

# **Aryl *tert*-butyl sulfoxide-promoted highly enantioselective addition of allyltrichlorosilane to aldehydes**

**Peng Wang,<sup>a,b</sup> Junmin Chen,<sup>a,b,c</sup> Linfeng Cun,<sup>a</sup> Jingen Deng,<sup>a,b</sup> Jin Zhu,<sup>a,b</sup> and Jian Liao<sup>a,b,c</sup>**

<sup>a</sup>National Engineering Research Center of Chiral Drugs and Key Laboratory of Asymmetric Synthesis and Chirotechnology of Sichuan Province, Chengdu Institute of Organic Chemistry, Chinese Academy of Sciences, Chengdu 610041, China. Fax: +8628 8522 3978; Tel: +8628 8522 9250; E-mail: jliao10@cioc.ac.cn

<sup>b</sup>Graduate School of Chinese Academy of Science, Beijing 100049, China

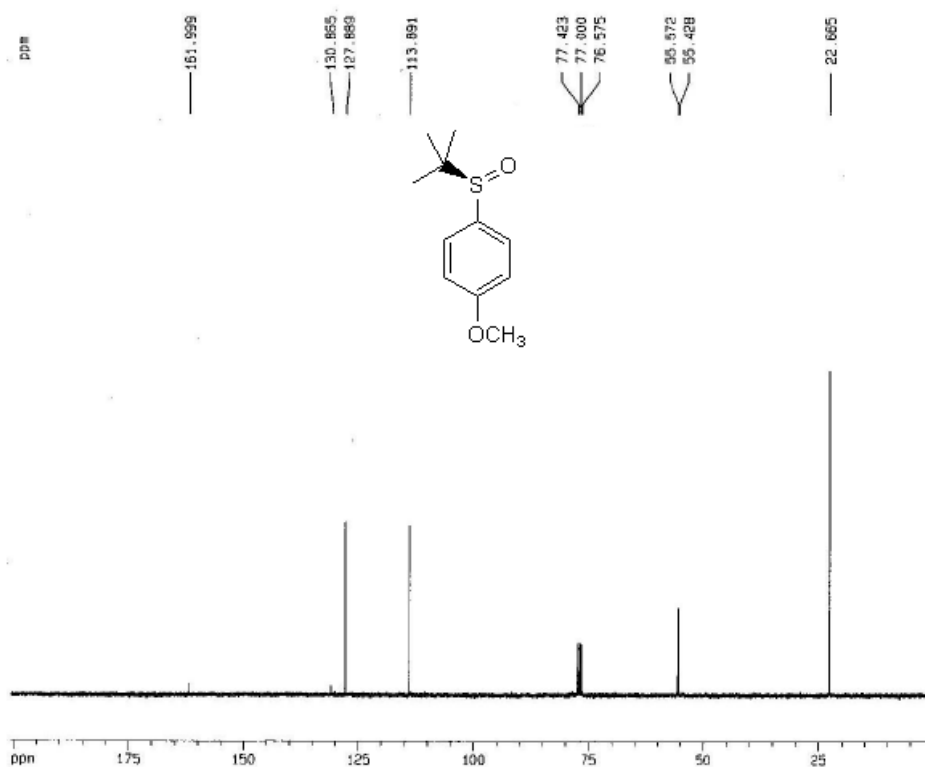
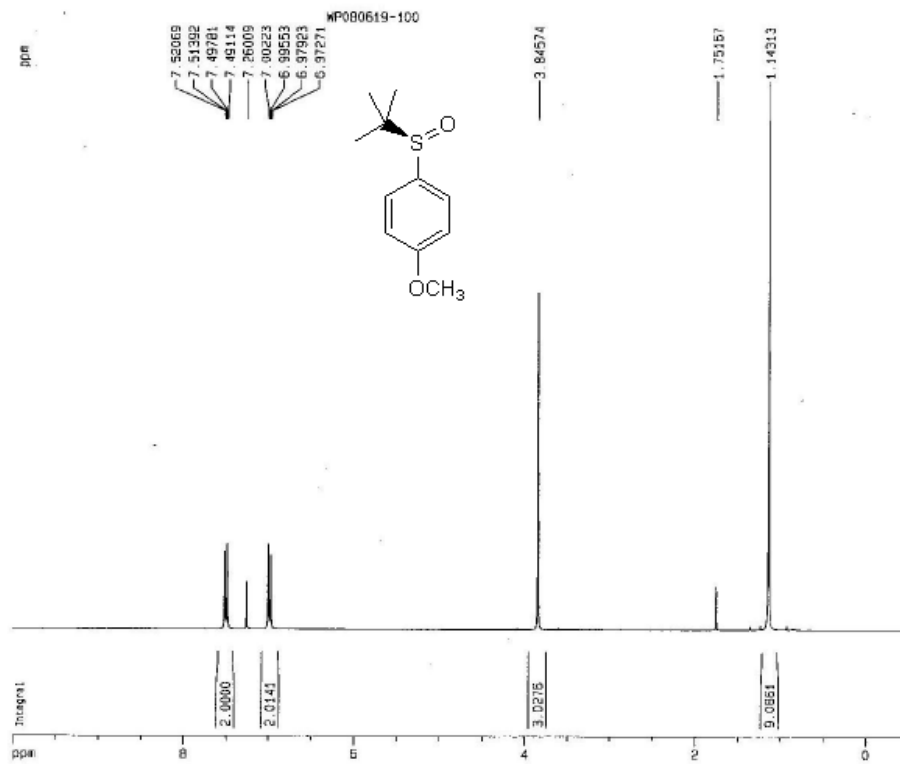
<sup>c</sup>College of Chemistry and Chemical Engineering, Jiangxi Normal University, Nanchang 330022, China

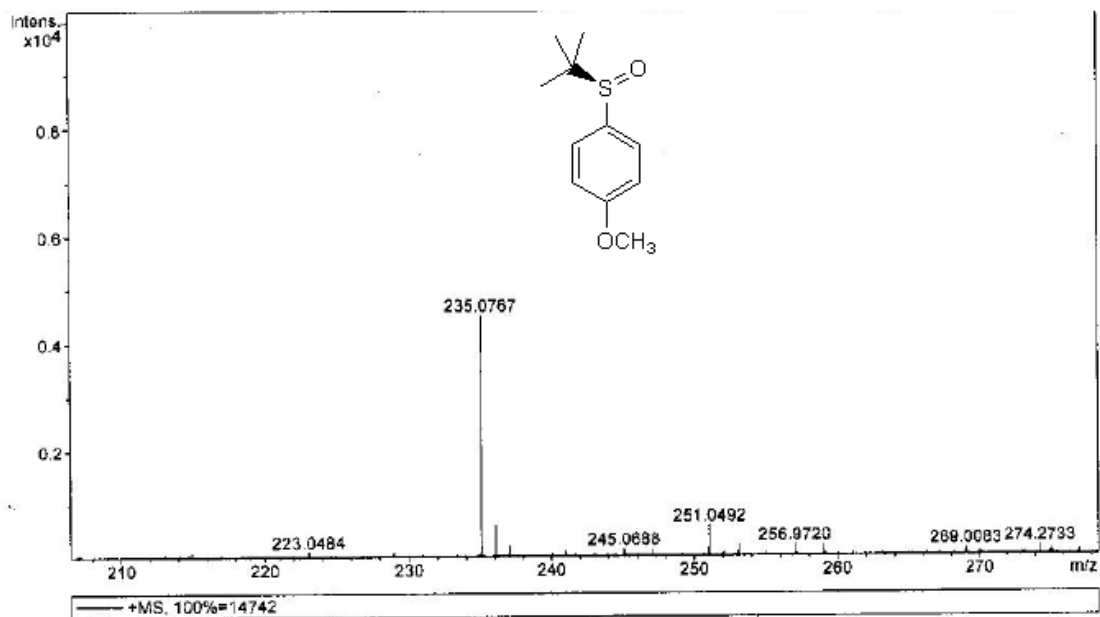
## **Supplementary Information**

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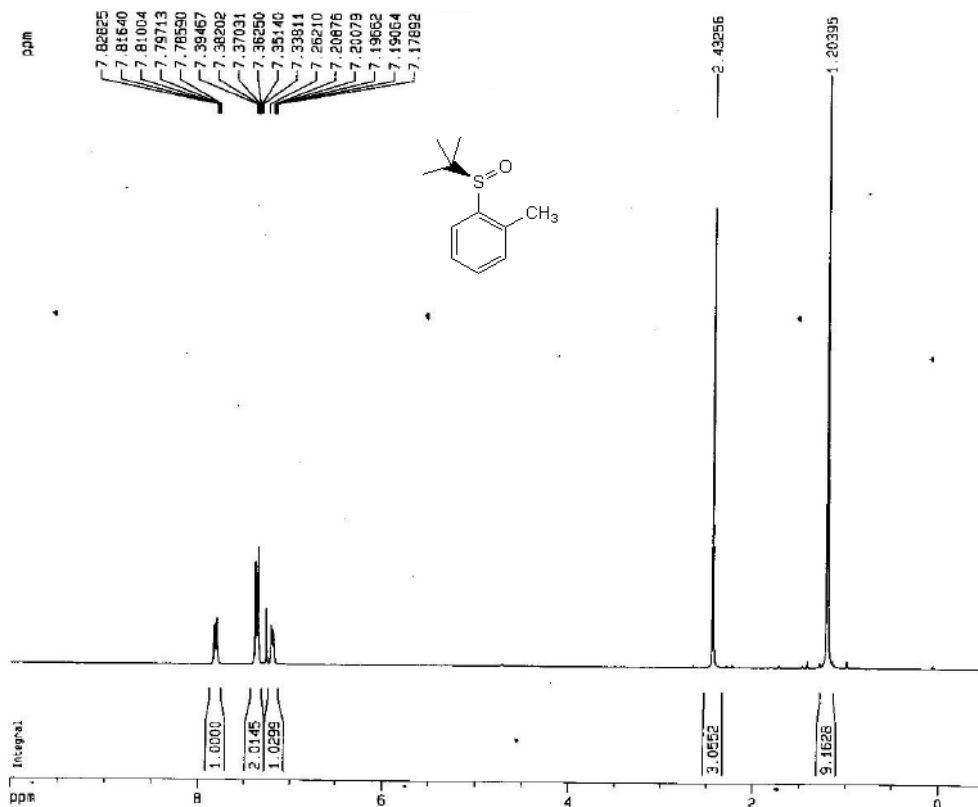
1. <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and high-resolution mass spectra
2. HPLC and GC chromatograms

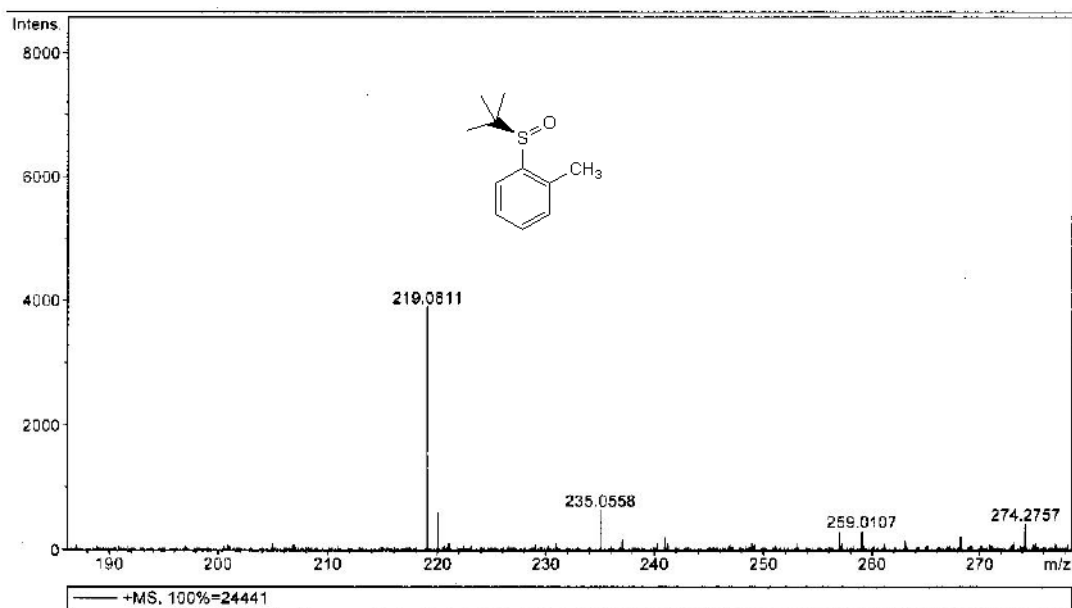
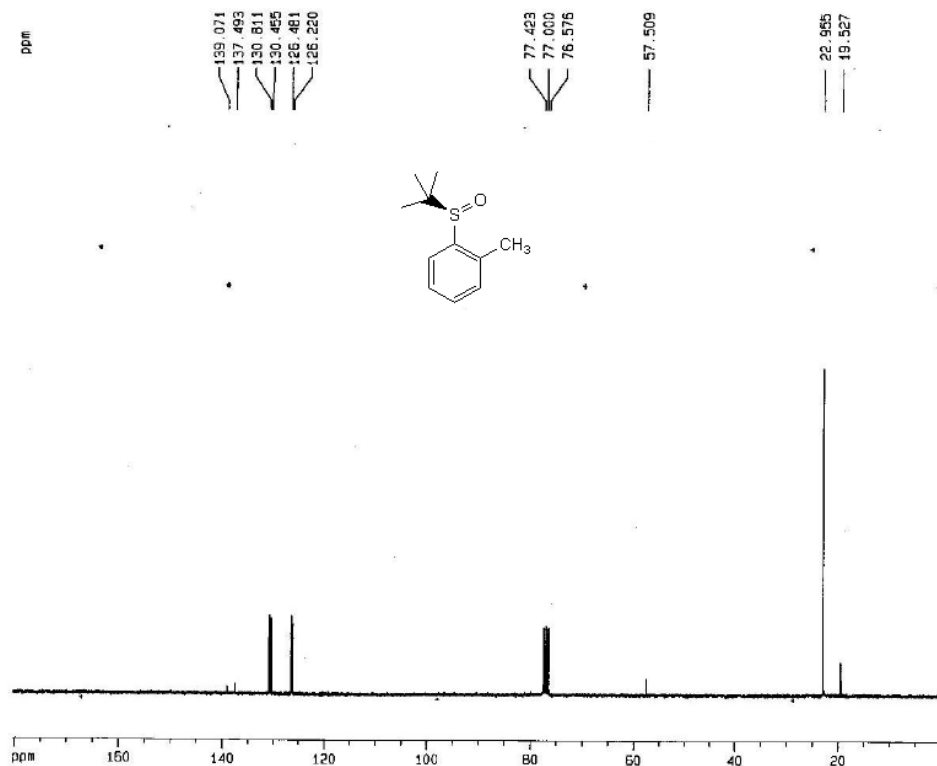
1. <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and high-resolution mass spectra



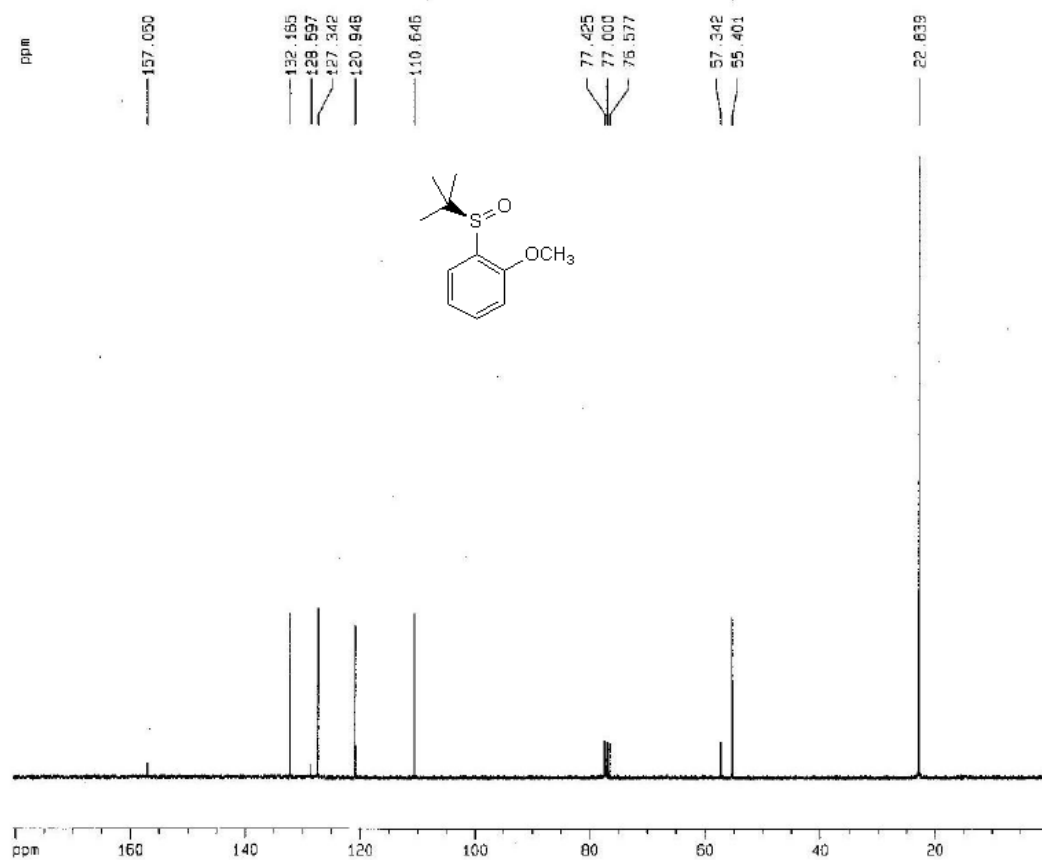
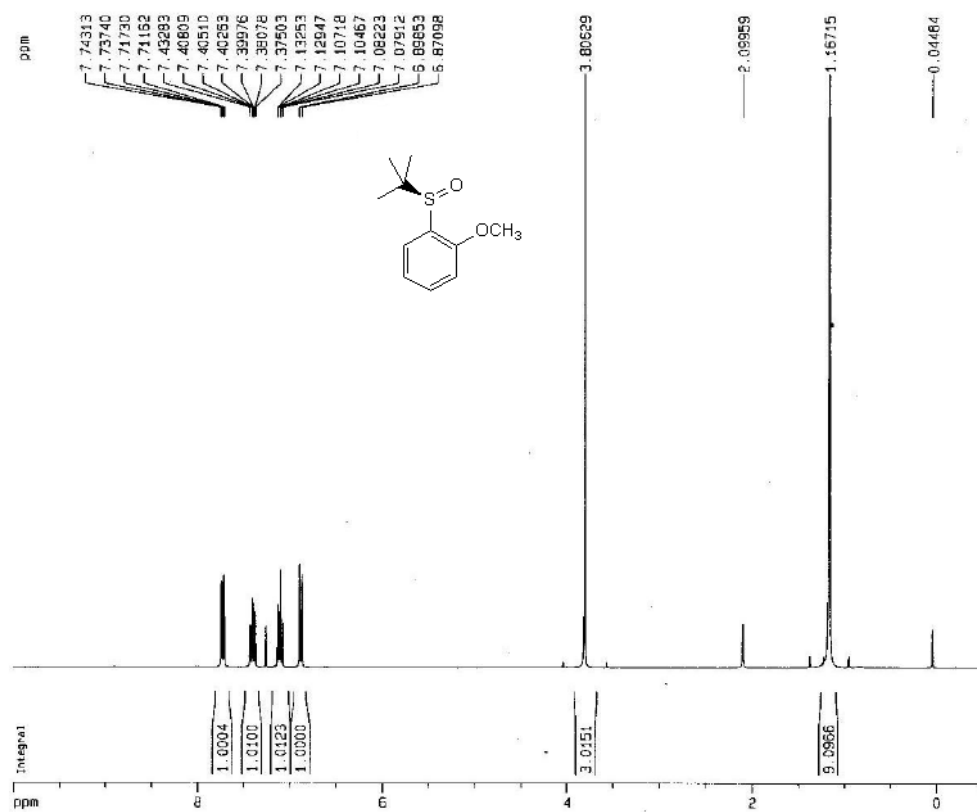


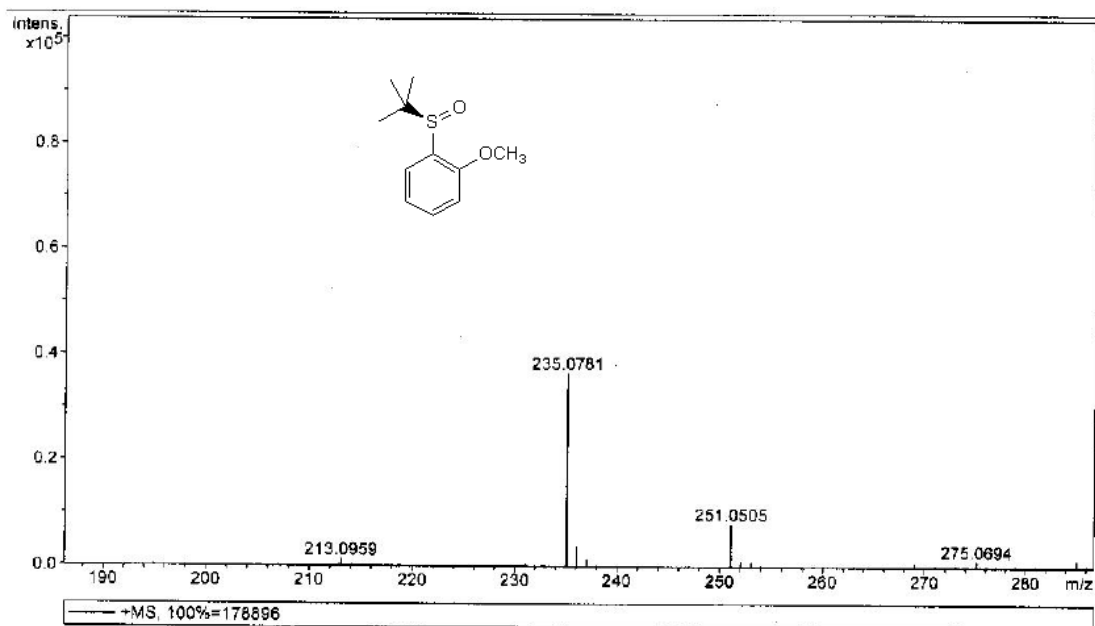
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C <sub>11</sub> H <sub>16</sub> Na <sub>1</sub> O <sub>2</sub> S <sub>1</sub>	0.01	235.0763	-1.62	-1.47	3.50	ok	even



