

Synthesis, characterization and antibacterial study of novel 2-((*E*)-2-(thiophen-2-yl)vinyl)-4*H*-chromen-4-ones

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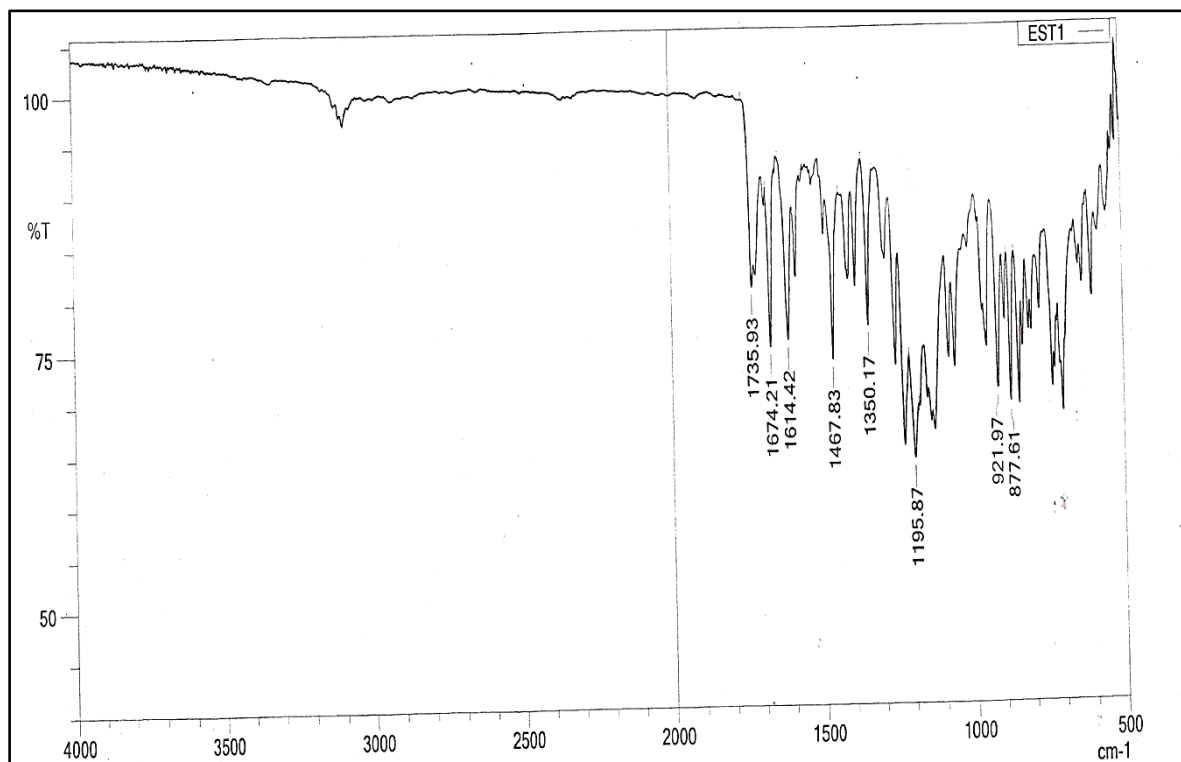
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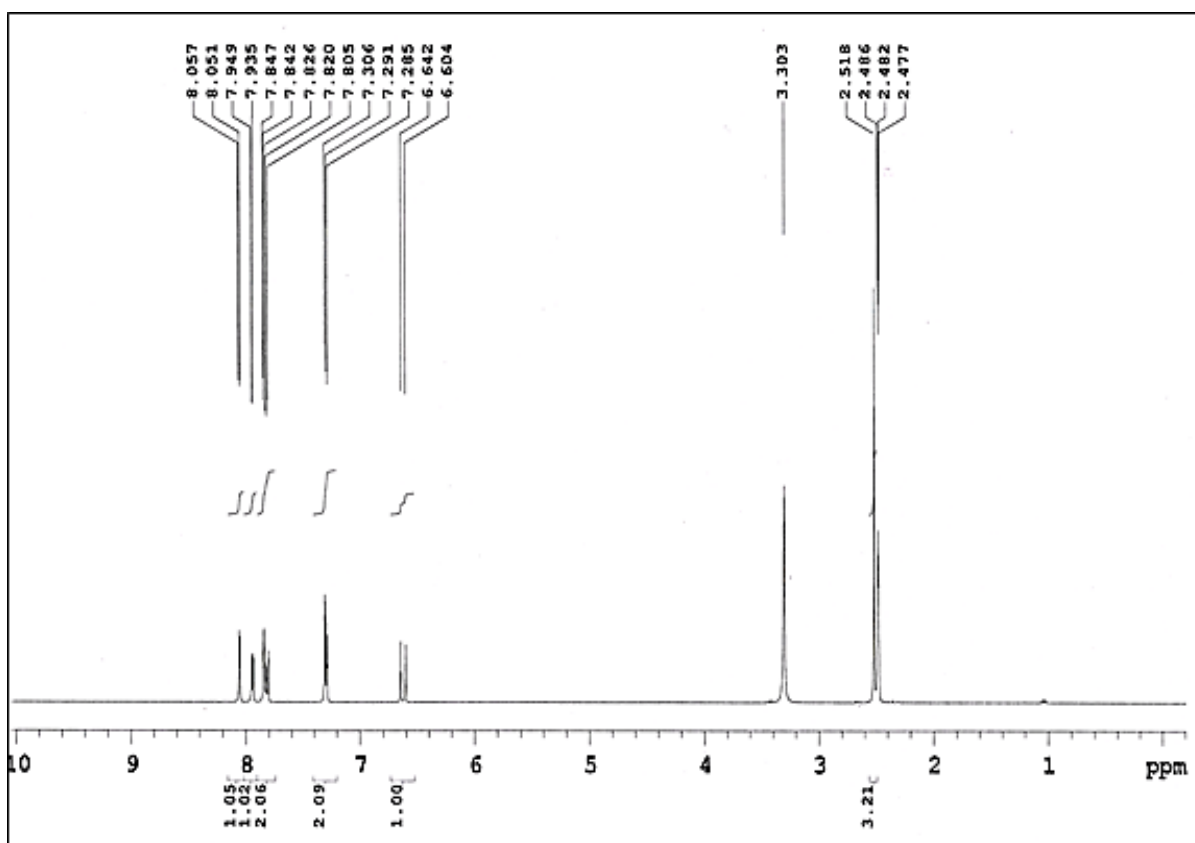
1. IR spectra of **3a**, **3f**, **4a**, **5a**
2. ¹H NMR spectra of **3a**, **3f**, **4a** and **5a**
3. ¹³C NMR spectra of **3a**, **4a** and **5a**
4. Mass spectra of **3a**, **4a** and **5a**

