Table of Contents

Table S1. Initial screen of IMD-0354 analogues for colistin resistance suppression

	KP B9		AB 4106	
Compound	**MIC (μM)**	**Colistin MIC (μg/mL) (fold reduction)[a]**	**MIC (μM)**	**Colistin MIC (μg/mL) (fold reduction)**
-		512	-	2048
IMD-0354	50	0.5 (1024)	50	2 (1024)
1	>200	>64 (≤4)	>200	>64 (≤16)
2	>200	>64 (≤4)	>200	>64 (≤16)
3	>200	0.5 (1024)	>200	4 (512)
4	>200	>64 (≤4)	>200	>64 (≤16)
5	200	1 (512)	100	4 (512)
6	>200	0.5 (1024)	>200	4 (512)
7	>200	>64 (≤4)	>200	>64 (≤16)
8	>200	0.5 (1024)	>200	2 (1024)
9	25	0.25 (2048)	≥100	2 (1024)
10	>200	0.5 (1024)	>200	0.5 (4096)
11	>200	16 (32)	>200	8 (256)
12	>200	0.5 (1024)	>200	4 (512)
13	>200	4 (128)	>200	4 (512)
14	100	1 (512)	100	4 (512)
15	>200	0.25 (2048)	>200	1 (2048)
16	200	2 (256)	>200	>64 (≤16)
17	>200	0.5 (1024)	>200	2 (1024)
18	50	0.5 (1024)	>200	2 (1024)
19	>200	>64 (≤4)	>200	>64 (≤16)
20	>200	1 (512)	>200	2 (1024)
21	200	0.25 (2048)	>200	2 (1024)
22	>200	0.25 (2048)	>200	2 (1024)
23	>200	0.25 (2048)	>200	2 (1024)
24	>200	0.5 (1024)	≥200	0.5 (4096)
25	100	0.25 (2048)	50	1 (2048)
26	>200	0.25 (2048)	>200	1 (2048)
27	≥200	1 (512)	>200	8 (256)
28	>200	0.5 (1024)	>200	2 (1024)
29	>200	0.5 (1024)	>200	1 (2048)
30	>200	4 (128)	>200	64 (32)
31	>200	16 (32)	>200	64 (32)
32	>200	8 (64)	>200	64 (32)
33	>200	2 (256)	>200	16 (128)

34	>200	>64 (≤4)	>200	>64 (≤16)
35	>200	1 (512)	>200	64 (32)
36	>200	>64 (≤4)	>200	>64 (≤16)
37	>200	0.25 (2048)	>200	1 (2048)
38	>200	>64 (≤4)	>200	>64 (≤16)
39	>200	4 (128)	>200	8 (256)
40	>200	0.5 (1024)	>200	2 (1024)
41	>200	2 (256)	>200	16 (128)
42	25	0.5 (1024)	200	8 (256)
43	>200	0.125 (4096)	>200	2 (1024)
44	>200	>64 (≤4)	>200	>64 (≤16)
45	>200	0.5 (1024)	>200	2 (1024)
46	>200	0.25 (2048)	>200	4 (512)
47	>200	0.5 (1024)	>200	2 (1024)
48	>200	1 (512)	>200	16 (128)
49	>200	0.25 (2048)	200	1 (2048)
50	>200	0.25	>200	4 (512)
51	>200	0.125	>200	1 (2048)
52	>200	0.5	>200	1 (2048)
53	>200	1	>200	8 (256)
54	100	1	200	2 (1024)
55	>200	0.5	>200	1 (2048)
56	>200	0.5	>200	1 (2048)
57	>200	1	>200	8 (256)
58	>200	>64 (≤4)	>200	>64 (≤16)
59	>200	32	>200	>64 (≤16)
60	50	0.5	50	1 (2048)
61	>200	>64 (≤4)	>200	>64 (≤16)
62	50	1	100	4 (512)

[a]All compounds tested at 5 μM

Table S2. Activity of compounds identified in initial screen against colistin resistant isolate panel

Compound	KP C3	KP A5	KP F2210291*mcr-1*	AB 3941	AB 3942	AB 4112	AB 4119	AB 17978*mcr-1*
-	128	2048	16	1024	>2048	2048	1024	64
IMD-0354	0.5	8	0.5	2	2	2	4	0.5
3	4	>64	1	8	8	8	4	0.5
5	2	4	0.5	8	8	8	4	N.T.[b]
6	1	2	0.5	4	4	4	4	0.5
8	1	4	1	2	2	2	2	0.5
9	1	1	0.5	2	2	2	2	0.5
10	0.5	2	0.5	1	1	1	1	1
12	2	>64	0.5	4	4	4	2	0.5
13	N.T.	N.T.	N.T.	16	32	8	2	4
14	2	4	1	8	4	4	4	1
15	0.5	4	0.25	2	2	1	2	0.25
17	1	4	0.25	4	4	4	4	0.25
18	1	2	0.5	2	2	2	2	0.5
20	0.5	1	0.5	4	4	4	4	0.25
21	0.25	0.5	0.5	2	2	2	4	0.25
22	0.5	0.5	0.25	2	2	2	2	0.25
23	0.5	0.5	0.125	2	2	2	1	0.5
24	0.5	4	0.25	1	0.5	0.25	0.125	0.25
25	0.5	4	0.5	1	1	1	1	0.5
26	0.5	1	0.5	2	2	2	2	0.25
27	2	8	0.5	N.T.	N.T.	N.T.	N.T.	N.T.
28	0.5	2	0.25	2	2	2	1	0.25
29	1	1	0.25	1	1	1	2	0.125
35	2	8	1	N.T.	N.T.	N.T.	N.T.	N.T.
37	0.25	0.5	0.25	2	2	2	1	0.25
40	0.5	2	0.5	8	4	4	4	0.25
42	0.5	2	0.25	N.T.	N.T.	N.T.	N.T.	N.T.
43	0.25	1	0.25	2	2	2	2	0.125
45	0.25	0.5	0.5	2	2	2	1	0.25
46	0.5	1	0.25	2	4	4	4	0.5
47	0.25	1	0.25	2	2	2	1	0.5
48	2	8	0.5	N.T.	N.T.	N.T.	N.T.	N.T.
49	0.5	4	0.25	2	2	2	1	0.25

50	0.5	1	0.5	4	4	2	4	0.25
51	0.25	0.25	0.25	1	1	1	0.5	0.125
52	0.5	1	0.25	1	1	1	2	0.25
53	1	8	0.5	N.T.	N.T.	N.T.	N.T.	N.T.
54	0.5	1	0.5	4	2	2	2	0.5
55	0.5	1	0.5	2	2	1	1	0.5
56	0.5	1	0.25	2	1	2	2	0.125
57	4	8	0.5	N.T.	N.T.	N.T.	N.T.	N.T.
60	1	2	0.5	2	2	2	2	0.25
62	1	1	0.5	8	8	4	4	0.5

[a]All compounds tested at 5 μM. [b]N.T. not tested

Table S3. Dose response data for active analogues against KP B9

Compound	Concentration (μM)	Colistin MIC (μg/mL) (fold reduction)
IMD-0354	5	0.5 (1024)
	3	0.5 (1024)
	1	4 (128)
3	5	0.5 (1024)
	3	1 (512)
	1	>64 (≤4)
5	5	1 (512)
	3	2 (256)
	1	16 (32)
6	5	0.5 (1024)
	3	0.5 (1024)
	1	4 (128)
8	5	0.5 (1024)
	3	1 (512)
	1	8 (64)
9	5	0.25 (2048)
	3	0.5 (1024)
	1	2 (256)
10	5	0.5 (1024)
	3	1 (512)
	1	2 (256)
12	5	0.5 (1024)
	3	1 (512)
	1	>64 (≤4)
14	5	1 (512)
	3	2 (256)
	1	16 (32)
15	5	0.25 (2048)
	3	0.5 (1024)
	1	1 (512)
	0.5	4 (128)
17	5	0.5 (1024)
	3	0.5 (1024)
	1	2 (256)
18	5	0.5 (1024)
	3	2 (256)
	1	4 (128)
20	5	0.5 (1024)
	3	0.5 (1024)
	1	16 (32)

21	5	0.25 (2048)
	3	0.5 (1024)
	1	1 (512)
22	5	0.25 (2048)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	4 (128)
23	5	0.25 (2048)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	1 (512)
	0.25	4 (128)
24	5	0.5 (1024)
	3	1 (512)
	1	2 (256)
25	5	0.25 (2048)
	3	1 (512)
	1	1 (512)
	0.5	16 (32)
26	5	0.25 (2048)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	8 (64)
28	5	0.5 (1024)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	4 (128)
29	5	0.5 (1024)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	0.5 (1024)
	0.25	1 (512)
	0.125	>64 (≤4)
35	5	1 (512)
	3	2 (256)
	1	>64 (≤4)
37	5	0.25 (2048)
	3	0.5 (1024)
	1	0.5 (1024)
	0.5	64 (32)
40	5	0.5 (1024)
	3	1 (512)
	1	16 (32)
42	5	0.5 (1024)

	3	0.5 (1024)
	1	>64
43	5	0.125 (4096)
	3	1 (512)
	1	2 (256)
45	5	0.5 (1024)
	3	0.5 (1024)
	1	4 (128)
46	5	0.25 (2048)
	3	2 (256)
	1	8 (64)
47	5	0.5 (1024)
	3	1 (512)
	1	2 (256)
48	5	1 (512)
	3	2 (256)
	1	>64 (≤4)
49	5	0.25 (2048)
	3	0.5 (1024)
	1	1 (512)
	0.5	4 (128)
50	5	0.25 (2048)
	3	0.5 (1024)
	1	2 (256)
51	5	0.125 (4096)
	3	0.25 (2048)
	1	0.5 (1024)
	0.5	1 (512)
	0.25	16 (32)
52	5	0.5 (1024)
	3	0.5 (1024)
	1	1 (512)
	0.5	1 (512)
	0.25	16 (32)
53	5	1 (512)
	3	1 (512)
	1	>64 (≤4)
54	5	1 (512)
	3	2 (256)
	1	4 (128)
55	5	0.5 (1024)
	3	2 (256)
	1	2 (256)
56	5	0.5 (1024)

	3	0.5 (1024)
	1	4 (128)
57	5	1 (512)
	3	1 (512)
	1	>64 (≤4)
60	5	0.5 (1024)
	3	0.5 (1024)
	1	2 (256)
62	5	1 (512)
	3	1 (512)
	1	8 (64)

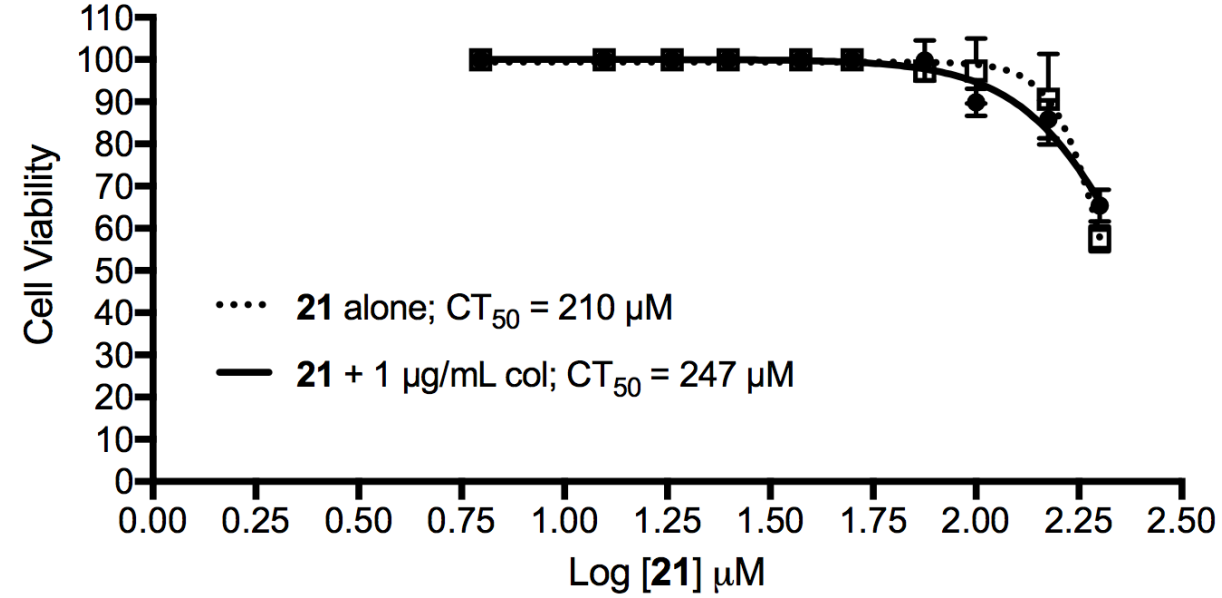
Table S4. Dose response data for active analogues against AB 4106

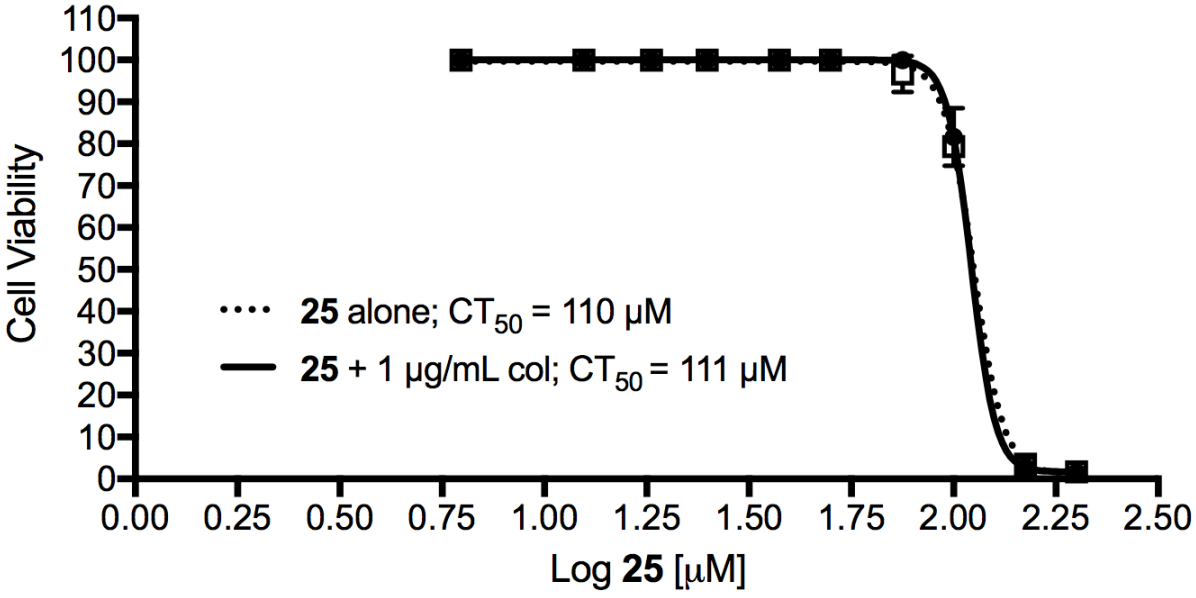
Compound	Concentration (μM)	Colistin MIC (μg/mL) (fold reduction)
-	-	2048 μg/mL
IMD-0354	5	2 (1024)
	3	4 (512)
	1	8 (256)
3	5	4 (512)
	3	8 (256)
	1	>64 (≤16)
5	5	4 (512)
	3	8 (256)
	1	>64 (≤16)
6	5	4 (512)
	3	4 (512)
8	5	2 (1024)
	3	2 (1024)
	1	32 (64)
9	5	2 (1024)
	3	2 (1024)
	1	16 (128)
10	5	0.5 (4096)
	3	2 (1024)
	1	16 (128)
12	5	4 (512)
	3	8 (256)
	1	>64 (≤16)
13	5	4 (512)
	3	8 (256)
	1	64 (32)
14	5	4 (512)
	3	4 (512)
	1	64 (32)
15	5	1 (2048)
	3	4 (512)
	1	16 (128)
17	5	2 (1024)
	3	4 (512)
	1	16 (128)
18	5	2 (1024)
	3	2 (1024)
	1	8 (256)
20	5	2 (1024)
	3	4 (512)

	1	128 (16)
21	5	2 (1024)
	3	4 (512)
	1	32 (64)
22	5	2 (1024)
	3	2 (1024)
	1	4 (512)
23	5	2 (1024)
	3	2 (1024)
	1	8 (256)
24	5	0.5 (4096)
	3	1 (2048)
	1	4 (512)
25	5	1 (2048)
	3	2 (1024)
	1	4 (512)
26	5	1 (2048)
	3	2 (1024)
	1	16 (128)
28	5	2 (1024)
	3	2 (1024)
	1	8 (256)
29	5	1 (2048)
	3	2 (1024)
	1	4 (512)
37	5	1 (2048)
	3	2 (1024)
	1	16 (128)
40	5	2 (1024)
	3	8 (256)
	1	>64 (≤16)
43	5	2 (1024)
	3	4 (512)
	1	16 (128)
45	5	2 (1024)
	3	4 (512)
	1	8 (256)
46	5	4 (512)
	3	8 (256)
	1	64 (32)
47	5	2 (1024)
	3	2 (1024)
	1	8 (256)
49	5	1 (2048)

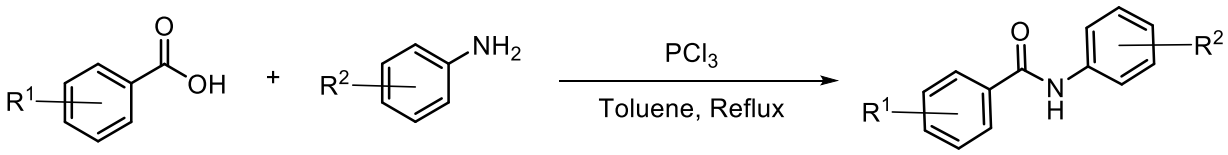
	3	2 (1024)
	1	8 (256)
50	5	4 (512)
	3	8 (256)
	1	32 (64)
51	5	1 (2048)
	3	1 (2048)
	1	4 (512)
52	5	1 (2048)
	3	2 (1024)
	1	8 (256)
54	5	2 (1024)
	3	4 (512)
	1	32 (64)
55	5	1 (2048)
	3	2 (1024)
	1	8 (256)
56	5	1 (2048)
	3	2 (1024)
	1	8 (256)
60	5	1 (2048)
	3	4 (512)
	1	16 (128)
62	5	4 (512)
	3	8 (256)
	1	64 (32)

Dose response curves for cytotoxicity assay

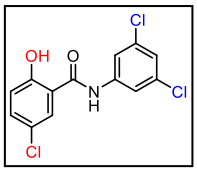




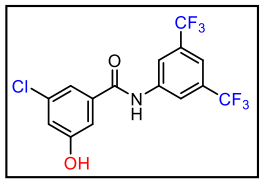
Synthetic procedures and compound characterization



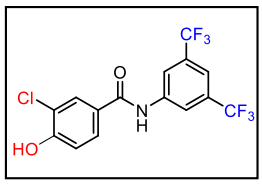
General procedure for synthesis of N-aryl-2-hydroxybenzamides: To a stirring solution of halogen substituted salicylic acid (100mg, 1 eq) was added to toluene under nitrogen atmosphere, then phosphorus trichloride (0.5 eq) was added dropwise and heated to reflux. Substituted Aniline (0.9 eq) was added in portion over 10 minutes and the reaction mixture was refluxed overnight. The reaction was cooled and checked for completion, ethyl acetate (100 mL) was added, taken in a separatory funnel and washed with 2N HCl (3x30 mL) followed by Brine (30 mL) and then Sodium bicarbonate (3x30 mL). The organic layer was washed with Brine (30 mL) and dried using anhydrous sodium sulfate, evaporated and purified via column using 1:2 to 1:1 DCM/Hexanes to obtain a white solid.



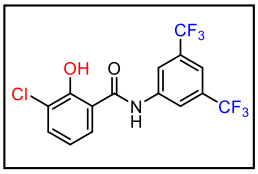
5-chloro-N-(3,5-dichlorophenyl)-2-hydroxybenzamide (**1**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **1** as a white solid (78 mg, 45%). NMR spectra match those previously reported.[1]



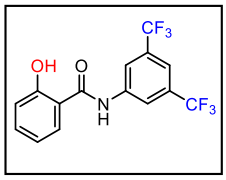
N-(3,5-bis(trifluoromethyl)phenyl)-3-chloro-5-hydroxybenzamide (3): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **3** as a white solid (52 mg, 39%). **^{1}H NMR (400 MHz, *d*$_3$-Acetonitrile):** 9.11 (s, 1H), 8.41 – 8.30 (m, 2H), 7.75 (s, 1H), 7.46 (t, *J* = 1.4, 0.7 Hz, 1H), 7.30 (t, *J* = 1.6 Hz, 1H), 7.08 (t, *J* = 2.0 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_3$-Acetonitrile):** 164.5, 157.8, 140.1, 136.6, 134.3, 131.1 (q, *J* = 33.3 Hz), 123.1 (q, *J* = 271.8 Hz), 119.8, 119.8, 118.7, 118.5, 113.1. **UV**(λ_{max} nm)**:** 265; **IR**ν_{max} (cm^{-1})**:** 3324, 1654, 1573, 914; **HRMS (ESI):** calcd for $C_{15}H_9ClF_6NO_2$ $[M+H]^+$: 384.0221, found: 384.0213.



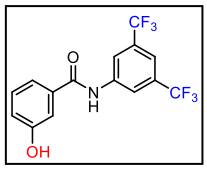
***N*-(3,5-bis(trifluoromethyl)phenyl)-3-chloro-4-hydroxybenzamide(4):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **4** as a white solid (76 mg, 14%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.11 (s, 1H), 10.66 (s, 1H), 8.50 (s, 2H), 8.09 (d, *J* = 2.3 Hz, 1H), 7.84 (dd, *J* = 8.6, 2.3 Hz, 1H), 7.80 (s, 1H), 7.11 (d, *J* = 8.5 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.6, 156.8, 141.2, 130.7 (q, *J* = 32.7 Hz), 129.7, 128.6, 125.3, 123.4 (q, *J* = 272.8 Hz), 119.8 (d, *J* = 4.2 Hz), 119.7, 116.4, 116.2 (m) . UV(λ_{max} nm): 272; IRν_{max} (cm^{-1})**:** 3174, 1643, 1118, 681; **HRMS (ESI):** calcd for $C_{15}H_9ClF_6NO_2[M+H]^+$: 384.0221, found: 384.0194.



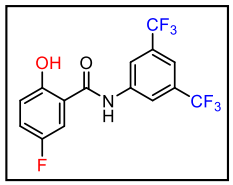
N-(3,5-bis(trifluoromethyl)phenyl)-3-chloro-2-hydroxybenzamide (5): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **5** as a white solid (76 mg, 24%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.60 (s, 1H), 8.42 (s, 2H), 7.91 (dd, *J* = 8.0, 2.2 Hz, 1H), 7.84 (d, *J* = 6.4 Hz, 1H), 7.62 (dt, *J* = 8.2, 2.1 Hz, 1H), 6.93 (t, *J* = 7.9 Hz, 1H).. **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 168.0, 156.3, 140.2, 134.1, 130.7 (q, *J* = 33.0 Hz), 127.3, 123.2 (q, *J* = 272.4 Hz), 122.0, 120.7, 118.5, 118.3, 117.4 – 116.5 (m). **UV** (λ_{max} nm)**:** 265; **IR** ν_{max} (cm^{-1})**:** 3302, 1651, 1544, 1230; **HRMS (ESI):** calcd for $C_{15}H_9ClF_6NO_2$ $[M+H]^+$: 384.0221, found: 384.0202.



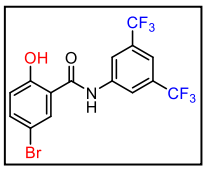
N-(3,5-bis(trifluoromethyl)phenyl)-3-hydroxybenzamide (6): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **6** as a white solid (76 mg, 34%). NMR spectra match those previously reported.[1]



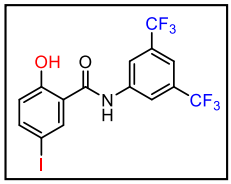
N-(3,5-bis(trifluoromethyl)phenyl)-3-hydroxybenzamide (**7**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **7** as a white solid (34 mg, 23%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 10.76 (s, 1H), 9.86 (s, 1H), 8.53 (d, *J* = 1.8 Hz, 2H), 7.81 (s, 1H), 7.43 (dt, *J* = 7.6, 1.3 Hz, 1H), 7.40 – 7.33 (m, 2H), 7.03 (ddd, *J* = 7.9, 2.4, 1.1 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 166.3, 157.5, 141.2, 135.3, 130.6 (q, *J* = 32.8 Hz), 129.7, 123.3 (d, *J* = 272.6 Hz), 119.8 (q, *J* = 3.4 Hz), 119.3, 118.3, 116.4 (q, *J* = 7.3 Hz), 114.6. **UV** (λ_{max} nm)**:** 274; **IR** ν_{max} (cm^{-1})**:** 3080, 1564, 1509, 1220; **HRMS (ESI):** calcd for $C_{14}H_{13}ClNO_3$ $[M+H]^+$: 278.0578, found: 278.0596.



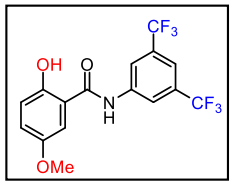
N-(3,5-bis(trifluoromethyl)phenyl)-5-fluoro-2-hydroxybenzamide (8): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **8** as a white solid (36 mg, 44%). **^{1}H NMR (400 MHz, *d*$_6$-Acetone):** 8.49 (s, 2H), 7.86 (dd, *J* = 9.5, 3.1 Hz, 1H), 7.82 (s, 1H), 7.33 (ddd, *J* = 9.2, 7.8, 3.1 Hz, 1H), 7.14 – 7.01 (m, 1H). **^{13}C NMR (100 MHz, *d*$_6$-Acetone):** 168.2, 157.8, 156.2 (d, *J* = 236.1 Hz), 141.0, 132.6 (q, *J* = 33.3 Hz), 125.7 (t, *J* = 272.7, 271.5 Hz), 122.8 (d, *J* = 23.6 Hz), 121.8 (d, *J* = 4.1 Hz), 120.3 (d, *J* = 7.7 Hz), 118.3 (p, *J* = 4.0 Hz), 116.8 (d, *J* = 6.8 Hz), 114.8 (d, *J* = 24.7 Hz). **UV**(λ_{max} nm)**:** 257; **IR**ν_{max} (cm^{-1})**:** 3252, 1648, 1544, 1110; **HRMS (ESI):** calcd for $C_{15}H_9F_7NO_2$ $[M+H]^+$: 368.0516, found: 368.0501.



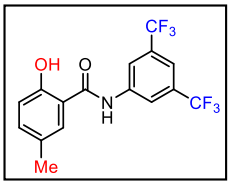
N-(3,5-bis(trifluoromethyl)phenyl)-5-bromo-2-hydroxybenzamide (**9**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **9** as a white solid (56 mg, 26%). NMR spectra match those previously reported.[2]



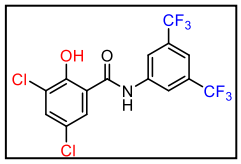
***N*-(3,5-bis(trifluoromethyl)phenyl)-2-hydroxy-5-iodobenzamide (10):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **10** as a white solid (53 mg, 13%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.46 (s, 1H), 10.59 (s, 1H), 8.08 (d, *J* = 2.3 Hz, 1H), 8.00 (d, *J* = 1.7 Hz, 2H), 7.71 (dd, *J* = 8.7, 2.3 Hz, 1H), 7.59 (t, *J* = 1.7 Hz, 1H), 6.83 (d, *J* = 8.6 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.5, 157.3, 141.8, 140.3, 137.2, 130.7 (q, *J* = 32.8 Hz), 123.3 (q, *J* = 272.8 Hz), 121.2, 120.4 (q, *J* = 4.3 Hz), 119.8, 117.1 – 116.7 (m), 81.0 . **UV**(λ_{max} nm): 264; **IR**ν_{max} (cm^{-1})**:** 3117, 1552, 1271, 1135; **HRMS (ESI):** calcd for $C_{15}H_9F_6INO_2$ $[M+H]^+$: 475.9577, found: 475.9554



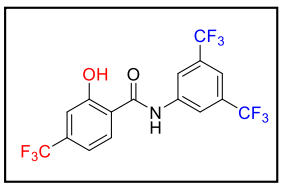
N-(3,5-bis(trifluoromethyl)phenyl)-2-hydroxy-5-methoxybenzamide (11): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **11** as a white solid (50 mg, 16%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 8.36 (s, 2H), 7.65 (s, 1H), 7.36 (d, *J* = 3.3 Hz, 1H), 6.89 (dd, *J* = 9.0, 3.3 Hz, 1H), 6.72 (d, *J* = 8.9 Hz, 1H), 3.69 (s, 3H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 167.3 , 158.7 , 149.1 , 142.7 , 130.6 (q, *J* = 32.6 Hz), 124.8 (q, *J* = 271.8 Hz), 121.1 , 119.8 , 119.7 (q, *J* = 5.1 Hz), 117.4 , 114.7 , 112.0 , 55.5. **UV**(λ_{max} nm)**:** 271; **IR**ν_{max} (cm^{-1})**:** 3256, 1662, 1551, 931; **HRMS (ESI):** calcd for $C_{13}H_9BrF_2NO_2$ $[M+H]^+$: 380.0716, found: 380.0710.



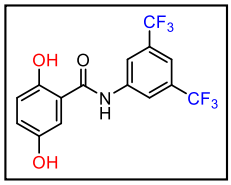
***N*-(3,5-bis(trifluoromethyl)phenyl)-hydroxy-5-methylbenzamide (12):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **12** as a white solid (66 mg, 11%). Spectral data was consistent with previous reports.[2]



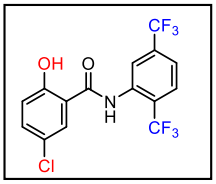
N-(3,5-bis(trifluoromethyl)phenyl)-3,5-dichloro-2-hydroxybenzamide (14): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **14** as a white solid (86 mg, 18%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):**.10 (s, 1H), 8.41 (t, *J* = 2.0 Hz, 2H), 8.01 (d, *J* = 2.5 Hz, 1H), 7.91 (s, 1H), 7.85 (d, *J* = 2.5 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 166.6, 153.9, 139.8, 133.2, 130.7 (q, *J* = 32.9 Hz), 126.7, 123.2 (q, *J* = 272.8 Hz), 122.9, 122.6, 120.9 (q, *J* = 4.4 Hz), 119.7,117.5 (q, *J* = 4.1 Hz). **UV**(λ_{max} nm)**:** 264; **IR**ν_{max} (cm^{-1})**:** 3291, 1641, 1543, 1279, 1118; **HRMS (ESI):** calcd for $C_{15}H_8Cl_2F_6NO_2$ $[M+H]^+$: 417.9831, found: 417.9837.



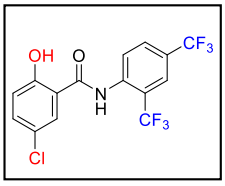
***N*-(3,5-bis(trifluoromethyl)phenyl)-2-hydroxy-4-(trifluoromethyl)benzamide (15):**The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **15** as a white solid (60 mg, 25%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.54 (s, 1H),10.98 (s, 1H), 8.45 (s, 2H), 7.92 (d, *J* = 8.0 Hz, 1H), 7.85 (s, 1H), 7.31 (d, *J* = 7.9 Hz, 2H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.4, 156.8, 140.4, 132.7 (q, *J* = 31.7 Hz), 130.9, 130.8 (q, *J* = 32.8 Hz), 124.2, 123.6 (q, *J* = 272.8 Hz), 123.3 (q, *J* = 272.8 Hz) 120.0 (d, *J* = 4.3 Hz), 116.9 (m), 115.4 (q, *J* = 3.7 Hz), 113.4 (q, *J* = 4.0 Hz). **UV**(λ_{max} nm): 268; **IR**ν_{max} (cm^{-1})**:** 3221, 1645, 1129, 700; **HRMS (ESI):** calcd for $C_{16}H_9F_9NO_2$$[M+H]^+$: 418.0484, found: 418.0506.



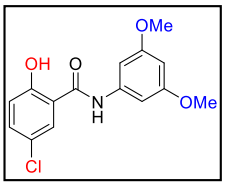
N-(3,5-bis(trifluoromethyl)phenyl)-2,5-dihydroxybenzamide (16): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **16** as a white solid (70 mg, 26%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.04 (s, 1H), 8.41 (s, 1H), 7.82 (s, 1H), 7.17 (t, *J* = 8.2 Hz, 1H), 6.43 (d, *J* = 8.2 Hz, 2H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 167.8, 158.3, 140.3, 132.9, 130.8 (q, *J* = 32.8 Hz), 123.3 (q, *J* = 272.8 Hz), 120.4, 120.4, 116.8, (q, *J* = 4.2 Hz), 116.7, 107.5, 107.1. **UV**(λ_{max} nm)**:** 275; **IR**ν_{max} (cm^{-1})**:** 3325, 1644, 1445, 974. **HRMS (ESI):** calcd for $C_{15}H_{10}F_6NO_3$ $[M+H]^+$: 366.0559, found: 366.0541.



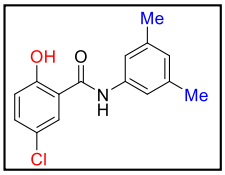
N-(2,5-bis(trifluoromethyl)phenyl)-5-chloro-2-hydroxybenzamide (17): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **17** as a white solid (47 mg, 35%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.39 (s, 1H), 11.09 (s, 1H), 8.74 (d, *J* = 2.0 Hz, 1H), 8.02 (d, *J* = 8.3 Hz, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.75 (d, *J* = 8.2 Hz, 1H), 7.53 (dd, *J* = 8.8, 2.8 Hz, 1H), 7.07 (d, *J* = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 163.7, 156.0, 136.8, 134.3, 133.6 (q, *J* = 32.4 Hz), 130.4, 128.6 – 128.1 (m), 124.0, 123.7 (q, *J* = 273.1 Hz), 123.6 (q, *J* = 273.1 Hz), 122.1– 121.7 (m), 119.5, 119.5. **UV**(λ_{max} nm)**:** 264; **IR**ν_{max} (cm^{-1})**:** 3291, 1640, 1542, 1120; **HRMS (ESI):** calcd for $C_{15}H_9ClF_6NO_2$ $[M+H]^+$: 384.0220, found: 384.0209.



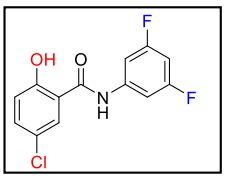
***N*-(2,4-bis(trifluoromethyl)phenyl)-5-chloro-2-hydroxybenzamide (18):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **18** as a white solid (78 mg, 14%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.43 (s, 1H), 11.18 (s, 1H), 8.64 (d, *J* = 8.8 Hz, 1H), 8.14 (d, *J* = 8.8 Hz, 1H), 8.07 (s, 1H), 7.97 (d, *J* = 2.8 Hz, 1H), 7.54 (d, *J* = 8.7 Hz, 1H), 7.07 (d, *J* = 8.7 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 162.9, 155.4, 139.2, 134.0, 130.6 (q, *J* = 3.7 Hz), 130.1, 125.1, 124.7 (q, *J* = 33.3 Hz), 123.7, 123.5 (m) 123.48 (q, *J* = 272.0 Hz), 123.15 (q, *J* = 273.4 Hz), 119.67 (q, *J* = 30.6 Hz), 119.21, 119.12. UV (λ_{max} nm):294; IRν_{max} (cm^{-1})**:** 3221, 1645, 1118, 655; **HRMS (ESI):** calcd for $C_{15}H_9ClF_6NO_2$ $[M+H]^+$: 384.0221, found: 384.0249.



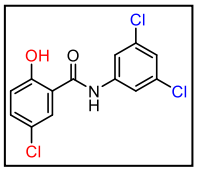
5-chloro-*N*-(3,5-dimethoxyphenyl)-2-hydroxybenzamide (19): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **19** as a white solid (37 mg, 17%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 10.46 (s, 1H), 7.90 (d, *J* = 2.7 Hz, 1H), 7.45 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.03 – 6.94 (m, 3H), 6.30 (t, *J* = 2.2 Hz, 1H), 3.74 (s, 6H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.9, 160.5, 157.0, 139.9, 133.0, 128.5, 122.5, 119.9, 119.2, 98.9, 96.3, 55.2 . **UV**(λ_{max} nm): 280; **IR**ν_{max} (cm^{-1})**:** 2939, 1601, 1153, 824; **HRMS (ESI):** calcd for $C_{15}H_{15}ClNO_4$$[M+H]^+$: 308.0684, found: 308.0691.



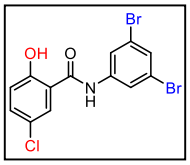
5-chloro-*N*-(3,5-dimethylphenyl)-2-hydroxybenzamide (20): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **20** as a white solid (81 mg, 42%). Spectral data was consistent with previous reports.[1]



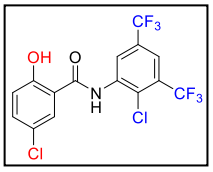
***N*-(3,5-difluorophenyl)-5-chloro-2-hydroxybenzamide (21):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **21** as a white solid (138 mg, 70%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.45 (s, 1H), 10.61 (s, 1H), 7.81 (d, *J* = 2.7 Hz, 1H), 7.55 – 7.43 (m, 3H), 7.06 – 6.95 (m, 2H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 162.4 (dd, *J* = 243.2, 15.3 Hz), 156.0, 140.8 (t, *J* = 13.8 Hz), 133.1, 128.7, 122.8, 120.6, 119.0, 103.3 (dd, *J* = 21.4, 9.4 Hz), 99.2 (t, *J* = 26.1 Hz) . **UV**(λ_{max} nm)**:** 242; **IR**ν_{max} (cm^{-1})**:** 3100, 1613, 1118, 652; **HRMS (ESI):** calcd for $C_{13}H_9ClF_2NO_2$ $[M+H]^+$:284.0284, found: 284.0276.



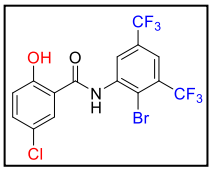
5-chloro-N-(3,5-dichlorophenyl)-2-hydroxybenzamide (**22**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **22** as a white solid (56 mg, 28%). Spectral data was consistent with previous reports.[2]



5-chloro-N-(3,5-dibromophenyl)-2-hydroxybenzamide (23): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **23** as a white solid (81 mg, 42%). Spectral data was consistent with previous reports. **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.41 (br s, 1H), 10.72 (br s, 1H), 7.92 – 10.68 (m, 3H), 7.46 (dd, *J* = 8.7, 2.8 Hz, 1H), 7.37 (d, *J* = 2.5 Hz, 1H), 7.02 (dd, *J* = 8.8, 3.3 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 156.4, 156.3, 140.9, 133.1, 128.6, 122.8, 122.3, 121.8, 119.0. **UV**(λ_{max} nm)**:** 266; **IR**ν_{max} (cm^{-1})**:** 3168, 1636, 1580, 1420; **HRMS (ESI):** calcd for $C_{13}H_9Br_2ClNO_2$ $[M-H]^-$:401.8537, found: 401.8529.

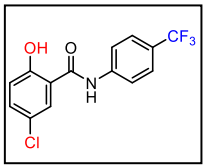


***N*-(2-chloro-3,5-bis(trifluoromethyl)phenyl)-5-chloro-2-hydroxybenzamide (24):** The title compound was following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **24** as a white solid (160 mg, 7%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.51 (s, 1H), 11.36 (s, 1H), 9.14 (d, J = 2.2 Hz, 1H), 7.98 (dd, J = 8.0, 2.5 Hz, 2H), 7.56 (dd, J = 8.8, 2.8 Hz, 1H), 7.11 (d, J = 8.8 Hz, 1H) . 13C NMR (101 MHz, Methanol-d4) δ 164.9, 156.5, 139.9, 135.1, 131.8, 130.9 (q, J = 34.0 Hz), 130.8 (q, J = 32.1 Hz), 129.9, 129.2, 126.4, 124.5 (q, J = 271.7 Hz), 123.7 (q, J = 273.0 Hz), 123.0 (q, J = 3.9 Hz), 120.69, 119.56. **UV**(λ_{max} nm)**:** 216; **IR**ν_{max} (cm^{-1})**:** 3297, 3183, 1642, 1132; **HRMS (ESI):** calcd for $C_{15}H_8Cl_2F_6NO_2$ $[M+H]^+$: 417.9831, found: 417.9830.

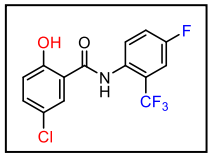


***N*-(2-bromo-3,5-bis(trifluoromethyl)phenyl)-5-chloro-2-hydroxybenzamide (25):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **25** as a white solid (33 mg, 10%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.45 (s, 1H), 11.25 (s, 1H), 9.02 (d, *J* = 2.2 Hz, 1H), 7.95 (dd, *J* = 21.9, 2.5 Hz, 2H), 7.54 (dd, *J* = 8.8, 2.9 Hz, 1H), 7.11 (d, *J* = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 163.2, 155.6, 139.9, 134.0, 130.8 (q, *J* = 31.4 Hz), 130.0, 129.1 (q, *J* = 33.3 Hz), 123.7, 123.1 (q, *J* = 272.87 Hz), 122.9 (qz, *J* = 3.8 Hz), 122.3 (q, *J* = 274.15 Hz), 119.2 (q, *J* = 3.3 Hz), 116.4. **UV**(λ_{max} nm)**:**

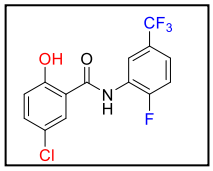
270; **IR**ν_{max} (cm^{-1})**:** 3240, 3191, 3117, 3094, 2461, 1672; **HRMS (ESI):** calcd for $C_{15}H_8BrClF_6NO_2$ $[M+H]^+$: 461.9326, found: 461.9307.



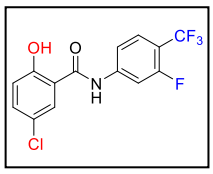
5-chloro-2-hydroxy-N-(4-(trifluoromethyl)phenyl)benzamide (**26**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **26** as a white solid (81 mg, 40%). Spectral data was consistent with previous reports.[3]



5-chloro-N-(4-fluoro-2-(trifluoromethyl)phenyl)-2-hydroxybenzamide (27): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **27** as a white solid (56 mg, 41%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 10.82 (s, 1H), 8.15 (dd, *J* = 9.0, 5.1 Hz, 1H), 7.96 (d, *J* = 2.8 Hz, 1H), 7.67 – 7.55 (m, 2H), 7.47 (dd, *J* = 8.8, 2.8 Hz, 1H), 7.04 (d, *J* = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.1, 159.01 (d, *J* = 244.7 Hz), 156.8, 134.0, 132.0, 130.0, 129.5 (d, *J* = 8.1 Hz), 123.5 (qd, *J* = 30.5, 8.1 Hz), 123.5, 123.3 (qd, *J* = 273.5, 2.6 Hz), 120.5 (d, *J* = 21.9 Hz), 119.6, 119.3,114.0 (dq, *J* = 26.5, 5.0 Hz). **UV**(λ_{max} nm)**:**264; **IR**ν_{max} (cm^{-1})**:** 3292, 1638, 1542, 1278, 1114; **HRMS (ESI):** calcd for C14H9ClF4NO2 $[M+H]^+$: 334.0264, found: 334.0252.



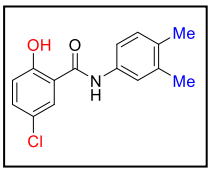
***N*-(2-fluoro-5-(trifluoromethyl)phenyl)-5-chloro-2-hydroxybenzamide (28):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **28** as a white solid (41 mg, 18%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.28 (s, 1H), 10.90 (d, J = 2.6 Hz, 1H), 8.70 (d, J = 7.0 Hz, 1H), 7.94 (d, J = 2.8 Hz, 1H), 7.58 (d, J = 7.8 Hz, 2H), 7.51 (dd, J = 8.7, 2.8 Hz, 1H), 7.06 (d, J = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 163.2, 155.5, 154.7 (d, J = 249.6 Hz), 133.7, 129.7, 127.2 (d, J = 11.5 Hz), 125.7 (d, J = 3.2 Hz), 125.4 (d, J = 3.5 Hz), 123.8 (q, J = 272.3 Hz), 123.6, 122.3 (q, J = 5.0 Hz), 119.5, 119.2, 116.6 (d, J = 20.9 Hz). **UV**(λ_{max} nm)**:** 216; **IR**ν_{max} (cm^{-1})**:** 3270, 3075, 2920, 2850,1670; **HRMS (ESI):** calcd for $C_{14}H_9ClF_4NO_2$ $[M+H]^+$: 334.0252, found: 334.0234.



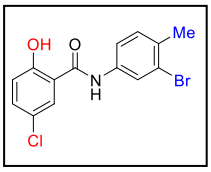
5-chloro-N-(3-fluoro-4-(trifluoromethyl)phenyl)-2-hydroxybenzamide (29): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **29** as a white solid (21 mg, 9%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.44 (s, 1H), 10.86 – 10.81 (m, 1H), 7.96 (d, *J* = 13.4 Hz, 1H), 7.79 (dd, *J* = 15.3, 5.8 Hz, 2H), 7.67 (d, *J* = 8.8 Hz, 1H), 7.48 (d, *J* = 8.8 Hz, 1H), 7.04 (d, *J* = 8.8 Hz, 1H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 159.1 (d, *J* = 249.5 Hz), 155.9, 144.2 (d, *J* = 11.3 Hz), 133.1, 128.8, 127.9 (qd, *J* = 6.8, 4.5 Hz),122.9, 122.8 (q, *J* = 271.0 Hz), 120.8, 119.0, 115.9 (d, *J* = 3.1 Hz), 111.3 (dd, *J* = 32.7, 12.5 Hz), 107.8 (d, *J* = 25.4 Hz). **UV**(λ_{max} nm)**:** 268; **IR**ν_{max} (cm^{-1})**:** 2924, 1606, 1122, 695; **HRMS (ESI):** calcd for $C_{14}H_9ClF_4NO_2$ $[M+H]^+$:334.0252, found: 334.0232.

5-chloro-2-hydroxy-N-(4-methyl-3-(trifluoromethyl)phenyl)benzamide (30): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **30** as a white solid (138 mg, 70%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):**

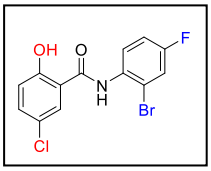
11.66 (s, 1H), 10.55 (s, 1H), 8.12 (d, J = 2.4 Hz, 1H), 7.92 (d, J = 2.7 Hz, 1H), 7.88 – 7.81 (m, 1H), 7.51 – 7.41 (m, 2H), 7.02 (d, J = 8.8 Hz, 1H), 2.42 (s, 3H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.3, 156.8, 136.4, 133.2, 132.7, 131.4 (q, J = 1.6 Hz), 128.4, 127.5 (q, J = 29.3 Hz), 124.4 (q, J = 276.98 Hz), 124.1, 122.8, 119.7, 119.1, 117.7 (q, J = 6.0 Hz), 18.3 (q, J = 2.1 Hz). **UV**(λ_{max} nm): 248; **IR**ν_{max} (cm^{-1})**:** 3145, 1628, 1108, 819; **HRMS (ESI):** calcd for $C_{15}H_{12}ClF_3NO_2$ $[M+H]^+$: 330.0503, found: 330.0504.



5-chloro-*N*-(3,4-dimethylphenyl)-2-hydroxybenzamide (31): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **31** as a white solid (49 mg, 26%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.00 (s, 1H), 10.29 (s, 1H), 7.99 (d, J = 2.7 Hz, 1H), 7.54 – 7.35 (m, 3H), 7.12 (d, J = 8.1 Hz, 1H), 7.01 (d, J = 8.8 Hz, 1H), 2.22 (s, 3H), 2.20 (s, 3H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 157.2, 136.5, 135.6, 133.1, 132.3, 129.7, 128.3, 122.7, 122.1, 119.2, 119.2, 118.4, 19.6, 18.9. **UV**(λ_{max} nm): 248; **IR**ν_{max} (cm^{-1})**:** 3091, 1627, 1227, 677; **HRMS (ESI):** calcd for $C_{15}H_{15}ClNO_2$ $[M+H]^+$: 276.0786, found: 276.0779.

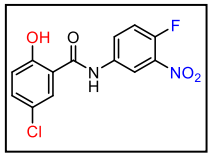


***N*-(3-bromo-4-methylphenyl)-5-chloro-2-hydroxybenzamide (32):**The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **32** as a white solid (143 mg, 60%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 10.45 (s, 1H), 8.06 (d, J = 2.1 Hz, 1H), 7.91 (d, J = 2.7 Hz, 1H), 7.57 (dd, J = 8.3, 2.2 Hz, 1H), 7.46 (dd, J = 8.8, 2.7 Hz, 1H), 7.35 (d, J = 8.3 Hz, 1H), 7.01 (d, J = 8.8 Hz, 1H), 2.32 (s, 3H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 156.8, 137.3, 133.1, 132.9, 131.0, 128.4, 123.8, 123.7, 122.7, 119.9, 119.7, 119.1, 21.8. **UV**(λ_{max} nm)**:** 270; **IR**ν_{max} (cm^{-1})**:** 2980, 1624, 1223, 678; **HRMS (ESI):** calcd for $C_{14}H_{12}BrClNO_2[M+H]^+$:339.9734, found: 339.9717.

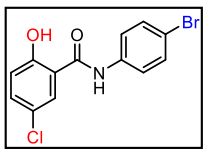


***N*-(2-bromo-4-fluorophenyl)-5-chloro-2-hydroxybenzamide (33):**The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **33** as a white solid (83 mg, 35%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.25 (s, 1H), 10.70 (s, 1H), 8.23 (dd, J = 9.1, 5.8 Hz, 1H), 7.99 (d, J = 2.7 Hz, 1H), 7.72 (dd, J = 8.3, 2.9 Hz, 1H), 7.51 (dd, J = 8.8, 2.8 Hz, 1H), 7.34 (ddd, J = 9.1, 8.2, 2.9 Hz, 1H), 7.07 (d, J = 8.8 Hz, 1H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 163.3, 158.5 (d, J = 246.1 Hz), 155.9, 133.6, 133.0 (d, J = 3.2 Hz), 129.5, 125.5 (d, J = 8.4 Hz), 123.4, 119.8, 119.5, 119.1 (d, J = 5.1 Hz), 115.9 (d, J = 9.9 Hz), 115.3 (d, J = 21.8 Hz). **UV**(λ_{max} nm): 232; **IR**ν_{max} (cm^{-1})**:** 3163, 1634, 829, 649; **HRMS (ESI):** calcd for $C_{13}H_9BrClFNO_2$ $[M+H]^+$: 343.9484, found: 343.9460.

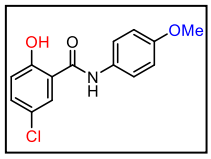
***N*-(2-bromo-6-fluorophenyl)-5-chloro-2-hydroxybenzamide (34):**The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **34** as a white solid (31 mg, 6.2%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.00 (s, 1H), 10.36 (s, 1H), 8.03 (s, 1H), 7.61 (d, J = 7.6 Hz, 1H), 7.54 (d, J = 8.5 Hz, 1H), 7.39 (dq, J = 15.9, 7.9, 7.4 Hz, 2H), 7.05 (d, J = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.3, 158.3 (d, J = 251.1 Hz), 157.6, 134.0, 130.0 (d, J = 8.8 Hz), 128.5, 128.4 (d, J = 3.4 Hz), 124.5 (d, J = 15.6 Hz), 123.1, 122.9, 119.5, 117.4, 115.7 (d, J = 20.9 Hz) . **UV**(λ_{max} nm)**:** 238; **IR**ν_{max} (cm^{-1})**:** 3193, 1631, 1520, 787; **HRMS (ESI):** calcd for $C_{13}H_9BrClFNO_2$ $[M+H]^+$: 343.9484, found: 343.9467



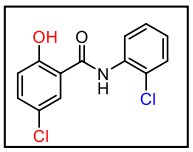
5-chloro-N-(4-fluoro-3-nitrophenyl)-2-hydroxybenzamide (35): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **33** as a white solid (67 mg, 45%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.51 (s, 1H), 10.76 (s, 1H), 8.66 (dd, *J* = 6.9, 2.7 Hz, 1H), 8.05 (dt, *J* = 9.2, 3.3 Hz, 1H), 7.87 (d, *J* = 2.7 Hz, 1H), 7.62 (dd, *J* = 11.2, 9.1 Hz, 1H), 7.48 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.03 (d, *J* = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.2, 156.4, 150.9 (d, *J* = 259.3 Hz), 136.4 (d, *J* = 7.6 Hz), 135.0 (d, *J* = 3.4 Hz), 133.1, 128.5, 128.0 (d, *J* = 8.3 Hz), 122.7, 120.2, 119.1, 118.9 (d, *J* = 21.8 Hz), 117.1 (d, *J* = 3.0 Hz). **UV**(λ_{max} nm)**:** 254 ; **IR**ν_{max} (cm^{-1})**:** 3291, 1620, 1334, 932; **HRMS (ESI):** calcd for $C_{13}H_9ClFN_2O_4$ $[M+H]^+$: 311.0229, found: 311.0241.



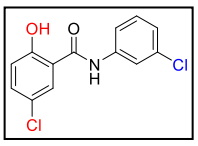
N-(4-bromophenyl)-5-chloro-2-hydroxybenzamide (**37**): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **37** as a white solid (71 mg, 52%). Spectral data was consistent with previous reports.[4]



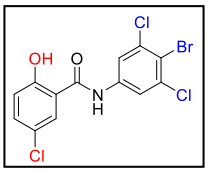
5-chloro-2-hydroxy-N-(4-methoxyphenyl)benzamide (38): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **38** as a white solid (81 mg, 42%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.03 (s, 1H), 10.33 (s, 1H), 7.99 (d, *J* = 2.7 Hz, 1H), 7.65 – 7.55 (m, 2H), 7.47 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.00 (d, *J* = 8.8 Hz, 1H), 6.95 (d, *J* = 9.0 Hz, 2H), 3.75 (s, 3H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 157.4, 156.1, 133.1, 130.8, 128.1, 122.7, 122.6, 119.2, 118.9, 113.9, 55.2. **UV**(λ_{max} nm)**:** 267; **IR**ν_{max} (cm^{-1})**:** 3080, 1564, 1509, 1220; **HRMS (ESI):** calcd for $C_{14}H_{13}ClNO_3$ $[M+H]^+$: 278.0578, found: 278.0578.



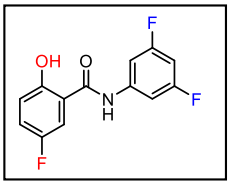
5-chloro-*N*-(2-chlorophenyl)-2-hydroxybenzamide (39):The title compound was synthesized) following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **39** as a white solid (110 mg, 56%). Spectral data was consistent with previous reports.[3]



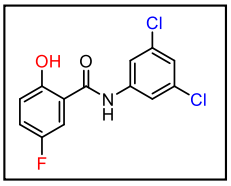
5-chloro-*N*-(3-chlorophenyl)-2-hydroxybenzamide (40):The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **40** as a white solid (61 mg, 41%). Spectral data was consistent with previous reports.[3]



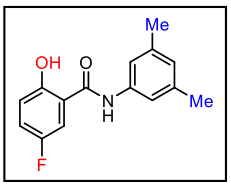
***N*-(4-bromo-3,5-dichlorophenyl)-5-chloro-2-hydroxybenzamide (41):** The title compound was following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **41** as a white solid (53 mg, 19%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.43 (s, 1H), 10.60 (s, 1H), 8.03 (s, 2H), 7.81 (d, *J* = 2.7 Hz, 1H), 7.48 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.03 (d, *J* = 8.8 Hz, 1H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 156.0, 139.1, 135.1, 133.2, 128.7, 122.8, 120.5, 120.2, 119.0, 116.1 . **UV**(λ_{max} nm)**:** 248; **IR**ν_{max} (cm^{-1})**:** 3149, 1626, 1208, 655; **HRMS (ESI):** calcd for $C_{13}H_8BrCl_3NO_2$ $[M+H]^+$: 393.8799, found: 393.8808.



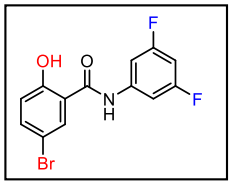
N-(3,5-difluorophenyl)-5-fluoro-2-hydroxybenzamide (42): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **42** as a white solid (53 mg, 29%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.30 (s, 1H), 10.62 (s, 1H), 7.62 (dd, *J* = 9.4, 3.2 Hz, 1H), 7.50 (ddd, *J* = 14.5, 9.5, 2.1 Hz, 2H), 7.31 (td, *J* = 8.5, 3.2 Hz, 1H), 7.02 (t, *J* = 4.7 Hz, 1H), 7.01 – 6.95 (m, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0 (d, *J* = 2.2 Hz), 162.4 (dd, *J* = 243.1, 15.2 Hz), 154.9 (d, *J* = 235.2 Hz), 153.5, 140.8 (t, *J* = 13.8 Hz), 120.5 (d, *J* = 23.2 Hz), 119.5 (d, *J* = 6.7 Hz), 118.5 (d, *J* = 7.5 Hz), 115.1 (d, *J* = 24.5 Hz), 103.3 (dd, *J* = 20.2, 8.0 Hz), 99.2 (t, *J* = 26.1 Hz). **UV**(λ_{max} nm)**:** 267; **IR**ν_{max} (cm^{-1})**:** 3321, 1653, 1571, 971; **HRMS (ESI):** calcd for $C_{13}H_9F_3NO_2$ $[M+H]^+$: 268.0580, found: 268.0577.



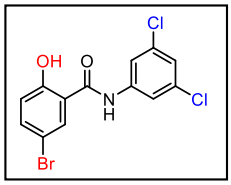
N-(3,5-dichlorophenyl)-5-fluoro-2-hydroxybenzamide (43): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **43** as a white solid (63 mg, 39%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.3 (s, 1H), 10.6 (s, 1H), 7.8 (d, *J* = 1.9 Hz, 2H), 7.6 (dd, *J* = 9.4, 3.2 Hz, 1H), 7.4 (t, *J* = 1.9 Hz, 1H), 7.3 (ddd, *J* = 9.0, 8.0, 3.2 Hz, 1H), 7.0 (dd, *J* = 9.0, 4.6 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.5 (d, *J* = 2.2 Hz), 155.3 (d, *J* = 234.8 Hz), 154.2, 141.1, 134.5, 123.7, 121.0 (d, *J* = 23.3 Hz), 119.7 (d, *J* = 6.8 Hz), 119.0, 119.0 (d, *J* = 7.6 Hz), 115.5 (d, *J* = 24.5 Hz). **UV**(λ_{max} nm)**:** 264; **IR**ν_{max} (cm^{-1})**:** 3232, 1648, 1547, 912; **HRMS (ESI):** calcd for $C_{13}H_9Cl_2FNO_2$ $[M+H]^+$: 299.9989, found: 299.9977.



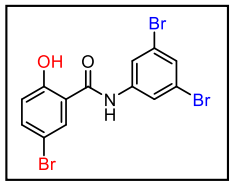
N-(3,5-dimethylphenyl)-5-fluoro-2-hydroxybenzamide (44): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **44** as a white solid (58 mg, 43%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.7 (s, 1H), 10.3 (s, 1H), 7.8 (dd, *J* = 9.8, 3.2 Hz, 1H), 7.3 (d, *J* = 1.4 Hz, 2H), 7.3 – 7.3 (m, 1H), 7.0 (dd, *J* = 9.0, 4.6 Hz, 1H), 6.8 (s, 1H), 2.3 (s, 6H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.3 (d, *J* = 2.5 Hz), 155.3 (d, *J* = 235.0 Hz), 154.9, 138.3 (d, *J* = 2.8 Hz), 126.3, 121.0, 120.8, 119.1 (d, *J* = 7.6 Hz), 119.0, 118.9 (d, *J* = 6.9 Hz), 115.2 (d, *J* = 24.4 Hz), 21.5. **UV**(λ_{max} nm)**:** 271; **IR**ν_{max} (cm^{-1})**:** 3086, 1634, 1578, 912; **HRMS (ESI):** calcd for $C_{15}H_{15}FNO_2$ $[M+H]^+$: 260.1081, found: 260.1064.



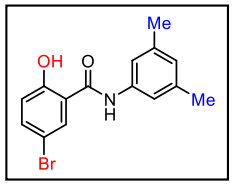
5-bromo-N-(3,5-difluorophenyl)-2-hydroxybenzamide (45): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **45** as a white solid (83 mg, 49%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.49 (s, 1H), 10.66 (s, 1H), 7.93 (d, *J* = 2.6 Hz, 1H), 7.58 (dd, *J* = 8.8, 2.6 Hz, 1H), 7.50 (qd, *J* = 6.7, 3.3 Hz, 2H), 7.08 – 6.93 (m, 2H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.8 (d, *J* = 13.0 Hz), 162.4 (dd, *J* = 243.1, 15.3 Hz), 156.5, 140.8 (d, *J* = 12.7 Hz), 135.8, 131.5, 121.1, 119.4, 110.1 (d, *J* = 2.8 Hz), 103.2 (dd, *J* = 29.3, 8.4 Hz), 99.2 (t, *J* = 26.1 Hz). **UV**(λ_{max} nm)**:** 260; **IR**ν_{max} (cm^{-1})**:** 3192, 1644, 1552, 1117; **HRMS (ESI):** calcd for $C_{13}H_9BrF_2NO_2$ $[M+H]^+$: 327.9779, found: 327.9760.



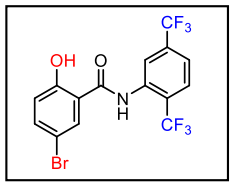
5-bromo-N-(3,5-dichlorophenyl)-2-hydroxybenzamide (46): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **46** as a white solid (53 mg, 43%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.48 (s, 1H), 10.67 (s, 1H), 7.93 (d, *J* = 2.6 Hz, 1H), 7.83 (d, *J* = 1.9 Hz, 2H), 7.57 (dd, *J* = 8.8, 2.6 Hz, 1H), 7.36 (t, *J* = 1.9 Hz, 1H), 6.96 (d, *J* = 8.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.9, 156.6, 140.7, 140.5, 135.9, 134.1, 131.4, 123.3, 119.4, 118.6, 118.5, 110.1. **UV**(λ_{max} nm)**:** 263; **IR**ν_{max} (cm^{-1})**:** 3131, 1621, 1476, 974; **HRMS (ESI):** calcd for $C_{13}H_9BrCl_2NO_2$ $[M+H]^+$: 359.9188, found: 359.9180.