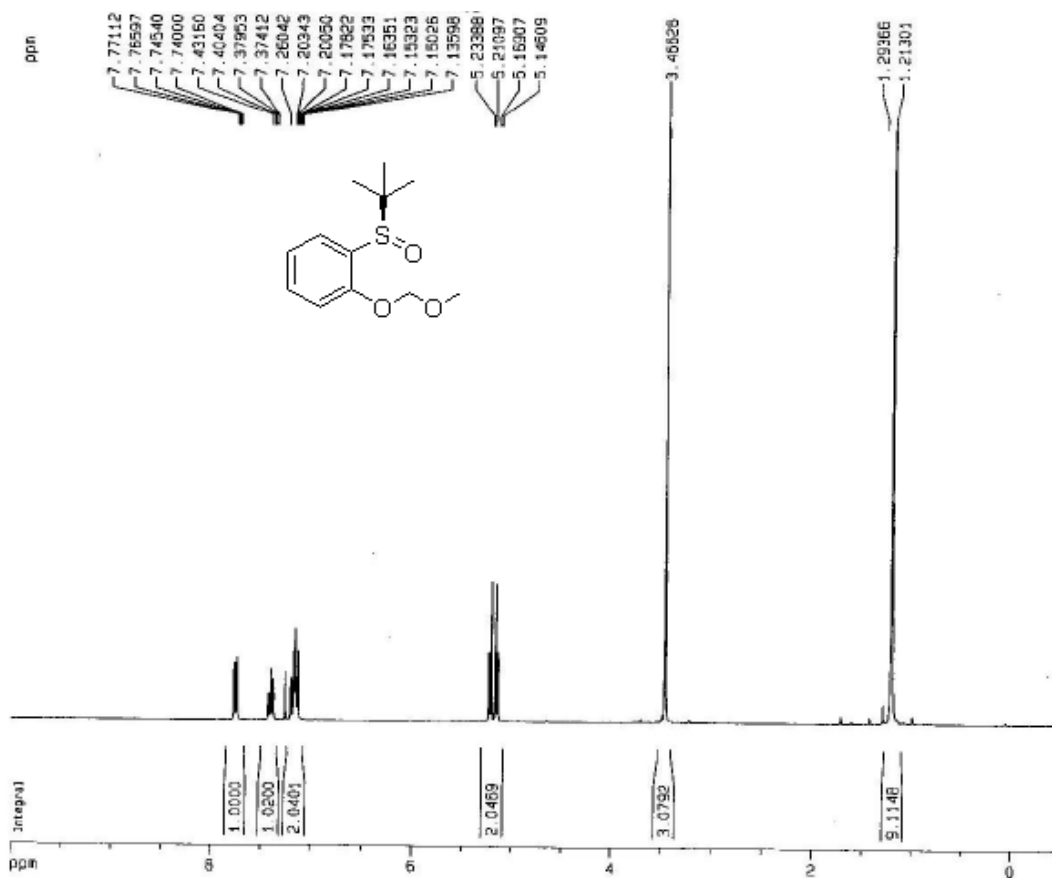


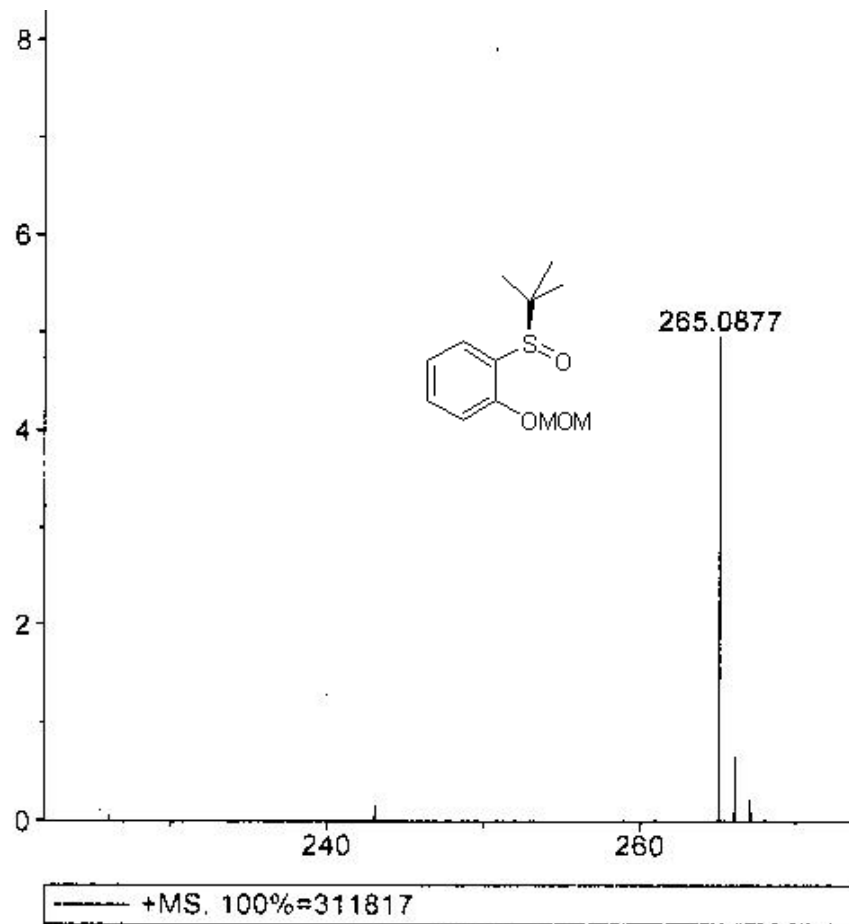
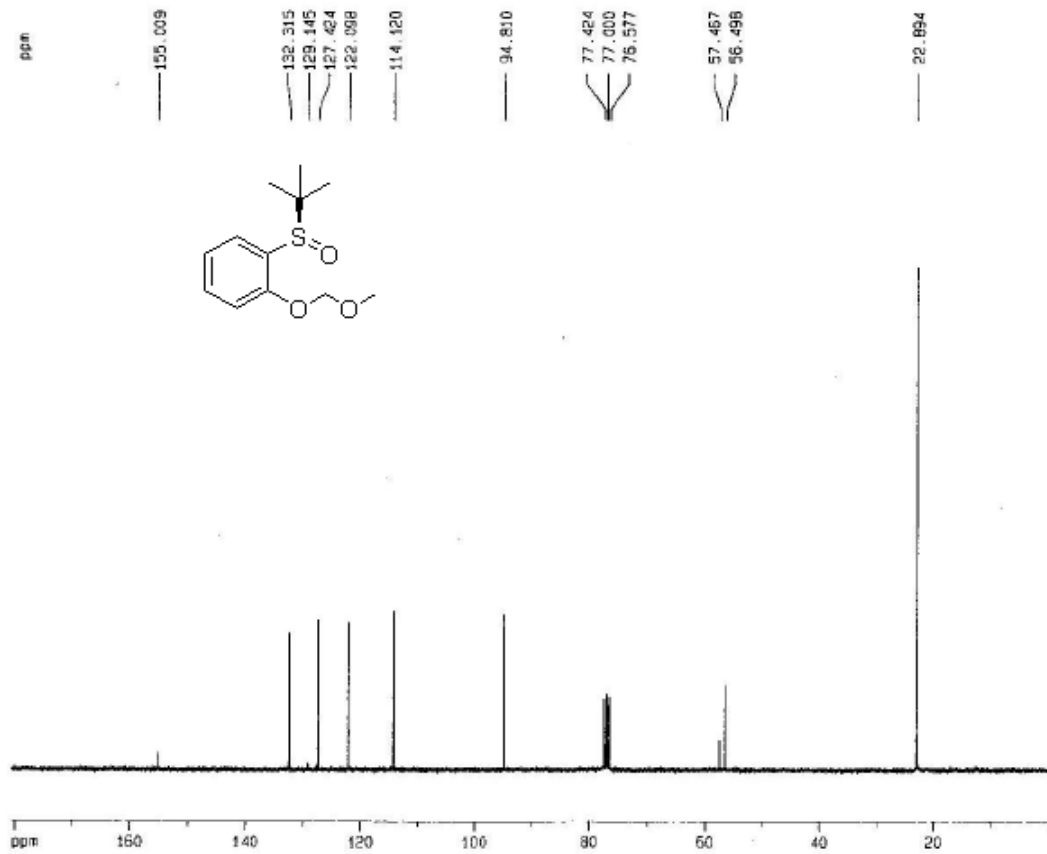
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C 11 H 16 Na 1 O 1 S 1	0.03	219.0814	1.20	1.86	3.60	ok	even

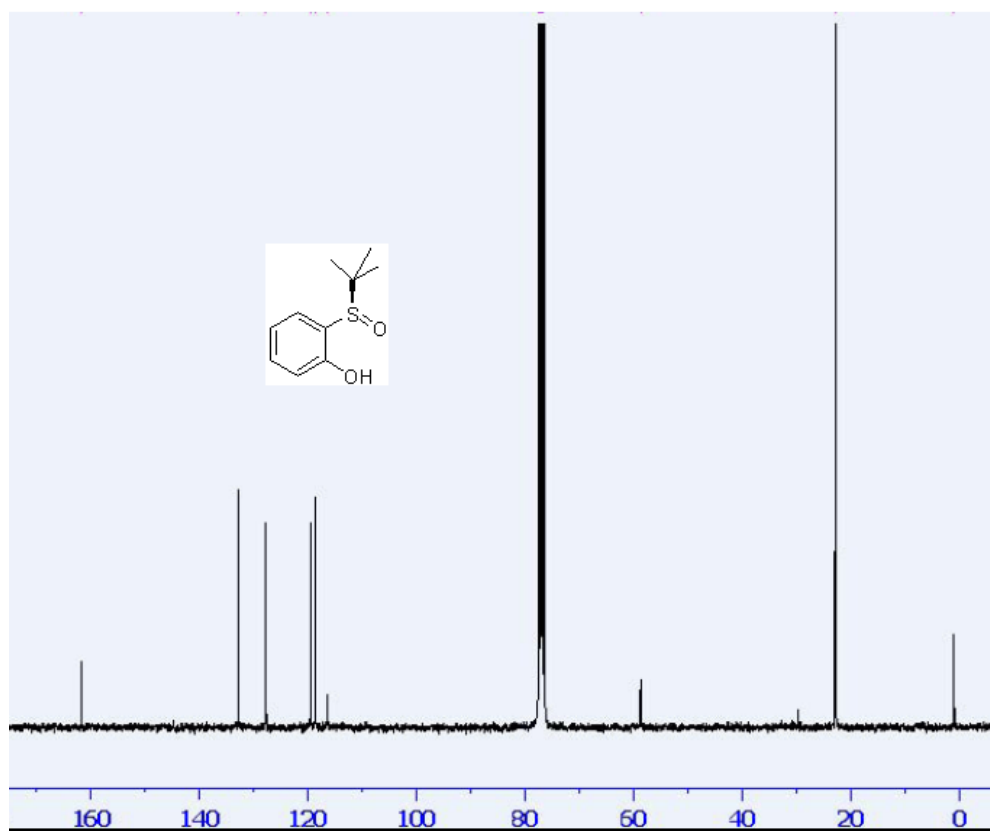
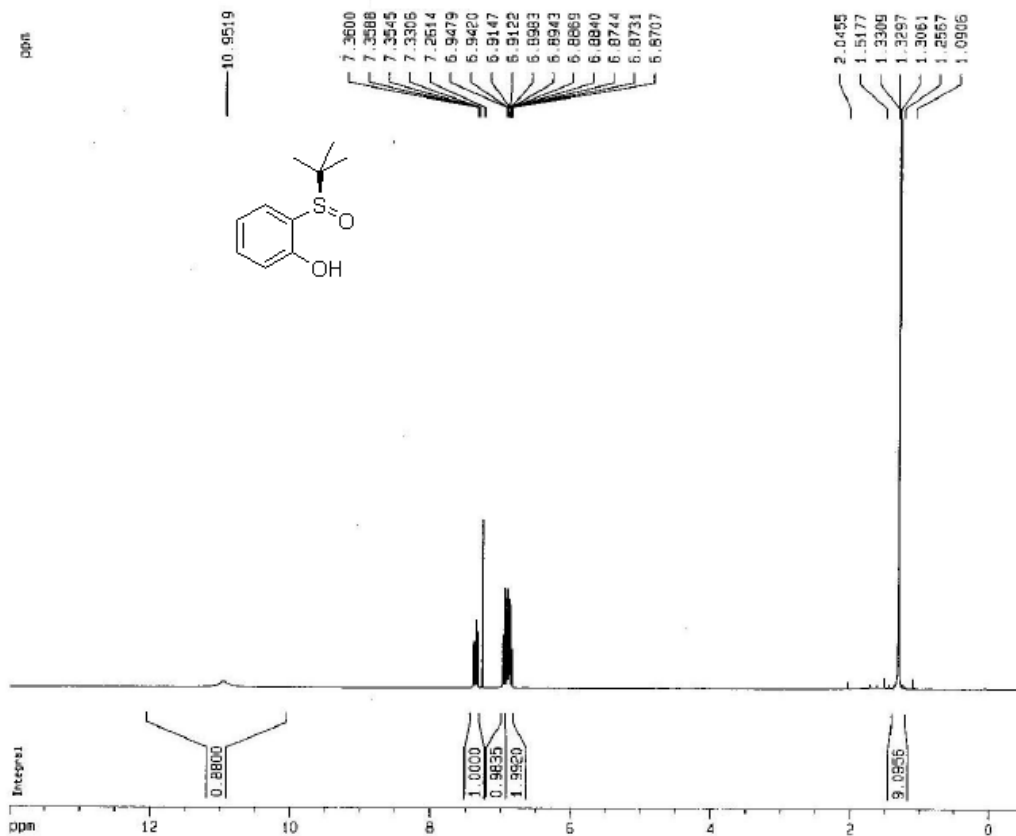




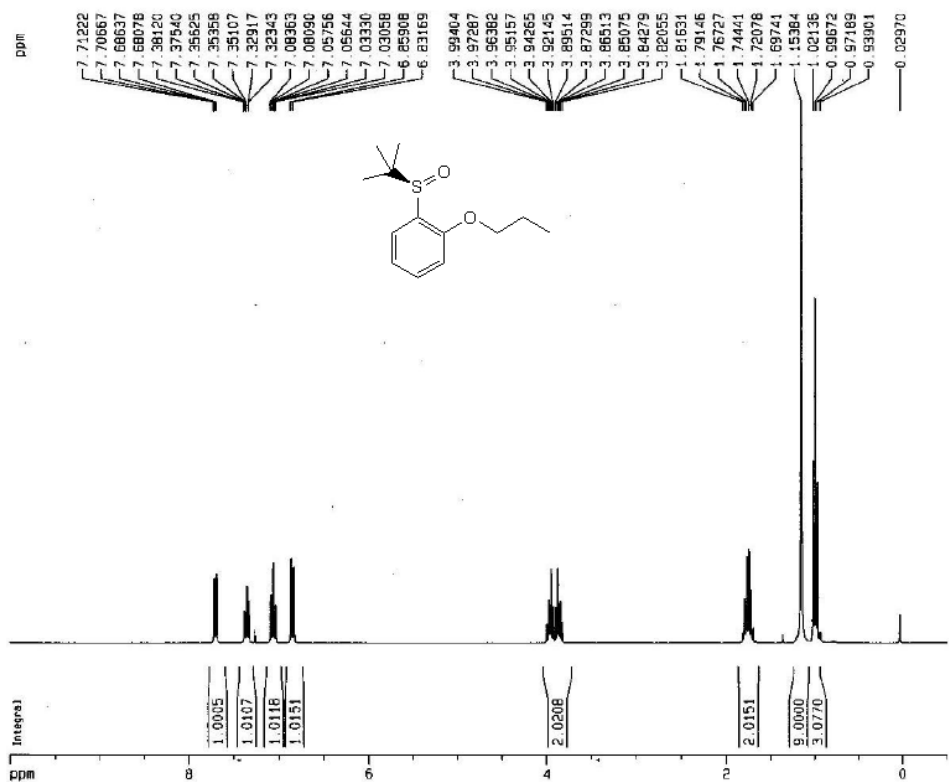
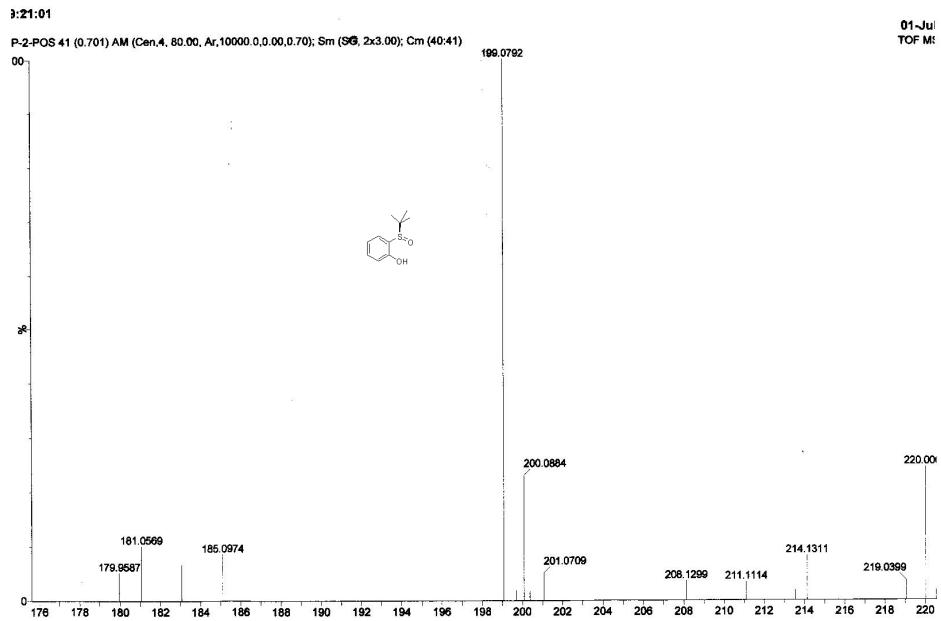
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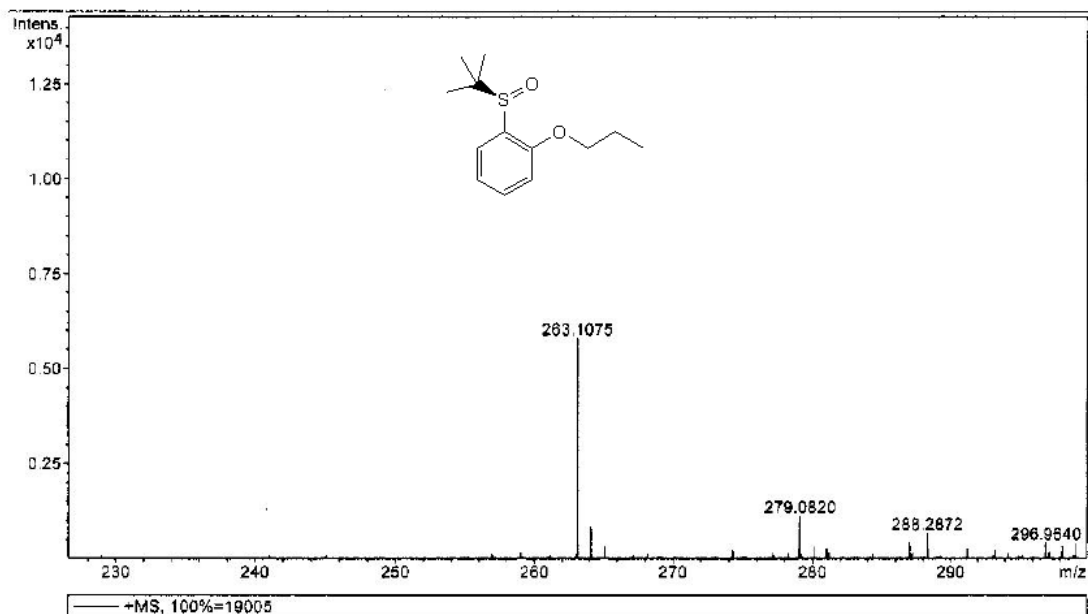
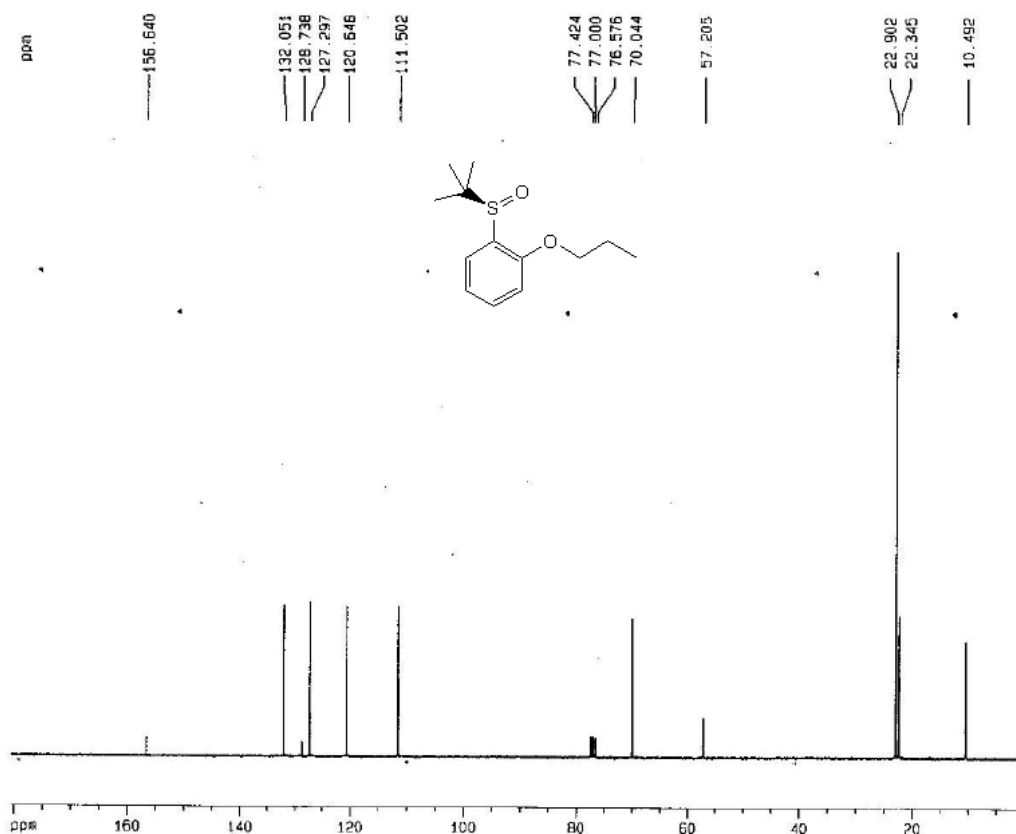




