SUPPORTING INFORMATION

Hybrid Molecules of Azithromycin with Chloramphenicol and Metronidazole: Synthesis and Study of Antibacterial Properties

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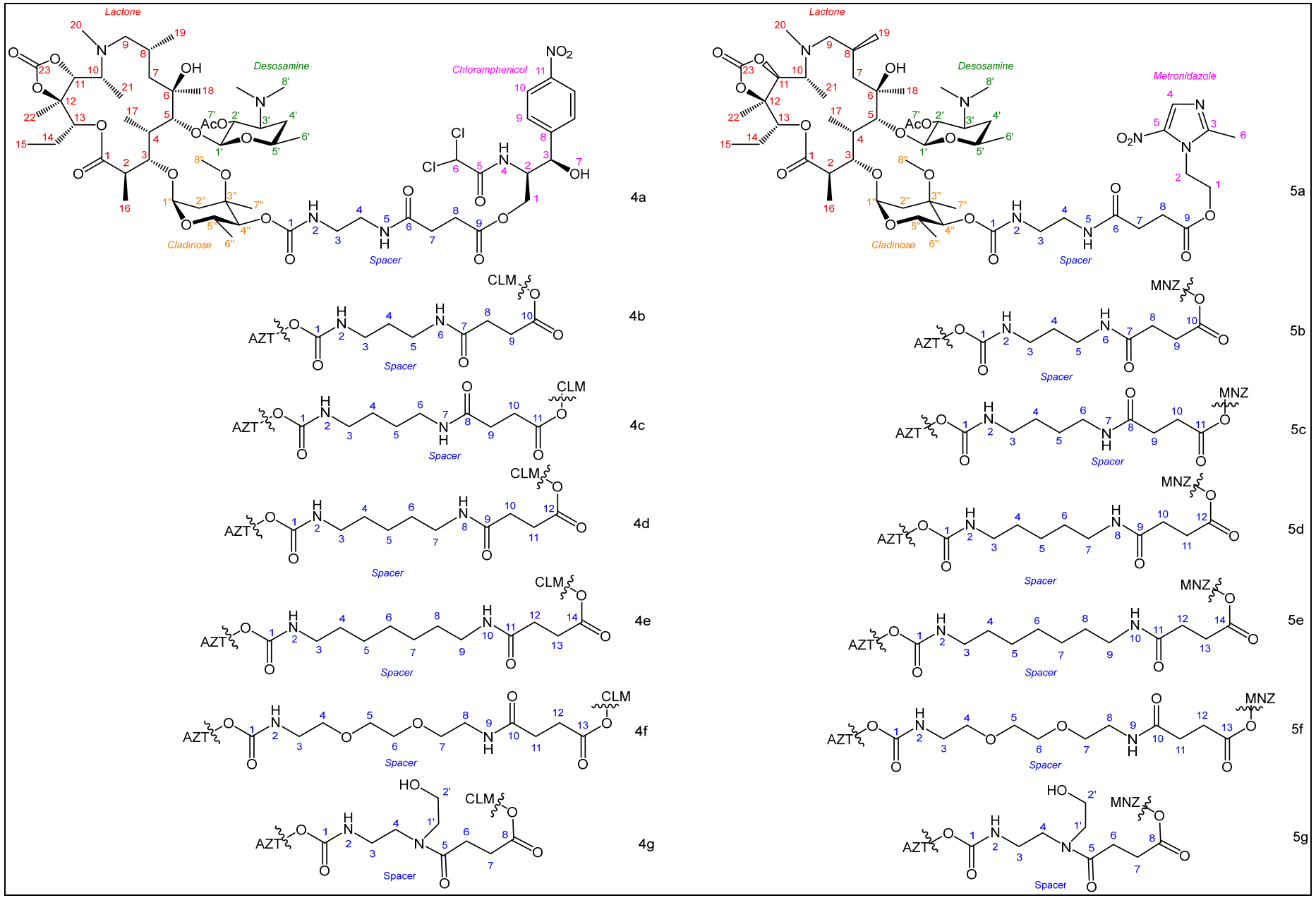


Figure S1. Numbering of atoms of AZT hybrids **4a–g** and **5a–g**.

Table S1. Assignment of signals of ^{1}H and ^{13}C NMR spectra for AZT-CLM hybrids **4a–g**.

Compound 4a			Compound 4b			Compound 4c			Compound 4d			Compound 4e			Compound 4f			Compound 4g		
position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')
Lactone			**Lactone**			**Lactone**			**Lactone**			**Lactone**			**Lactone**			**Lactone**		
1 C=O	177,2	-	1 C=O	177,2	-	1 C=O	177,1	-	1 C=O	177,2	-	1 C=O	177,2	-	1 C=O	177,1	-	1 C=O	177,2	-
2 CH	44,1	2,78	2 CH	44,1	2,79	2 CH	44,1	2,79	2 CH	44,1	2,79	2 CH	44,1	2,78	2 CH	44,1	2,79	2 CH	44,1	2,79
3 CH	77,0	4,18	3 CH	77,0	4,18	3 CH	77,0	4,19	3 CH	77,1	4,18	3 CH	77,1	4,18	3 CH	77,0	4,18	3 CH	77,0	4,19
4 CH	40,6	1,90	4 CH	40,7	1,90	4 CH	40,7	1,90	4 CH	40,7	1,89	4 CH	40,7	1,90	4 CH	40,7	1,90	4 CH	40,7	1,91
5 CH	82,6	3,42	5 CH	82,6	3,43	5 CH	82,6	3,43	5 CH	82,6	3,42	5 CH	82,6	3,43	5 CH	82,6	3,43	5 CH	82,6	3,44
6 C-OH	72,7	6,76	6 C-OH	72,8	6,73	6 C-OH	72,8	6,72	6 C-OH	72,8	6,73	6 C-OH	72,8	6,74	6 C-OH	72,6	6,74	6 C-OH	72,8	6,75
7 CH_2	40,8	1,35	7 CH_2	40,9	1,35	7 CH_2	40,9	1,36	7 CH_2	40,8	1,35	7 CH_2	40,8	1,35	7 CH_2	40,8	1,35	7 CH_2	40,8	1,36
8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,85
9 CH_2	66,3	2,32 (2,21)	9 CH_2	66,2	2,32 (2,21)	9 CH_2	66,3	2,32 (2,21)	9 CH_2	66,2	2,32(2,22)	9 CH_2	66,3	2,32 (2,21)	9 CH_2	66,2	2,32(2,22)	9 CH_2	66,3	2,33(2,22)
10 CH	59,8	3,09	10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,11
11 CH	85,7	4,23	11 CH	85,9	4,22	11 CH	85,9	4,23	11 CH	85,9	4,23	11 CH	85,9	4,23	11 CH	85,9	4,23	11 CH	85,9	4,23
12 C	85,9	-	12 C	85,0	-	12 C	85,8	-	12 C	85,0	-	12 C	85,0	-	12 C	85,0	-	12 C	85,0	-
13 CH	75,5	4,78	13 CH	75,5	4,78	13 CH	75,5	4,79	13 CH	75,5	4,78	13 CH	75,5	4,78	13 CH	75,5	4,79	13 CH	75,5	4,79
14 CH_2	21,4	1,73 (1,58)	14 CH_2	21,4	1,72 (1,58)	14 CH_2	21,4	1,72 (1,58)	14 CH_2	21,4	1,71 (1,58)	14 CH_2	21,4	1,72 (1,58)	14 CH_2	21,4	1,72 (1,58)	14 CH_2	21,4	1,73(1,59)
15 CH_3	10,2	0,84	15 CH_3	10,1	0,84	15 CH_3	10,1	0,84	15 CH_3	10,2	0,84	15 CH_3	10,2	0,84	15 CH_3	10,1	0,84	15 CH_3	10,2	0,84
16 CH_3	14,6	1,13	16 CH_3	14,6	1,13	16 CH_3	14,6	1,13	16 CH_3	14,7	1,13	16 CH_3	14,7	1,13	16 CH_3	14,6	1,13	16 CH_3	14,6	1,14
17 CH_3	9,1	0,82	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83
18 CH_3	26,9	1,14	18 CH_3	26,9	1,14	18 CH_3	26,9	1,14	18 CH_3	26,9	1,14	18 CH_3	26,9	1,15	18 CH_3	26,9	1,15	18 CH_3	26,9	1,14
19 CH_3	22,1	0,84	19 CH_3	22,0	0,85	19 CH_3	22,0	0,85	19 CH_3	22,1	0,84	19 CH_3	22,1	0,85	19 CH_3	22,0	0,85	19 CH_3	22,0	0,85
20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,08
21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95
22 CH_3	13,3	1,44	22 CH_3	13,3	1,44	22 CH_3	13,3	1,44	22 CH_3	13,3	1,44	22 CH_3	13,3	1,44	22 CH_3	13,3	1,44	22 CH_3	13,3	1,44
23 C	152,7	-	23 C	152,7	-	23 C	152,6	-	23 C	152,7	-	23 C	152,7	-	23 C	152,7	-	23 C	152,7	-
Desosamine			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**		
1' CH	99,6	4,54	1' CH	99,7	4,55	1' CH	99,6	4,54	1' CH	99,7	4,54	1' CH	99,7	4,54	1' CH	99,7	4,55	1' CH	99,5	4,54
2' CH	71,2	4,56	2' CH	71,2	4,56	2' CH	71,3	4,54	2' CH	71,3	4,55	2' CH	71,3	4,54	2' CH	71,4	4,55	2' CH	71,0	4,59
3' CH	62,6	2,61	3' CH	62,7	2,66	3' CH	62,7	2,64	3' CH	62,7	2,63	3' CH	62,7	2,65	3' CH	62,7	2,63	3' CH	62,7	2,66
4' CH_2	29,9	1,86(1,20)	4' CH_2	30,0	1,85(1,20)	4' CH_2	30,0	1,84(1,19)	4' CH_2	30,0	1,83(1,18)	4' CH_2	30,0	1,84(1,18)	4' CH_2	30,1	1,83(1,18)	4' CH_2	29,9	1,87(1,26)
5' CH	67,2	3,64	5' CH	67,3	3,65	5' CH	67,3	3,64	5' CH	67,3	3,64	5' CH	67,2	3,64	5' CH	67,3	3,64	5' CH	67,2	3,64
6' CH_3	21,0	1,12	6' CH_3	21,0	1,12	6' CH_3	20,9	1,11	6' CH_3	21,0	1,11	6' CH_3	20,9	1,11	6' CH_3	21,0	1,11	6' CH_3	20,9	1,13
7' **C**=O	170,9	-	7' **C**=O	170,6	-	7' **C**=O	170,4	-	7' **C**=O	170,3	-	7' **C**=O	170,4	-	7' **C**=O	170,7	-	7' **C**=O	170,7	-
7' CH_3	21,2	1,96	7' CH_3	21,1	1,95	7' CH_3	21,1	1,95	7' CH_3	21,1	1,94	7' CH_3	21,1	1,95	7' CH_3	21,1	1,95	7' CH_3	21,2	1,97
8' N(CH_3)$_2$	40,4	2,19	8' N(CH_3)$_2$	40,3	2,20	8' N(CH_3)$_2$	40,4	2,19	8' N(CH_3)$_2$	40,4	2,18	8' N(CH_3)$_2$	40,4	2,19	8' N(CH_3)$_2$	40,4	2,18	8' N(CH_3)$_2$	40,2	2,26

Table S1 (continuation). Assignment of signals of ^{1}H and ^{13}C NMR spectra for AZT-CLM hybrids **4a–g**.

Compound 4a			Compound 4b			Compound 4c			Compound 4d			Compound 4e			Compound 4f			Compound 4g		
position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')
Cladinose			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**		
1" CH	94,4	4,88	1" CH	94,4	4,89	1" CH	94,4	4,89	1" CH	94,4	4,88	1" CH	94,5	4,88	1" CH	94,4	4,89	1" CH	94,4	4,90
2" CH_2	34,5	2,32 (1,68)	2" CH_2	34,5	2,32 (1,68)	2" CH_2	34,6	2,32 (1,68)	2" CH_2	34,5	2,32 (1,68)	2" CH_2	34,5	2,32 (1,68)	2" CH_2	34,5	2,32 (1,68)	2" CH_2	34,5	2,32 (1,69)
3" C	72,8	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-
4" CH	77,9	4,40	4" CH	77,8	4,40	4" CH	77,7	4,40	4" CH	77,7	4,40	4" CH	77,6	4,40	4" CH	77,8	4,41	4" CH	77,9	4,41
5" CH	62,8	4,23	5" CH	62,8	4,25	5" CH	62,8	4,25	5" CH	62,8	4,23	5" CH	62,9	4,23	5" CH	62,7	4,25	5" CH	62,7	4,25
6" CH_3	17,9	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,05	6" CH_3	17,8	1,05
7" CH_3	20,4	1,06	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05
8" O**CH_3**	48,8	3,25	8" O**CH_3**	48,8	3,25	8" O**CH_3**	48,8	3,25	8" O**CH_3**	48,8	3,24	8" O**CH_3**	48,8	3,24	8" O**CH_3**	48,8	3,25	8" O**CH_3**	48,8	3,25
Spacer			**Spacer**			**Spacer**			**Spacer**			**Spacer**			**Spacer**			**Spacer**		
1 C=O	156,3	-	1 C=O	156,3	-	1 C=O	156,2	-	1 C=O	156,2	-	1 C=O	156,2	-	1 C=O	156,3	-	1 C=O	156,3	-
2 C=ON**H**	-	7,91	2 C=ON**H**	-	7,86	2 C=ON**H**	-	6,95	2 C=ON**H**	-	6,96	2 C=ON**H**	-	7,84	2 C=ON**H**	-	6,97	2 C=ON**H**	-	6,96(7,08)
3 CH_2	38,7	3,11	3 CH_2	38,0	3,05(2,99)	3 CH_2	39,9	3,03(2,96)	3 CH_2	40,1	3,04(2,94)	3 CH_2	40,1	3,04(2,93)	3 CH_2	40,1	3,16(2,99)	3 CH_2 *	38,4/39,0	3,14/3,21
4 CH_2	38,7	3,10	4 CH_2	29,6	1,52	4 CH_2	26,9	1,38	4 CH_2	29,1	1,39	4 CH_2	29,4	1,38	4 CH_2	69,0	3,40	4 CH_2 *	45,3/47,3	3,40/3,41
			5 CH_2	36,1	3,05	5 CH_2	26,3	1,37	5 CH_2	28,9	1,23	5 CH_2	26,4	1,22	5 CH_2	69,4	3,48	1' CH_2 *	49,8/48,3	3,36/3,33
						6 CH_2	38,2	3,02	6 CH_2	28,7	1,37	6 CH_2	28,4	1,22	6 CH_2	69,4	3,48	2' CH_2 *	58,8/58,6	3,54/3,46
									7 CH_2	38,5	2,99	7 CH_2	26,0	1,22	7 CH_2	69,0	3,38	5 C=O	170,7/ 171,2	-
												8 CH_2	29,0	1,35	8 CH_2	38,5	3,18			
												9 CH_2	38,5	3,01				6 CH_2	29,0	2,48
5 C=ON**H**	-	6,93	6 C=ON**H**	-	6,94	7 C=ON**H**	-	7,85	8 C=ON**H**	-	7,84	10 C=ON**H**	-	6,94	9 C=ON**H**	-	7,96	7 CH_2 *	27,6/27,4	2,63/2,61
6 C=O	170,9	-	7 C=O	170,9	-	8 C=O	170,4	-	9 C=O	170,3	-	11 C=O	170,9	-	10 C=O	170,7	-	8 C=O *	172,2/ 172,3	-
7 CH_2	28,9	2,47	8 CH_2	29,0	2,48	9 CH_2	29,0	2,49	10 CH_2	29,0	2,47	12 CH_2	29,0	2,48	11 CH_2	29,7	2,36			
8 CH_2	29,7	2,34	9 CH_2	29,7	2,35	10 CH_2	29,7	2,34	11 CH_2	29,7	2,34	13 CH_2	29,7	2,35	12 CH_2	28,9	2,48	* - denotes second signal due to dynamics		
9 C=O	172,1	-	10 C=O	172,1	-	11 C=O	172,1	-	12 C=O	172,2	-	14 C=O	172,1	-	13 C=O	172,1	-			
Chloramphenicol			**Chloramphenicol**			**Chloramphenicol**			**Chloramphenicol**			**Chloramphenicol**			**Chloramphenicol**			**Chloramphenicol**		
1 CH_2	63,0	4,21(4,09)	1 CH_2	63,0	4,22(4,09)	1 CH_2	62,9	4,21(4,09)	1 CH_2	62,9	4,21(4,09)	1 CH_2	62,9	4,20(4,08)	1 CH_2	62,9	4,21(4,09)	1 CH_2	62,9	4,21(4,10)
2 CH	53,5	4,22	2 CH	53,5	4,23	2 CH	53,5	4,23	2 CH	53,5	4,22	2 CH	53,5	4,22	2 CH	53,5	4,22	2 CH	53,5	4,23
3 CH	69,5	5,02	3 CH	69,5	5,02	3 CH	69,5	5,02	3 CH	69,5	5,02	3 CH	69,5	5,02	3 CH	69,4	5,02	3 CH	69,4	5,04
4 C=ON**H**	-	8,51	4 C=ON**H**	-	8,51	4 C=ON**H**	-	8,51	4 C=ON**H**	-	8,52	4 C=ON**H**	-	8,52	4 C=ON**H**	-	8,54	4 C=ON**H**	-	8,51
5 C=O	163,6	-	5 C=O	163,6	-	5 C=O	163,6	-	5 C=O	163,6	-	5 C=O	163,6	-	5 C=O	163,6	-	5 C=O	163,6	-
6 $CHCl_2$	66,3	6,43	6 $CHCl_2$	66,3	6,43	6 $CHCl_2$	66,2	6,44	6 $CHCl_2$	66,3	6,43	6 $CHCl_2$	66,3	6,43	6 $CHCl_2$	66,2	6,44	6 $CHCl_2$	66,3	6,44
7 OH	-	6,22	7 OH	-	6,21	7 OH	-	6,21	7 OH	-	6,22	7 OH	-	6,74	7 OH	-	6,23	7 OH	-	6,21
8 C	146,6	-	8 C	146,7	-	8 C	146,6	-	8 C	146,6	-	8 C	146,6	-	8 C	146,6	-	8 C	146,6	-
9 CH	127,4	7,64	9 CH	127,4	7,63	9 CH	127,4	7,64	9 CH	127,4	7,64	9 CH	127,5	7,64	9 CH	127,4	7,64	9 CH	127,5	7,64
10 CH	122,9	8,17	10 CH	122,9	8,17	10 CH	122,8	8,16	10 CH	122,8	8,16	10 CH	122,8	8,16	10 CH	122,8	8,17	10 CH	122,9	8,17
11 C	150,2	-	11 C	150,3	-	11 C	150,2	-	11 C	150,2	-	11 C	150,2	-	11 C	150,2	-	11 C	150,2	-

Table S2. Assignment of signals of ^{1}H and ^{13}C NMR spectra for AZT–MNZ hybrids **5a–g.**

Compound 5a			Compound 5b			Compound 5c			Compound 5d			Compound 5e			Compound 5f			Compound 5g		
position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')
Lactone			**Lactone**			**Lactone**			**Lactone**			**Lactone**			**Lactone**			**Lactone**		
1 C=O	177,1	-	1 C=O	177,2	-	1 C=O	177,2	-	1 C=O	177,1	-	1 C=O	177,1	-	1 C=O	177,2	-	1 C=O	177,2	-
2 CH	44,1	2,79	2 CH	44,3	2,79	2 CH	44,1	2,78	2 CH	44,1	2,79	2 CH	44,1	2,78	2 CH	44,1	2,79	2 CH	44,1	2,78
3 CH	77,0	4,18	3 CH	77,1	4,23	3 CH	77,0	4,18	3 CH	76,9	4,20	3 CH	76,9	4,21	3 CH	77,0	4,19	3 CH	77,0	4,20
4 CH	40,6	1,91	4 CH	41	1,92	4 CH	40,7	1,90	4 CH	40,6	1,92	4 CH	40,6	1,93	4 CH	40,7	1,91	4 CH	40,6	1,92
5 CH	82,5	3,43	5 CH	83	3,46	5 CH	82,5	3,43	5 CH	82,5	3,45	5 CH	82,4	3,46	5 CH	82,5	3,44	5 CH	82,4	3,45
6 C-OH	72,8	6,75	6 C-OH	73	6,59	6 C-OH	72,8	6,77	6 C-OH	72,7	6,79	6 C-OH	72,7	6,87	6 C-OH	72,8	6,79	6 C-OH	72,7	6,86
7 CH_2	40,8	1,35	7 CH_2	41	1,45	7 CH_2	40,8	1,35	7 CH_2	40,7	1,36	7 CH_2	40,7	1,35	7 CH_2	40,7	1,35	7 CH_2	40,7	1,34
8 CH	25,3	1,84	8 CH	25,3	1,87	8 CH	25,3	1,84	8 CH	25,3	1,85	8 CH	25,3	1,84	8 CH	25,3	1,84	8 CH	25,3	1,84
9 CH_2	66,3	2,32(2,21)	9 CH_2	66,3	2,35(2,21)	9 CH_2	66,3	2,32(2,21)	9 CH_2	66,3	2,32(2,22)	9 CH_2	66,3	2,32(2,22)	9 CH_2	66,3	2,33(2,22)	9 CH_2	66,3	2,33(2,21)
10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,10	10 CH	59,7	3,11	10 CH	59,7	3,11	10 CH	59,7	3,11	10 CH	59,8	3,10
11 CH	85,9	4,23	11 CH	85,5	4,26	11 CH	85,9	4,22	11 CH	85,9	4,22	11 CH	85,9	4,22	11 CH	85,9	4,23	11 CH	85,9	4,21
12 C	85	-	12 C	85,2	-	12 C	85	-	12 C	85,0	-	12 C	85,0	-	12 C	85,0	-	12 C	85,0	-
13 CH	75,5	4,78	13 CH	75,5	4,8	13 CH	75,5	4,78	13 CH	75,5	4,79	13 CH	75,6	4,79	13 CH	75,5	4,79	13 CH	75,6	4,79
14 CH_2	21,4	1,72(1,58)	14 CH_2	21,4	1,75(1,58)	14 CH_2	21,4	1,72(1,58)	14 CH_2	21,4	1,73(1,59)	14 CH_2	21,4	1,73(1,60)	14 CH_2	21,4	1,72(1,59)	14 CH_2	21,4	1,72(1,58)
15 CH_3	10,1	0,84	15 CH_3	10,2	0,84	15 CH_3	10,1	0,83	15 CH_3	10,1	0,84	15 CH_3	10,2	0,85	15 CH_3	10,2	0,84	15 CH_3	10,2	0,84
16 CH_3	14,6	1,13	16 CH_3	14,7	1,13	16 CH_3	14,7	1,13	16 CH_3	14,6	1,14	16 CH_3	14,6	1,14	16 CH_3	14,6	1,14	16 CH_3	14,6	1,14
17 CH_3	9,0	0,83	17 CH_3	9,1	0,97	17 CH_3	9,0	0,83	17 CH_3	9,0	0,83	17 CH_3	8,9	0,83	17 CH_3	9,0	0,83	17 CH_3	8,9	0,82
18 CH_3	26,9	1,14	18 CH_3	27,1	1,17	18 CH_3	26,9	1,14	18 CH_3	26,9	1,15	18 CH_3	26,3	1,2	18 CH_3	26,9	1,14	18 CH_3	26,9	1,14
19 CH_3	22,0	0,84	19 CH_3	22,1	0,86	19 CH_3	22,0	0,84	19 CH_3	22,0	0,85	19 CH_3	22,0	0,84	19 CH_3	22,1	0,84	19 CH_3	22,0	0,84
20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,09	20 N-CH_3	34,2	2,08	20 N-CH_3	34,1	2,08	20 N-CH_3	34,1	2,09	20 N-CH_3	34,1	2,11	20 N-CH_3	34,1	2,08
21 CH_3	5,1	0,95	21 CH_3	5,4	0,97	21 CH_3	5,1	0,95	21 CH_3	5,1	0,95	21 CH_3	5,1	0,96	21 CH_3	5,1	0,96	21 CH_3	5,1	0,95
22 CH_3	13,3	1,44	22 CH_3	13,6	1,46	22 CH_3	13,3	1,44	22 CH_3	13,2	1,45	22 CH_3	13,2	1,46	22 CH_3	13,3	1,45	22 CH_3	13,3	1,45
23 C	152,6	-	23 C	152,6	-	23 C	152,7	-	23 C	152,6	-	23 C	152,7	-	23 C	152,7	-	23 C	152,7	-
Desosamine			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**			**Desosamine**		
1' CH	99,5	4,54	1' CH	101,8	4,38	1' CH	99,5	4,54	1' CH	99,2	4,55	1' CH	98,9	4,55	1' CH	99,5	4,55	1' CH	98,8	4,54
2' CH	71,2	4,56	2' CH	69,2	3,23	2' CH	70,8	4,6	2' CH	n.o.	n.o.	2' CH	n.o.	n.o.	2' CH	n.o.	n.o.	2' CH	n.o.	n.o.
3' CH	63	2,66	3' CH	not four	not found	3' CH	62,8	2,82	3' CH	n.o.	n.o.	3' CH	n.o.	n.o.	3' CH	n.o.	2,67	3' CH	n.o.	n.o.
4' CH_2	30,0	1,85(1,20)	4' CH_2	29,7	1,91(1,34)	4' CH_2	29,9	1,88(1,28)	4' CH_2	n.o.	n.o.	4' CH_2	n.o.	n.o.	4' CH_2	n.o.	1,87(1,25)	4' CH_2	n.o.	n.o.
5' CH	67,1	3,65	5' CH	66,8	3,63	5' CH	67,2	3,65	5' CH	67	3,68	5' CH	66,8	3,71	5' CH	67,1	3,67	5' CH	66,9	3,67
6' CH_3	20,9	1,13	6' CH_3	21,0	1,14	6' CH_3	20,9	1,13	6' CH_3	20,8	1,16	6' CH_3	20,7	1,19	6' CH_3	20,9	1,14	6' CH_3	20,8	1,16
7' **C**=O	170,6	-	7' **C**=O	170,5	-	7' **C**=O	170,1	-	7' **C**=O	170,1	-	7' **C**=O	170,1	-	7' **C**=O	170,5	-	7' **C**=O	170,5	-
7' CH_3	21,1	1,97	7' CH_3	not four	not found	7' CH_3	21,2	1,98	7' CH_3	21,2	2	7' CH_3	21,3	2,05	7' CH_3	21,2	1,99	7' CH_3	21,4	2,08
8' N(CH_3)$_2$	40,2	2,22	8' N(CH_3)$_2$	40,4	2,54	8' N(CH_3)$_2$	40,4	2,54	8' N(CH_3)$_2$	40,4	2,54	8' N(CH_3)$_2$	40,4	2,54	8' N(CH_3)$_2$	40,4	2,54	8' N(CH_3)$_2$	40,4	2,54

Table S2 (continuation). Assignment of signals of ^{1}H and ^{13}C NMR spectra for AZT–MNZ hybrids **5a–g**.

Compound 5a			Compound 5b			Compound 5c			Compound 5d			Compound 5e			Compound 5f			Compound 5g		
position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')	position	δC	δH (δH')
Cladinose			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**			**Cladinose**		
1" CH	94,4	4,89	1" CH	94,5	4,91	1" CH	94,4	4,89	1" CH	94,4	4,9	1" CH	94,4	4,91	1" CH	94,4	4,89	1" CH	94,4	4,90
2" CH_2	34,5	2,32(1,69)	2" CH_2	34,5	2,31(1,67)	2" CH_2	34,5	2,32(1,68)	2" CH_2	34,5	2,33(1,69)	2" CH_2	34,5	2,32(1,70)	2" CH_2	34,5	2,32(1,68)	2" CH_2	34,5	2,32(1,70)
3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-	3" C	72,7	-
4" CH	77,9	4,40	4" CH	77,8	4,39	4" CH	77,7	4,40	4" CH	77,6	4,41	4" CH	77,6	4,41	4" CH	77,7	4,40	4" CH	77,9	4,41
5" CH	62,7	4,22	5" CH	62,7	4,24	5" CH	62,8	4,22	5" CH	62,8	4,22	5" CH	62,8	4,2	5" CH	62,8	4,22	5" CH	62,8	4,21
6" CH_3	17,8	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,04	6" CH_3	17,8	1,05	6" CH_3	17,9	1,06	6" CH_3	17,8	1,04	6" CH_3	17,8	1,04
7" CH_3	20,4	1,06	7" CH_3	20,4	1,04	7" CH_3	20,4	1,05	7" CH_3	20,4	1,07	7" CH_3	20,3	1,07	7" CH_3	20,4	1,05	7" CH_3	20,4	1,05
8" O**CH_3**	48,8	3,26	8" O**CH_3**	48,9	3,22	8" O**CH_3**	48,8	3,25	8" O**CH_3**	48,9	3,26	8" O**CH_3**	49	3,27	8" O**CH_3**	48,8	3,25	8" O**CH_3**	49	3,26
Spacer			**Spacer**			**Spacer**			**Spacer**			**Spacer**			**Spacer**			**Spacer**		
1 C=O	156,3	-	1 C=O	156,1	-	1 C=O	156,2	-	1 C=O	156,2	-	1 C=O	156,2	-	1 C=O	156,3	-	1 C=O	156,2	-
2 C=ON**H**	-	6,9	2 C=ON**H**	-	6,84	2 C=ON**H**	-	6,93	2 C=ON**H**	-	6,87	2 C=ON**H**	-	6,83	2 C=ON**H**	-	6,89	2 C=ON**H**	-	6,86
3 CH2	38,6	3,11(3,06)	3 CH2	37,9	3,03(2,97)	3 CH2	40,0	3,03(2,96)	3 CH2	40,1	3,05(2,96)	3 CH2	40,1	3,06(2,96)	3 CH2	40,2	3,17	3 CH2	45,4	3,35(3,27)
4 CH2	40,1	3,05	4 CH2	29,6	1,49	4 CH2	26,9	1,38	4 CH2	29,1	1,4	4 CH2	29,4	1,4	4 CH2	69,1	3,41	4 CH2	38,7	3,19(3,12)
			5 CH2	35,9	3,02	5 CH2	26,3	1,35	5 CH2	23,4	1,22	5 CH2	26,3	1,21	5 CH2	69,1	3,37	1' CH2	47,2	3,37(3,28)
						6 CH2	38,2	2,99	6 CH2	28,7	1,36	6 CH2	28,3	1,23	6 CH2	69,5	3,49	2' CH2	58,7	3,51(3,43)
									7 CH2	38,4	2,97	7 CH2	26,0	1,23	7 CH2	69,5	3,49			
												8 CH2	29,0	1,34	8 CH2	38,5	3,16			
												9 CH2	38,4	2,98						
5 C=ON**H**	-	7,87	6 C=ON**H**	-	7,86	7 C=ON**H**	-	7,82	8 C=ON**H**	-	7,79	10 C=ON**H**	-	7,8	9 C=ON**H**	-	7,92			
6 C=O	170,6	-	7 C=O	170,5	-	8 C=O	170,1	-	9 C=O	170,1	-	11 C=O	170,1	-	10 C=O	170,5	-	5 C=O	171	-
7 CH2	28,7	2,43	8 CH2	28,7	2,43	9 CH2		2,42	10 CH2	28,7	2,42	12 CH2	28,8	2,42	11 CH2	28,7	2,41	6 CH2	27,2	2,52
8 CH2	29,5	2,27	9 CH2	29,6	2,28	10 CH2	29,5	2,26	11 CH2	29,5	2,27	13 CH2	29,5	2,27	12 CH2	29,5	2,29	7 CH2	27,4	2,56
9 C=O	171,9	-	10 C=O	172	-	11 C=O	172	-	12 C=O	172	-	14 C=O	172	-	13 C=O	172	-	8 C=O	172,1	-
Metronidazole			**Metronidazole**			**Metronidazole**			**Metronidazole**			**Metronidazole**			**Metronidazole**			**Metronidazole**		
1 CH2	62,2	4,35	1 CH2	62,2	4,35	1 CH2	62,2	4,35	1 CH2	62,1	4,35	1 CH2	62,2	4,34	1 CH2	62,4	4,35	1 CH2	62,1	4,35
2 CH2	44,7	4,56	2 CH2	44,7	4,55	2 CH2	44,7	4,55	2 CH2	44,7	4,56	2 CH2	44,7	4,56	2 CH2	44,7	4,56	2 CH2	44,7	4,56
3 C	151,6	-	3 C	151,5	-	3 C	151,5	-	3 C	151,5	-	3 C	151,5	-	3 C	151,6	-	3 C	151,5	-
4 CH	133	8,03	4 CH	133	8,04	4 CH	133	8,03	4 CH	133	8,03	4 CH	133	8,03	4 CH	133	8,03	4 CH	133	8,04
5 C	138,4	-	5 C	138,4	-	5 C	138,4	-	5 C	138,4	-	5 C	138,5	-	5 C	138,5	-	5 C	138,5	-
6 CH3	13,8	2,45	6 CH3	13,8	2,45	6 CH3	13,9	2,45	6 CH3	13,8	2,46	6 CH3	13,9	2,45	6 CH3	13,9	2,45	6 CH3	13,9	2,46

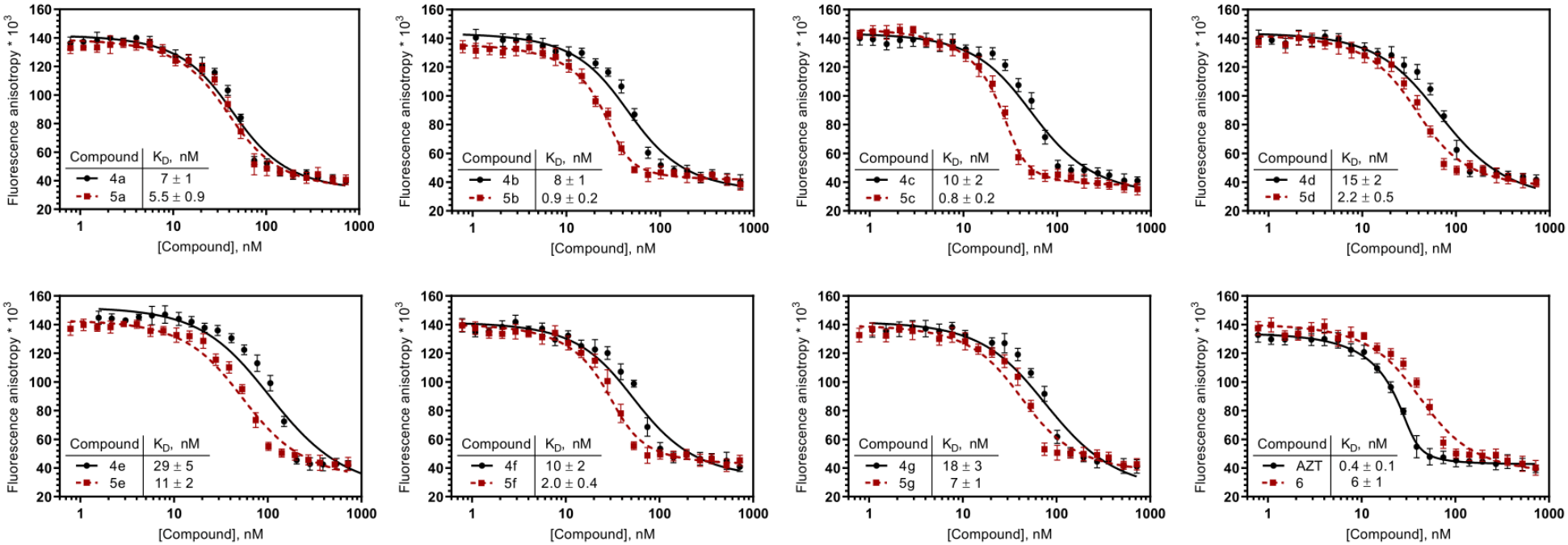


Figure S2. Competition-binding assay. The competition-binding assay was applied to test the displacement of fluorescently labeled BODIPY-ERY from the *E. coli* 70S ribosomes in the presence of increasing concentrations of AZT–CLM (**4a–g**) and AZT–MNZ (**5a–g**) derivatives measured by fluorescence anisotropy. AZT and compound **6** were used as controls. The resulting values for apparent dissociation constants (K_D) and 95% confidence intervals are shown on each plot. All reactions were repeated at least two times. Error bars represent standard deviation.

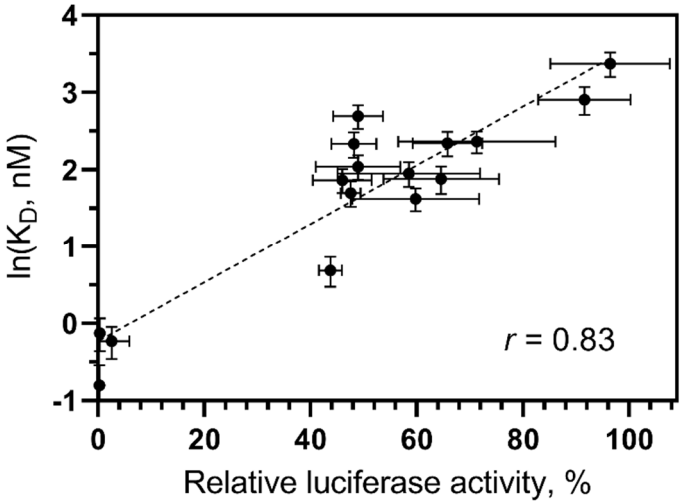


Figure S3. Correlation analysis of affinity for the 70S *E. coli* ribosome (shown as the natural logarithm of the apparent dissociation constant) and translation inhibitory activity (shown as the relative residual level of firefly luciferase activity) of azithromycin derivatives. The trend line is shown as a dash. Error bars represent 95% confidence intervals. Spearman correlation coefficient (*r*) is presented on the plot, *p*-value = 0.0001.

