Supporting information for

Copper(II)-catalyzed enantioselective hydrosilylation of halo-substituted alkyl aryl and heteroaryl ketones: Asymmetric synthesis of (*R*)-fluoxetine and (*S*)-duloxetine†

Ji-Ning Zhou, Qiang Fang, Yi-Hu Hu, Li-Yao Yang, Fei-Fei Wu, Lin-Jie Xie, Jing Wu* and Shijun Li *

College of Material, Chemistry and Chemical Engineering, Hangzhou Normal University, Hangzhou 310036, People's Republic of China

Fax : (+86)-571-2886-8023; E-mail: jingwubc@hznu.edu.cn; l_shijun@hznu.edu.cn

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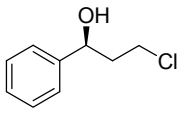
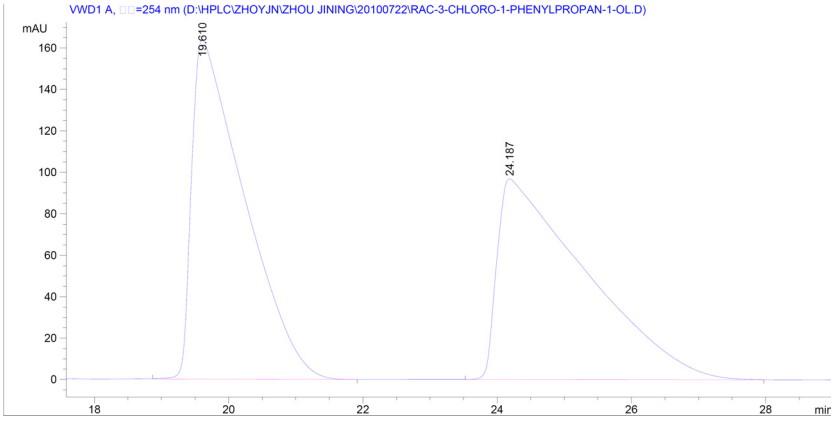
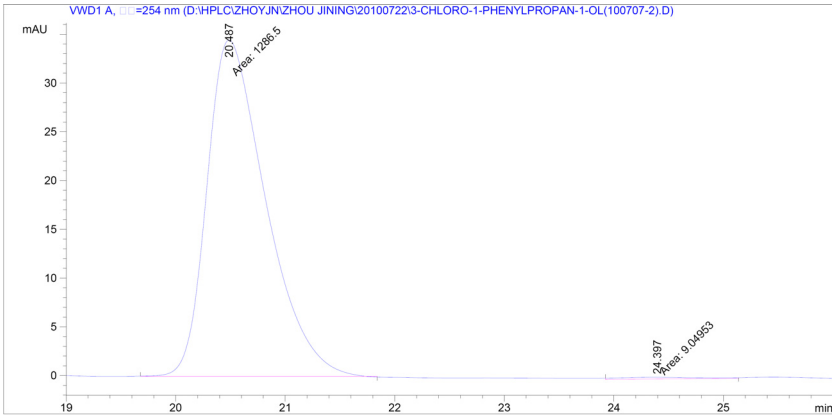
HPLC spectra for chiral alcohol products



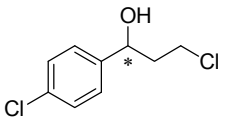
Chromatograms are illustrated below for a 99% ee sample of (*S*)-3-Chloro-1-phenylpropan-1-ol (**6a**)



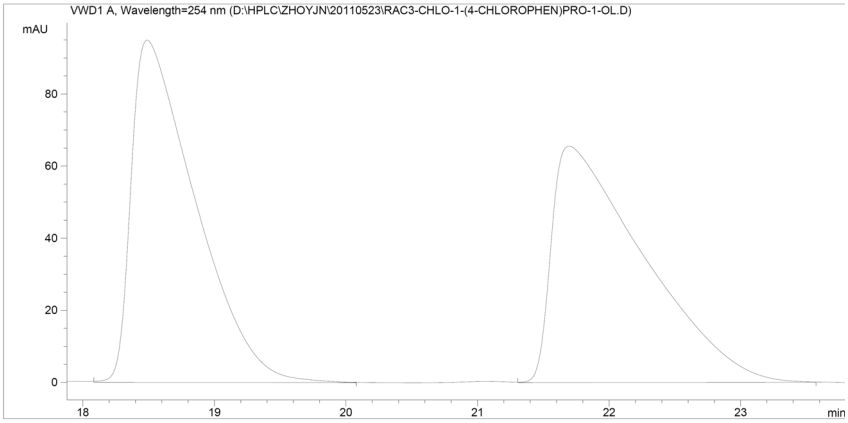
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	19.610	BB	0.7870	8934.90234	164.01431	50.0659
2	24.187	BB	1.1967	8911.36328	96.77125	49.9341



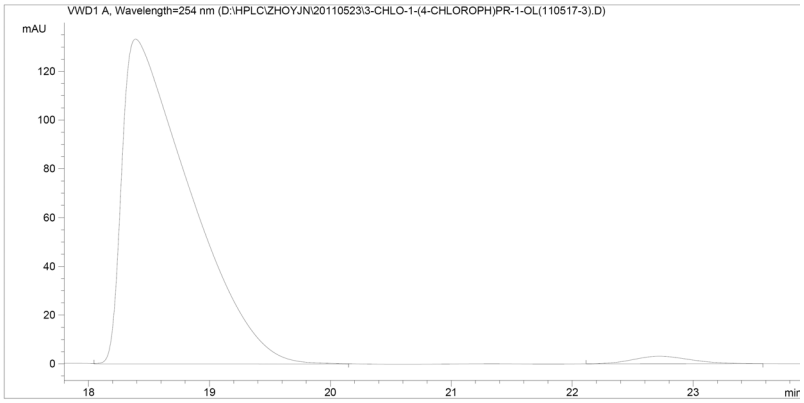
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	20.487	MM	0.6217	1286.49683	34.48652	99.3015
2	24.397	MM	0.8275	9.04953	1.82275e-1	0.6985



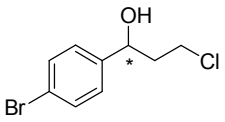
Chromatograms are illustrated below for a 96% ee sample of (–)-3-Chloro-1-(4-chlorophenyl)propan-1-ol (**6b**)



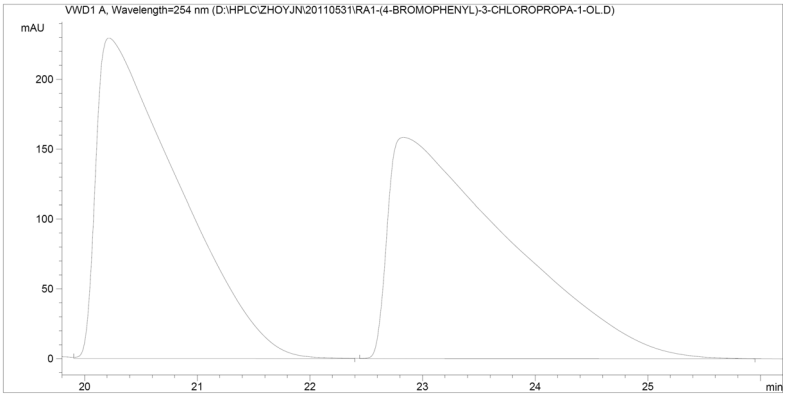
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	18.488	BB	0.5046	3219.19116	50.2437
2	21.695	VB	0.7126	3187.96021	49.7563



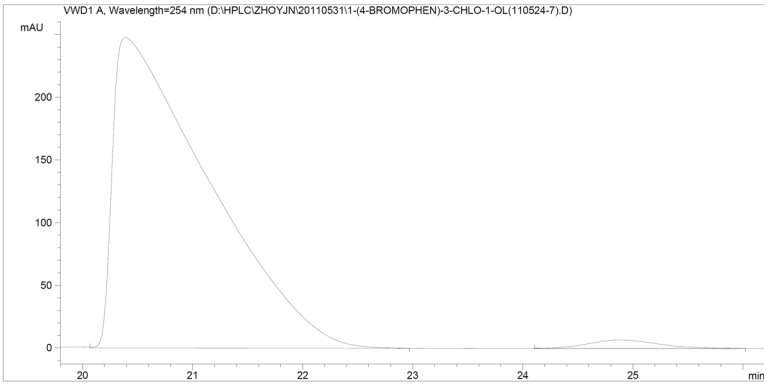
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	18.390	BB	0.5639	5194.92334	98.0475
2	22.722	BB	0.5120	103.45123	1.9525



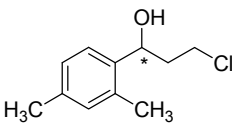
Chromatograms are illustrated below for a 96% ee sample of (–)-1-(4-Bromophenyl)-3-chloropropan-1-ol (**6c**)



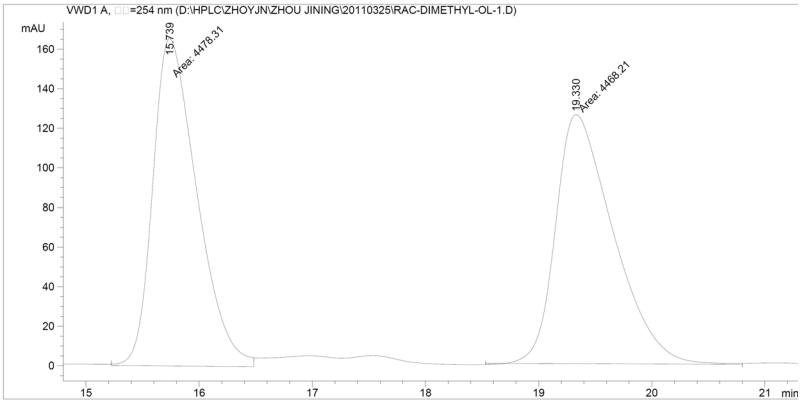
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	20.217	VB	0.7095	1.16629e4	49.6085
2	22.831	BB	1.0011	1.18469e4	50.3915



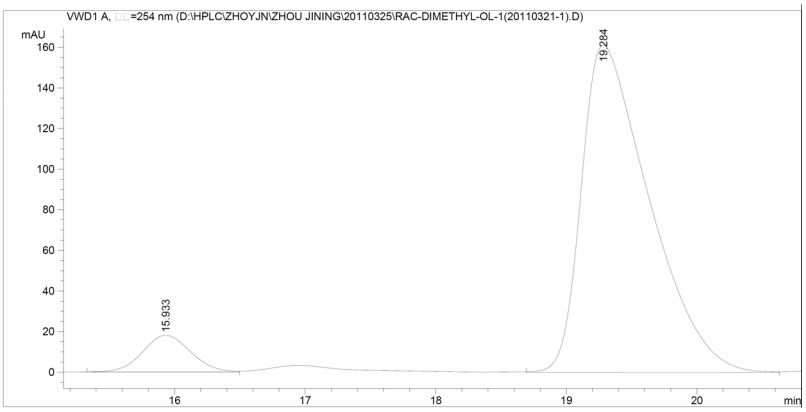
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	20.389	VB	0.8595	1.49774e4	98.0509
2	24.886	BB	0.6605	297.72717	1.9491



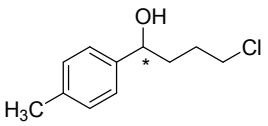
Chromatograms are illustrated below for an 85% ee sample of (–)-3-Chloro-1-(2,4-dimethylphenyl)propan-1-ol (**6d**)



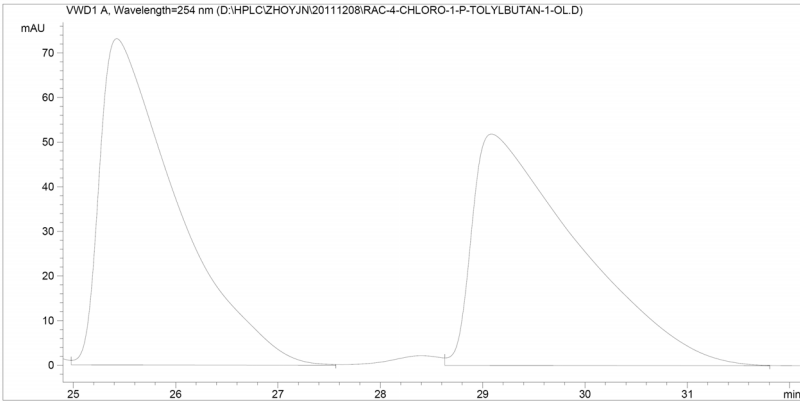
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	15.739	MF	0.4510	4478.30664	165.49646	50.0564
2	19.330	MM	0.5914	4468.21338	125.91904	49.9436



