Supplementary Materials: Synthesis and Evaluation of the Lifespan-Extension Properties of Oleracones D–F, Antioxidative Flavonoids from *Portulaca Oleracea* L.

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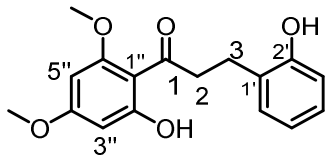
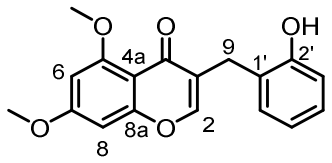
Table S1. Comparative analysis of ^{1}H NMR and ^{13}C NMR of Oleracone E.



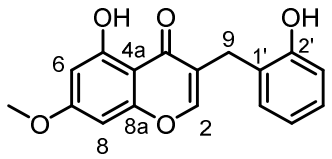
Position	^{13}C-NMR		^{1}H-NMR	
	Reported	Synthesized	Reported	Synthesized
1	204.8	205.4		
2	43.5	43.9	3.18 (brt, *J* = 7.7 Hz, 2H)	3.20 (brt, *J* = 7.7 Hz, 2H)
3	25.1	25.5	2.80 (brt, *J* = 7.7 Hz, 2H)	2.81(brt, *J* = 7.7 Hz, 2H)
1'	127.3	127.7		
2'	155.3	155.5		
2'-OH			9.57 (brs, 1H)	9.30 (brs, 1H)
3'	114.9	115.3	6.78 (dd, *J* = 8.0, 1.0 Hz, 1H)	6.77 (dd, *J* = 8.0, 1.0 Hz, 1H)
4'	126.9	127.5	6.98 (brtd, *J* = 7.6, 1.6 ,1H)	6.99 (brtd, *J* = 7.7, 1.6 Hz, 1H)
5'	118.7	119.5	6.68 (td, *J* = 7.4, 1.0 Hz, 1H)	6.70 (td, *J* = 7.4, 1.0 Hz, 1H)
6'	129.7	130.3	7.05 (dd, *J* = 7.4, 1.6 Hz, 1H)	7.06 (dd, *J* = 7.4, 1.5 Hz, 1H)
1"	105.7	106.0		
2"	165.6	166.1		
2"-OH			13.59 (brs, 1H)	13.63 (brs, 1H)
3"	93.8	94.2	6.09 (d, *J* = 2.3 Hz, 1H)	6.11 (d, *J* = 2.4 Hz, 1H)
4"	165.4	166.0		
4"-OMe	55.6	56.1	3.79 (s, 3H)	3.80 (s, 3H)
5"	90.7	91.2	6.08 (d, *J* = 2.3 Hz, 1H)	6.09 (d, *J* = 2.4 Hz, 1H)
6"	162.3	162.9		
6"-OMe	56.0	56.4	3.81(s, 3H)	3.82(s, 3H)