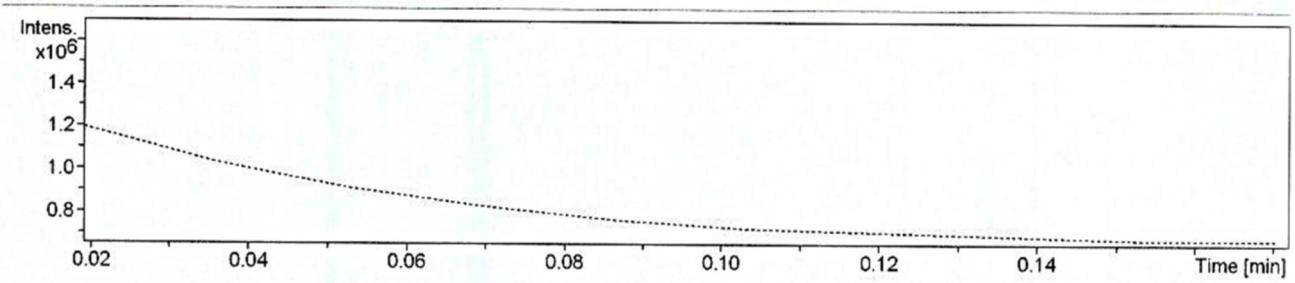
Compound Spectrum List Report

Analysis Info

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Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

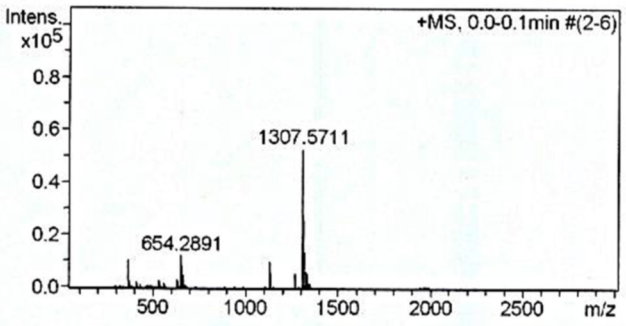
Acquisition Parameter

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Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

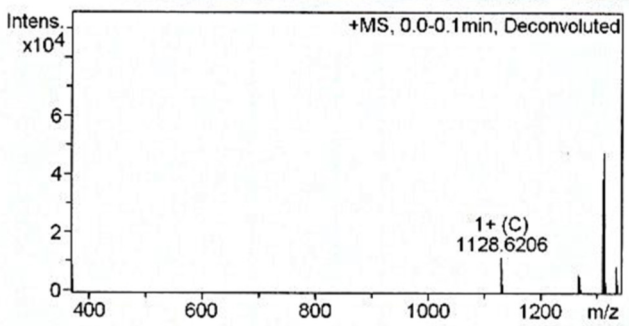


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1307.5711

+MS, 0.0-0.1min #(2-6)



#	m/z	Res.	S/N	I	I %
1	369.3853	13732	579.4	10685	20.2
2	654.2891	20505	260.3	12231	23.2
3	654.7906	21878	167.0	7854	14.9
4	655.2889	17758	189.2	8903	16.9
5	1128.6183	22048	204.7	10243	19.4
6	1307.5711	24517	813.4	52781	100.0
7	1308.5680	23250	498.0	32359	61.3
8	1309.5684	21614	606.3	39448	74.7
9	1310.5680	26069	400.9	26118	49.5
10	1311.5656	17923	110.0	7189	13.6



#	m/z	Res.	S/N	I	I %
1	369.3850			10684	26.6
2	1128.6206			12280	30.5
3	1265.5513			5703	14.2
4	1308.5645			40213	100.0
5	1331.5494			9109	22.7

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Figure S4. HRMS-ESI of **4a**.

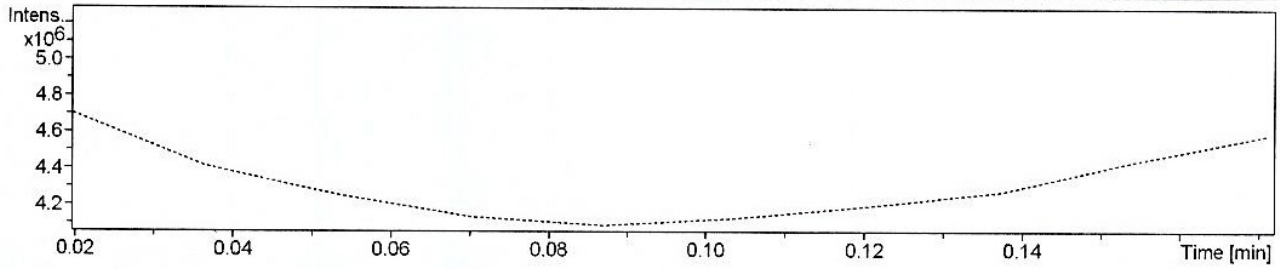
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\LCTA-3002_CHCl3+MeOH__pos_tune_wide.d	Acquisition Date	18.06.2018 10:04:25
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

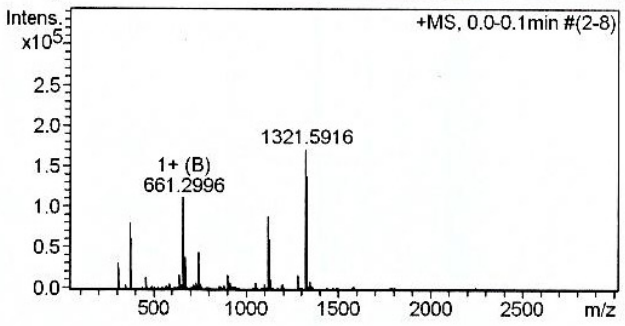
Acquisition Parameter

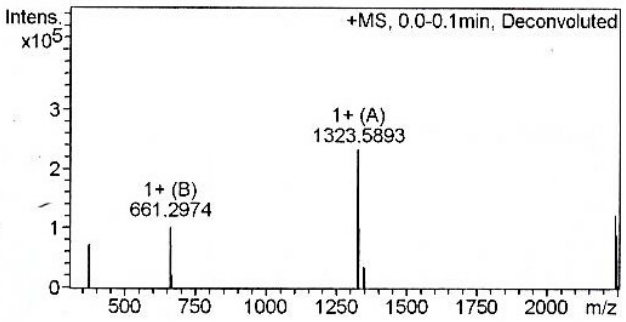
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source



#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1321.5916

+MS, 0.0-0.1min #(2-8)





#	m/z	Res.	S/N	I	I %
1	375.2039	19257	1346.9	79403	46.3
2	661.2996	23884	588.9	111860	65.2
3	661.8006	18306	334.4	63671	37.1
4	662.3000	21528	511.5	97501	56.8
5	1120.0850	21570	327.5	64650	37.7
6	1120.5860	23936	448.3	88481	51.5
7	1321.5916	28582	1108.5	171644	100.0
8	1322.5936	25474	693.3	107232	62.5
9	1323.5910	25794	903.3	139474	81.3
10	1324.5920	22392	409.9	63261	36.9

#	m/z	Res.	S/N	I	I %
1	308.1972			31065	13.1
2	375.2039			79402	33.5
3	661.2974			111859	47.2
4	1323.5893			236973	100.0
5	1345.5717			38273	16.2
6	2238.1566			132787	56.0

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Figure S5. HRMS-ESI of **4b**.

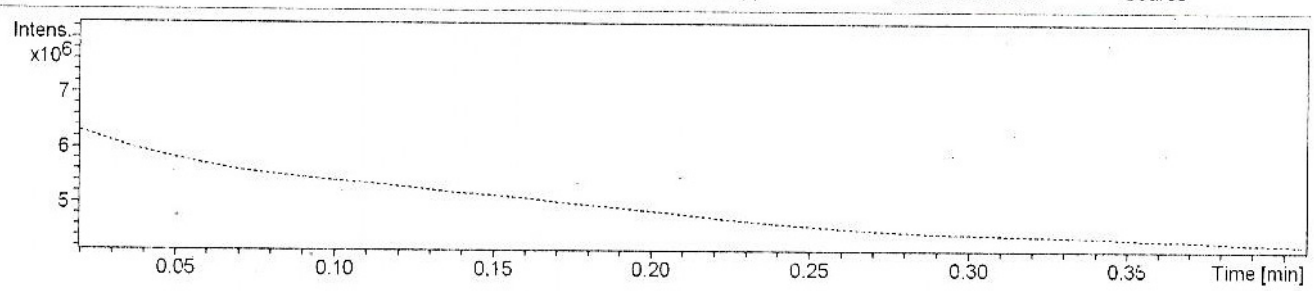
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-7-05-2019_MeOH_pos_tune_wide.d	Acquisition Date	15.05.2019 10:00:40
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

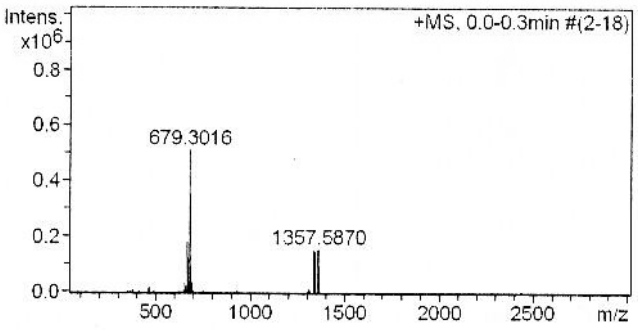
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

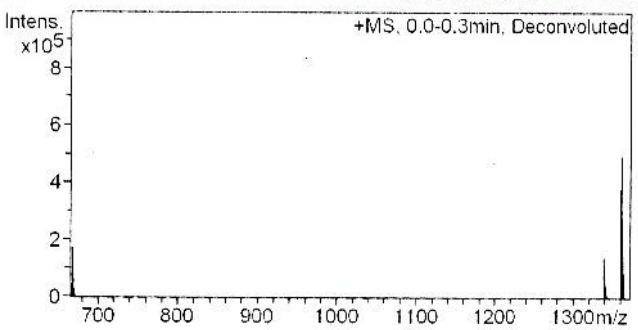


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	679.3016

+MS, 0.0-0.3min #(2-18)



#	m/z	Res.	S/N	I	I %
1	668.3094	25849	1021.7	180191	35.3
2	679.3016	28942	2742.2	510797	100.0
3	679.8030	27038	1800.8	336296	65.8
4	680.3020	24609	2190.3	409997	80.3
5	680.8006	22528	1183.1	222046	43.5
6	681.2989	21965	663.5	124868	24.4
7	1335.6051	28252	1592.1	151242	29.6
8	1337.6051	30744	1545.6	146186	28.6
9	1357.5870	31196	1720.7	155606	30.5
10	1359.5899	27069	1386.2	124793	24.4



#	m/z	Res.	S/N	I	I %
1	666.3061			57556	13.8
2	668.3063			180191	43.1
3	1337.6033			146185	35.0
4	1338.6048			75841	18.2
5	1358.5902			417650	100.0

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Figure S6. HRMS-ESI of **4c**.

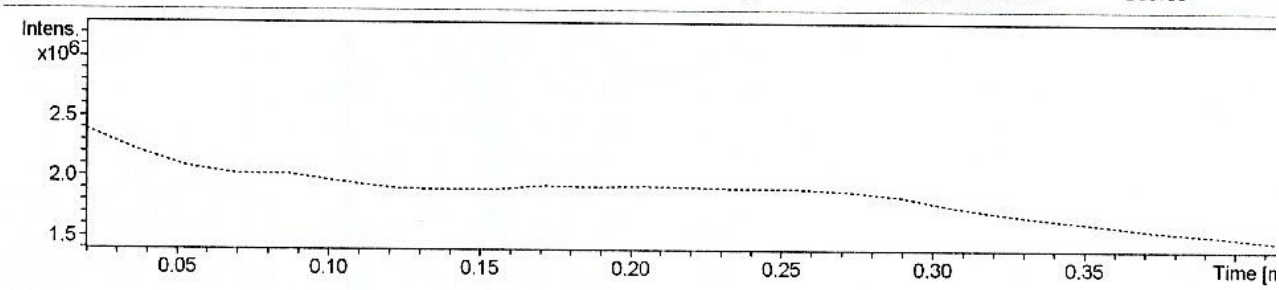
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\11-10-2018_AcCN+MeOH_pos_tune_wide.d	Acquisition Date	11.10.2018 13:44:36
Method	tune_wide.m	Operator	Korolev
Sample Name	polyene-BSG(K6)	Instrument / Ser#	micrOTOF-Q II 10225
Comment			

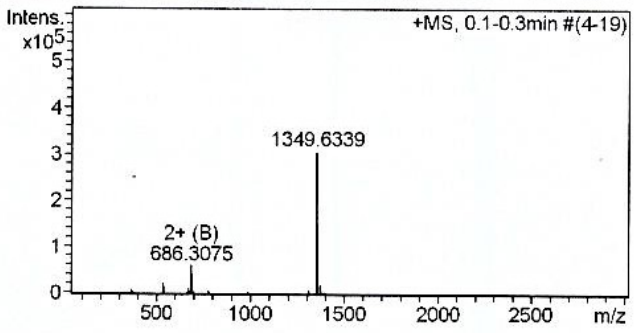
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	1.0 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

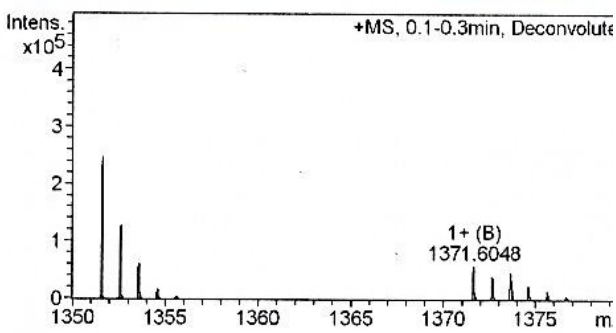


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	1349.6339

+MS, 0.1-0.3min #(4-19)



#	m/z	Res.	S/N	I	I %
1	537.3189	16511	842.3	21545	7.0
2	686.3075	23564	1428.7	60654	19.8
3	686.8094	20597	1030.2	43799	14.3
4	687.3095	19447	1212.2	51603	16.9
5	687.8098	17975	577.6	24631	8.0
6	1349.6339	33986	4099.8	306153	100.0
7	1350.6325	29105	2522.5	187674	61.3
8	1351.6335	31235	3455.1	256079	83.6
9	1352.6323	25553	1708.8	126189	41.2
10	1353.6260	22809	818.5	60228	19.7



#	m/z	Res.	S/N	I	I %
1	1351.6296			266675	100.0
2	1371.6048			60654	22.7

Figure S7. HRMS-ESI of **4d**.

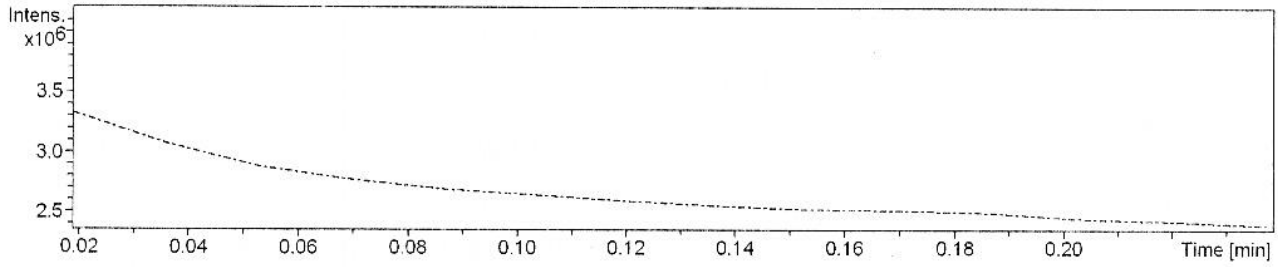
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-13-05-2019_MeOH_pos_tune_wide.d	Acquisition Date	15.05.2019 10:04:30
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

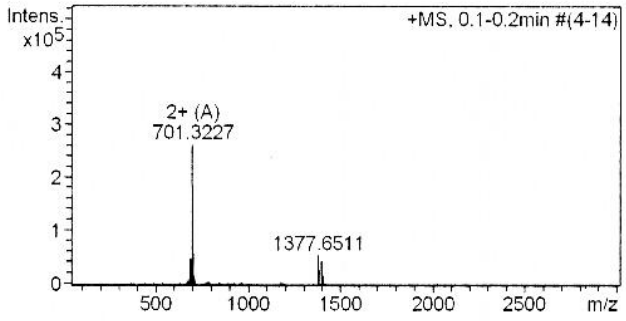
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

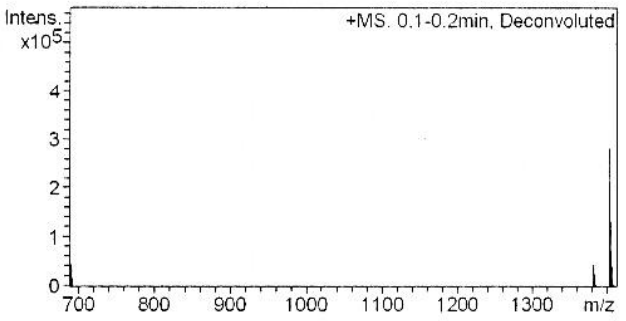


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	701.3227

+MS, 0.1-0.2min #(4-14)



#	m/z	Res.	S/N	I	I %
1	689.3303	19182	332.0	47894	18.3
2	690.3296	18985	313.9	45486	17.4
3	700.3219	19858	1421.4	214944	82.0
4	700.8227	22597	1221.2	185066	70.6
5	701.3227	28128	1725.3	261991	100.0
6	701.8222	19967	742.4	113009	43.1
7	702.3196	21789	441.8	67422	25.7
8	1377.6511	23434	913.4	54648	20.9
9	1379.6456	24199	772.8	46057	17.6
10	1399.6289	24335	734.5	42011	16.0



#	m/z	Res.	S/N	I	I %
1	689.3273			47893	15.8
2	1379.6452			46057	15.2
3	1400.6320			302574	100.0

Figure S8. HRMS-ESI of **4e**.

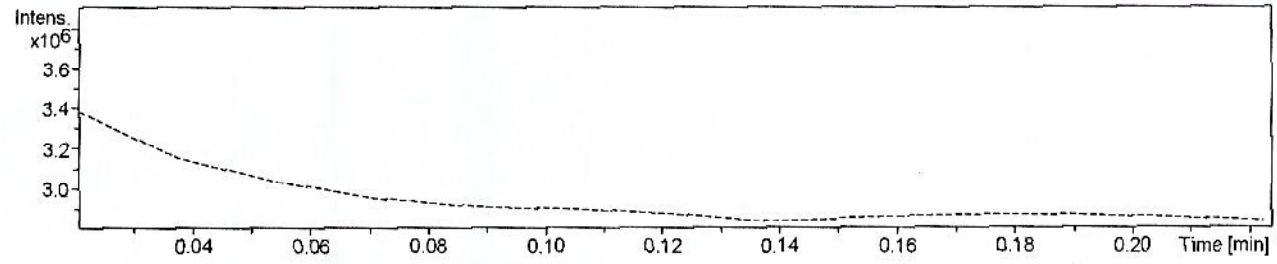
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\25-09-2018_fr_2_AcCN+MeOH_pos_tune_wide.d	Acquisition Date	09.10.2018 11:07:00
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

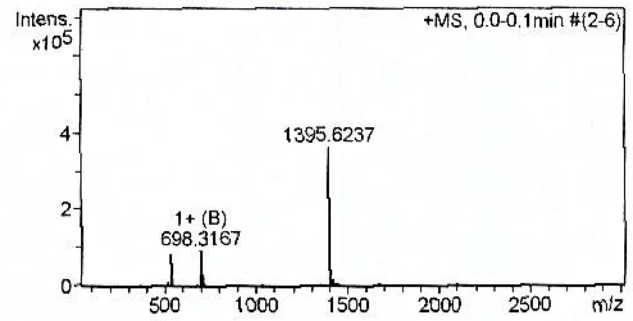
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

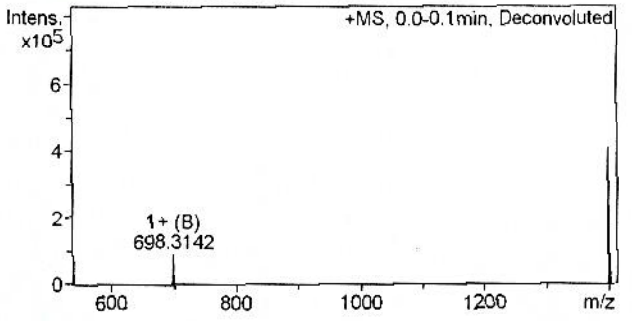


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1395.6237

+MS, 0.0-0.1min #(2-6)



#	m/z	Res.	S/N	I	I %
1	537.3205	16721	1830.6	85570	23.6
2	698.3167	20738	1037.4	93482	25.8
3	698.8190	21155	767.4	69269	19.1
4	699.3164	21283	938.0	84782	23.4
5	699.8160	18576	464.6	42072	11.6
6	1395.6237	30703	3076.1	361931	100.0
7	1396.6241	31055	2255.4	264714	73.1
8	1397.6232	35139	3079.3	360494	99.6
9	1398.6215	31392	1764.2	206033	56.9
10	1399.6183	27477	866.3	100927	27.9



#	m/z	Res.	S/N	I	I %
1	537.3206			85570	25.6
2	698.3142			93482	28.0
3	1396.6192			333981	100.0

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Figure S9. HRMS-ESI of **4f**.

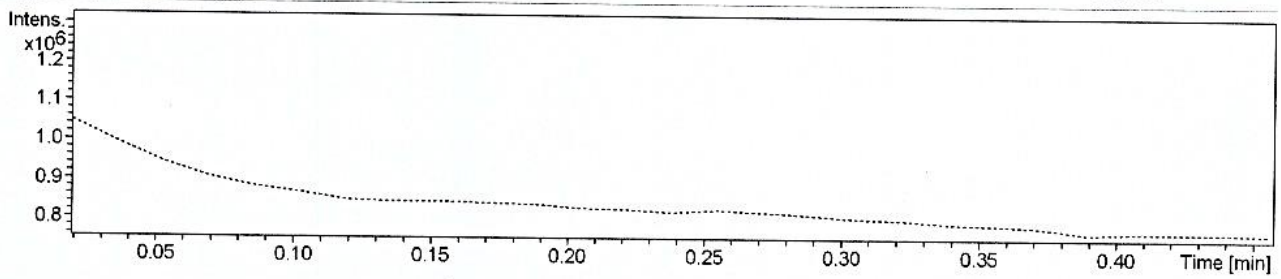
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-22-04-2019-II_MeOH_pos_tune_wide.d	Acquisition Date	22.05.2019 10:38:27
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

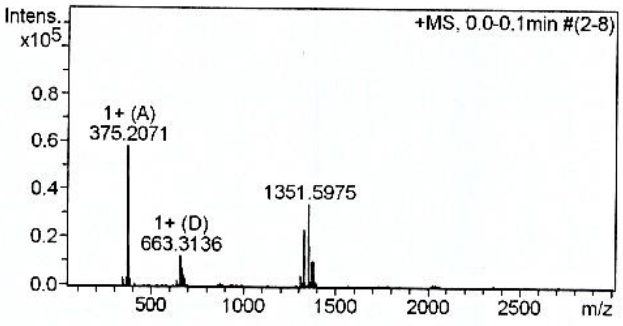
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

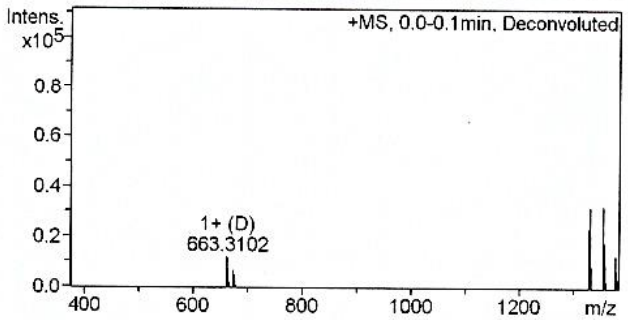


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	375.2071

+MS, 0.0-0.1min #(2-8)



#	m/z	Res.	S/N	I	I %
1	375.2071	9767	5537.5	57997	100.0
2	663.3136	13171	591.5	12371	21.3
3	664.3133	13127	516.4	10834	18.7
4	1325.6184	15171	472.3	23409	40.4
5	1326.6226	16240	320.0	15924	27.5
6	1327.6145	15926	445.6	22115	38.1
7	1351.5975	14978	739.3	34252	59.1
8	1352.5997	14995	431.6	19952	34.4
9	1353.5999	14824	649.0	29895	51.5
10	1354.5969	15845	334.3	15368	26.5



#	m/z	Res.	S/N	I	I %
1	375.2069			57997	100.0
2	663.3102			12371	21.3
3	674.2993			7160	12.3
4	1326.6142			24060	41.5
5	1352.5949			22739	39.2
6	1374.5745			9698	16.7

Figure S10. HRMS-ESI of **4g**.

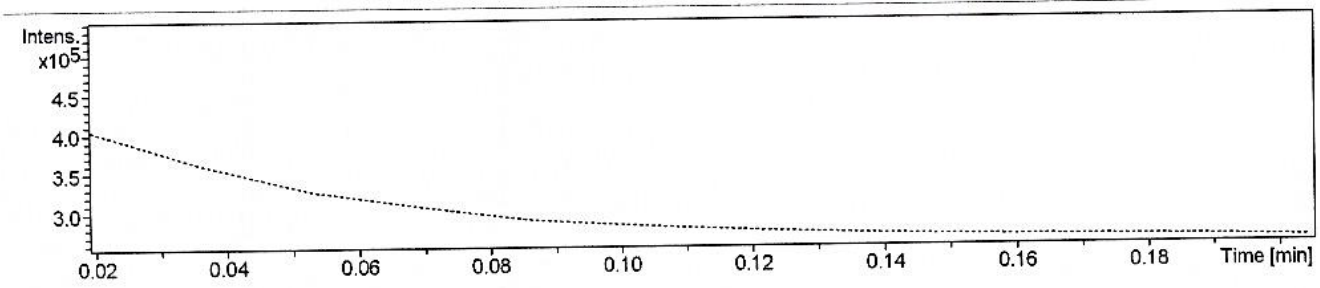
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-23-11-2018_MeOH_pos_tune_wide.d	Acquisition Date	23.11.2018 12:24:50
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

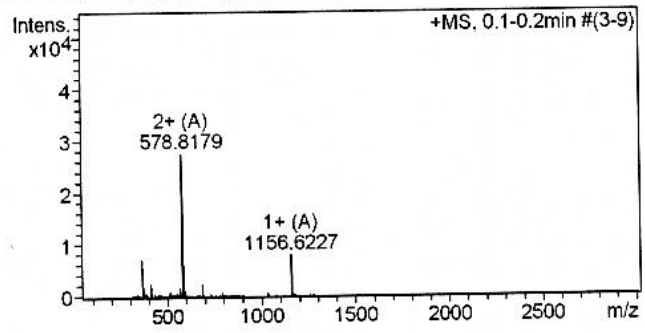
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

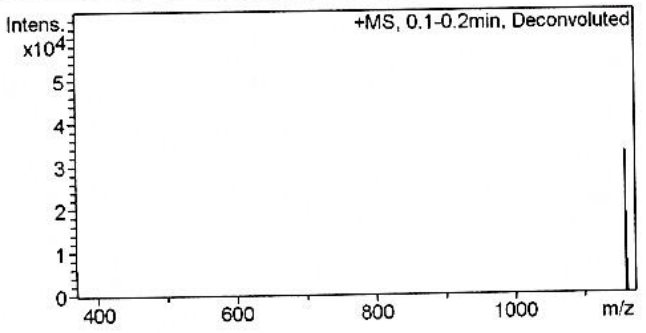


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	578.8179

+MS, 0.1-0.2min #(3-9)



#	m/z	Res.	S/N	I	I %
1	369.3851	10704	855.4	7184	26.2
2	413.2662	12077	198.3	2284	8.3
3	578.8179	11976	1406.3	27451	100.0
4	579.3199	12294	892.2	17414	63.4
5	579.8218	12753	317.2	6198	22.6
6	580.3228	12138	91.9	1805	6.6
7	687.0665	12401	127.2	2240	8.2
8	687.4007	11919	128.8	2267	8.3
9	1156.6227	14798	673.6	8032	29.3
10	1157.6276	17246	527.3	6284	22.9



#	m/z	Res.	S/N	I	I %
1	369.3846			7184	20.2
2	1156.6277			35481	100.0

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Figure S11. HRMS-ESI of **5a**.

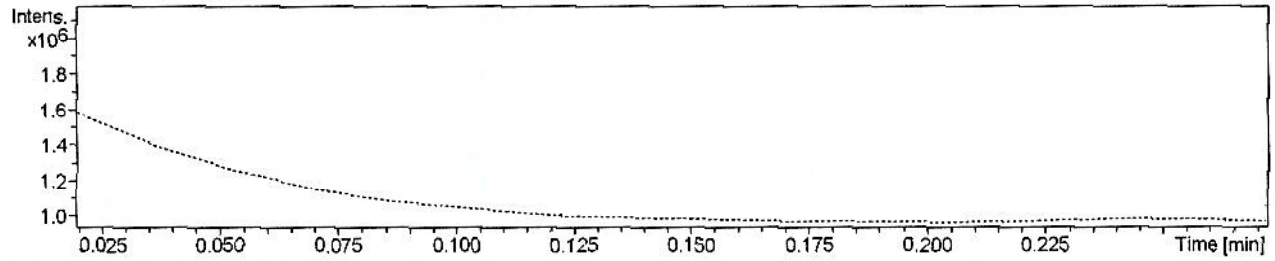
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-28-11-2018_(III)_MeOH_pos_tune_low.d	Acquisition Date	29.11.2018 11:41:52
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

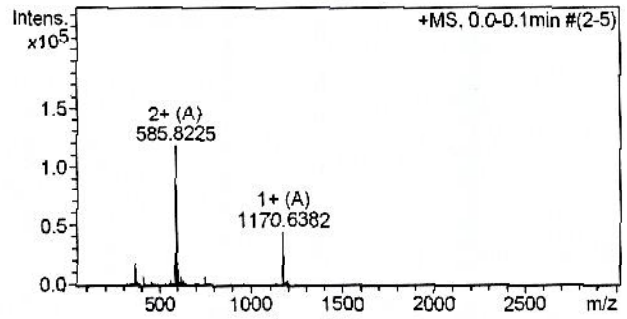
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

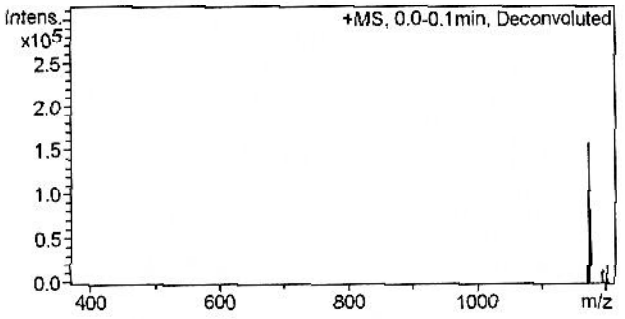


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	585.8225

+MS, 0.0-0.1min #(2-5)



#	m/z	Res.	S/N	I	I %
1	369.3799	13752	391.9	18066	15.4
2	585.8225	23289	1166.8	117690	100.0
3	586.3242	18548	625.9	63133	53.6
4	586.8263	20716	243.5	24570	20.9
5	596.8131	21141	141.8	14261	12.1
6	597.3143	21618	90.7	9124	7.8
7	599.8384	21210	197.8	19859	16.9
8	600.3407	17311	105.9	10643	9.0
9	1170.6382	25511	574.5	45076	38.3
10	1171.6423	24652	298.0	23368	19.9



#	m/z	Res.	S/N	I	I %
1	369.3799			18065	11.1
2	1170.6382			162764	100.0
3	1192.6187			14260	8.8
4	1198.6696			19858	12.2

Figure S12. HRMS-ESI of **5b**.

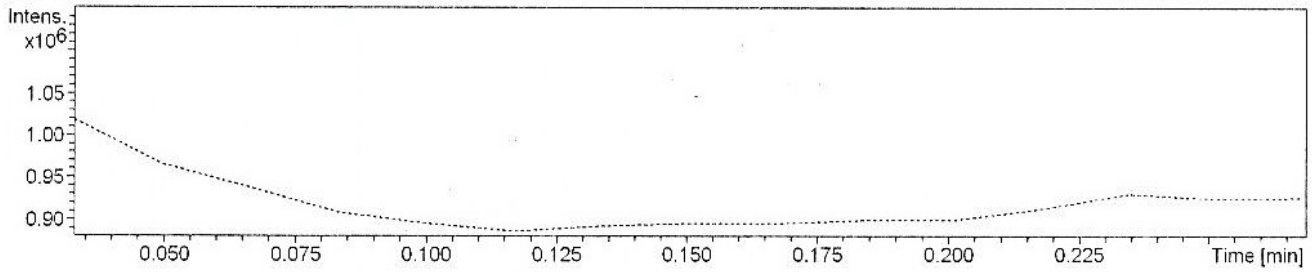
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-30-11-2018_(II)_MeOH_pos_tune_wide.d	Acquisition Date	03.12.2018 11:07:39
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

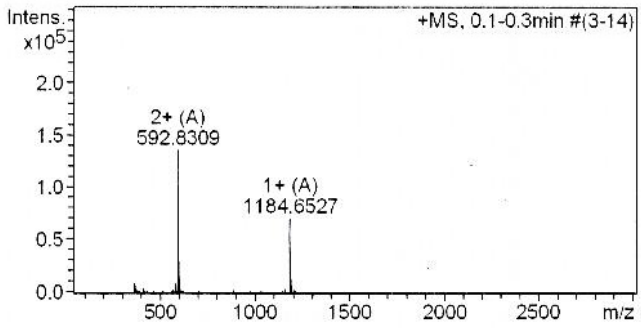
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

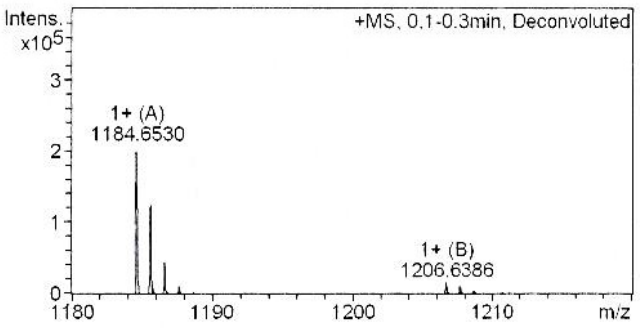


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	592.8309

+MS, 0.1-0.3min #(3-14)



#	m/z	Res.	S/N	I	I %
1	578.8343	12284	221.3	8579	6.3
2	592.8309	10509	3671.7	135922	100.0
3	593.3319	10620	2295.8	84871	62.4
4	593.8339	12183	882.6	32598	24.0
5	594.3341	12166	222.7	8236	6.1
6	603.8219	12365	455.9	16331	12.0
7	604.3248	12395	286.9	10272	7.6
8	1184.6527	13514	3507.3	70661	52.0
9	1185.6528	14484	2095.3	42121	31.0
10	1186.6560	15338	637.4	12805	9.4



#	m/z	Res.	S/N	I	I %
1	1184.6530			206582	100.0
2	1206.6386			16331	7.9

Figure S13. HRMS-ESI of **5c**.

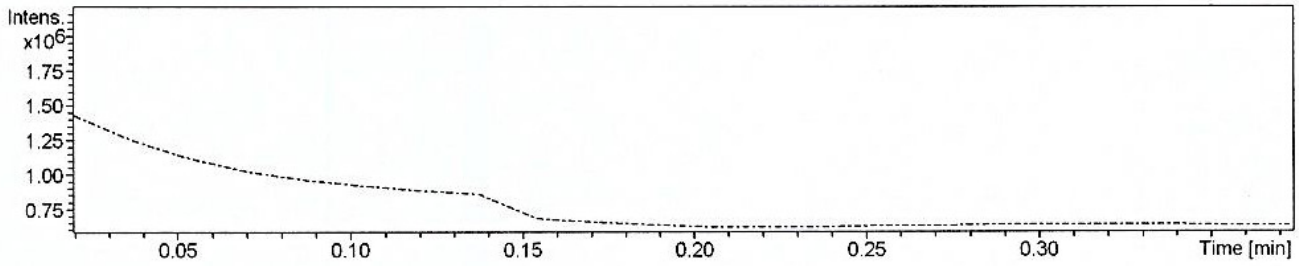
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\LCTA-3063_MeOH_pos_tune_wide.d	Acquisition Date	22.05.2019 10:29:41
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

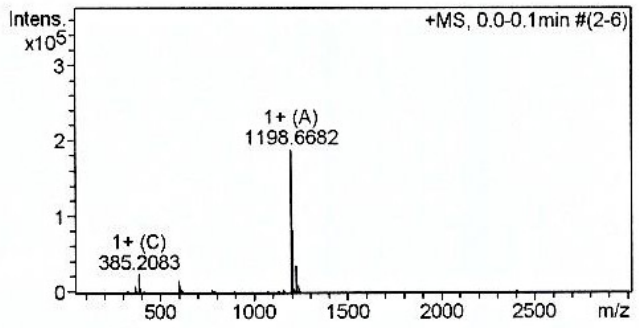
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

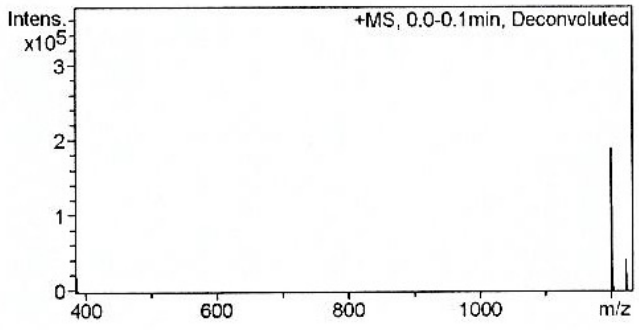


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1198.6682

+MS, 0.0-0.1min #(2-6)



#	m/z	Res.	S/N	I	I %
1	369.3852	13664	382.4	7498	4.0
2	385.2083	14349	1104.6	24175	12.9
3	599.8362	17943	305.8	14050	7.5
4	600.3389	15061	165.2	7596	4.0
5	1198.6682	30635	2789.6	187642	100.0
6	1199.6719	22058	1226.5	82388	43.9
7	1200.6682	21767	381.1	25576	13.6
8	1220.6439	23764	540.9	35223	18.8
9	1221.6517	22530	271.4	17655	9.4
10	1236.6273	18815	166.8	10609	5.7



#	m/z	Res.	S/N	I	I %
1	385.2084			24174	12.0
2	1198.6675			201692	100.0
3	1220.6453			40468	20.1

Bruker Compass DataAnalysis 4.0 printed: 22.05.2019 10:52:32 Page 1 of 1

Figure S14. HRMS-ESI of **5d**.

