

Synthesis, Biological Evaluation and Mechanisms Study of a Class of Cyclic CA-4 Analogues as Novel Antitumour Agents

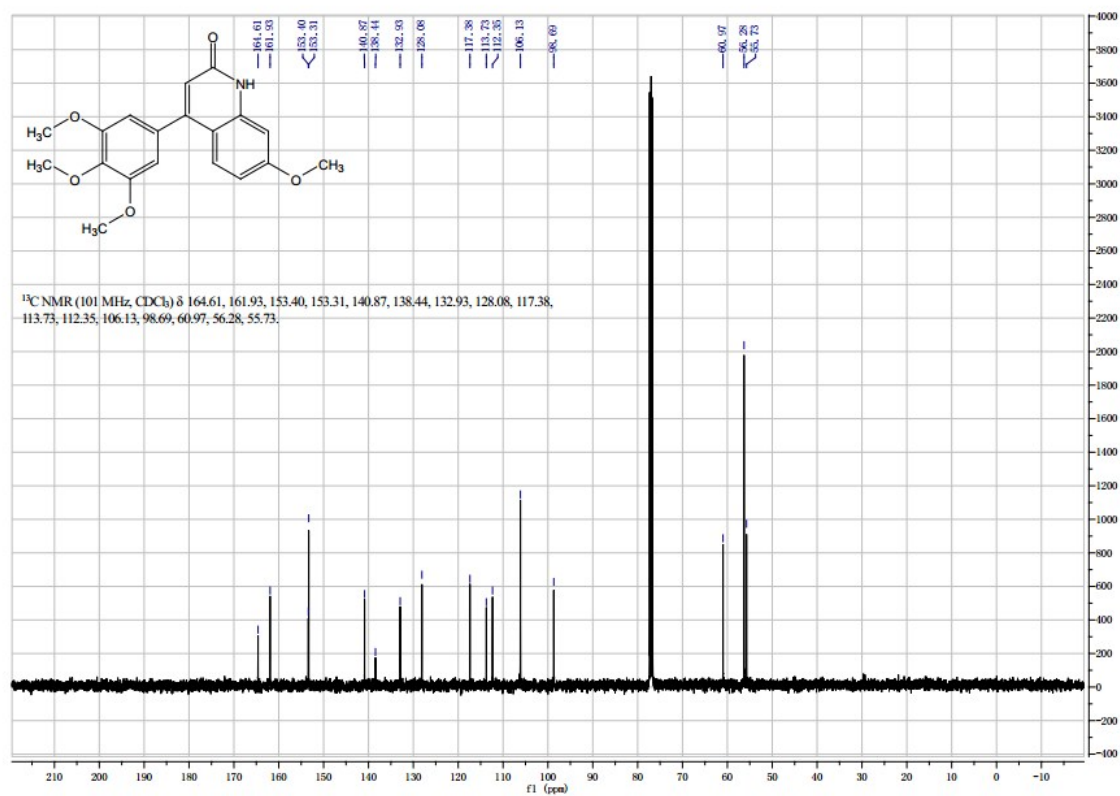
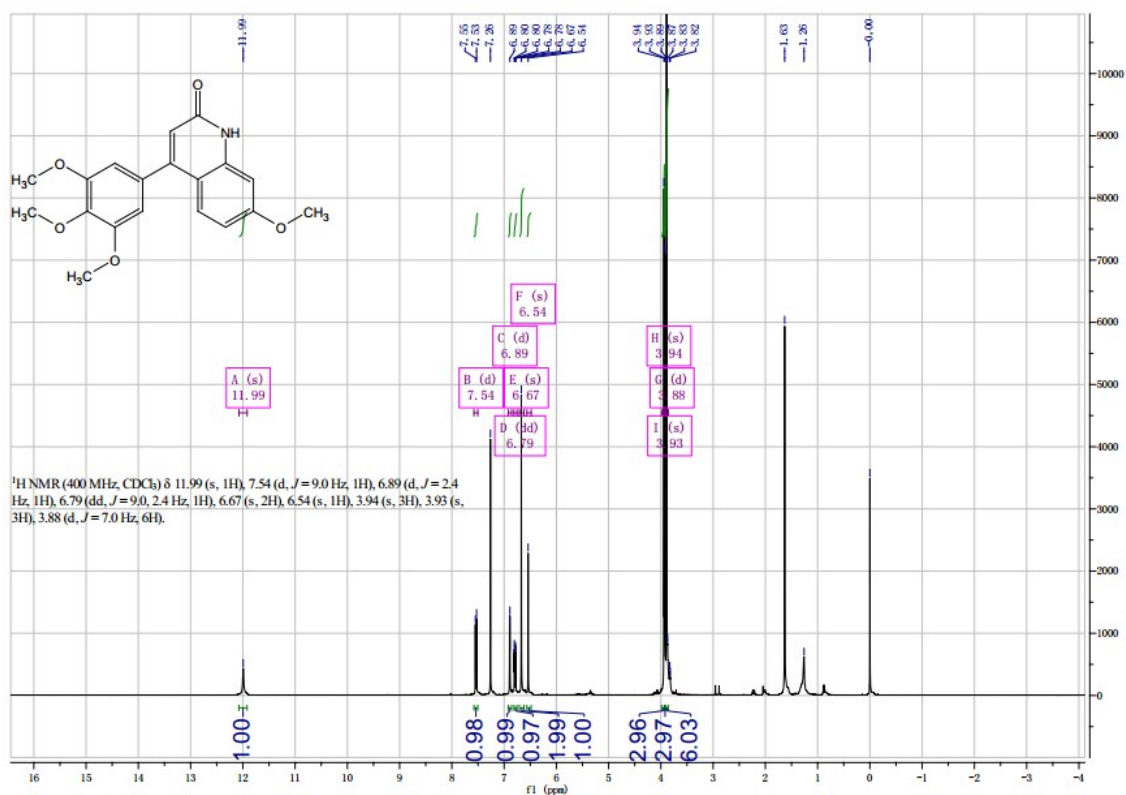
Jun Yan, Yanqing Pang, Jie Chen, Jianfei Sheng, Jinhui Hu, Ling Huang, * and Xingshu Li*

I. NMR spectra of target compounds (2-18)

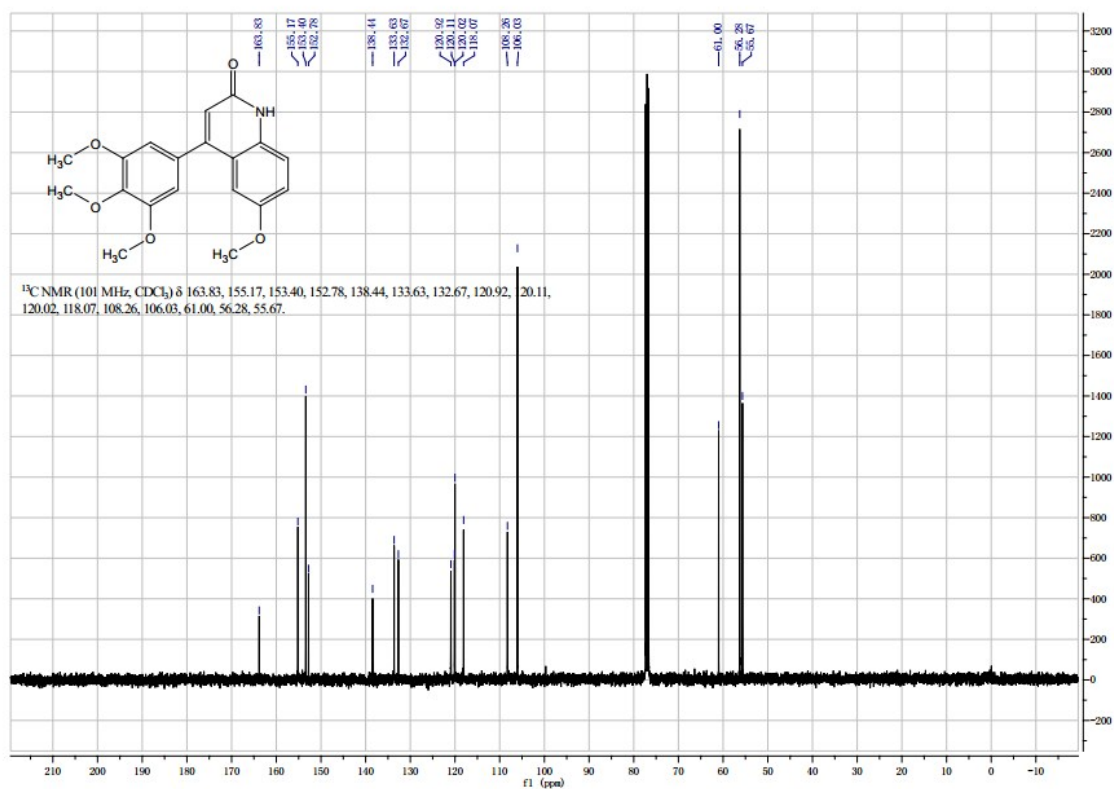
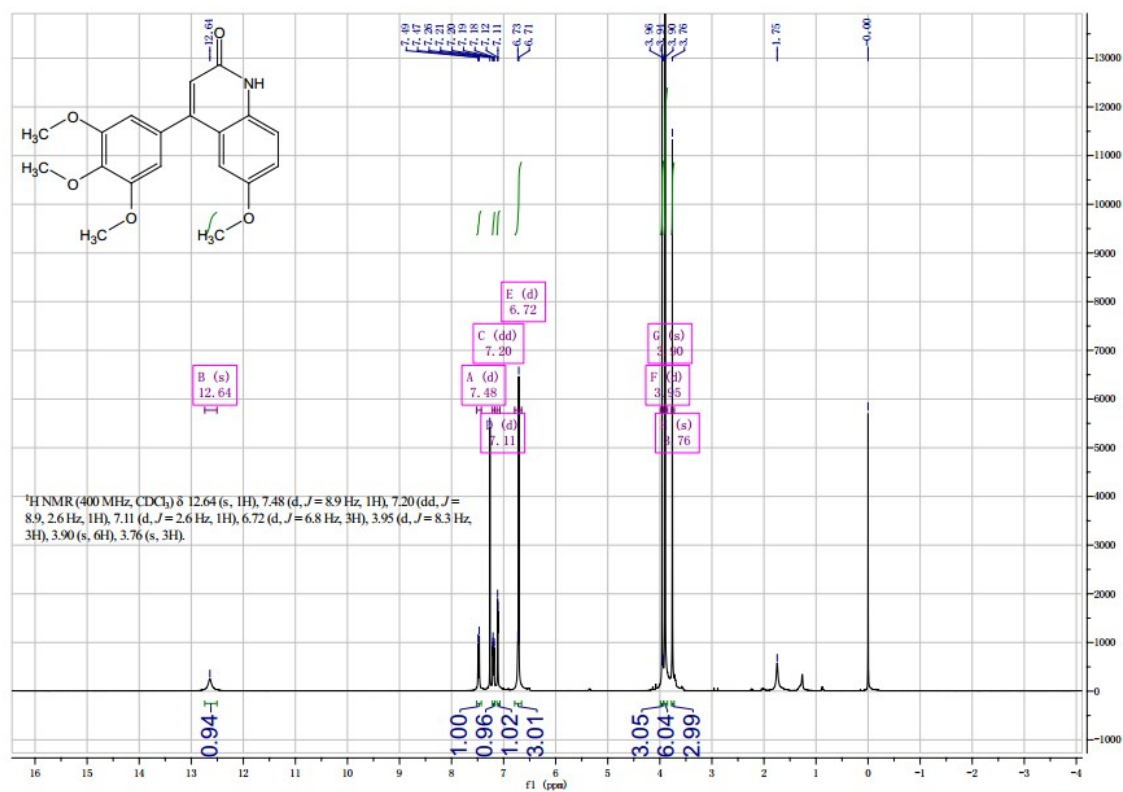
II. HPLC chromatograms of target compounds (19-25)

