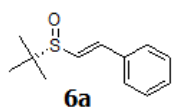


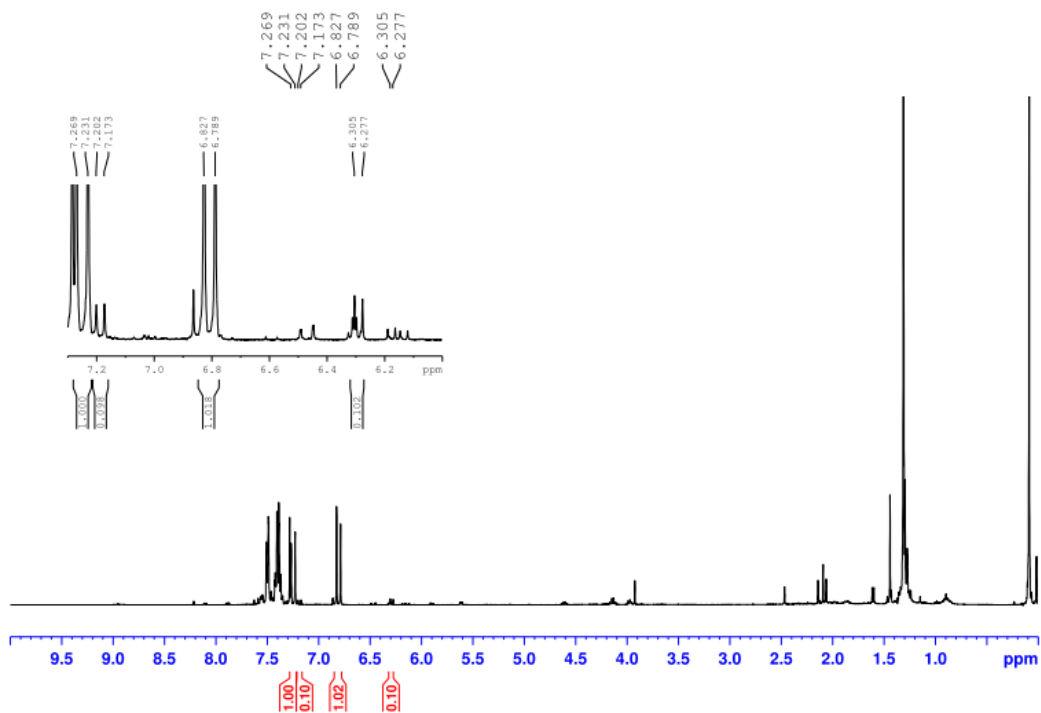
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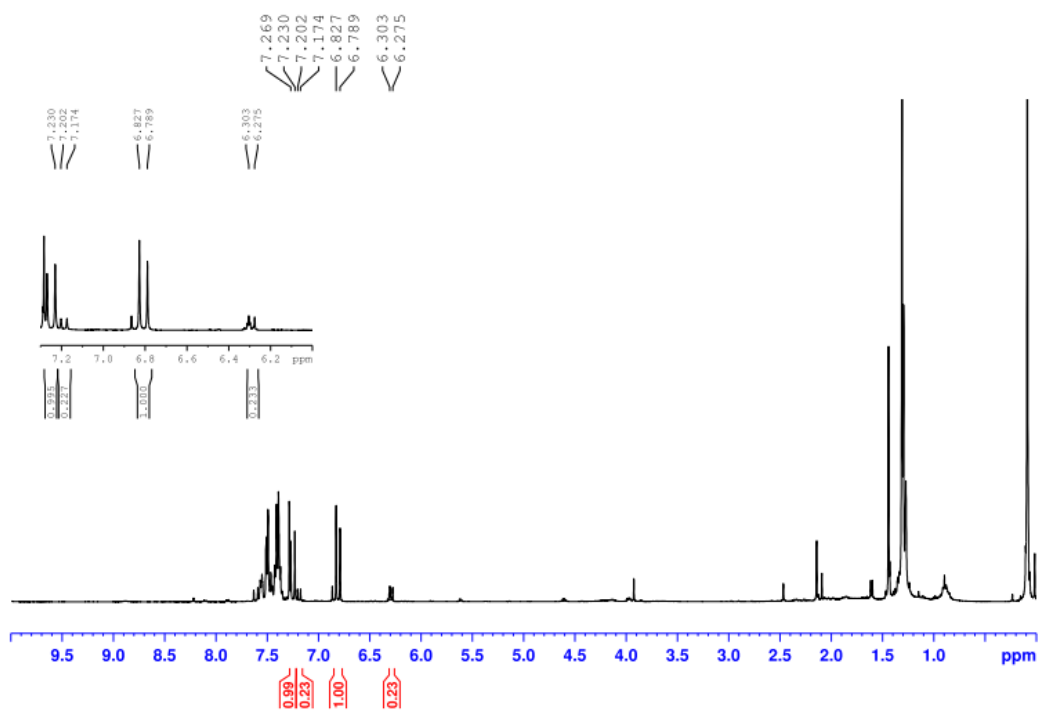
^1H NMR analysis of crude product **6a**.



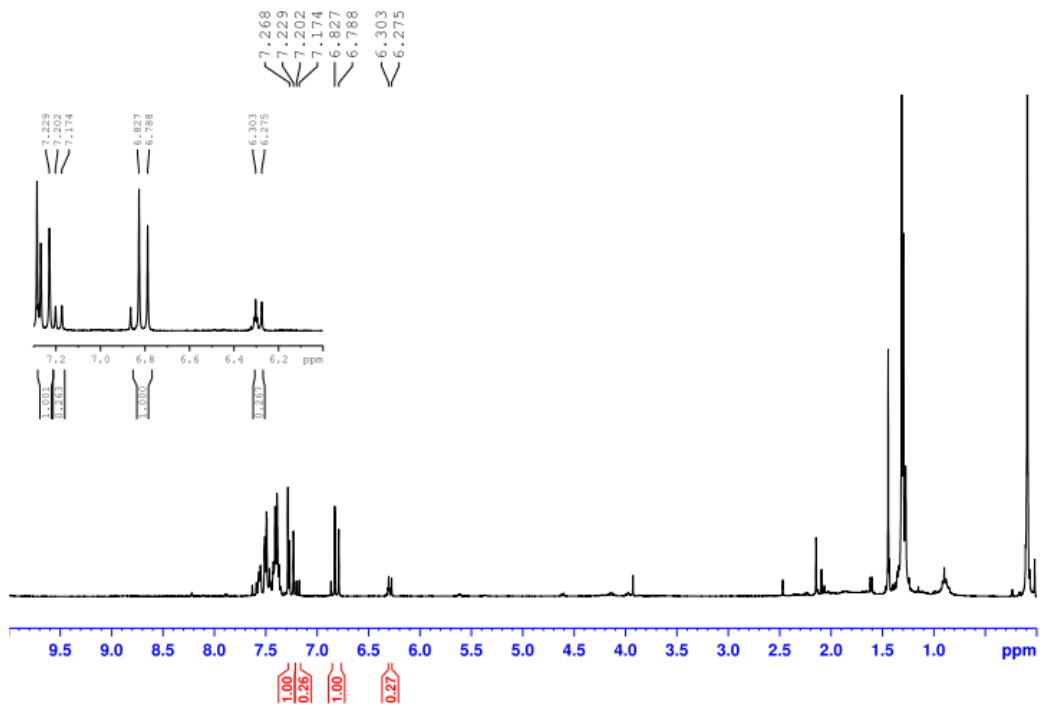
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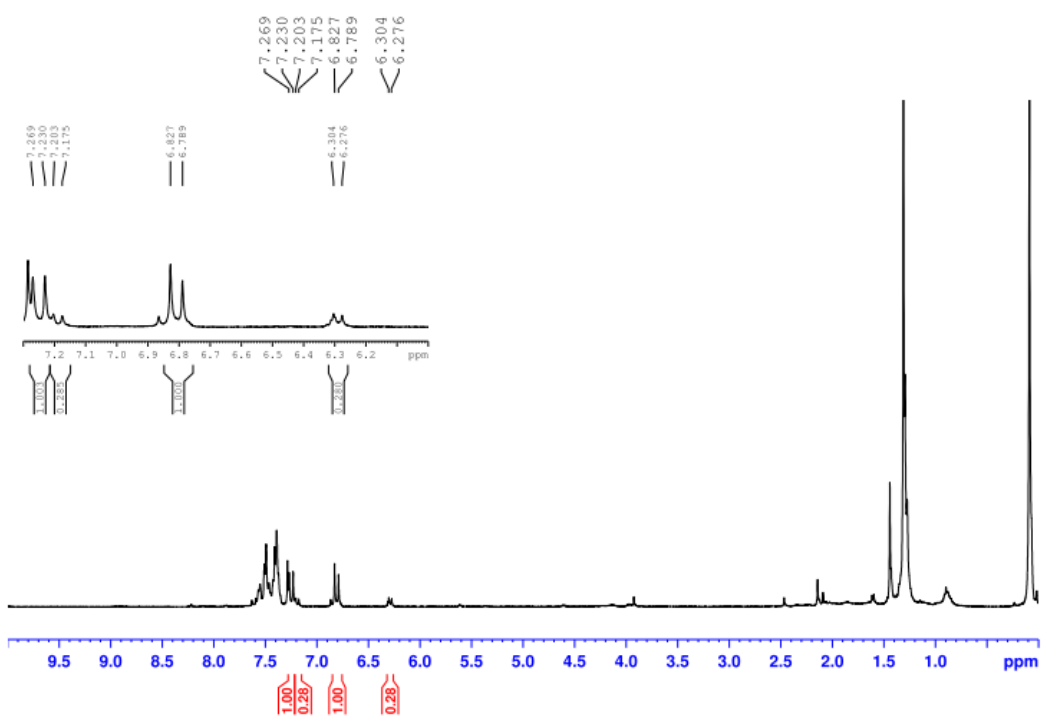
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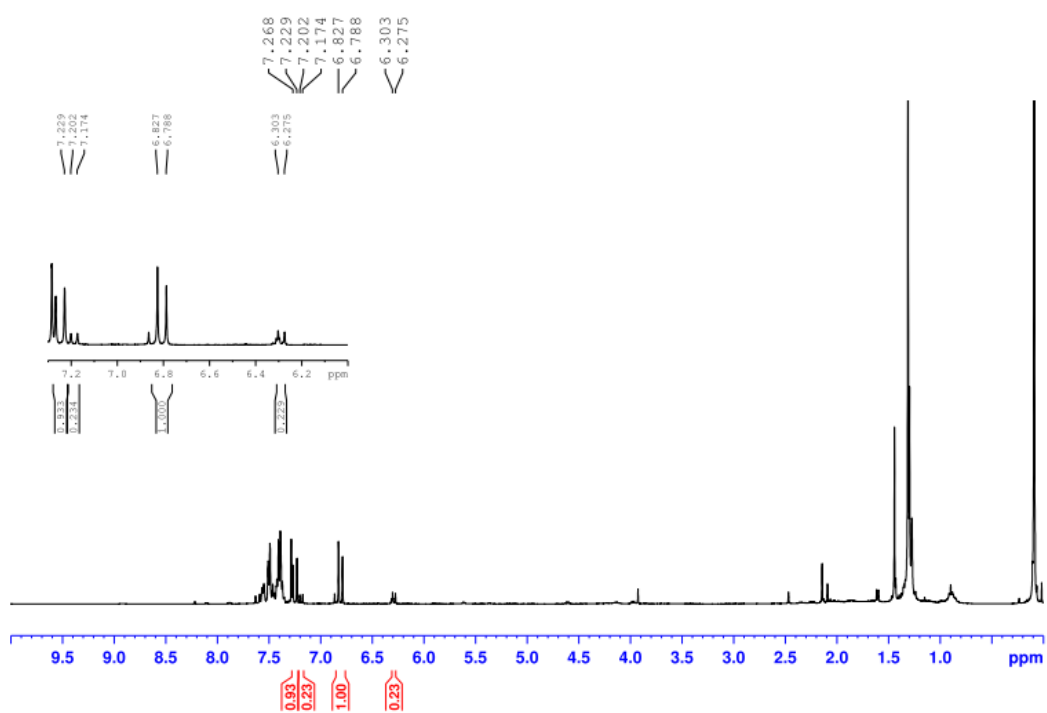
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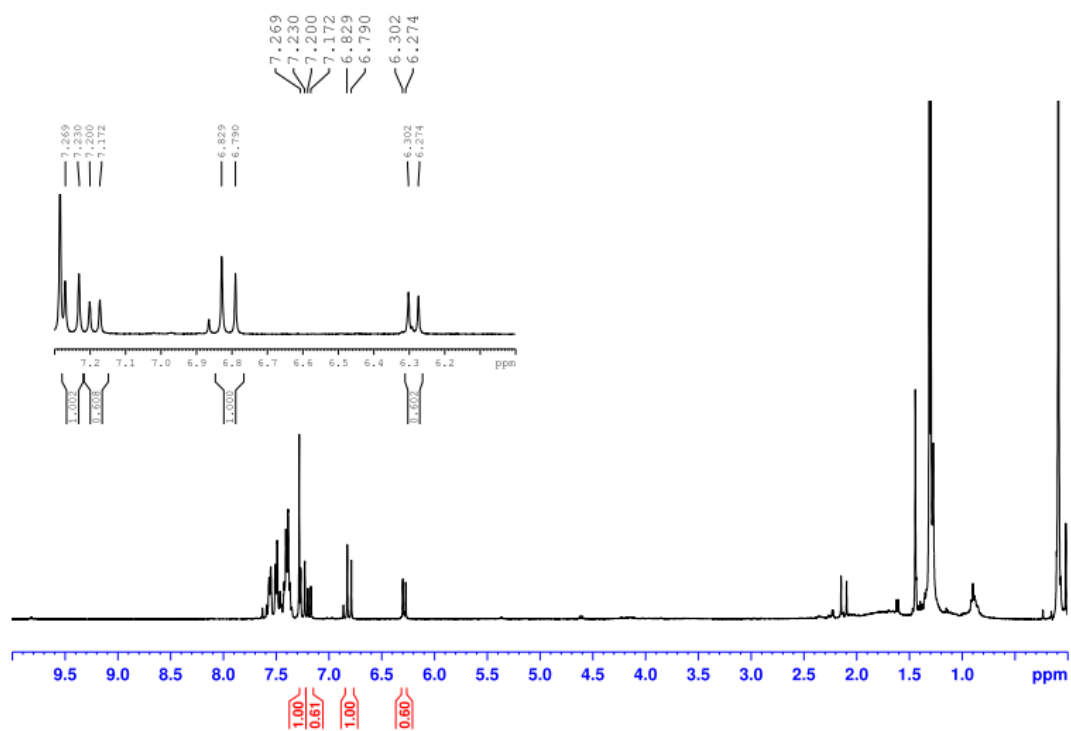
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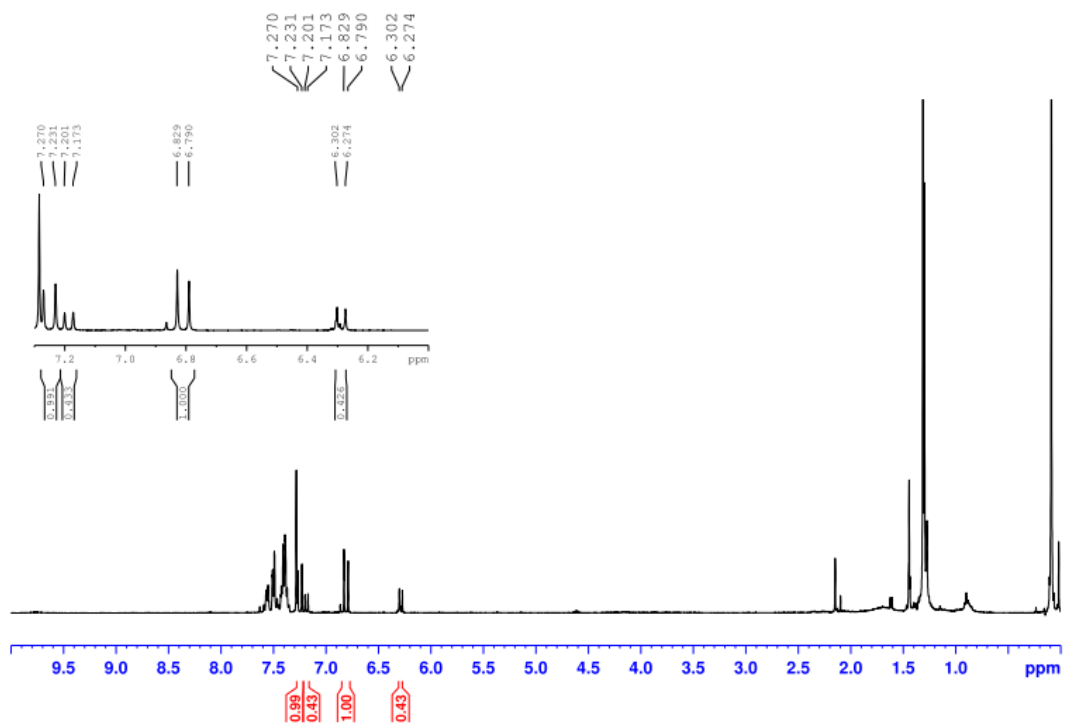
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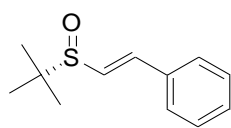
t-BuOK as base:



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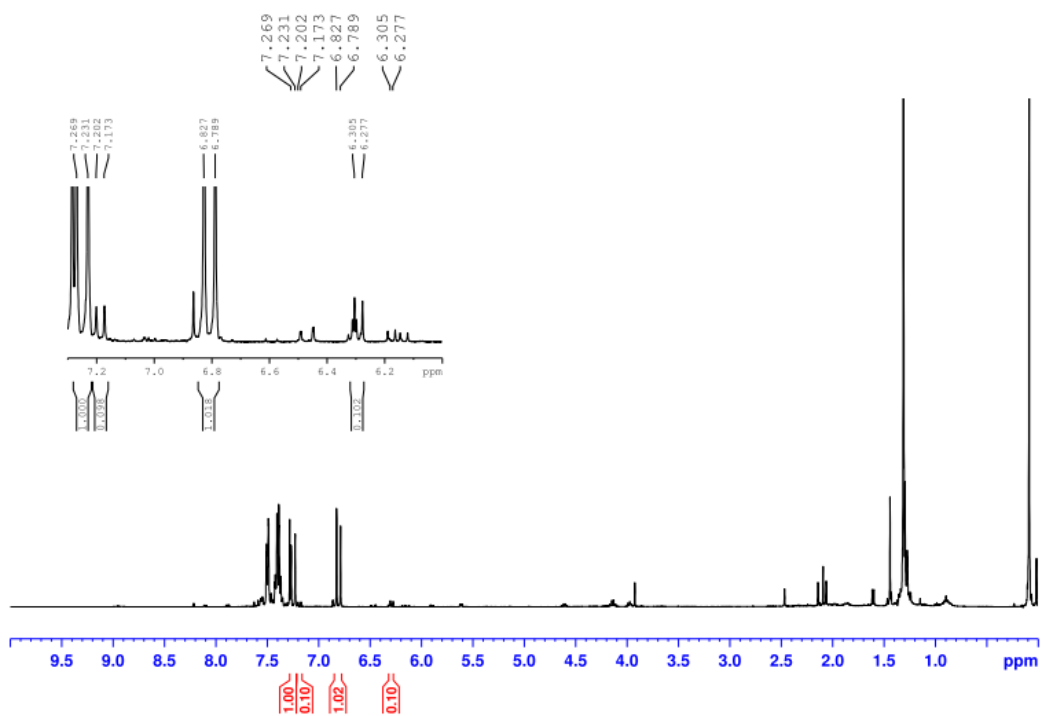
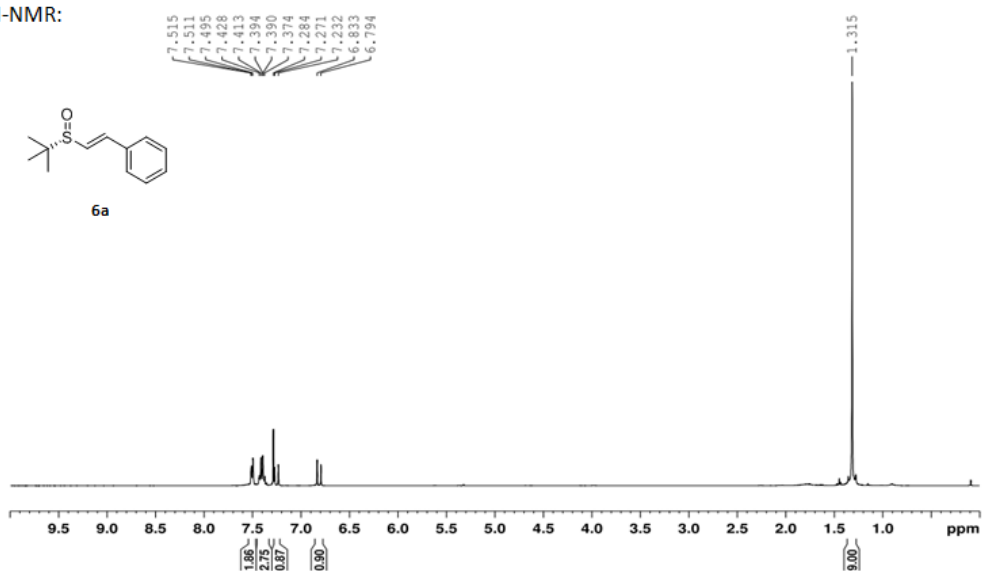


^1H NMR and LC-MS analysis of crude product (6a-q).

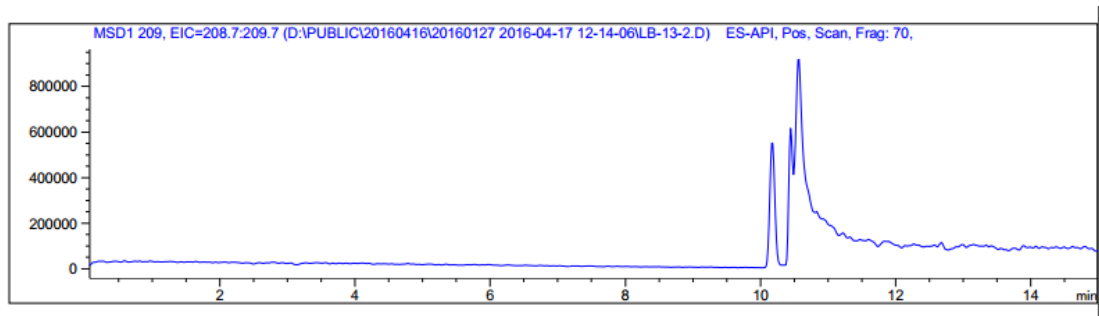
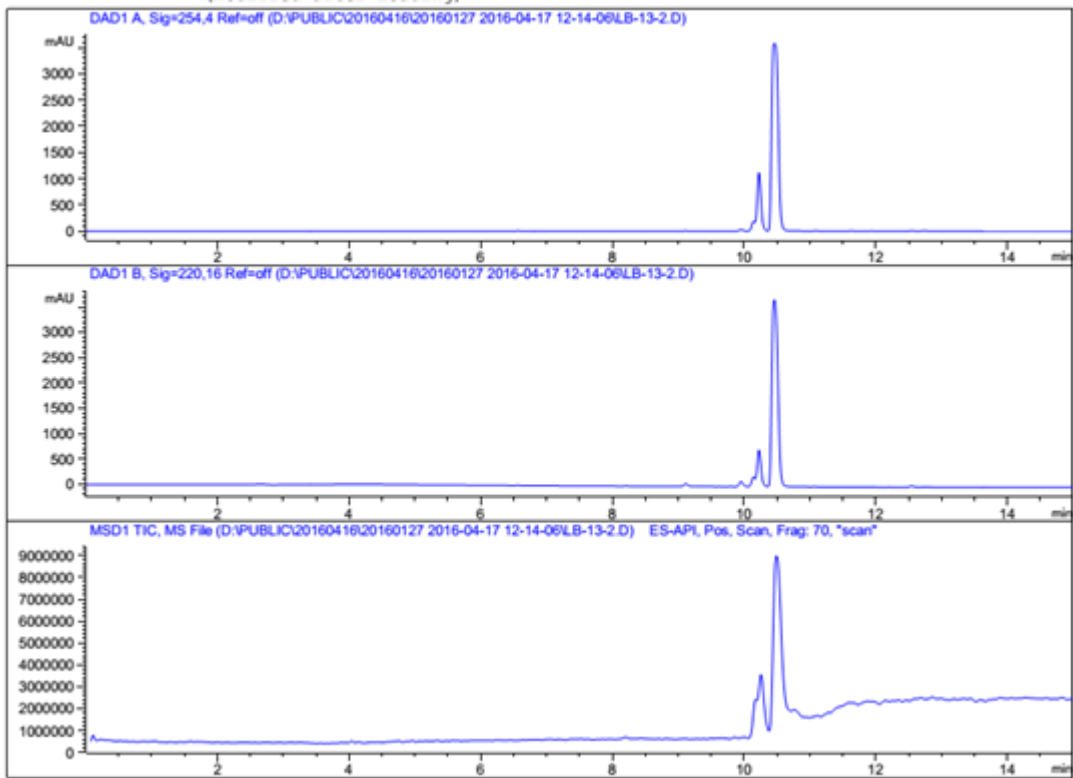


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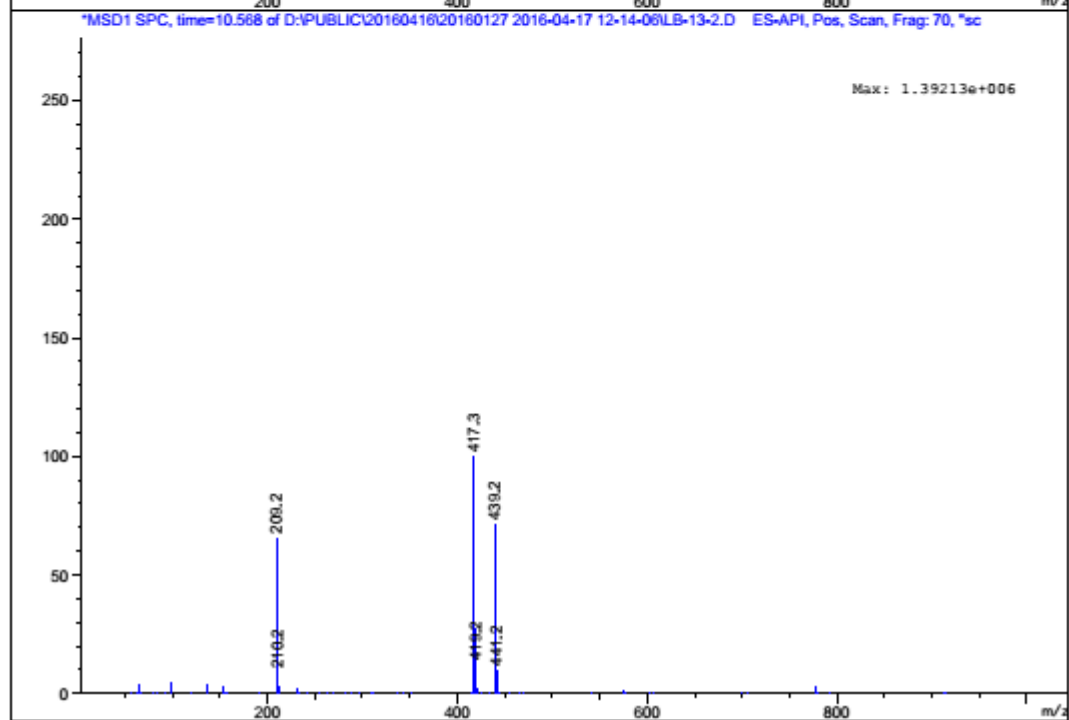
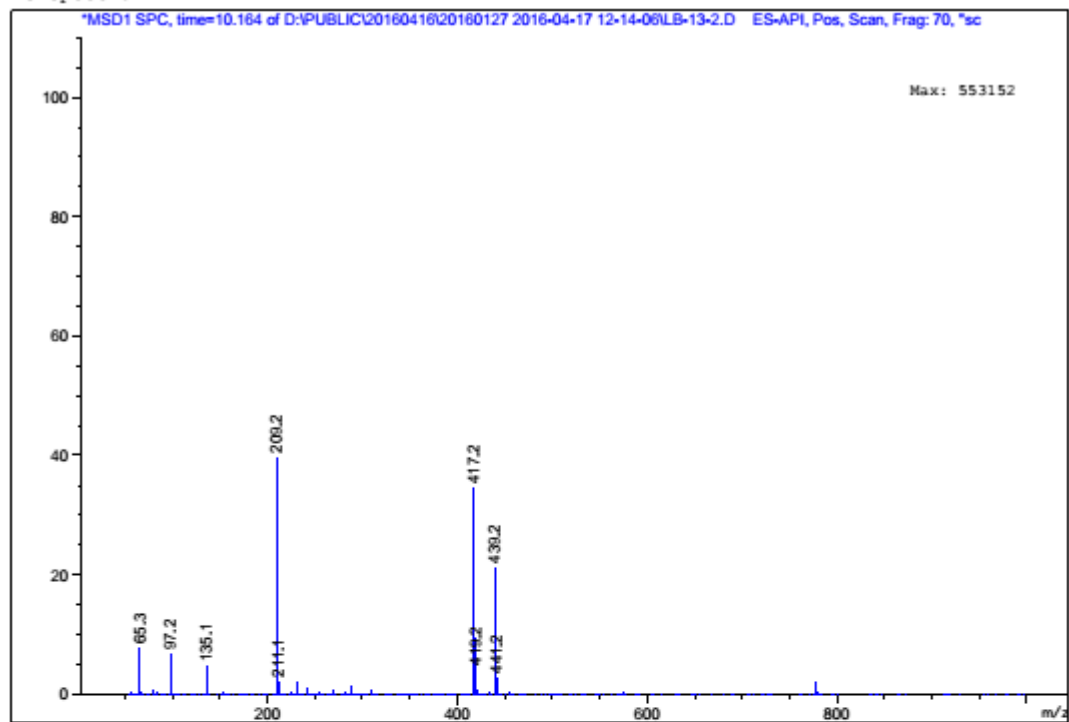
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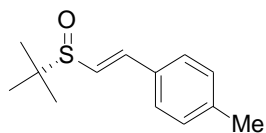


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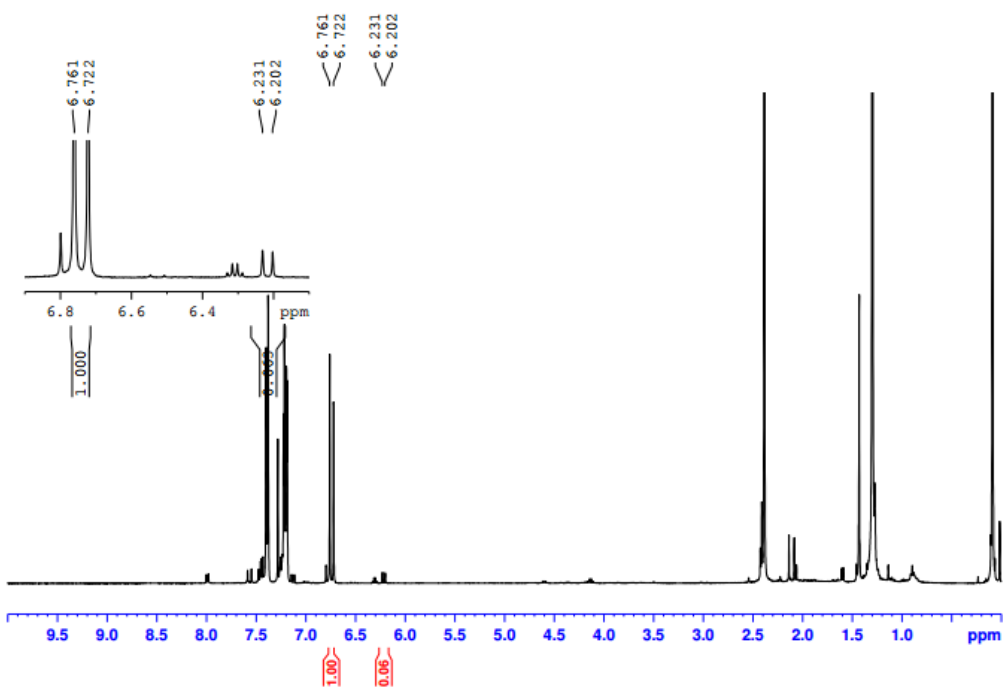
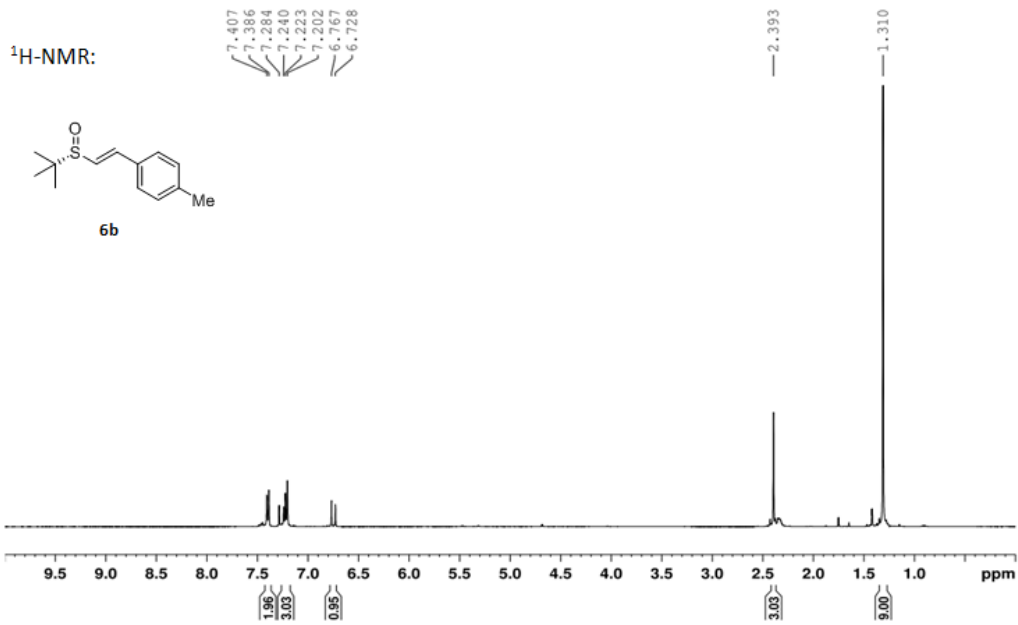


