

## Supporting Information

### Solid-Phase Synthesis of Tetrasubstituted Pyrrolo[2,3-*d*]pyrimidine

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Figure S1. LC/MS traces of crude products **14a-h**.

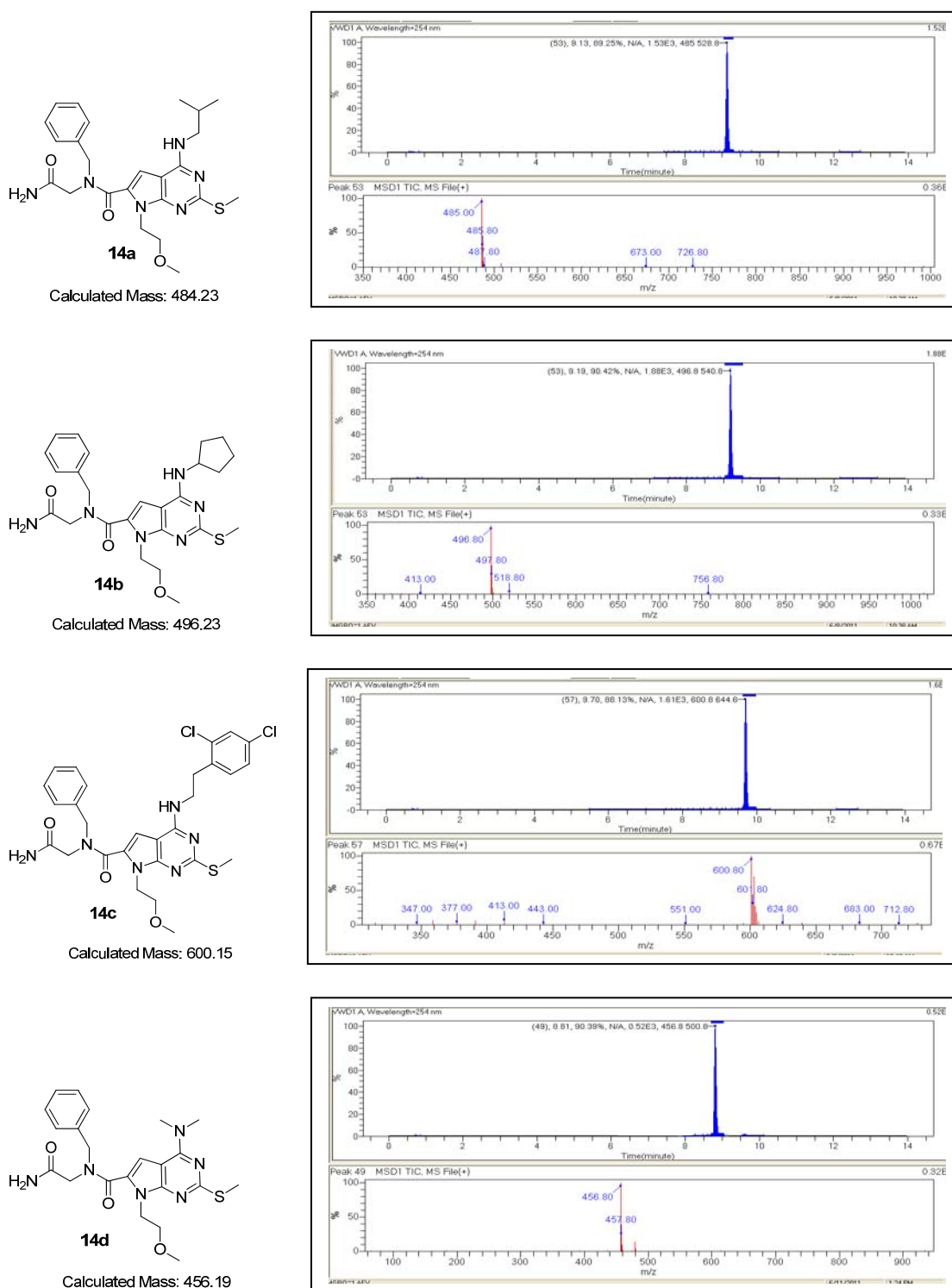
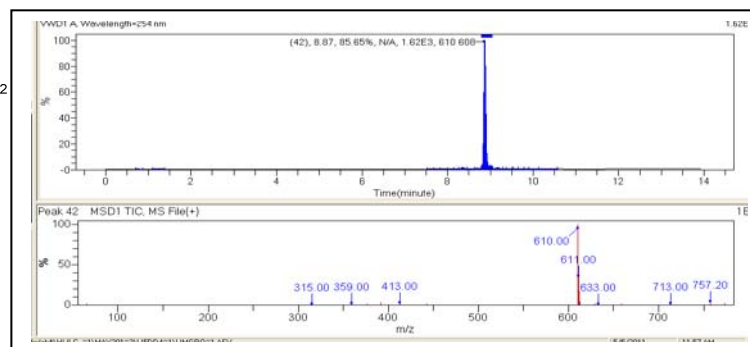
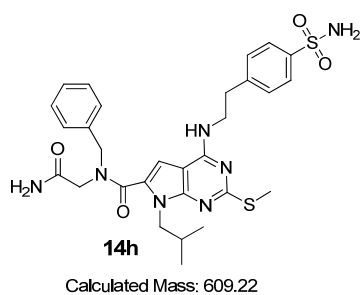
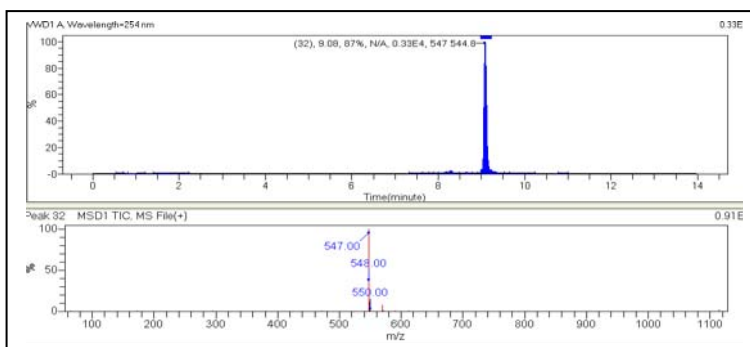
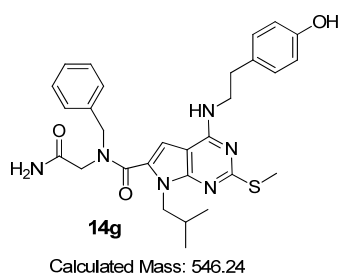
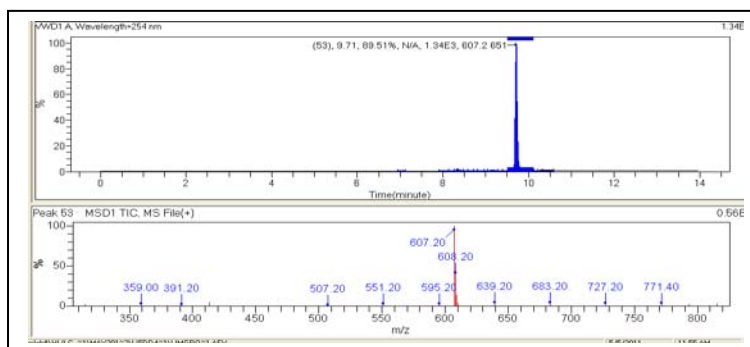
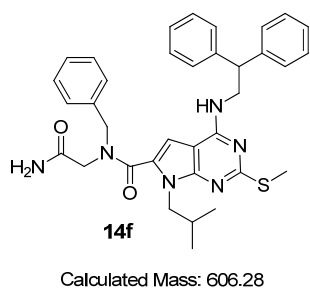
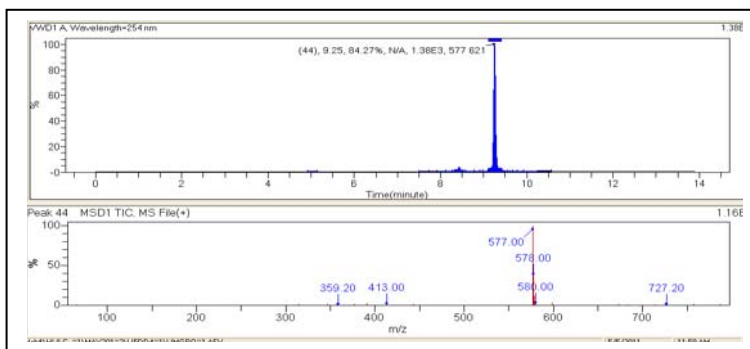
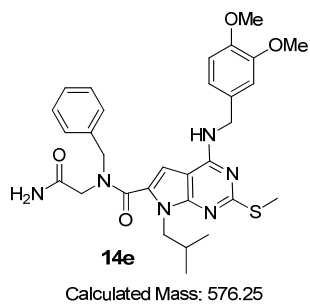
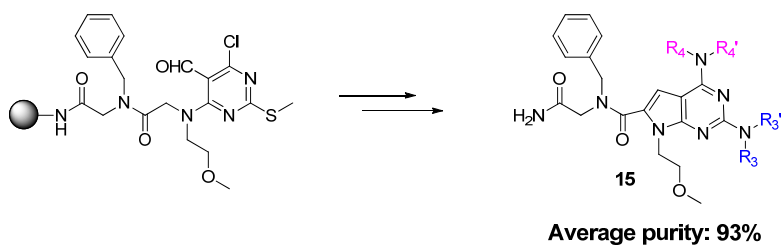


Figure S1. (Cont'd)

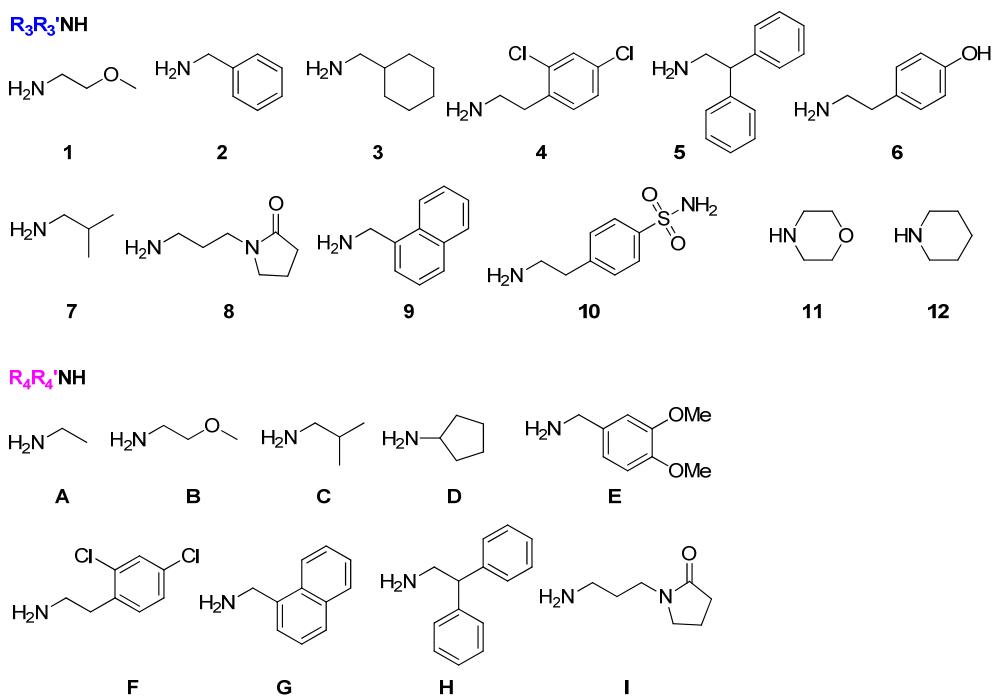


**Table S1.** Purity of crude final products **15**.



Purity (%) <sup>a</sup>		HNR <sub>4</sub> R <sub>4</sub>								
		A	B	C	D	E	F	G	H	I
HNR <sub>3</sub> R <sub>3</sub>	1	90	90	93	95	94	89	93	94	89
	2	92	90	95	96	91	91	94	93	89
	3	97	95	96	98	92	93	95	97	92
	4	96	94	97	98	94	93	94	93	91
	5	96	95	91	97	94	93	96	95	91
	6	93	91	91	97	93	91	94	97	90
	7	94	92	93	96	92	91	95	94	89
	8	91	95	92	95	90	93	94	94	90
	9	90	91	89	94	91	87	88	89	88
	10	91	93	91	96	92	95	93	96	91
	11	95	90	91	97	89	93	92	93	90
	12	92	90	92	97	89	93	93	91	91

<sup>a</sup>Purity assessed by HPLC.



**Table S2.** Mass data of crude final products **15**.

Entry	Calculated Mass (M)	Observed Mass (M+H)	Entry	Calculated Mass (M)	Observed Mass (M+H)
A-1	483.26	484.20	D-1	523.29	524.20
A-2	515.26	516.00	D-2	555.30	556.20
A-3	521.31	522.20	D-3	561.34	562.20
A-4	597.20	598.00	D-4	637.23	638.00
A-5	605.31	606.00	D-5	645.34	646.20
A-6	545.28	546.00	D-6	585.31	586.00
A-7	481.28	482.00	D-7	521.31	522.00
A-8	550.30	551.00	D-8	590.33	591.20
A-9	565.28	566.20	D-9	605.31	606.00
A-10	608.25	609.00	D-10	648.28	649.00
A-11	495.26	496.00	D-11	535.29	536.00
A-12	493.28	494.20	D-12	533.31	534.20
B-1	513.27	514.00	E-1	605.30	606.00
B-2	545.28	546.20	E-2	637.30	638.00
B-3	551.32	552.20	E-3	643.35	644.20
B-4	627.21	628.00	E-4	719.24	720.00
B-5	635.32	636.20	E-5	727.35	728.00
B-6	575.29	576.00	E-6	667.31	668.00
B-7	511.29	512.20	E-7	603.32	604.00
B-8	580.31	581.00	E-8	672.34	673.20
B-9	595.29	596.20	E-9	687.32	688.00
B-10	638.26	636.80	E-10	730.29	731.00
B-11	525.27	526.00	E-11	617.30	618.00
B-12	523.29	524.20	E-12	615.32	616.20
C-1	511.29	512.20	F-1	627.21	628.00
C-2	543.30	545.20	F-2	659.22	660.00
C-3	549.34	550.20	F-3	665.26	666.00
C-4	625.23	626.00	F-4	741.16	741.80
C-5	633.34	634.20	F-5	749.26	750.00
C-6	573.31	574.20	F-6	689.23	690.00
C-7	509.31	510.20	F-7	625.23	626.00
C-8	578.33	579.20	F-8	694.25	695.00
C-9	593.31	594.20	F-9	709.23	710.00
C-10	636.28	637.00	F-10	752.21	753.00
C-11	523.29	524.20	F-11	639.21	640.00
C-12	521.31	522.20	F-12	637.23	638.00

**Table S2.** (Cont'd)

Entry	Calculated Mass (M)	Observed Mass (M+H)	Entry	Calculated Mass	Observed Mass
G-1	595.29	596.00	I-1	580.31	581.20
G-2	627.30	628.00	I-2	612.32	613.20
G-3	633.34	634.20	I-3	618.36	619.20
G-4	709.23	710.00	I-4	694.25	695.00
G-5	717.34	718.20	I-5	702.36	703.20
G-6	657.31	658.00	I-6	642.33	643.20
G-7	593.31	594.20	I-7	578.33	579.20
G-8	662.33	663.20	I-8	647.35	648.20
G-9	677.31	678.00	I-9	662.33	663.20
G-10	720.28	721.00	I-10	705.31	706.00
G-11	607.29	608.00	I-11	592.31	593.20
G-12	605.31	606.00	I-12	590.33	591.20
H-1	635.32	636.20			
H-2	667.33	668.20			
H-3	673.37	674.20			
H-4	749.26	750.00			
H-5	757.37	758.20			
H-6	697.34	698.20			
H-7	633.34	634.20			
H-8	702.36	703.20			
H-9	717.34	718.00			
H-10	760.32	761.20			
H-11	647.32	648.00			
H-12	645.34	646.20			

Figure S2. LC/MS data for 15.

