

**Identification of AdipoRon analogues as novel activators of AMPK
for the treatment of type 2 diabetes**

Chao Lin^c, Geng Sun^{b,*} and Yi Li^{a,*}

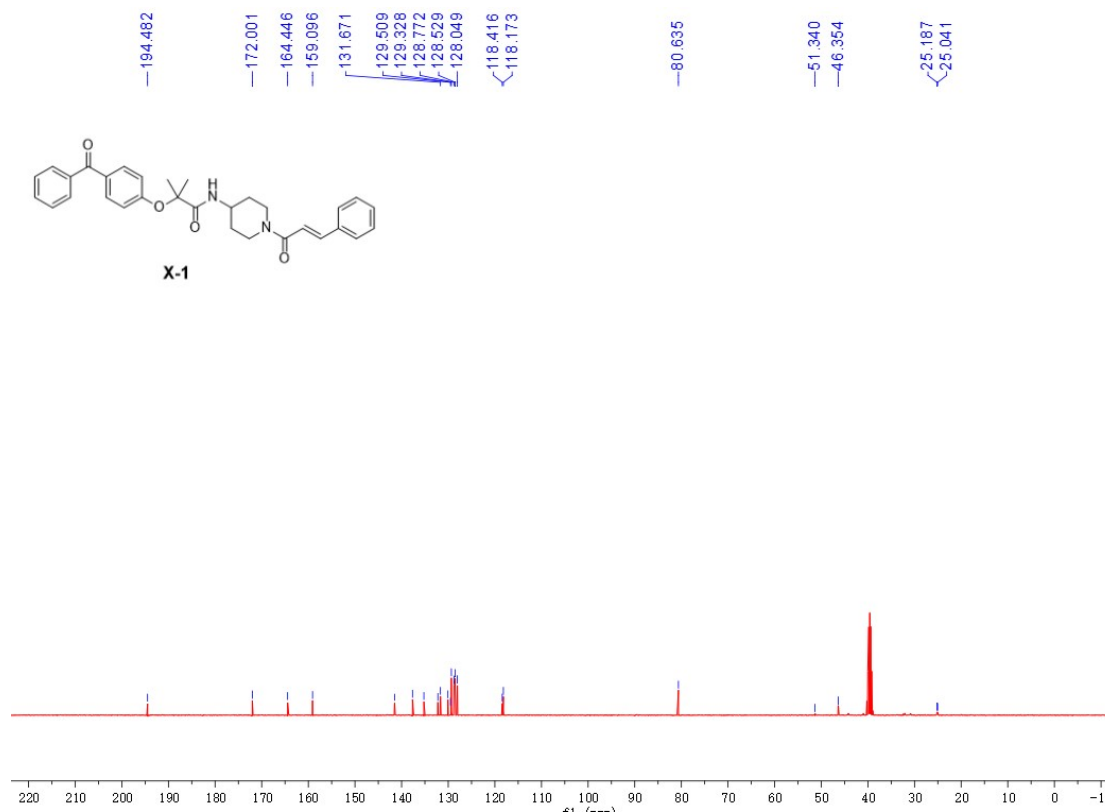
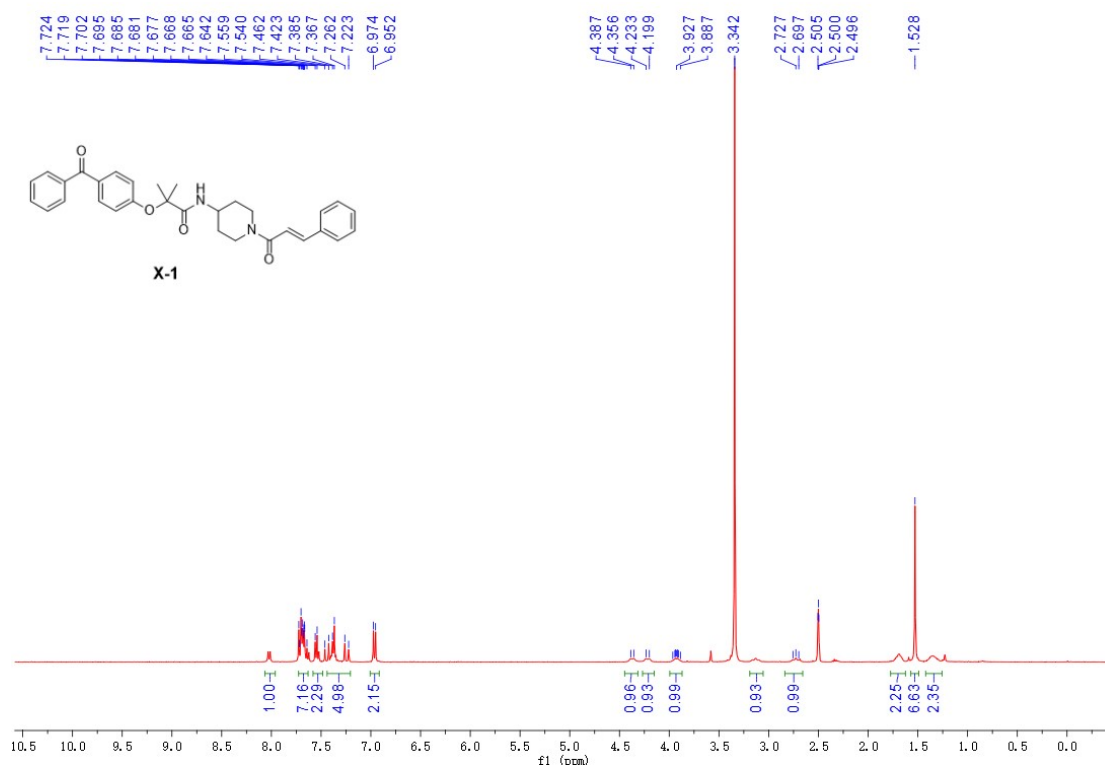
^aYantai Vocational College, Yantai 264000, Shandong, China

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Shanghai, 200433, China*

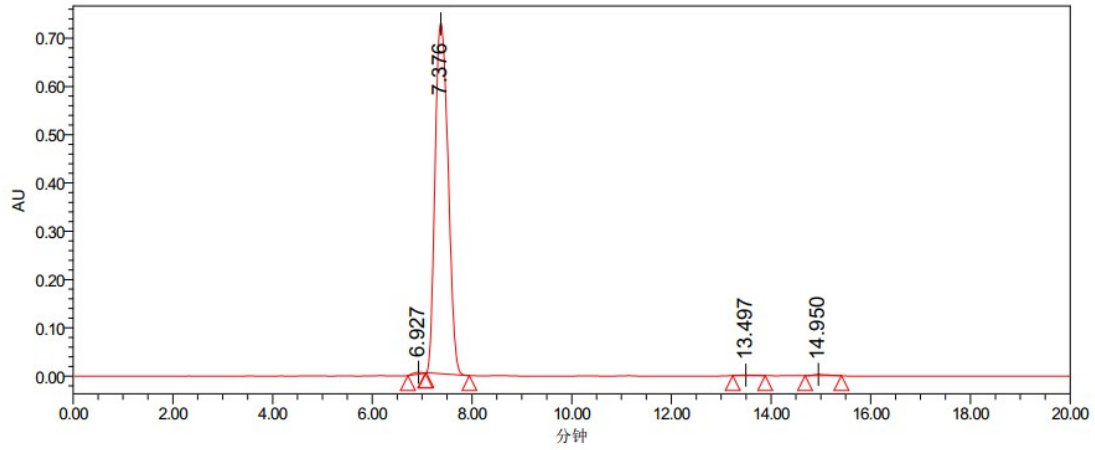
^cYantai Institute of Materia Medica, Shandong 264000, China

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^1H NMR and ^{13}C NMR of final compounds X-1



HPLC purity traces for final compounds X-1

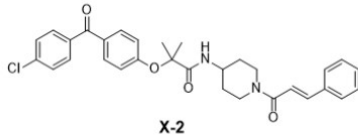
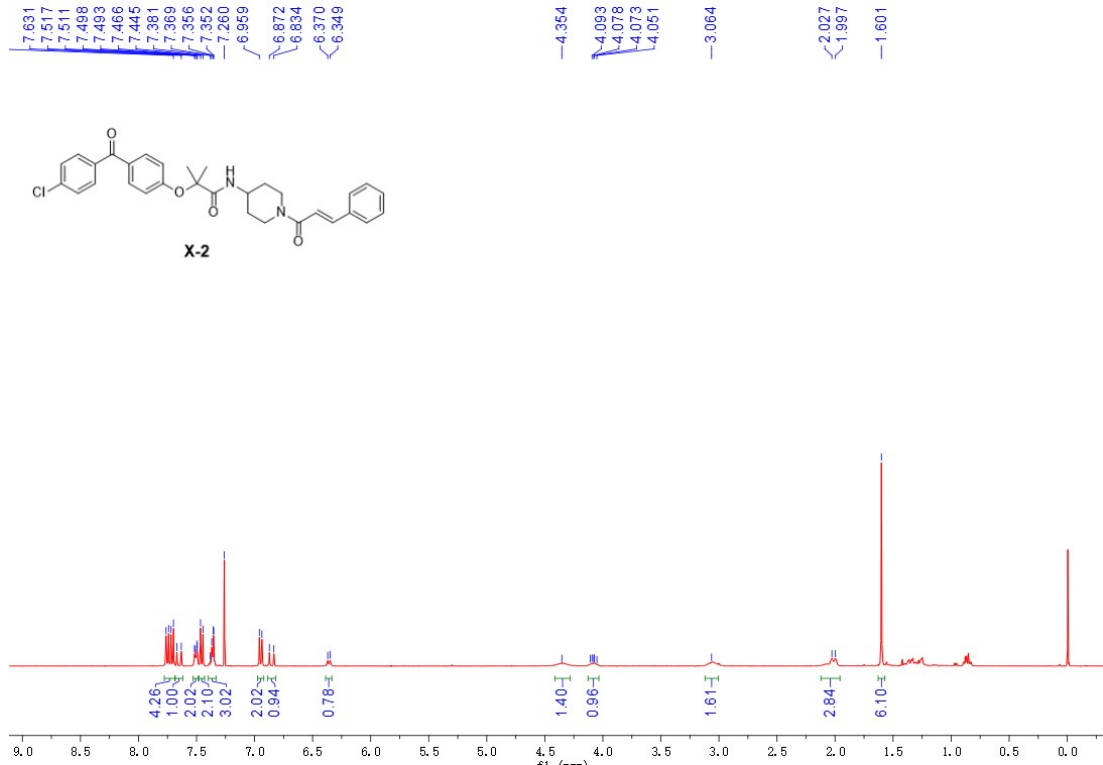


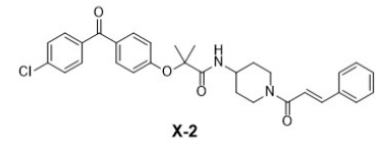
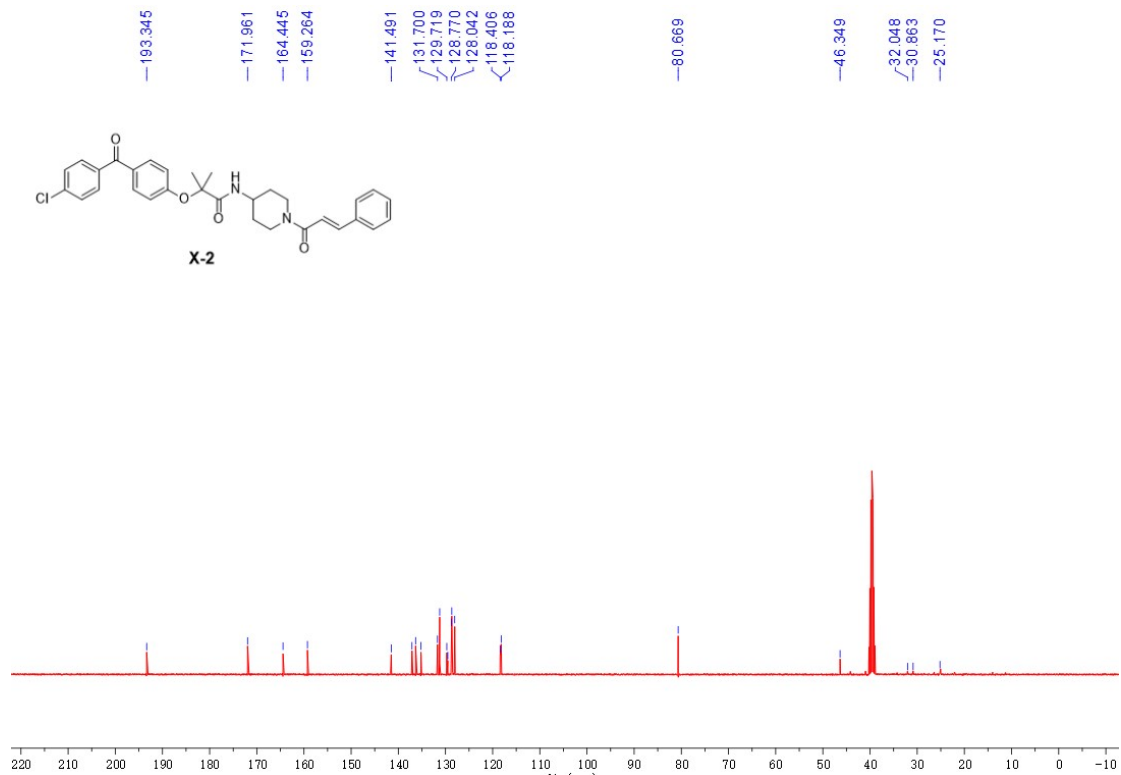
— 样品名称 XQ-1; 样品瓶 61; 进样 1; 通道 W2489 ChA; 采集日期 2022/7/5 12:16:09 CST

处理通道: W2489 ChA 254nm

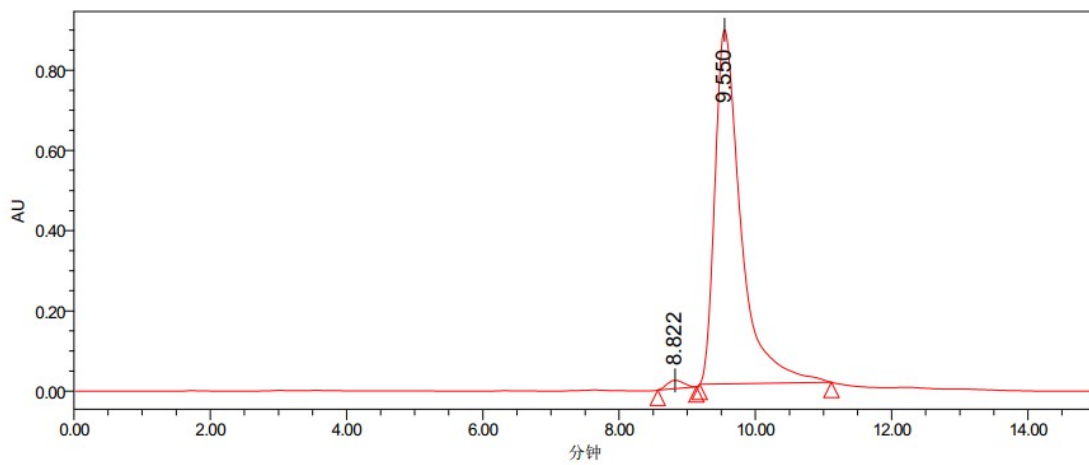
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1	W2489 ChA 254nm	6.927	48624	0.37	3949
2	W2489 ChA 254nm	7.376	13126232	99.02	726012
3	W2489 ChA 254nm	13.497	25728	0.19	1043
4	W2489 ChA 254nm	14.950	55503	0.42	2734