MS Spectrum

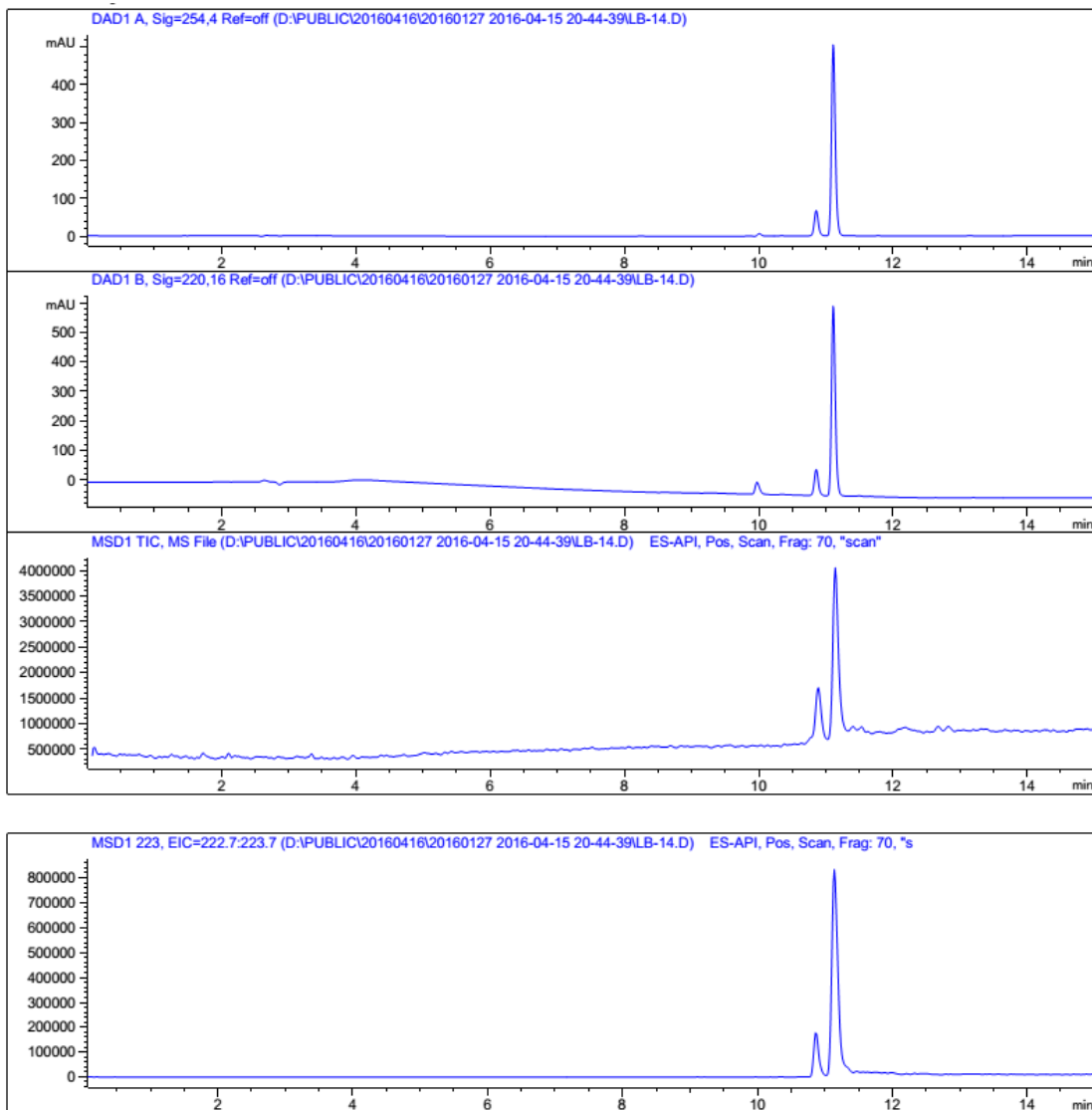




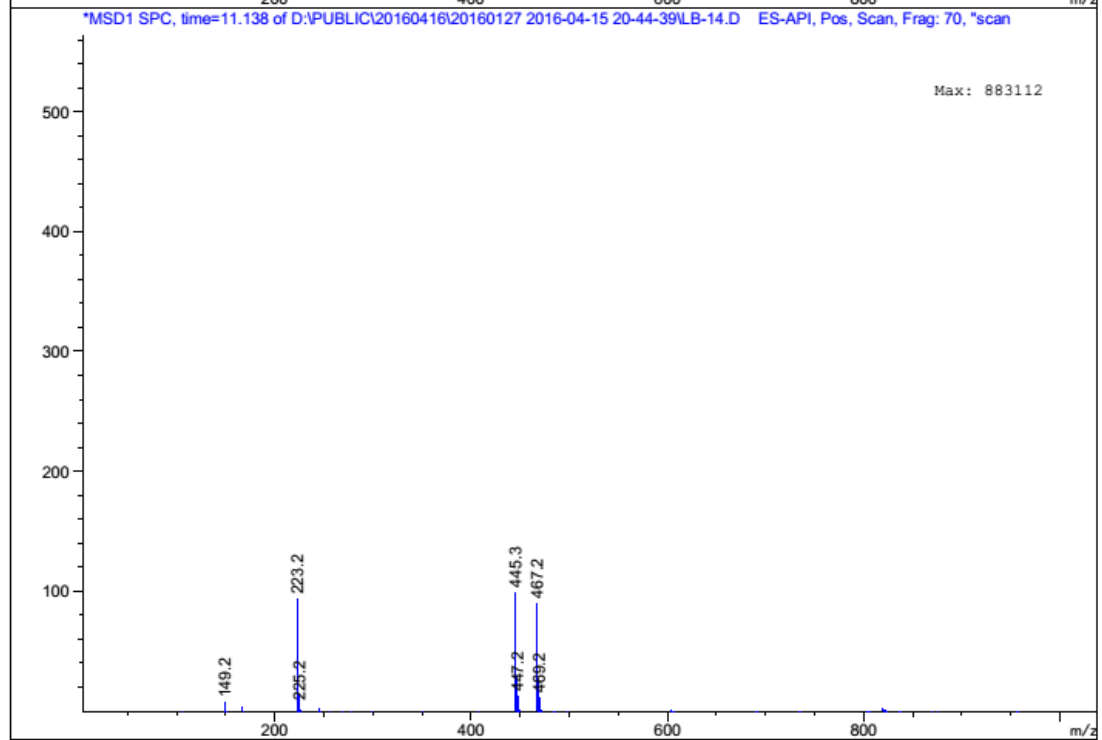
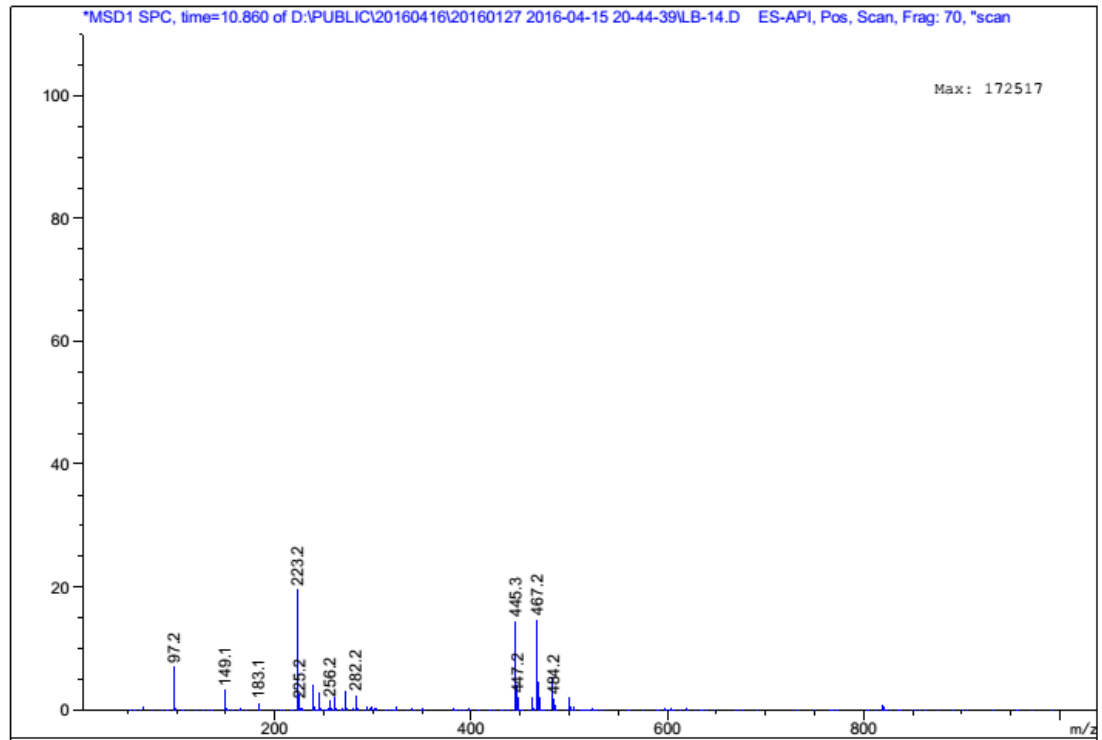
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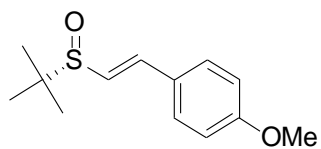


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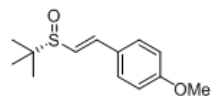
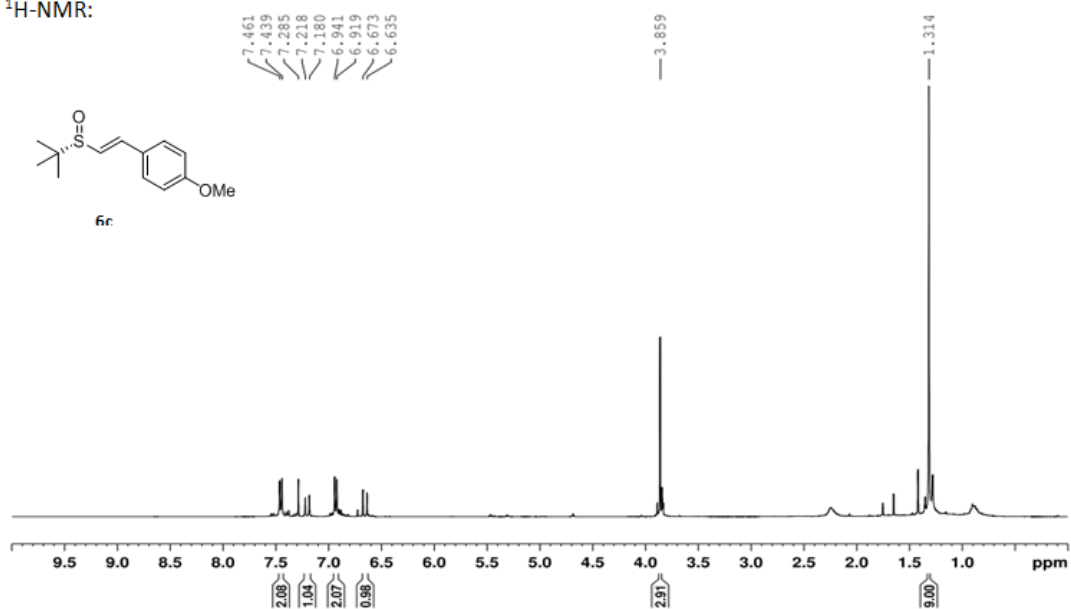
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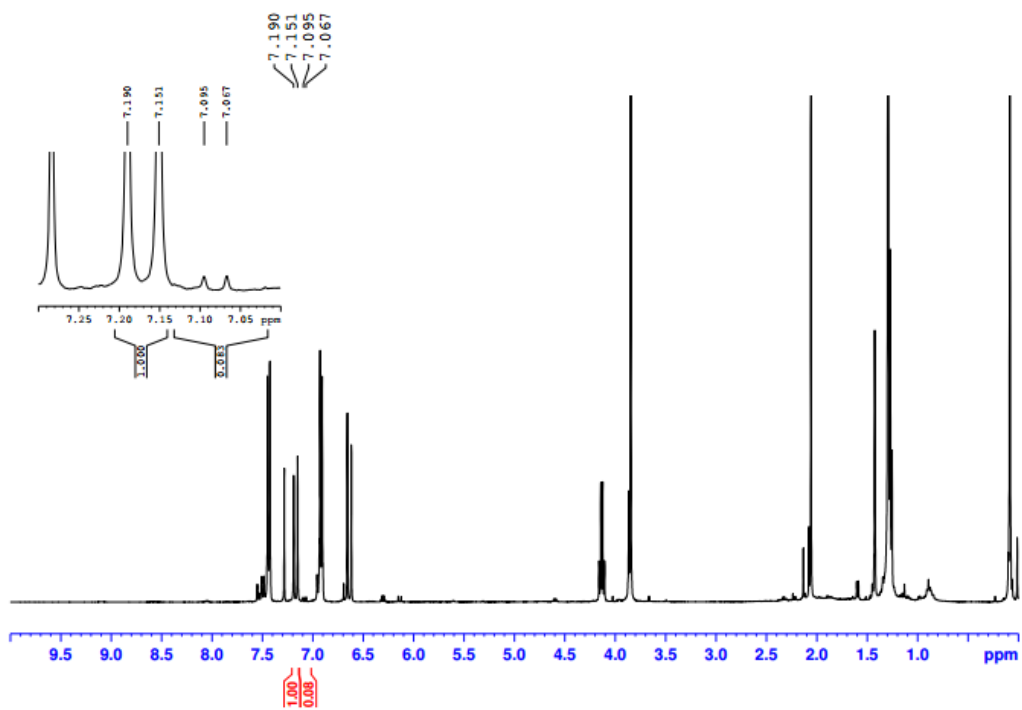


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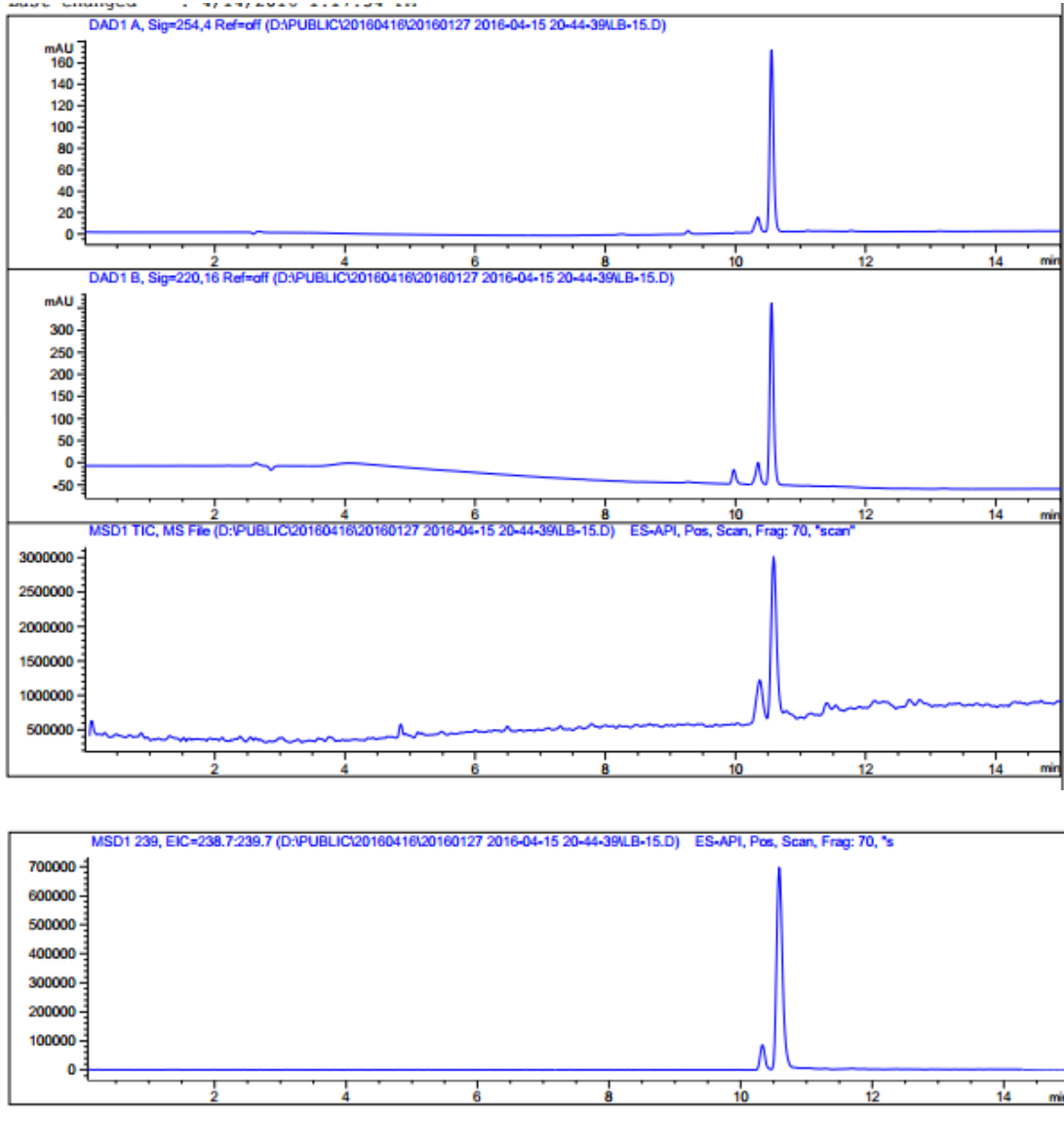
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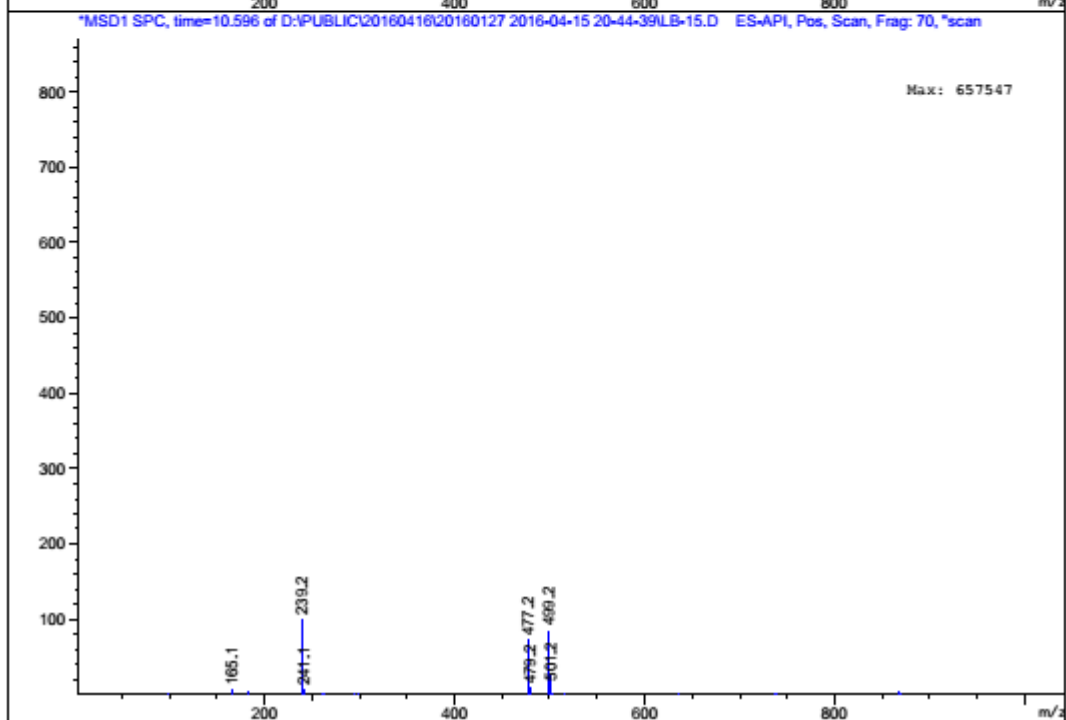
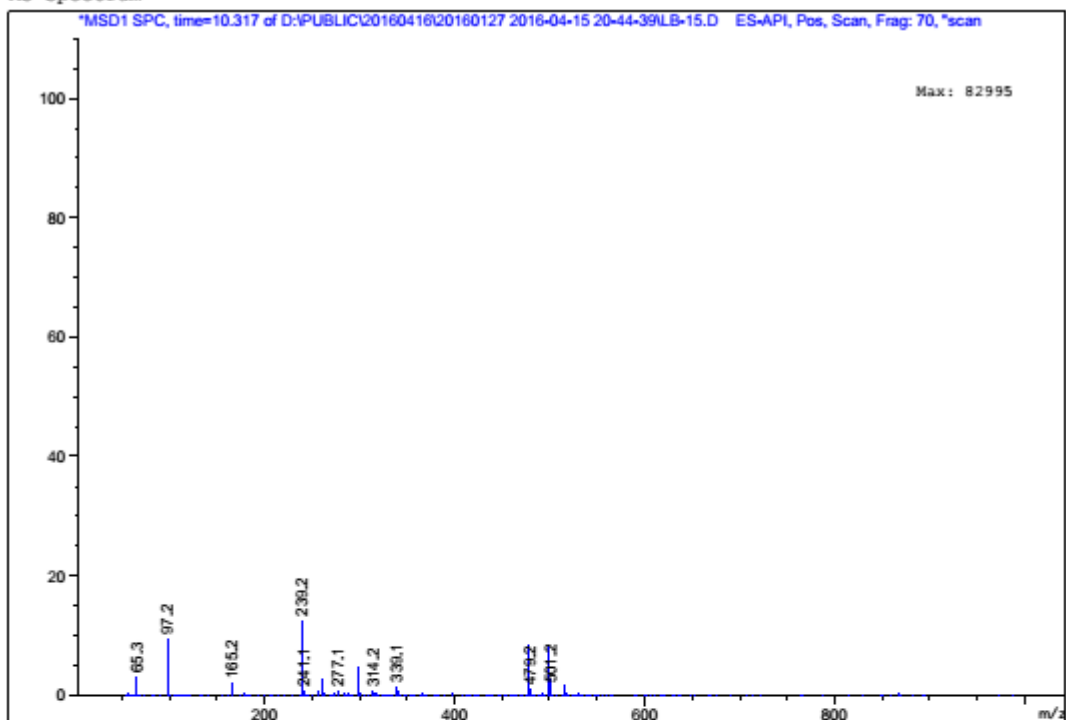
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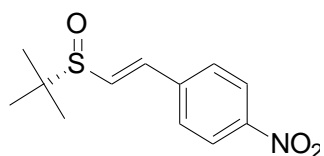


LC-MS spectrum:



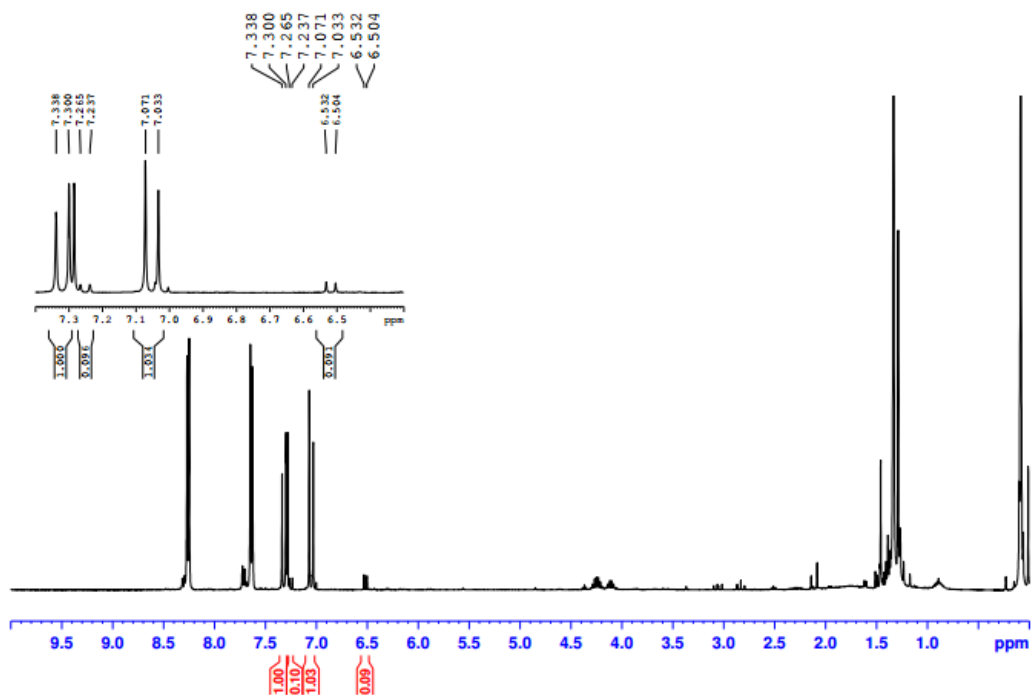
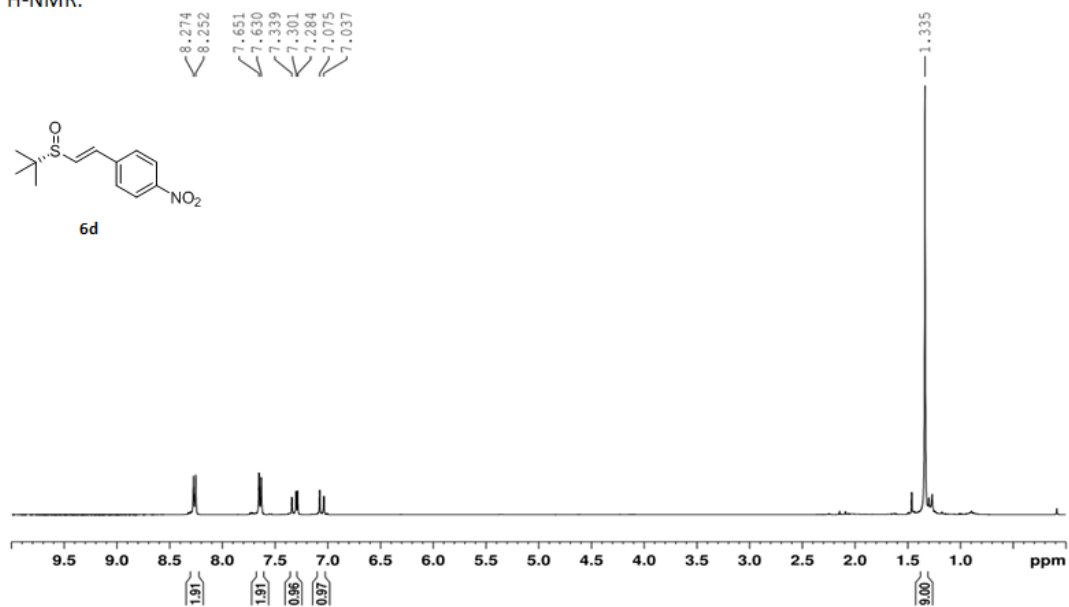
MS Spectrum



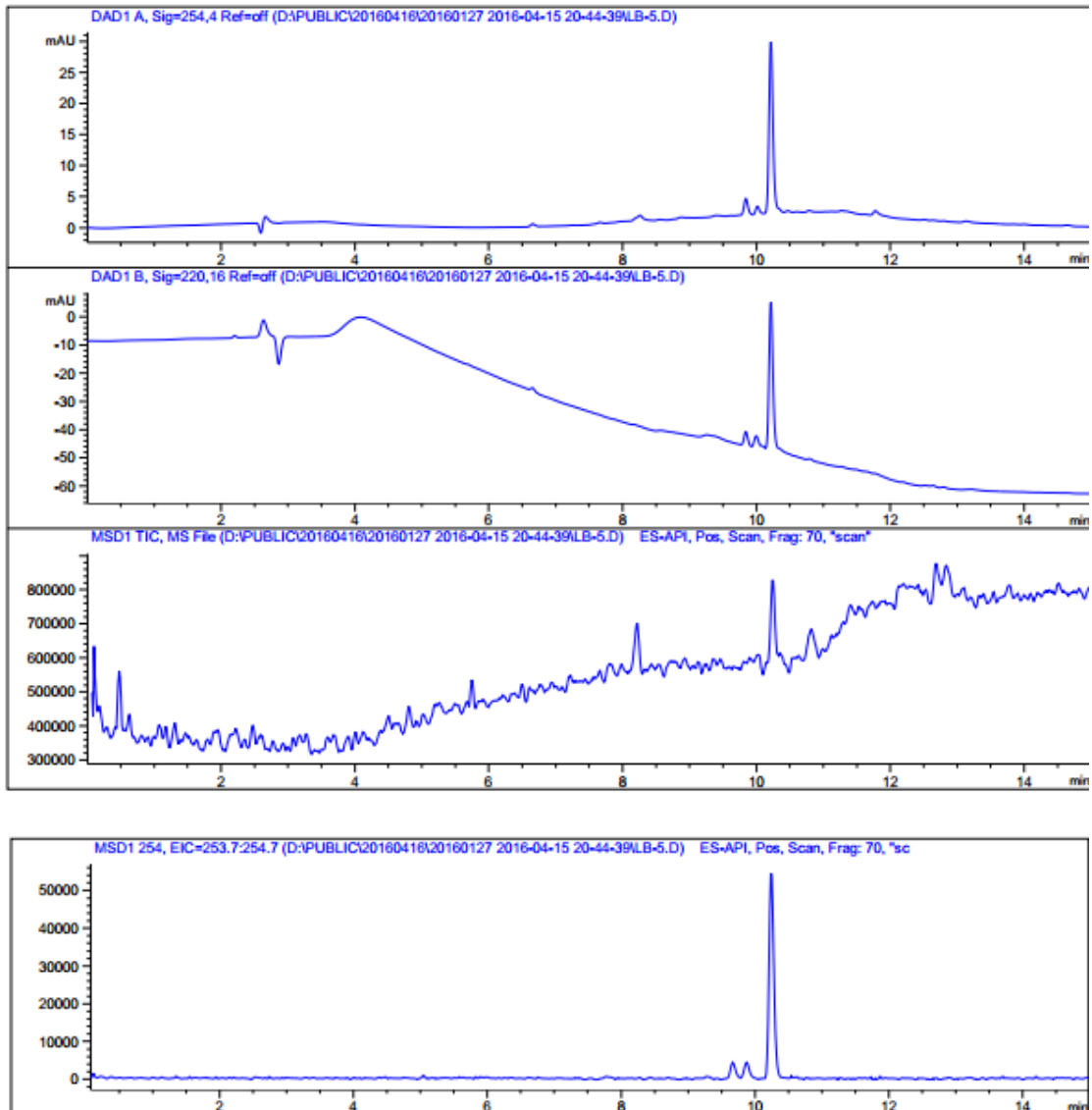


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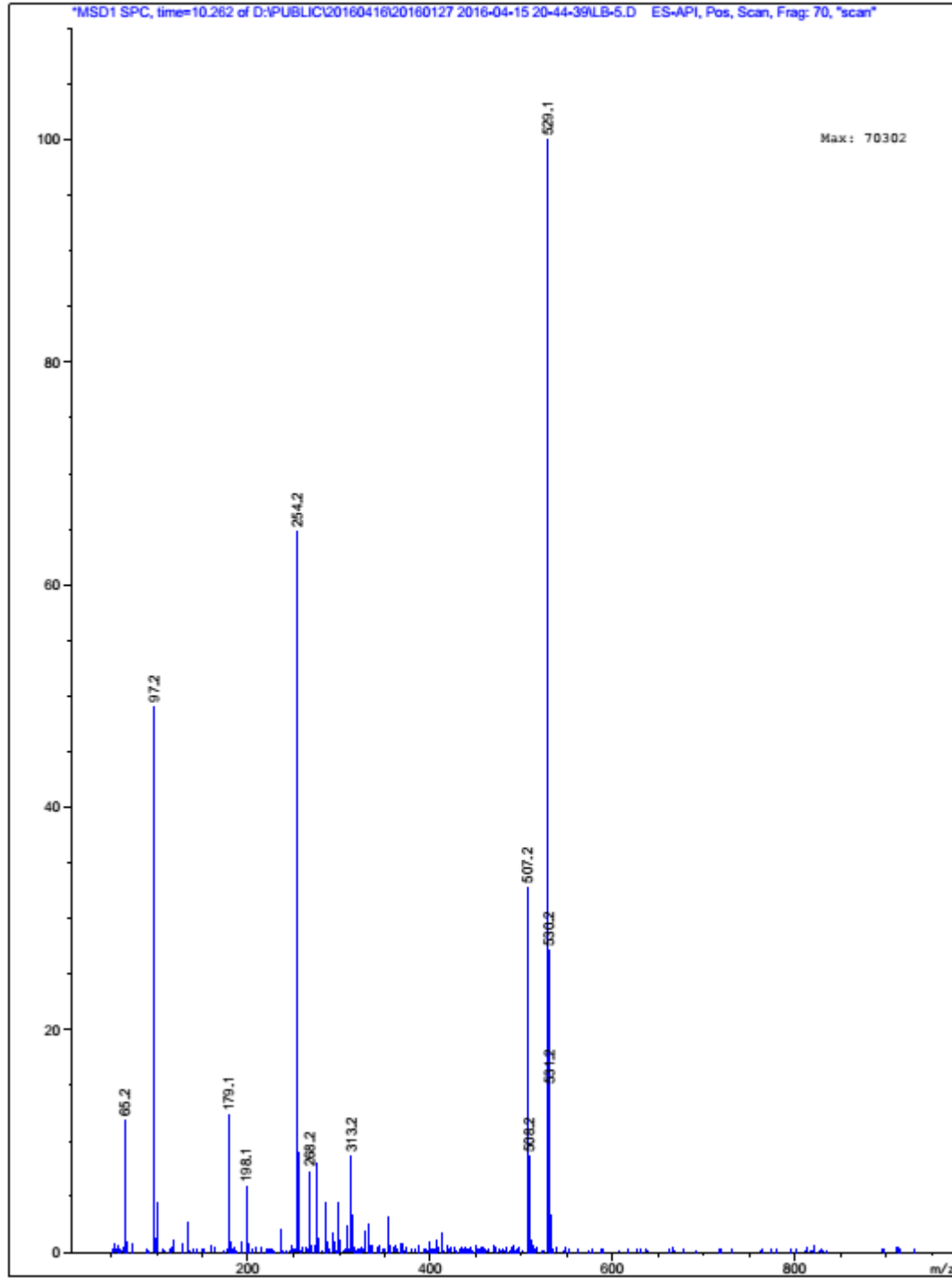
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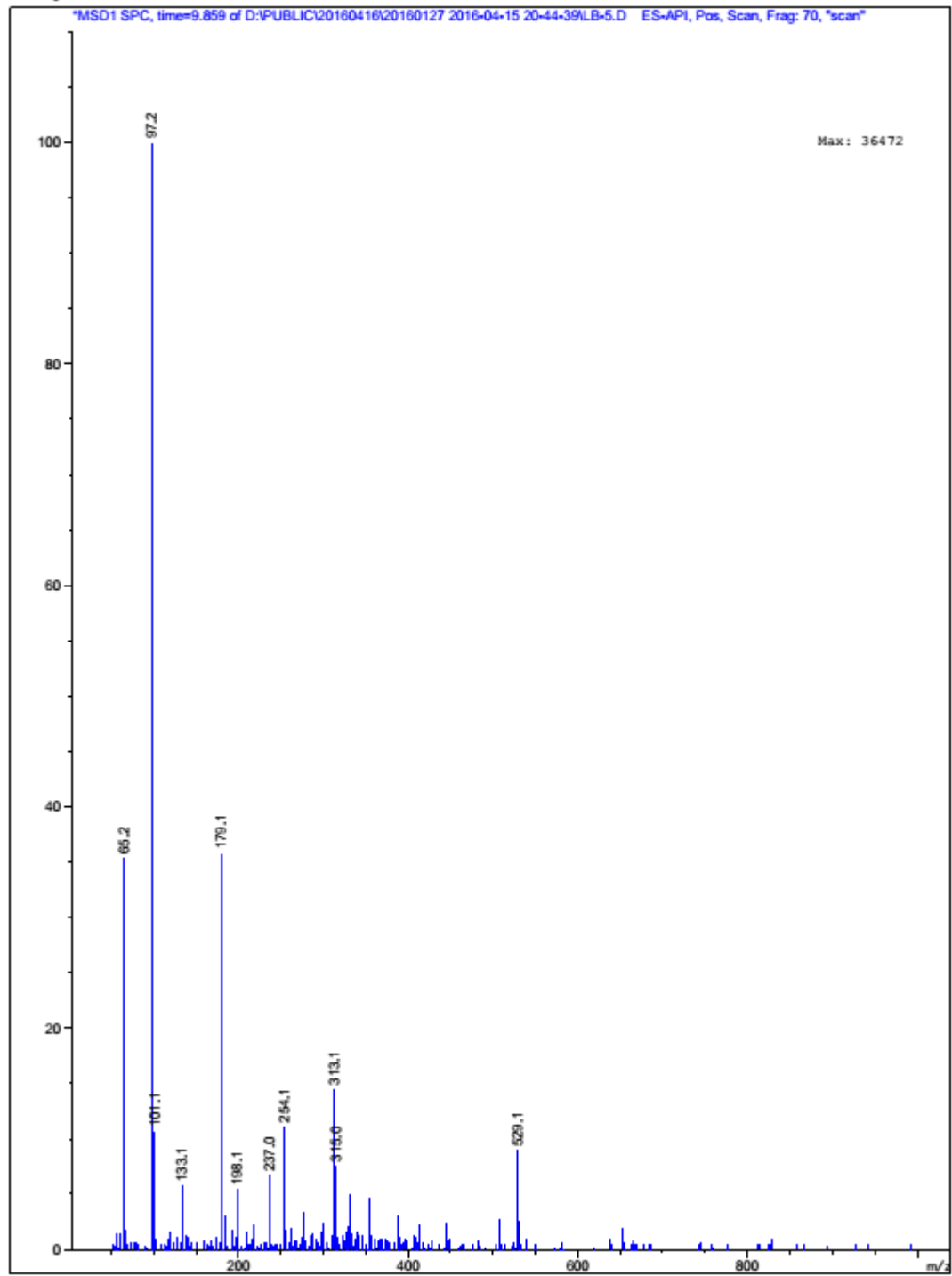
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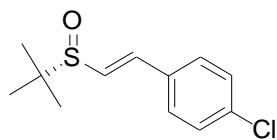


MS Spectrum



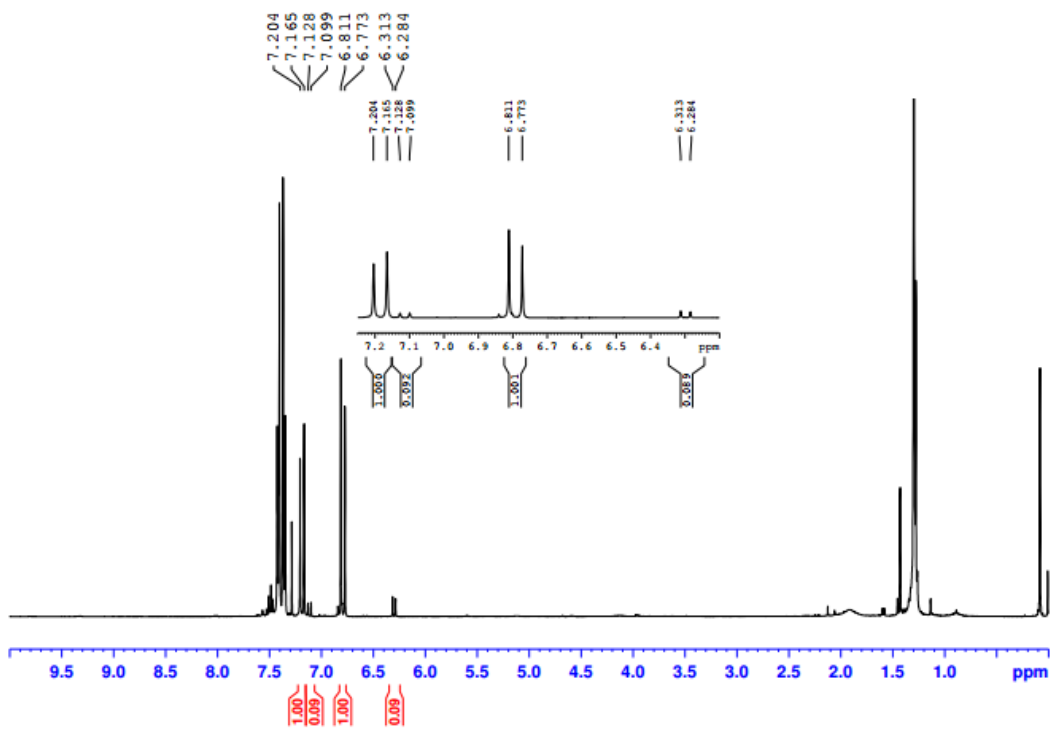
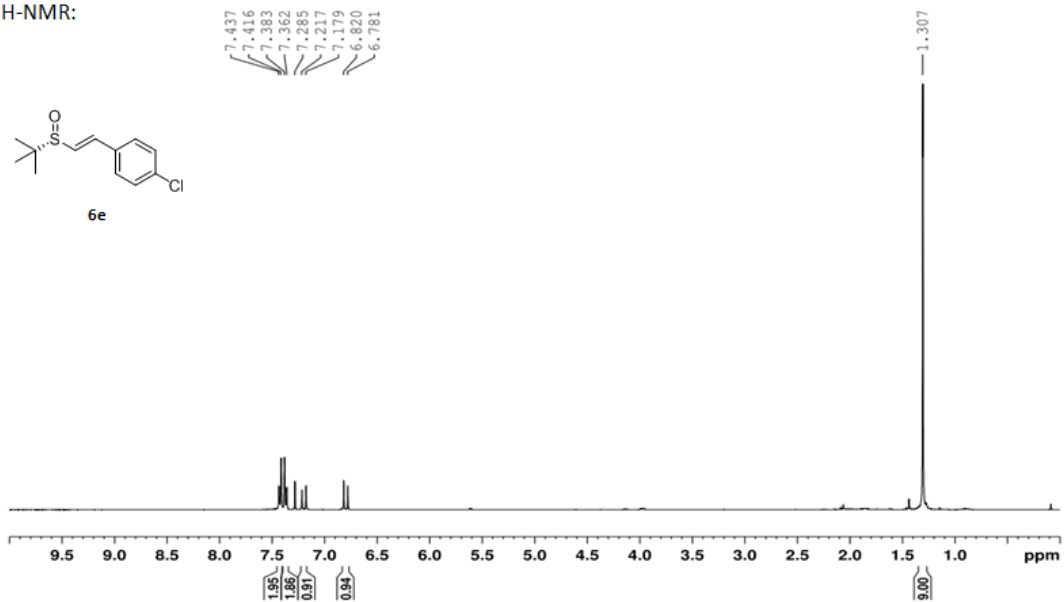
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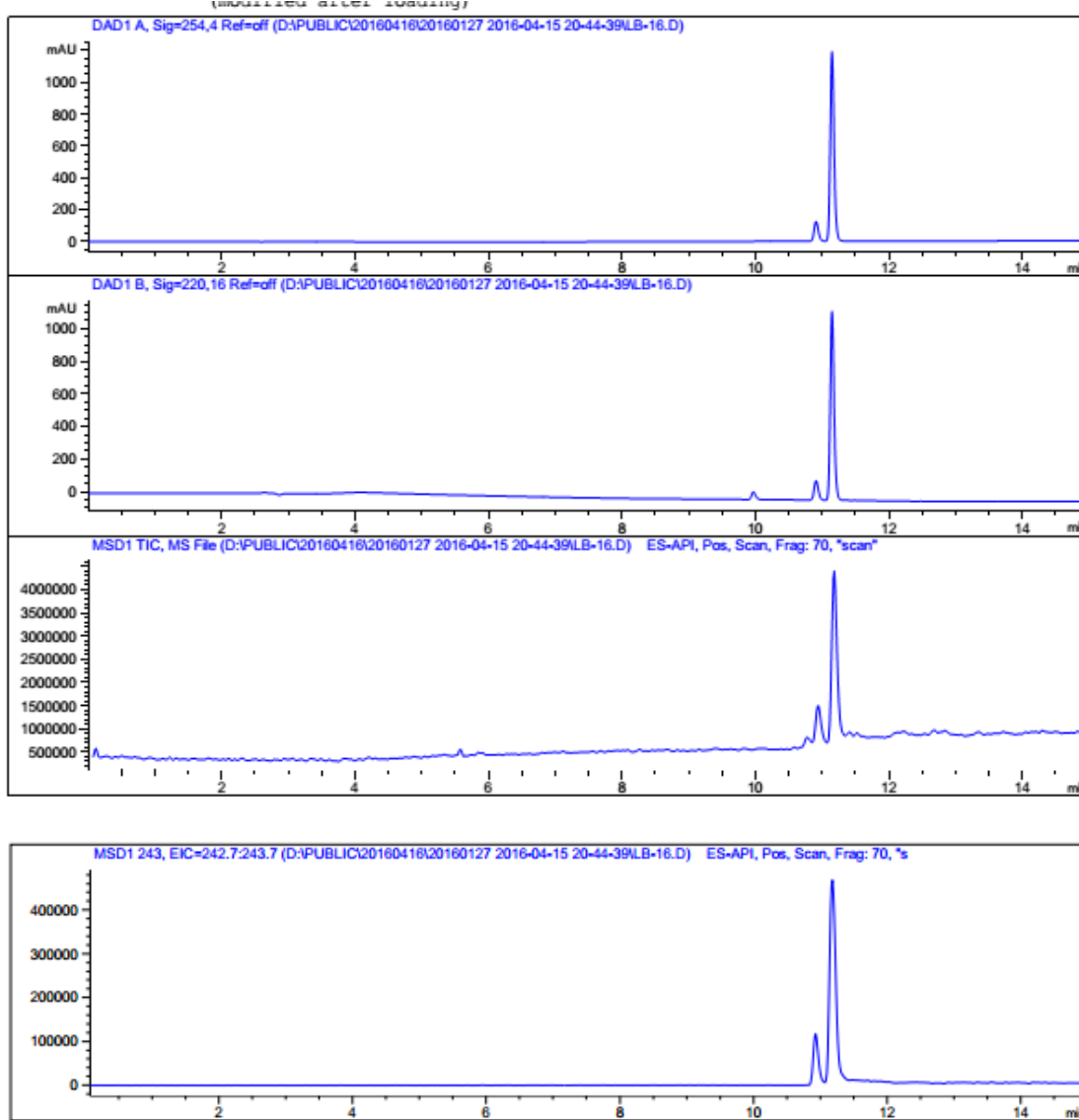