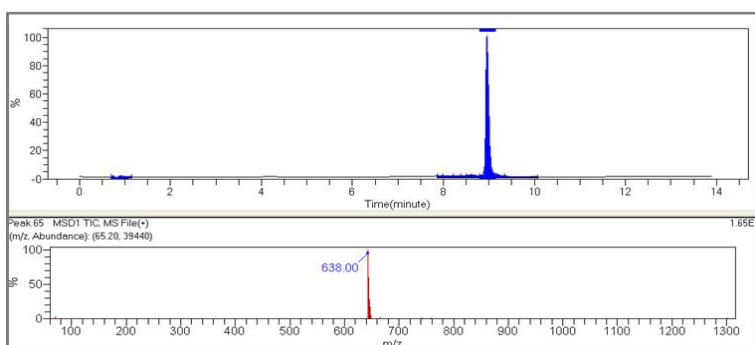
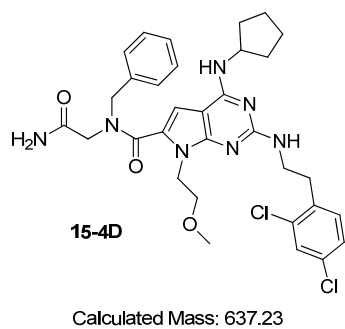
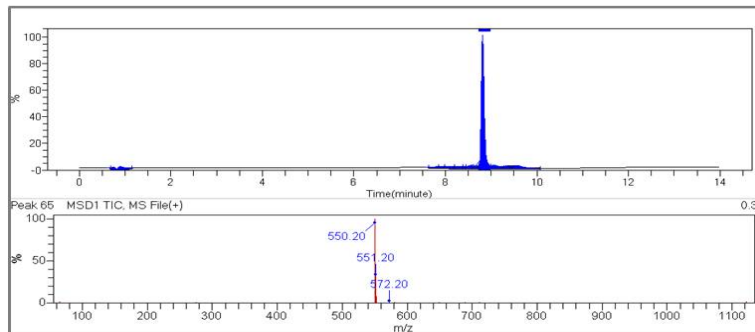
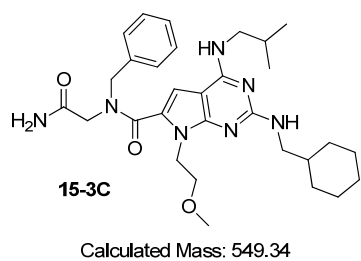
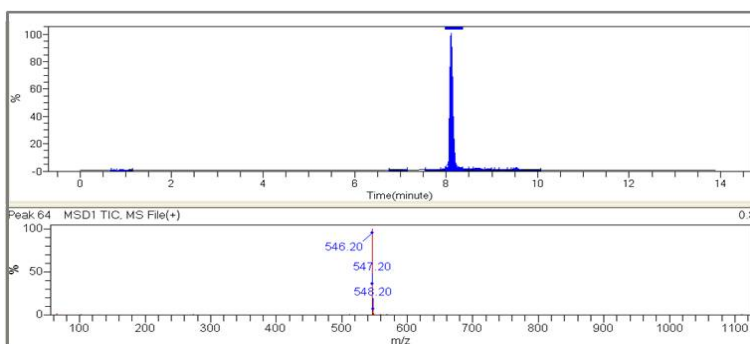
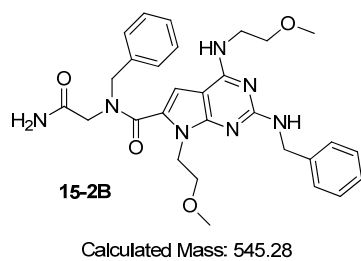
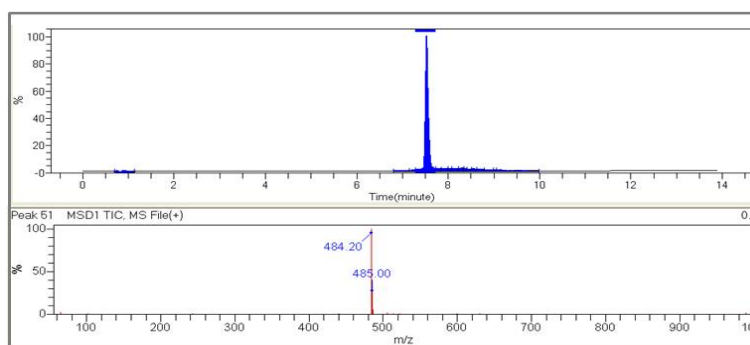
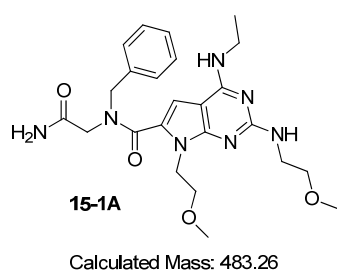


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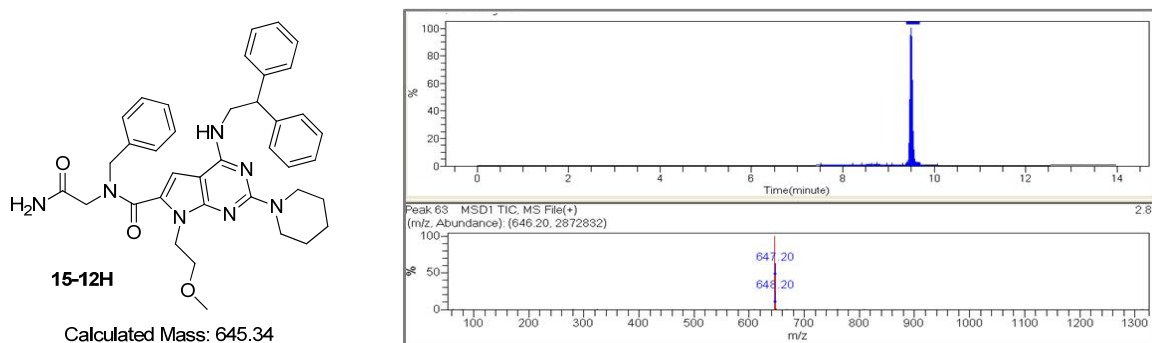
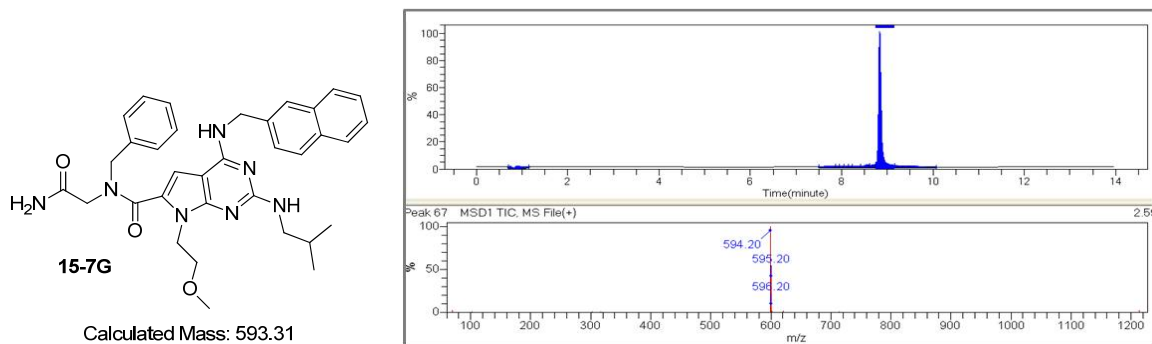
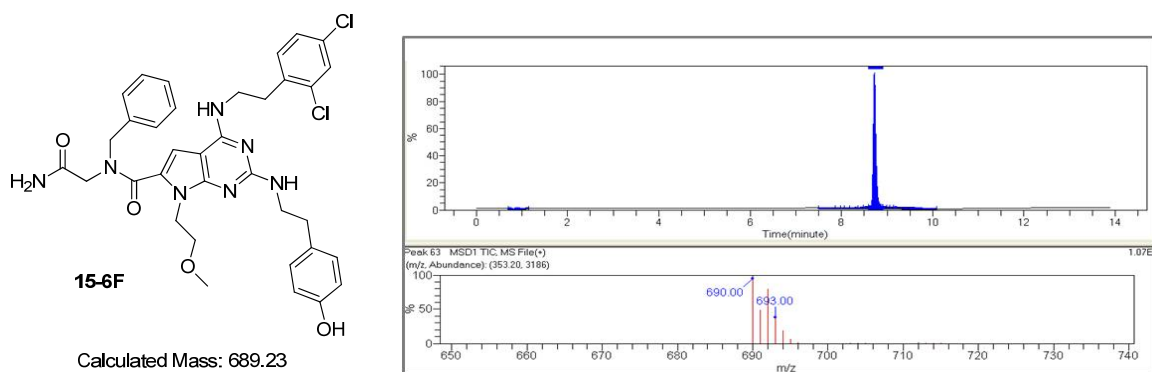
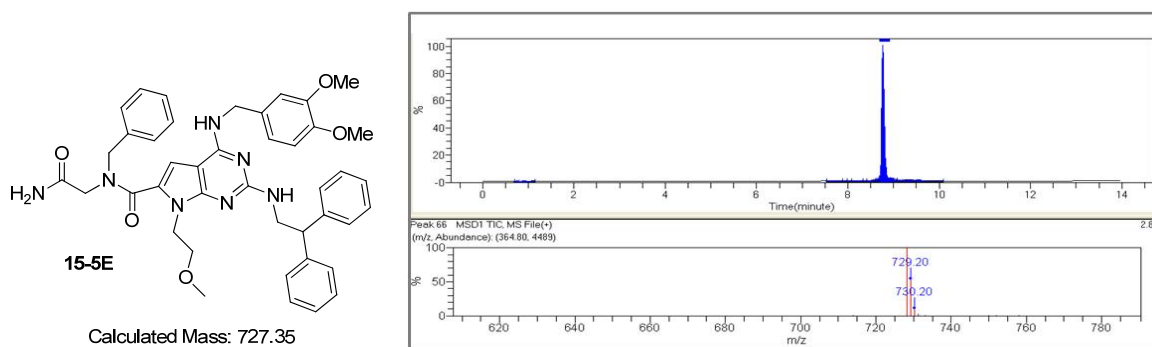




