

Supporting Information

Isolation and Structure Determination of New Pyrones from *Dictyostelium* spp. Cellular Slime Molds Coincubated with *Pseudomonas* spp.

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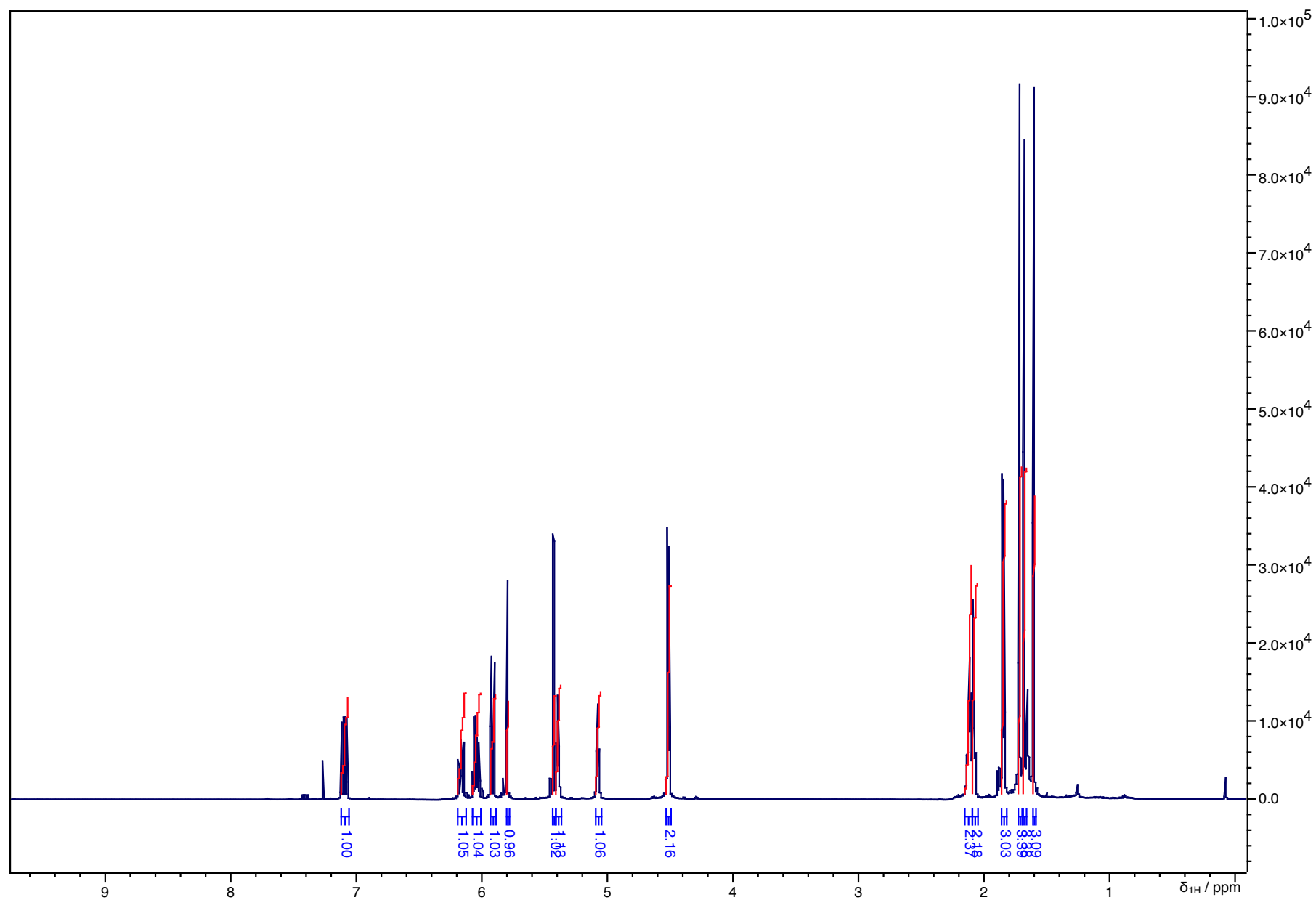


Figure S1. ^1H NMR spectrum (CDCl₃, 600 MHz) for **1**.

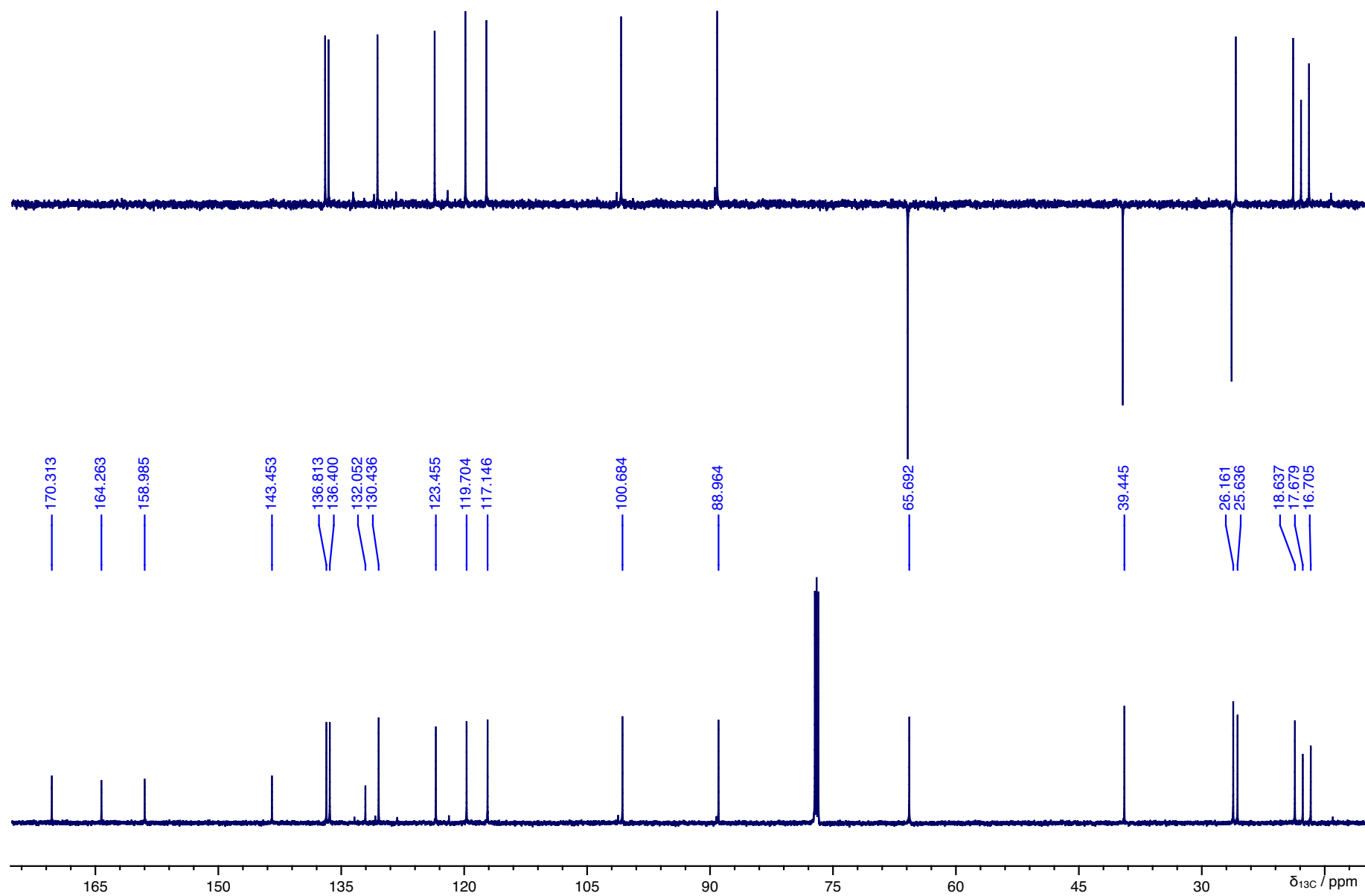


Figure S2. ¹³C NMR and DEPT spectra (CDCl₃, 150 MHz) for **1**.

