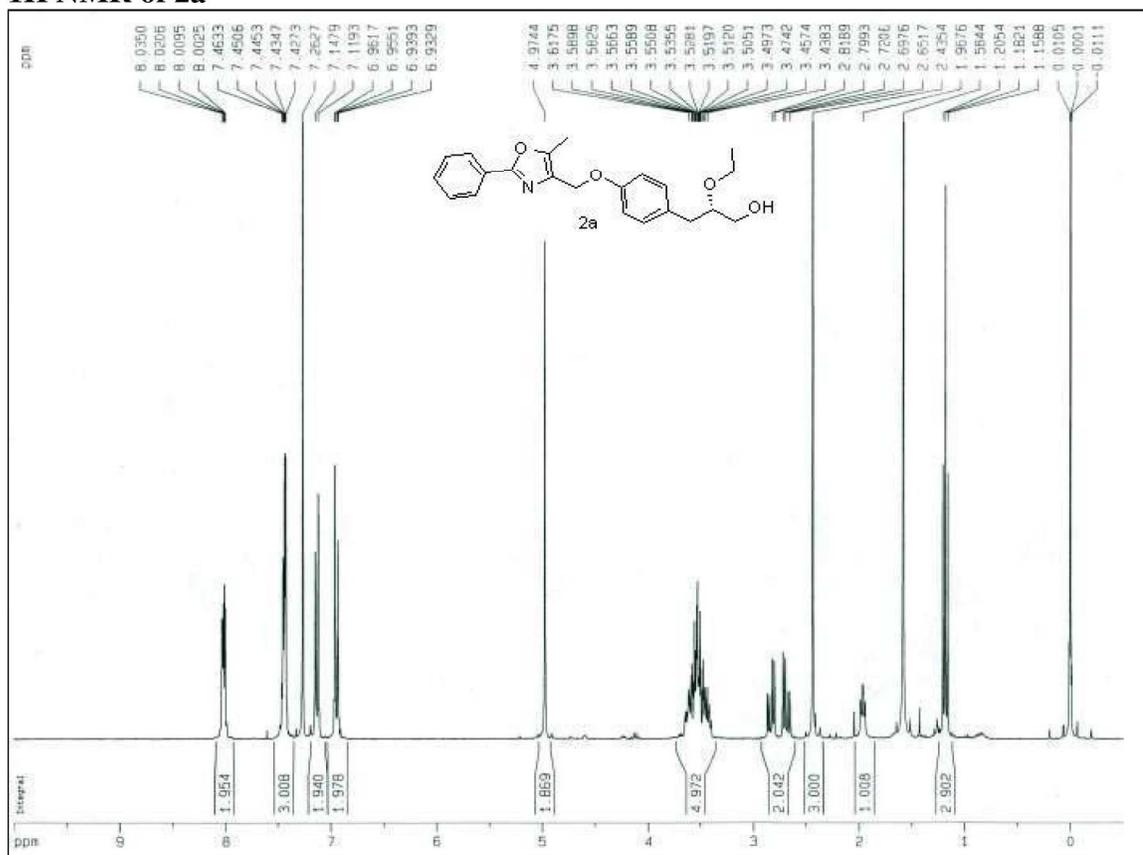
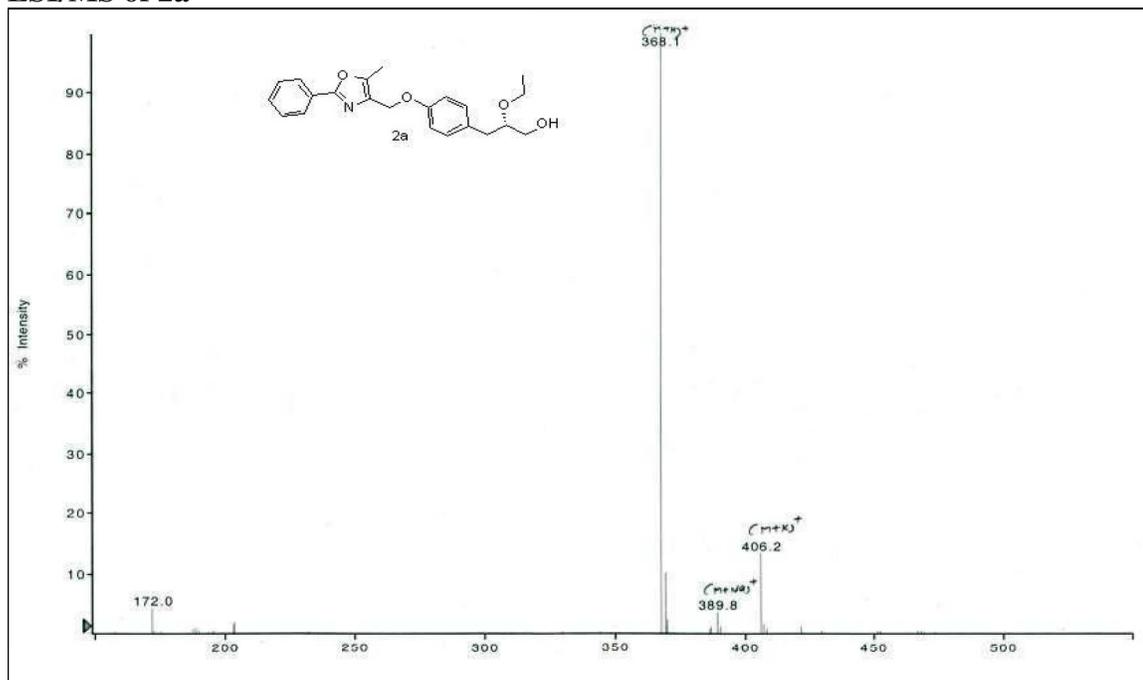


# SPECTRA

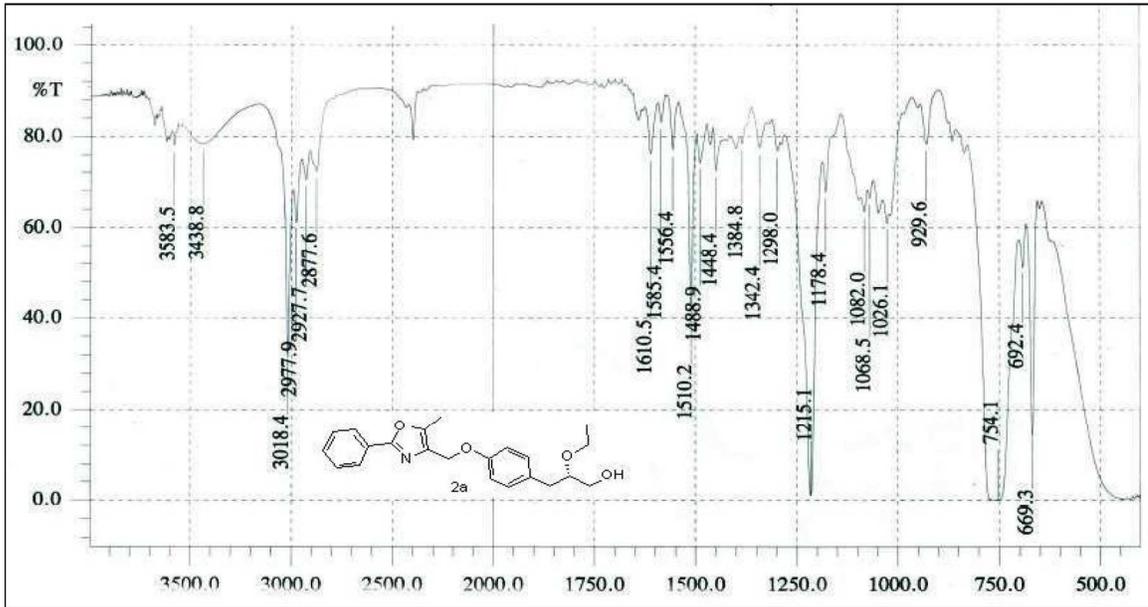
### **<sup>1</sup>H NMR of 2a**



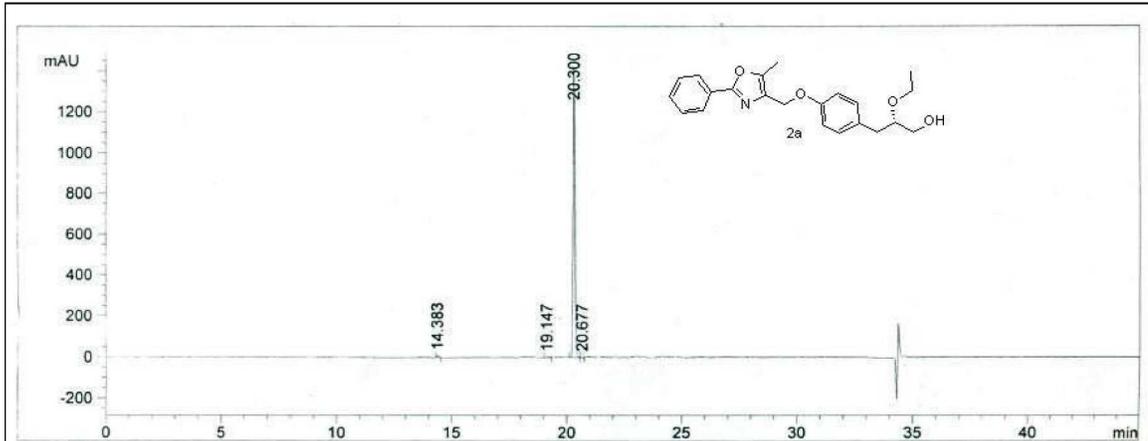
### **ESI/MS of 2a**



### IR of 2a



### HPLC of 2a



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

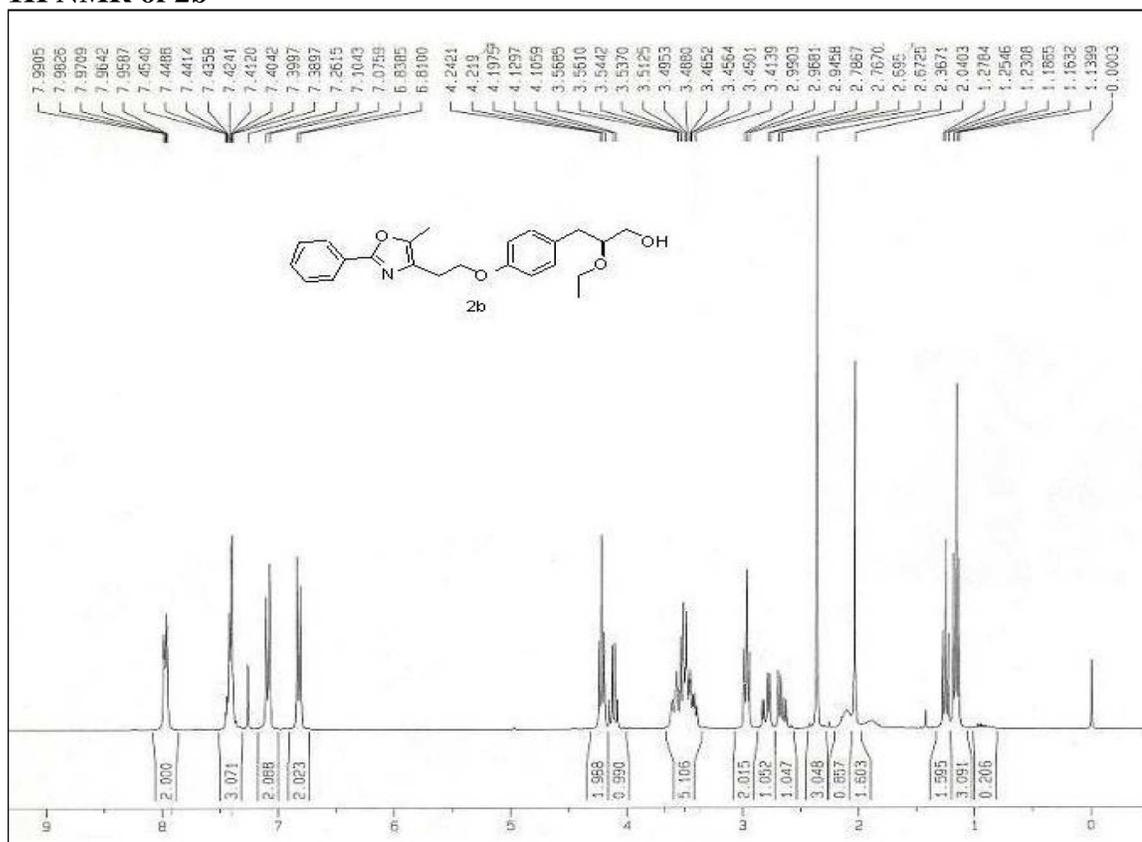
Peak #	RetTime [min]	Type	Width [min]	Area mAU*s	Height [mAU]	Area %
1	14.383	PB	0.0730	65.64398	13.78395	0.8057
2	19.147	VB	0.1064	60.93454	8.55823	0.7479
3	20.300	VV	0.0861	7957.28809	1413.13855	97.6656
4	20.677	VV	0.1157	63.61909	8.42796	0.7808

Totals : 8147.48570 1443.90870

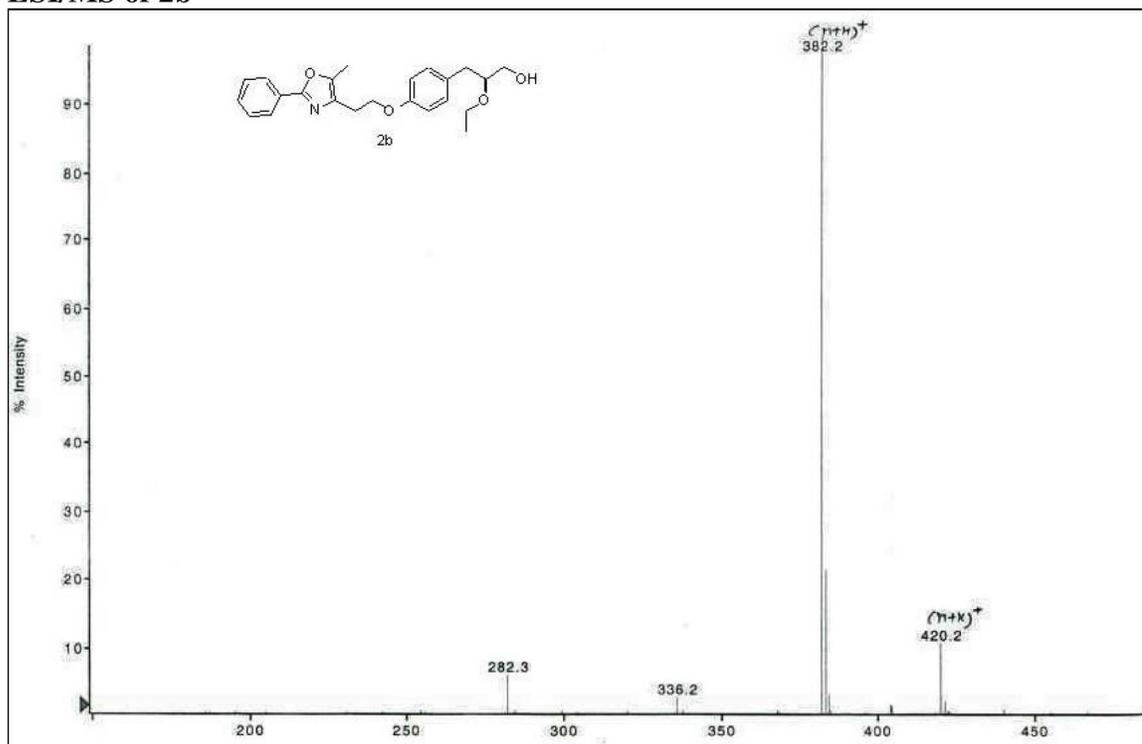
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

