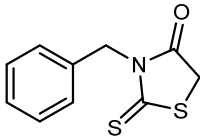
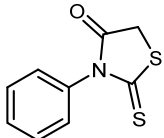
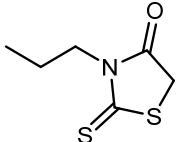
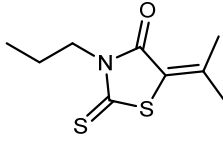
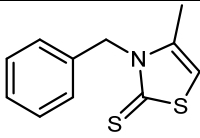
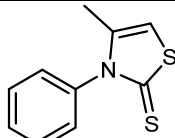
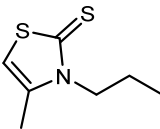
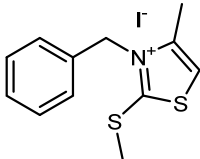
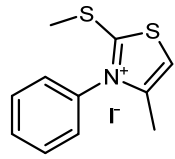
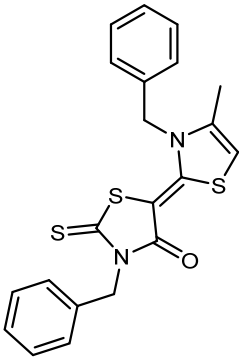
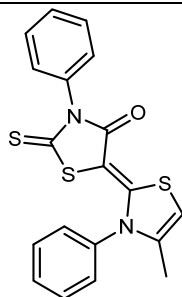
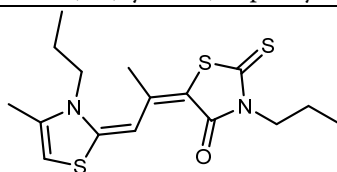
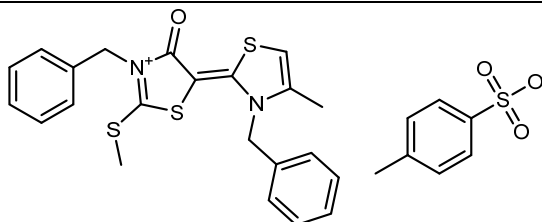
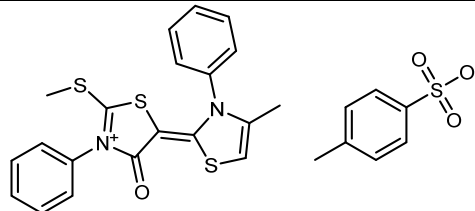
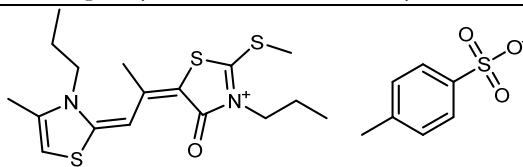
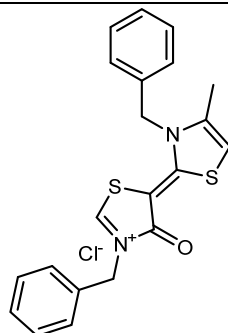


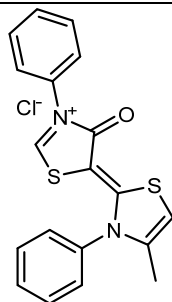
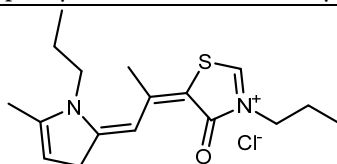
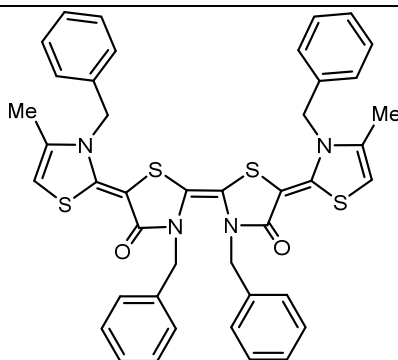
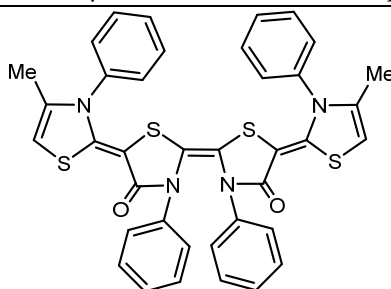
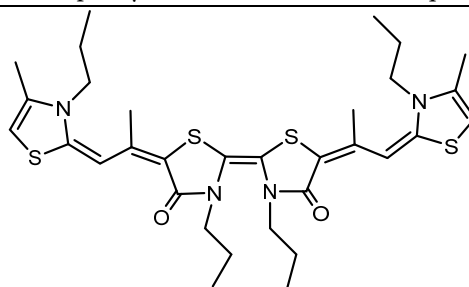
Supplementary Information (SI)

This supplementary data is a part of paper entitled “Study of the Electrochemical Behavior of Merocyanine and Merocarbocyanine Salts and Their Transformation into Π -Electron Donor Molecules, Namely Tetrathiatetraazafulvalenes”.

STRUCTURES OF SYNTHESIZED MOLECULES

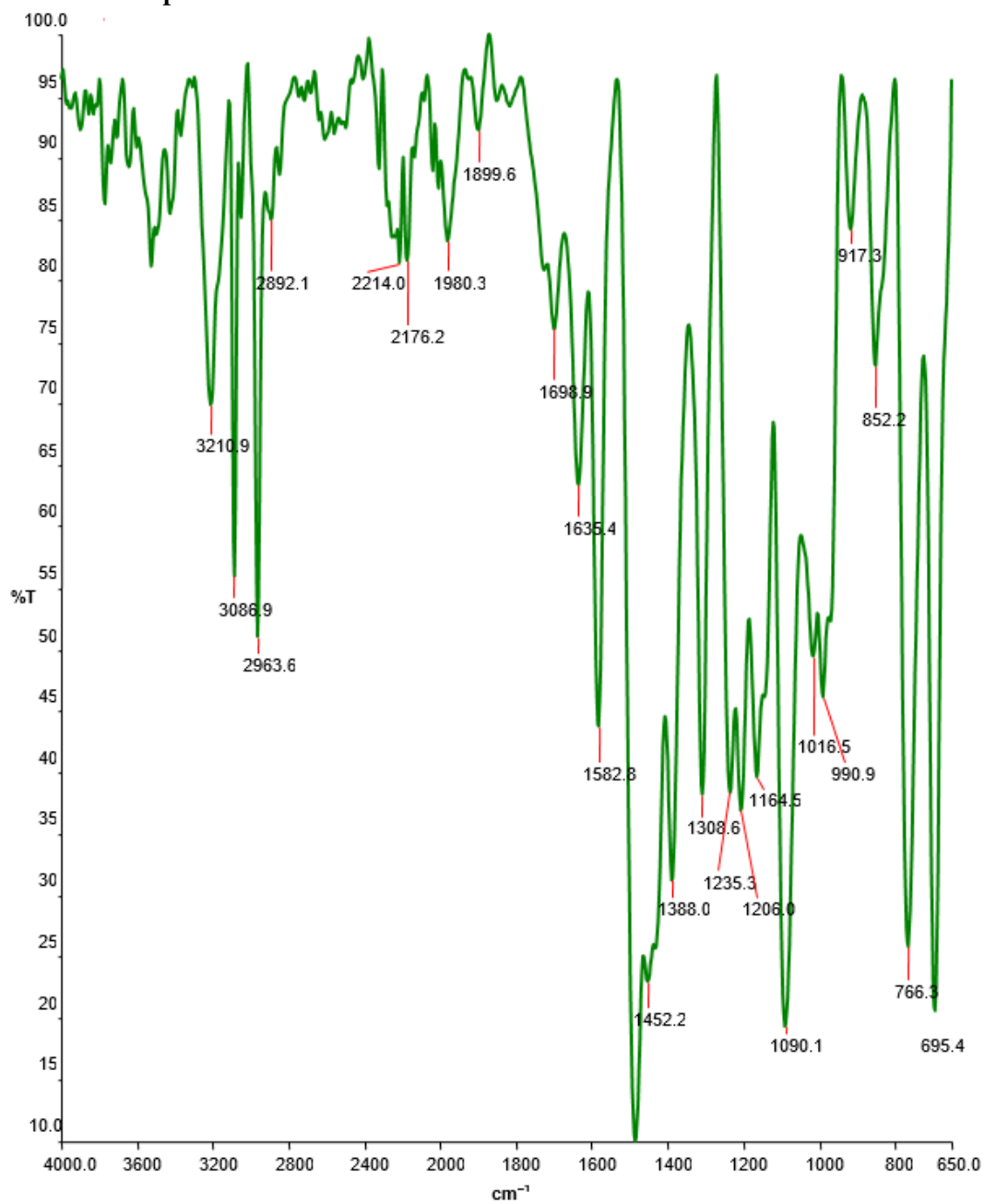
	
3-Benzyl-2-thioxo-1,3-thiazolidin-4-one (1a)	3-Phenyl-2-thioxo-1,3-thiazolidin-4-one (1b)
	
3-propyl-2-thioxo-1,3-thiazolidin-4-one (1c)	5-(Propan-2-ylidene)-3-propyl-2-thioxo-1,3-thiazolidin-4-one (3c)
	
3-Benzyl-4-methyl-1,3-thiazole-2(3H)-thione (2a)	4-Methyl-3-phenyl-1,3-thiazole-2(3H)-thione (2b)
	
4-Methyl-3-propyl-1,3-thiazole-2(3H)-thione (2c)	
	
3-Benzyl-4-methyl-2-(methylsulfanyl)-1,3-thiazol-3-ium iodide (3a)	4-Methyl-2-(methylsulfanyl)-3-phenyl-1,3-thiazol-3-ium iodide (3b)
	
(5E)-3-benzyl-5-(3-benzyl-4-methyl-1,3-thiazol-2(3H)-ylidene)-2-thioxo-1,3-thiazolidin-4-one (4a)	

(5E)-5-(4-methyl-3-phenyl-1,3-thiazol-2(3H)-ylidene)-3-phenyl-2-thioxo-1,3-thiazolidin-4-one (**4b**)(E)-5-((E)-1-(4-methyl-3-propylthiazol-2(3H)-ylidene)propan-2-ylidene)-3-propyl-2-thioxothiazolidin-4-one (**4c**)(E)-3,3'-dibenzyl-4-methyl-2'-(methylthio)-4'-oxo-3H,4'H-[2,5'-bithiazolylydene]-3'-ium-4-methylbenzenesulfonate (**5a**)(E)-4-methyl-2'-(methylthio)-4'-oxo-3,3'-diphenyl-3H,4'H-[2,5'-bithiazolylydene]-3'-ium-4-methylbenzenesulfonate (**5b**)(E)-5-((E)-1-(4-methyl-3-propylthiazol-2(3H)-ylidene)propan-2-ylidene)-2-(methylthio)-4-oxo-3-propyl-4,5-dihydrothiazol-3-ium 4-methylbenzenesulfonate (**5c**)(E)-3,3'-dibenzyl-4-methyl-4'-oxo-3H,4'H-[2,5'-bithiazolylydene]-3'-ium chloride (**6a**)

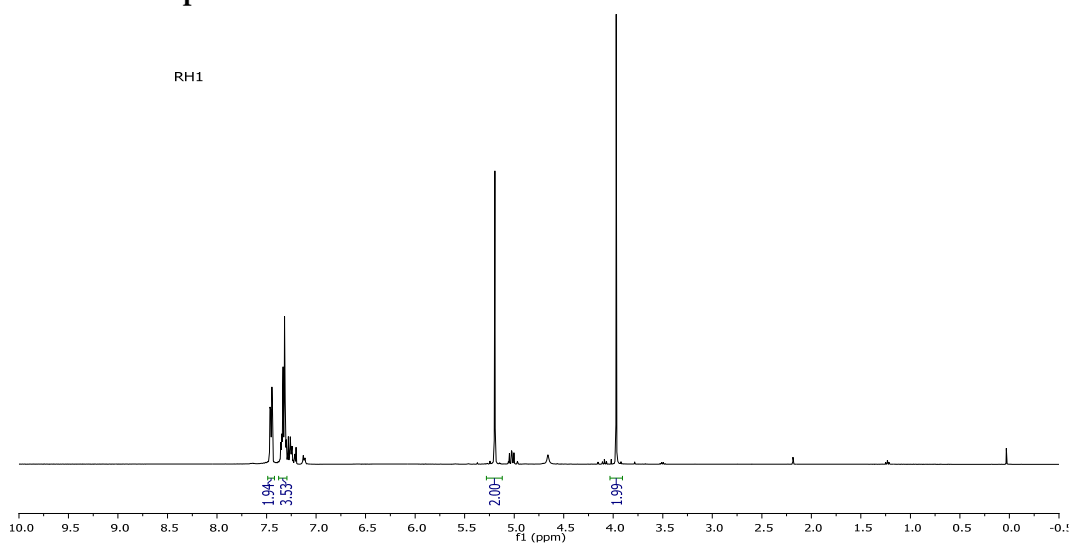
(E)-4-methyl-4'-oxo-3,3'-diphenyl-3H,4'H-[2,5'-bithiazolyli-dene]-3'-ium chloride (**6b**)(E)-5-((Z)-1-(5-methyl-1-propyl-1,3-dihydro-2H-pyrrol-2-ylidene)propan-2-ylidene)-4-oxo-3-propyl-4,5-dihydrothiazol-3-ium chloride (**6c**)(2E,2'Z,2'''E)-3,3',3'',3'''-tetrabenzyl-4,4'''-dimethyl-3H,3'''H-[2,5':2',2'':5'',2'''-quaterthiazole]-4',4''(3'H,3'''H)-dione (**7a**)(2E,2'Z,2'''E)-4,4'''-dimethyl-3,3',3'',3'''-tetraphenyl-3H,3'''H-[2,5':2',2'':5'',2'''-quaterthiazole]-4',4''(3'H,3'''H)-dione (**7b**)(2Z,5E,5'E)-5,5'-bis((E)-1-(4-methyl-3-propylthiazol-2(3H)-ylidene)propan-2-ylidene)-3,3'-dipropyl-3H,3'H-[2,2'-bithiazolyli-dene]-4,4'(5H,5'H)-dione (**8c**)