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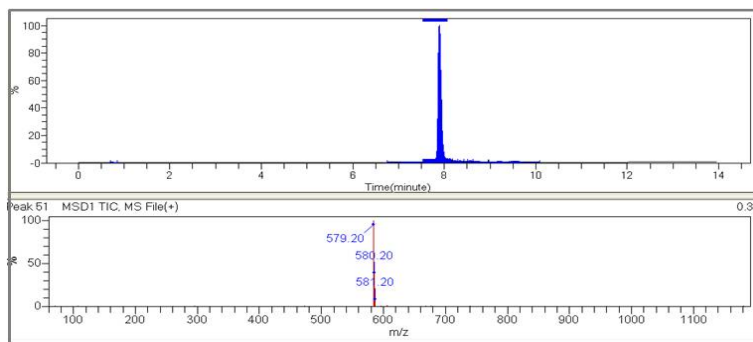
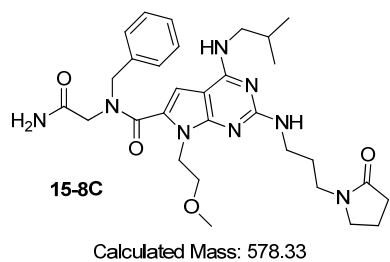
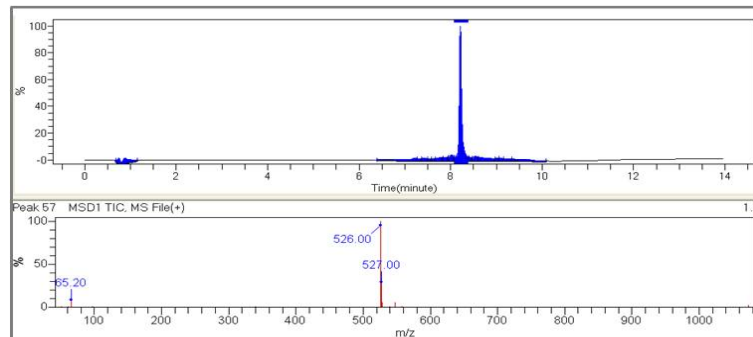
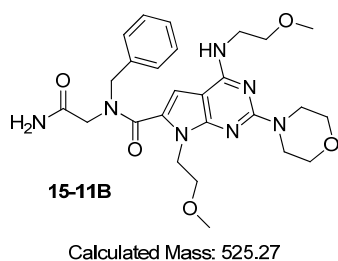
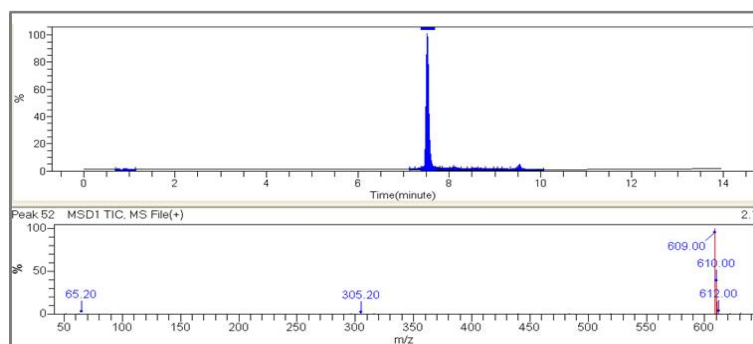
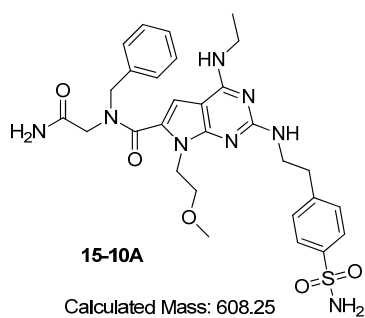
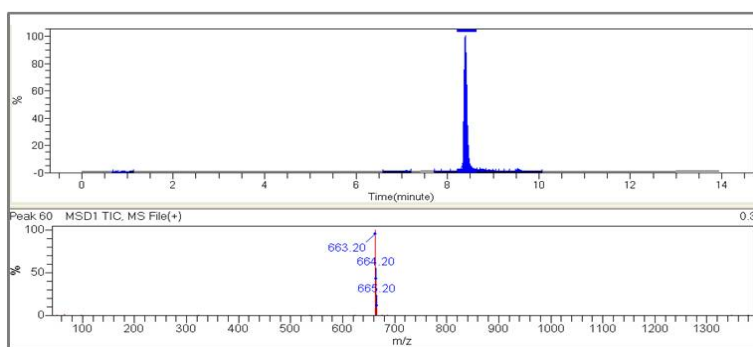
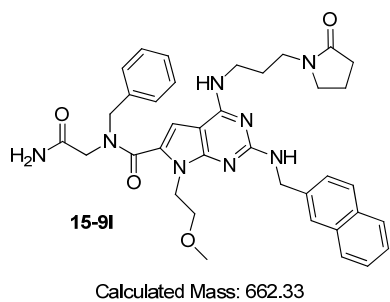
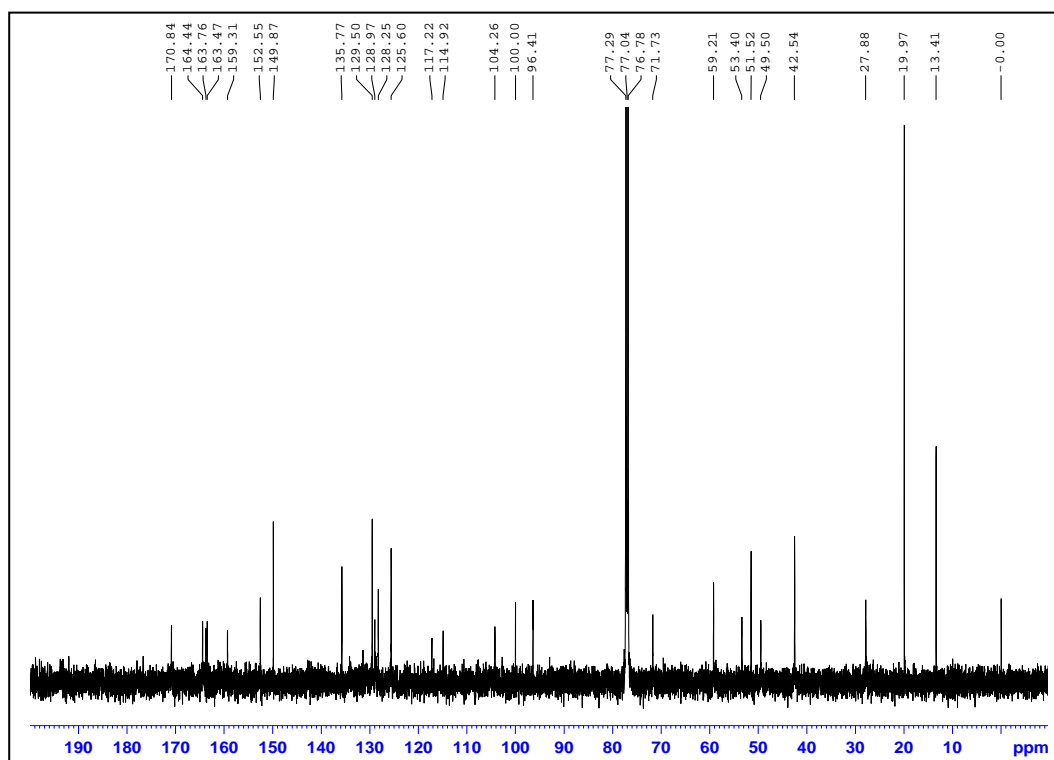
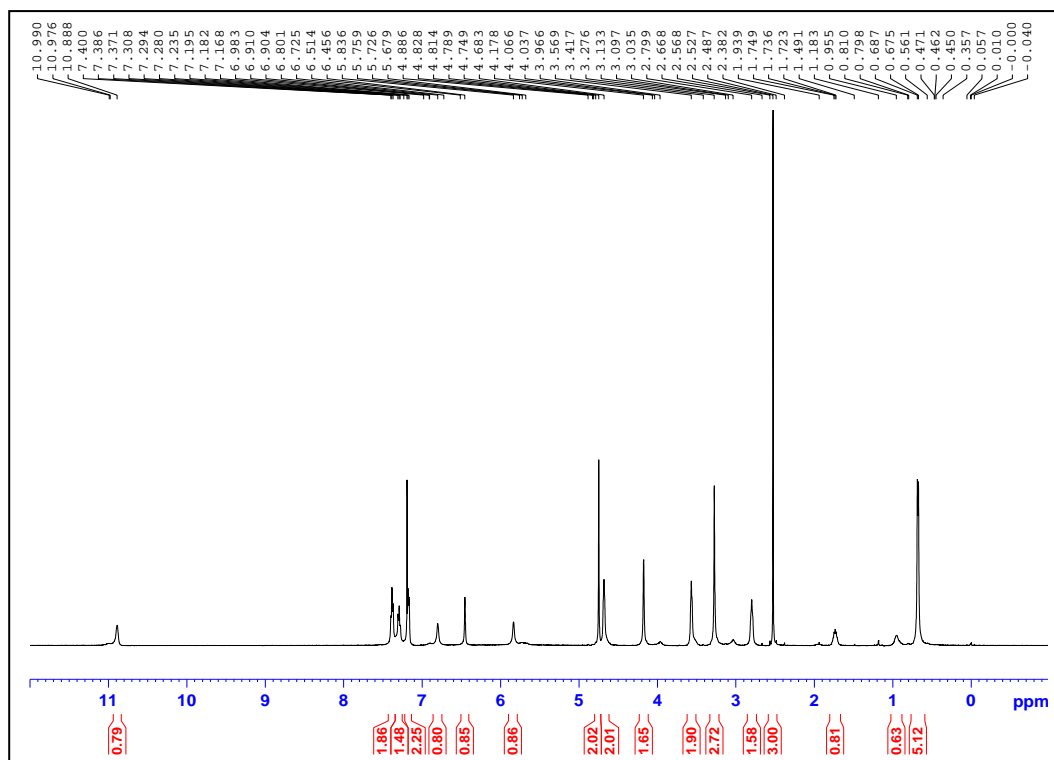
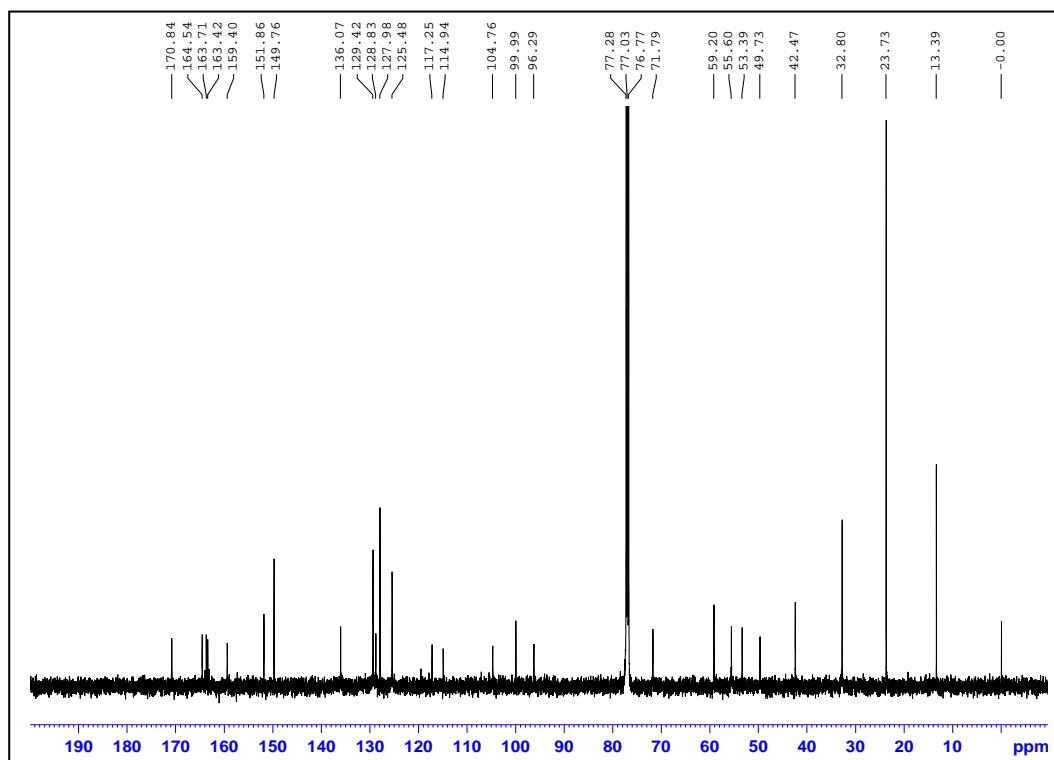
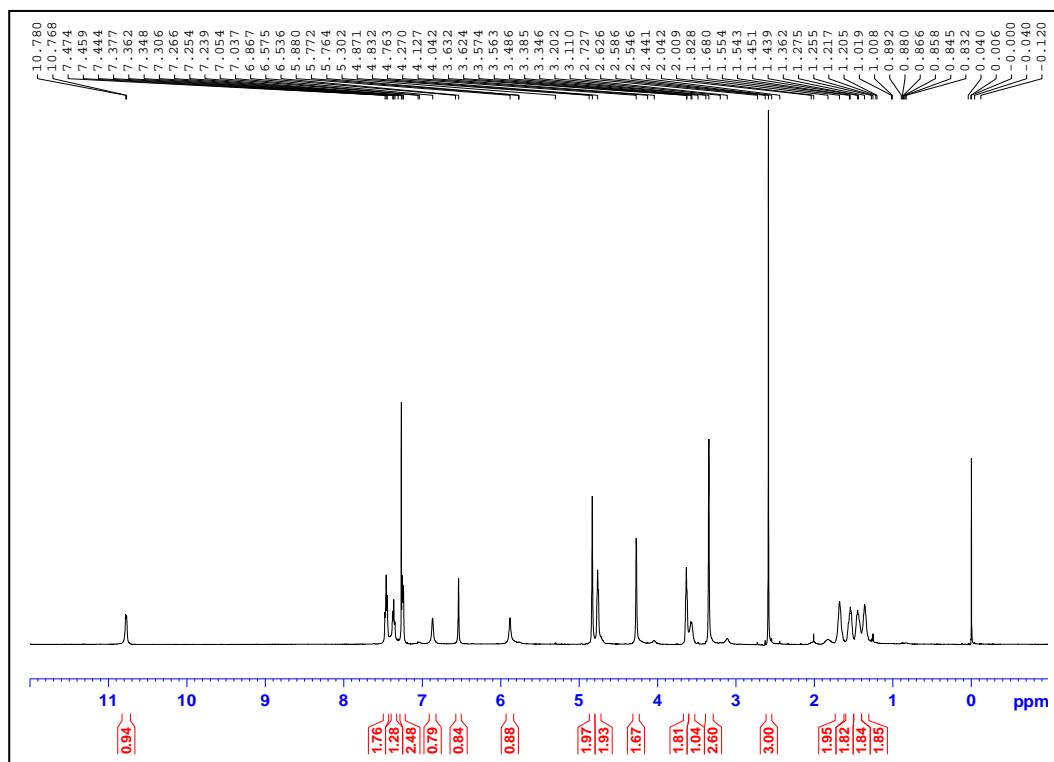


Figure S3.  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compounds **14a-h**.