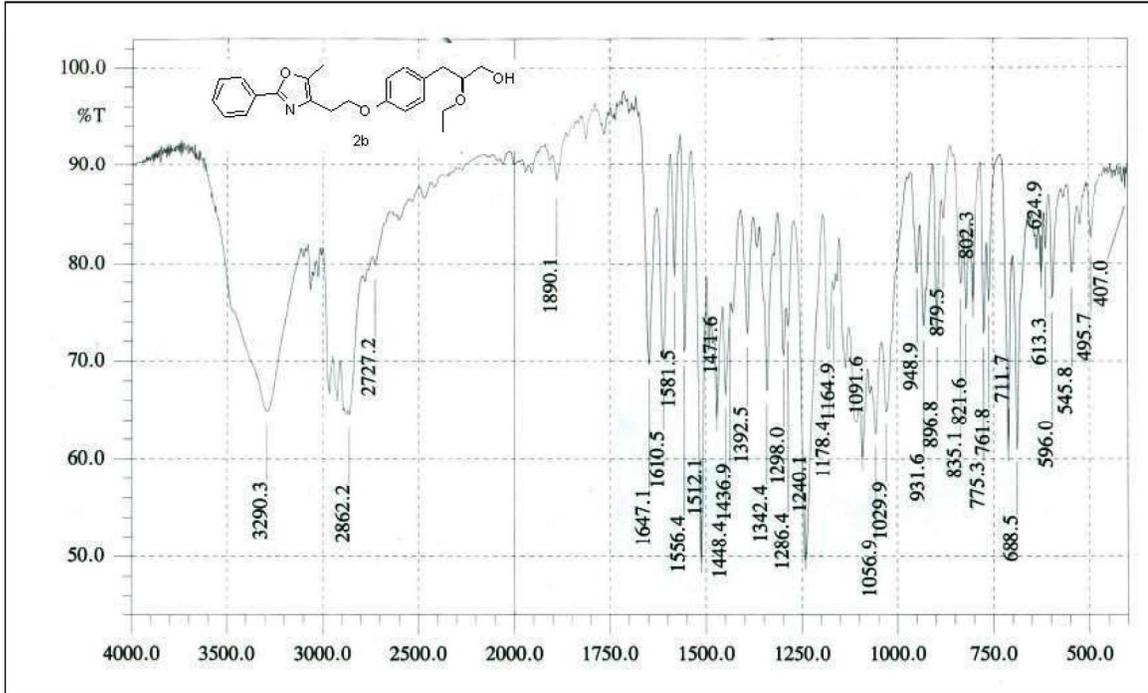
### **<sup>1</sup>H NMR of 2b**



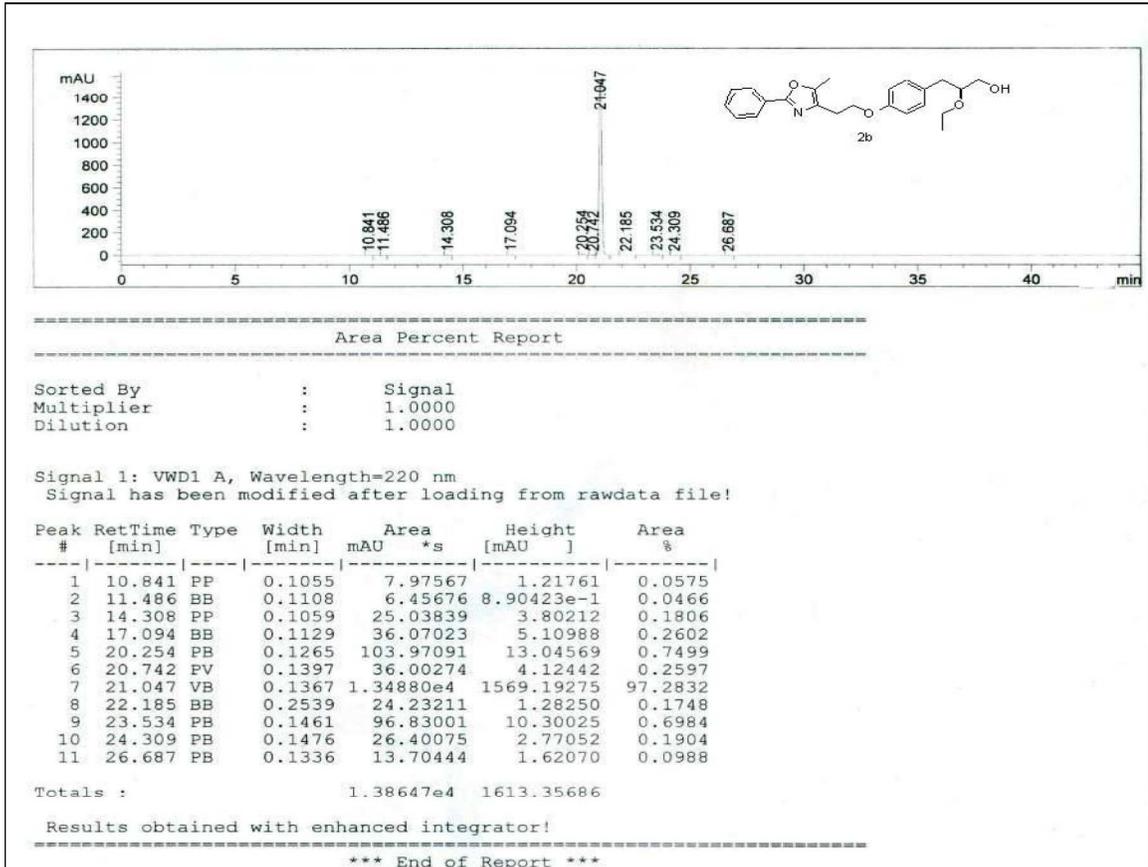
### **ESI/MS of 2b**



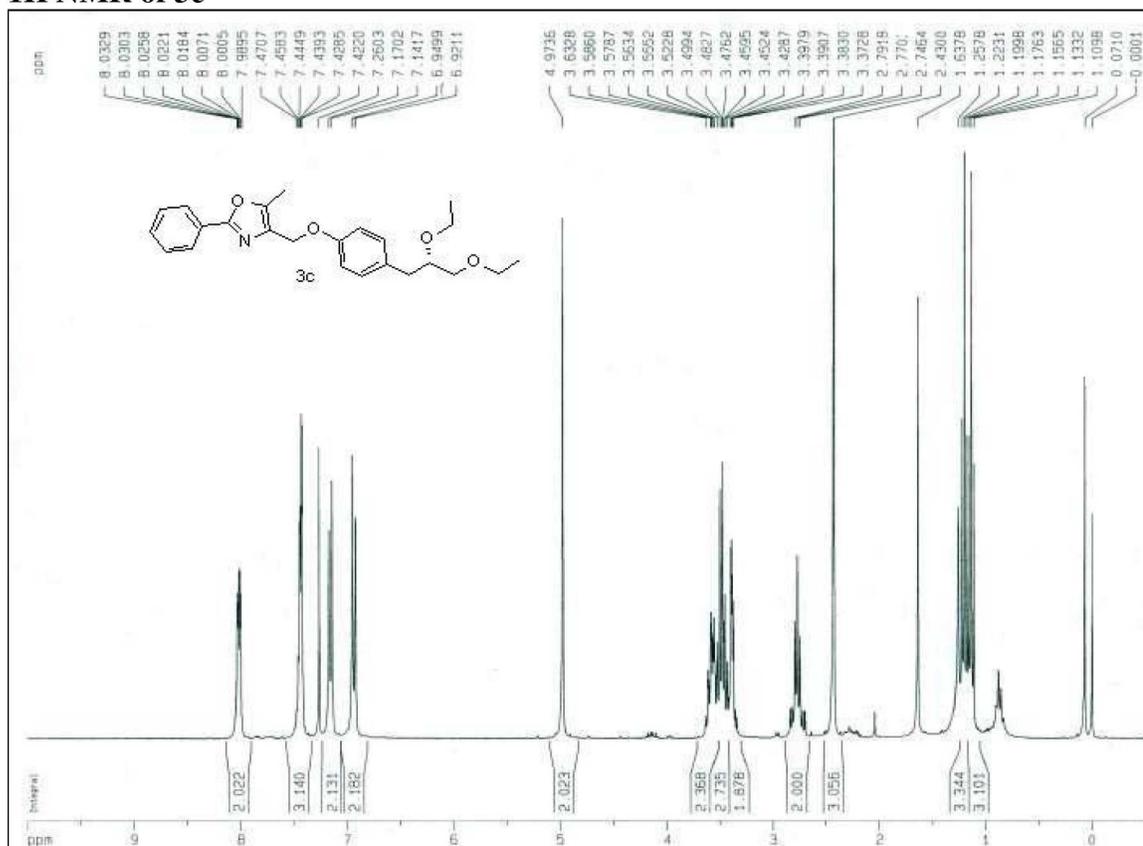
### IR of 2b



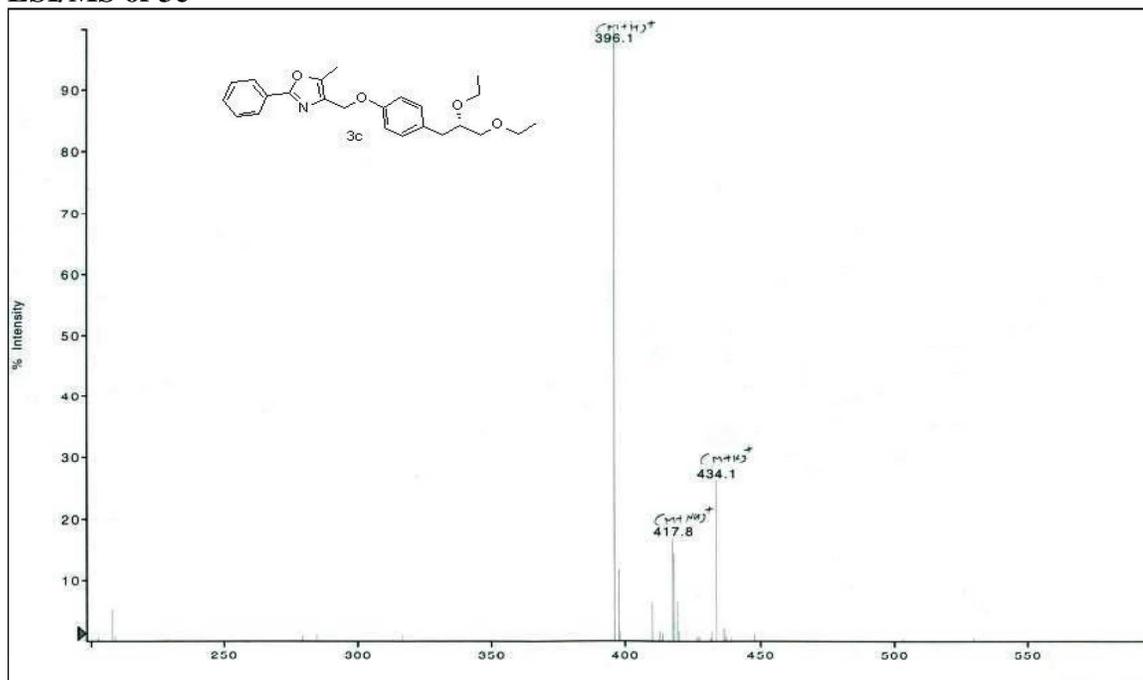
### HPLC of 2b



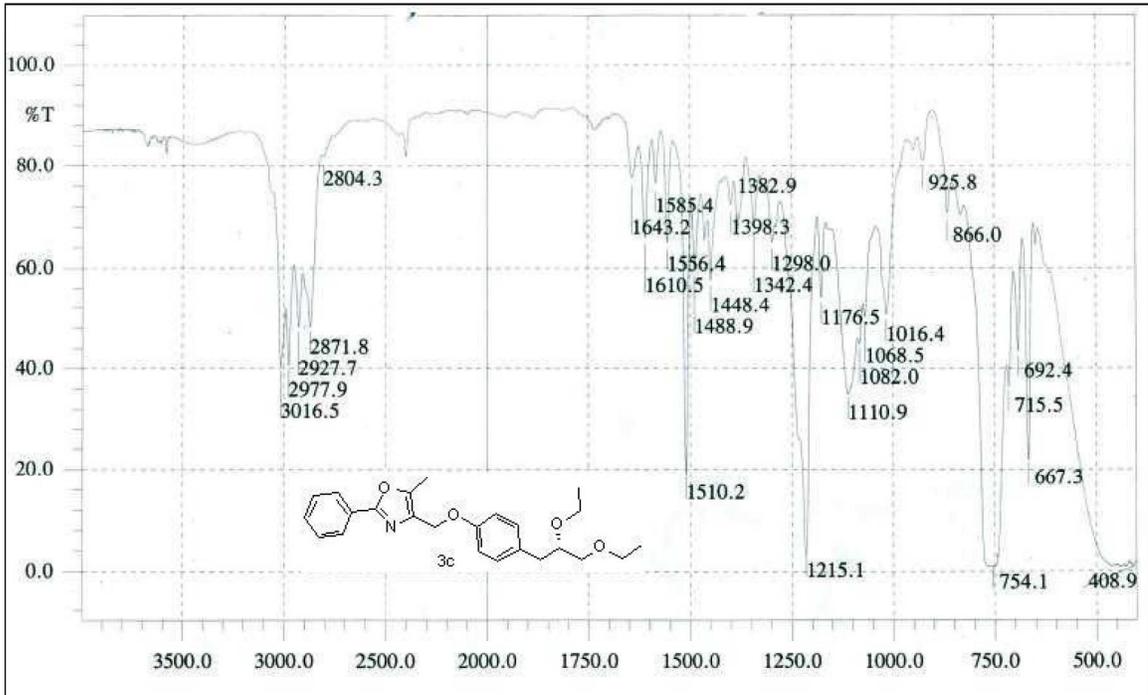
### **<sup>1</sup>H NMR of 3c**



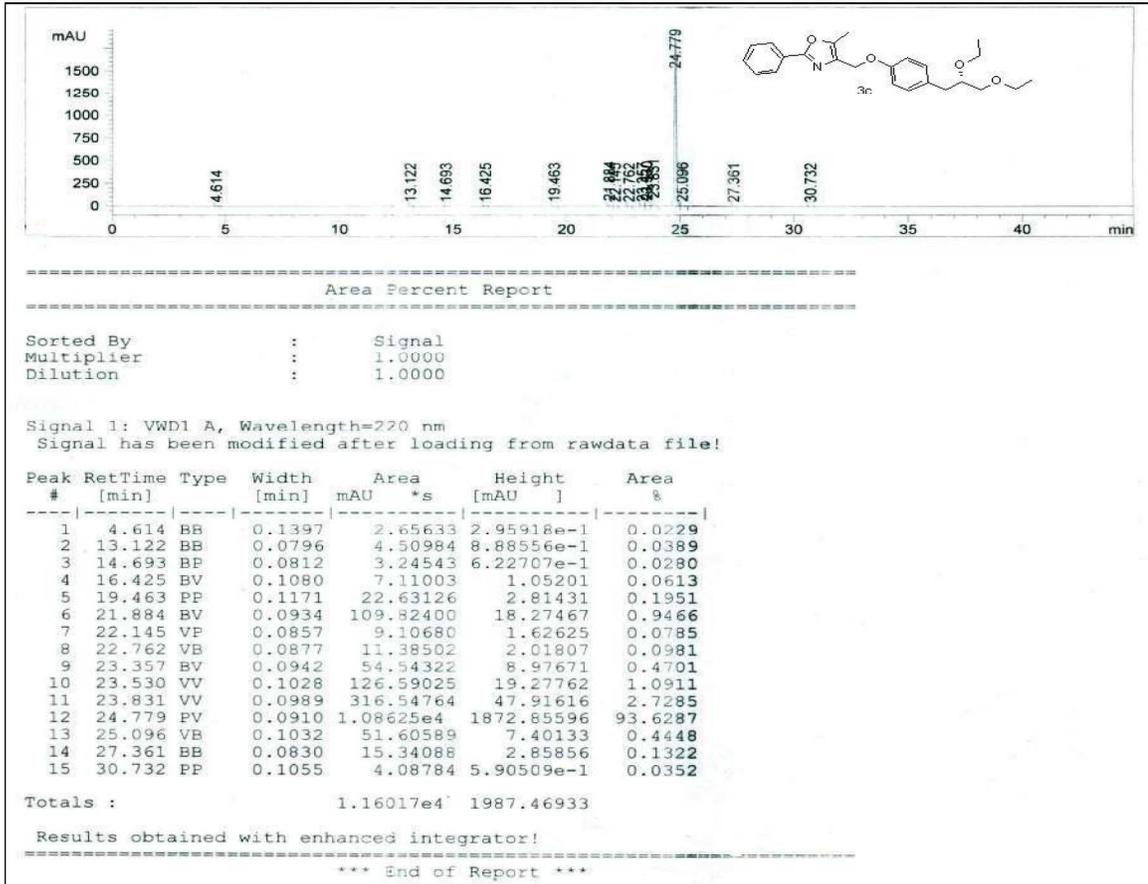
### **ESI/MS of 3c**



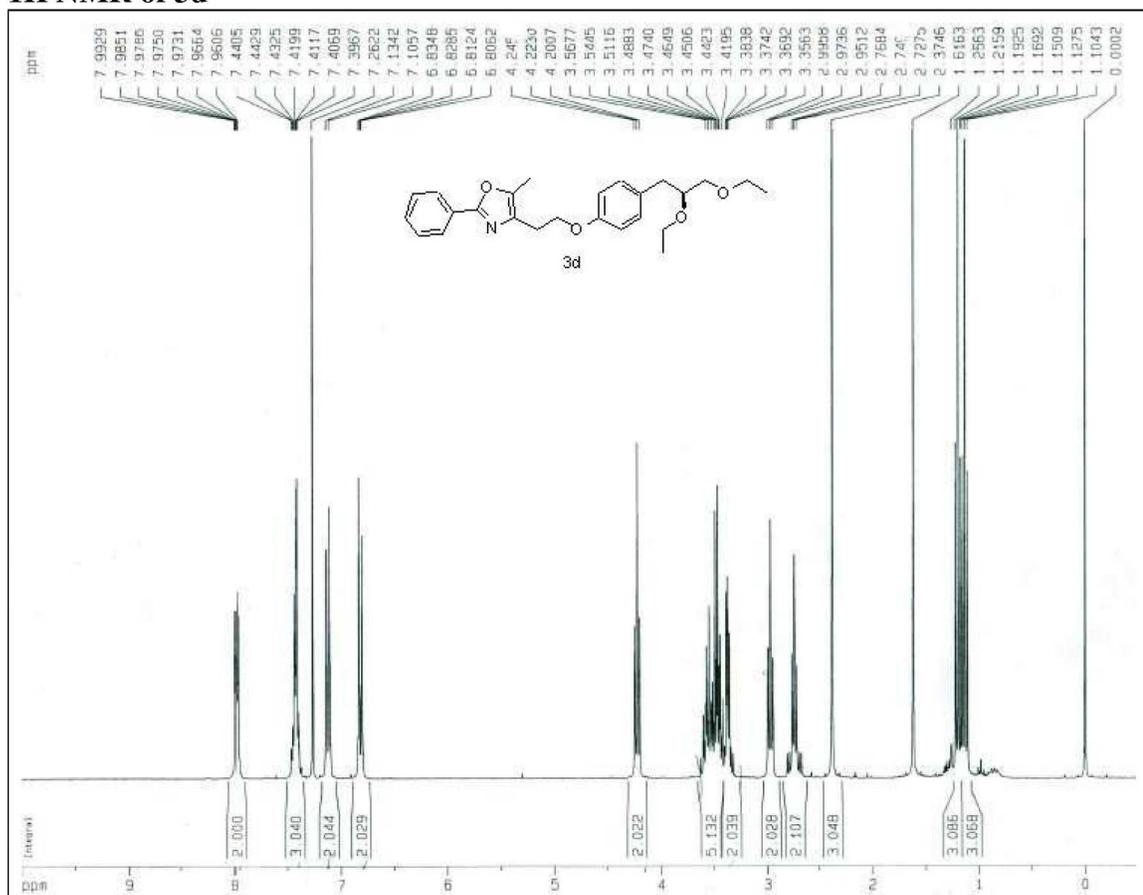
### IR of 3c



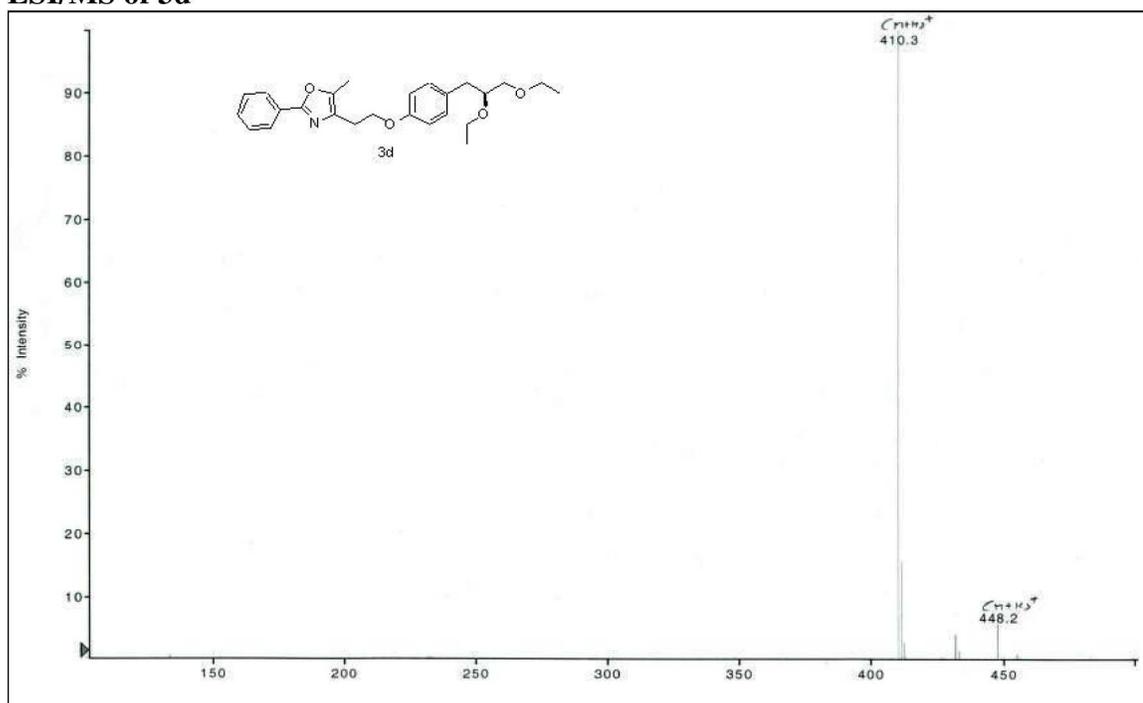
### HPLC of 3c



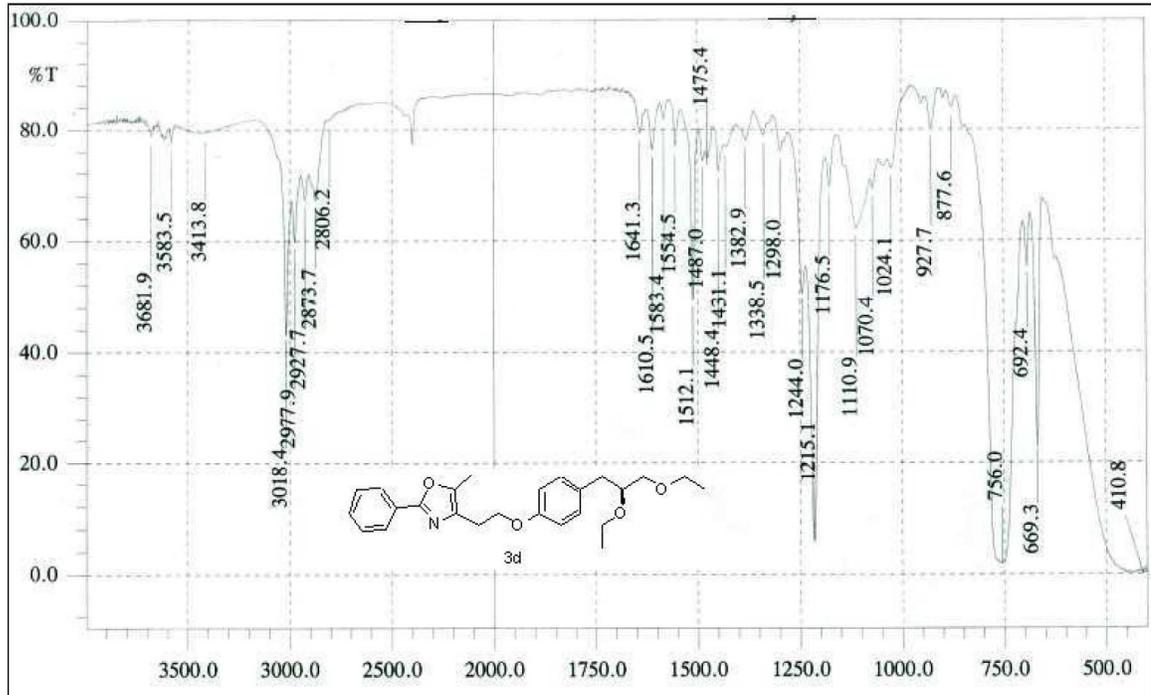
### **<sup>1</sup>H NMR of 3d**



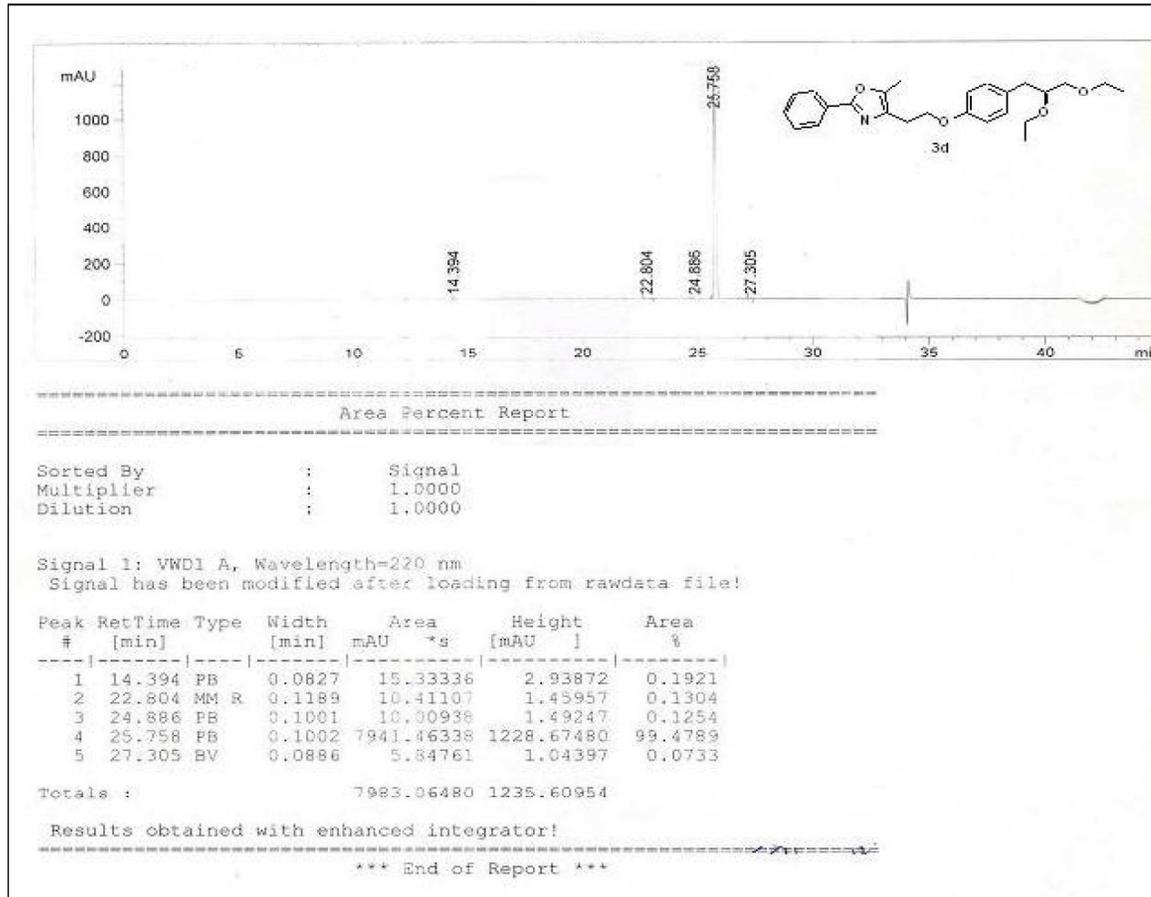
### **ESI/MS of 3d**



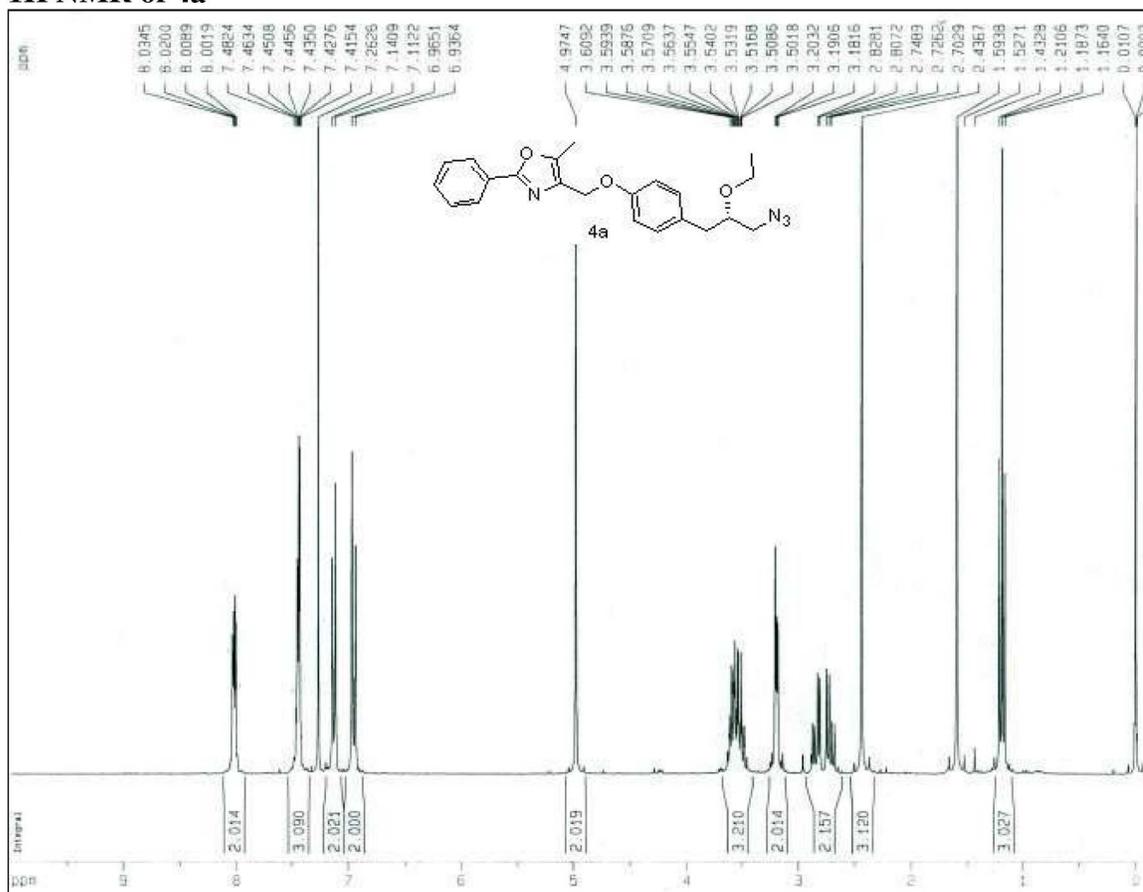
### IR of 3d



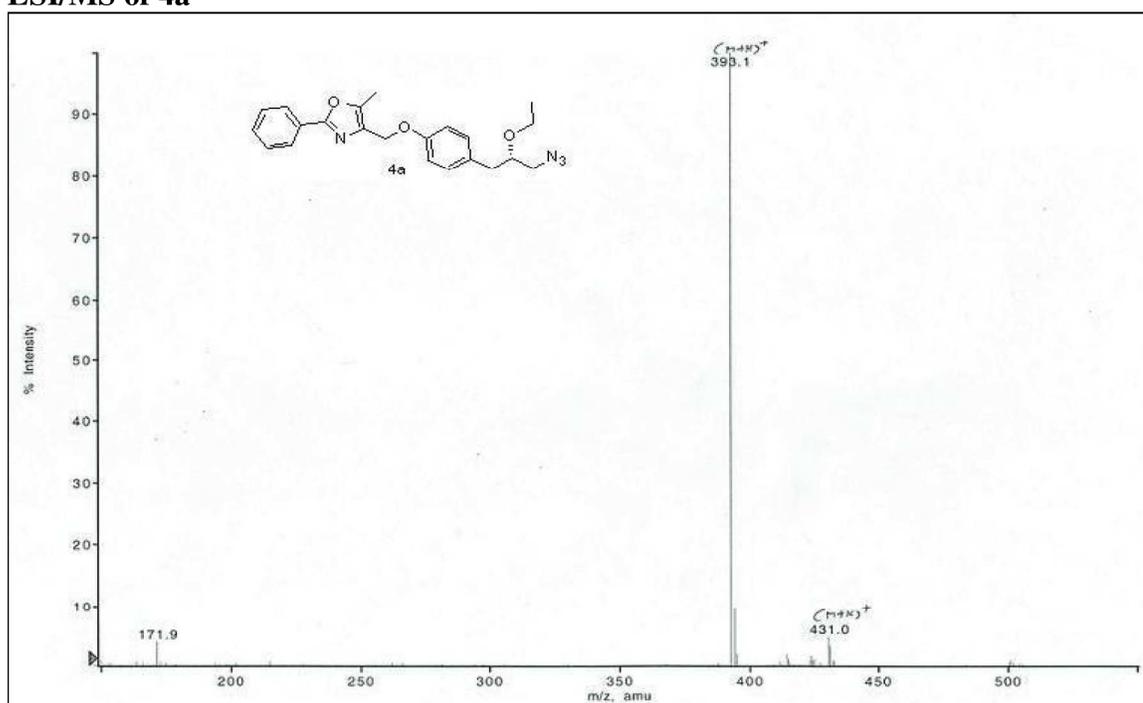
### HPLC of 3d



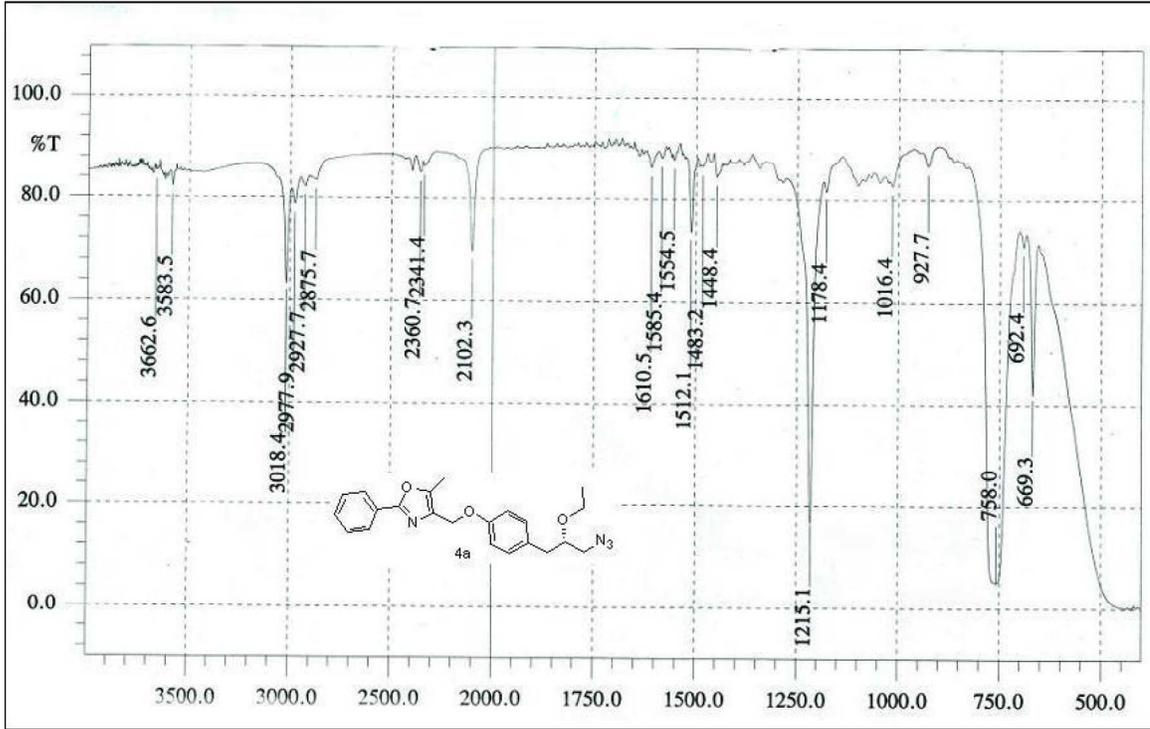
### <sup>1</sup>H NMR of 4a



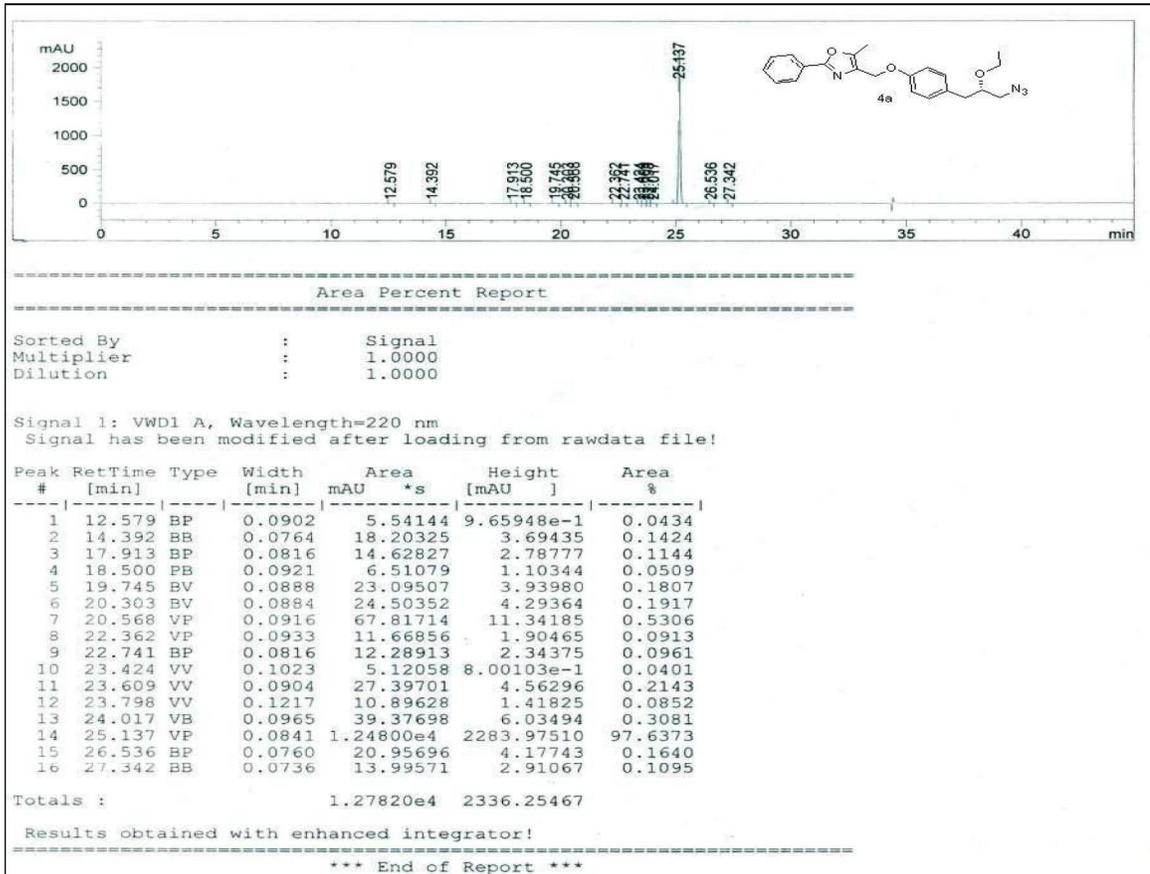
### ESI/MS of 4a



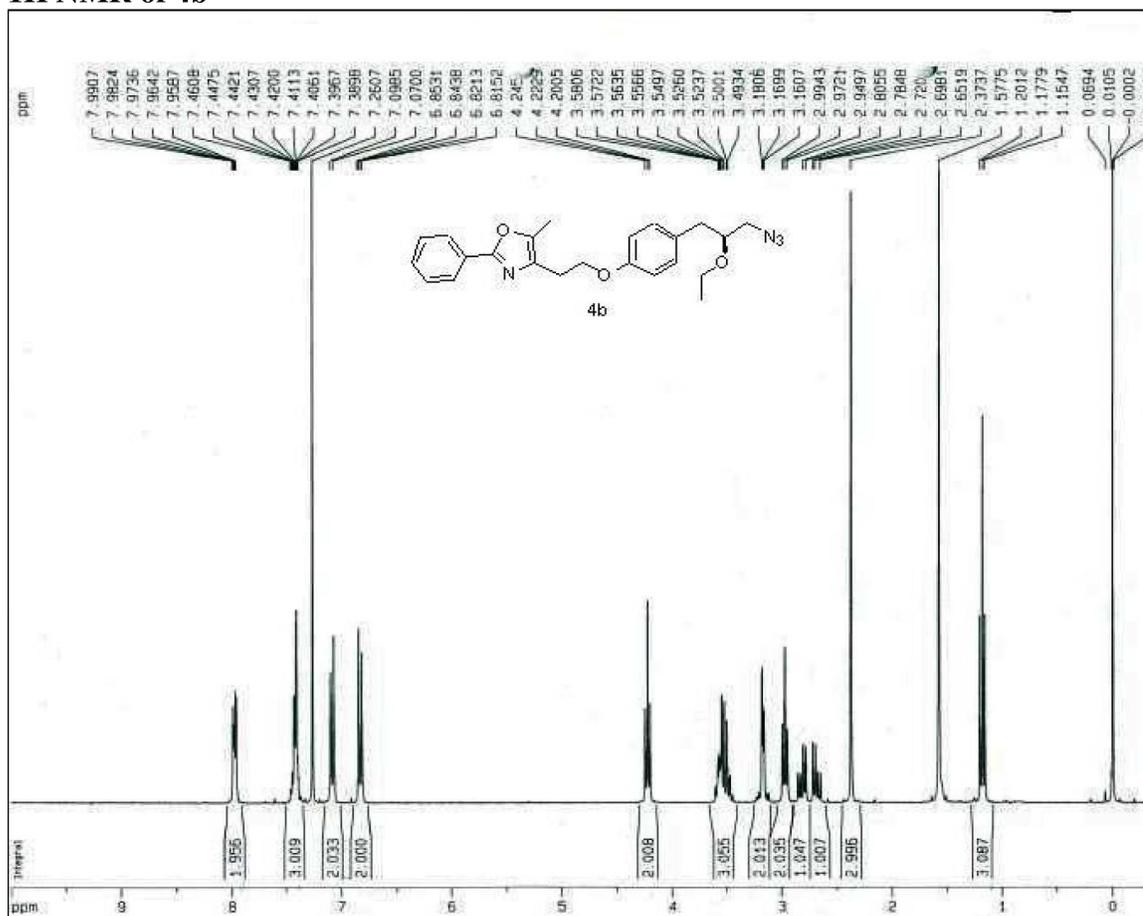
### IR of 4a



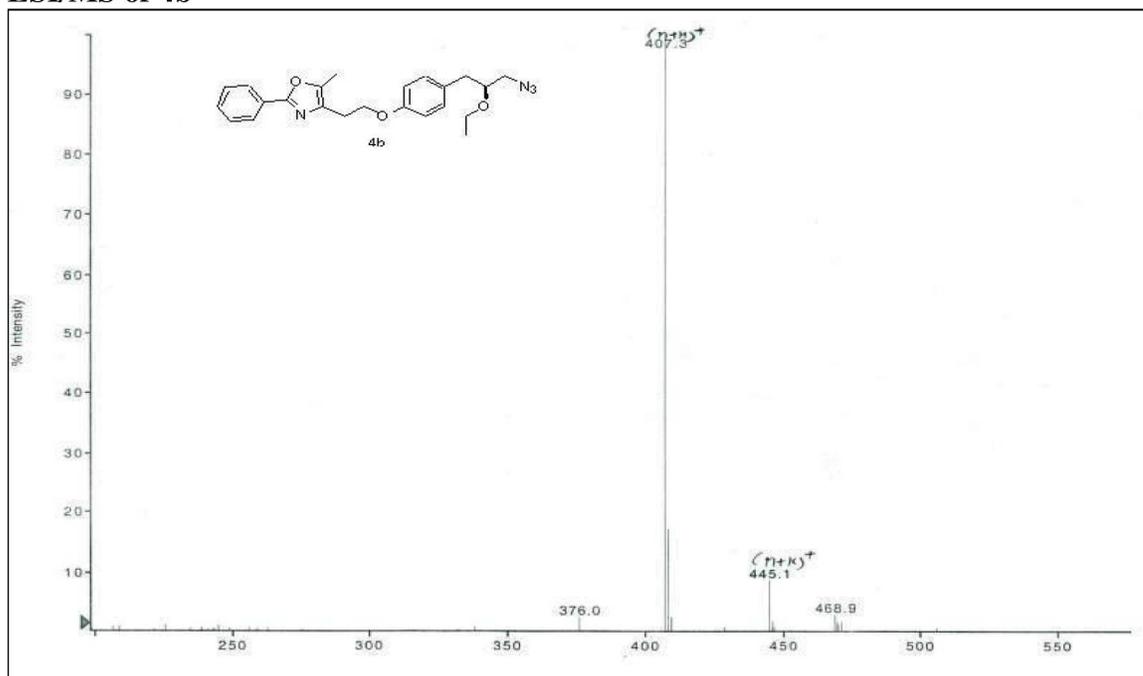
### HPLC of 4a



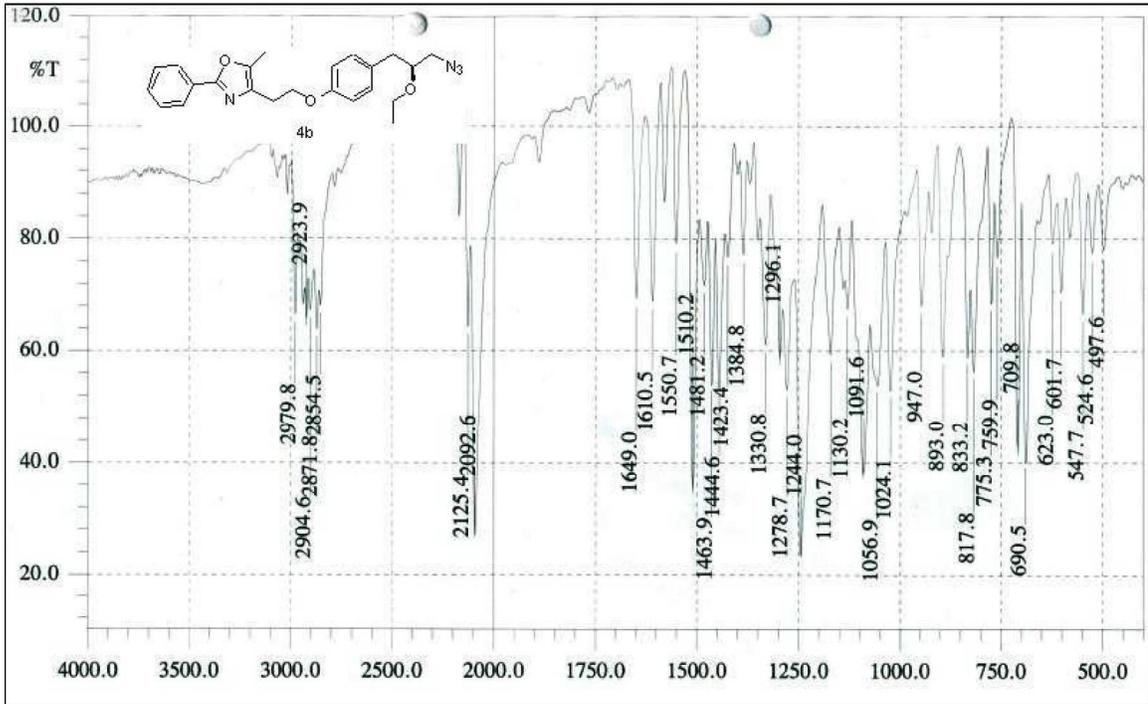
### <sup>1</sup>H NMR of 4b



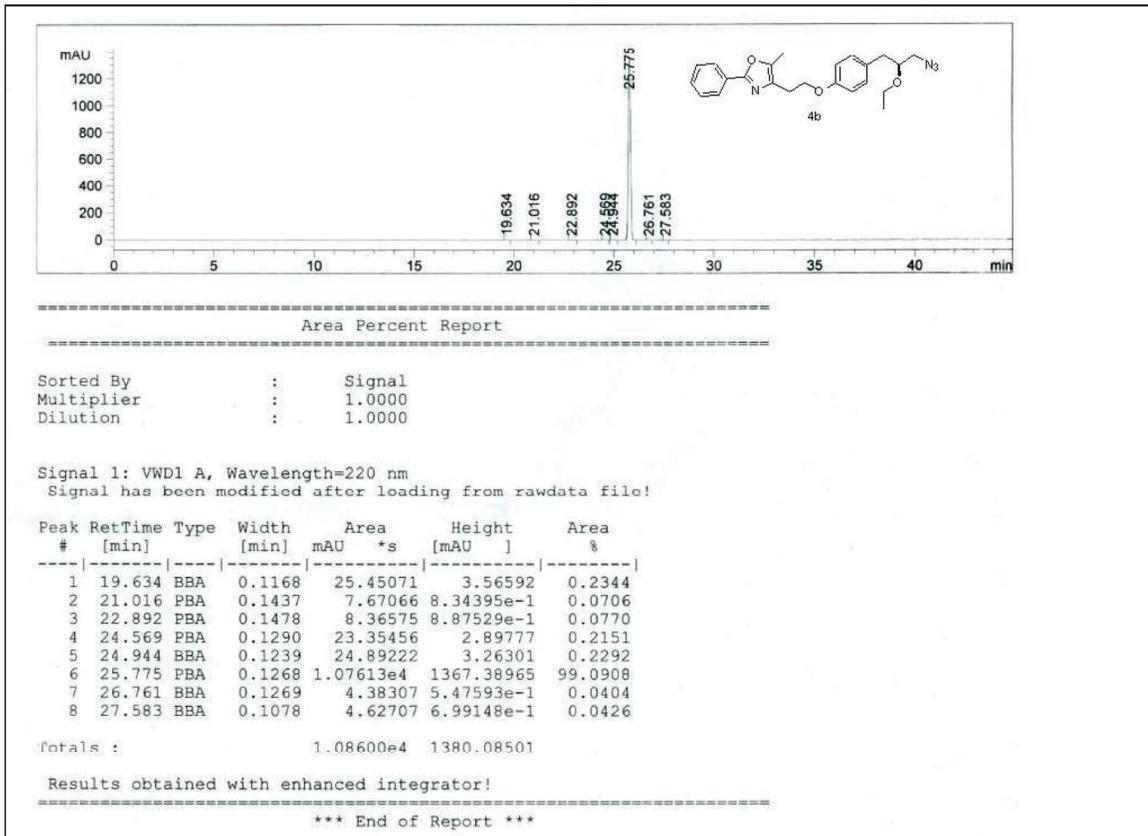
### ESI/MS of 4b



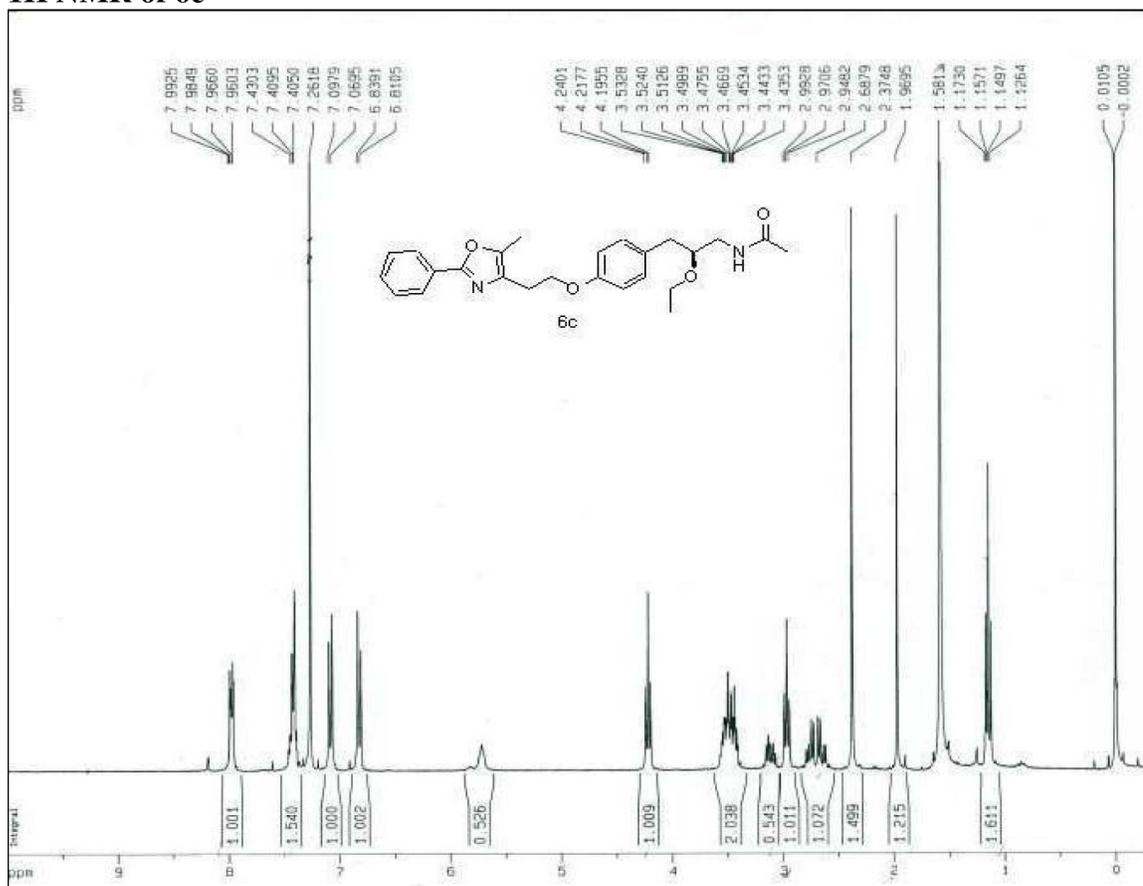
## IR od 4b



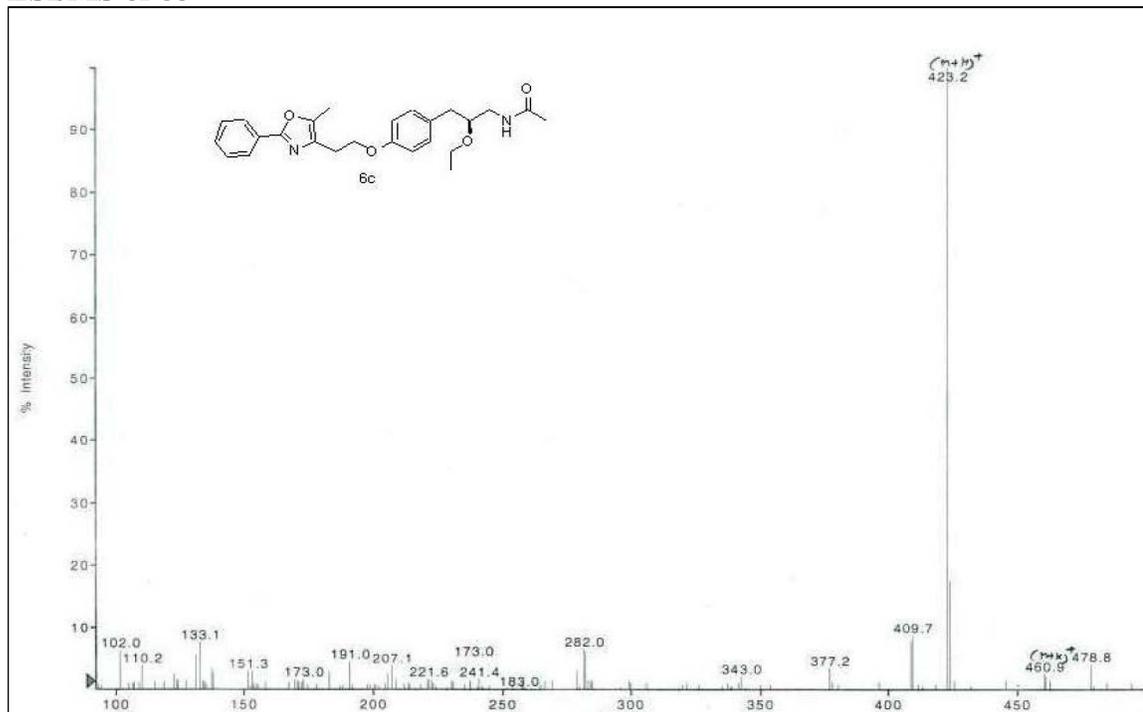
## HPLC of 4b



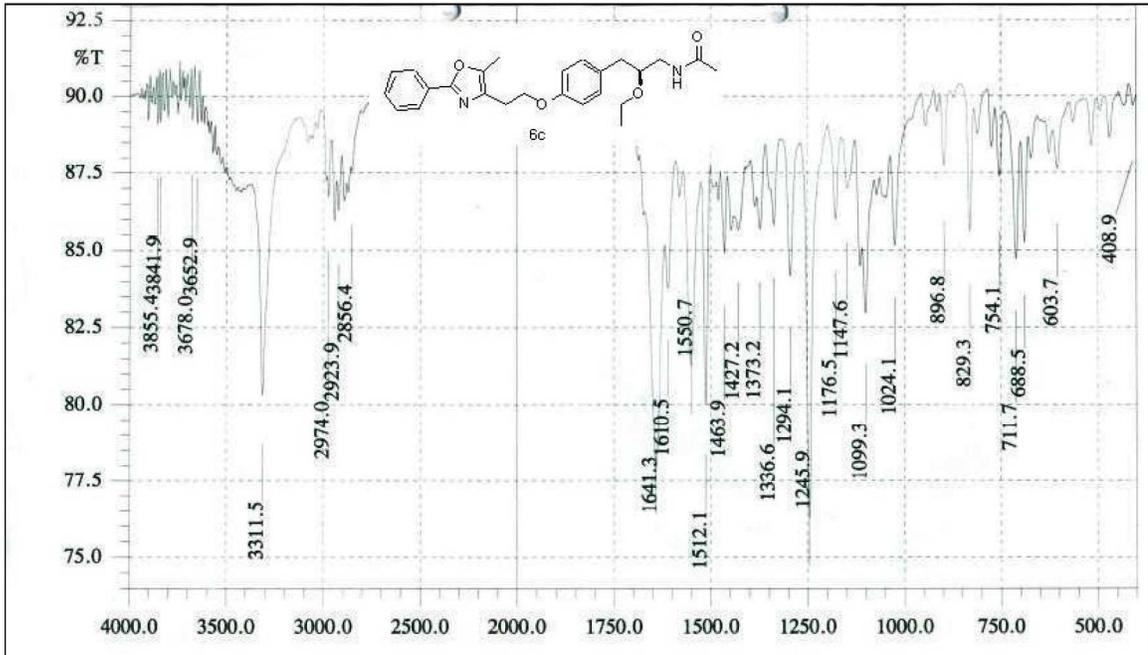
### **<sup>1</sup>H NMR of 6c**



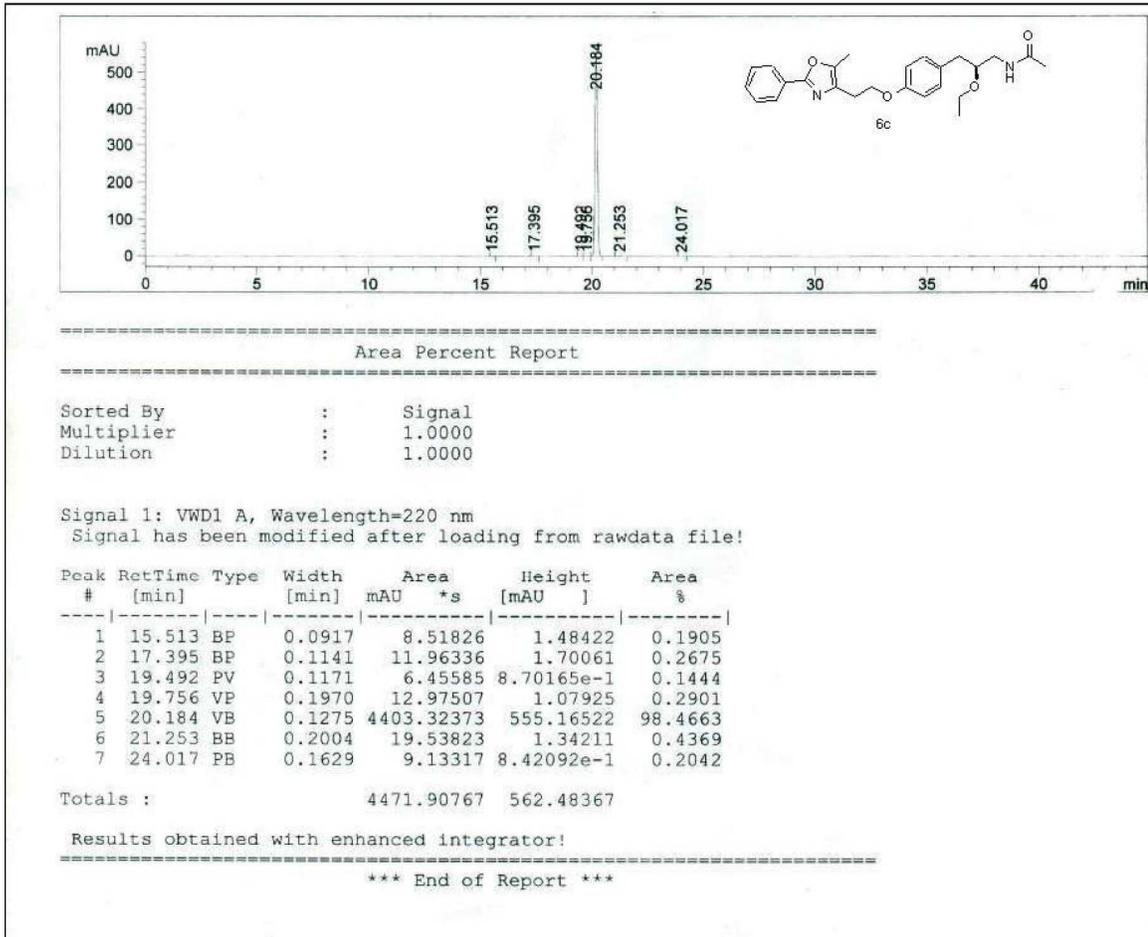
### **ESI/MS of 6c**



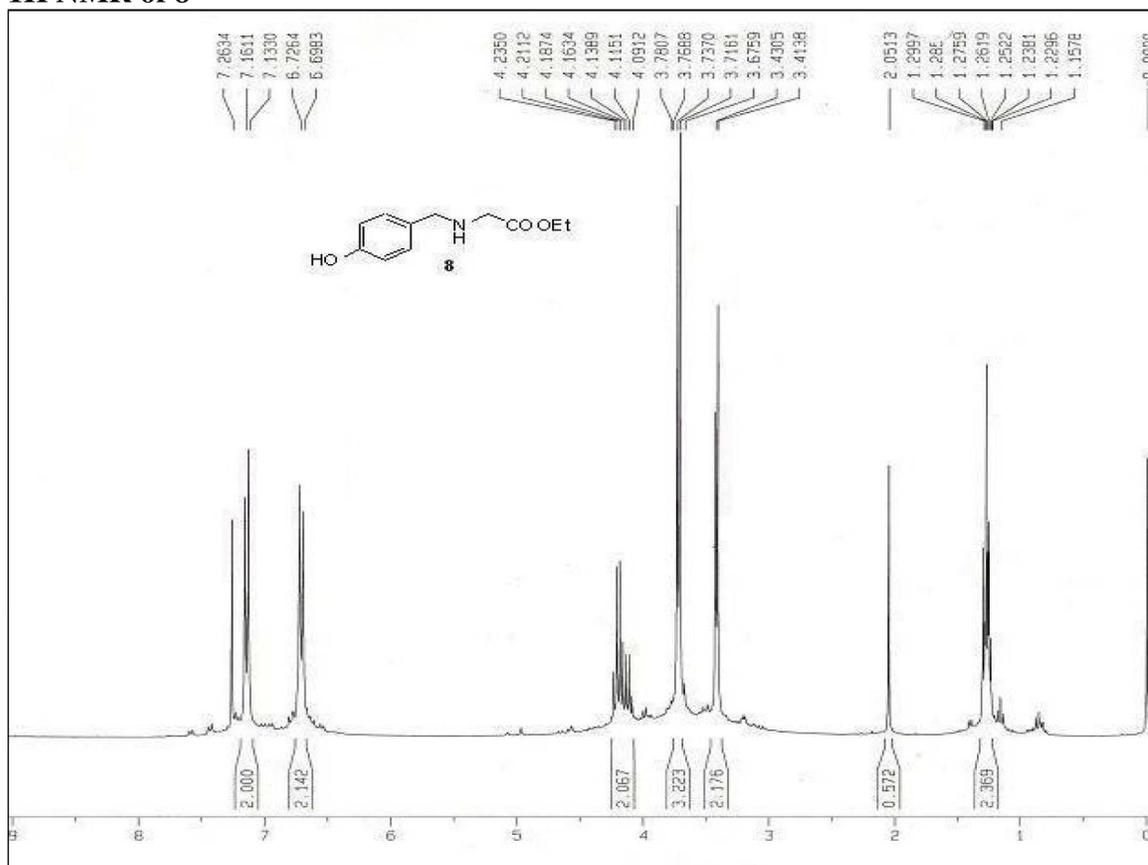
### IR of 6c



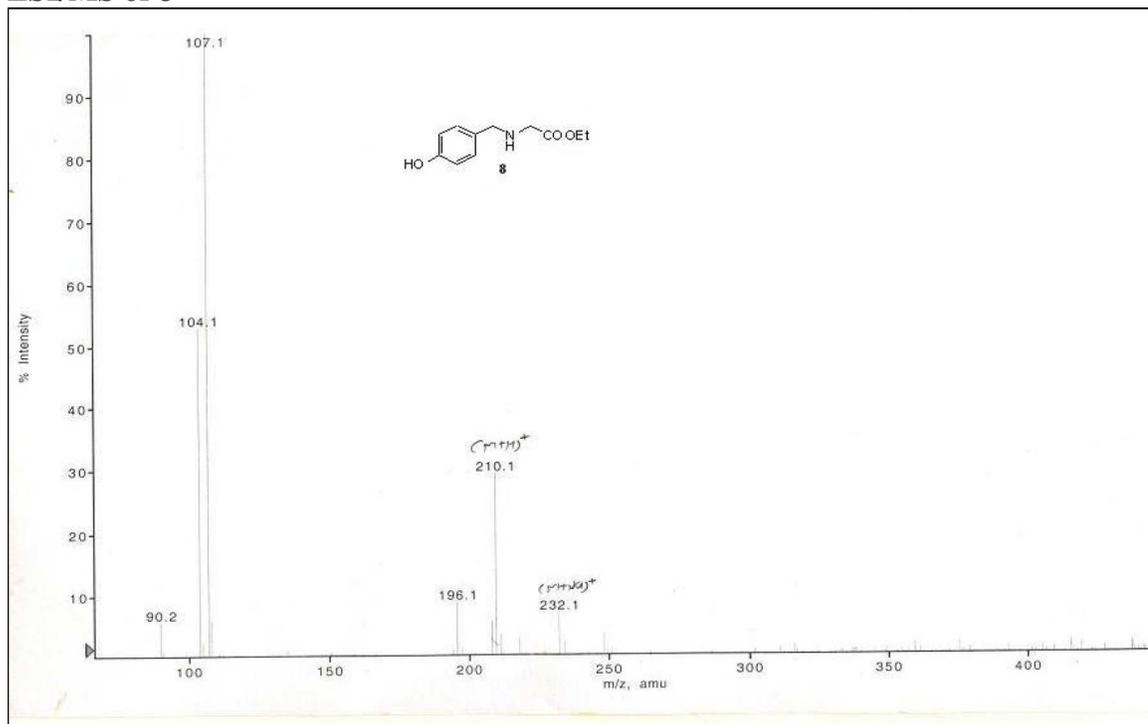
### HPLC of 6c



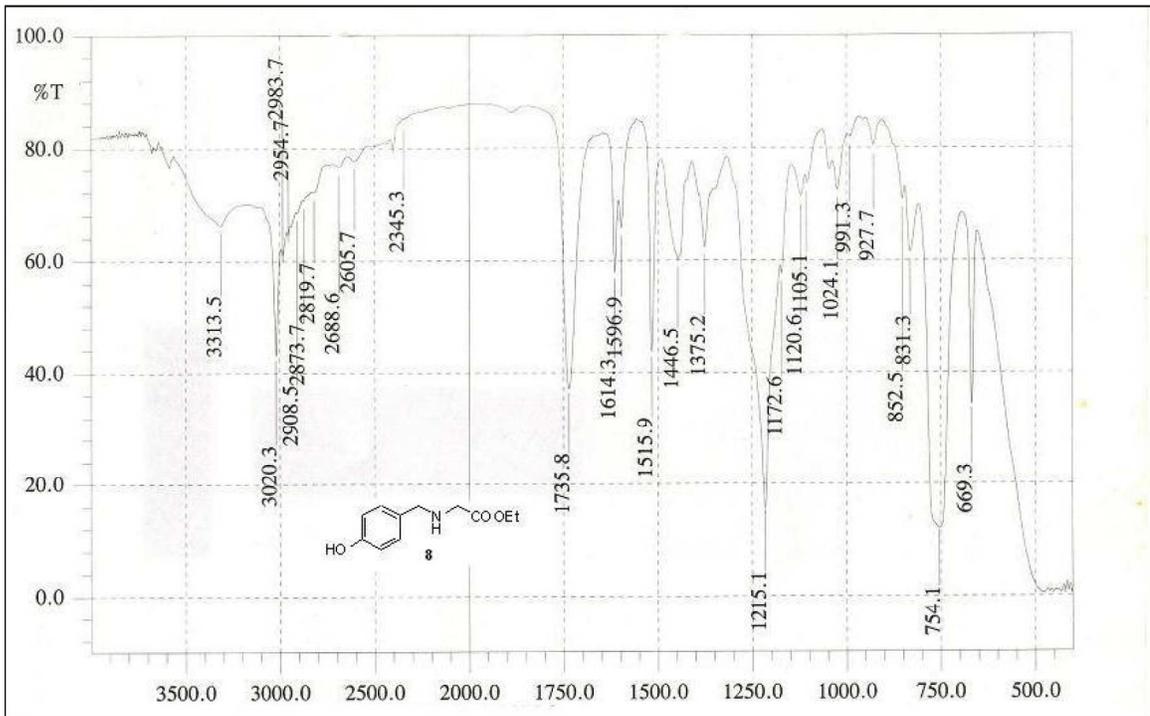
### **<sup>1</sup>H NMR of 8**



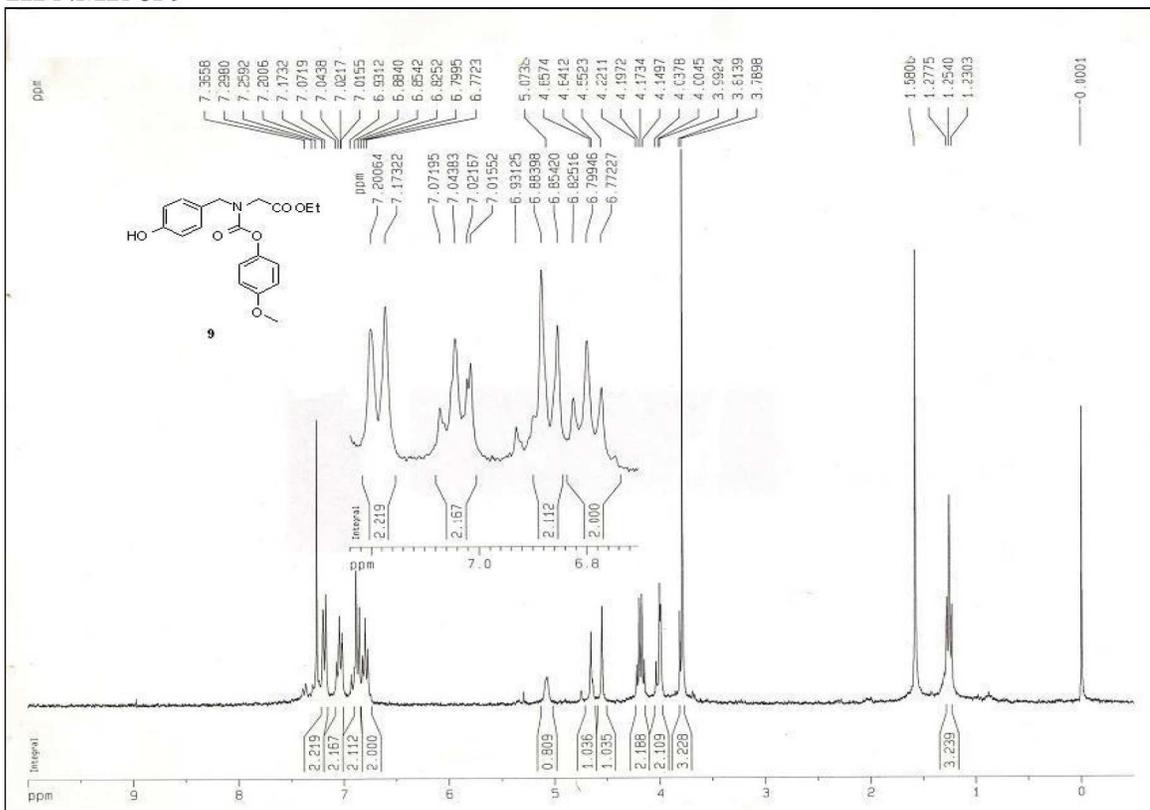
### **ESI/MS of 8**



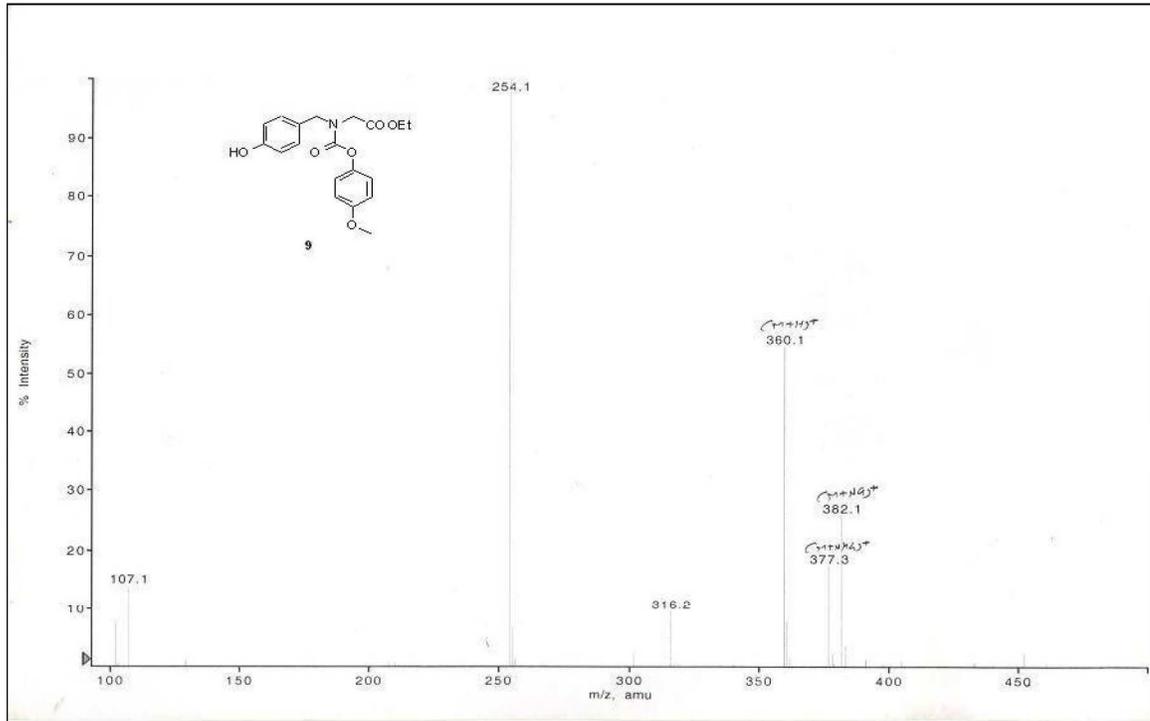
**IR of 8**



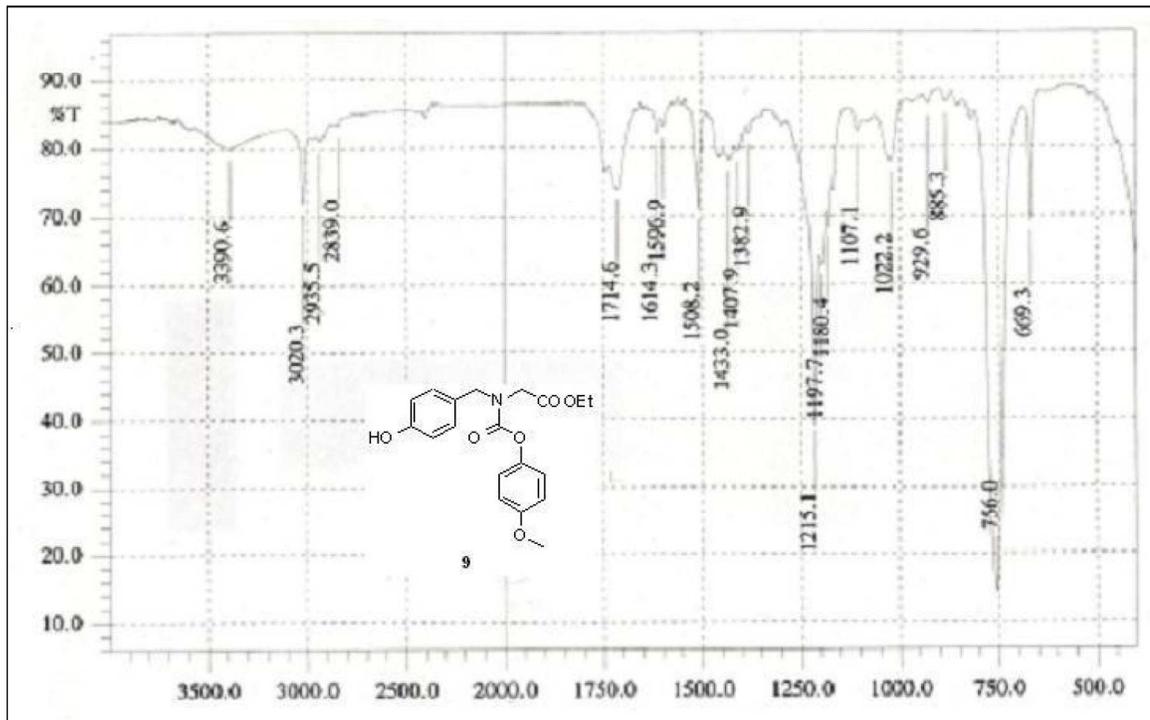
**<sup>1</sup>H NMR of 9**



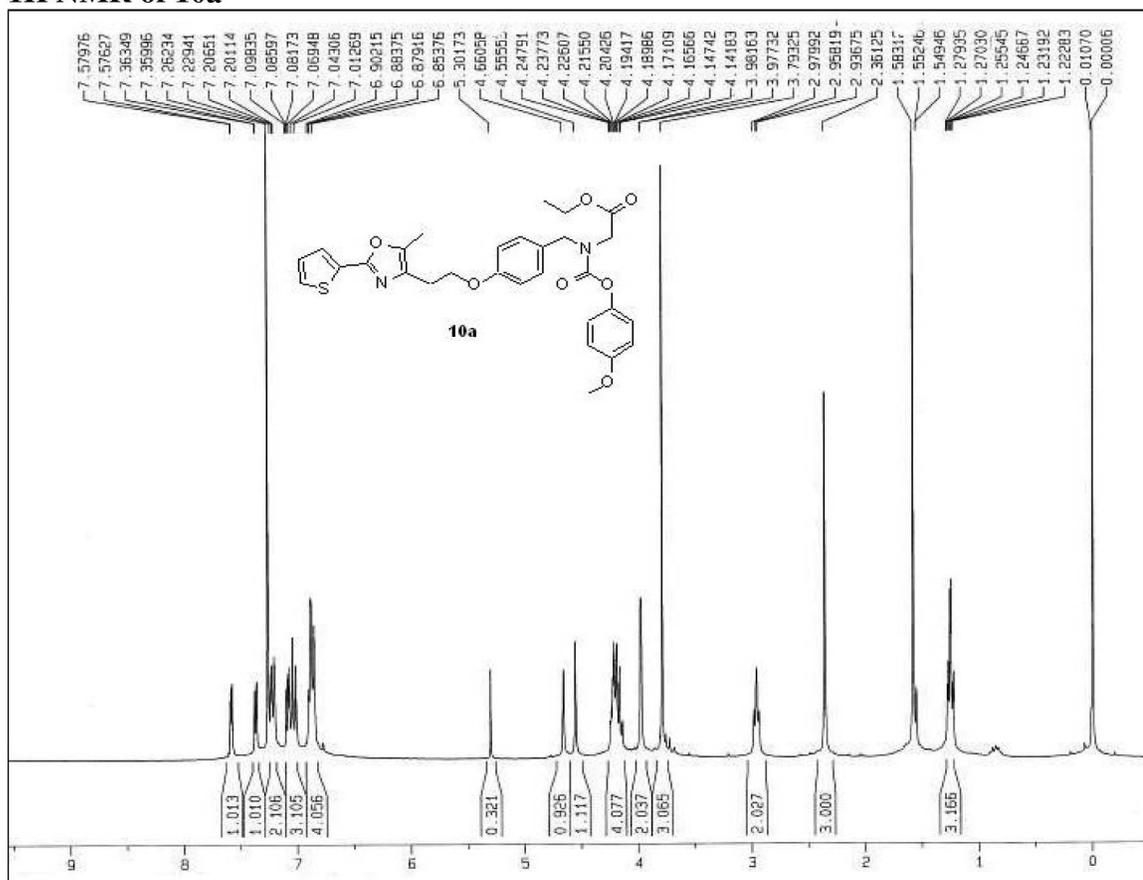
### ESI/MS of 9



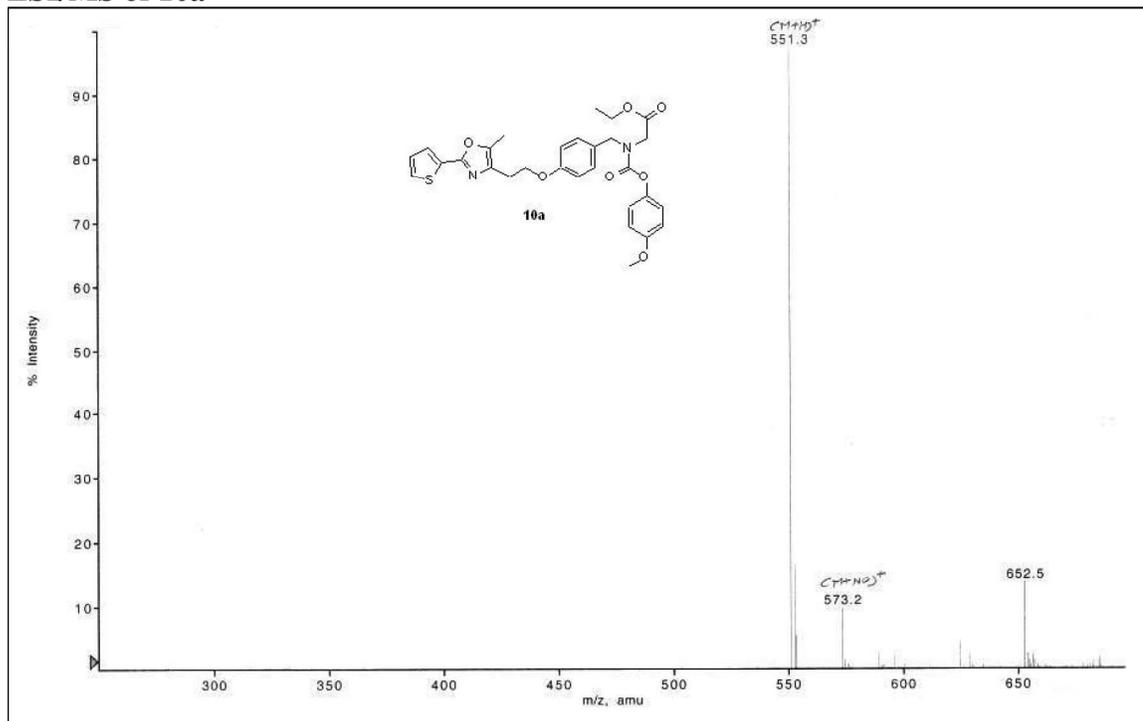
### IR of 9



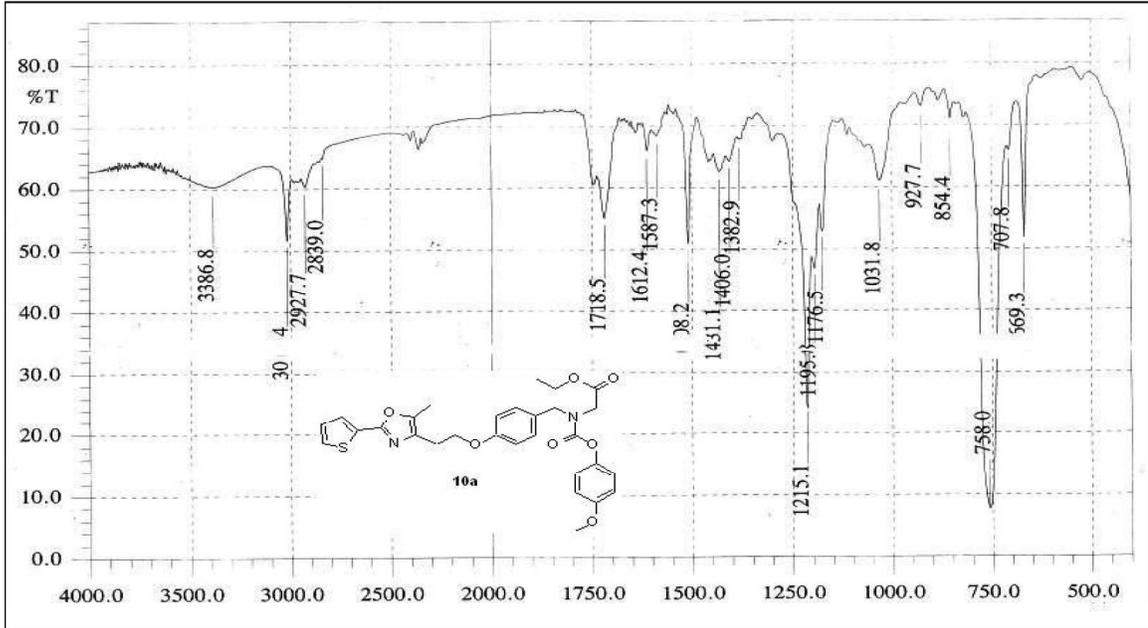
### **<sup>1</sup>H NMR of 10a**



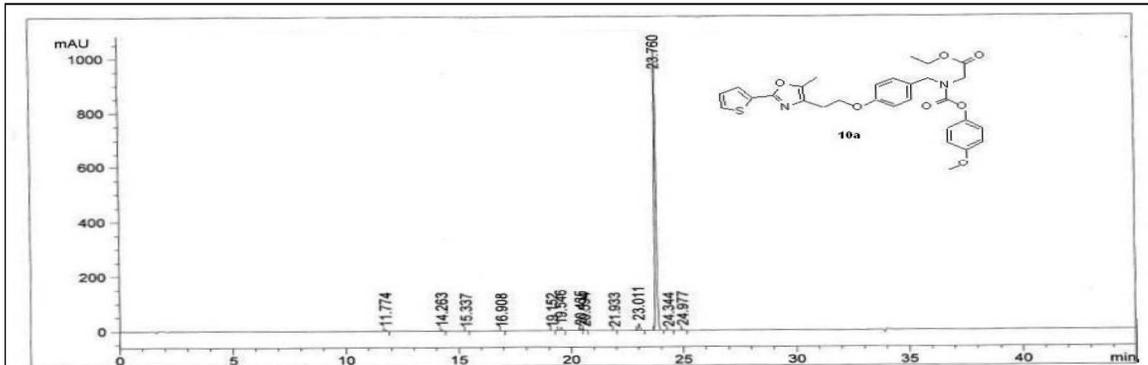
### **ESI/MS of 10a**



### IR of 10a



### HPLC of 10a



#### Area Percent Report

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

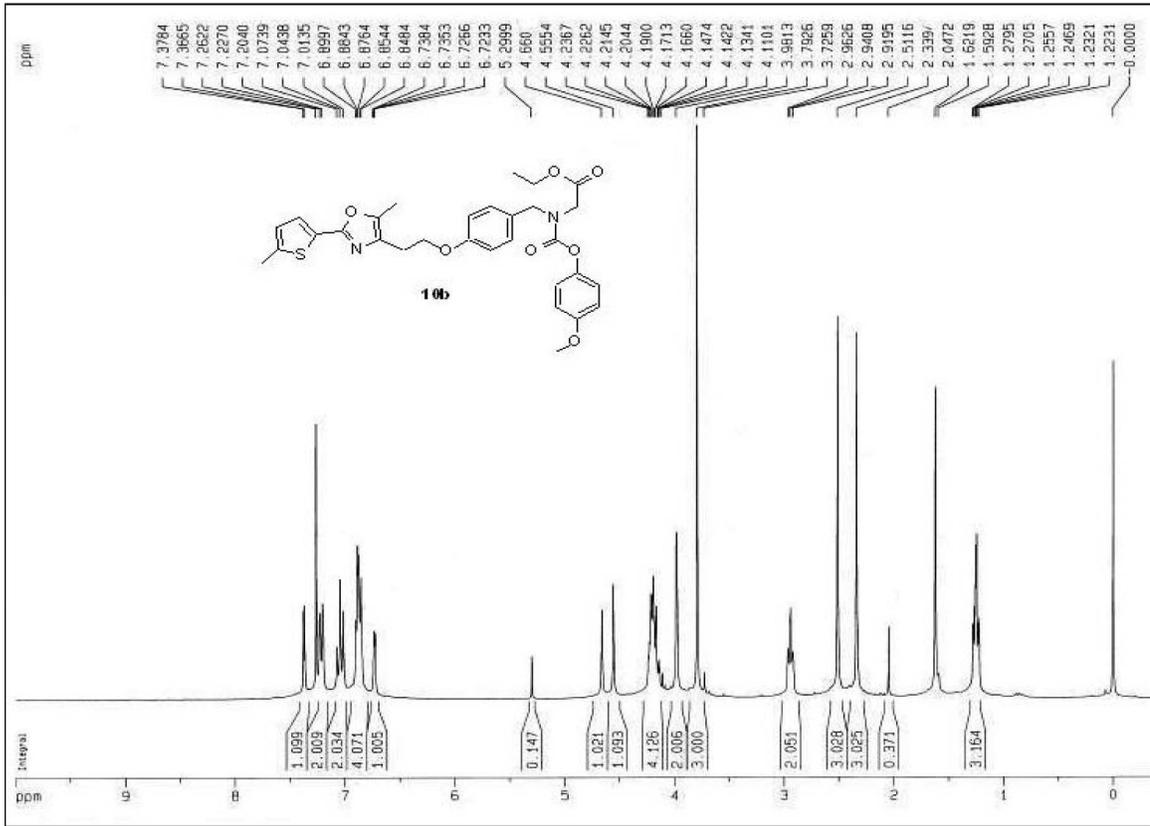
Peak #	RetTime [min]	Type	Width [min]	Area mAU	*s	Height [mAU]	Area %
1	11.774	BB	0.0873	27.97663		4.98994	0.4671
2	14.263	BB	0.0789	22.18014		4.31504	0.3703
3	15.337	BB	0.0711	3.37547		7.14315e-1	0.0564
4	16.908	MM R	0.1263	1.62731		2.14824e-1	0.0272
5	19.152	PP	0.0722	1.88371		4.01738e-1	0.0314
6	19.546	BB	0.0789	63.02331		12.26535	1.0521
7	20.435	BV	0.0812	40.33692		7.55825	0.6734
8	20.594	VB	0.0895	19.07081		3.21896	0.3184
9	21.933	MM R	0.0845	5.26587		1.03823	0.0879
10	23.011	BP	0.0847	138.52641		25.14207	2.3126
11	23.760	BB	0.0839	5629.63037		1033.79932	93.9845
12	24.344	PB	0.1204	8.32034		9.70881e-1	0.1389
13	24.977	BP	0.0787	28.73759		5.60998	0.4798

Totals : 5989.95488 1100.23890

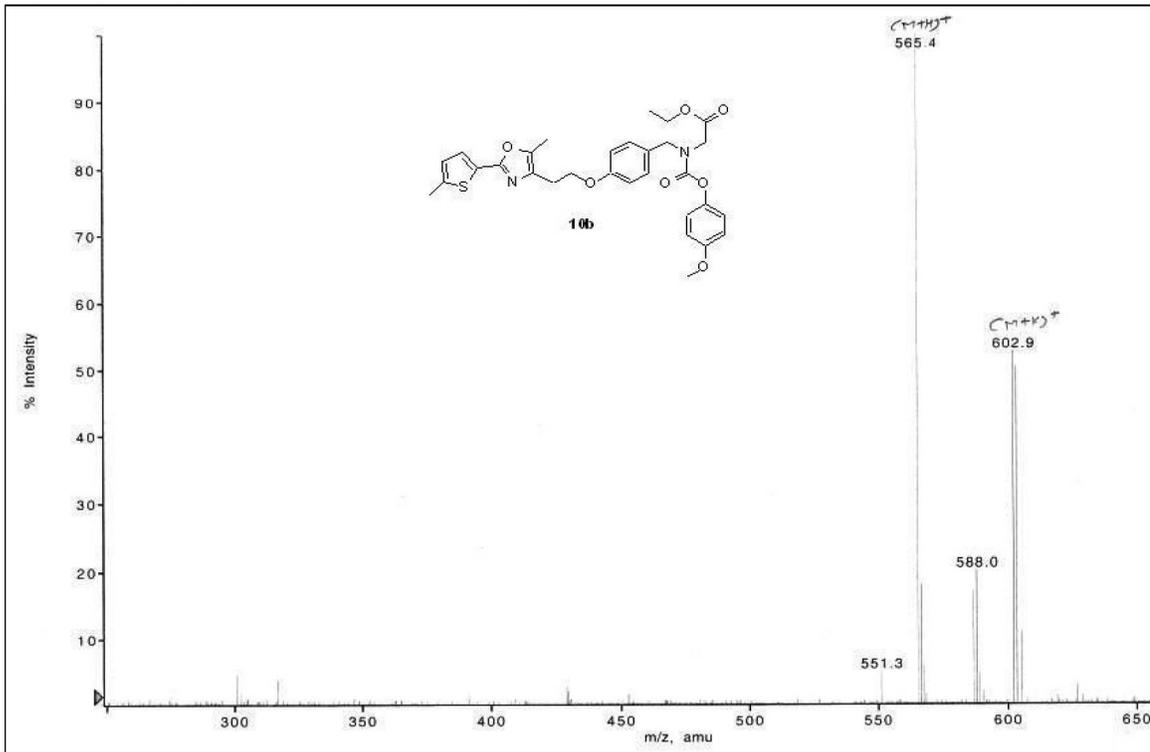
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

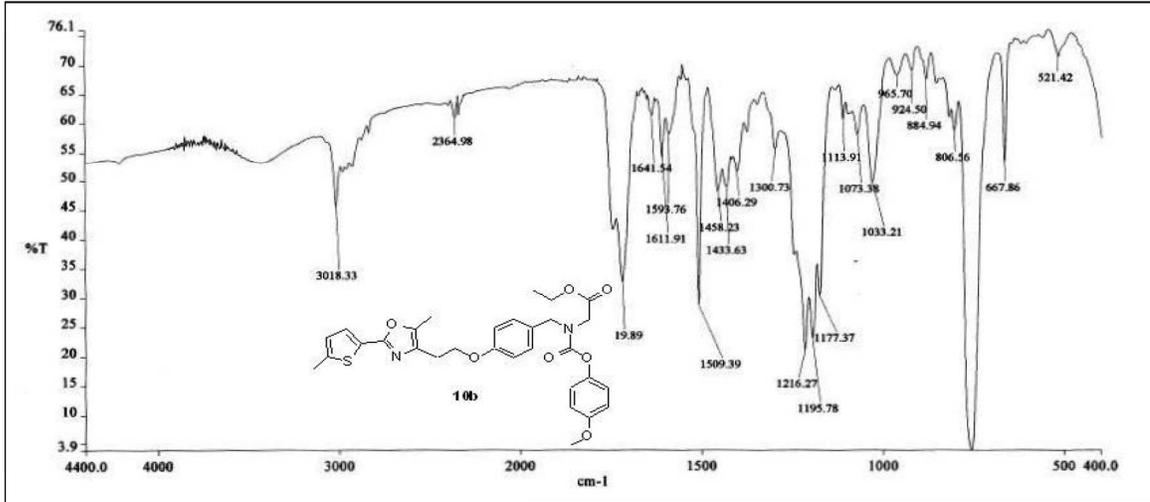
### **<sup>1</sup>H NMR of 10b**



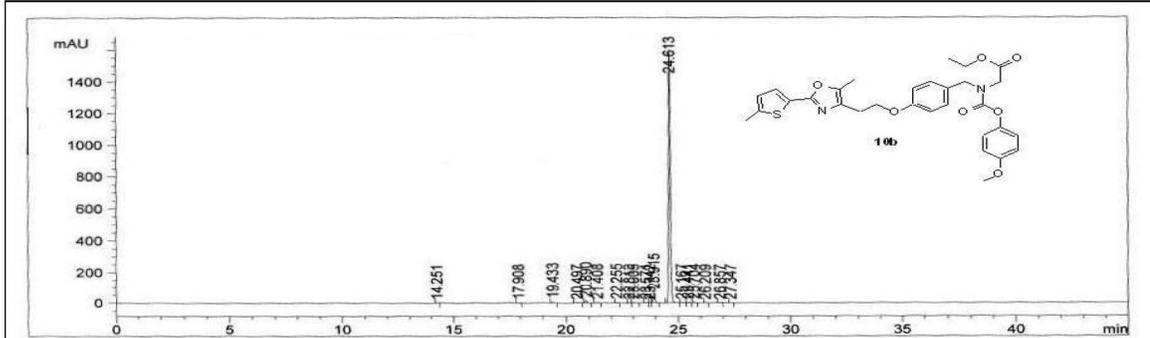
### **ESI/MS of 10b**



**IR of 10b**



**HPLC of 10b**



=====  
 Area Percent Report  
 =====

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

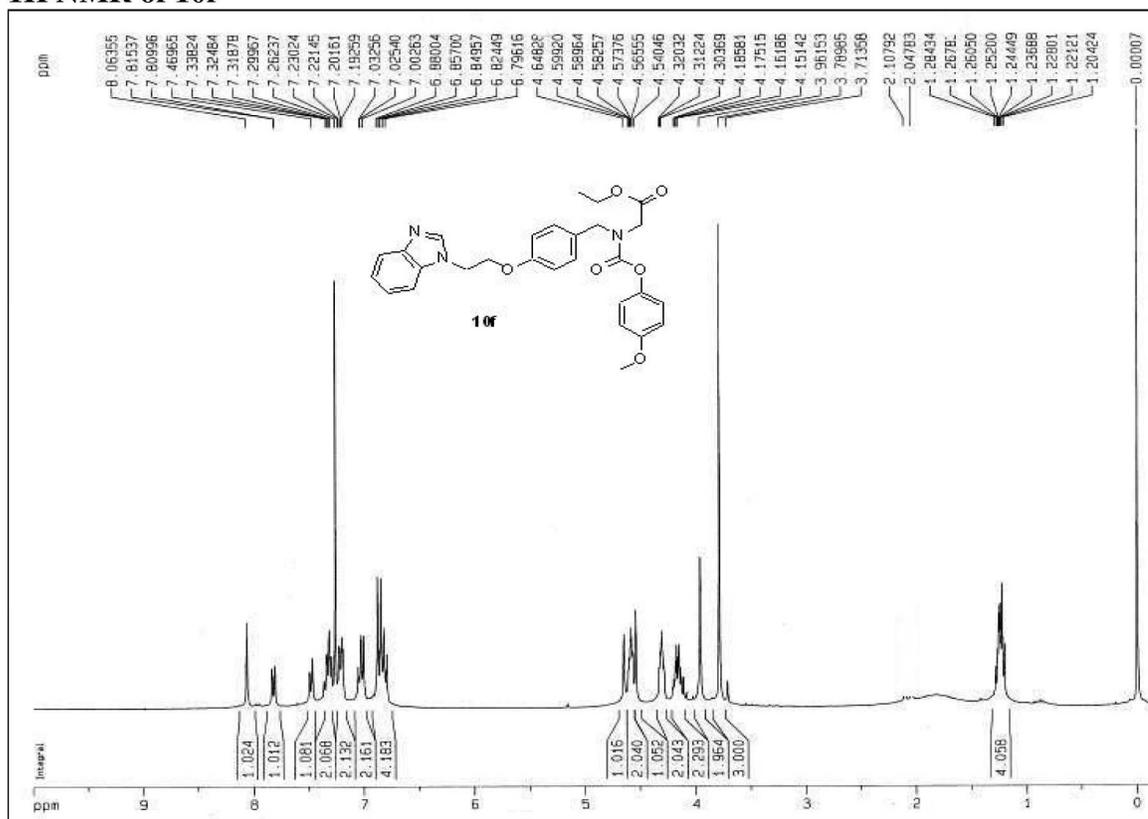
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	14.251	BB	0.0768	2.43228	4.90044e-1	0.0251
2	17.908	BB	0.0787	6.39047	1.24798	0.0661
3	19.433	BB	0.0920	58.53207	9.73209	0.6051
4	20.497	PP	0.1168	13.75726	1.80060	0.1422
5	20.890	BB	0.0801	79.35996	15.14522	0.8204
6	21.408	BB	0.0866	23.86143	4.11098	0.2467
7	22.255	BP	0.0797	21.32052	4.09113	0.2204
8	22.813	BV	0.0825	15.23691	2.86052	0.1575
9	23.005	VP	0.1006	21.76211	3.16683	0.2250
10	23.571	BV	0.0970	15.75045	2.49287	0.1628
11	23.742	VV	0.0819	4.59766	8.52255e-1	0.0475
12	23.915	VB	0.0838	372.18591	68.46342	3.8478
13	24.613	BB	0.0870	8966.43945	1605.74658	92.6978
14	25.167	BP	0.1067	13.41603	1.75328	0.1387
15	25.441	VB	0.0867	28.85764	5.07437	0.2983
16	25.704	BB	0.0774	19.76703	3.94088	0.2044
17	26.209	PP	0.0666	2.83732	6.93901e-1	0.0293
18	26.857	PB	0.0875	3.36114	5.84027e-1	0.0347
19	27.347	PB	0.0767	2.90079	5.85314e-1	0.0300

Totals : 9672.76644 1732.83229

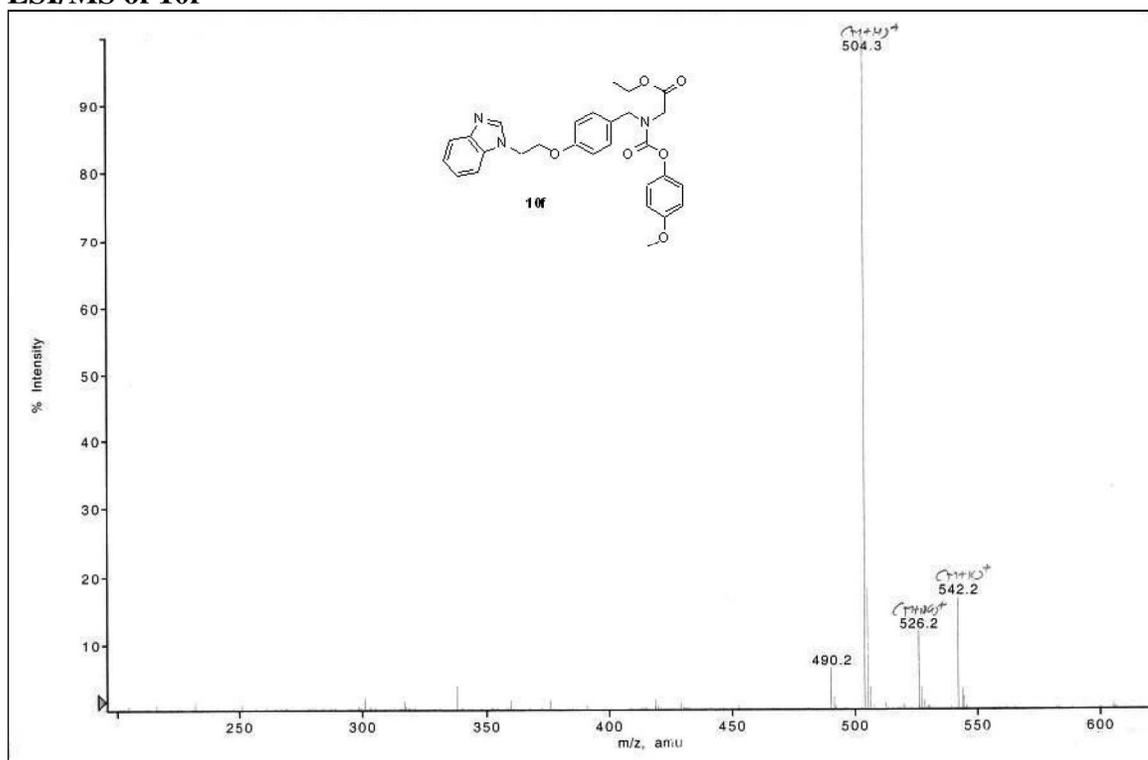
Results obtained with enhanced integrator!

