

Coumarin-Amino Acid Hybrids as Promising Anticancer Agents: Design, Synthesis, Docking Studies and Ck2 Inhibition

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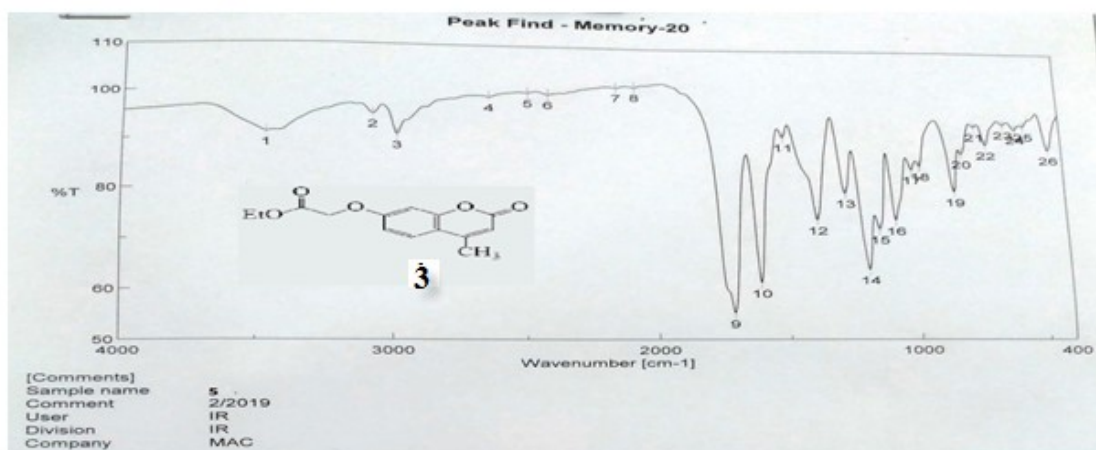
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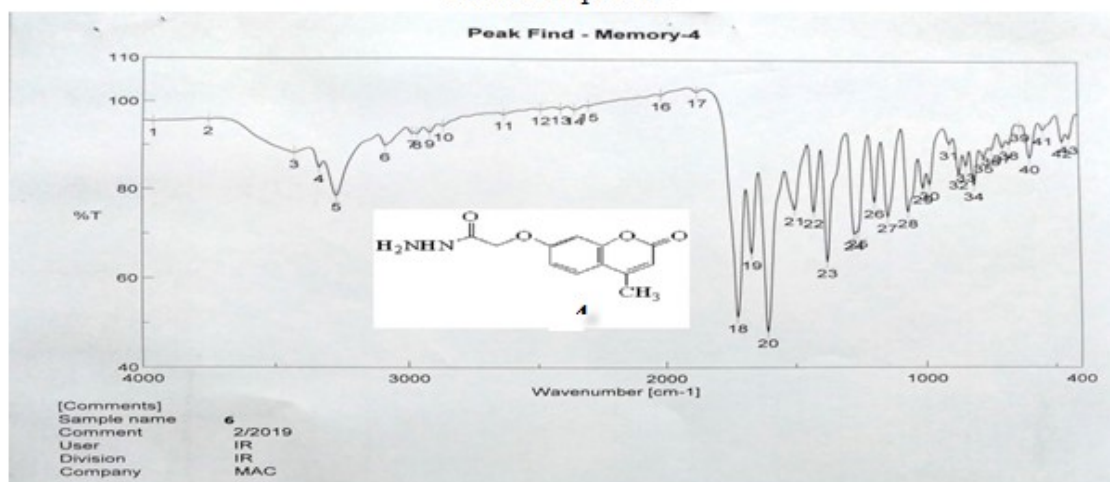
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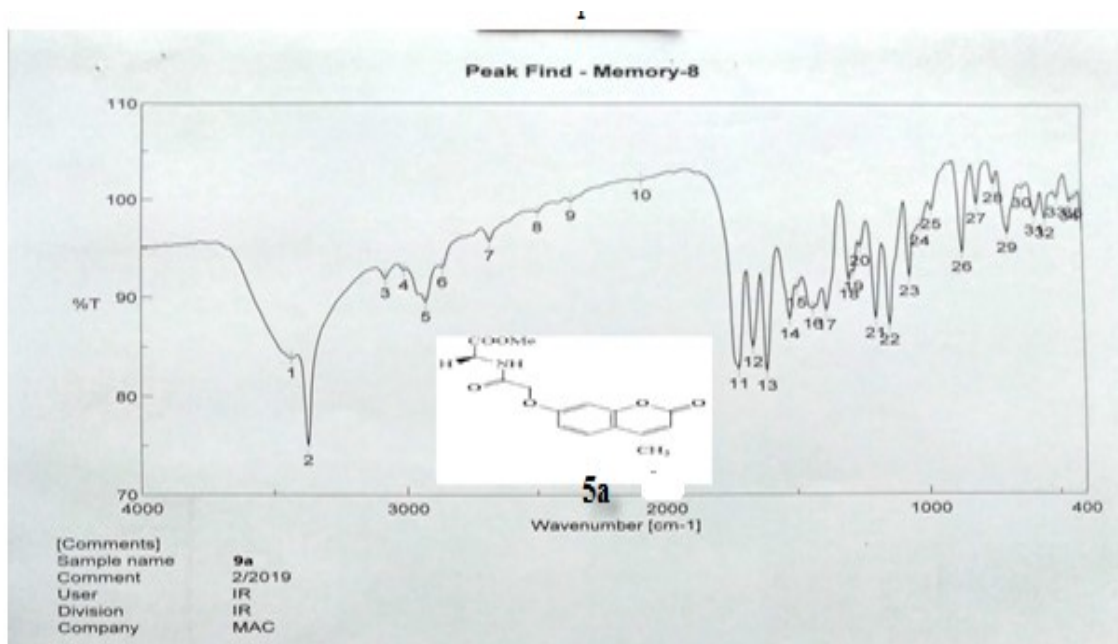
IR of Compound 3



