

Supplementary Information

Figure S1. Spectroscopic data for compound **1**. (A) ESI-TOF and UV spectra for compound **1**; (B) ^1H NMR spectrum (CDCl_3 , 500 MHz) of compound **1**; (C) ^{13}C NMR spectrum (CDCl_3 , 125 MHz) of compound **1**; (D) COSY spectrum of compound **1**; (E) HSQC spectrum of compound **1**; (F) HMBC spectrum of compound **1**; (G) NOESY spectrum of compound **1**.

Figure S2. Spectroscopic data for compound **2**. (A) ESI-TOF and UV spectra for compound **2**; (B) ^1H NMR spectrum (CDCl_3 , 500 MHz) of compound **2**; (C) ^{13}C NMR spectrum (CDCl_3 , 125 MHz) of compound **2**; (D) COSY spectrum of compound **2**; (E) HSQC spectrum of compound **2**; (F) HMBC spectrum of compound **2**; (G) NOESY spectrum of compound **2**.

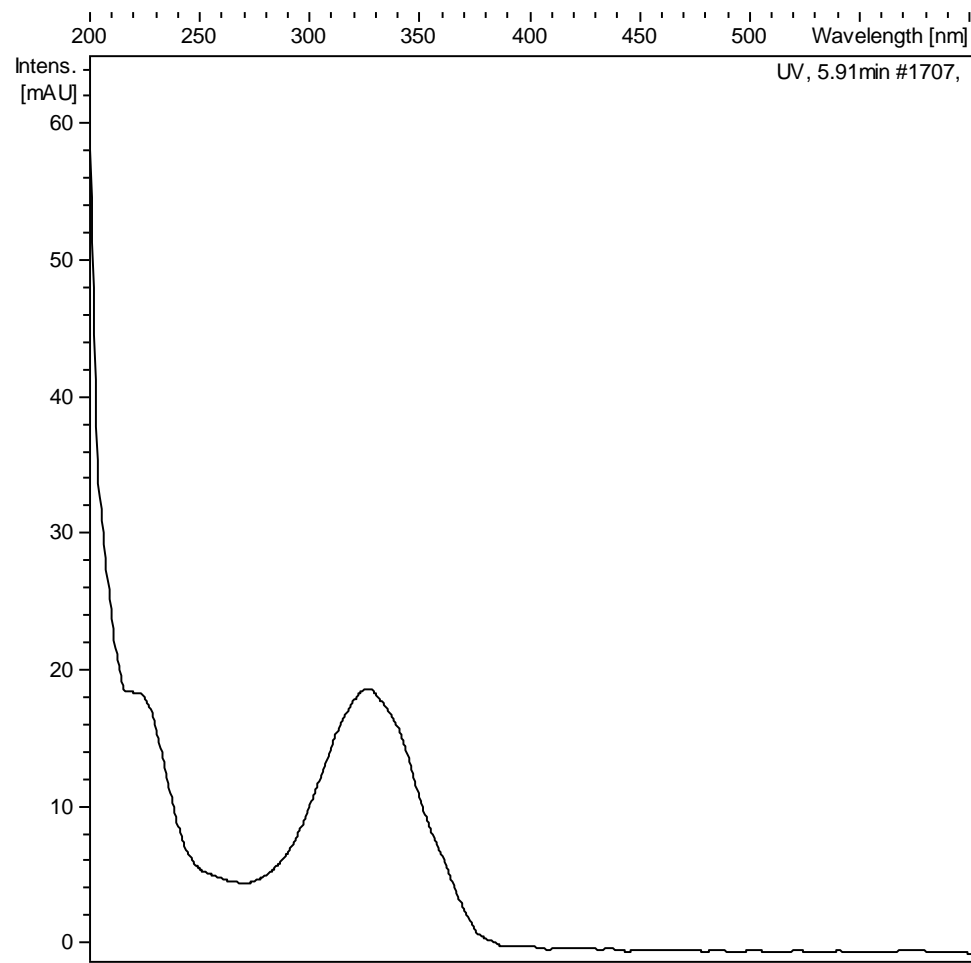
Figure S3. Spectroscopic data for compound **3**. (A) ESI-TOF and UV spectra for compound **3**; (B) ^1H NMR spectrum (CDCl_3 , 500 MHz) of compound **3**; (C) ^{13}C NMR spectrum (CDCl_3 , 125 MHz) of compound **3**; (D) COSY spectrum of compound **3**; (E) HSQC spectrum of compound **3**; (F) HMBC spectrum of compound **3**; (G) NOESY spectrum of compound **3**.

Figure S4. NMR spectra of ikaguramycin (**4**). (A) ^1H NMR spectrum (CDCl_3 , 500 MHz) of compound **4**; (B) ^{13}C NMR spectrum (CDCl_3 , 125 MHz) of compound **4**; (C) NOESY spectrum of compound **4**.

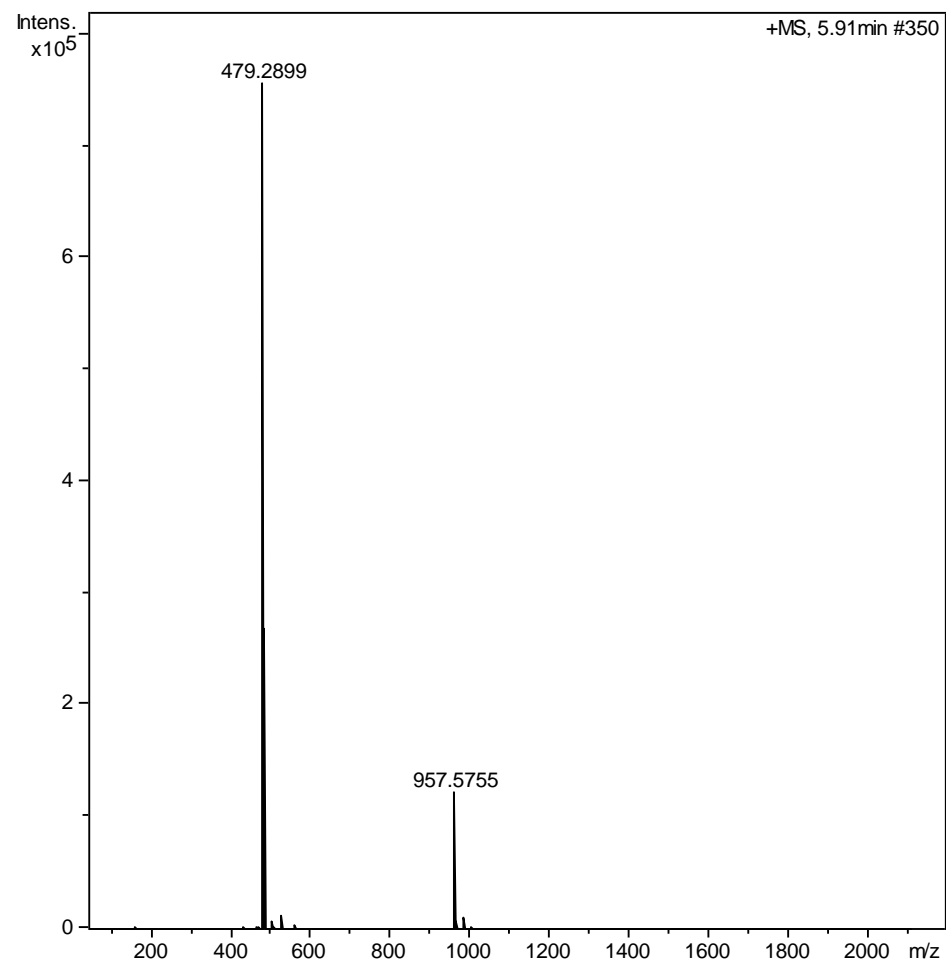
Figure S5. Molecular models of **1–4** showing the key observed NOEs.

Figure S6. Overlay of the molecular models of **1–4**.

Table S1. NMR data of ikarugamycin (**4**).



UV spectrum of compound 1.



ESI-TOF spectrum of compound 1.

(A)

Figure S1. Cont.

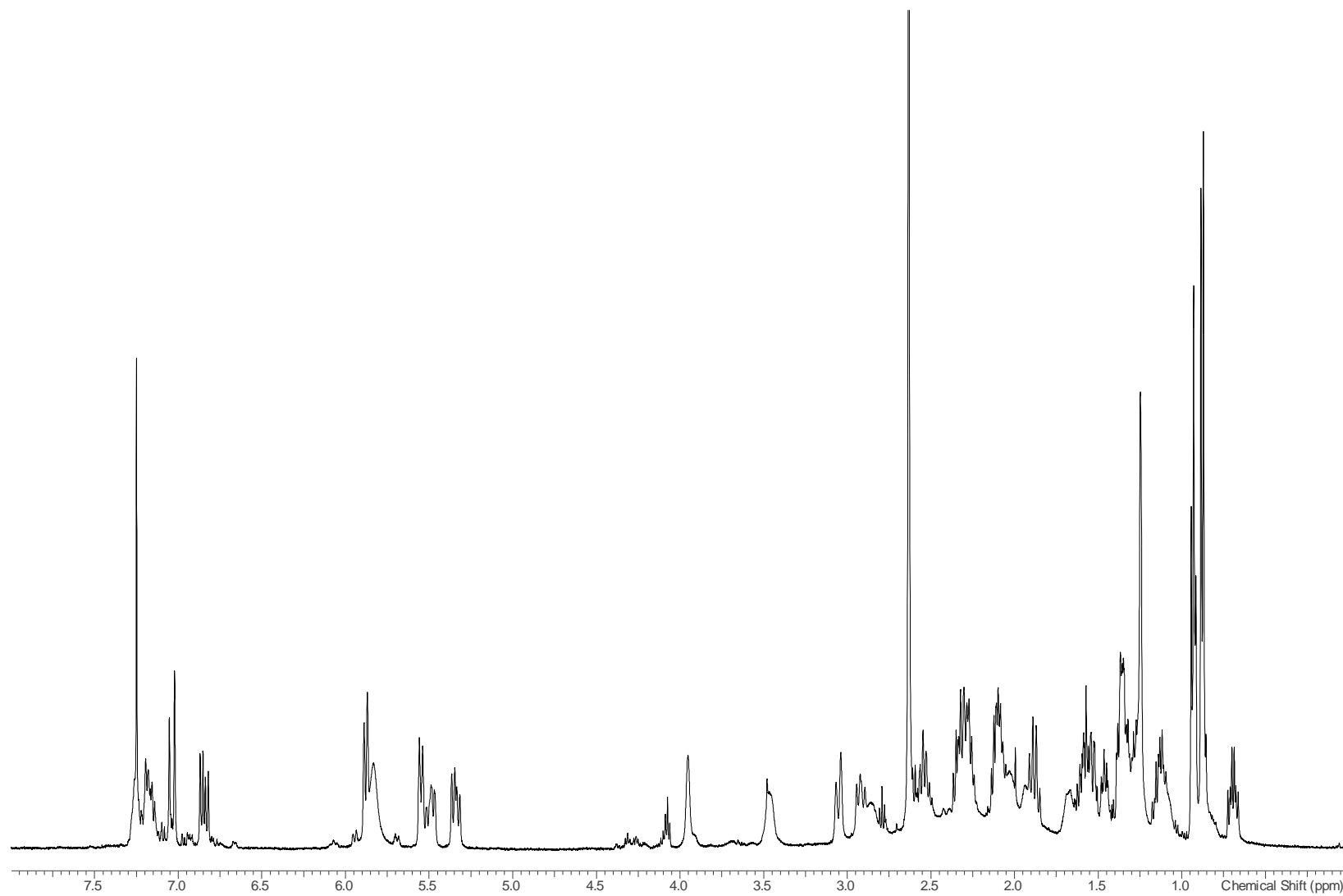


Figure S1. Cont.

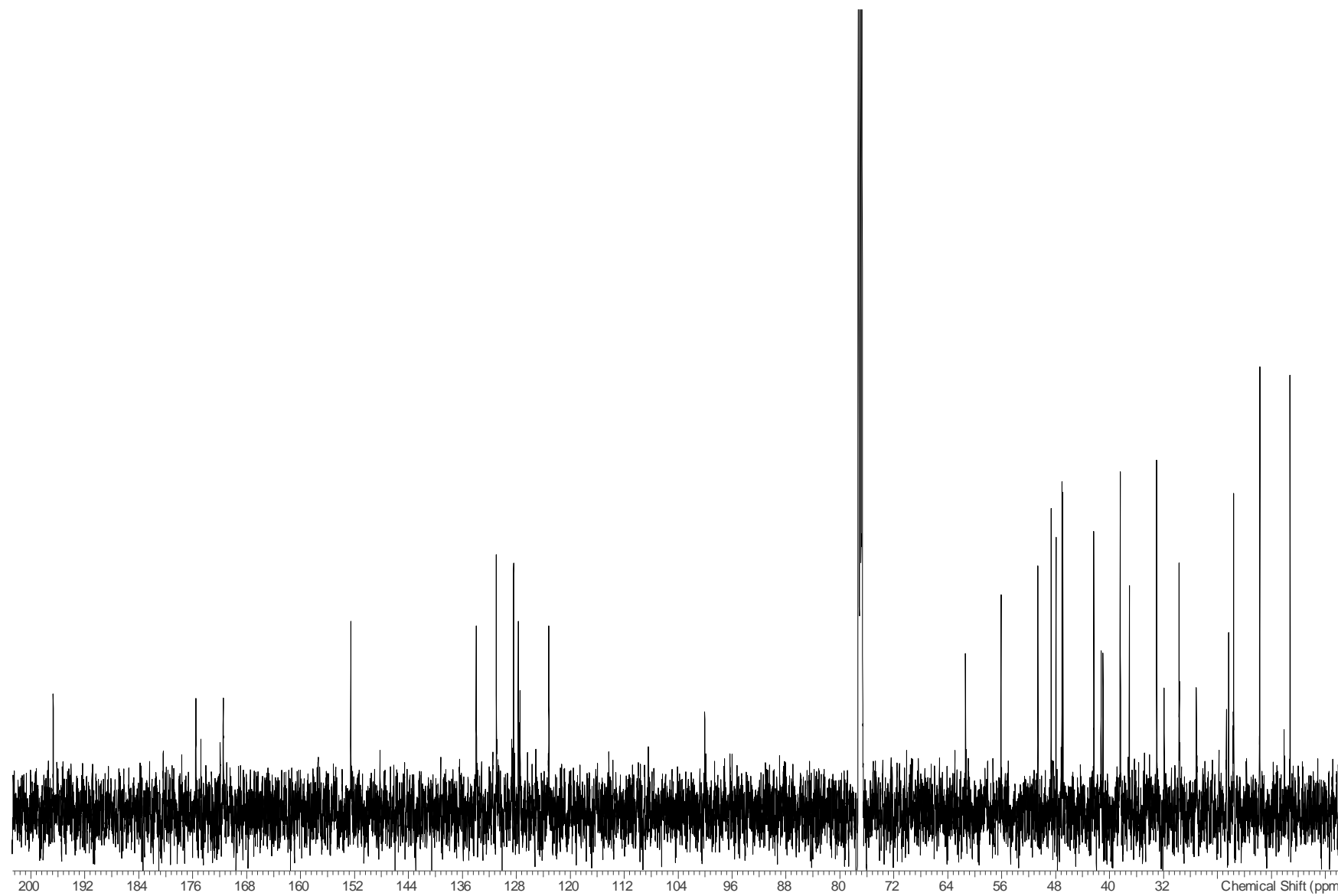


Figure S1. Cont.