SPECTROSCOPIC DATA

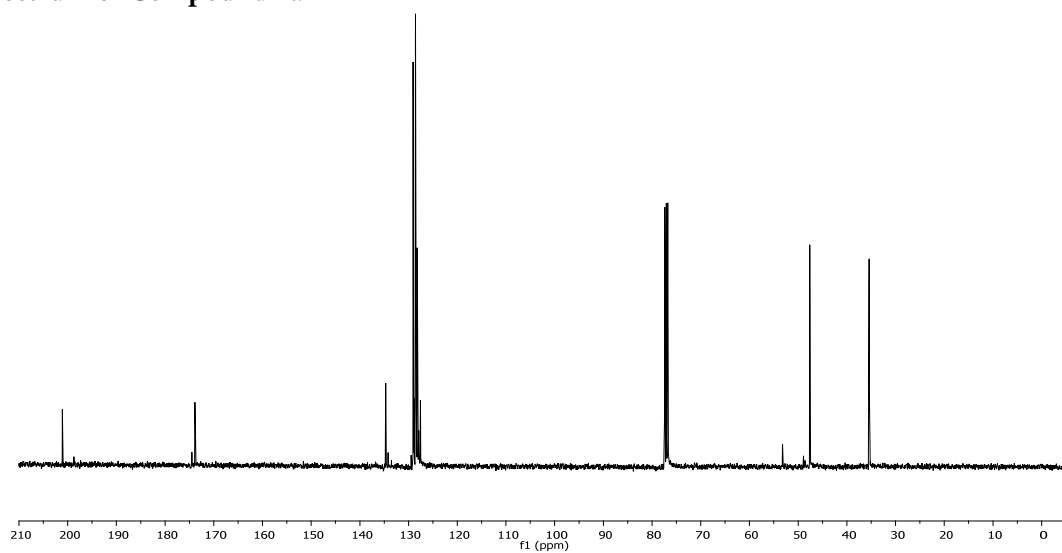
Infrared Spectrum of Compound 1a



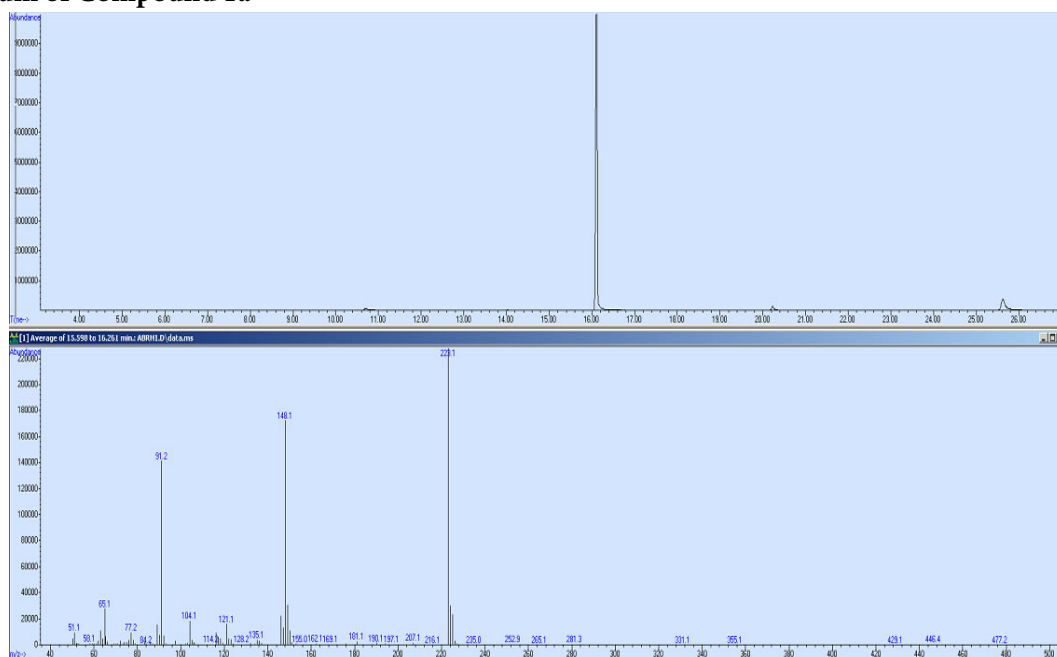
¹H-NMR Spectrum of Compound 1a



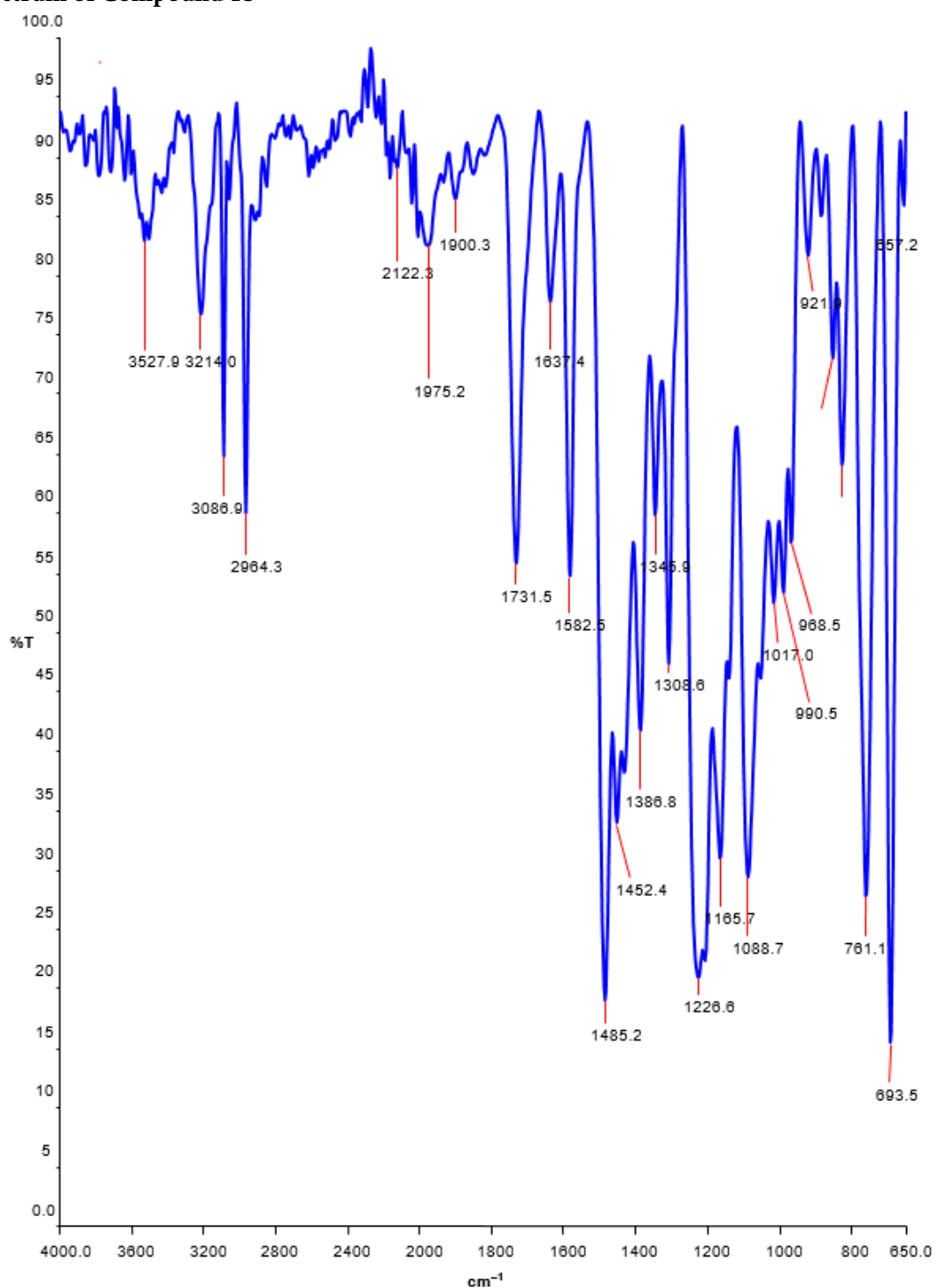
¹³C-NMR Spectrum of Compound 1a

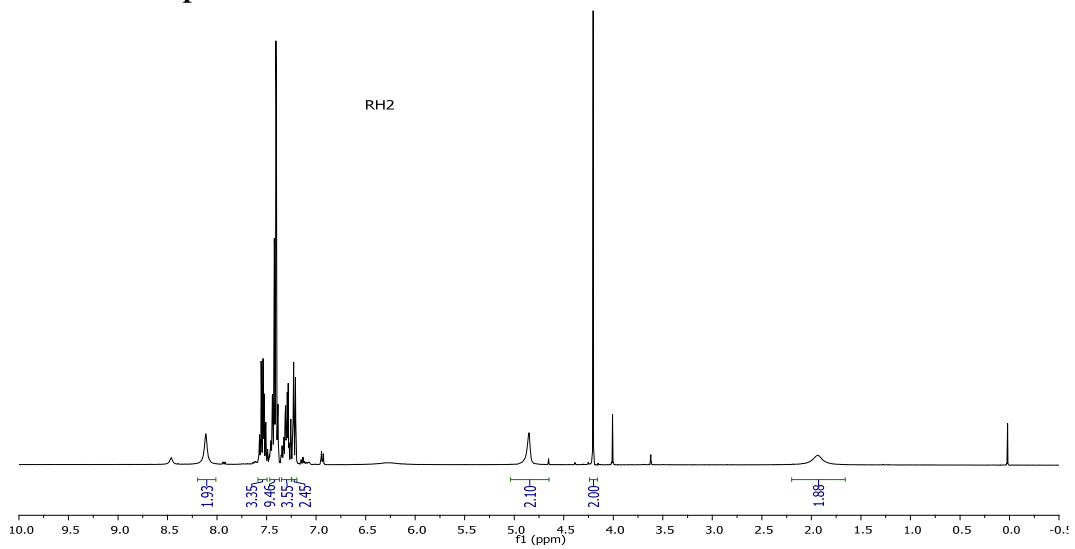


Mass Spectrum of Compound 1a

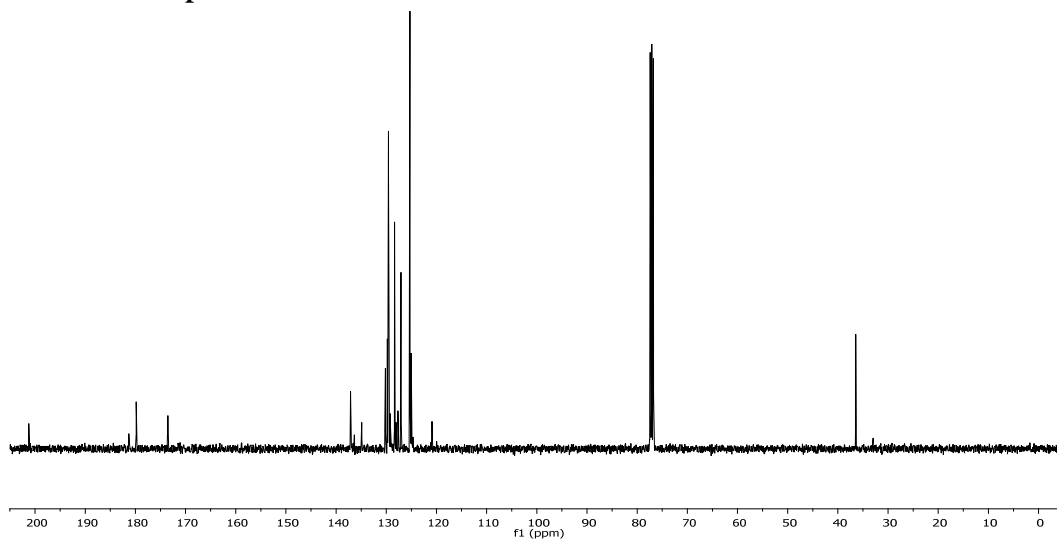


Infrared Spectrum of Compound 1b

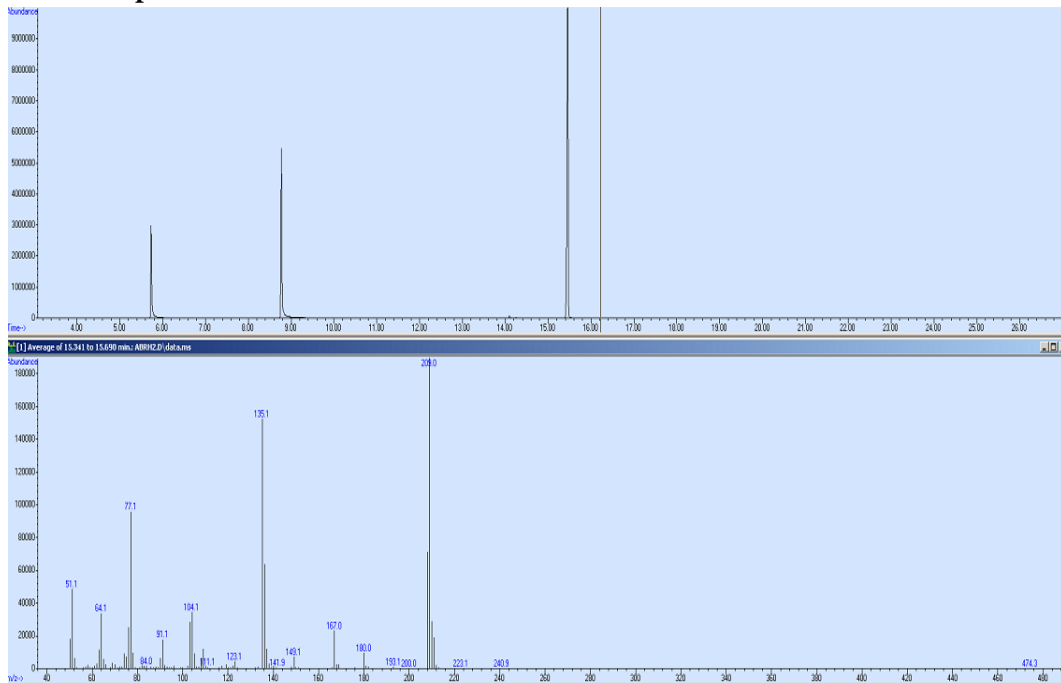


¹H-NMR Spectrum of Compound 1b**¹³C-NMR Spectrum of Compound 1b**

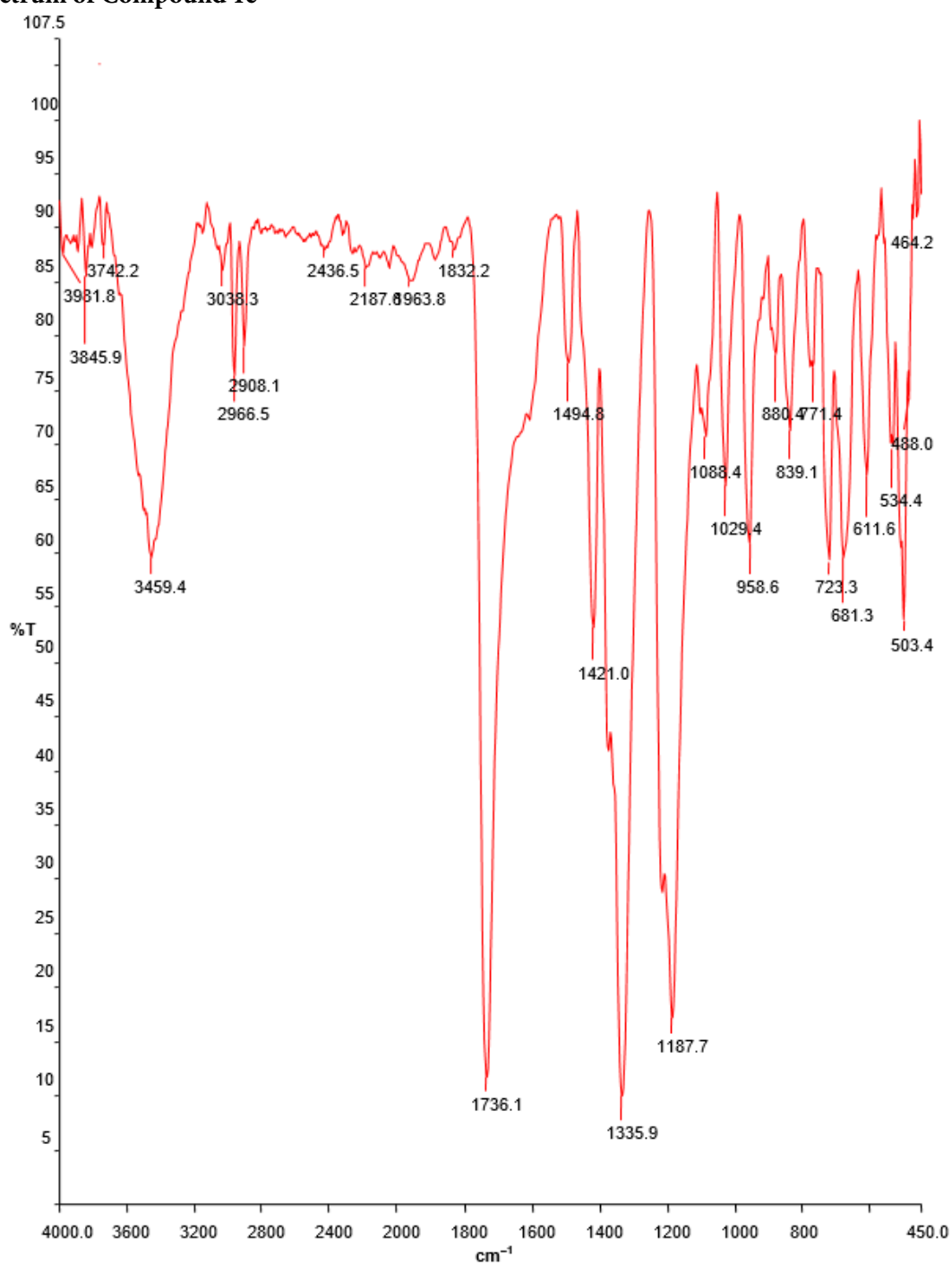
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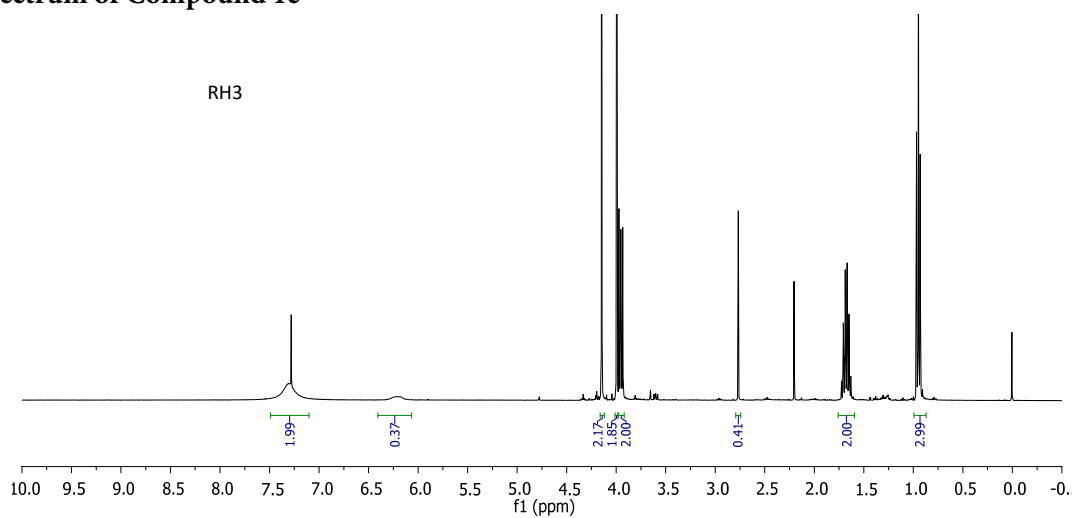
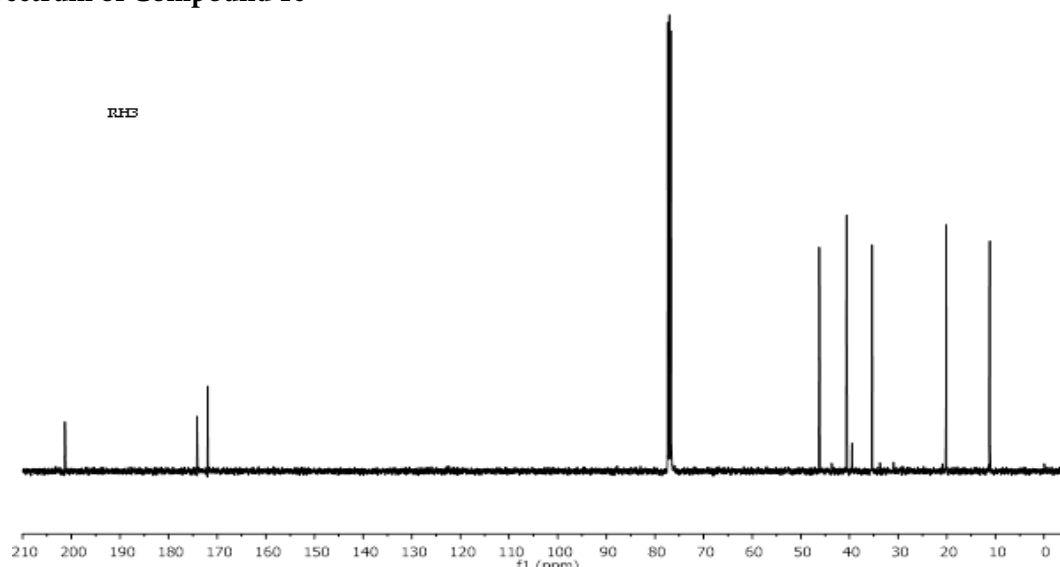