Supplementary Data

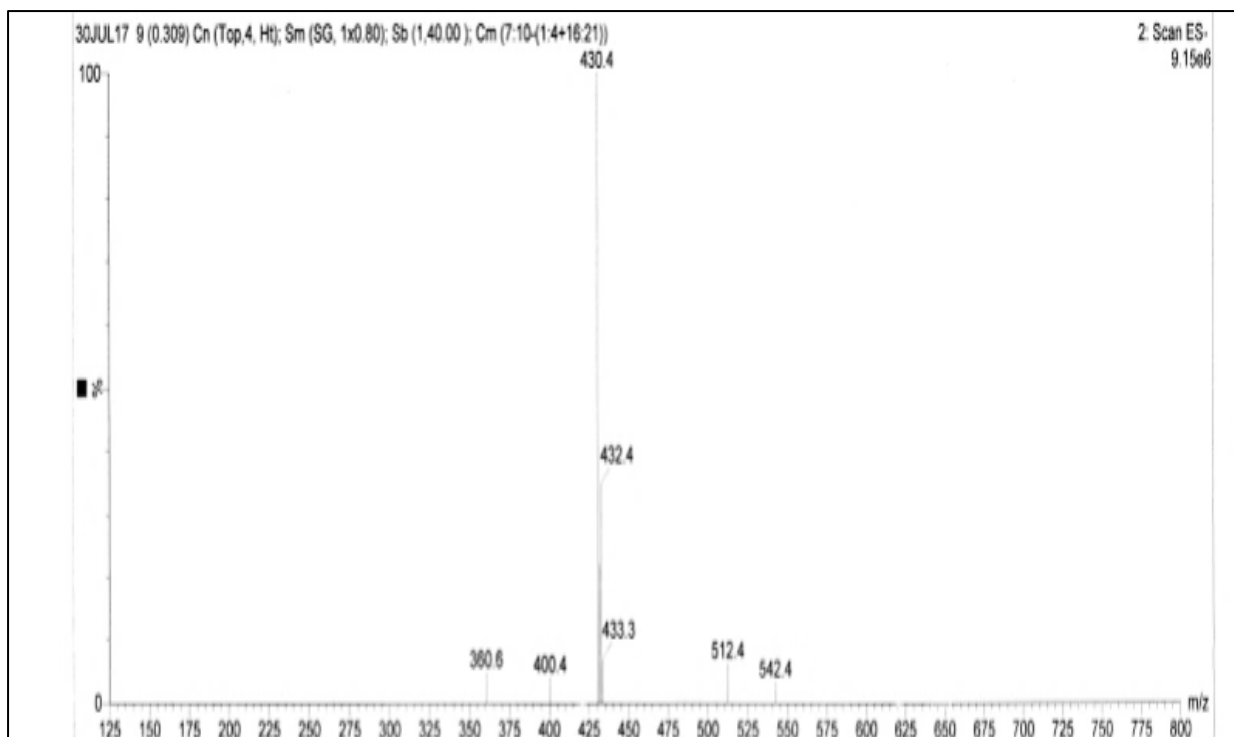
IR of compound 3a



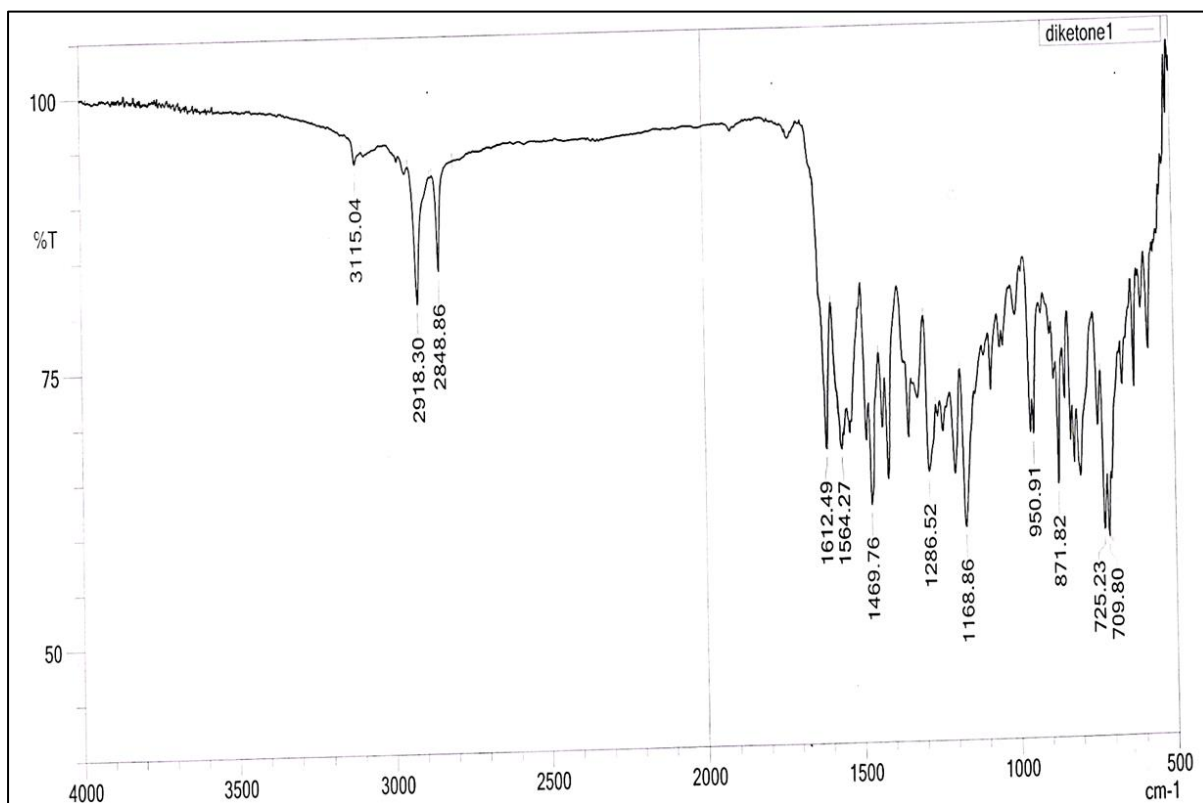