^1H NMR and ^{13}C NMR of final compounds X-2





HPLC purity traces for final compounds X-2

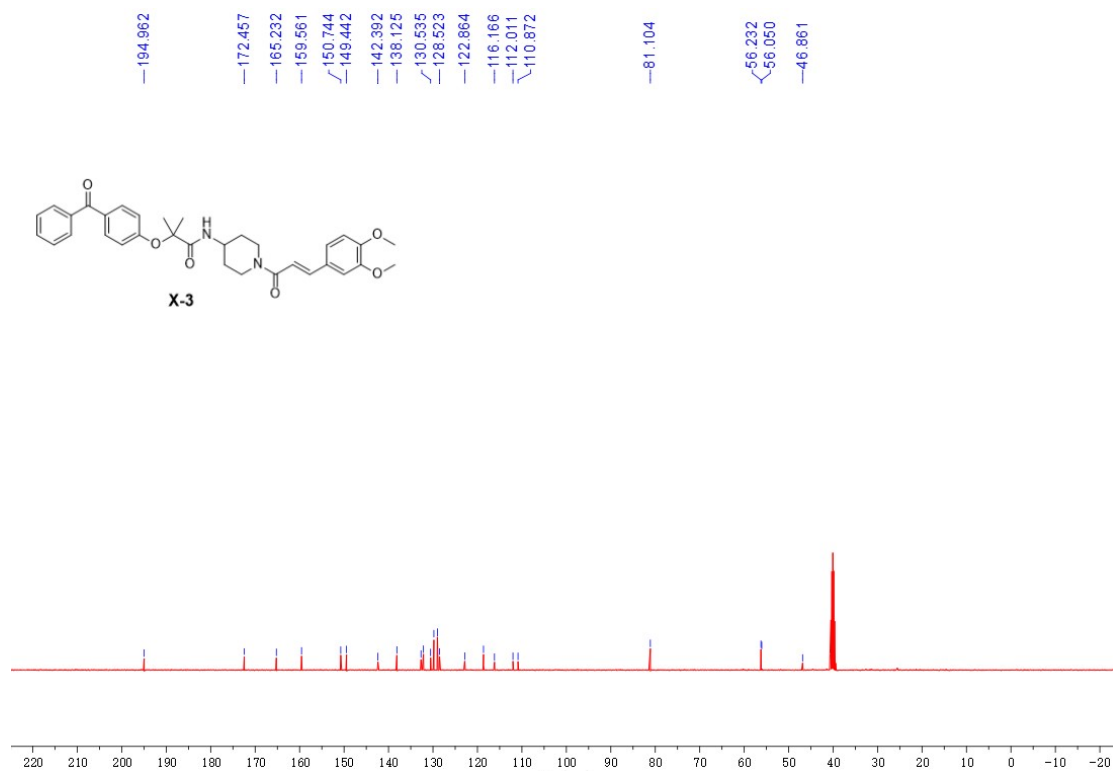
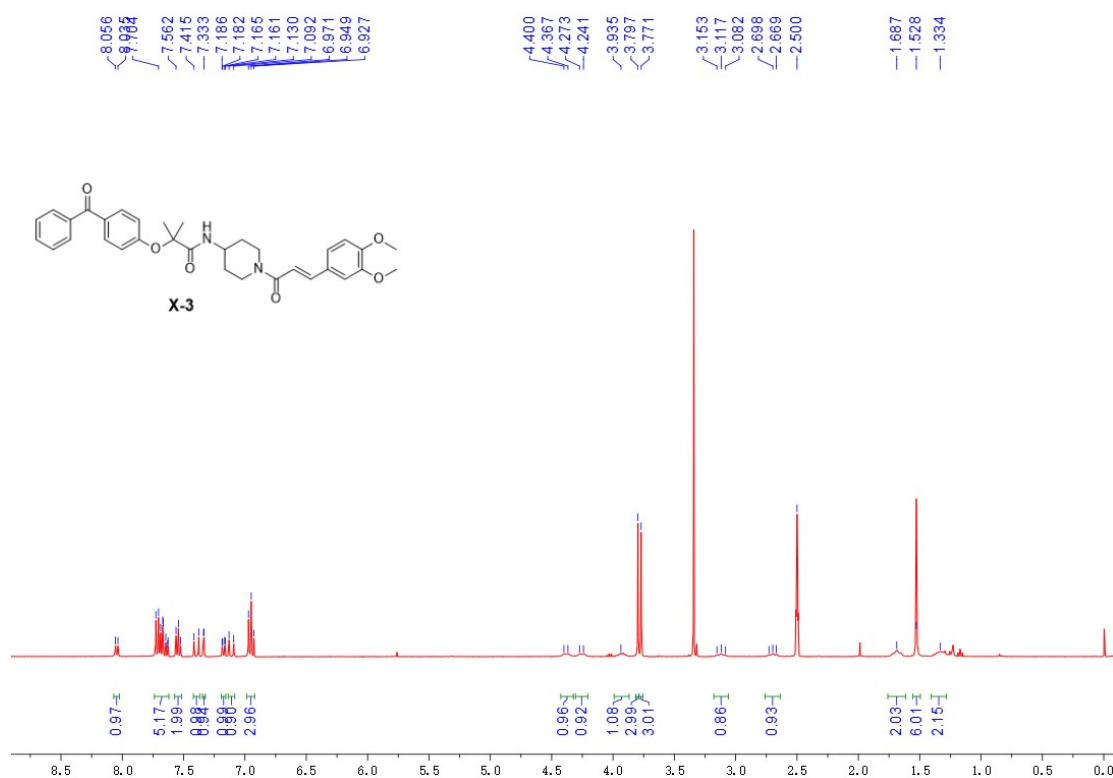


— 样品名称 27866-1; 样品瓶 51; 进样 1; 通道 W2489 ChA; 采集日期 2019/12/26 9:10:30 CST

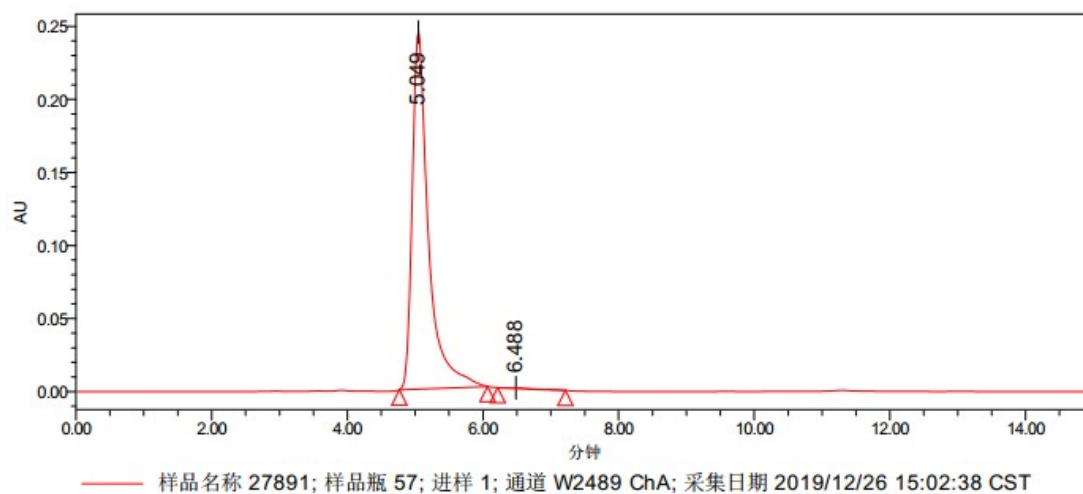
处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	8.822	349797	1.47	20777
2	W2489 ChA 254nm	9.550	23526884	98.53	882968

¹H NMR and ¹³C NMR of final compounds X-3



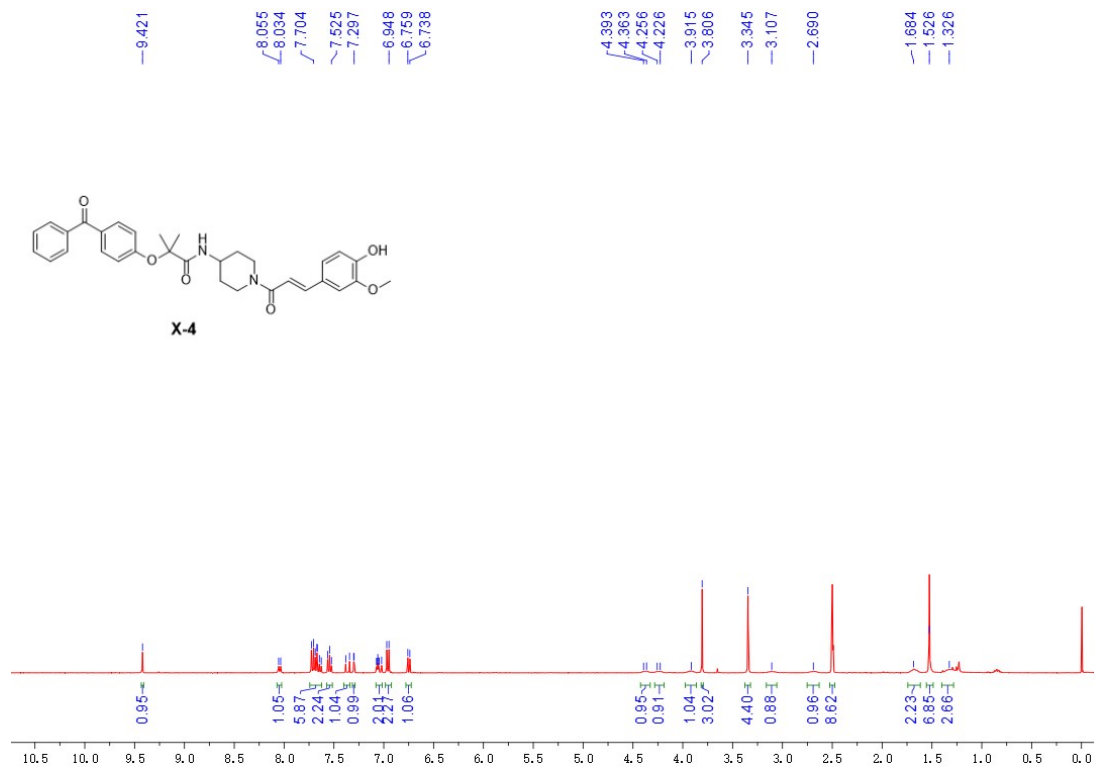
HPLC purity traces for final compounds X-3

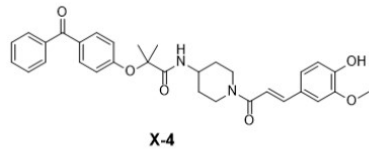
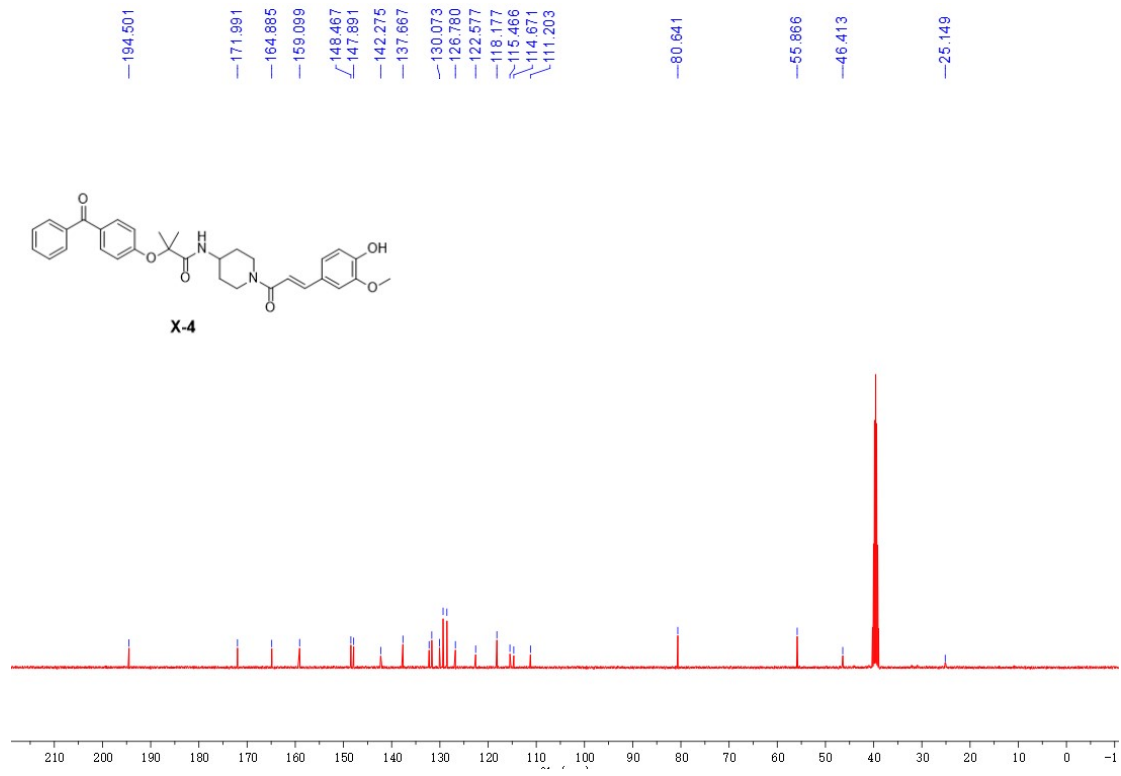


处理通道: W2489 ChA 254nm

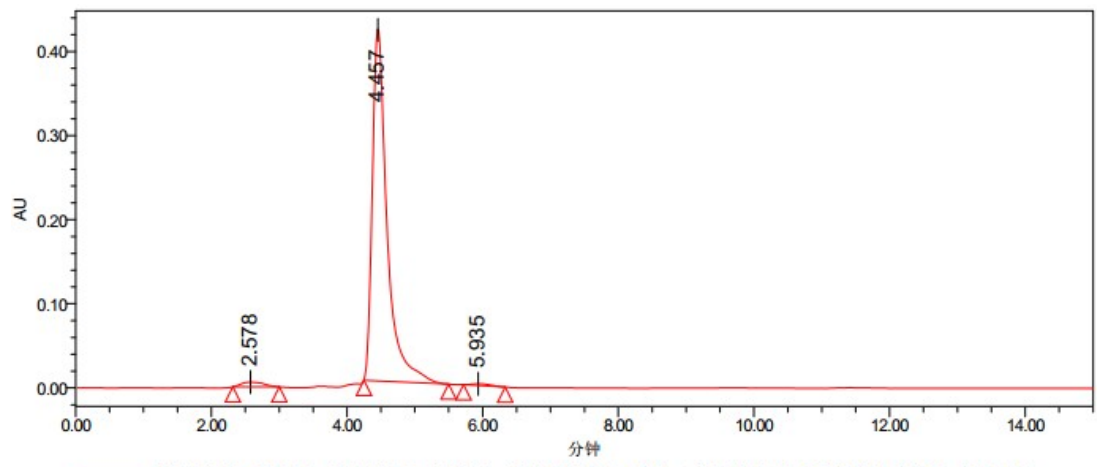
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1 W2489 ChA 254nm	5.049	4062843	99.81	244308
2 W2489 ChA 254nm	6.488	7719	0.19	306