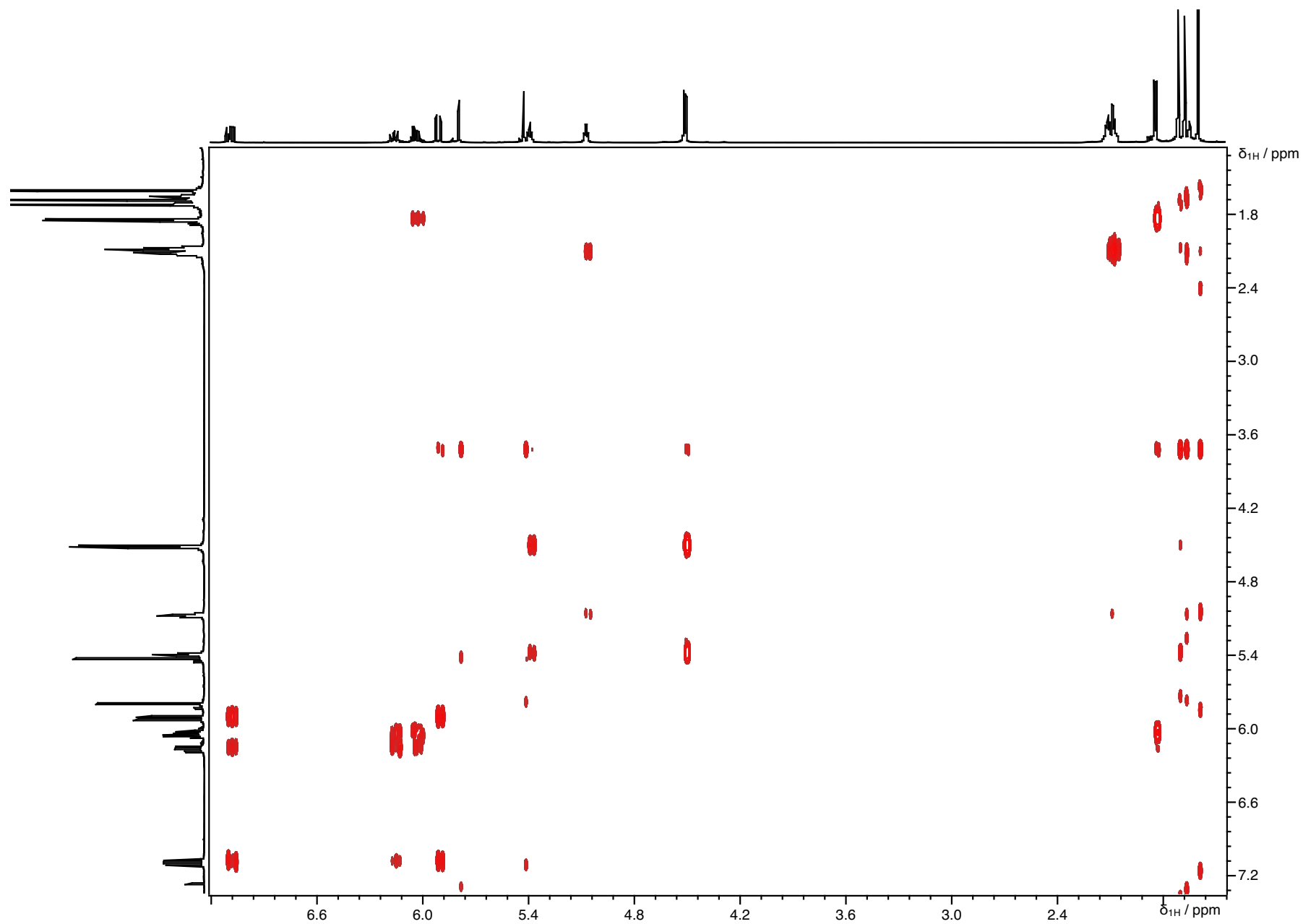


Figure S3. DQF-COSY spectrum (CDCl₃, 600 MHz) for **1**.

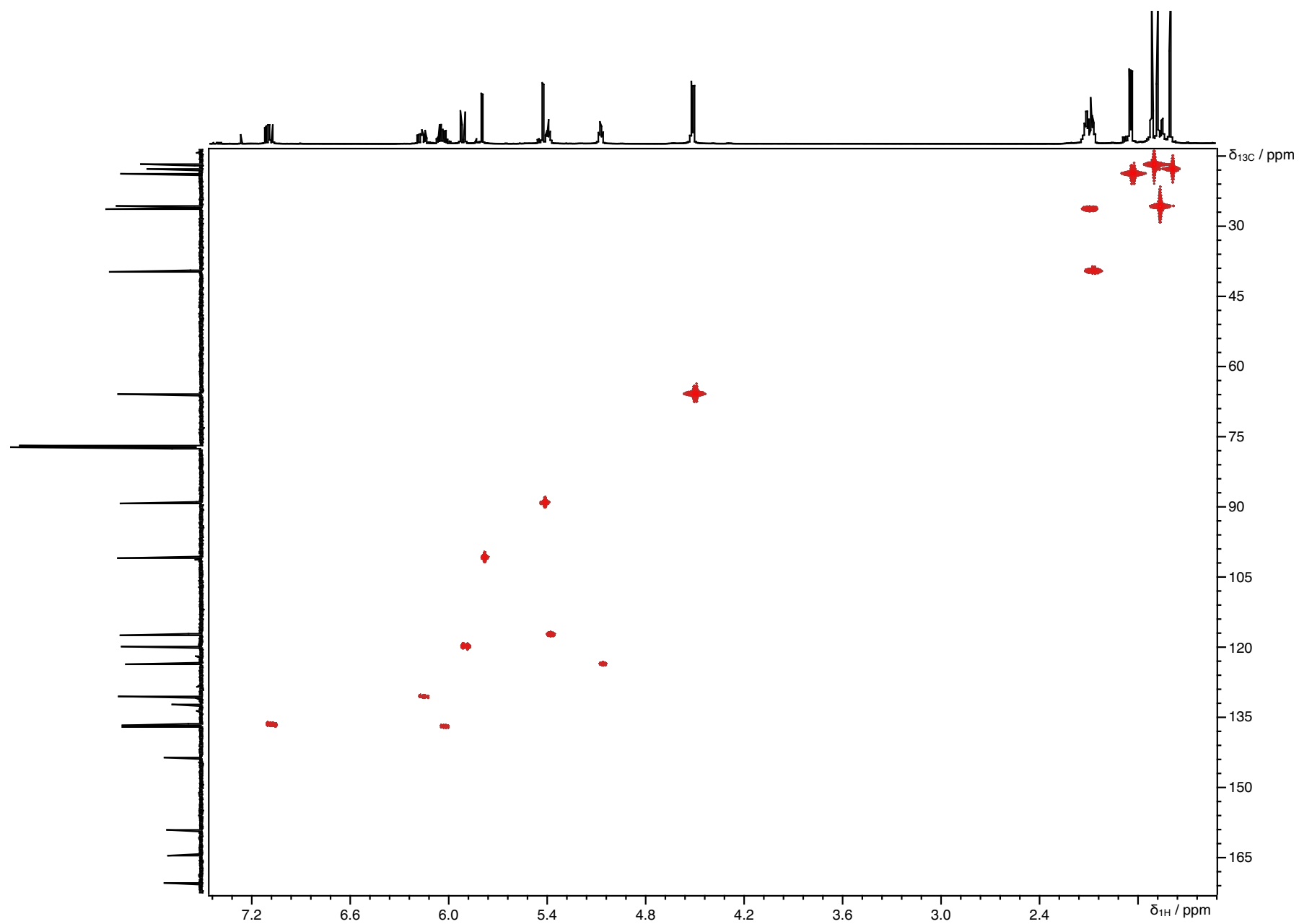


Figure S4. HMQC spectrum (CDCl₃, 600 MHz) for **1**.

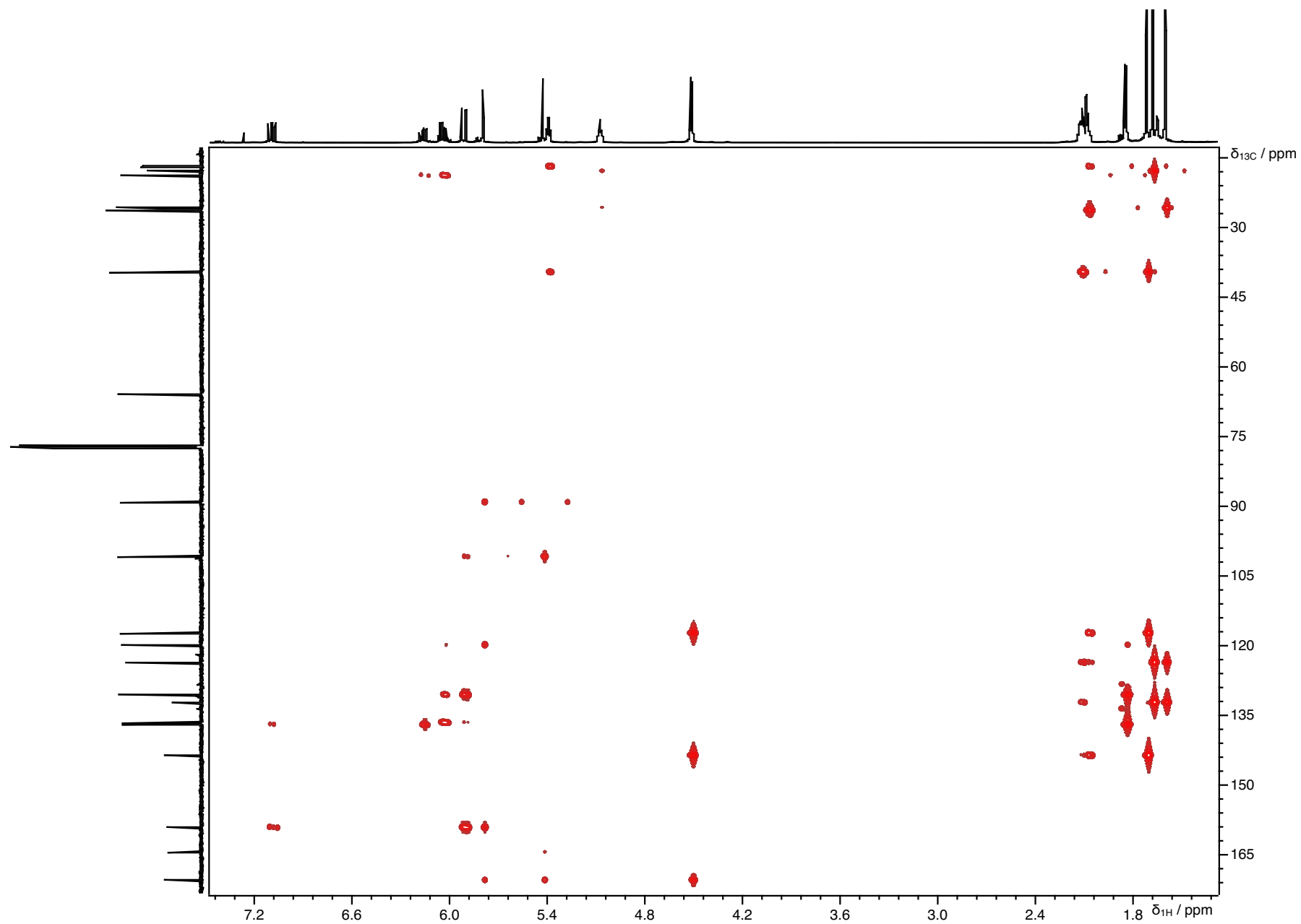


Figure S5. HMBC spectrum (CDCl₃, 600 MHz) for **1**.