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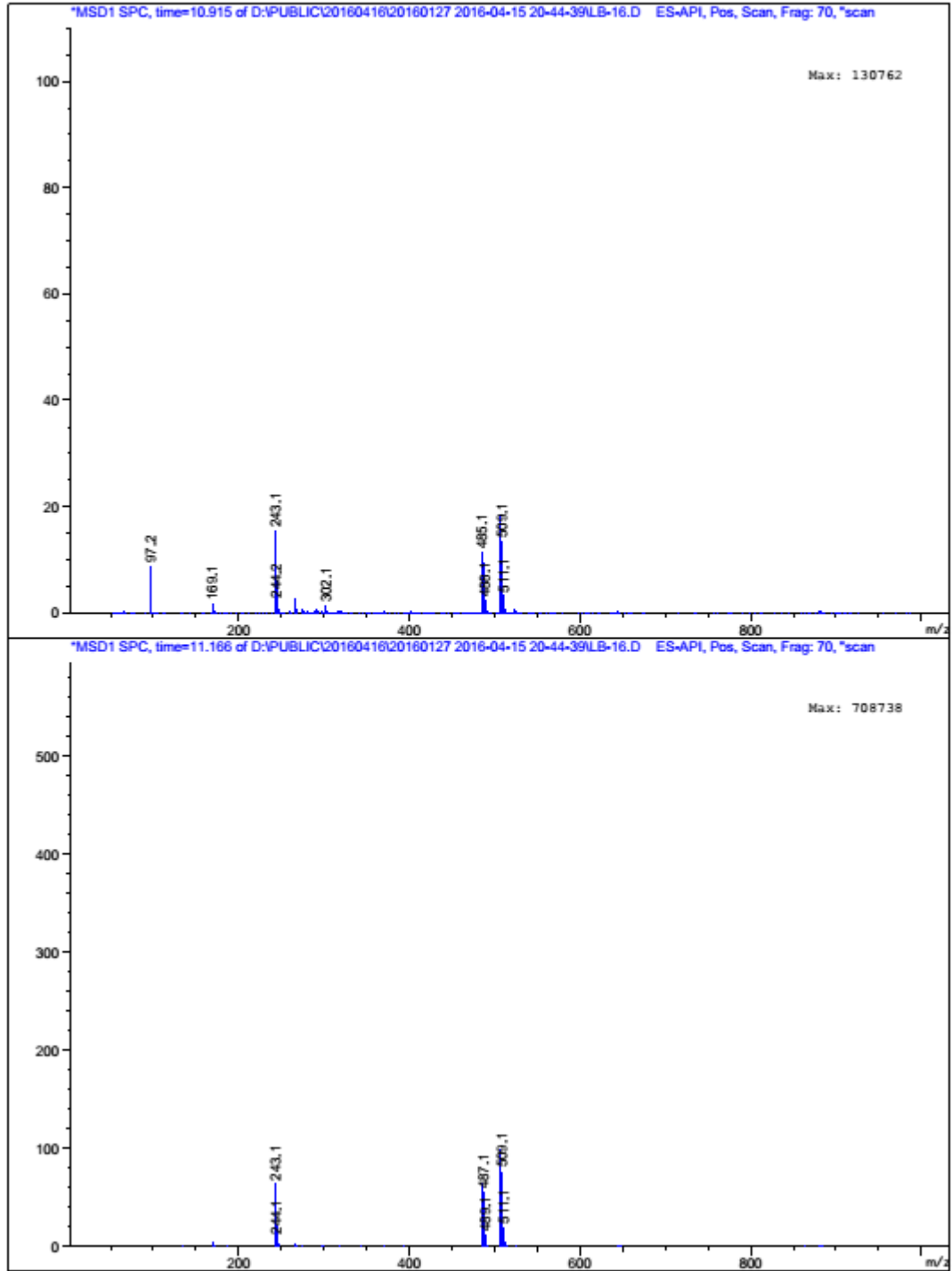
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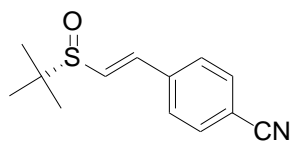


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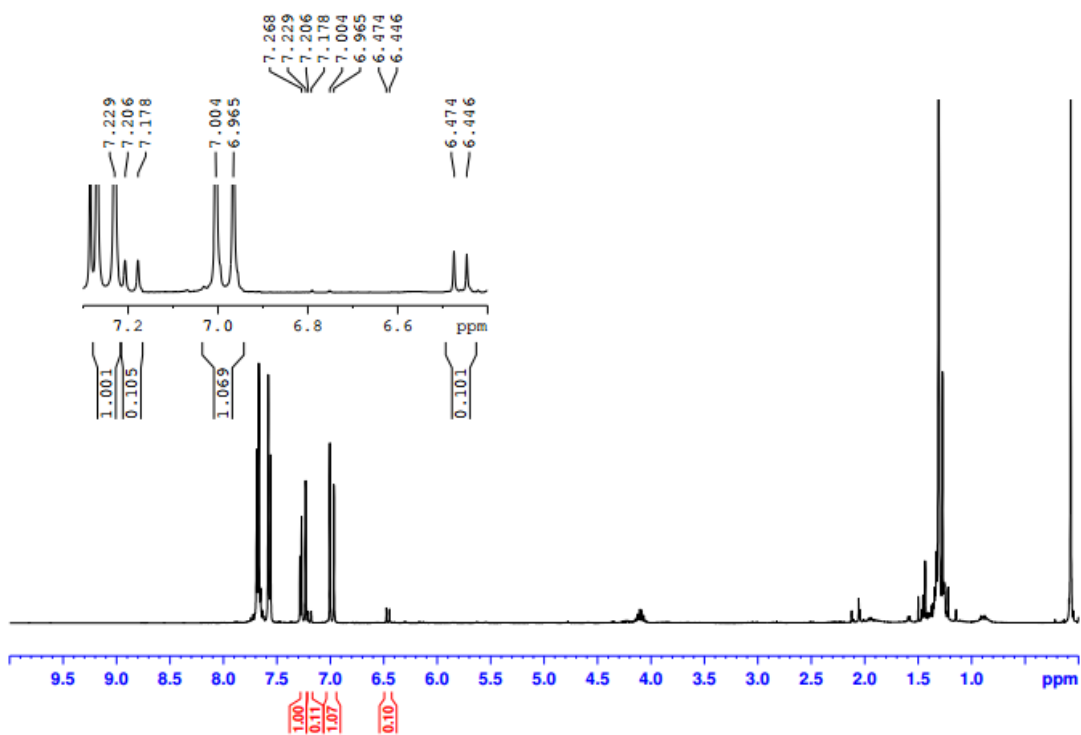
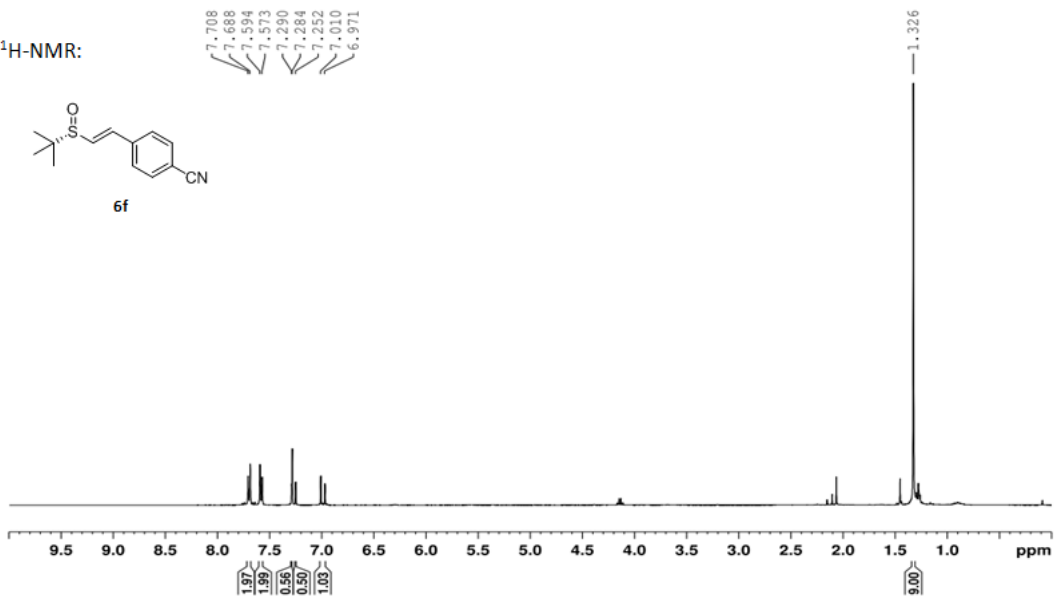
MS Spectrum



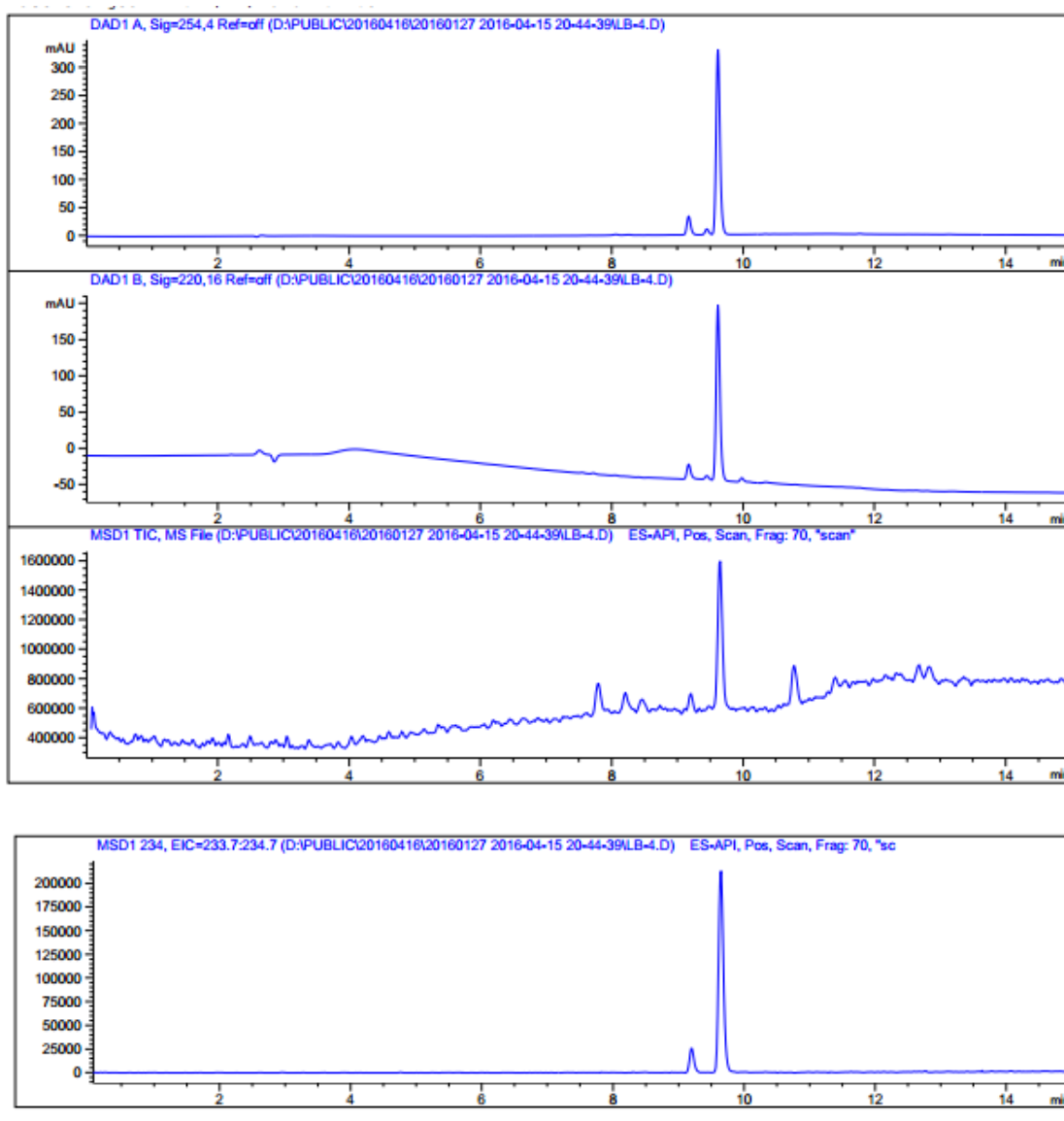


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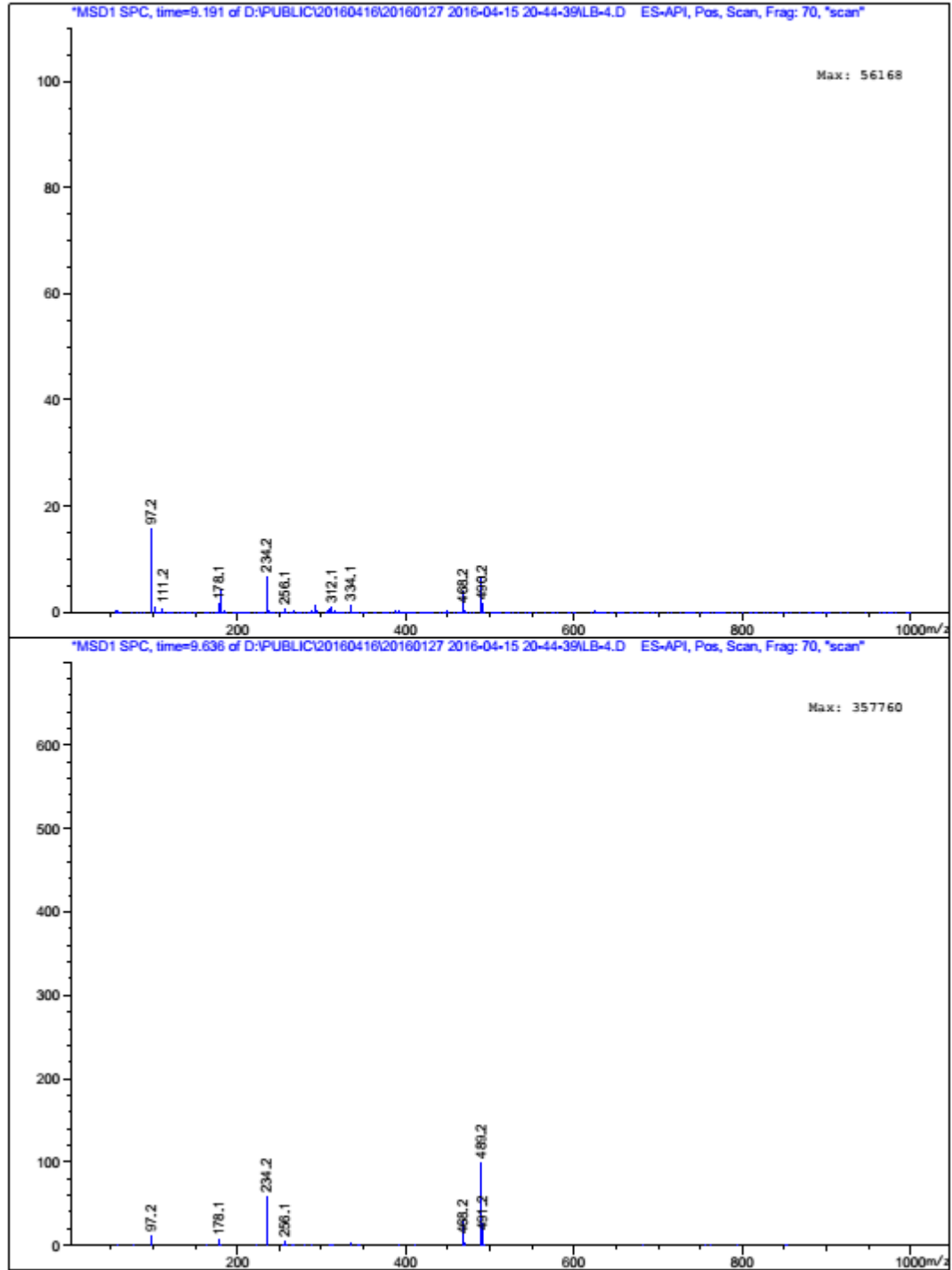
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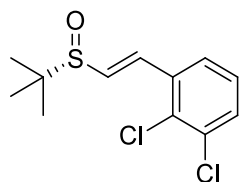


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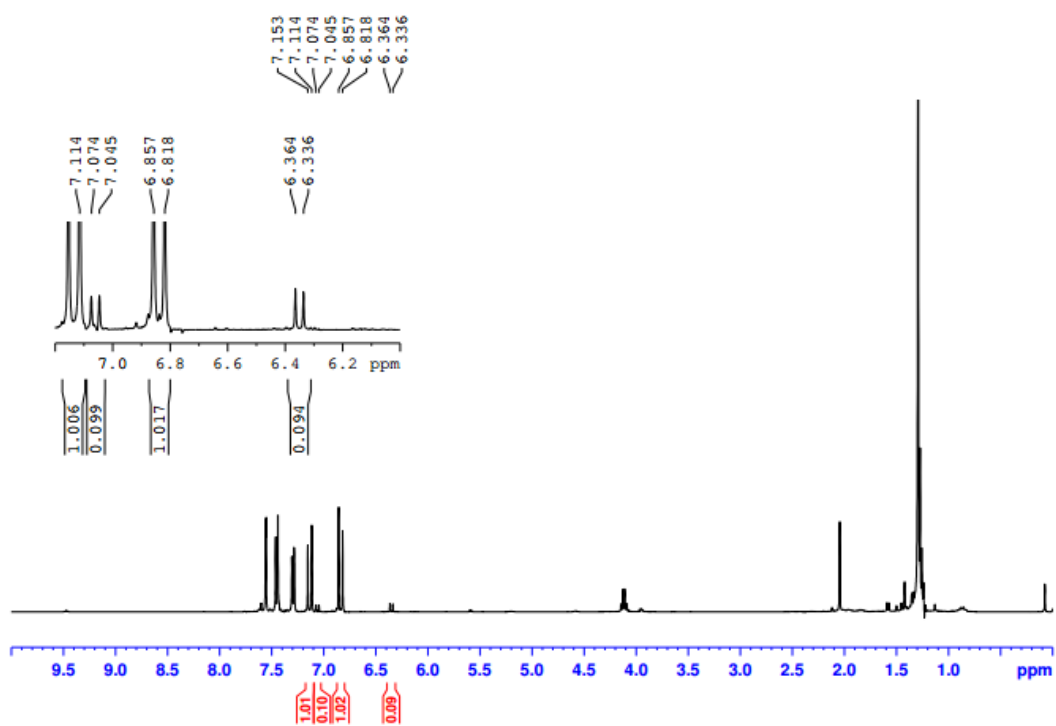
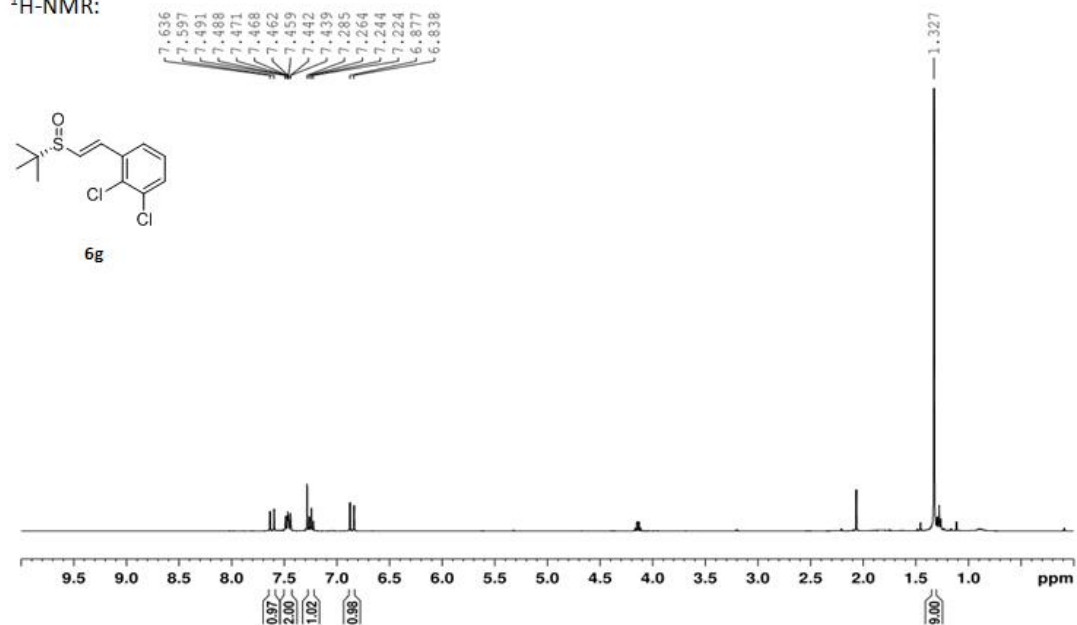
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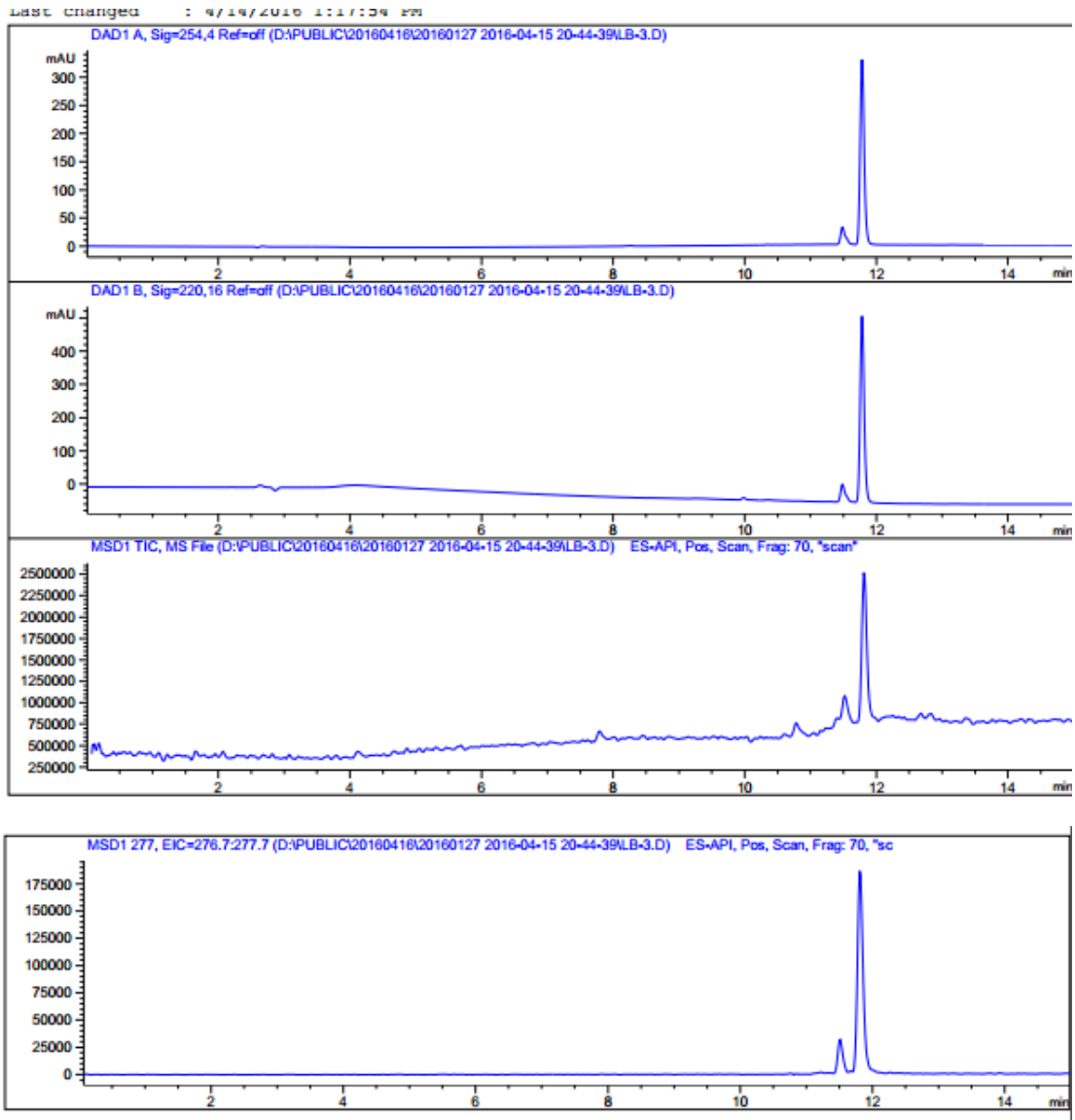


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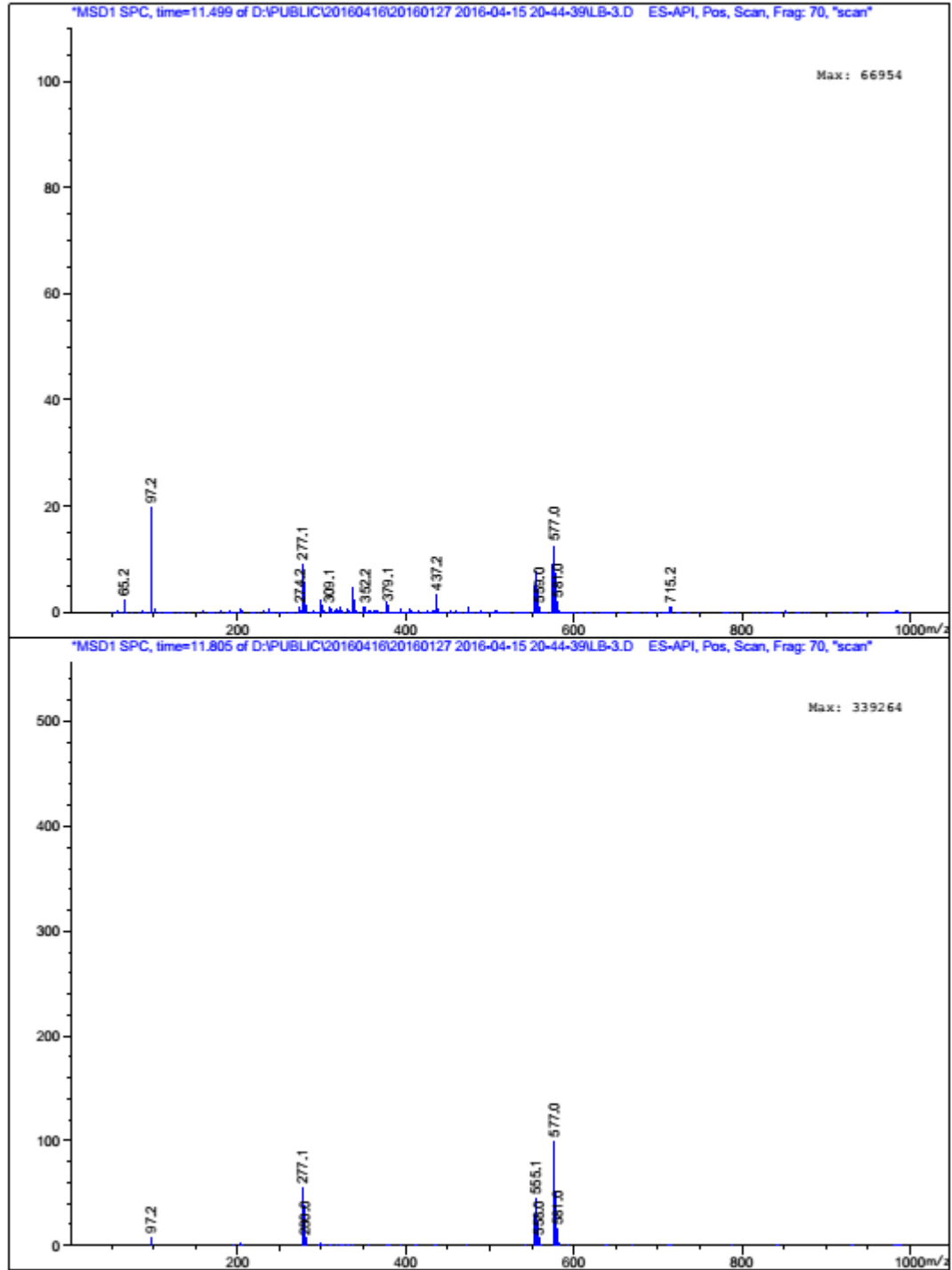
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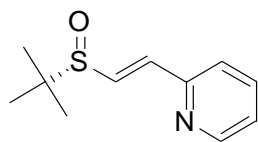


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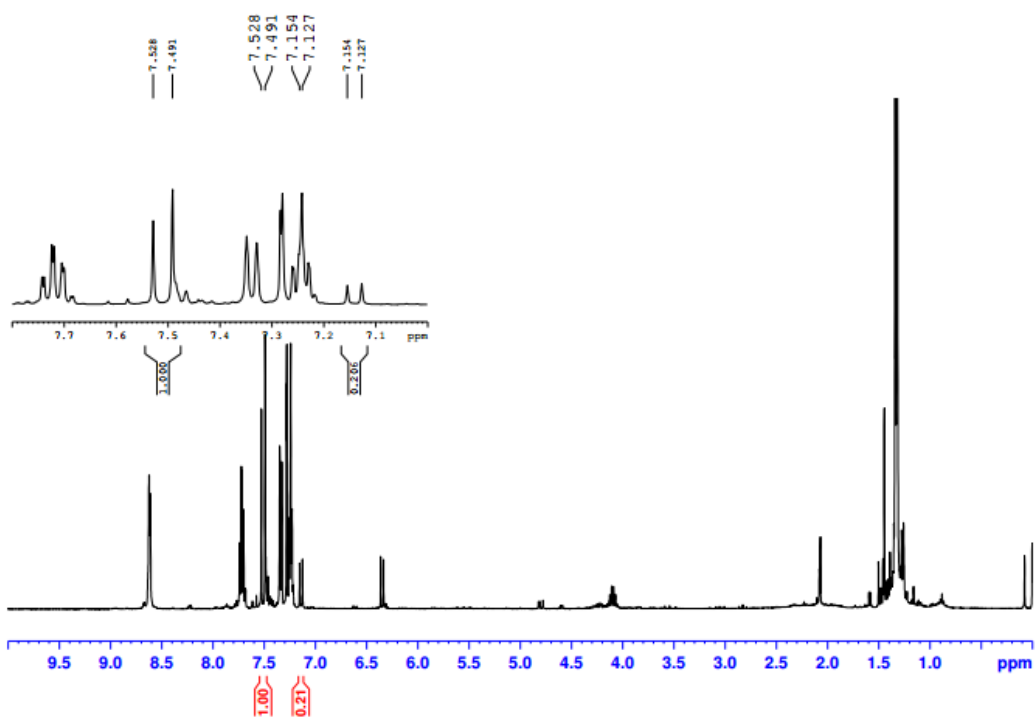
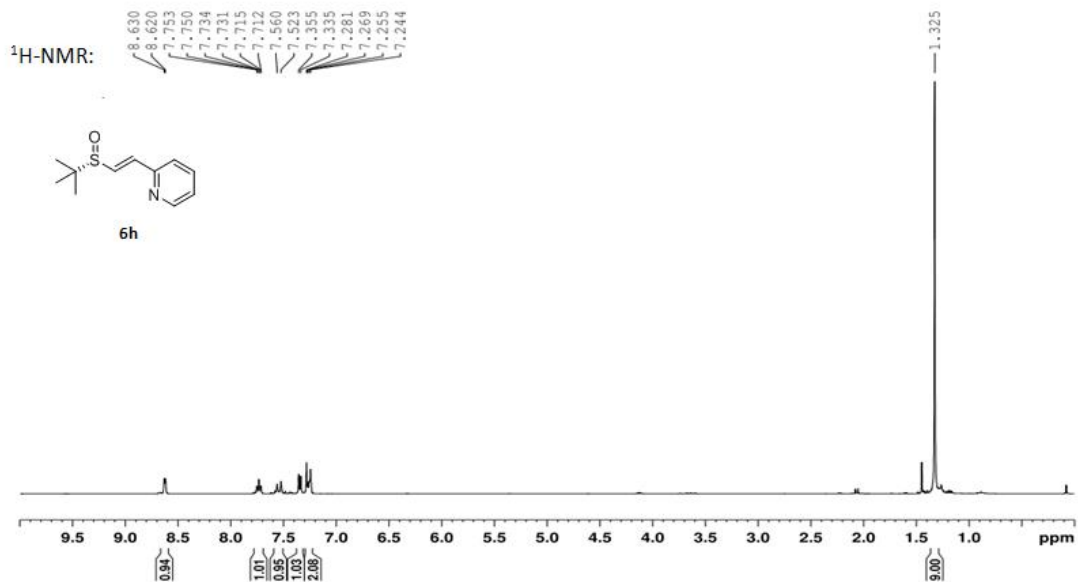


