Supporting Information

Antibacterial Kaneoheoic acids A-F from a Hawaiian Fungus *Fusarium* sp. FM701

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Figure S1: HRESIMS of compound 1

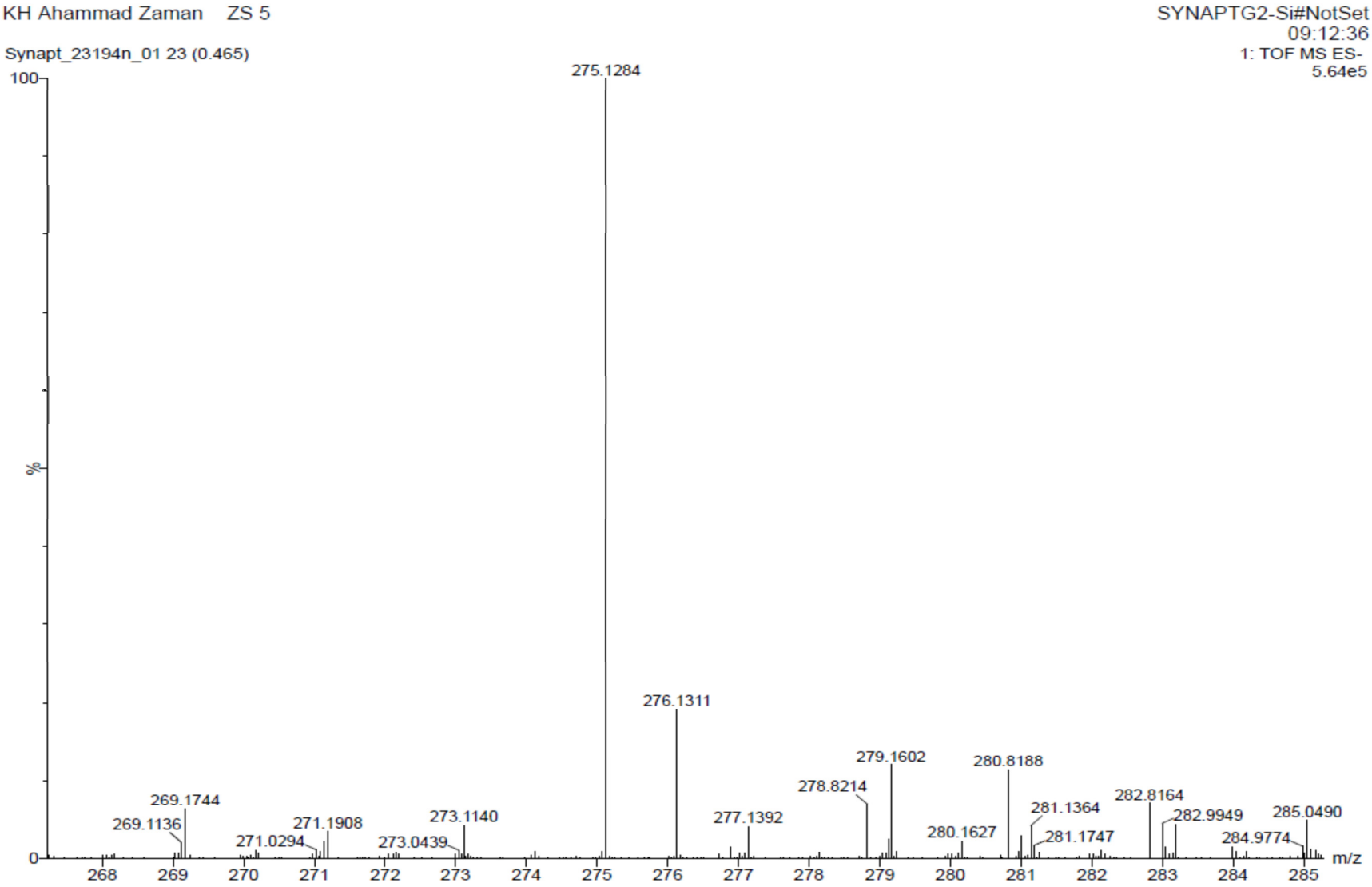

Figure S2: ^{1}H NMR spectrum of compound 1 in CD_3OD (400MHz)

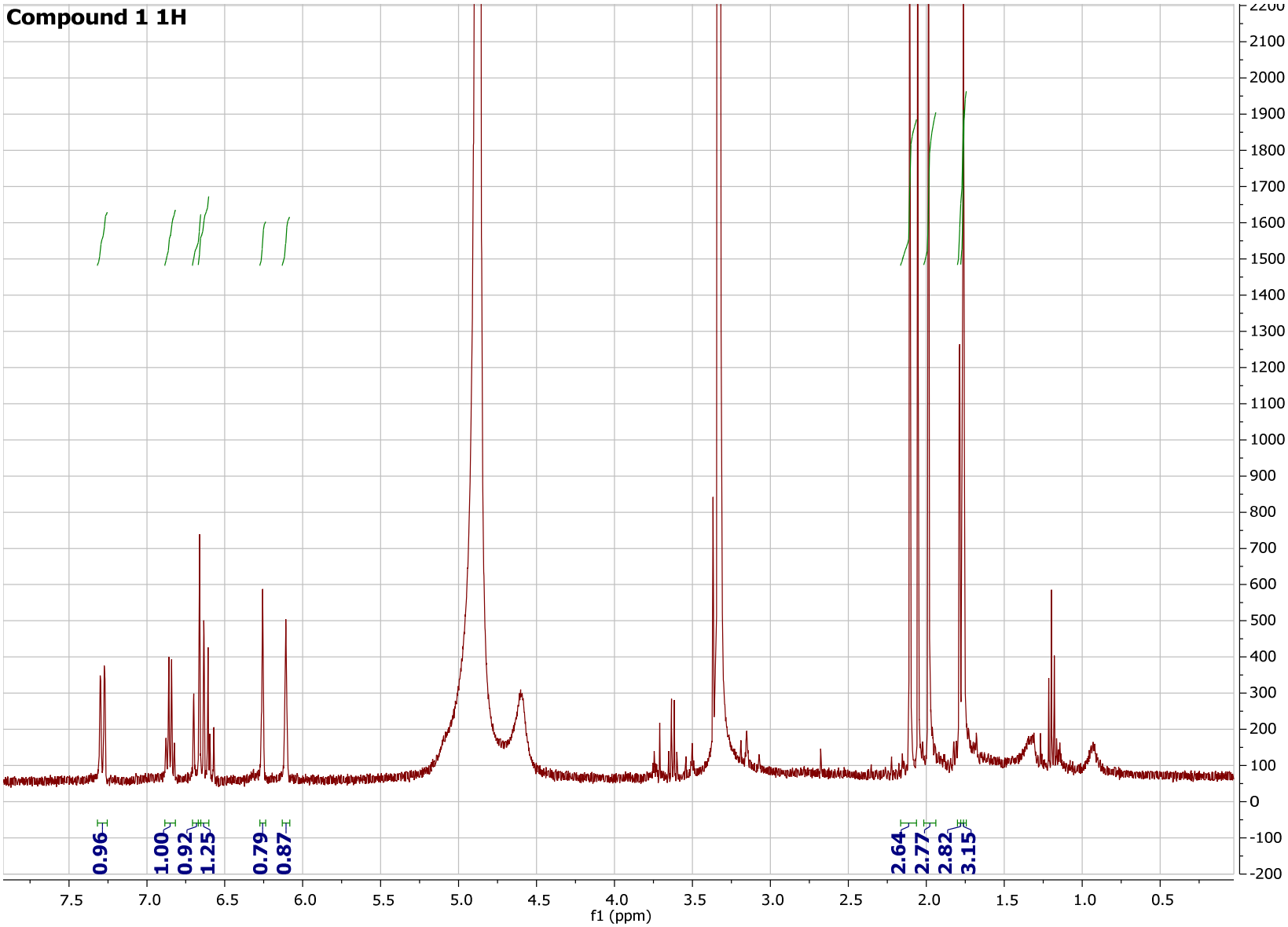

Figure S3: HSQC spectrum of compound 1 in CD_3OD (400MHz)

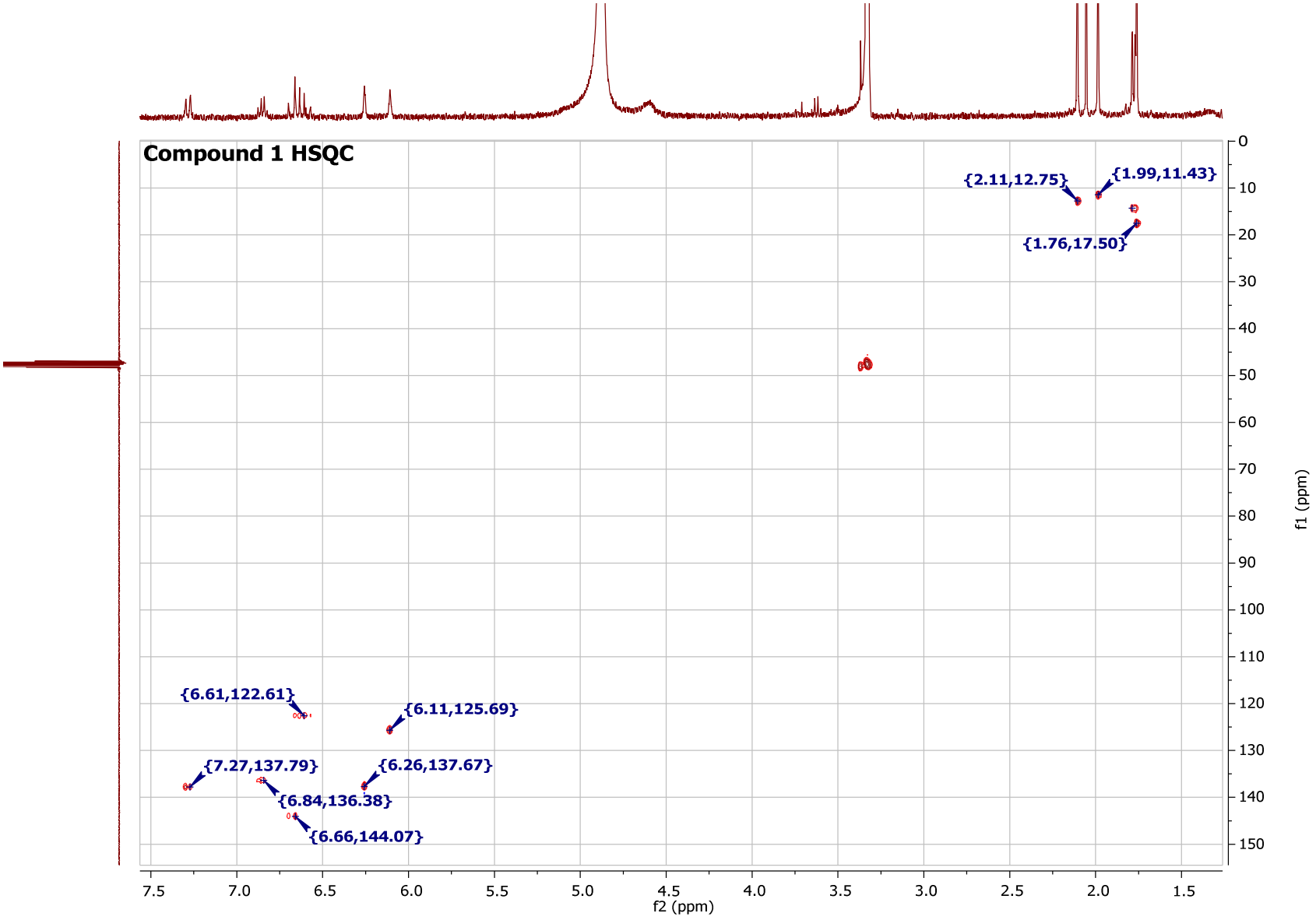

Figure S4: COSY spectrum of compound 1 in CD_3OD (400MHz)

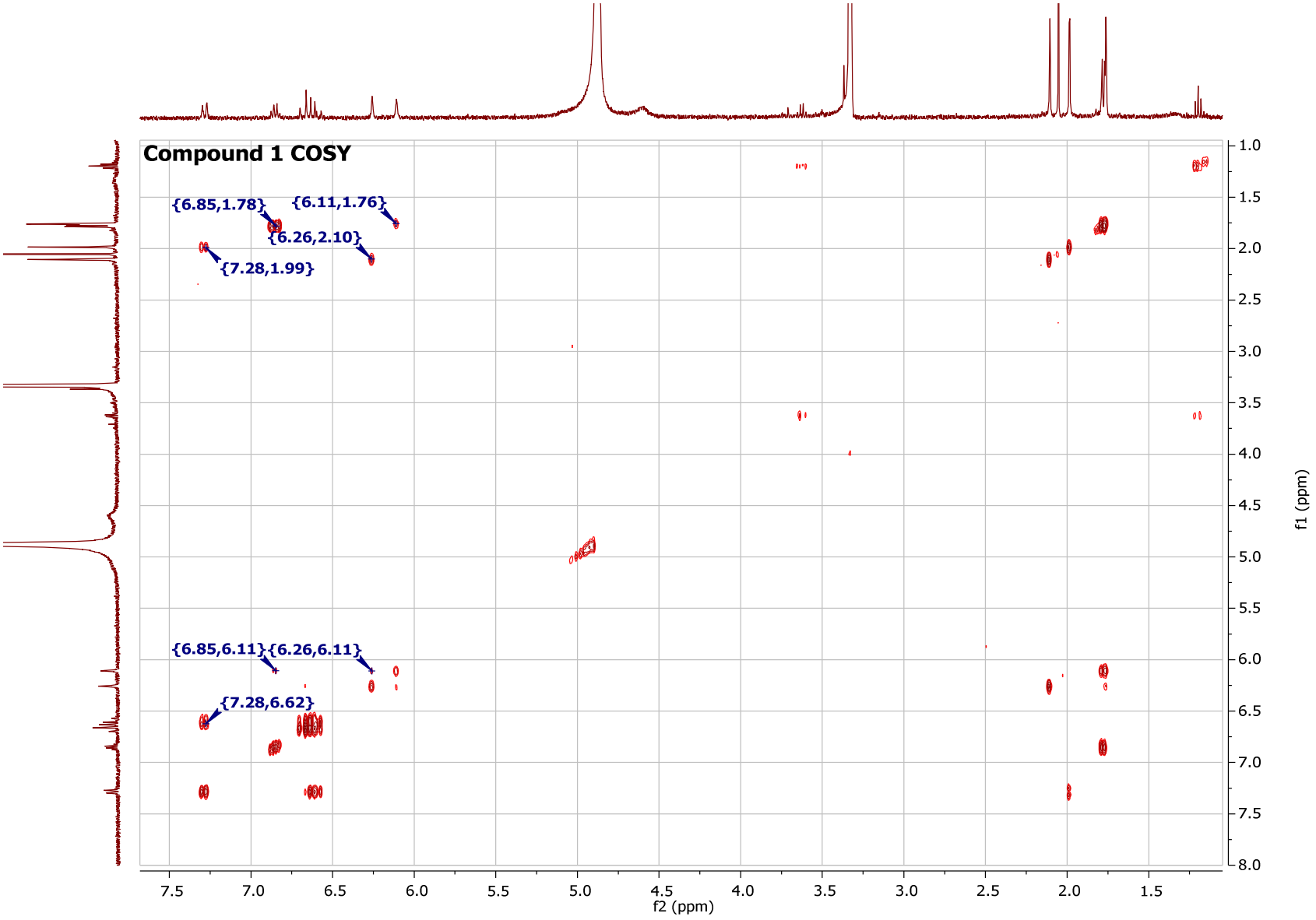

Figure S5: HMBC spectrum of compound 1 in CD_3OD (400MHz)