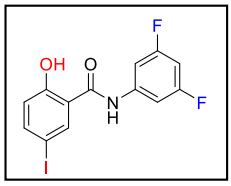
5-bromo-N-(3,5-dibromophenyl)-2-hydroxybenzamide (47): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **47** as a white solid (93 mg, 61%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 10.63 (s, 1H), 7.99 (d, *J* = 1.8 Hz, 2H), 7.95 (d, *J* = 2.5 Hz, 1H), 7.59 – 7.53 (m, 2H), 6.96 (d, *J* = 8.7 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 157.0, 141.0, 135.9, 131.4, 128.5, 122.3, 121.8, 120.6, 119.5, 110.0. **UV**(λ_{max} nm)**:** 273; **IR**ν_{max} (cm^{-1})**:** 3275, 1644, 1542, 92; **HRMS (ESI):** calcd for $C_{13}H_9Br_3NO_2$ $[M+H]^+$: 447.8178, found: 447.8187.



5-bromo-N-(3,5-dimethylphenyl)-2-hydroxybenzamide (48): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **48** as a white solid (51 mg, 34%). **1H NMR (400 MHz, *d6*-DMSO):** 12.0 (s, 1H), 10.3 (s, 1H), 8.1 (d, *J* = 2.5 Hz, 1H), 7.6 (dd, *J* = 8.7, 2.5 Hz, 1H), 7.3 (d, *J* = 1.7 Hz, 2H), 7.0 (d, *J* = 8.8 Hz, 1H), 6.8 (s, 1H), 2.3 (s, 6H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.2, 157.9, 138.3, 138.3, 136.3, 131.7, 126.3, 120.4, 120.0, 119.0, 110.5, 21.5. **UV**(λ_{max} nm)**:** 261; **IR**ν_{max} (cm^{-1})**:** 3345, 1649, 1574, 1117. **HRMS (ESI):** calcd for $C_{15}H_{15}BrNO_2$ $[M+H]^+$: 320.0281, found: 320.0260.

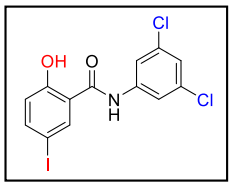


5-bromo-N-(2,5-bis(trifluoromethyl)phenyl)-2-hydroxybenzamide (49): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **49** as a white solid (53 mg, 29%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.19 (s, 1H), 8.74 (s, 1H), 8.10 (d, *J* = 2.7 Hz, 1H), 8.02 (d, *J* = 8.3 Hz, 1H), 7.75 (d, *J* = 8.7 Hz, 1H), 7.63 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.02 (d, *J* = 8.7 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 163.7, 156.0, 136.8, 134.3, 133.6 (q, *J* = 32.4 Hz), 130.4, 128.6 – 128.1 (m), 124.0, 123.7 (q, *J* = 273.1 Hz), 123.6 (q, *J* = 273.1 Hz), 122.1 – 121.7 (m), 119.5, 119.5. **UV**(λ_{max} nm)**:** 261;**IR**ν_{max} (cm^{-1})**:** 3324, 1658, 1544, 970; **HRMS (ESI):** calcd for $C_{15}H_9BrF_6NO_2$ $[M+H]^+$: 427.9715, found: 427.9715.

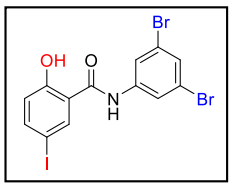


***N*-(3,5-difluorophenyl)-2-hydroxy-5-iodobenzamide (50):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **50** as a white solid (15 mg, 9%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.46 (s, 1H), 10.62 (s, 1H), 8.06 (d, *J* = 2.3 Hz, 1H), 7.71 (dd, *J* = 8.6, 2.3 Hz, 1H), 7.54 – 7.43 (m, 2H), 7.00 (dd, *J* = 10.6, 8.2 Hz, 1H), 6.84 (d, *J* = 8.6 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0 , 162.5 (dd,

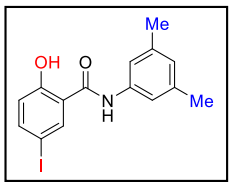
J = 243.1, 15.2 Hz), 157.1, 141.6, 140.9 (t, *J* = 13.9 Hz), 137.3, 121.7, 119.8, 103.4 (dd, *J* = 19.3, 8.6 Hz), 99.3 (t, *J* = 26.3 Hz), 81.1. **UV** (λ_{max} nm)**:** 266; **IR**ν_{max} (cm^{-1})**:** 3088, 1616, 1121, 695; **HRMS (ESI):** calcd for $C_{13}H_9F_2INO_2[M+H]^+$: 375.9641, found: 375.9616.



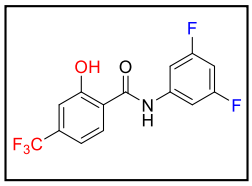
***N*-(3,5-dichlorophenyl)-2-hydroxy-5-iodobenzamide (51):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **51** as a white solid (200 mg, 13%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.46 (s, 1H), 10.64 (s, 1H), 8.07 (d, J = 2.3 Hz, 1H), 7.82 (d, J = 2.0 Hz, 2H), 7.70 (dd, J = 8.6, 2.3 Hz, 1H), 7.36 (d, J = 2.0 Hz, 1H), 6.83 (d, J = 8.7 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 157.4, 141.6, 140.7, 137.2, 134.0, 123.2, 121.3, 119.8, 118.6, 80.8. **UV**(λ_{max} nm)**:** 224; **IR**ν_{max} (cm^{-1})**:** 3310, 3075, 2920, 2850, 1628, 667; **HRMS (ESI):** calcd for $C_{13}H_9Cl_2INO_2$ $[M+H]^+$: 407.9050, found: 407.9024.



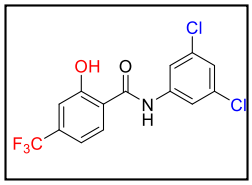
***N*-(3,5-dibromophenyl)-2-hydroxy-5-iodobenzamide (52):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **52** as a white solid (53 mg, 13%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.46 (s, 1H), 10.59 (s, 1H), 8.08 (d, *J* = 2.3 Hz, 1H), 8.00 (d, *J* = 1.7 Hz, 2H), 7.71 (dd, *J* = 8.7, 2.3 Hz, 1H), 7.59 (t, *J* = 1.7 Hz, 1H), 6.83 (d, *J* = 8.6 Hz, 1H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.1, 158.6, 141.5, 141.2, 137.2, 128.4, 122.3, 121.7, 120.3, 79.9. **UV**(λ_{max} nm)**:** 236; **IR**ν_{max} (cm^{-1})**:** 3079, 1636, 1109, 664; **HRMS (ESI):** calcd for $C_{13}H_9Br_2INO_2[M+H]^+$: 495.8039, found: 495.8059.



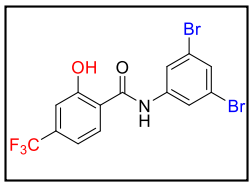
***N*-(3,5-dimethylphenyl)-2-hydroxy-5-iodobenzamide (53):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **53** as a white solid (67 mg, 40%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.93 (s, 1H), 10.27 (s, 1H), 8.22 (d, *J* = 2.2 Hz, 1H), 7.70 (dd, *J* = 8.6, 2.2 Hz, 1H), 7.32 (s, 2H), 6.85 – 6.77 (m, 2H), 2.27 (s, 6H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.9, 158.1, 141.6, 137.9, 137.8, 137.0, 125.9, 120.4, 120.0, 118.6, 81.0, 21.1. **UV**(λ_{max} nm)**:** 238; **IR**ν_{max} (cm^{-1})**:** 2915, 1618, 1285, 836; **HRMS (ESI):** calcd for $C_{15}H_{15}INO_2[M+H]^+$:368.0142, found: 368.0121.



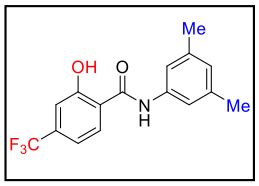
***N*-(3,5-difluorophenyl)-2-hydroxy-4-(trifluoromethyl)benzamide (54):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **54** as a white solid (191 mg, 50%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.54 (s, 1H), 10.70 (s, 1H), 7.88 (d, *J* = 7.9 Hz, 1H), 7.53 – 7.45 (m, 2H), 7.29 (d, *J* = 8.5 Hz, 2H), 7.00 (tt, *J* = 9.4, 2.4 Hz, 1H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.9, 162.5 (dd, *J* = 243.2, 15.3 Hz), 156.5, 141.0 (t, *J* = 13.7 Hz), 132.5 (q, *J* = 31.8 Hz), 130.8, 124.5, 123.6 (q, *J* = 272.7 Hz), 115.5 (q, *J* = 3.8 Hz), 113.3 (q, *J* = 3.9 Hz), 103.0 (dd, *J* = 20.8, 8.9 Hz), 99.2 (t, *J* = 26.2 Hz) . **UV**(λ_{max} nm)**:** 268; **IR**ν_{max} (cm^{-1})**:** 3173, 1620, 1113, 841; **HRMS (ESI):** calcd for $C_{14}H_9F_5NO_2$ $[M+H]^+$: 318.0548, found: 318.0536.



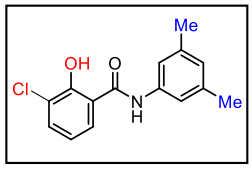
***N*-(3,5-dichlorophenyl)-2-hydroxy-4-(trifluoromethyl)benzamide (55):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **55** as a white solid (239 mg, 56%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.54 (s, 1H), 10.65 (s, 1H), 7.89 (d, *J* = 7.9 Hz, 1H), 7.84 (d, *J* = 1.9 Hz, 2H), 7.37 (t, *J* = 2.0 Hz, 1H), 7.29 (d, *J* = 8.7 Hz, 2H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 156.6, 140.8, 134.1, 132.6 (q, *J* = 31.9 Hz), 130.8, 124.3, 123.6 (q, *J* = 272.8 Hz), 123.3, 118.3, 115.5 (q, *J* = 3.7 Hz), 113.3 (q, *J* = 4.0 Hz). **UV**(λ_{max} nm)**:** 270; **IR**ν_{max} (cm^{-1})**:** 3081, 1640, 1110, 664; **HRMS (ESI):** calcd for $C_{14}H_9Cl_2F_3NO_2[M+H]^+$: 349.9957, found: 349.9935.



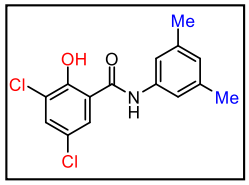
***N*-(3,5-dibromophenyl)-2-hydroxy-4-(trifluoromethyl)benzamide (56):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **56** as a white solid (37 mg, 14%).**^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.53 (s, 1H), 10.66 (s, 1H), 8.01 (d, *J* = 1.8 Hz, 2H), 7.89 (d, *J* = 7.9 Hz, 1H), 7.59 (t, *J* = 1.7 Hz, 1H), 7.29 (d, *J* = 8.5 Hz, 2H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 165.0, 156.7, 141.2, 132.6 (q, *J* = 31.9 Hz), 130.8, 128.6, 124.4, 123.6 (q, *J* = 272.8 Hz), 122.4, 121.6, 115.5 (q, *J* = 4.0 Hz), 113.3 (q, *J* = 4.2 Hz). **UV**(λ_{max} nm)**:** 270; **IR**ν_{max} (cm^{-1})**:** 3161, 1642, 1112, 661; **HRMS (ESI):** calcd for $C_{14}H_9Br_2F_3NO_2[M+H]^+$: 437.8947, found: 437.8919.



***N*-(3,5-dimethylphenyl)-2-hydroxy-4-(trifluoromethyl)benzamide (57):** The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **57** as a white solid (25 mg, 14%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 11.91 (s, 1H), 10.32 (s, 1H), 8.02 (d, *J* = 8.0 Hz, 1H), 7.34 (s, 2H), 7.29 (d, *J* = 9.3 Hz, 2H), 6.79 (s, 1H), 2.27 (s, 6H) . **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 164.6, 157.4, 138.1, 137.9, 132.6 (q, *J* = 32.0 Hz), 130.7, 125.9, 123.6 (q, *J* = 272.8 Hz), 123.4, 118.3, 115.4 (q, *J* = 3.6 Hz), 113.6 (q, *J* = 3.8 Hz), 21.1 . **UV**(λ_{max} nm)**:** 302; **IR**ν_{max} (cm^{-1})**:** 2588, 1620, 1119, 681; **HRMS (ESI):** calcd for $C_{16}H_{15}F_3NO_2$ $[M+H]^+$: 310.1049, found: 310.1046

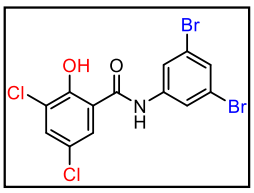


3-chloro-N-(3,5-dimethylphenyl)-2-hydroxybenzamide(58): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **58** as a white solid (45 mg, 27%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.9 (s, 1H), 10.5 (s, 1H), 8.0 (dd, *J* = 8.1, 1.5 Hz, 1H), 7.7 (dd, *J* = 7.9, 1.4 Hz, 1H), 7.3 (s, 2H), 7.0 (t, *J* = 8.0 Hz, 1H), 6.8 (s, 1H), 2.3 (s, 6H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 167.8, 156.2, 137.8, 137.2, 134.0, 126.8, 126.4, 121.3, 119.6, 119.1, 117.2, 21.0. **UV**(λ_{max} nm)**:** 271 ; **IR**ν_{max} (cm^{-1})**:** 3380, 1614, 1549, 1117; **HRMS (ESI):** calcd for $C_{15}H_{15}ClNO_2$ $[M+H]^+$: 276.0786, found: 276.0767.

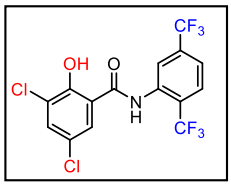


3,5-dichloro-N-(3,5-dimethylphenyl)-2-hydroxybenzamide (59): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **59** as a white solid (65 mg, 44%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 12.9 (s, 1H), 10.7 (s, 1H), 8.1 (t, *J* = 2.9, 1.5 Hz, 1H), 7.8 (d, *J* = 2.6 Hz, 1H), 7.3 (s, 2H), 6.8 (s, 1H), 2.3 (s, 6H). **^{13}C**

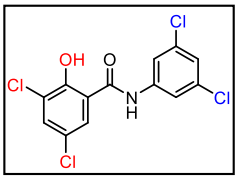
NMR (100 MHz, *d*$_6$-DMSO): 166.4, 155.5, 137.8, 137.2, 133.0, 126.4, 122.7, 121.8, 119.3, 118.3, 118.2, 21.0. **UV**(λ_{max} nm)**:** 265; **IR**ν_{max} (cm^{-1})**:** 3234, 1632, 1572, 1168. **HRMS (ESI):** calcd for $C_{15}H_{14}Cl_2NO_2$ $[M+H]^+$: 310.0396, found: 310.0385.



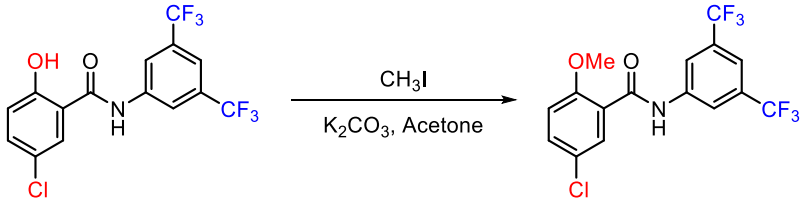
3,5-dichloro-N-(3,5-dibromophenyl)-2-hydroxybenzamide (60): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **60** as a white solid (25 mg, 19%). **^{1}H NMR (400 MHz, *d*$_6$-DMSO):** 14.75 (s, 1H), 7.92 (d, *J* = 1.7 Hz, 2H), 7.64 (d, *J* = 3.0 Hz, 1H), 7.44 (t, *J* = 1.7 Hz, 1H), 7.34 (d, *J* = 3.0 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_6$-DMSO):** 166.3, 163.9, 143.0, 131.7, 127.5, 127.4, 126.1, 122.9, 121.3, 119.3, 113.3. **UV**(λ_{max} nm)**:** 278; **IR**ν_{max} (cm^{-1})**:** 3293, 1640, 1579, 145;. **HRMS (ESI):** calcd for $C_{13}H_8Br_2Cl_2NO_2$ $[M+H]^+$: 437.8293, found: 437.8261.



N-(2,5-bis(trifluoromethyl)phenyl)-3,5-dichloro-2-hydroxybenzamide (61): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **61** as a white solid (21 mg, 12%). **^{1}H NMR (400 MHz, *d*$_3$-Acetonitrile):** 9.0 (s, 1H), 7.8 (d, *J* = 8.3 Hz, 1H), 7.7 (d, *J* = 3.0 Hz, 1H), 7.5 – 7.4 (m, 1H), 7.3 (d, *J* = 3.0 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_3$-Acetonitrile):** 167.6, 166.4, 140.3, 134.5, 134.2, 132.3, 128.7, 128.0 (q, *J* = 5.8 Hz), 127.2, 124.8 (q, *J* = 271.9 Hz), 124.6 (q, *J* = 271.9 Hz), 121.8 (q, *J* = 4.1 Hz), 119.9, 119.4 (q, *J* = 3.8 Hz), 113.3. **UV**(λ_{max} nm)**:** 273; **IR**ν_{max} (cm^{-1})**:** 3291, 1640, 1542, 1120; **HRMS (ESI):** calcd for $C_{15}H_7Cl_2F_6NO_2Na$ $[M+Na]^+$: 439.9650, found: 439.9659.

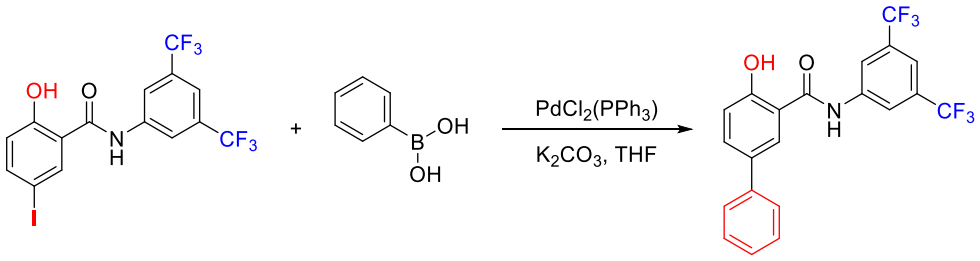


3,5-dichloro-N-(3,5-dichlorophenyl)-2-hydroxybenzamide (62): The title compound was synthesized following the general procedure for synthesis of N-aryl-2-hydroxybenzamides to afford **62** as a white solid (35 mg, 18%). **^{1}H NMR (400 MHz, *d*$_4$-CD$_3$OD):** 7.76 (d, *J* = 3.0 Hz, 1H), 7.74 (t, *J* = 2.2 Hz, 2H), 7.32 (d, *J* = 2.9 Hz, 1H), 7.10 (t, *J* = 1.8 Hz, 1H). **^{13}C NMR (100 MHz, *d*$_4$-CD$_3$OD):** 166.5, 163.6, 141.4, 134.8, 131.7, 131.5, 127.3, 126.9, 122.4, 118.0, 115.7. **UV**(λ_{max} nm)**:** 267; **IR**ν_{max} (cm^{-1})**:** 3293, 1638, 1544, 1110; **HRMS (ESI):** calcd for $C_{13}H_8Cl_4NO_2$ $[M+H]^+$: 349.9304, found: 349.9283.

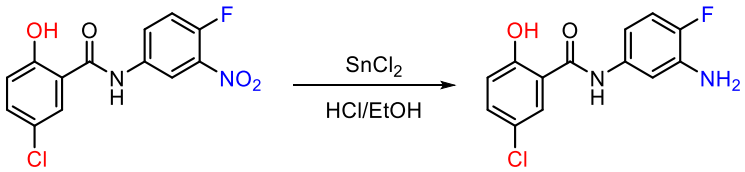


N-(3,5-bis(trifluoromethyl)phenyl)-5-chloro-2-methoxybenzamide (2): Potassium carbonate (27 mg, 0.20 mmol) was added to a stirring solution of **IMD 0354** (50 mg, 0.13 mmol) in 20 mL acetone. To the resulting mixture, iodomethane (28 mg, 0.20 mmol) was added at room temperature and stirred for 16 hours. The reaction contents were transferred to a separatory funnel containing saturated sodium chloride and extracted with ethyl acetate. The organic contents were combined, dried with sodium sulfate, and then purified via column using 1:3 to 1:1 DCM/Hexanes

to obtain a white solid (37 mg, 74%). **^{1}H NMR (400 MHz, $CDCl_3$):** 10.0 (s, 1H), 8.2 (d, J = 2.8 Hz, 1H), 8.1 (s, 2H), 7.6 (s, 1H), 7.5 (dd, J = 8.9, 2.8 Hz, 1H), 7.0 (d, J = 8.8 Hz, 1H), 4.1 (s, 3H). **^{13}C NMR (100 MHz, $CDCl_3$):** 162.3 , 155.7 , 139.4 , 133.6 , 132.3 (q, J = 33.4 Hz), 132.3 , 127.5 , 123.1 (q, J = 272.8 Hz), 122.0 , 120.1 (d, J = 4.2 Hz), 117.6 (p, J = 3.9 Hz), 113.2 , 56.9. **UV**(λ_{max} nm)**:** 281; **IR**ν_{max} (cm^{-1})**:** 3314, 1665, 1470, 911; **HRMS (ESI):** calcd for $C_{16}H_{11}ClF_6NO_2$ $[M+H]^+$: 398.0377, found: 398.0361



***N*-(3,5-bis(trifluoromethyl)phenyl)-4-hydroxy-[1,1'-biphenyl]-3-carboxamide (13):** To a flame dried round bottom flask compound **10** (300mg, 0.63 mmol), $PdCl_2(PPh_3)$ (22 mg, 0.03 mmol), K_2CO_3 (87 mg, 0.63 mmol), and phenyl boronic acid (154 mg, 1.26 mmol) were added. The flask was evacuated then placed under argon then dissolved in 20 mL of THF. Argon was subsequently bubbled through the solvent for 30 minutes then the reaction was heated to reflux and allowed to stir until for 48 hours. The reaction was cooled and checked for completion, ethyl acetate (100 mL) was added, taken in a separatory funnel and washed with Sodium bicarbonate (3x30 mL) followed by water (3x30 mL) and then brine (2x30 mL). The organic layer was then dried using anhydrous sodium sulfate, evaporated and purified via preparative scale TLC using 1:1 ethyl ether/Hexanes to obtain a white solid. **^{1}H NMR (400 MHz, *d_6*-DMSO):** 11.42 (s, 1H), 11.08 (s, 1H), 8.49 (s, 2H), 8.16 (d, J = 2.4 Hz, 1H), 7.86 (s, 1H), 7.78 (dd, J = 8.5, 2.4 Hz, 1H), 7.68 (d, J = 7.6 Hz, 2H), 7.48 (t, J = 7.6 Hz, 2H), 7.35 (t, J = 7.4 Hz, 1H), 7.10 (d, J = 8.5 Hz, 1H). **^{13}C NMR (100 MHz, *d_6*-DMSO):** 167.3, 159.6, 140.8, 139.5, 132.0, 130.7 (q, J = 32.9 Hz), 130.0, 128.9, 127.2, 126.8, 126.1, 123.3 (q, J = 272.8 Hz), 120.3, 118.5, 118.2, 116.4. **UV**(λ_{max} nm): 204; **IR**ν_{max} (cm^{-1})**:** 3252, 2926, 1642, 1128; **HRMS (ESI):** calcd for $C_{21}H_{14}F_6NO_2$ $[M+H]^+$: 426.0923, found: 426.0906.



N-(3-amino-4-fluorophenyl)-5-chloro-2-hydroxybenzamide (36): To the solution of 5-chloro-N-(4-fluoro-3-nitrophenyl)-2-hydroxybenzamide **35 (**1 eq) in anhydrous ethanol (0.1 M), Tin (II) chloride (2 eq) was added. The reaction mixture was heated to 70 °C for 12 h, cooled, and concentrated under reduced pressure. The residue was taken in a mixture of 100 mL Ethyl acetate and 100 mL saturated sodium bicarbonate solution and the water layer was discarded. The organic layer was washed with brine, dried over anhydrous sodium sulfate, filtered, and concentrated under reduced pressure, and then purified via column using 10:1 DCM/methanol to obtain compound 36 as a white solid (112 mg, 71%). **^{1}H NMR (400 MHz, *d_6*-DMSO):** 11.94 (s, 1H), 10.22 (s, 1H), 7.95 (d, J = 2.7 Hz, 1H), 7.45 (dd, J = 8.8, 2.7 Hz, 1H), 7.20 (dd, J = 8.4, 2.6 Hz, 1H), 7.00 (d, J =

9.0 Hz, 1H), 6.97 – 6.91 (m, 1H), 6.77 (ddd, J = 8.7, 4.1, 2.6 Hz, 1H), 5.24 (s, 2H). **^{13}C NMR (100 MHz, d_6-DMSO):** 165.2, 157.5, 148.0 (d, J = 234.7 Hz), 136.9 (d, J = 13.7 Hz), 134.8 (d, J = 2.3 Hz), 133.4, 128.7, 123.1, 119.9, 119.6, 115.1 (d, J = 19.3 Hz), 109.3 (d, J = 4.4 Hz), 108.9 (d, J = 6.5 Hz). **UV**(λ_{max} nm): 274; **IR**ν_{max} (cm^{-1})**:** 3351, 1651, 1128, 933; **HRMS (ESI):** calcd for $C_{21}H_{14}F_6NO_2$ $[M+H]^+$: 281.04876, found: 281.0488.

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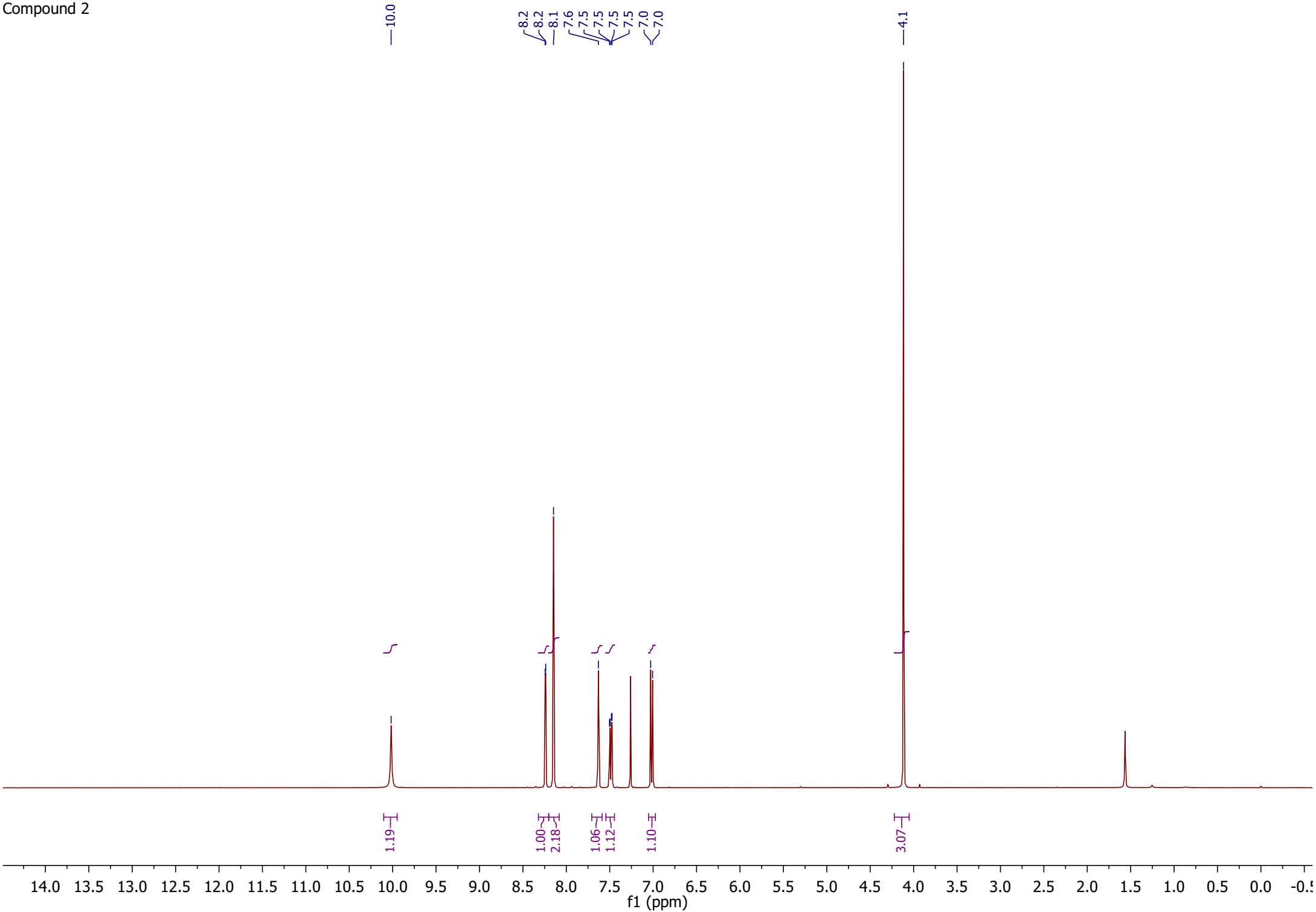
(2) Lee, I.-Y.; Gruber, T. D.; Samuels, A.; Yun, M.; Nam, B.; Kang, M.; Crowley, K.; Winterroth, B.; Boshoff, H. I.; Barry, C. E. Structure–activity Relationships of Antitubercular Salicylanilides Consistent with Disruption of the Proton Gradient via Proton Shuttling. *Bioorg. Med. Chem.* **2013**, *21*, 114–126.

(3) Mook, R. A.; Wang, J.; Ren, X.-R.; Chen, M.; Spasojevic, I.; Barak, L. S.; Lyerly, H. K.; Chen, W. Structure–activity Studies of Wnt/β-Catenin Inhibition in the Niclosamide Chemotype: Identification of Derivatives with Improved Drug Exposure. *Bioorg. Med. Chem.* **2015**, *23*, 5829–5838.

(4) Paraskevopoulos, G.; Monteiro, S.; Vosátka, R.; Krátký, M.; Navrátilová, L.; Trejtnar, F.; Stolaříková, J.; Vinšová, J. Novel Salicylanilides from 4,5-Dihalogenated Salicylic Acids: Synthesis, Antimicrobial Activity and Cytotoxicity. *Bioorg. Med. Chem.* **2017**, *25*, 1524–1532.

Compound 2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1.00
2.18
1.06
1.12
1.10
3.07
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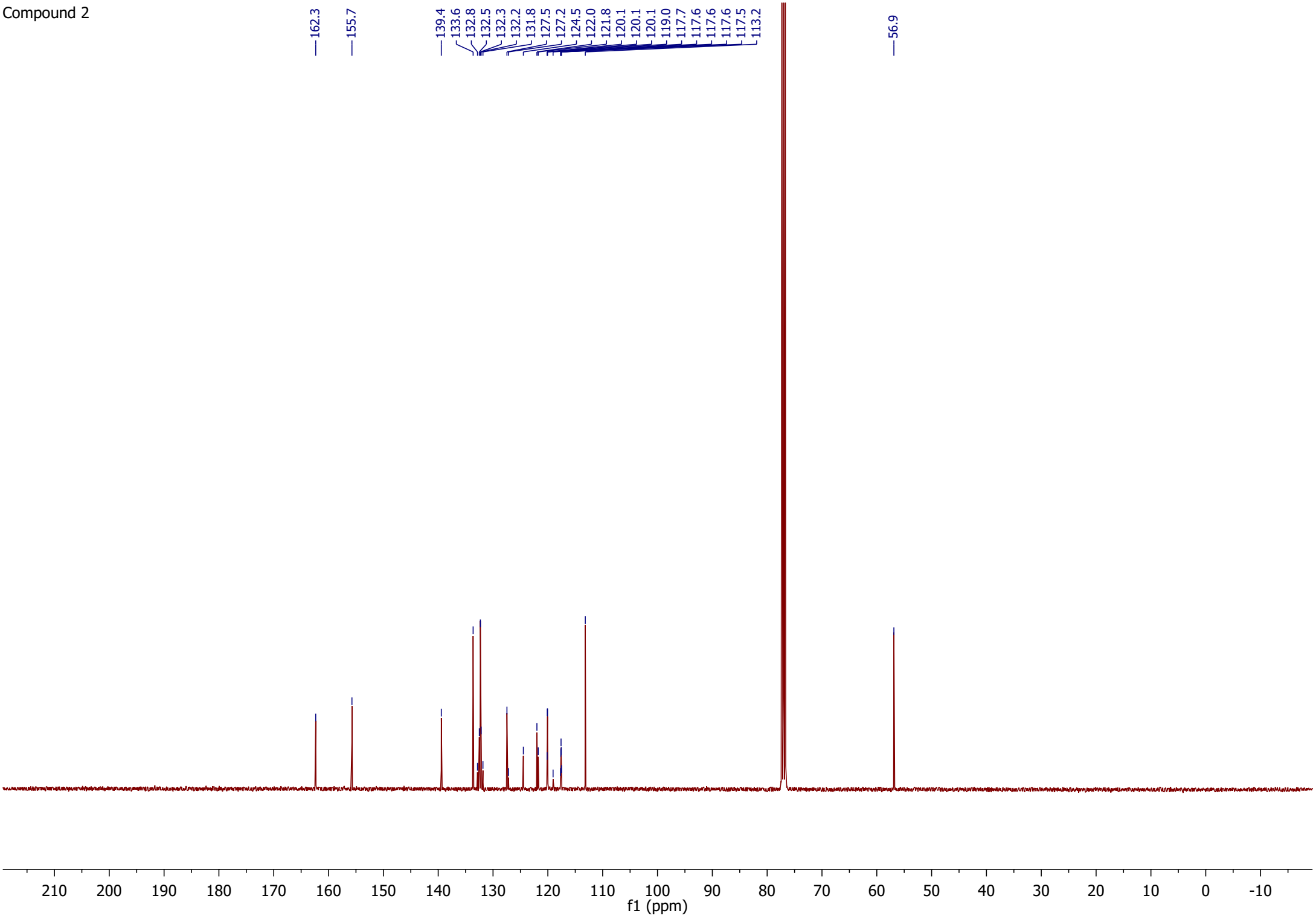
Compound 2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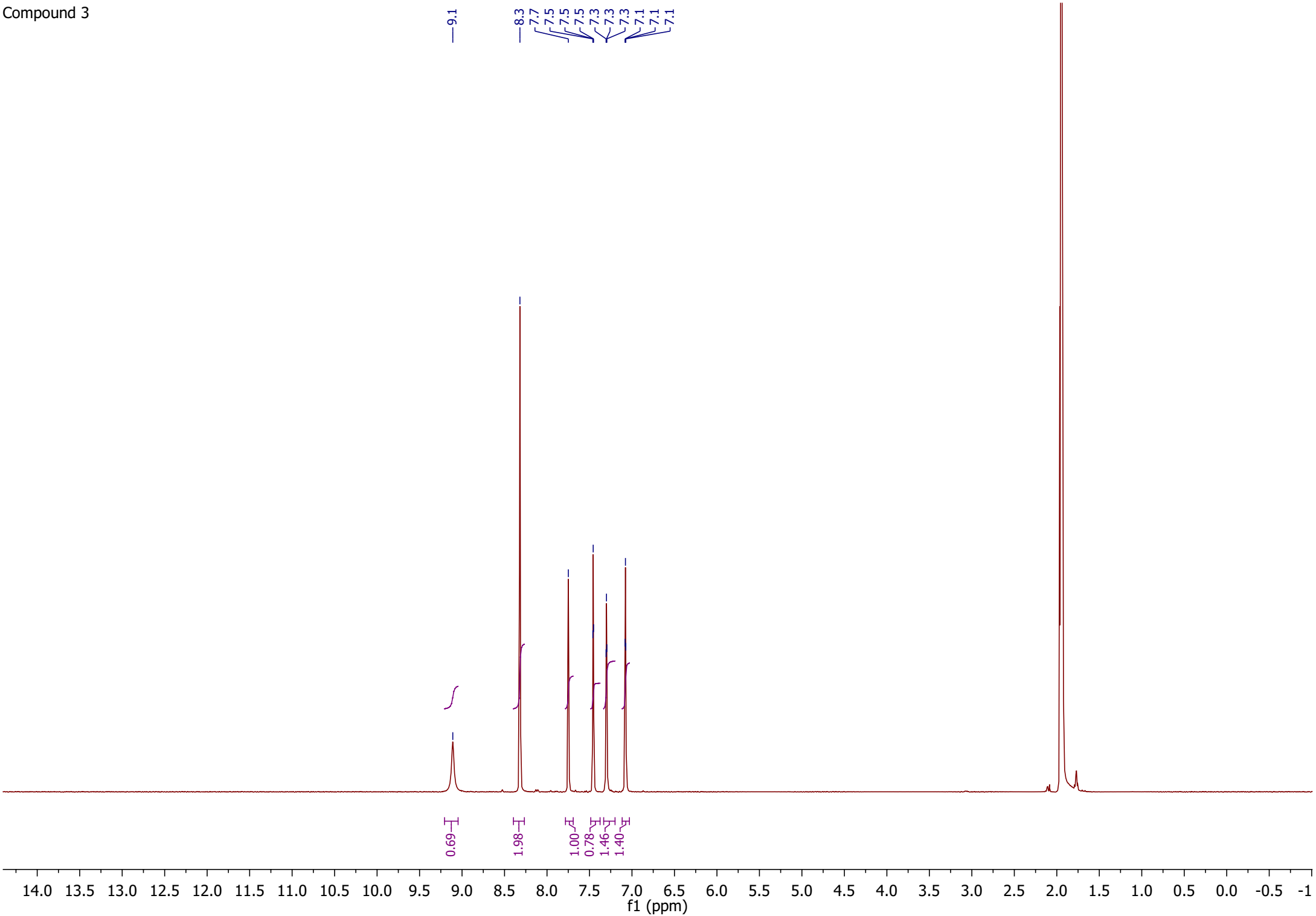
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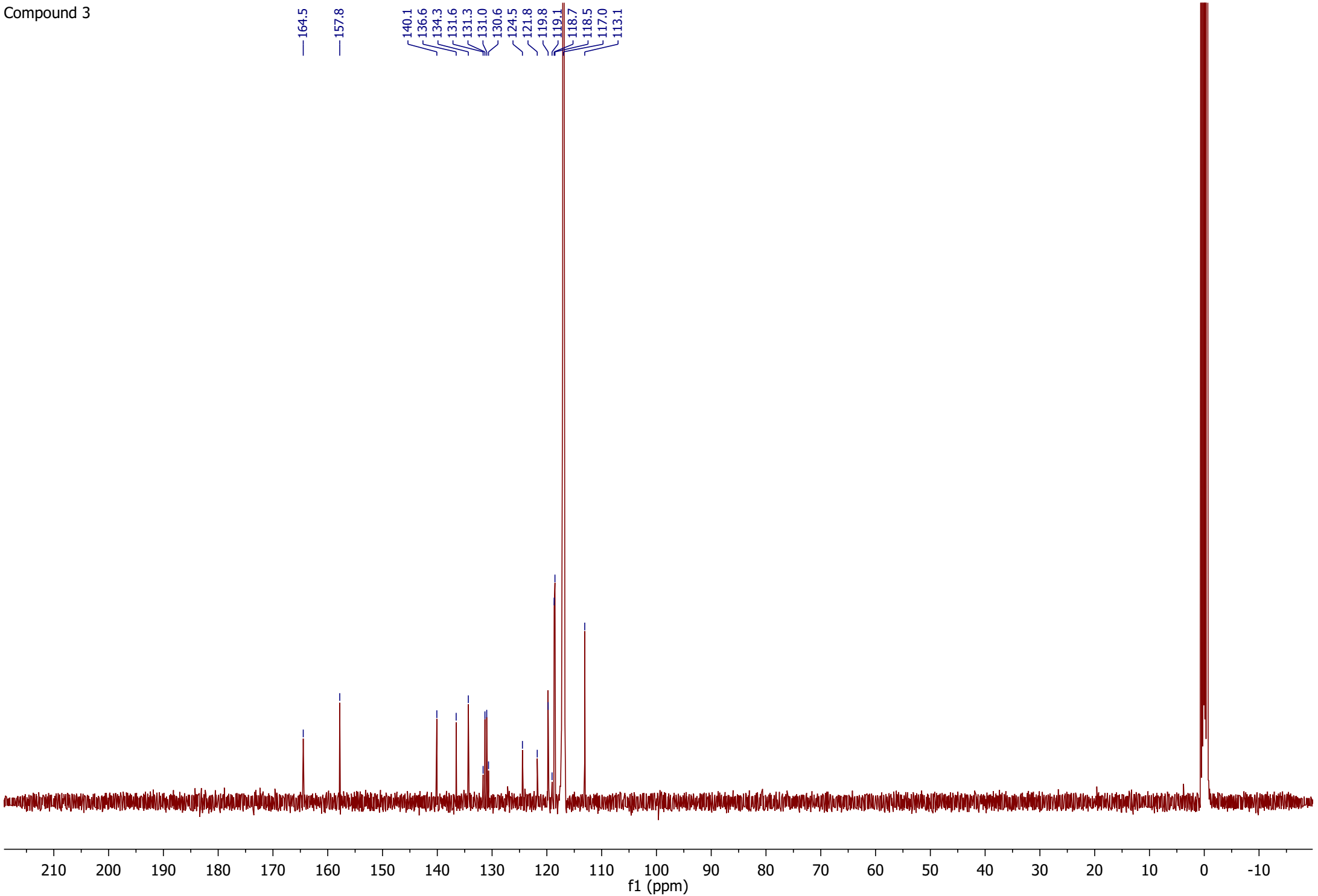
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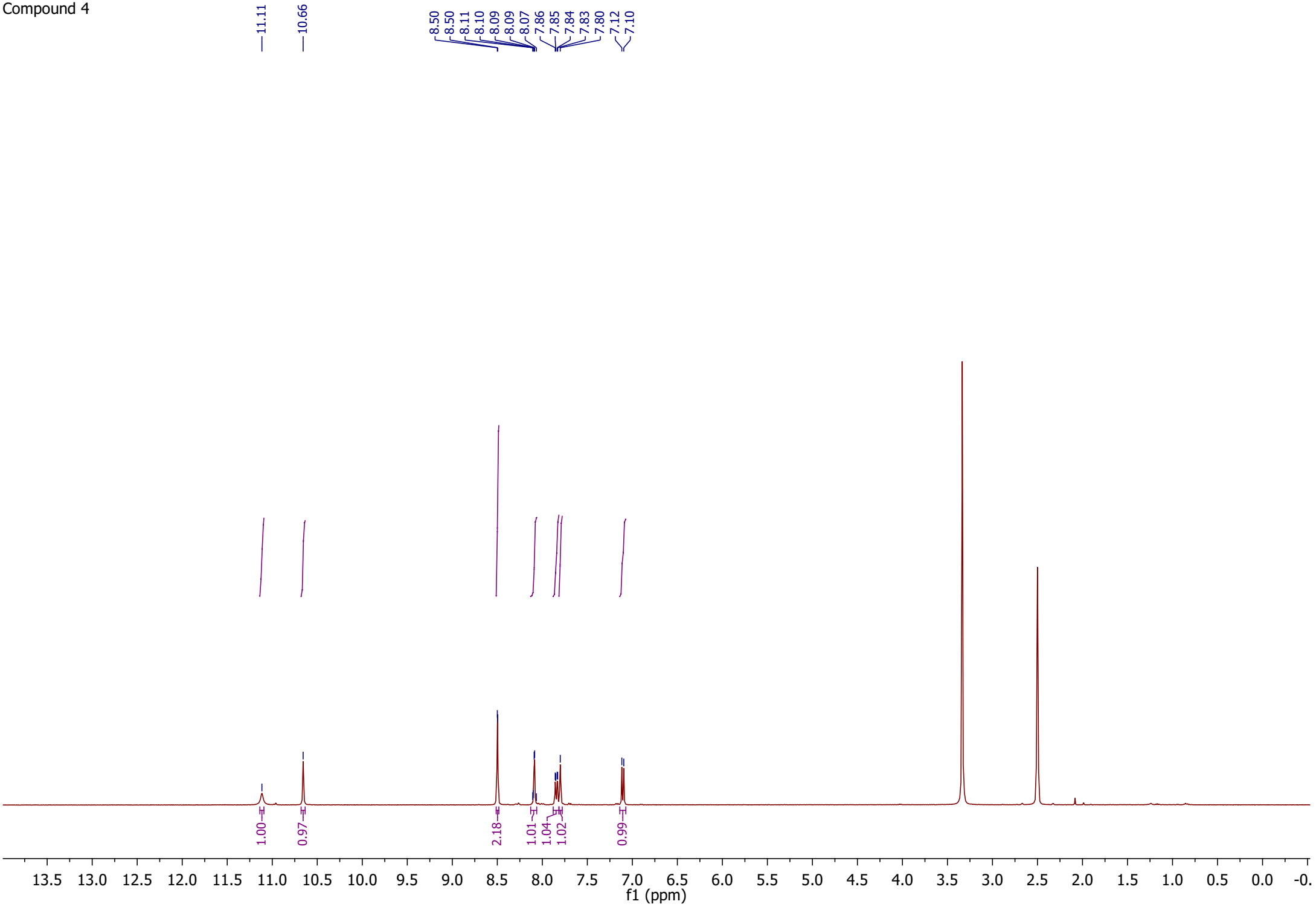
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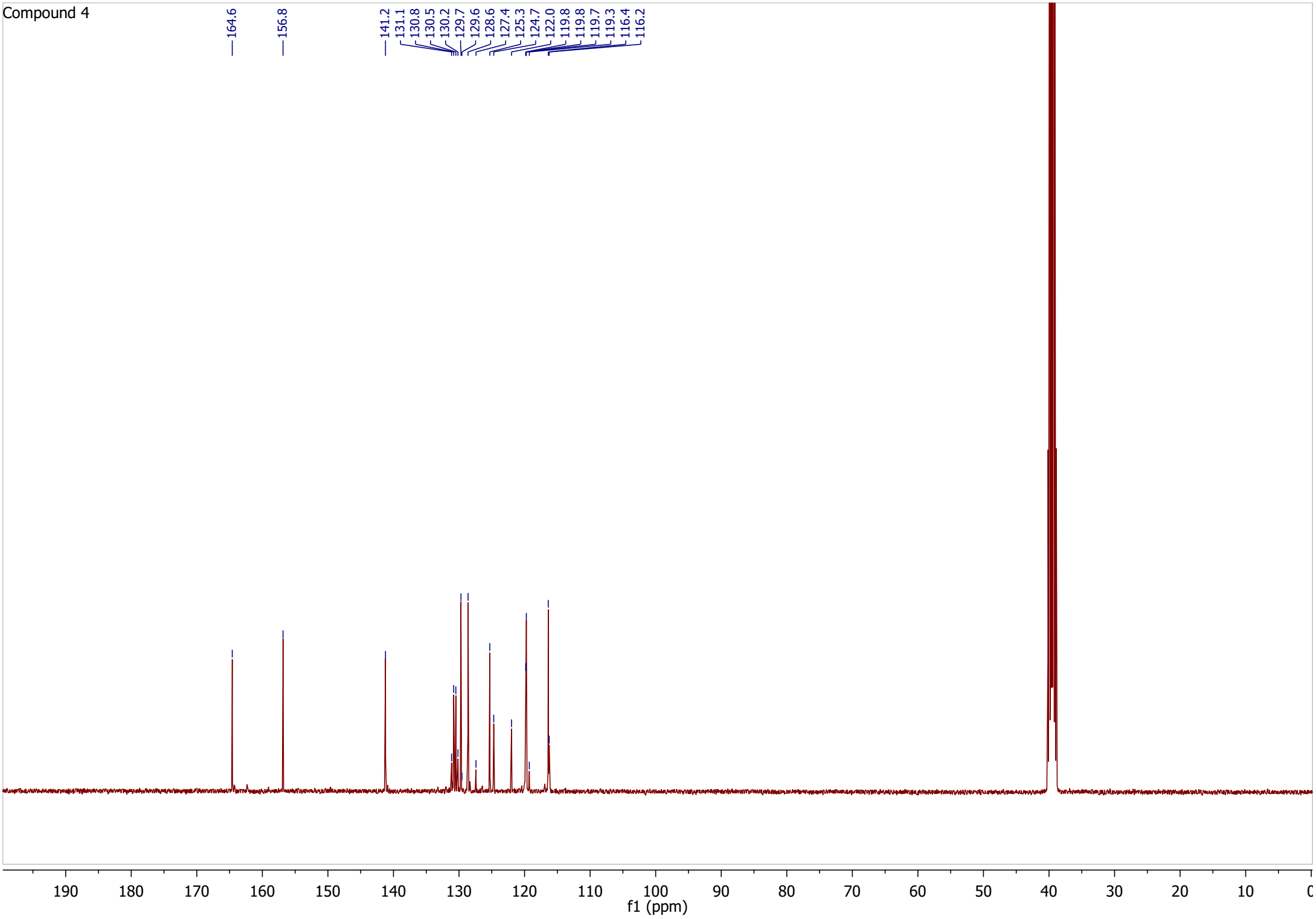
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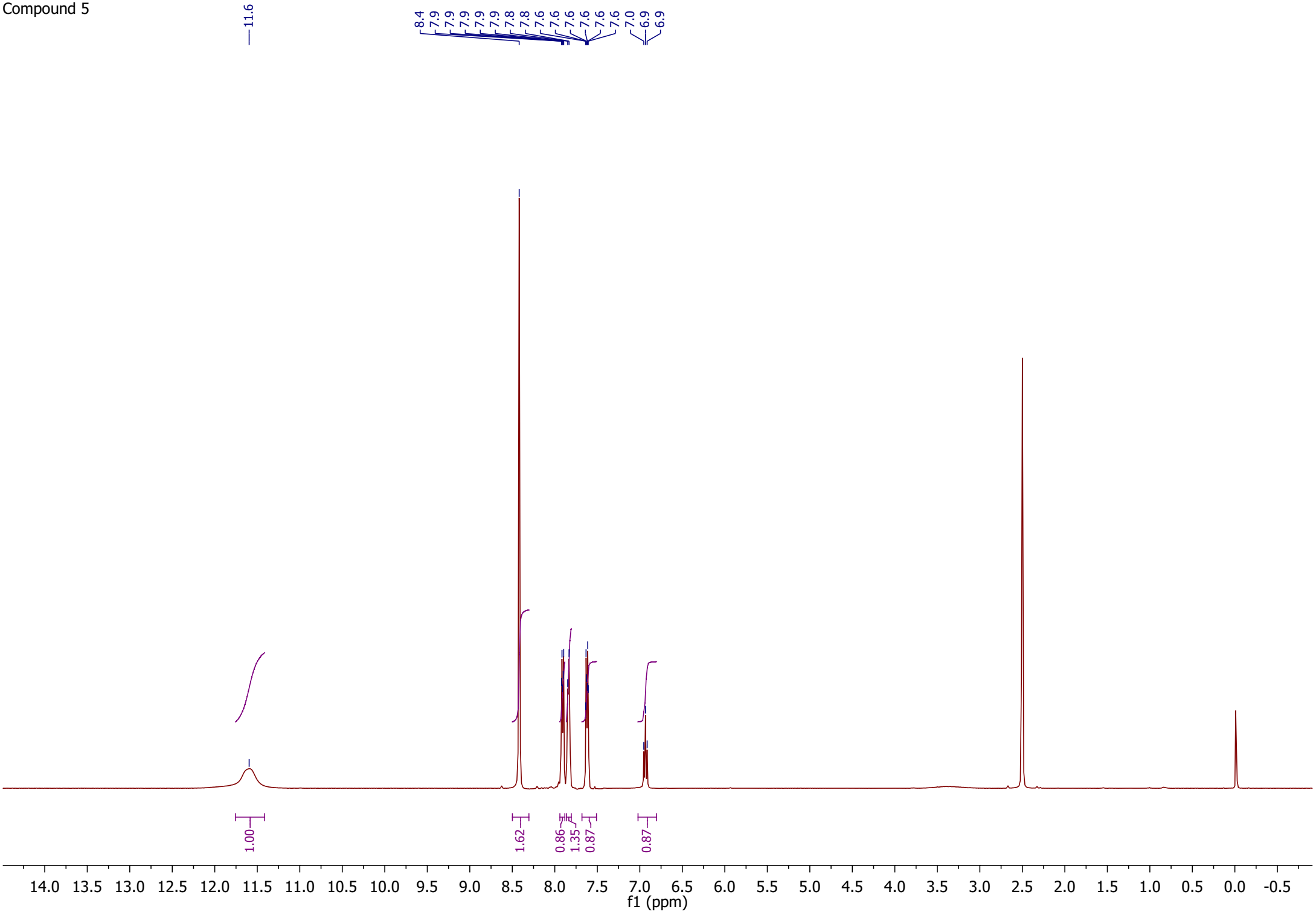
Compound 5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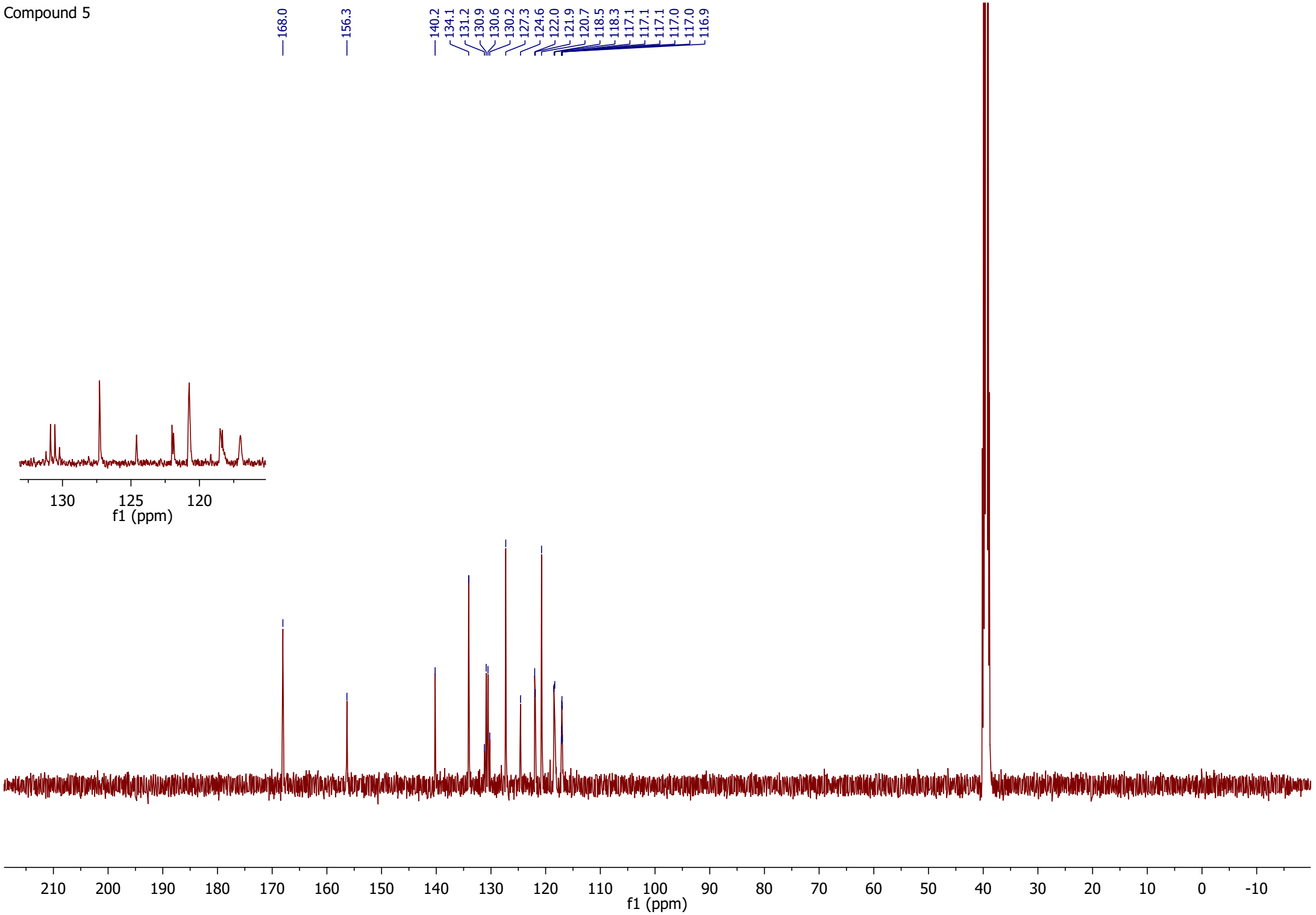
f1 (ppm)

Compound 5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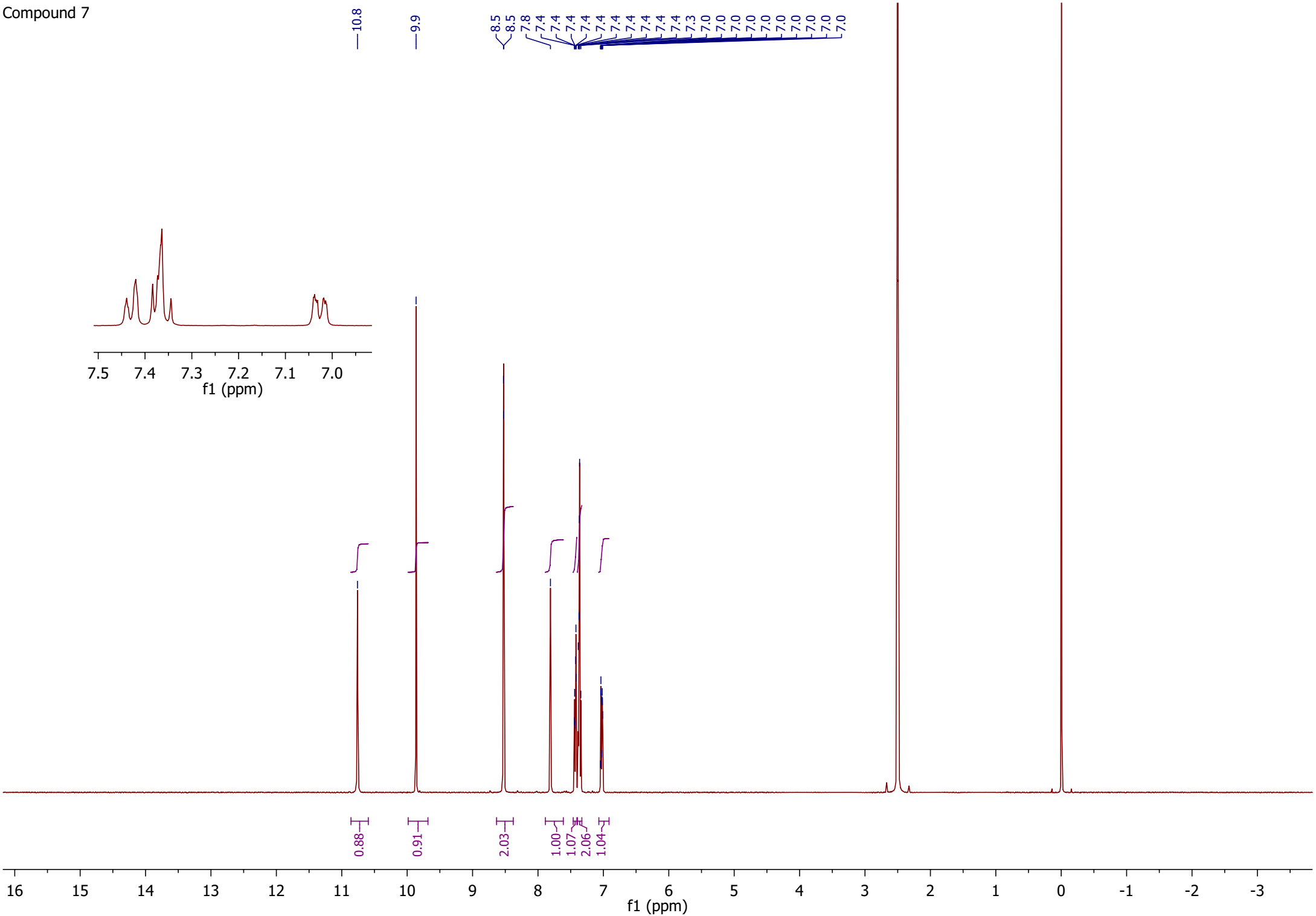
Compound 7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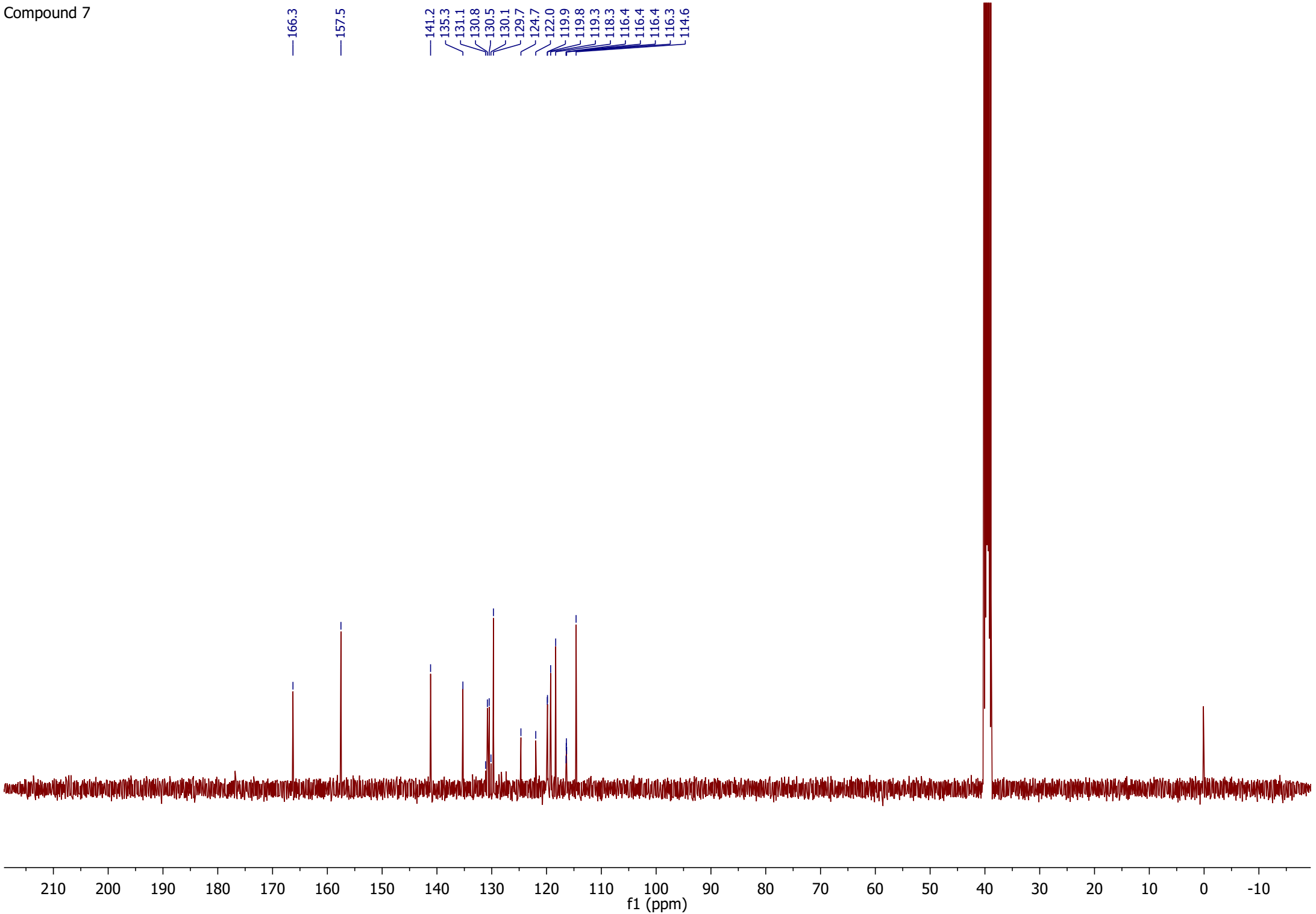
f1 (ppm)

