

Supporting Information

New amino naphthoquinone derivatives as anti-*Trypanosoma cruzi* agents targeting trypanothione reductase

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Index

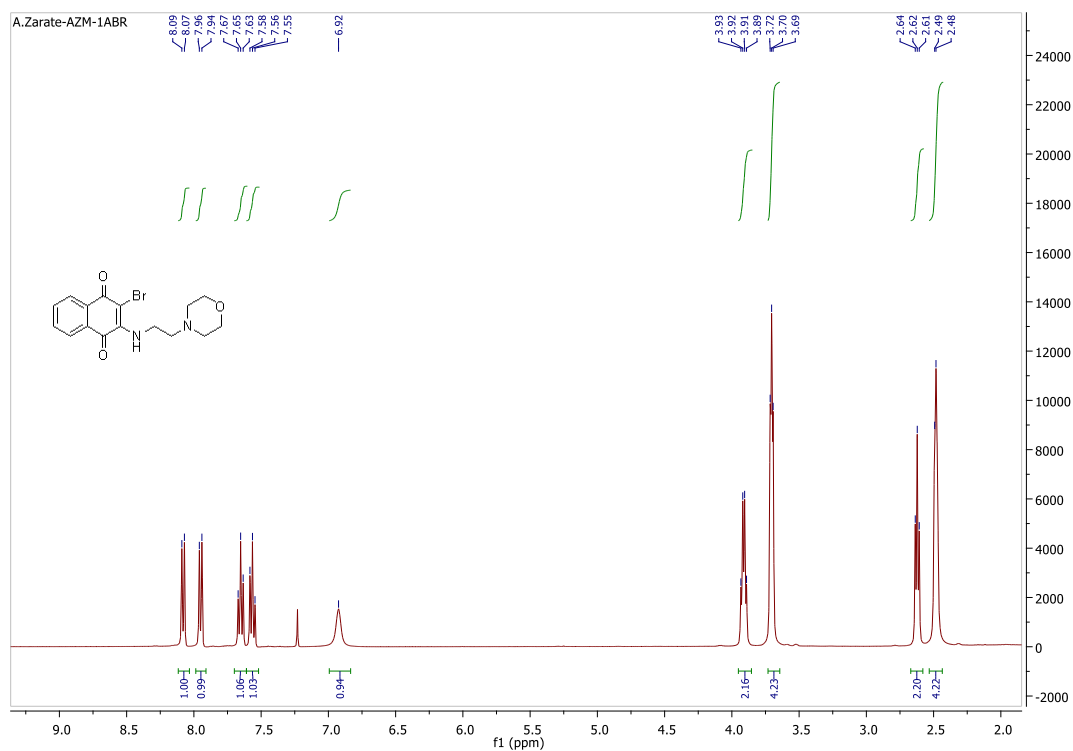
¹H and ¹³C NMR of selected compoundspag 02-17

HRMS of selected compounds..... pag 18-26

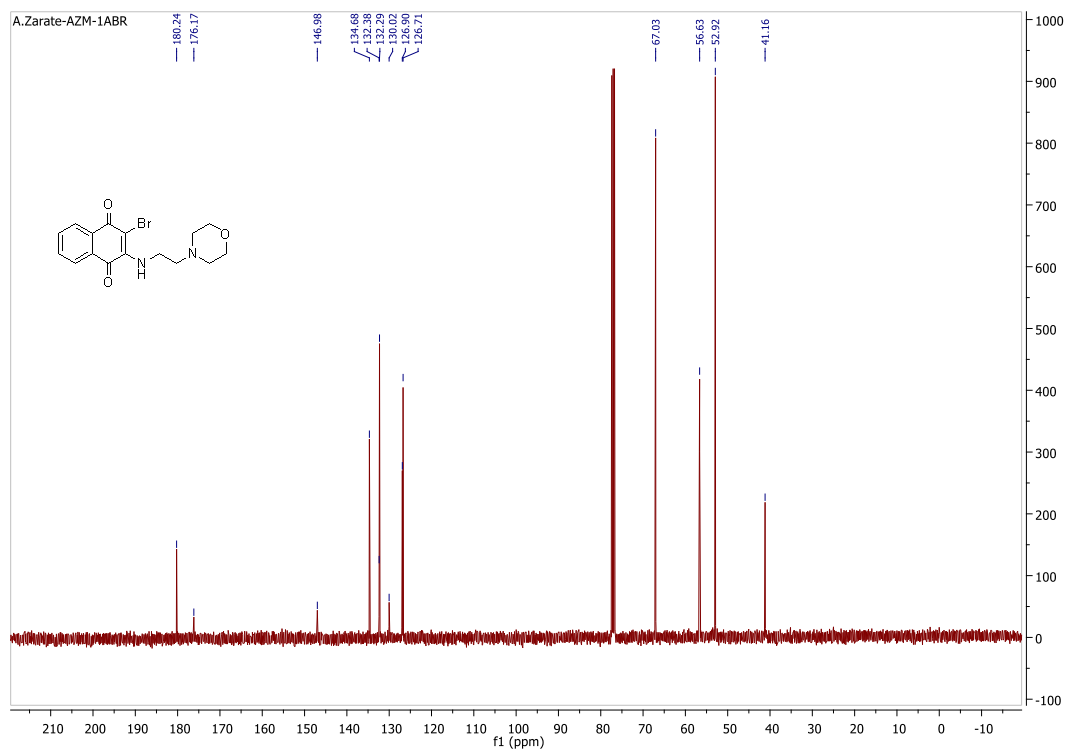
Table S1. Effect of amino naphthoquinone derivatives upon culture growth of *T. cruzi* epimastigote forms expressed as % growth inhibition at 10 µM..... pag 27

Table S2. Protein-ligand interaction profiles for naphthoquinones and controls.....pag 28-29