Mass Spectrum of Compound 1b

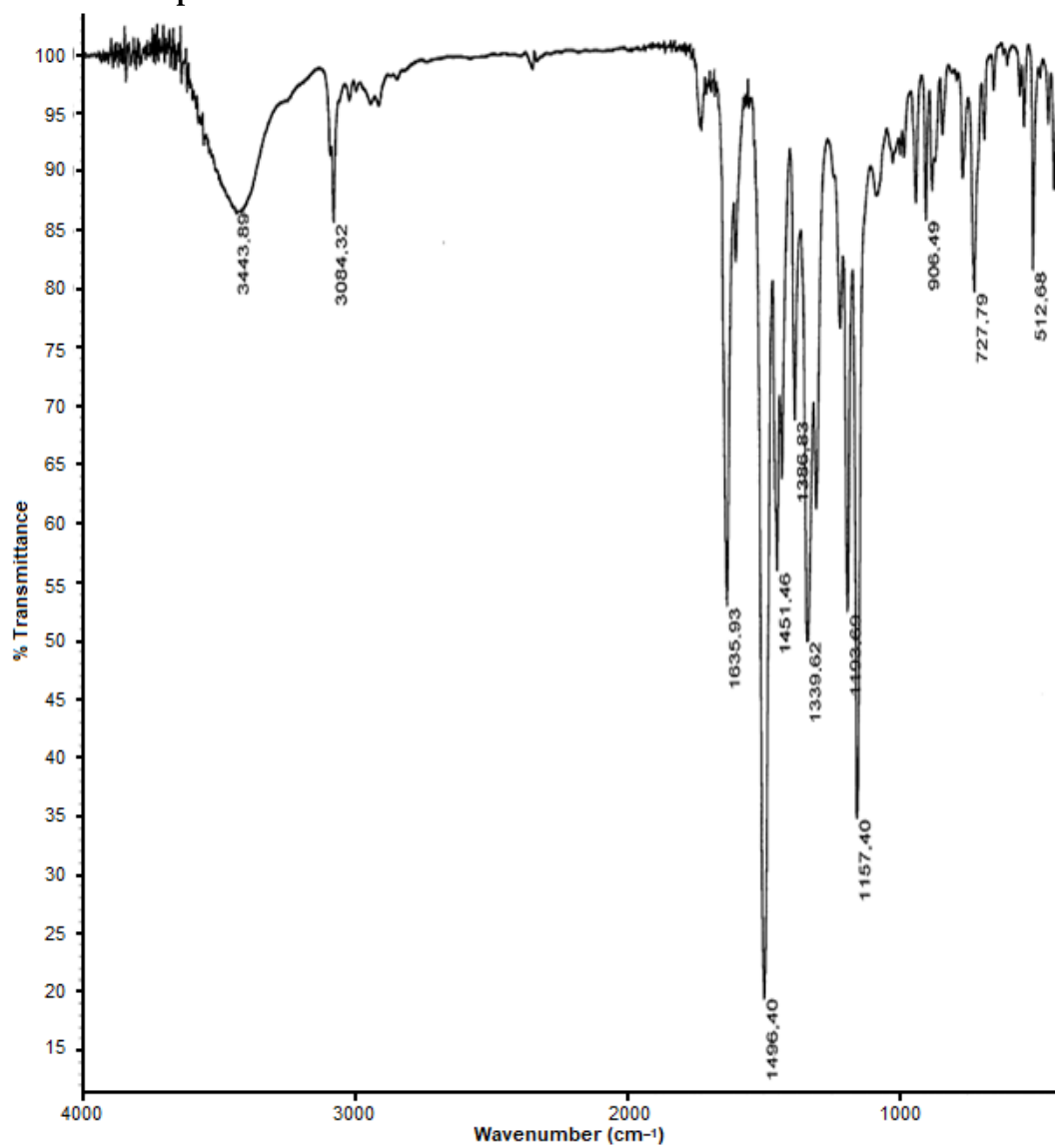


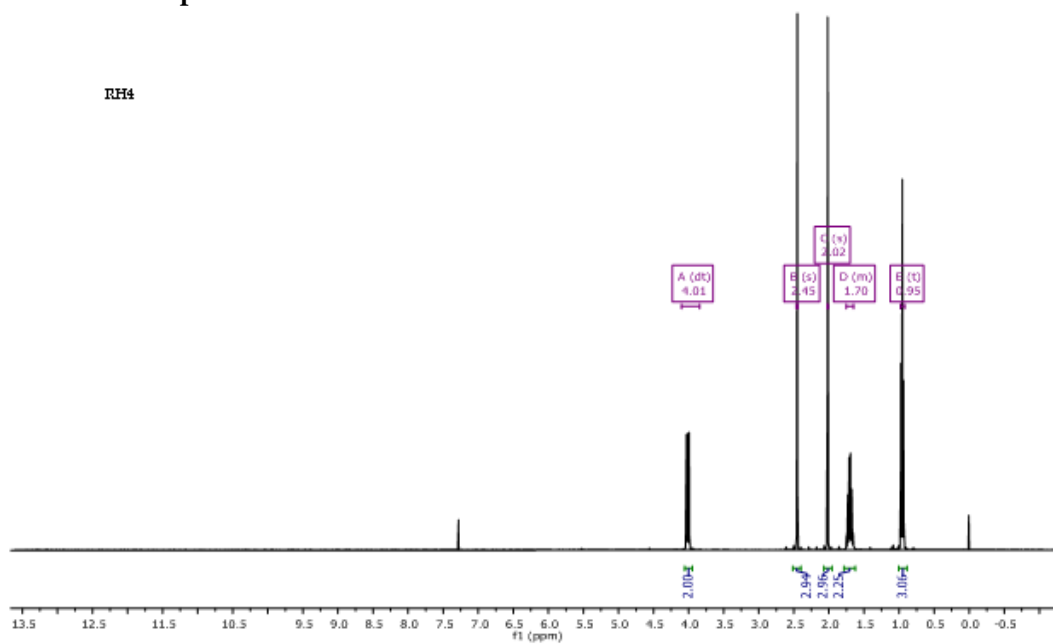
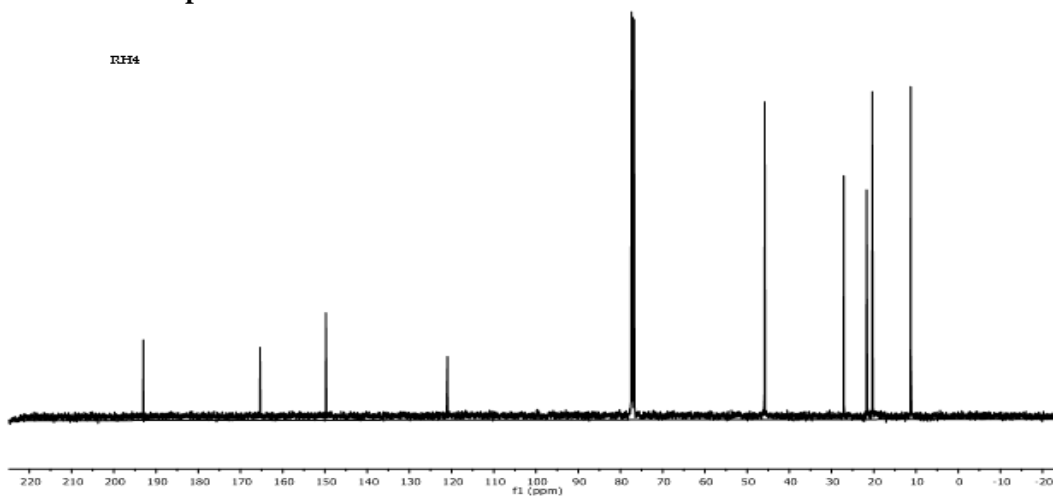
Infrared Spectrum of Compound 1c



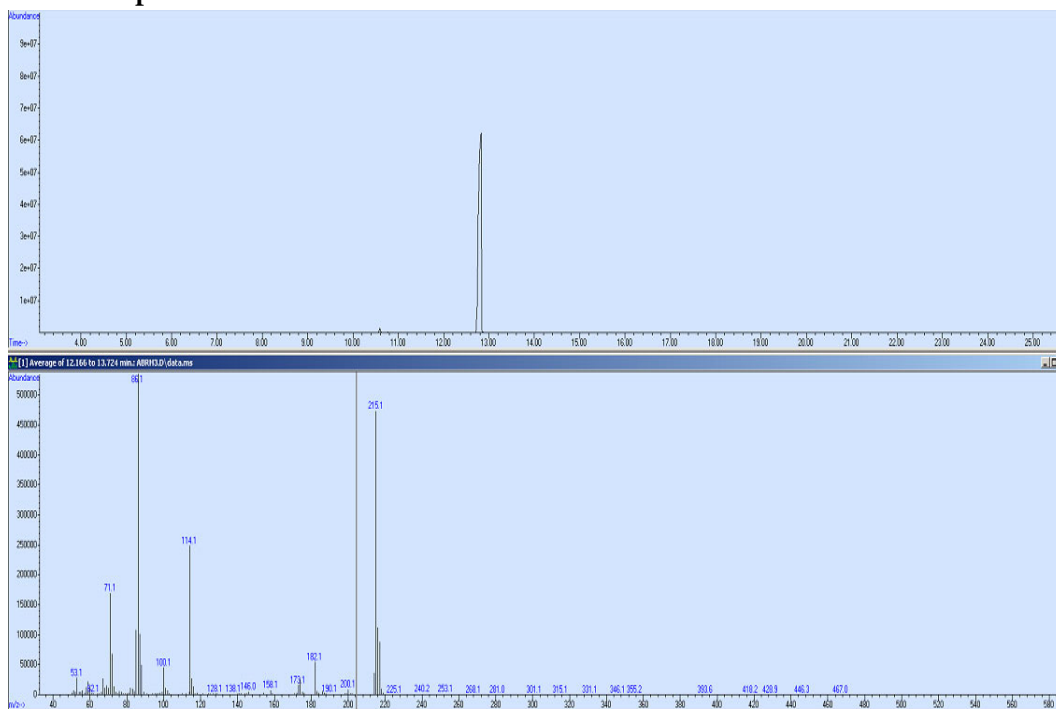
¹H-NMR Spectrum of Compound 1c**¹³C-NMR Spectrum of Compound 1c**

Infrared Spectrum of Compound 3c

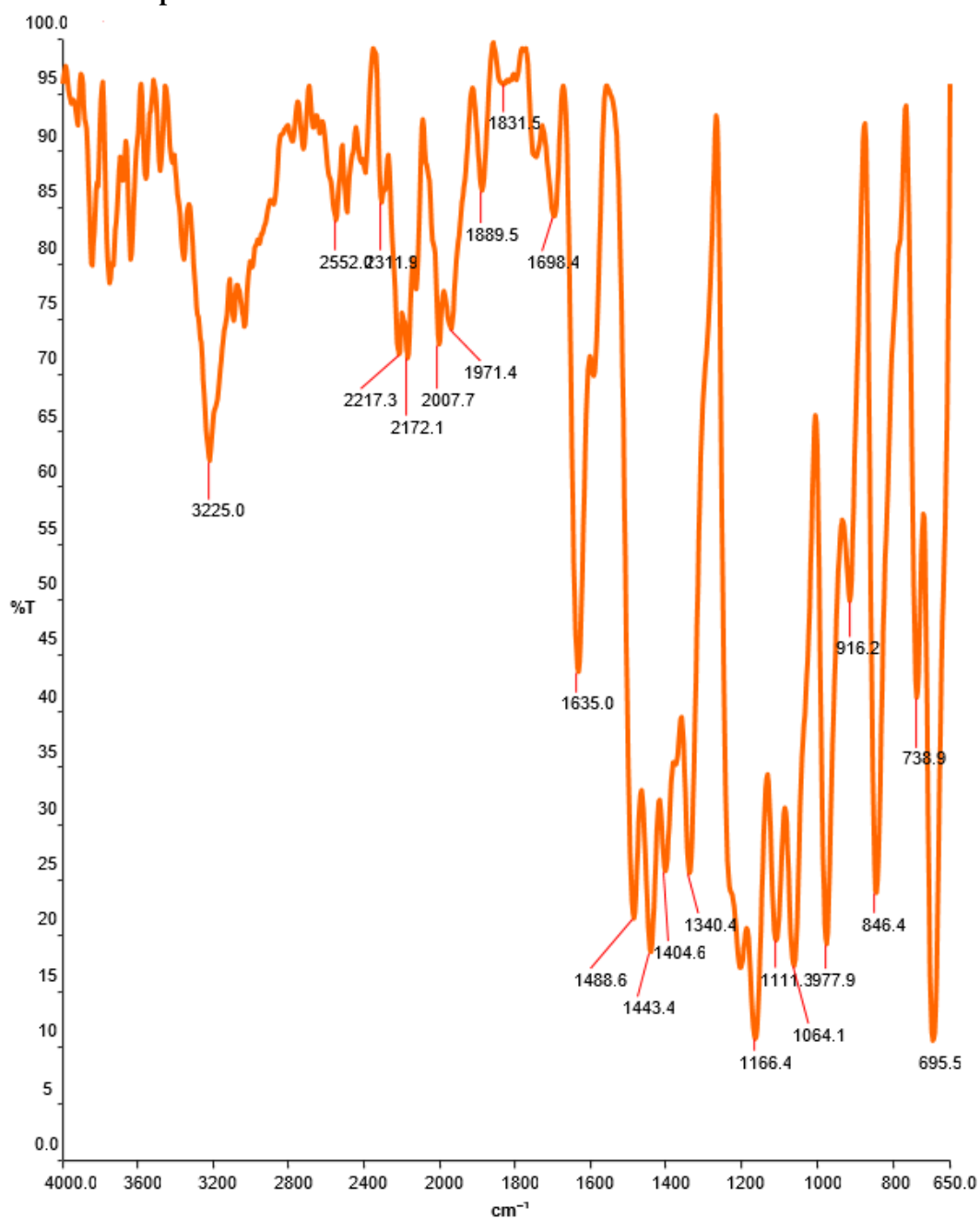


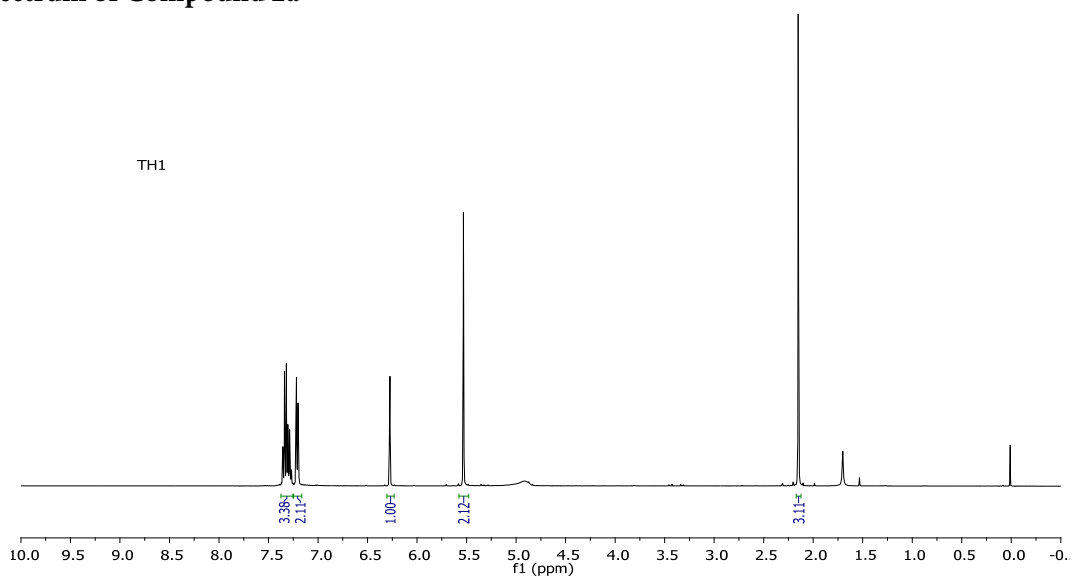
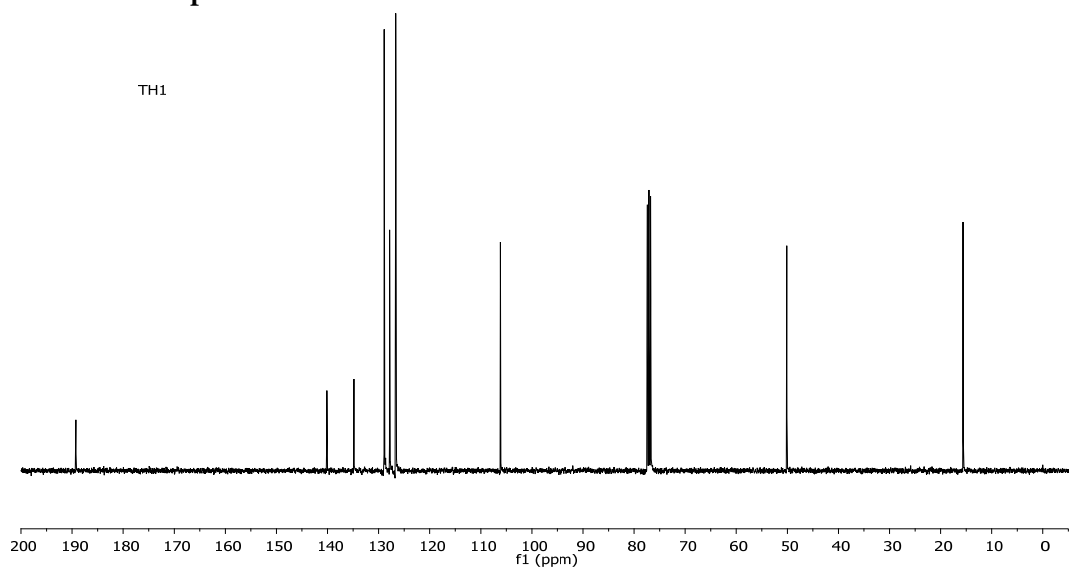
¹H-NMR Spectrum of Compound 3c**¹³C-NMR Spectrum of Compound 3c**