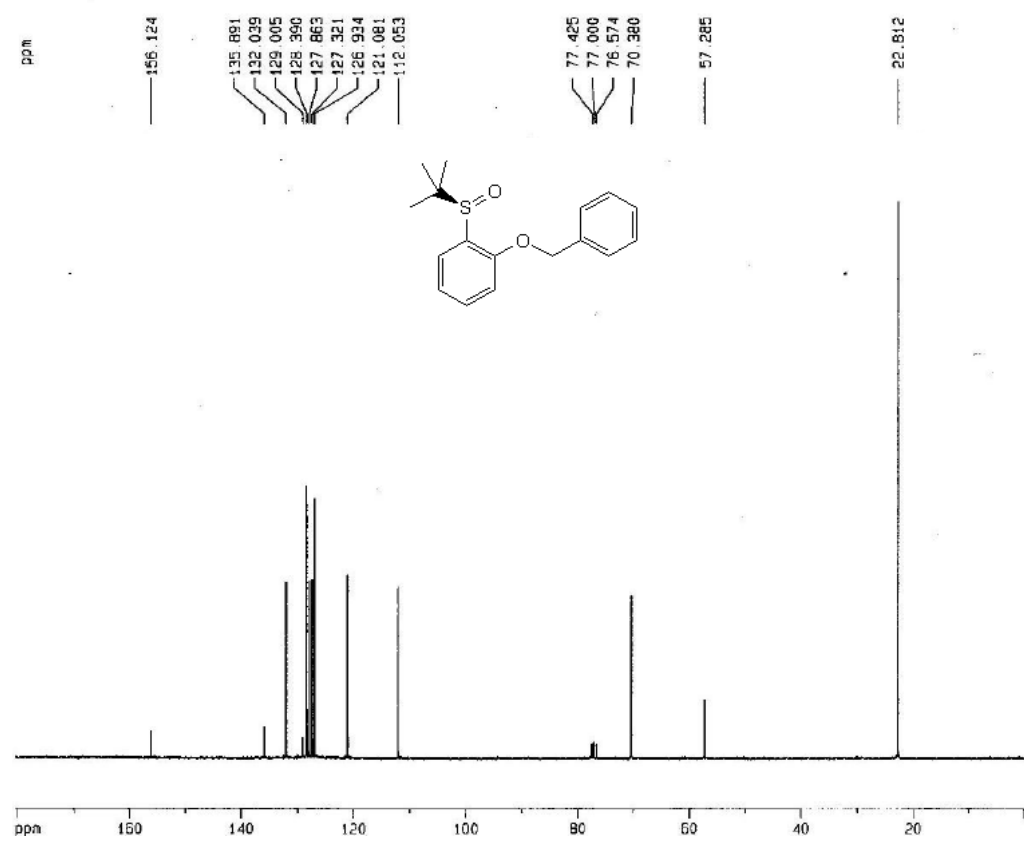
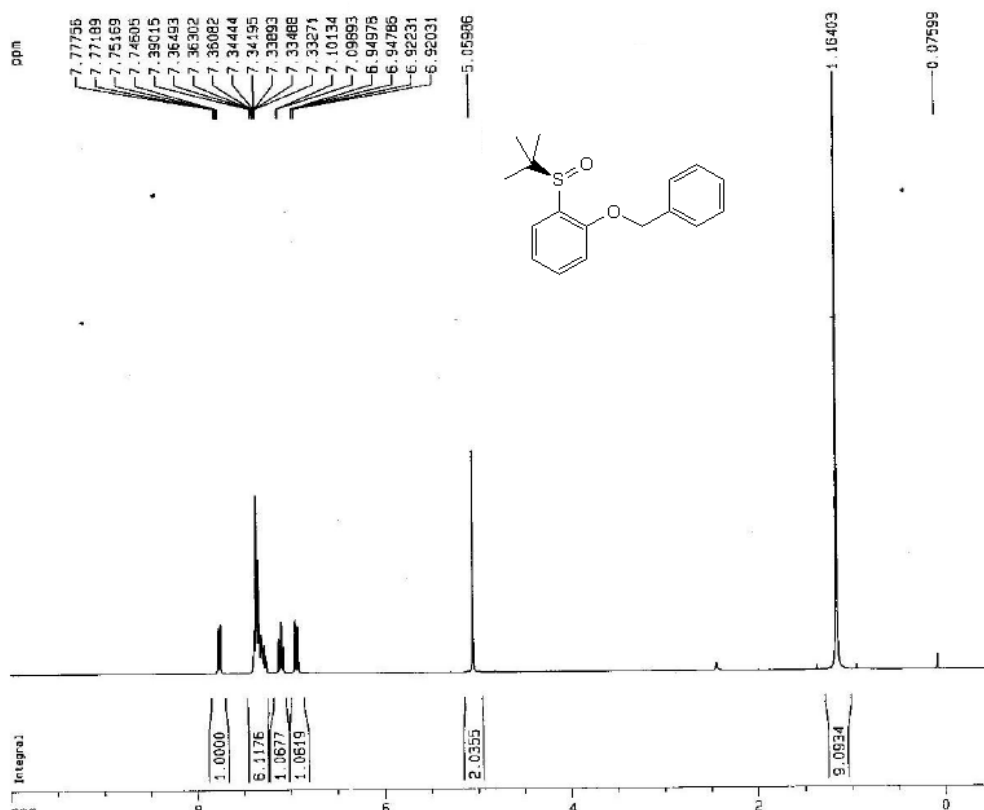


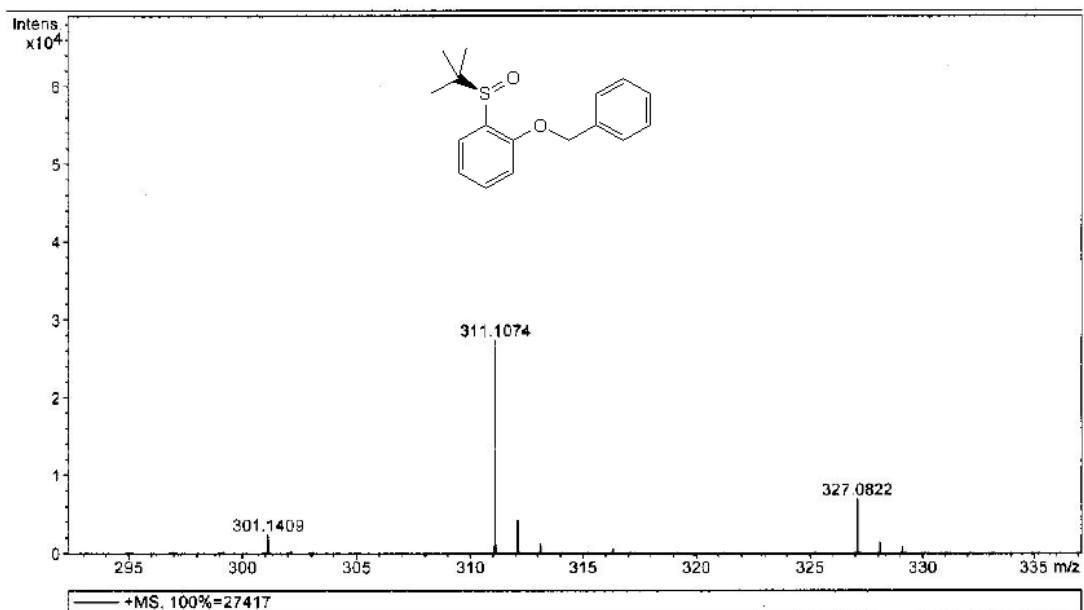




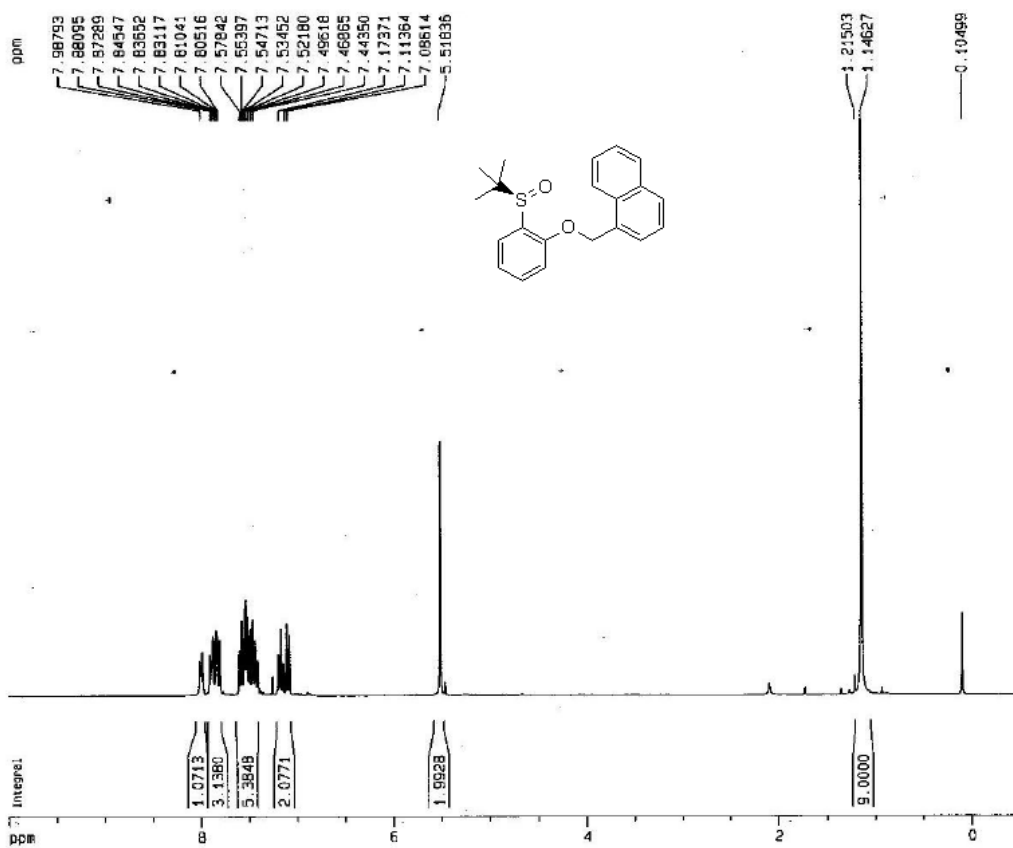


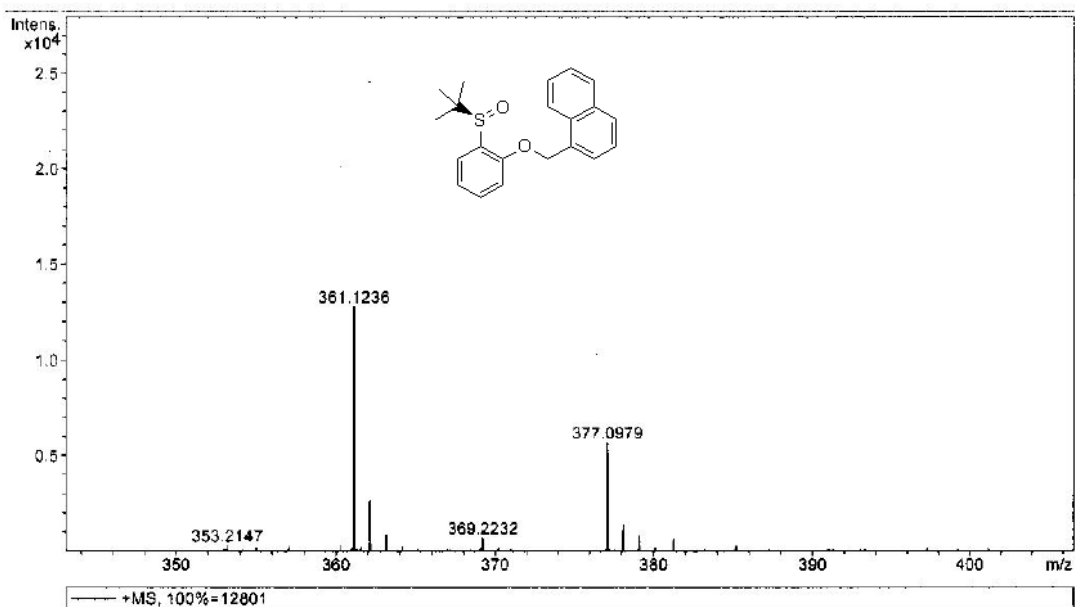
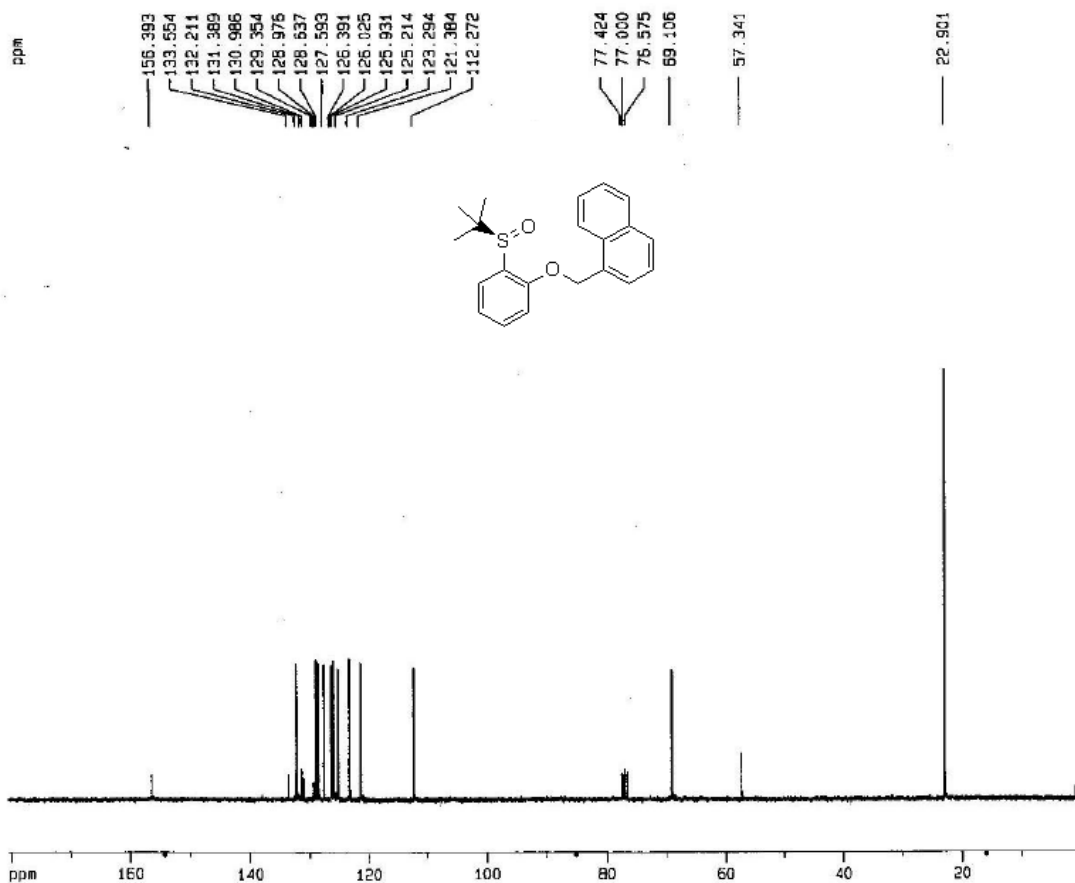
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C <sub>13</sub> H <sub>20</sub> NaO <sub>2</sub> S <sub>1</sub>	0.00	263.1076	0.49	-1.05	3.50	ok	even



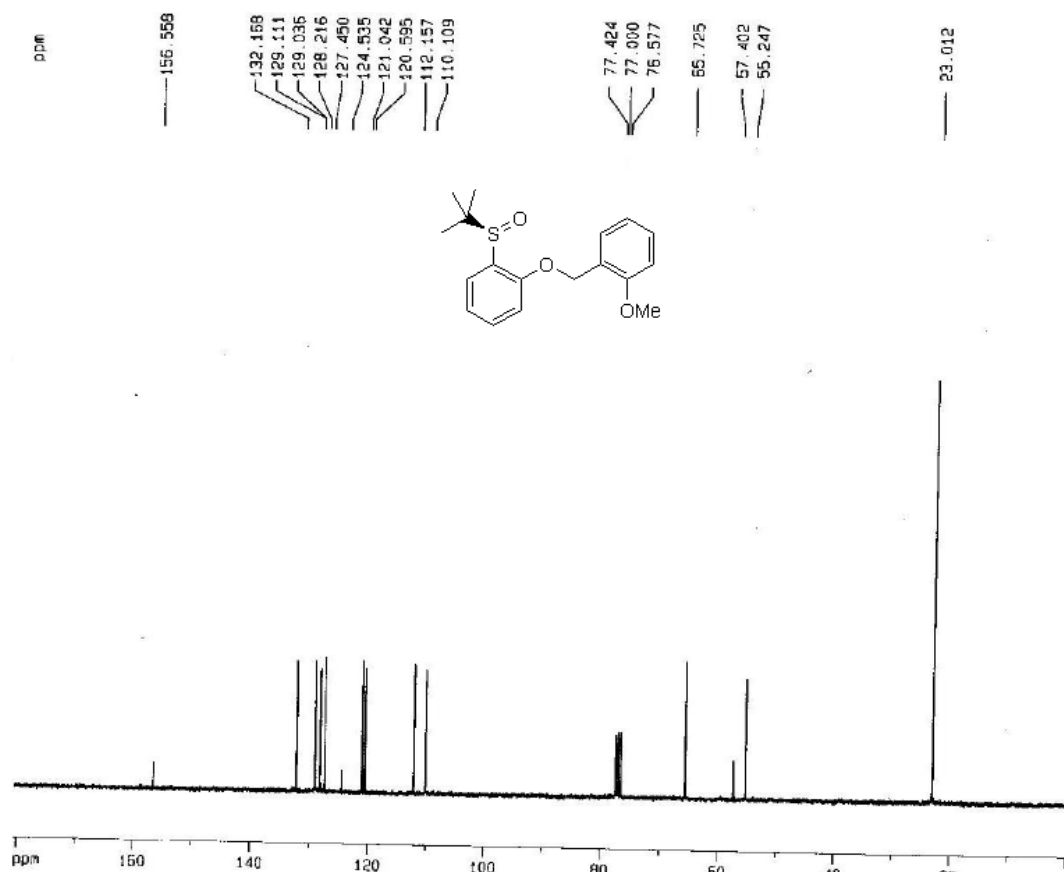
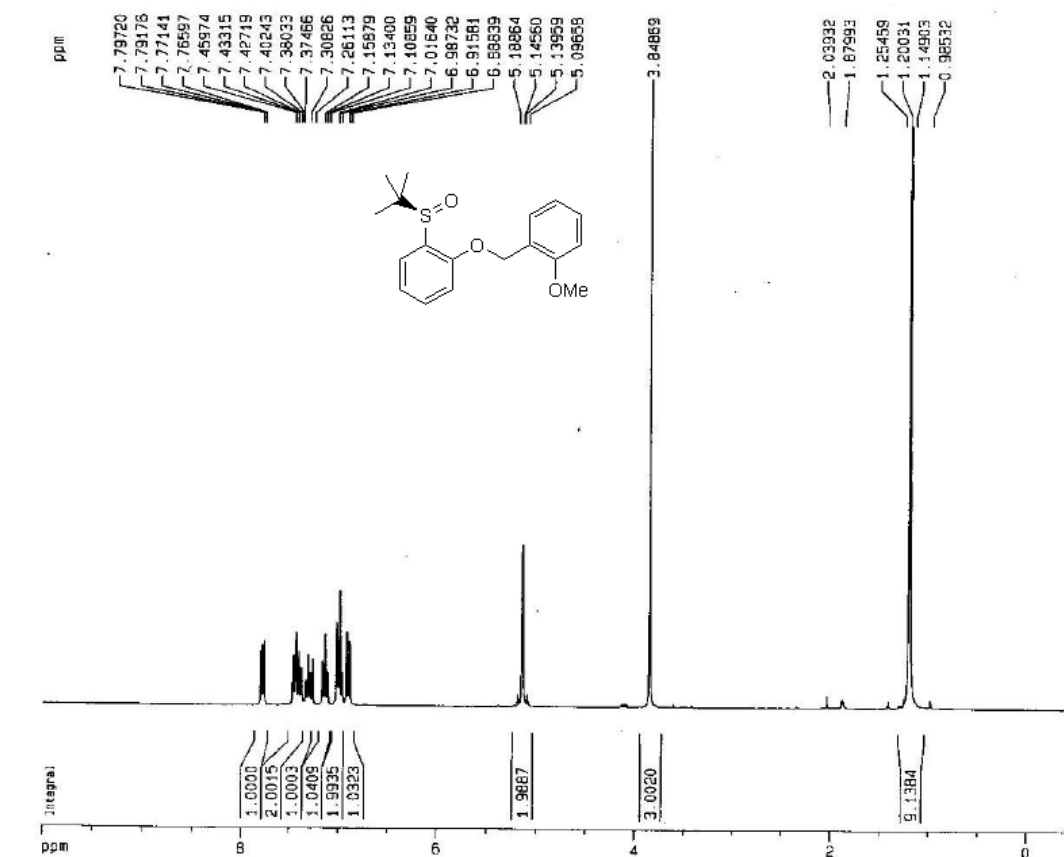


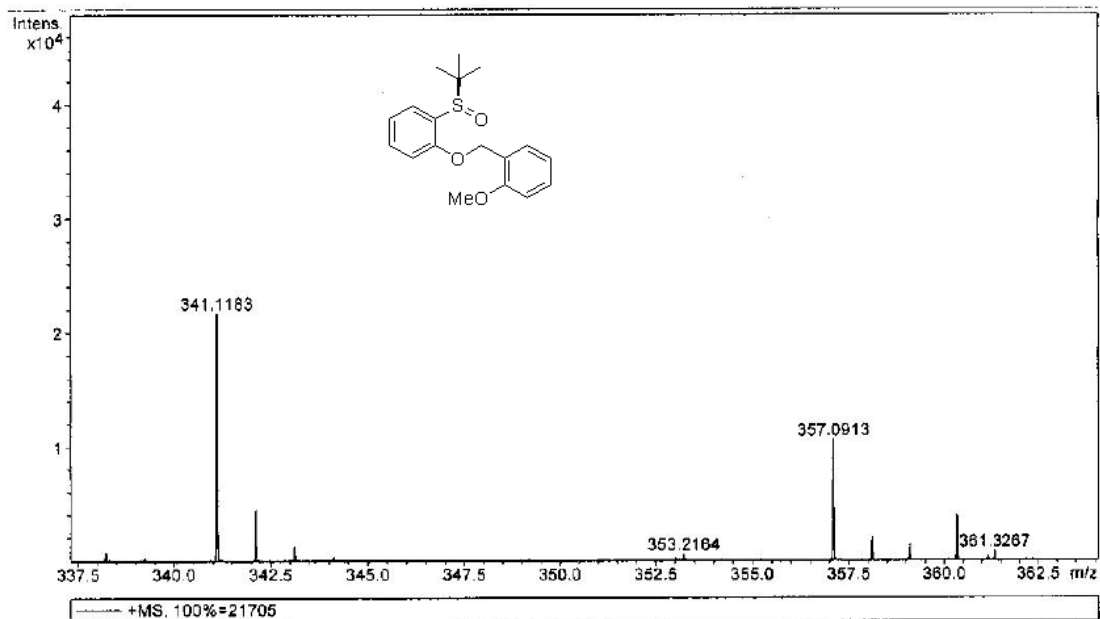
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C 17 H 20 Na 1 O 2 S 1	0.02	311.1076	0.81	-8.73	7.50	ok	even