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 \*\*\* End of Report \*\*\*

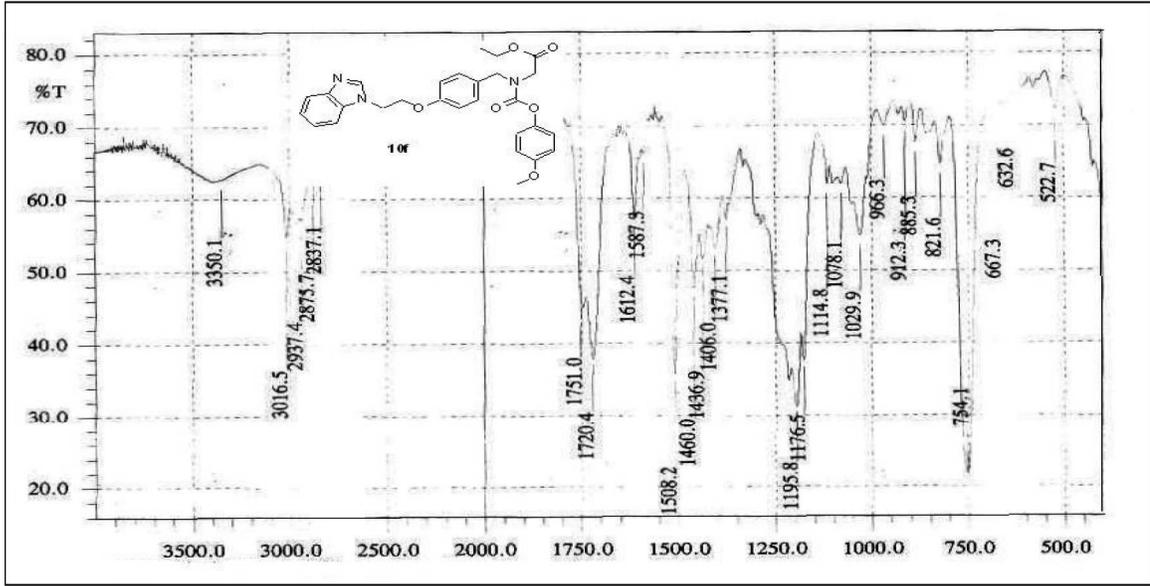
### **<sup>1</sup>H NMR of 10f**



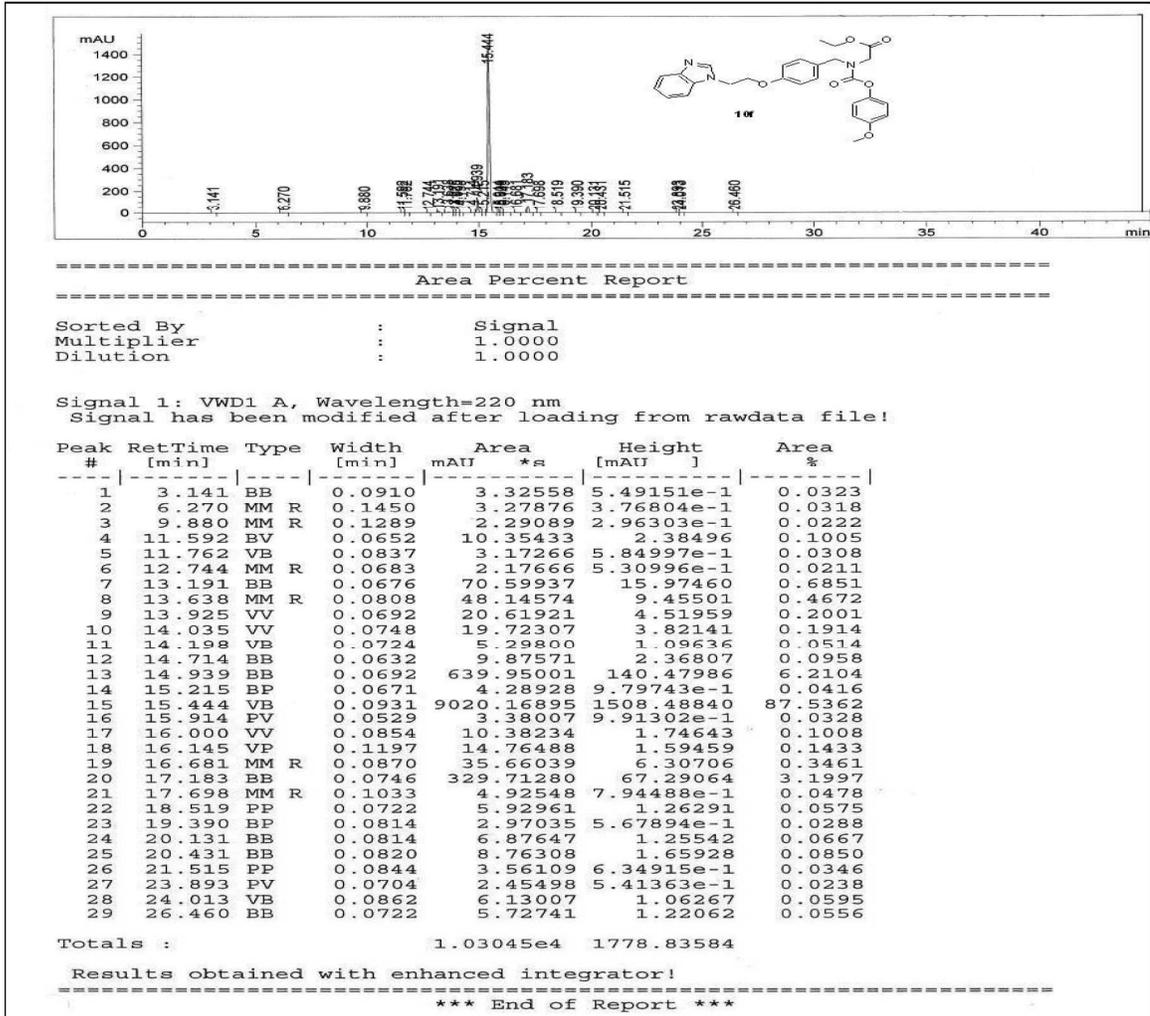
### **ESI/MS of 10f**



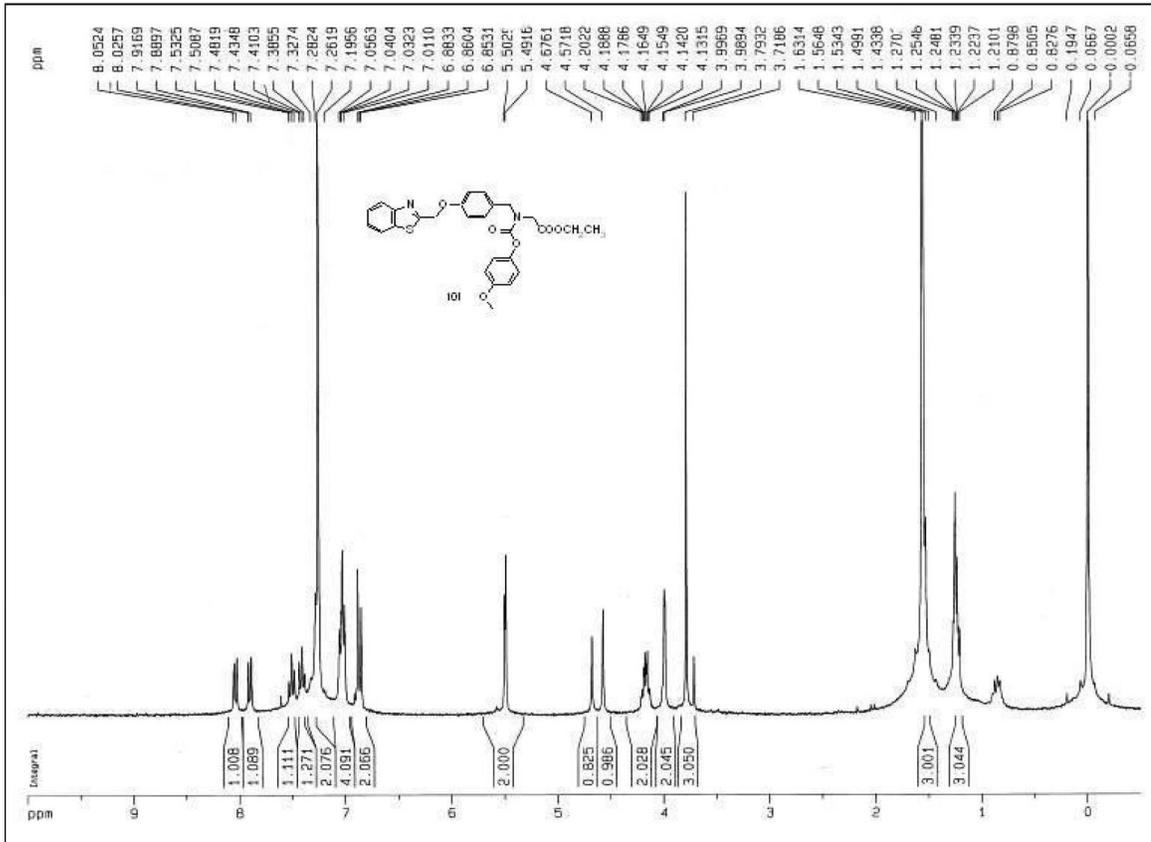
IR of 10f



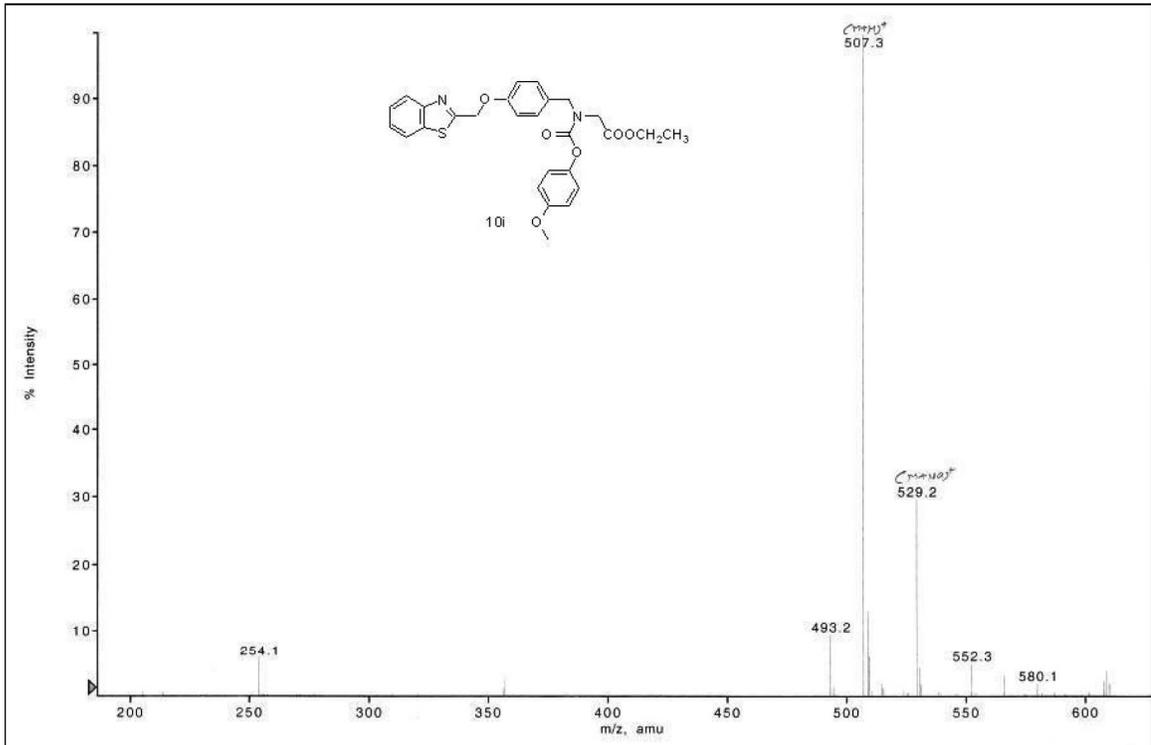
HPLC of 10f



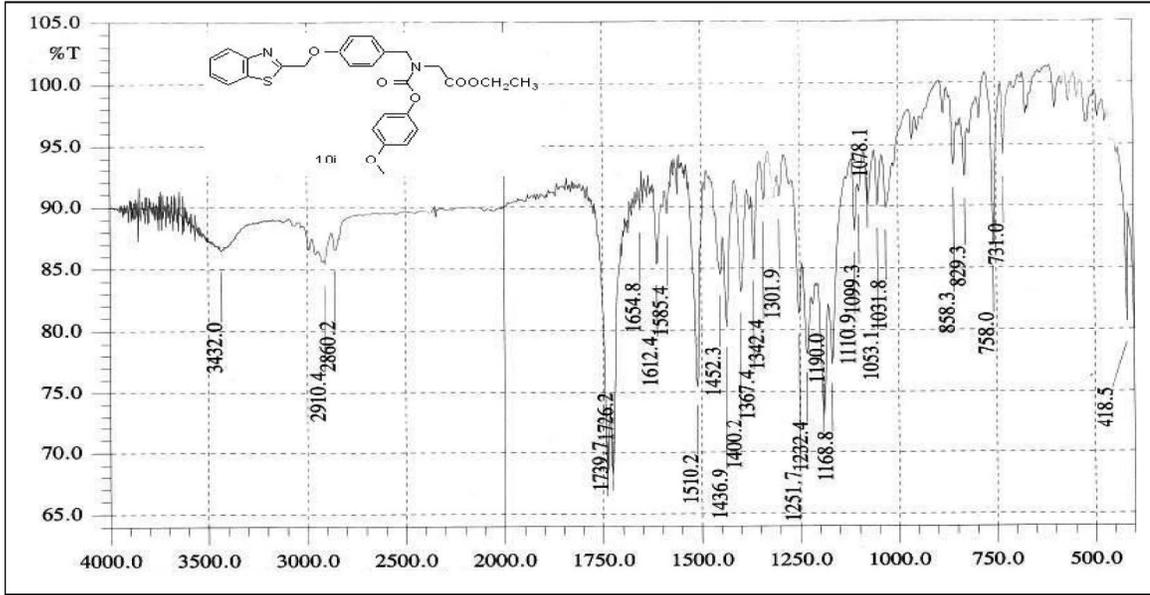
### **<sup>1</sup>H NMR of 10i**



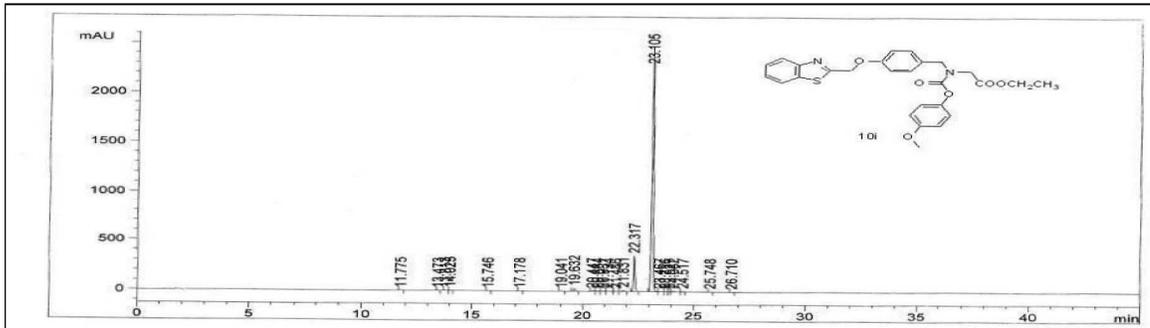
### **ESI/MS of 10i**



### IR of 10i



### HPLC of 10i



#### Area Percent Report

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

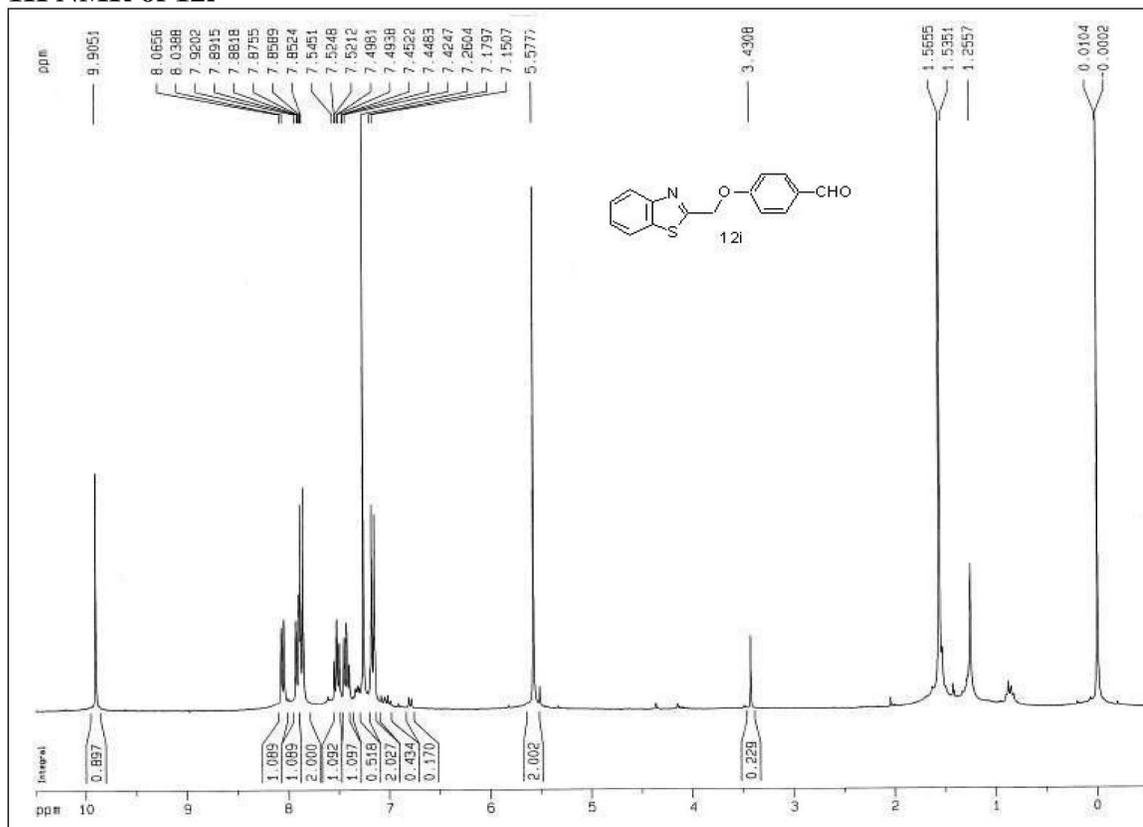
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	11.775	BP	0.0820	3.44019	6.67452e-1	0.0218
2	13.473	BP	0.0635	3.83490	9.41882e-1	0.0243
3	13.813	VB	0.0778	14.92384	2.95779	0.0945
4	14.025	BP	0.0653	31.37458	7.42502	0.1986
5	15.746	PB	0.0726	3.92504	8.77680e-1	0.0248
6	17.178	PB	0.0802	8.43677	1.64517	0.0534
7	19.041	BP	0.0905	28.24363	4.69634	0.1788
8	19.632	VP	0.0852	159.54521	29.38768	1.0100
9	20.447	PV	0.0850	29.57889	5.46397	0.1873
10	20.664	VP	0.0868	26.34777	4.63074	0.1668
11	20.931	VV	0.0917	32.61917	5.33326	0.2065
12	21.134	VP	0.0937	10.13987	1.61455	0.0642
13	21.486	BP	0.0977	11.17006	1.71828	0.0707
14	21.831	VP	0.0954	95.25127	14.52491	0.6030
15	22.317	VP	0.0816	1857.49768	353.72516	11.7590
16	23.105	BV	0.0827	1.33037e4	2490.37964	84.2199
17	23.467	VB	0.1111	35.96995	4.55237	0.3277
18	23.716	BV	0.1059	12.98329	1.74243	0.0822
19	23.927	VV	0.0807	13.64598	2.51668	0.0864
20	24.082	VB	0.1649	72.99680	6.13850	0.4621
21	24.517	BP	0.0869	27.20909	4.99148	0.1722
22	25.748	BB	0.0741	10.08772	2.13195	0.0639
23	26.710	BB	0.0803	3.45609	6.57187e-1	0.0219

Totals : 1.57964e4 2948.72013

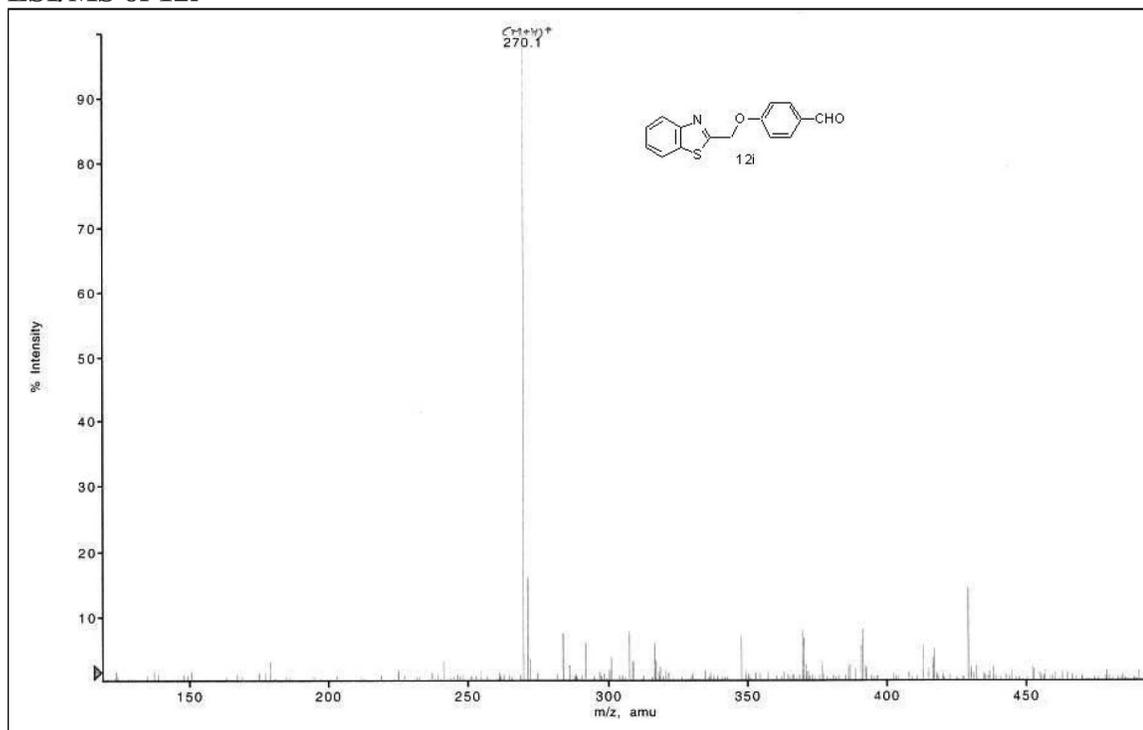
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

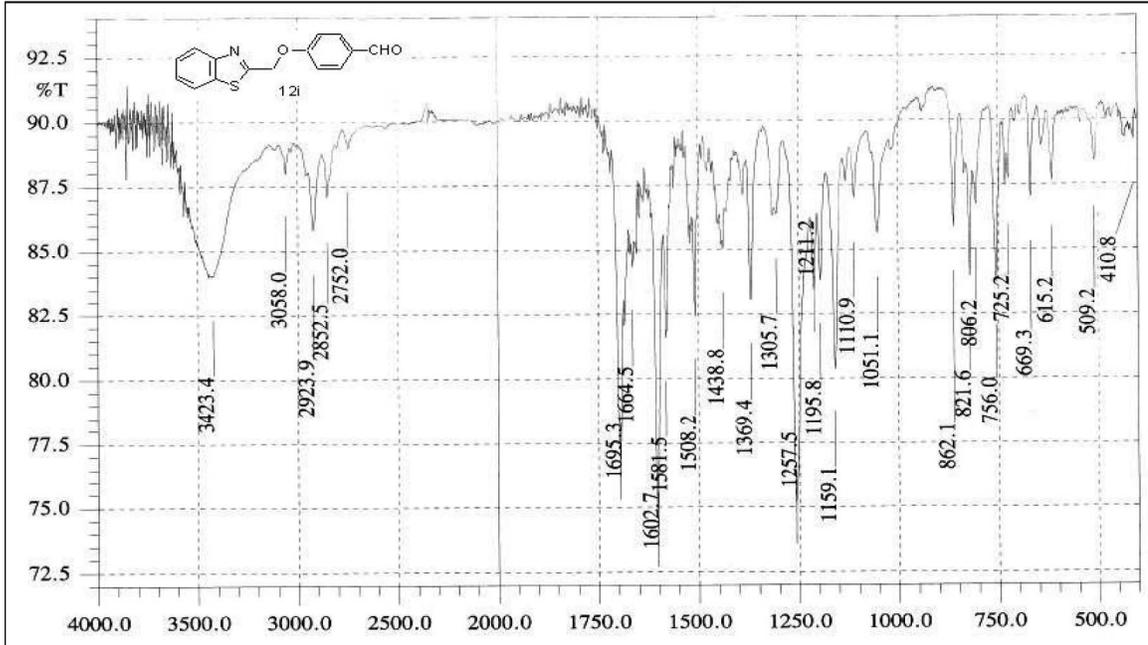
### **<sup>1</sup>H NMR of 12i**



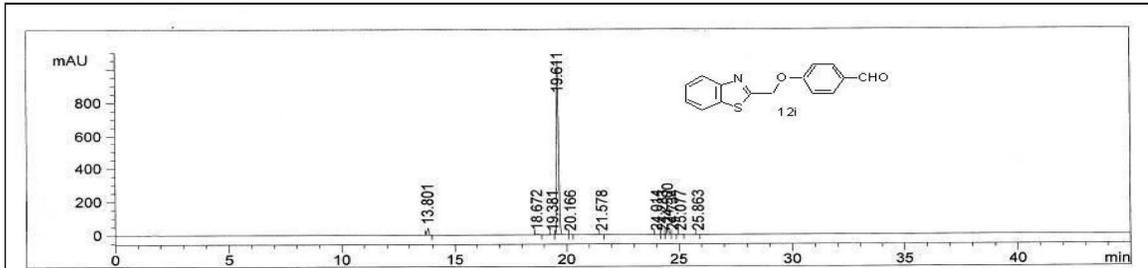
### **ESI/MS of 12i**



## IR of 12i



## HPLC of 12i



### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

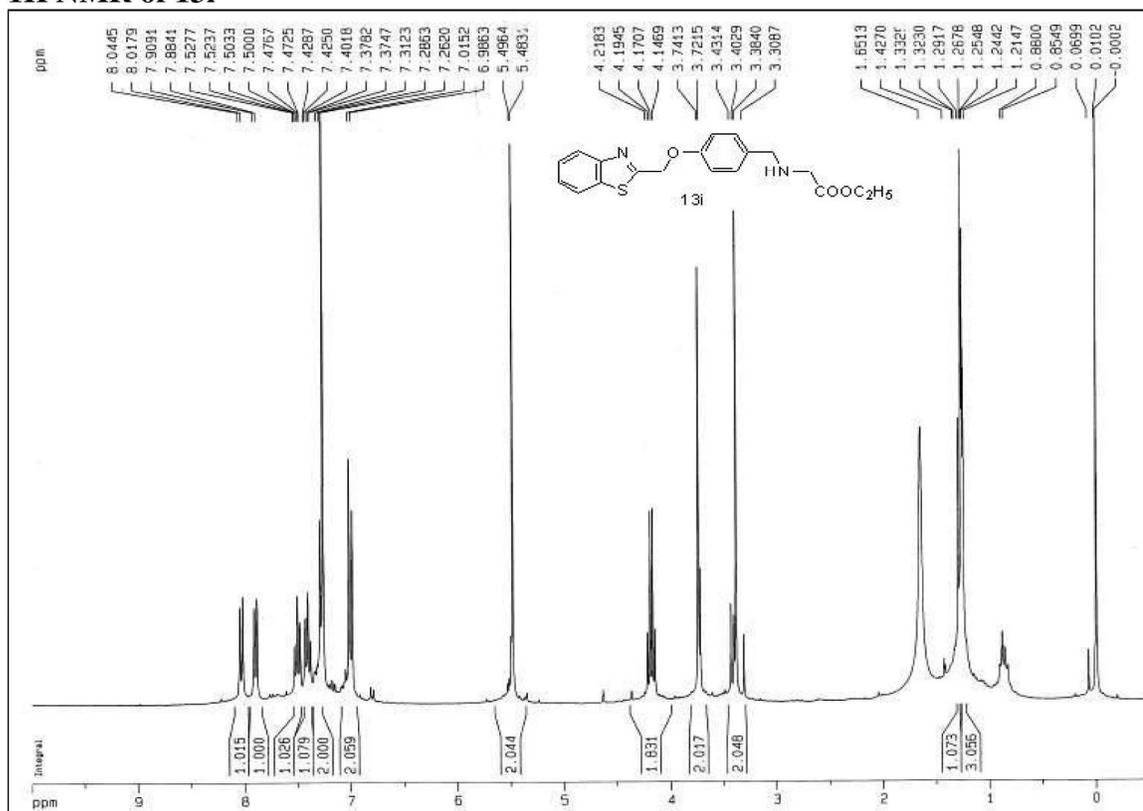
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	13.801	BB	0.0767	206.68752	41.75533	41.75533	3.3549
2	18.672	BB	0.1039	27.17640	3.66647	3.66647	0.4411
3	19.381	MM R	0.0878	5.32860	1.01114	1.01114	0.0865
4	19.611	MM R	0.0828	5661.60840	1049.38403	1049.38403	91.8966
5	20.166	MM R	0.0814	2.52305	5.16499e-1	5.16499e-1	0.0410
6	21.578	MM R	0.1047	4.15423	7.98084e-1	7.98084e-1	0.0674
7	24.014	BV	0.1348	4.51894	4.54970e-1	4.54970e-1	0.0733
8	24.283	VV	0.0883	5.34357	9.38022e-1	9.38022e-1	0.0867
9	24.500	VV	0.0864	225.39615	40.70727	40.70727	3.6585
10	24.734	VP	0.0908	13.46171	2.22943	2.22943	0.2185
11	25.077	MM R	0.1231	2.83943	4.46265e-1	4.46265e-1	0.0461
12	25.863	MM R	0.0933	1.80834	4.21276e-1	4.21276e-1	0.0294

Totals : 6160.84634 1142.32878

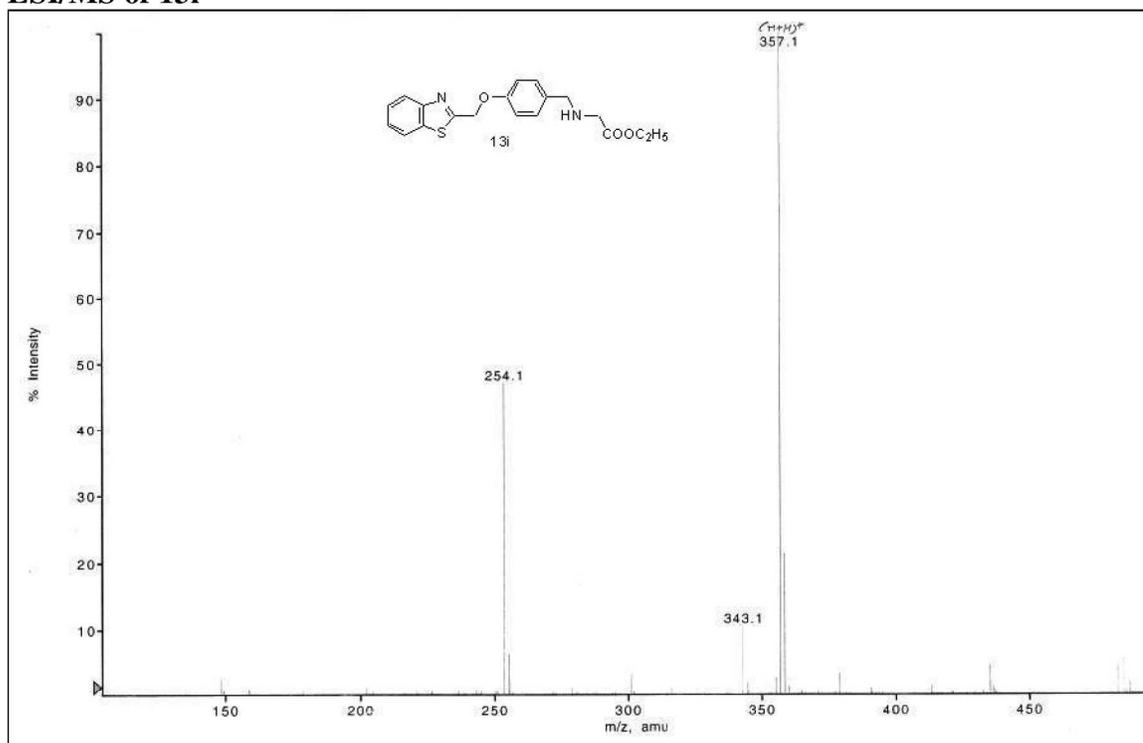
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

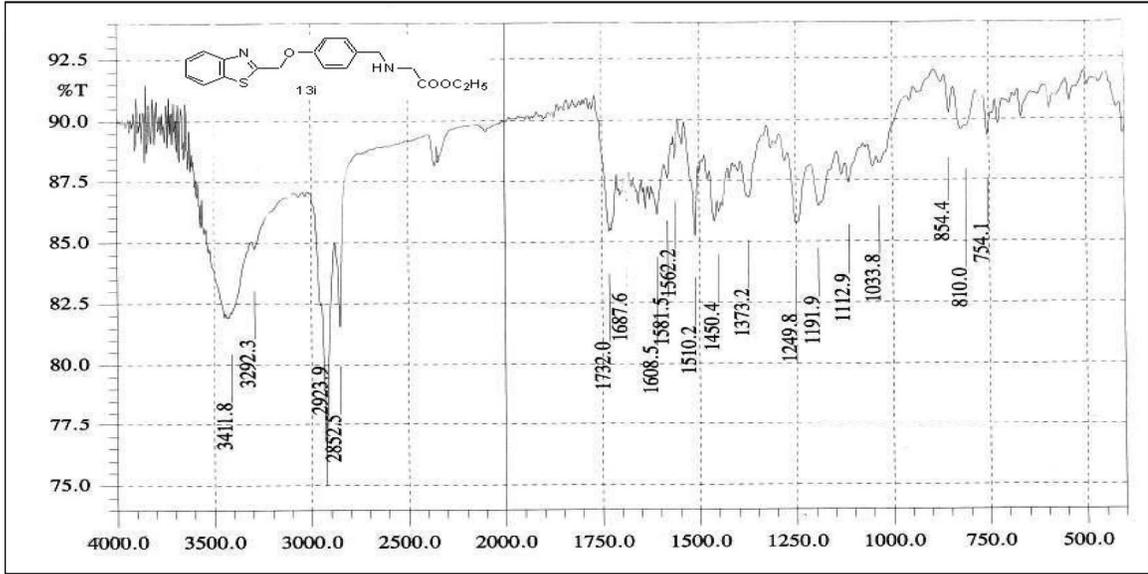
### **<sup>1</sup>H NMR of 13i**



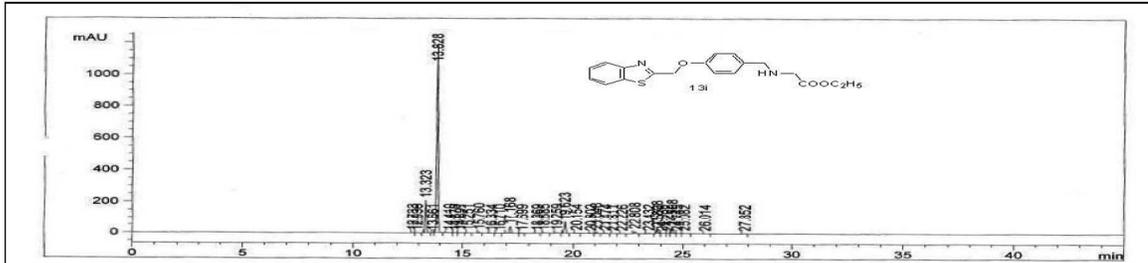
### **ESI/MS of 13i**



### IR of 13i



### HPLC of 13i



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

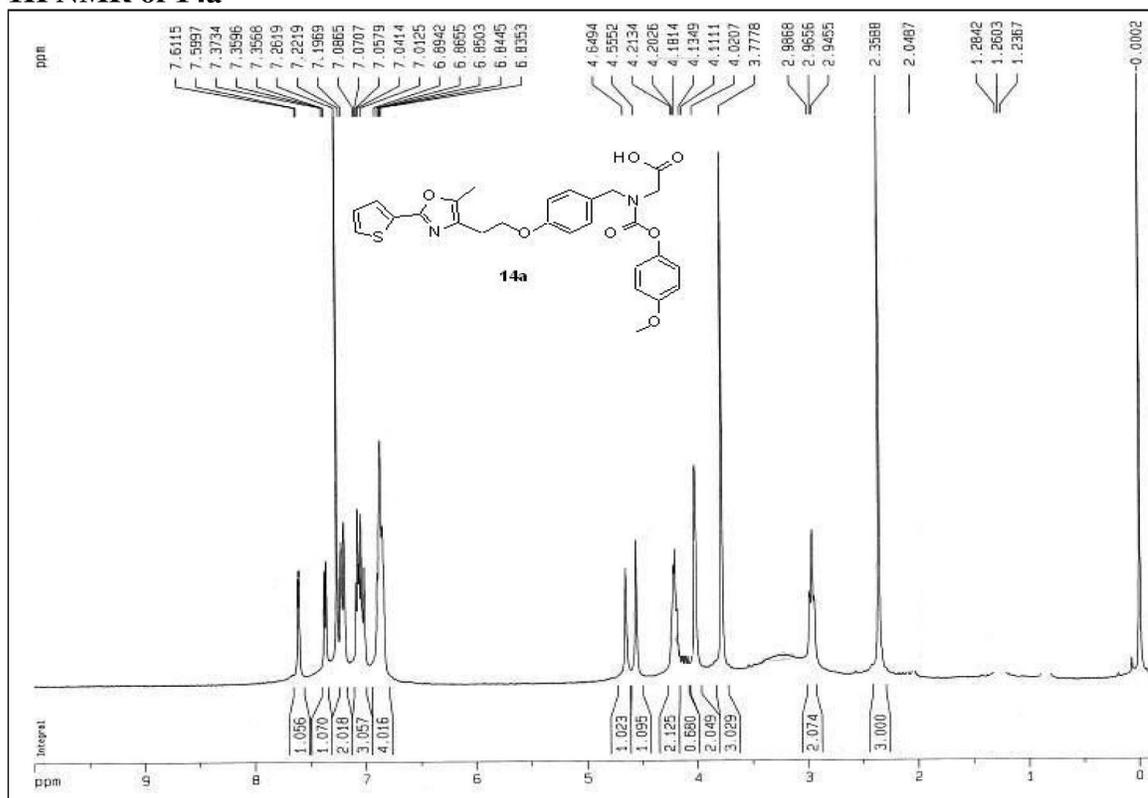
Peak #	RetTime [min]	Type	Width [min]	mAU	Area *s	Height [mAU]	Area %
1	12.733	PV	0.0616	9.32891	2.31352	0.1124	
2	12.936	VP	0.0761	7.00823	1.32791	0.0844	
3	13.323	PB	0.0666	920.38422	213.30907	11.0852	
4	13.661	PV	0.0564	4.95478	1.38138	0.0597	
5	13.828	VB	0.0789	6017.87744	1199.14966	72.4797	
6	14.410	PP	0.1041	12.50159	1.65645	0.1506	
7	14.670	VP	0.0714	2.53454	5.33651e-1	0.0305	
8	14.891	VB	0.0839	23.30964	4.09137	0.2807	
9	15.251	PB	0.0818	5.60567	9.94031e-1	0.0675	
10	15.760	BB	0.0669	29.39508	6.74369	0.3540	
11	16.334	MM R	0.1233	1.88110	2.54170e-1	0.0227	
12	16.710	MM R	0.1335	2.07541	2.59049e-1	0.0250	
13	17.168	MM R	0.0874	223.41957	42.60547	2.6909	
14	17.699	MM R	0.1042	1.77999	2.84675e-1	0.0214	
15	18.369	BB	0.0798	5.111970	9.81225e-1	0.0617	
16	18.685	FB	0.1236	24.21623	2.69812	0.2917	
17	19.259	MM R	0.0839	23.71472	4.71167	0.2856	
18	19.623	BB	0.0831	402.04608	74.81609	4.8423	
19	20.154	BB	0.0873	15.51515	2.76627	0.1869	
20	20.802	BB	0.1041	8.65497	1.20630	0.1042	
21	21.048	BB	0.0832	59.40915	10.78680	0.7155	
22	21.474	BP	0.1040	22.04543	3.07693	0.2655	
23	21.811	MM R	0.1114	1.93366	2.87672e-1	0.0232	
24	22.226	PB R	0.0942	7.08335	1.4173	0.0853	
25	22.808	BB	0.0841	72.90334	13.34949	0.8781	
26	23.432	VB	0.0944	19.88044	3.13487	0.2394	
27	23.808	BV	0.0815	141.14445	26.94491	1.7000	
28	24.035	VV	0.1120	10.60226	1.30816	0.1277	
29	24.292	VV	0.0884	8.84181	1.48546	0.1065	
30	24.508	VB	0.114	189.71959	33.22390	2.2127	
31	24.745	BV	0.1192	12.91350	1.57093	0.155	
32	25.082	VP	0.0979	12.26903	1.84711	0.1478	
33	26.014	MM R	0.1759	6.54853	6.20643e-1	0.0789	
34	27.852	MM R	0.1045	2.23952	3.57019e-1	0.0270	

Totals : 8302.84608 1660.21937

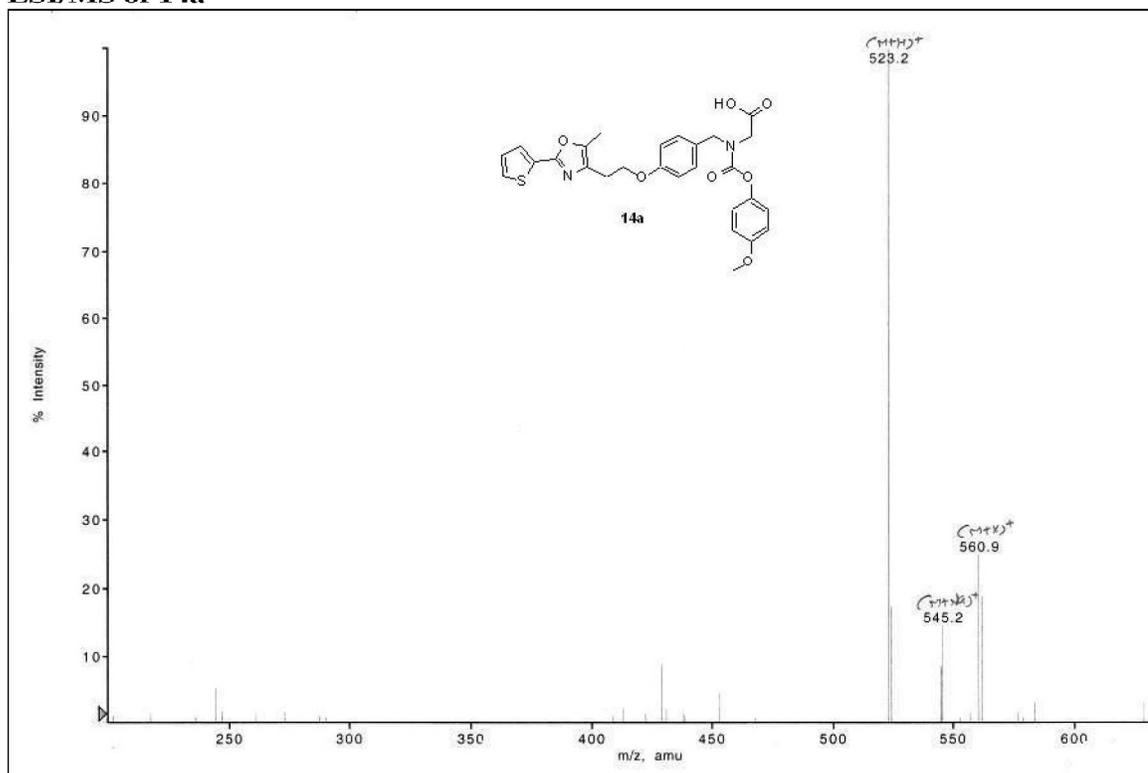
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

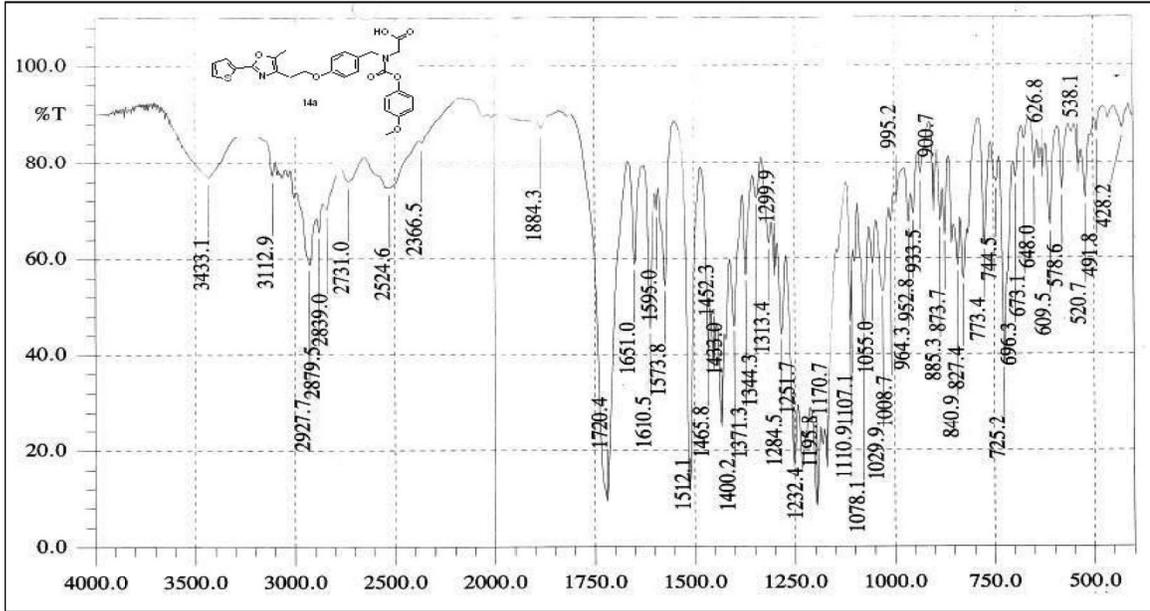
### **<sup>1</sup>H NMR of 14a**



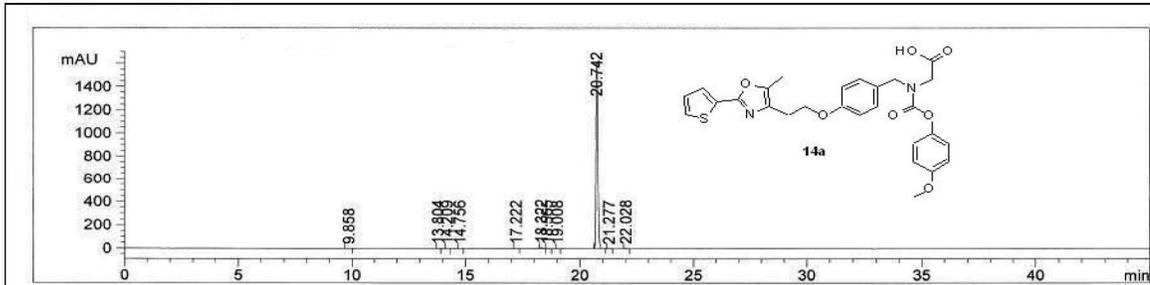
### **ESI/MS of 14a**



### IR of 14a



### HPLC of 14a



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

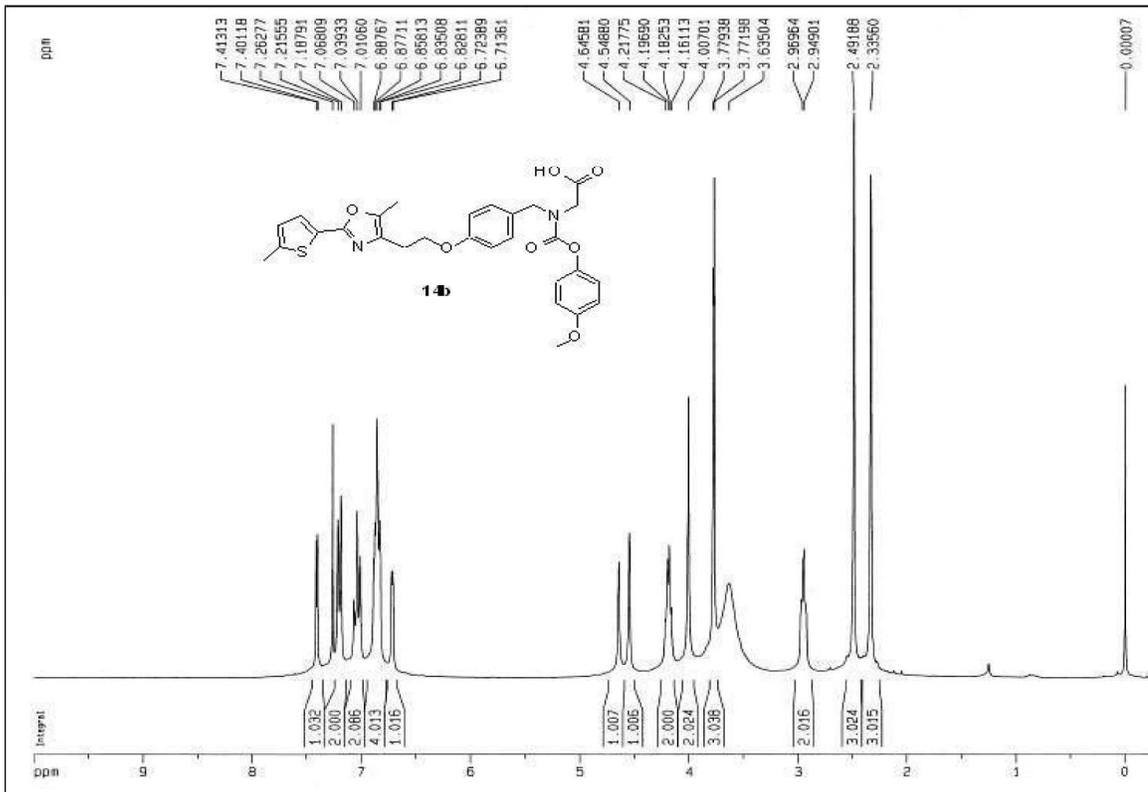
Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	9.858	MM R	0.1329	2.20973	2.77078e-1	0.0228	
2	13.804	PP	0.0682	4.09581	9.16546e-1	0.0423	
3	14.209	BP	0.0712	2.90337	6.30752e-1	0.0300	
4	14.756	PP	0.0727	5.77810	1.22073	0.0596	
5	17.222	PP	0.0782	4.58559	9.03217e-1	0.0473	
6	18.322	BV	0.0870	66.59401	11.41053	0.6873	
7	18.565	VB	0.0913	13.89030	2.28386	0.1434	
8	19.008	BB	0.0742	2.25565	4.75739e-1	0.0233	
9	20.742	BB	0.0921	9551.08984	1619.52966	98.5743	
10	21.277	PB	0.0801	5.73660	1.14973	0.0592	
11	22.028	VB	0.0858	30.09239	5.36367	0.3106	

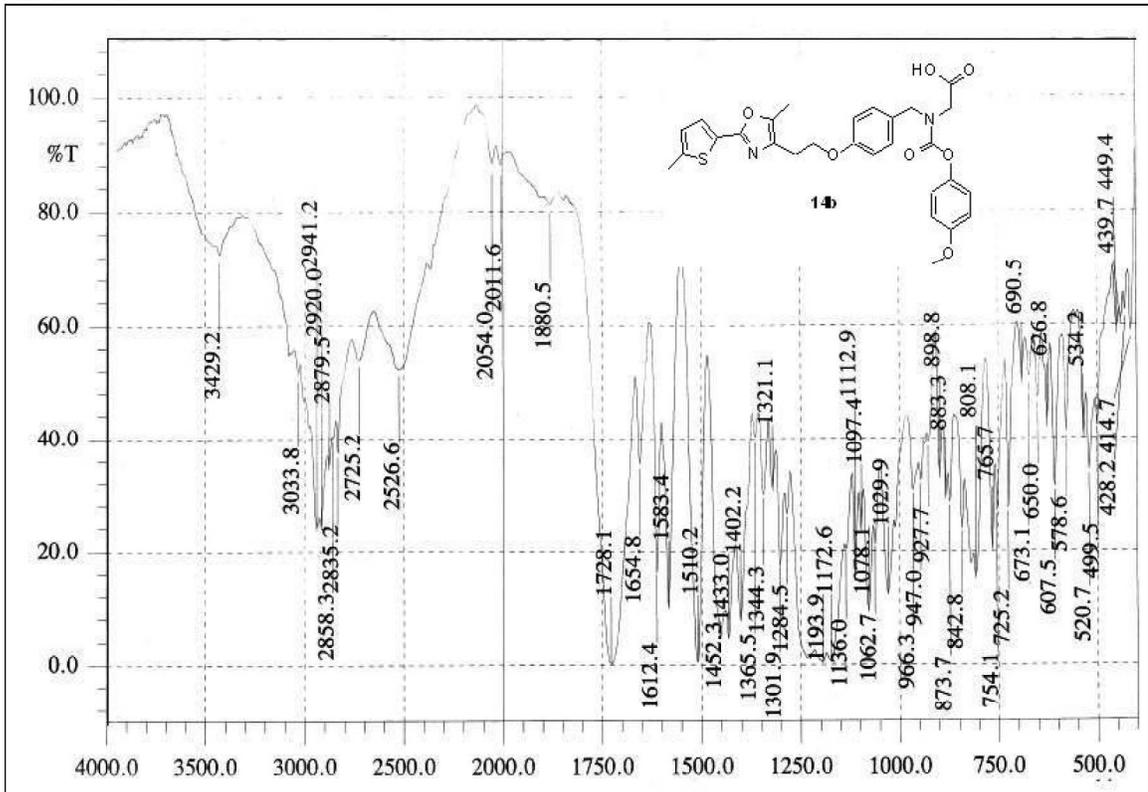
Totals : 9689.23139 1644.16152

Results obtained with enhanced integrator!