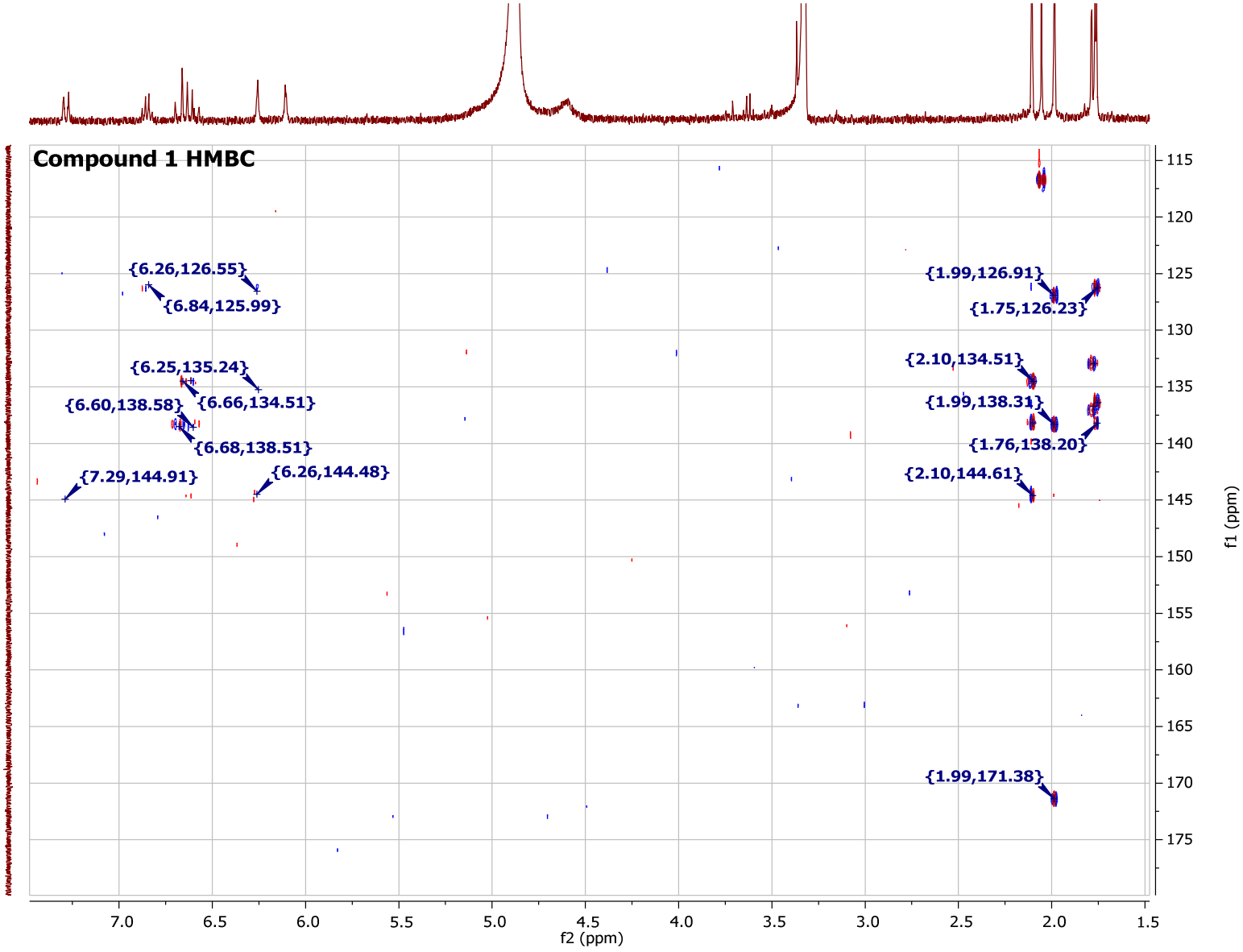

Figure S6: HRESIMS of compound 2

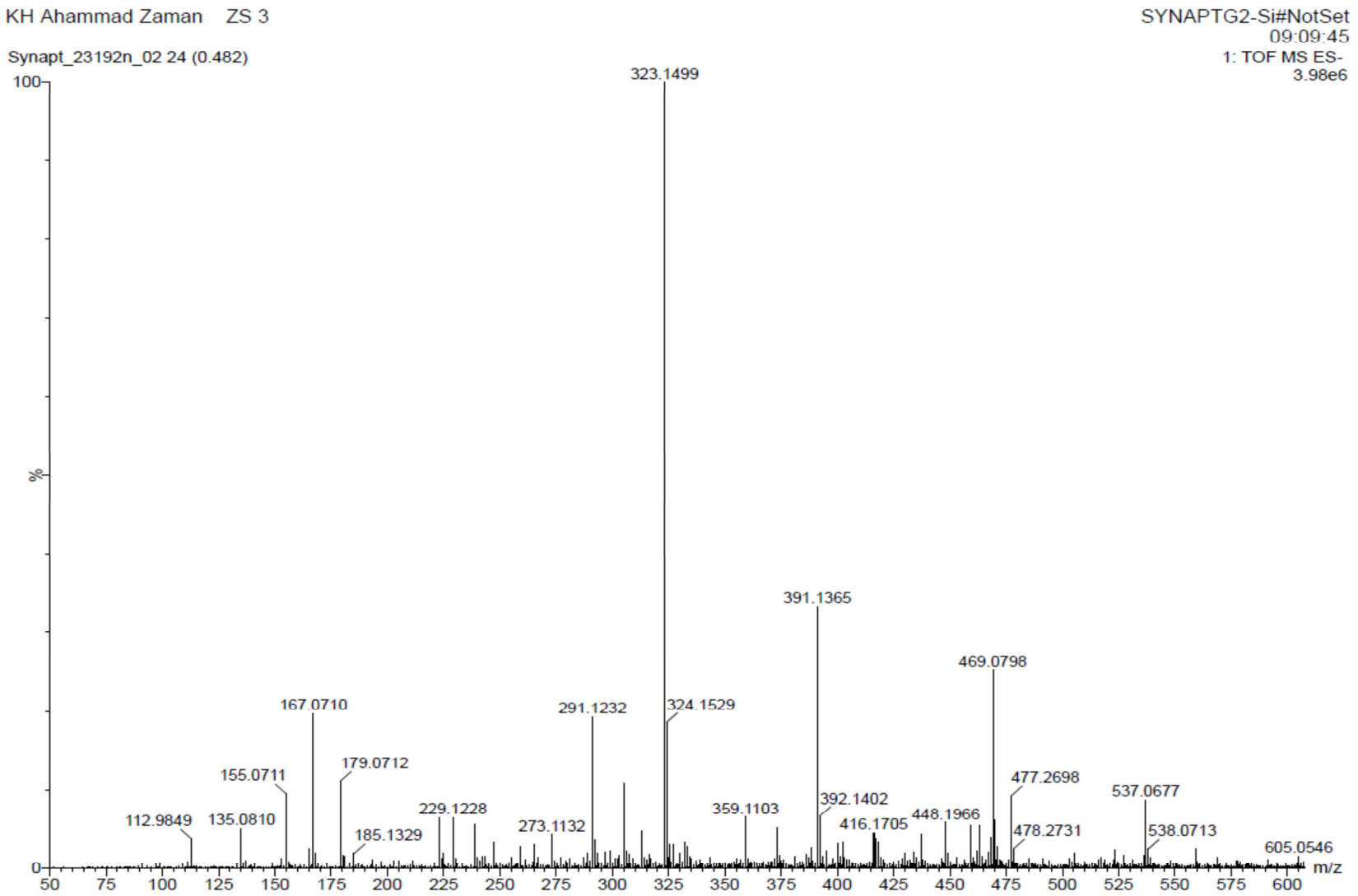

Figure S7: ^{1}H NMR spectrum of compound 2 in CD_3OD (400MHz)

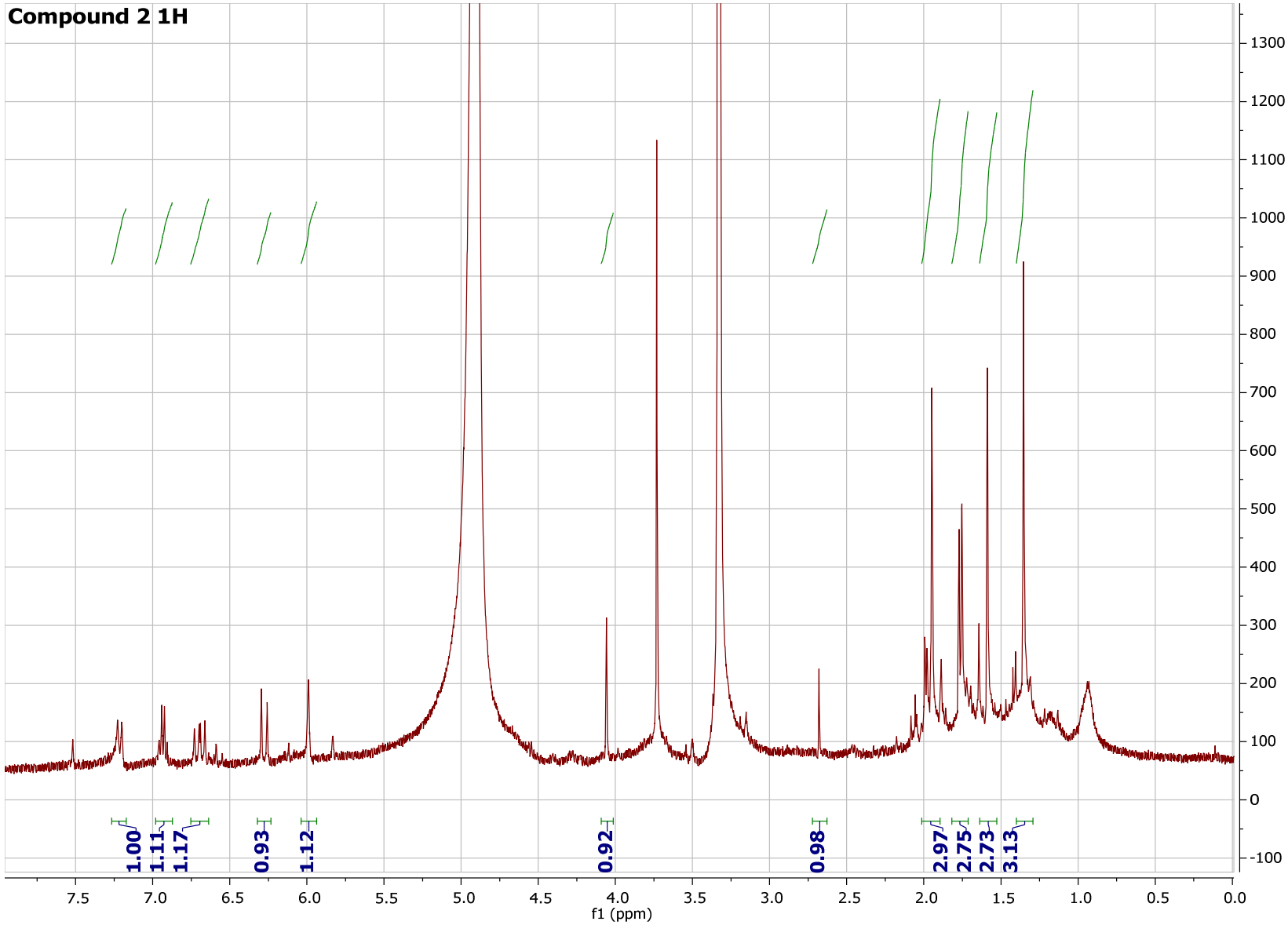

Figure S8: HSQC spectrum of compound 2 in CD_3OD (400MHz)

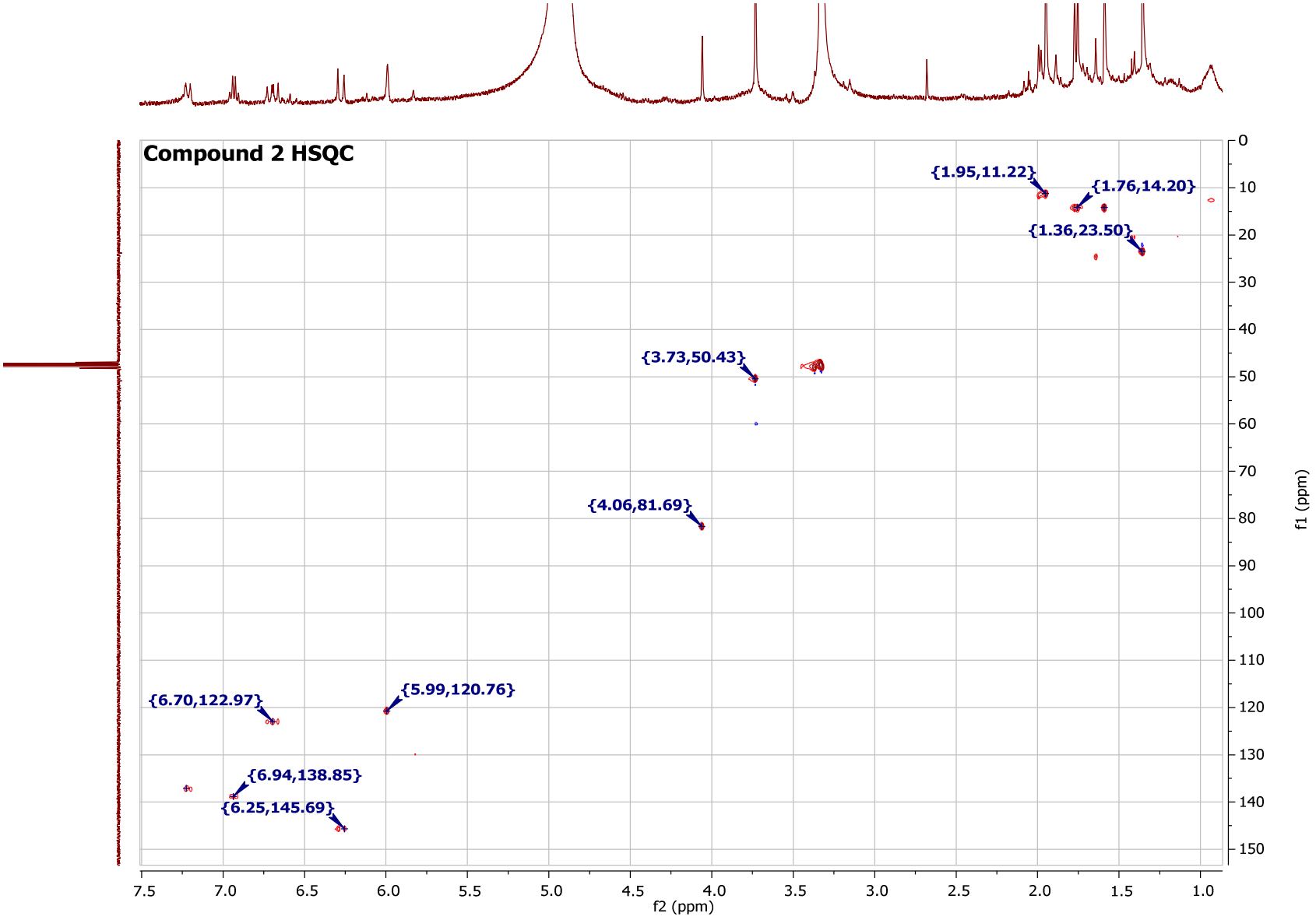

Figure S9: COSY spectrum of compound 2 in CD_3OD (400MHz)

