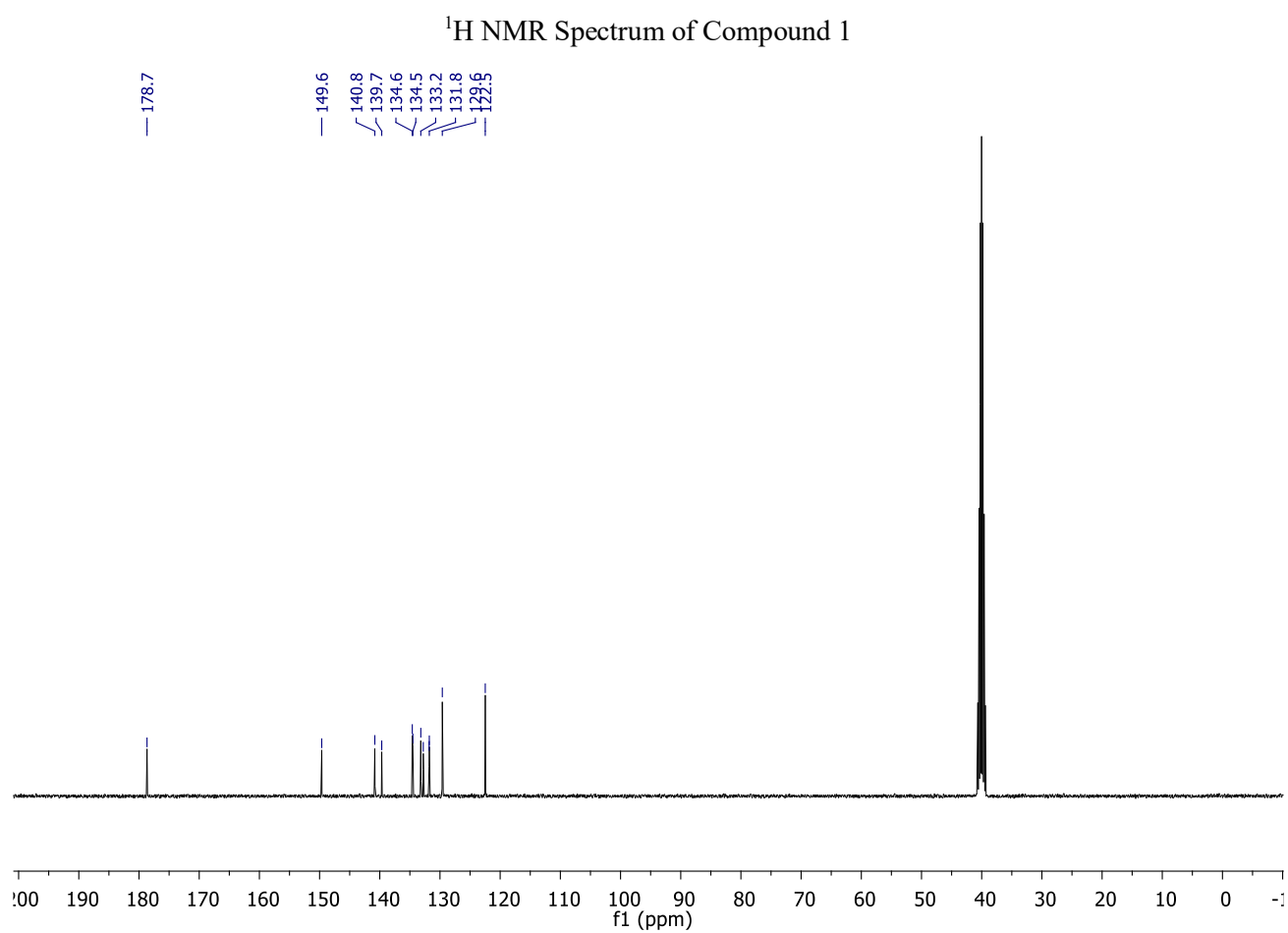
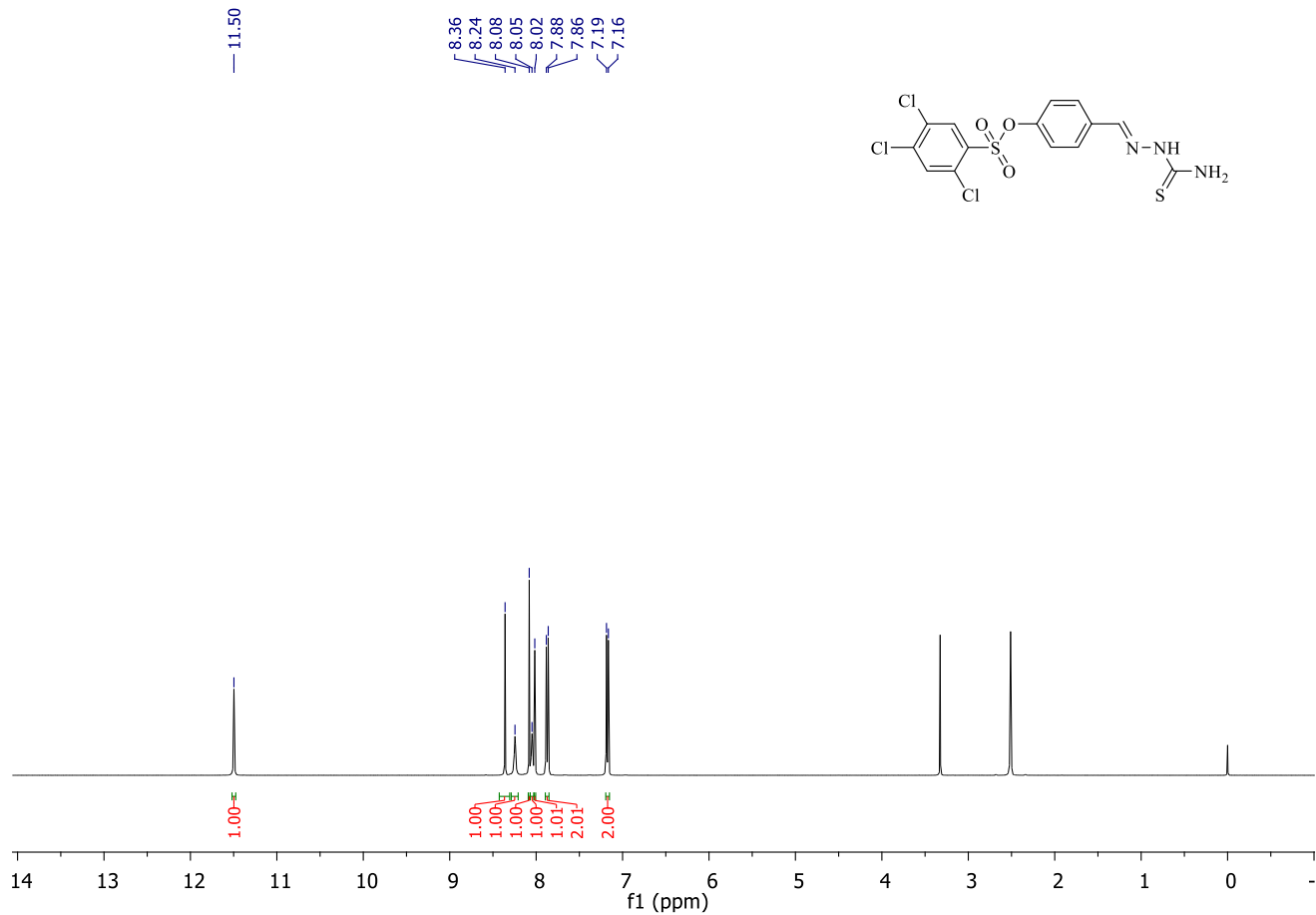
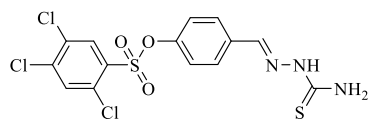
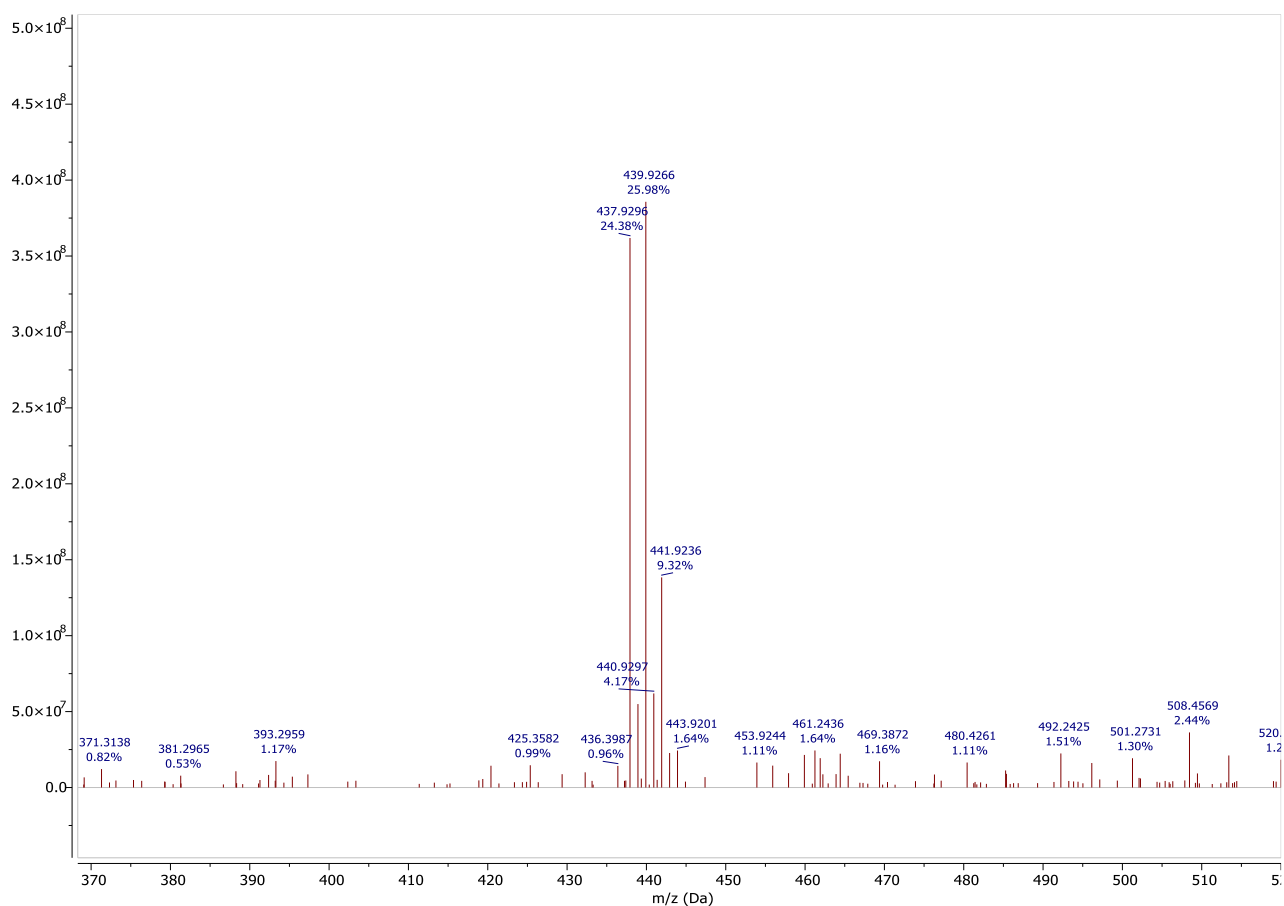


SUPPLEMENTARY MATERIAL

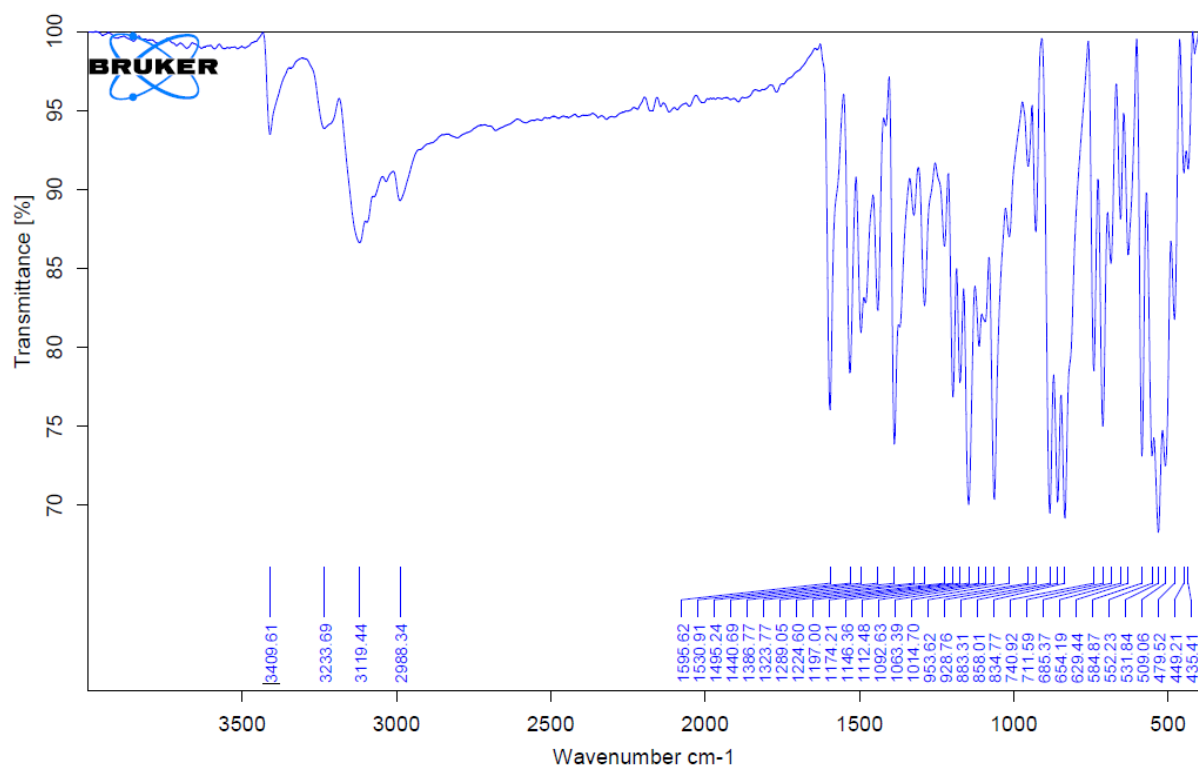
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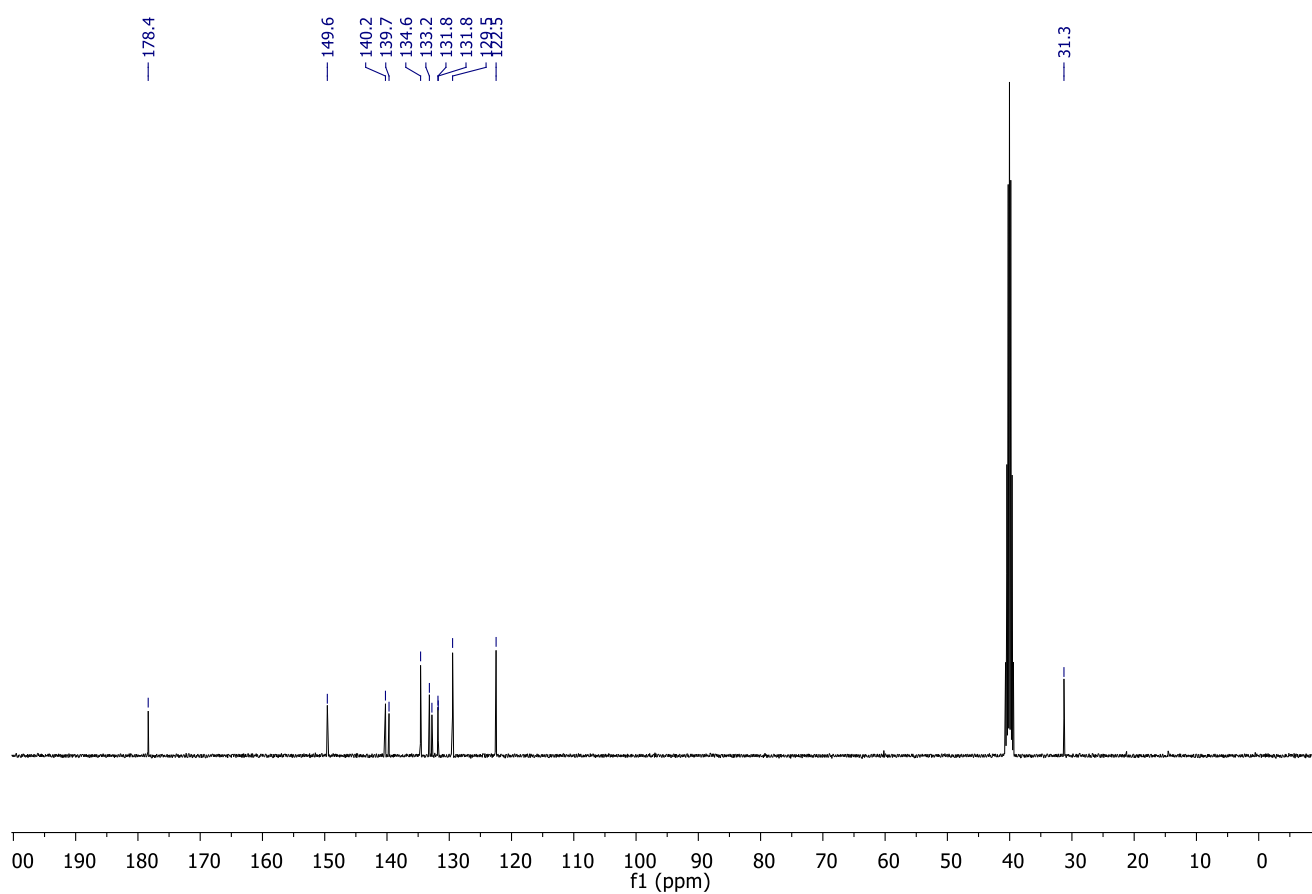
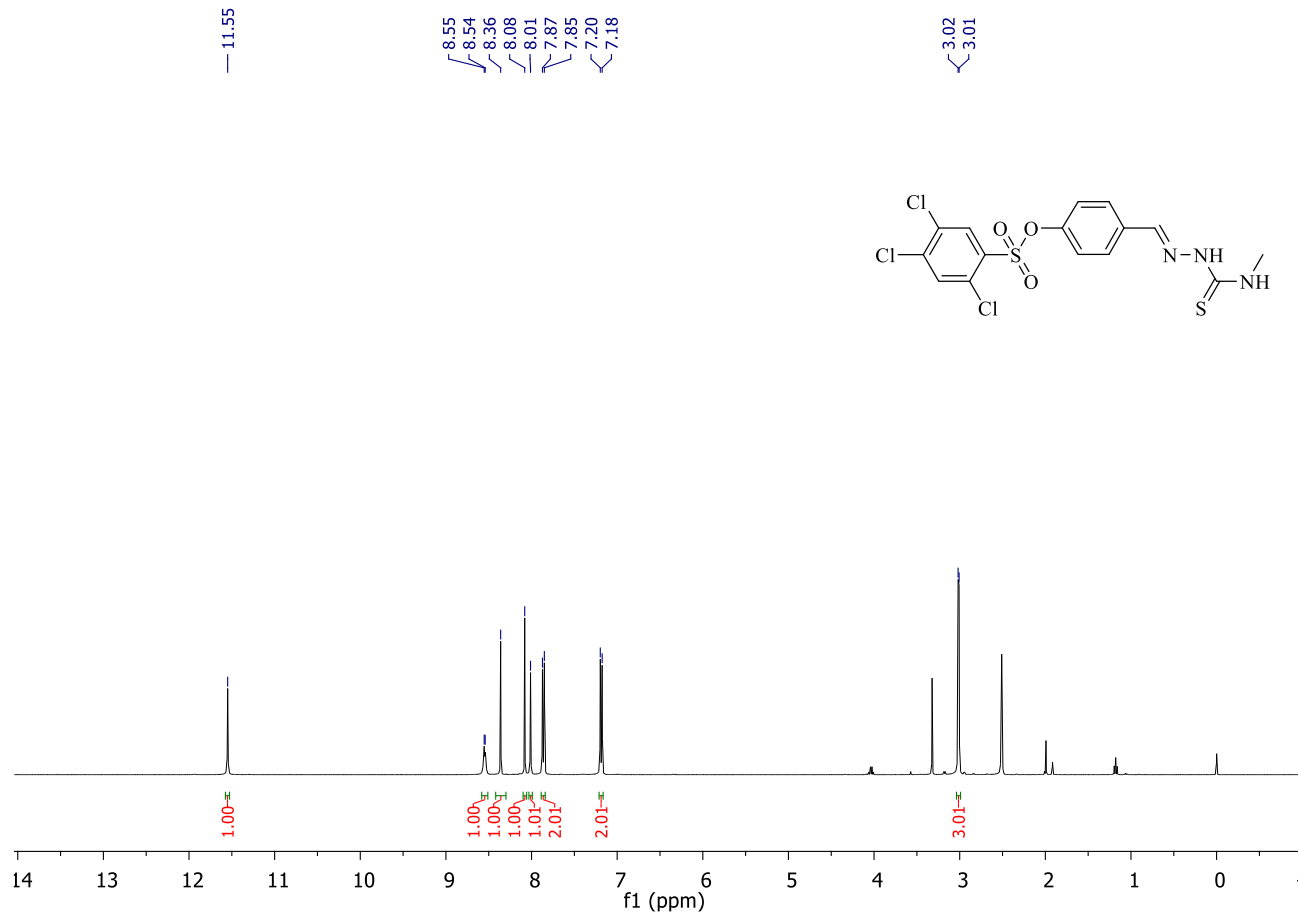


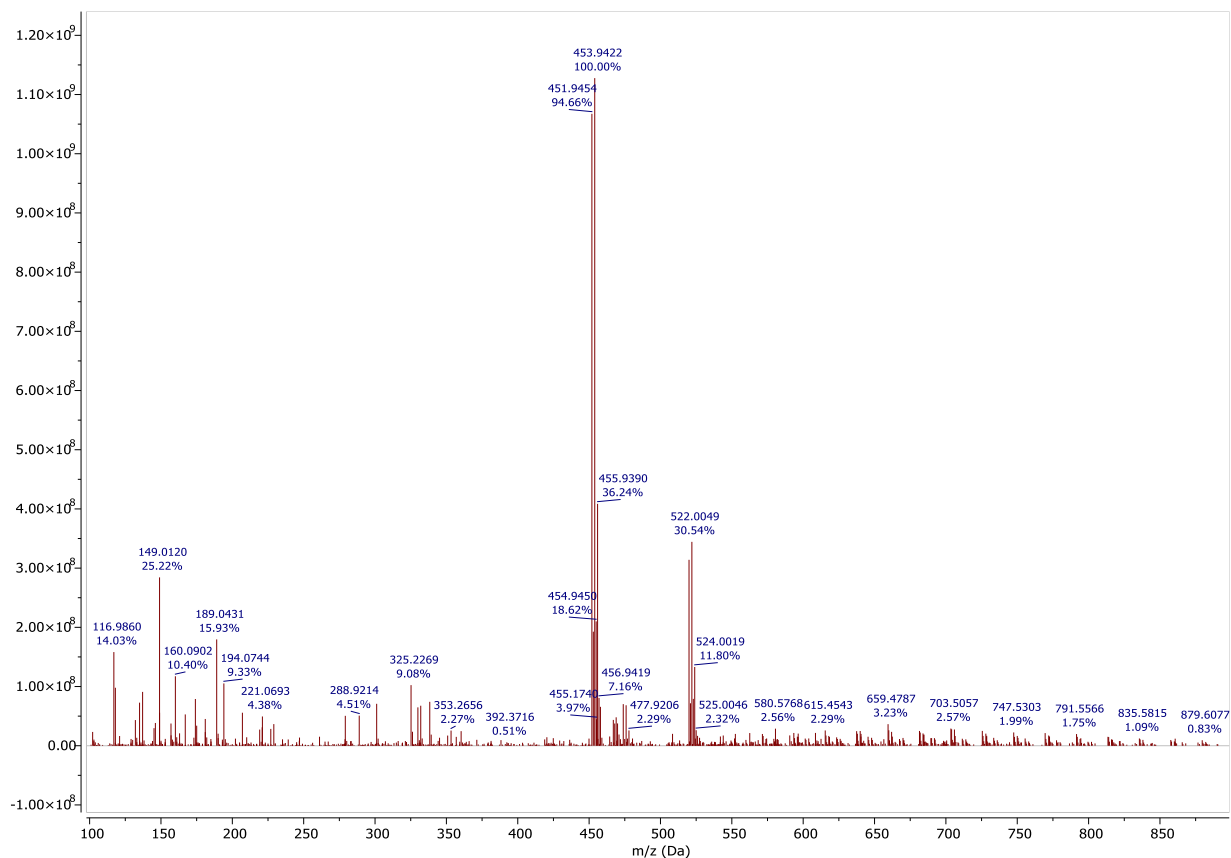


HRMS Spectrum of Compound 1

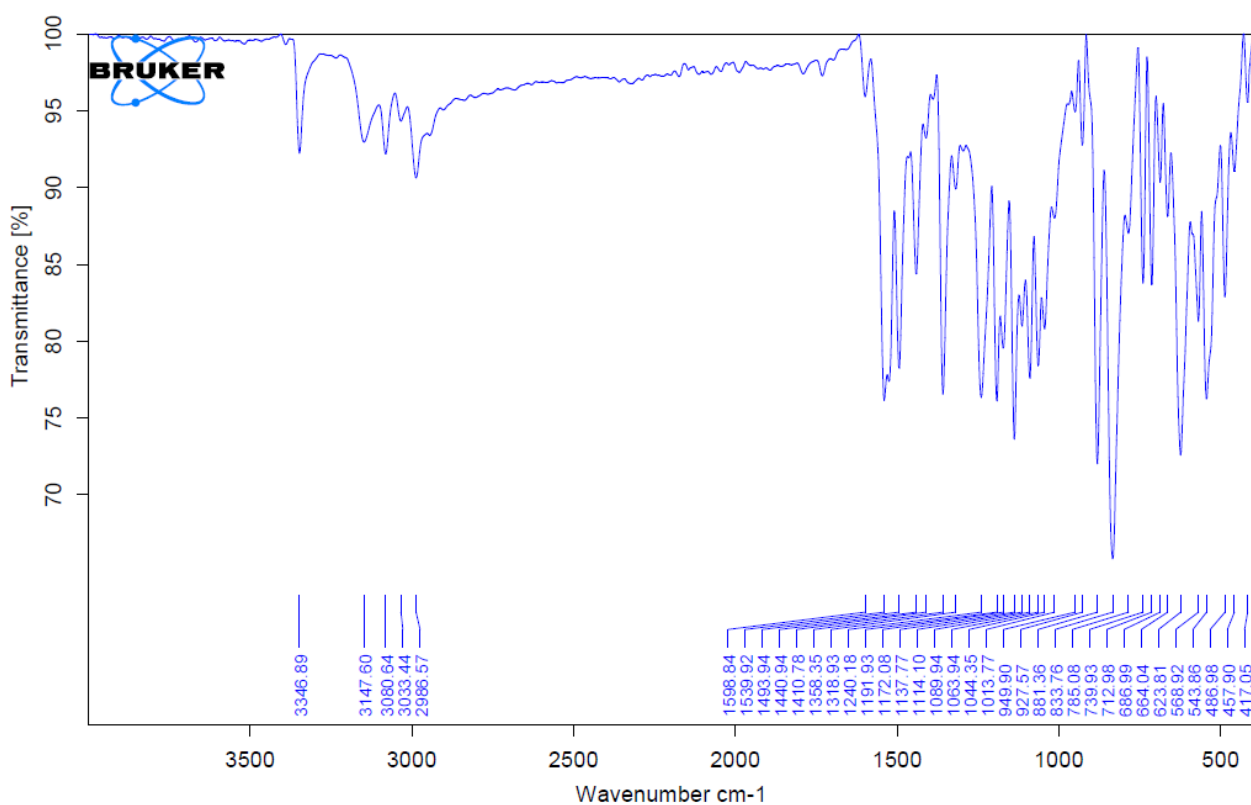


FTIR Spectrum of Compound 1

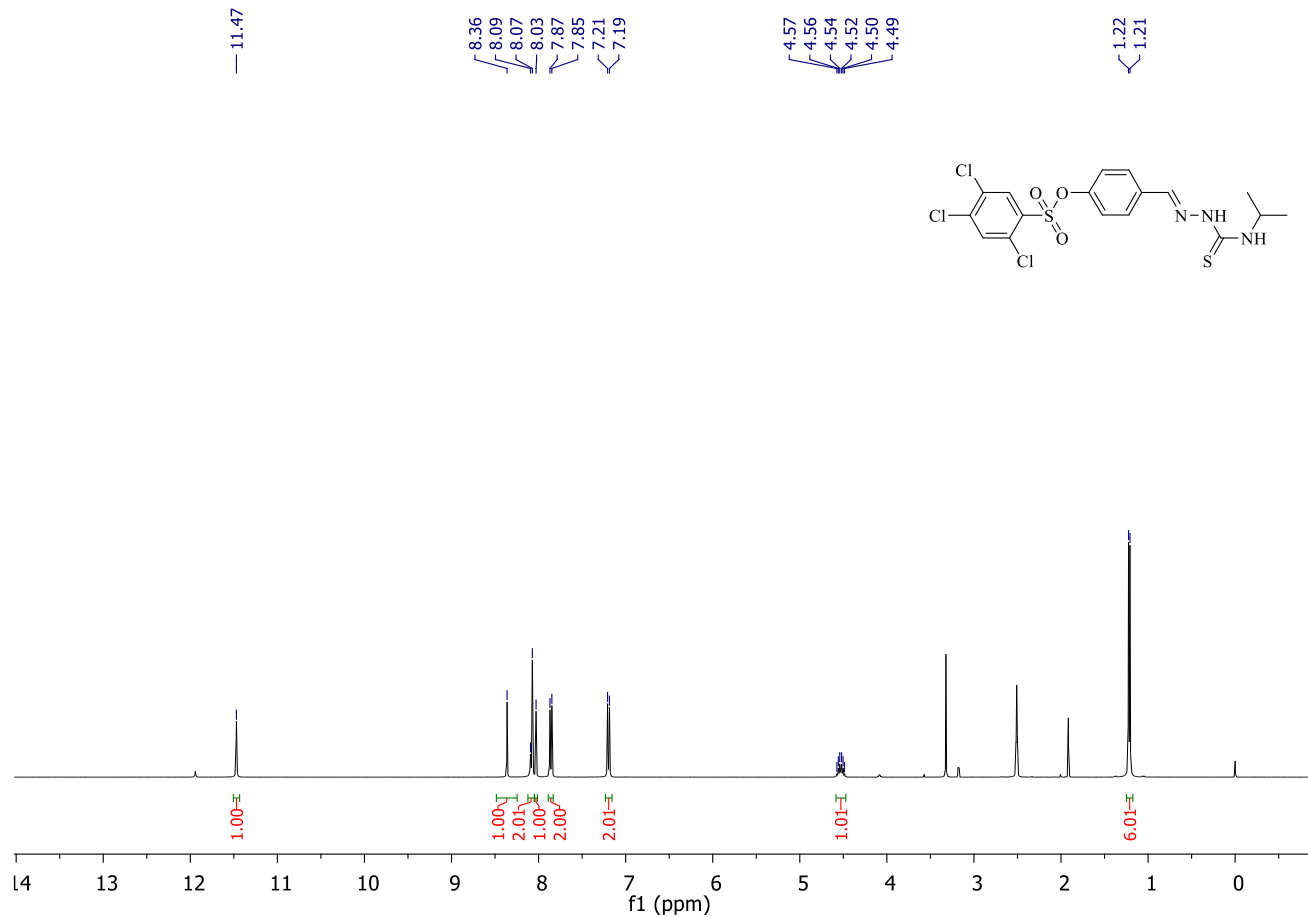




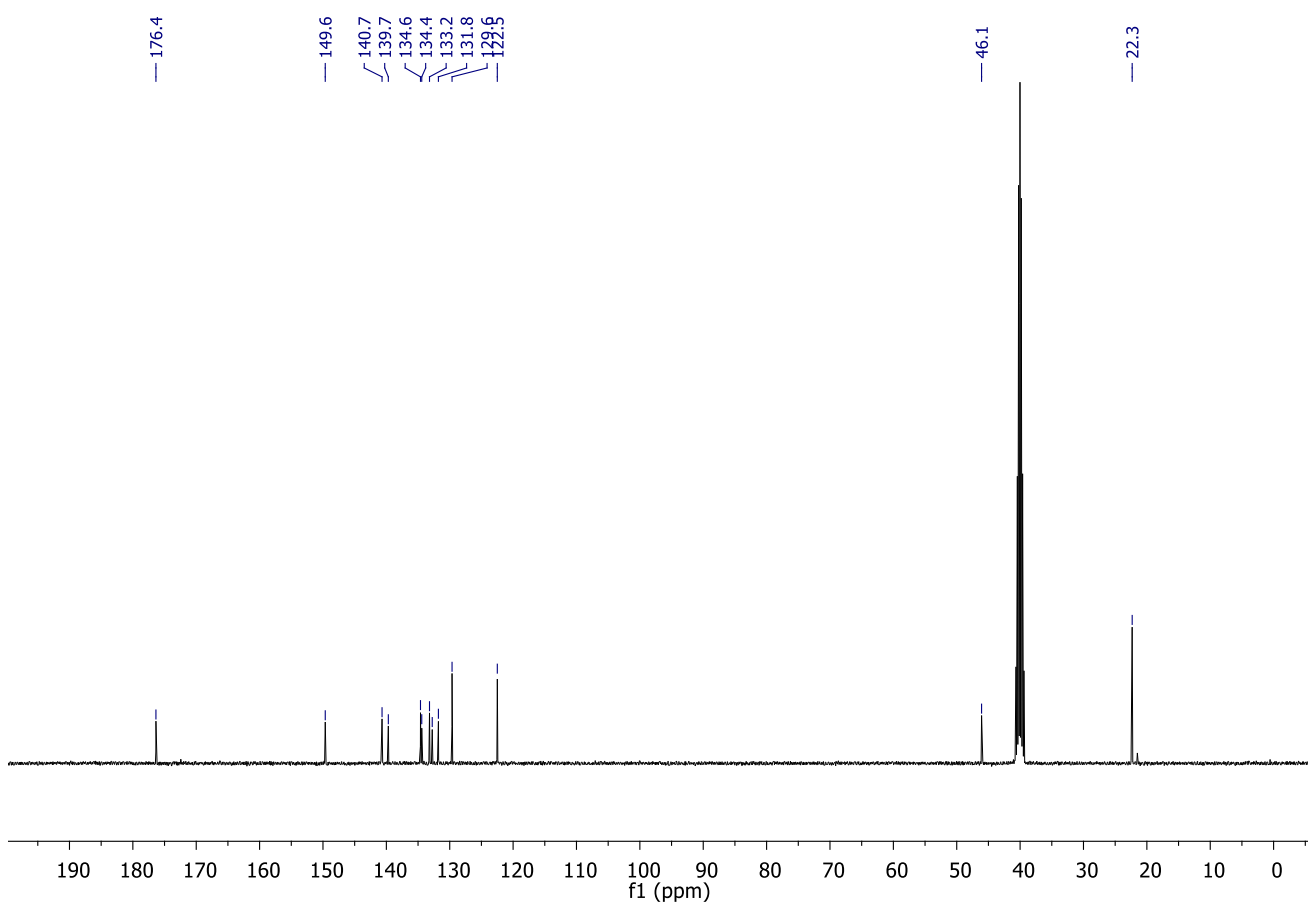
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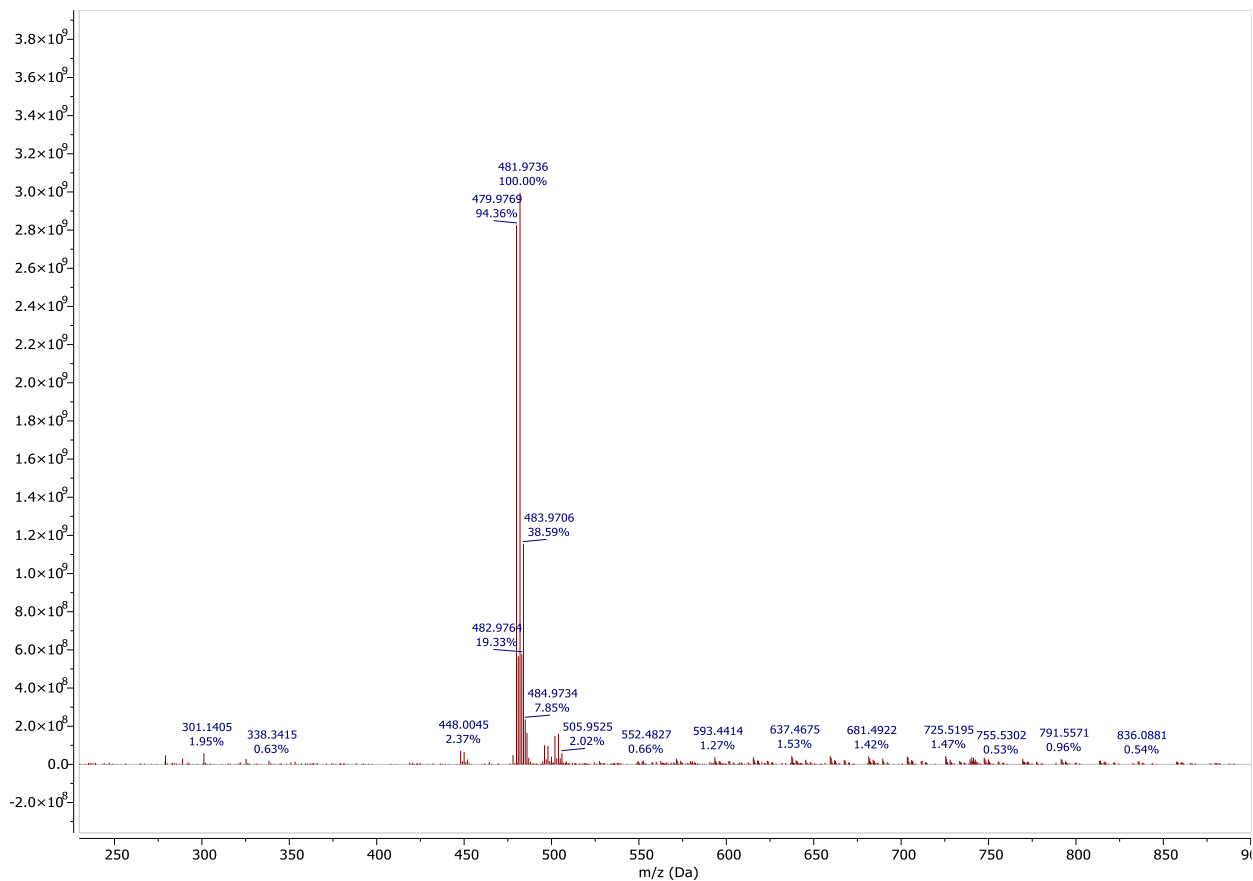
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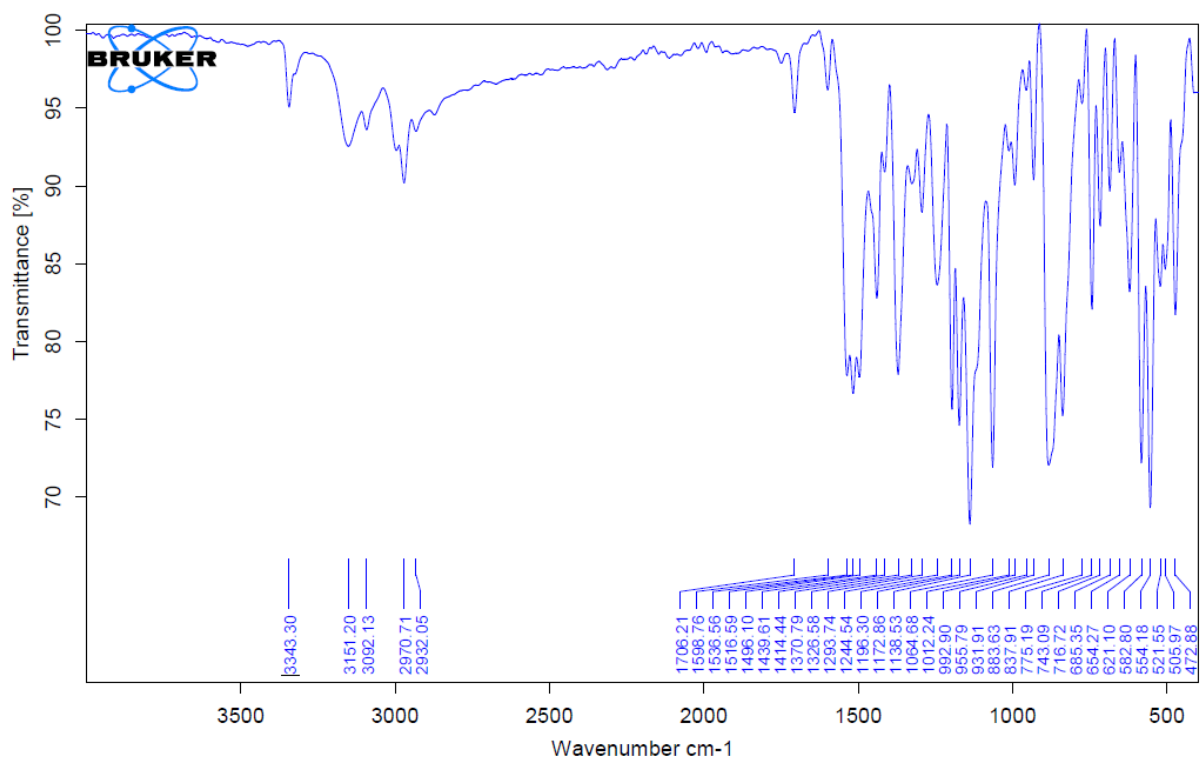
¹H NMR Spectrum of Compound 3



