Supporting information for journal *Marine drugs*

Four New C9 Metabolites from the Sponge-associated Fungus *Gliomastix* sp. ZSDS1-F7-2

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Table S1. ^{1}H and ^{13}C NMR data of compounds **2** and **prelactone C**[d]

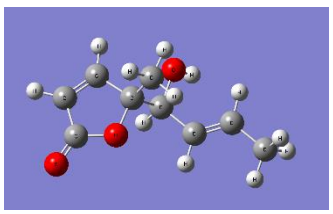
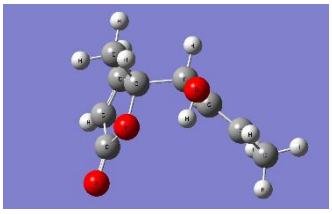
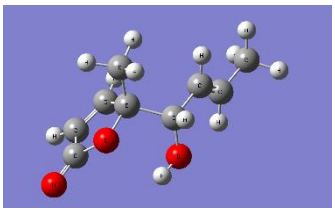
	2[a]		**prelactone C**[b]	**prelactone C**[c]	
No	δ_H (mult., J in Hz)	δ_C	δ_H (mult., J in Hz)	δ_H (mult., J in Hz)	δ_C
1	-	173.4	-	-	170.2
2	2.42 (dd, J = 18.3, 9.0) 2.81 (dd, J = 18.3, 6.6)	36.4	2.40 (dd, J = 17, 7) 2.91 (dd, J = 17, 6)	2.50 (dd, J = 17, 8) 2.94 (dd, J = 17, 6)	39.1
3	4.20 (m)	67.4	3.72 (ddq, J = 7,7,6)	3.79 (m)	69.6
4	2.16 (m)	38.9	1.60 (ddq, J = 10, 7, 6)	1.68 (m)	41.5
5	4.81 (dd, J = 6.9, 2.1)	83.2	4.30 (dd, J = 10, 8)	4.21 (m)	84.1
6	5.66 (dd, J = 15.3, 6.9)	128.6	5.46 (ddq, J = 15, 8, 2)	5.46 (ddq, J = 15, 8, 2)	127.6
7	5.84 (dq, J = 15.3, 6.3)	130.6	5.83 (ddq, J = 15, 6, 1)	5.81 (ddq, J = 15, 6, 1)	132.6
8	1.75 (d, J = 6.3)	17.9	1.75 (dd, J = 6.5, 2)	1.76 (dd, J = 6.5, 2)	17.7
9	0.92 (d, J = 7.2)	5.9	1.04 (d, J = 6.5)	1.04 (d, J = 7.0)	13.7

[a]: Recorded for ^{1}H NMR at 300MHz/ ^{13}C NMR at 75MHz in CD_3OD; [b]: Recorded for ^{1}H NMR at 500MHz in CD_3OD; [c]: Recorded for ^{1}H NMR at 200MHz / ^{13}C NMR at 50MHz in $CDCl_3$; [d]: The NMR data of Prelactone C were taken from the literature, Bindseil, Kai U., and Axel Zeeck. "Metabolic products of microorganisms. Part 265. Prelactones C and B, oligoketides from Streptomyces producing concanamycins and bafilomycins." *Helvetica chimica acta* 76.1 (1993): 150-157.

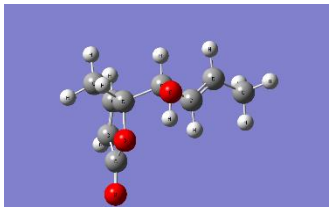
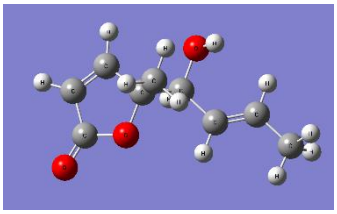
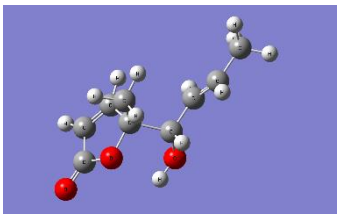
Table S2. Anti-fouling and cytotoxicity activities of compounds **1**–**4**

Compounds	**Antifouling (*Balanus amphitrite*)**			**Cytotoxicity (HeLa)**
	EC_{50} (μg/mL)	LC_{50} (μg/mL)	LC_{50}/EC_{50}	IC_{50} (μg/mL)
1	12.8	>25	>1.9	>25
2	>25	>25	-	>25
3	>25	>25	-	>25
4	>25	>25	-	>25

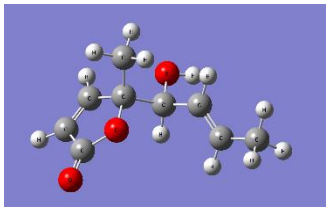
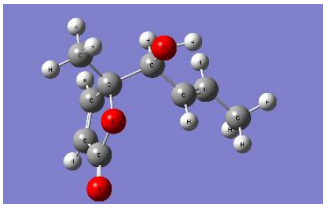
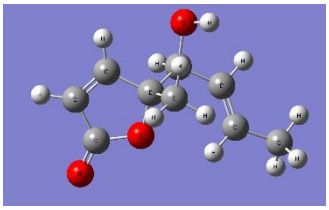
- Not applicable

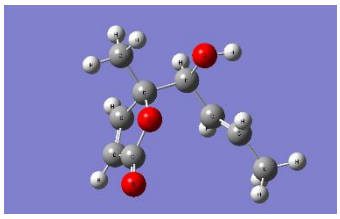
ΔG = 0 kcal/mol, 21%; ΔG = 0.14 kcal/mol, 17%; ΔG = 0.16 kcal/mol, 16%;

ΔG = 0.22 kcal/mol, 15%; ΔG = 0.36 kcal/mol, 11%; ΔG = 0.39 kcal/mol, 11%;

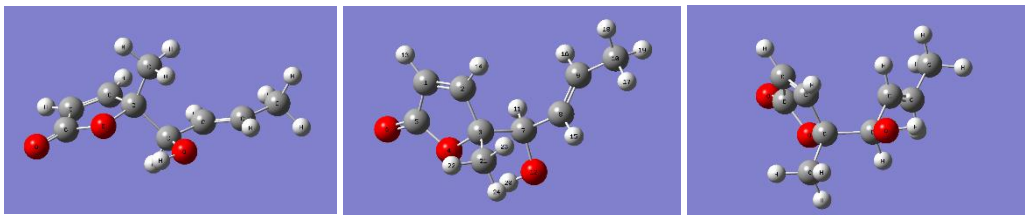




ΔG = 0.54 kcal/mol, 8%; ΔG = 2.00 kcal/mol, 0.7%; ΔG = 2.85 kcal/mol, 0.15%;

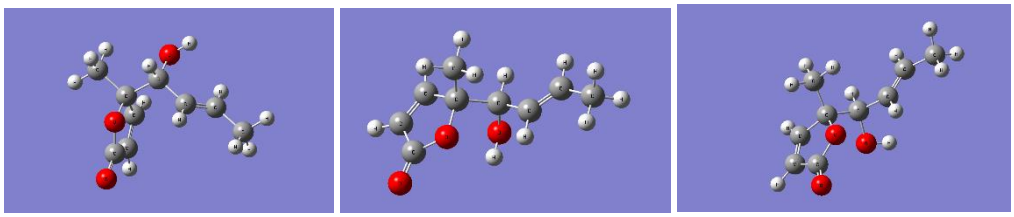


ΔG = 2.87 kcal/mol, 0.15%;

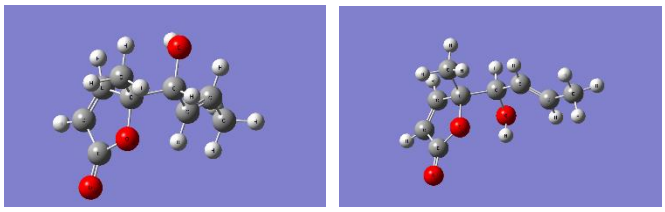
Figure S1. The conformers, relative energies (ΔG) and conformer populations of the minimized conformers of (4*R*, 5*S*)-**1** within an energy range of 3 kcal/mol.



ΔG = 0 kcal/mol, 43%; ΔG = 0.09 kcal/mol, 37%; ΔG = 1.09 kcal/mol, 7%;



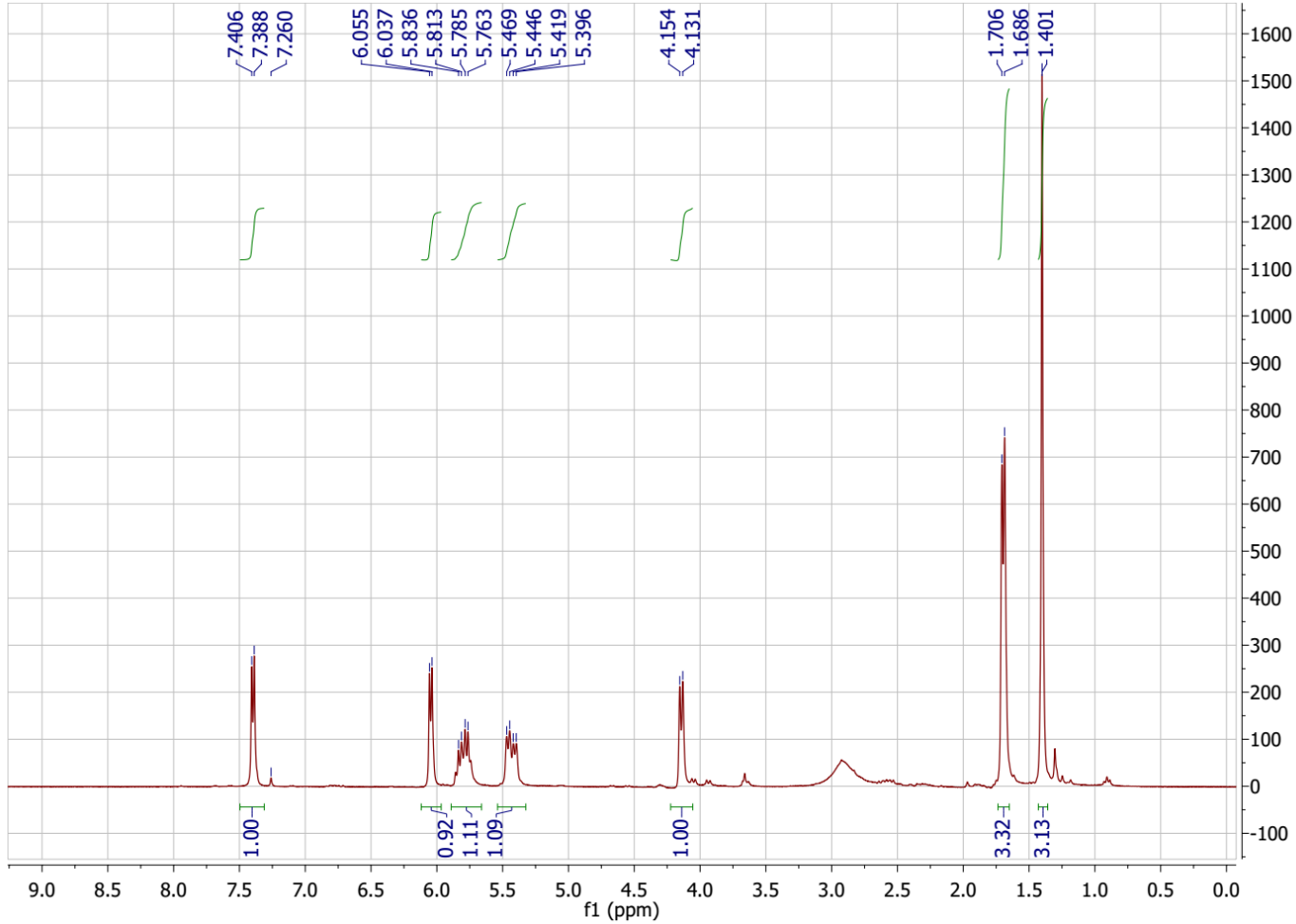
ΔG = 1.25 kcal/mol, 5%; ΔG = 1.41 kcal/mol, 4%; ΔG = 2.02 kcal/mol, 2%;

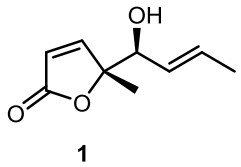


ΔG = 2.07 kcal/mol, 1%; ΔG = 2.31 kcal/mol, 1%.

Figure S2. The conformers, relative energies (ΔG) and conformer populations of the minimized conformers of (4*R*, 5*R*)-**1** within an energy range of 3 kcal/mol.

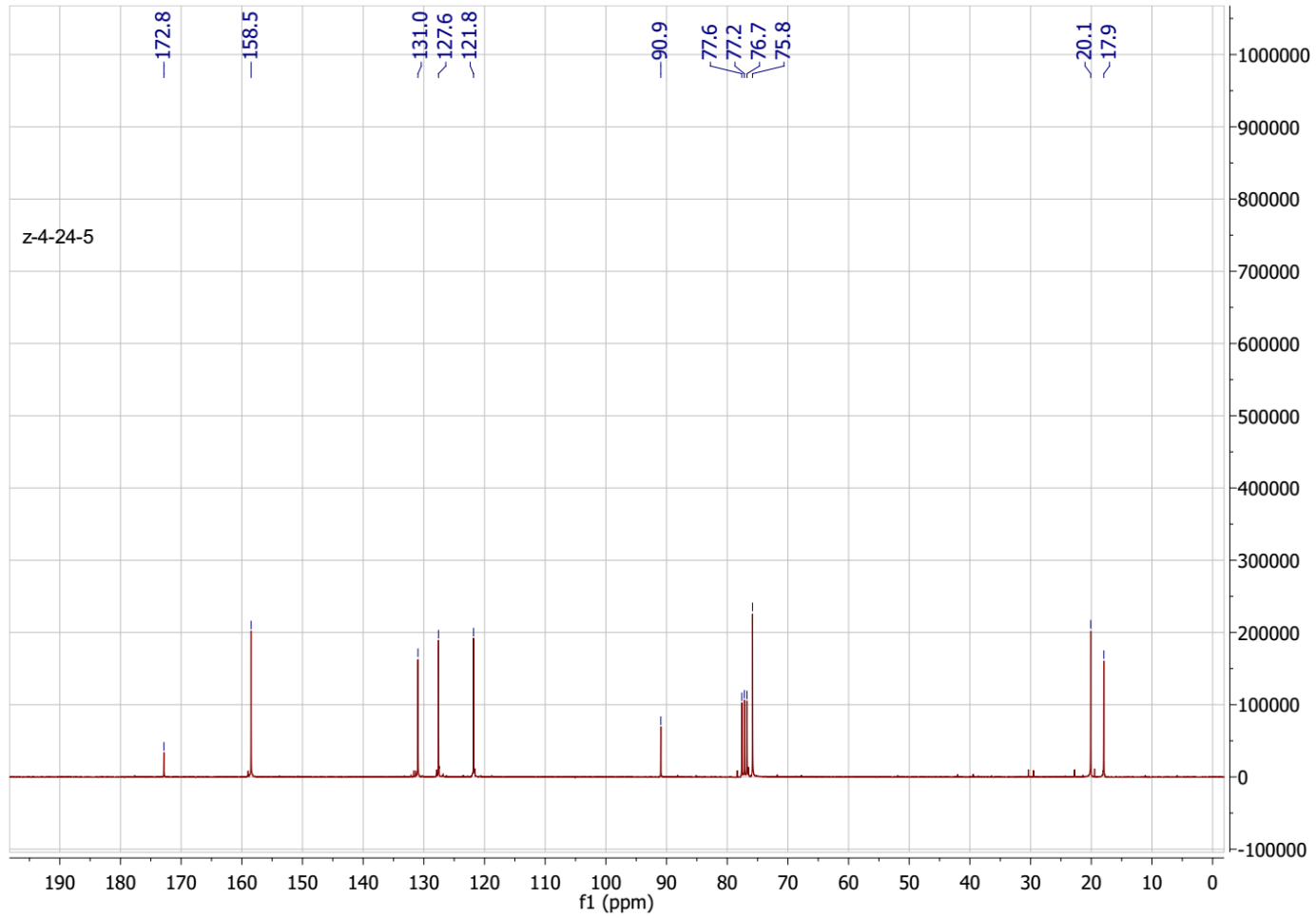
Figure S3. ^{1}H NMR (300 MHz, $CDCl_3$) of compound **1**.