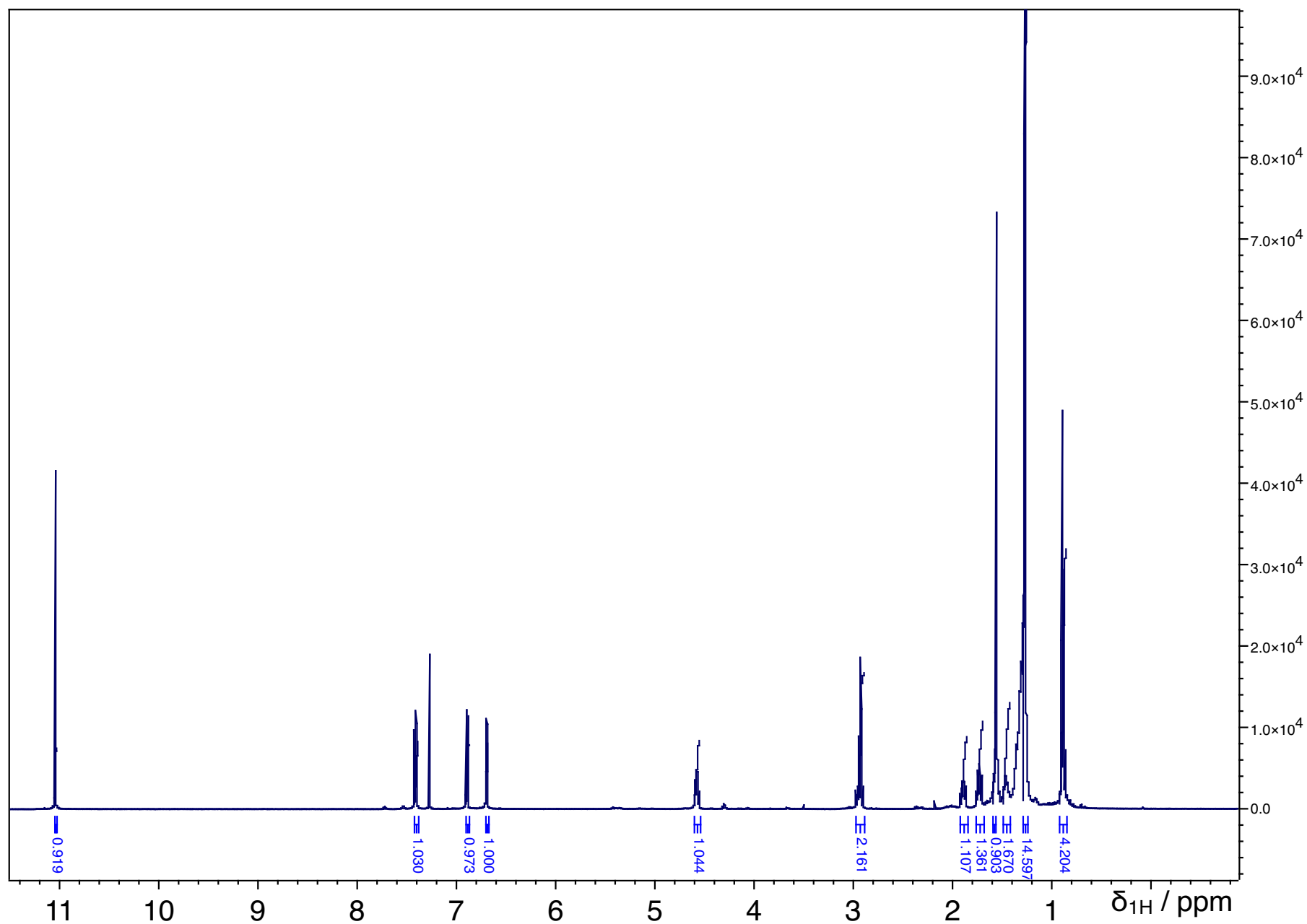


Figure S6. ¹H NMR spectrum (CDCl₃, 600 MHz) for **2**.

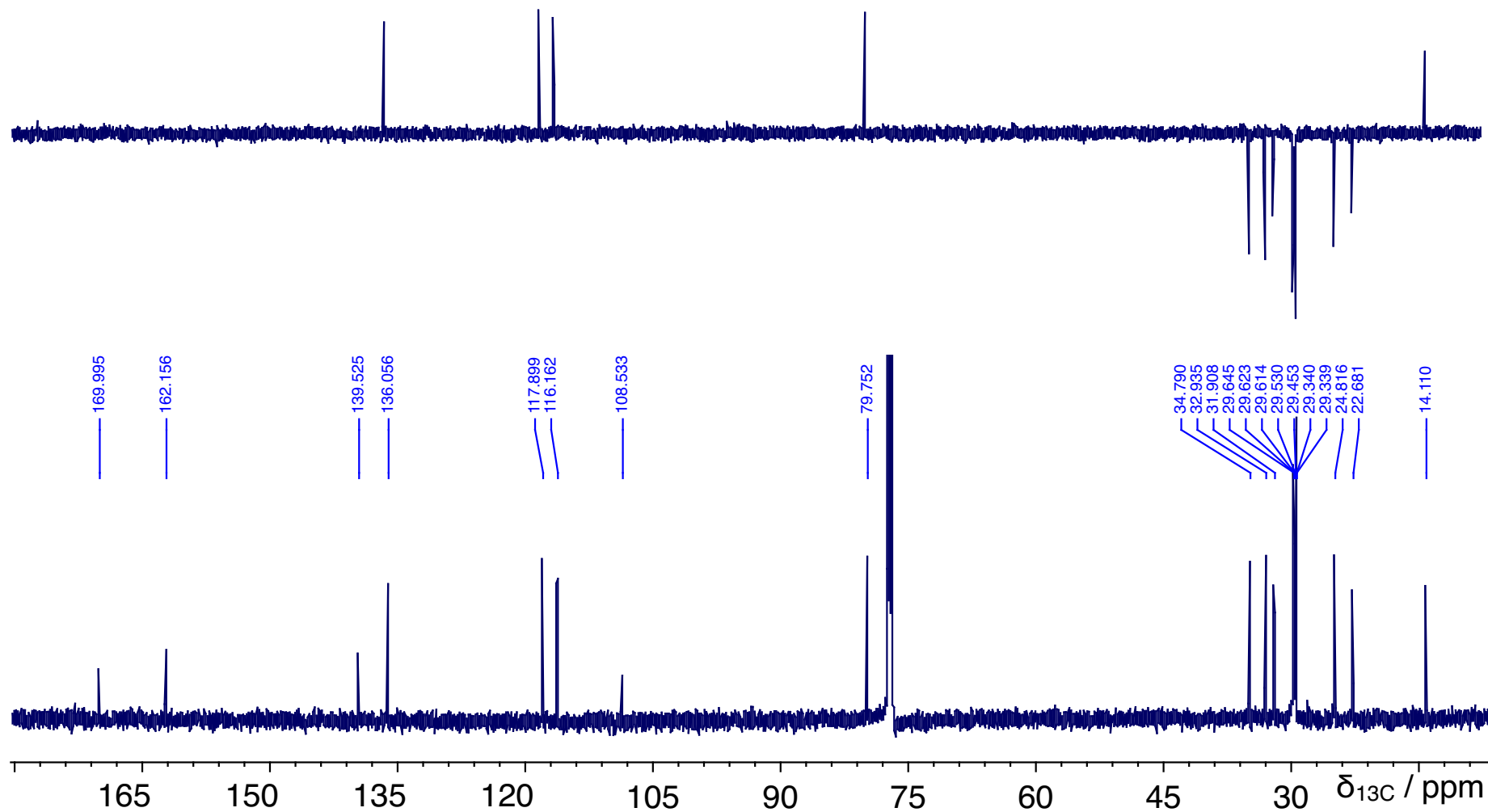


Figure S7. ^{13}C NMR and DEPT spectra (CDCl_3 , 150 MHz)

S8

for **2**.