I. NMR spectra of target compounds

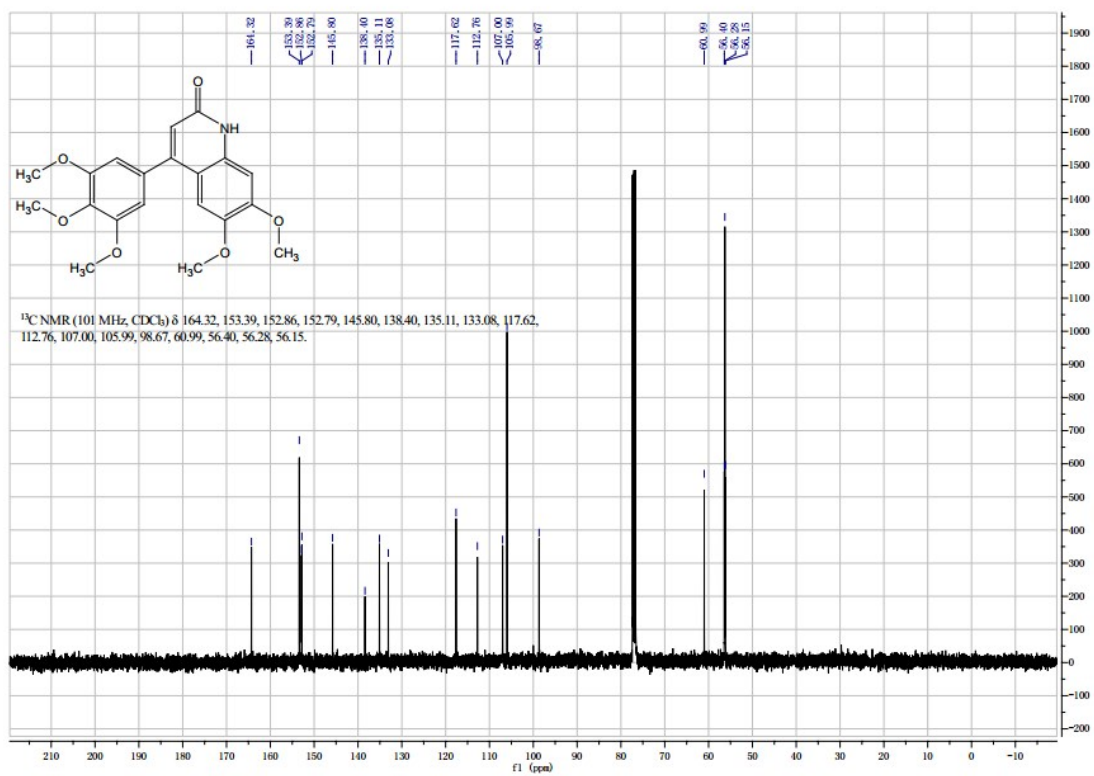
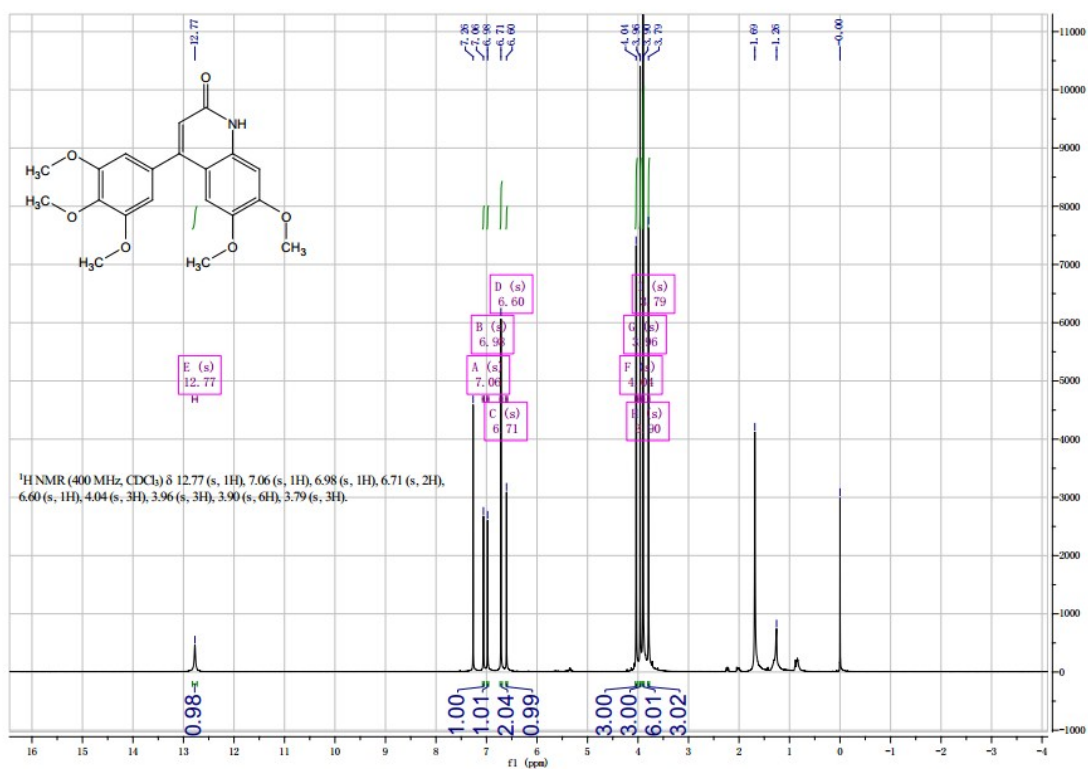
4a