1

Figure S4. ^{13}C NMR (75 MHz, $CDCl_3$) of compound **1**.



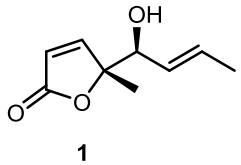


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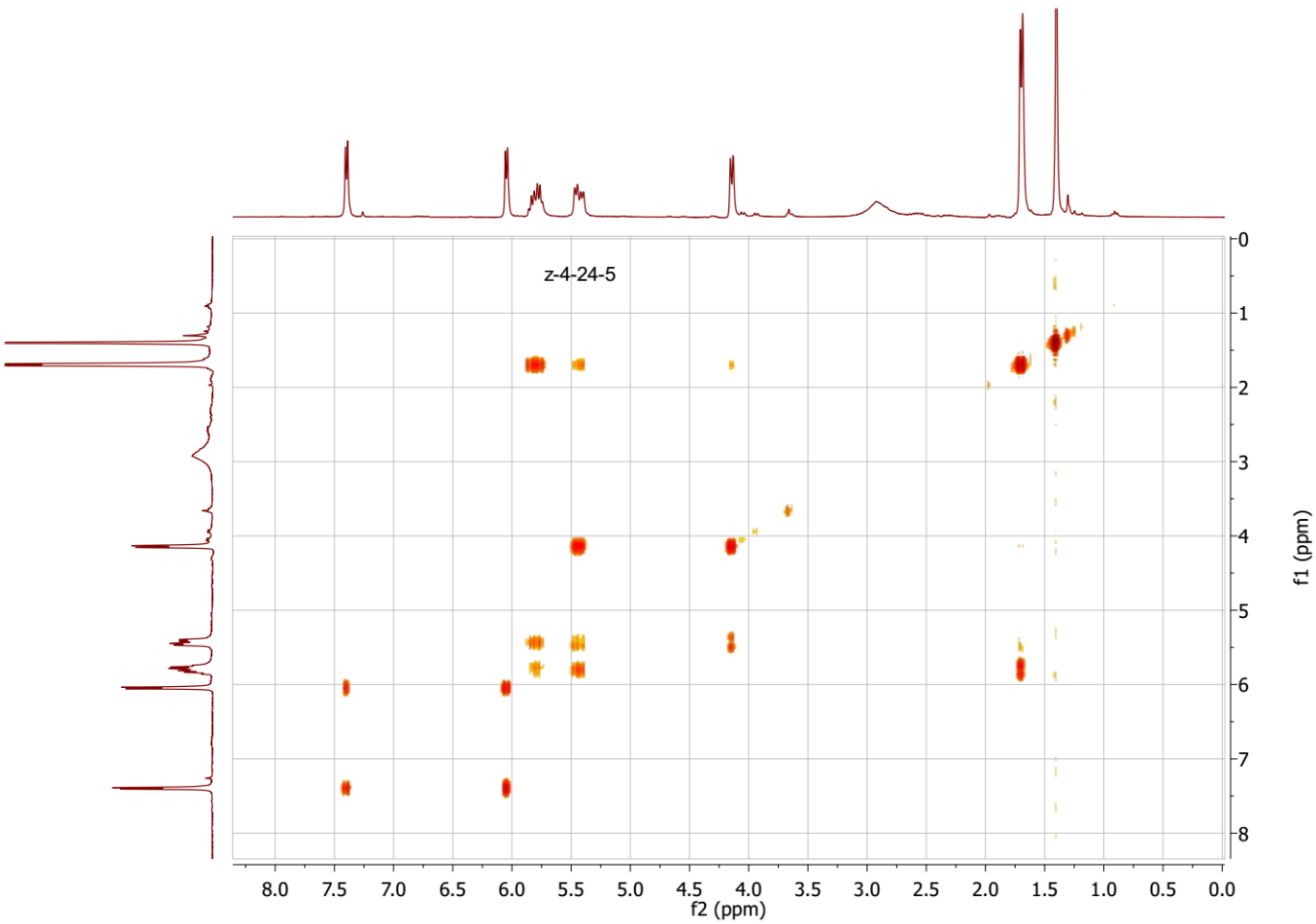
Figure S5. ^{1}H-^{1}H COSY (300 MHz, $CDCl_3$) of compound **1**



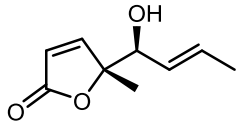


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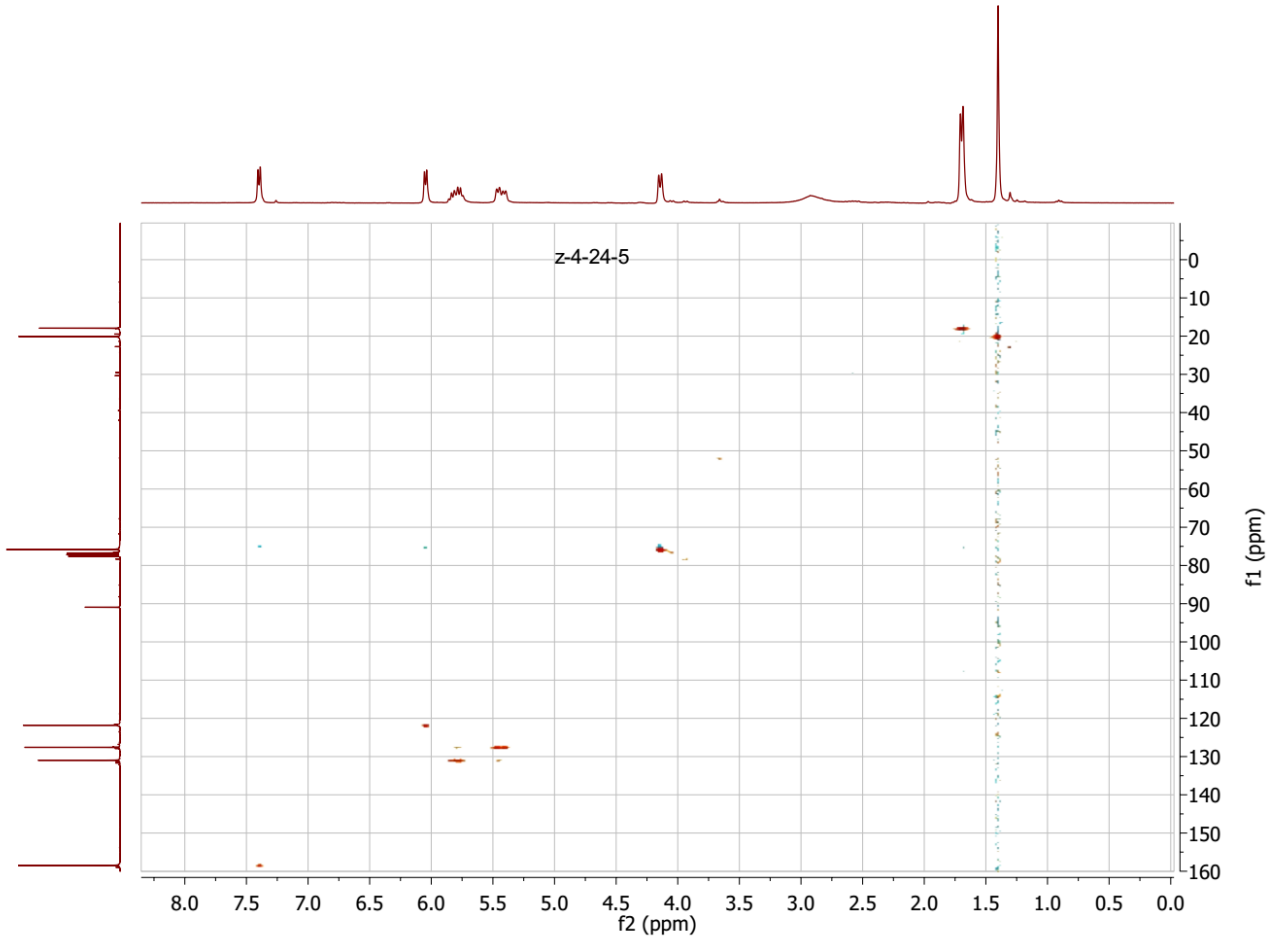
Figure S6. HSQC (300 MHz, $CDCl_3$) of compound **1**.



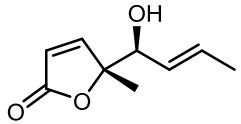


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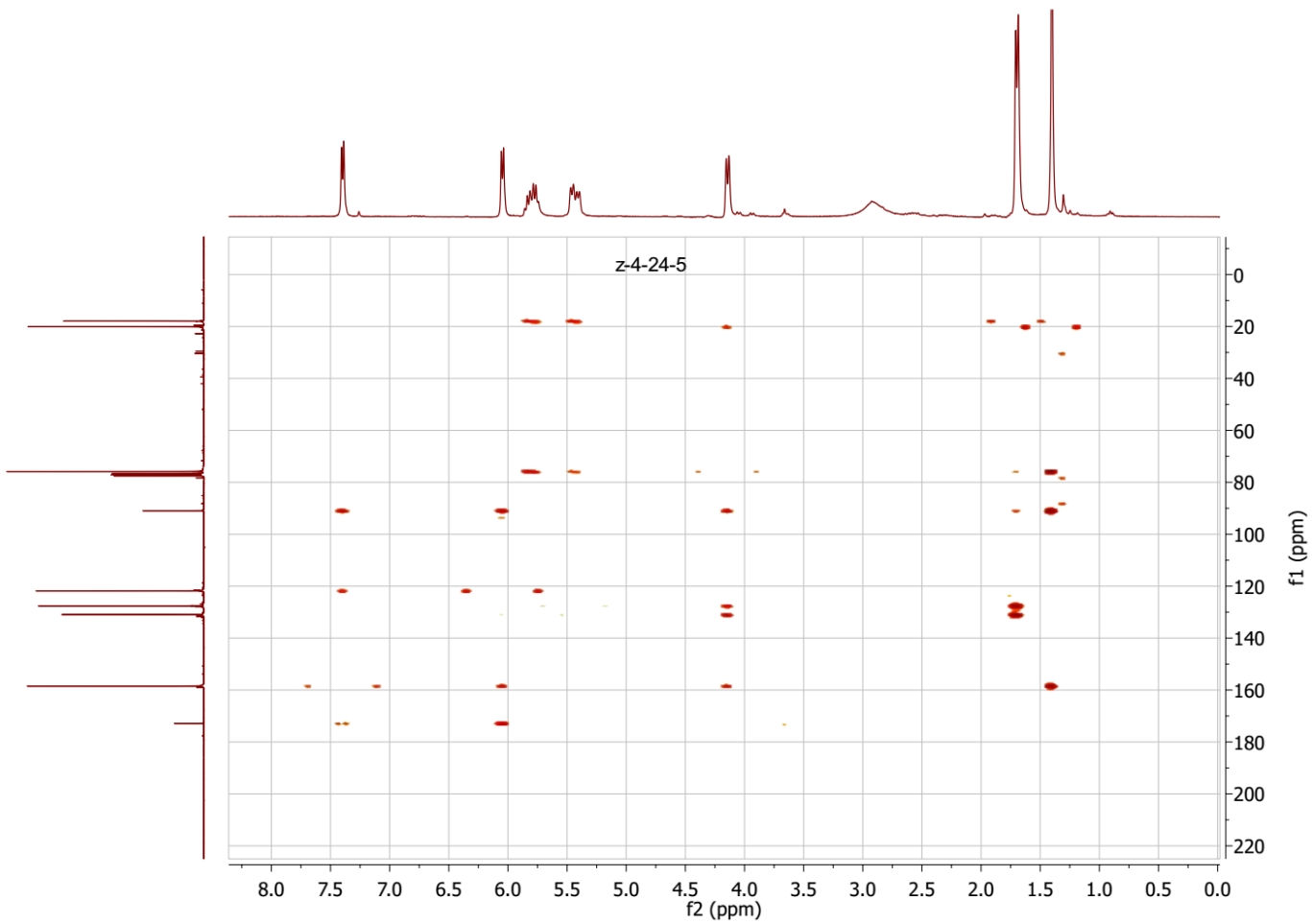
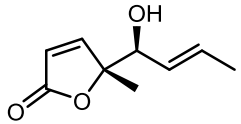
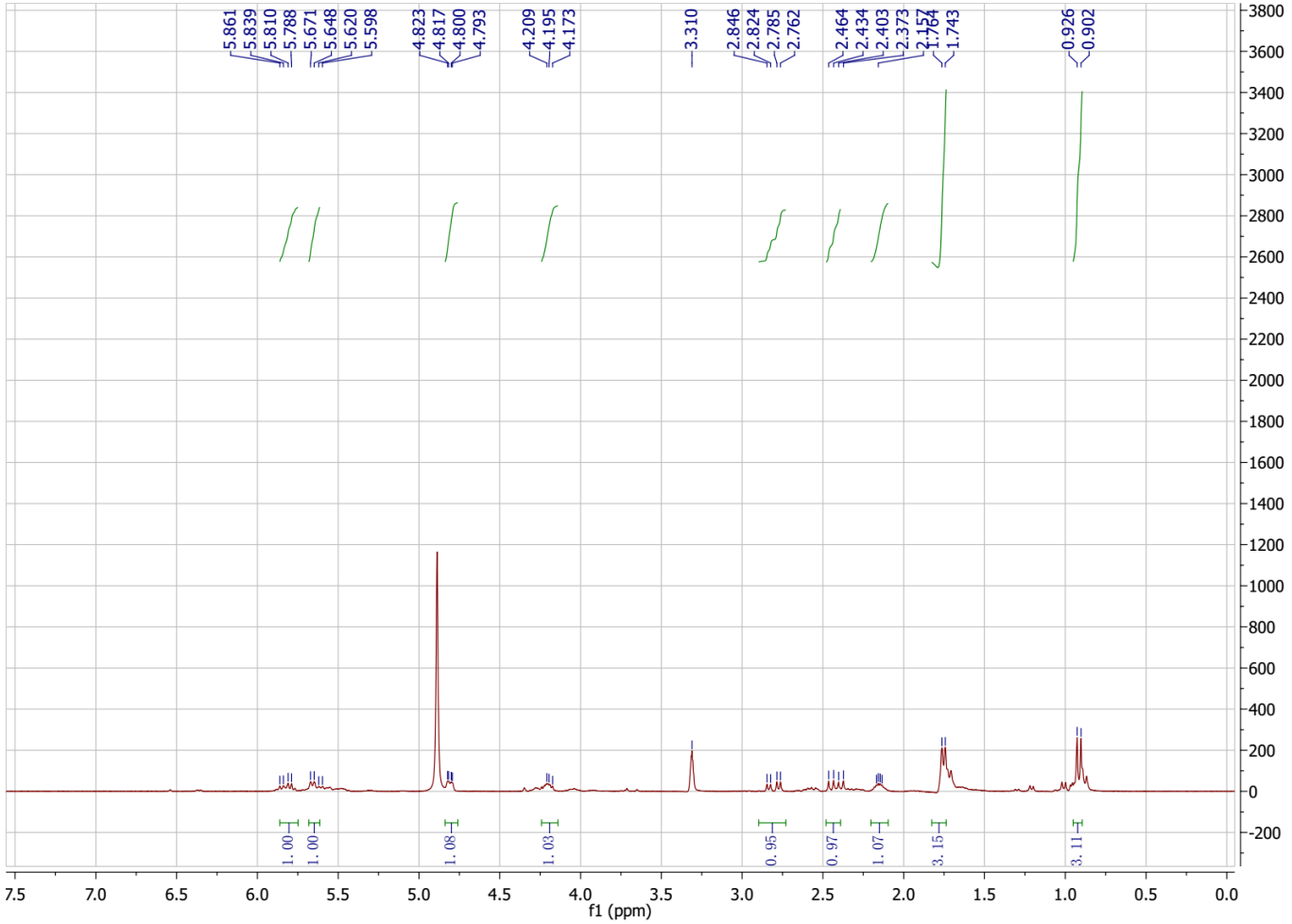
Figure S7. HMBC (300 MHz, $CDCl_3$) of compound **1**.