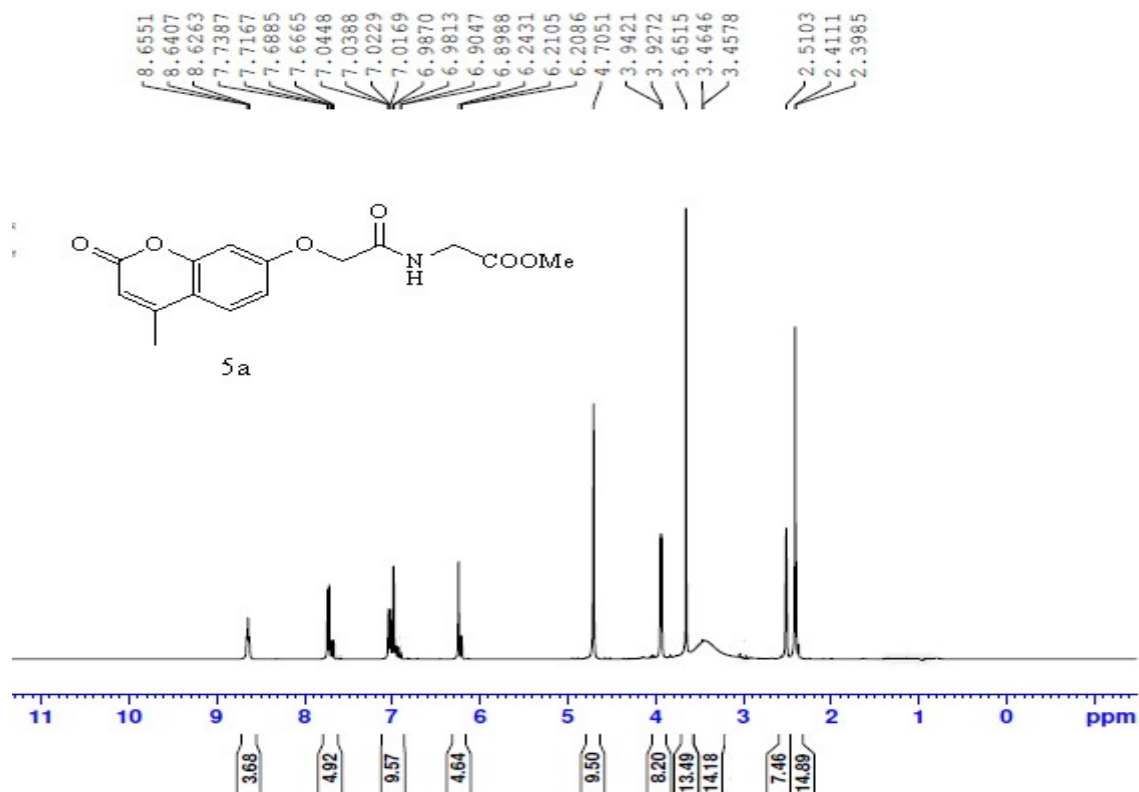
IR of Compound 4



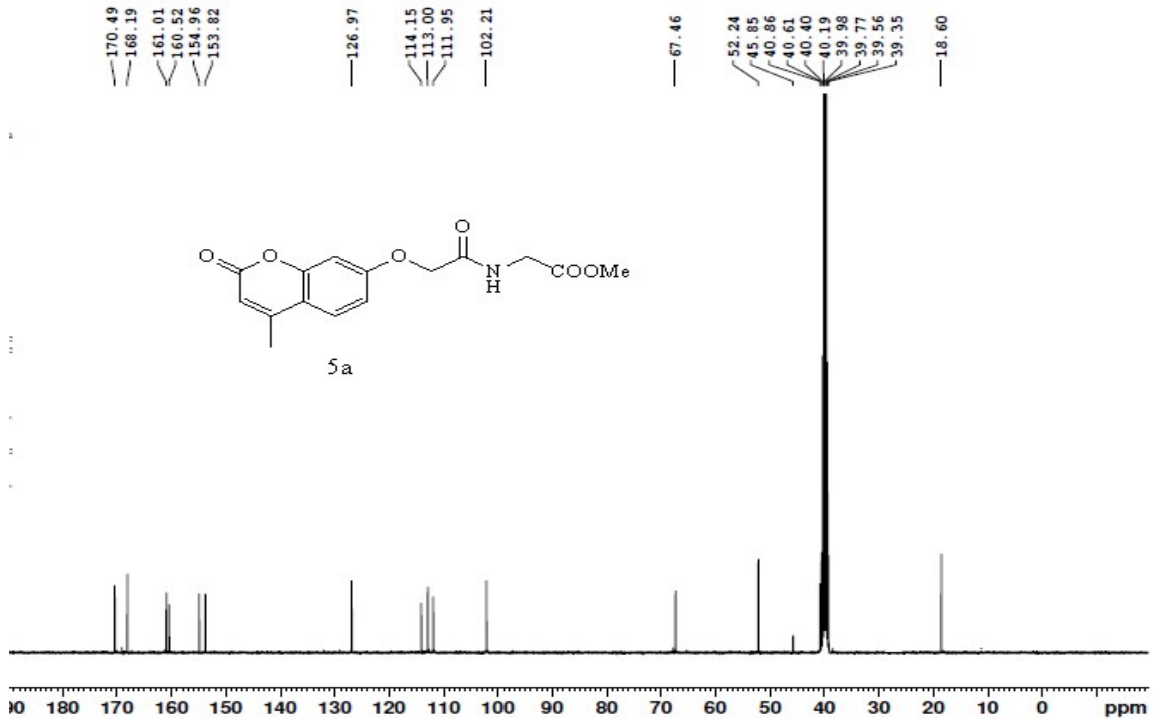
IR of Compound 5a



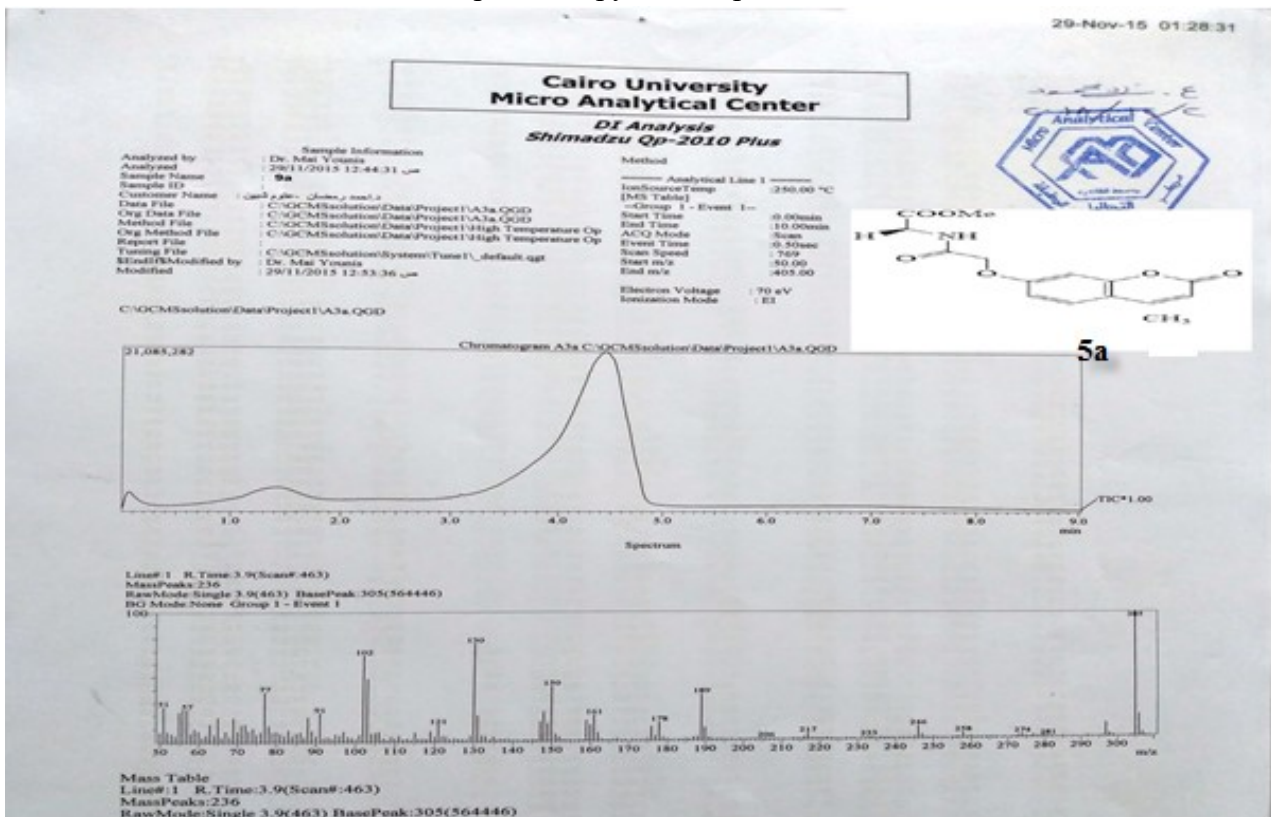
¹H NMR of Compound 5a



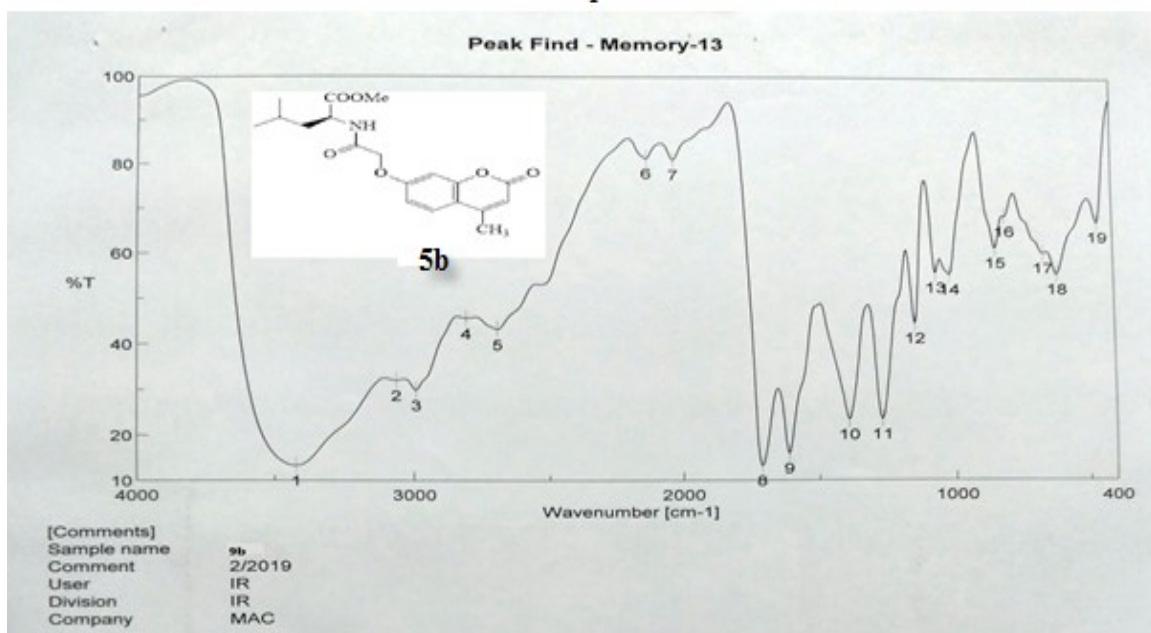
¹³C NMR of Compound 5a



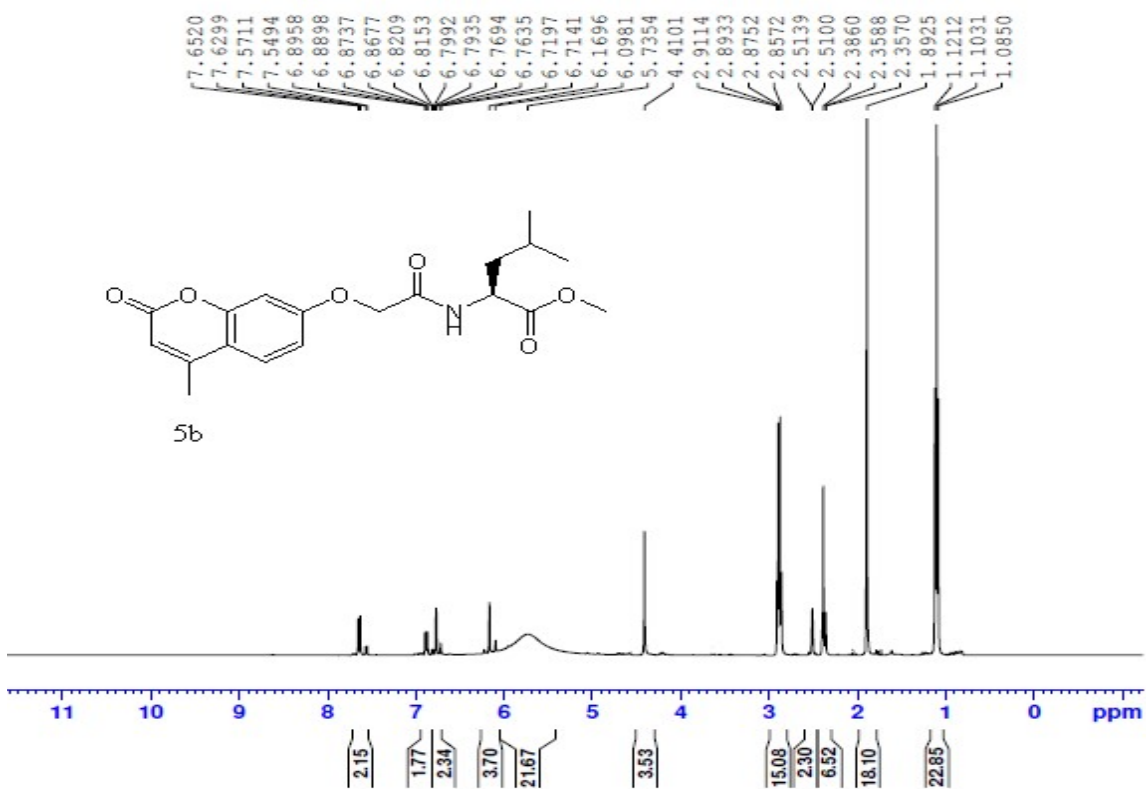
Mass spectroscopy of Compound 5a



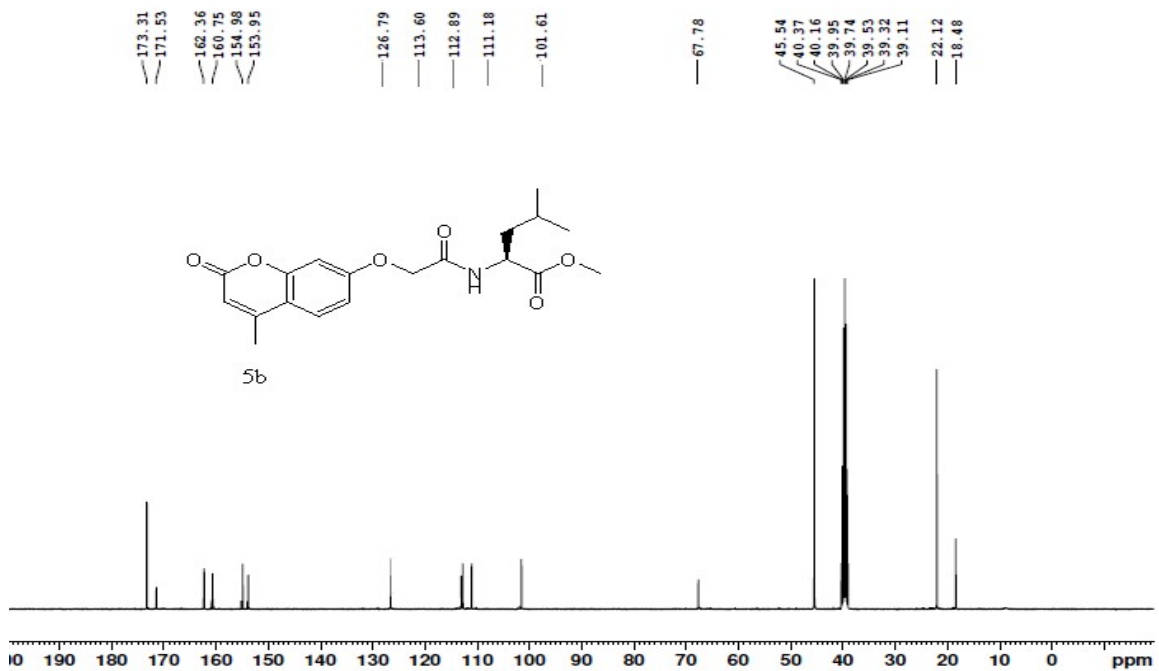
IR of Compound 5b



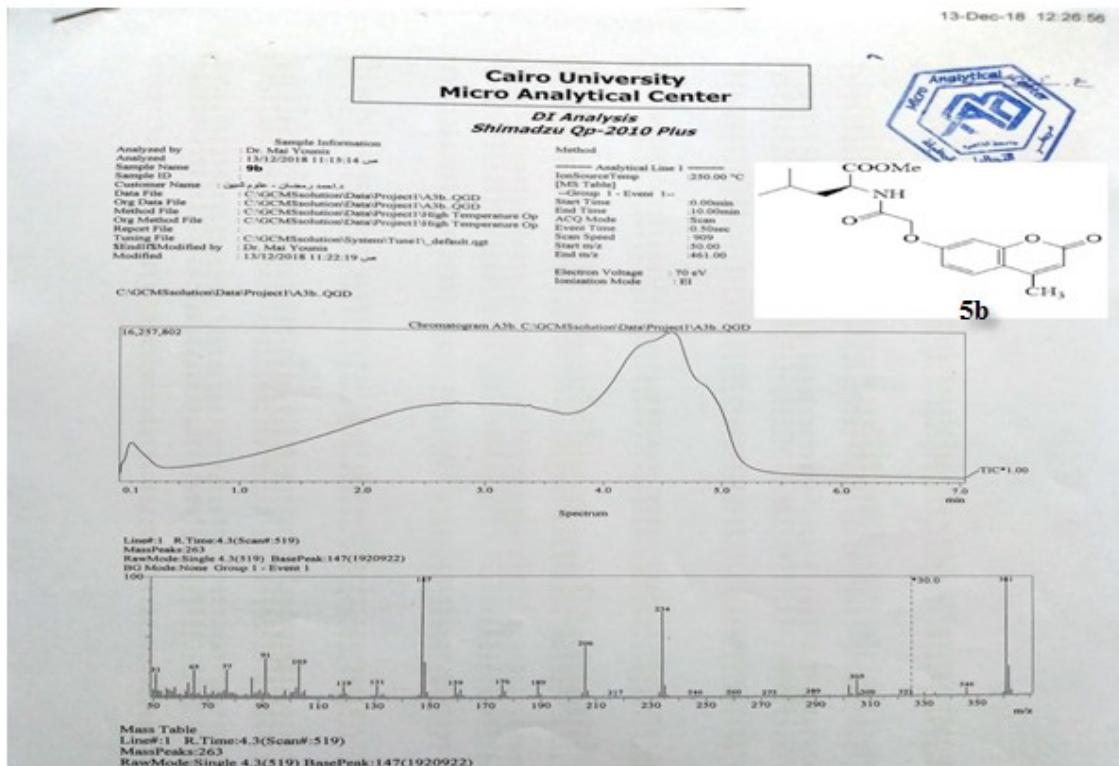
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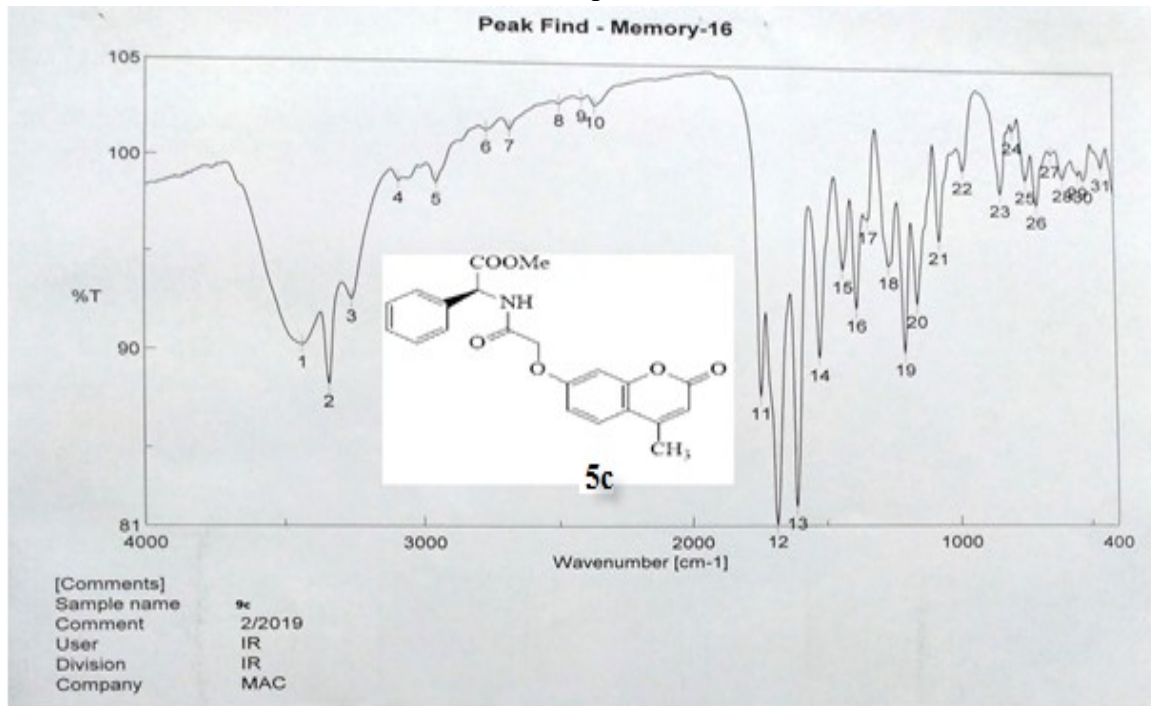
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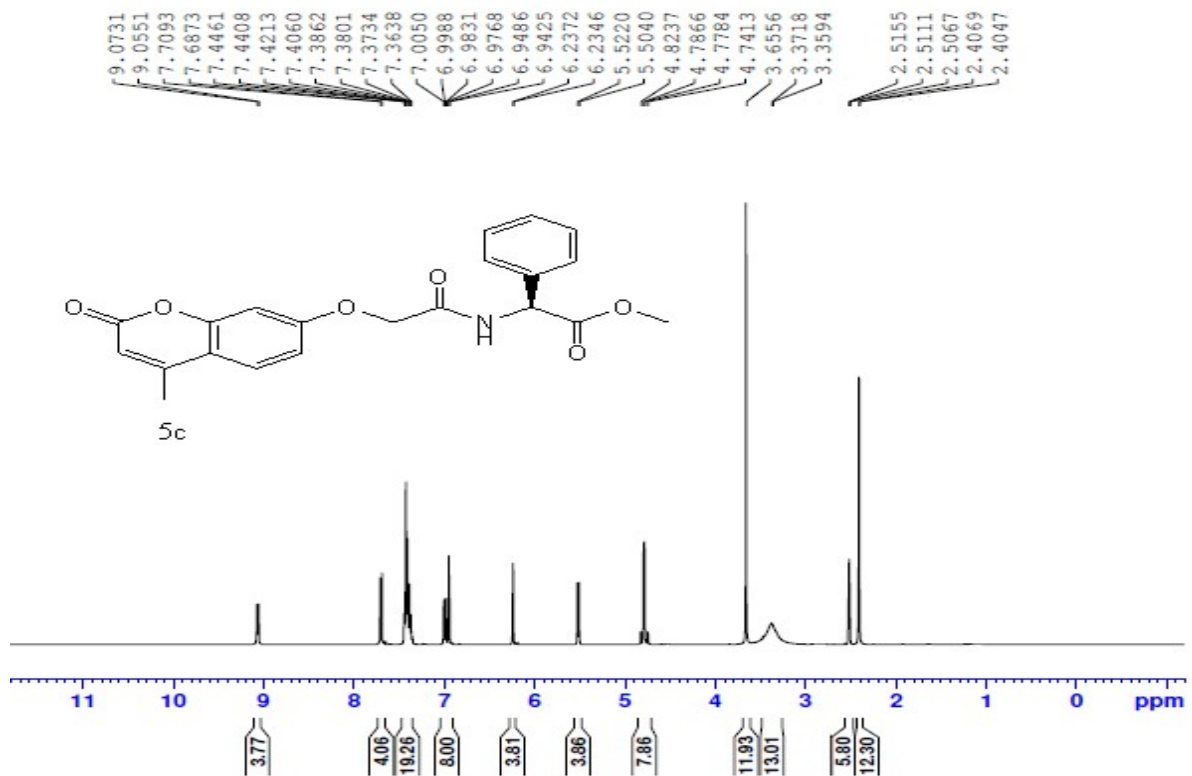
Mass spectroscopy of Compound 5b