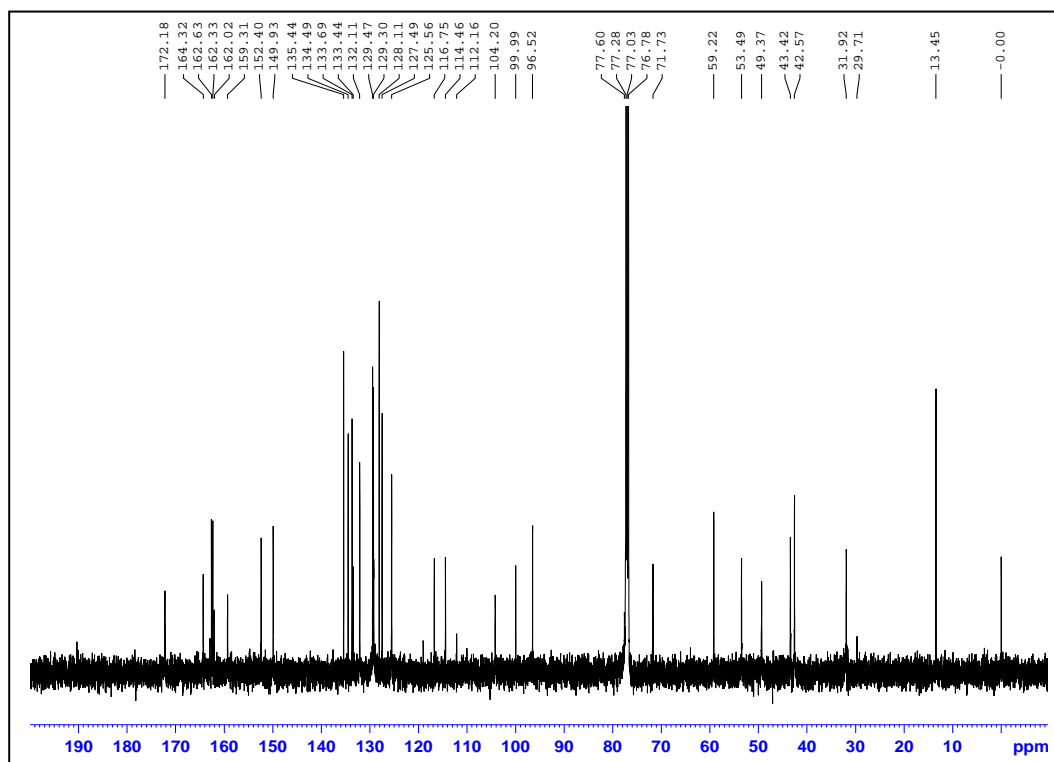
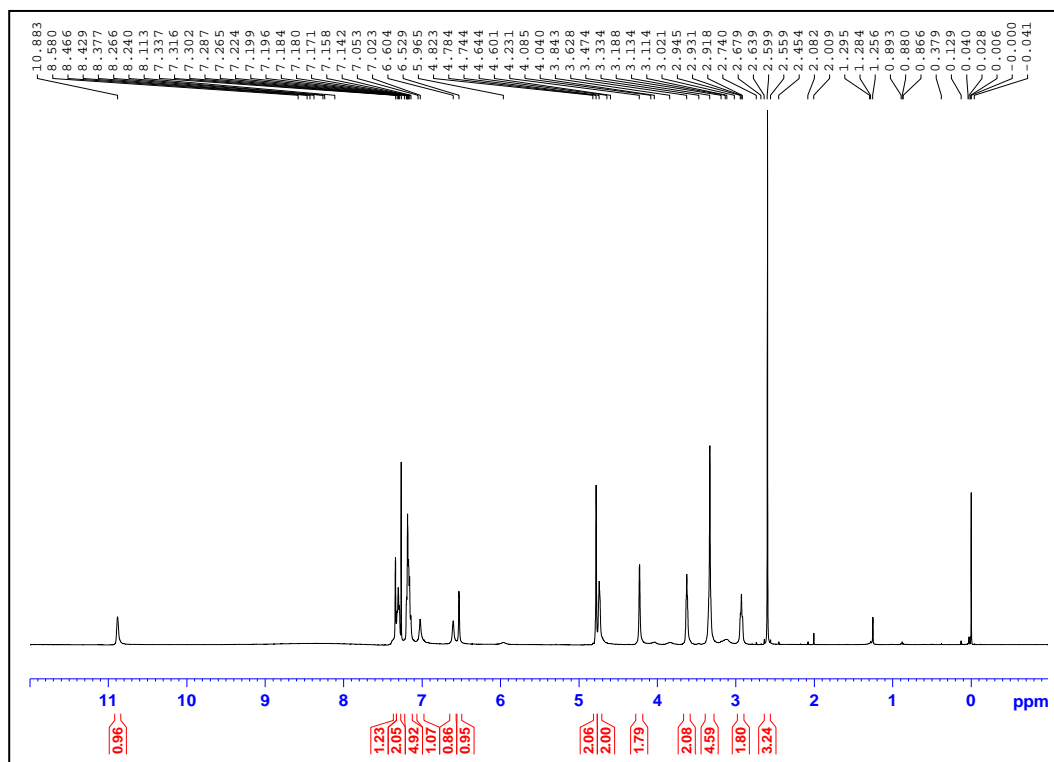
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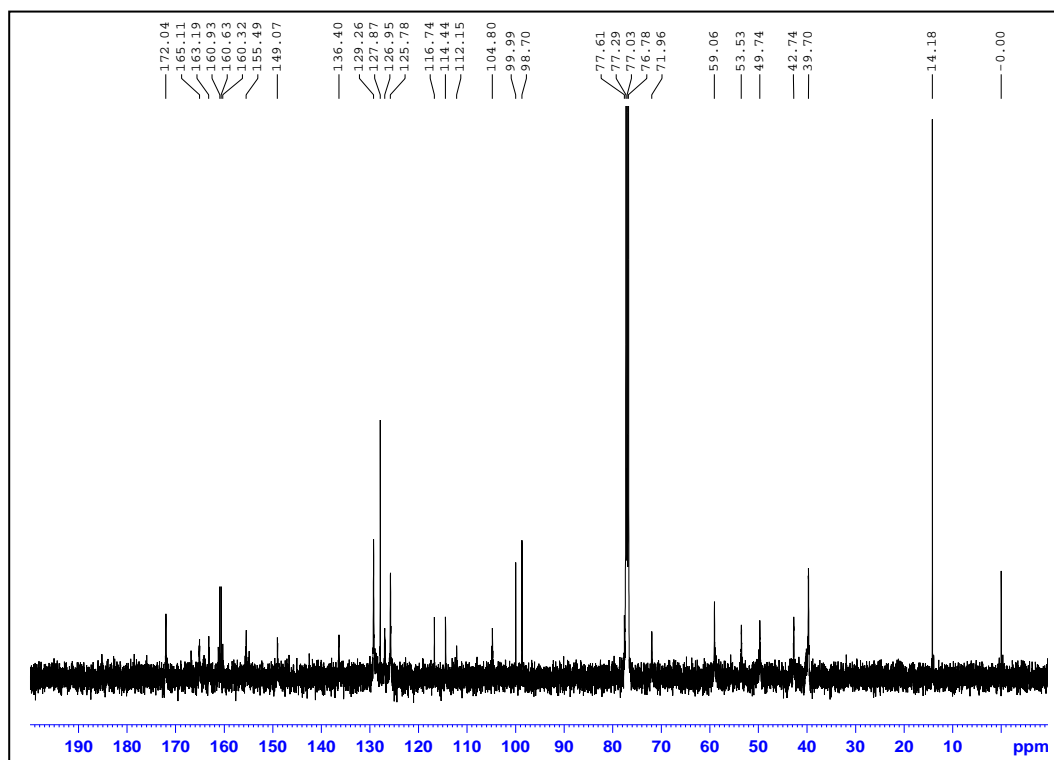
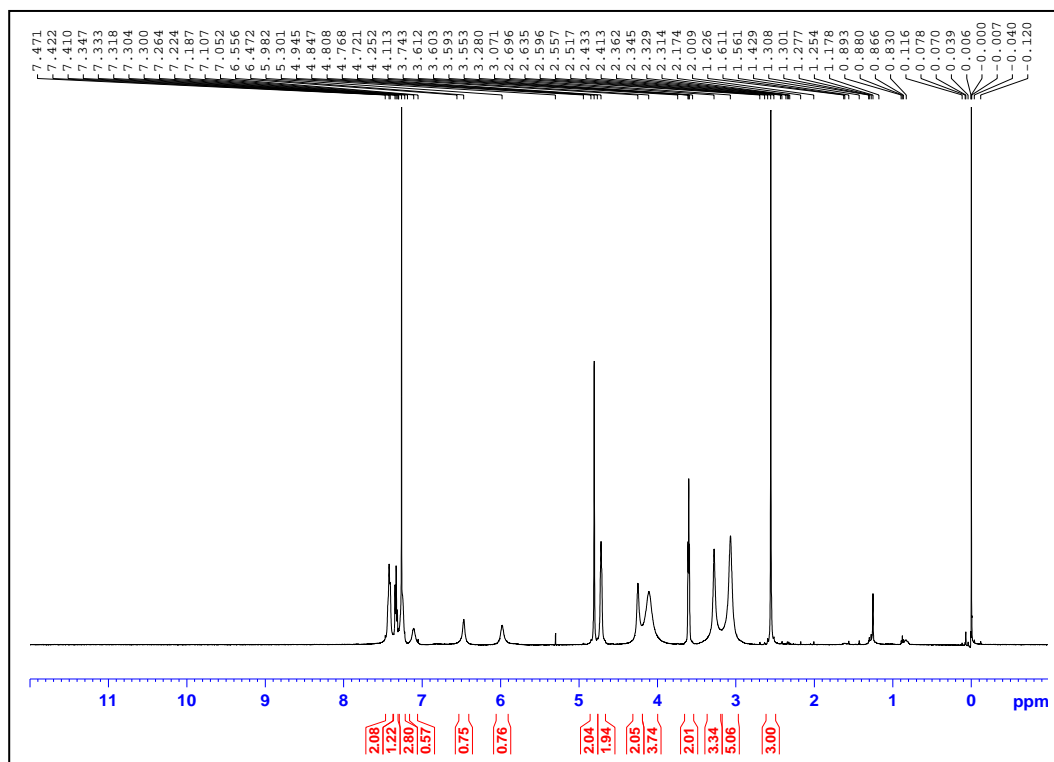
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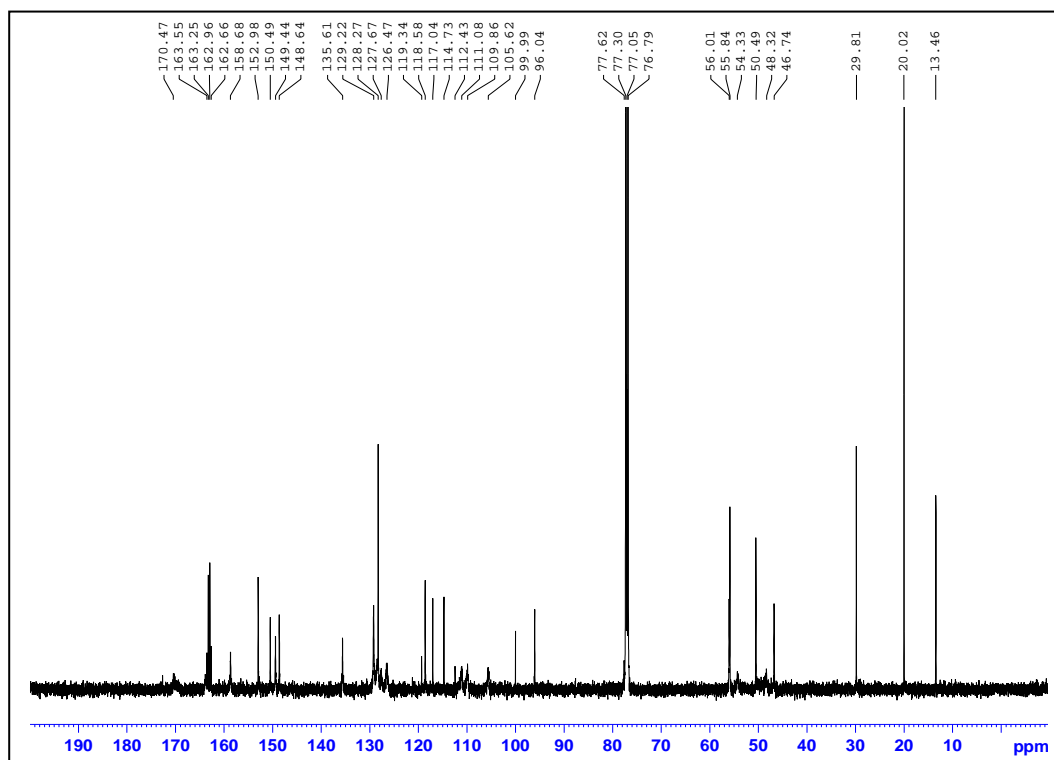
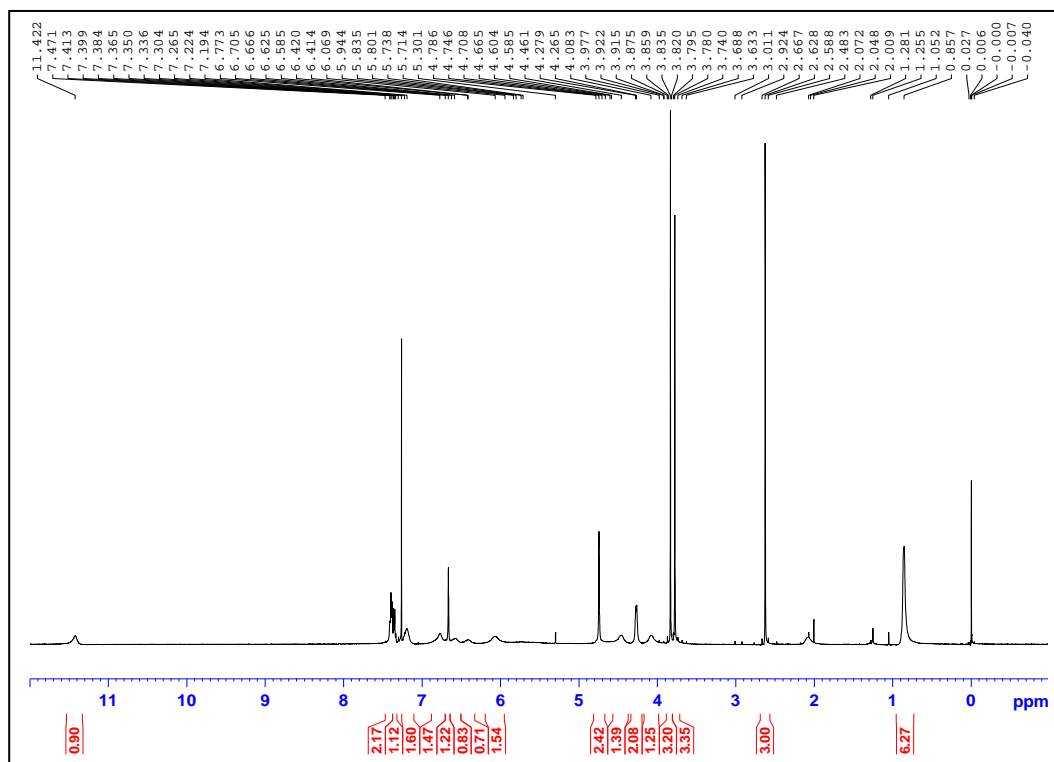
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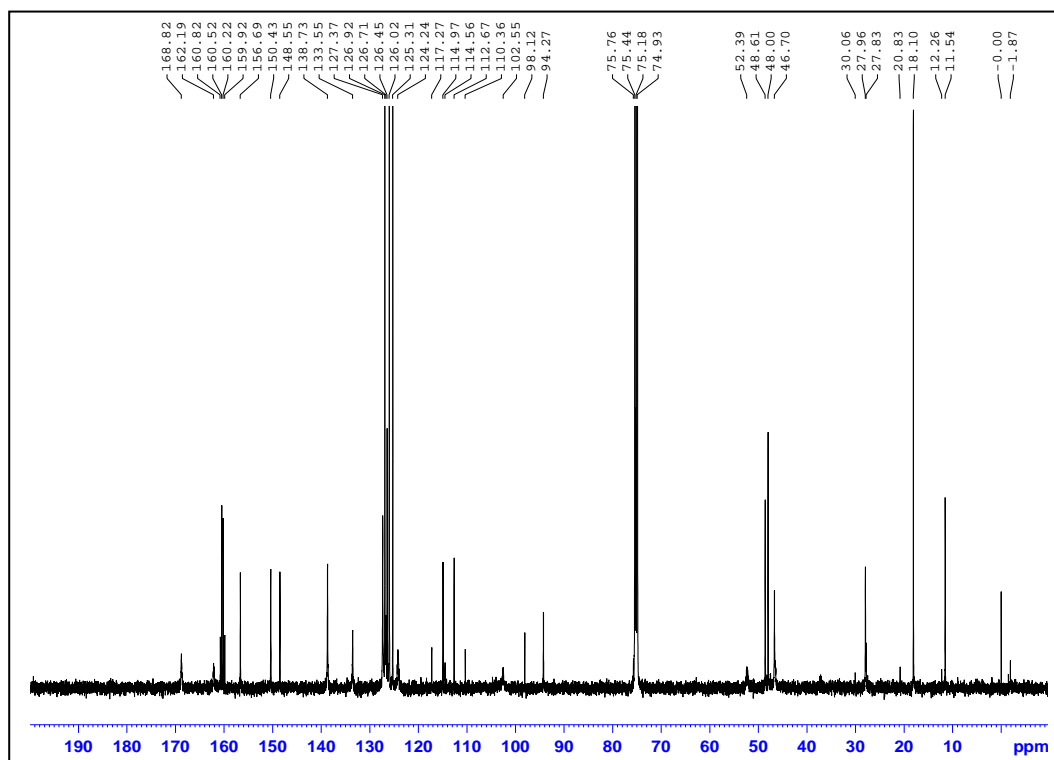
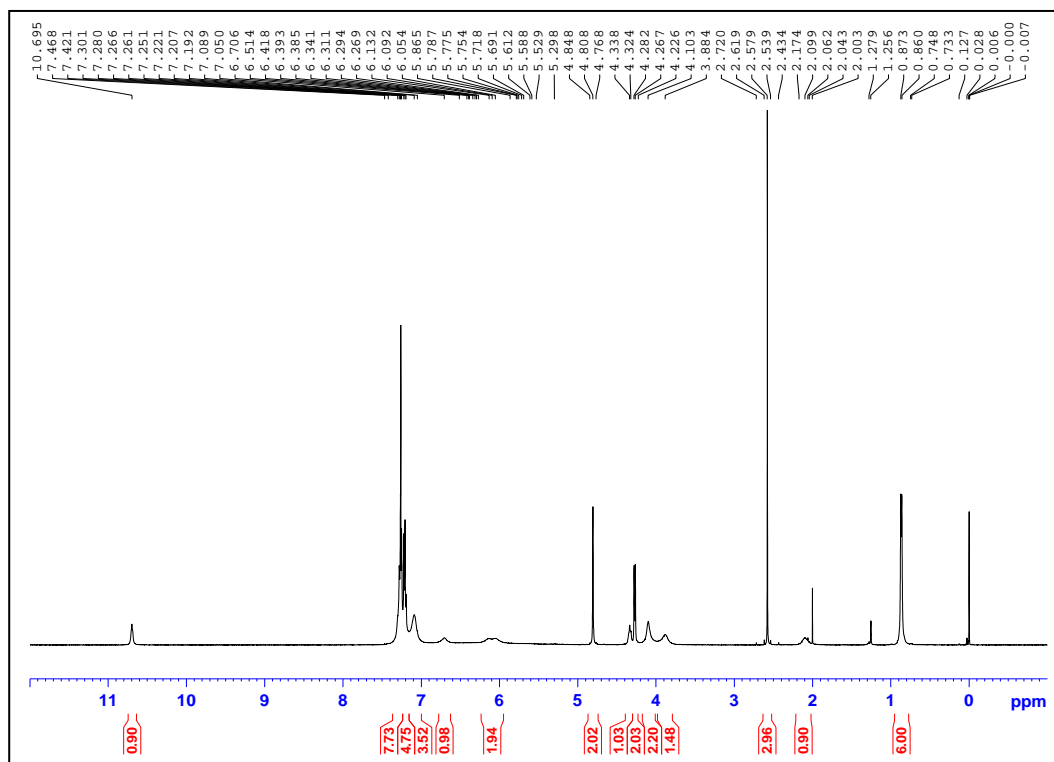
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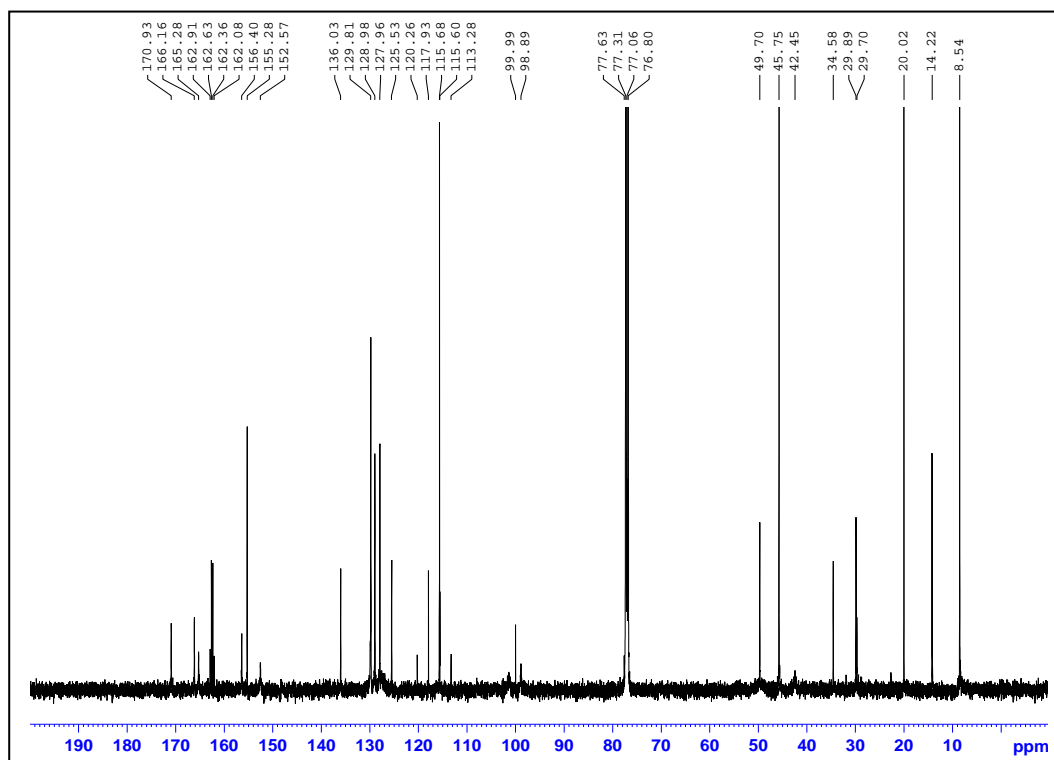
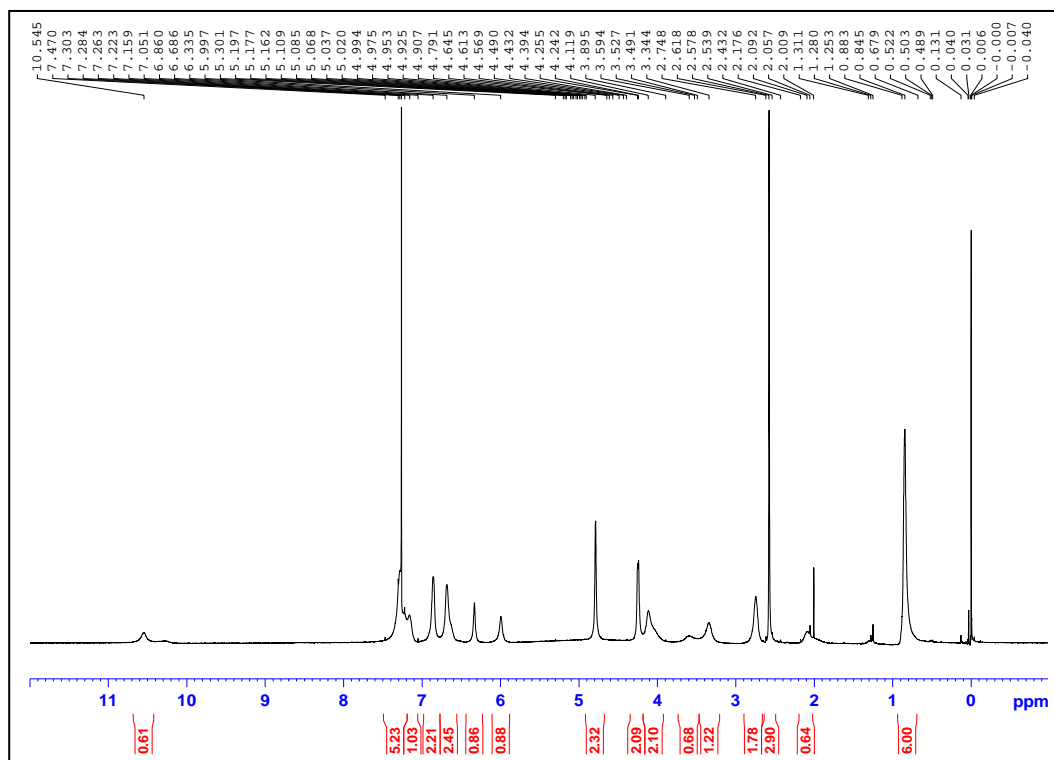
14e