1

Figure S8. ^{1}H NMR (300 MHz, CD_3OD) of compound **2**.



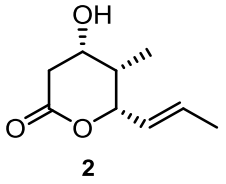


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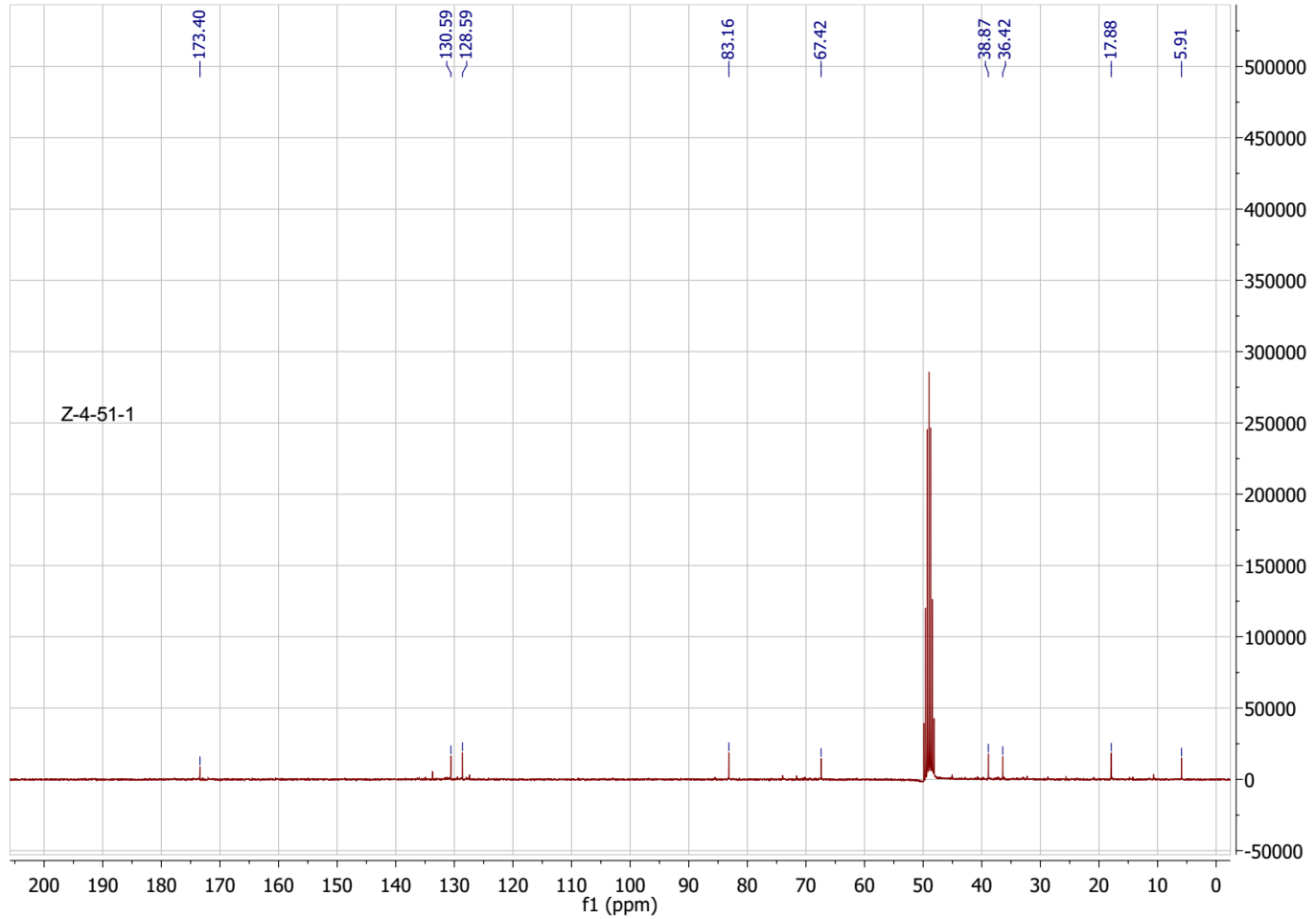
Figure S9. ^{13}C NMR (75 MHz, CD_3OD) of compound **2**.



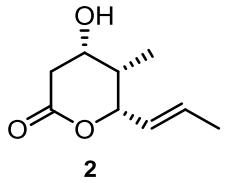


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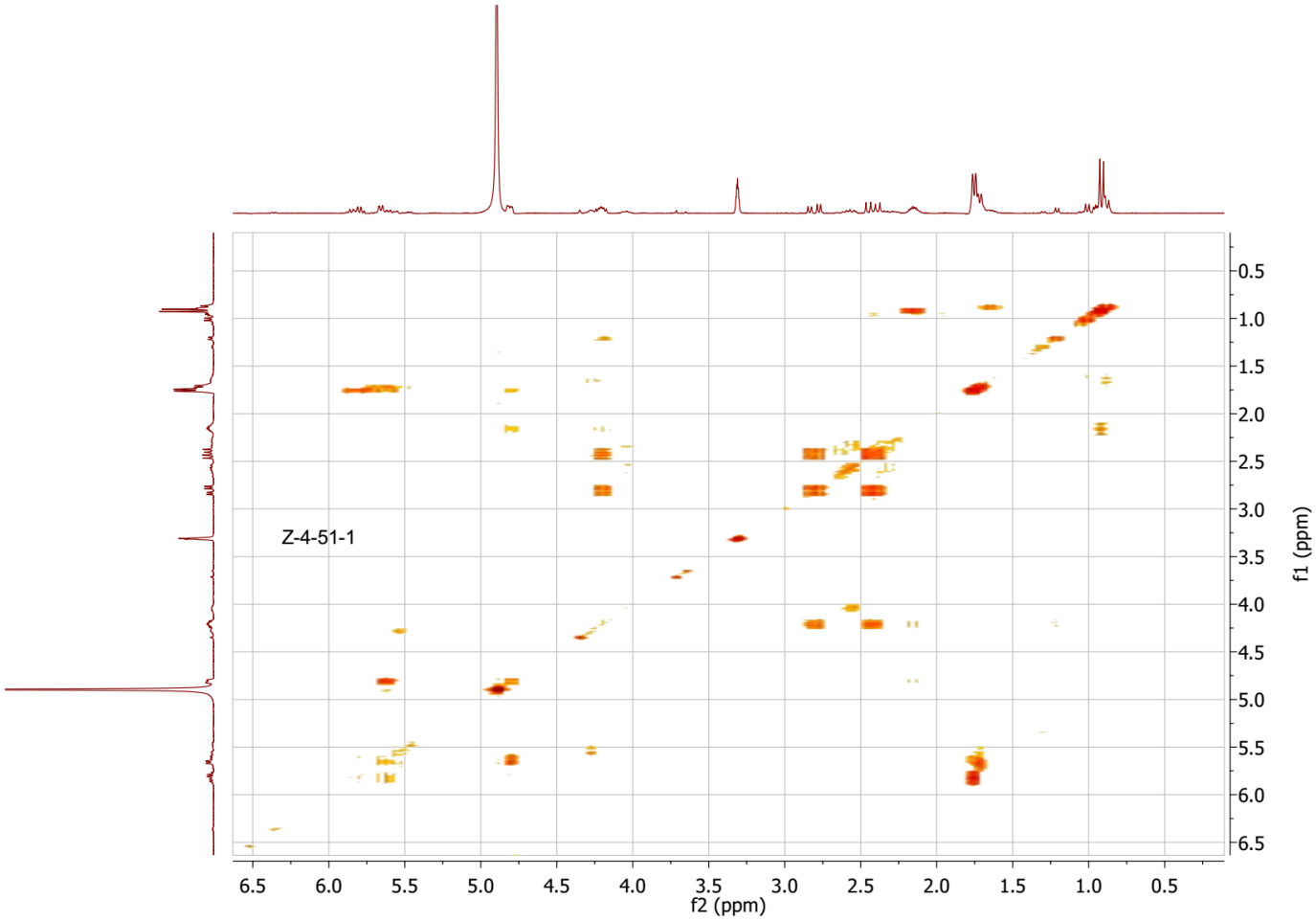
Figure S10. ^{1}H-^{1}H COSY (300 MHz, CD_3OD)compound **2**



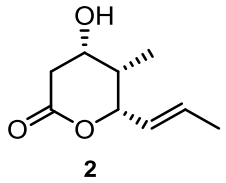


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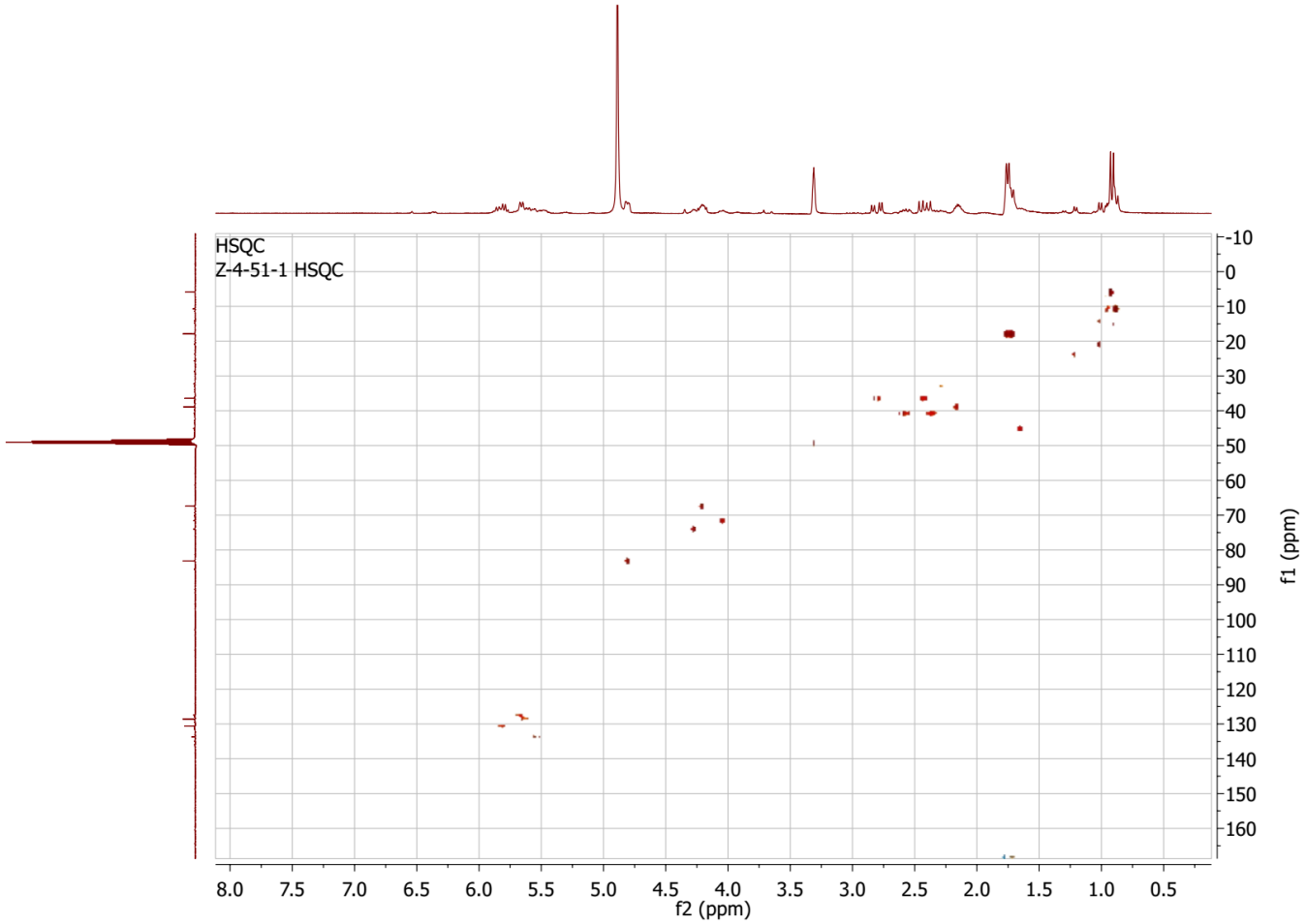
Figure S11. HSQC (300 MHz, CD_3OD) of compound **2**.