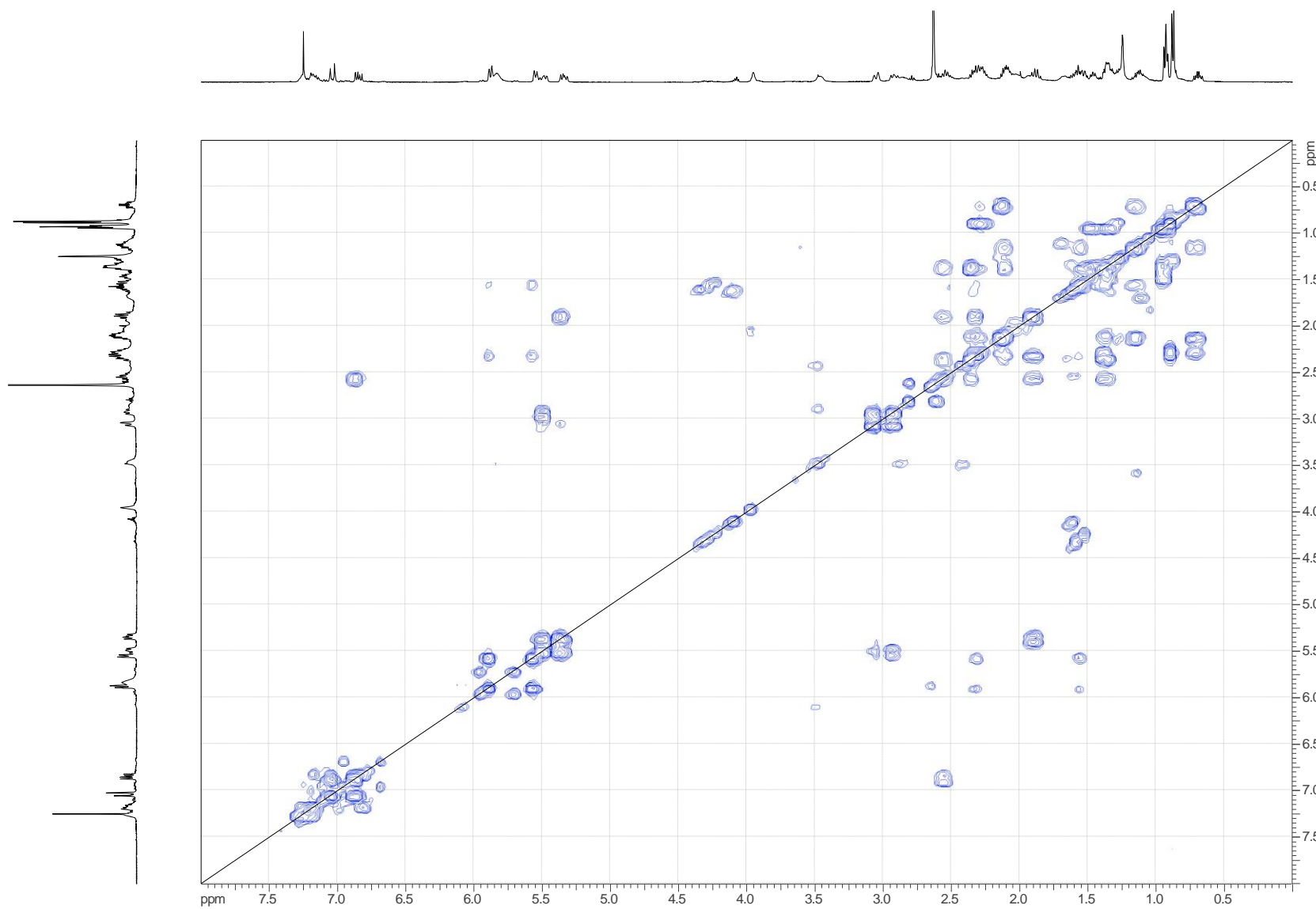


Figure S1. Cont.

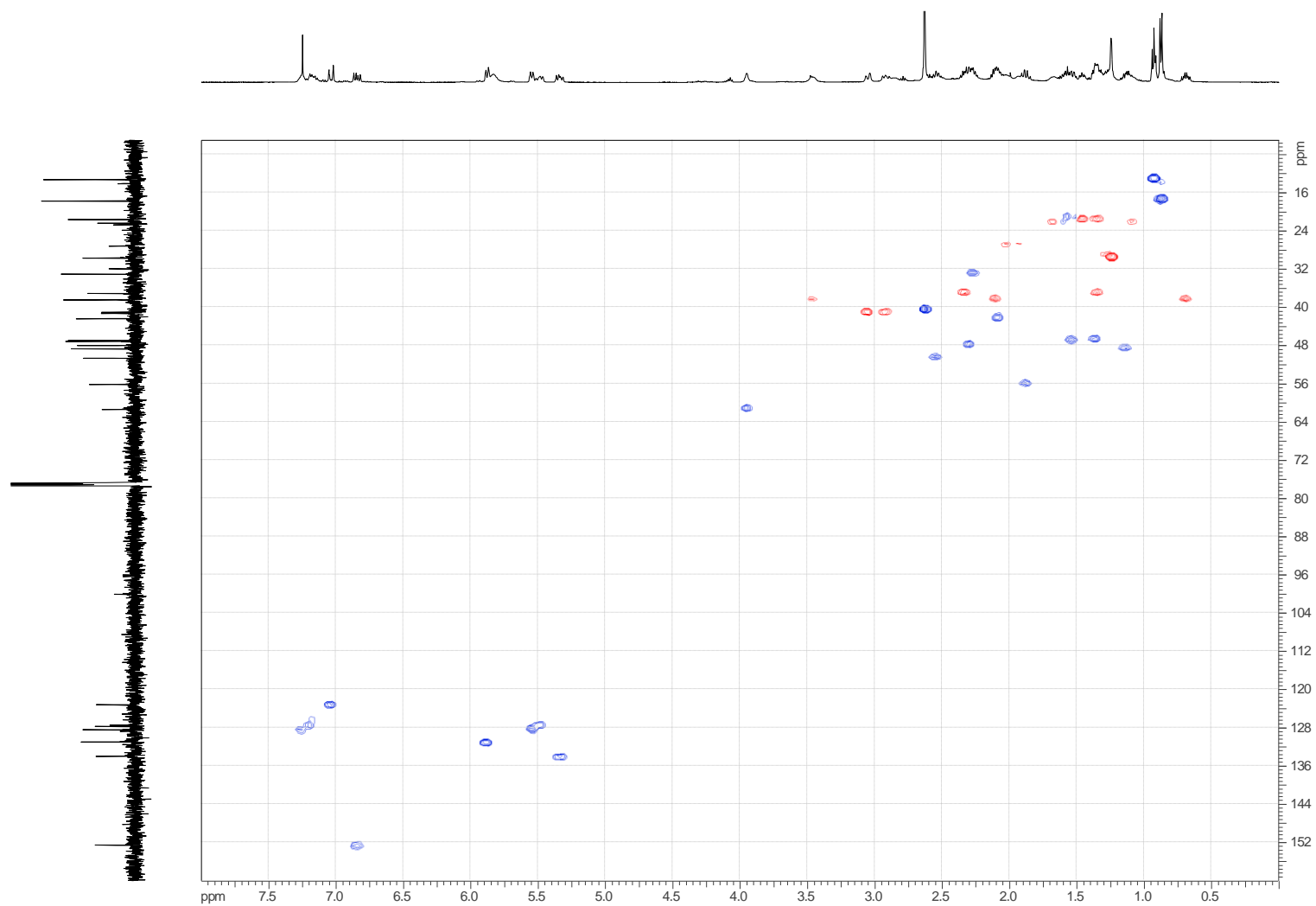


Figure S1. Cont.

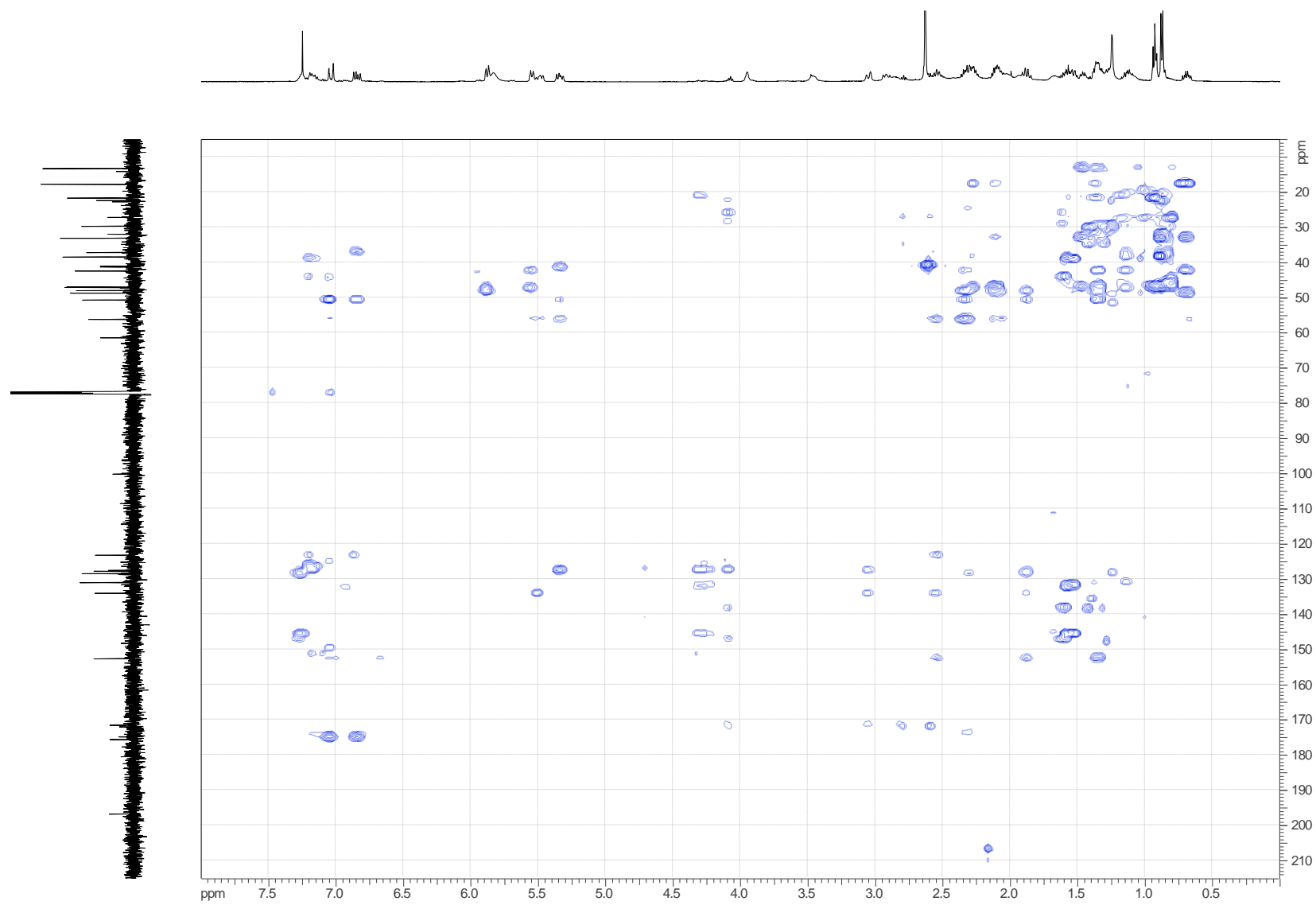


Figure S1. Cont.