MS Spectrum

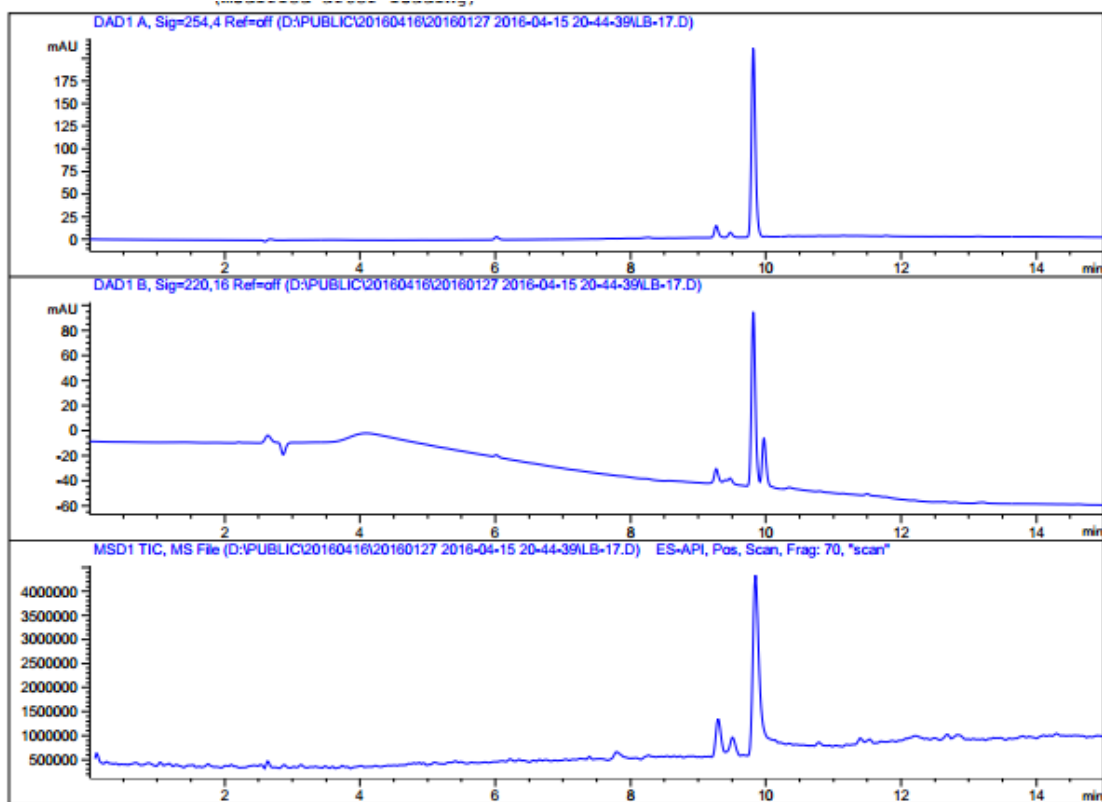




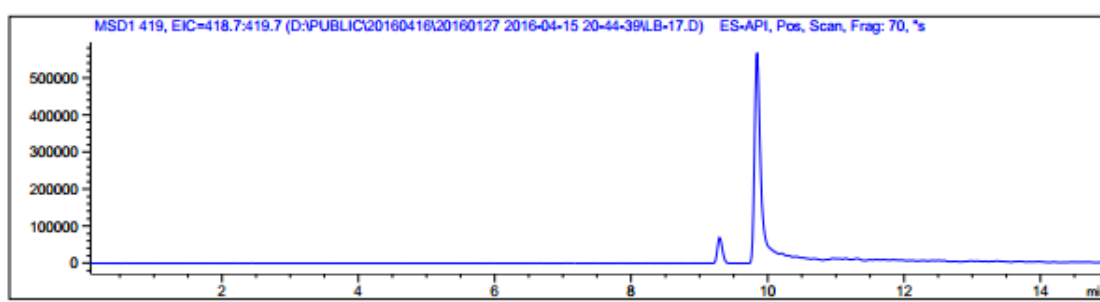
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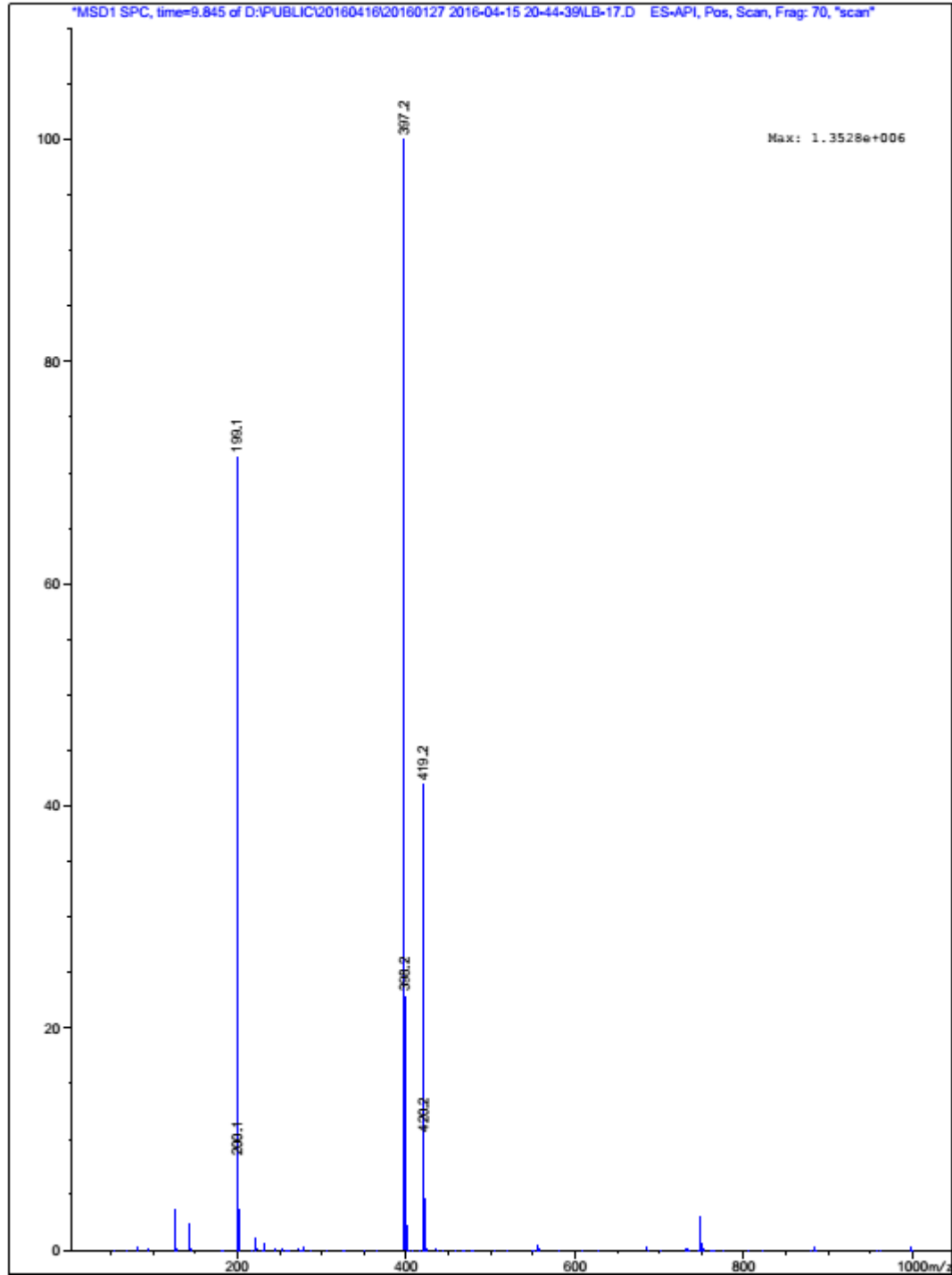
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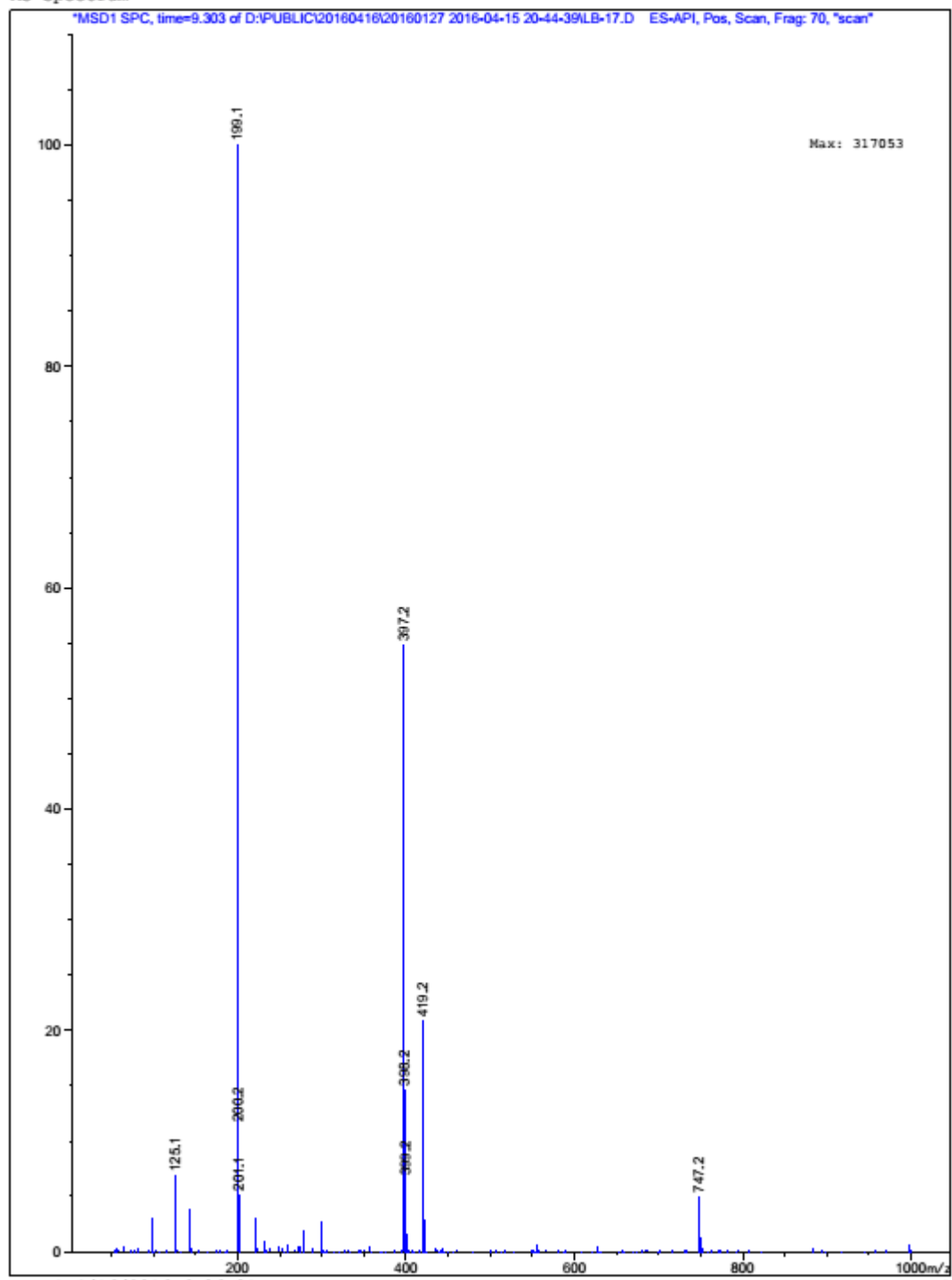
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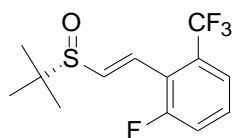


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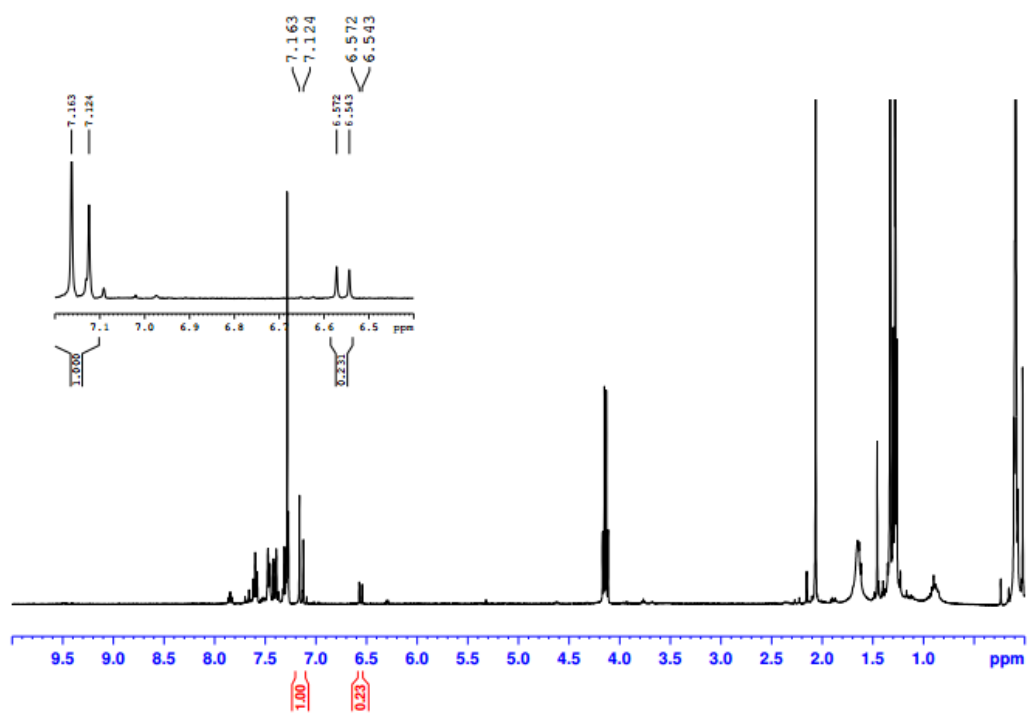
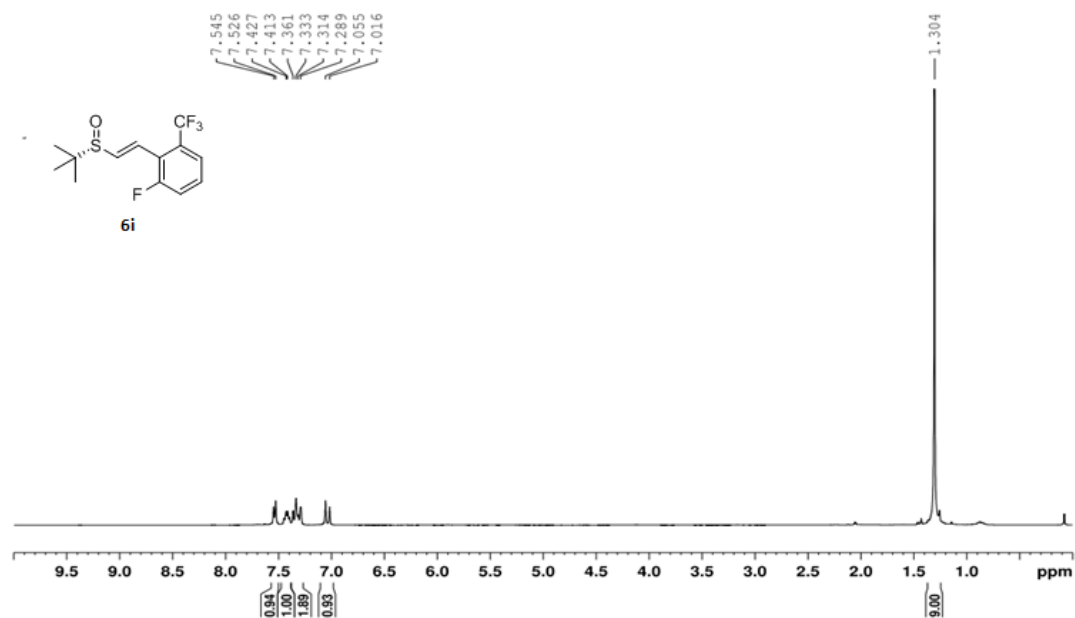
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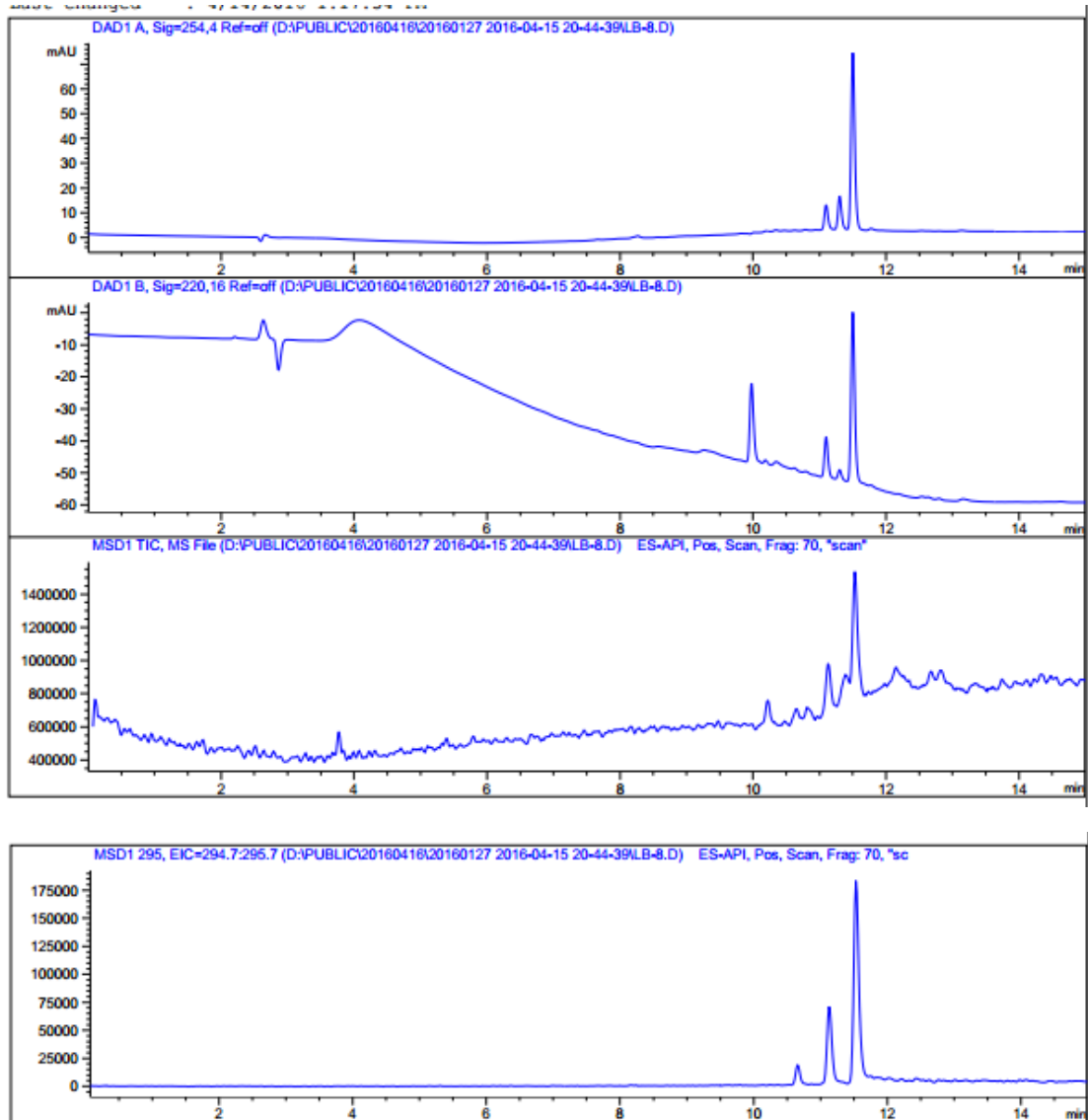


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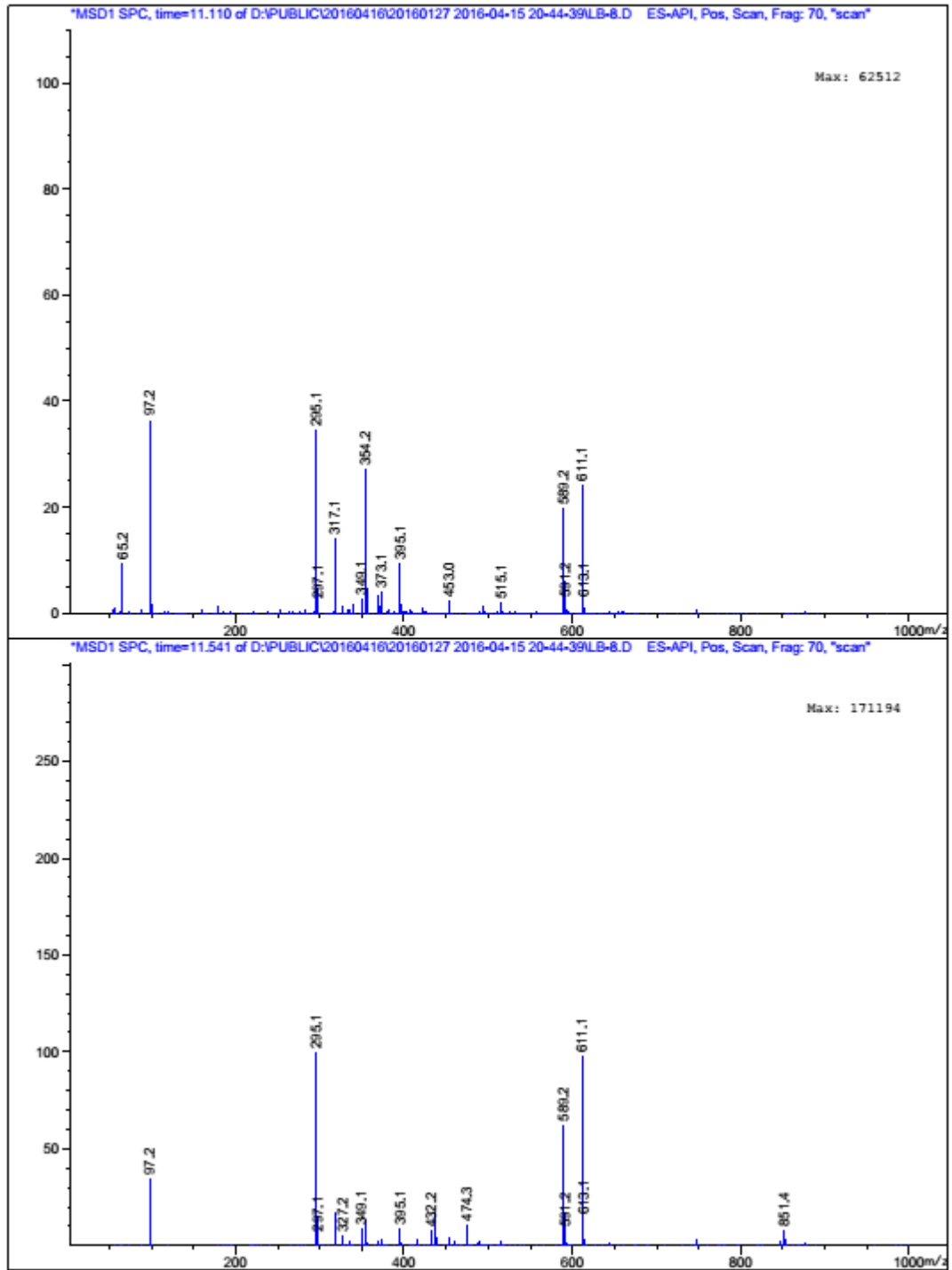
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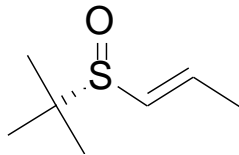


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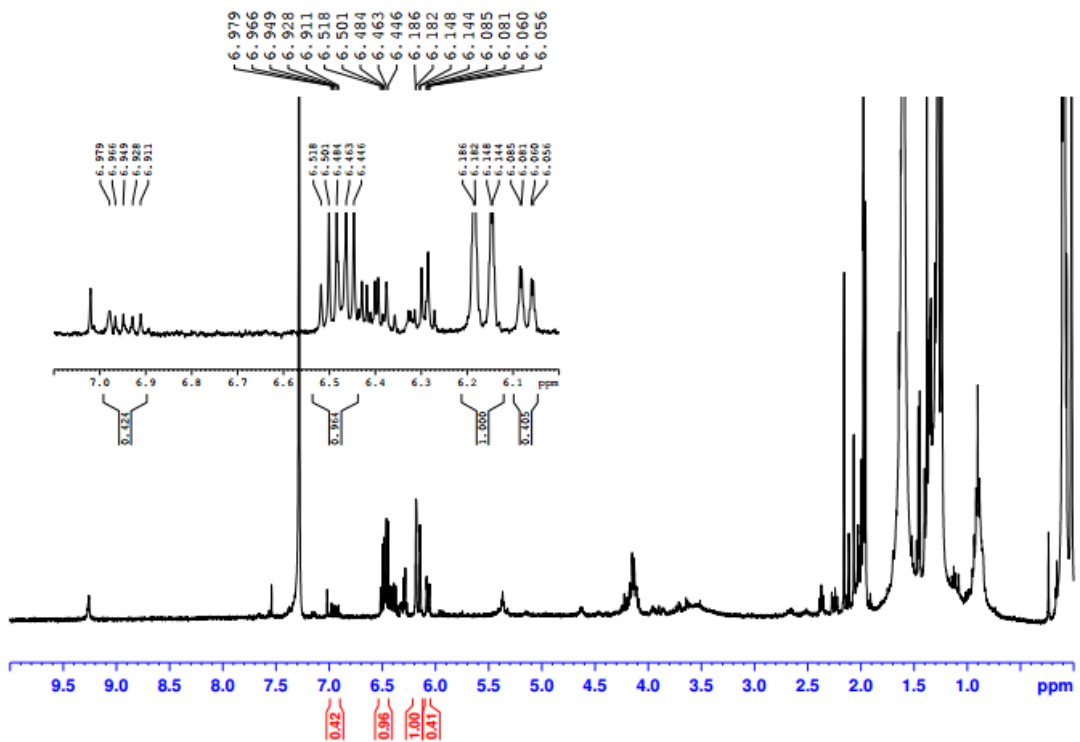
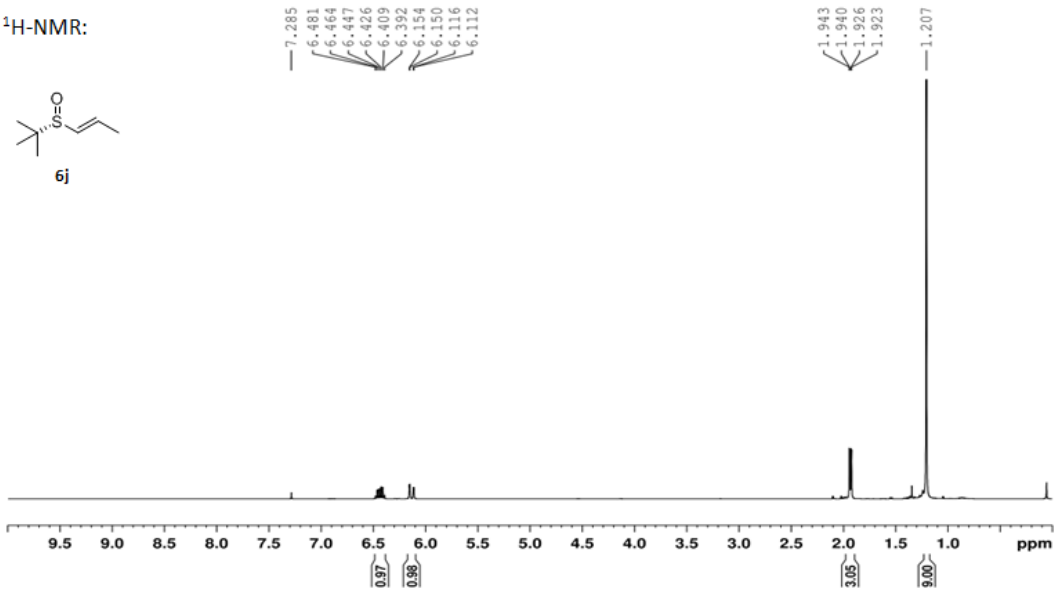
MS Spectrum



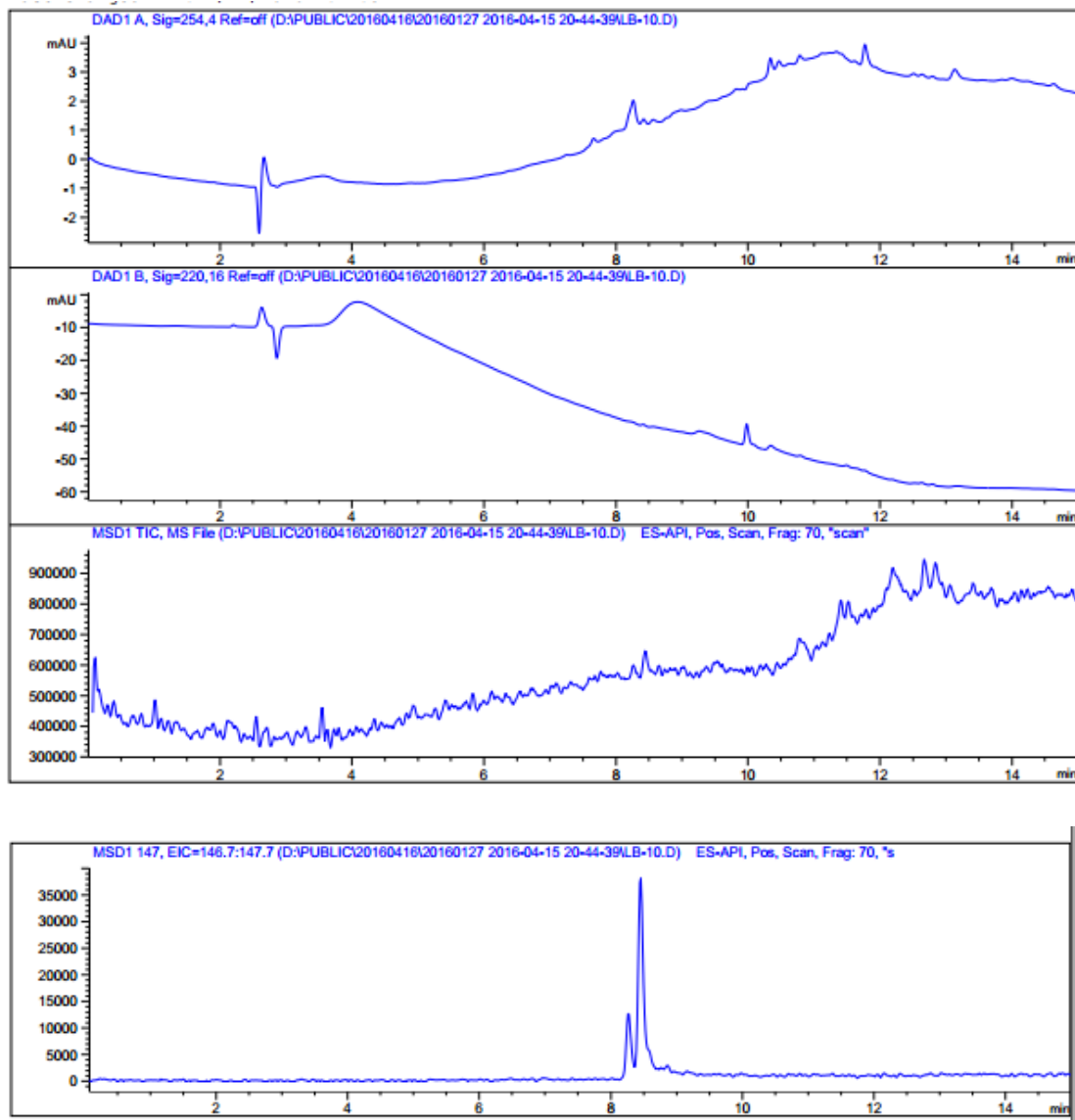


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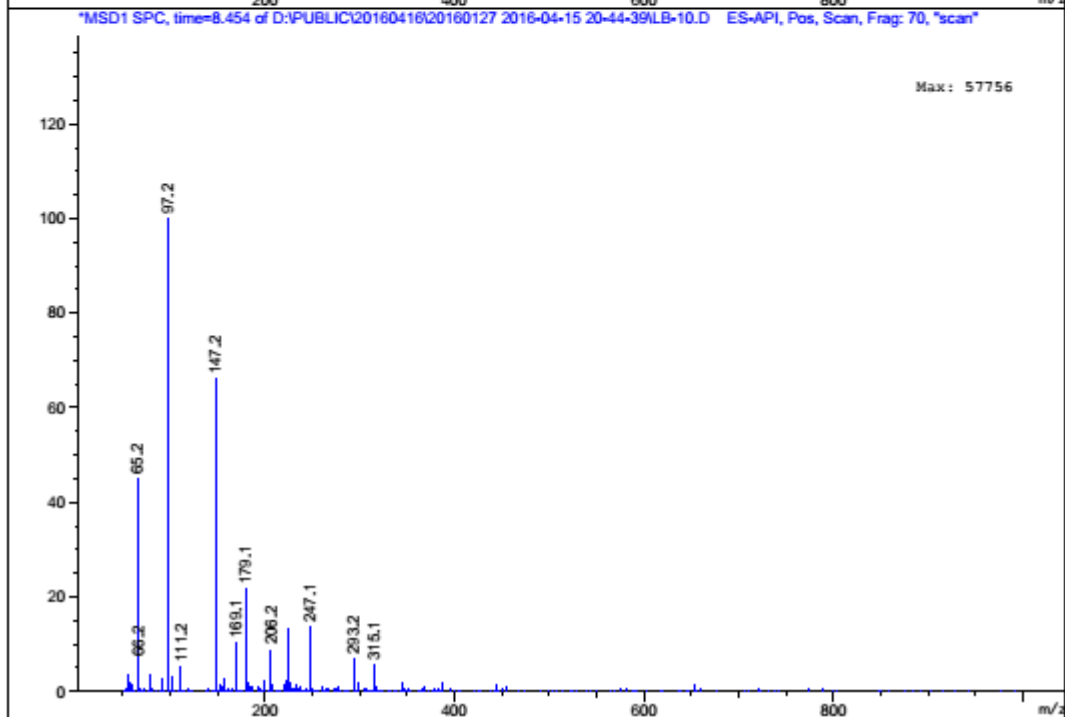
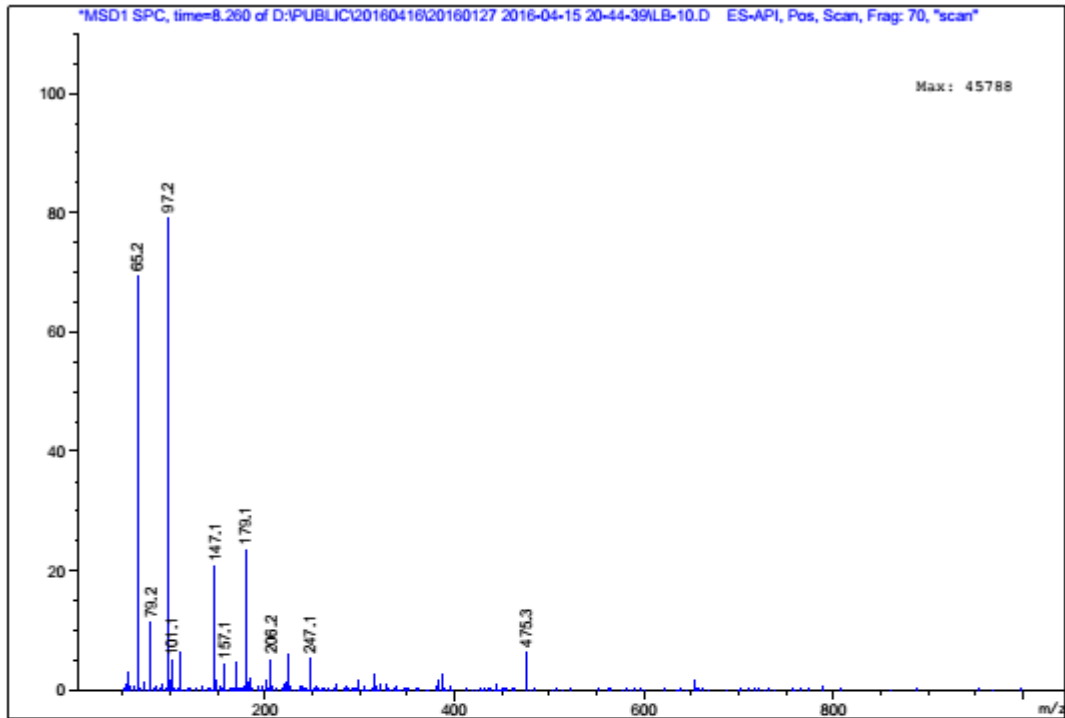
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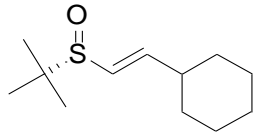