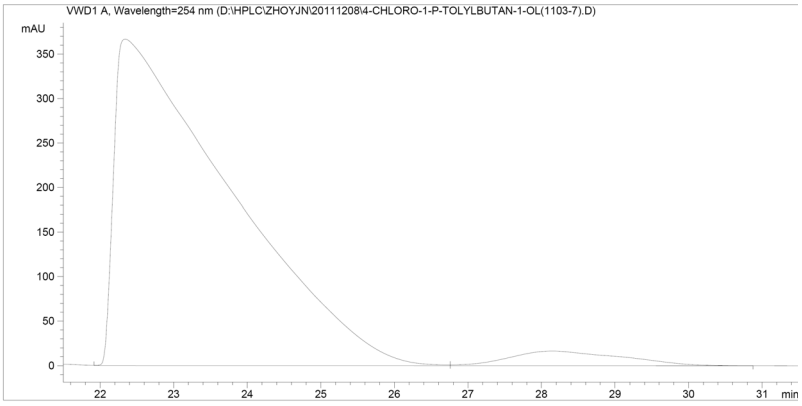
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	15.933	BV	0.3998	467.72113	18.14410	7.4447
2	19.284	BV	0.5375	5814.86719	161.14296	92.5553



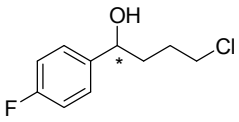
Chromatograms are illustrated below for a 92% ee sample of (–)-4-Chloro-1-*p*-tolylbutan-1-ol (**6e**)



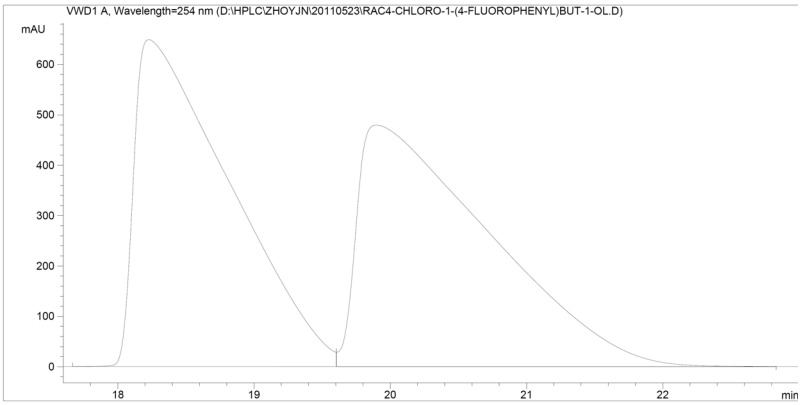
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	25.424	VB	0.7666	3838.74097	50.6839
2	29.086	VB	0.9975	3735.14136	49.3161



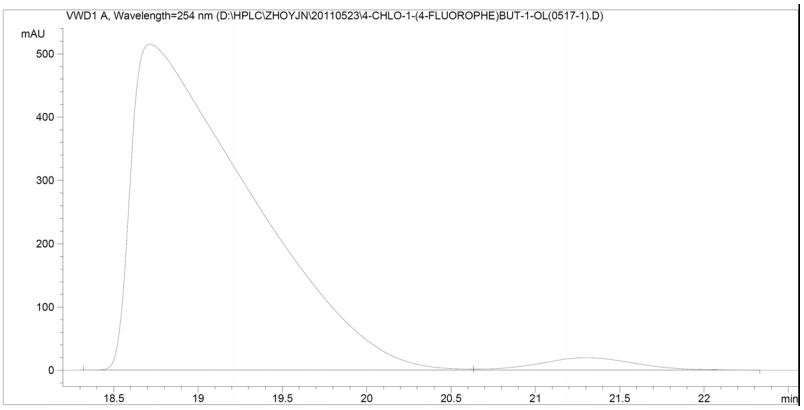
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	22.341	VB	1.4723	4.03389e4	95.8939
2	28.144	BB	1.4792	1727.29529	4.1061



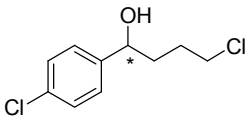
Chromatograms are illustrated below for a 94% ee sample of (–)-4-Chloro-1-(4-fluorophenyl)butan-1-ol (**6f**)



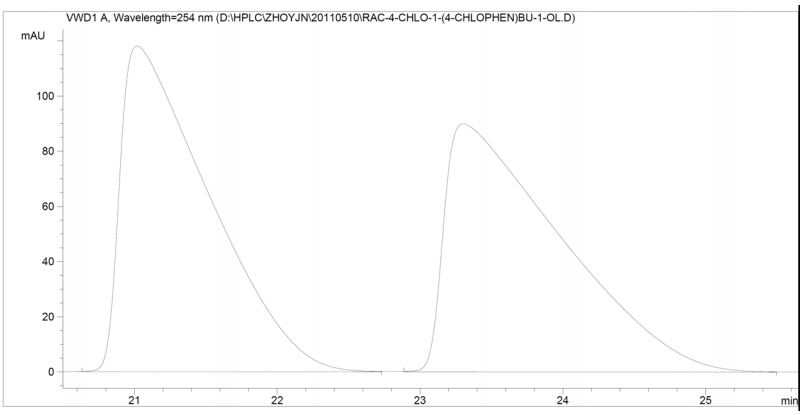
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	18.228	BV	0.7039	3.15365e4	49.4761
2	19.899	VB	0.9588	3.22044e4	50.5239



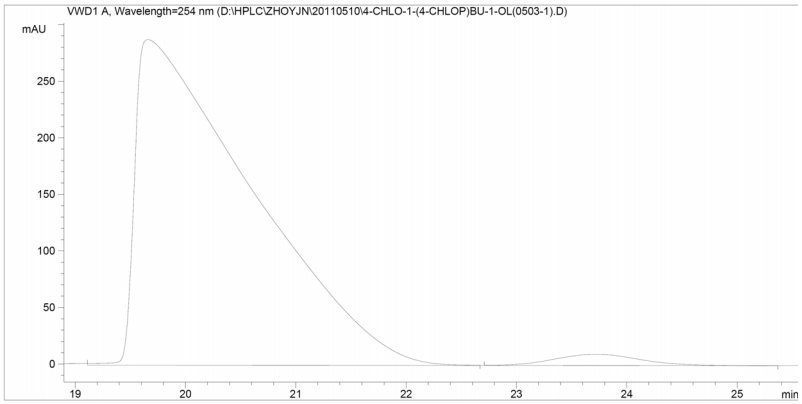
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	18.715	BV	0.6784	2.52557e4	97.0165
2	21.302	VB	0.6112	776.68726	2.9835



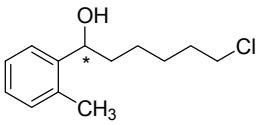
Chromatograms are illustrated below for a 95% ee sample of (–)-4-Chloro-1-(4-chlorophenyl)butan-1-ol (**6g**)



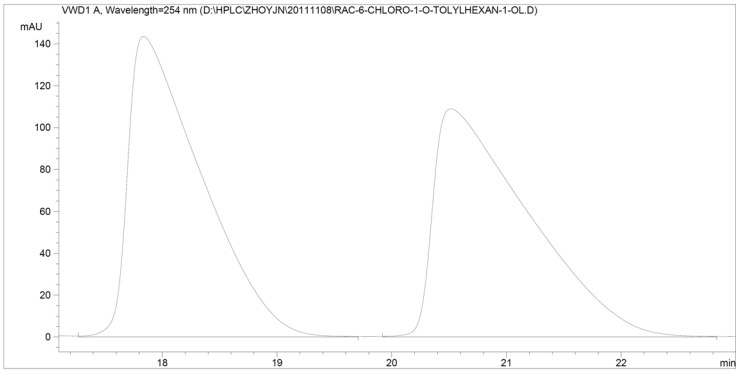
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	21.019	BB	0.6416	5108.64209	50.0987
2	23.305	BB	0.8086	5088.50586	49.9013



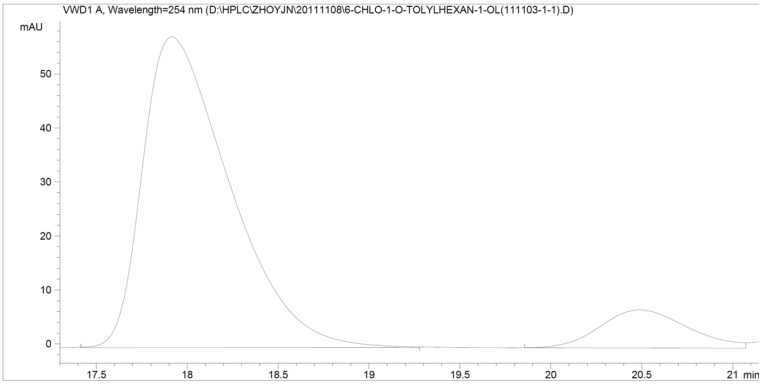
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	19.660	BB	1.0462	2.11123e4	97.4916
2	23.712	BB	0.8250	543.21185	2.5084



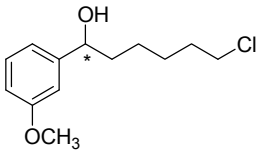
Chromatograms are illustrated below for a 78% ee sample of (–)-6-Chloro-1-*o*-tolylhexan-1-ol (**8a**)



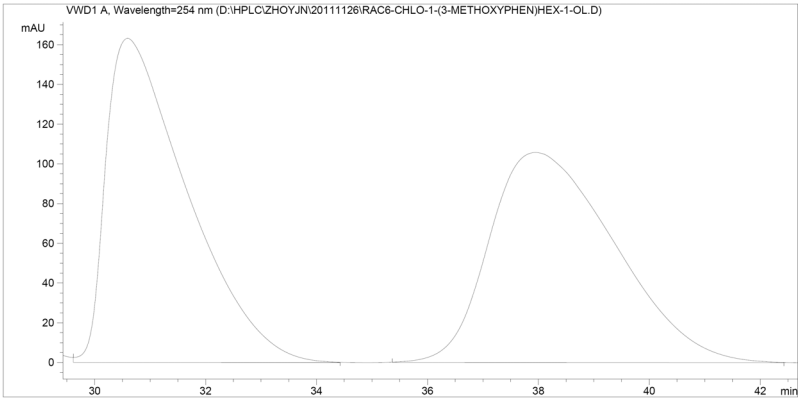
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	17.838	VB	0.6486	6369.29150	50.4061
2	20.516	BB	0.8199	6266.67480	49.5939



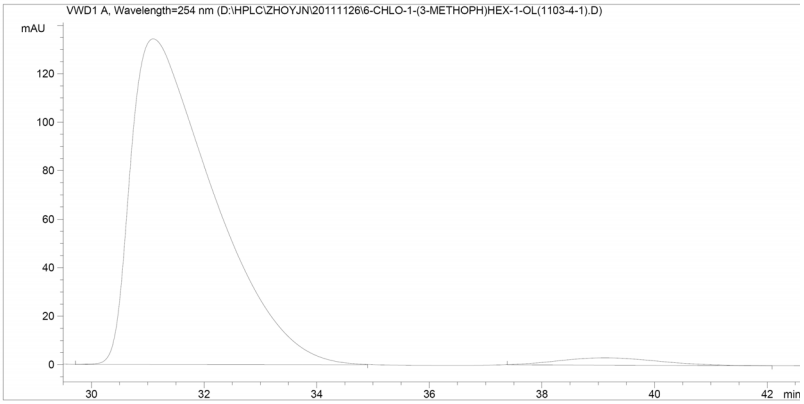
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	17.915	BB	0.5088	1915.07825	89.0278
2	20.488	BV	0.5194	236.02411	10.9722



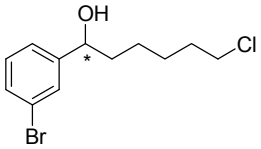
Chromatograms are illustrated below for a 95% ee sample of (–)-6-Chloro-1-(3-methoxyphenyl)hexan-1-ol (**8b**)



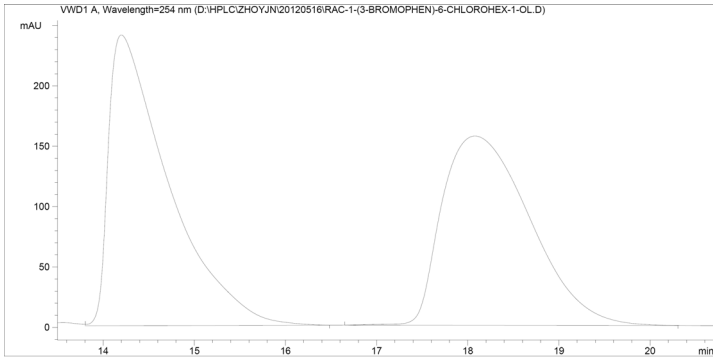
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	30.594	VB	1.4739	1.66306e4	49.9996
2	37.944	BB	2.3305	1.66308e4	50.0004



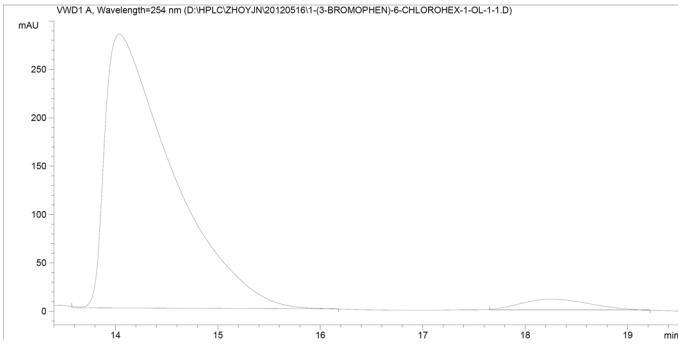
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	31.096	VB	1.4683	1.36930e4	97.3820
2	39.119	BB	1.4575	368.12698	2.6180