Table S2. Comparative analysis of ^{1}H NMR and ^{13}C NMR of Oleracone F



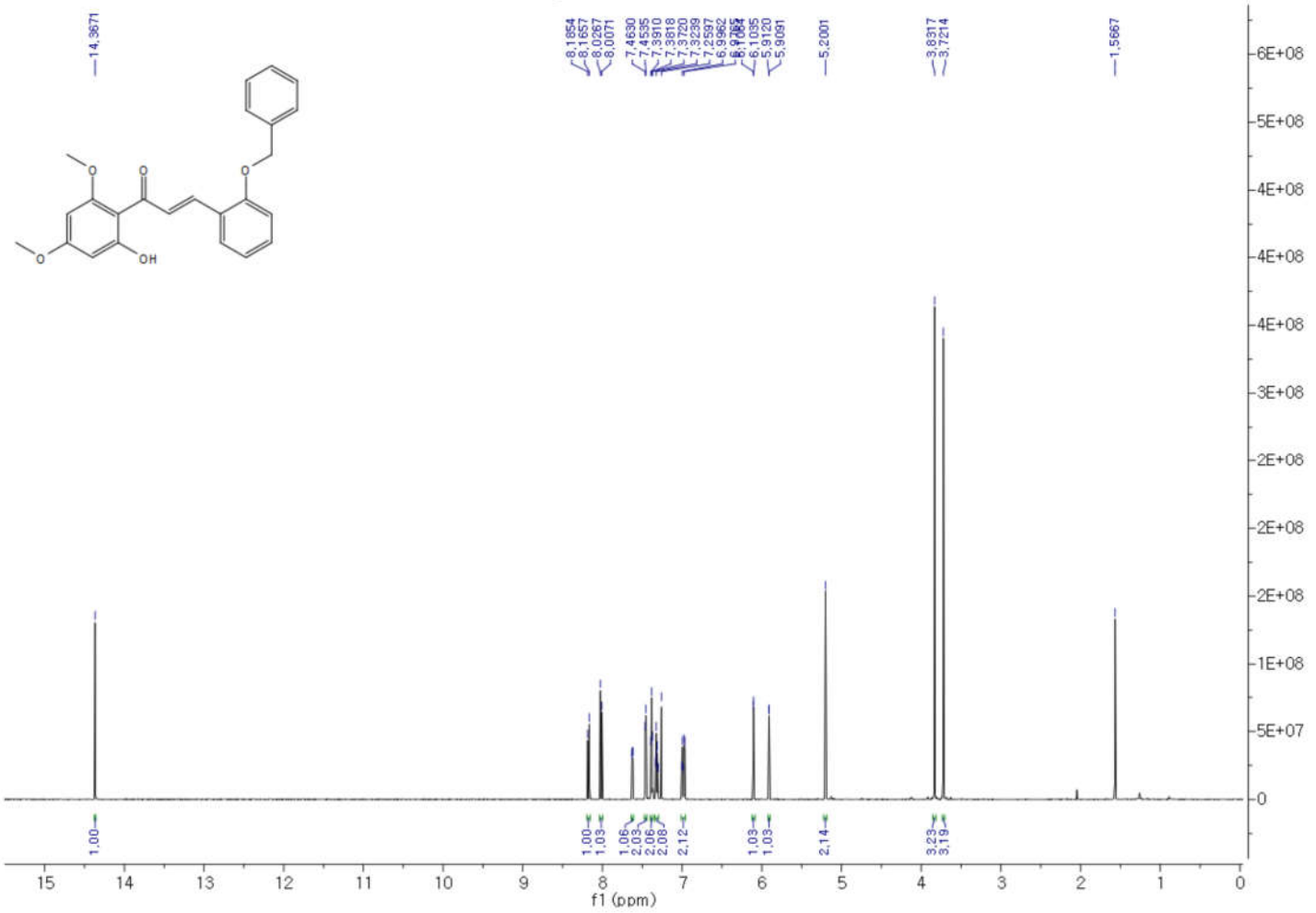
Position	^{13}C-NMR		^{1}H-NMR	
	Reported	Synthesized	Reported	Synthesized
2	151.1	151.9	7.86 (s, 1H)	7.88 (s, 1H)
3	123.4	123.8		
4	174.9	175.8		
4a	108.3	108.7		
5	160.4	160.9		
5-OH				
5-OMe	56.0	56.5	3.80 (s, 3H)	3.81 (s, 3H)
6	96.0	96.4	6.47 (d, *J* = 2.4 Hz, 1H)	6.48 (d, *J* = 2.3 Hz, 1H)
7	163.5	164.1		
7-OMe	55.9	56.3	3.85 (s, 3H)	3.86 (s, 3H)
8	92.9	93.3	6.60 (d, *J* = 2.3 Hz, 1H)	6.61 (d, *J* = 2.3 Hz, 1H)
8a	159.5	160.0		
9	25.1	25.6	3.51 (s, 2H)	3.52 (s, 2H)
1'	125.3	125.7		
2'	155.1	155.4		
2'-OH			9.58 (s, 1H)	9.46 (s, 1H)
3'	115.2	115.6	6.78 (dd, *J* = 8.1, 1.1 Hz, 1H)	6.78 (dd, *J* = 8.0, 1.0 Hz, 1H)
4'	127.2	127.9	7.00 (brtd, *J* = 7.6, 1.6 Hz, 1H)	7.01 (brtd, *J* = 7.7, 1.6 ,1H)
5'	118.8	119.6	6.68 (brtd, *J* = 7.4, 1.1 Hz, 1H)	6.70 (brtd, *J* = 7.4, 1.1 ,1H)
6'	130.0	130.5	7.06 (dd, *J* = 7.5, 1.6 Hz, 1H)	7.07 (dd, *J* = 7.5, 1.5 Hz, 1H)