¹H NMR of compound 3a



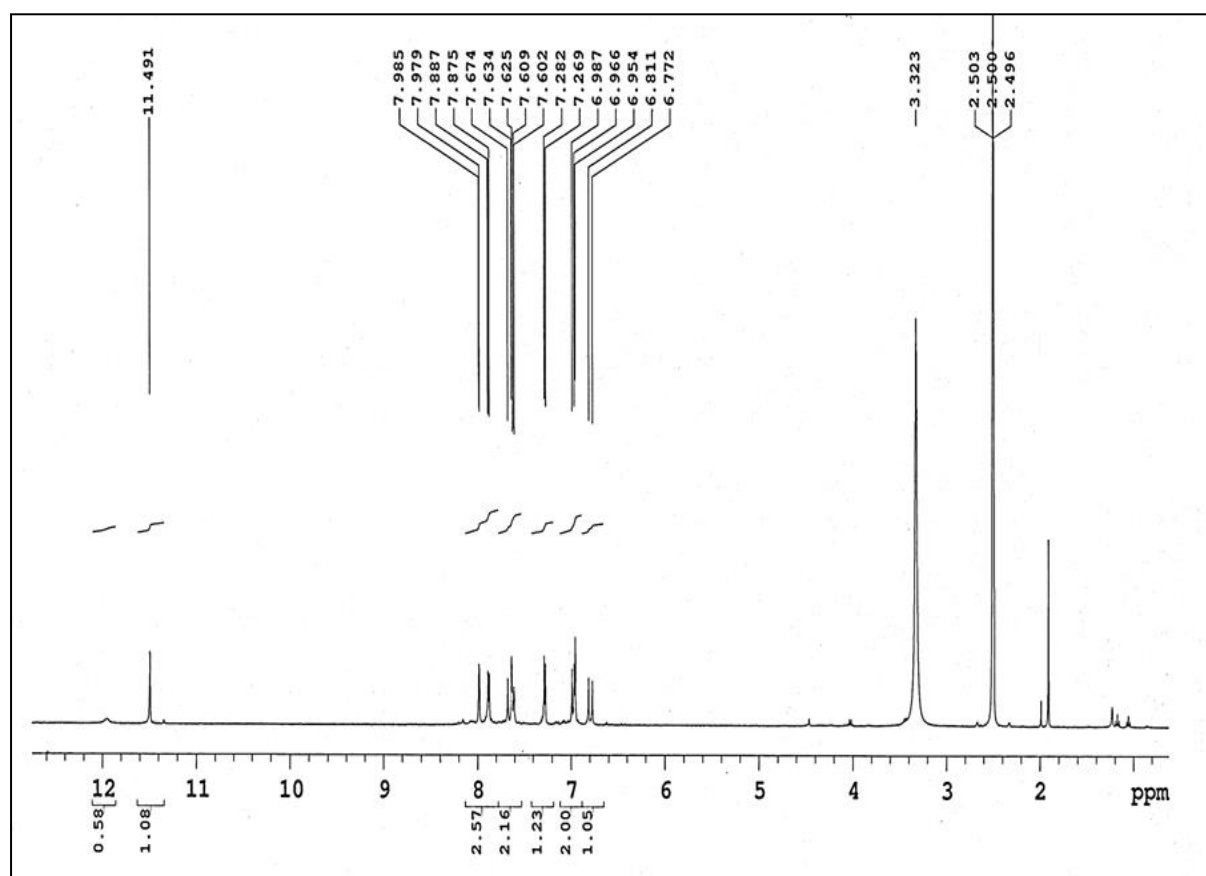
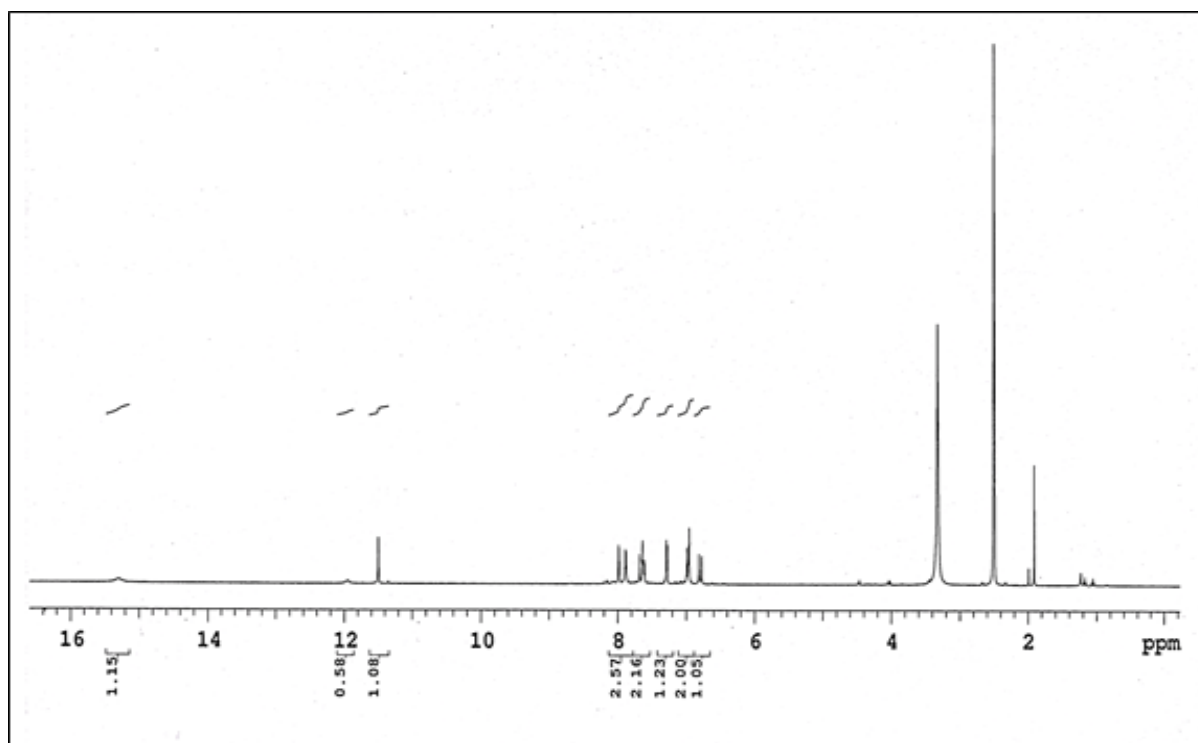
Mass spectrum of compound **3a**