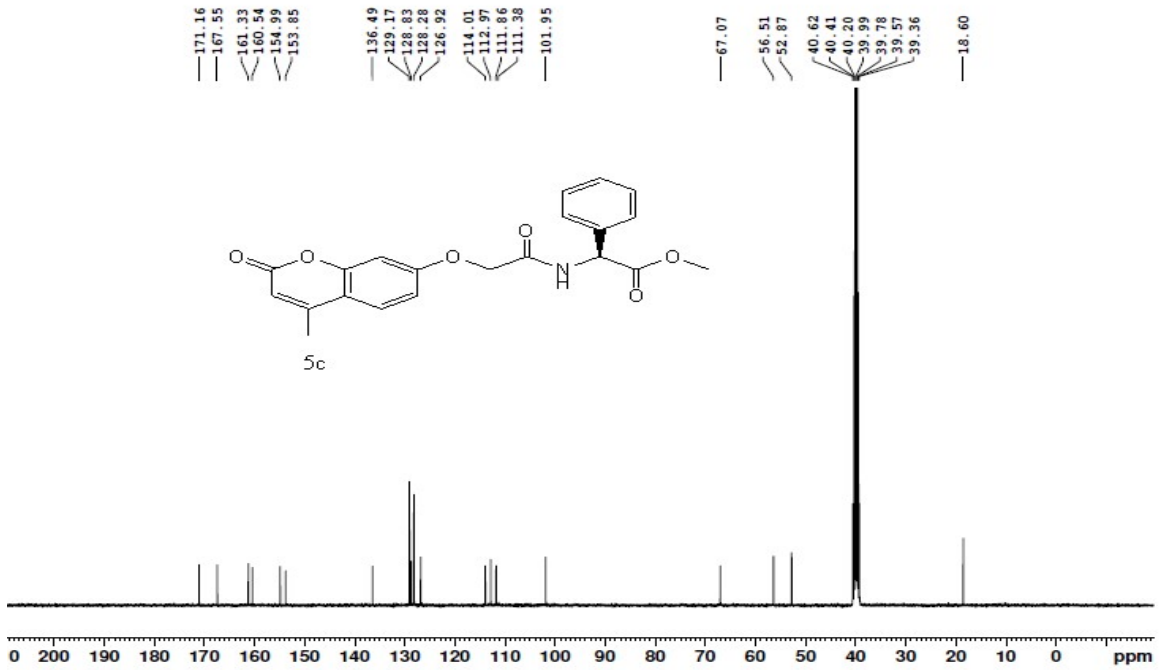
IR of Compound 5c



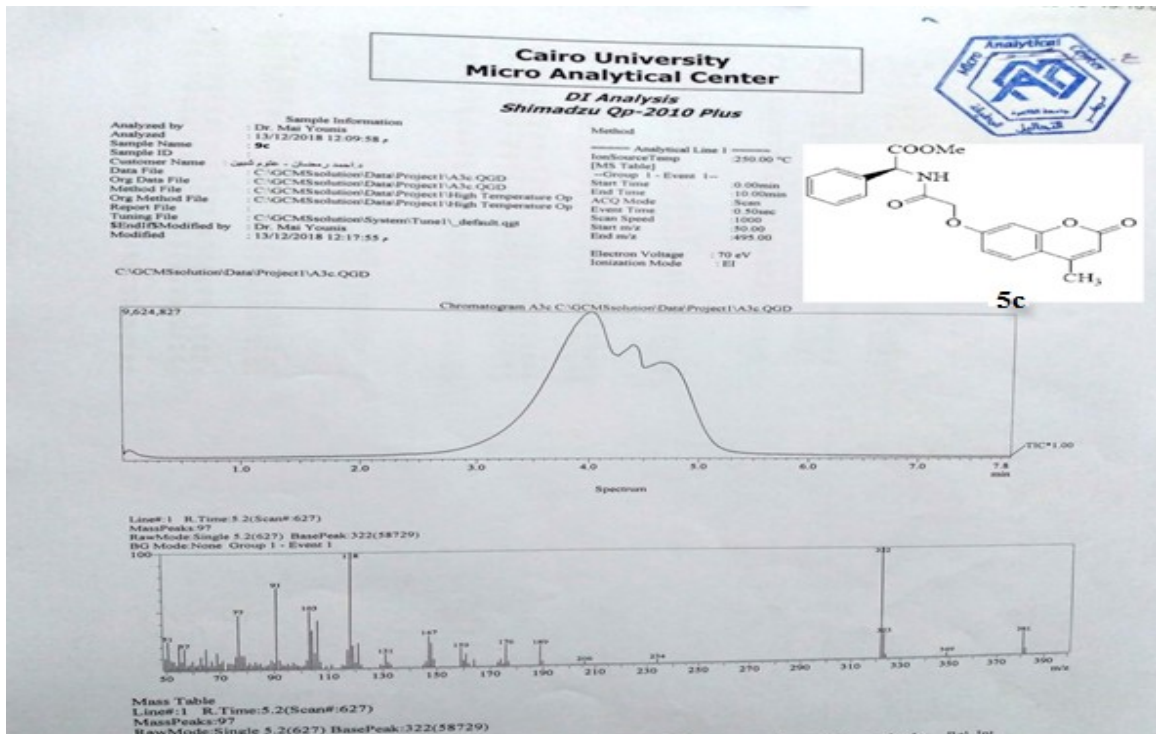
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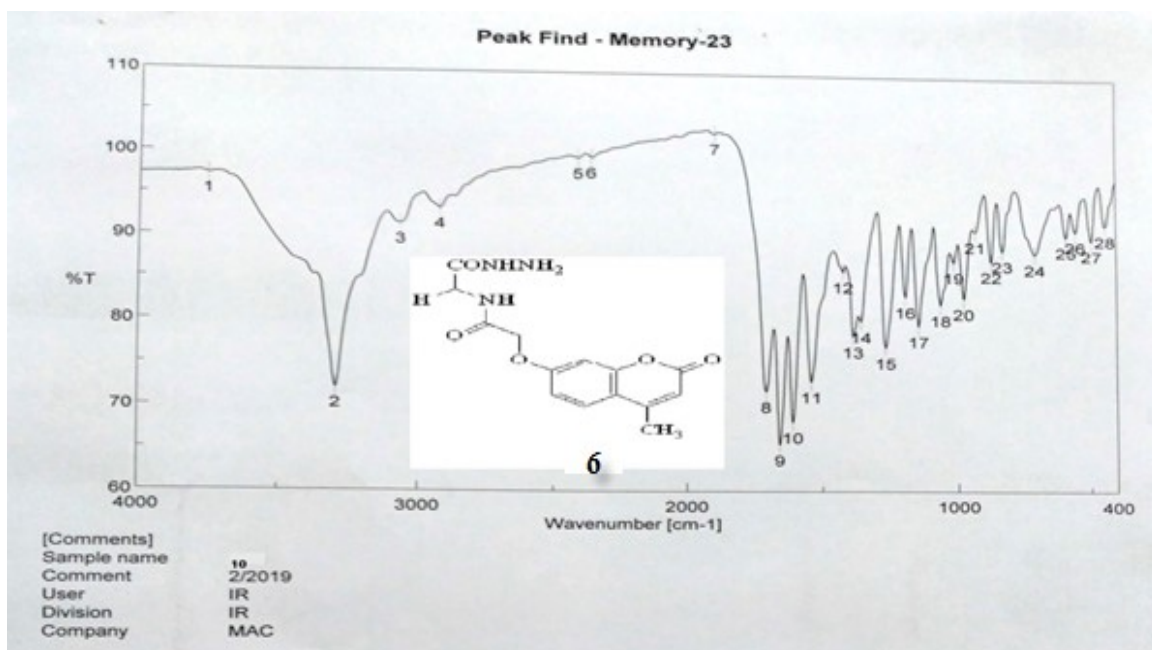
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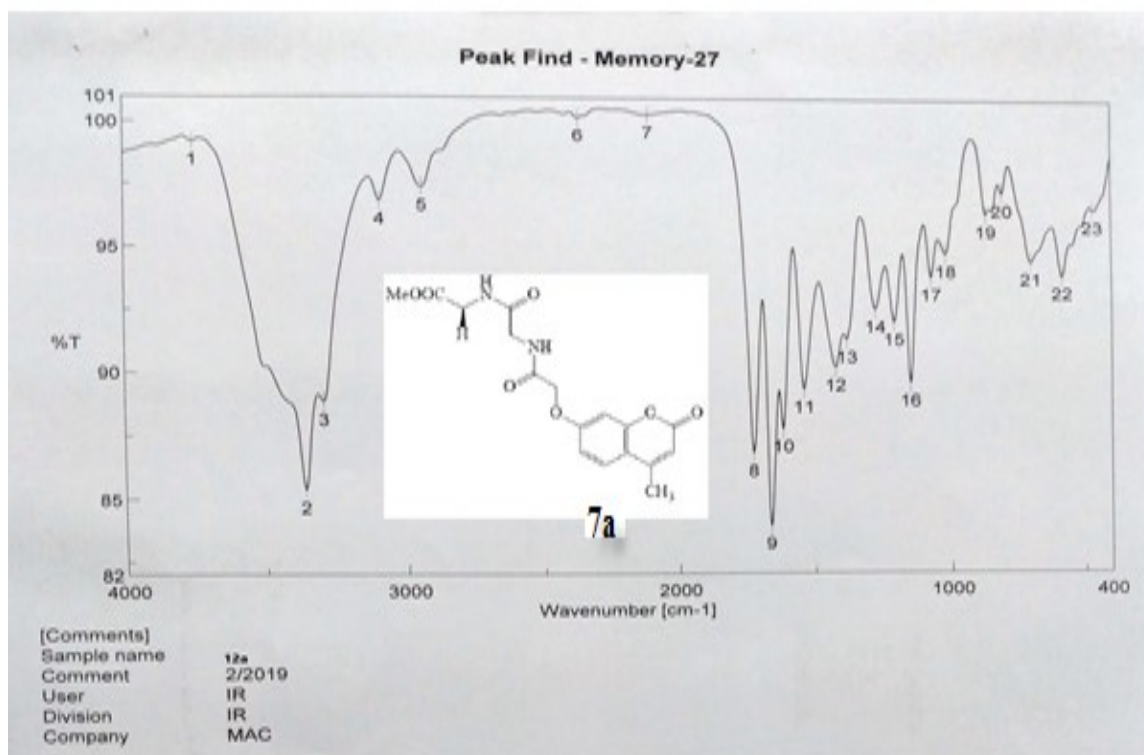
Mass spectroscopy of Compound 5c