Compound 7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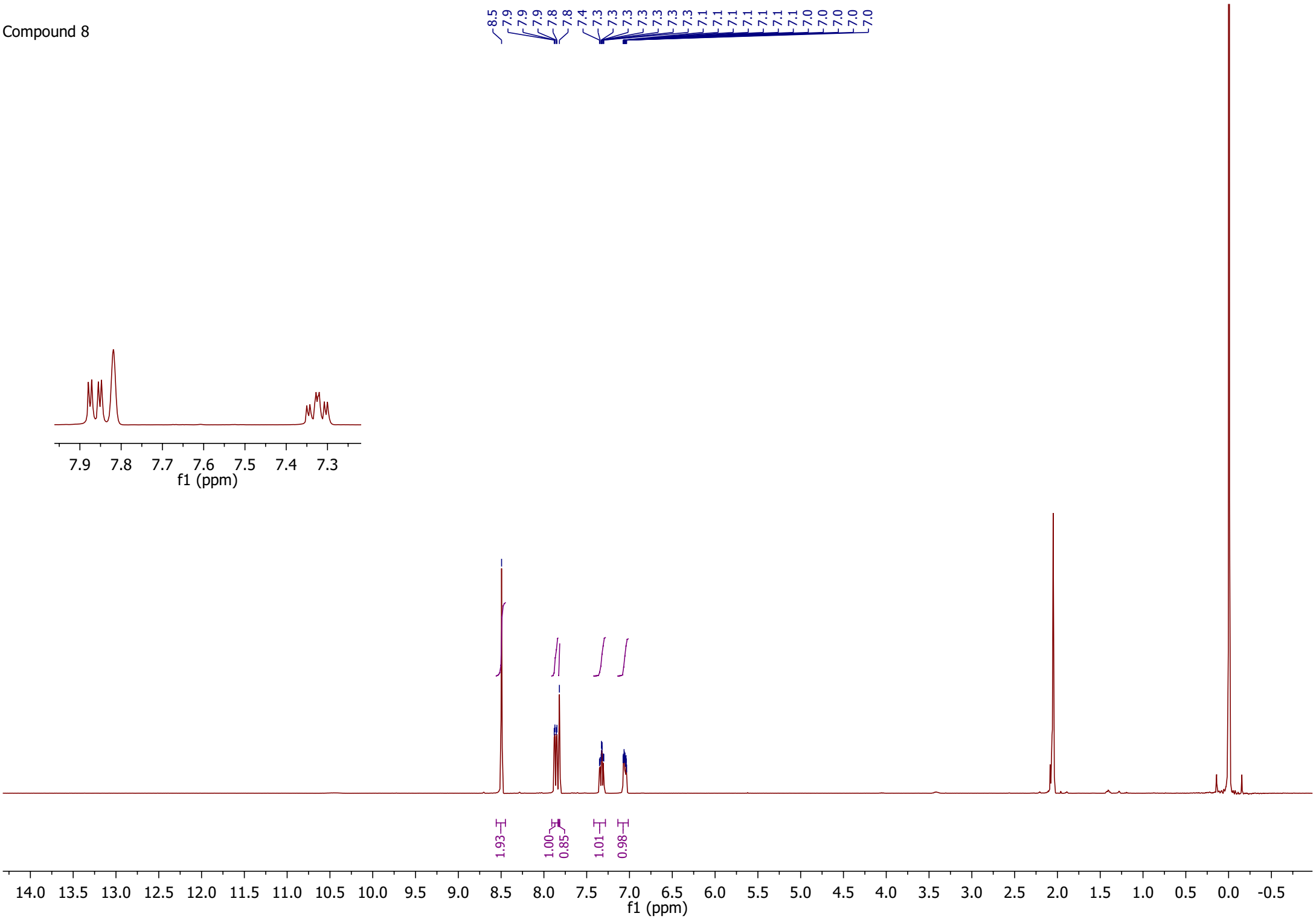
f1 (ppm)

Compound 8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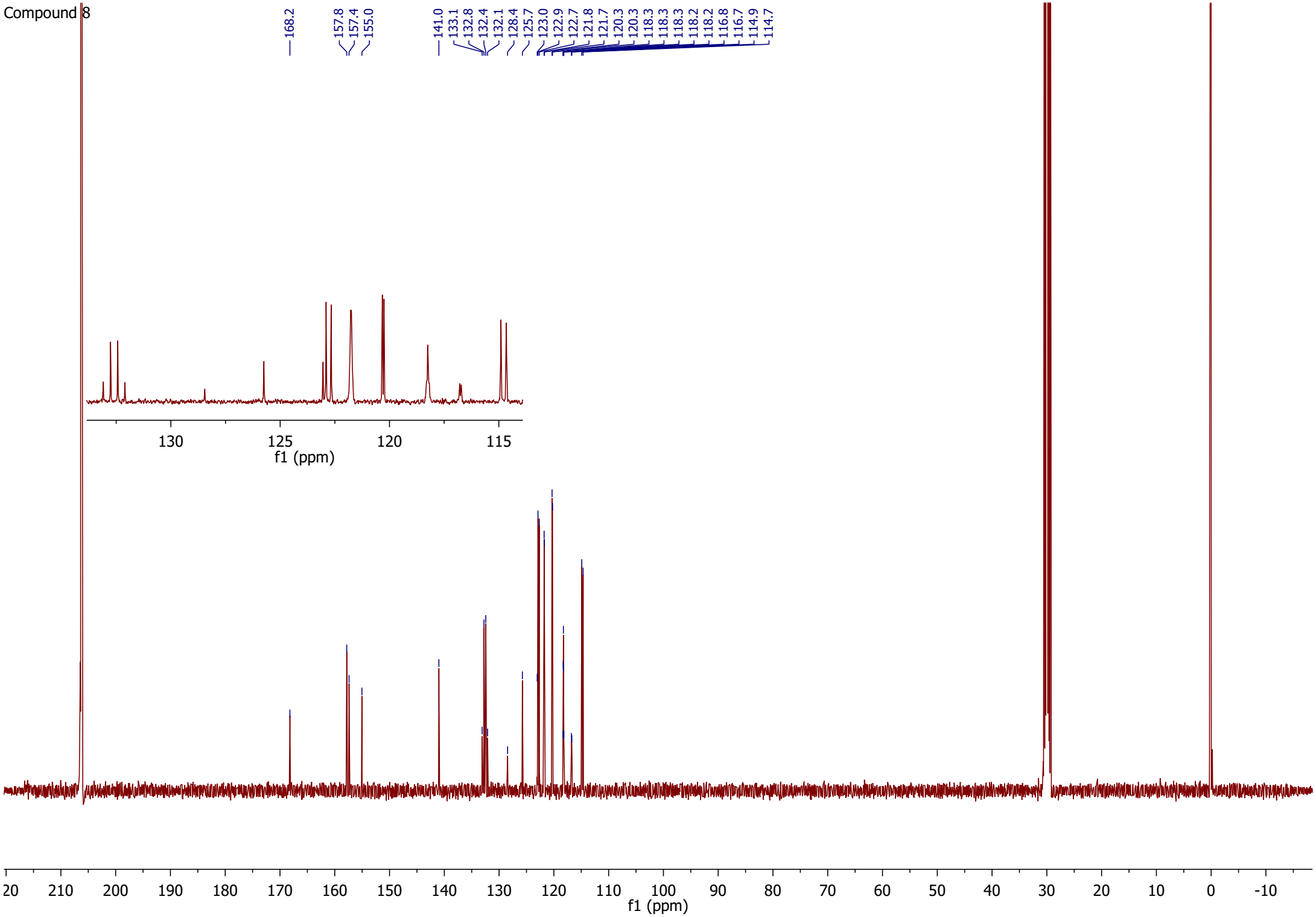
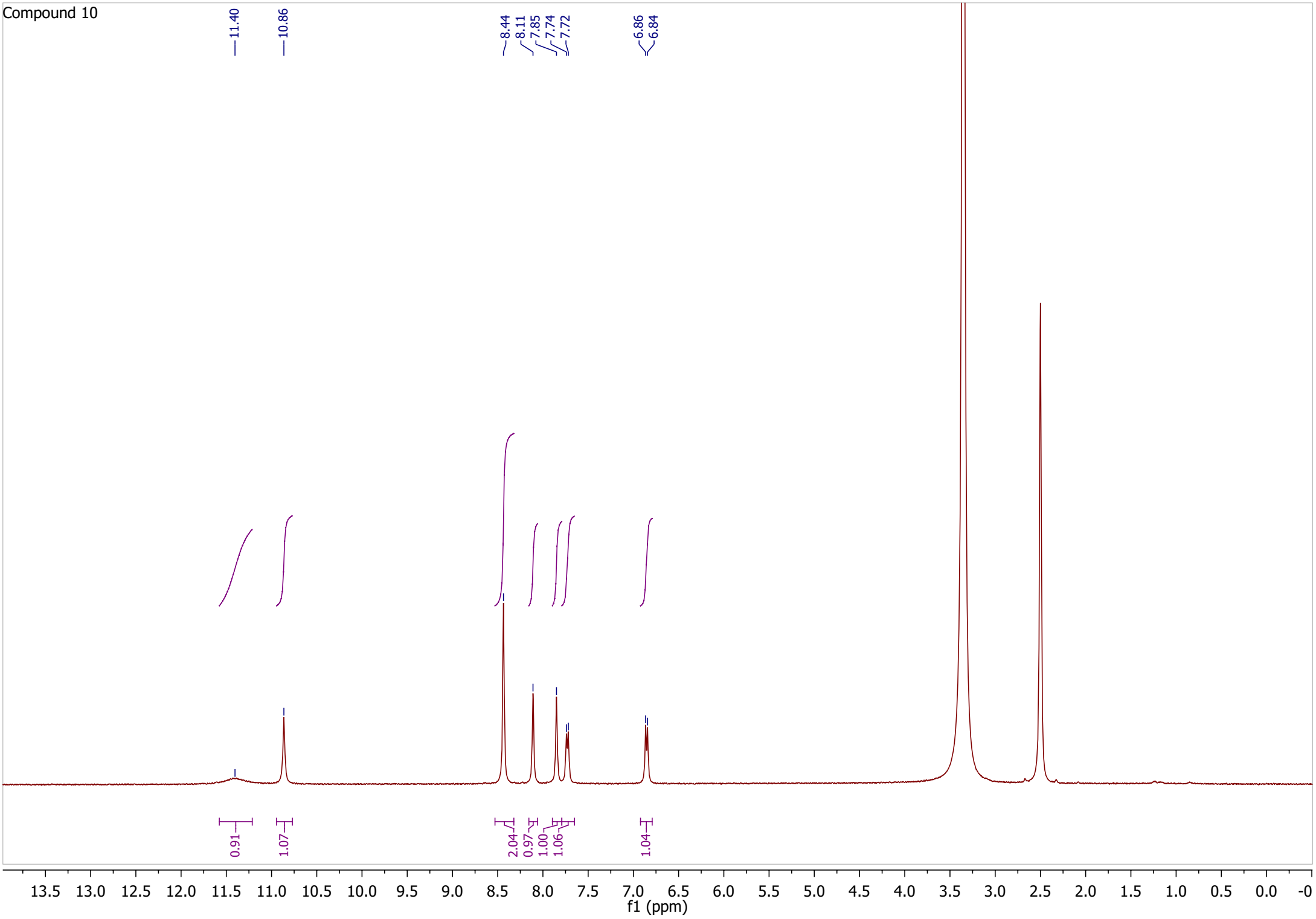
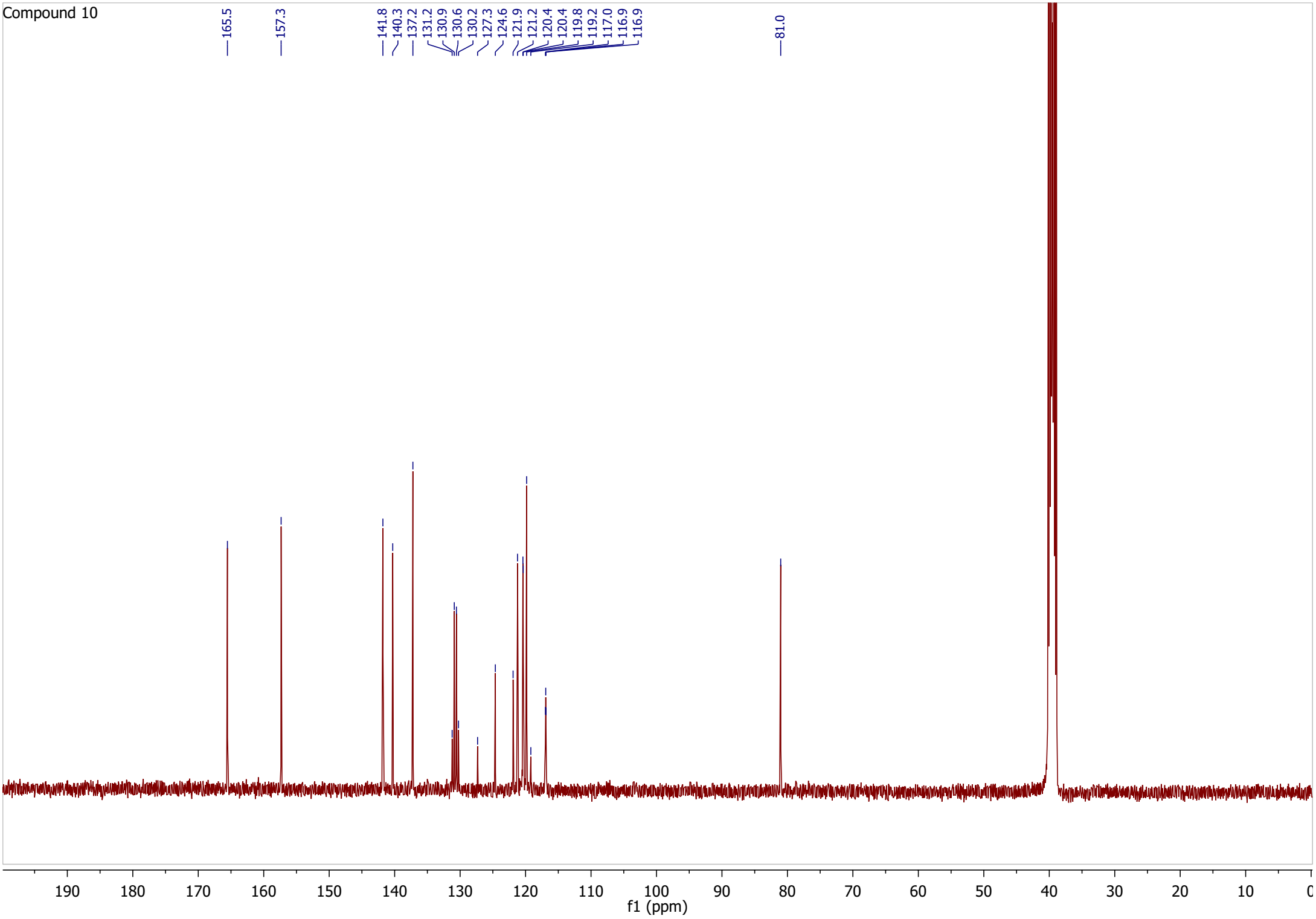
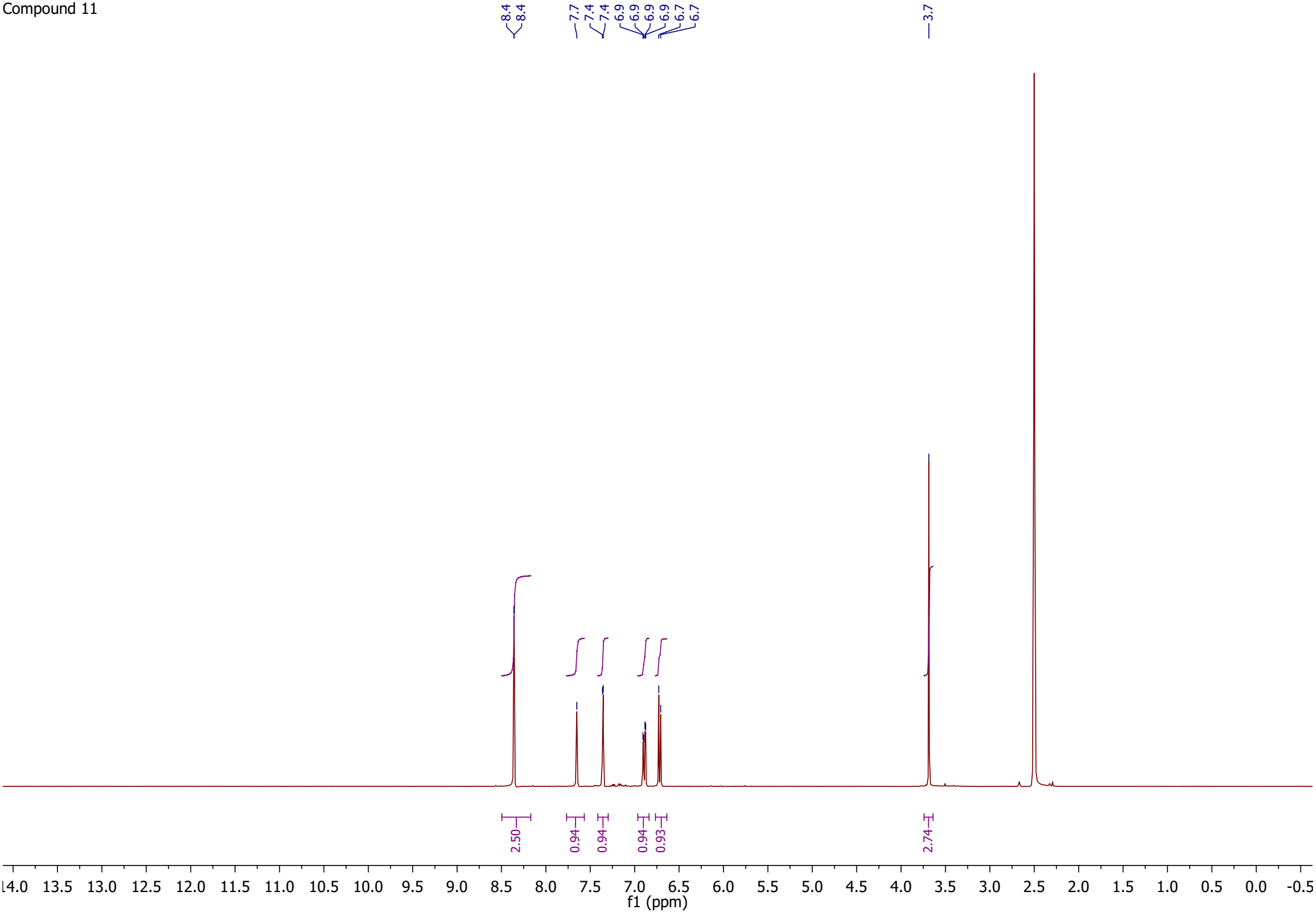
7.3
7.3
7.3
7.1
7.1
7.1
7.1
7.1
7.1
7.0
7.0
7.0
7.0
7.9 7.8 7.7 7.6 7.5 7.4 7.3
f1 (ppm)
1.93
1.00
0.85
1.01
0.98
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

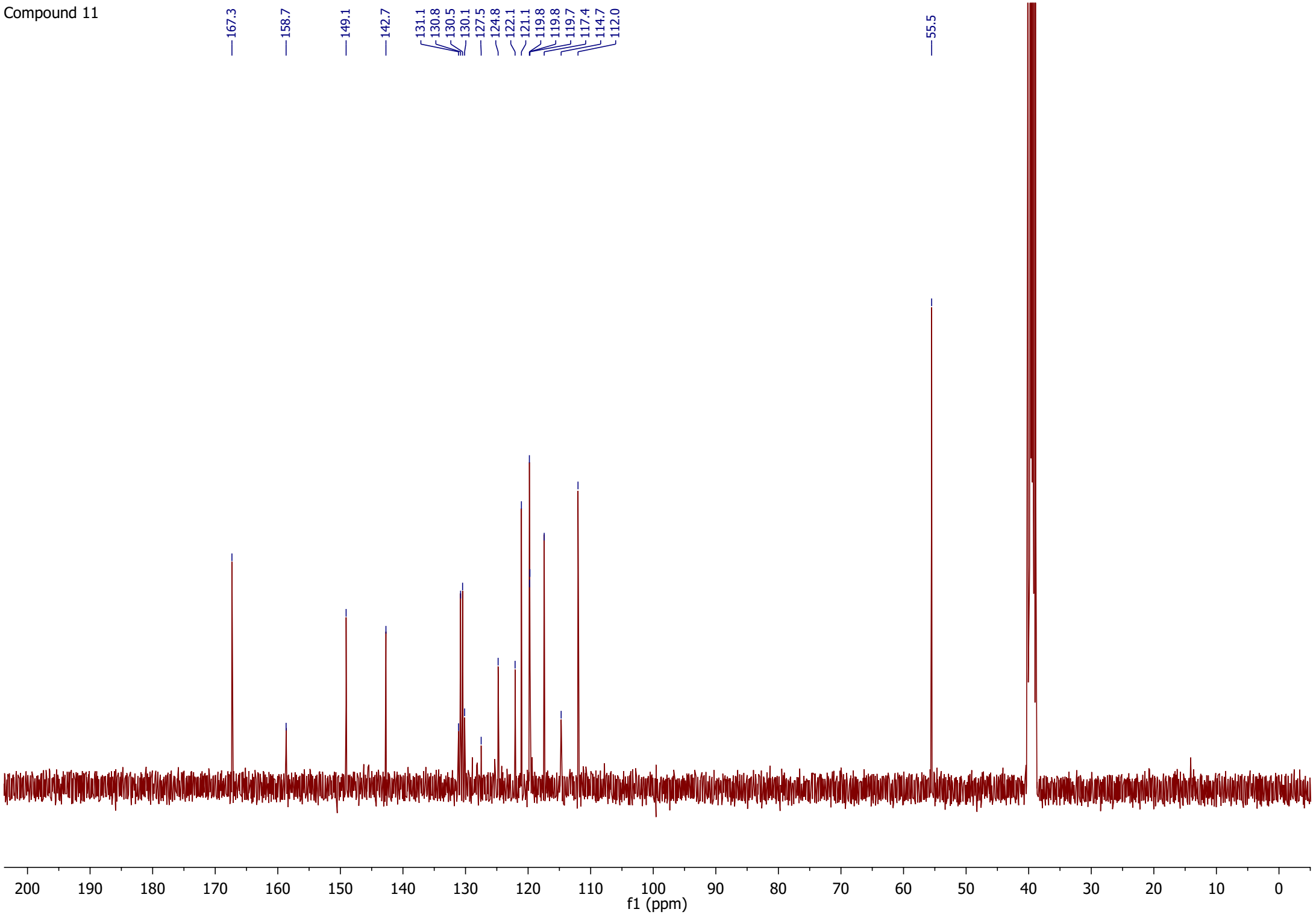

Compound 8
168.2
157.8
157.4
155.0
141.0
133.1
132.8
132.4
132.1
128.4
125.7
123.0
122.9
122.7
121.8
121.7
120.3
120.3
118.3
118.3
118.2
118.2
116.8
116.7
114.9
114.7
130
125
120
115
f1 (ppm)
f1 (ppm)


Compound 10
11.40
10.86
8.44
8.11
7.85
7.74
7.72
6.86
6.84
0.91
1.07
2.04
0.97
1.00
1.06
1.04
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

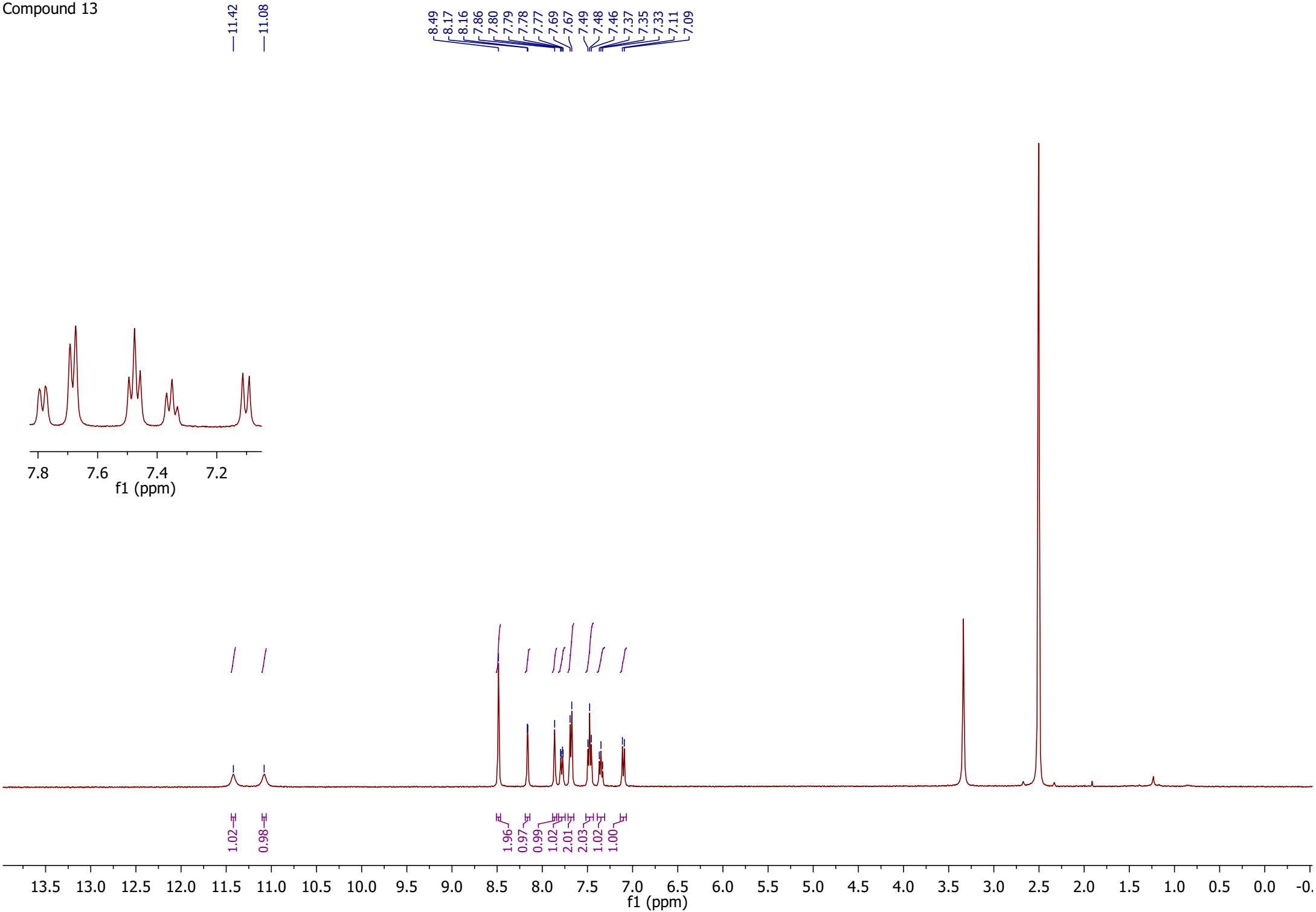

Compound 10
165.5
157.3
141.8
140.3
137.2
131.2
130.9
130.6
130.2
127.3
124.6
121.9
121.2
120.4
120.4
119.8
119.2
117.0
116.9
116.9
81.0
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

Compound 11

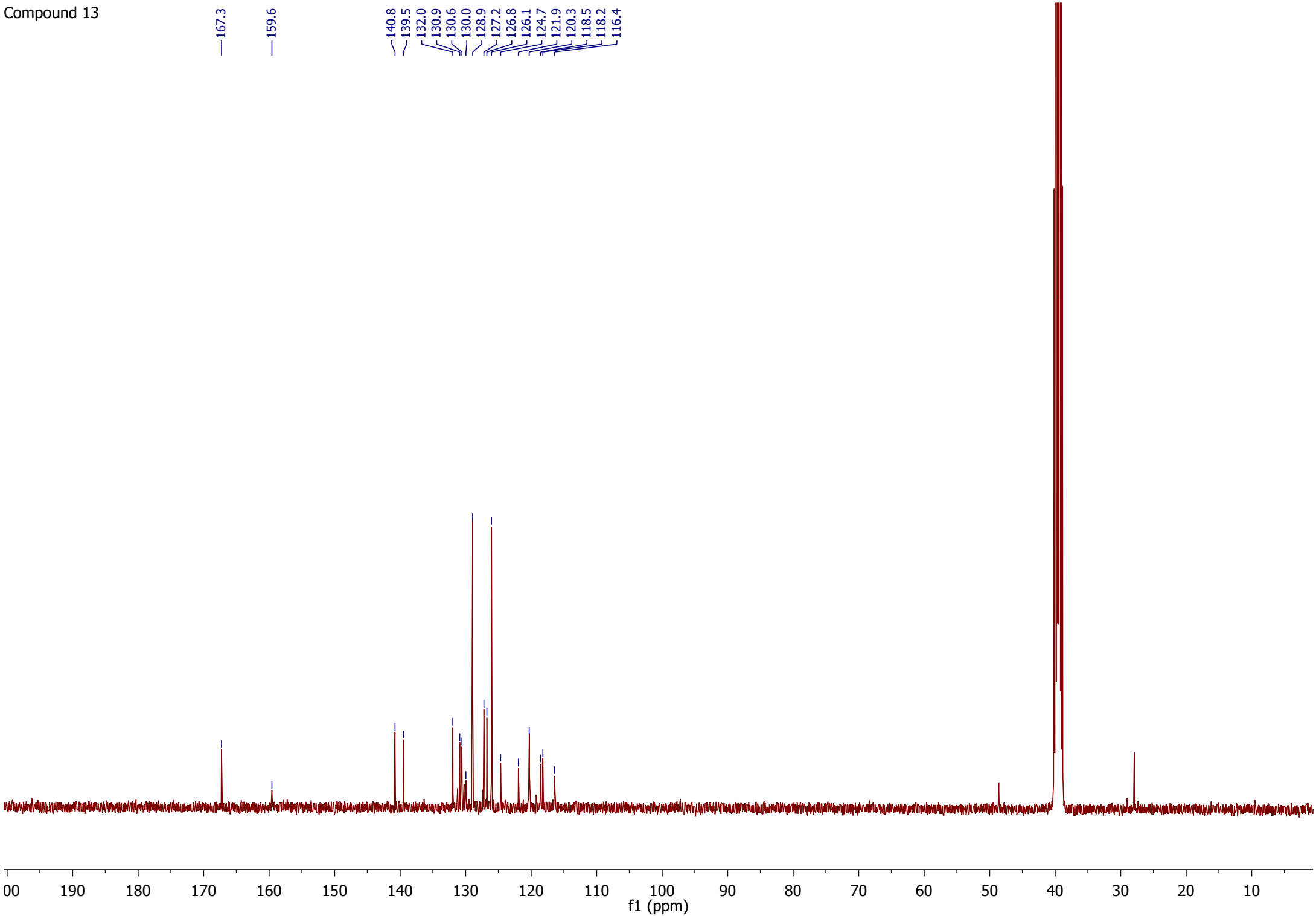



Compound 11
167.3
158.7
149.1
142.7
131.1
130.8
130.5
130.1
127.5
124.8
122.1
121.1
119.8
119.8
119.7
117.4
114.7
112.0
55.5
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

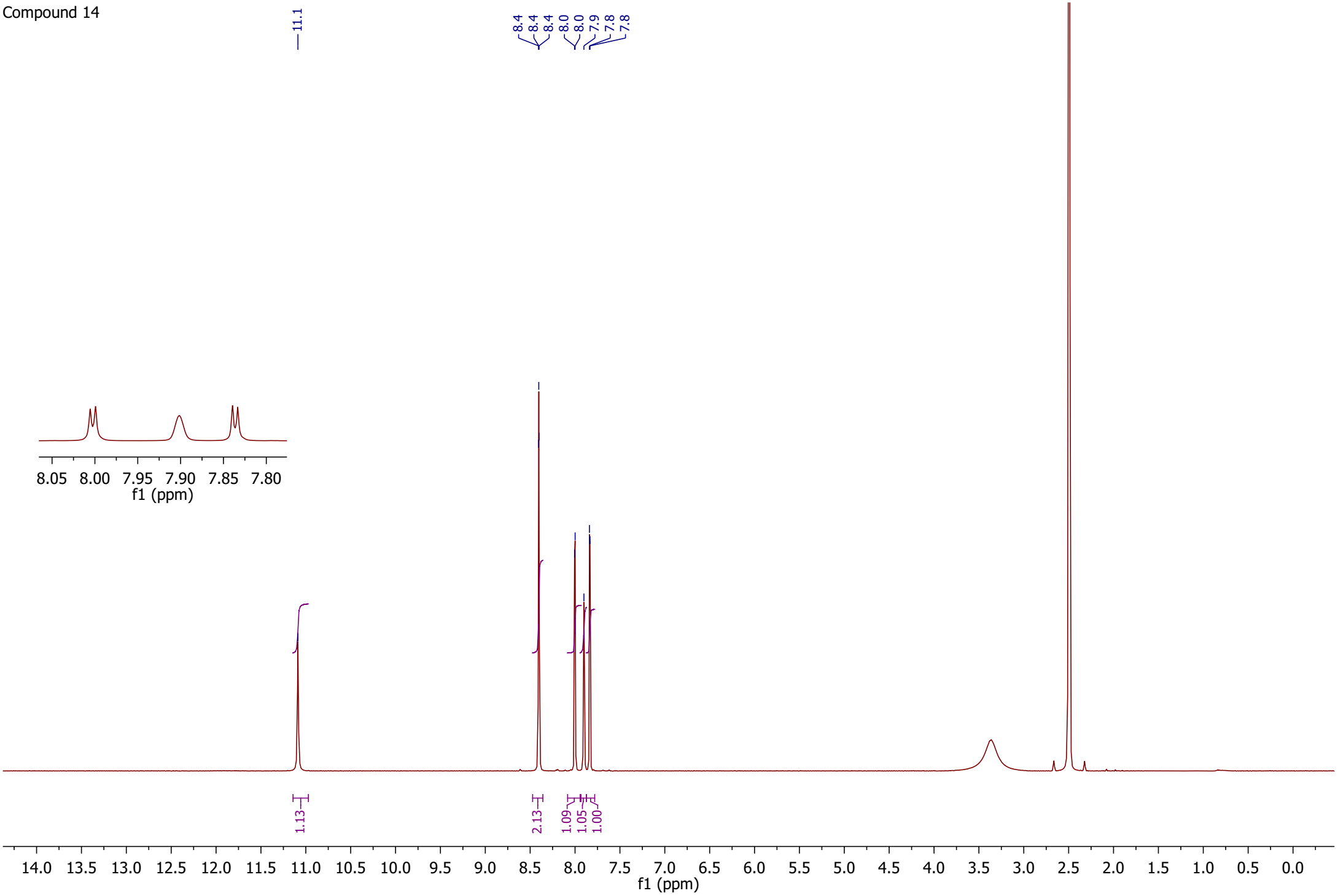
Compound 13


11.42
11.08
8.49
8.17
8.16
7.86
7.80
7.79
7.78
7.77
7.69
7.67
7.49
7.48
7.46
7.37
7.35
7.33
7.11
7.09
7.8
7.6
7.4
7.2
f1 (ppm)
1.02
0.98
1.96
0.97
0.99
1.02
2.01
2.03
1.02
1.00
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
f1 (ppm)

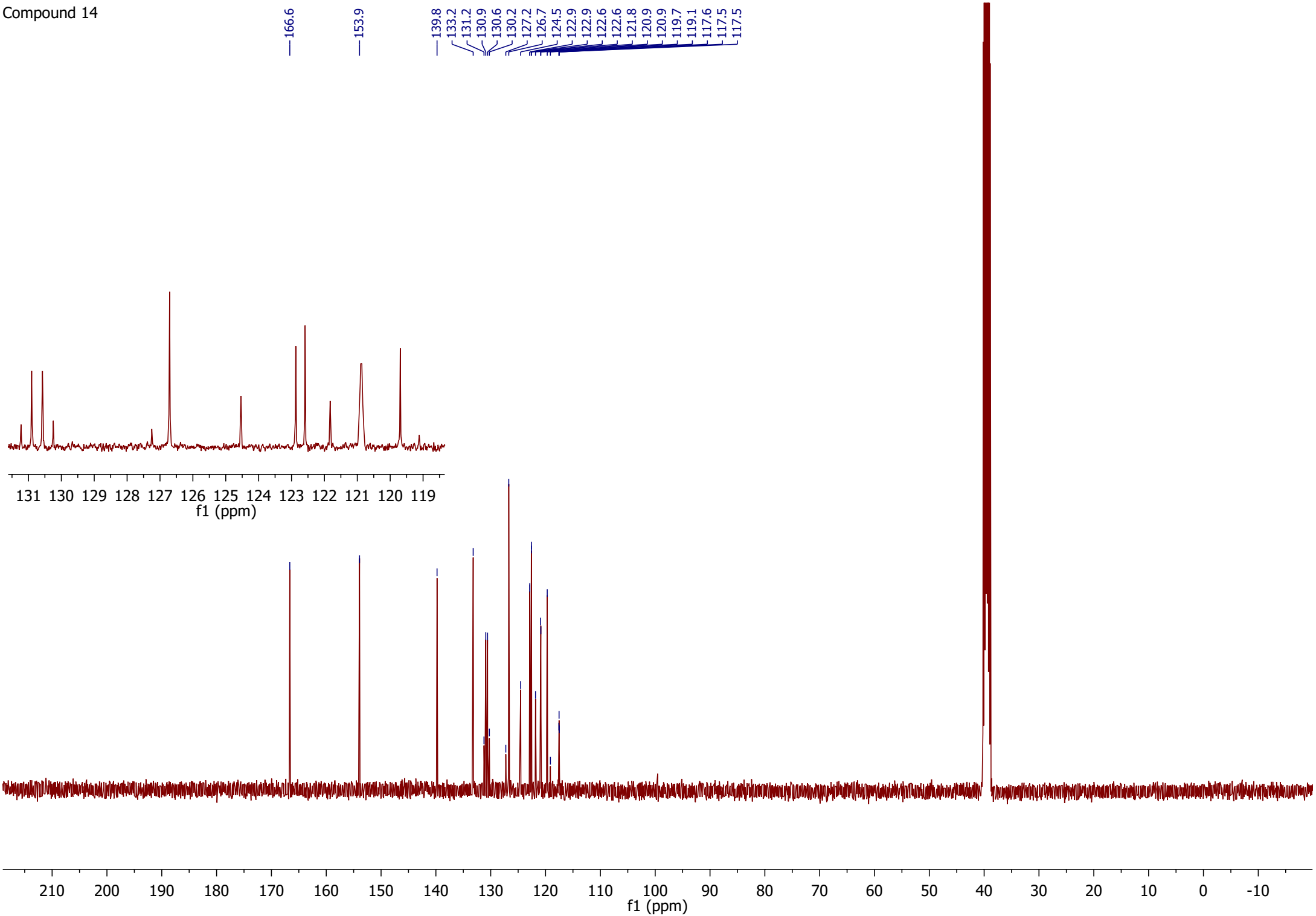
Compound 13


167.3
159.6
140.8
139.5
132.0
130.9
130.6
130.0
128.9
127.2
126.8
126.1
124.7
121.9
120.3
118.5
118.2
116.4
00
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

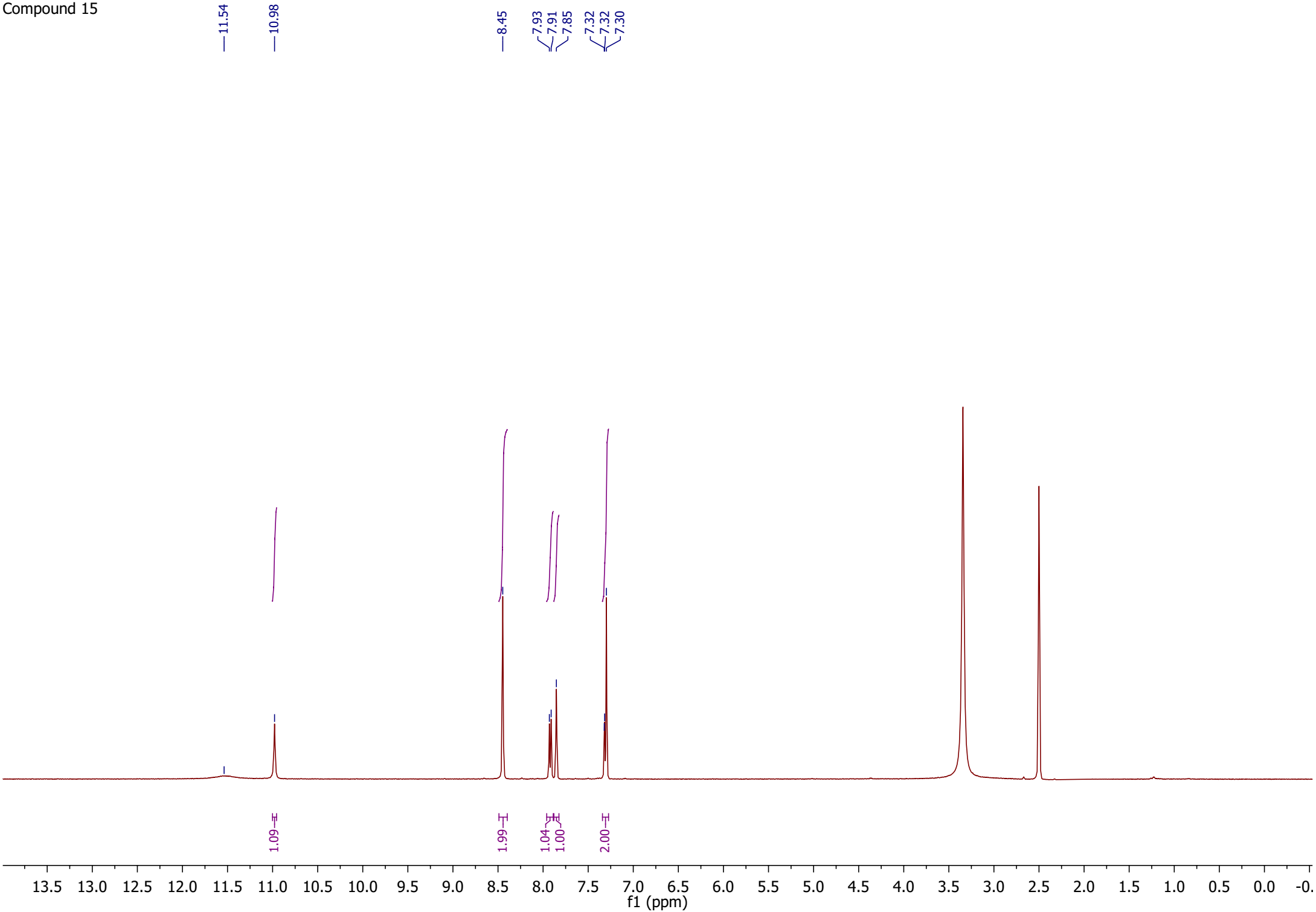
Compound 14


11.1
8.4
8.4
8.4
8.0
8.0
7.9
7.8
7.8
8.05 8.00 7.95 7.90 7.85 7.80
f1 (ppm)
1.13
2.13
1.09
1.05
1.00
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

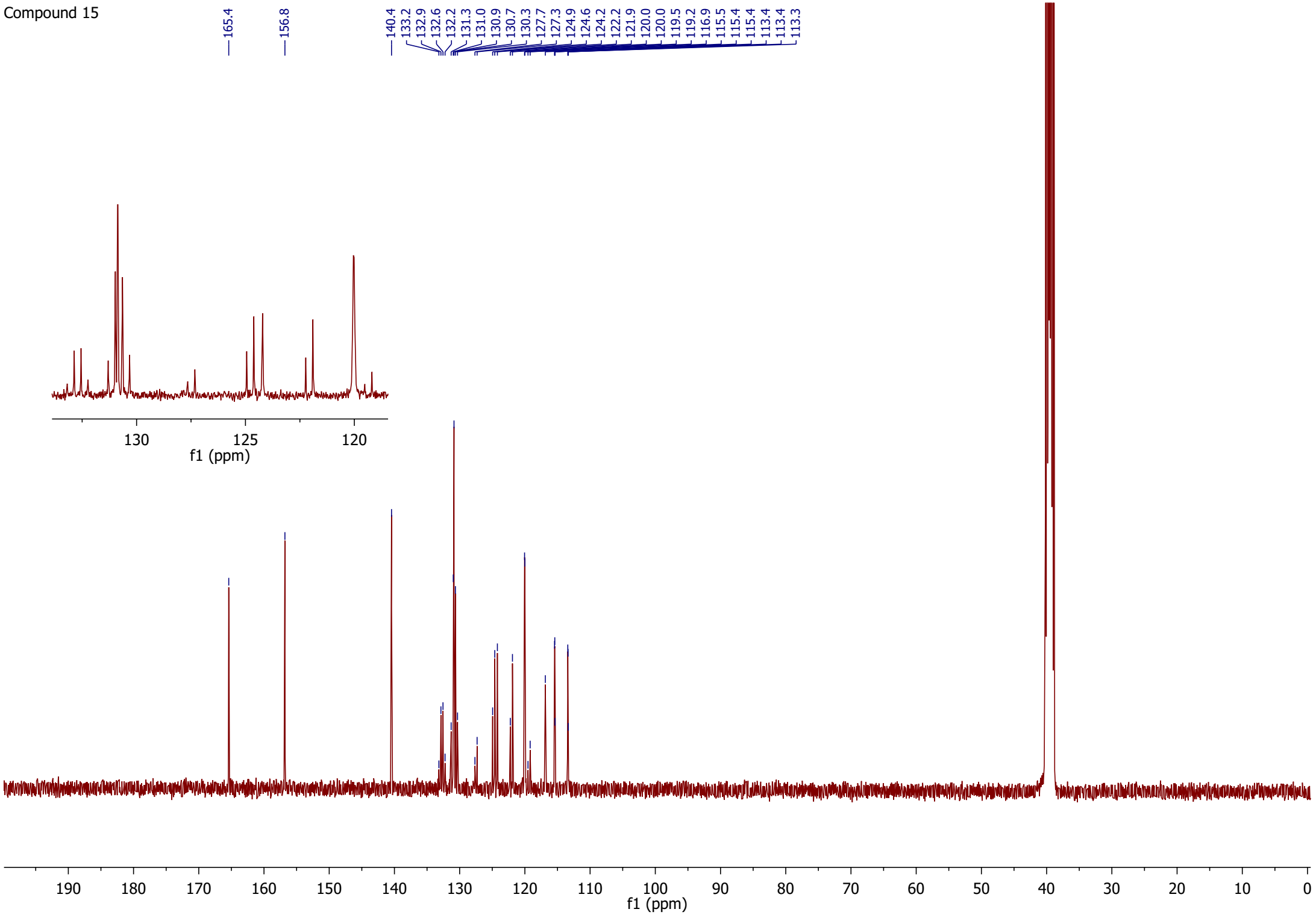
Compound 14


166.6
153.9
139.8
133.2
131.2
130.9
130.6
130.2
127.2
126.7
124.5
122.9
122.9
122.6
122.6
121.8
120.9
120.9
119.7
119.1
117.6
117.5
117.5
131 130 129 128 127 126 125 124 123 122 121 120 119
f1 (ppm)
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)

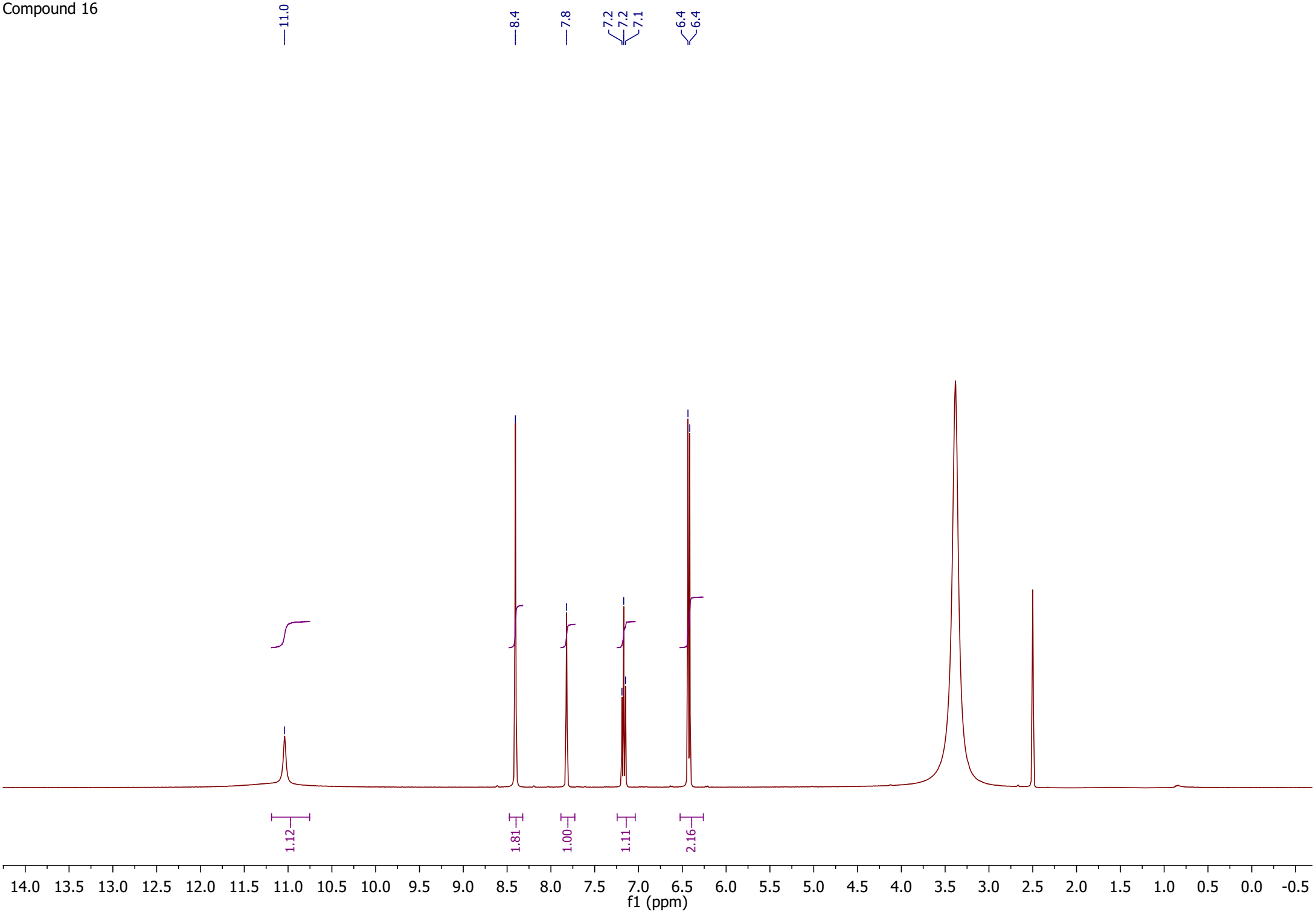
Compound 15


11.54
10.98
8.45
7.93
7.91
7.85
7.32
7.32
7.30
1.09
1.99
1.04
1.00
2.00
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

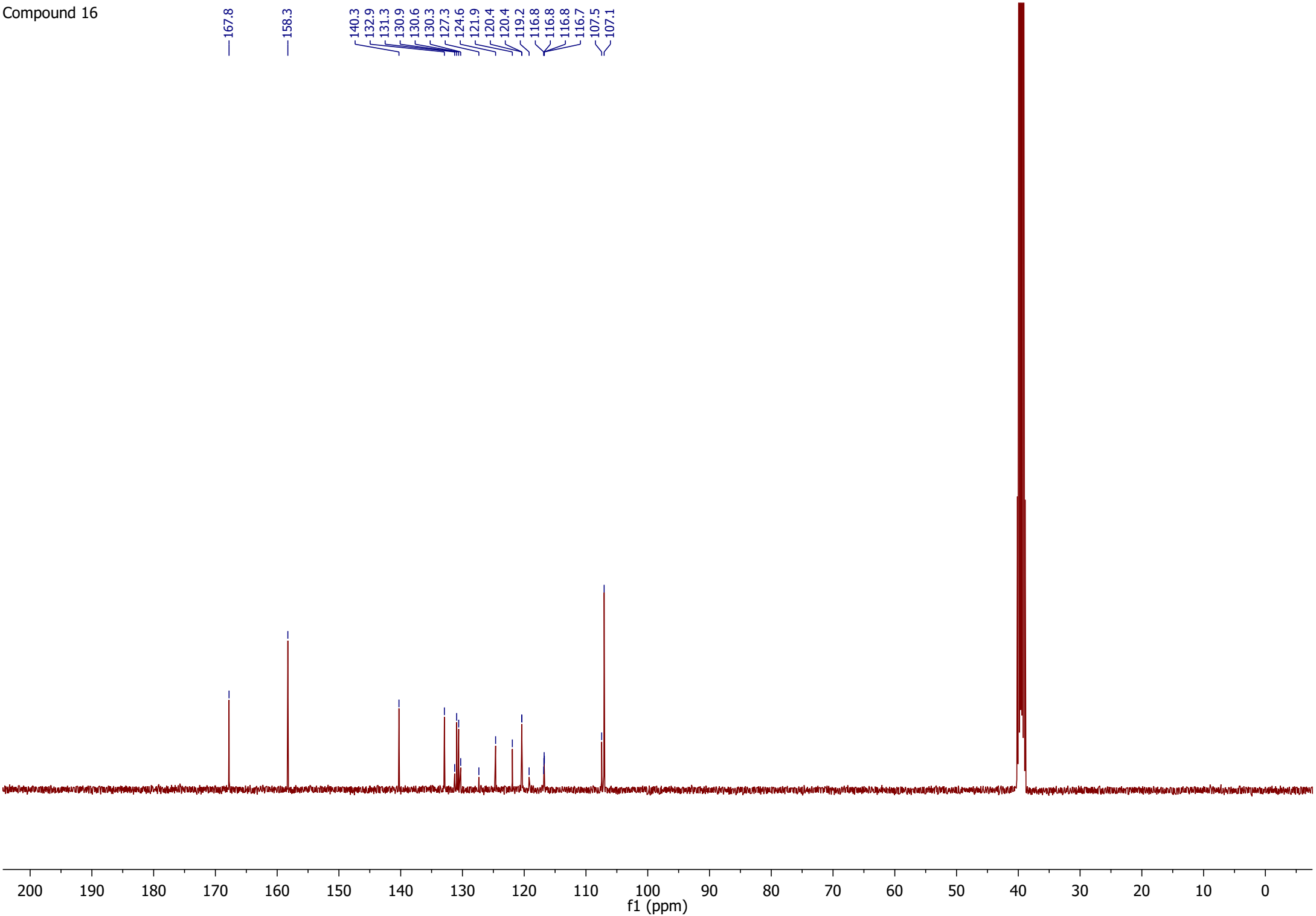
Compound 15


165.4
156.8
140.4
133.2
132.9
132.6
132.2
131.3
131.0
130.9
130.7
130.3
127.7
127.3
124.9
124.6
124.2
122.2
121.9
120.0
120.0
119.5
119.2
116.9
115.5
115.4
115.4
113.4
113.4
113.3
130
125
120
f1 (ppm)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

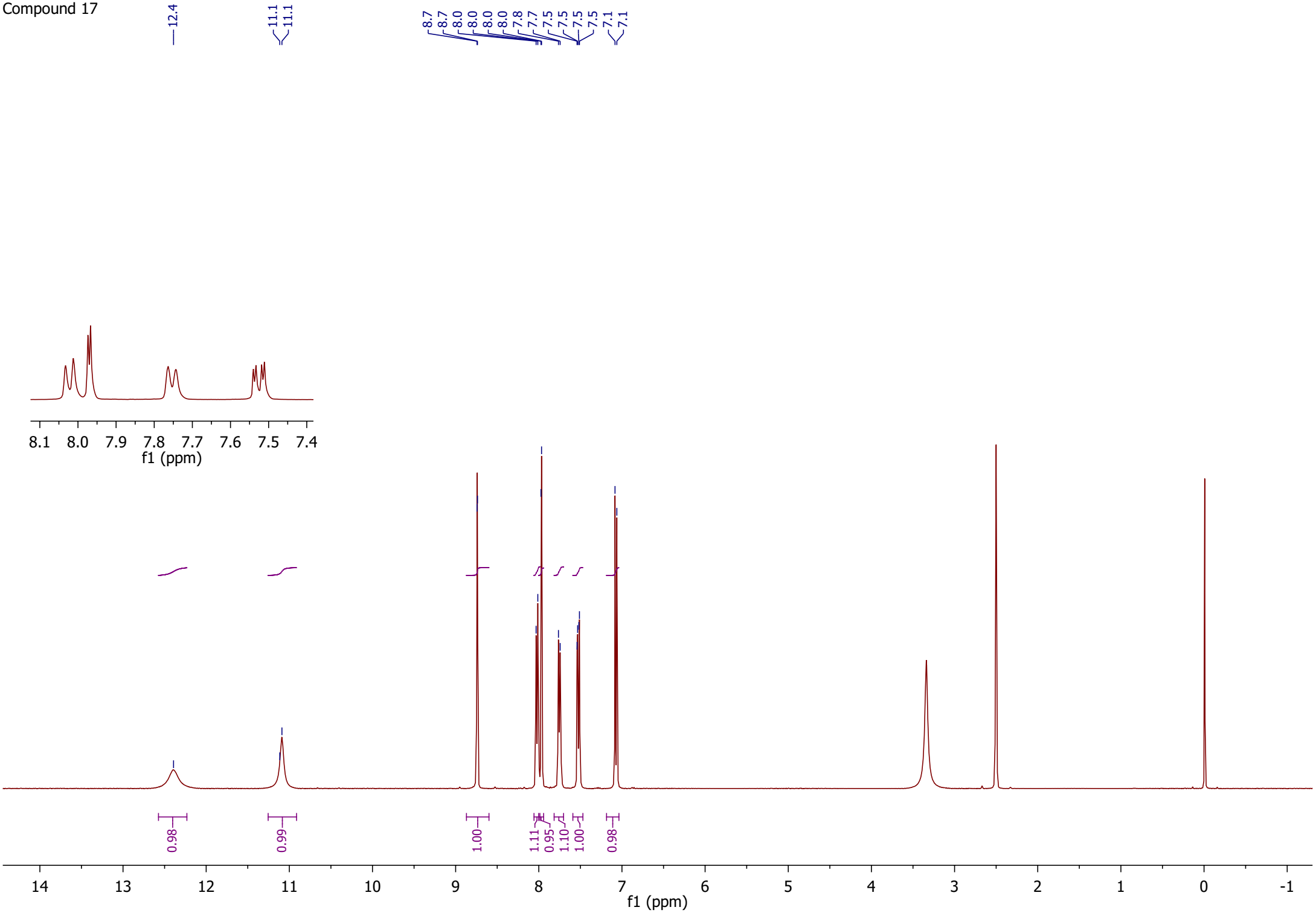
Compound 16


11.0
8.4
7.8
7.2
7.2
7.1
6.4
6.4
1.12
1.81
1.00
1.11
2.16
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