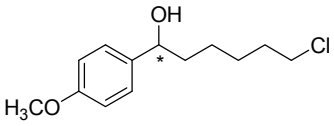
Chromatograms are illustrated below for a 93% ee sample of (–)-1-(3-bromophenyl)-6-chlorohexan-1-ol (**8c**)



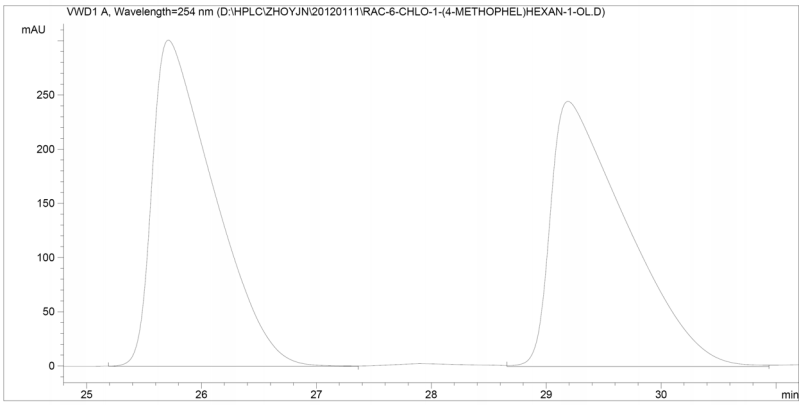
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	14.200	VB	0.6697	1.09956e4	51.1051
2	18.078	BB	1.1001	1.05201e4	48.8949



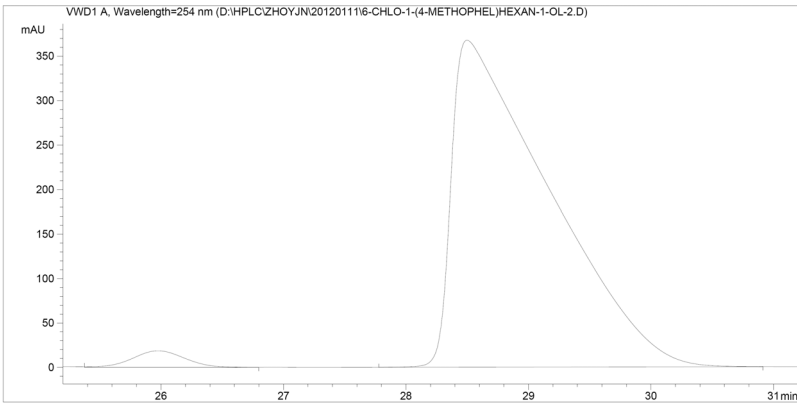
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	14.037	MM	0.7614	1.29262e4	96.2956
2	18.256	MM	0.7537	497.25888	3.7044



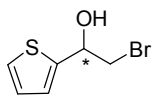
Chromatograms are illustrated below for a 95% ee sample of (–)-6-Chloro-1-(4-methoxyphenyl)hexan-1-ol (**8d**)



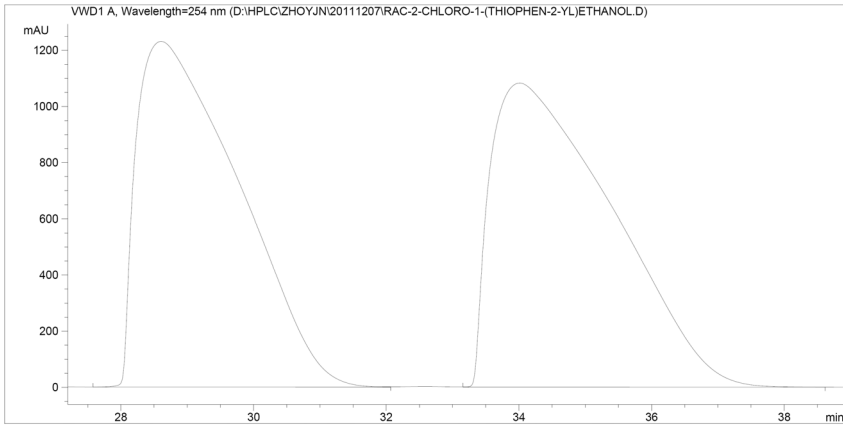
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	25.714	BB	0.5546	1.12242e4	49.9284
2	29.192	VV	0.6770	1.12564e4	50.0716



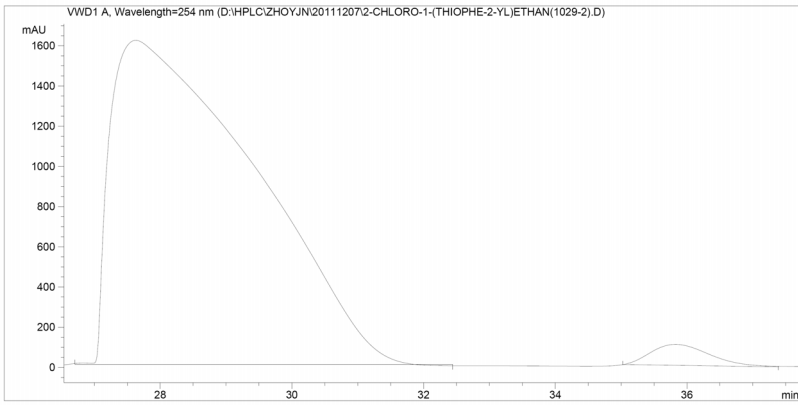
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	25.975	VB	0.4647	558.34491	2.6724
2	28.501	BB	0.7416	2.03346e4	97.3276



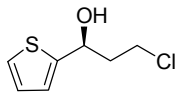
Chromatograms are illustrated below for a 95% ee sample of (–)-2-Bromo-1-(thiophen-2-yl)ethanol (**10a**)



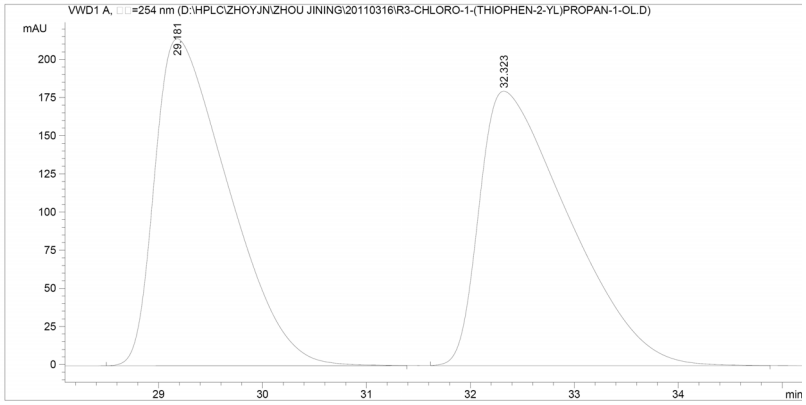
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	28.606	VV	1.9014	1.31819e5	48.8191
2	34.011	VB	1.8532	1.38196e5	51.1809



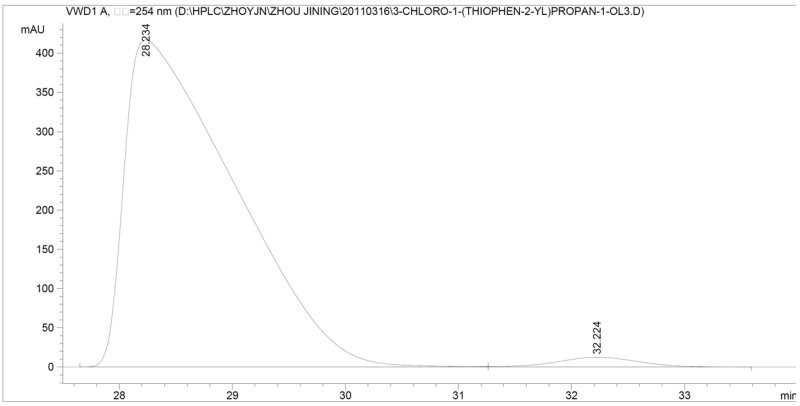
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	27.630	MM	2.5370	2.45404e5	97.4410
2	35.832	MM	1.0316	6444.72559	2.5590



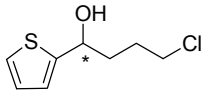
Chromatograms are illustrated below for a 96% ee sample of (*S*)-3-Chloro-1-(thiophen-2-yl)propan-1-ol (**10b**)



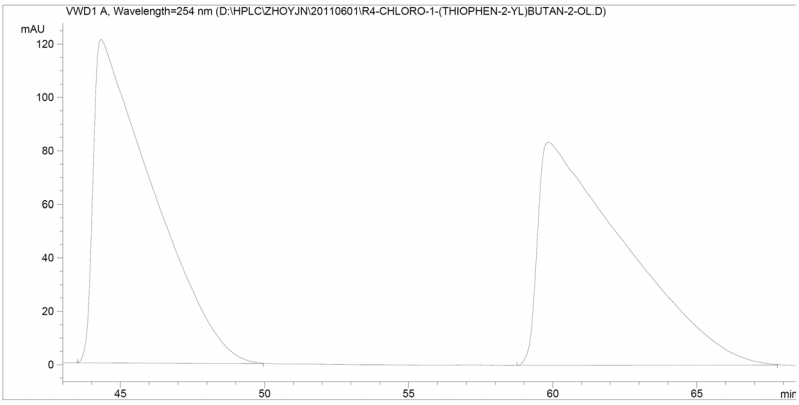
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	29.181	BB	0.7563	1.05779e4	214.33797	49.6036
2	32.323	BB	0.8949	1.07470e4	179.92650	50.3964



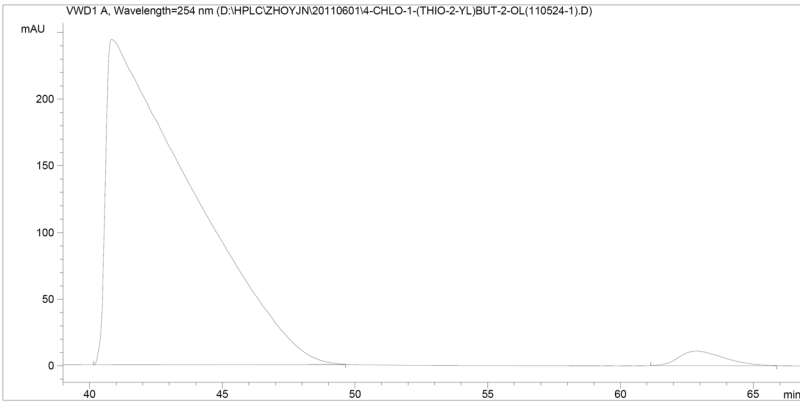
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Height [mAU]	Area %
1	28.234	BB	1.0296	2.80514e4	416.92700	97.7799
2	32.224	BB	0.7828	636.91577	12.45839	2.2201



Chromatograms are illustrated below for a 95% ee sample of (–)-4-Chloro-1-(thiophen-2-yl)butan-1-ol (**10c**)



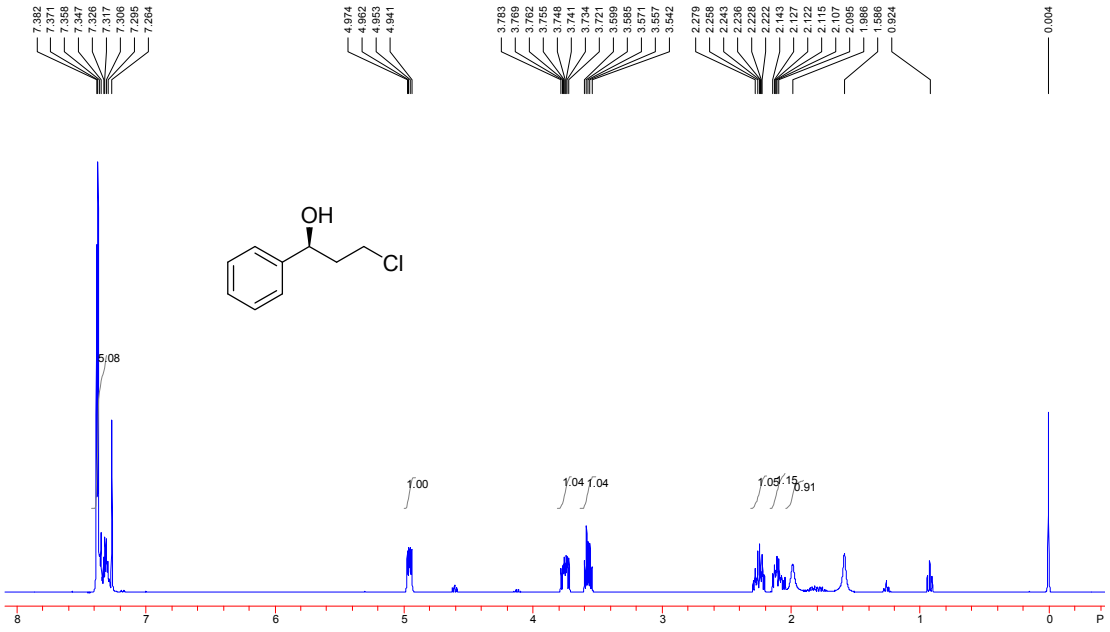
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	44.328	BB	1.8503	1.74306e4	49.6587
2	59.843	BB	2.6591	1.76702e4	50.3413

