β-Elemene derivatives produced from SeO_2-mediated oxidation reaction

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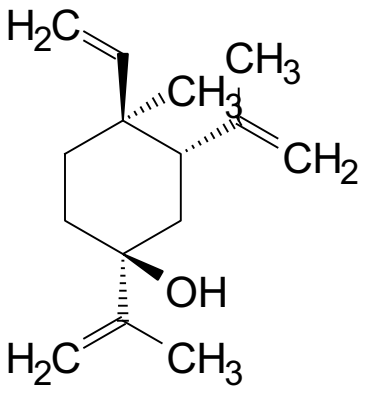
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Tel: +86-571-28860237 (Tian Xie); E-mail: xbs@hznu.edu.cn (Tian Xie);

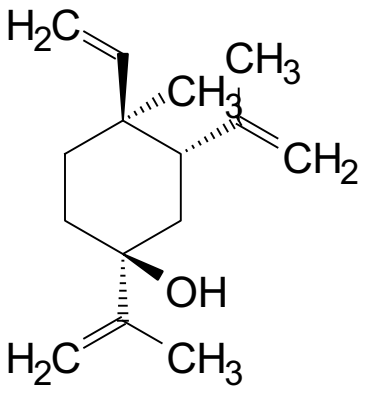
Supporting Information

^{1}H NMR (500 MHz, Chloroform-*d*) data of **3**



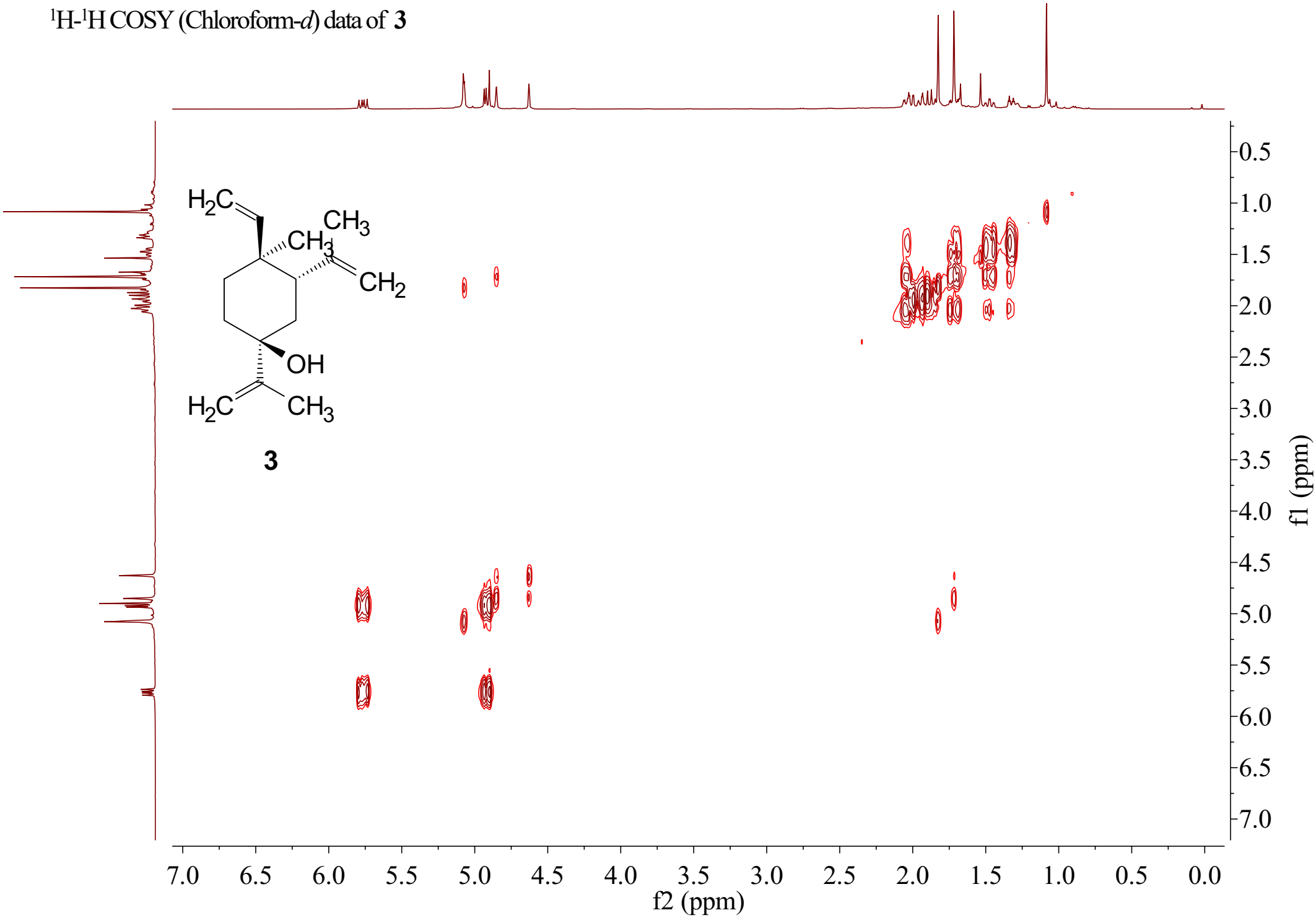