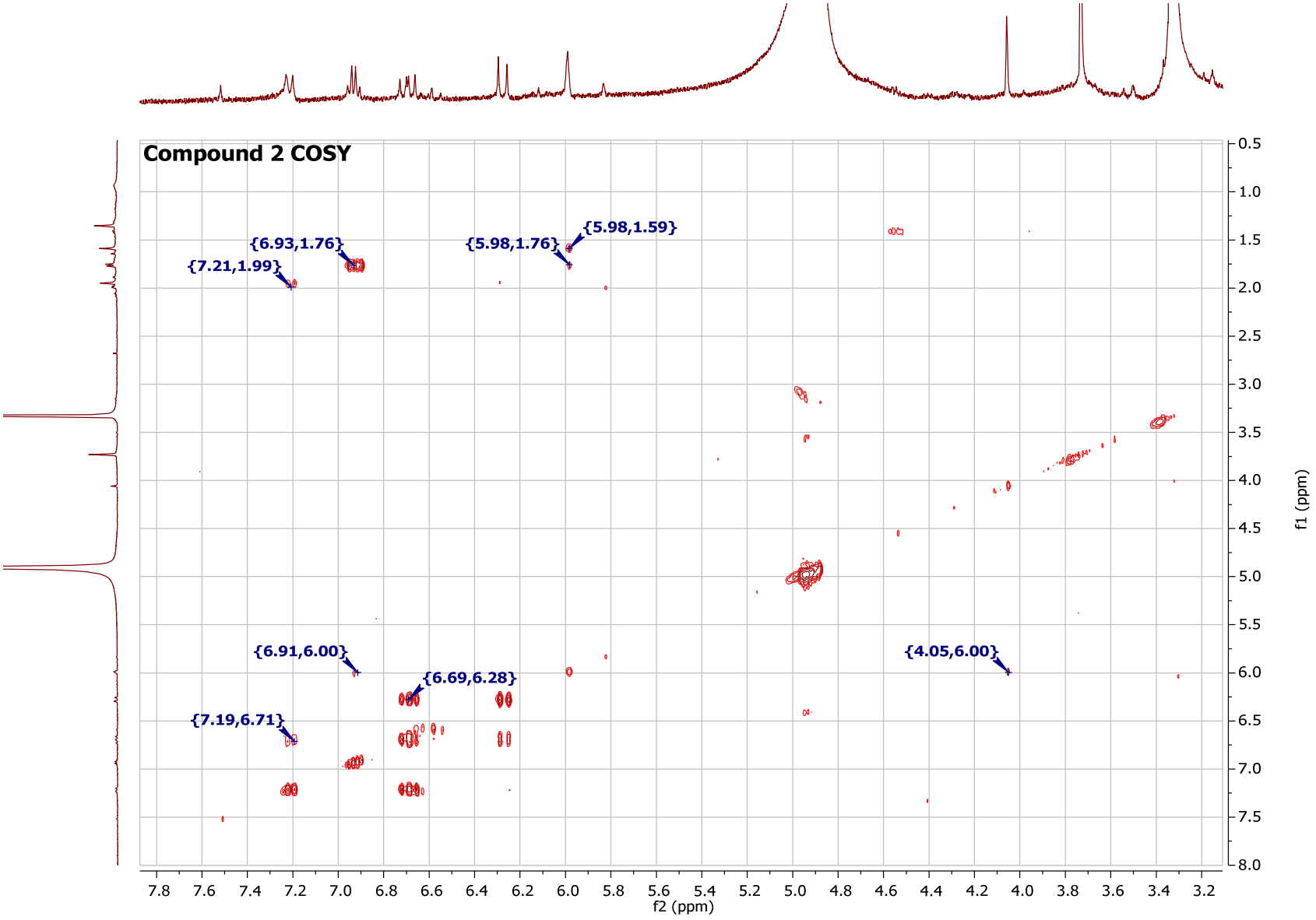

Figure S10: HMBC spectrum of compound 2 in CD_3OD (400MHz)

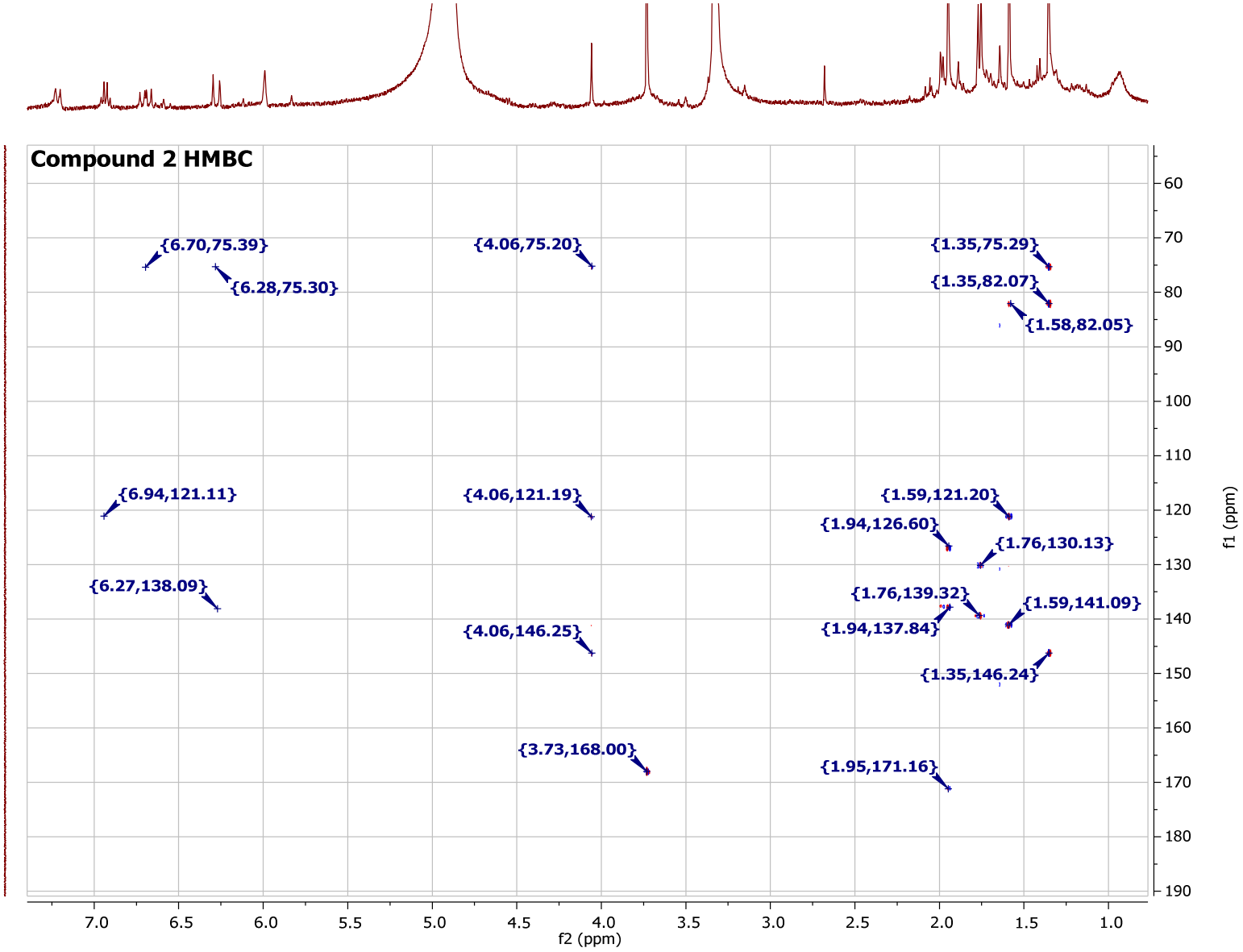

Figure S11: ROESY spectrum of compound 2 in CD_3OD (400MHz)

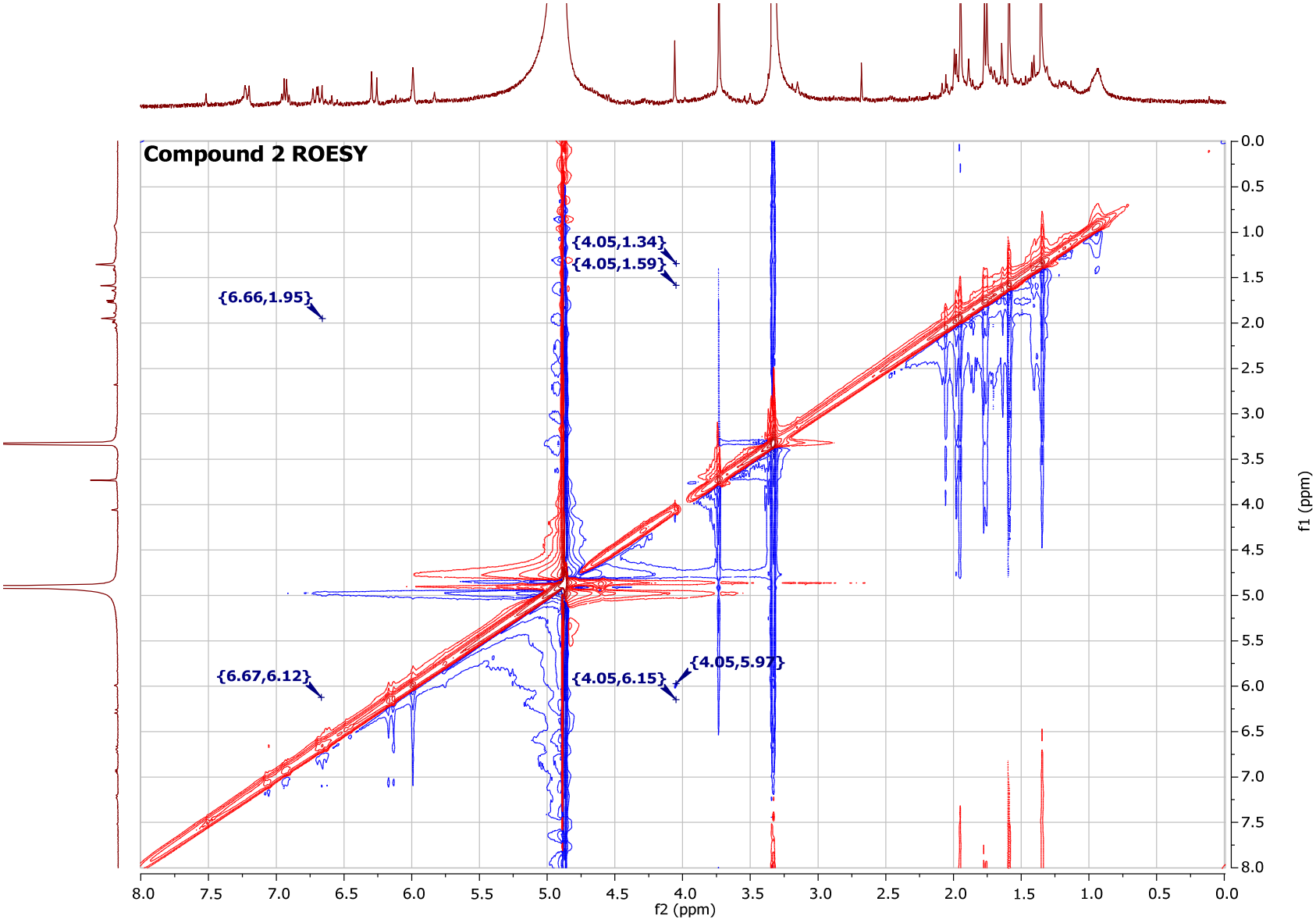

Table S1: Calculated and experimental NMR of compound 2 in CD_3OD (400MHz)

Atom numbers	Calculated NMR				Experimental NMR	
	2SS		2SR		Original	
	13C	1H	13C	1H	13C	1H
1	169.98		170.02		171.1	
2	126.42		126.13		126.6	
3	142.96	7.43	143.10	7.35	137	7.23
4	124.93	6.94	122.99	6.88	138.8	6.7
5	156.15	6.48	151.26	6.23	145.7	6.25
6	79.77		79.20		75.2	
7	86.24	4.07	84.93	4.06	81.7	4.06
8	141.57		143.41		141	
9	131.45	6.24	130.72	6.18	120.7	5.99
10	128.65		128.28		130.1	
11	154.45	6.44	154.99	6.27	138.8	6.94
12	16.78	2.45	16.67	2.42	14.2	1.76
13	12.88	1.92	12.96	1.90	11.2	1.95
15	23.26	1.17	27.79	1.41	23.5	1.36
16	13.51	1.85	12.69	1.73	14.1	1.59
17	169.52		169.54		168	
19	51.60	3.63	51.45	3.60	50.4	3.73

Figure S12: HRESIMS of compound 3

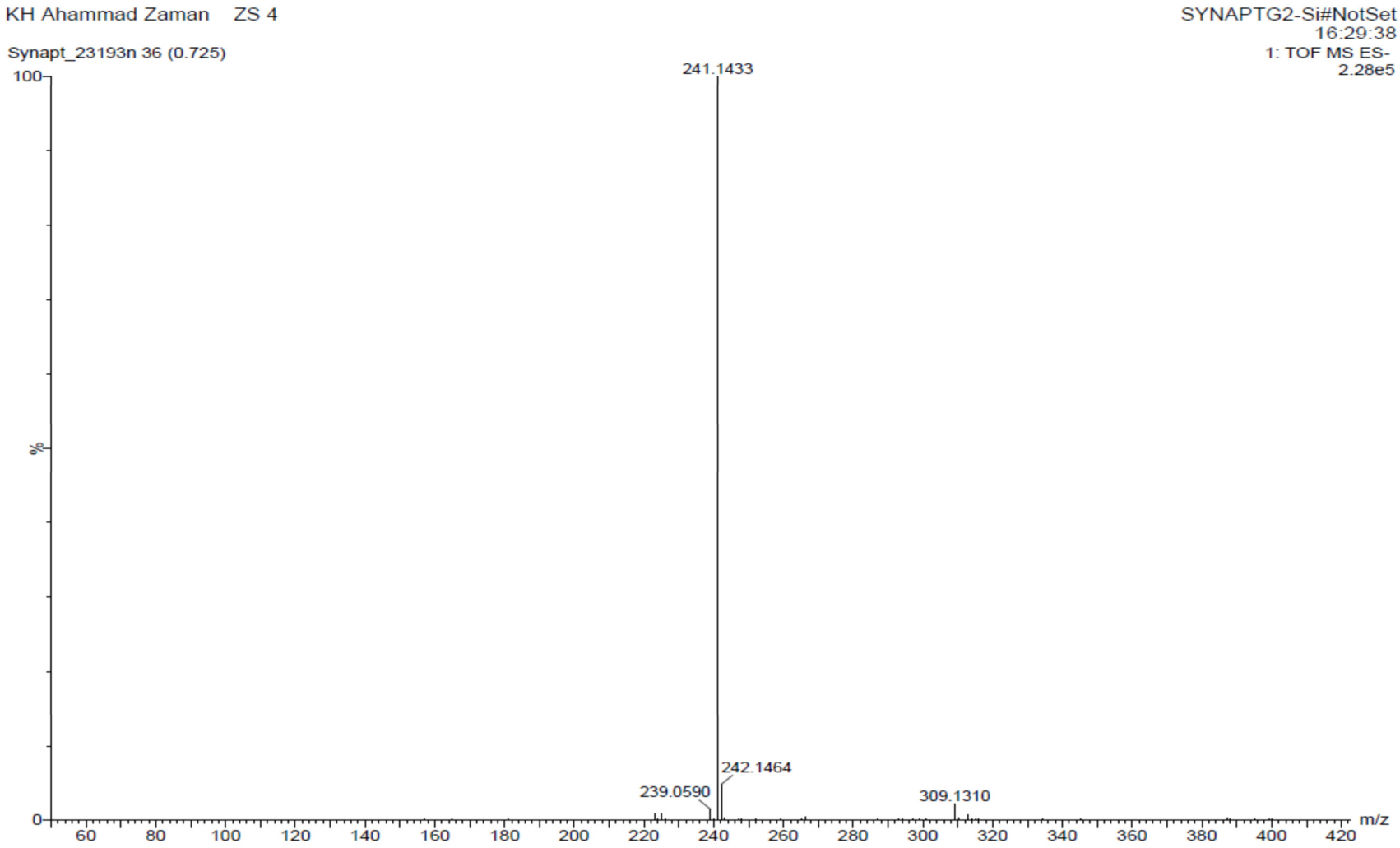

Figure S13: ^{1}H NMR spectrum of compound 3 in CD_3OD (400MHz)