Mass Spectrum of Compound 3c

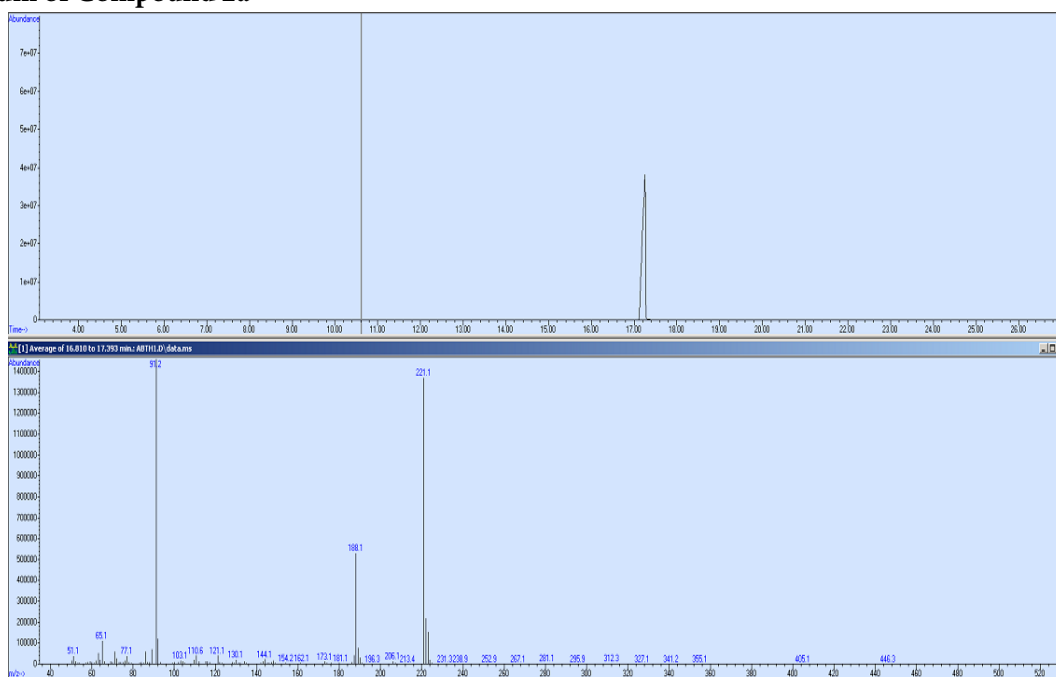


Infrared Spectrum of Compound 2a

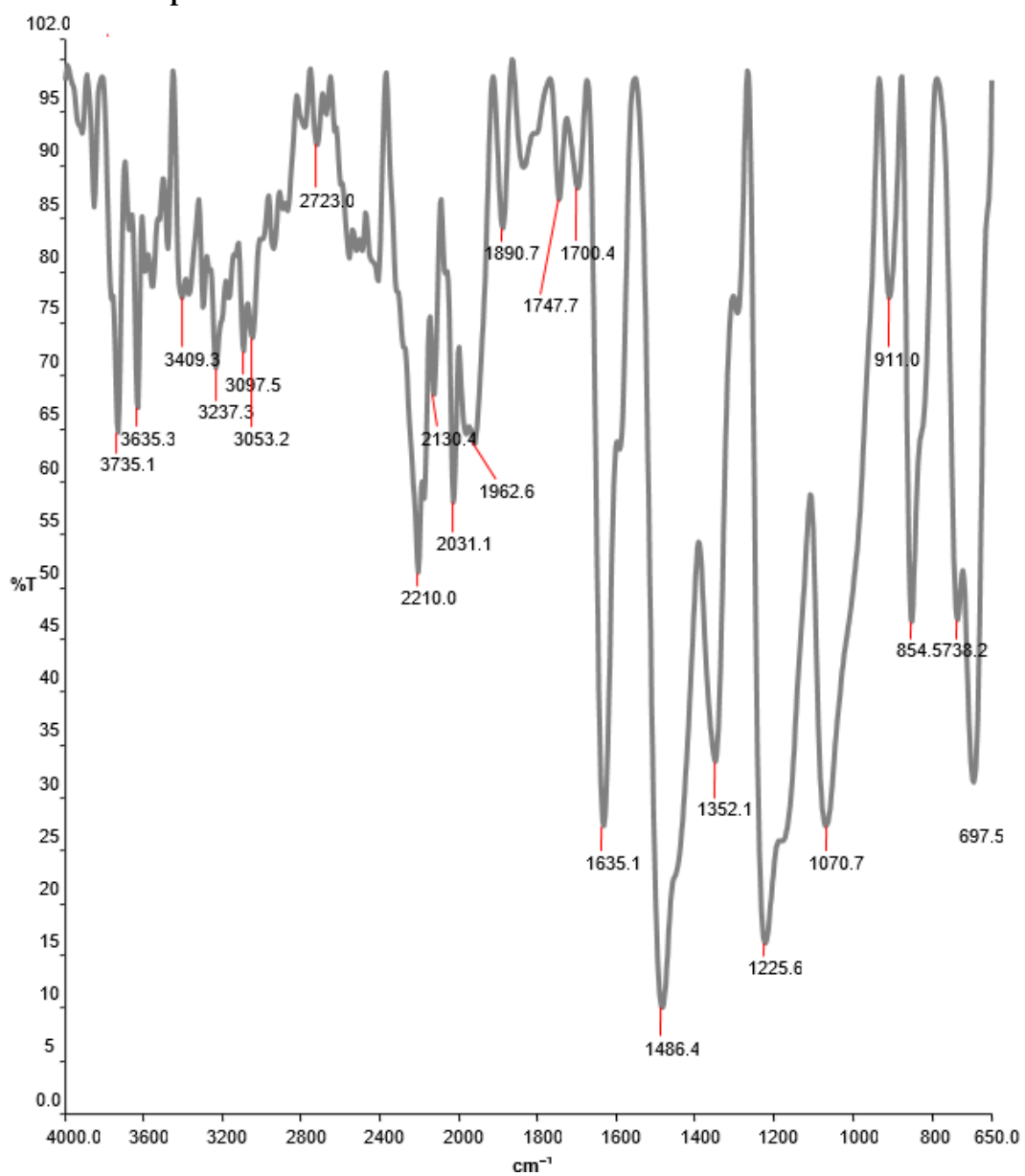


¹H-NMR Spectrum of Compound 2a**¹³C-NMR Spectrum of Compound 2a**

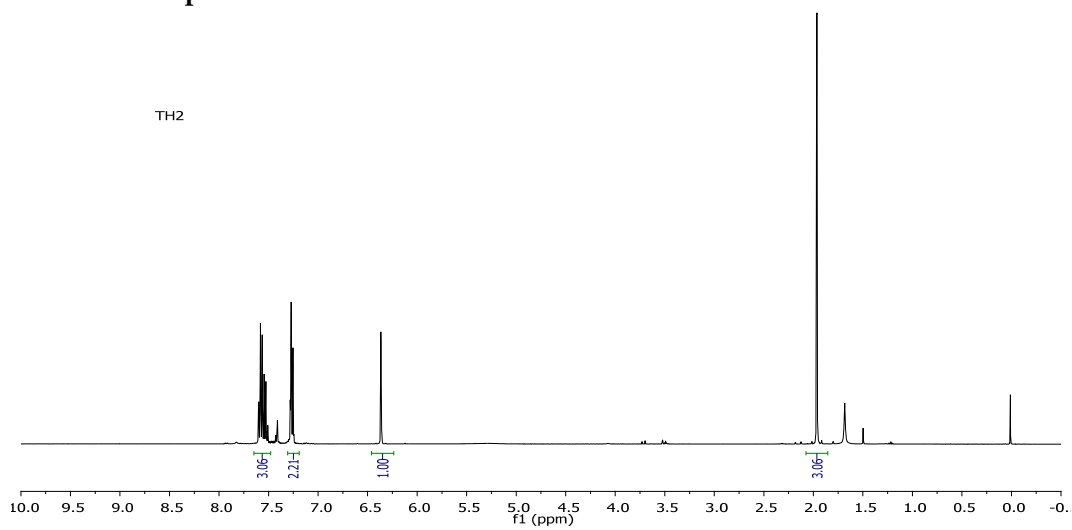
Mass Spectrum of Compound 2a



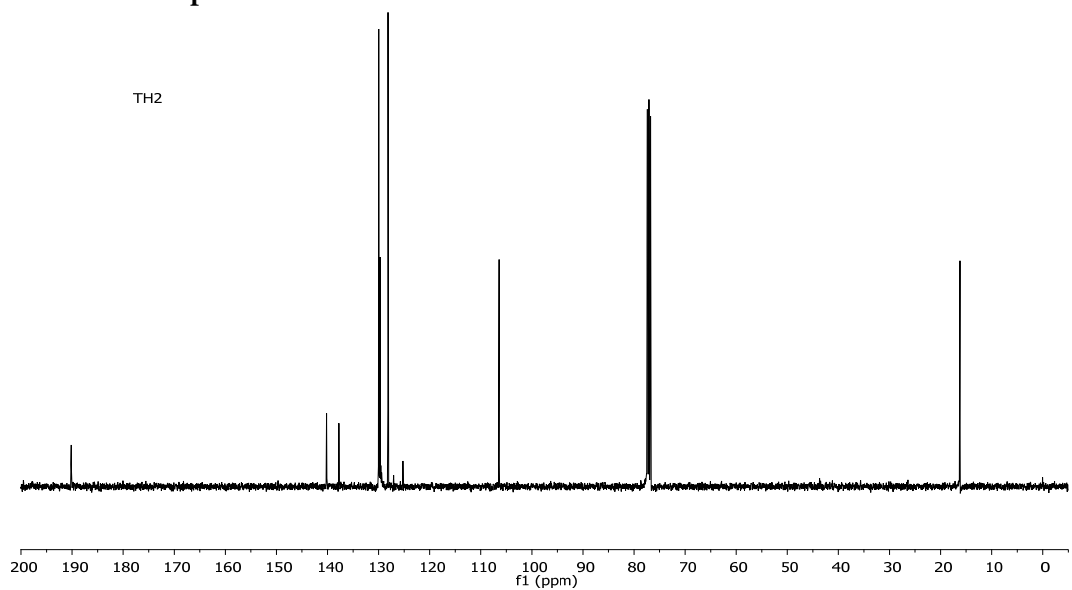
Infrared Spectrum of Compound 2b



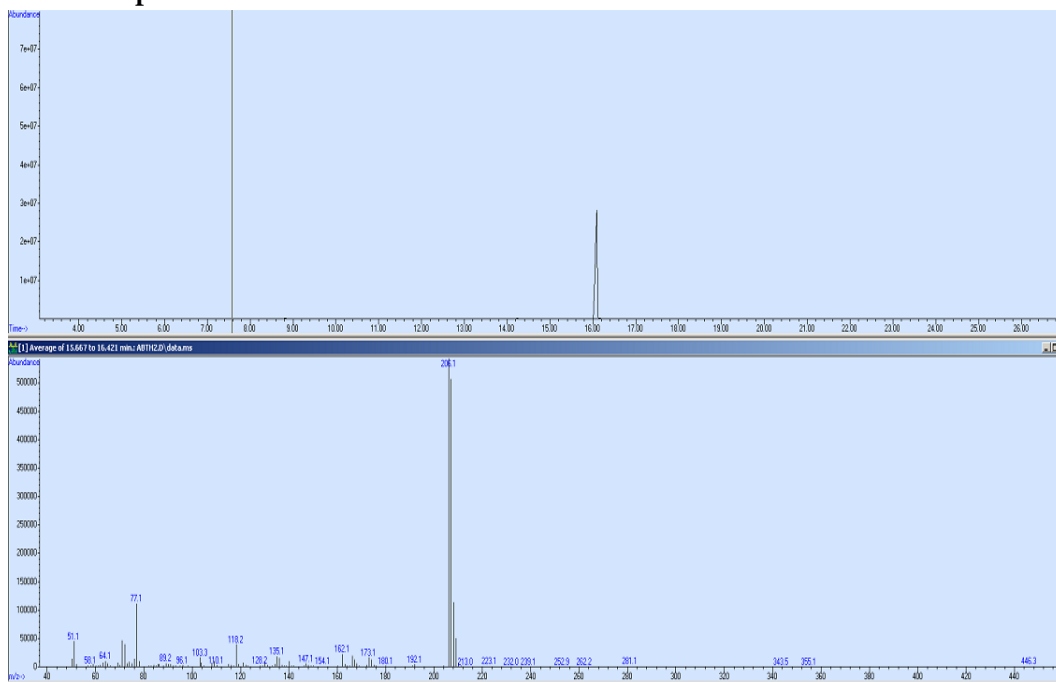
¹H-NMR Spectrum of Compound 2b



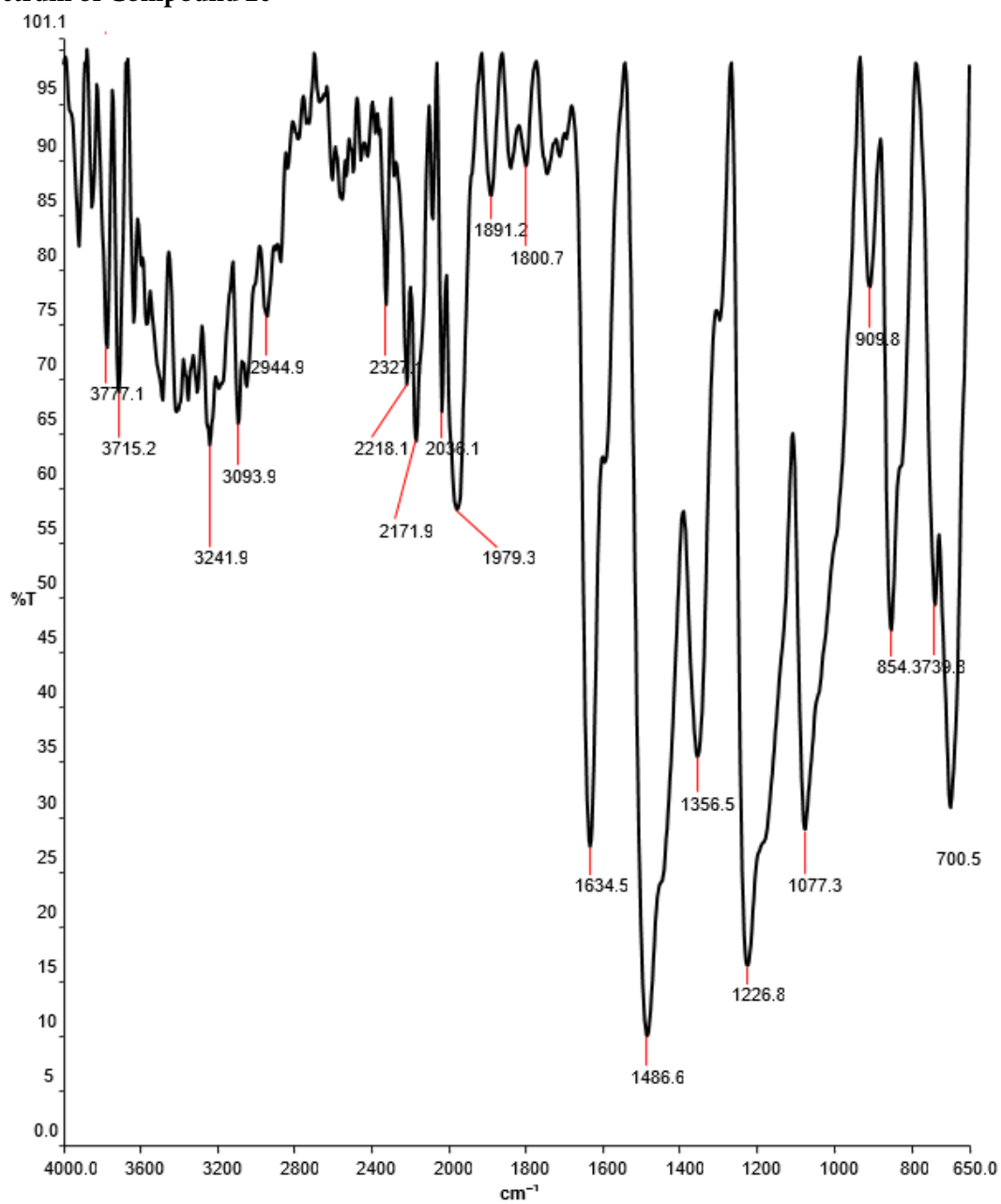
¹³C-NMR Spectrum of Compound 2b

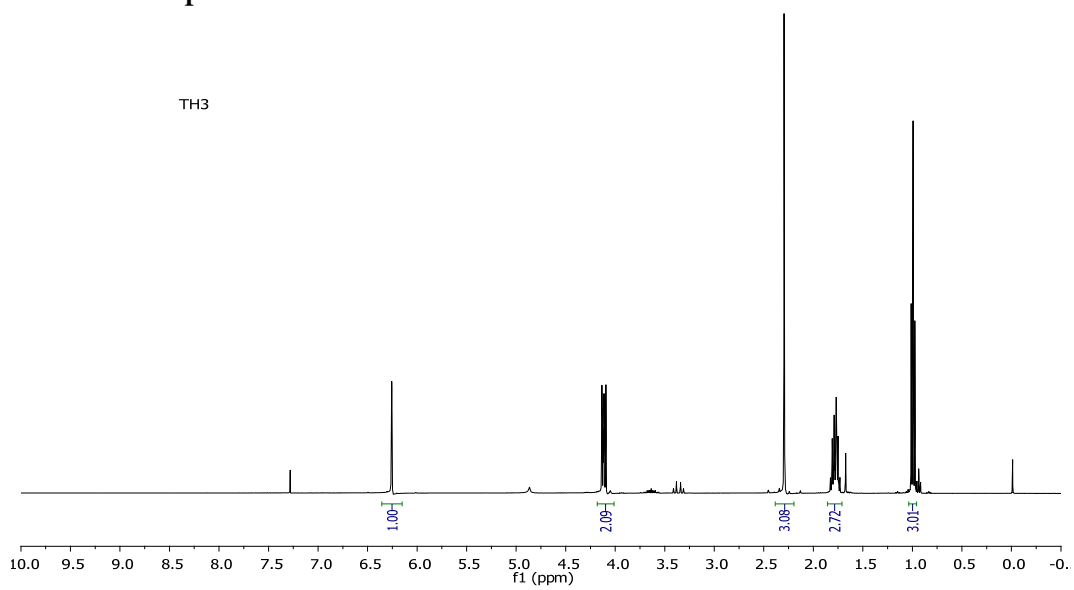
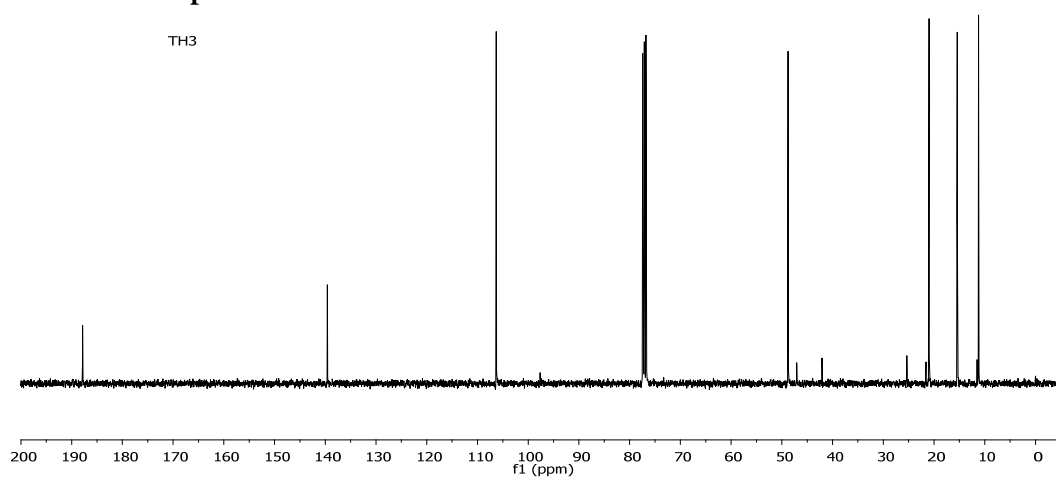