3

^{13}C NMR (126 MHz, Chloroform-*d*) data of **3**

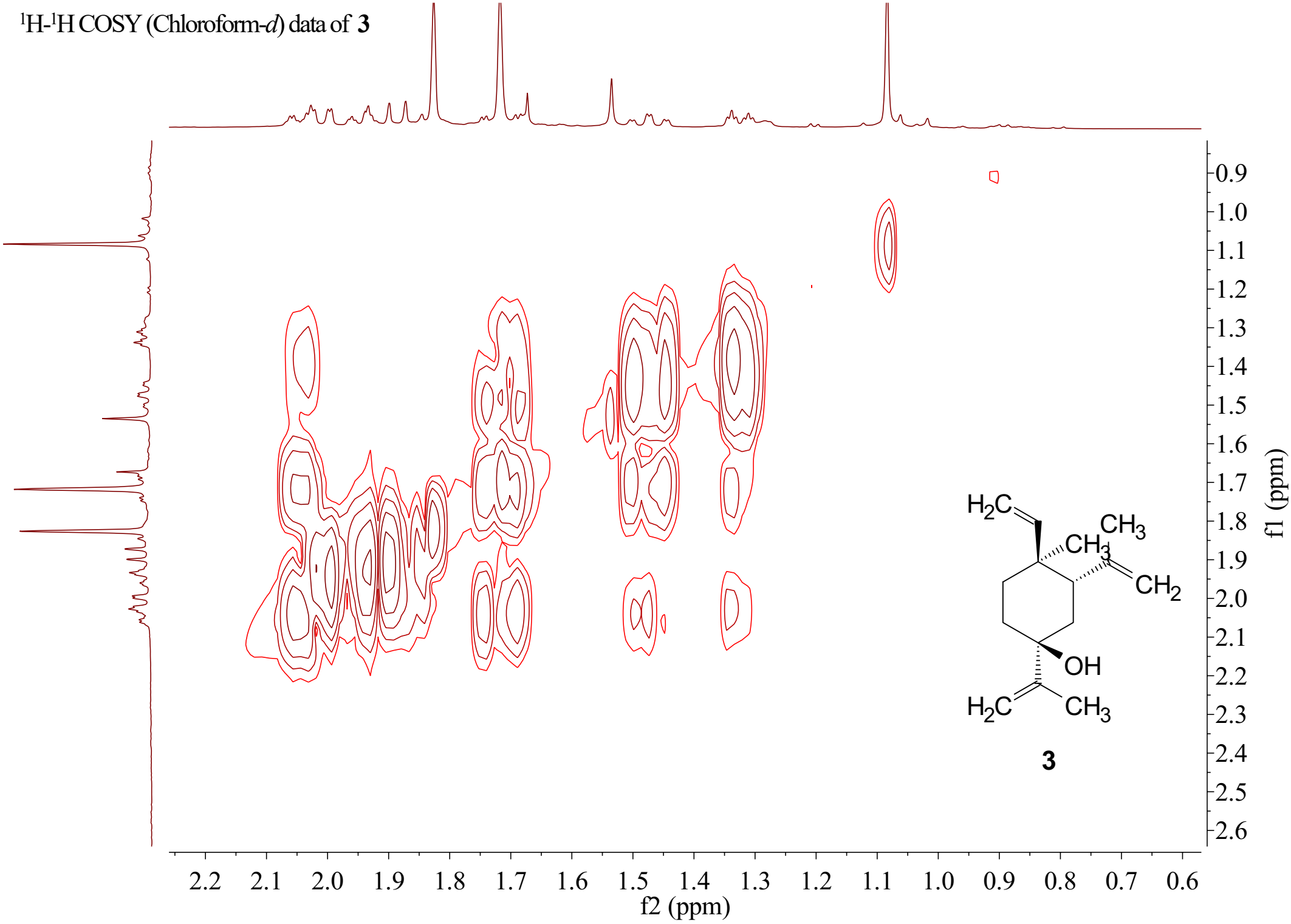


3

^{1}H-^{1}H COSY (Chloroform-*d*) data of **3**

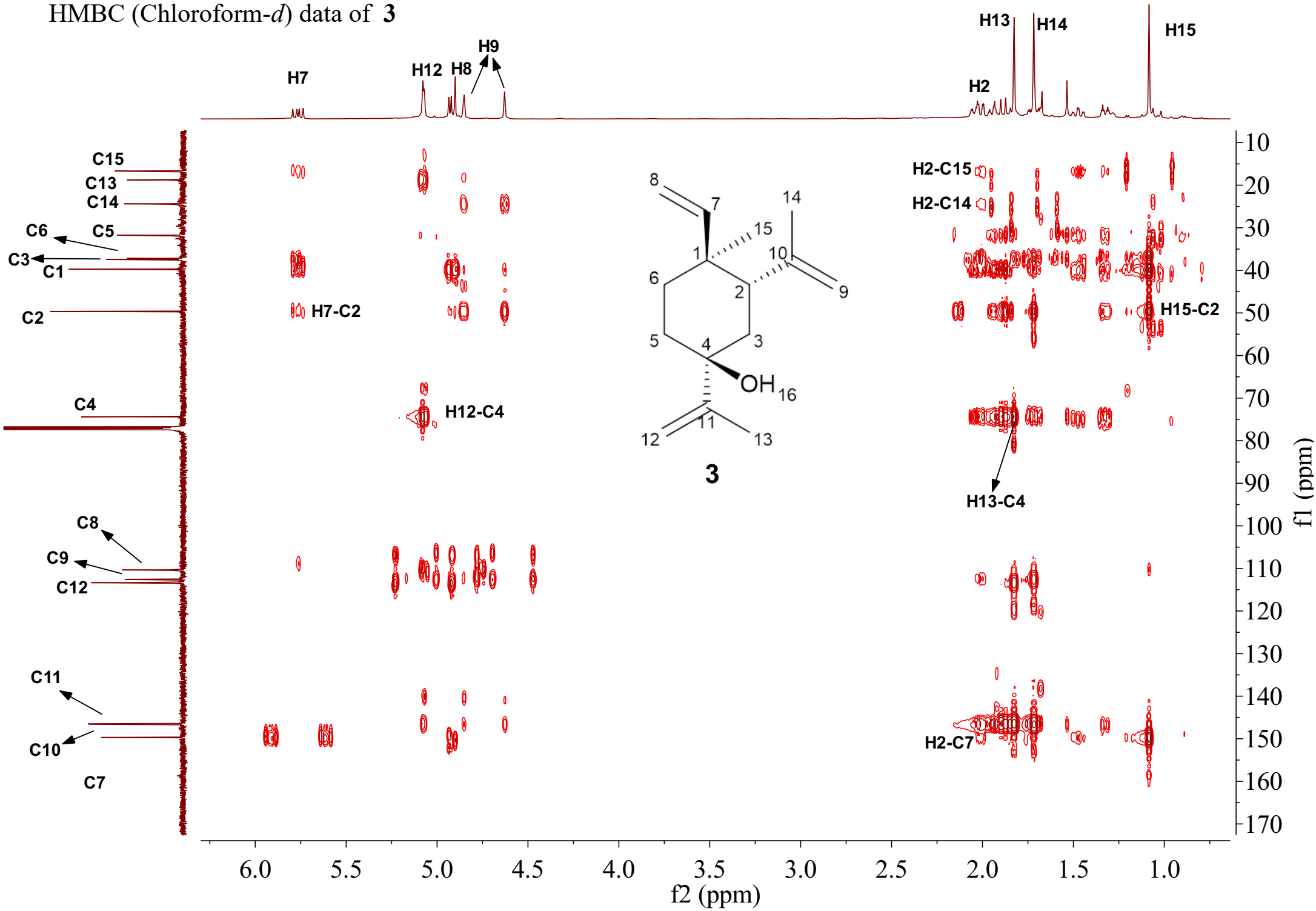