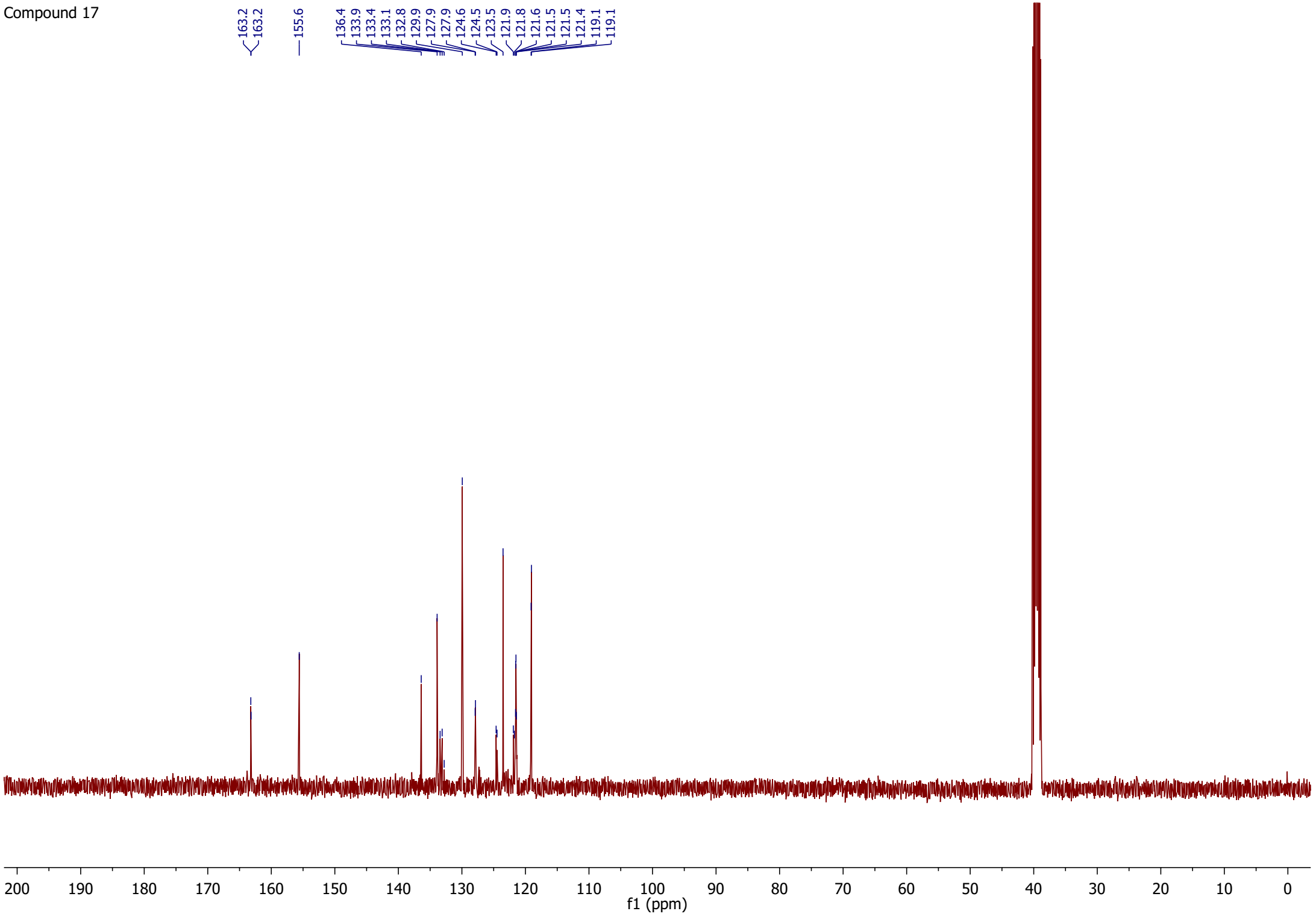
Compound 16

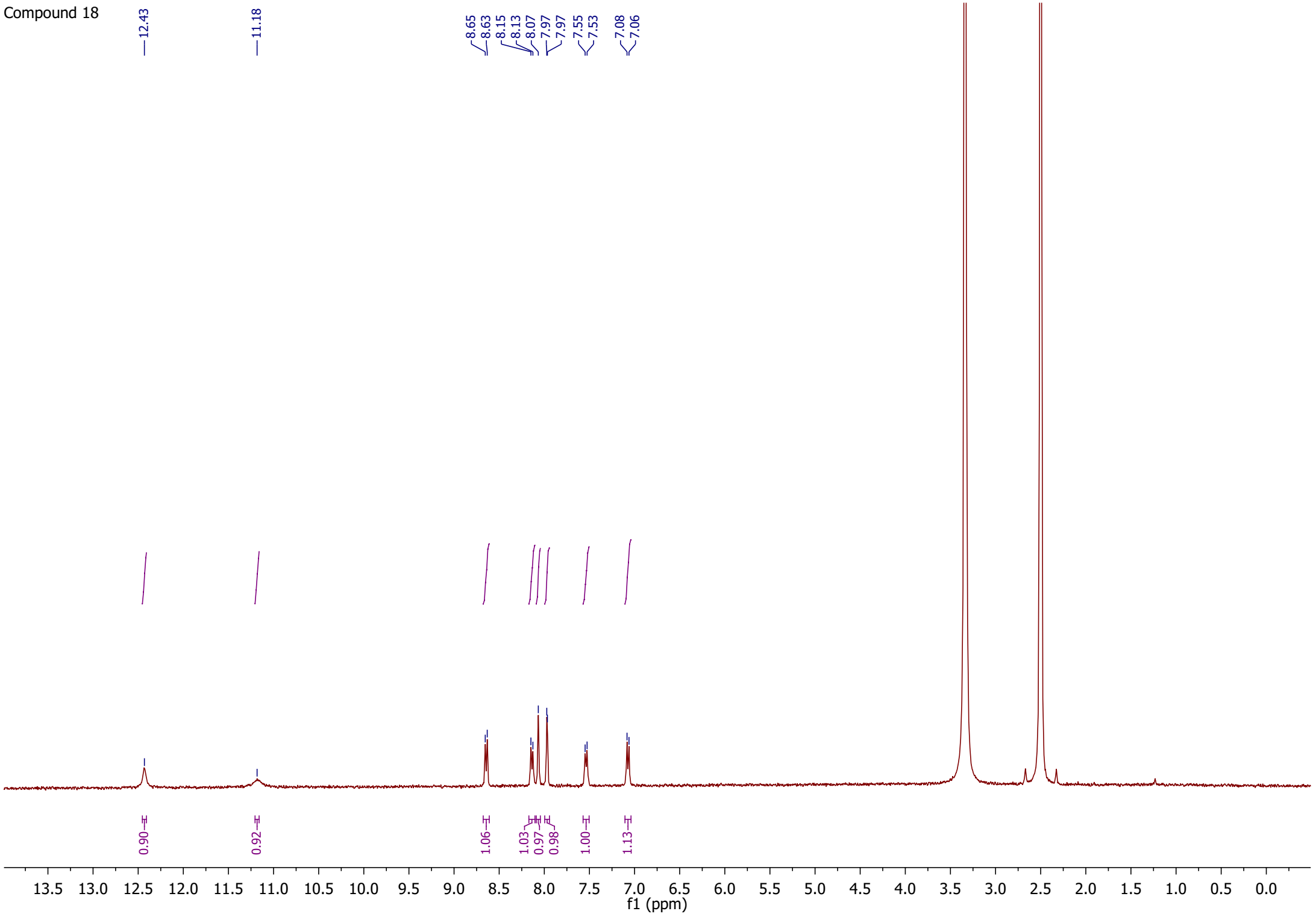

167.8
158.3
140.3
132.9
131.3
130.9
130.6
130.3
127.3
124.6
121.9
120.4
120.4
119.2
116.8
116.8
116.8
116.7
107.5
107.1
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

Compound 17

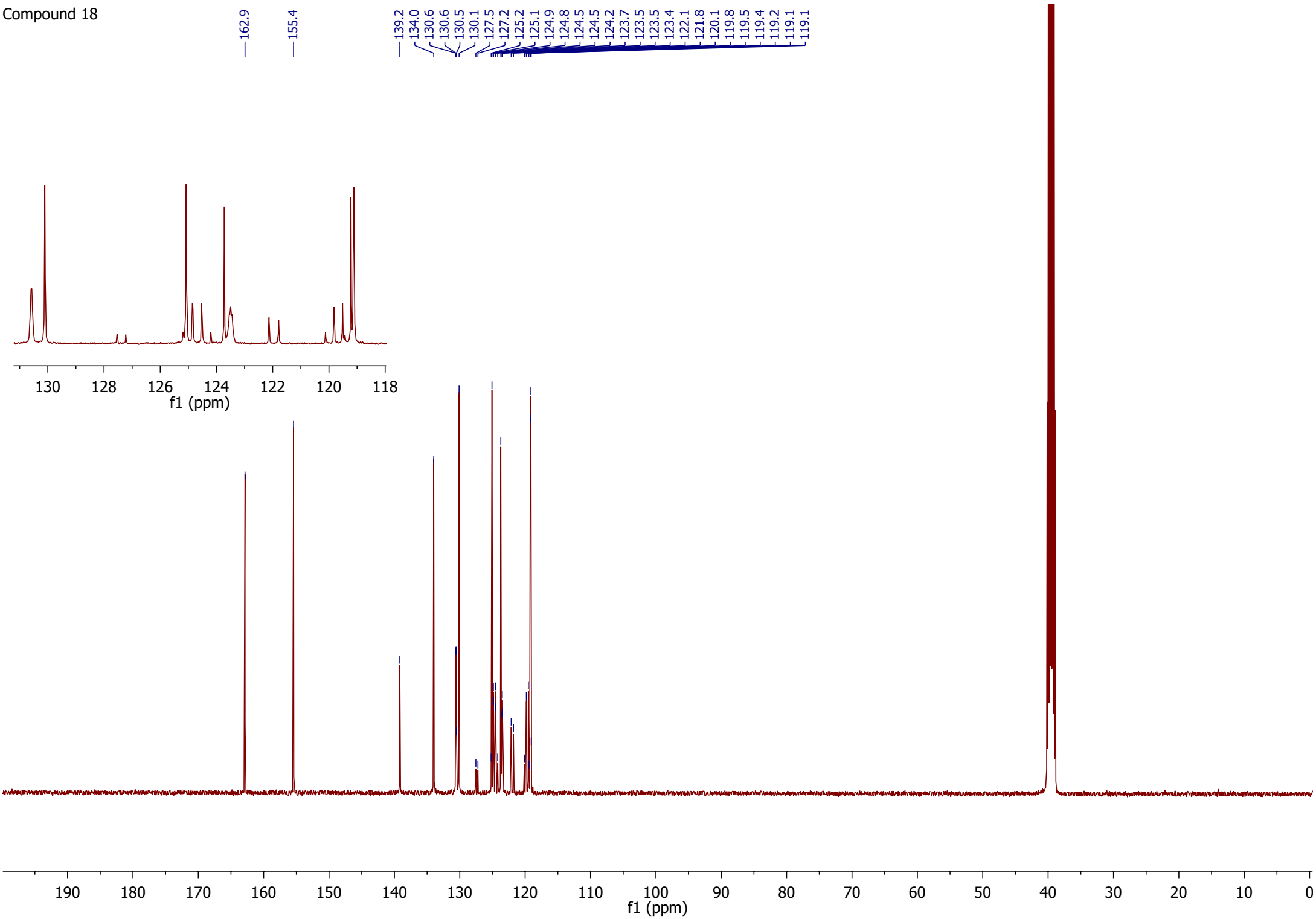

12.4
11.1
11.1
8.7
8.7
8.0
8.0
8.0
8.0
7.8
7.7
7.5
7.5
7.5
7.5
7.1
7.1
8.1 8.0 7.9 7.8 7.7 7.6 7.5 7.4
f1 (ppm)
0.98
0.99
1.00
1.11
0.95
1.10
1.00
0.98
14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1
f1 (ppm)

Compound 17

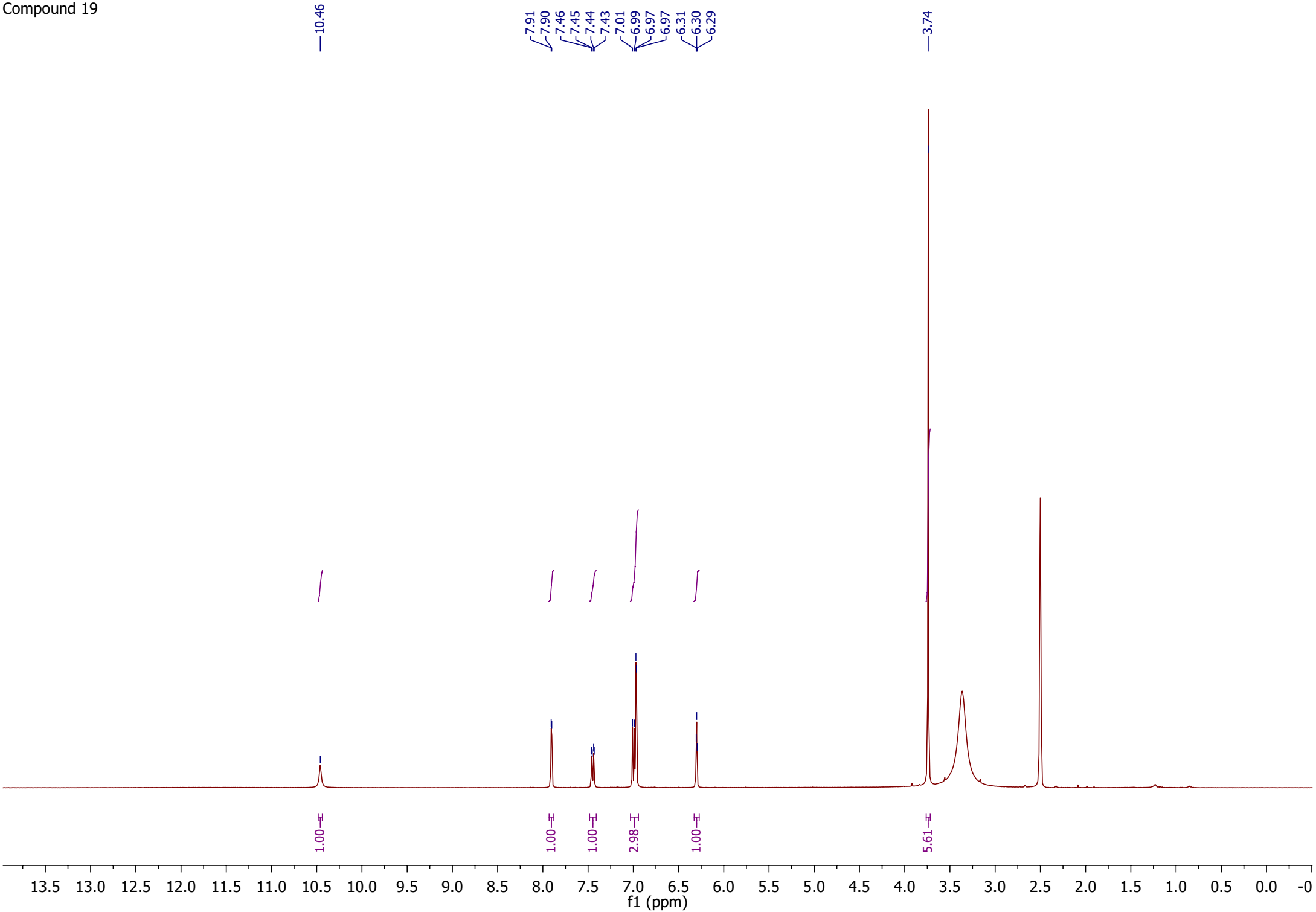

163.2
163.2
155.6
136.4
133.9
133.4
133.1
132.8
129.9
127.9
127.9
124.6
124.5
123.5
121.9
121.8
121.6
121.5
121.5
121.4
119.1
119.1
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)


Compound 18
12.43
11.18
8.65
8.63
8.15
8.13
8.07
7.97
7.97
7.55
7.53
7.08
7.06
0.90
0.92
1.06
1.03
0.97
0.98
1.00
1.13
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

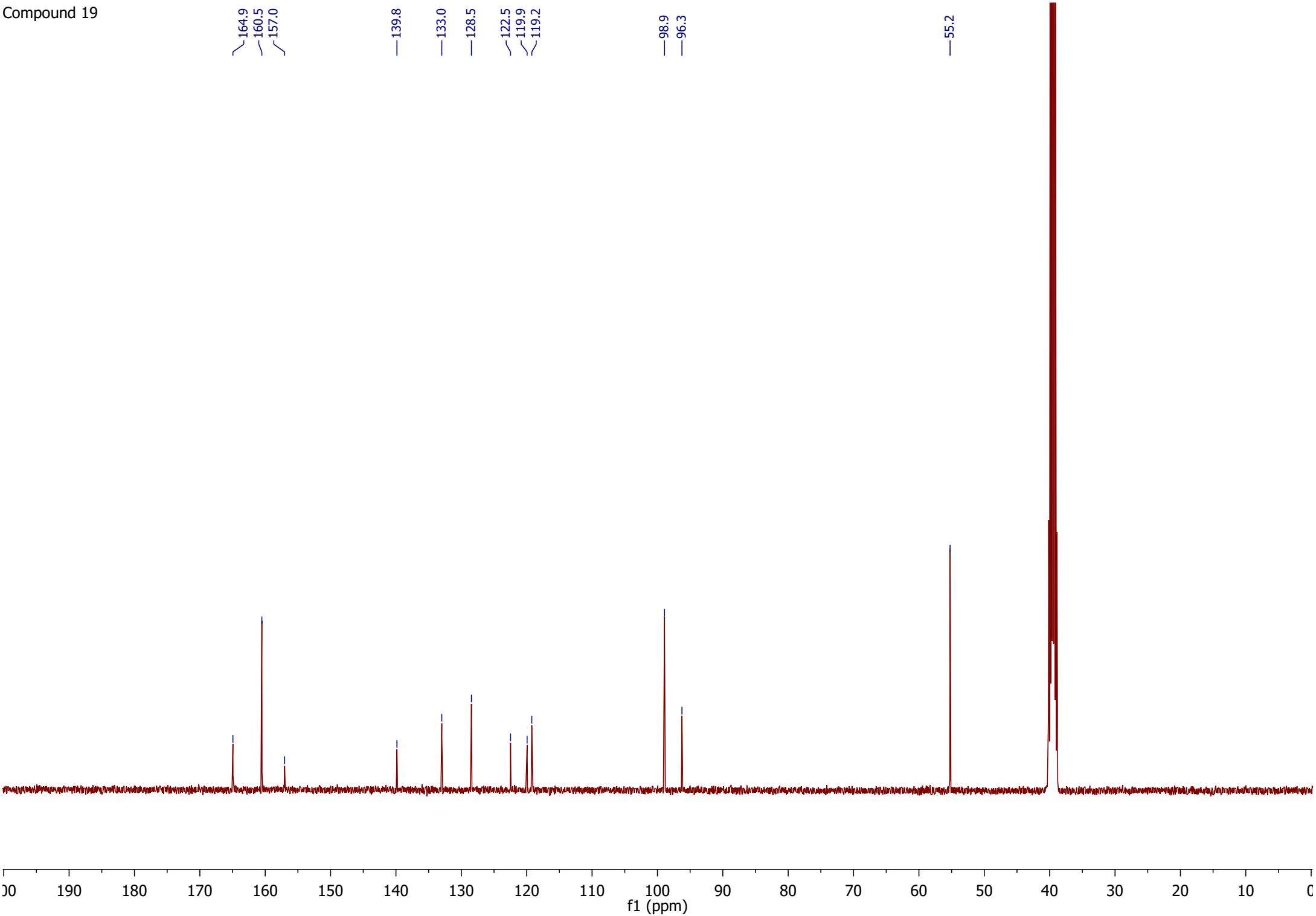
Compound 18


162.9
155.4
139.2
134.0
130.6
130.6
130.5
130.1
127.5
127.2
125.2
125.1
124.9
124.8
124.5
124.5
124.2
123.7
123.5
123.5
123.4
122.1
121.8
120.1
119.8
119.5
119.4
119.2
119.1
119.1
130
128
126
124
122
120
118
f1 (ppm)
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

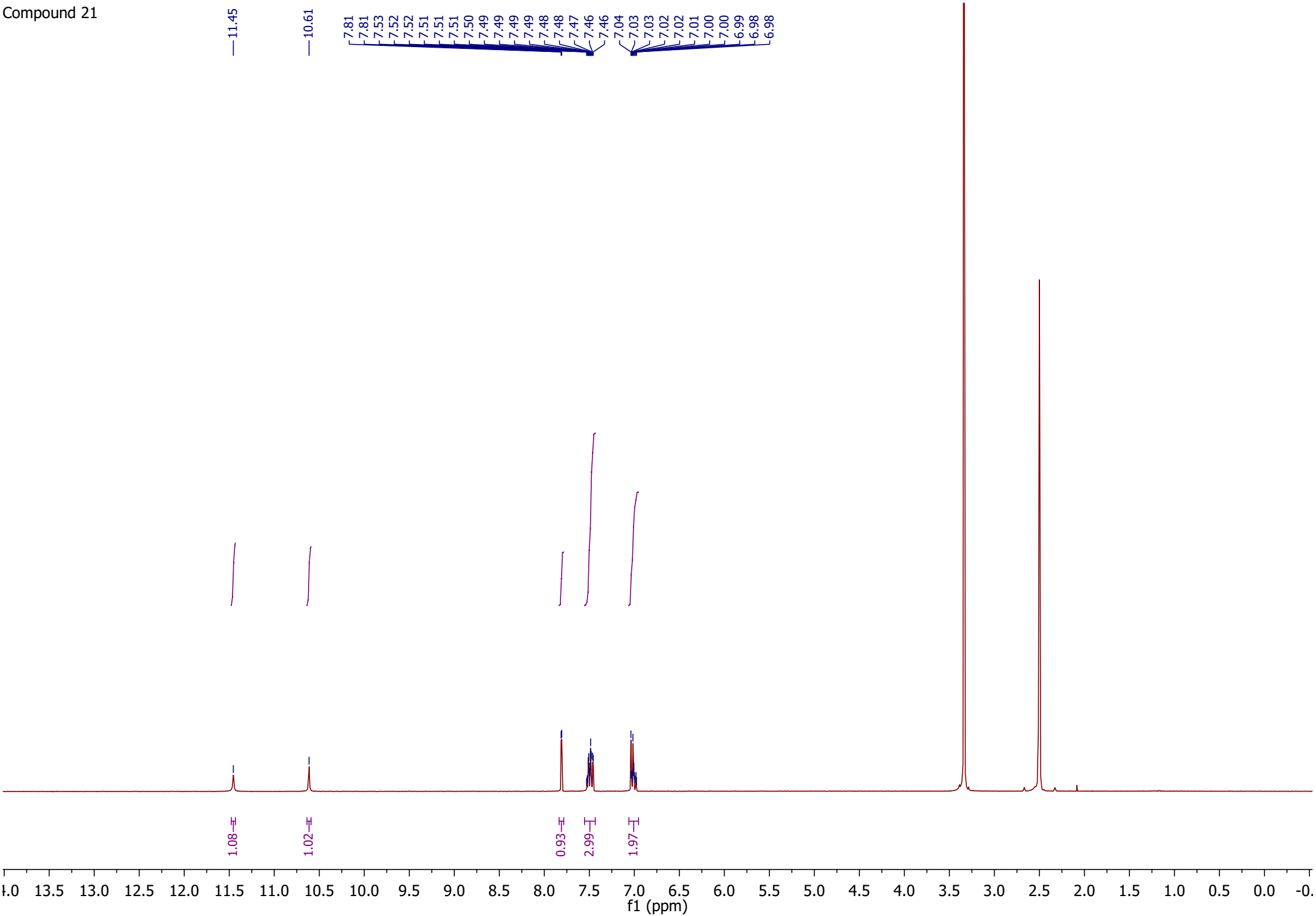
Compound 19


10.46
7.91
7.90
7.46
7.45
7.44
7.43
7.01
6.99
6.97
6.97
6.31
6.30
6.29
3.74
1.00
1.00
1.00
2.98
1.00
5.61
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

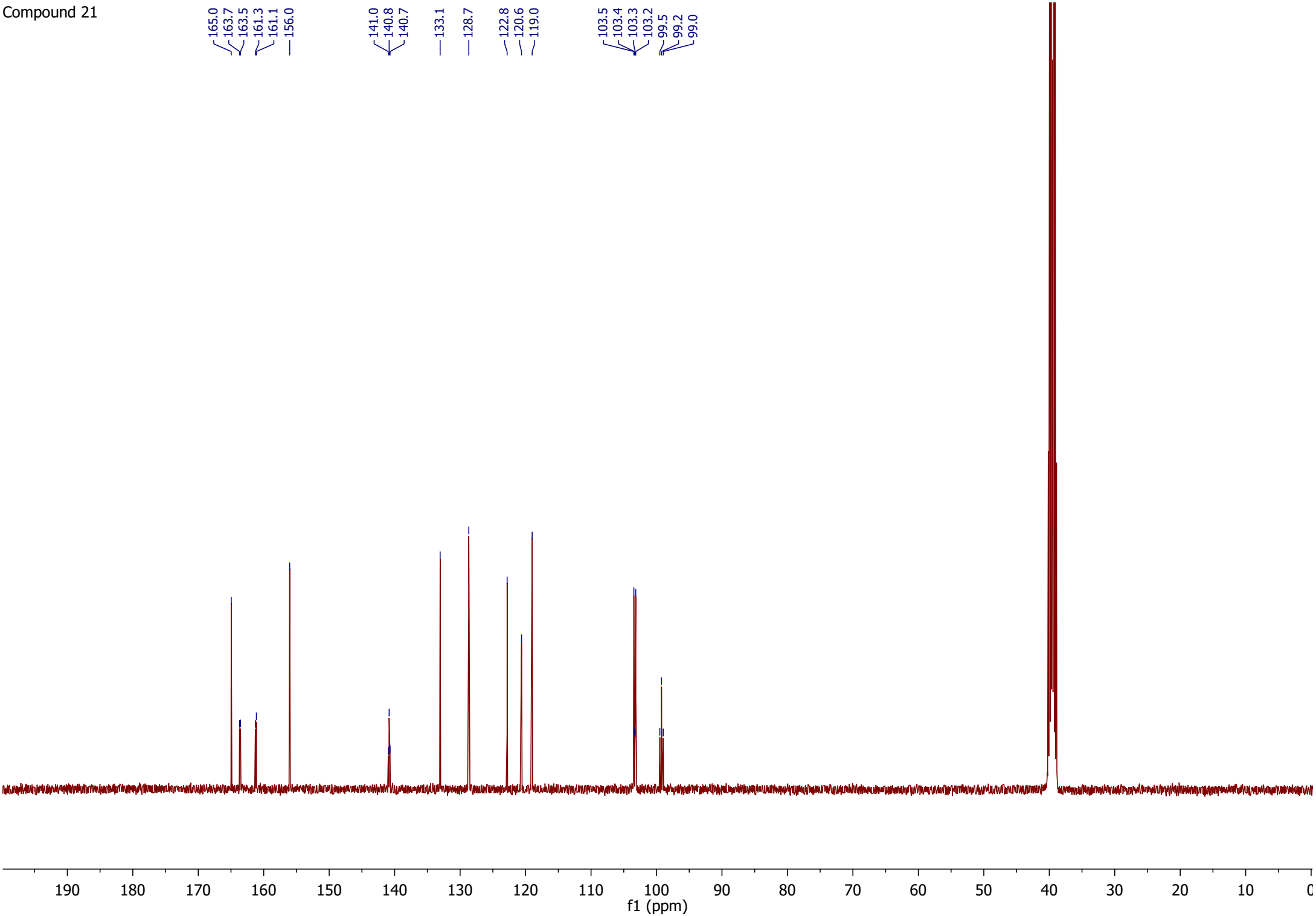
Compound 19


164.9
160.5
157.0
139.8
133.0
128.5
122.5
119.9
119.2
98.9
96.3
55.2
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

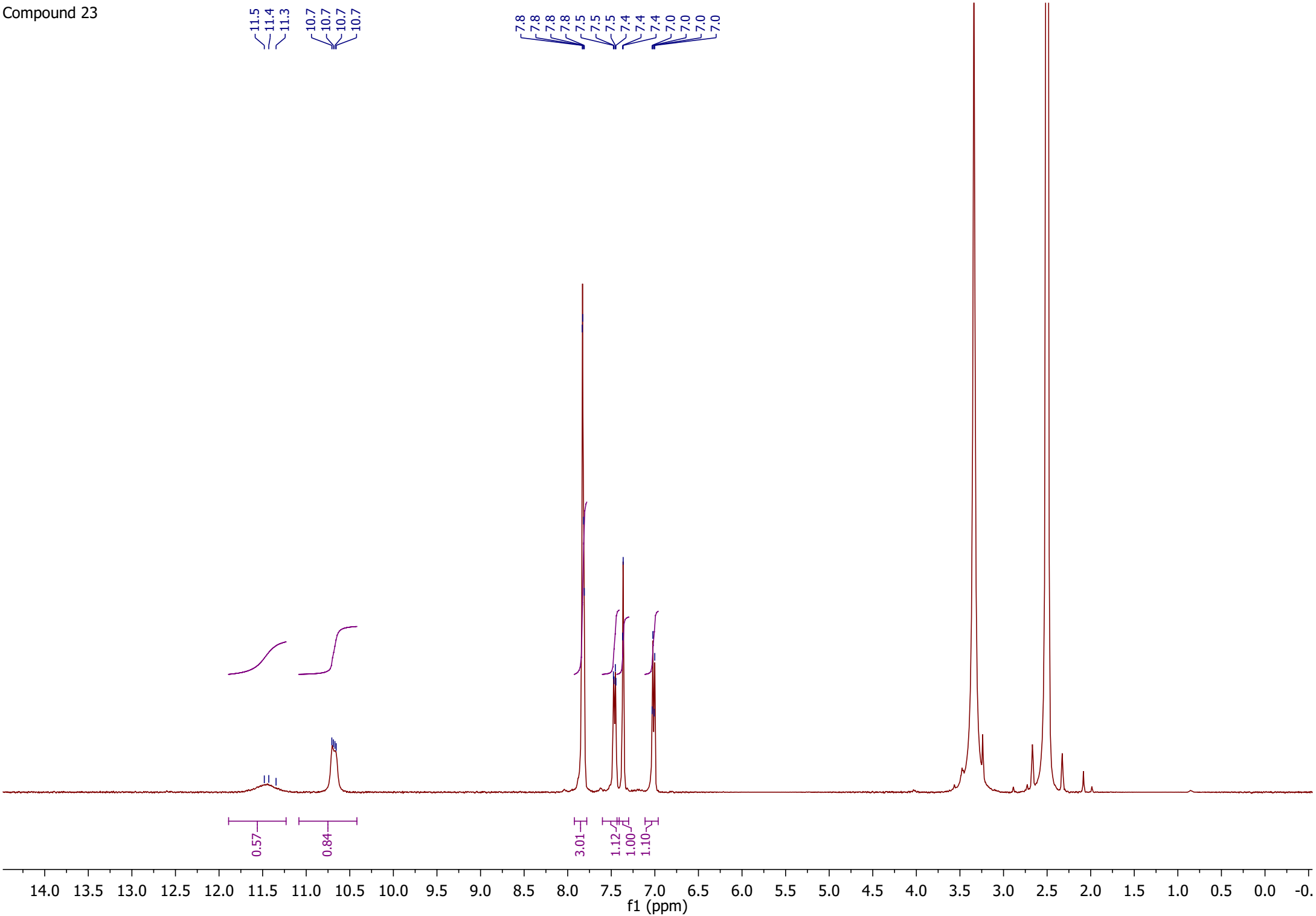
Compound 21


11.45
10.61
7.81
7.81
7.53
7.52
7.52
7.51
7.51
7.51
7.50
7.49
7.49
7.49
7.49
7.48
7.48
7.47
7.46
7.46
7.04
7.03
7.03
7.02
7.02
7.01
7.00
7.00
6.99
6.98
6.98
1.08
1.02
0.93
2.99
1.97
f1 (ppm)

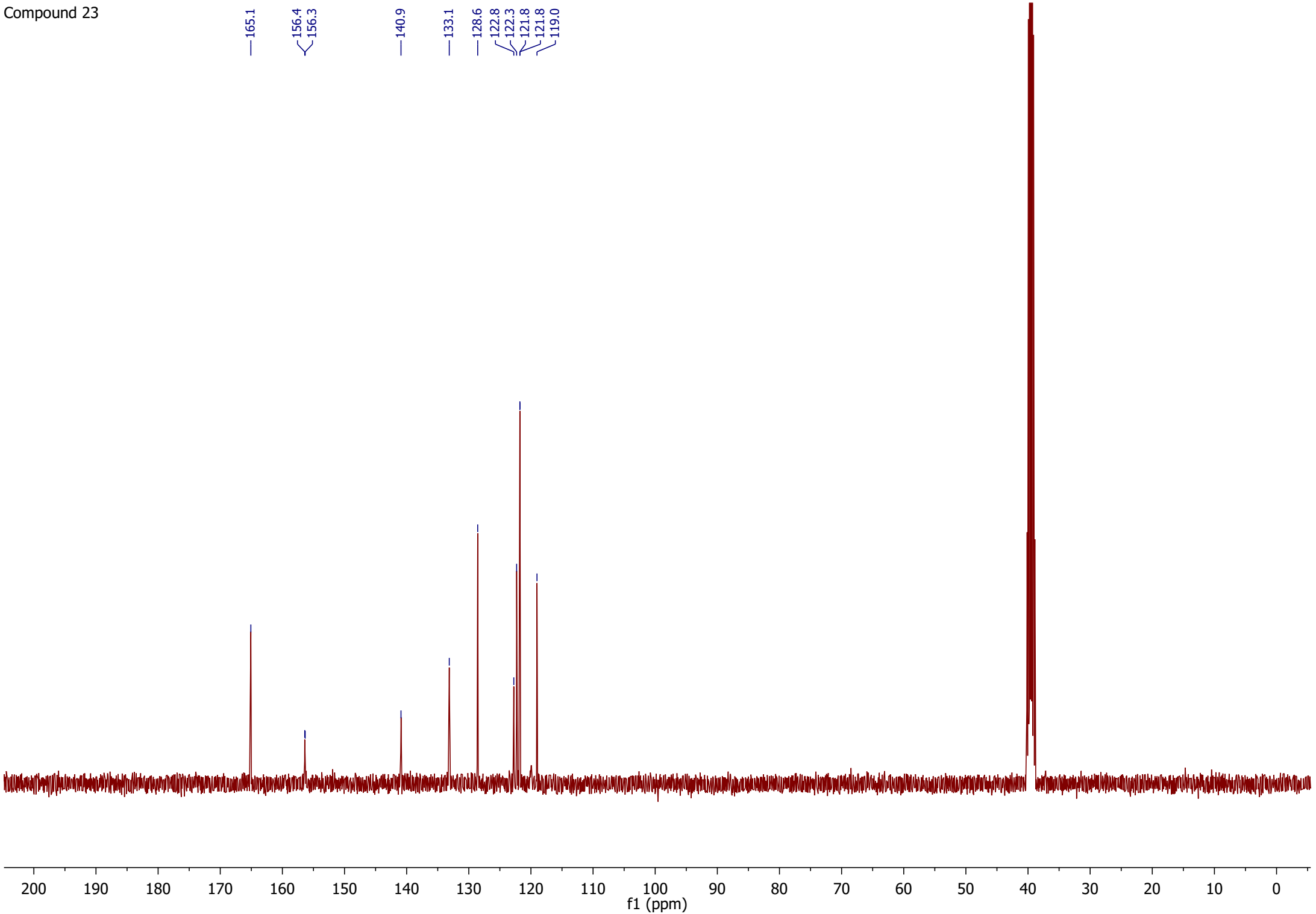
Compound 21


165.0
163.7
163.5
161.3
161.1
156.0
141.0
140.8
140.7
133.1
128.7
122.8
120.6
119.0
103.5
103.4
103.3
103.2
99.5
99.2
99.0
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

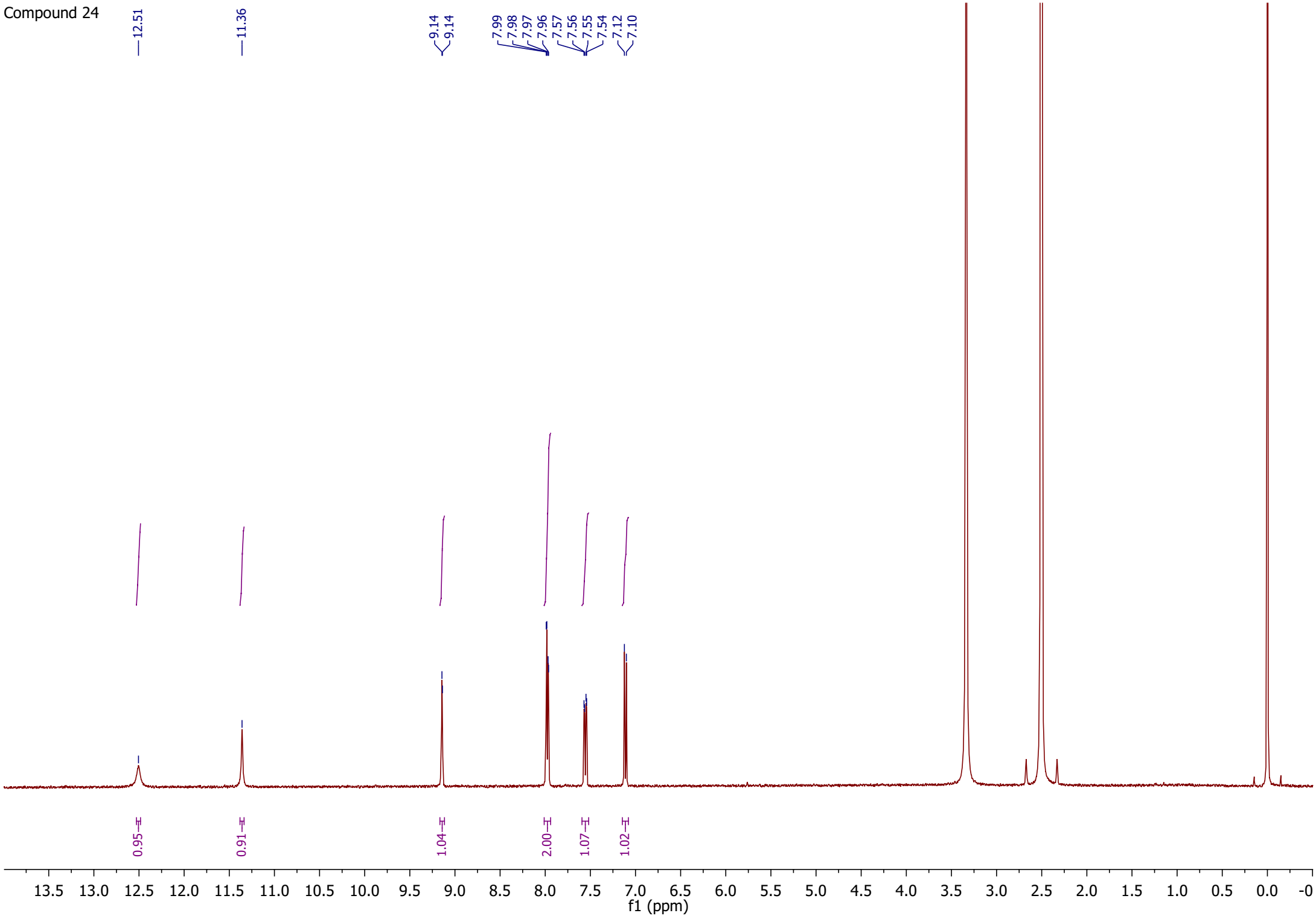
Compound 23


11.5
11.4
11.3
10.7
10.7
10.7
10.7
7.8
7.8
7.8
7.8
7.5
7.5
7.5
7.4
7.4
7.4
7.0
7.0
7.0
7.0
0.57
0.84
3.01
1.12
1.00
1.10
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

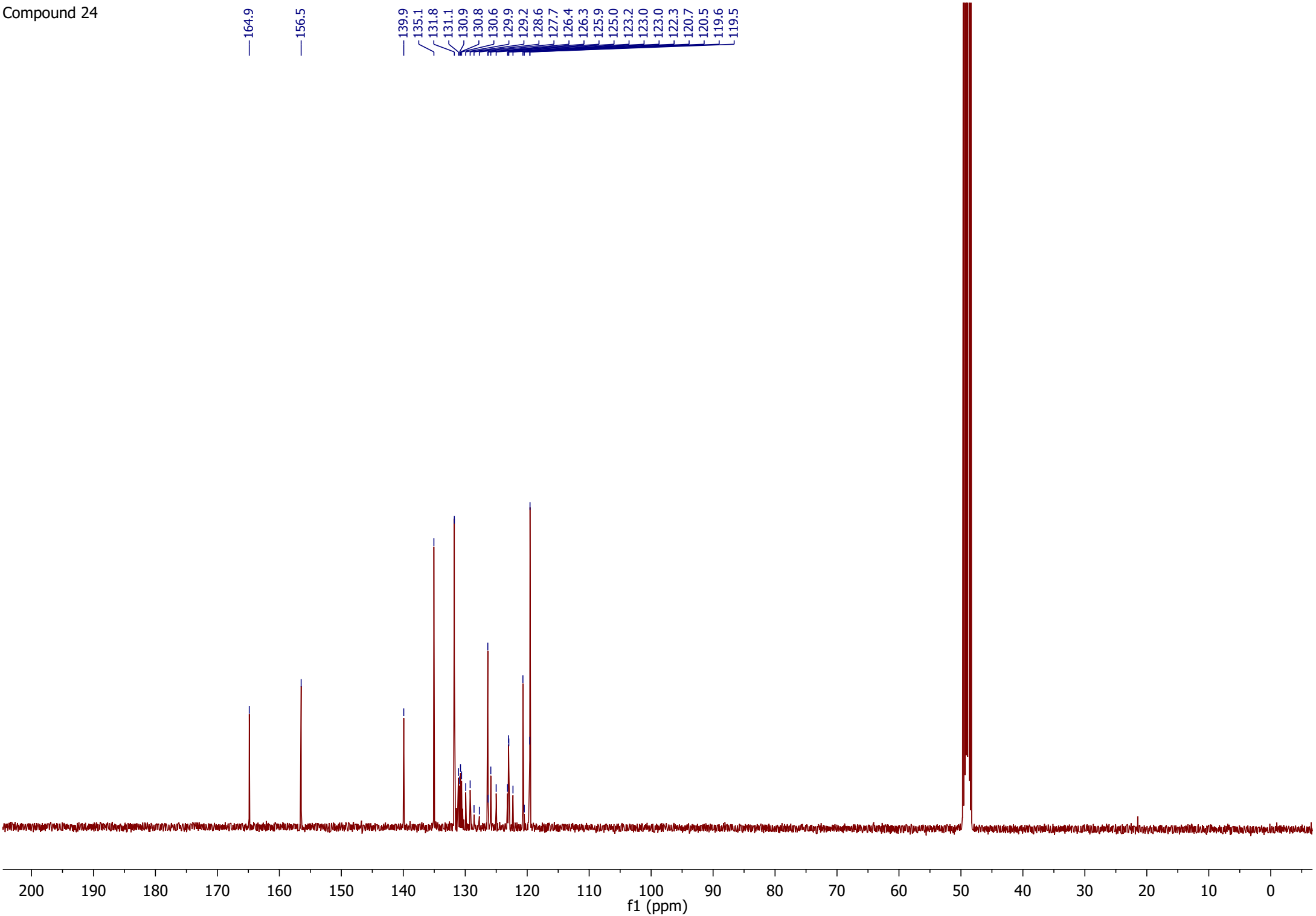
Compound 23


165.1
156.4
156.3
140.9
133.1
128.6
122.8
122.3
121.8
121.8
119.0
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

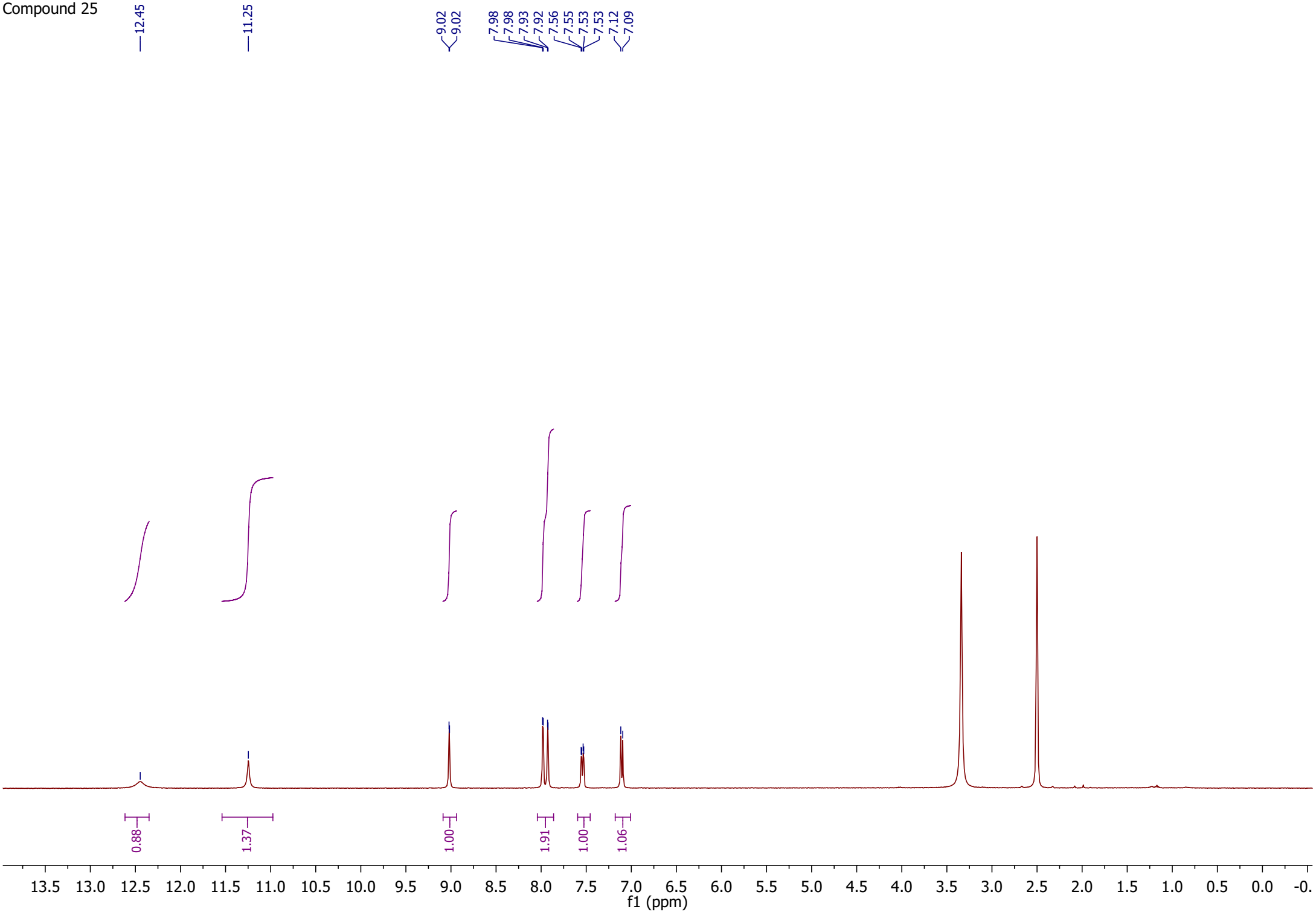
Compound 24


12.51
11.36
9.14
9.14
7.99
7.98
7.97
7.96
7.57
7.56
7.55
7.54
7.12
7.10
0.95
0.91
1.04
2.00
1.07
1.02
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

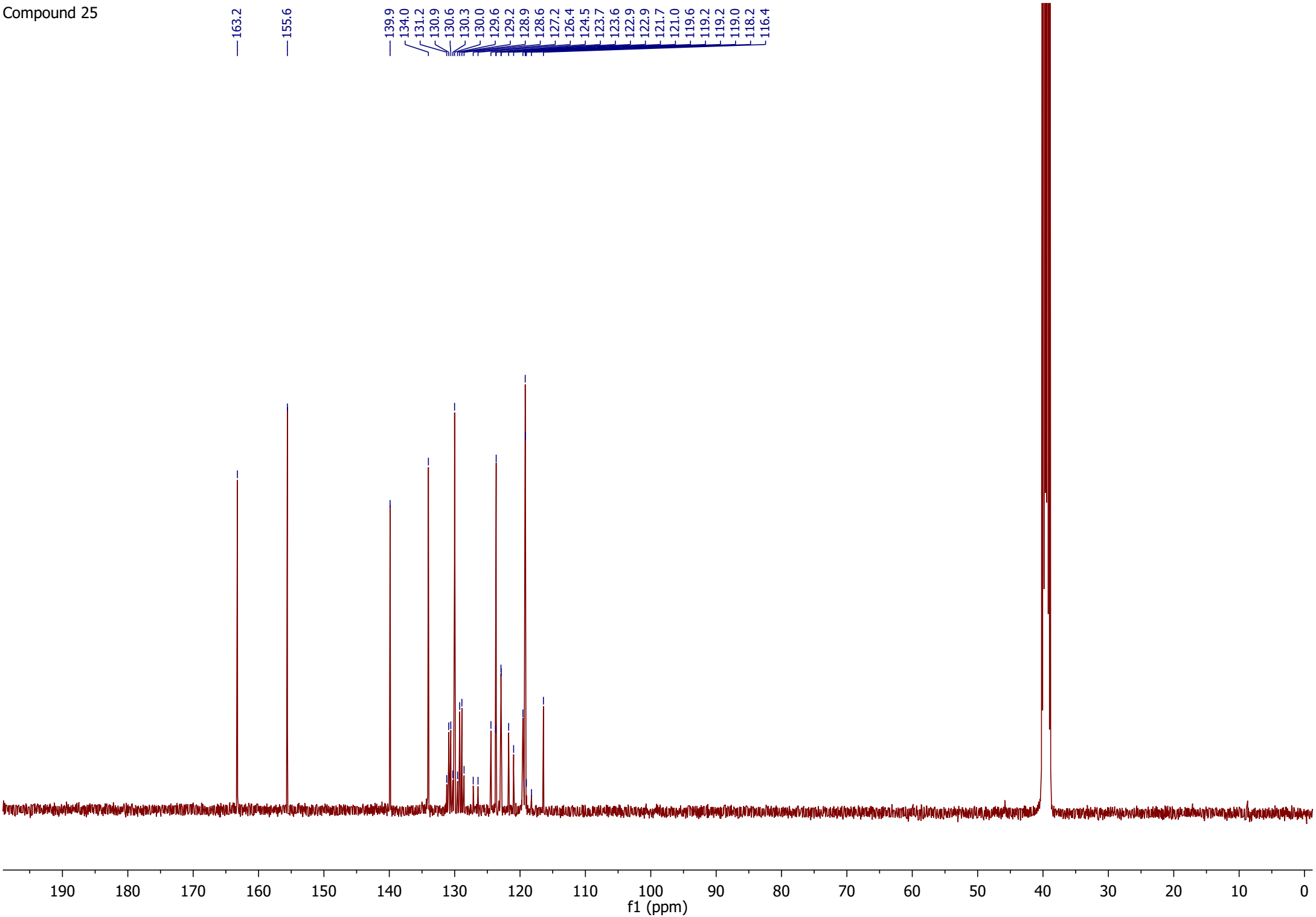
Compound 24


164.9
156.5
139.9
135.1
131.8
131.1
130.9
130.8
130.6
129.9
129.2
128.6
127.7
126.4
126.3
125.9
125.0
123.2
123.0
123.0
122.3
120.7
120.5
119.6
119.5
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

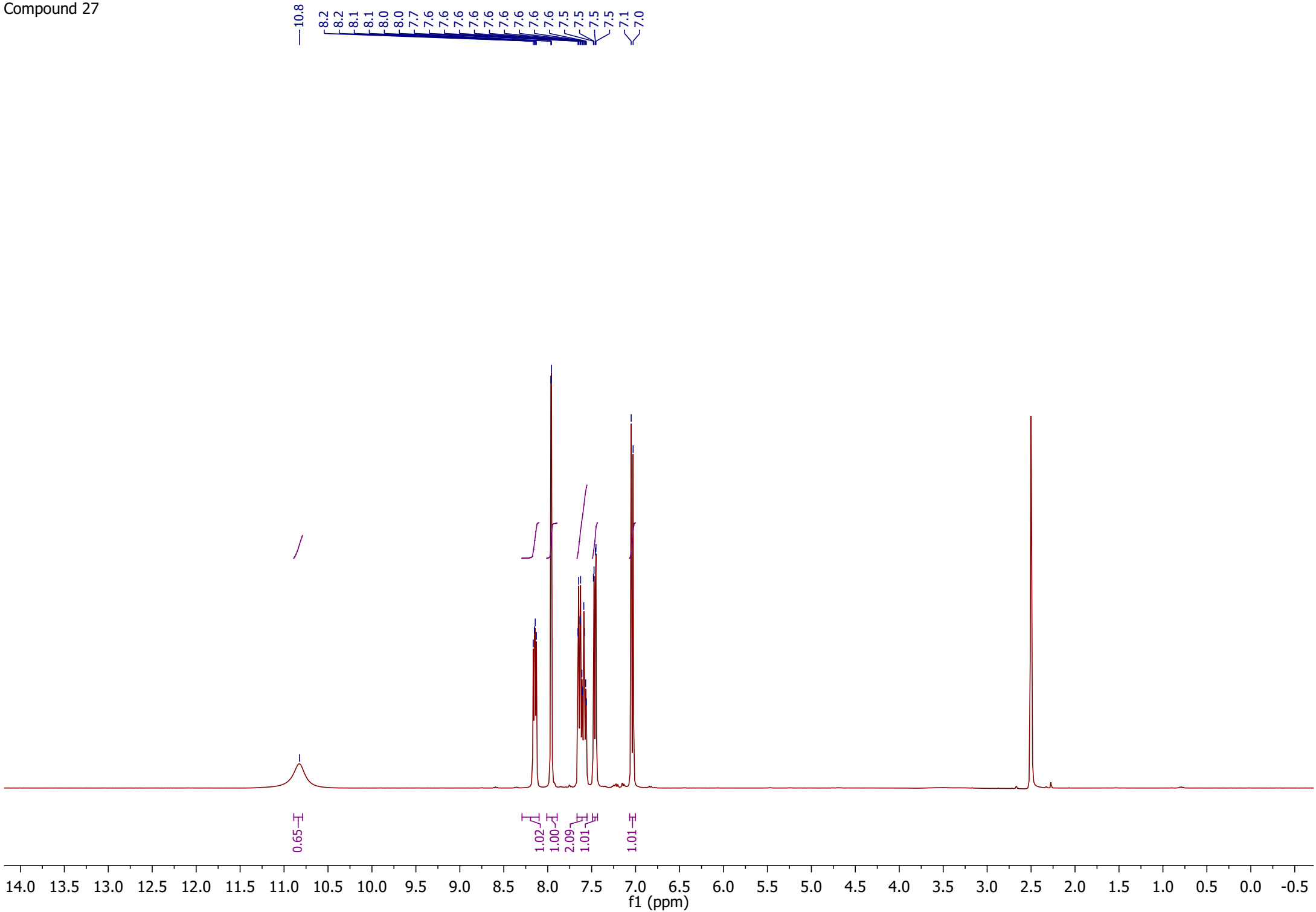
Compound 25


12.45
11.25
9.02
9.02
7.98
7.98
7.93
7.92
7.56
7.55
7.53
7.53
7.12
7.09
0.88
1.37
1.00
1.91
1.00
1.06
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

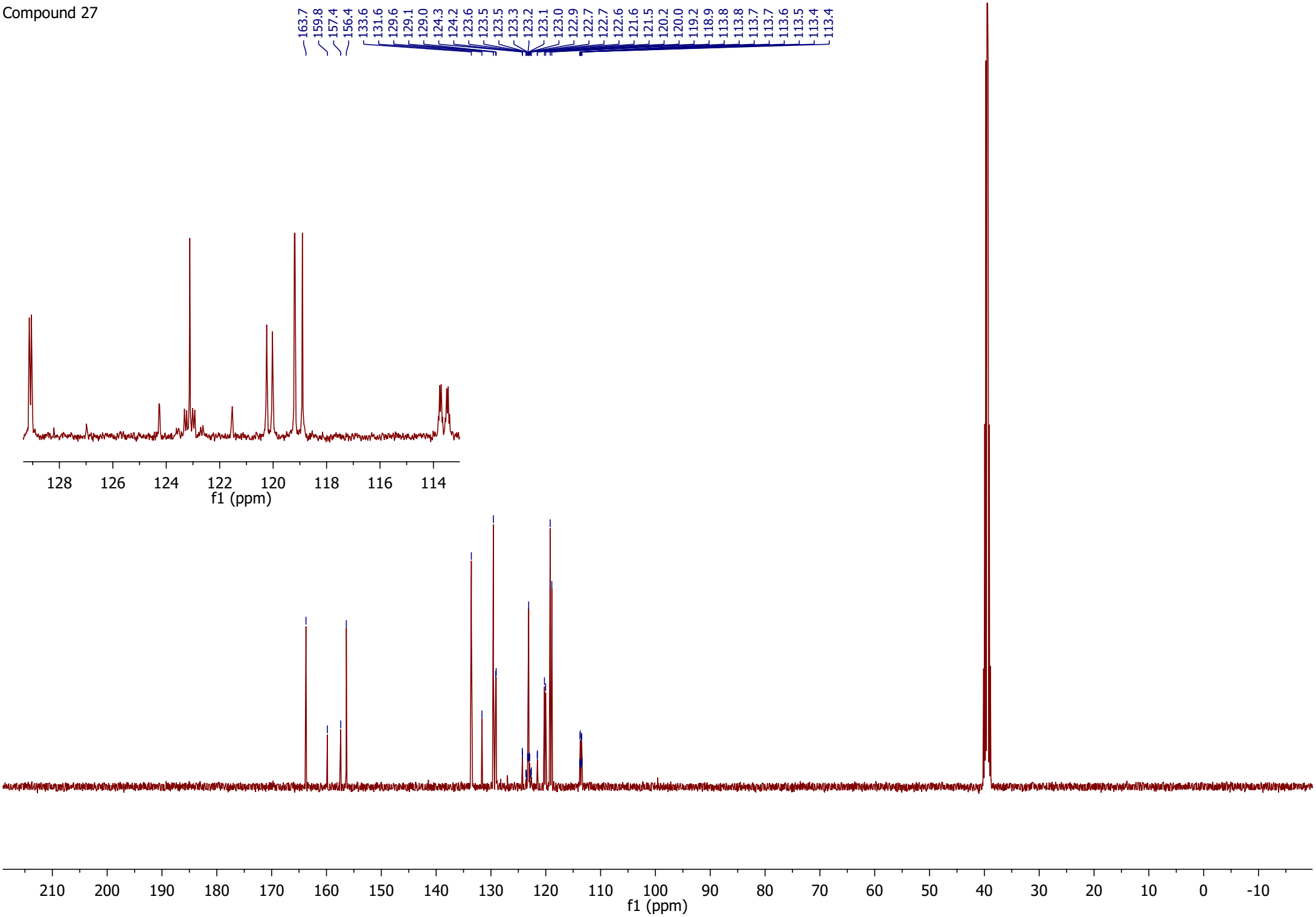
Compound 25


163.2
155.6
139.9
134.0
131.2
130.9
130.6
130.3
130.0
129.6
129.2
128.9
128.6
127.2
126.4
124.5
123.7
123.6
122.9
122.9
121.7
121.0
119.6
119.2
119.2
119.0
118.2
116.4
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

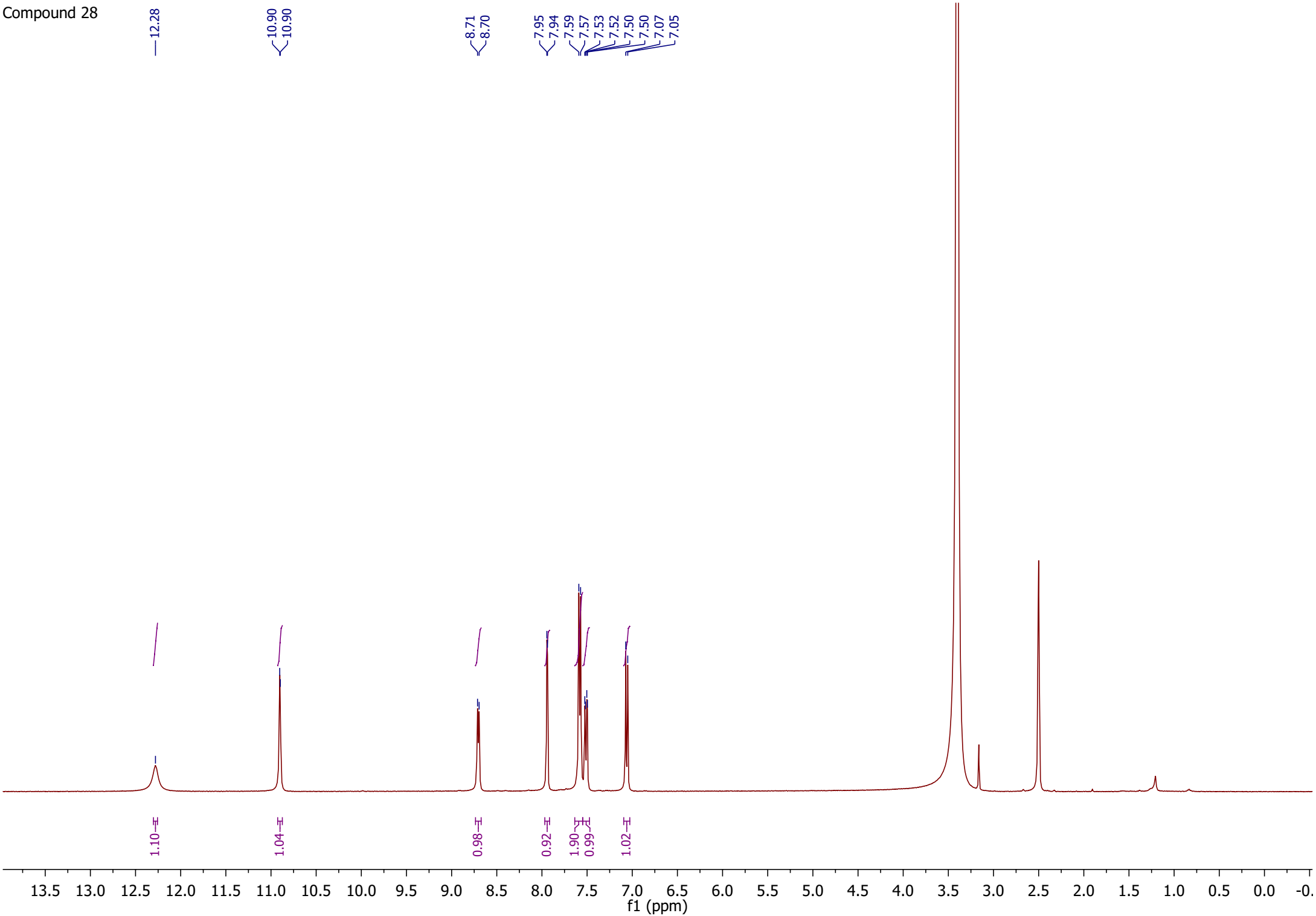
Compound 27


10.8
8.2
8.2
8.1
8.1
8.0
8.0
7.7
7.6
7.6
7.6
7.6
7.6
7.6
7.6
7.5
7.5
7.5
7.5
7.1
7.0
0.65
1.02
1.00
2.09
1.01
1.01
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