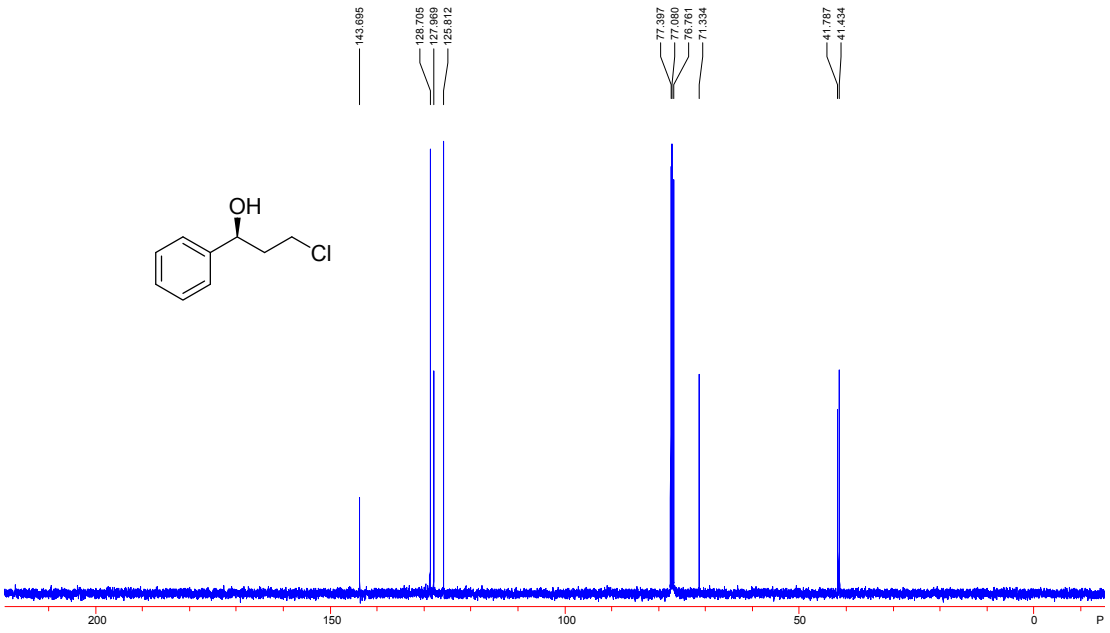


Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %
1	40.835	BB	2.7873	5.46649e4	97.7043
2	62.848	BB	1.4649	1284.44849	2.2957

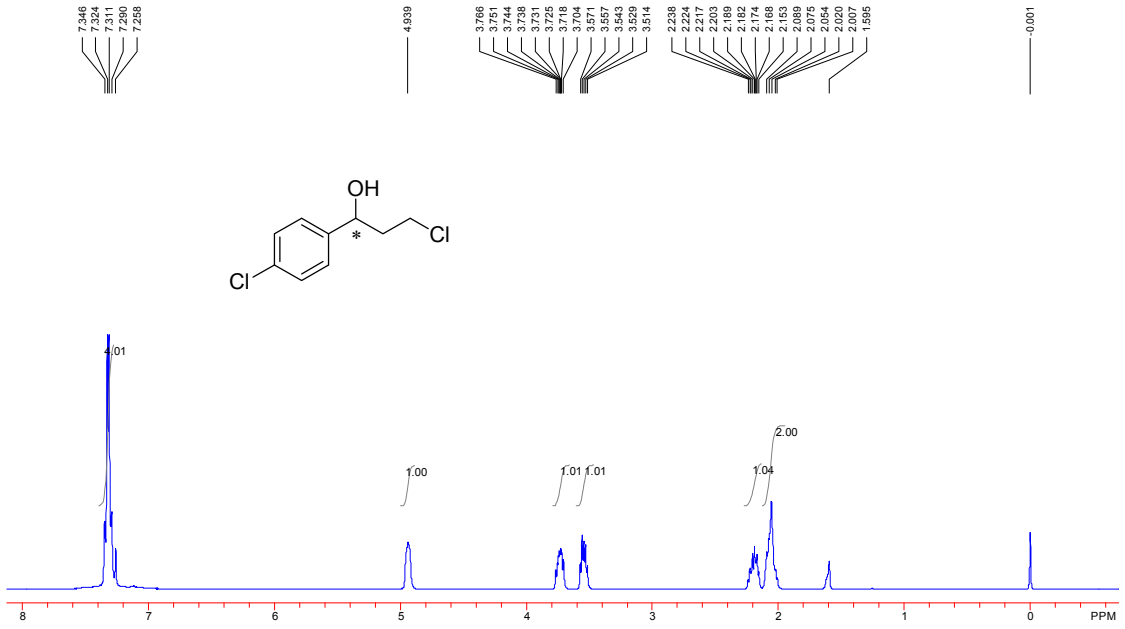
NMR Spectra

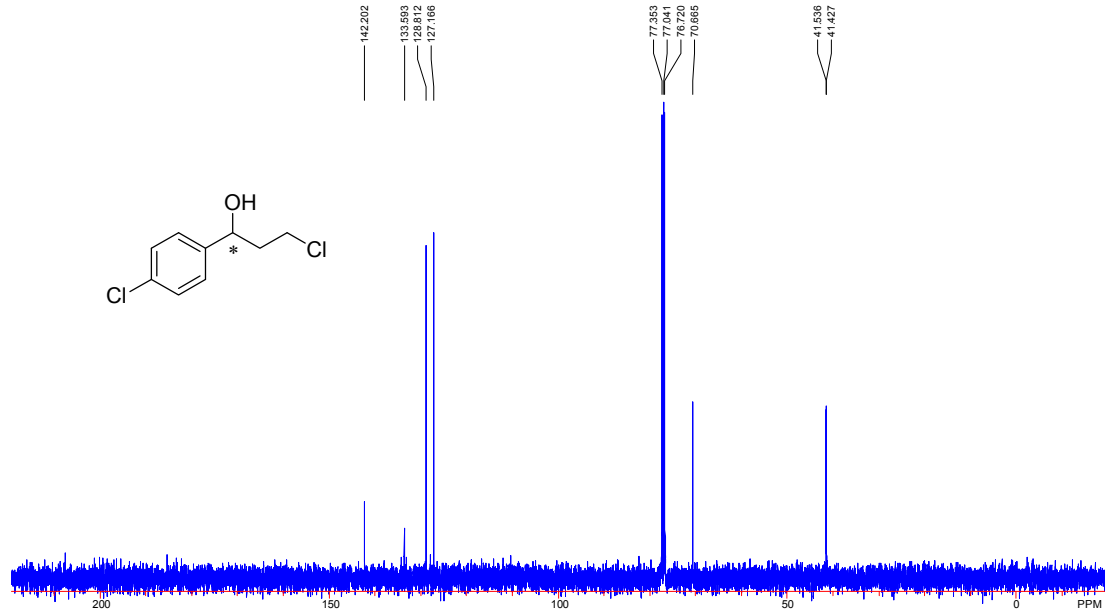
(*S*)-3-Chloro-1-phenylpropan-1-ol (6a)



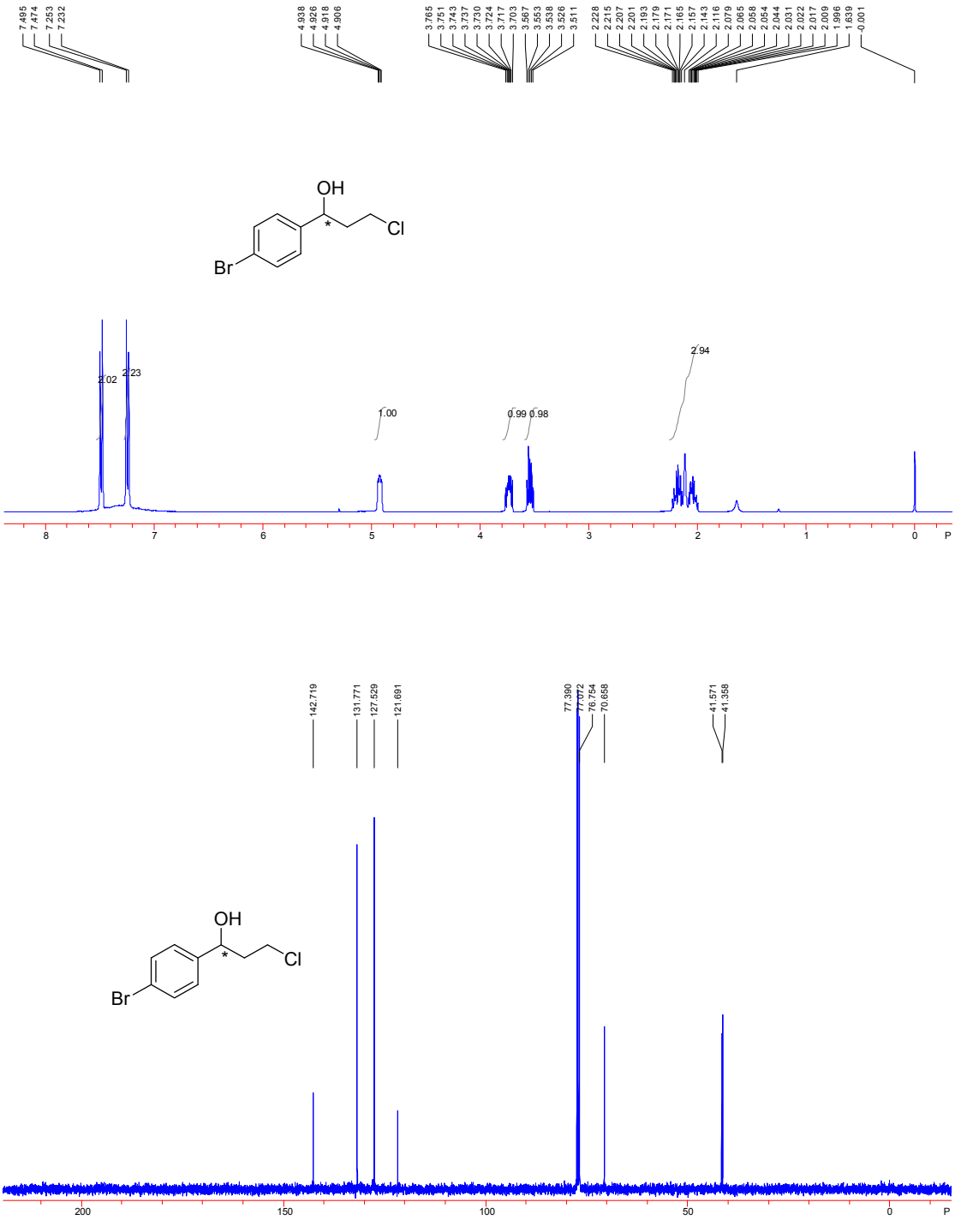


(–)-3-Chloro-1-(4-chlorophenyl)propan-1-ol (6b)