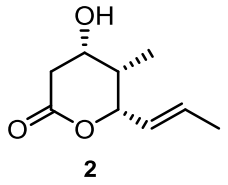


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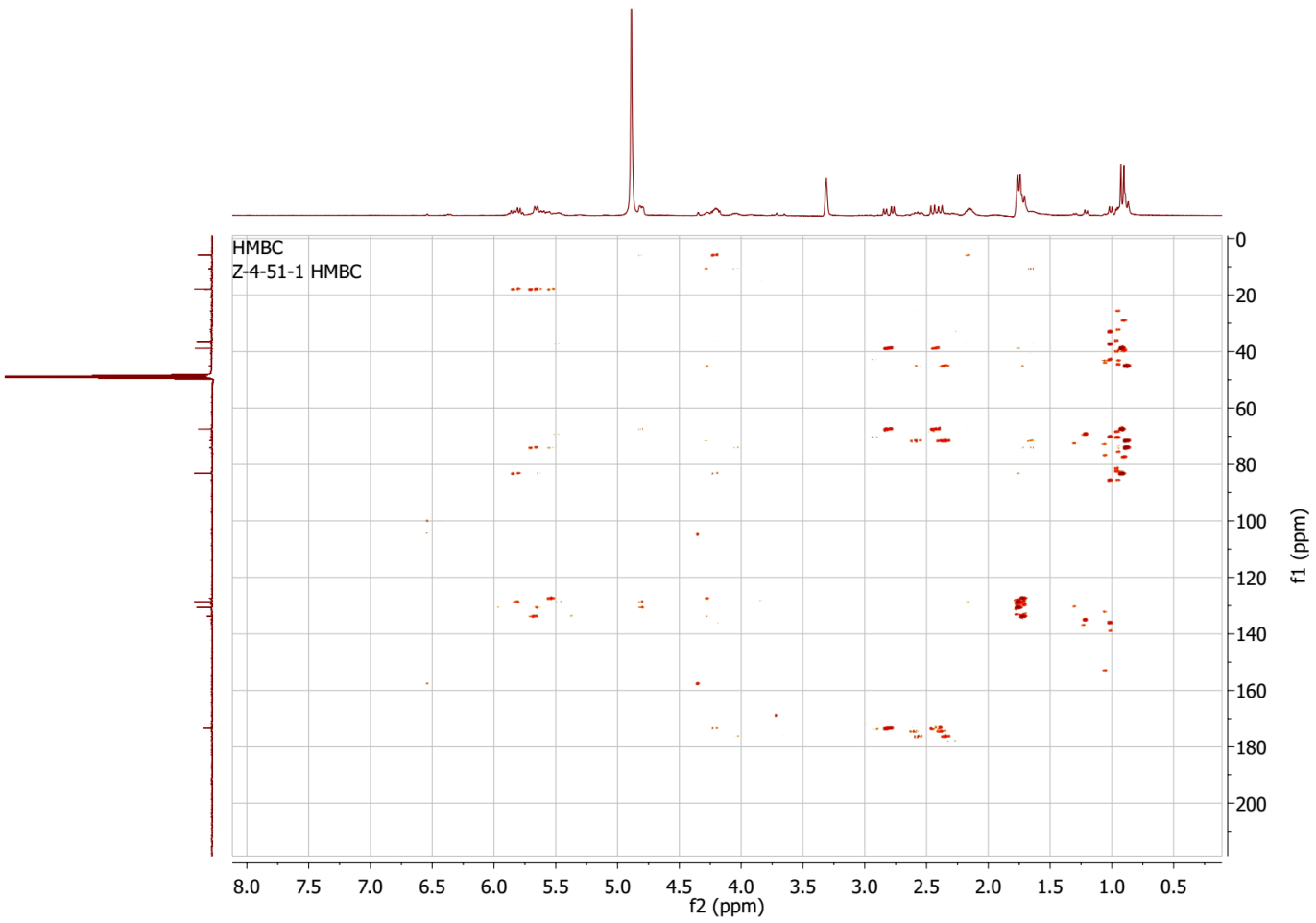
Figure S12. HMBC (300 MHz, CD_3OD) of compound **2**.



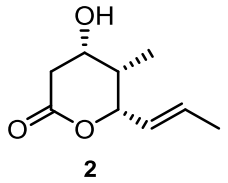


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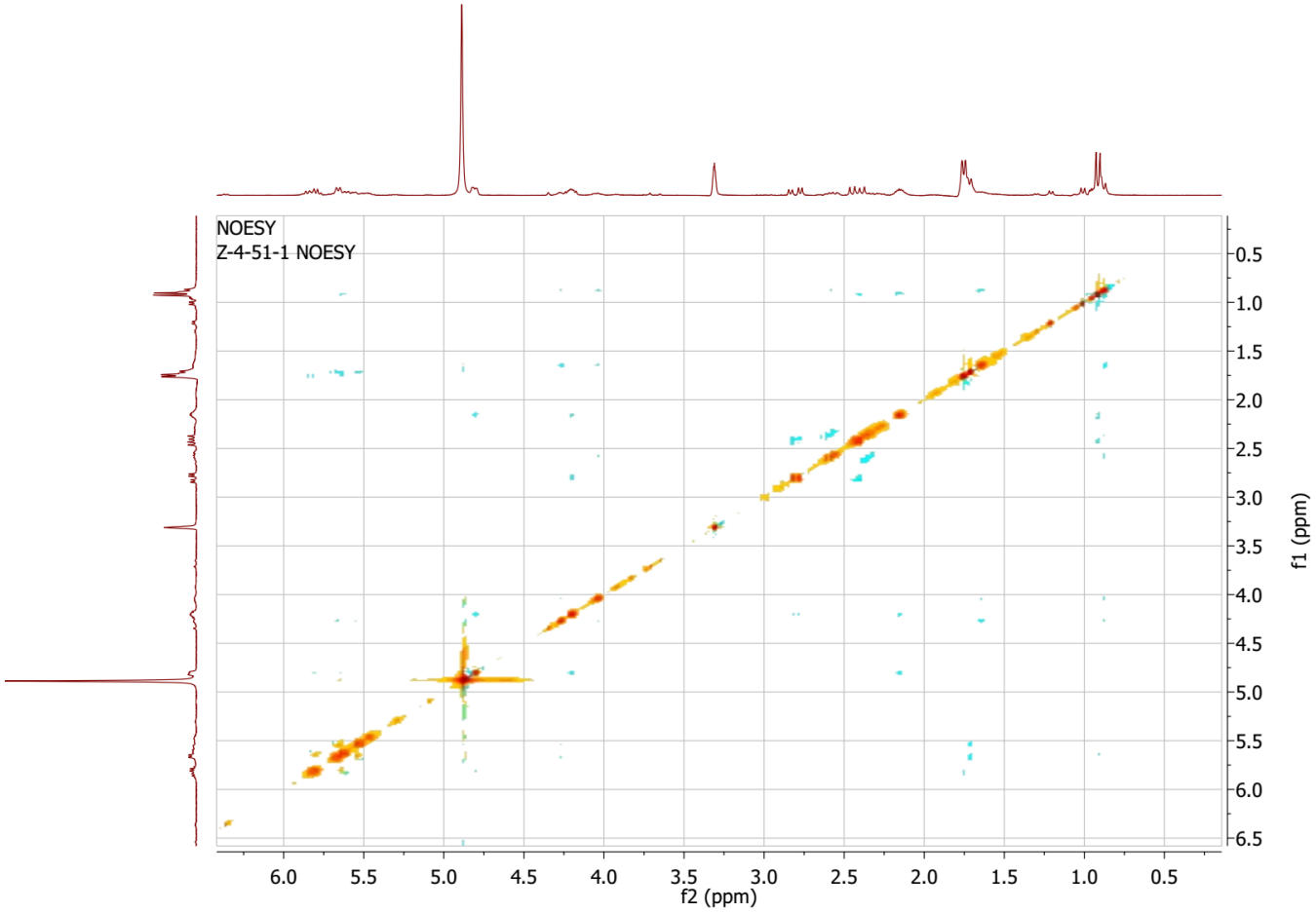
Figure S13. NOESY (300 MHz, CD_3OD) of compound **2**.



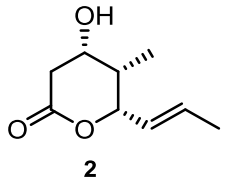


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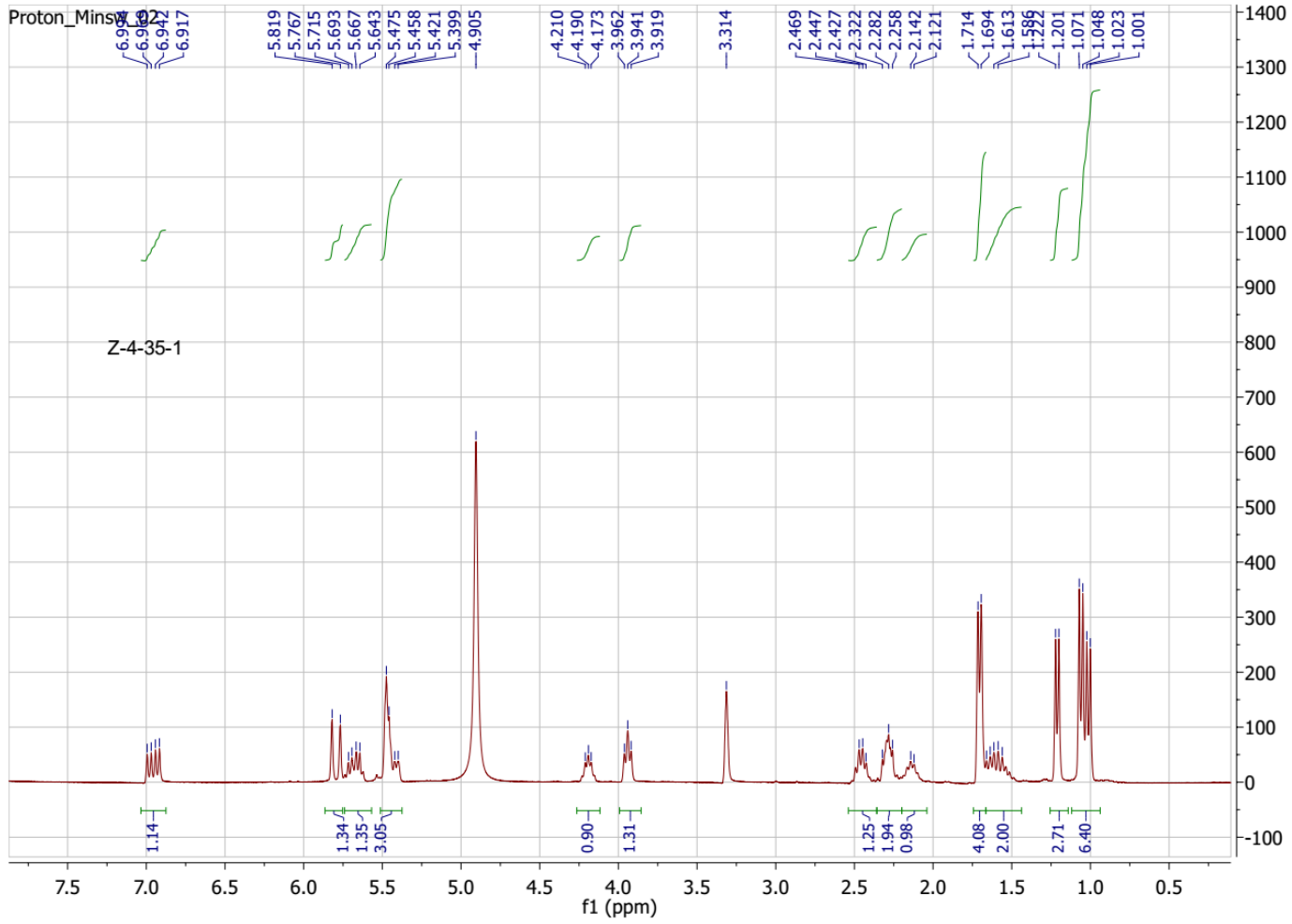
Figure S14. ^{1}H NMR (500 MHz, CD_3OD) of compounds **3** and **4** (1:1 ratio).



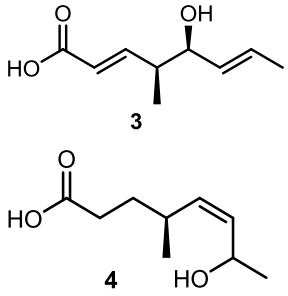
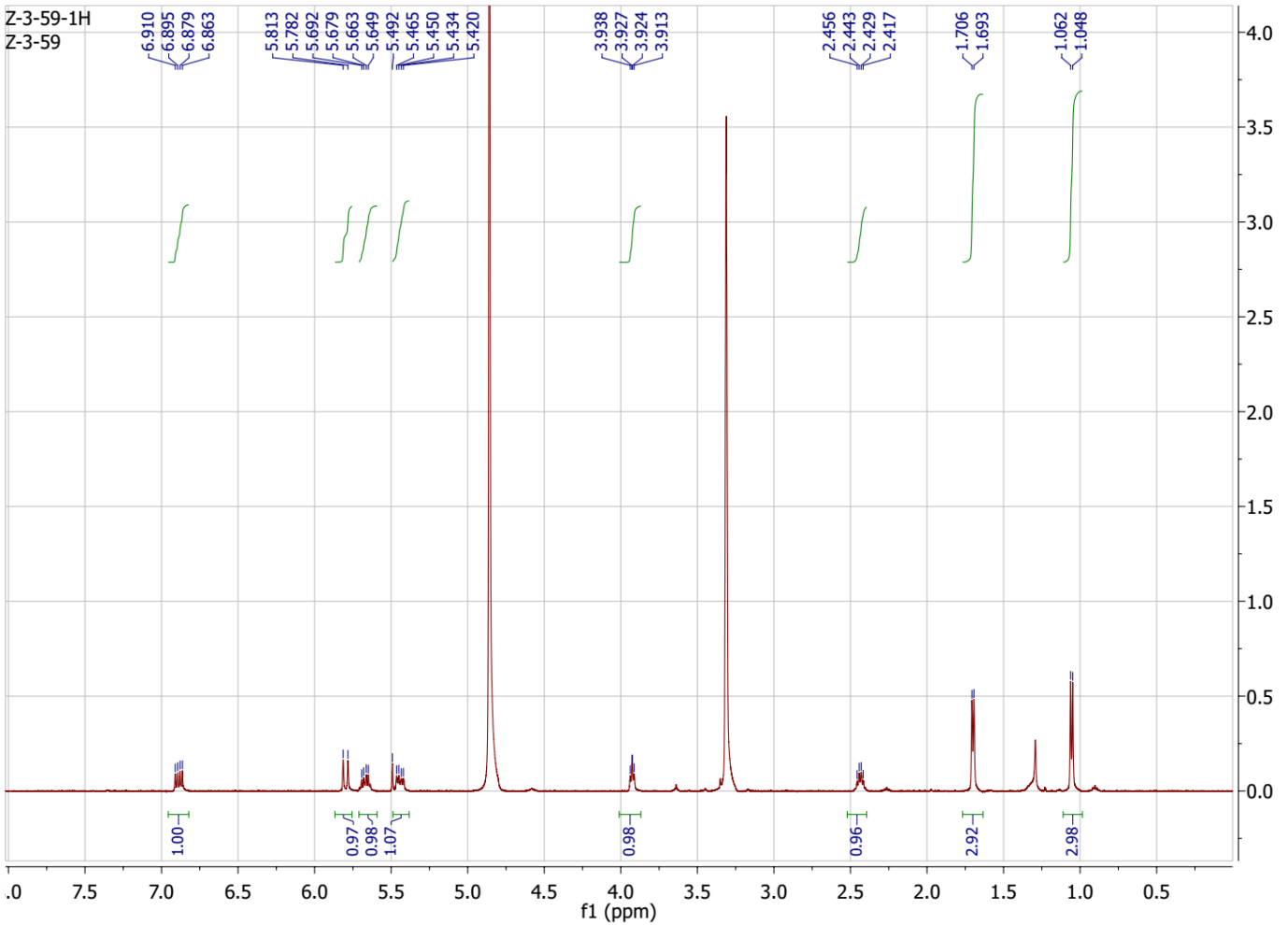
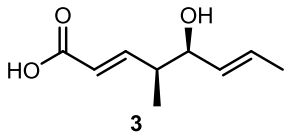