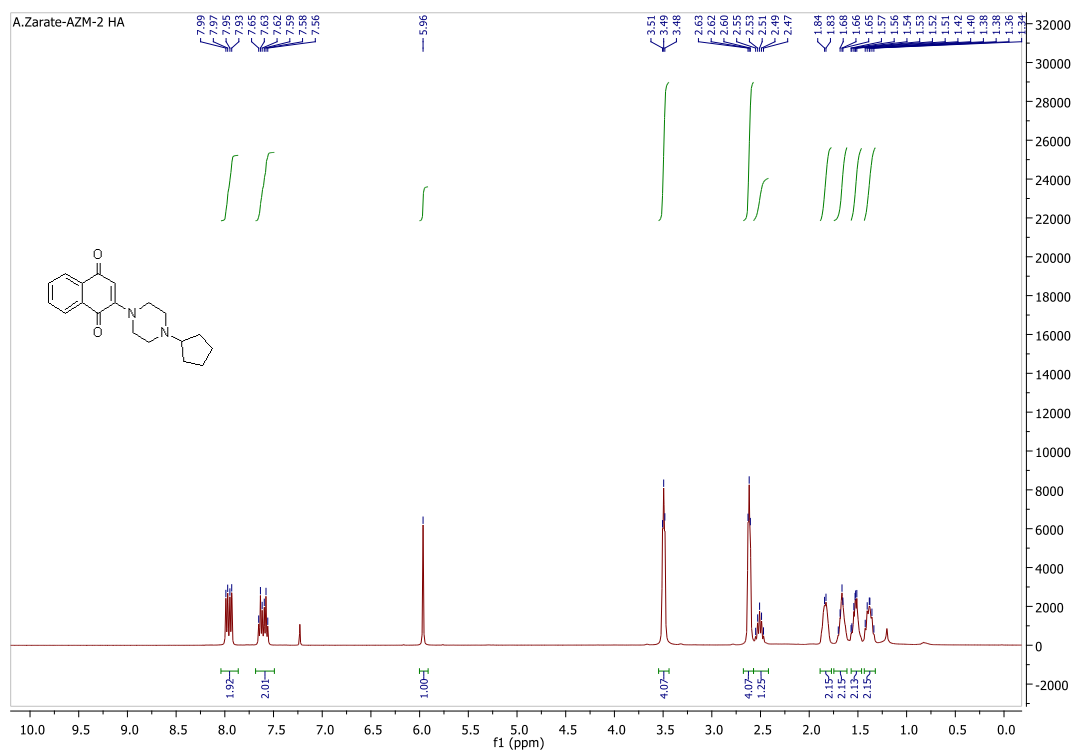
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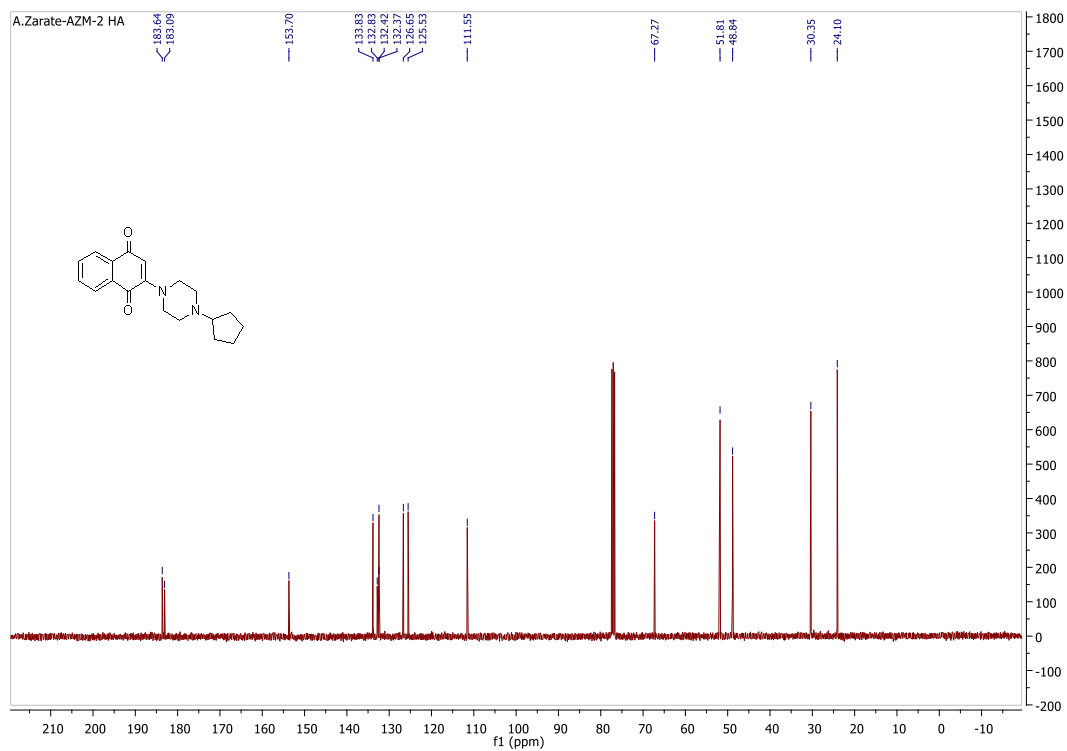
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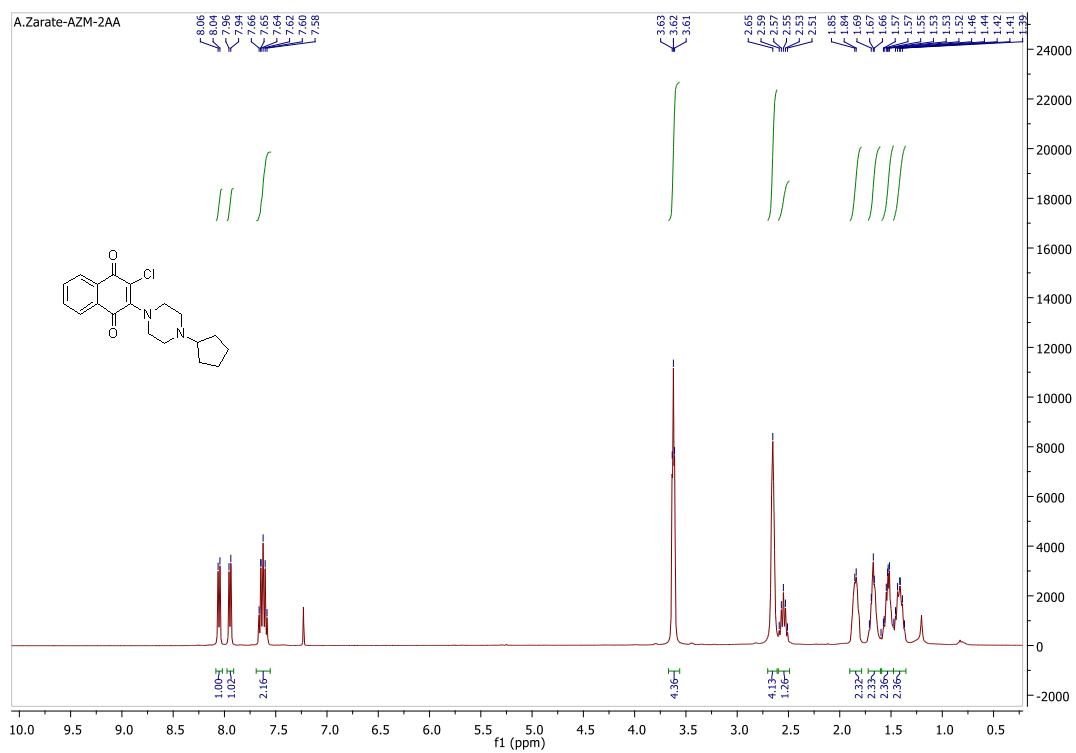
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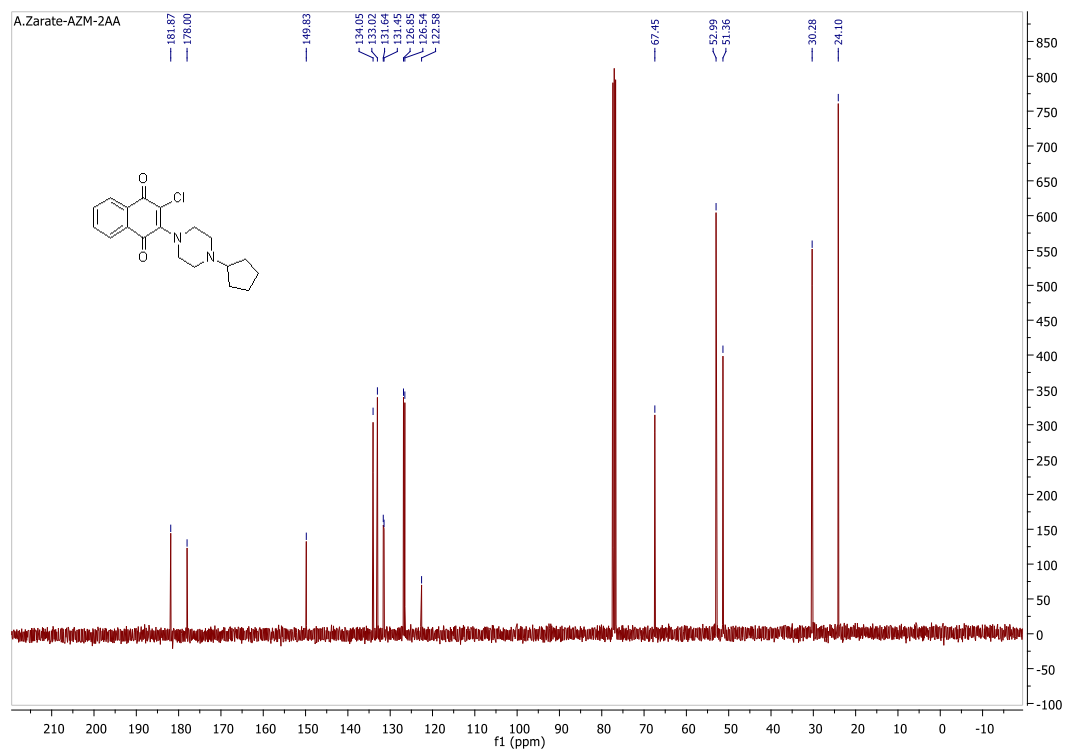
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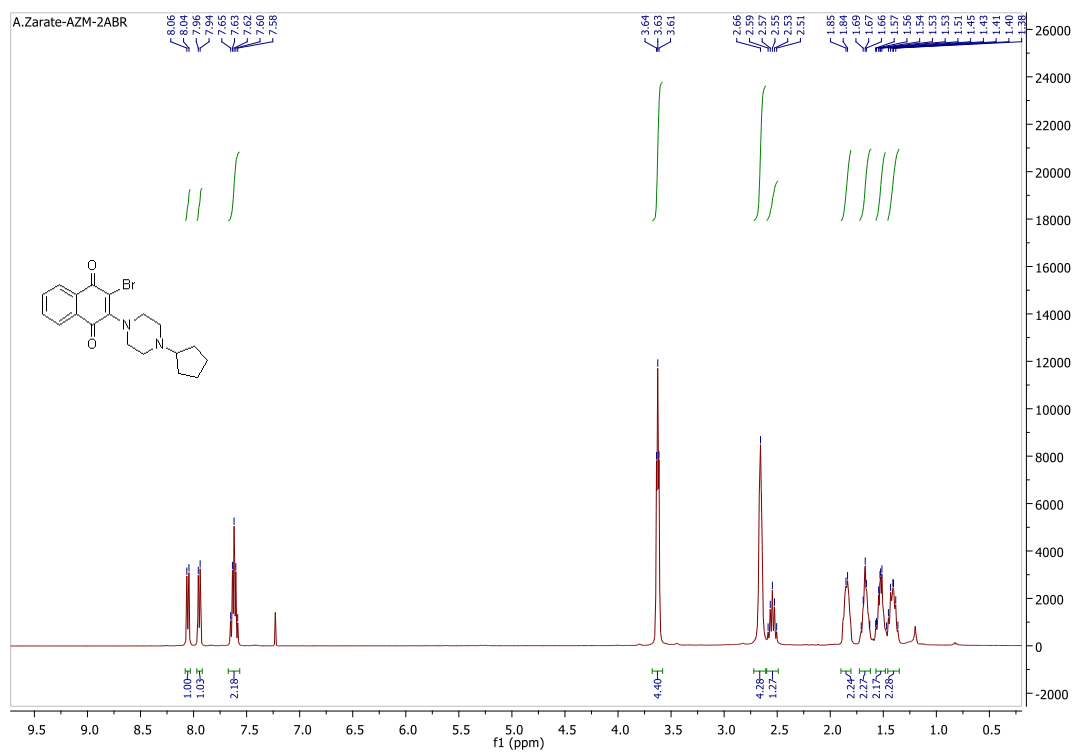
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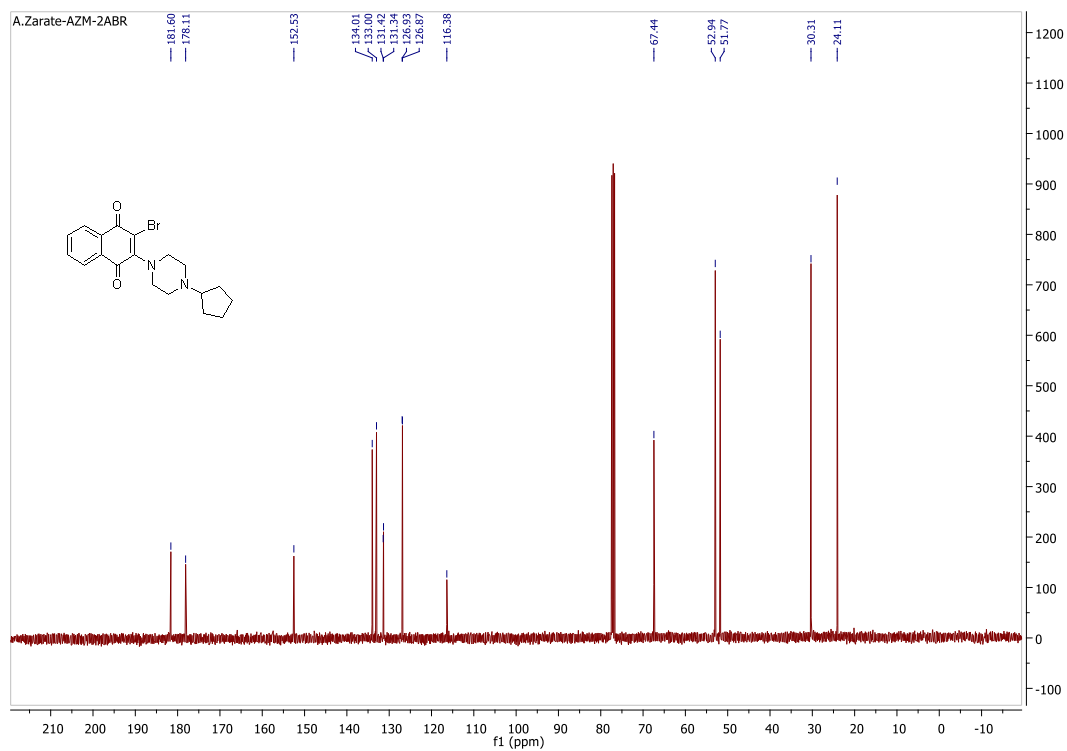
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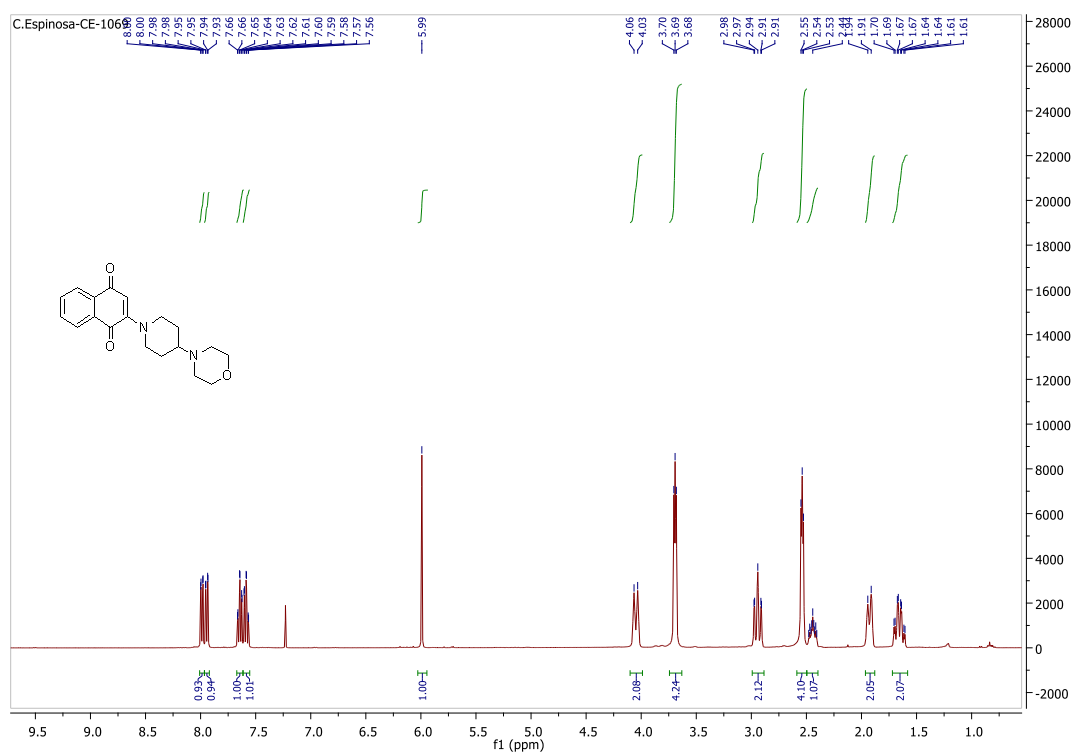
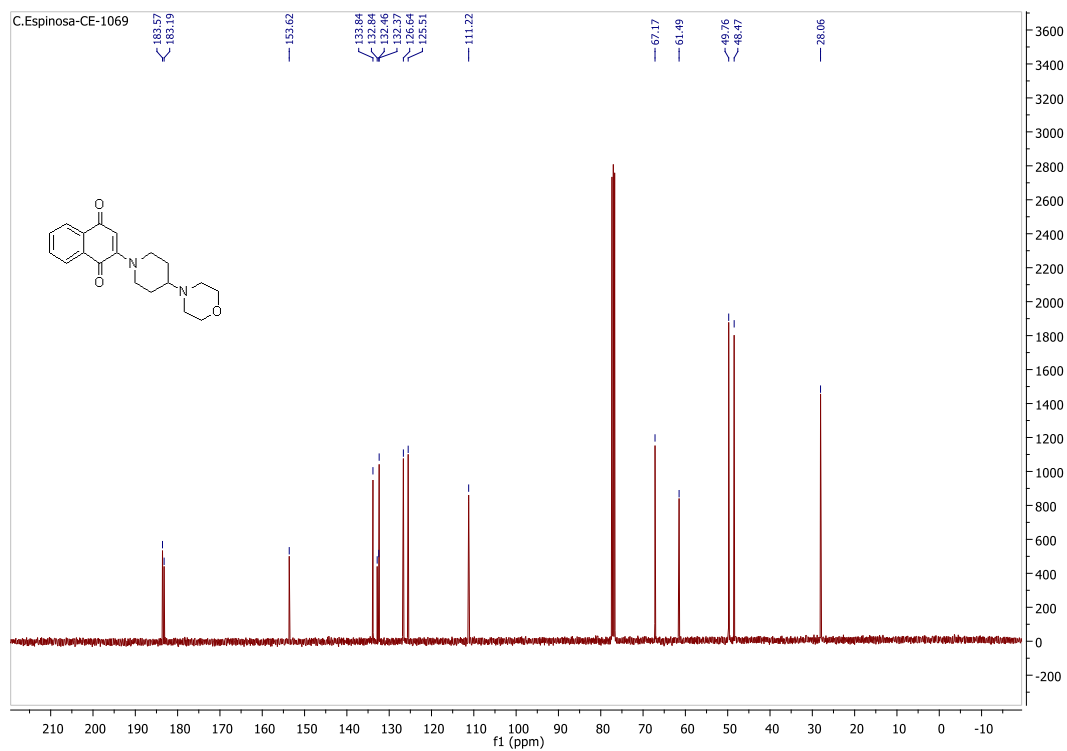


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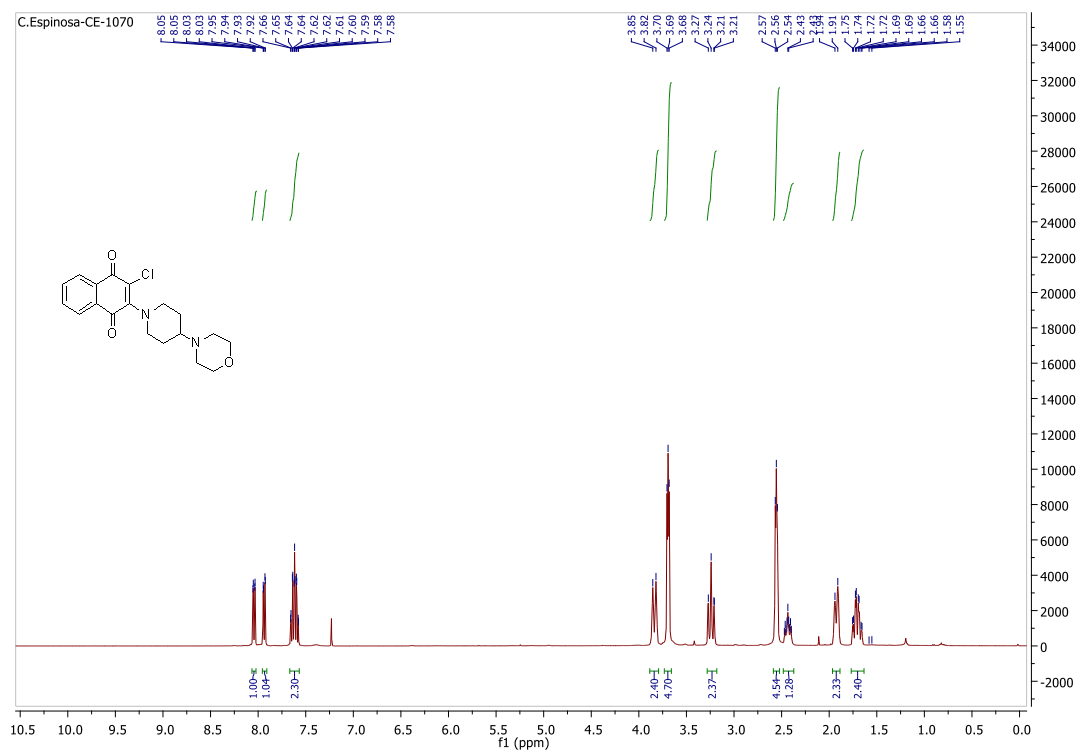


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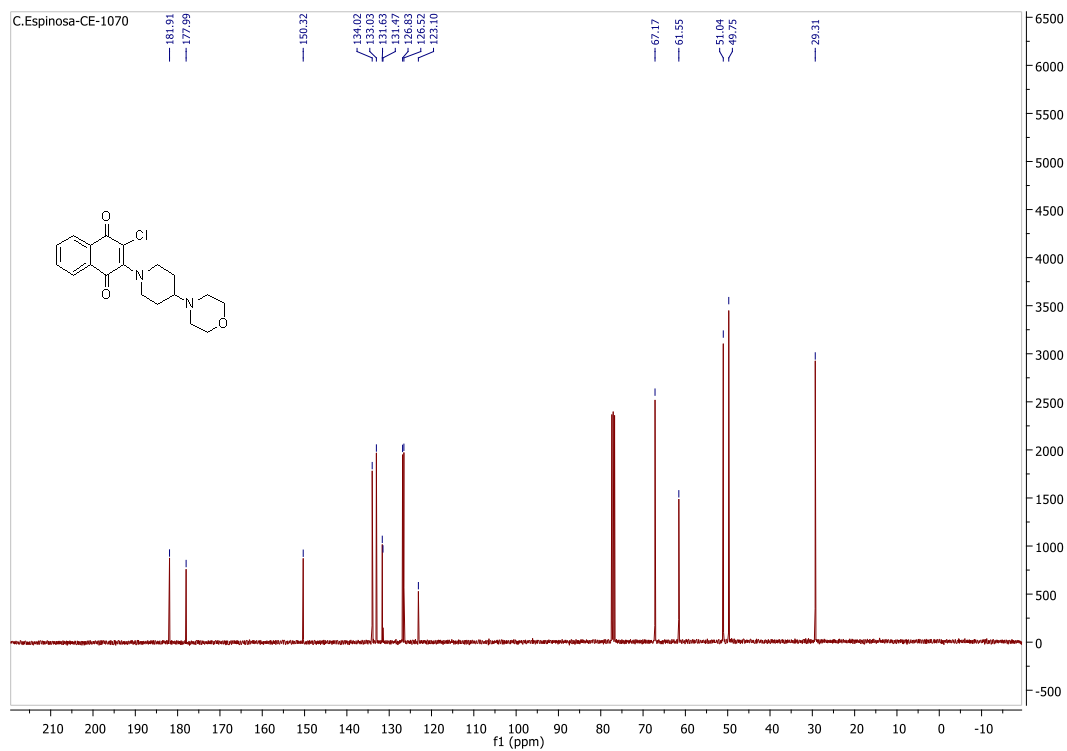