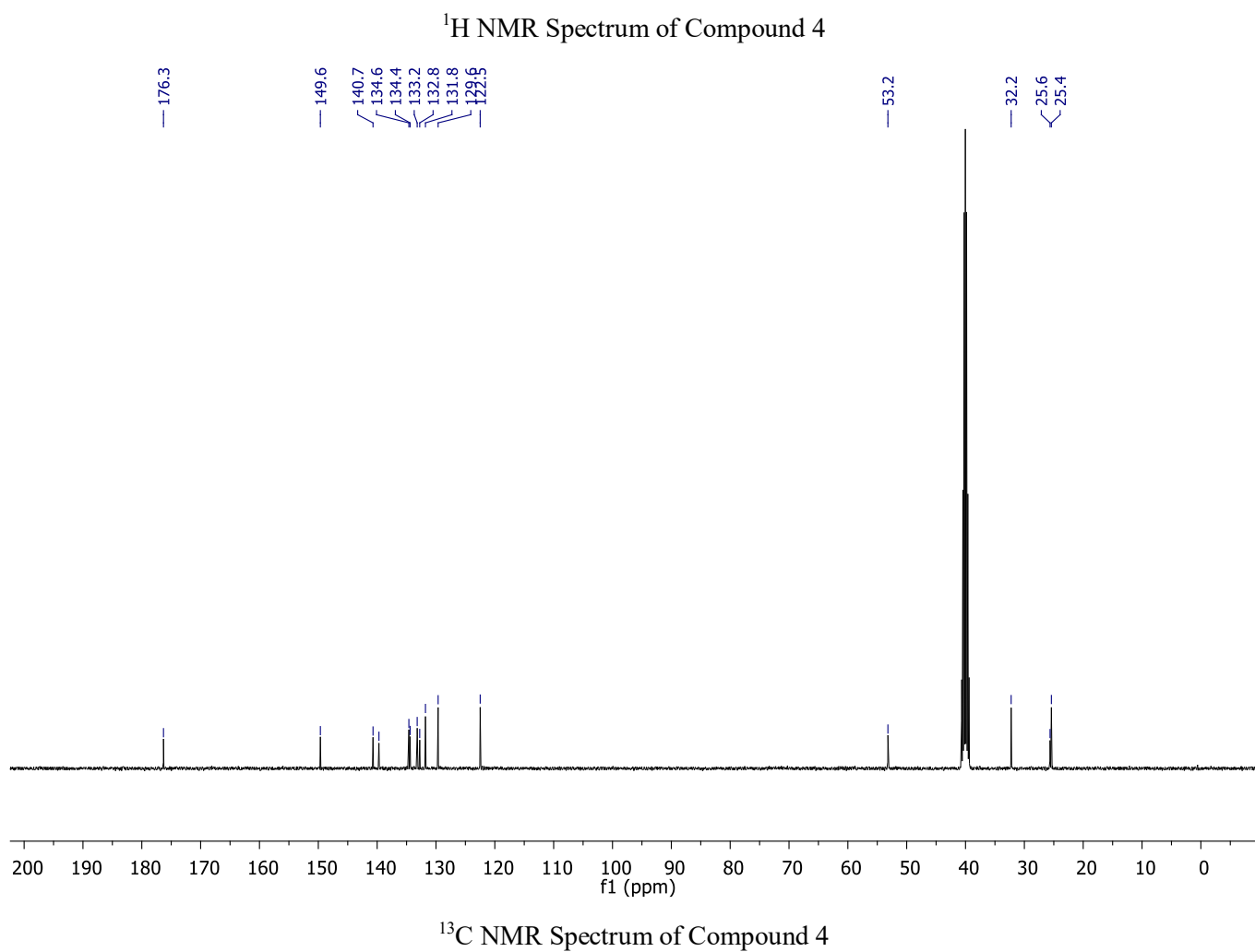
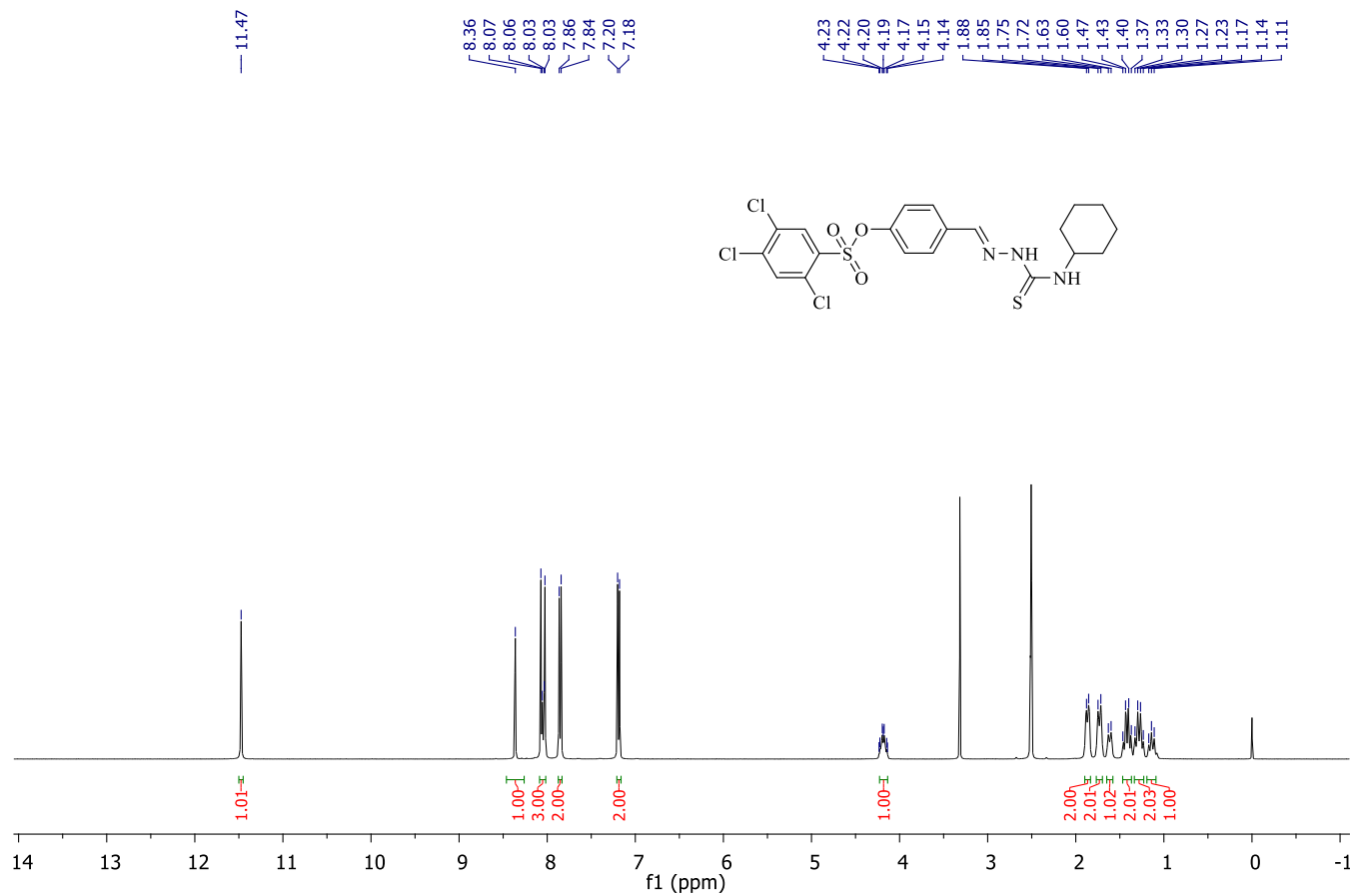
¹³C NMR Spectrum of Compound 3

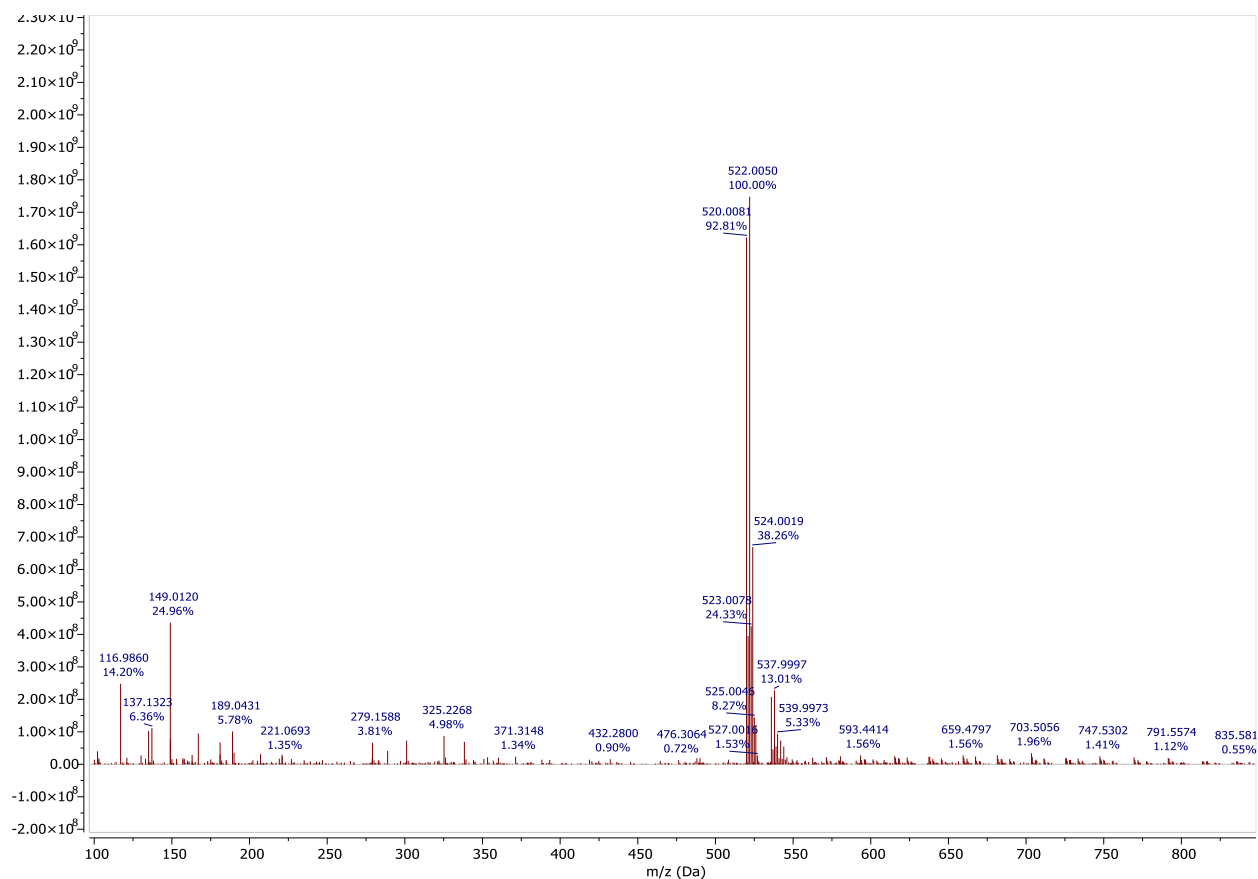


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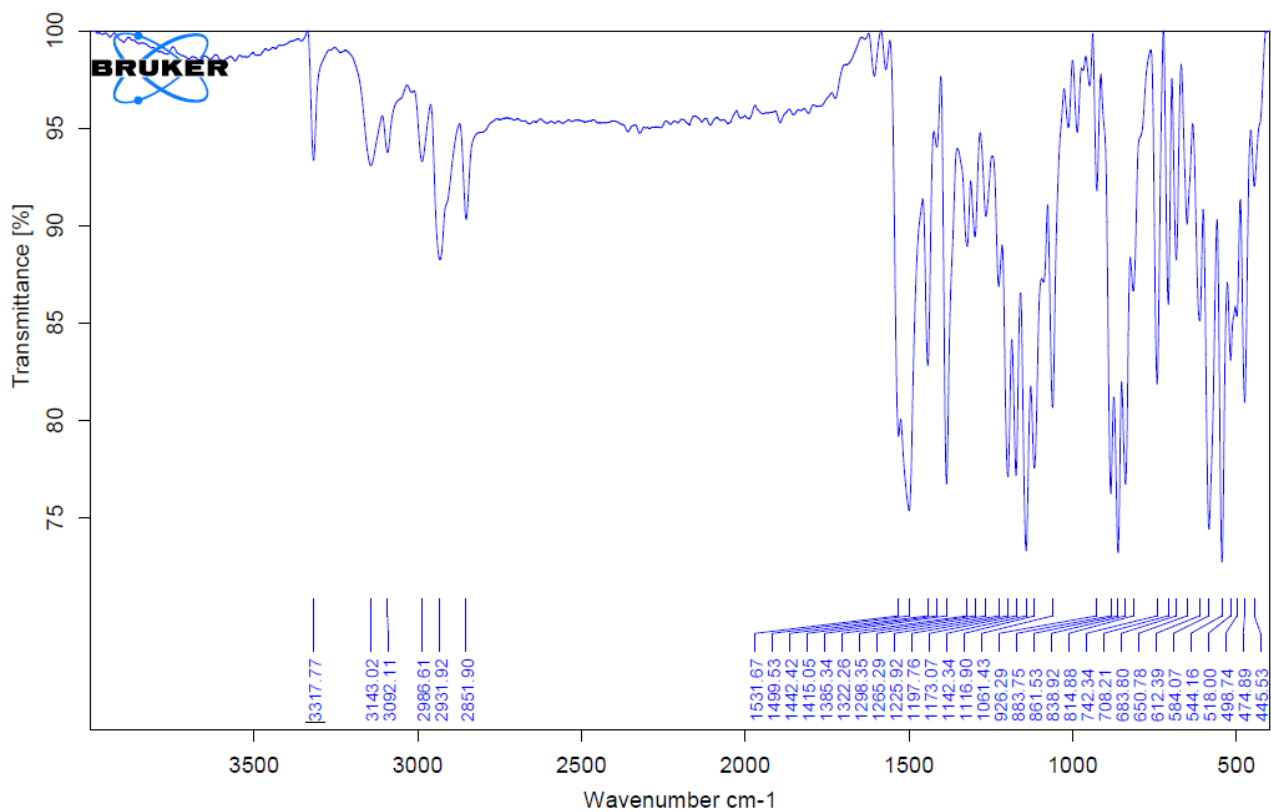


FTIR Spectrum of Compound 3

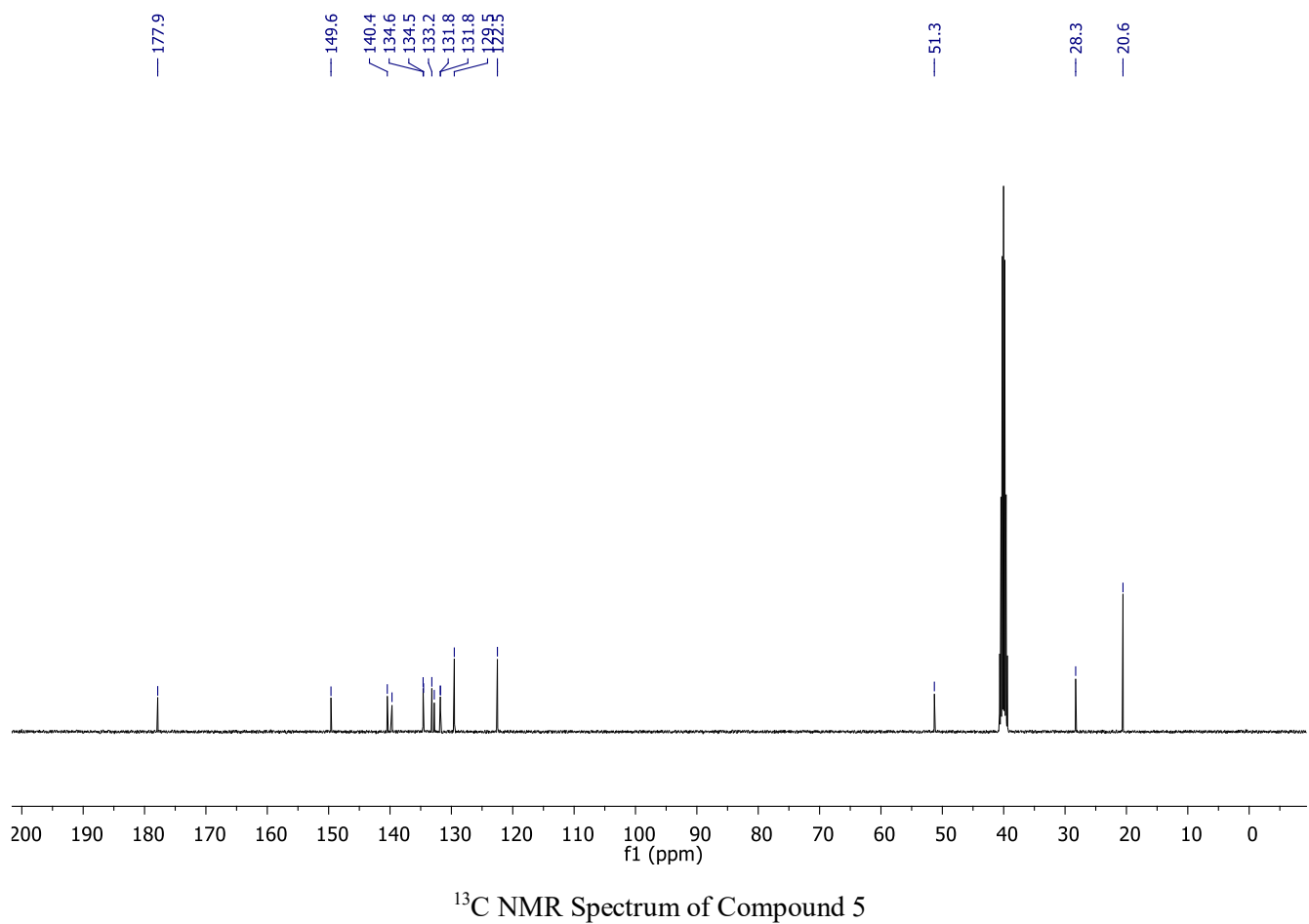
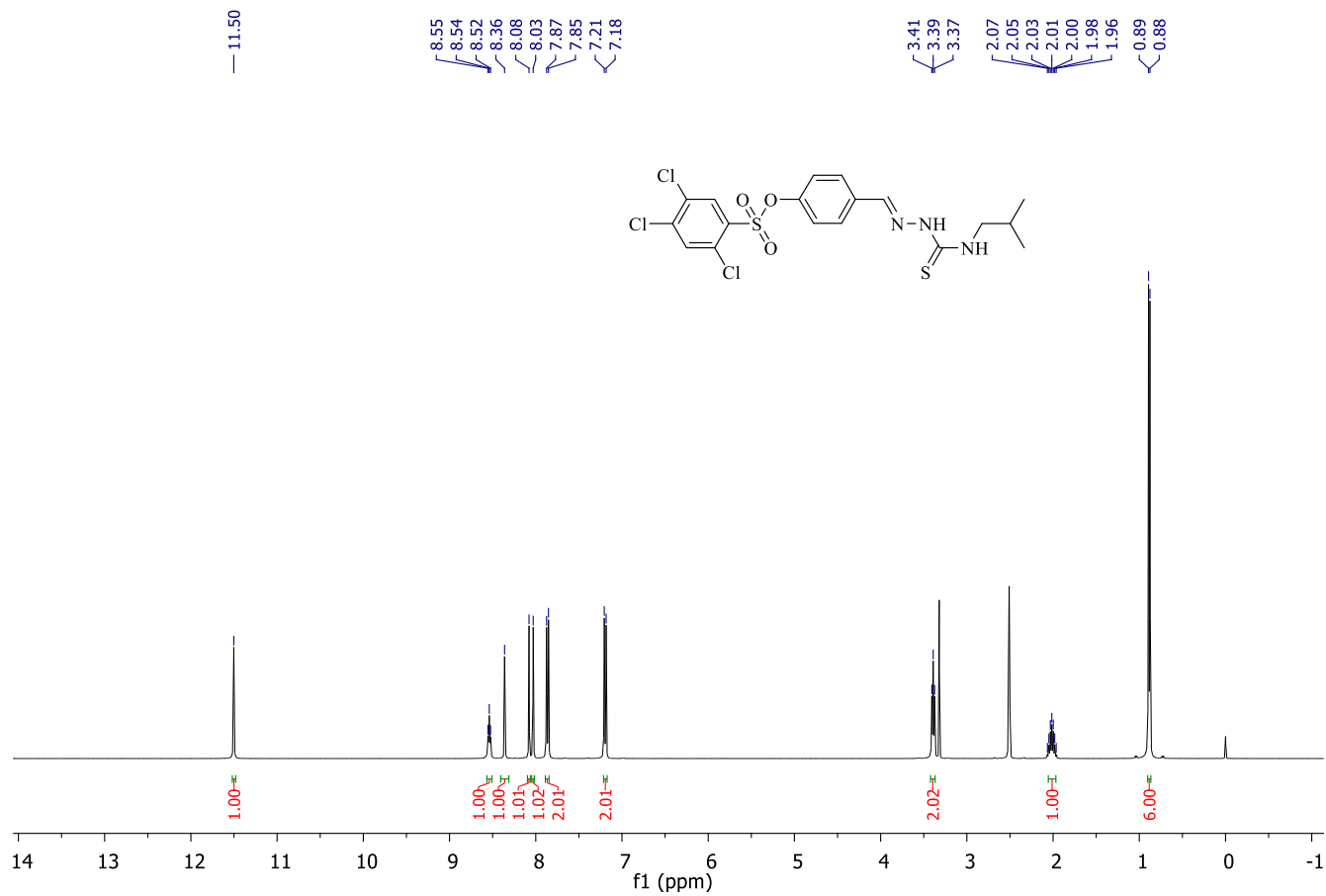


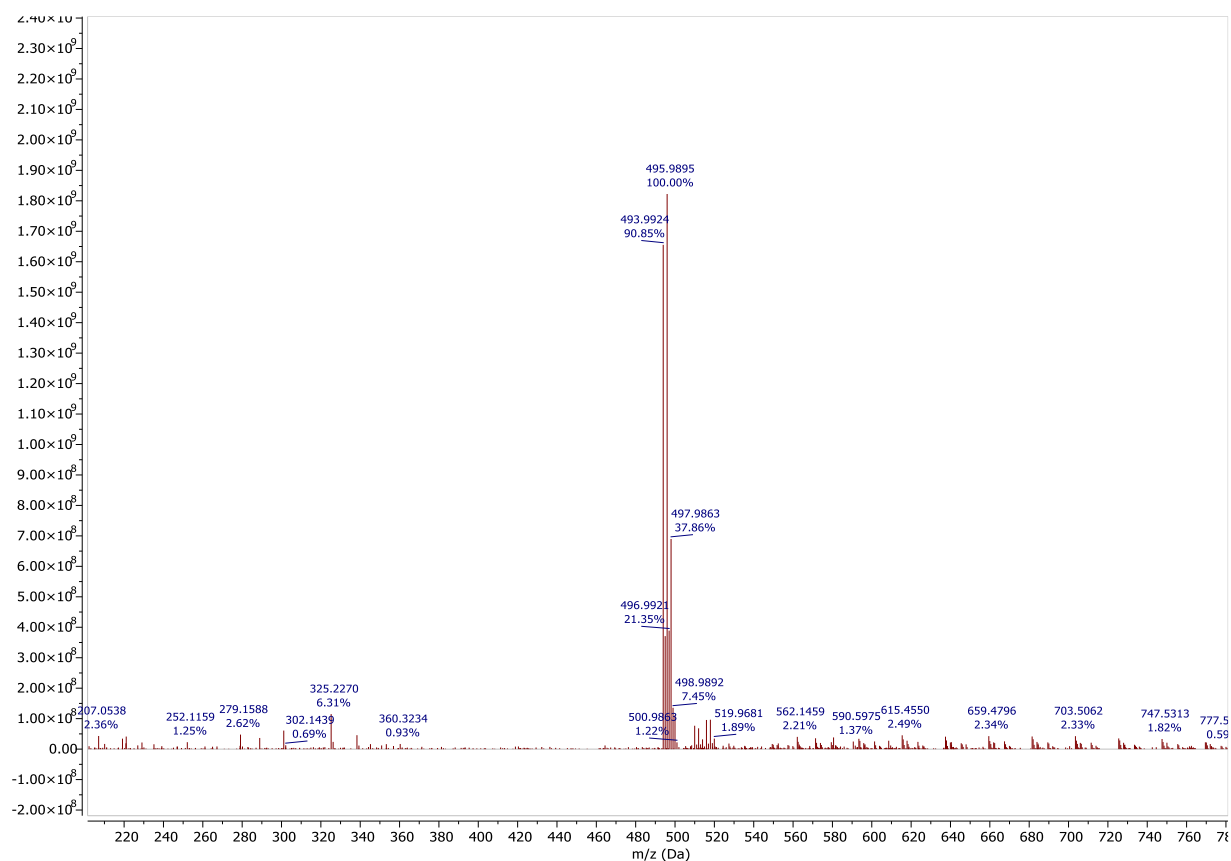


HRMS Spectrum of Compound 4

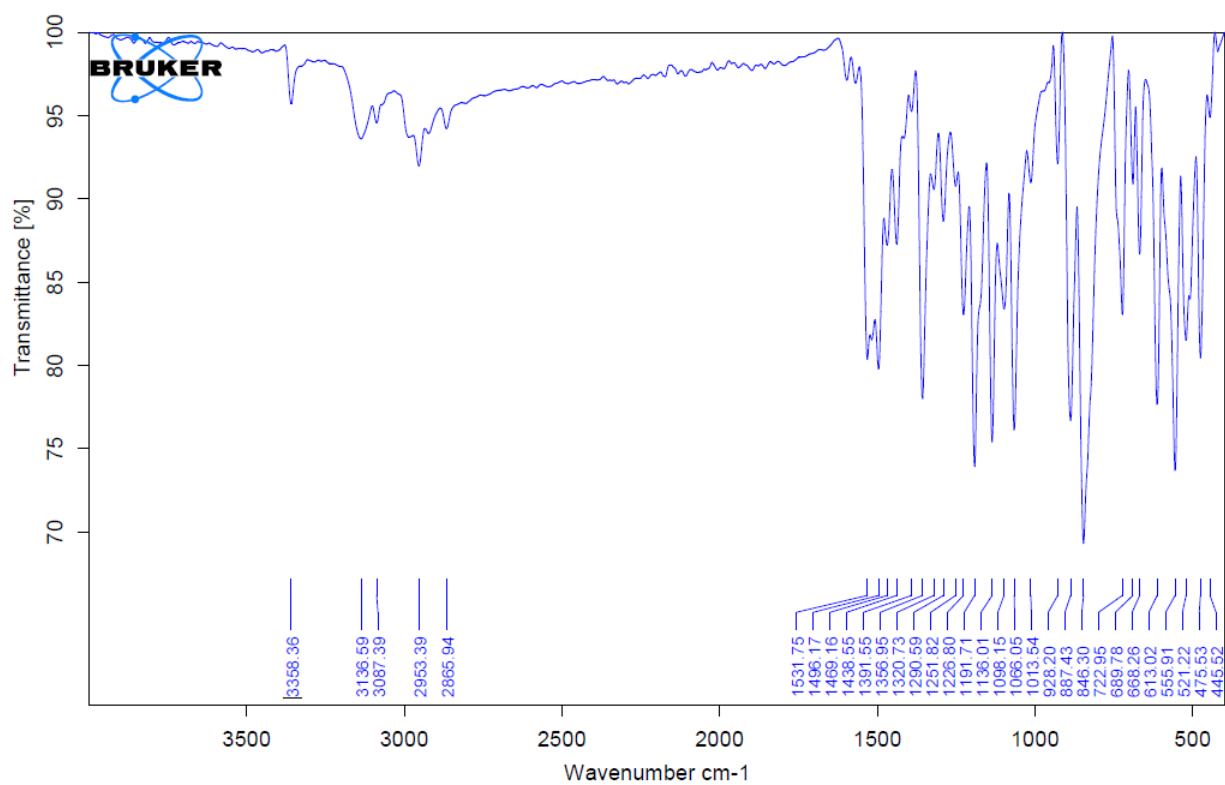


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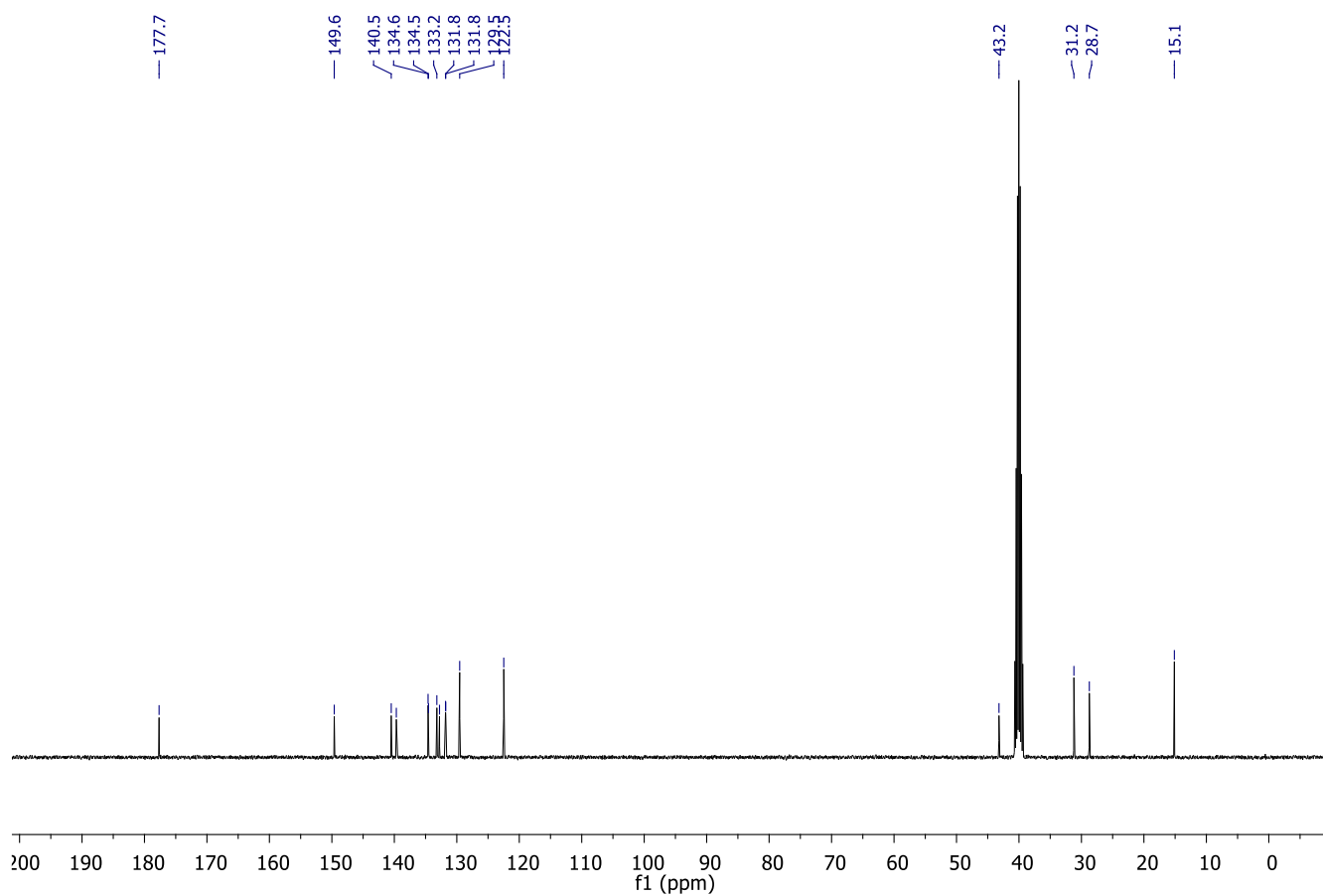
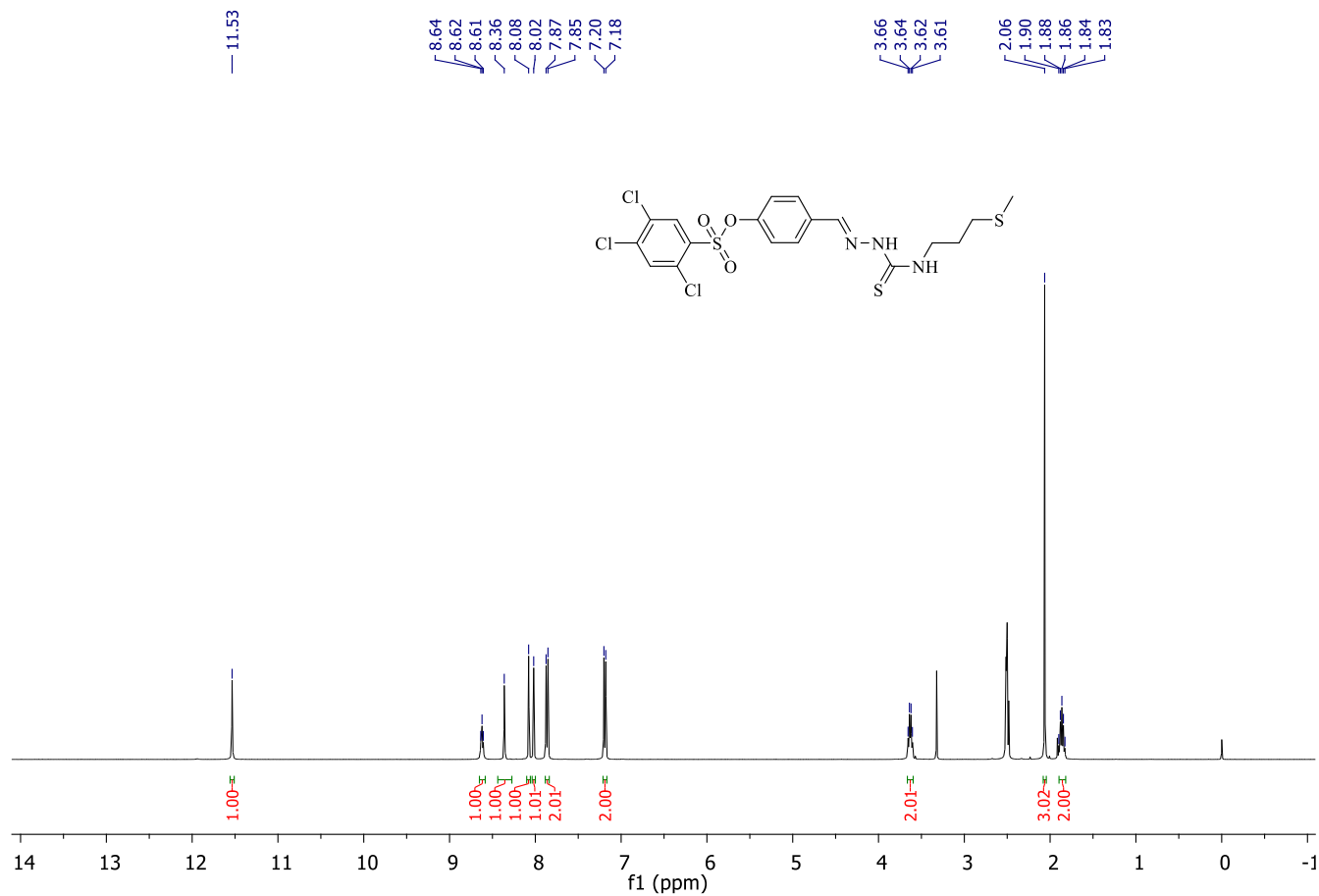