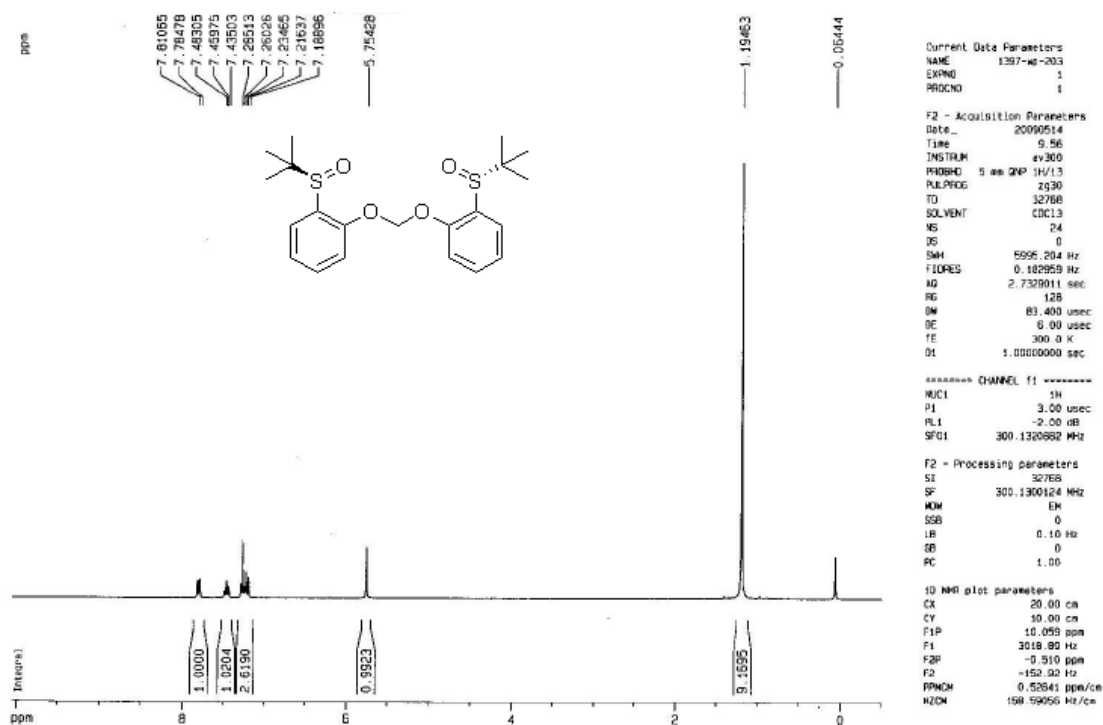


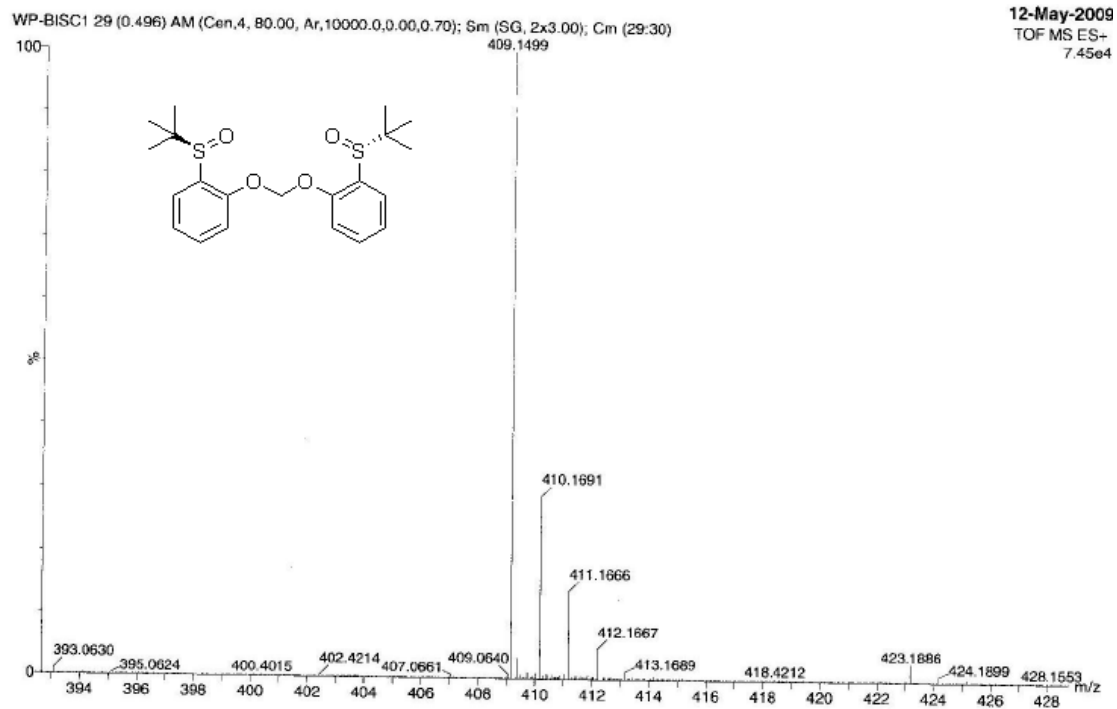
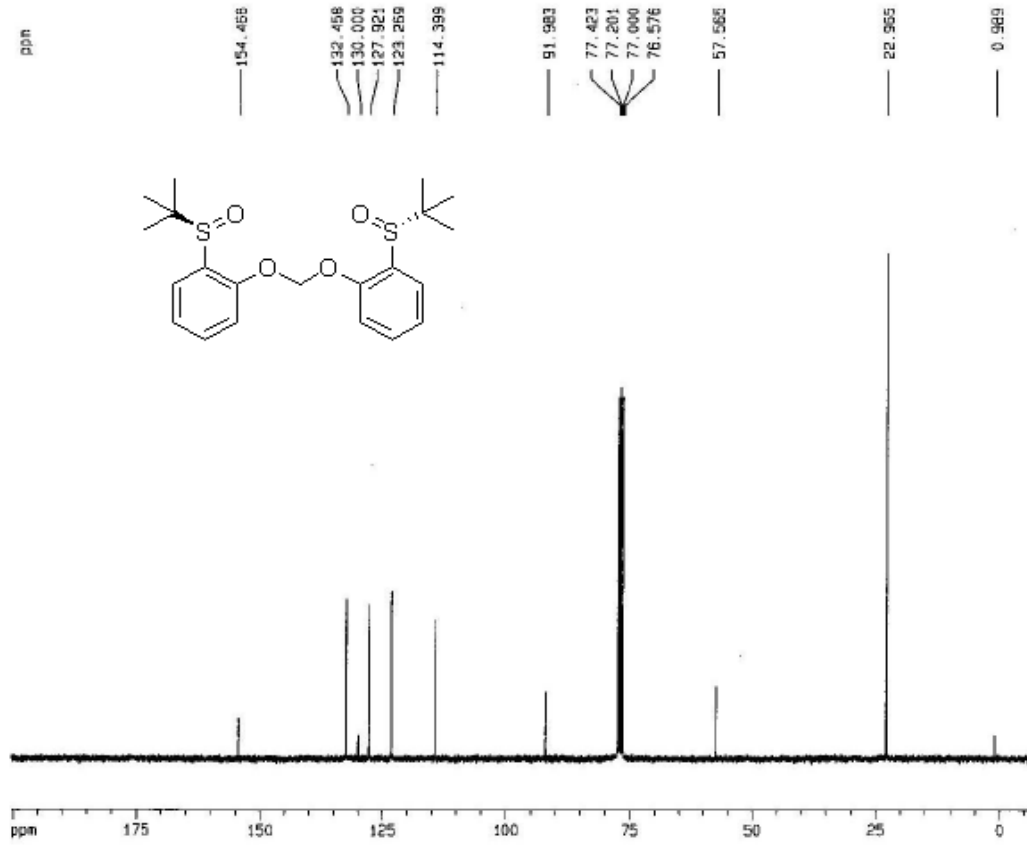
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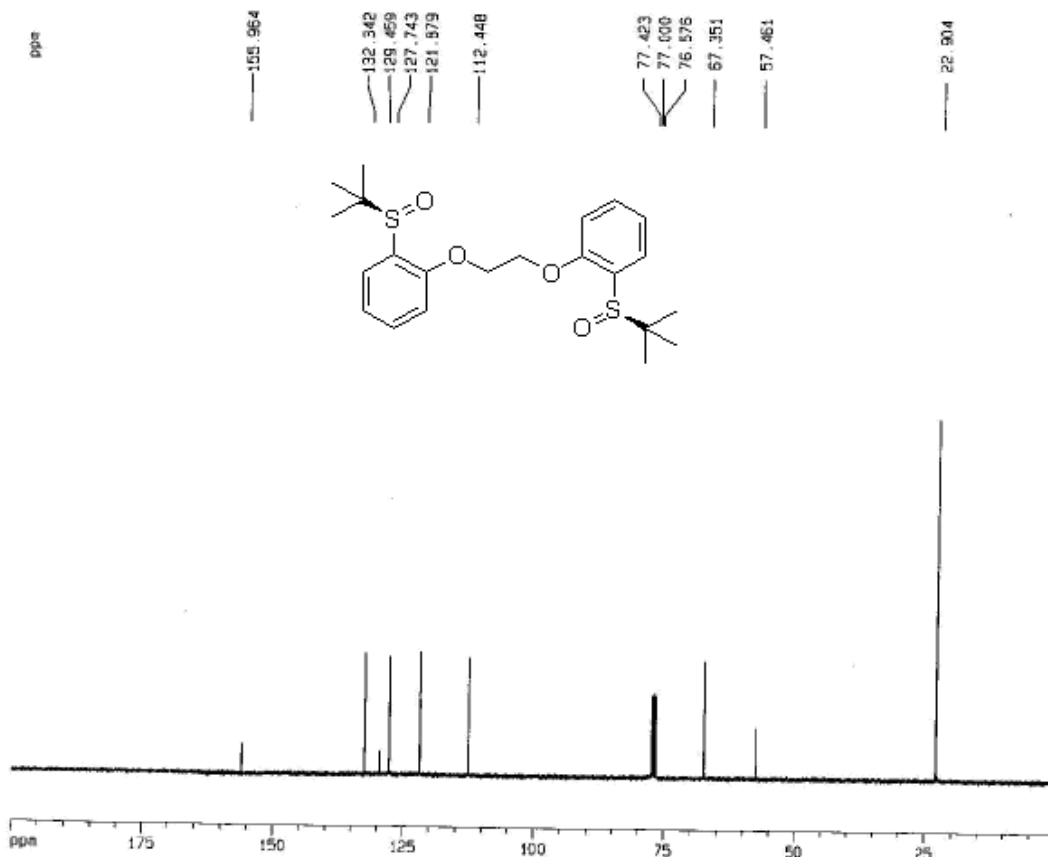
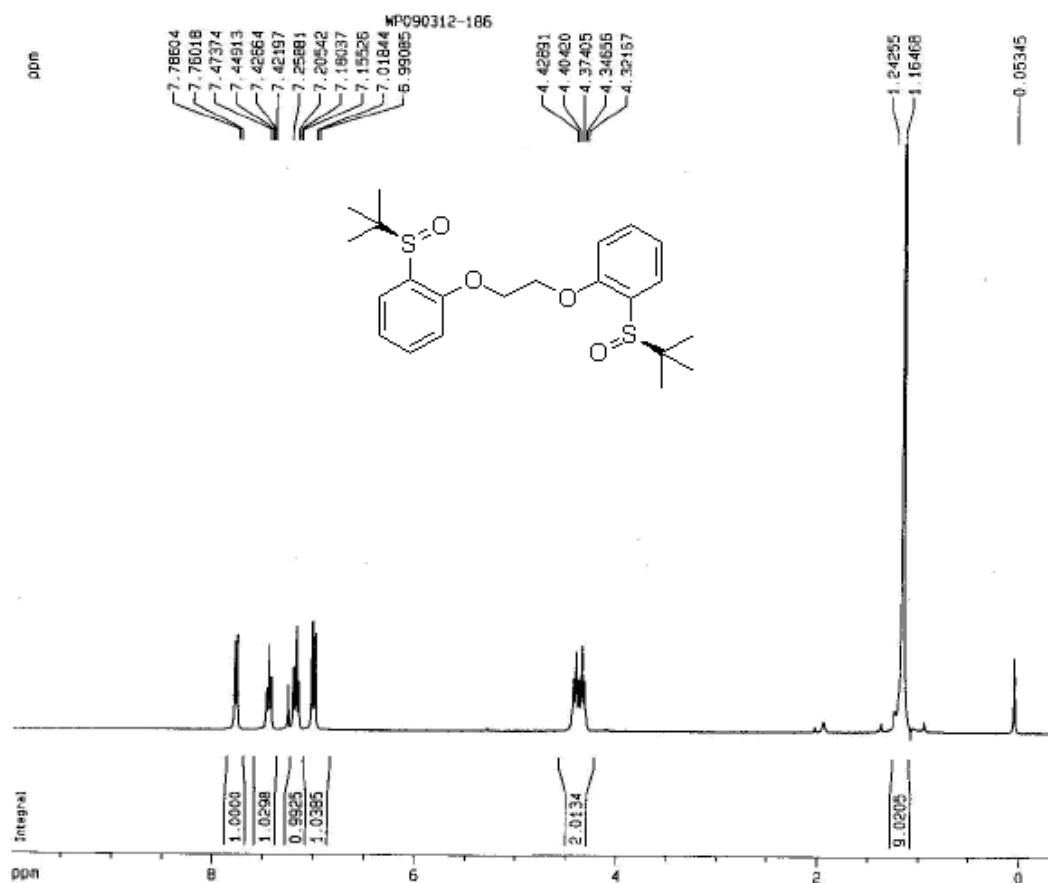


Sum	Formula	Sigma	m/z	Err [ppm]	Mean Err [ppm]	rdb	N Rule	e <sup>-</sup>			
C 18	H 22	Na 1	O 3	S 1	0.01	341.1182	-0.46	-1.13	7.50	ok	even



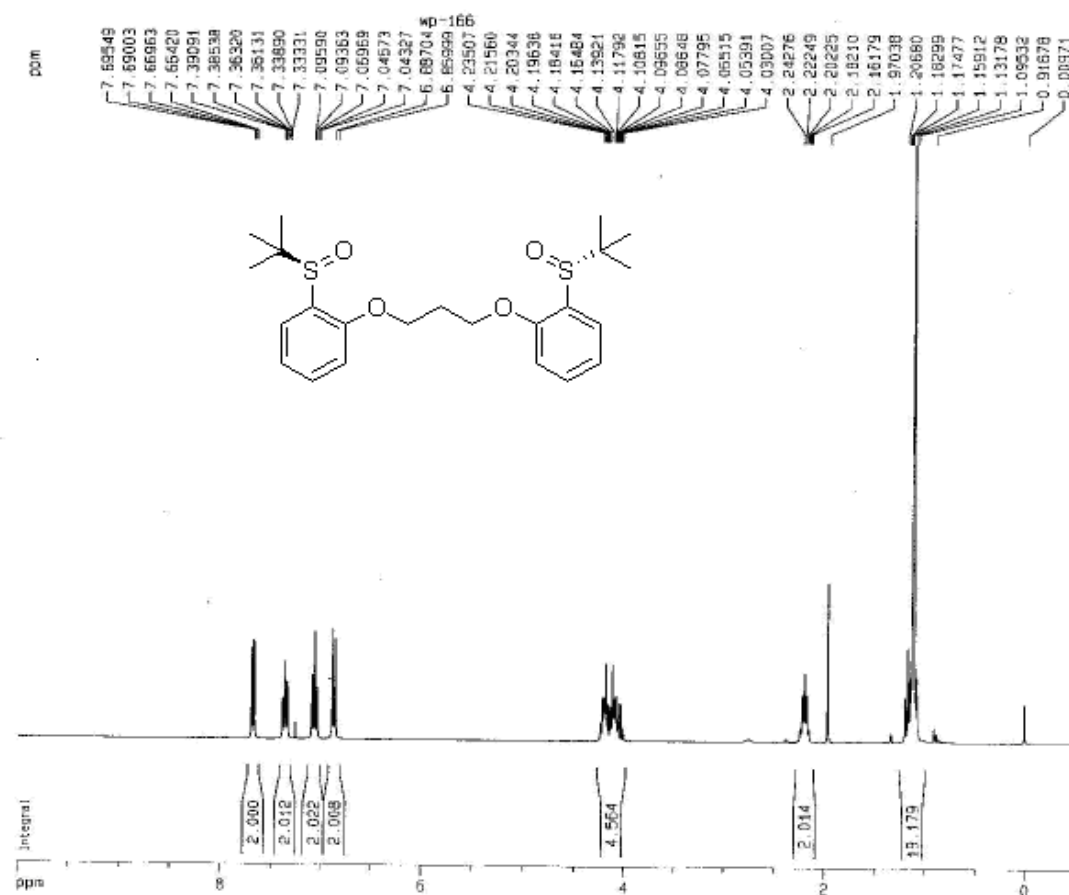
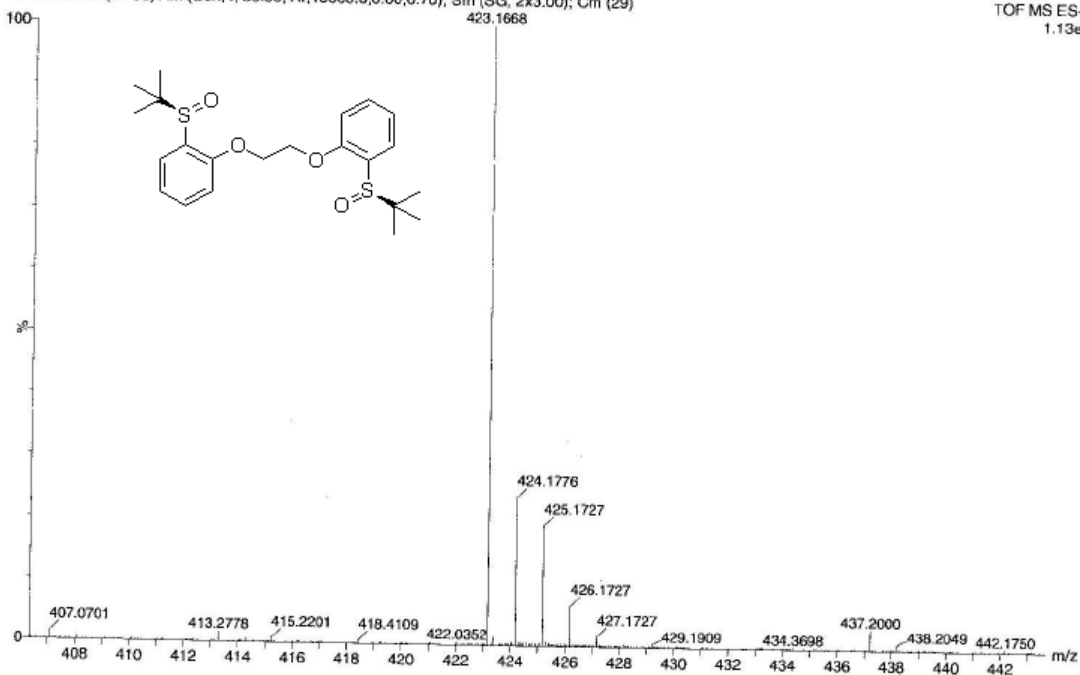


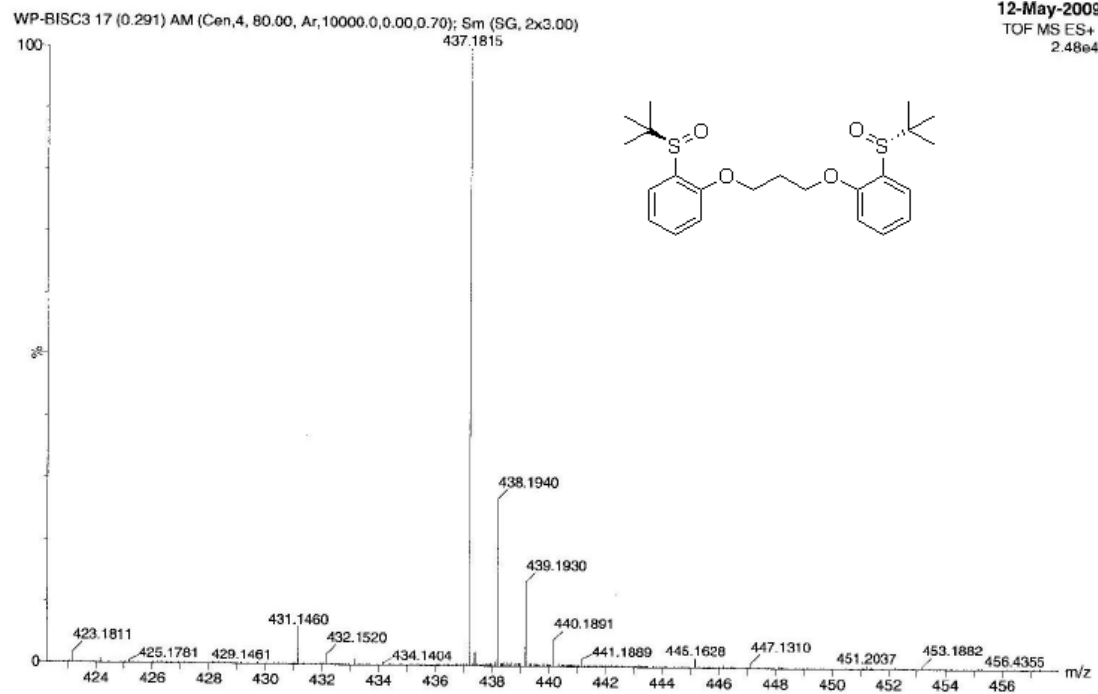
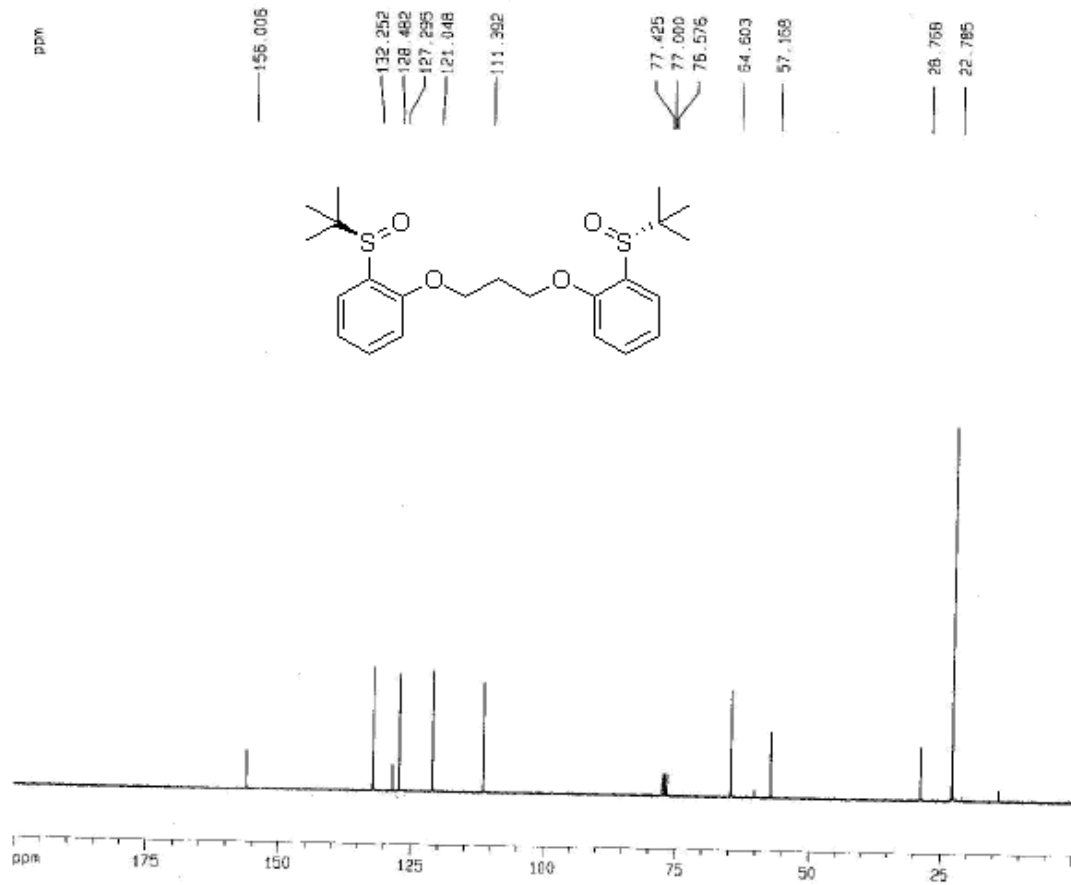