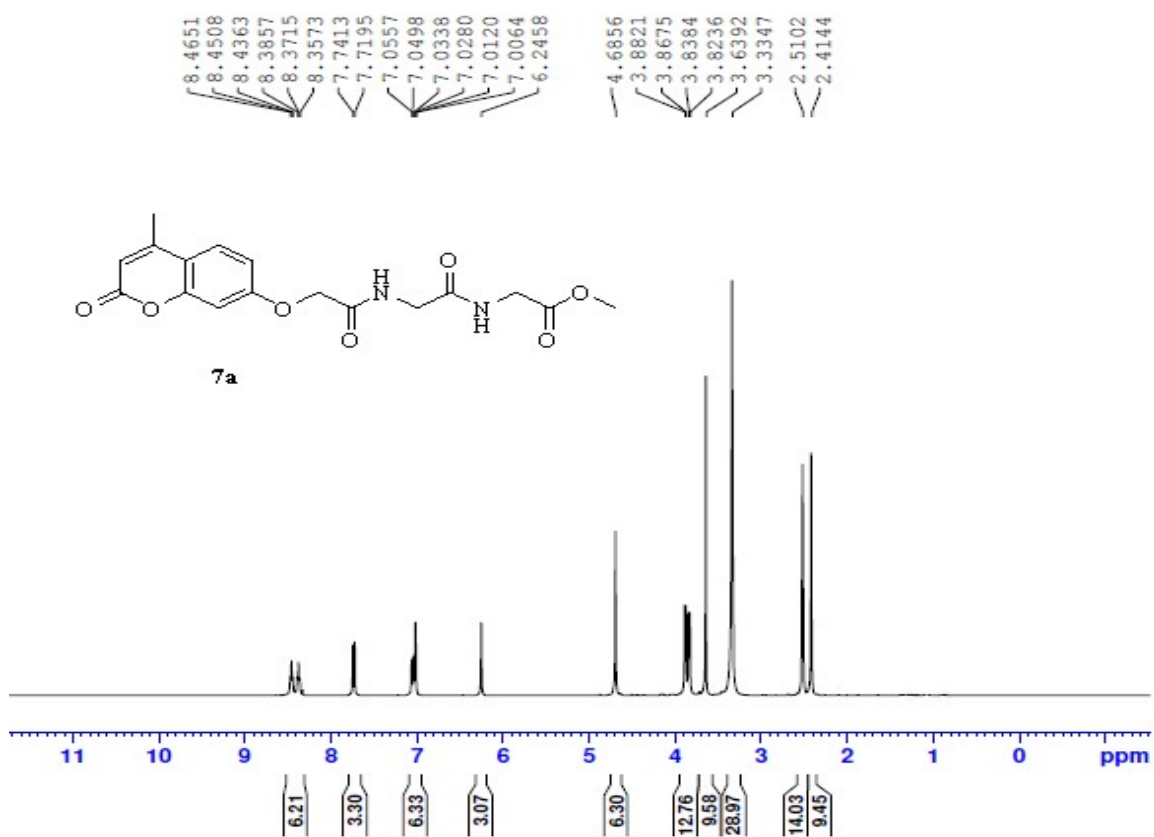
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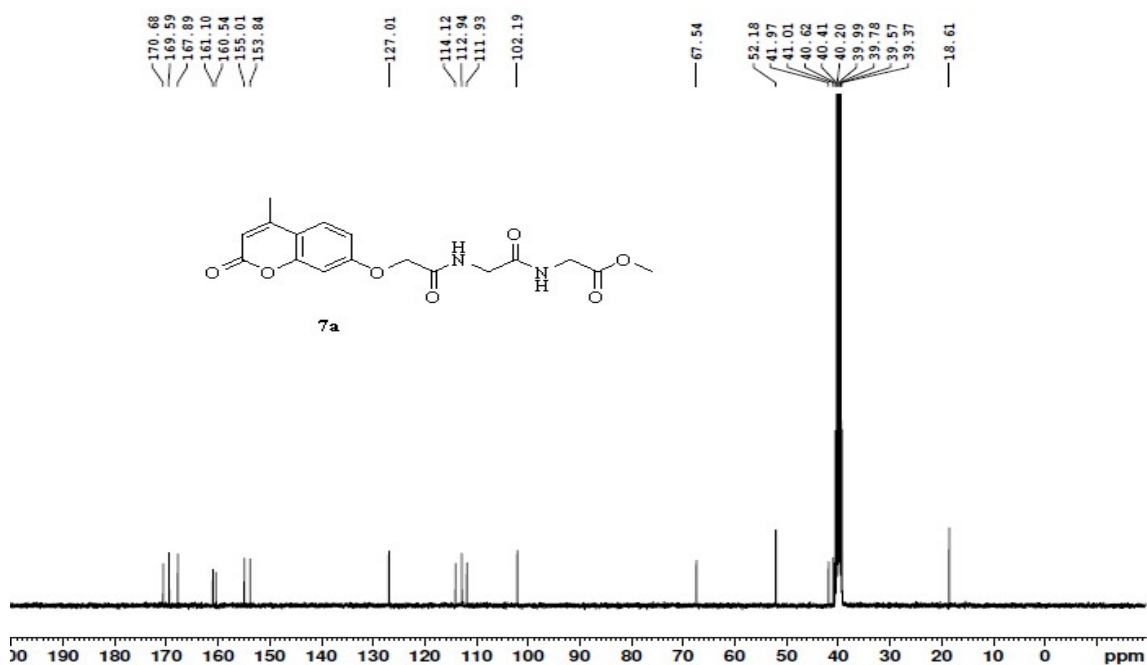
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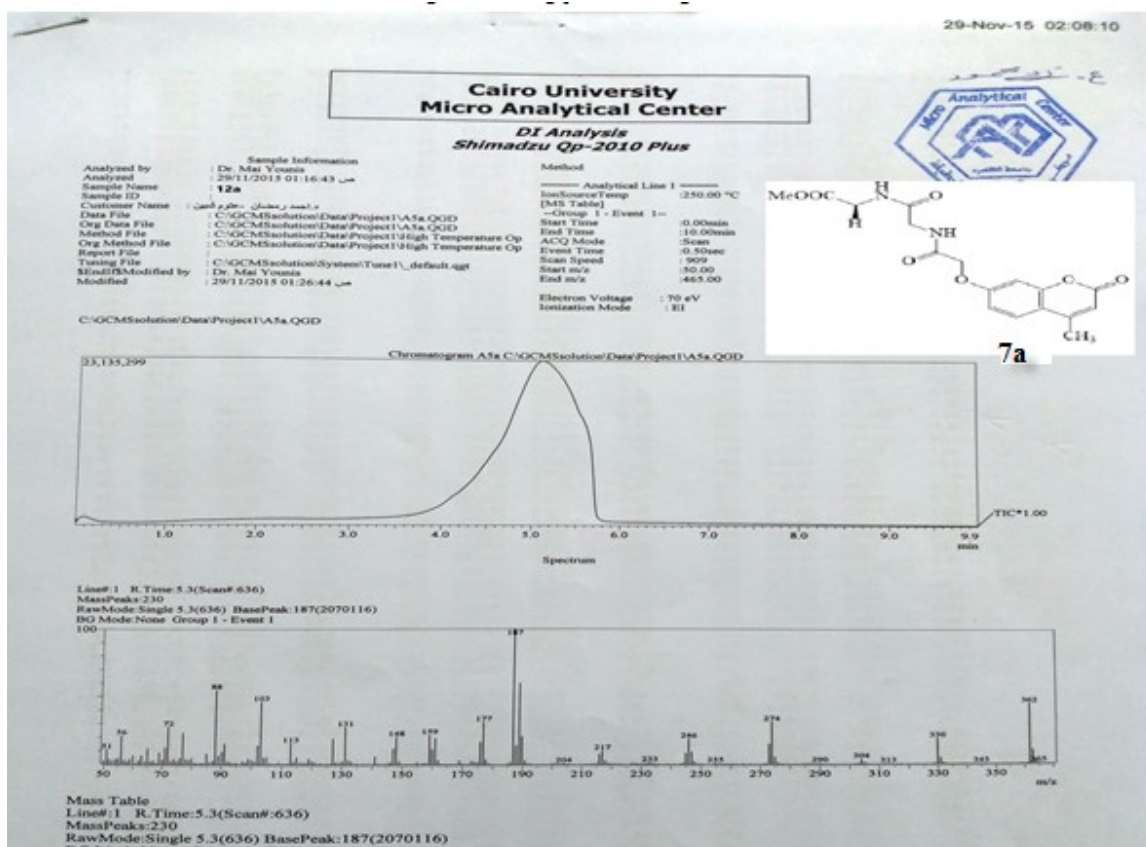
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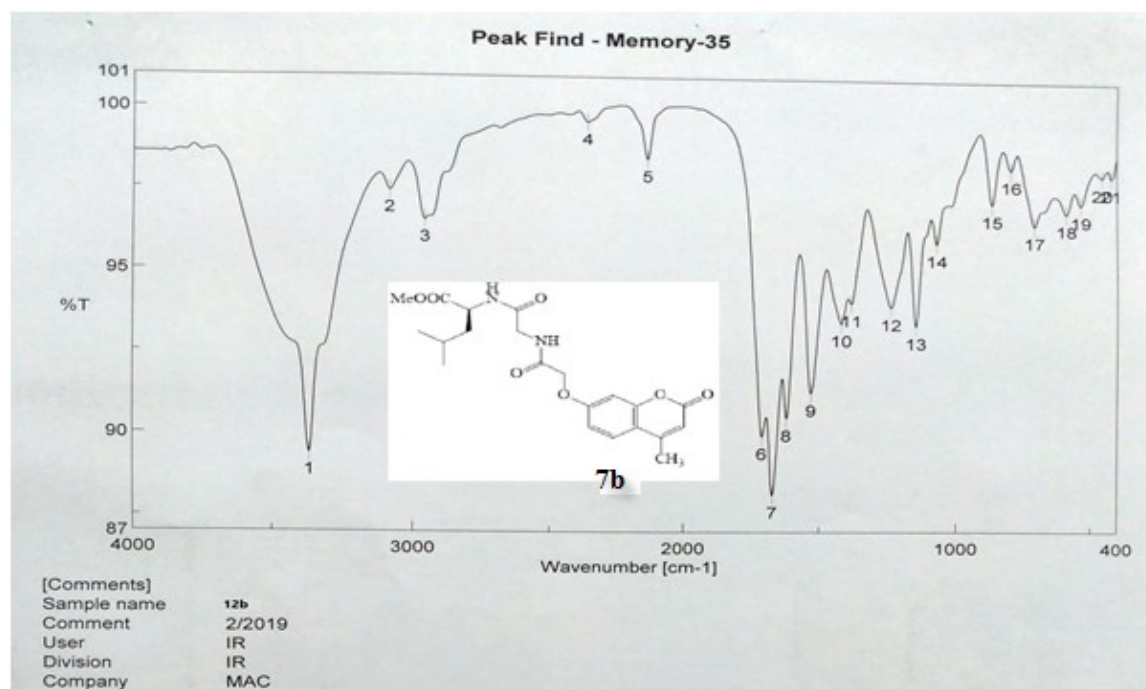
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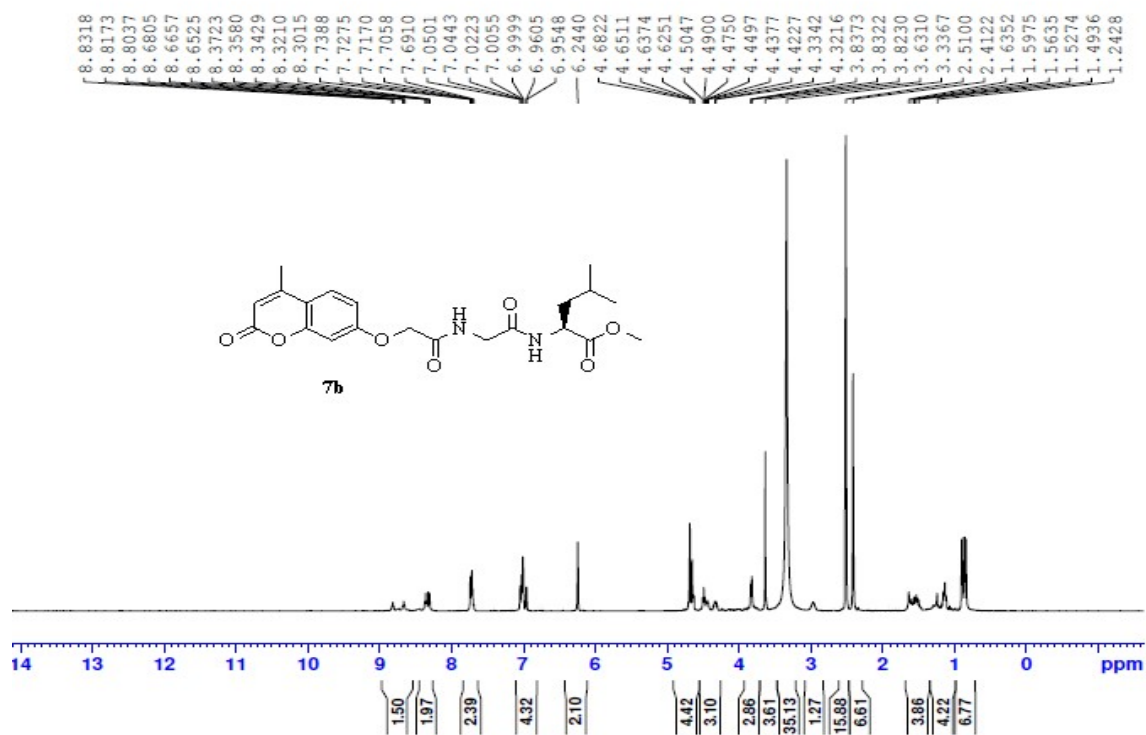
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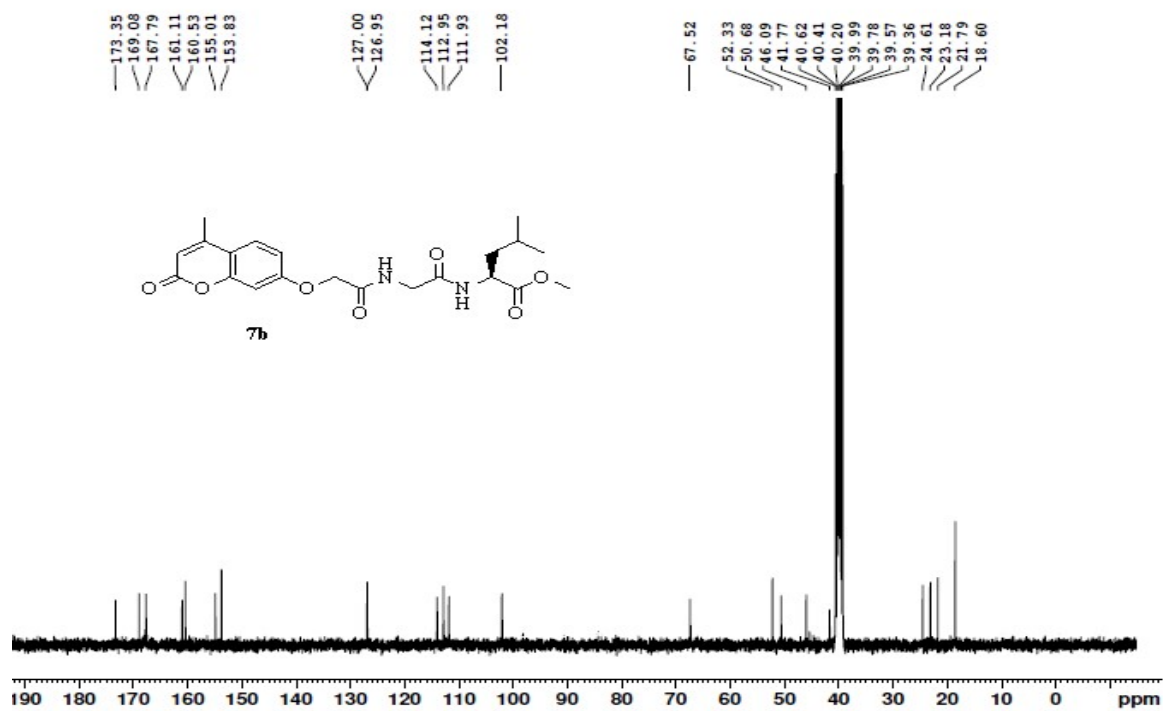
IR of Compound 7b