¹H NMR and ¹³C NMR of final compounds X-4





HPLC purity traces for final compounds **X-4**

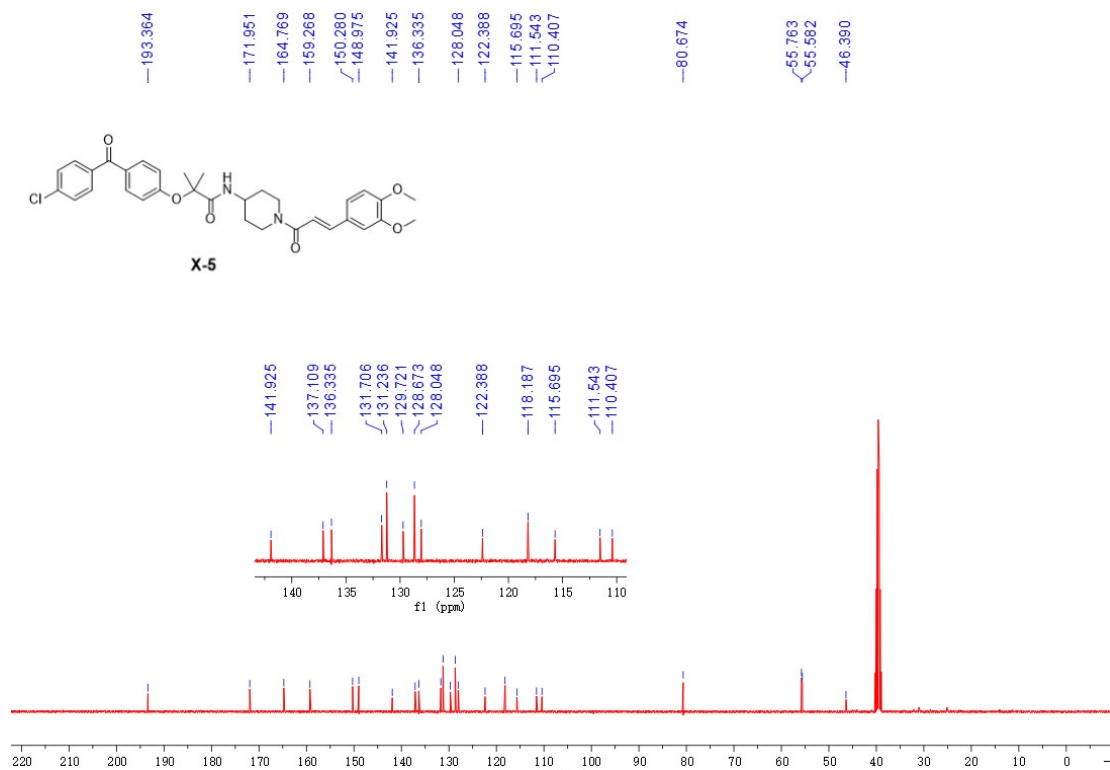
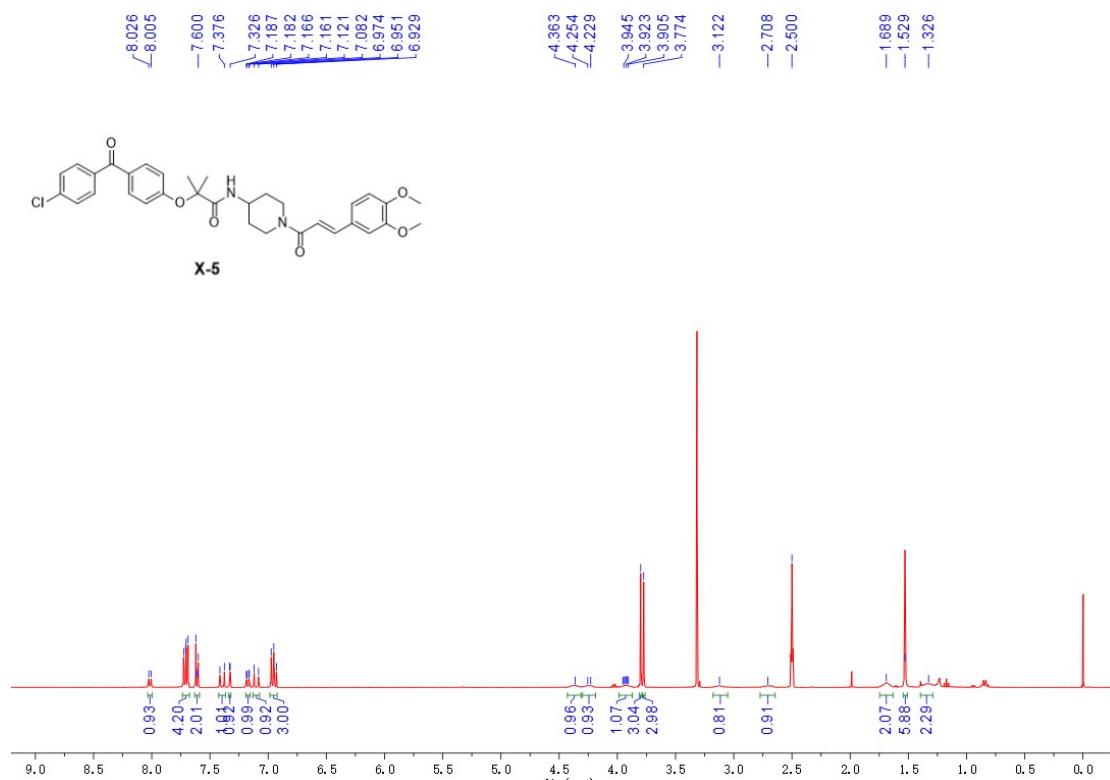


— 样品名称 27888; 样品瓶 55; 进样 1; 通道 W2489 ChA; 采集日期 2019/12/26 14:31:18 CST

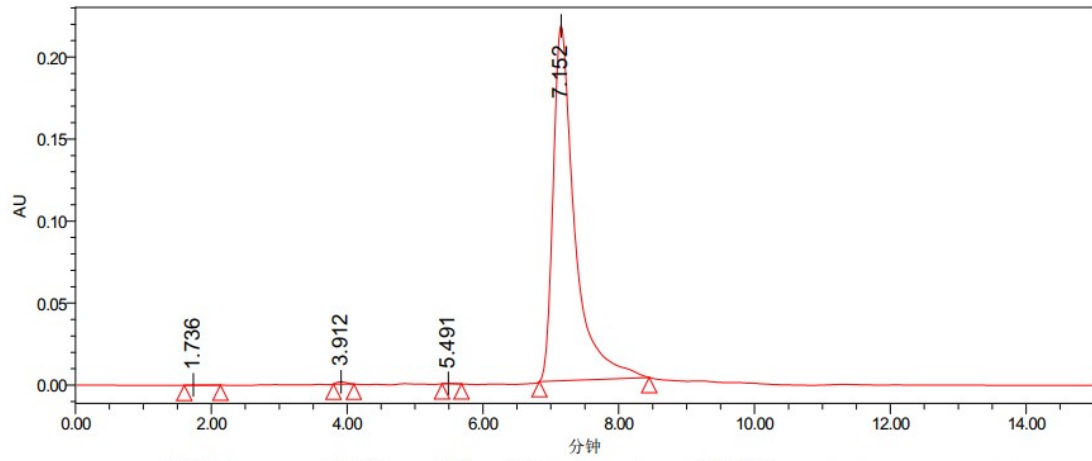
处理通道: **W2489 ChA 254nm**

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1	W2489 ChA 254nm	2.578	131250	2.03	5734
2	W2489 ChA 254nm	4.457	6303646	97.34	419845
3	W2489 ChA 254nm	5.935	41001	0.63	2088

¹H NMR and ¹³C NMR of final compounds X-5



HPLC purity traces for final compounds X-5

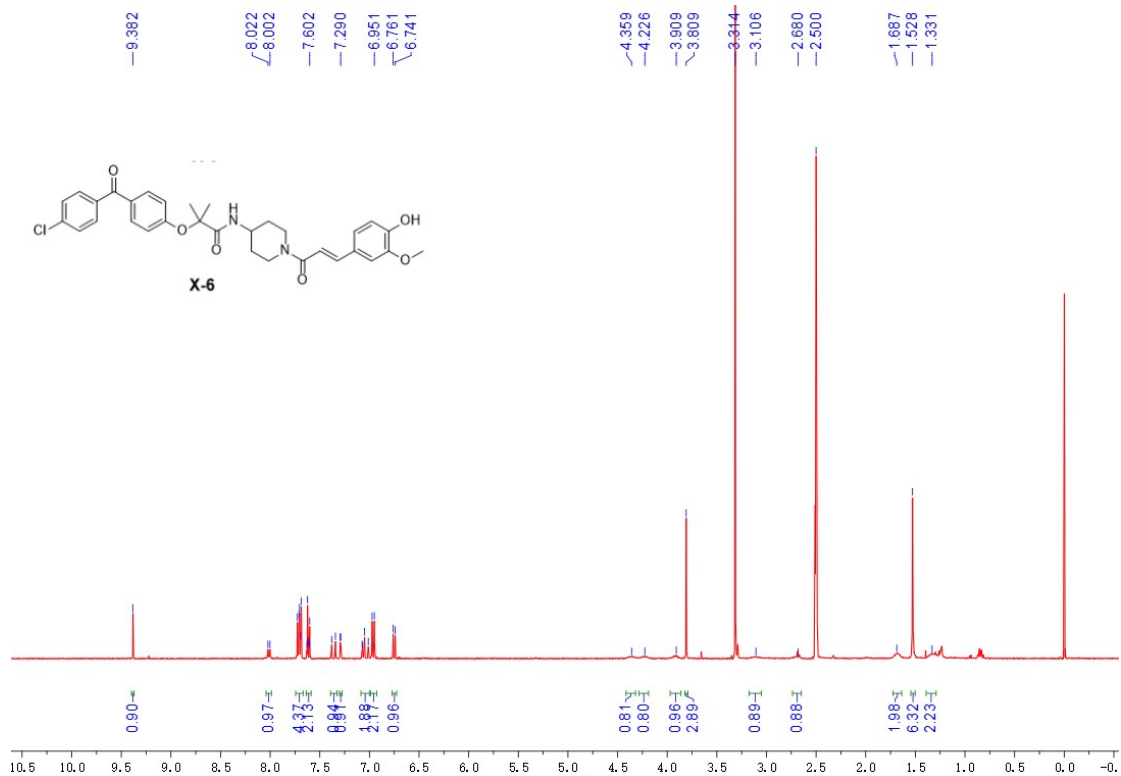


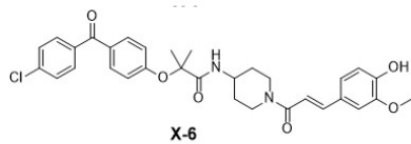
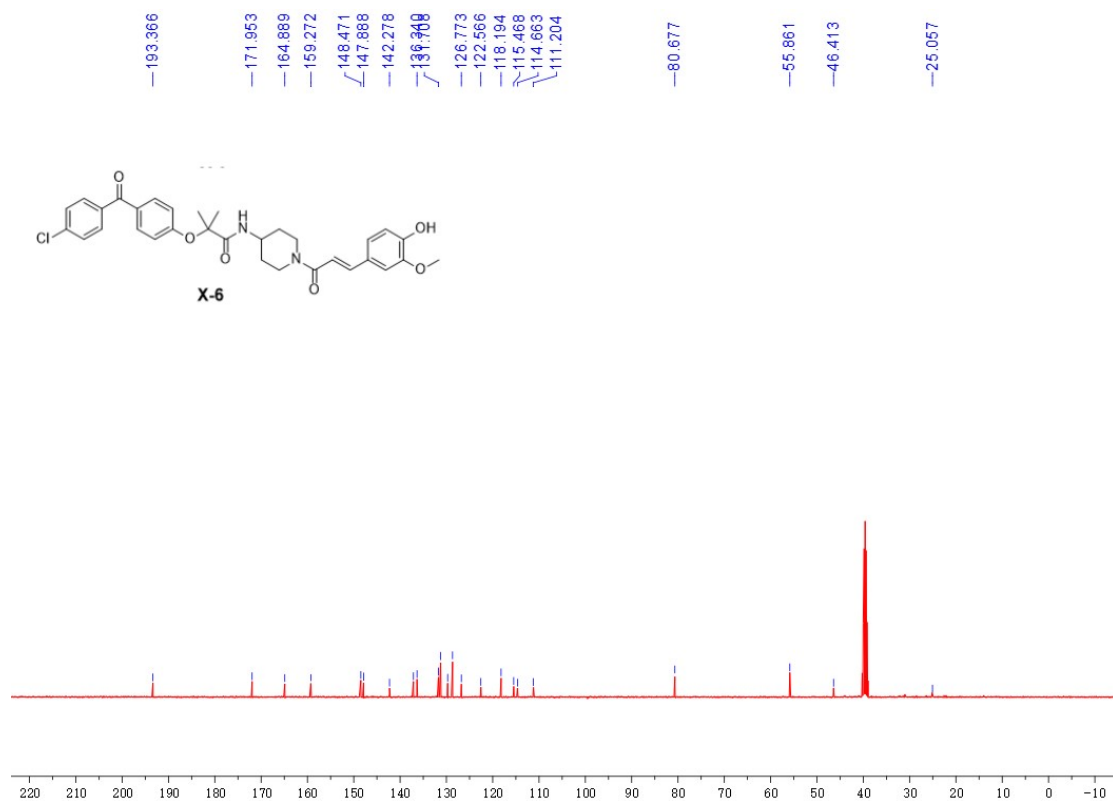
— 样品名称 27890; 样品瓶 56; 进样 1; 通道 W2489 ChA; 采集日期 2019/12/26 14:46:59 CST

处理通道: W2489 ChA 254nm

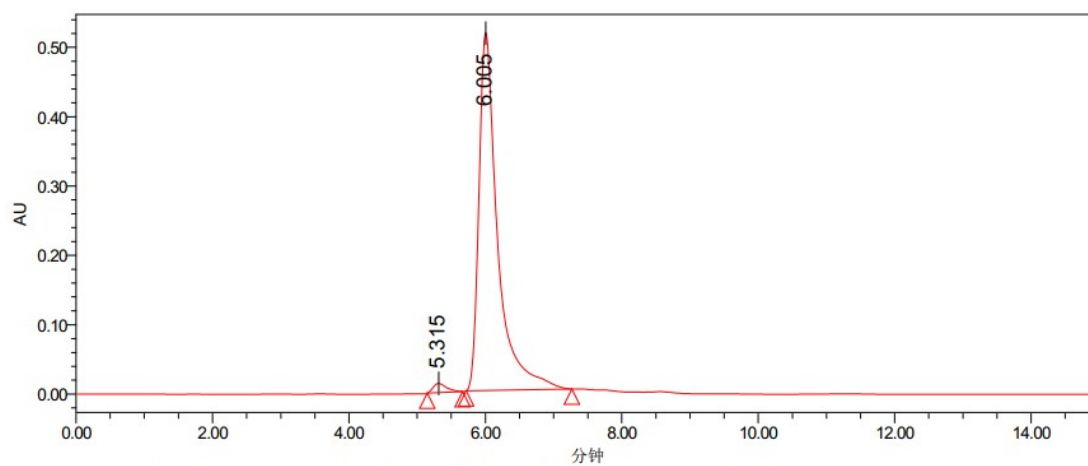
处理通道	保留时间 (分钟)	面积	% 面积	峰高
1 W2489 ChA 254nm	1.736	1291	0.03	95
2 W2489 ChA 254nm	3.912	13223	0.28	1407
3 W2489 ChA 254nm	5.491	2880	0.06	287
4 W2489 ChA 254nm	7.152	4750831	99.64	216557