14f

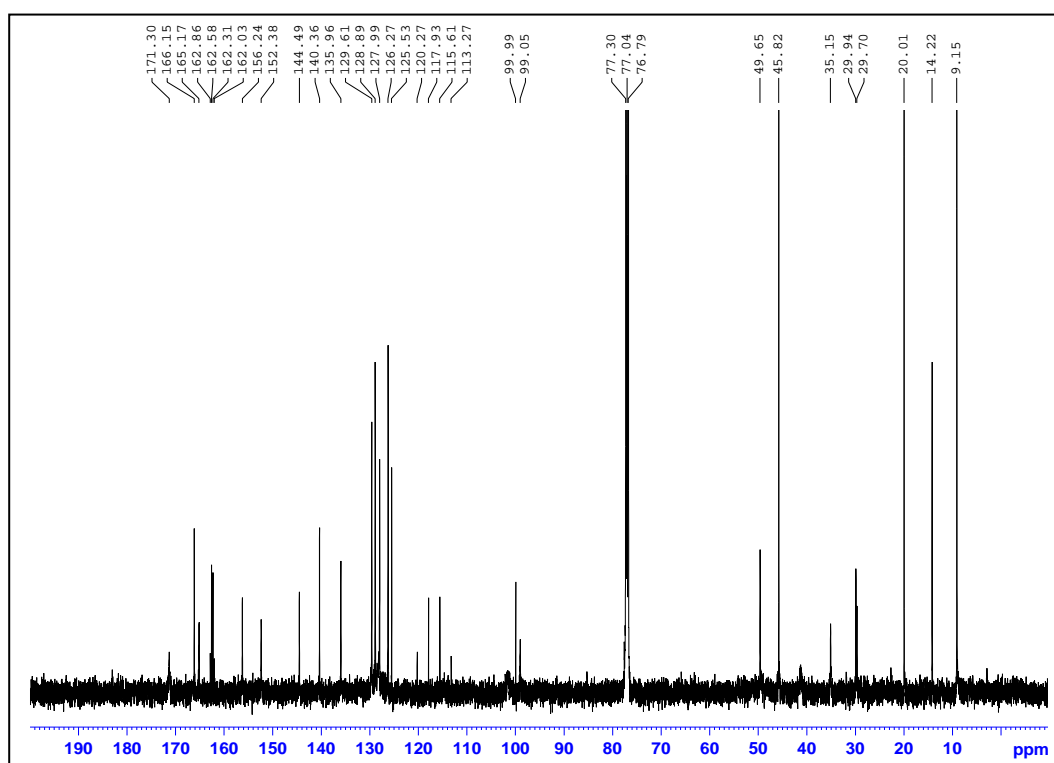
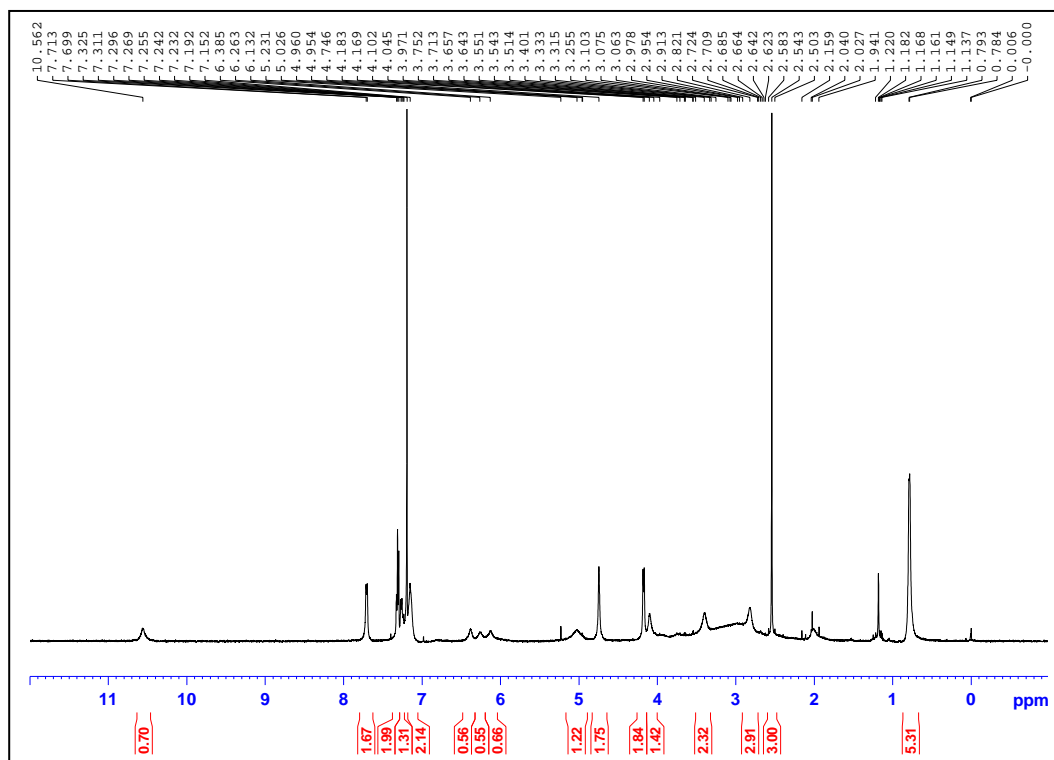


14g



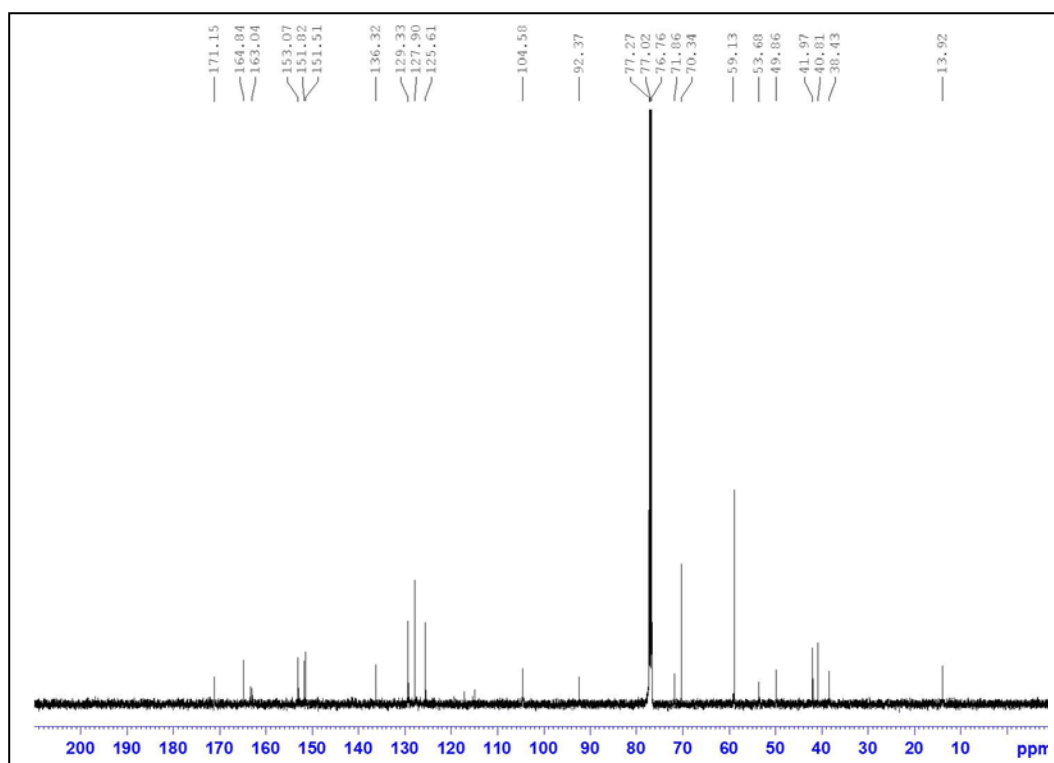
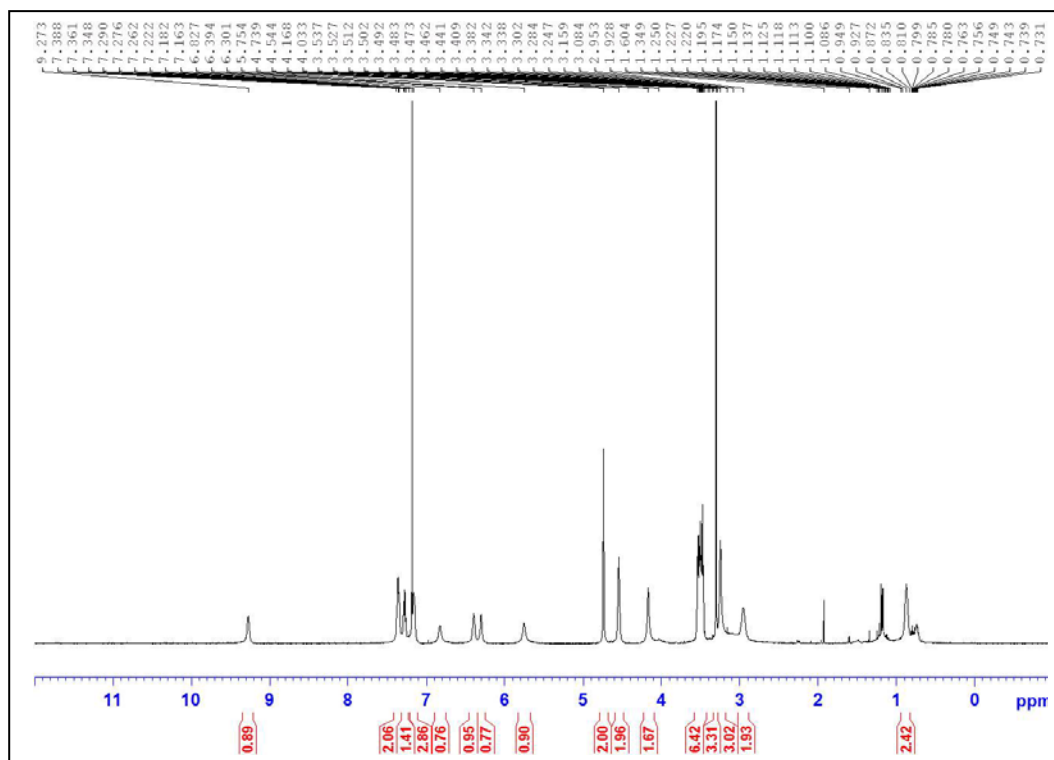


14h

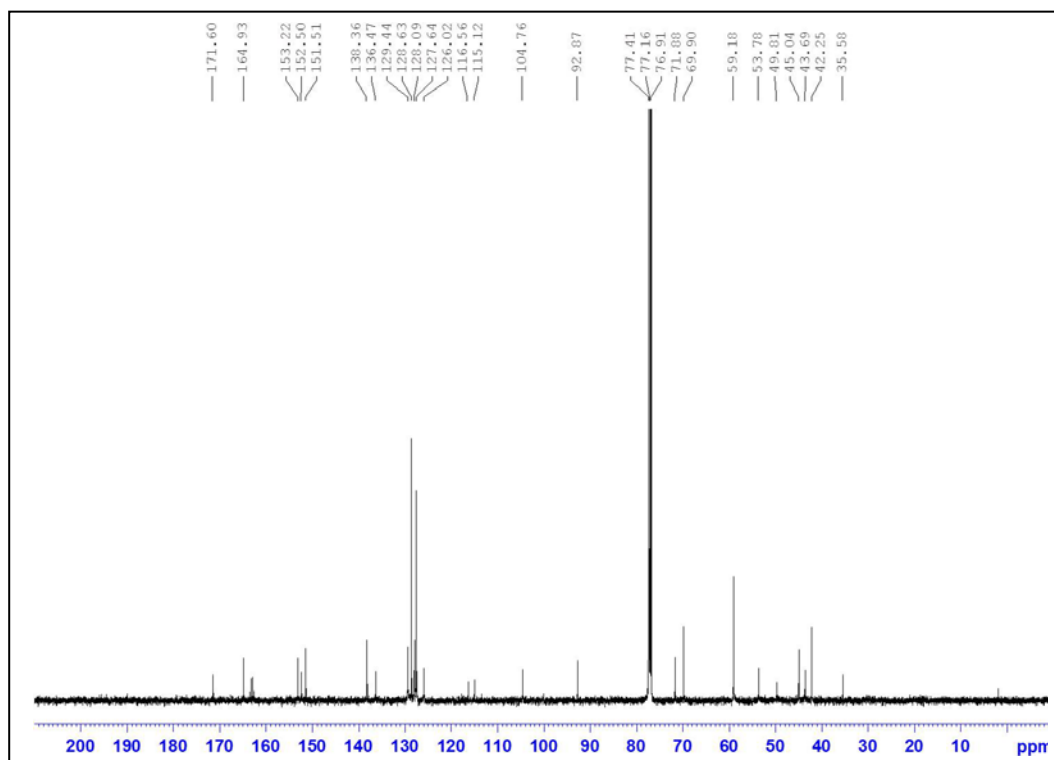
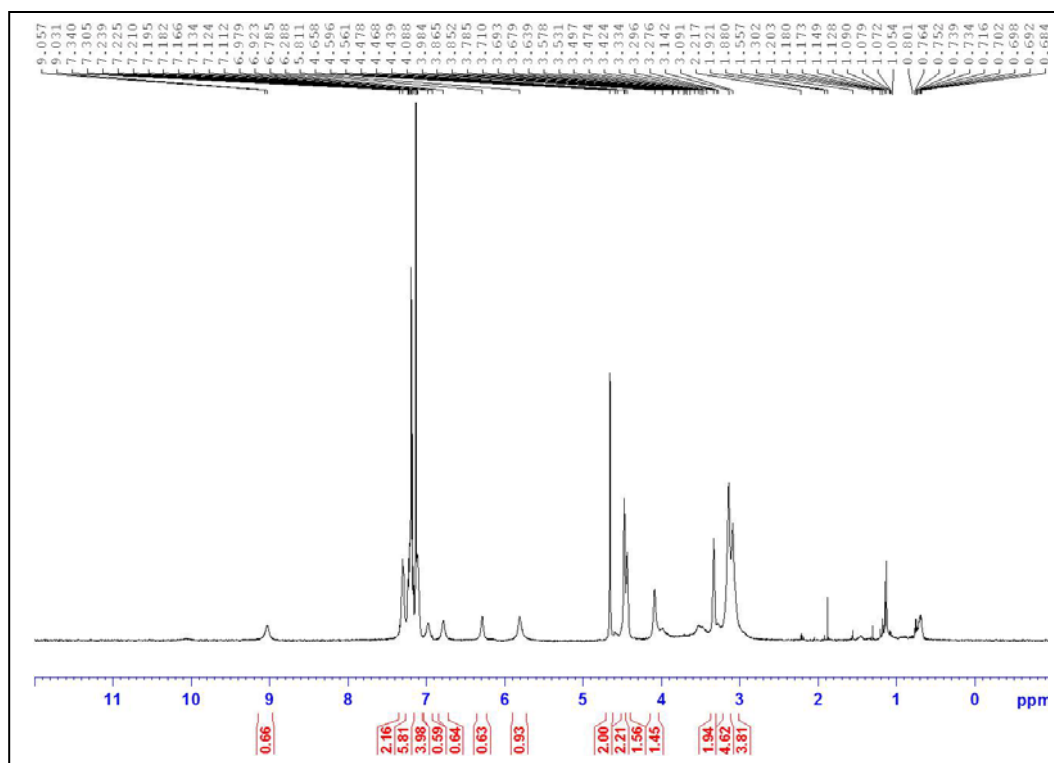


