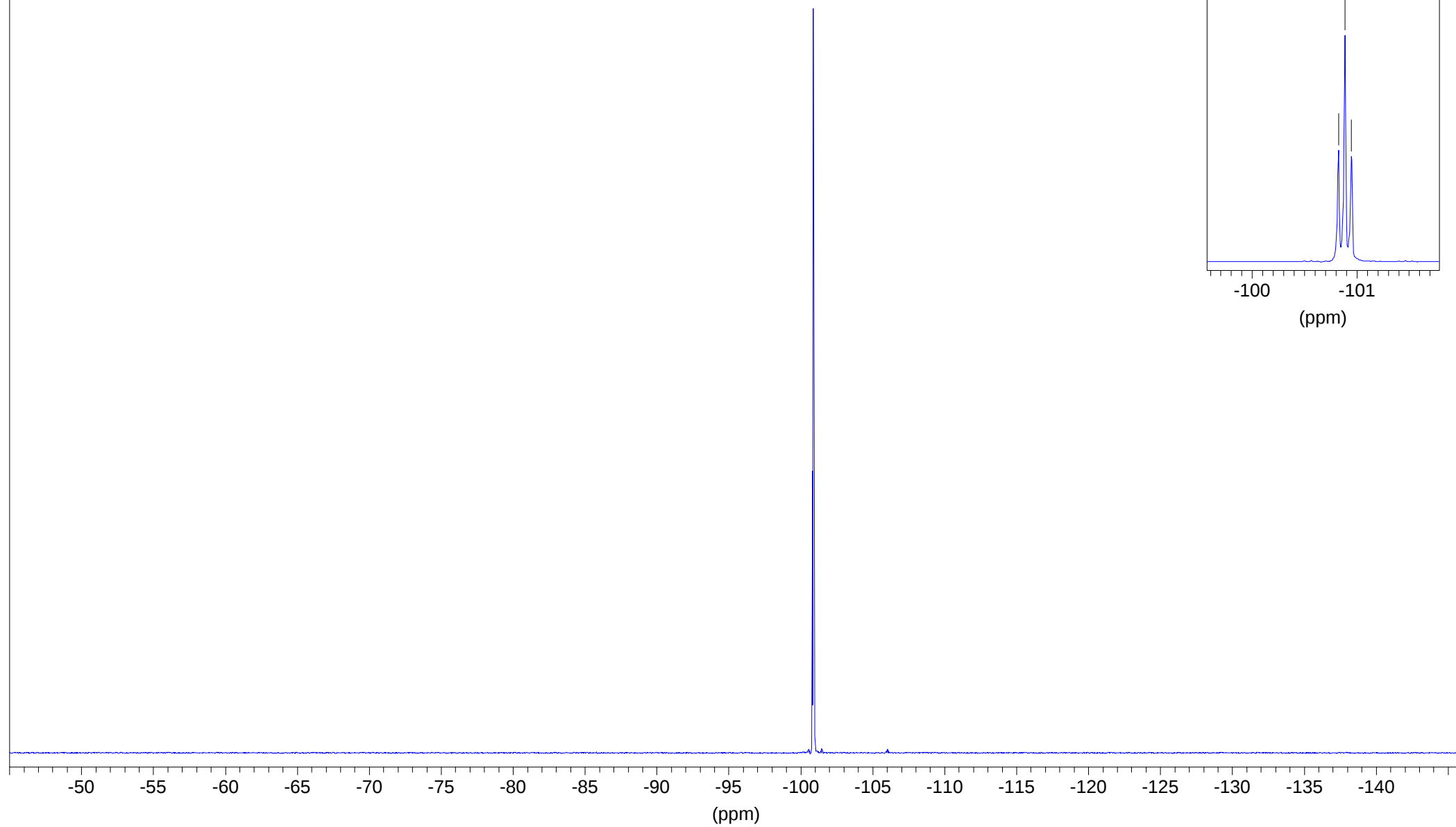


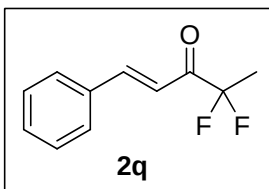




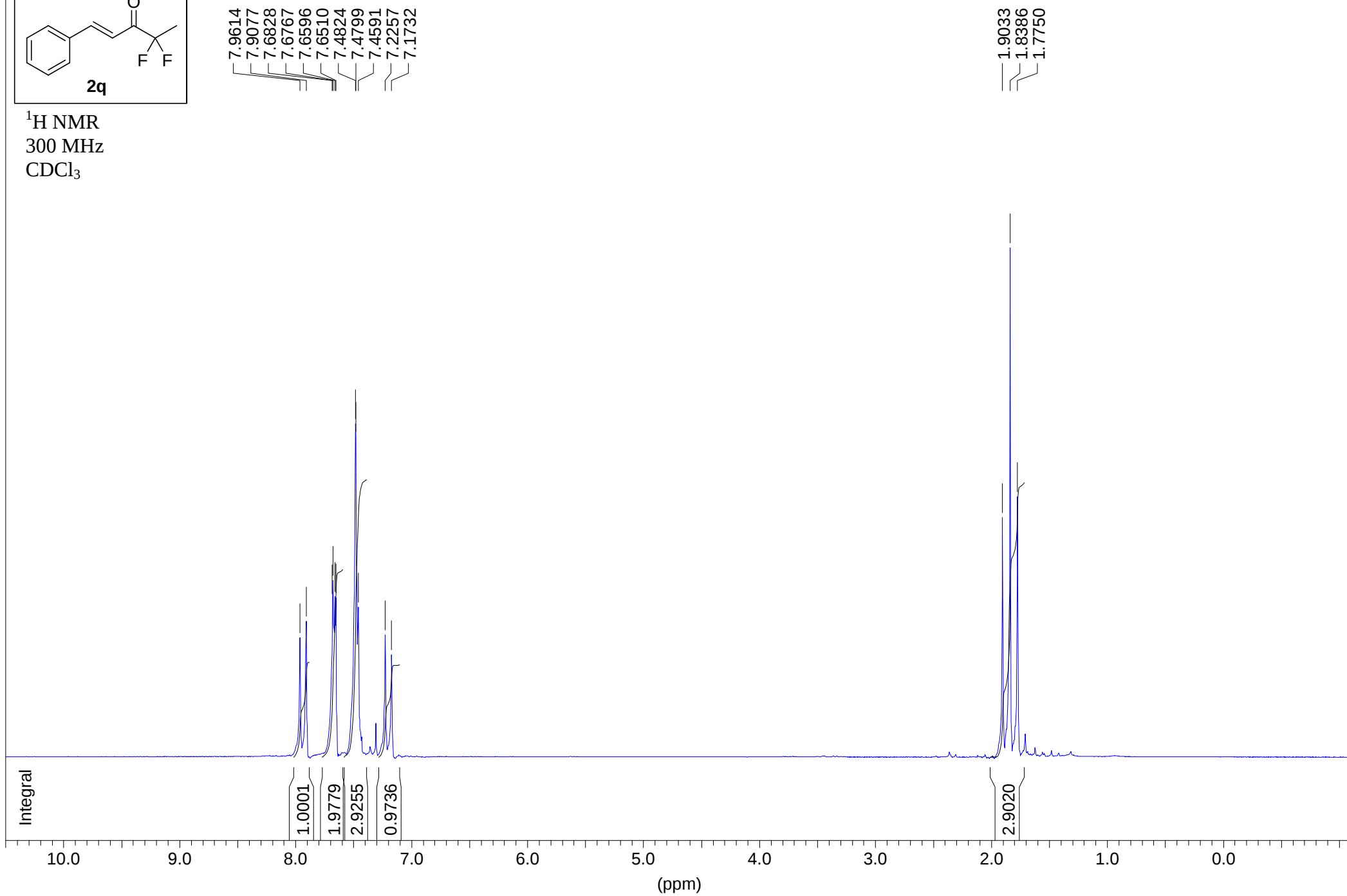