¹H NMR and ¹³C NMR of final compounds X-6





HPLC purity traces for final compounds X-6

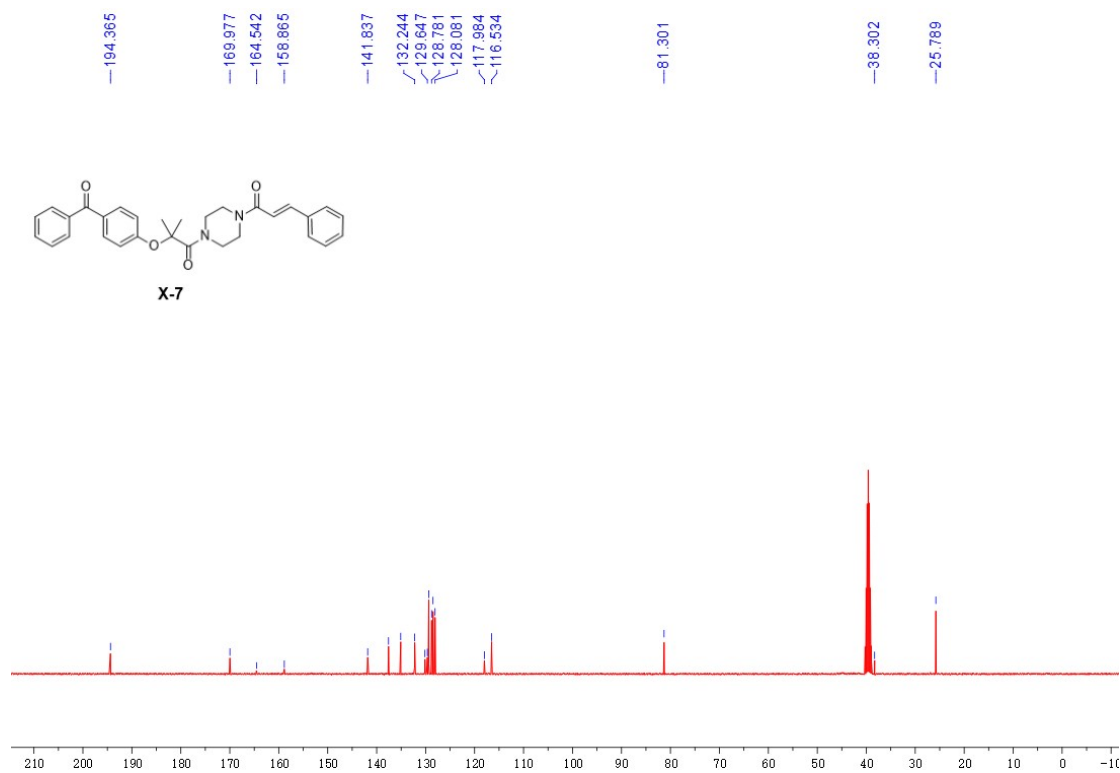
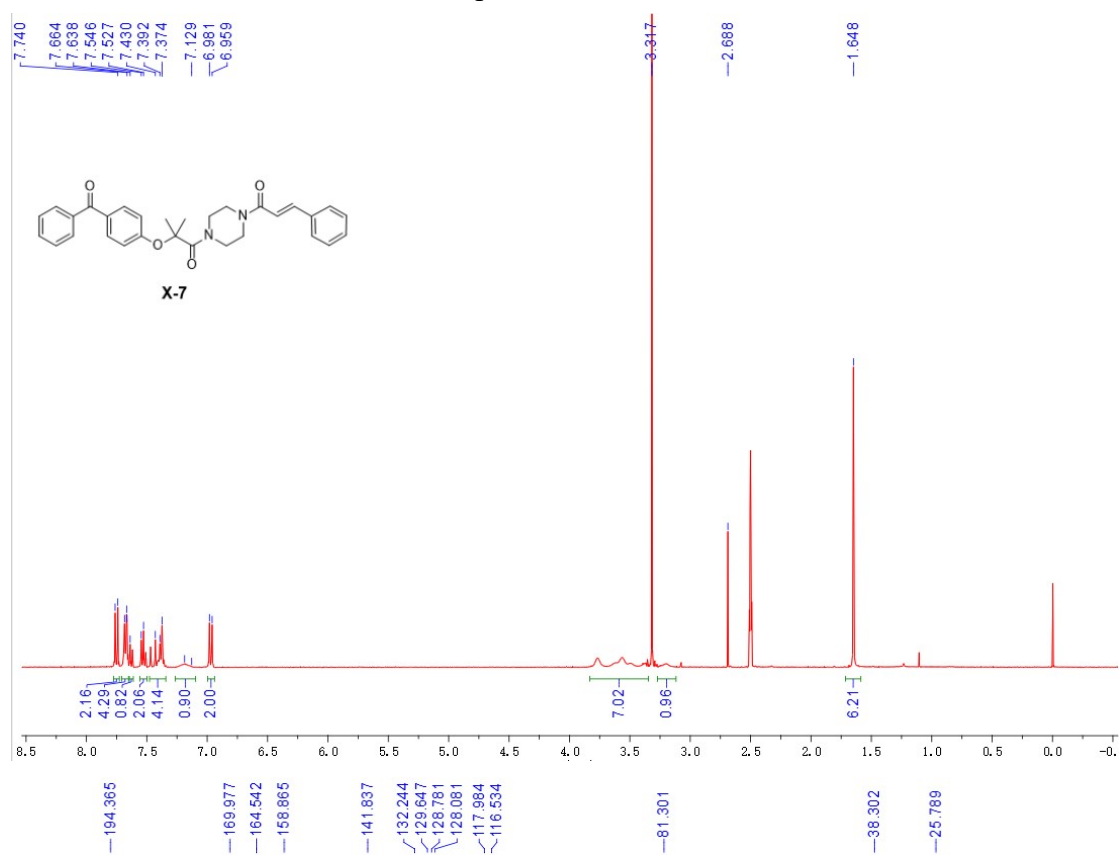


— 样品名称 27880-1; 样品瓶 52; 进样 1; 通道 W2489 ChA; 采集日期 2019/12/26 9:27:43 CST

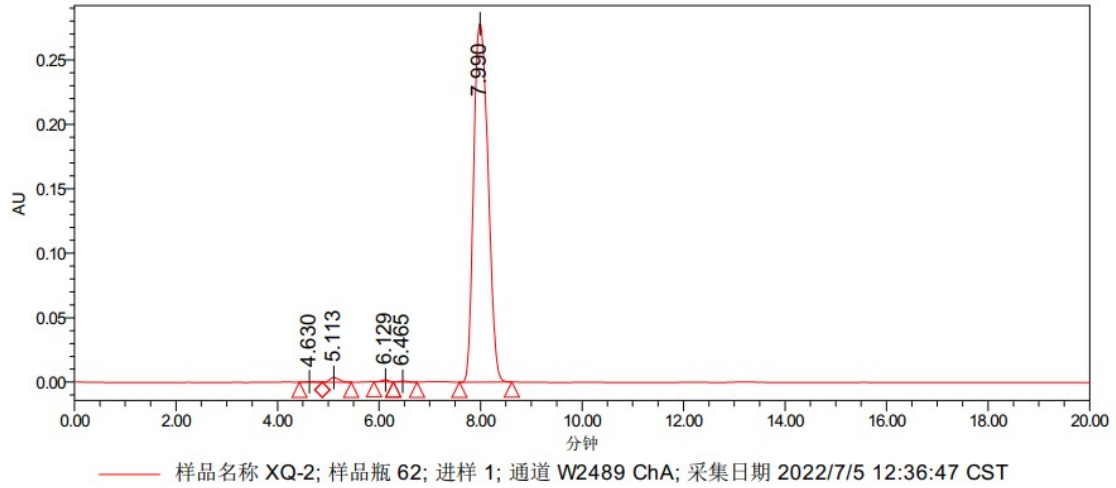
处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	5.315	179210	1.79	13205
2	W2489 ChA 254nm	6.005	9841444	98.21	516739

^1H NMR and ^{13}C NMR of final compounds X-7



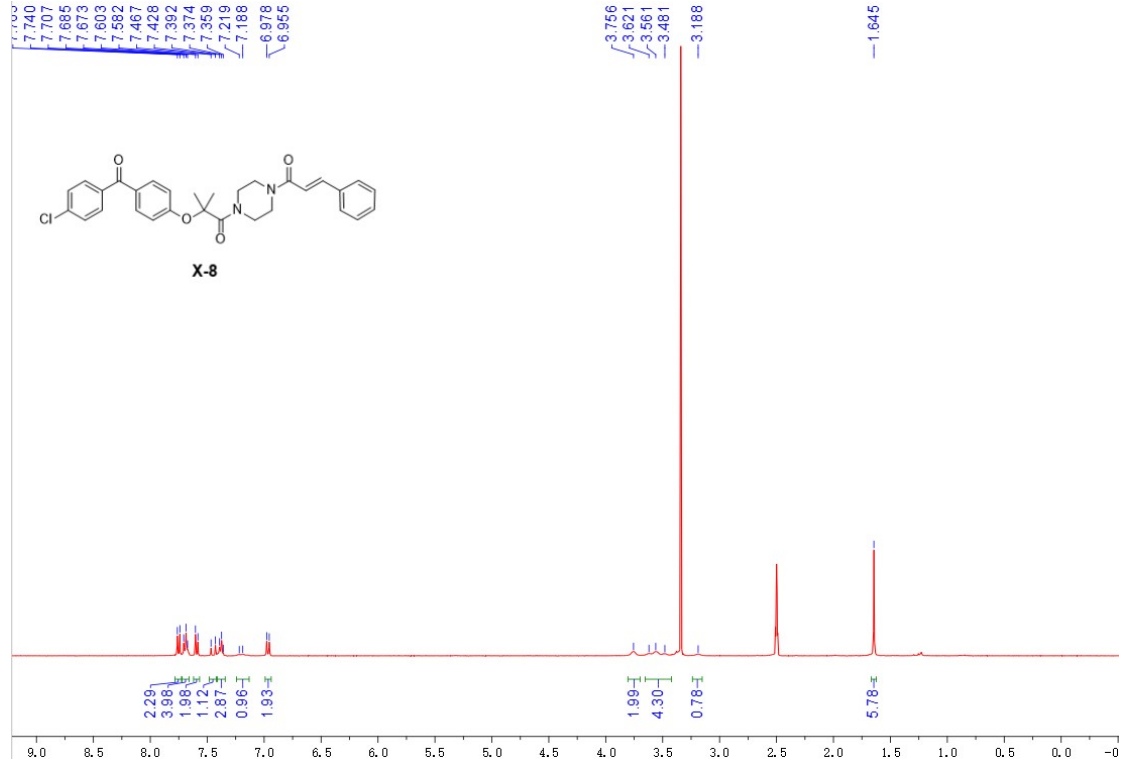
HPLC purity traces for final compounds X-7

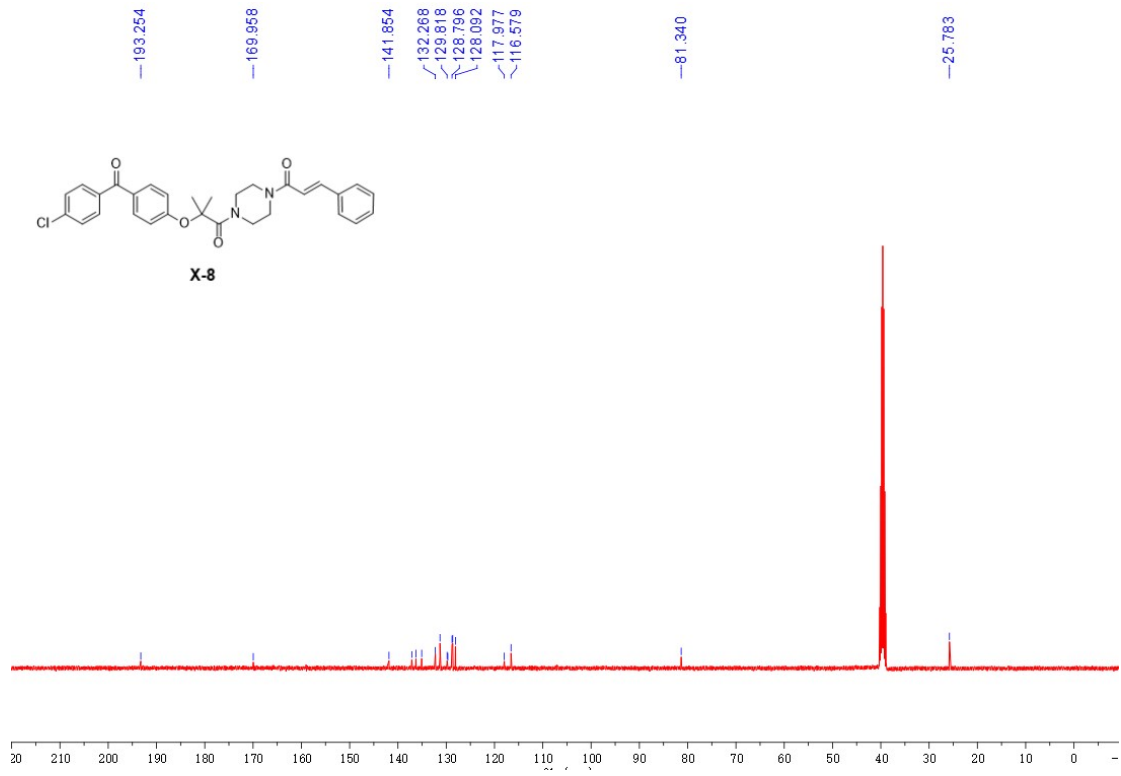


处理通道: W2489 ChA 254nm

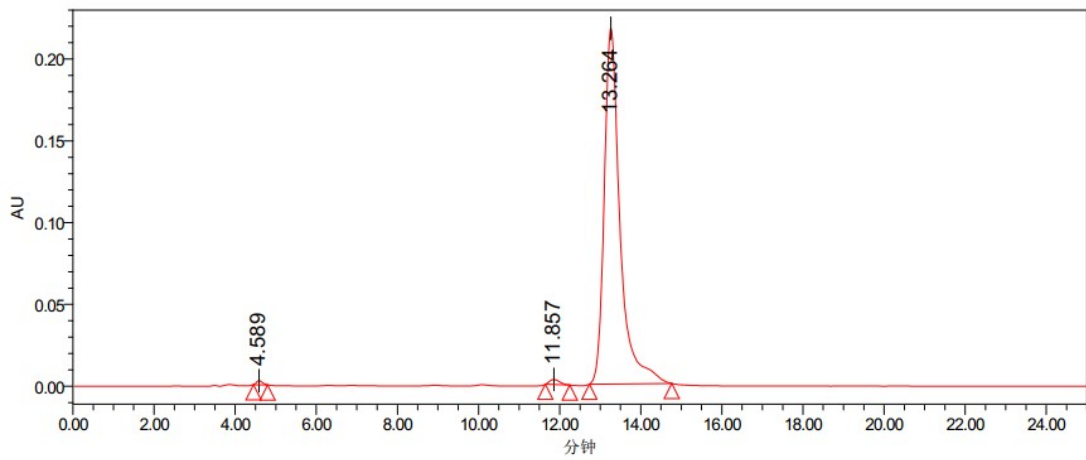
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1 W2489 ChA 254nm	4.630	6575	0.12	487
2 W2489 ChA 254nm	5.113	48436	0.87	3720
3 W2489 ChA 254nm	6.129	14123	0.25	1515
4 W2489 ChA 254nm	6.465	9865	0.18	700
5 W2489 ChA 254nm	7.990	5492963	98.58	278366

¹H NMR and ¹³C NMR of final compounds X-8





HPLC purity traces for final compounds **X-8**

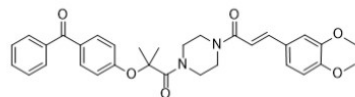
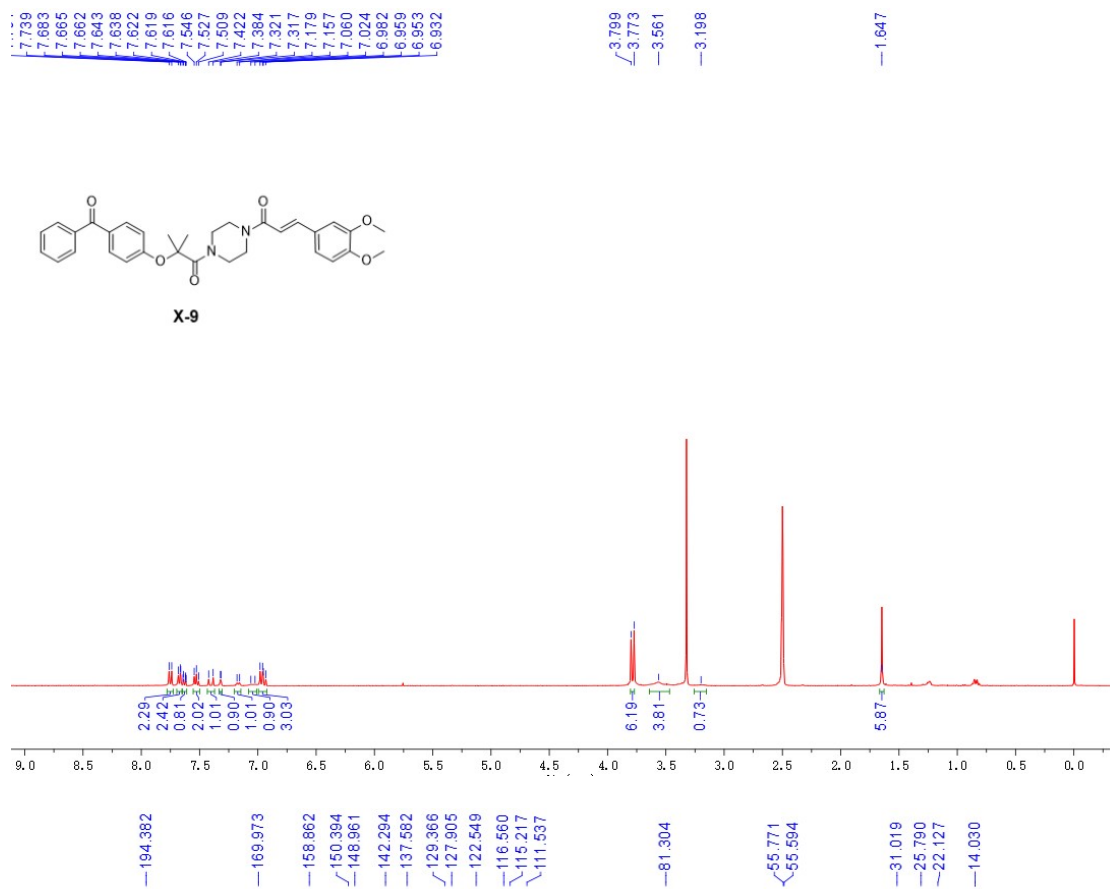