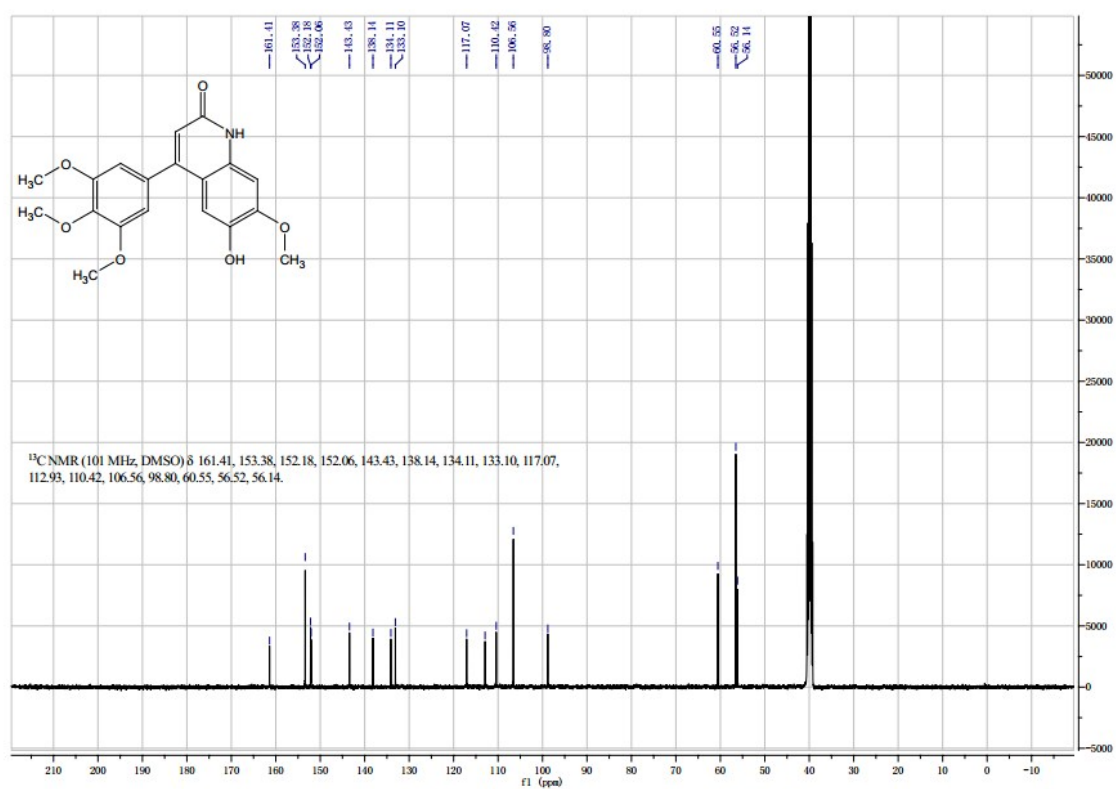
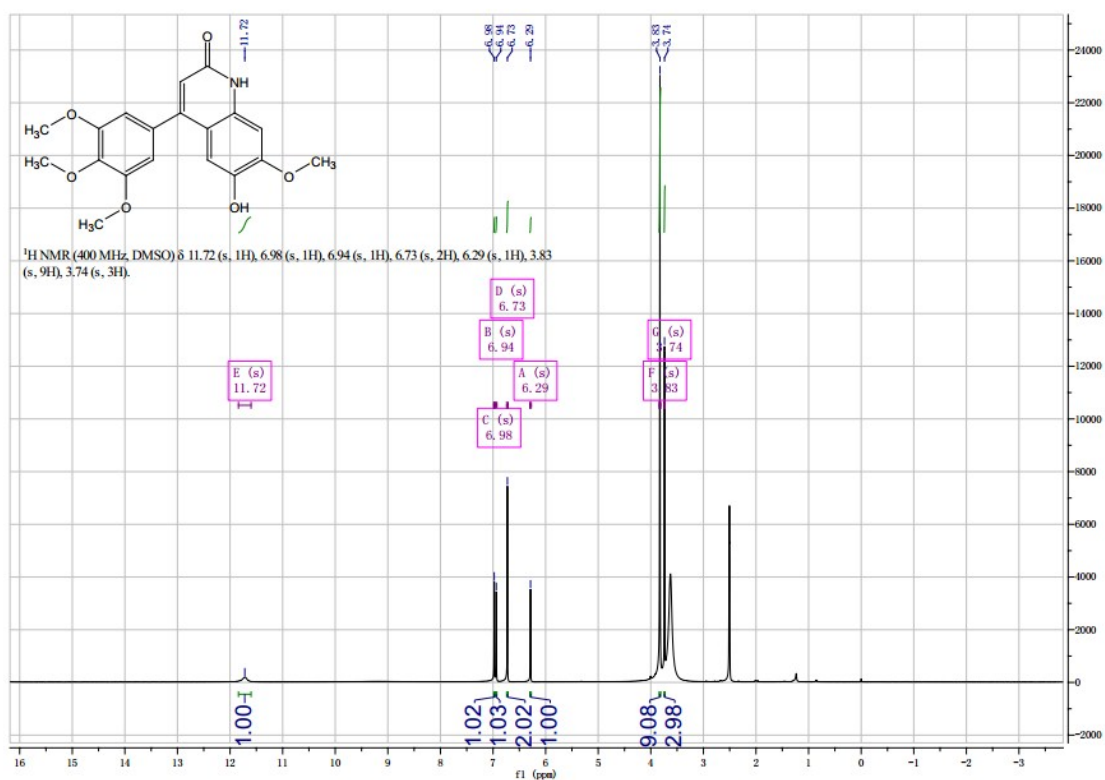
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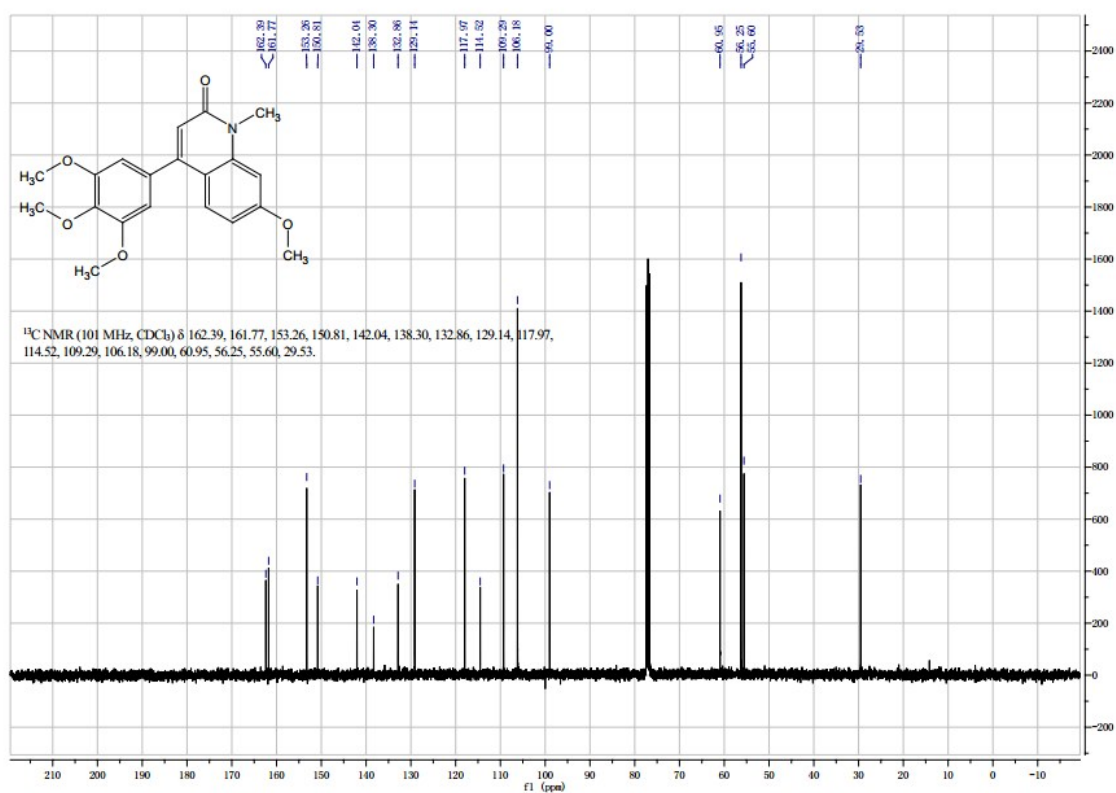
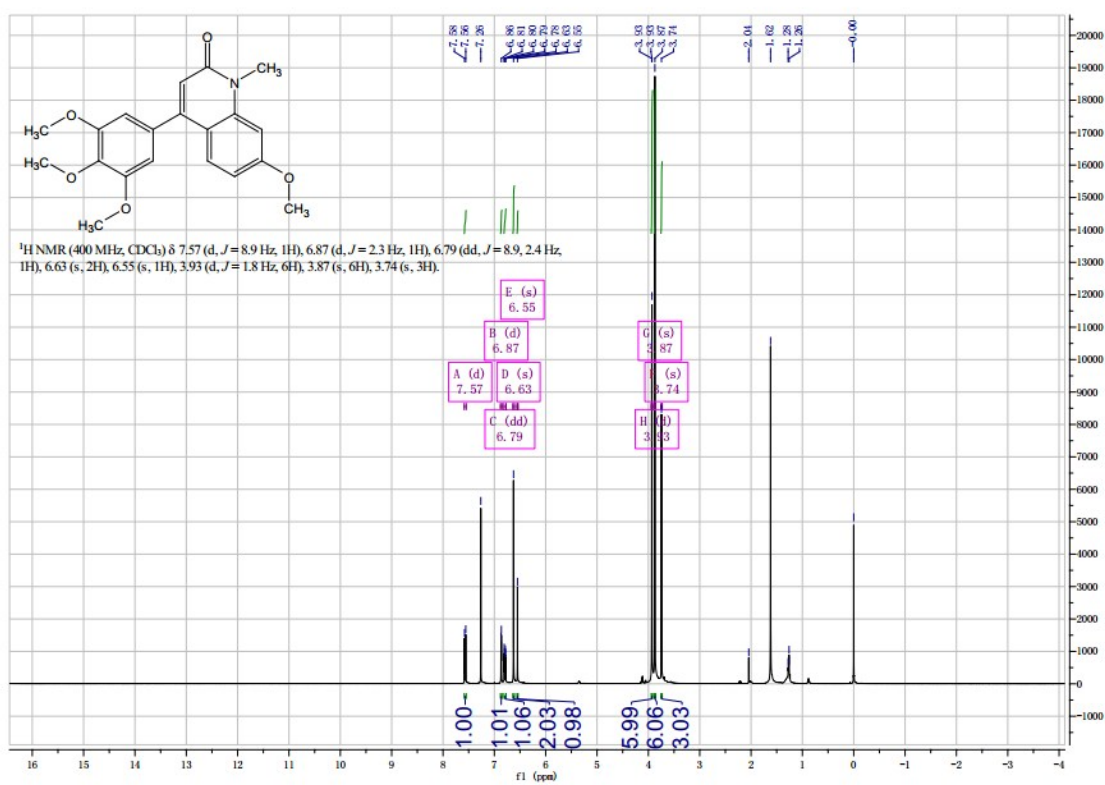
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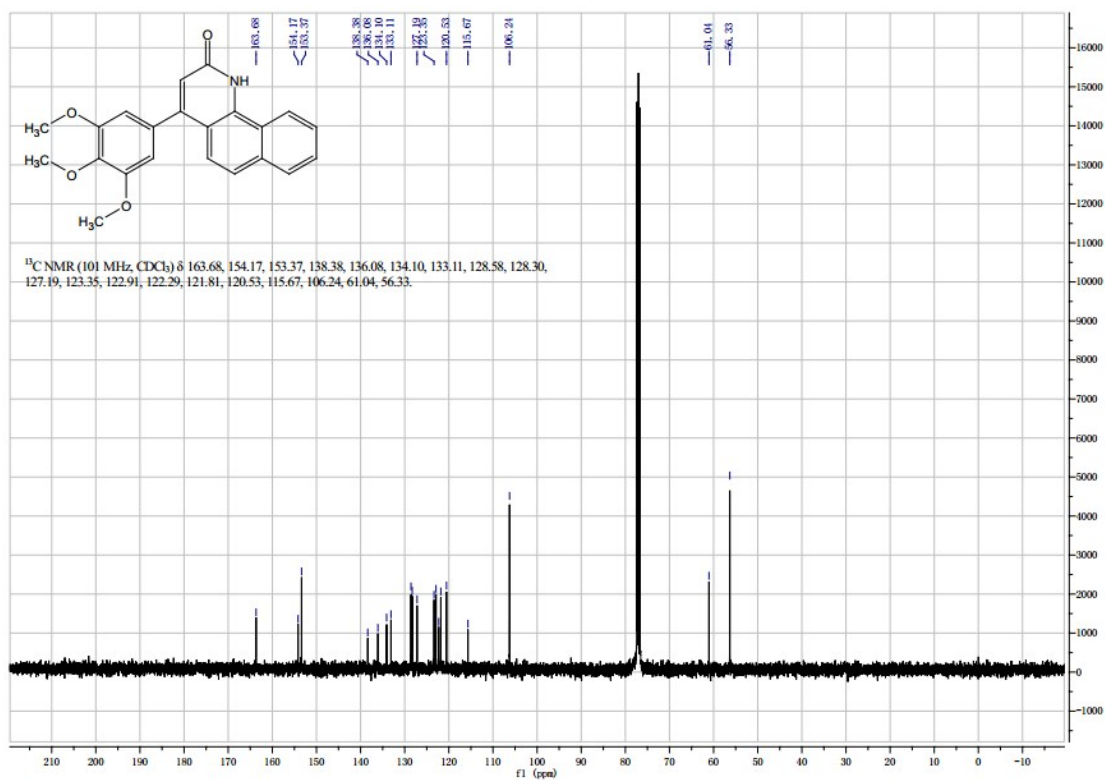
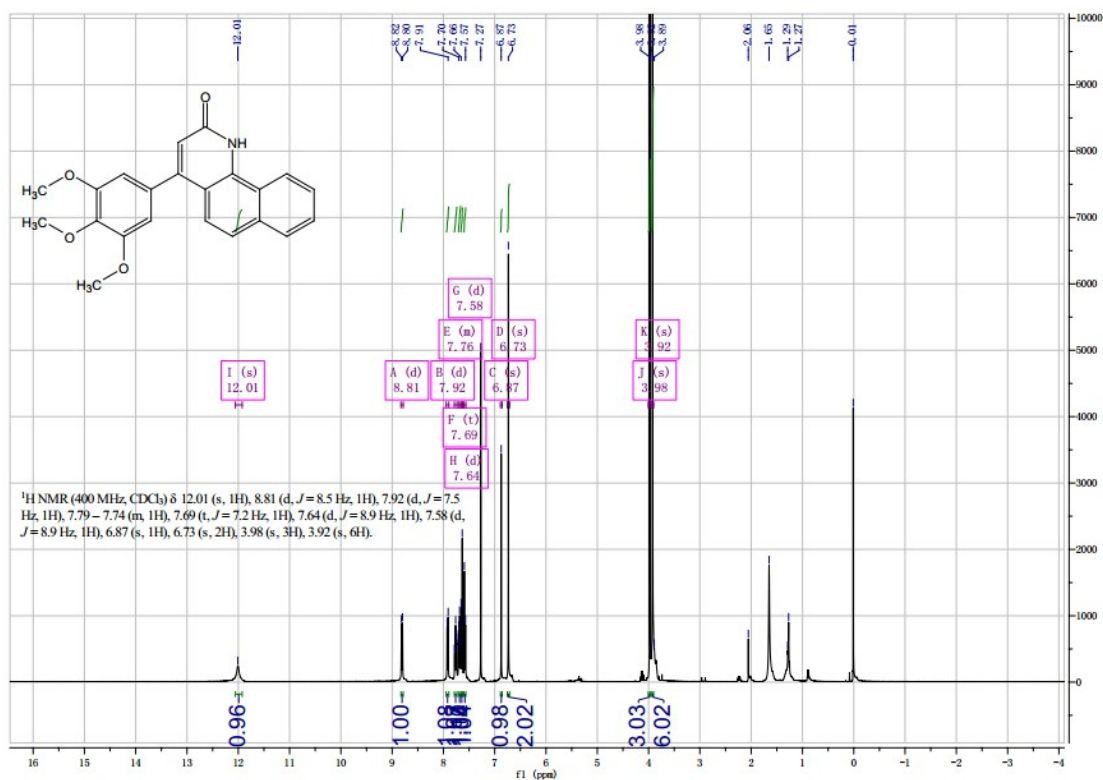
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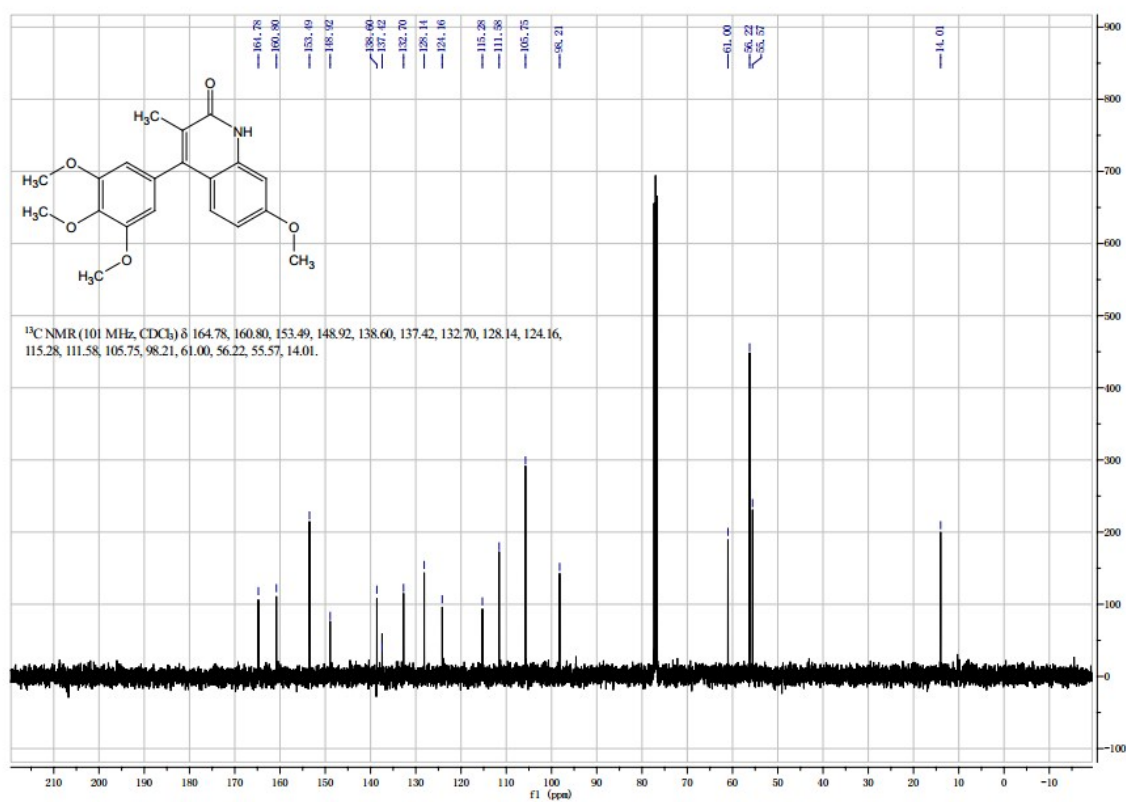
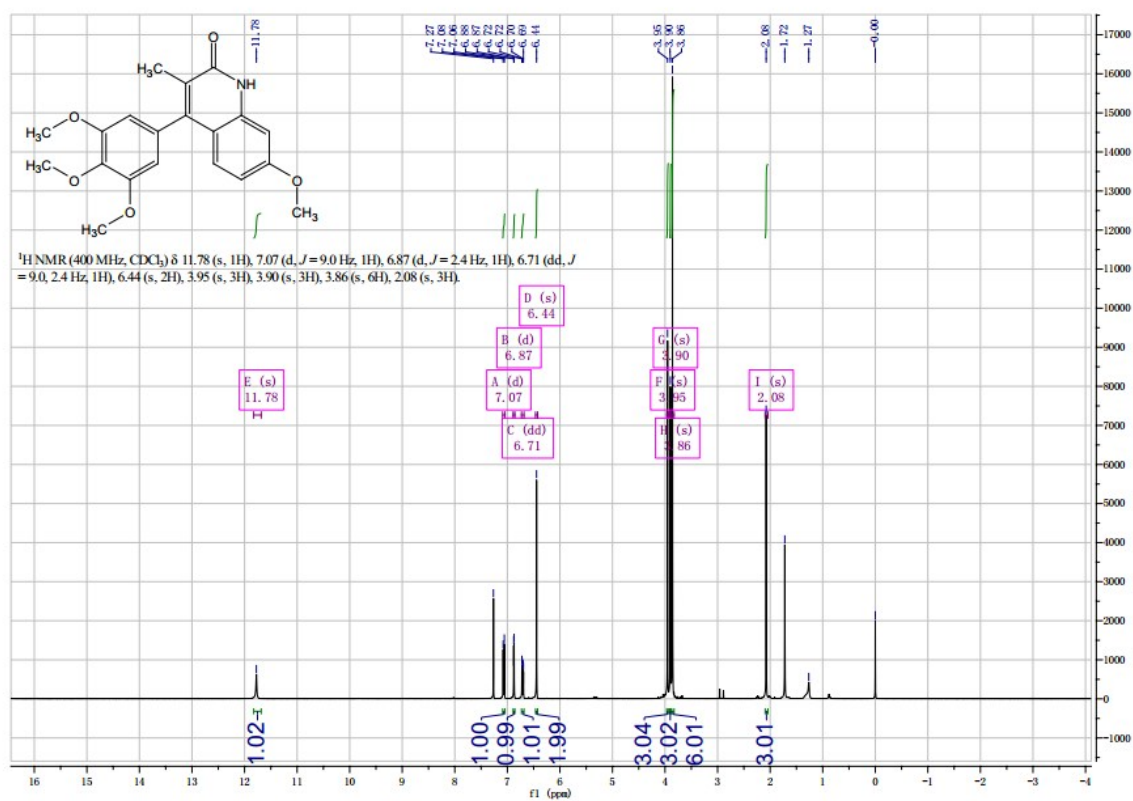