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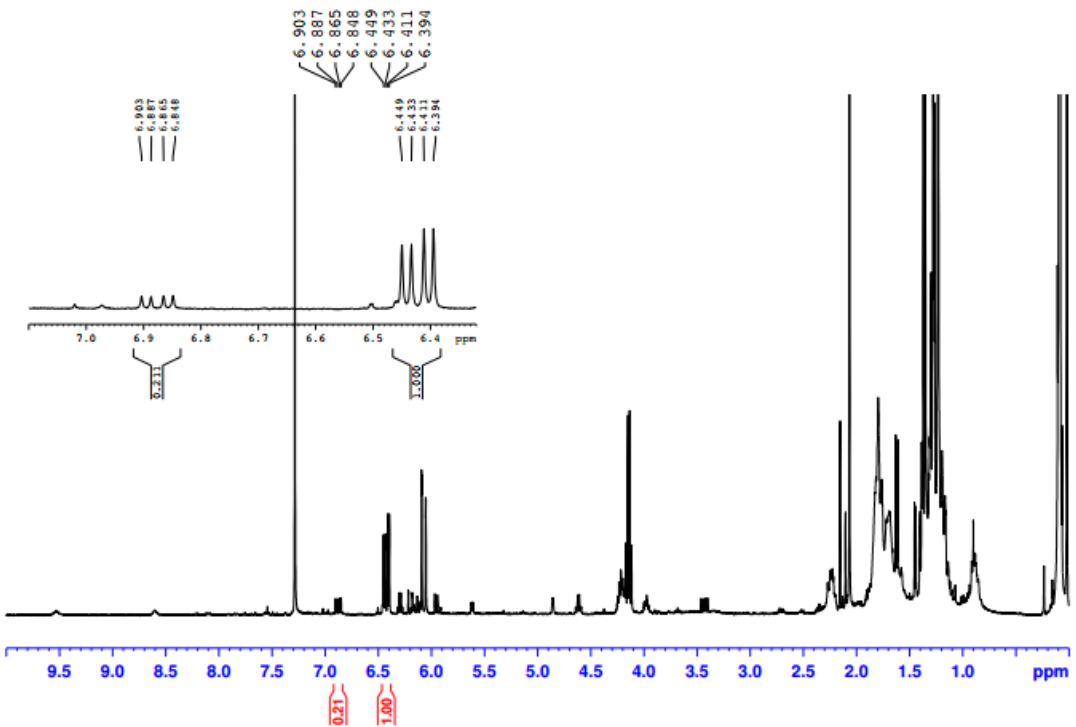
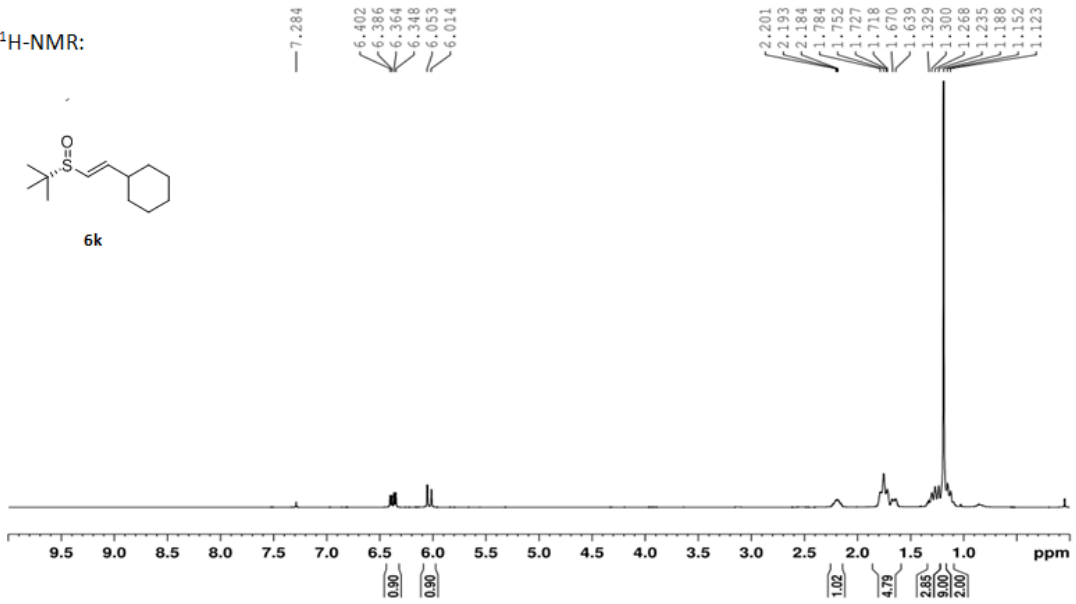
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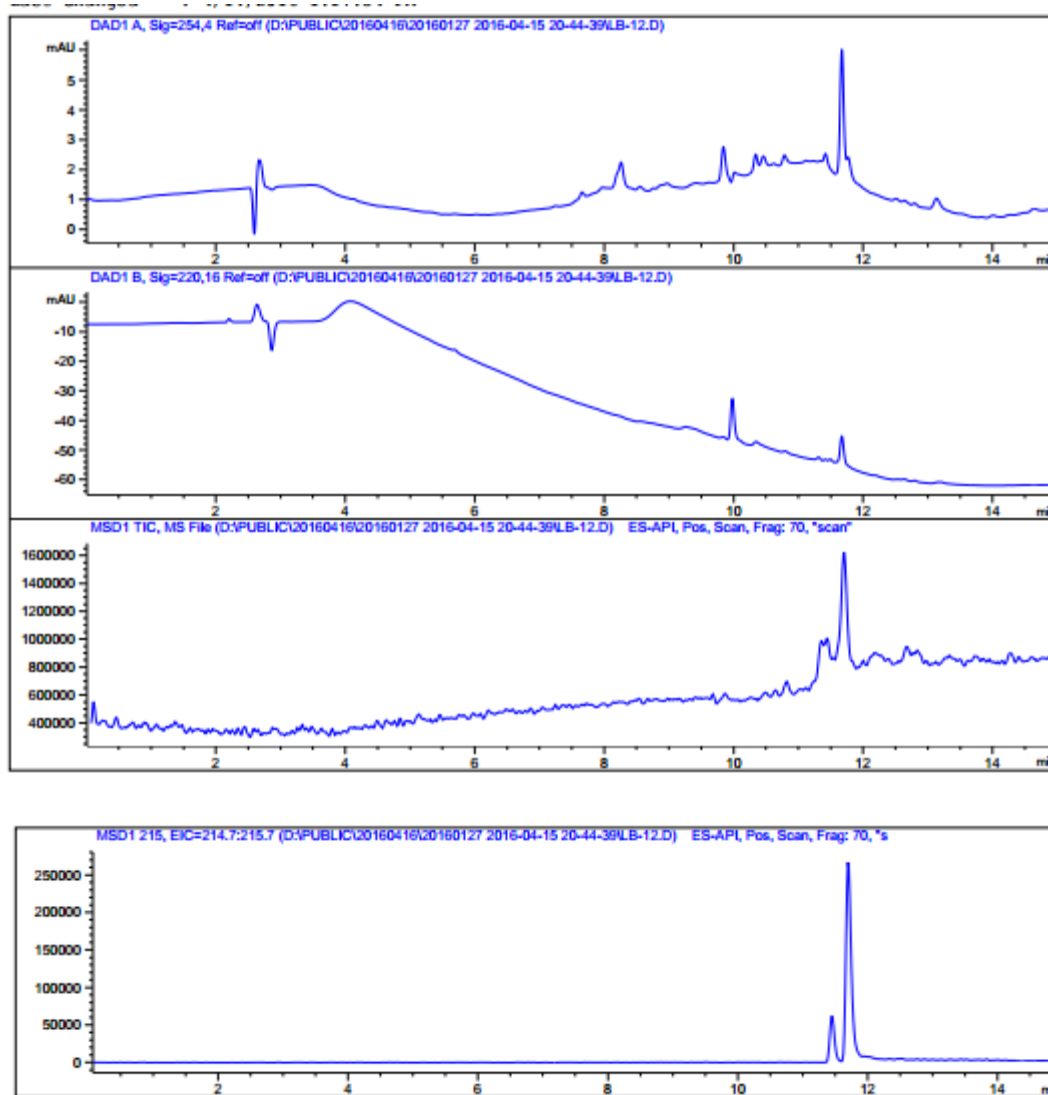


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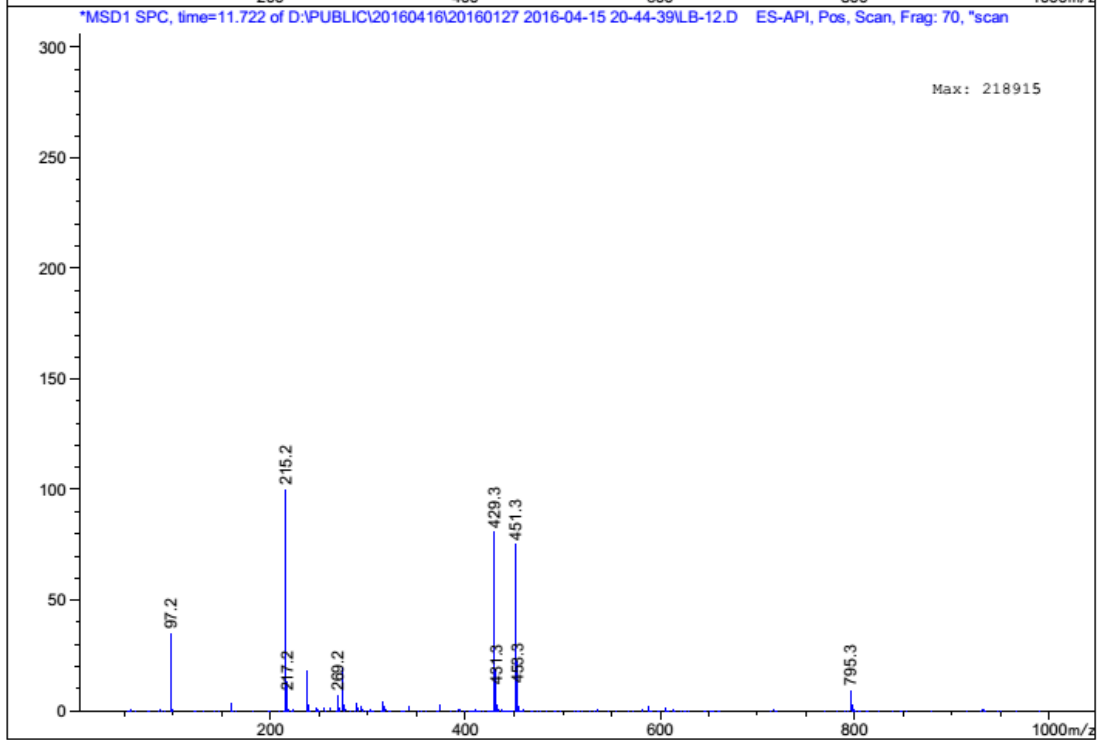
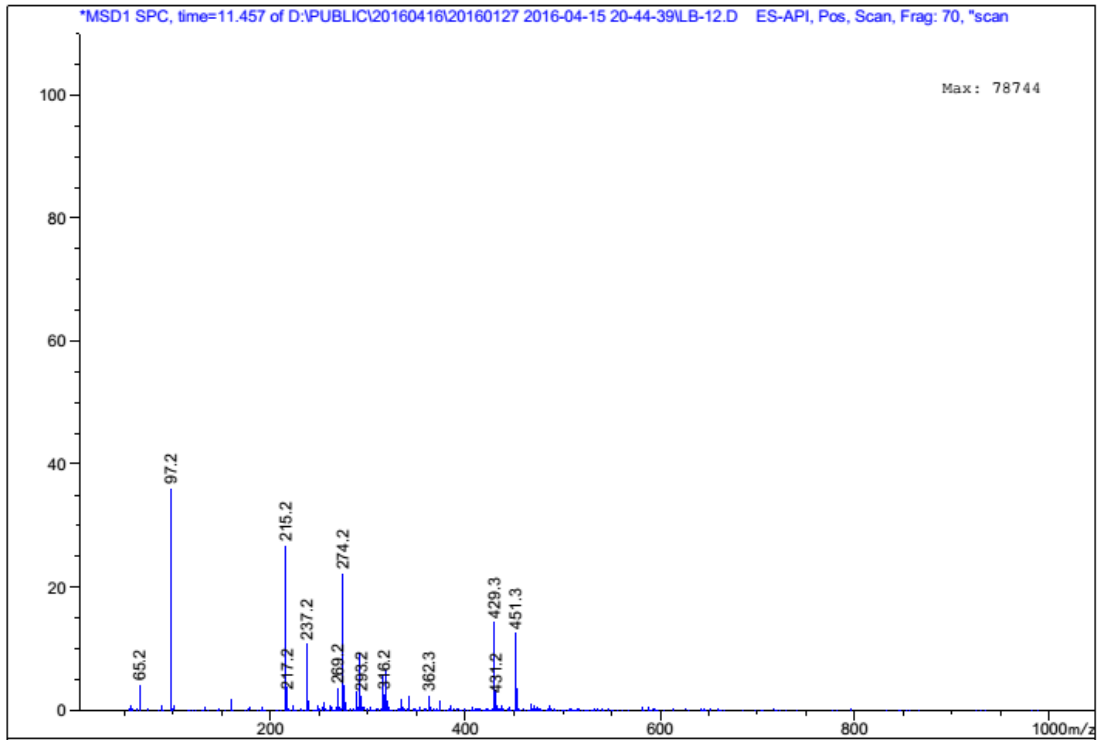
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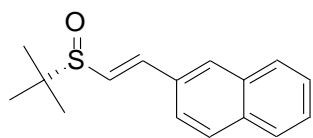


LC-MS spectrum:



MS Spectrum

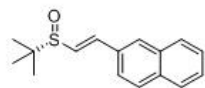




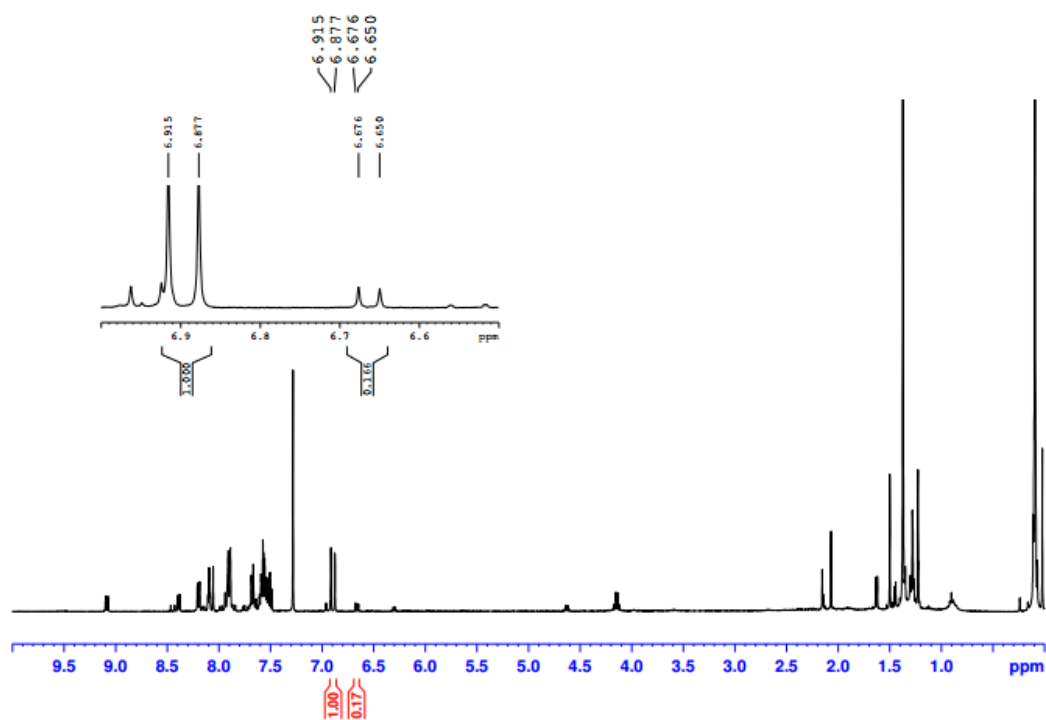
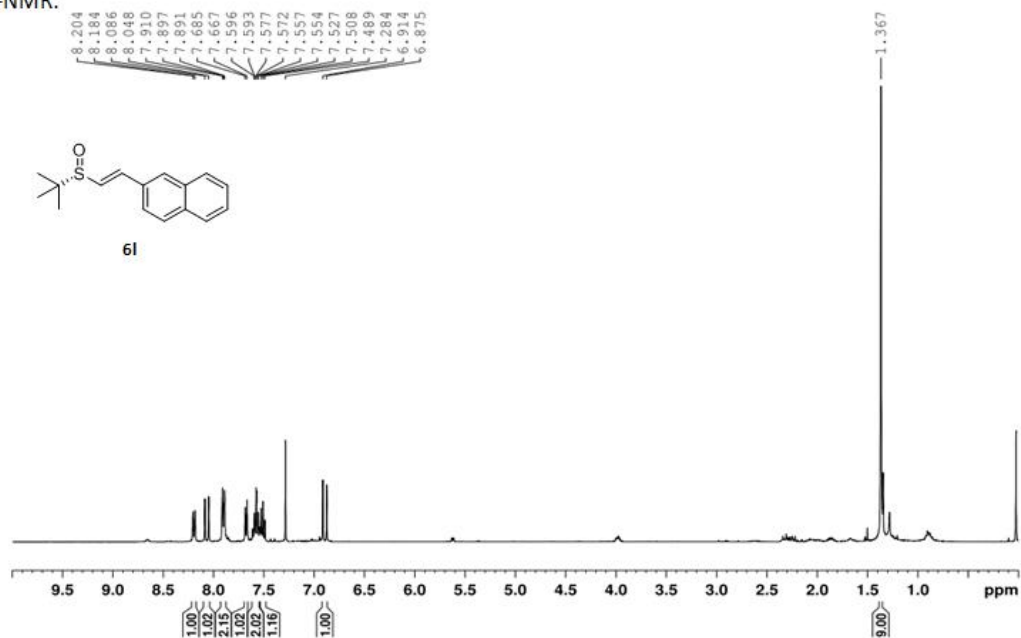
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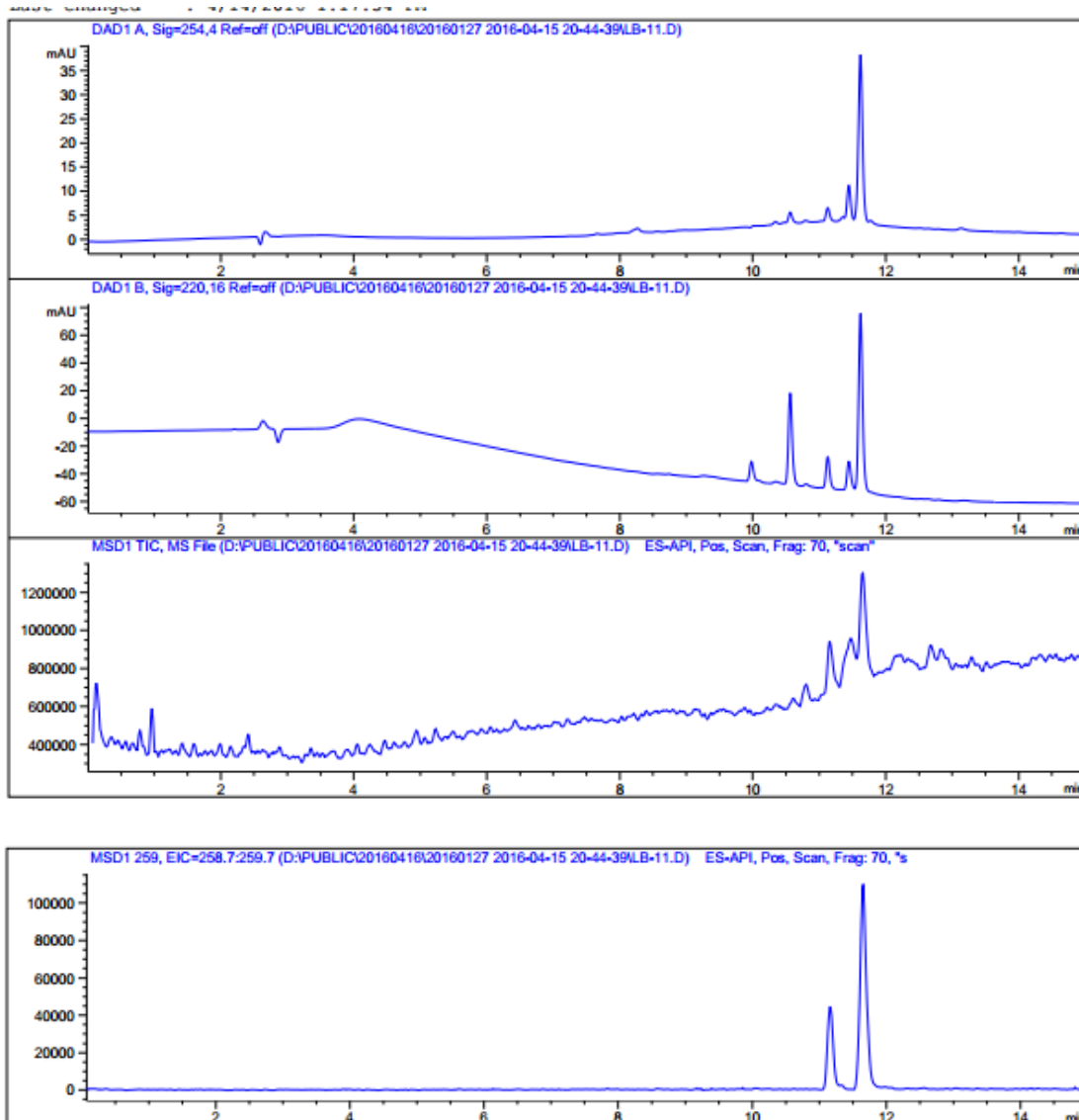
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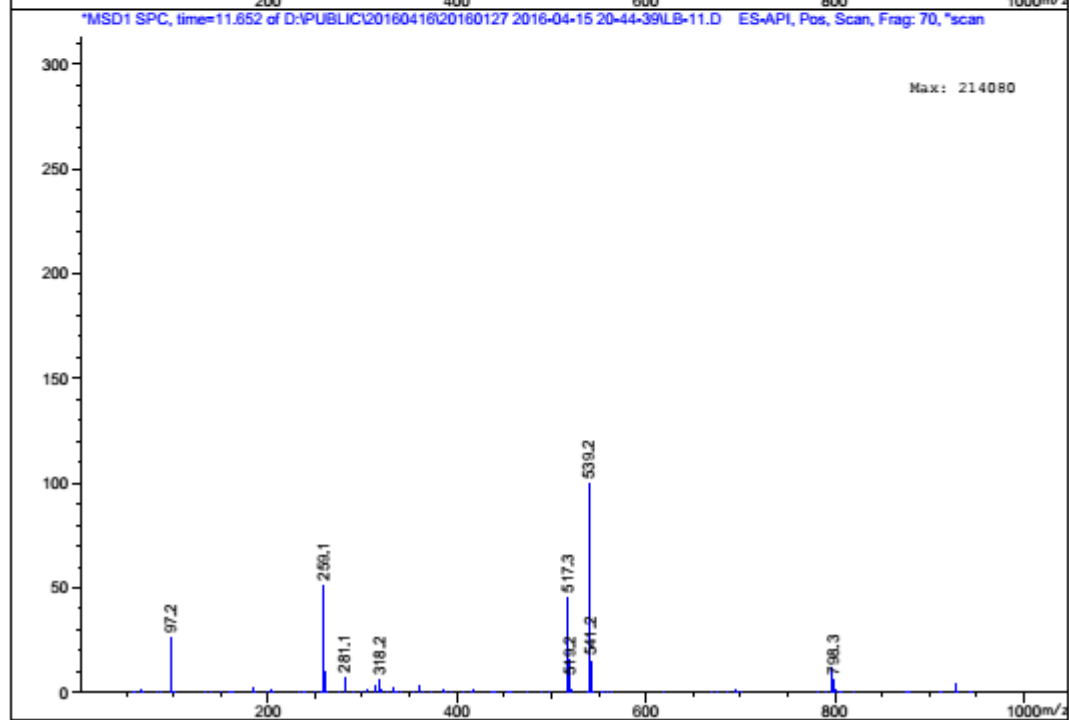
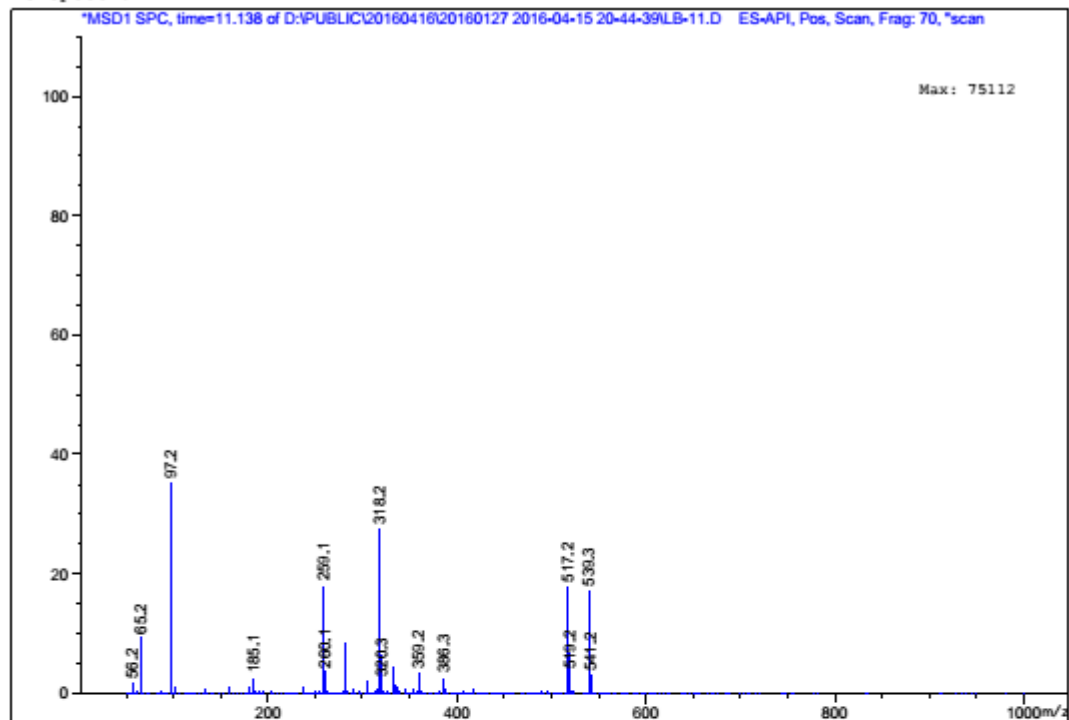
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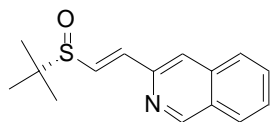


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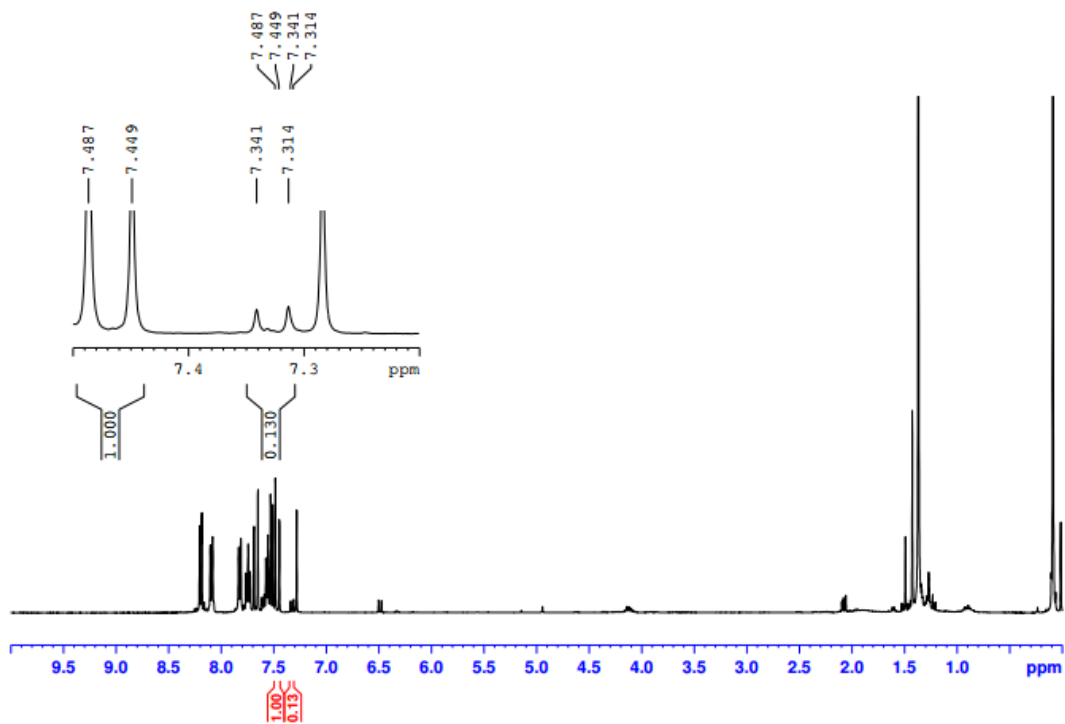
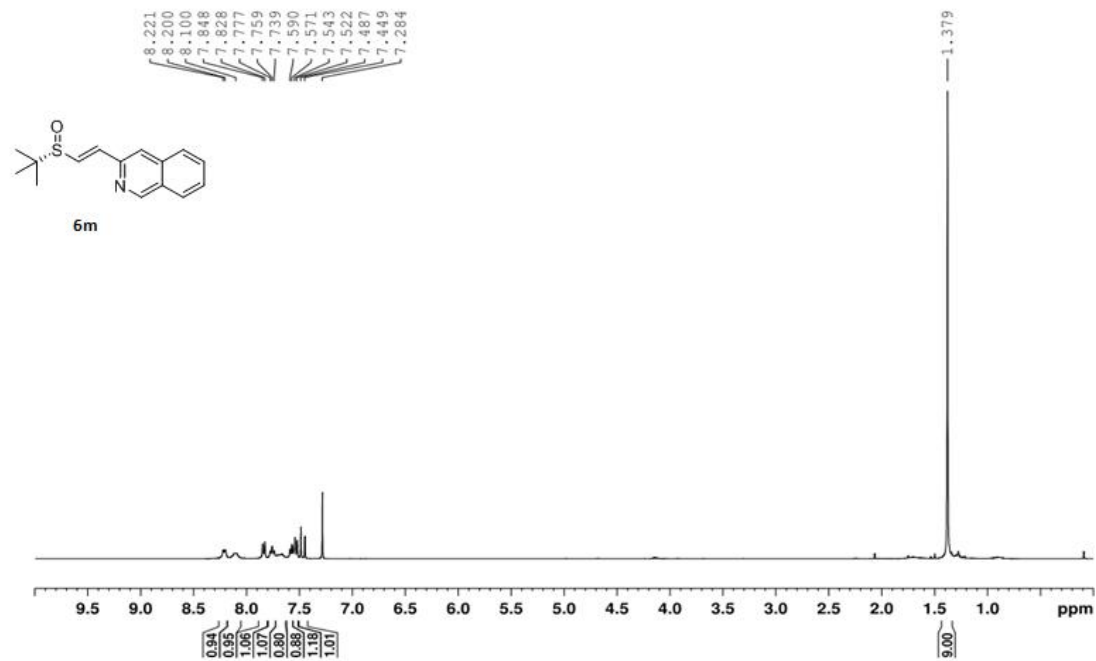


MS Spectrum

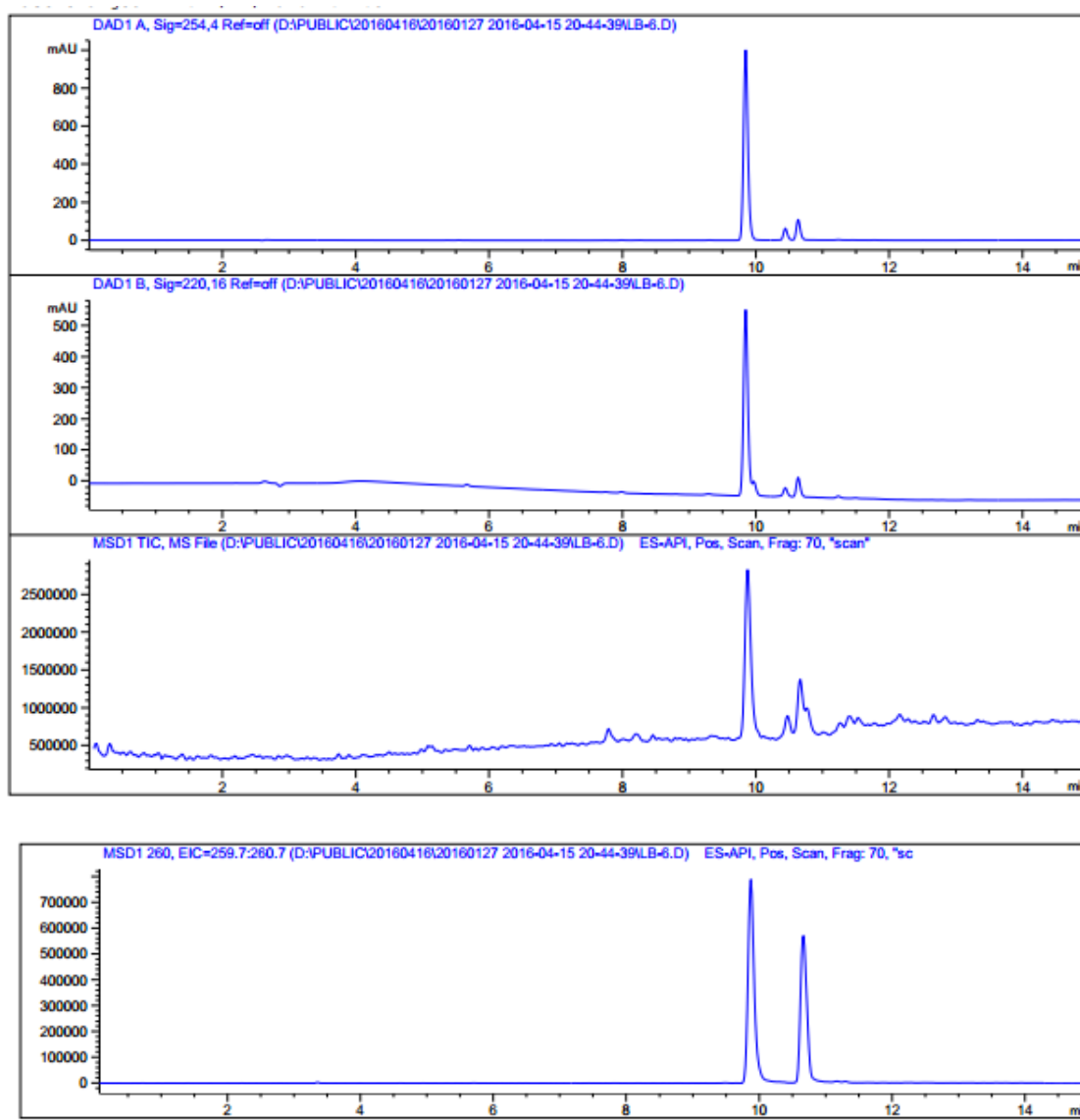




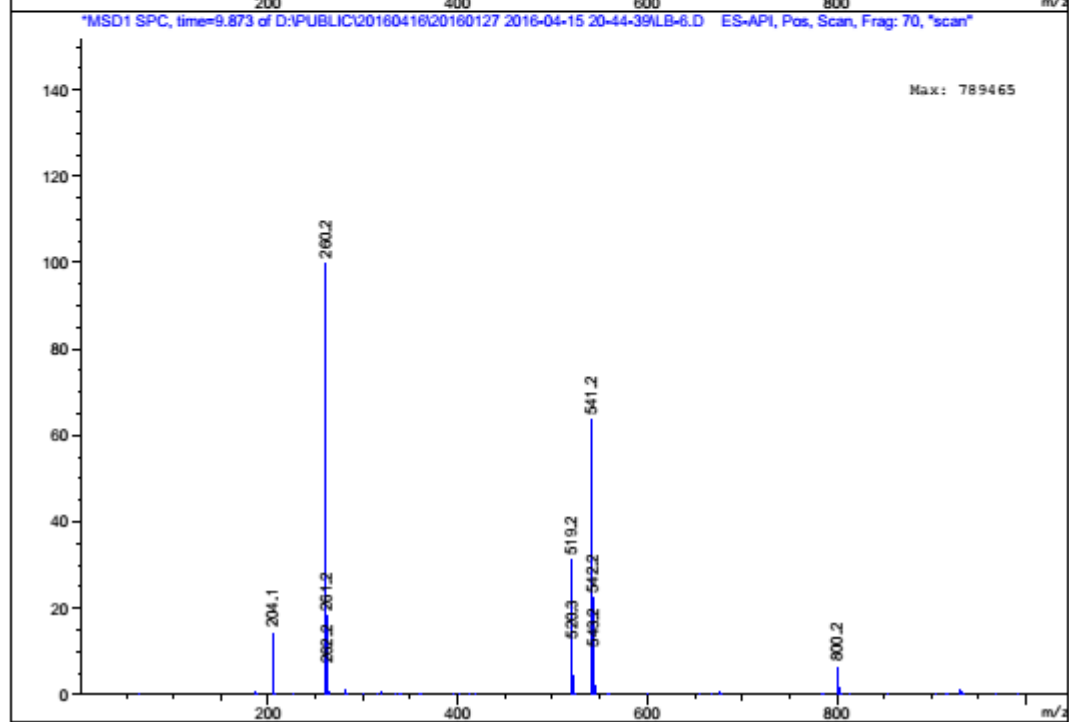
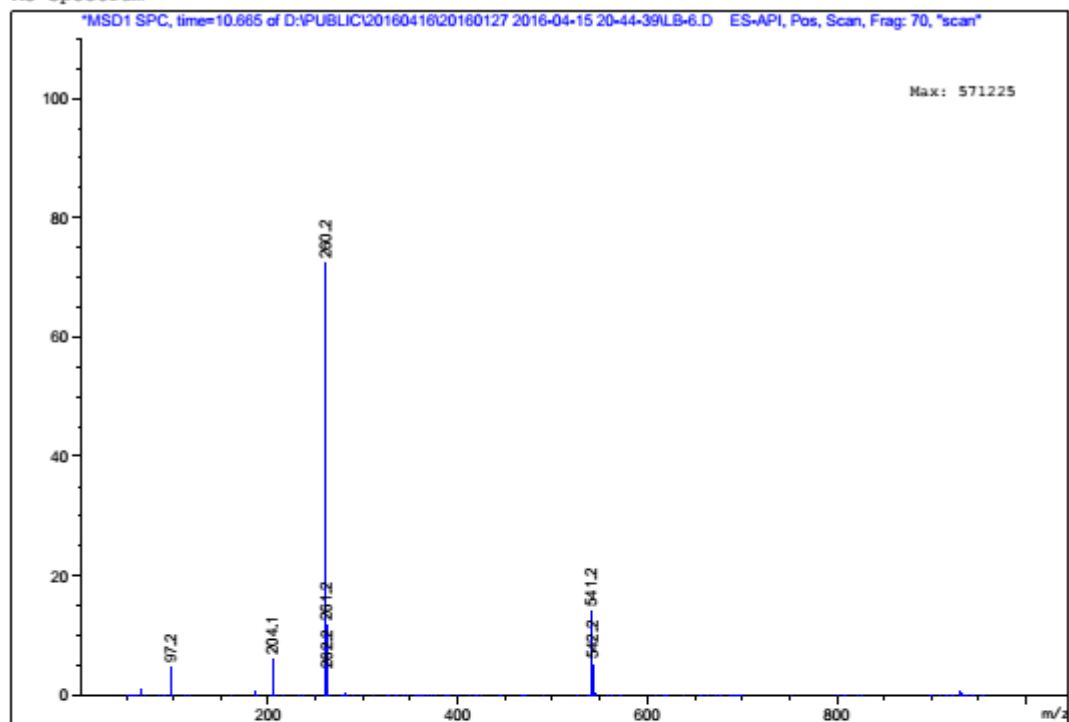
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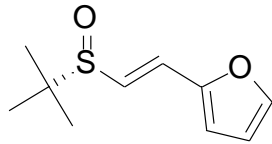