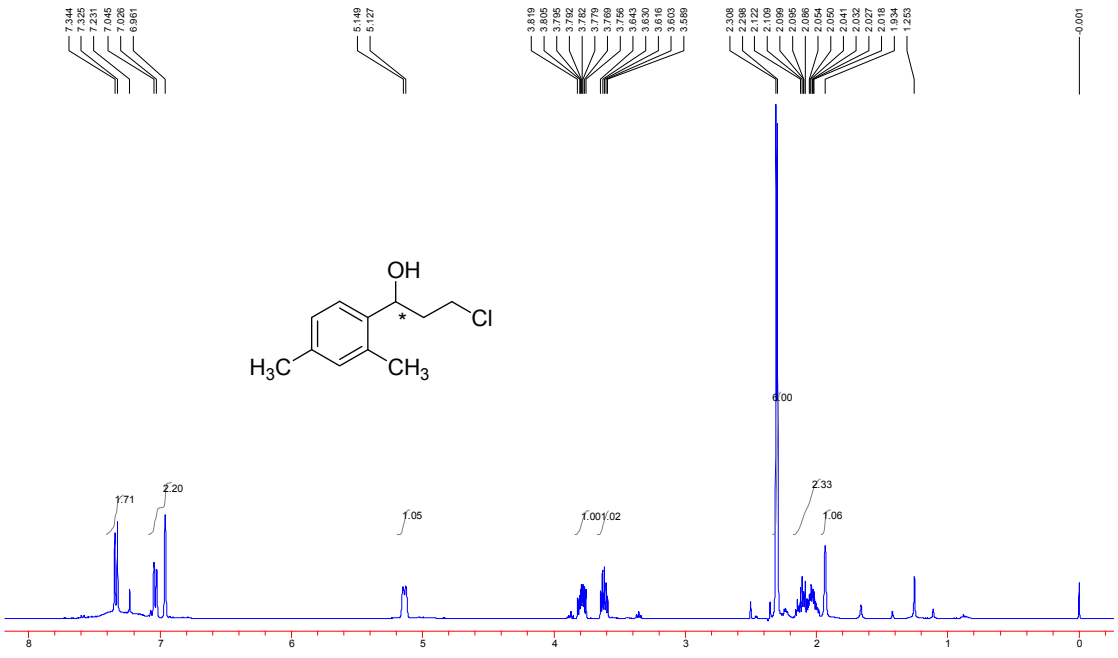


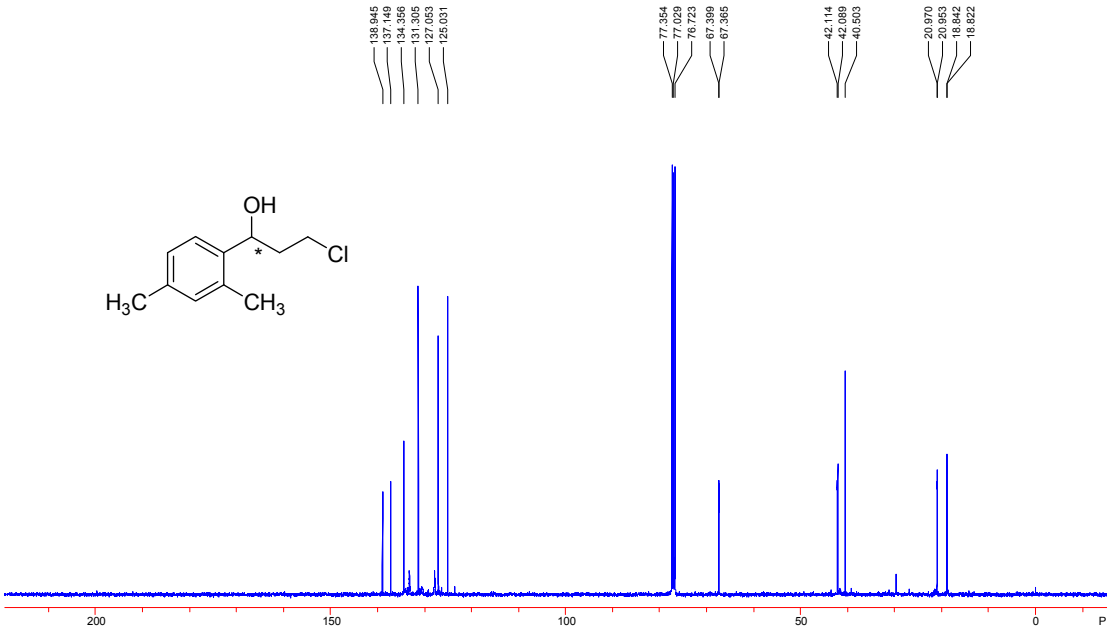


(–)-1-(4-Bromophenyl)-3-chloropropan-1-ol (6c)

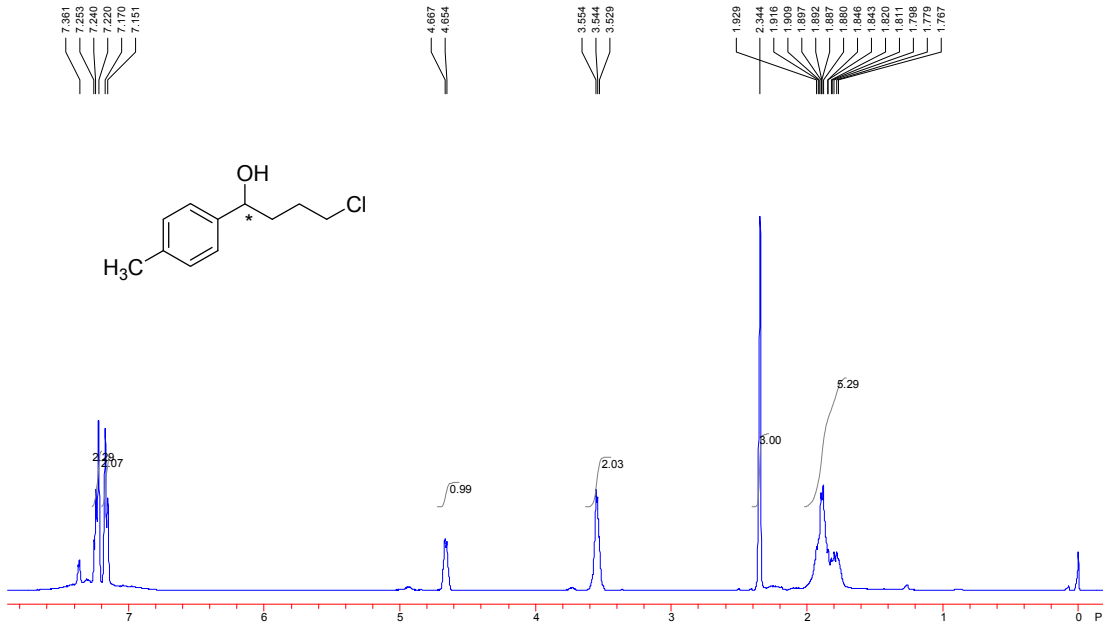


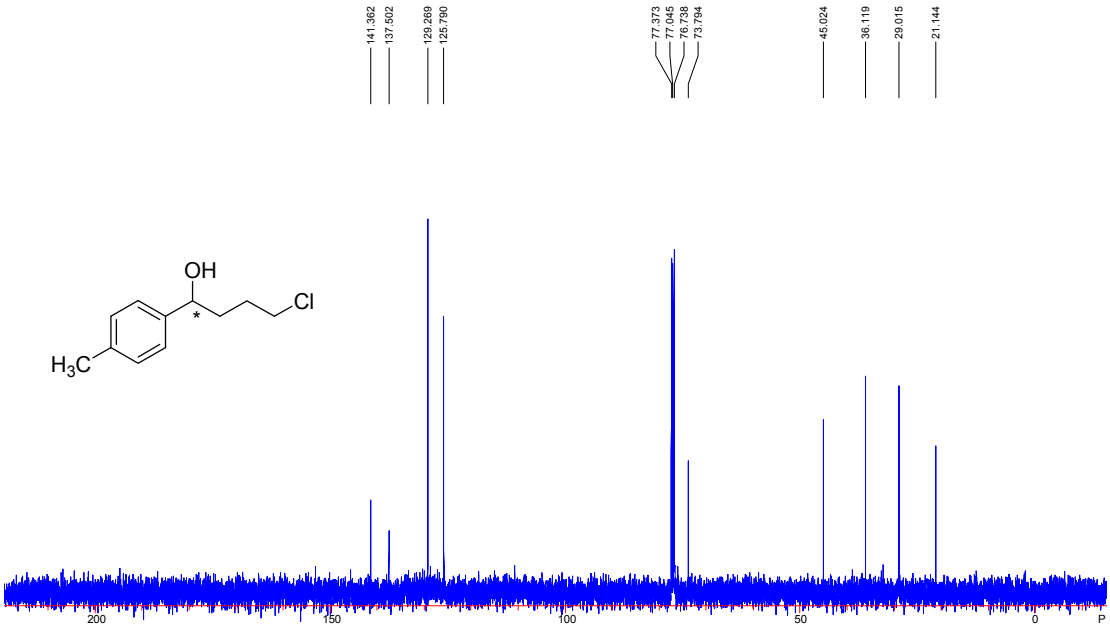
(–)-3-Chloro-1-(2,4-dimethylphenyl)propan-1-ol (6d)



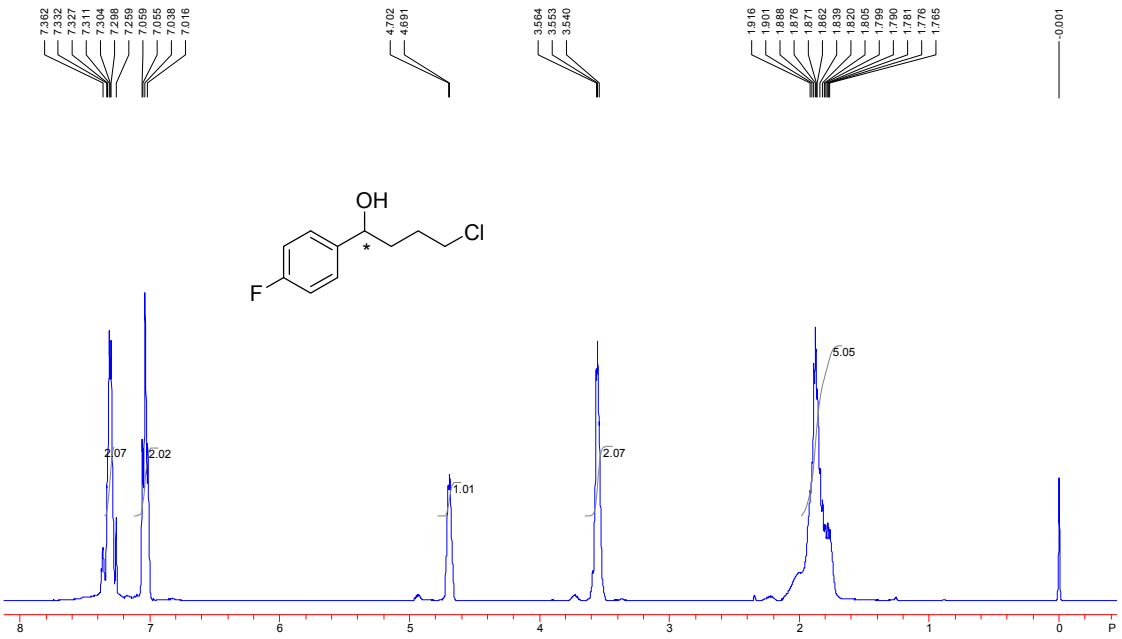


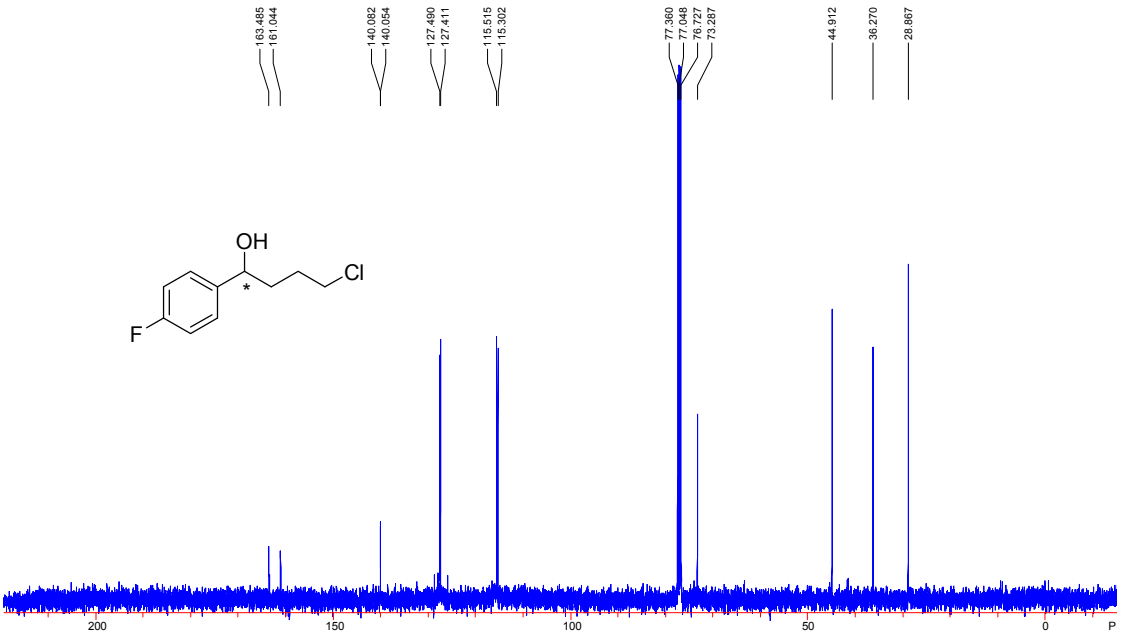
(–)-4-Chloro-1-*p*-tolylbutan-1-ol (6e)