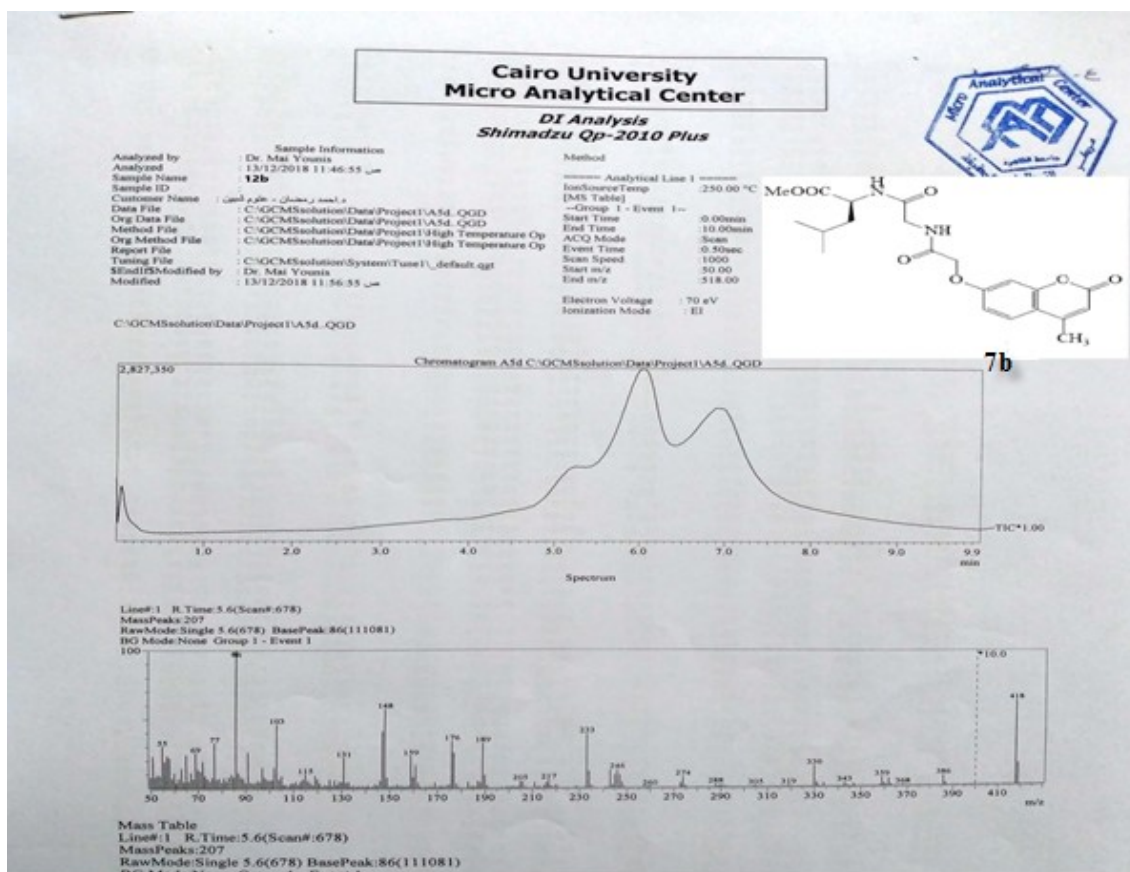
¹H NMR of Compound 7b



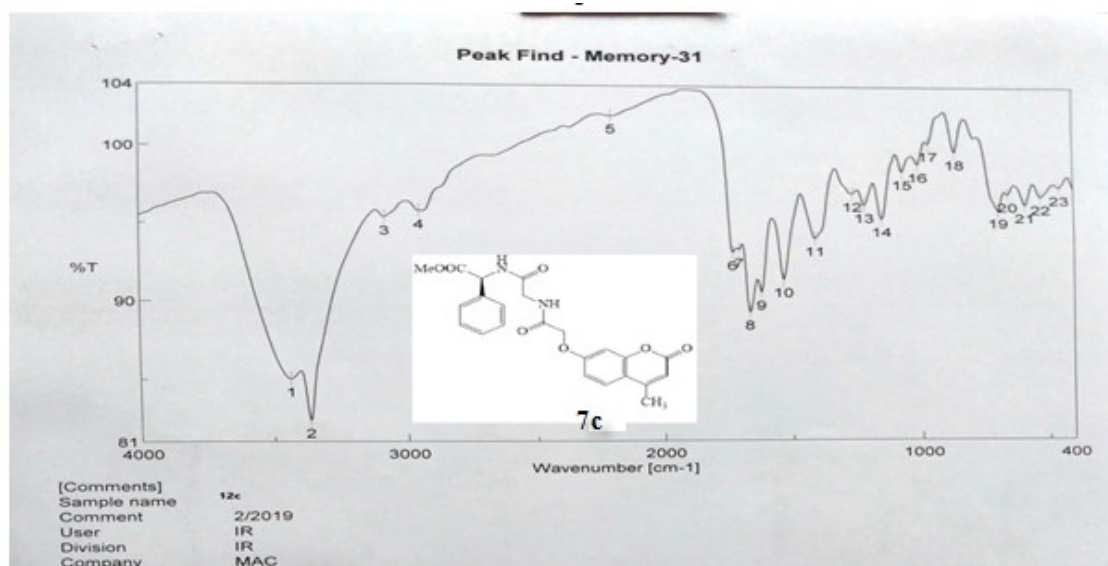
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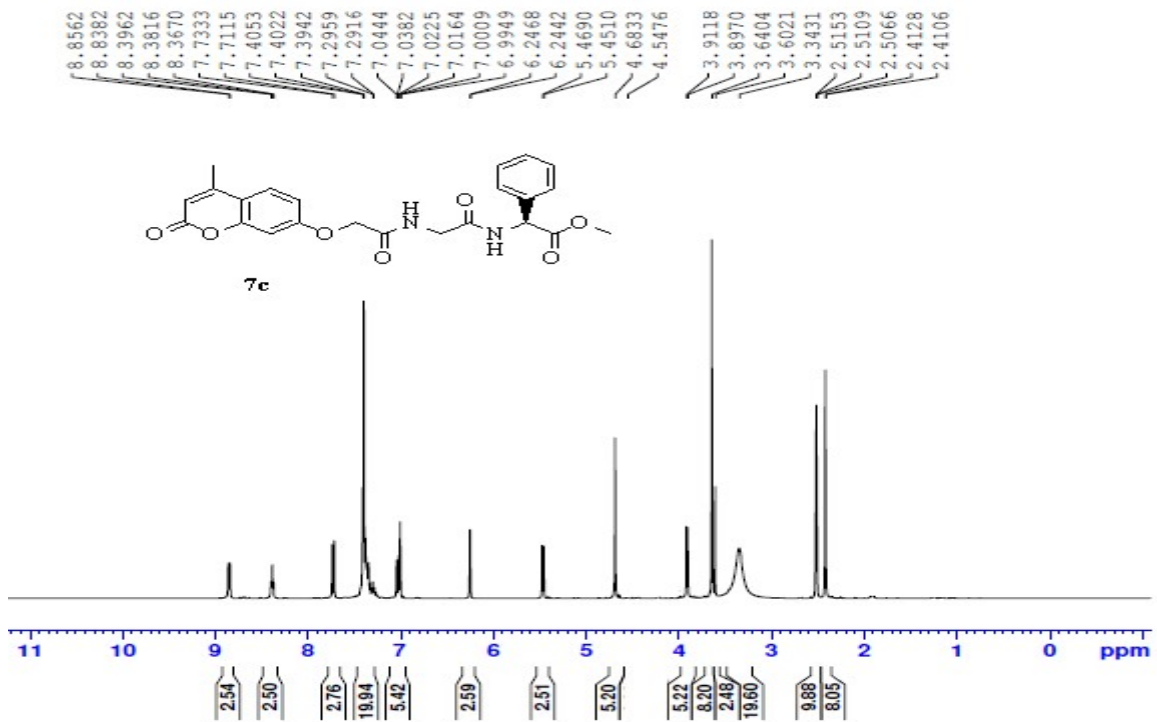
Mass spectrometry of Compound 7b