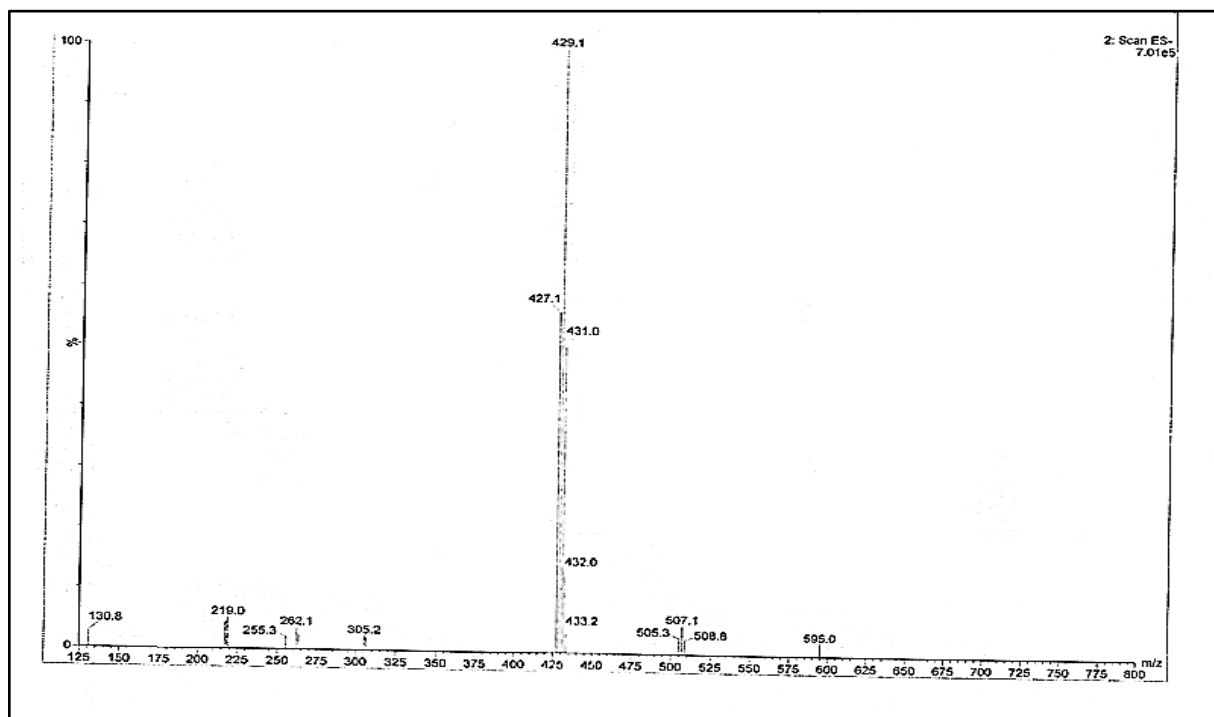
IR spectrum of compound **4a**



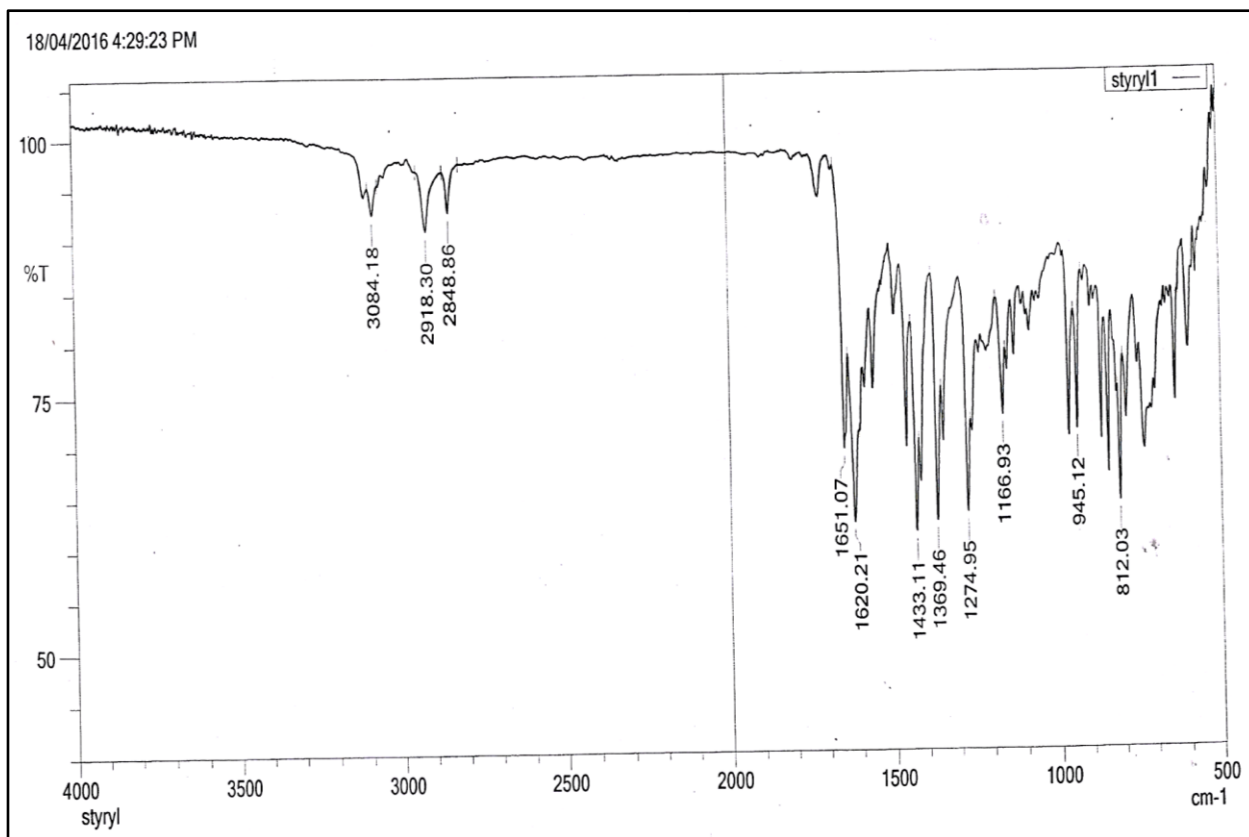
^1H NMR of compound **4a**



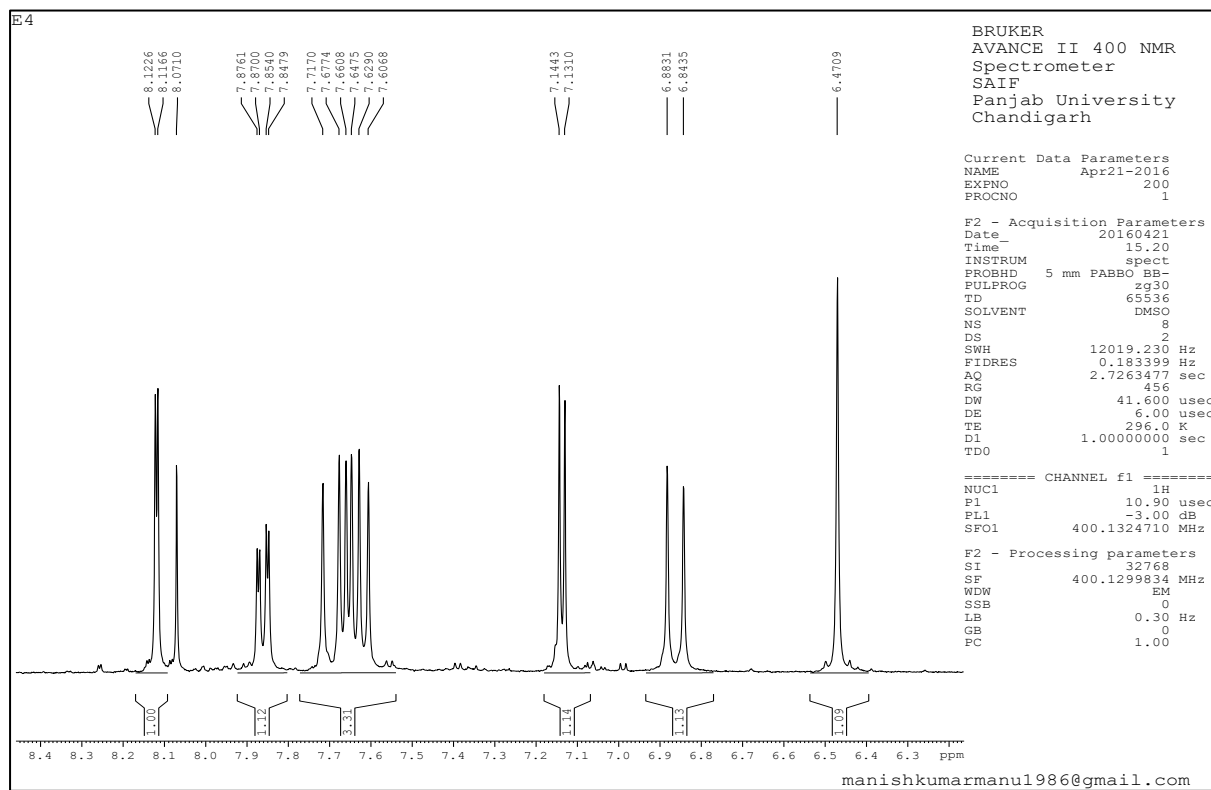