Mass Spectrum of Compound 2b

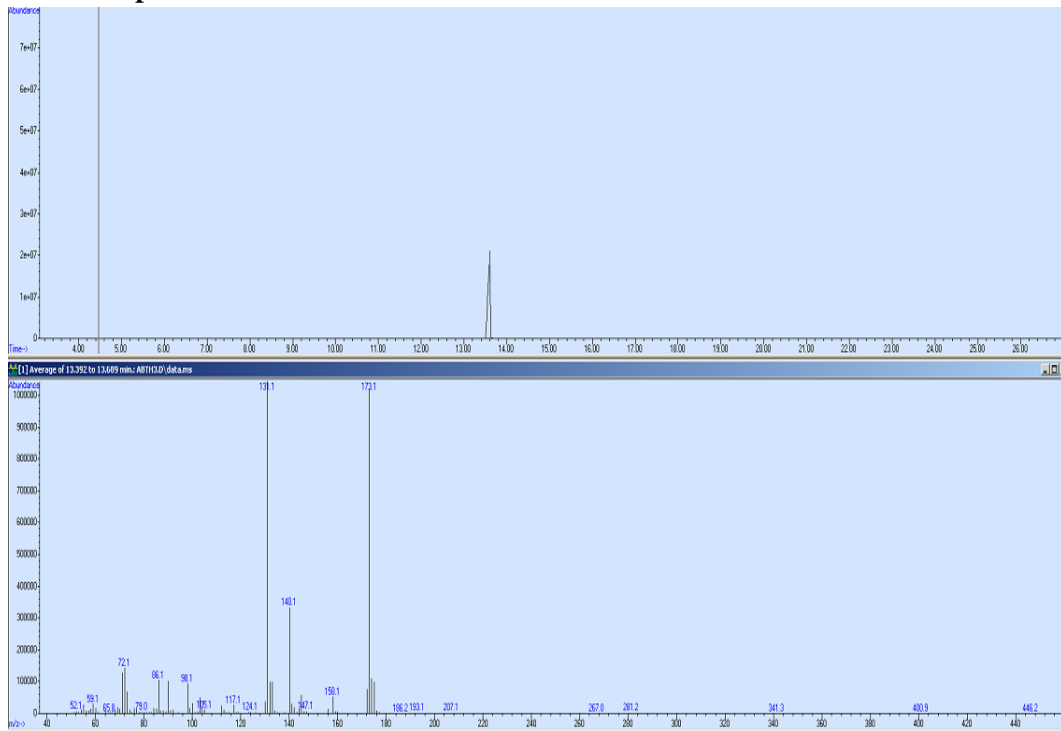


Infrared Spectrum of Compound 2c

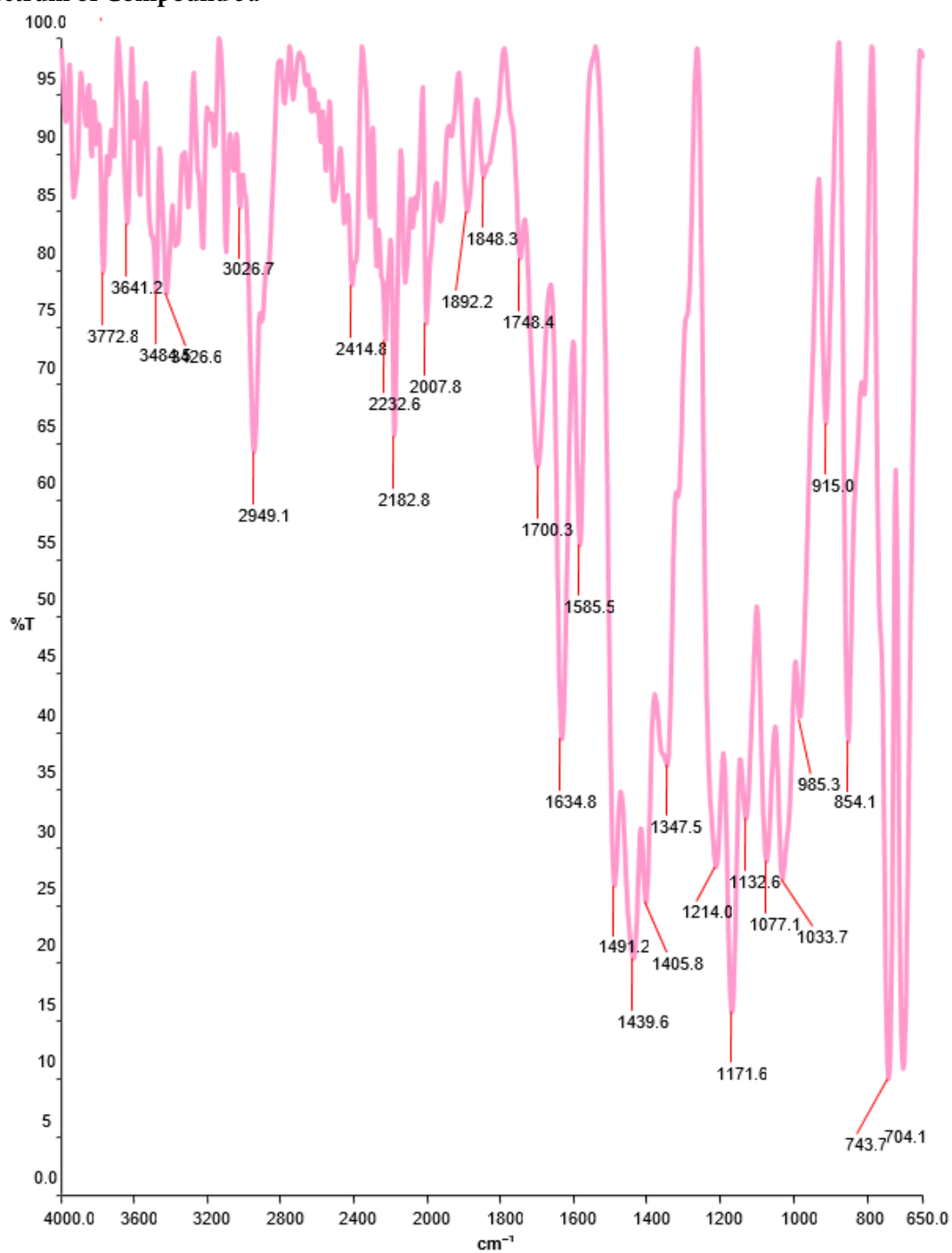


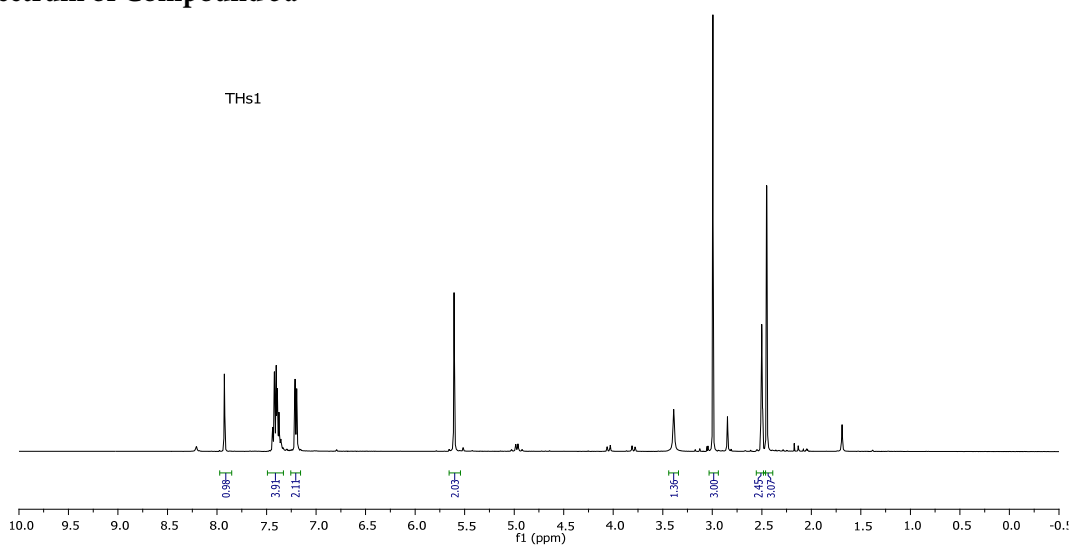
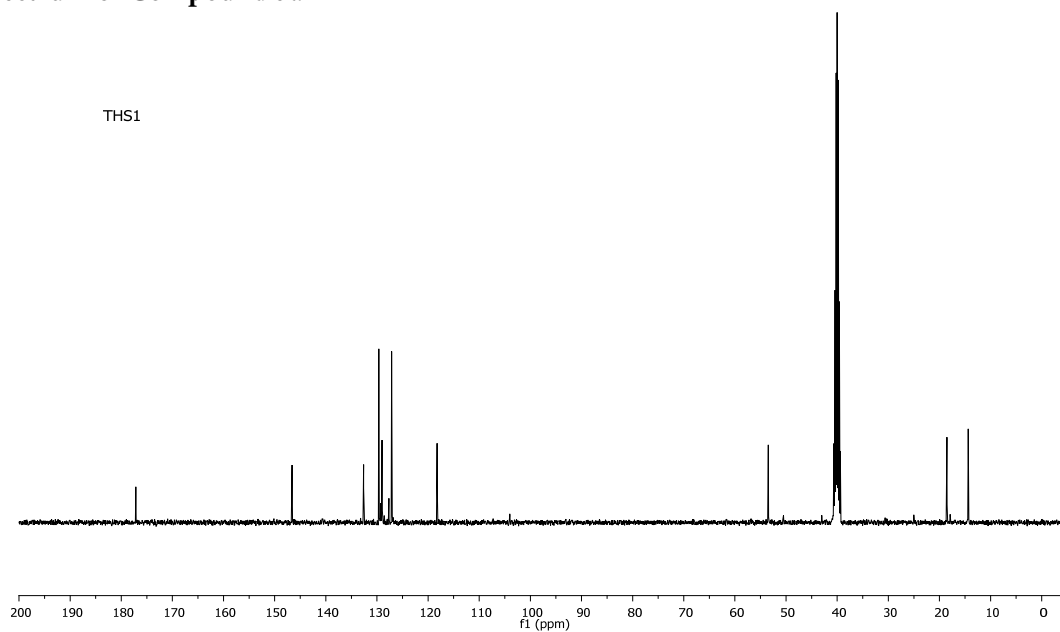
¹H-NMR Spectrum of Compound 2c**¹³C-NMR Spectrum of Compound 2c**

Mass Spectrum of Compound 2c

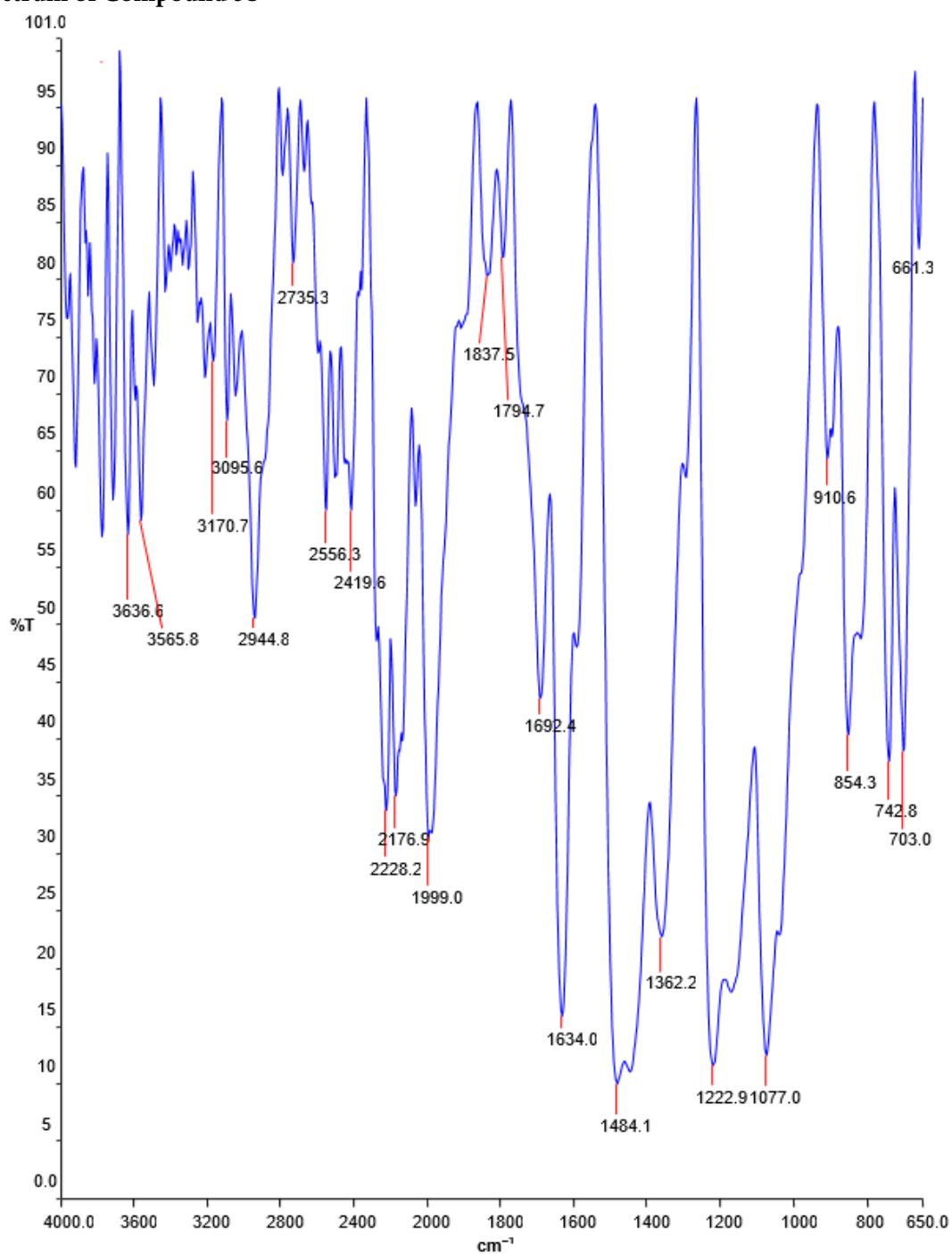


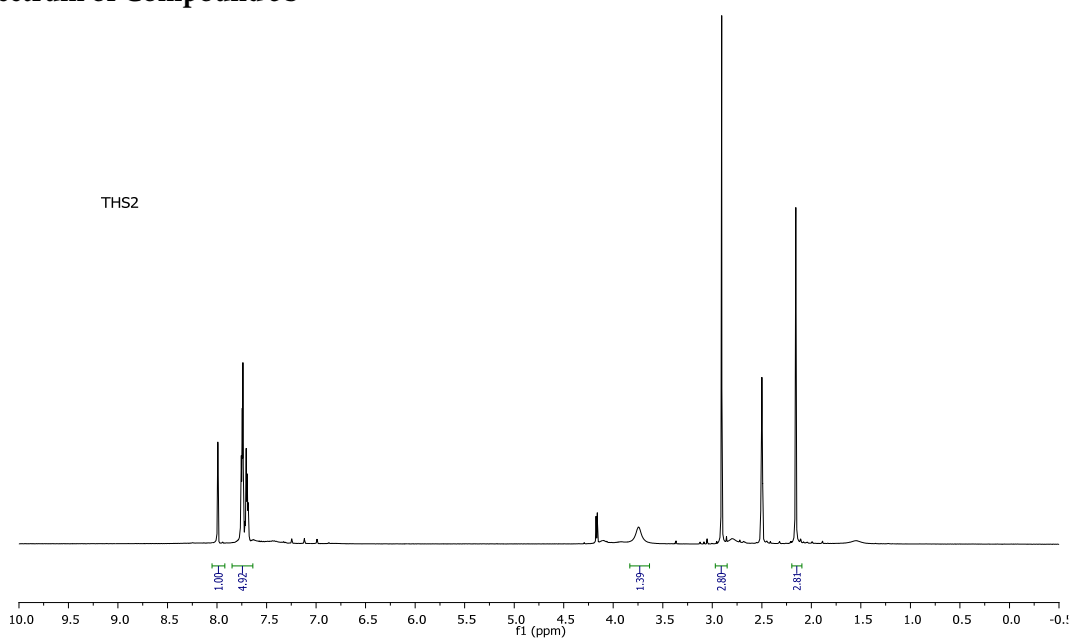
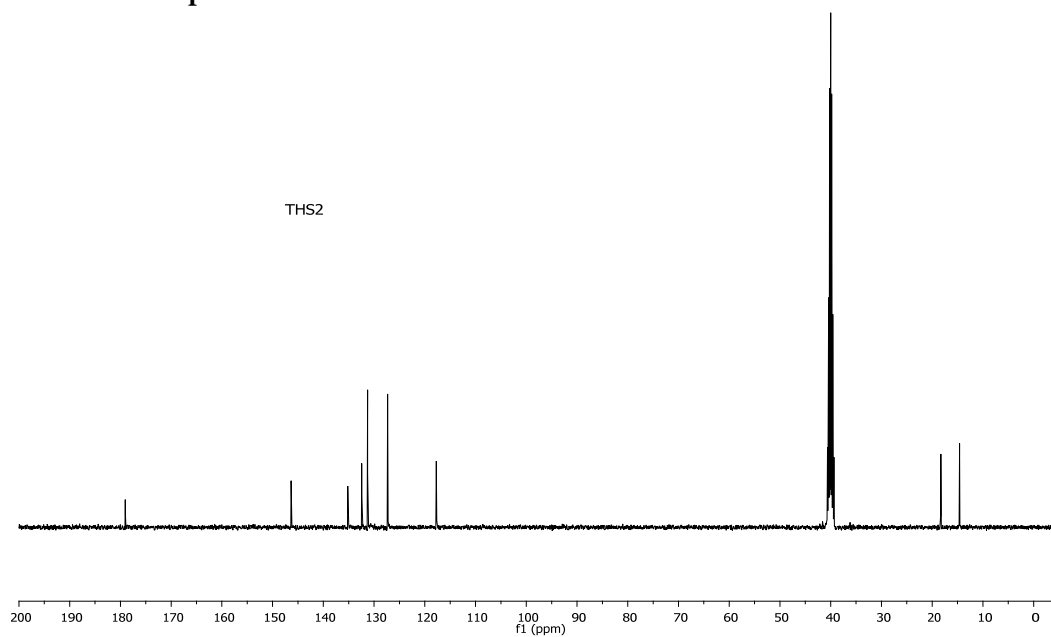
Infrared Spectrum of Compound 3a



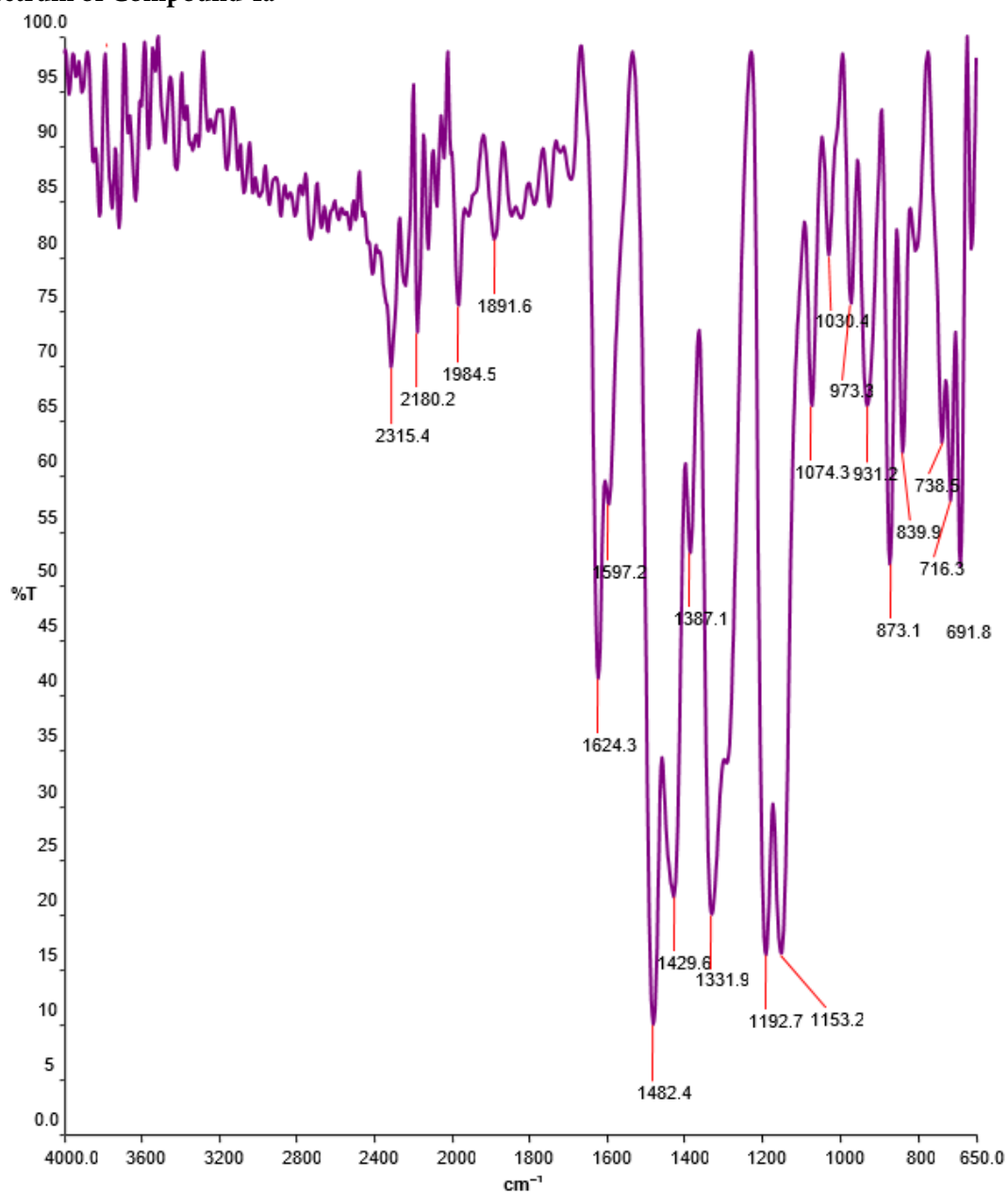
¹H-NMR Spectrum of Compound 3a**¹³C-NMR Spectrum of Compound 3a**

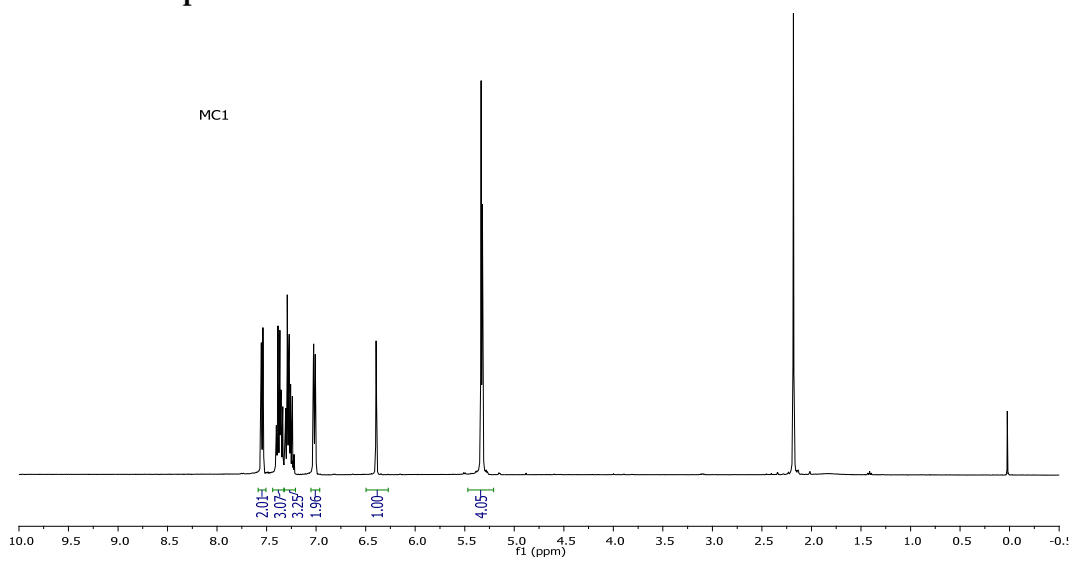
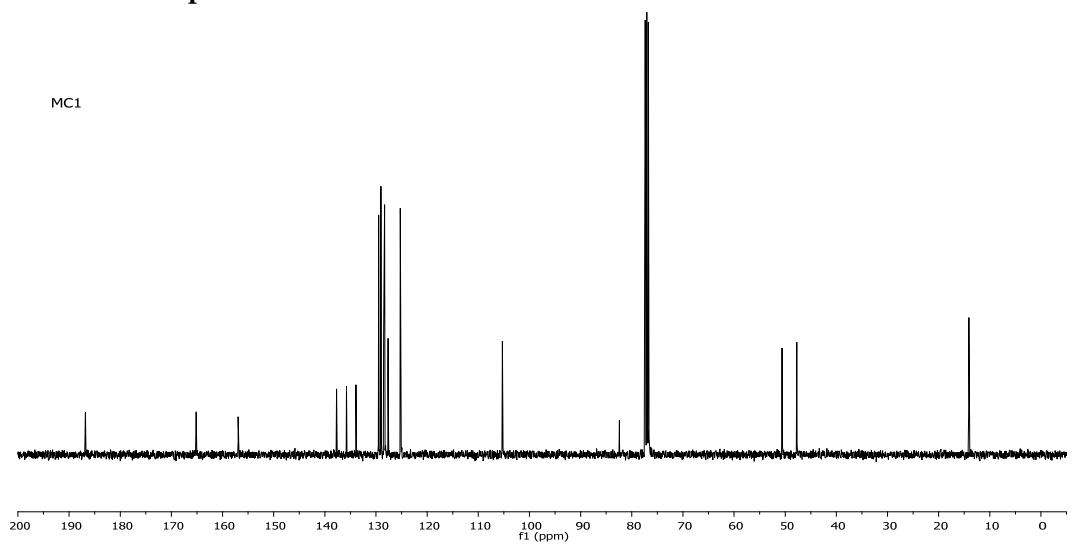
Infrared Spectrum of Compound 3b