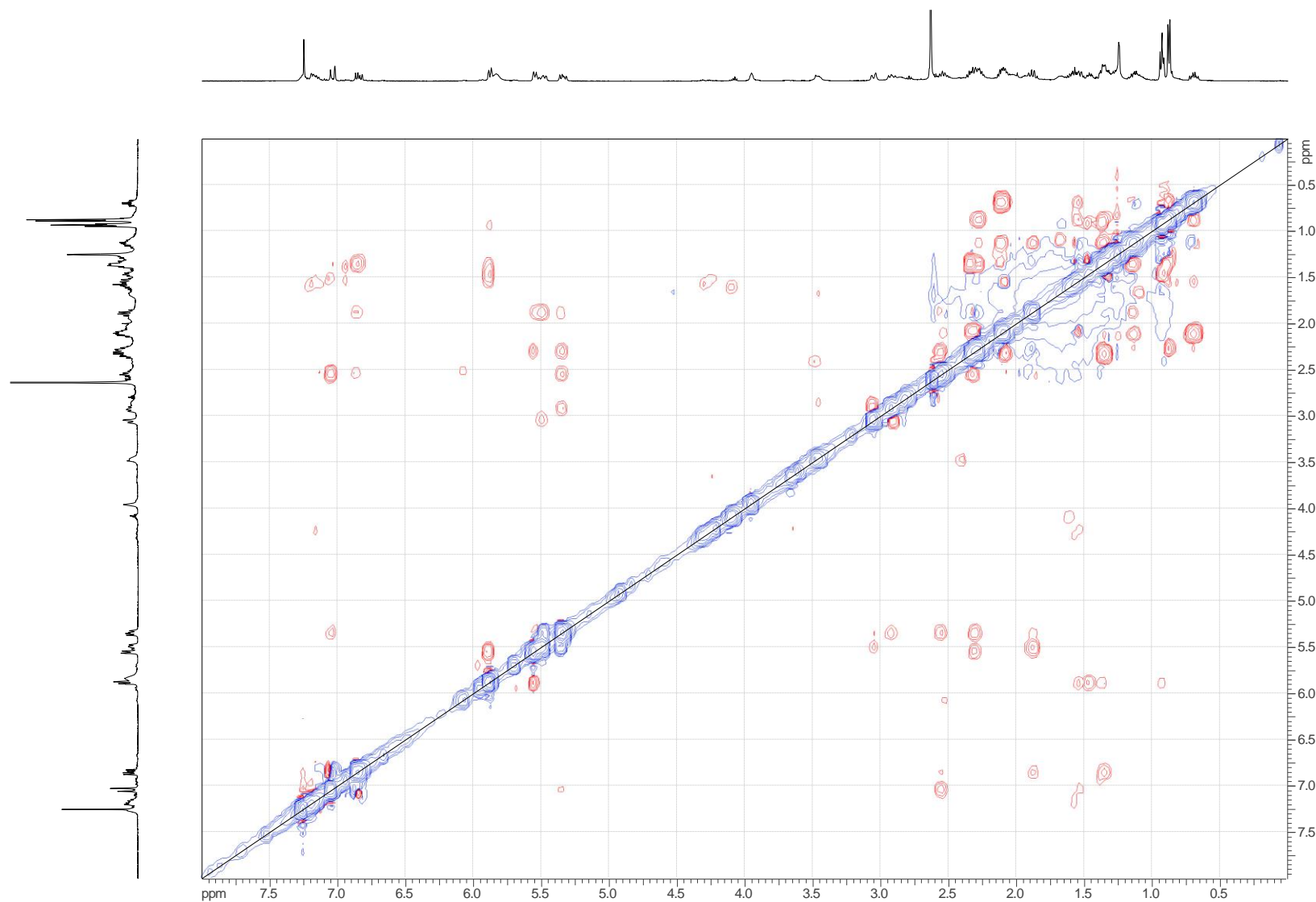
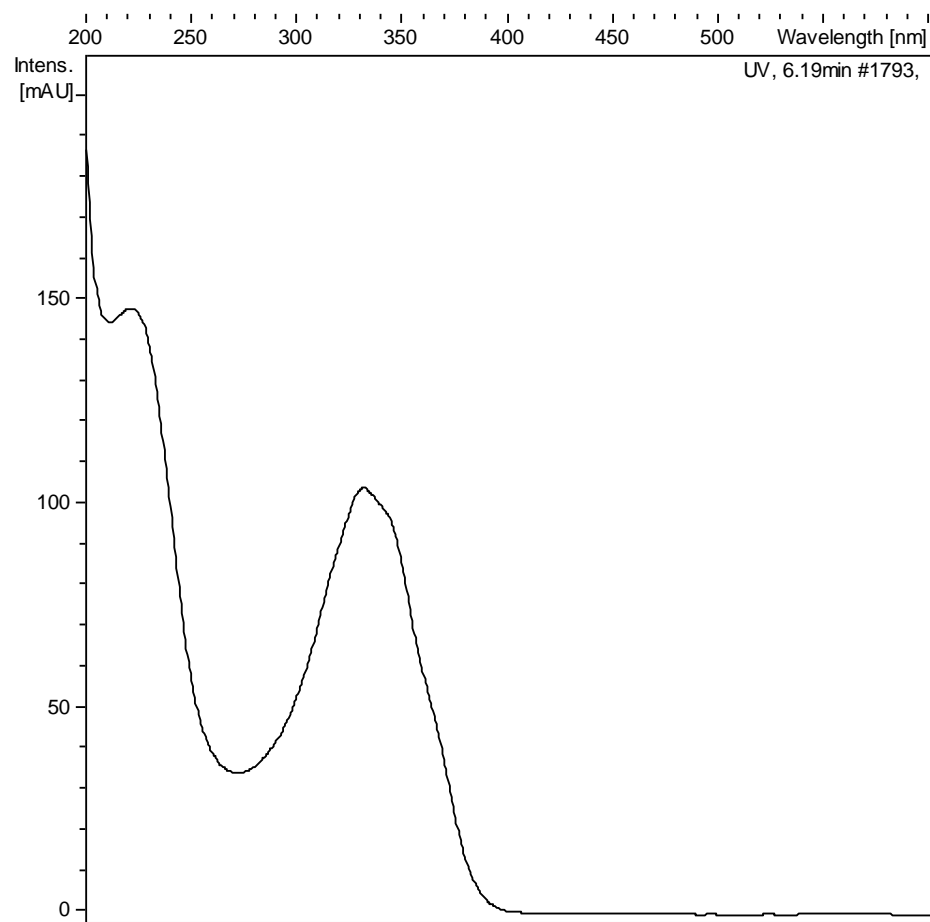
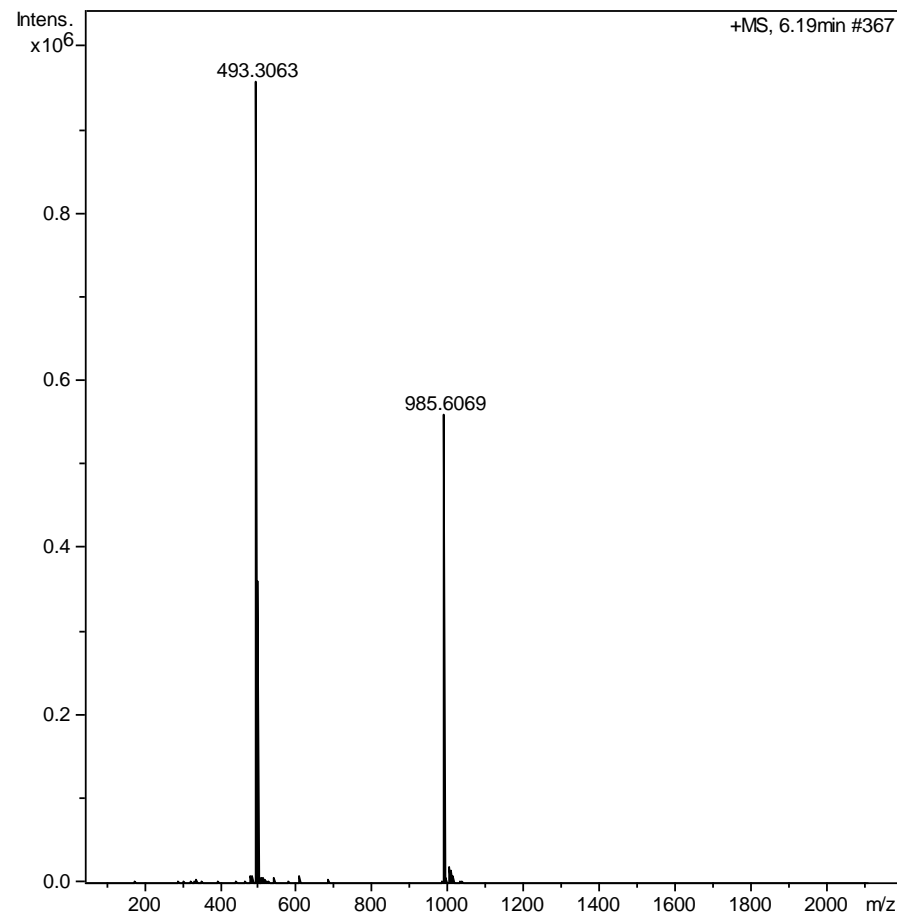


Figure S1. (A) ESI-TOF and UV spectra of compound **1**; (B) ¹H NMR (CDCl₃, 500 MHz) of compound **1**; (C) ¹³C NMR (CDCl₃, 125 MHz) of compound **1**; (D) COSY of compound **1**; (E) HSQC of compound **1**; (F) HMBC of compound **1**. (G) NOESY of compound **1**.



UV spectrum of compound 2.



ESI-TOF spectrum of compound 2.

Figure S2. Cont.

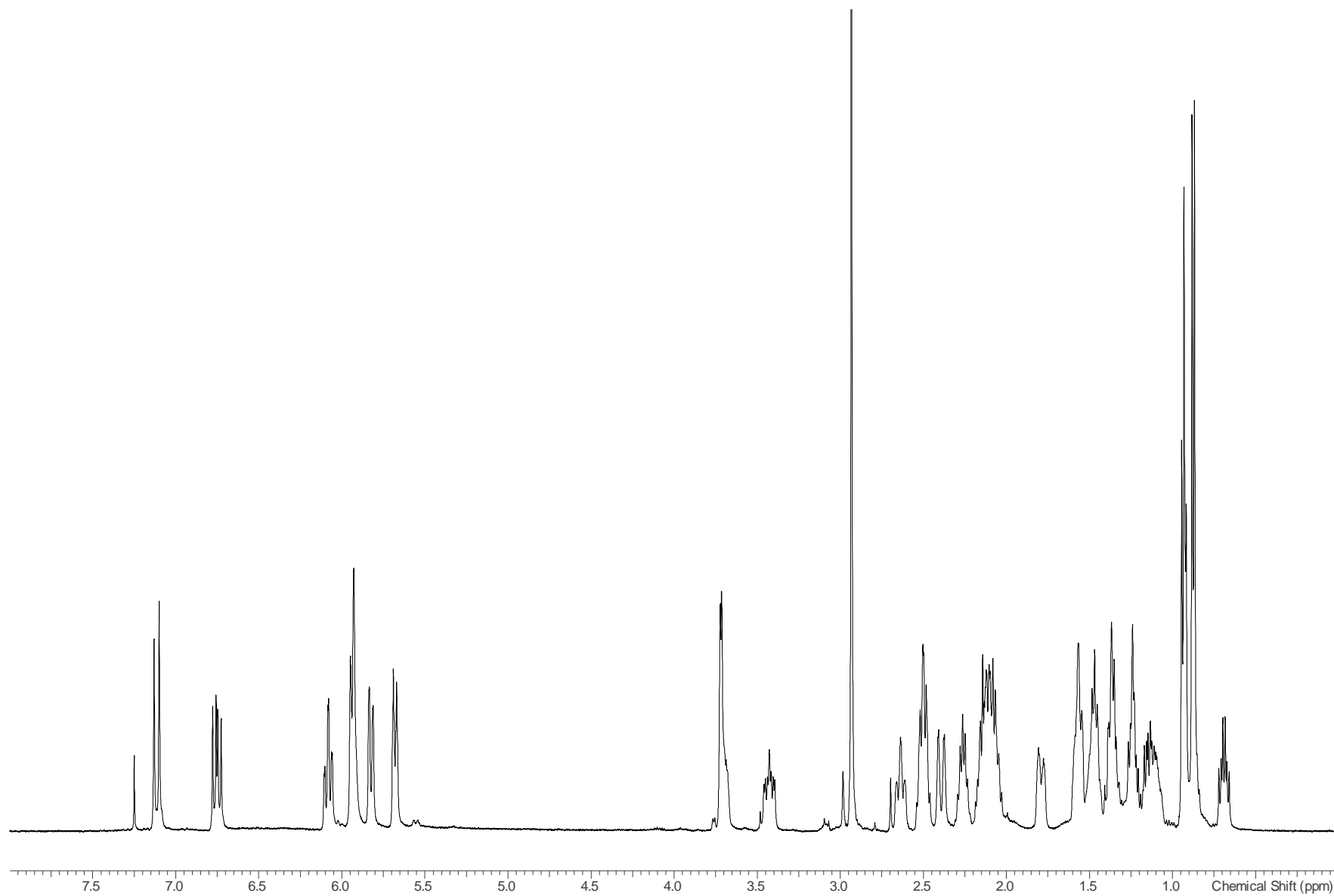


Figure S2. Cont.