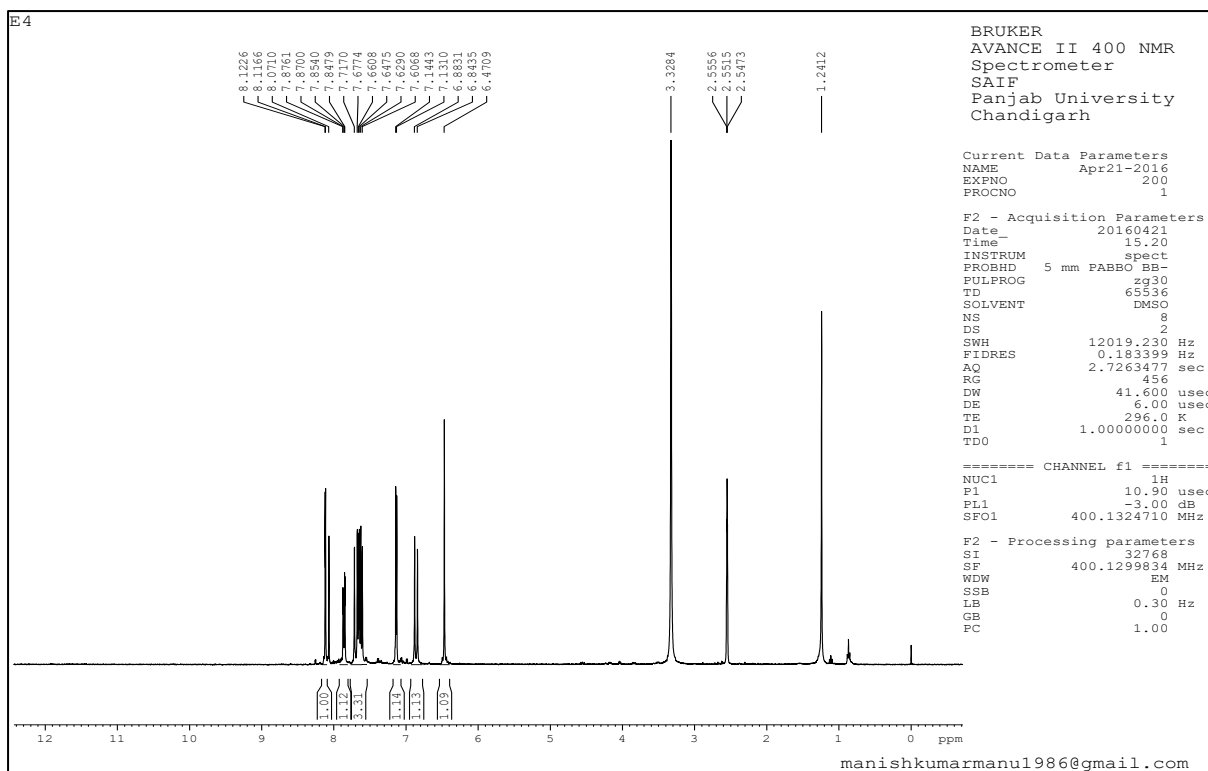
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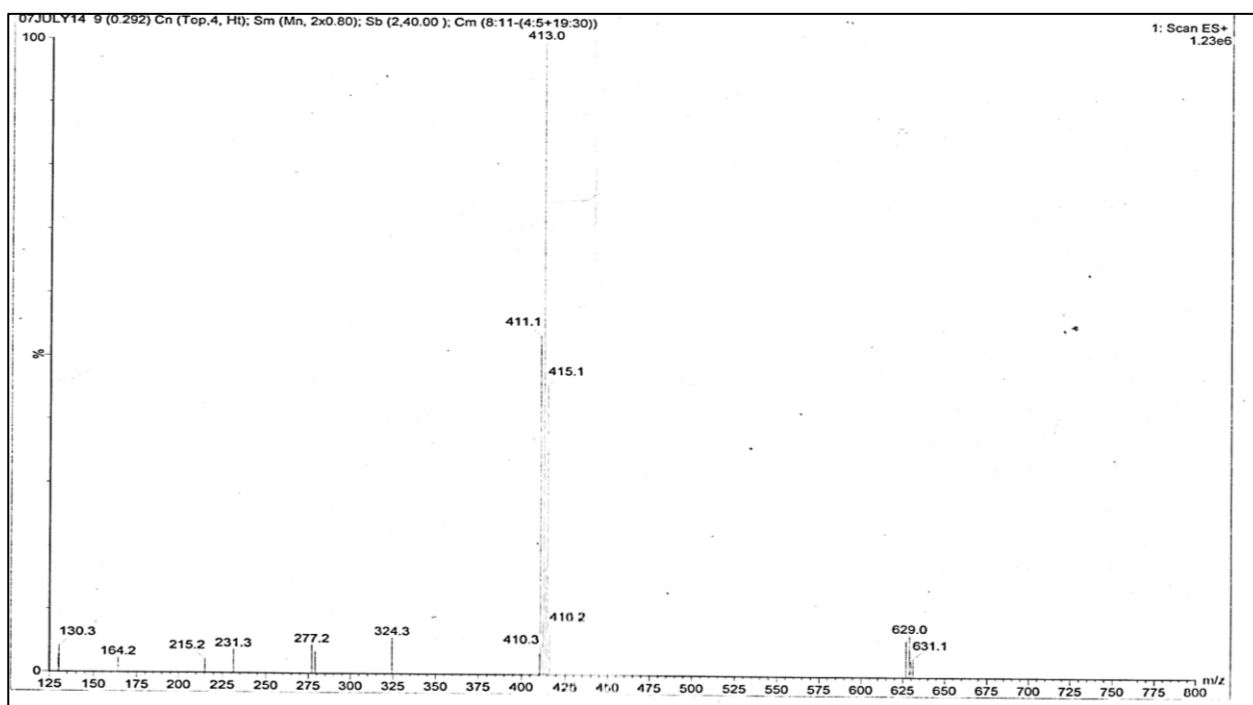
IR spectrum of compound **5a**