**Figure S4.**  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra for compounds **15**.

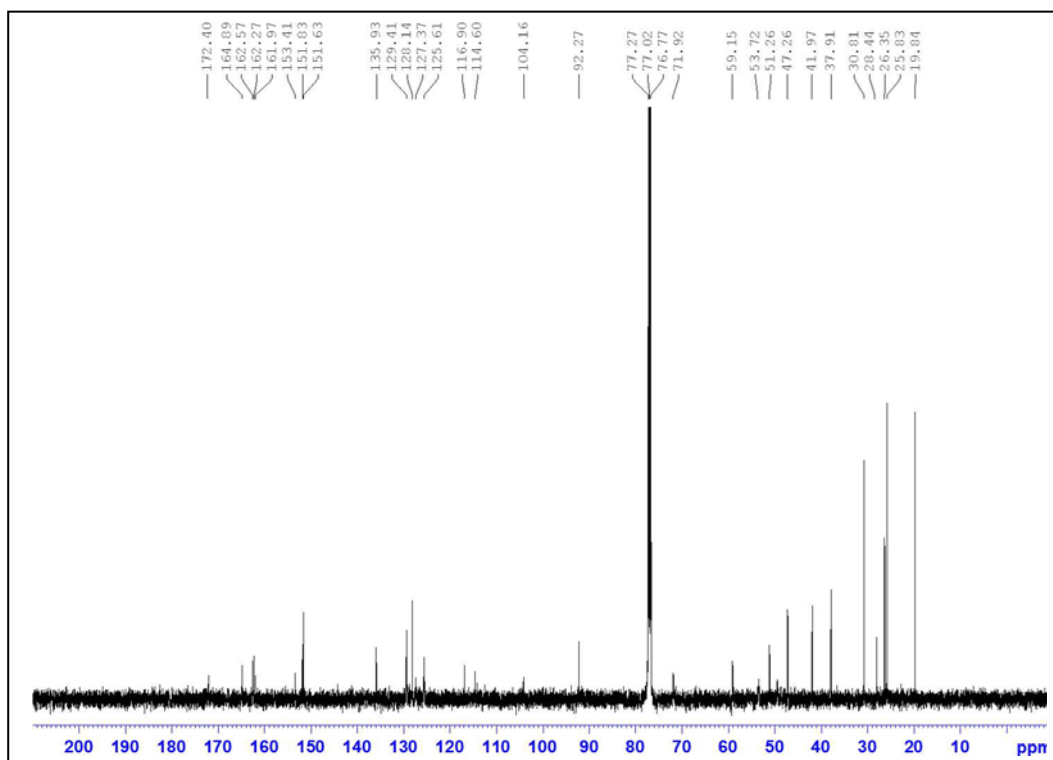
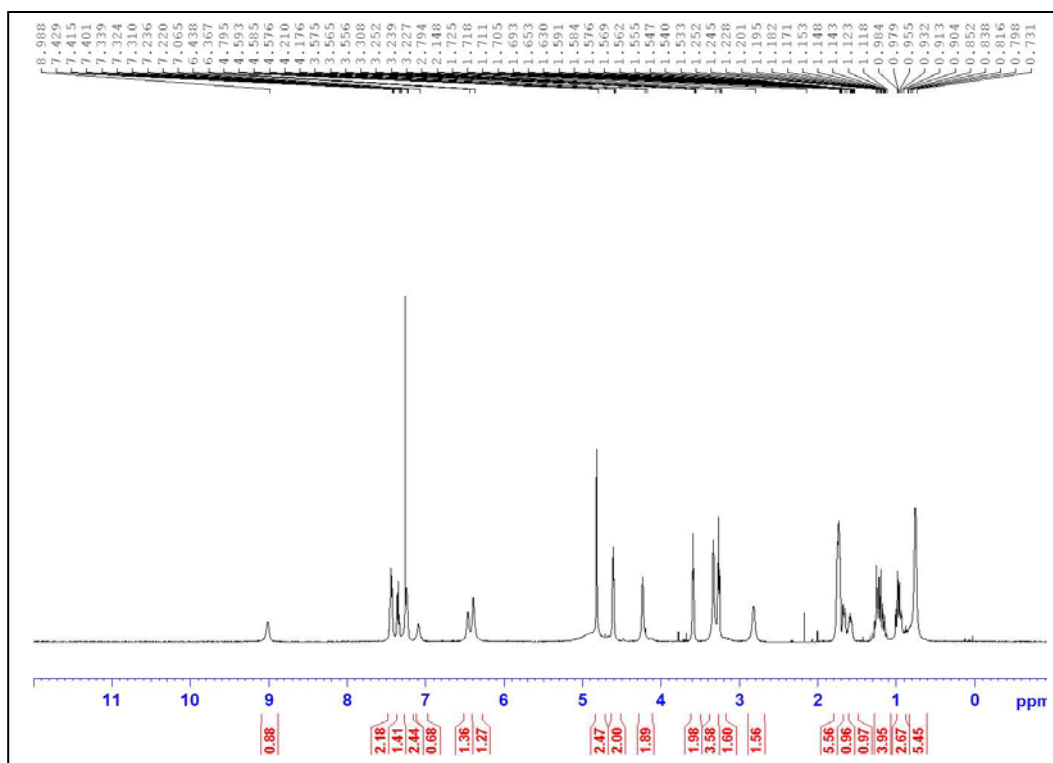
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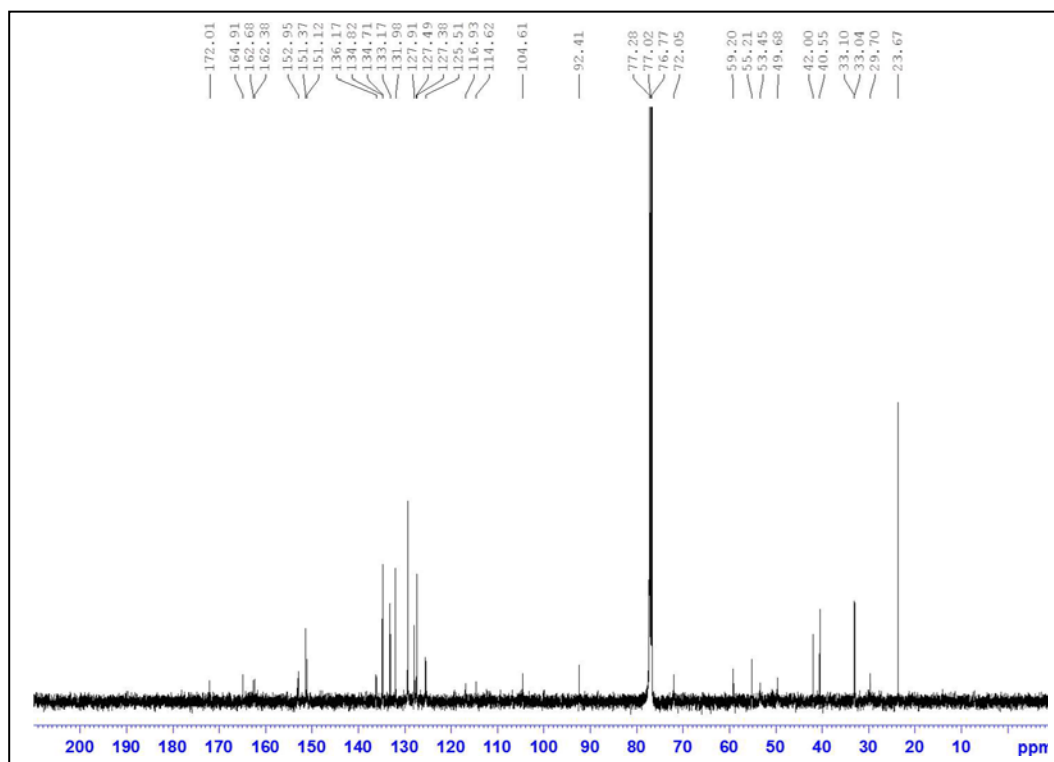
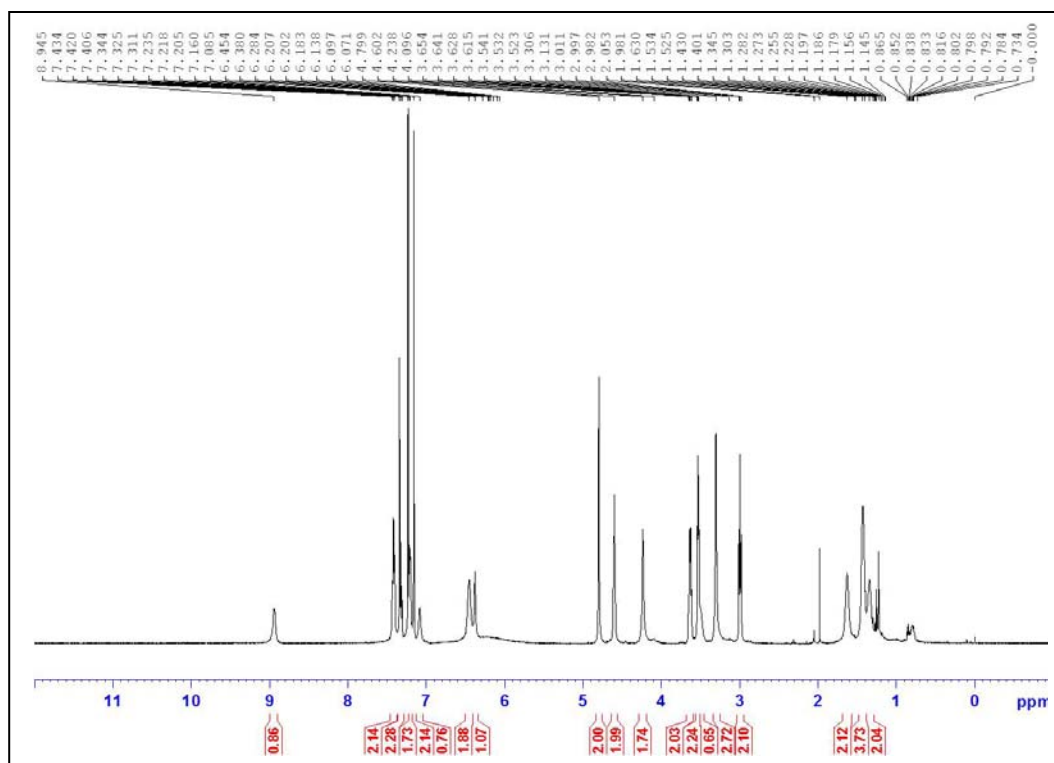
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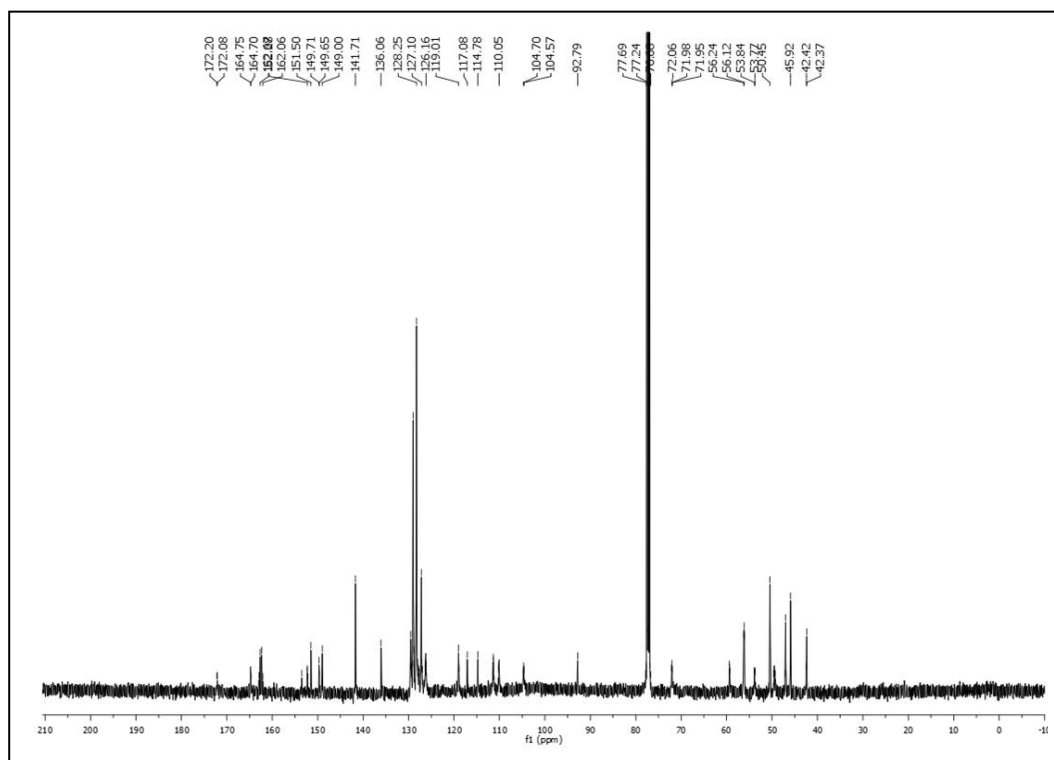
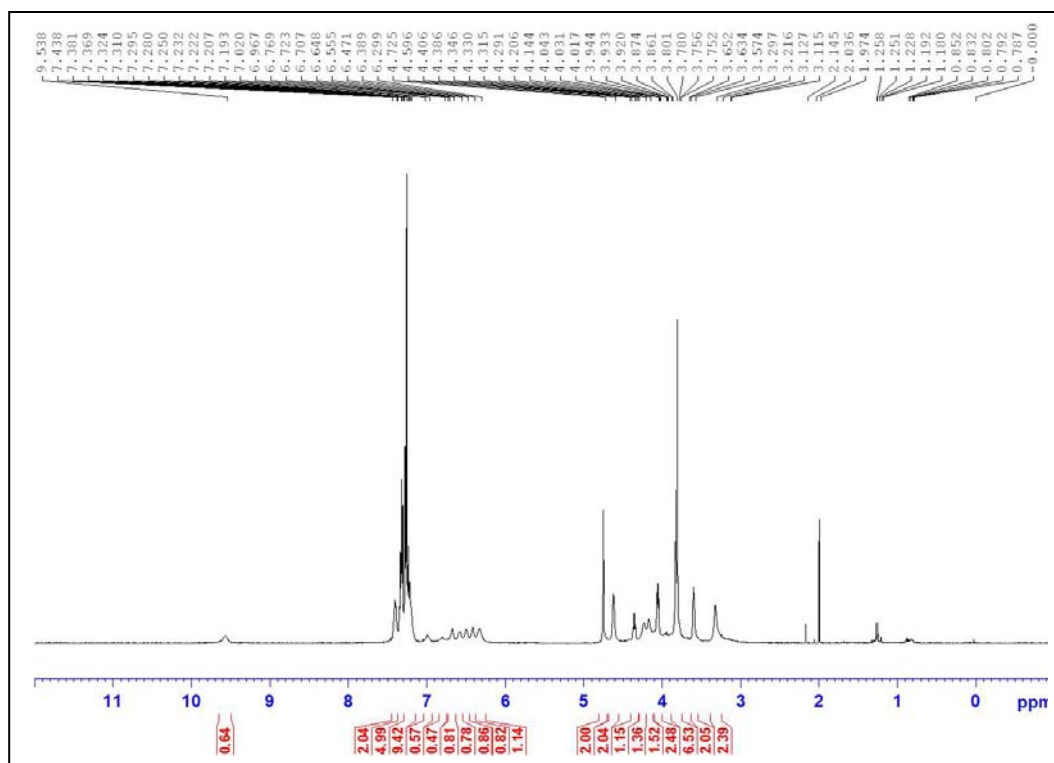
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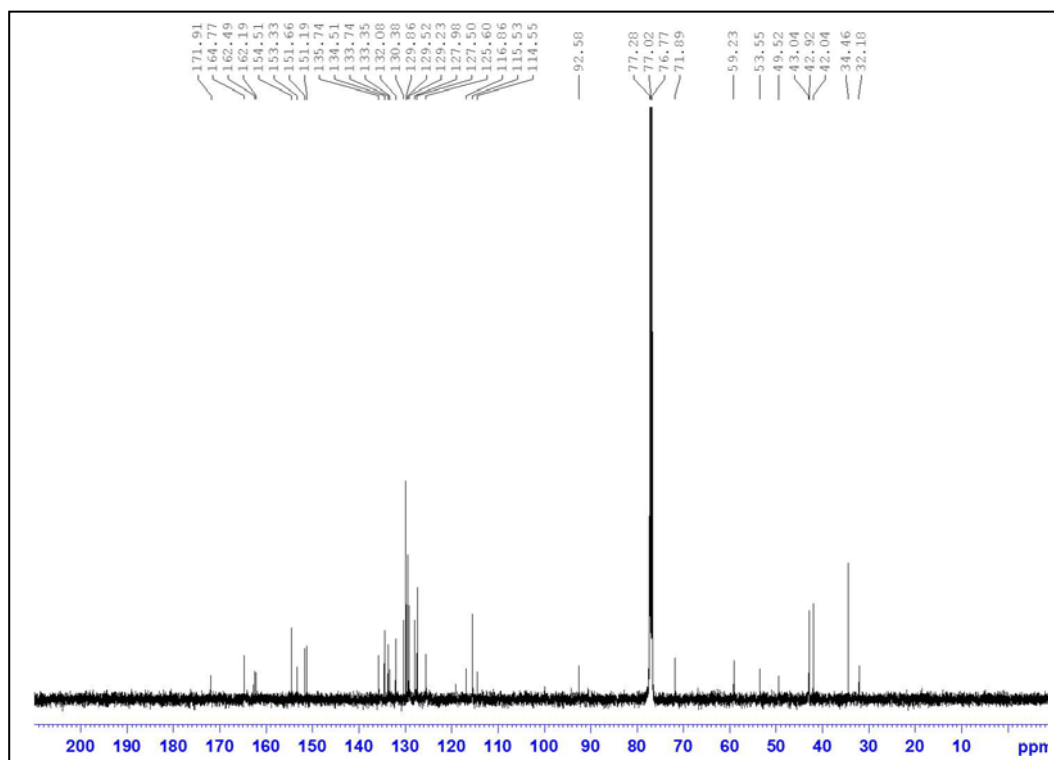
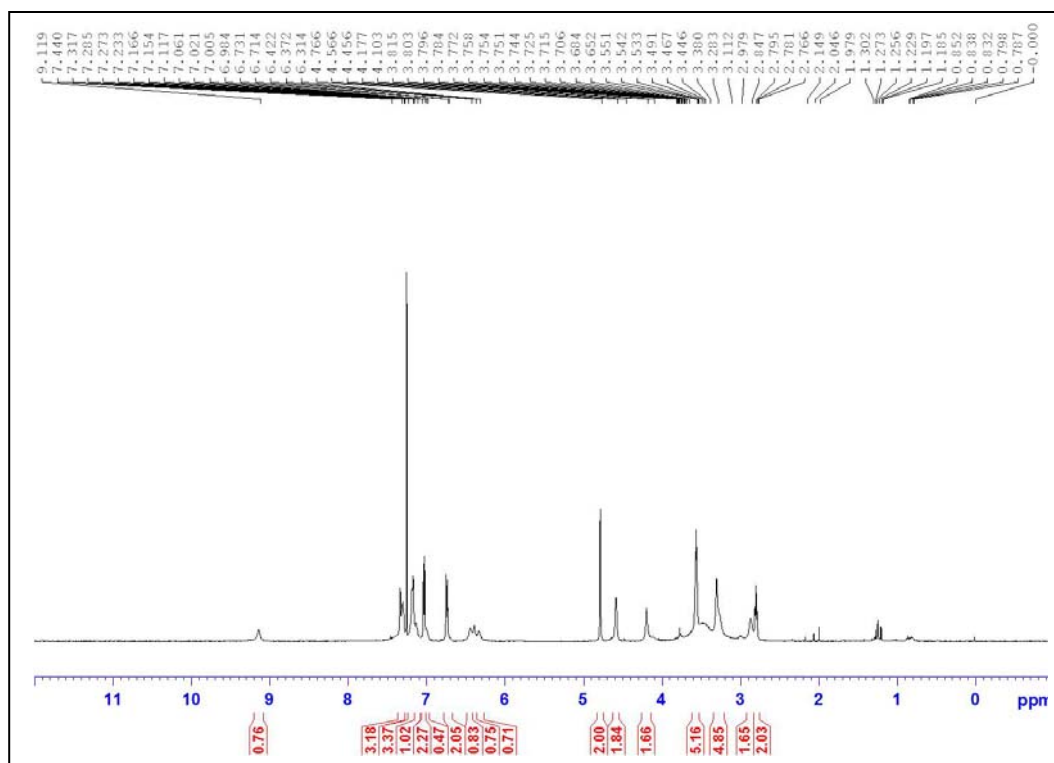
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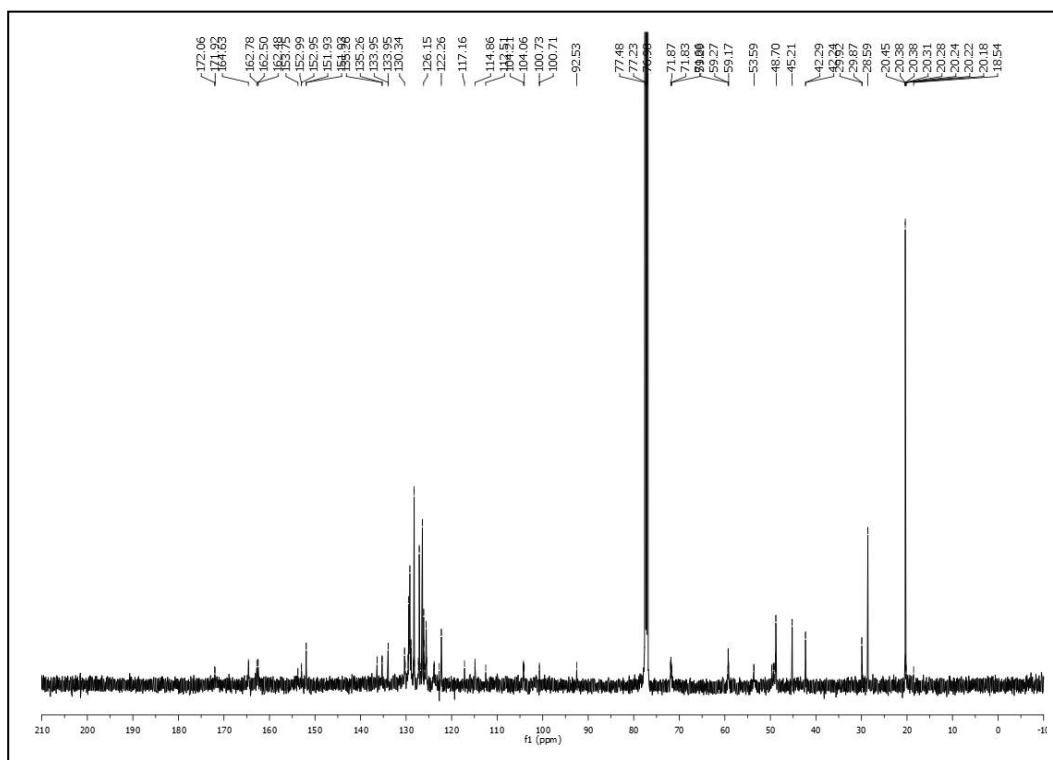
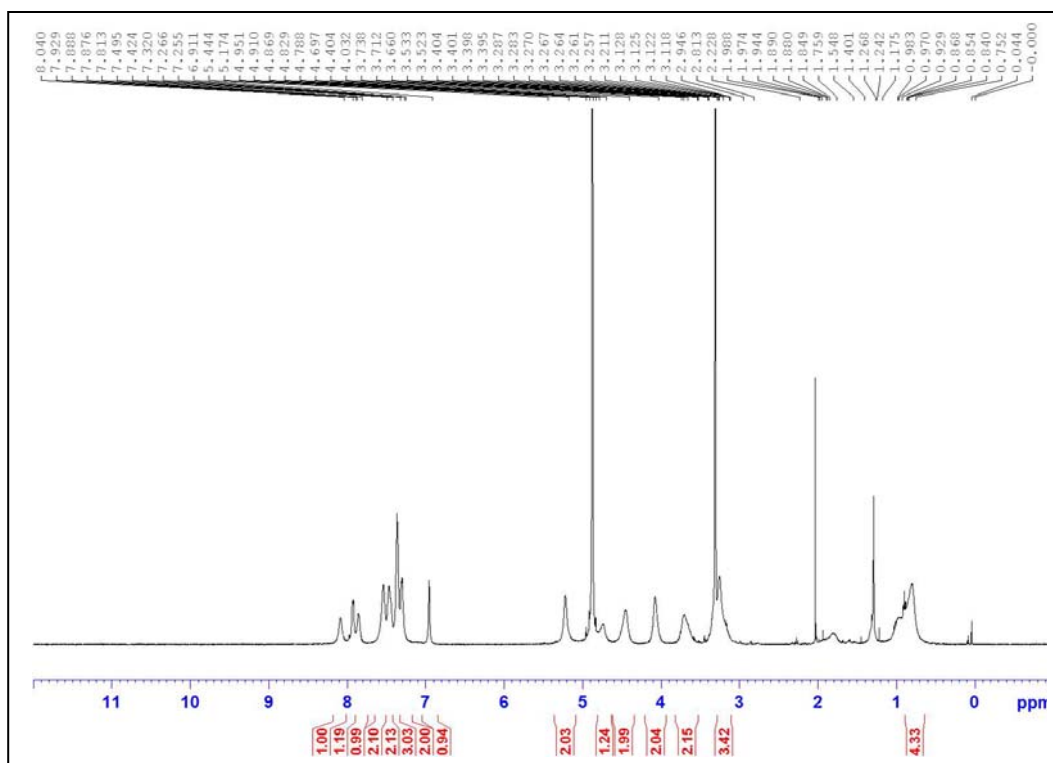
### 15-5E