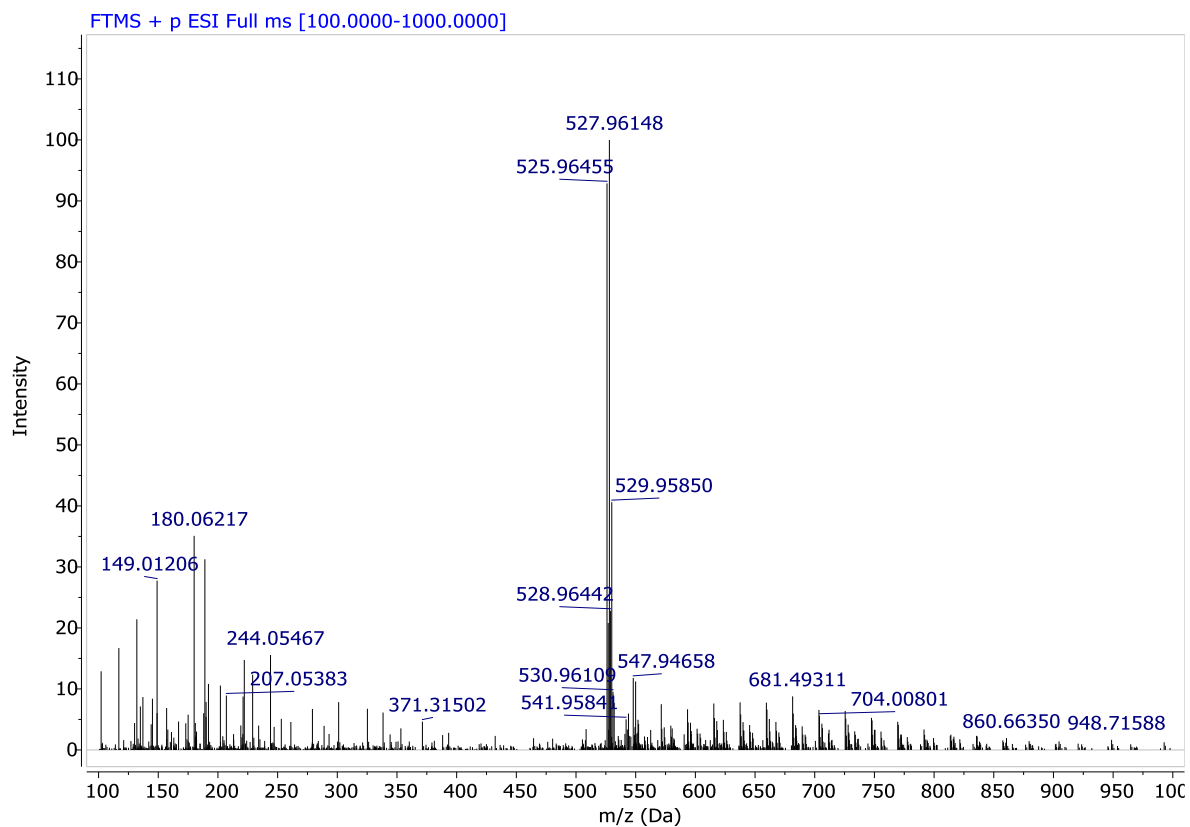


HRMS Spectrum of Compound 5

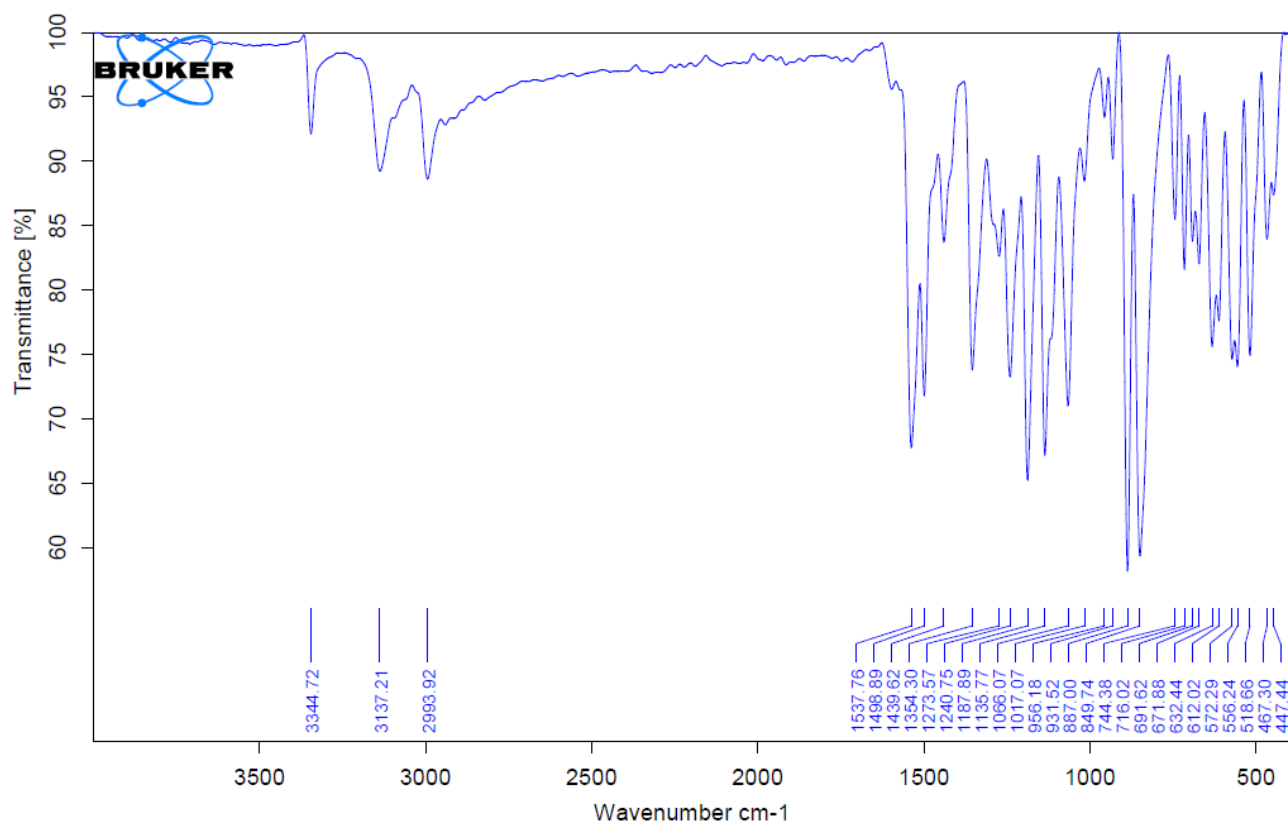


FTIR Spectrum of Compound 5

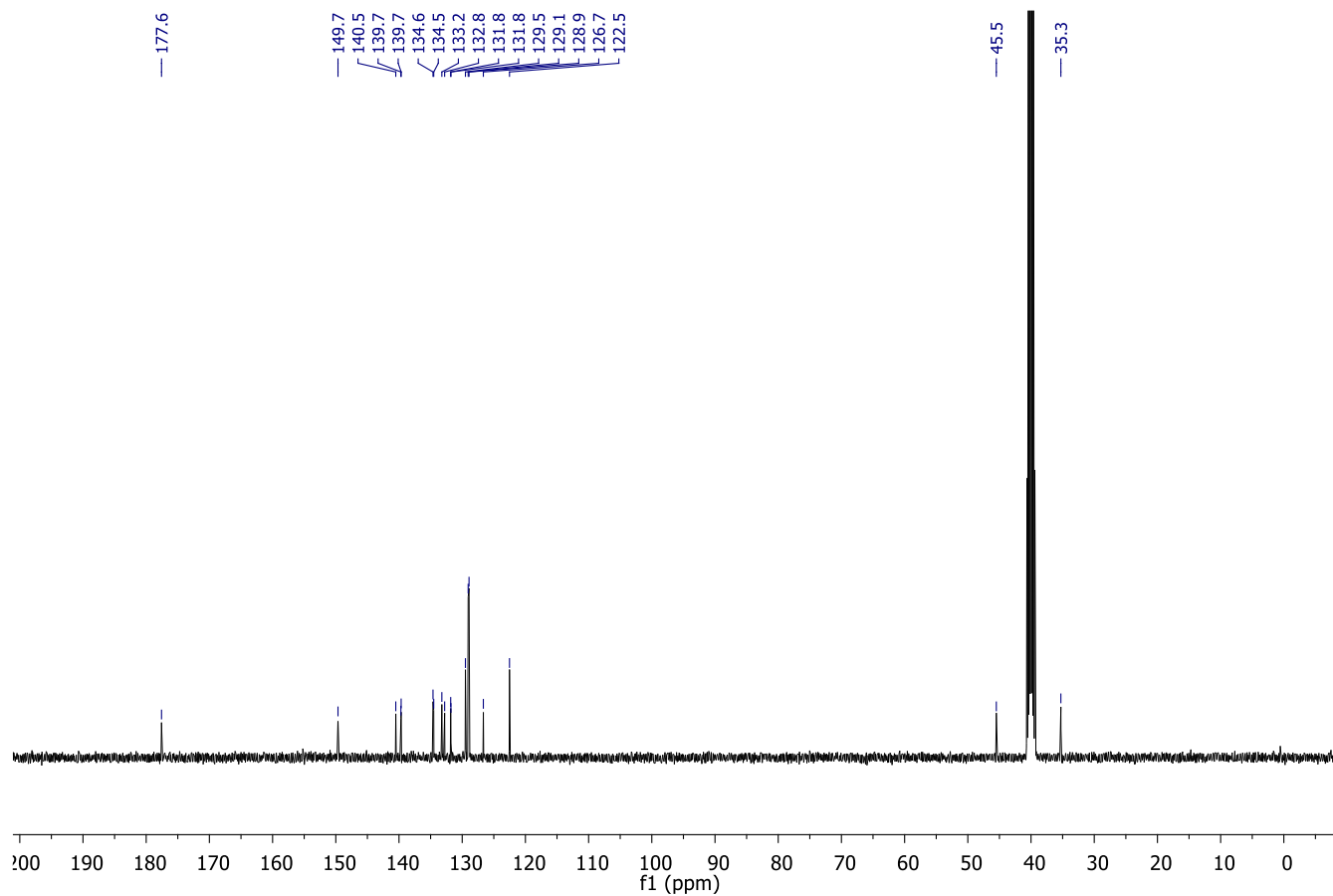
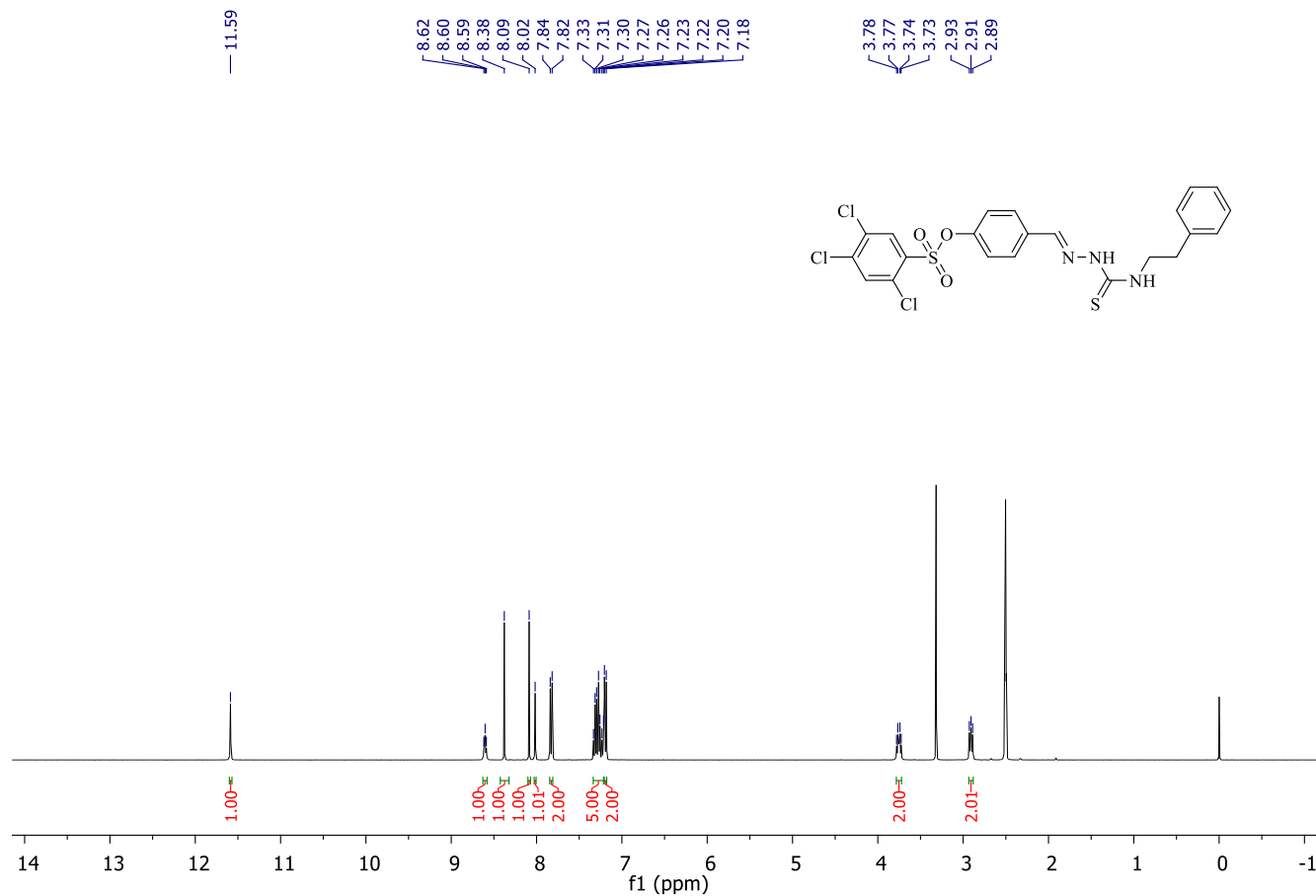


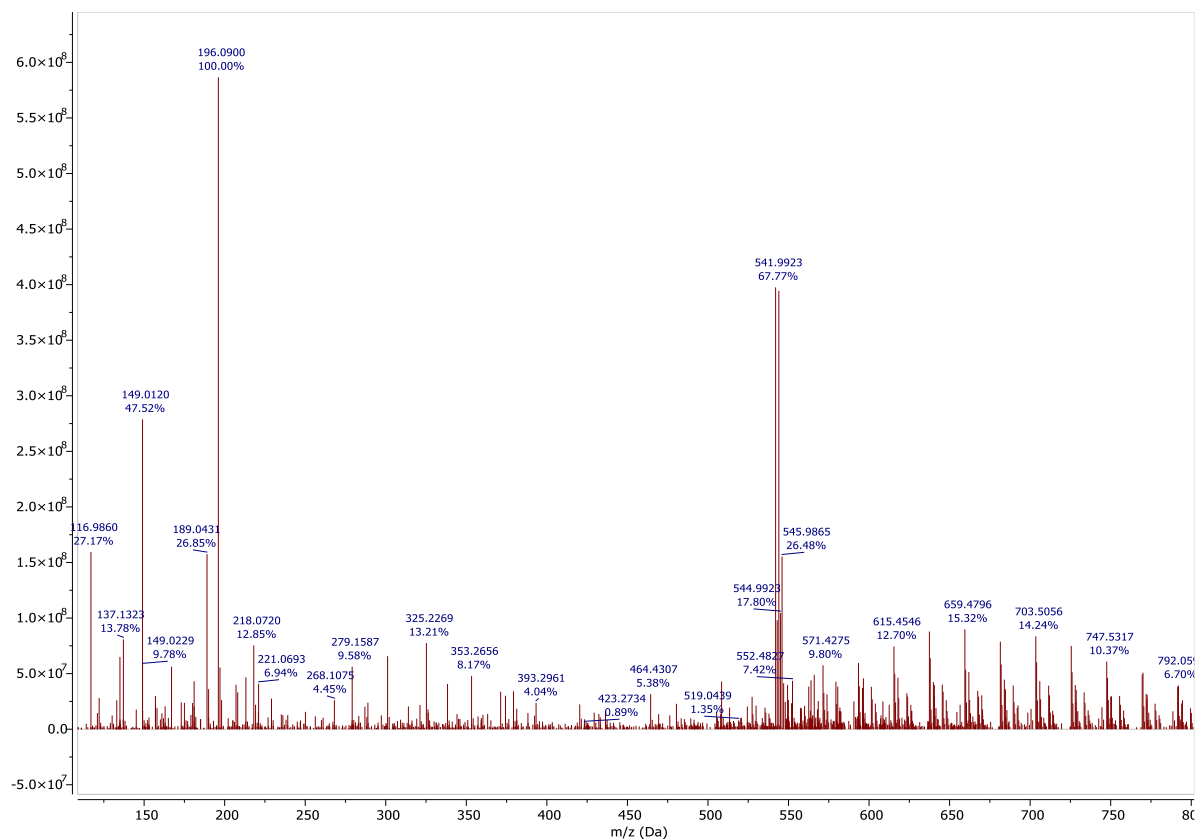


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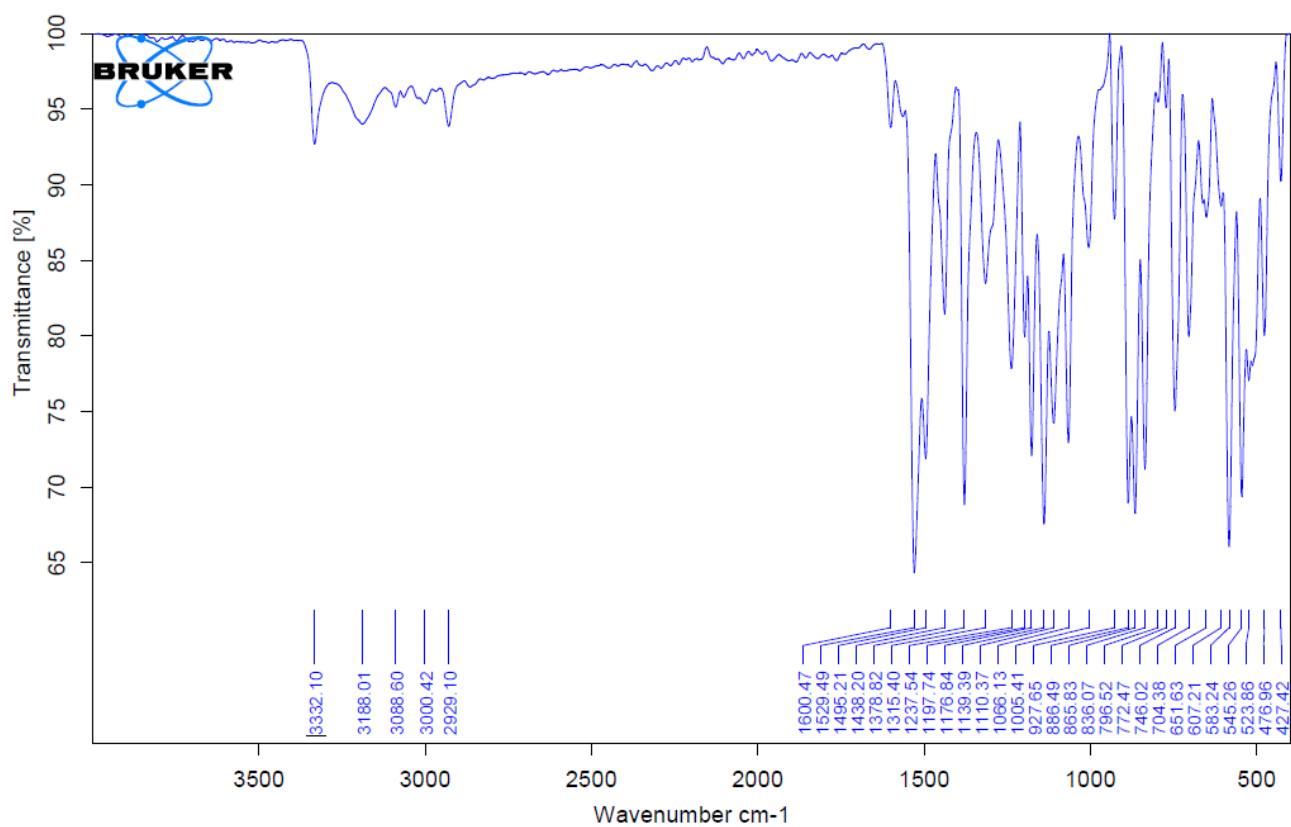


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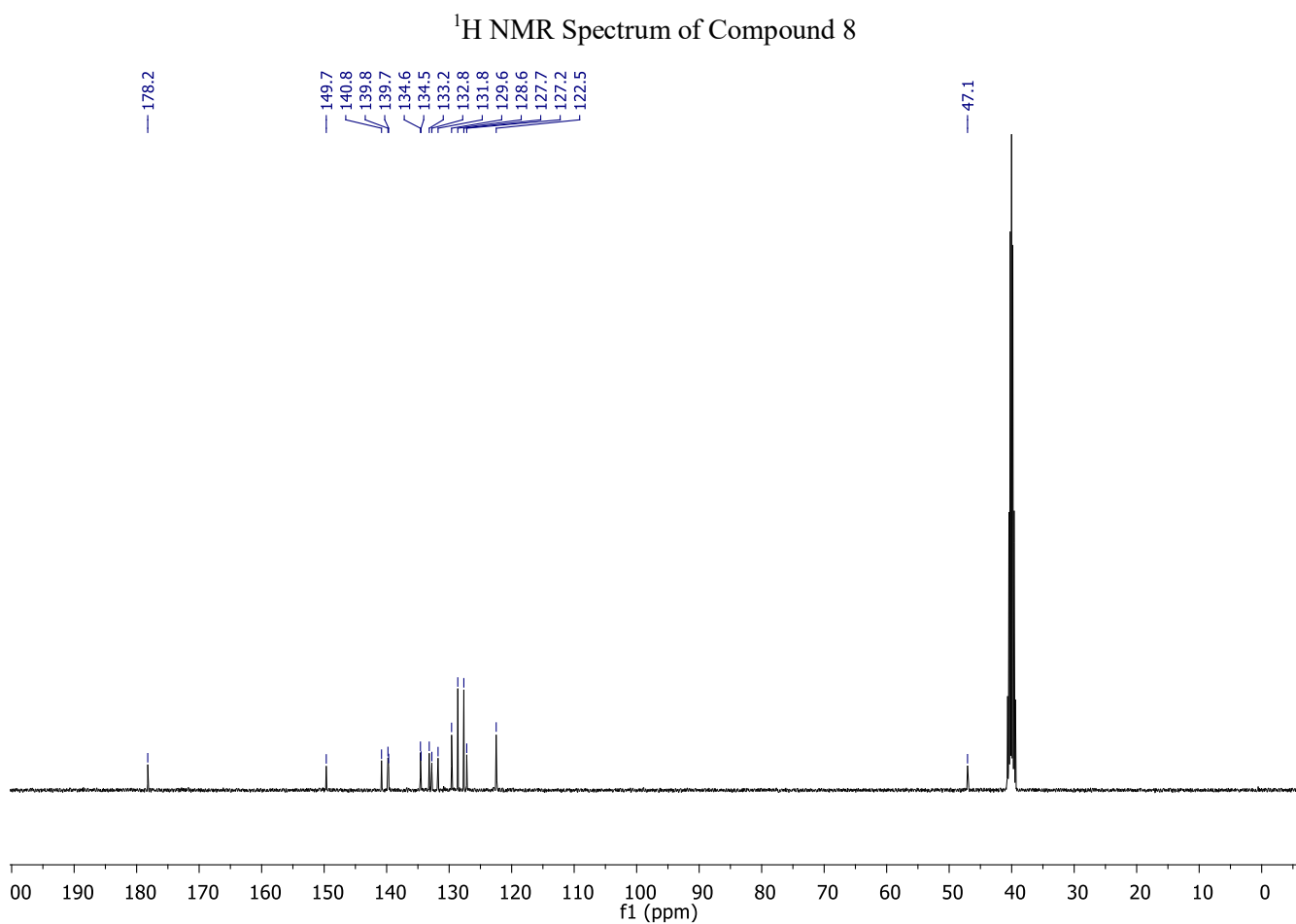
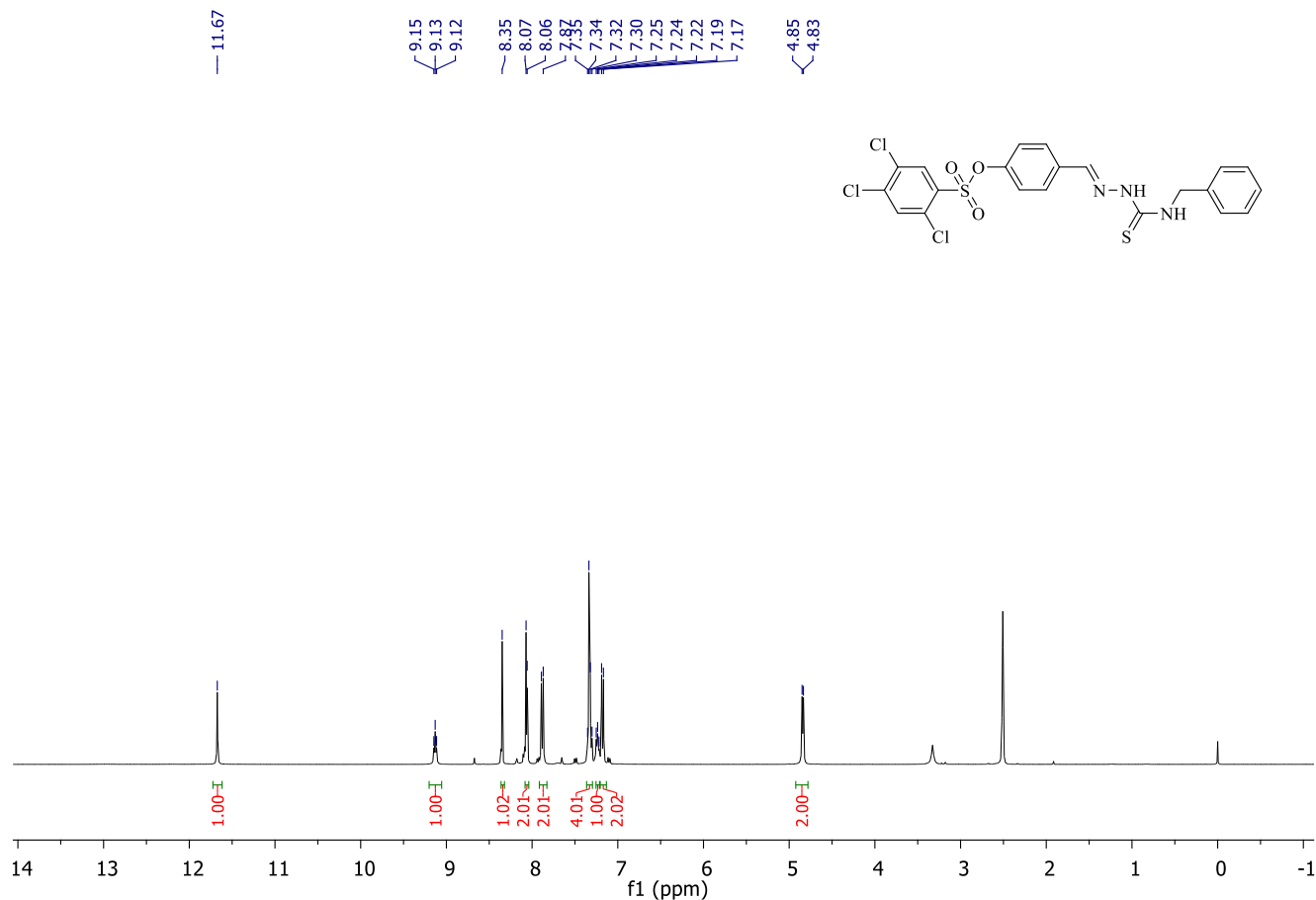


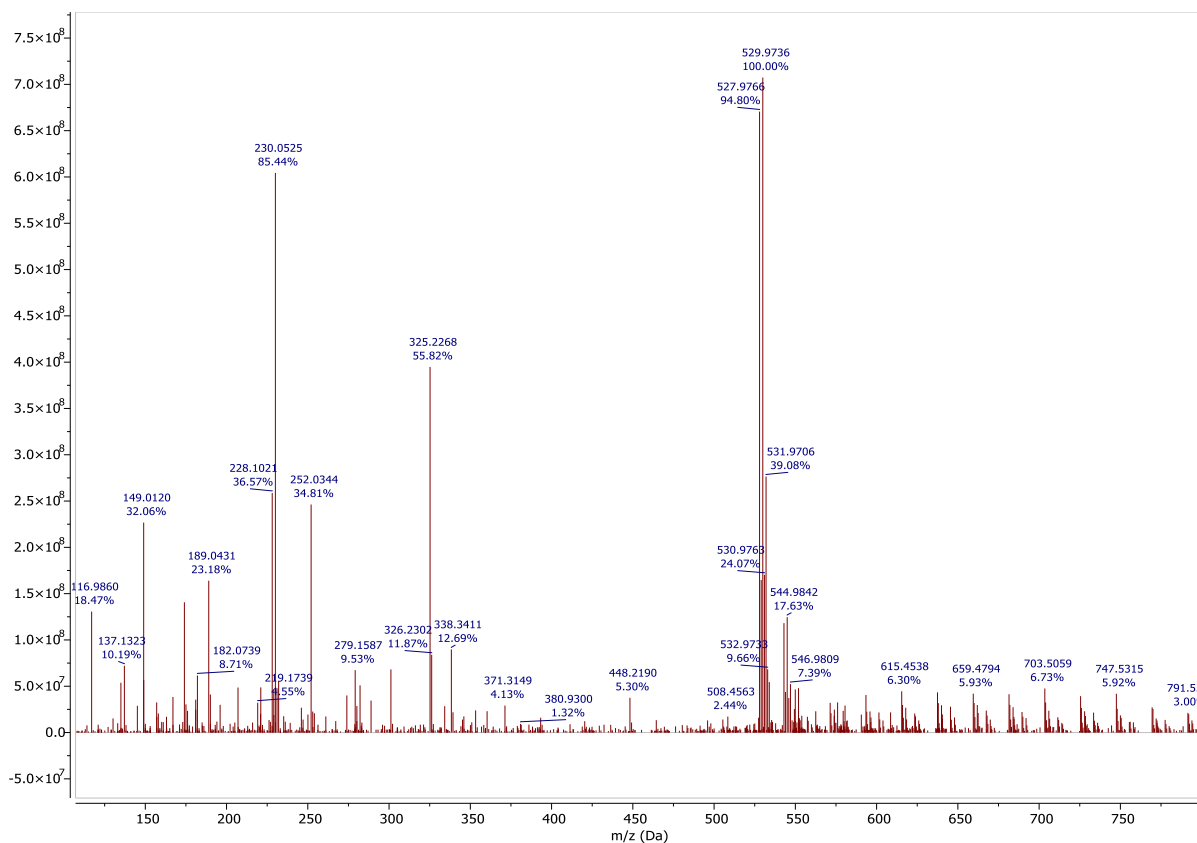


HRMS Spectrum of Compound 7

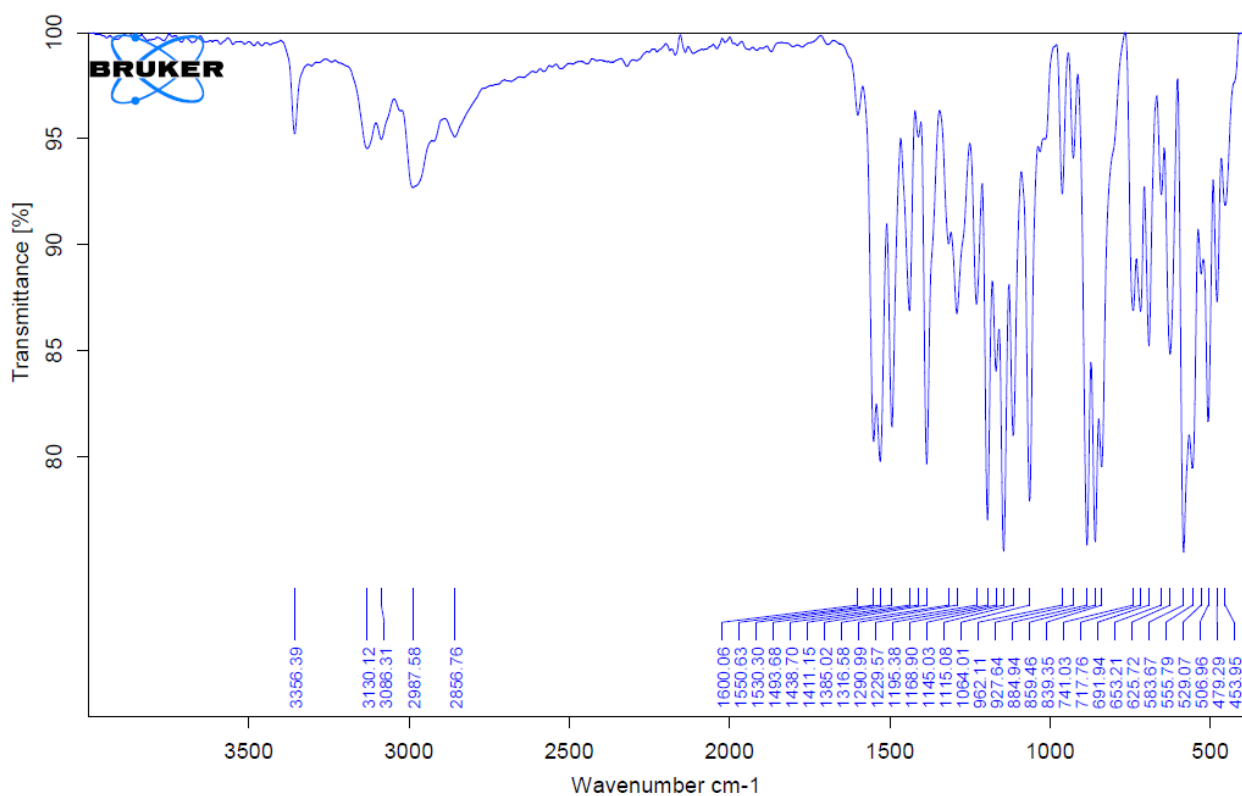


FTIR Spectrum of Compound 7

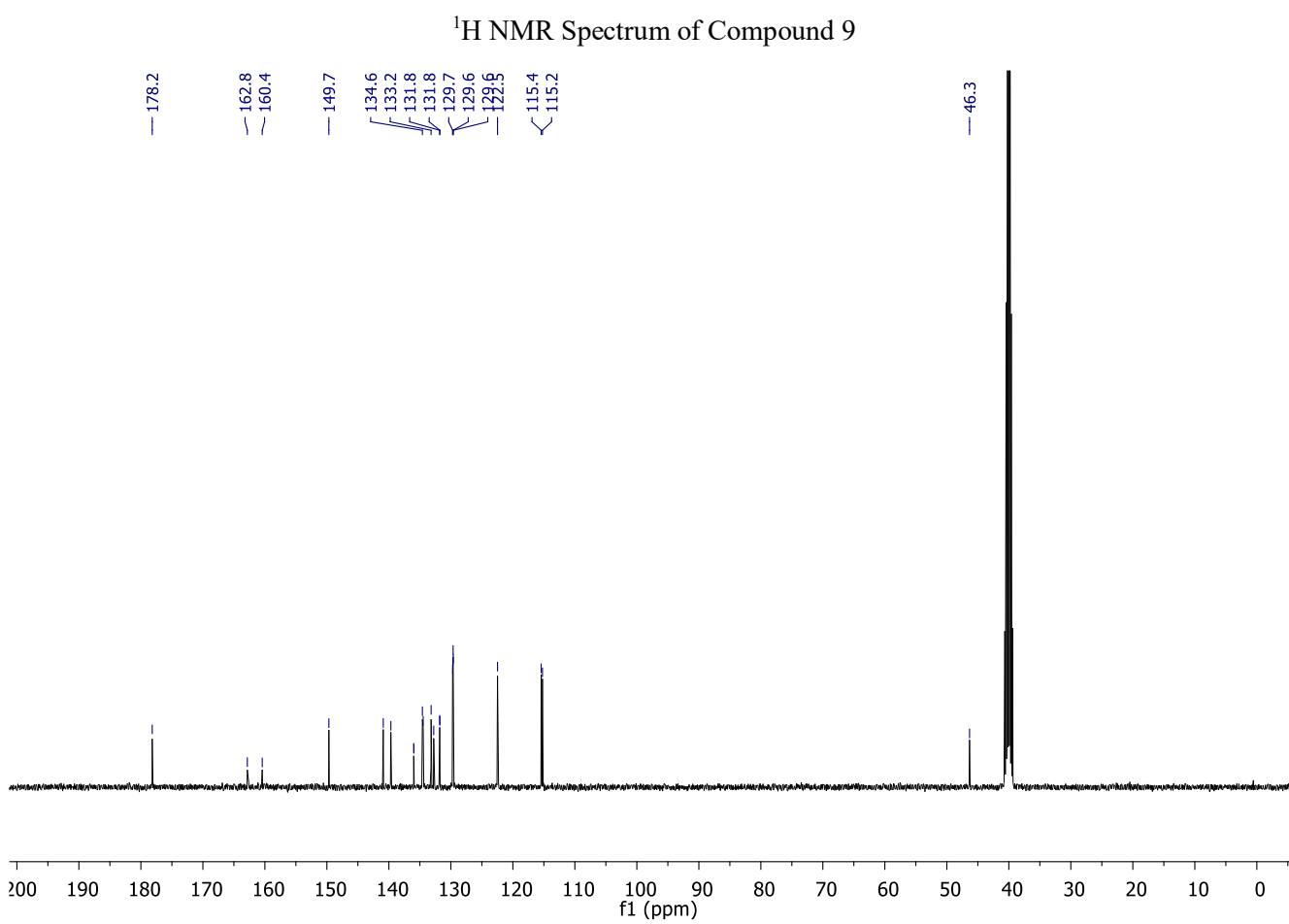
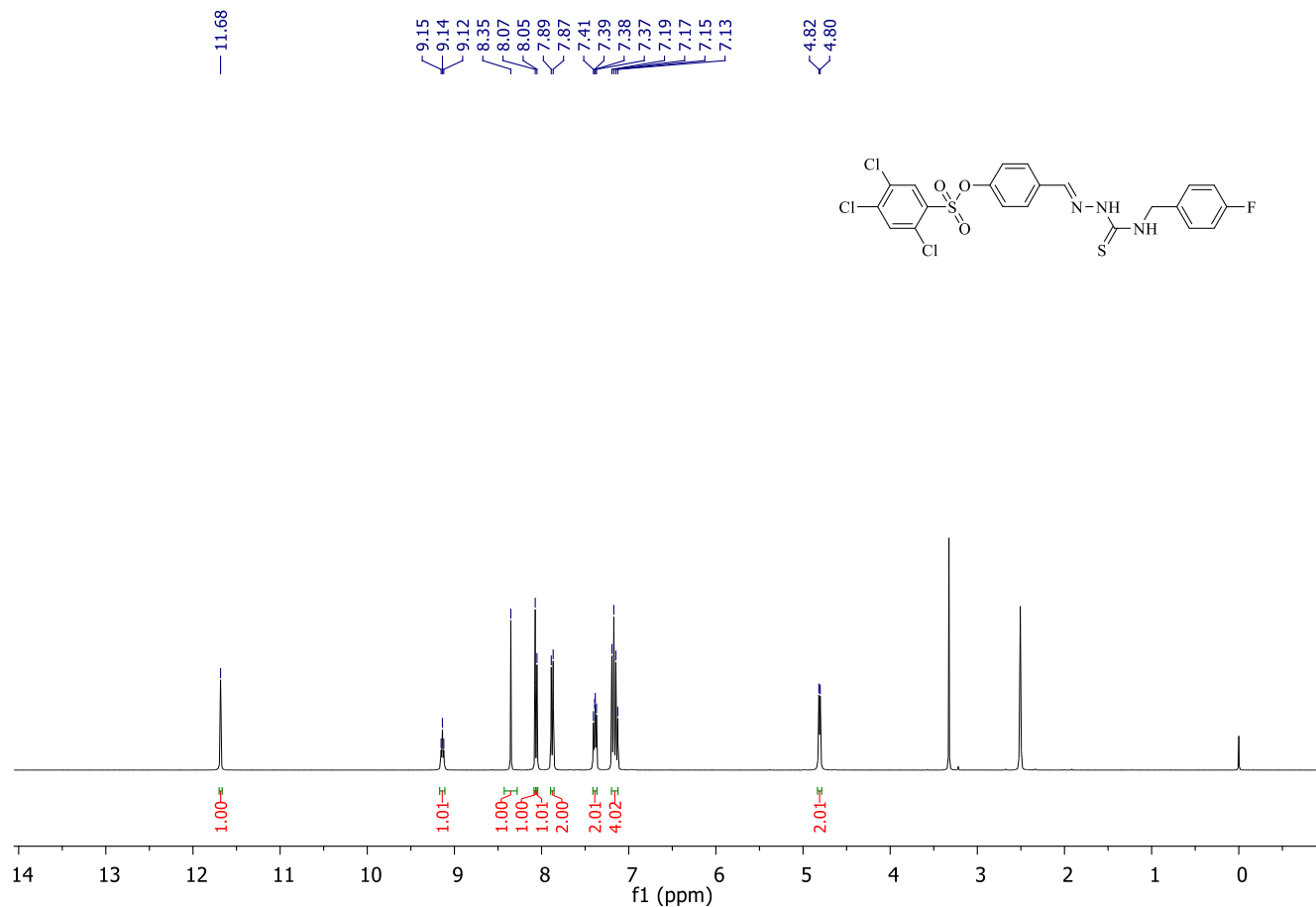


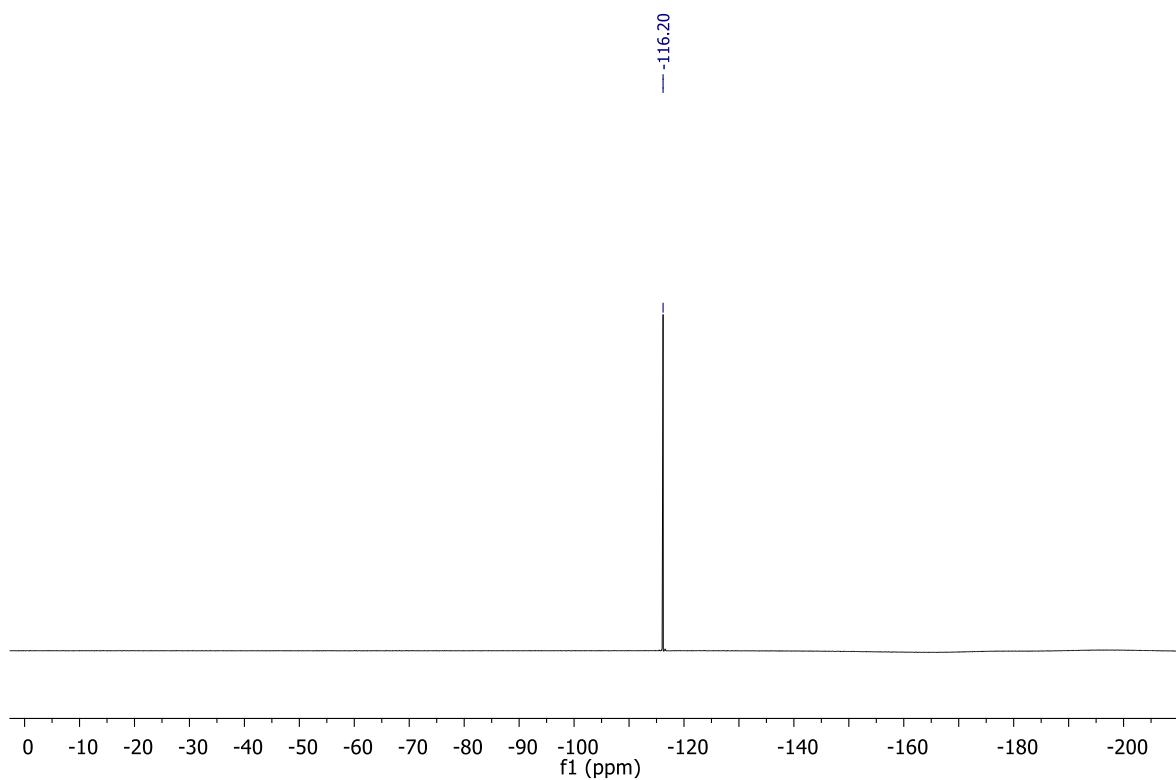


HRMS Spectrum of Compound 8

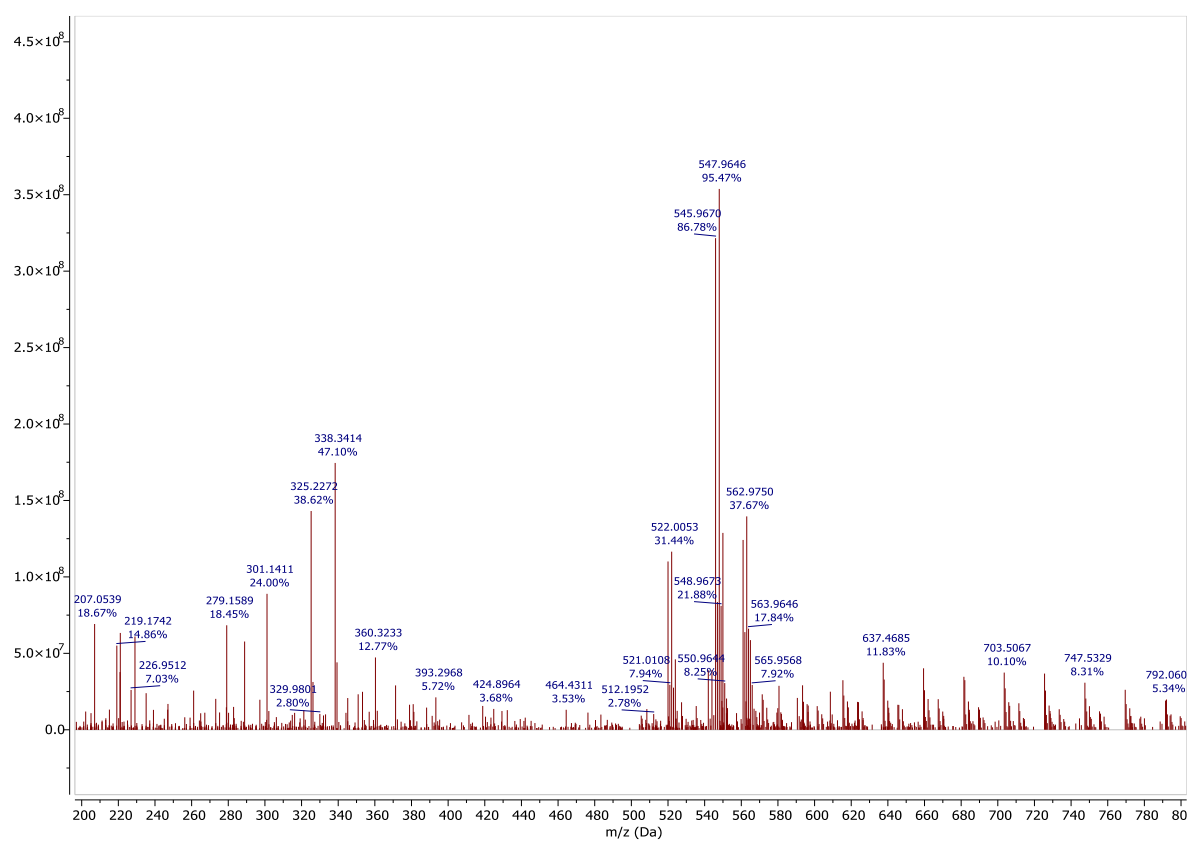


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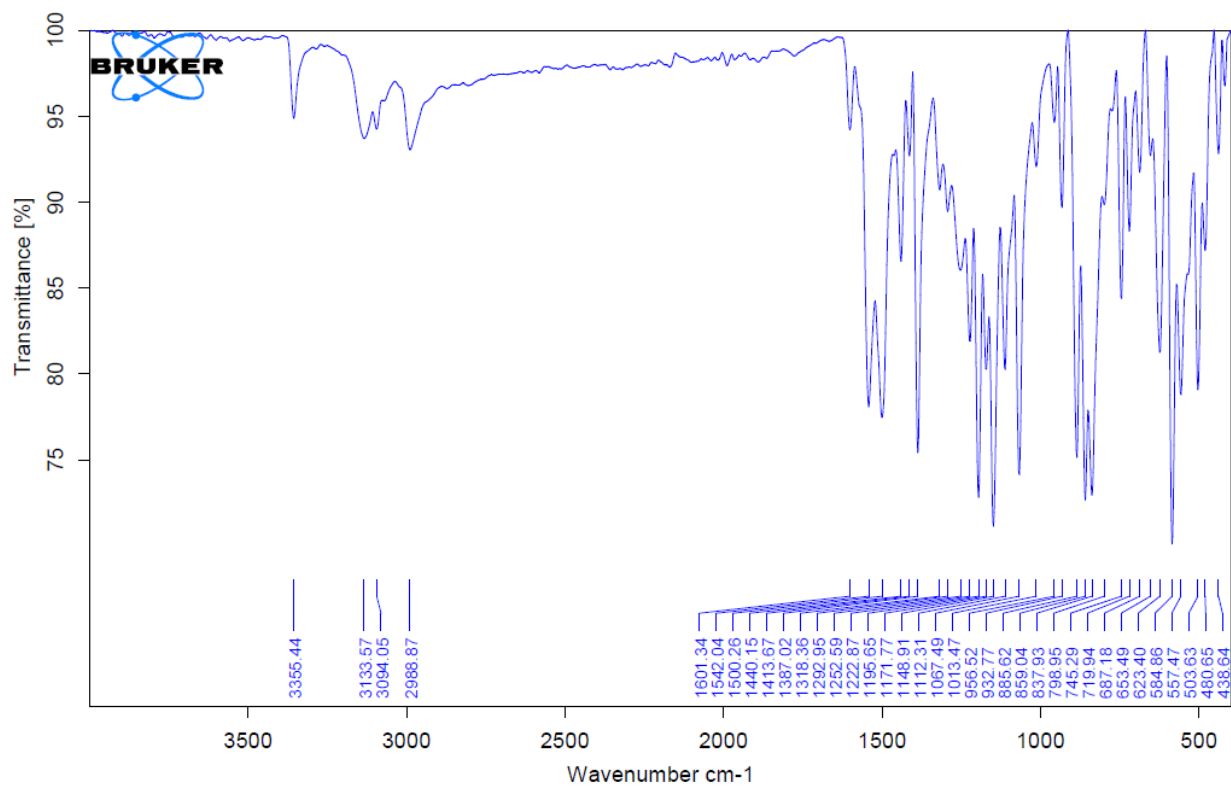