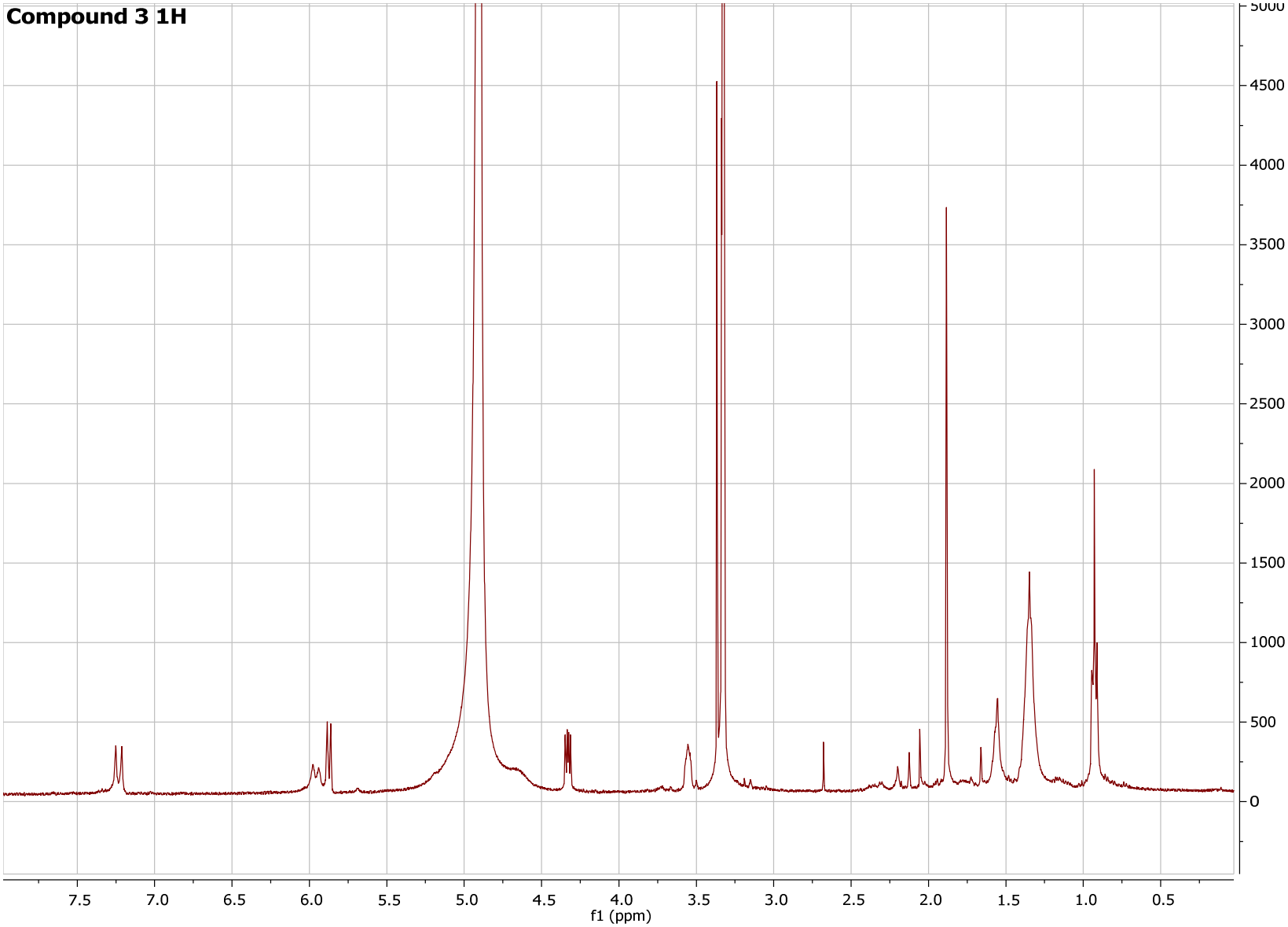

Figure S14: HSQC spectrum of compound 3 in CD_3OD (400MHz)

Figure S15: COSY spectrum of compound 3 in CD_3OD (400MHz)

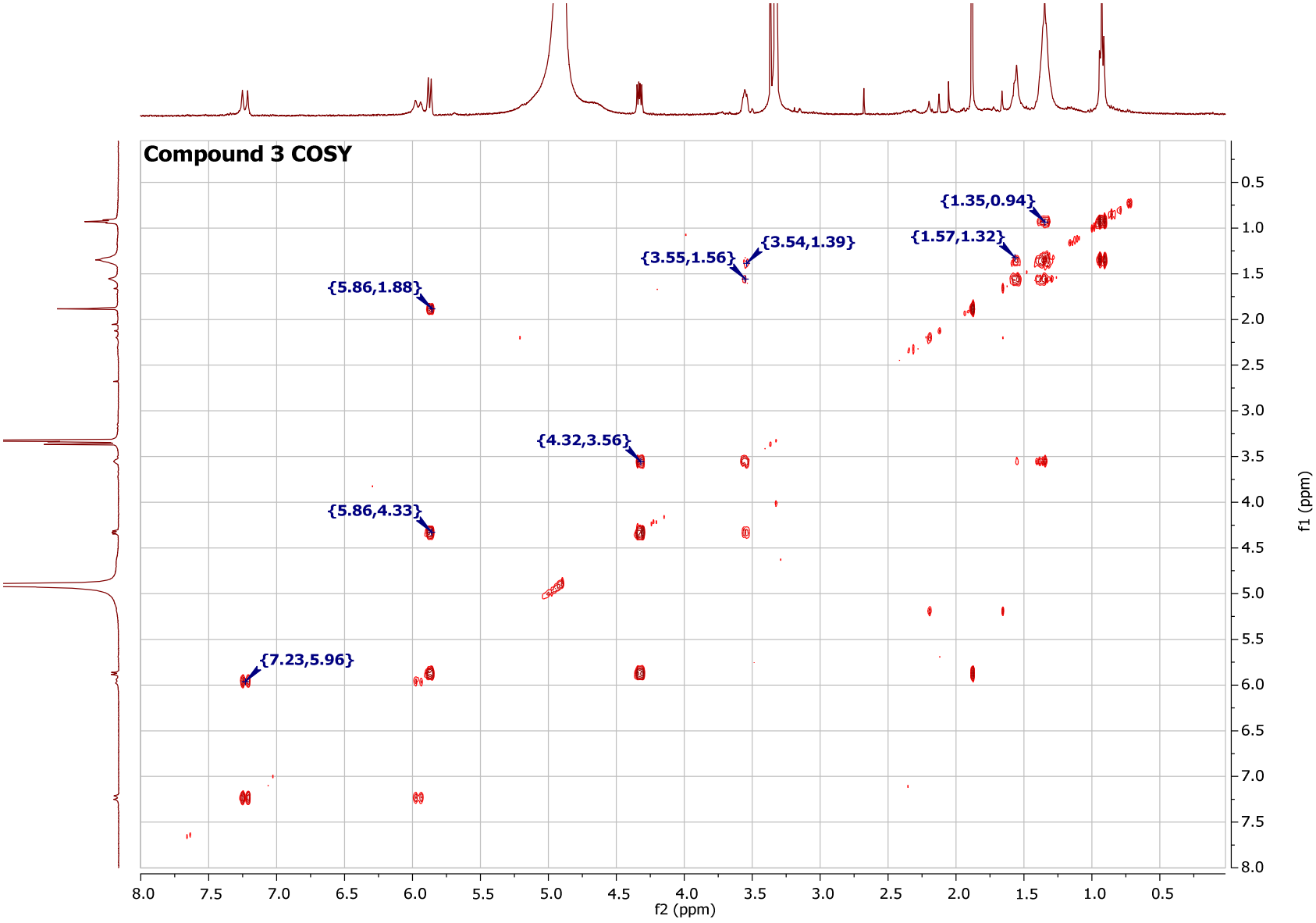

Figure S16: HMBC spectrum of compound 3 in CD_3OD (400MHz)

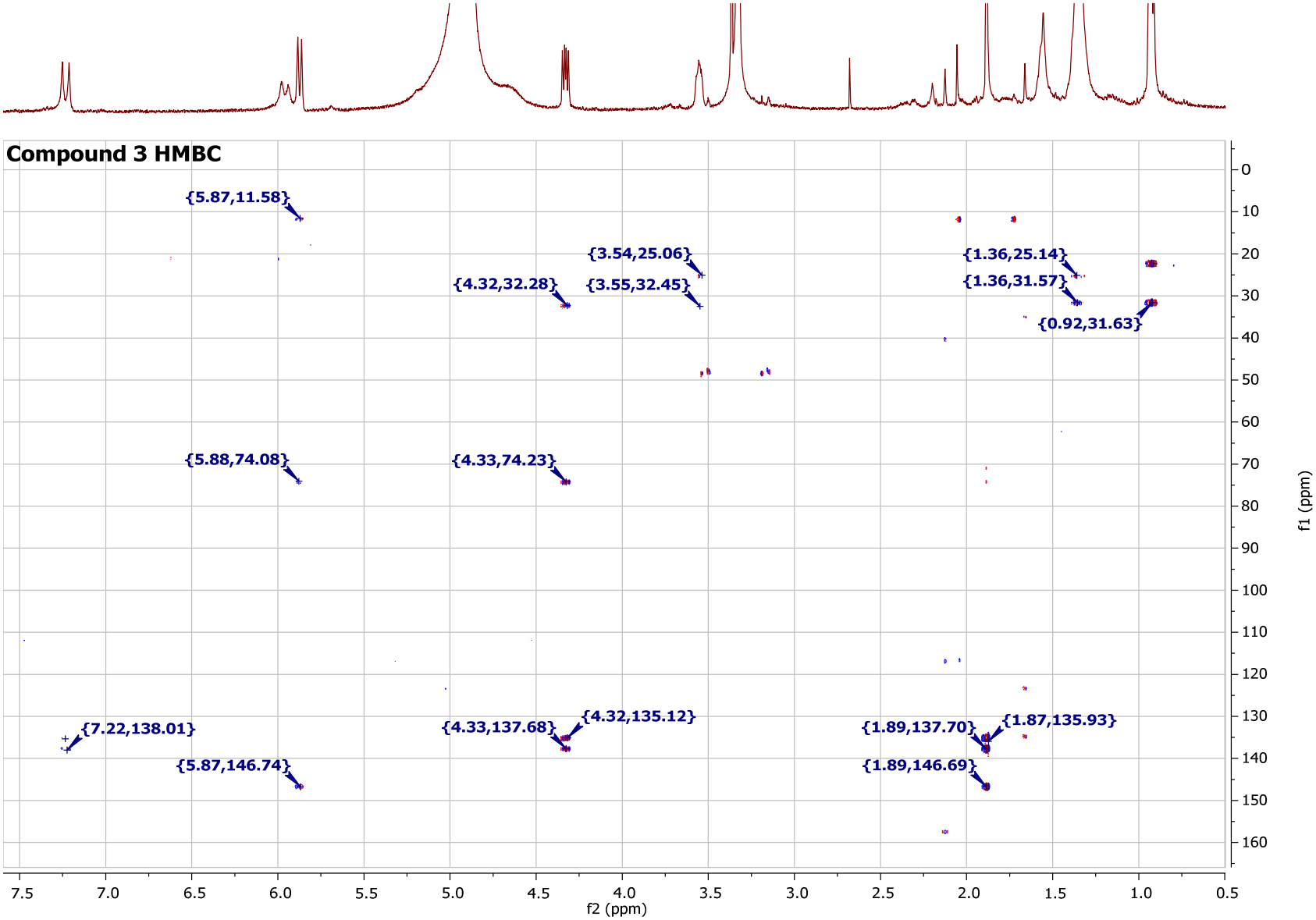

Figure S17: ROESY spectrum of compound 3 in CD_3OD (400MHz)