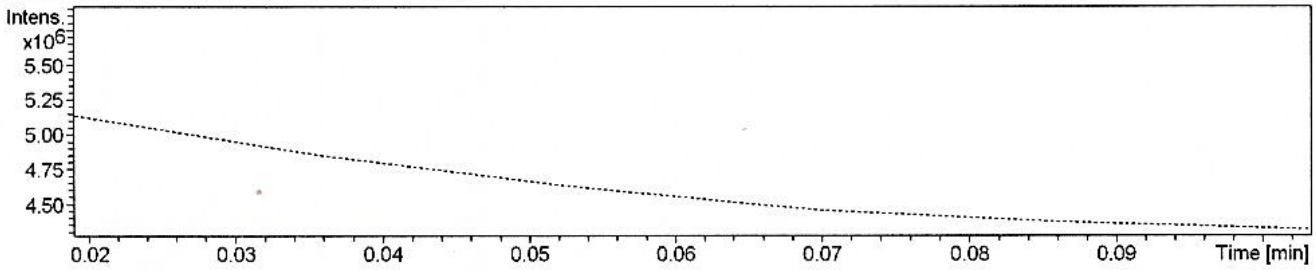
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-12-12-2018_MeOH_pos_tune_wide.d	Acquisition Date	12.12.2018 10:45:53
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

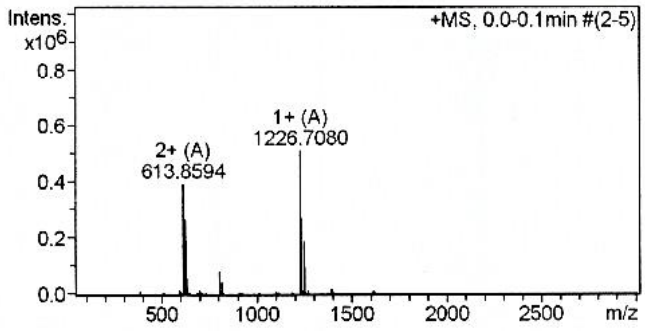
Acquisition Parameter

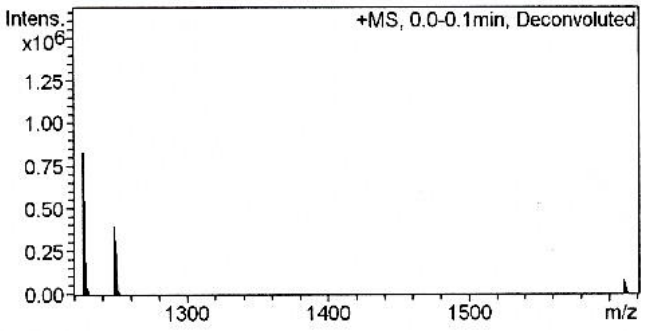
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source



#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1226.7080

+MS, 0.0-0.1min #(2-5)





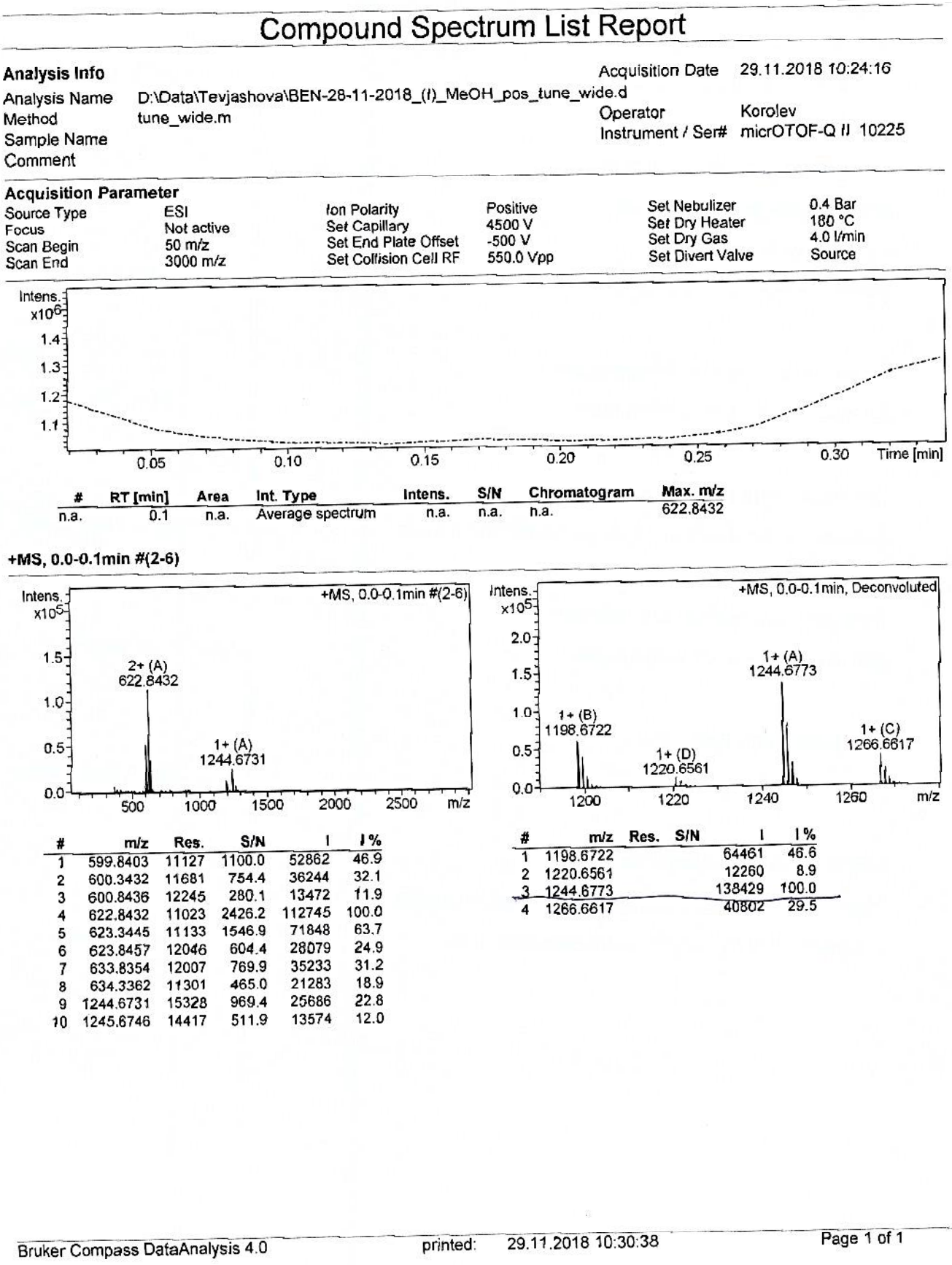
#	m/z	Res.	S/N	I	I %
1	613.8594	25236	2432.4	393482	76.9
2	614.3601	23876	1501.6	243155	47.5
3	624.8492	19776	1594.3	263101	51.4
4	625.3500	24625	1220.9	201663	39.4
5	805.4681	24592	449.9	80425	15.7
6	1226.7080	31532	3694.1	511615	100.0
7	1227.7078	26938	2328.3	322330	63.0
8	1228.7095	23095	694.3	96110	18.8
9	1248.6850	29678	1355.7	185951	36.3
10	1249.6890	25734	780.2	106982	20.9

#	m/z	Res.	S/N	I	I %
1	1226.7078			905095	100.0
2	1248.6880			449052	49.6
3	1609.9257			89076	9.8

OK

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Figure S15. HRMS-ESI of **5e**.



Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-28-11-2018_(I)_MeOH_pos_tune_wide.d	Acquisition Date	29.11.2018 10:24:16
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

Intens. x10^6; Time [min]

#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	622.8432

+MS, 0.0-0.1min #(2-6)

Intens. x10^5; +MS, 0.0-0.1min #(2-6); 2+ (A) 622.8432; 1+ (A) 1244.6731; m/z

#	m/z	Res.	S/N	I	I %
1	599.8403	11127	1100.0	52862	46.9
2	600.3432	11681	754.4	36244	32.1
3	600.8436	12245	280.1	13472	11.9
4	622.8432	11023	2426.2	112745	100.0
5	623.3445	11133	1546.9	71848	63.7
6	623.8457	12046	604.4	28079	24.9
7	633.8354	12007	769.9	35233	31.2
8	634.3362	11301	465.0	21283	18.9
9	1244.6731	15328	969.4	25686	22.8
10	1245.6746	14417	511.9	13574	12.0

Intens. x10^5; +MS, 0.0-0.1min, Deconvoluted; 1+ (B) 1198.6722; 1+ (D) 1220.6561; 1+ (A) 1244.6773; 1+ (C) 1266.6617; m/z

#	m/z	Res.	S/N	I	I %
1	1198.6722			64461	46.6
2	1220.6561			12260	8.9
3	1244.6773			138429	100.0
4	1266.6617			40802	29.5

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Figure S16. HRMS-ESI of **5f**.

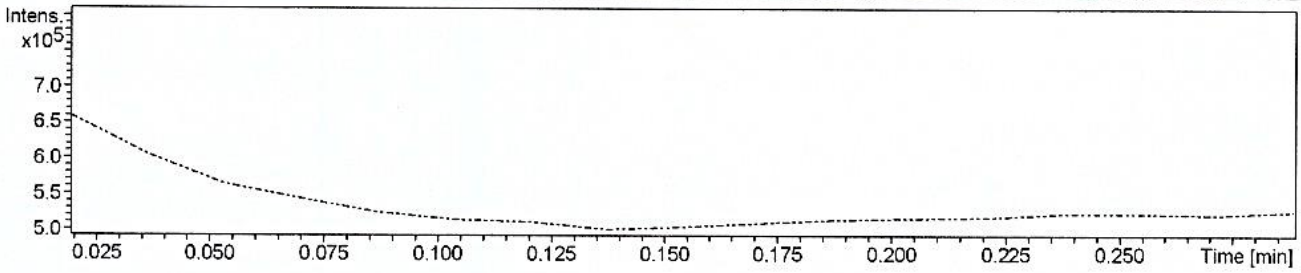
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\Tevjashova\BEN-22-04-2019-1_MeOH_pos_tune_wide.d	Acquisition Date	22.05.2019 10:34:07
Method	tune_wide.m	Operator	Korolev
Sample Name		Instrument / Ser#	micrOTOF-Q II 10225
Comment			

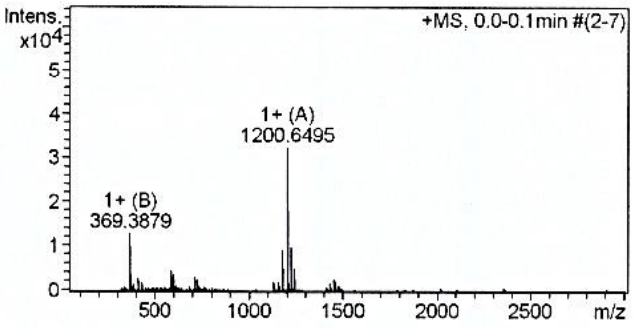
Acquisition Parameter

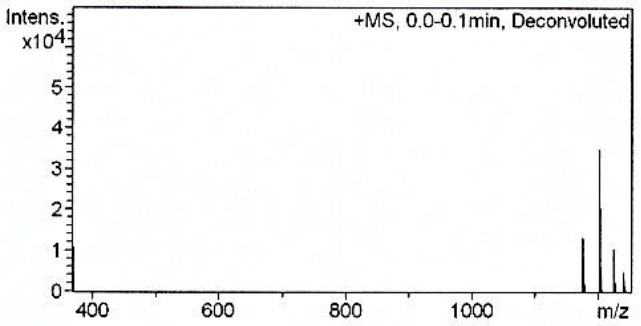
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source



#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	1200.6495

+MS, 0.0-0.1min #(2-7)





#	m/z	Res.	S/N	I	I %
1	369.3879	10199	854.5	12859	39.8
2	587.8417	12314	169.0	4561	14.1
3	1174.6706	15863	314.1	9096	28.2
4	1175.6783	14311	166.1	4816	14.9
5	1200.6495	14451	1147.7	32280	100.0
6	1201.6567	14224	647.2	18194	56.4
7	1202.6581	14738	191.3	5387	16.7
8	1222.6297	15398	357.6	9838	30.5
9	1223.6387	16929	259.8	7145	22.1
10	1238.6093	15335	186.1	5041	15.6

OK

#	m/z	Res.	S/N	I	I %
1	369.3874			12858	35.7
2	1174.6731			13657	37.9
3	1200.6510			36001	100.0
4	1222.6320			10970	30.5
5	1238.6063			5040	14.0

Figure S17. HRMS-ESI of **5g**.

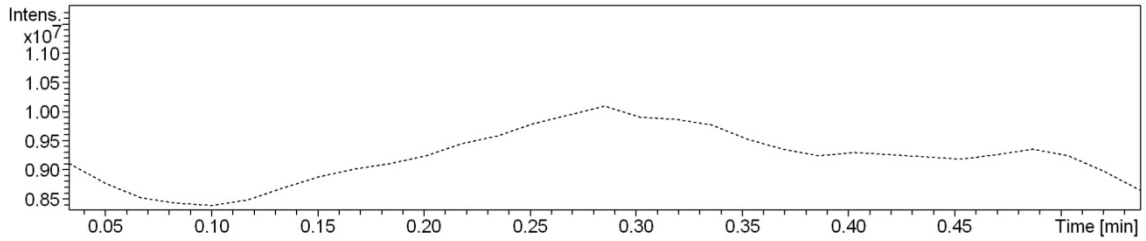
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\MM\MM-051-2.d	Acquisition Date	9/2/2023 5:48:02 PM
Method	tune_norm.m	Operator	Mitrokhov
Sample Name	Tune wide	Instrument / Ser#	micrOTOF-Q II 10225
Comment			

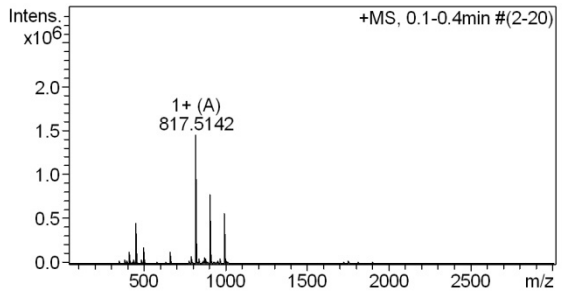
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

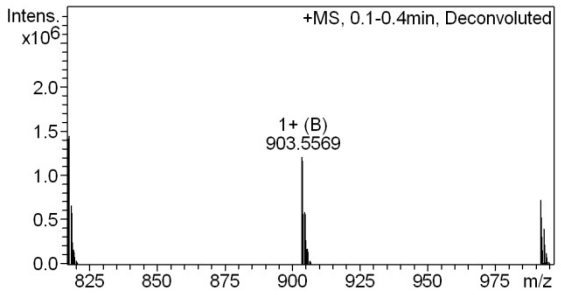


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	817.5142

+MS, 0.1-0.4min #(2-20)



#	m/z	Res.	S/N	I	I %
1	452.2837	13164	3739.0	457872	31.5
2	452.7837	11117	1756.0	215543	14.8
3	496.2971	11425	1215.2	178158	12.3
4	817.5142	22337	5325.5	1452560	100.0
5	818.5122	18573	2330.5	638574	44.0
6	819.5089	13201	541.6	149164	10.3
7	903.5585	19329	2069.9	784119	54.0
8	904.5576	16870	1027.2	390455	26.9
9	991.5870	18978	1823.4	565607	38.9
10	992.5866	16639	1003.5	309549	21.3



#	m/z	Res.	S/N	I	I %
1	817.5113			1584514	100.0
2	903.5569			1241990	78.4
3	991.5848			743764	46.9

Figure S18. HRMS-ESI of **6**.

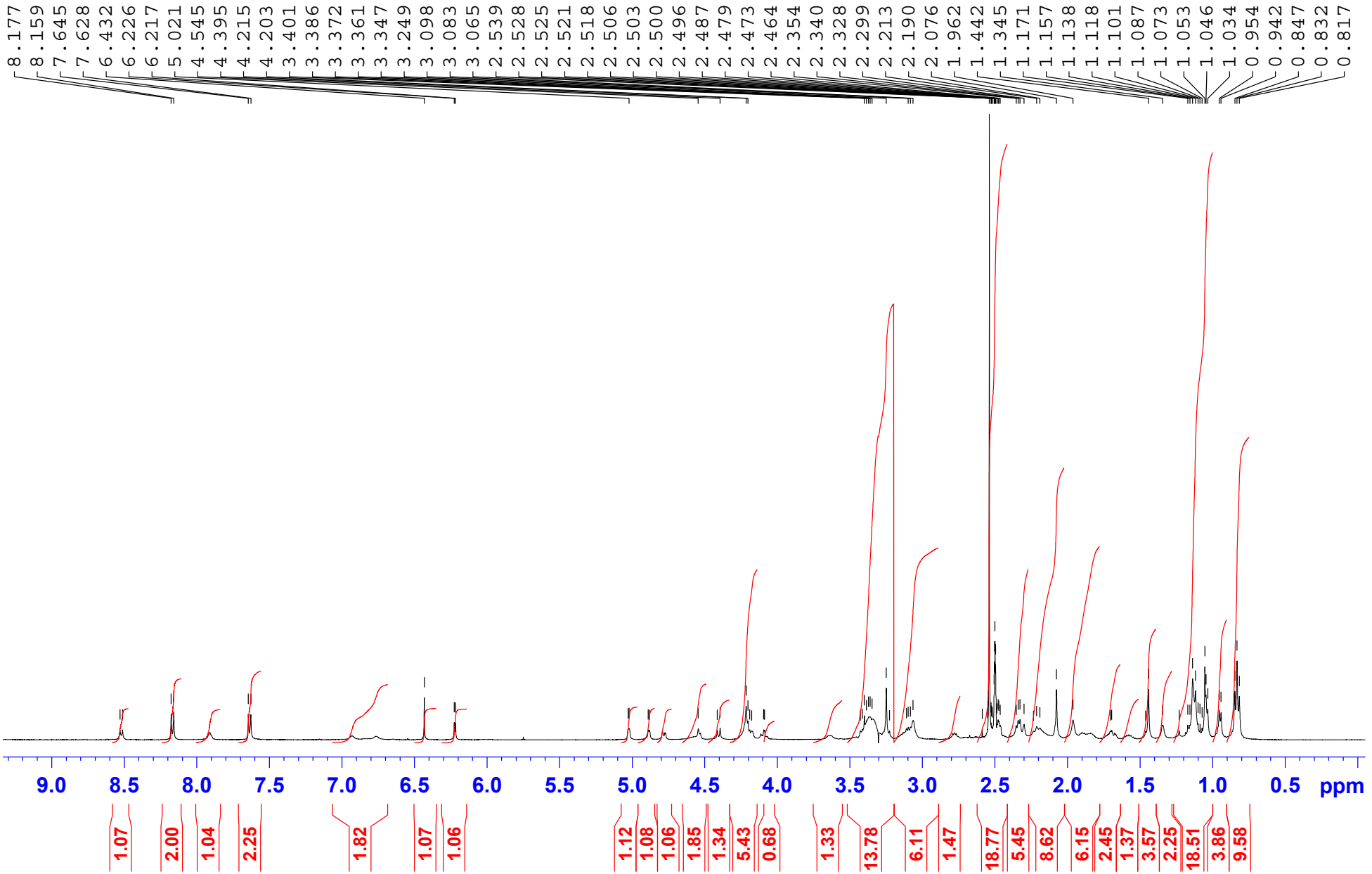


Figure S19. ^{1}H NMR spectra of **4a** (500 MHz, DMSO-d_6).

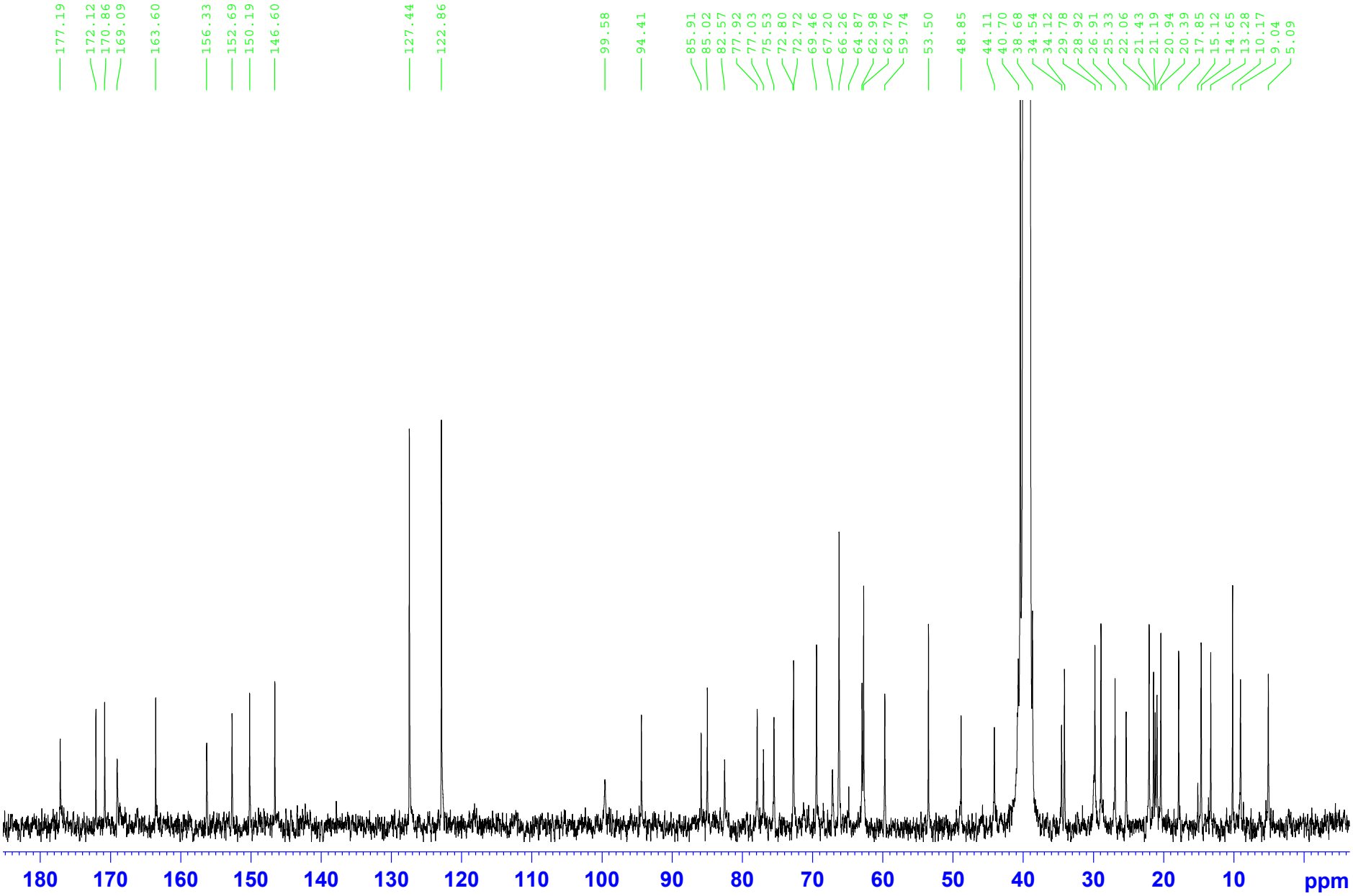


Figure S20. ^{13}C NMR spectra of **4a** (125 MHz, DMSO-d_6).

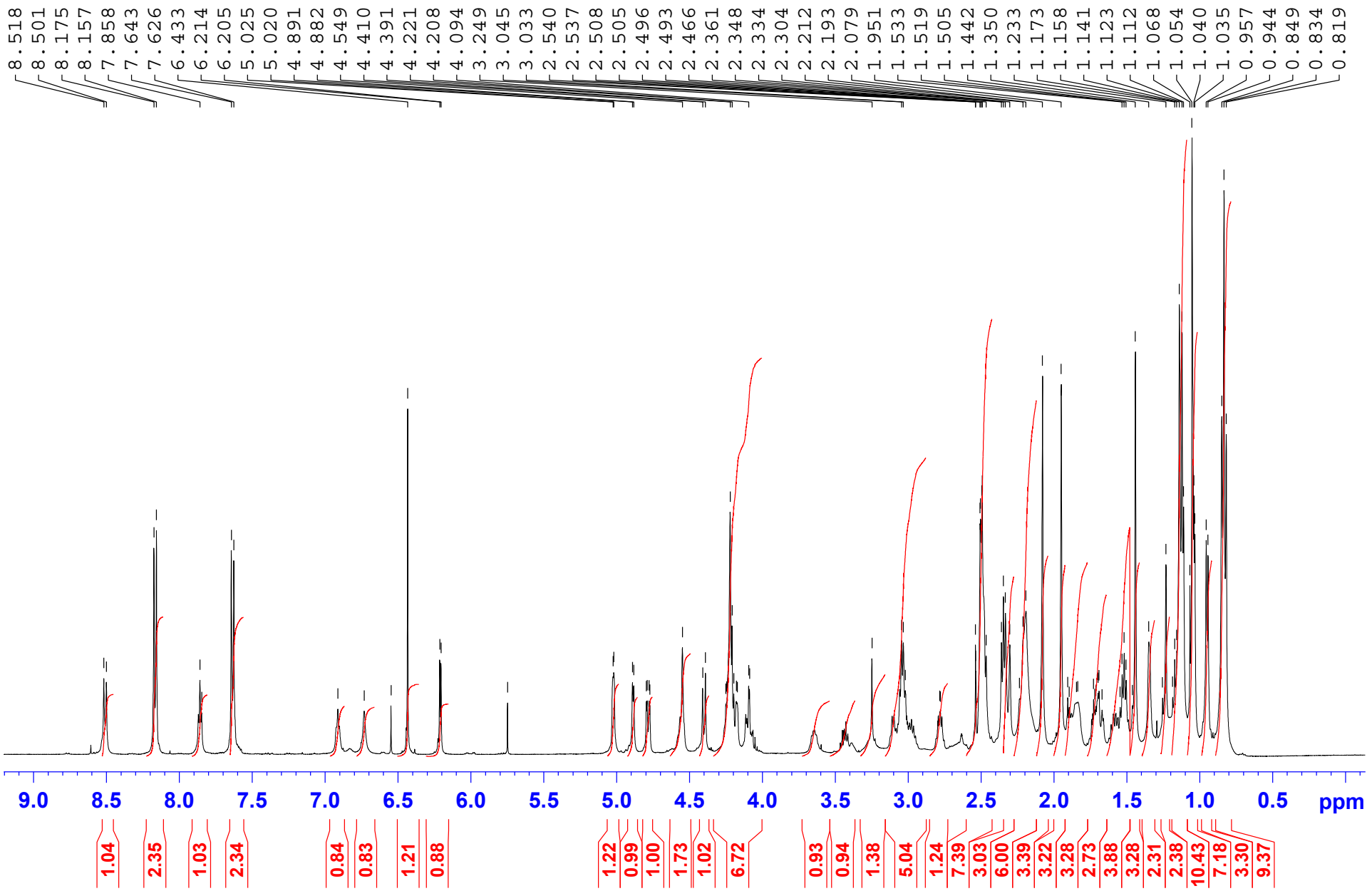


Figure S21. ^{1}H NMR spectra of **4b** (500 MHz, DMSO-d_6).

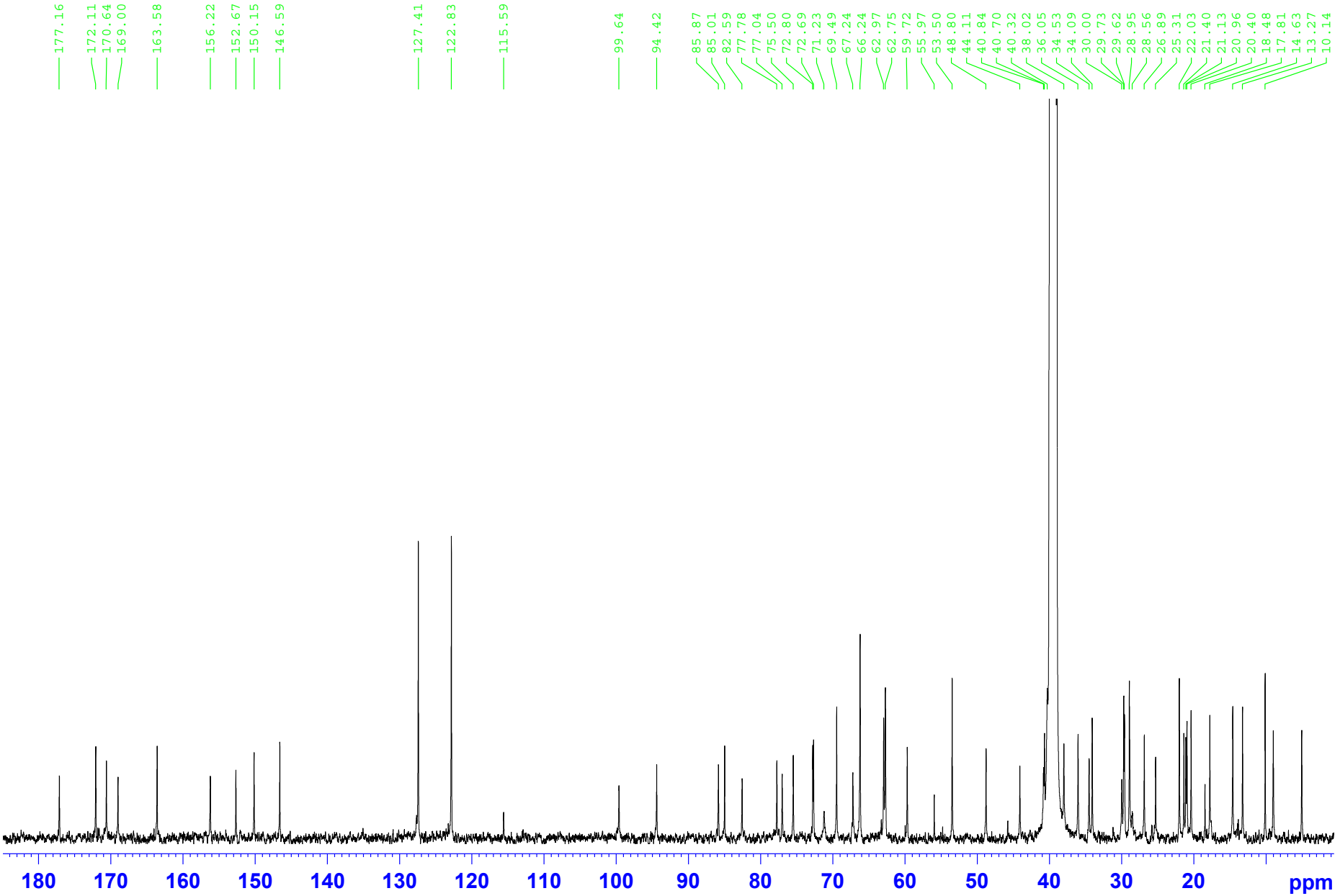


Figure S22. ^{13}C NMR spectra of **4b** (125 MHz, DMSO-d_6).

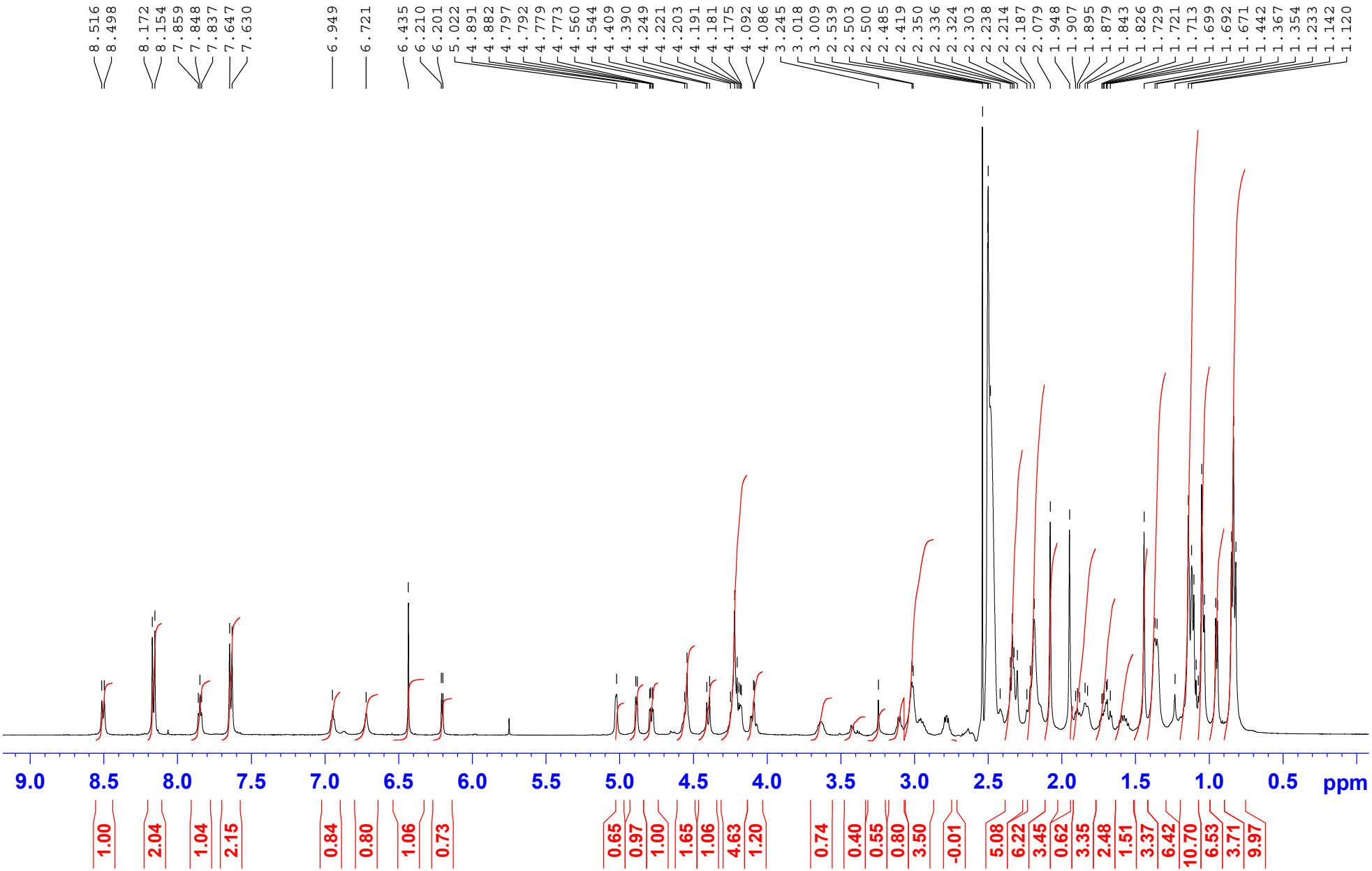


Figure S23. ^{1}H NMR spectra of **4c** (500 MHz, DMSO-d_6).

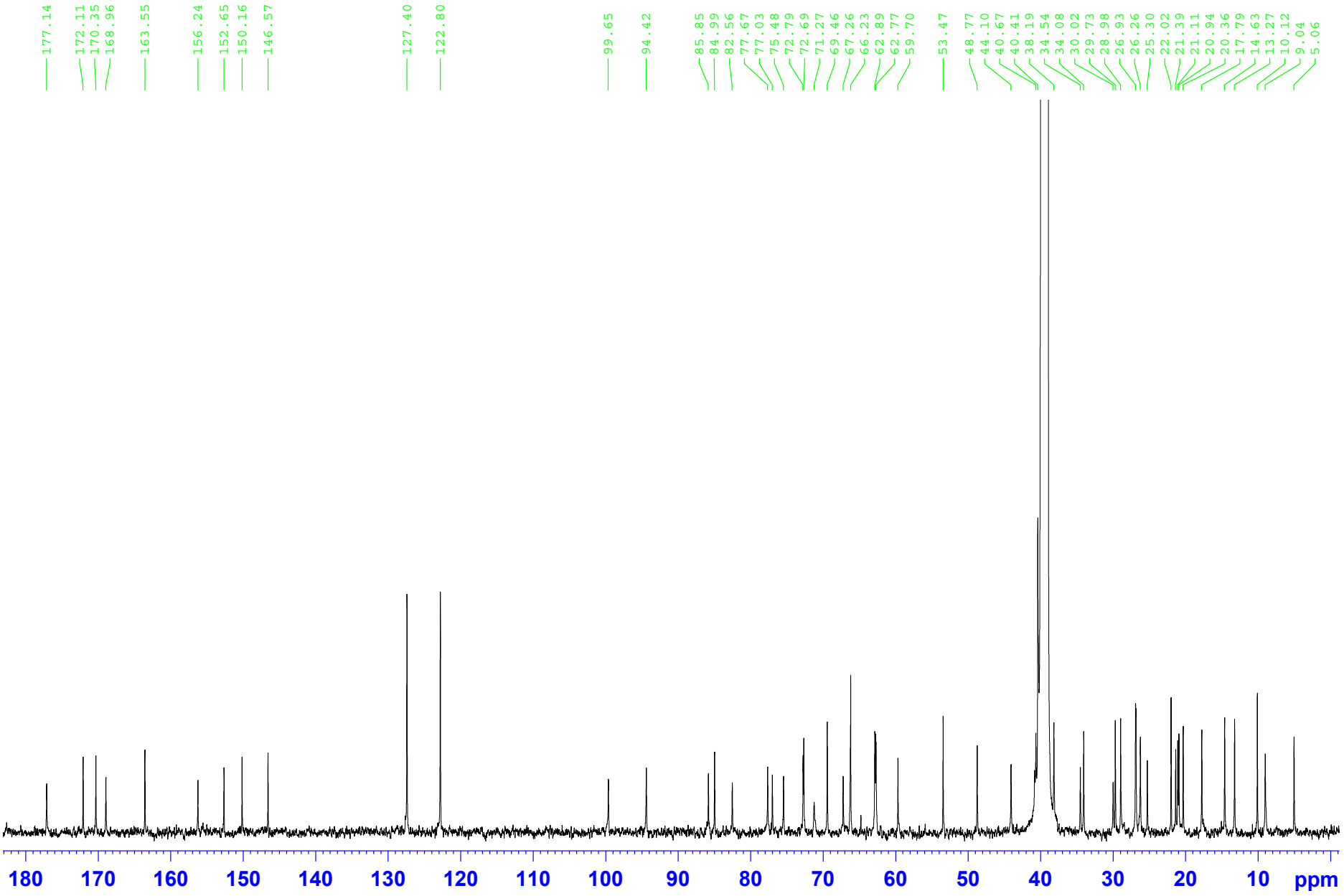


Figure S24. ^{13}C NMR spectra of **4c** (125 MHz, DMSO-d_6).