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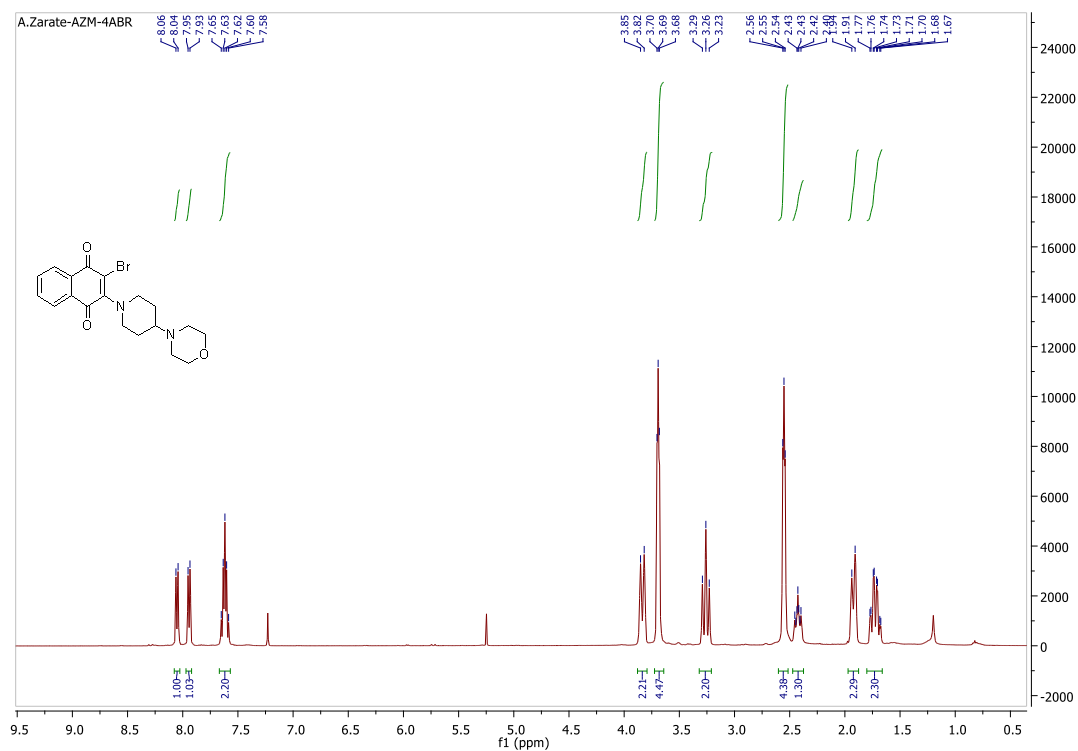
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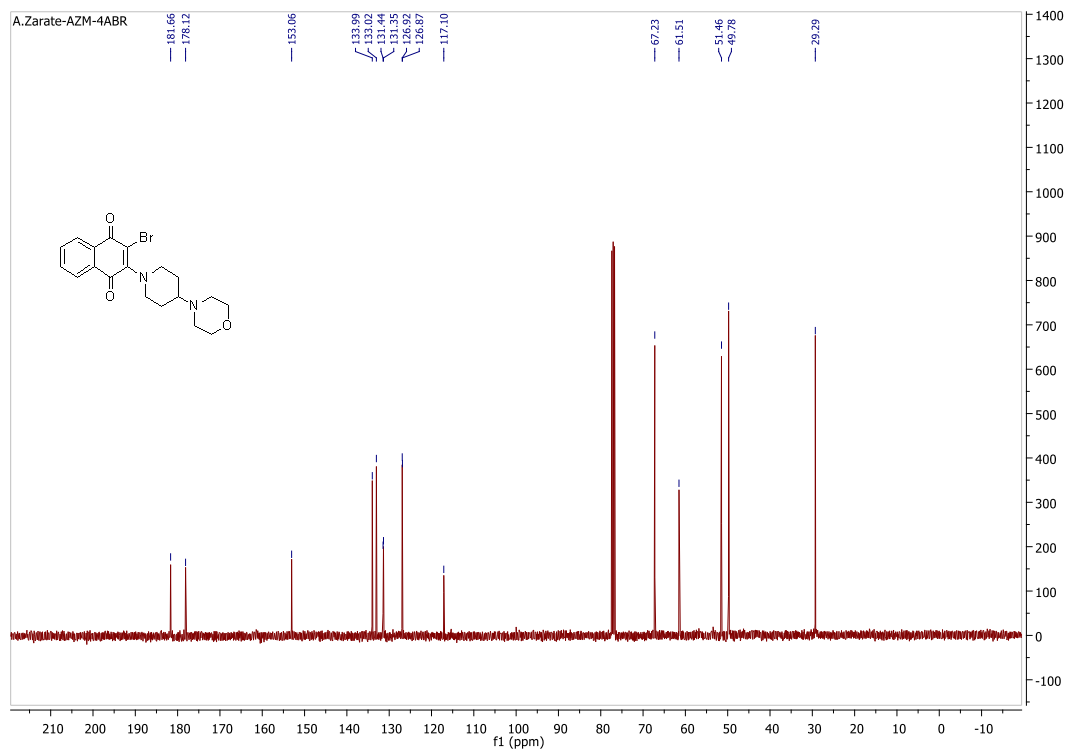
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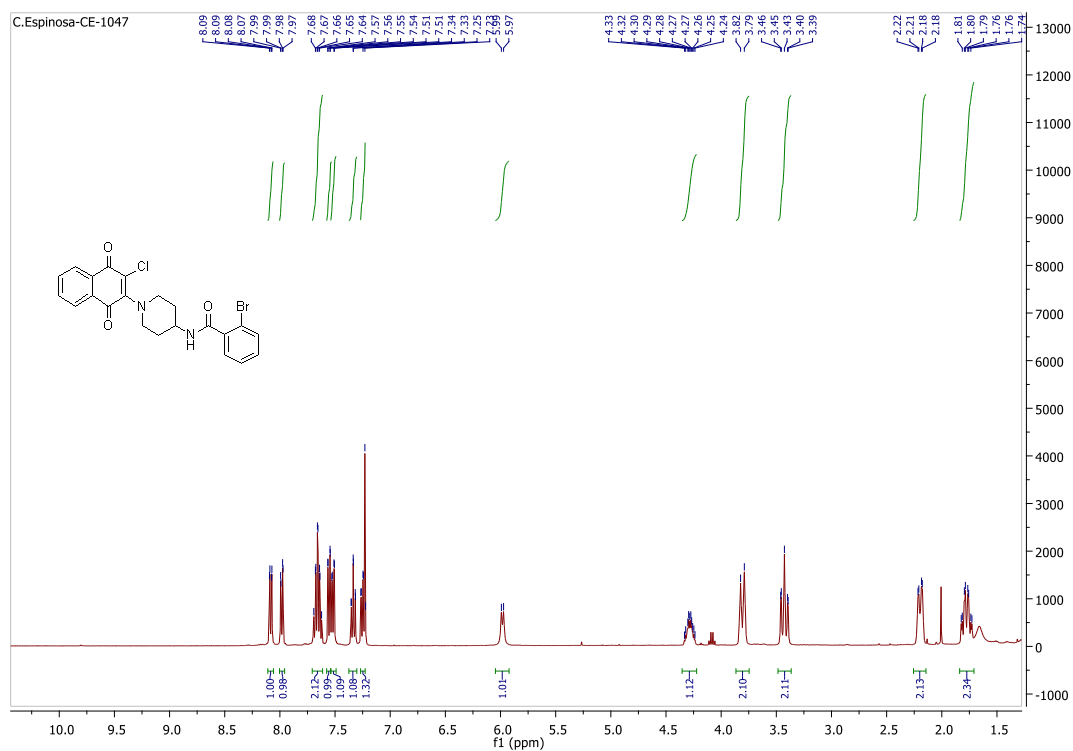
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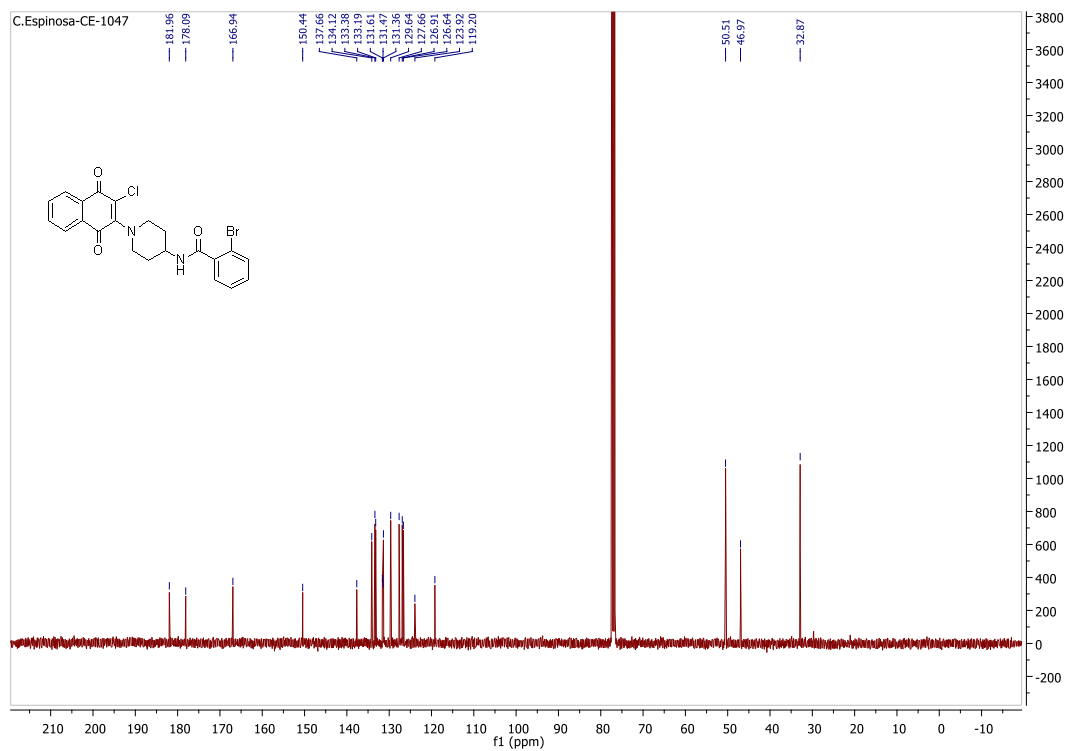
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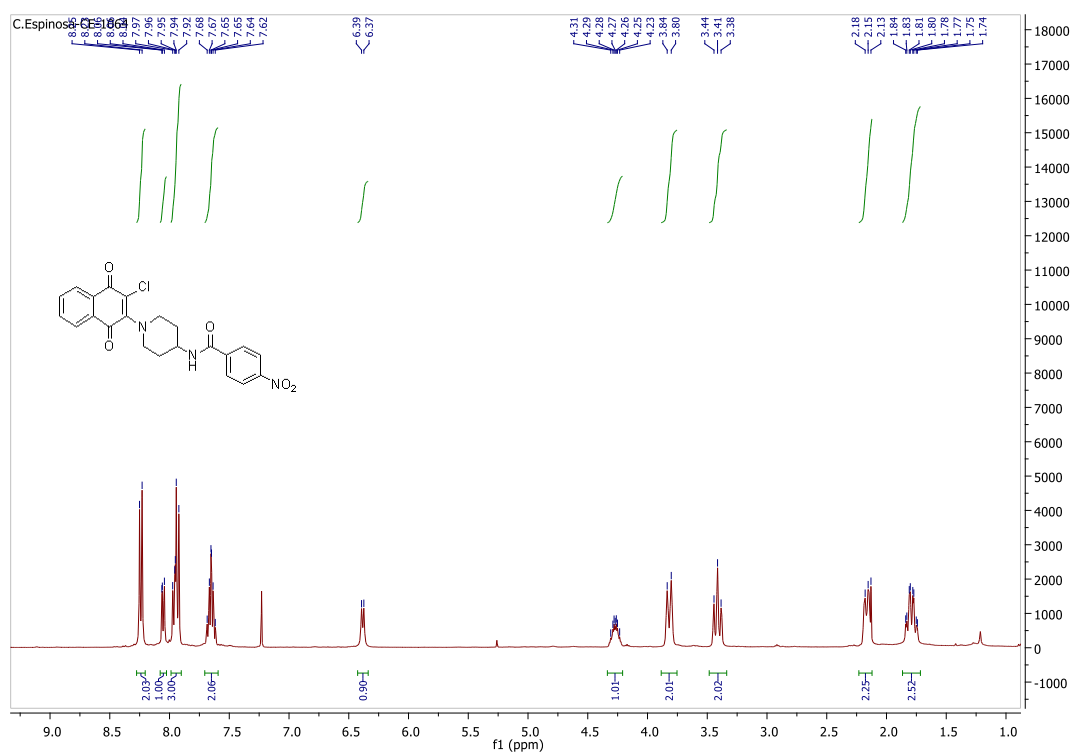
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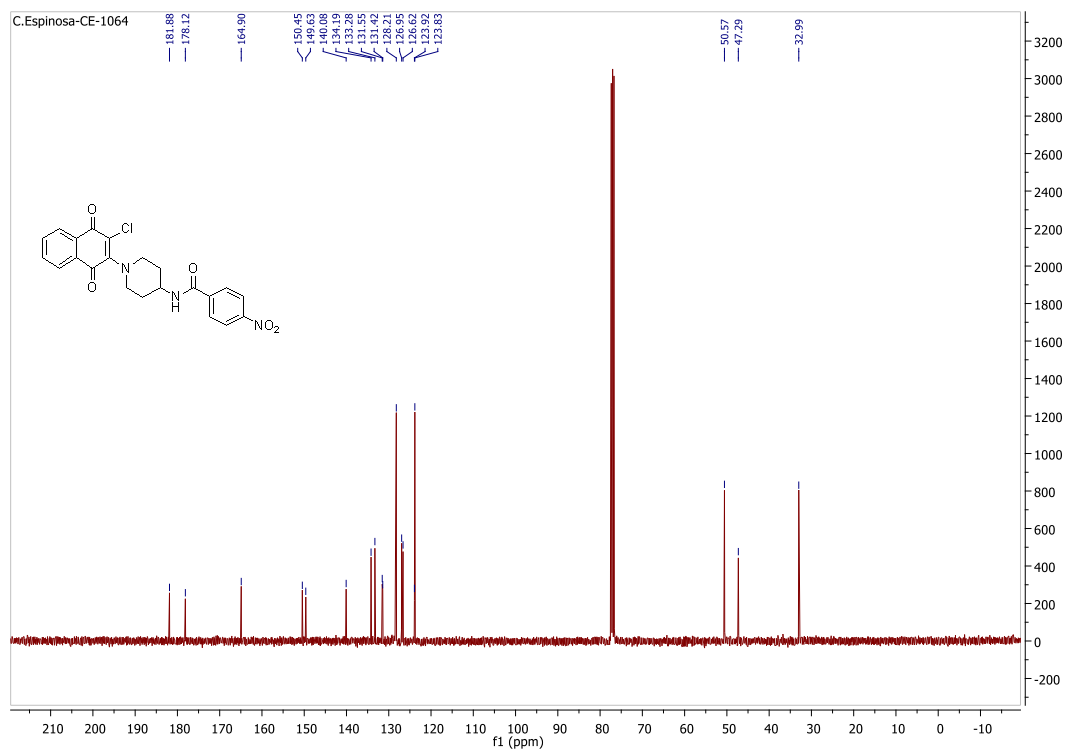
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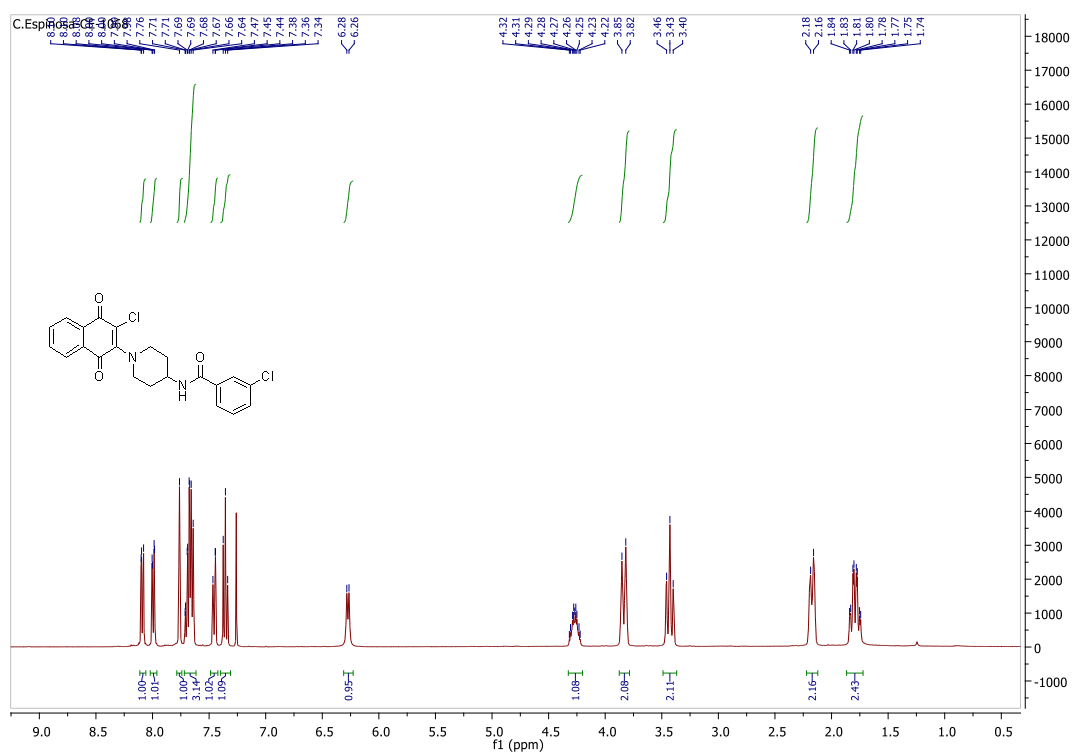
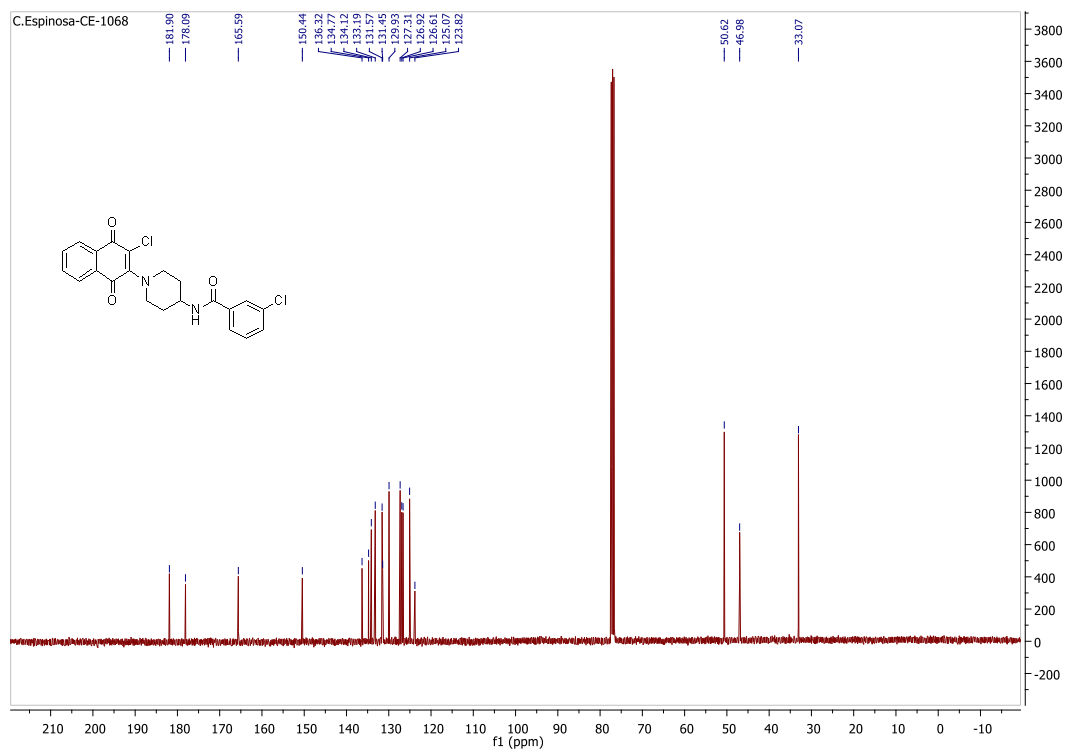