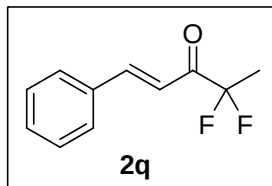
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282 MHz
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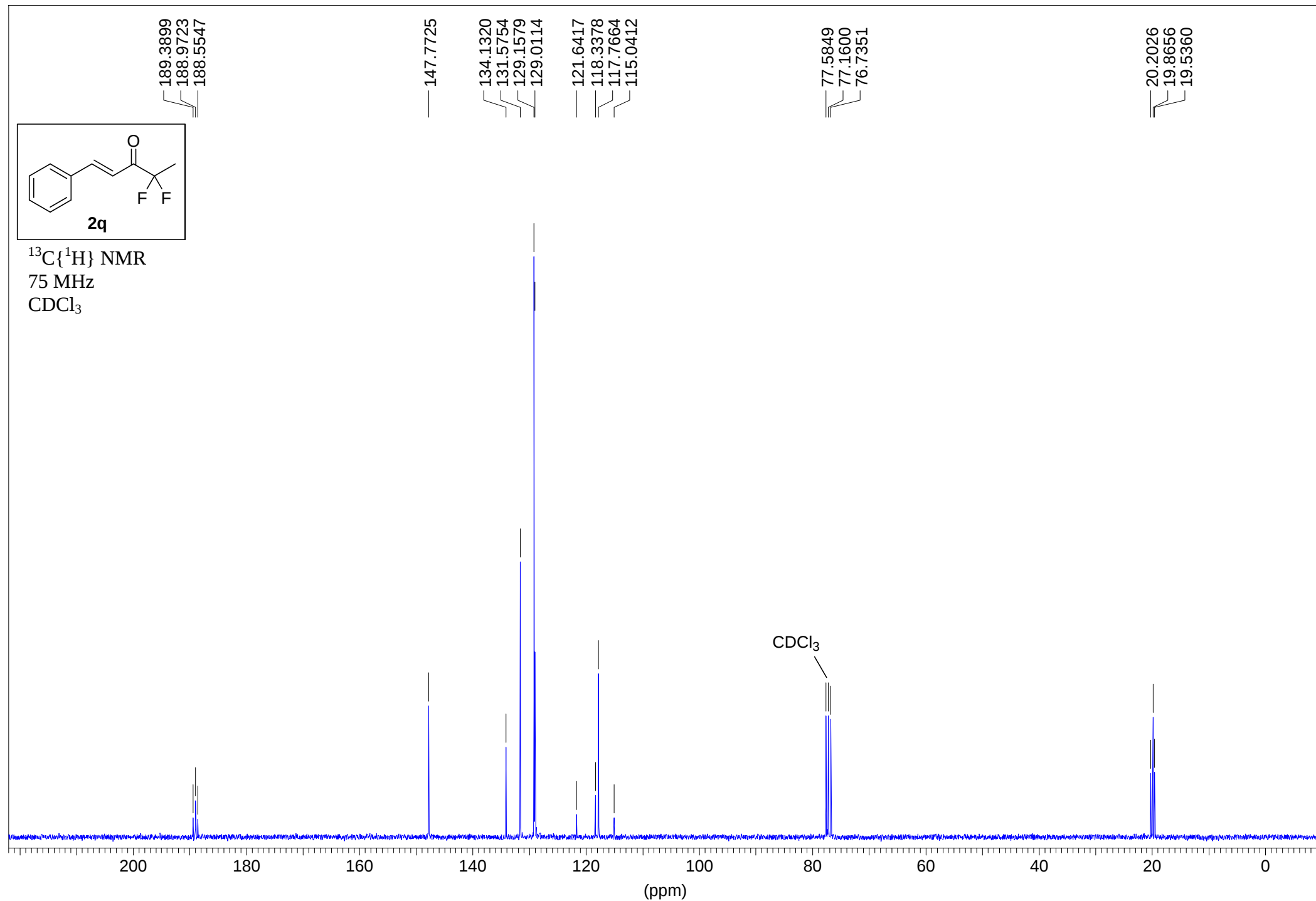