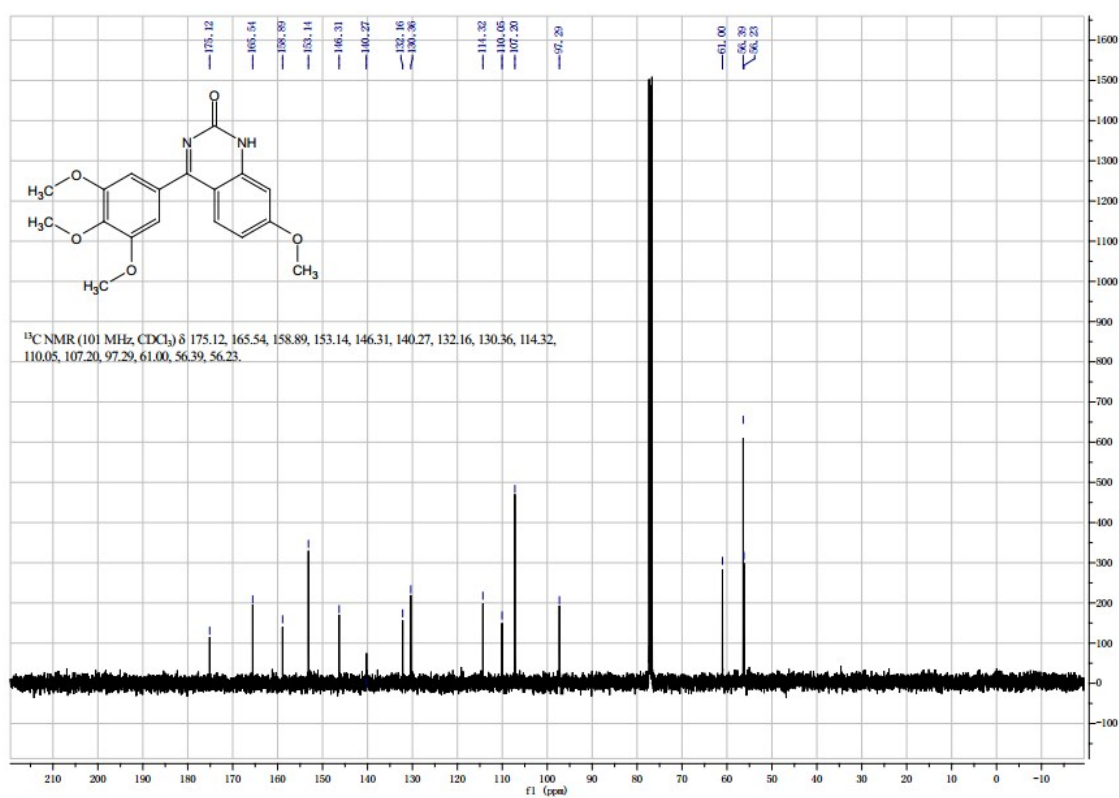
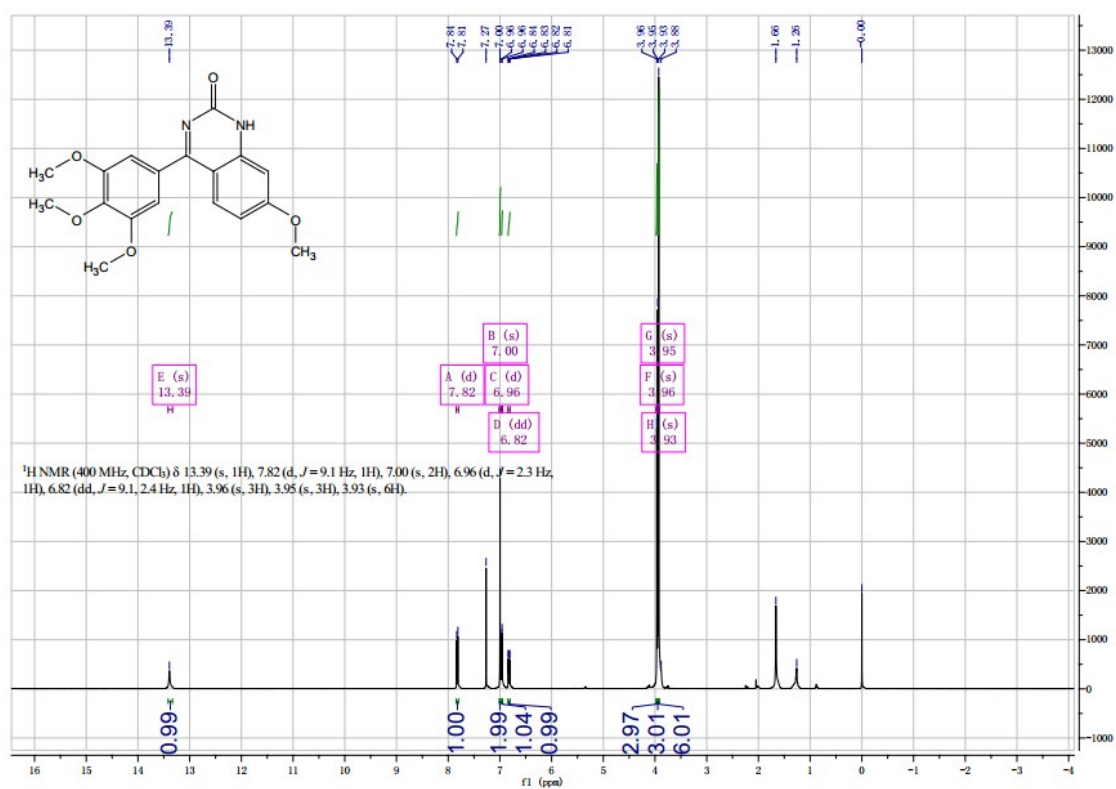
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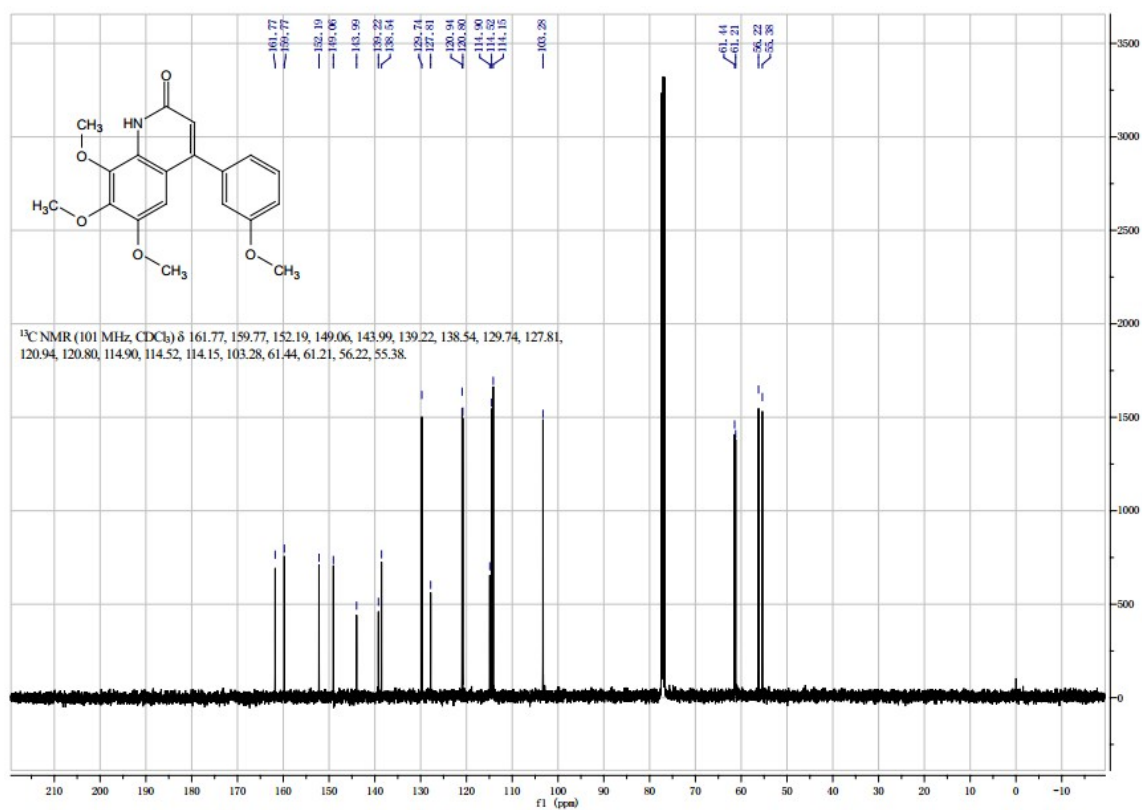
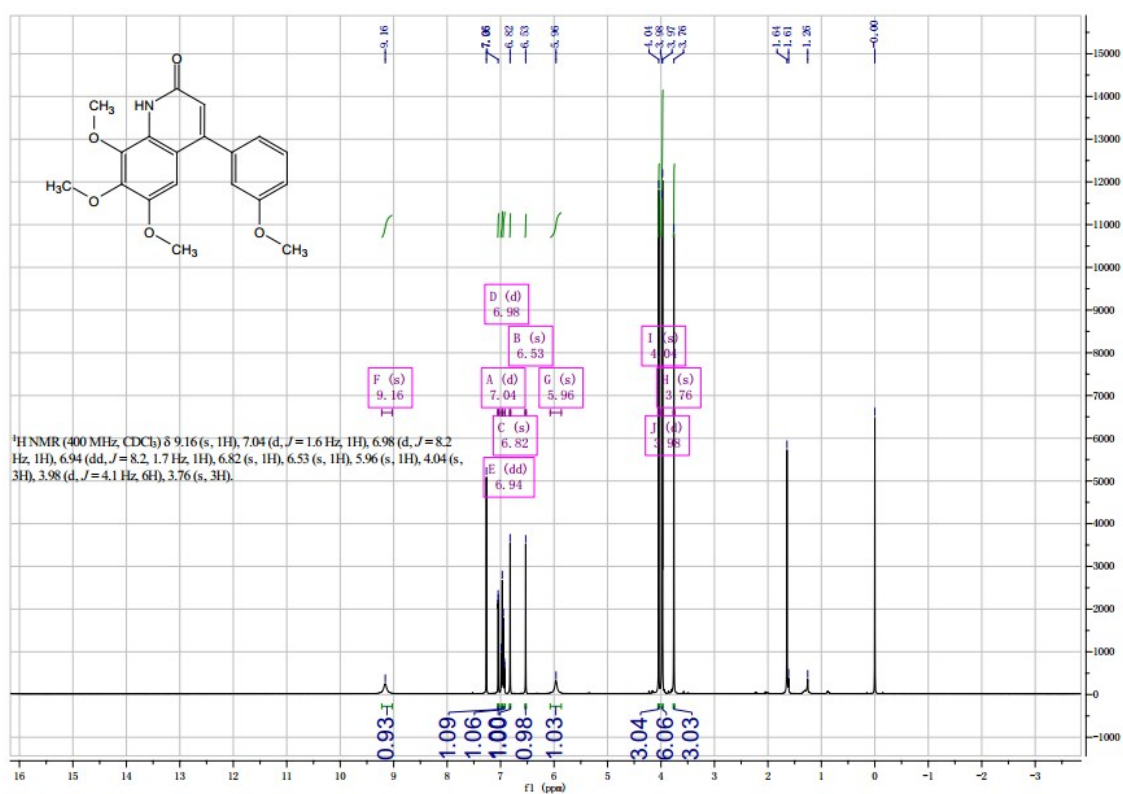
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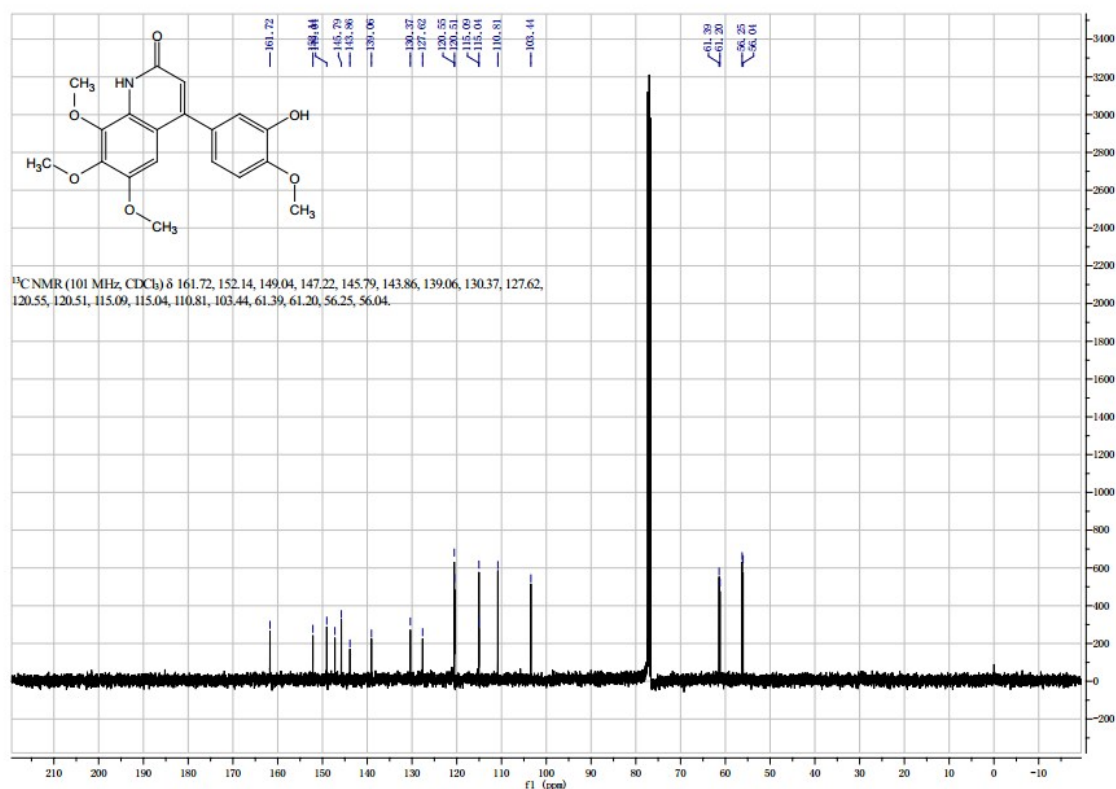
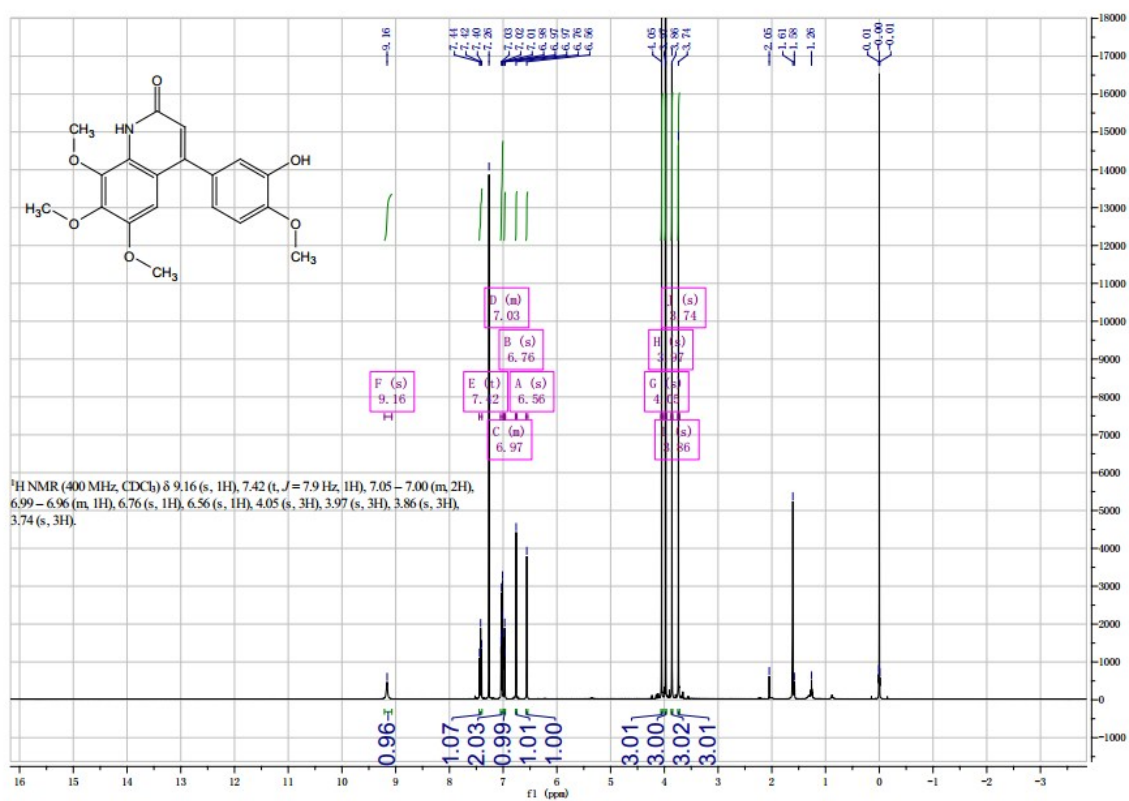