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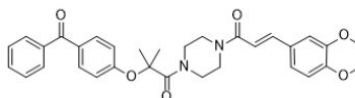
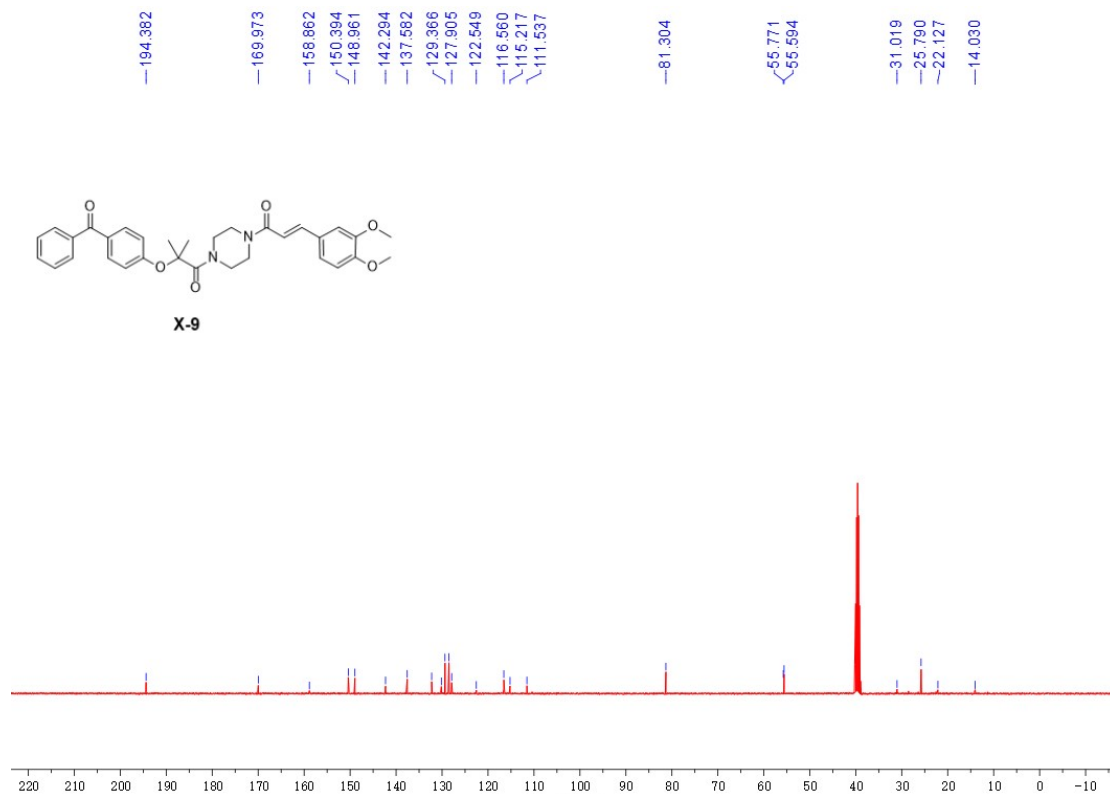
处理通道: **W2489 ChA 254nm**

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	4.589	25367	0.42	2518
2	W2489 ChA 254nm	11.857	54171	0.90	3096
3	W2489 ChA 254nm	13.264	5906339	98.67	217638

¹H NMR and ¹³C NMR of final compounds X-9

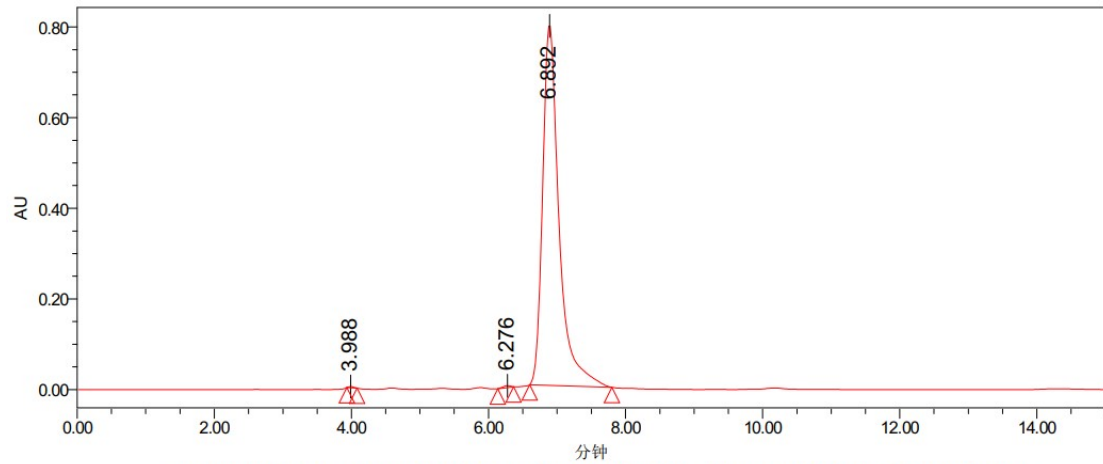


X-9



X-9

HPLC purity traces for final compounds X-9

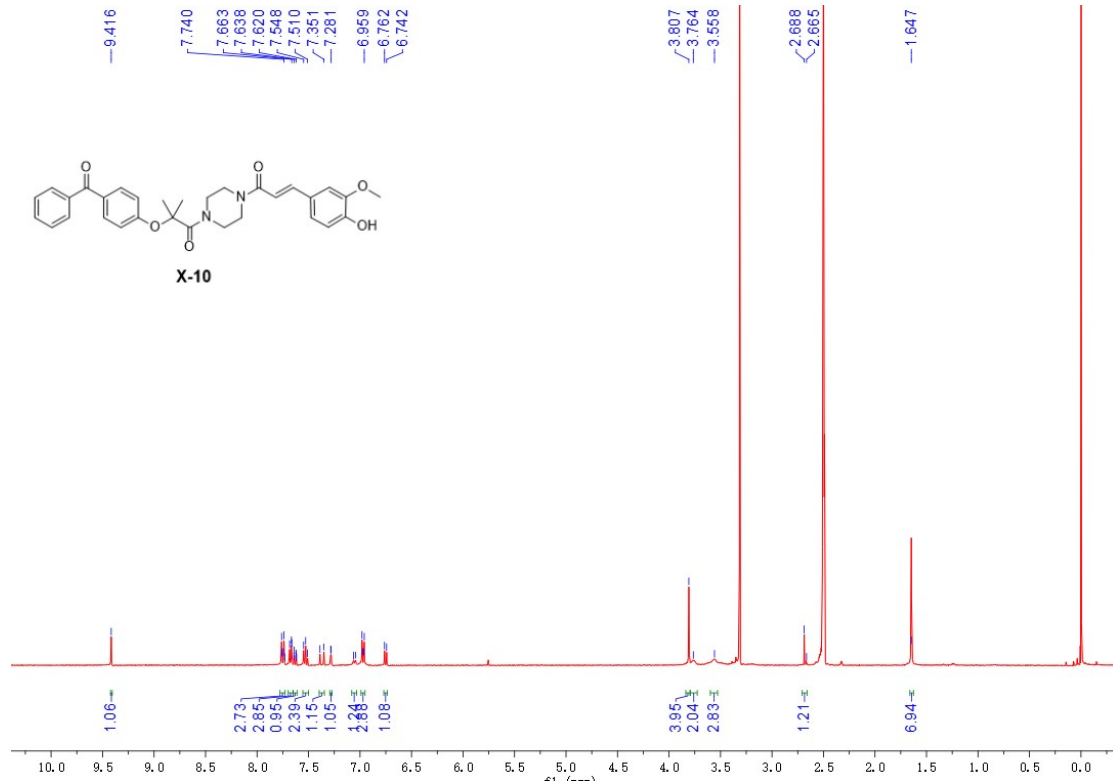


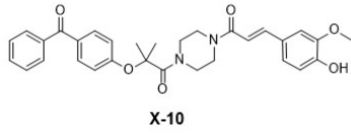
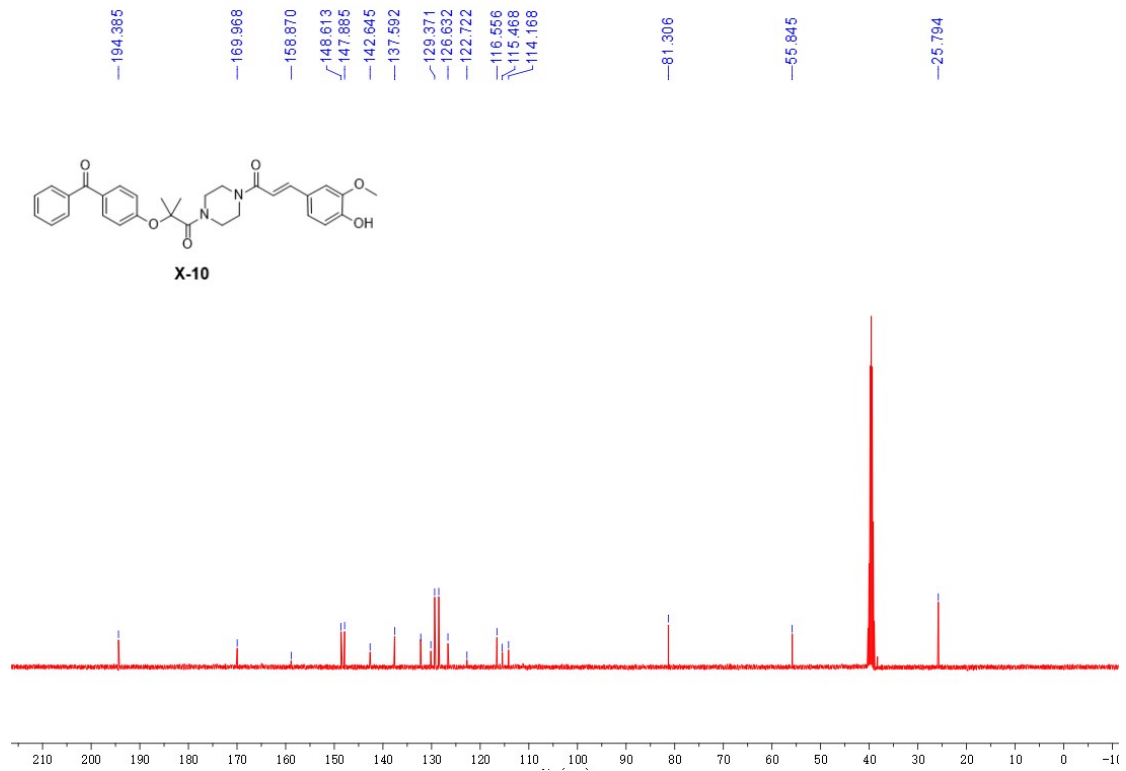
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处理通道: W2489 ChA 254nm

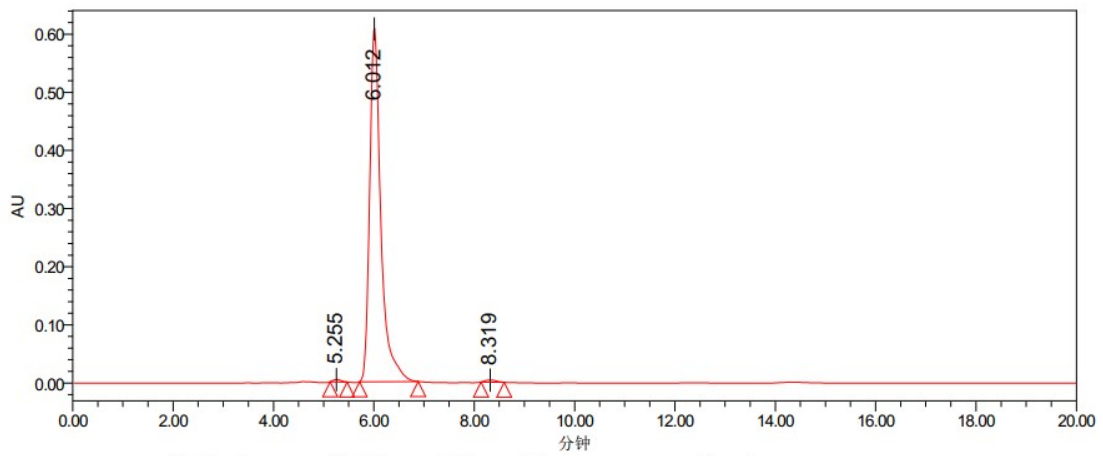
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1	W2489 ChA 254nm	3.988	15068	0.11	2795
2	W2489 ChA 254nm	6.276	31986	0.24	4182
3	W2489 ChA 254nm	6.892	13228229	99.65	796151

^1H NMR and ^{13}C NMR of final compounds X-10





HPLC purity traces for final compounds X-10

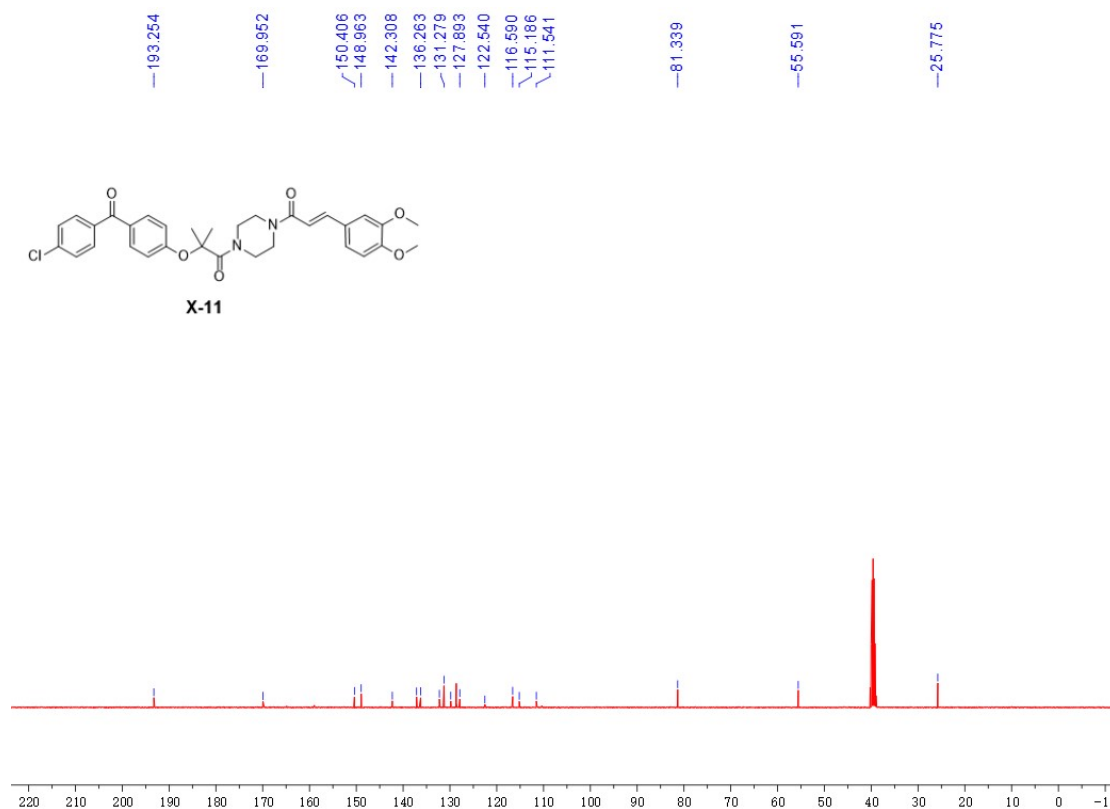
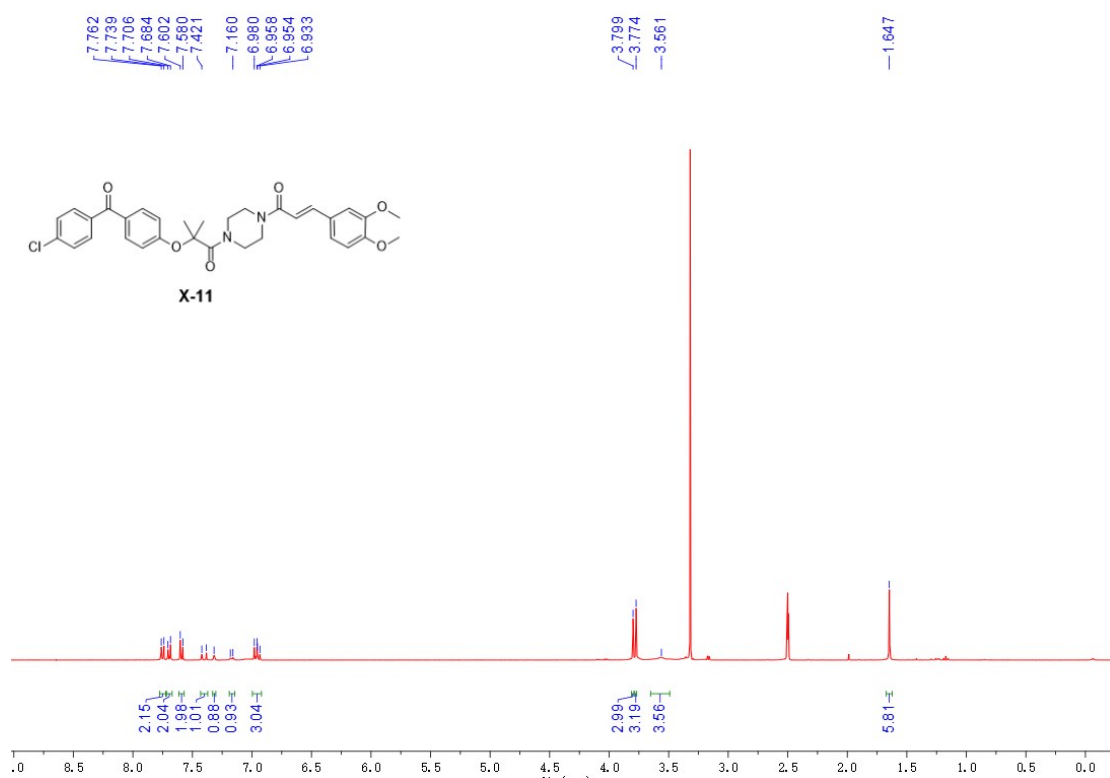