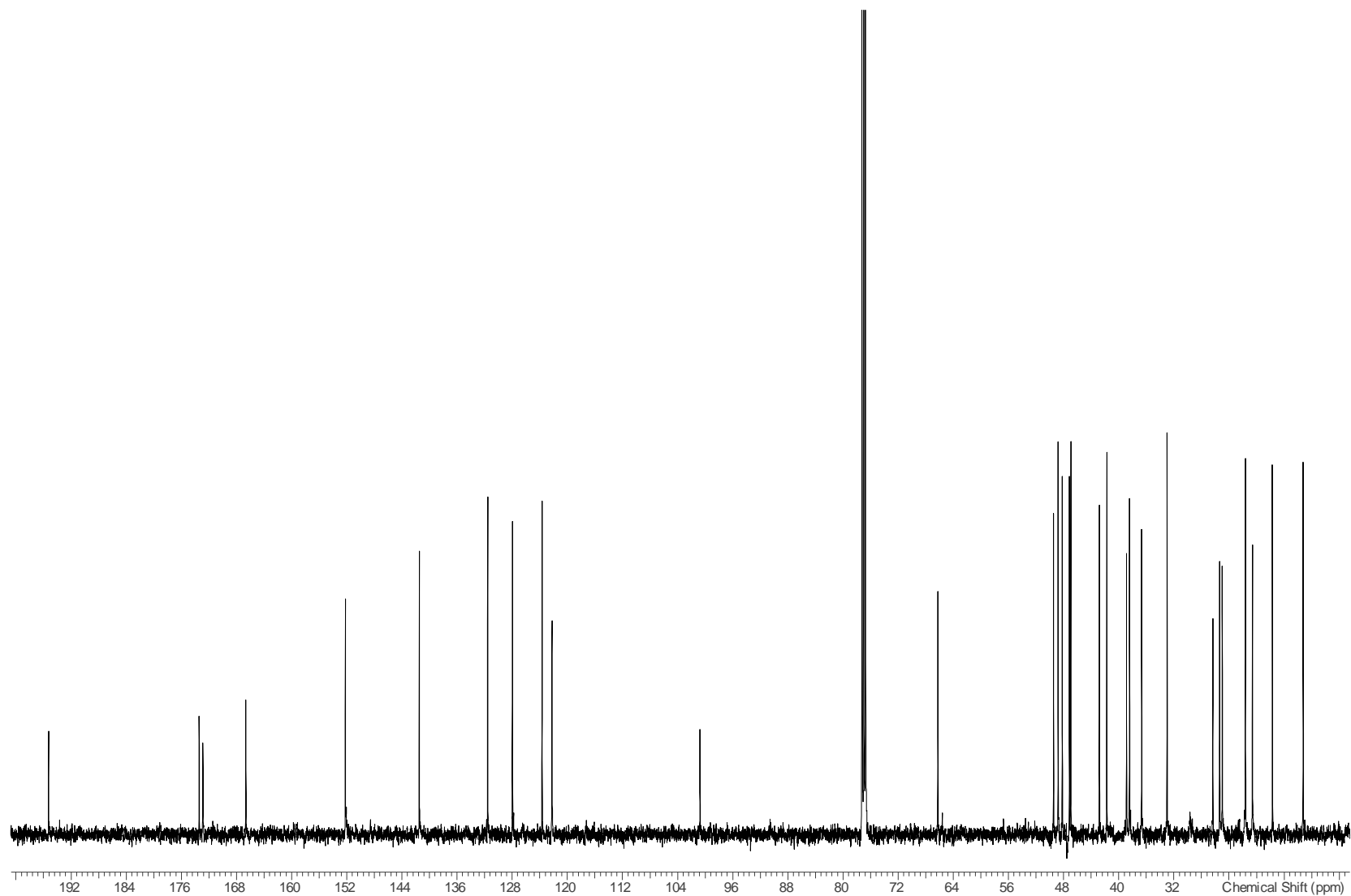


Figure S2. Cont.

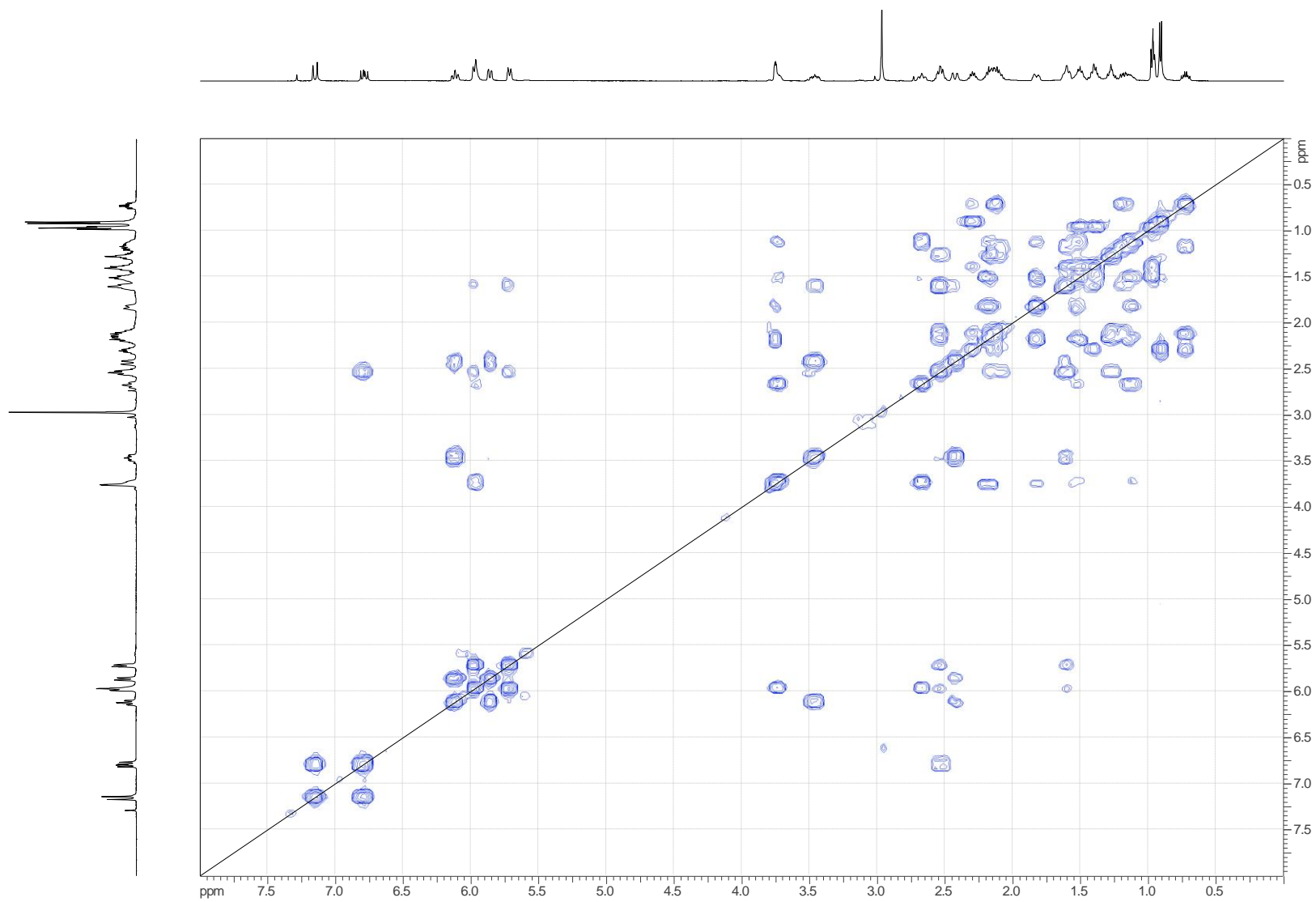


Figure S2. Cont.

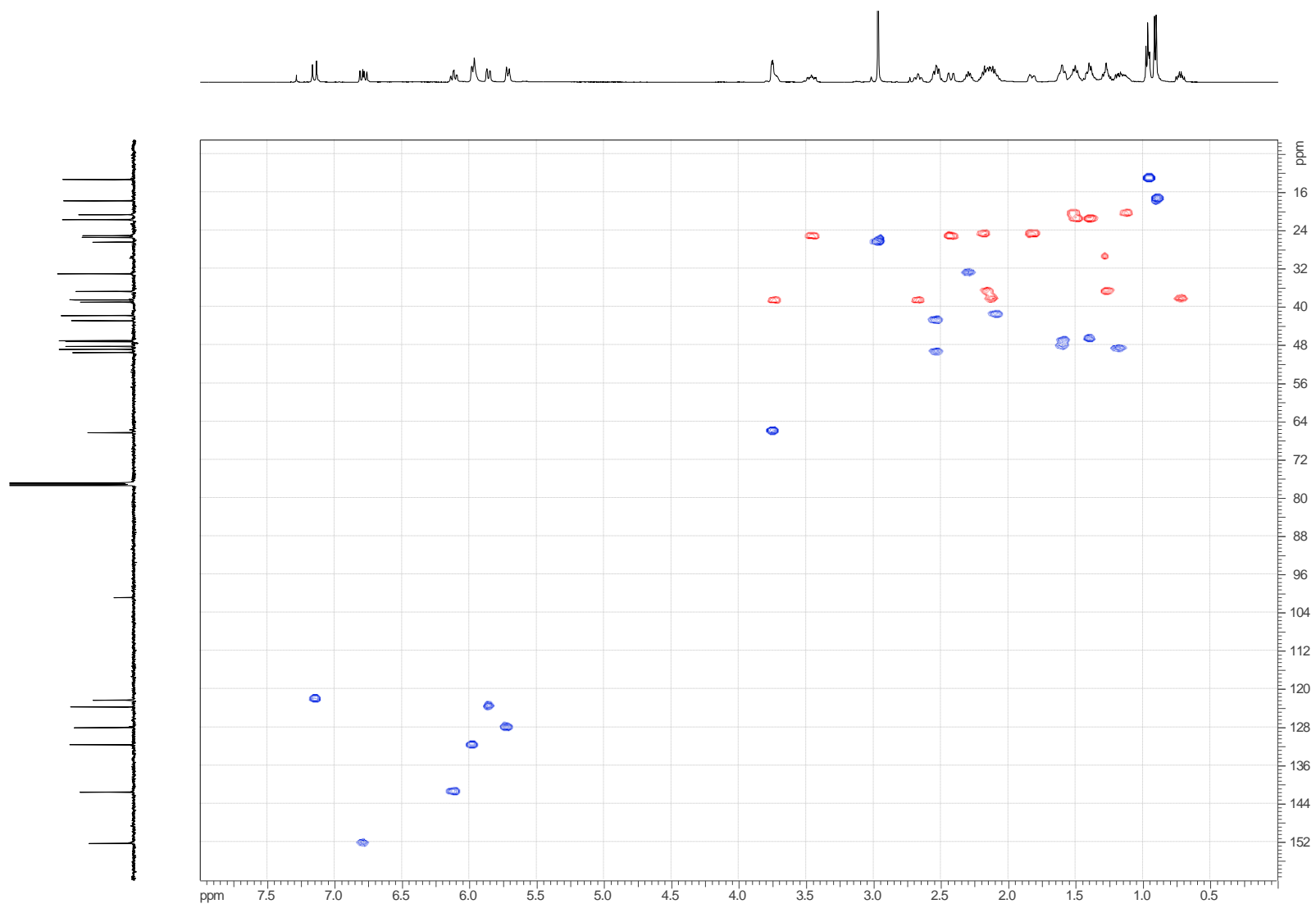


Figure S2. Cont.

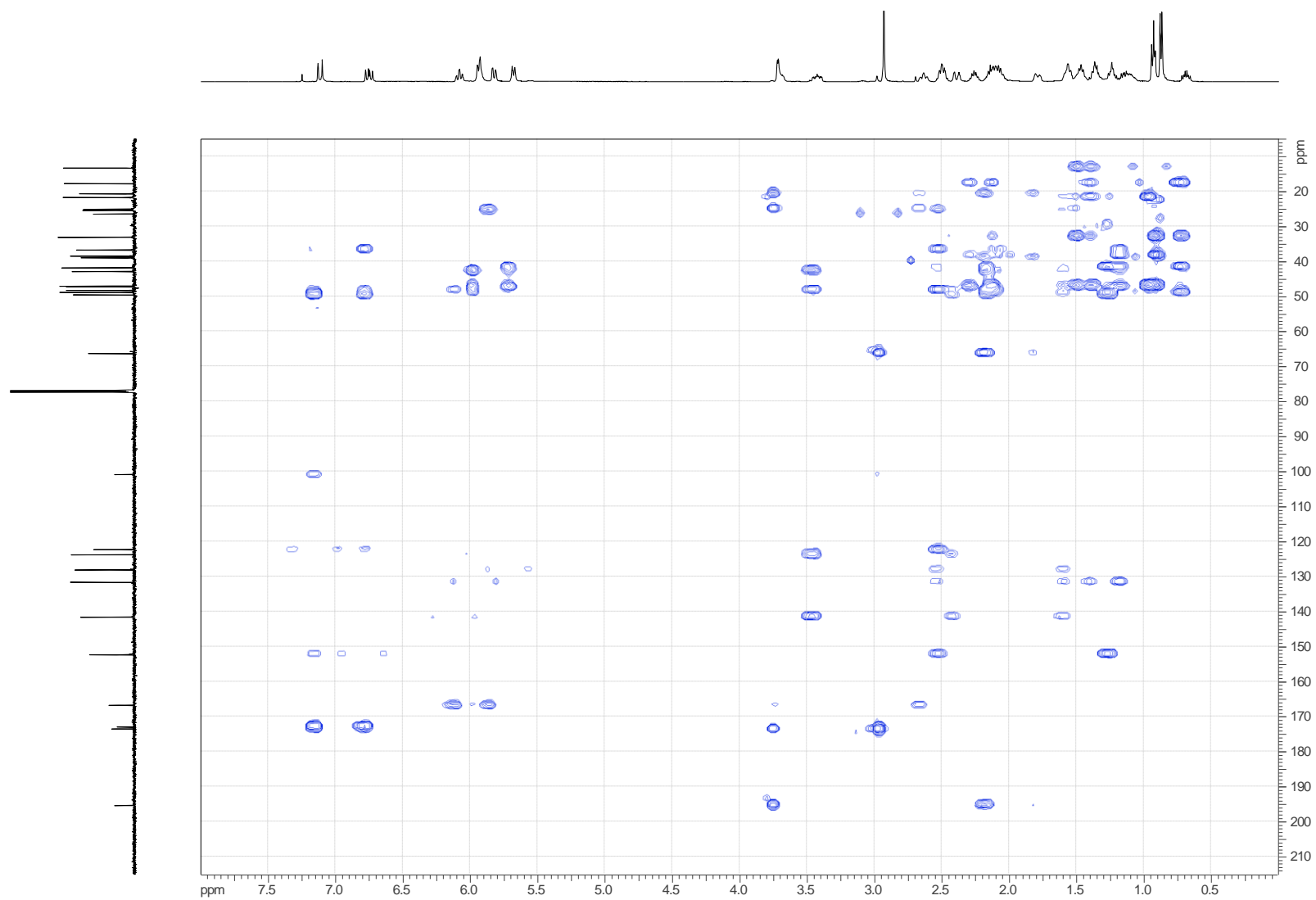


Figure S2. Cont.