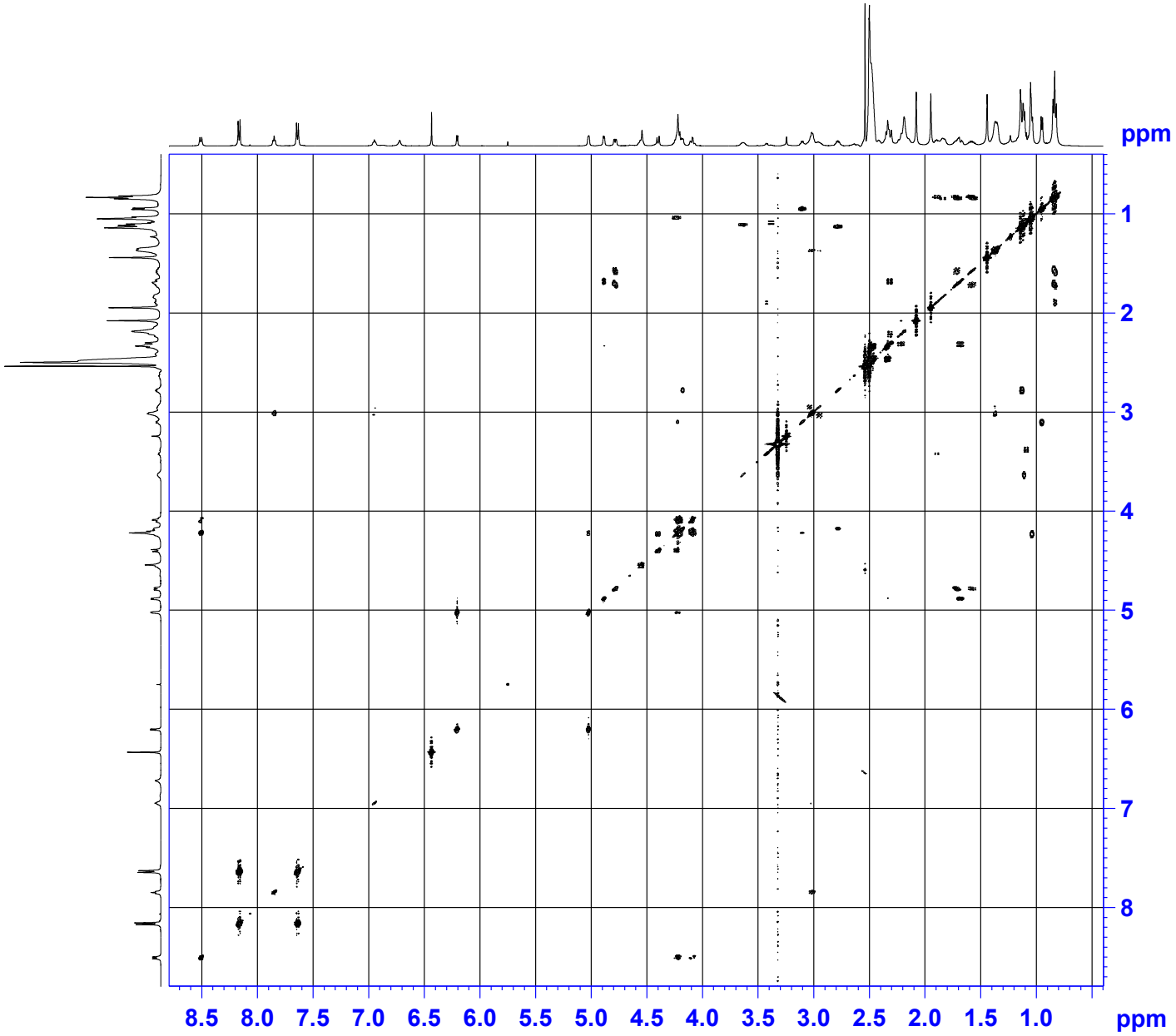


Figure S25. ^{1}H-^{1}H COSY NMR spectrum of **4c** (DMSO-d_6).

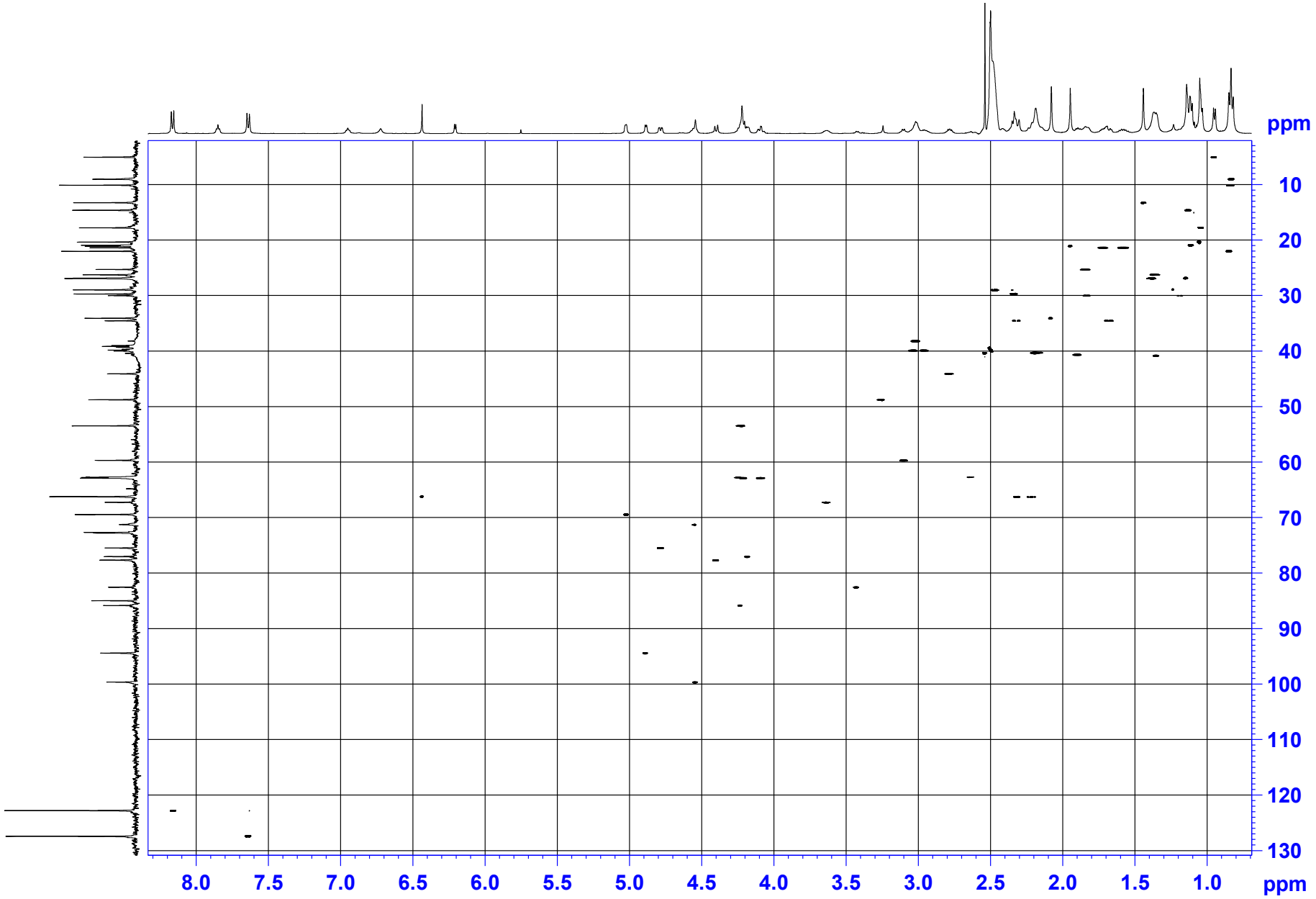


Figure S26. ^{1}H-^{13}C HSQC NMR spectrum of **4c** (DMSO-d_6).

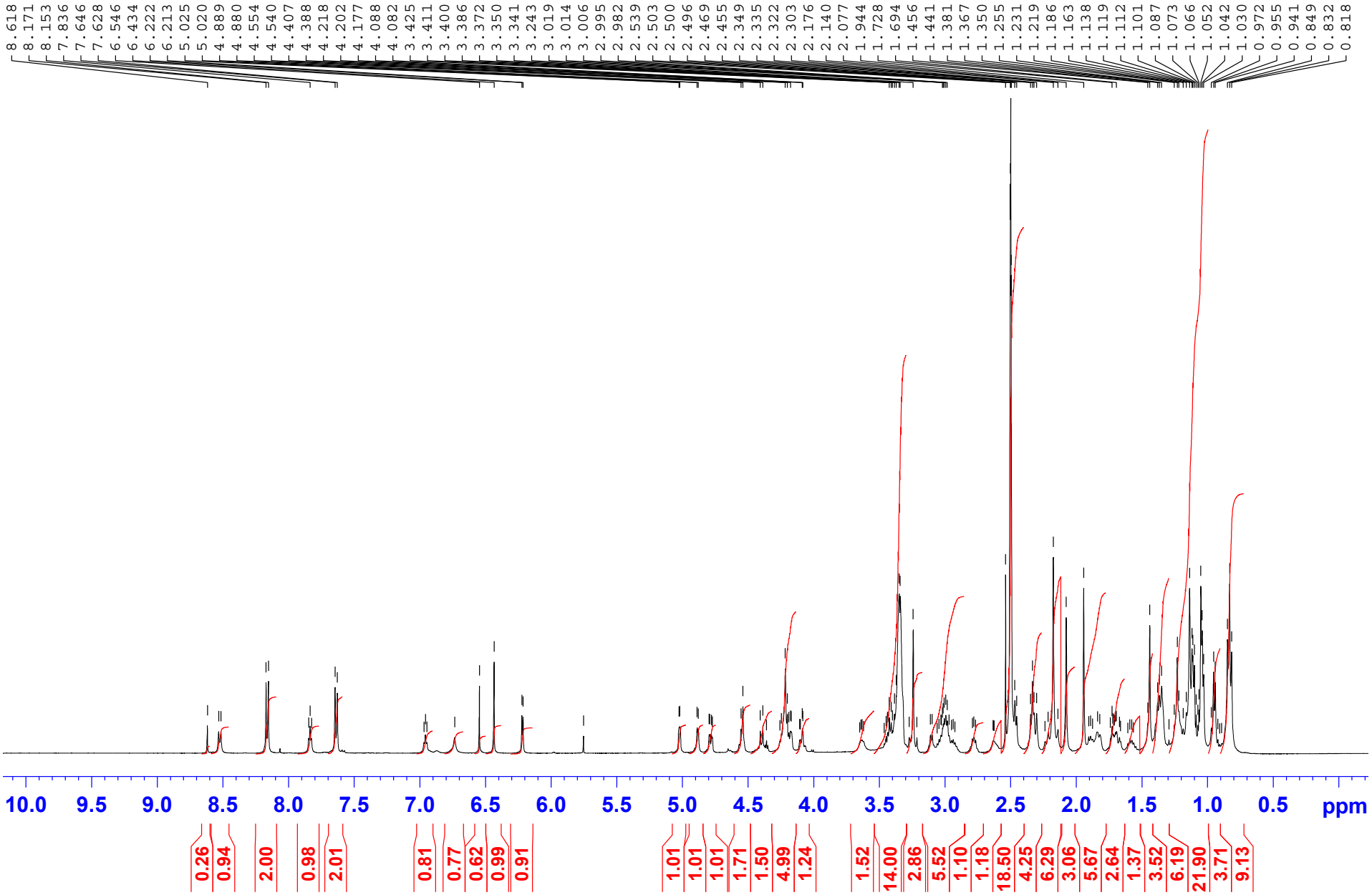


Figure S27. ^{1}H NMR spectra of **4d** (500 MHz, DMSO-d_6).

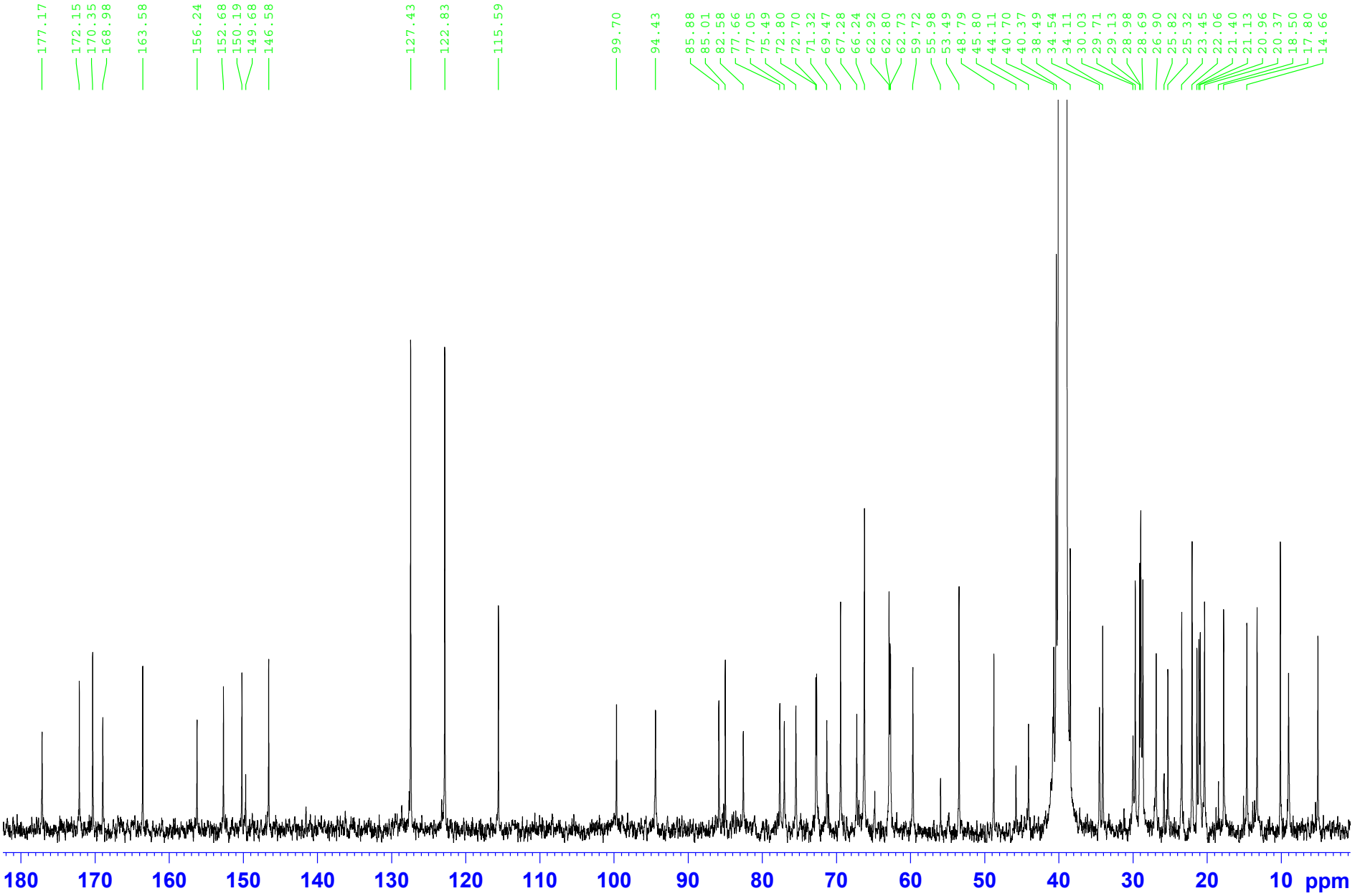


Figure S28. ^{13}C NMR spectra of **4d** (125 MHz, DMSO-d_6).

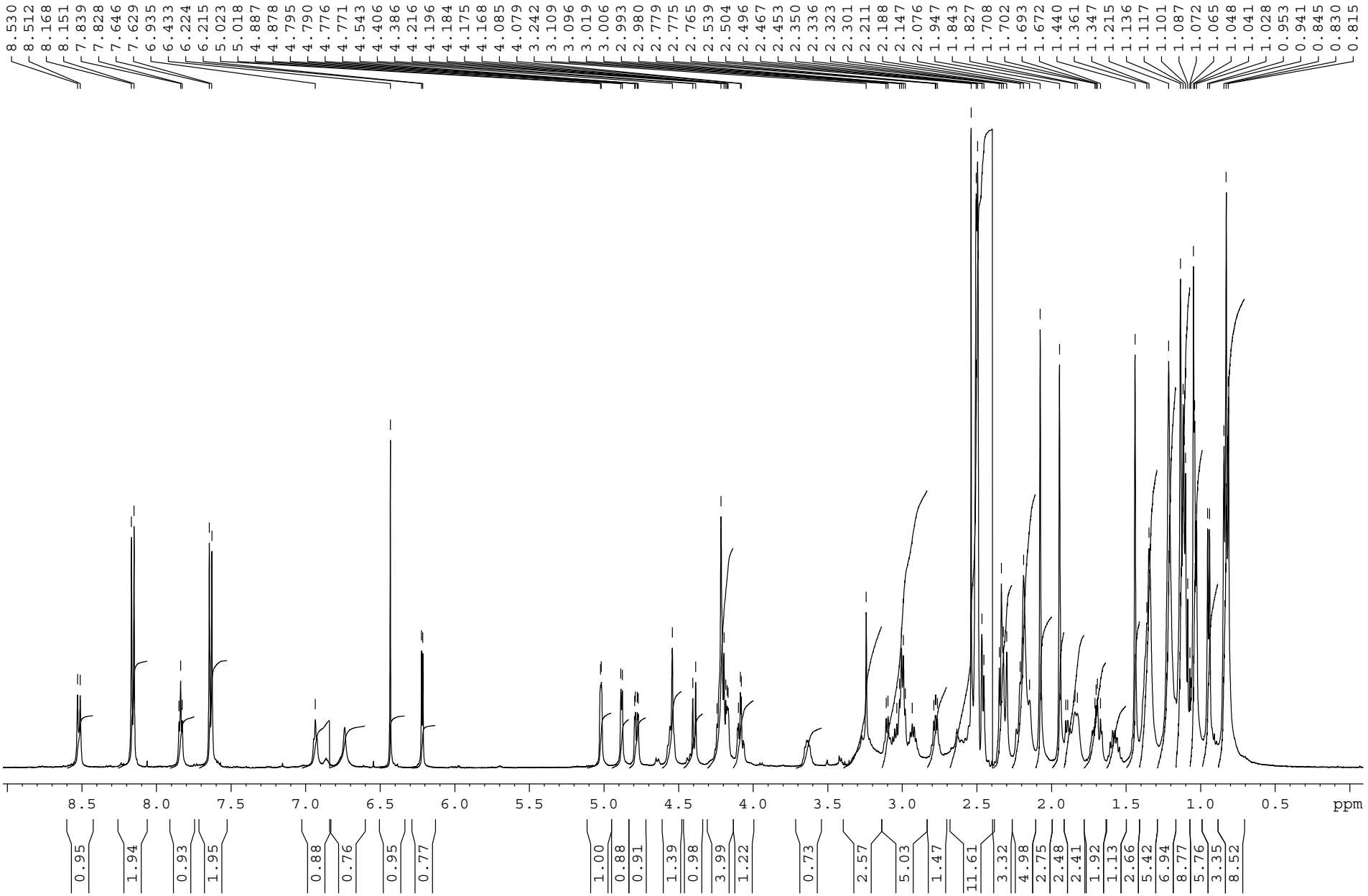


Figure S29. ^{1}H NMR spectra of **4e** (500 MHz, DMSO-d_6).

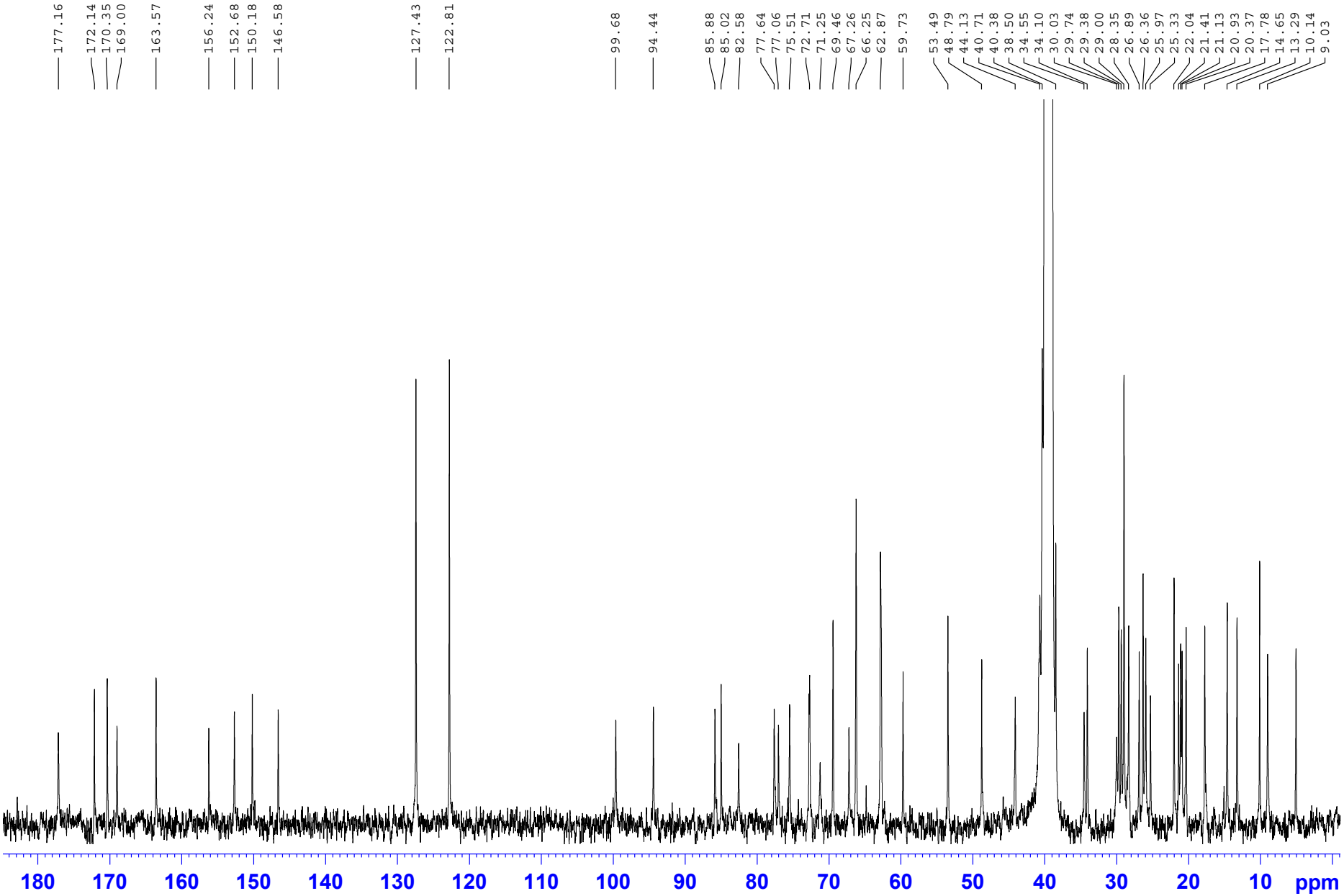


Figure S30. ^{13}C NMR spectra of **4e** (125 MHz, DMSO-d_6).

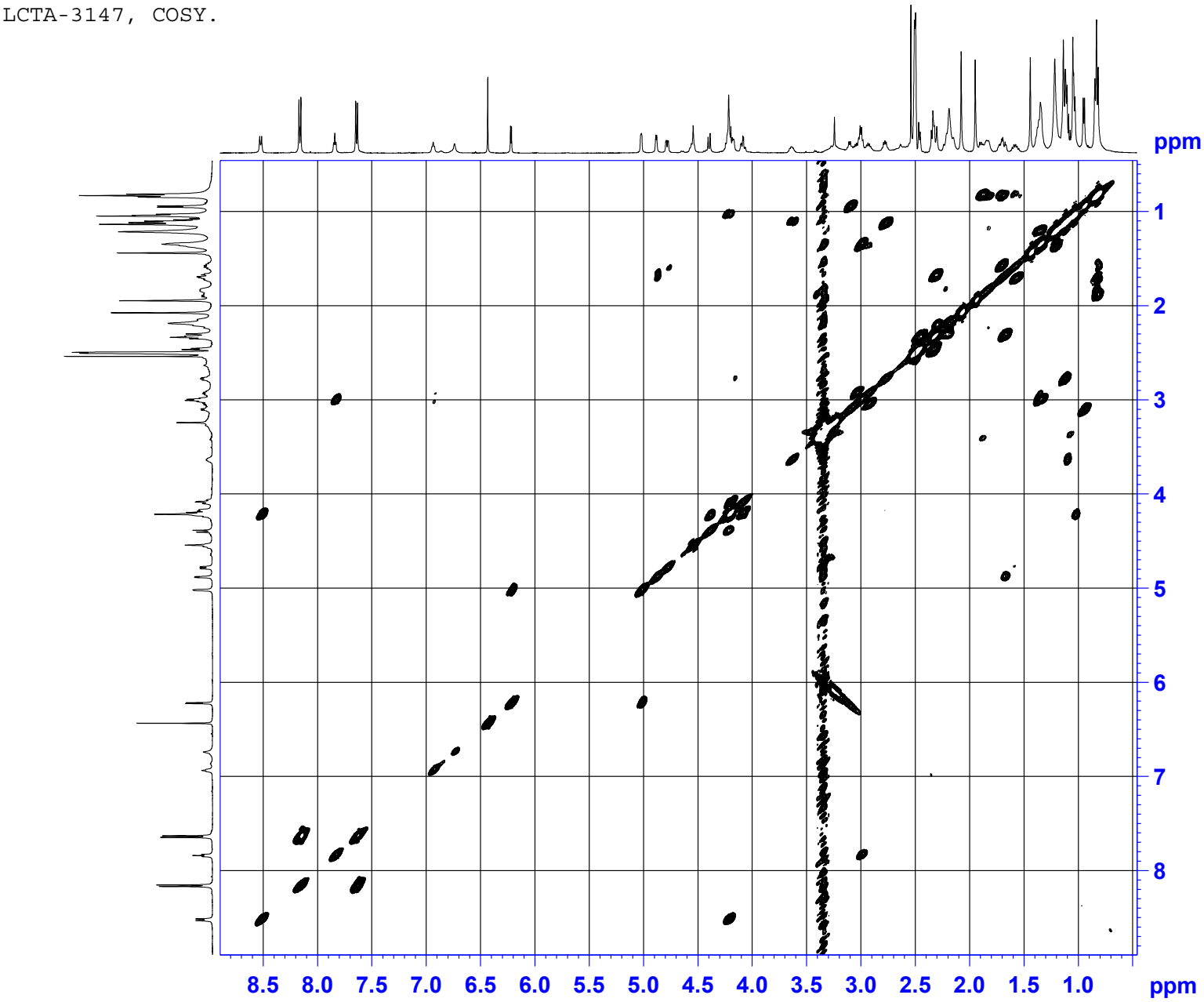


Figure S31. ^{1}H-^{1}H COSY NMR spectrum of **4e** (DMSO-d_6).

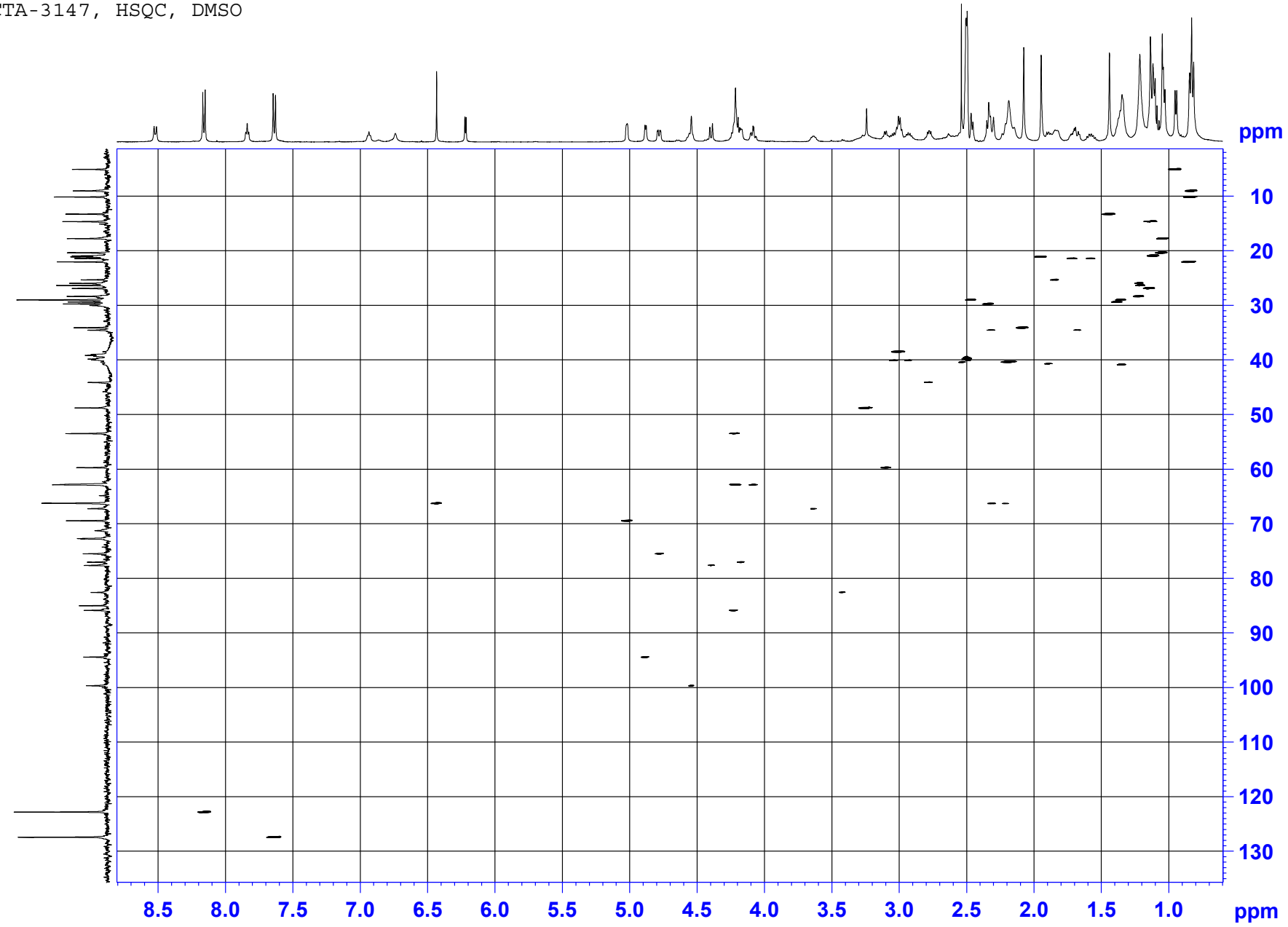


Figure S32. ^{1}H-^{13}C HSQC NMR spectrum of **4e** (DMSO-d_6).

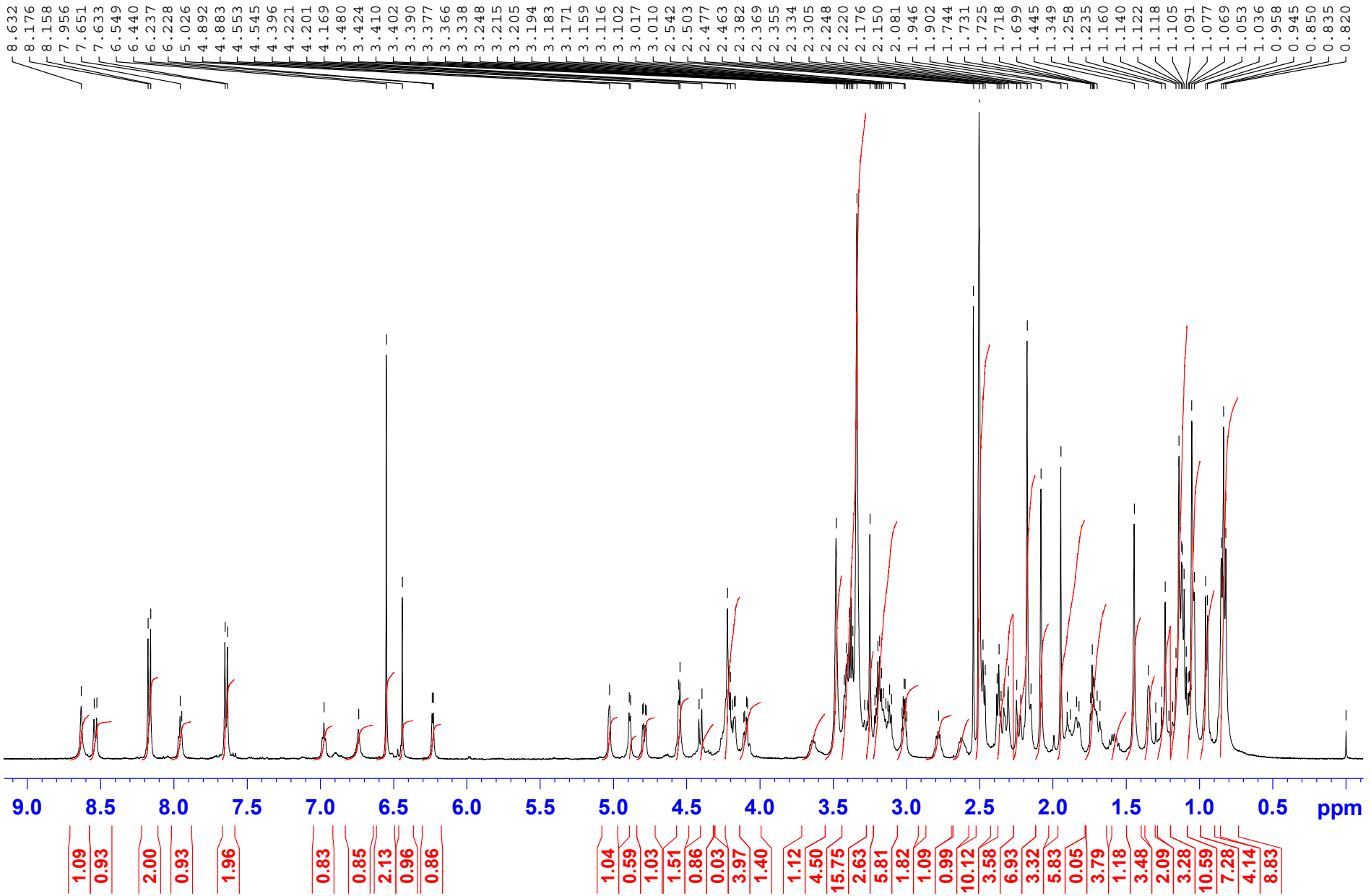


Figure S33. ^{1}H NMR spectra of **4f** (500 MHz, DMSO-d_6).

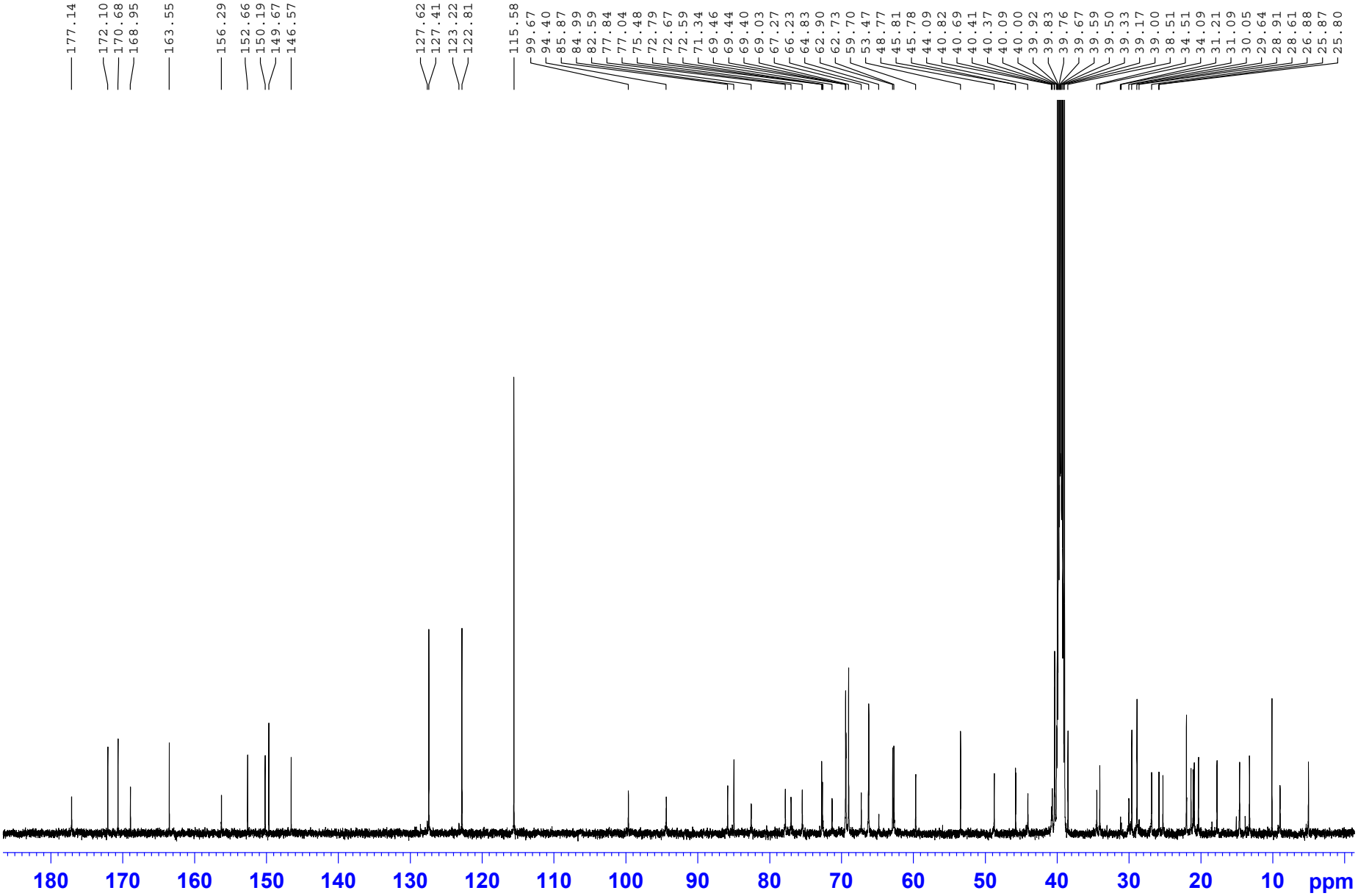


Figure S34. ^{13}C NMR spectra of **4f** (125 MHz, DMSO-d_6).