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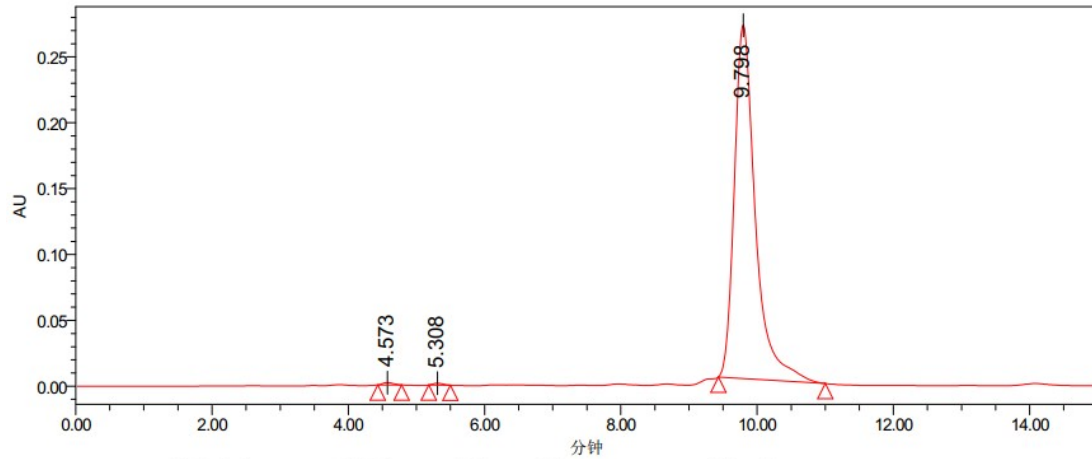
处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	5.255	42987	0.45	4120
2	W2489 ChA 254nm	6.012	9444726	98.94	608354
3	W2489 ChA 254nm	8.319	58323	0.61	3929

^1H NMR and ^{13}C NMR of final compounds X-11



HPLC purity traces for final compounds X-11

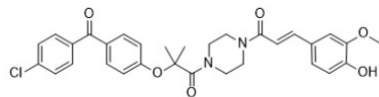


— 样品名称 27897; 样品瓶 11; 进样 1; 通道 W2489 ChA; 采集日期 2020/5/6 10:19:30 CST

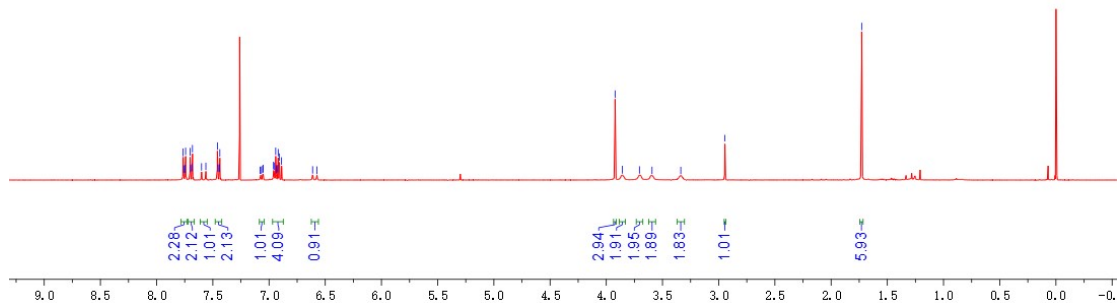
处理通道: **W2489 ChA 254nm**

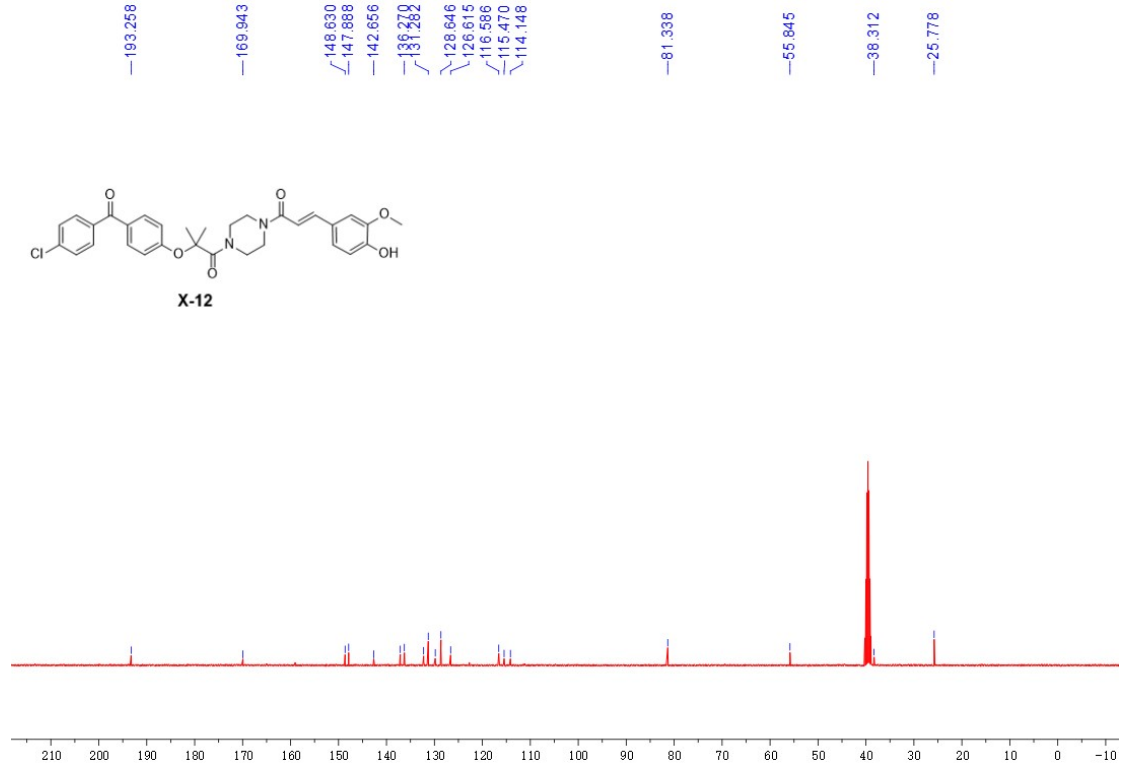
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1	W2489 ChA 254nm	4.573	19236	0.33	1808
2	W2489 ChA 254nm	5.308	14093	0.24	1417
3	W2489 ChA 254nm	9.798	5751437	99.42	268488

^1H NMR and ^{13}C NMR of final compounds X-12

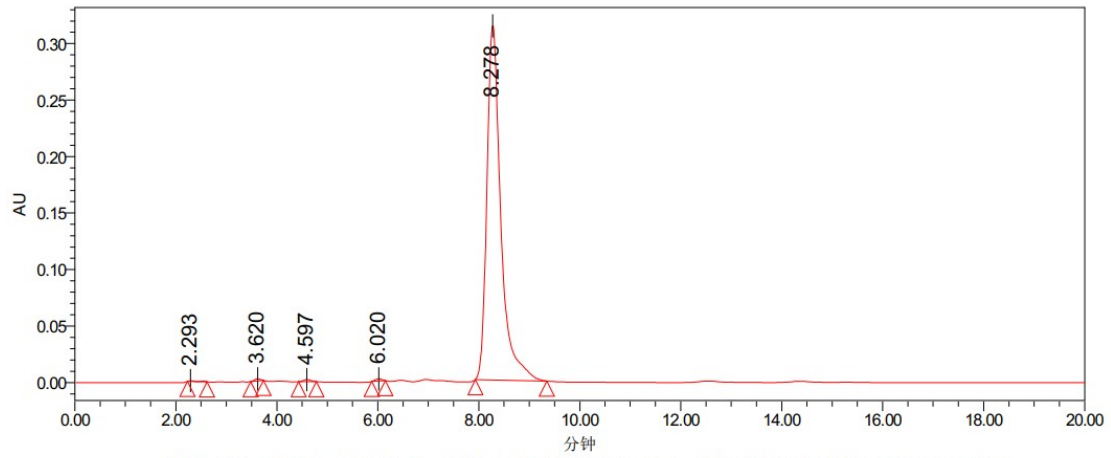


X-12





HPLC purity traces for final compounds X-12

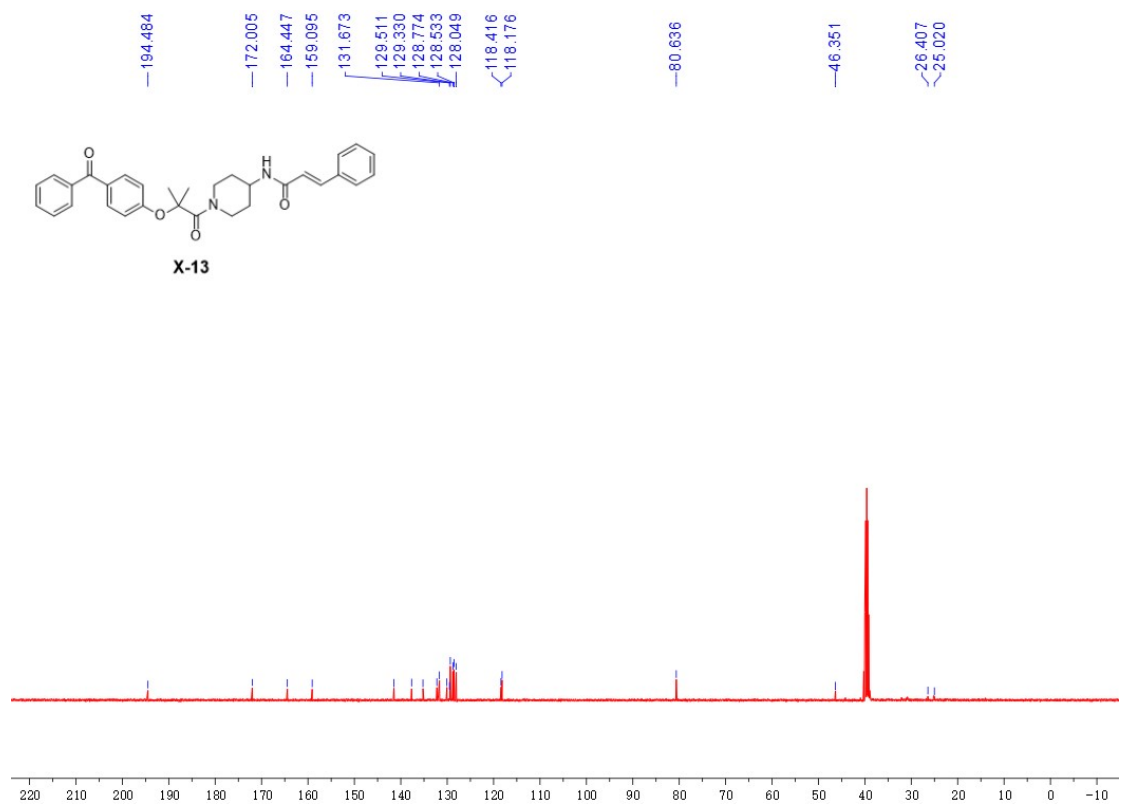
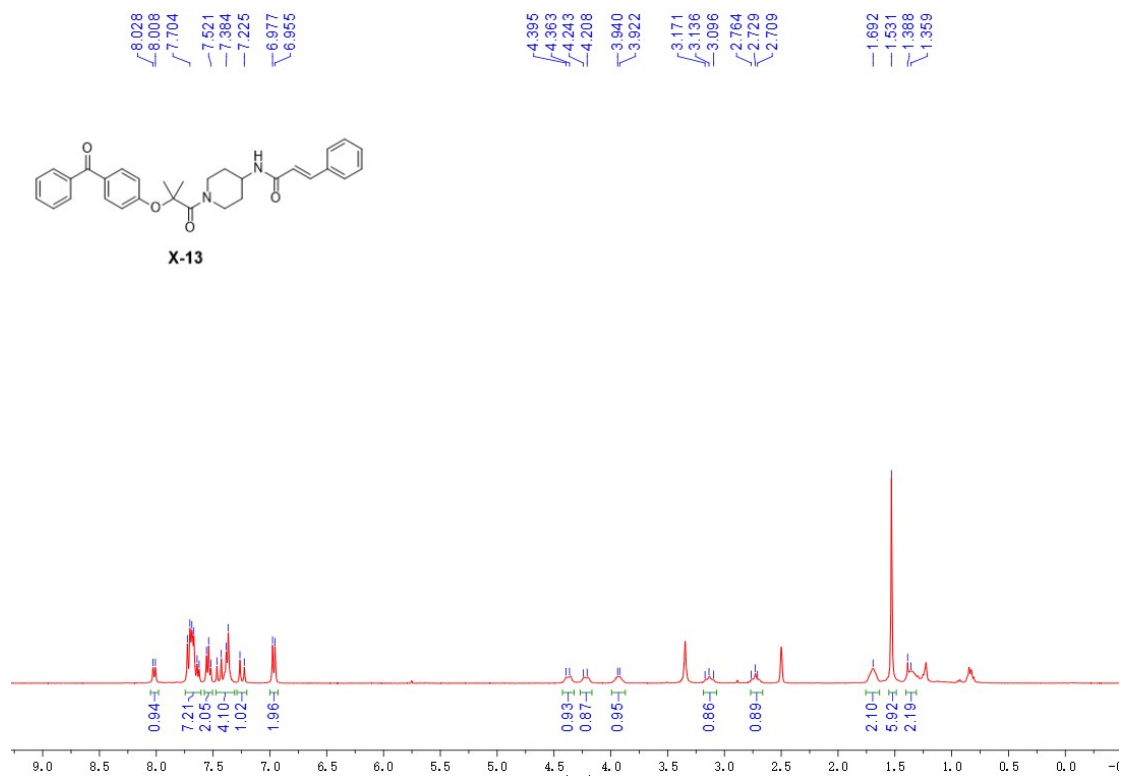