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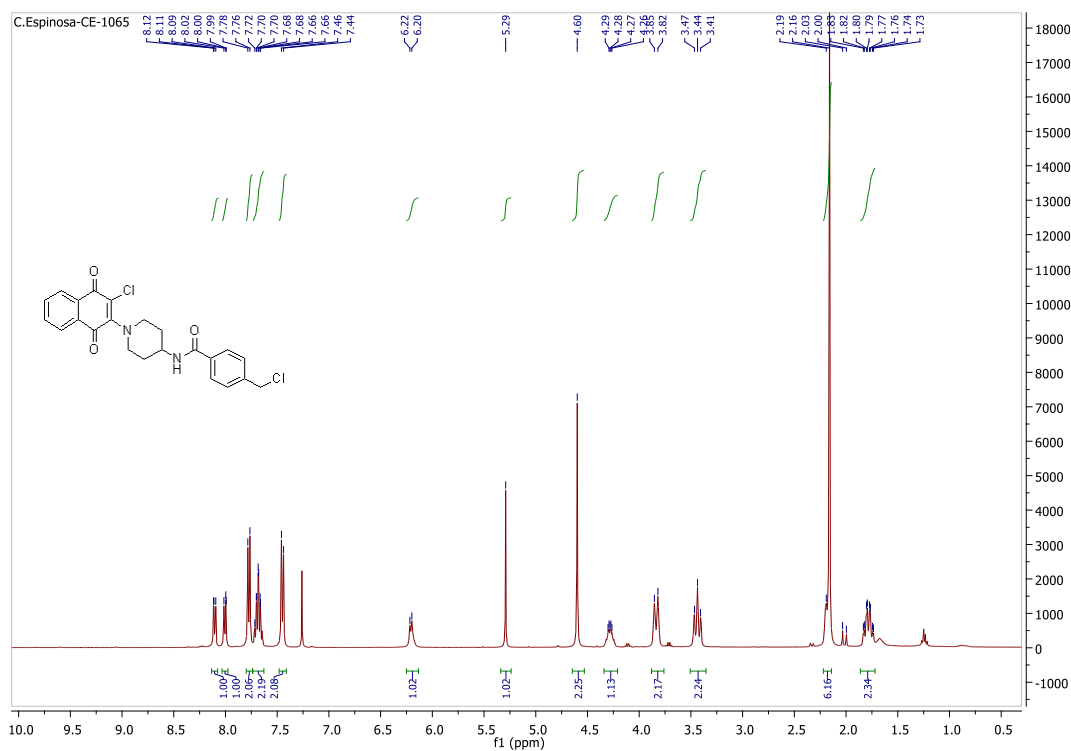


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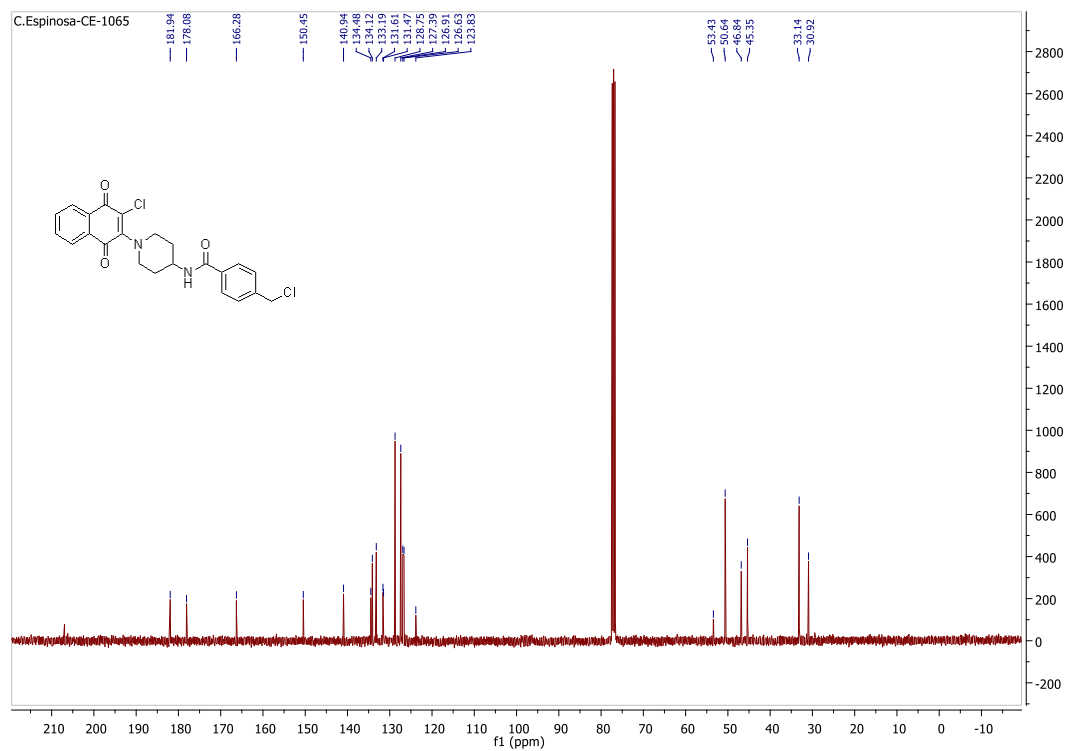