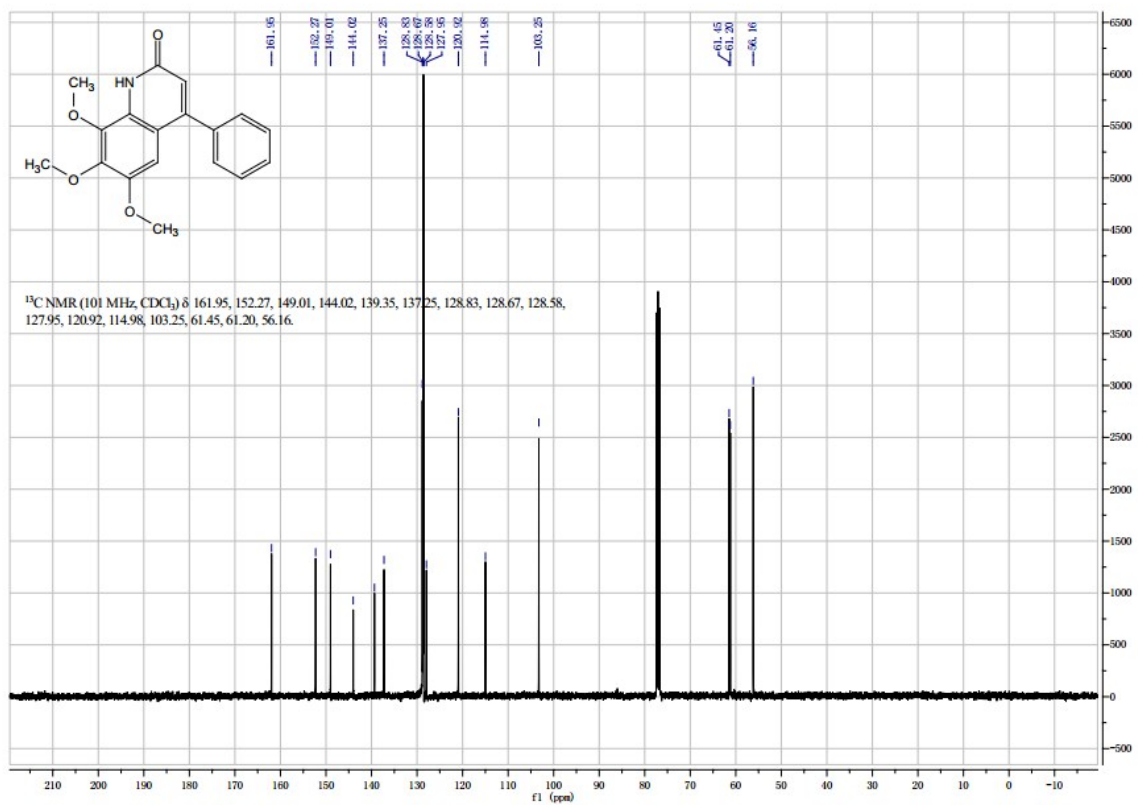
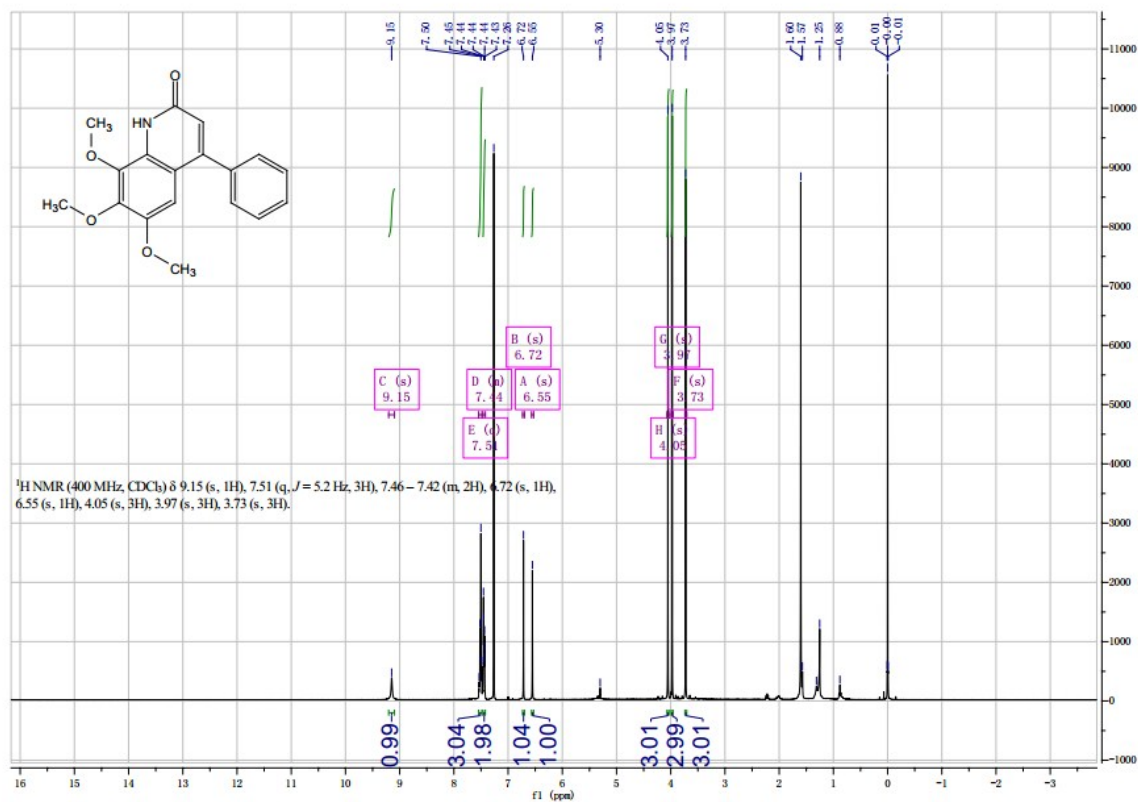
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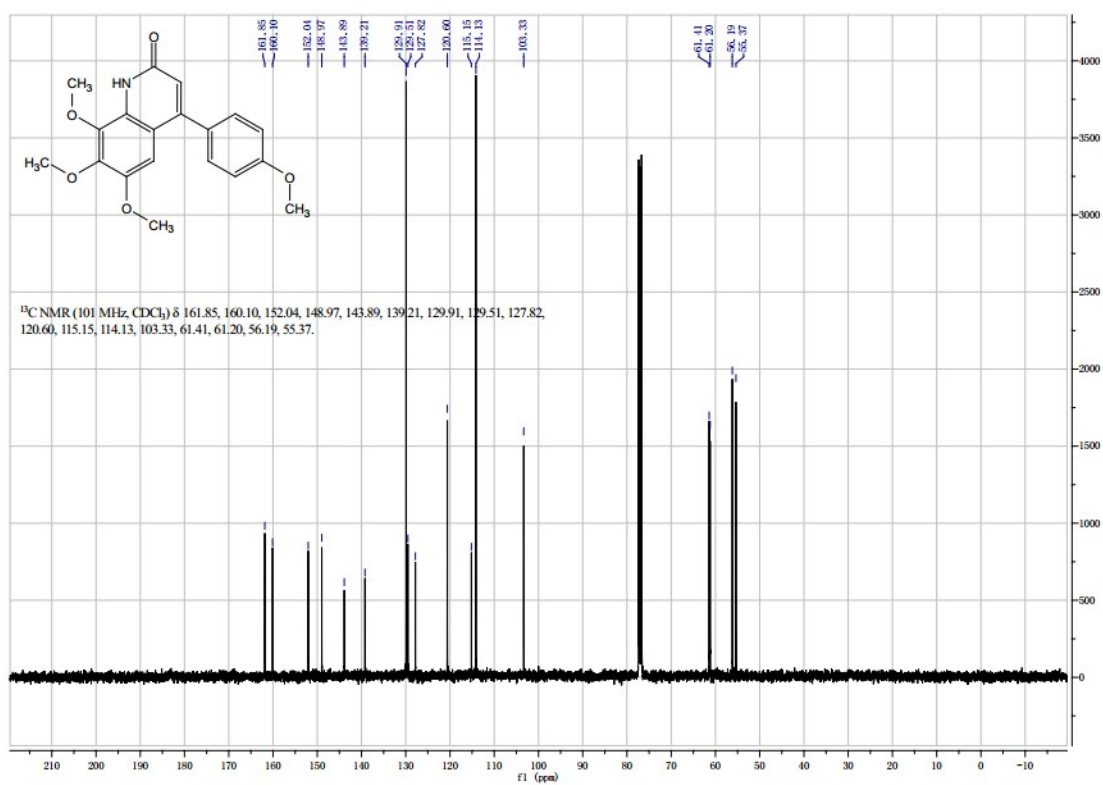
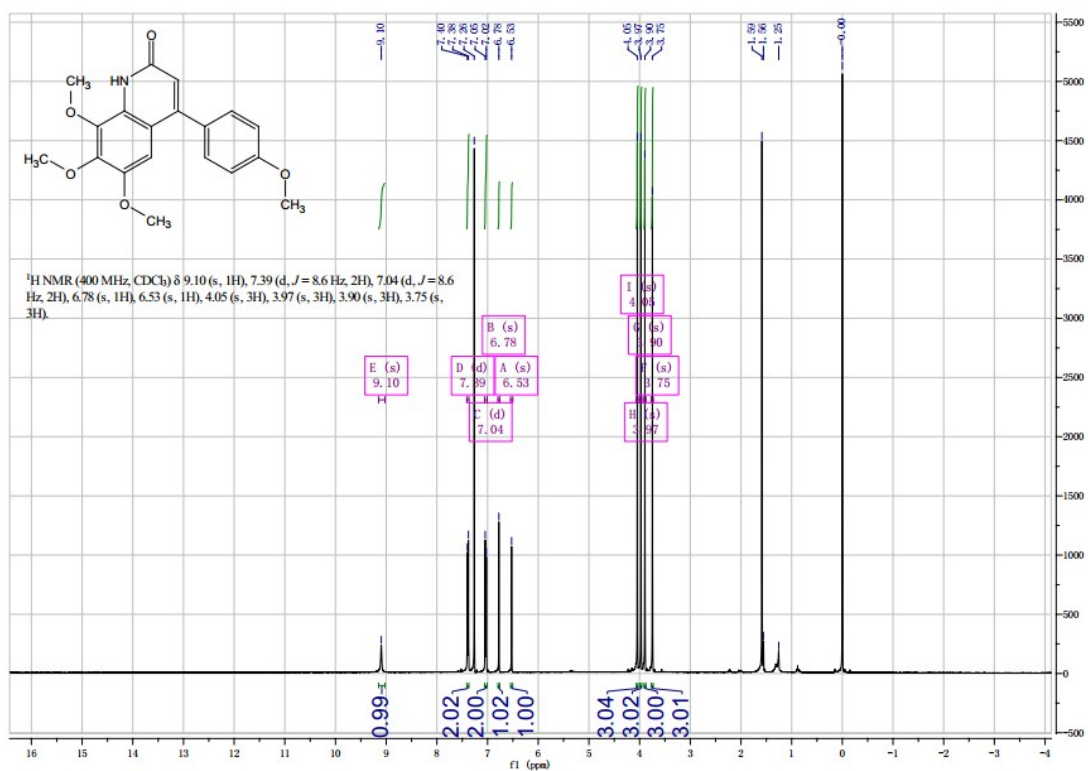
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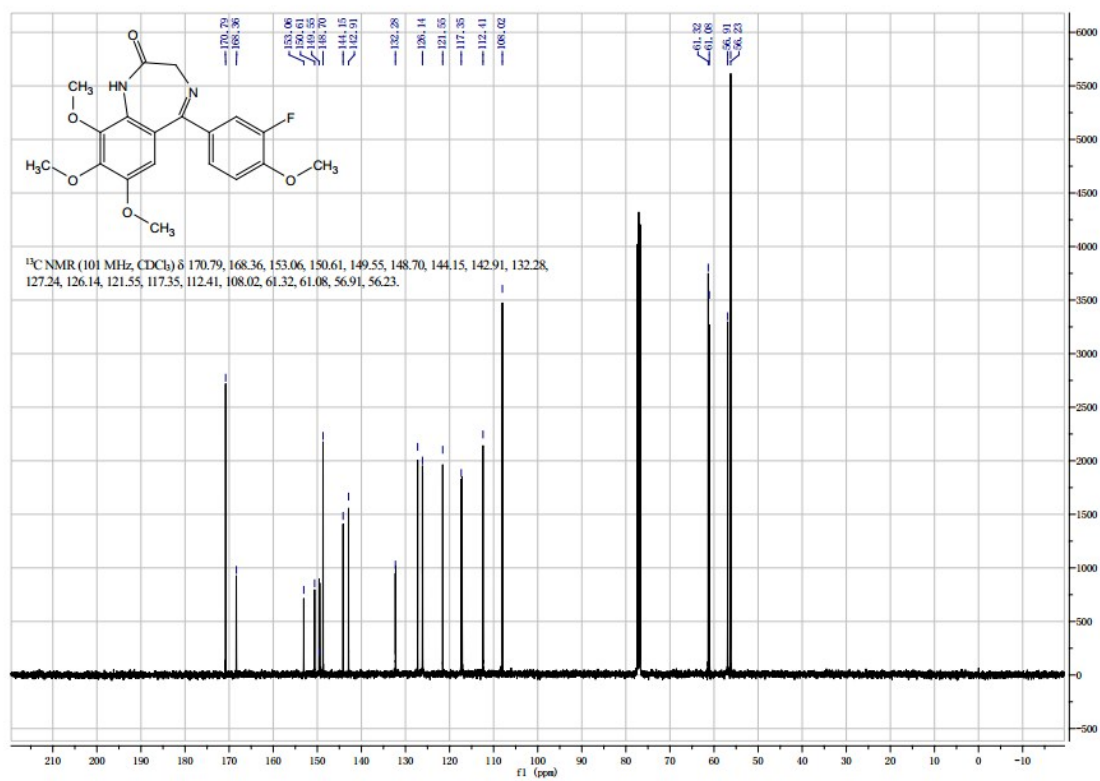