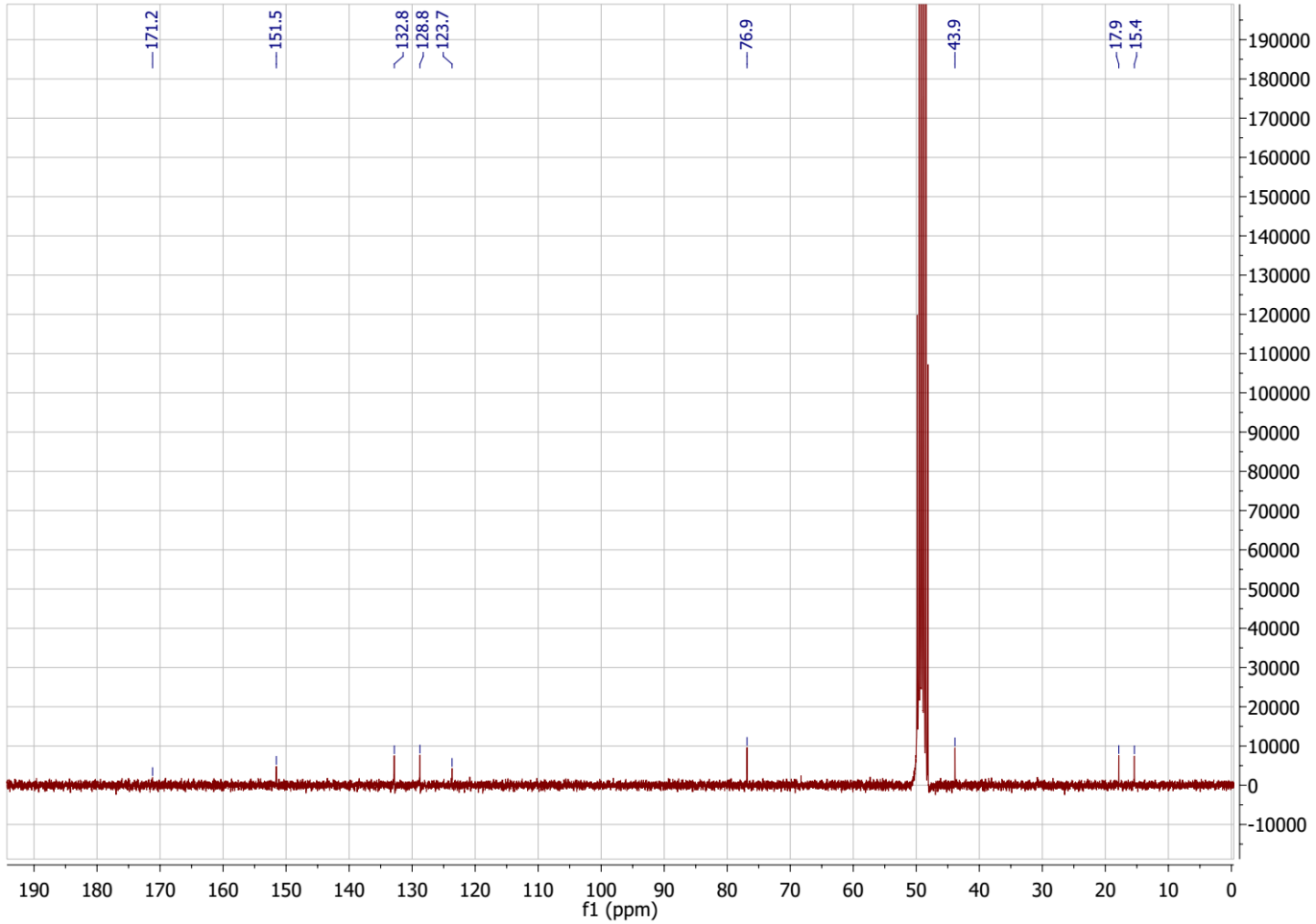
Figure S15. ^{1}H NMR (500 MHz, CD_3OD) of compound **3**.





3

Figure S16. ^{13}C NMR (75 MHz, CD_3OD) of compound **3.**



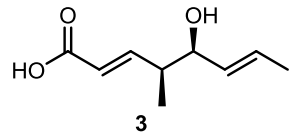


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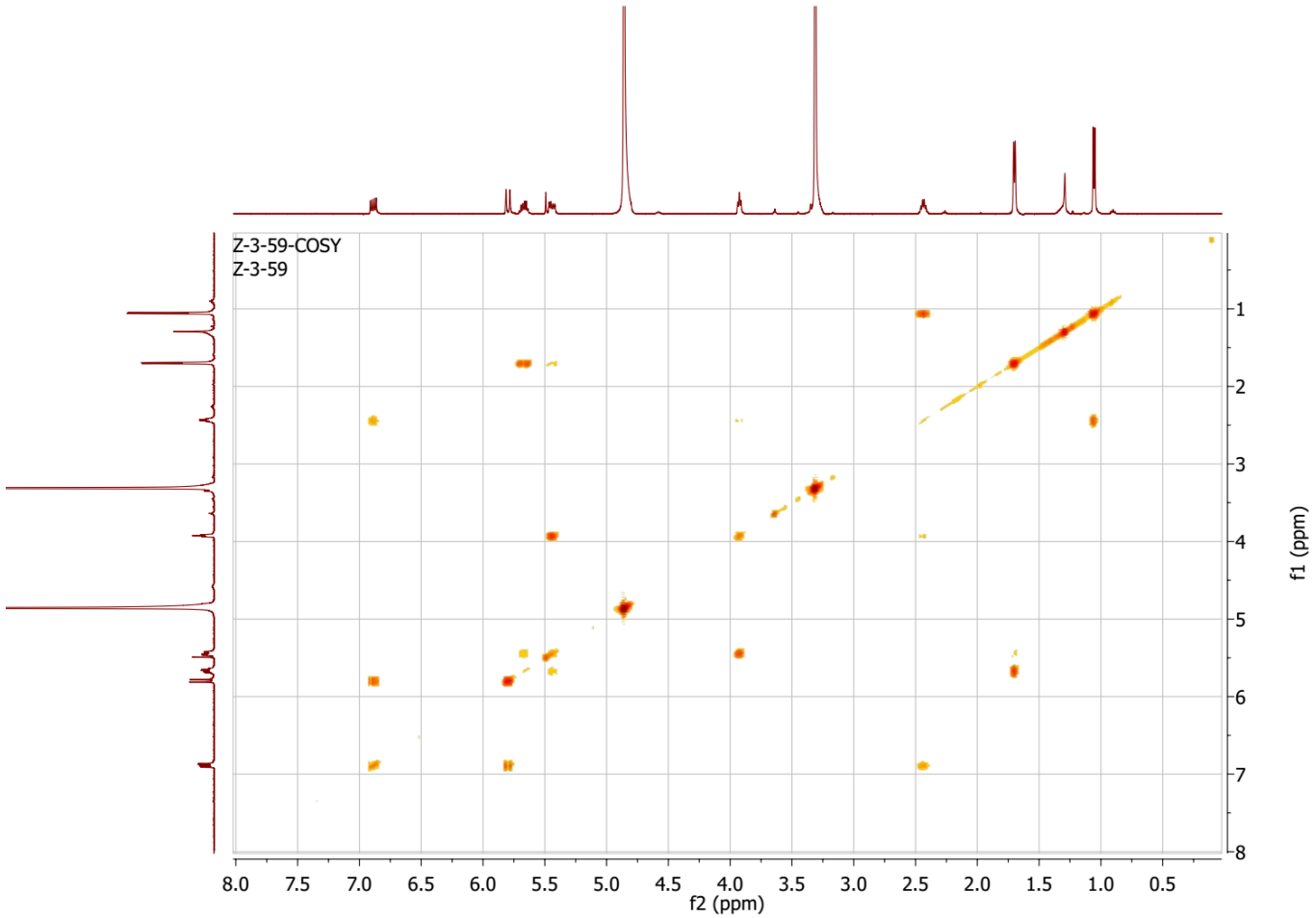
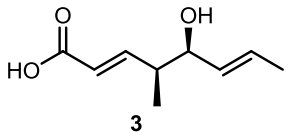
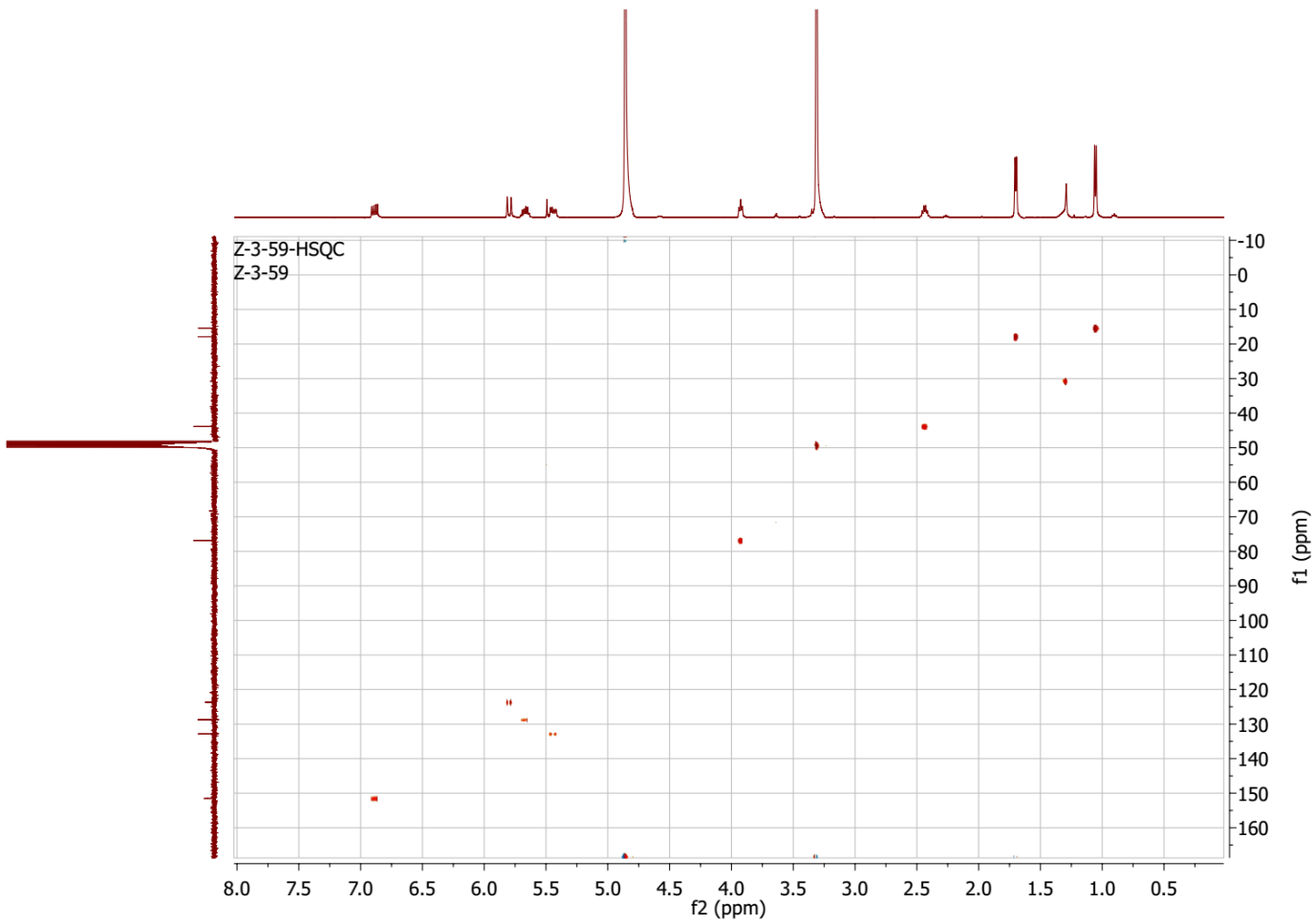
Figure S17. ^{1}H-^{1}H COSY (500 MHz, CD_3OD) of compound **3**

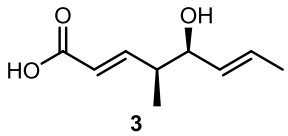




3

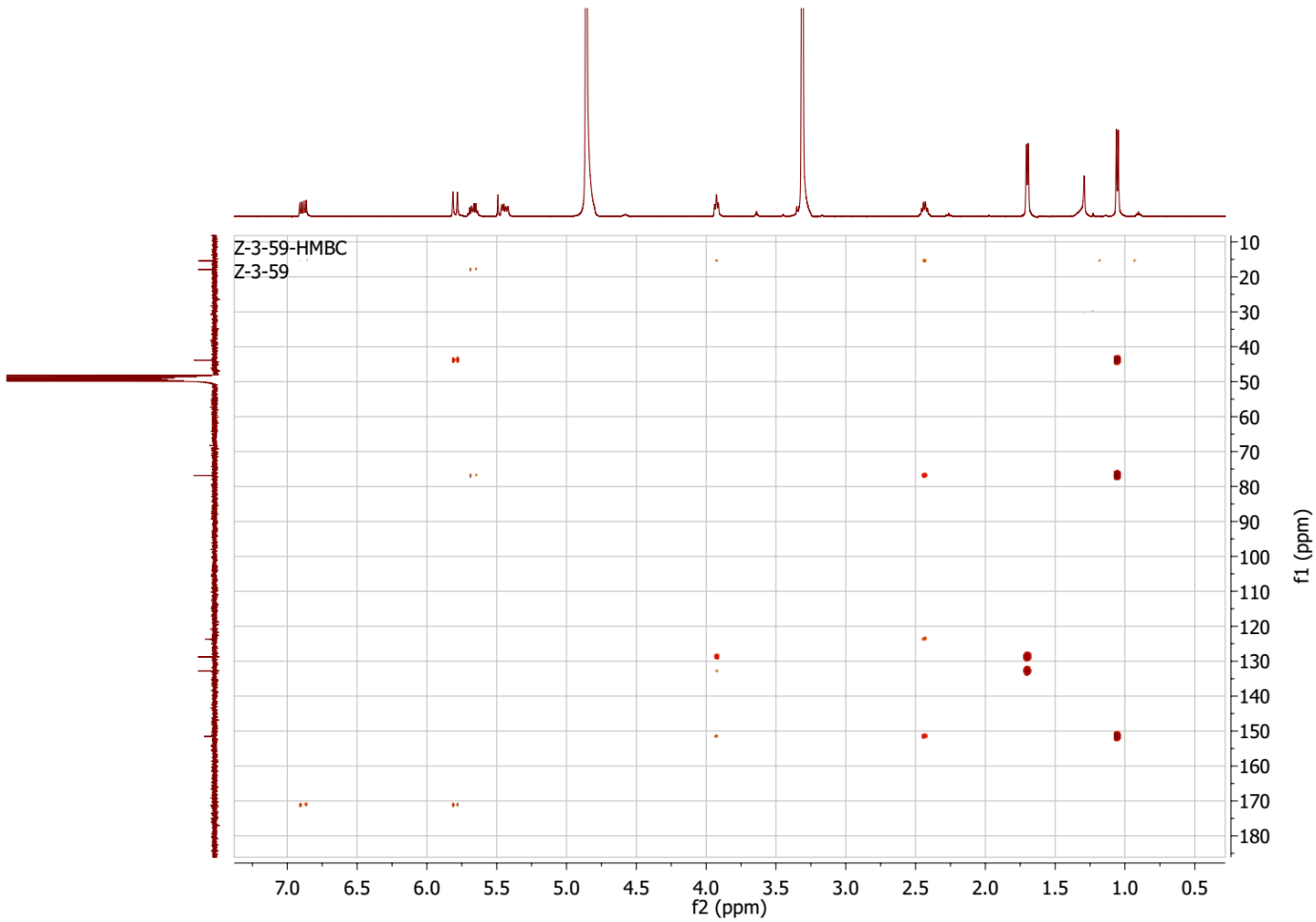
Figure S18. HSQC (500 MHz, CD_3OD) of compound **3**