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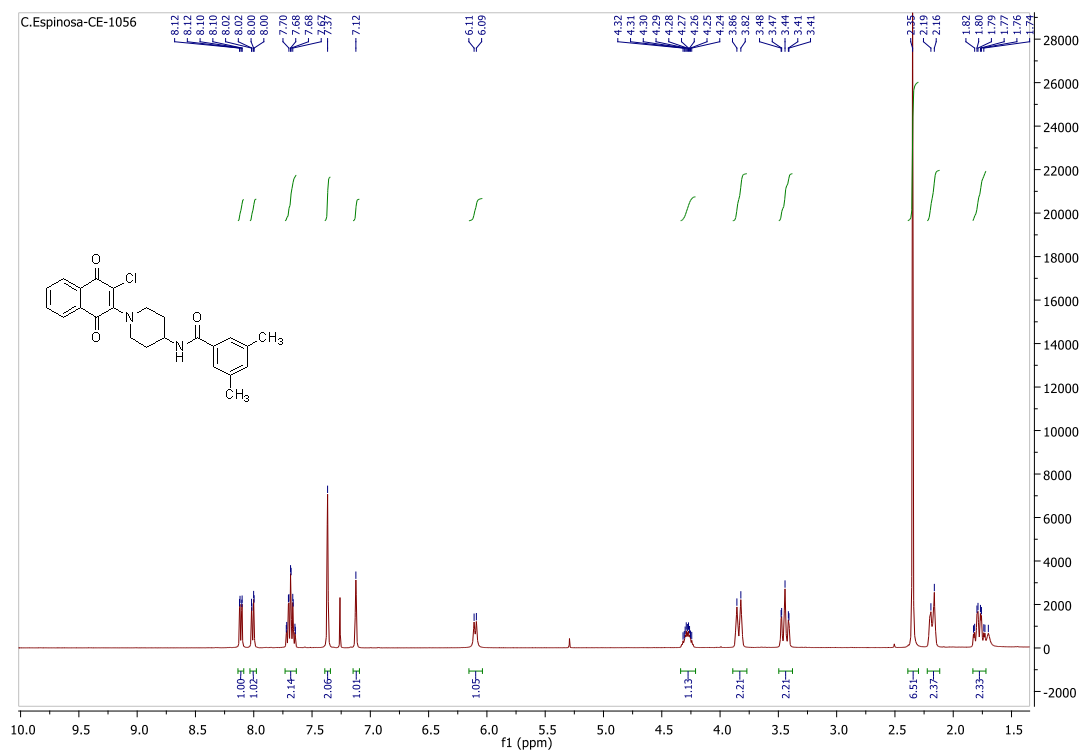
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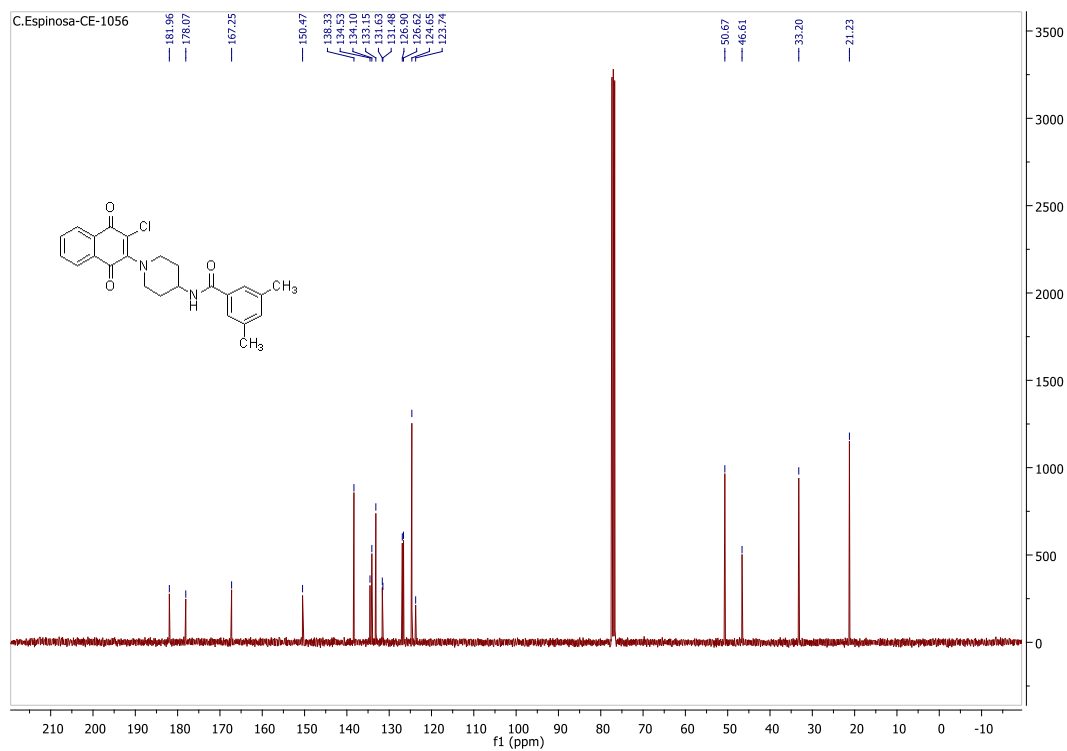
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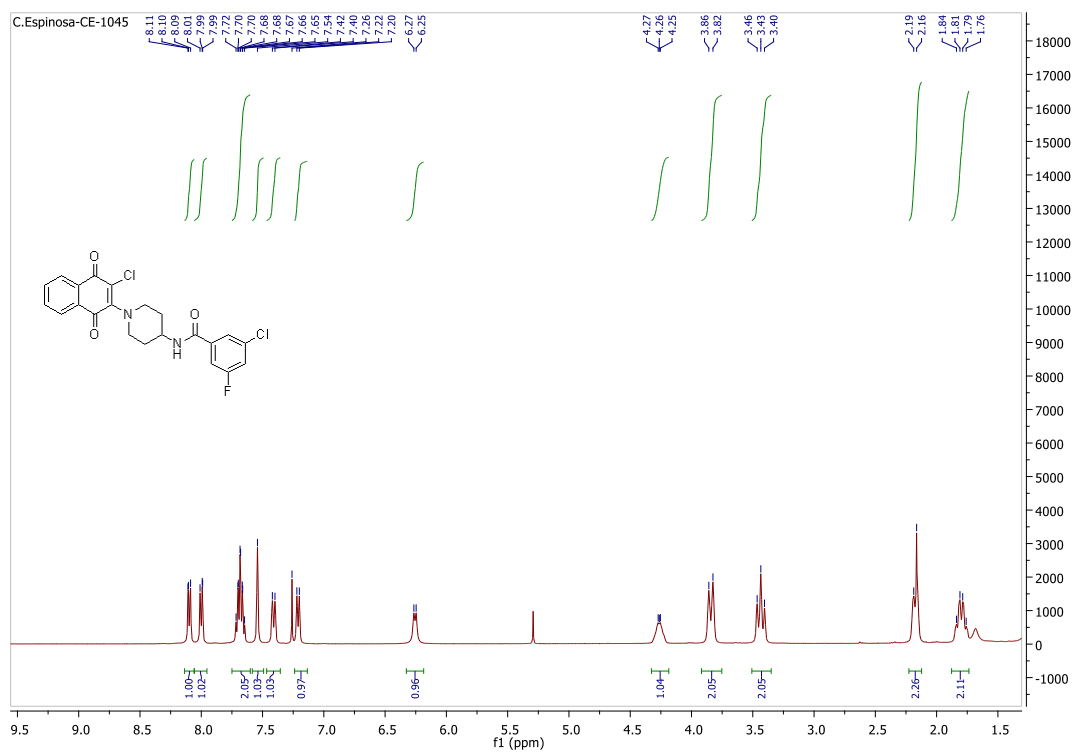
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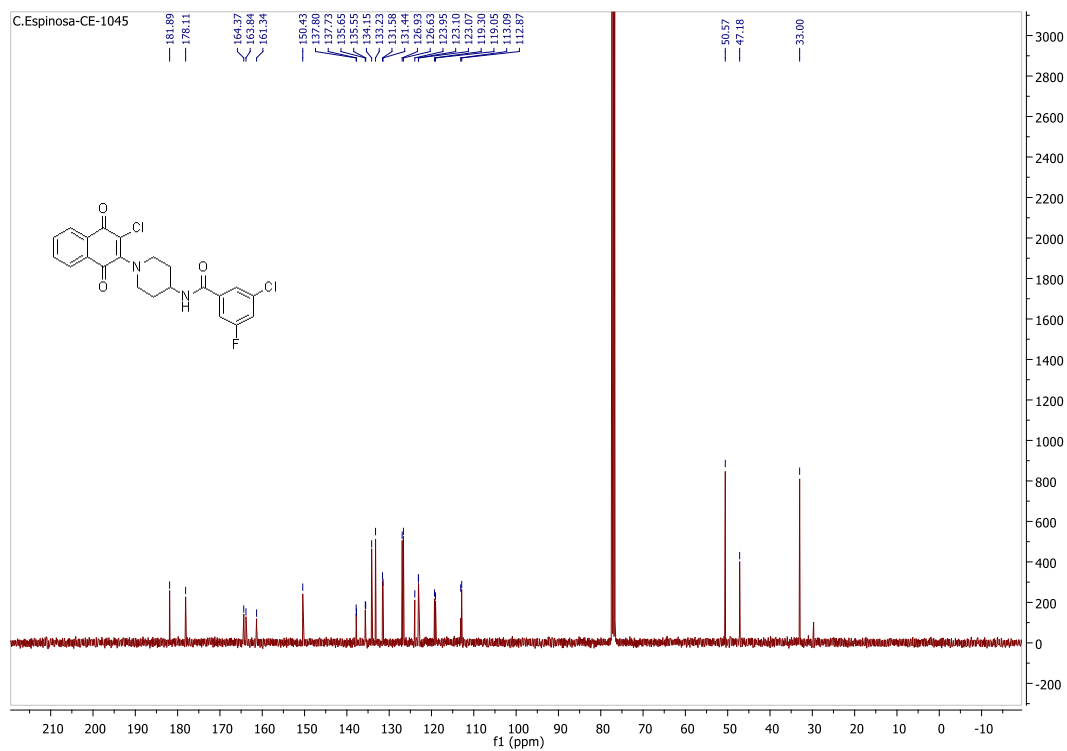
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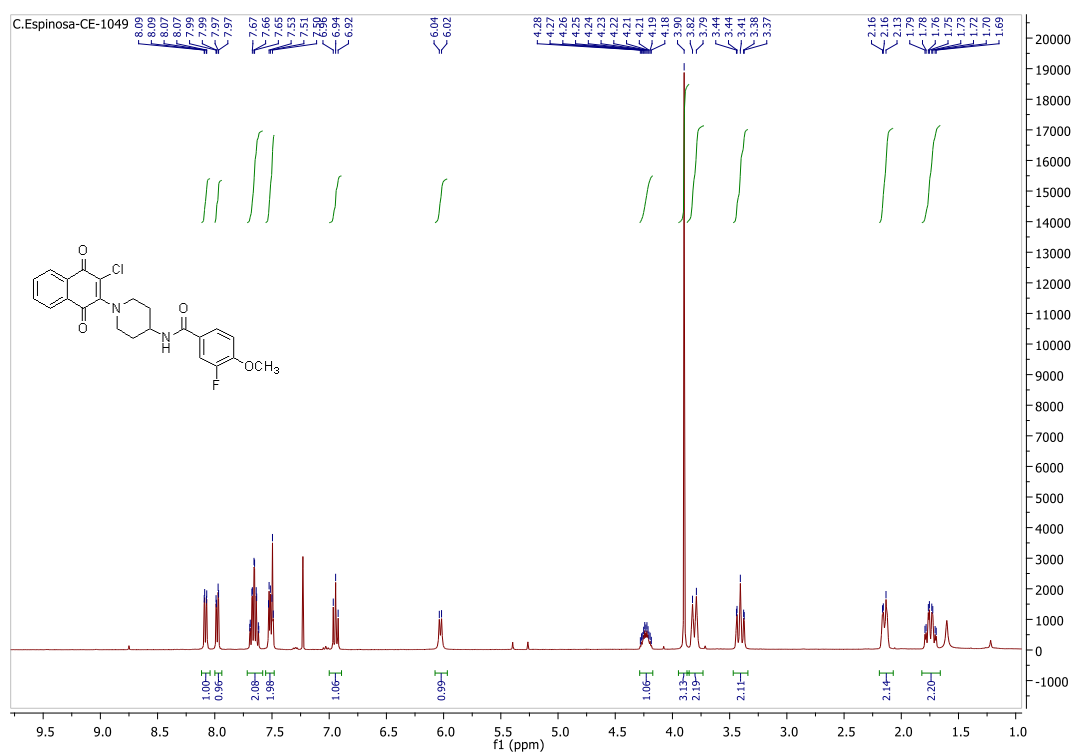
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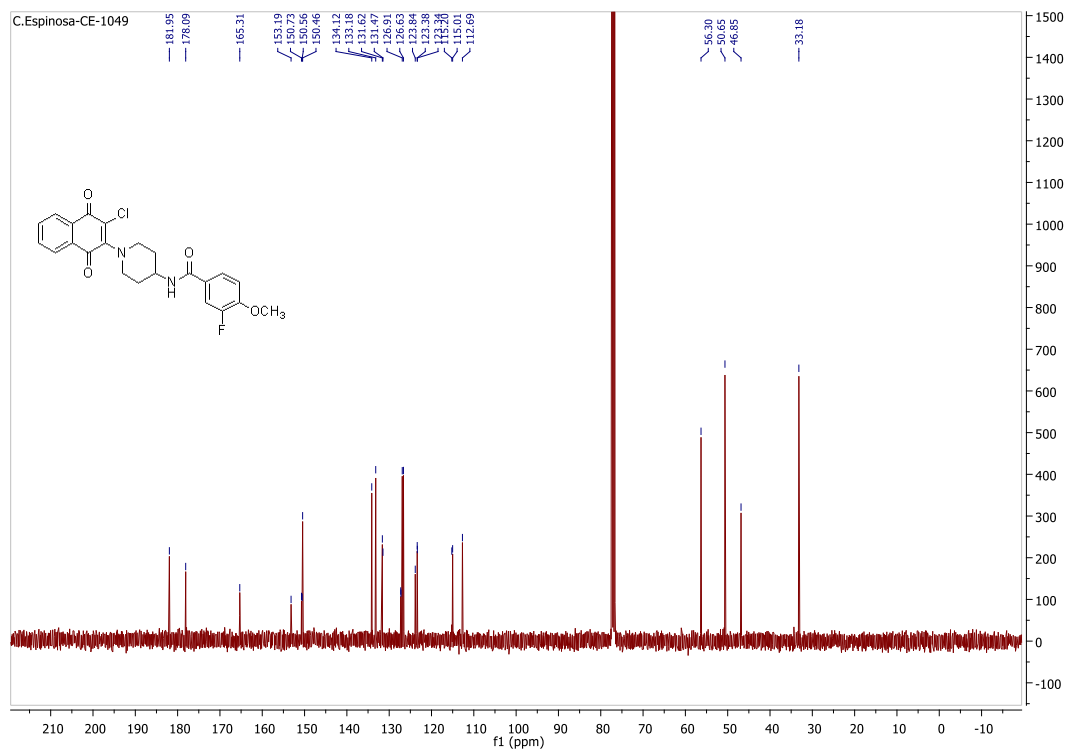
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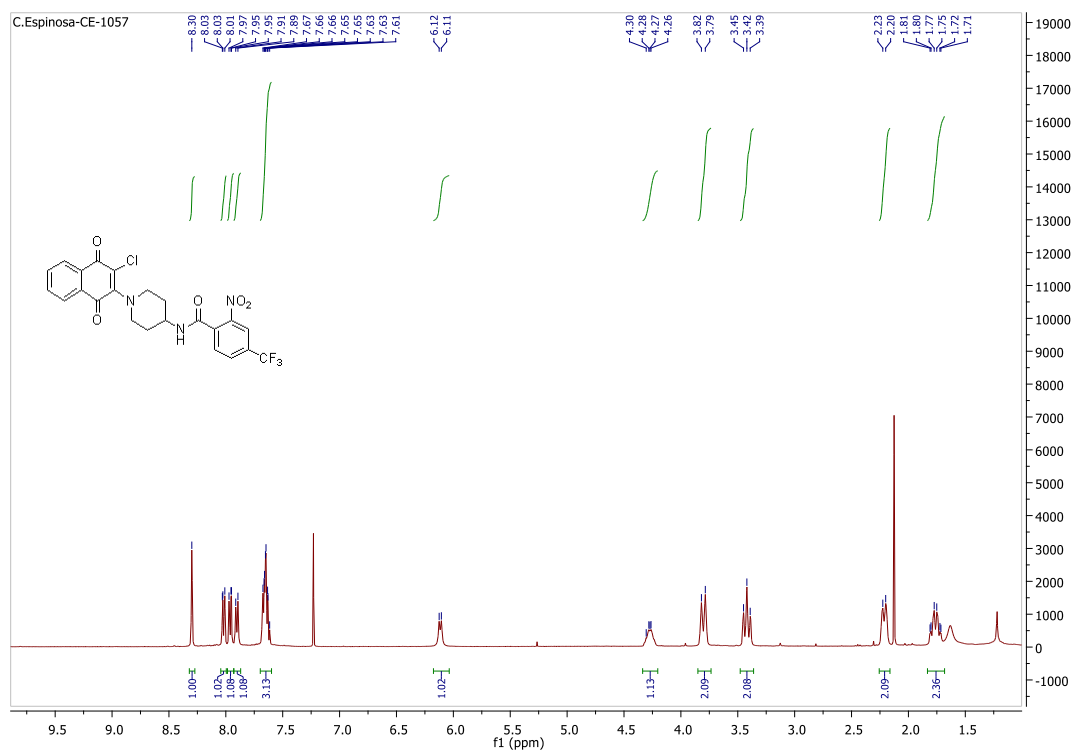
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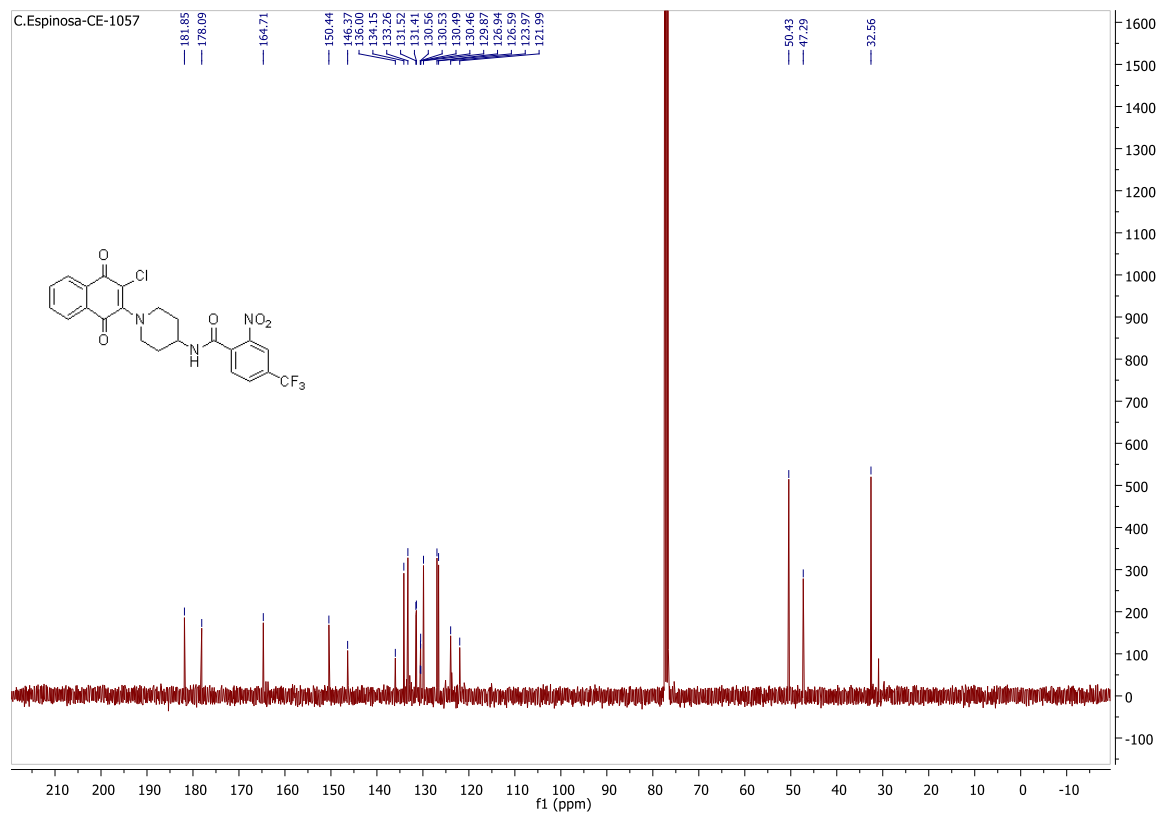
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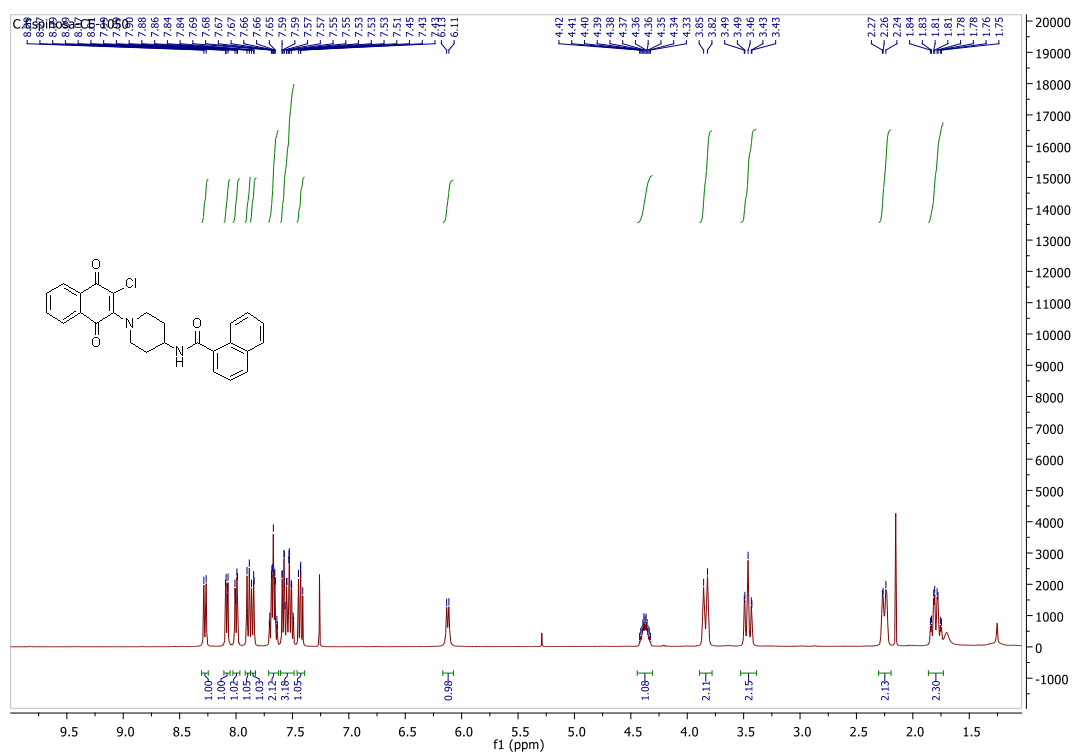
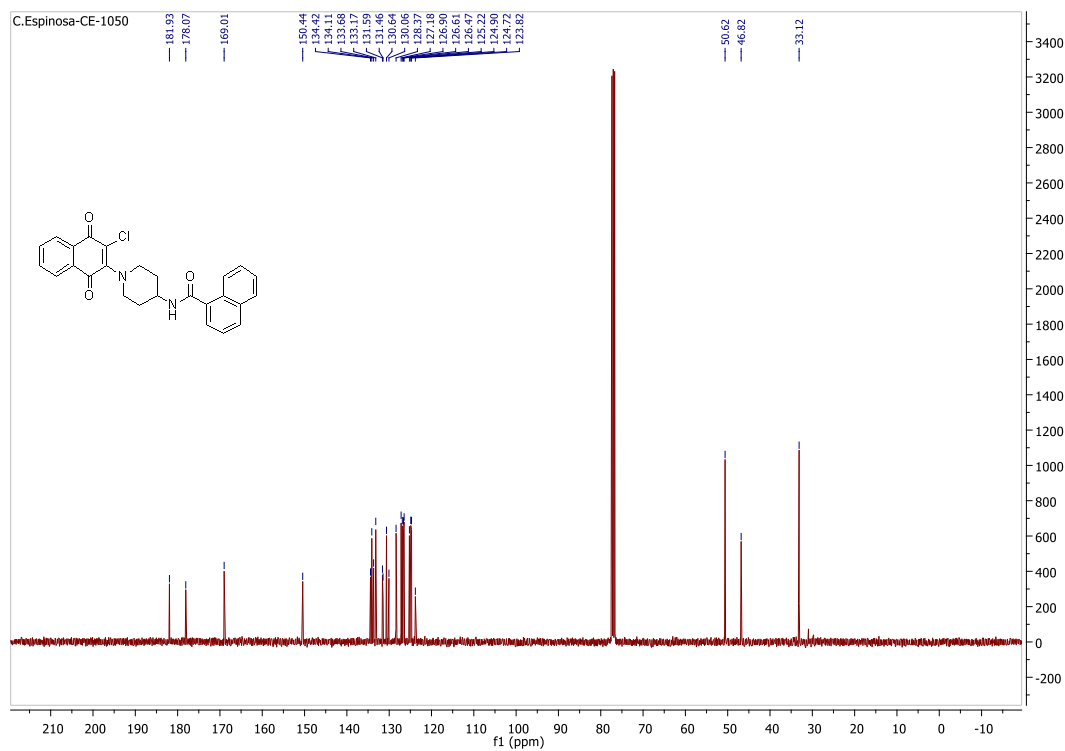