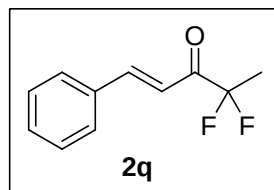
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300 MHz
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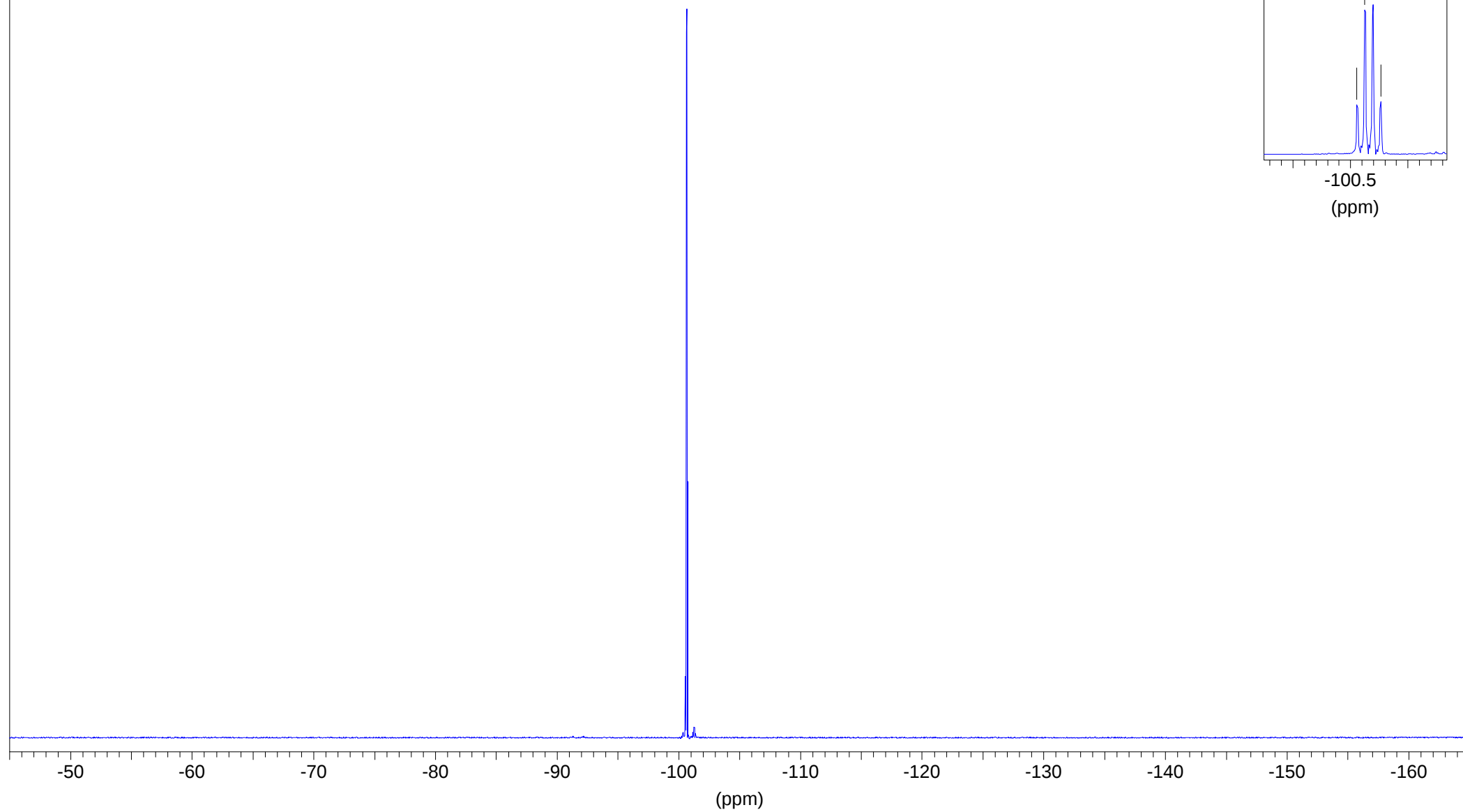


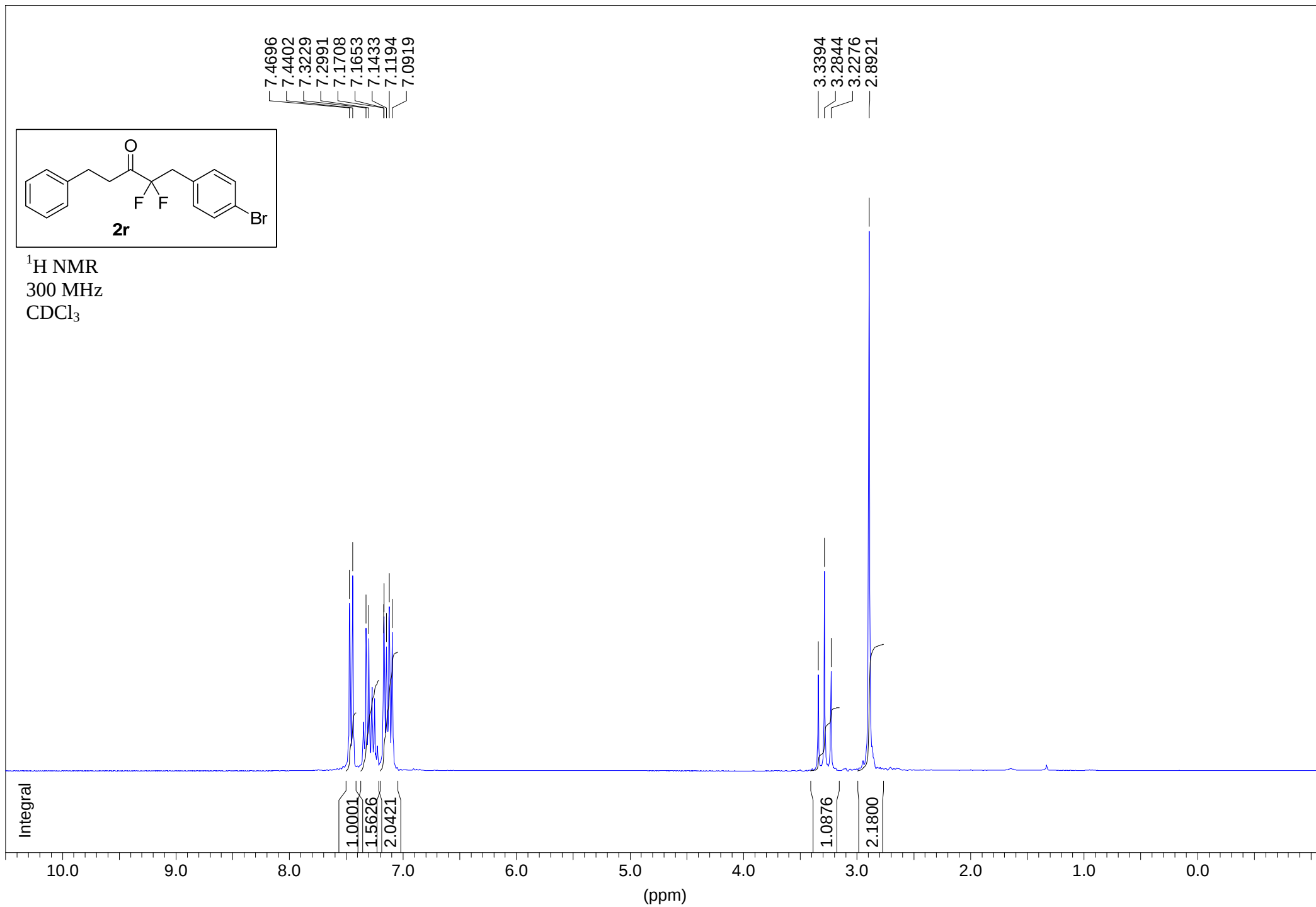
$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3