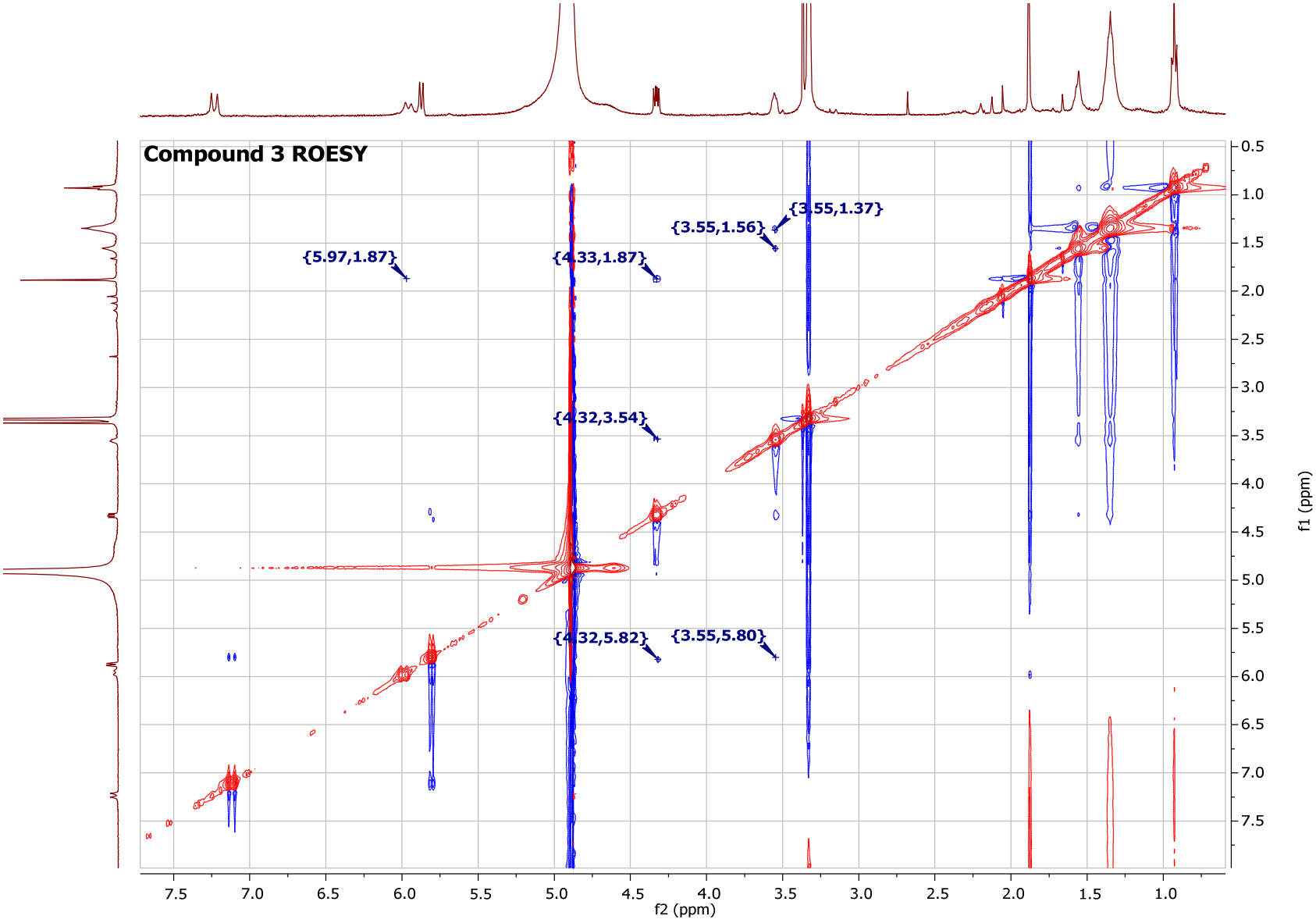

Figure S18: HRESIMS of compound 4

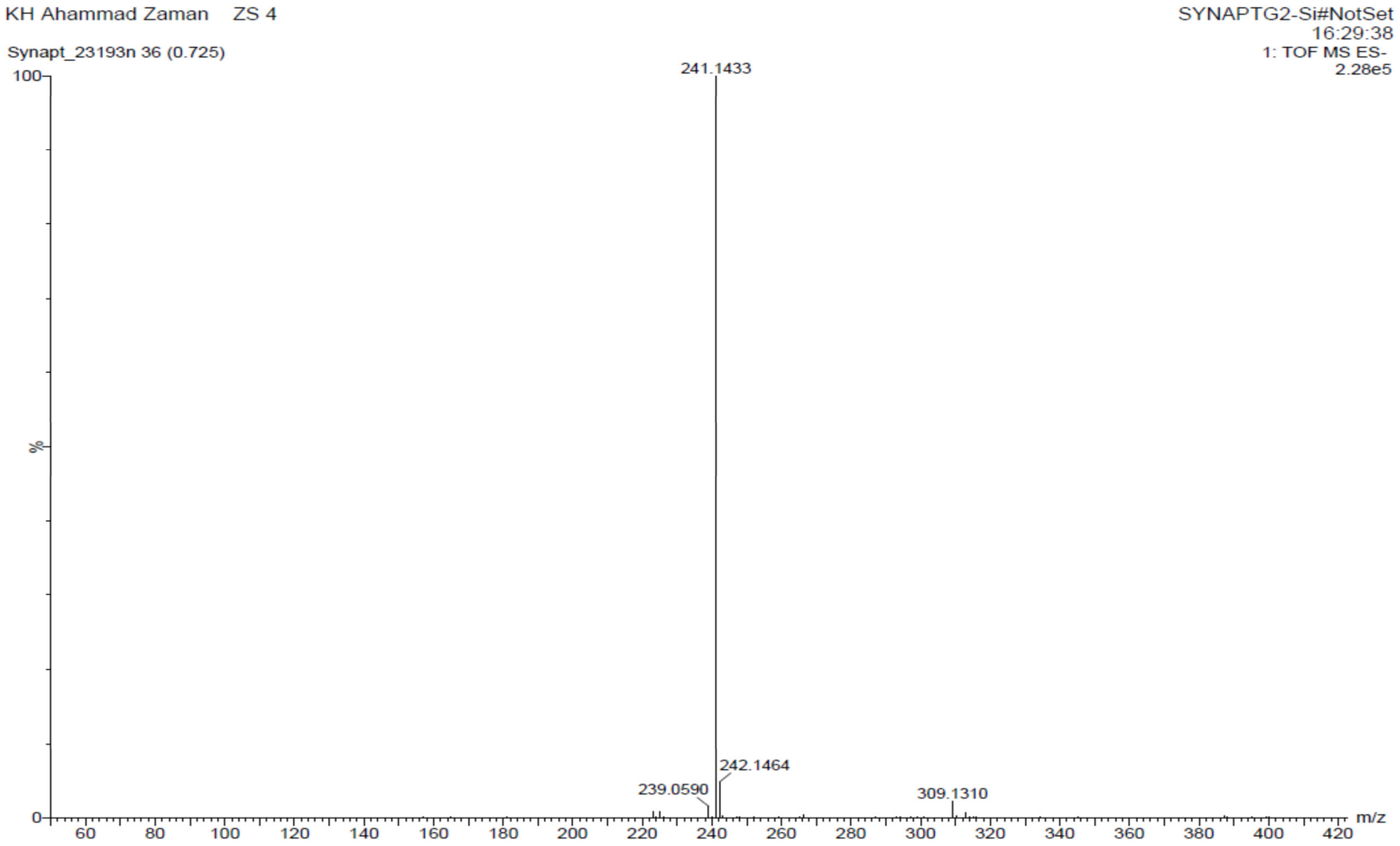

Figure S19: ^{1}H NMR spectrum of compound 4 in CD_3OD (400MHz)

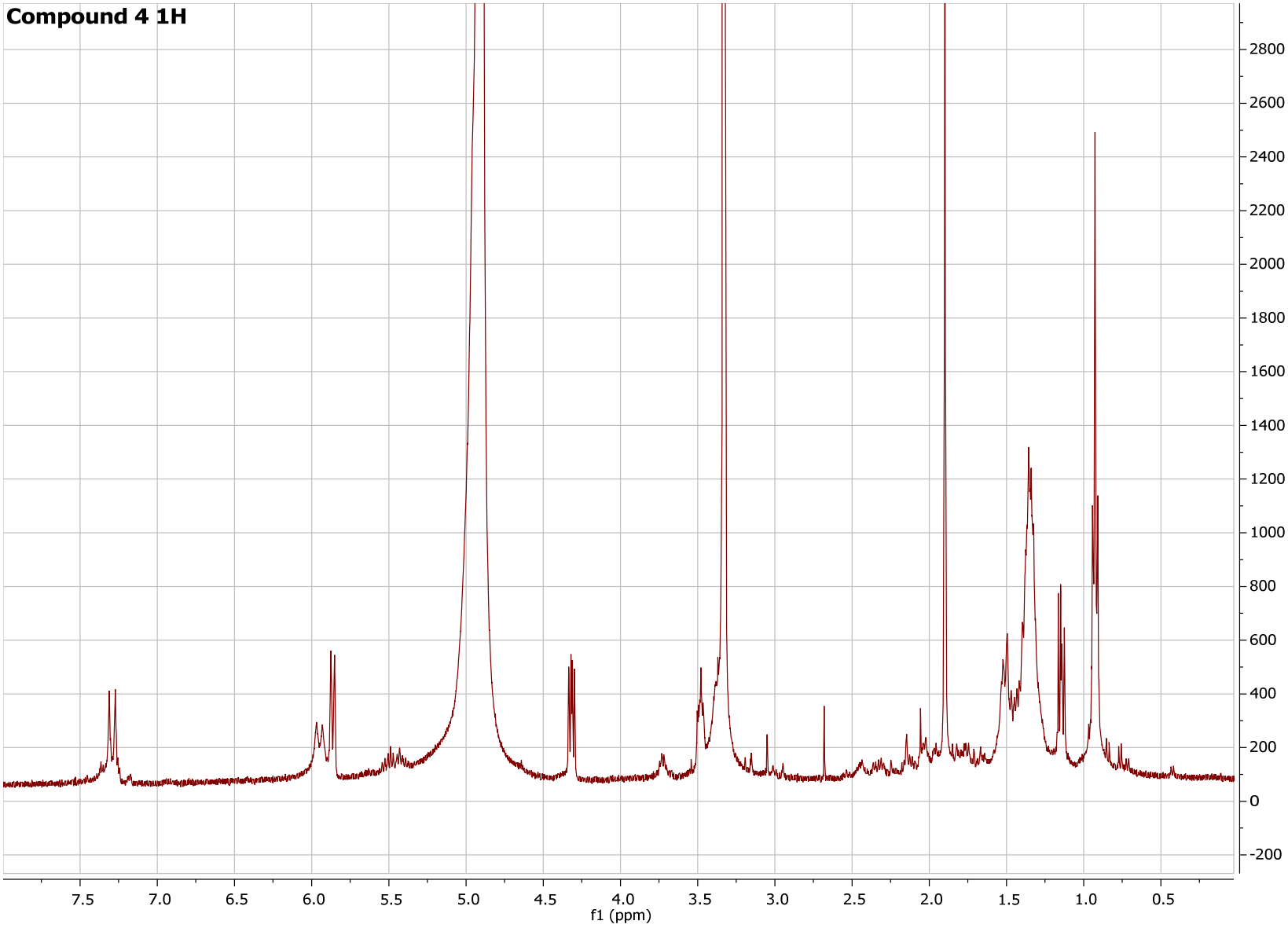

Figure S20: HSQC spectrum of compound 4 in CD_3OD (400MHz)

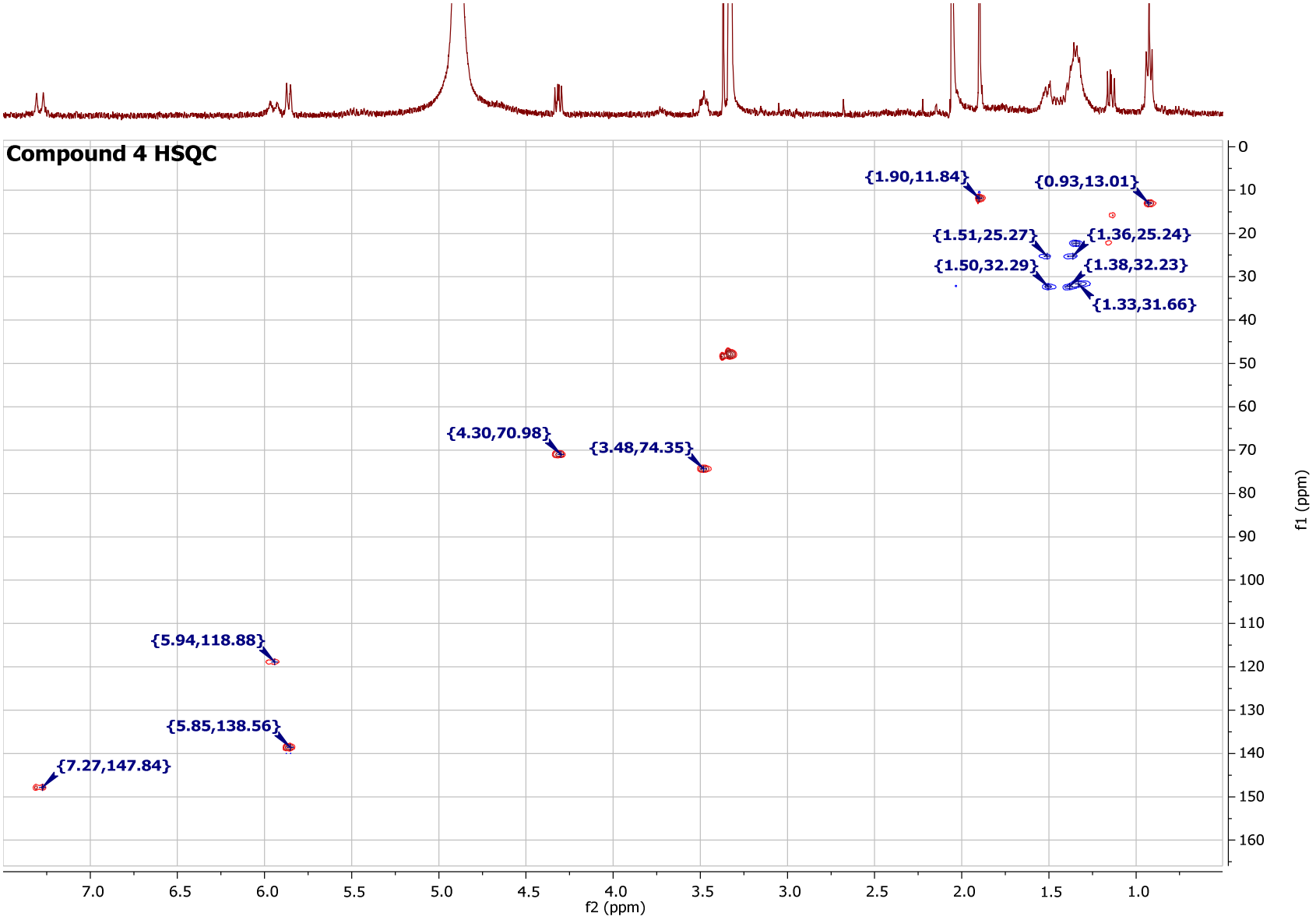

Figure S21: COSY spectrum of compound 4 in CD_3OD (400MHz)

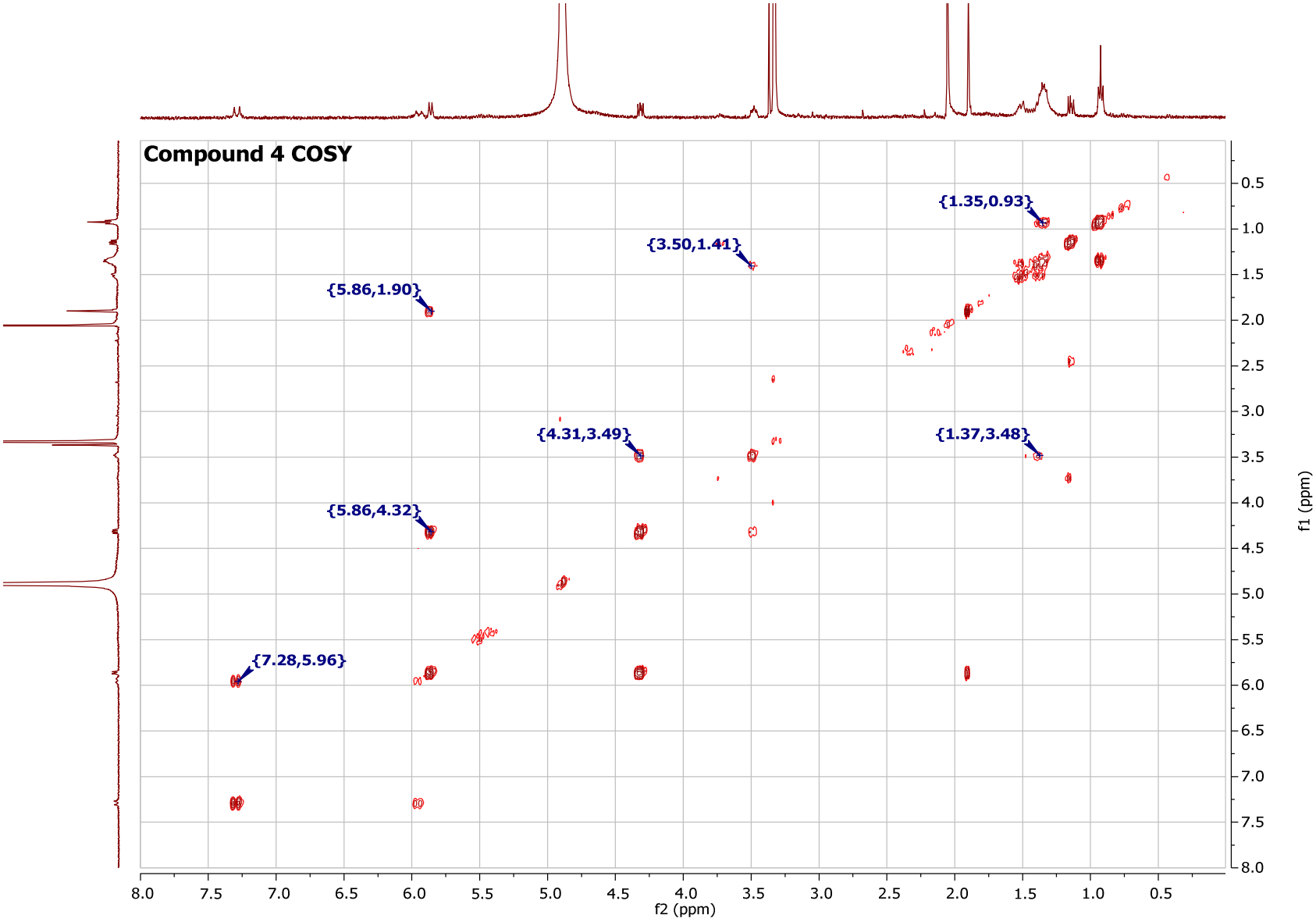

Figure S22: HMBC spectrum of compound 4 in CD_3OD (400MHz)