### 15-6F

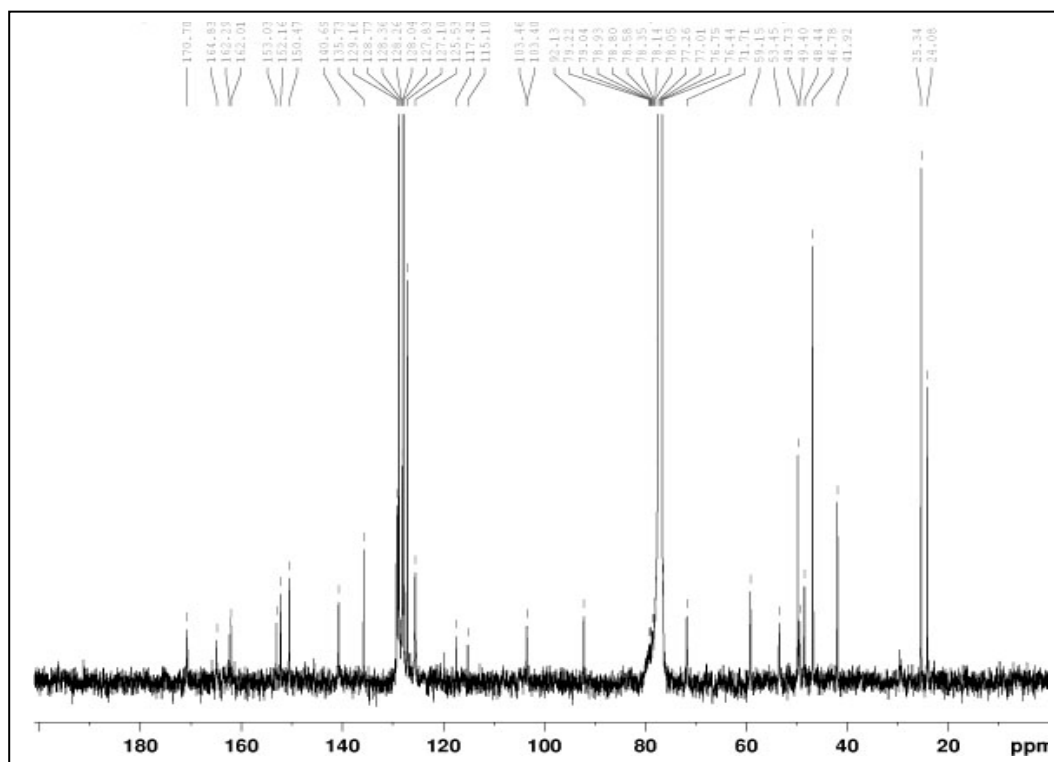
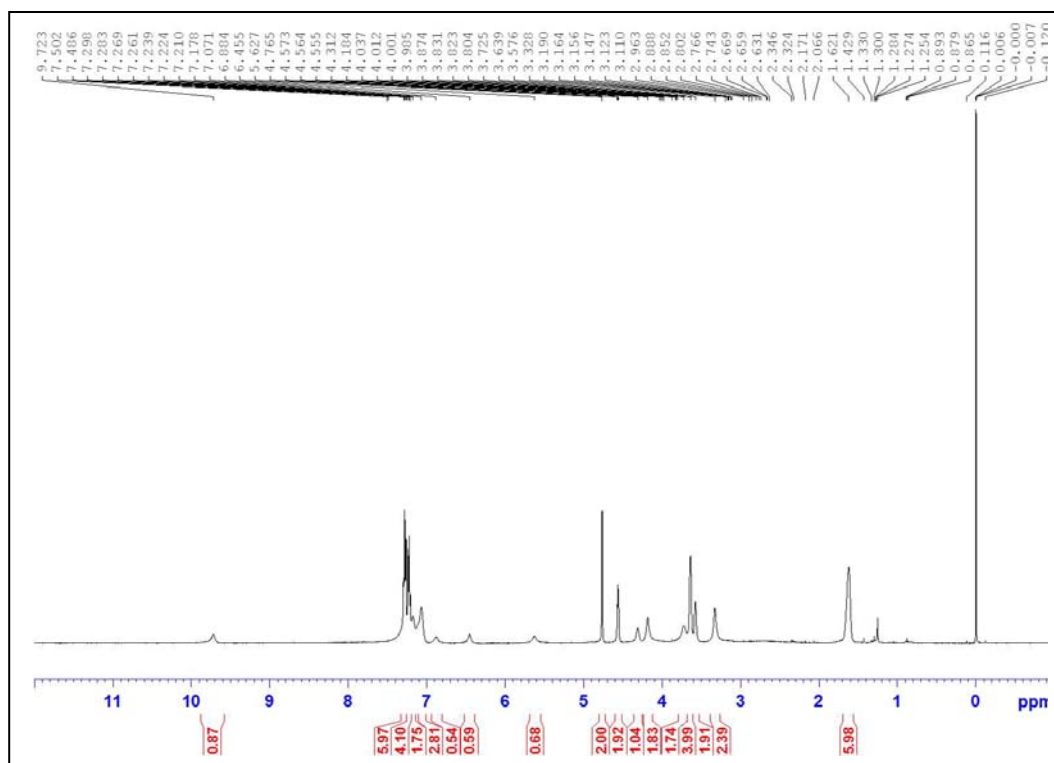