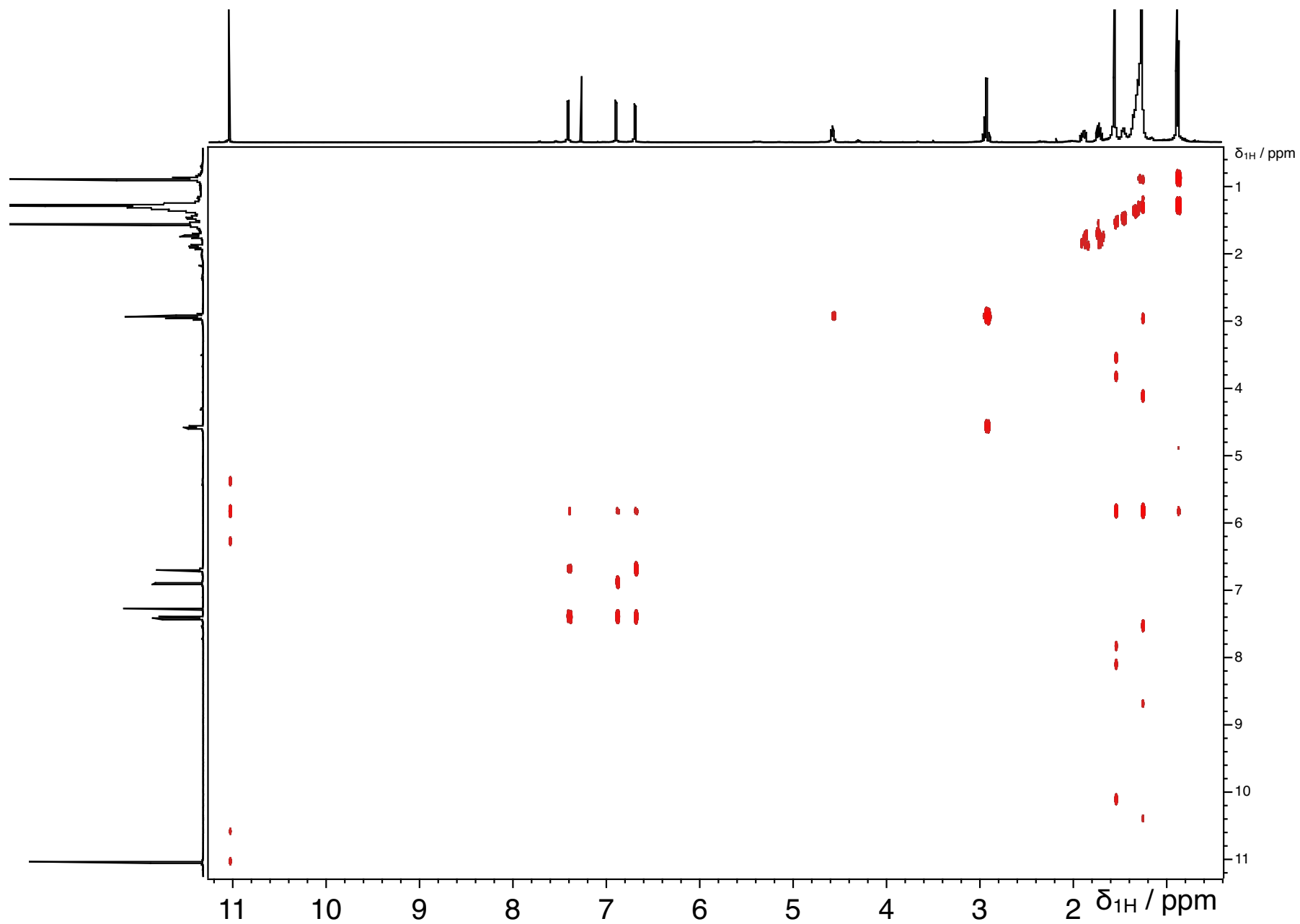


Figure S8. DQF-COSY spectrum ($CDCl_3$, 600 MHz) for **2**.

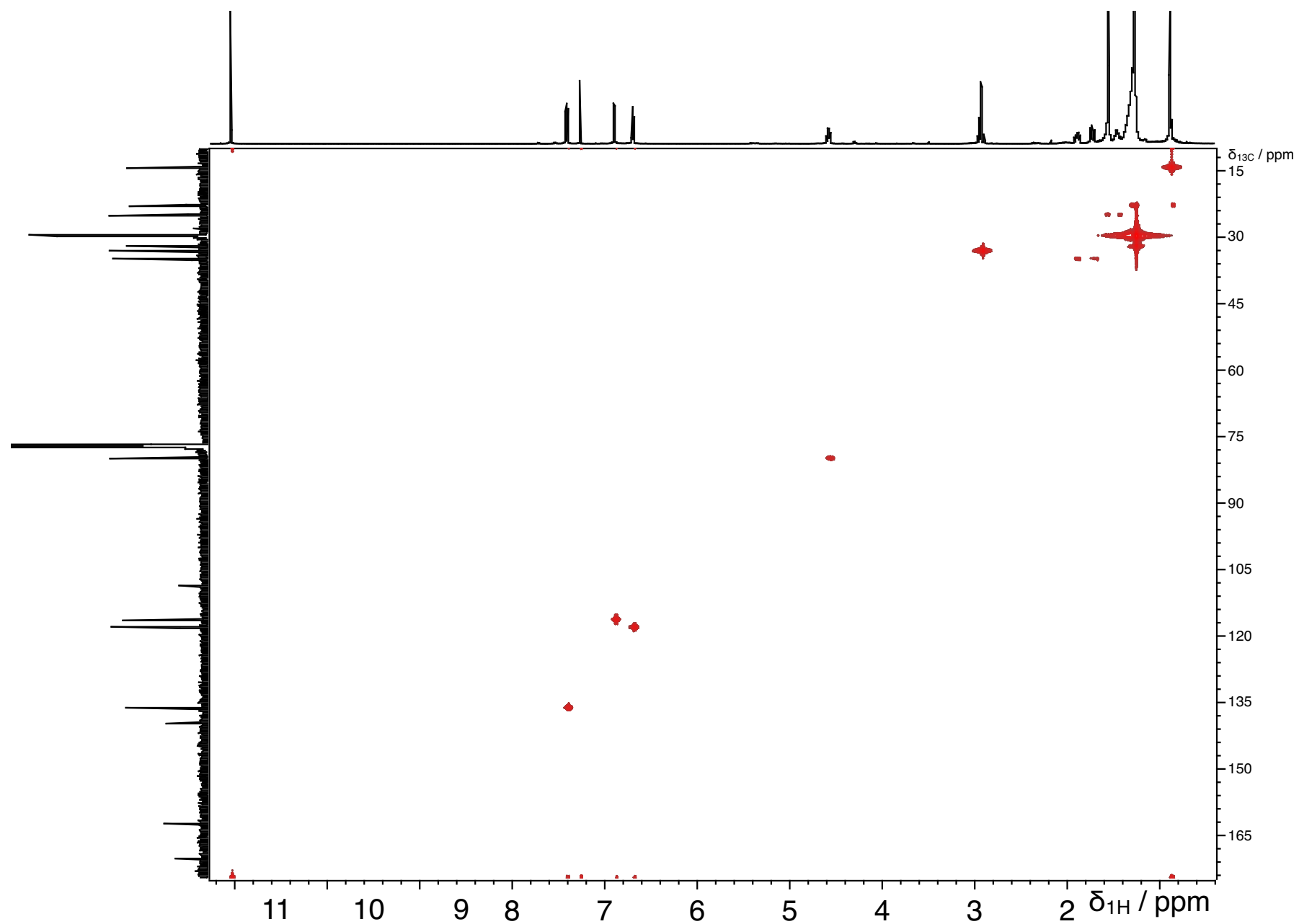


Figure S9. HMQC spectrum (CDCl₃, 600 MHz)

S10

for **2**.