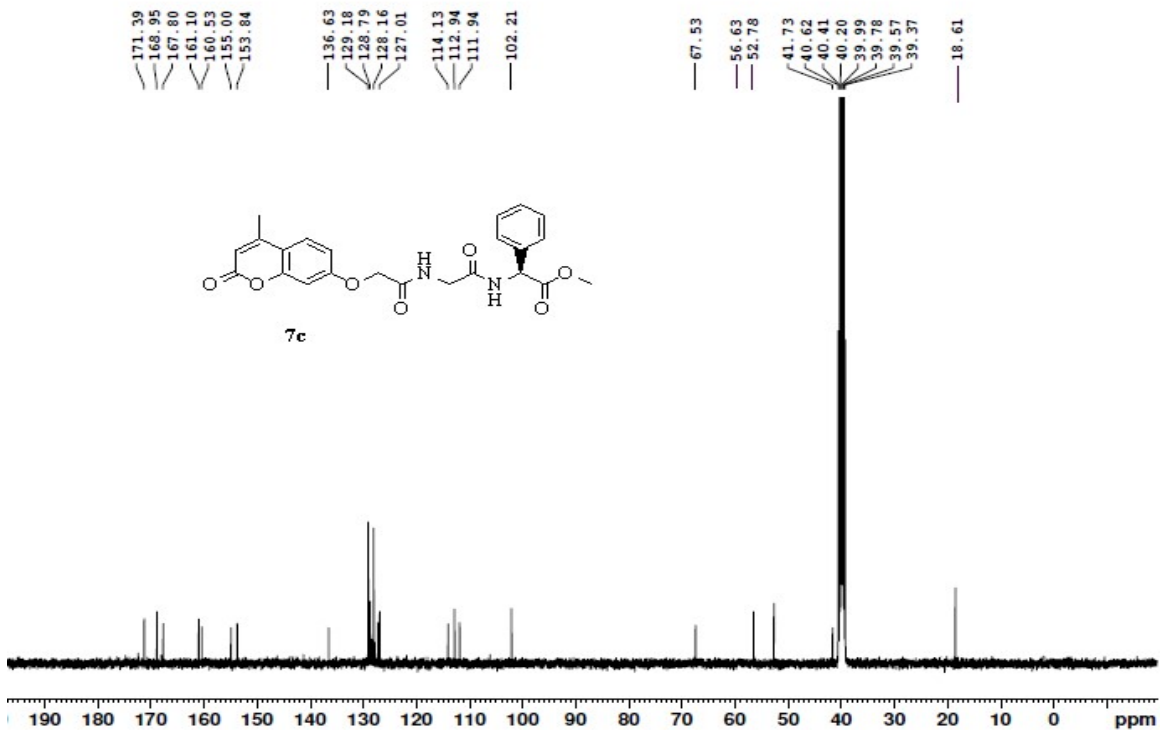
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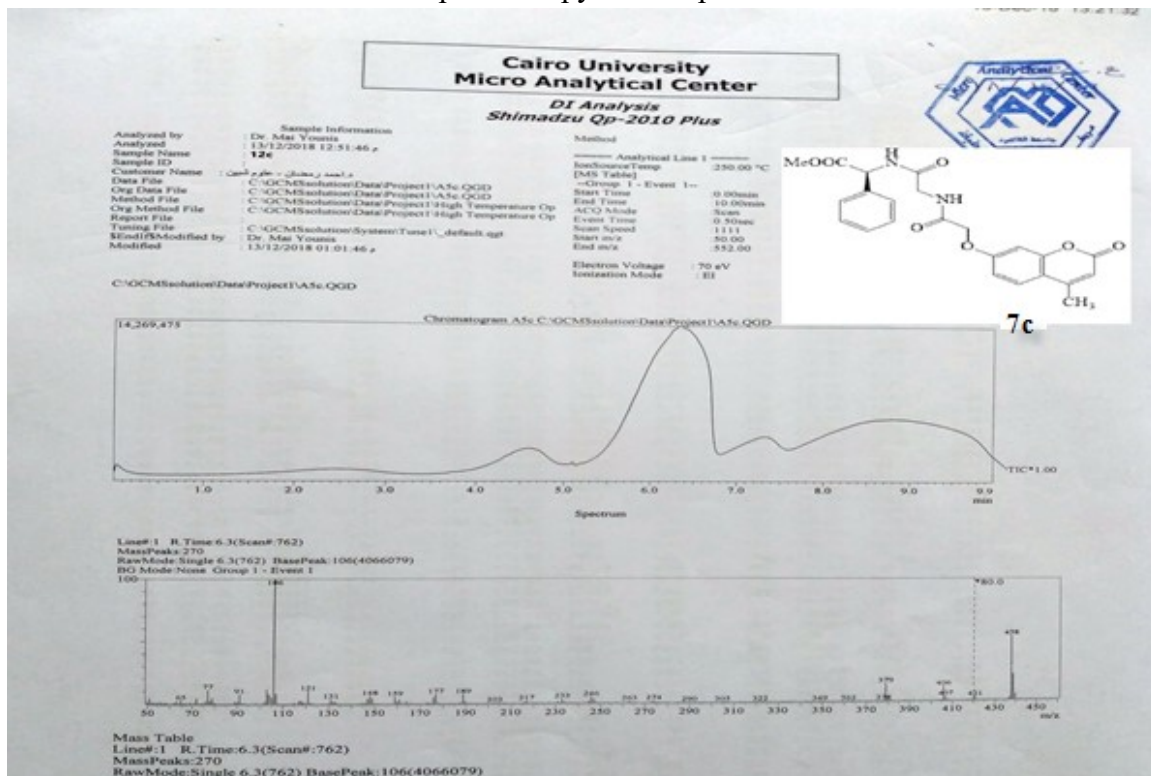
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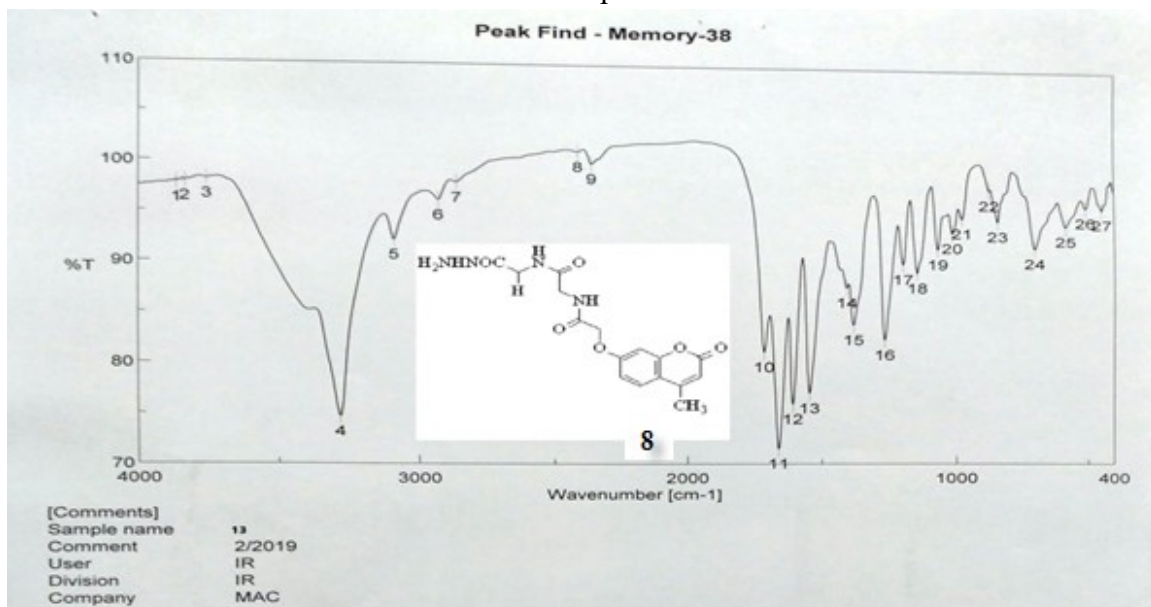
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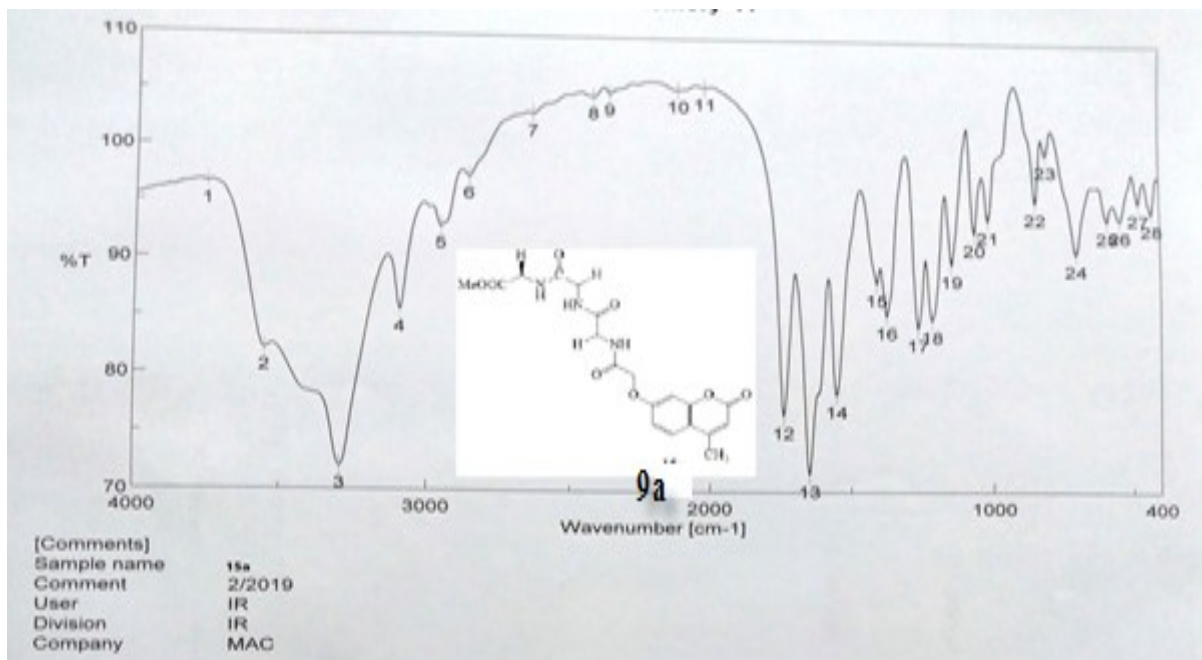
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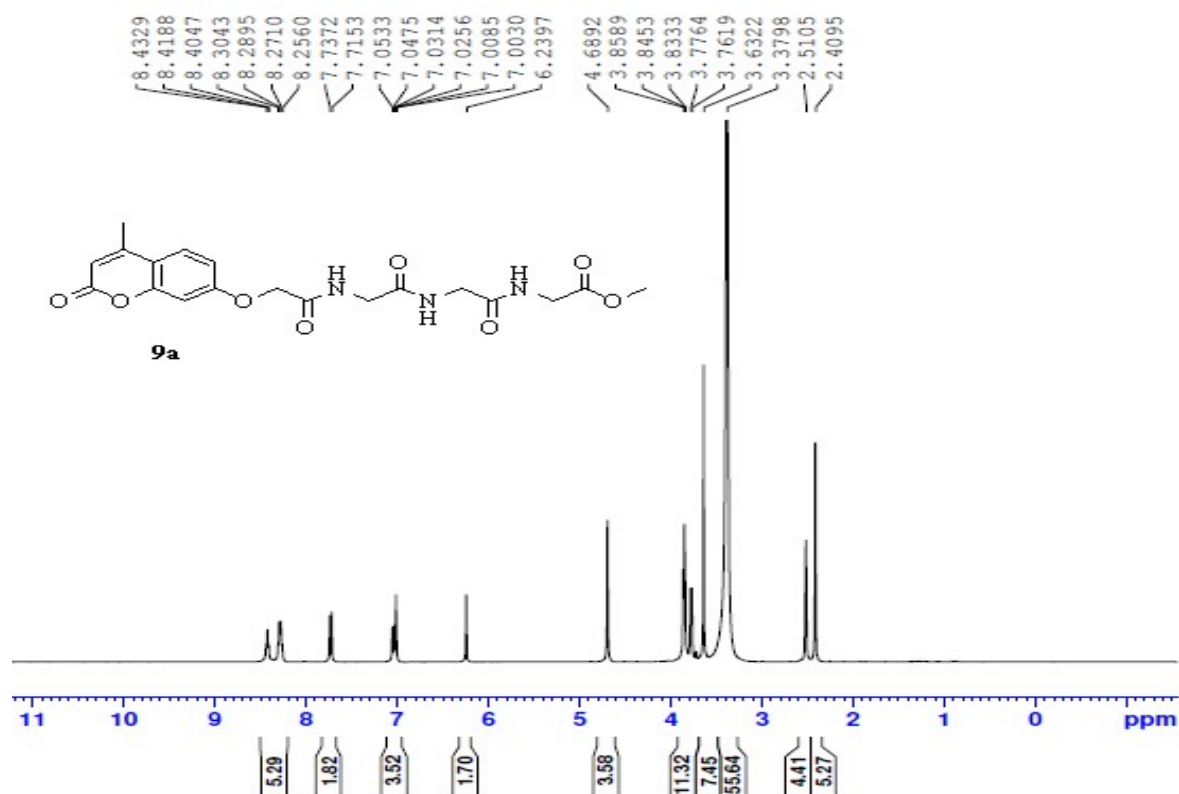
IR of Compound 8