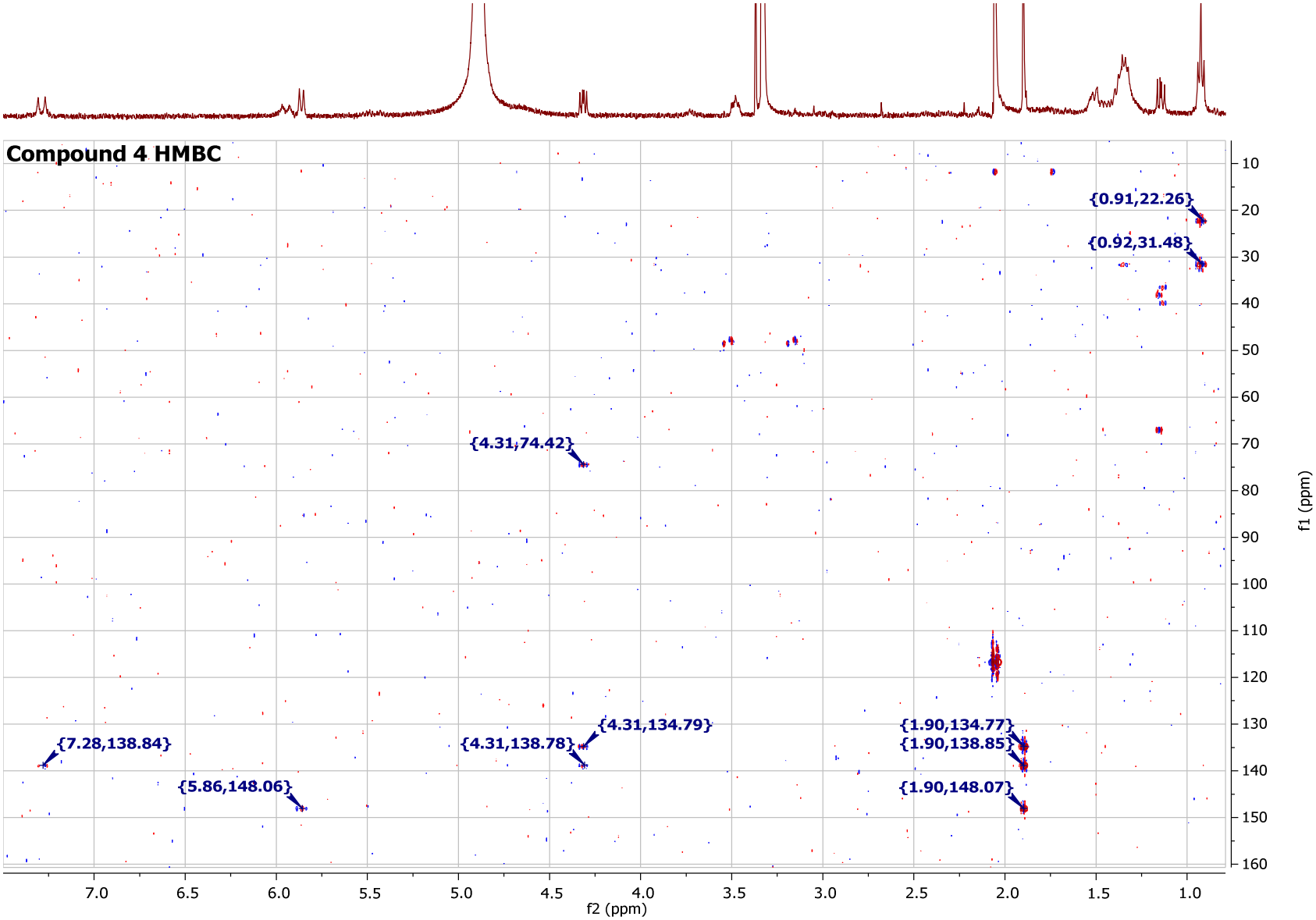

Figure S23: ROESY spectrum of compound 4 in CD_3OD (400MHz)

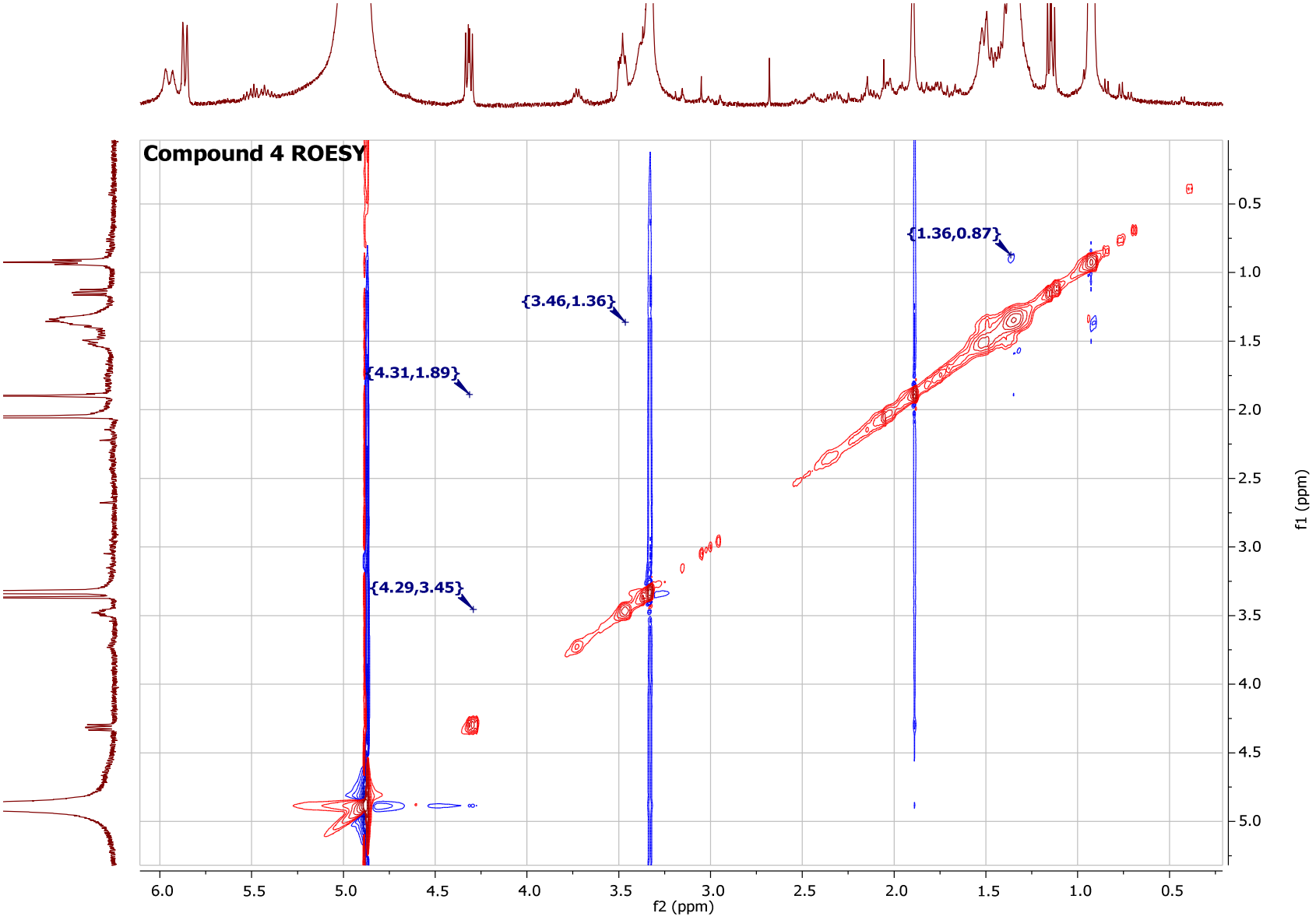

Figure S24: HRESIMS of compound 5

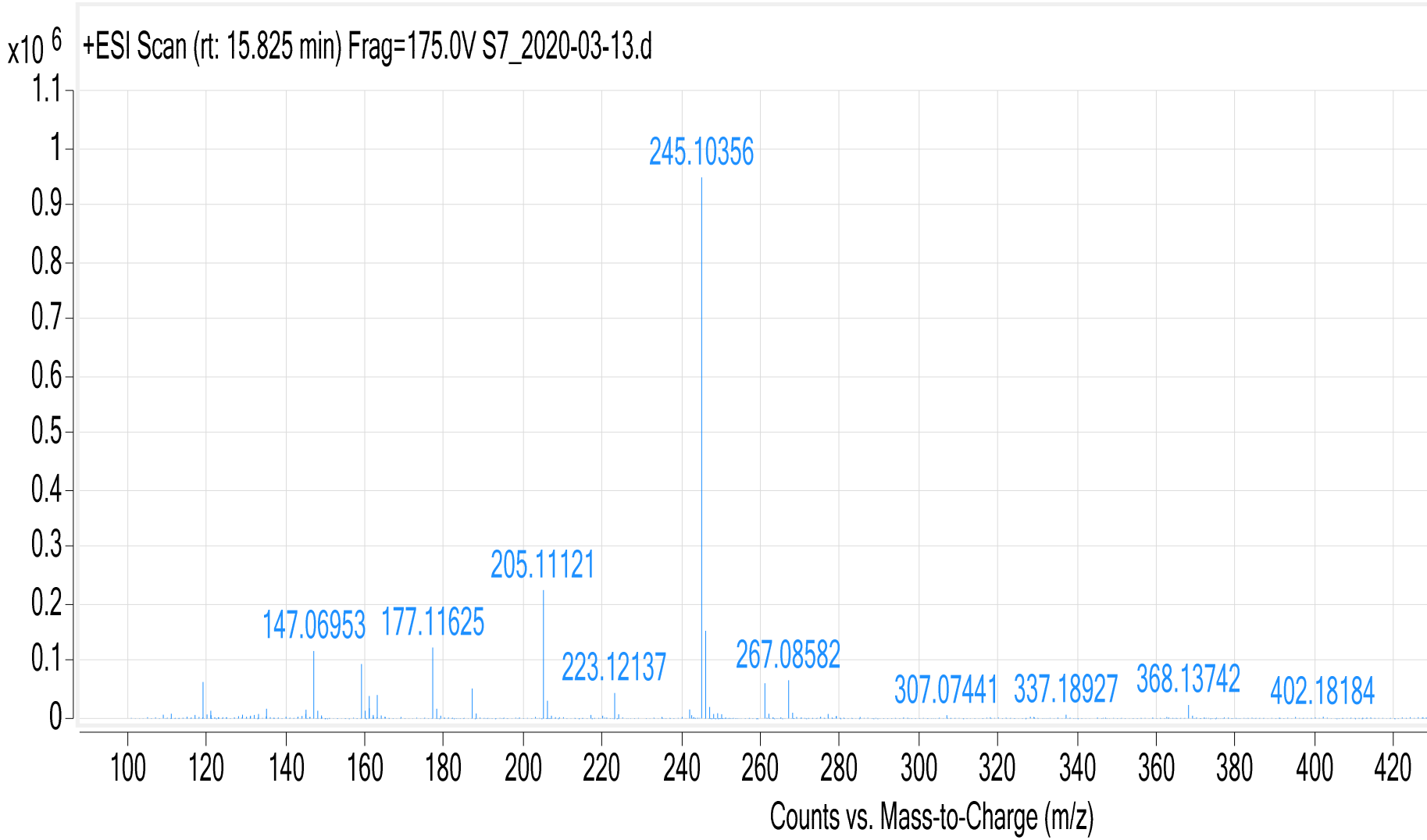

Figure S25: 1H spectrum of compound 5 in CD_3OD (400MHz)

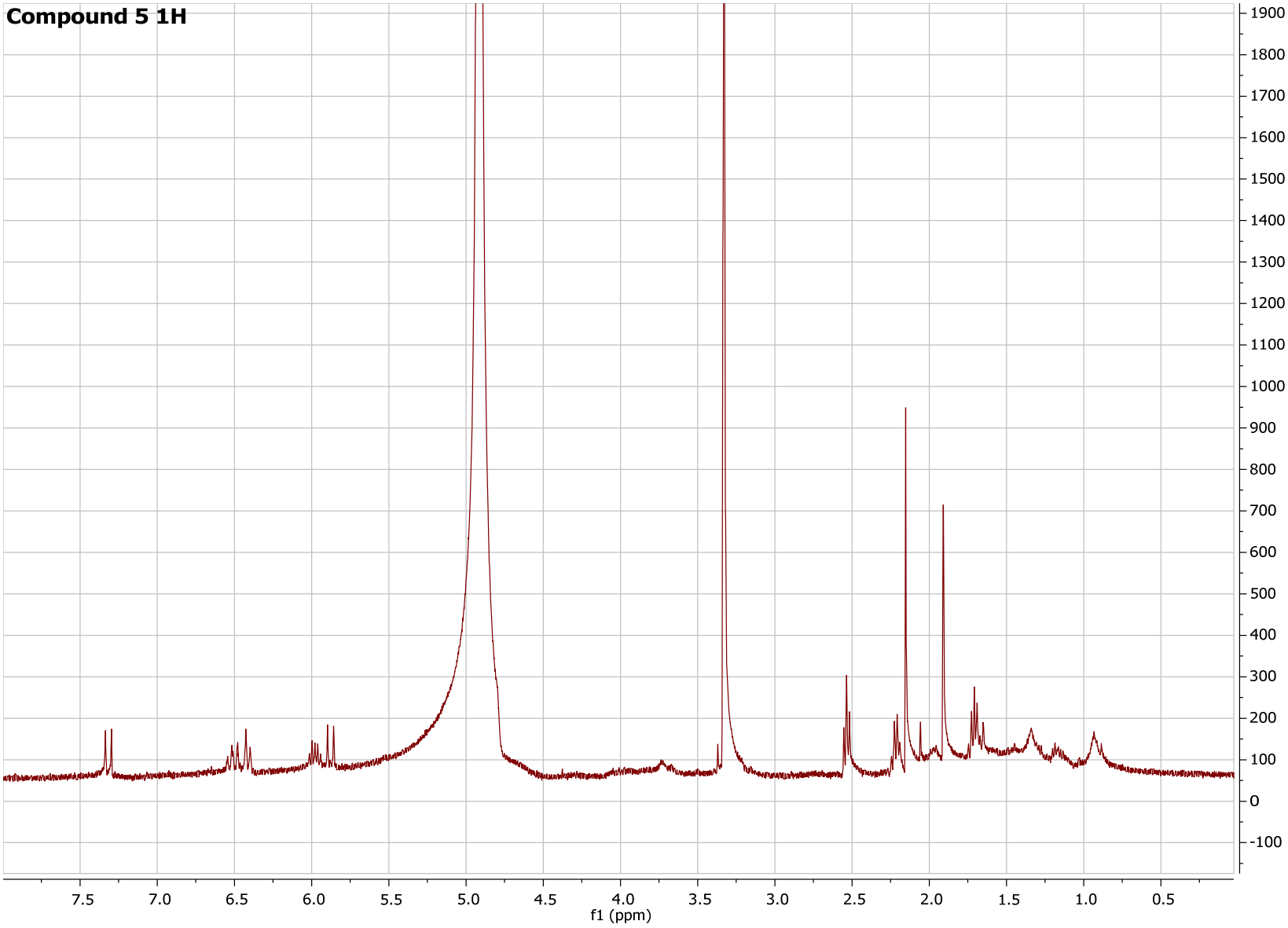

Figure S26: HSQC spectrum of compound 5 in CD_3OD (400MHz)