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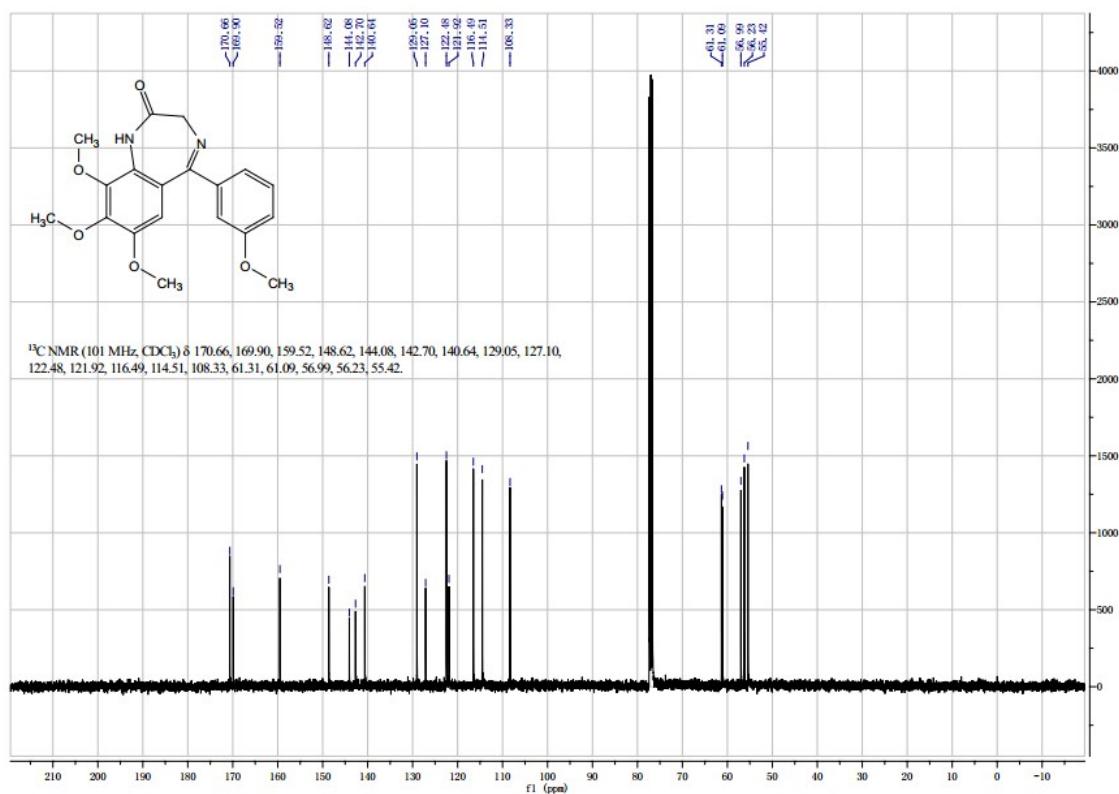
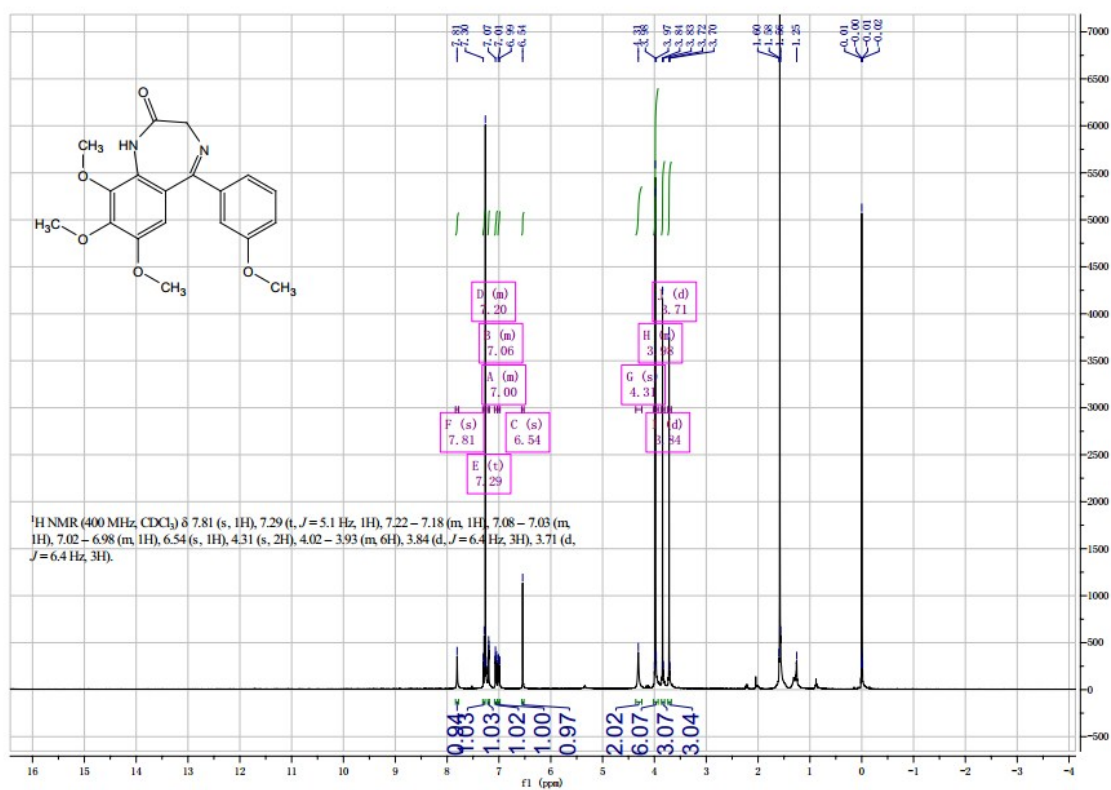
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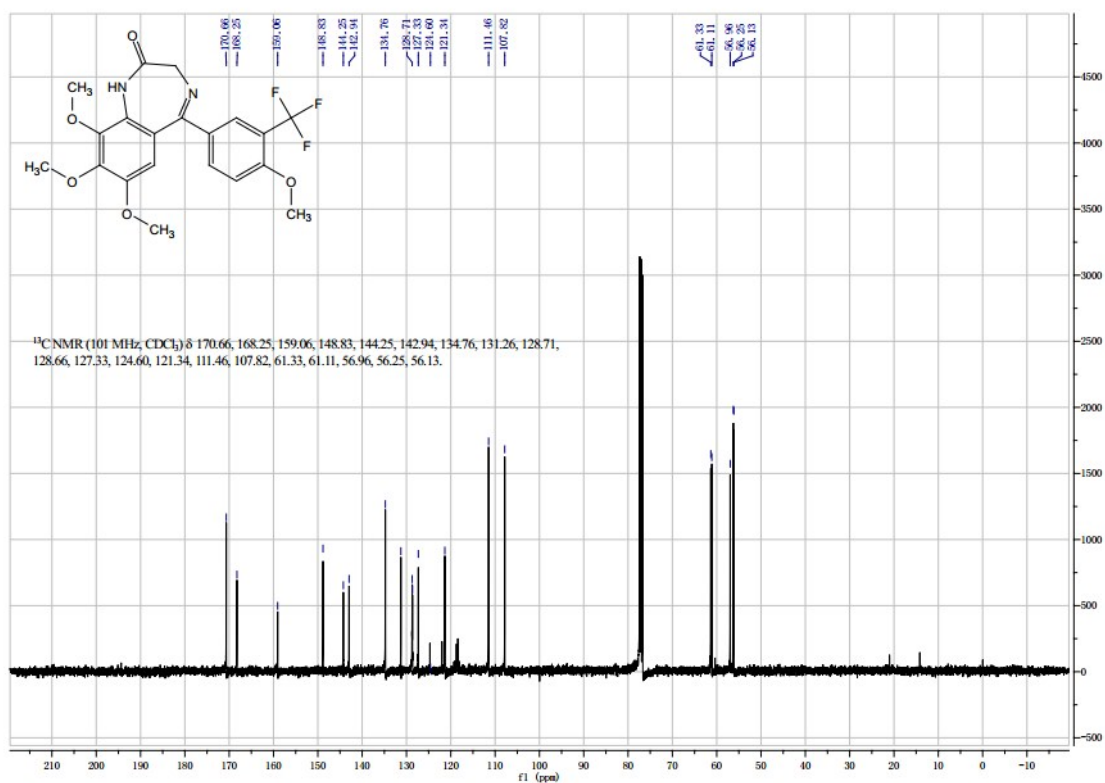
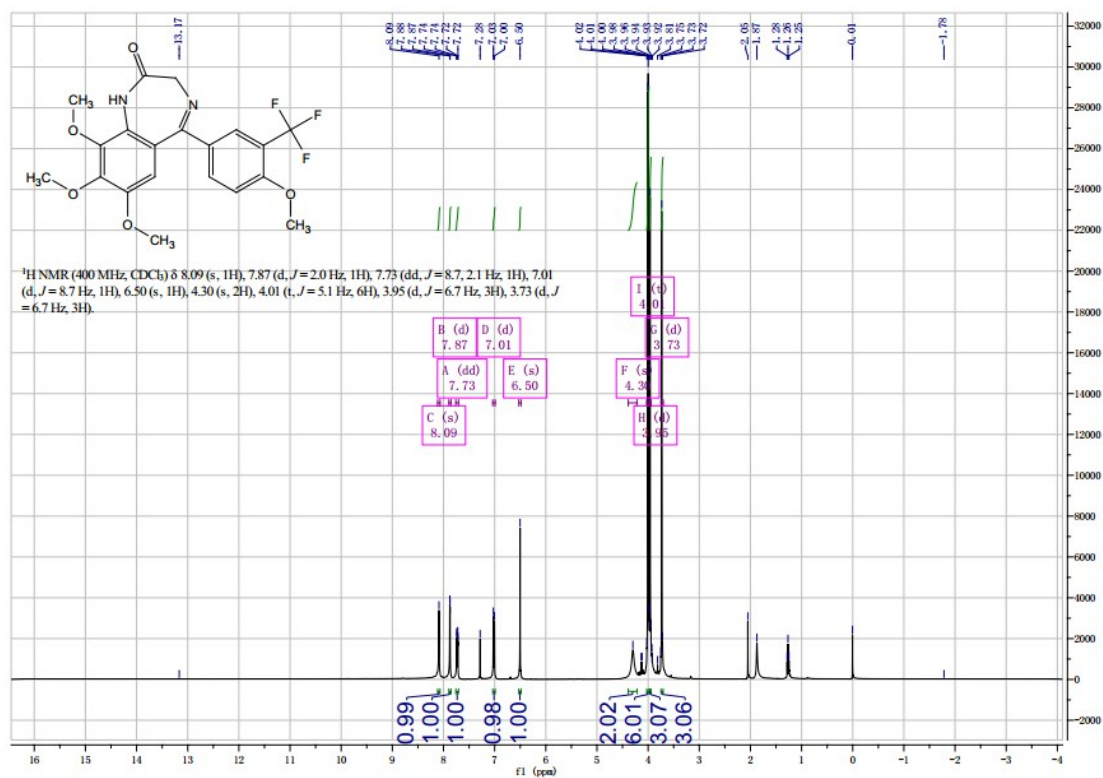
23b