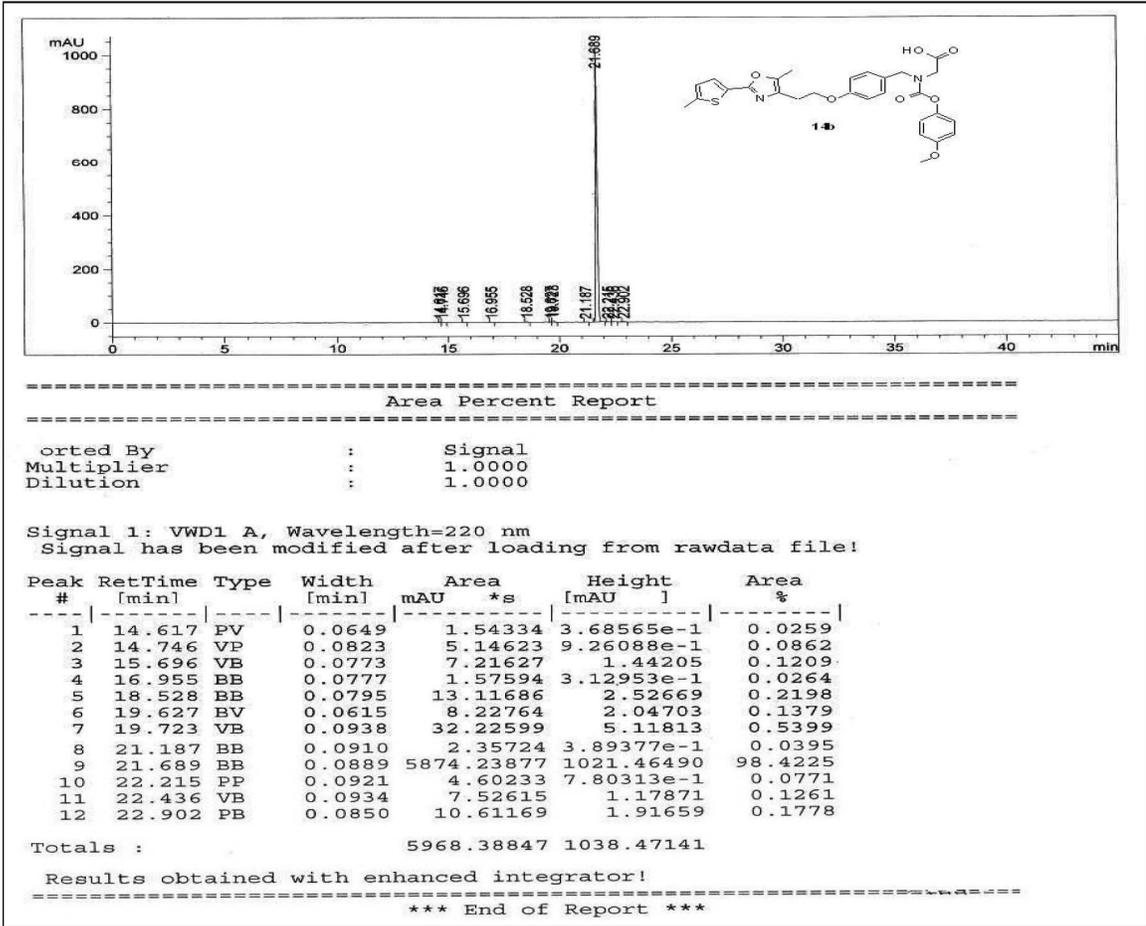
### <sup>1</sup>H NMR of 14b



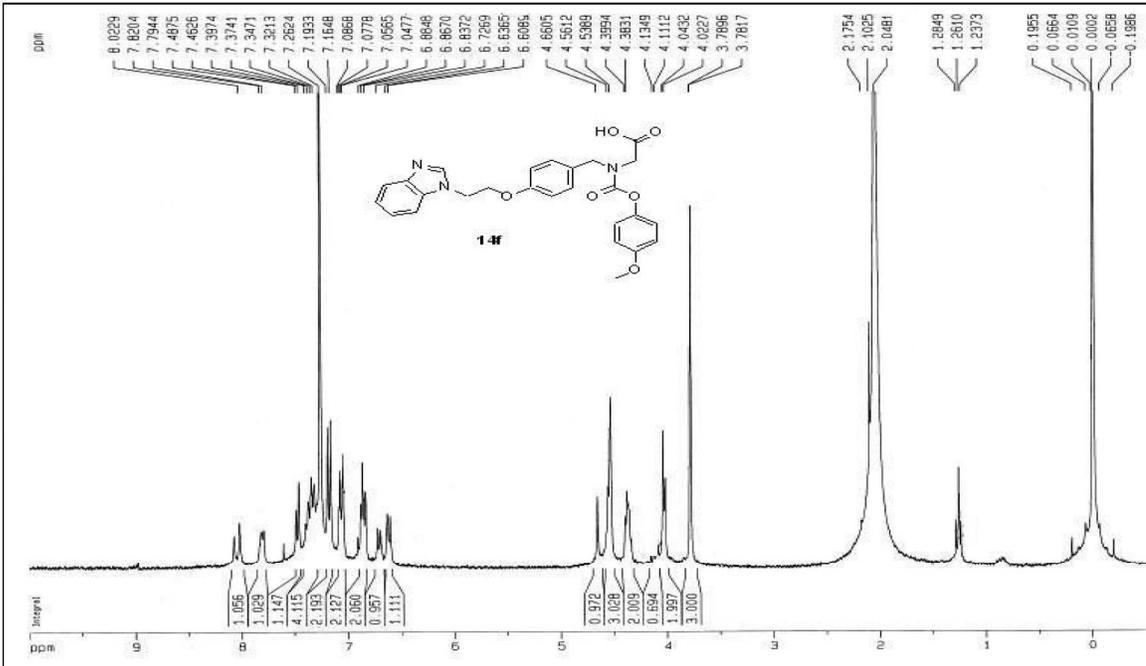
### IR of 14b



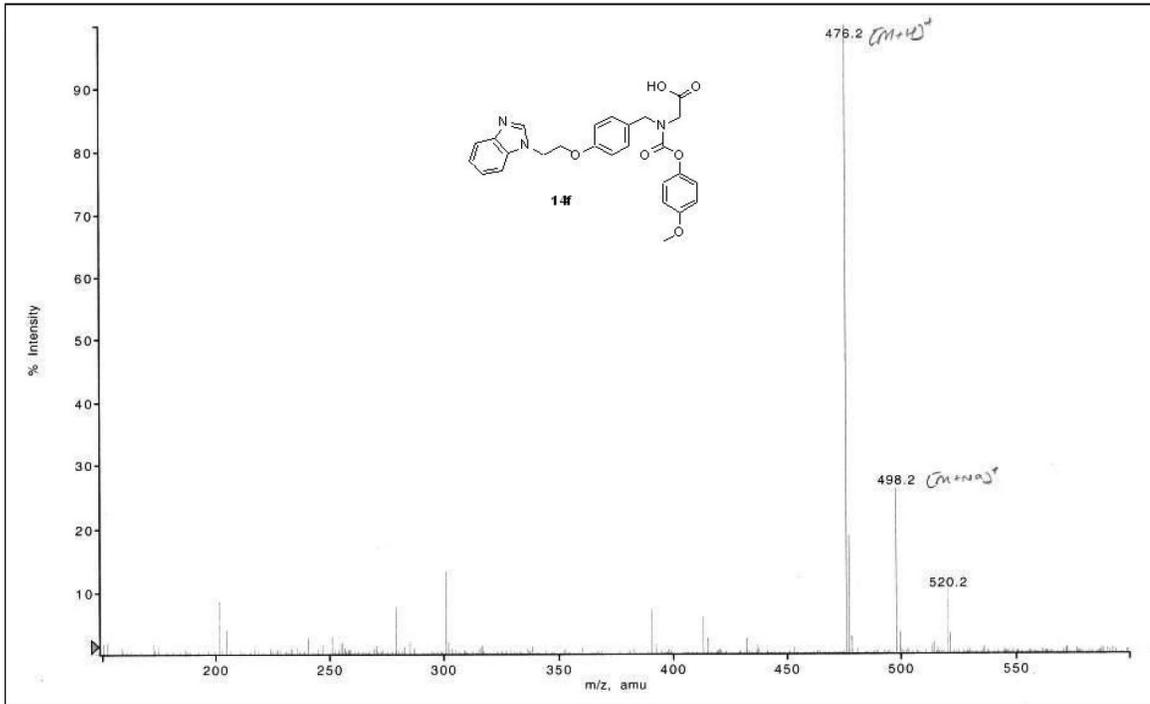
## HPLC of 14b



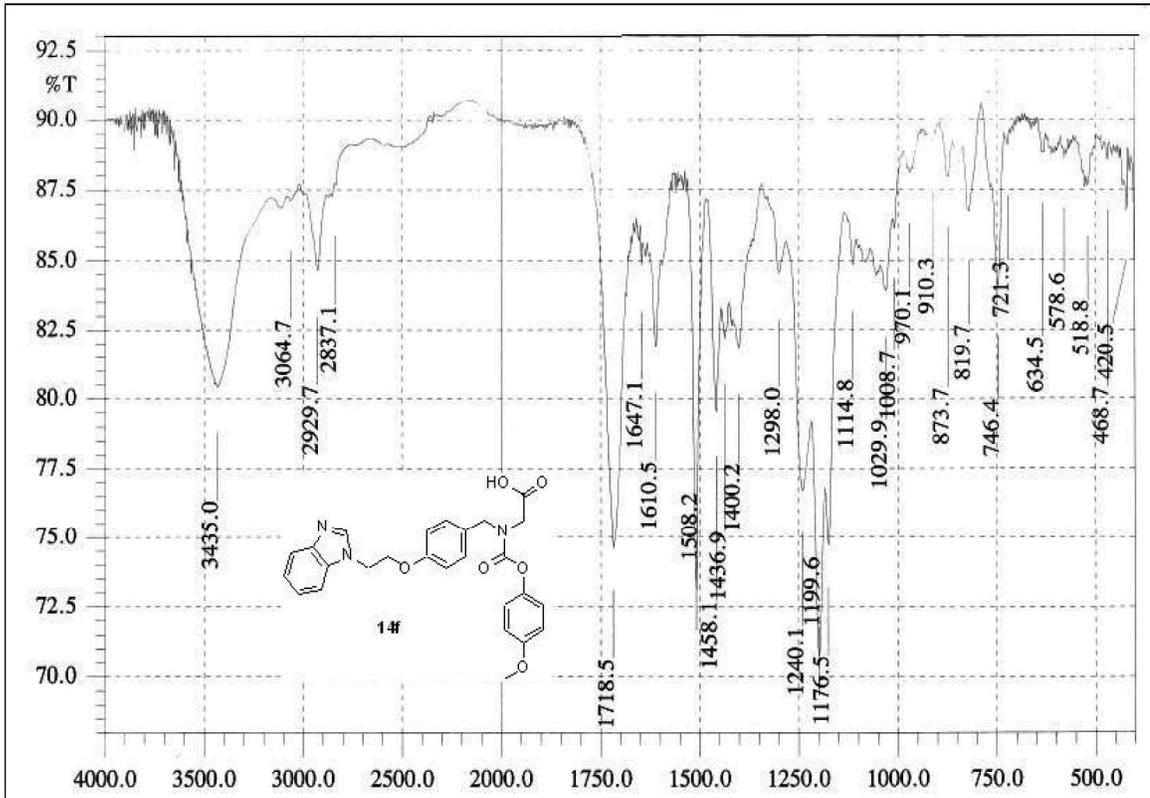
## <sup>1</sup>H NMR of 14f



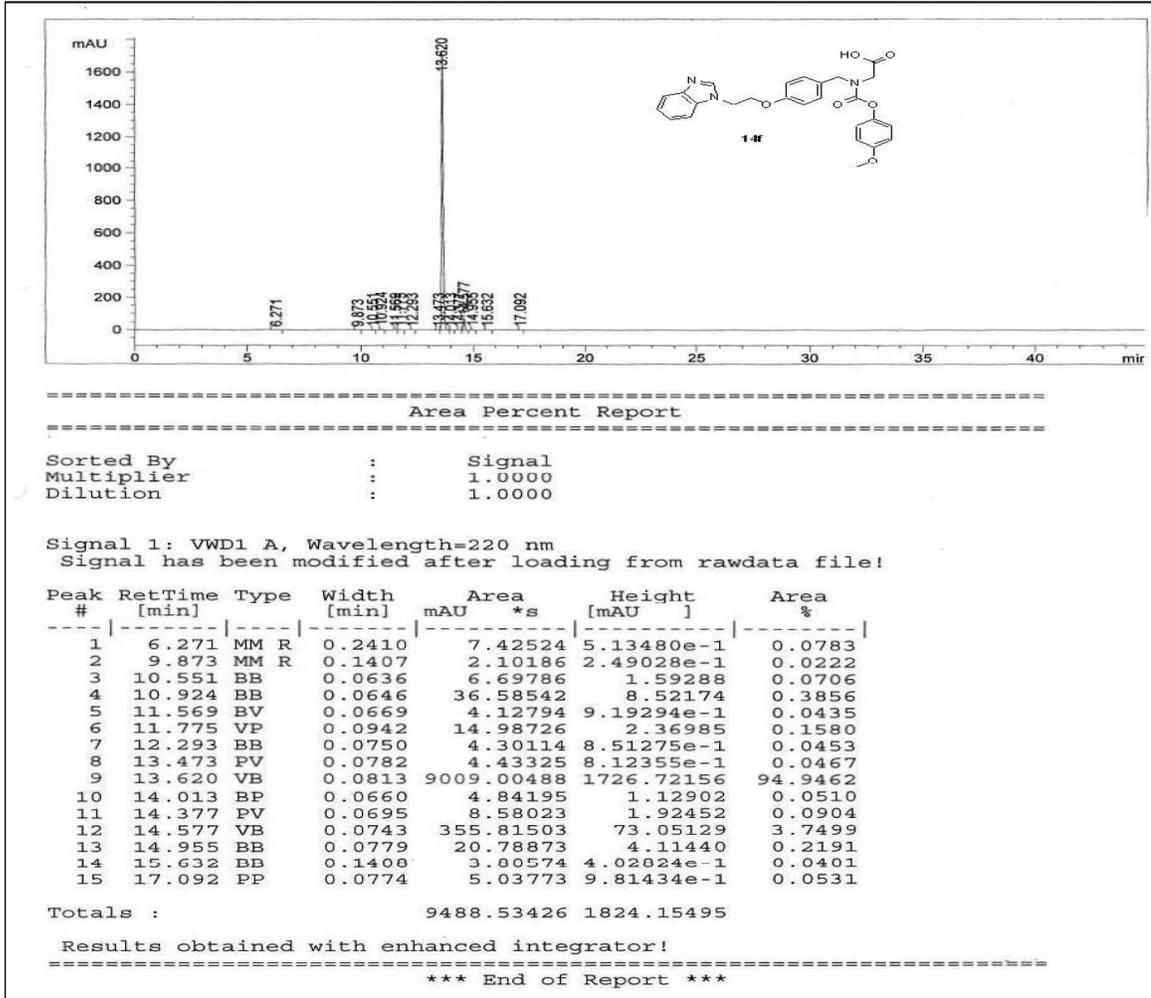
### ESI/MS of 14f



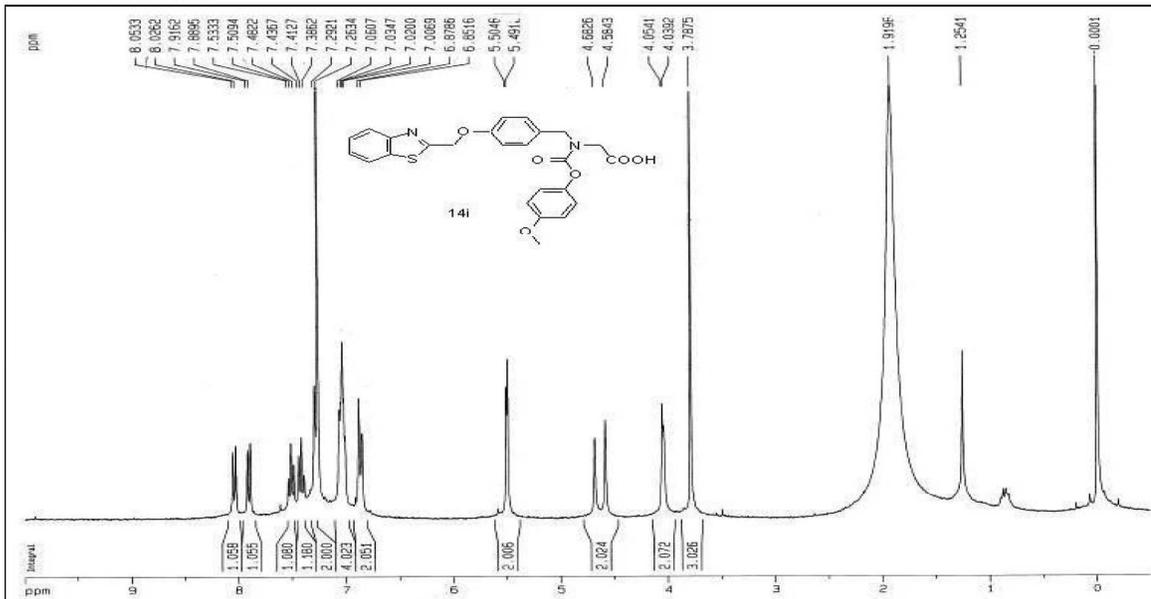
### IR of 14f



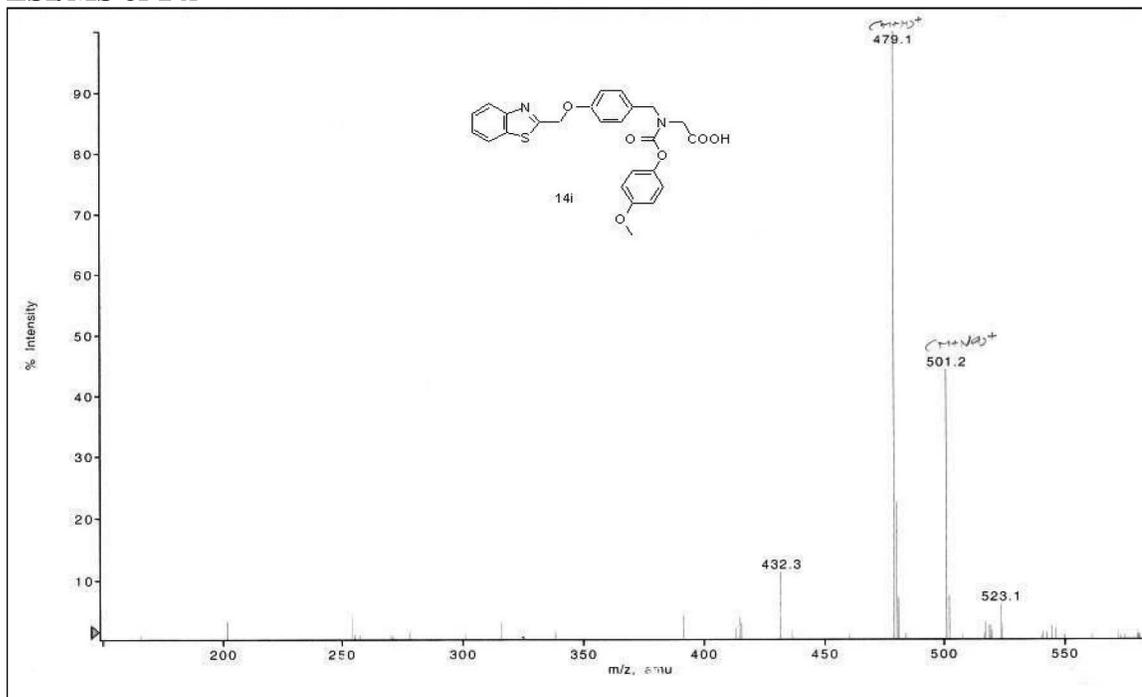
### HPLC of 14f



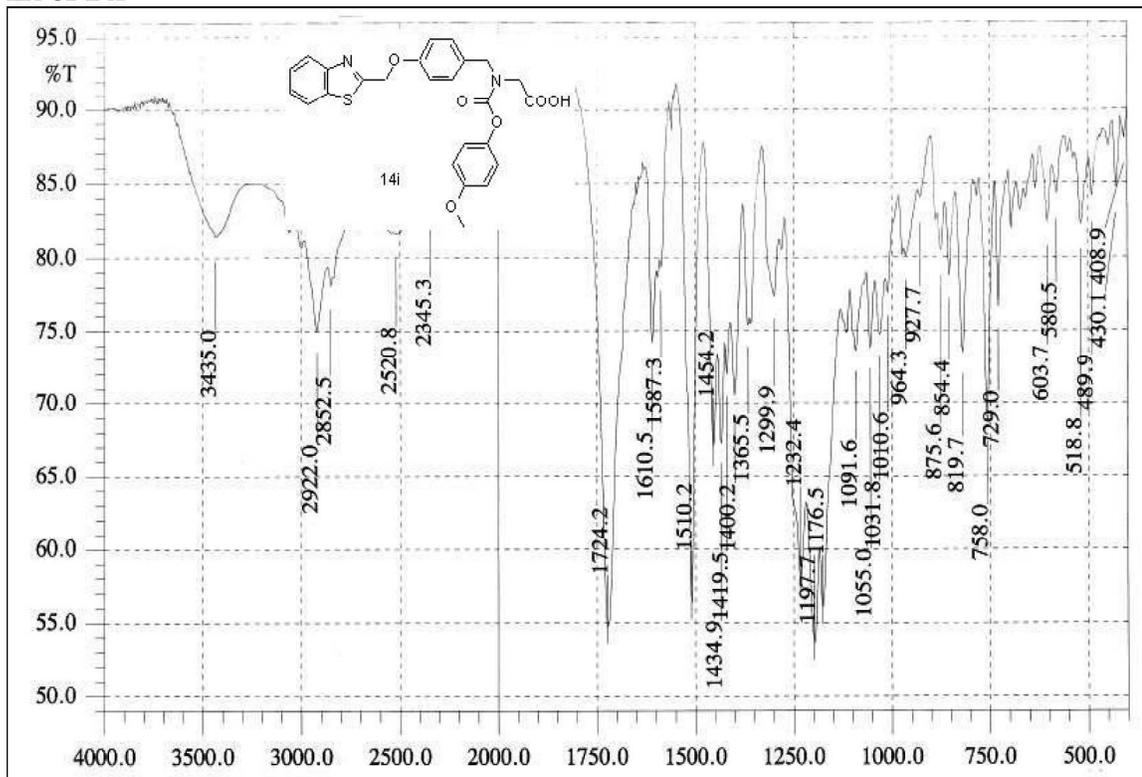
### <sup>1</sup>H NMR of 14i



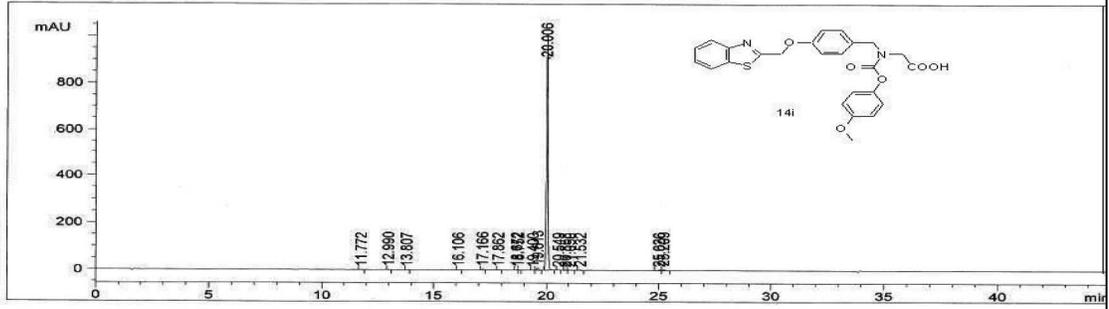
### ESI/MS of 14i



### IR of 14i



# HPLC of 14i



## Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

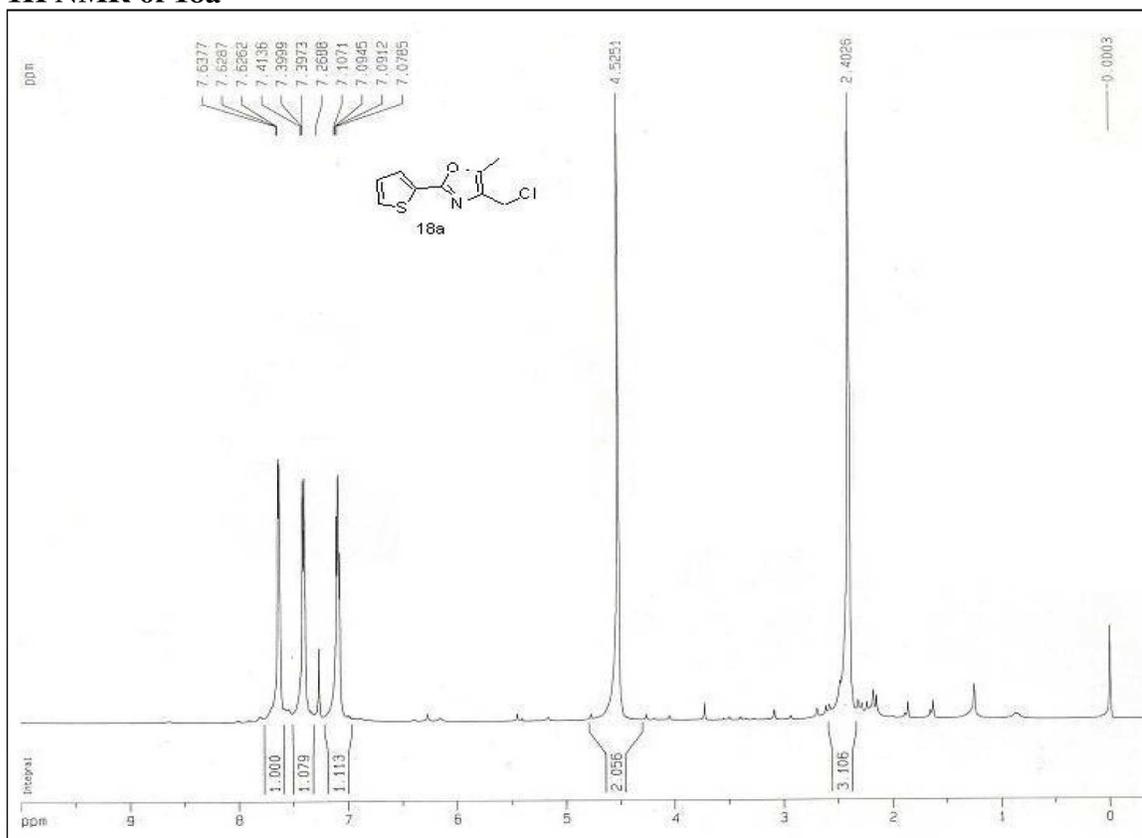
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area %	Height [mAU]	Area %
1	11.772	PB	0.0832	3.50812	0.0633	6.51839e-1	0.0633
2	12.990	BP	0.0613	10.33373	0.1864	2.66495	0.1864
3	13.807	BB	0.0789	4.32906	0.0781	8.42133e-1	0.0781
4	16.106	BB	0.0819	5.73457	0.1034	1.08675	0.1034
5	17.166	BB	0.0783	20.47648	0.3694	4.02197	0.3694
6	17.862	PP	0.0766	10.56279	0.1905	2.13620	0.1905
7	18.672	BV	0.0756	12.41320	0.2239	2.43161	0.2239
8	18.752	VB	0.0685	7.69587	0.1388	1.71168	0.1388
9	19.400	PV	0.0821	3.86088	0.0696	7.12839e-1	0.0696
10	19.613	VB	0.0835	53.41599	0.9635	9.87880	0.9635
11	20.006	BB	0.0804	5317.83301	95.9251	1009.62909	95.9251
12	20.549	MM R	0.0864	1.30156	0.0235	3.09337e-1	0.0235
13	20.858	BP	0.0788	1.99677	0.0360	3.98615e-1	0.0360
14	21.050	VP	0.1032	2.91129	0.0525	4.49925e-1	0.0525
15	21.532	BP	0.1097	18.92820	0.3414	2.47345	0.3414
16	25.026	VV	0.1139	29.66596	0.5351	3.70156	0.5351
17	25.209	VB	0.0965	38.76689	0.6993	5.82771	0.6993

Totals : 5543.73436 1048.92846

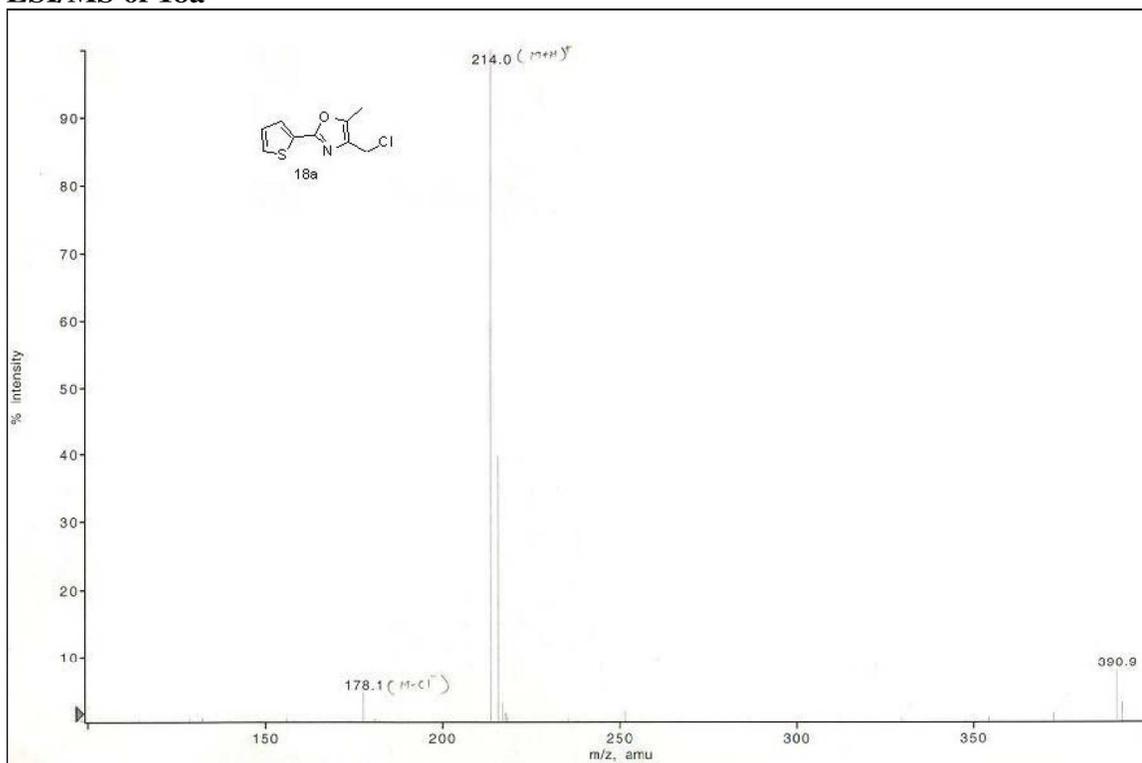
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