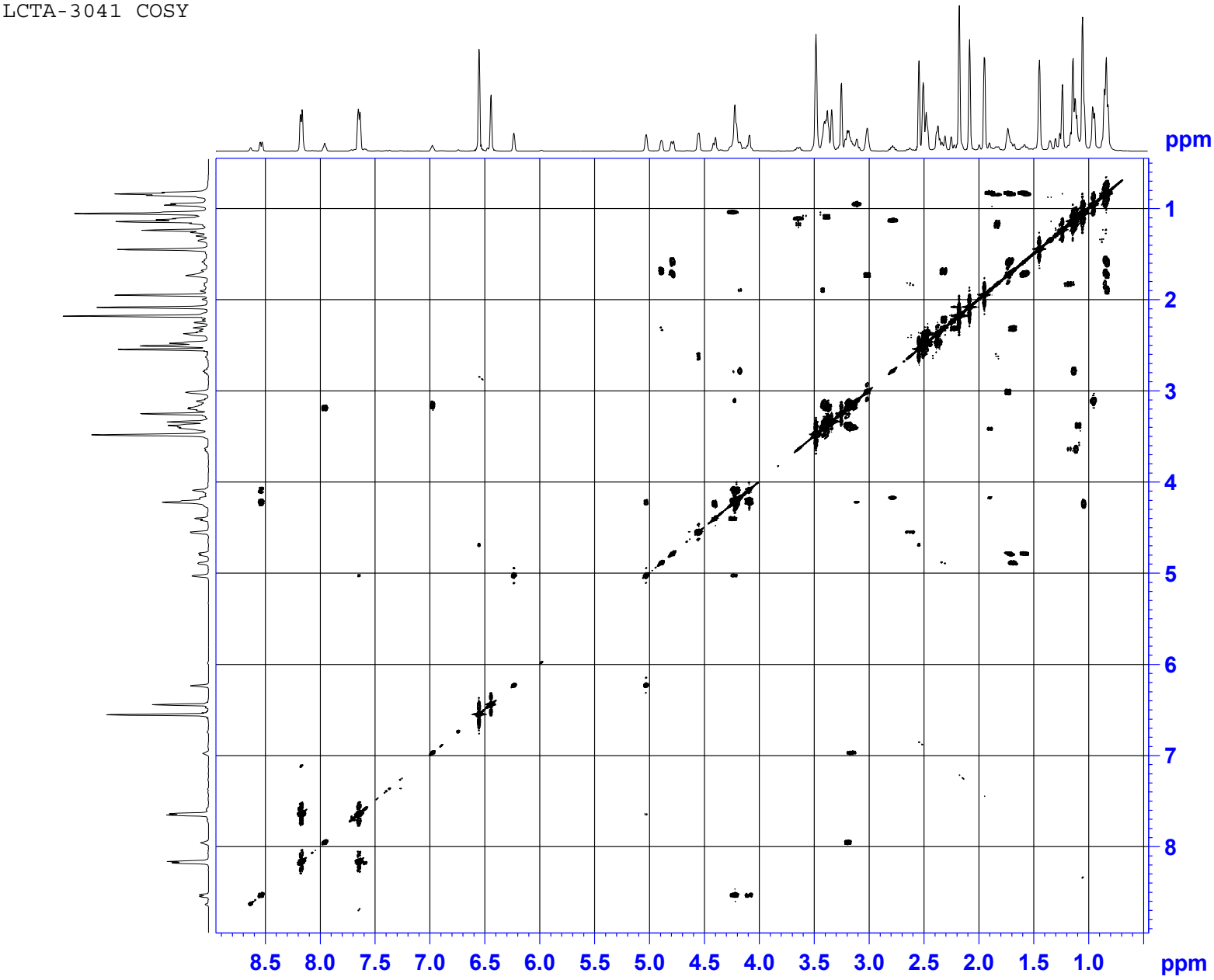


Figure S35. ^{1}H-^{1}H COSY NMR spectrum of **4f** (DMSO-d_6).

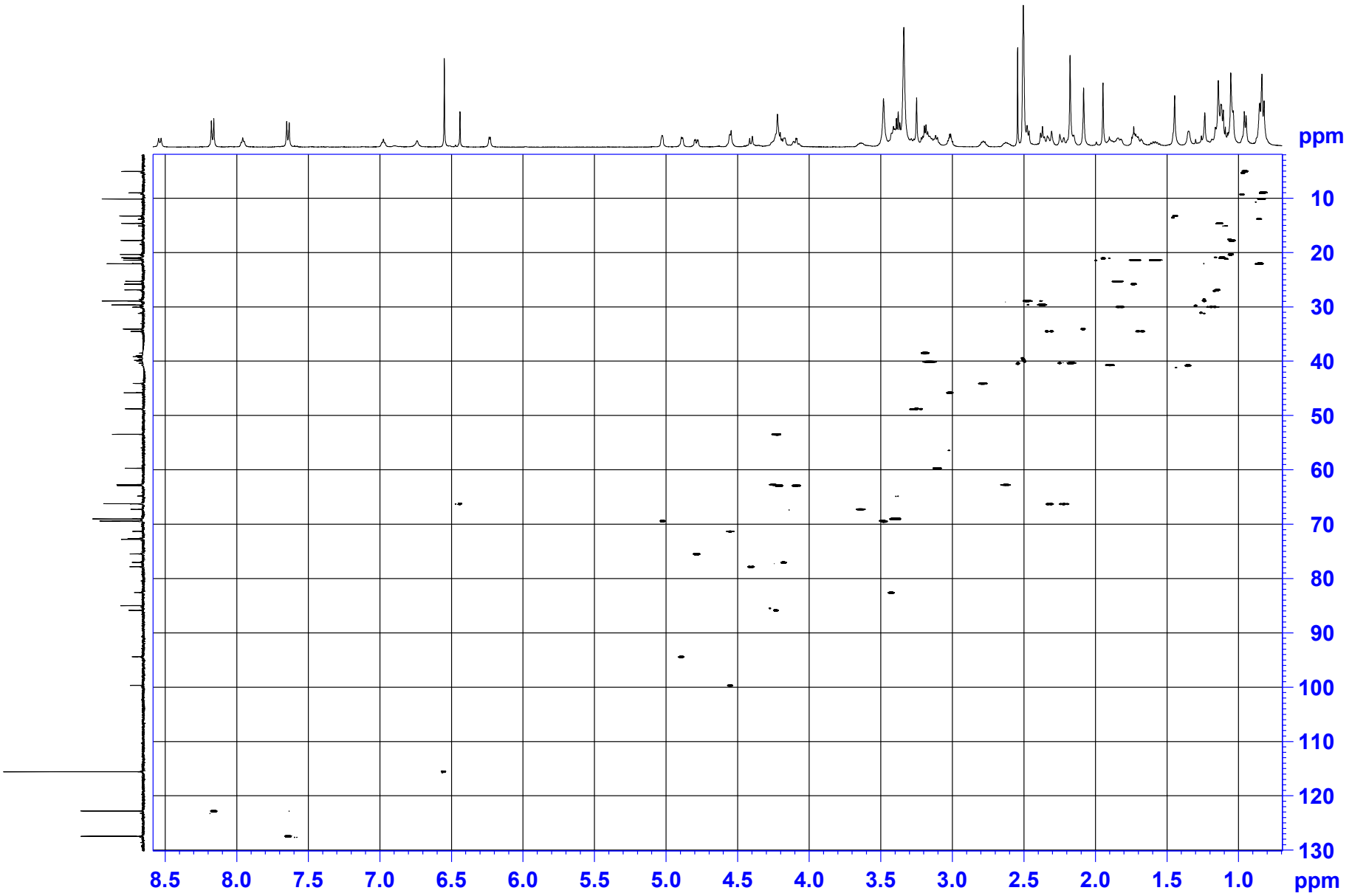


Figure S36. ^{1}H-^{13}C HSQC NMR spectrum of **4f** (DMSO-d_6).

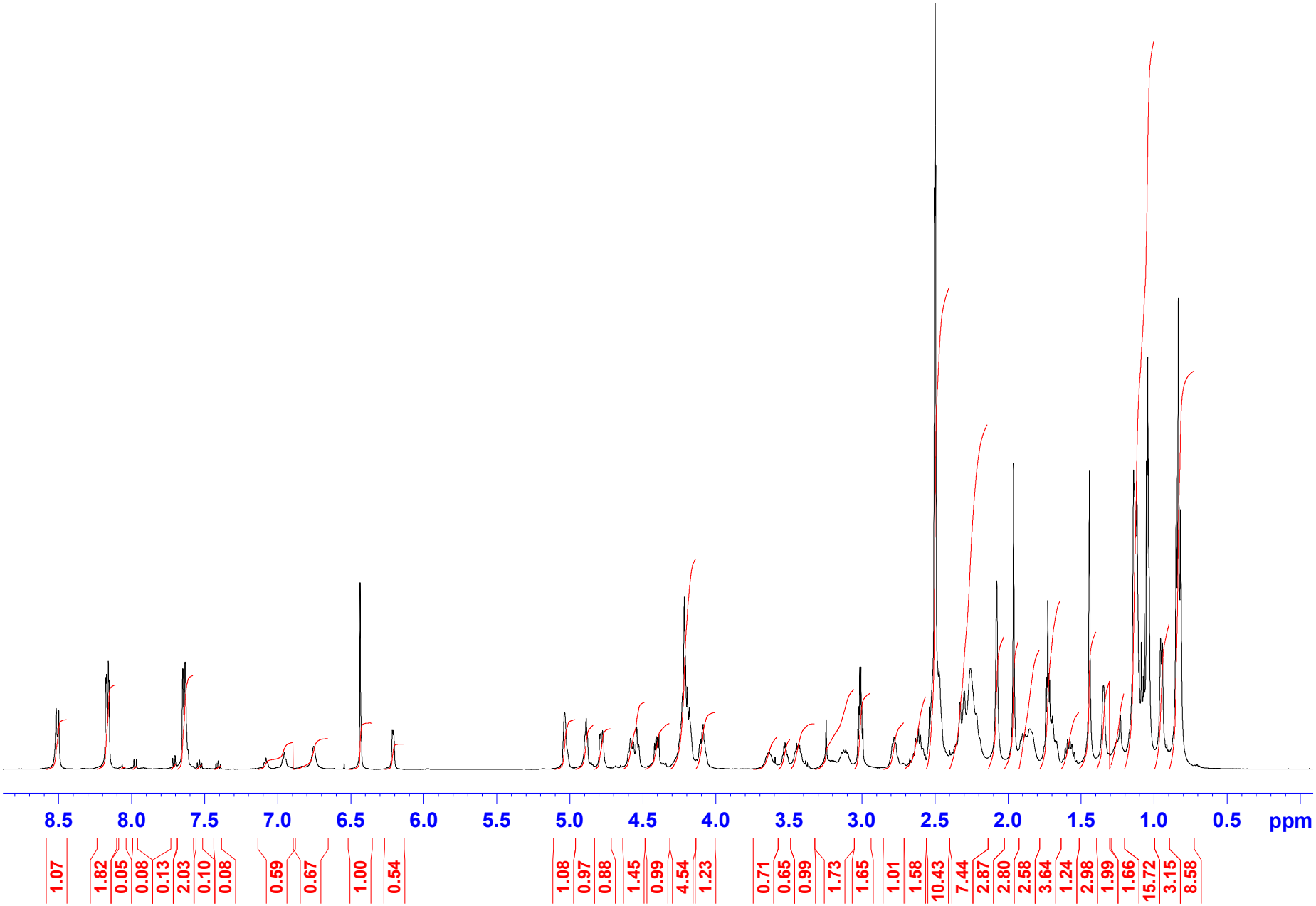


Figure S37. ^{1}H NMR spectra of **4g** (500 MHz, DMSO-d_6).

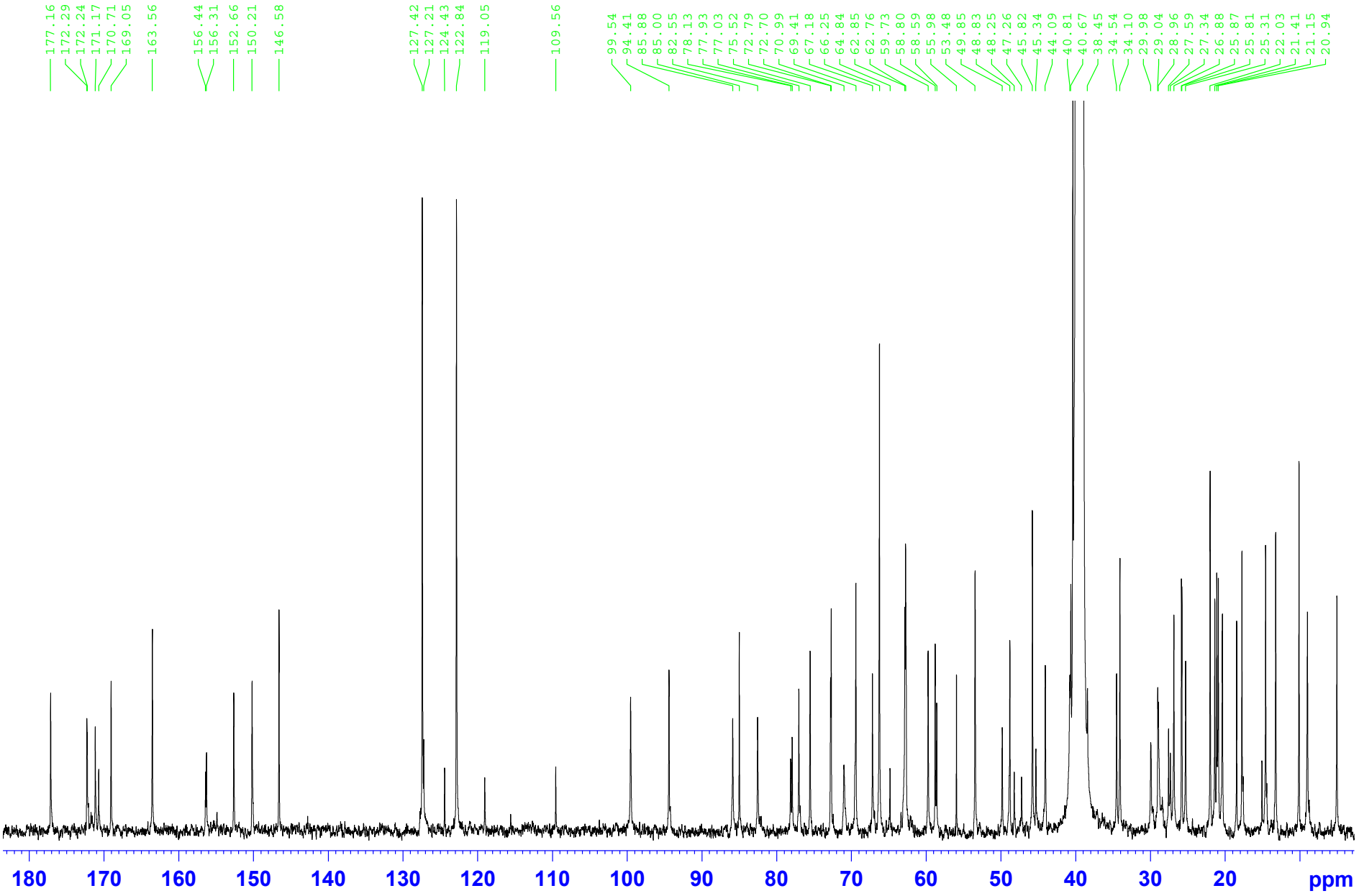


Figure S38. ^{13}C NMR spectra of **4g** (125 MHz, DMSO-d_6).

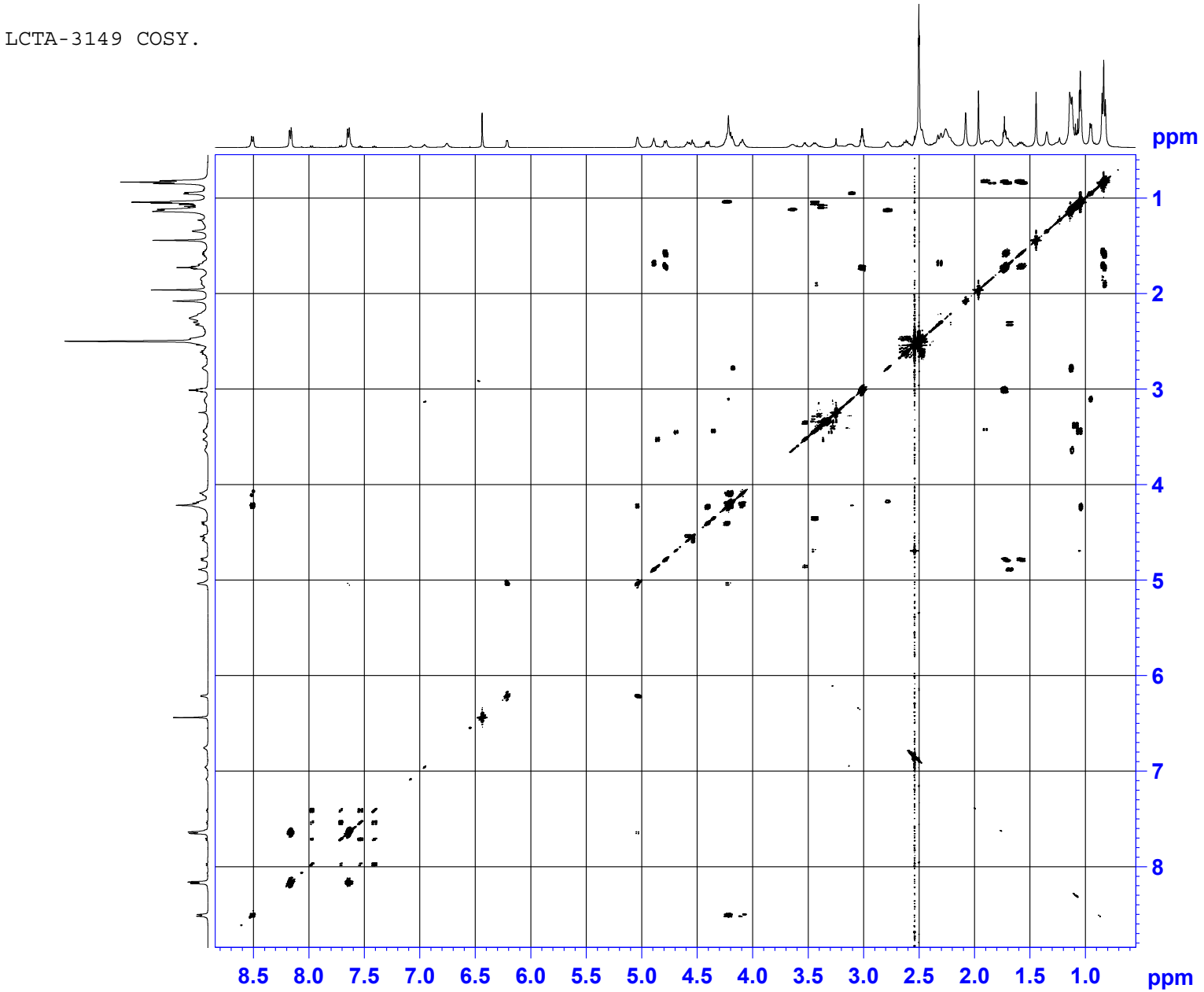


Figure S39. ^{1}H-^{1}H COSY NMR spectrum of **4g** (DMSO-d_6).

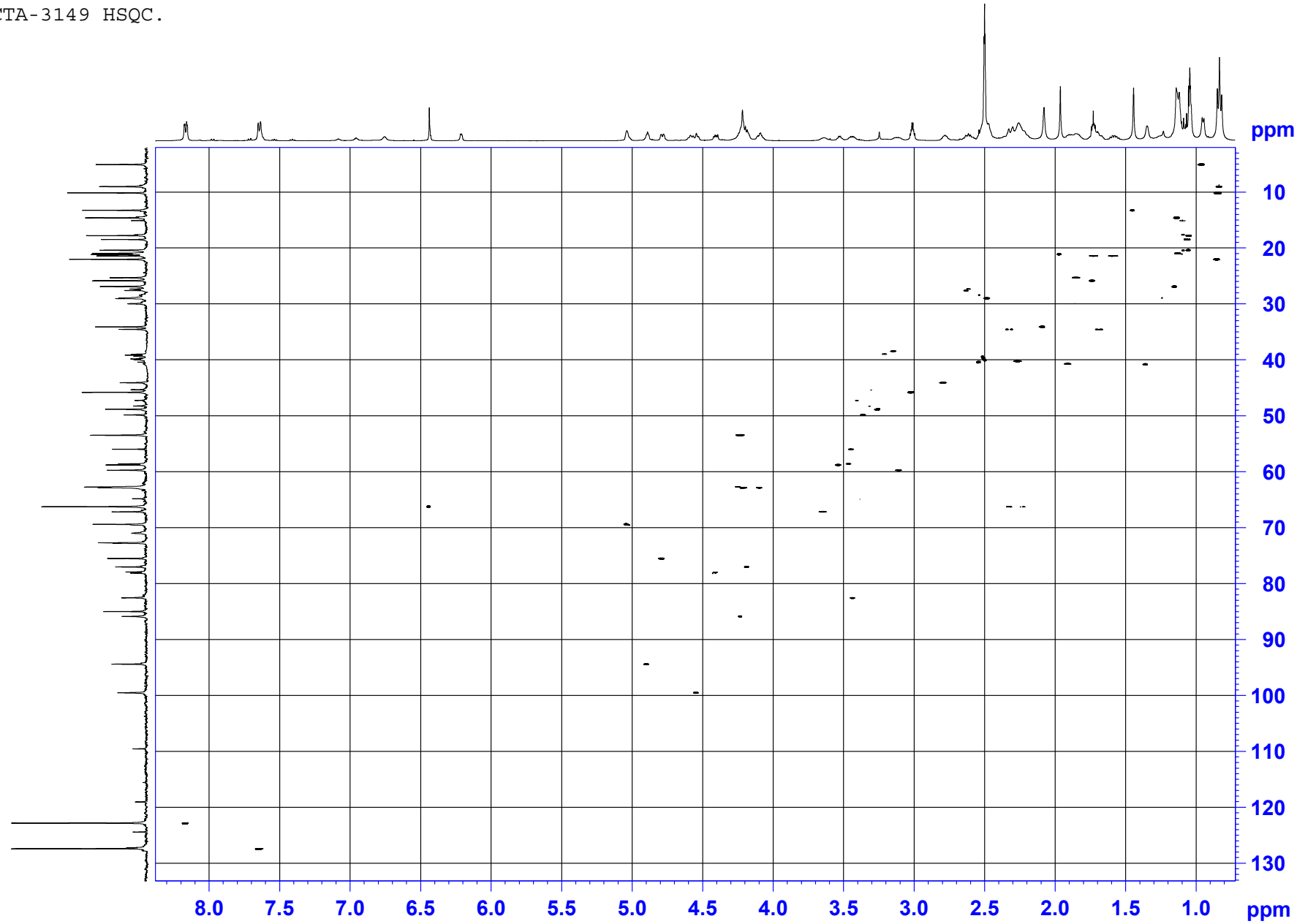


Figure S40. ^{1}H-^{13}C HSQC NMR spectrum of **4g** (DMSO-d_6).

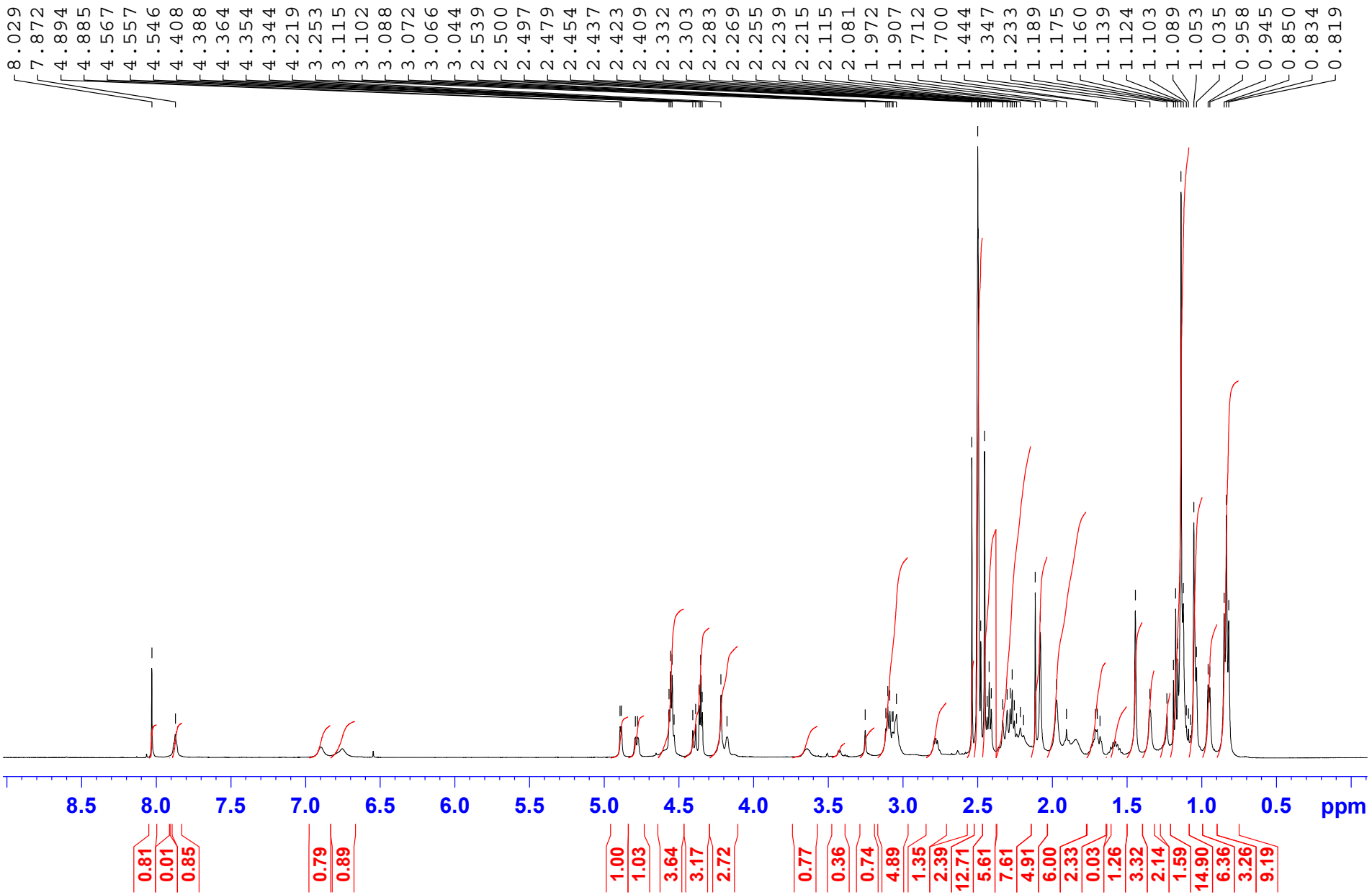


Figure S41. ^{1}H NMR spectra of **5a** (500 MHz, DMSO-d_6).

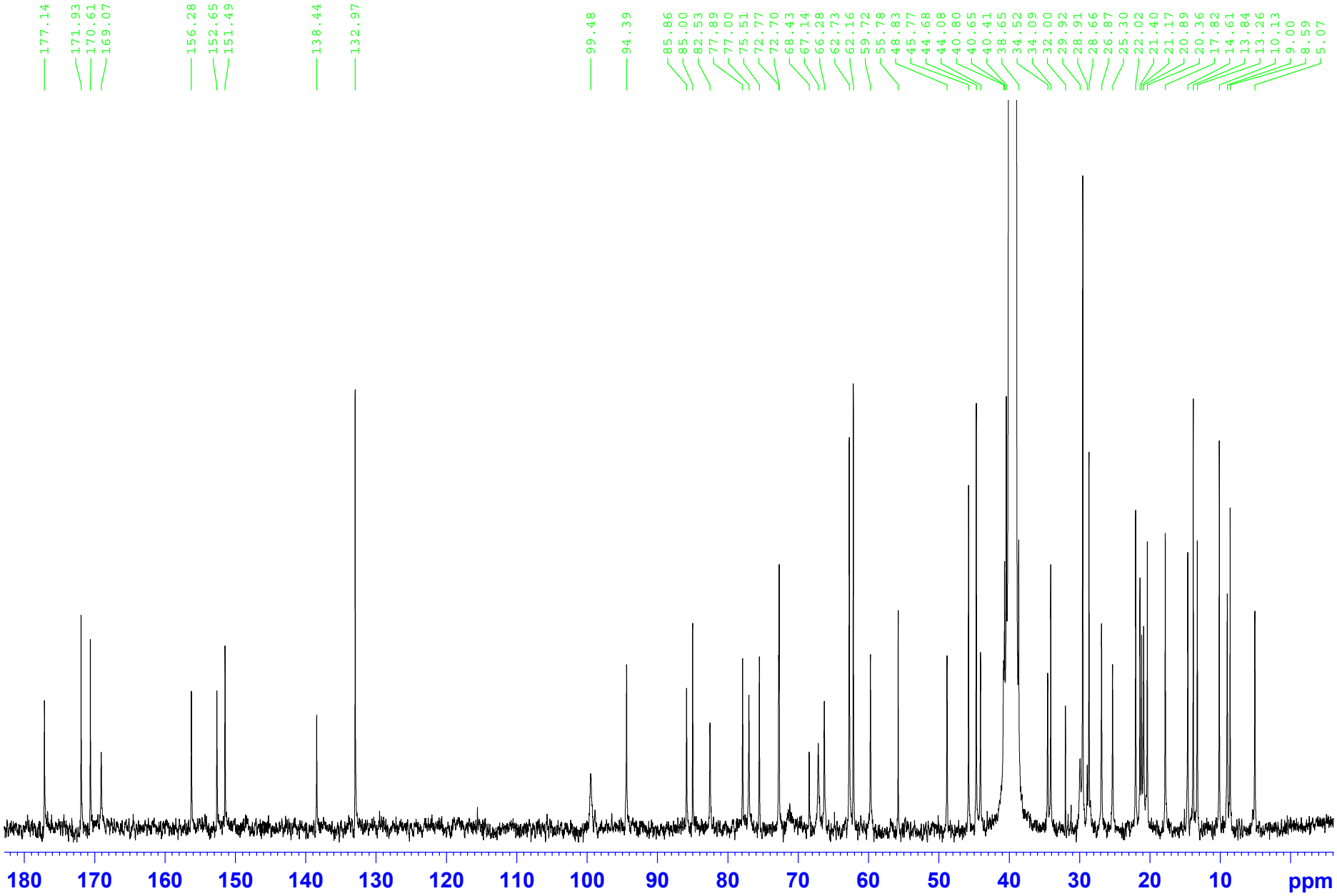


Figure S42. ^{13}C NMR spectra of **5a** (125 MHz, DMSO-d_6).

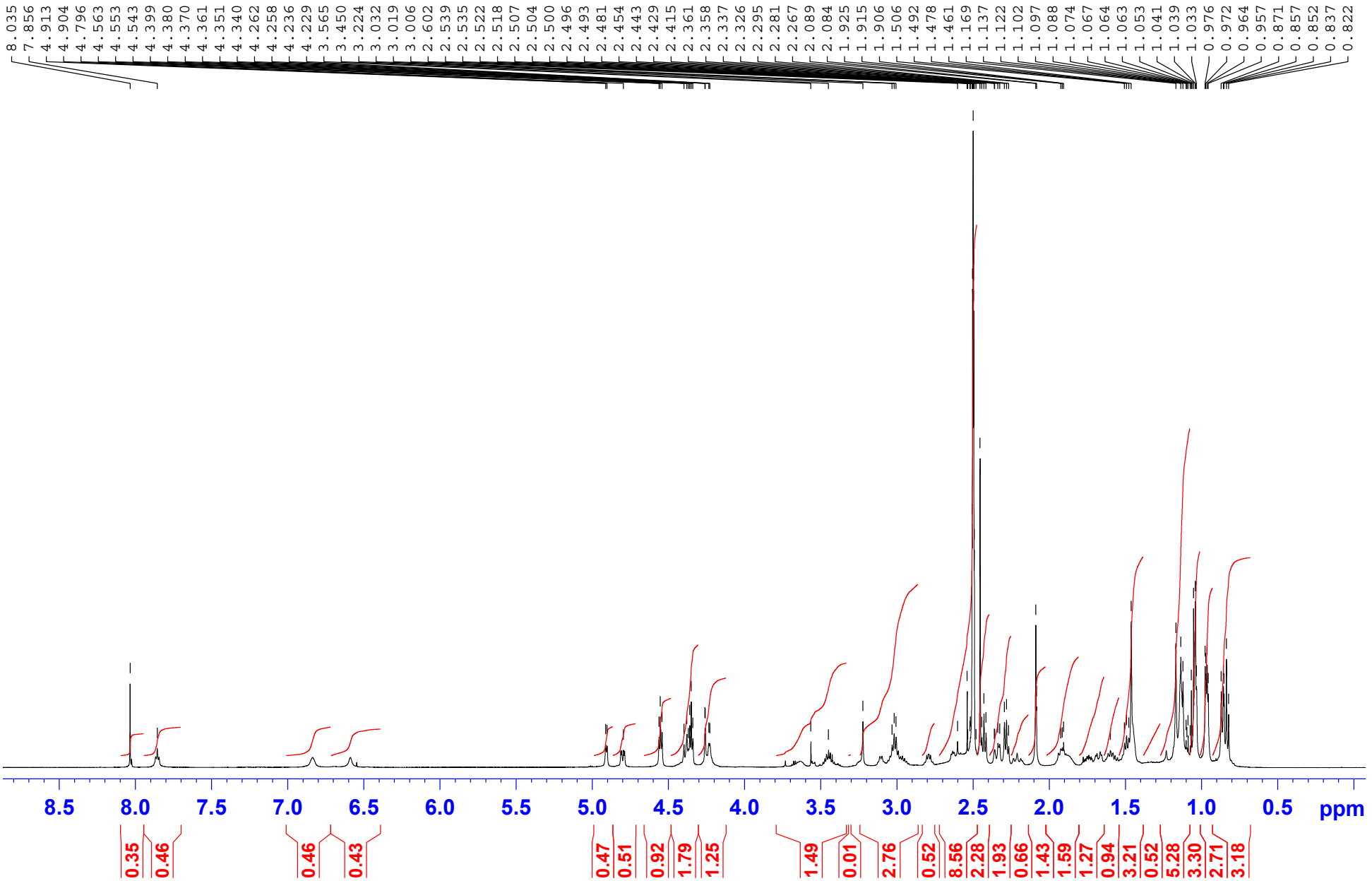


Figure S43. ^{1}H NMR spectra of **5b** (500 MHz, DMSO-d_6).

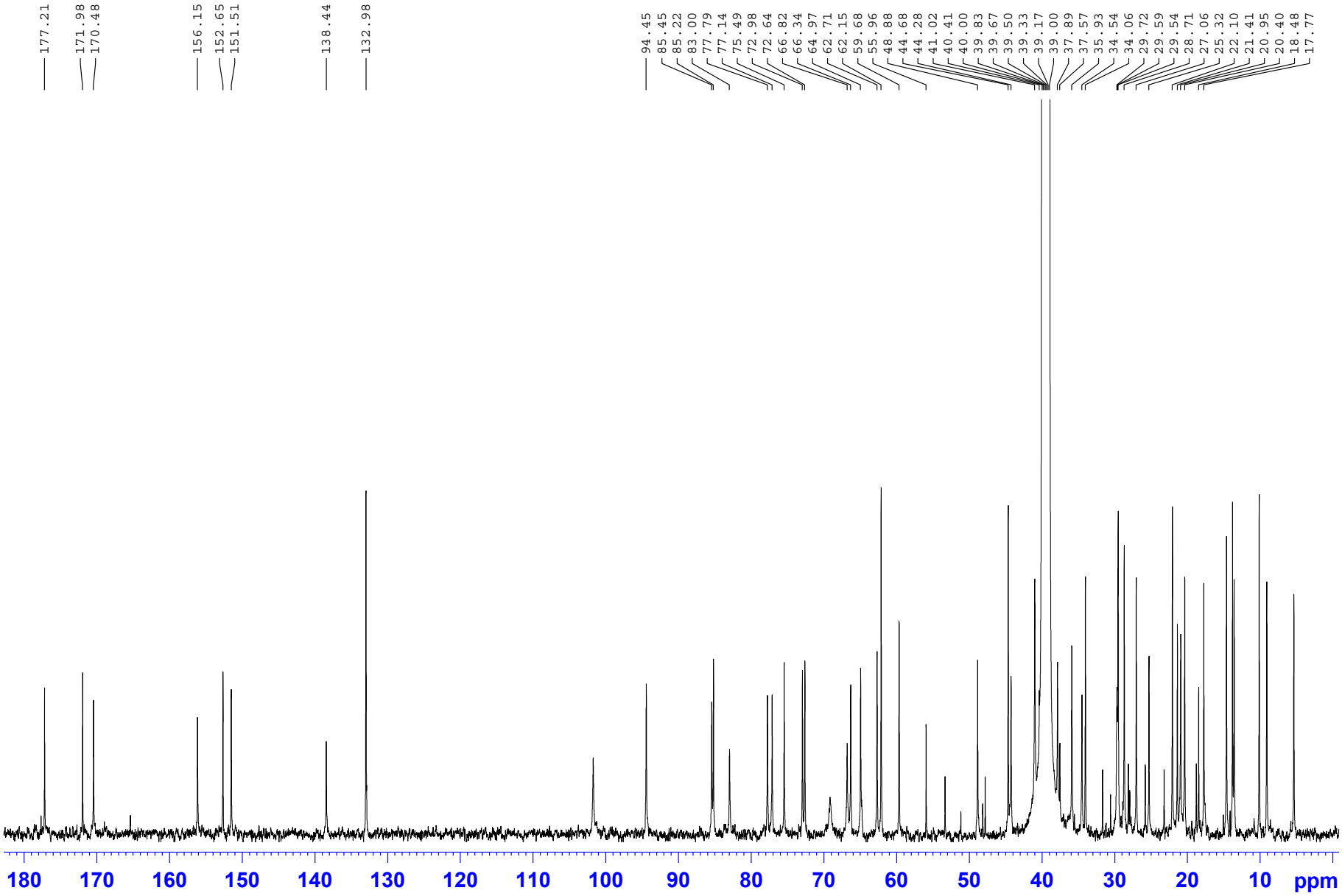


Figure S44. ^{13}C NMR spectra of **5b** (125 MHz, DMSO-d_6).