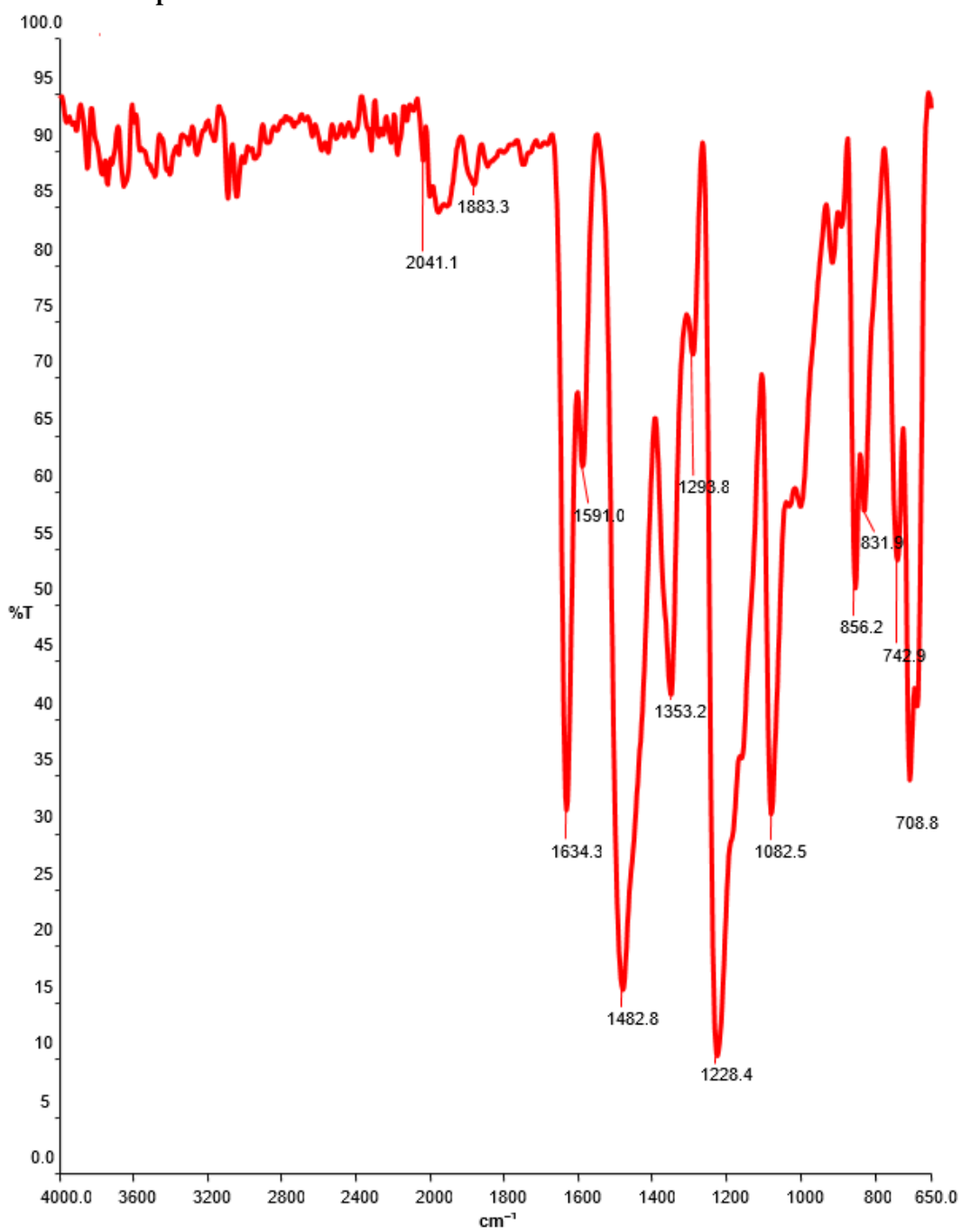
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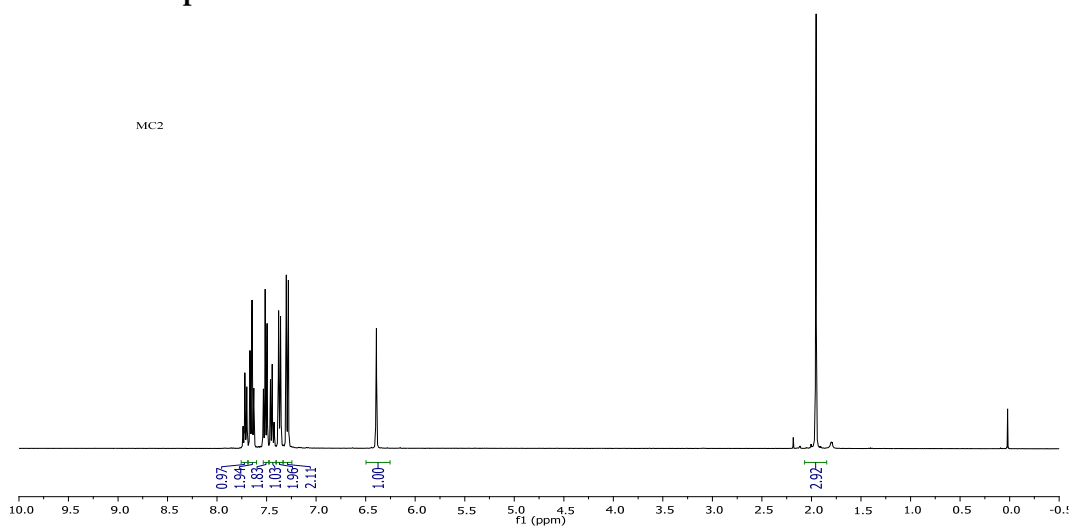
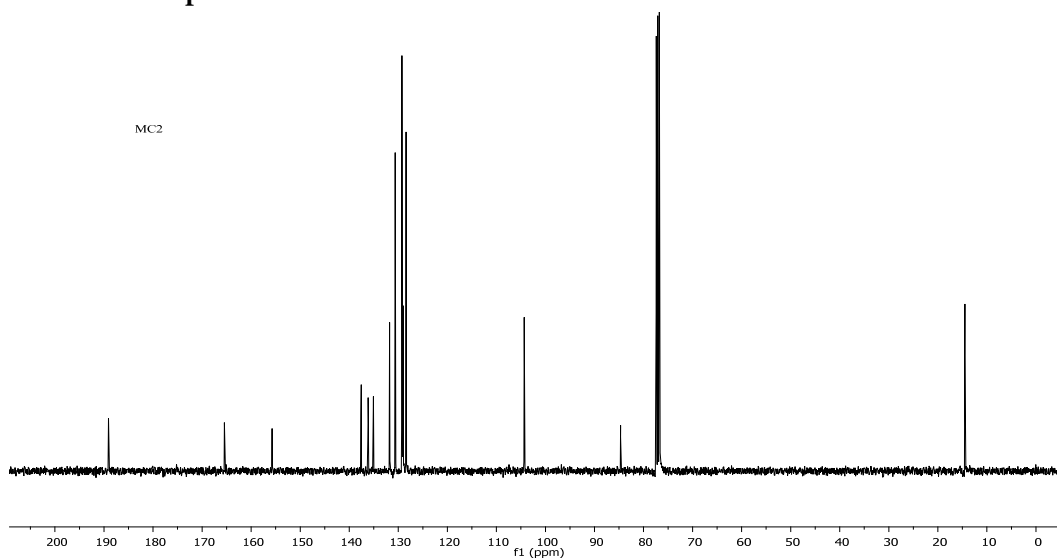
Infrared Spectrum of Compound 4a



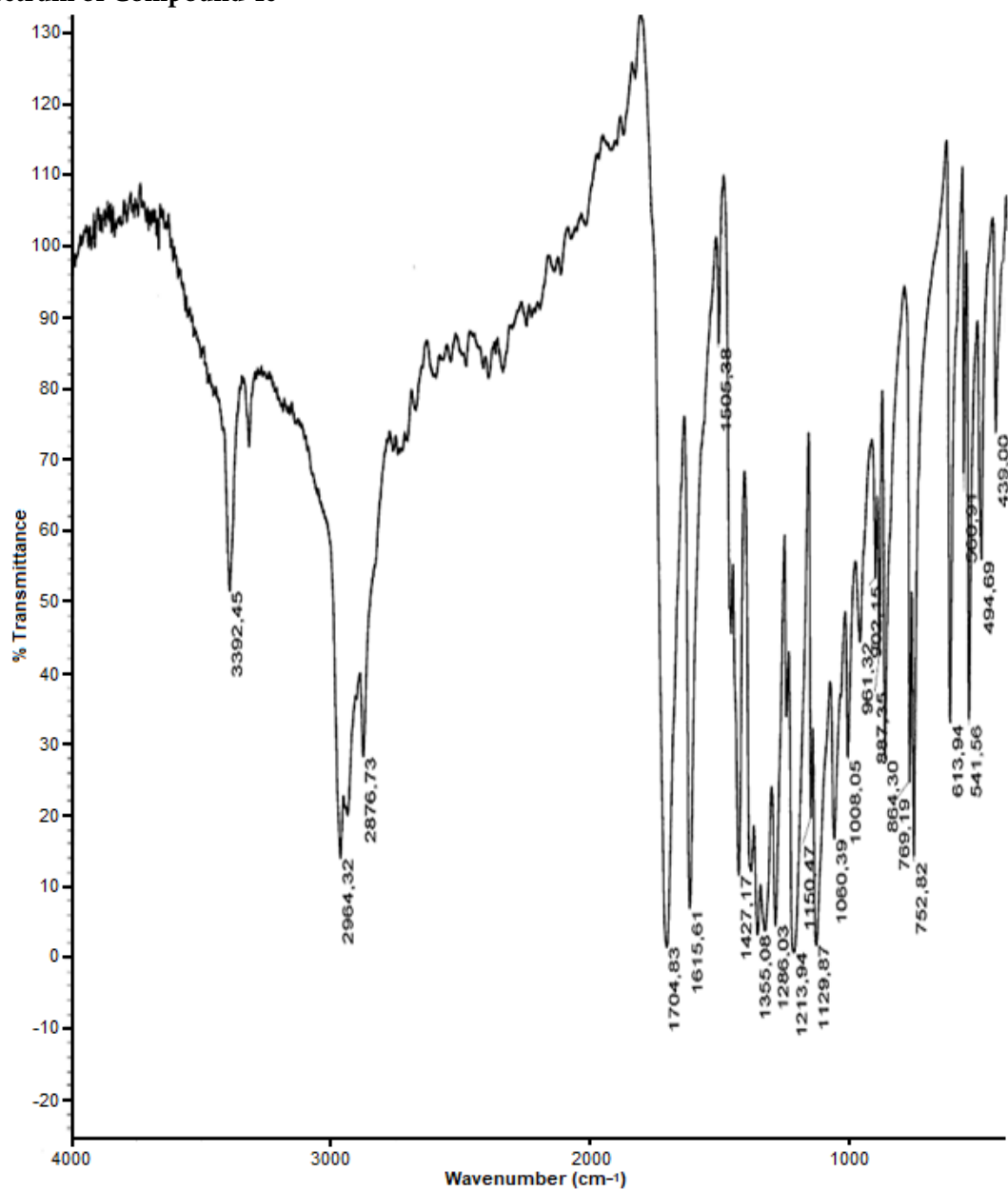
¹H-NMR Spectrum of Compound 4a**¹³C-NMR Spectrum of Compound 4a**

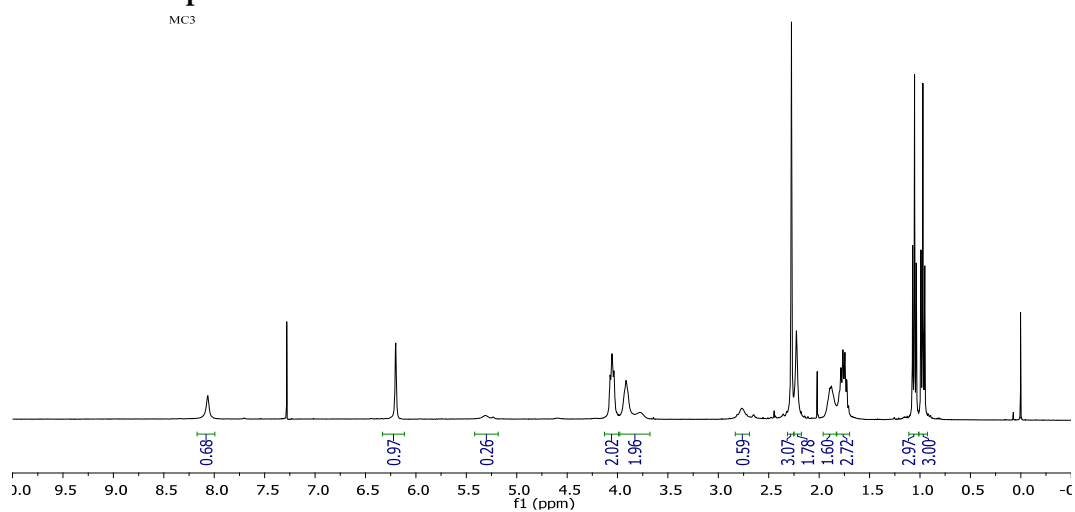
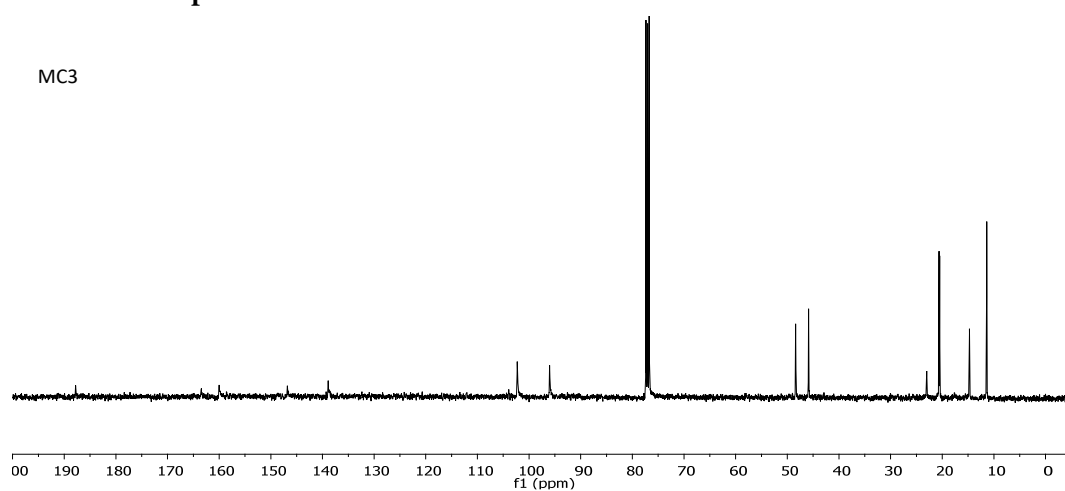
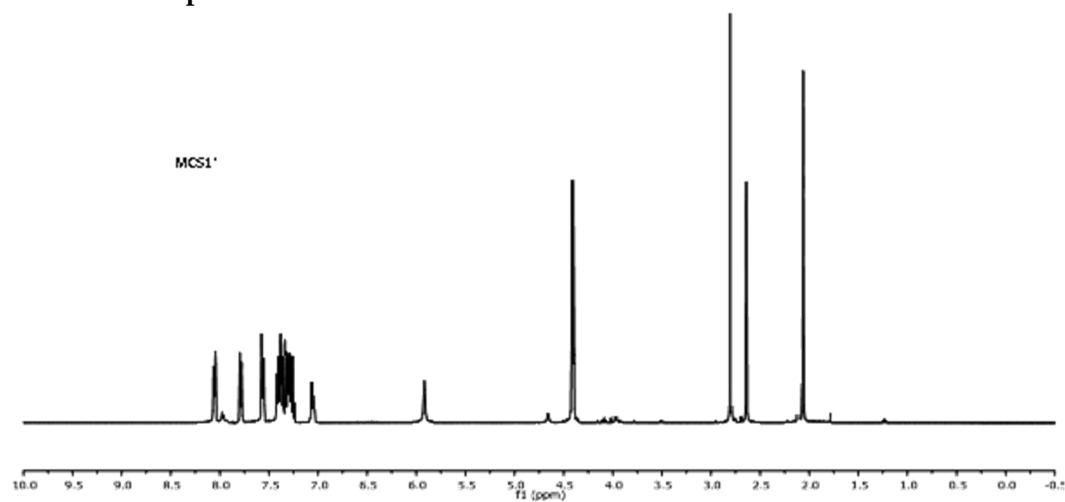
Infrared Spectrum of Compound 4b

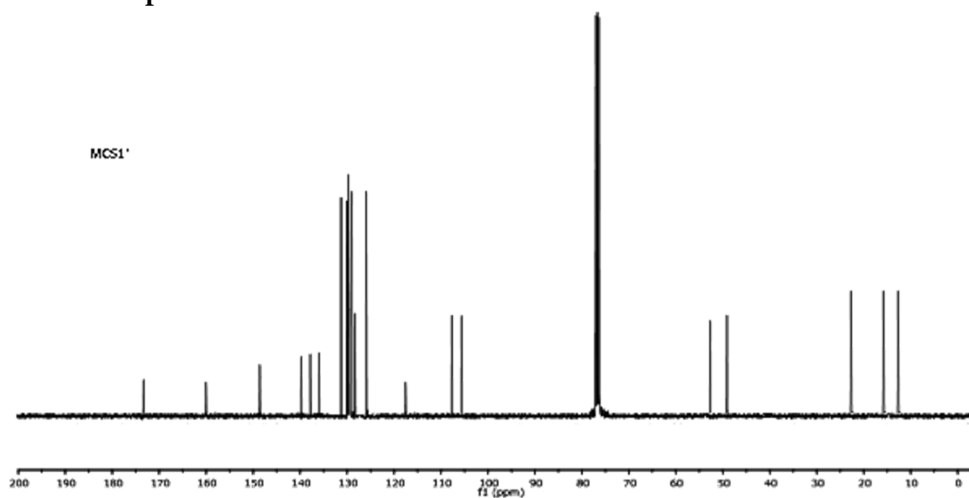
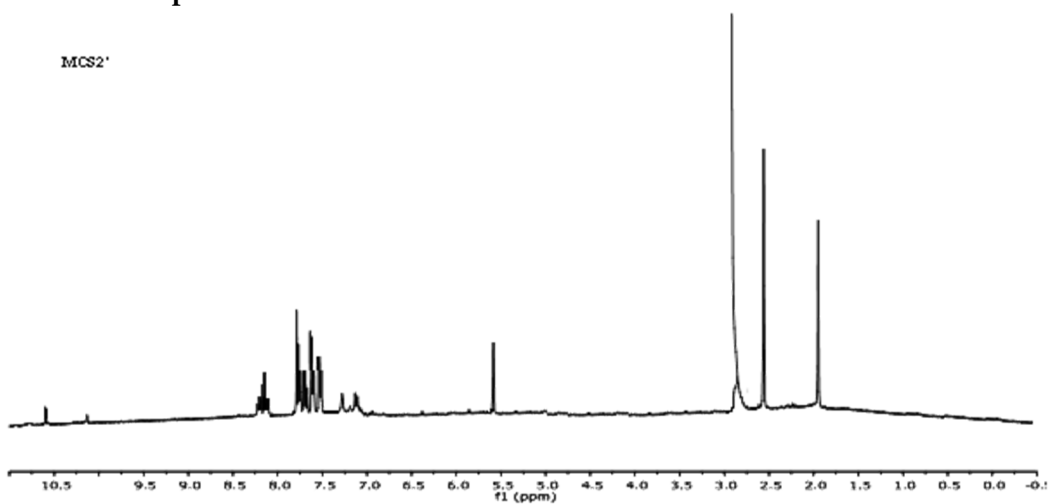
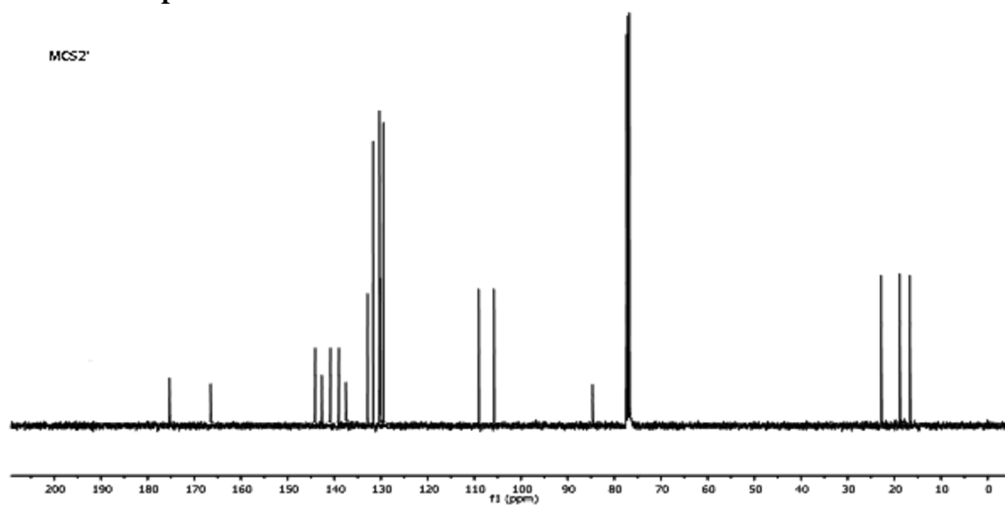