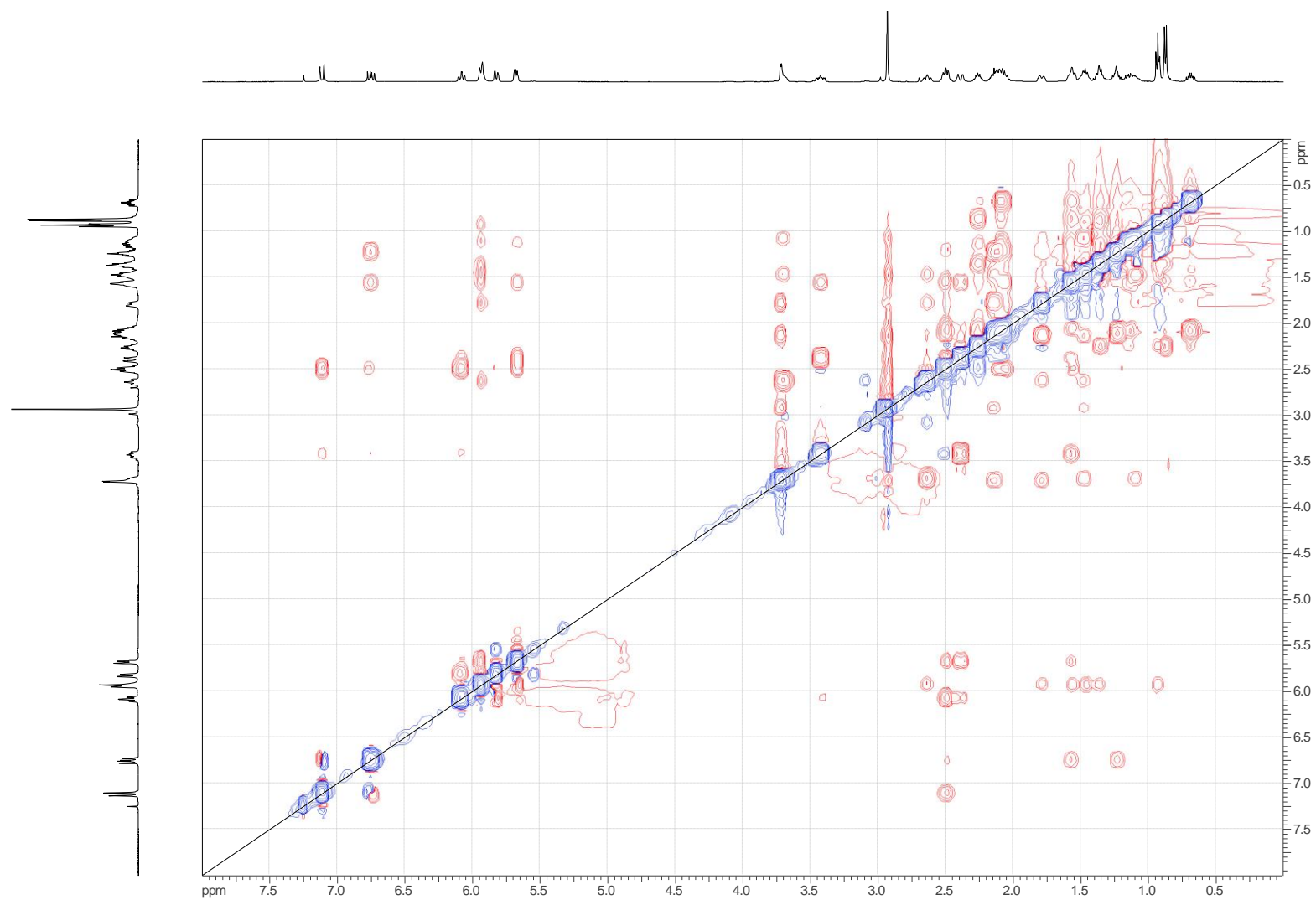
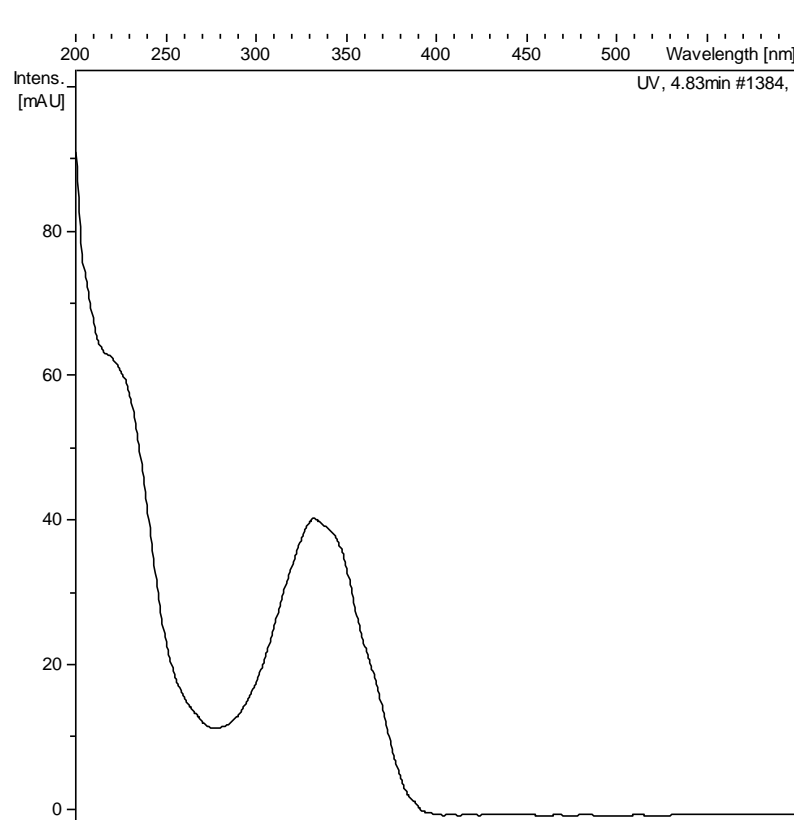
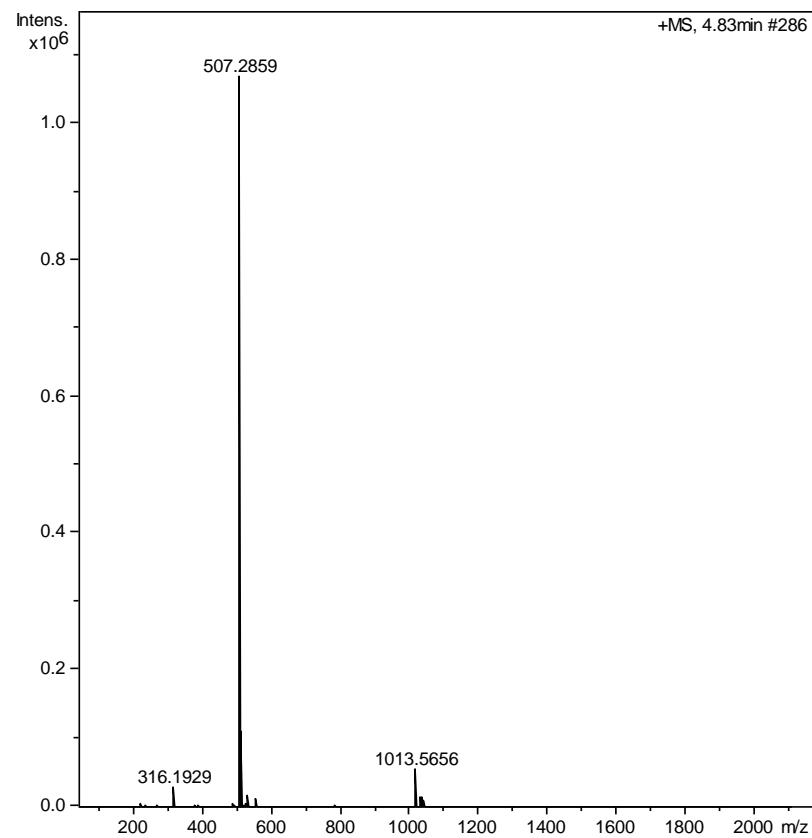


Figure S2. (A) ESI-TOF and UV spectra of compound **2**; (B) ^1H NMR (CDCl_3 , 500 MHz) of compound **2**; (C) ^{13}C NMR (CDCl_3 , 125 MHz) of compound **2**; (D) COSY of compound **2**. (E) HSQC of compound **2**; (F) HMBC of compound **2**. (G) NOESY of compound **2**.



UV spectrum of compound 3.



ESI-TOF spectrum of compound 3.

Figure S3. Cont.

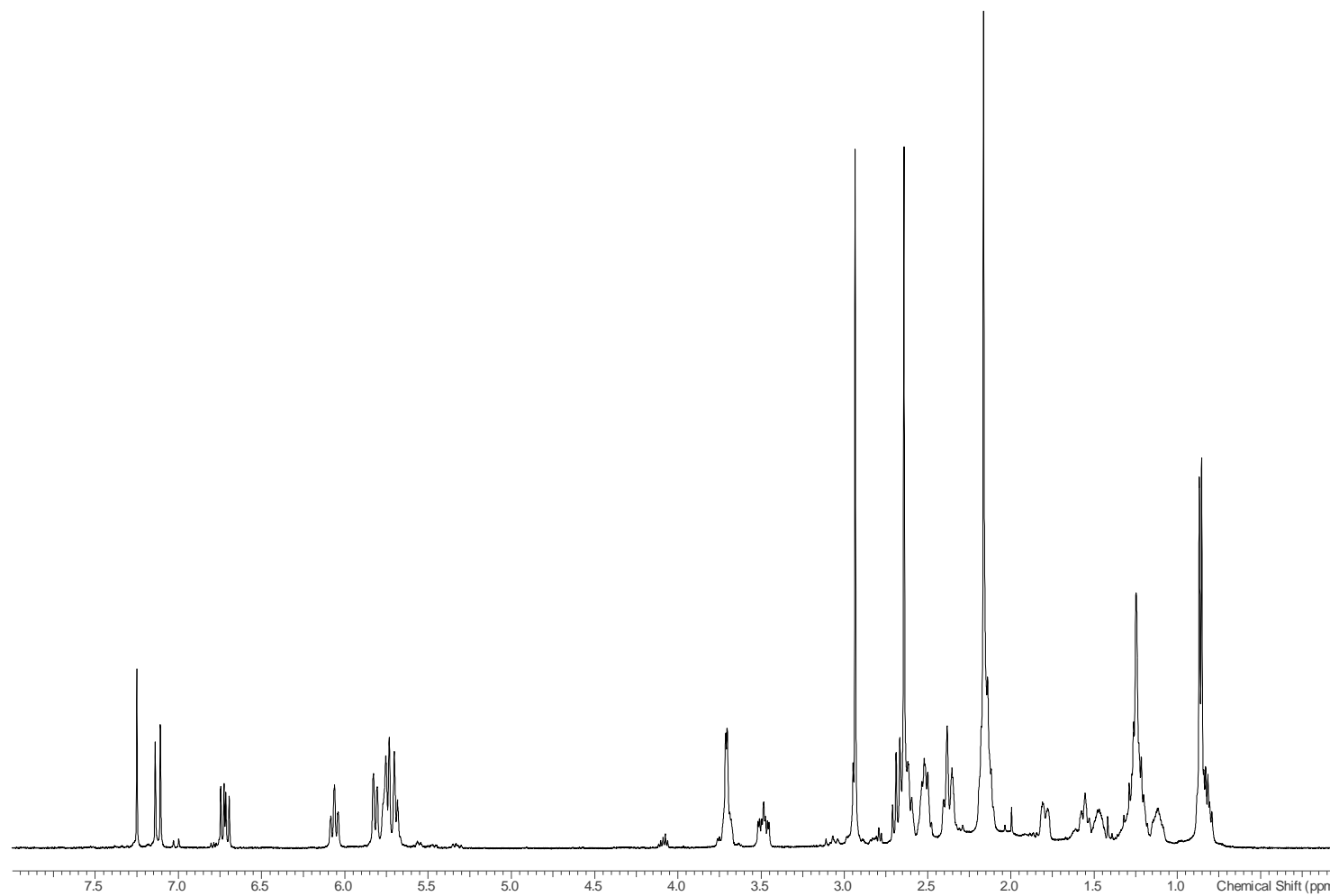


Figure S3. Cont.