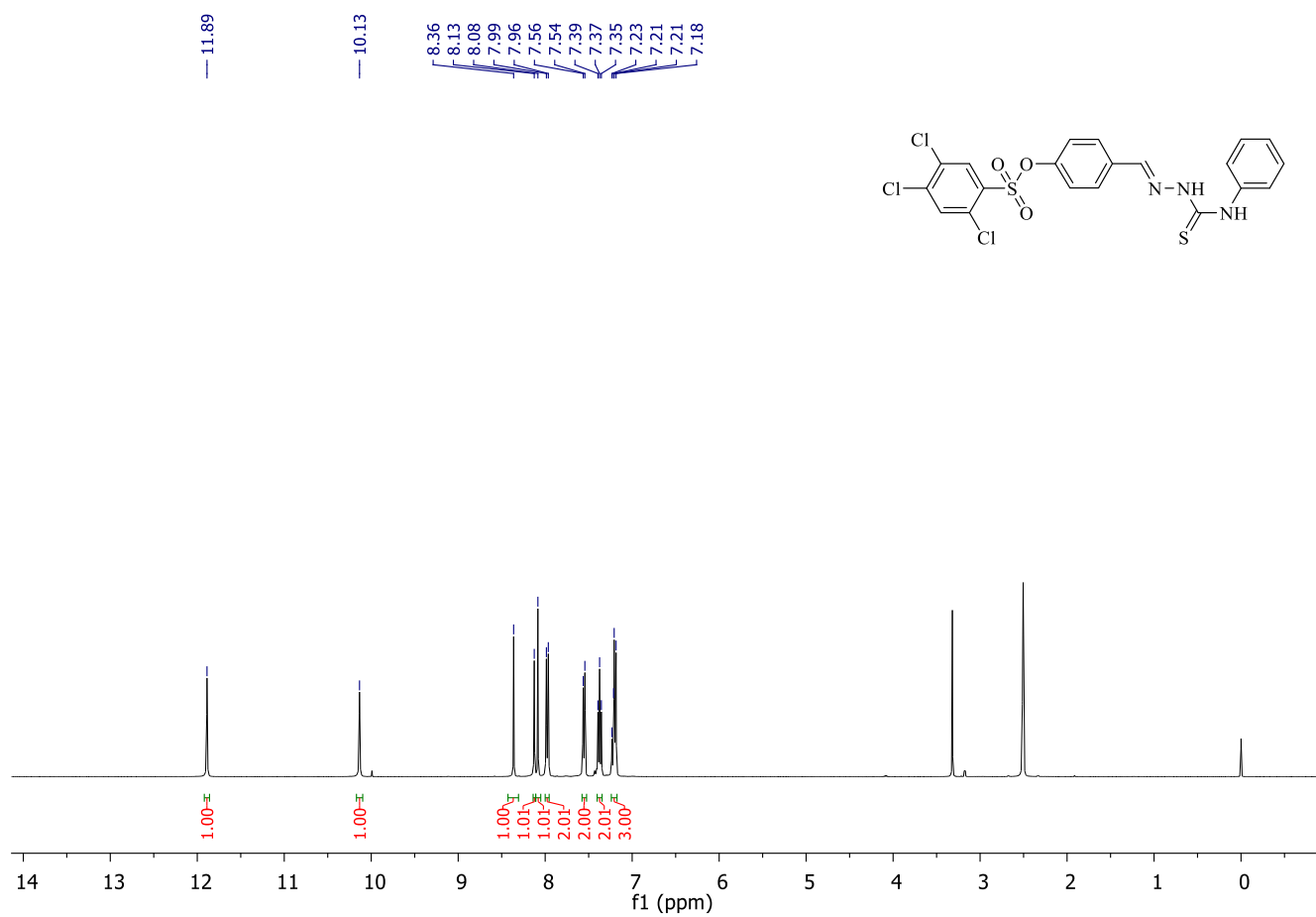
^{19}F NMR Spectrum of Compound 9



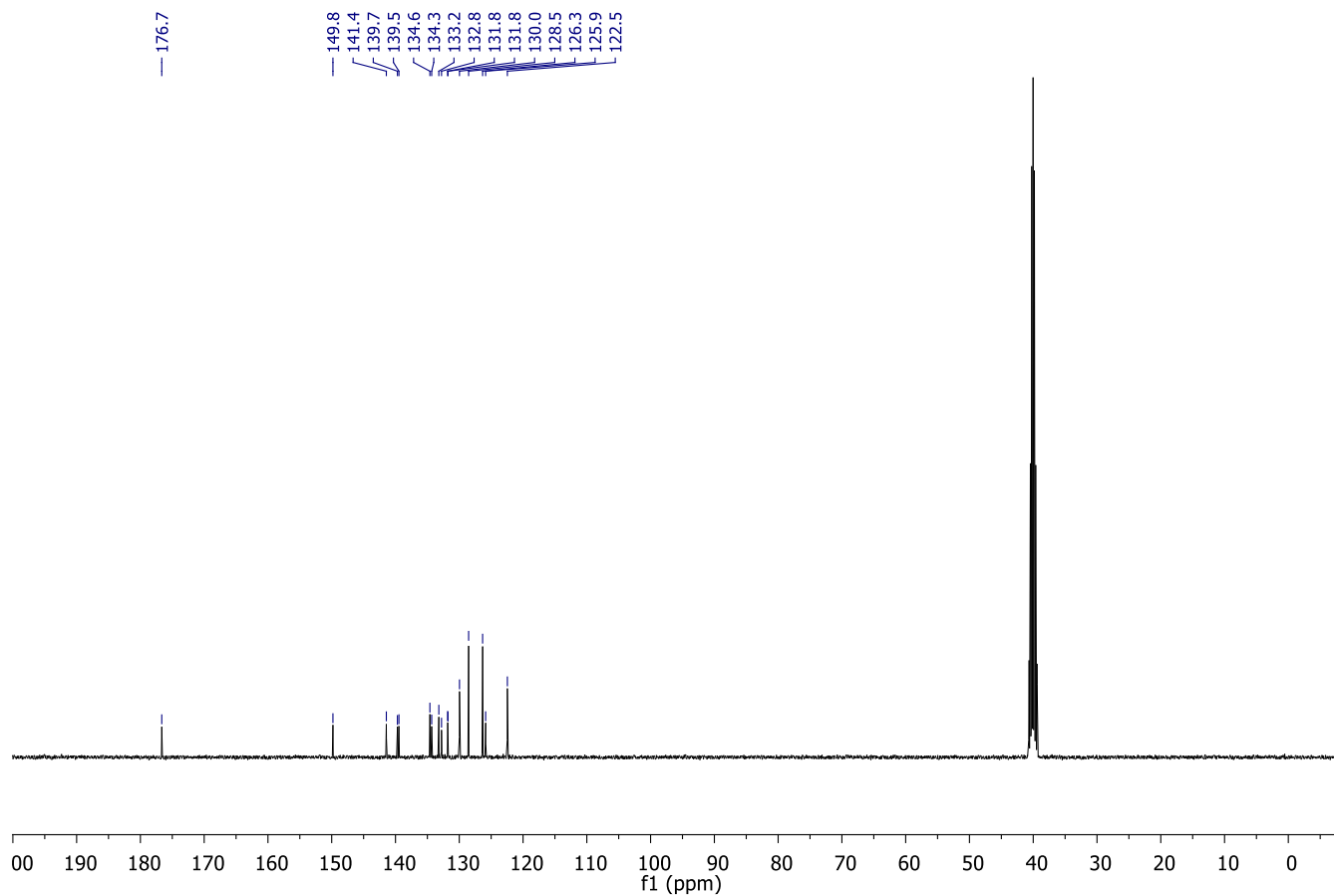
HRMS Spectrum of Compound 9



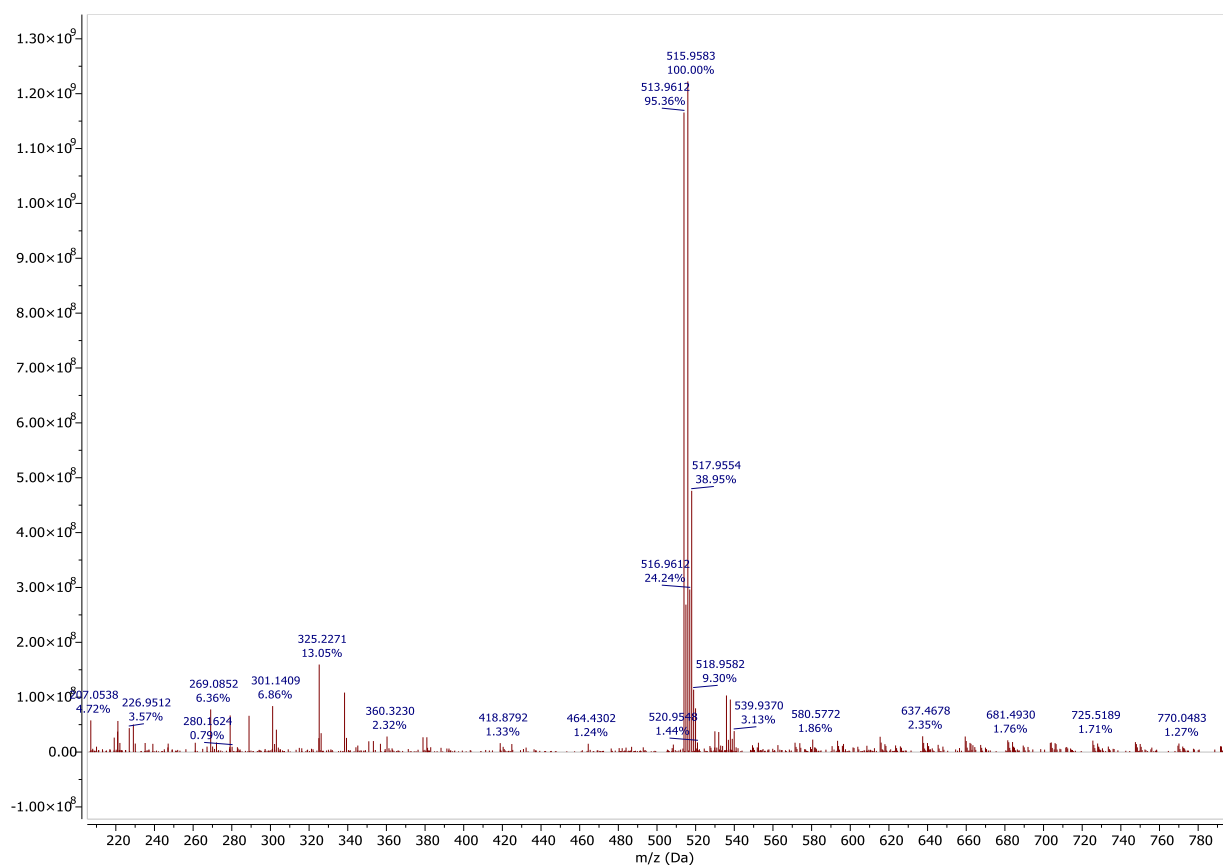
FTIR Spectrum of Compound 9



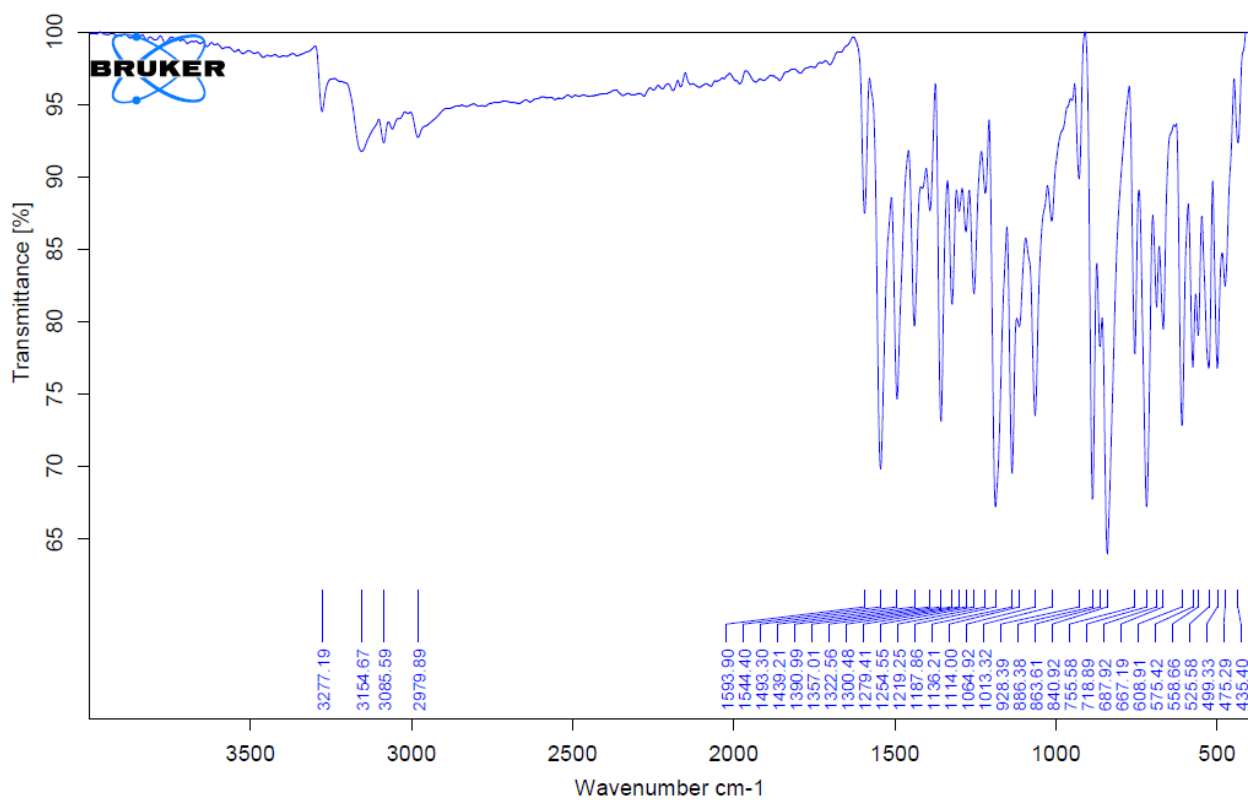
¹H NMR Spectrum of Compound 10



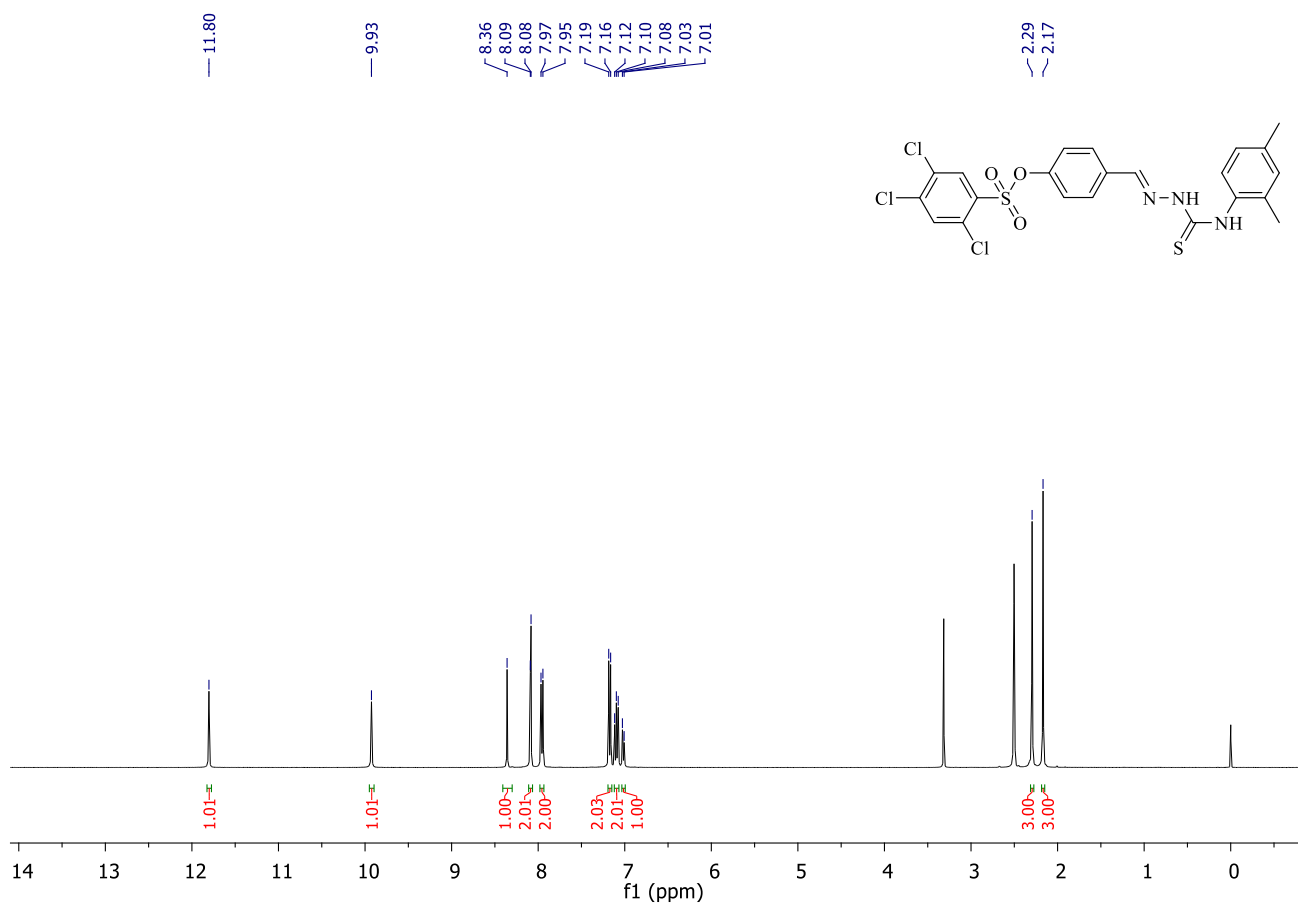
^{13}C NMR Spectrum of Compound 10



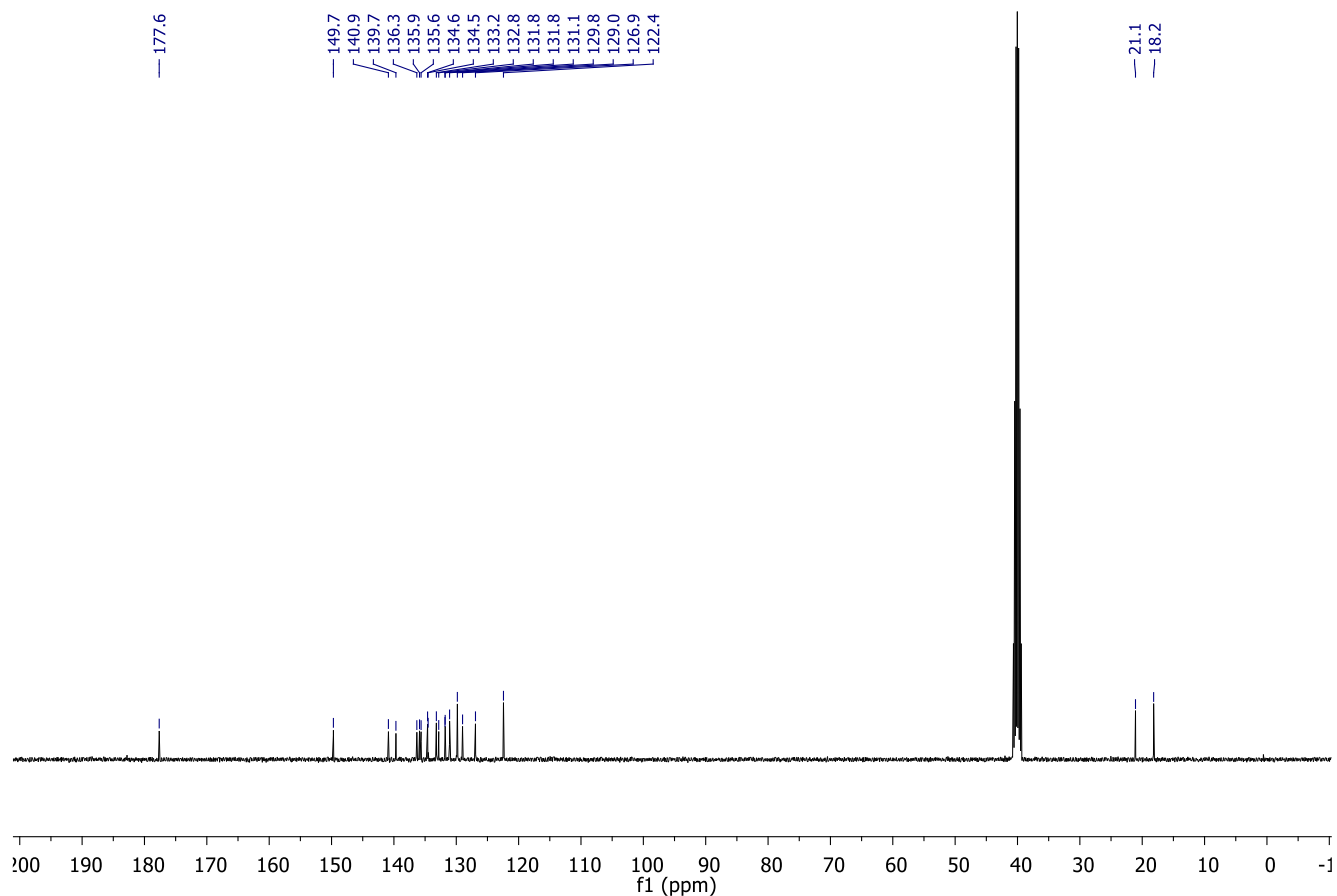
HRMS Spectrum of Compound 10



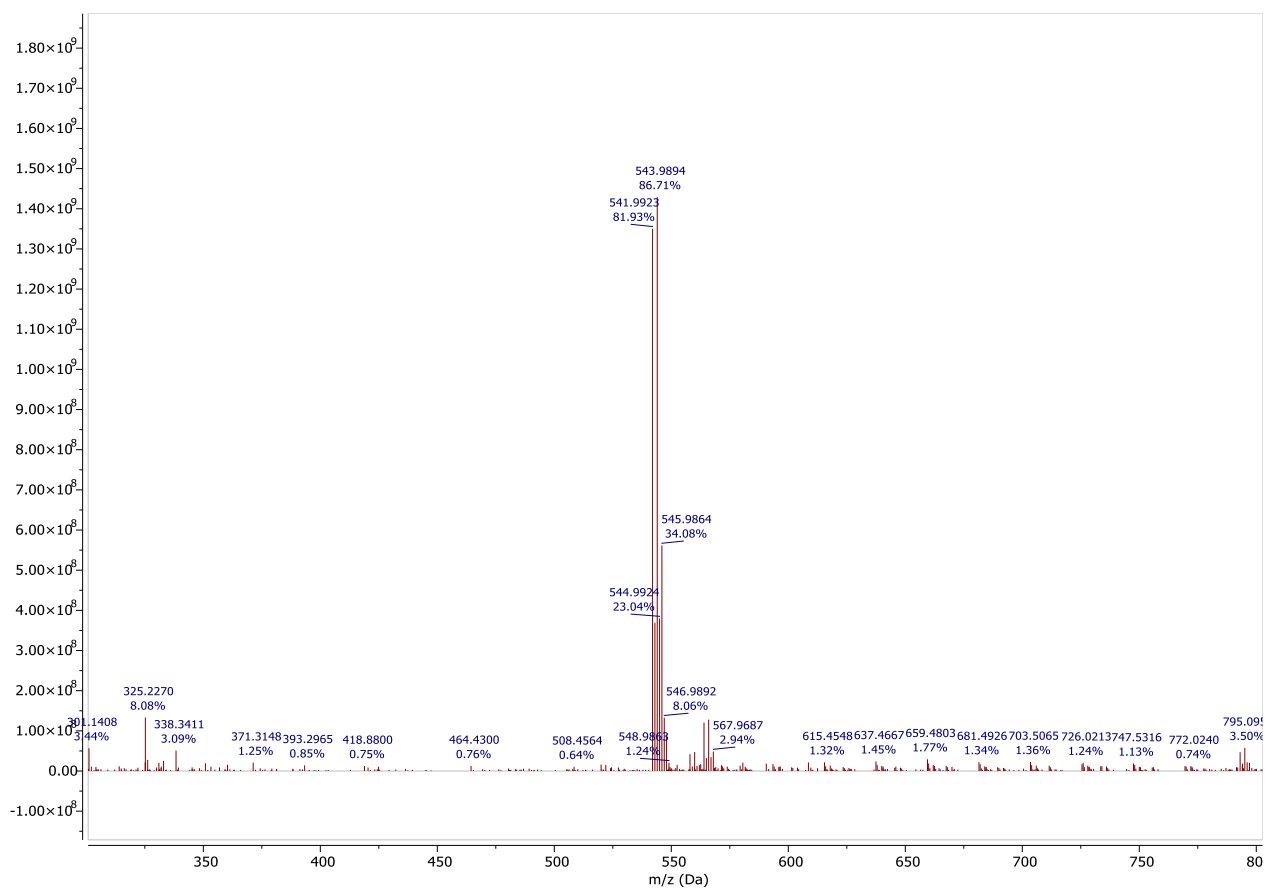
FTIR Spectrum of Compound 10



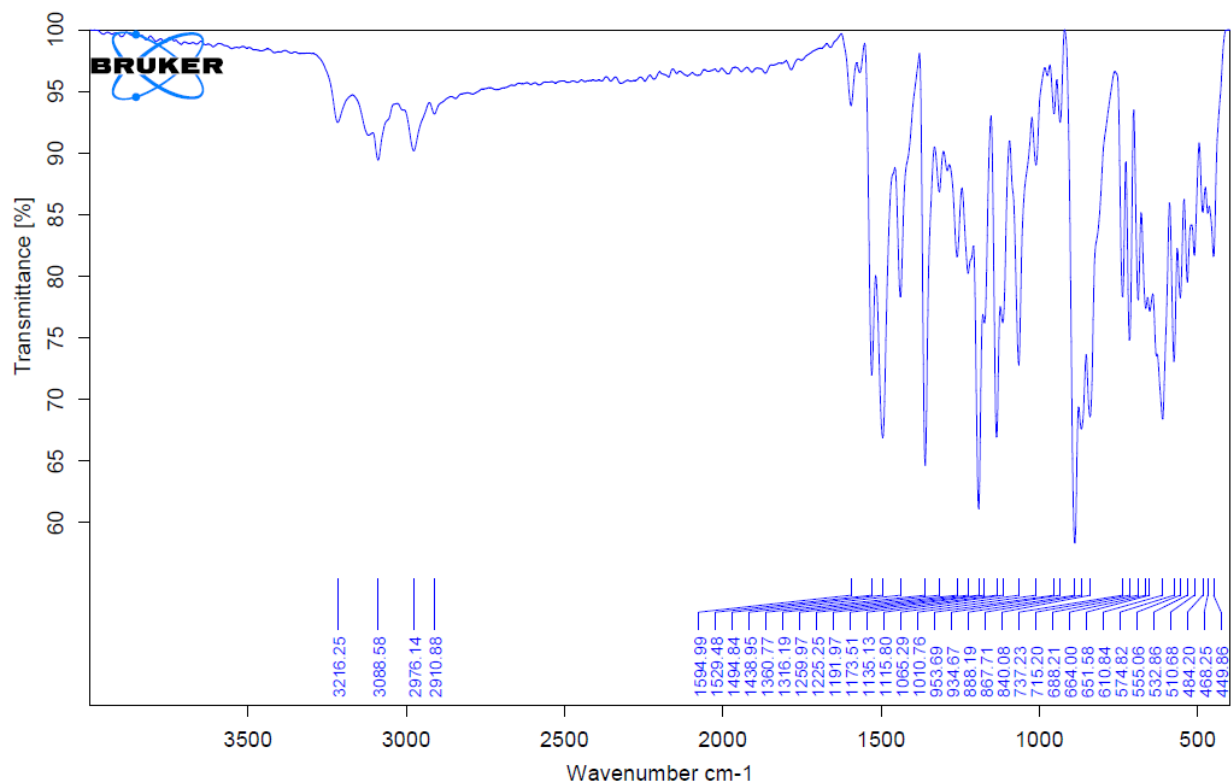
¹H NMR Spectrum of Compound 11



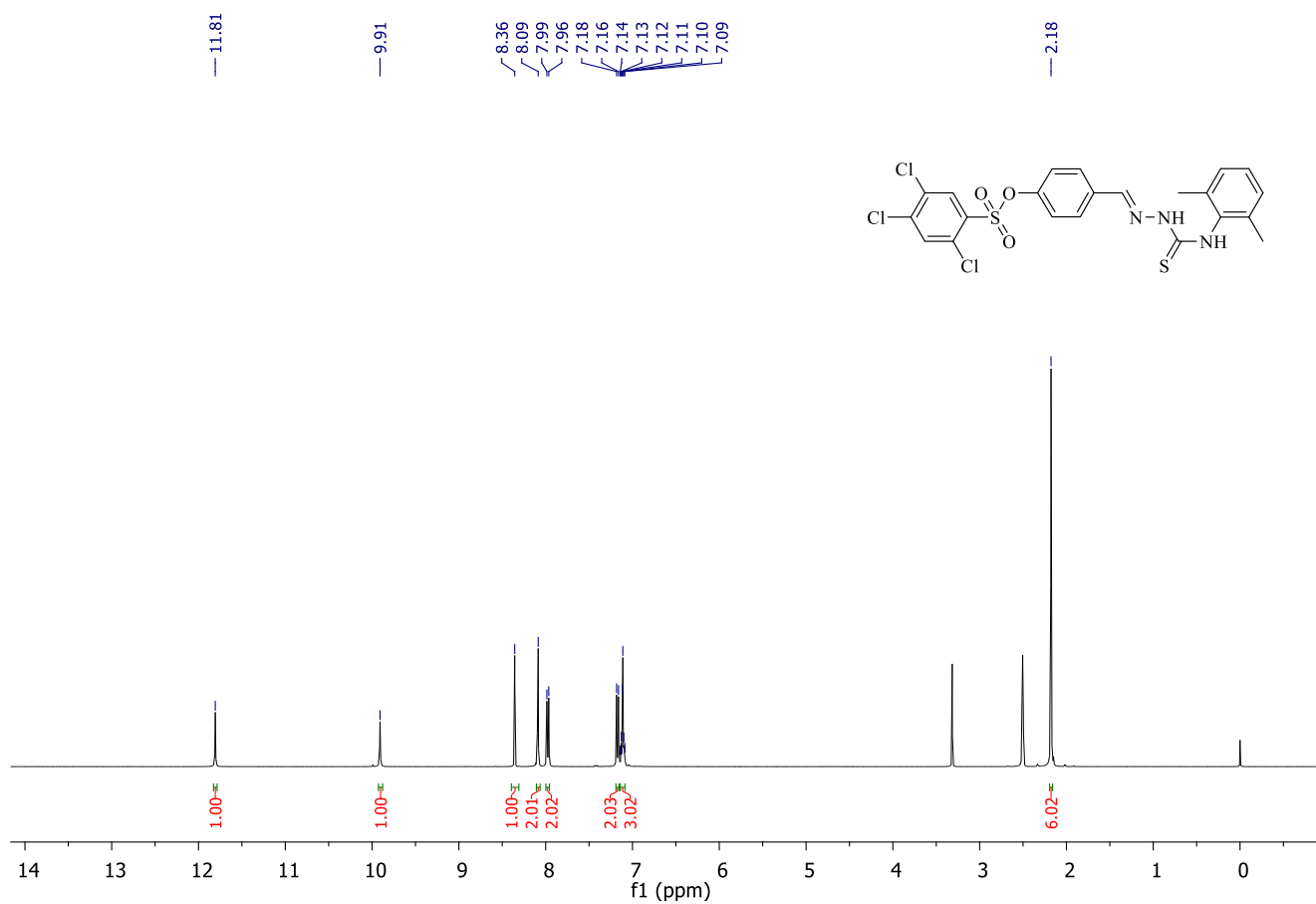
¹³C NMR Spectrum of Compound 11



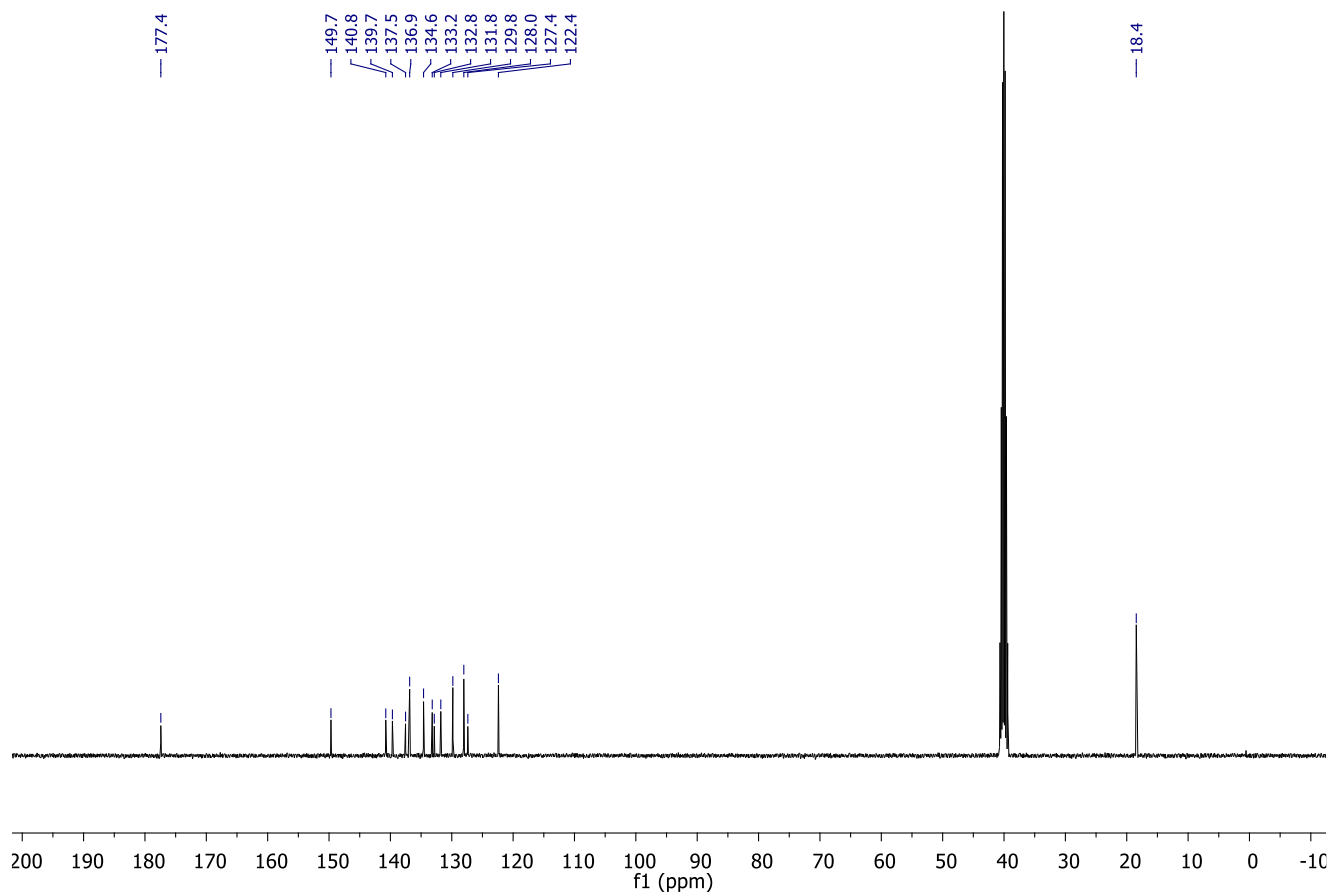
HRMS Spectrum of Compound 11



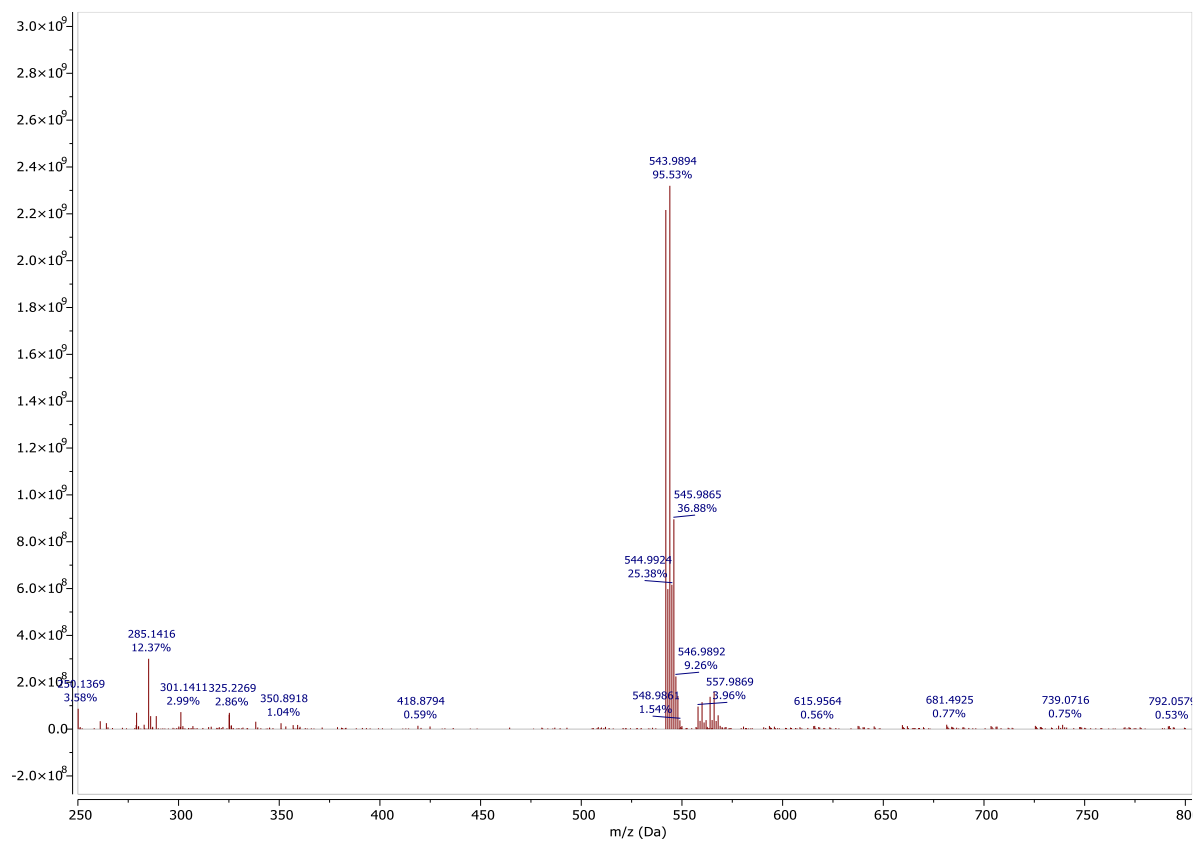
FTIR Spectrum of Compound 11



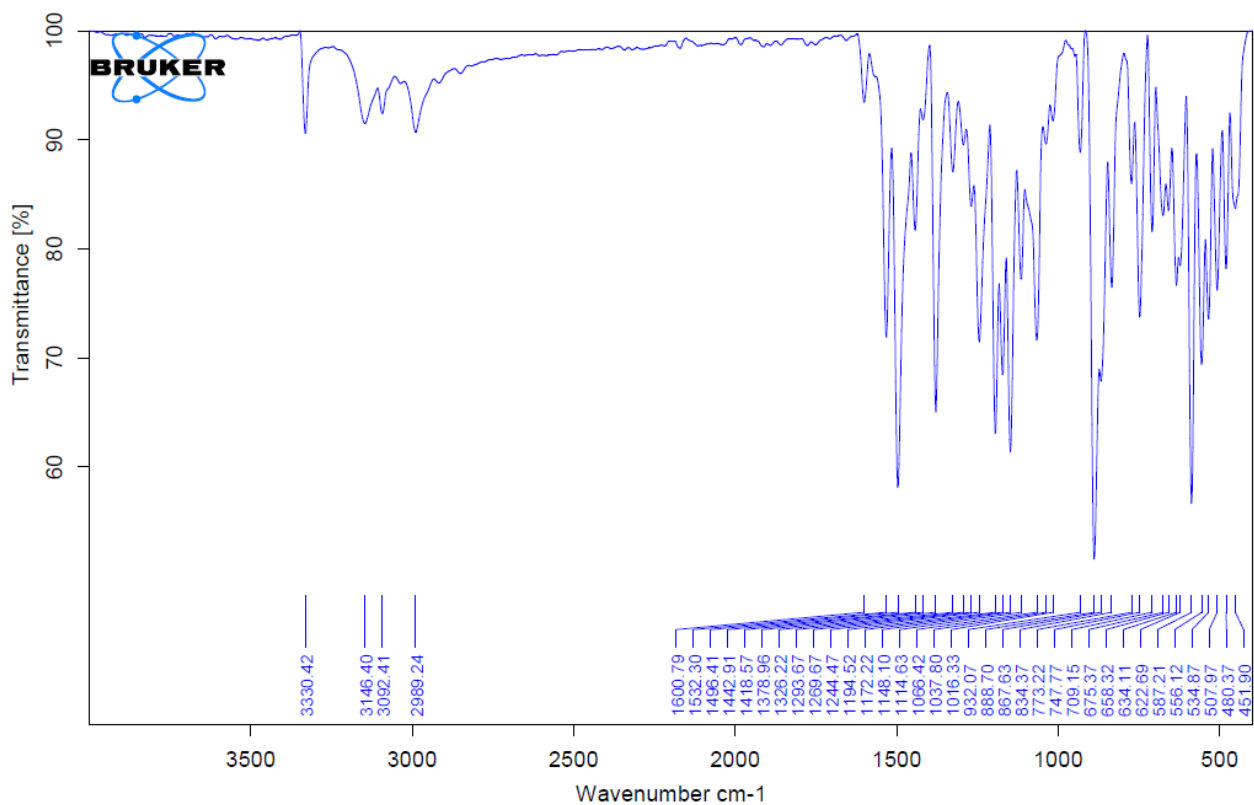