Table S3. Comparative analysis of ^{1}H NMR and ^{13}C NMR of Oleracone D

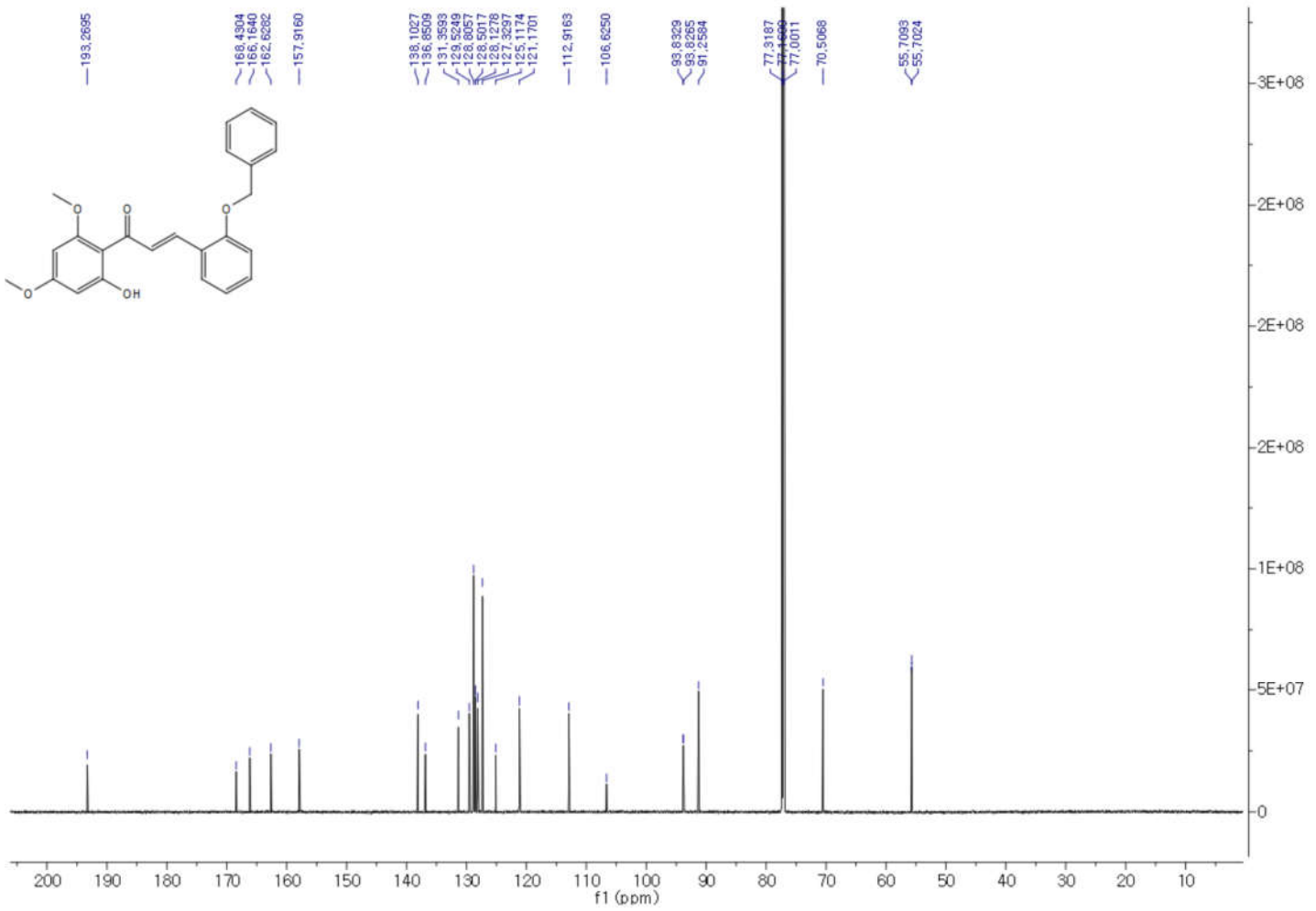


Position	^{13}C-NMR		^{1}H-NMR	
	Reported	**Synthesized**	**Reported**	**Synthesized**
2	154.9	155.3	8.05 (s, 1H)	8.06 (s, 1H)
3	121.0	121.4		
4	181.8	181.6		
4a	105.1	105.5		
5	161.3	161.6		
5-OH			12.74 (brs, 1H)	12.76 (s, 1H)
5-OMe				
6	97.9	98.4	6.38 (d, *J* = 1.9 Hz, 1H)	6.38 (d, *J* = 2.3 Hz, 1H)
7	165.1	165.6		
7-OMe	56.0	56.4	3.84 (s, 3H)	3.84 (s, 3H)
8	92.3	92.8	6.59 (d, *J* = 1.9 Hz, 1H)	6.61 (d, *J* = 2.3 Hz, 1H)
8a	157.7	158.2		
9	24.4	25.0	3.61(s, 2H)	3.61(s, 2H)
1'	124.5	125.0		
2'	155.2	155.4		
2'-OH			9.65 (brs, 1H)	9.47 (brs, 1H)
3'	115.0	115.4	6.82 (dd, *J* = 7.9, 1.1 Hz, 1H)	6.81(dd, *J* = 8.0, 0.8 Hz, 1H)
4'	127.4	128.0	7.03 (brtd, *J* = 7.6, 1.6 Hz, 1H)	7.03 (brtd, *J* = 7.7, 1.6 Hz, 1H)
5'	118.8	119.5	6.70 (brtd, *J* =7.4, 1.1 Hz, 1H)	6.71 (brtd, *J* =7.4, 1.0 Hz, 1H)
6'	129.8	130.4	7.08 (dd, *J* = 7.4, 1.6 Hz, 1H)	7.08 (dd, *J* = 7.5, 1.4 Hz, 1H)