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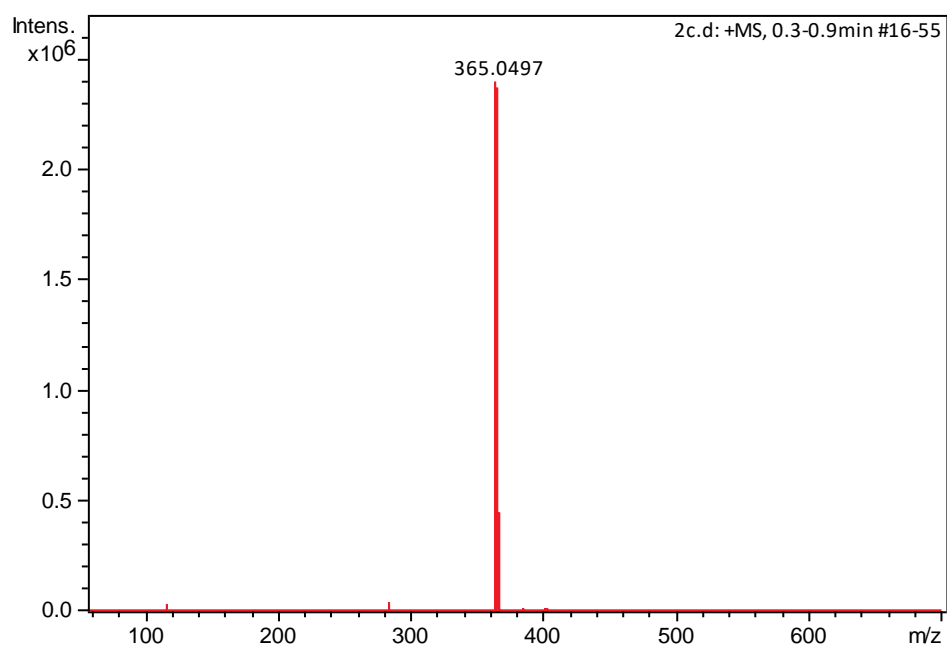


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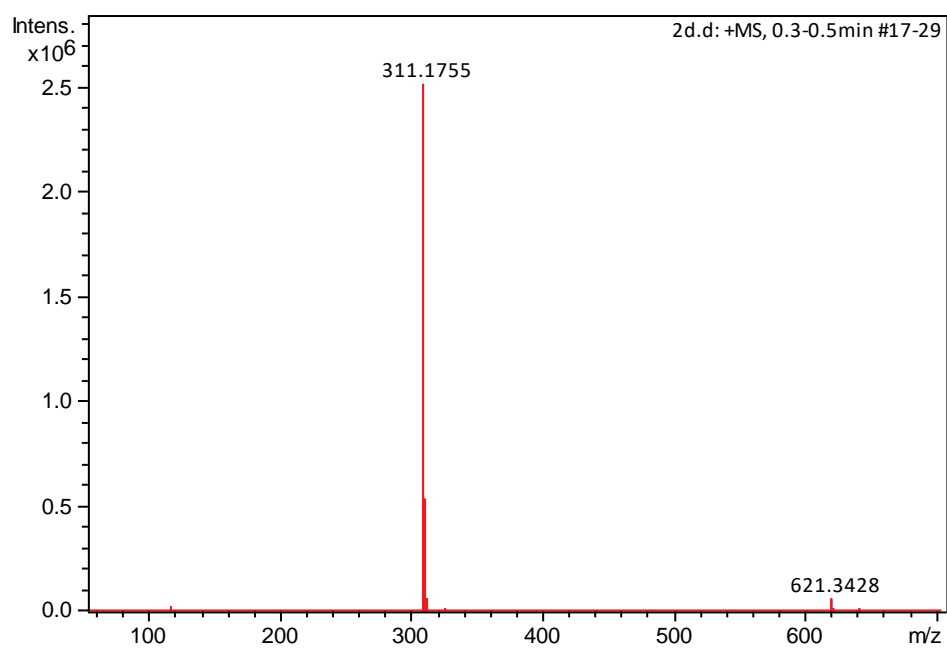