¹H NMR Spectrum of Compound 12



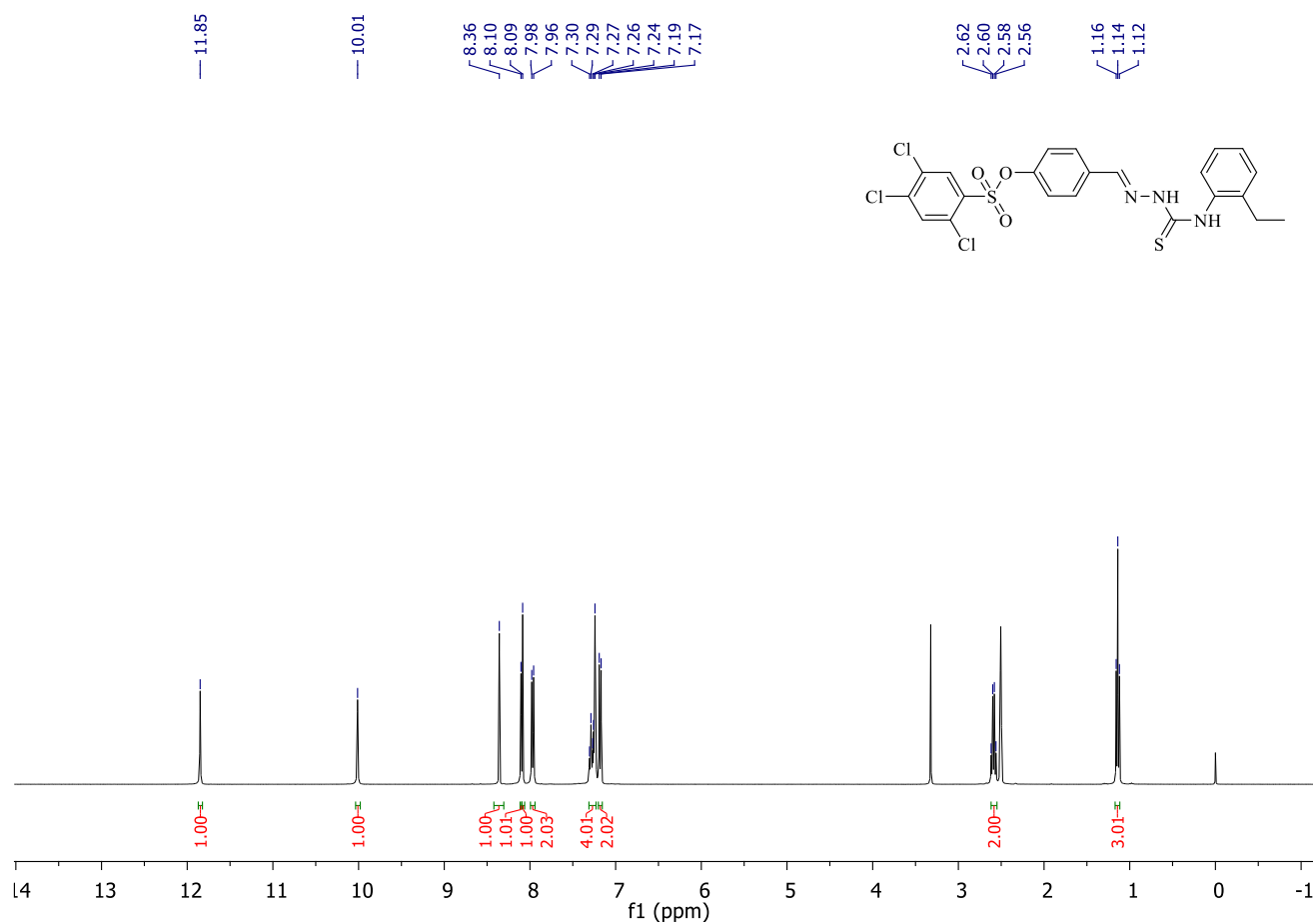
^{13}C NMR Spectrum of Compound 12



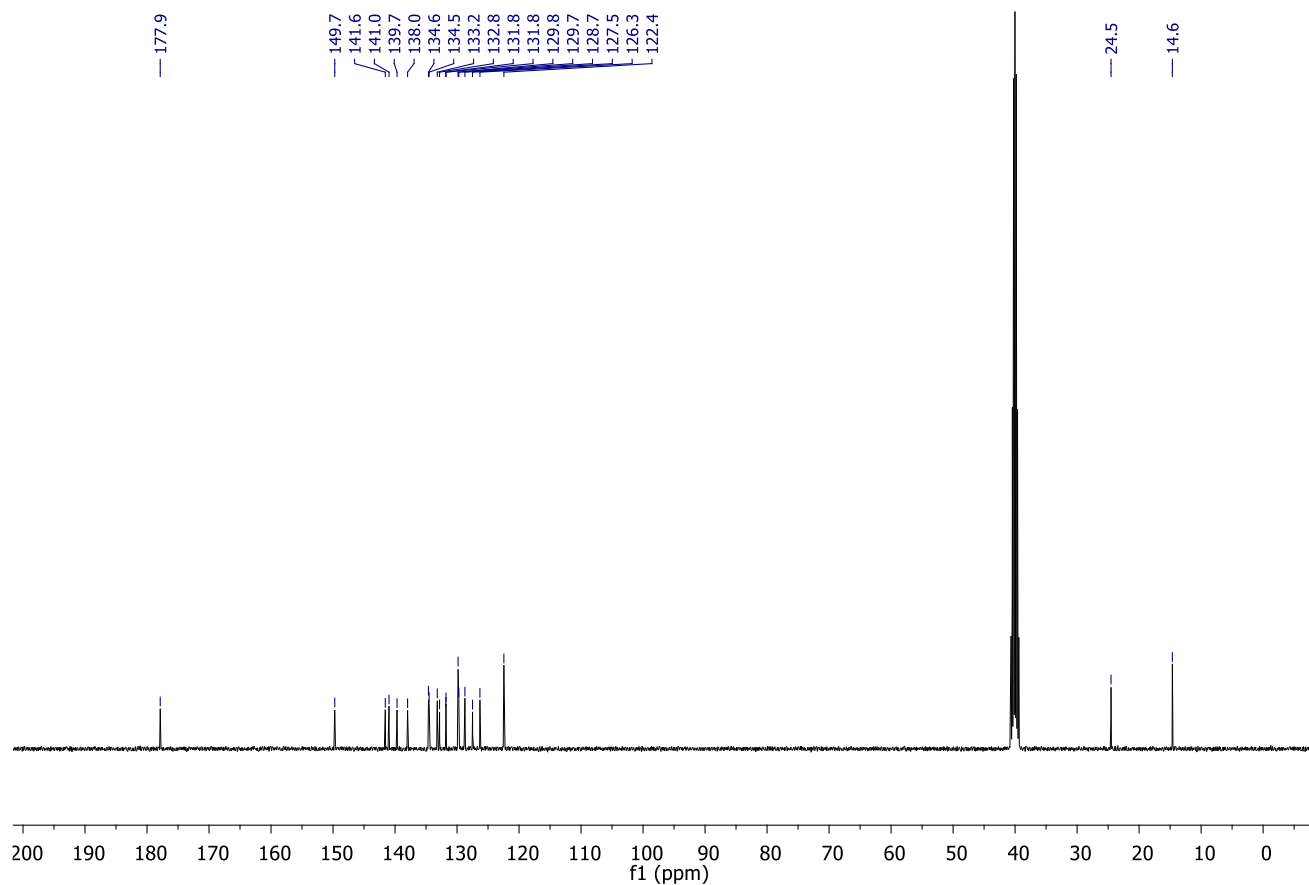
HRMS Spectrum of Compound 12



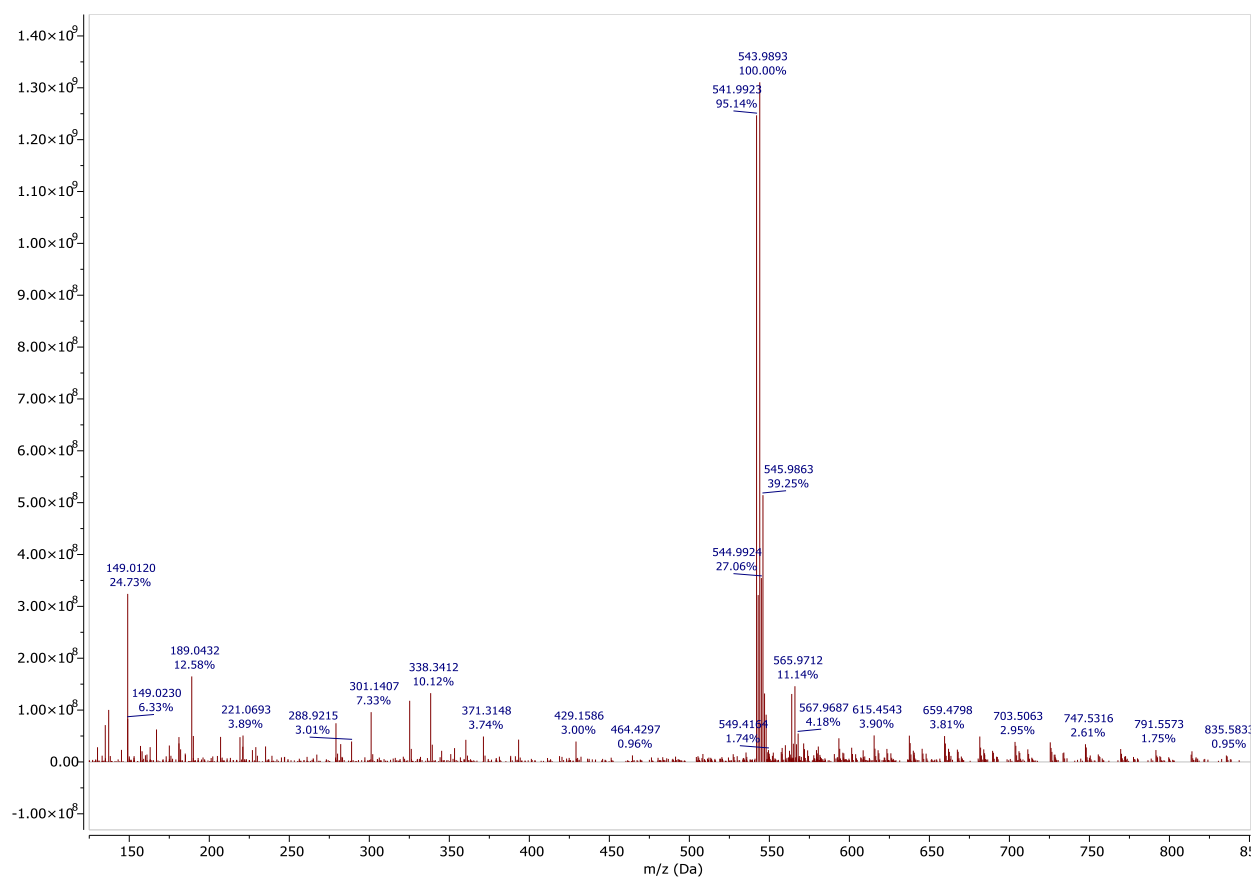
FTIR Spectrum of Compound 12



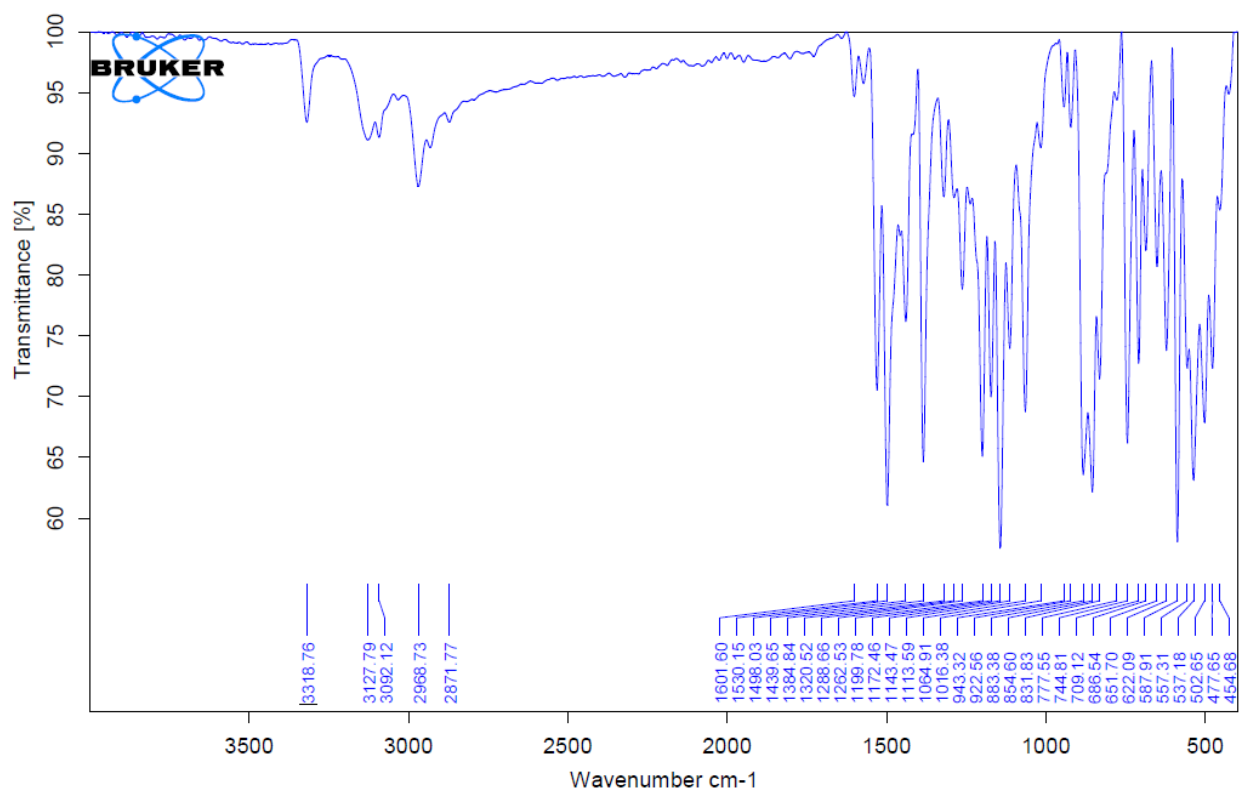
¹H NMR Spectrum of Compound 13



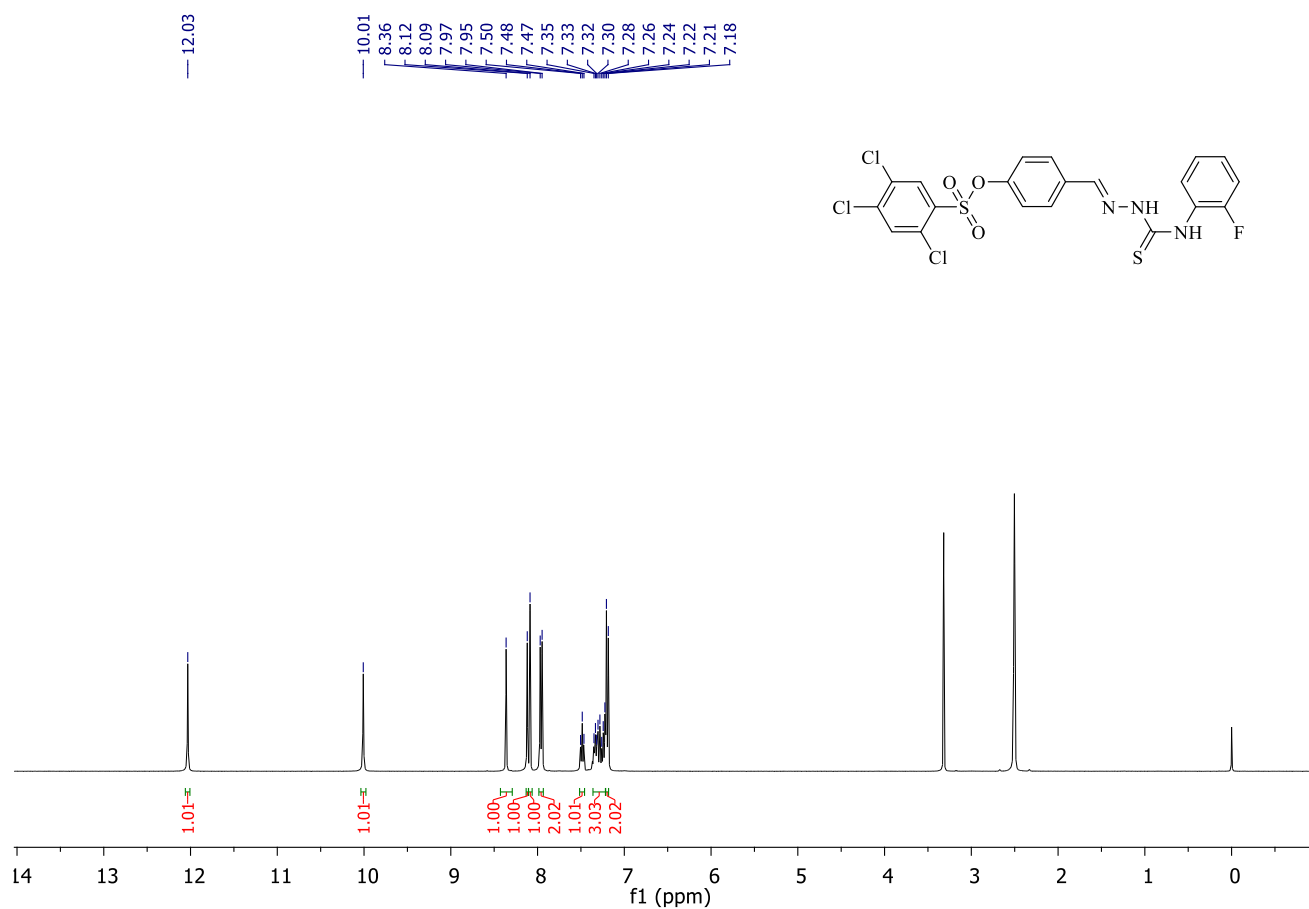
¹³C NMR Spectrum of Compound 13



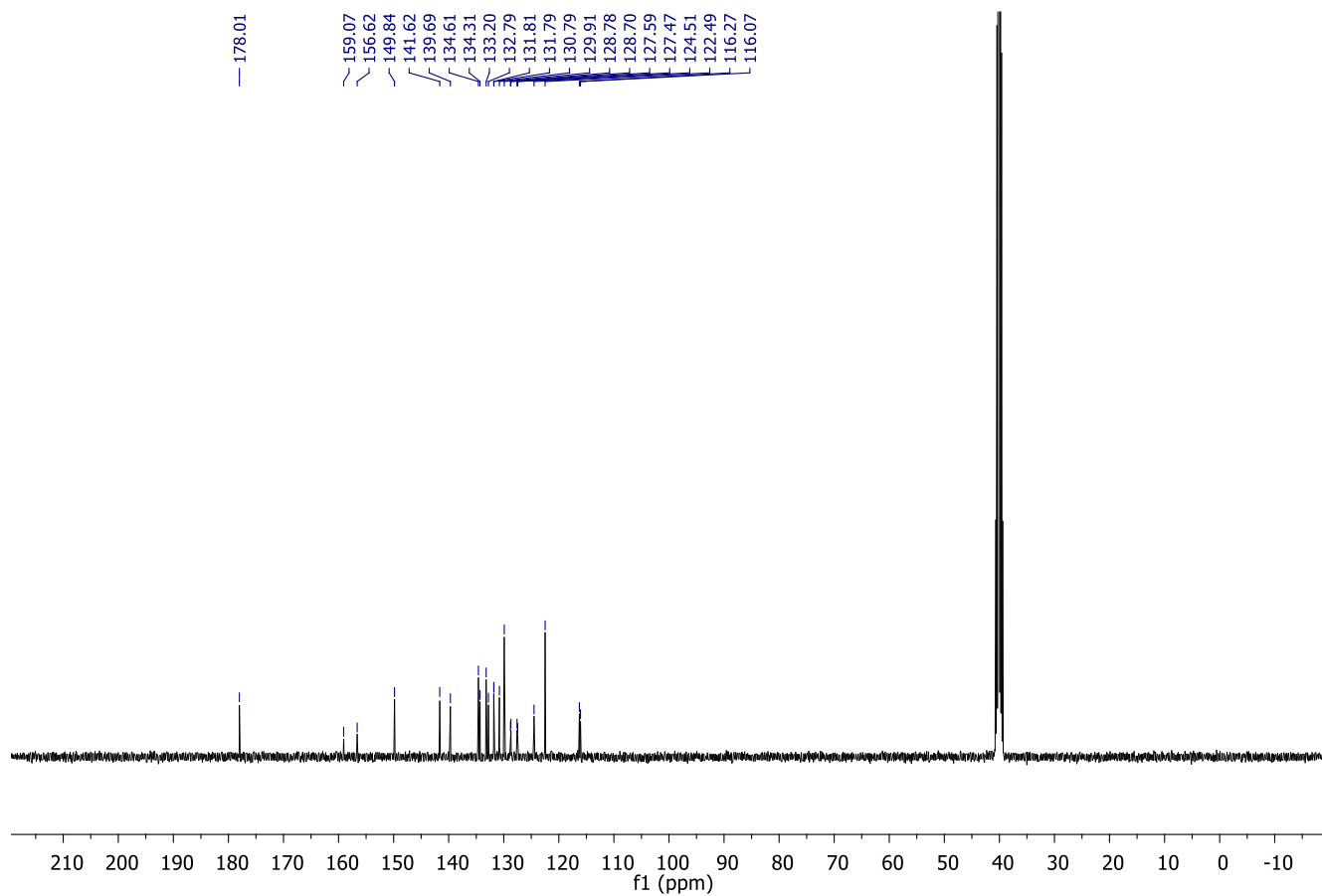
HRMS Spectrum of Compound 13



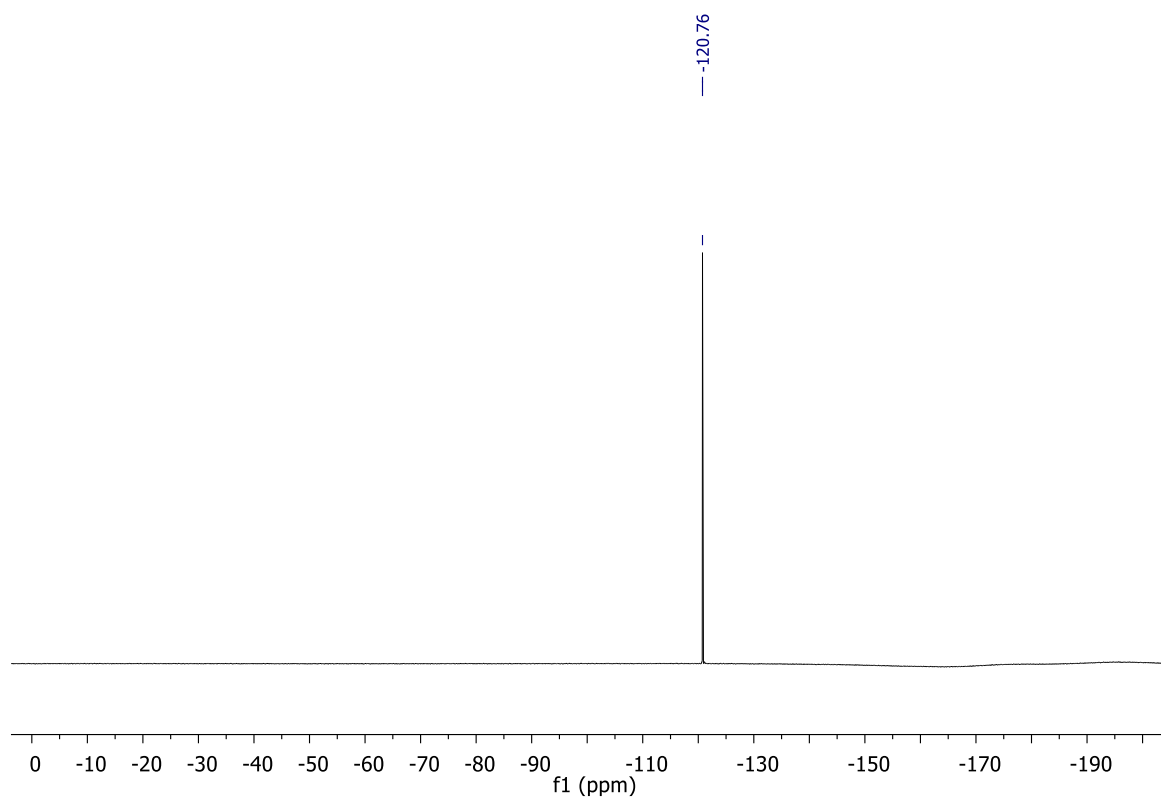
FTIR Spectrum of Compound 13



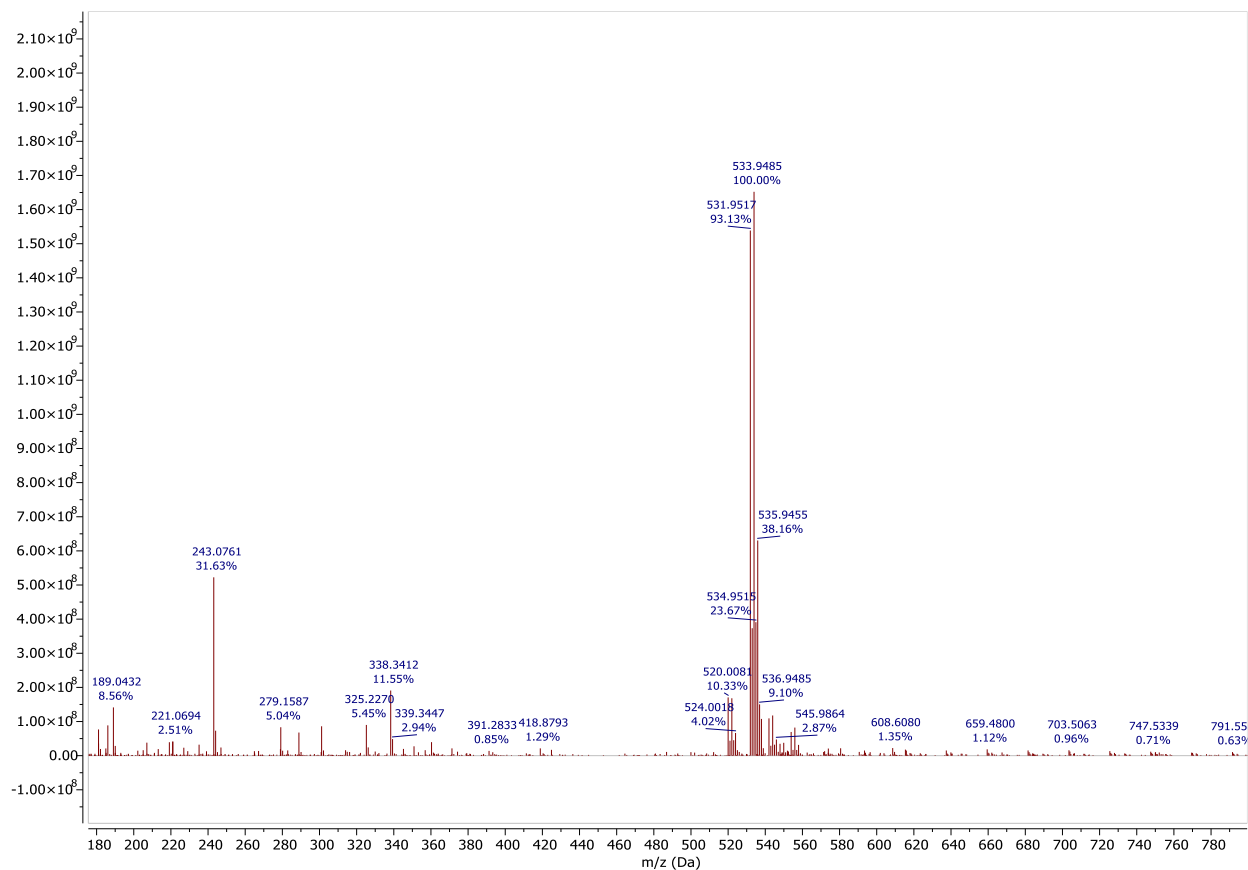
¹H NMR Spectrum of Compound 14



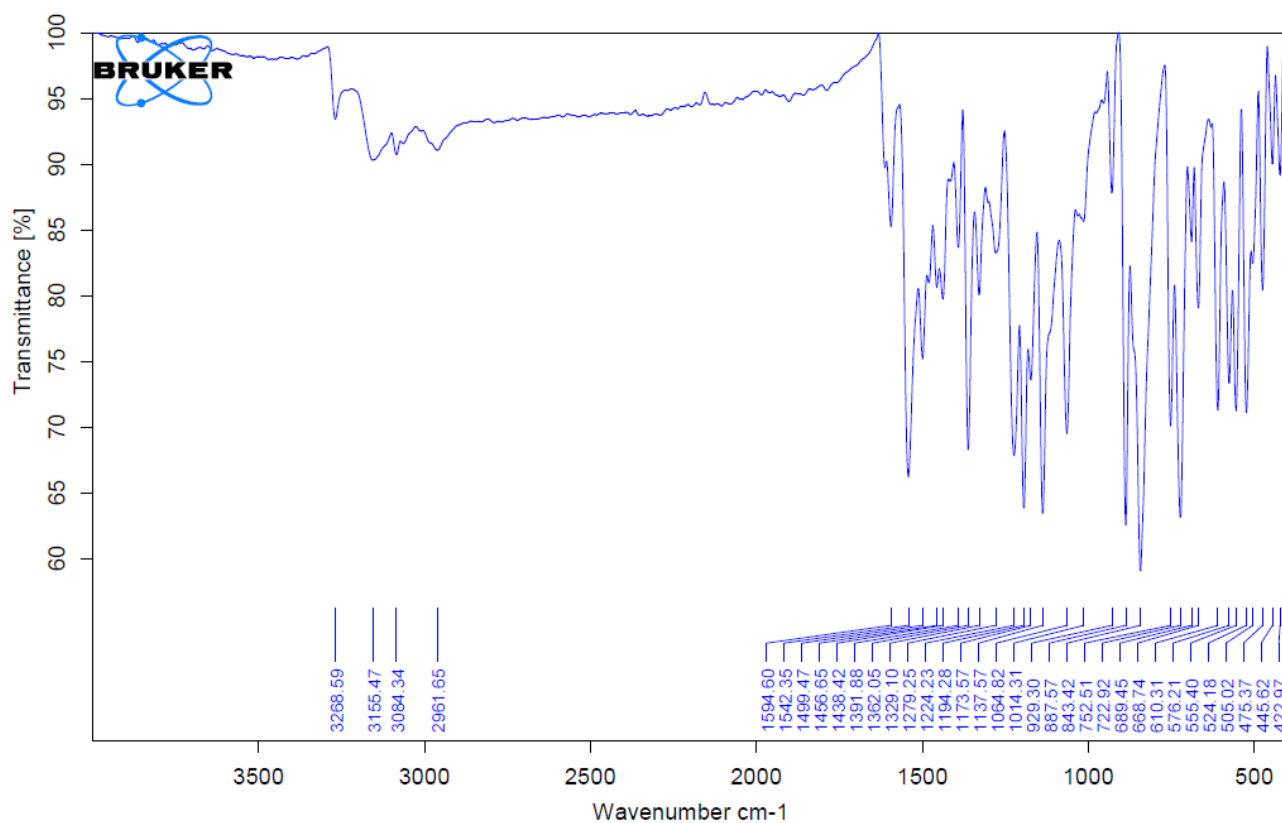
^{13}C NMR Spectrum of Compound 14



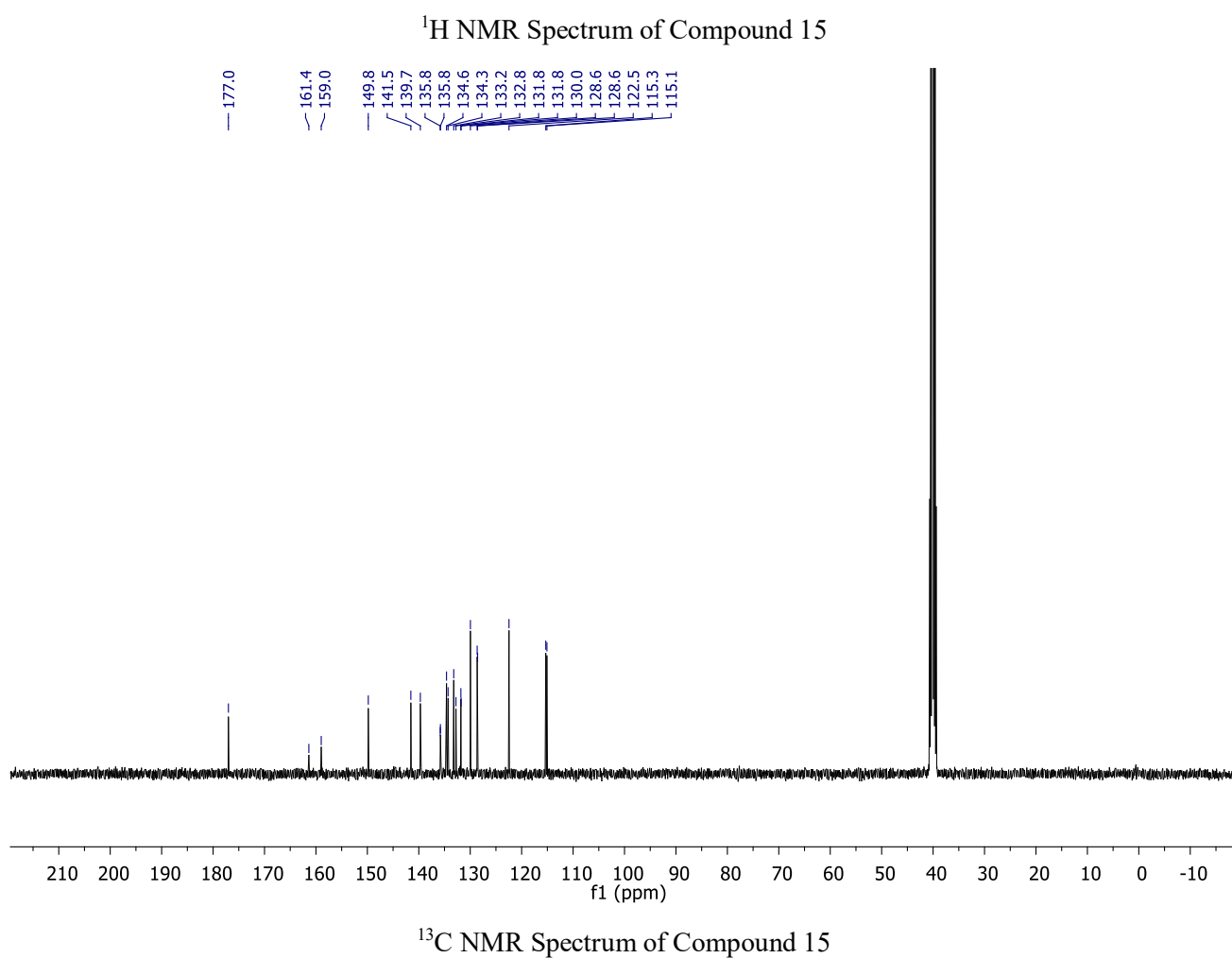
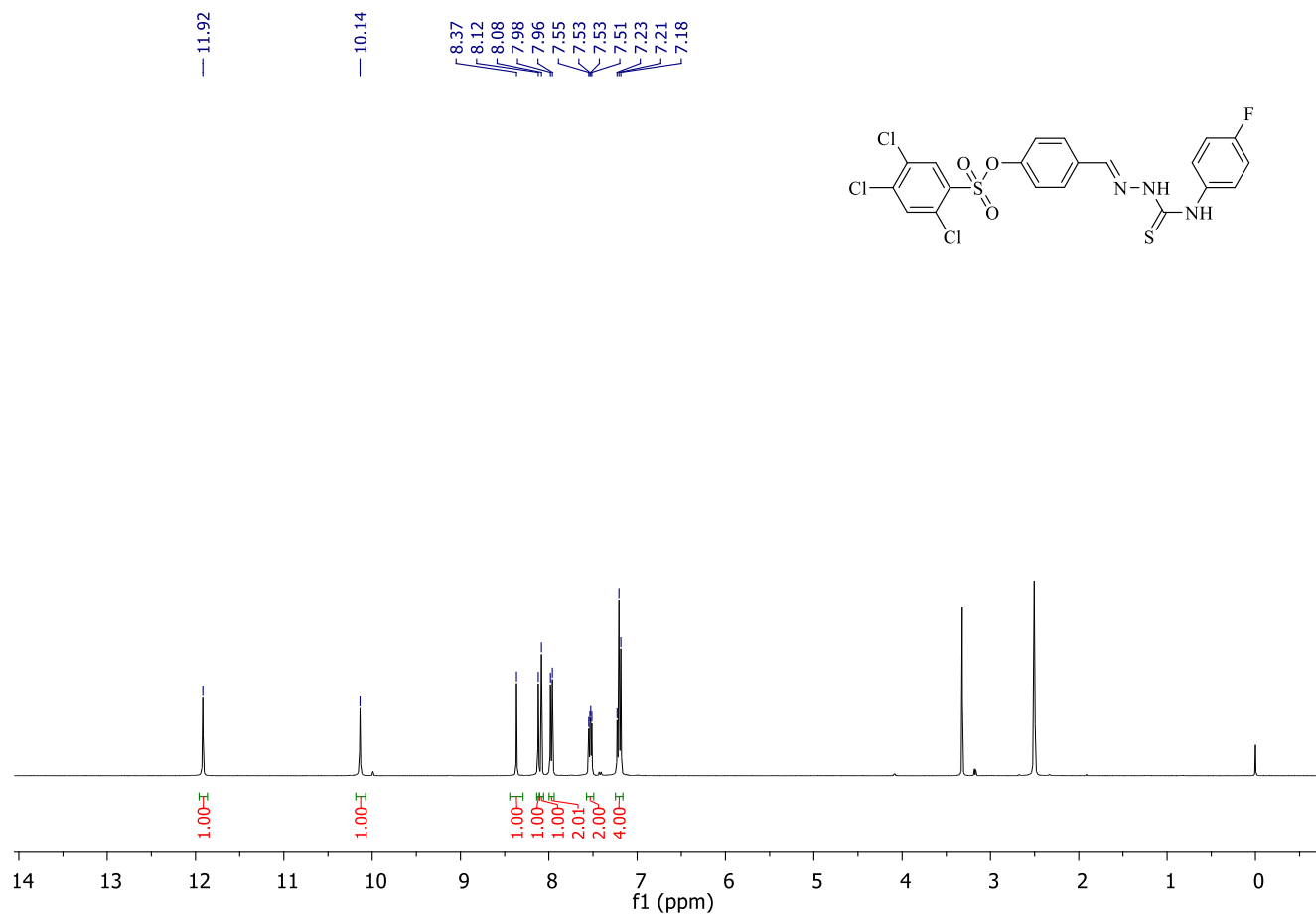
^{19}F NMR Spectrum of Compound 14