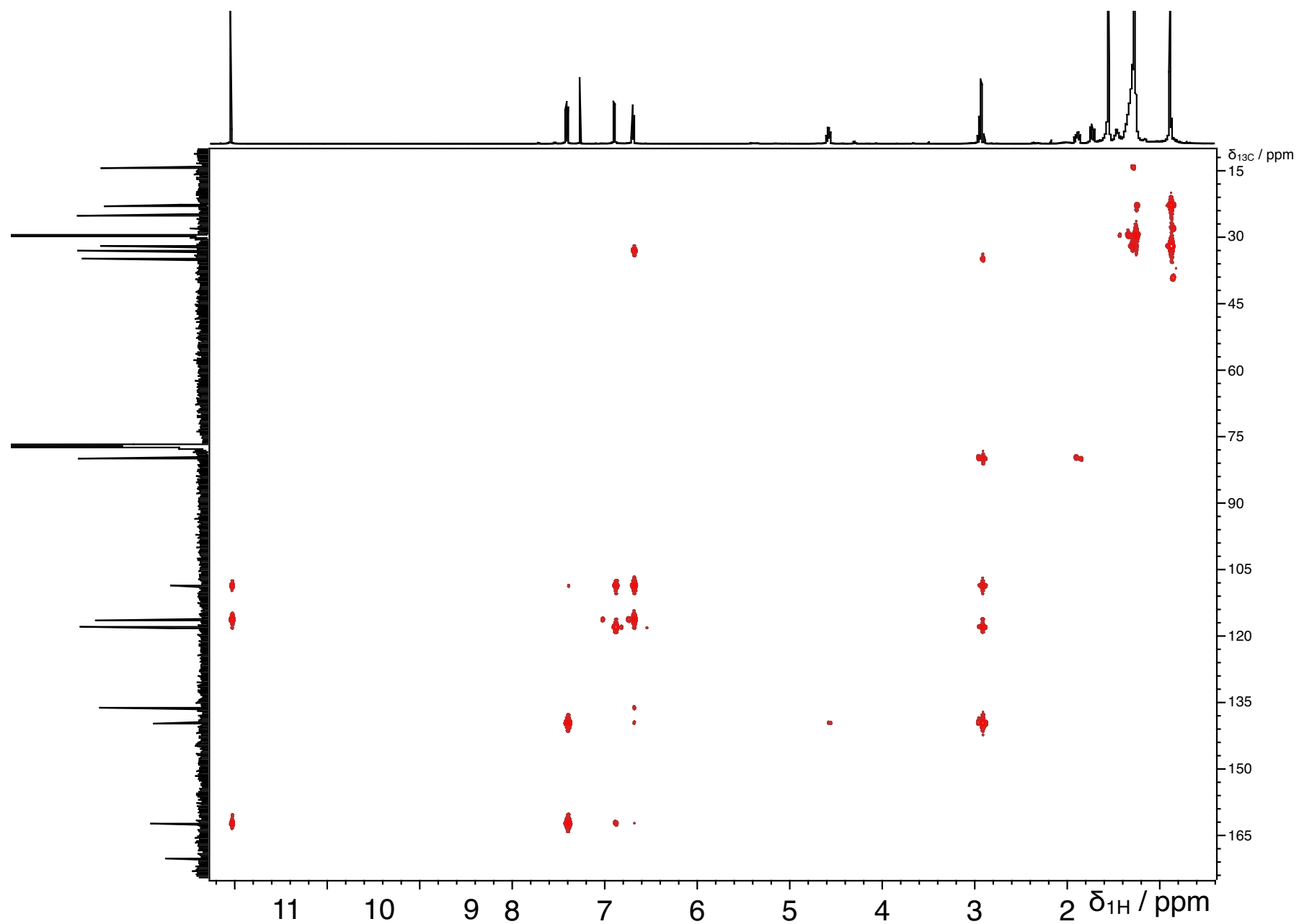


Figure S10. HMBC spectrum (CDCl₃, 600 MHz)

S11

for 2.

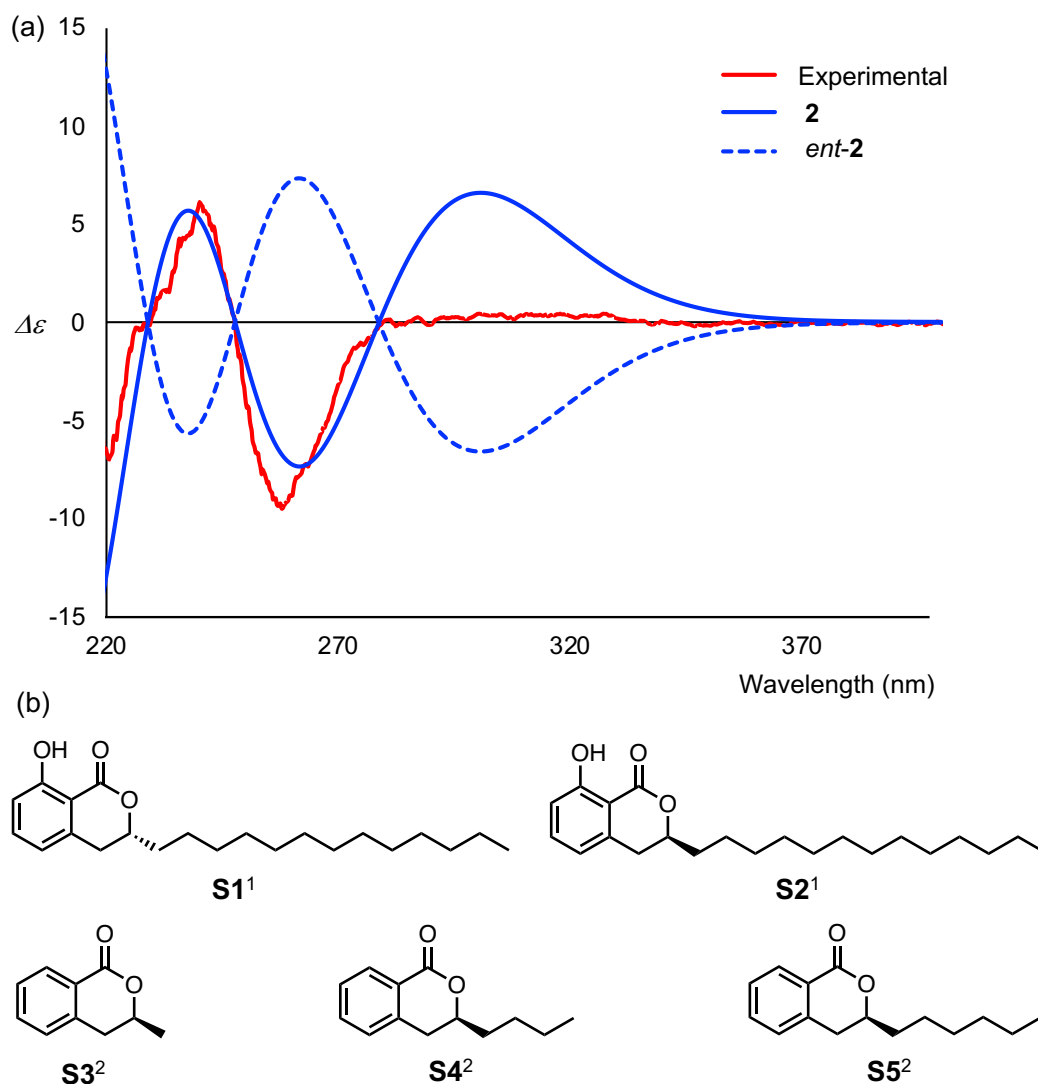


Figure S11. (a) Experimental and theoretical ECD spectra of **2** and *ent-2*. (b) Structures used for comparison of ECD spectra and optical rotations with **2**.

Table S1. Specific rotations of isocoumarin-type compounds.^{1,2}

Compounds	Specific rotation
2	$[\alpha]_{\text{D}}^{26} -20.4$ (c 0.15, CDCl ₃)
S1	$[\alpha]_{\text{D}}^{23} -31$ (c 1.0, CDCl ₃)
S2	$[\alpha]_{\text{D}}^{23} +32$ (c 1.0, CDCl ₃)
S3	$[\alpha]_{\text{D}}^{22} +141.4$ (c 1.30, CDCl ₃)
S4	$[\alpha]_{\text{D}}^{22} +82.9$ (c 1.20, CDCl ₃)
S5	$[\alpha]_{\text{D}}^{22} +68.9$ (c 1.25, CDCl ₃)

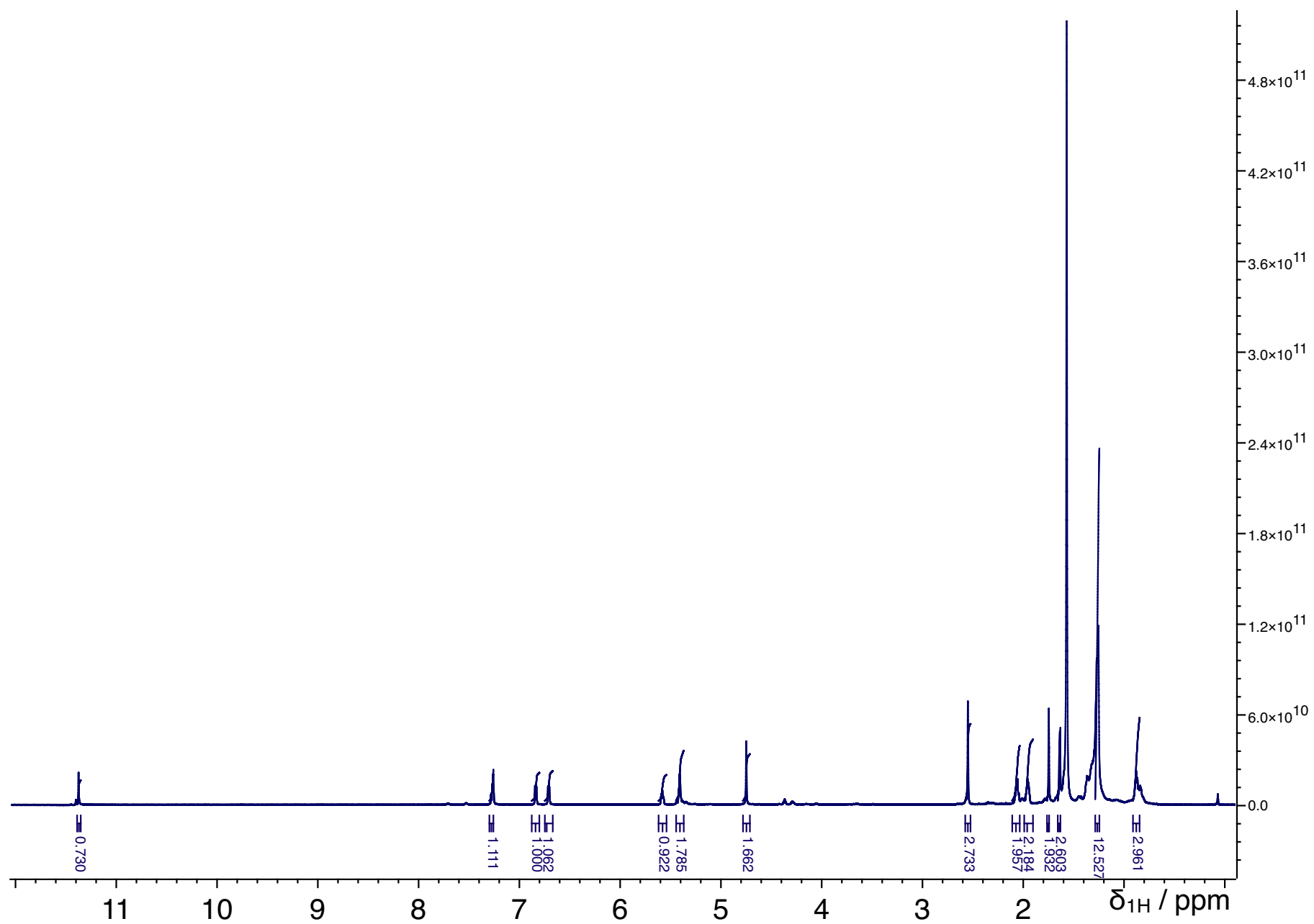


Figure S12. ^1H NMR spectrum (CDCl₃, 600 MHz) for **3**.