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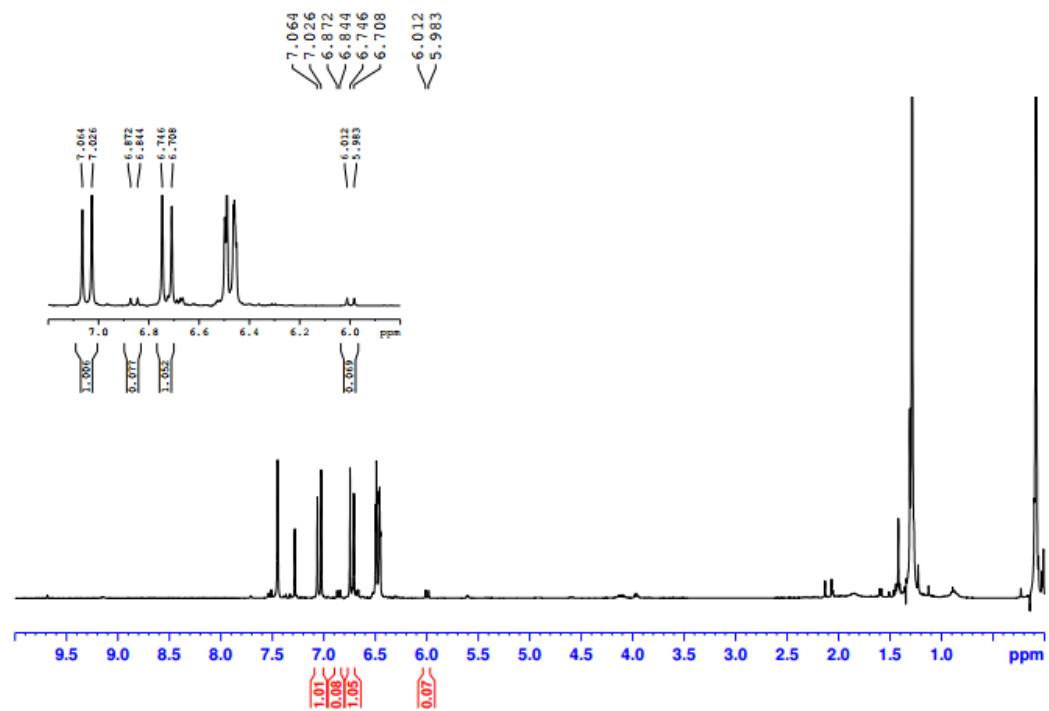
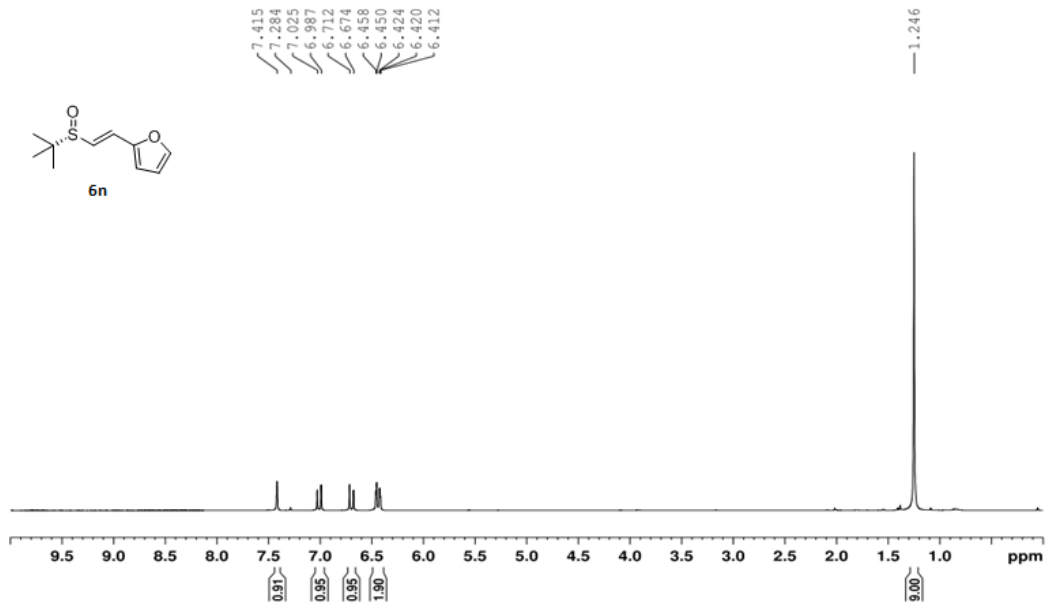


MS Spectrum

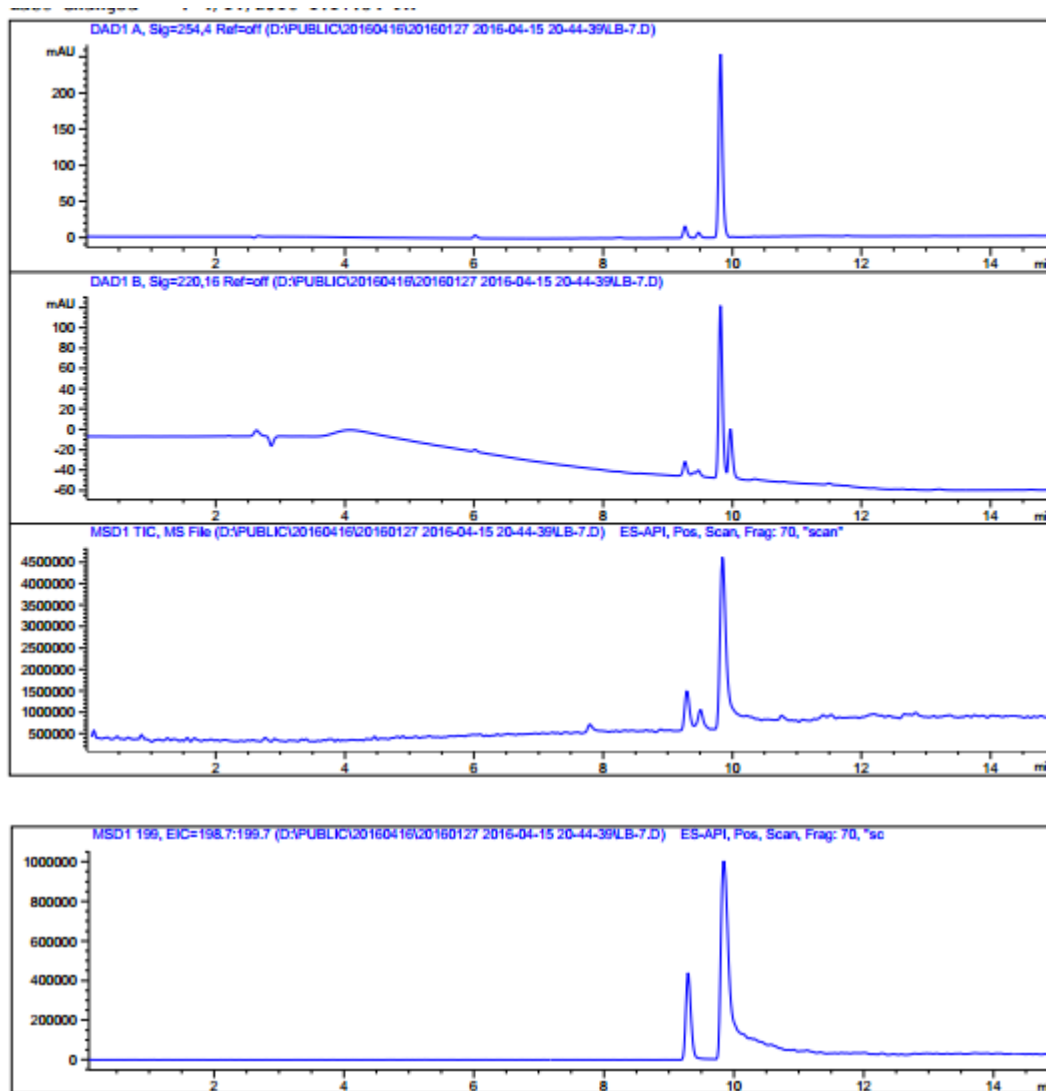




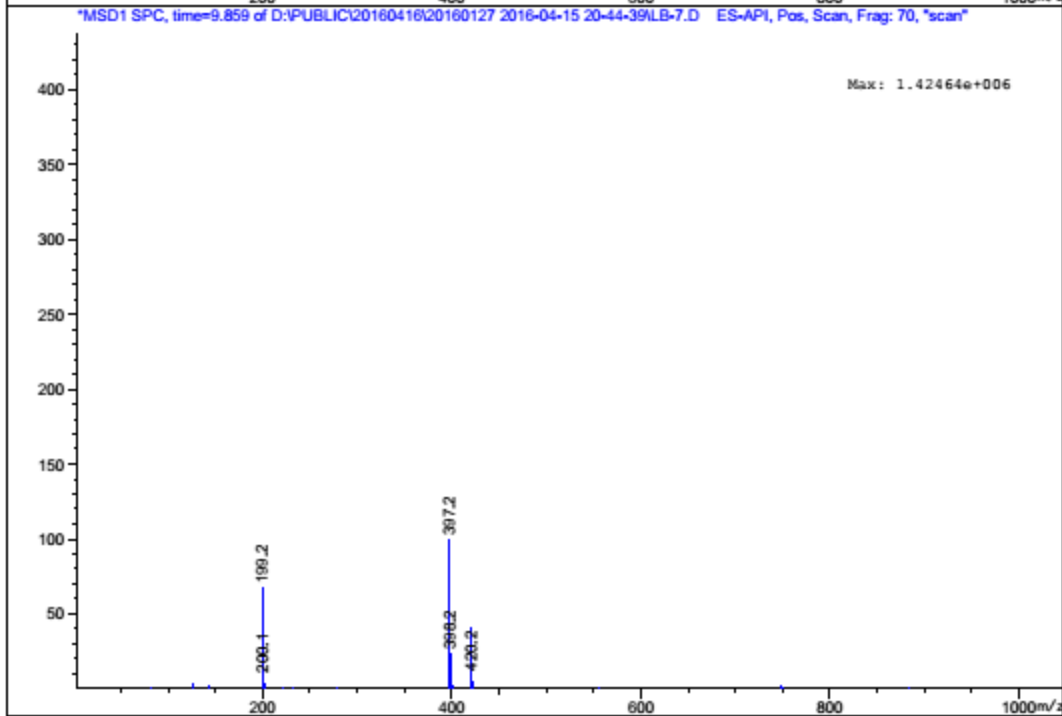
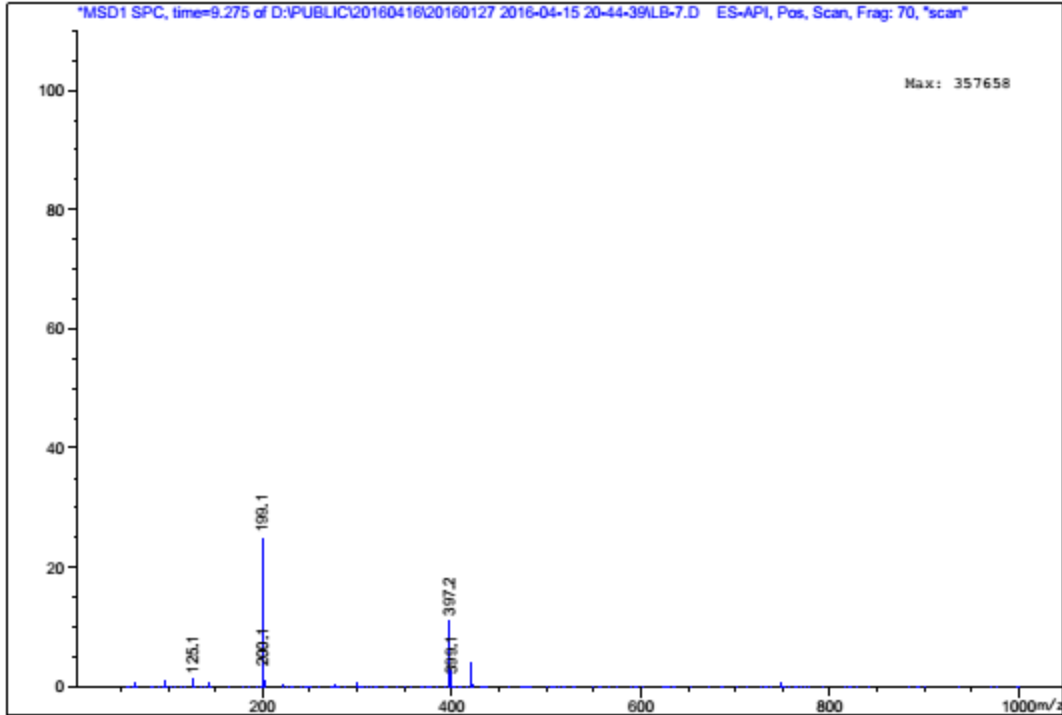
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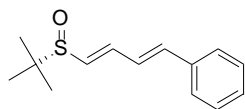


LC-MS spectrum:

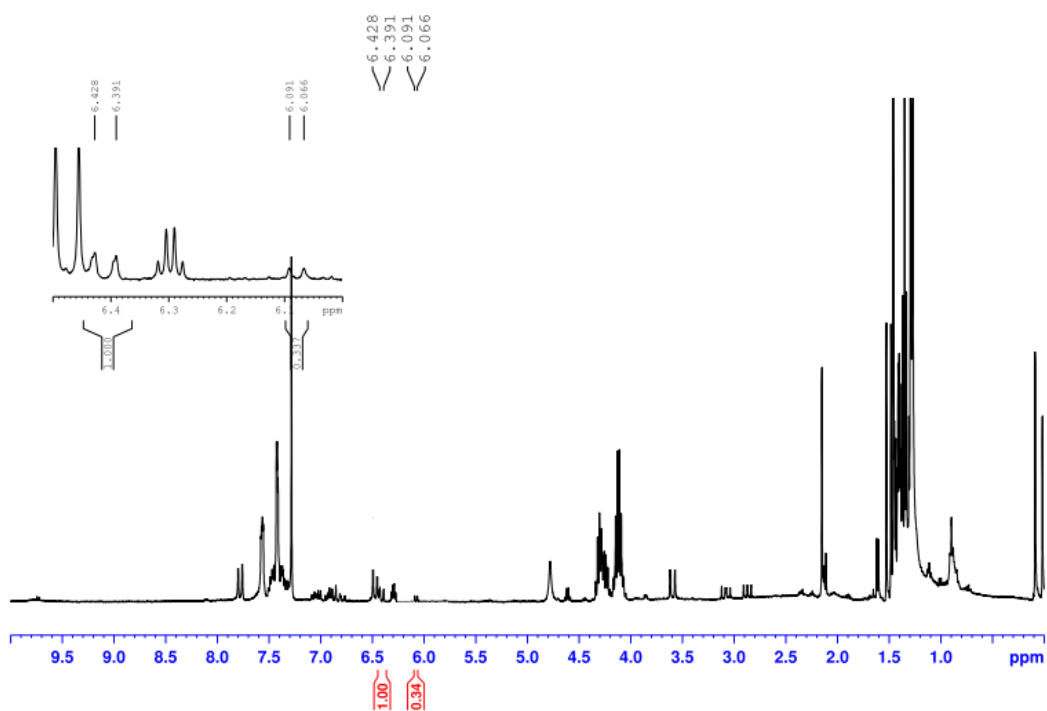
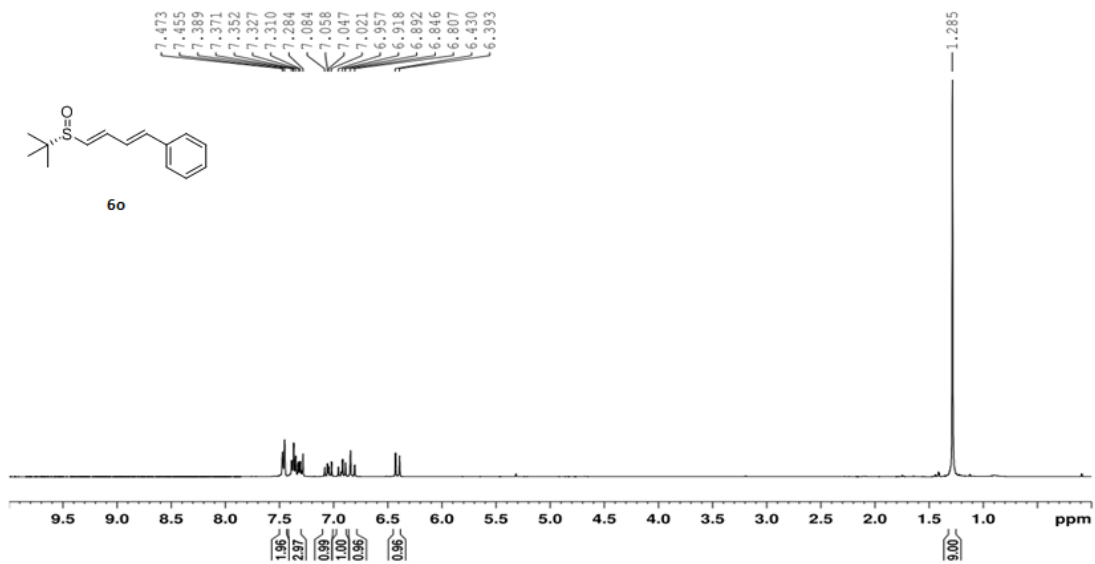


MS Spectrum

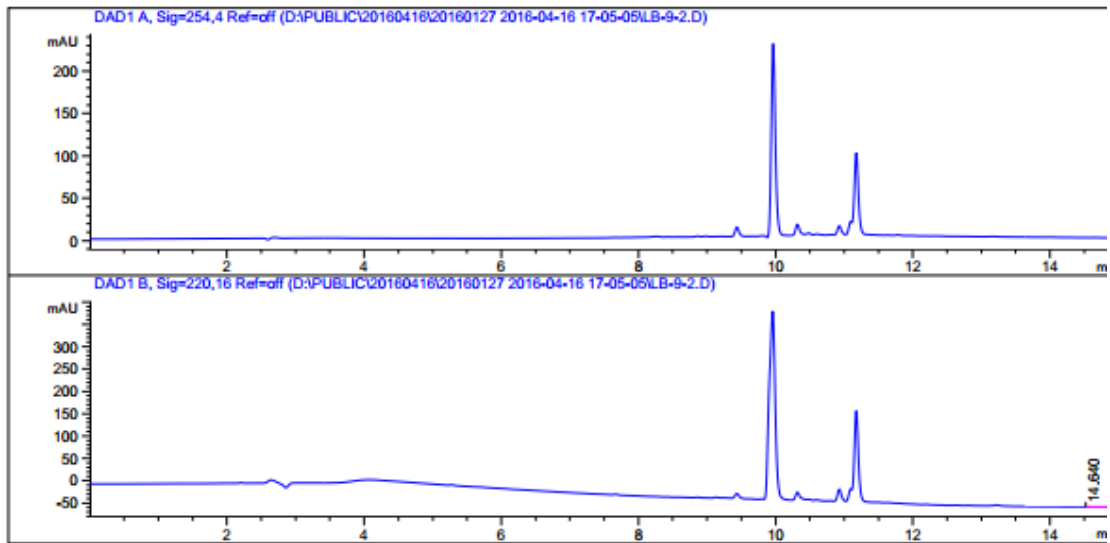




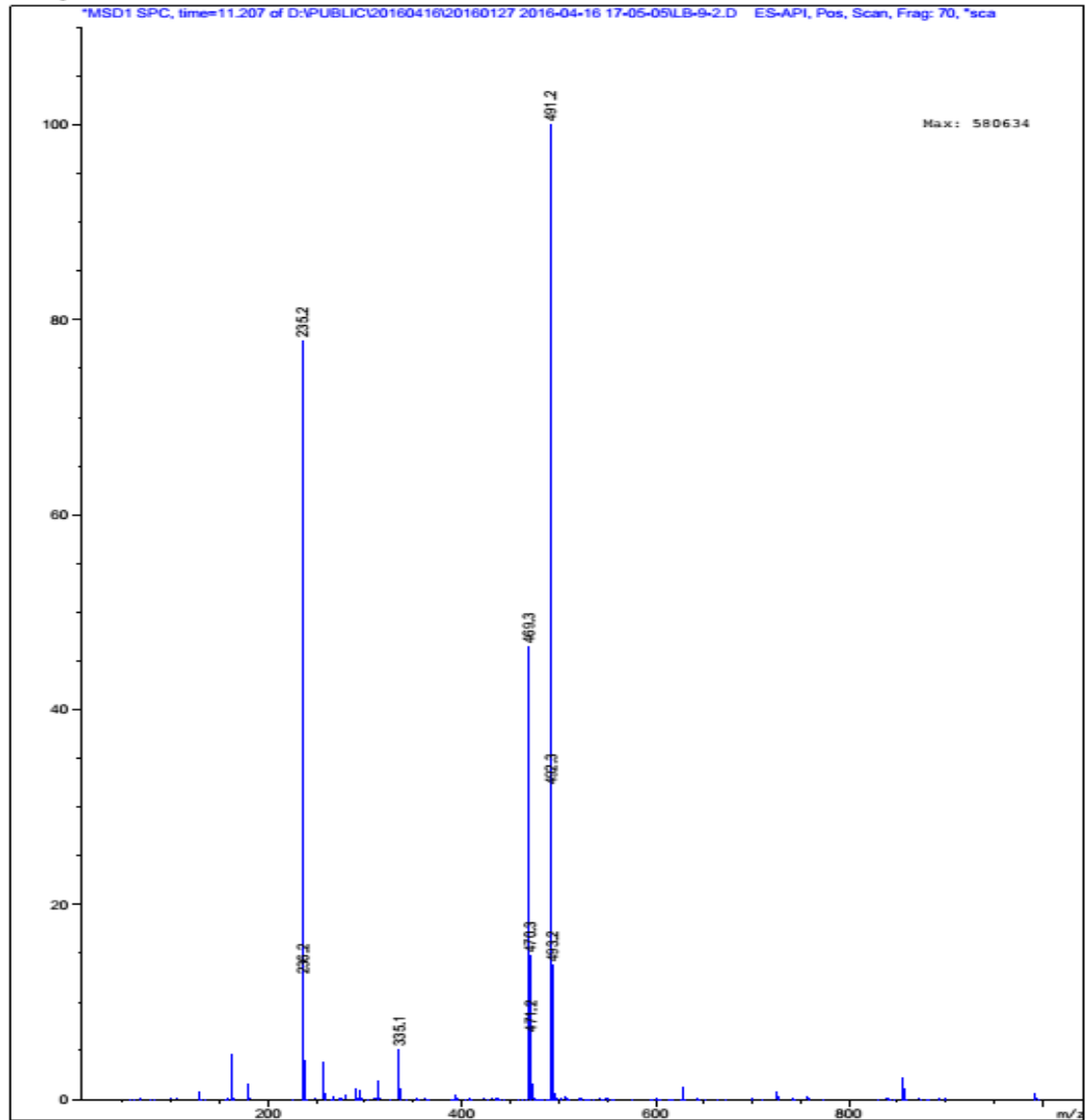
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LC-MS spectrum:

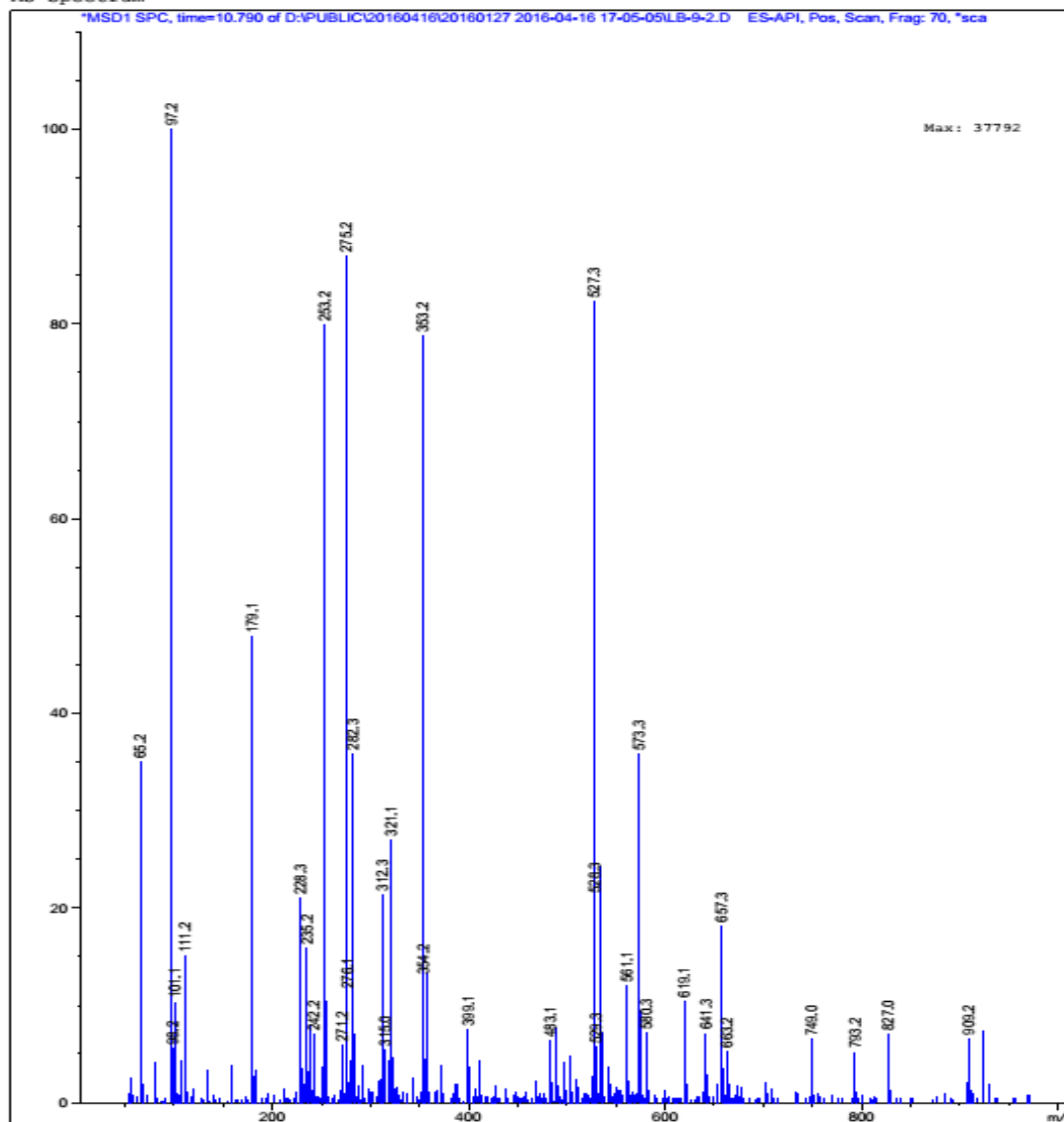


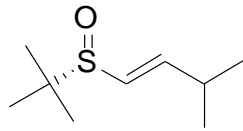
MS Spectrum



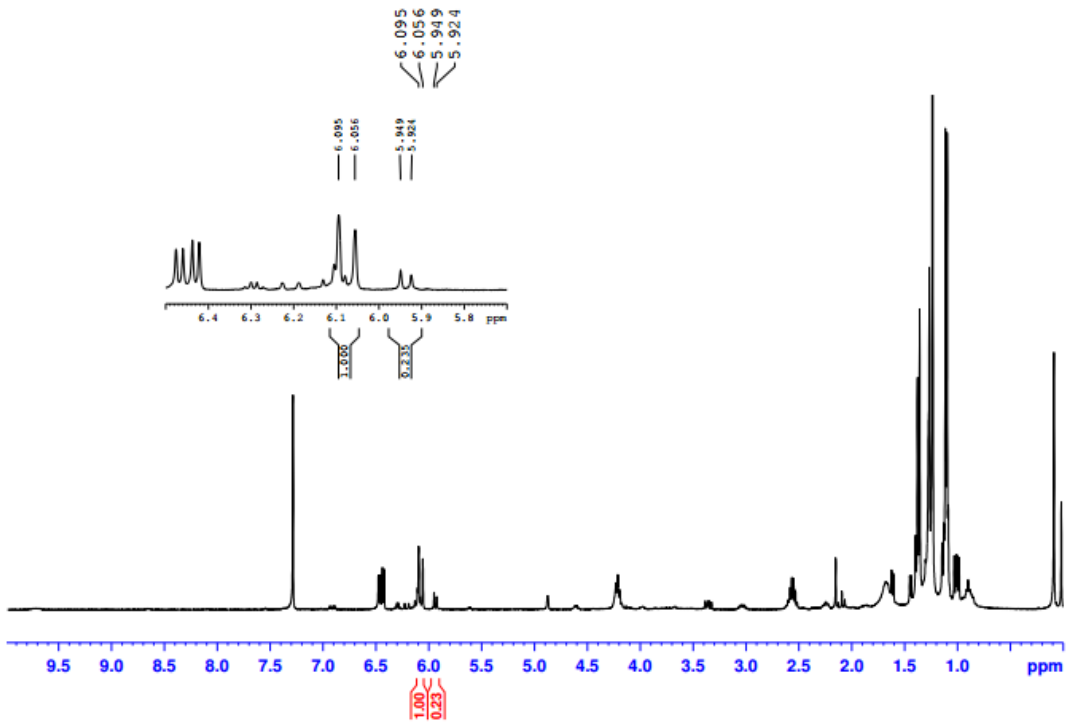
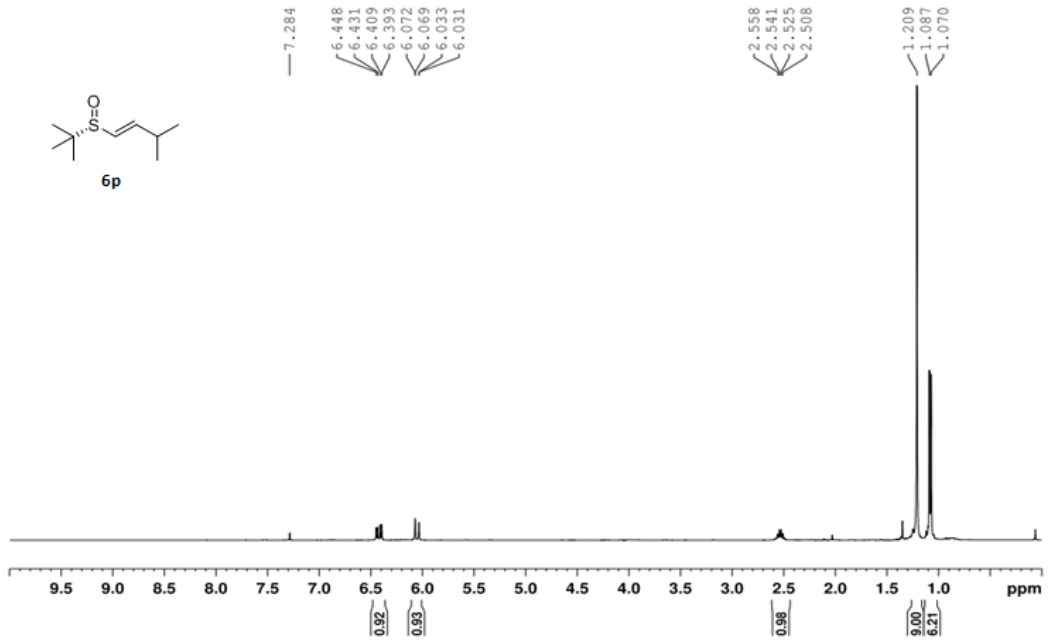
MS Spectrum

*MSD1 SPC, time=10.790 of D:\PUBLIC\20160416\20160127 2016-04-16 17-05-05\LB-9-2.D ES-API, Pos, Scan, Frag: 70, *sca

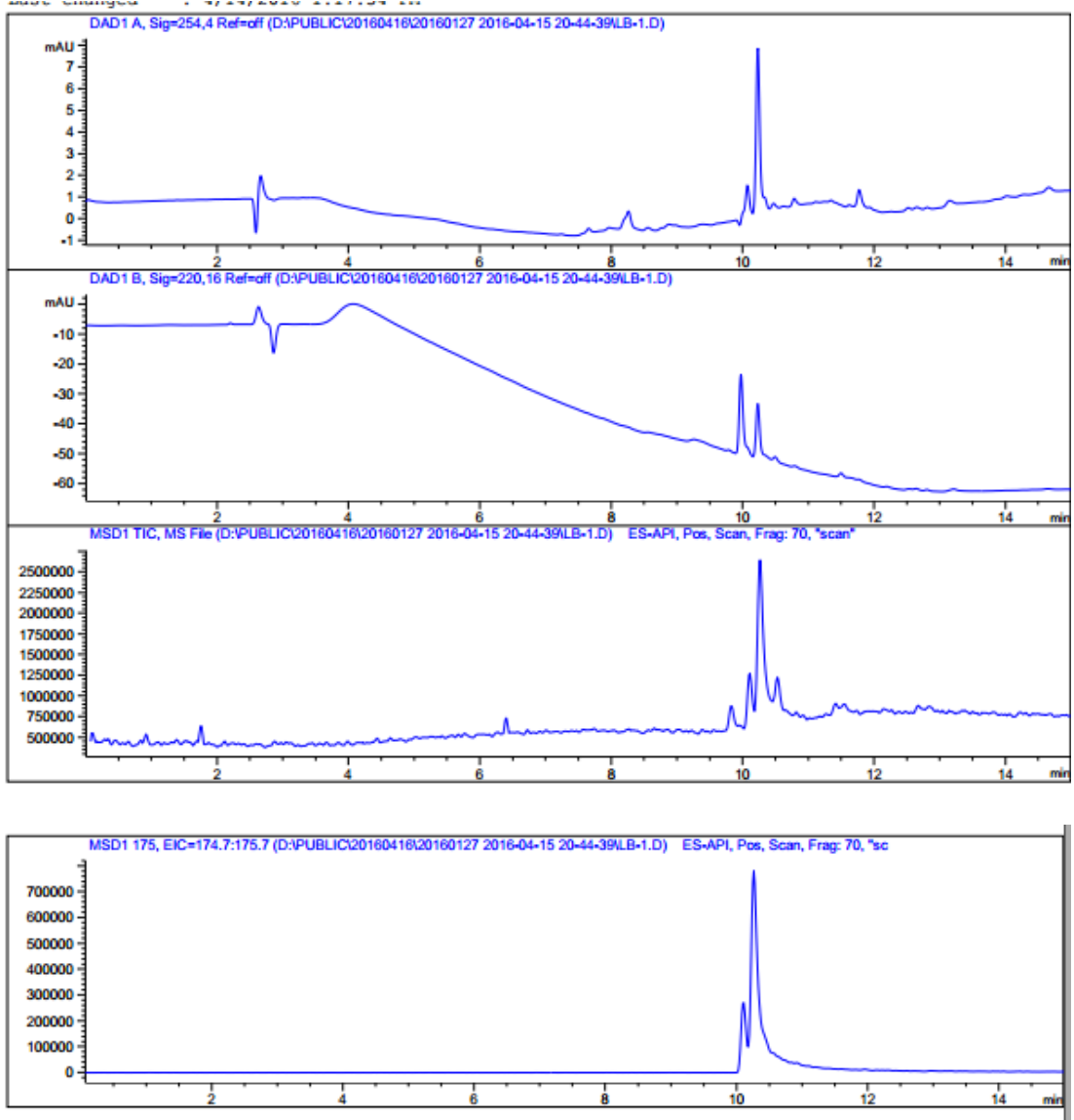




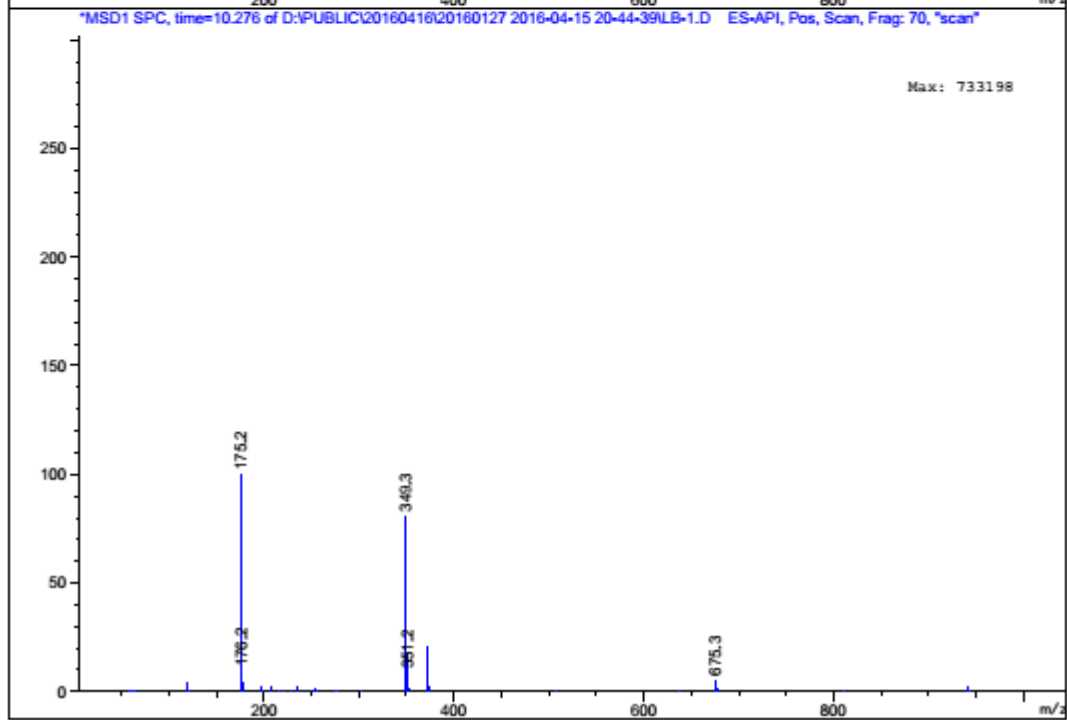
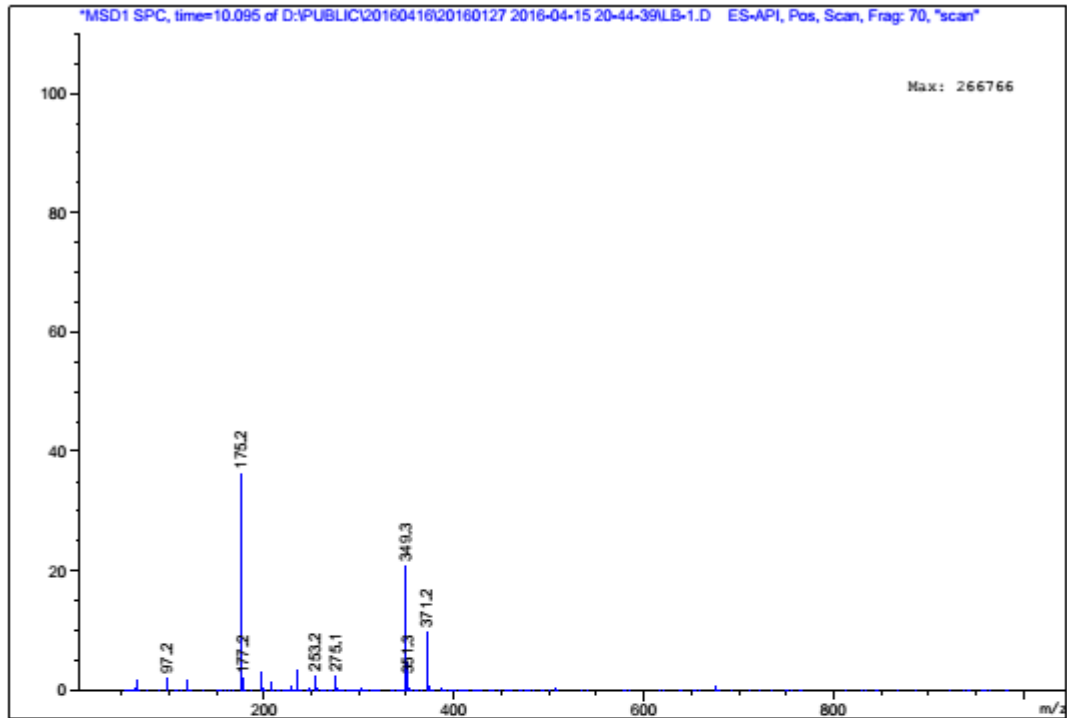
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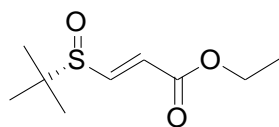