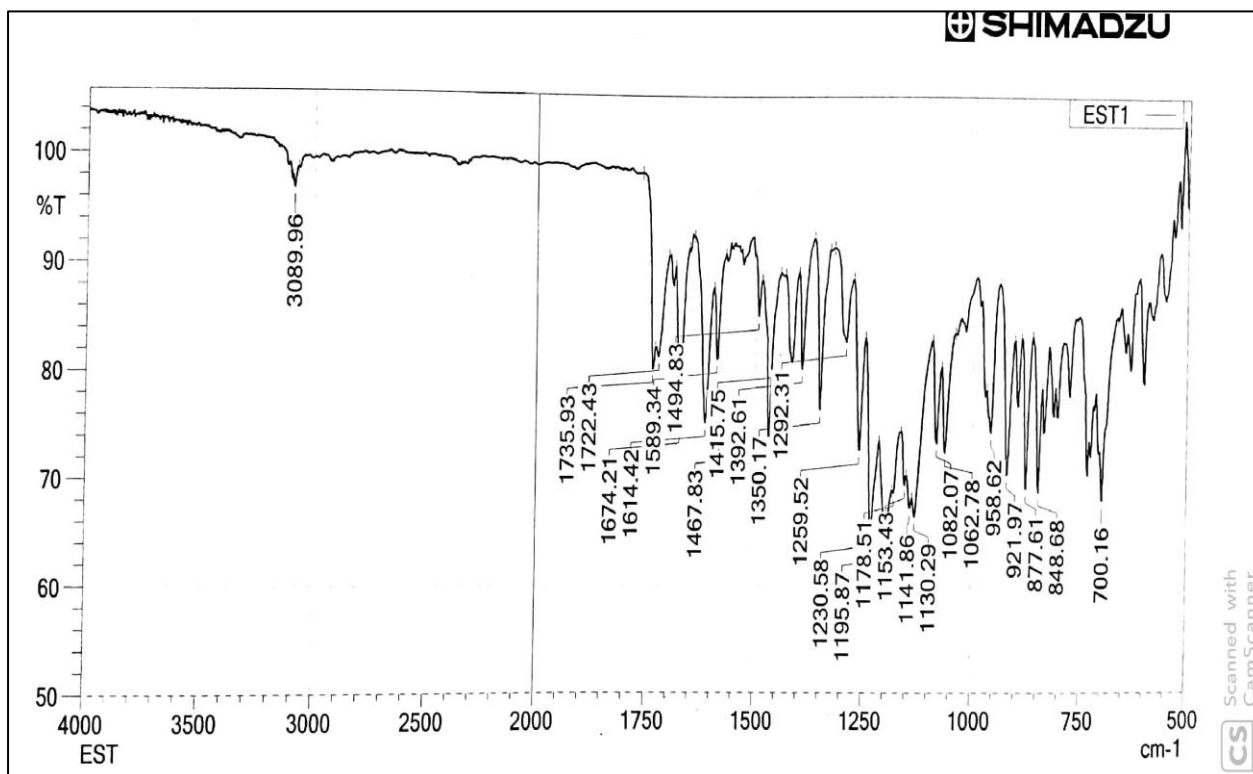
¹H NMR spectrum of compound **5a**



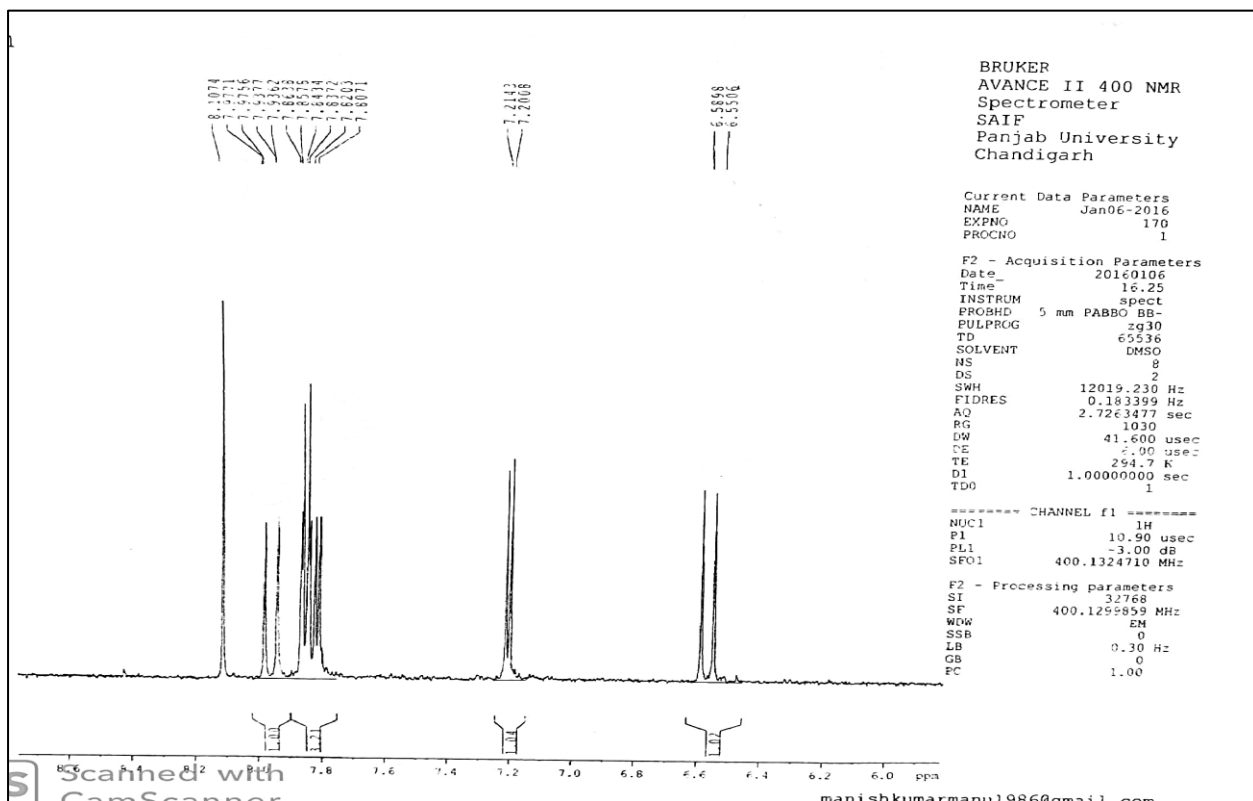
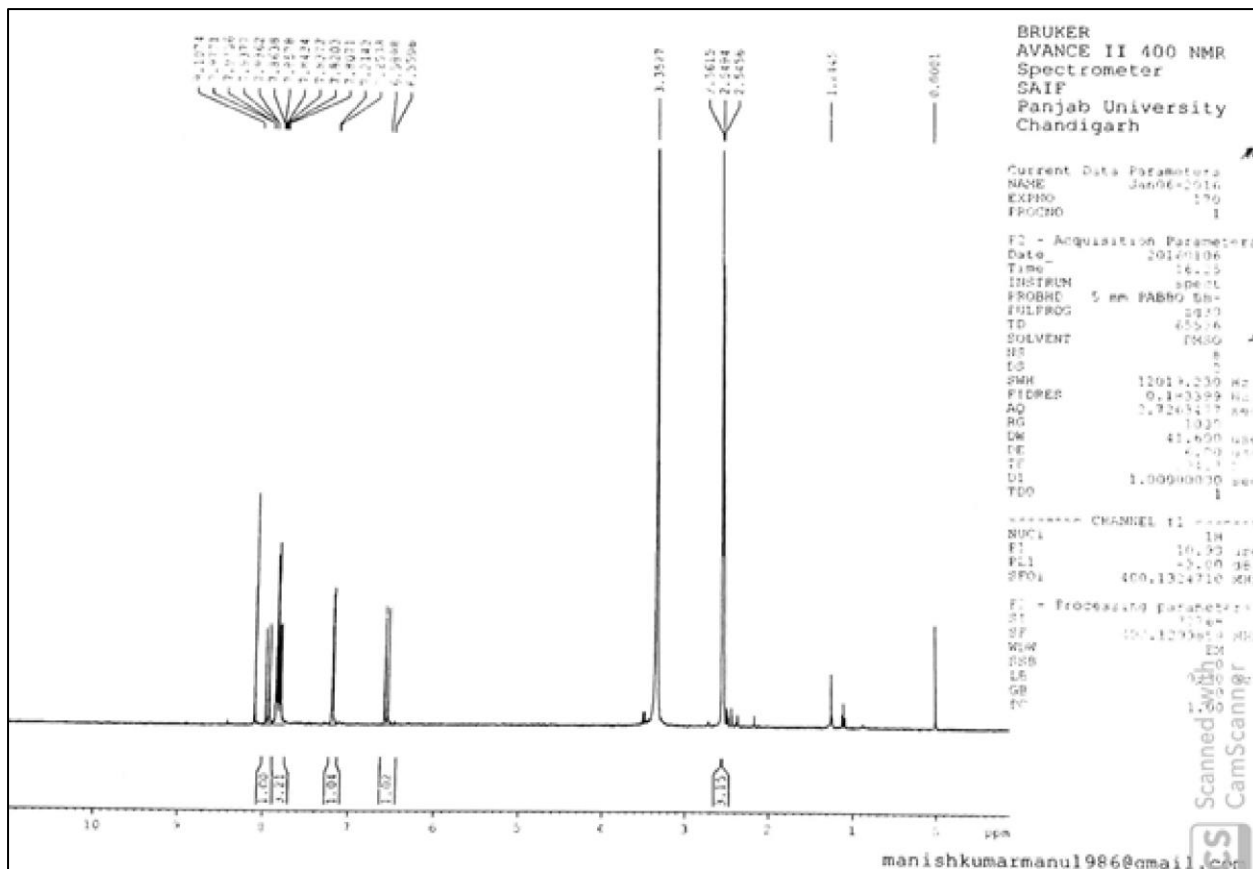
Mass spectrum of compound 5a