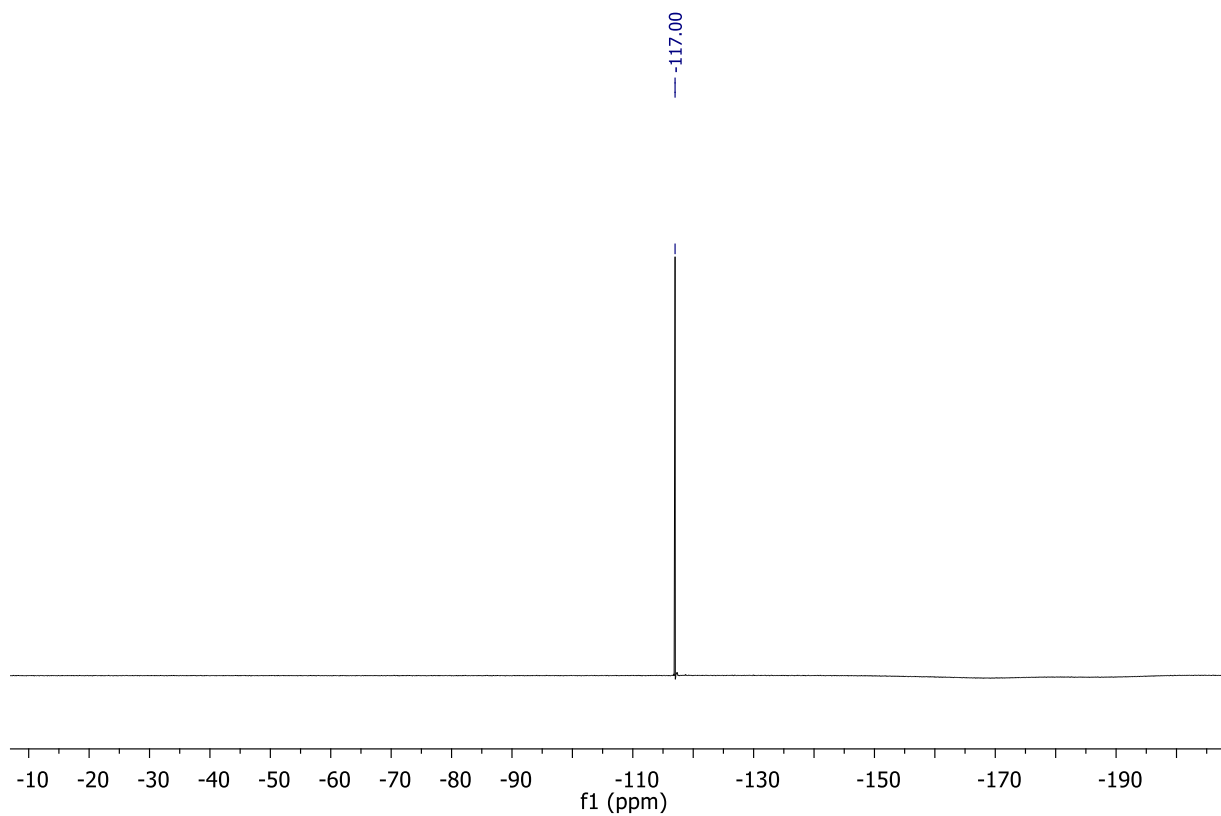


HRMS Spectrum of Compound 14

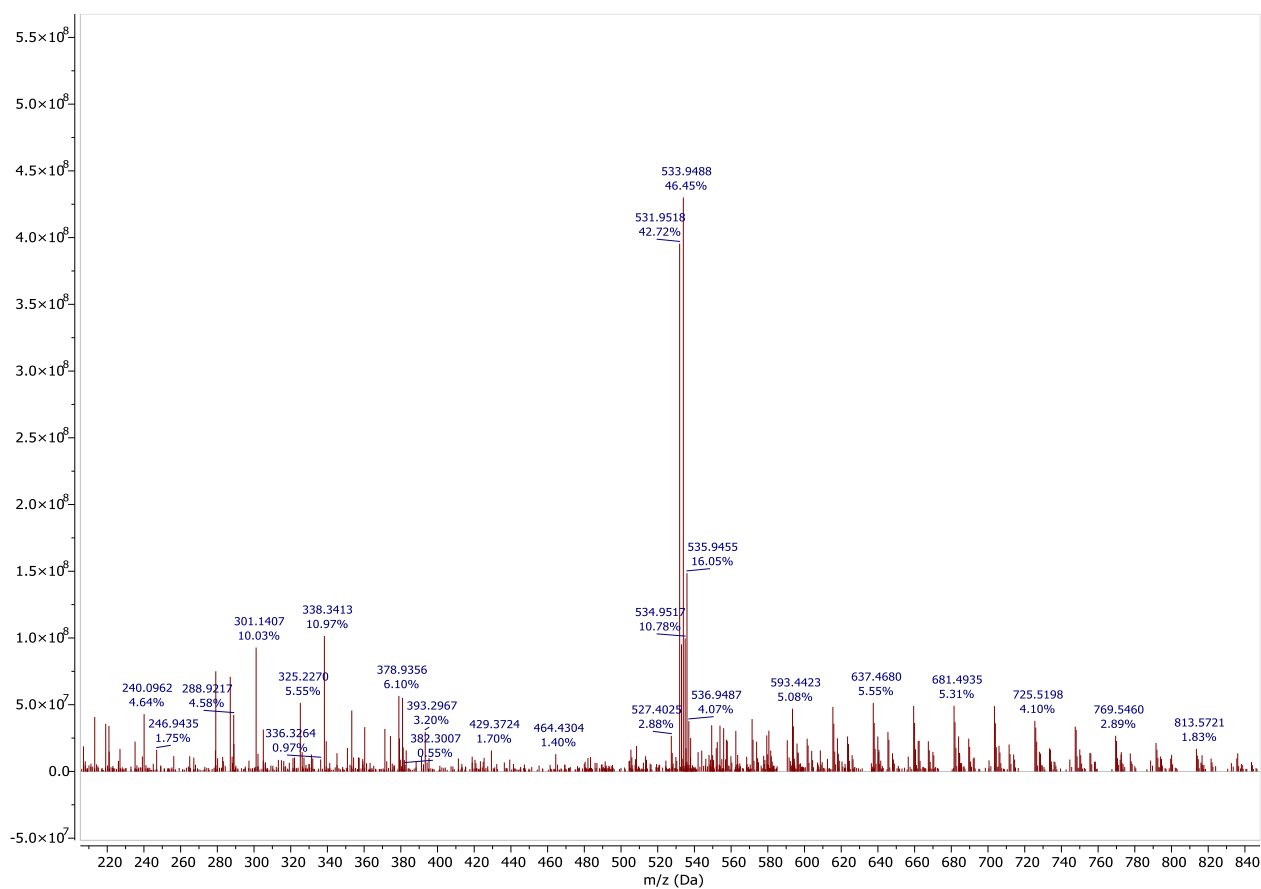


FTIR Spectrum of Compound 14

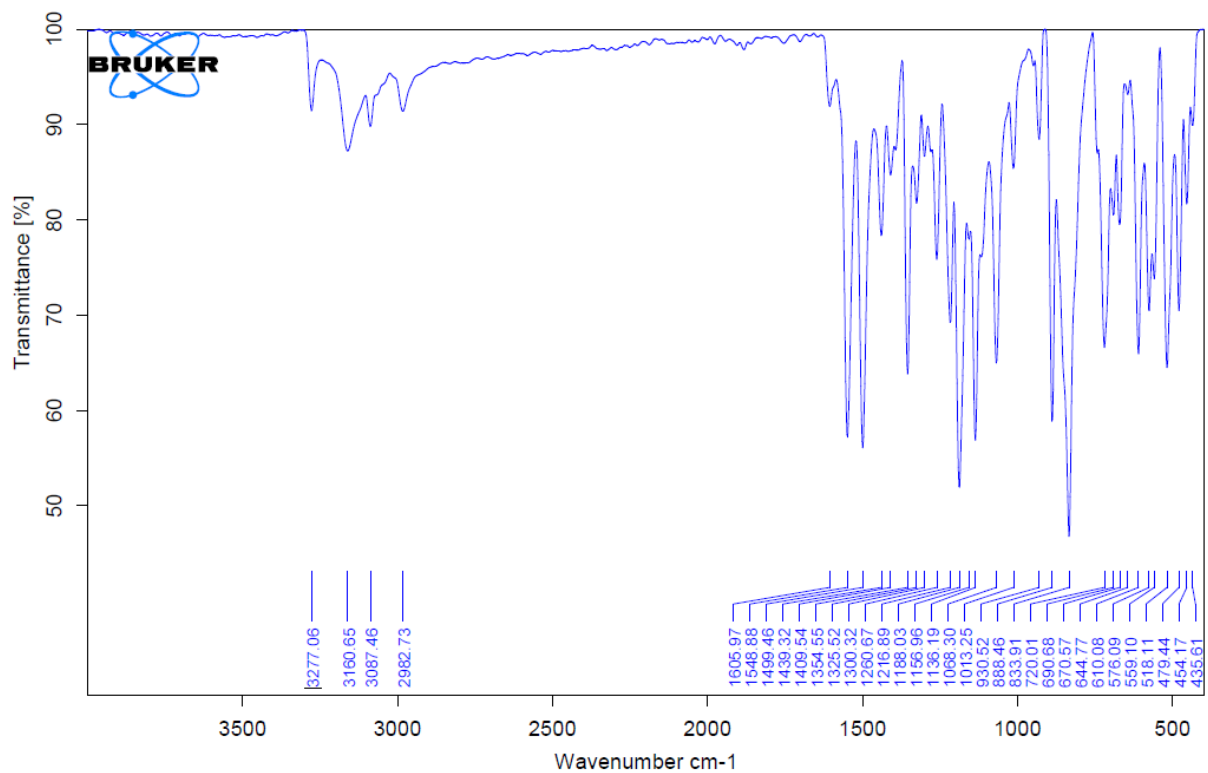




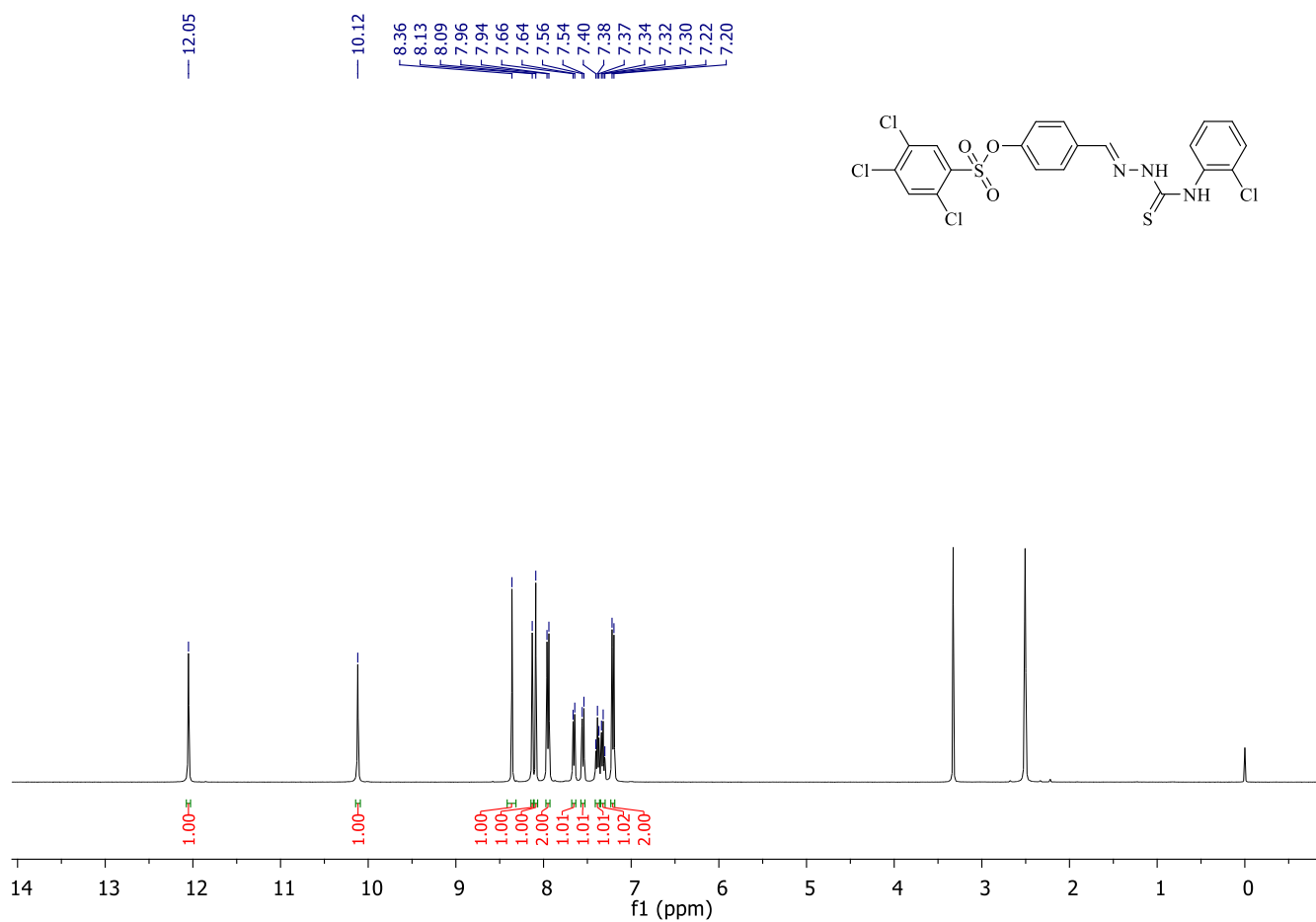
^{19}F NMR Spectrum of Compound 15



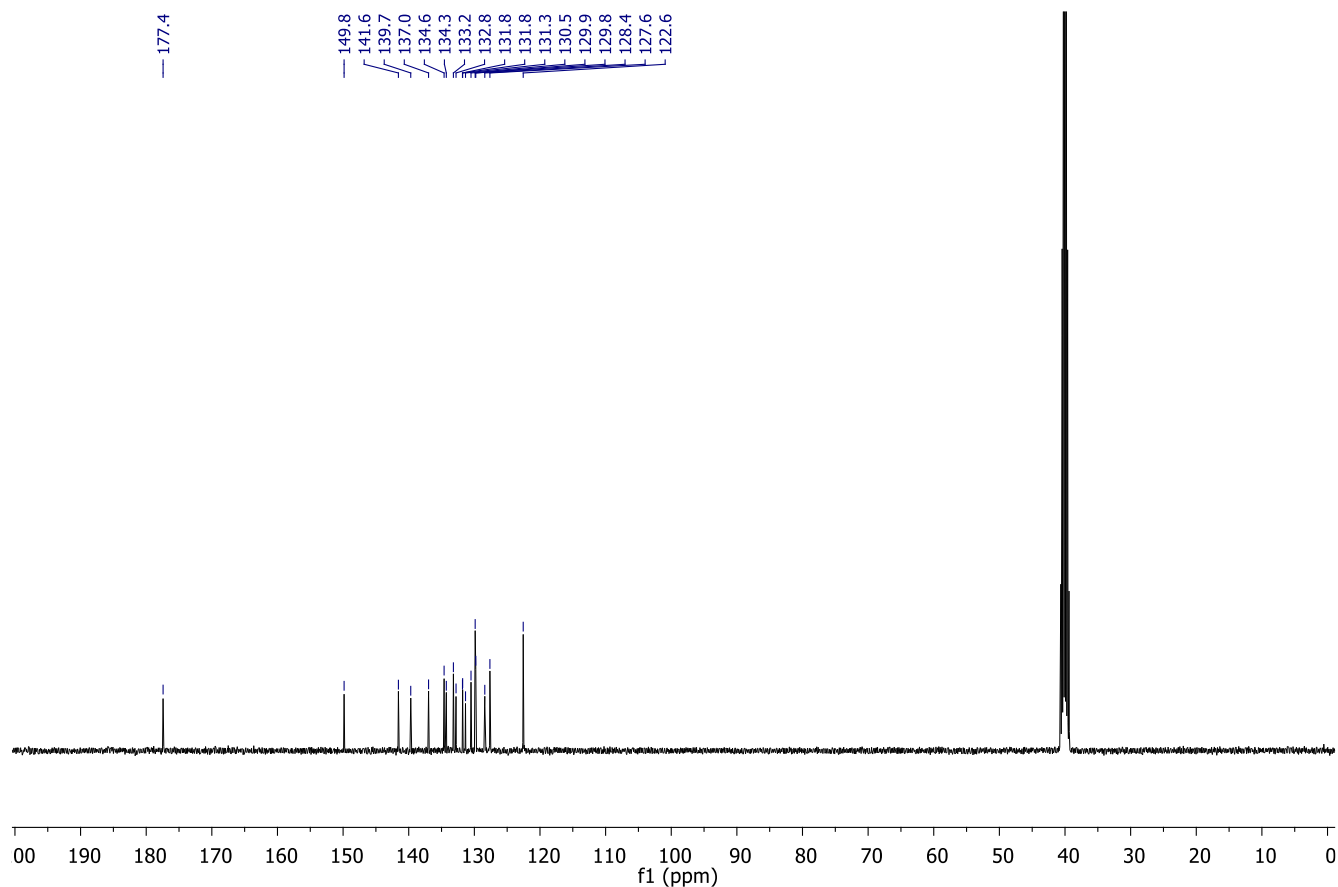
HRMS Spectrum of Compound 15



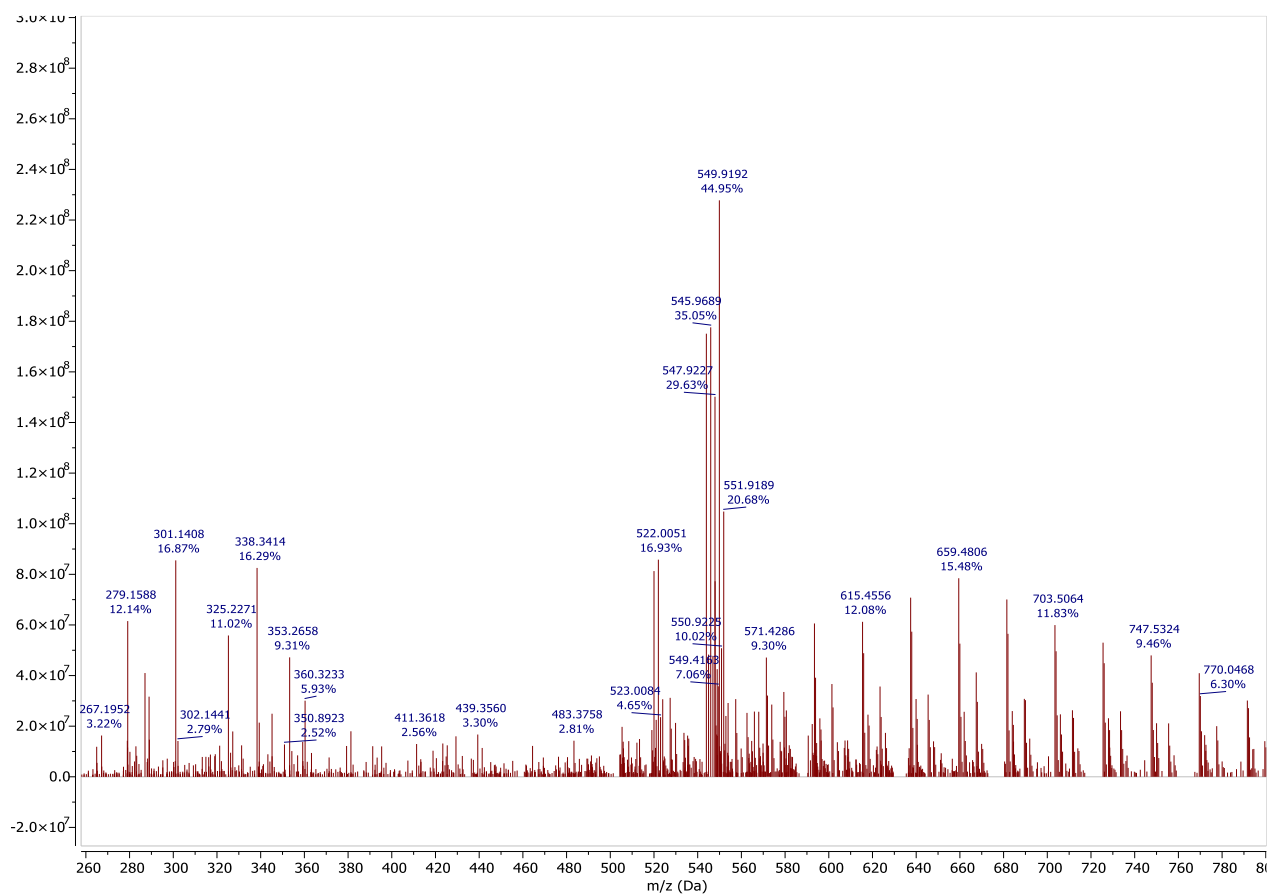
FTIR Spectrum of Compound 15



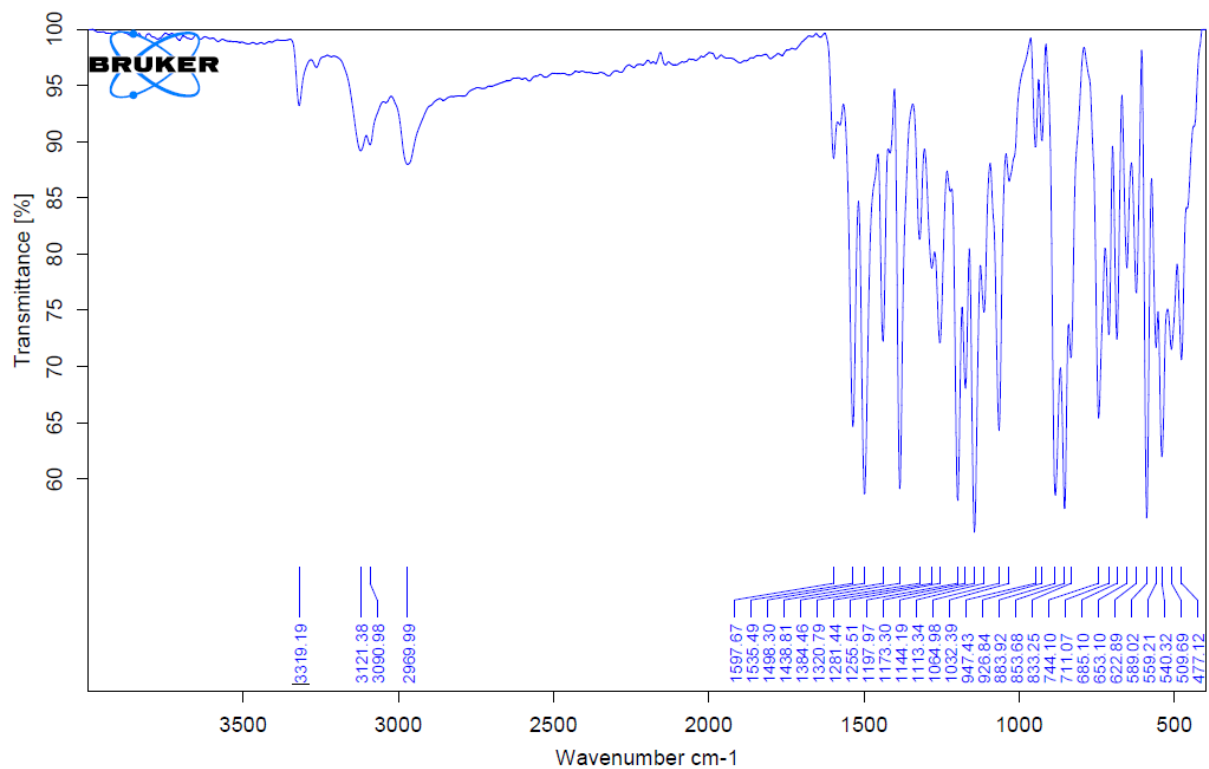
¹H NMR Spectrum of Compound 16



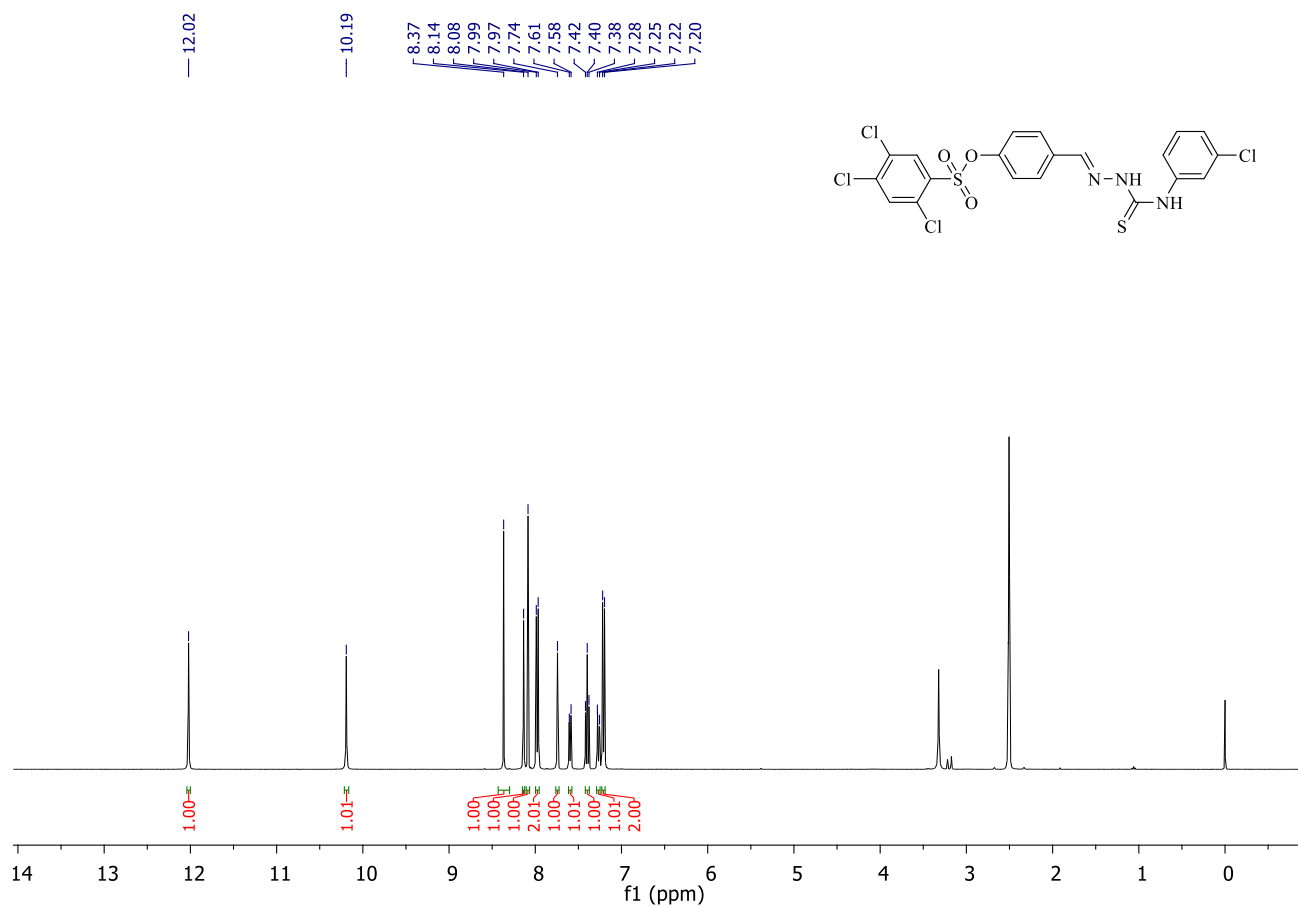
^{13}C NMR Spectrum of Compound 16



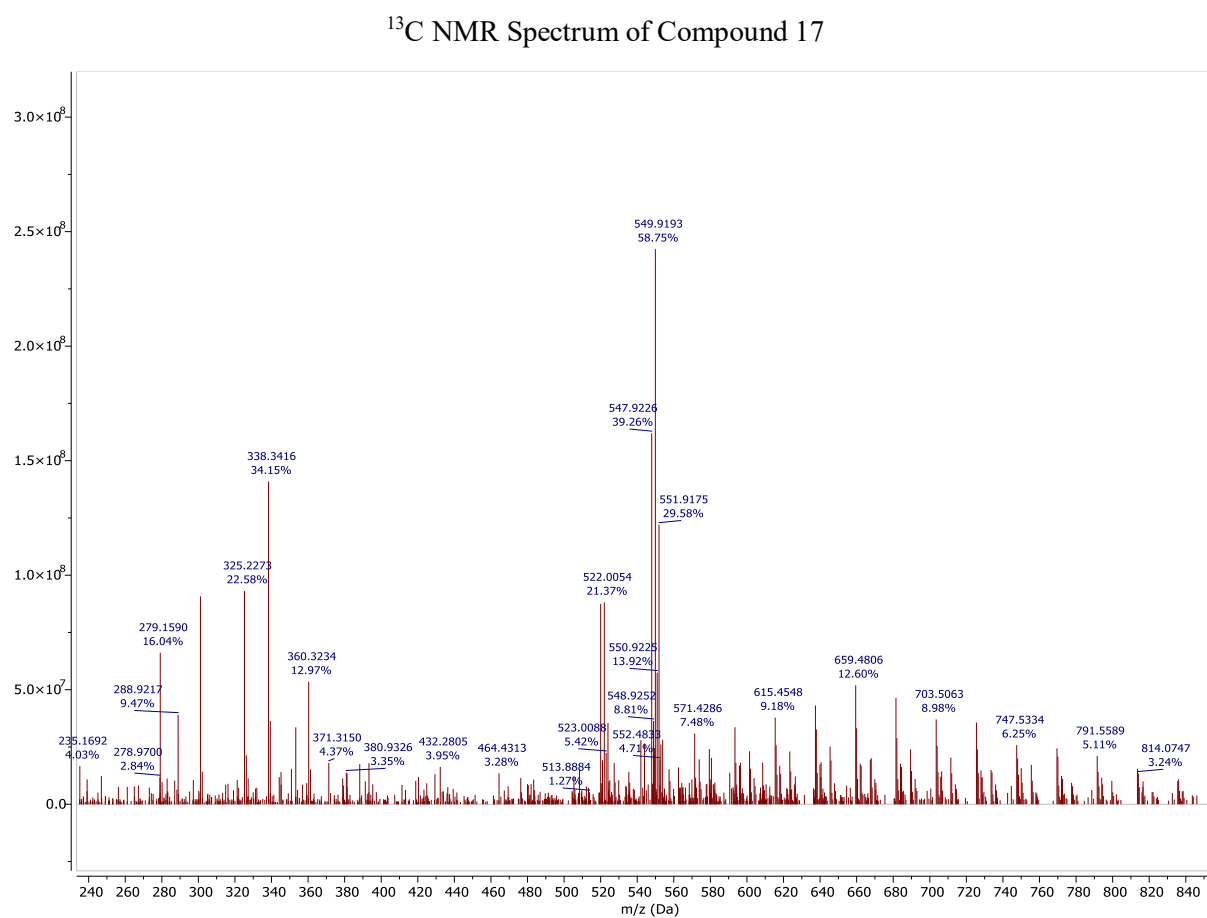
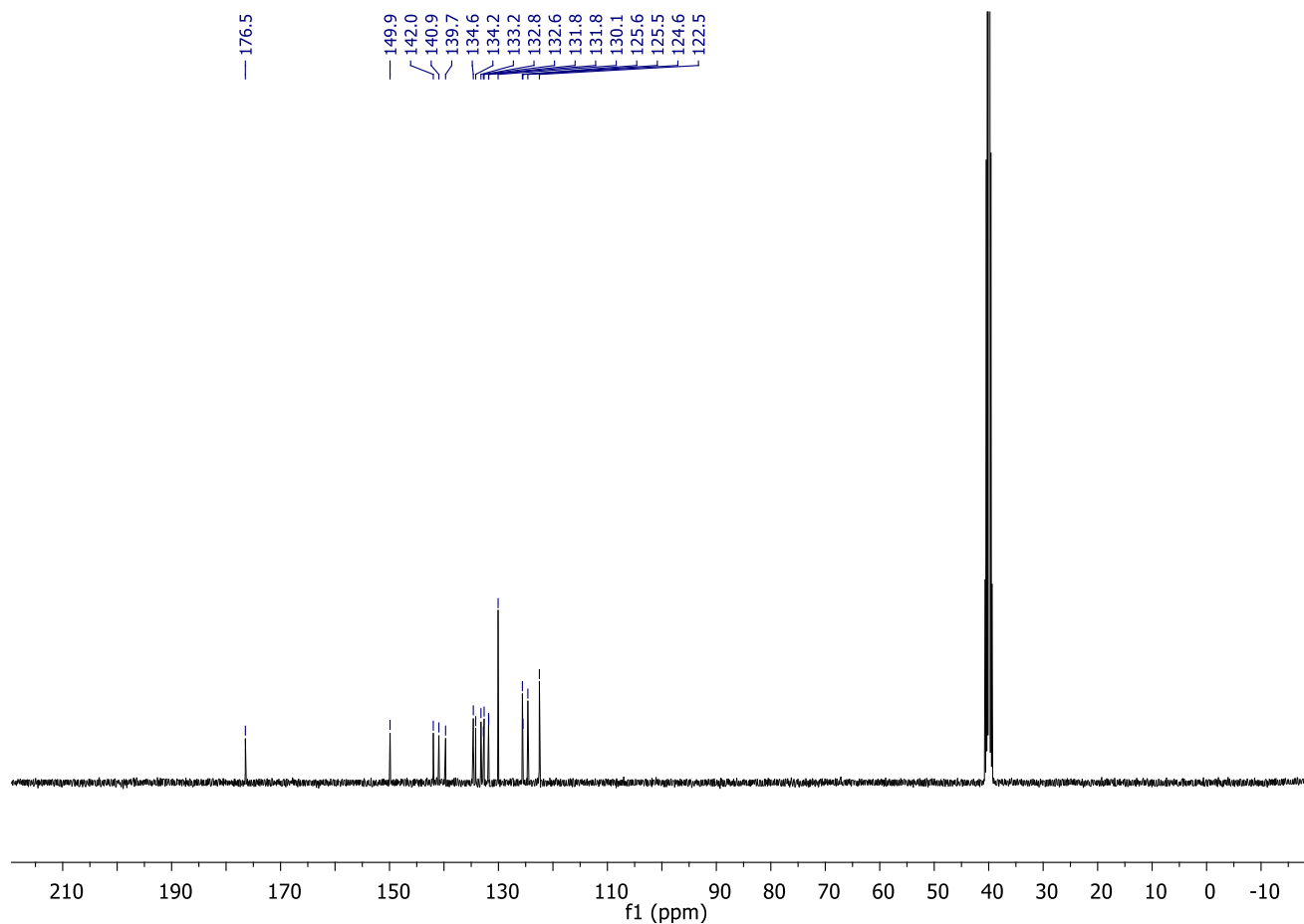
HRMS Spectrum of Compound 16