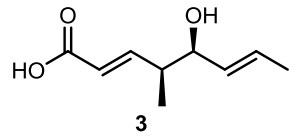




3

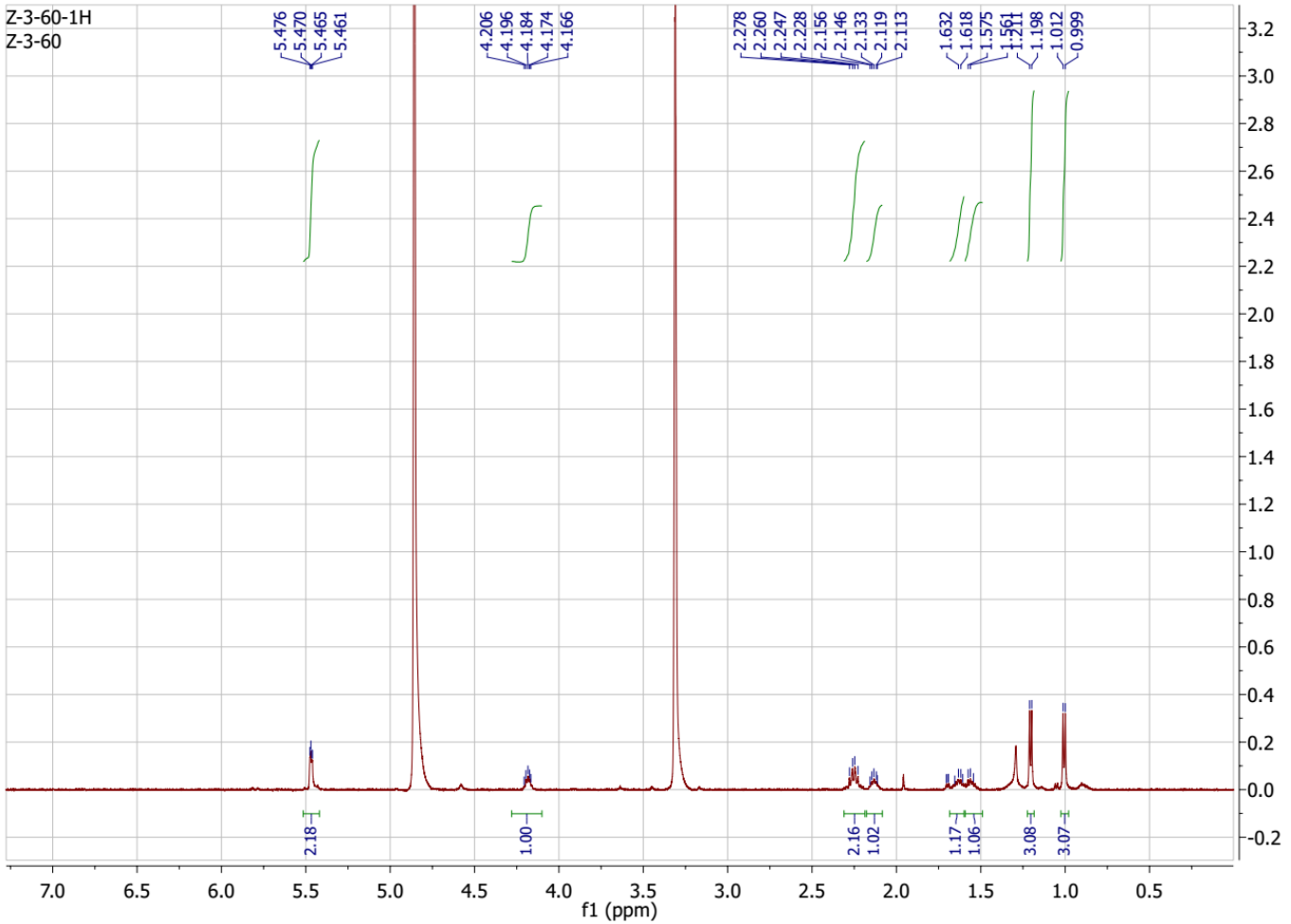
Figure S19. HMBC (500 MHz, CD_3OD) of compound **3**.

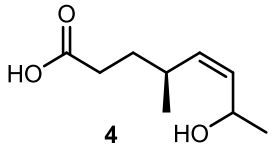




3

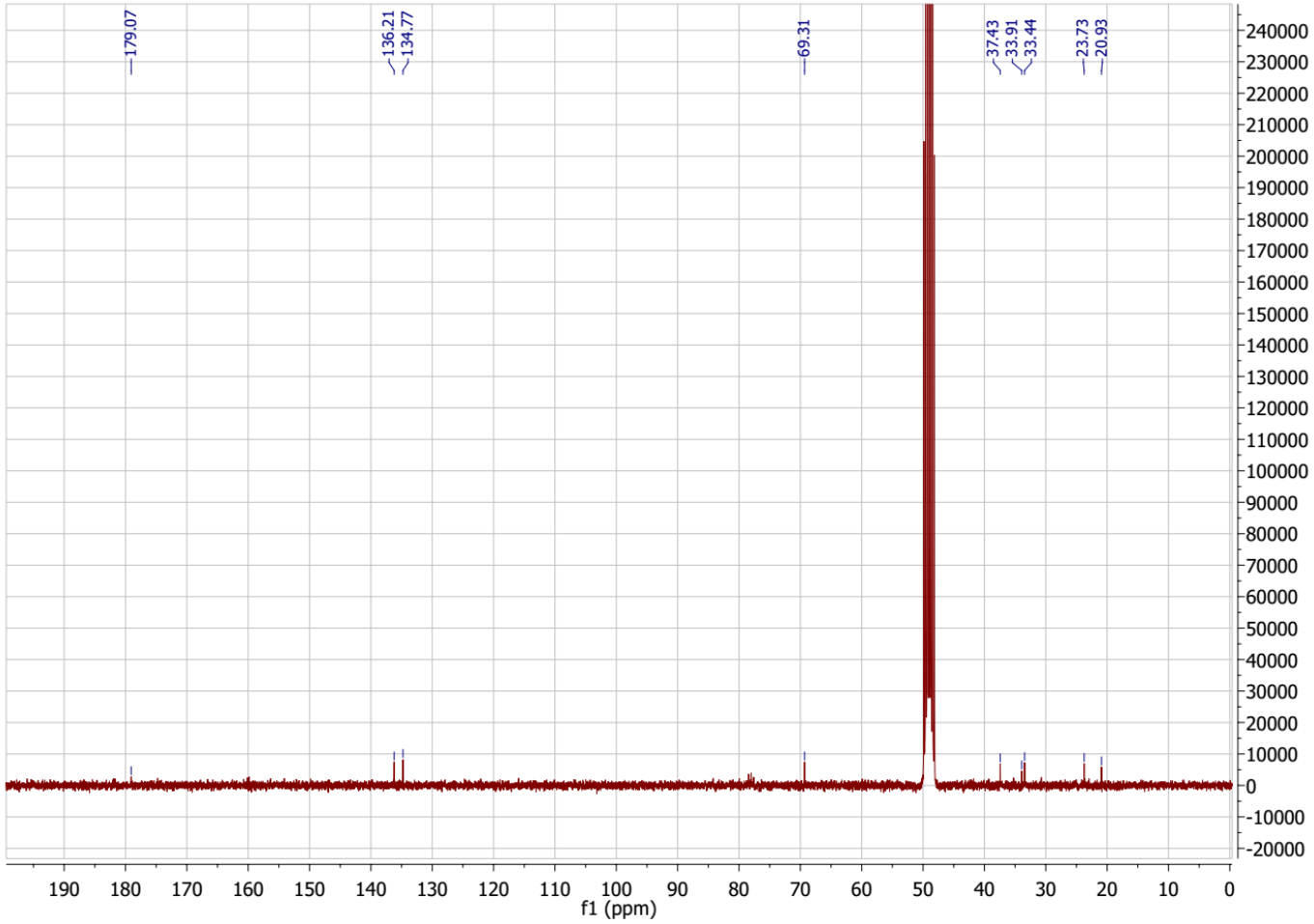
Figure S20. ^{1}H NMR (500 MHz, CD_3OD) of compound **4**.

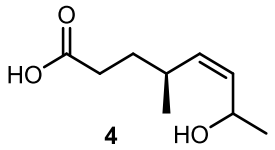




4

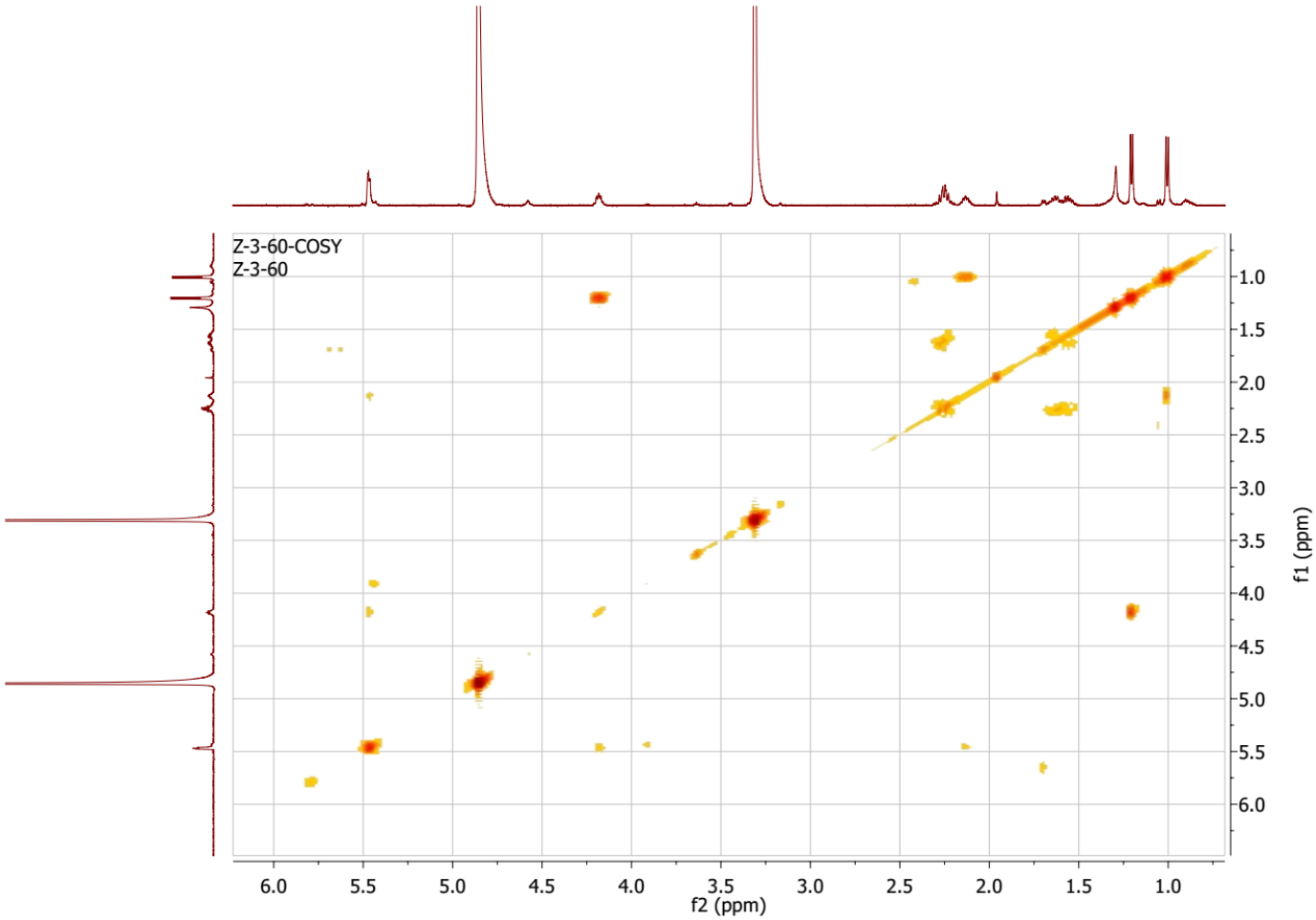
Figure S21. ^{13}C NMR (75 MHz, CD_3OD) of compound **4**

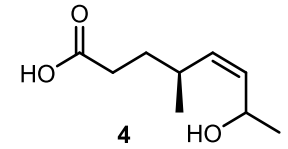




4

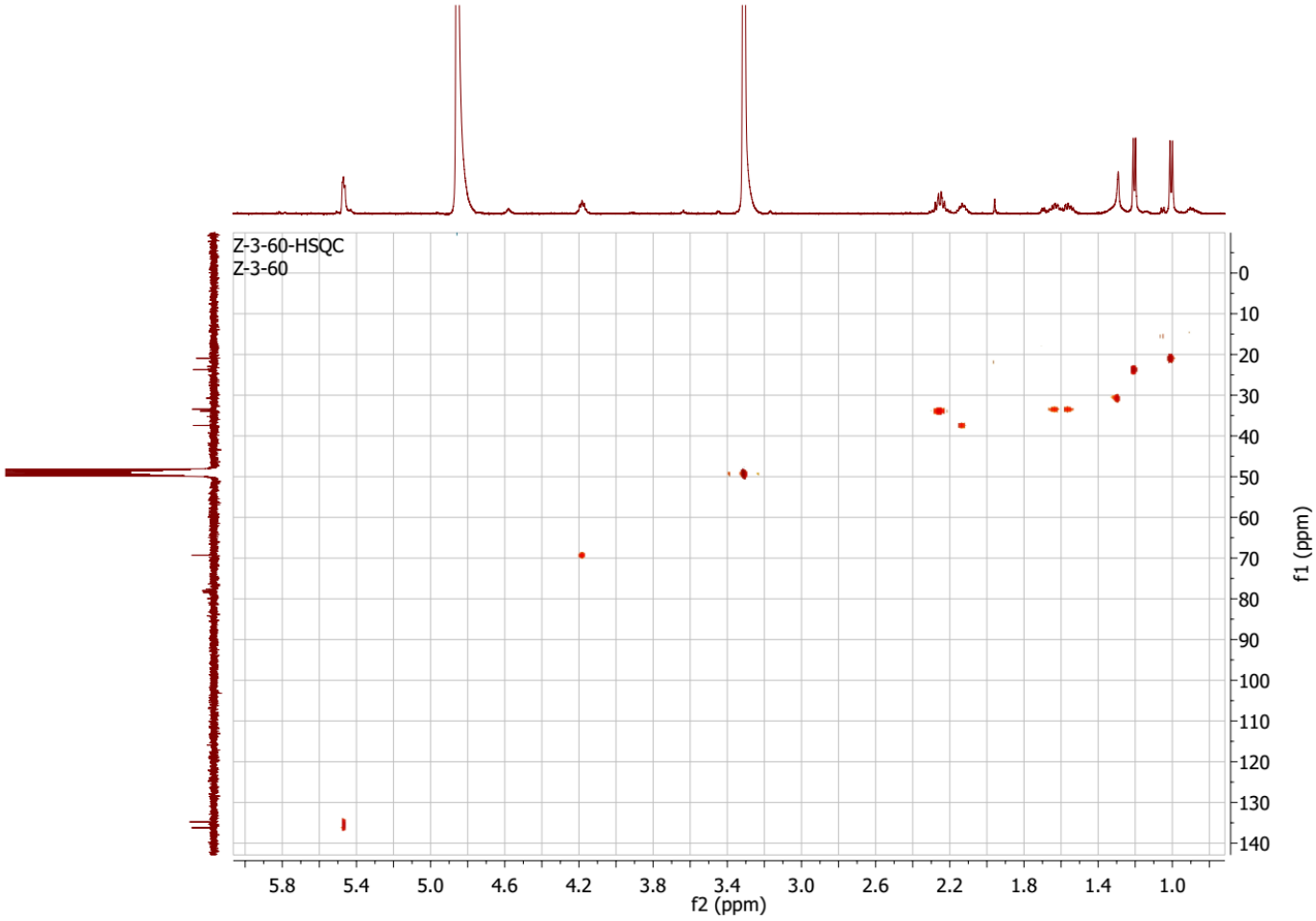
Figure S22. ^{1}H-^{1}H COSY (500 MHz, CD_3OD) of compound **4**