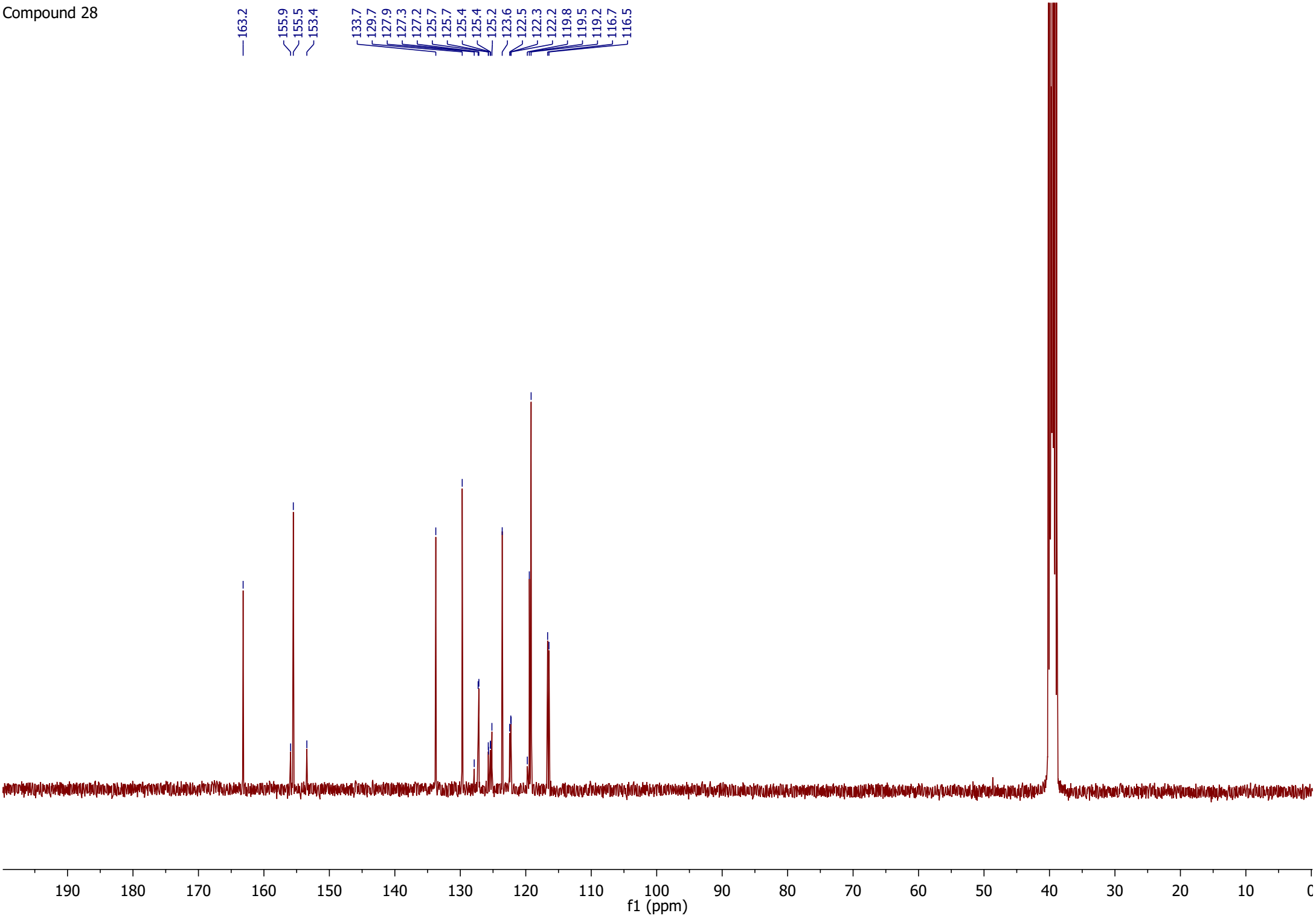
Compound 27

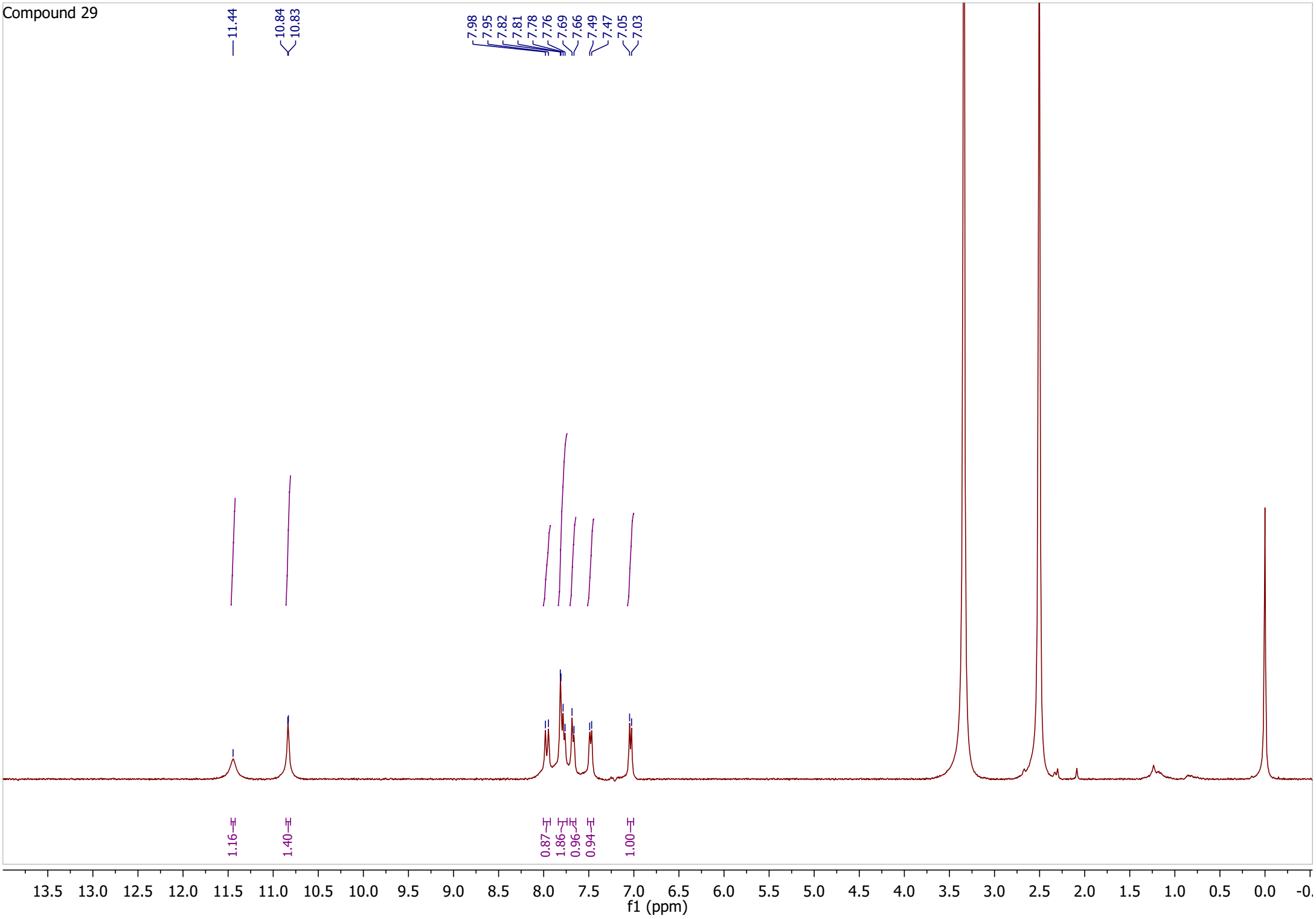

163.7
159.8
157.4
156.4
133.6
131.6
129.6
129.1
129.0
124.3
124.2
123.6
123.5
123.5
123.3
123.2
123.1
123.0
122.9
122.7
122.7
122.6
121.6
121.5
120.2
120.0
119.2
118.9
113.8
113.8
113.7
113.7
113.6
113.5
113.4
113.4
128
126
124
122
120
118
116
114
f1 (ppm)
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

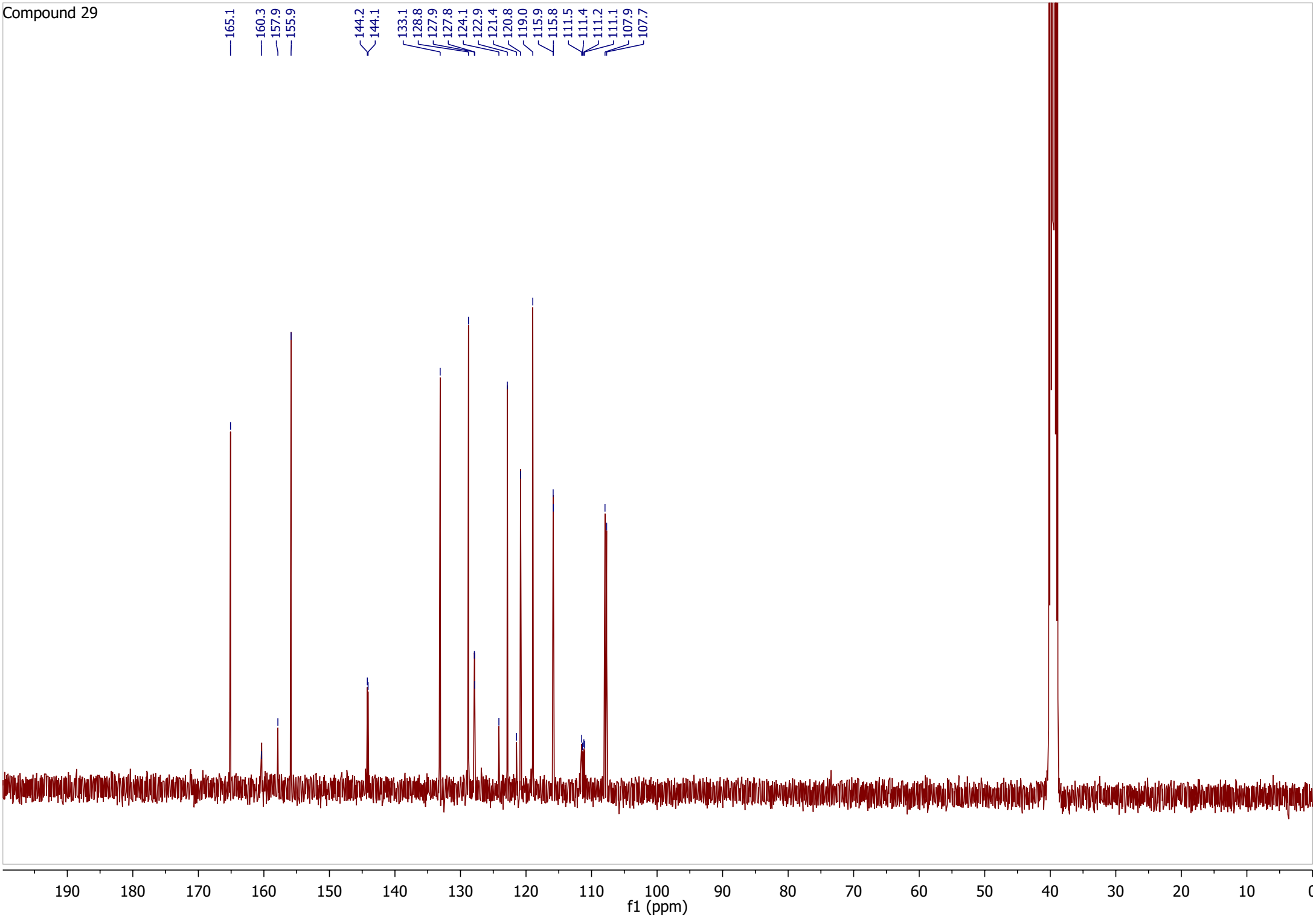
Compound 28


12.28
10.90
10.90
8.71
8.70
7.95
7.94
7.59
7.57
7.53
7.52
7.50
7.50
7.07
7.05
1.10
1.04
0.98
0.92
1.90
0.99
1.02
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

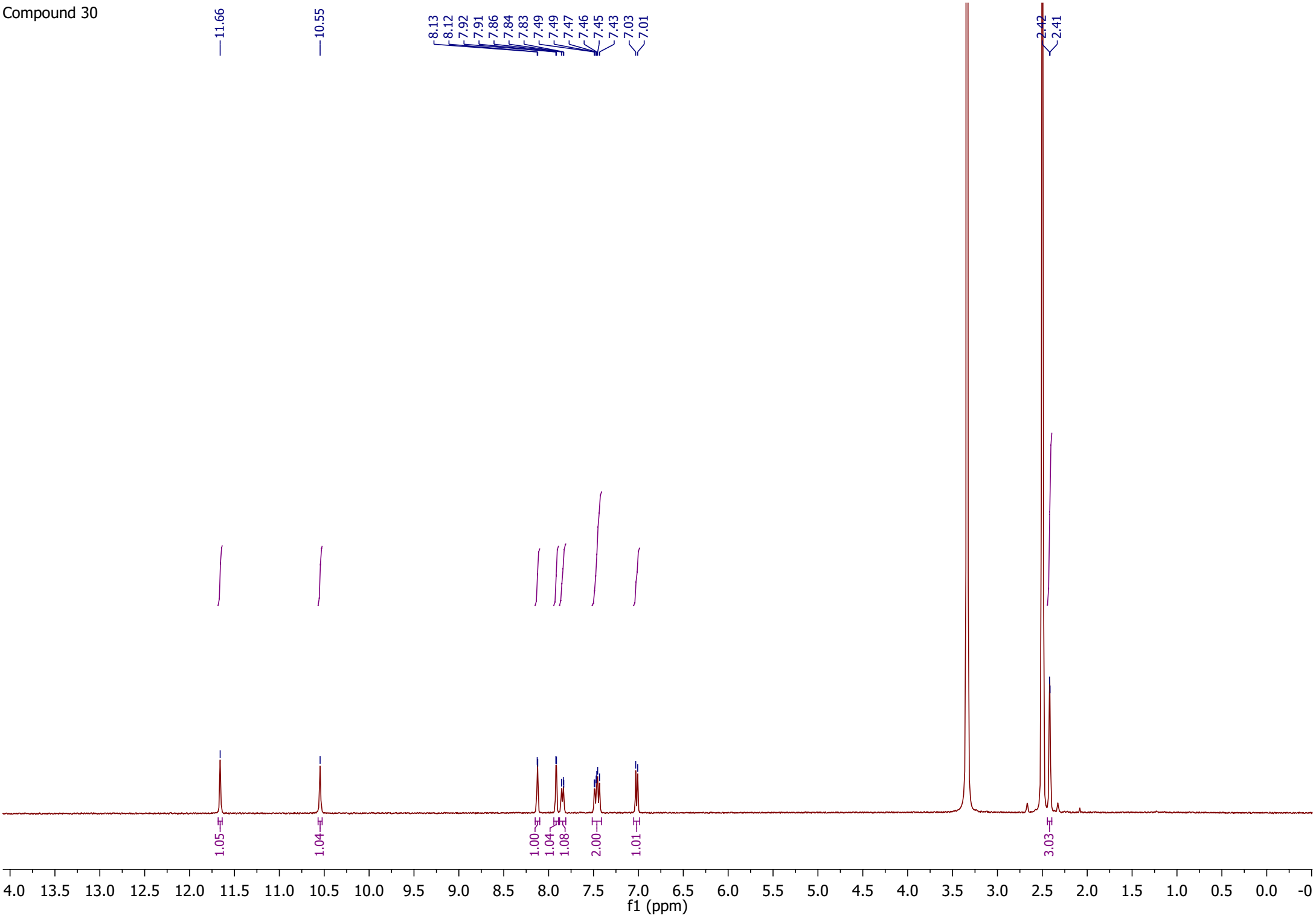
Compound 28


163.2
155.9
155.5
153.4
133.7
129.7
127.9
127.3
127.2
125.7
125.7
125.4
125.4
125.2
123.6
122.5
122.3
122.2
119.8
119.5
119.2
116.7
116.5
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

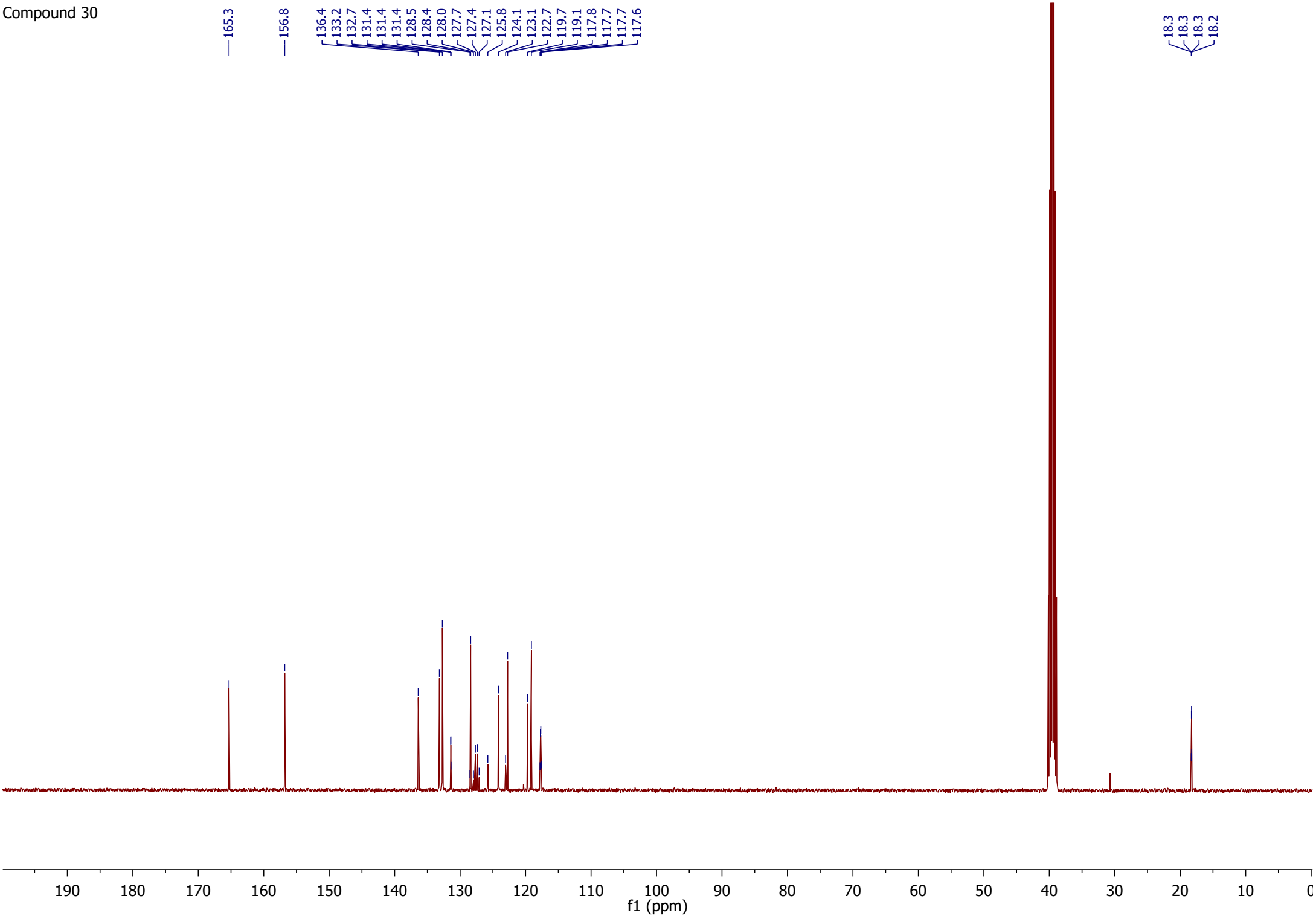

Compound 29
11.44
10.84
10.83
7.98
7.95
7.82
7.81
7.78
7.76
7.69
7.66
7.49
7.47
7.05
7.03
1.16
1.40
0.87
1.86
0.96
0.94
1.00
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)


Compound 29
165.1
160.3
157.9
155.9
144.2
144.1
133.1
128.8
127.9
127.8
124.1
122.9
121.4
120.8
119.0
115.9
115.8
111.5
111.4
111.2
111.1
107.9
107.7
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

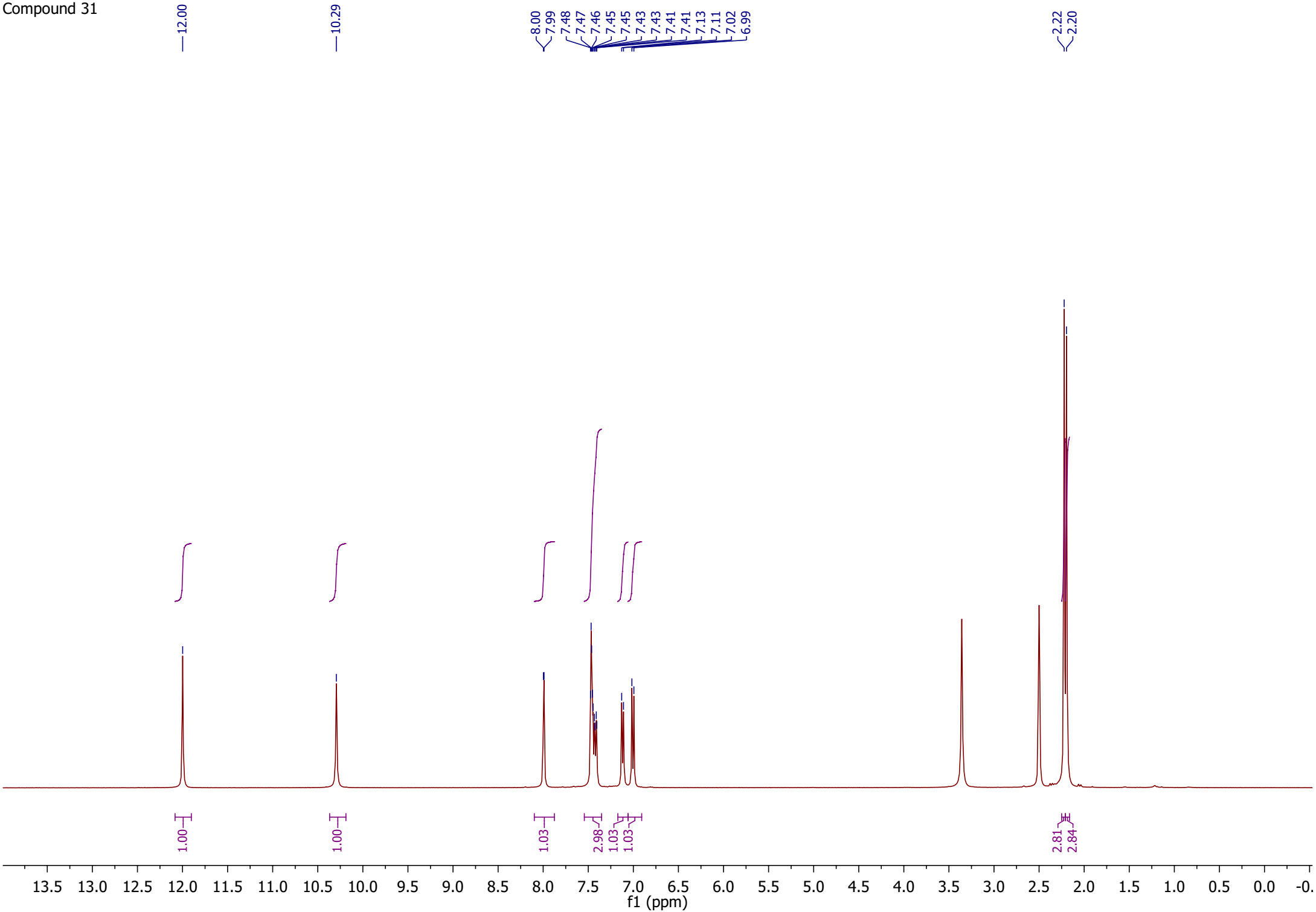
Compound 30


11.66
10.55
8.13
8.12
7.92
7.91
7.86
7.84
7.83
7.49
7.49
7.47
7.46
7.45
7.43
7.03
7.01
2.42
2.41
1.05
1.04
1.00
1.04
1.08
2.00
1.01
3.03
4.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

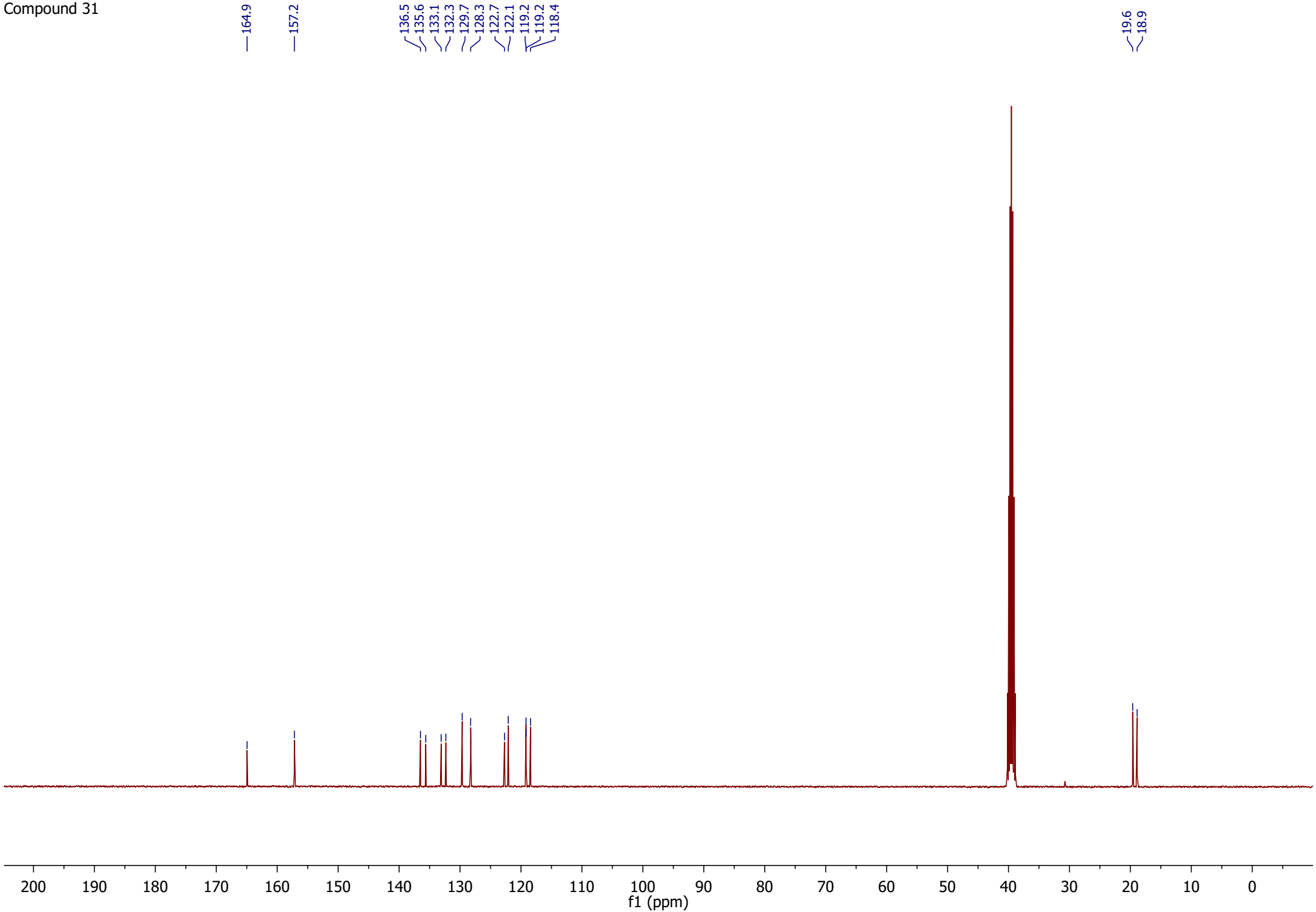
Compound 30


165.3
156.8
136.4
133.2
132.7
131.4
131.4
131.4
128.5
128.4
128.0
127.7
127.4
127.1
125.8
124.1
123.1
122.7
119.7
119.1
117.8
117.7
117.7
117.6
18.3
18.3
18.3
18.2
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

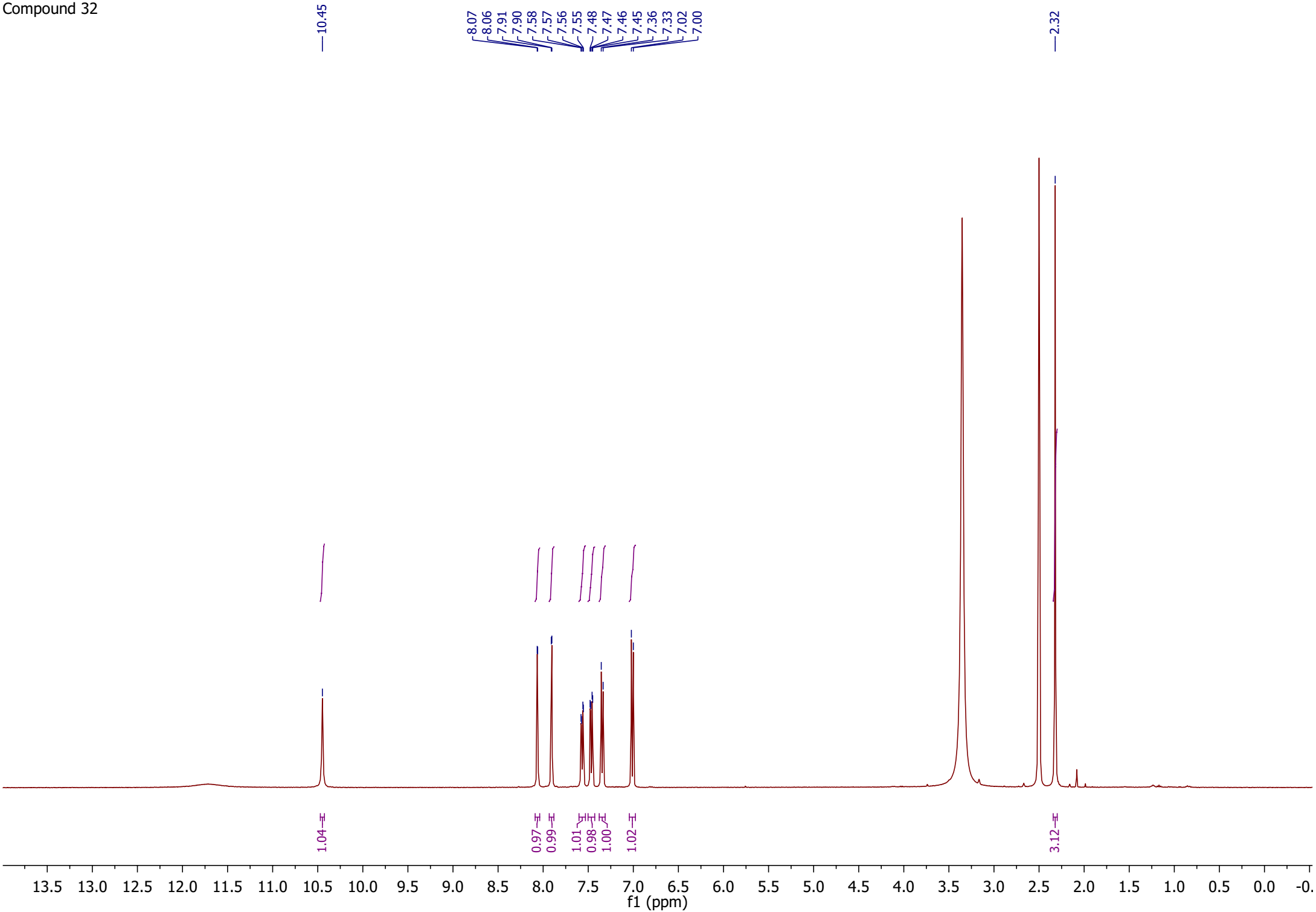
Compound 31


12.00
10.29
8.00
7.99
7.48
7.47
7.46
7.45
7.45
7.43
7.43
7.41
7.41
7.13
7.11
7.02
6.99
2.22
2.20
1.00
1.00
1.03
2.98
1.03
1.03
2.81
2.84
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

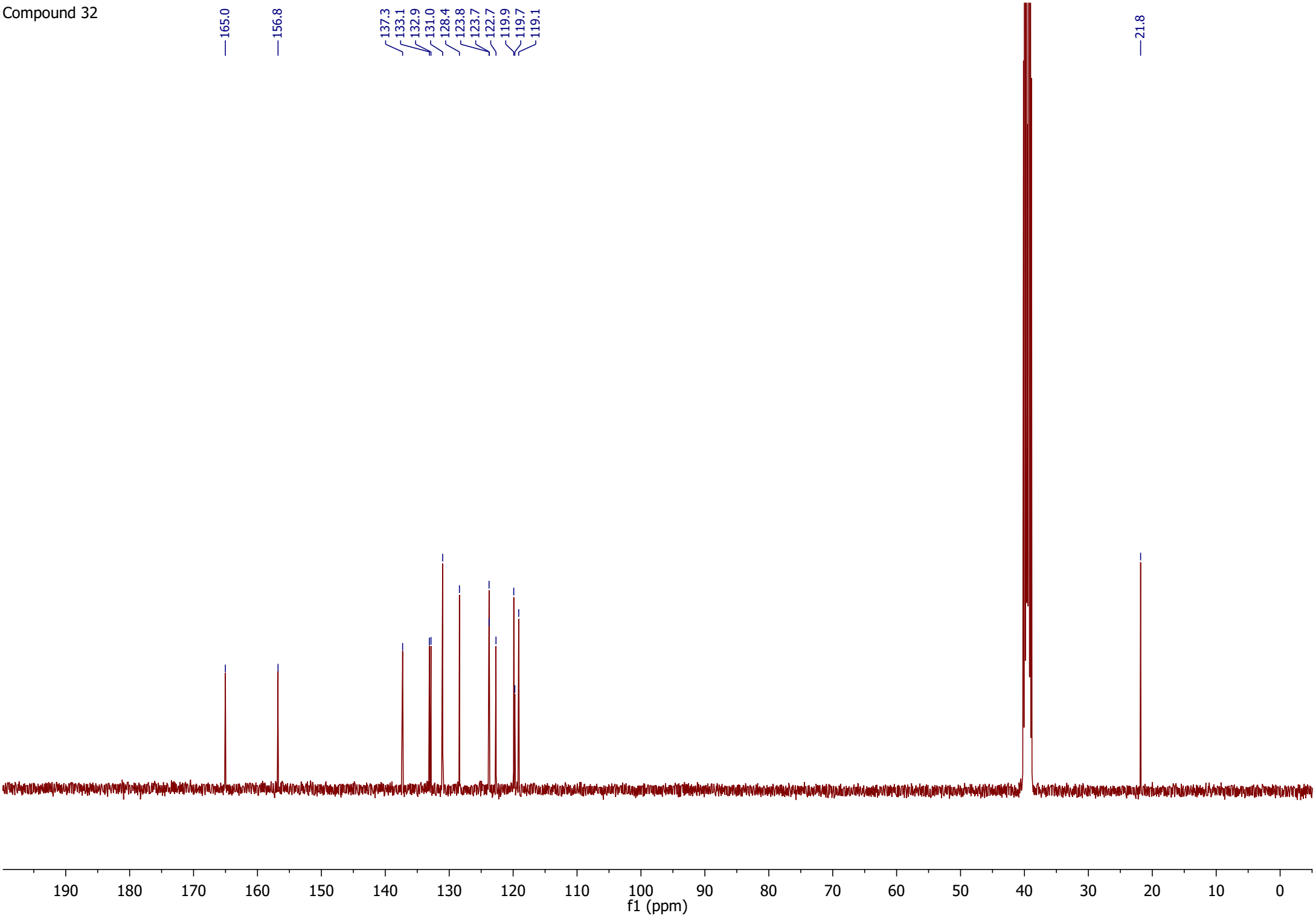
Compound 31

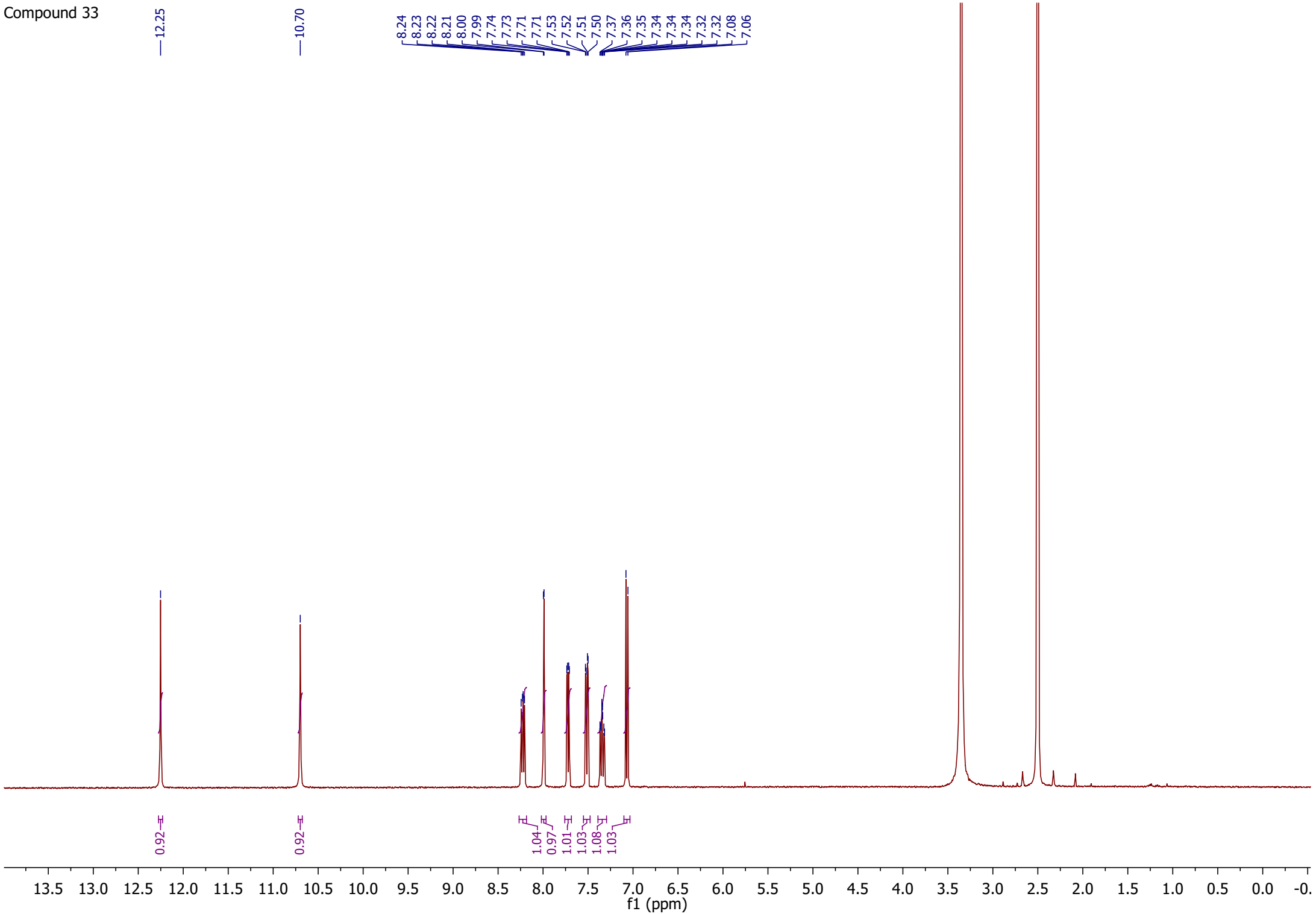

164.9
157.2
136.5
135.6
133.1
132.3
129.7
128.3
122.7
122.1
119.2
119.2
118.4
19.6
18.9
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

Compound 32

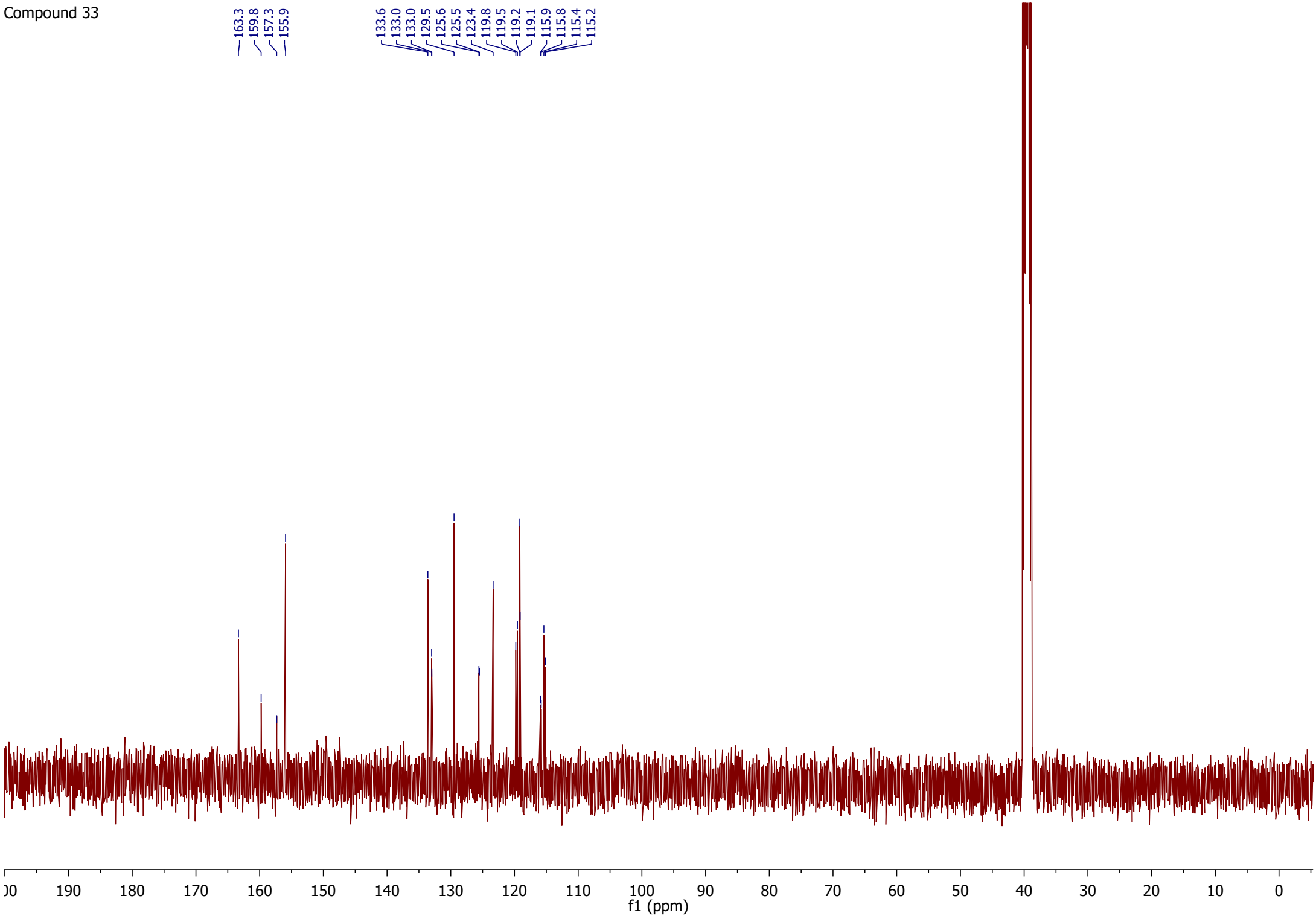

10.45
8.07
8.06
7.91
7.90
7.58
7.57
7.56
7.55
7.48
7.47
7.46
7.45
7.36
7.33
7.02
7.00
2.32
1.04
0.97
0.99
1.01
0.98
1.00
1.02
3.12
f1 (ppm)

Compound 32

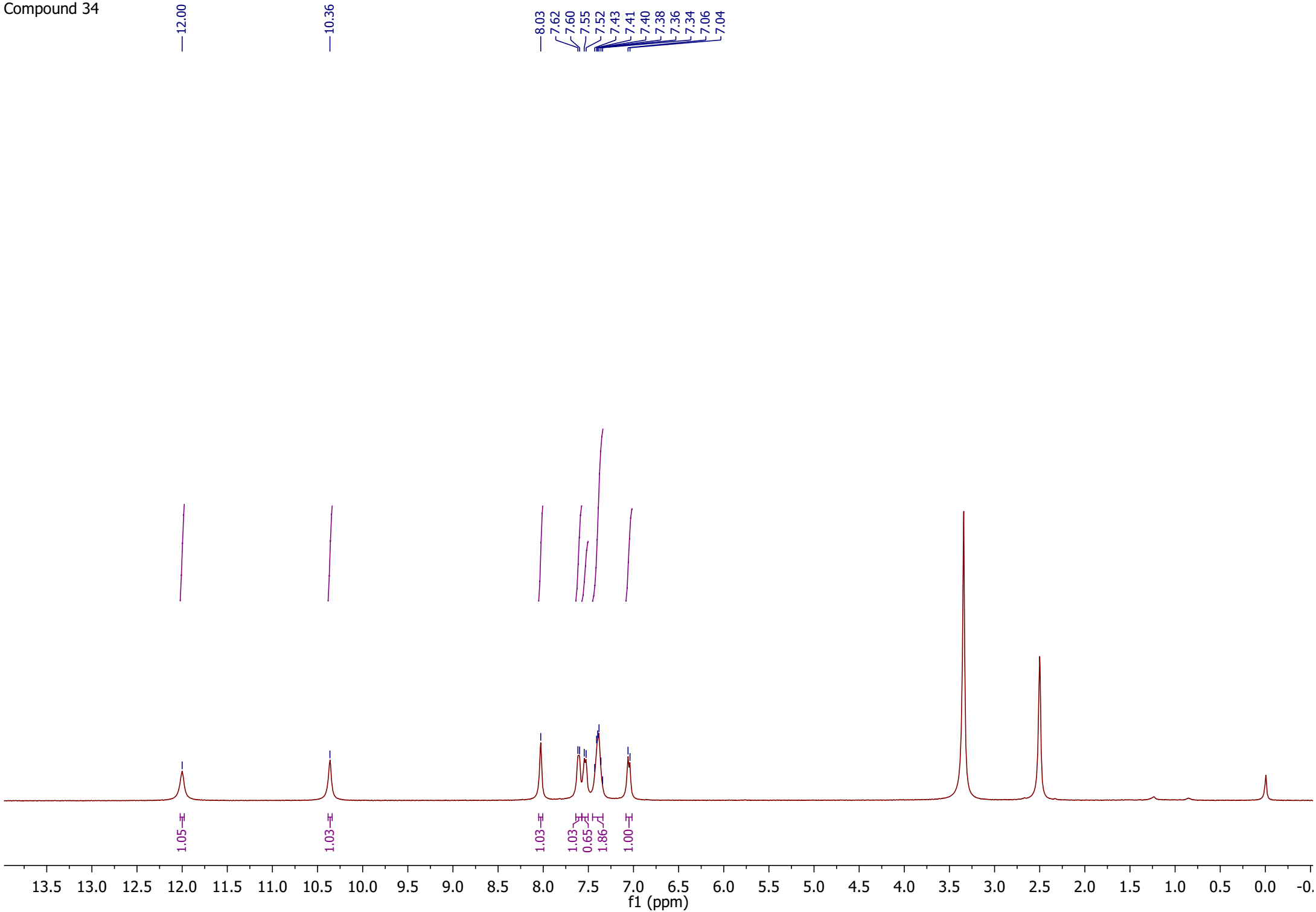

165.0
156.8
137.3
133.1
132.9
131.0
128.4
123.8
123.7
122.7
119.9
119.7
119.1
21.8
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)


Compound 33
12.25
10.70
8.24
8.23
8.22
8.21
8.00
7.99
7.74
7.73
7.71
7.71
7.53
7.52
7.51
7.50
7.37
7.36
7.35
7.34
7.34
7.34
7.32
7.32
7.08
7.06
0.92
0.92
1.04
0.97
1.01
1.03
1.08
1.03
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

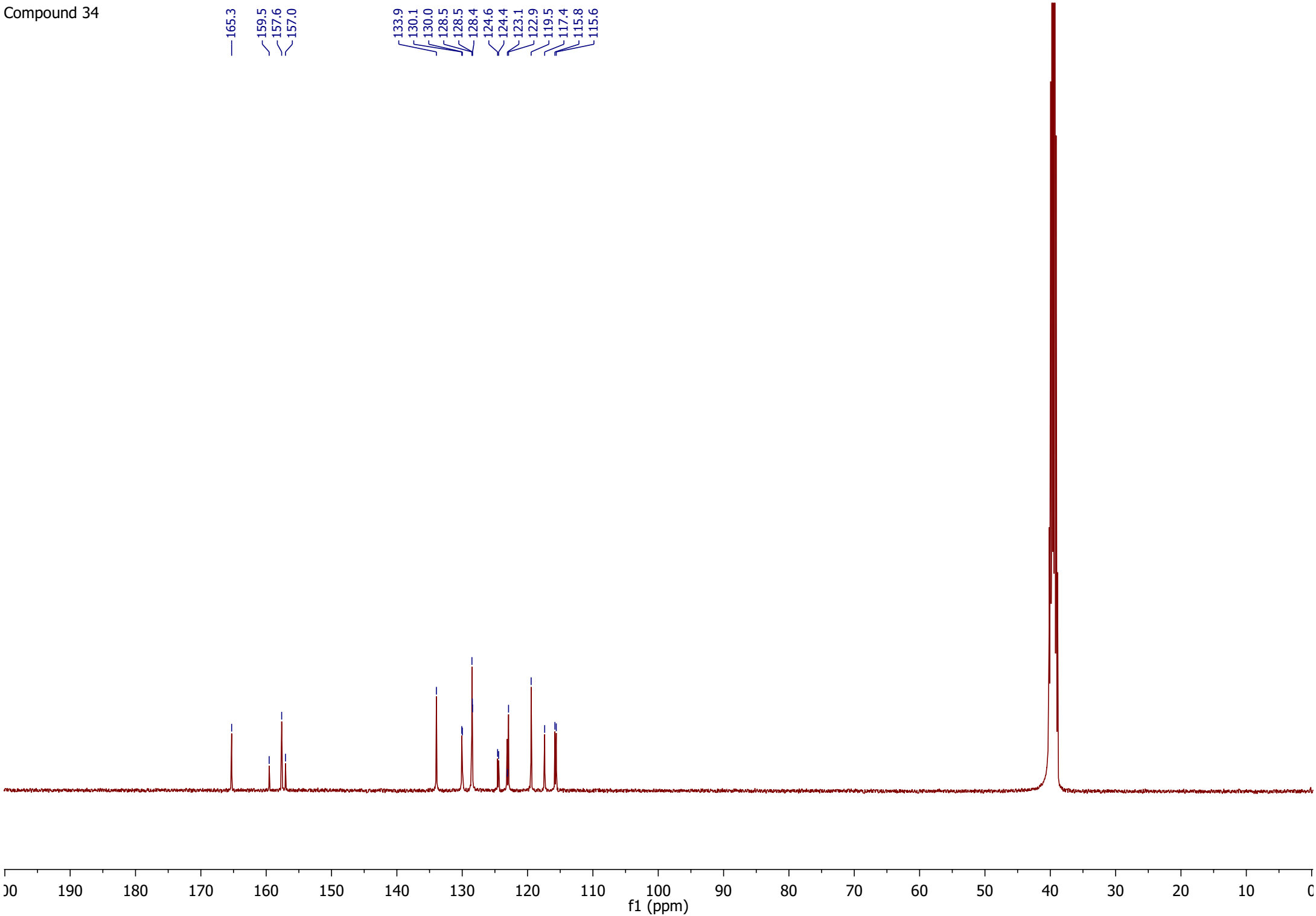
Compound 33


163.3
159.8
157.3
155.9
133.6
133.0
133.0
129.5
125.6
125.5
123.4
119.8
119.5
119.2
119.1
115.9
115.8
115.4
115.2
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

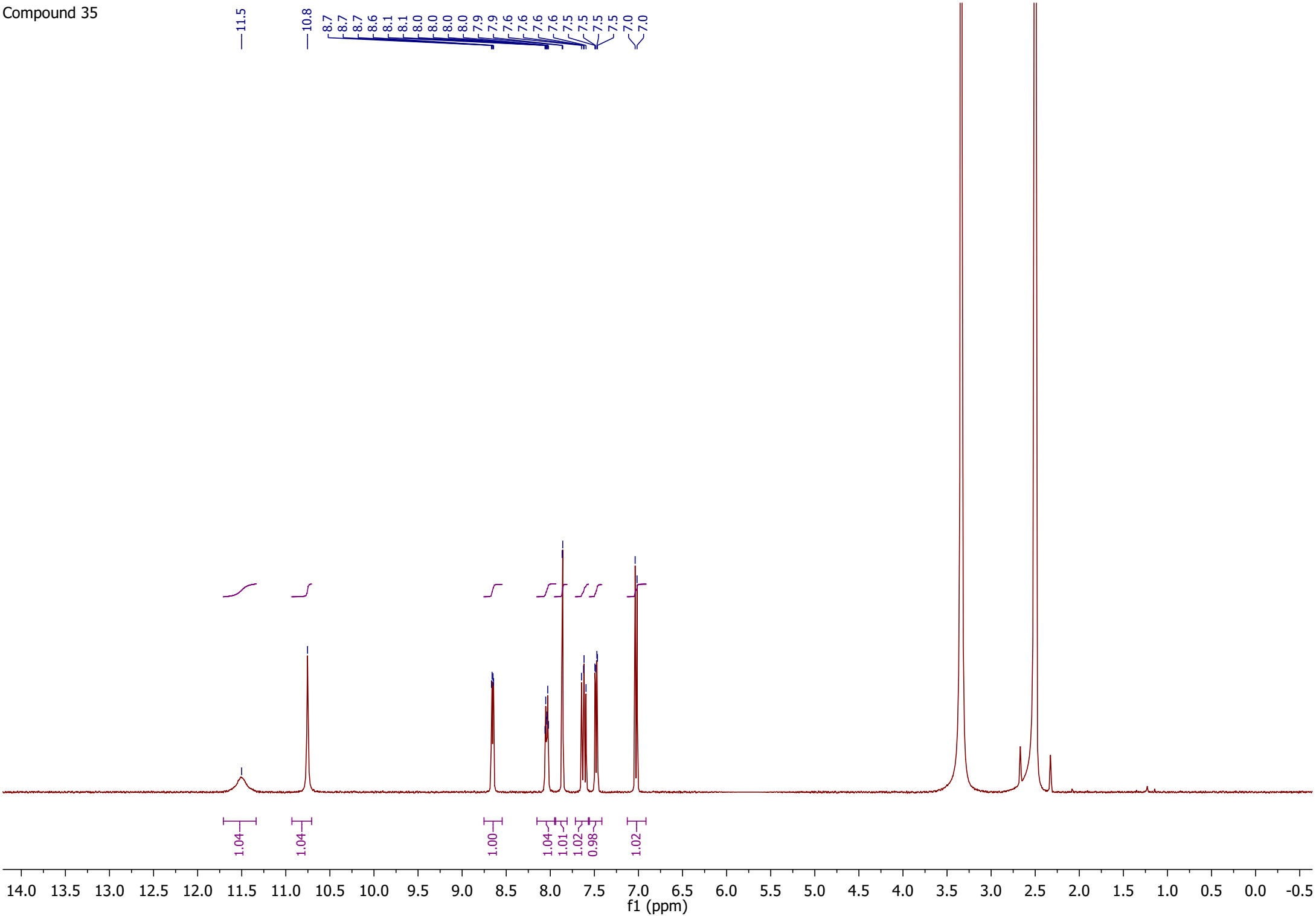
Compound 34


12.00
10.36
8.03
7.62
7.60
7.55
7.52
7.43
7.41
7.40
7.38
7.36
7.34
7.06
7.04
1.05
1.03
1.03
1.03
0.65
1.86
1.00
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

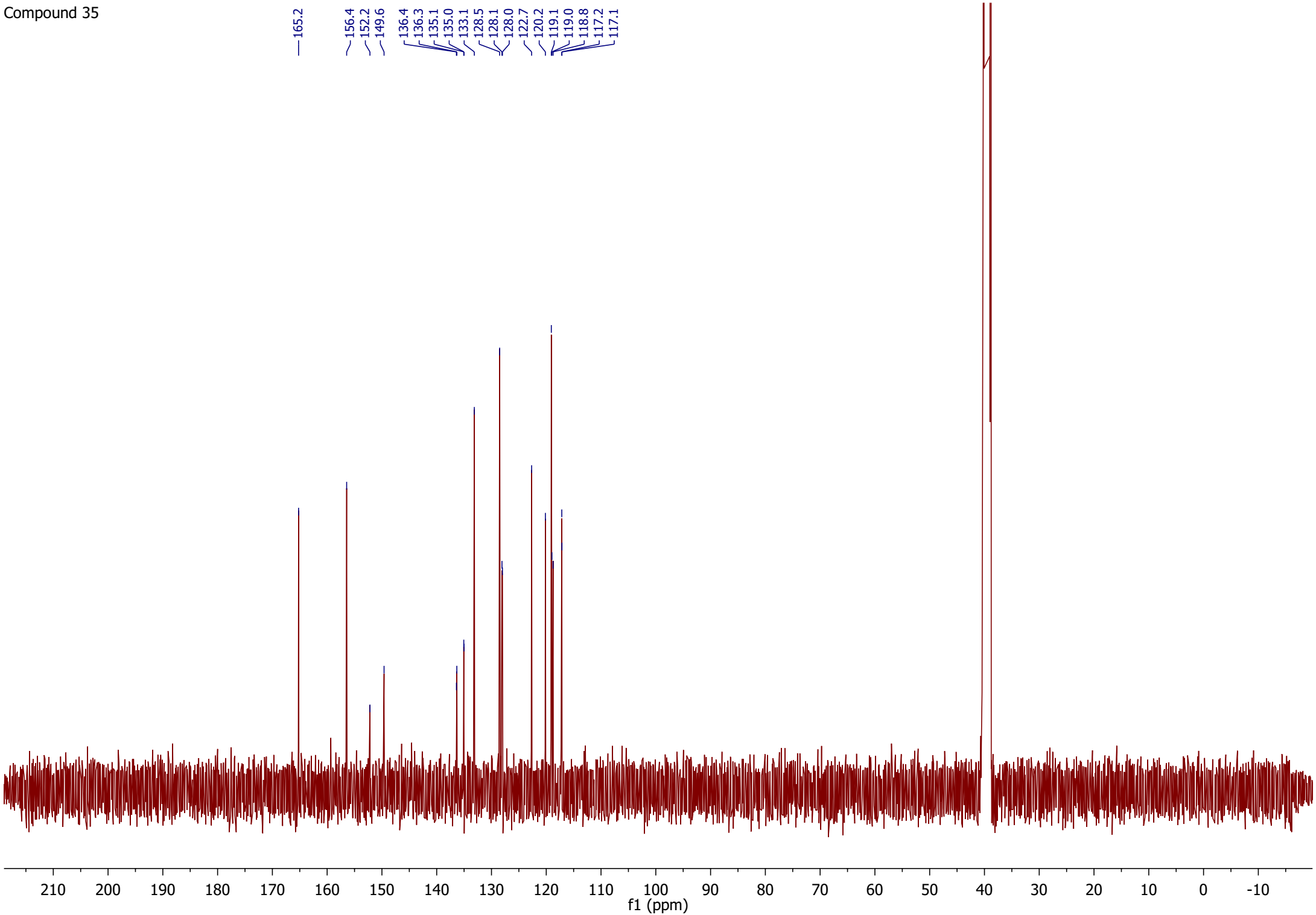
Compound 34


165.3
159.5
157.6
157.0
133.9
130.1
130.0
128.5
128.5
128.4
124.6
124.4
123.1
122.9
119.5
117.4
115.8
115.6
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

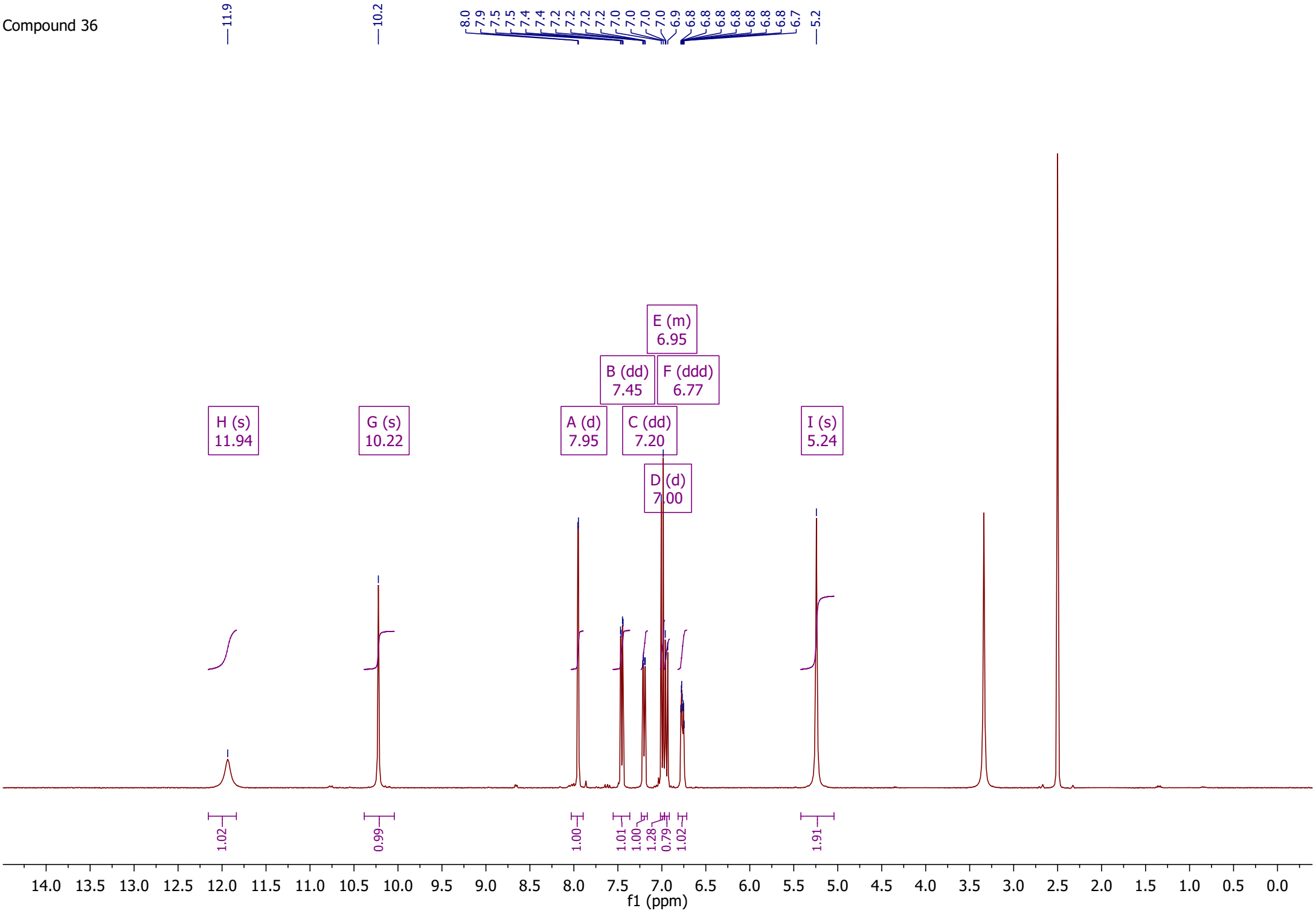
Compound 35


11.5
10.8
8.7
8.7
8.7
8.6
8.1
8.1
8.0
8.0
8.0
8.0
7.9
7.9
7.6
7.6
7.6
7.5
7.5
7.5
7.5
7.0
7.0
1.04
1.04
1.00
1.04
1.01
1.02
0.98
1.02
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