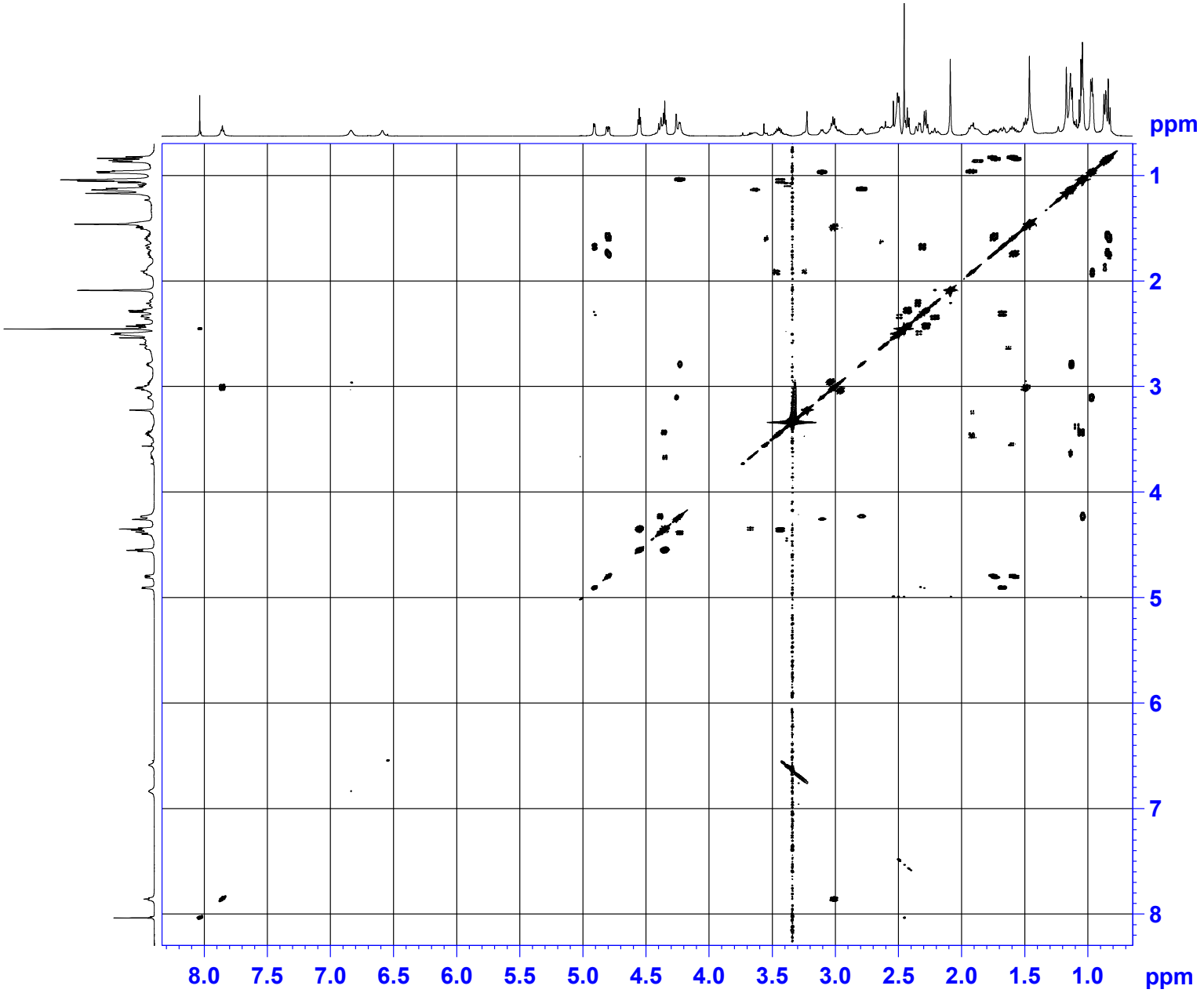


Figure S45. ^{1}H-^{1}H COSY NMR spectrum of **5b** (DMSO-d_6).

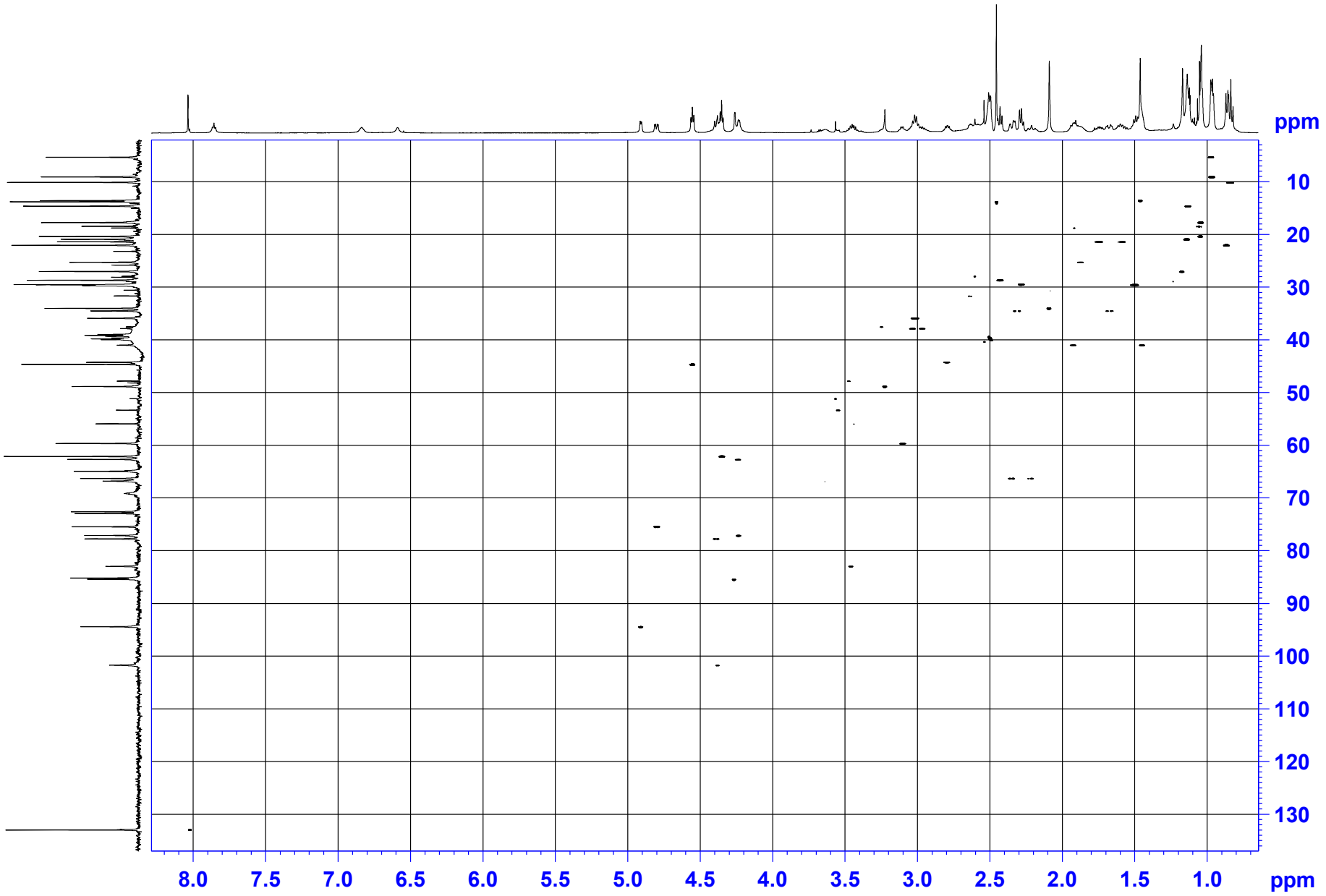


Figure S46. ^{1}H-^{13}C HSQC NMR spectrum of **5b** (DMSO-d_6).

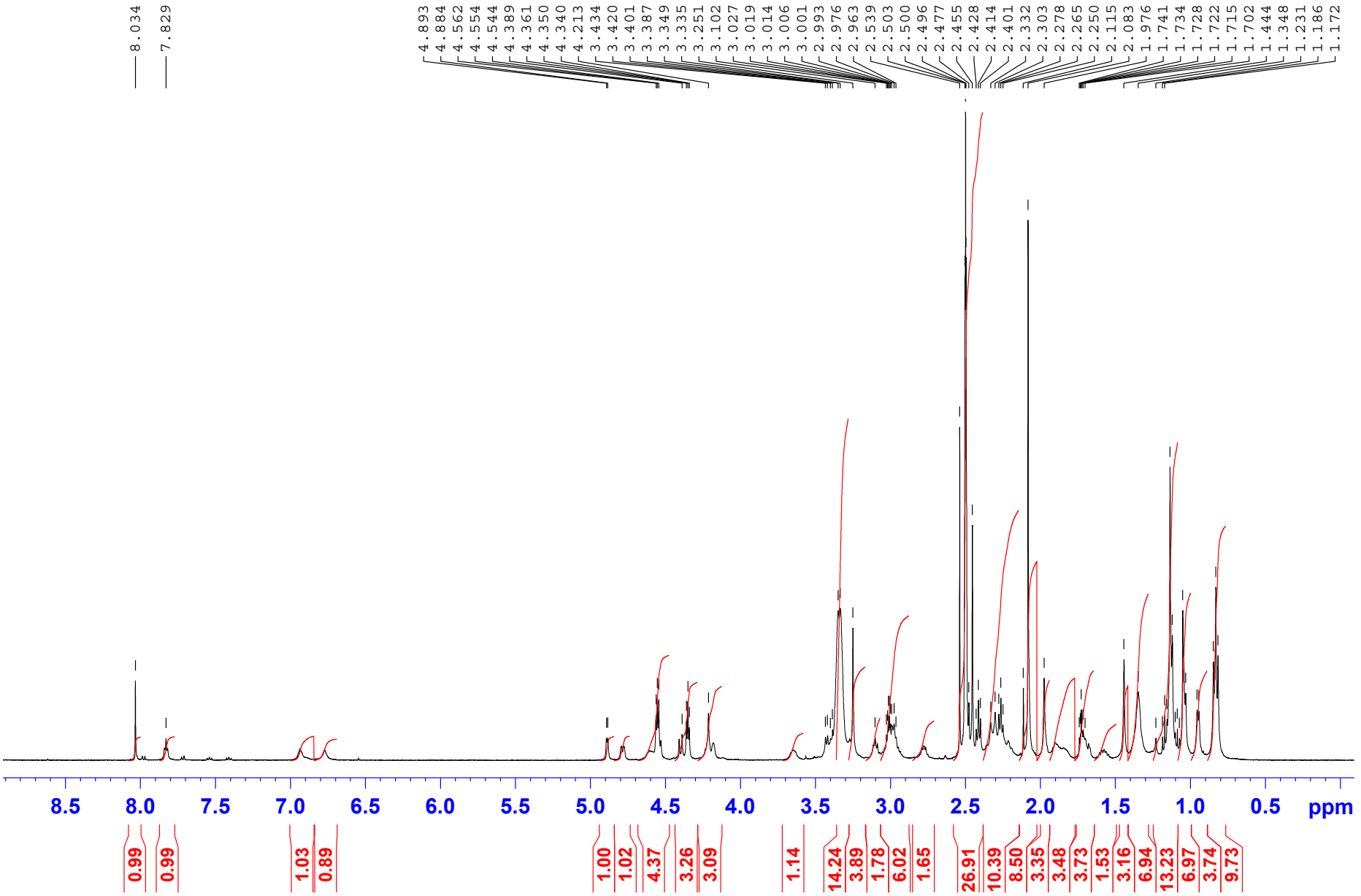


Figure S47. ^{1}H NMR spectra of **5c** (500 MHz, DMSO-d_6).

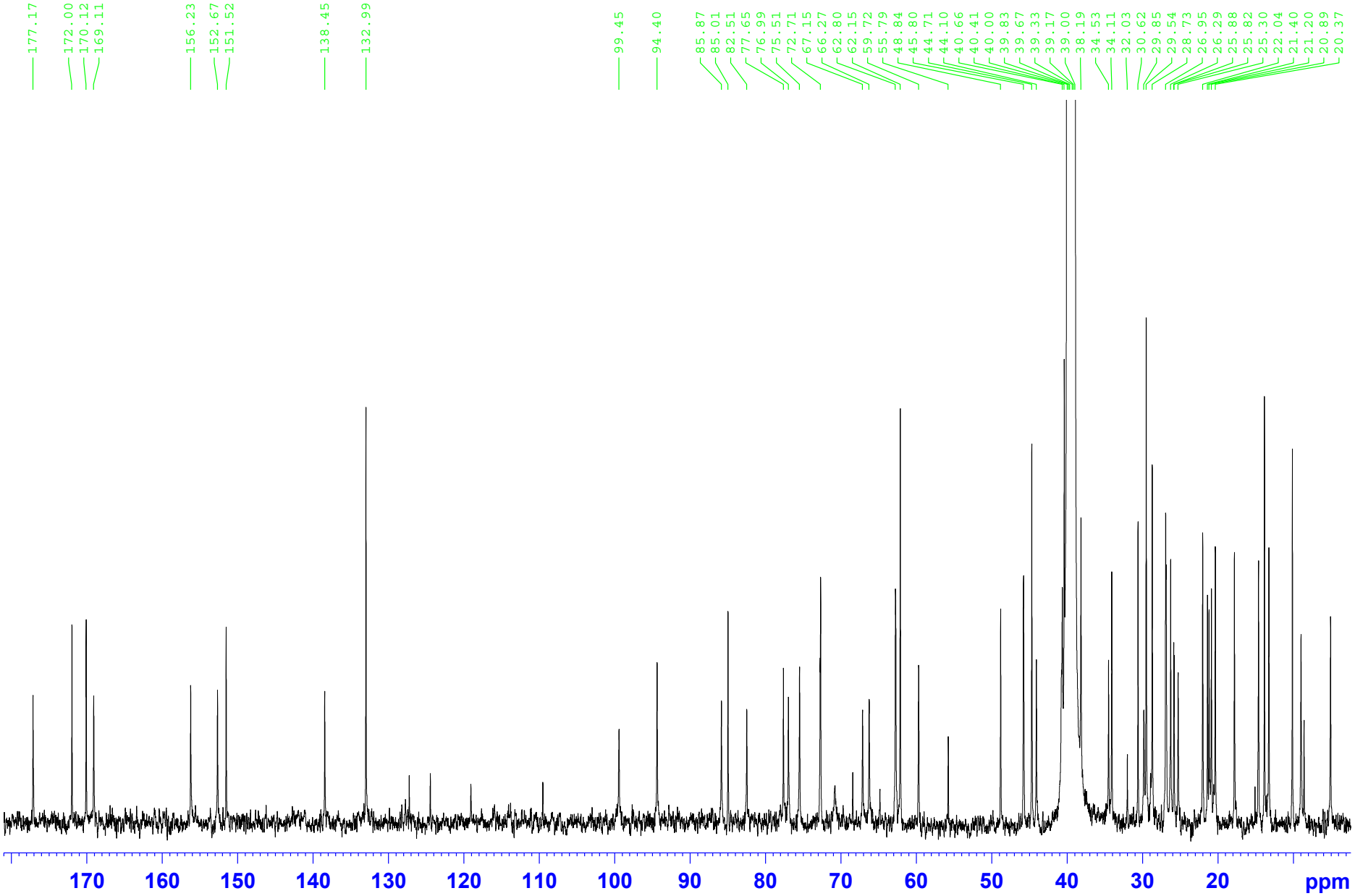


Figure S48. ^{13}C NMR spectra of **5c** (125 MHz, DMSO-d_6).

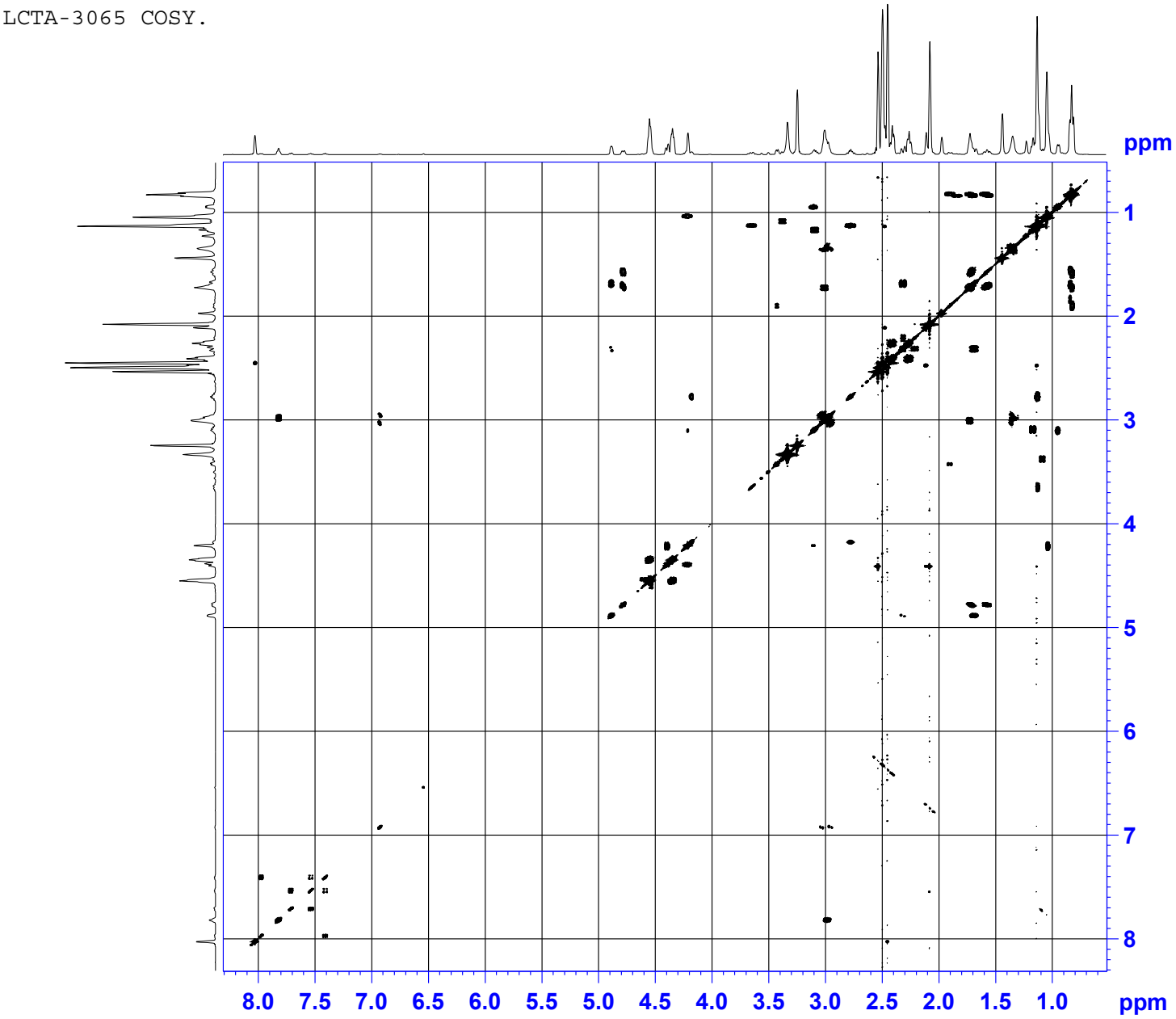


Figure S49. ^{1}H-^{1}H COSY NMR spectrum of **5c** (DMSO-d_6).

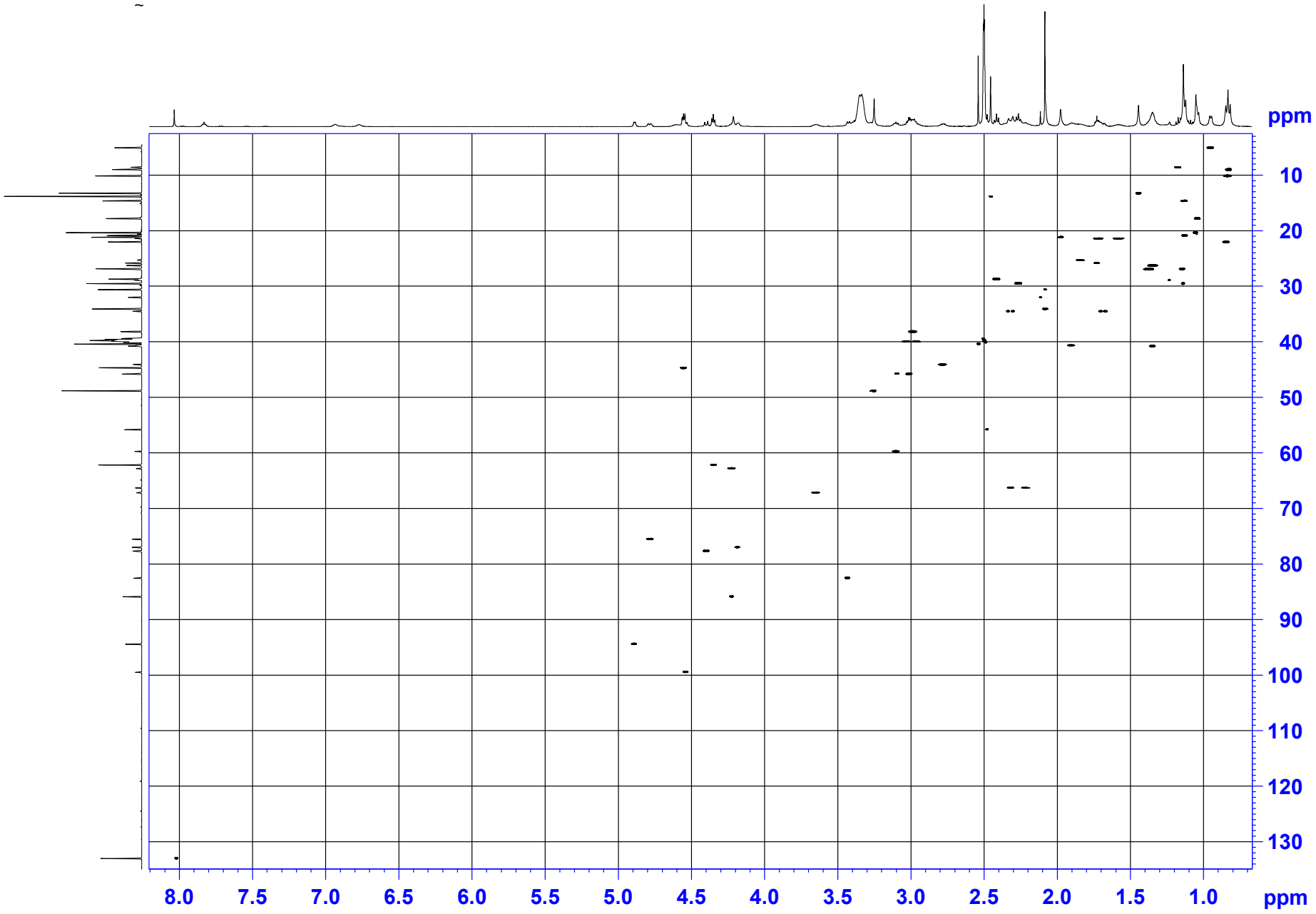


Figure S50. ^{1}H-^{13}C HSQC NMR spectrum of **5c** (DMSO-d_6).

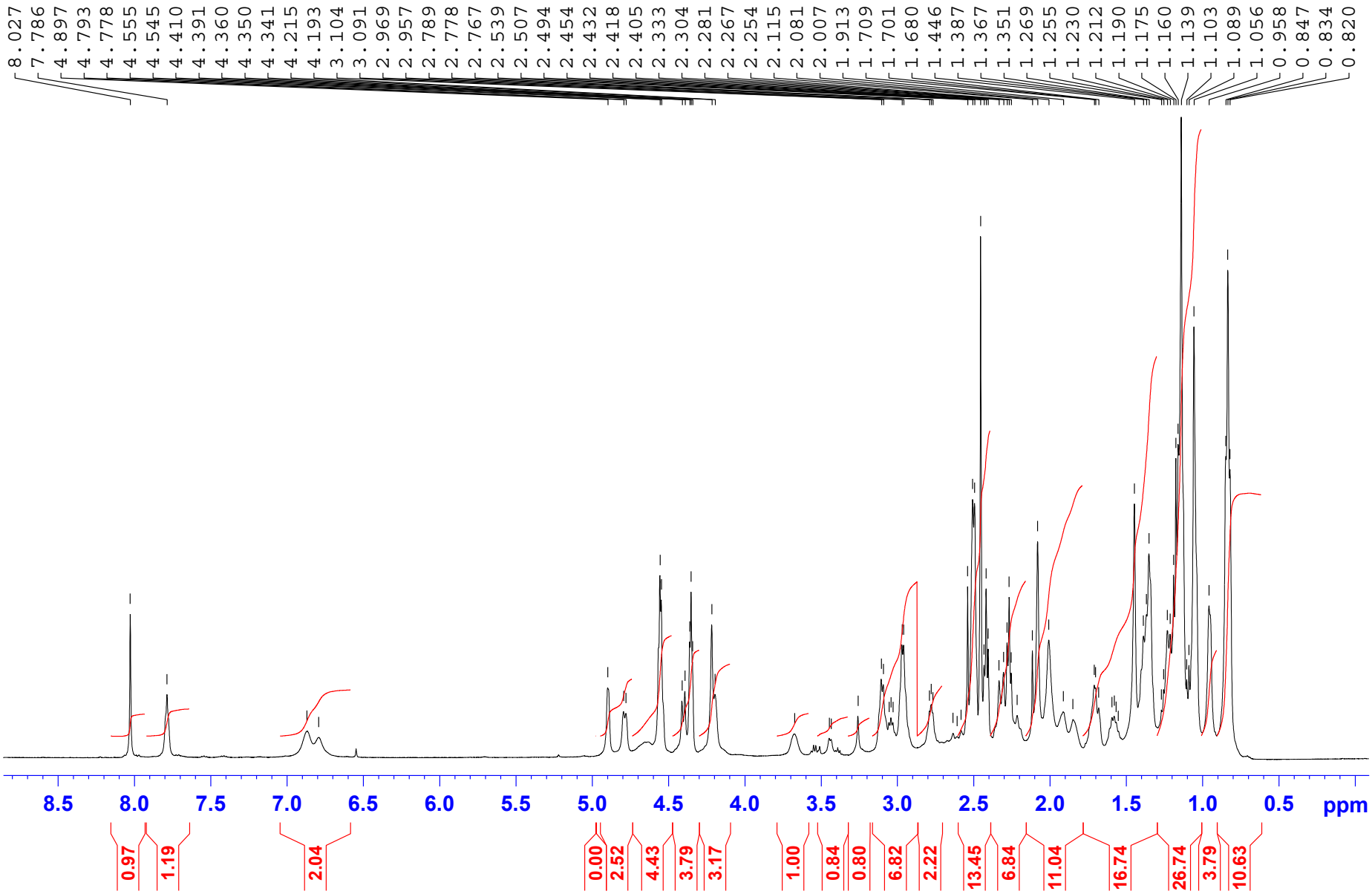


Figure S51. ^{1}H NMR spectra of **5d** (500 MHz, DMSO-d_6).

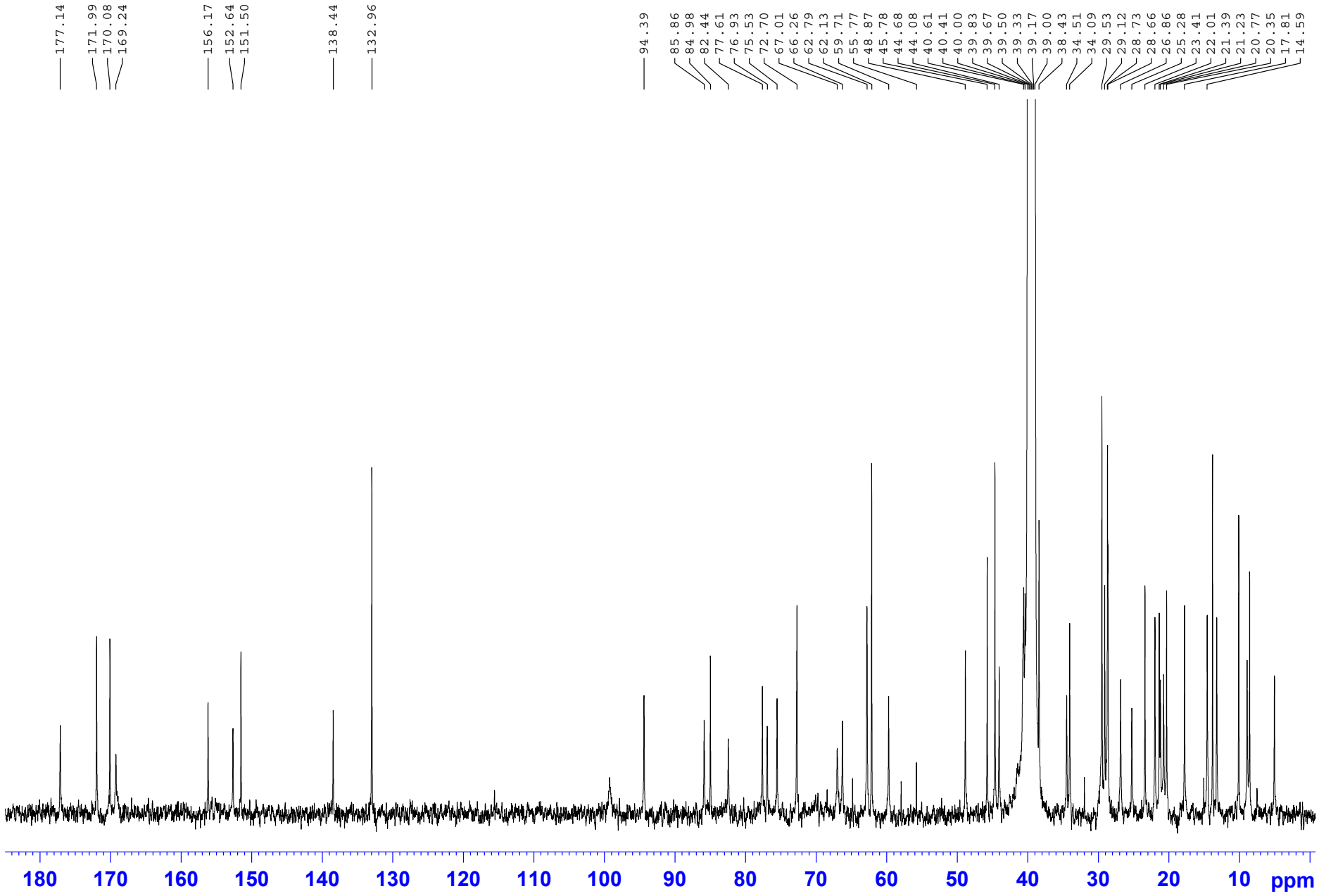


Figure S52. ^{13}C NMR spectra of **5d** (125 MHz, DMSO-d_6).

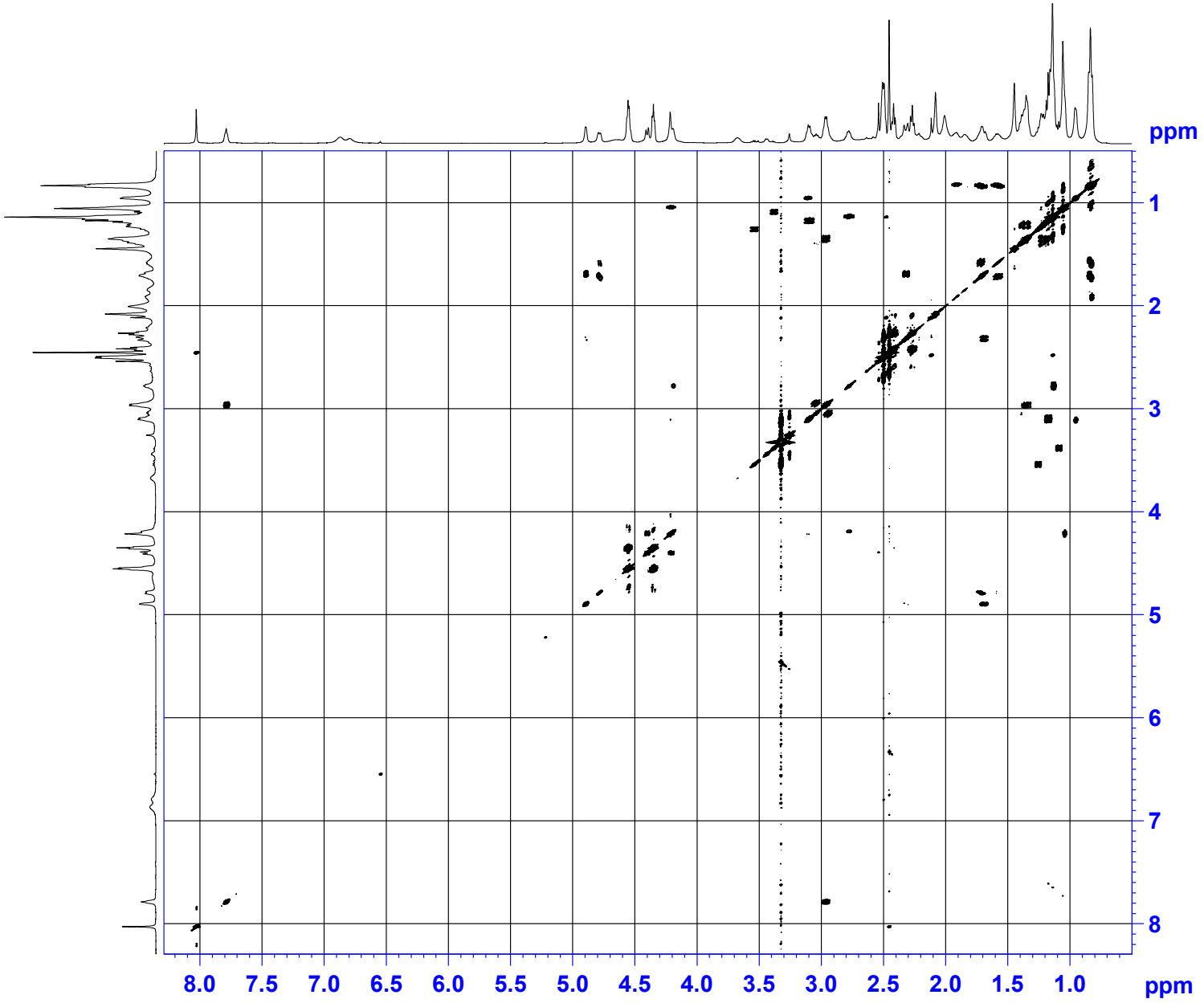


Figure S53. ^{1}H-^{1}H COSY NMR spectrum of **5d** (DMSO-d_6).