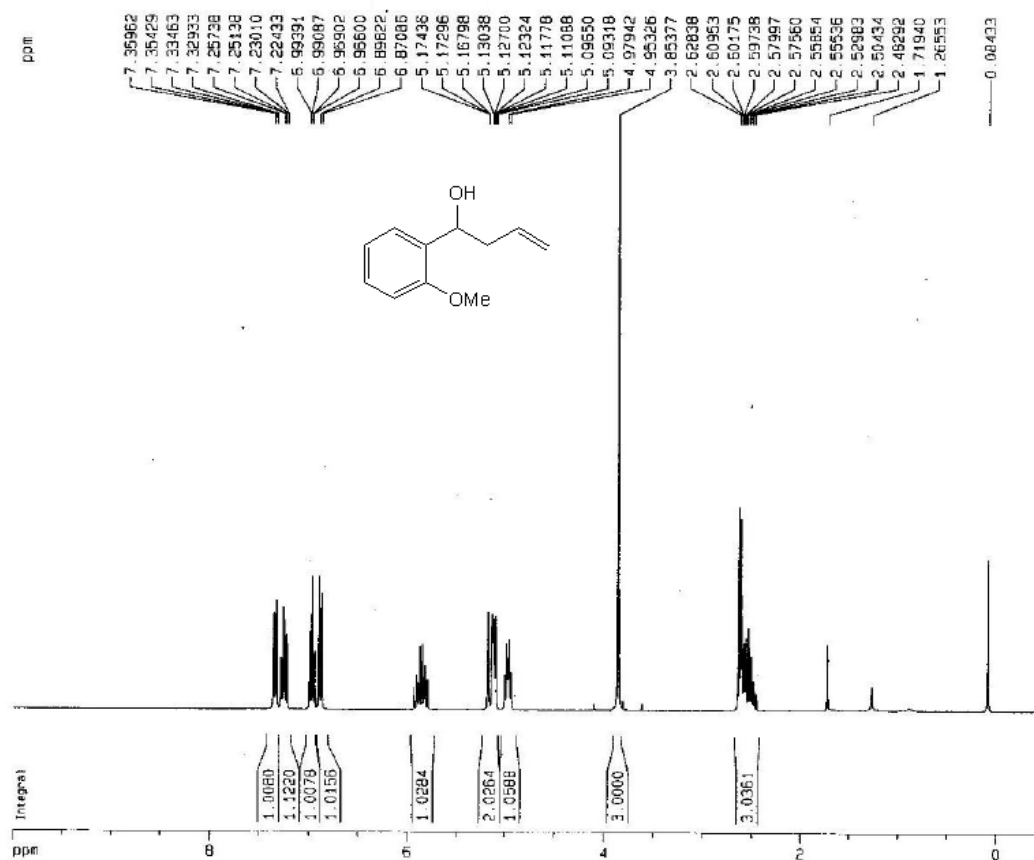
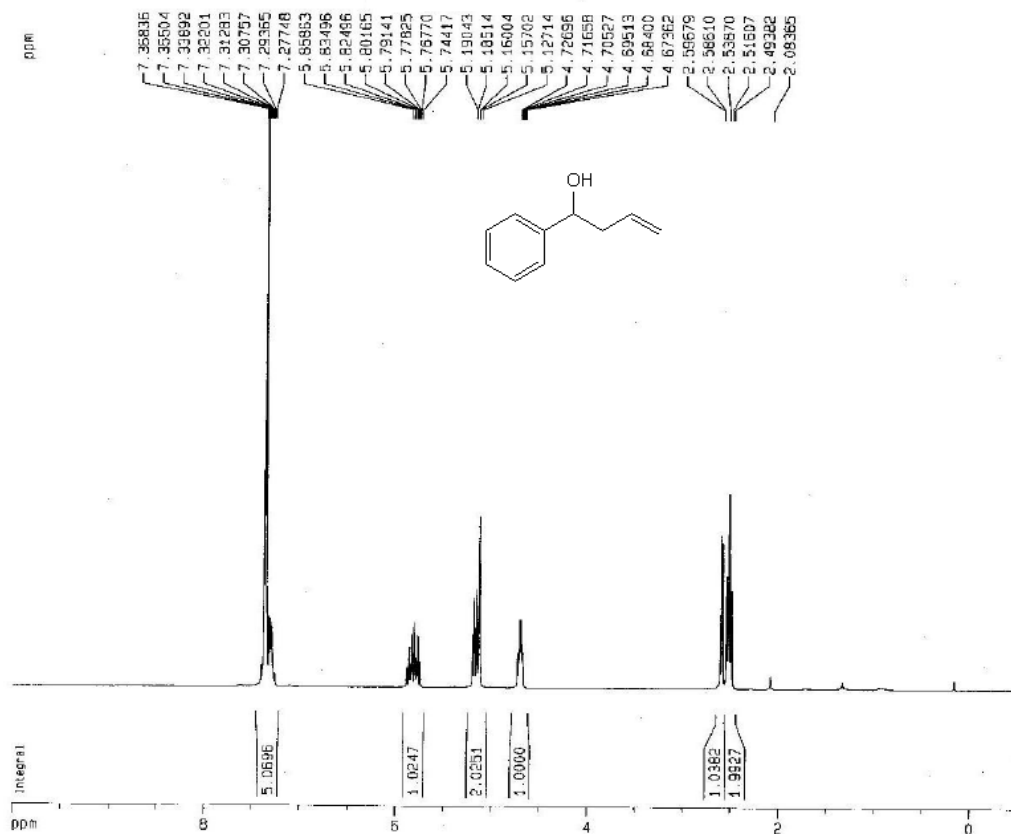


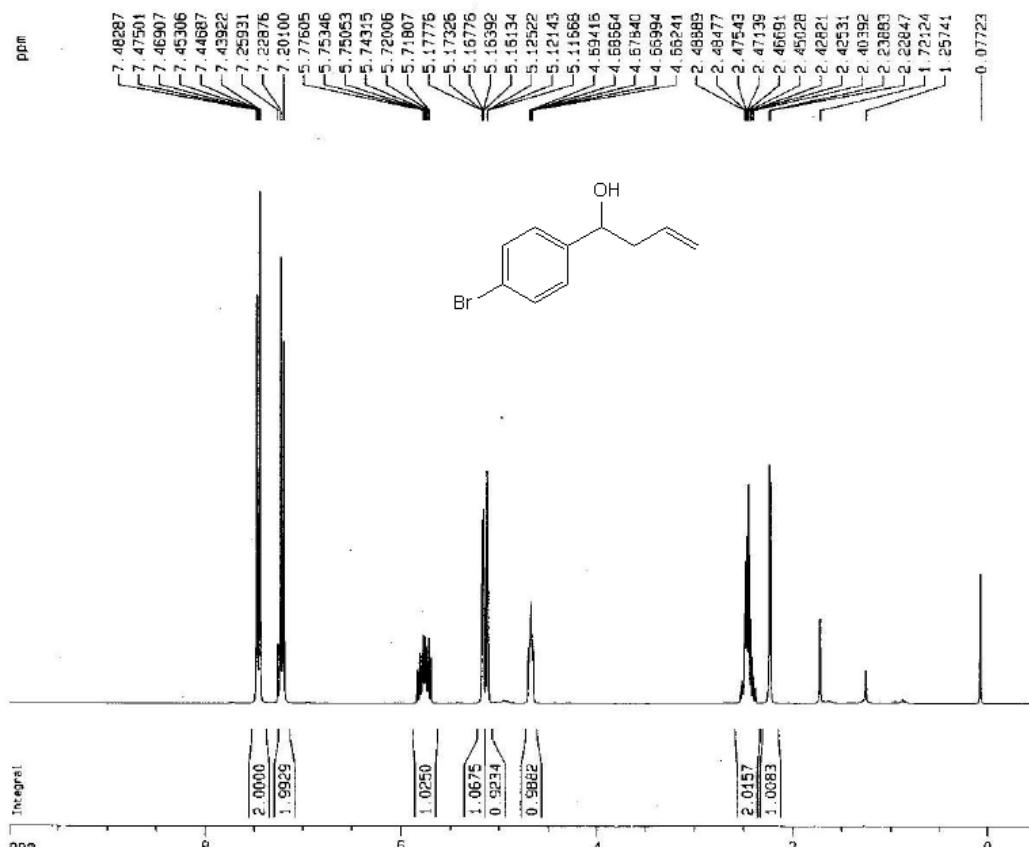
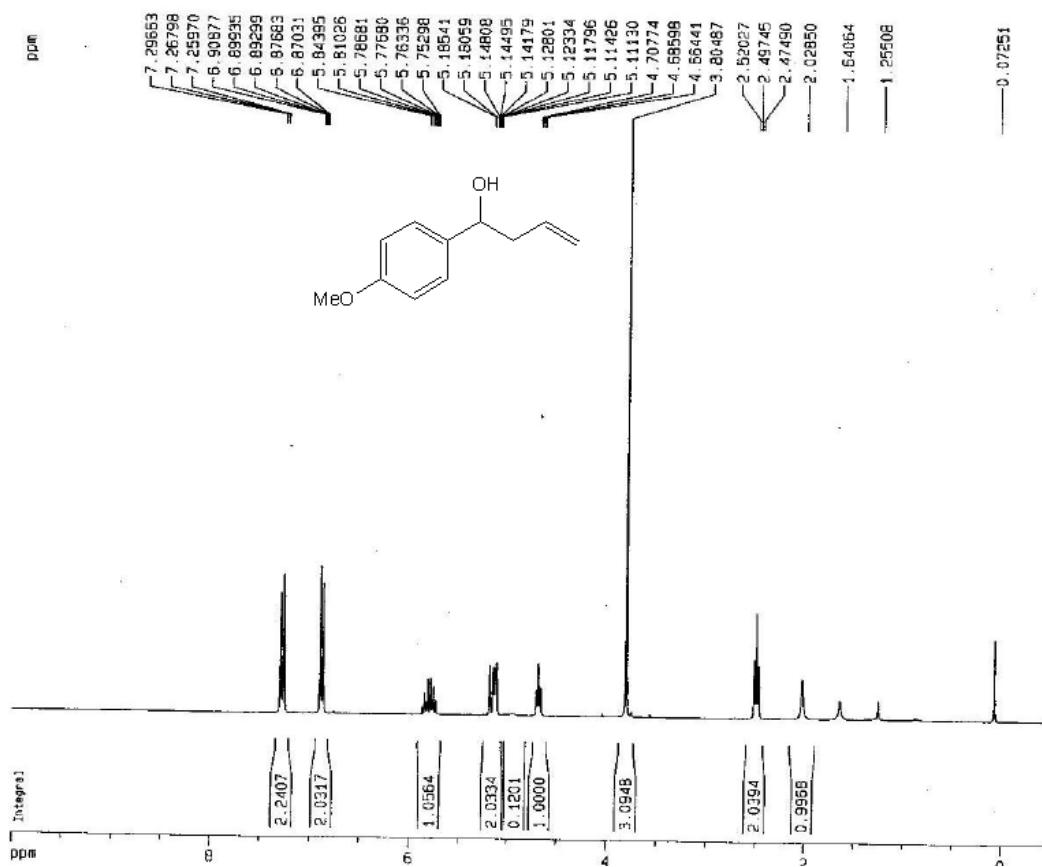
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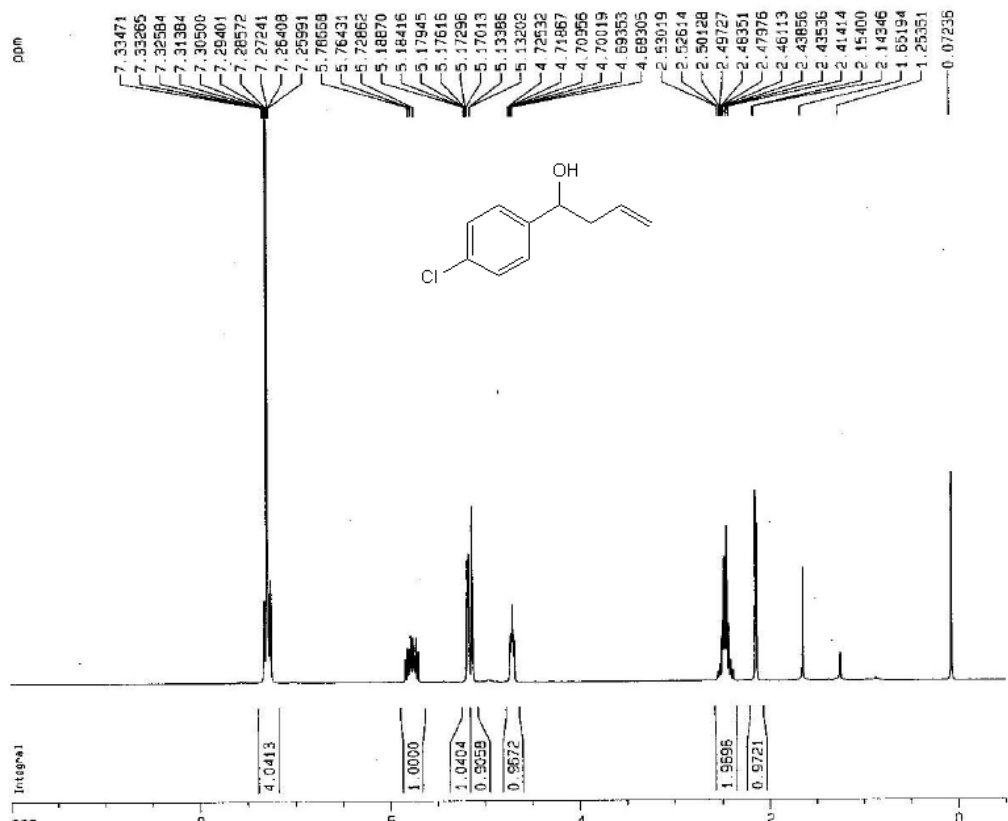
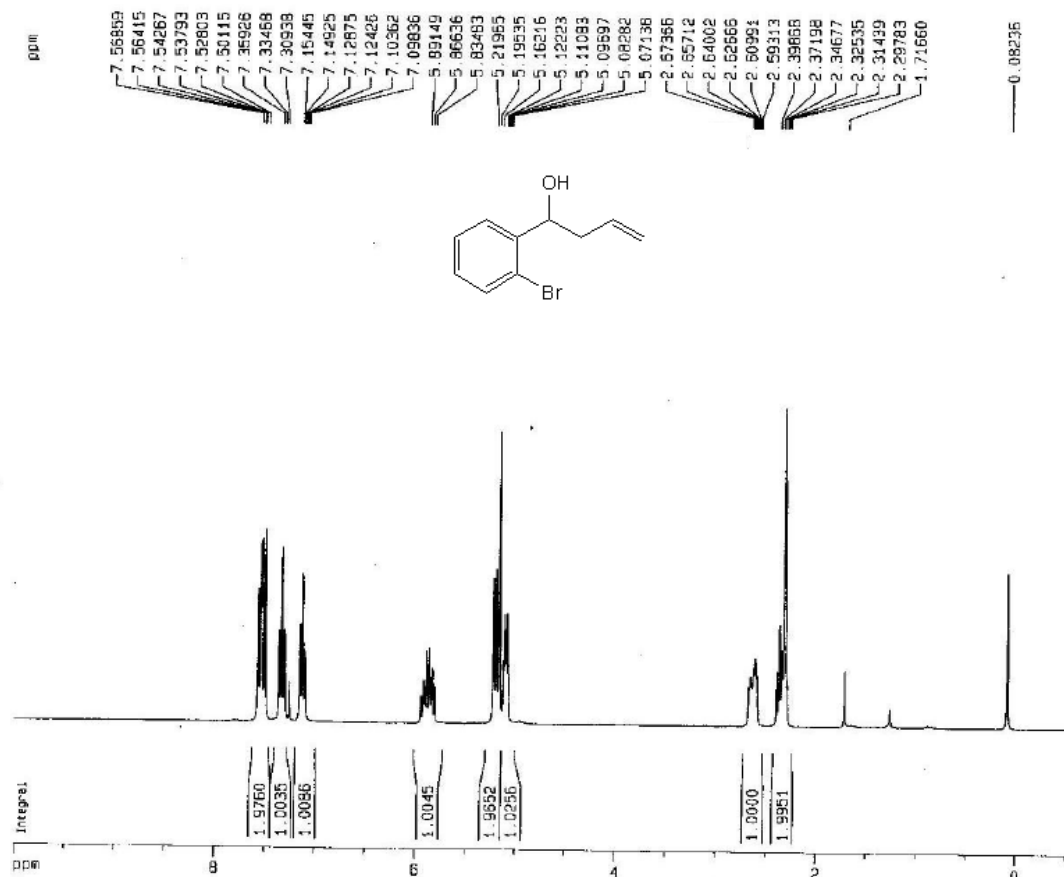
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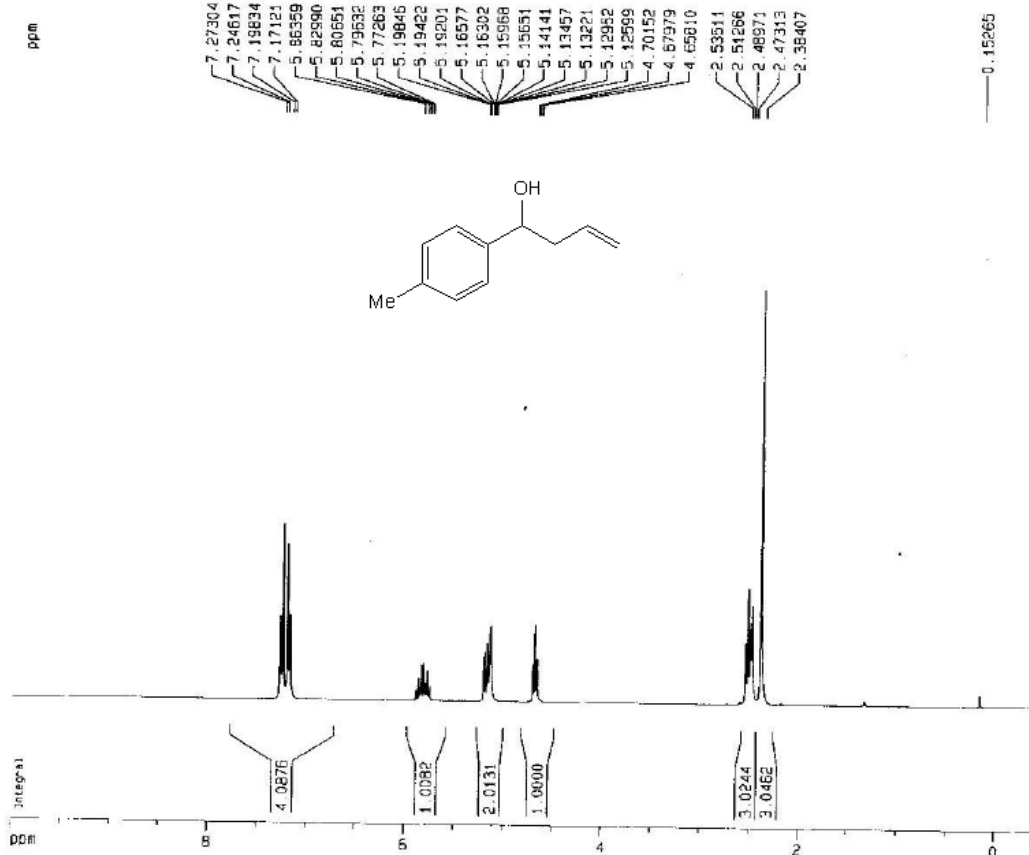
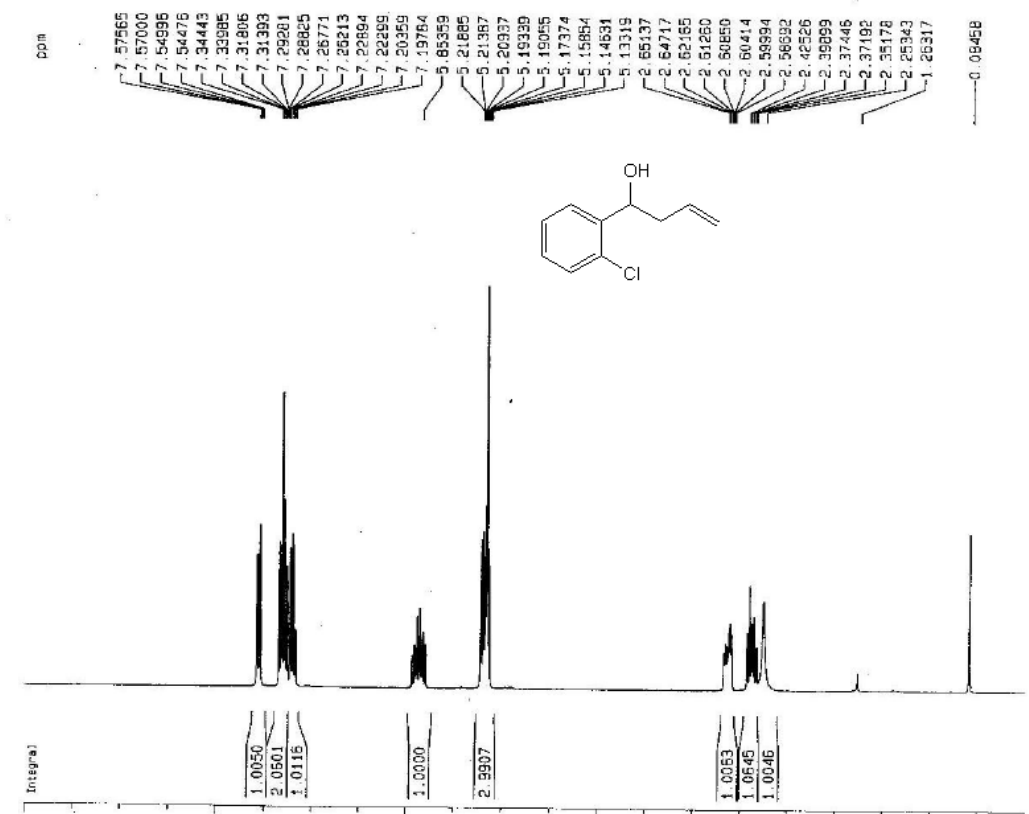