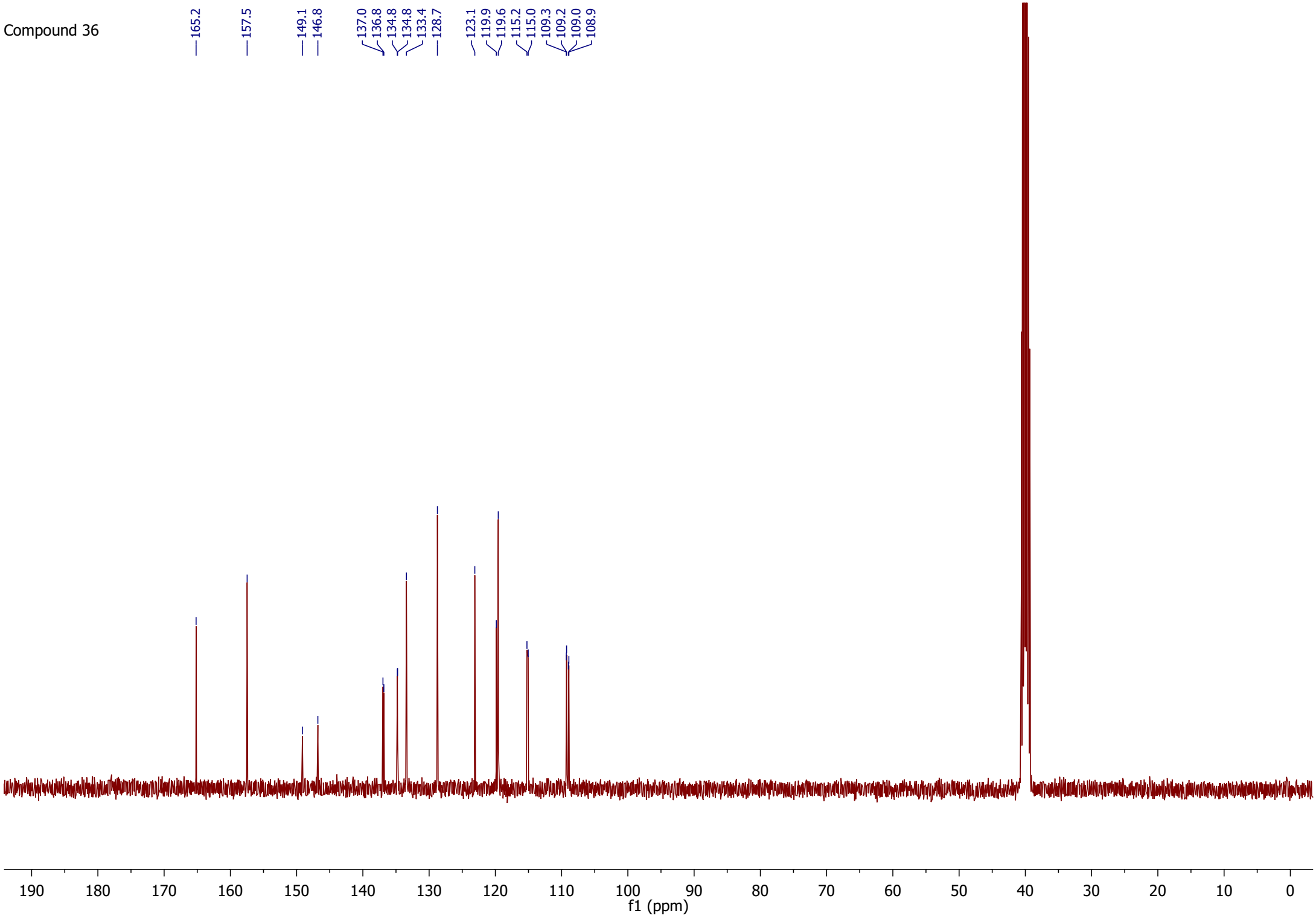
Compound 35


165.2
156.4
152.2
149.6
136.4
136.3
135.1
135.0
133.1
128.5
128.1
128.0
122.7
120.2
119.1
119.0
118.8
117.2
117.1
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

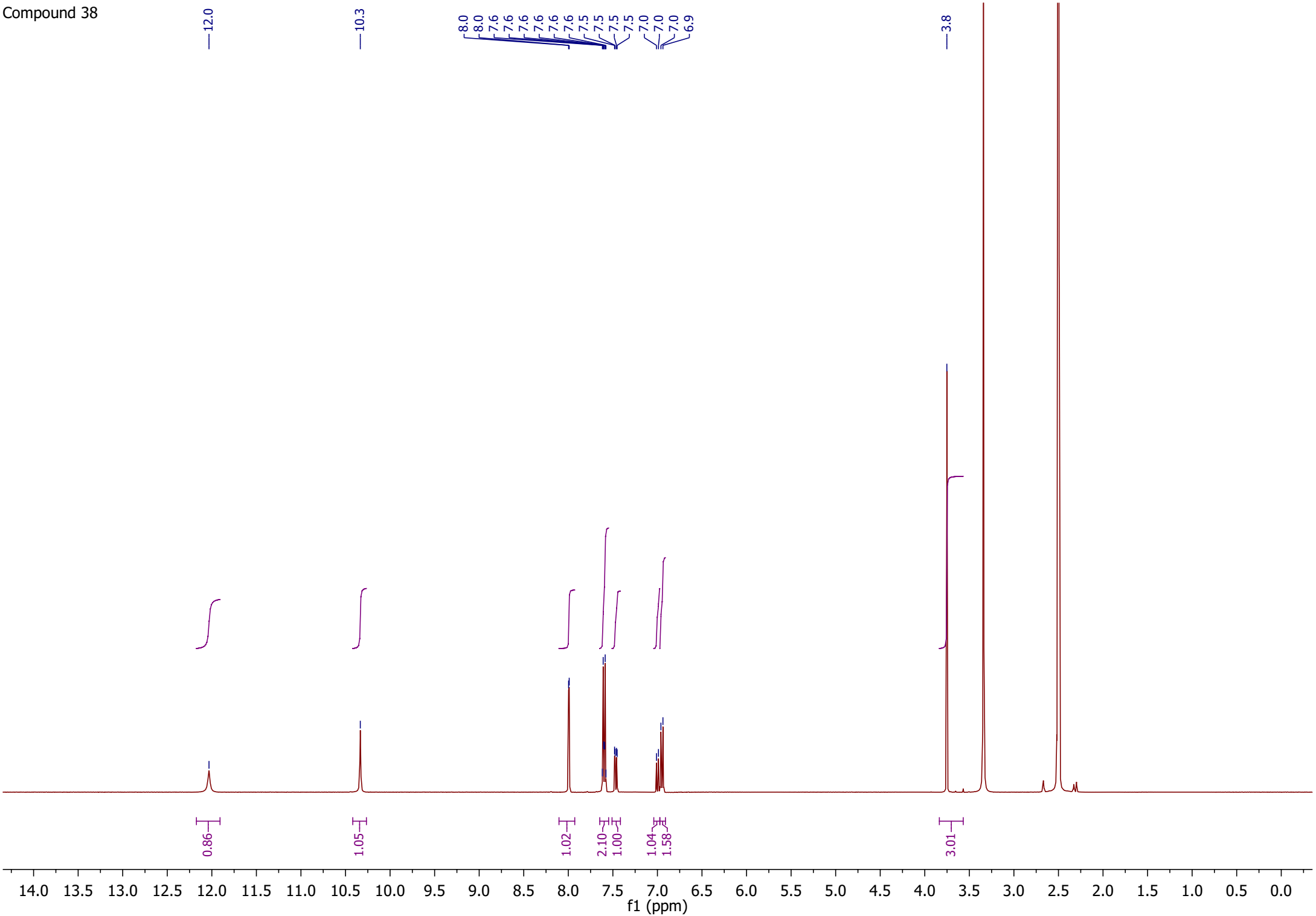
Compound 36


11.9
10.2
8.0
7.9
7.5
7.5
7.4
7.4
7.2
7.2
7.2
7.2
7.0
7.0
7.0
7.0
6.9
6.8
6.8
6.8
6.8
6.8
6.8
6.7
5.2
H (s)
11.94
G (s)
10.22
A (d)
7.95
B (dd)
7.45
C (dd)
7.20
D (d)
7.00
E (m)
6.95
F (ddd)
6.77
I (s)
5.24
1.02
0.99
1.00
1.01
1.00
1.28
0.79
1.02
1.91
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
f1 (ppm)

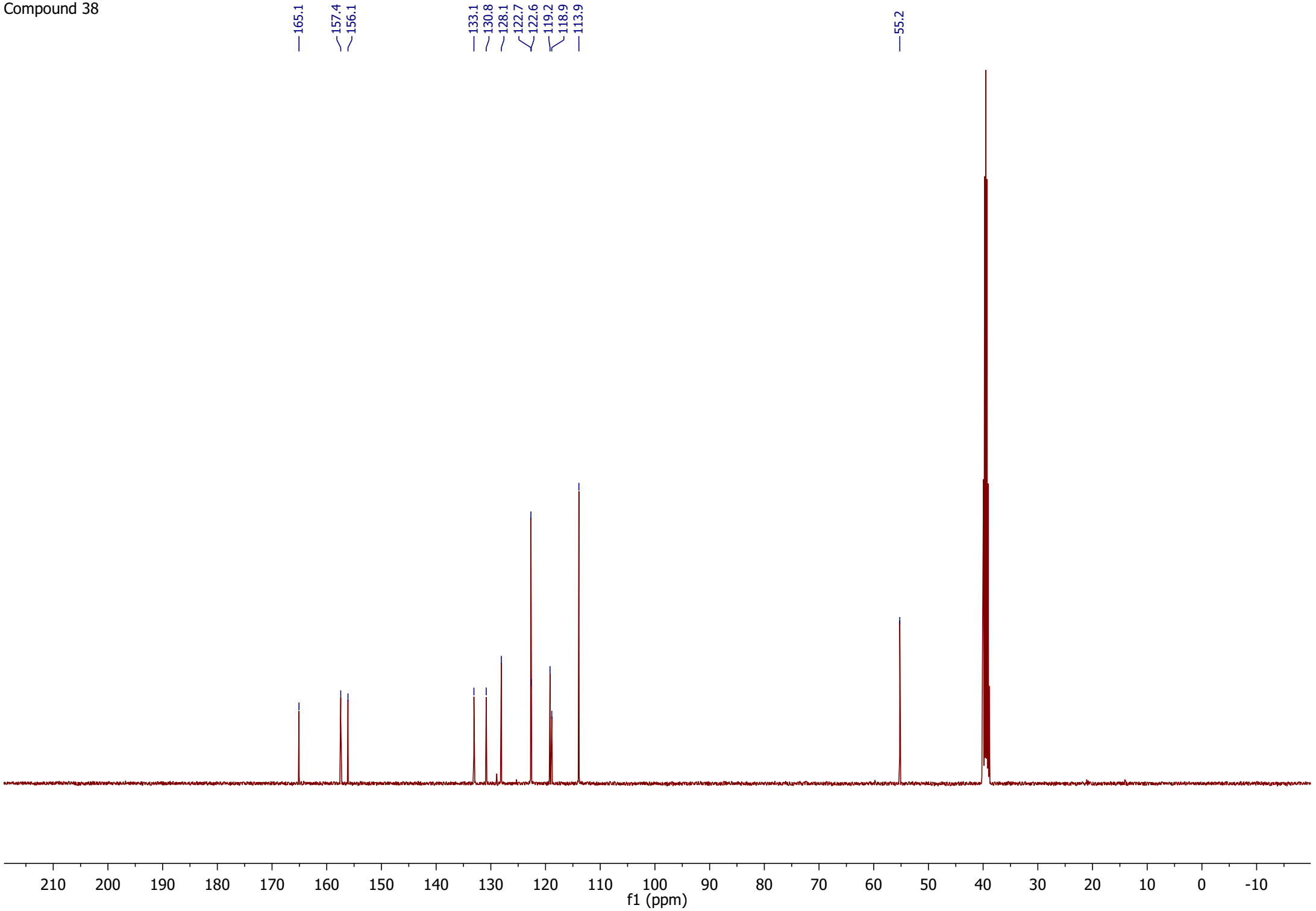
Compound 36


165.2
157.5
149.1
146.8
137.0
136.8
134.8
134.8
133.4
128.7
123.1
119.9
119.6
115.2
115.0
109.3
109.2
109.0
108.9
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

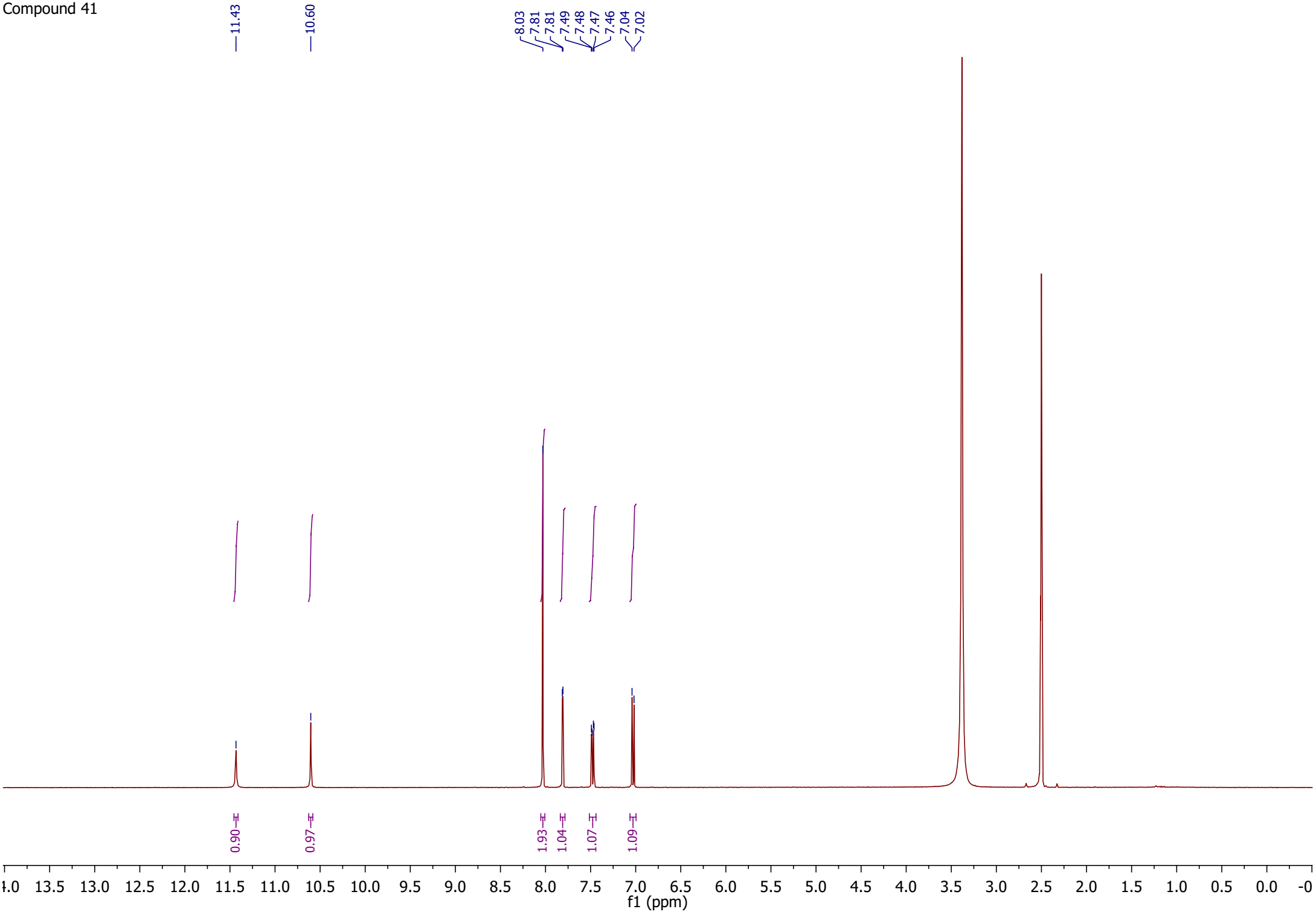
Compound 38


12.0
10.3
8.0
8.0
7.6
7.6
7.6
7.6
7.6
7.6
7.5
7.5
7.5
7.5
7.0
7.0
7.0
6.9
3.8
0.86
1.05
1.02
2.10
1.00
1.04
1.58
3.01
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

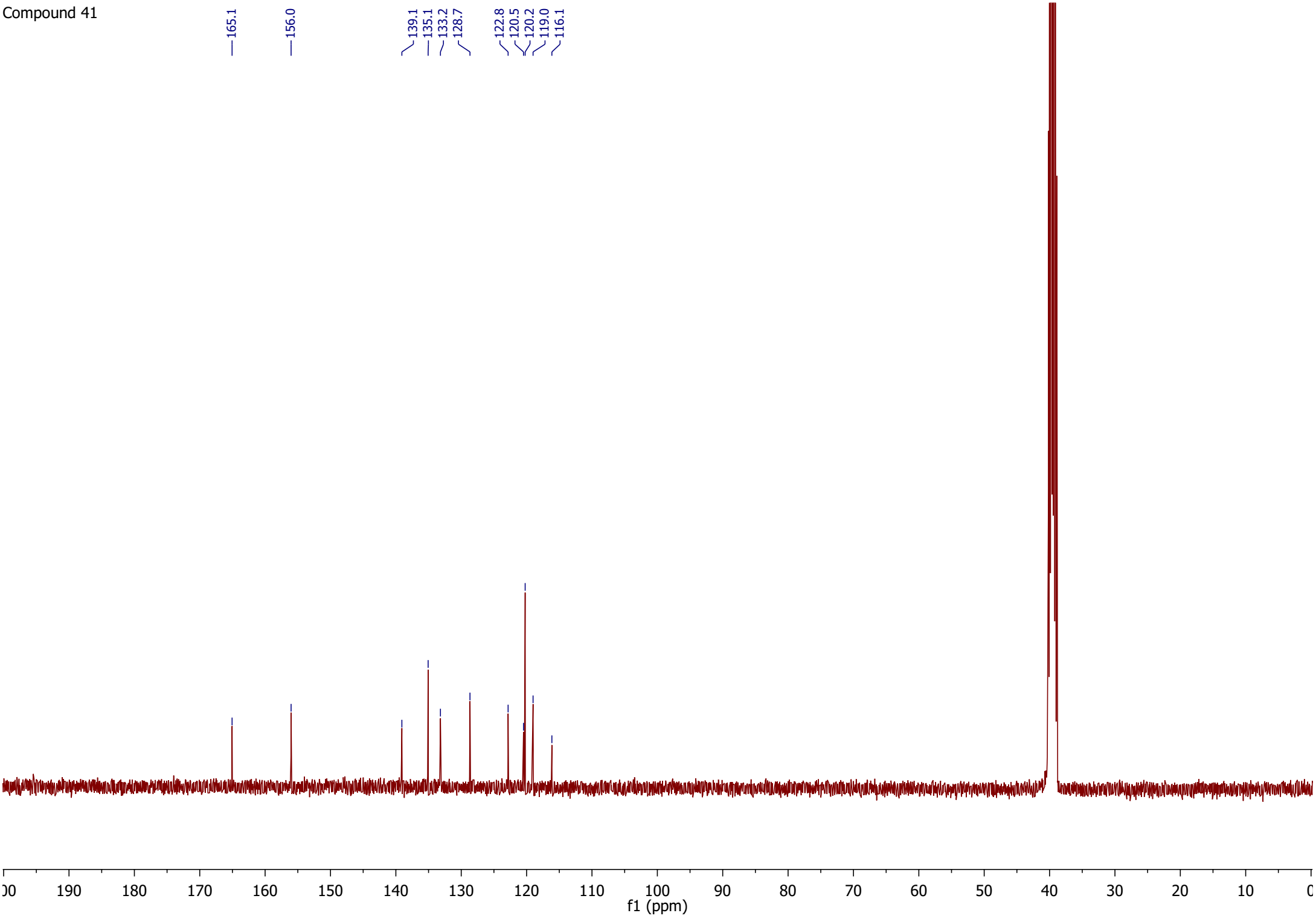
Compound 38


165.1
157.4
156.1
133.1
130.8
128.1
122.7
122.6
119.2
118.9
113.9
55.2
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

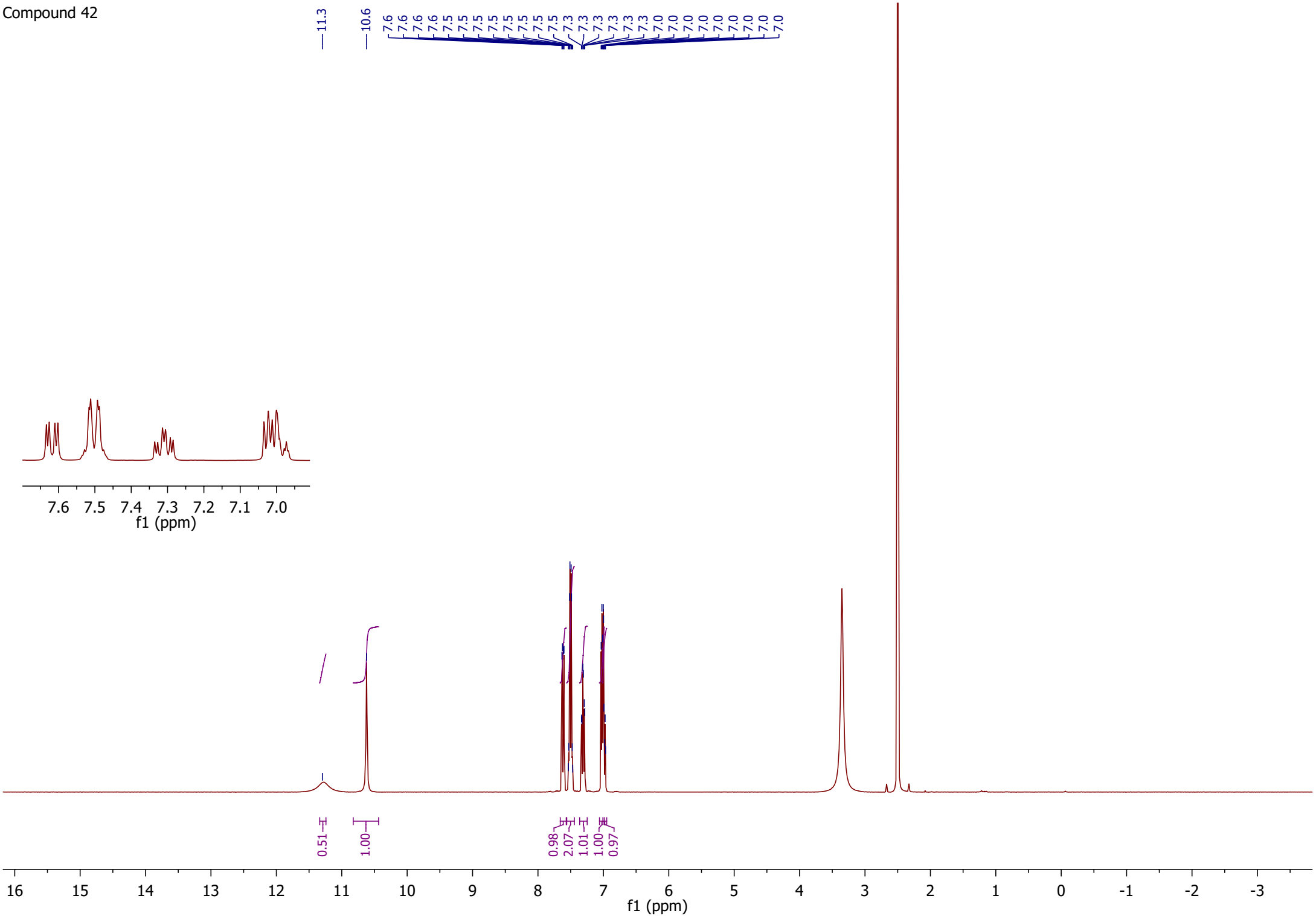
Compound 41


11.43
10.60
8.03
7.81
7.81
7.49
7.48
7.47
7.46
7.04
7.02
0.90
0.97
1.93
1.04
1.07
1.09
f1 (ppm)

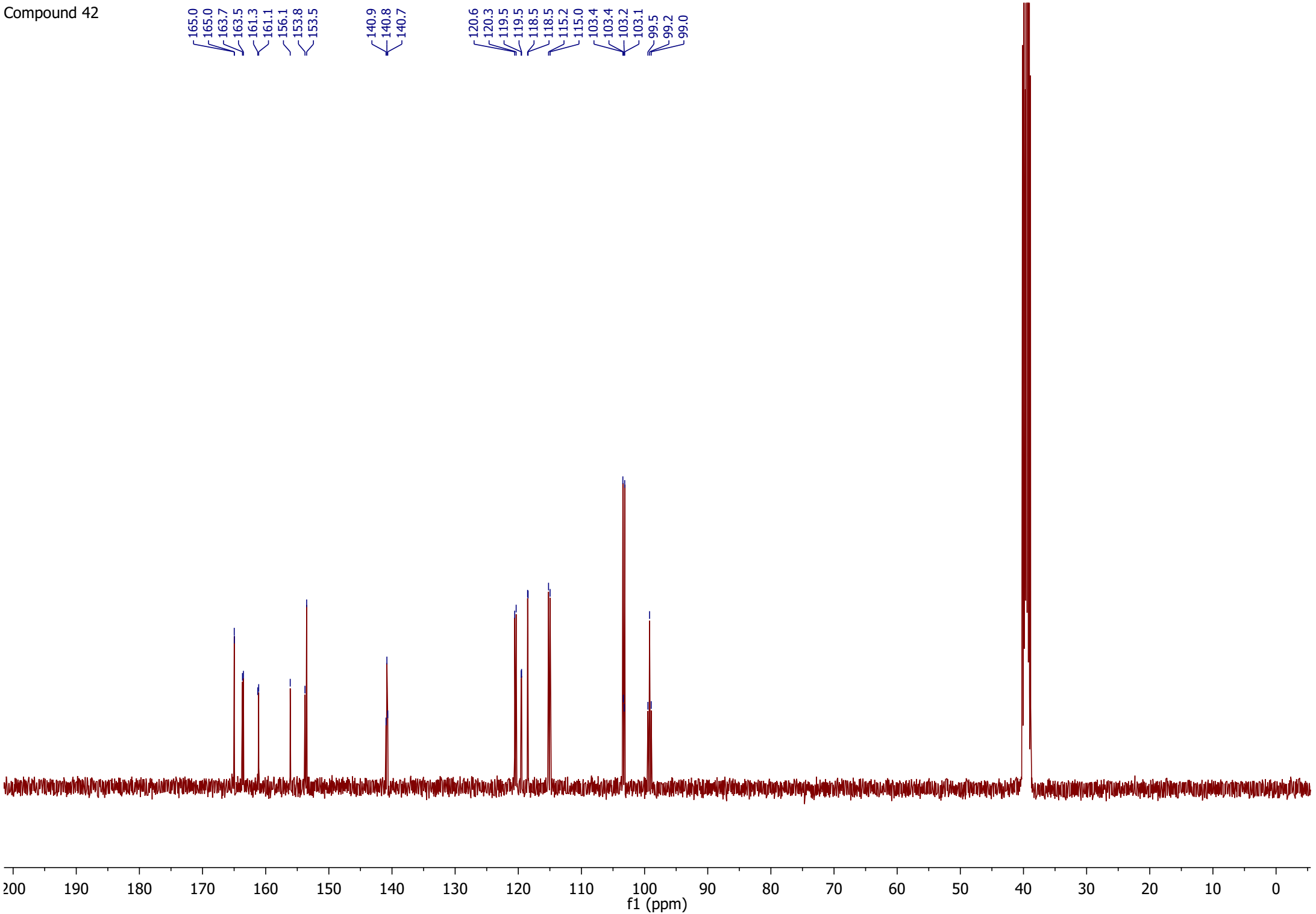
Compound 41


165.1
156.0
139.1
135.1
133.2
128.7
122.8
120.5
120.2
119.0
116.1
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

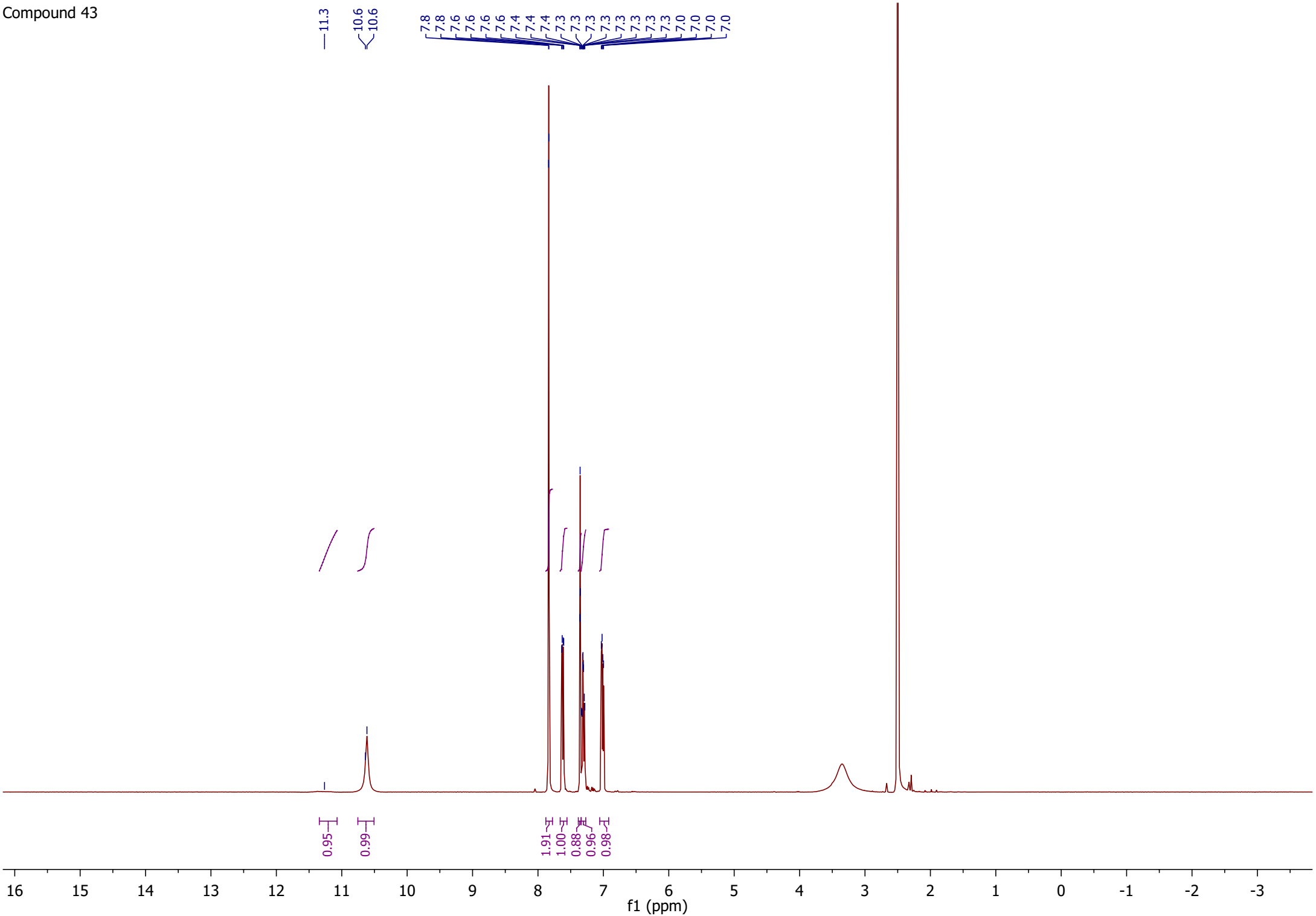
Compound 42


11.3
10.6
7.6
7.6
7.6
7.6
7.5
7.5
7.5
7.5
7.5
7.5
7.5
7.3
7.3
7.3
7.3
7.3
7.0
7.0
7.0
7.0
7.0
7.0
7.0
7.0
7.6 7.5 7.4 7.3 7.2 7.1 7.0
f1 (ppm)
0.51
1.00
0.98
2.07
1.01
1.00
0.97
16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3
f1 (ppm)

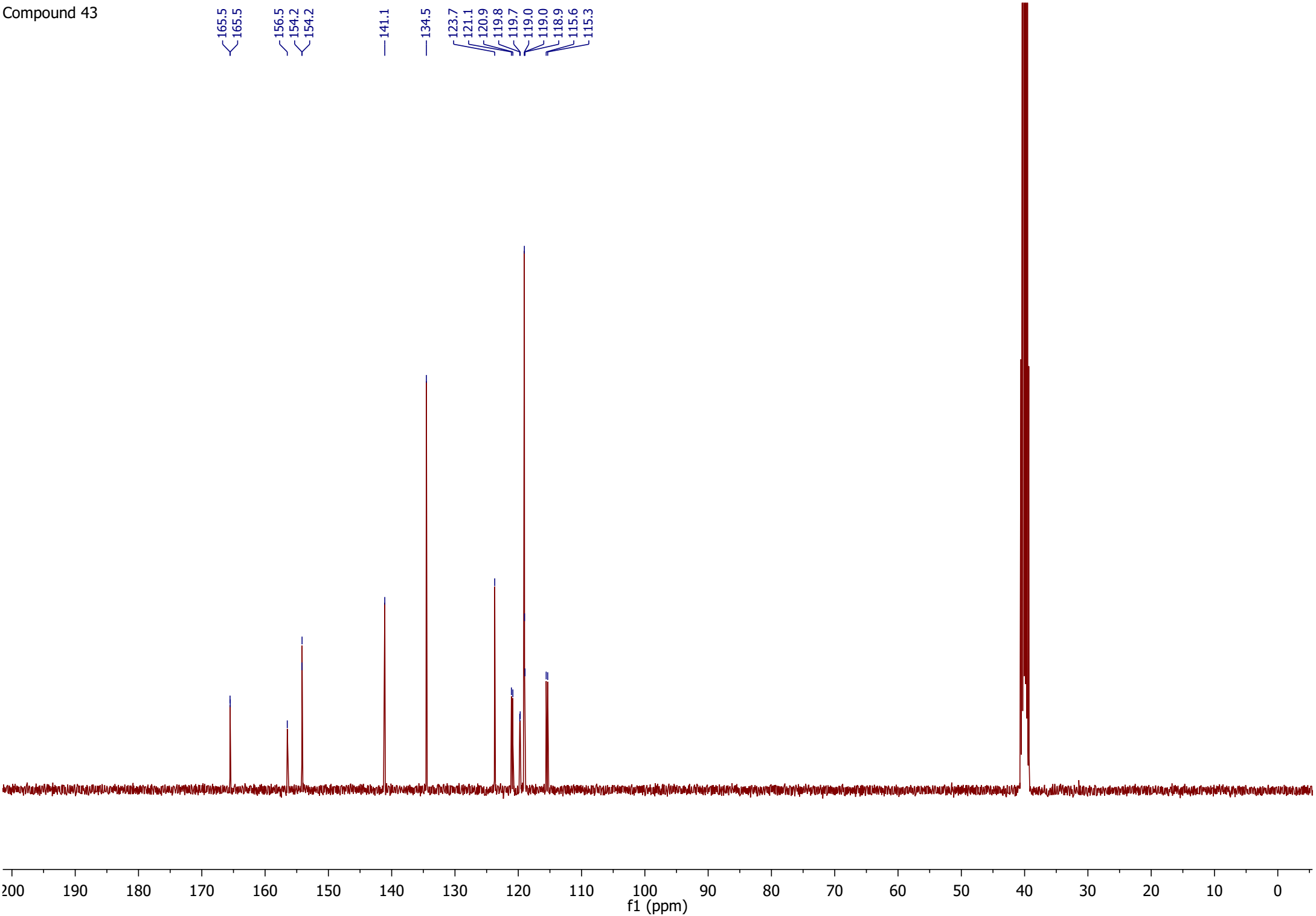
Compound 42


165.0
165.0
163.7
163.5
161.3
161.1
156.1
153.8
153.5
140.9
140.8
140.7
120.6
120.3
119.5
119.5
118.5
118.5
115.2
115.0
103.4
103.4
103.2
103.1
99.5
99.2
99.0
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

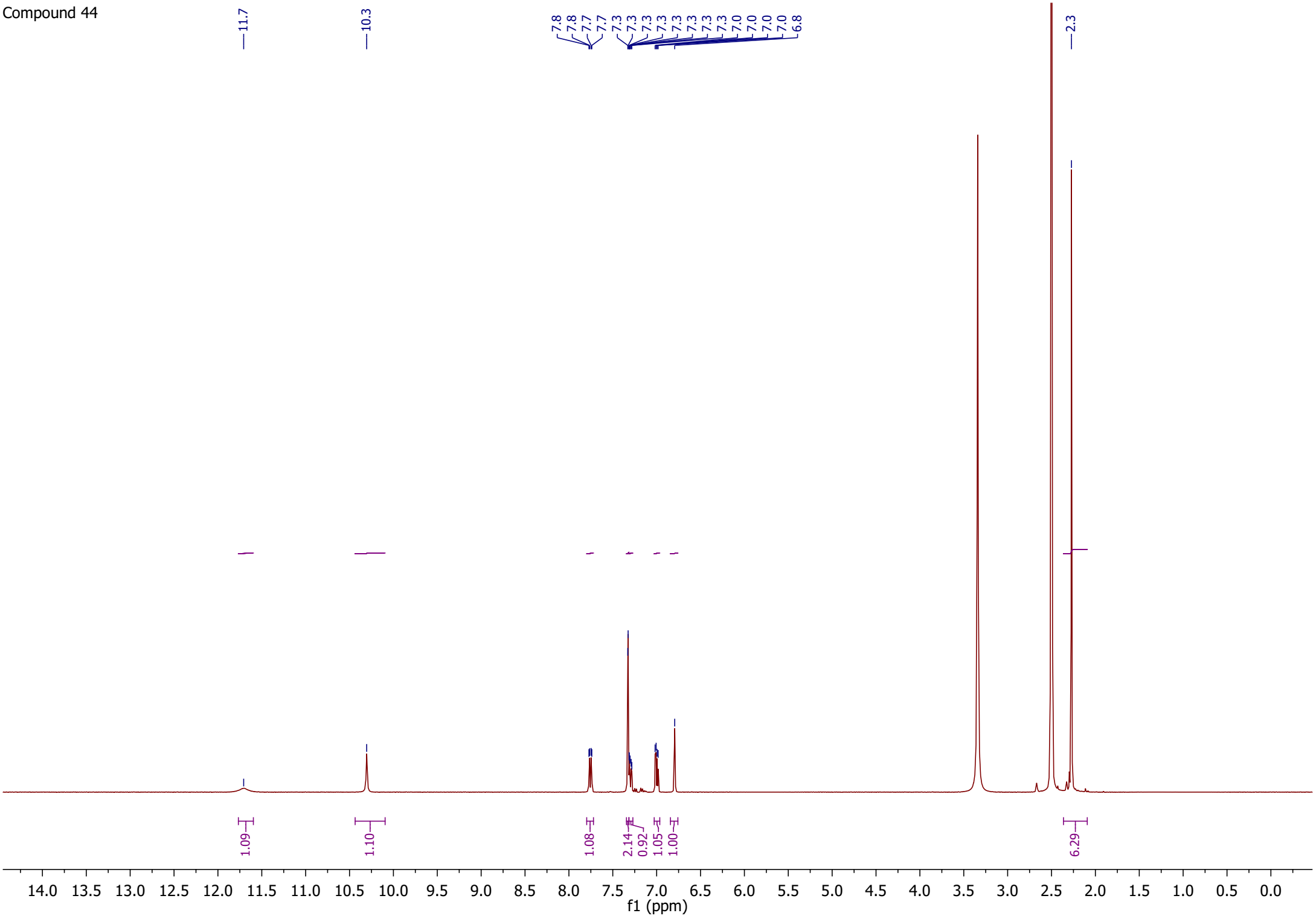
Compound 43


11.3
10.6
10.6
7.8
7.8
7.6
7.6
7.6
7.6
7.4
7.4
7.4
7.3
7.3
7.3
7.3
7.3
7.3
7.3
7.0
7.0
7.0
0.95
0.99
1.91
1.00
0.88
0.96
0.98
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
f1 (ppm)

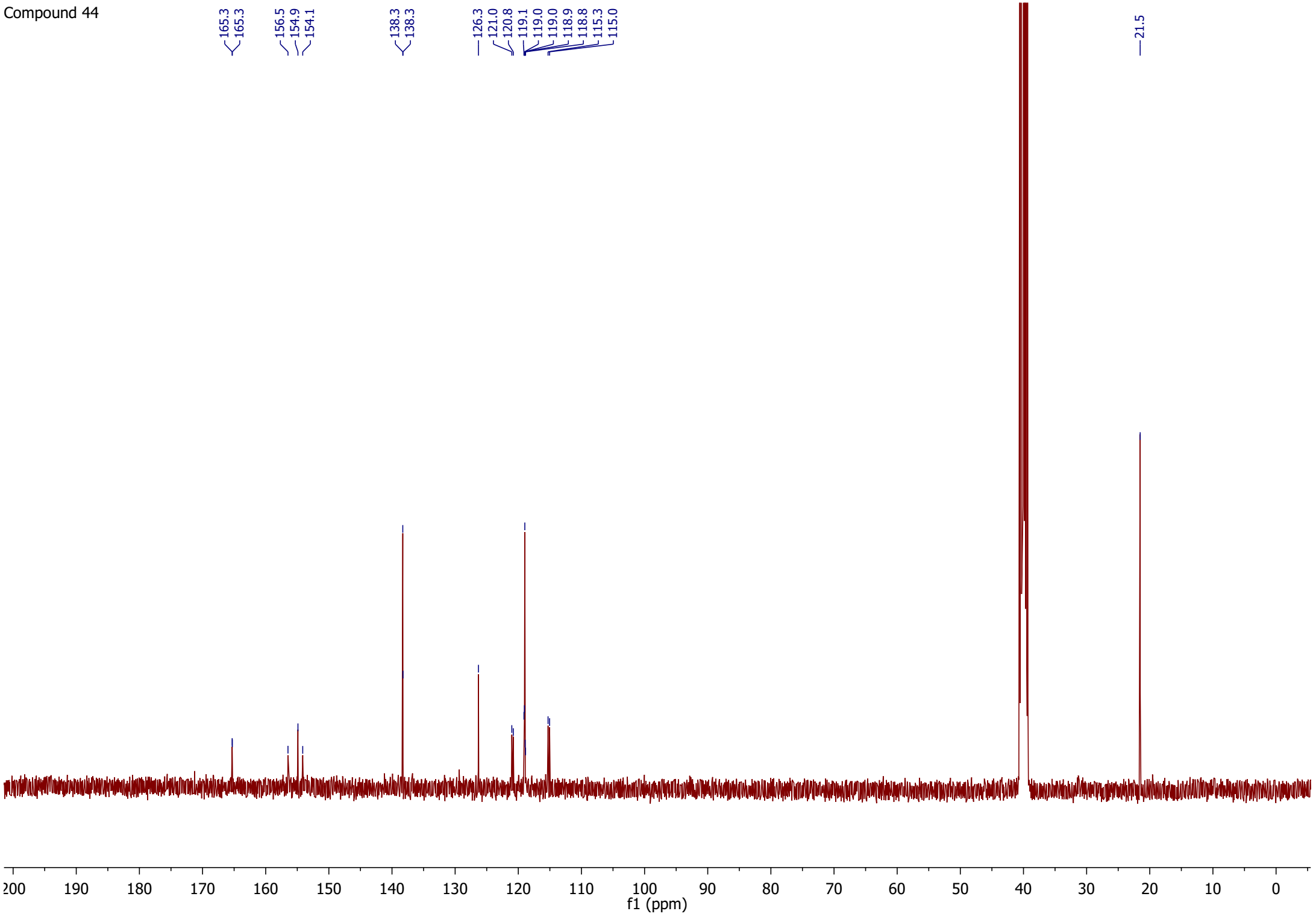
Compound 43


165.5
165.5
156.5
154.2
154.2
141.1
134.5
123.7
121.1
120.9
119.8
119.7
119.0
119.0
118.9
115.6
115.3
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

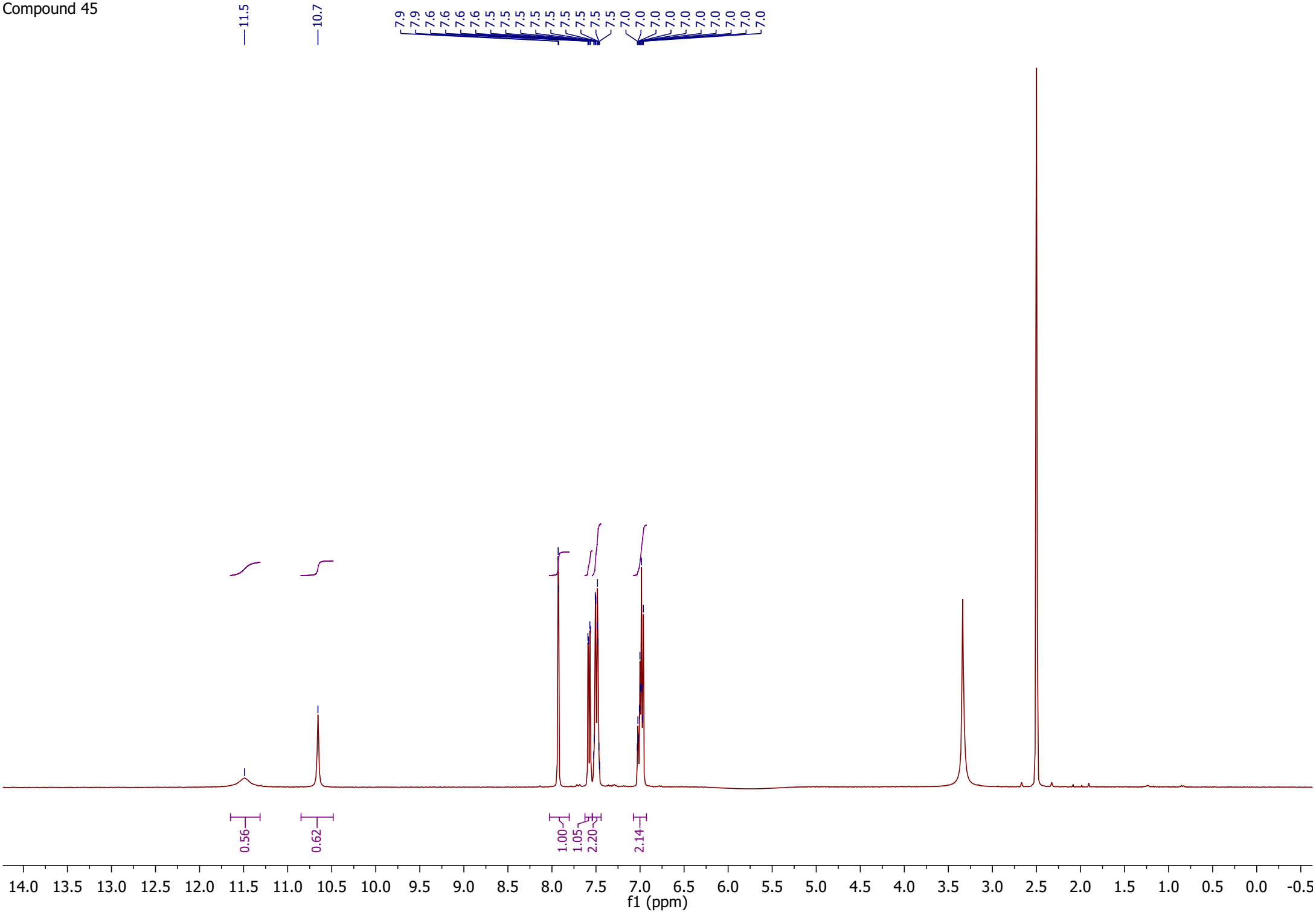
Compound 44


11.7
10.3
7.8
7.8
7.7
7.7
7.3
7.3
7.3
7.3
7.3
7.3
7.3
7.0
7.0
7.0
7.0
6.8
2.3
1.09
1.10
1.08
2.14
0.92
1.05
1.00
6.29
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

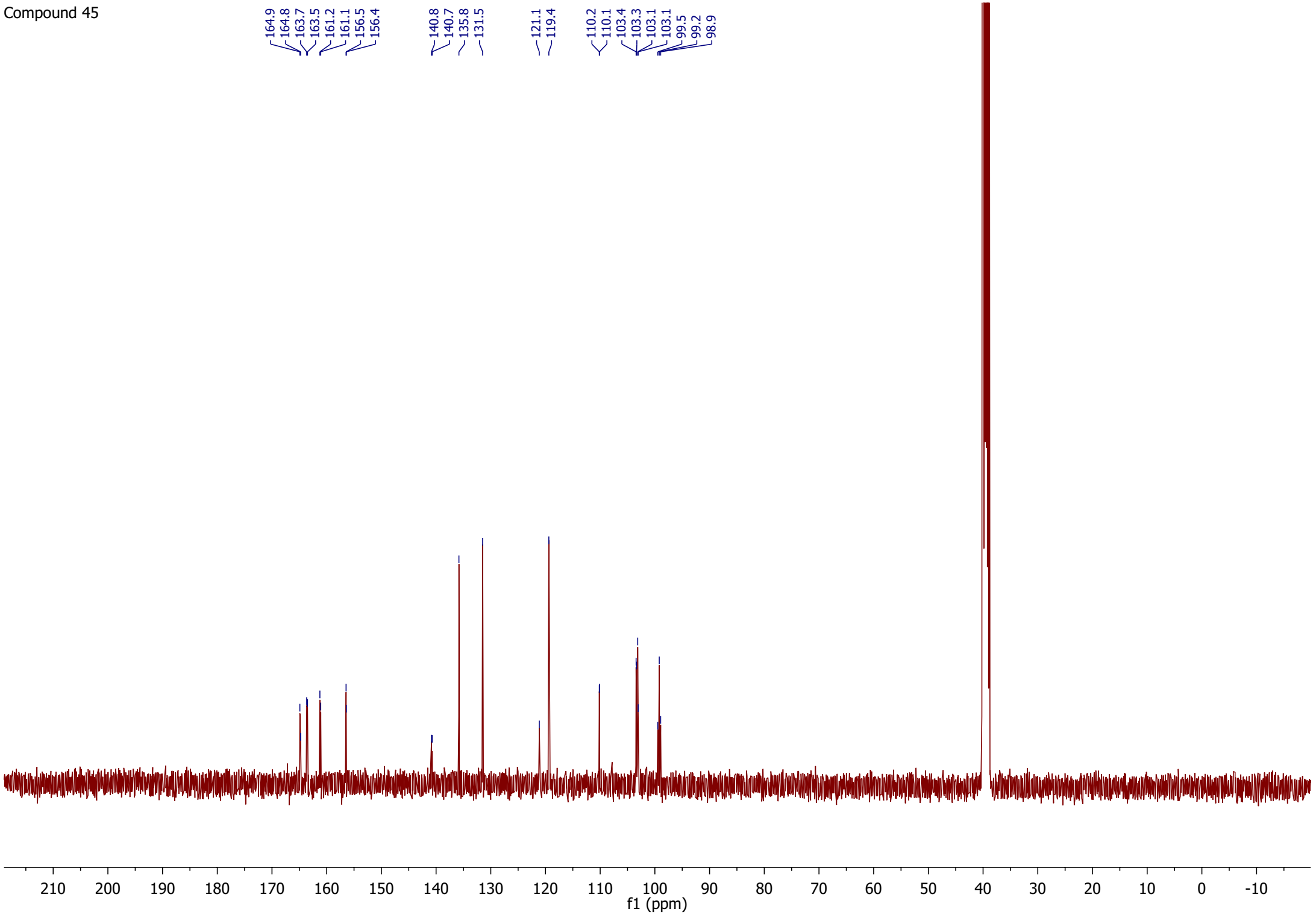
Compound 44


165.3
165.3
156.5
154.9
154.1
138.3
138.3
126.3
121.0
120.8
119.1
119.0
119.0
118.9
118.8
115.3
115.0
21.5
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

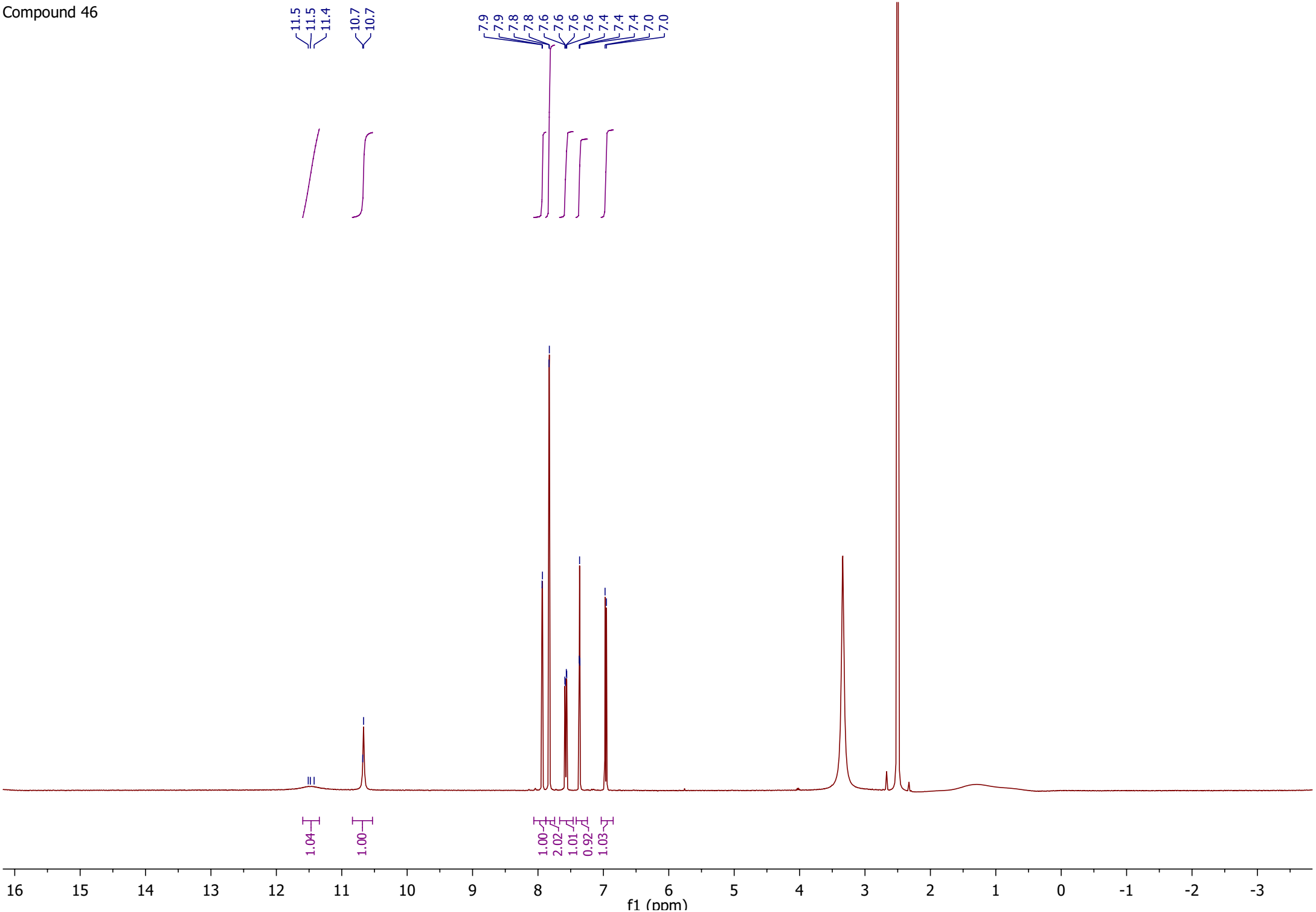
Compound 45


11.5
10.7
7.9
7.9
7.6
7.6
7.6
7.5
7.5
7.5
7.5
7.5
7.5
7.5
7.0
7.0
7.0
7.0
7.0
7.0
7.0
7.0
0.56
0.62
1.00
1.05
2.20
2.14
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

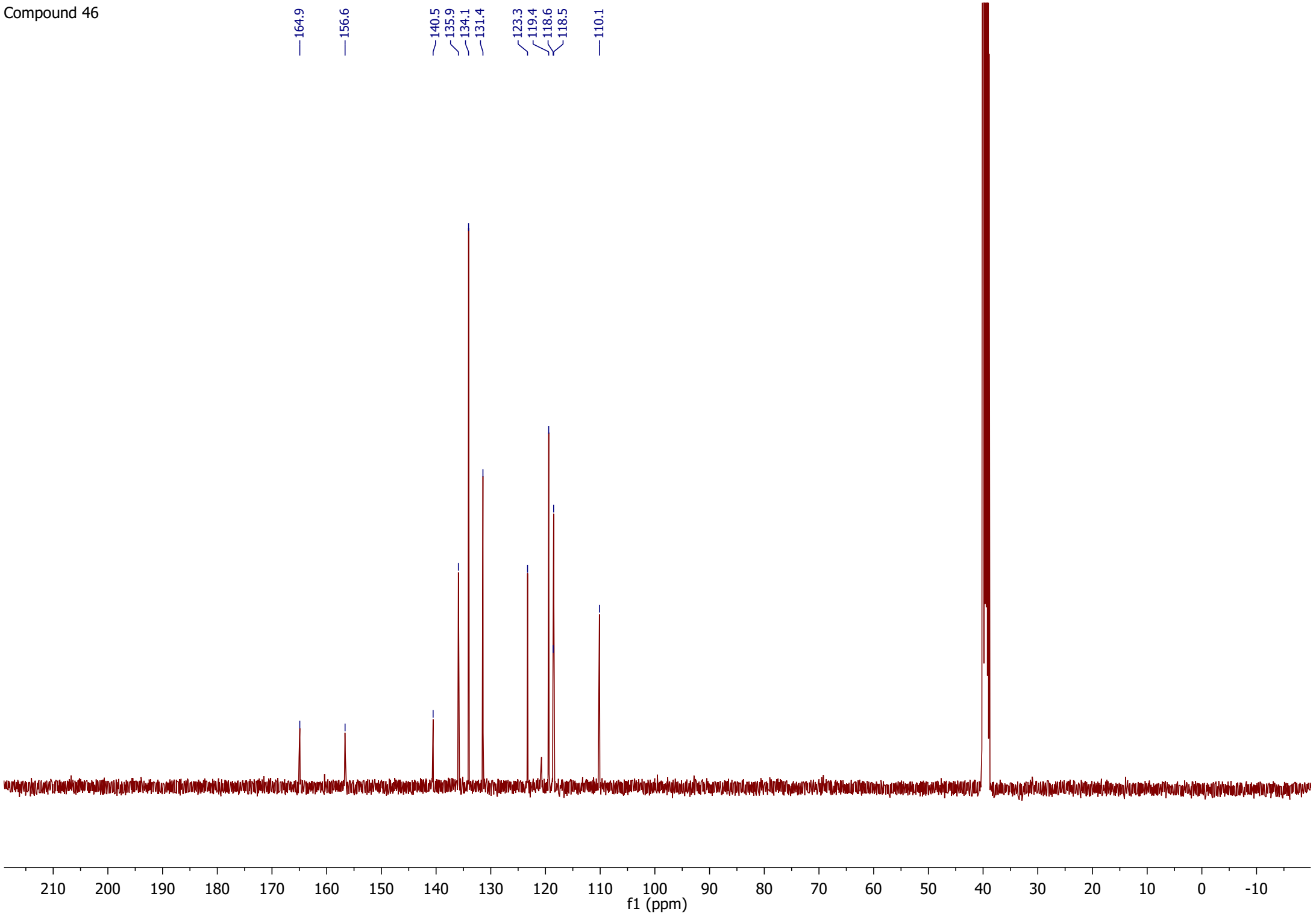
Compound 45


164.9
164.8
163.7
163.5
161.2
161.1
156.5
156.4
140.8
140.7
135.8
131.5
121.1
119.4
110.2
110.1
103.4
103.3
103.1
103.1
99.5
99.2
98.9
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