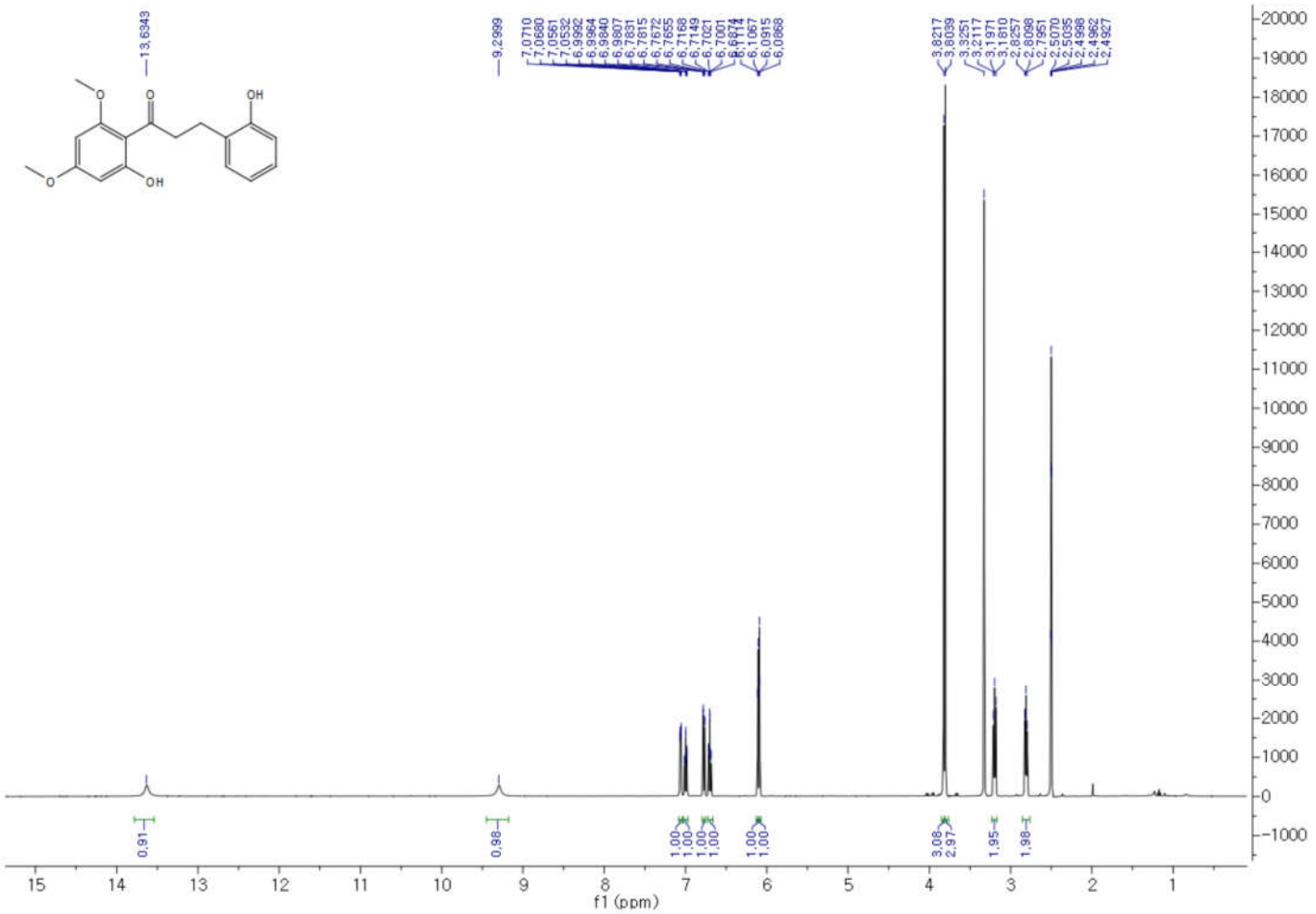
^{1}H-NMR Spectra of **6** (800 MHz, $CDCl_3$)