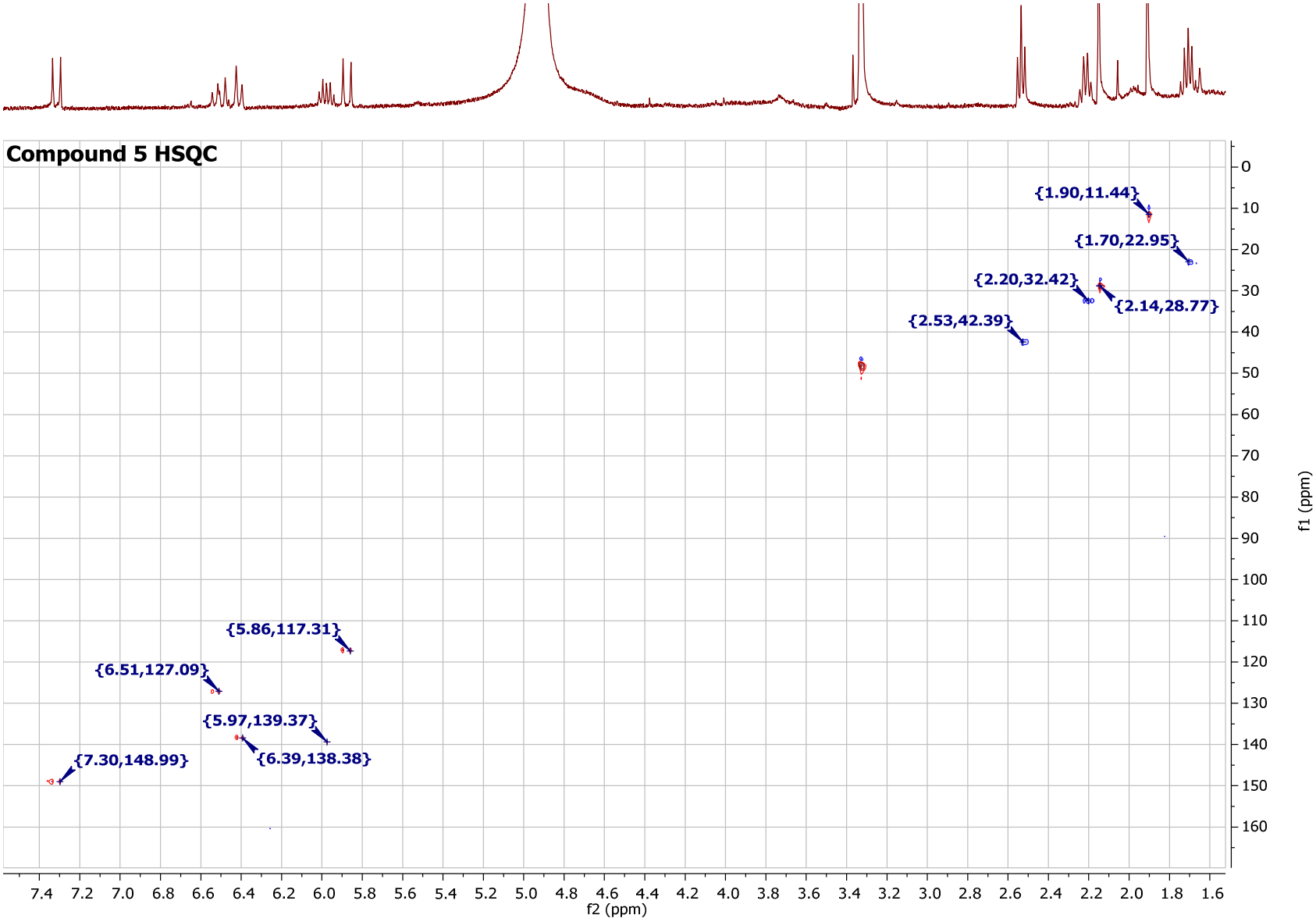

Figure S27: COSY spectrum of compound 5 in CD_3OD (400MHz)

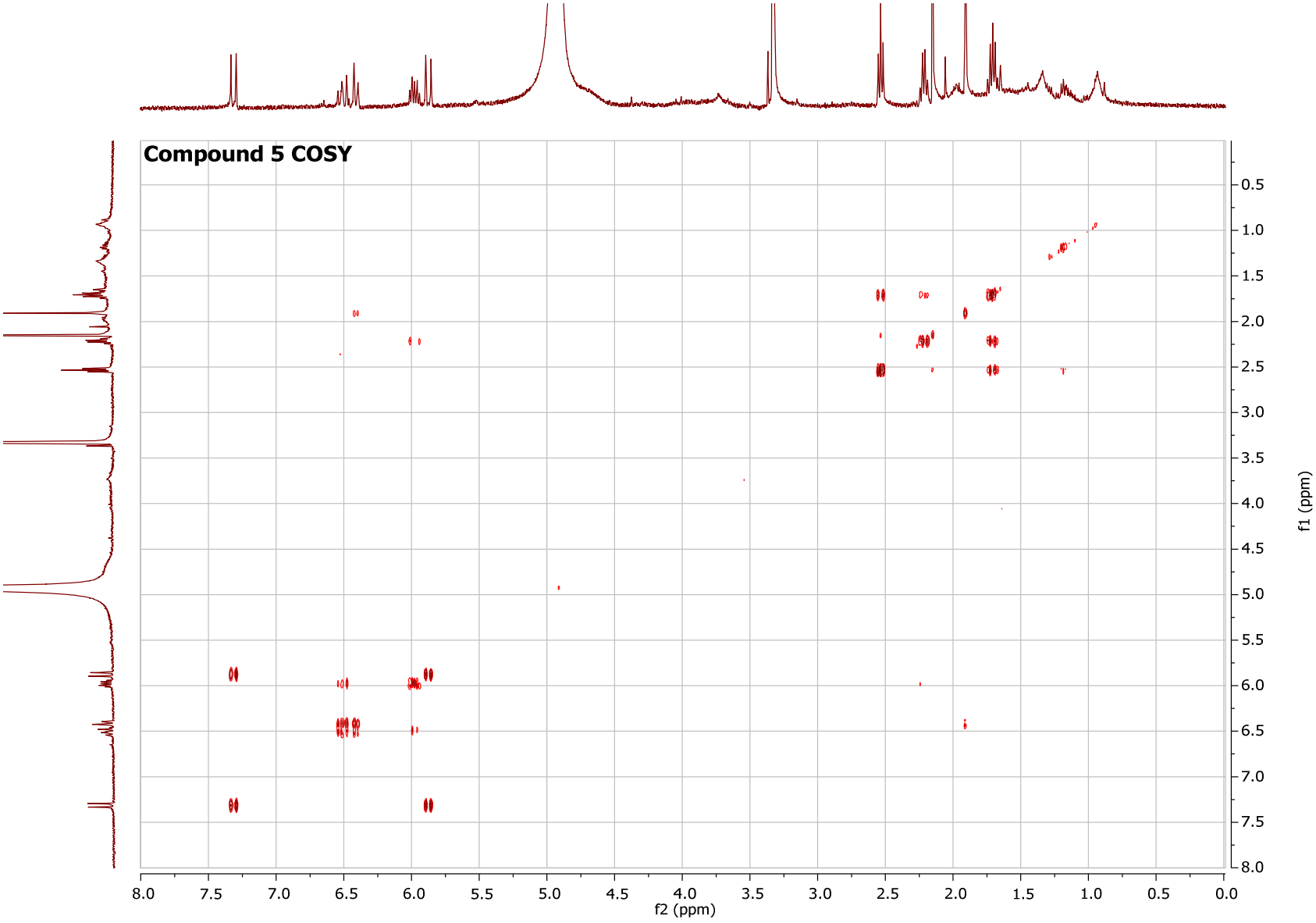

Figure S28: HMBC spectrum of compound 5 in CD_3OD (400MHz)

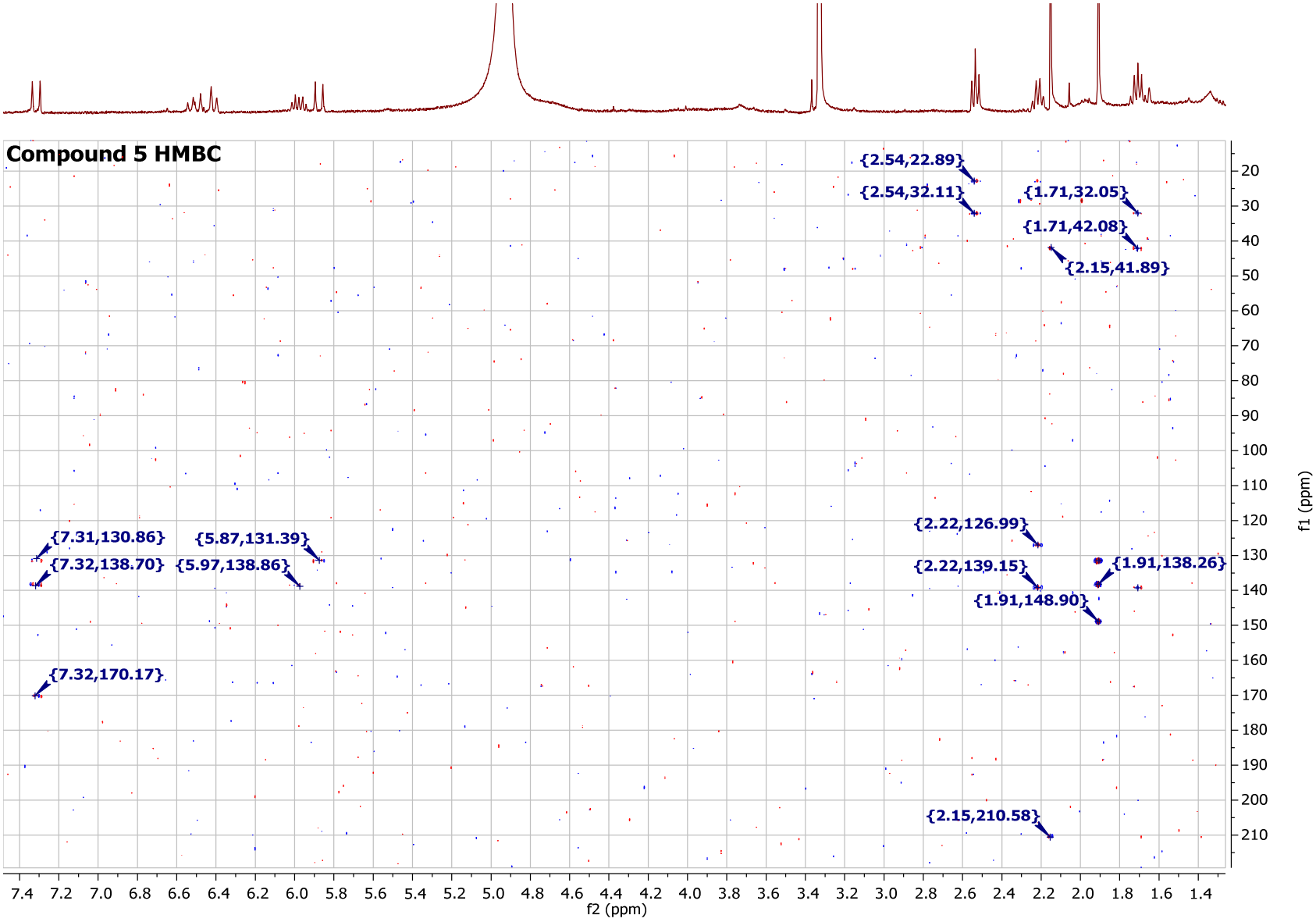

Figure S29: HRESIMS of compound 6

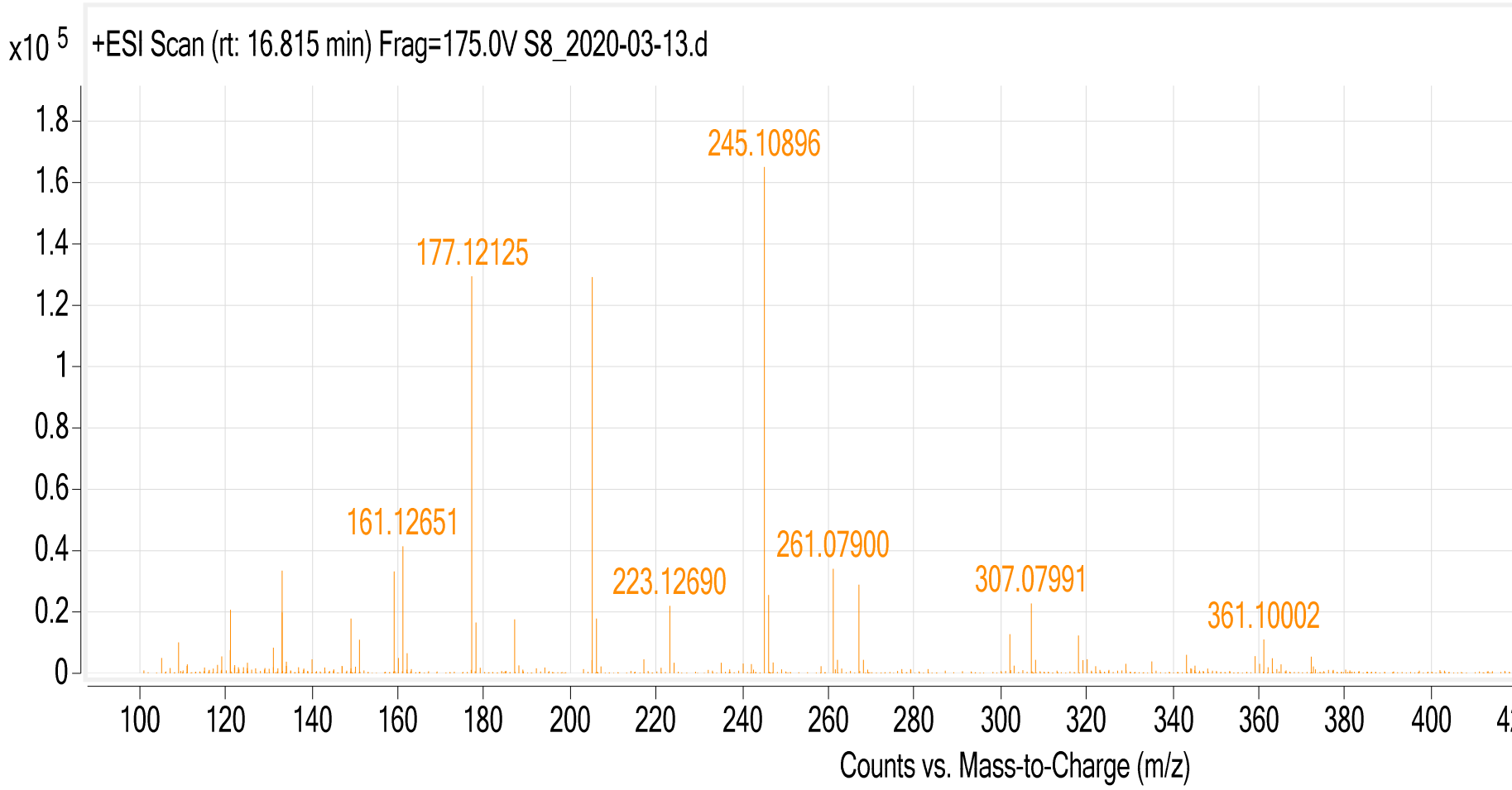

Figure S30: 1H spectrum of compound 6 in CD_3OD (400MHz)