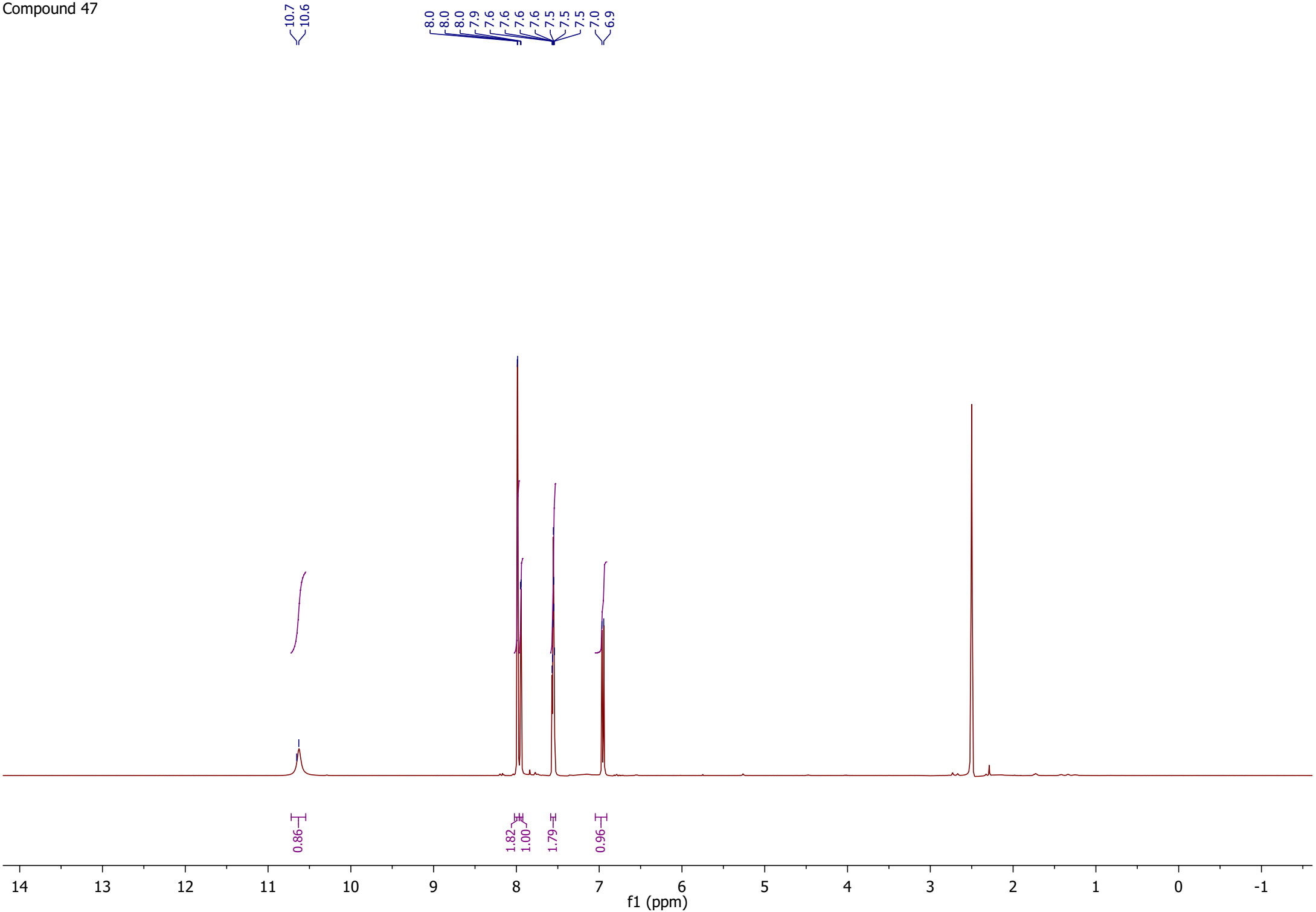
Compound 46


11.5
11.5
11.4
10.7
10.7
7.9
7.9
7.8
7.8
7.6
7.6
7.6
7.6
7.4
7.4
7.4
7.0
7.0
1.04
1.00
1.00
2.02
1.01
0.92
1.03
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
f1 (ppm)

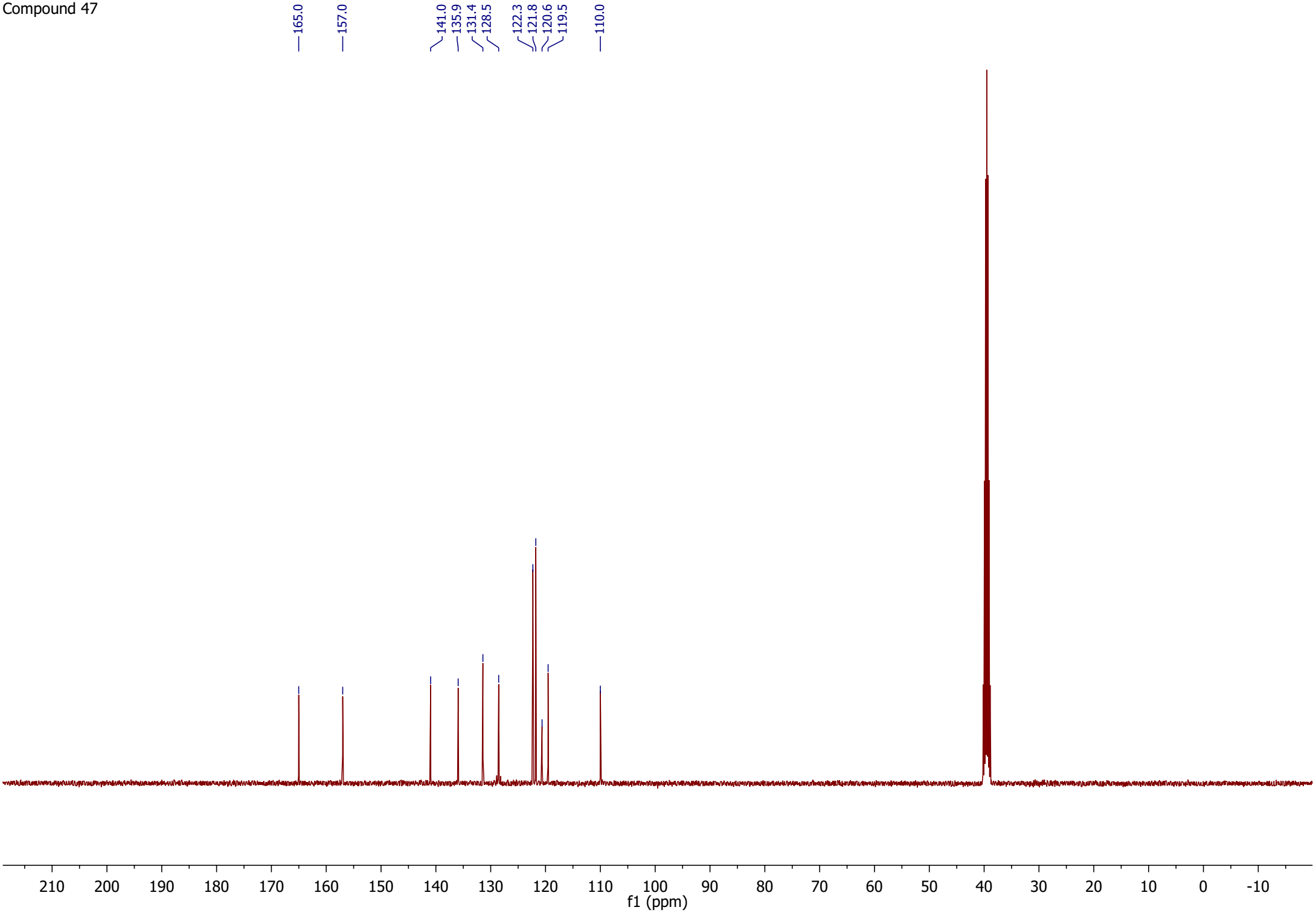
Compound 46

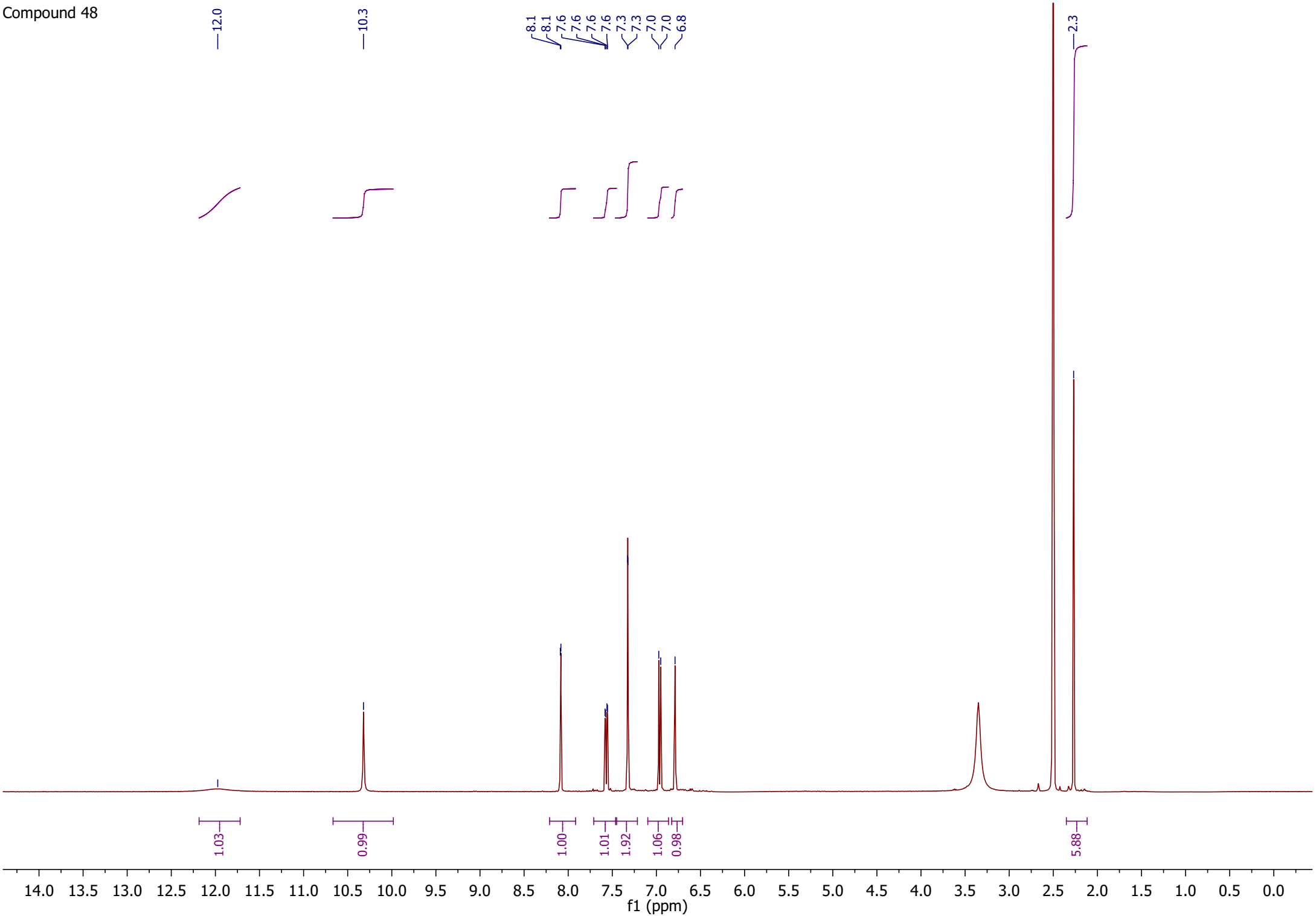

164.9
156.6
140.5
135.9
134.1
131.4
123.3
119.4
118.6
118.5
110.1
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

Compound 47

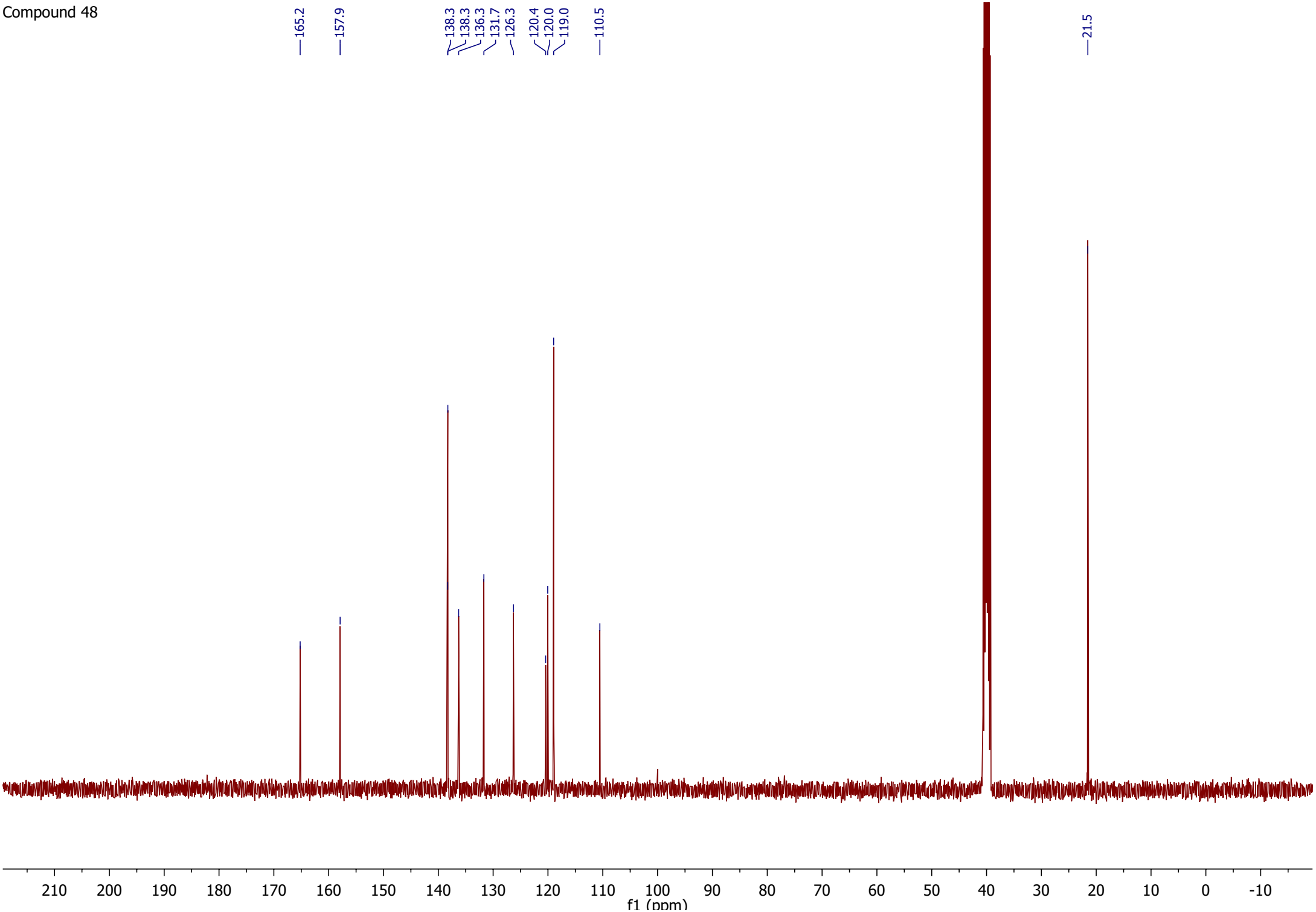

10.7
10.6
8.0
8.0
8.0
7.9
7.6
7.6
7.6
7.6
7.5
7.5
7.5
7.0
6.9
0.86
1.82
1.00
1.79
0.96
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
f1 (ppm)

Compound 47

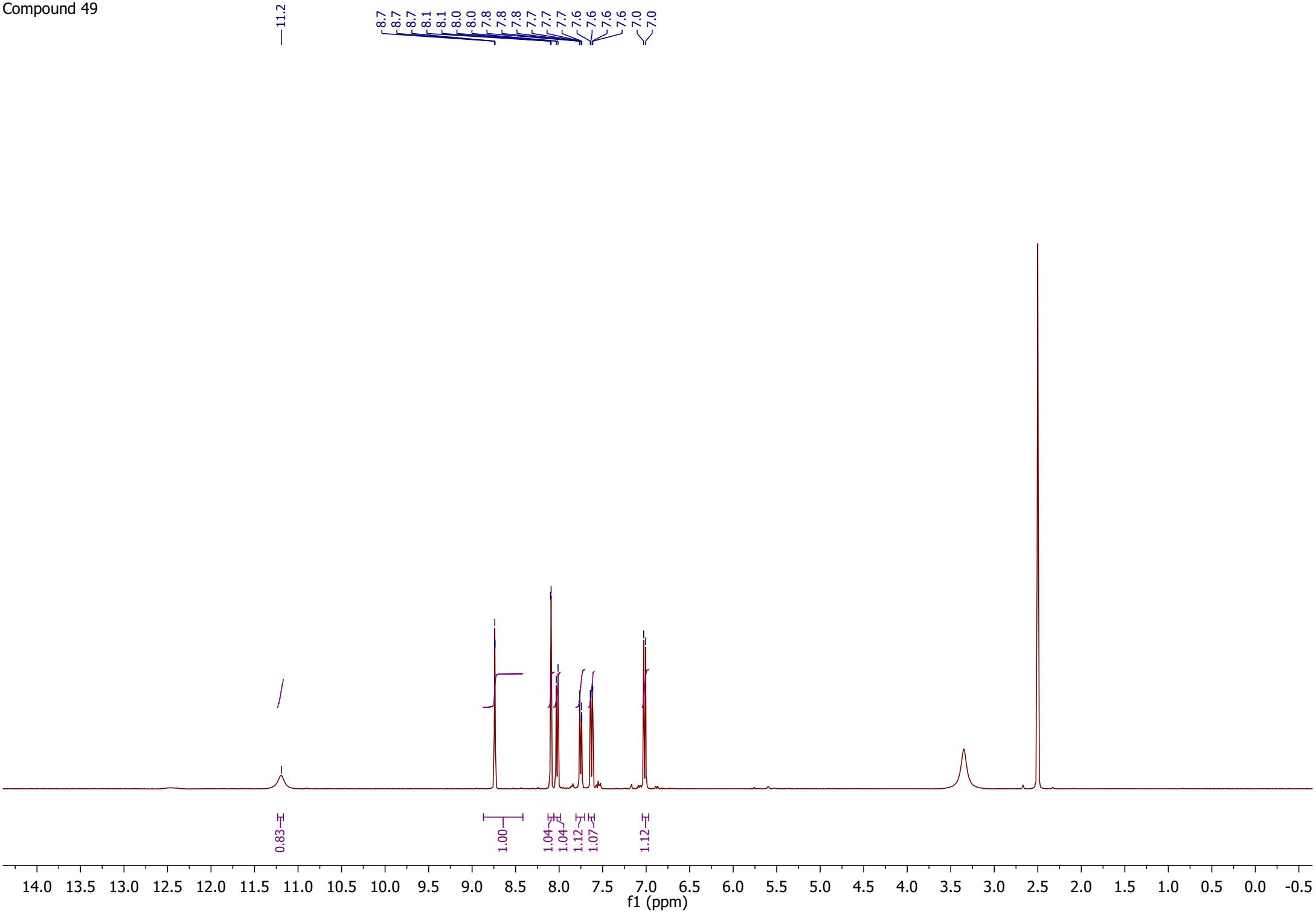

165.0
157.0
141.0
135.9
131.4
128.5
122.3
121.8
120.6
119.5
110.0
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)


Compound 48
12.0
10.3
8.1
8.1
7.6
7.6
7.6
7.6
7.3
7.3
7.0
7.0
6.8
2.3
1.03
0.99
1.00
1.01
1.92
1.06
0.98
5.88
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

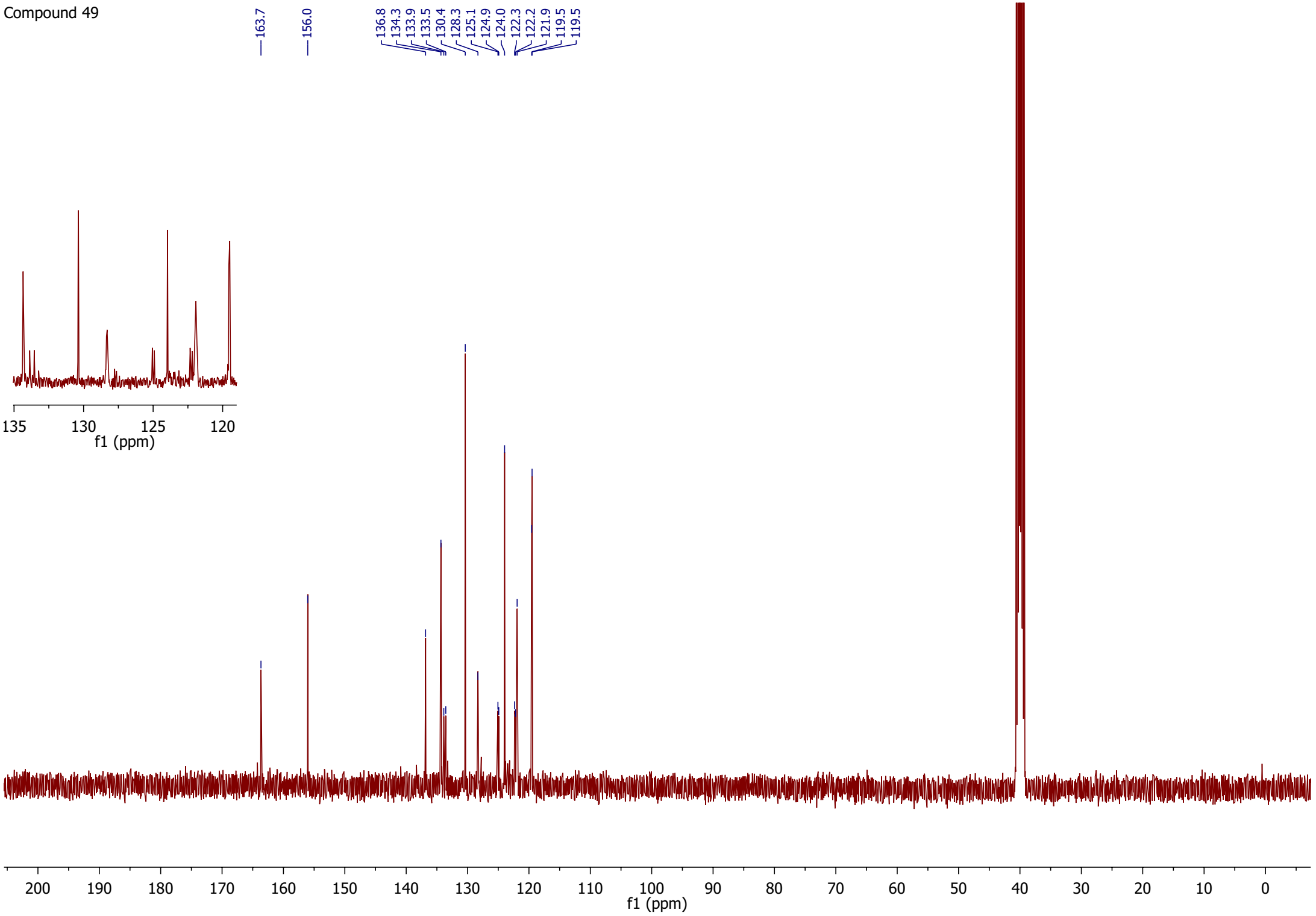
Compound 48


165.2
157.9
138.3
138.3
136.3
131.7
126.3
120.4
120.0
119.0
110.5
21.5
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

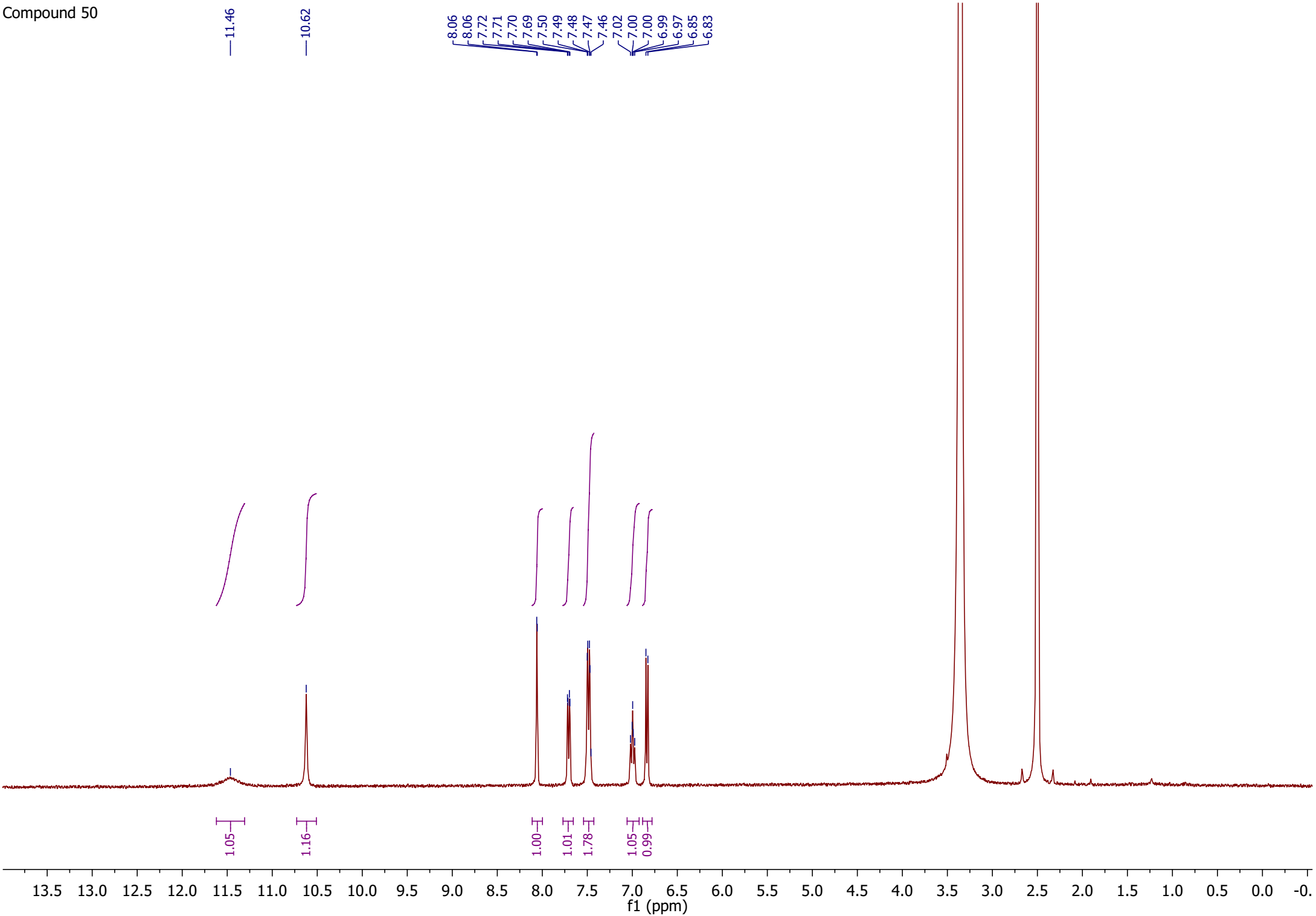
Compound 49


11.2
8.7
8.7
8.7
8.1
8.1
8.0
8.0
7.8
7.8
7.8
7.7
7.7
7.7
7.6
7.6
7.6
7.6
7.0
7.0
0.83
1.00
1.04
1.04
1.12
1.07
1.12
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)

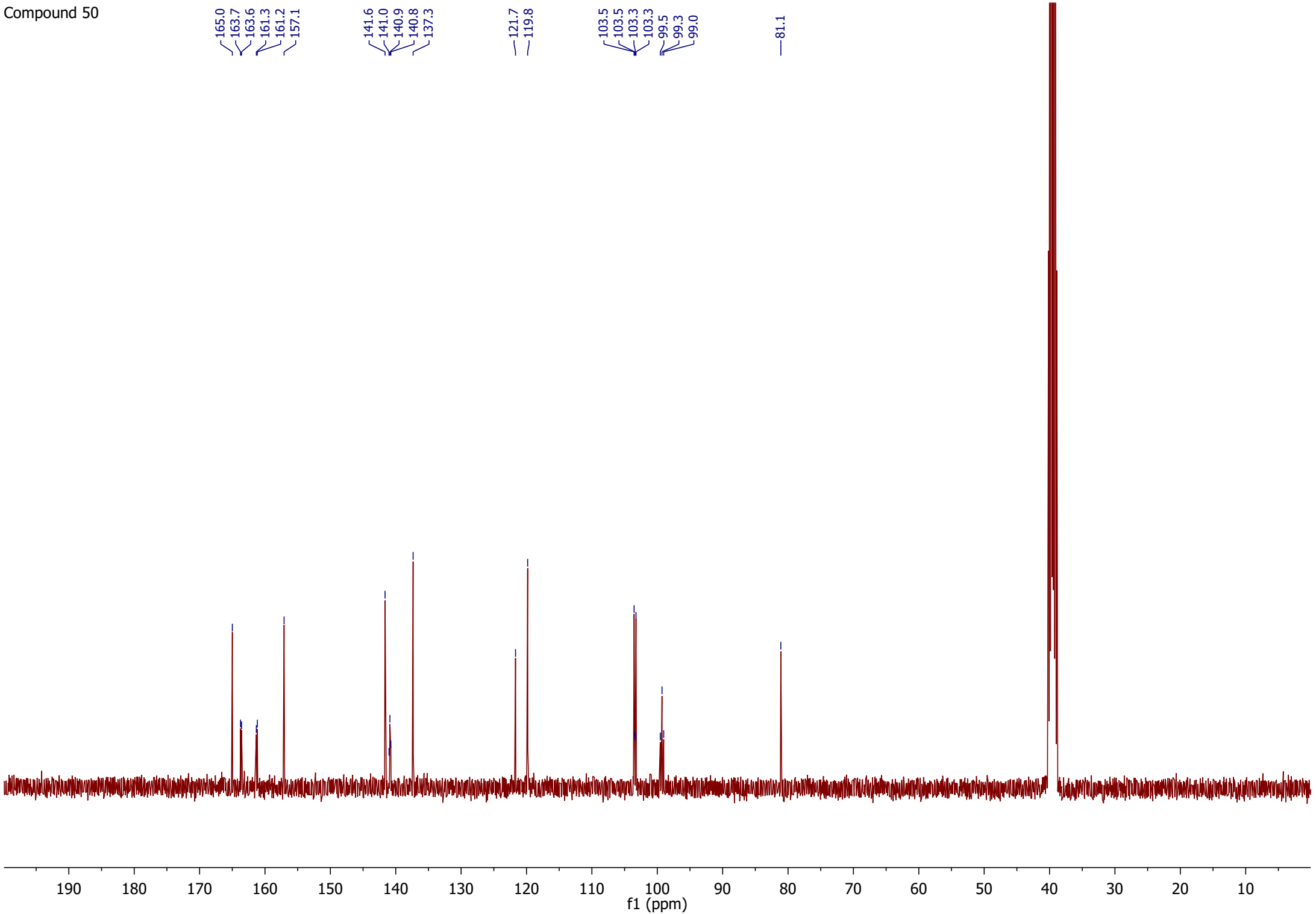
Compound 49


163.7
156.0
136.8
134.3
133.9
133.5
130.4
128.3
125.1
124.9
124.0
122.3
122.2
121.9
119.5
119.5
135
130
125
120
f1 (ppm)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

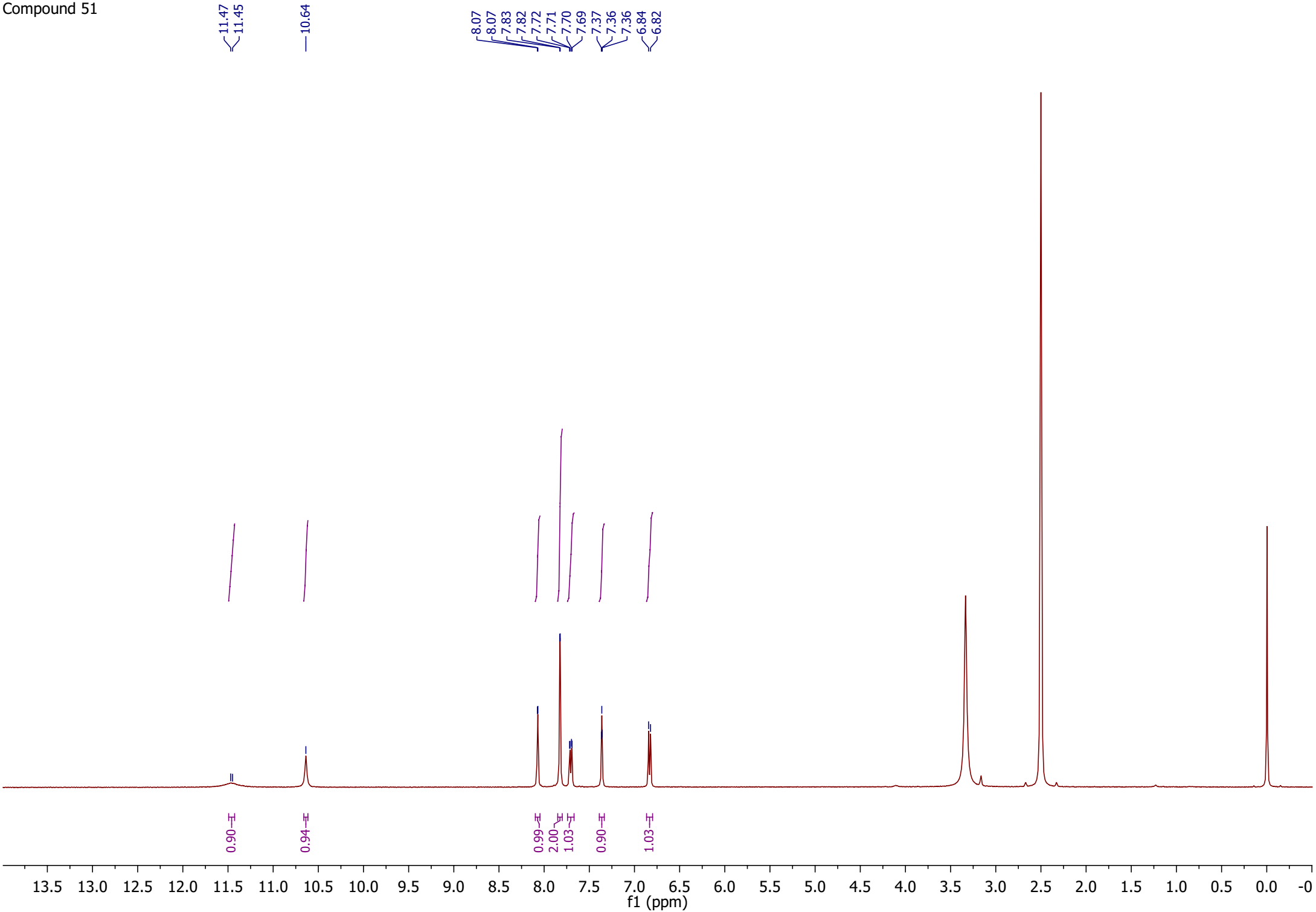
Compound 50


11.46
10.62
8.06
8.06
7.72
7.71
7.70
7.69
7.50
7.49
7.48
7.47
7.46
7.02
7.00
7.00
6.99
6.97
6.85
6.83
1.05
1.16
1.00
1.01
1.78
1.05
0.99
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

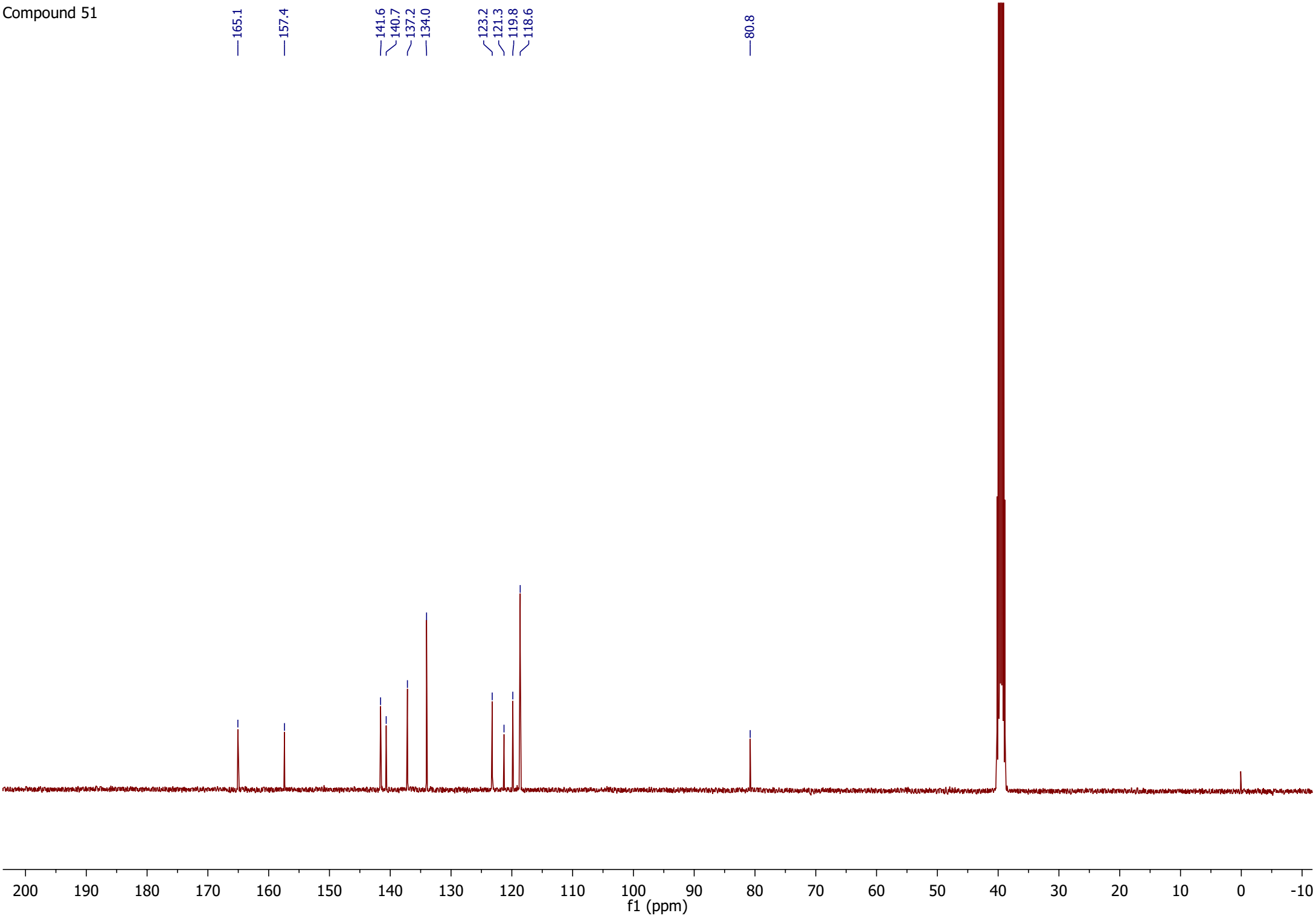
Compound 50


165.0
163.7
163.6
161.3
161.2
157.1
141.6
141.0
140.9
140.8
137.3
121.7
119.8
103.5
103.5
103.3
103.3
99.5
99.3
99.0
81.1
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)

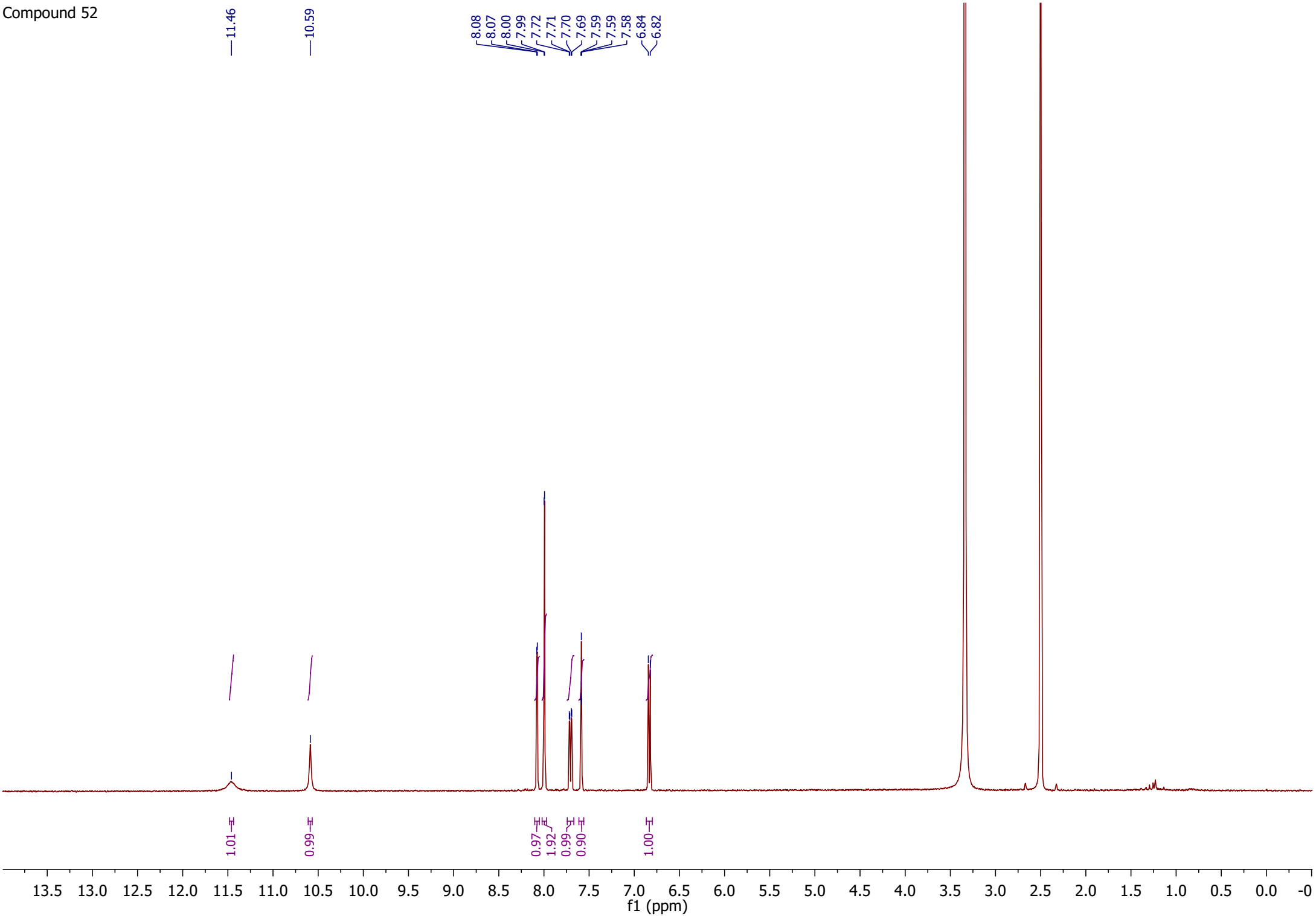
Compound 51


11.47
11.45
10.64
8.07
8.07
7.83
7.82
7.72
7.71
7.70
7.69
7.37
7.36
7.36
6.84
6.82
0.90
0.94
0.99
2.00
1.03
0.90
1.03
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

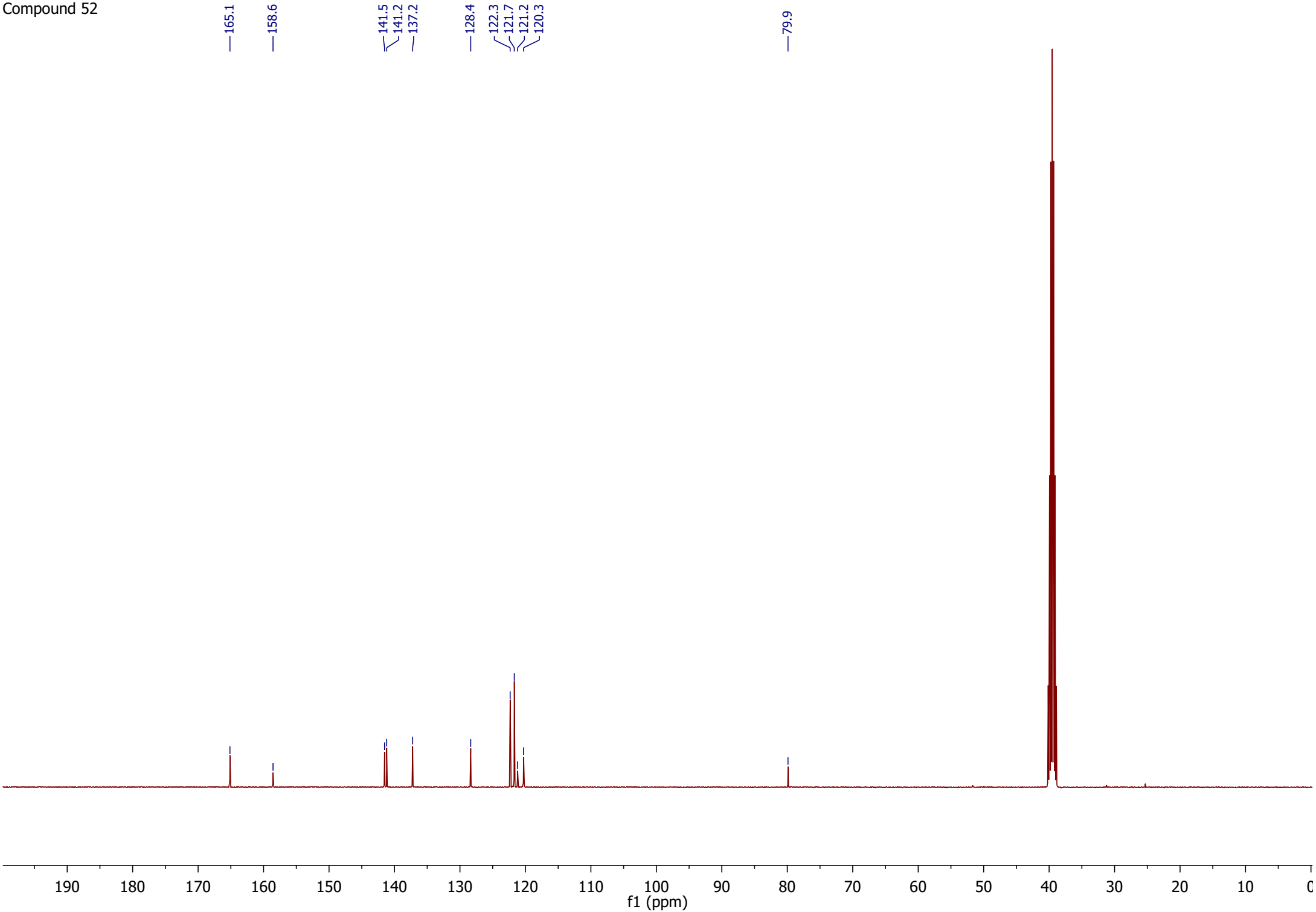
Compound 51


165.1
157.4
141.6
140.7
137.2
134.0
123.2
121.3
119.8
118.6
80.8
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

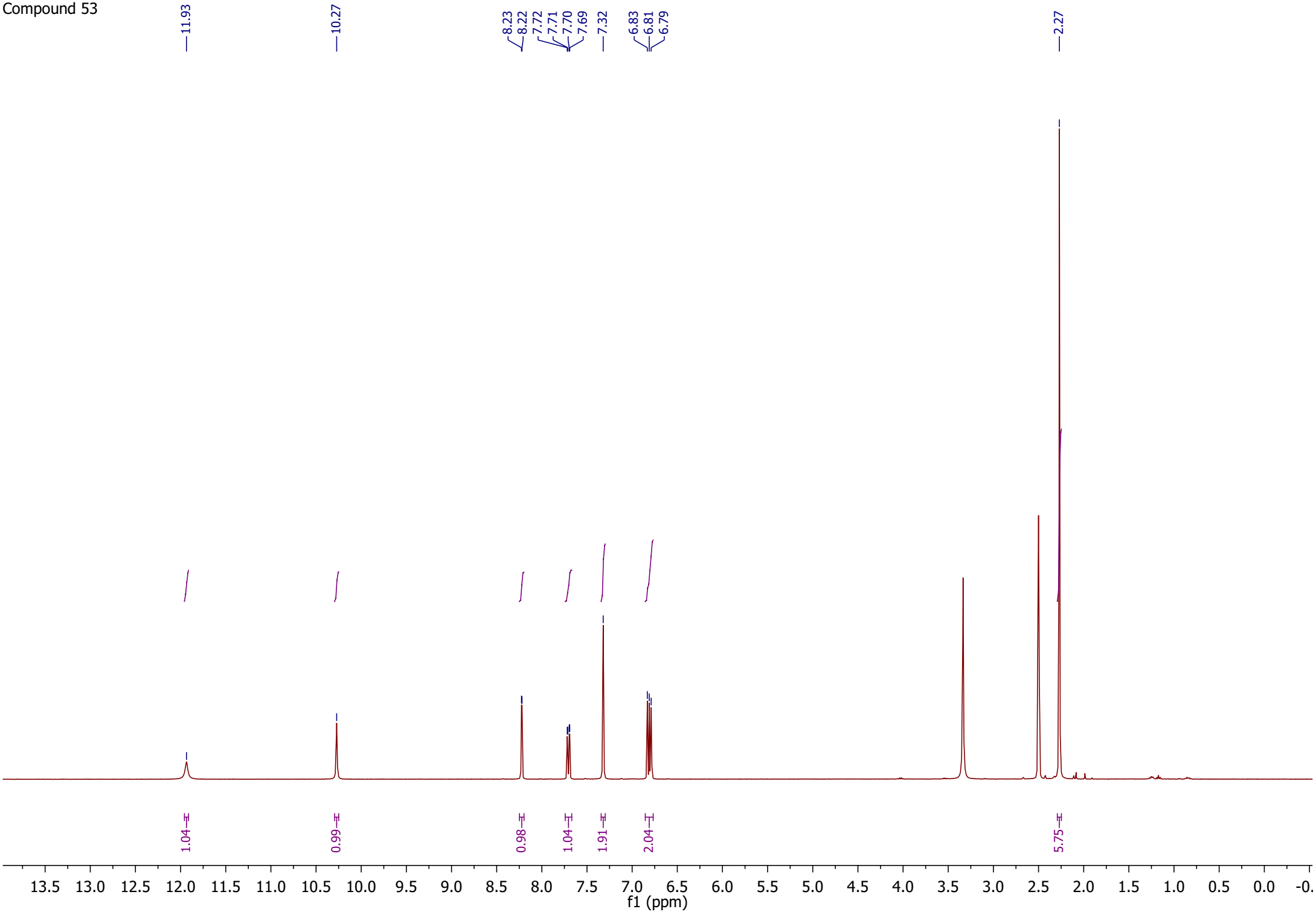
Compound 52


11.46
10.59
8.08
8.07
8.00
7.99
7.72
7.71
7.70
7.69
7.59
7.59
7.58
6.84
6.82
1.01
0.99
0.97
1.92
0.99
0.90
1.00
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

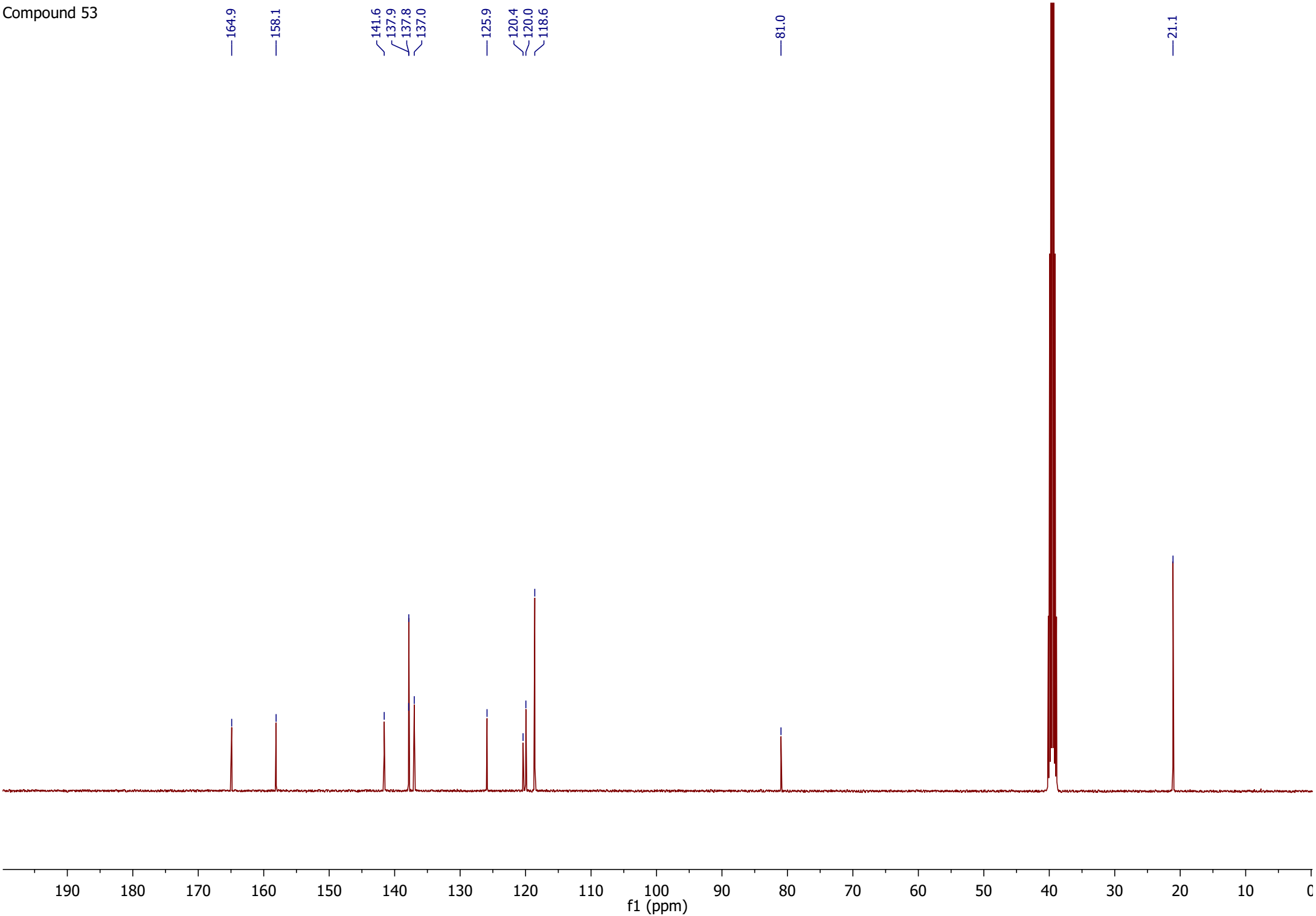
Compound 52


165.1
158.6
141.5
141.2
137.2
128.4
122.3
121.7
121.2
120.3
79.9
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

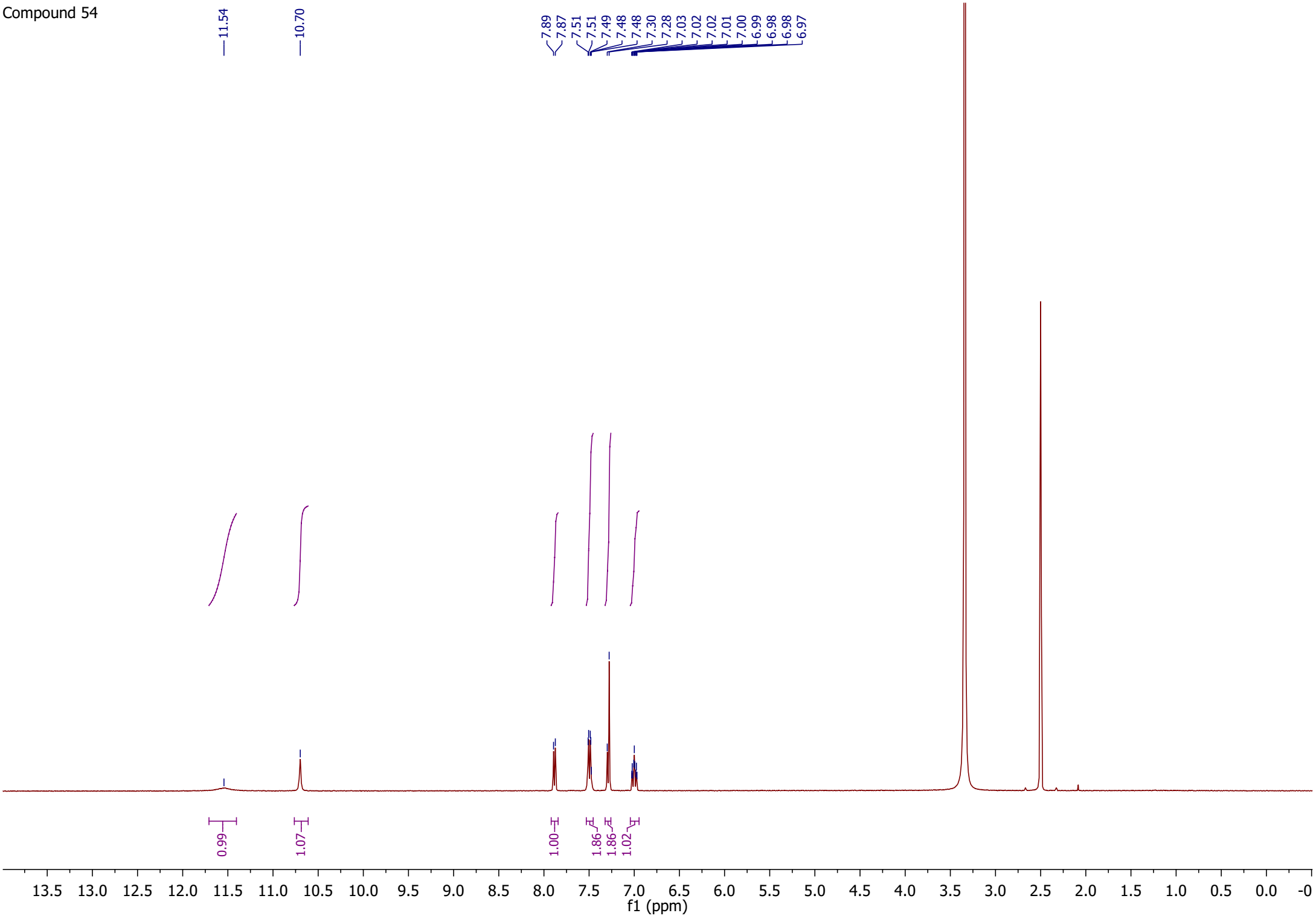
Compound 53


11.93
10.27
8.23
8.22
7.72
7.71
7.70
7.69
7.32
6.83
6.81
6.79
2.27
1.04
0.99
0.98
1.04
1.91
2.04
5.75
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

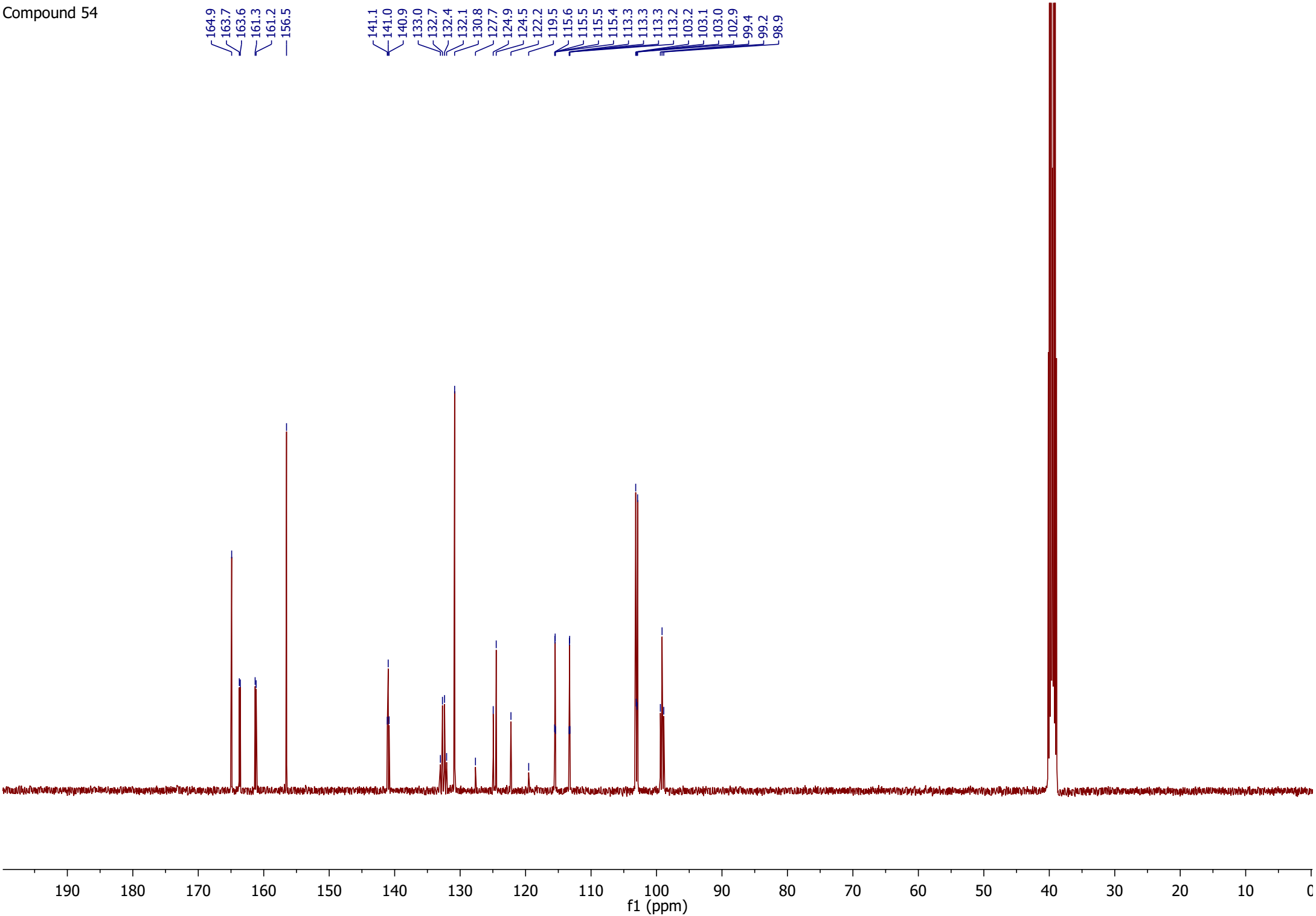
Compound 53


164.9
158.1
141.6
137.9
137.8
137.0
125.9
120.4
120.0
118.6
81.0
21.1
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