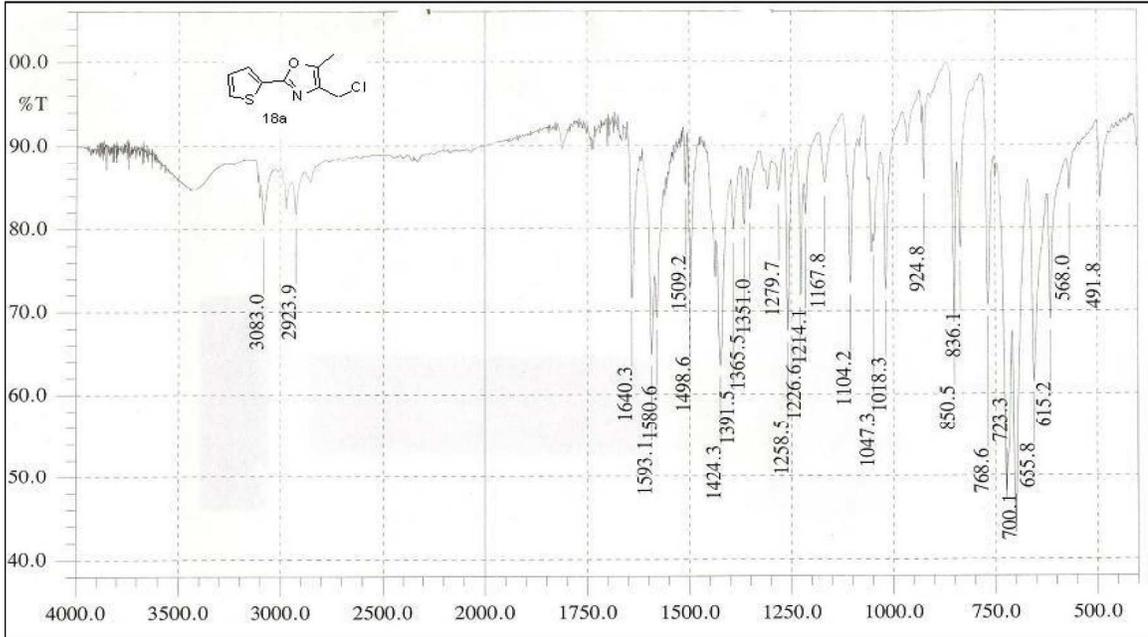
### **<sup>1</sup>H NMR of 18a**



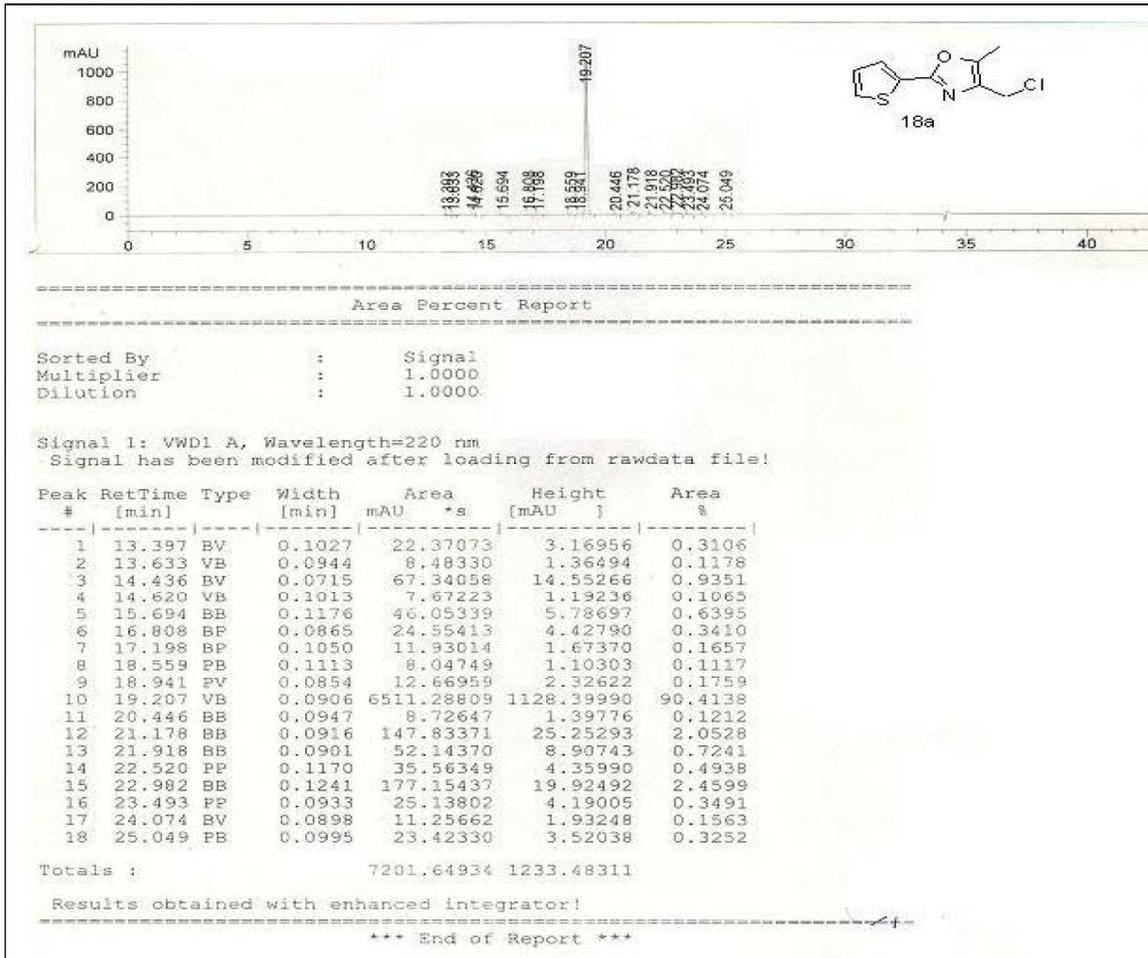
### **ESI/MS of 18a**



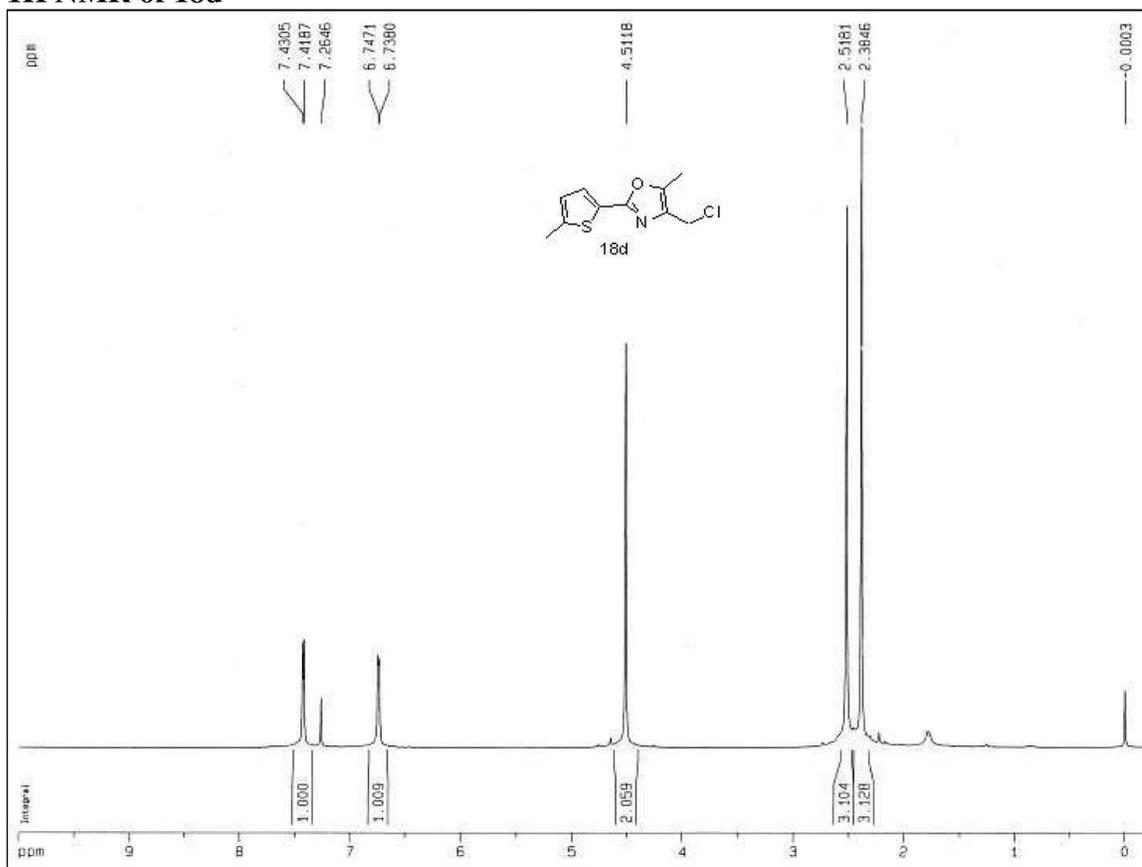
## IR of 18a



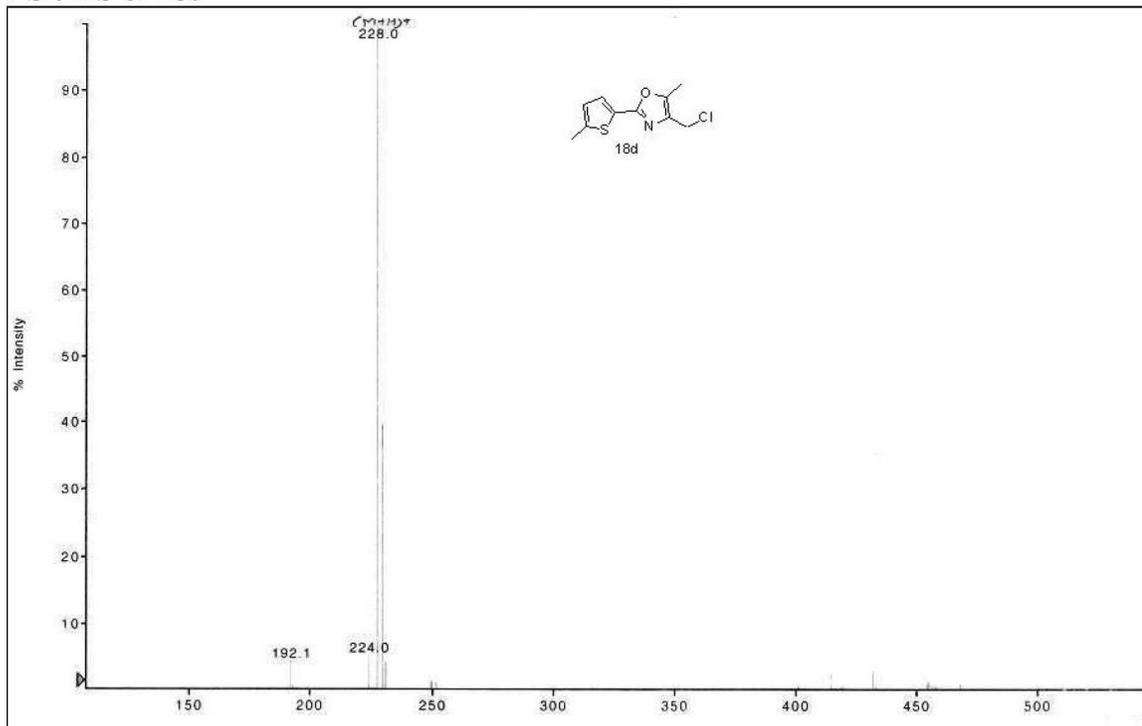
## HPLC of 18a



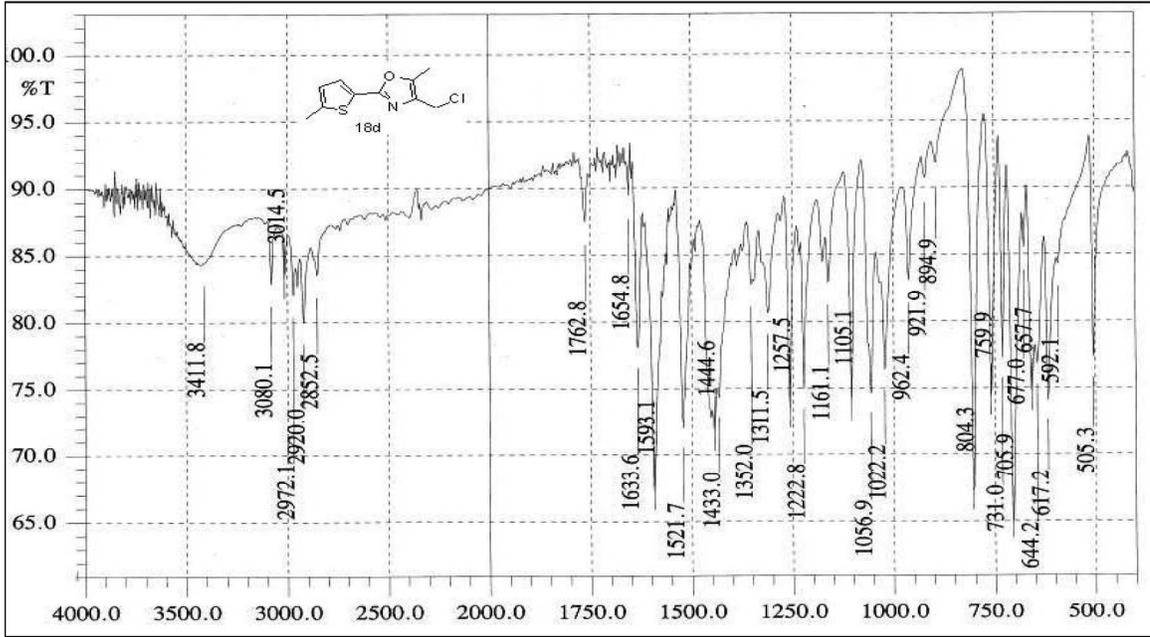
### **<sup>1</sup>H NMR of 18d**



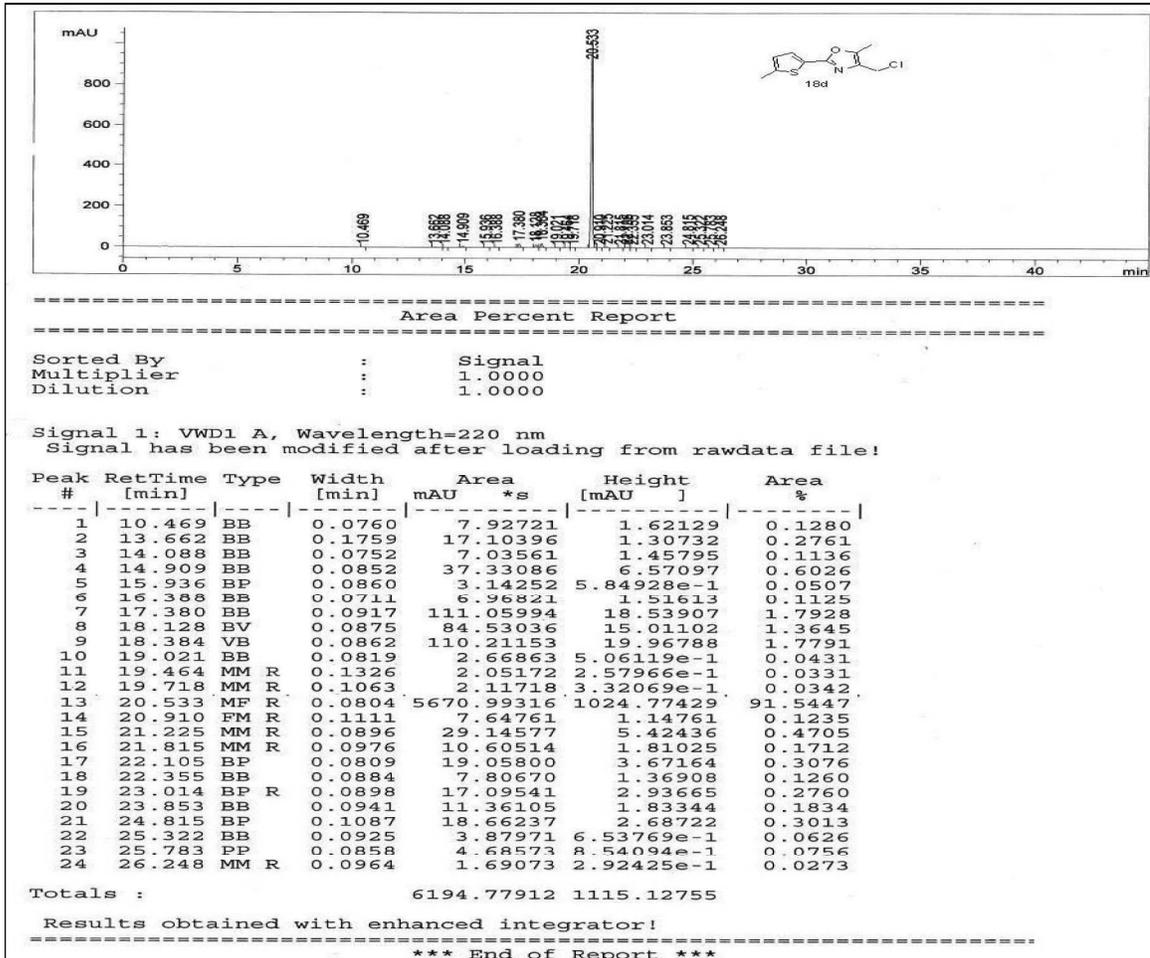
### **ESI/MS of 18d**



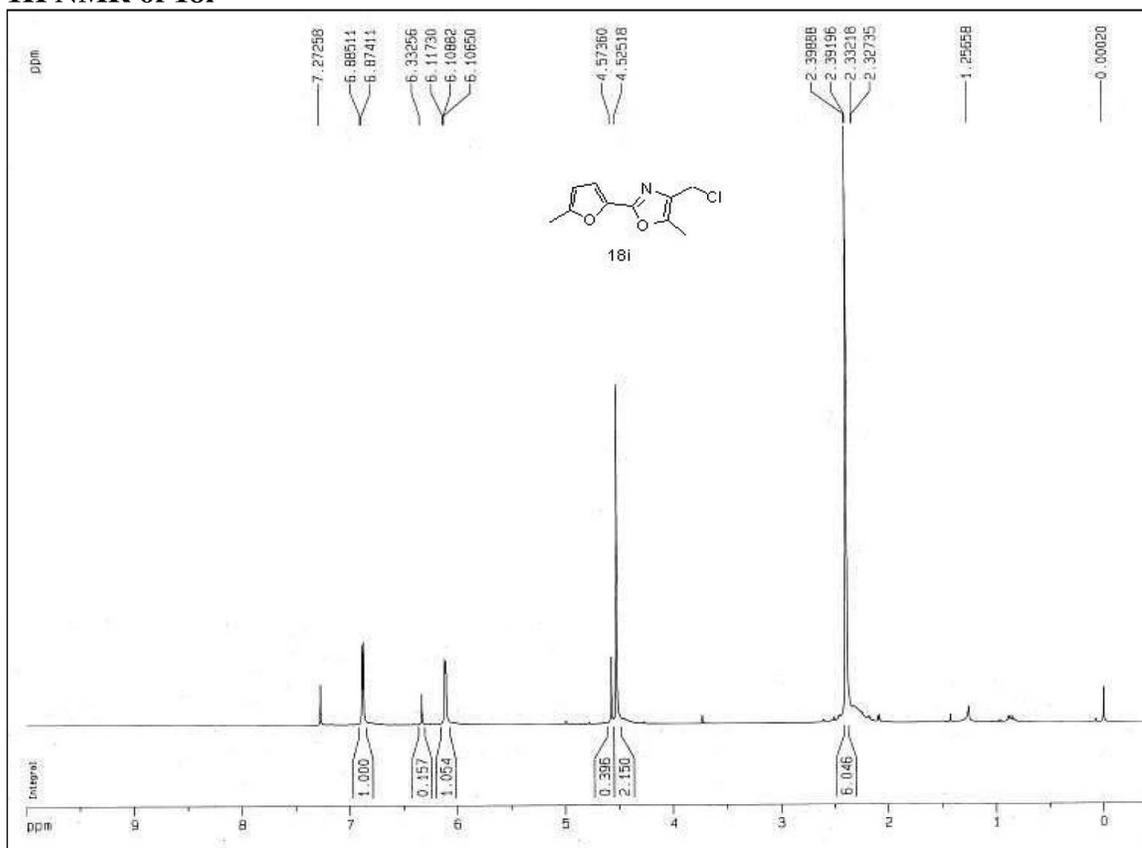
IR of 18d



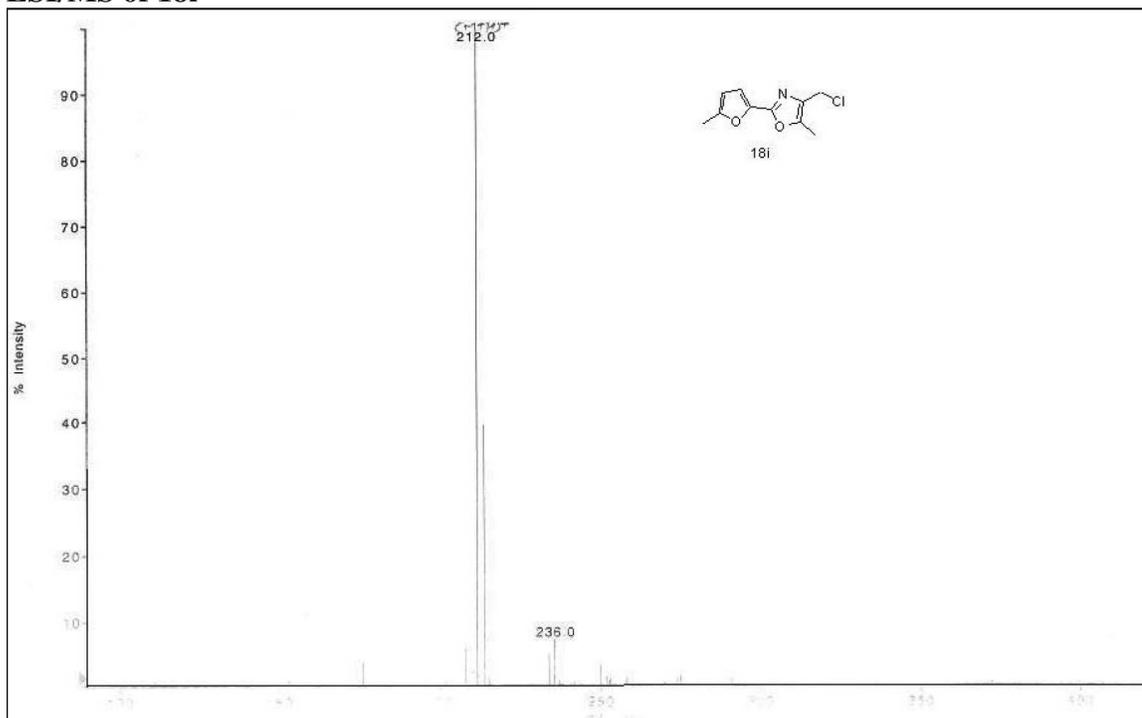
HPLC of 18d



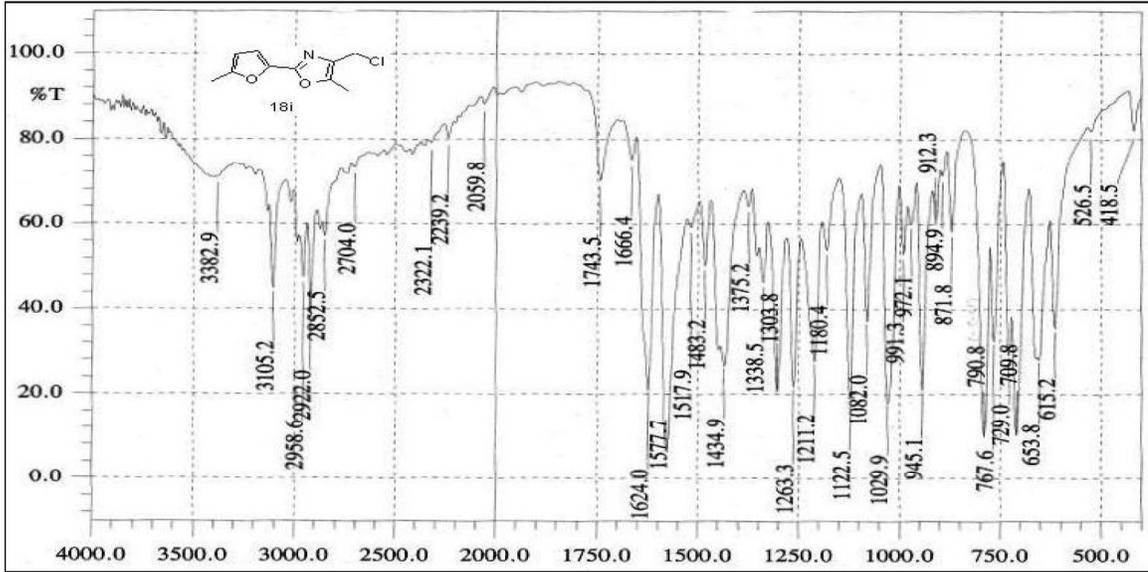
### **<sup>1</sup>H NMR of 18i**



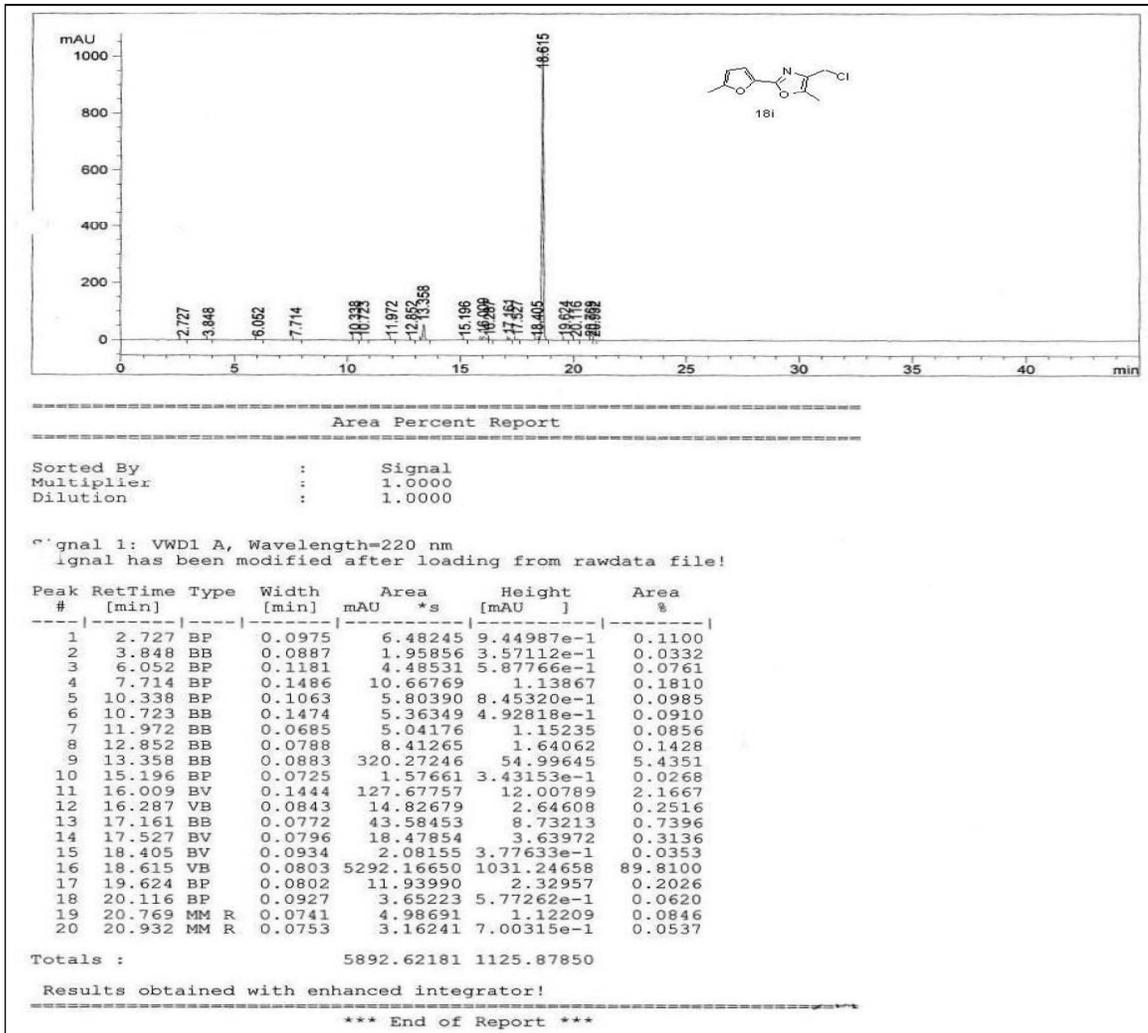
### **ESI/MS of 18i**



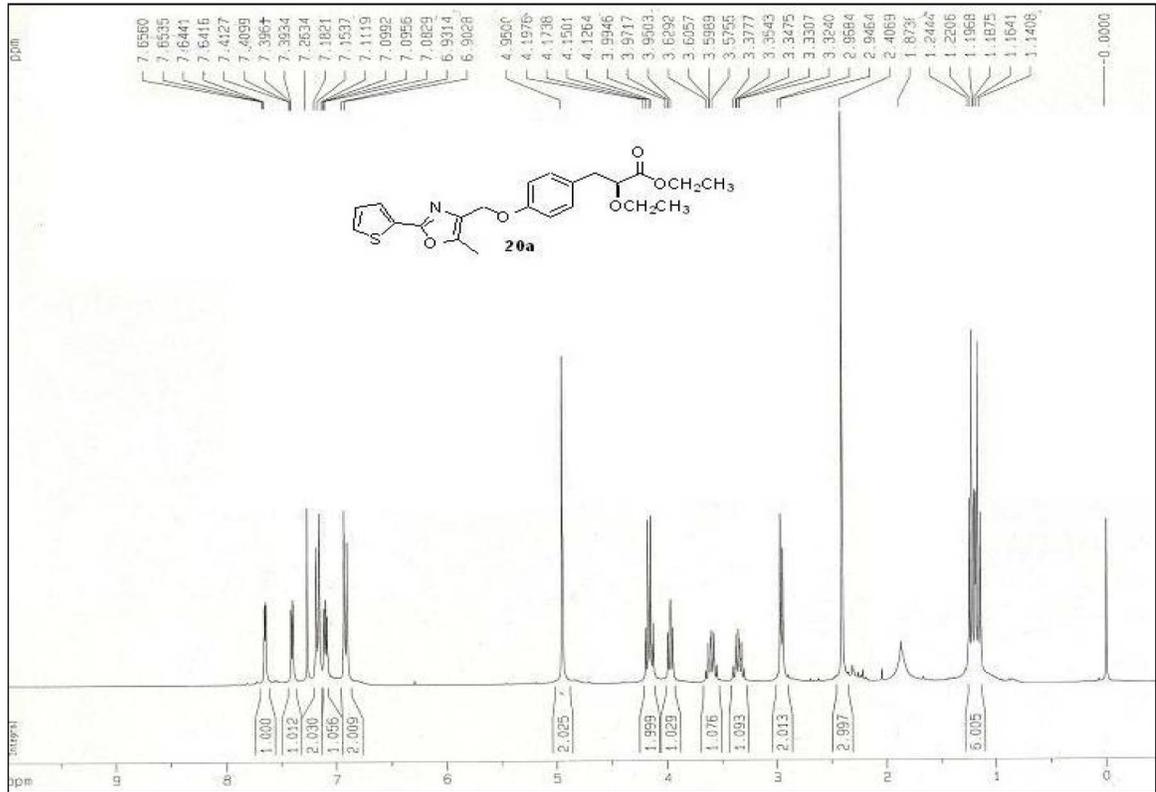
### IR of 18i



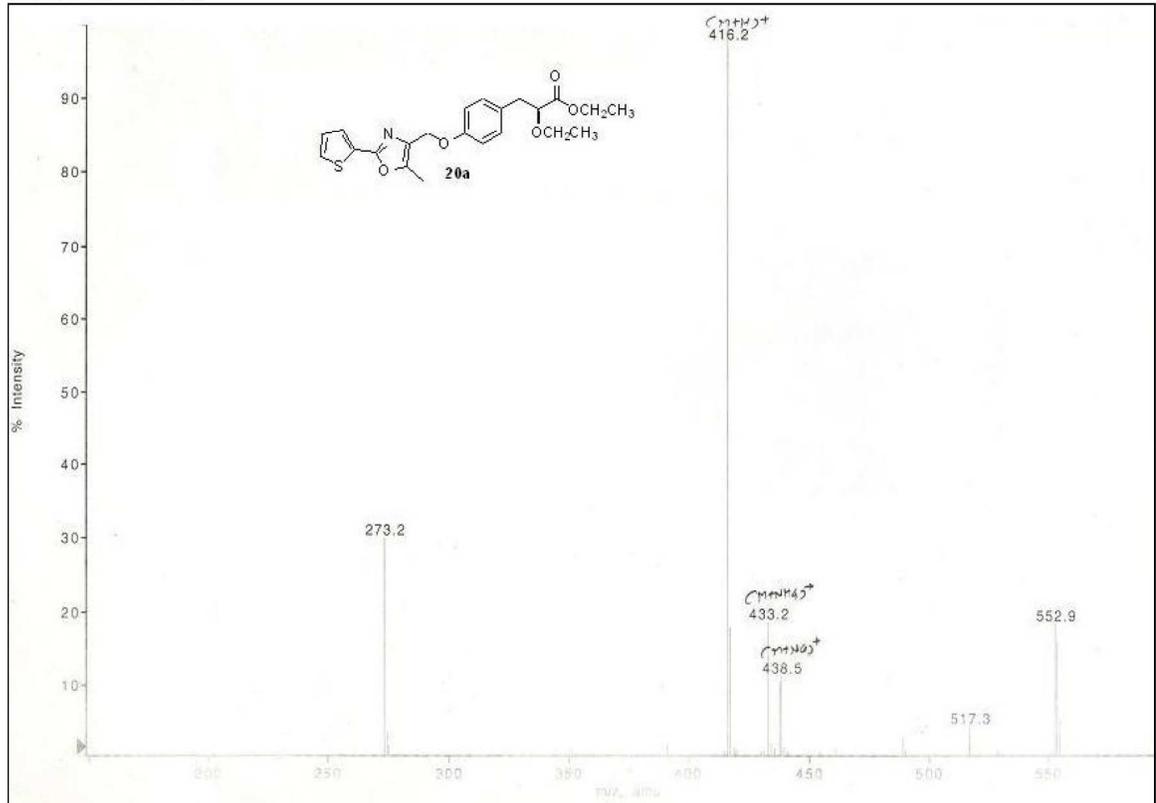
### HPLC of 18i



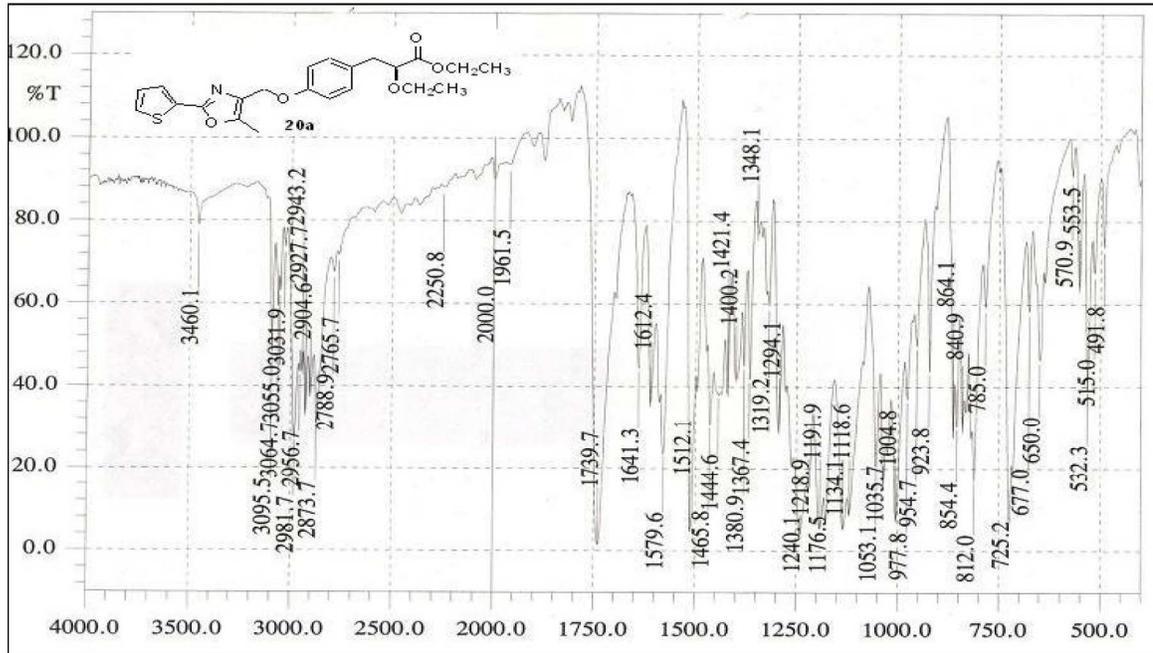
### **<sup>1</sup>H NMR of 20a**



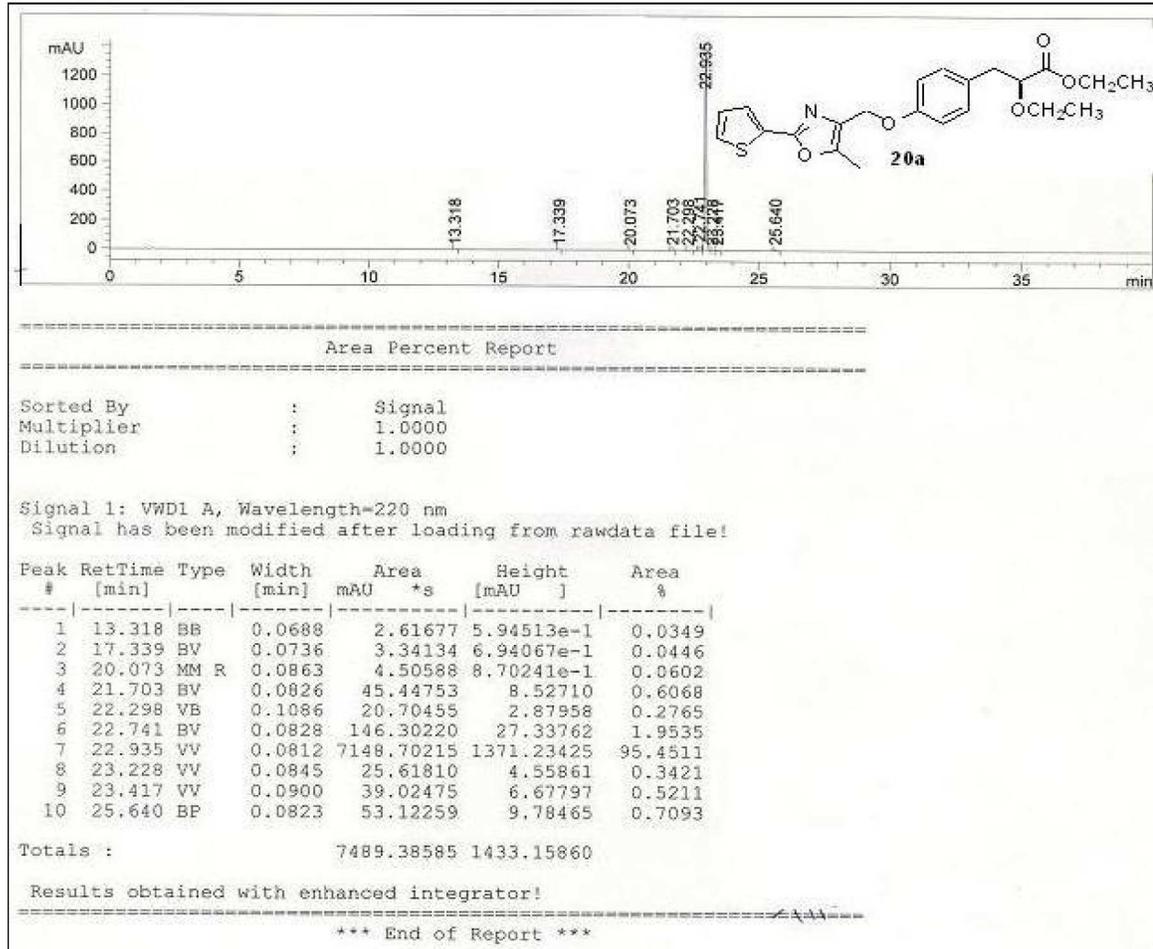
### **ESI/MS of 20a**



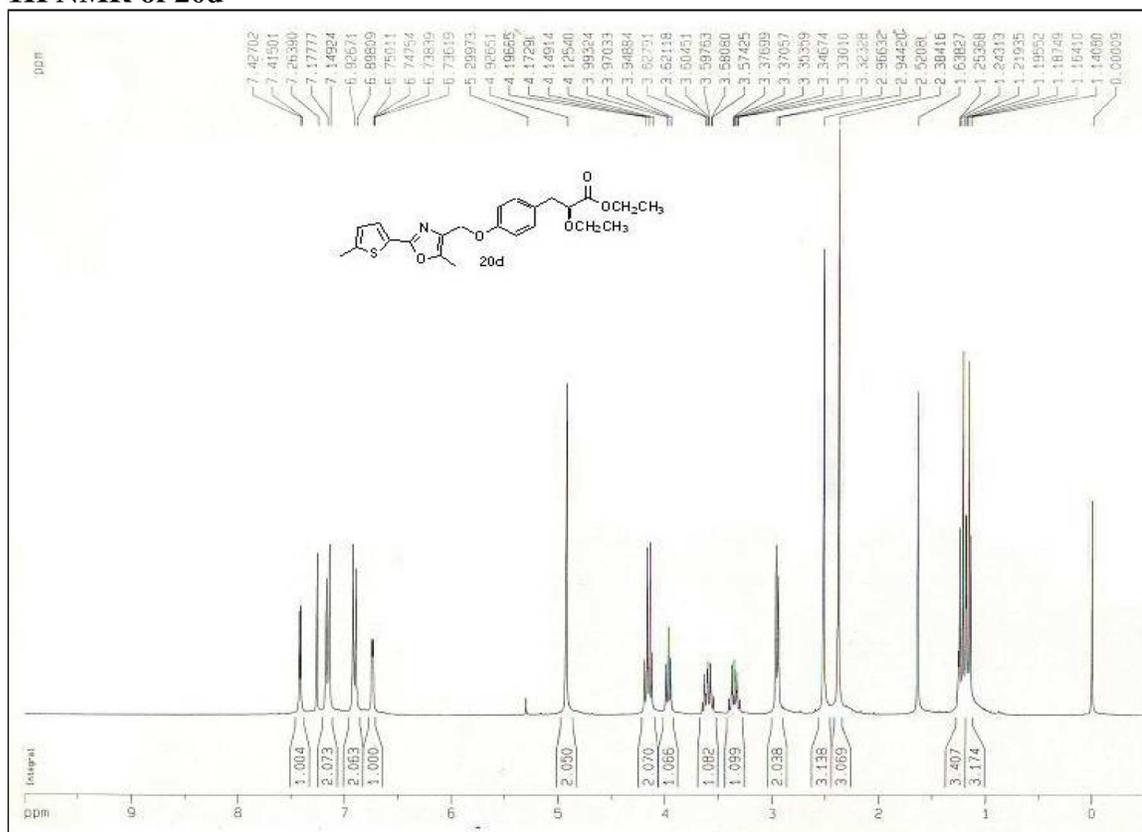
### IR of 20a



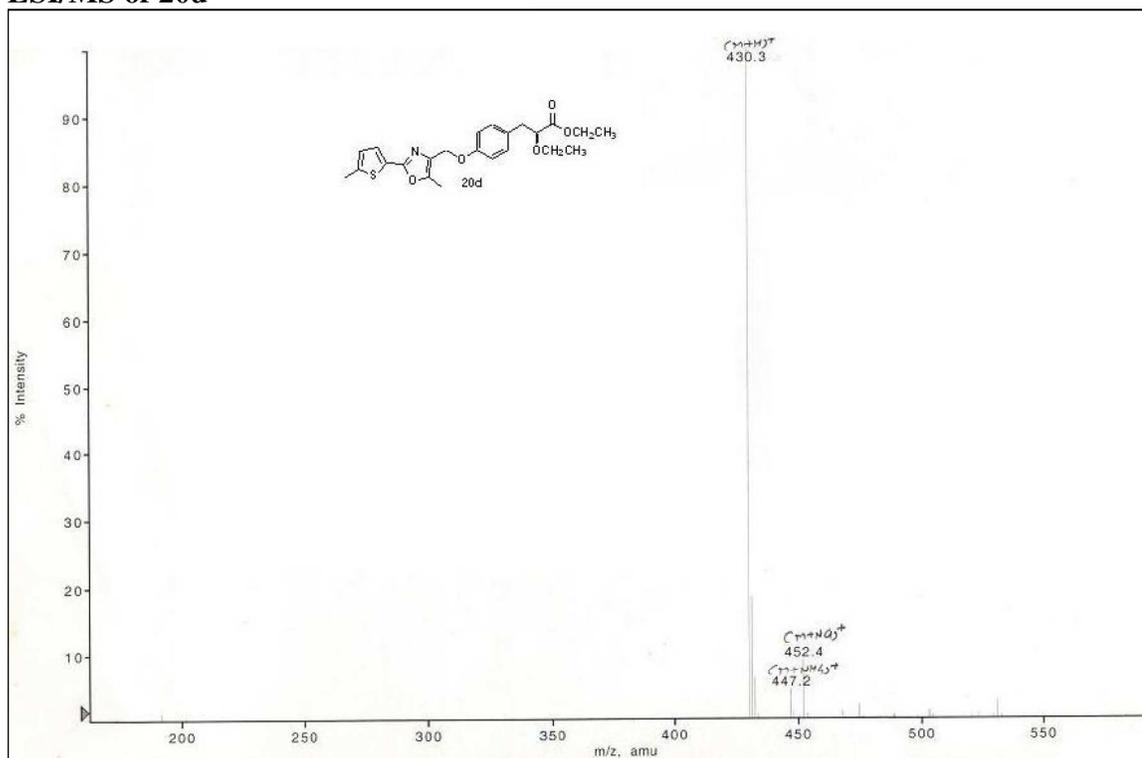
### HPLC of 20a



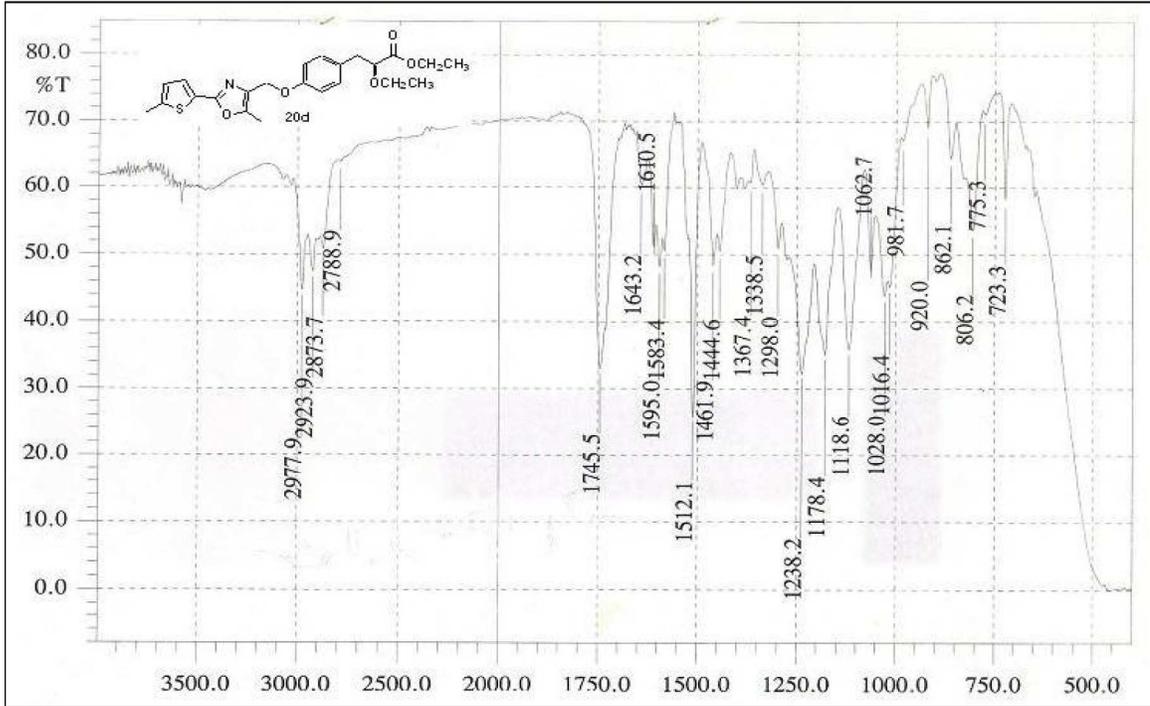
### **<sup>1</sup>H NMR of 20d**



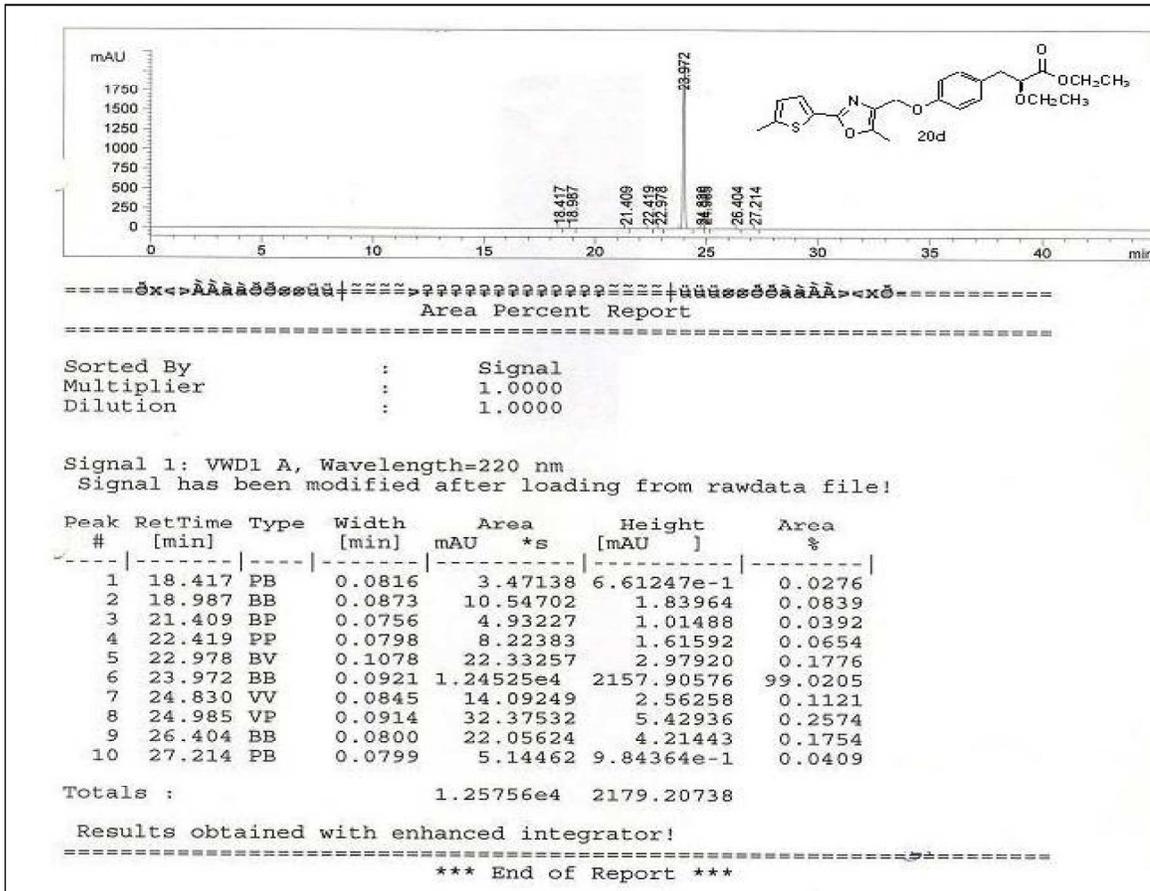
### **ESI/MS of 20d**



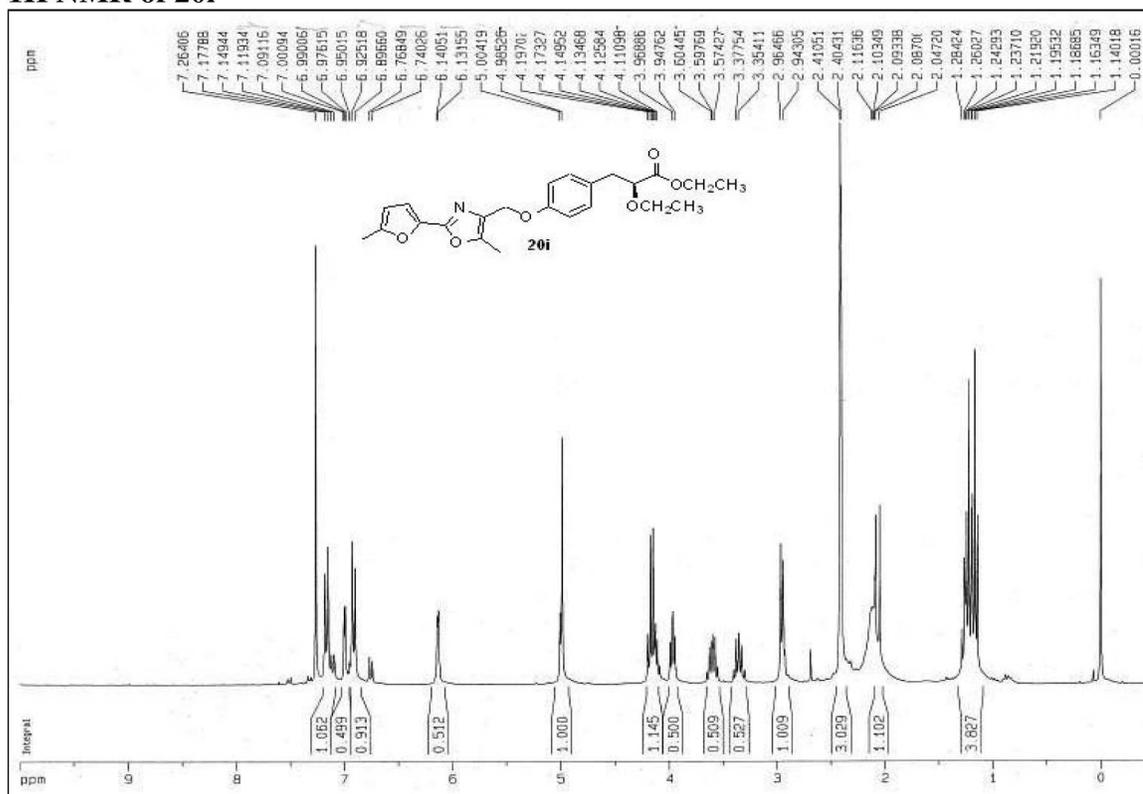
### IR of 20d



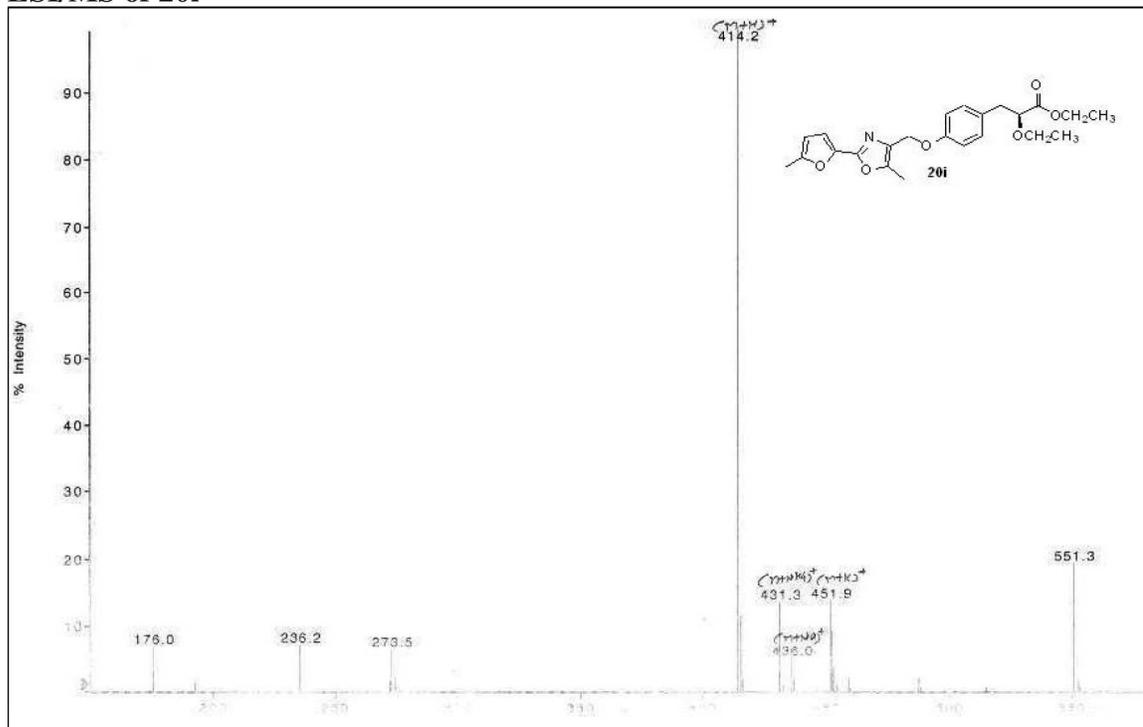
### HPLC of 20d



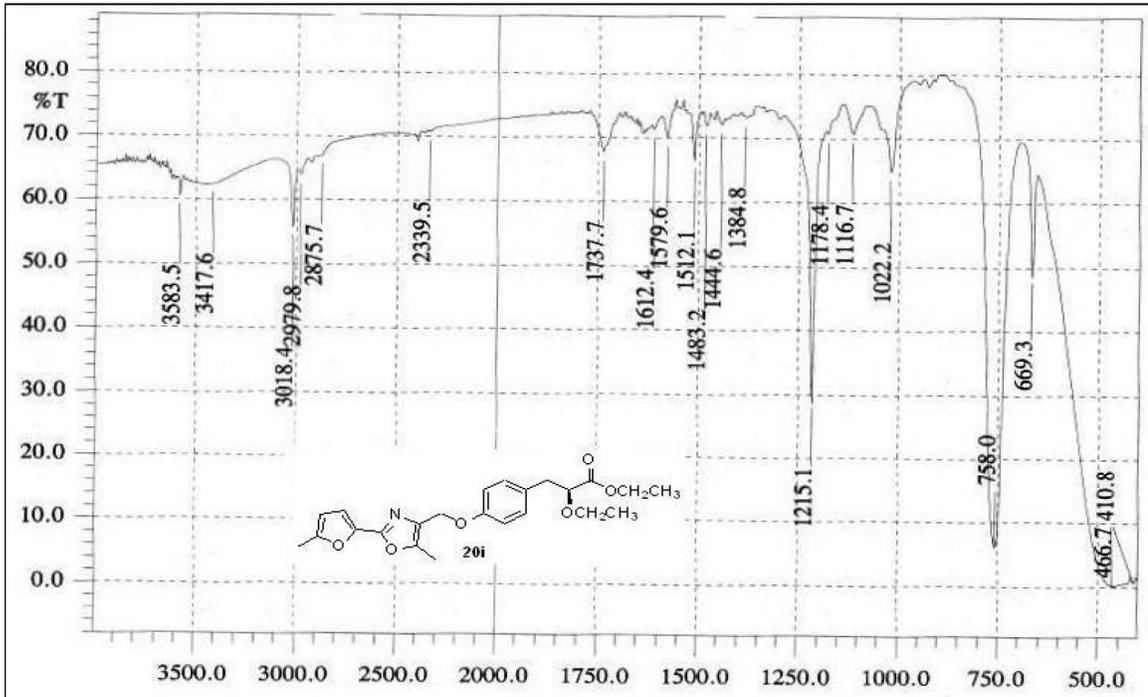
### **<sup>1</sup>H NMR of 20i**



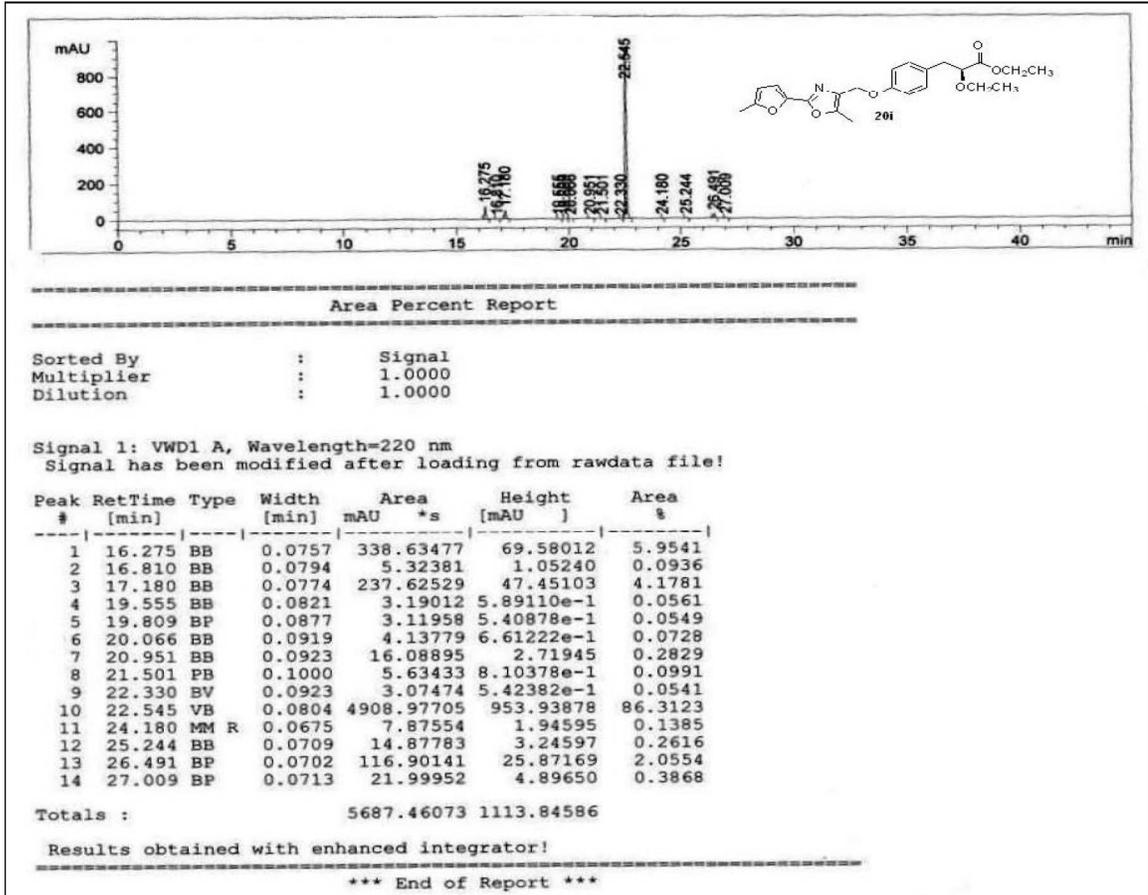
### **ESI/MS of 20i**



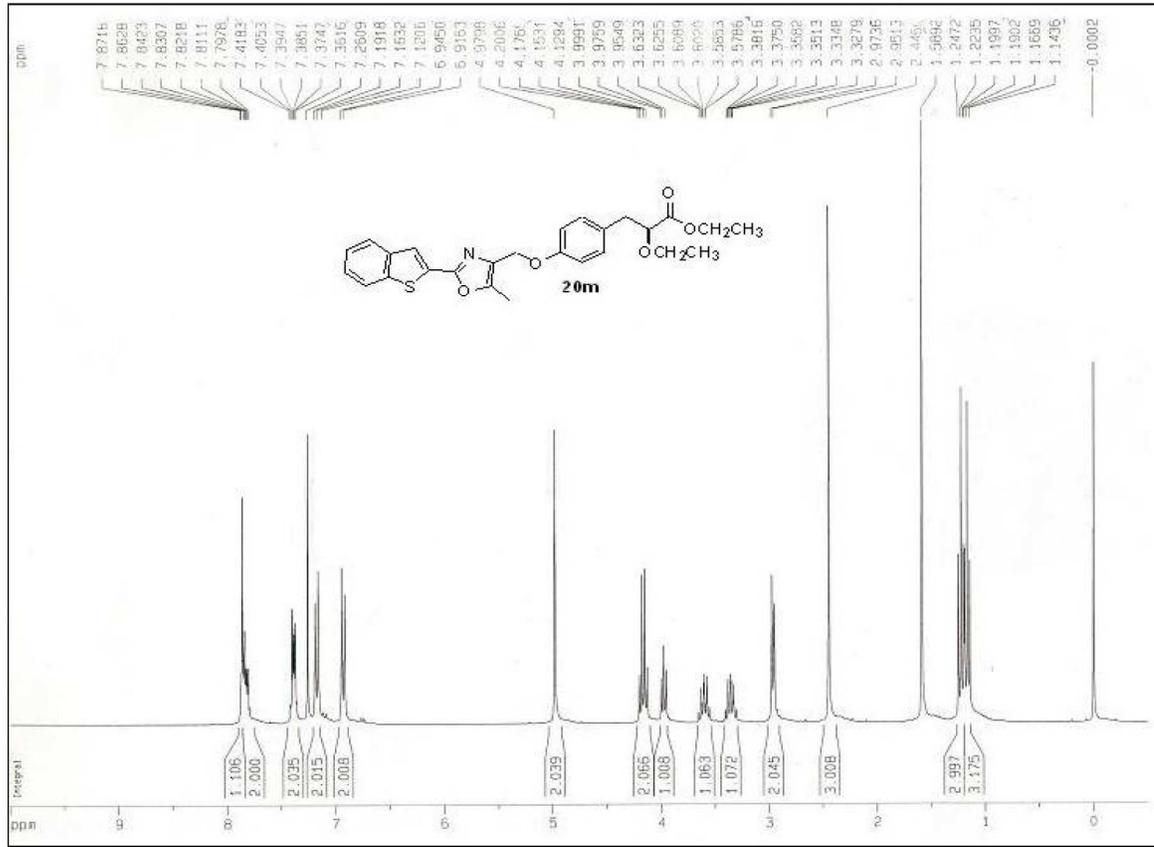
### IR of 20i



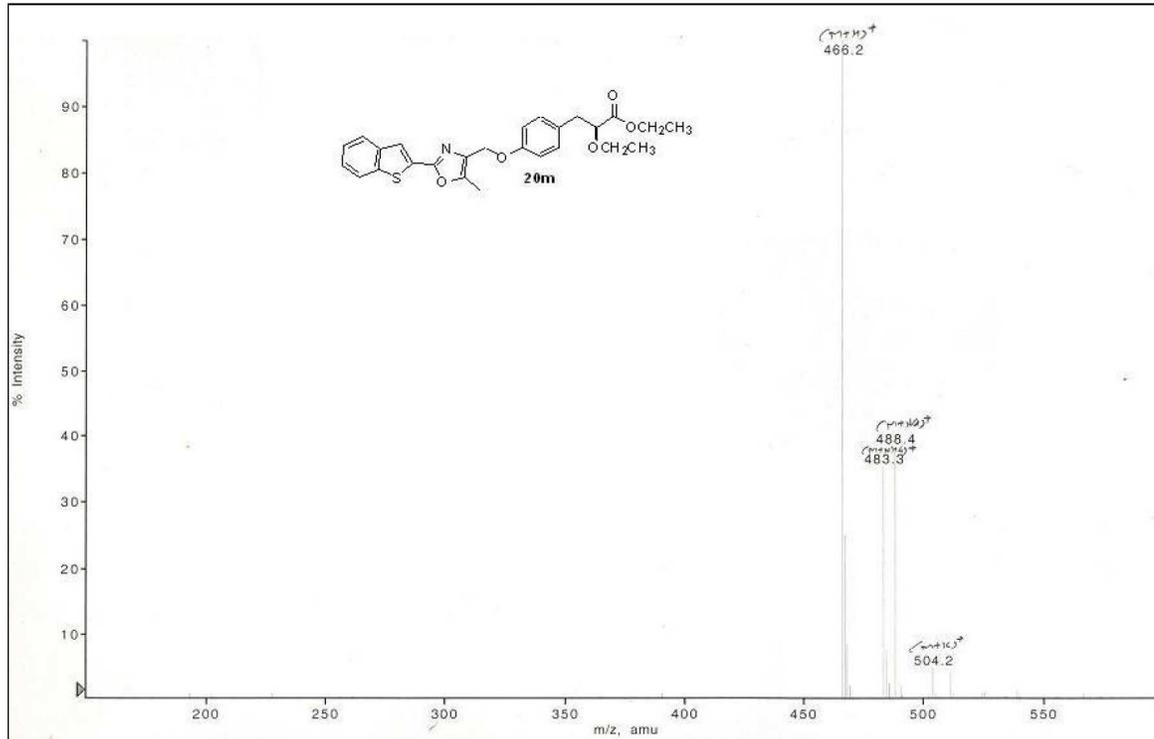
### HPLC of 20i



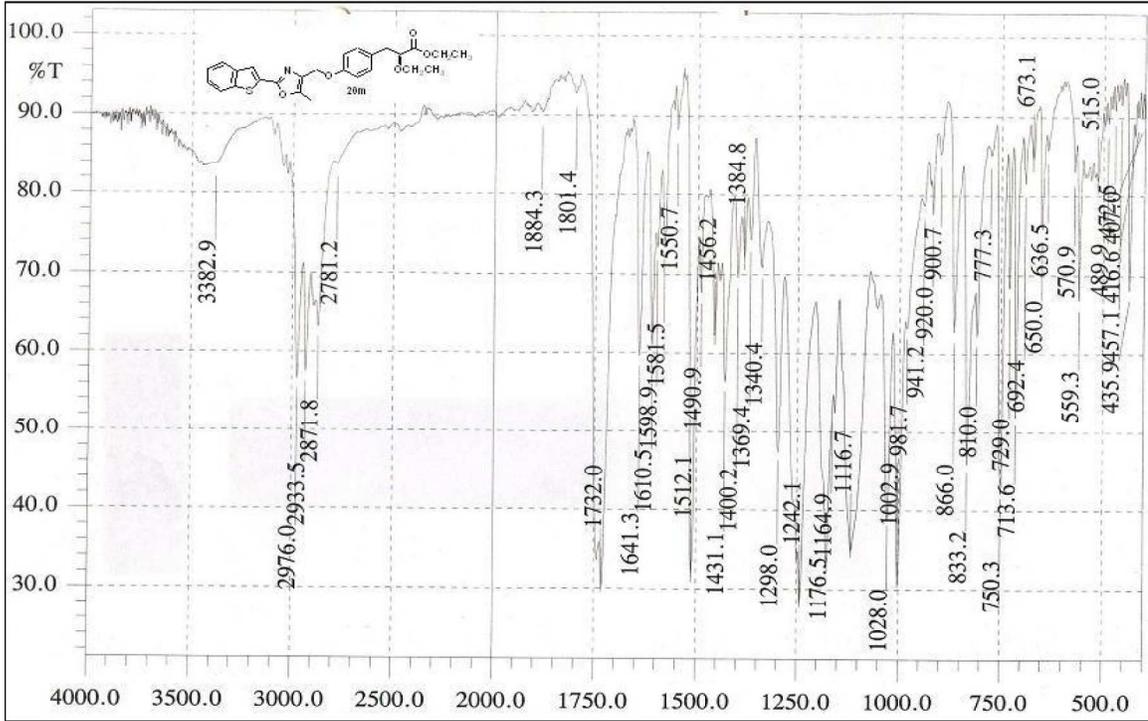
### **<sup>1</sup>H NMR of 20m**



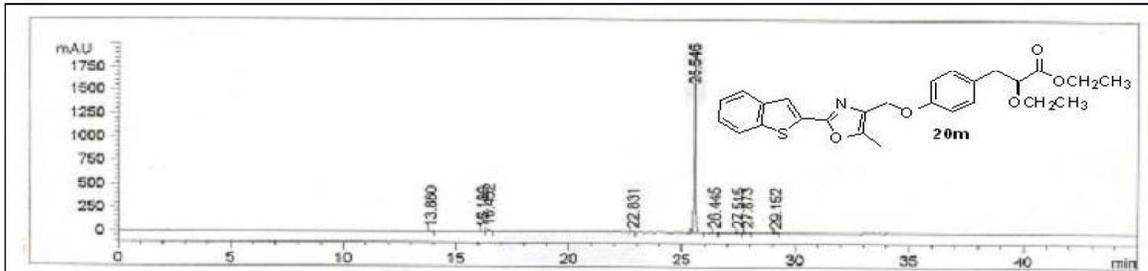
### **ESI/MS of 20m**



### IR of 20m



### HPLC of 20m



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

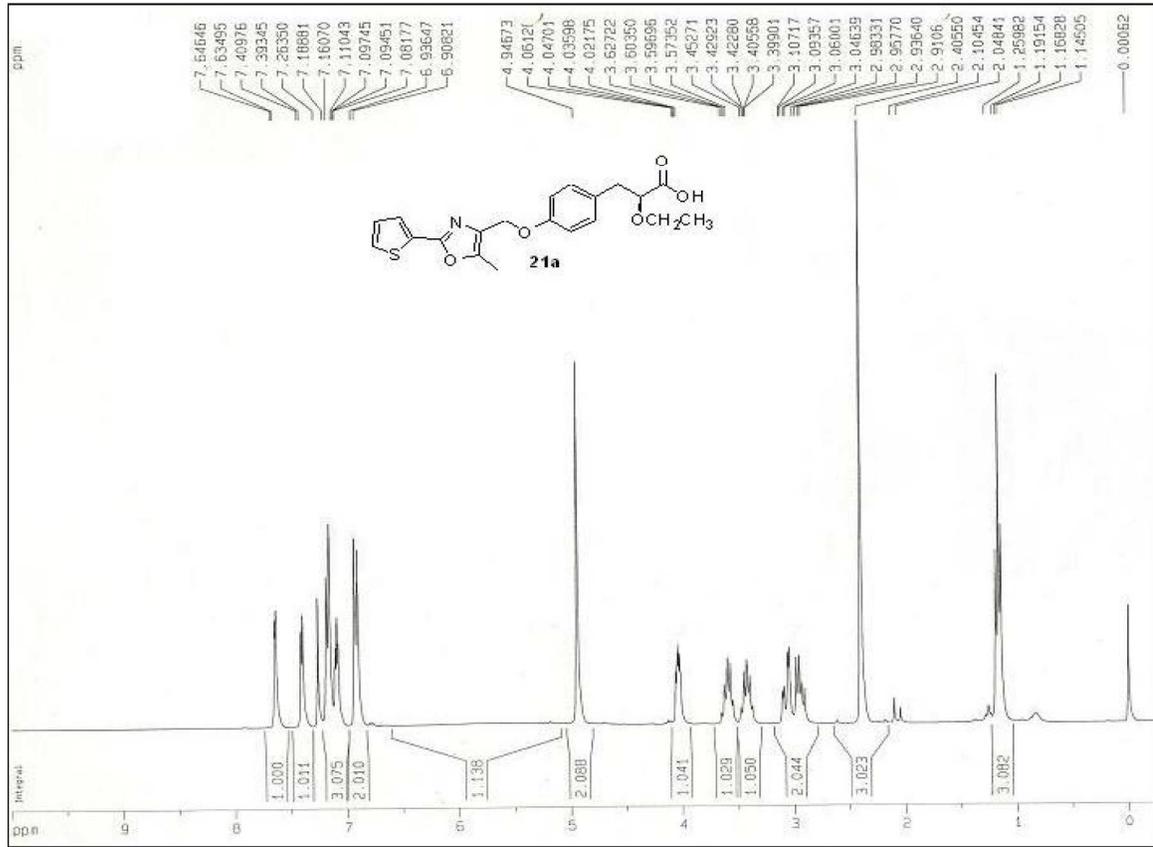
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area %	Height [mAU]	Area %
1	13.880	PB	0.0812	2.91576	0.0277	5.45986e-1	0.0277
2	16.189	BB	0.0848	9.18031	0.0871	1.66376	0.0871
3	16.452	BB	0.0831	118.16756	1.1210	21.98264	1.1210
4	22.831	MM R	0.0980	7.55621	0.0717	1.28493	0.0717
5	25.546	PB	0.0830	1.03223e4	97.9251	1923.97437	97.9251
6	26.445	PB	0.0846	17.21266	0.1633	3.19865	0.1633
7	27.515	VB	0.0774	25.54527	0.2423	5.10051	0.2423
8	27.873	BB	0.1069	32.13562	0.3049	4.41012	0.3049
9	29.152	PP	0.0962	6.00603	0.0570	9.80936e-1	0.0570

Totals : 1.05410e4 1963.14190

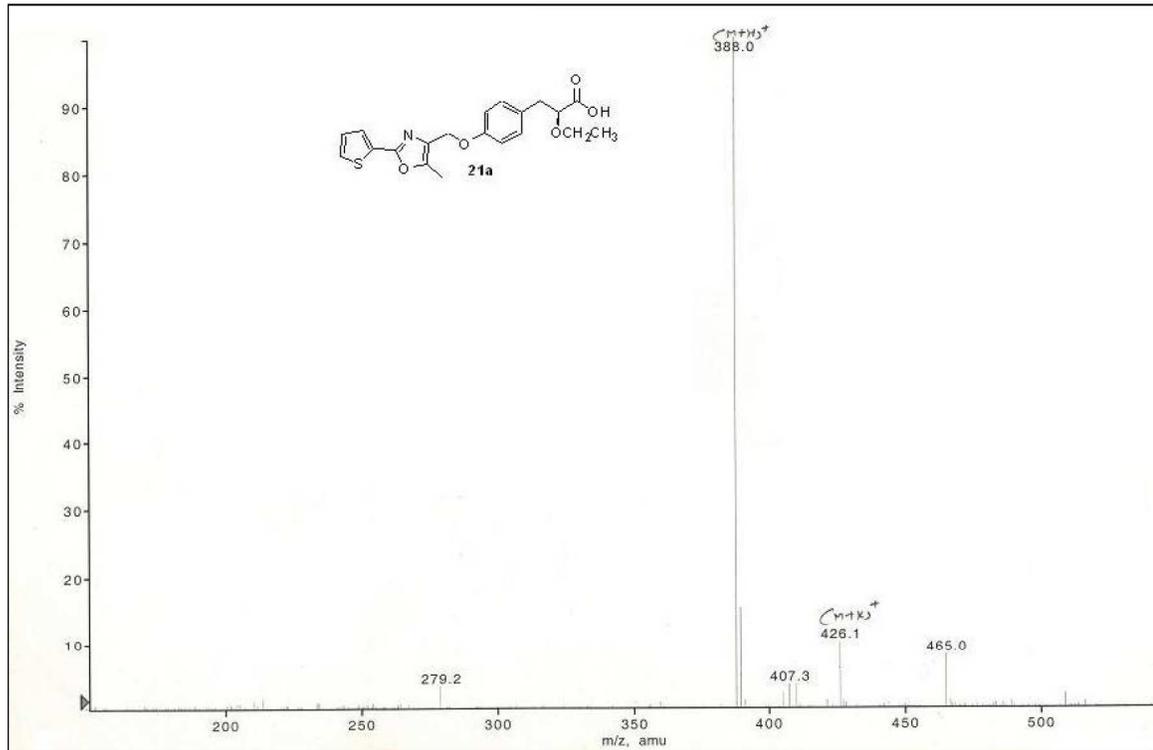
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

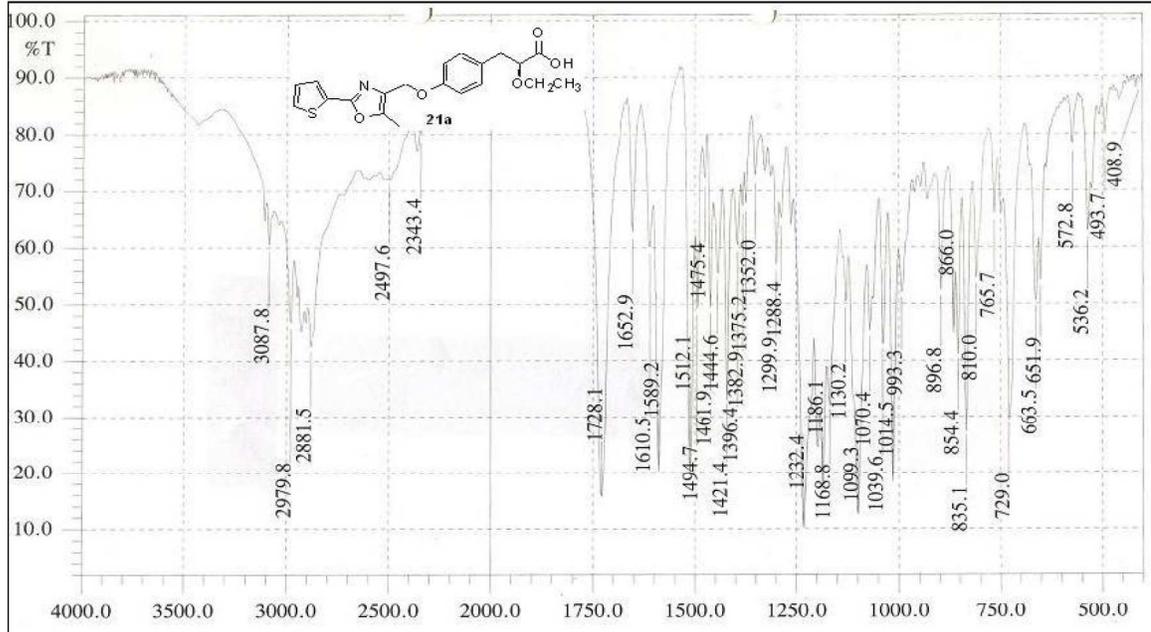
### **<sup>1</sup>H NMR of 21a**



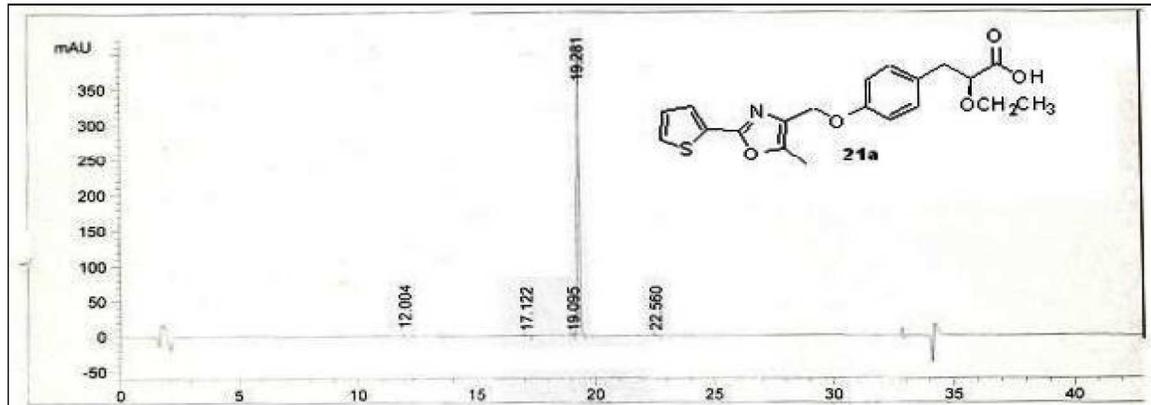
### **ESI/MS of 21a**



### IR of 21a



### HPLC of 21a



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

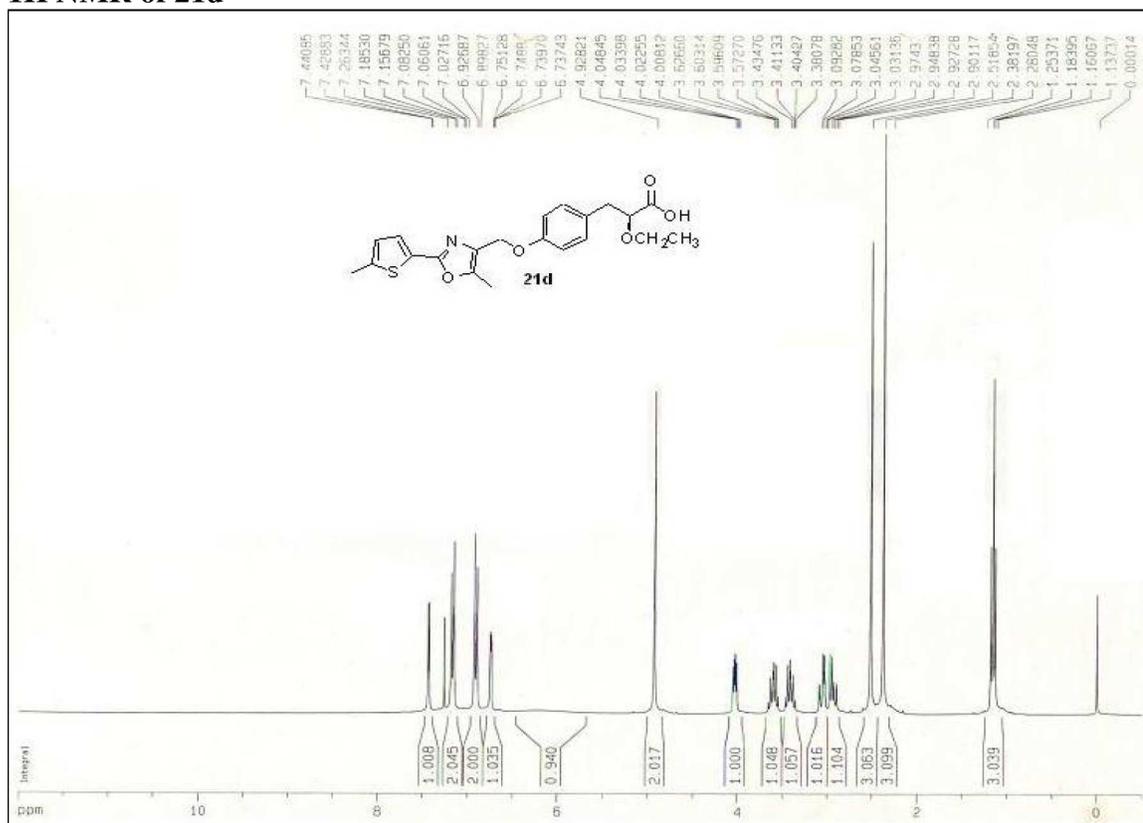
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	12.004	BB	0.0858	25.25167	4.60957	0.9925
2	17.122	BB	0.0938	3.31236	5.59361e-1	0.1302
3	19.095	BV	0.0843	2.80136	5.23389e-1	0.1101
4	19.281	VB	0.0976	2505.27002	401.37421	98.4636
5	22.560	BB	0.1006	7.72670	1.21222	0.3037

Totals : 2544.36212 408.27875

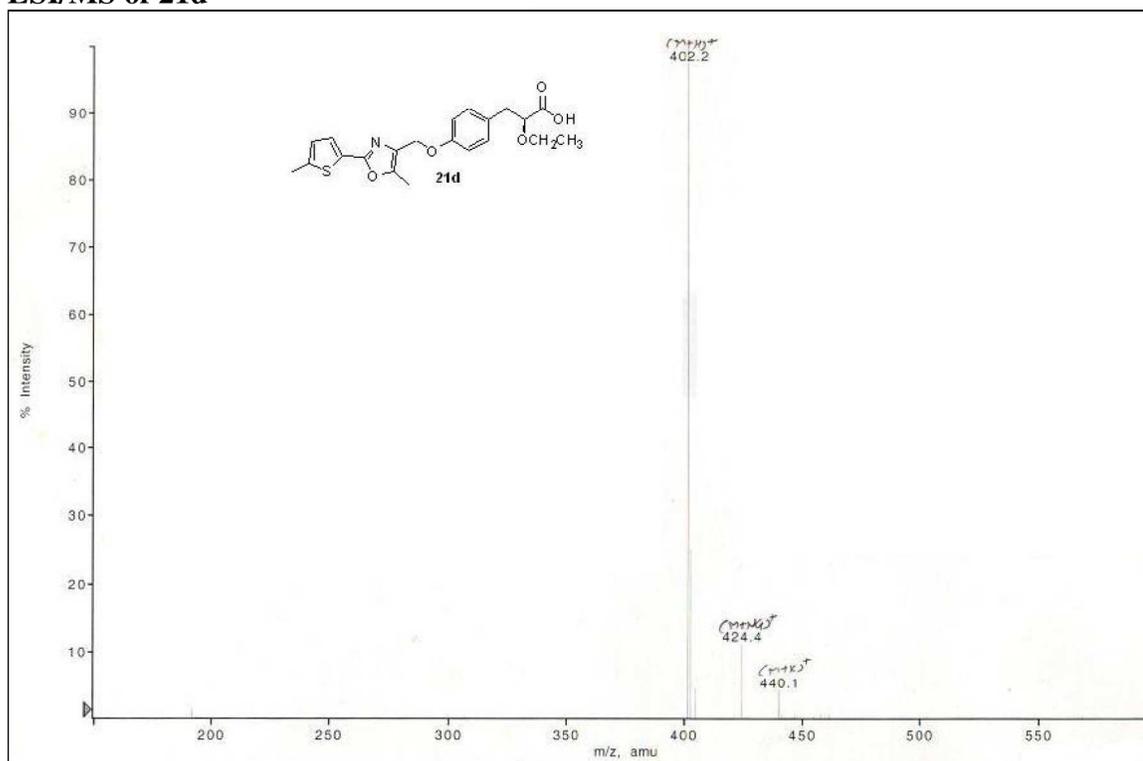
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

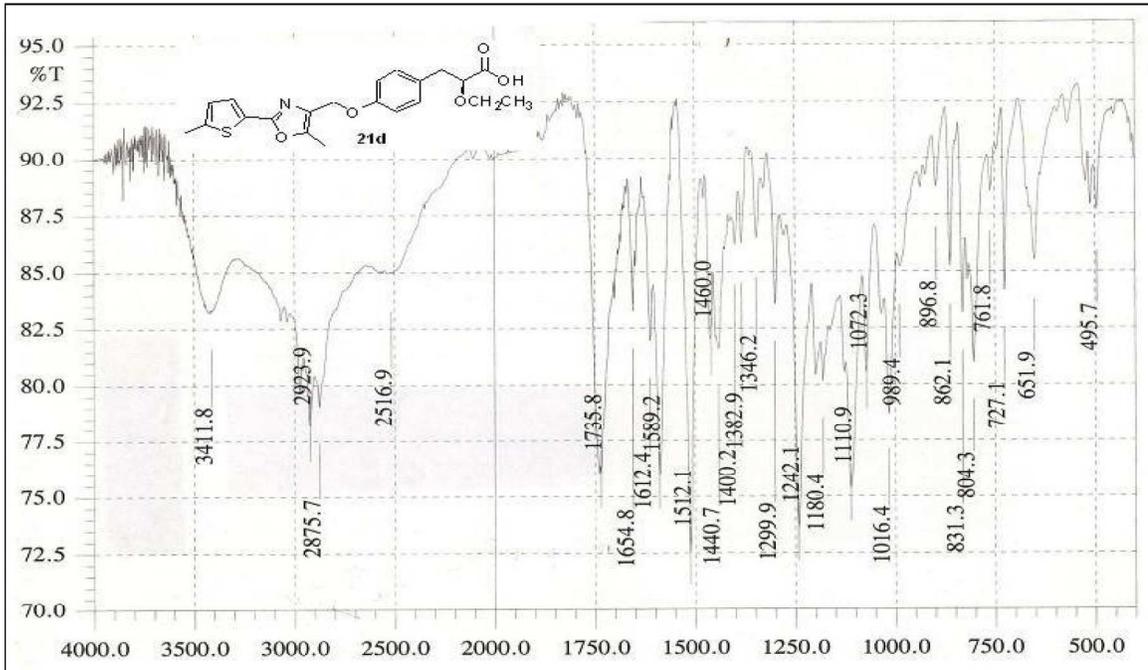
### **<sup>1</sup>H NMR of 21d**



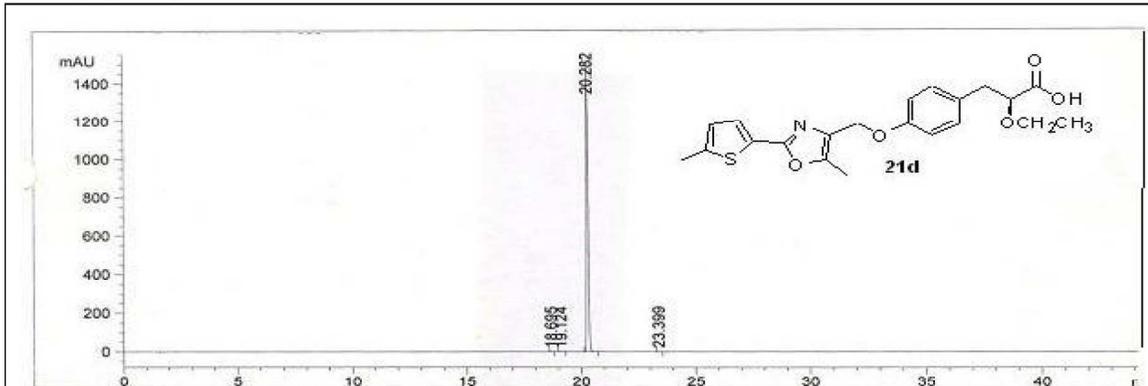
### **ESI/MS of 21d**



## IR of 21d



## HPLC of 21d



### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

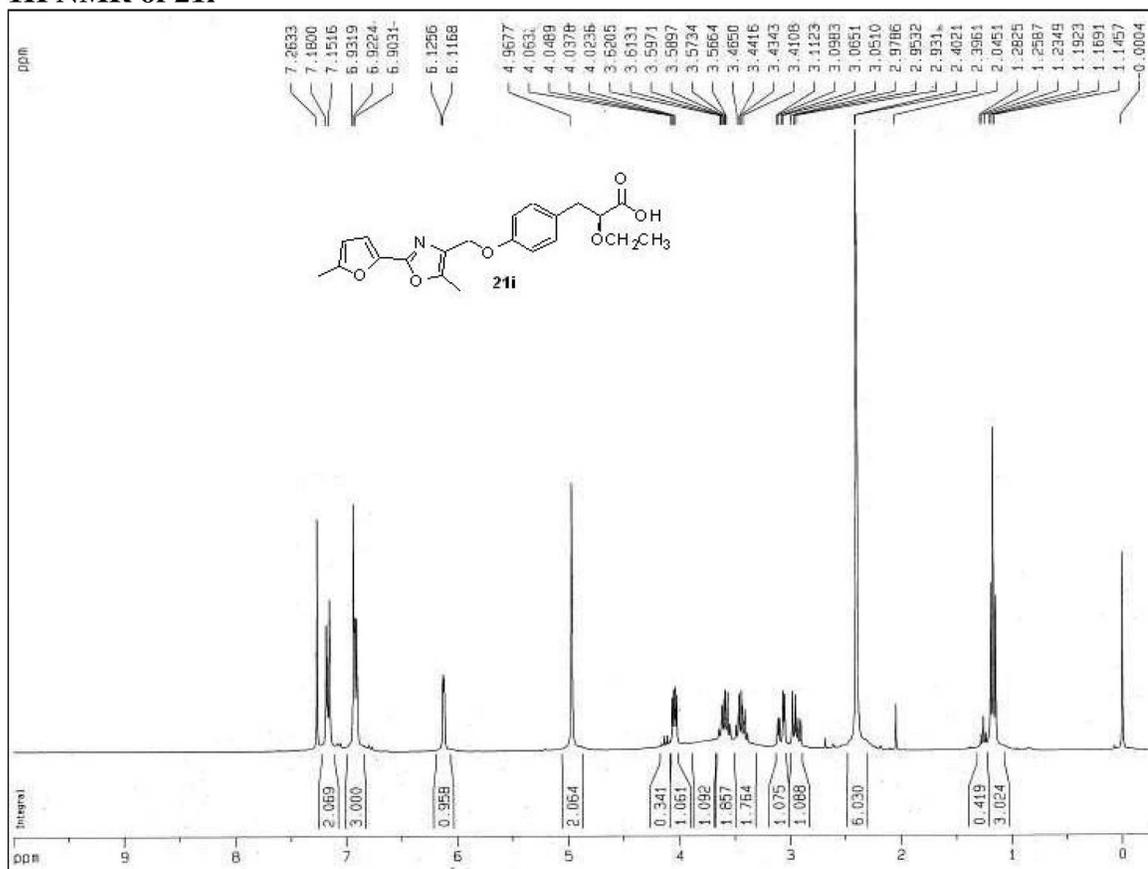
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	18.695	BB	0.0760	2.94878	6.02697e-1	0.0373	0.0373
2	19.124	BB	0.1079	6.18626	7.97691e-1	0.0783	0.0783
3	20.282	PB	0.0824	7879.03662	1482.00159	99.7689	99.7689
4	23.399	VB	0.0829	9.11412	1.70107	0.1154	0.1154

Totals : 7897.28578 1485.10304

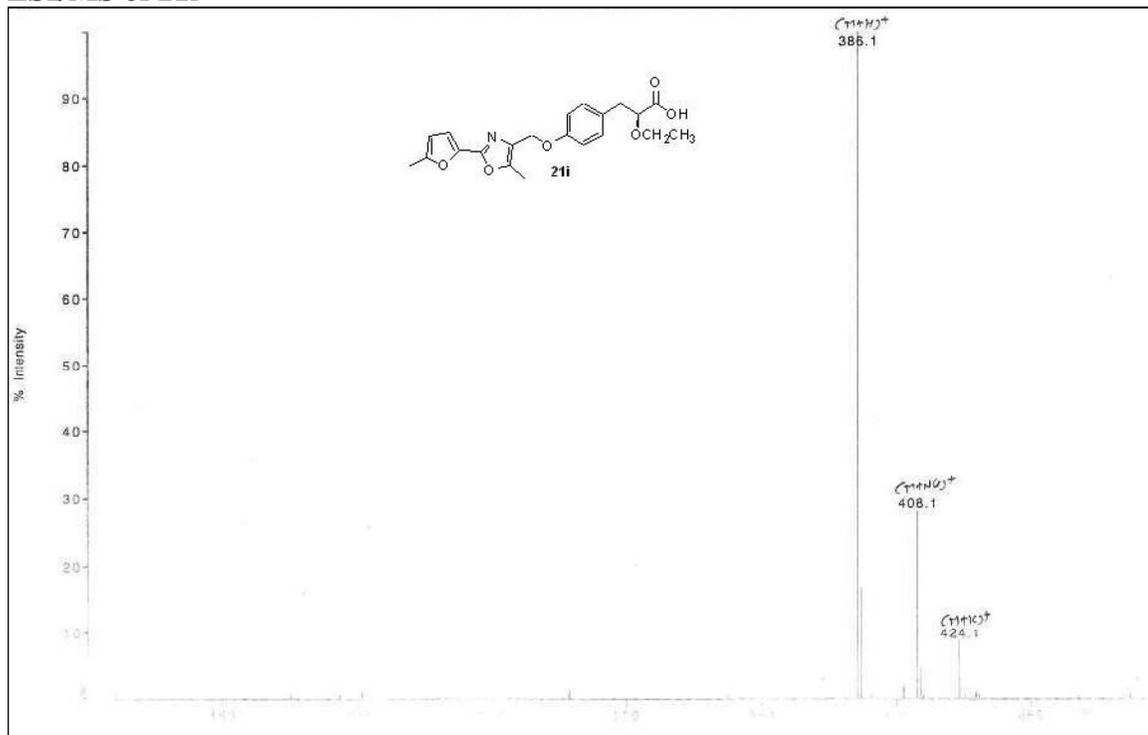
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