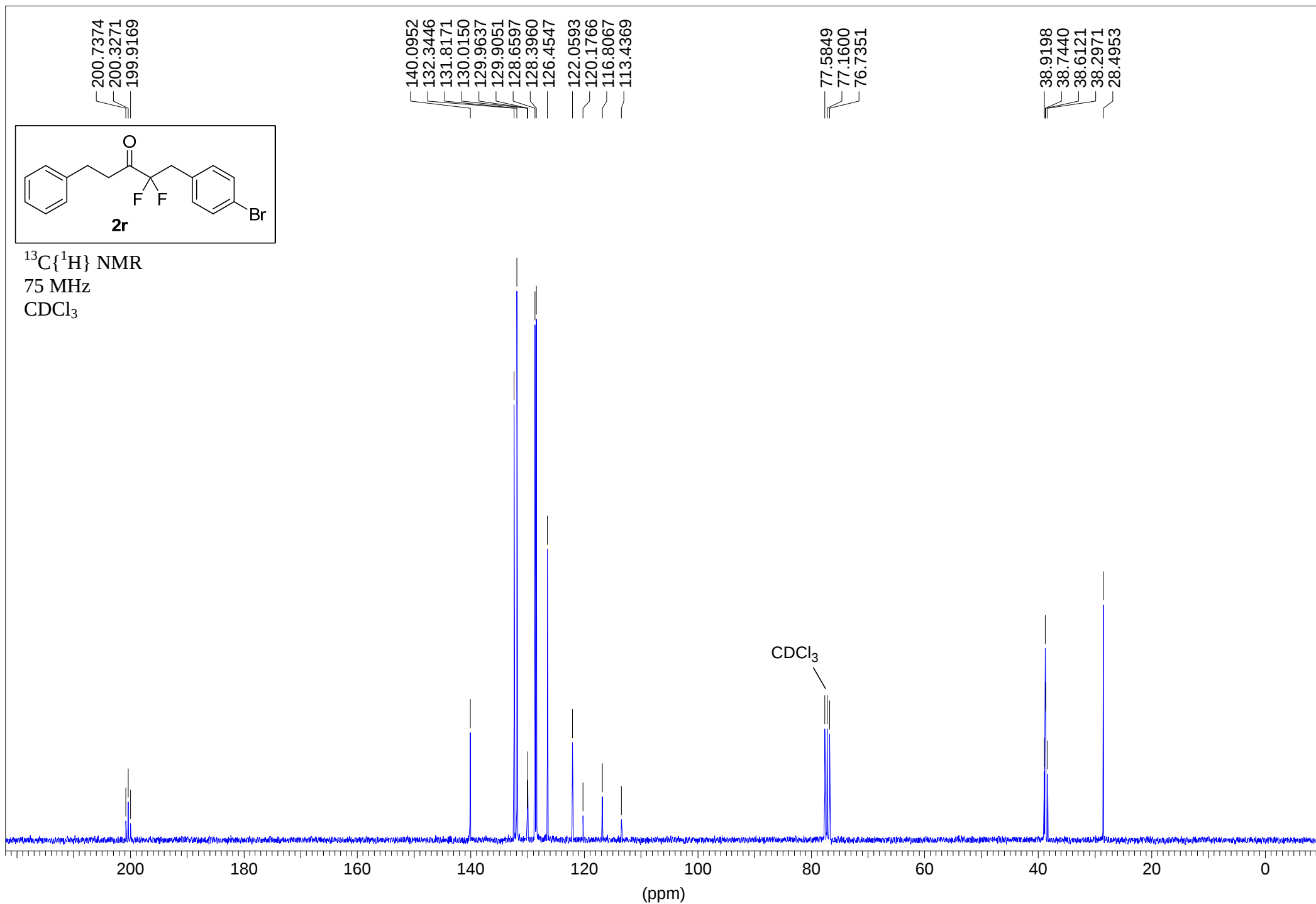


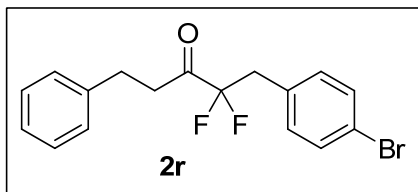


^{19}F NMR
282 MHz
 CDCl_3

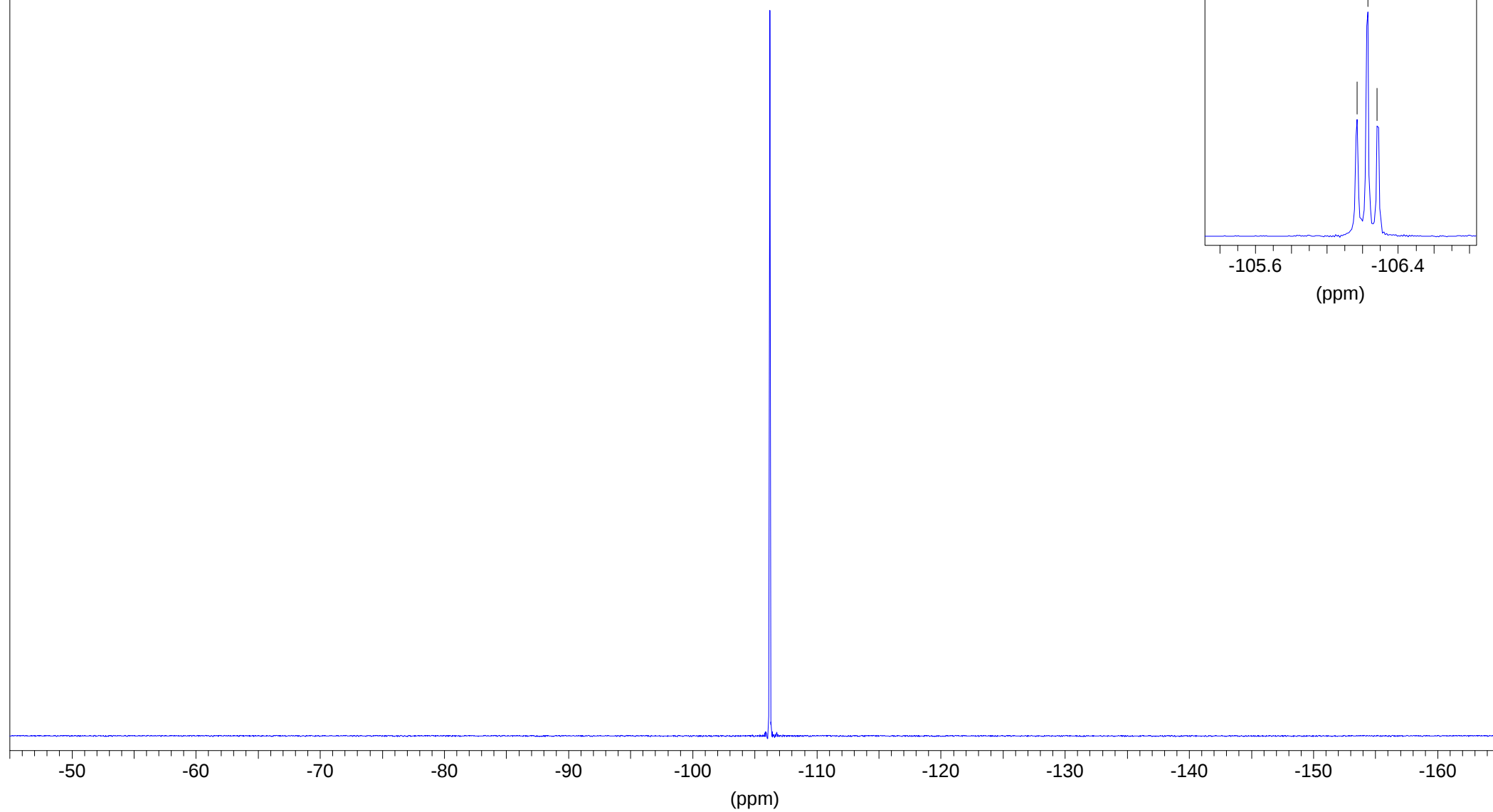