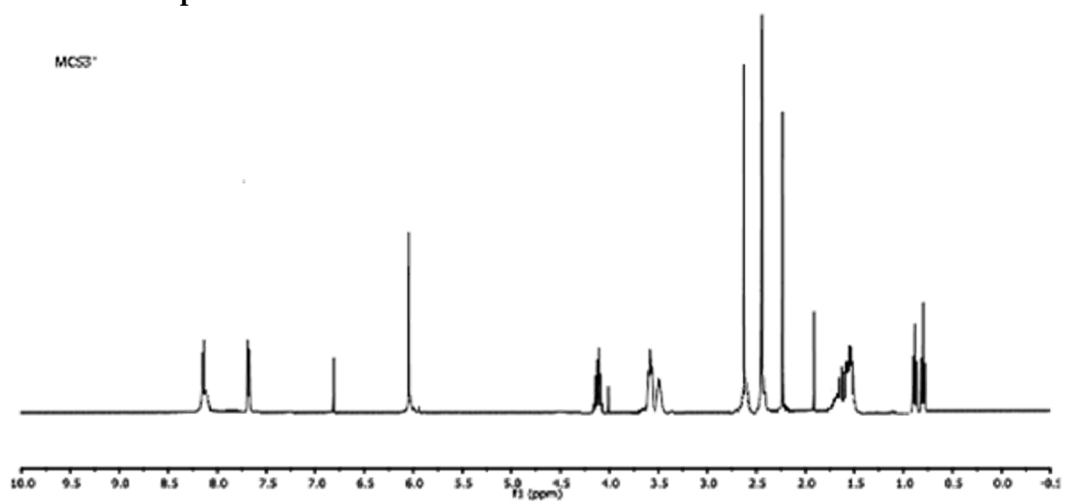
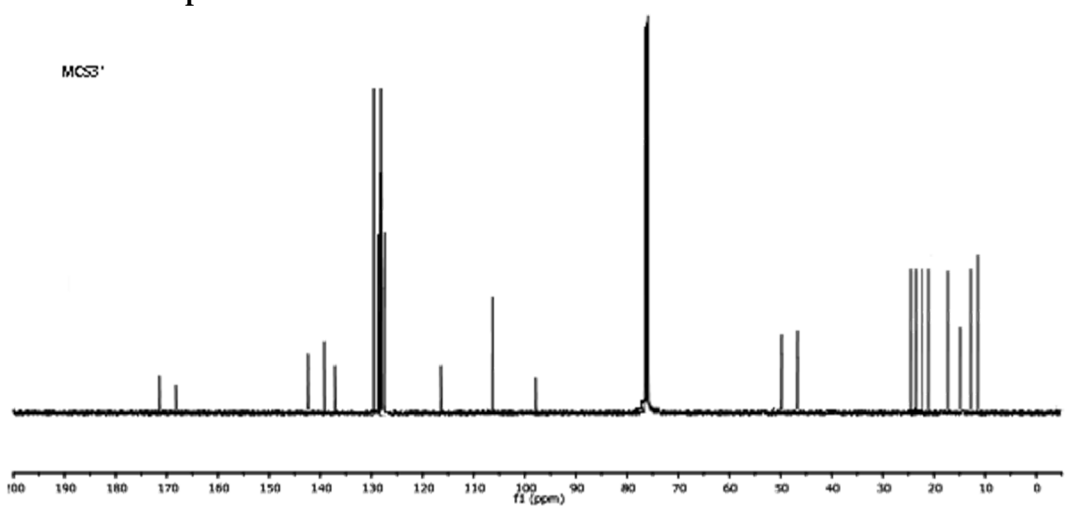
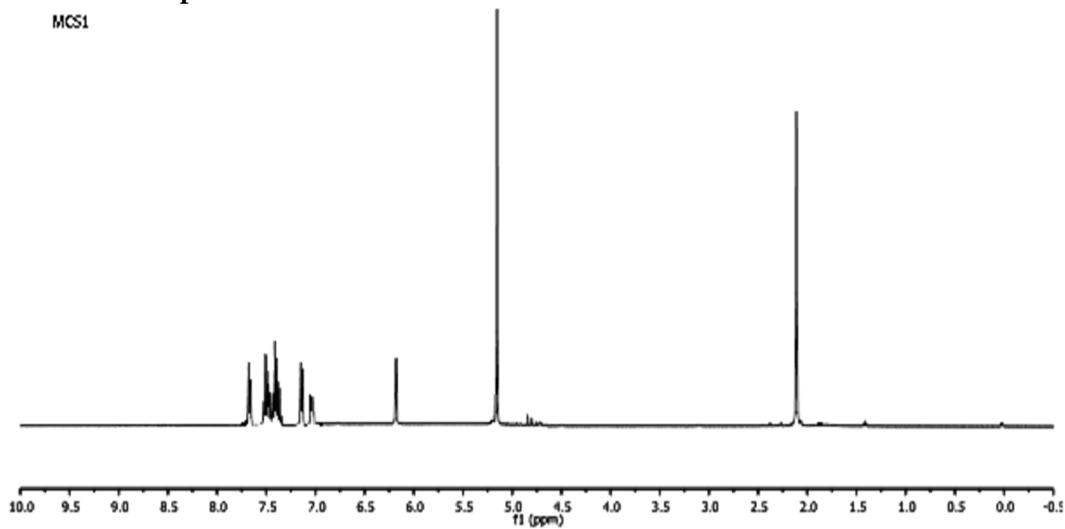
¹H-NMR Spectrum of Compound 4b**¹³C-NMR Spectrum of Compound 4b**

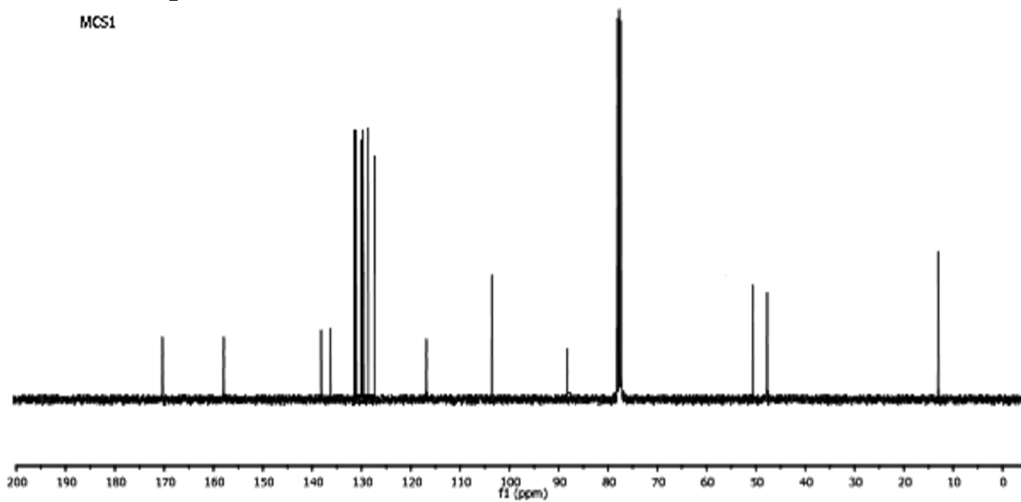
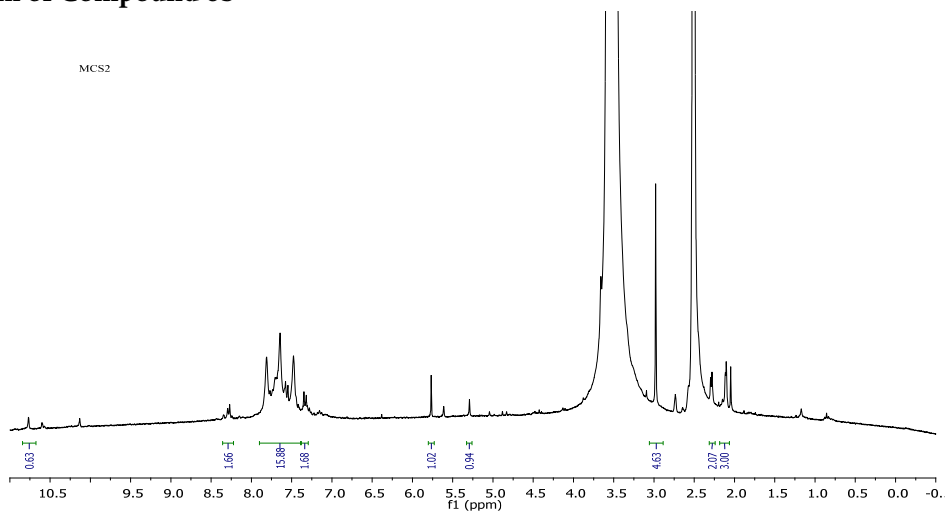
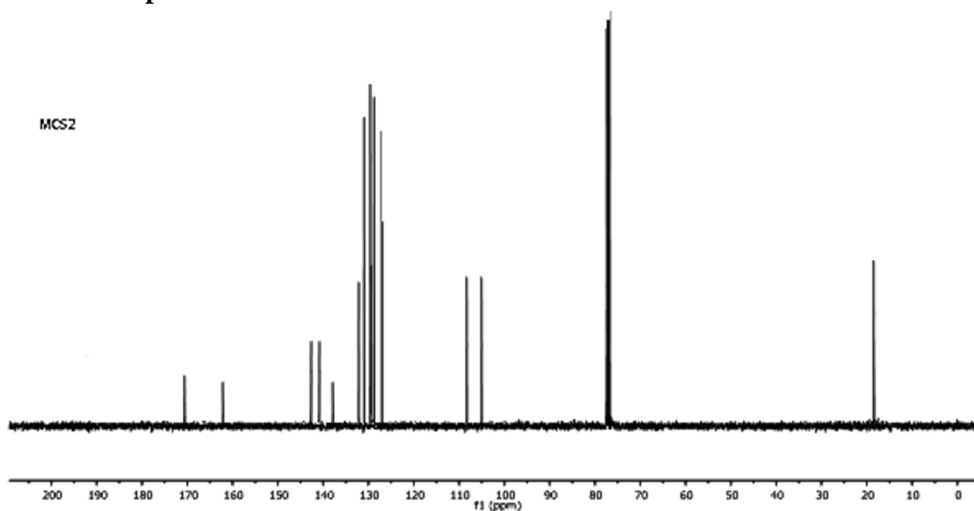
Infrared Spectrum of Compound 4c



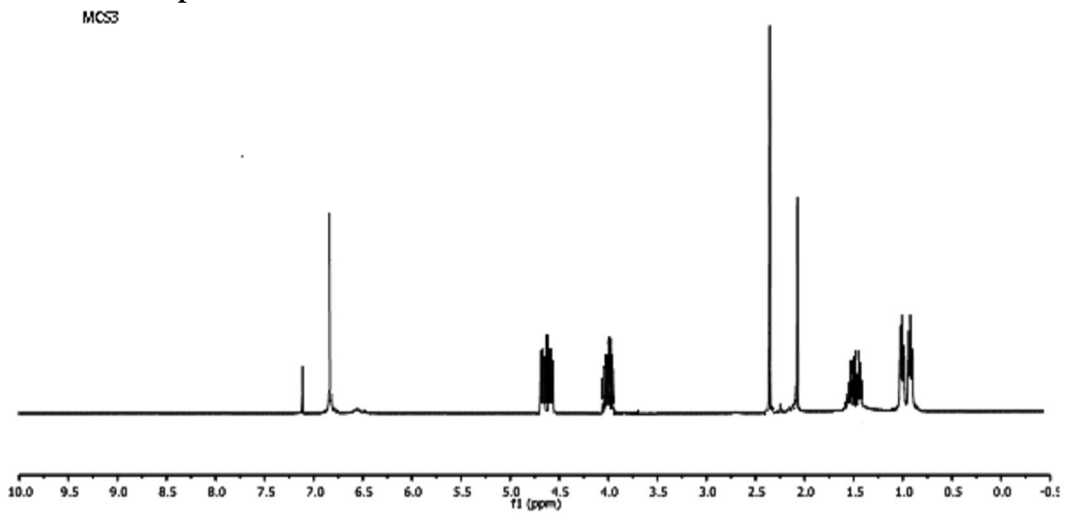
¹H-NMR Spectrum of Compound 4c**¹³C-NMR Spectrum of Compound 4c****¹H-NMR Spectrum of Compound 5a**

¹³C-NMR Spectrum of Compound 5a¹H-NMR Spectrum of Compound 5b¹³C-NMR Spectrum of Compound 5b

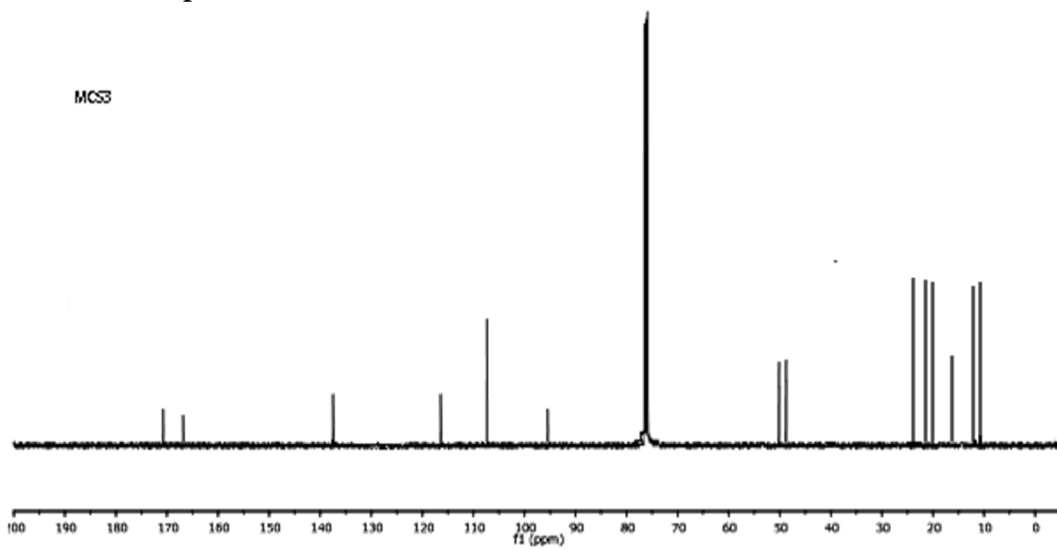
¹H-NMR Spectrum of Compound 5c**¹³C-NMR Spectrum of Compound 5c****¹H-NMR Spectrum of Compound 6a**

¹³C-NMR Spectrum of Compound 6a**¹H-NMR Spectrum of Compound 6b****¹³C-NMR Spectrum of Compound 6b**

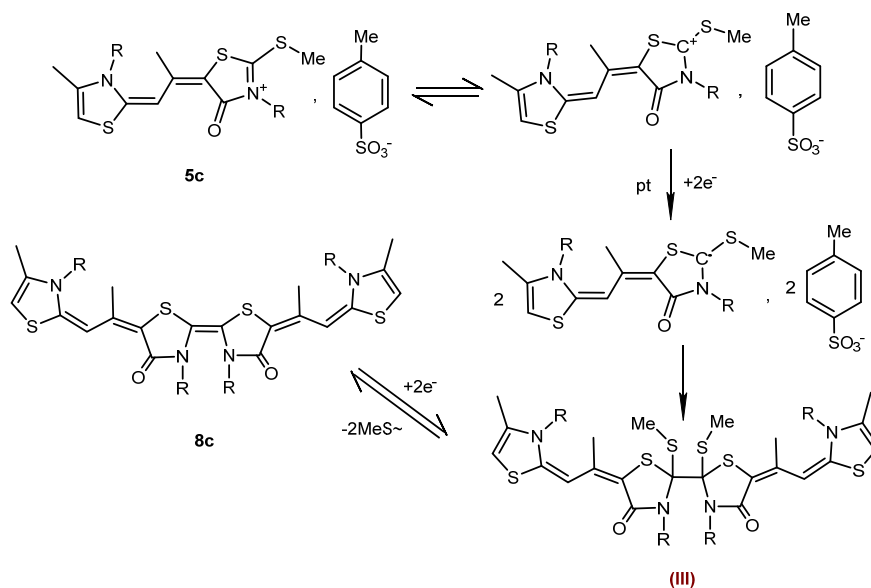
¹H-NMR Spectrum of Compound 6c



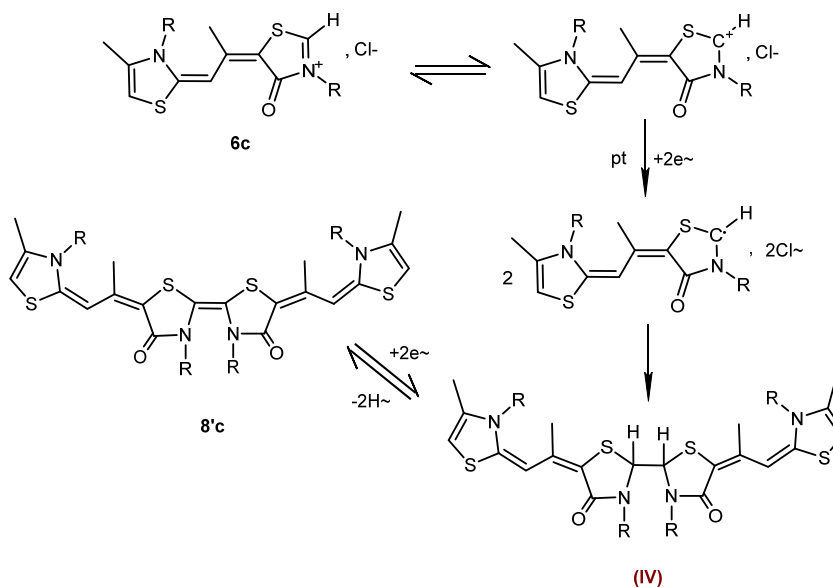
¹³C-NMR Spectrum of Compound 6c



Formation of tetrathiatetraazafulvalènes 8c and 8'c

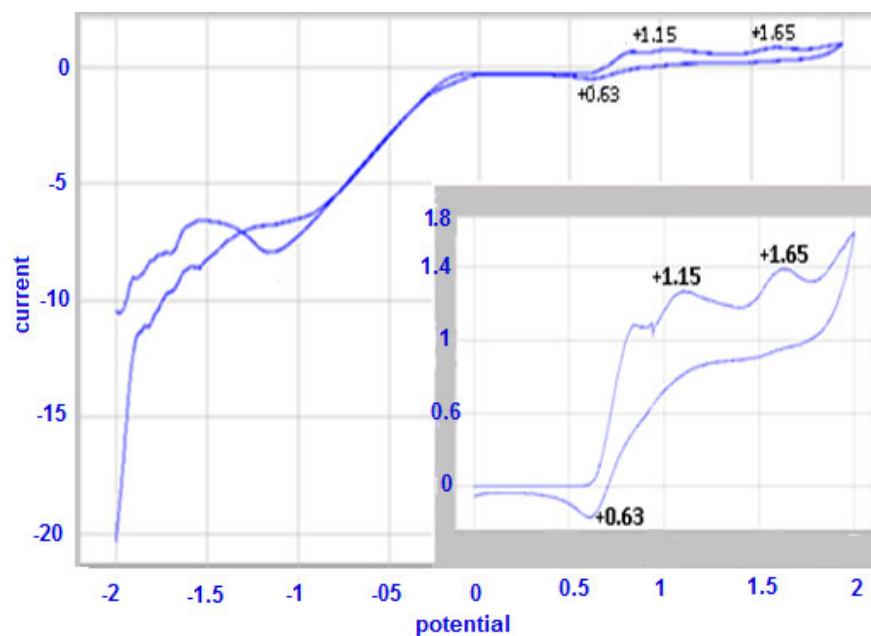


Scheme 5. The strategy of electrochemical transformation of alkylidenthiazolidenium sulfonate salt (5c) into TTTAF (8c)