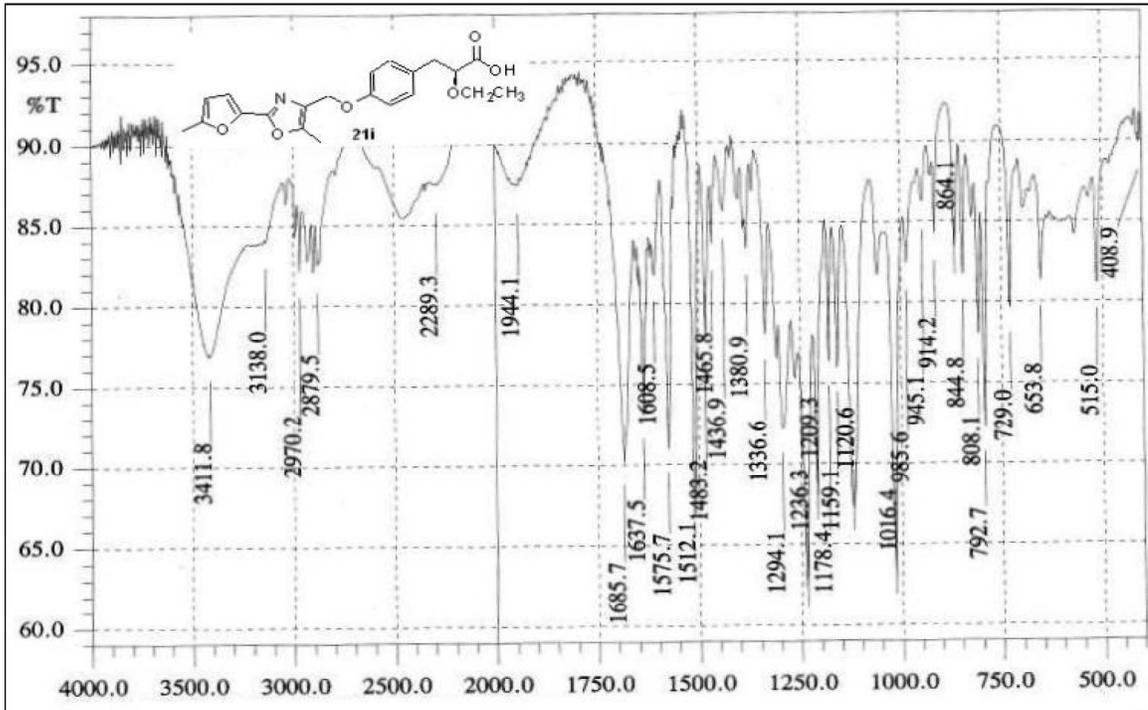
### **<sup>1</sup>H NMR of 2i**



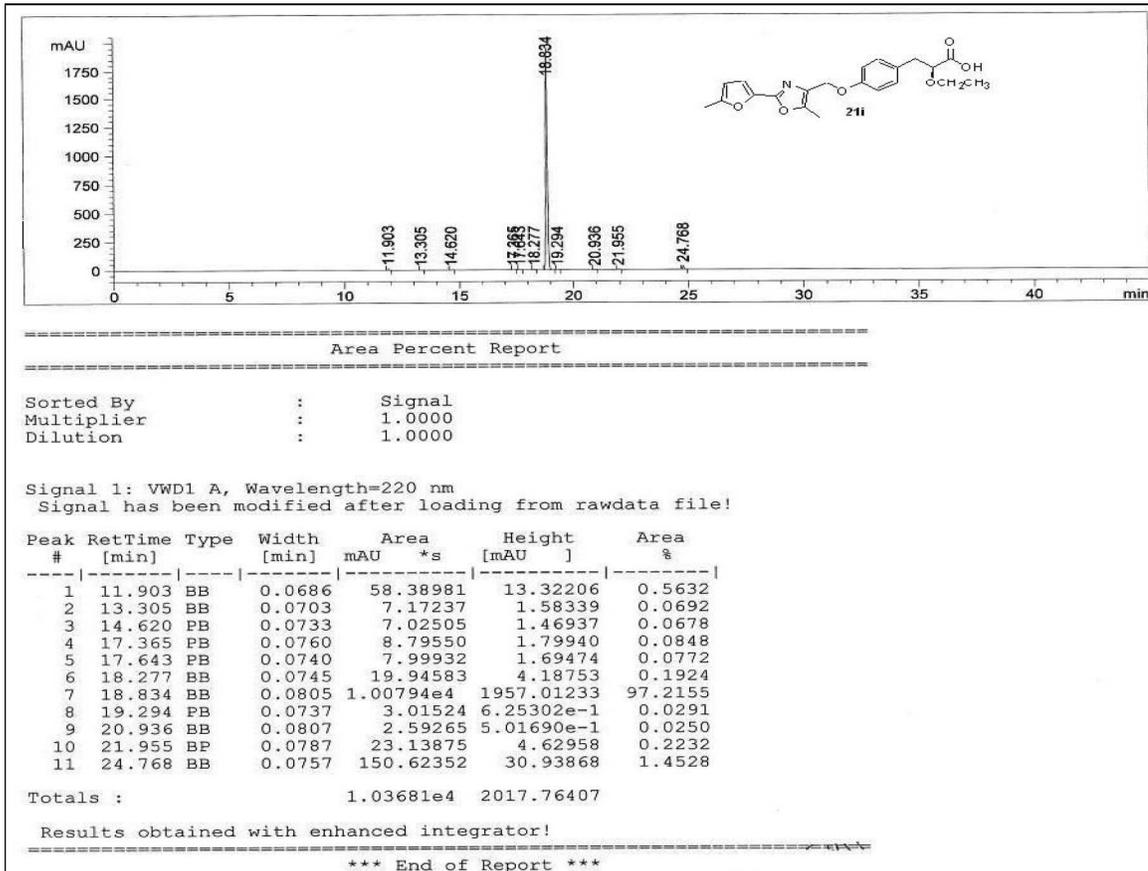
### **ESI/MS of 2i**



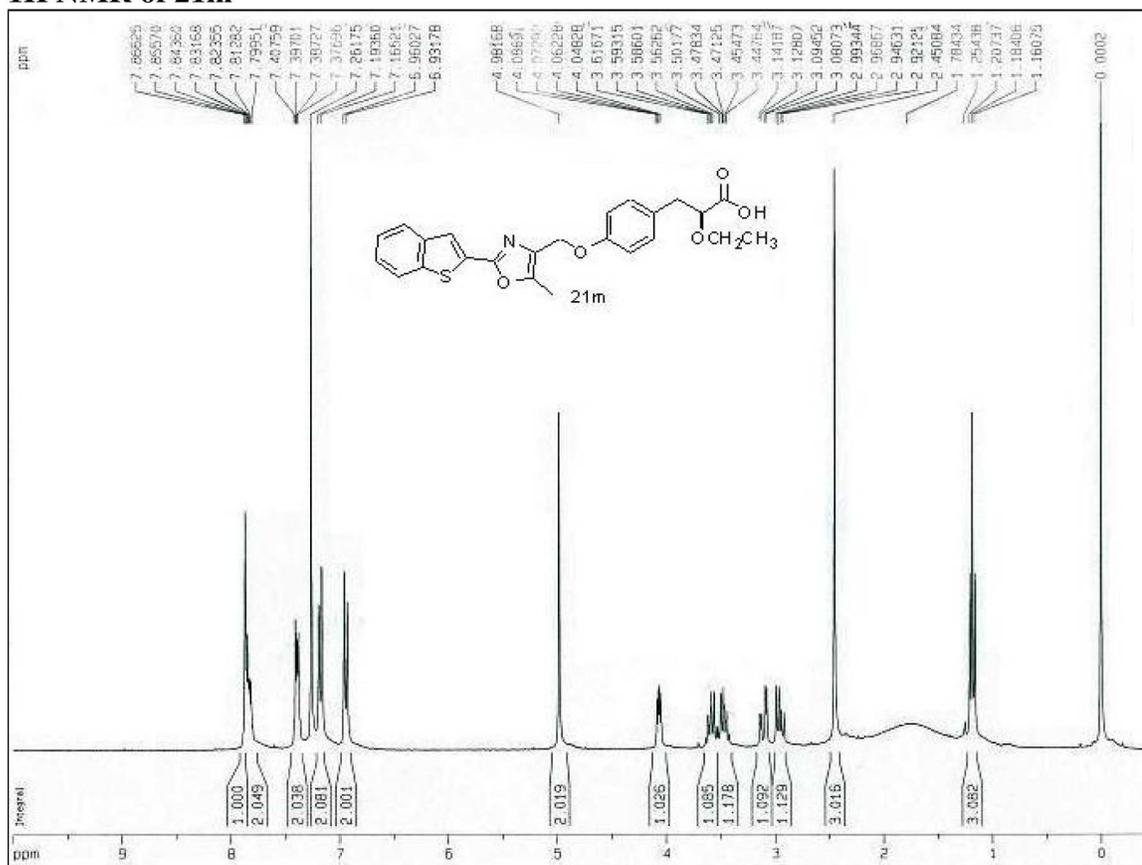
## IR of 21i



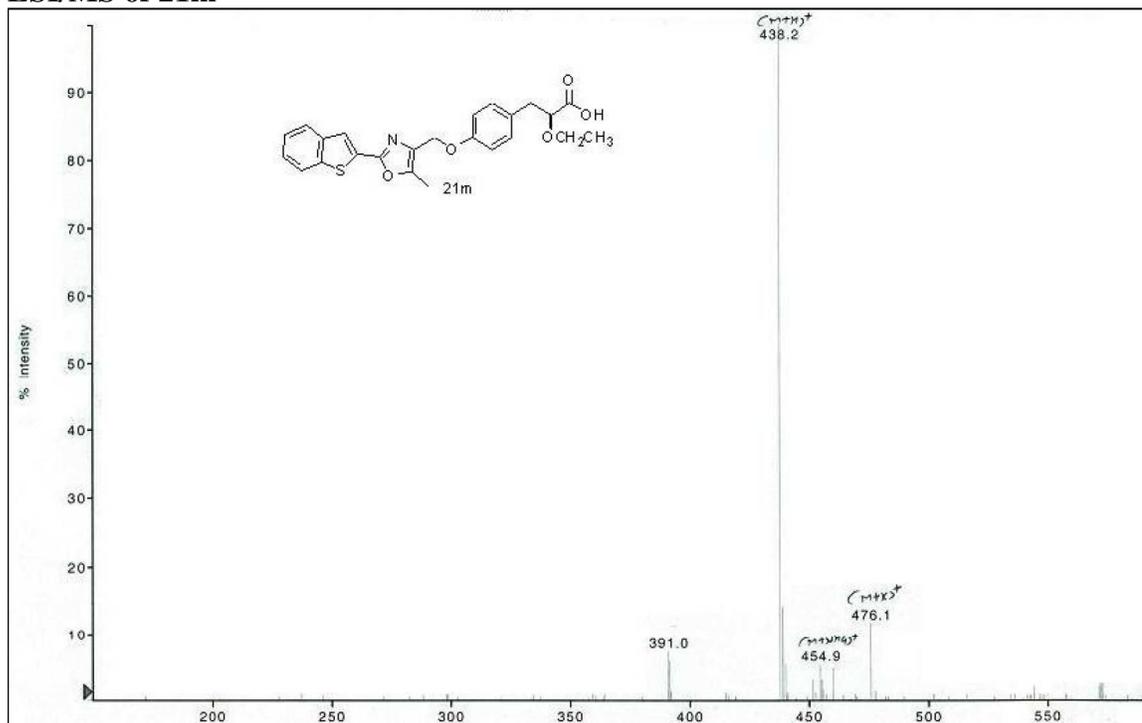
## HPLC of 21i



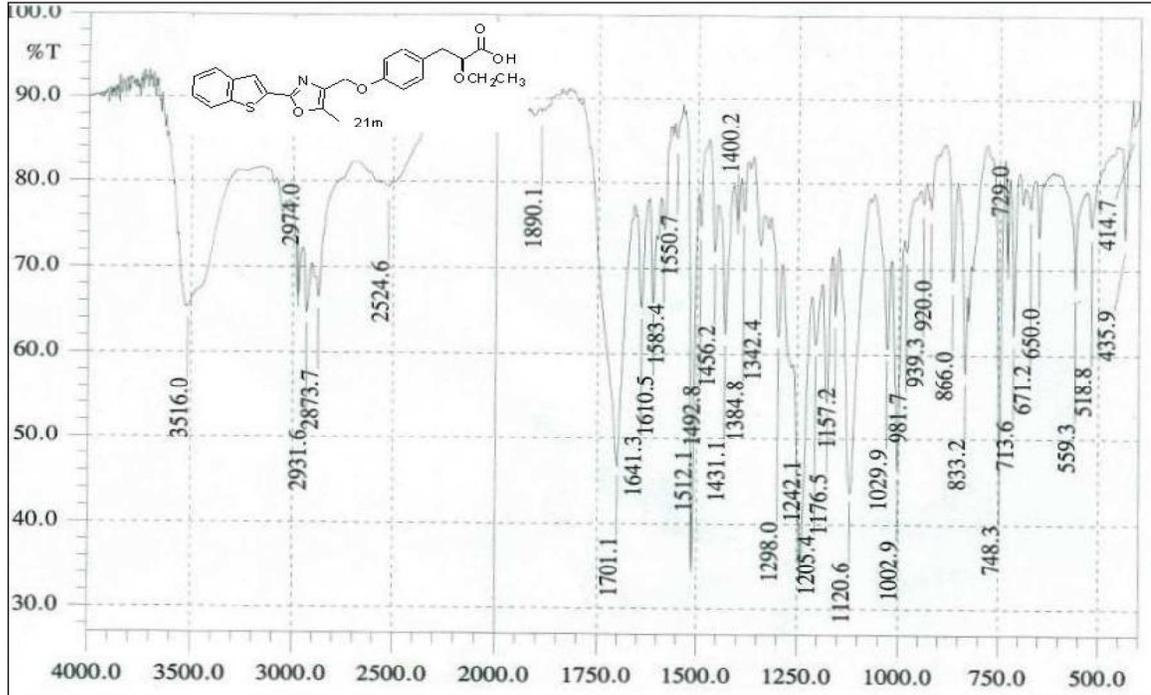
### <sup>1</sup>H NMR of 21m



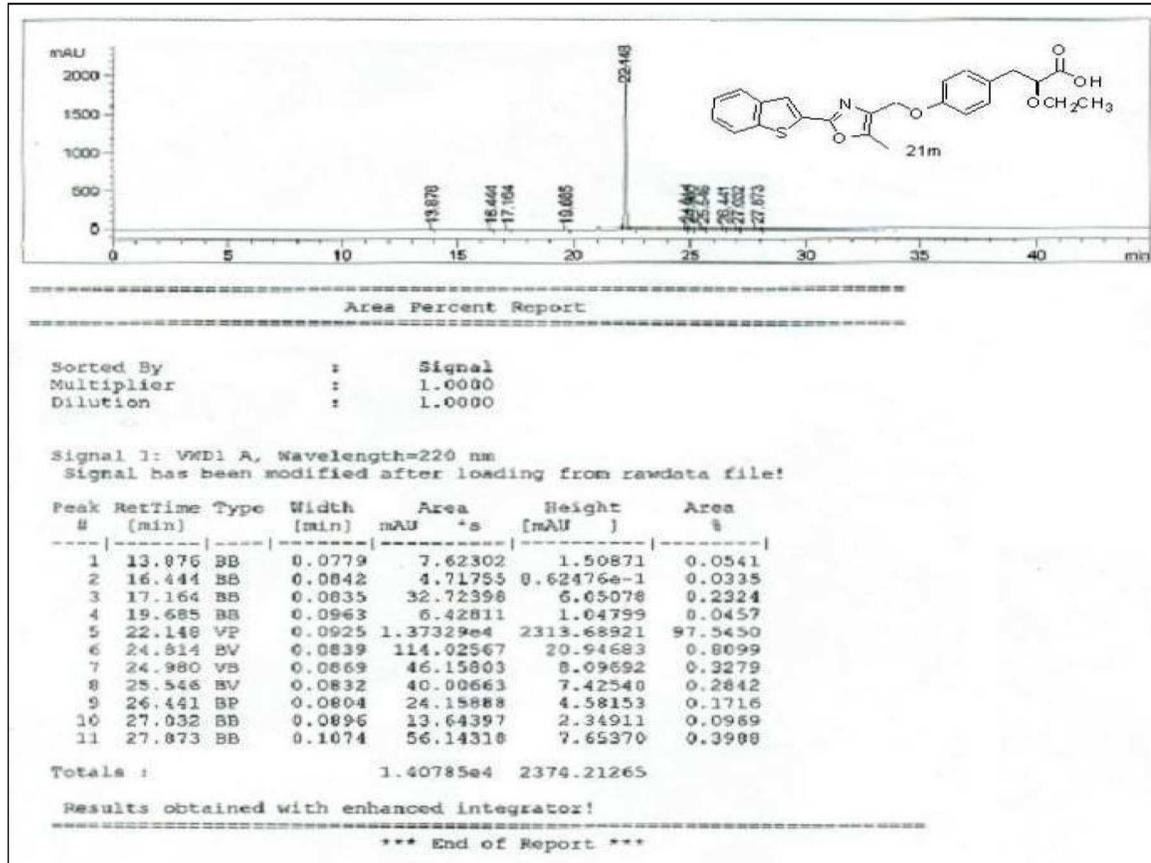
### ESI/MS of 21m



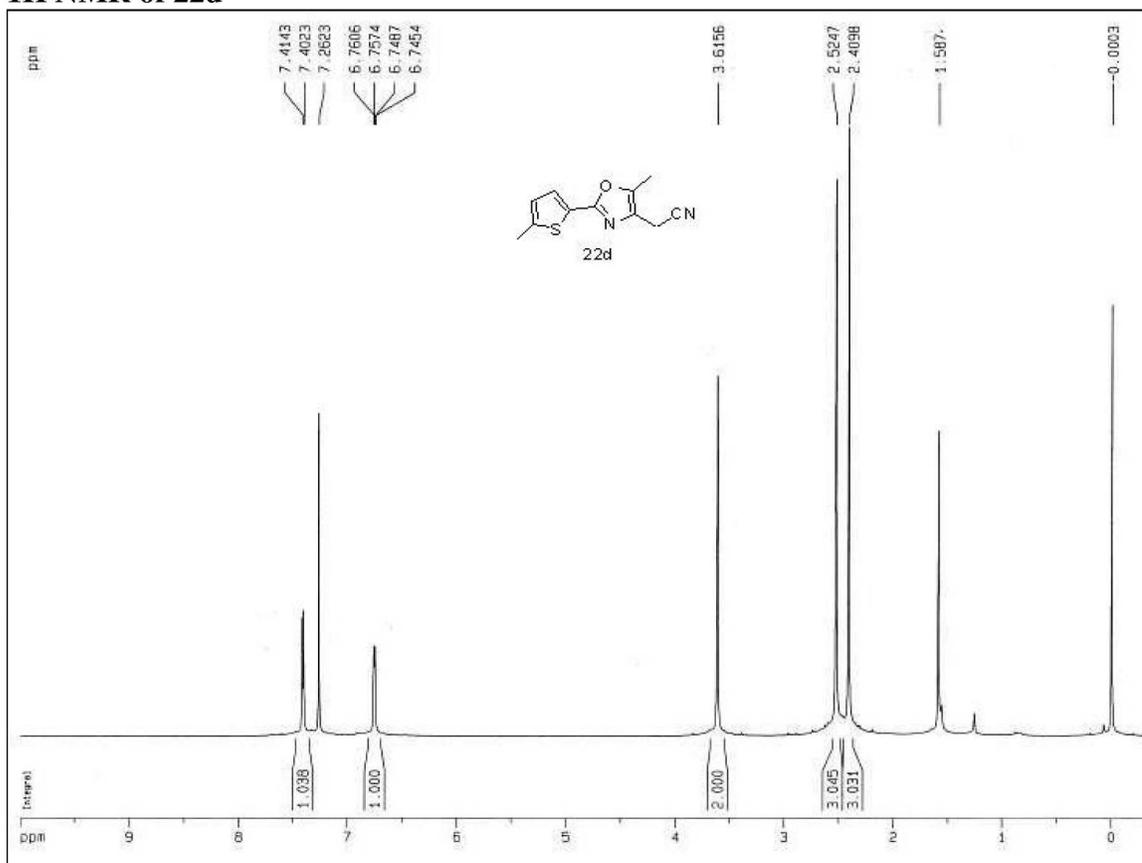
### IR of 21m



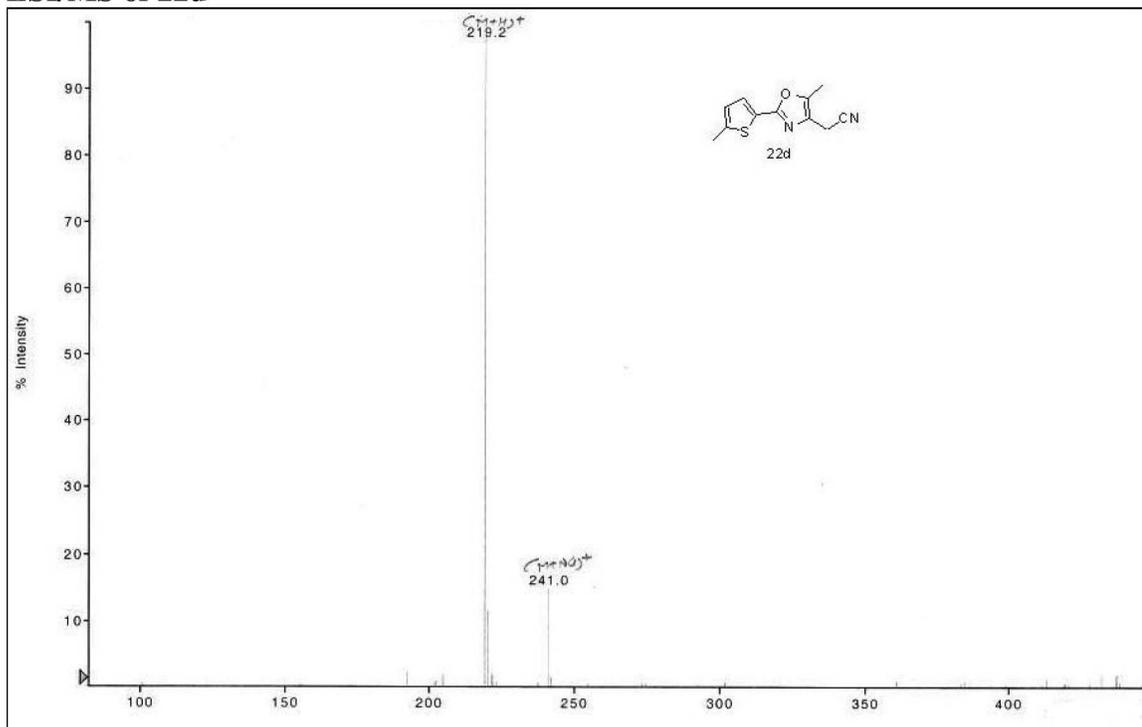
### HPLC of 21m



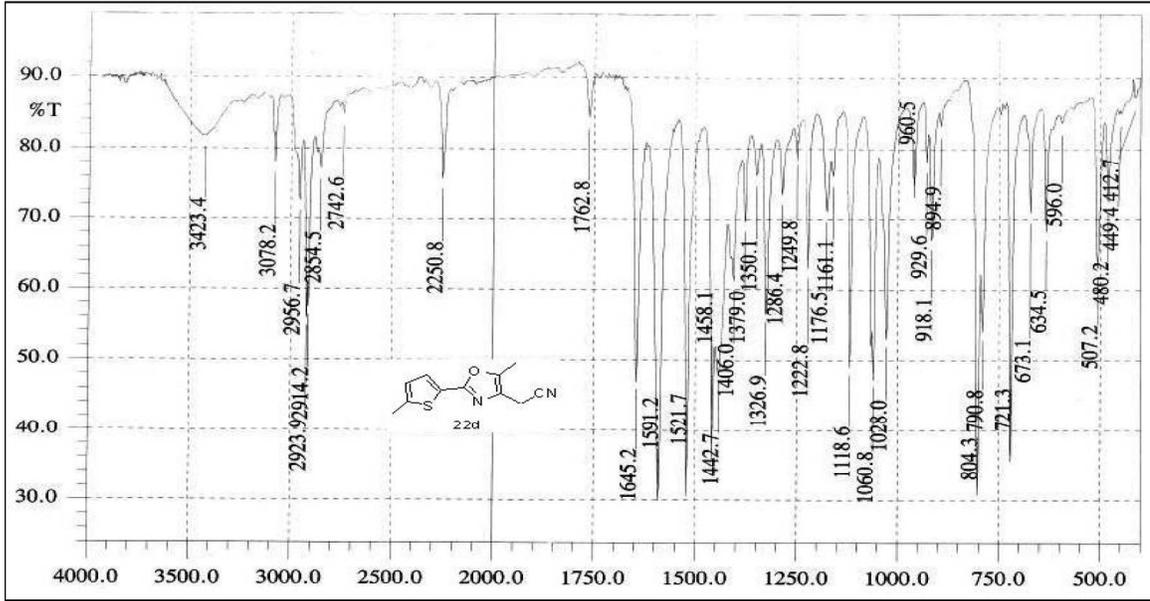
### **<sup>1</sup>H NMR of 22d**



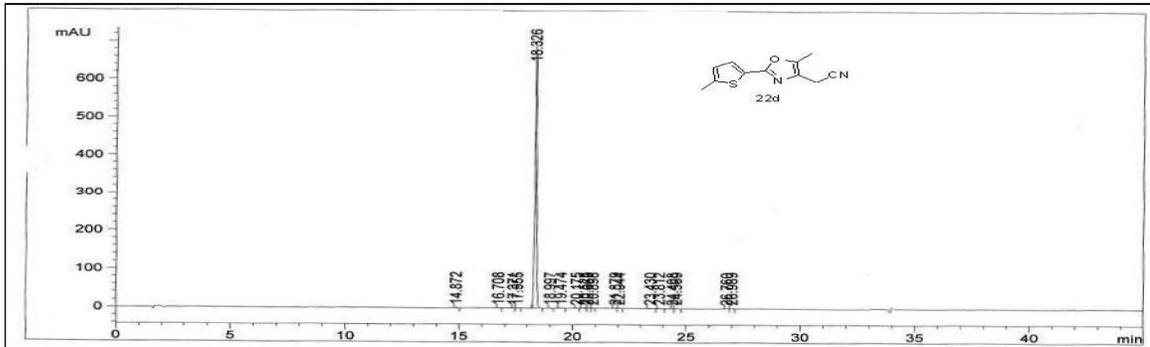
### **ESI/MS of 22d**



**IR of 22d**



**HPLC of 22d**



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**Area Percent Report**  
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Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

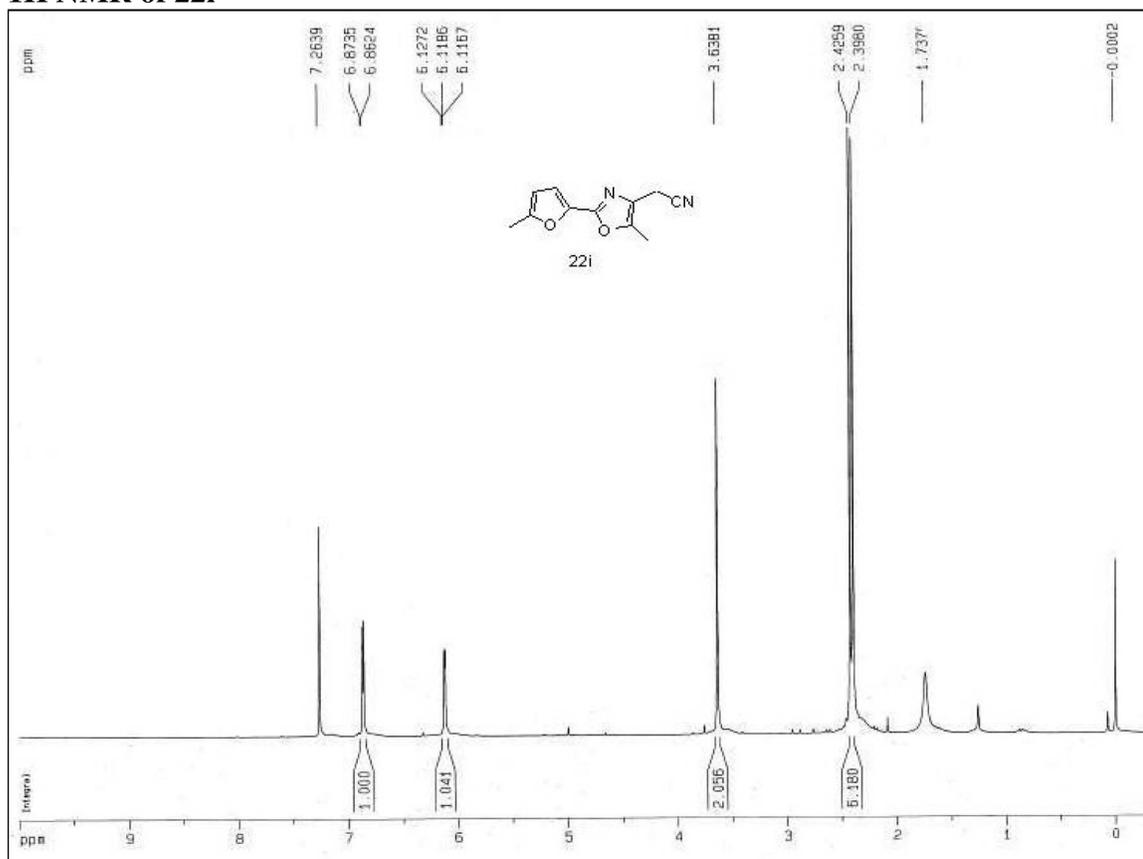
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	14.872	BB	0.0794	5.92304	1.14320	0.1520
2	16.708	MM	0.0998	1.90099	3.19082e-1	0.0490
3	17.371	MM	0.0725	1.04693	2.40748e-1	0.0269
4	17.555	BP	0.0863	2.30081	4.26343e-1	0.0590
5	18.326	BP	0.0838	3809.97998	700.86572	97.7565
6	18.997	BP	0.0795	1.97737	4.00192e-1	0.0507
7	19.474	BB	0.1075	6.83365	8.99939e-1	0.1753
8	20.175	PB	0.0729	1.82454	3.73965e-1	0.0468
9	20.528	BV	0.1135	6.61035	8.15895e-1	0.1696
10	20.663	VP	0.0879	4.14597	7.01612e-1	0.1064
11	20.898	MM	0.0813	1.61848	3.31803e-1	0.0415
12	21.879	MM	0.1055	3.62236	5.72307e-1	0.0929
13	22.044	MM	0.0889	5.22212	9.78545e-1	0.1340
14	23.430	VB	0.1370	11.33042	1.13309	0.2907
15	23.812	BP	0.1157	10.13050	1.27841	0.2599
16	24.408	PV	0.0633	1.46713	3.62191e-1	0.0376
17	24.760	VP	0.0897	6.85322	1.13051	0.1758
18	24.989	BB	0.0859	6.16638	1.07339	0.1582
19	25.989	BB	0.0786	8.45462	1.65171	0.2169

Totals : 3897.41783 714.69865

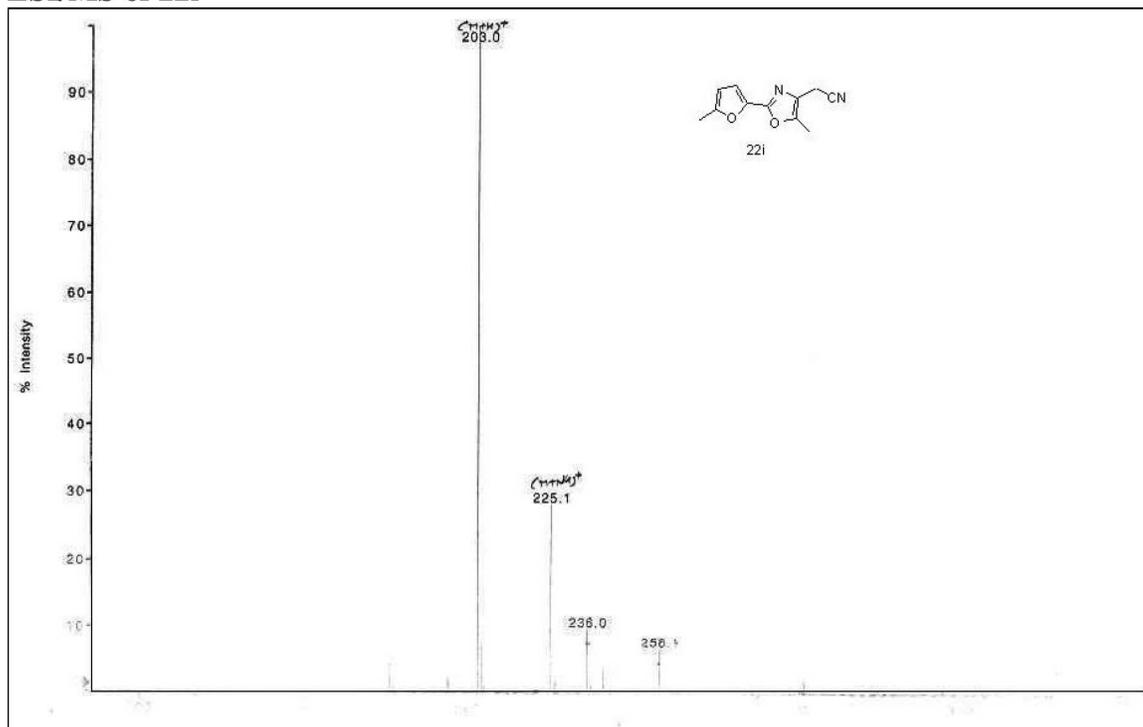
Results obtained with enhanced integrator!

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 \*\*\* End of Report \*\*\*  
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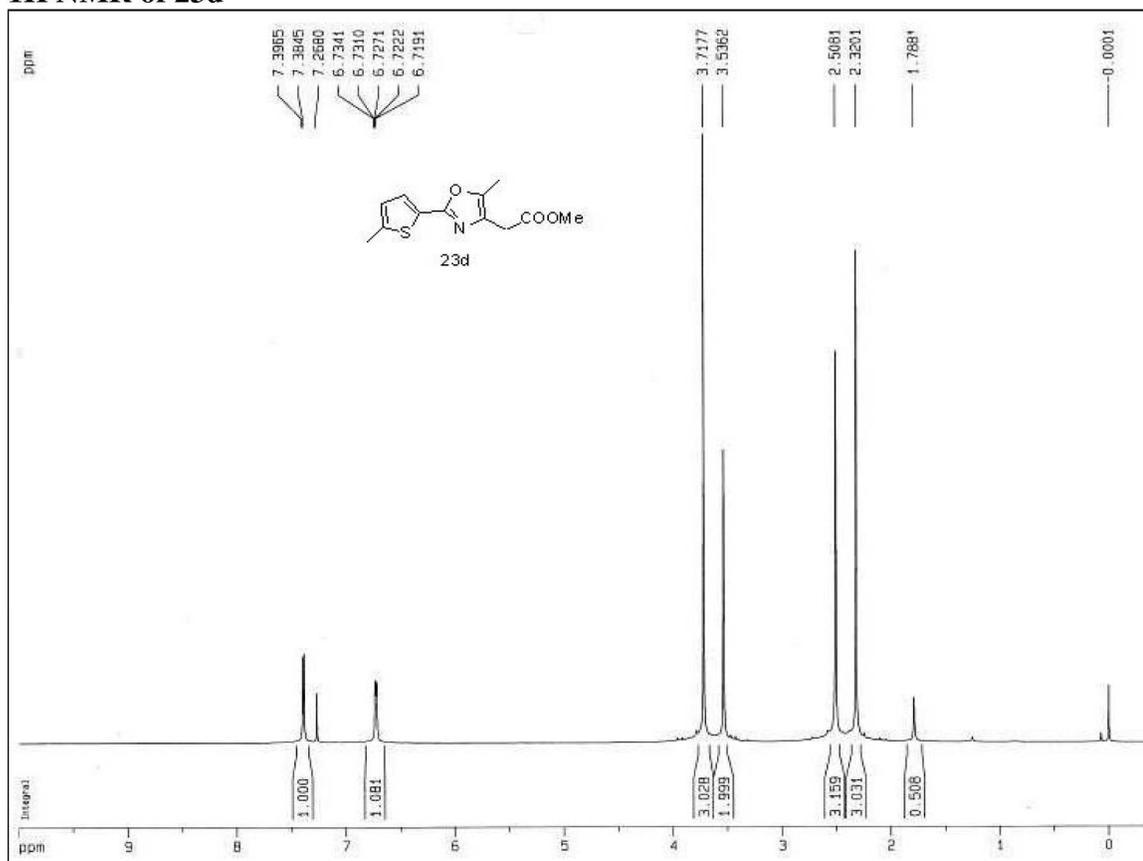
### **<sup>1</sup>H NMR of 22i**



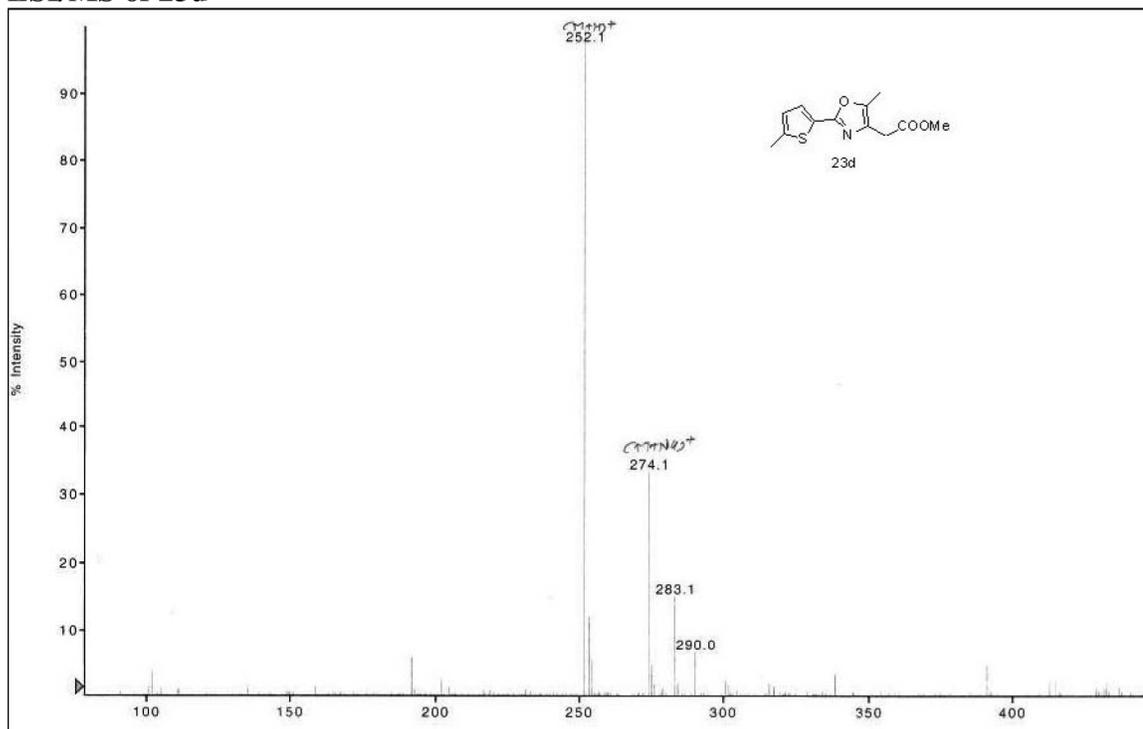
### **ESI/MS of 22i**



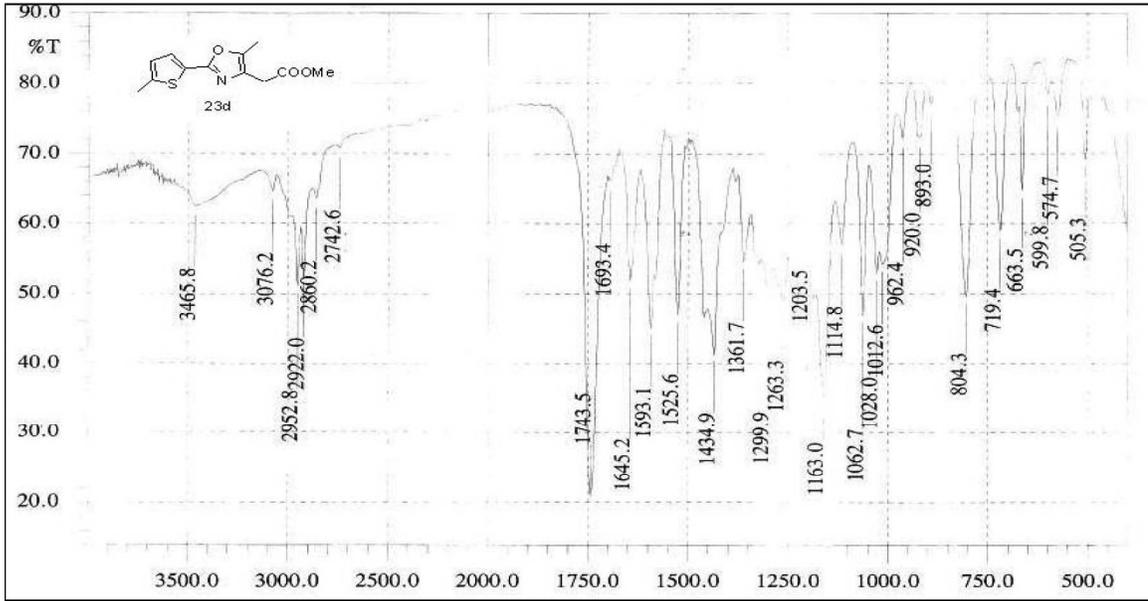
### **<sup>1</sup>H NMR of 23d**



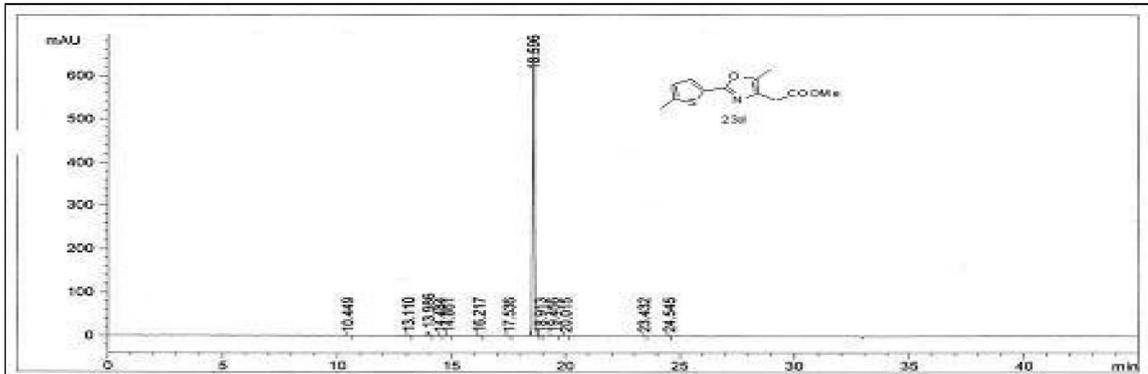
### **ESI/MS of 23d**



### IR of 23d



### HPLC of 23d



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

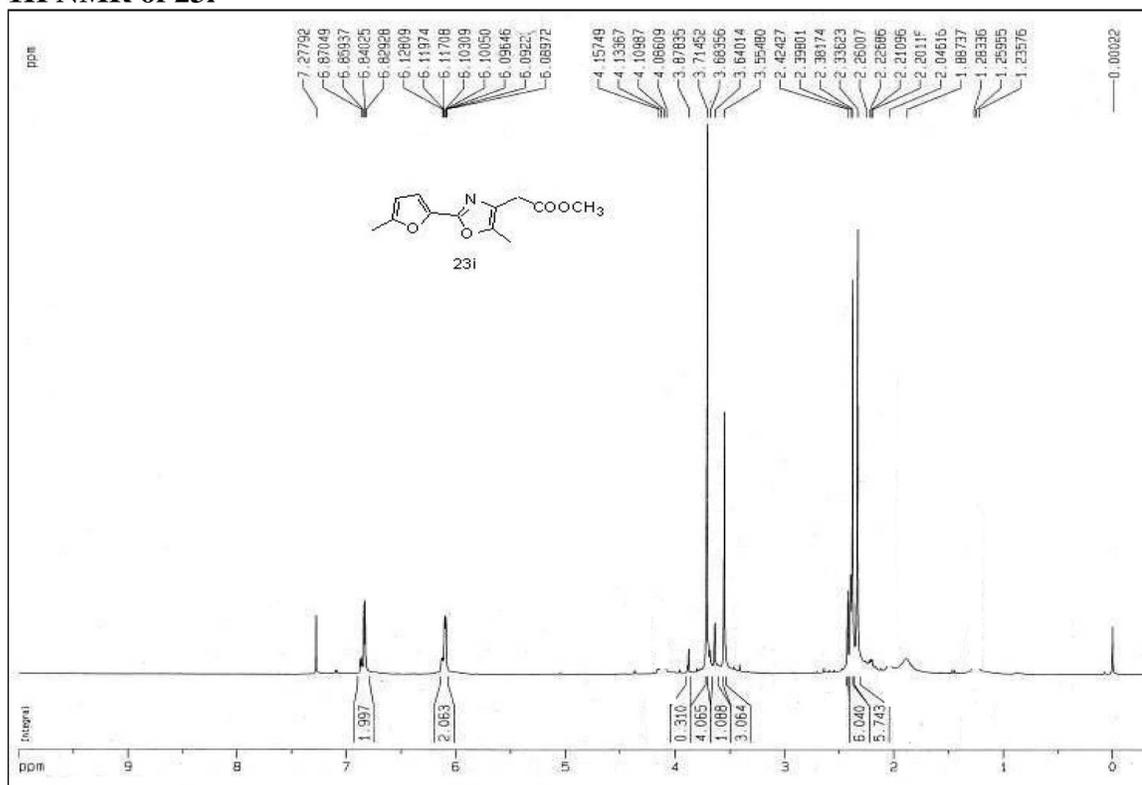
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area %	Height [mAU]	Area %
1	10.449	BP	0.0813	2.10629	0.0561	4.03622e-1	0.0561
2	13.110	PB	0.0774	6.61412	0.1763	1.31916	0.1763
3	13.986	BB	0.0745	48.69350	1.2979	9.95381	1.2979
4	14.484	MM R	0.0805	1.38717	0.0370	2.87221e-1	0.0370
5	14.861	BB	0.0766	3.95361	0.1054	7.80000e-1	0.1054
6	16.217	BB	0.0807	6.20279	0.1653	1.19964	0.1653
7	17.536	MM R	0.0961	2.21067	0.0589	3.83504e-1	0.0589
8	18.556	BP R	0.0847	3660.91481	97.5813	663.58352	97.5813
9	19.813	MM R	0.0909	1.48563	0.0393	2.74852e-1	0.0393
10	19.456	BS	0.1166	7.33597	0.1953	8.46276e-1	0.1953
11	20.015	BP	0.0874	3.88981	0.0613	4.07172e-1	0.0613
12	23.432	MM R	0.0891	4.98245	0.1216	8.53496e-1	0.1216
13	24.546	MM R	0.0843	3.81013	0.1016	7.53019e-1	0.1016

Totals : 3751.58796 681.04530

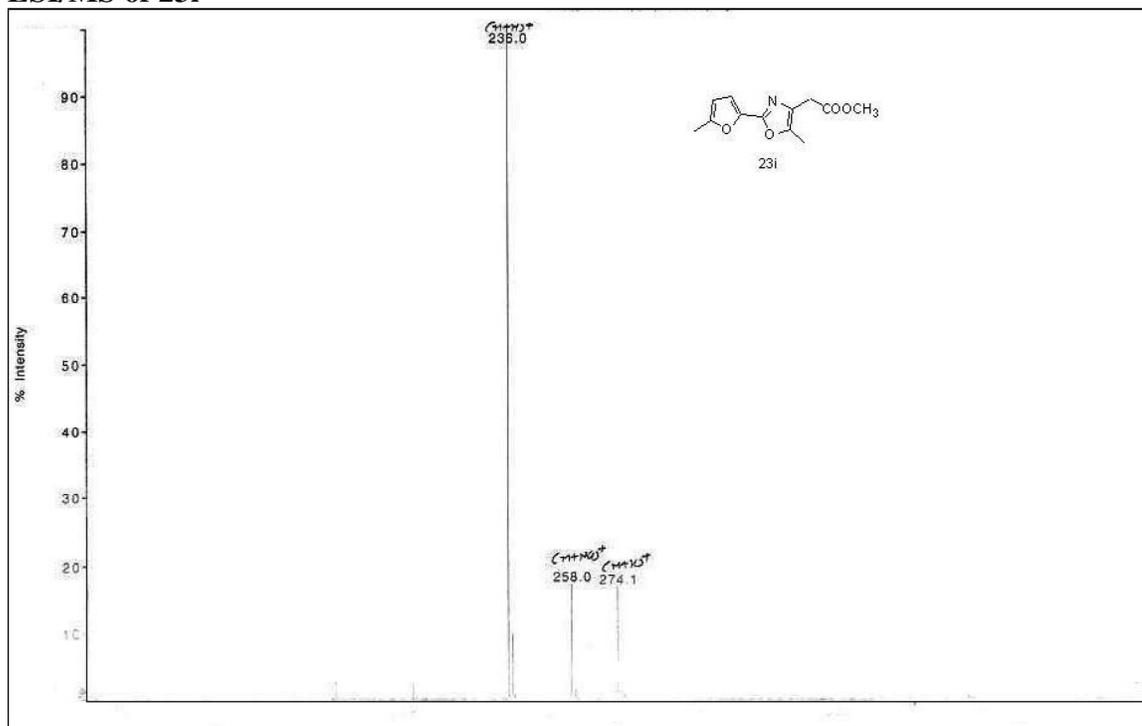
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

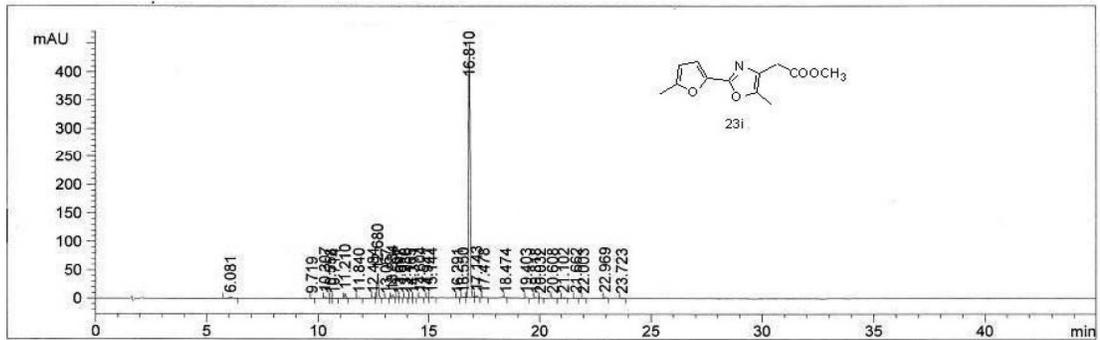
### **<sup>1</sup>H NMR of 23i**



### **ESI/MS of 23i**



HPLC of 23i



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 Area Percent Report  
 =====

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

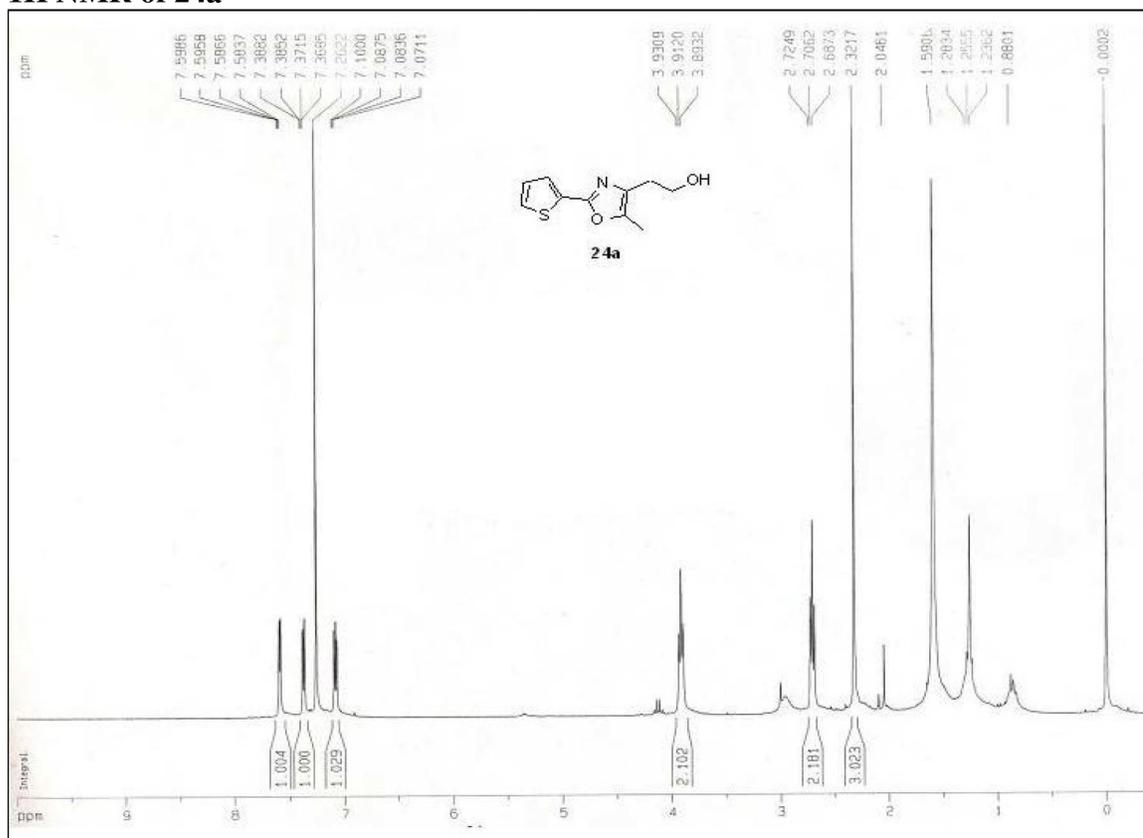
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	6.081	MM R	0.1735	27.99024		2.68953	0.9908
2	9.719	PB	0.0780	4.03508		7.59170e-1	0.1428
3	10.307	BV	0.1032	21.09963		3.32301	0.7469
4	10.558	VV	0.0673	2.05651		4.81964e-1	0.0728
5	10.714	VP	0.0870	1.88300		3.52770e-1	0.0667
6	11.210	BP	0.0640	33.18510		8.06393	1.1747
7	11.840	BP	0.0830	7.33247		1.27691	0.2596
8	12.484	BV	0.0823	6.87067		1.29503	0.2432
9	12.680	VB	0.0708	199.48375		43.66130	7.0612
10	13.067	BP	0.0768	2.68320		5.27980e-1	0.0950
11	13.334	BB	0.0732	27.00392		5.65815	0.9559
12	13.597	BV	0.0795	2.76225		5.19195e-1	0.0978
13	13.698	VB	0.0666	2.09788		4.57844e-1	0.0743
14	13.936	BP	0.0617	2.78092		7.10782e-1	0.0984
15	14.165	BV	0.0742	3.23558		6.65745e-1	0.1145
16	14.311	VB	0.0858	4.77998		8.15957e-1	0.1692
17	14.604	BB	0.0843	14.67132		2.56153	0.5193
18	14.941	BV	0.0652	2.46394		6.01948e-1	0.0872
19	15.144	VB	0.1005	9.90636		1.39194	0.3507
20	16.291	MM R	0.0735	1.05656		2.39596e-1	0.0374
21	16.550	PV	0.0870	6.41347		1.12337	0.2270
22	16.810	VV	0.0814	2349.98584		449.11469	83.1835
23	17.143	VP	0.0834	21.39584		3.95816	0.7574
24	17.478	MM R	0.1237	2.38213		3.20984e-1	0.0843
25	18.474	MM R	0.0740	2.21861		4.99528e-1	0.0785
26	19.403	BB	0.0790	4.69555		9.12471e-1	0.1662
27	19.818	BP	0.0843	5.12966		9.14913e-1	0.1816
28	20.032	VB	0.0836	4.46444		8.24448e-1	0.1580
29	20.608	BP	0.0833	4.90449		9.30317e-1	0.1736
30	21.102	BB	0.0875	11.14775		1.98096	0.3946
31	21.662	MM R	0.0936	10.39059		1.84928	0.3678
32	22.003	BP	0.0864	3.18130		5.88352e-1	0.1126
33	22.969	PB	0.0840	15.02621		2.75577	0.5319
34	23.723	MM R	0.0975	6.34710		1.08505	0.2247

Totals : 2825.06134 542.91257

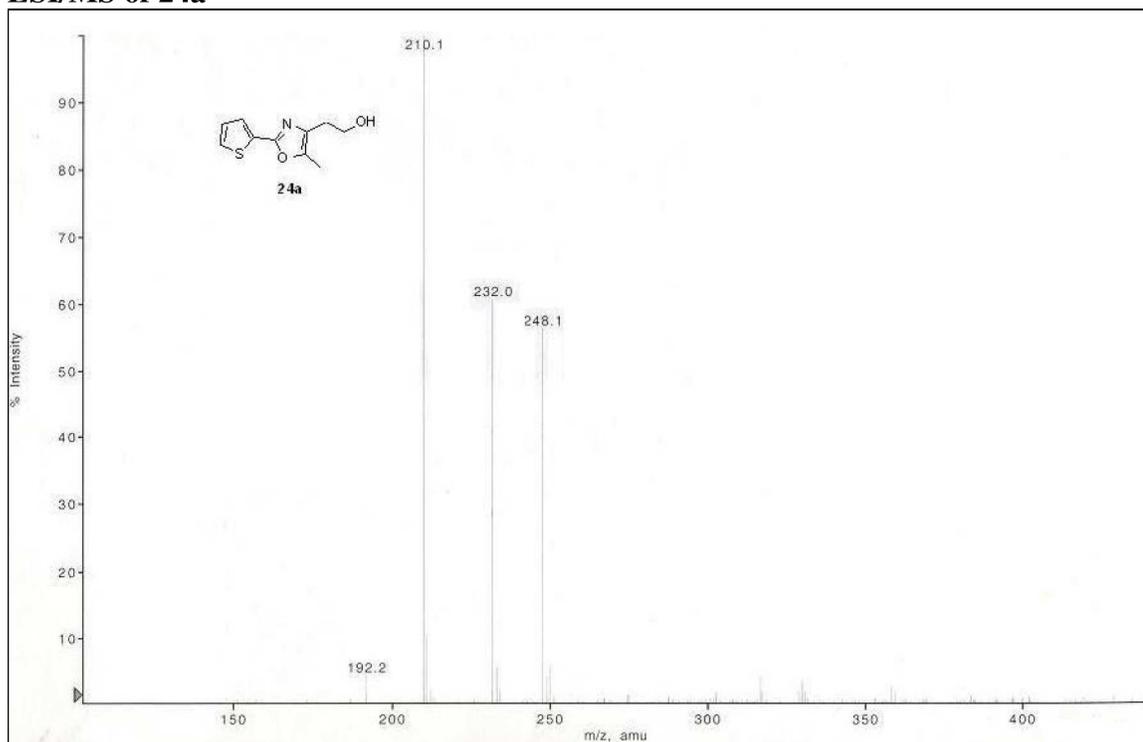
Results obtained with enhanced integrator!

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 \*\*\* End of Report \*\*\*