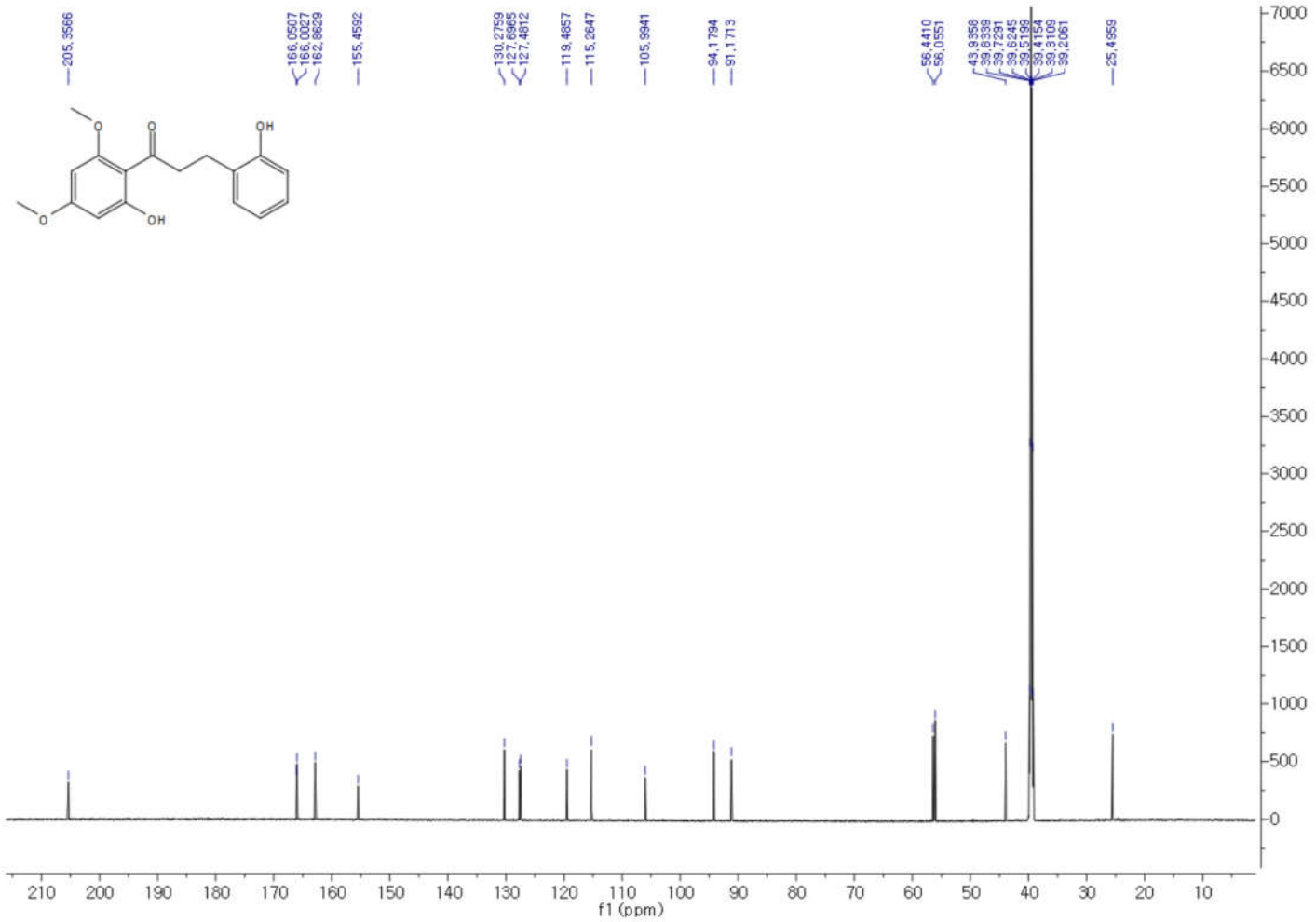
^{13}C-NMR Spectra of **6** (200 MHz, $CDCl_3$)