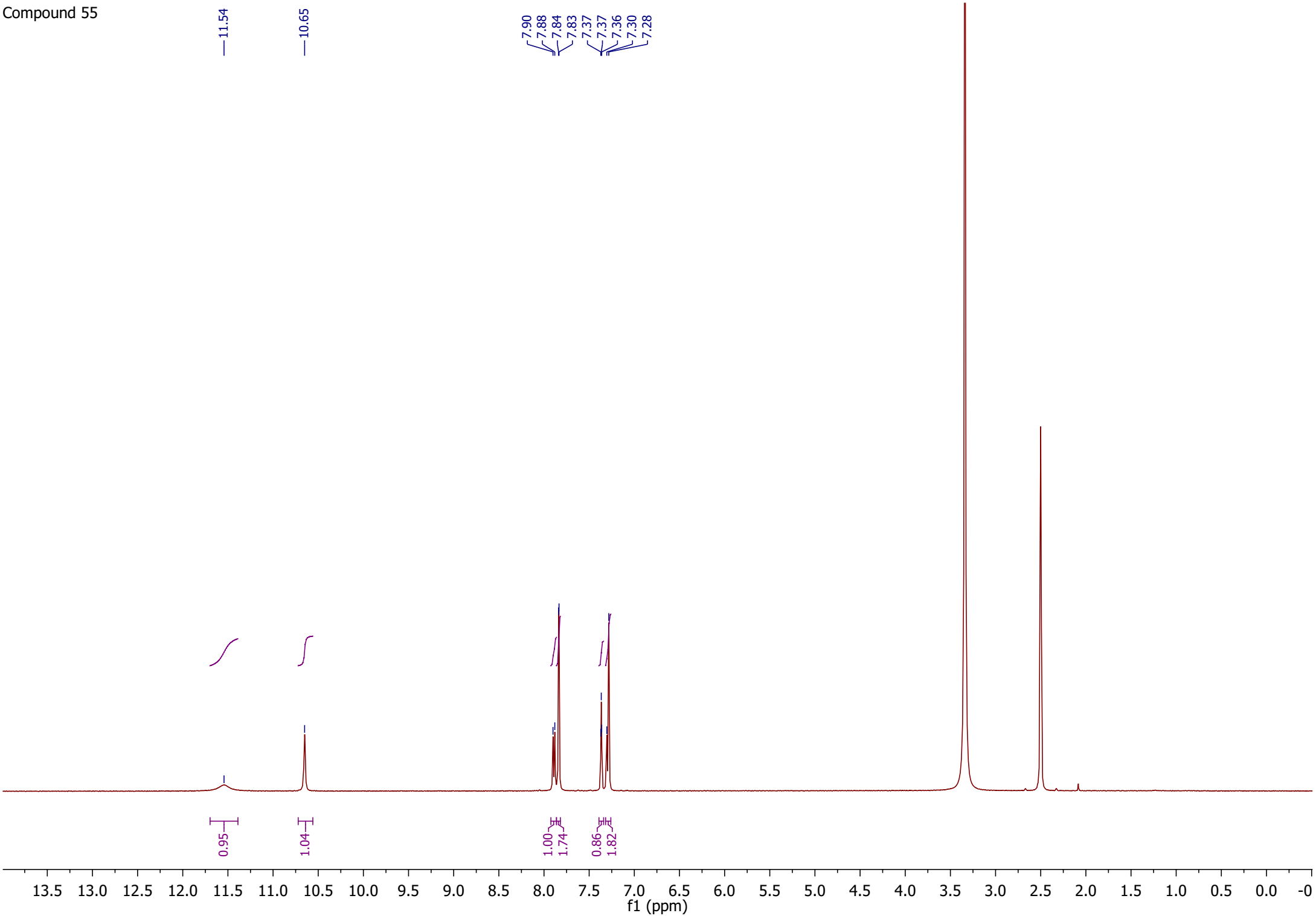
Compound 54


11.54
10.70
7.89
7.87
7.51
7.51
7.49
7.48
7.48
7.30
7.28
7.03
7.02
7.02
7.01
7.00
6.99
6.98
6.98
6.97
0.99
1.07
1.00
1.86
1.86
1.02
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

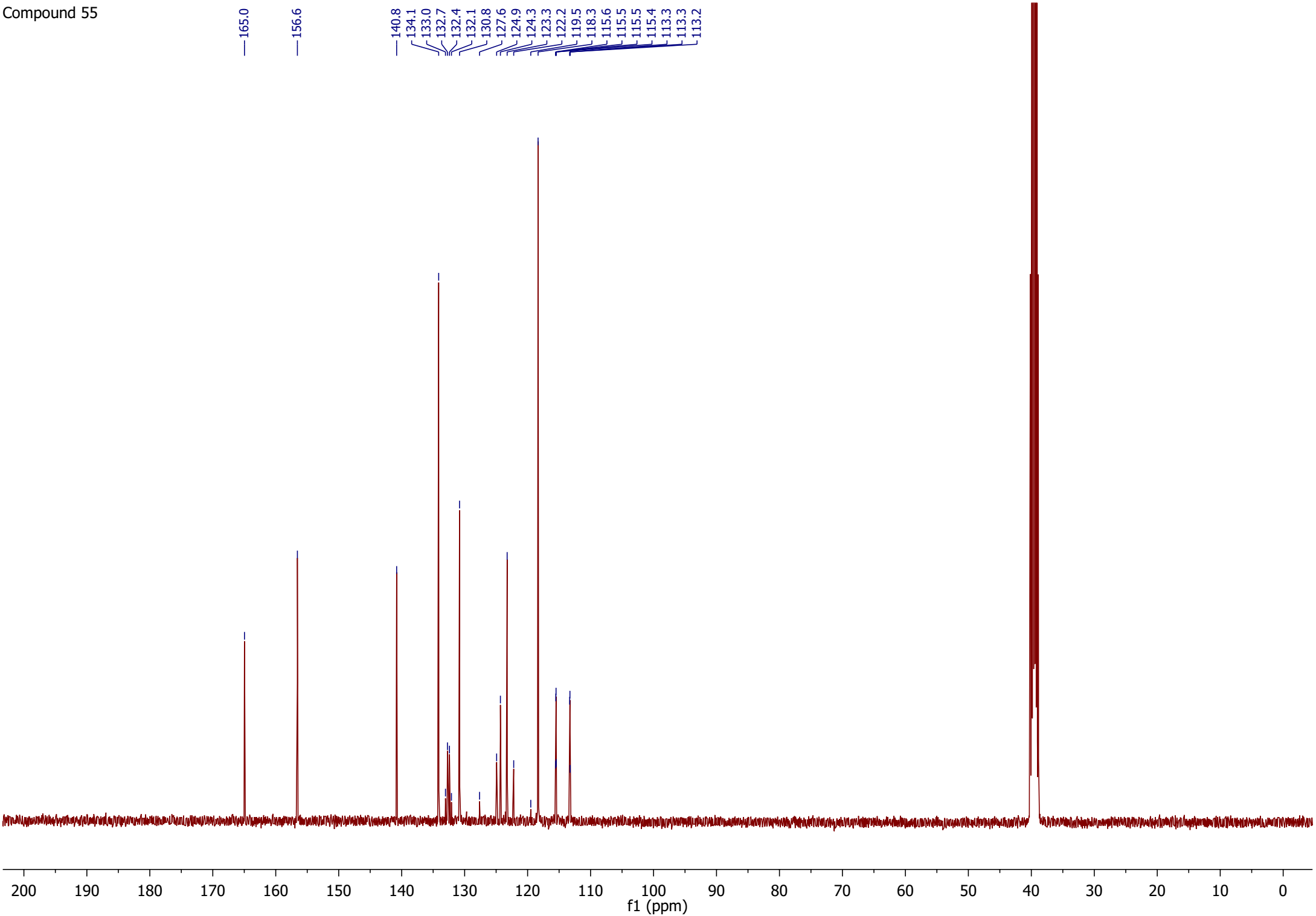
Compound 54


164.9
163.7
163.6
161.3
161.2
156.5
141.1
141.0
140.9
133.0
132.7
132.4
132.1
130.8
127.7
124.9
124.5
122.2
119.5
115.6
115.5
115.5
115.4
113.3
113.3
113.3
113.2
103.2
103.1
103.0
102.9
99.4
99.2
98.9
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

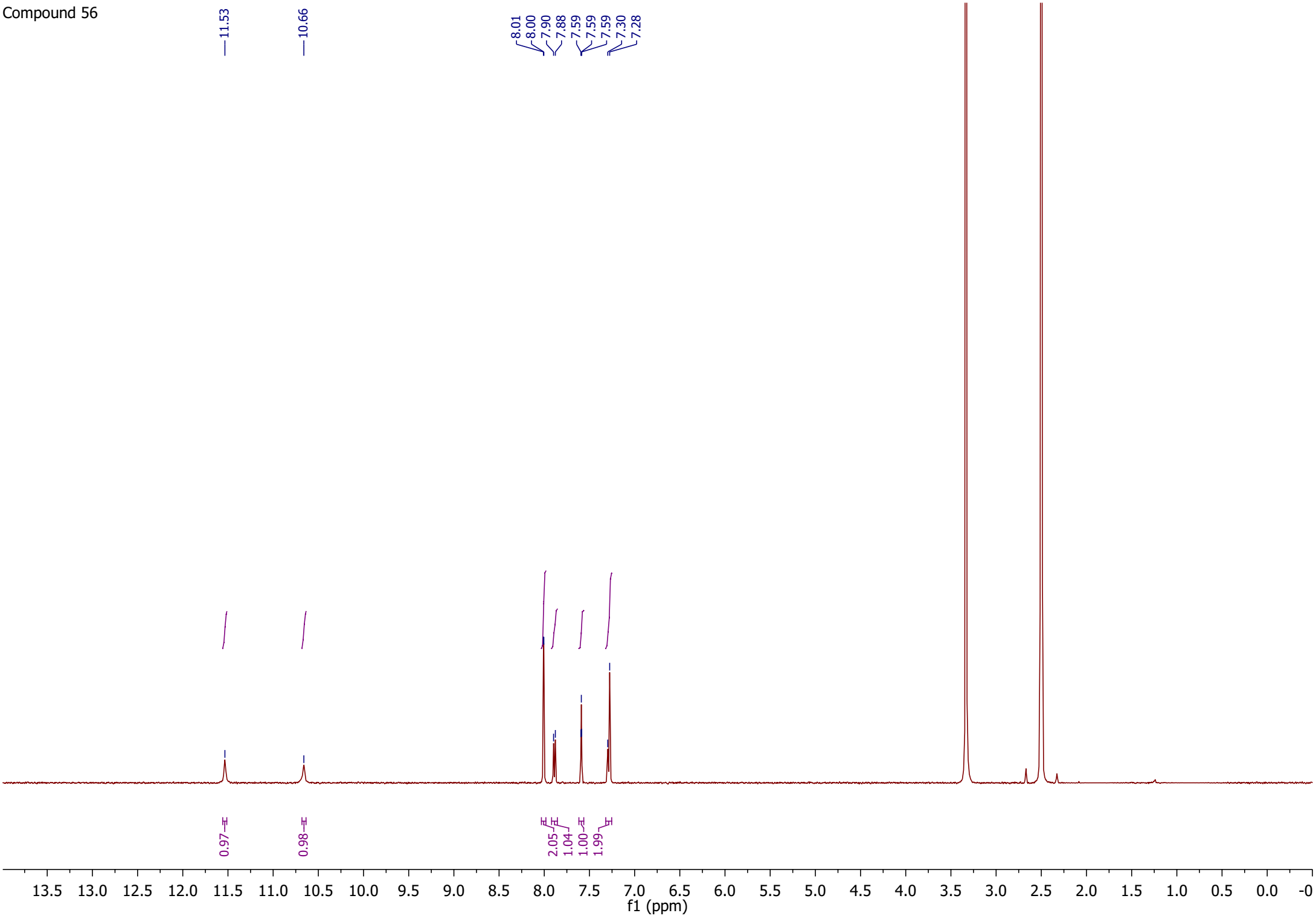
Compound 55


11.54
10.65
7.90
7.88
7.84
7.83
7.37
7.37
7.36
7.30
7.28
0.95
1.04
1.00
1.74
0.86
1.82
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

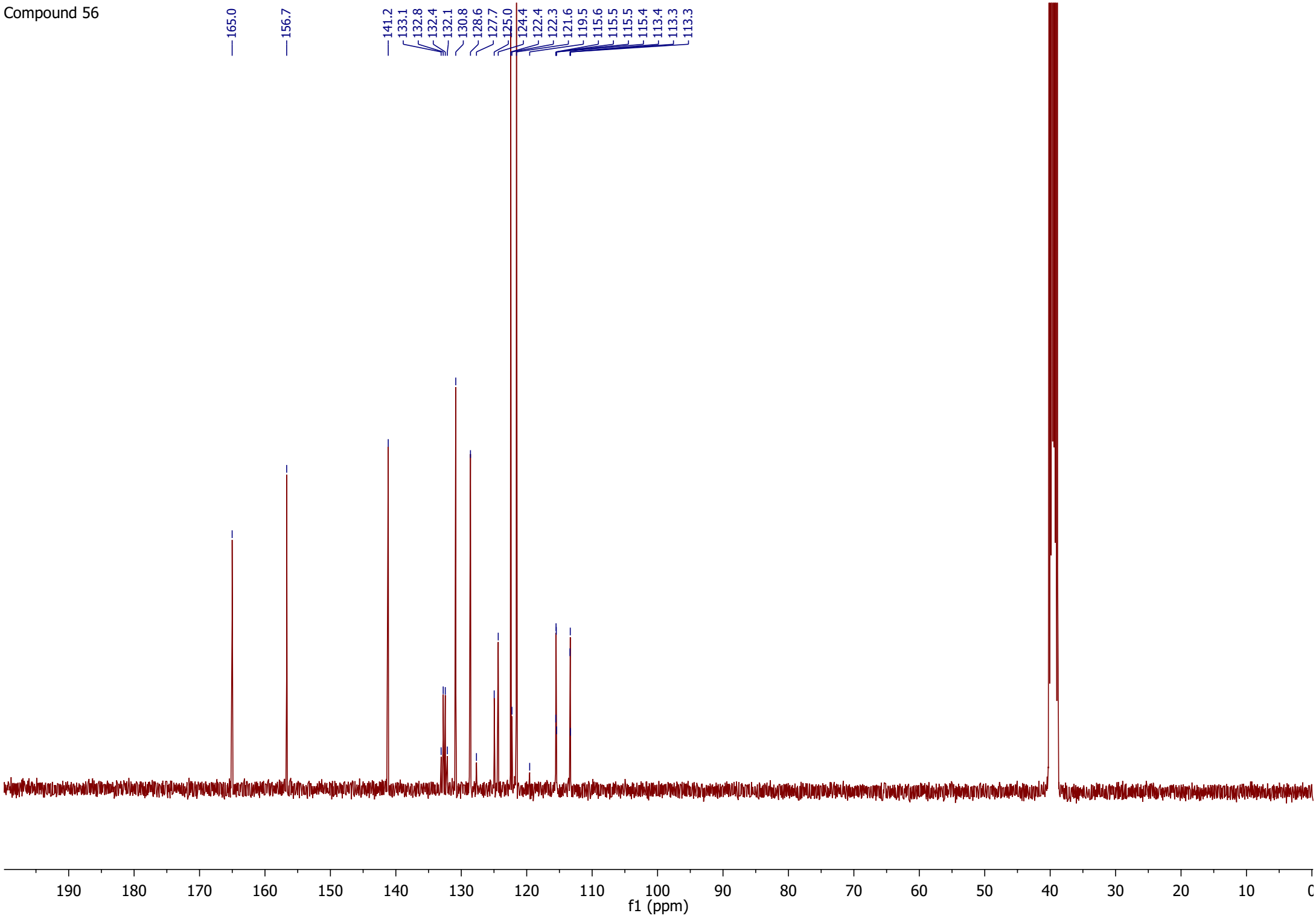
Compound 55


165.0
156.6
140.8
134.1
133.0
132.7
132.4
132.1
130.8
127.6
124.9
124.3
123.3
122.2
119.5
118.3
115.6
115.5
115.5
115.4
113.3
113.3
113.2
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

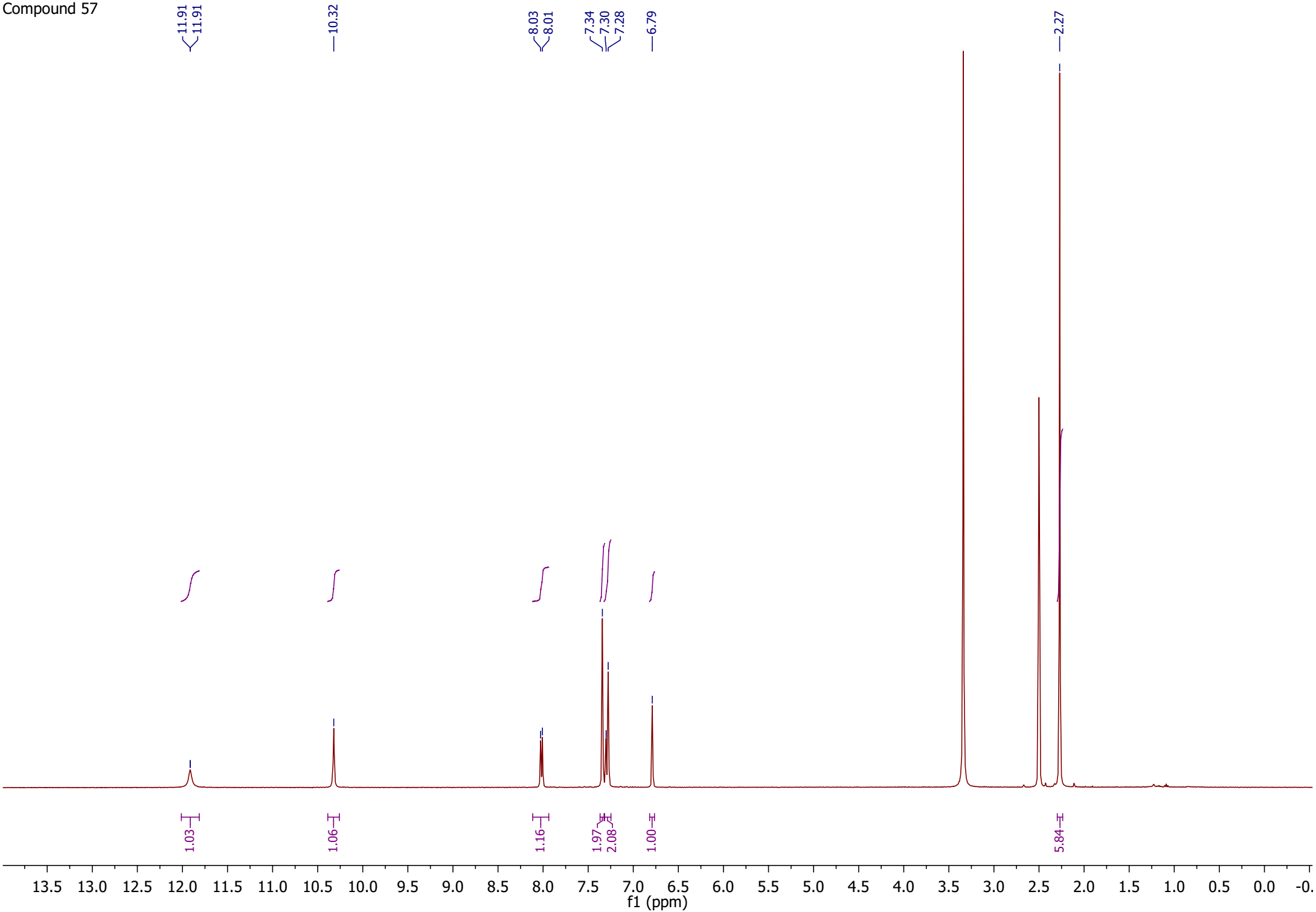
Compound 56


11.53
10.66
8.01
8.00
7.90
7.88
7.59
7.59
7.59
7.30
7.28
0.97
0.98
2.05
1.04
1.00
1.99
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0
f1 (ppm)

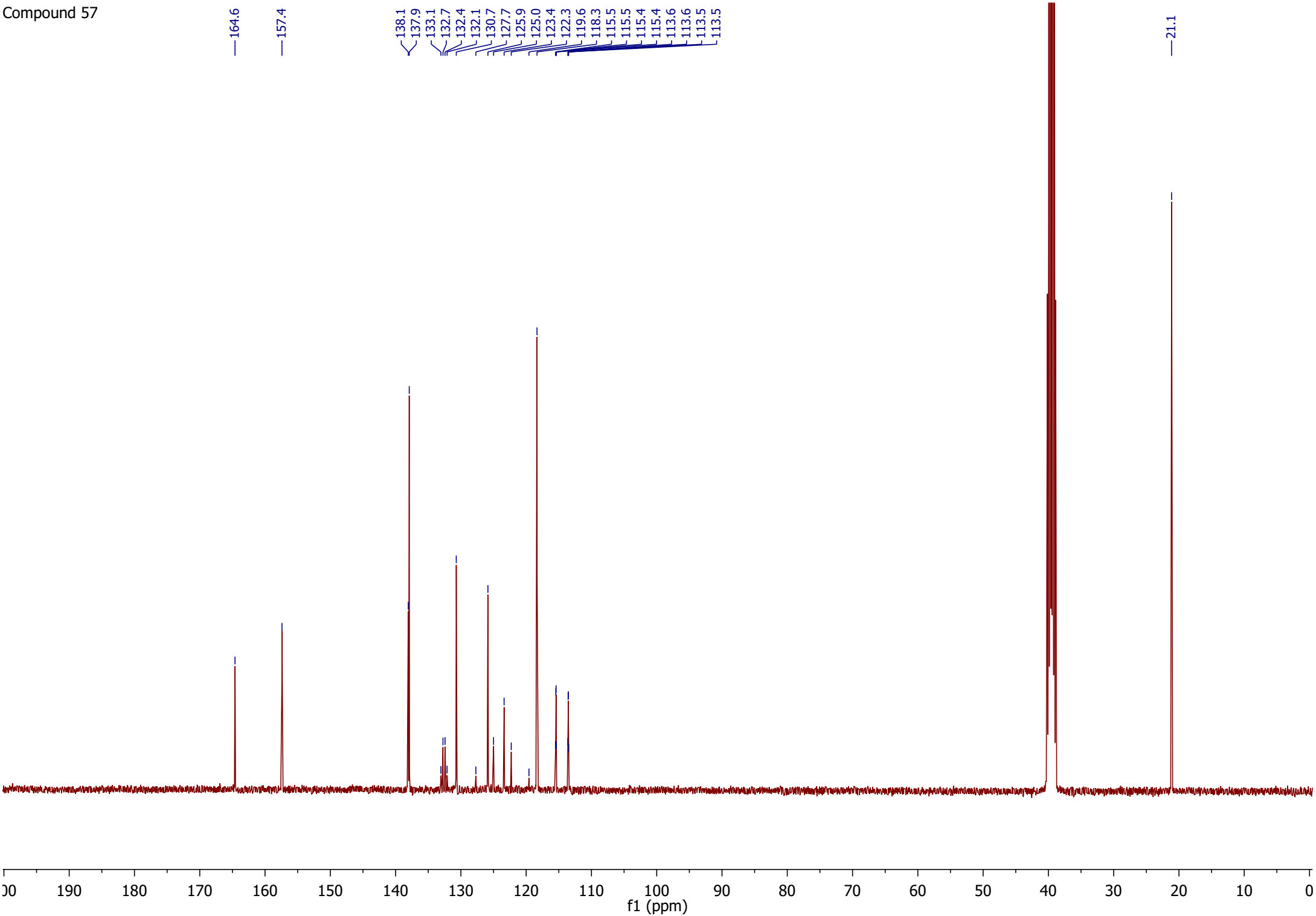
Compound 56


165.0
156.7
141.2
133.1
132.8
132.4
132.1
130.8
128.6
127.7
125.0
124.4
122.4
122.3
121.6
119.5
115.6
115.5
115.5
115.4
113.4
113.3
113.3
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

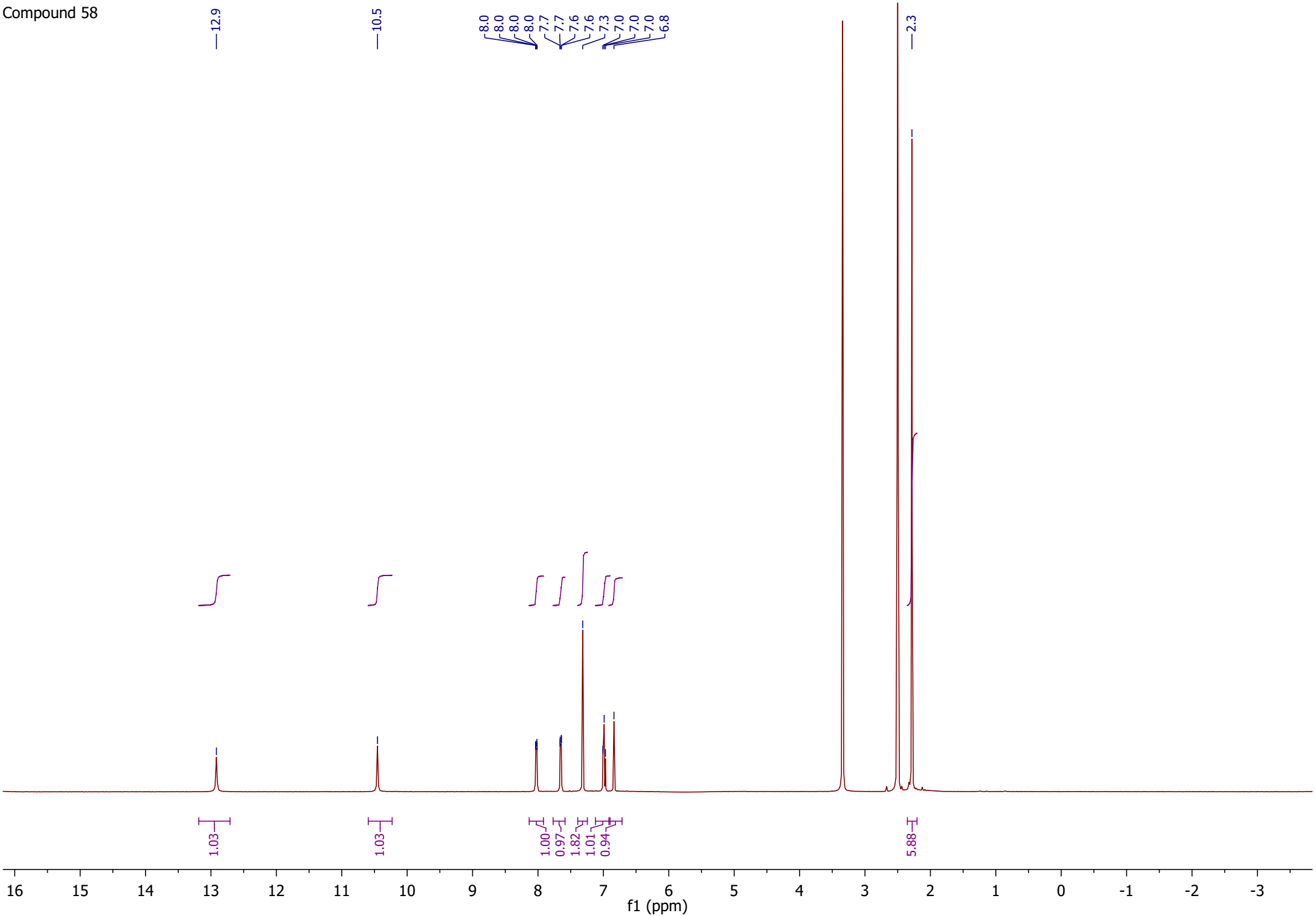
Compound 57


11.91
11.91
10.32
8.03
8.01
7.34
7.30
7.28
6.79
2.27
1.03
1.06
1.16
1.97
2.08
1.00
5.84
13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.
f1 (ppm)

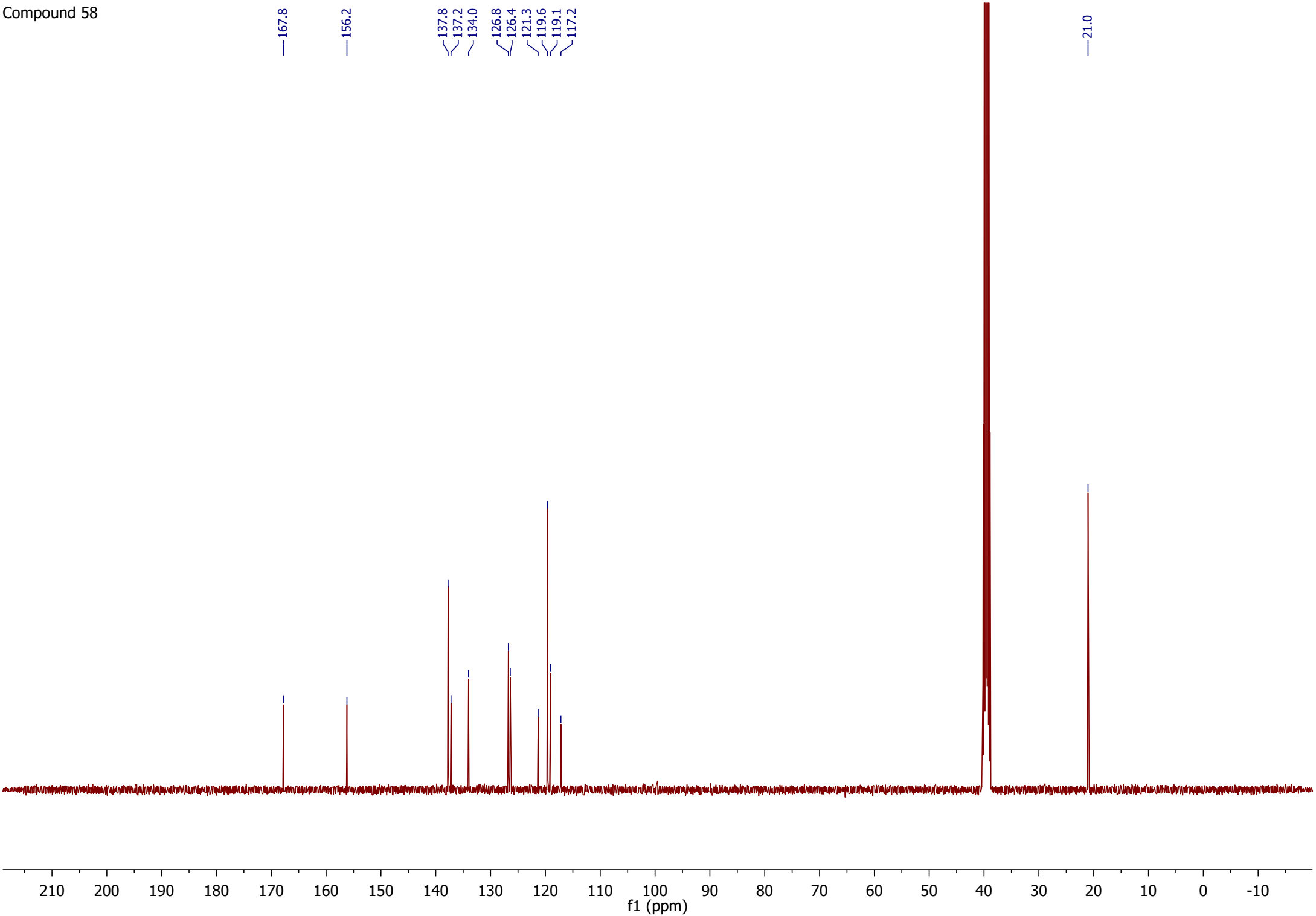
Compound 57


164.6
157.4
138.1
137.9
133.1
132.7
132.4
132.1
130.7
127.7
125.9
125.0
123.4
122.3
119.6
118.3
115.5
115.5
115.4
115.4
113.6
113.6
113.5
113.5
21.1
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
f1 (ppm)

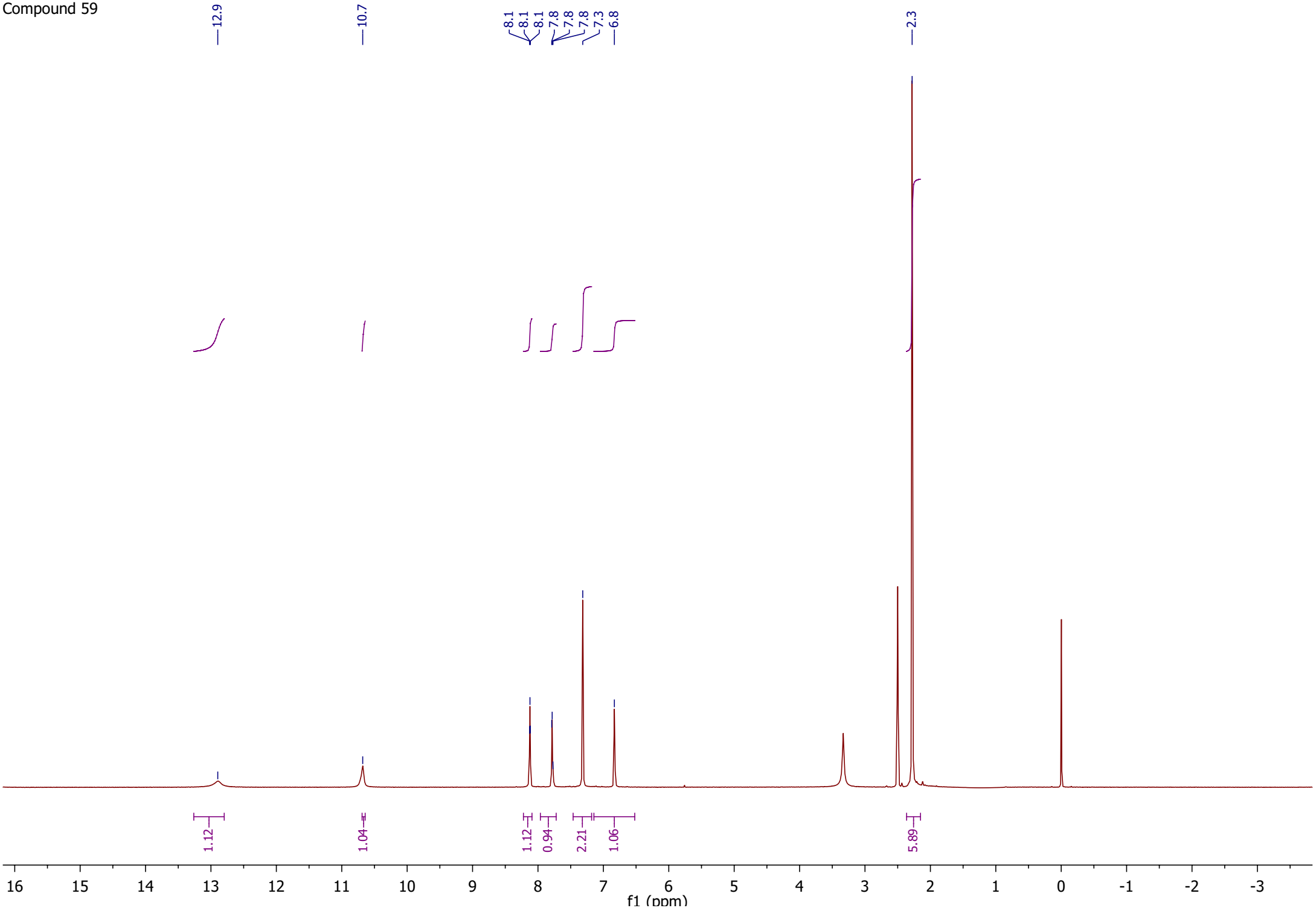
Compound 58


12.9
10.5
8.0
8.0
8.0
8.0
7.7
7.7
7.6
7.6
7.3
7.0
7.0
7.0
6.8
2.3
1.03
1.03
1.00
0.97
1.82
1.01
0.94
5.88
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
f1 (ppm)

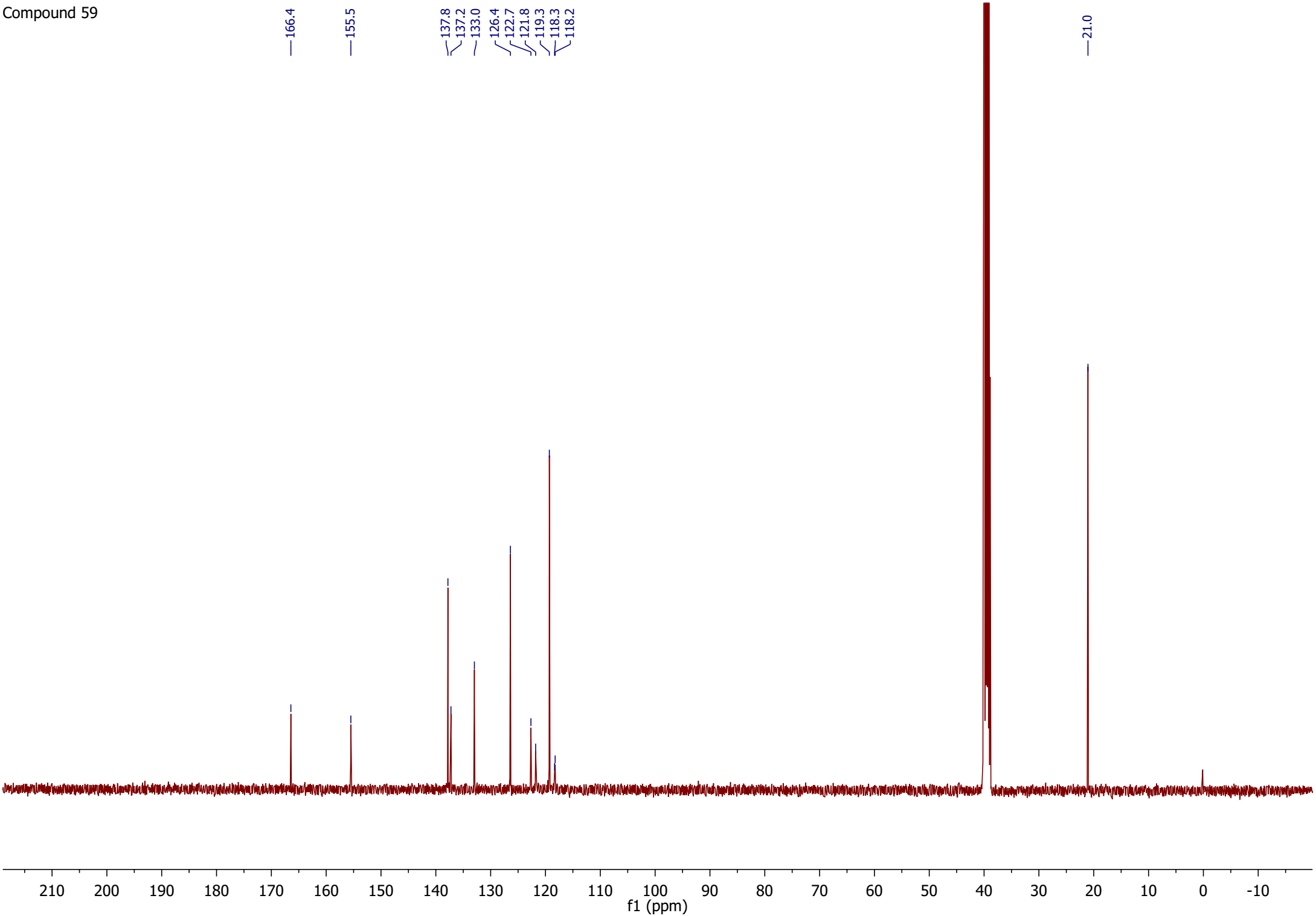
Compound 58


167.8
156.2
137.8
137.2
134.0
126.8
126.4
121.3
119.6
119.1
117.2
21.0
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

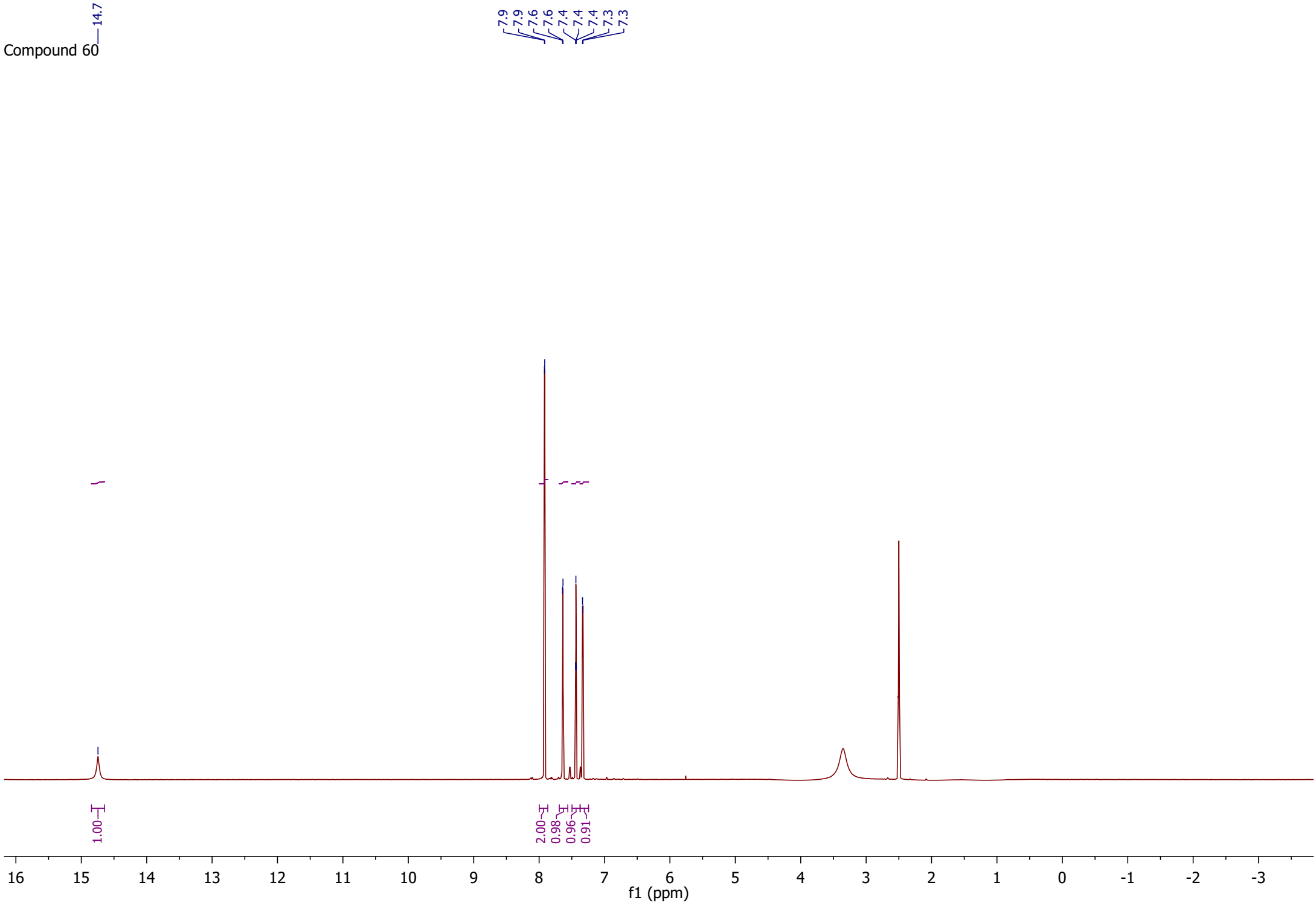
Compound 59


12.9
10.7
8.1
8.1
8.1
7.8
7.8
7.8
7.3
6.8
2.3
1.12
1.04
1.12
0.94
2.21
1.06
5.89
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
f1 (ppm)

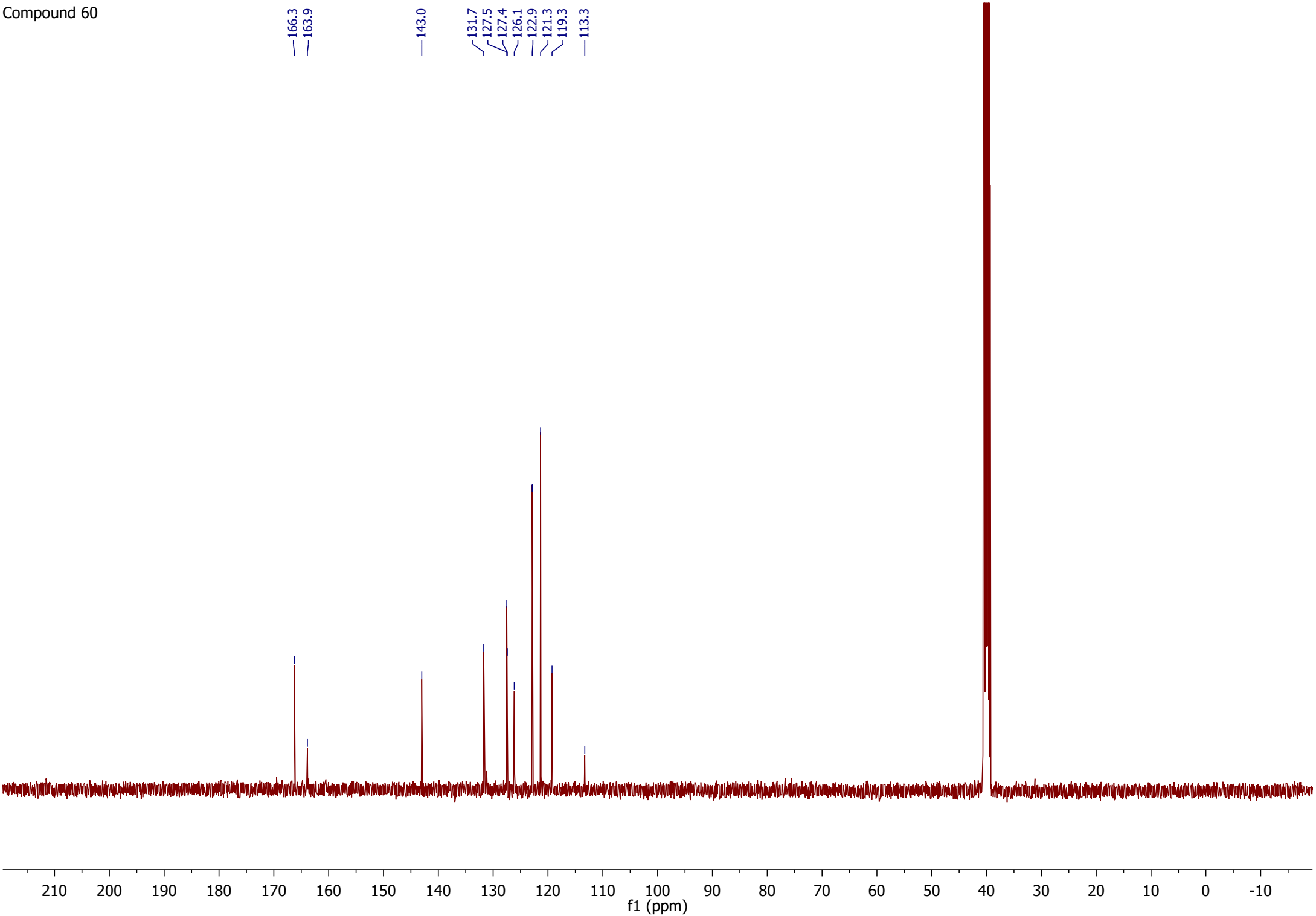
Compound 59


166.4
155.5
137.8
137.2
133.0
126.4
122.7
121.8
119.3
118.3
118.2
21.0
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

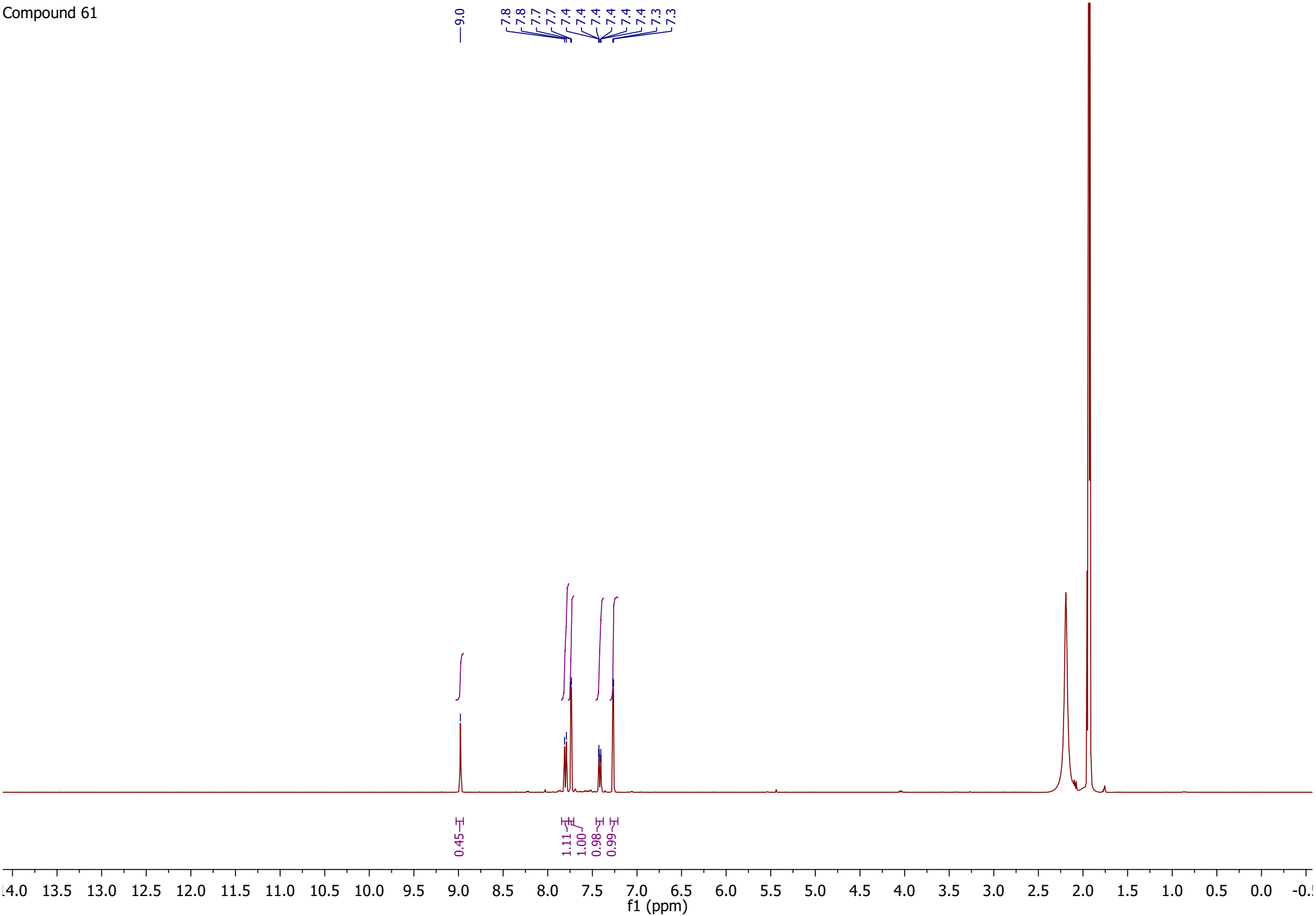
Compound 60

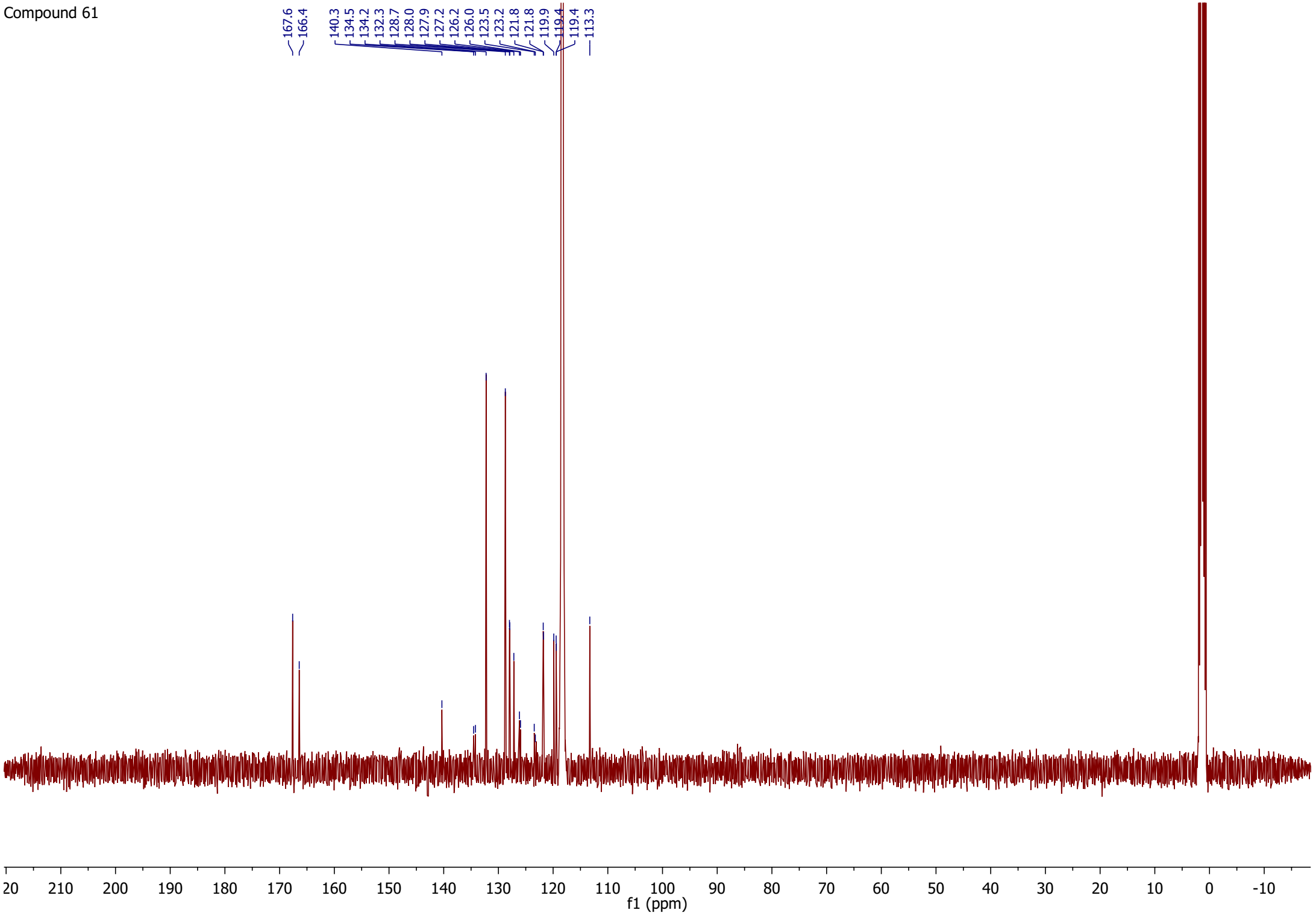

14.7
7.9
7.9
7.6
7.6
7.4
7.4
7.4
7.3
7.3
1.00
2.00
0.98
0.96
0.91
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
f1 (ppm)

Compound 60

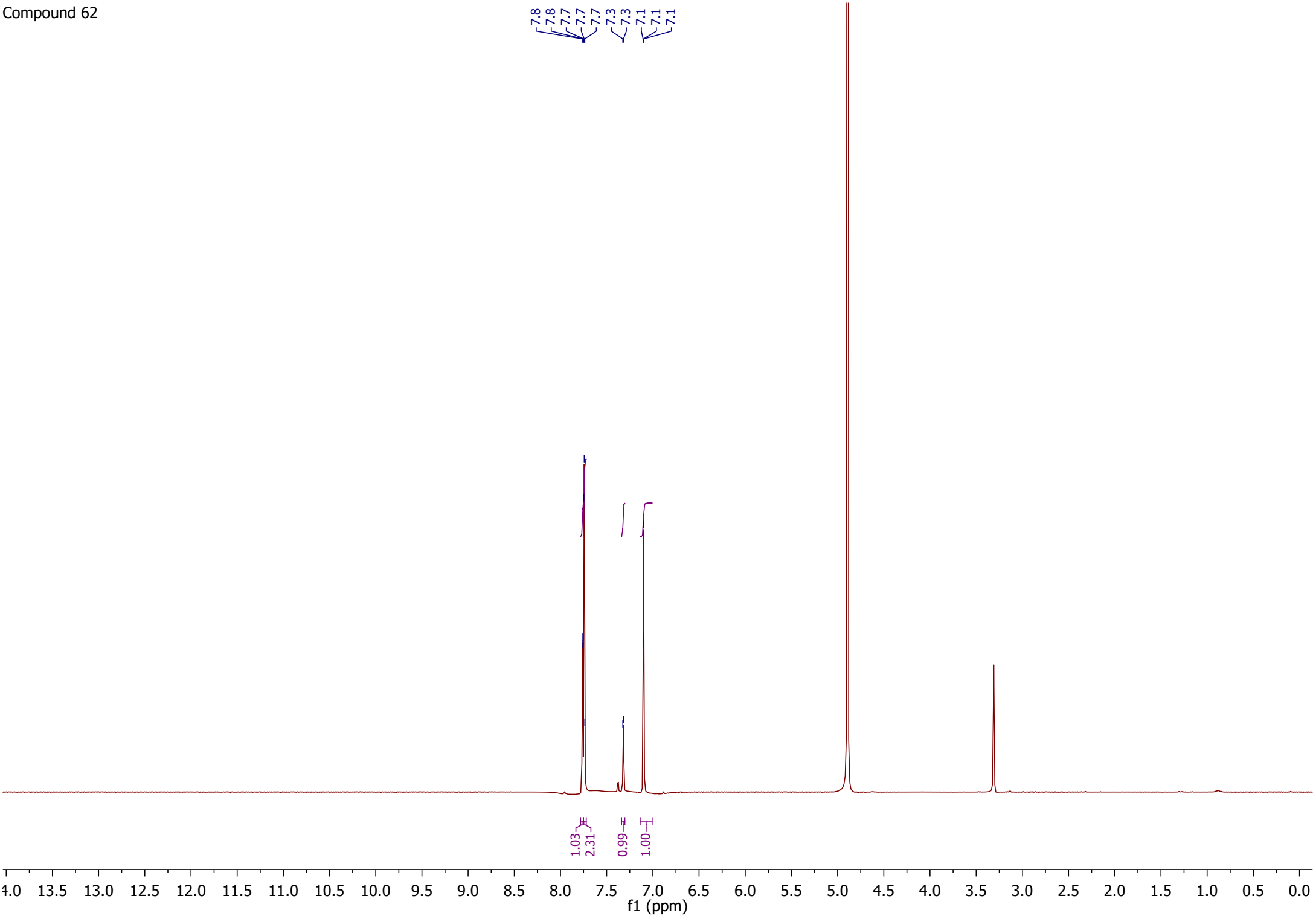

166.3
163.9
143.0
131.7
127.5
127.4
126.1
122.9
121.3
119.3
113.3
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

Compound 61

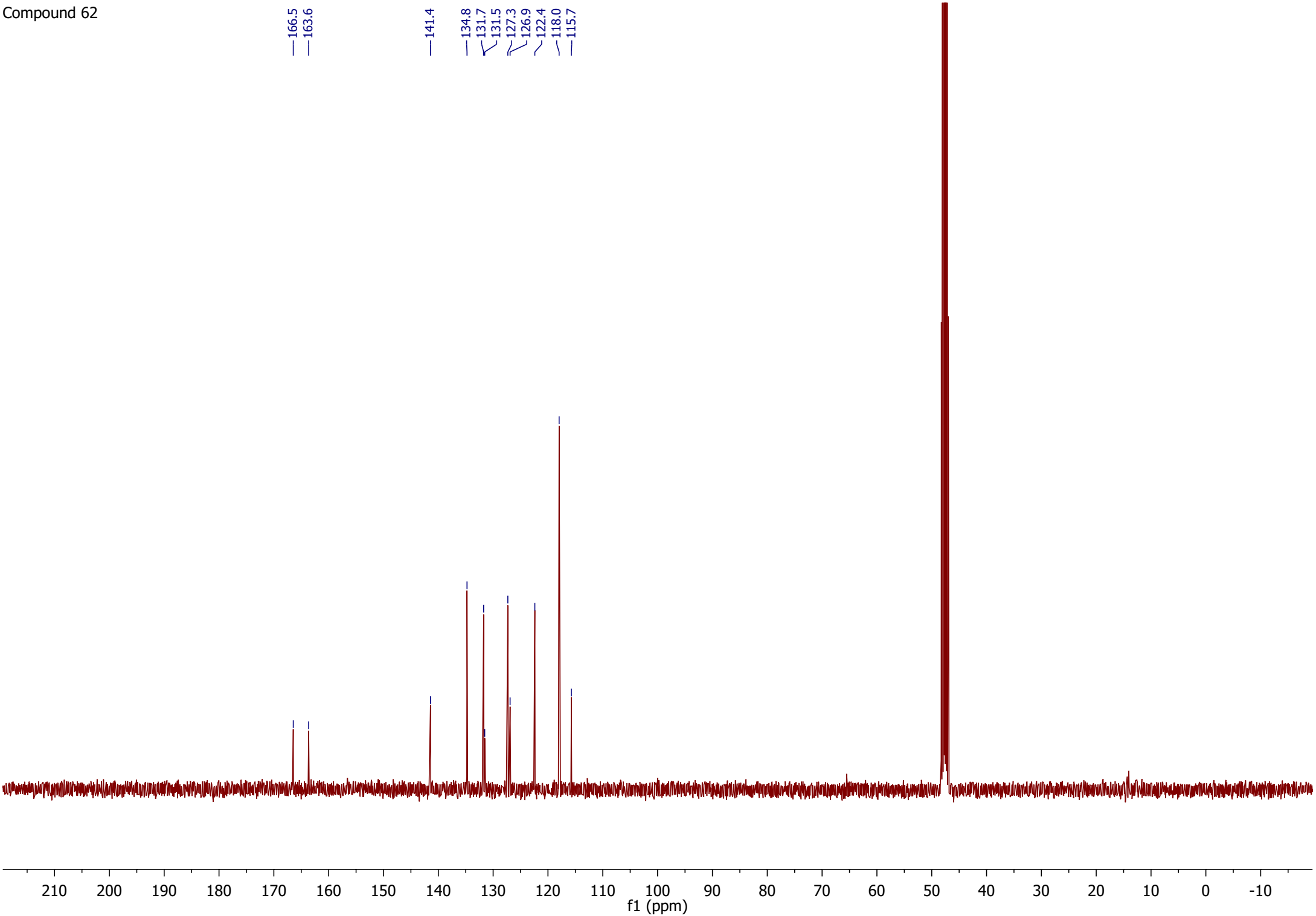

9.0
7.8
7.8
7.7
7.7
7.4
7.4
7.4
7.4
7.4
7.4
7.3
7.3
0.45
1.11
1.00
0.98
0.99
14.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)


Compound 61
167.6
166.4
140.3
134.5
134.2
132.3
128.7
128.0
127.9
127.2
126.2
126.0
123.5
123.2
121.8
121.8
119.9
119.4
119.4
113.3
20
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)

Compound 62


7.8
7.8
7.7
7.7
7.7
7.3
7.3
7.1
7.1
7.1
1.03
2.31
0.99
1.00
4.0 13.5 13.0 12.5 12.0 11.5 11.0 10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

Compound 62


166.5
163.6
141.4
134.8
131.7
131.5
127.3
126.9
122.4
118.0
115.7
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
-10
f1 (ppm)