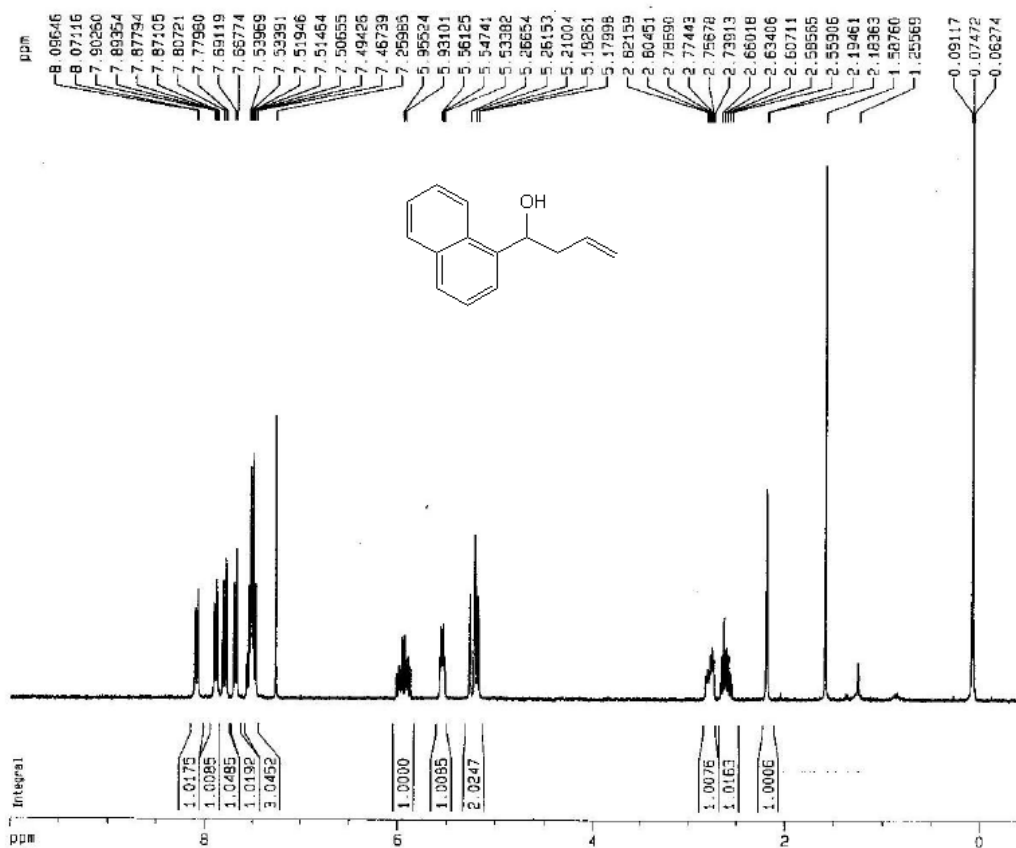
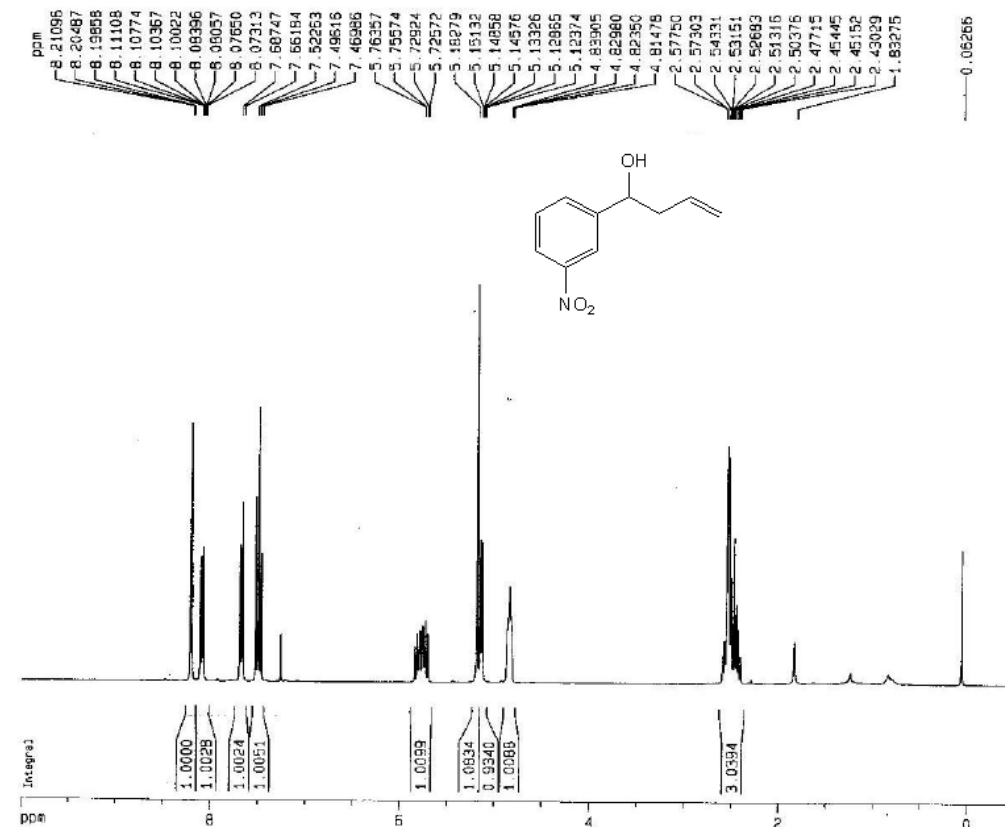




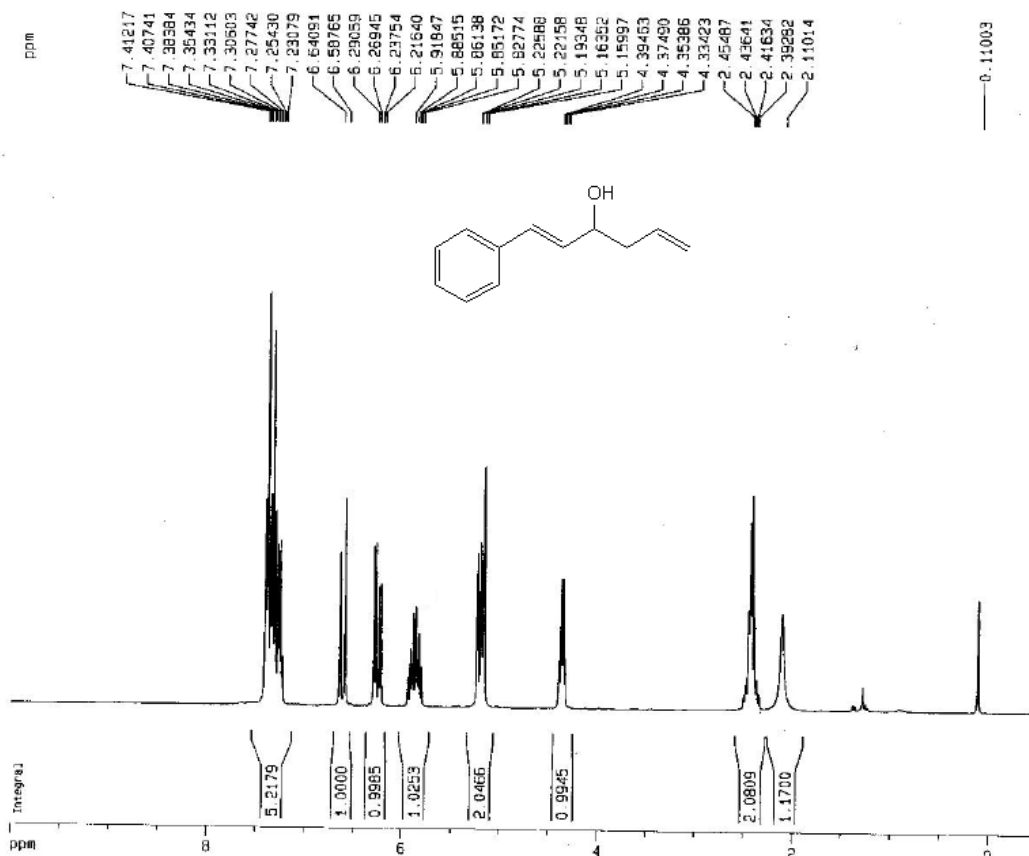




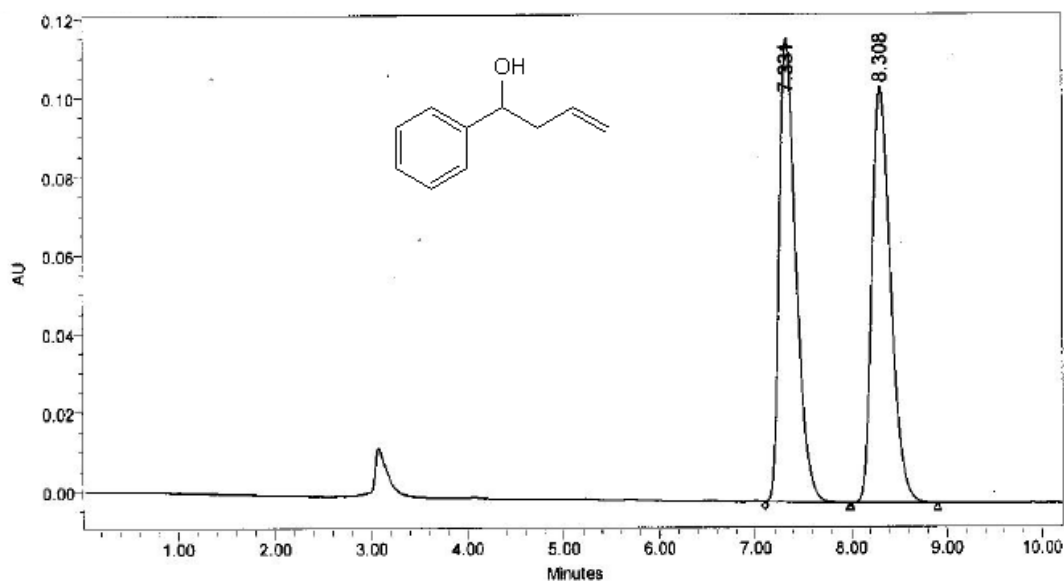




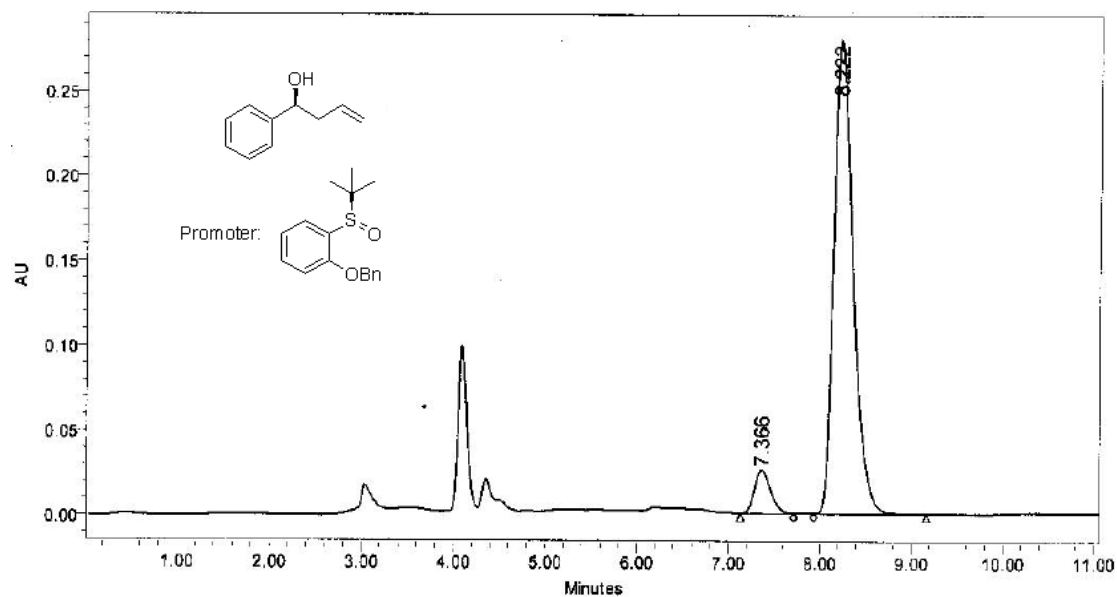




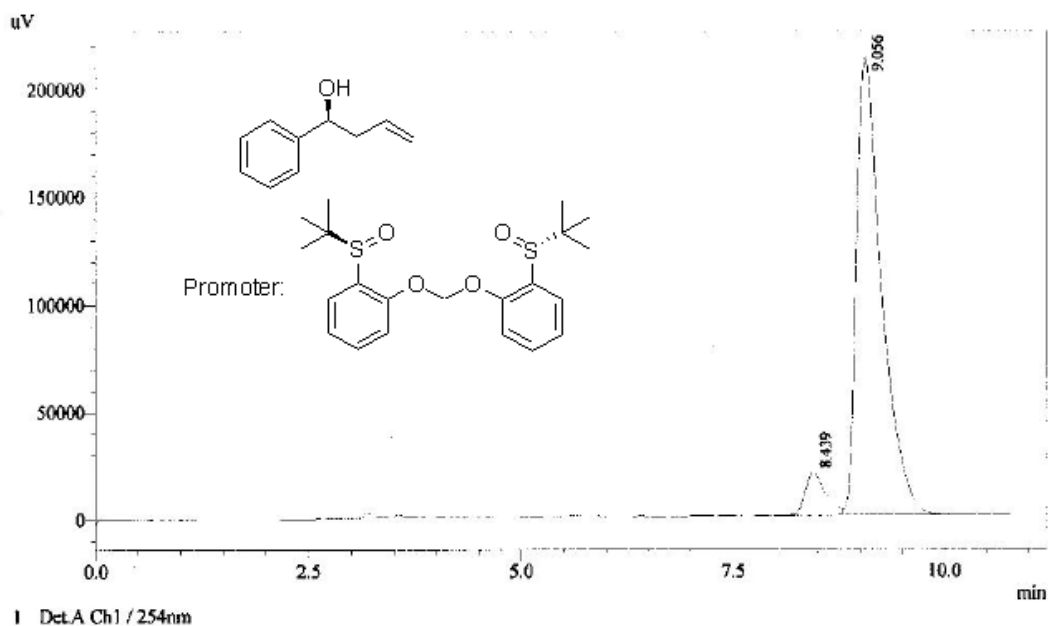
## 2. HPLC and GC chromatograms



	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	7.331	1419041	49.98	117965	52.61
2	8.308	1420375	50.02	106272	47.39

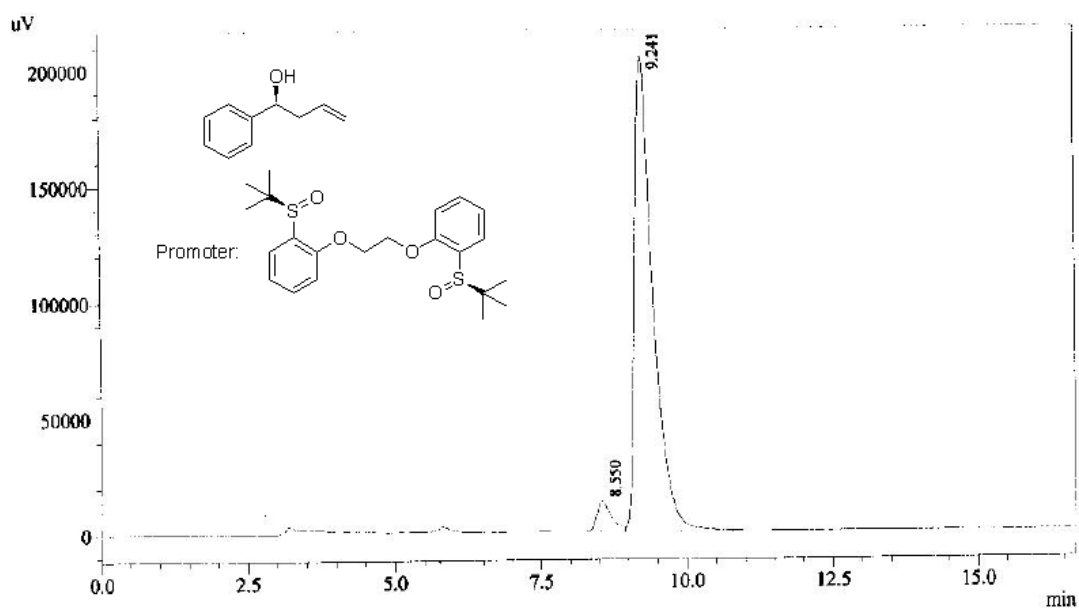


	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	7.366	310629	7.08	25666	8.38
2	8.222	4073710	92.92	280542	91.62



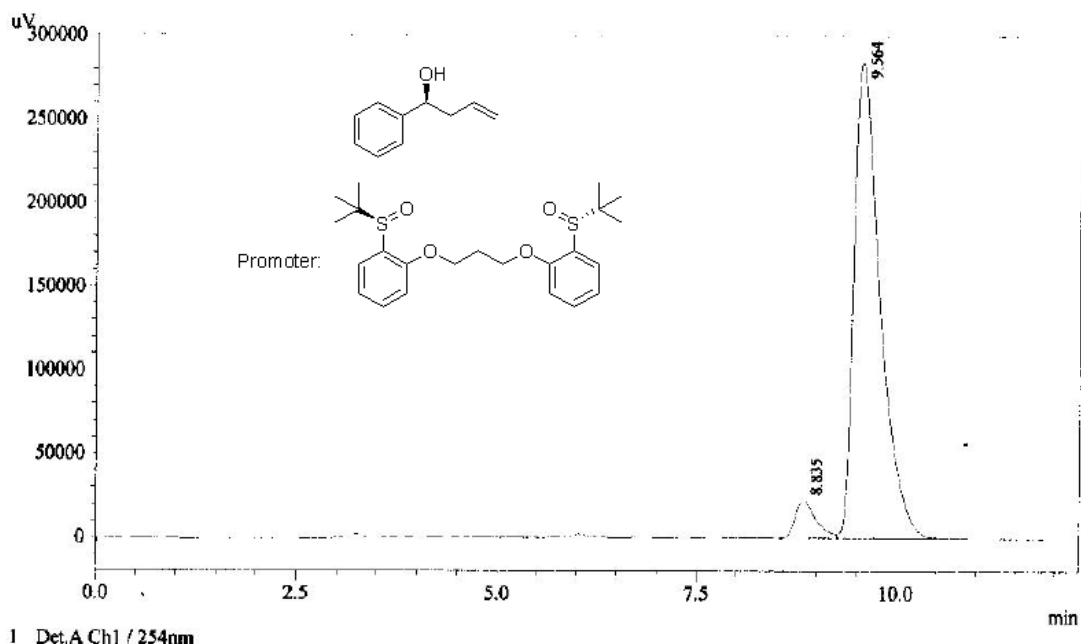
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	8.439	328765	19770	6.935	8.505
2	9.056	4411899	212691	93.065	91.495
Total		4740663	232461	100.000	100.000



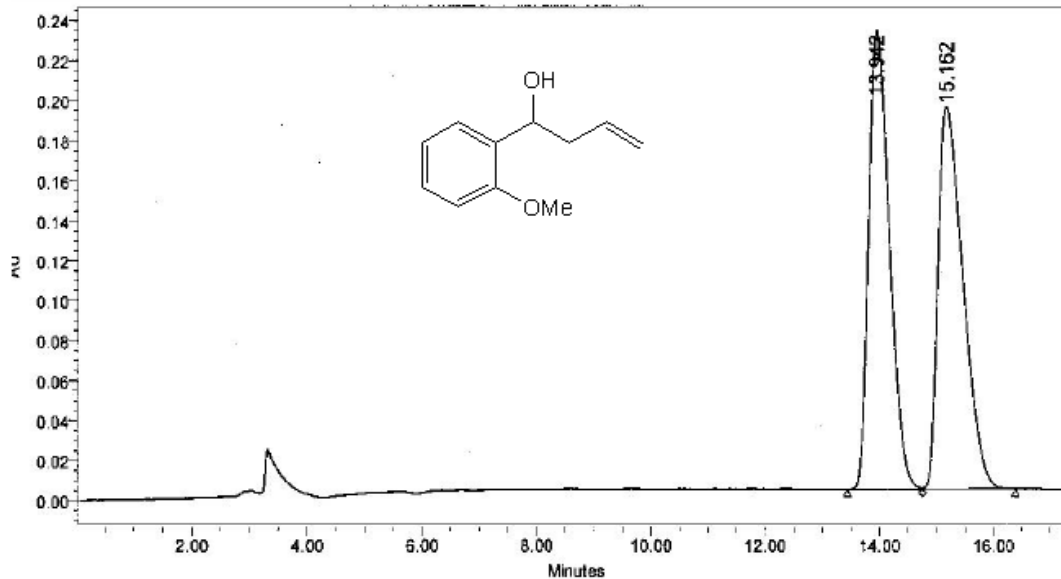
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	8.550	223223	12958	4.790	5.952
2	9.241	4436733	204736	95.210	94.048
Total		4659956	217694	100.000	100.000