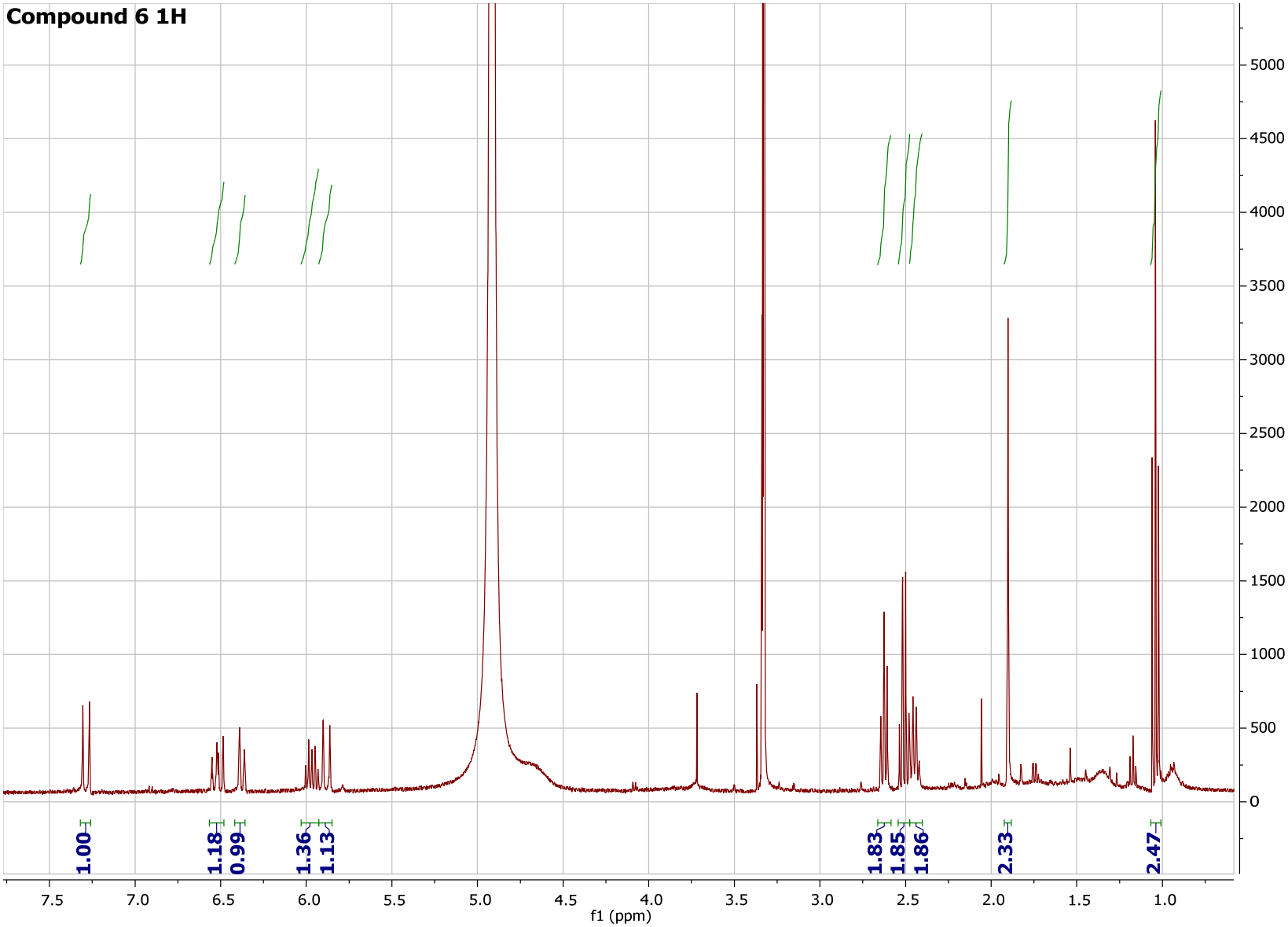

Figure S31: HSQC spectrum of compound 6 in CD_3OD (400MHz)

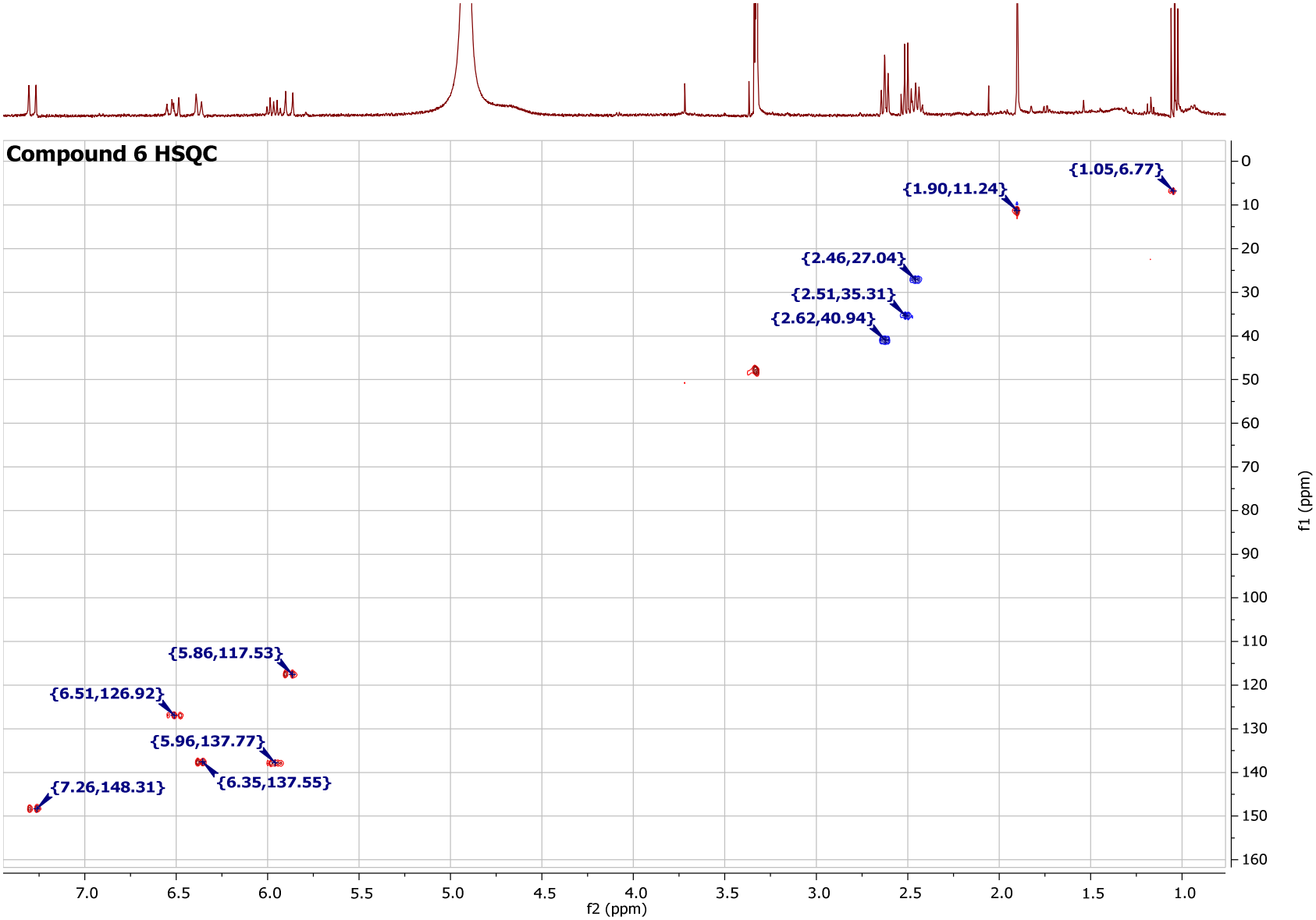

Figure S32: COSY spectrum of compound 6 in CD_3OD (400MHz)

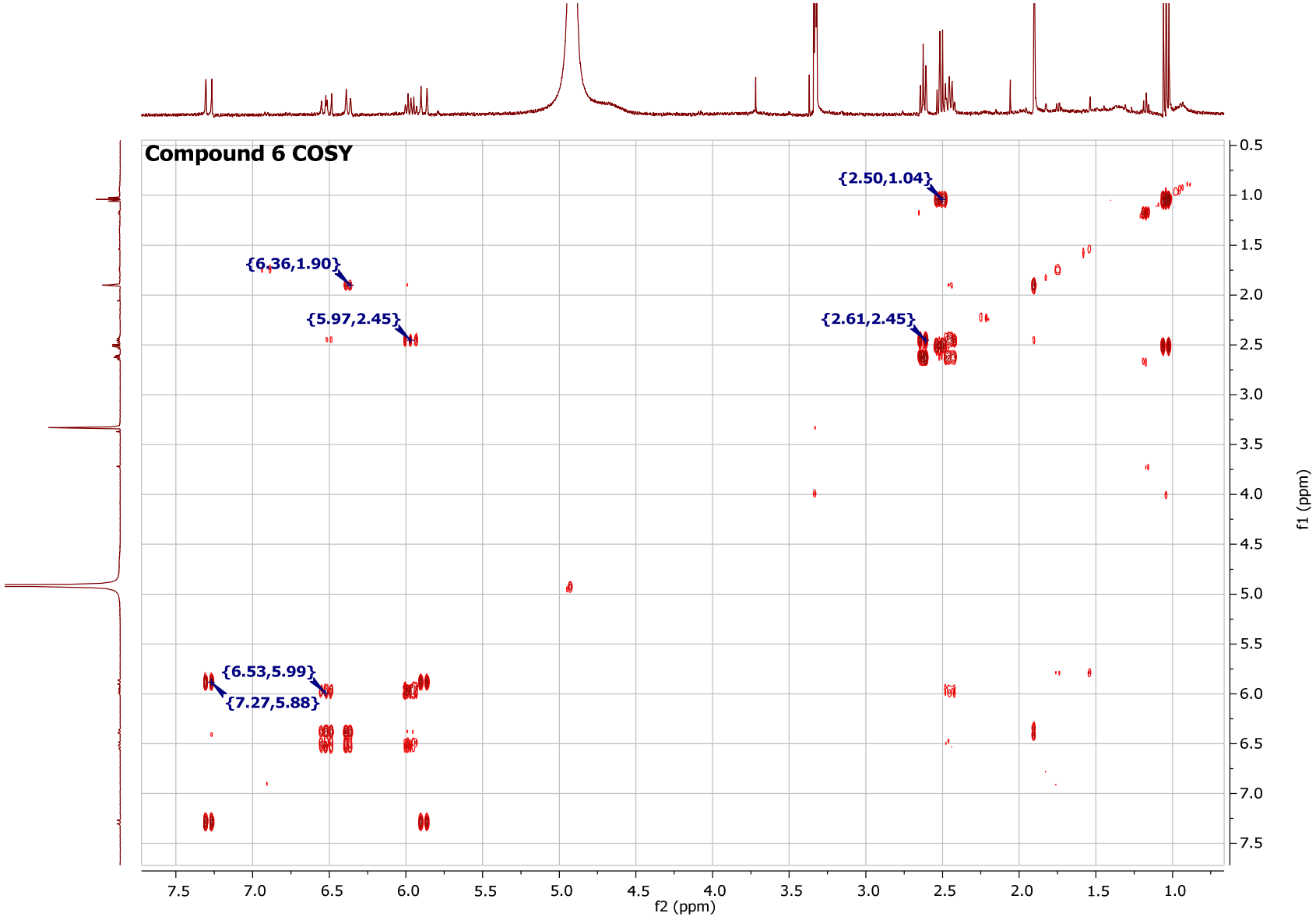

Figure S33: HMBC spectrum of compound 6 in CD_3OD (400MHz)

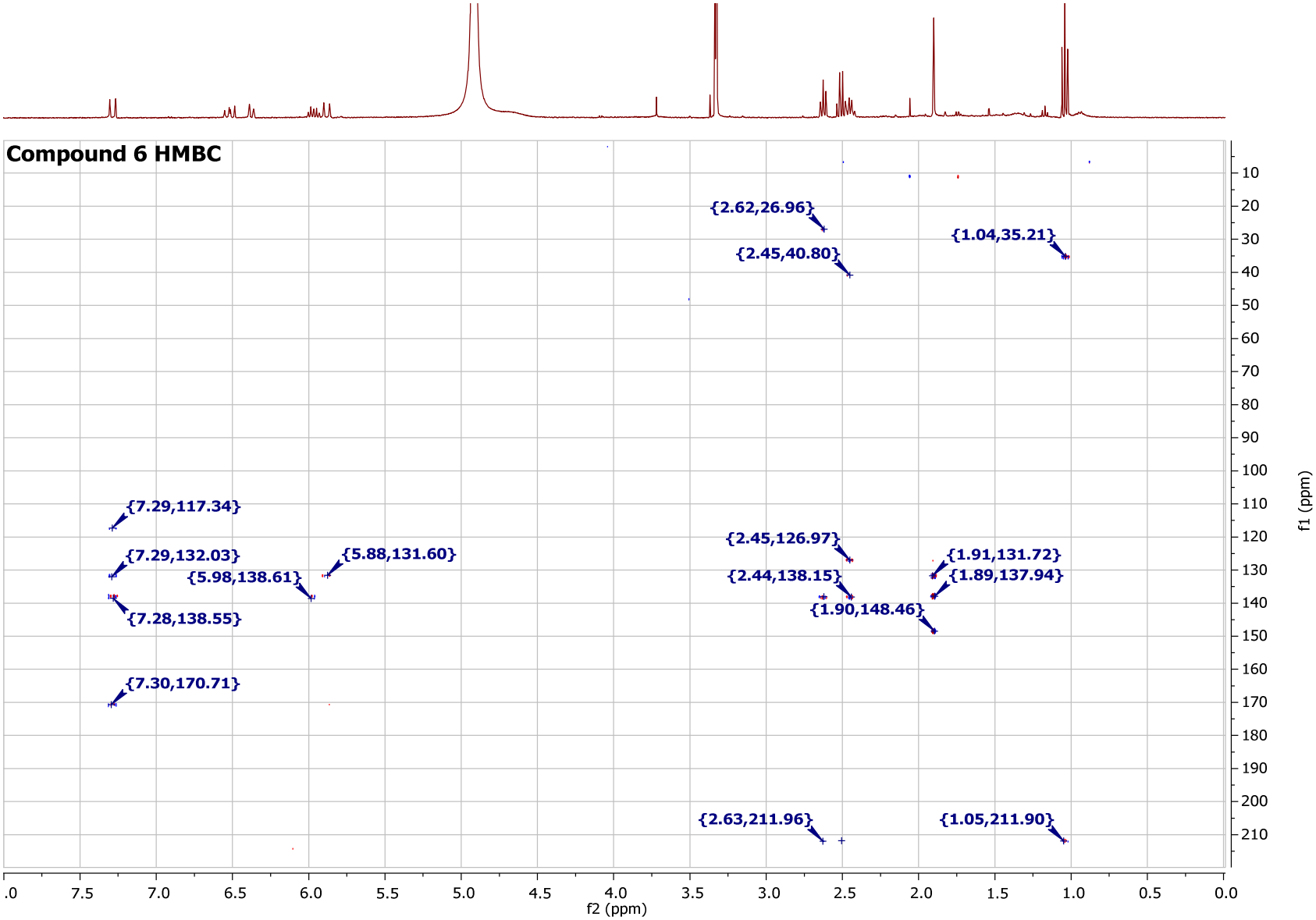

Table S2: Activities of Kaneoheoic acids A-F against *S. aureus* (*ATCC® 12600™*) and *Bacillus subtilis* (*ATCC®6633™*)

	MIC found from Assay [µg/mL]					
	S. aureus			*Bacillus subtilis*		
	Compound alone	**Compound + Disulfiram [6 µg/mL]**	**Compound + Chloramphenicol [1µg/mL]**	**Compound alone**	**Compound + Disulfiram [6 µg/mL]**	**Compound + Chloramphenicol [1µg/mL]**
Kaneoheoic acid A	NA	20	NA	NA	NA	NA
Kaneoheoic acid B	NA	40	NA	NA	80	80
Kaneoheoic acid C	NA	40	NA	NA	40	40
Kaneoheoic acid D	NA	10	NA	NA	80	80
Kaneoheoic acid E	NA	10	NA	NA	40	80
Kaneoheoic acid F	NA	20	NA	NA	40	40

NA→ Not Active

Table S3: Activities of Small to medium chain fatty acids against *S. aureus* (*ATCC® 12600™*) and *B. subtilis* (*ATCC®6633™*)

#	Fatty Acids	MIC found from Assay [µg/mL]					
		S. aureus			*Bacillus subtilis*		
		Compound alone	**Compound + Disulfiram [6 µg/mL]**	**Compound + Chloramphenicol [1µg/mL]**	**Compound alone**	**Compound + Disulfiram [6 µg/mL]**	**Compound + Chloramphenicol [1µg/mL]**
1	**Butyric acid [Na salt] MW 110**	1100	550	550	550	137.5	137.5
2	**Capric acid [Na salt] MW 194**	121.2	121.2	121.2	485	242.5	242.5
3	**Lauric acid MW 200**	63	63	63	126	63	63
4	**Myristic acid MW 228**	570	285	570	285	142.5	142.5
5	**Linoleic acid MW 280**	700	88.2	350	215.6	215.6	215.6