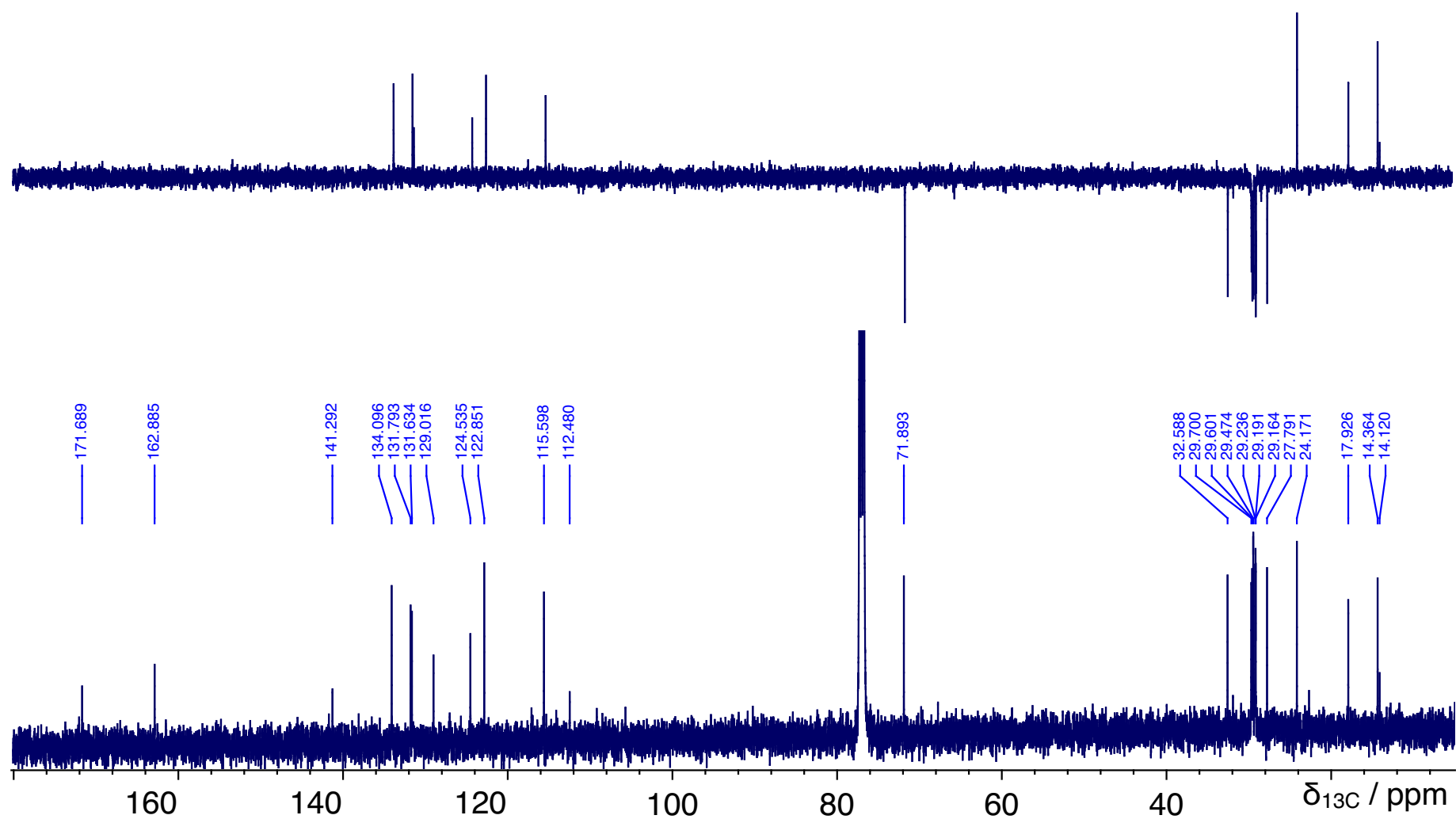


Figure S13. ^{13}C NMR and DEPT spectra (CDCl₃, 150 MHz)

S14

for **3**.