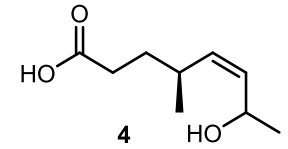




4

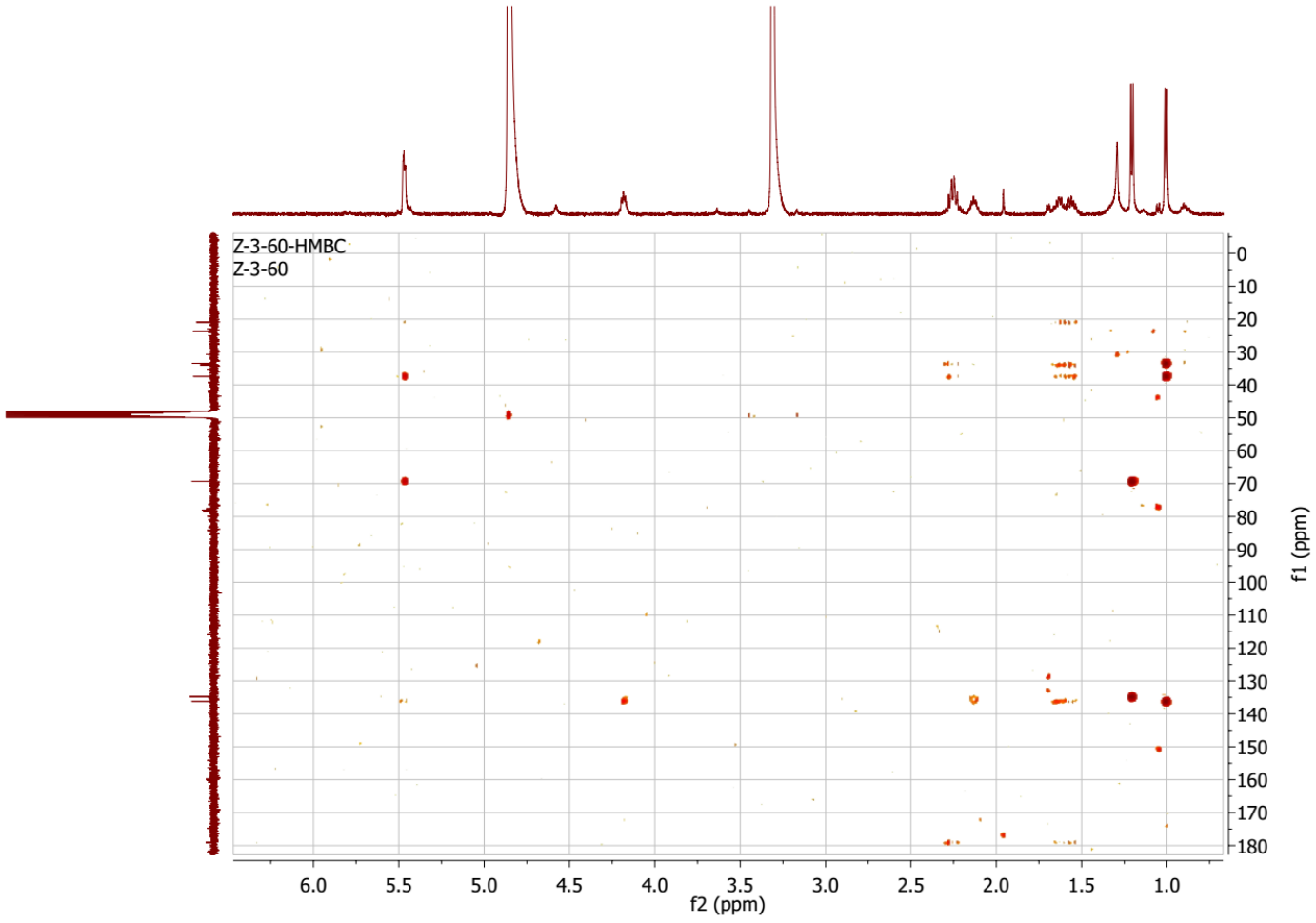
Figure S23. HSQC (500 MHz, CD_3OD) of compound **4**.

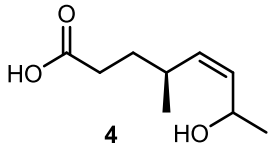




4

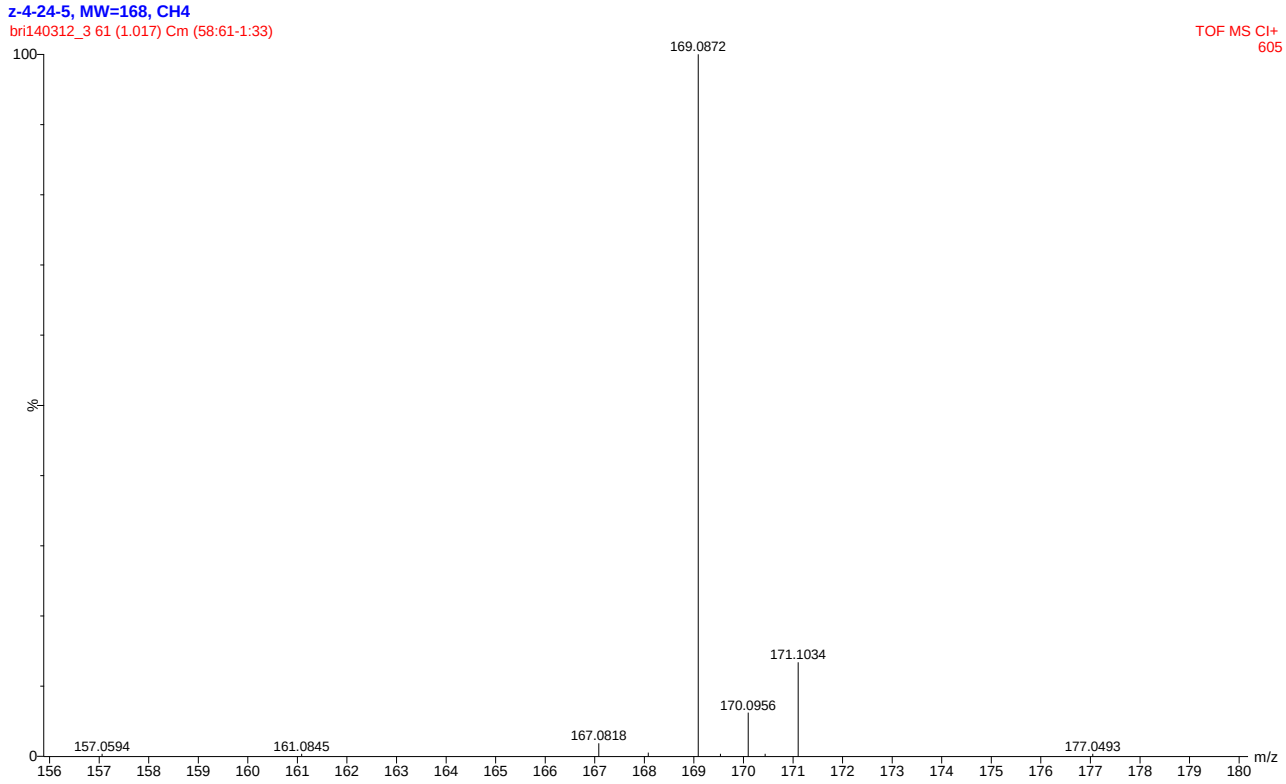
Figure S24. HMBC (500 MHz, CD_3OD) of compound **4**.

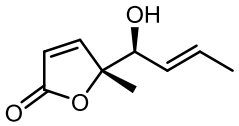




4

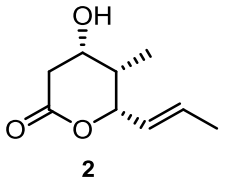
Figure S25. HRMS of compound **1**.





1

Figure S26. HRMS of compound **2**.



2

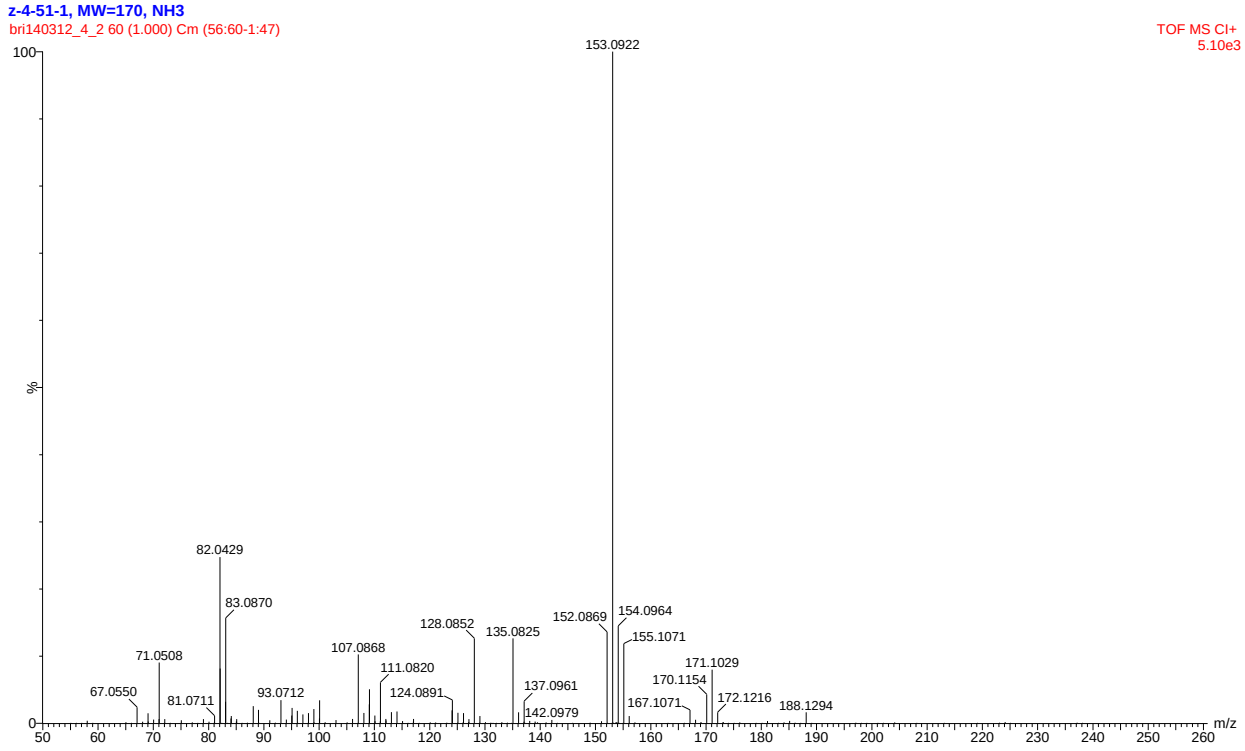
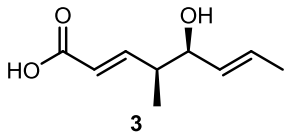


Figure S27. HRMS of compound **3**.



3

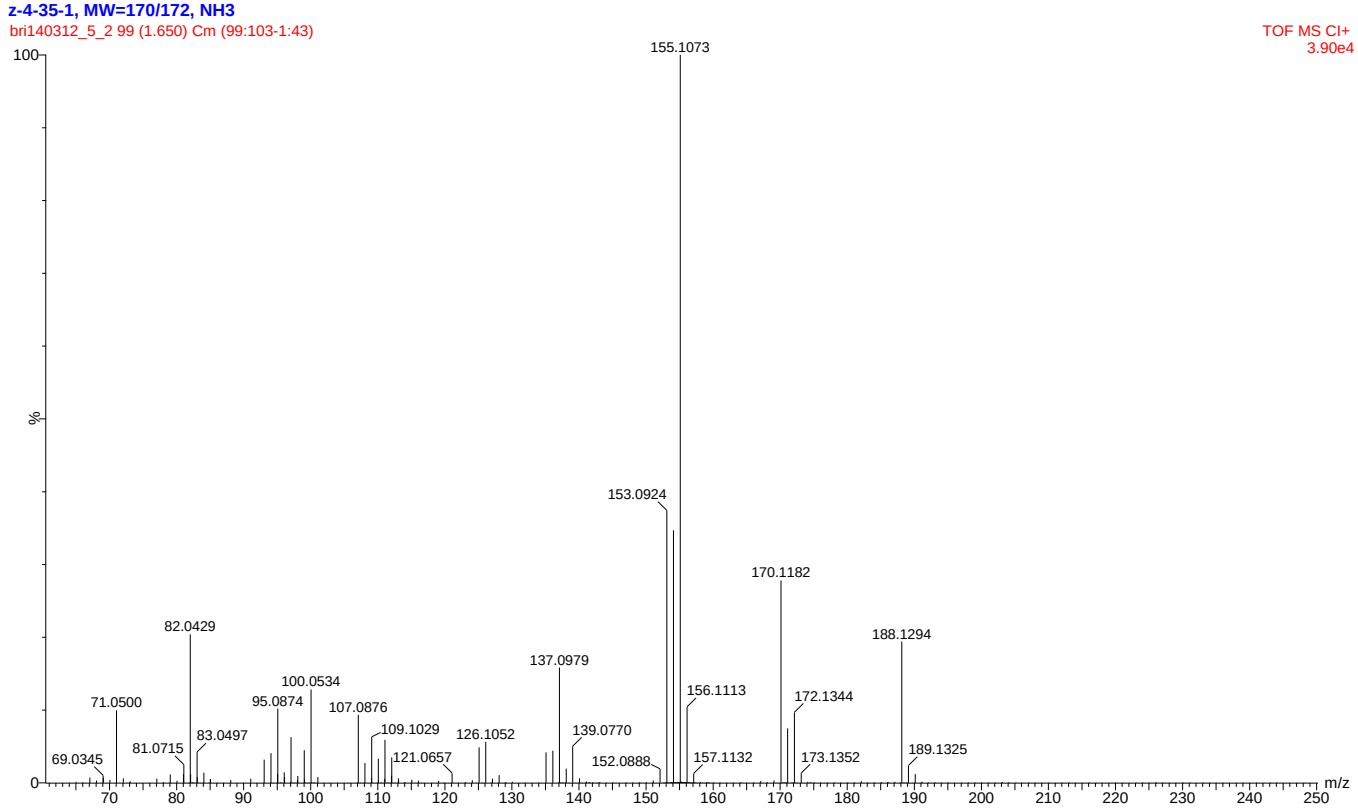
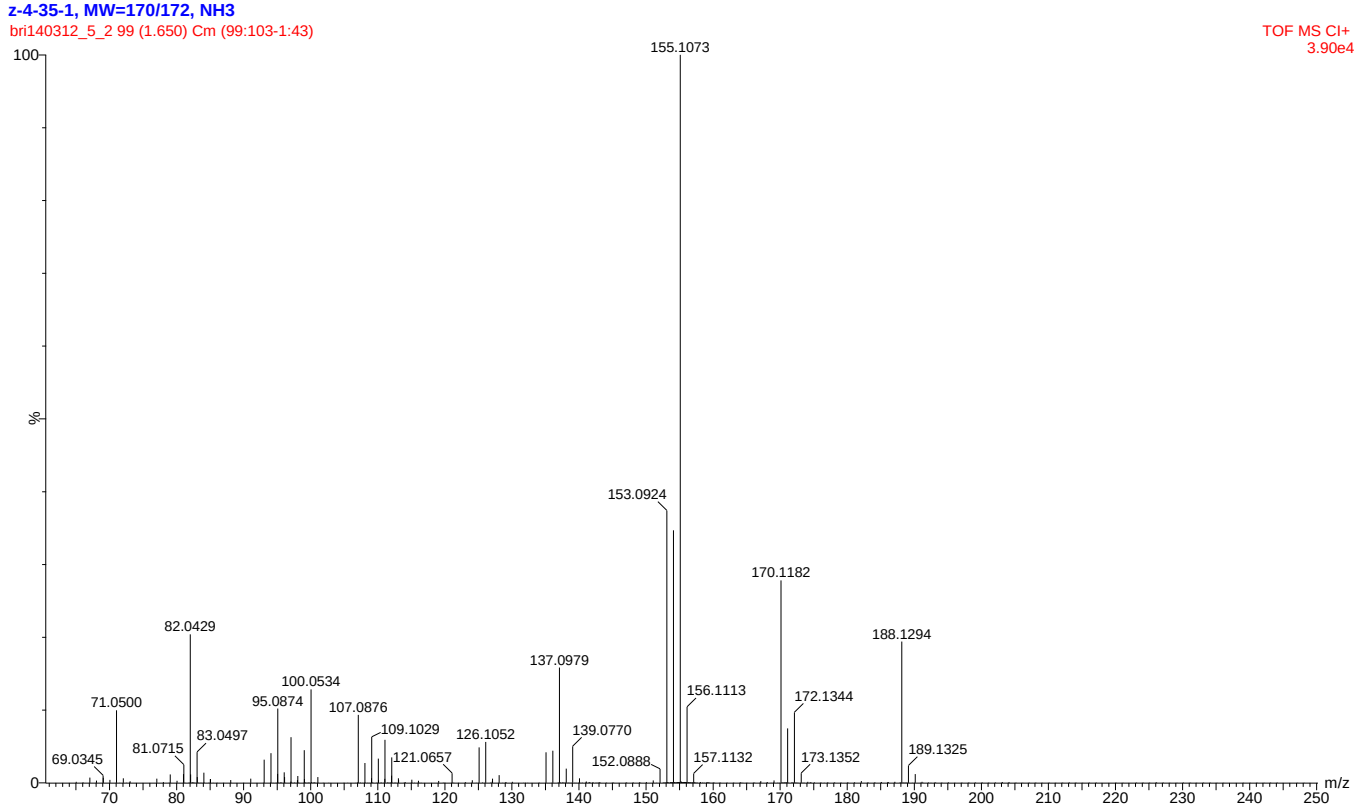
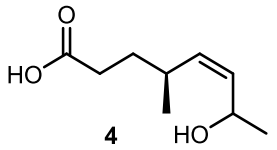