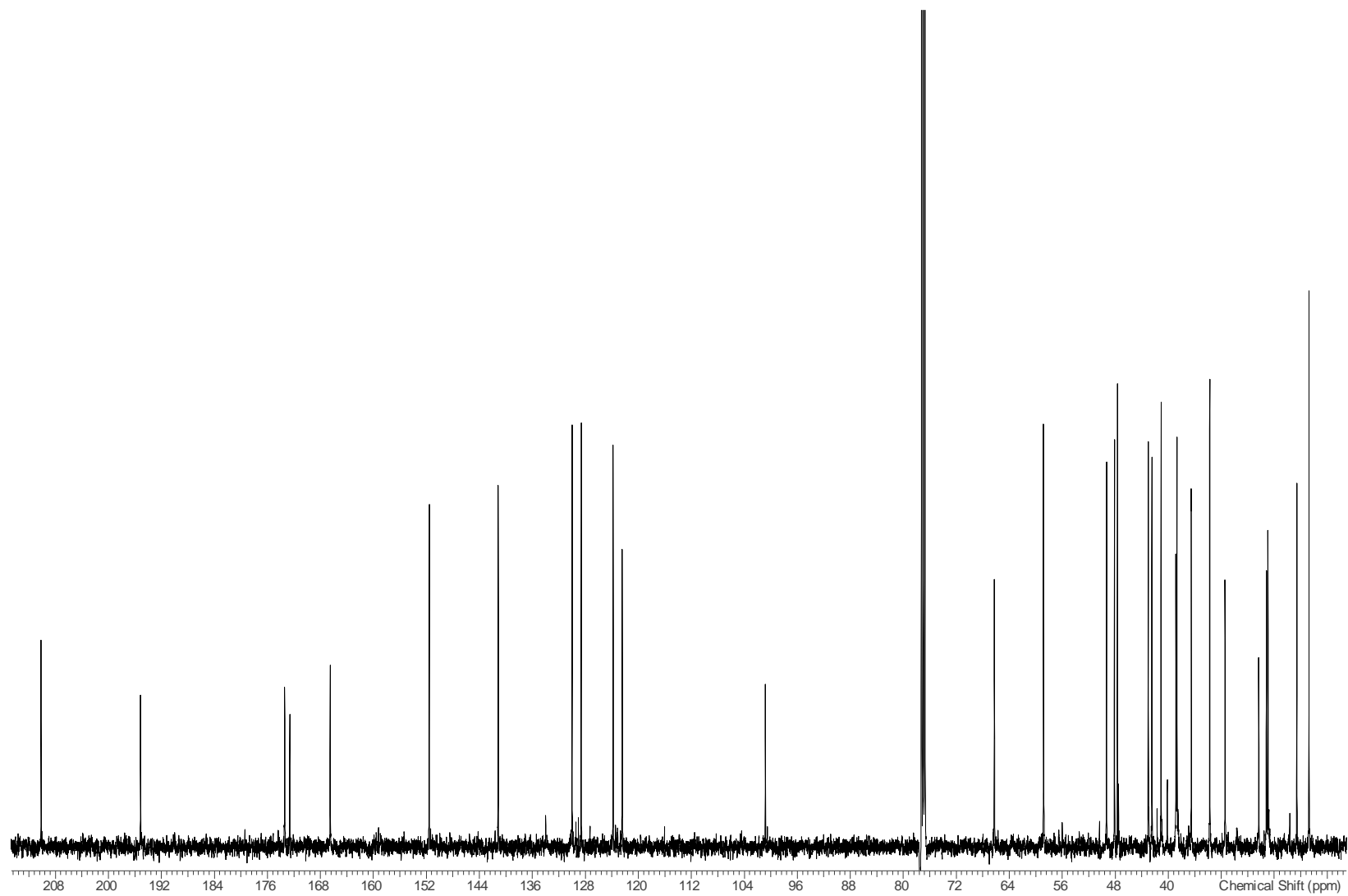


Figure S3. Cont.

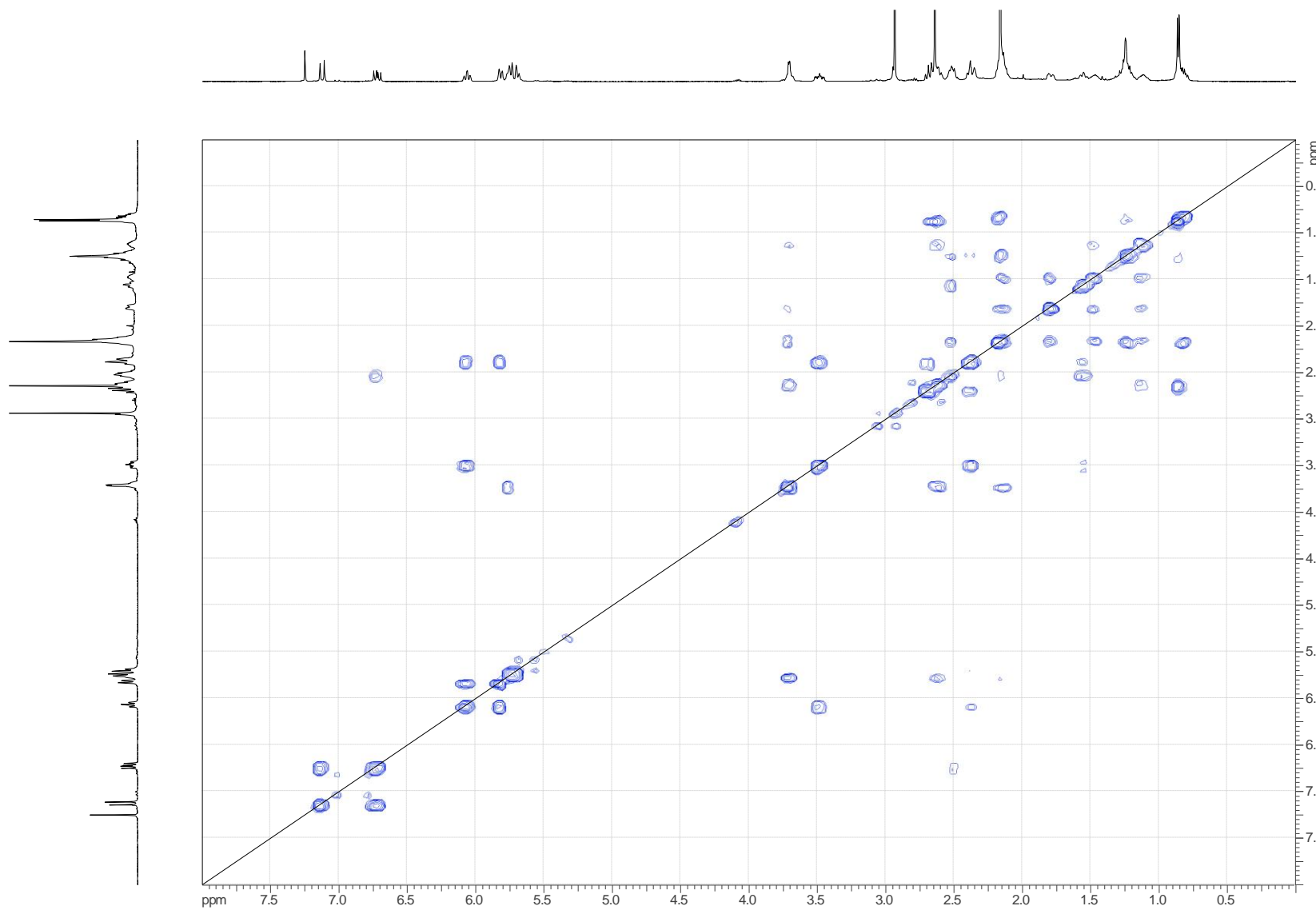


Figure S3. Cont.

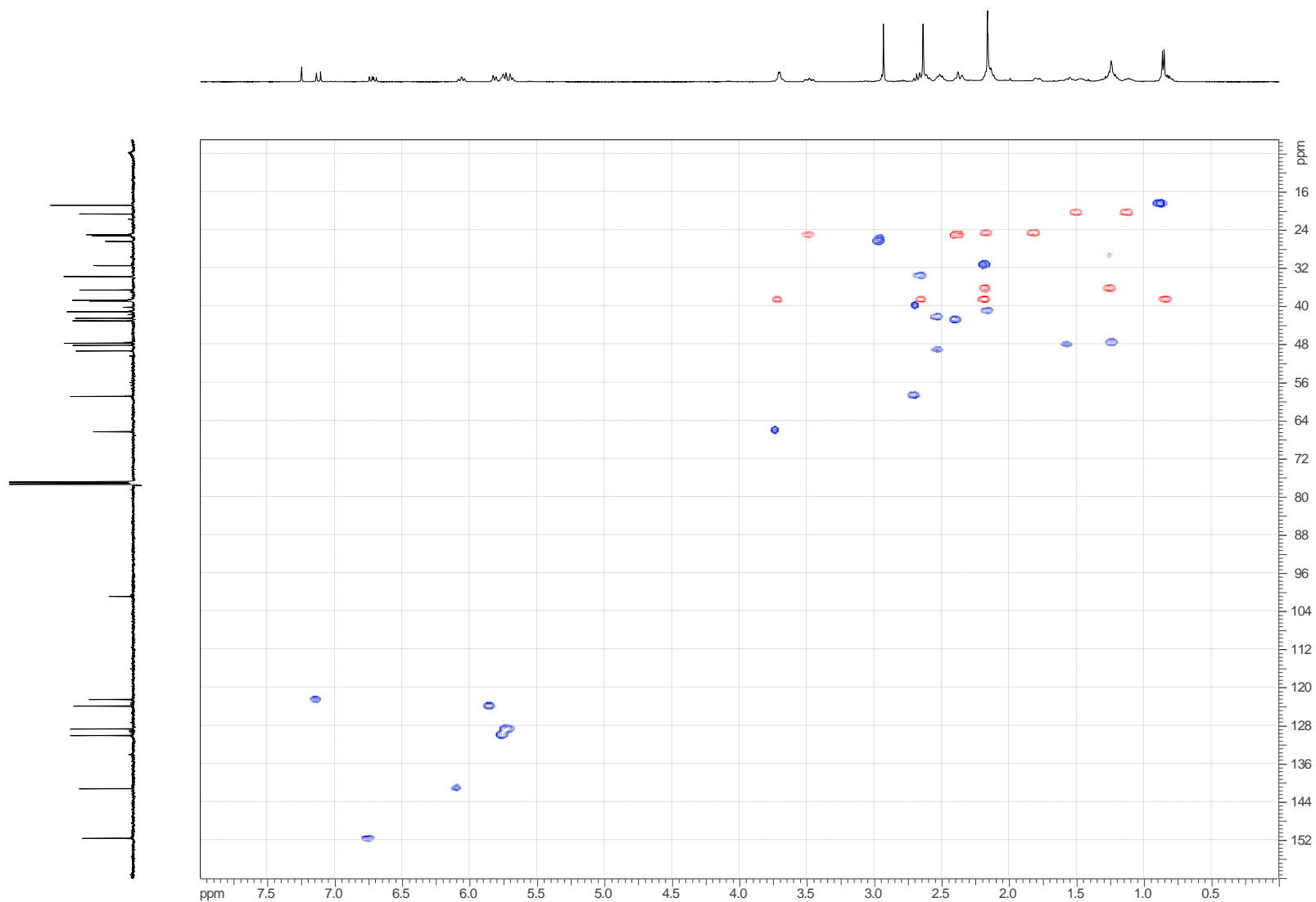


Figure S3. Cont.

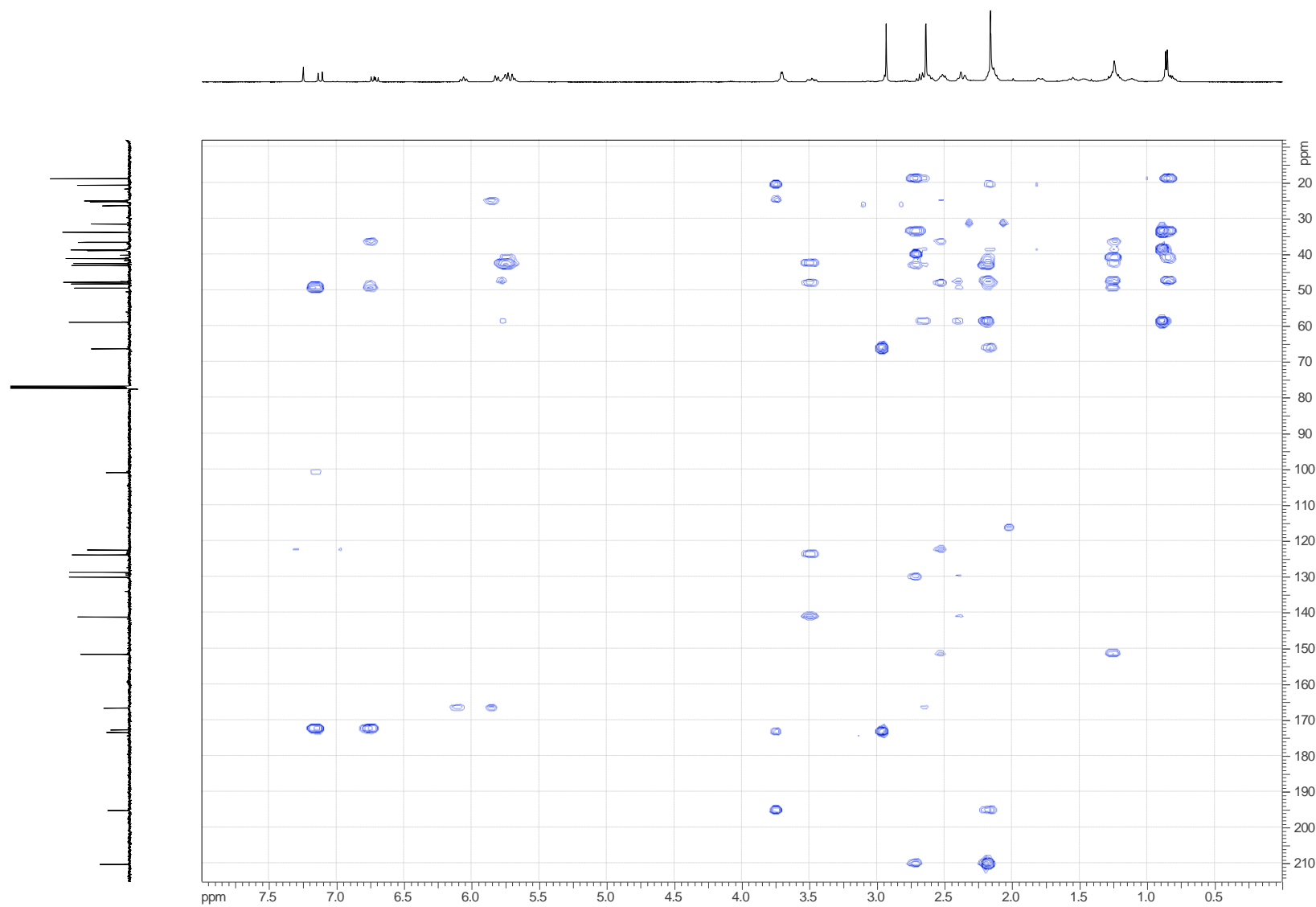


Figure S3. Cont.