— 样品名称 28172; 样品瓶 13; 进样 1; 通道 W2489 ChA; 采集日期 2020/5/6 12:08:10 CST

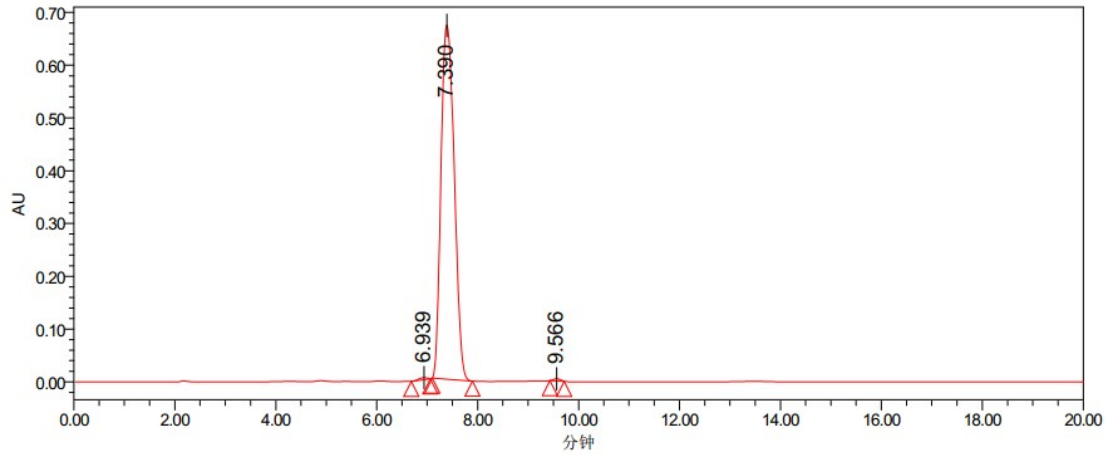
处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	2.293	6248	0.10	588
2	W2489 ChA 254nm	3.620	15768	0.26	1932
3	W2489 ChA 254nm	4.597	19023	0.31	1897
4	W2489 ChA 254nm	6.020	17933	0.30	1909
5	W2489 ChA 254nm	8.278	5988372	99.02	313927

^1H NMR and ^{13}C NMR of final compounds X-13



HPLC purity traces for final compounds X-13

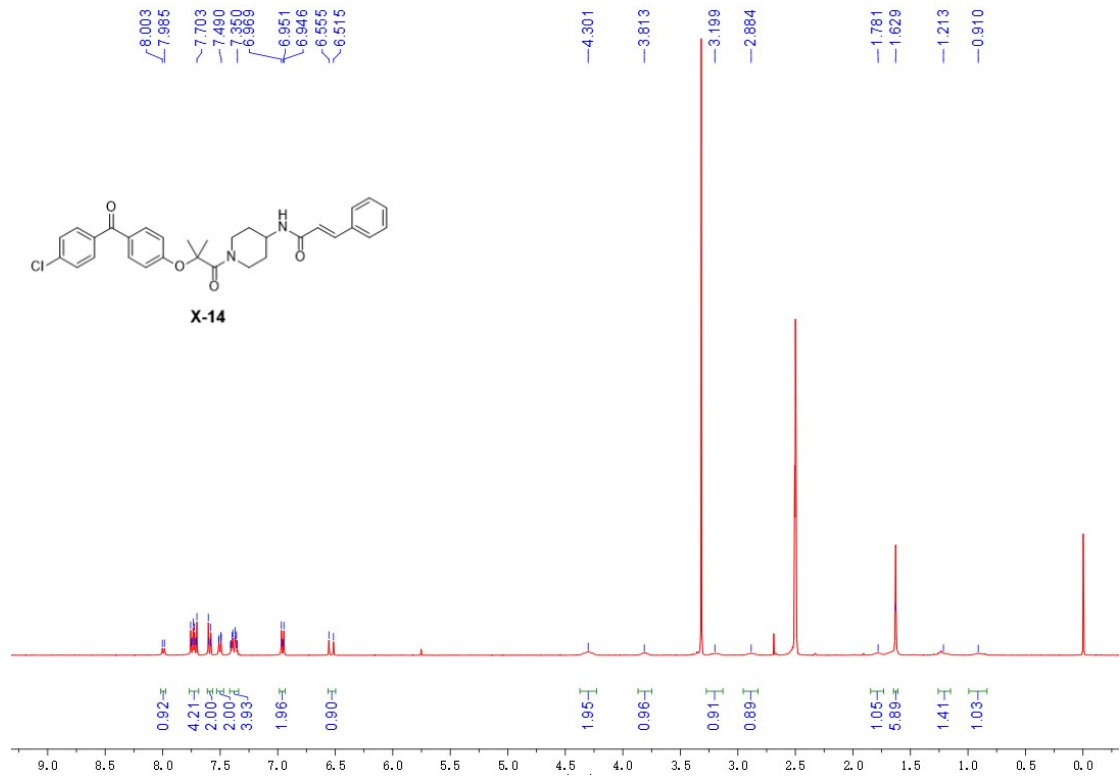


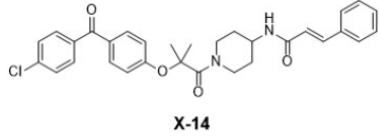
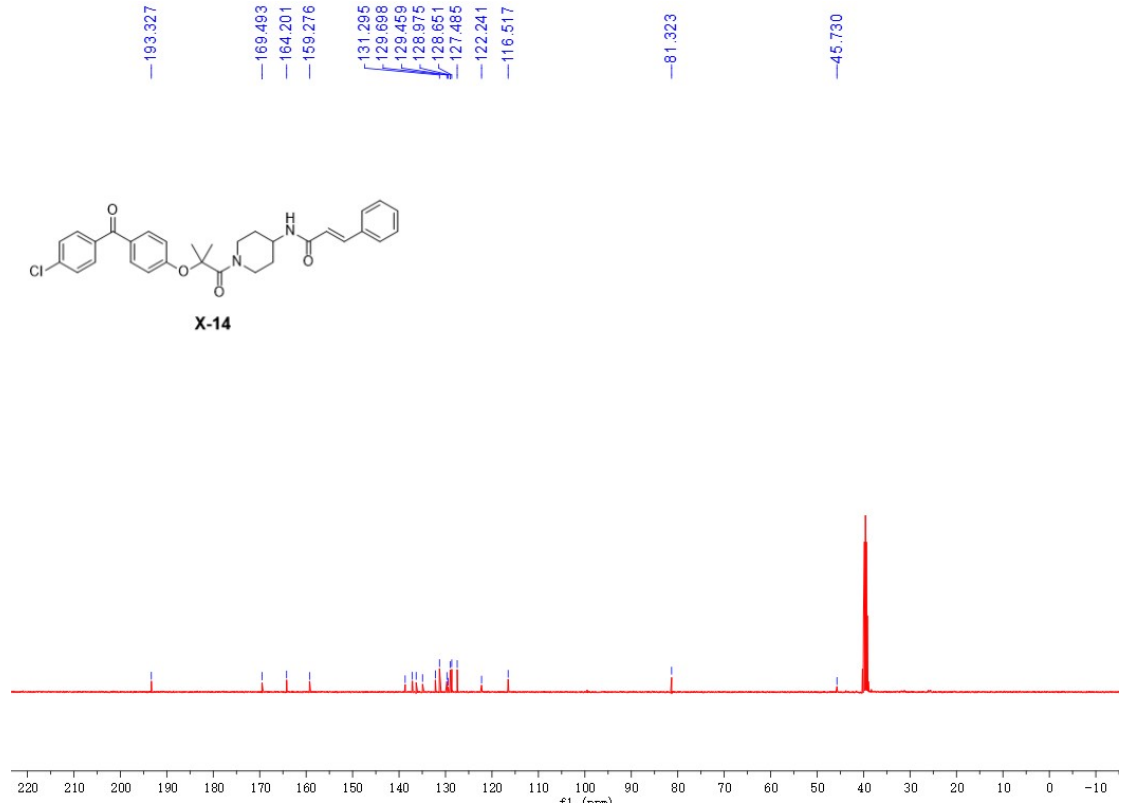
— 样品名称 XQ-3; 样品瓶 63; 进样 1; 通道 W2489 ChA; 采集日期 2022/7/5 12:57:24 CST

处理通道: W2489 ChA 254nm

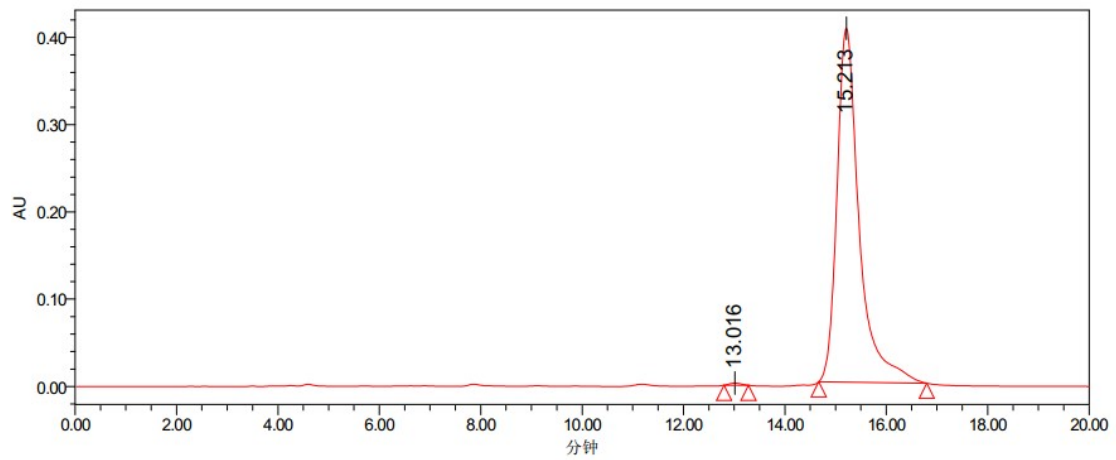
	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	6.939	48151	0.39	3947
2	W2489 ChA 254nm	7.390	12216898	99.29	671926
3	W2489 ChA 254nm	9.566	39353	0.32	4176

¹H NMR and ¹³C NMR of final compounds X-14





HPLC purity traces for final compounds X-14

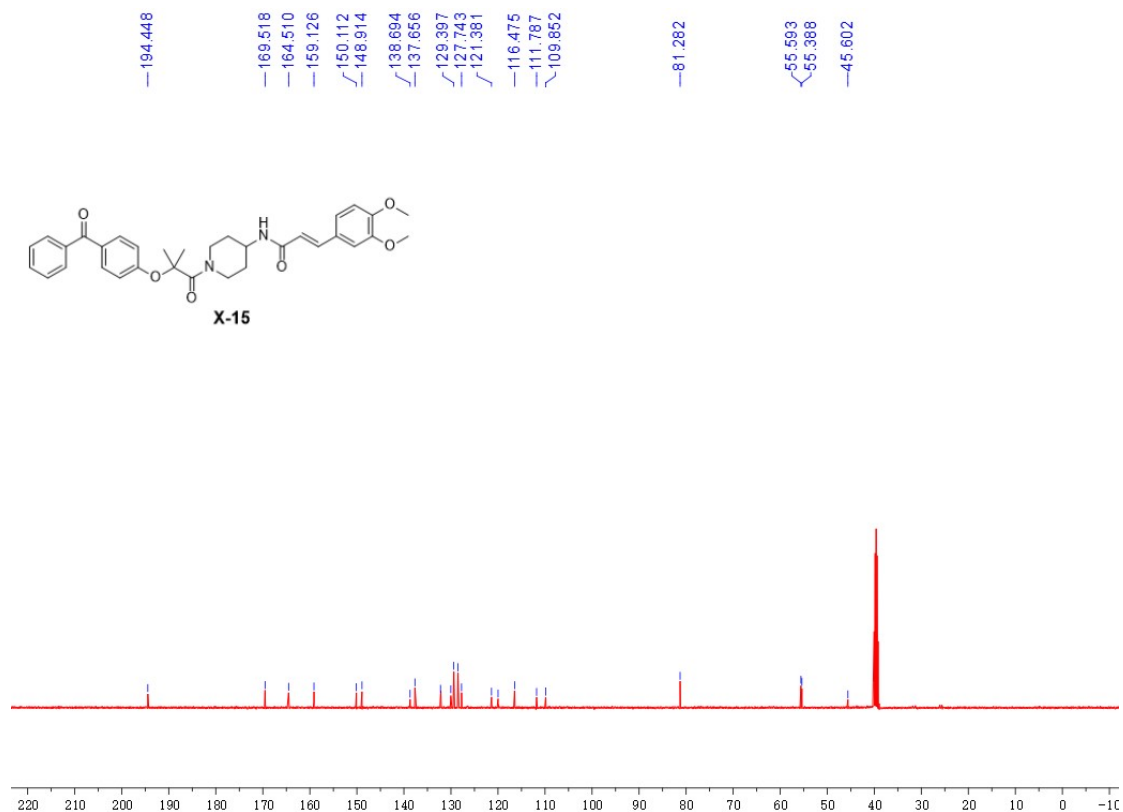
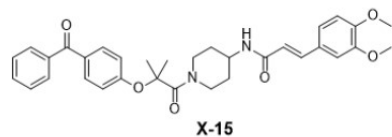
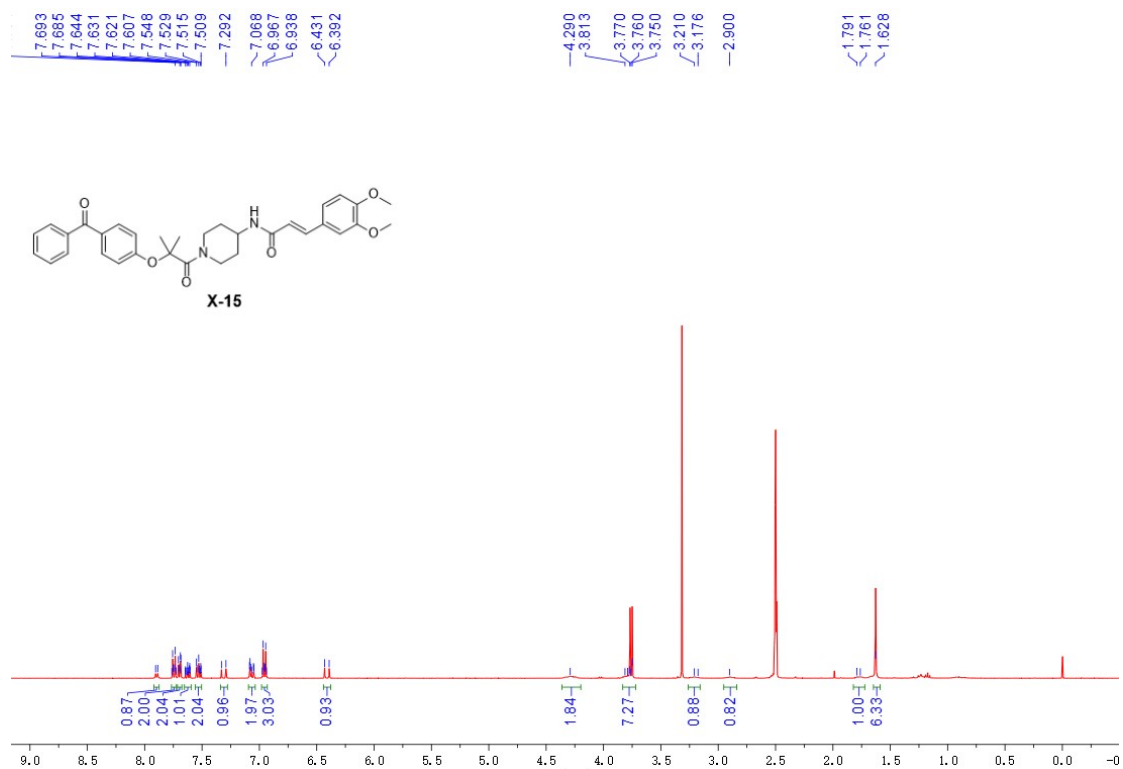


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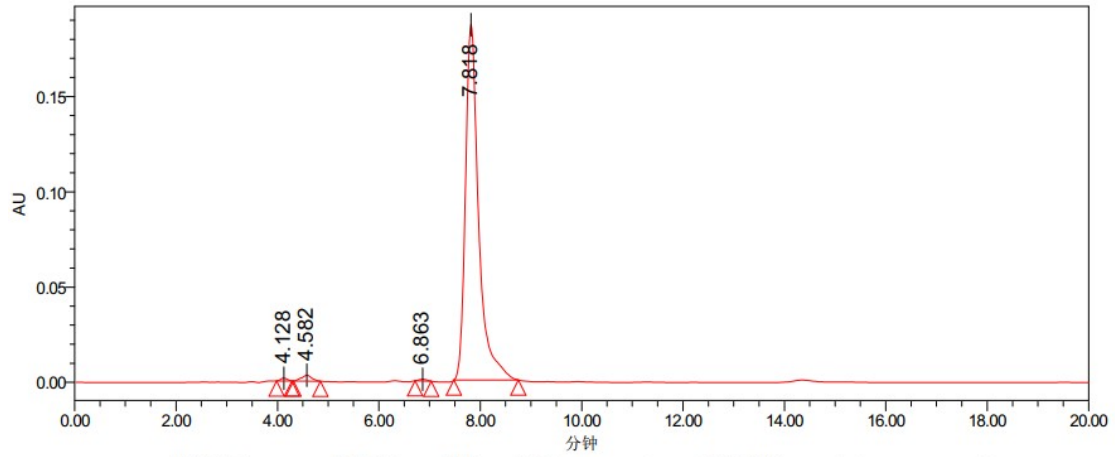
处理通道: W2489 ChA 254nm