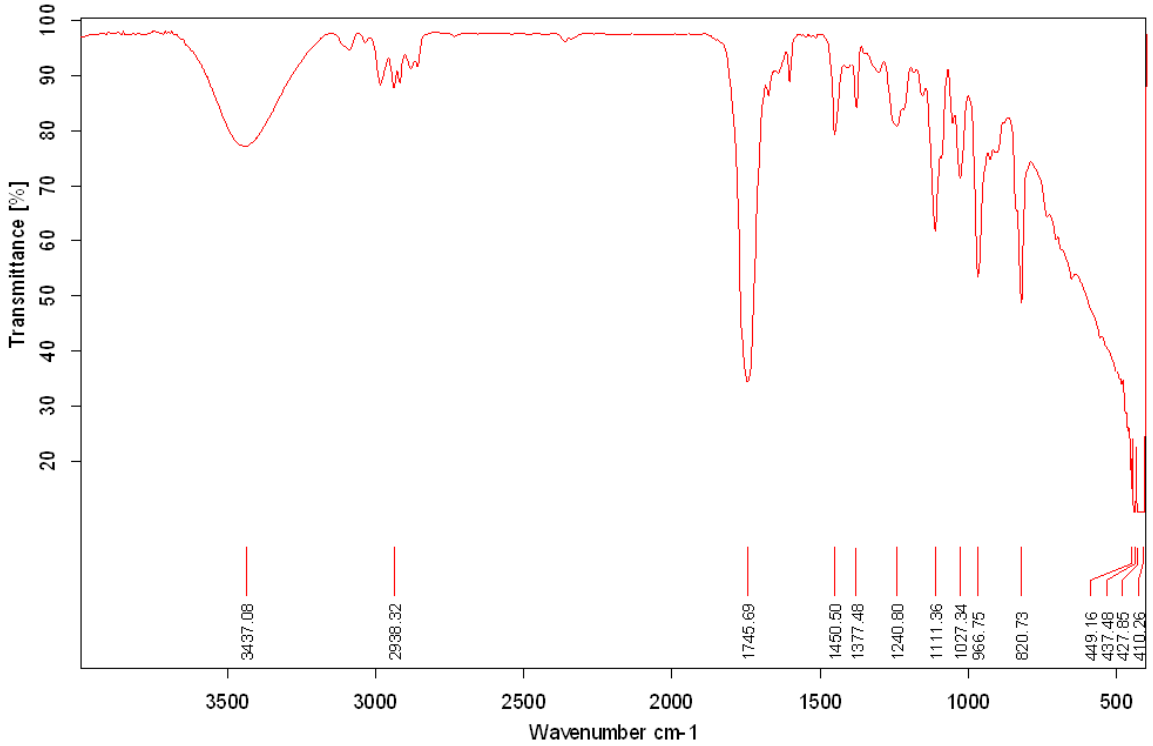
Figure S28. HRMS of compound **4**.

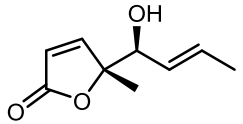




4

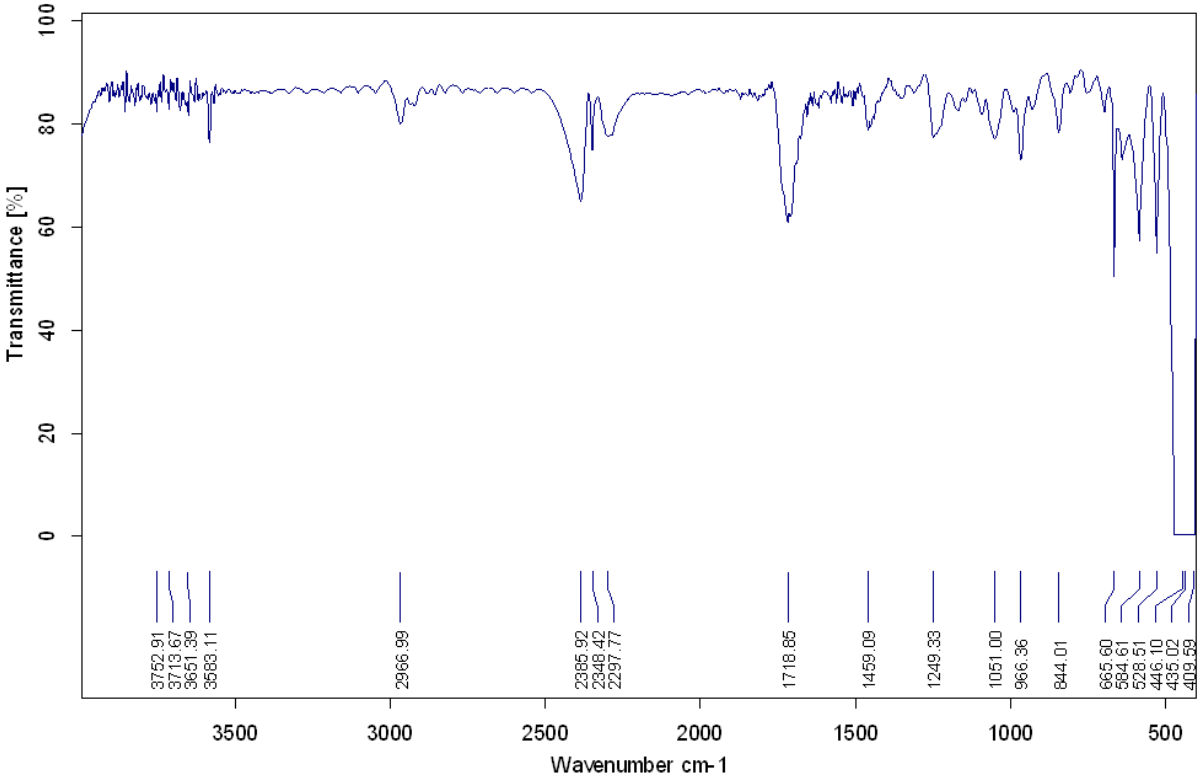
Figure S29. IR of compound **1**.

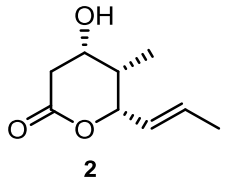




1

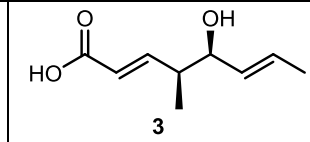
Figure S30. IR of compound **2**.





2

Figure S31. IR of compound **3**.



3

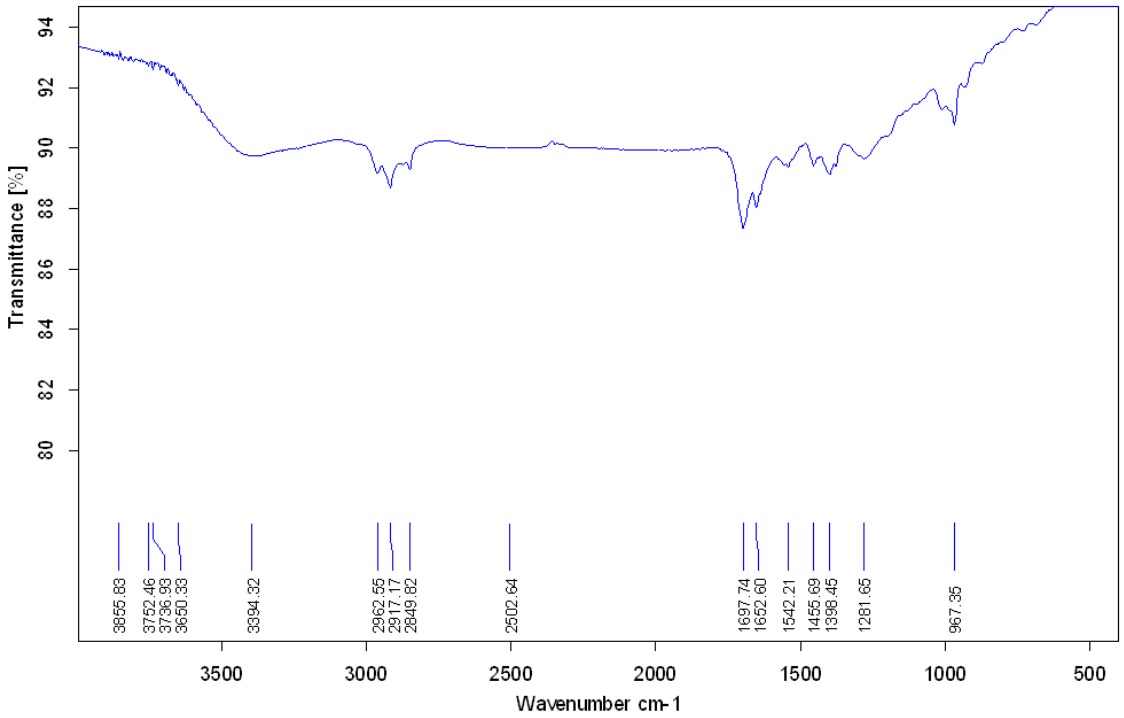
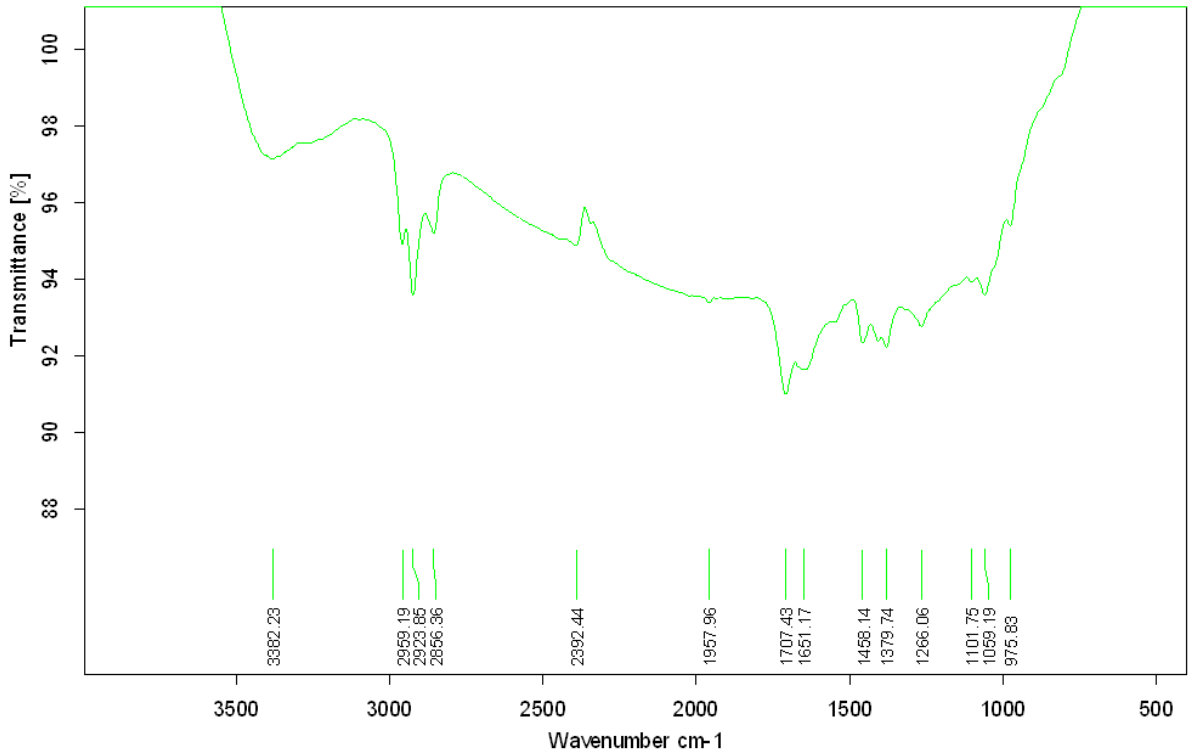
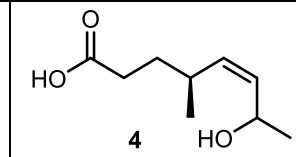


Figure S32. IR of compound **4**.





4