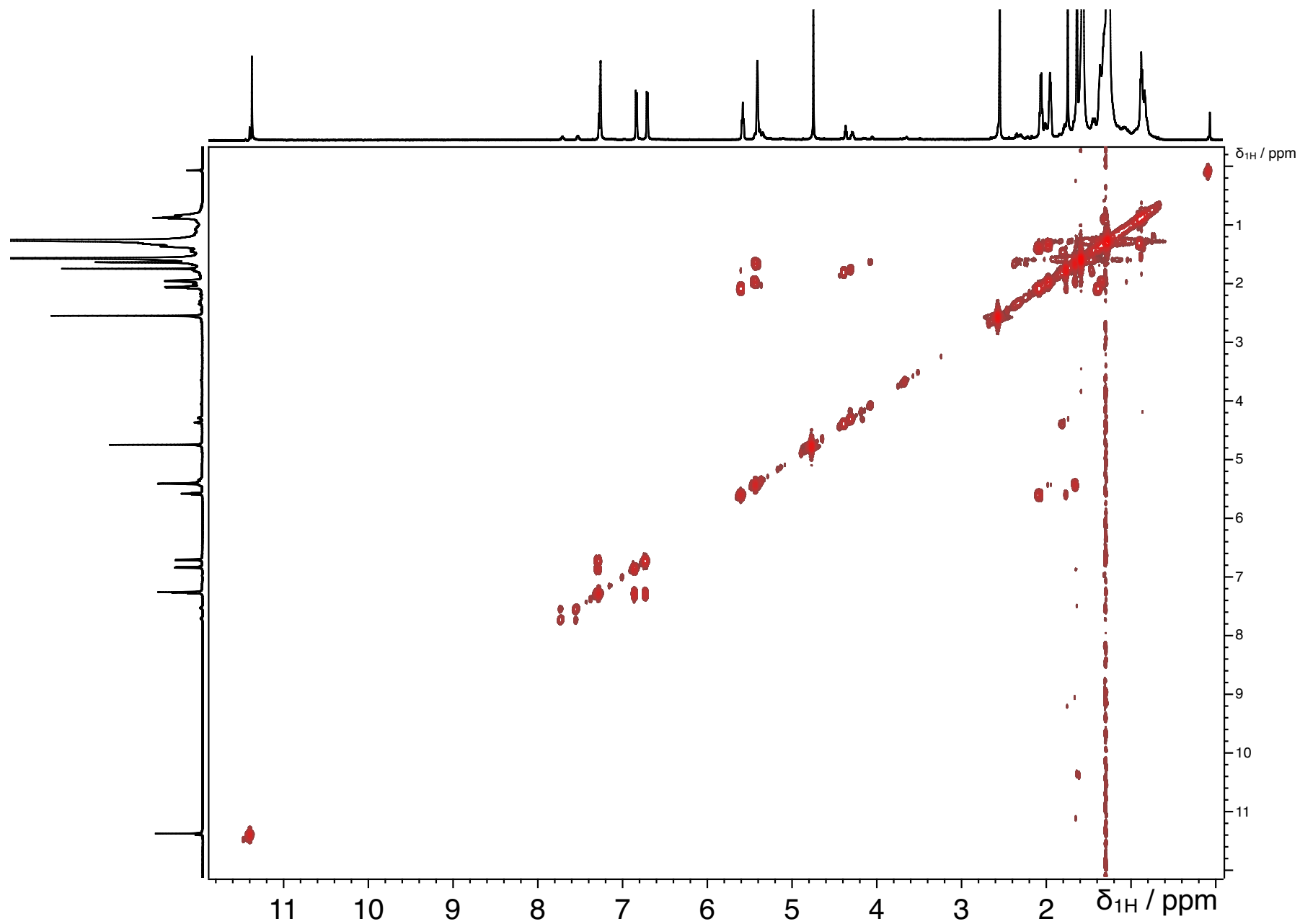


Figure S14. DQF-COSY spectrum (CDCl₃, 600 MHz) for **3**

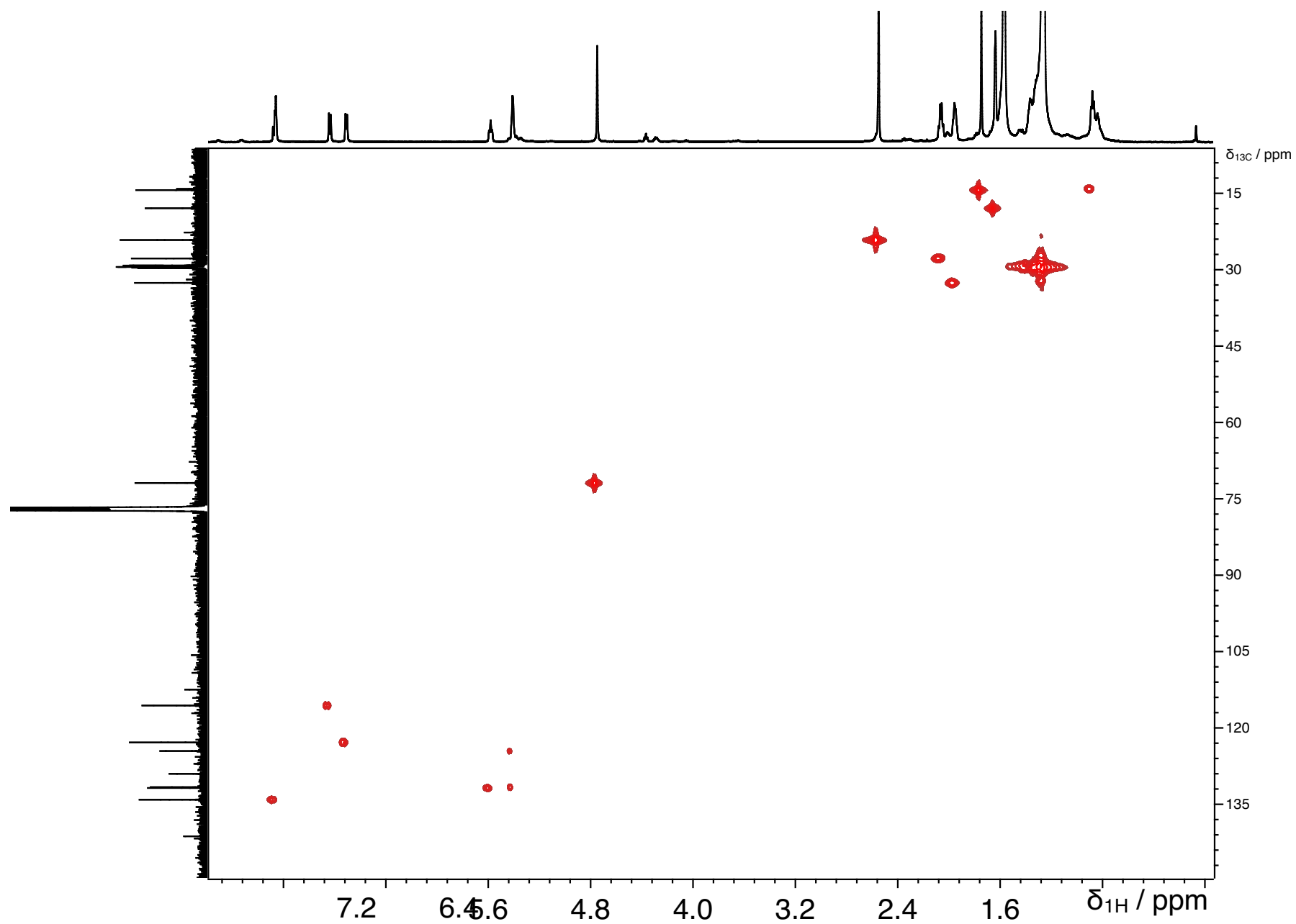


Figure S15. HMQC spectrum (CDCl₃, 600 MHz)

S16

for **3**.

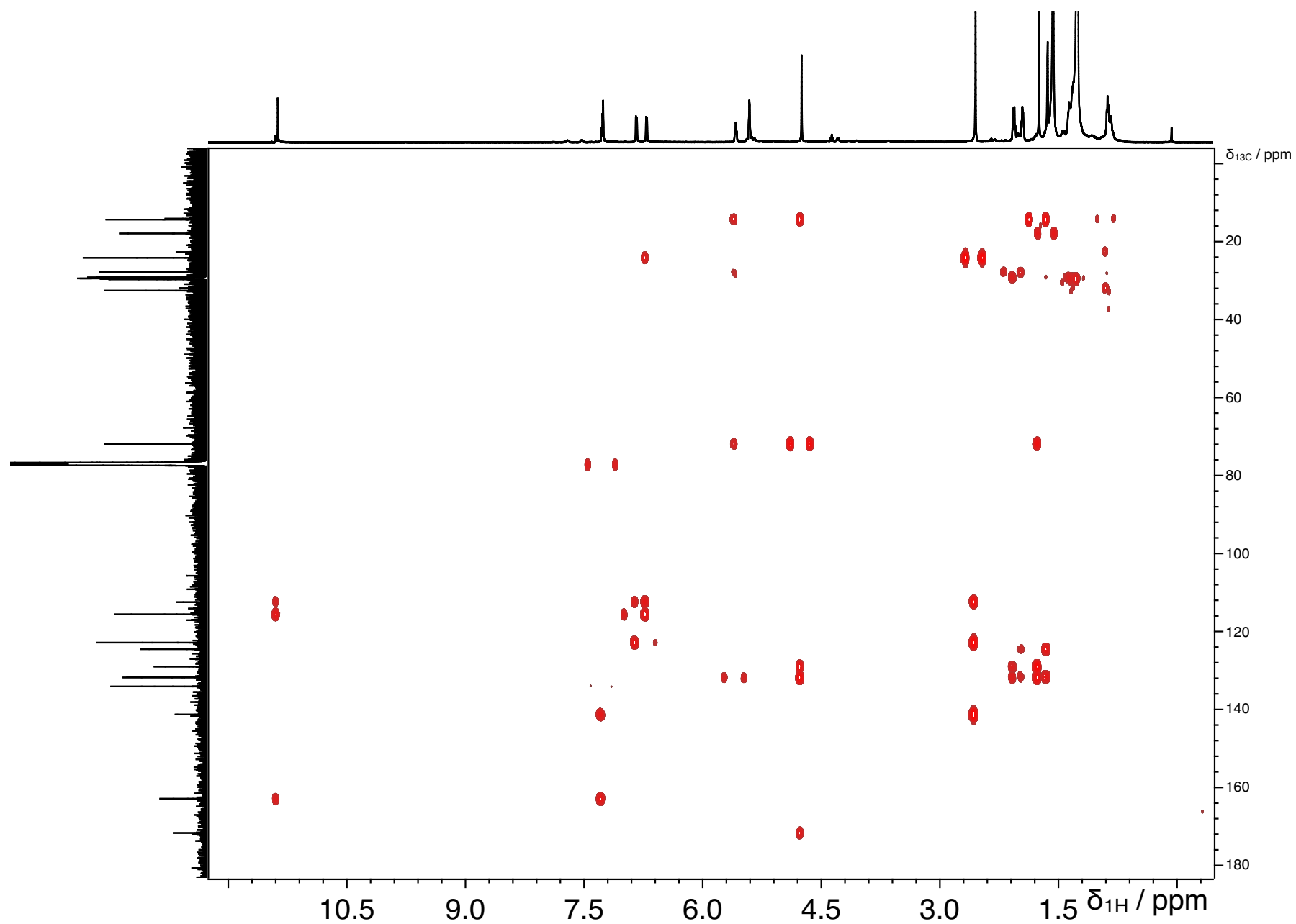


Figure S16. HMBC spectrum (CDCl_3 , 600 MHz) for **3**.

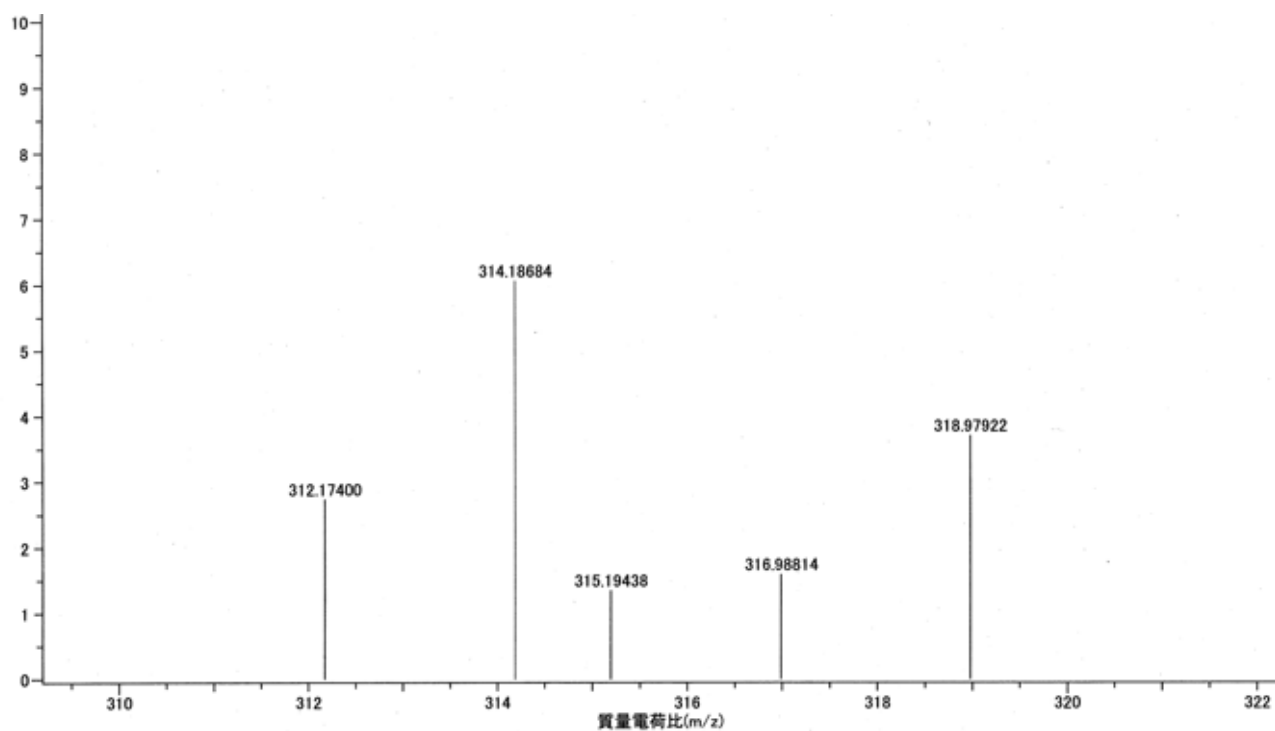


Figure S17. HRMS spectrum for **1**.