23c

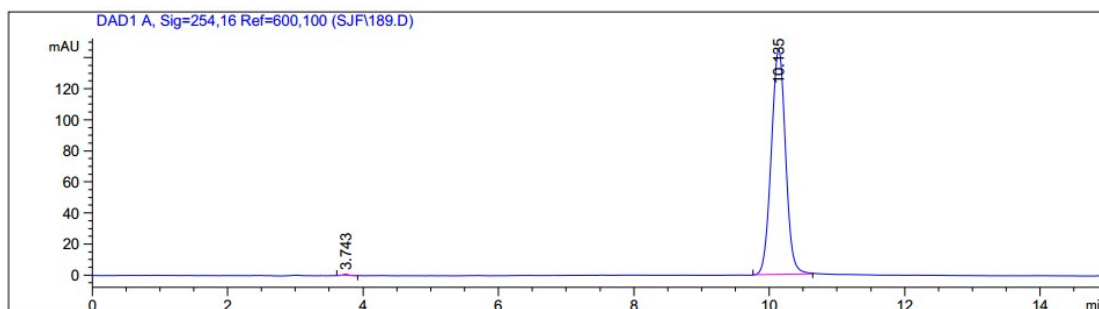


23d



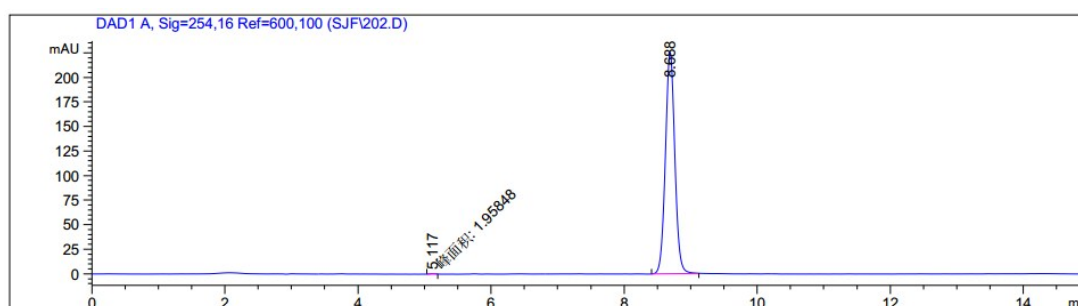
II. HPLC chromatograms of target compounds

4a



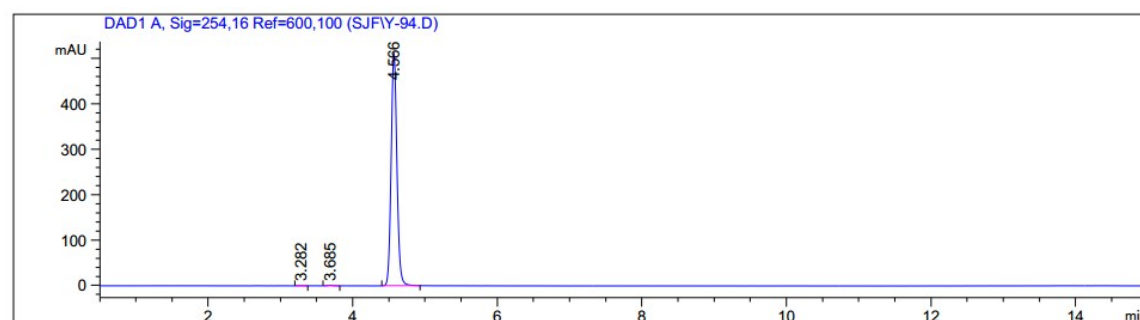
Peak #	Retention time [min]	Type	Peak width [min]	Peak area [mAU*s]	Peak height [mAU]	Peak area %
1	3.743	BB	0.1102	5.89620	8.17430e-1	0.2769
2	10.135	BB	0.2291	2123.43286	144.75177	99.7231

4b



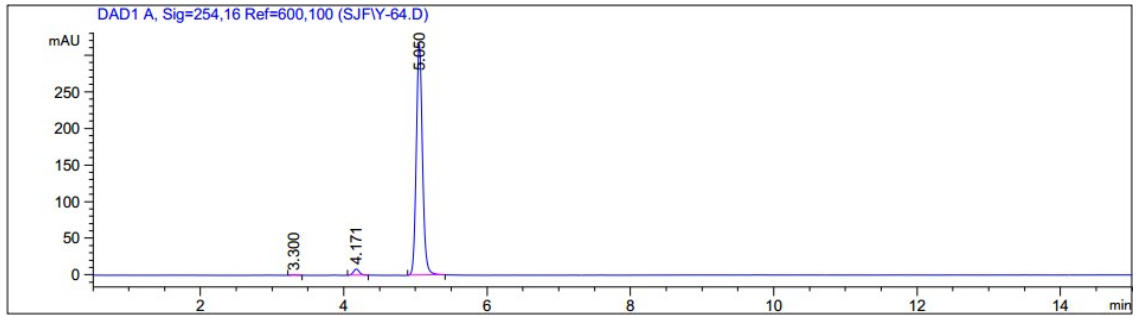
Peak #	Retention time [min]	Type	Peak width [min]	Peak area [mAU*s]	Peak height [mAU]	Peak area %
1	5.117	MM T	0.0919	1.95848	3.55151e-1	0.0882
2	8.688	BB	0.1526	2217.67847	225.76378	99.9118

4c



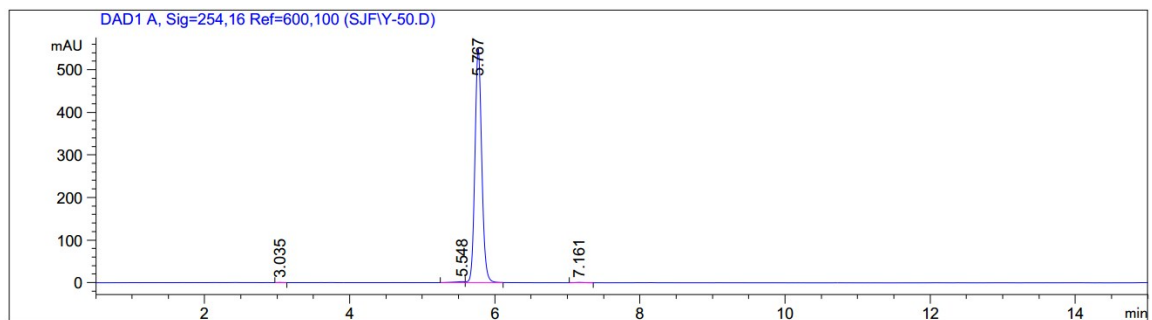
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1	3.282	BB	0.0641	1.32862	3.09245e-1	0.0466
2	3.685	BB	0.0759	4.75948	9.58507e-1	0.1669
3	4.566	BB	0.0868	2845.06567	512.05280	99.7865

4d



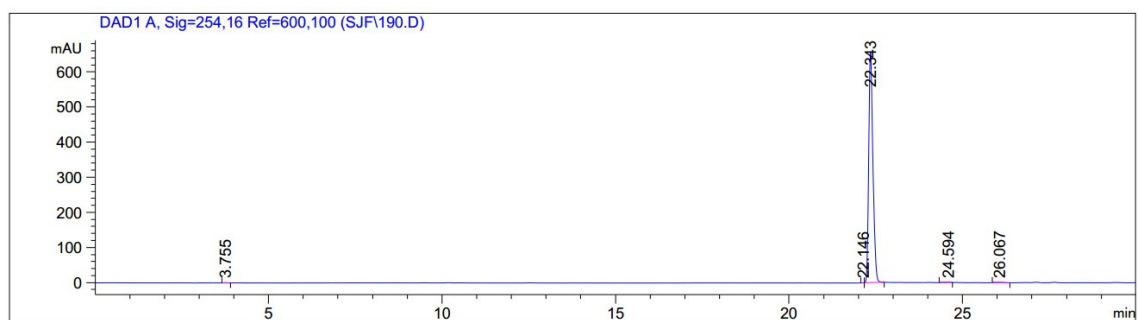
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1	3.300	BB	0.0831	3.44210	5.80983e-1	0.1767
2	4.171	BB	0.0912	49.57061	8.36157	2.5451
3	5.050	BB	0.0919	1894.68848	316.33862	97.2782

5



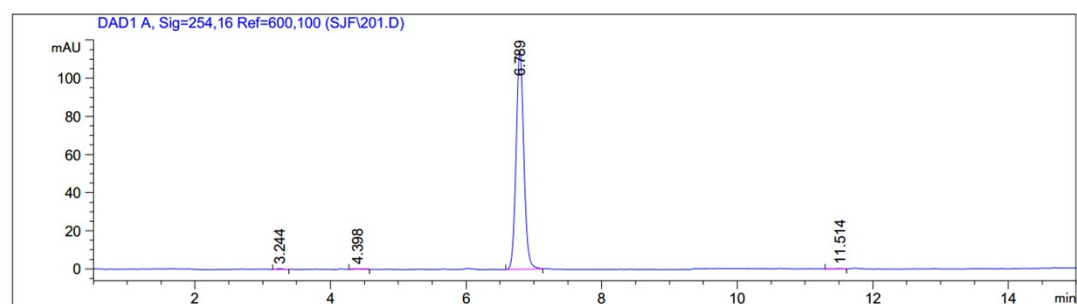
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1	3.035	BB	0.0639	1.34211	3.13774e-1	0.0372
2	5.548	BV	0.1383	23.81199	2.27151	0.6598
3	5.767	VB	0.1001	3578.33276	548.75793	99.1526
4	7.161	BB	0.1123	5.42676	6.86198e-1	0.1504