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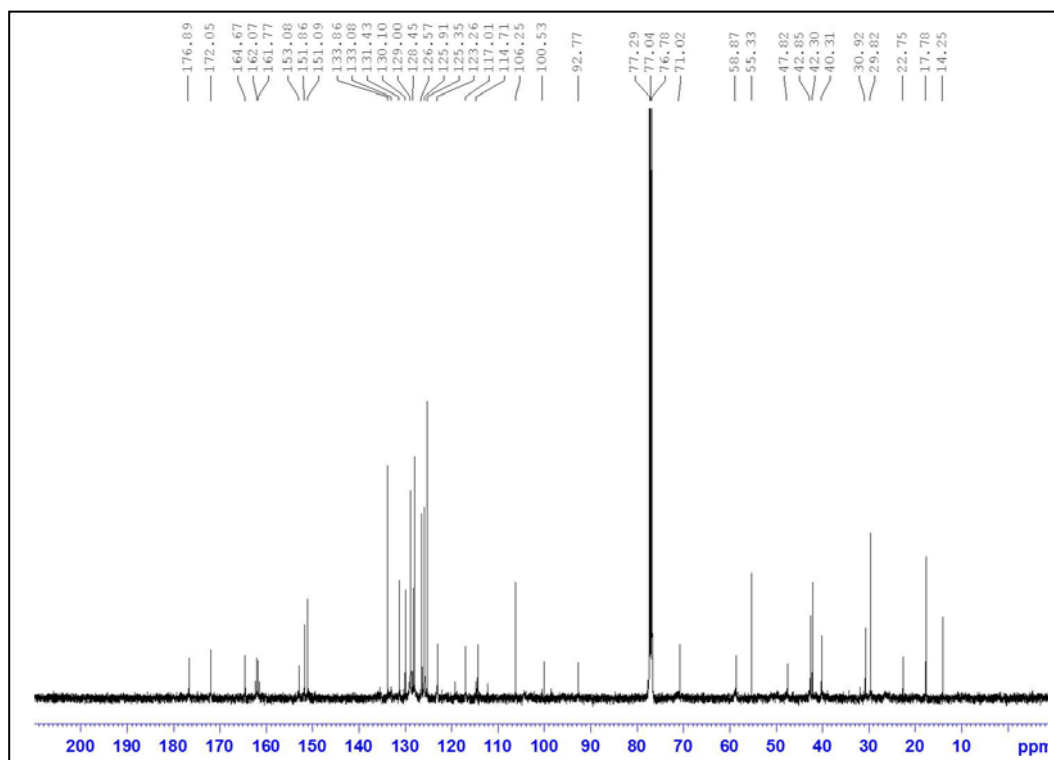
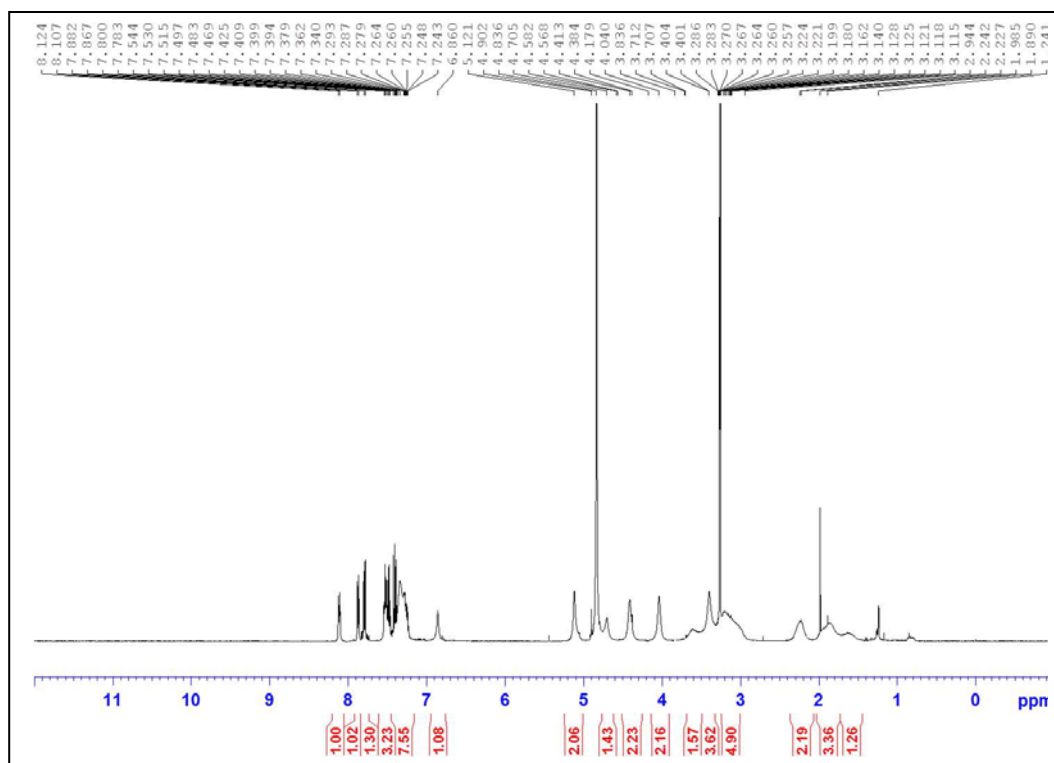




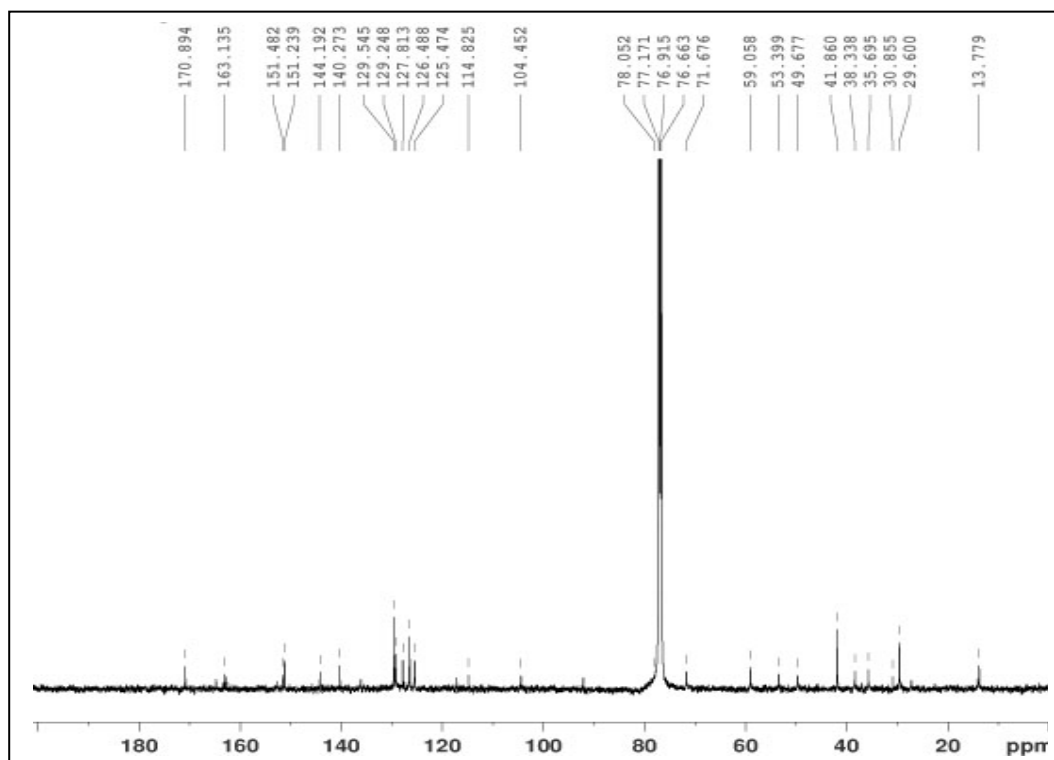
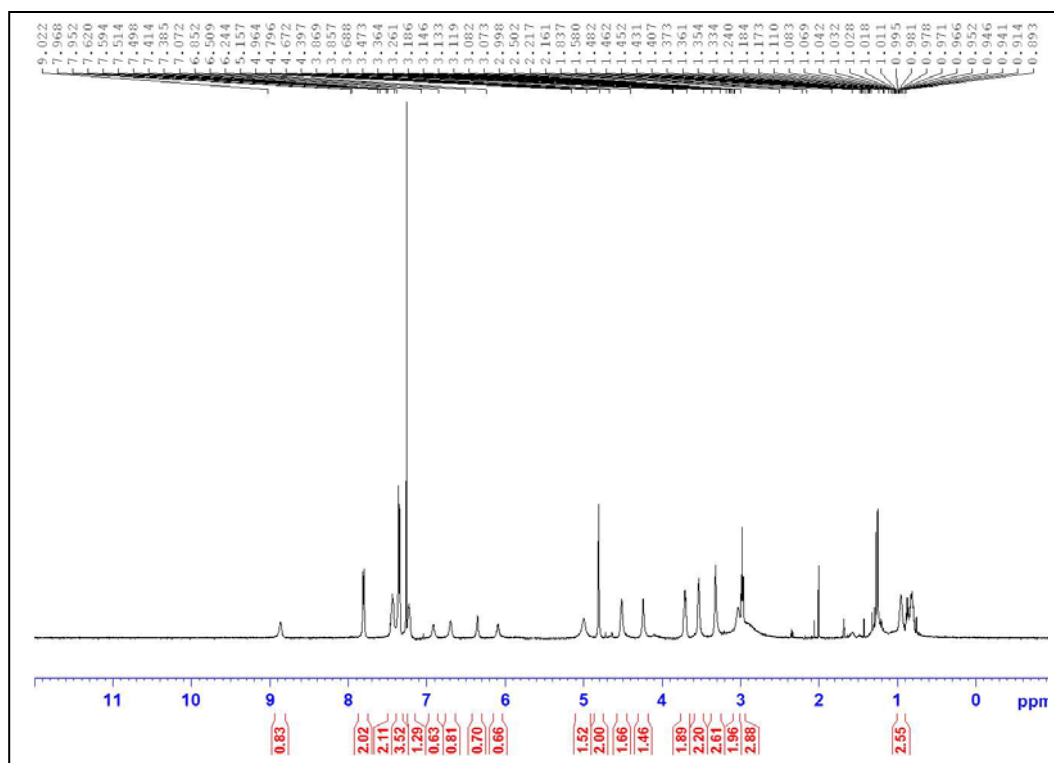
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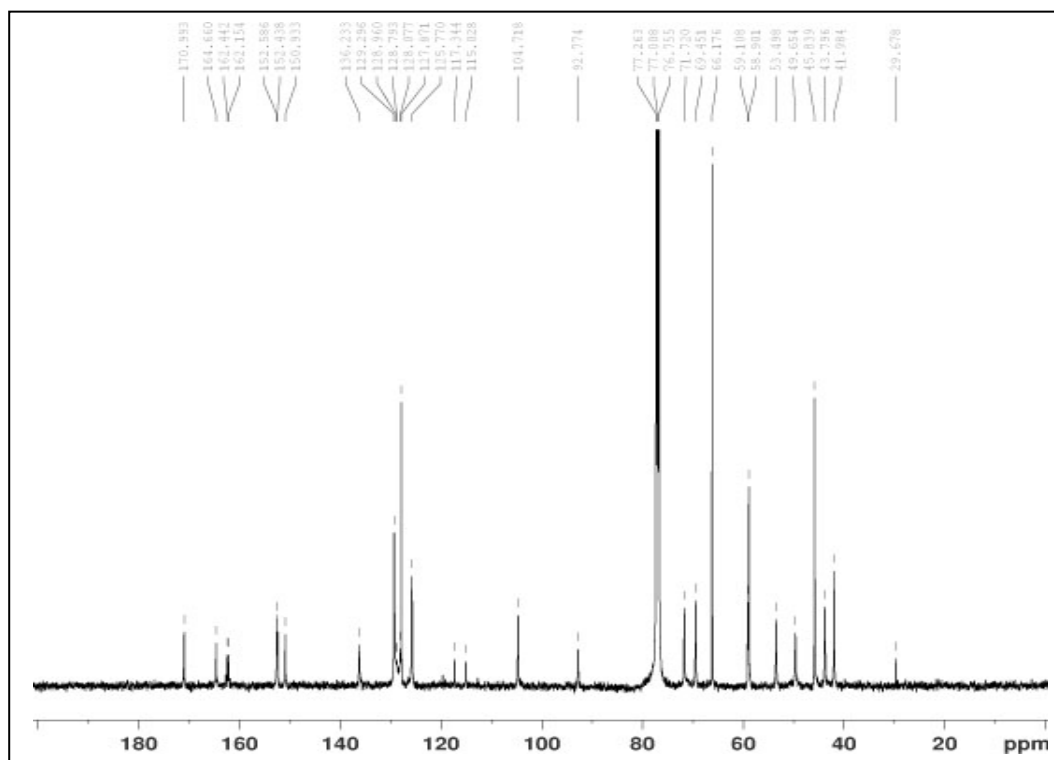
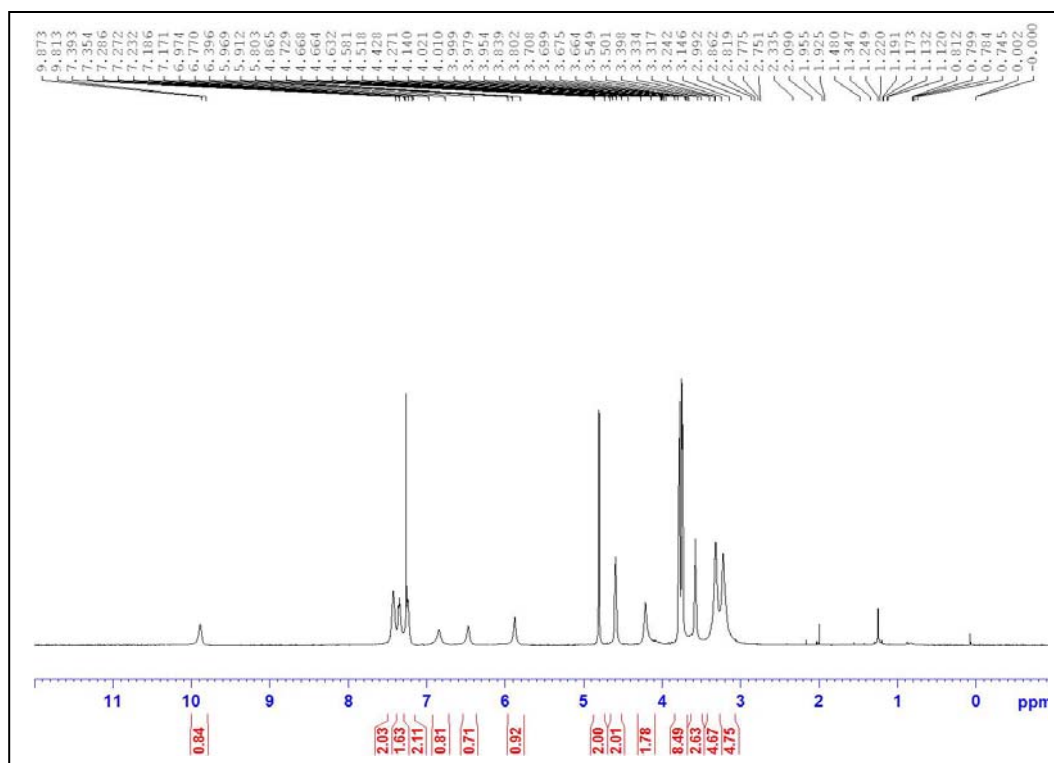
15-9I



### 15-10A



### 15-11B



15-8C