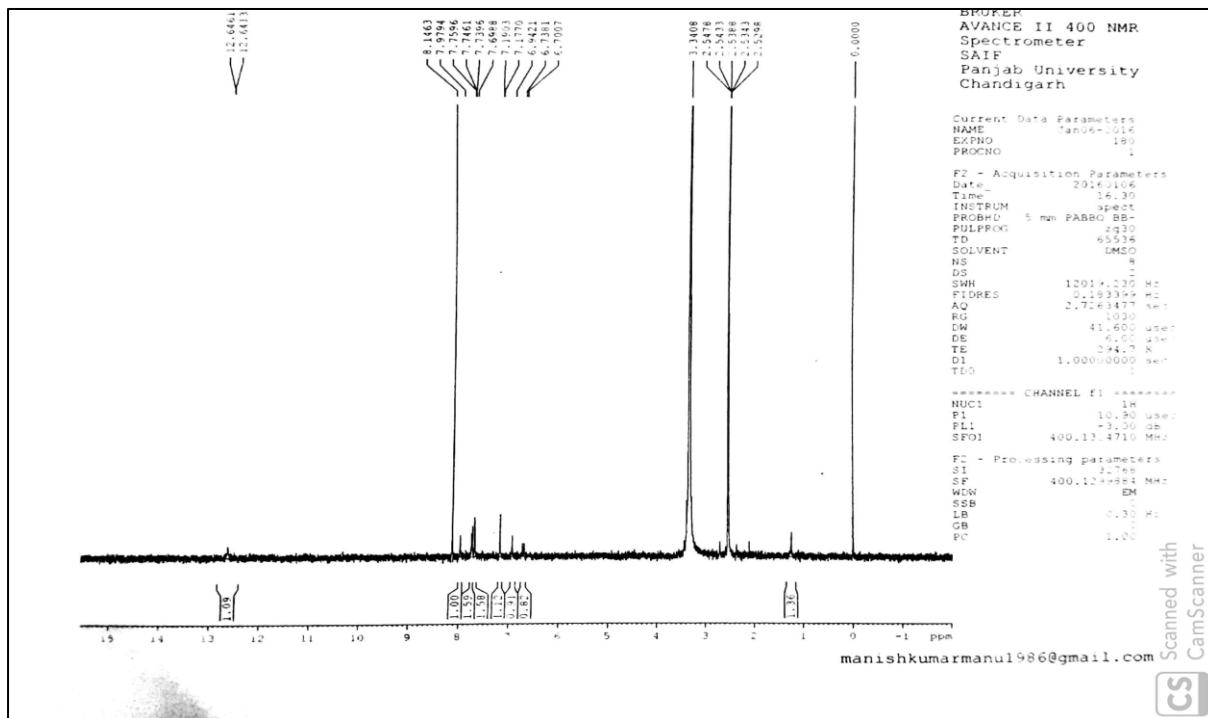
IR spectrum of compound 3f



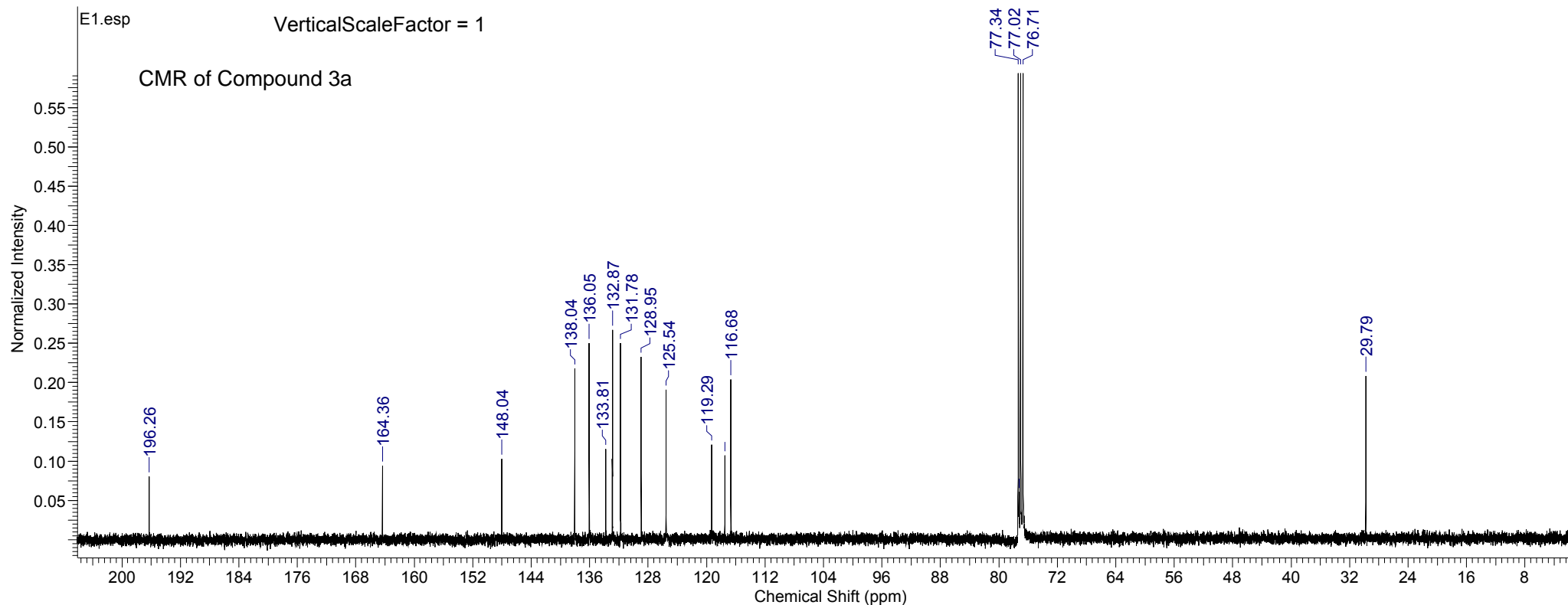
¹H NMR spectrum of compound 3f



¹H NMR spectra of compound 4f

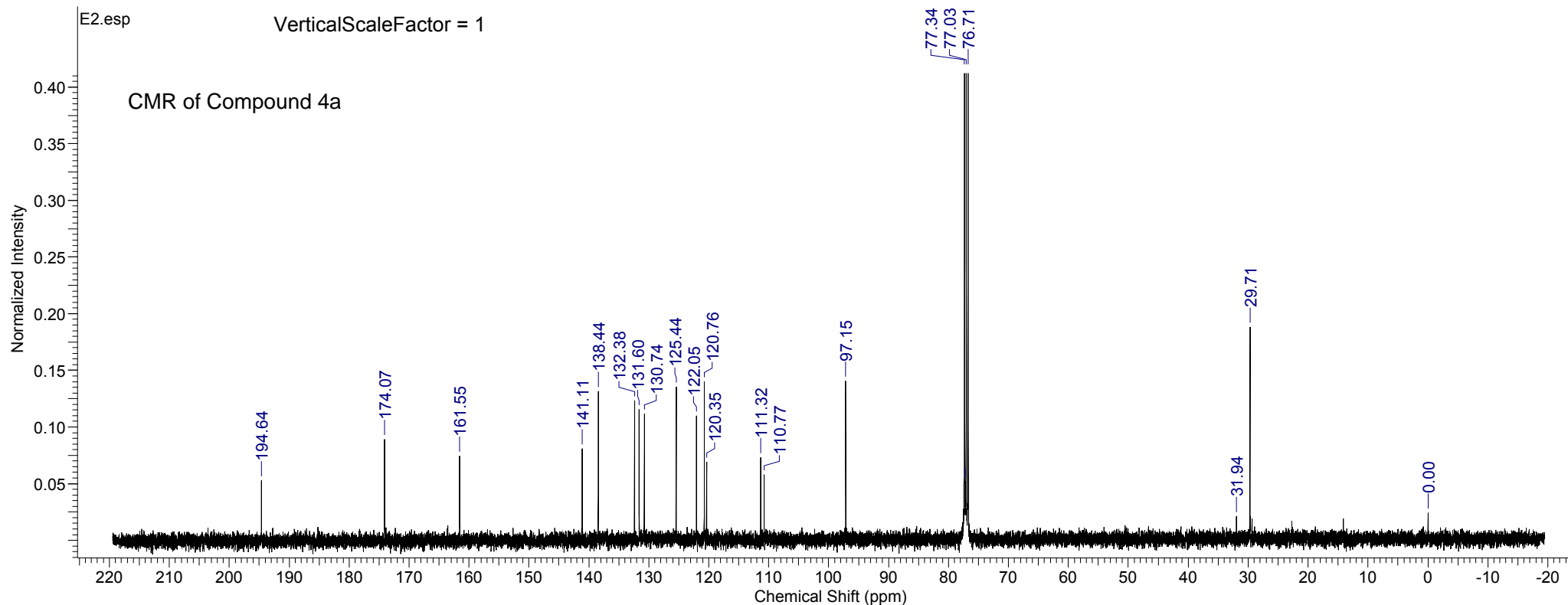


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Spectrum Type	STANDARD	Sweep Width (Hz)	24037.73	Temperature (degree C)	27.184		



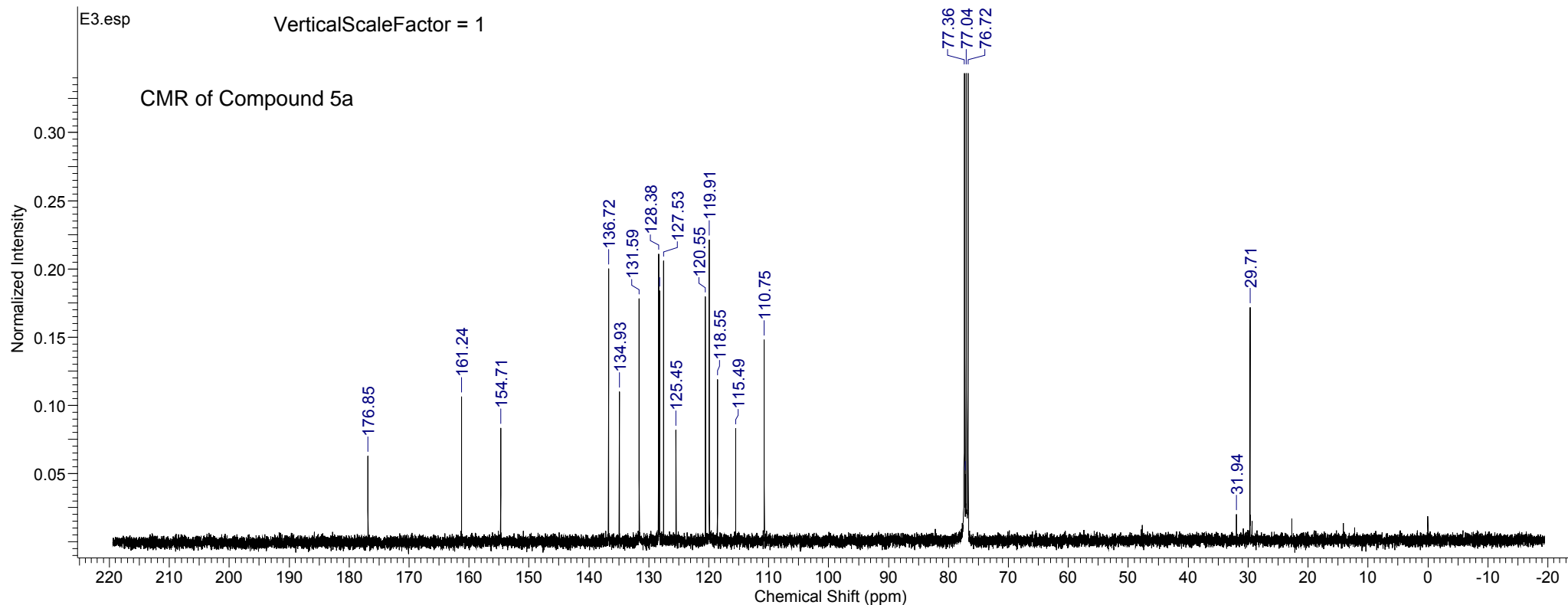
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2	76.71	7719.8	1.0000	6	116.68	11742.1	0.2040	10	128.95	12976.8	0.2324	14	133.81	13466.1	0.1152
3	77.02	7751.4	0.9423	7	117.51	11825.8	0.1074	11	131.78	13262.2	0.2501	15	136.05	13692.0	0.2503
4	77.23	7771.9	0.0606	8	119.29	12004.8	0.1208	12	132.87	13372.2	0.2672	16	138.04	13891.6	0.2174
												17	148.04	14898.1	0.1030
												18	164.36	16540.6	0.0939
												19	196.26	19751.5	0.0803

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Spectrum Type	STANDARD	Sweep Width (Hz)	24037.73	Temperature (degree C)	27.206		



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2	29.71	2989.6	0.1883	7	77.34	7783.7	0.9948	12	120.76	12153.0	0.1401	17	132.38	13322.3	0.1233