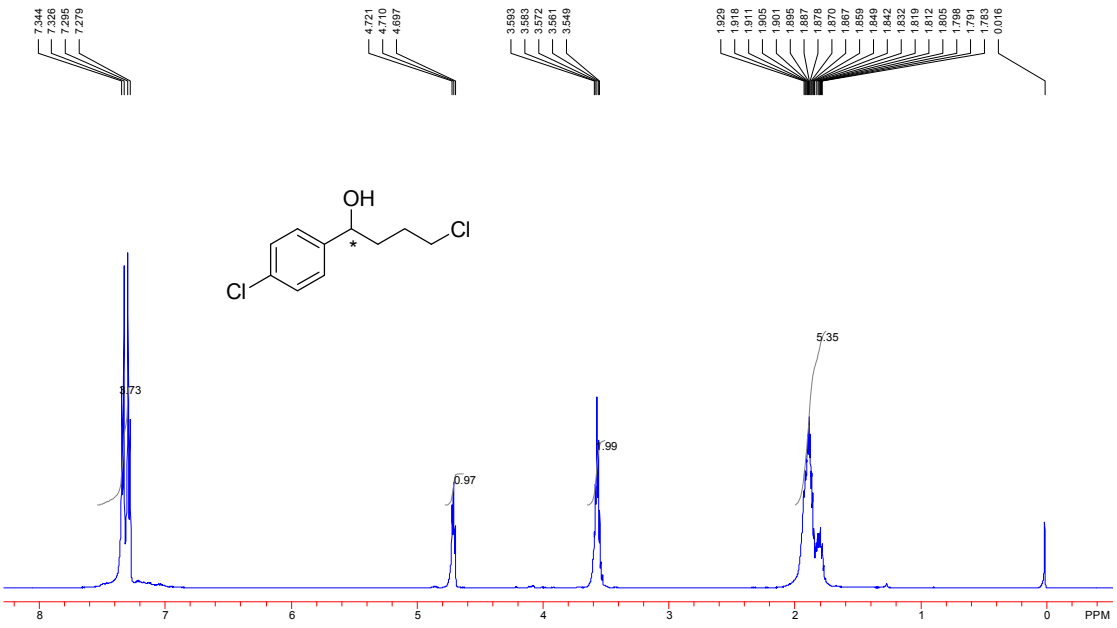


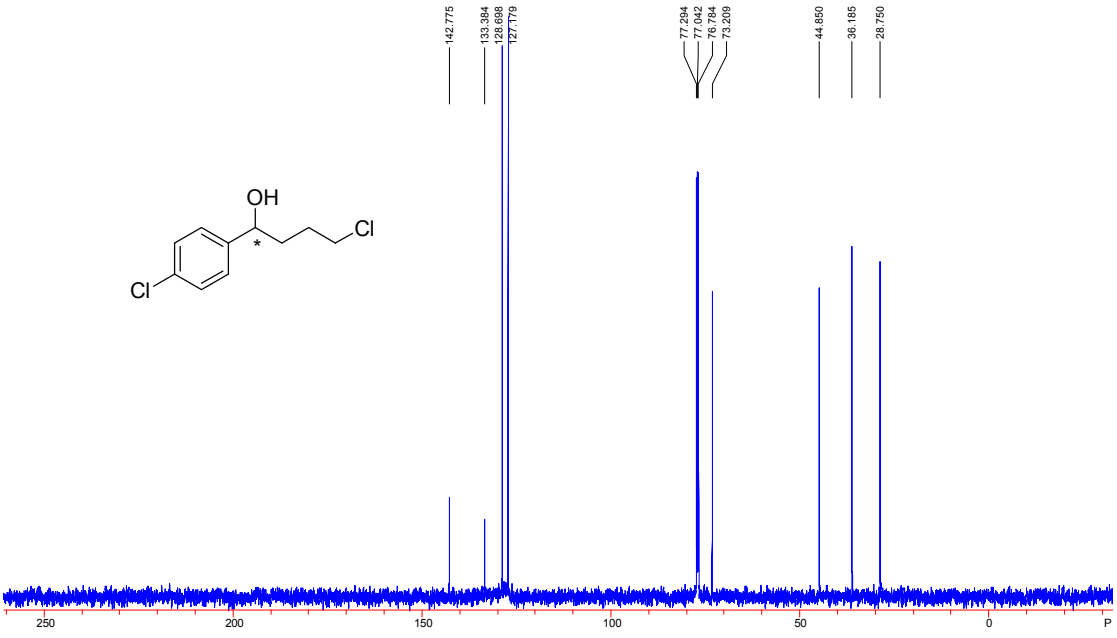
(–)-4-Chloro-1-(4-fluorophenyl)butan-1-ol (6f)



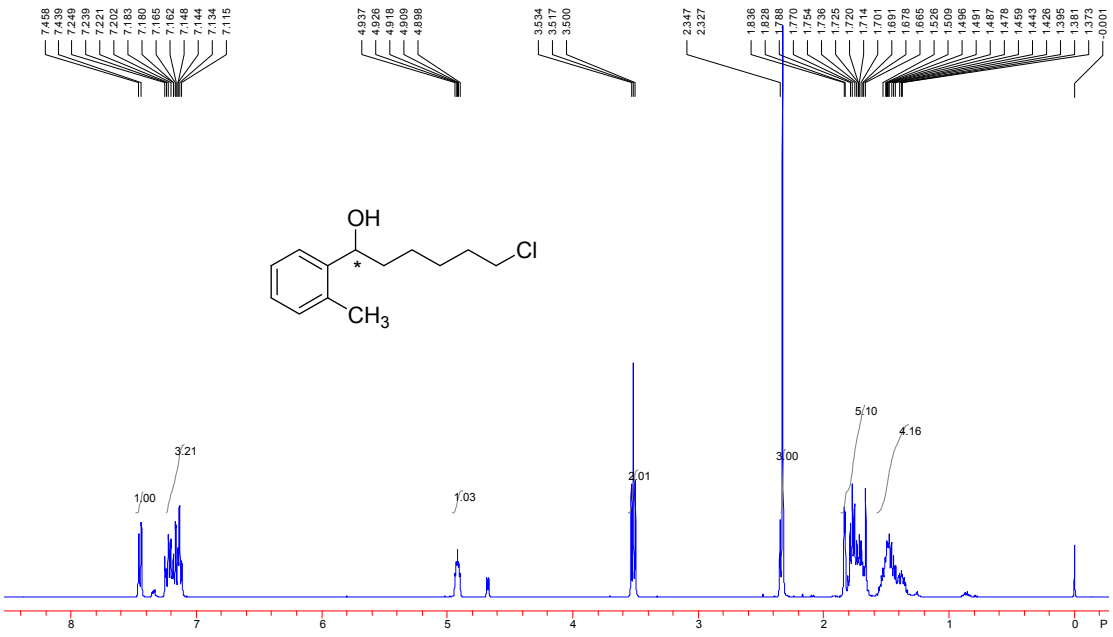


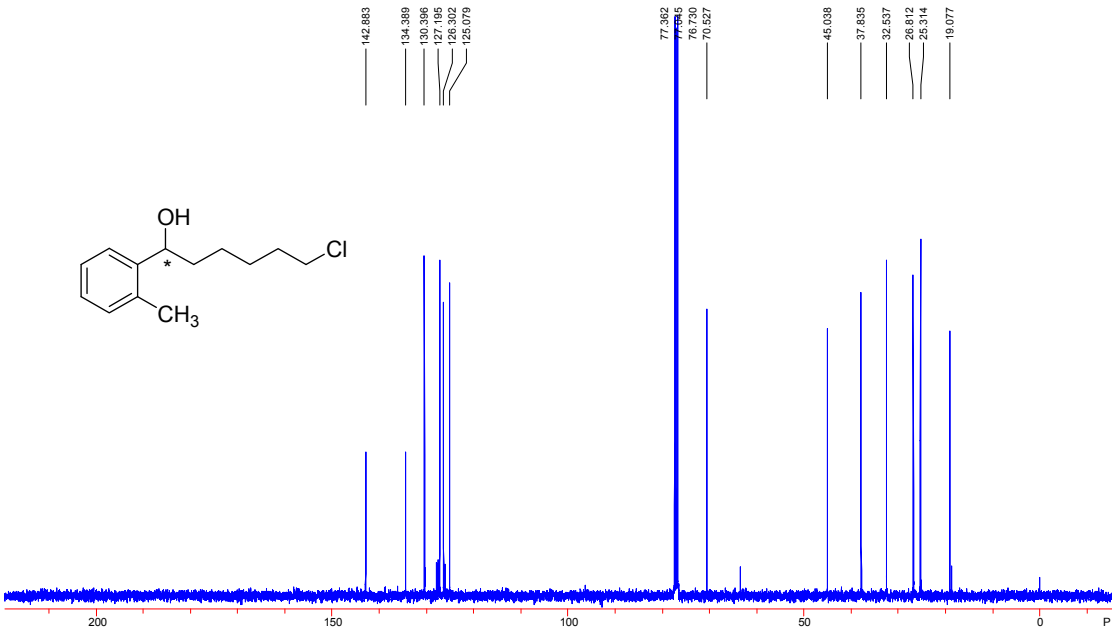
(–)-4-Chloro-1-(4-chlorophenyl)butan-1-ol (6g)



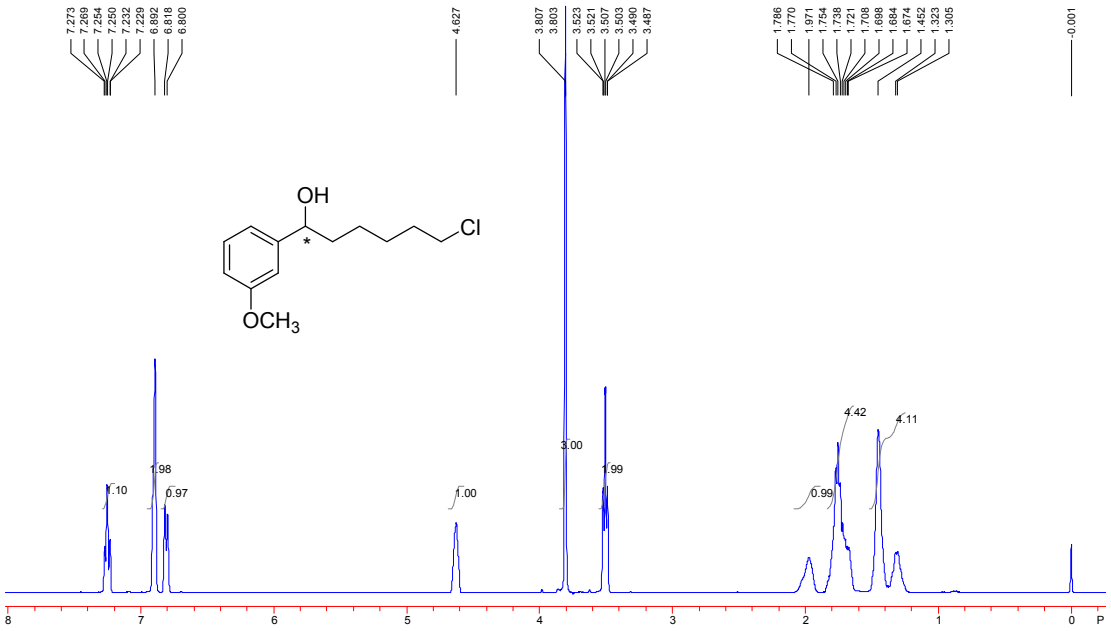


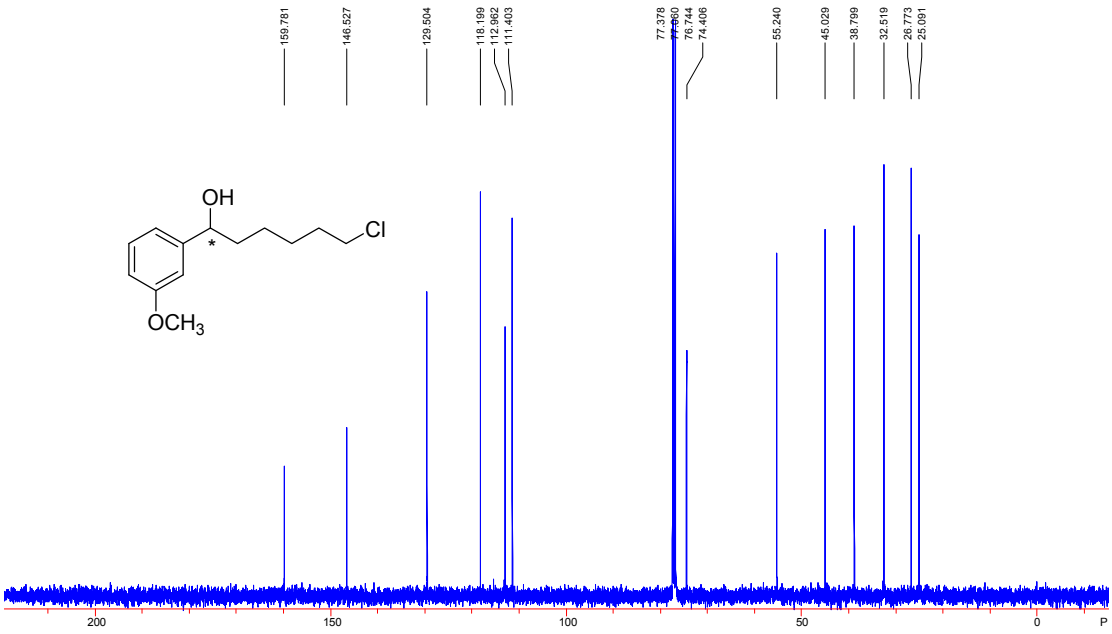
(–)-6-Chloro-1-*o*-tolylhexan-1-ol (8a)