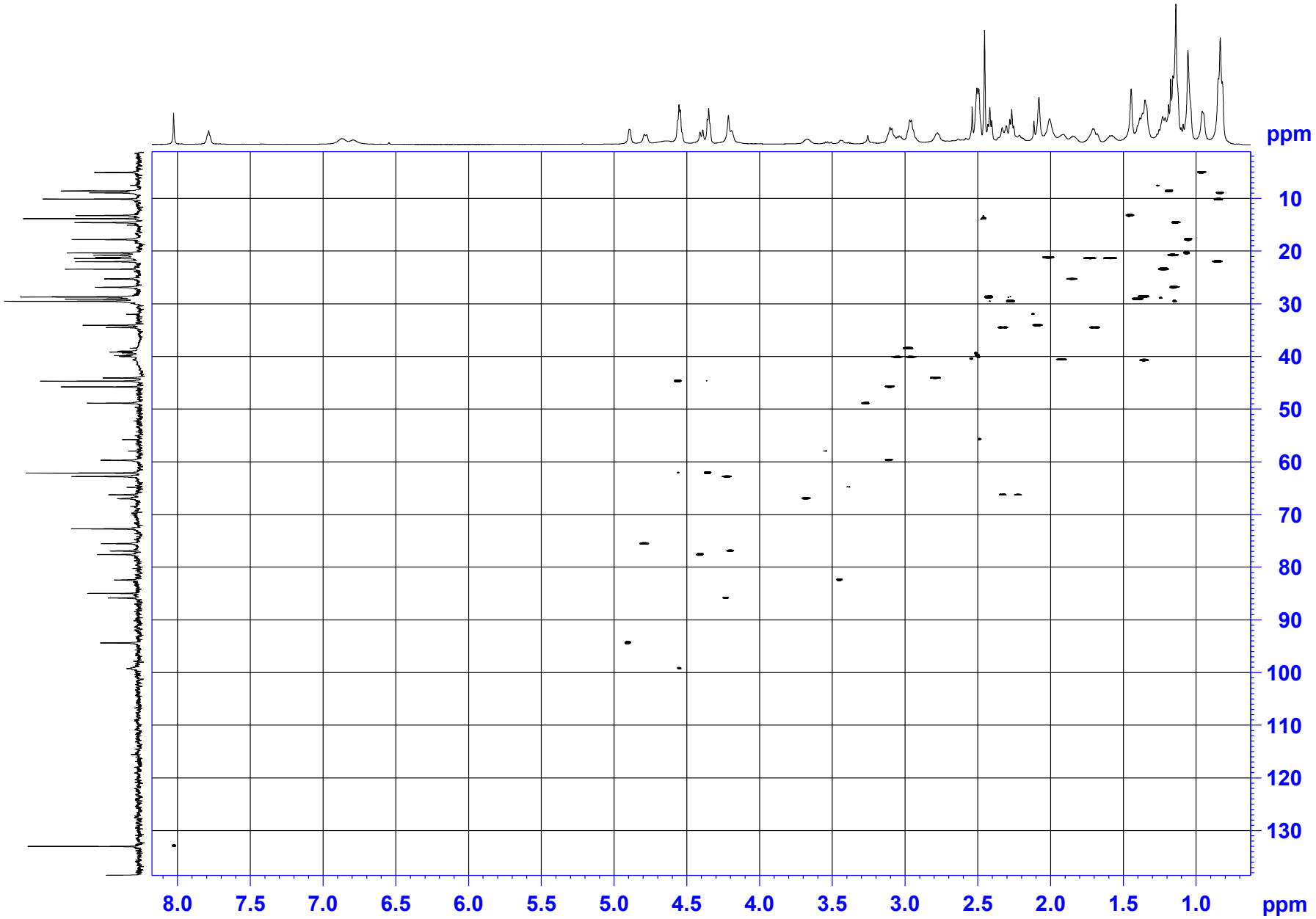


Figure S54. ^{1}H-^{13}C HSQC NMR spectrum of **5d** (DMSO-d_6).

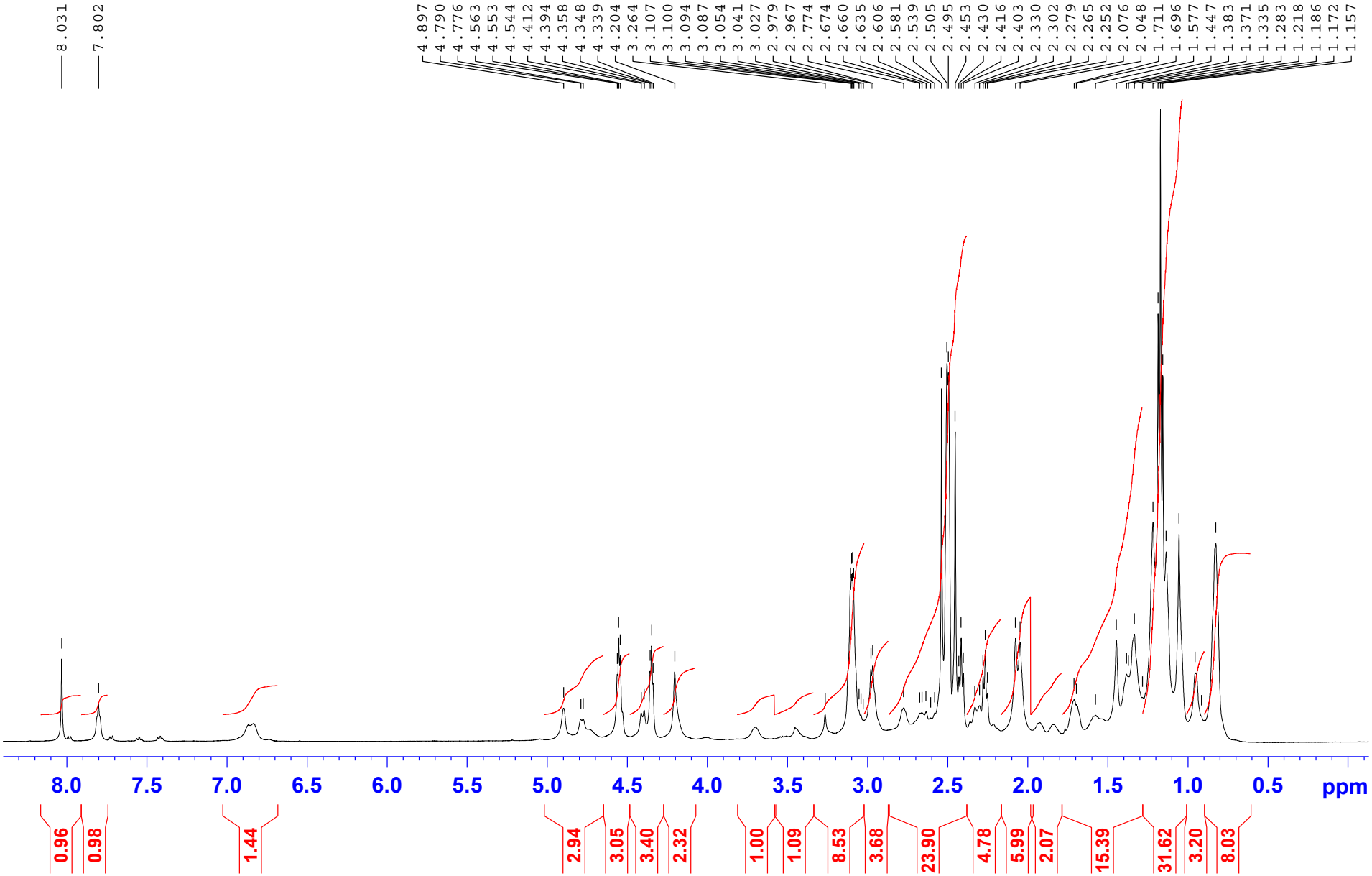


Figure S55. ^{1}H NMR spectra of **5e** (500 MHz, DMSO-d_6).

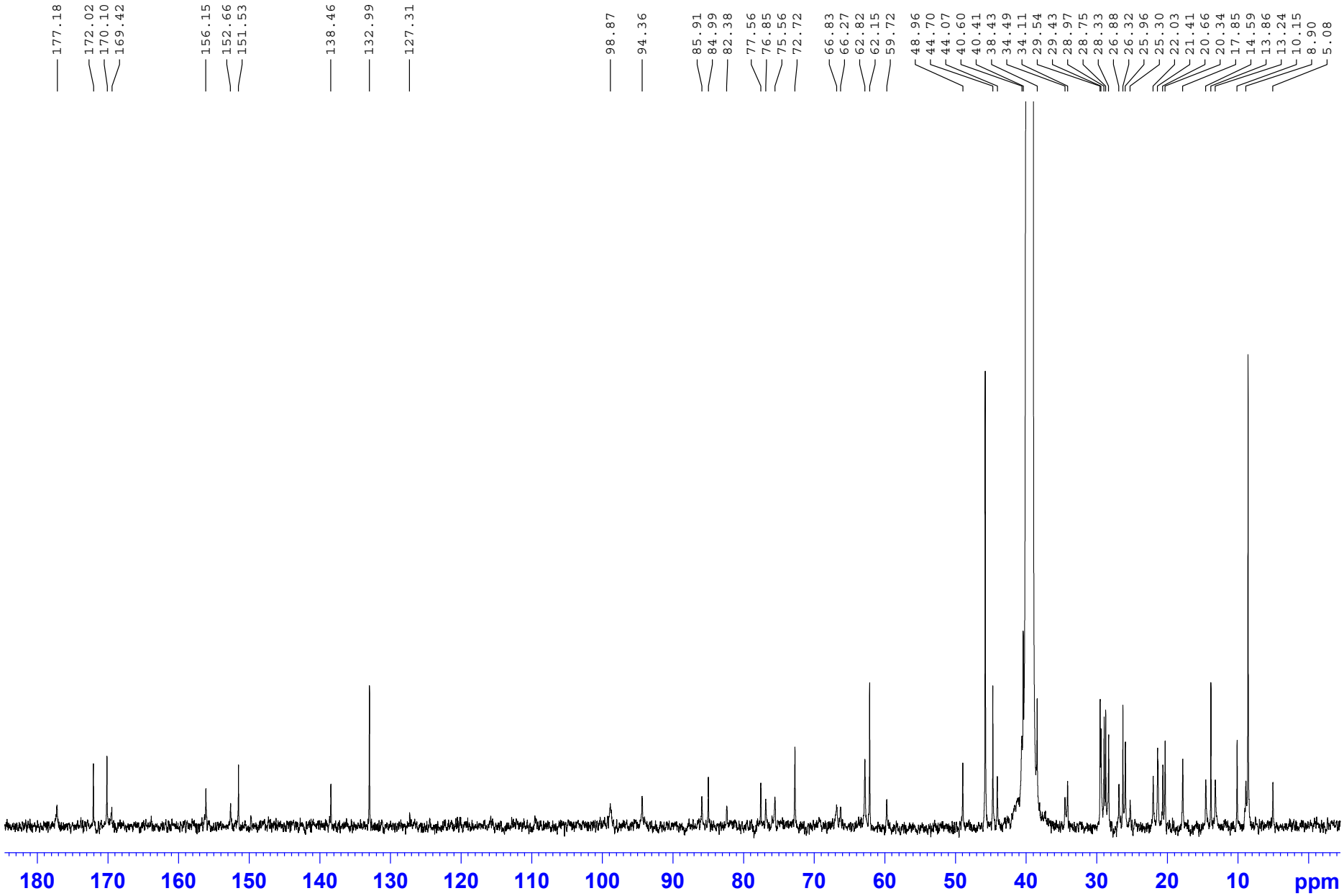


Figure S56. ^{13}C NMR spectra of **5e** (125 MHz, DMSO-d_6).

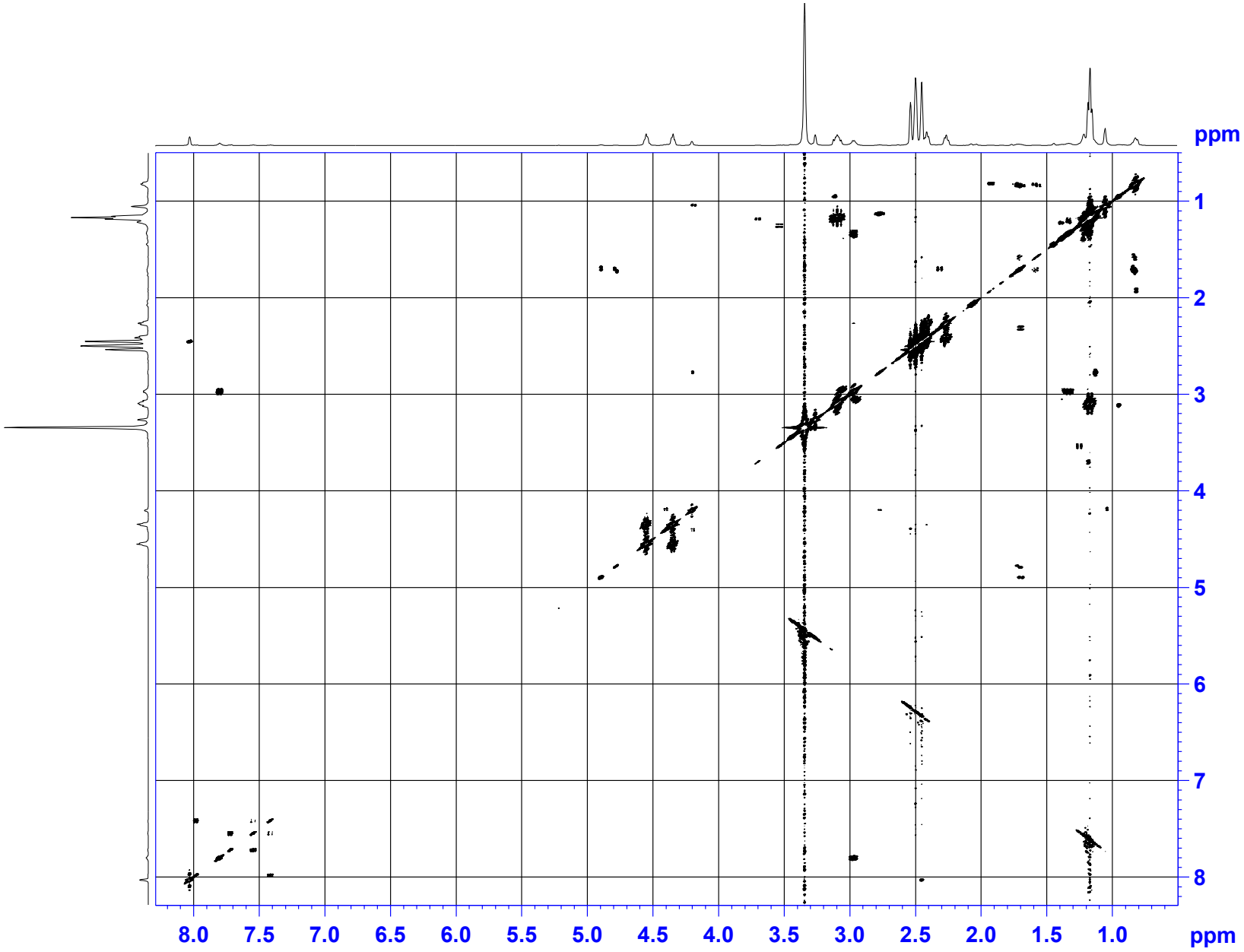


Figure S57. ^{1}H-^{1}H COSY NMR spectrum of **5e** (DMSO-d_6).

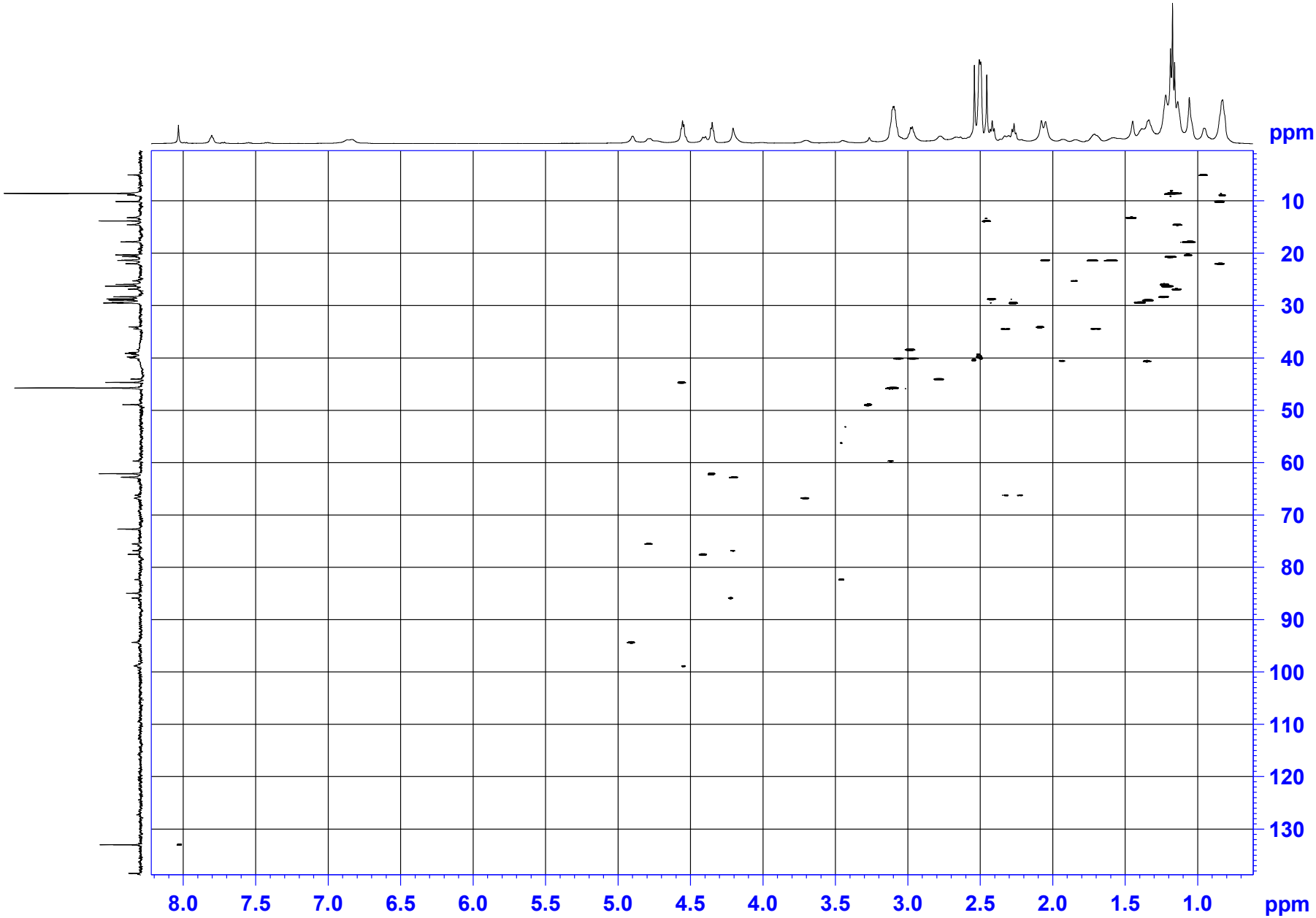


Figure S58. ^{1}H-^{13}C HSQC NMR spectrum of **5e** (DMSO-d_6).

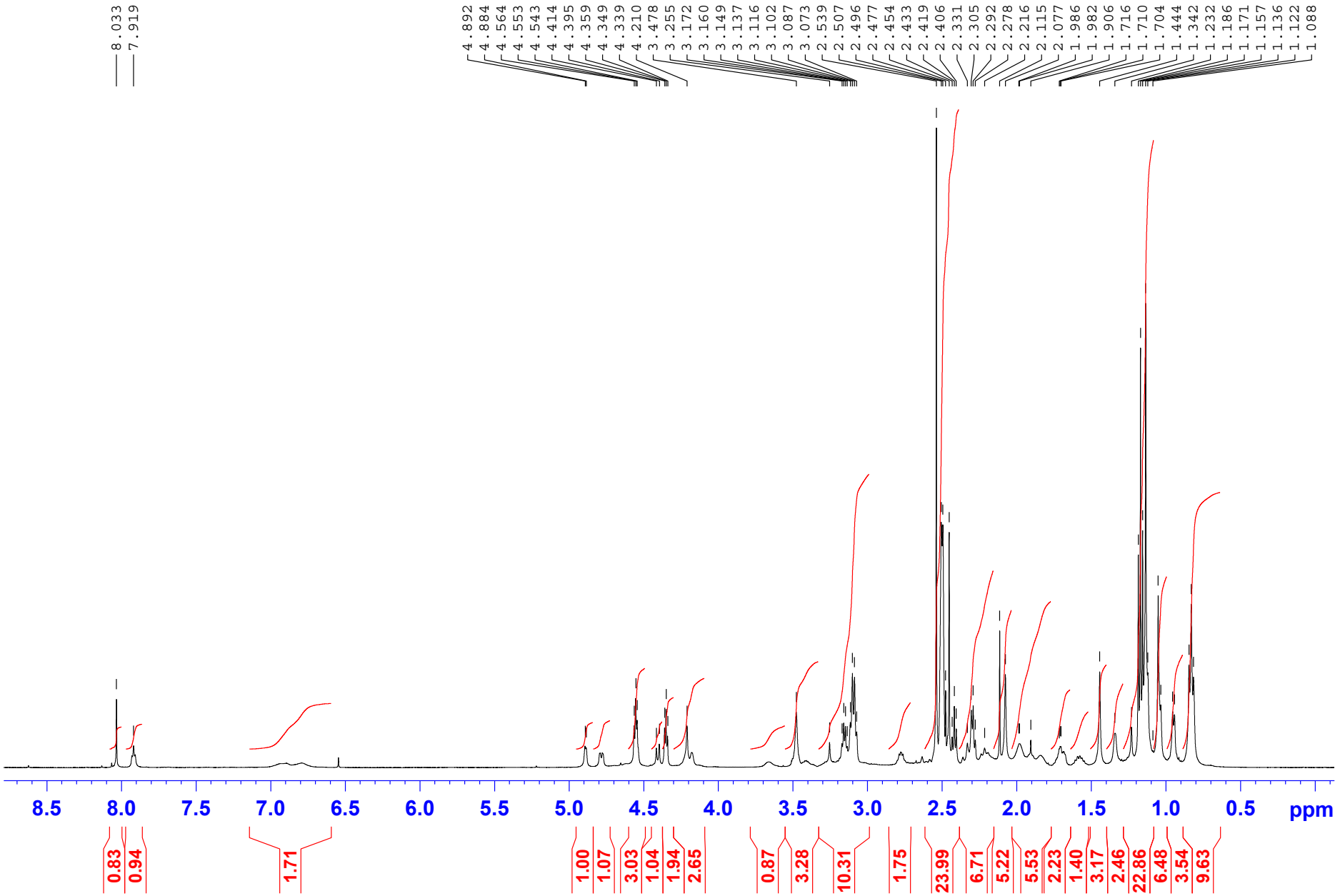


Figure S59. ^{1}H NMR spectra of **5f** (500 MHz, DMSO-d_6).

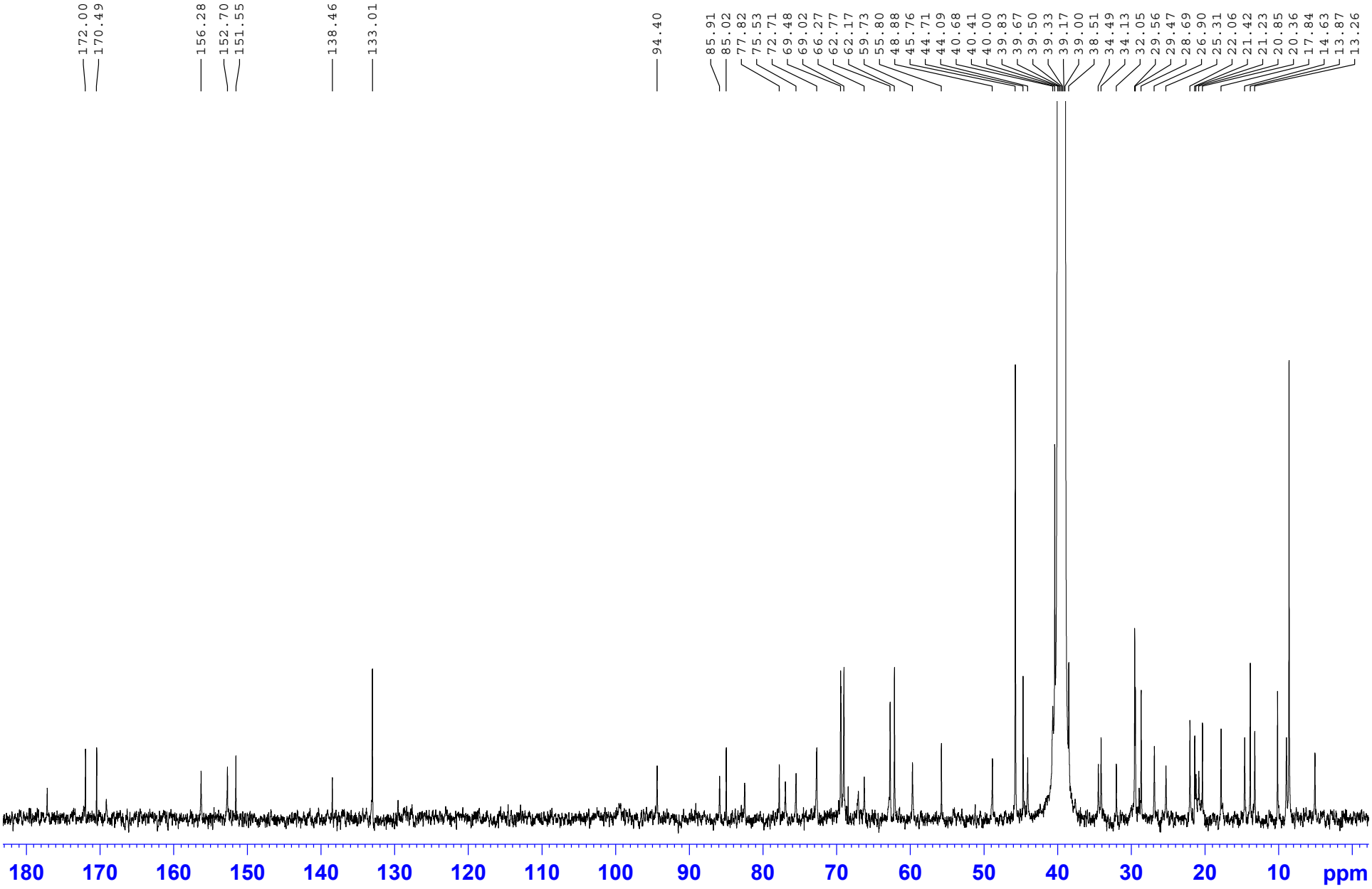


Figure S60. ^{13}C NMR spectra of **5f** (125 MHz, DMSO-d_6).

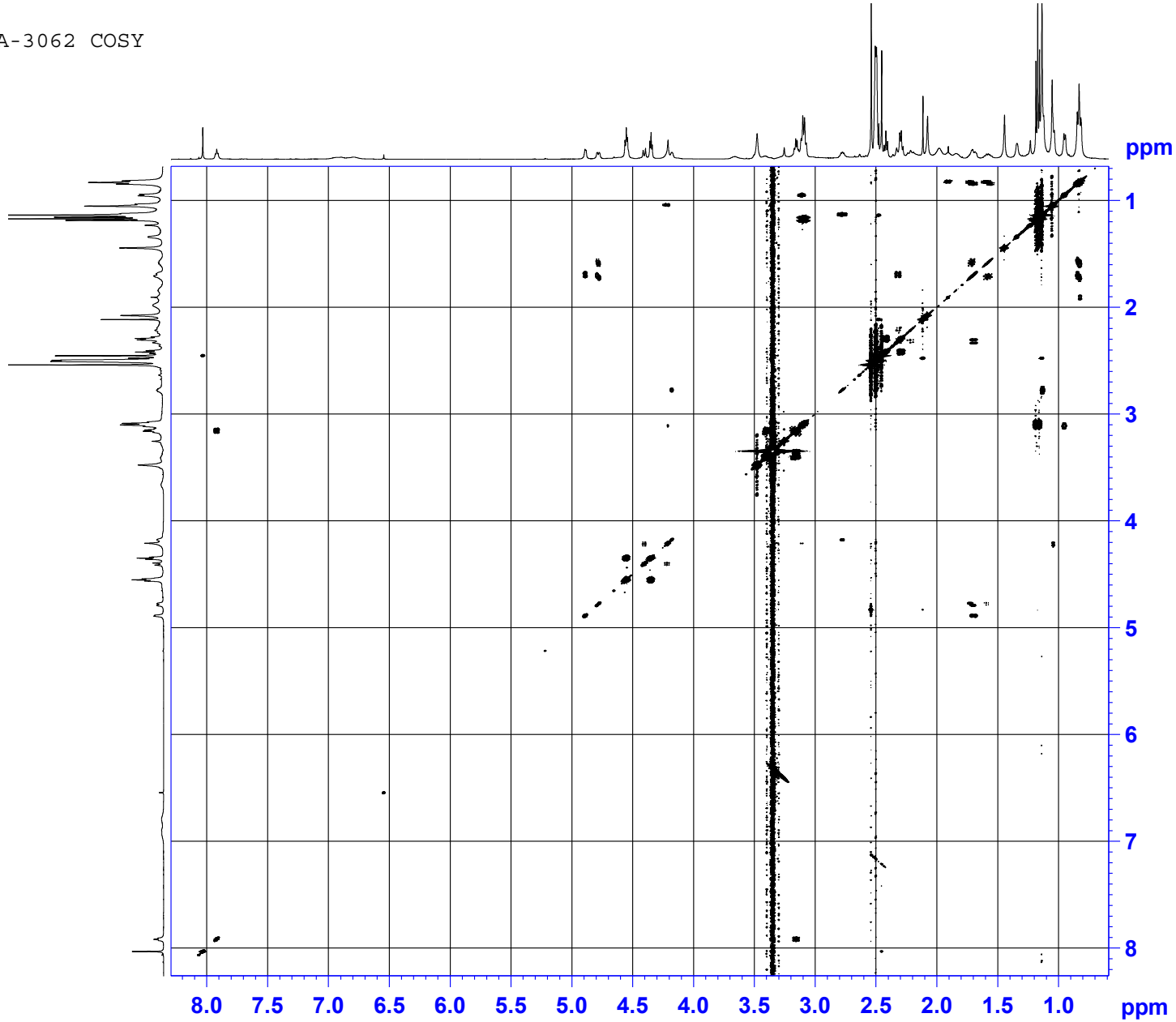


Figure S61. ^{1}H-^{1}H COSY NMR spectrum of **5f** (DMSO-d_6).

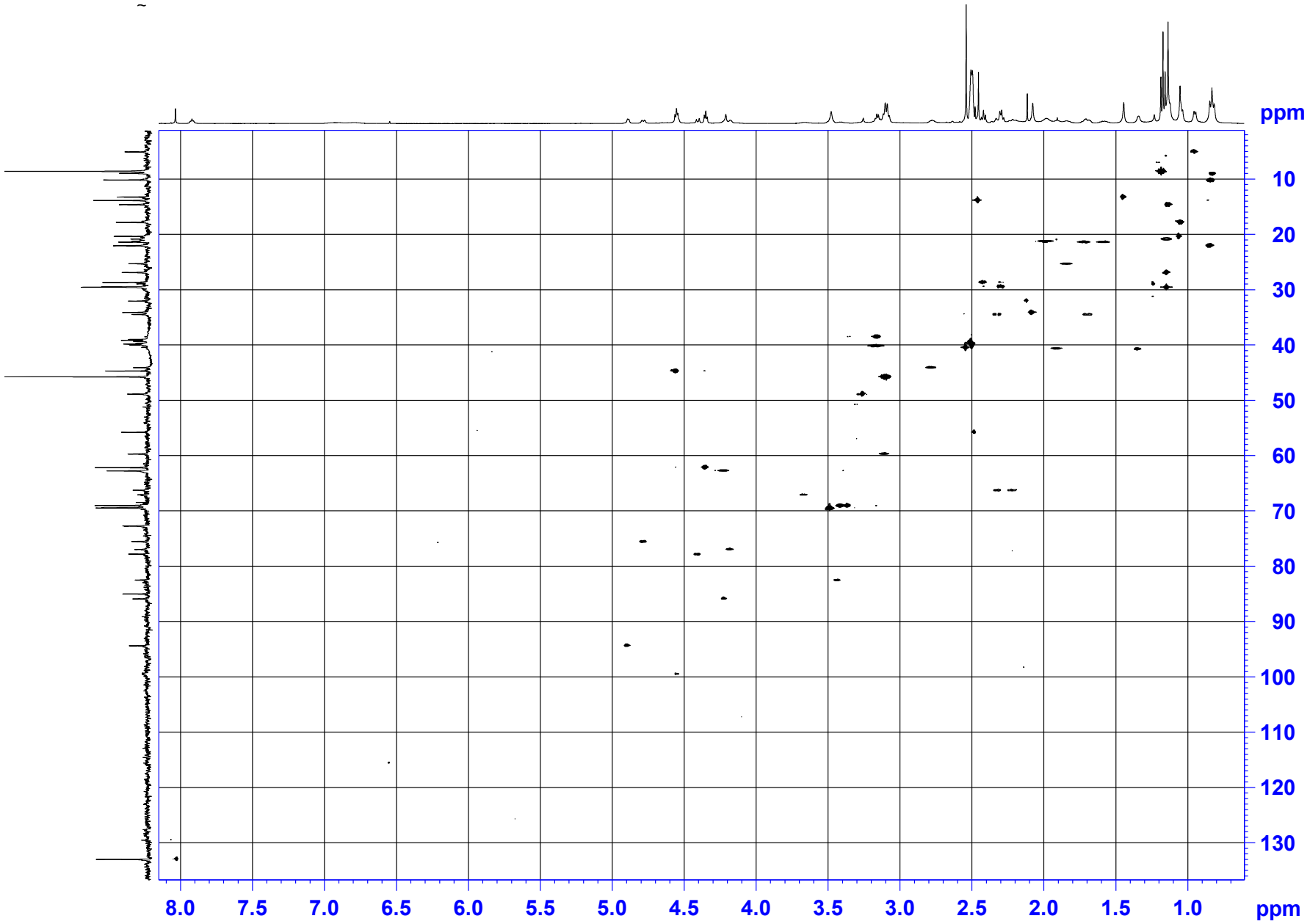


Figure S62. ^{1}H-^{13}C HSQC NMR spectrum of **5f** (DMSO-d_6).

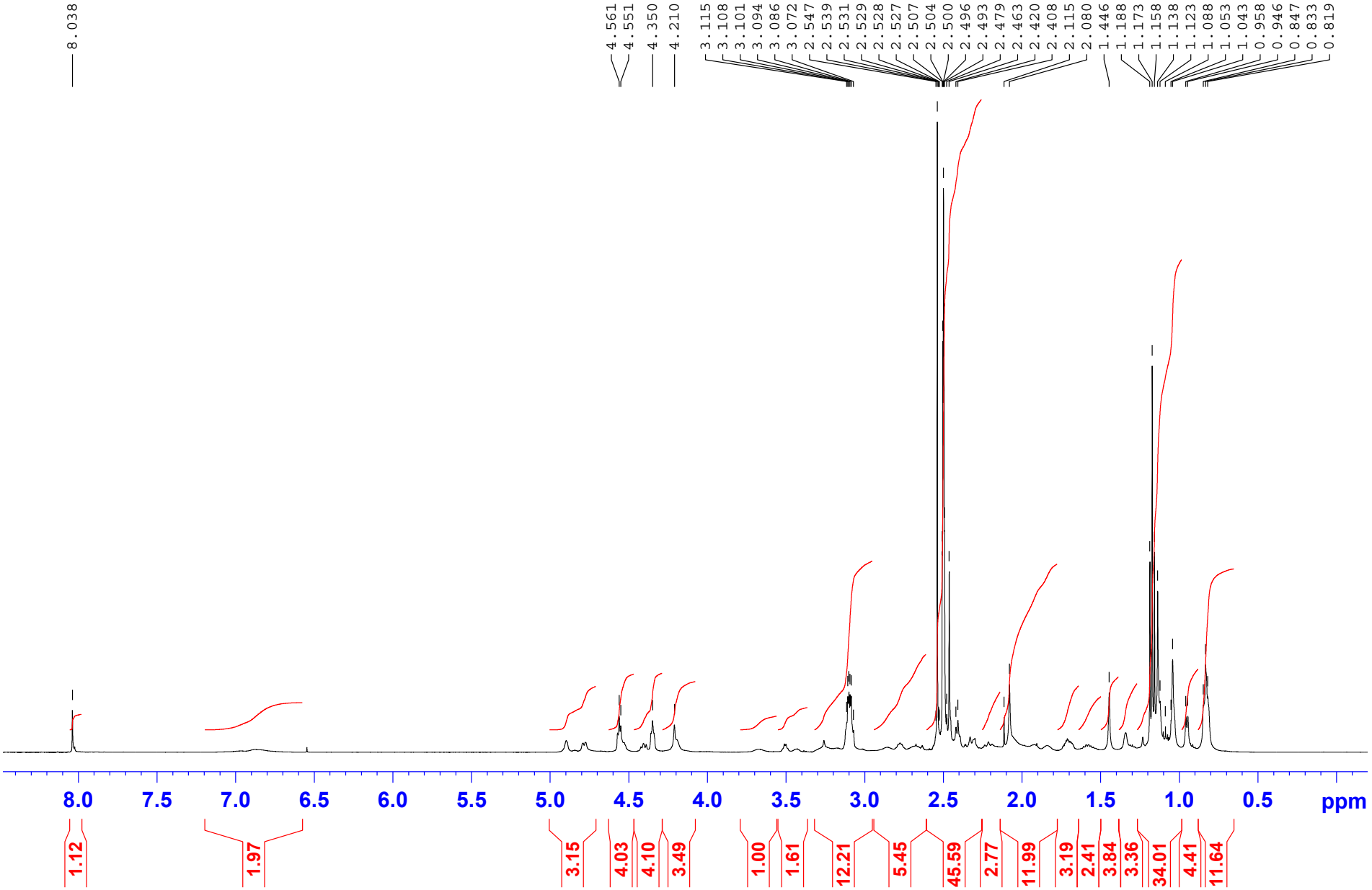


Figure S63. ^{1}H NMR spectra of **5g** (500 MHz, DMSO-d_6).