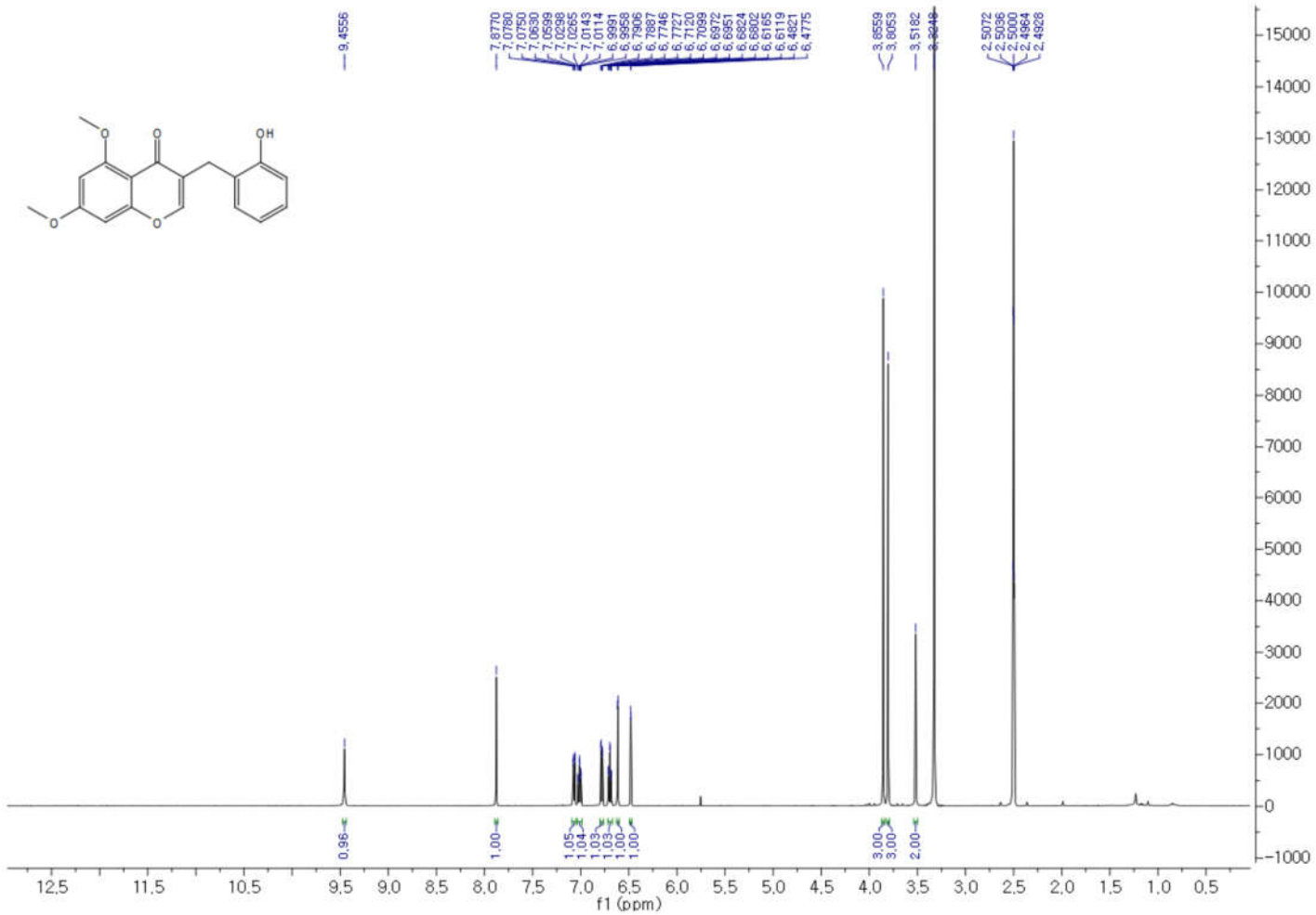
^{1}H-NMR Spectra of **3** (500 MHz, DMSO-d_6)



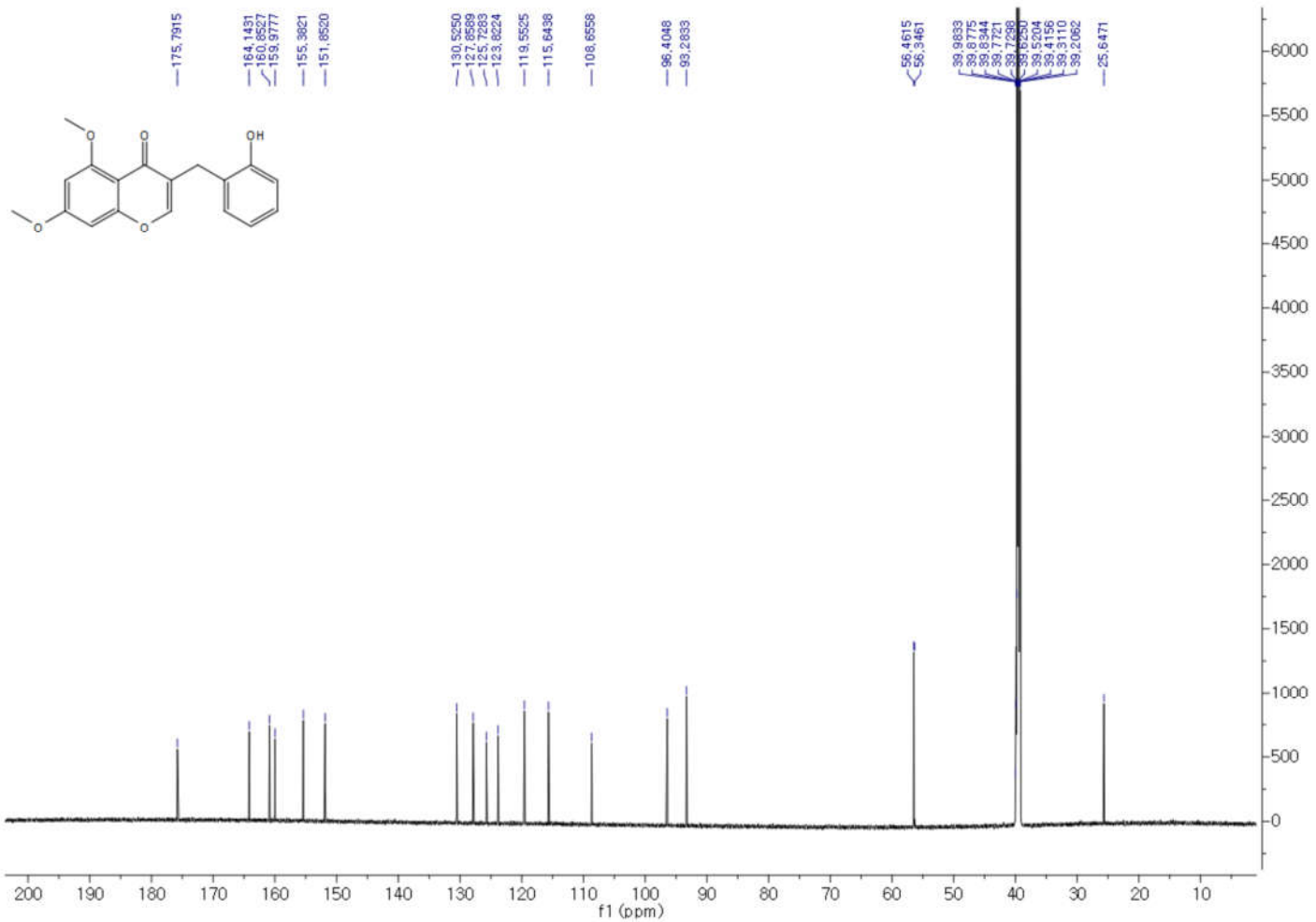
^{13}C-NMR Spectra of **3** (200 MHz, DMSO-d$_6$)