9



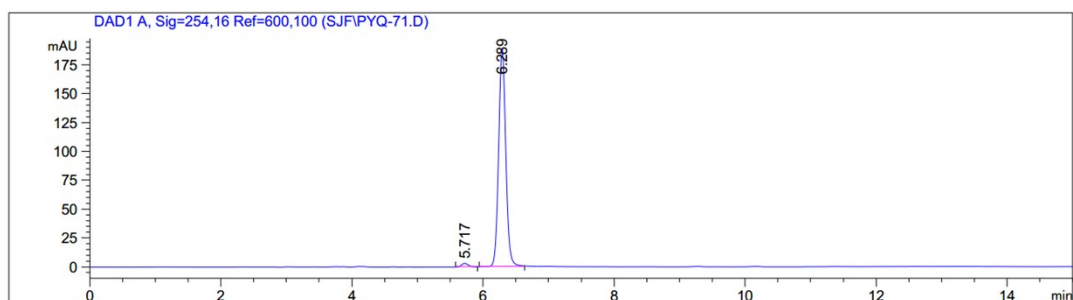
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1	3.755	BB	0.0818	3.01423	5.68799e-1	0.0542
2	22.146	BV	0.0426	6.95182e-1	2.49083e-1	0.0125
3	22.343	VB	0.1281	5531.15967	657.72260	99.4774
4	24.594	BV	0.1681	13.09297	1.10586	0.2355
5	26.067	BB	0.1670	12.25430	9.46701e-1	0.2204

12



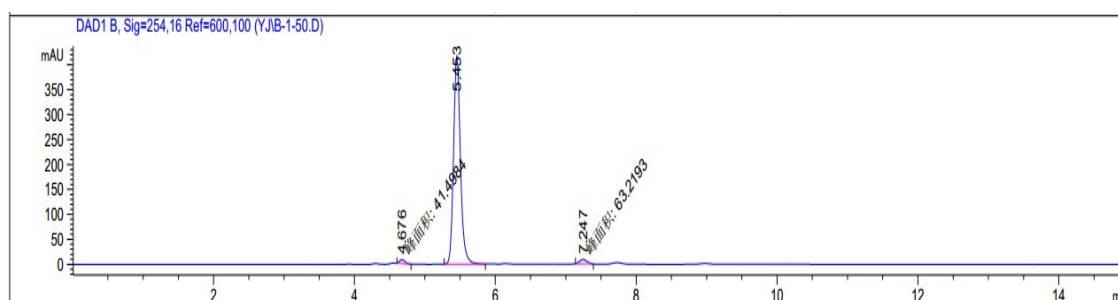
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1	3.244	BB	0.0799	2.50821	4.72824e-1	0.2729
2	4.398	BB	0.1082	2.31618	3.21038e-1	0.2520
3	6.789	BB	0.1206	911.10205	114.79269	99.1282
4	11.514	BV	0.1250	3.18851	3.54225e-1	0.3469

16



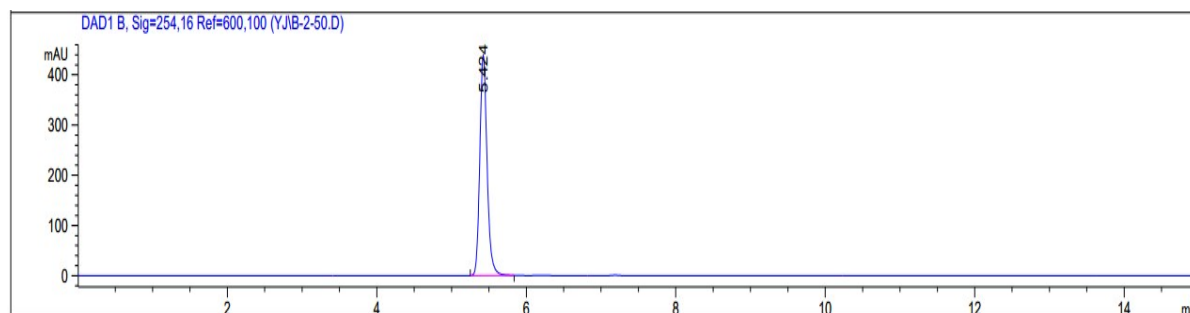
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1	5.717	BB	0.1072	21.54799	3.09743	1.4882
2	6.289	BB	0.1163	1426.36230	188.55087	98.5118

20a



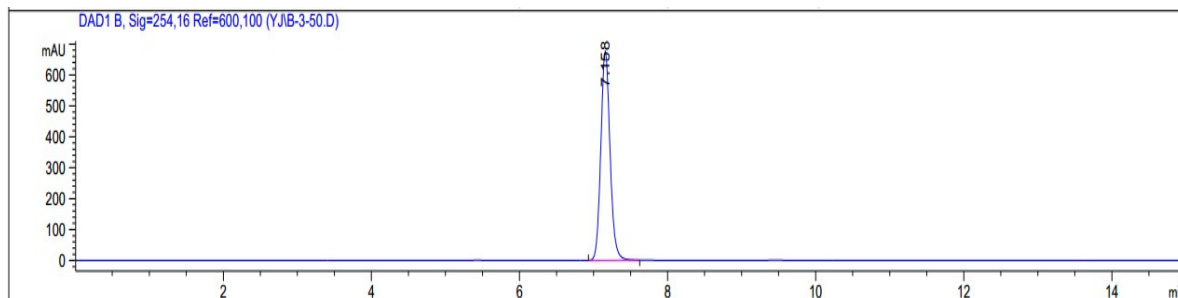
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1	4.676	MM T	0.0860	41.49838	8.03788	1.4109
2	5.453	BB	0.1054	2836.59424	416.73114	96.4398
3	7.247	MM T	0.1223	63.21931	8.61722	2.1494

20b



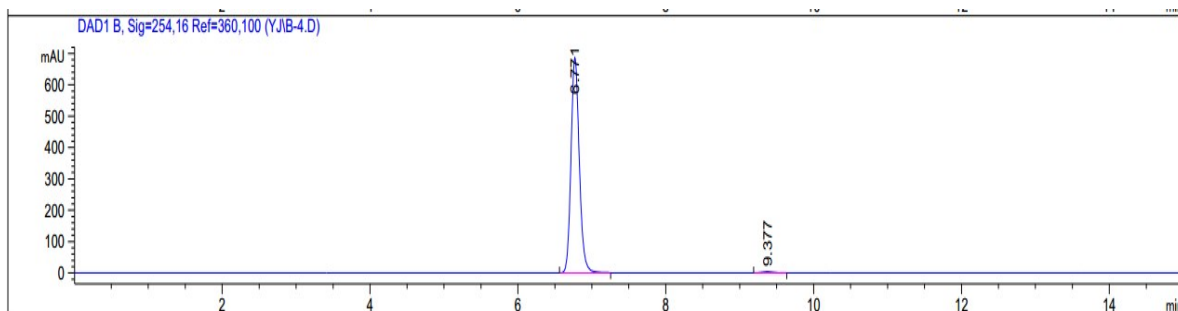
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1	5.424	BB	0.1051	2972.45459	438.60312	100.0000

20c



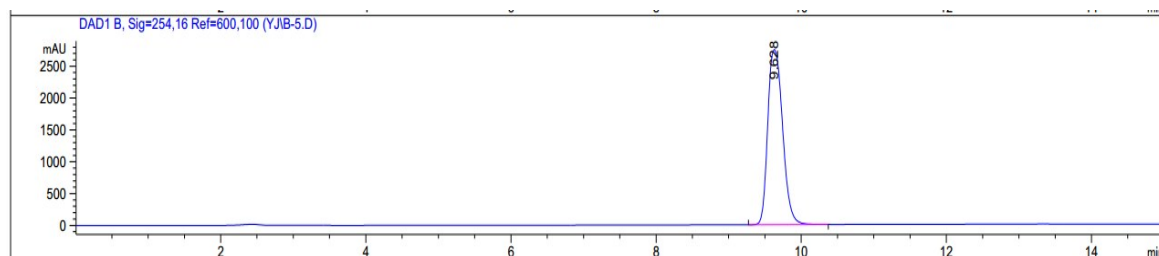
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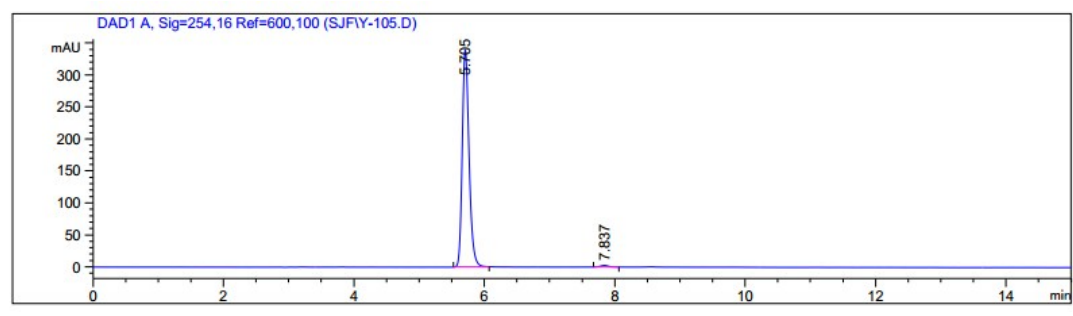
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1	6.771	BB	0.1189	5350.96777	686.86017	99.3465
2	9.377	BB	0.1530	35.19823	3.57056	0.6535

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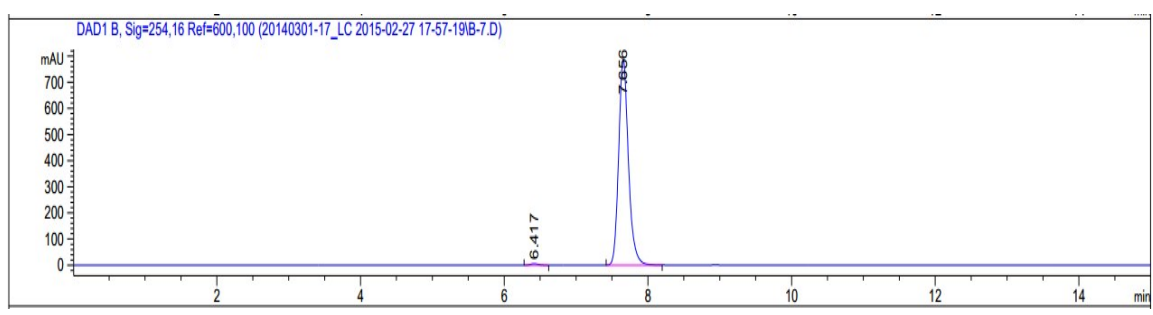
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23a



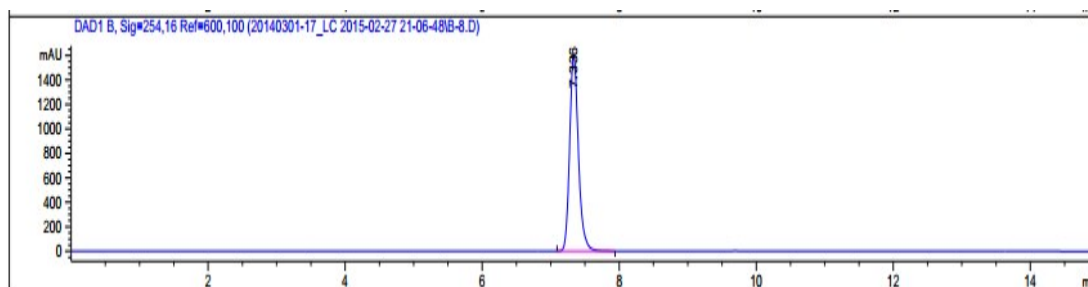
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1	5.705	BB	0.1124	2460.49023	339.96622	99.0593
2	7.837	BB	0.1356	23.36452	2.63031	0.9407

23b



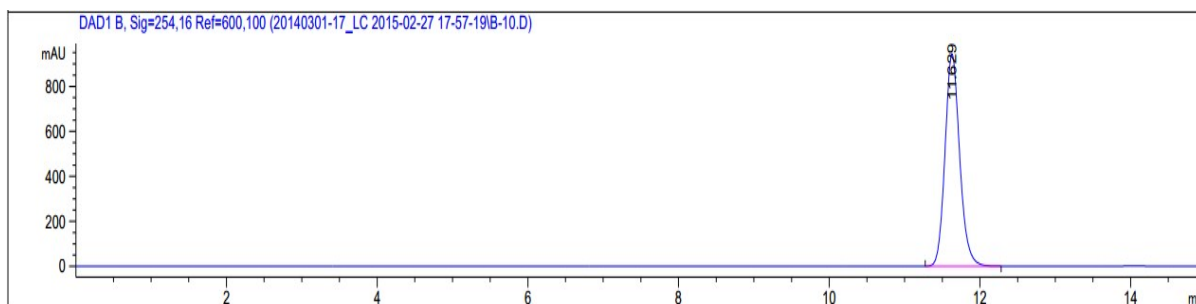
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1	6.417	BB	0.1160	41.11514	5.45114	0.5490
2	7.656	BB	0.1443	7448.54053	787.91748	99.4510

23c



Peak #	Retention time [min]	Type	Peak width [min]	Peak area [mAU*s]	Peak height [mAU]	Peak area %
1	7.336	BB	0.1360	1.42723e4	1601.76782	100.0000

23d



Peak #	Retention time [min]	Type	Peak width [min]	Peak area [mAU*s]	Peak height [mAU]	Peak area %
1	11.629	BB	0.2078	1.27728e4	944.15472	100.0000