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1	W2489 ChA 254nm	13.016	40663	0.33	2464
2	W2489 ChA 254nm	15.213	12355364	99.67	405726

^1H NMR and ^{13}C NMR of final compounds X-15



HPLC purity traces for final compounds X-15

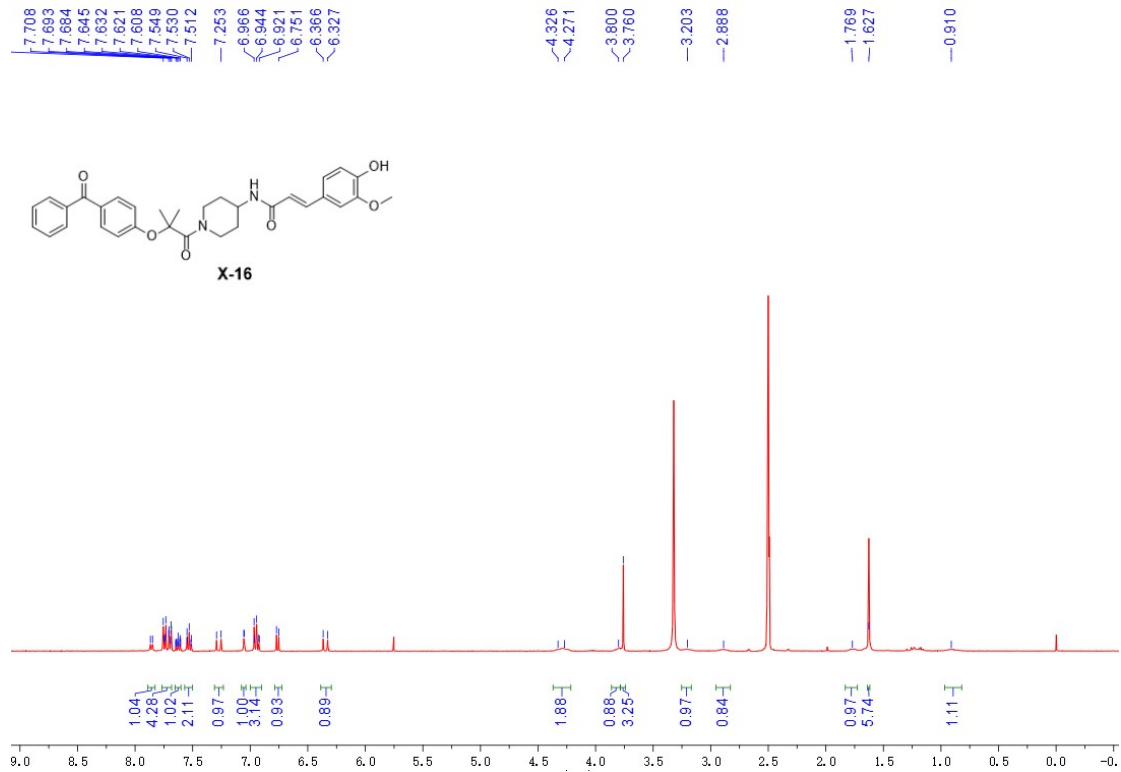


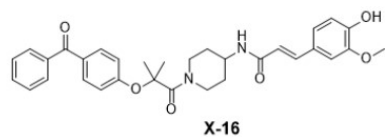
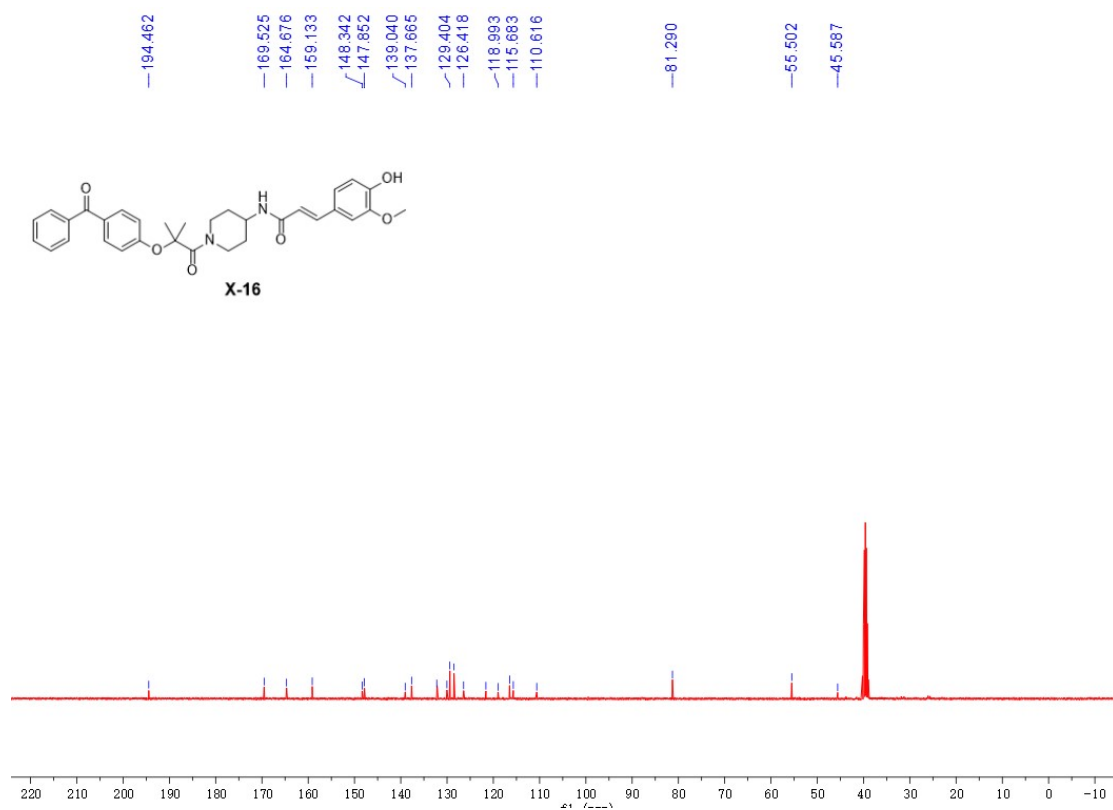
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处理通道: W2489 ChA 254nm

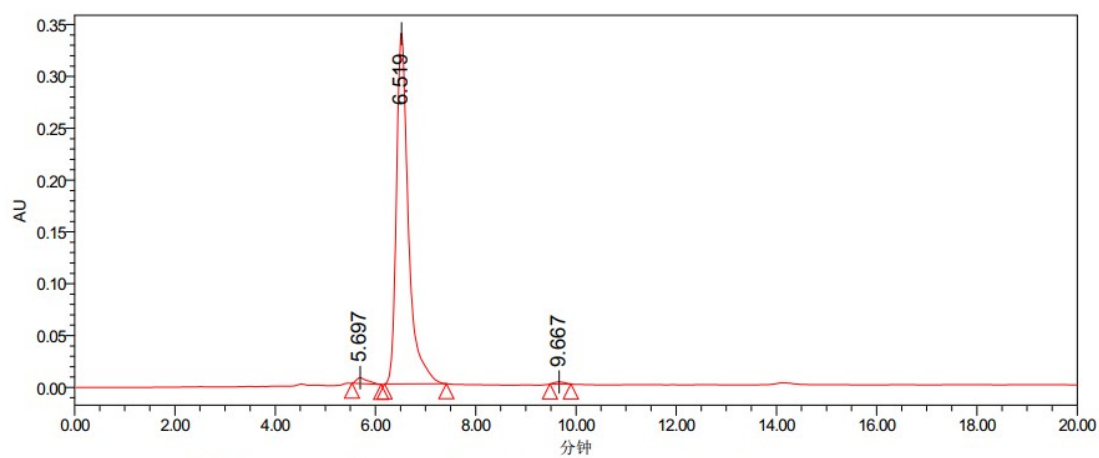
	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	4.128	13440	0.39	1449
2	W2489 ChA 254nm	4.582	43693	1.27	3091
3	W2489 ChA 254nm	6.863	9927	0.29	917
4	W2489 ChA 254nm	7.818	3383155	98.06	186594

^1H NMR and ^{13}C NMR of final compounds X-16





HPLC purity traces for final compounds X-16

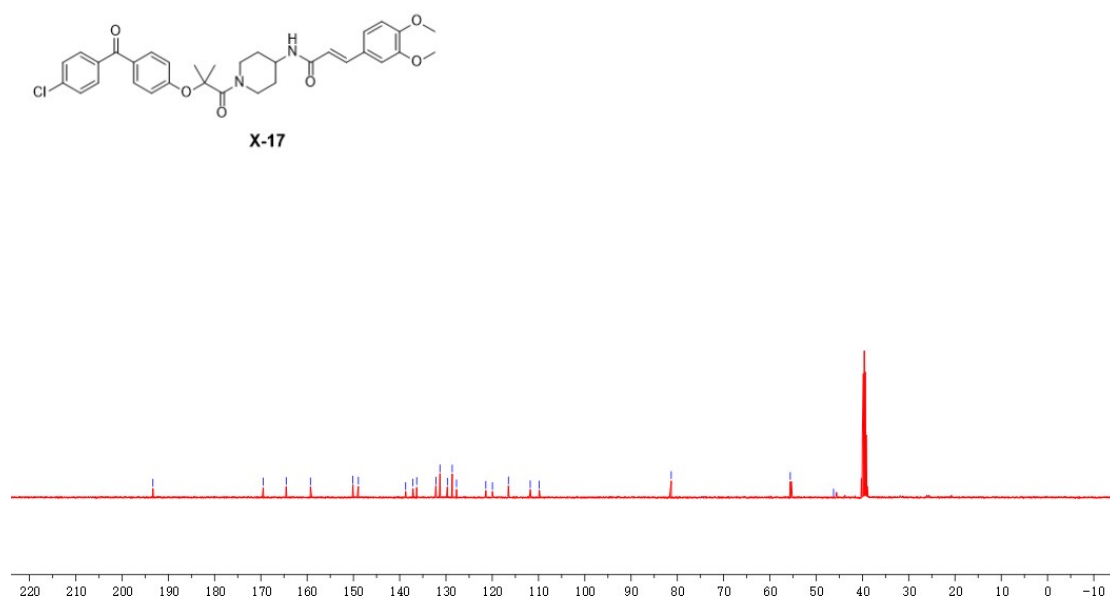
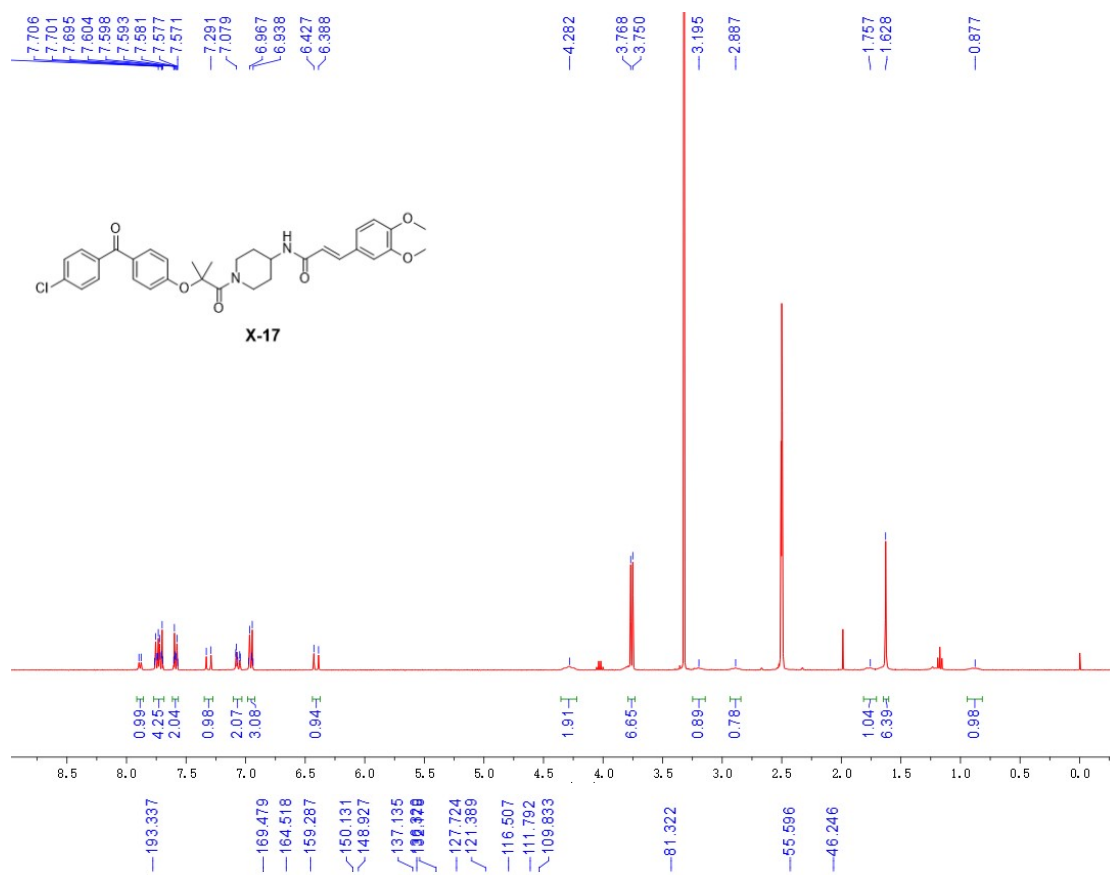


— 样品名称 41623; 样品瓶 3; 进样 1; 通道 W2489 ChA; 采集日期 2020/5/21 9:28:35 CST

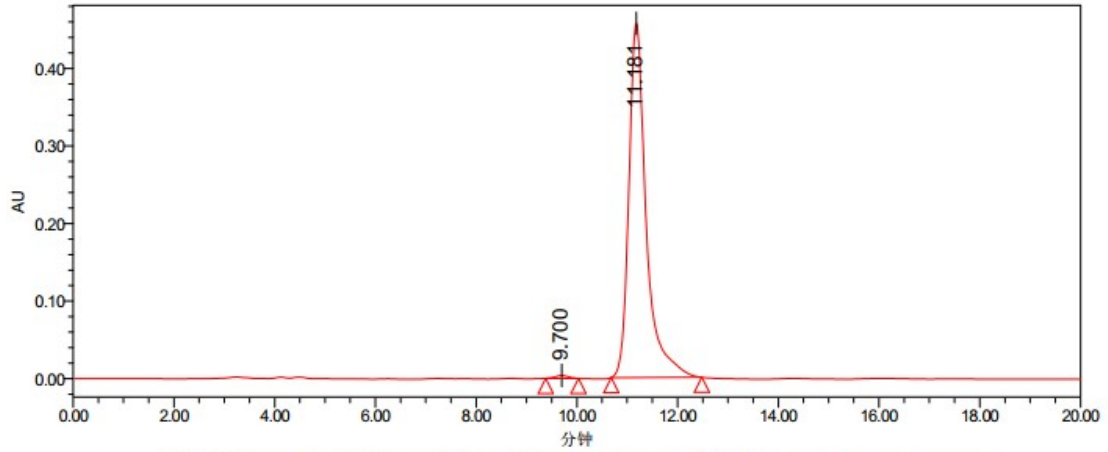
处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	5.697	89229	1.55	5758
2	W2489 ChA 254nm	6.519	5634593	97.95	338539
3	W2489 ChA 254nm	9.667	28947	0.50	2029

^1H NMR and ^{13}C NMR of final compounds **X-17**



HPLC purity traces for final compounds X-17



处理通道: W2489 ChA 254nm

	处理通道	保留时间 (分钟)	面积	% 面积	峰高
1	W2489 ChA 254nm	9.700	65728	0.60	3664
2	W2489 ChA 254nm	11.181	10919170	99.40	457120