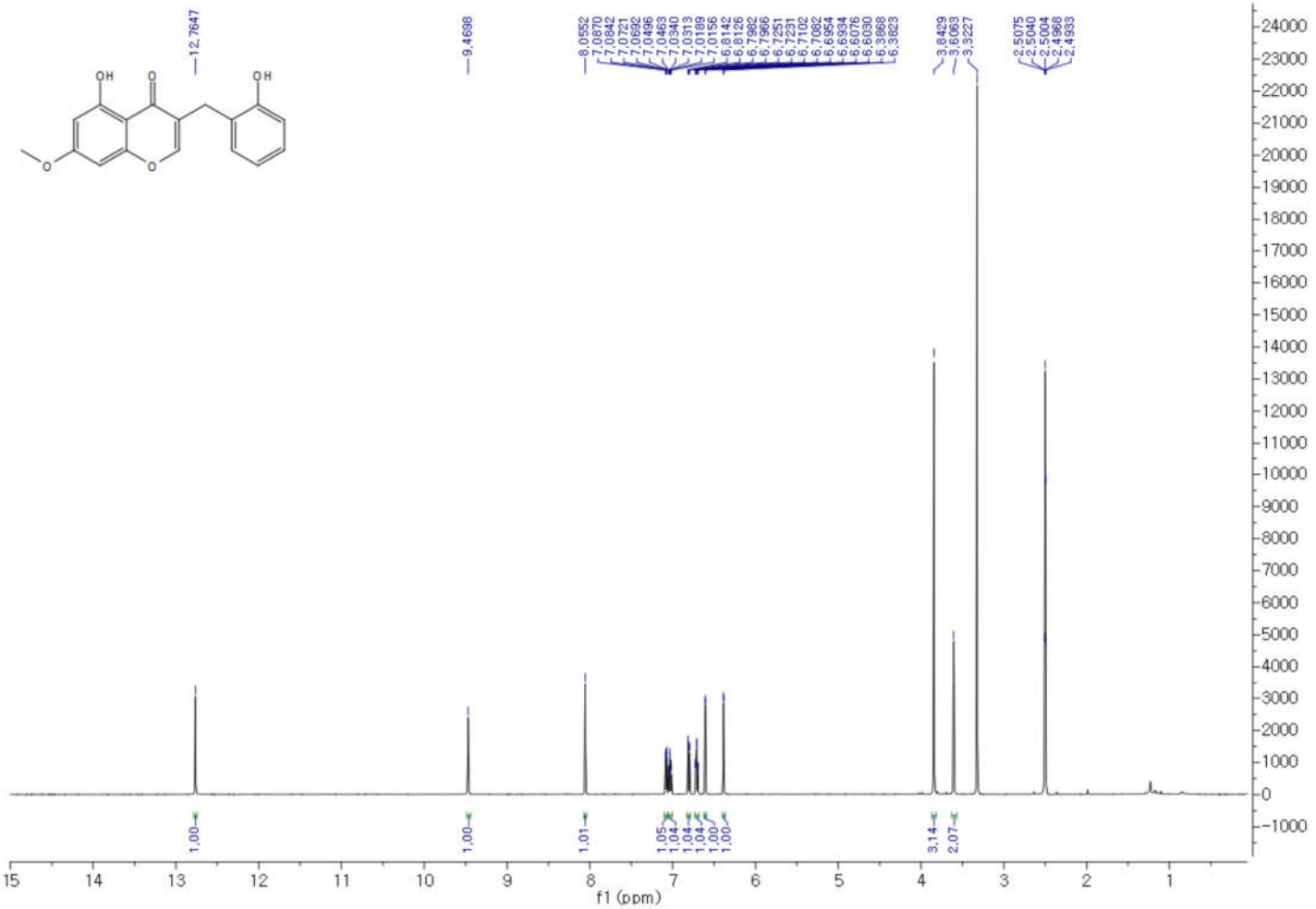
^{1}H-NMR Spectra of **2** (500 MHz, DMSO-d_6)