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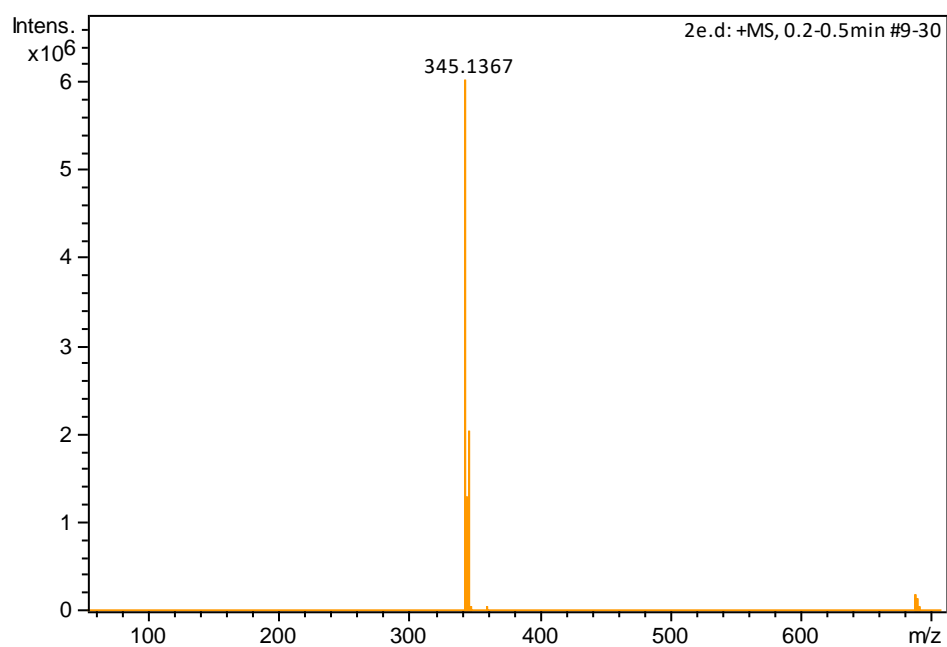
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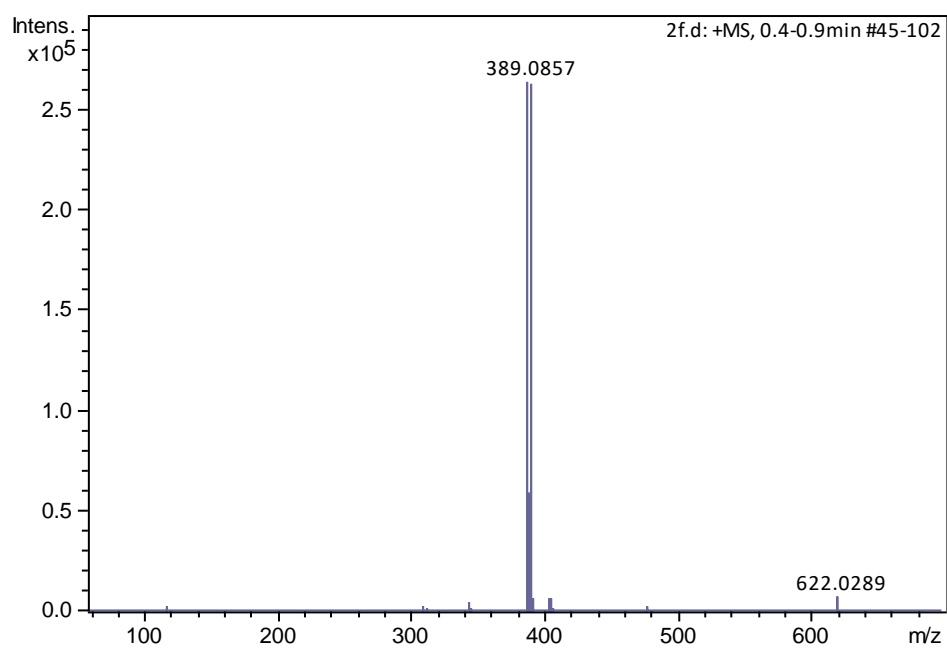
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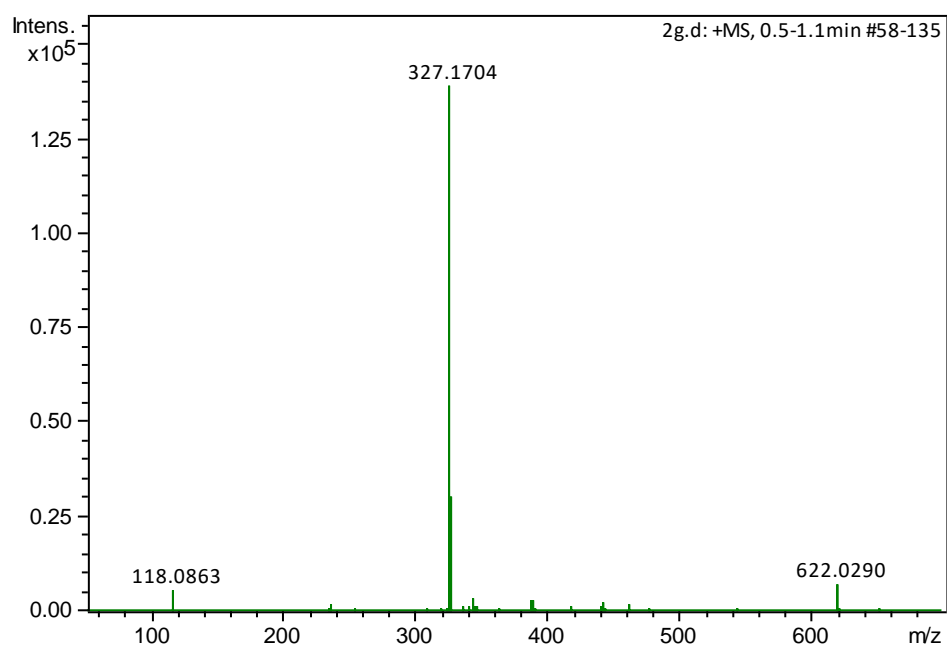
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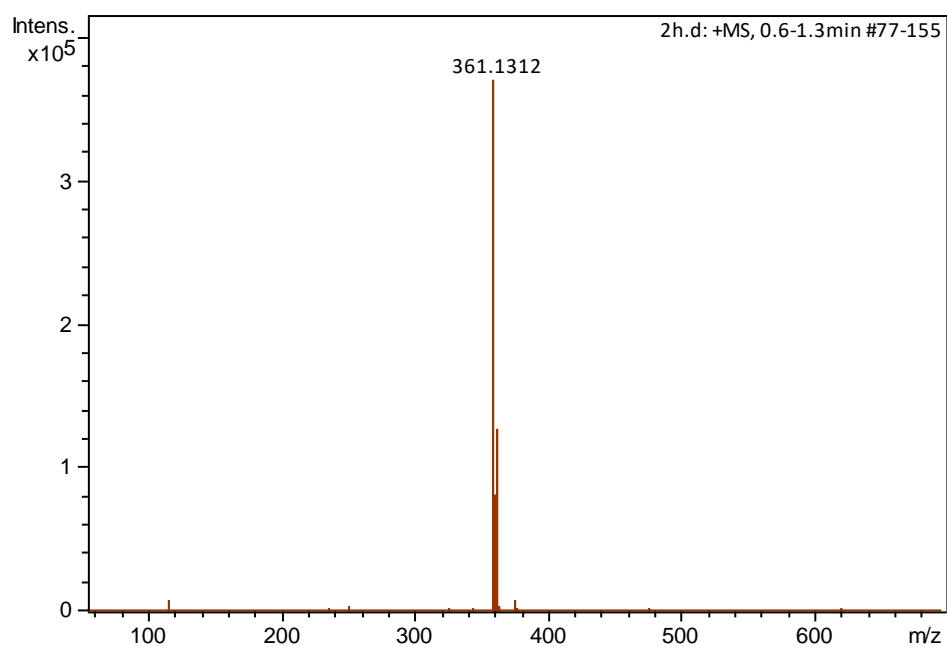
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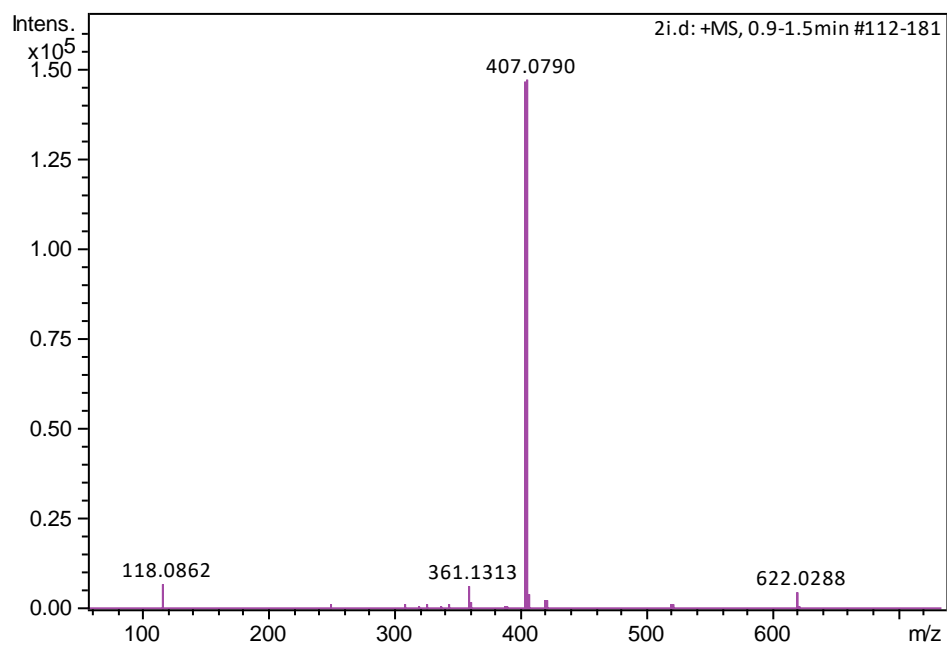
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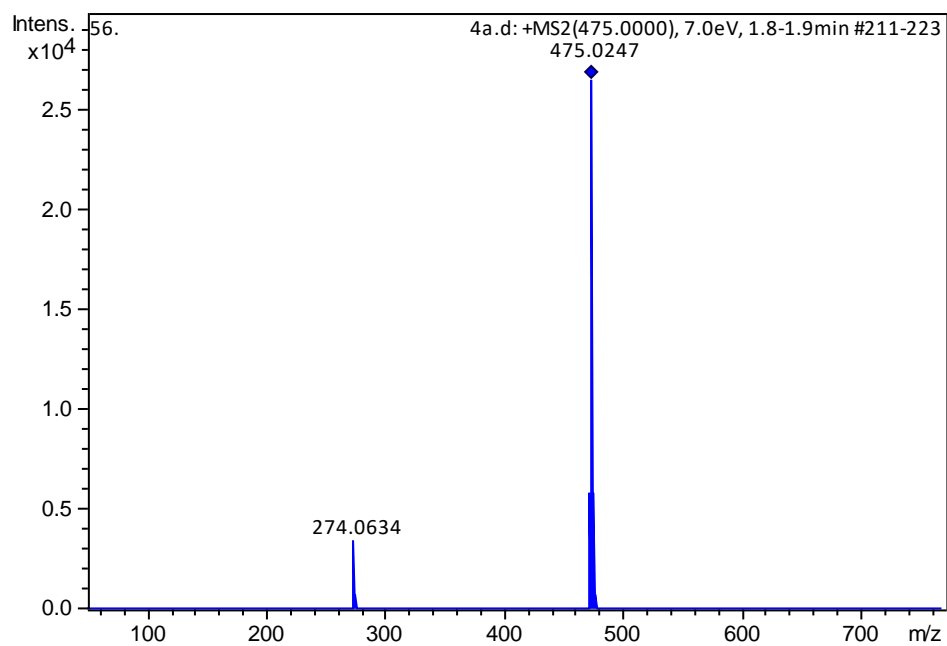
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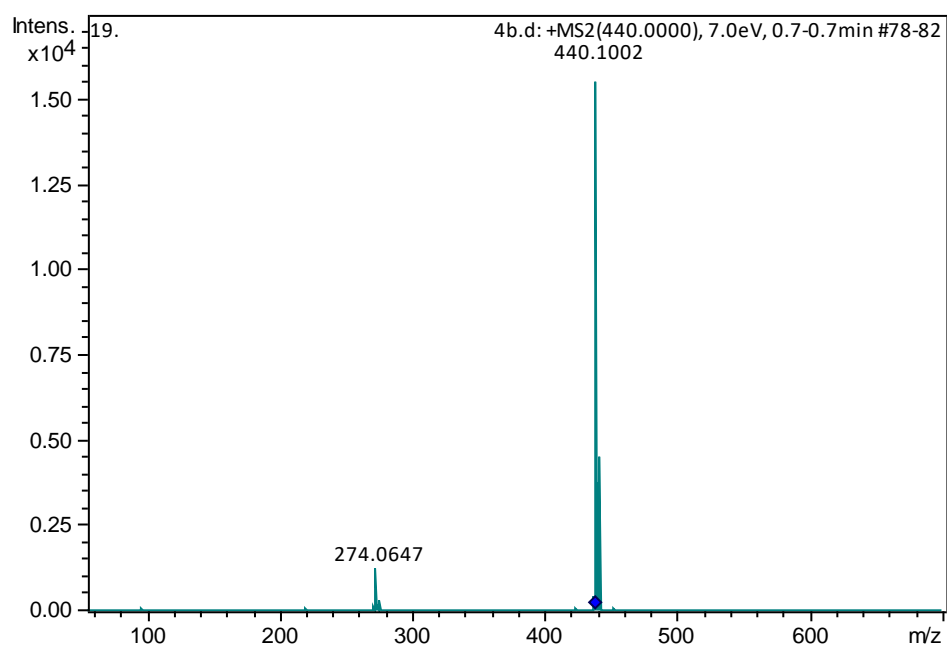
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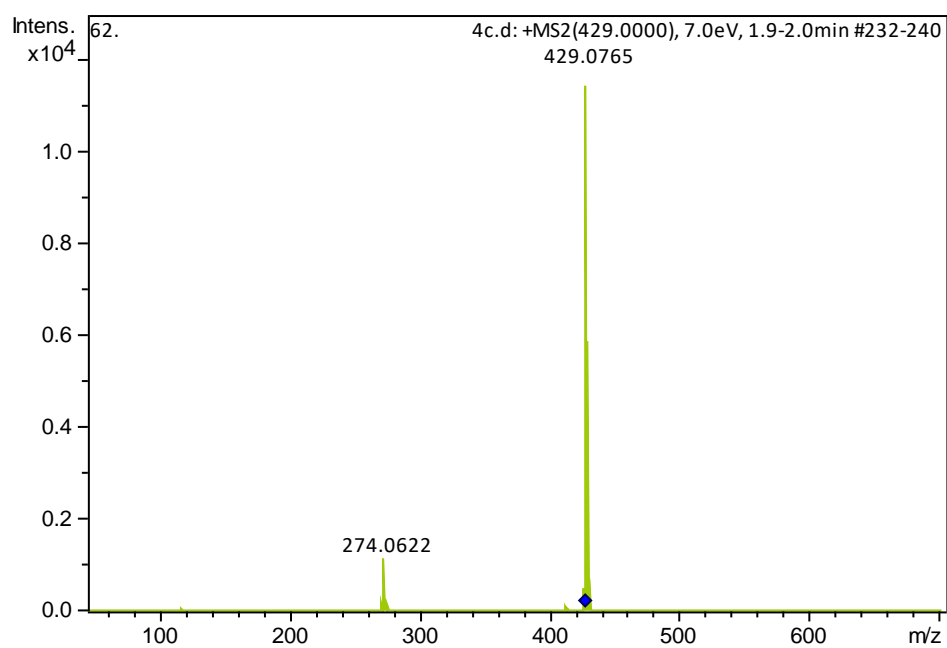
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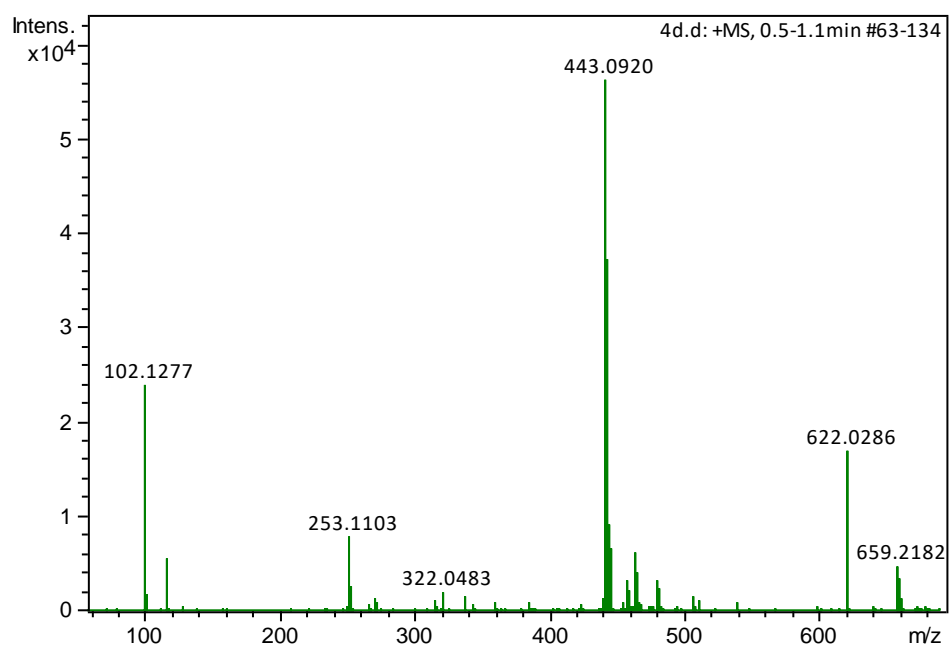
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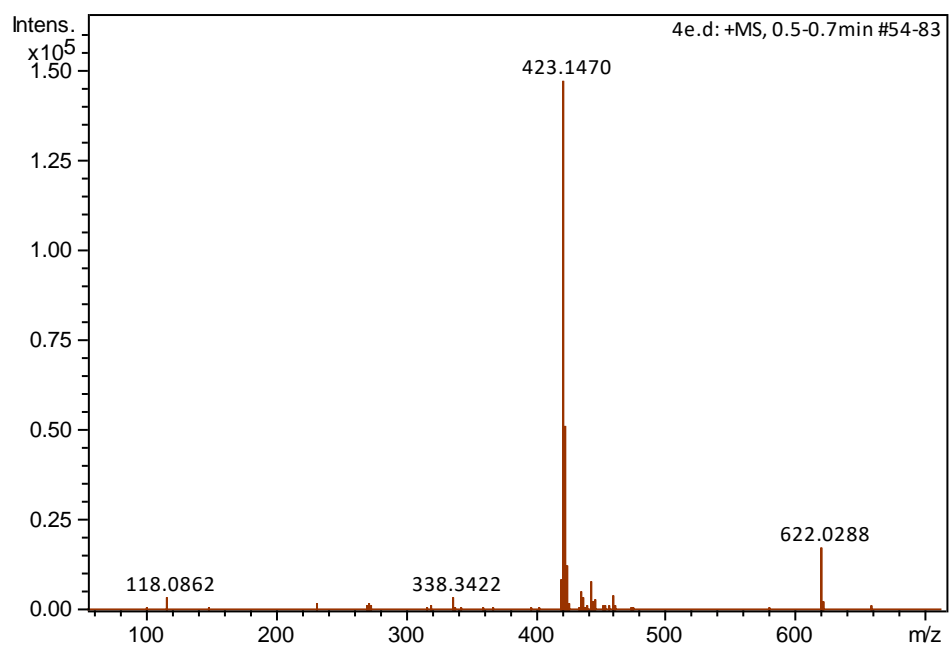
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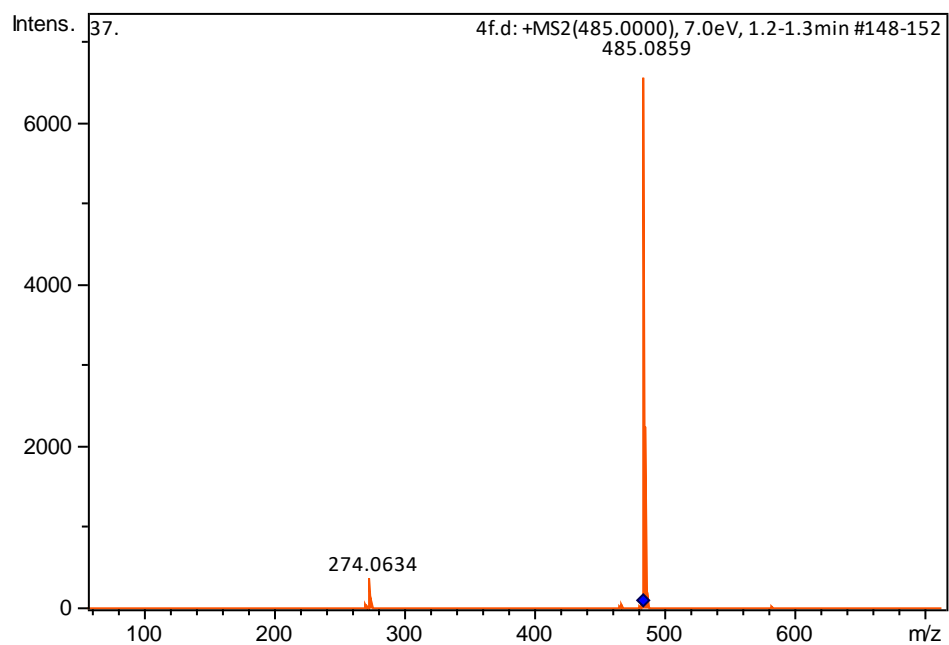
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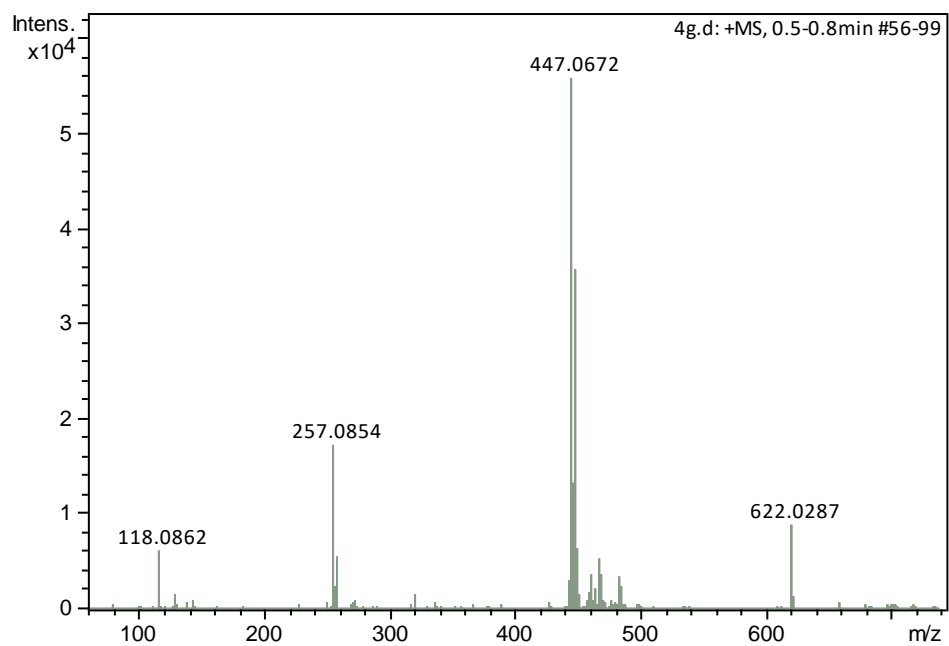
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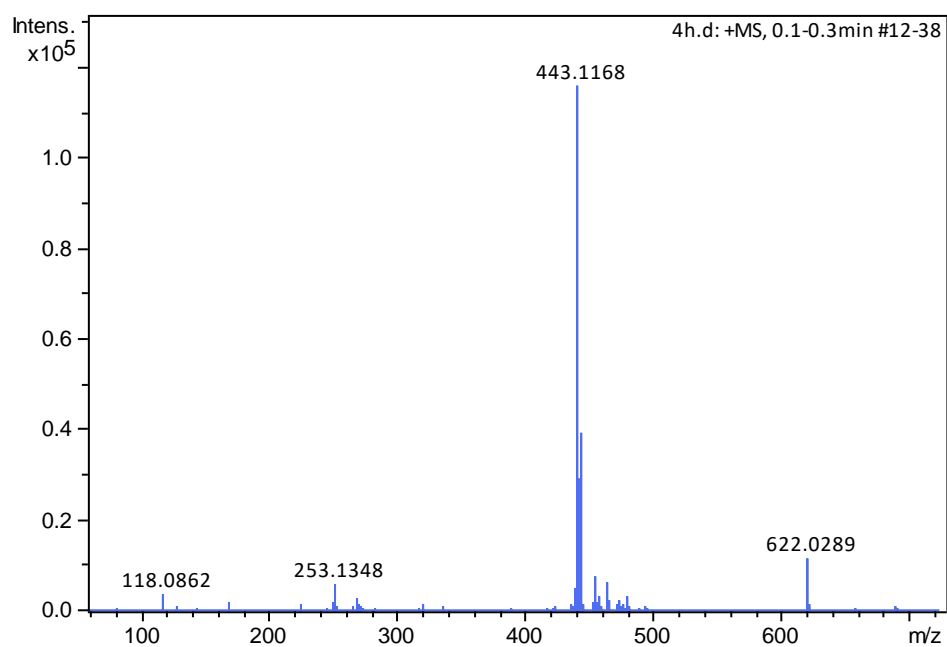
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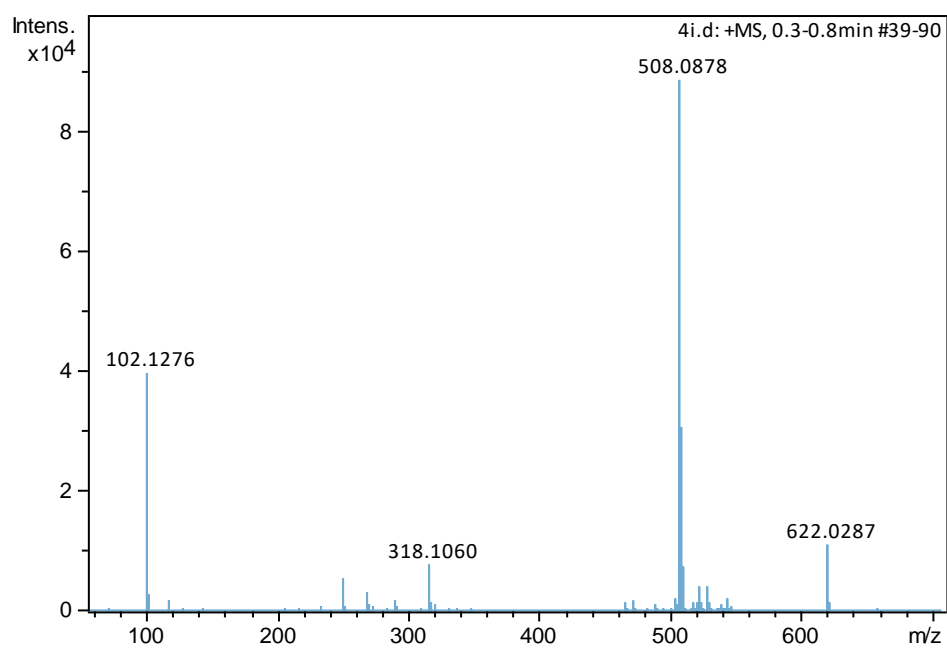
Mass spectra compound 7g