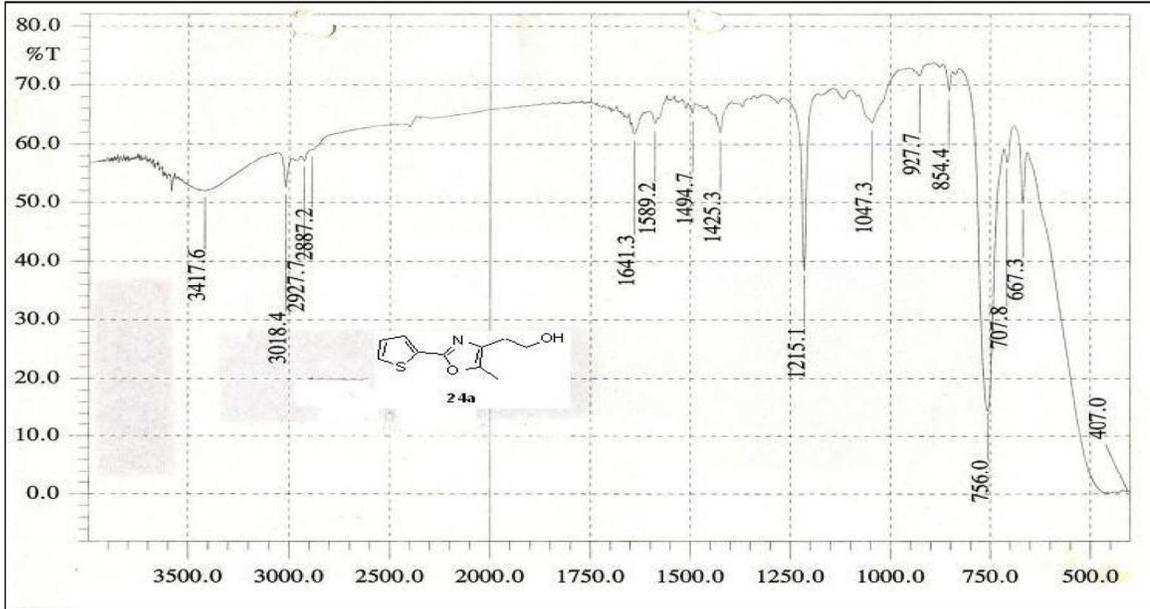
### **<sup>1</sup>H NMR of 24a**



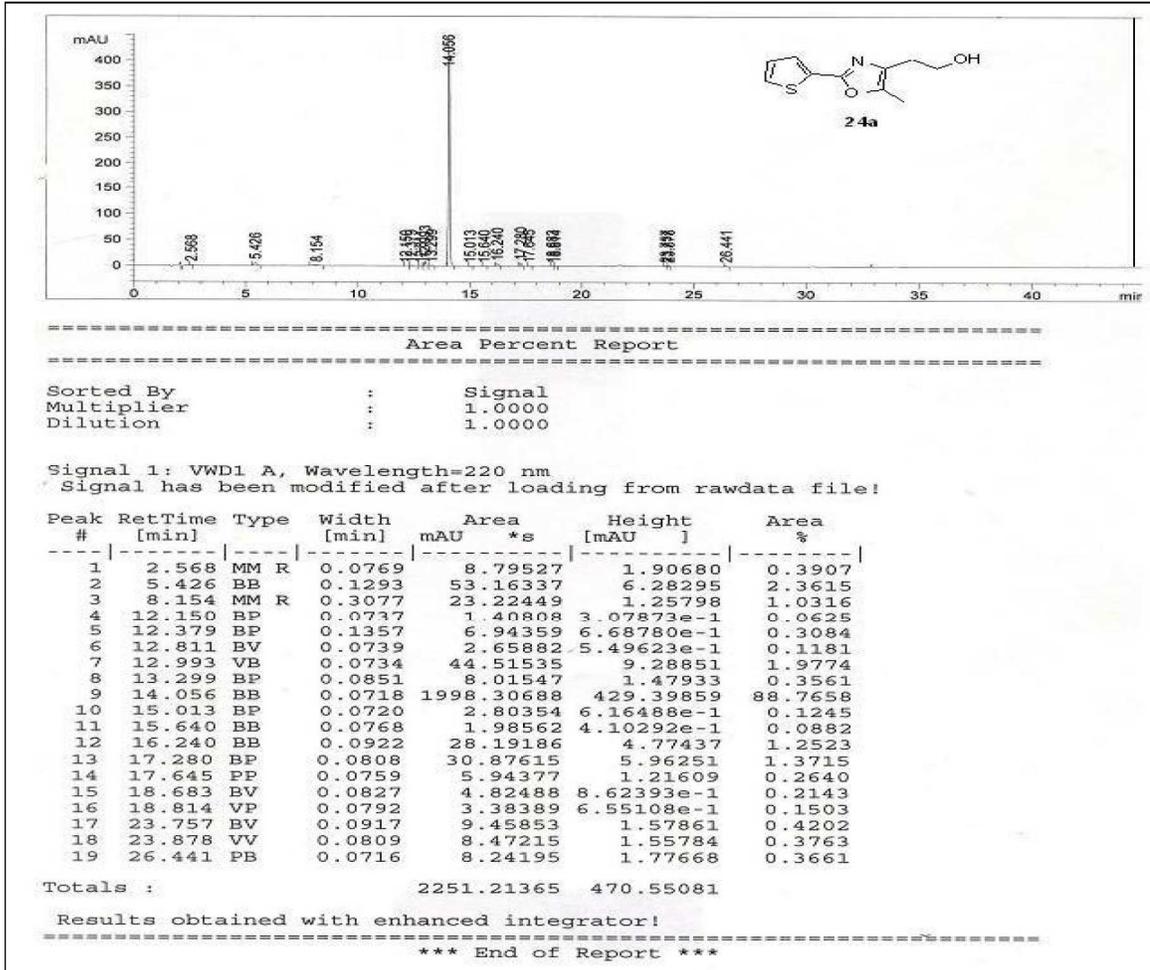
### **ESI/MS of 24a**



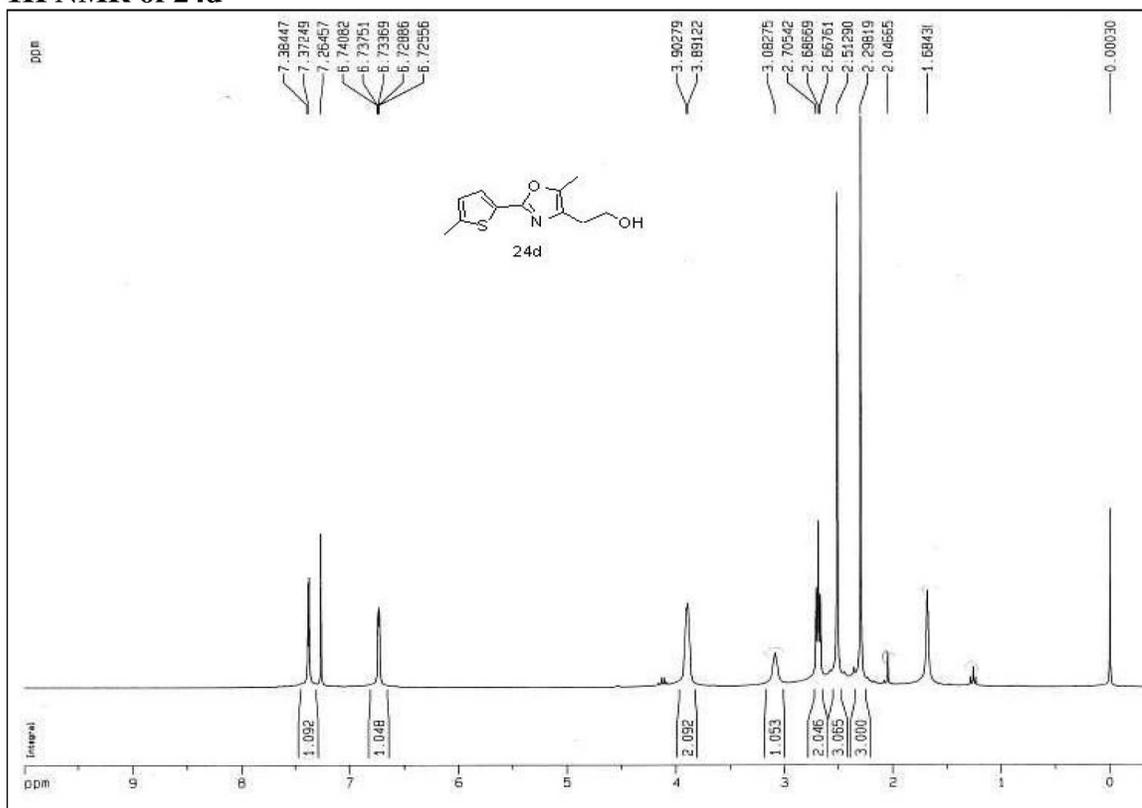
### IR of 24a



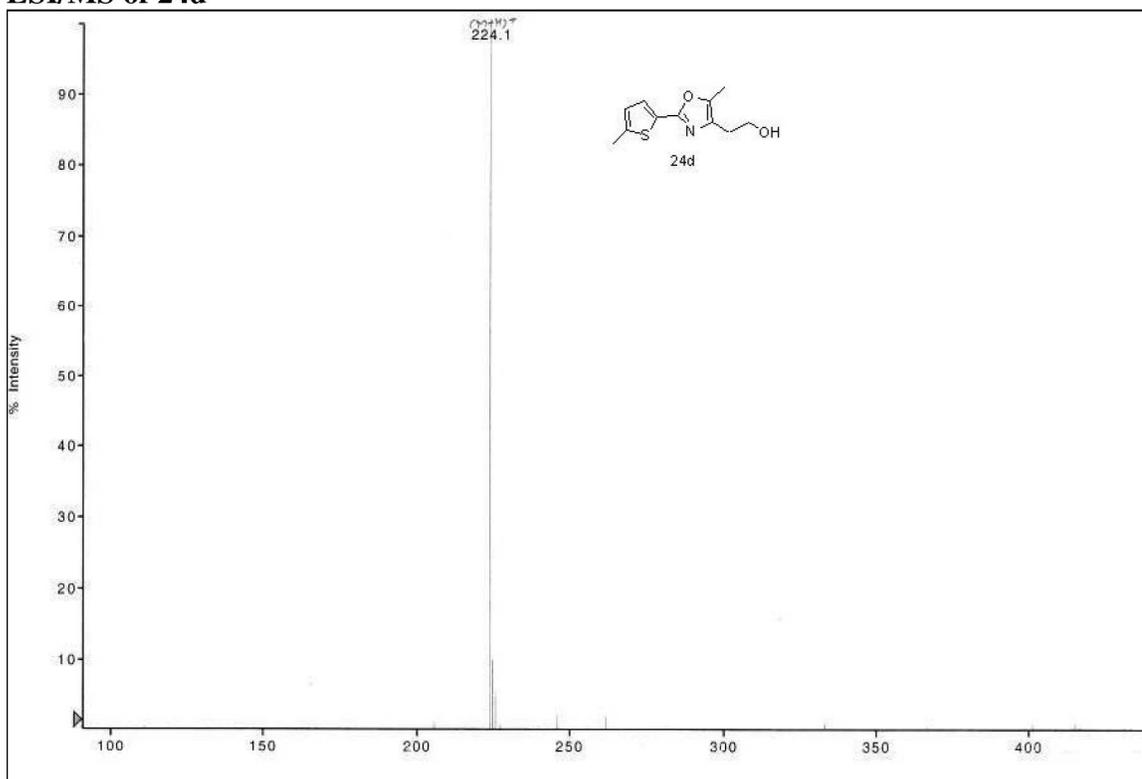
### HPLC of 24a



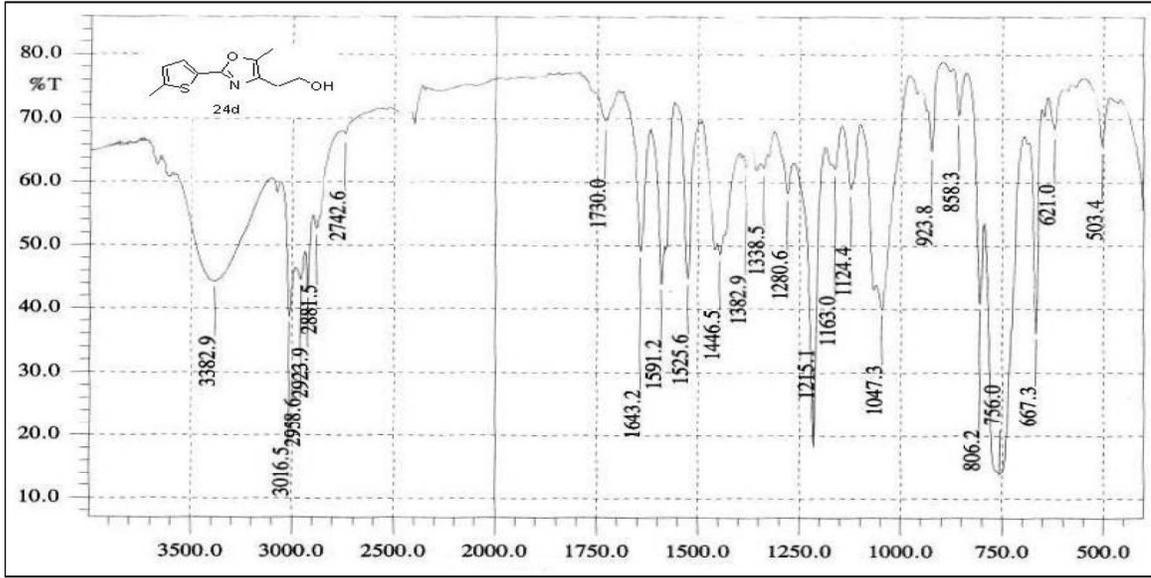
### **<sup>1</sup>H NMR of 24d**



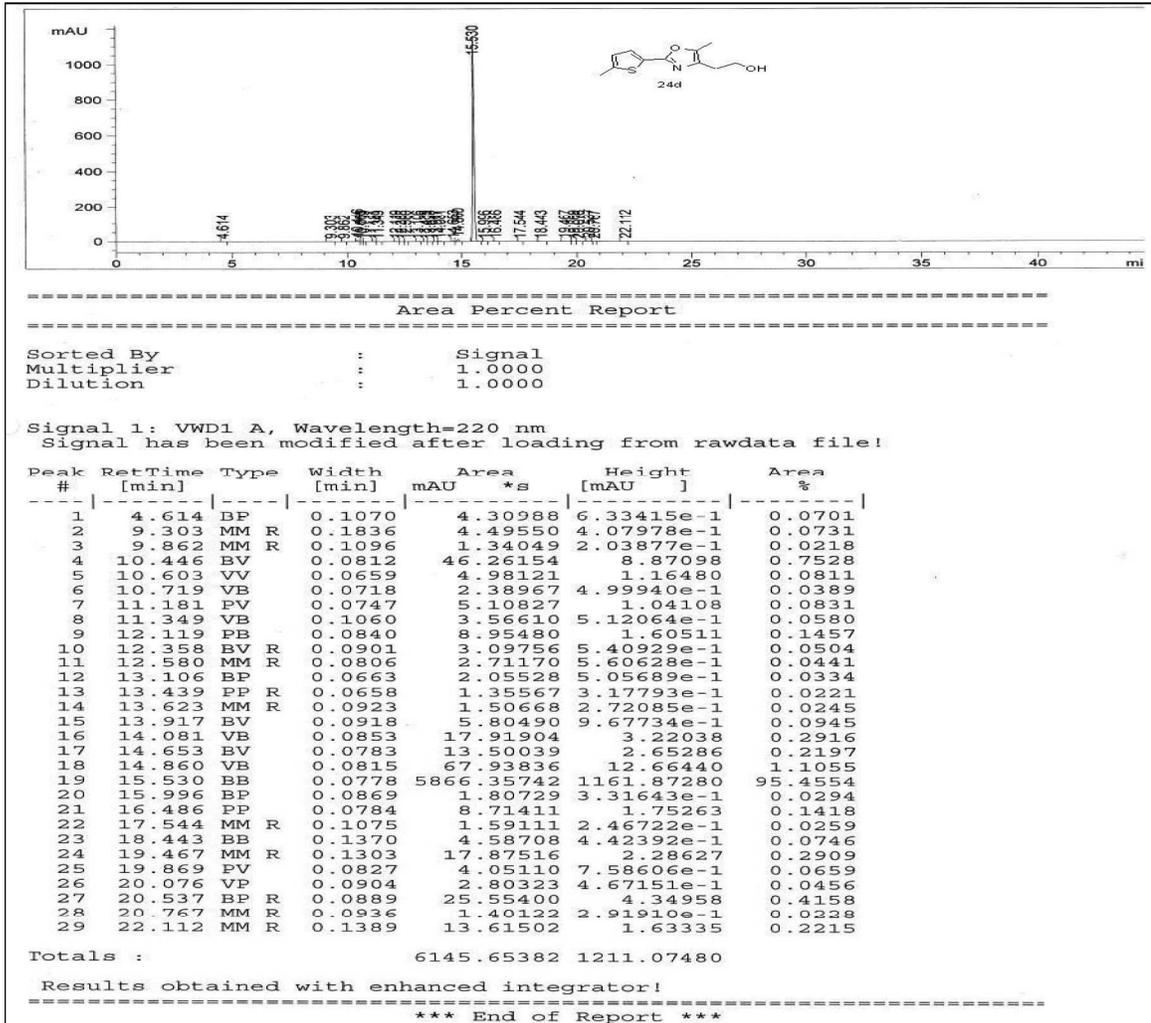
### **ESI/MS of 24d**



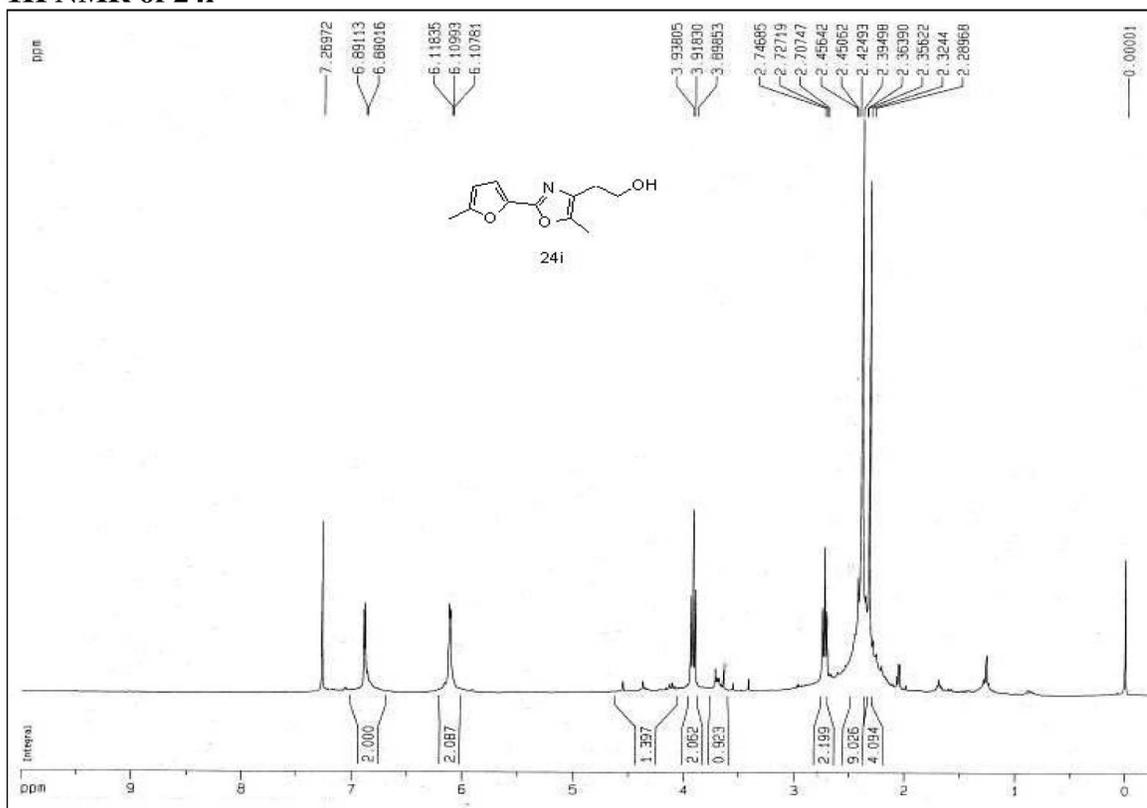
### IR of 24d



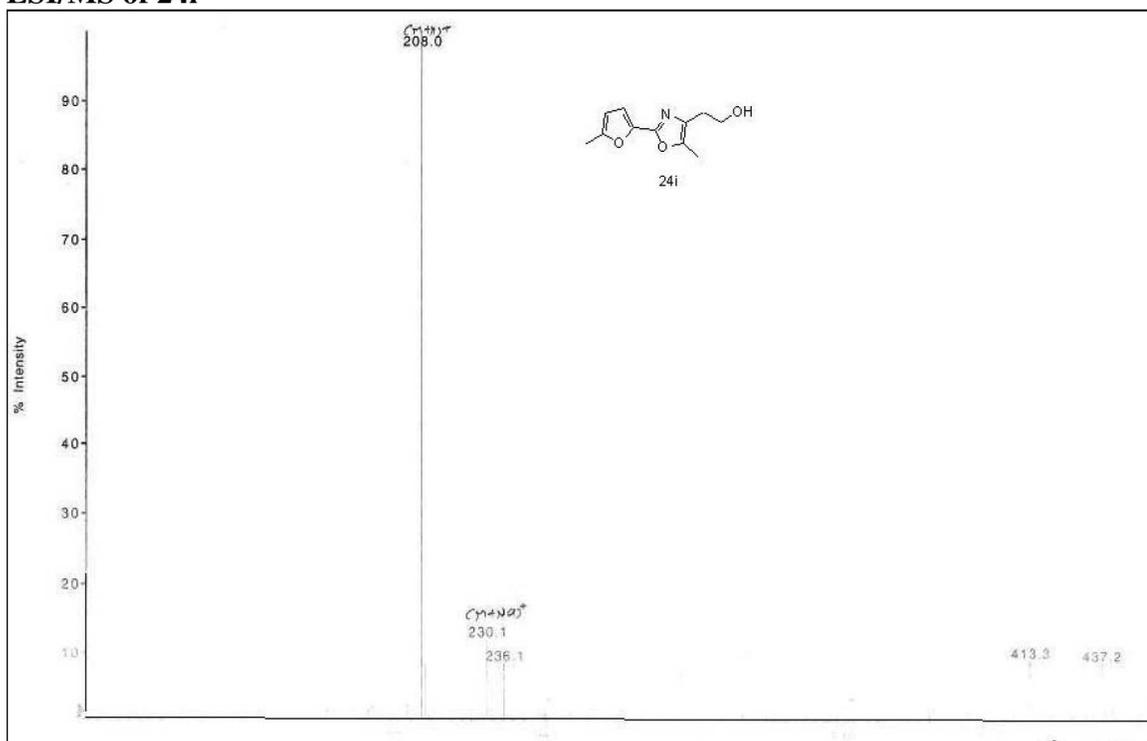
### HPLC of 24d



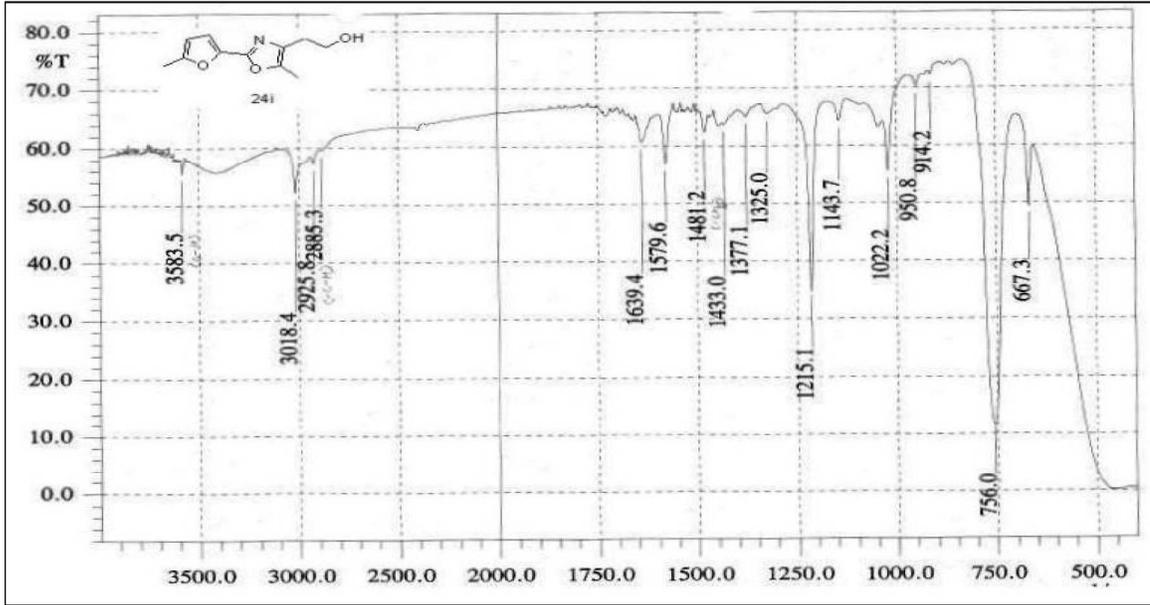
### **<sup>1</sup>H NMR of 24i**



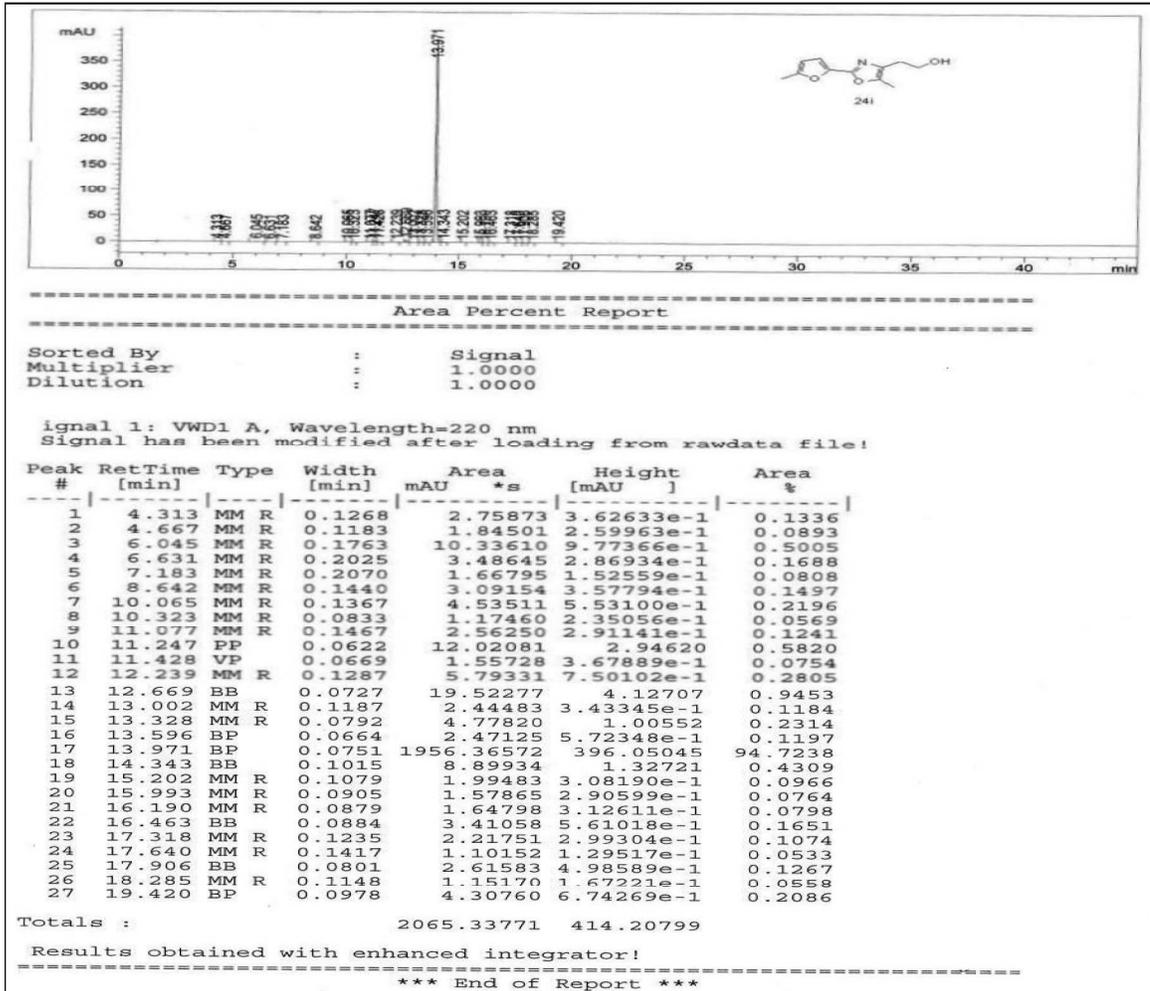
### **ESI/MS of 24i**



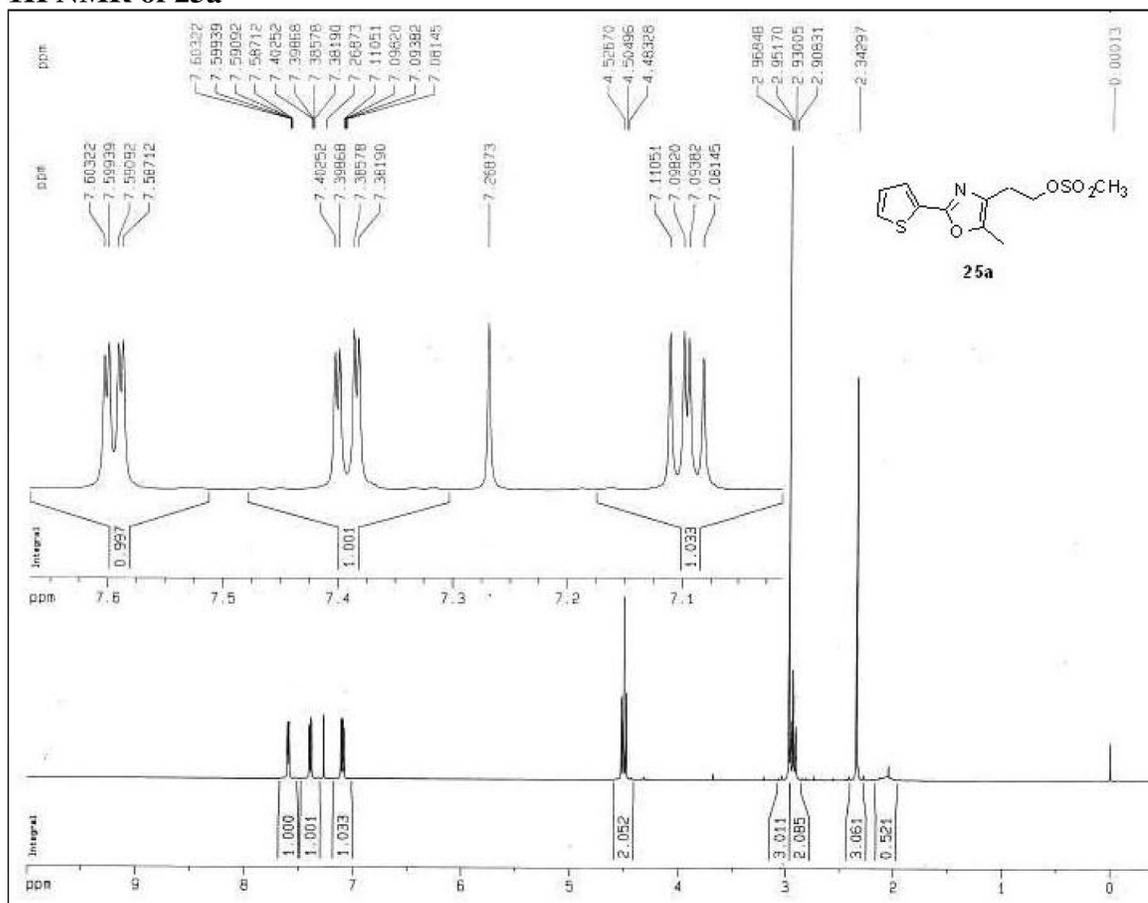
IR of 24i



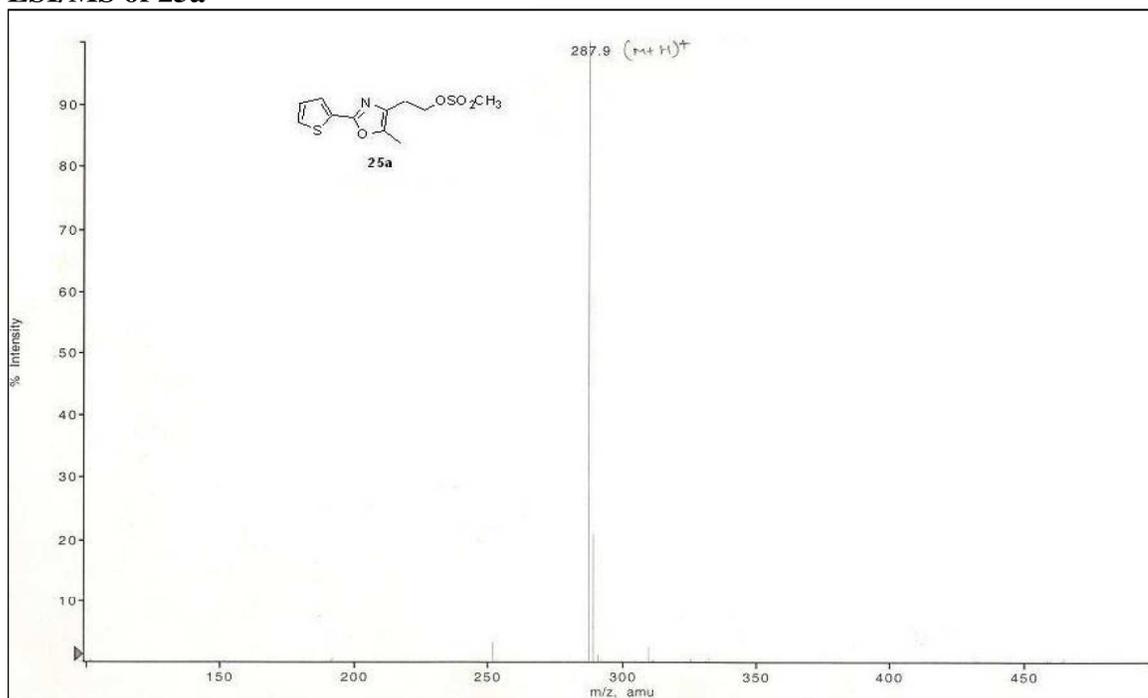
HPLC of 24i



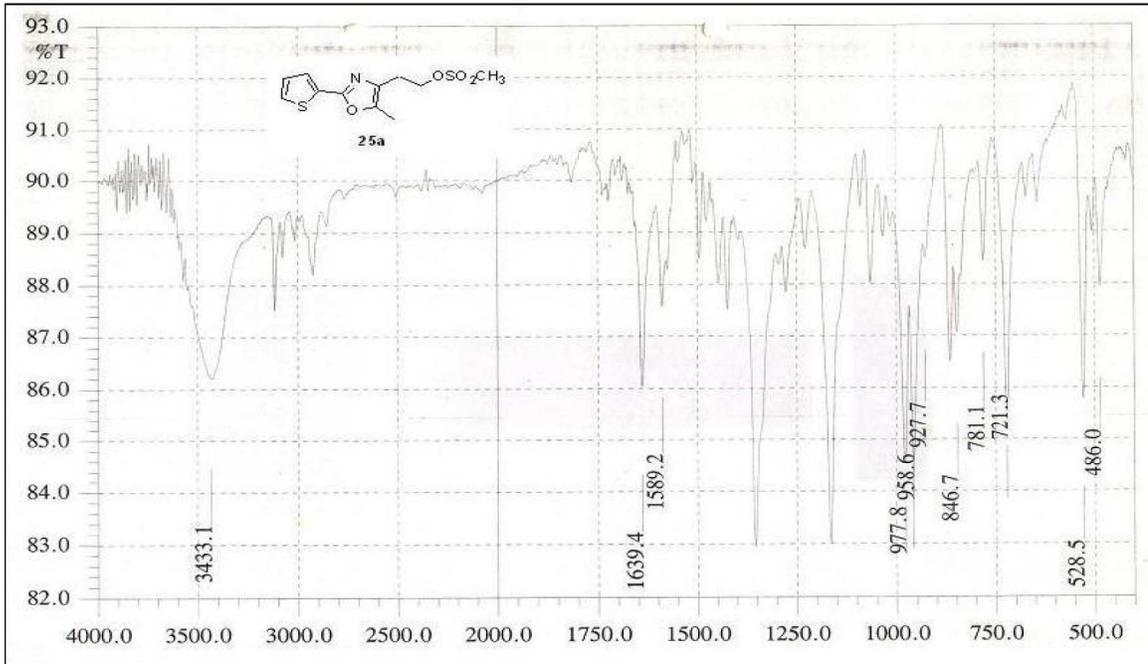
### **<sup>1</sup>H NMR of 25a**



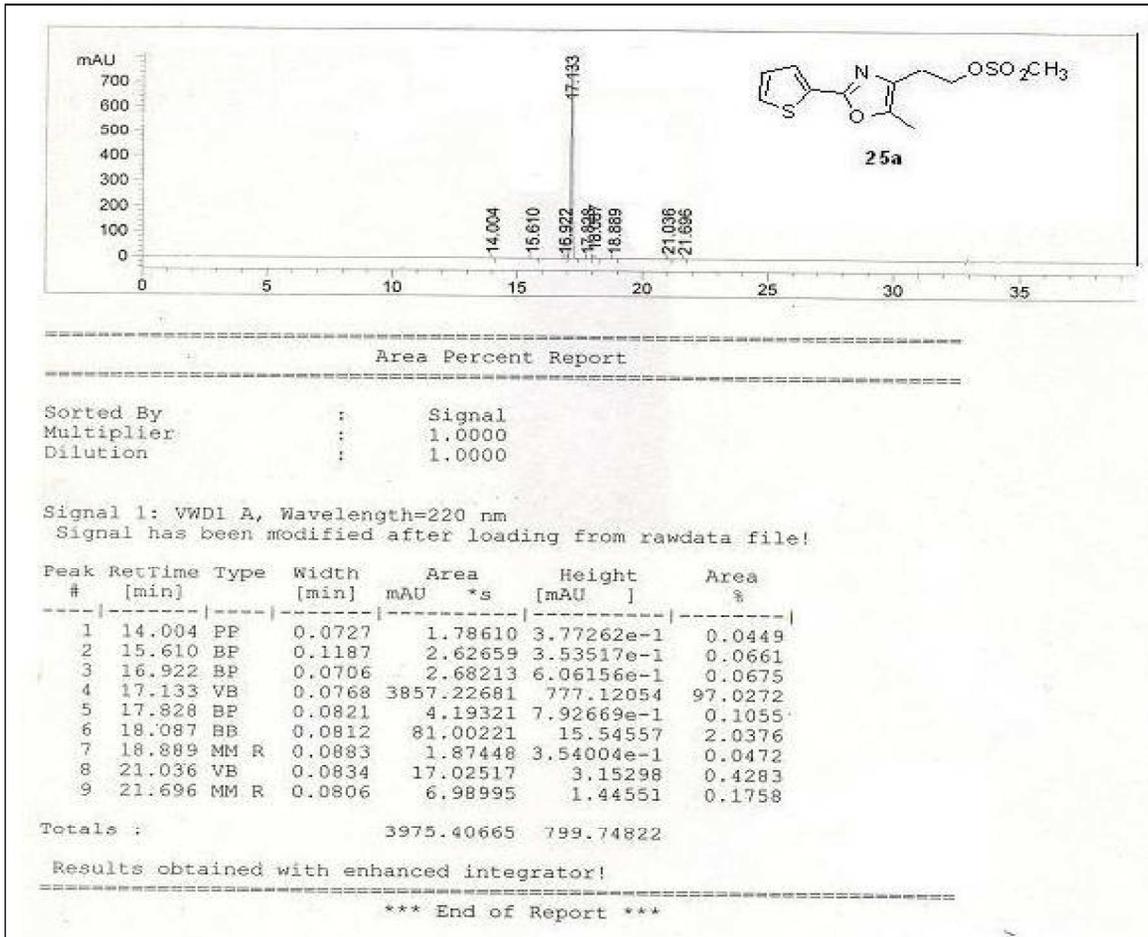
### **ESI/MS of 25a**



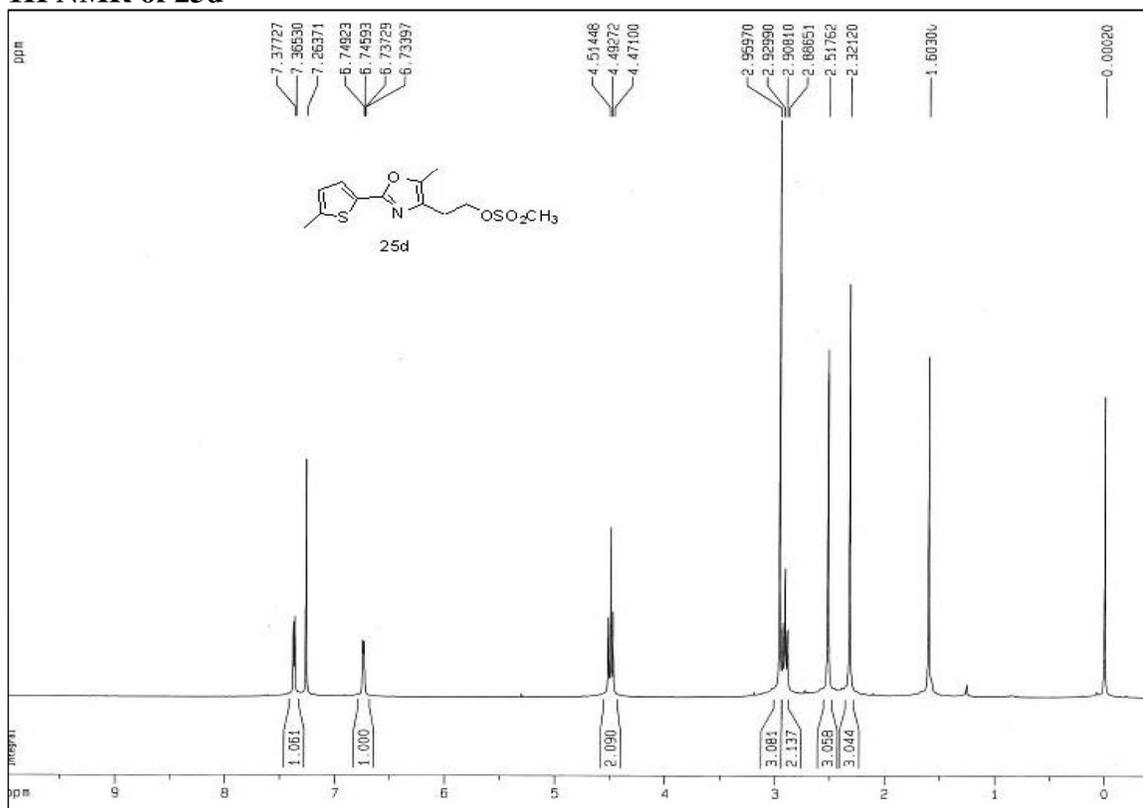
### IR of 25a



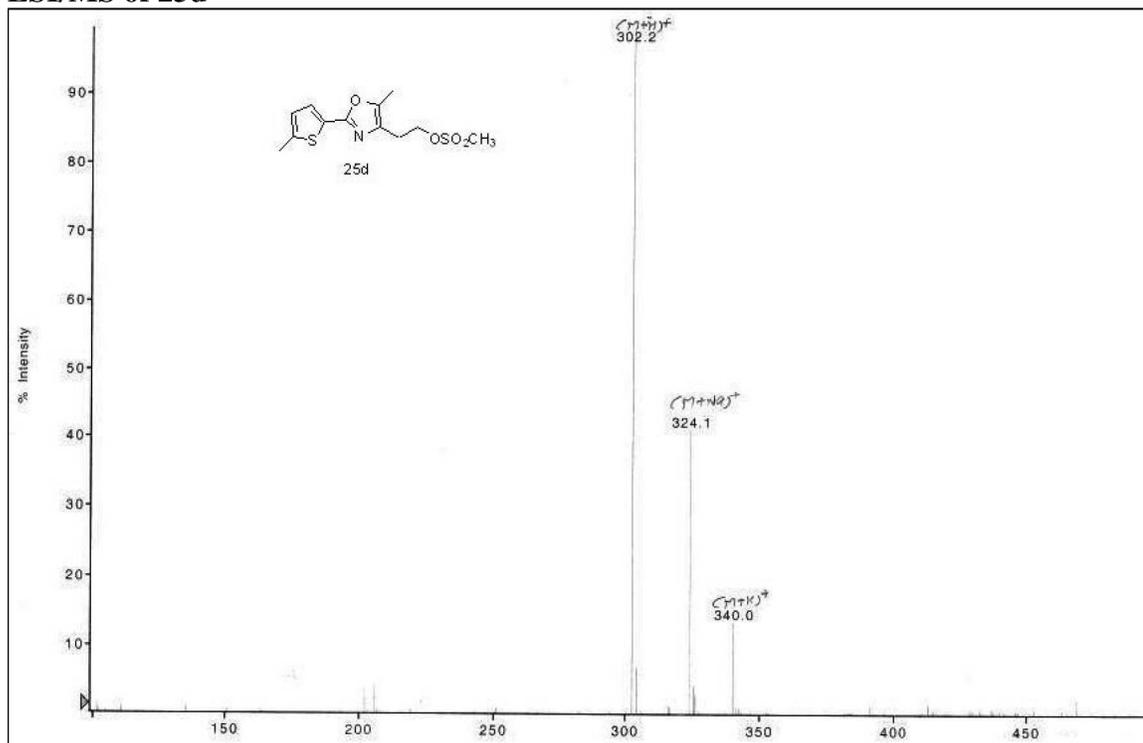
### HPLC of 25a



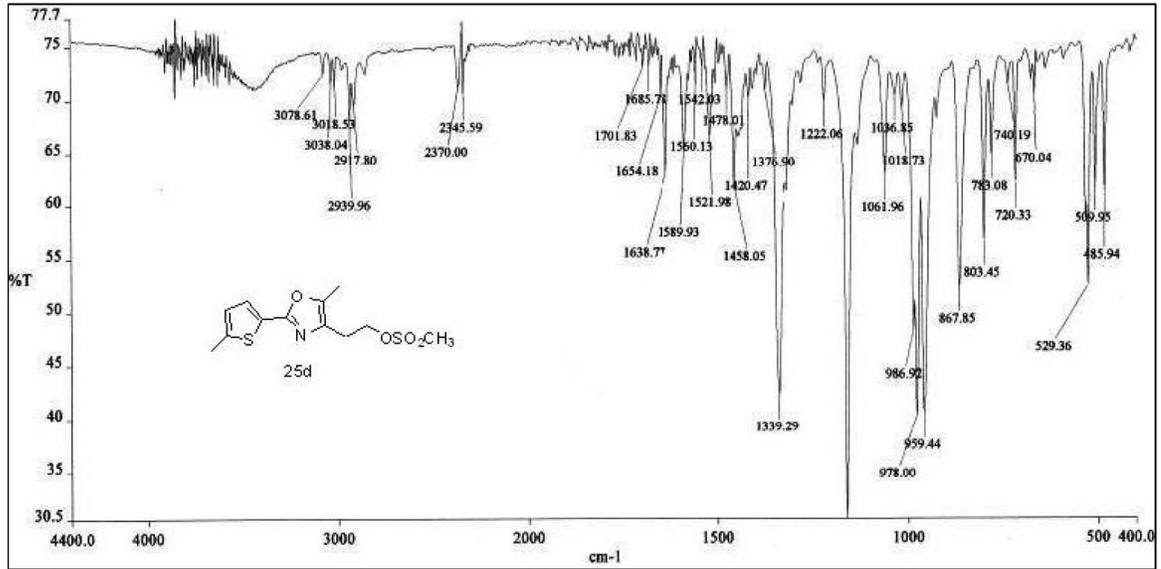
### **<sup>1</sup>H NMR of 25d**



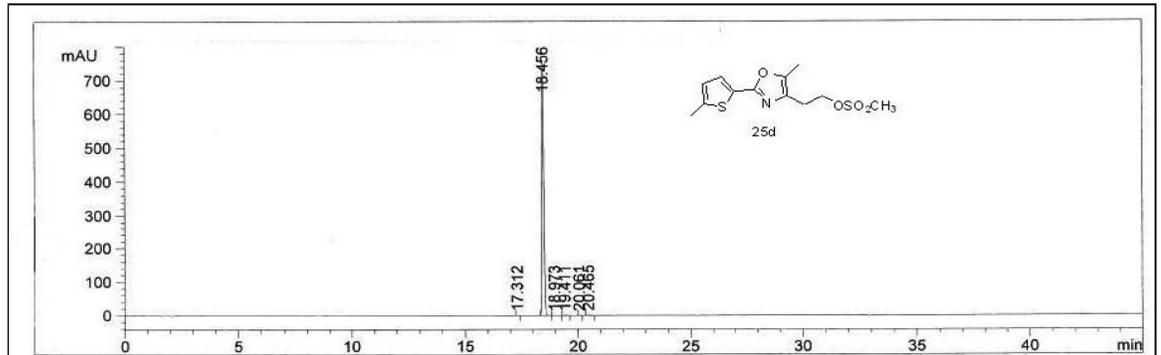
### **ESI/MS of 25d**



**IR of 25d**



**HPLC of 25d**



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**Area Percent Report**  
 =====

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area mAU*s	Height [mAU]	Area %
1	17.312	BB	0.0842	1.28438	2.34961e-1	0.0313
2	18.456	BB	0.0828	4076.90723	762.45331	99.2096
3	18.973	BP	0.1419	4.54894	4.26394e-1	0.1107
4	19.411	BB	0.1174	11.27740	1.35647	0.2744
5	20.061	BP	0.0780	1.26286	2.49333e-1	0.0307
6	20.465	PB	0.1295	14.10827	1.59387	0.3433

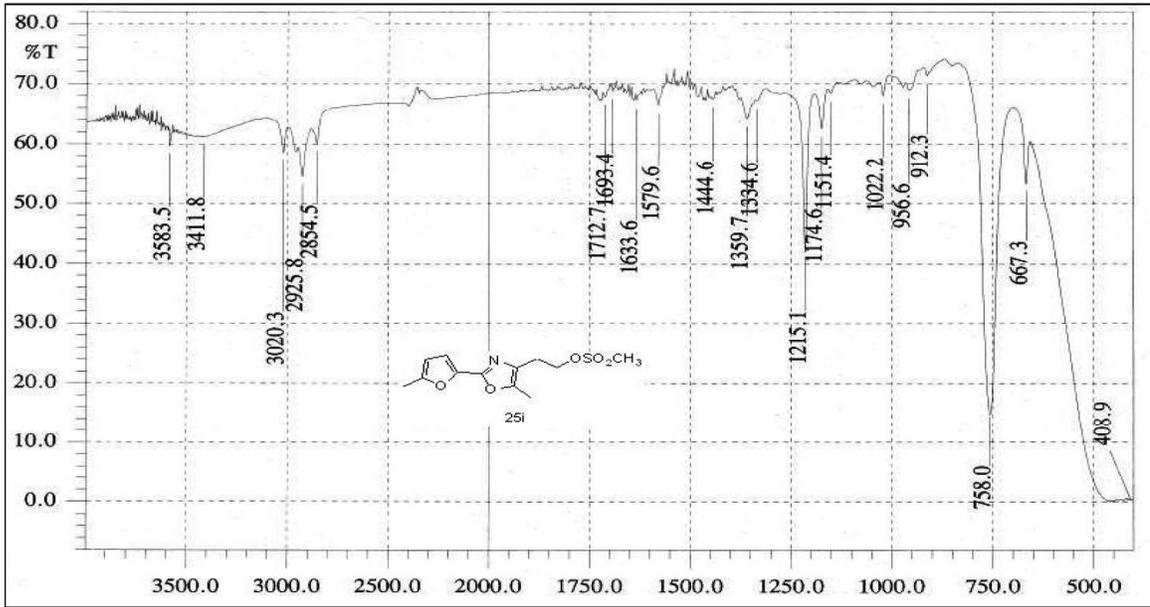
Totals : 4109.38907 766.31433

Results obtained with enhanced integrator!

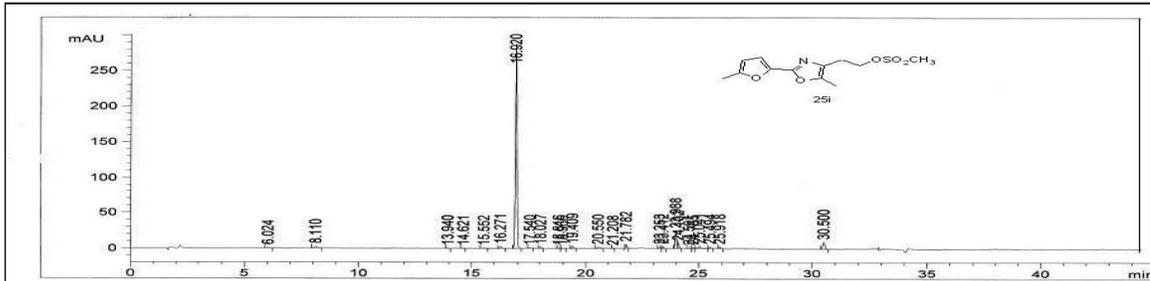
=====  
 \*\*\* End of Report \*\*\*



### IR of 25i



### HPLC of 25i



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

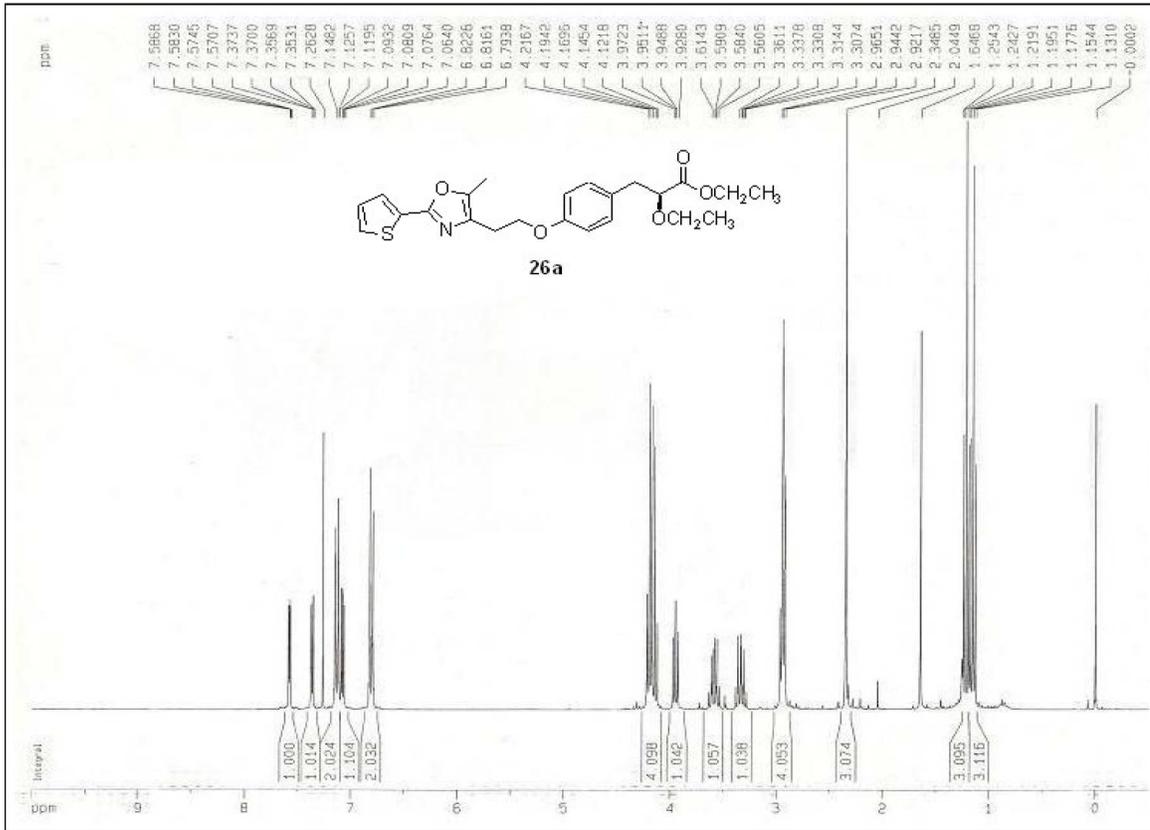
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	6.024	BP	0.1162	8.67937	1.18207	0.4747
2	8.110	BB	0.1466	24.55787	2.59936	1.3432
3	13.940	PB	0.0709	3.58716	7.82937e-1	0.1962
4	14.621	MM R	0.0955	3.04460	5.31105e-1	0.1665
5	15.552	MM R	0.1484	5.44528	6.11358e-1	0.2978
6	16.271	BB	0.1028	17.69292	2.85952	0.9677
7	16.920	BB	0.0727	1363.67859	288.23132	74.5880
8	17.540	BB	0.0676	3.49378	8.90515e-1	0.1911
9	18.027	BP	0.0708	9.78171	2.14045	0.5350
10	18.816	PV	0.0758	5.81150	1.19234	0.3179
11	18.966	VB	0.0804	3.60971	6.84859e-1	0.1974
12	19.409	PP	0.0798	18.10247	3.47037	0.9901
13	20.550	VV	0.1622	24.46582	1.97256	1.3383
14	21.208	MM R	0.0665	2.37450	5.94940e-1	0.1299
15	21.782	MM R	0.0739	24.64355	5.56016	1.3479
16	23.253	BP	0.0834	12.52769	2.49308	0.6852
17	23.412	VB	0.0786	13.76822	2.75919	0.7531
18	23.988	BV	0.0773	124.41770	24.88880	6.8052
19	24.102	VP	0.0663	32.51200	7.32567	1.7783
20	24.591	BP	0.0799	5.82538	1.14280	0.3186
21	24.765	VV	0.0724	7.06299	1.58402	0.3863
22	25.041	VP	0.1043	24.02002	3.33748	1.3138
23	25.494	BB	0.0686	9.41234	2.14809	0.5148
24	25.918	BP	0.0836	11.57949	2.08934	0.6334
25	30.500	BB	0.1093	68.18733	9.74954	3.7296

Totals : 1828.28201 370.82106

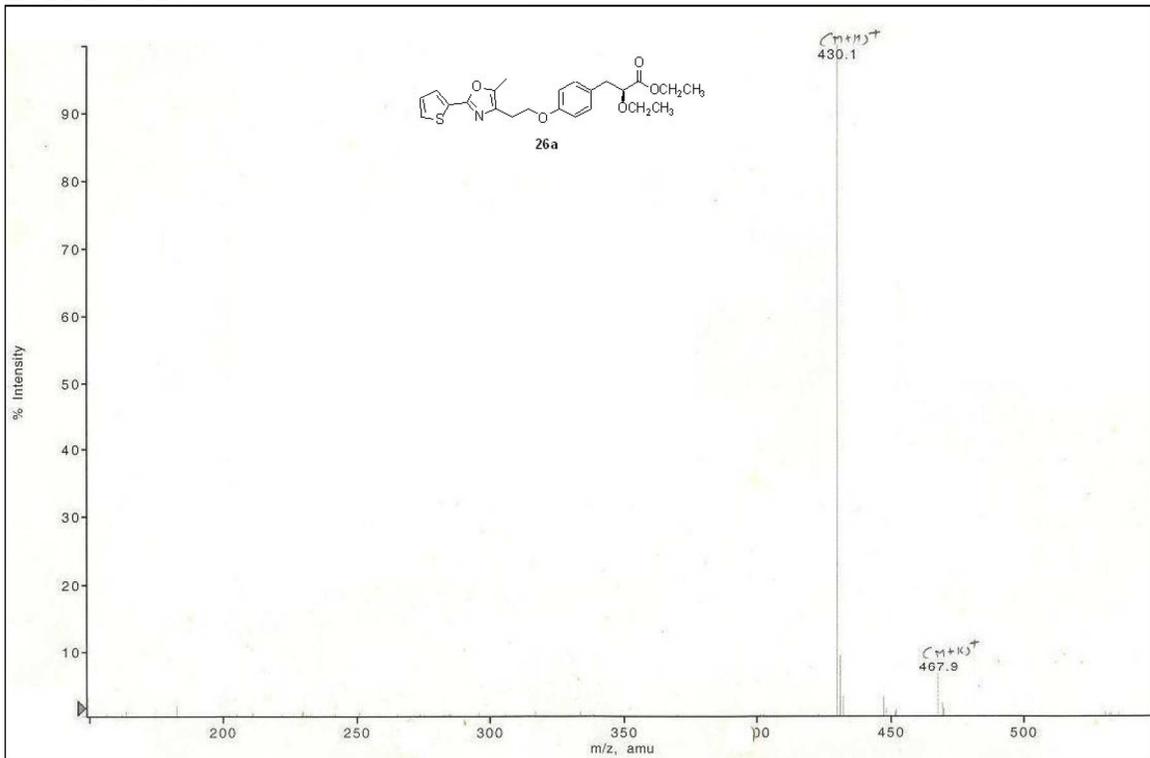
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