LC-MS spectrum:

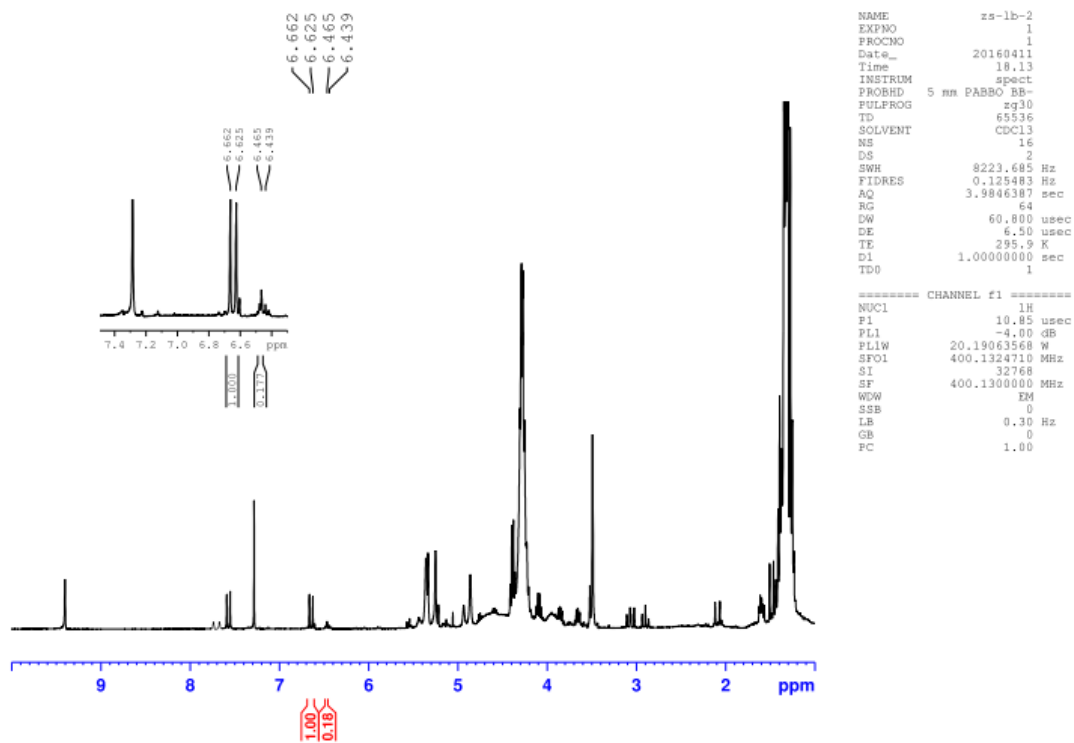
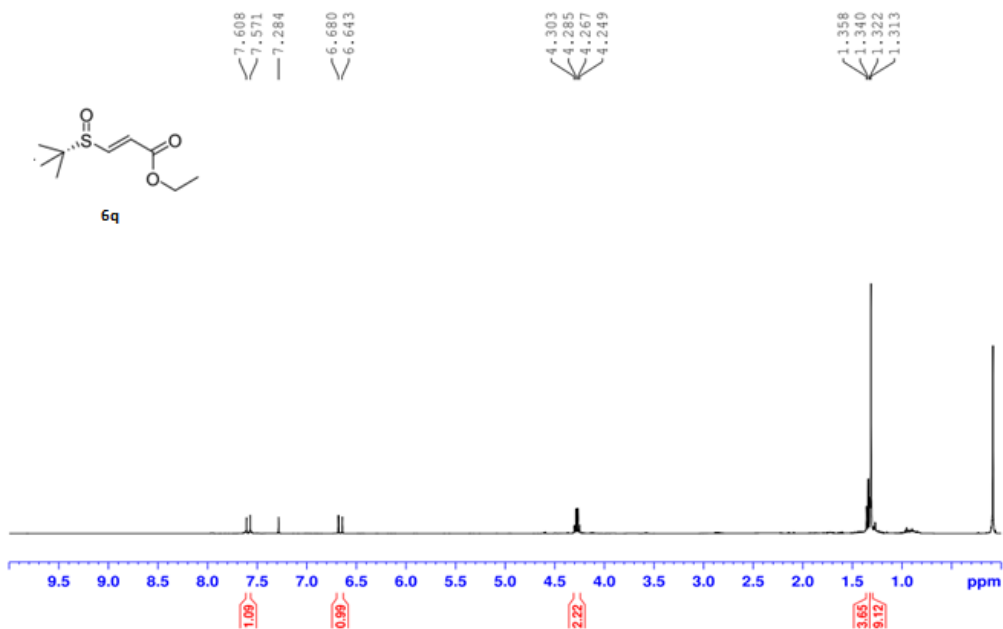


MS Spectrum

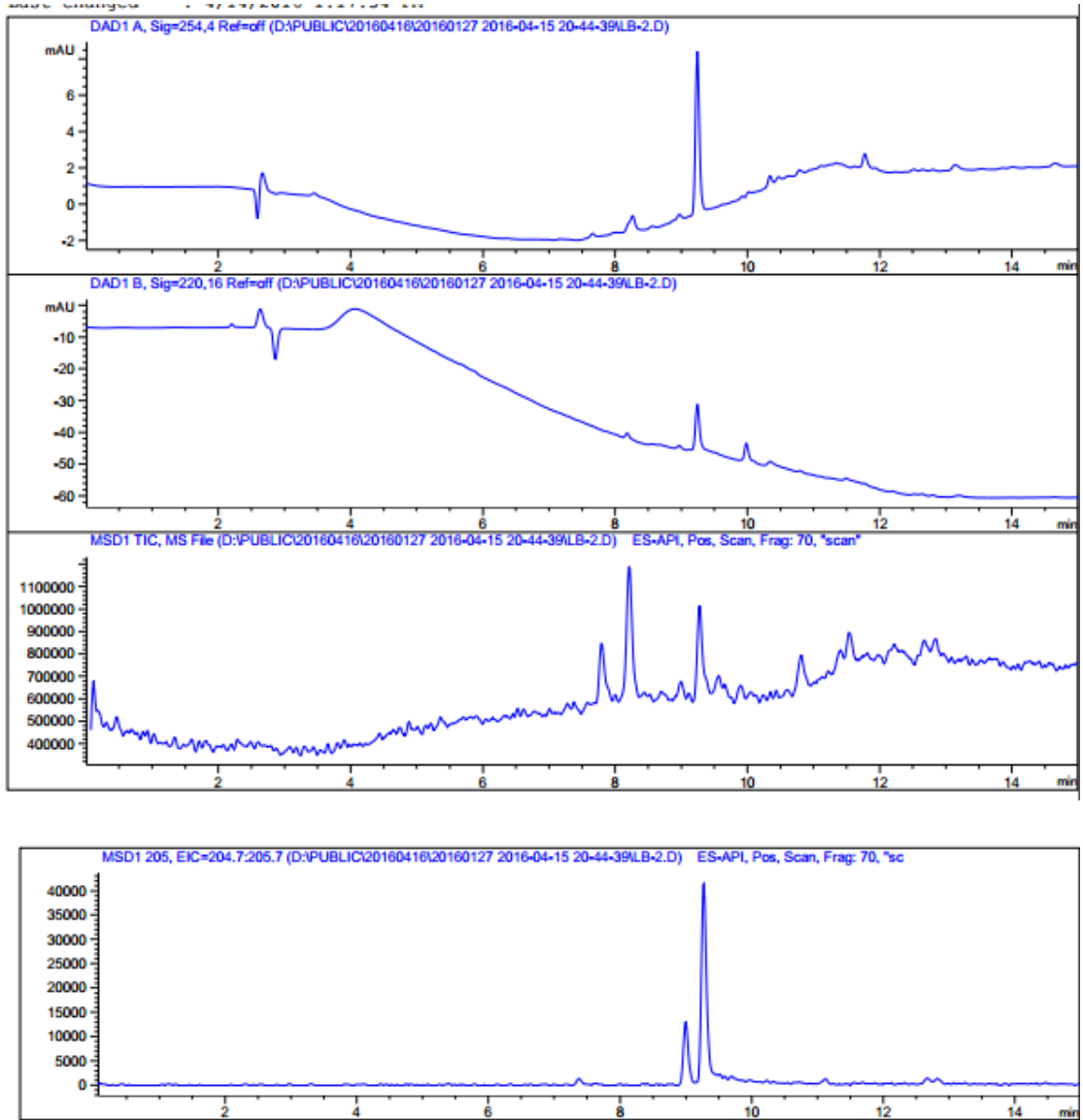




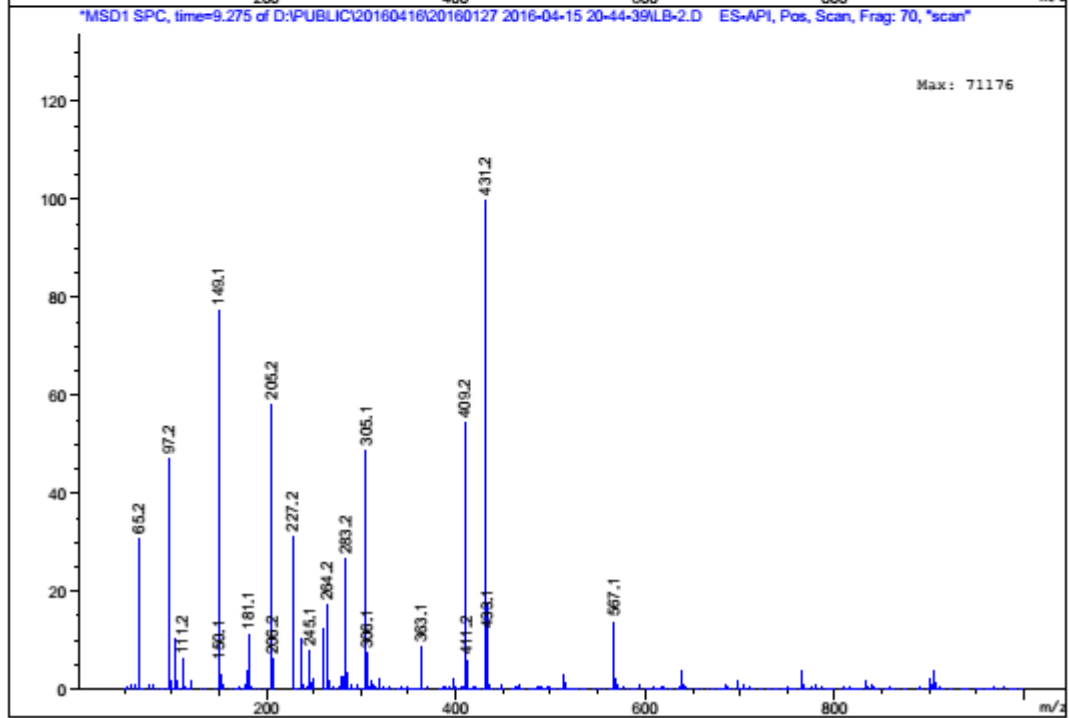
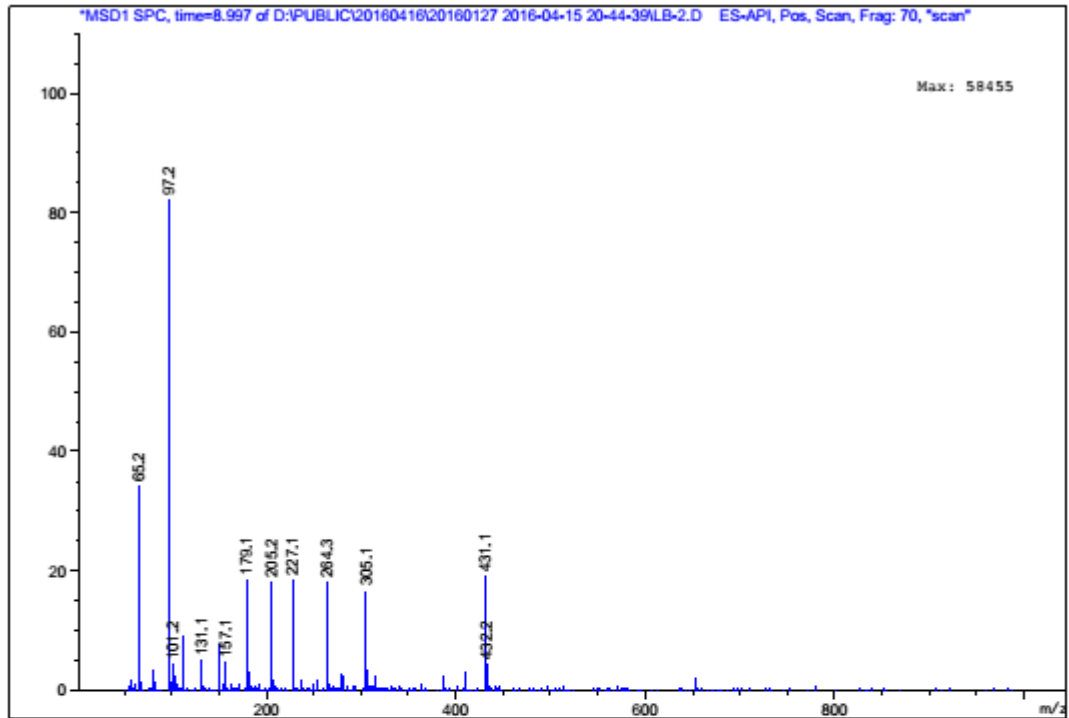
6q



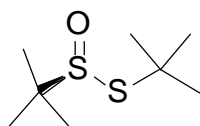
LC-MS spectrum:



MS Spectrum



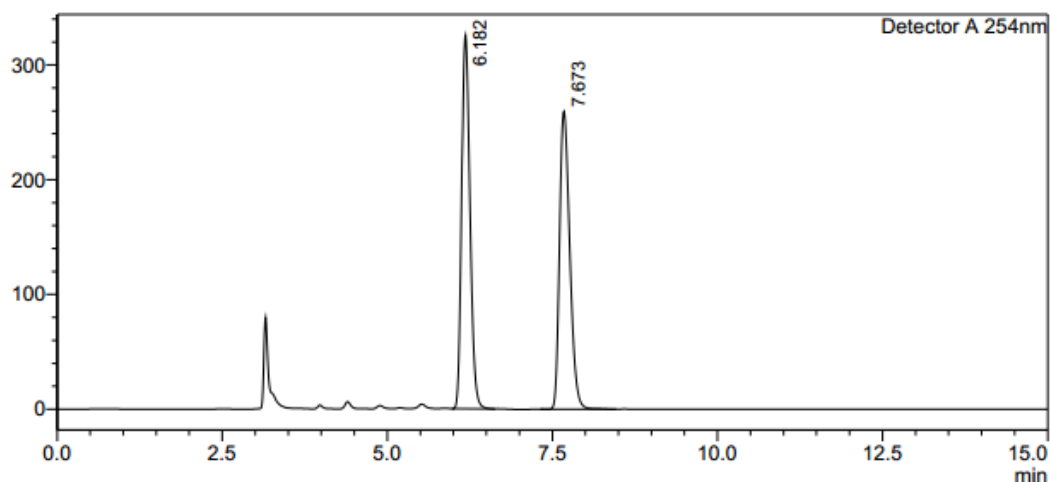
HPLC Analysis Report by Chiral Column (AS-H)



2

<Chromatogram>

mV



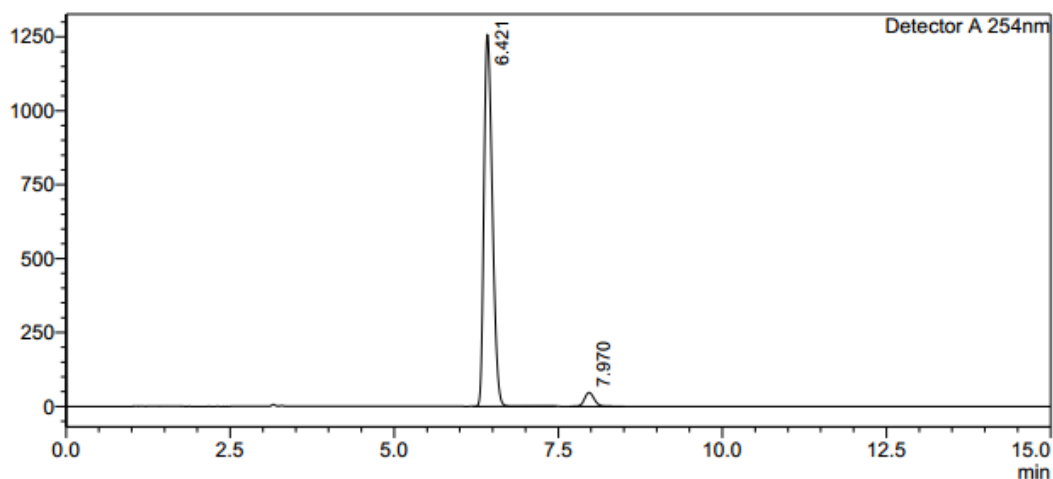
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	6.182	2828415	325354	50.120			
2	7.673	2814824	259528	49.880		V	
Total		5643240	584881				

<Chromatogram>

mV

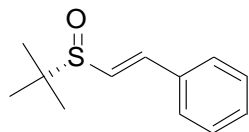


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	6.421	11267032	1256428	95.933		V	
2	7.970	477617	46701	4.067			
Total		11744649	1303129				

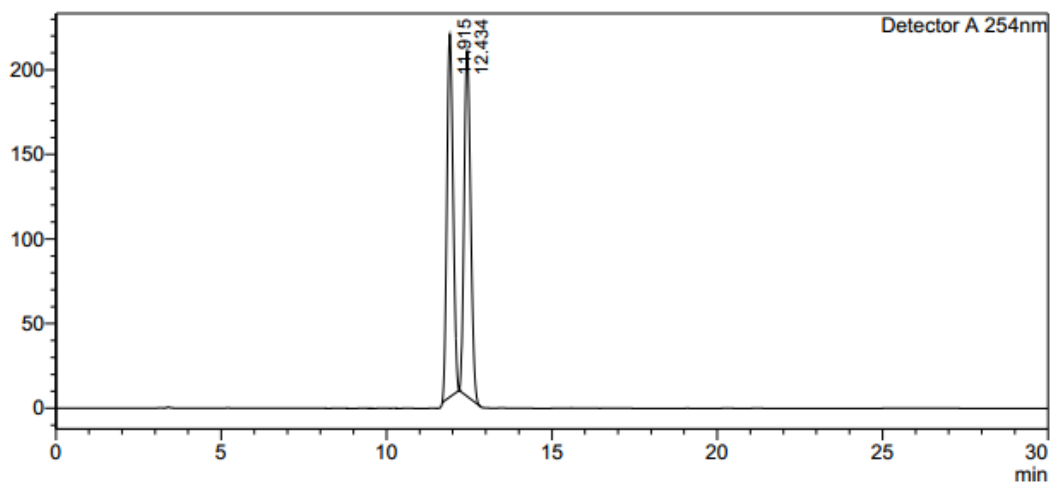
HPLC Analysis Report by Chiral Column (OJ-H)



6a

<Chromatogram>

mV



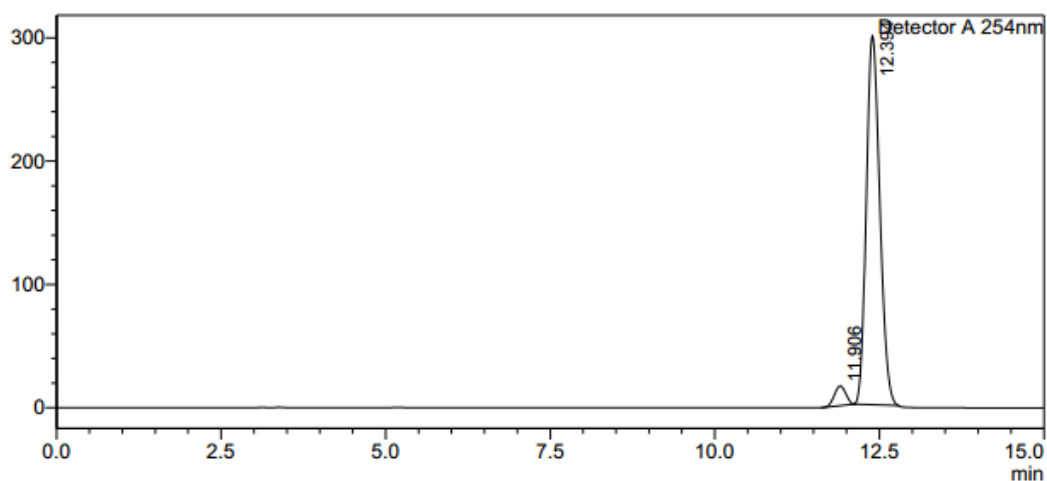
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	11.915	2790861	214364	49.890		M	
2	12.434	2803167	204303	50.110		M	
Total		5594028	418667				

<Chromatogram>

mV

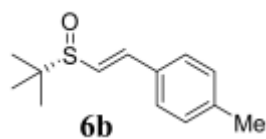


<Peak Table>

Detector A 254nm

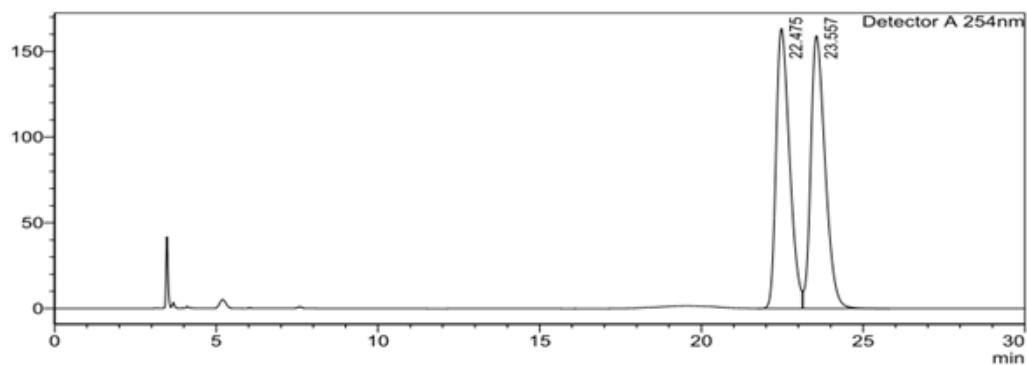
Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	11.906	193886	15967	4.354		M	
2	12.394	4259643	298991	95.646		M	
Total		4453529	314959				

HPLC Analysis Report by Chiral Column (OJ-H)



<Chromatogram>

mV



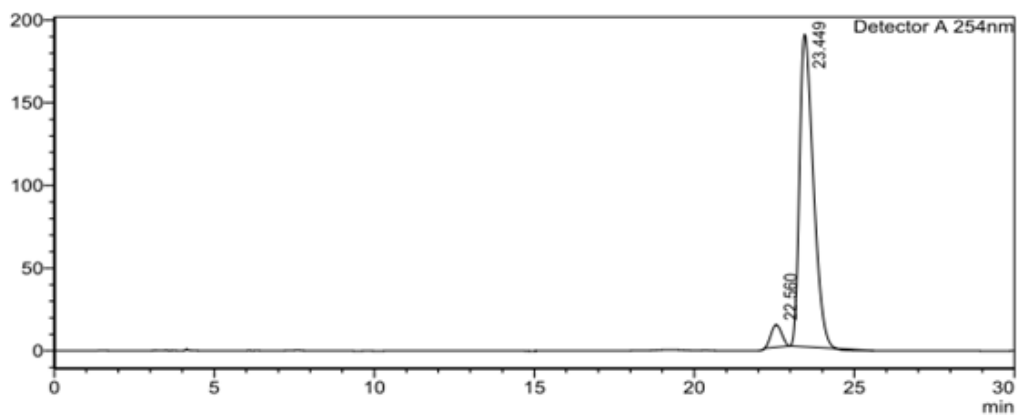
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	22.475	4763894	163228	49.076			
2	23.557	4943333	159138	50.924		V	
Total		9707228	322366				

<Chromatogram>

mV

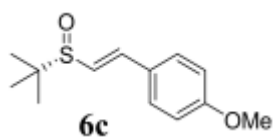


<Peak Table>

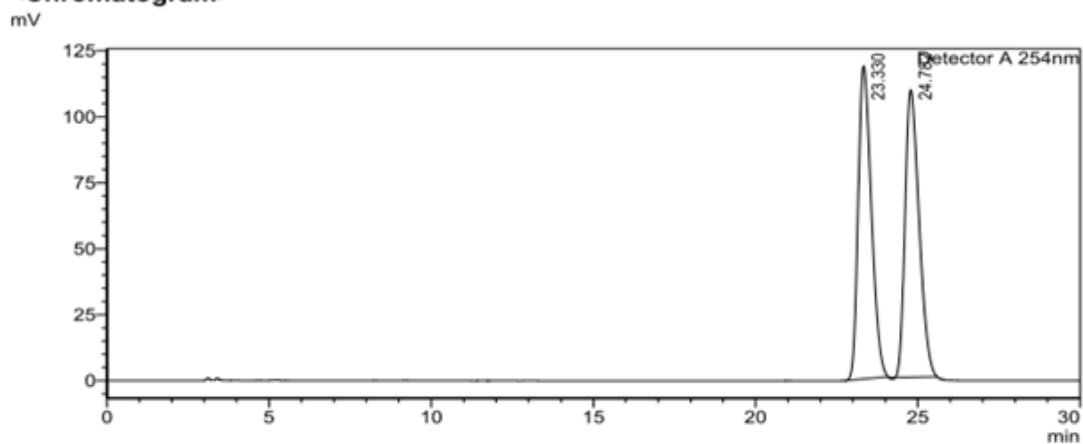
Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	22.560	317806	13534	5.310		M	
2	23.449	5667522	188797	94.690		M	
Total		5985328	202330				

HPLC Analysis Report by Chiral Column (OJ-H)



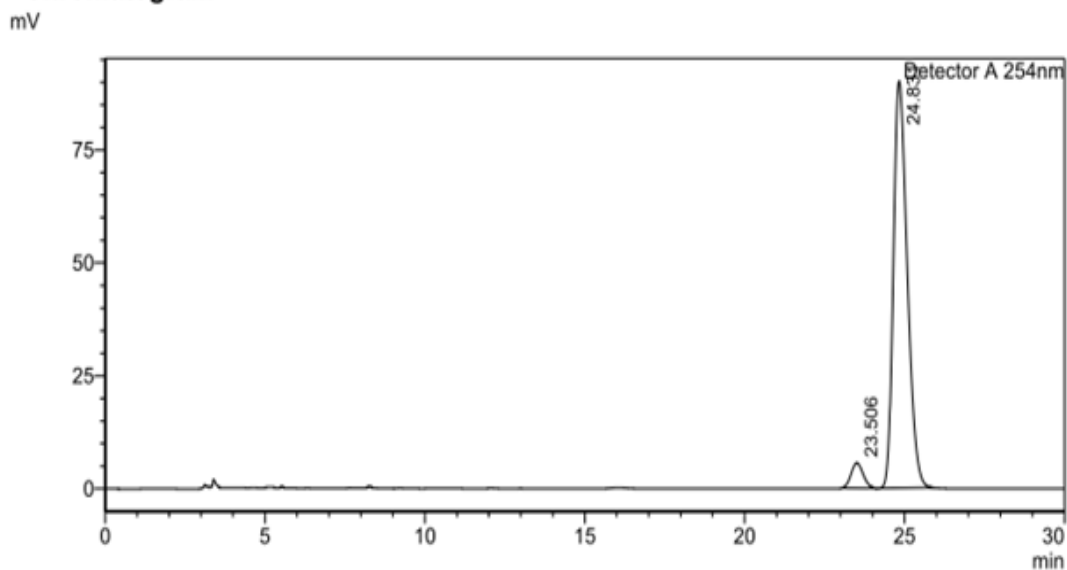
<Chromatogram>



<Peak Table>

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	23.330	3313329	118513	50.294		M	
2	24.782	3274600	108881	49.706		M	
Total		6587929	227394				

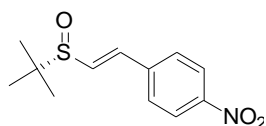
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<Peak Table>

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	23.506	148269	5596	5.184		M	
2	24.831	2711729	90023	94.816		M	
Total		2859998	95619				

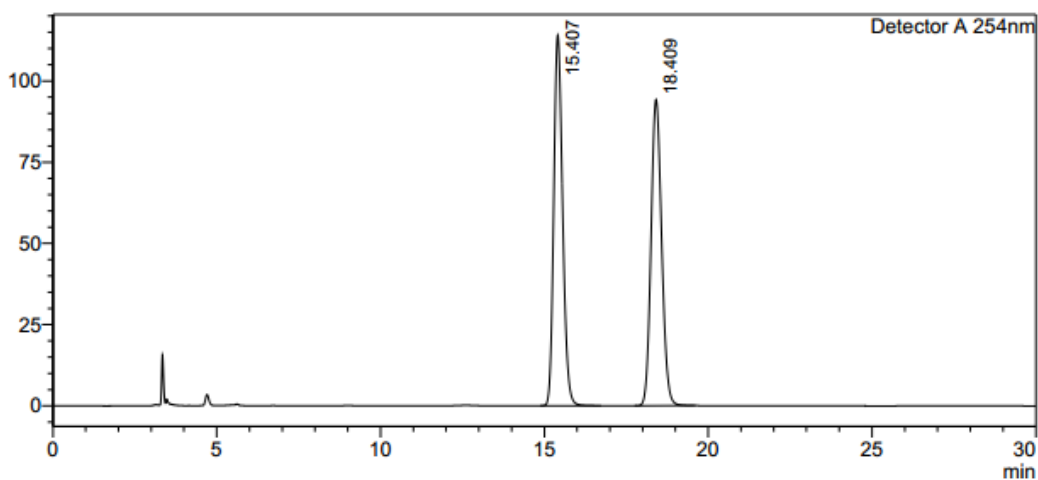
HPLC Analysis Report by Chiral Column (OJ-H)



6d

<Chromatogram>

mV



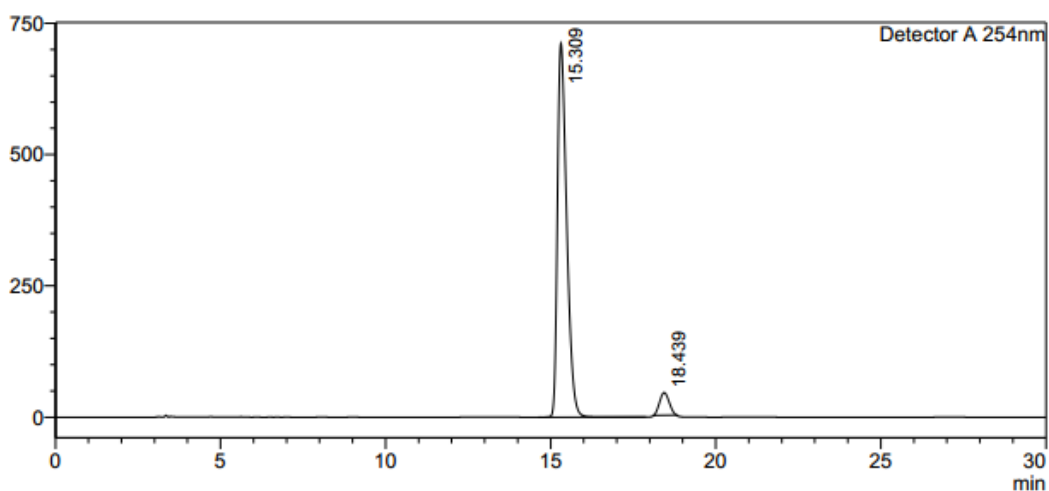
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	15.407	2156533	114047	50.289			
2	18.409	2131777	94233	49.711			
Total		4288310	208280				

<Chromatogram>

mV

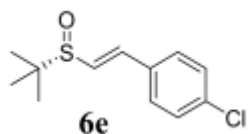


<Peak Table>

Detector A 254nm

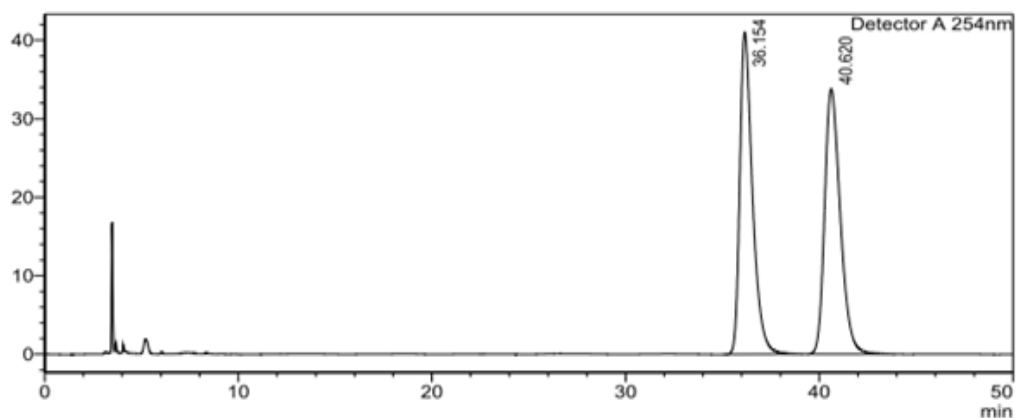
Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	15.309	13905367	711710	94.112		M	
2	18.439	870026	43028	5.888		M	
Total		14775392	754738				

HPLC Analysis Report by Chiral Column (OJ-H)



<Chromatogram>

mV



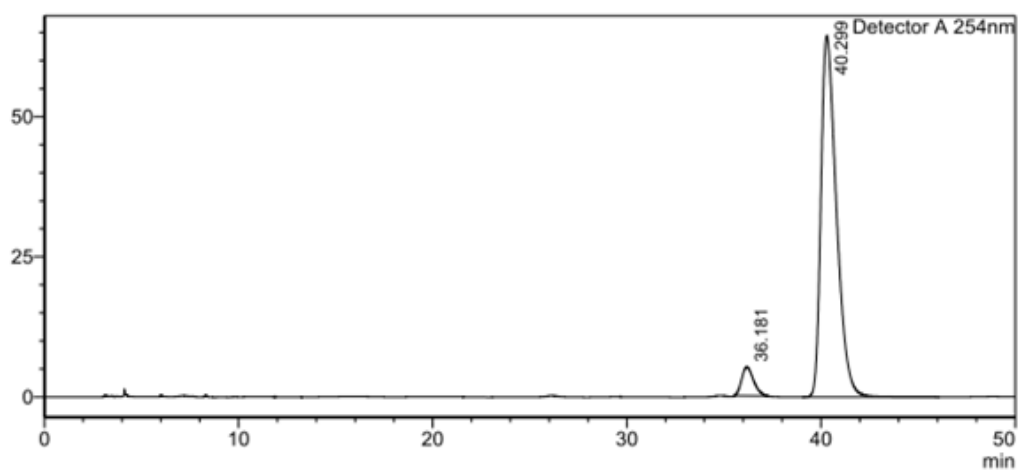
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	36.154	1865673	41045	49.624			
2	40.620	1893956	33749	50.376			
Total		3759629	74794				

<Chromatogram>

mV

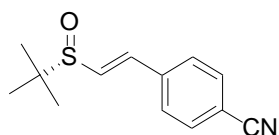


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	36.181	221730	5169	5.865		M	
2	40.299	3559087	64371	94.135		M	
Total		3780817	69541				

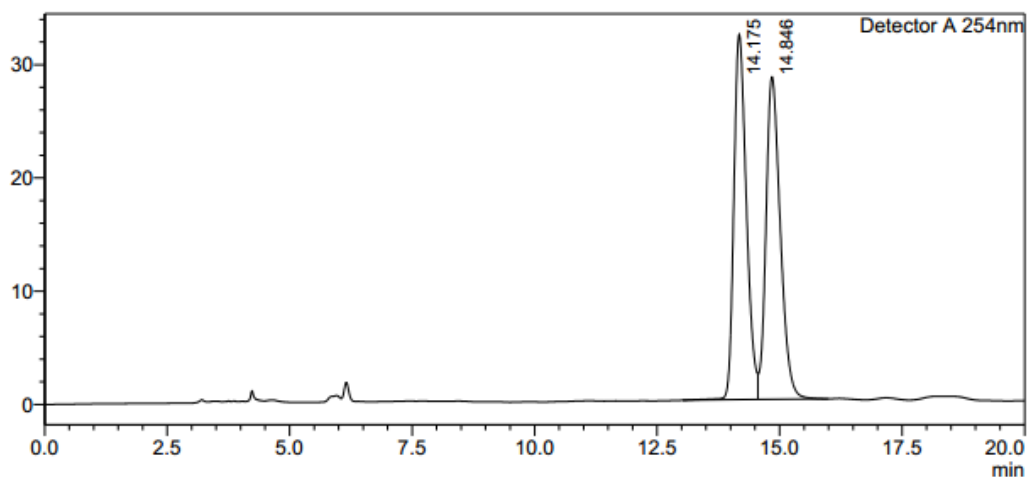
HPLC Analysis Report by Chiral Column (OJ-H)



6f

<Chromatogram>

mV



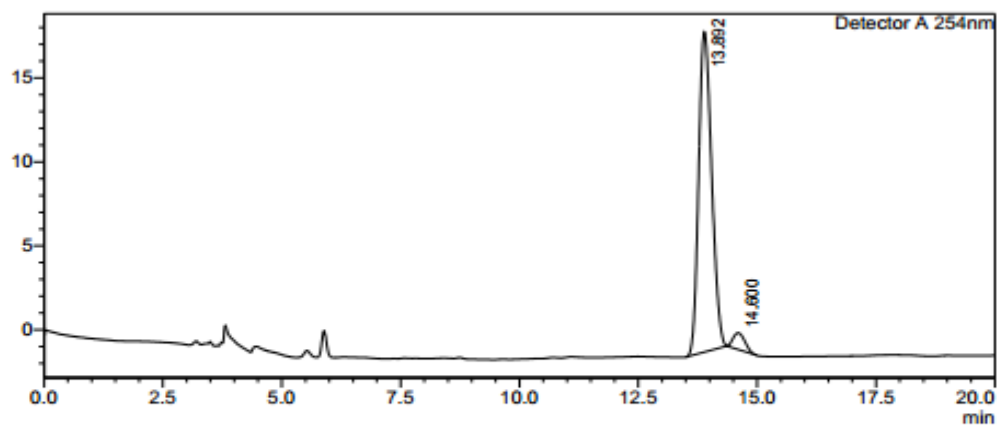
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.175	574239	32251	49.729			
2	14.846	580498	28470	50.271		V	
Total		1154737	60721				