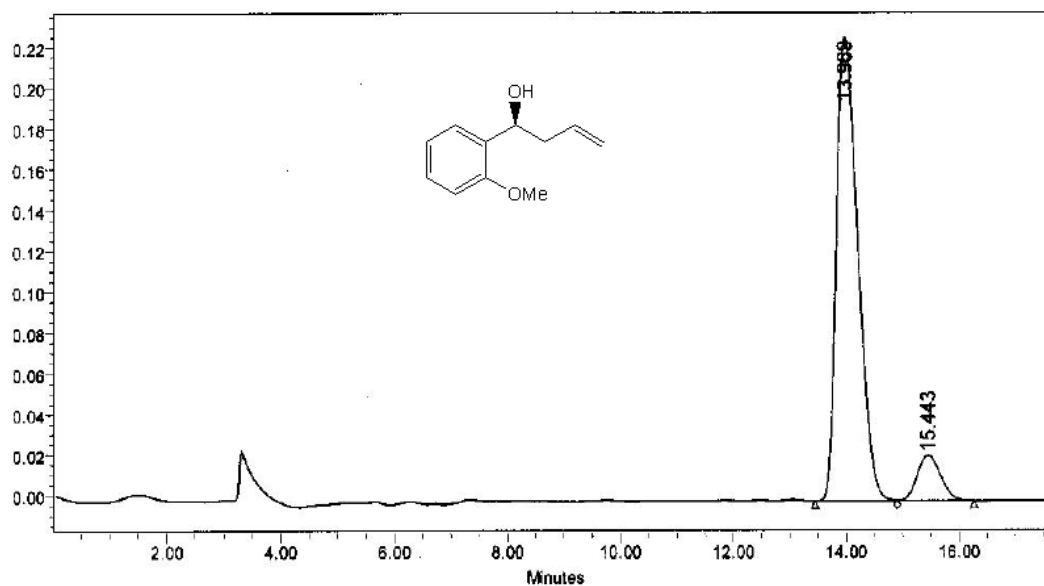


Detector A Ch1 254nm

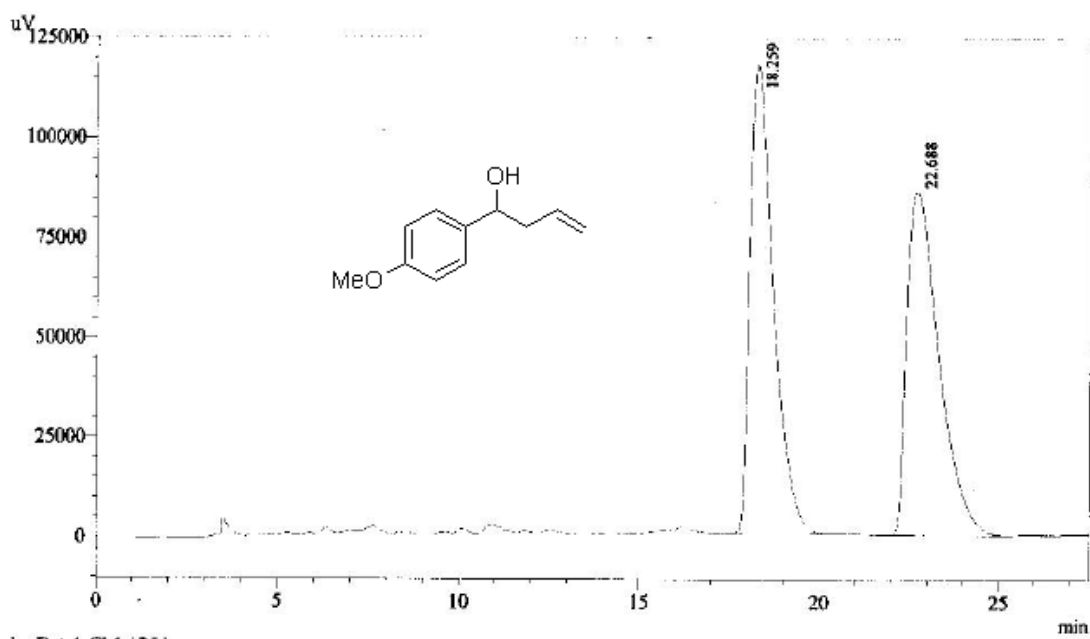
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1	8.835	411647	22992	5.966	7.483
2	9.564	6488016	284253	94.034	92.517
Total		6899663	307245	100.000	100.000



	RT (min)	Area (μV*sec)	% Area	Height (μV)	% Height
1	13.942	5792592	49.93	229749	54.60
2	15.162	5808656	50.07	191025	45.40



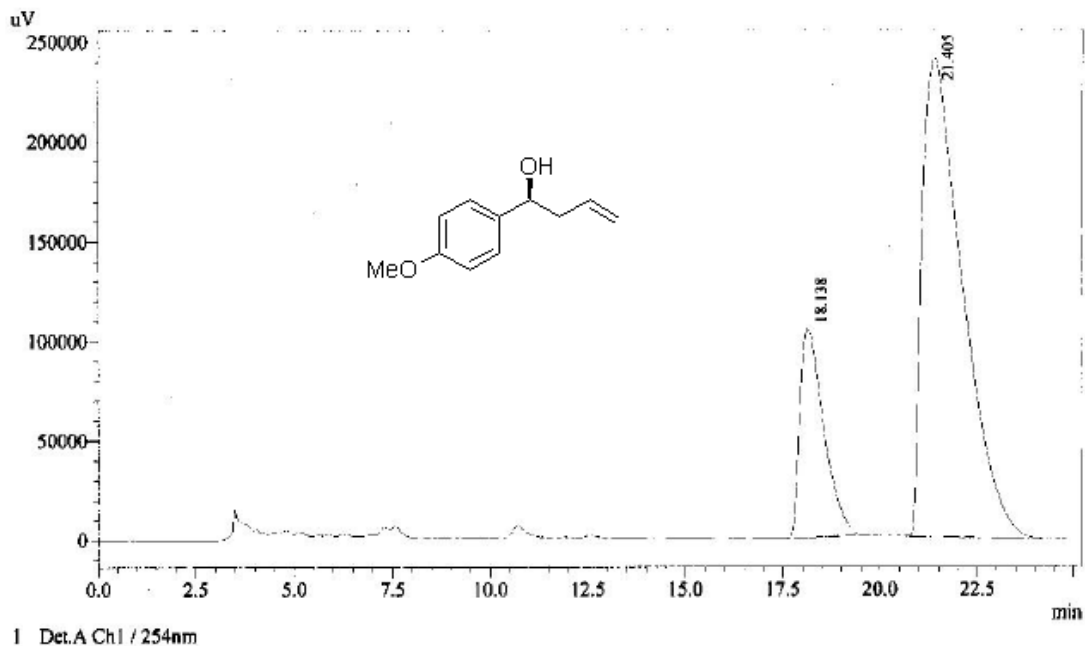
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1	13.969	6003890	90.43	228347	91.11
2	15.443	635470	9.57	22294	8.89



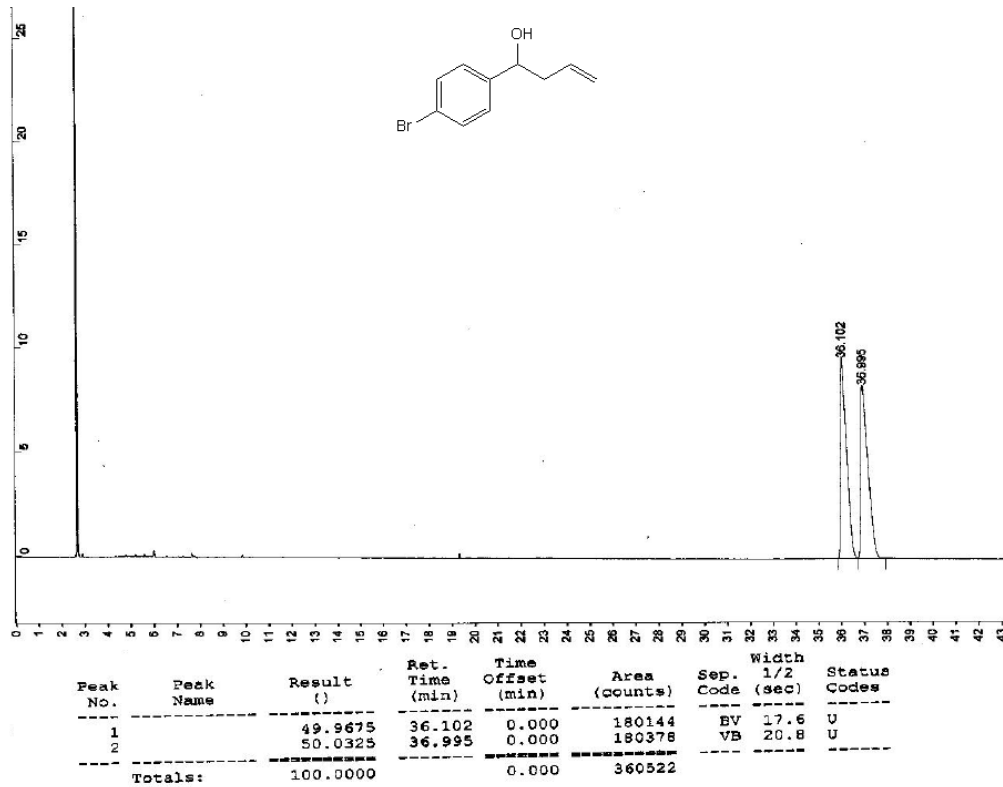
1 Det.A Ch1 / 254nm

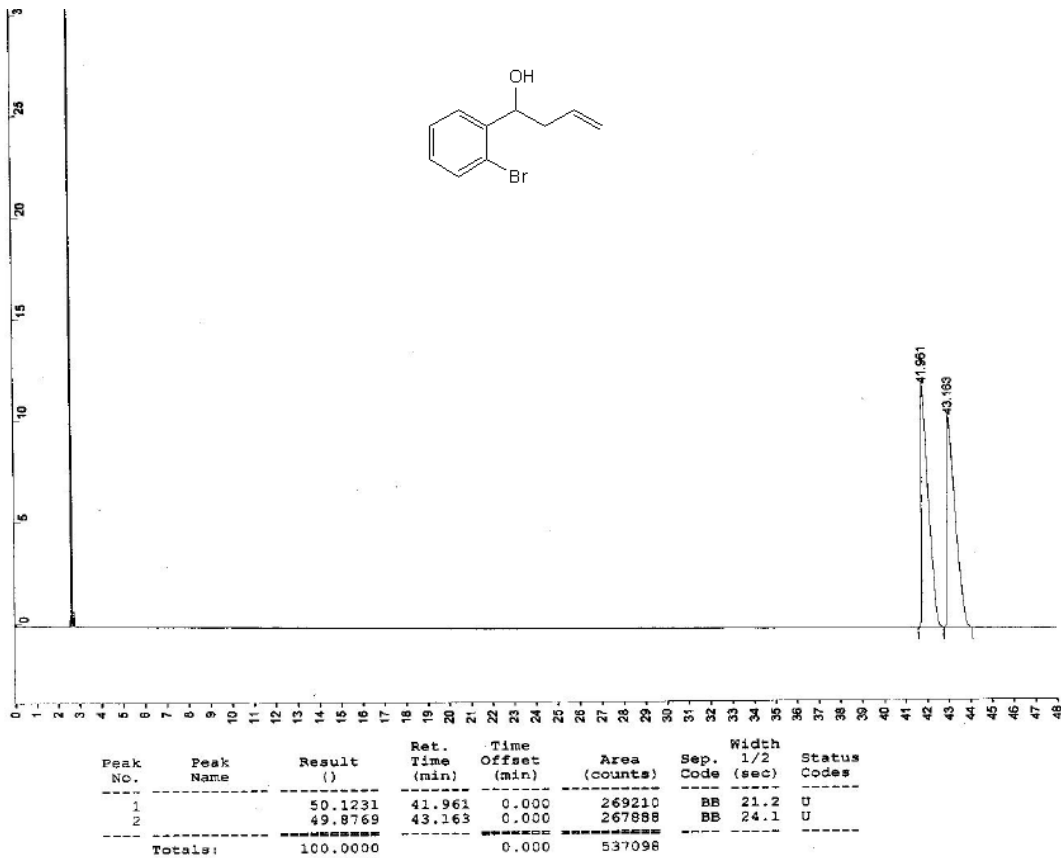
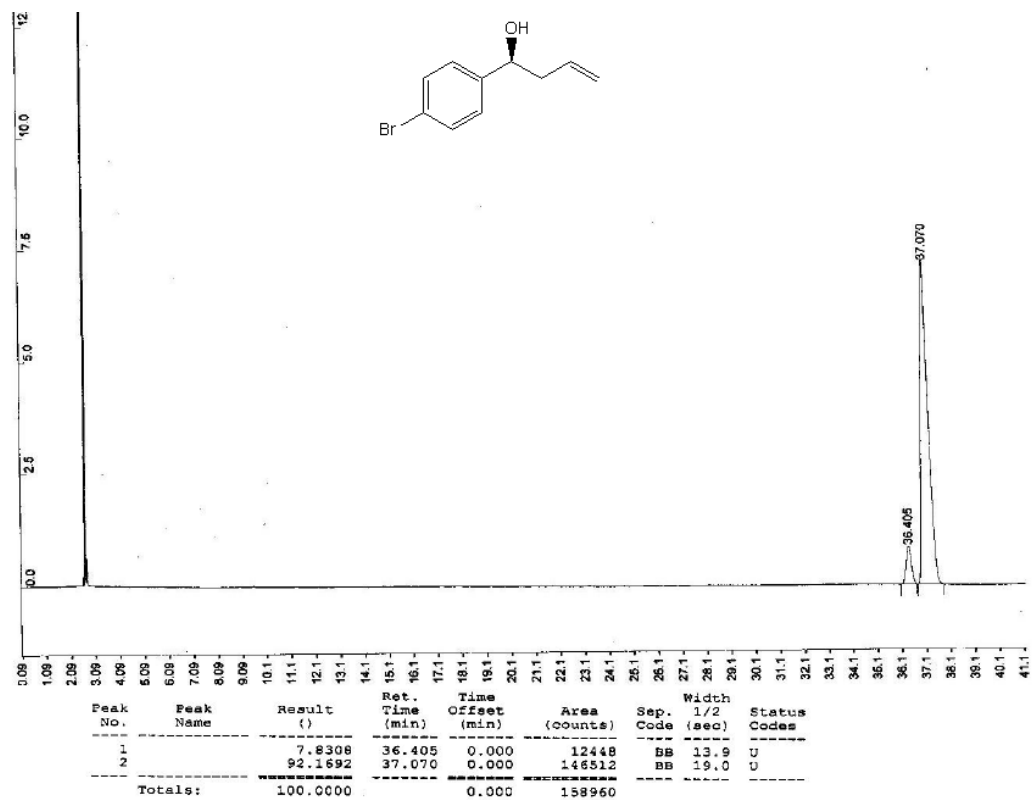
Detector A Ch1 254nm

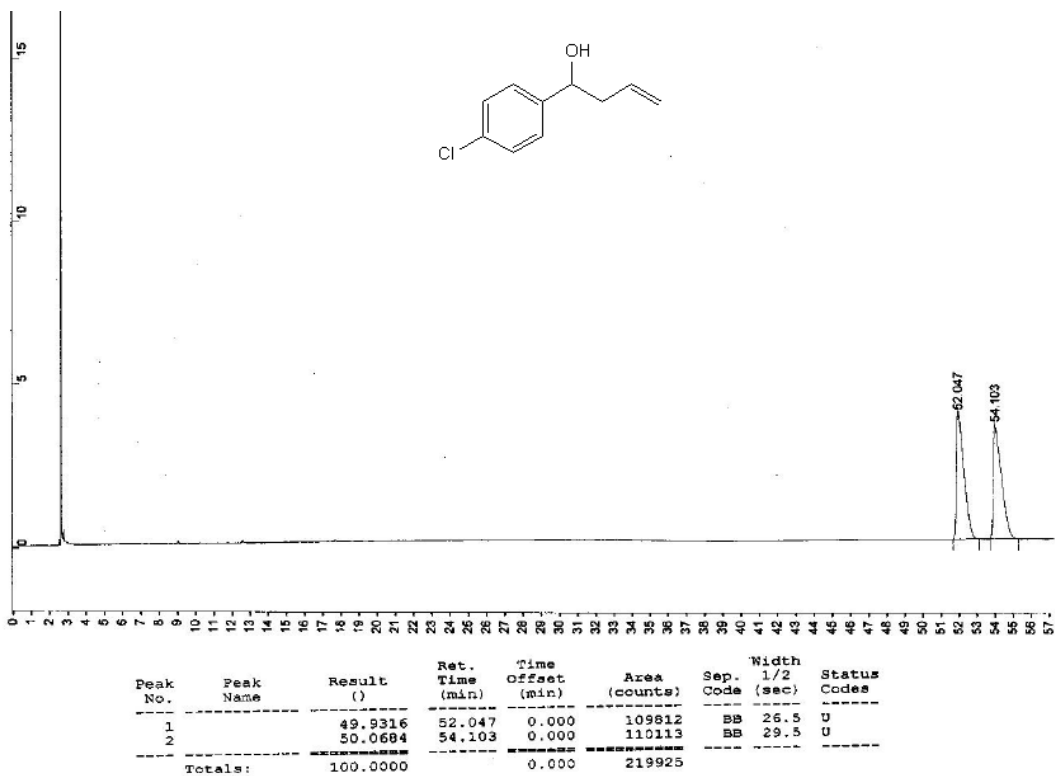
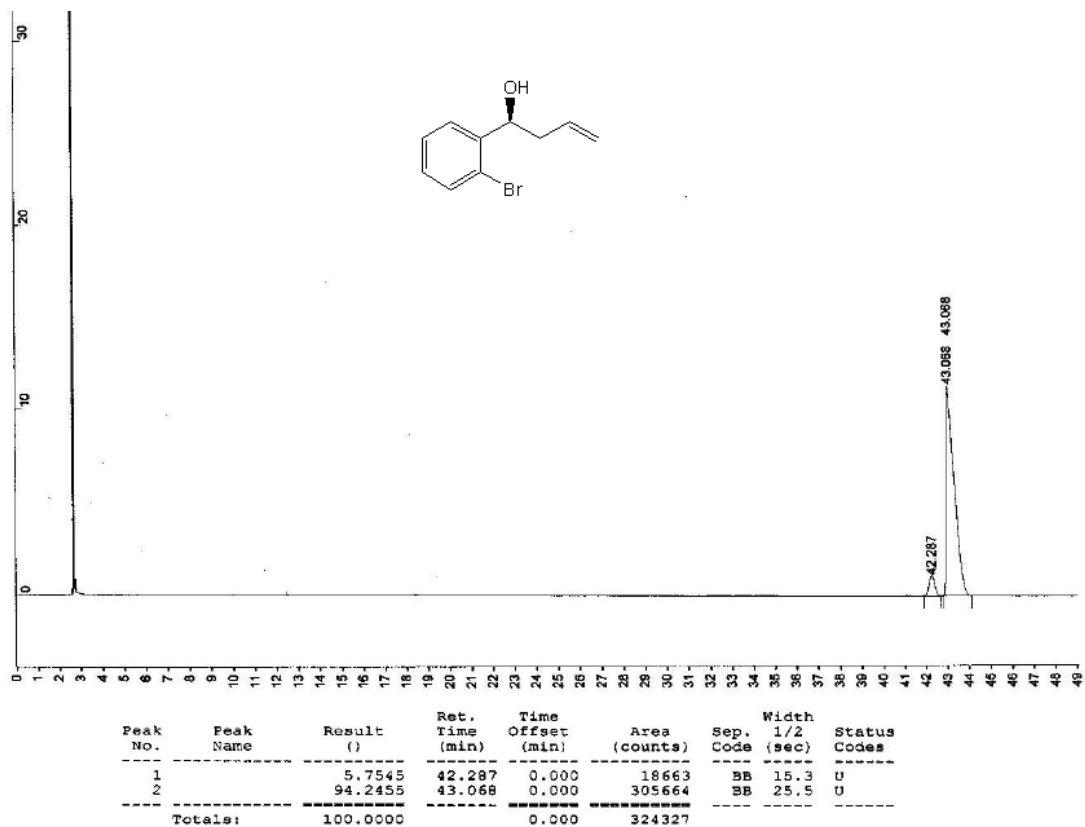
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1	18.259	5314079	117233	49.779	57.691
2	22.688	5361321	85977	50.221	42.309
Total		10675399	203210	100.000	100.000



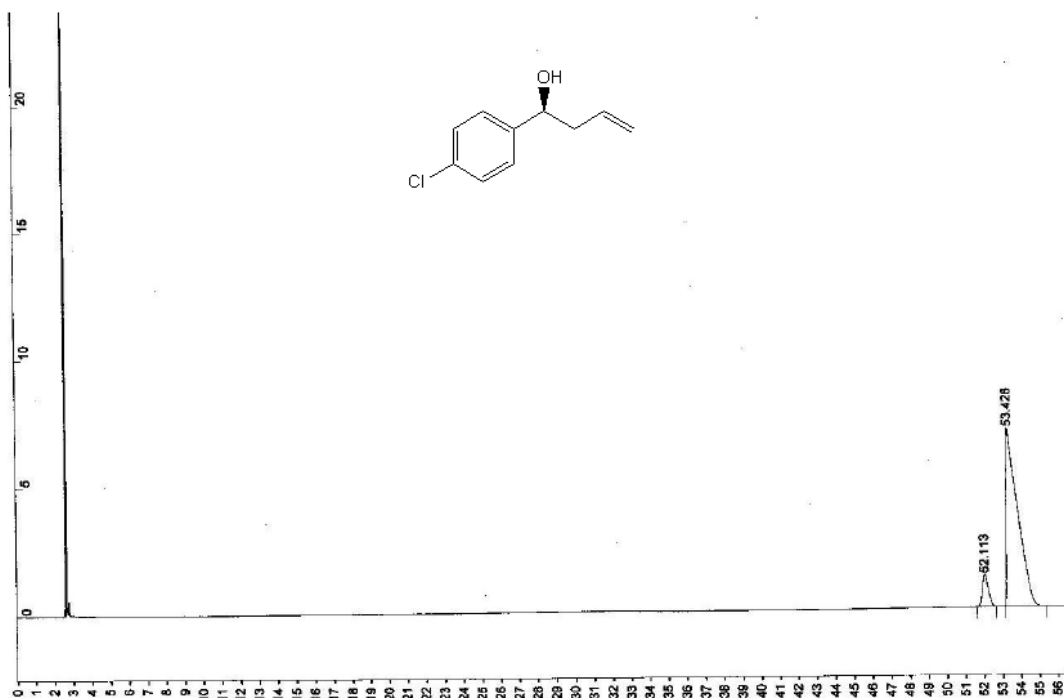
Peak#	Ret. Time	Area	Height	Area %	Height %
1	18.138	4502072	105761	20.465	30.501
2	21.405	17496331	240989	79.535	69.499
<b>Total</b>		<b>21998403</b>	<b>346750</b>	<b>100.000</b>	<b>100.000</b>