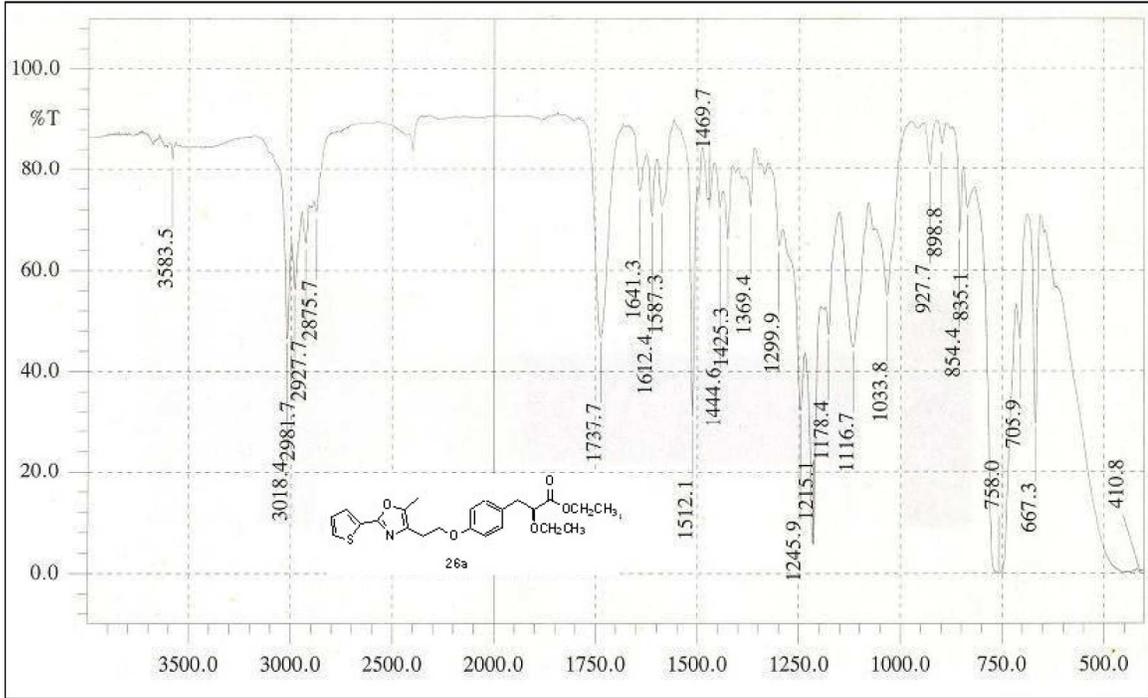
### **<sup>1</sup>H NMR of 26a**



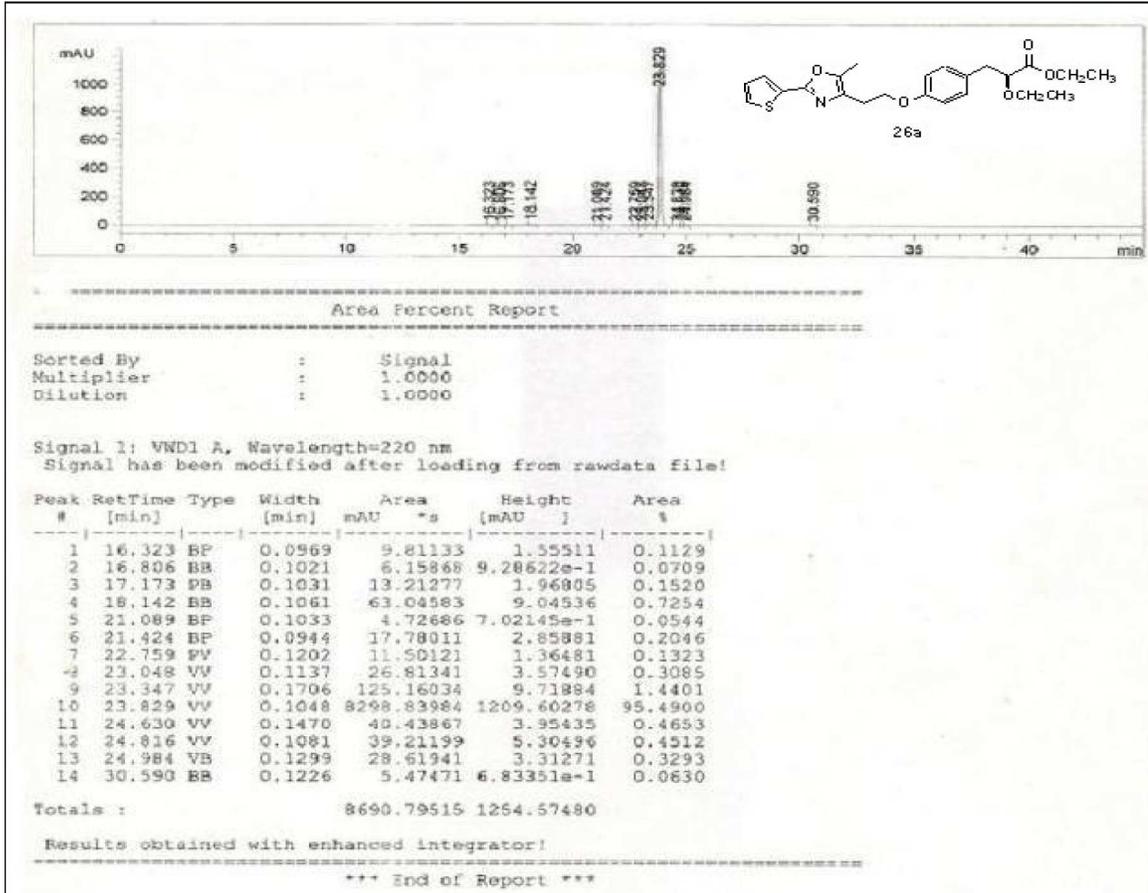
### **ESI/MS of 26a**



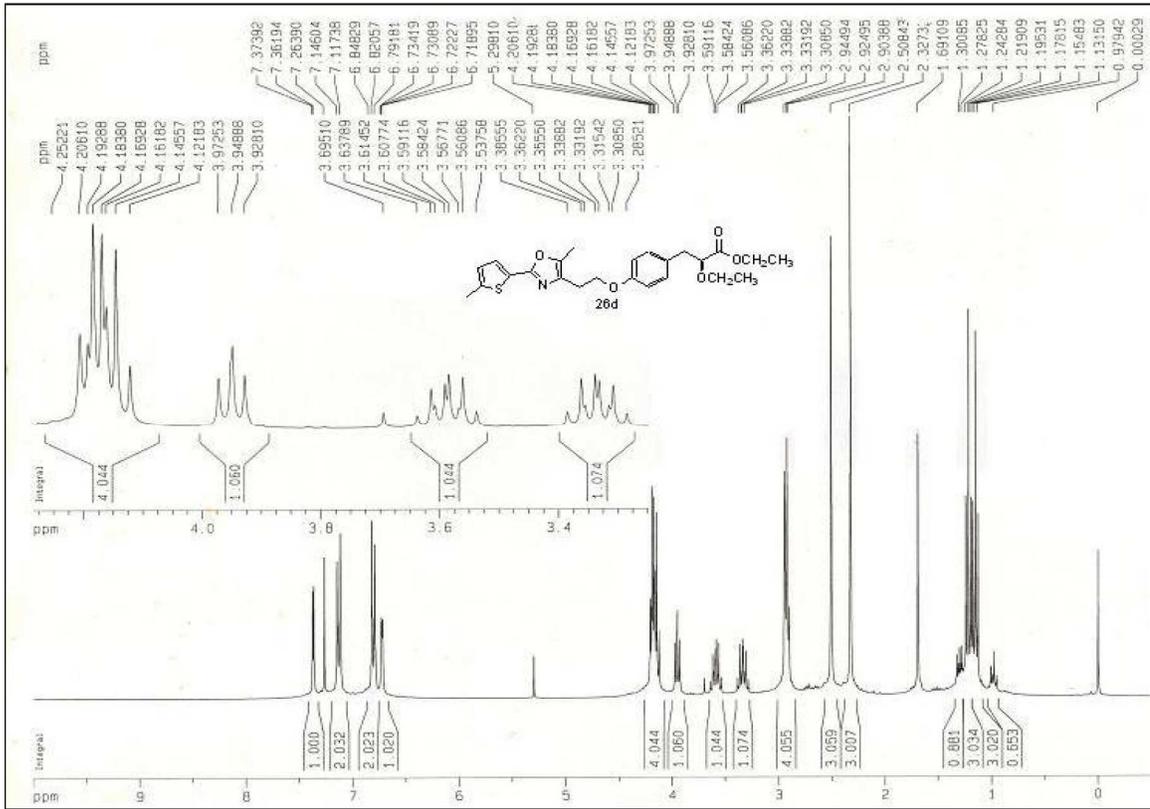
### IR of 26a



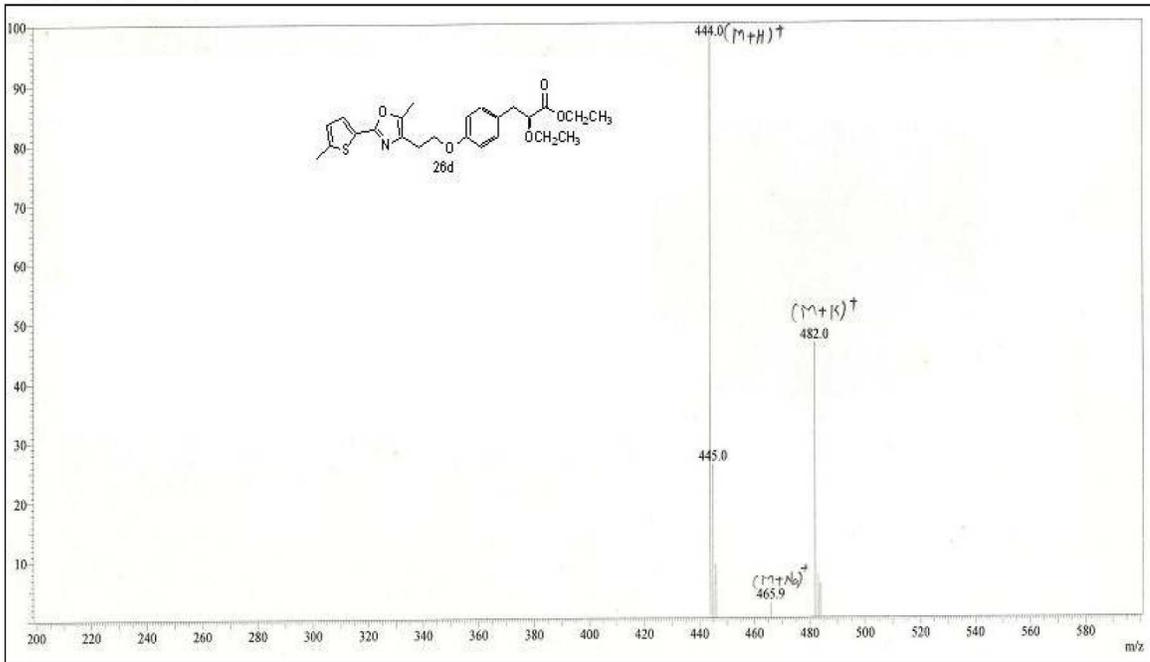
### HPLC of 26a



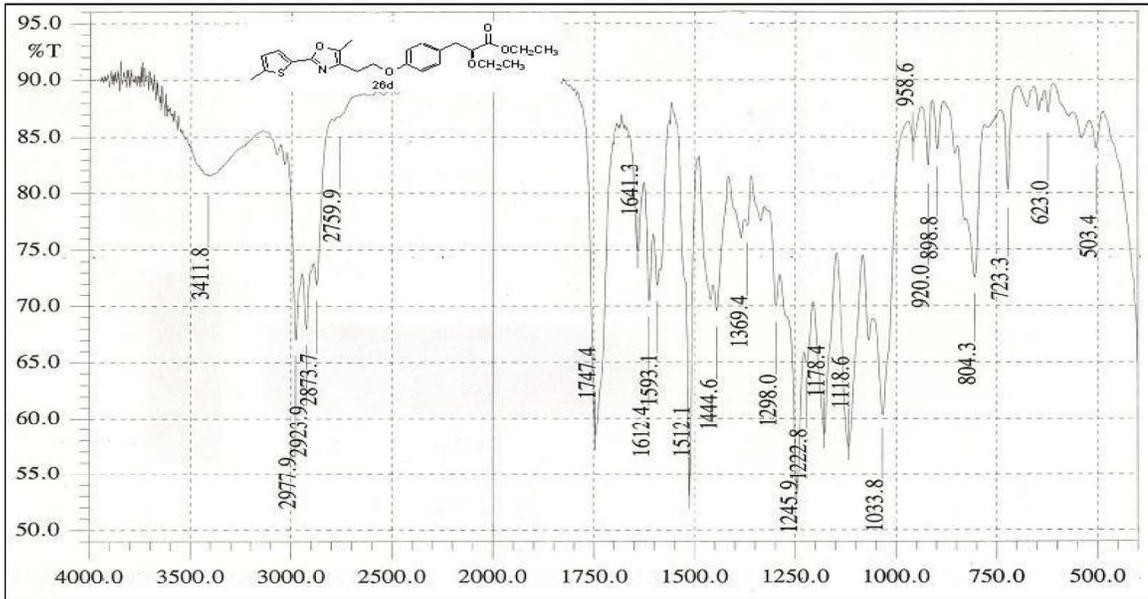
### **<sup>1</sup>H NMR of 26d**



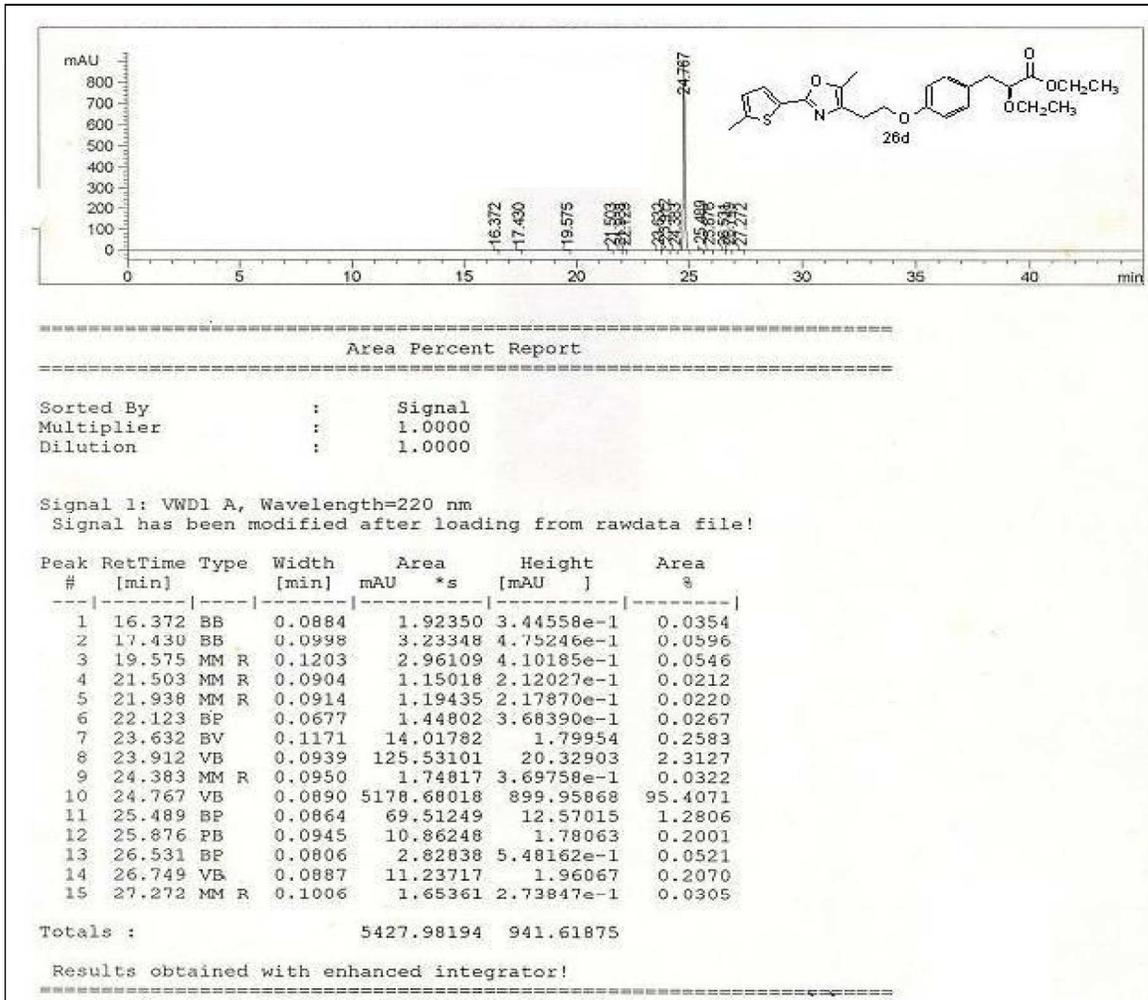
### **ESI/MS of 26d**



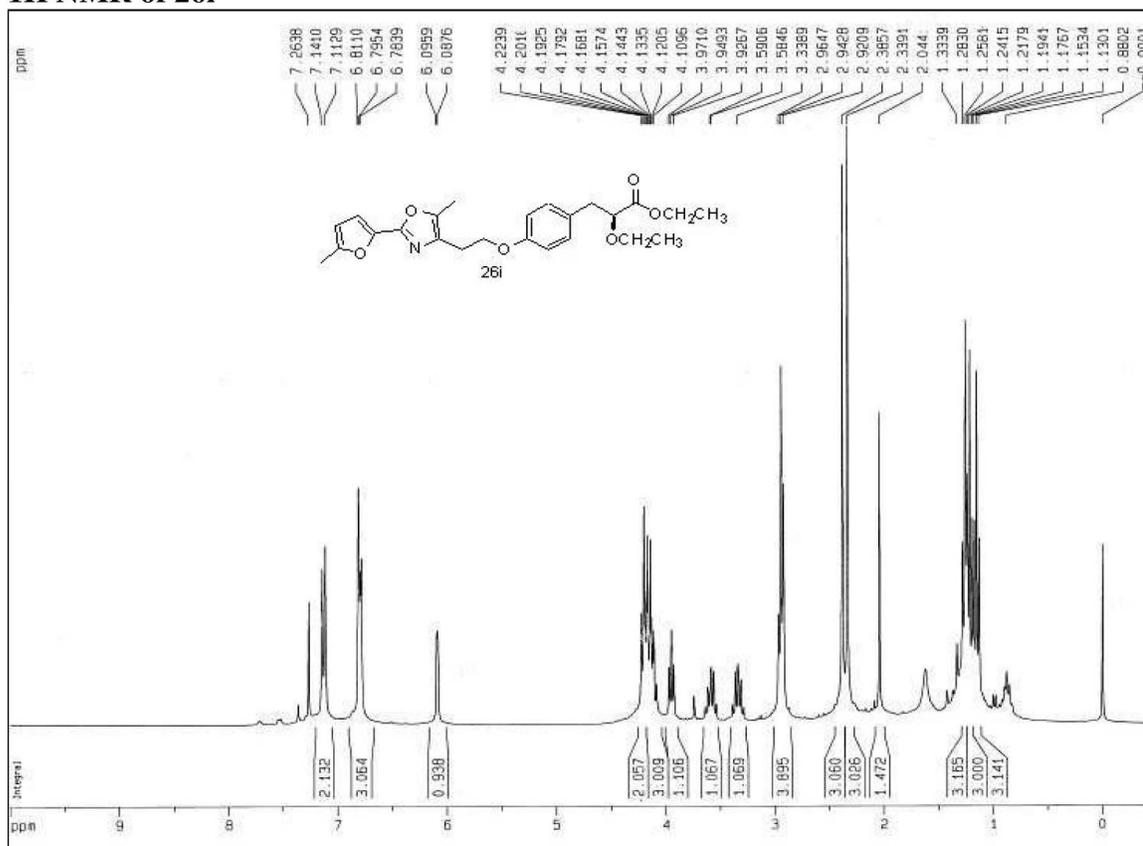
## IR of 26d



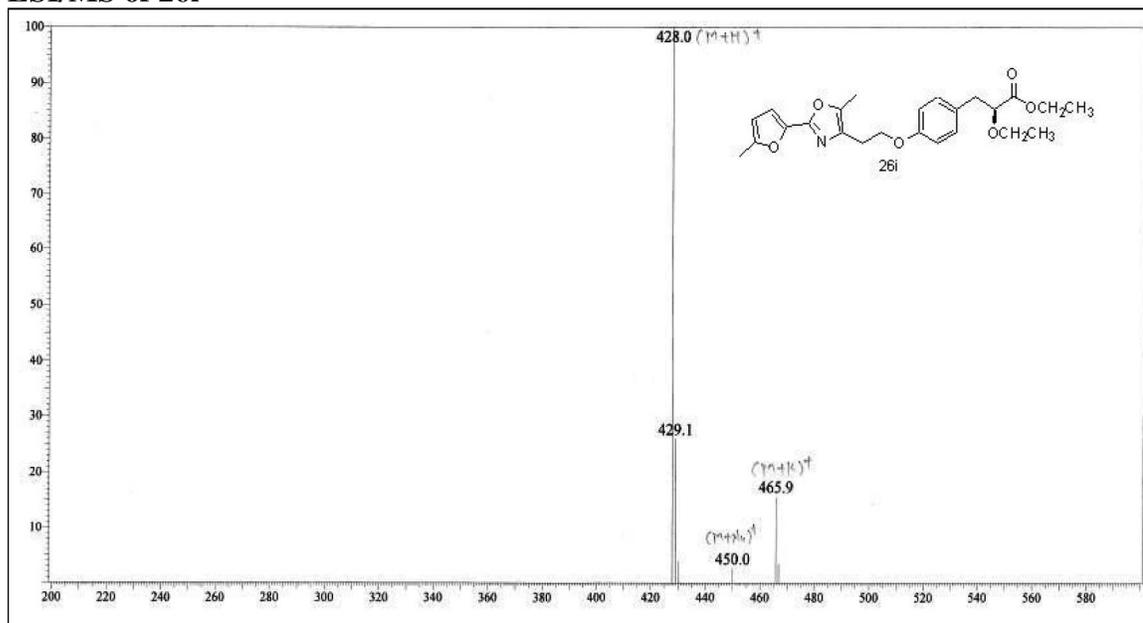
## HPLC of 26d



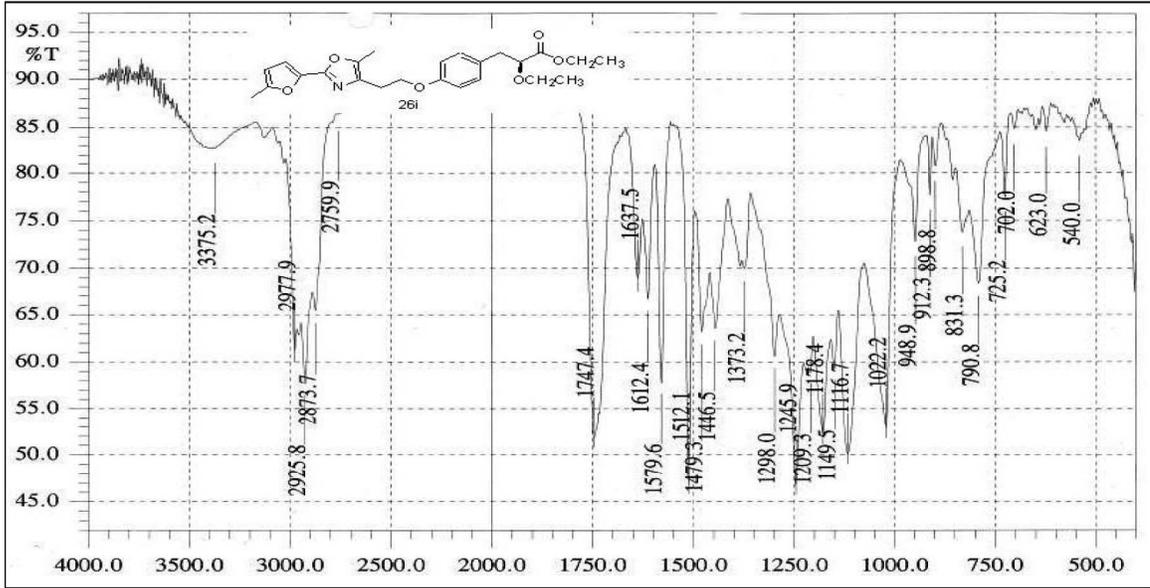
### **<sup>1</sup>H NMR of 26i**



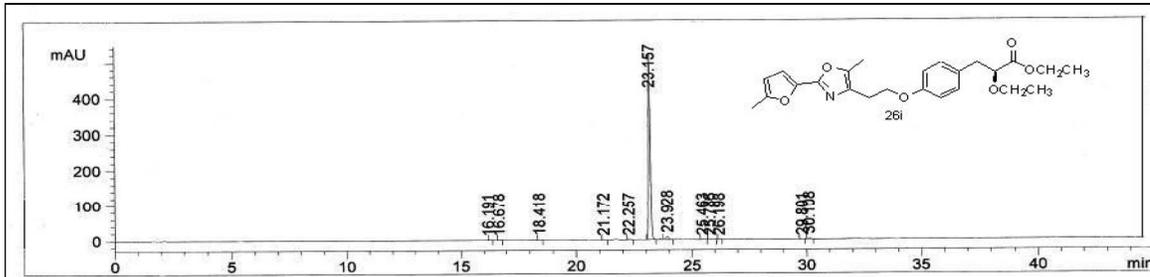
### **ESI/MS of 26i**



### IR of 26i



### HPLC of 26i



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

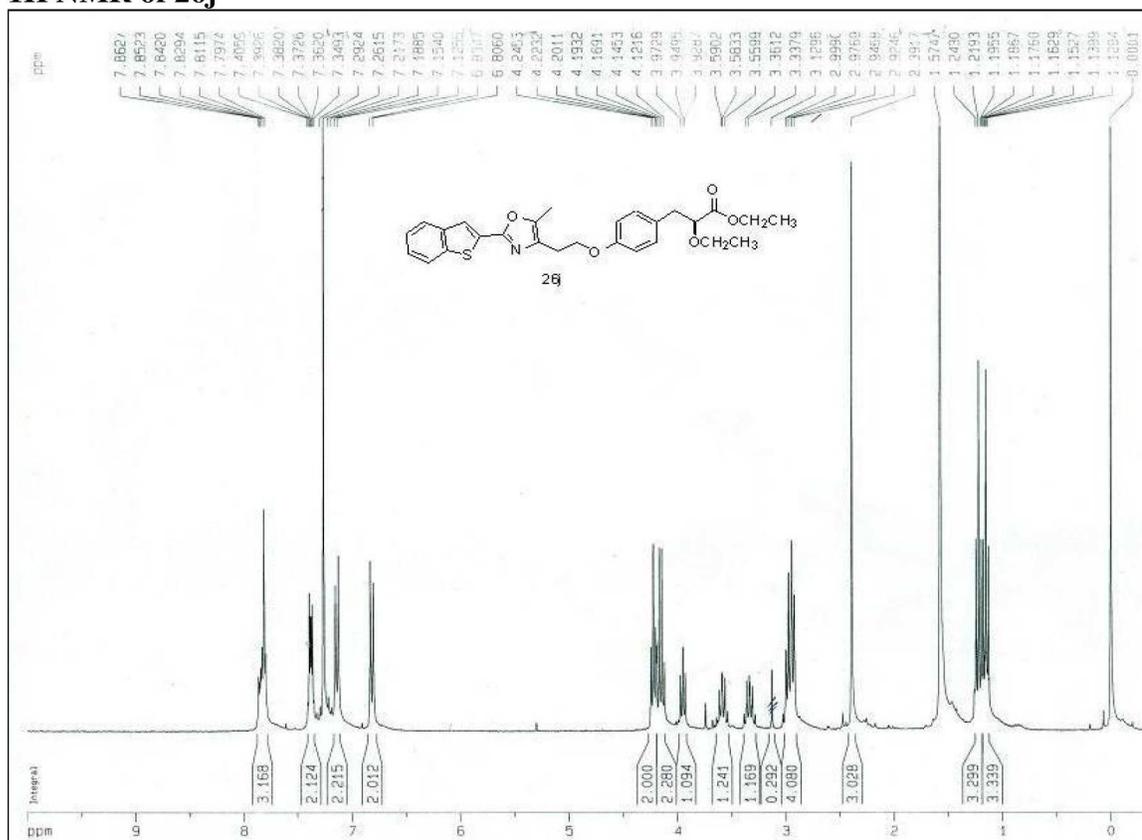
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area *s	Height [mAU]	Area %
1	16.191	MM R	0.0856	1.12495		4.94542e-4	0.0341
2	16.678	PP	0.0777	4.67634		9.52549e-1	0.1419
3	18.418	PP	0.0841	11.00779		2.06146	0.3341
4	21.172	BB	0.0908	3.56636		6.02964e-1	0.1083
5	22.257	BB	0.0974	9.62970		1.51650	0.2923
6	23.157	BB	0.0936	3148.57031		522.27612	95.5732
7	23.928	PB	0.1296	77.50977		8.62147	2.3528
8	25.463	MM R	0.1229	2.98058		4.04365e-1	0.0905
9	25.786	MM R	0.1574	6.24838		6.61802e-1	0.1897
10	26.198	MM R	0.1019	1.68826		3.10476e-1	0.0512
11	29.801	MM R	0.1143	2.72524		3.97234e-1	0.0827
12	30.108	BB	0.1050	24.68091		3.65254	0.7492

Totals : 3294.40859 541.45798

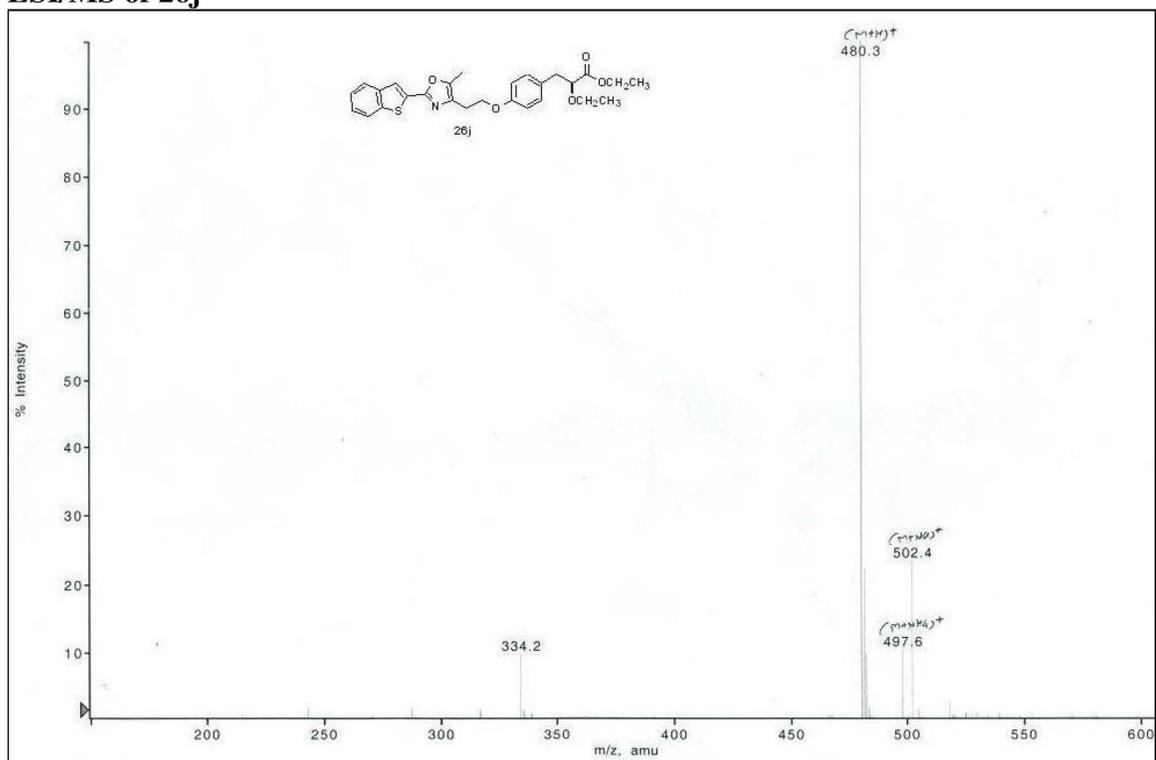
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

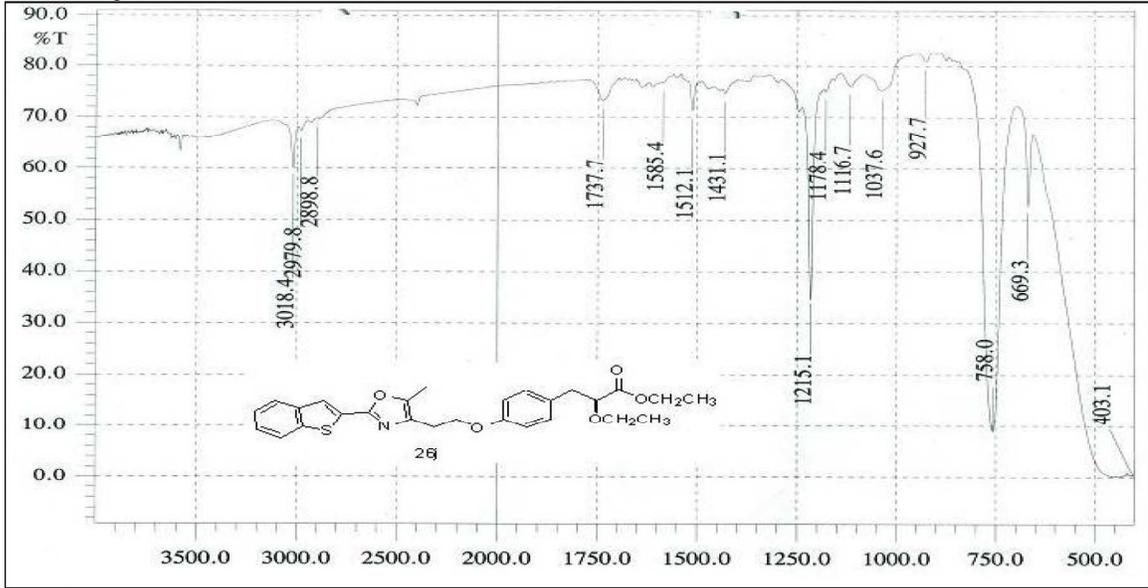
### **<sup>1</sup>H NMR of 26j**



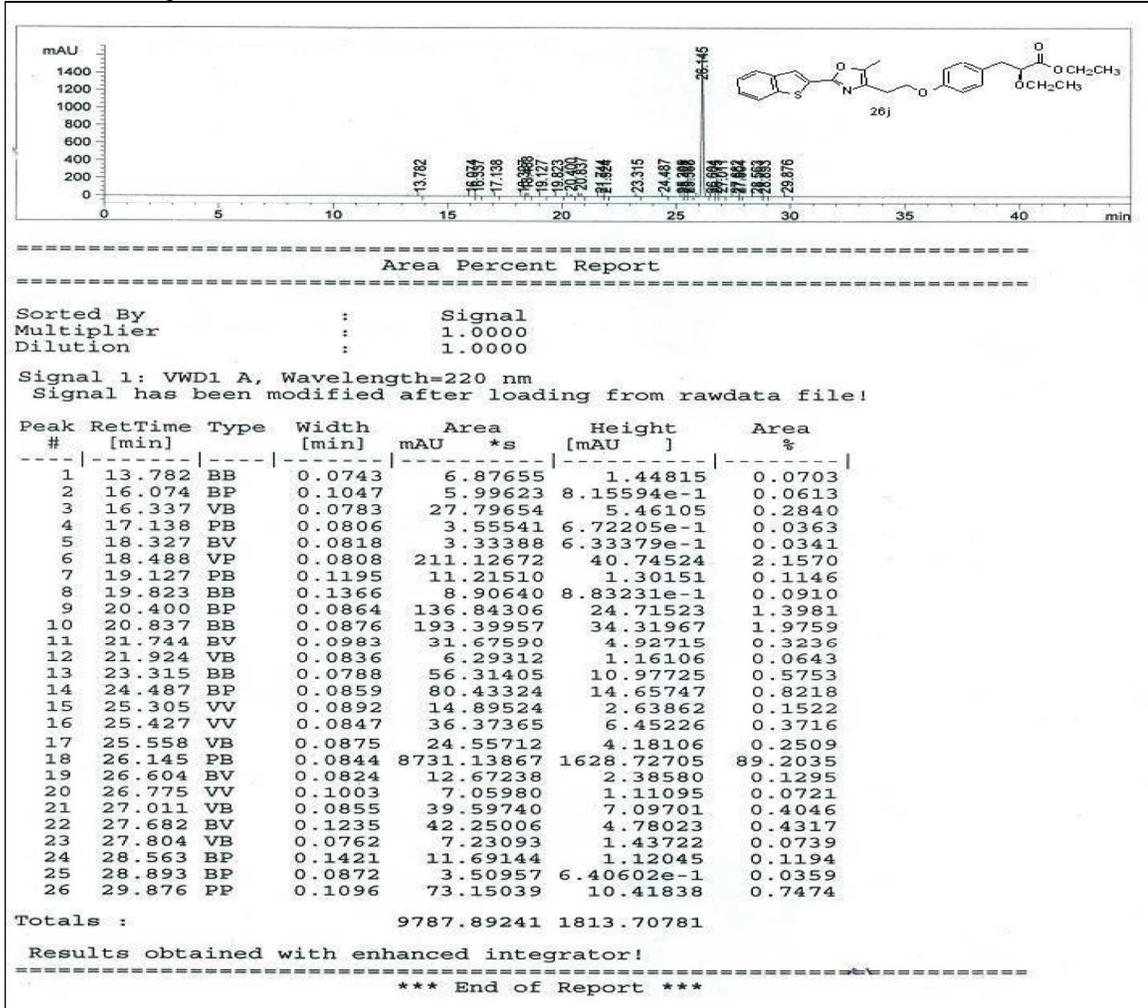
### **ESI/MS of 26j**



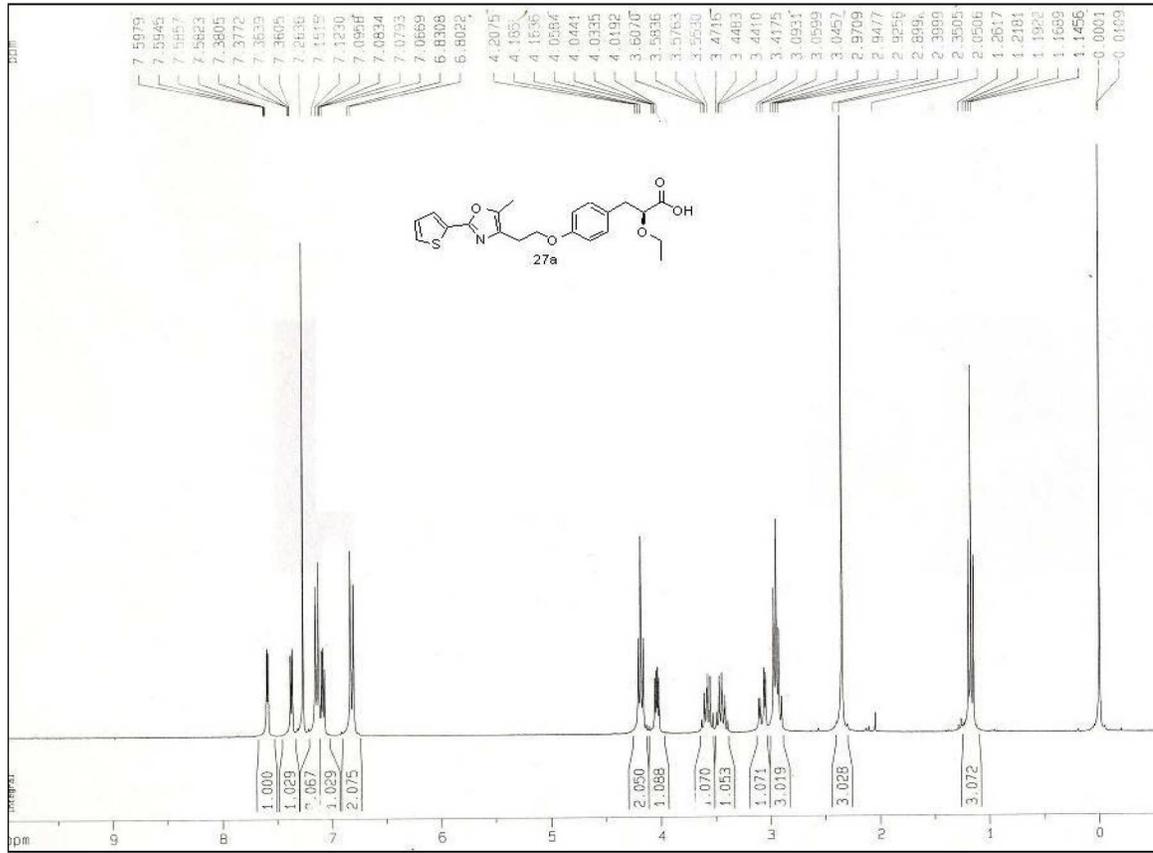
### IR of 26j



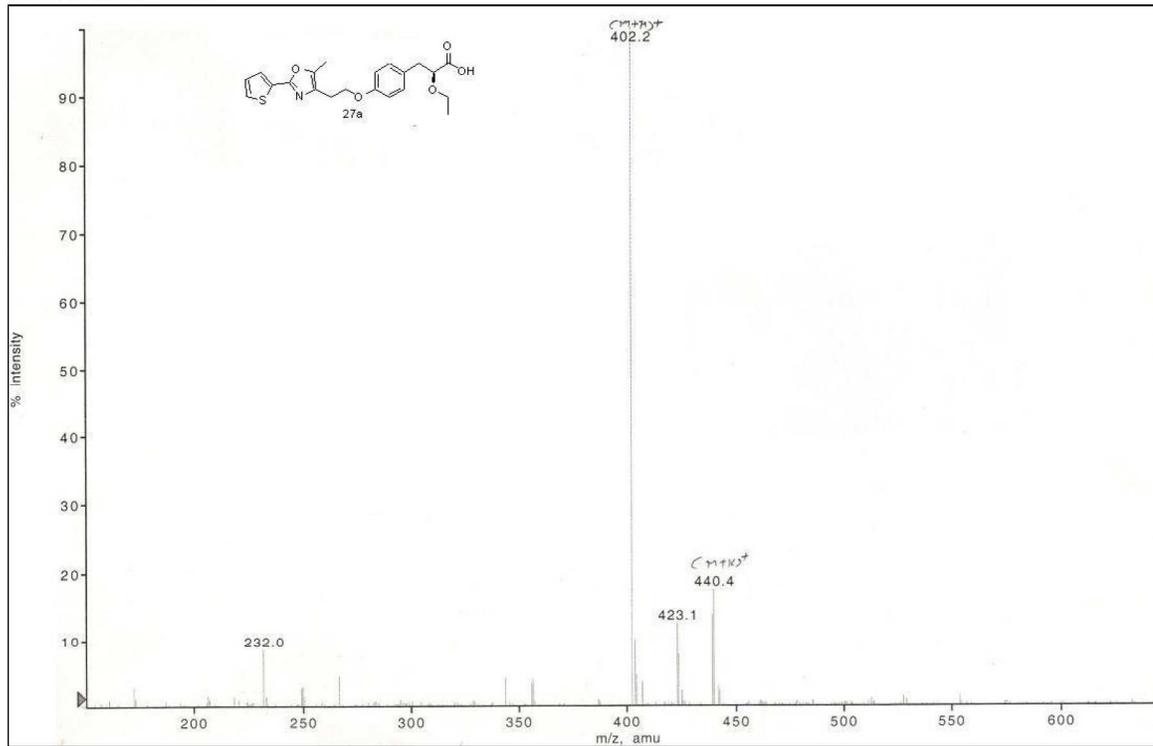
### HPLC of 26j



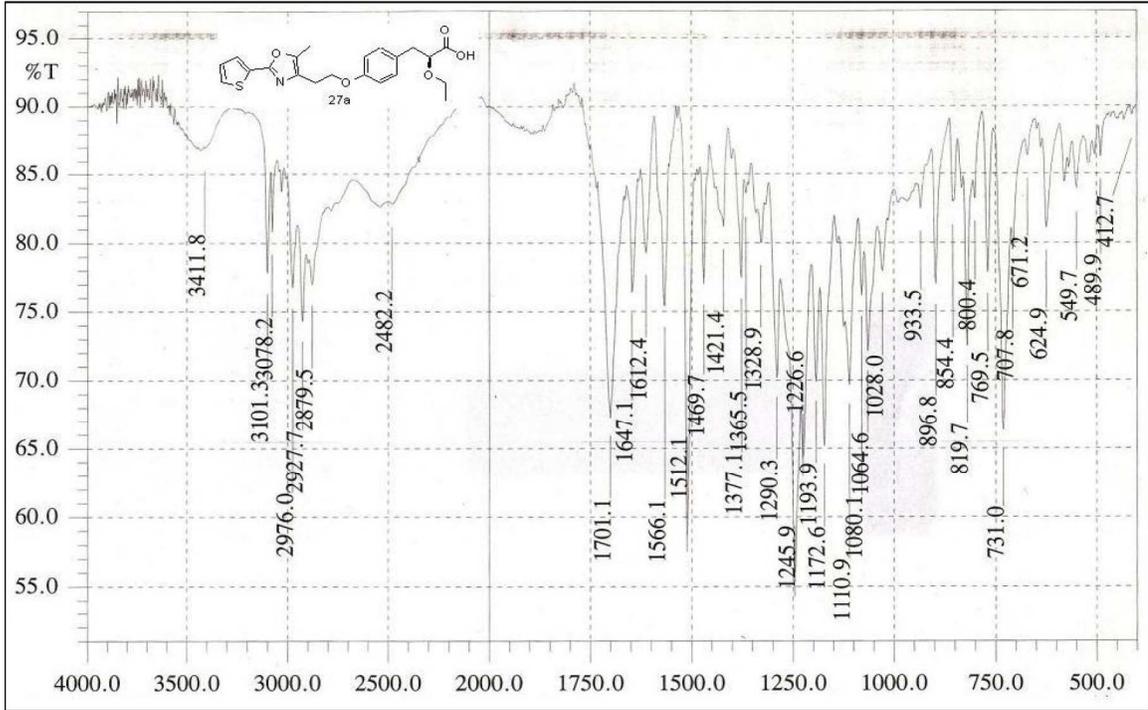
### **<sup>1</sup>H NMR of 27a**



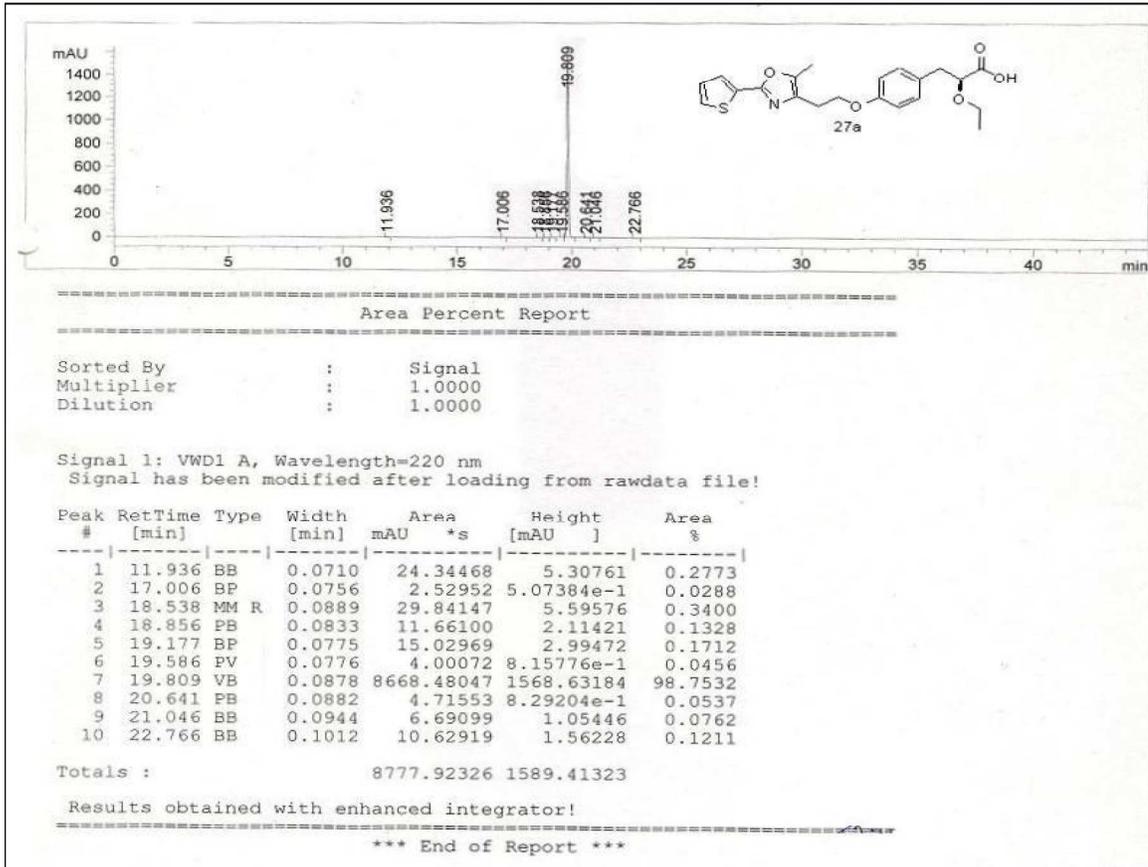
### **ESI/MS of 27a**



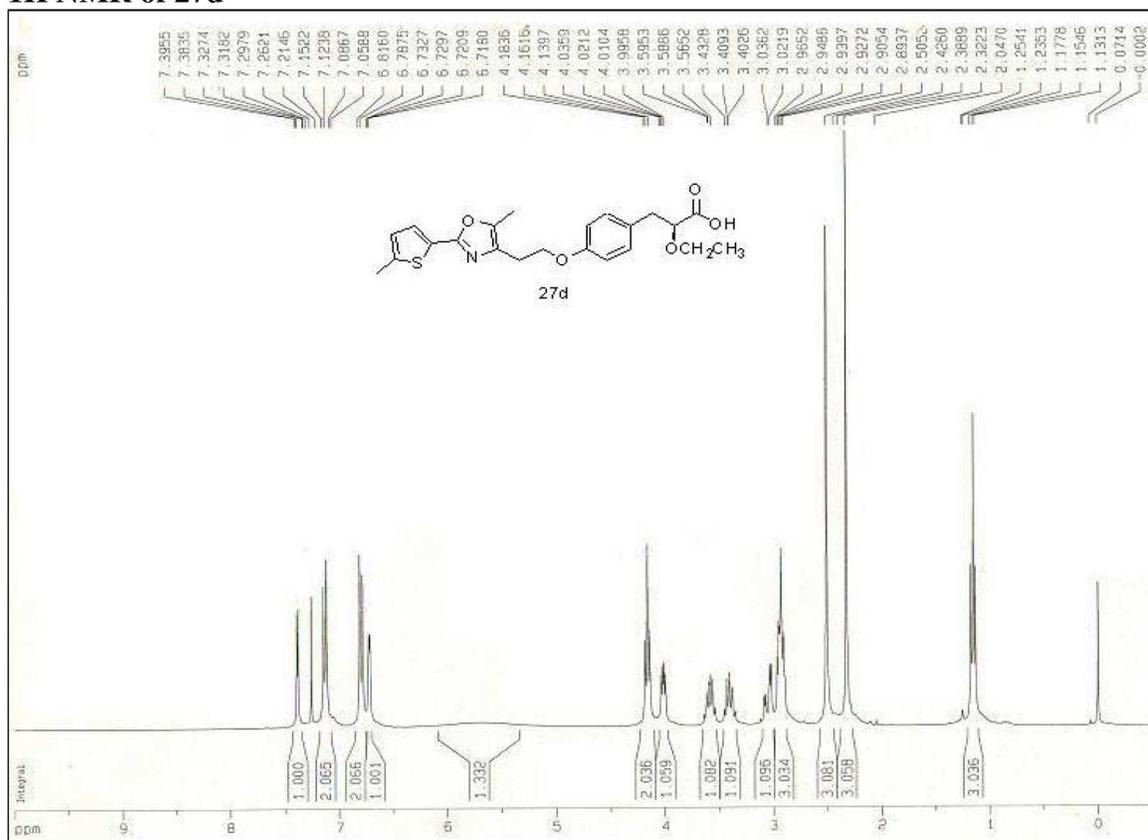
### IR of 27a



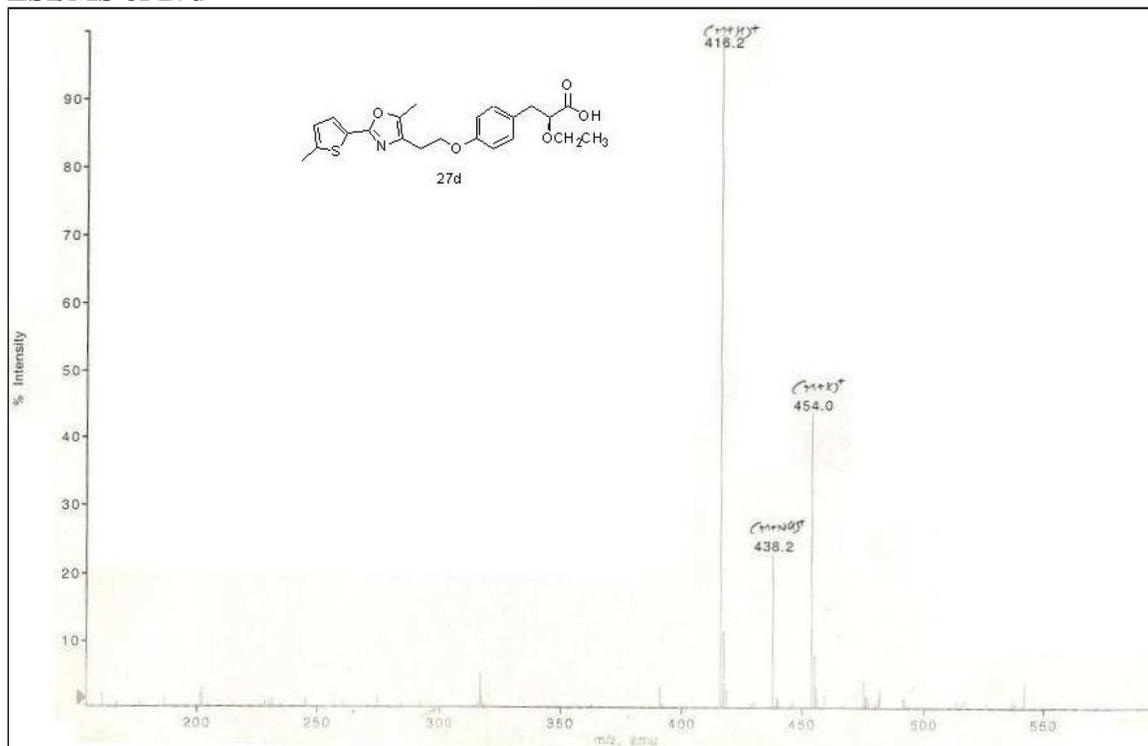
### HPLC of 27a



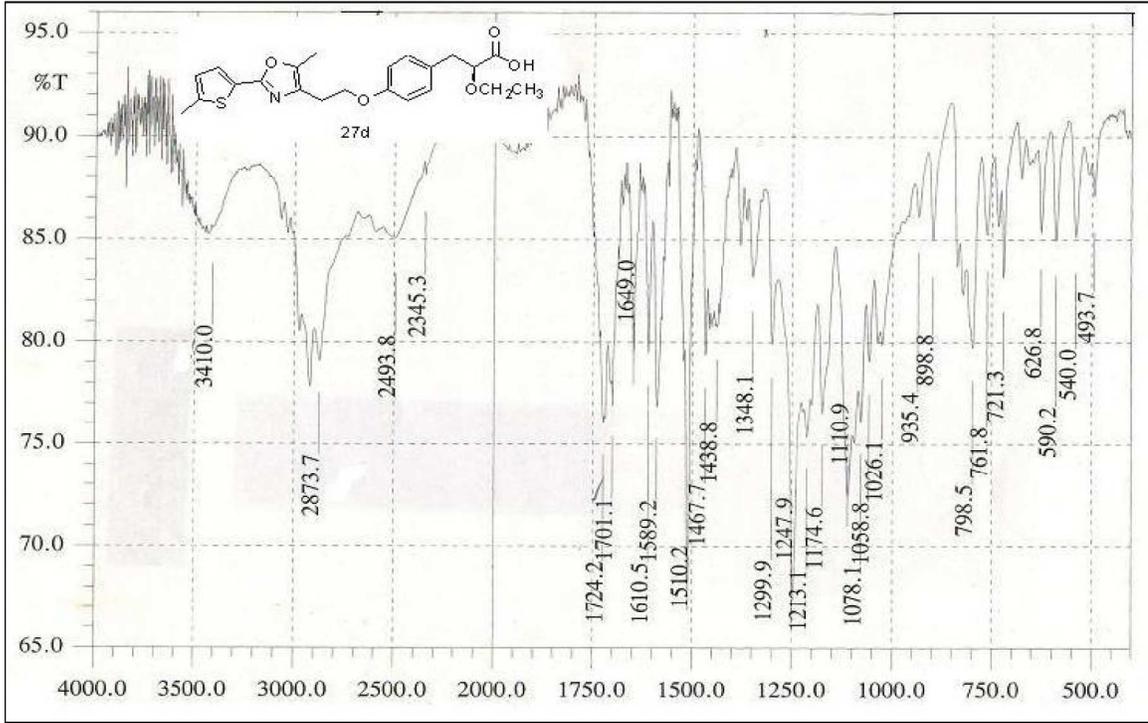
### **<sup>1</sup>H NMR of 27d**



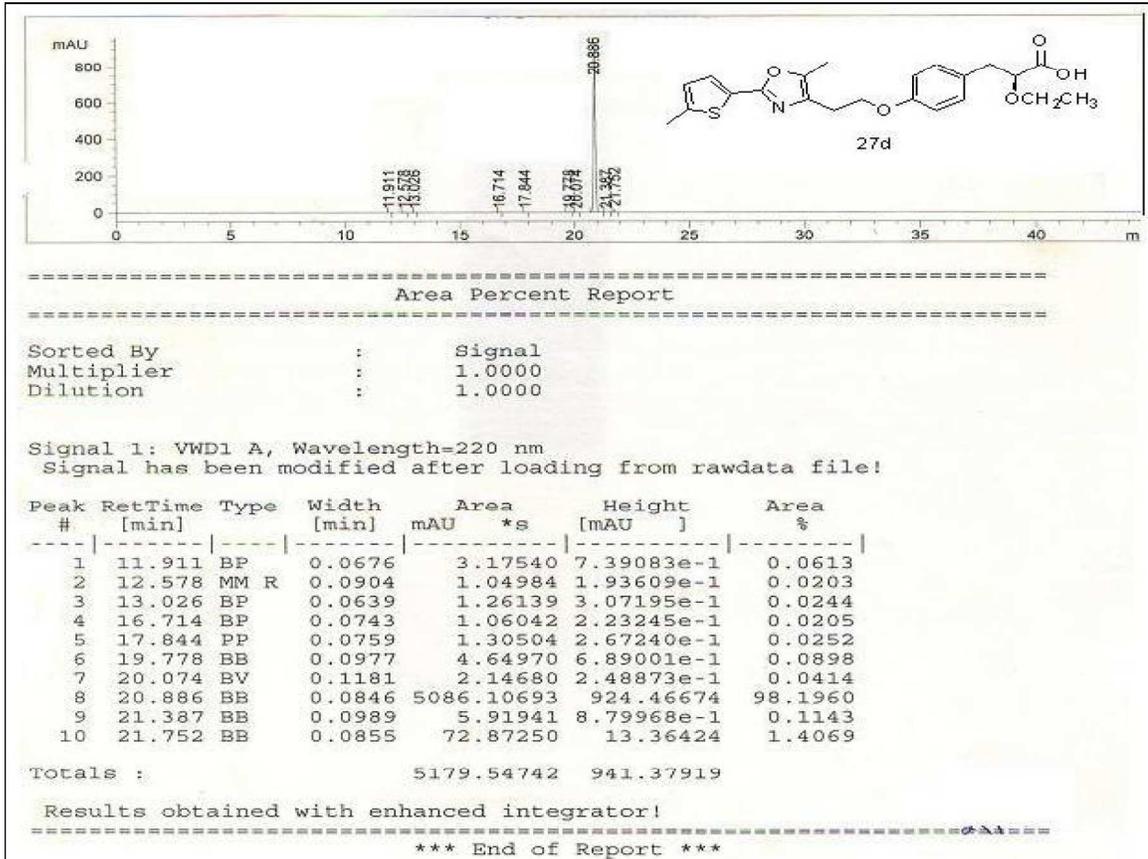
### **ESI/MS of 27d**



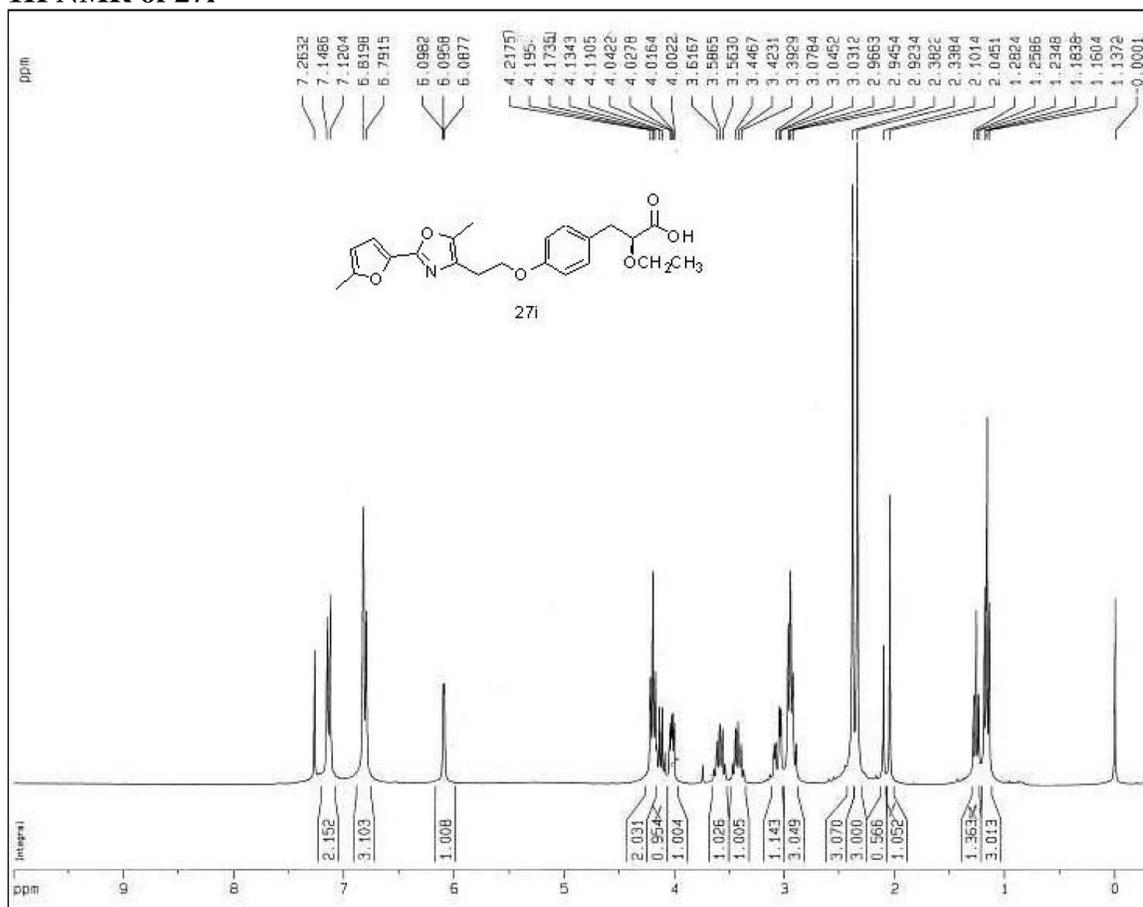
**IR of 27d**



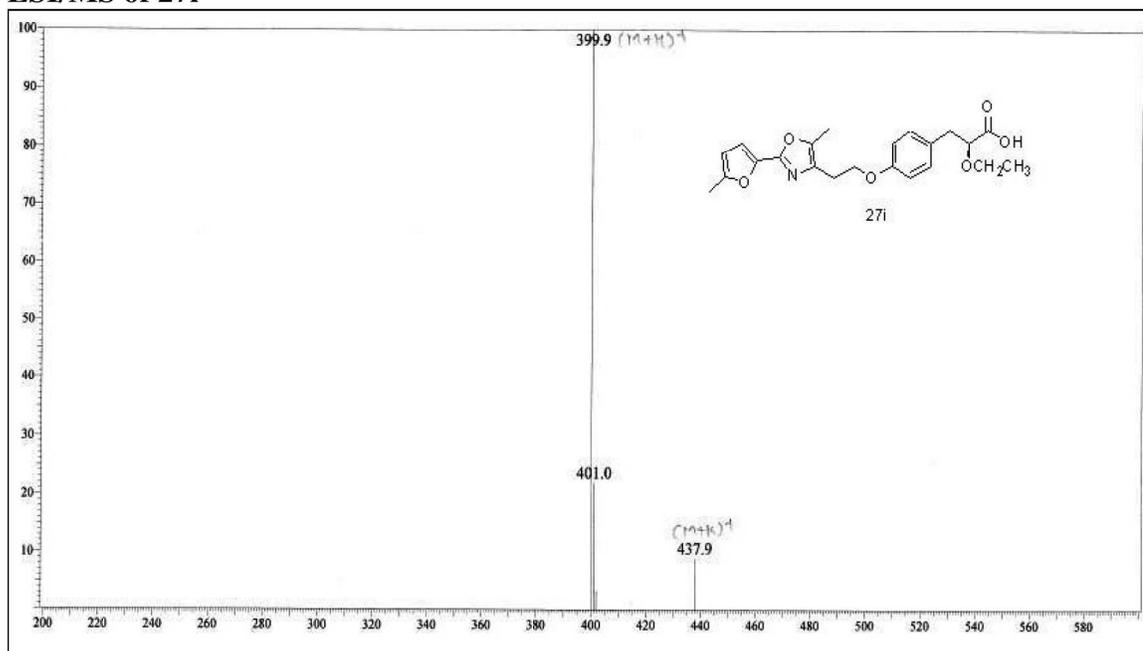
**HPLC of 27d**



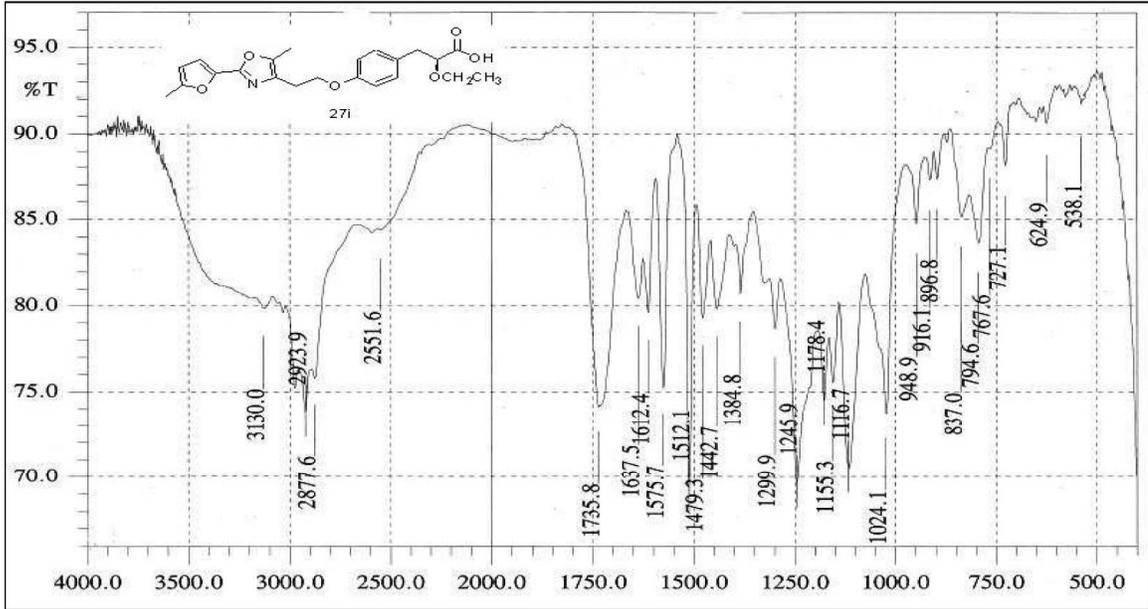
### **<sup>1</sup>H NMR of 27i**



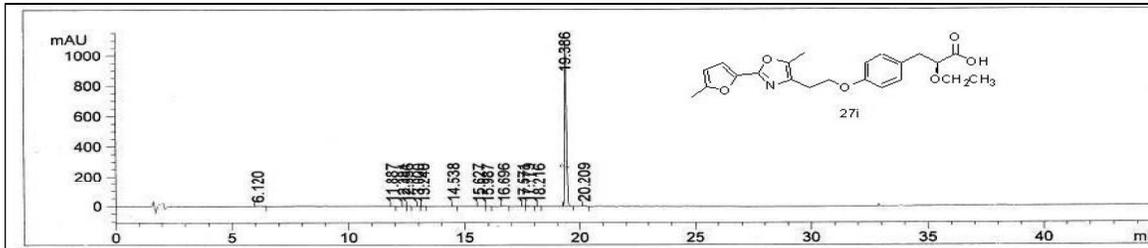
### **ESI/MS of 27i**



### IR of 27i



### HPLC of 27i



#### Area Percent Report

Sorted By : Signal  
Multiplier : 1.0000  
Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
Signal has been modified after loading from rawdata file!

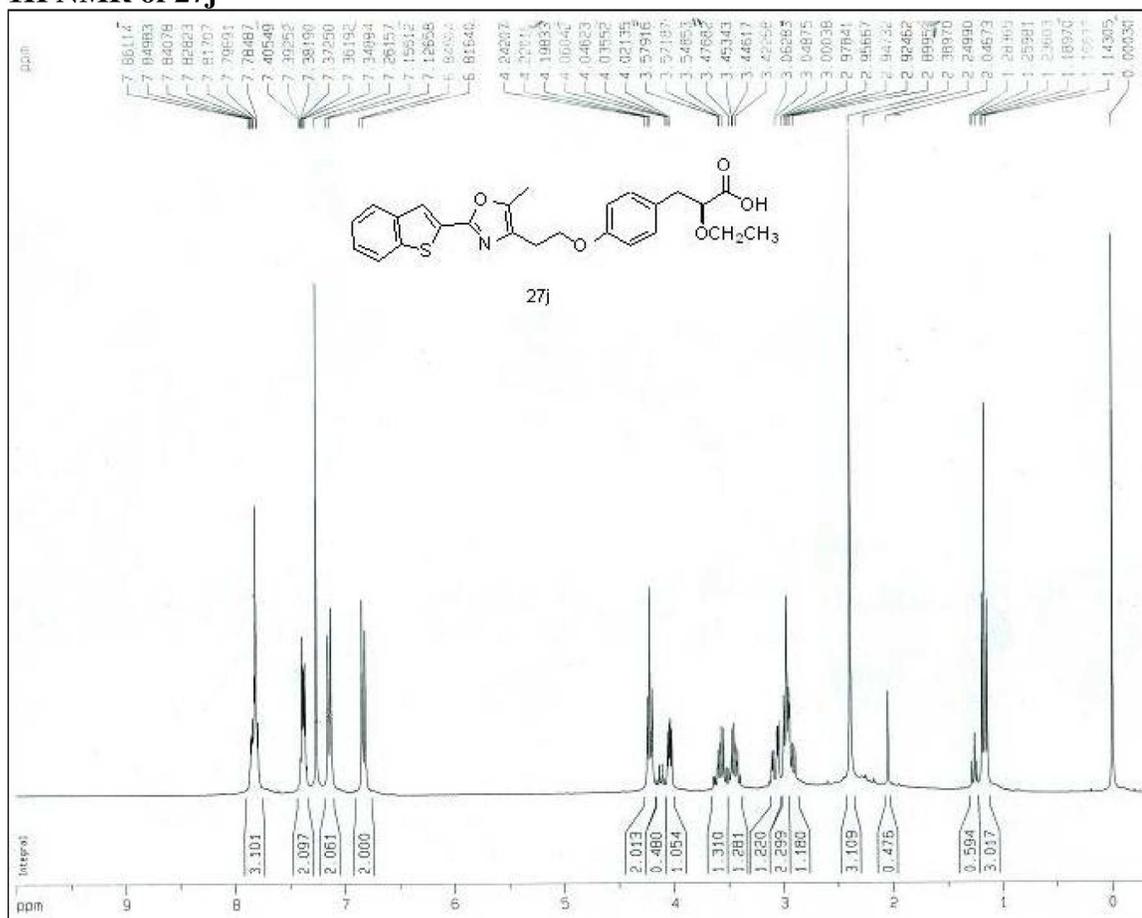
Peak #	RetTime [min]	Type	Width [min]	Area mAU	Height [mAU]	Area %
1	6.120	MM R	0.2652	6.46745	4.06465e-1	0.1023
2	11.887	BB	0.0730	7.56851	1.63261	0.1198
3	12.381	PP	0.0723	3.40845	7.44720e-1	0.0539
4	12.556	VB	0.0719	5.98731	1.31906	0.0947
5	13.000	MM R	0.0756	2.67750	5.90630e-1	0.0424
6	13.240	MM R	0.1014	2.82731	4.64856e-1	0.0447
7	14.538	BP	0.0770	23.46782	4.83670	0.3714
8	15.627	PF R	0.1000	9.94872	1.56290	0.1574
9	15.987	FM R	0.1218	4.51526	6.17702e-1	0.0715
10	16.696	PB	0.1001	22.39883	3.27721	0.3544
11	17.571	BV	0.0808	5.35572	1.00919	0.0848
12	17.779	VB	0.1524	15.23937	1.37685	0.2412
13	18.216	MM R	0.0826	2.39781	4.83936e-1	0.0379
14	19.386	BB	0.0871	6171.58594	1102.49451	97.6608
15	20.209	BP	0.0938	35.56405	5.76751	0.5628

Totals : 6319.41005 1126.58485

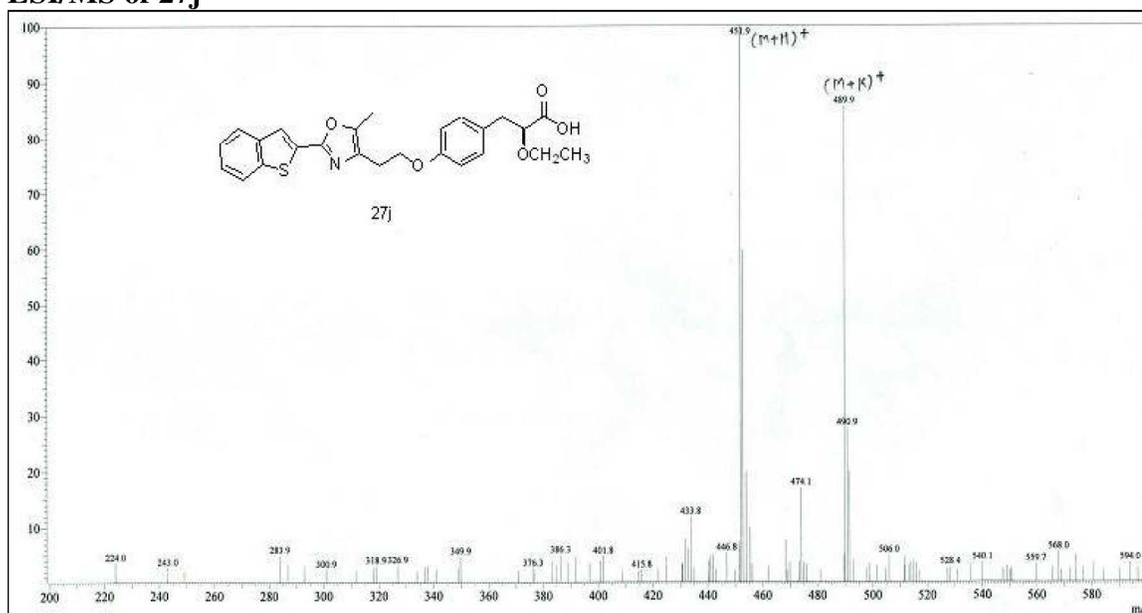
Results obtained with enhanced integrator!

\*\*\* End of Report \*\*\*

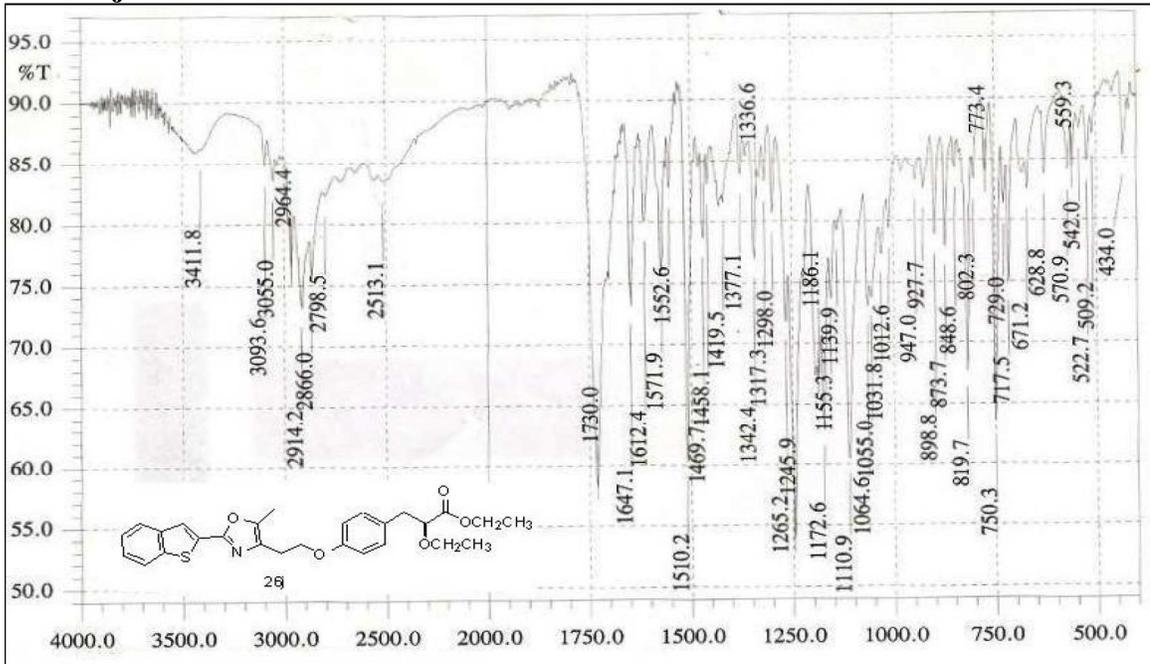
### **<sup>1</sup>H NMR of 27j**



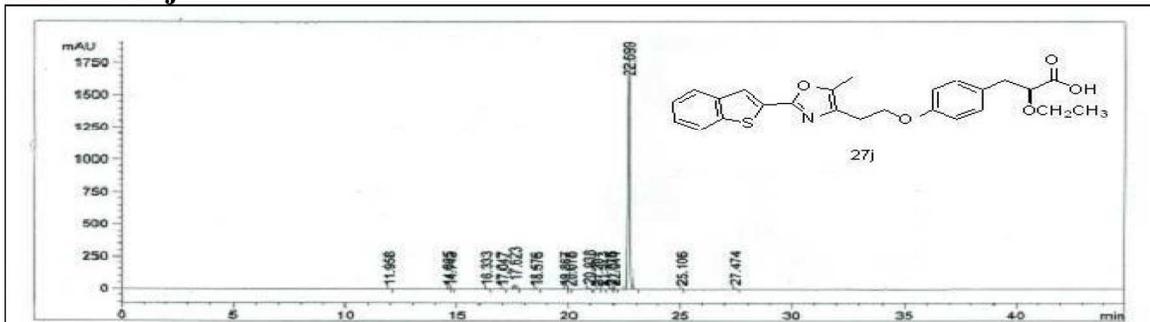
### **ESI/MS of 27j**



### IR of 27j



### HPLC of 27j



=====  
 Area Percent Report  
 =====

Sorted By : Signal  
 Multiplier : 1.0000  
 Dilution : 1.0000

Signal 1: VWD1 A, Wavelength=220 nm  
 Signal has been modified after loading from rawdata file!

Peak #	RetTime [min]	Type	Width [min]	Area mAU	Area %	Height [mAU]	Area %
1	11.958	BB	0.0758	4.46957	0.0398	8.93345e-1	0.0398
2	14.605	BV	0.0749	15.15787	0.1349	3.15841	0.1349
3	14.743	VB	0.0770	2.31679	0.0206	4.53802e-1	0.0206
4	16.333	BB	0.0916	22.20243	0.1976	3.56616	0.1976
5	17.047	BP	0.0770	2.34600	0.0209	4.83310e-1	0.0209
6	17.623	PB	0.0797	206.48682	1.8377	39.62970	1.8377
7	18.576	BP	0.0758	2.28920	0.0204	4.81676e-1	0.0204
8	19.867	BP	0.0844	2.40135	0.0214	4.58221e-1	0.0214
9	20.078	VV	0.0812	7.18849	0.0640	1.34639	0.0640
10	20.938	BB	0.0847	75.25803	0.6698	13.97734	0.6698
11	21.301	BV	0.1055	13.61923	0.1212	1.86601	0.1212
12	21.523	VP	0.1027	15.41388	0.1372	2.18519	0.1372
13	21.916	VV	0.0850	28.22117	0.2512	4.98160	0.2512
14	22.041	VB	0.0868	32.33073	0.2877	5.68169	0.2877
15	22.699	PB	0.0903	1.07371e4	95.5584	1828.92981	95.5584
16	25.106	MM R	0.0812	18.62458	0.1658	3.82511	0.1658
17	27.474	BB	0.0902	50.73762	0.4516	8.66521	0.4516

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 \*\*\* End of Report \*\*\*