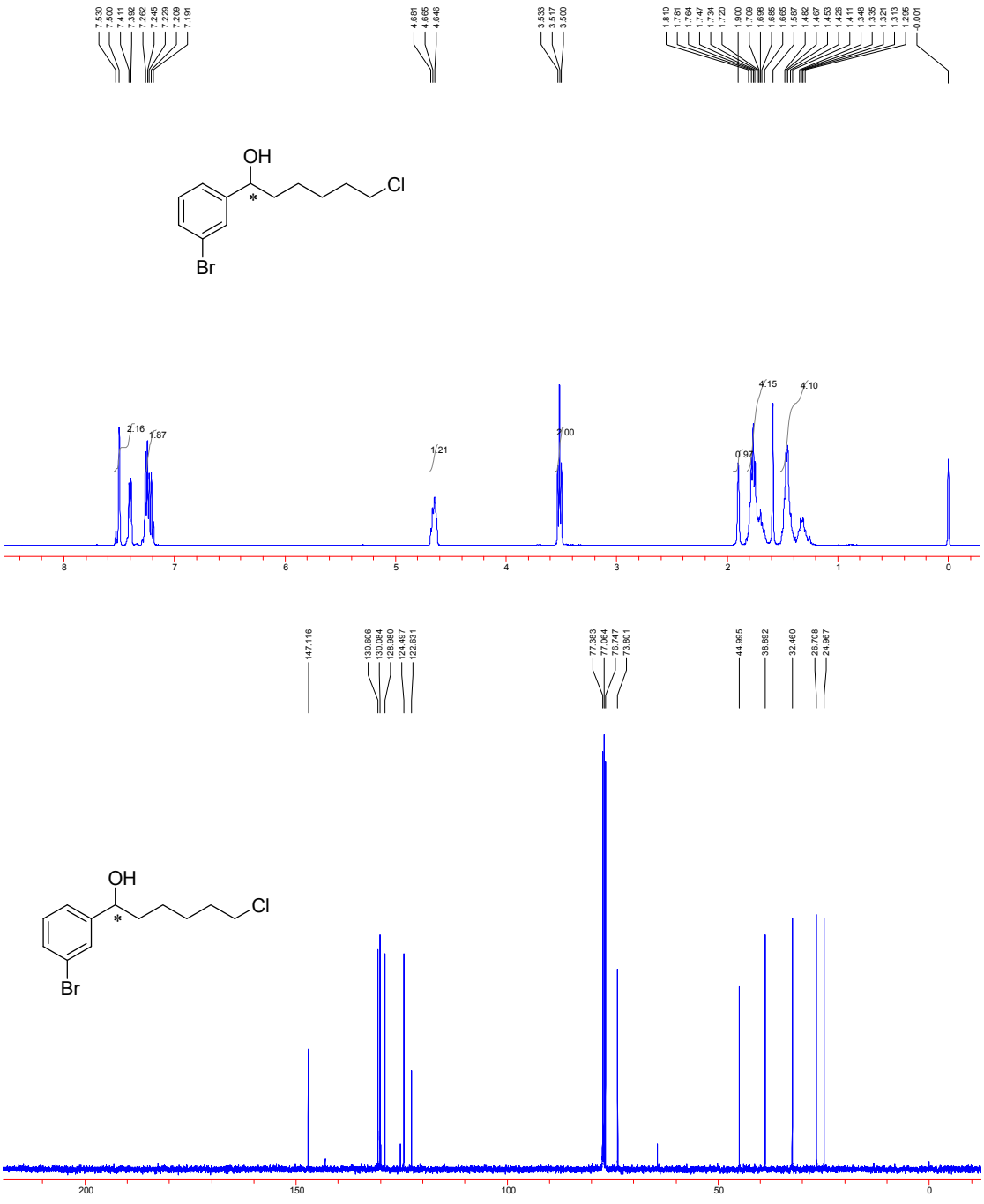


(–)-6-Chloro-1-(3-methoxyphenyl)hexan-1-ol (8b)

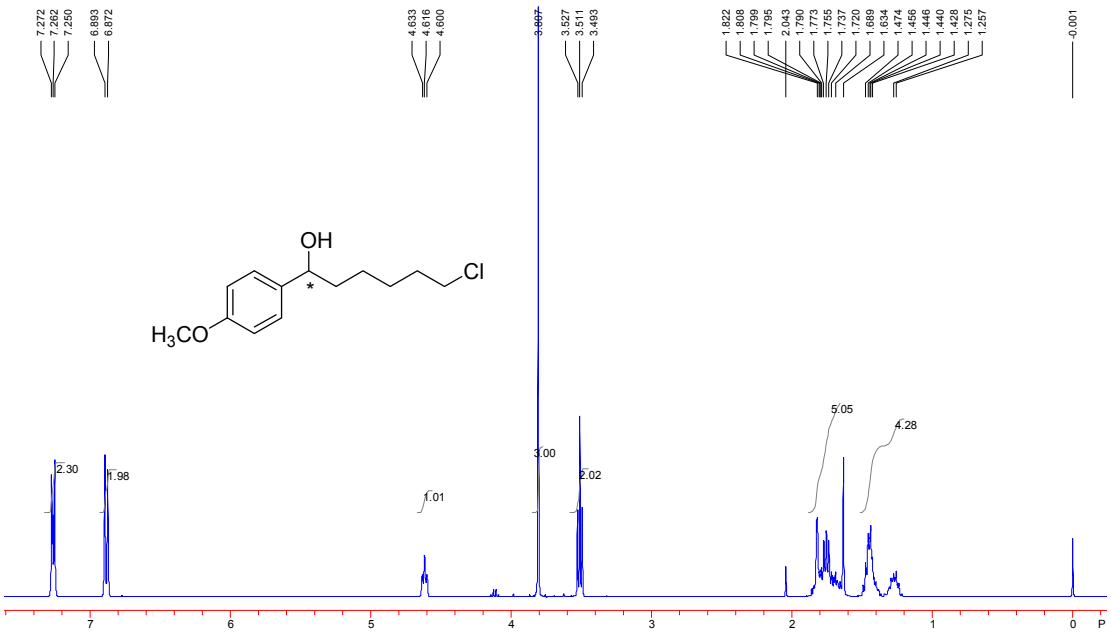


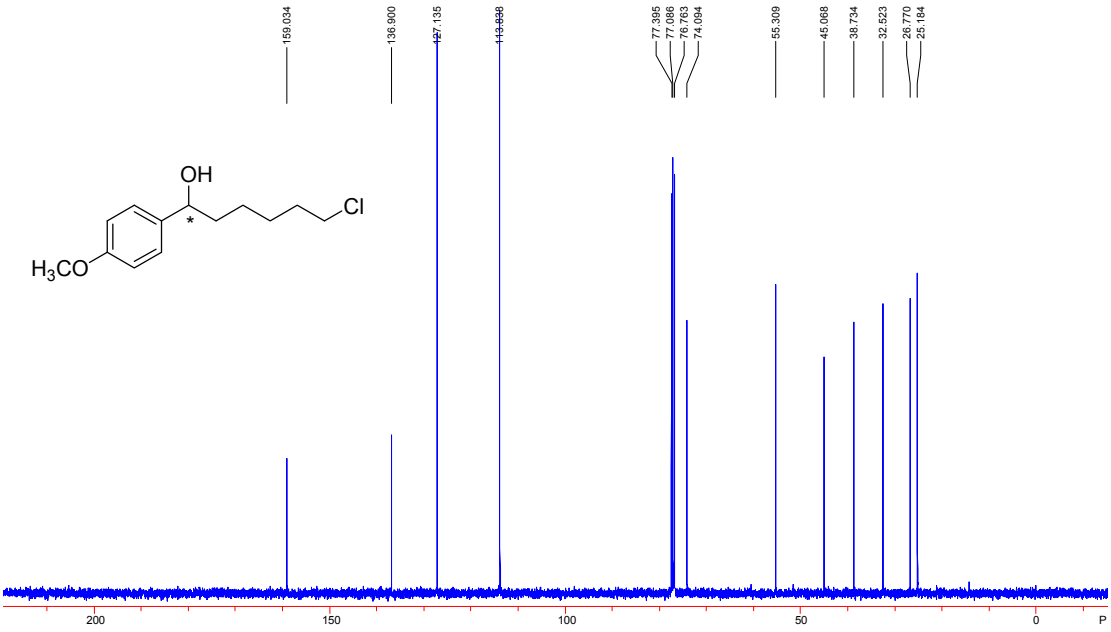


(–)-1-(3-Bromophenyl)-6-chlorohexan-1-ol (8c)

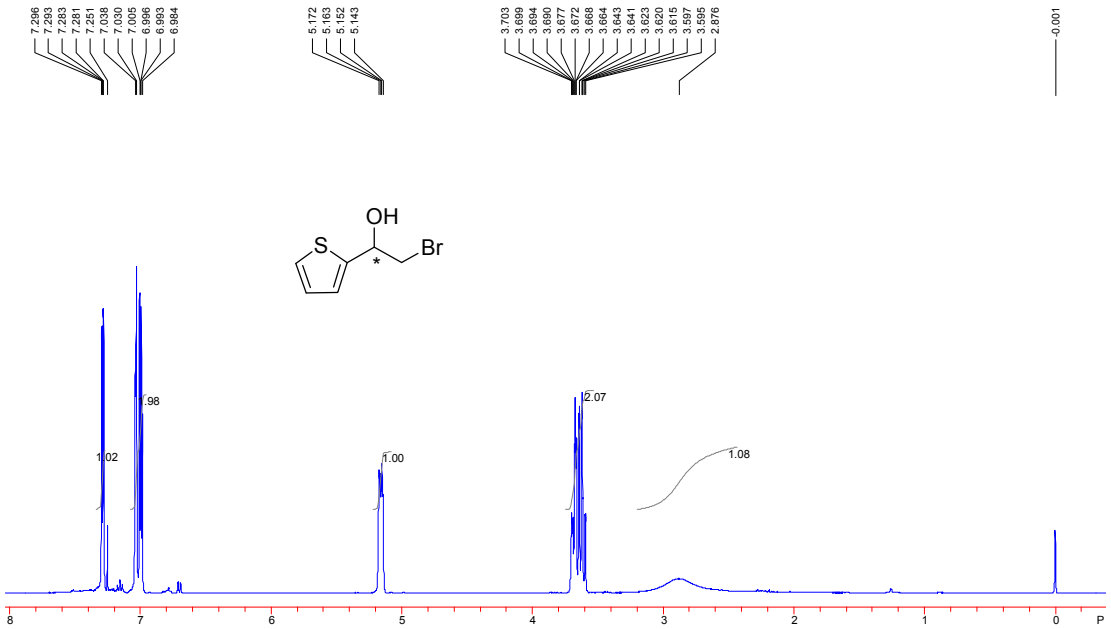


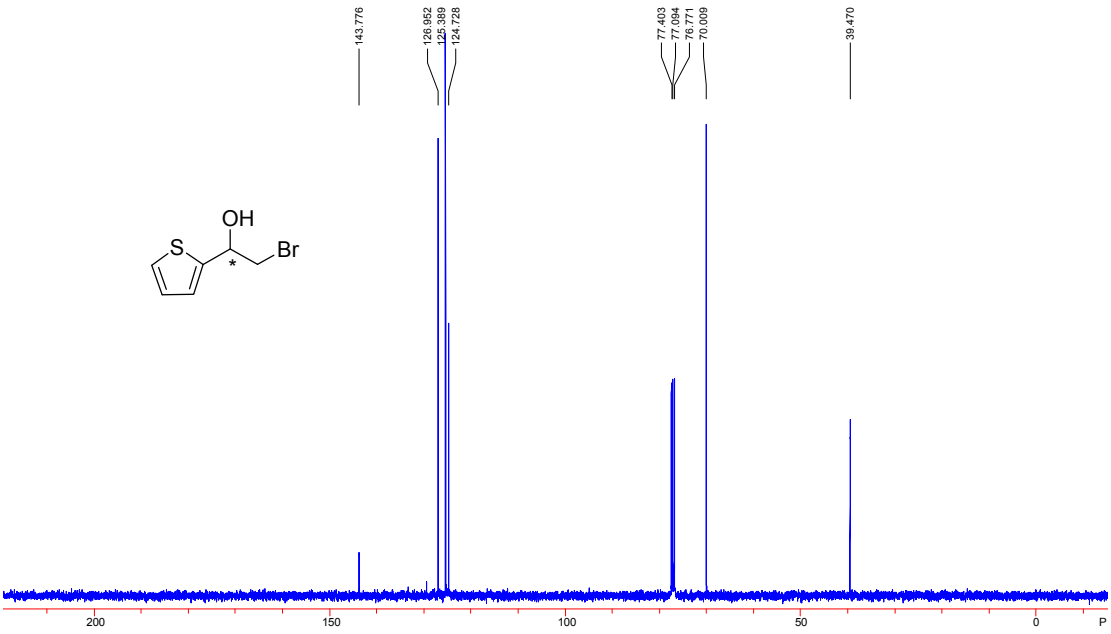
(–)-6-Chloro-1-(4-methoxyphenyl)hexan-1-ol (8d)