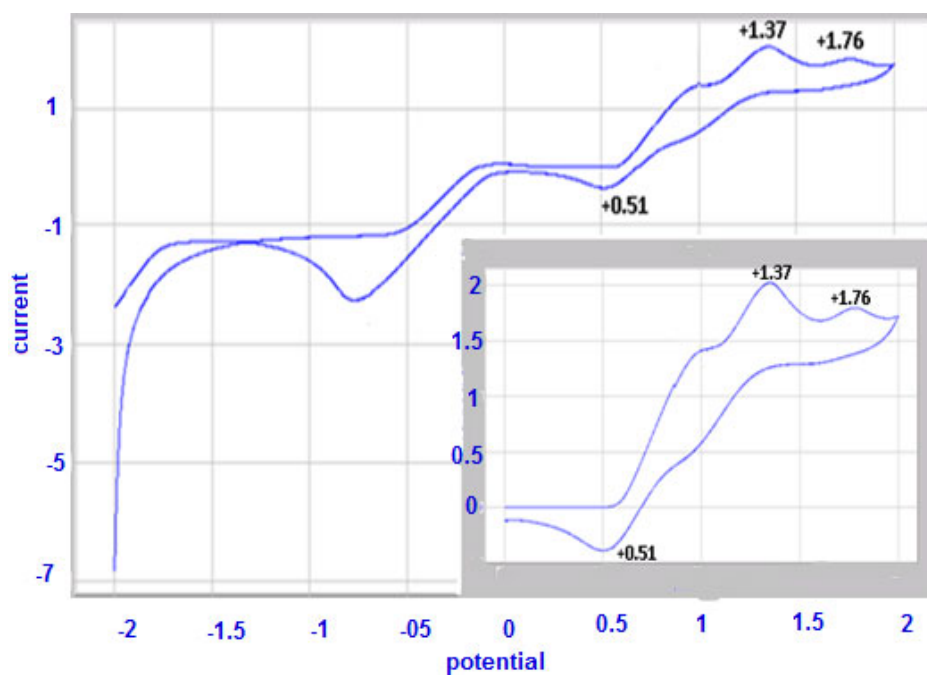


Scheme 6. The strategy of electrochemical transformation of alkylidenthiazolidenium chloride salt (6c) into TTTAF (8'c)

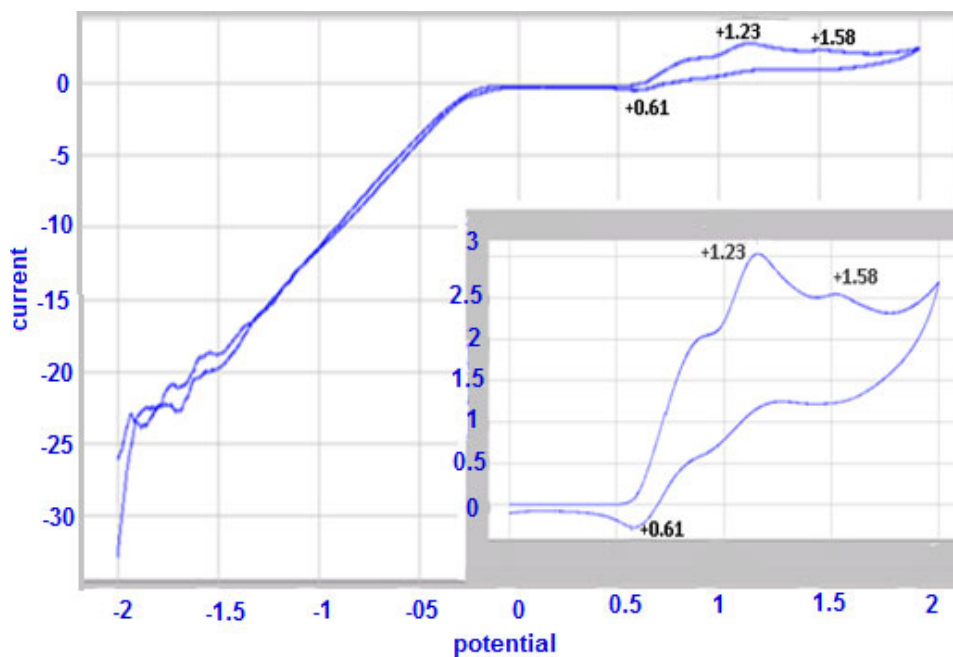
The Voltammograms obtained from the Voltalab 40 PGZ 301 potentiostat
Range: -2000/2000 and 0/2000



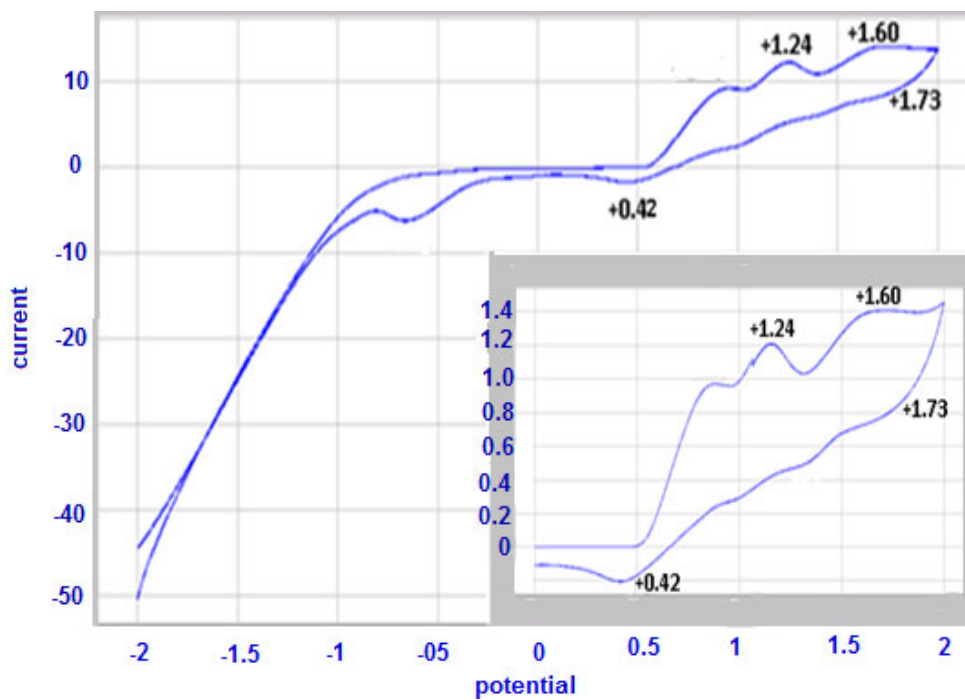
Voltammogram of compound 4a (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl , 0.1 V/s)



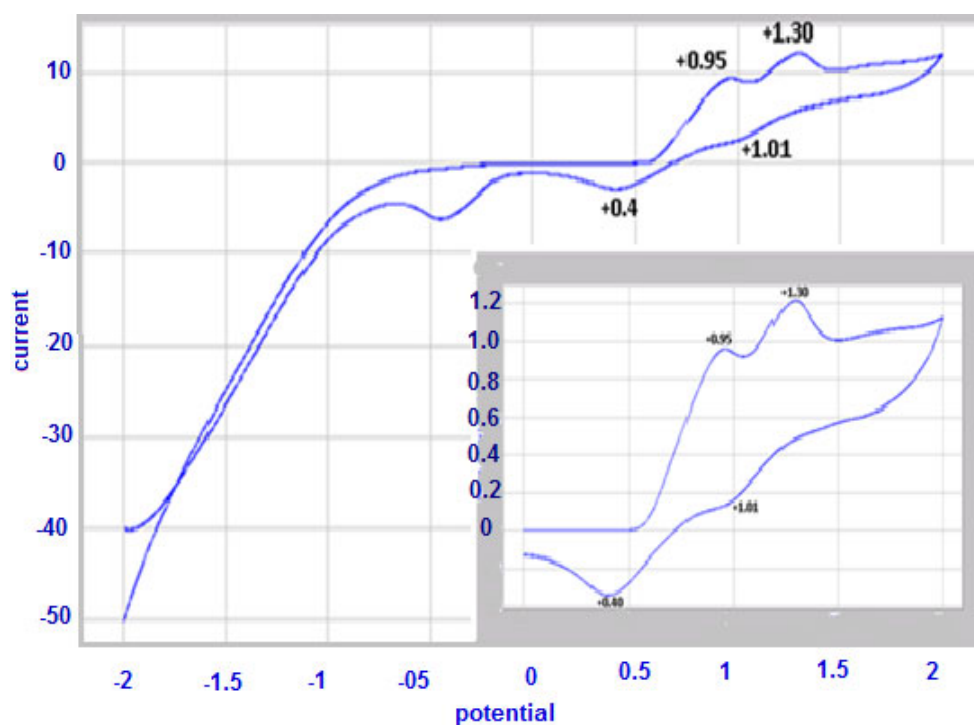
Voltammogram of compound 4b (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl , 0.1 V/s)



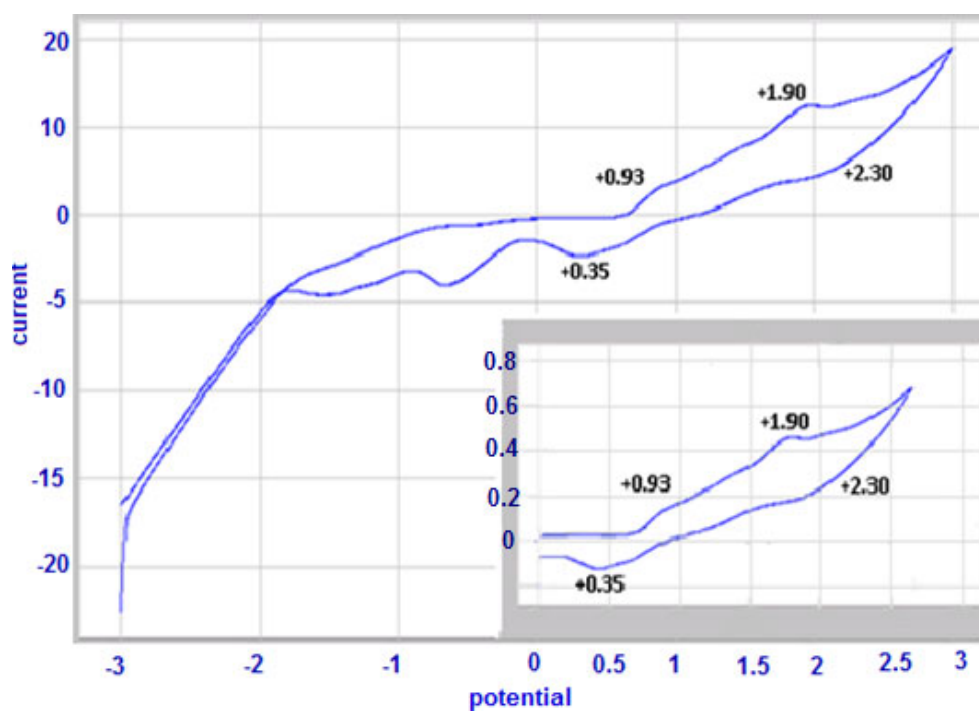
Voltammogram of compound 4c (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl, 0.1 V/s)



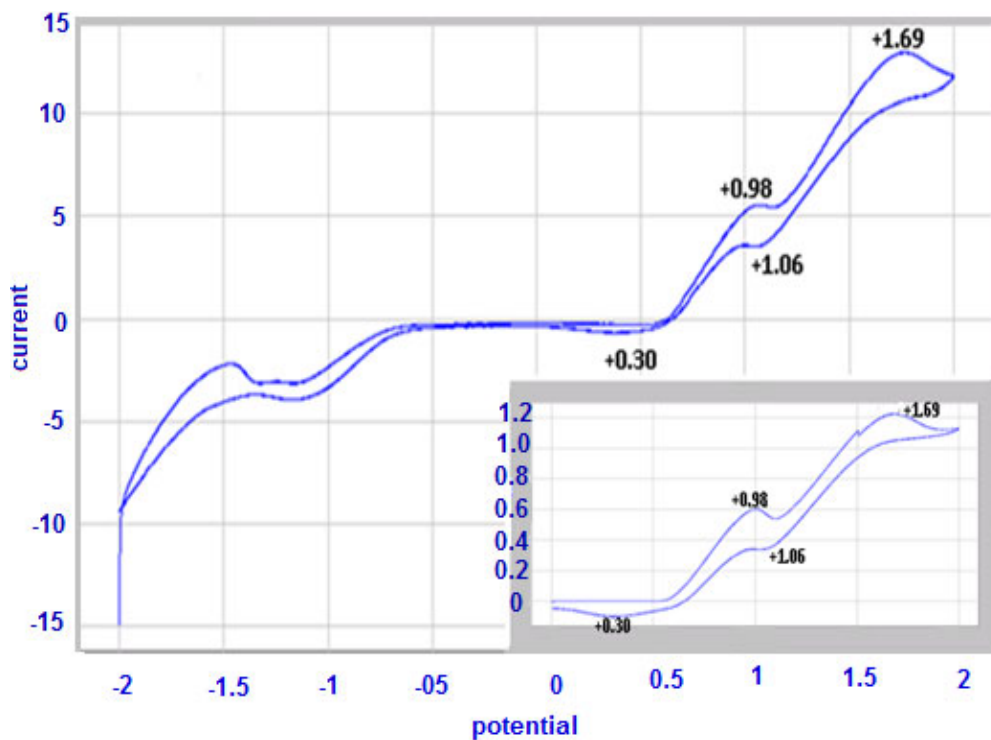
Voltammogram of compound 5a (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl, 0.1 V/s)



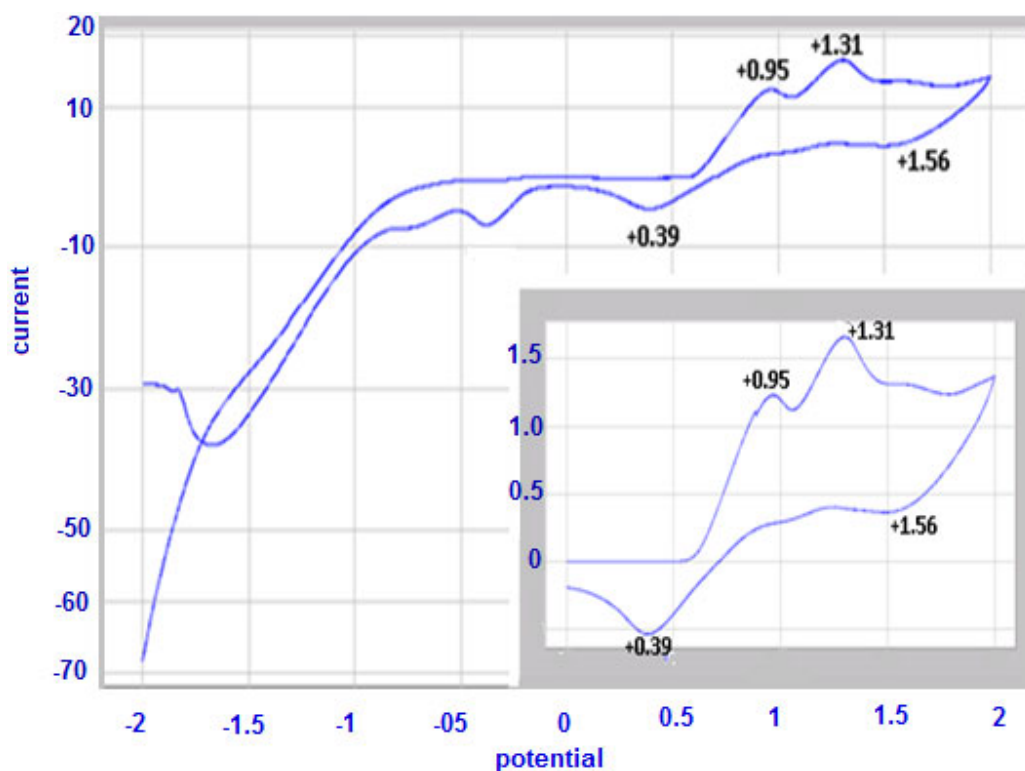
Voltammogram of compound 5b (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl , 0.1 V/s)



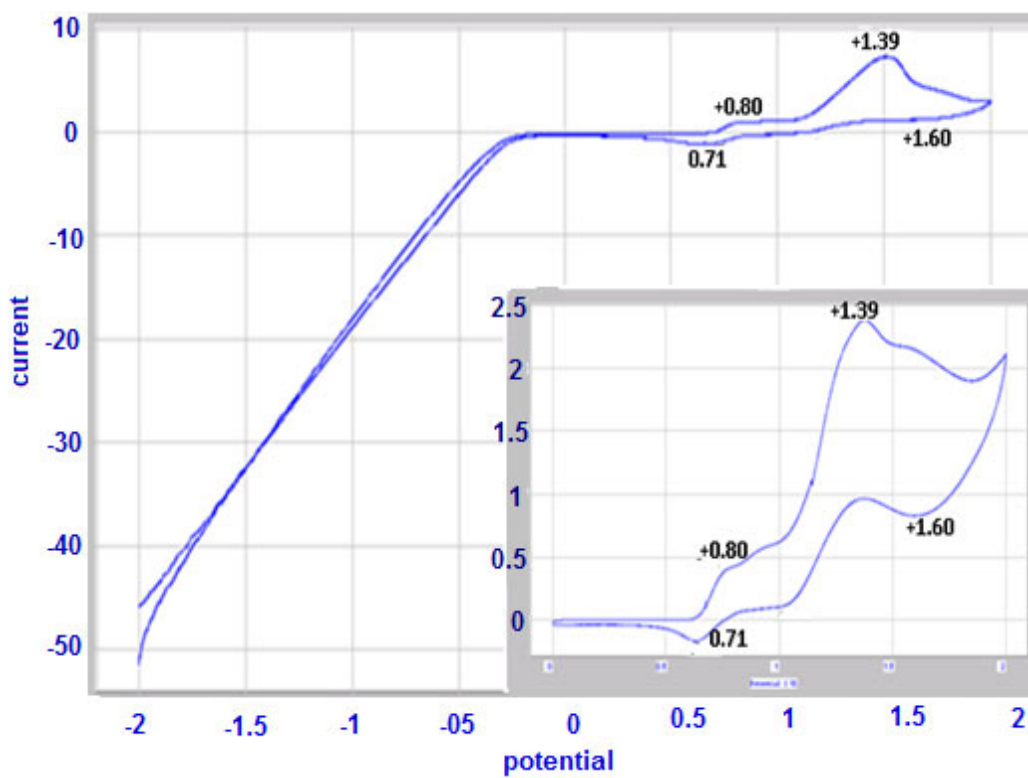
Voltammogram of compound 6a (CH_3CN , NBu_4Br 0.1M, HClO_4 , PT, Ag/AgCl , 0.1V/s)



Voltammogram of compound 6b (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl, 0.1 V/s)



Voltammogram of compound 5c (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl, 0.1 V/s)



Voltammogram of compound 6c (CH_3CN , NBu_4Br 0.1 M, HClO_4 , PT, Ag/AgCl, 0.1 V/s)