<Chromatogram>

mV

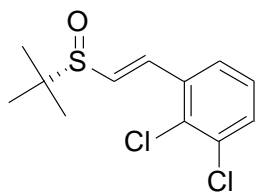


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	13.892	362733	19050	95.498		M	
2	14.600	17098	989	4.502		M	
Total		379832	20038				

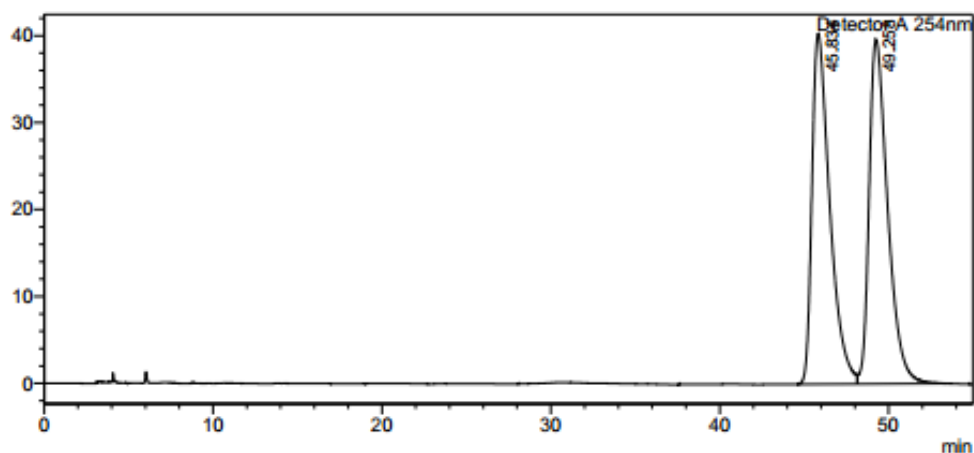
HPLC Analysis Report by Chiral Column (OJ-H)



6g

<Chromatogram>

mV



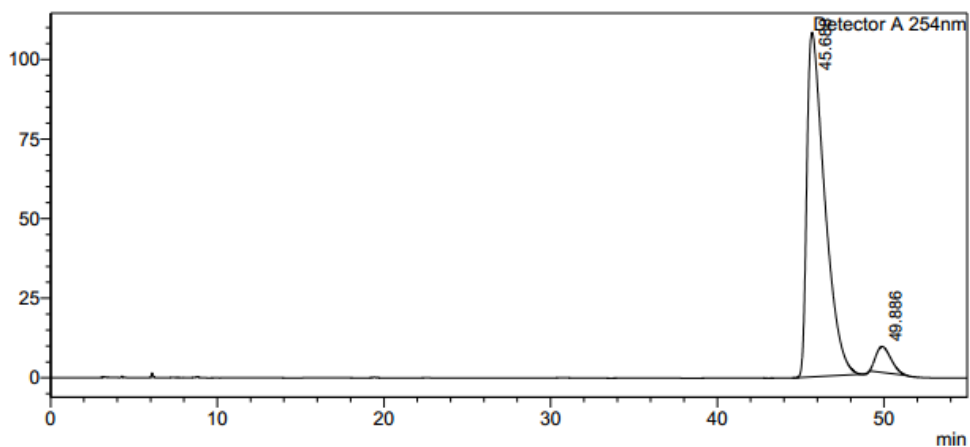
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	45.834	2960509	40274	49.489			
2	49.258	3021678	39616	50.511		V	
Total		5982187	79890				

<Chromatogram>

mV

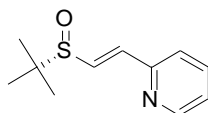


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	45.688	8070787	108221	94.053		M	
2	49.886	510343	8097	5.947		M	
Total		8581130	116318				

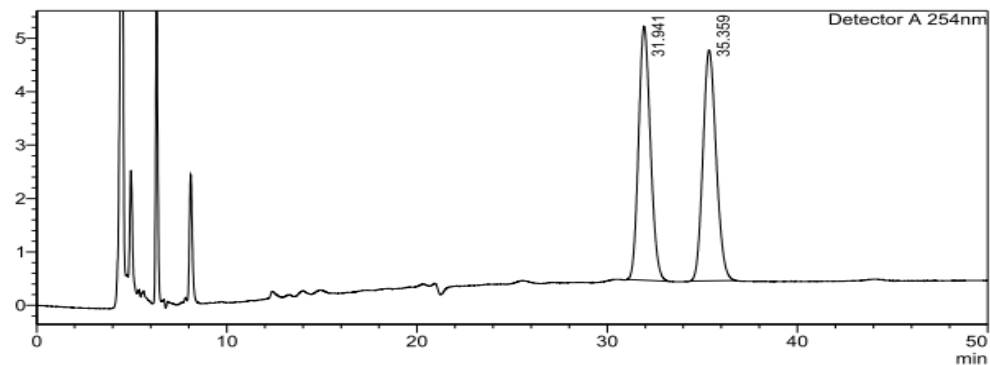
HPLC Analysis Report by Chiral Column (AS-H)



6h

<Chromatogram>

mV



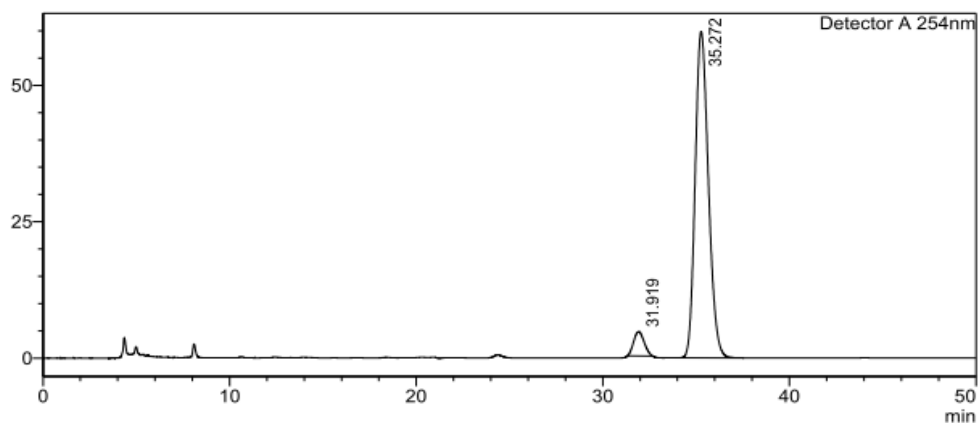
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	31.941	205543	4749	49.644			
2	35.359	208495	4319	50.356			
Total		414038	9068				

<Chromatogram>

mV

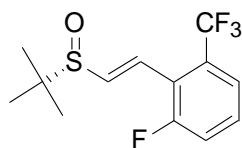


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	31.919	174123	4450	5.572		M	
2	35.272	2950891	59810	94.428		M	
Total		3125013	64260				

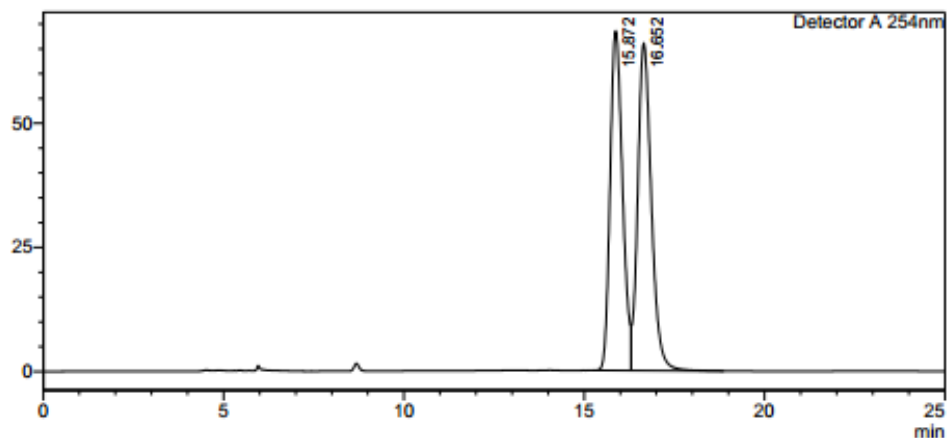
HPLC Analysis Report by Chiral Column (OJ-H)



6i

<Chromatogram>

mV



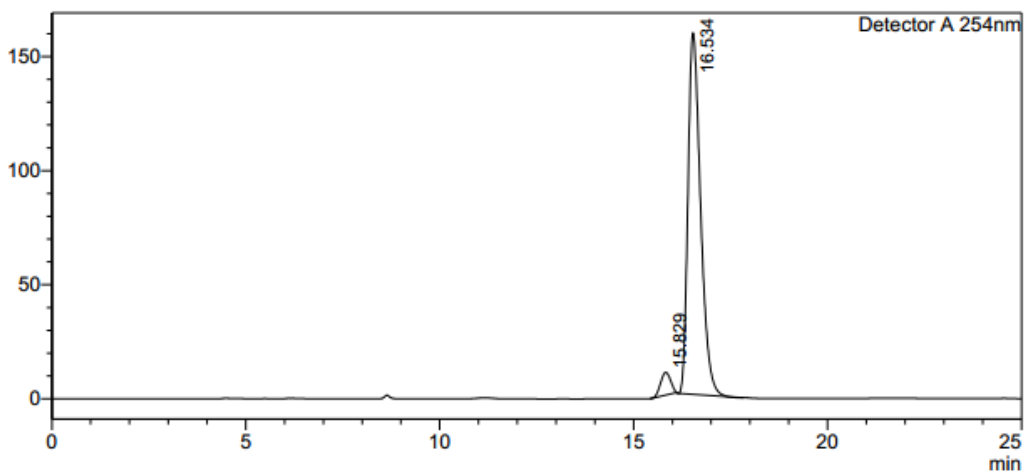
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	15.872	1632002	68343	48.495			
2	16.652	1733328	65903	51.505		V	
Total		3365330	134246				

<Chromatogram>

mV

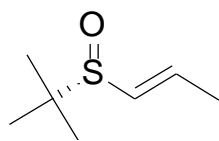


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	15.829	176893	9883	4.726		M	
2	16.534	3566151	158241	95.274		M	
Total		3743044	168124				

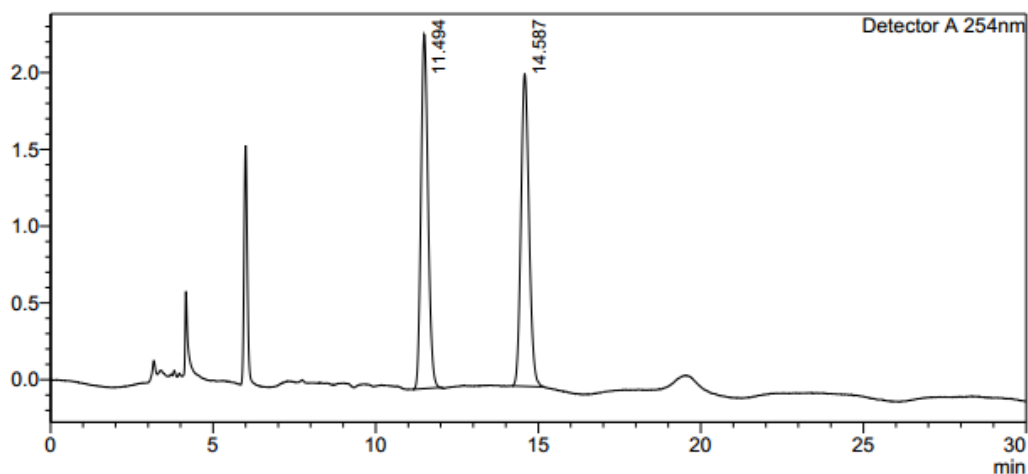
HPLC Analysis Report by Chiral Column (OJ-H)



6j

<Chromatogram>

mV



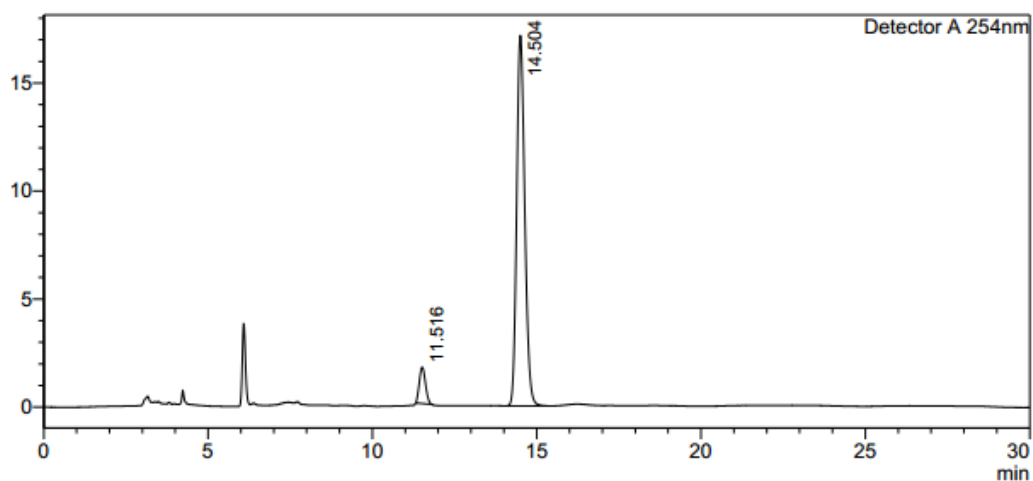
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	11.494	34986	2306	49.844			
2	14.587	35205	2034	50.156			
Total		70191	4339				

<Chromatogram>

mV

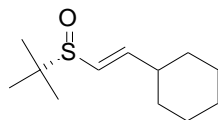


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	11.516	21866	1678	6.911		M	
2	14.504	294514	17134	93.089		M	
Total		316380	18812				

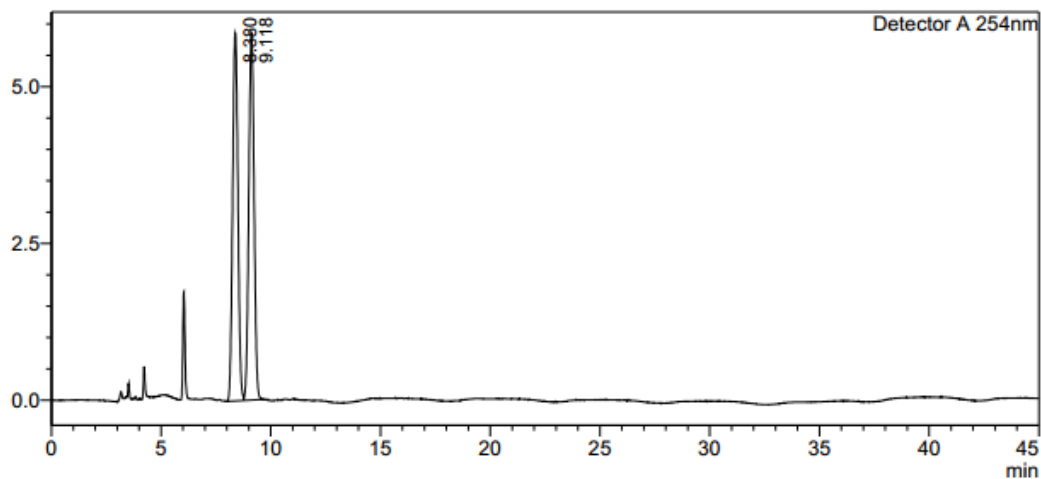
HPLC Analysis Report by Chiral Column (OJ-H)



6k

<Chromatogram>

mV



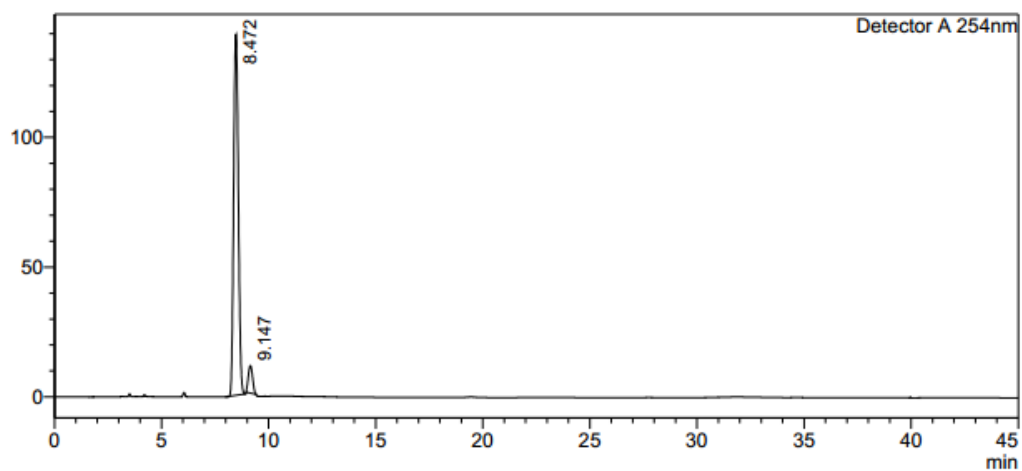
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	8.380	98823	5864	49.940			
2	9.118	99059	5855	50.060		V	
Total		197883	11719				

<Chromatogram>

mV

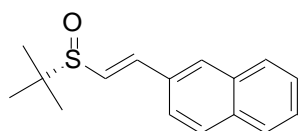


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	8.472	2134319	139032	93.603		M	
2	9.147	145868	10498	6.397		M	
Total		2280187	149530				

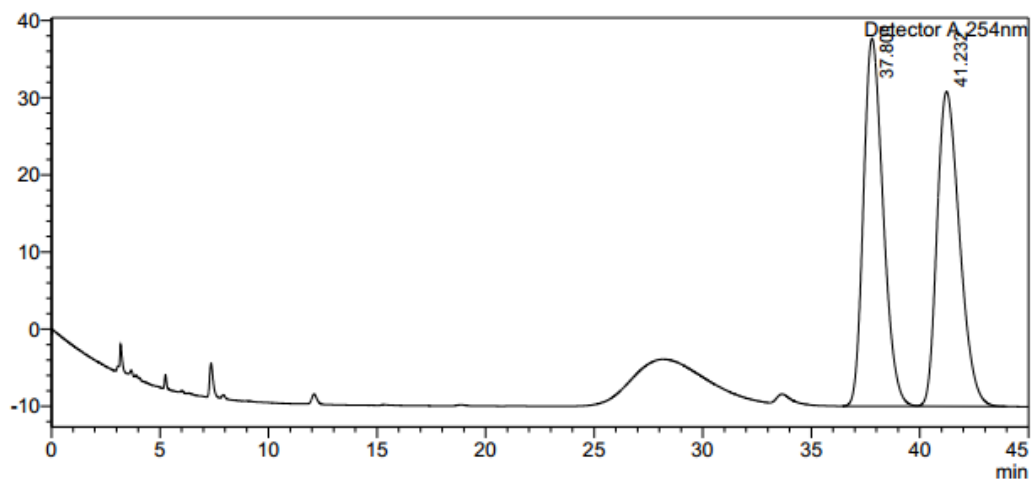
HPLC Analysis Report by Chiral Column (AS-H)



6l

<Chromatogram>

mV



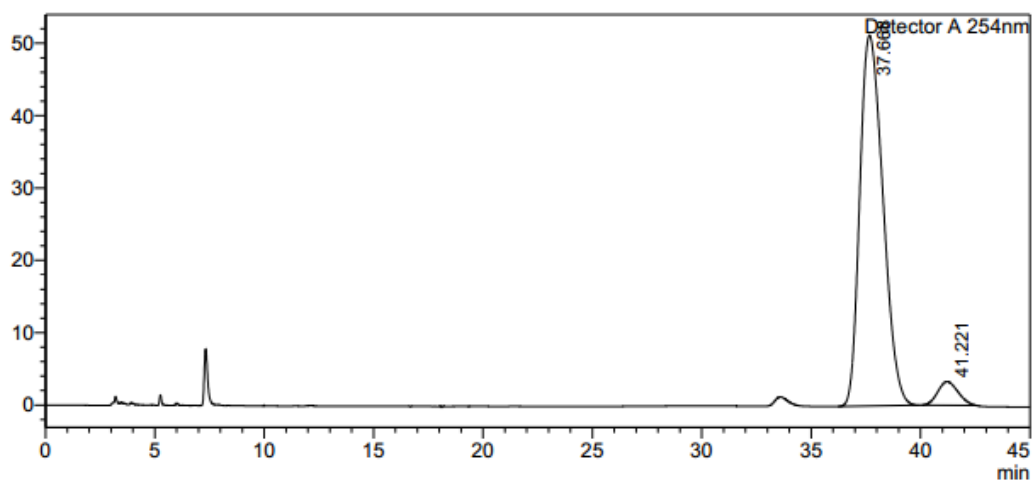
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	37.801	3002849	47672	50.479			
2	41.232	2945862	40797	49.521		V	
Total		5948710	88469				

<Chromatogram>

mV

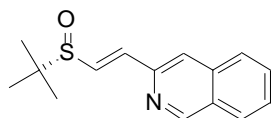


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	37.668	3771529	51236	94.705		M	
2	41.221	210862	3265	5.295		M	
Total		3982391	54501				

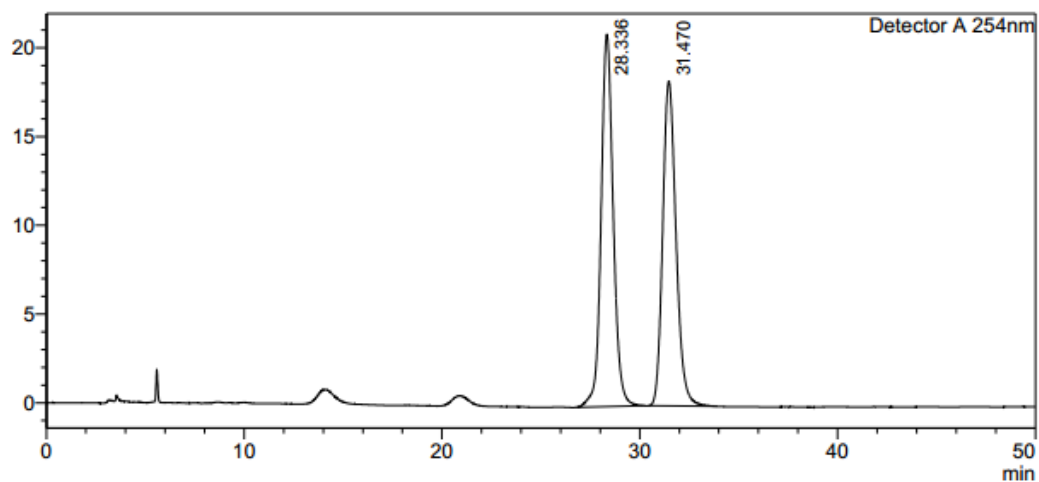
HPLC Analysis Report by Chiral Column (OJ-H)



6m

<Chromatogram>

mV



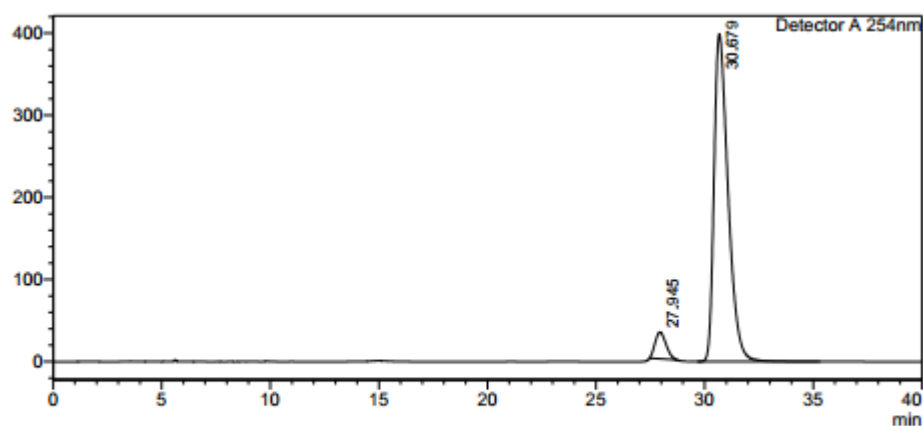
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	28.336	894491	20964	51.097			
2	31.470	856088	18300	48.903			
Total		1750579	39264				

<Chromatogram>

mV

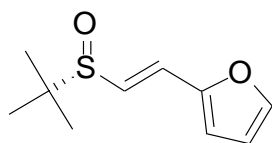


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	27.945	1127035	32276	5.913		M	
2	30.679	17932942	398722	94.087			
Total		19059976	430997				

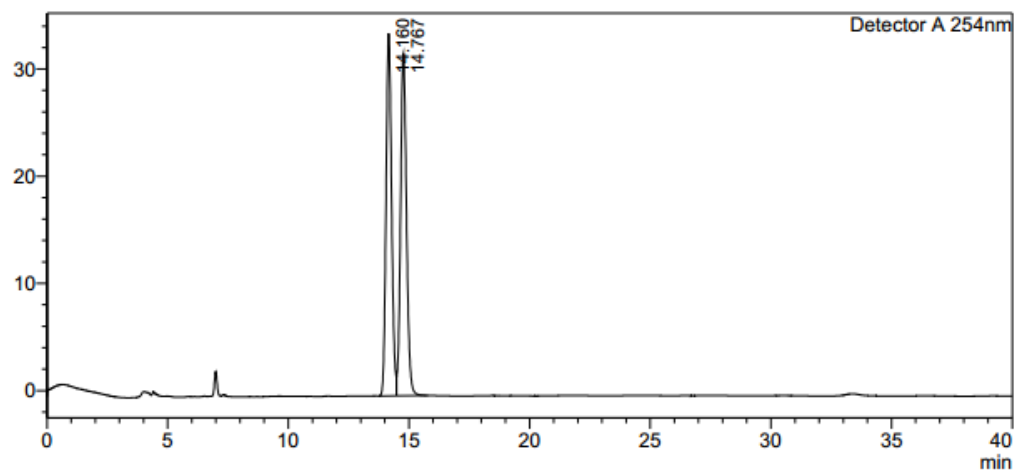
HPLC Analysis Report by Chiral Column (OJ-H)



6n

<Chromatogram>

mV



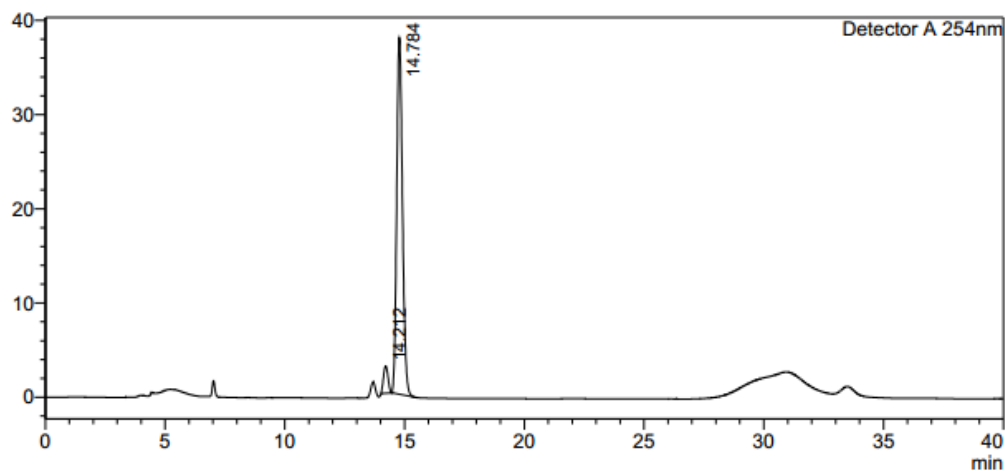
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.160	538731	33805	49.581			
2	14.767	547828	31936	50.419		V	
Total		1086559	65740				

<Chromatogram>

mV

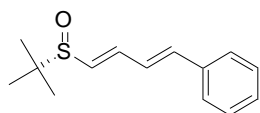


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.212	38376	2896	5.700		M	
2	14.784	634844	37854	94.300		M	
Total		673220	40750				

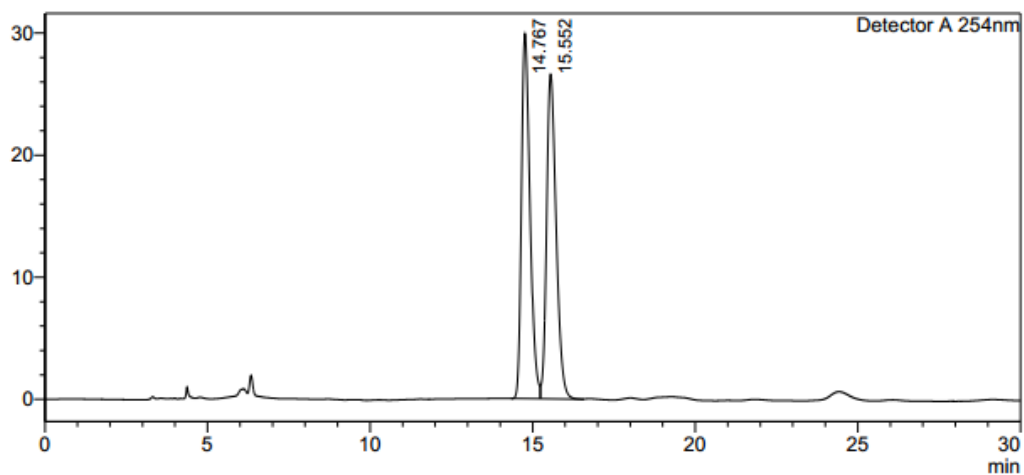
HPLC Analysis Report by Chiral Column (OJ-H)



60

<Chromatogram>

mV



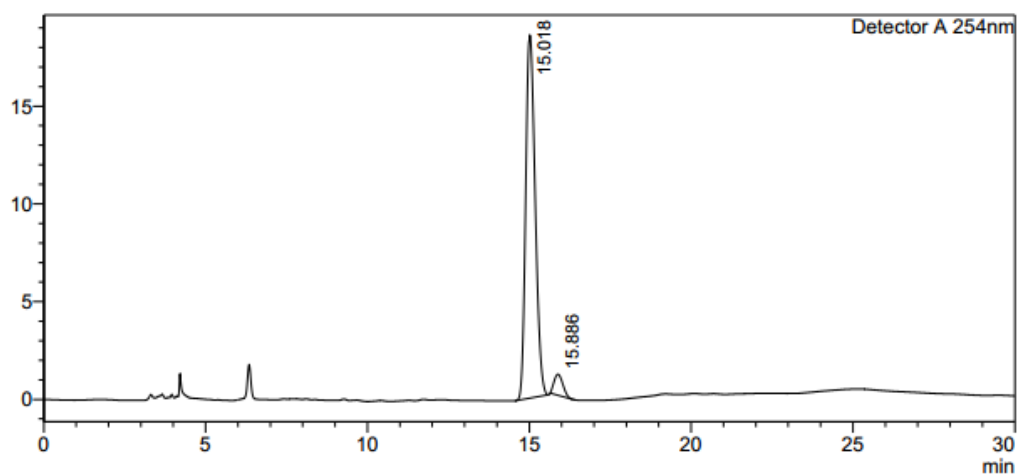
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.767	544514	29881	49.912			
2	15.552	546425	26600	50.088		V	
Total		1090940	56480				

<Chromatogram>

mV

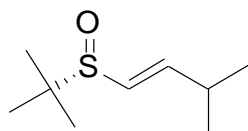


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	15.018	370423	18545	94.743		M	
2	15.886	20554	1078	5.257		M	
Total		390977	19623				

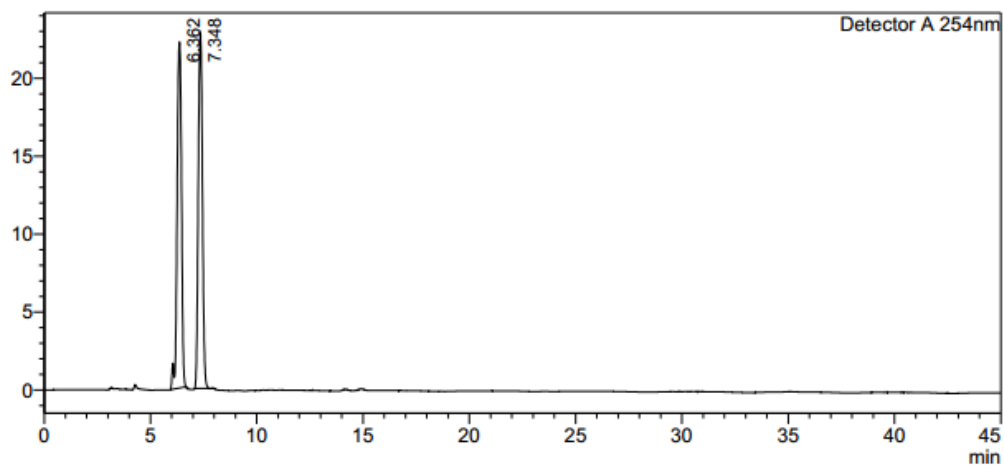
HPLC Analysis Report by Chiral Column (OJ-H)



6p

<Chromatogram>

mV



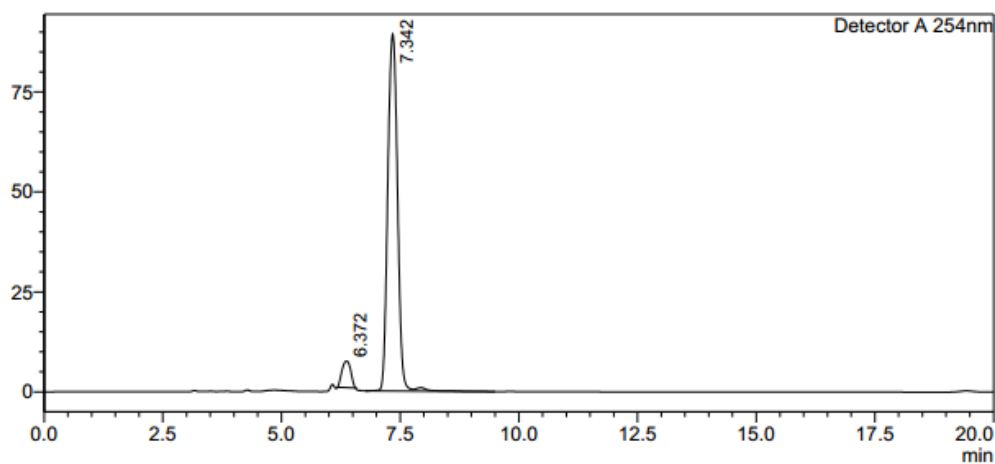
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	6.362	320365	22189	50.703		M	
2	7.348	311476	22789	49.297		M	
Total		631841	44978				

<Chromatogram>

mV

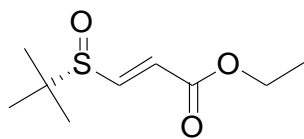


<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	6.372	85161	6639	6.256		M	
2	7.342	1276171	89224	93.744		M	
Total		1361333	95863				

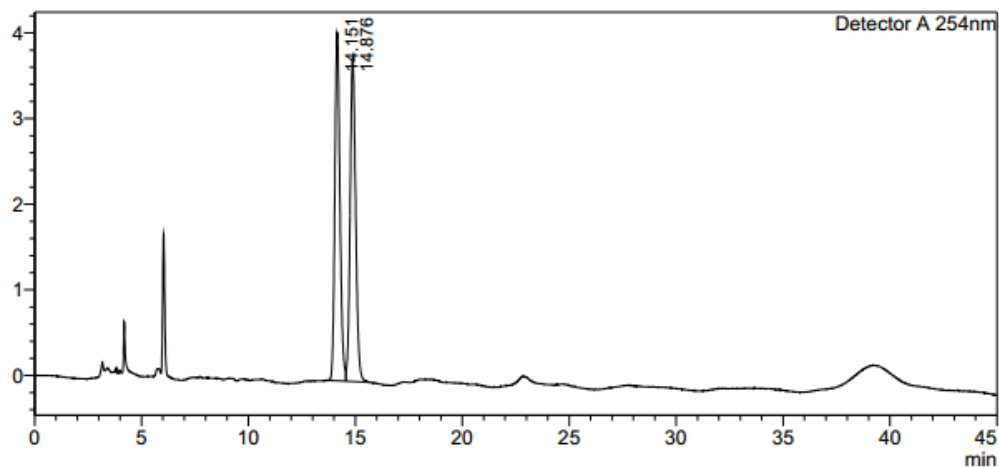
HPLC Analysis Report by Chiral Column (OJ-H)



6q

<Chromatogram>

mV



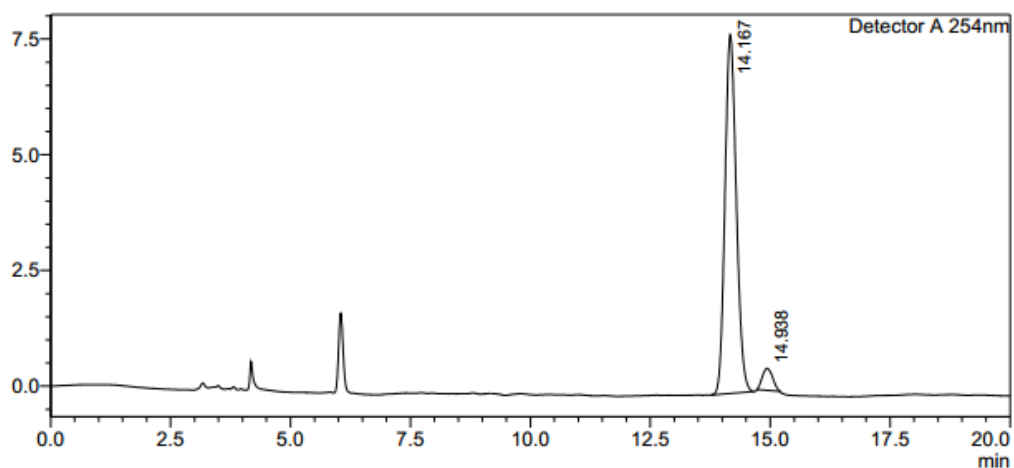
<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.151	67504	4070	49.939			
2	14.876	67669	3780	50.061		V	
Total		135173	7850				

<Chromatogram>

mV



<Peak Table>

Detector A 254nm

Peak#	Ret. Time	Area	Height	Conc.	Unit	Mark	Name
1	14.167	127140	7750	94.741		M	
2	14.938	7058	473	5.259		M	
Total		134197	8223				