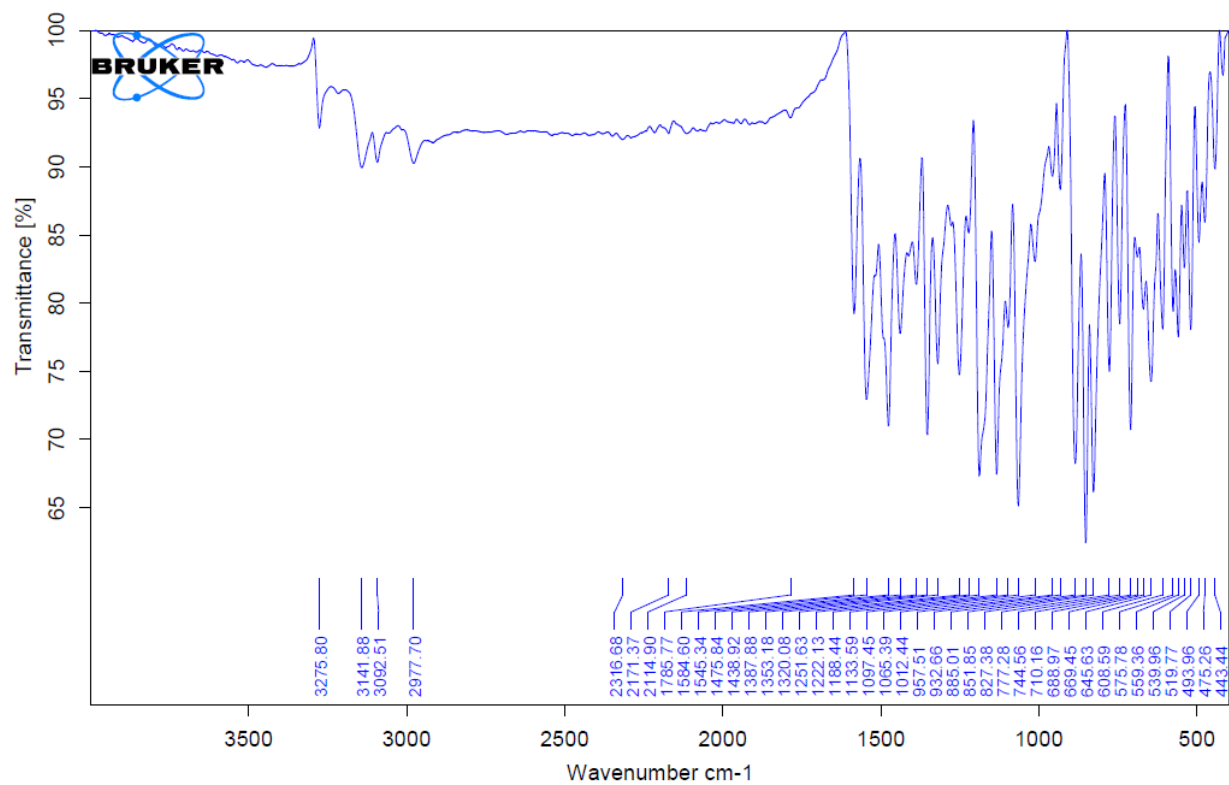


FTIR Spectrum of Compound 16

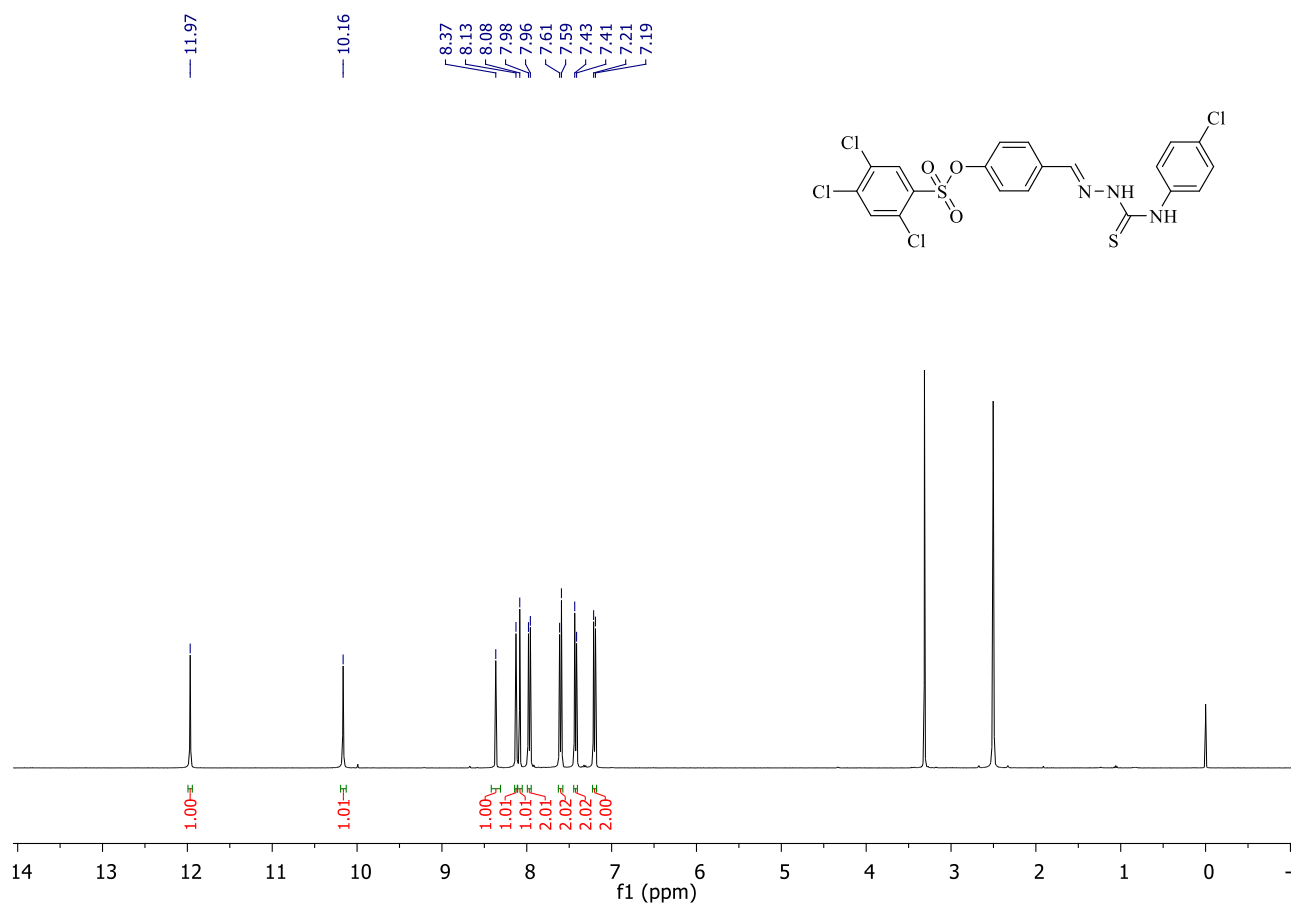


¹H NMR Spectrum of Compound 17

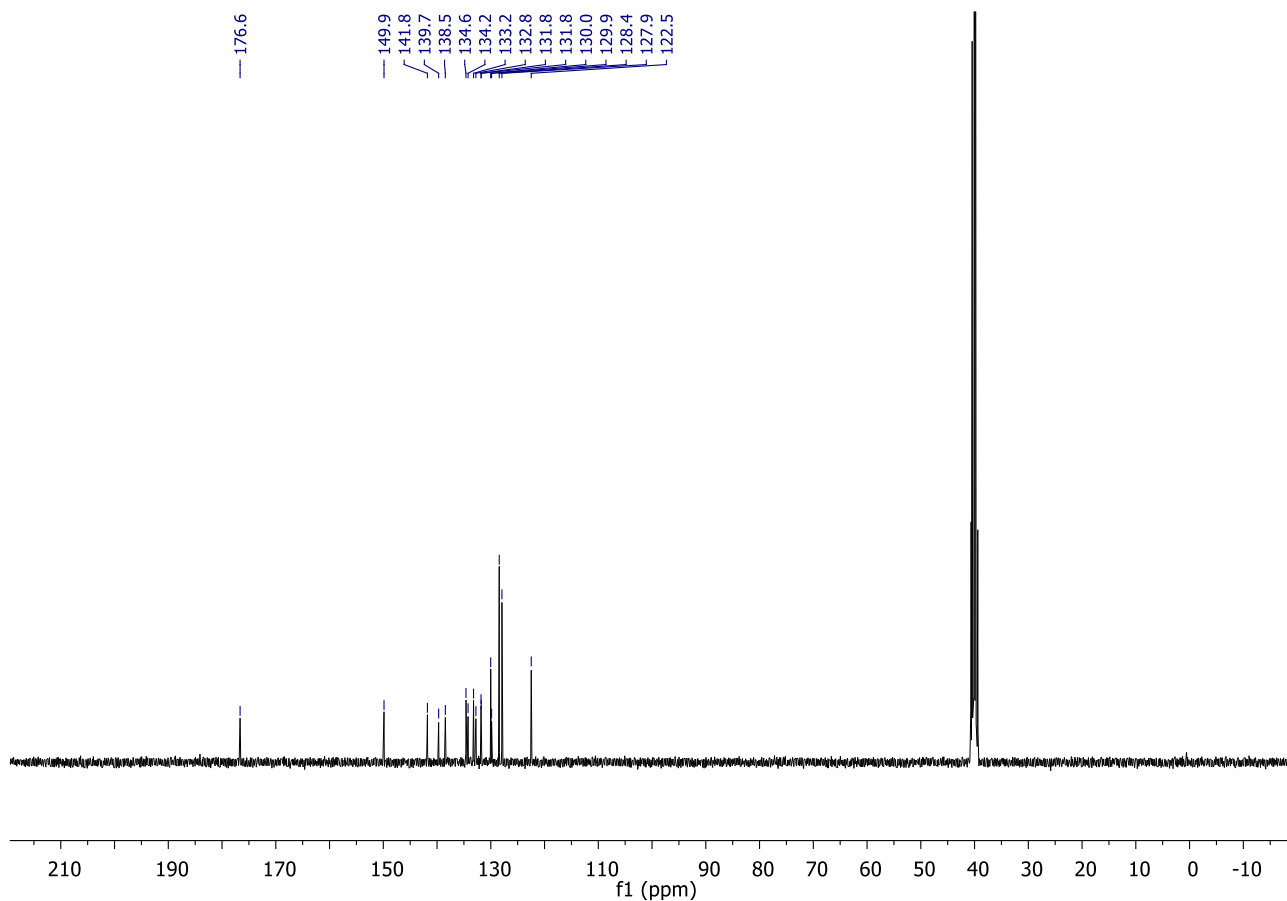




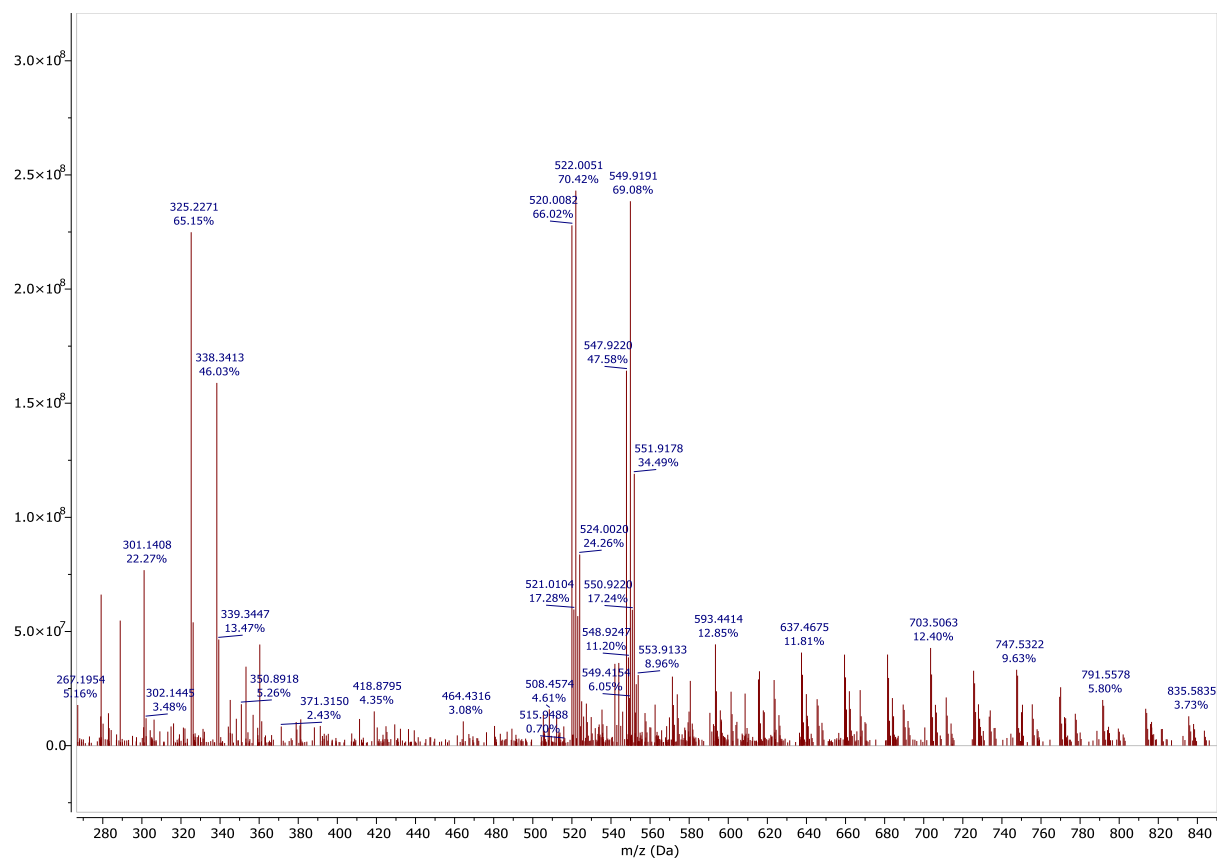
FTIR Spectrum of Compound 17



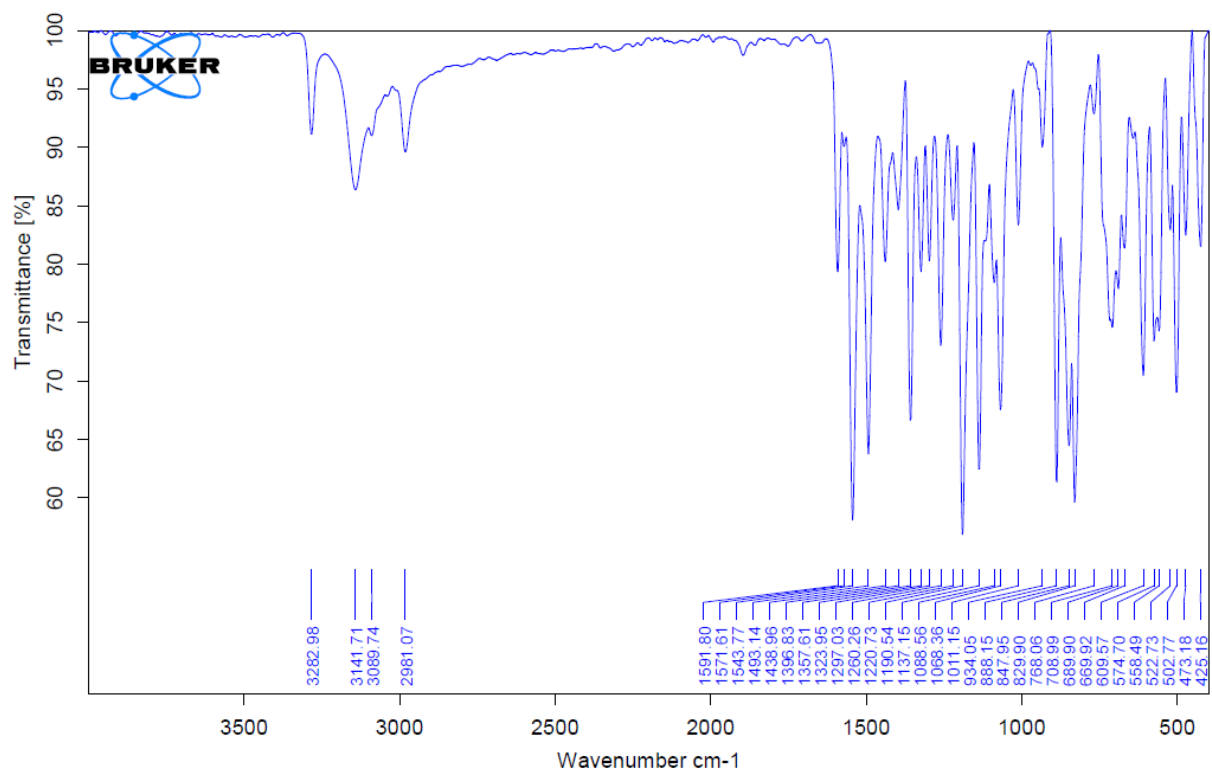
¹H NMR Spectrum of Compound 18



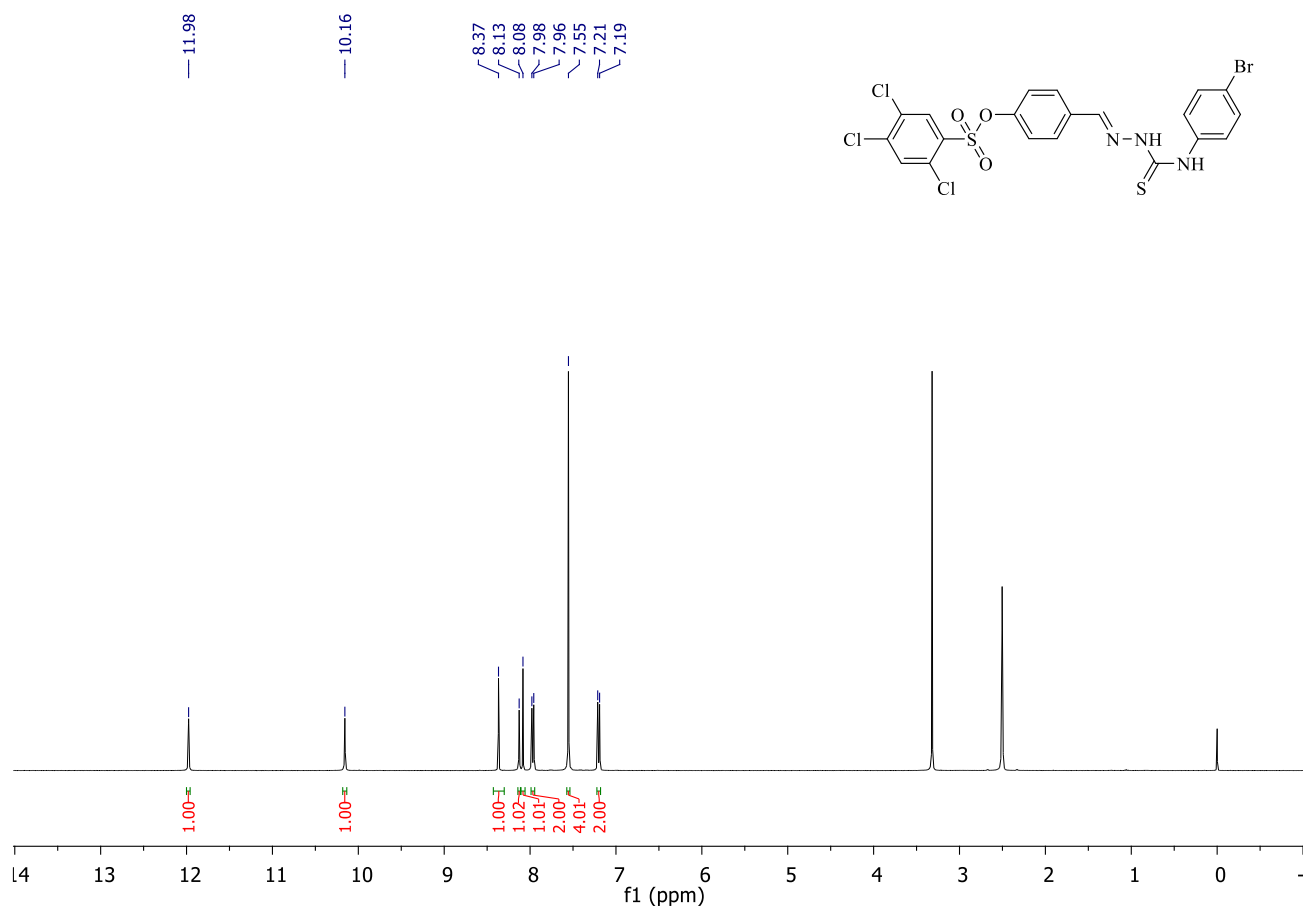
^{13}C NMR Spectrum of Compound 18



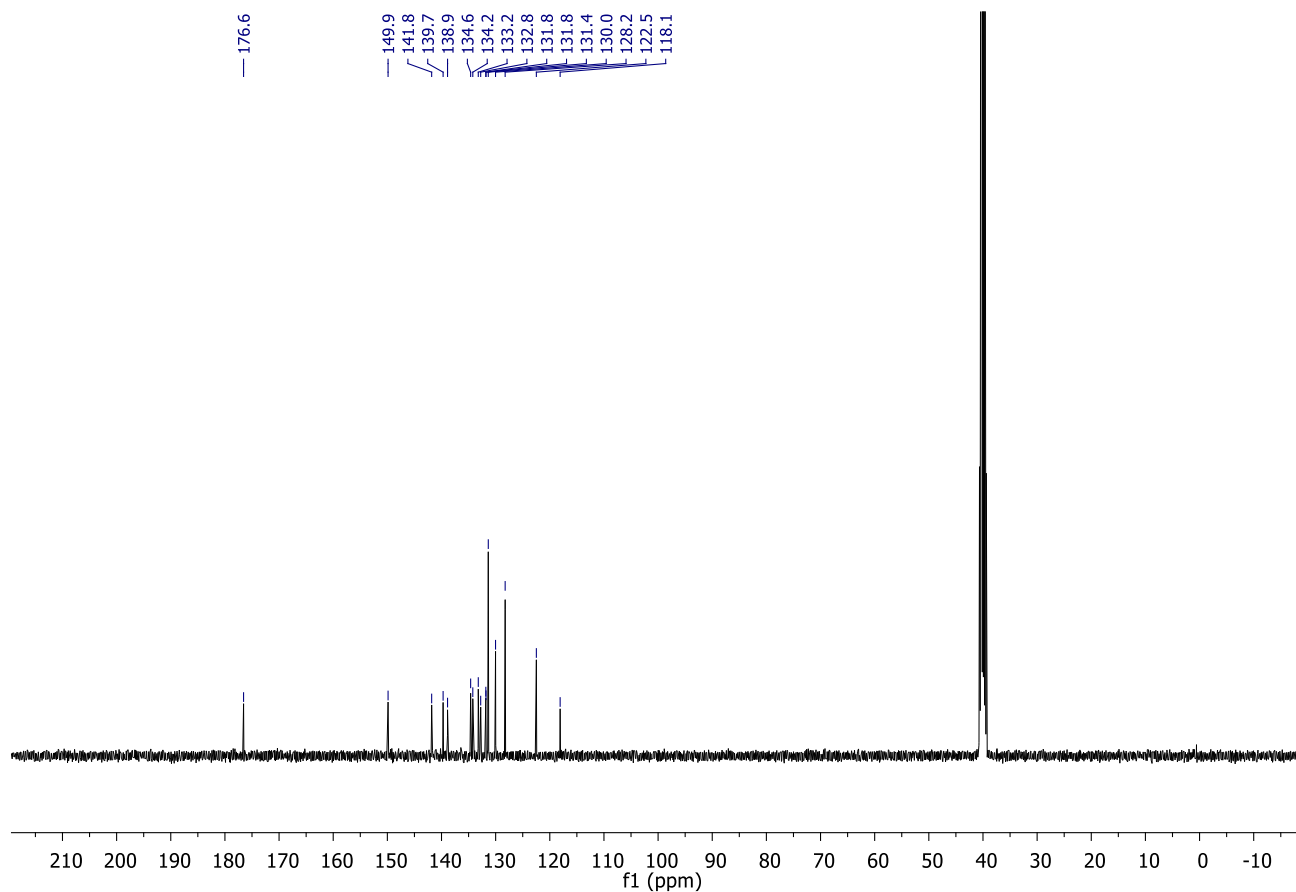
HRMS Spectrum of Compound 18



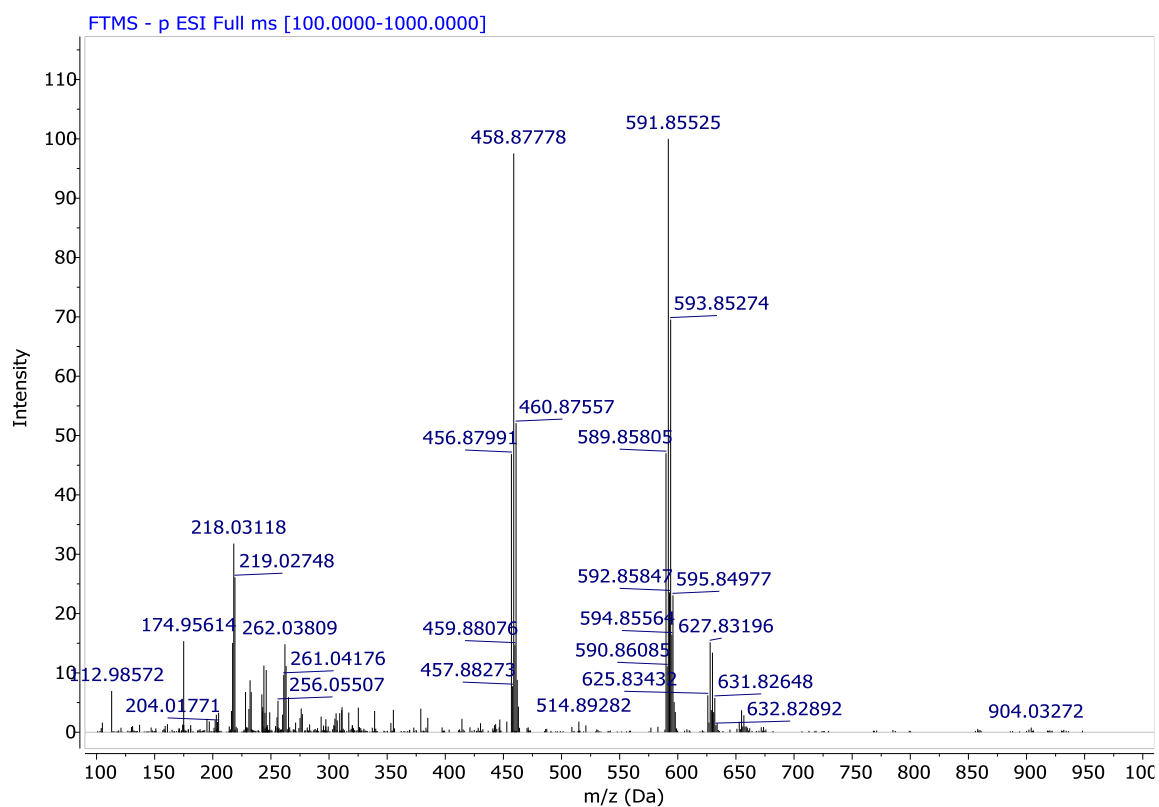
FTIR Spectrum of Compound 18



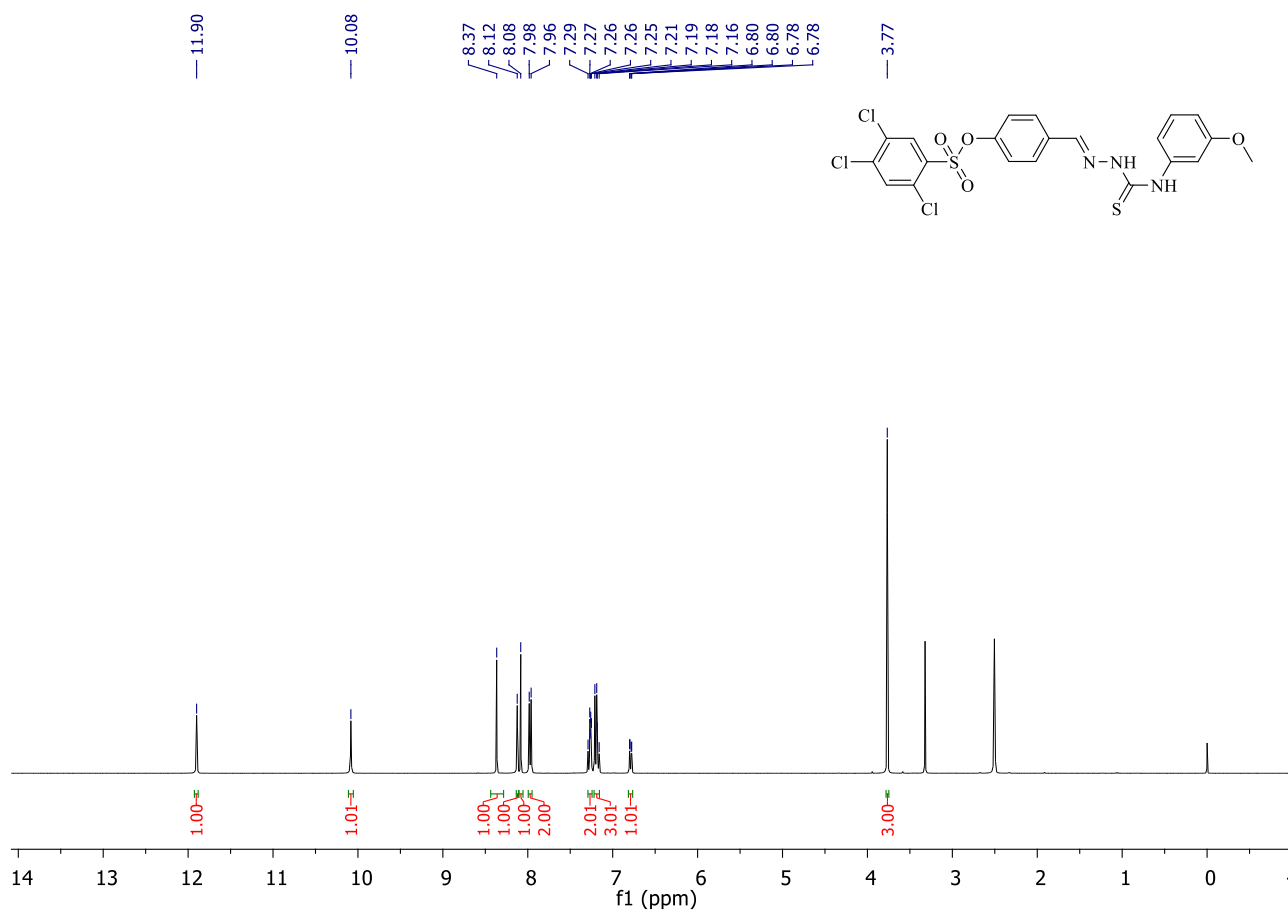
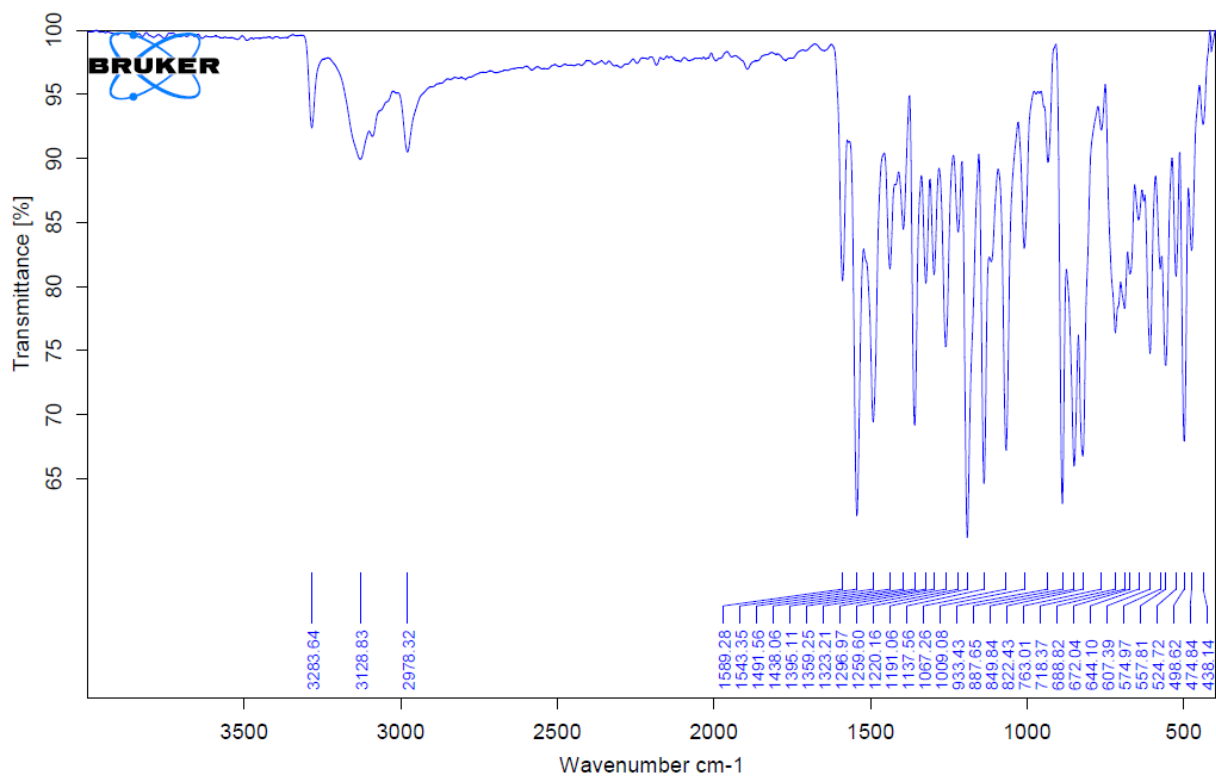
¹H NMR Spectrum of Compound 19