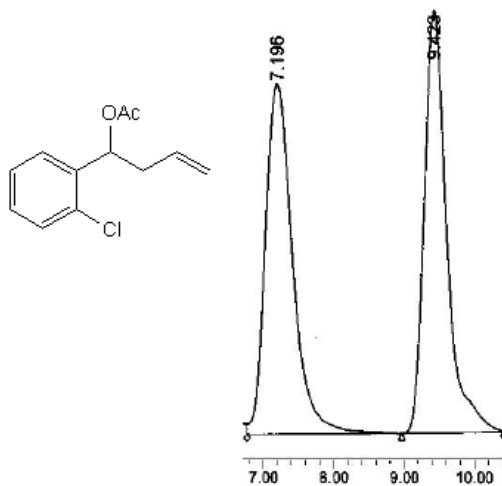




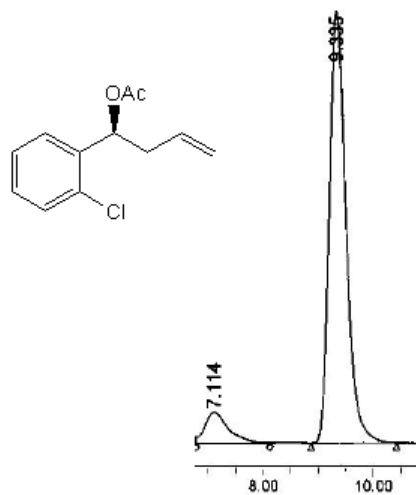




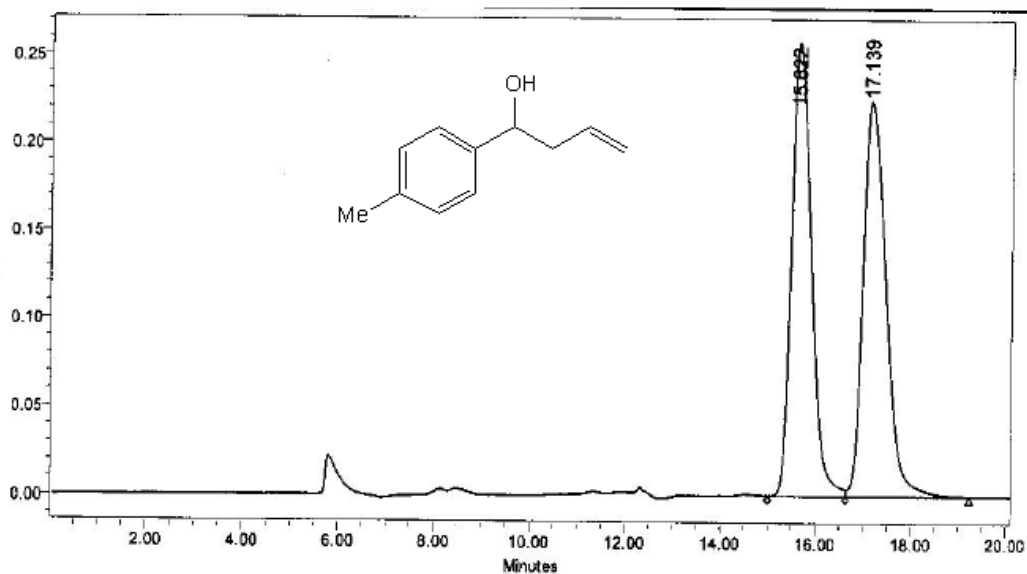
Peak No.	Peak Name	Result (°)	Ret. Time (min)	Time Offset (min)	Area (counts)	Sep. Code	Width 1/2 (sec)	Status Codes
1		8.5800	52.113	0.000	27990	BB	20.5	U
2		91.4200	53.426	0.000	298238	BB	40.9	U
Totals:		100.0000		0.000	326228			



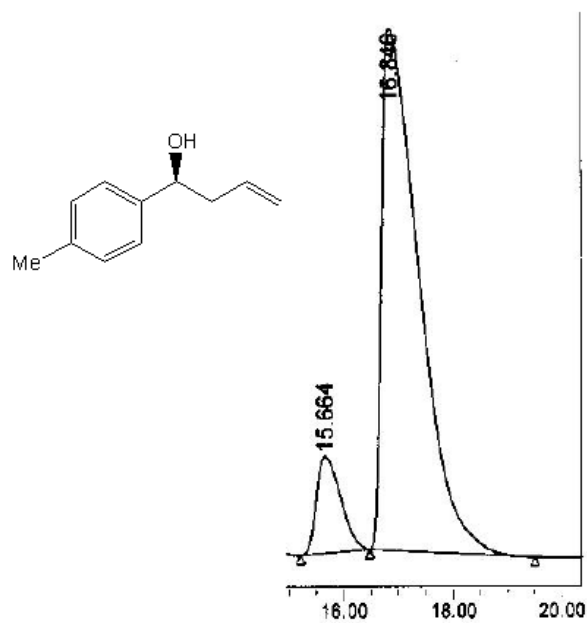
RT (min)	Area (μV*sec)	% Area	Height (μV)	% Height
1 7.196	3488397	50.12	130023	45.27
2 9.423	3471874	49.88	157196	54.73



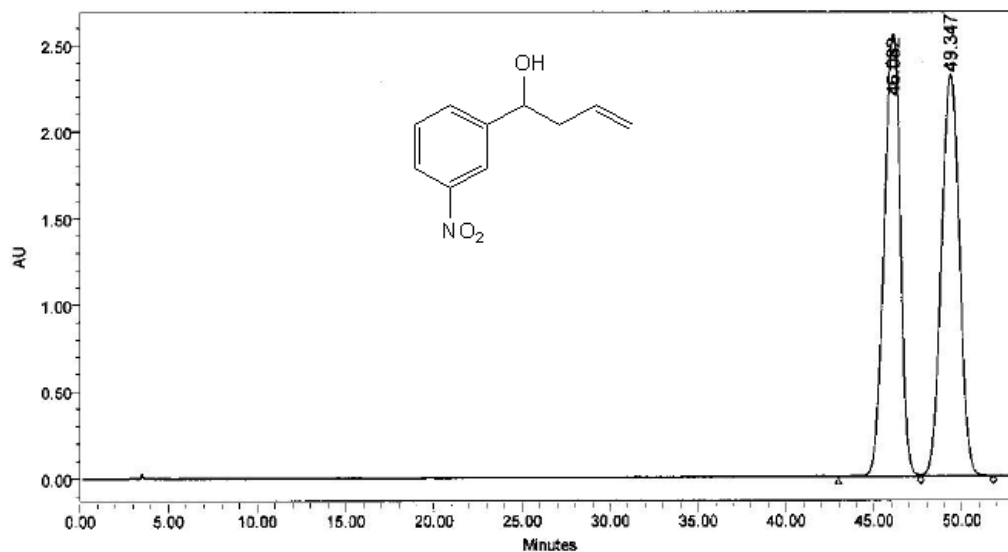
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	7.114	384546	9.37	12993	6.81
2	9.335	3721363	90.63	177762	93.19



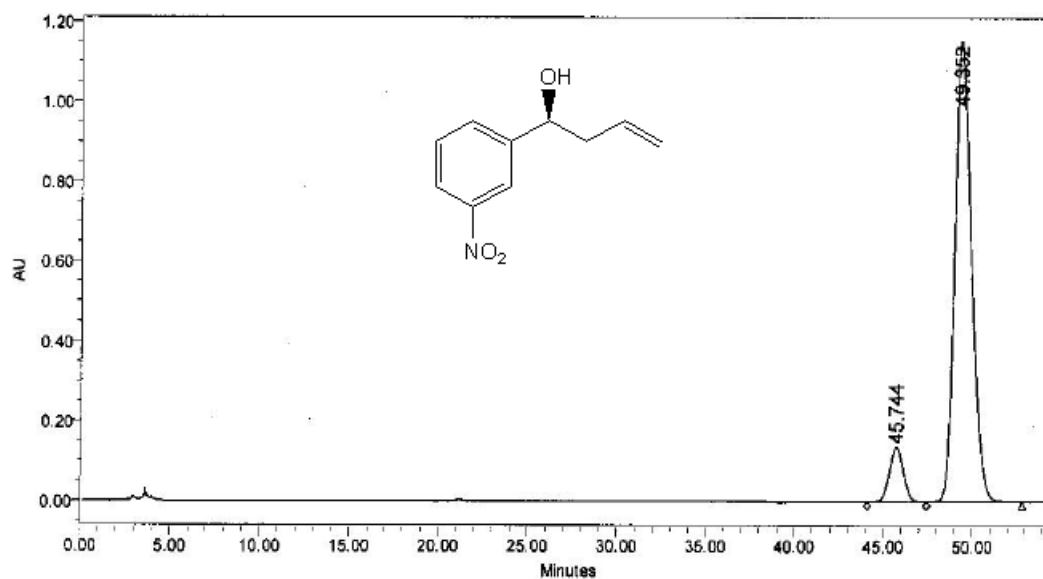
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	15.622	7362450	49.78	257692	53.47
2	17.139	7446322	50.22	224270	46.53



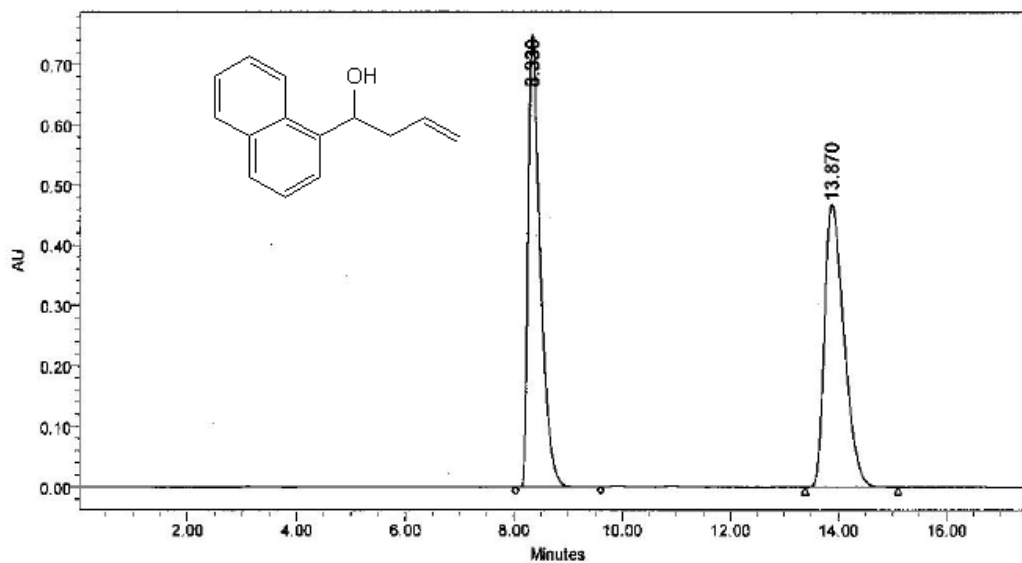
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	15.664	4196280	10.67	137381	15.58
2	16.846	35145704	89.33	744285	84.42



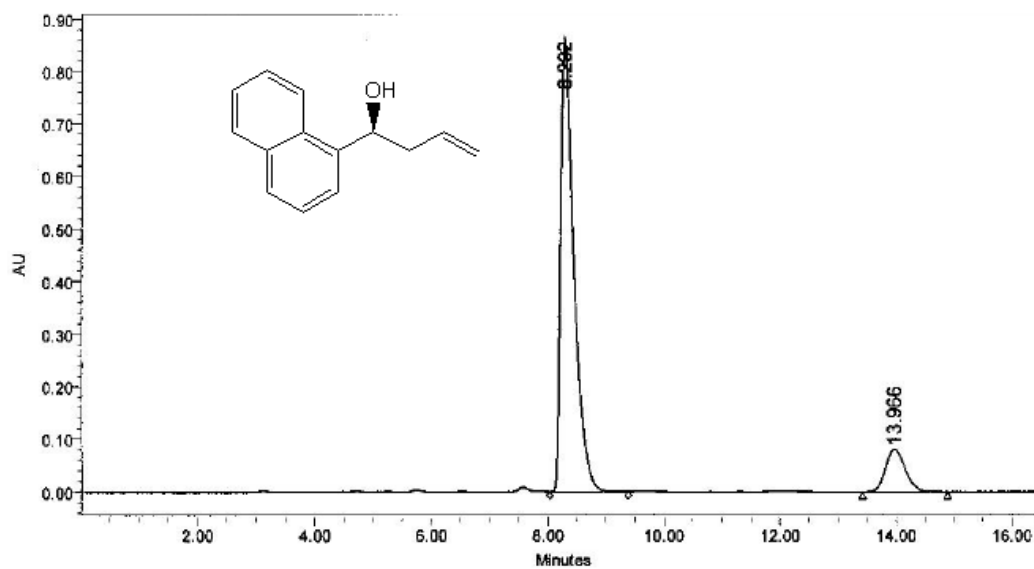
RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1 46.082	163643877	49.74	2552228	52.48
2 49.347	165324881	50.26	2311237	47.52



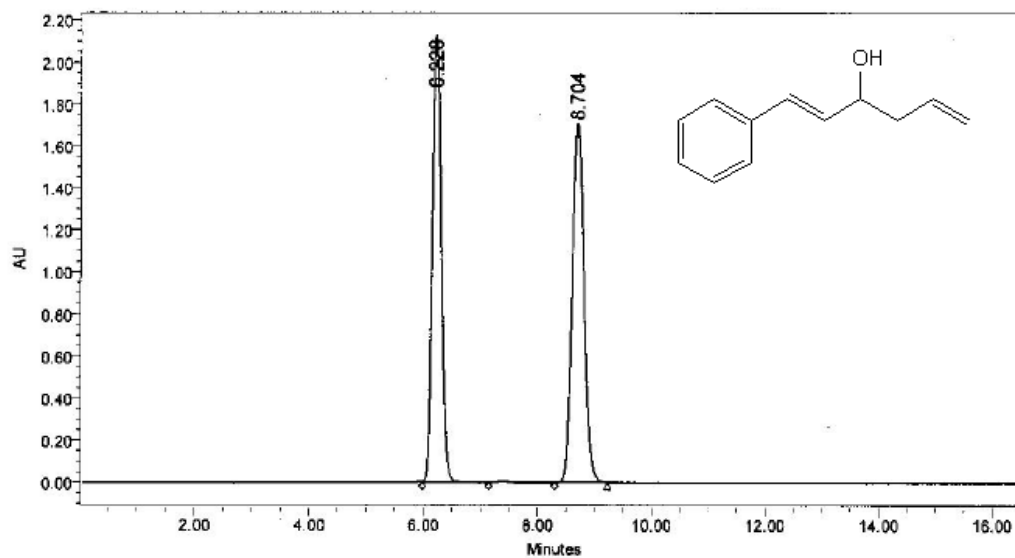
RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1 45.744	7567399	9.14	137403	10.64
2 49.352	75283192	90.86	1153588	89.36



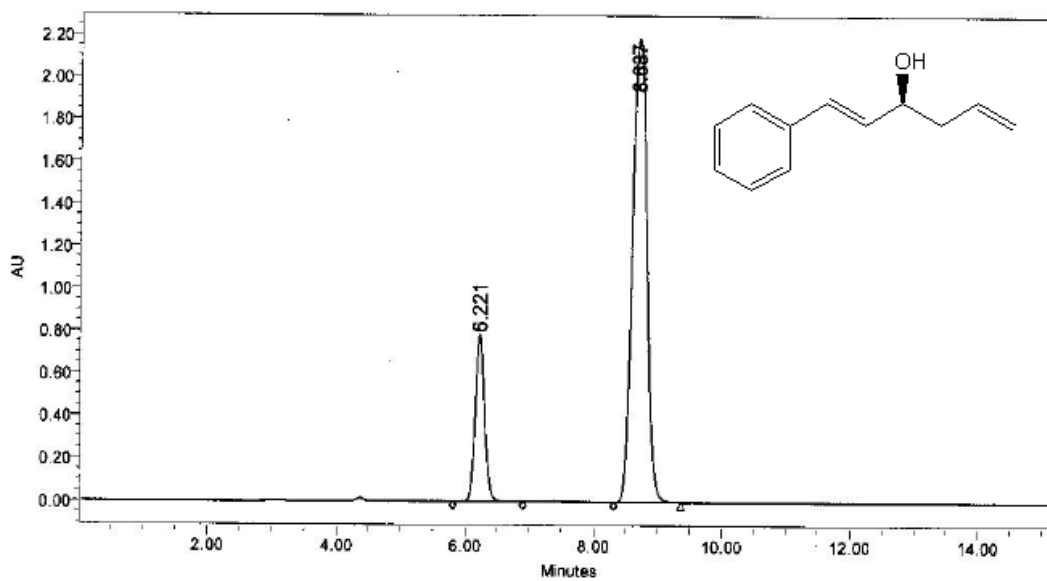
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	8.330	11698479	50.00	749686	61.56
2	13.870	11698625	50.00	468067	38.44



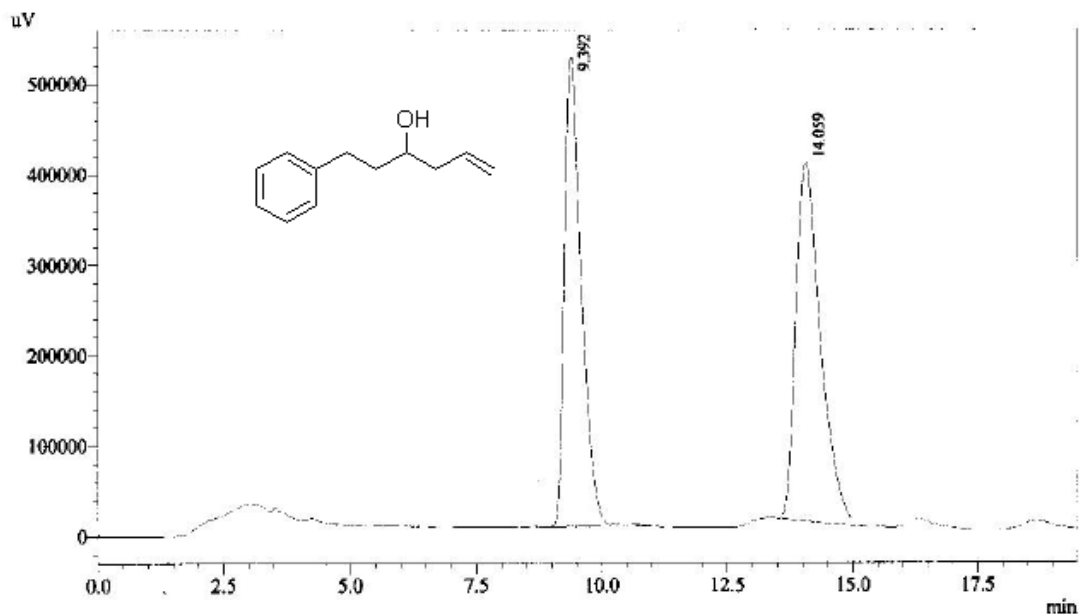
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	8.292	13645550	88.11	870397	91.60
2	13.966	1840549	11.89	79810	8.40



	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	6.228	23424960	48.70	2134865	55.51
2	8.704	24671964	51.30	1710869	44.49



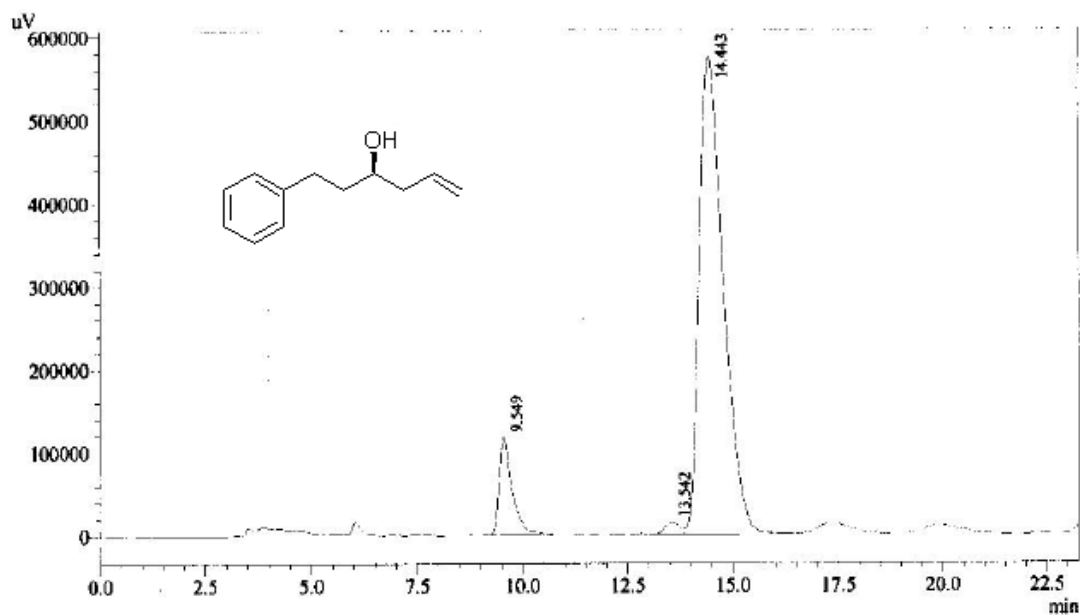
	RT (min)	Area ( $\mu\text{V}\cdot\text{sec}$ )	% Area	Height ( $\mu\text{V}$ )	% Height
1	6.221	7821006	18.72	782885	26.37
2	8.687	33947847	81.28	2185823	73.63



1 Det.A Ch1 / 220nm

Detector A Ch1 220nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	9.392	12303203	519344	47.637	56.719
2	14.059	13523735	396297	52.363	43.281
Total		25826937	915641	100.000	100.000



1 Det.A Ch1 / 220nm

Detector A Ch1 220nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	9.549	2544613	118420	9.869	16.727
2	13.542	369291	15133	1.432	2.138
3	14.443	22868953	574403	88.698	81.135
Total		25782857	707957	100.000	100.000