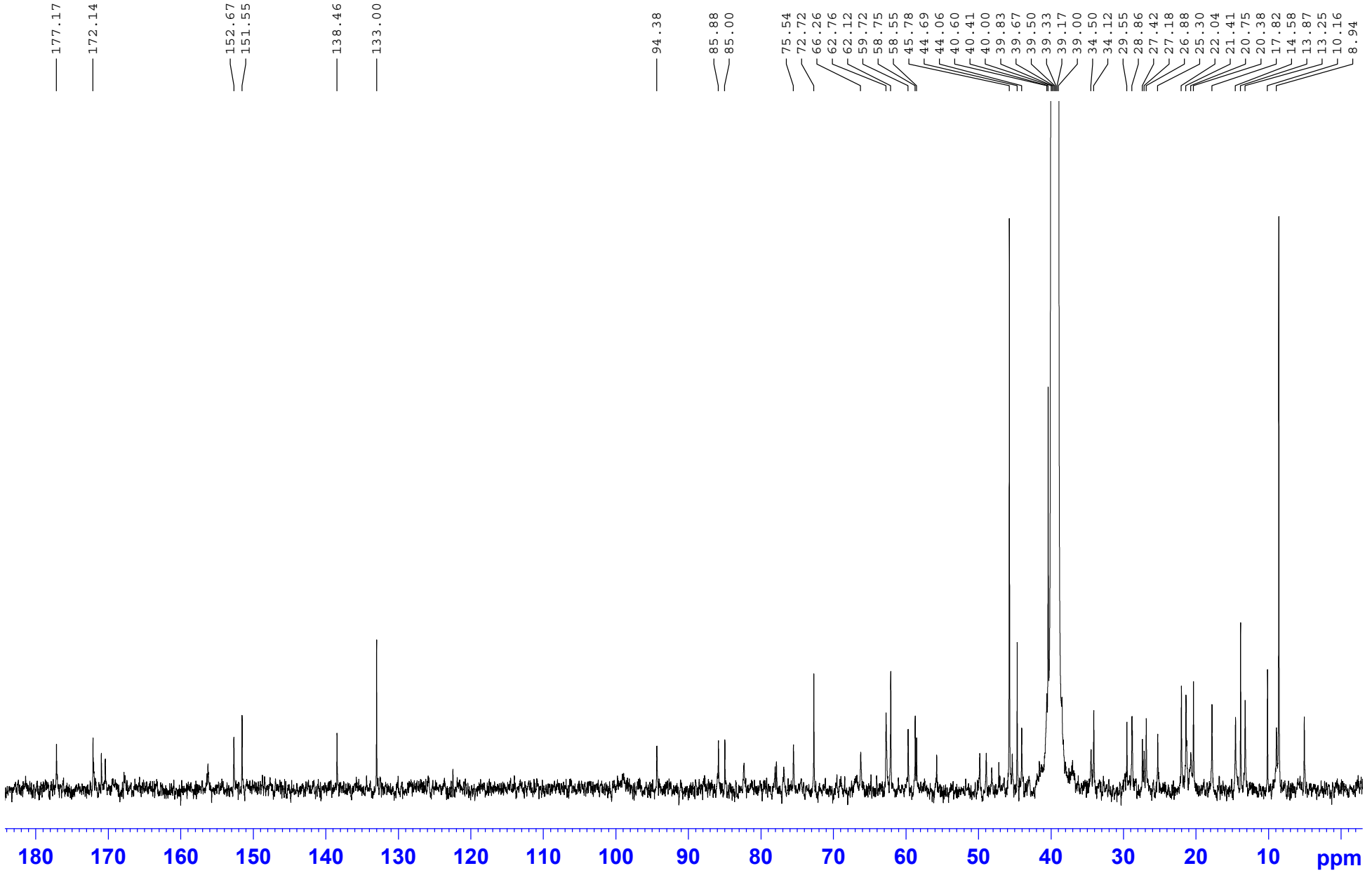


Figure S64. ^{13}C NMR spectra of **5g** (125 MHz, DMSO-d_6).

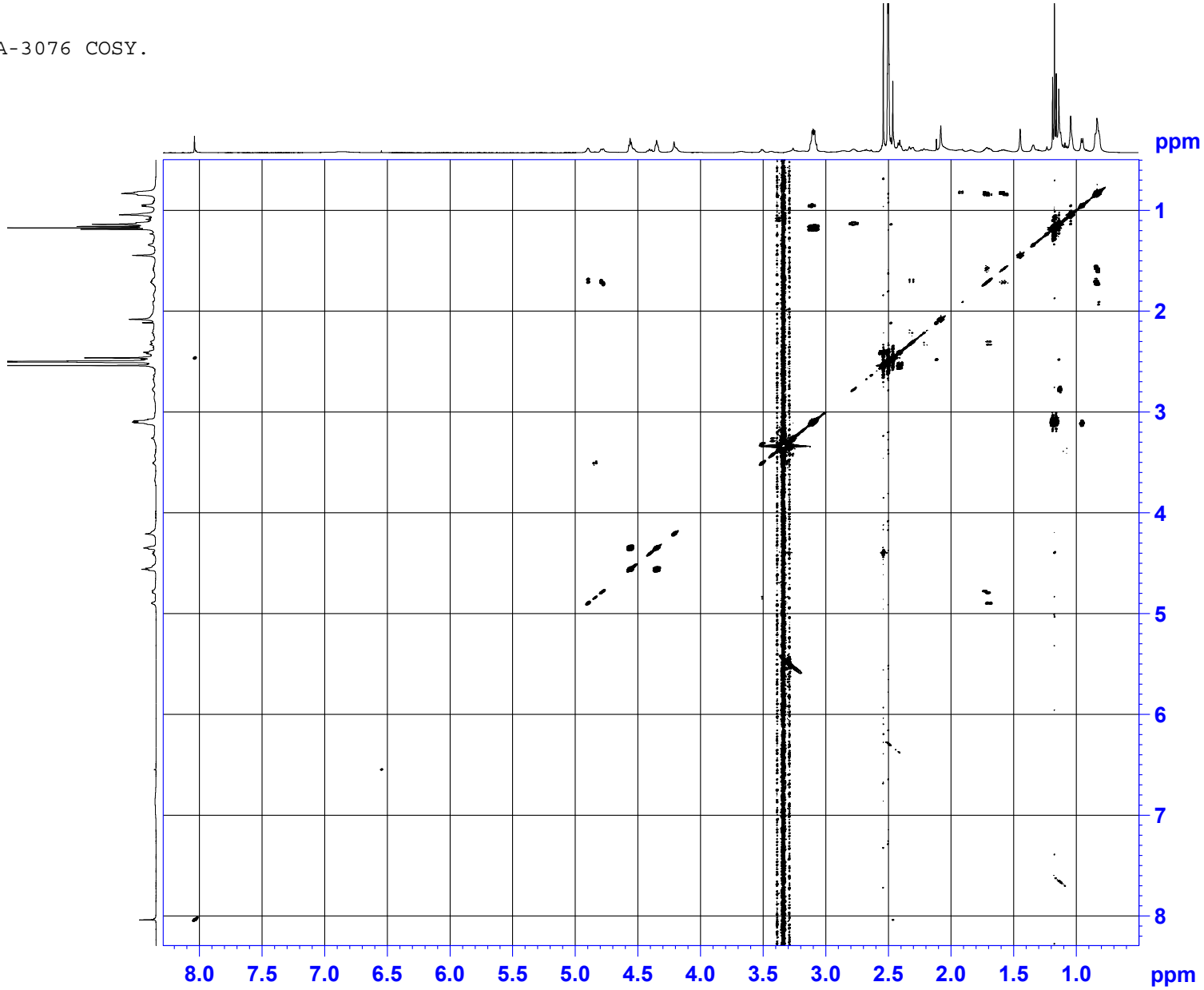


Figure S65. ^{1}H-^{1}H COSY NMR spectrum of **5g** (DMSO-d_6).

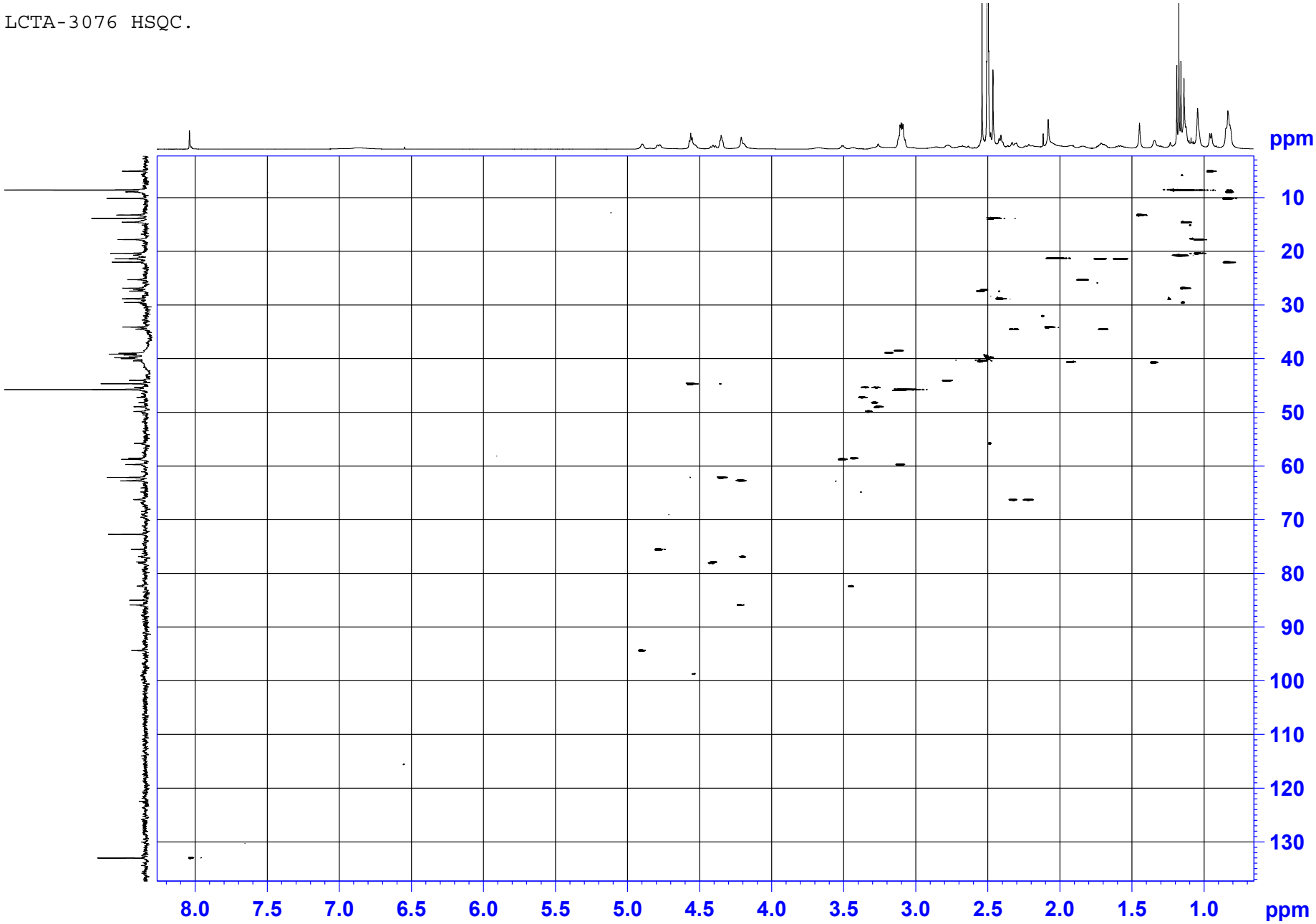


Figure S66. ^{1}H-^{13}C HSQC NMR spectrum of **5g** (DMSO-d_6).

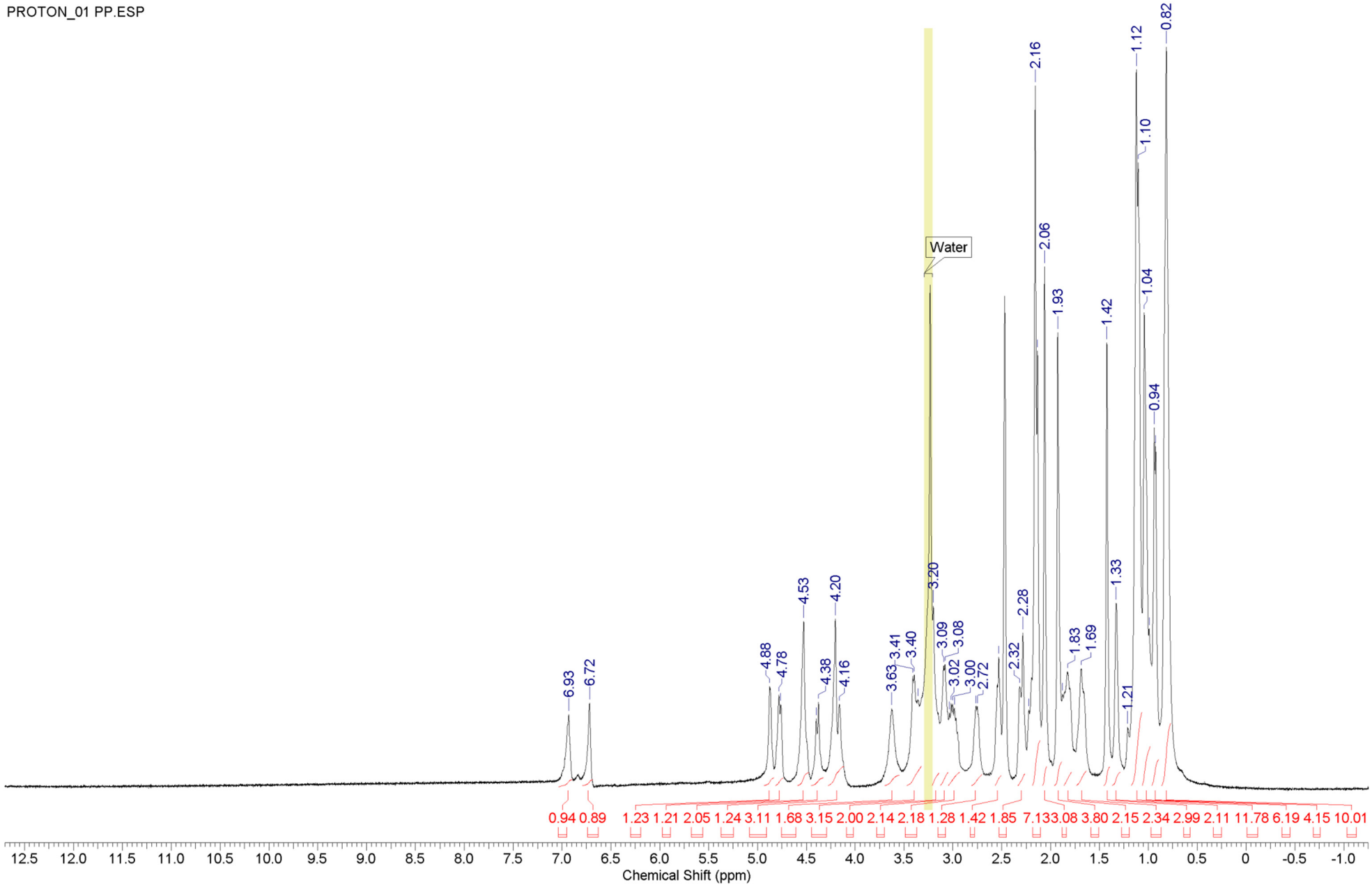


Figure S67. ^{1}H NMR spectra of **6** (400 MHz, DMSO-d_6).

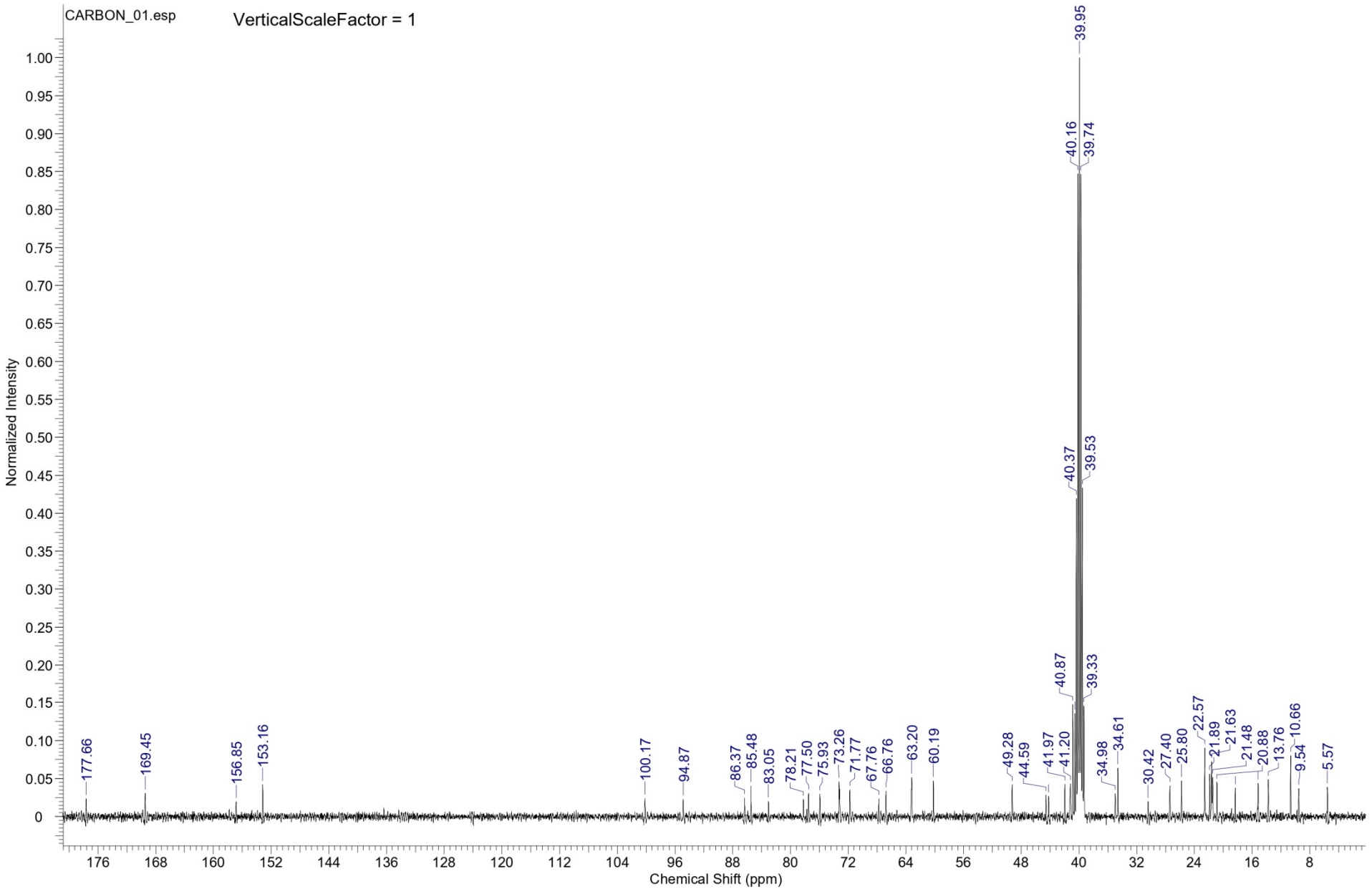


Figure S68. ^{13}C NMR spectra of **6** (100 MHz, DMSO-d_6).

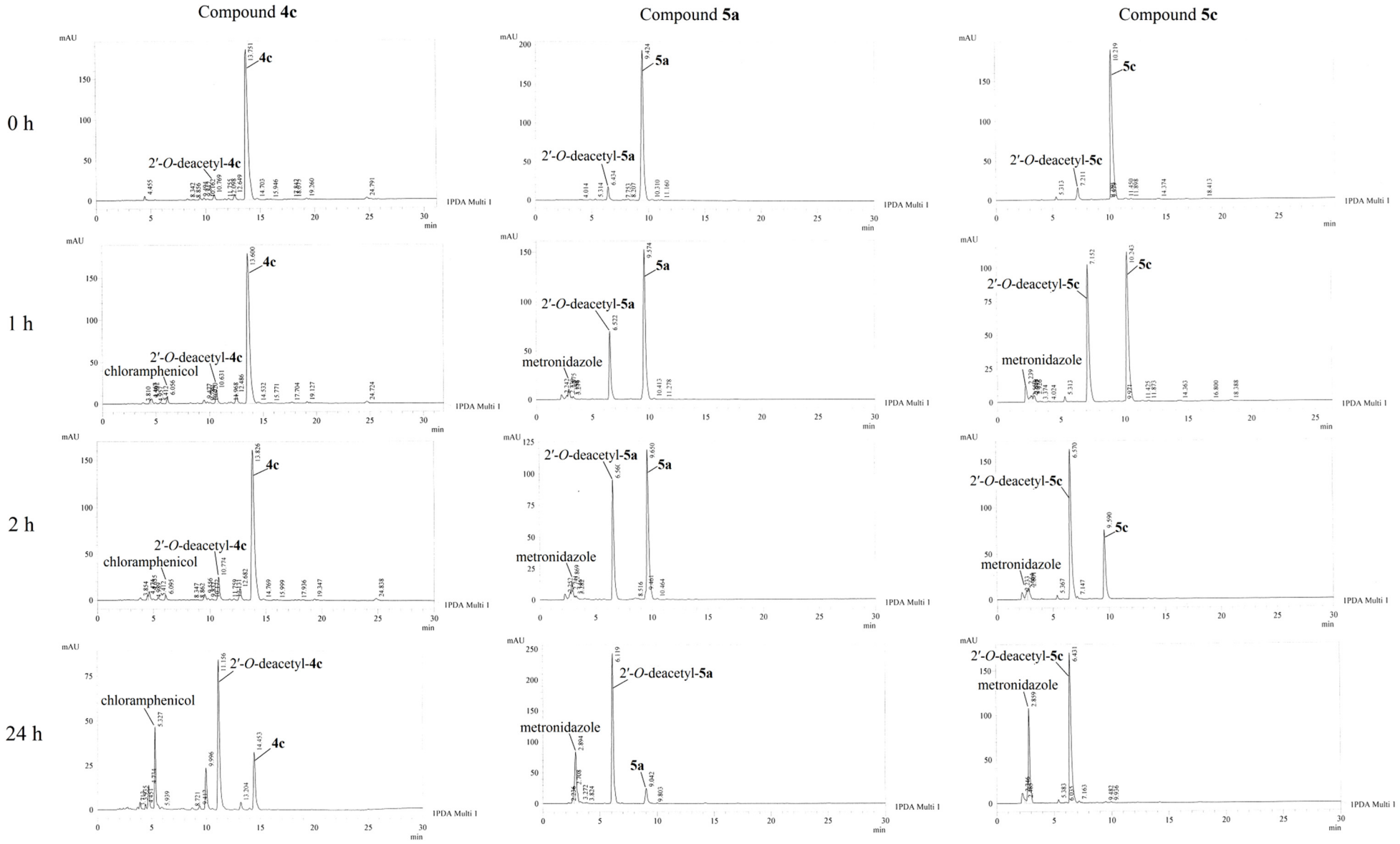


Figure S69. HPLC analysis of compounds **4c**, **5a**, **5c** stability in PBS buffer (pH 7.4) during incubation at 37 °C.

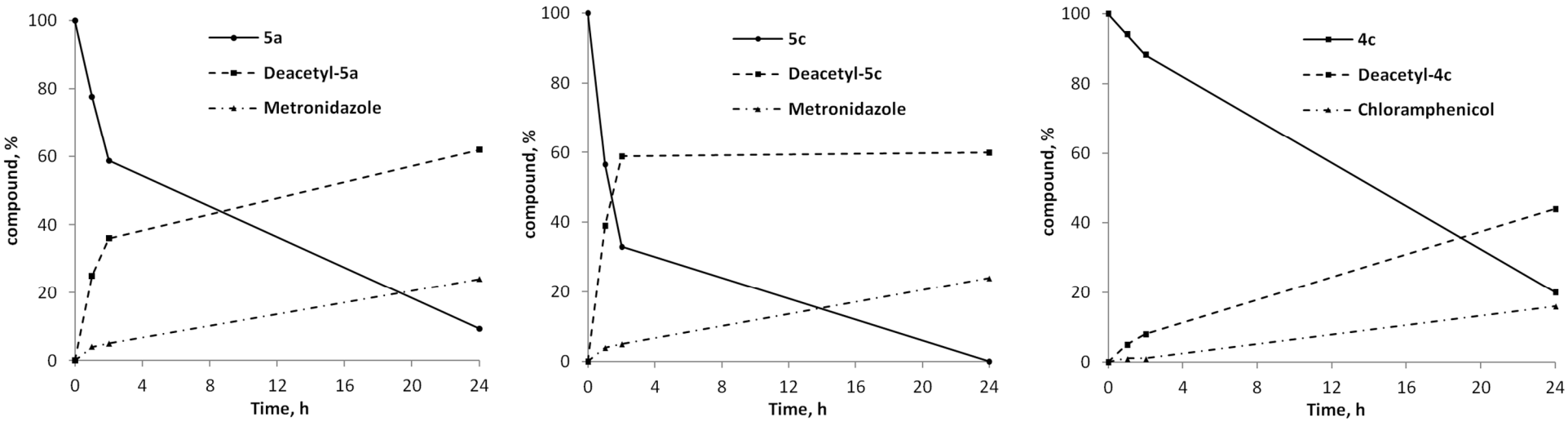


Figure S70. Stability of compounds **4c**, **5a** and **5c** in PBS buffer (pH 7.4) upon incubation at 37 °C represented as kinetic curves.

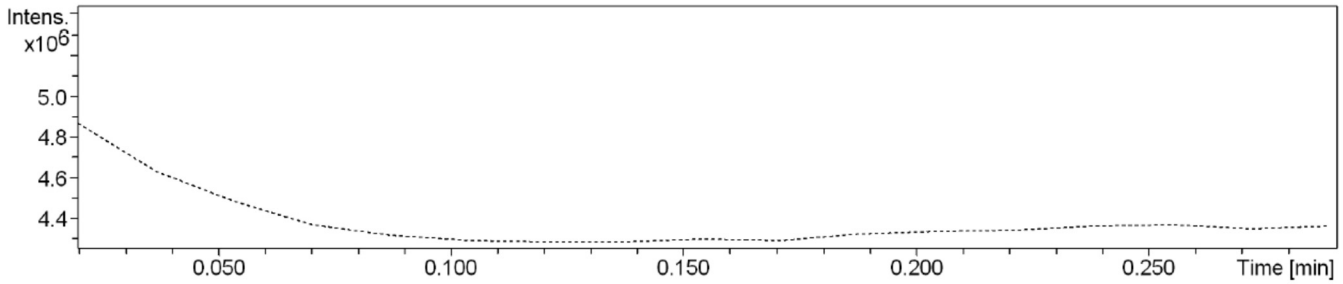
Compound Spectrum List Report

Analysis Info

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Comment			

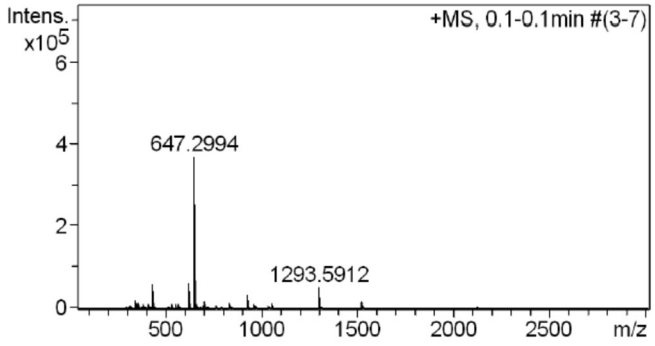
Acquisition Parameter

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Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

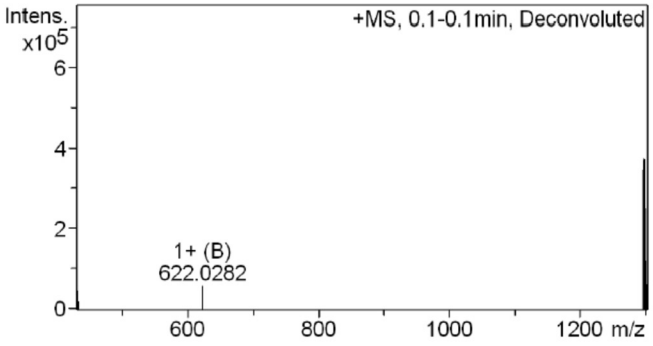


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	647.2994

+MS, 0.1-0.1min #(3-7)



#	m/z	Res.	S/N	I	I %
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2	622.0284	7531	422.7	59946	16.3
3	647.2994	7116	2516.0	368502	100.0
4	647.8009	7160	1715.7	251531	68.3
5	648.2990	7140	2244.2	329160	89.3
6	648.7994	7295	1247.6	183219	49.7
7	649.2987	7400	699.7	102932	27.9
8	649.7990	7644	298.3	44035	11.9
9	1293.5912	8480	517.3	52054	14.1
10	1295.5901	8993	484.4	48726	13.2



#	m/z	Res.	S/N	I	I %
1	431.1589			56790	19.8
2	622.0282			59946	20.9
3	1294.5874			286682	100.0

Figure S71. HRMS-ESI of the **4c** metabolite corresponding to 2′-*O*-deacetyl-**4c**.

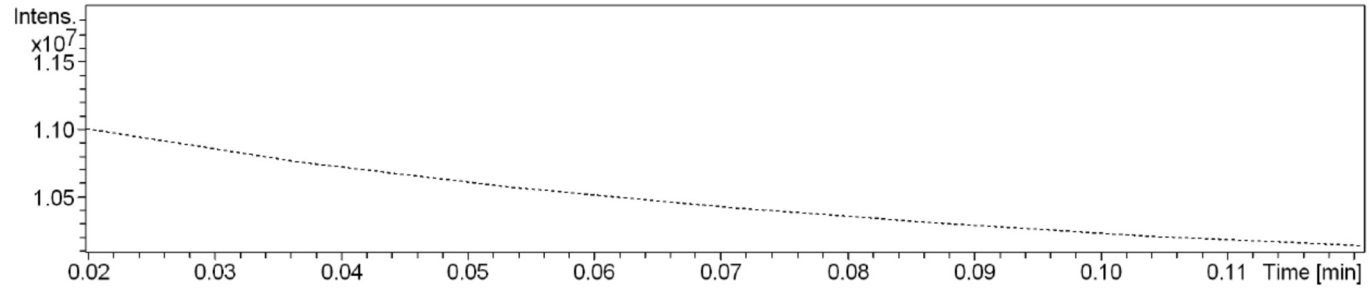
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\AST\3004(1).d	Acquisition Date	1/16/2024 9:53:18 PM
Method	tune_norm.m	Operator	Mitrokhov
Sample Name	Tune wide	Instrument / Ser#	micrOTOF-Q II 10225
Comment			

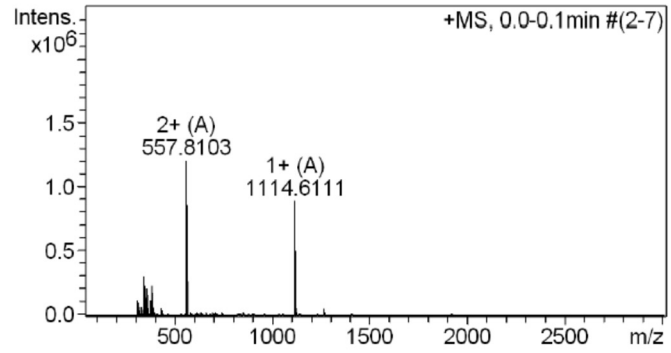
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

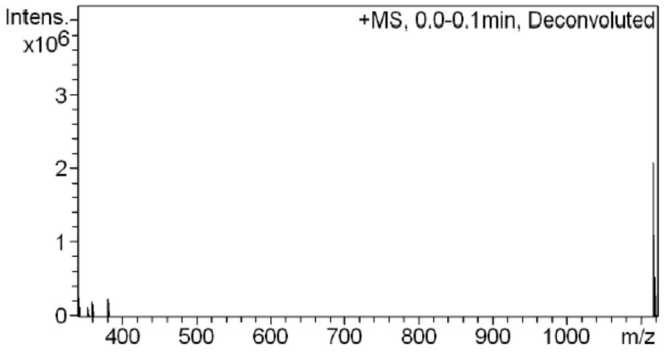


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.1	n.a.	Average spectrum	n.a.	n.a.	n.a.	557.8103

+MS, 0.0-0.1min #(2-7)



#	m/z	Res.	S/N	I	I %
1	341.3048	6093	1752.1	302844	25.1
2	353.2653	6254	772.1	137317	11.4
3	359.3149	6149	1127.1	203237	16.9
4	381.2965	6238	1225.2	232046	19.3
5	557.8103	5633	4834.0	1205134	100.0
6	558.3107	6276	3730.8	929747	77.1
7	558.8114	7002	1469.4	366195	30.4
8	1114.6111	7574	5810.3	889891	73.8
9	1115.6138	7742	3610.5	552209	45.8
10	1116.6170	8054	1219.7	186492	15.5



#	m/z	Res.	S/N	I	I %
1	341.3048			302844	14.5
2	353.2668			137317	6.6
3	359.3146			203237	9.7
4	381.2964			232046	11.1
5	1114.6111			2095025	100.0

Figure S72. HRMS-ESI of the **5a** metabolite corresponding to 2′-*O*-deacetyl-**5a**.

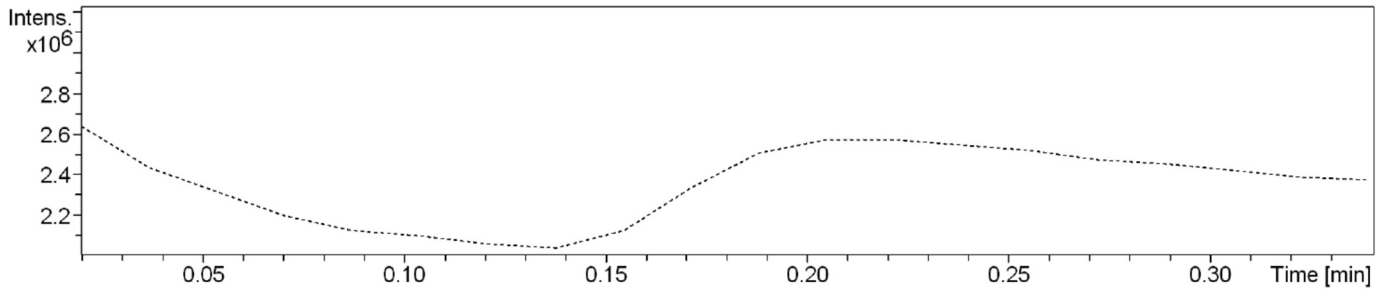
Compound Spectrum List Report

Analysis Info

Analysis Name	D:\Data\AST\AST-1.d	Acquisition Date	1/12/2024 12:16:22 PM
Method	tune_norm.m	Operator	Mitrokhov
Sample Name	Tune wide	Instrument / Ser#	micrOTOF-Q II 10225
Comment			

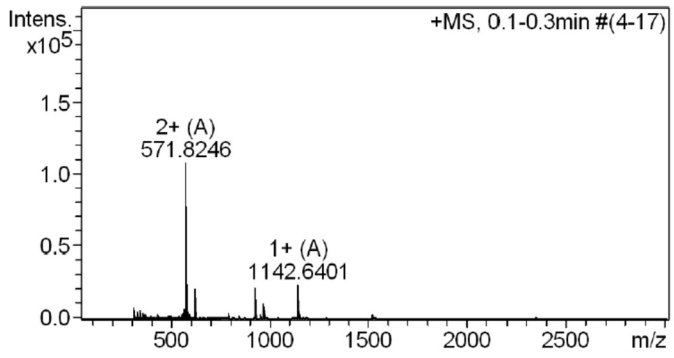
Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active	Set Capillary	4500 V	Set Dry Heater	180 °C
Scan Begin	50 m/z	Set End Plate Offset	-500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set Collision Cell RF	550.0 Vpp	Set Divert Valve	Source

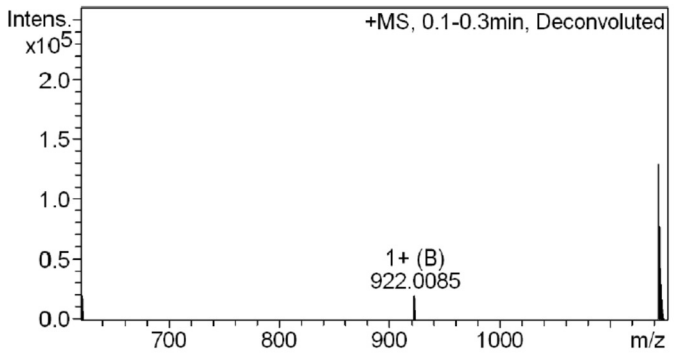


#	RT [min]	Area	Int. Type	Intens.	S/N	Chromatogram	Max. m/z
n.a.	0.2	n.a.	Average spectrum	n.a.	n.a.	n.a.	571.8246

+MS, 0.1-0.3min #(4-17)



#	m/z	Res.	S/N	I	I %
1	313.2730	5666	114.4	7321	6.8
2	571.8246	6549	1082.5	107576	100.0
3	572.3260	6469	672.4	66871	62.2
4	572.8285	6552	252.5	25253	23.5
5	573.3280	6348	75.1	7696	7.2
6	622.0268	6863	219.7	20292	18.9
7	922.0086	7642	323.5	21837	20.3
8	967.5352	7679	157.0	10648	9.9
9	1142.6401	7638	359.7	23357	21.7
10	1143.6425	7670	231.5	15110	14.0



#	m/z	Res.	S/N	I	I %
1	622.0265			20292	15.5
2	922.0085			21836	16.7
3	1142.6413			130933	100.0

Figure S73. HRMS-ESI of the **5c** metabolite corresponding to 2′-*O*-deacetyl-**5c**.

Table S3. Antibacterial activity (MIC, μg/mL) of AZT–MNZ conjugates **5a, 5c** and their 2′-*O*-deacetyl metabolites.

Strain	AZT	**5a**	2′-*O*-deacetyl-**5a**	**5c**	2′-*O*-deacetyl-**5c**
S. pneumoniae ATCC 49619	0.03	0.125	0.125	0.25	0.125
S. pneumoniae ATCC 6305	0.03	0.125	0.125	0.125	0.125
S. agalactiae 1Cp	0.03	0.5	1	1	1

Supplementary Methods

Analysis of Kinetic Stability

The analysis of kinetic stability of azithromycin derivatives **4a**, **5a** and **5c** was carried out essentially as previously described [1]. Briefly, hybrid molecules **4a**, **5a**, **5c** (1 mg/mL) were incubated in isotonic phosphate buffer (PBS, pH 7.4) at 37 °C during 0, 1, 2 and 24 h. The ionic strength of the buffer solution was adjusted to 0.5 by adding the calculated amount of KCl. The aliquots at appropriate incubation intervals were analyzed by HPLC, system (A): A – HCO_2NH_4 (0.2%) pH = 4.5, B – MeCN, concentration of B varied from 40% to 90% for 30 min. The peaks of metabolites were collected and analyzed using HRMS (ESI).

Supplementary References

1. Mahfouz, N.M.; Aboul-Fadl, T.; Diab, A.K. Metronidazole twin ester prodrugs: synthesis, physicochemical properties, hydrolysis kinetics and antigiardial activity. *European Journal of Medicinal Chemistry* **1998**, *33*, 675-683, doi: 10.1016/S0223-5234(98)80026-3.