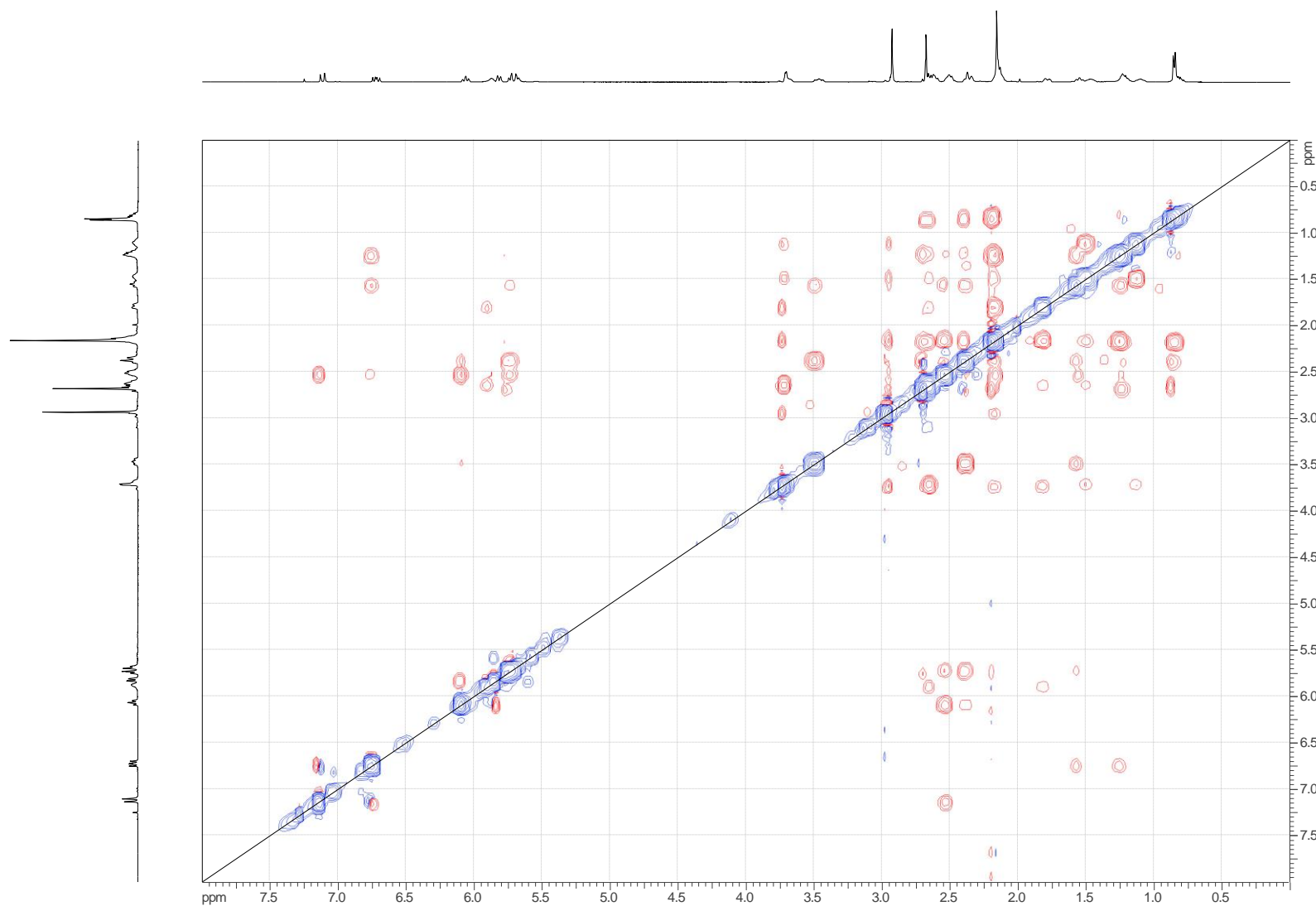


Figure S3. (A) ESI-TOF and UV spectra of compound **3**; (B) ^1H NMR (CDCl_3 , 500 MHz) of compound **3**; (C) ^{13}C NMR (CDCl_3 , 125 MHz) of compound **3**; (D) COSY of compound **3**; (E) HSQC of compound **3**; (F) HMBC of compound **3**; (G) NOESY of compound **3**.

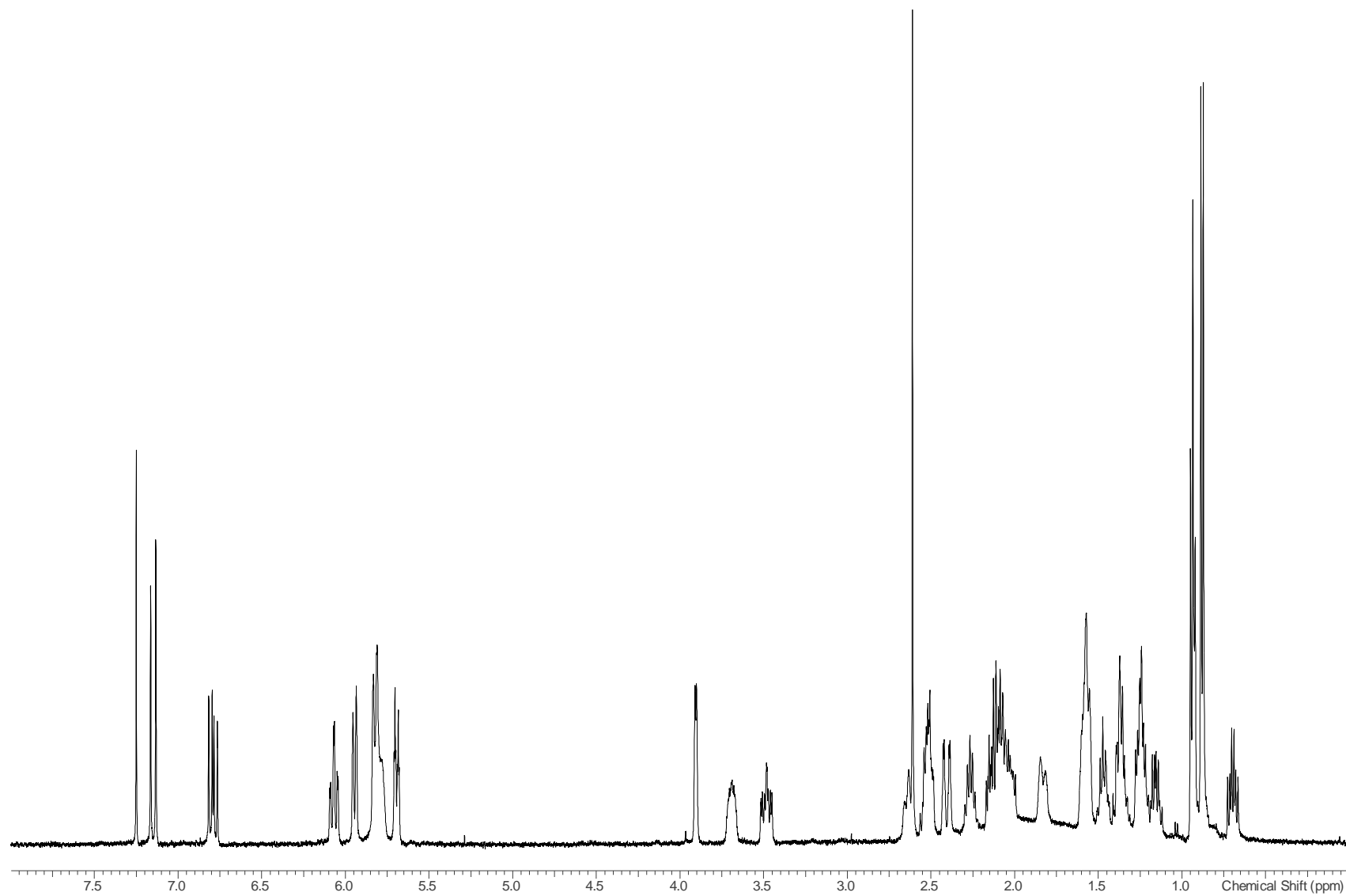


Figure S4. Cont.

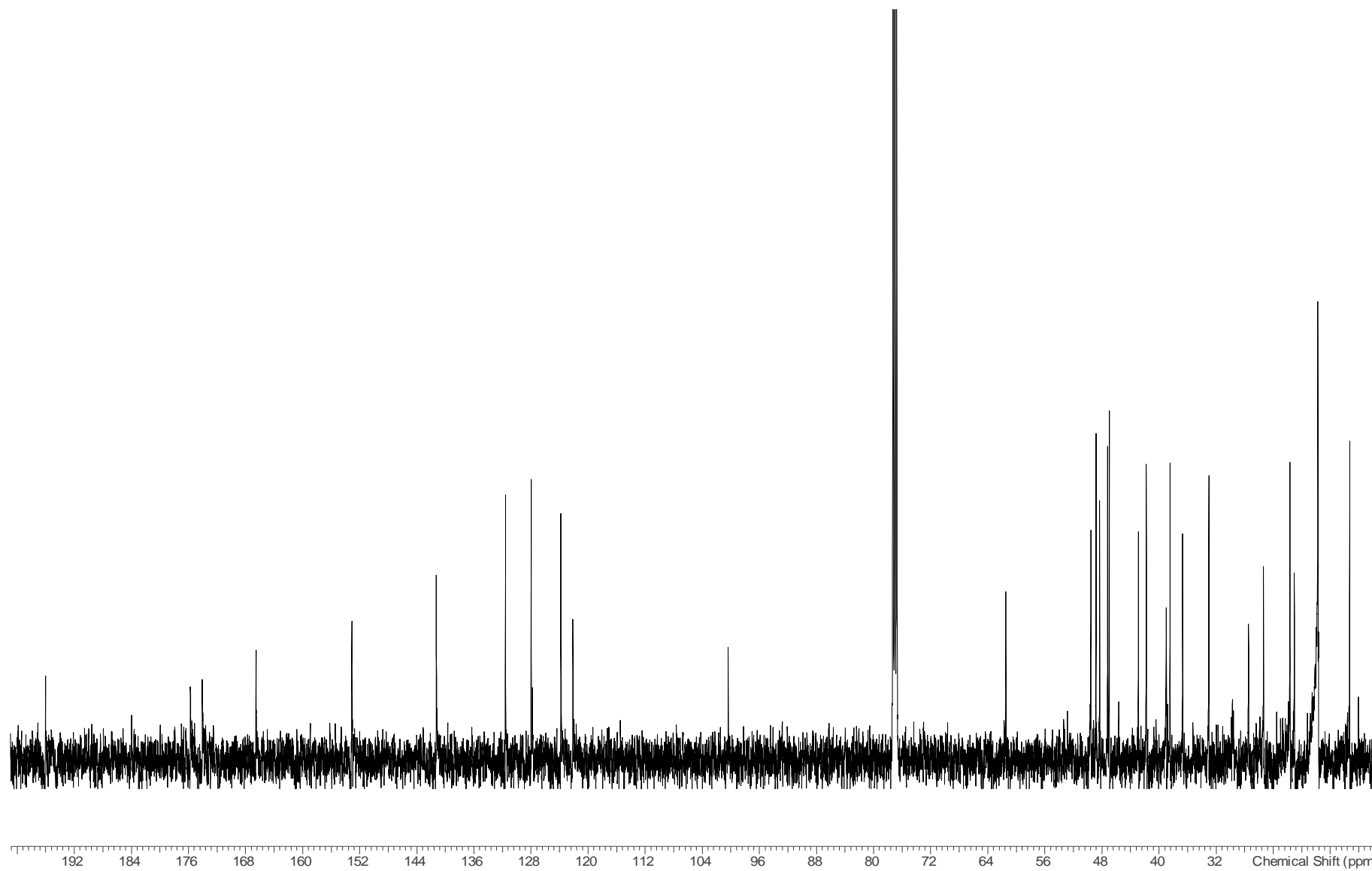


Figure S4. Cont.