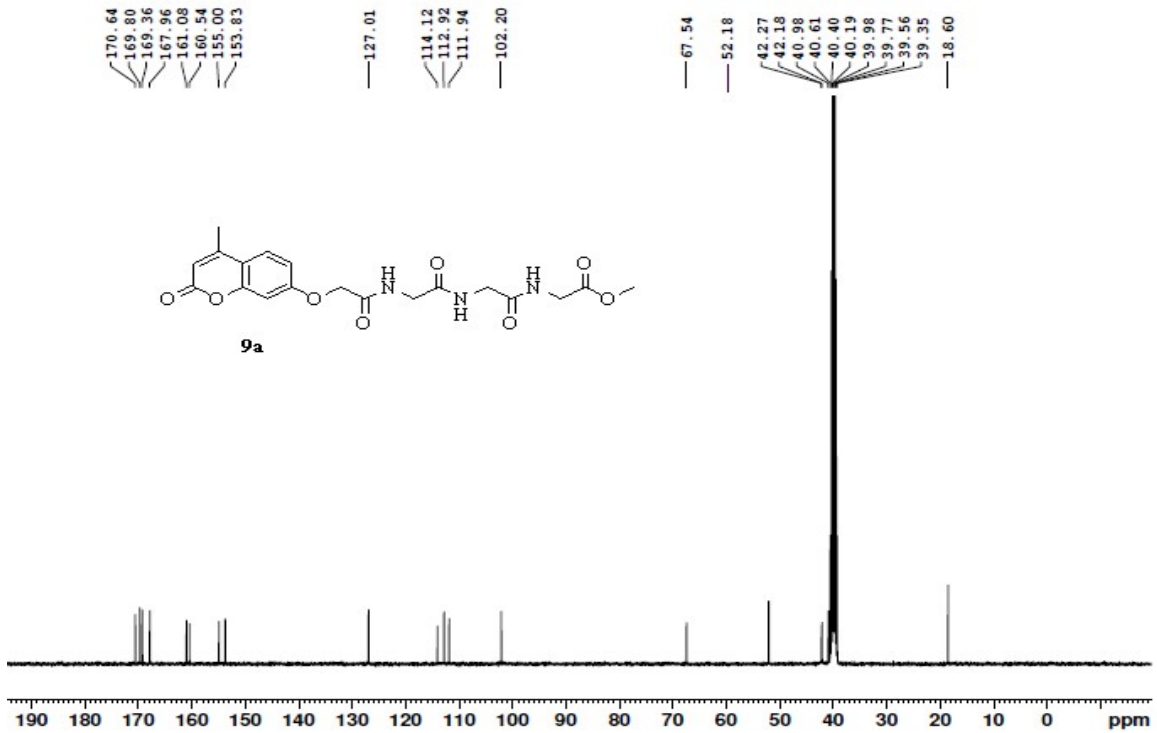
IR of Compound 9a



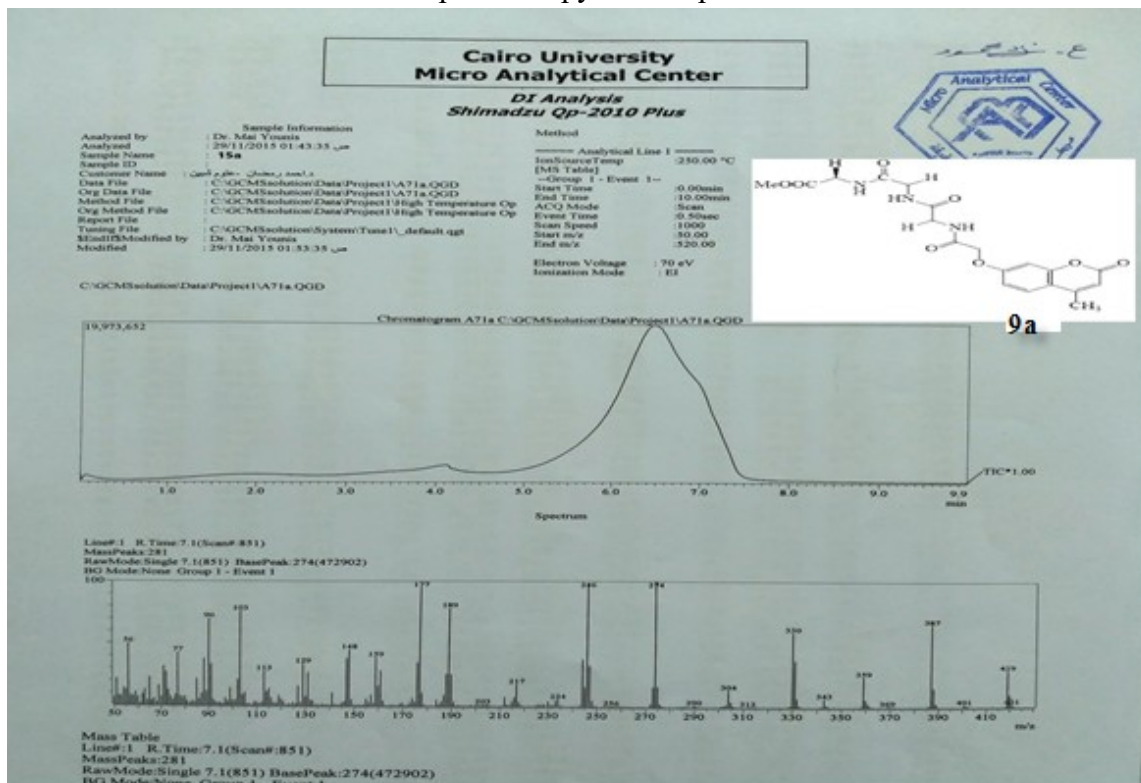
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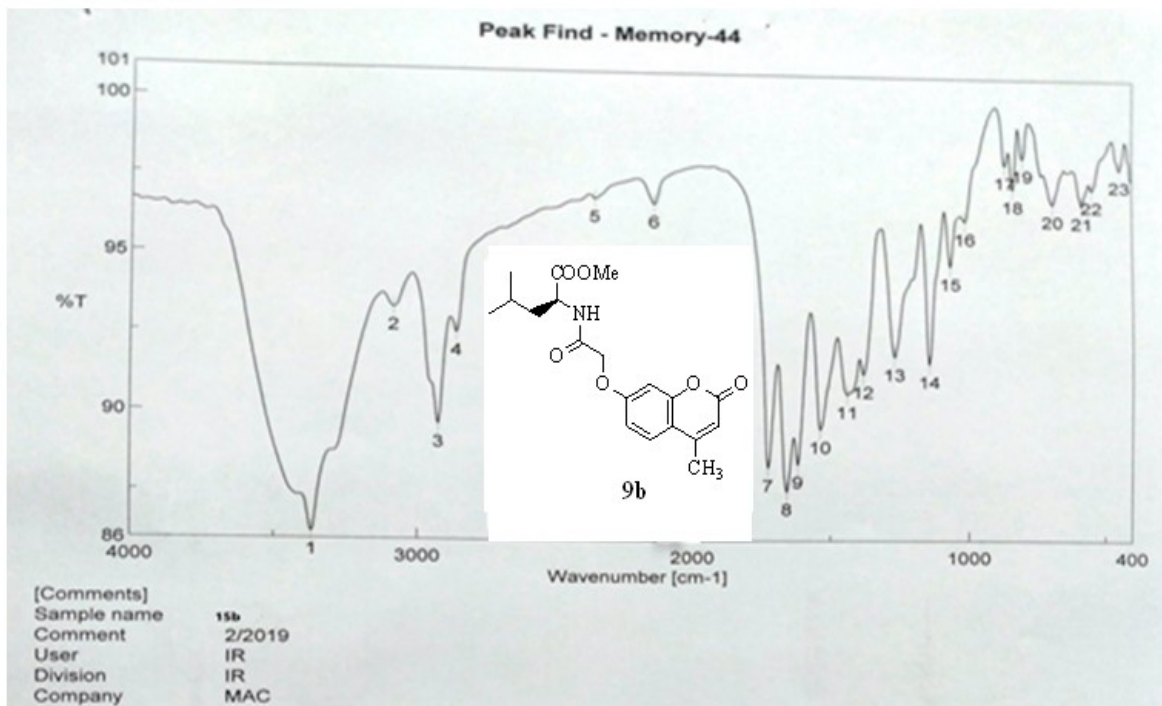
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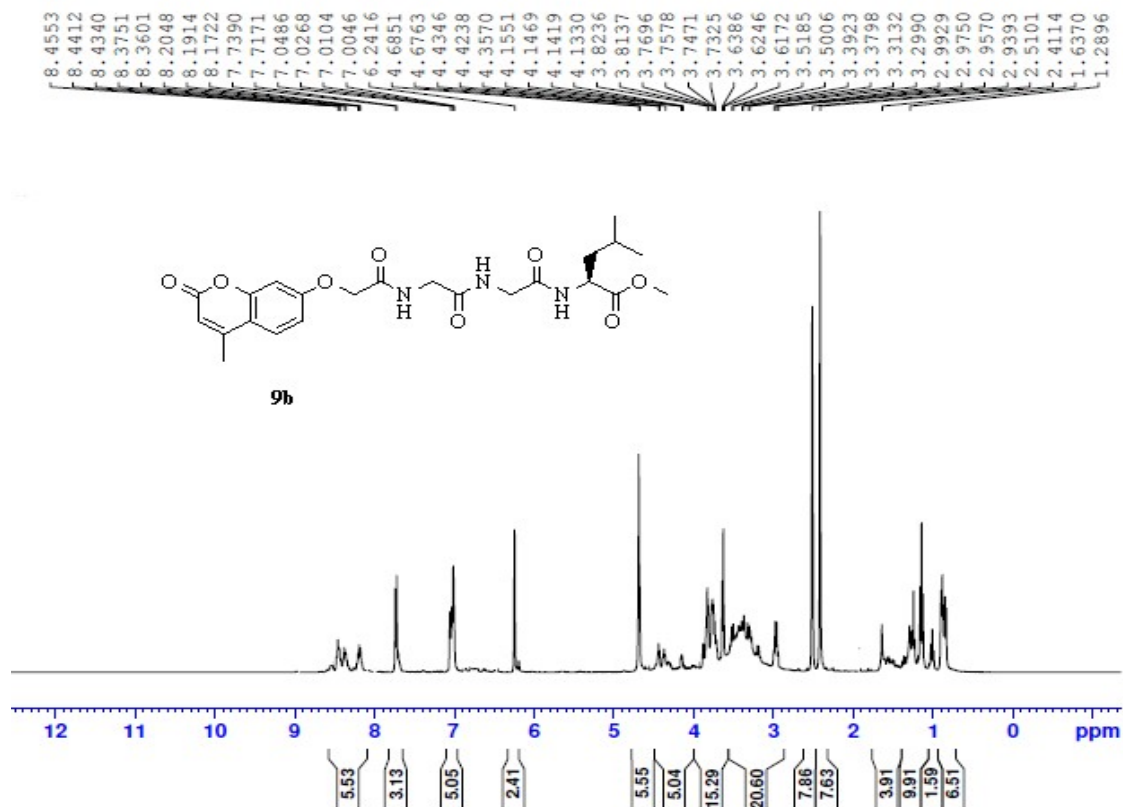
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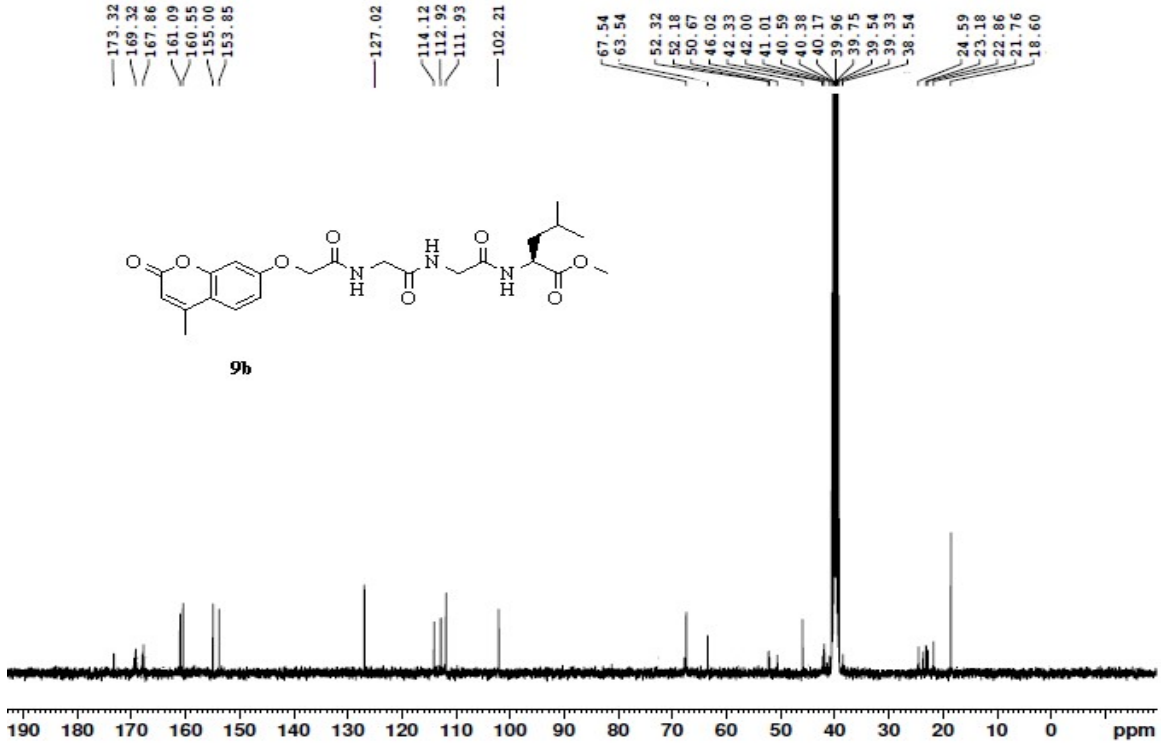
IR of Compound 9b