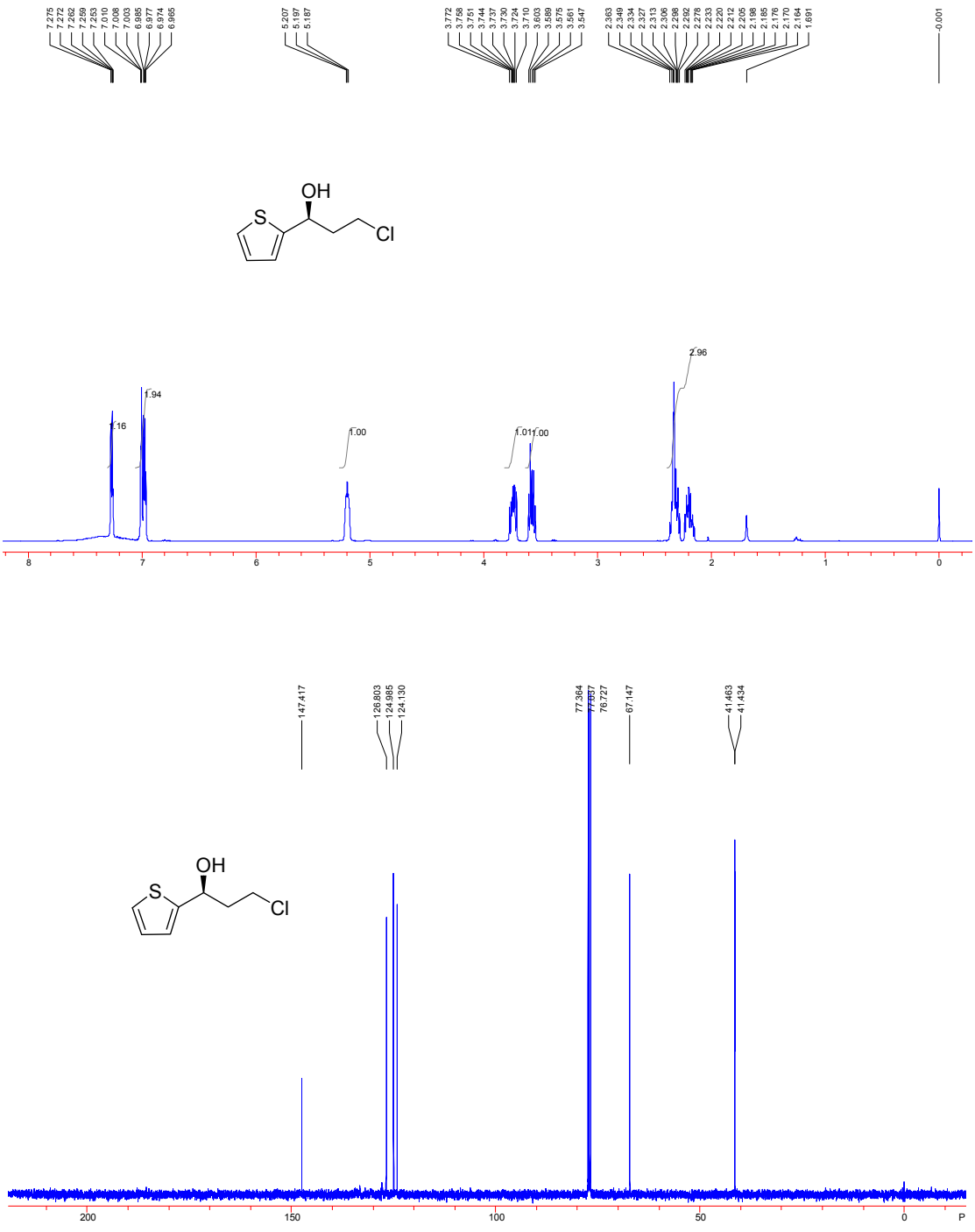


(–)-2-Bromo-1-(thiophen-2-yl)ethanol (10a)

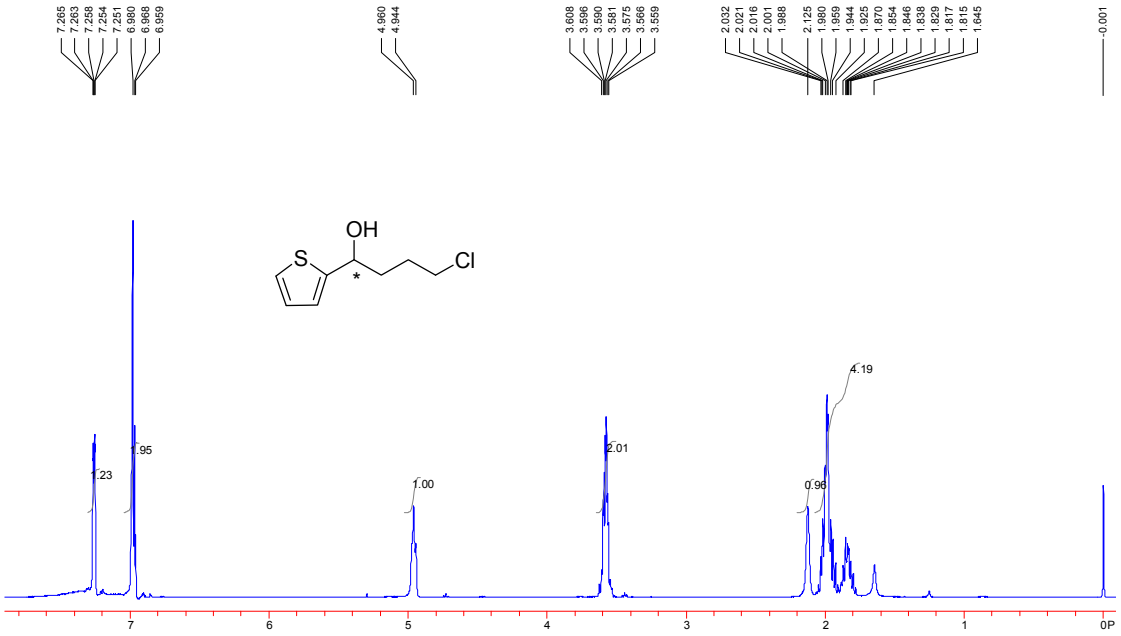


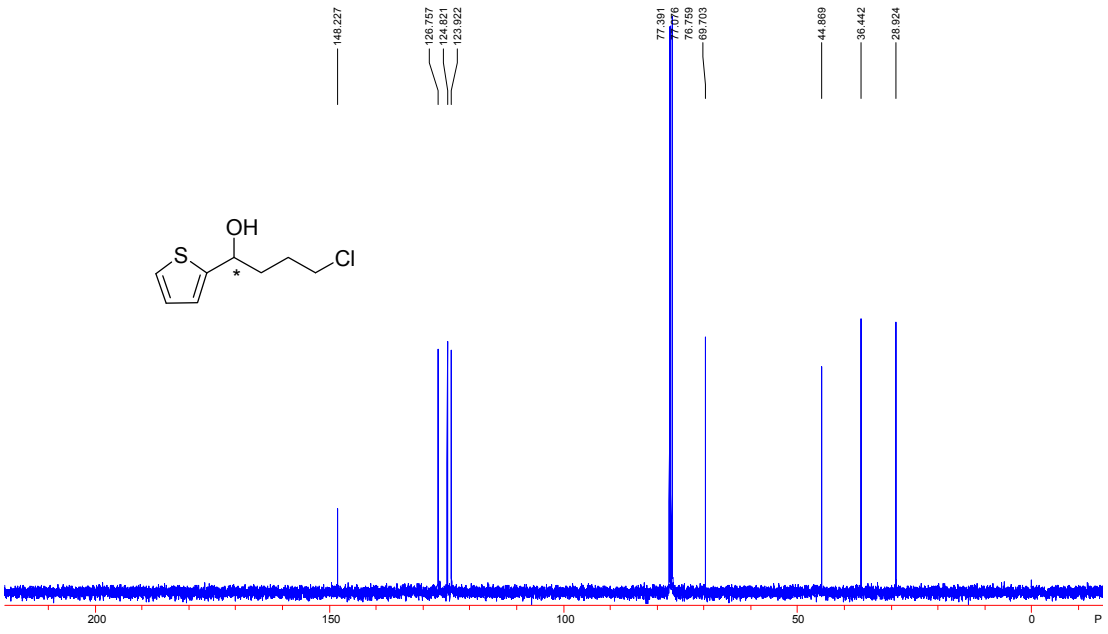


(*S*)-3-Chloro-1-(thiophen-2-yl)propan-1-ol (10b)

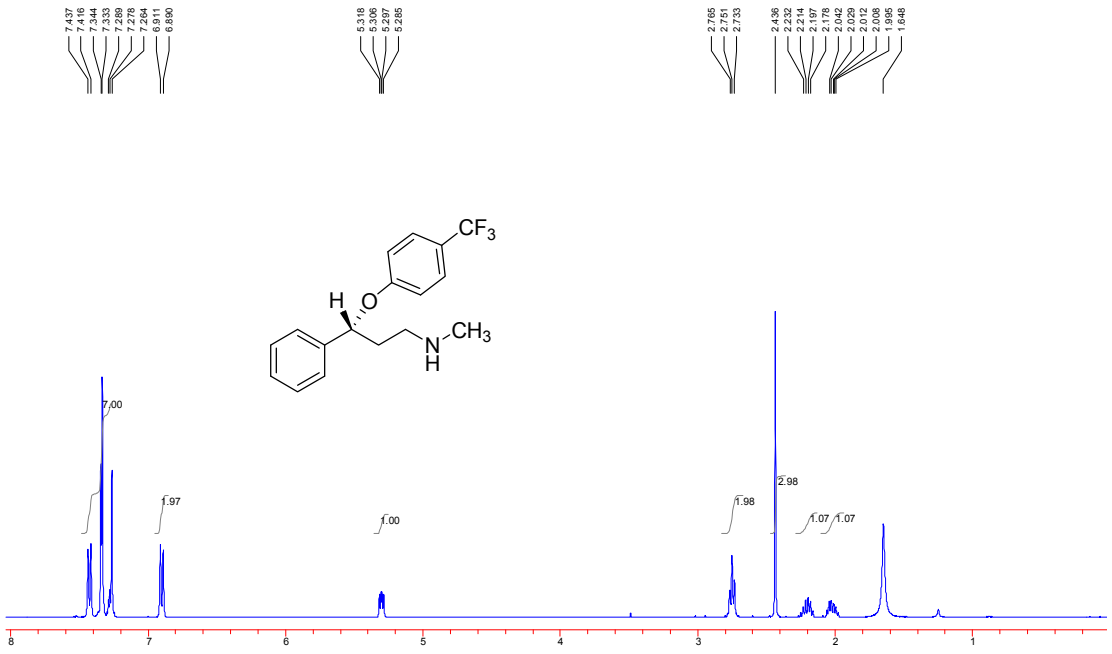


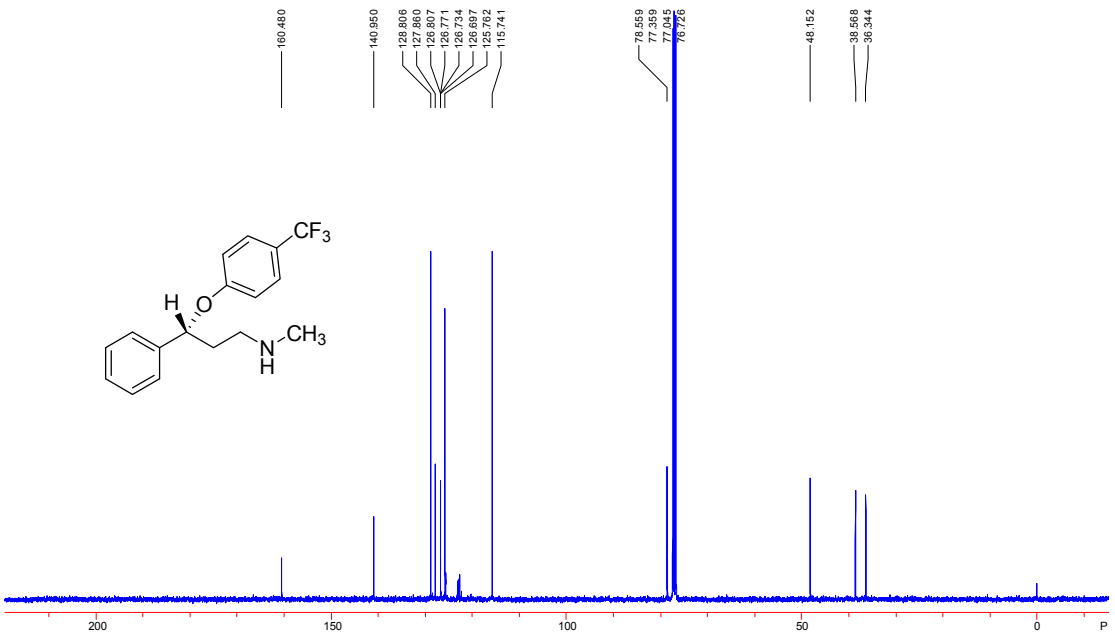
(–)-4-Chloro-1-(thiophen-2-yl)butan-1-ol (10c)





(*R*)-Fluoxetine (1)





(*S*)-Duloxetine (2)