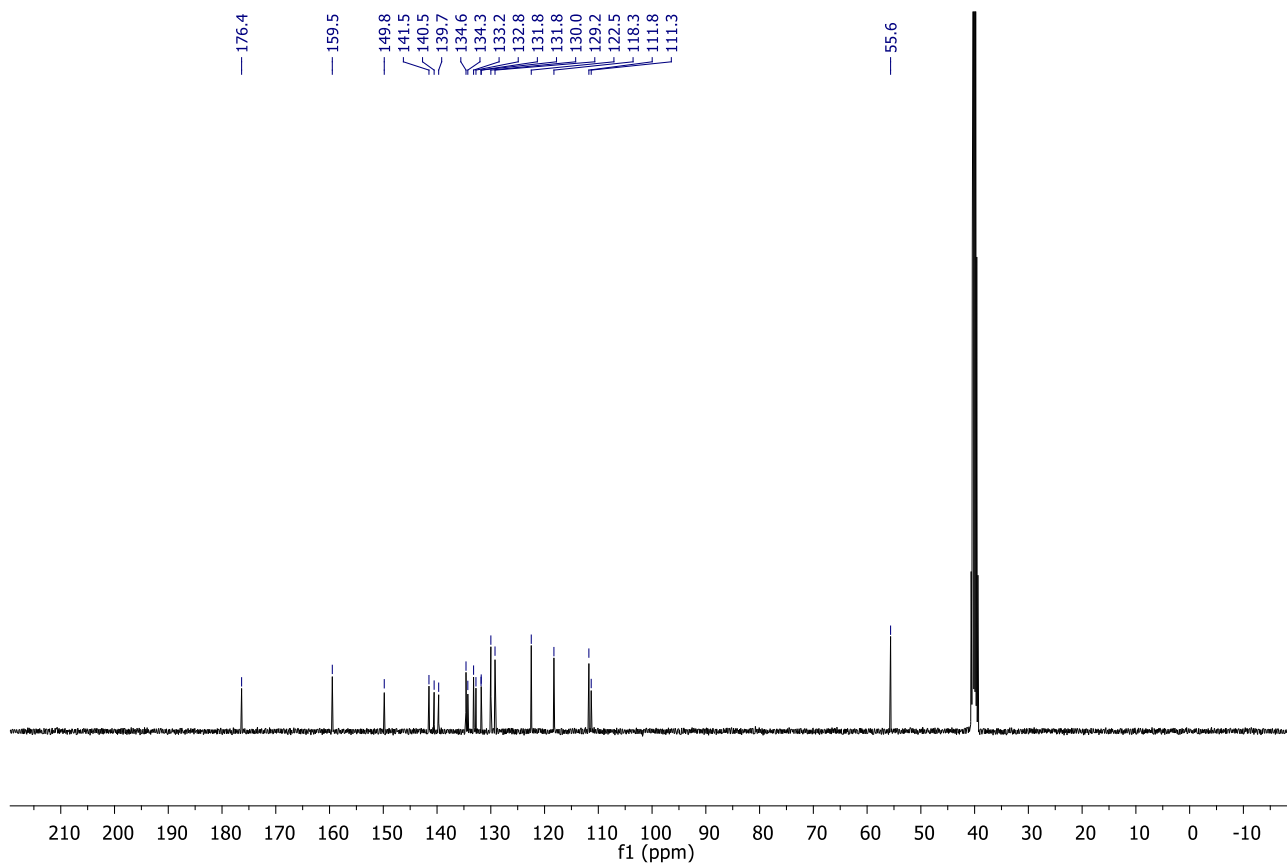


^{13}C NMR Spectrum of Compound 19

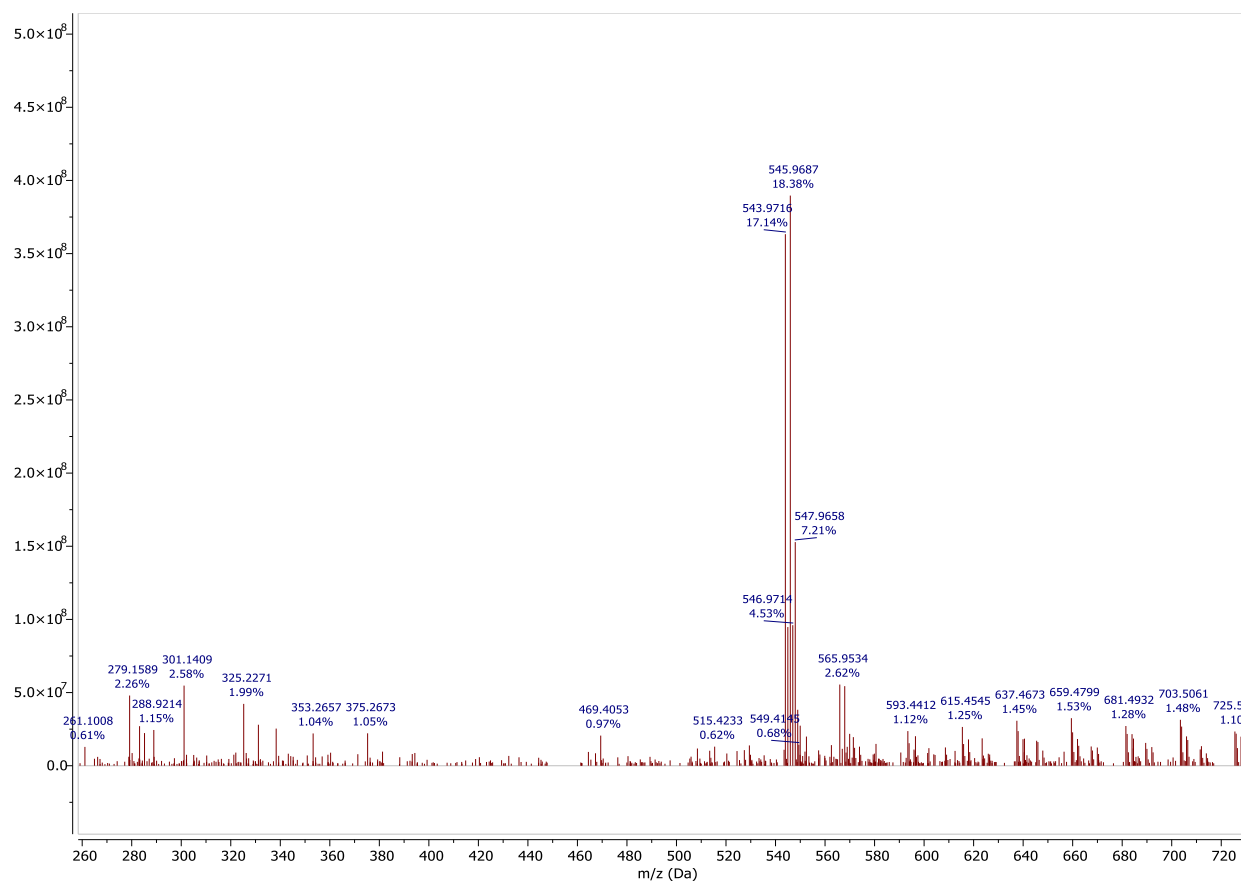


HRMS Spectrum of Compound 19

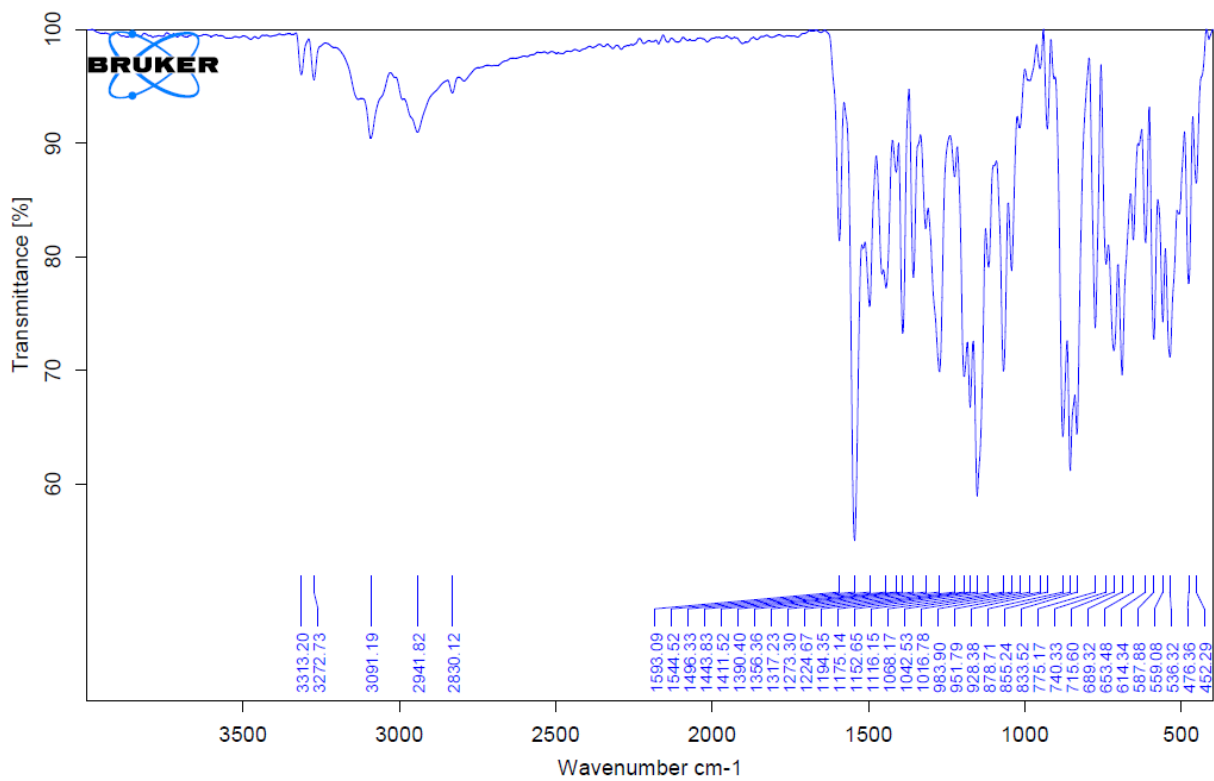




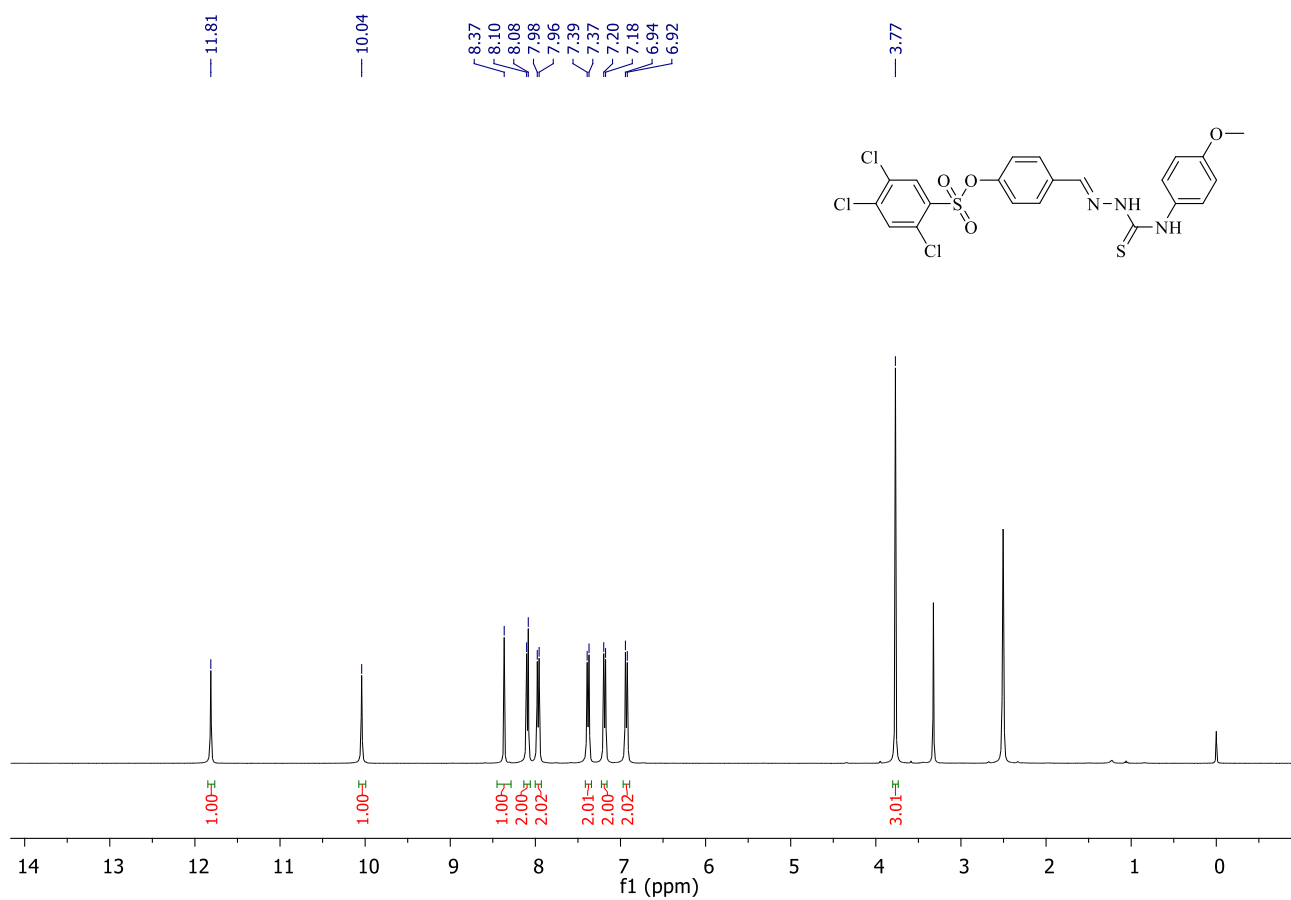
^{13}C NMR Spectrum of Compound 20



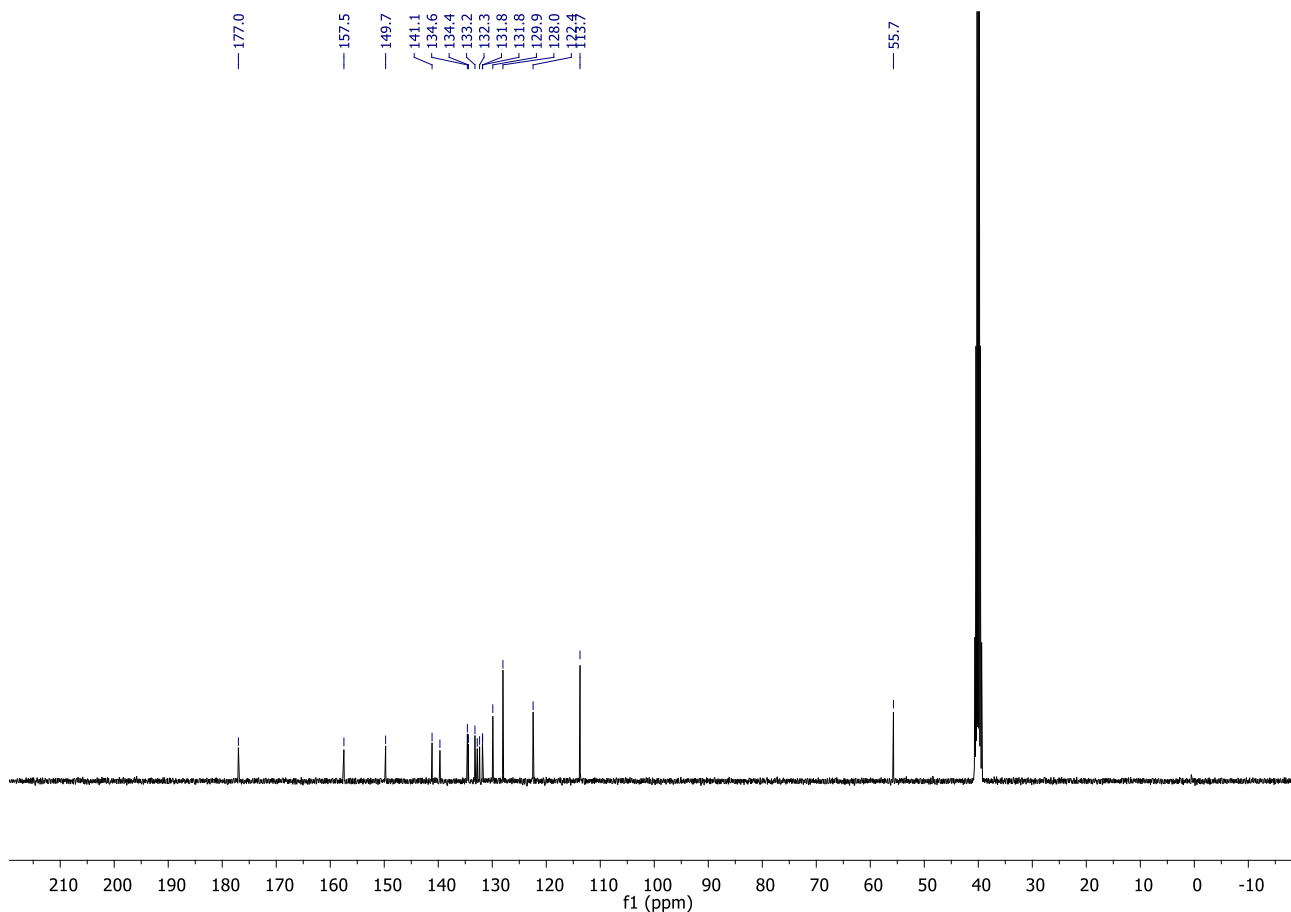
HRMS Spectrum of Compound 20



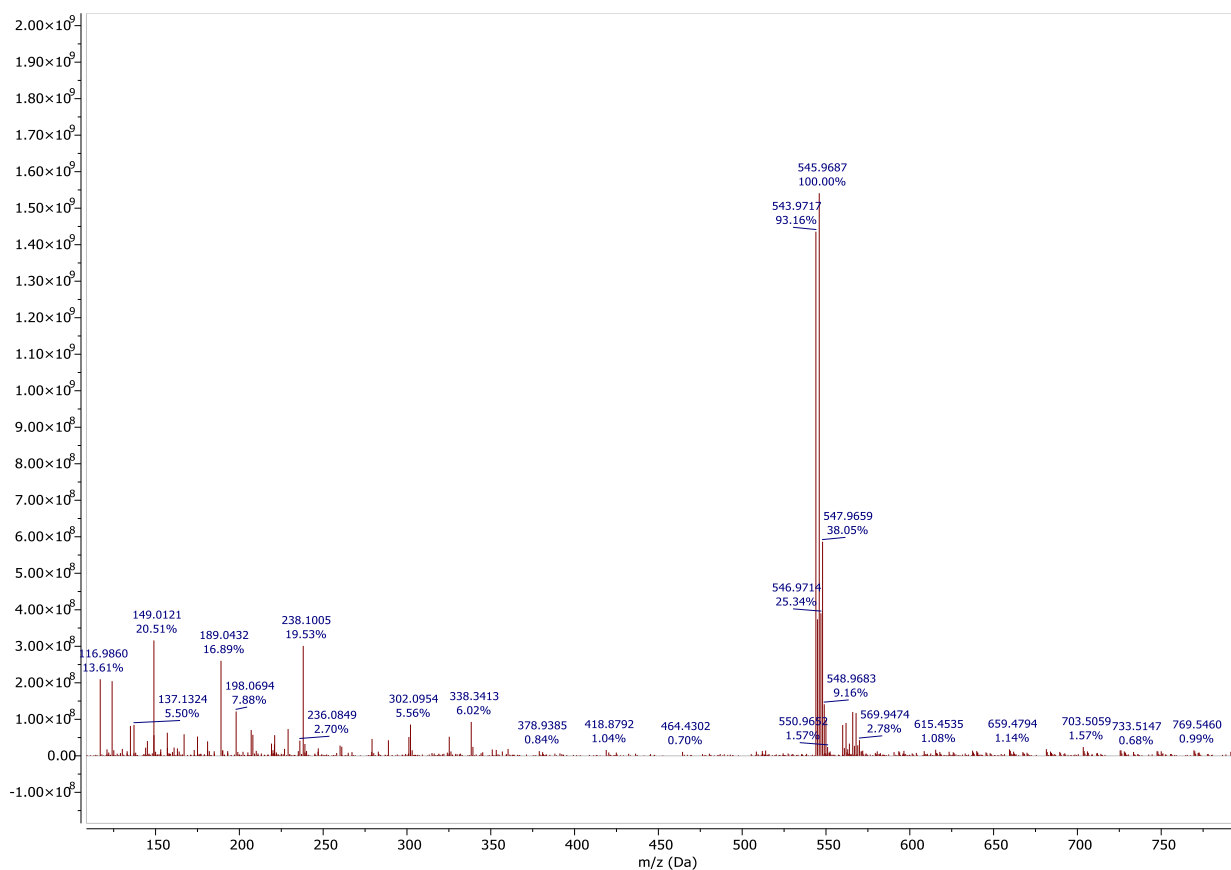
FTIR Spectrum of Compound 20



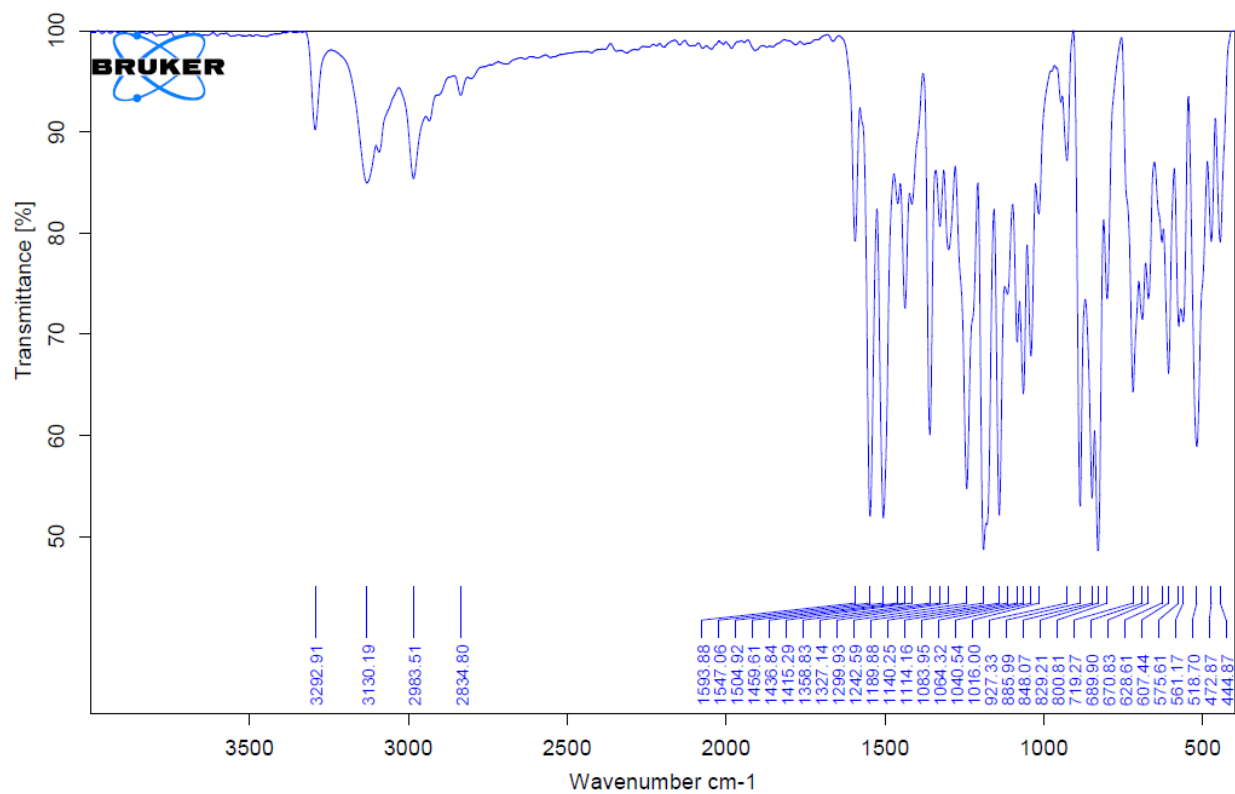
¹H NMR Spectrum of Compound 21



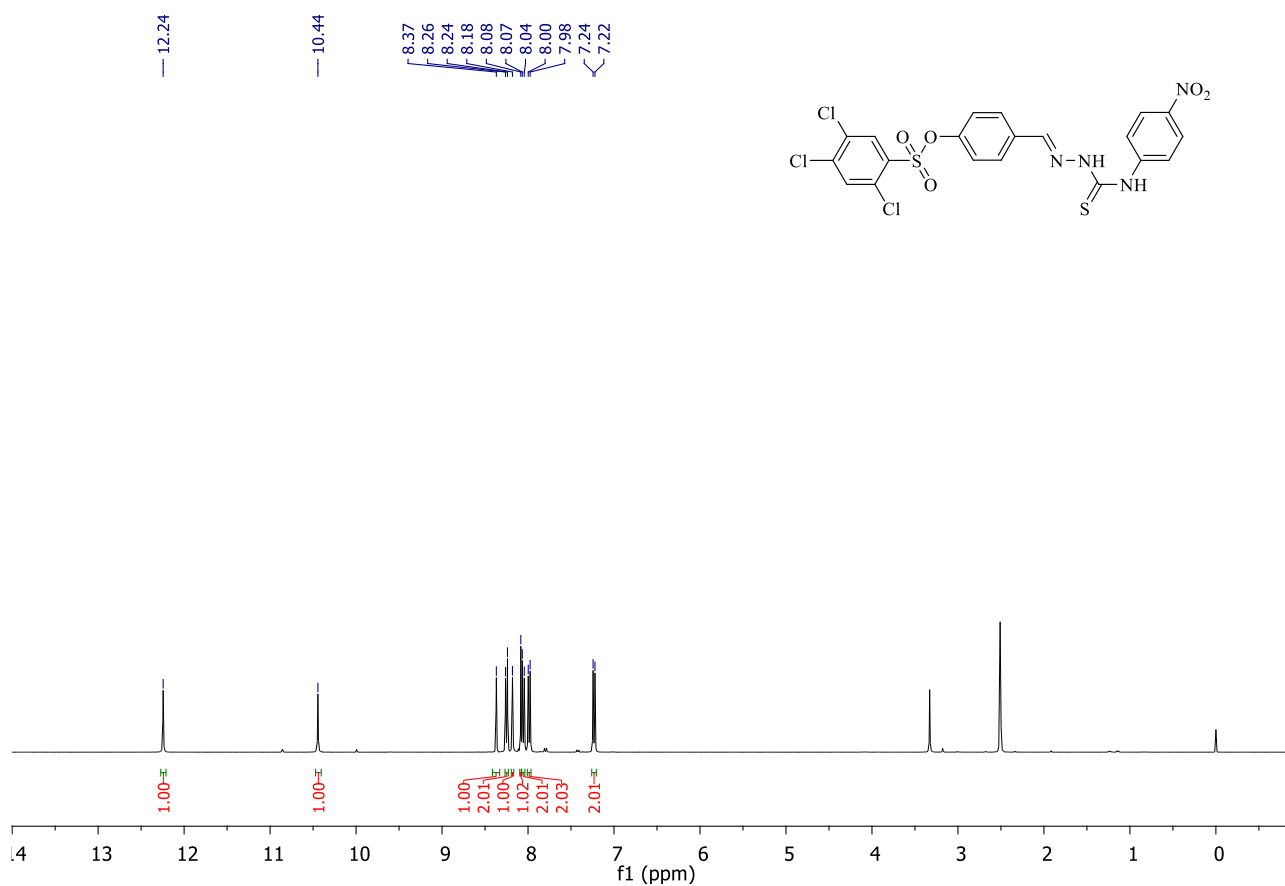
¹³C NMR Spectrum of Compound 21



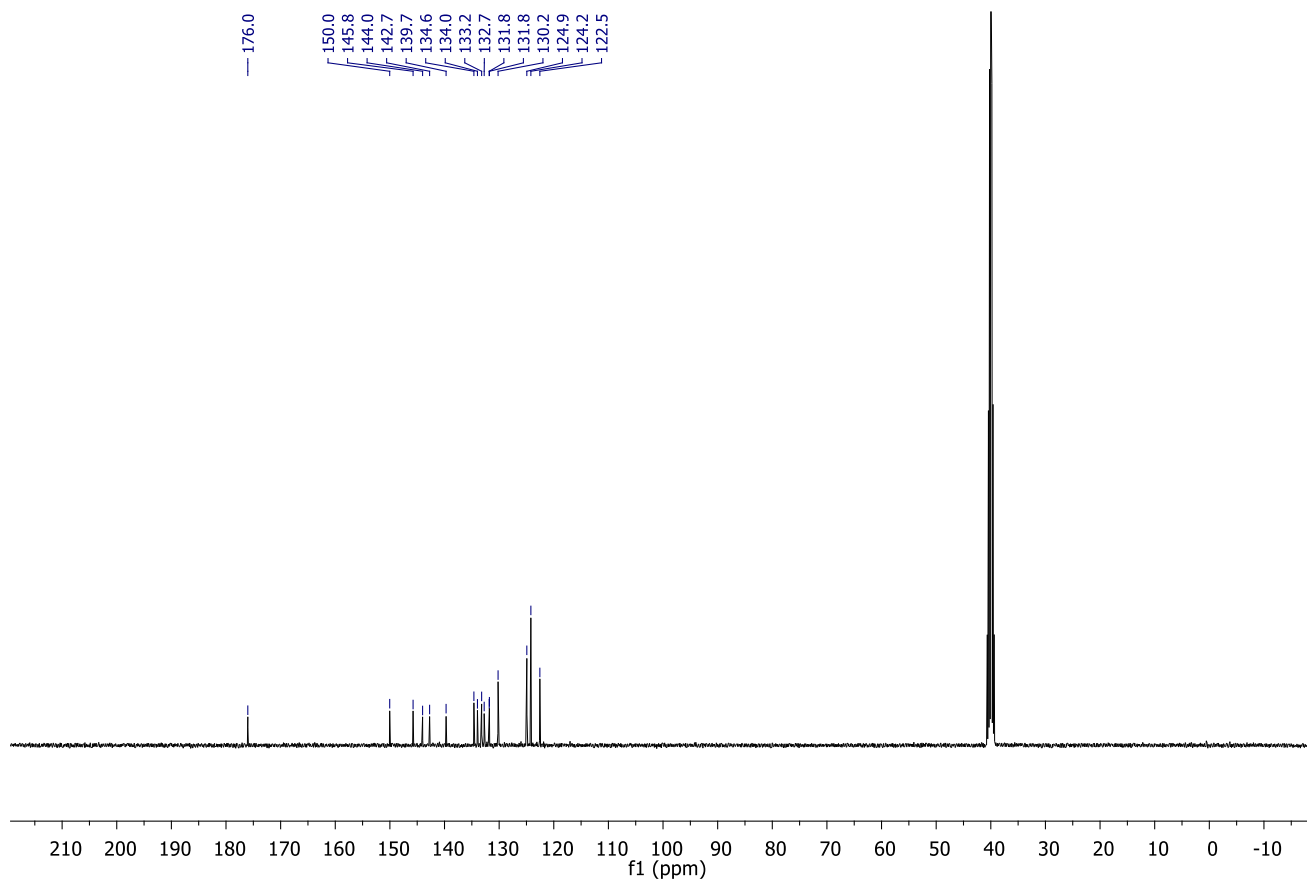
HRMS Spectrum of Compound 21



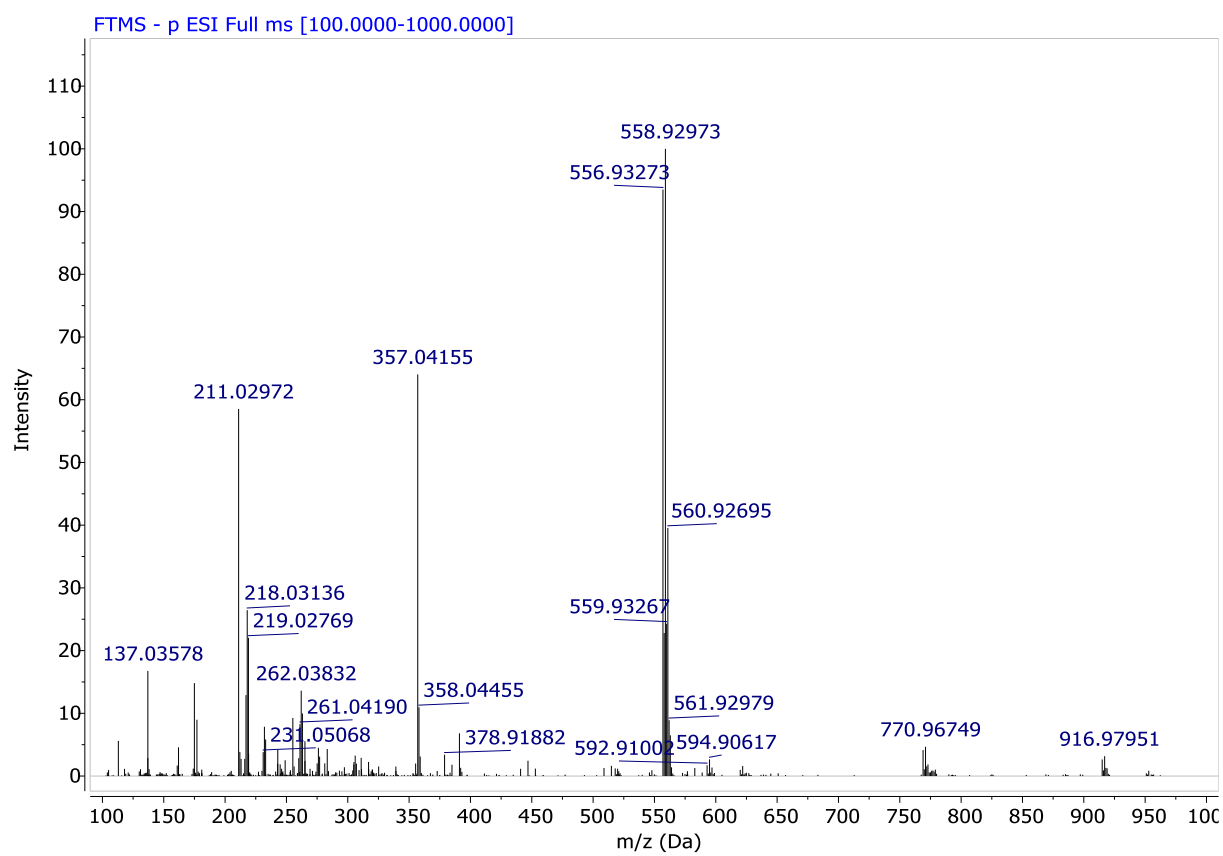
FTIR Spectrum of Compound 21



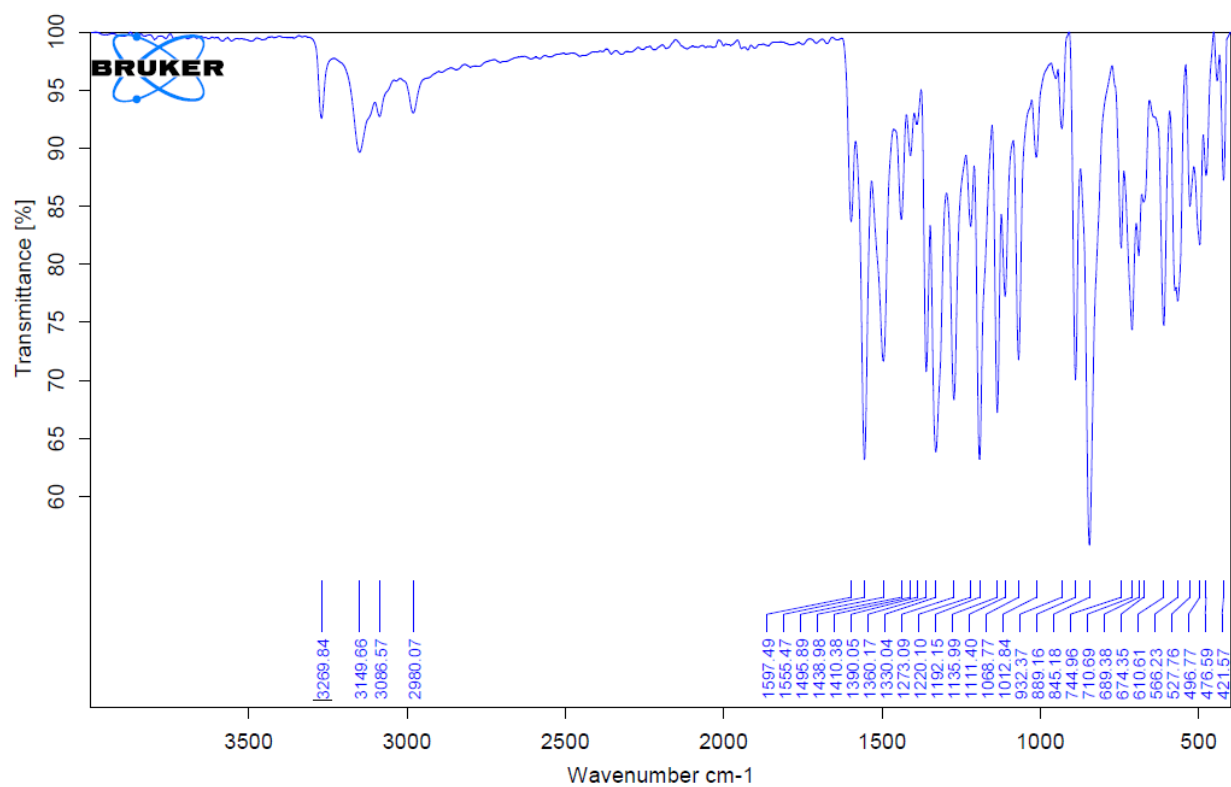
¹H NMR Spectrum of Compound 22



^{13}C NMR Spectrum of Compound 22

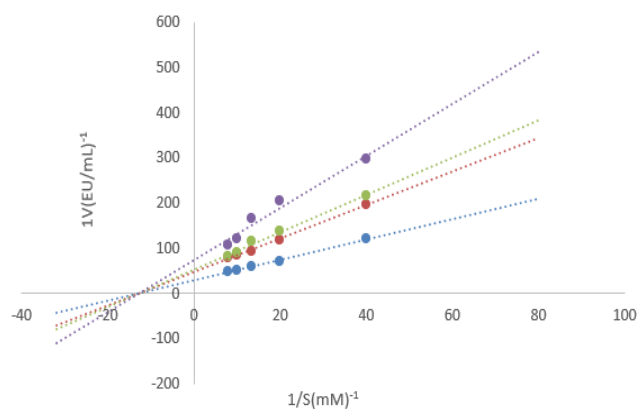


HRMS Spectrum of Compound 22

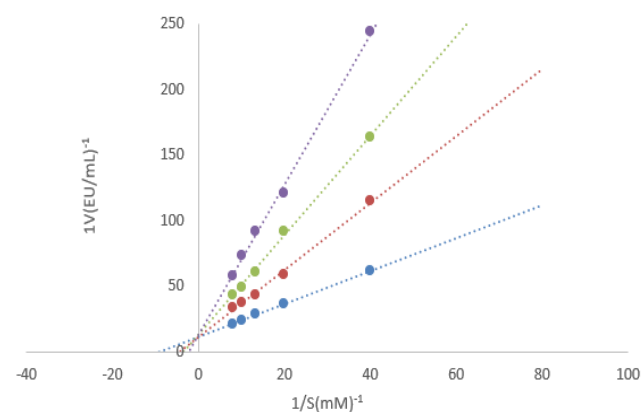


FTIR Spectrum of Compound 22

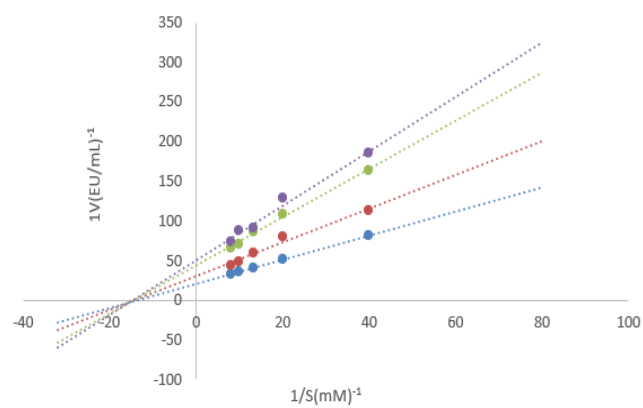
Lineweaver-Burk Graphs of Compounds 1-22 and Acarbose for α -Glu



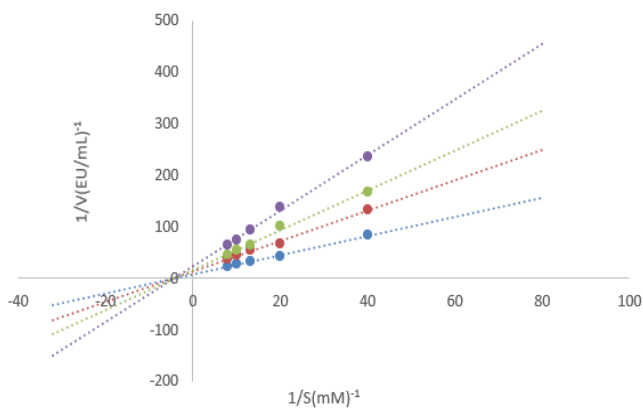
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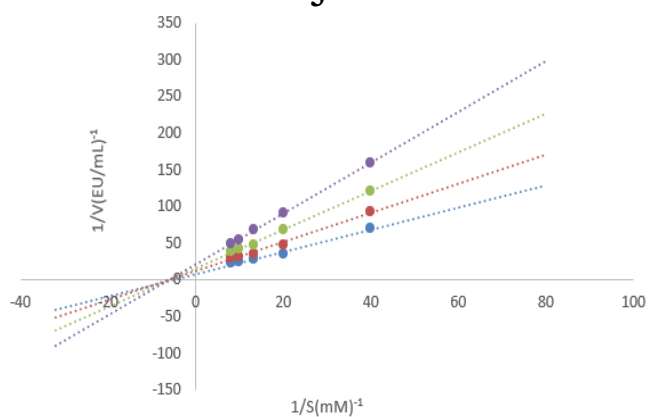
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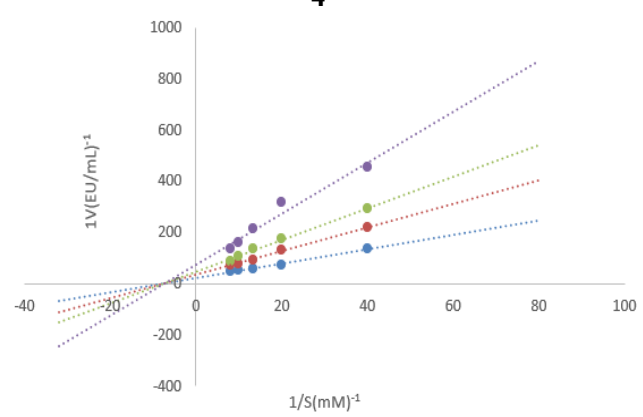
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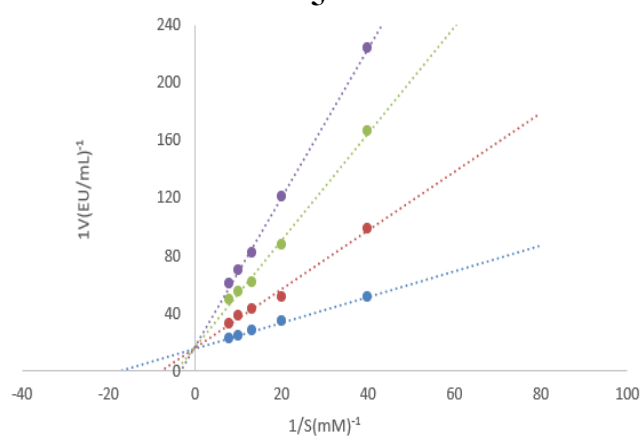
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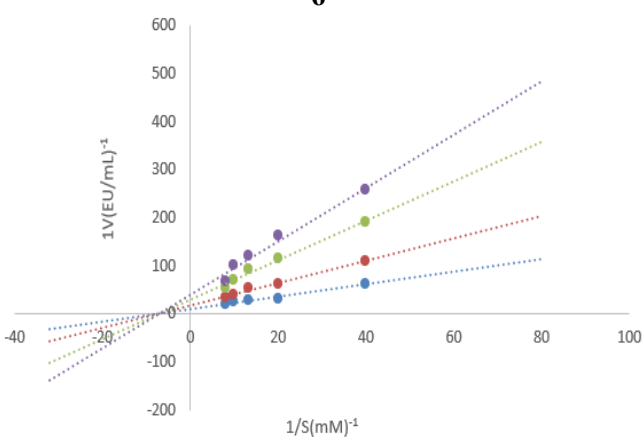
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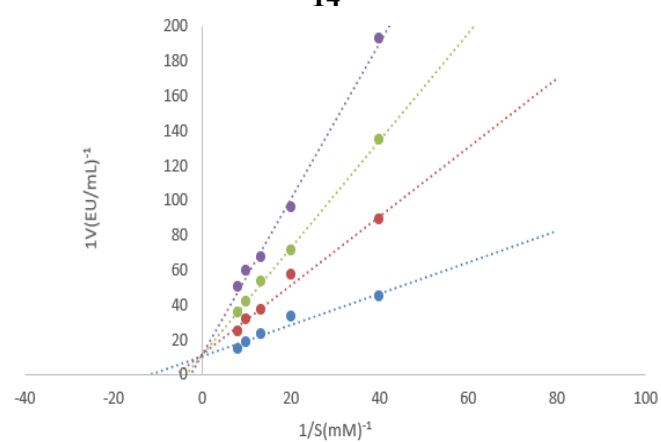
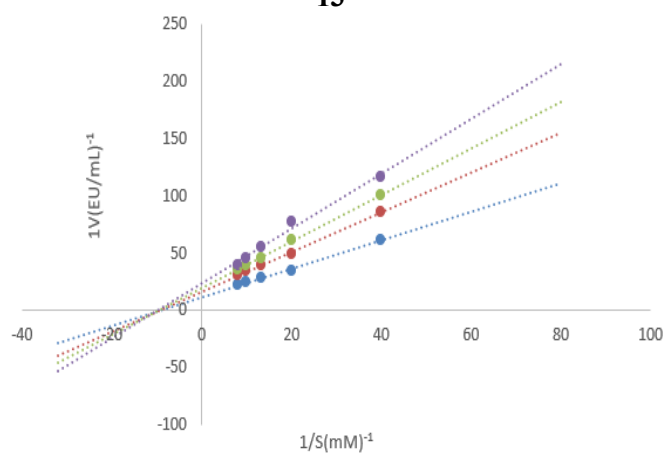
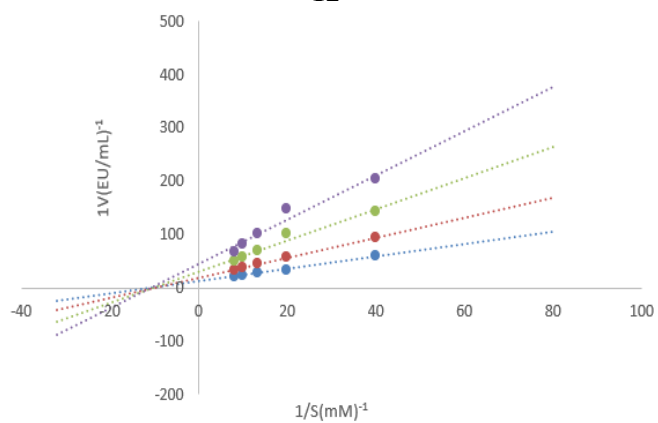
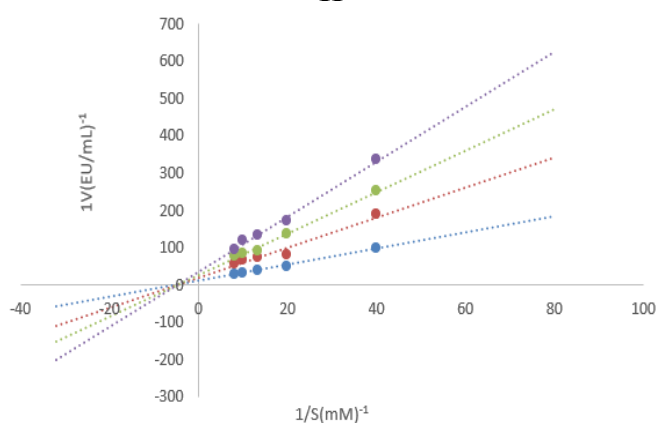
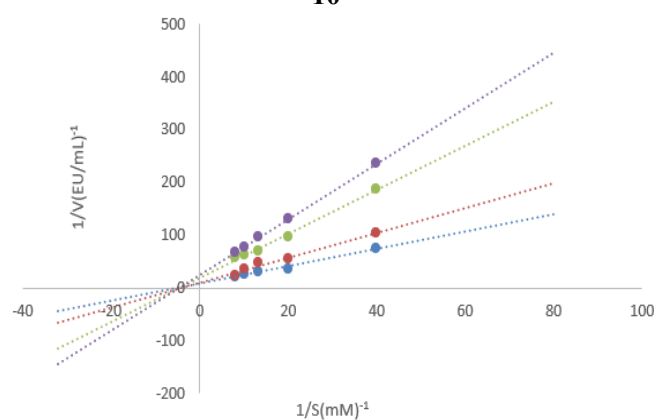
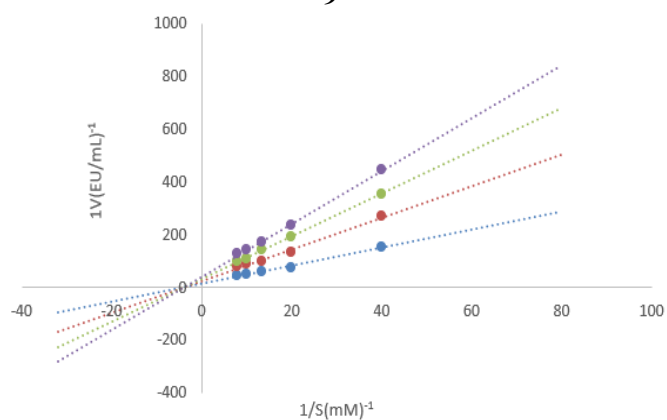
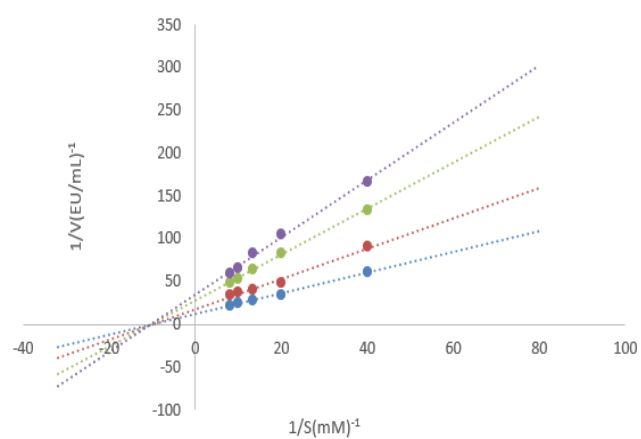
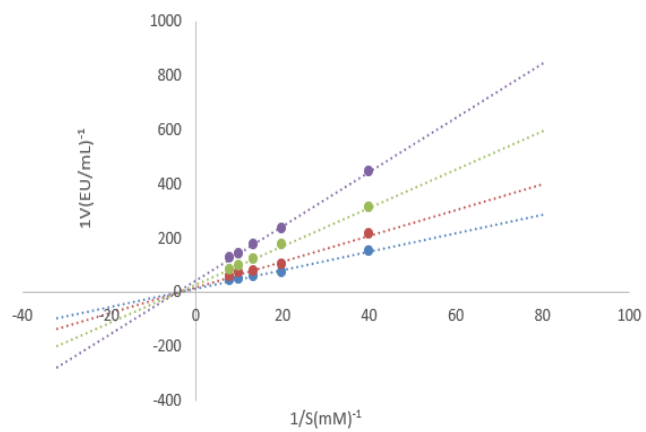
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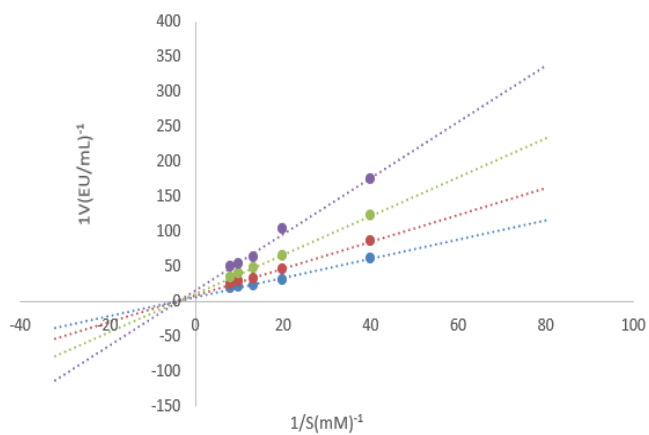


7

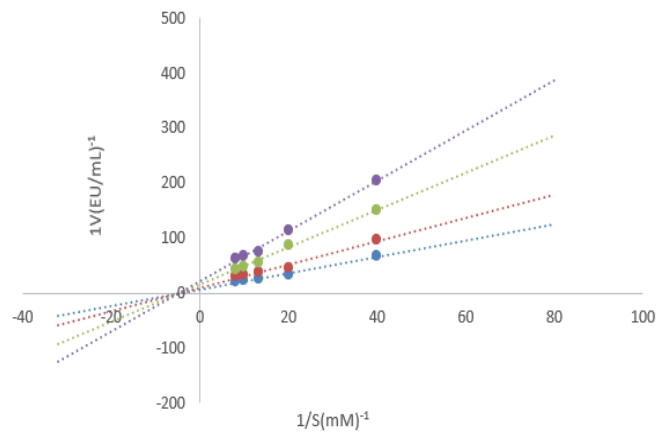


8

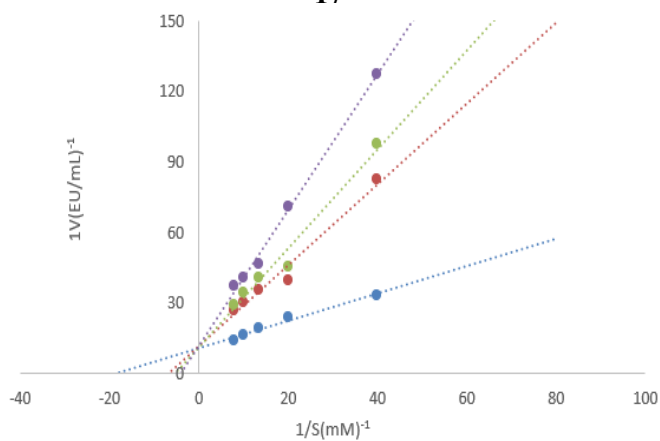




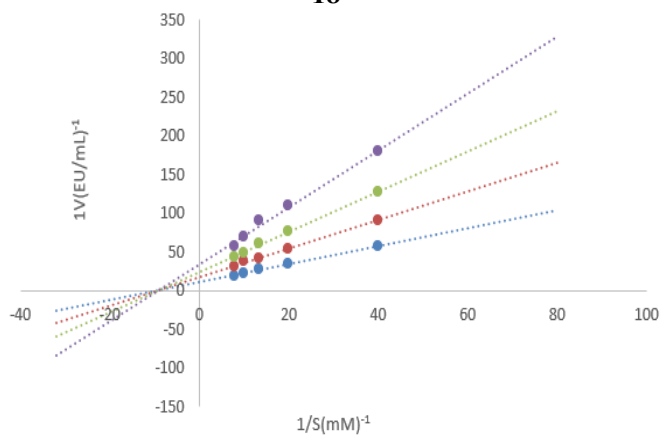
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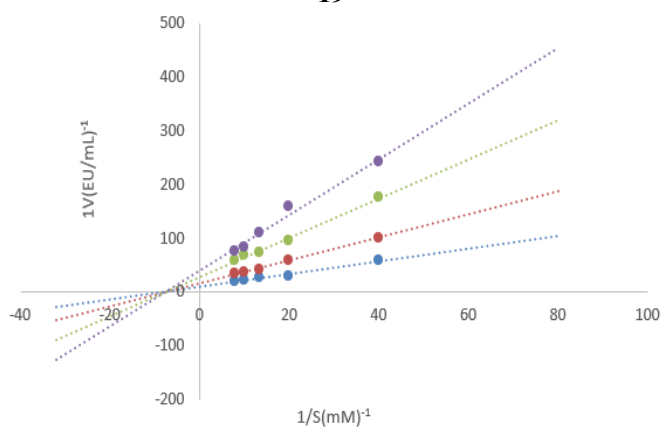
18



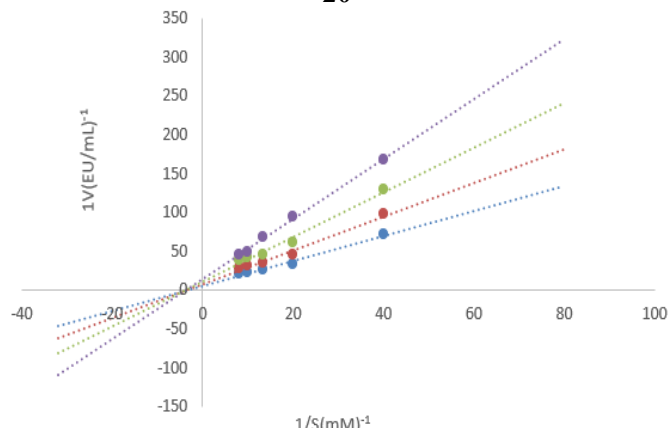
19



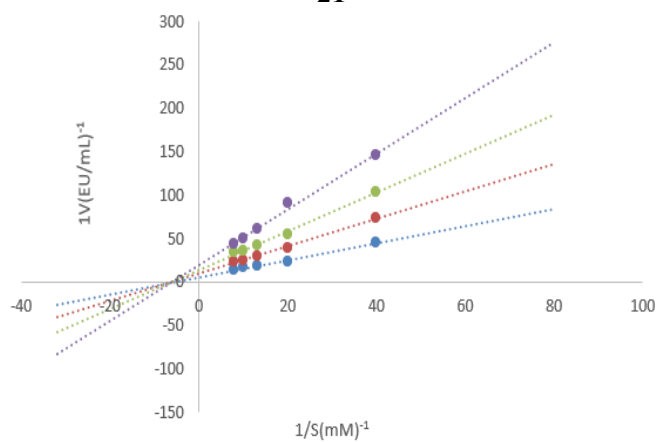
20



21



22



Acarbose

Table S1. The interactions of compound **16** with α -Glu and α -Amy

Enzyme	Binding energy (kcal/mol)	Interacting residues	Type of interaction	Distance (Å)
α -Glu	-69.67	Asn241	Hydrogen bond	1.90
		Glu276	Hydrogen bond	1.85 and 2.19
		Ash214	Hydrogen bond	2.26
		Phe157	π - π stacking	4.86
		Hie245	π - π stacking	5.00
		Tyr71	π - π stacking	3.76
α -Amy	-66.02	Gln233	Hydrogen bond	2.72
		Asp197	Hydrogen bond	2.08 and 2.28
		Lys200	Halogen bond	2.28 and 3.08