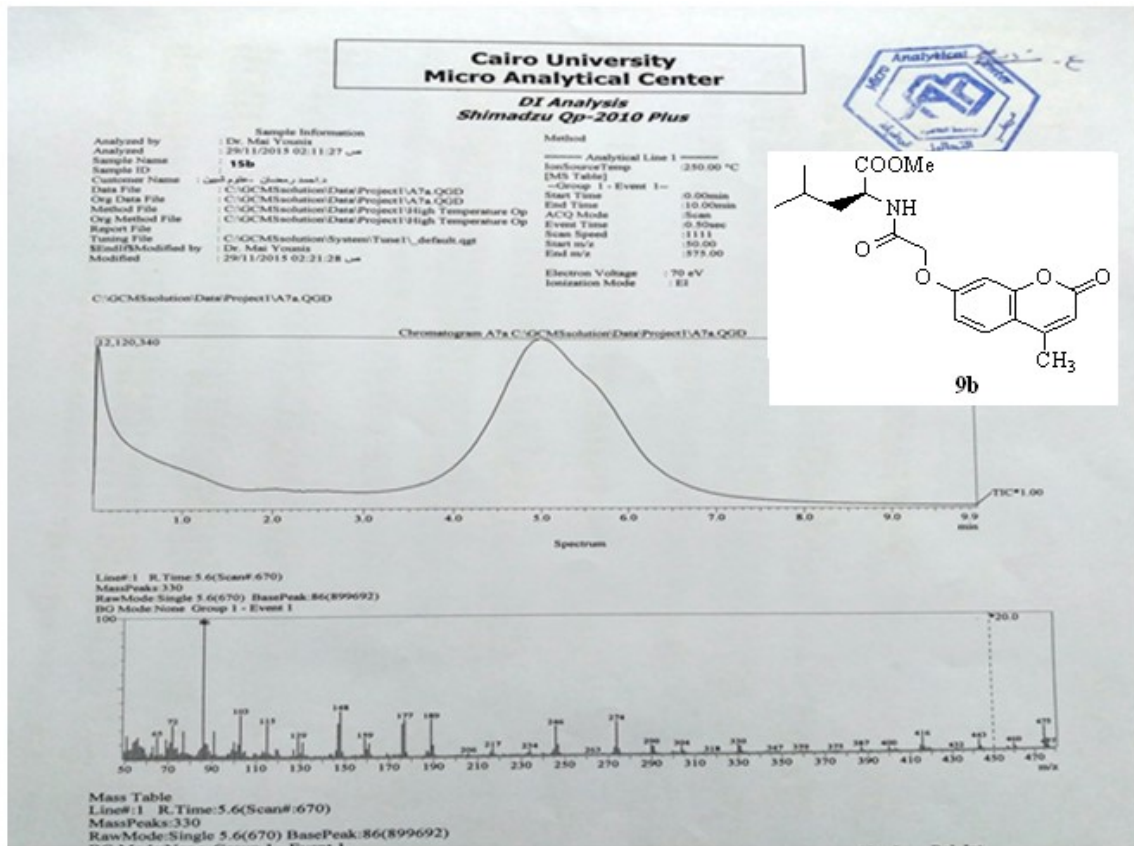
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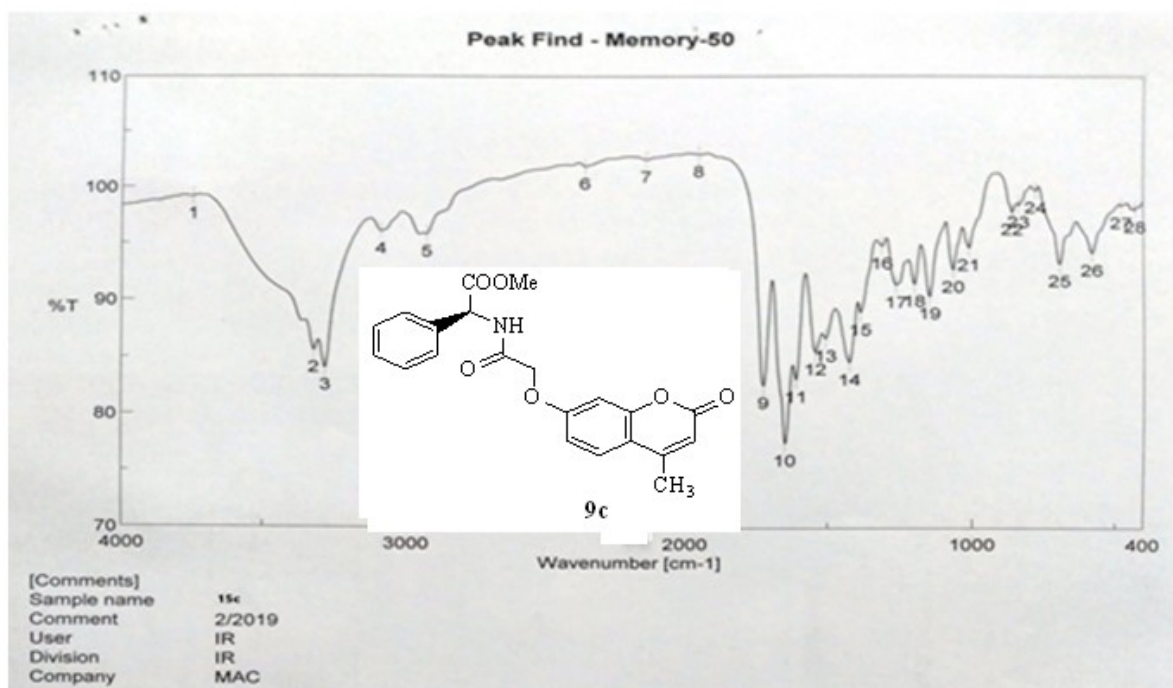
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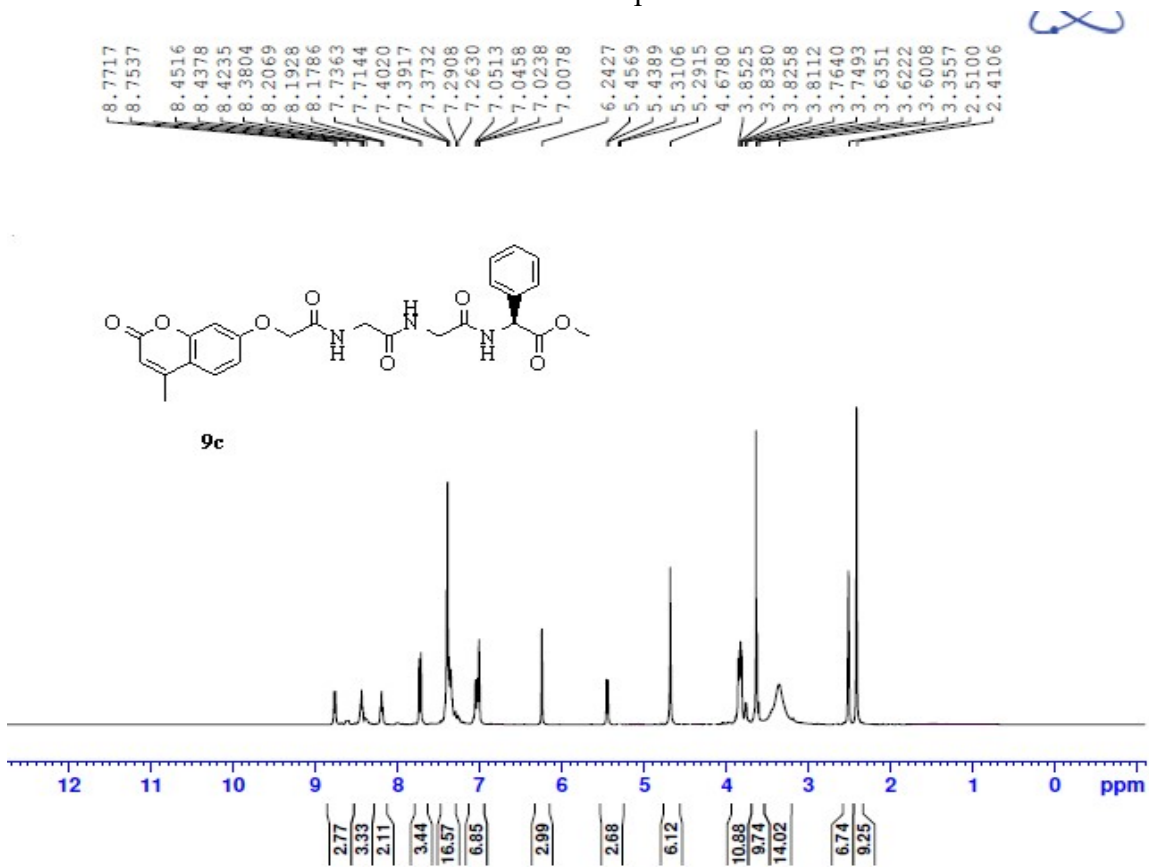
Mass spectroscopy of Compound 9b



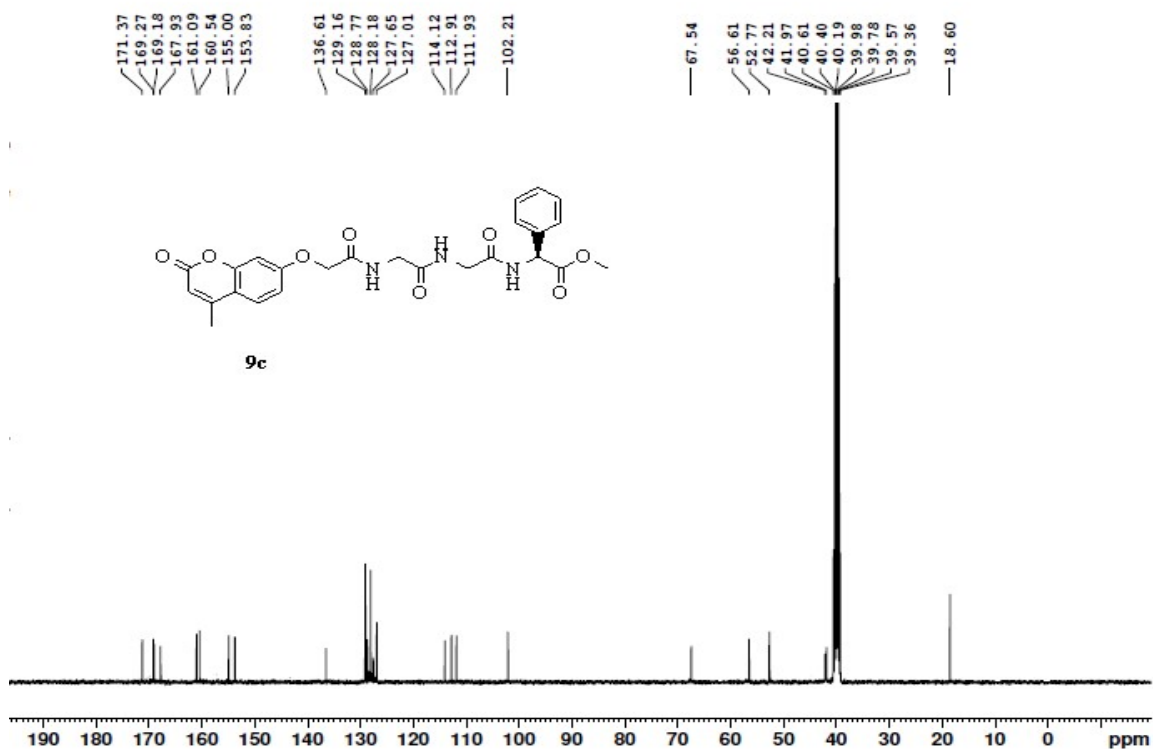
IR of Compound 9c



¹H NMR of Compound 9c



¹³C NMR of Compound 9c



Mass spectroscopy of Compound 9c

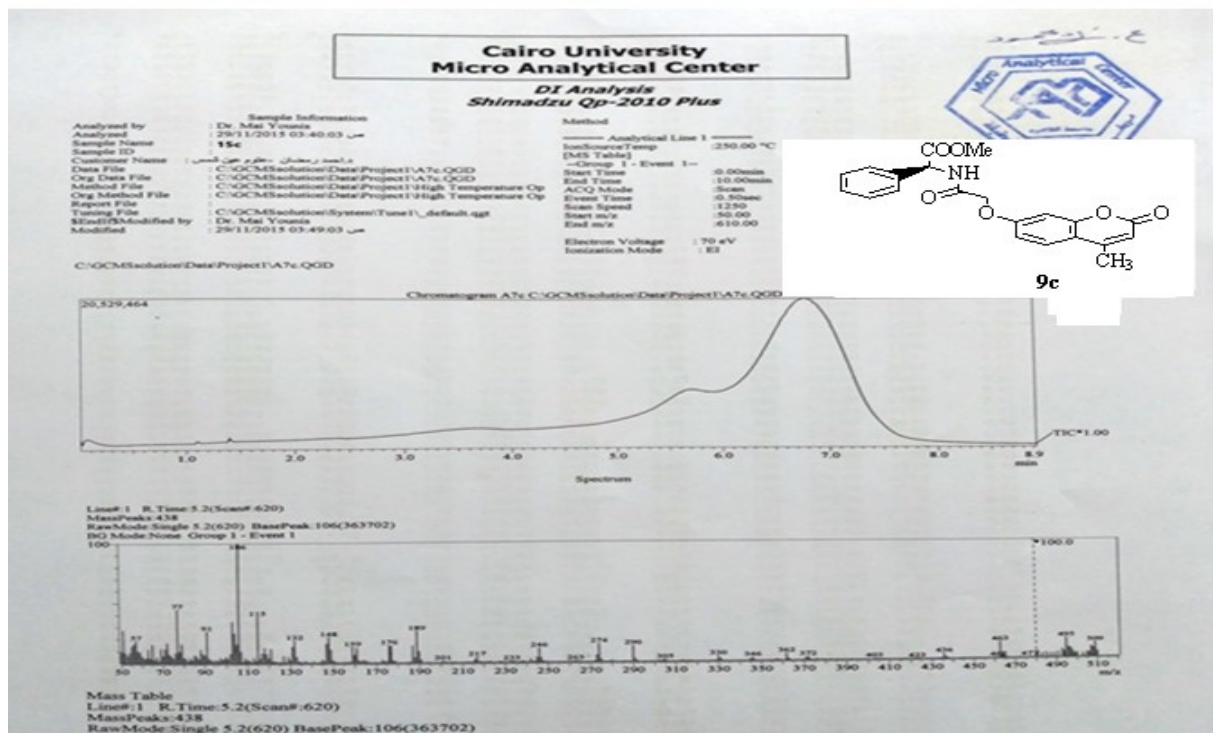


Table (1)

	^a QPlogS	^b Caco	^c Percentage Human/ oral absorption	^d QPlogKhsa	^e LogBB	^f MW	^g HBD	^h HBA	ⁱ QPlog(O/w)	^j MDCK
5a	-3.646	181.355	64.010	-0.675	-1.579	305.287	0.250	7.000	0.770	144.494
5b	-3.646	199.349	81.479	-0.182	-1.548	361.394	0.250	7.000	2.410	140.667
5c	-4.417	155.169	81.879	-0.101	-1.557	381.384	0.250	7.000	2.331	133.414
6	-4.417	213.401	42.985	-0.809	-1.098	305.290	0.250	7.000	2.685	187.87
7a	-2.343	13.956	48.247	-0.971	-2.662	362.338	0.500	8.750	0.139	17.540
7b	-3.478	25.835	62.284	-0.471	-2.575	418.446	0.500	8.750	1.719	35.052
7c	-4.246	31.876	65.625	-0.407	-2.432	438.436	0.500	8.750	2.009	39.495
8	-2.077	31.762	23.323	-1.133	-2.437	362.341	3.500	9.750	-1.257	39.340
9a	-2.164	3.161	19.983	-1.288	-3.526	419.390	0.750	10.500	-0.504	6.110
9b	-3.497	3.481	29.567	-0.774	-3.709	475.497	0.750	10.500	1.005	8.221
9c	-4.058	2.585	28.675	-0.689	-3.821	495.488	0.750	10.500	1.248	6.389

^aPredicted aqueous solubility; log S in mol/L (acceptable range; -6.5-0.5), ^bPredicted apparent Caco-2 cell permeability in nm/sec; (<25% is poor and >500% is great), ^cpercentage of human oral absorption; (<25% is poor and >80% is high), ^dprediction of binding to human serum albumin; (acceptable range; -1.0-1.5), ^eprediction of brain/blood; (acceptable range; -3.0-1.2), ^fmolecular weight (<500), ^gHydrogen bond donor (<5), ^hHydrogen bond acceptor (<10), ⁱPrediction octanol/water partition coefficient log p (acceptable range; -2.0-6.5), ^jPrediction apparent MDCK cell permeability in nm/sec; (<25% is poor and >500% is great), ADME; Absorption, distribution, metabolism and excretion