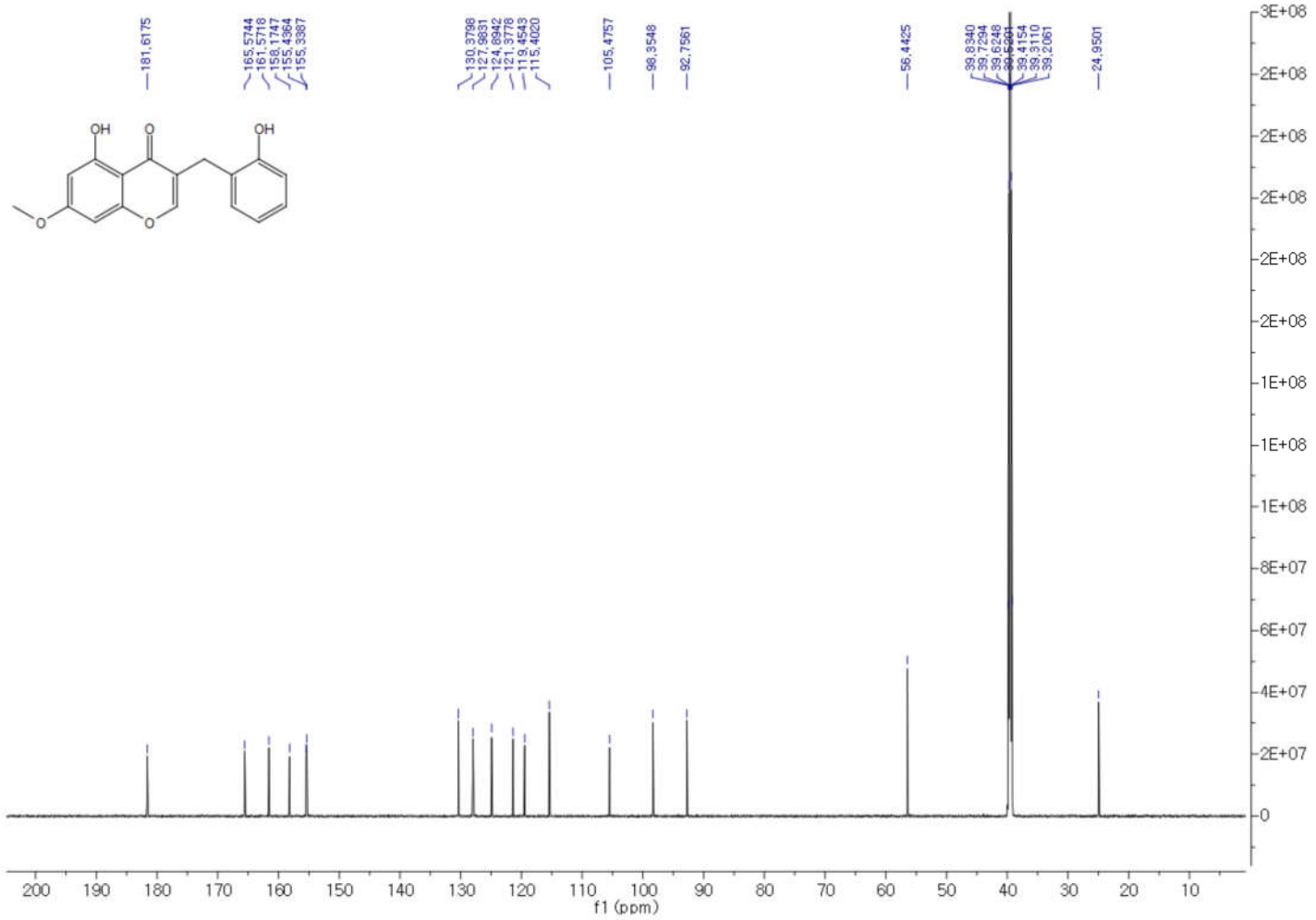
^{13}C-NMR Spectra of **2** (200 MHz, DMSO-d$_6$)



^{1}H-NMR Spectra of **1** (500 MHz, DMSO-d_6)



^{13}C-NMR Spectra of **1** (200 MHz, DMSO-d$_6$)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158.1747
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127.9831
124.6942
121.3778
119.4543
115.4020
105.4757
98.3548
92.7561
56.4425
39.8340
39.7294
39.6248
39.4154
39.3110
39.2061
24.9501
OH
O
OH
O
O
3E+08
2E+08
2E+08
2E+08
2E+08
2E+08
1E+08
1E+08
1E+08
8E+07
6E+07
4E+07
2E+07
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200
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180
170
160
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140
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120
110
100
90
80
70
60
50
40
30
20
10
f1 (ppm)