Mass spectra compound 7h



Mass spectra compound 7i



Mass spectra compound 7j

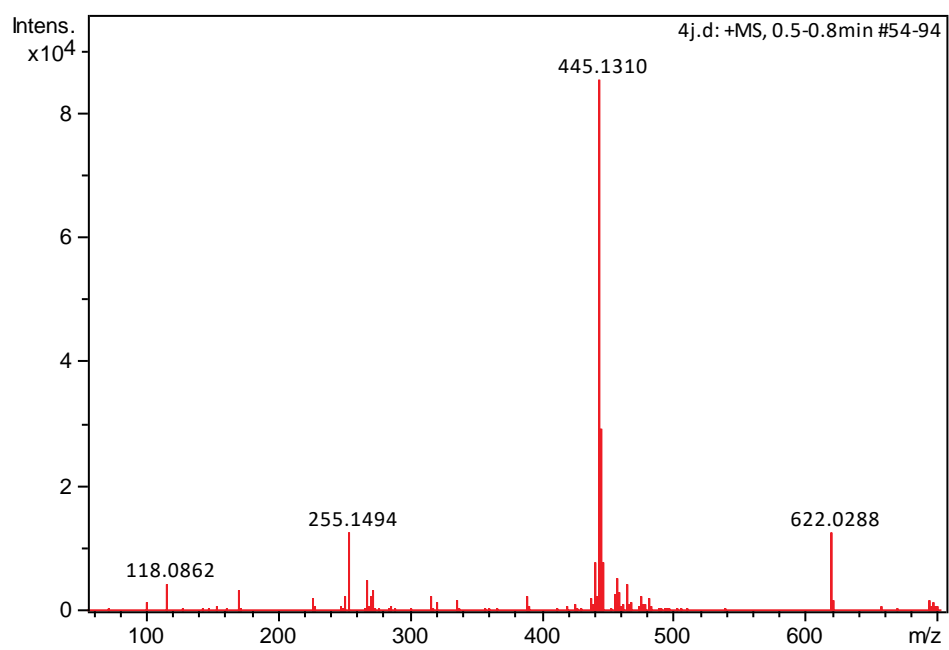


Table S1. Effect of amino naphthoquinone derivatives upon culture growth of *T. cruzi* epimastigote forms expressed as % growth inhibition at 10 μ M.

Compound	%GI Epi INC-5	%GI Epi NINOA
2a	72 \pm 0.01	65 \pm 0.07
2b	95 \pm 0.02	88 \pm 0.06
2c	100 \pm 0.08	100 \pm 0.09
2d	93 \pm 0.01	100 \pm 0.5
2e	84 \pm 0.07	100 \pm 0.03
2f	95 \pm 0.05	100 \pm 0.09
2g	64 \pm 0.0.8	68 \pm 0.08
2h	100 \pm 0.02	100 \pm 0.08
2i	89 \pm 0.03	92 \pm 0.04
4a	100 \pm 0.03	100 \pm 0.09
4b	98 \pm 0.08	96 \pm 0.04
4c	100 \pm 0.09	96 \pm 0.03
4d	100 \pm 0.1	100 \pm 0.07
4e	96 \pm 0.06	86 \pm 0.05
4f	100 \pm 0.07	100 \pm 0.07
4g	90 \pm 0.05	100 \pm 0.08
4h	87 \pm 0.03	98 \pm 0.03
4i	78 \pm 0.03	90 \pm 0.07
4j	100 \pm 0.05	98 \pm 0.06
Bnz	50 \pm 0.36	99 \pm 0.02

Table S2. Protein-ligand interaction profiles for naphthoquinones and controls.

TR	GR	107ILEB	110LEUB	110SERB	111TYRB	114TYRB	15SERB	18LEUB	33LEUB	19GLUB	34ALAB	22TRPB	37ARGB	335THRB	339THRB	336PROB	340PROB	339ILEB	343ILEB	340ASNB	343ALAB	347ARGB	394SERA	396PHEA	403PHEA	397THRA	404THRA	398PROA	405PROA	399LEUA	406META	402LYSA	409ALAA	457THRA	458ILEA
2b		1	4	0	2	7	2	0	5	2	1	0	3	0	0	5	1	6	6	4	0	2	0	1	2	0	2	1	0	5	2	1	0	0	1
2a		0	0	0	2	11	0	0	10	1	5	0	6	0	0	7	0	9	9	6	0	6	0	0	0	0	0	0	0	2	1	0	0	0	0
2c		0	4	0	1	7	1	0	6	2	2	0	5	0	0	5	1	6	7	6	0	4	0	1	0	0	0	1	0	3	0	0	0	0	1
2e		1	2	0	1	4	0	0	1	1	5	1	5	0	0	6	1	5	8	3	0	2	0	8	8	0	0	1	0	2	2	0	0	0	0
2d		0	2	0	2	8	0	0	5	2	4	2	6	1	0	6	2	9	10	5	0	0	0	3	4	0	1	0	0	0	2	0	1	0	1
2f		1	0	0	2	5	0	1	1	2	3	2	4	0	0	3	1	9	4	2	0	1	0	3	8	0	1	0	0	2	4	0	1	0	0
2h		2	1	0	1	5	0	0	2	1	2	0	6	0	0	5	1	5	8	5	0	6	0	1	3	0	1	0	0	4	3	0	0	0	1
2g		1	4	0	0	1	0	0	0	0	2	0	2	0	0	3	0	5	0	5	0	0	0	4	3	1	1	0	0	2	4	0	0	0	0
2i		1	2	0	0	5	0	0	1	0	2	0	1	0	0	3	1	5	4	4	0	5	0	2	3	0	1	0	0	4	4	0	0	0	0
7i		3	4	0	0	2	0	0	0	0	7	0	12	0	0	4	0	7	2	3	0	6	0	4	5	0	0	1	1	7	6	0	1	0	1
7g		3	0	0	0	5	0	0	3	1	1	0	6	0	1	6	3	4	9	2	0	4	0	6	3	0	1	0	0	4	3	0	1	0	0
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7e		4	0	0	1	5	0	0	2	0	0	0	7	0	0	5	2	8	6	5	2	5	0	8	8	0	1	0	0	8	3	0	3	0	3
7f		3	3	0	0	0	0	0	0	0	4	0	8	0	0	1	0	5	0	6	0	6	0	2	3	0	0	0	0	7	7	0	0	0	1
7h		1	2	0	2	5	0	0	2	0	1	2	9	0	0	5	1	9	6	6	0	7	0	5	3	1	2	0	0	3	4	0	1	0	0
7b		3	2	0	0	2	0	0	0	0	4	0	11	0	0	6	0	11	3	2	0	7	0	4	6	0	0	0	0	11	3	0	1	0	0
7c		3	0	0	0	4	0	0	2	0	1	0	5	0	1	4	2	8	7	4	0	4	0	6	5	0	1	0	0	5	2	0	1	0	0
7d		3	3	0	0	2	0	0	0	0	3	0	8	0	0	8	0	12	3	2	0	3	0	3	4	0	1	0	0	8	4	0	3	0	1
7j		2	6	0	5	4	0	0	0	0	1	2	8	0	0	6	3	8	6	5	0	10	0	7	5	0	0	0	0	4	4	0	1	0	3
TS2		2	X	2	8	X	5	0	X	7	X	3	X	0	X	1	X	2	X	0	0	X	1	6	X	1	X	0	X	5	X	1	X	0	0
NQ-h		2	2	0	3	7	1	1	5	0	2	2	5	0	0	7	2	9	8	1	0	4	0	3	2	0	1	0	0	3	0	0	1	0	1
NQ-g		0	0	0	3	7	1	1	5	0	3	1	6	0	0	7	0	12	7	3	0	2	0	7	6	0	2	0	0	1	2	0	2	0	0
NQ-d		5	3	0	1	4	0	1	2	0	2	1	3	0	0	4	1	4	4	2	0	2	0	6	8	0	1	0	0	6	3	0	0	0	2

Table S2. Protein-ligand interaction profiles for naphthoquinones and controls (continued).

TR	GR	459GLYA	465ALAA	461HISA	467HISA	462PROA	468PROA	463THRA	469THRA	466GLUA	472GLUA	467GLUA	473GLUA	469CYSA	470SERA	472ARGA	478ARGA	54VALB	59VALB	59VALB	64VALB
2b		5	1	2	3	1	2	0	0	10	4	3	3	0	0	0	0	0	0	0	2
2a		5	0	3	2	1	0	0	0	16	5	5	7	0	0	1	2	0	0	0	0
2c		3	1	4	3	2	2	0	0	13	6	7	6	0	0	0	0	0	0	0	2
2e		1	1	2	3	1	3	0	0	7	3	3	7	0	0	0	3	1	0	0	1
2d		1	2	3	3	0	2	0	0	4	3	3	4	0	0	0	4	0	0	0	1
2f		2	1	1	1	1	2	0	0	11	2	4	3	0	0	0	2	0	0	0	0
2h		3	1	3	2	0	0	0	0	11	0	3	4	0	0	0	1	0	0	2	0
2g		3	0	3	4	1	2	0	1	10	0	2	1	0	0	0	4	0	0	0	2
2i		1	1	2	1	1	1	0	1	11	0	3	6	0	0	0	0	0	0	0	0
7i		2	0	0	2	1	3	2	0	10	0	0	3	0	0	0	3	0	0	0	3
7g		3	3	1	4	0	0	0	0	11	1	1	2	0	0	1	7	0	0	1	0
7a		3	2	1	2	0	2	0	1	4	1	3	2	0	0	0	3	0	0	0	0
7e		2	2	4	2	0	1	0	0	8	0	2	1	0	0	0	7	0	0	1	0
7f		1	0	4	5	0	3	1	0	8	0	1	1	0	0	0	0	0	0	0	3
7h		3	1	1	1	0	0	0	0	8	1	2	0	1	0	0	4	0	0	0	0
7b		0	0	3	2	2	2	1	0	16	0	0	3	0	0	0	1	0	0	0	1
7c		3	2	0	4	1	1	0	0	10	1	3	2	0	0	0	9	0	0	0	0
7d		1	0	3	3	1	2	2	0	13	0	1	3	0	0	0	5	0	0	0	2
7j		3	3	0	5	0	2	0	0	4	0	2	2	0	0	0	4	0	0	1	2
TS2		4	X	9	X	0	X	8	X	12	X	1	X	1	2	2	X	0	X	1	X
NQ-h		1	2	4	3	3	1	0	0	4	0	0	1	0	0	0	1	1	0	3	1
NQ-g		1	0	2	0	2	1	0	0	8	0	0	0	0	0	0	2	0	1	0	0
NQ-d		0	1	4	2	4	4	0	0	4	0	1	0	0	0	0	1	2	0	2	1