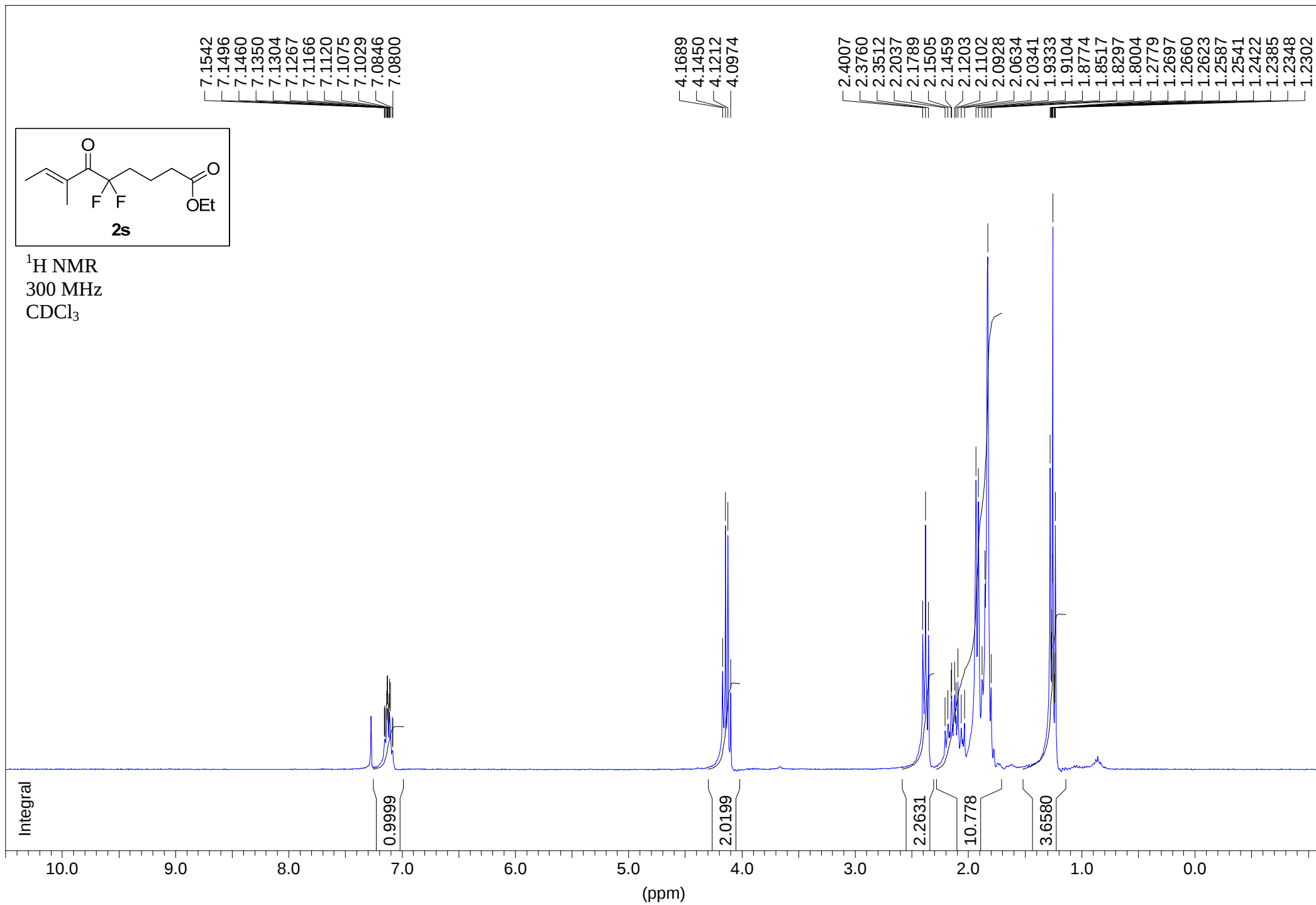


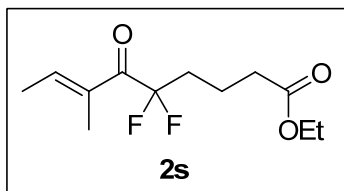




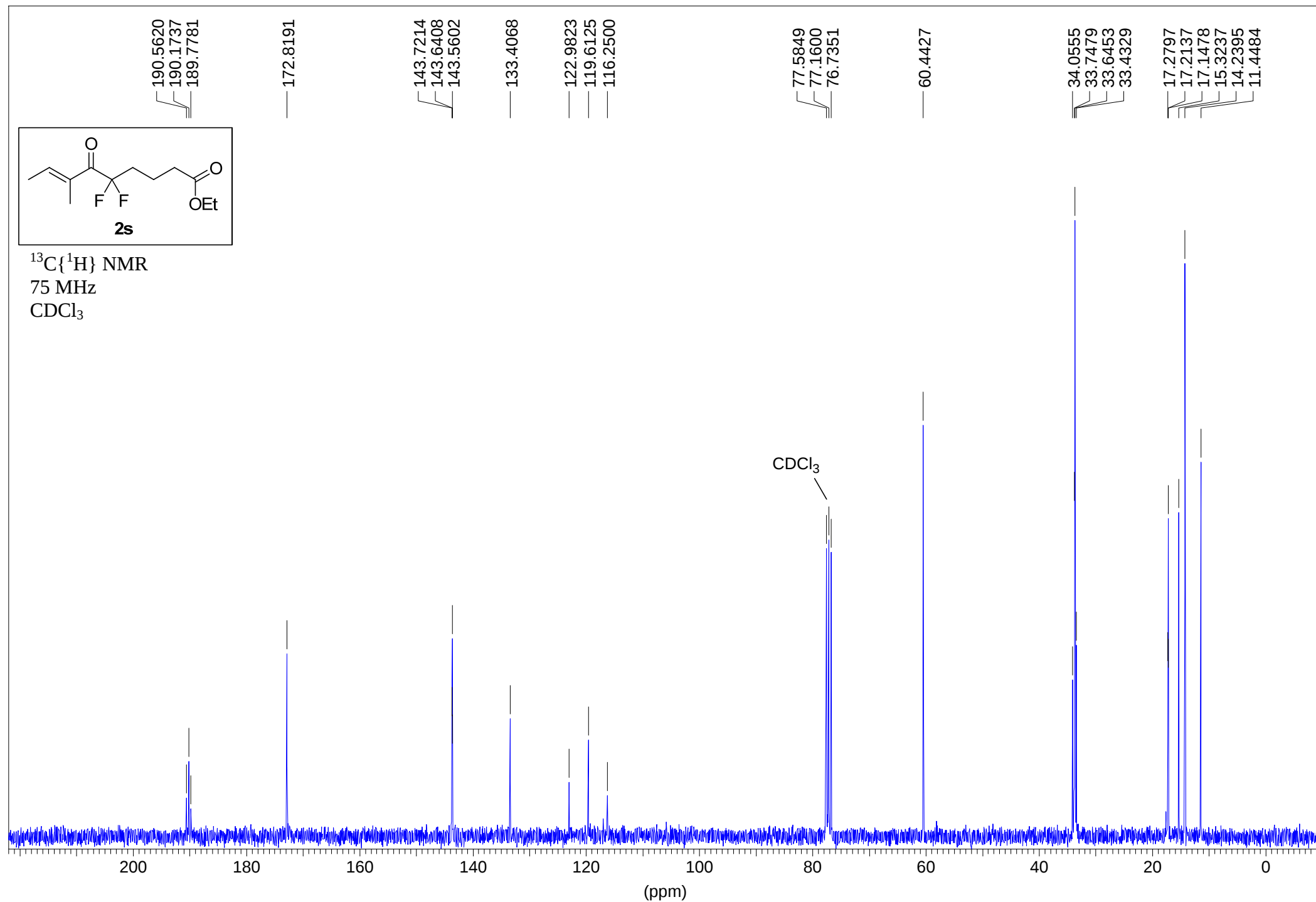
^{19}F NMR
282 MHz
 CDCl_3

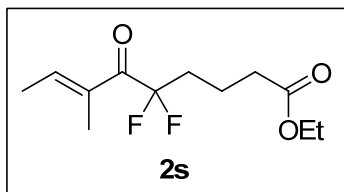






$^{13}\text{C}\{^1\text{H}\}$ NMR
75 MHz
 CDCl_3





^{19}F NMR
282 MHz
 CDCl_3