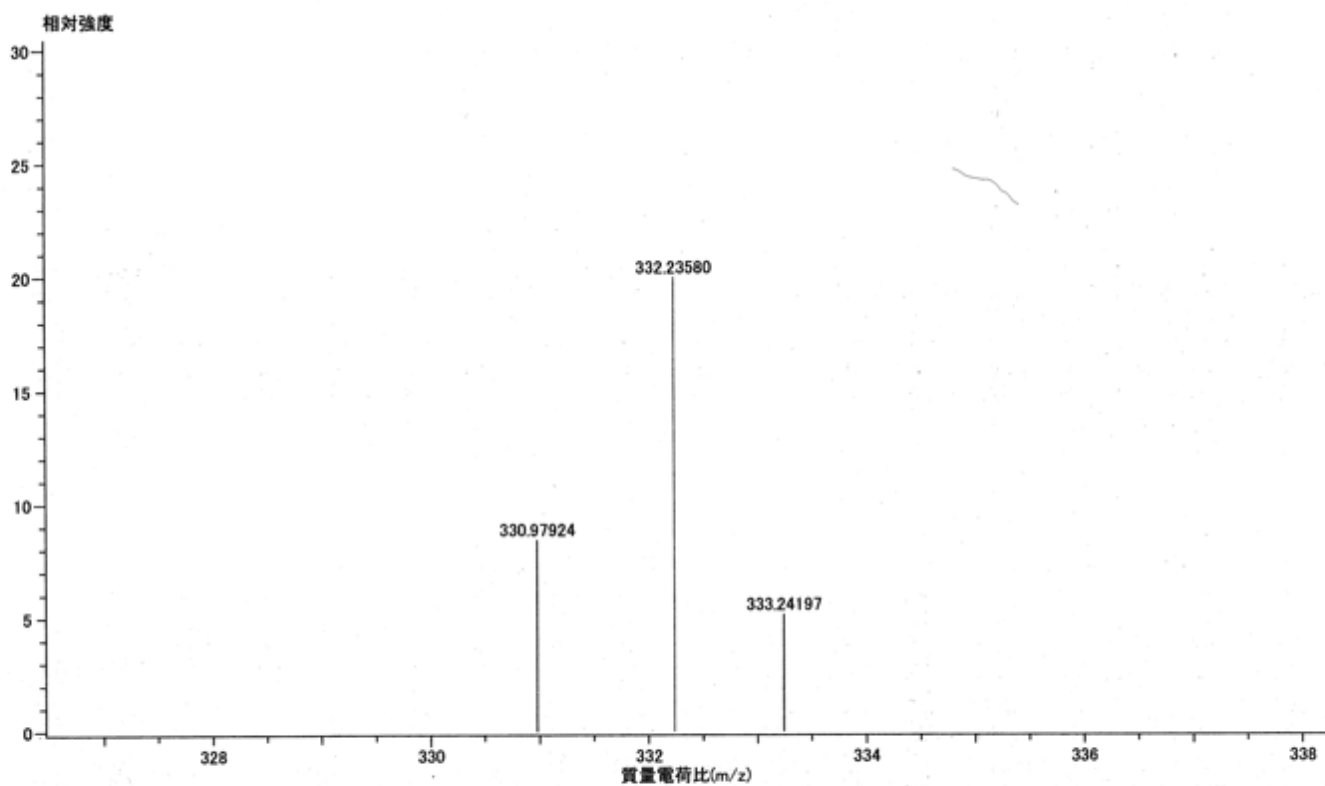
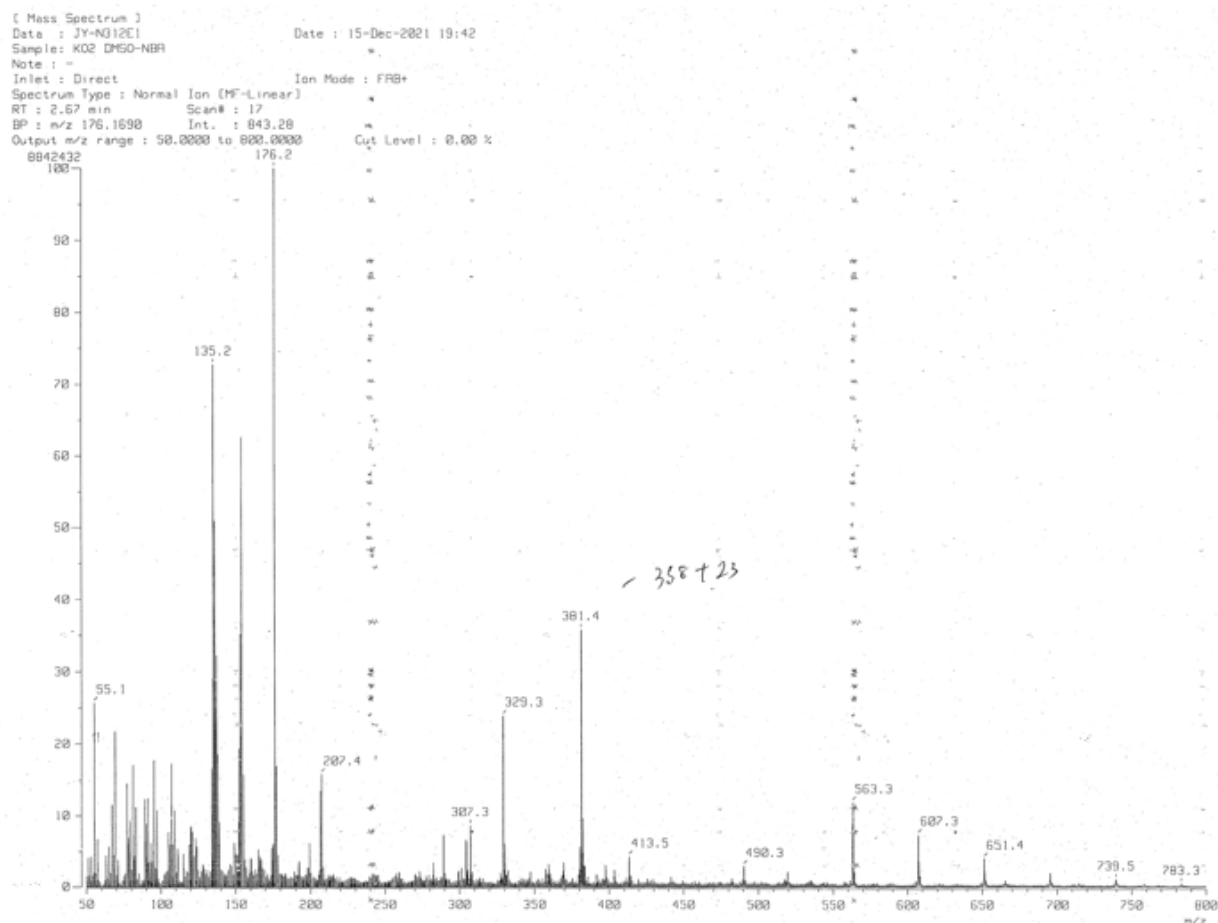


Figure S18. HRMS spectrum for **2**.



[Elemental Composition]

Date : J028

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Sample: N312-e1 DMSO-NBA

Note :

Inlet : Direct

Ion Mode : FAB+

RT : 2.34 min

Scan#: 15

Elements : C 30/15, 1H 45/25, O 5/0, Na 2/0

Mass Tolerance : 20mmu

Unsaturation (U.S.) : 0.0 - 100.0

Observed m/z	Int%	Err[ppm / mmu]	U.S.	Composition
381.2380	100.0	+42.5 / +16.2	14.5	C 28 1H 29 O
		-12.9 / -4.9	9.5	C 25 1H 33 O 3
		-46.6 / -17.8	10.5	C 27 1H 34 Na
		+48.8 / +18.6	11.5	C 26 1H 30 O Na
		-6.6 / -2.5	6.5	C 23 1H 34 O 3 Na
		-40.3 / -15.4	7.5	C 25 1H 35 Na 2
		-0.3 / -0.1	3.5	C 21 1H 35 O 3 Na 2

Figure S19. HRMS spectrum for **3**.

Reference

1. Choukchou-Braham, N.; Asakawa, Y.; Lepoittevin, J. Isolation, Structure Determination and Synthesis of New Dihydroiso-coumarins from Ginko biloba L. *Tetrahedron Lett.* **1994**, *35*, 3949–3952.
2. Li, W.; Wiesenfeldt, M.P.; Glorius, F. Ruthenium-NHC-Diamine Catalyzed Enantioselective Hydrogenation of Isocoumarins. *J. Am. Chem. Soc.* **2017**, *139*, 2585–2588.