3	31.94	3214.1	0.0214	8	97.15	9776.8	0.1408	13	122.05	12282.8	0.1100	18	138.44	13931.9	0.1318
4	76.71	7719.8	1.0000	9	110.77	11147.9	0.0580	14	125.44	12623.9	0.1355	19	141.11	14201.2	0.0808
5	77.03	7752.1	0.9954	10	111.32	11203.0	0.0730	15	130.74	13157.3	0.1117	20	161.55	16258.2	0.0744
												21	174.07	17518.5	0.0891
												22	194.64	19588.0	0.0530

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Receiver Gain	199.80	SW(cyclical) (Hz)	24038.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	10063.3154
Spectrum Type	STANDARD	Sweep Width (Hz)	24037.73	Temperature (degree C)	27.337		



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2	31.94	3214.1	0.0201	7	110.75	11145.7	0.1483	12	125.45	12625.4	0.0820	17	134.93	13579.1	0.1100
3	76.72	7720.6	0.9022	8	115.49	11622.6	0.0831	13	127.53	12834.5	0.2061	18	136.72	13758.8	0.2004
4	77.04	7752.9	1.0000	9	118.55	11930.7	0.1192	14	128.22	12904.2	0.1841	19	154.71	15570.1	0.0833
5	77.24	7773.4	0.0492	10	119.91	12067.1	0.2214	15	128.38	12919.6	0.2109	20	161.24	16226.6	0.1062
												21	176.85	17798.0	0.0628