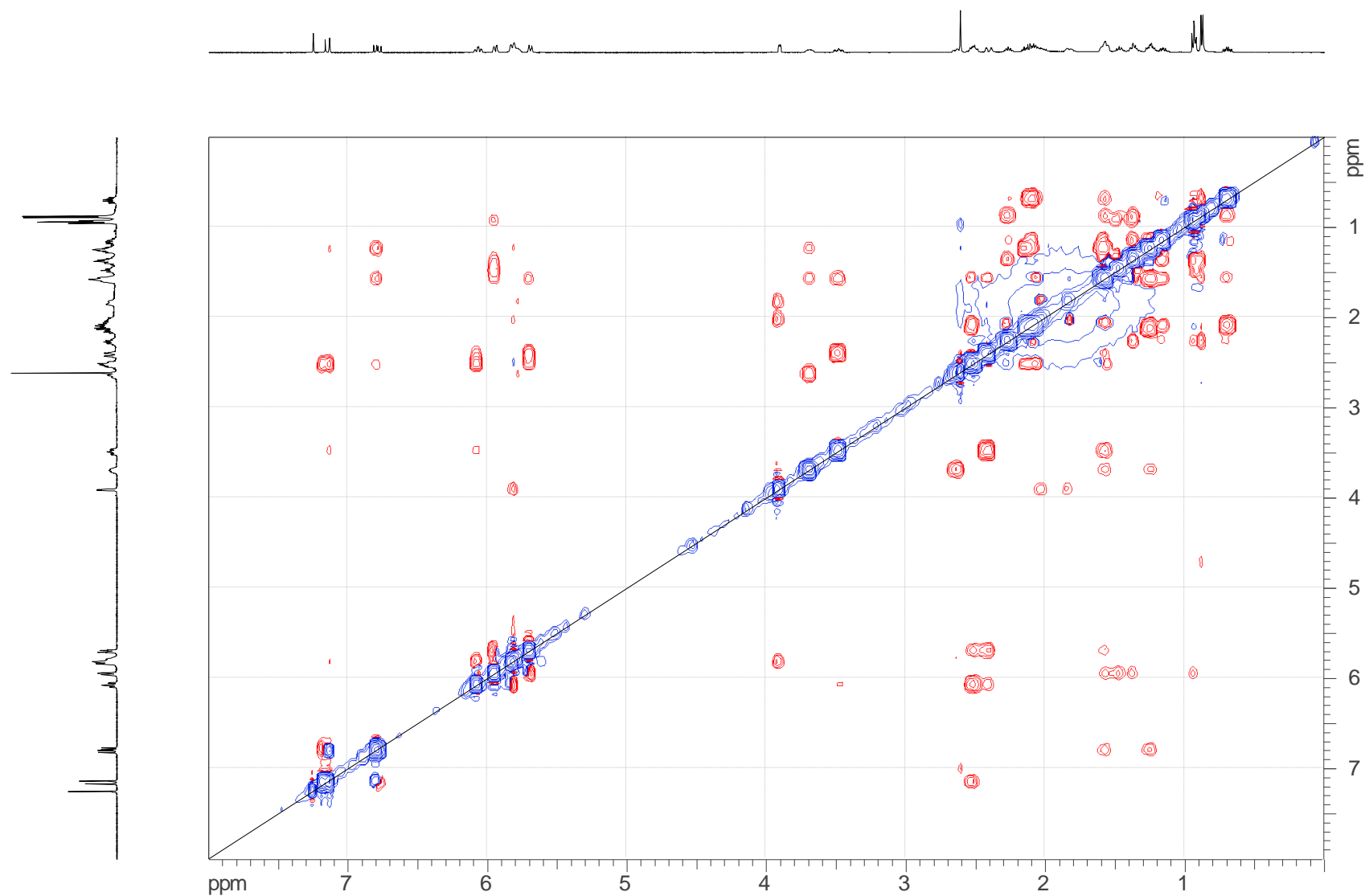


Figure S4. (A) ^1H NMR (CDCl_3 , 500 MHz) of compound **4**; (B) ^{13}C NMR (CDCl_3 , 125 MHz) of compound **4**; (C) NOESY of compound **4**.

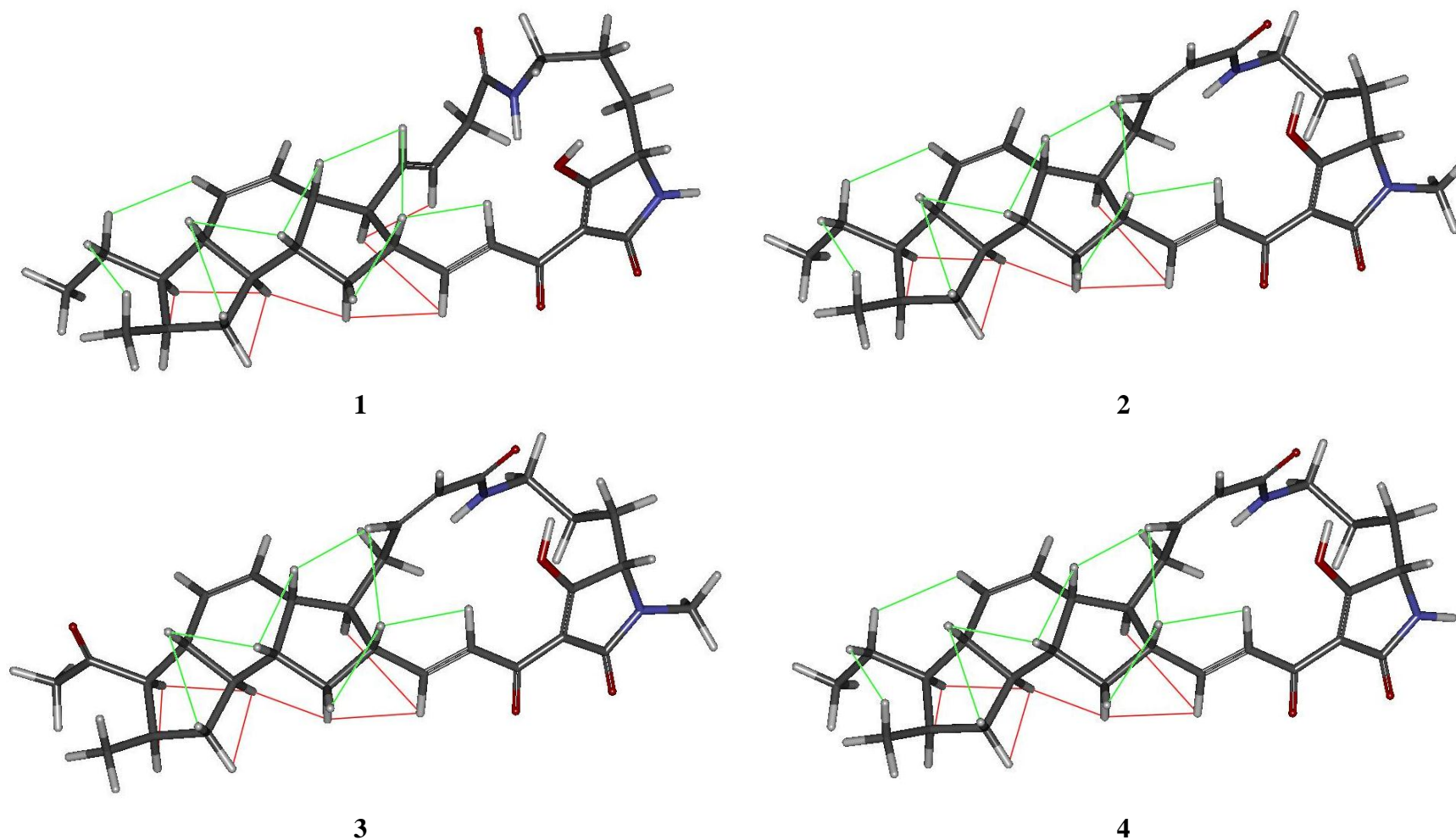


Figure S5. Molecular models of 1–4 showing the key observed NOEs which determine the relative configuration for all compounds. The protons in β orientation (relative to de fused tricycle pseudoplane according to the 2D structure scketches) which display mutual correlation are connected by green lines while red lines are employed for those in α orientation.

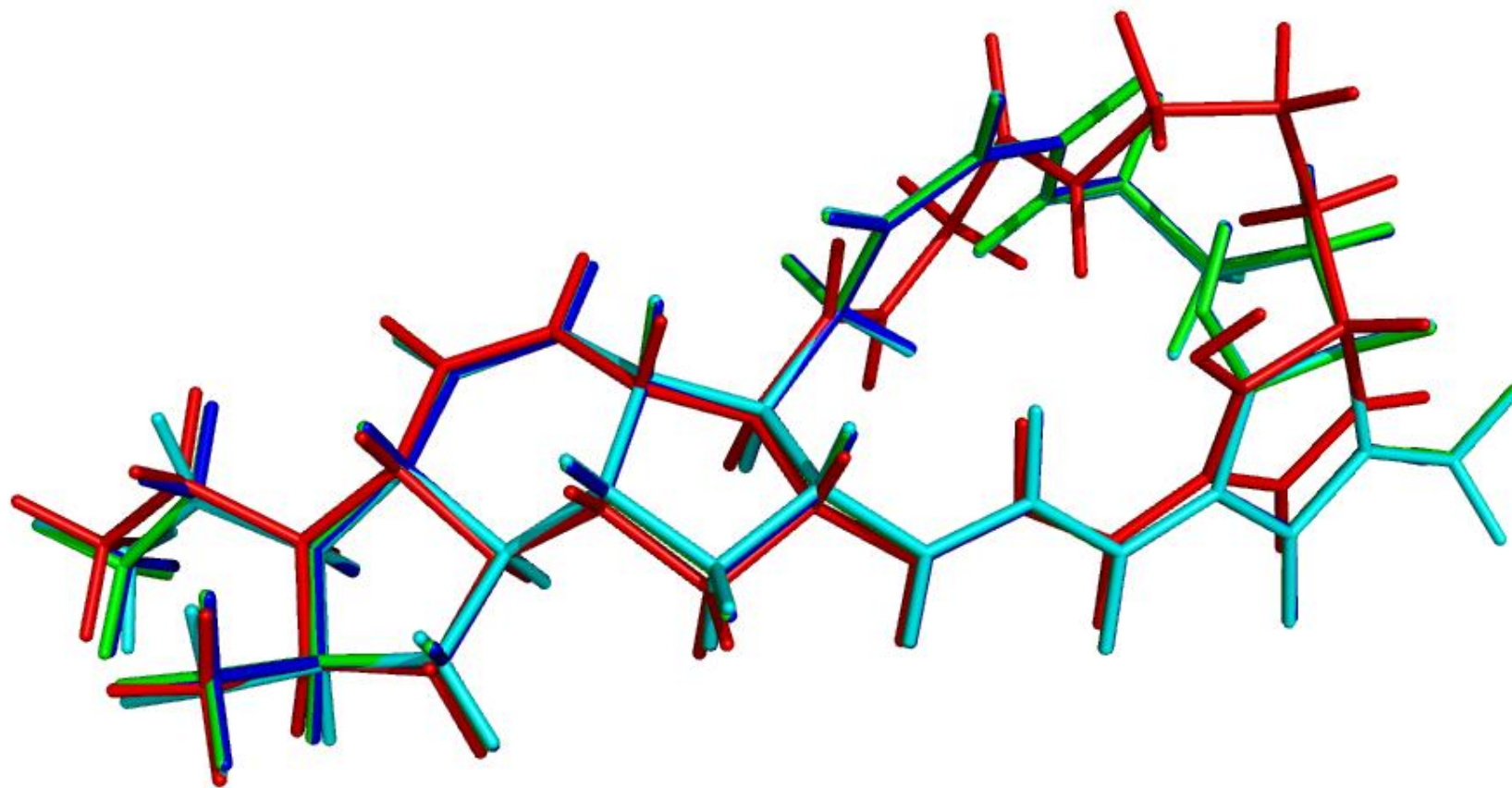


Figure S6. Overlay of the molecular models of 1–4. The following colour coding was employed: Red (1), green (2), cyan (3), blue (4).

Table S1. NMR data of Ikarugamycin (4). ¹H and ¹³C NMR (500 and 125 MHz in CDCl₃).

Position	δ H, Mult (J in Hz)	δ C, Mult	Position	δ H, Mult (J in Hz)	δ C, Mult
1		196.0, C	17	2.27, ddd (7.6, 7.6, 7.6)	33.0, CH
2	3.91, br s	61.5, CH	18	0.69, ddd (12.0, 12.0, 6.8) 2.11, m	38.4, CH ₂
3	1.81, m; 2.09, m	27.4, CH ₂	19	1.16, ddd (11.1, 11.1, 4.1)	48.8, CH
4	1.24, m; 1.57, m	21.0, CH ₂	20	2.08, m	41.8, CH
5	2.64, s; 3.67, br s	38.9, CH ₂	21	1.26, q (6.0, 5.1) 2.10, m	36.7, CH ₂
NH-6	5.92, br s		22	2.56, dd (10.6, 6.6)	49.5, CH
7		166.5, C	23	6.80, dd (15.4, 10.6)	153.0, CH
8	5.83, d (10.6)	123.8, CH	24	7.14, d (15.4)	122.3, CH
9	6.02, dd (10.6, 10.6)	141.3, CH	25		175.4, C
10	2.40, d (10.6); 3.46, m	25.3, CH ₂	26		100.4, C
11	1.57, m	48.3, CH	27		174.1, C
12	2.50, ddd (11.5, 7.7, 3.7)	42.9, CH	NH	6.15, br s	
13	5.67, dd (10.0, 3.7)	128.1, CH	29	0.86, d (7.2)	17.7, CH ₃
14	5.94, d (10.0)	131.6, CH	30	1.45, m 1.35, m	21.6, CH ₂
15	1.57, m	47.0, CH	31	0.92, t (7.0)	13.3, CH ₃
16	1.37, m	47.2, CH			