^{1}H-^{1}H COSY (Chloroform-*d*) data of **3**

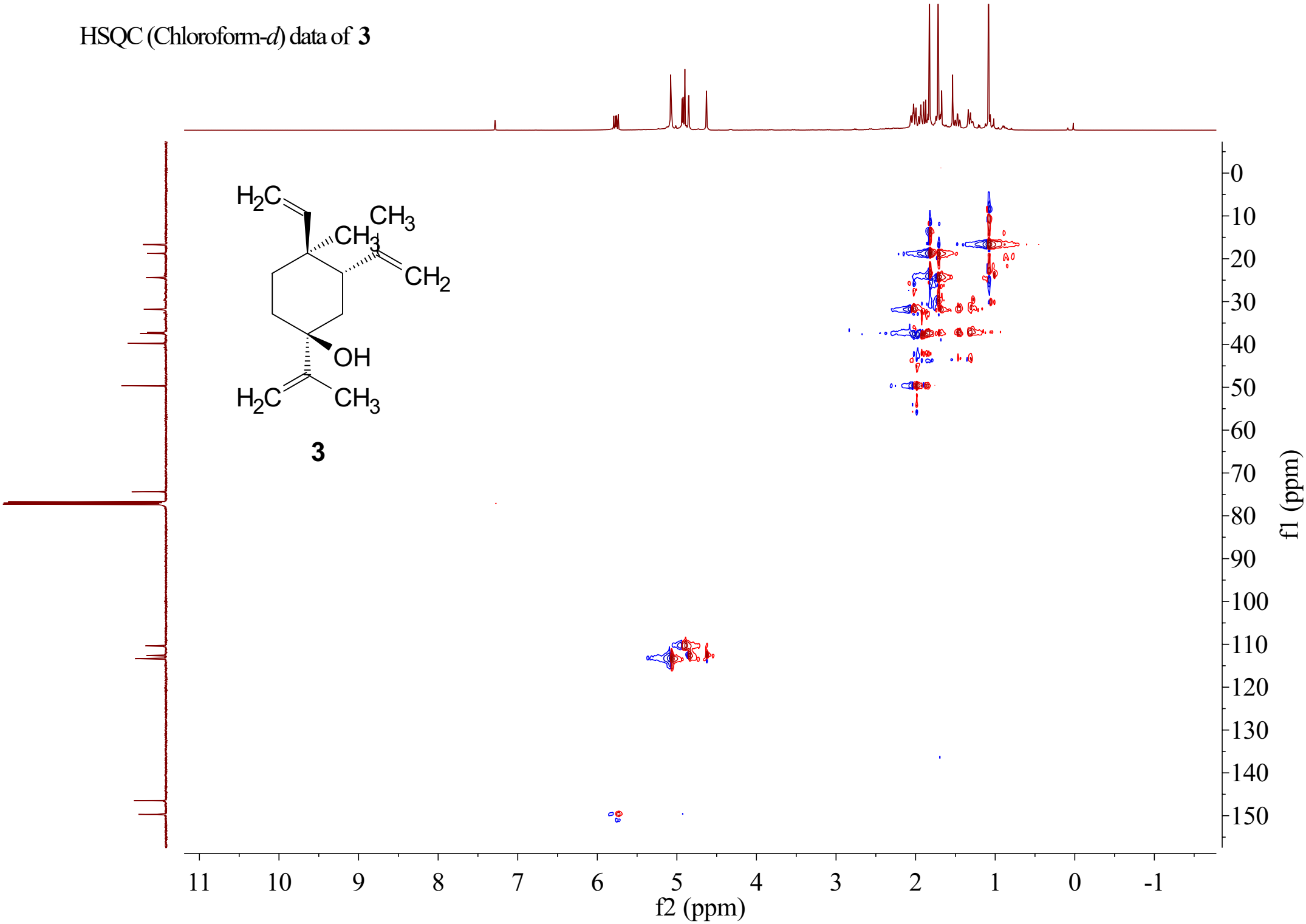


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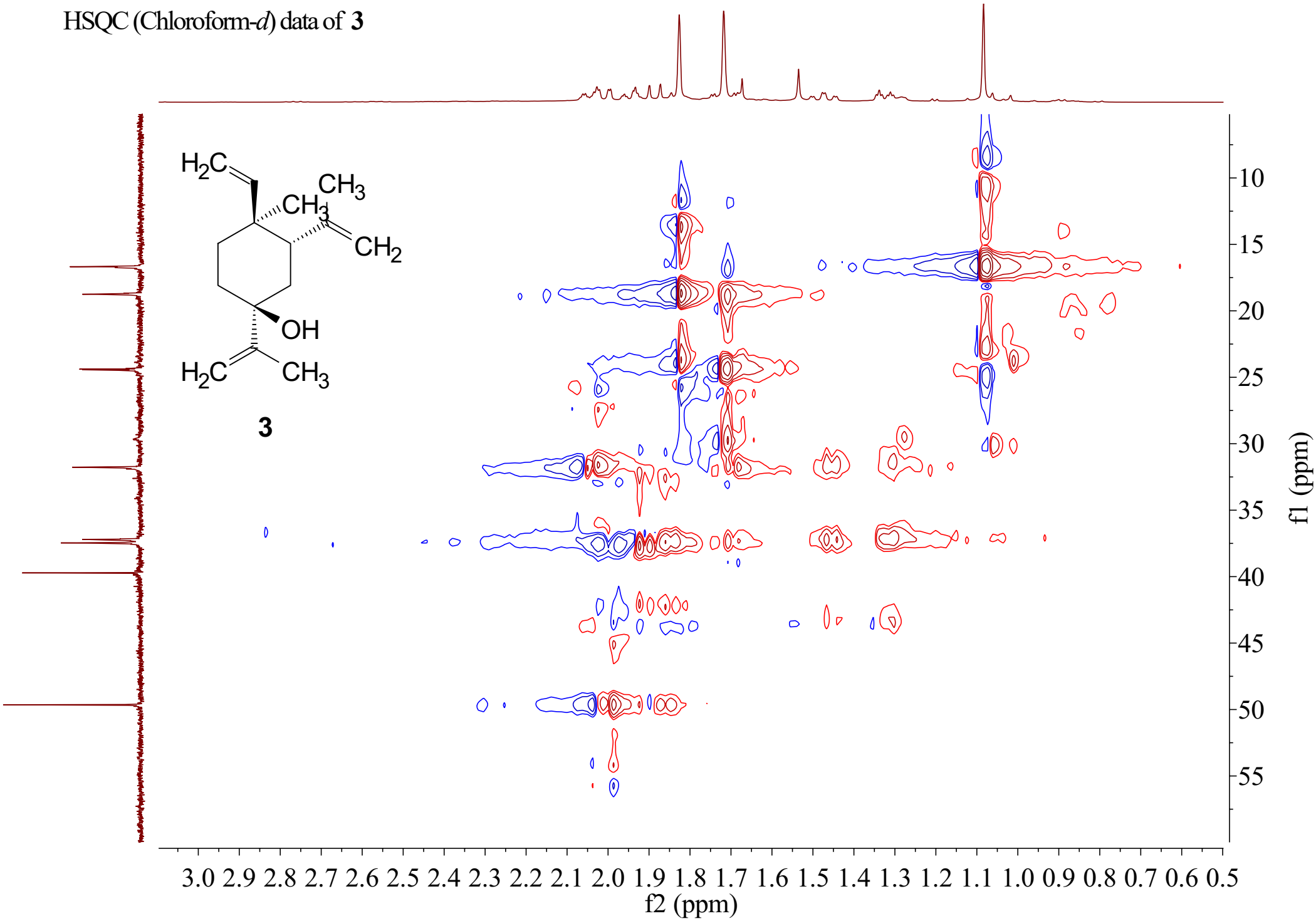
HMBC (Chloroform-*d*) data of **3**



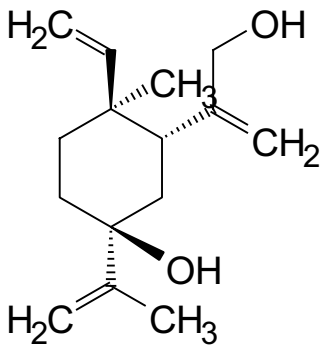
HSQC (Chloroform-*d*) data of **3**



HSQC (Chloroform-*d*) data of **3**

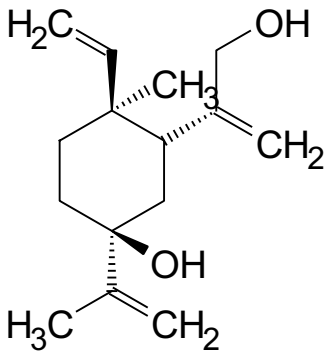


^{1}H NMR (400 MHz, Chloroform-*d)* data of 8



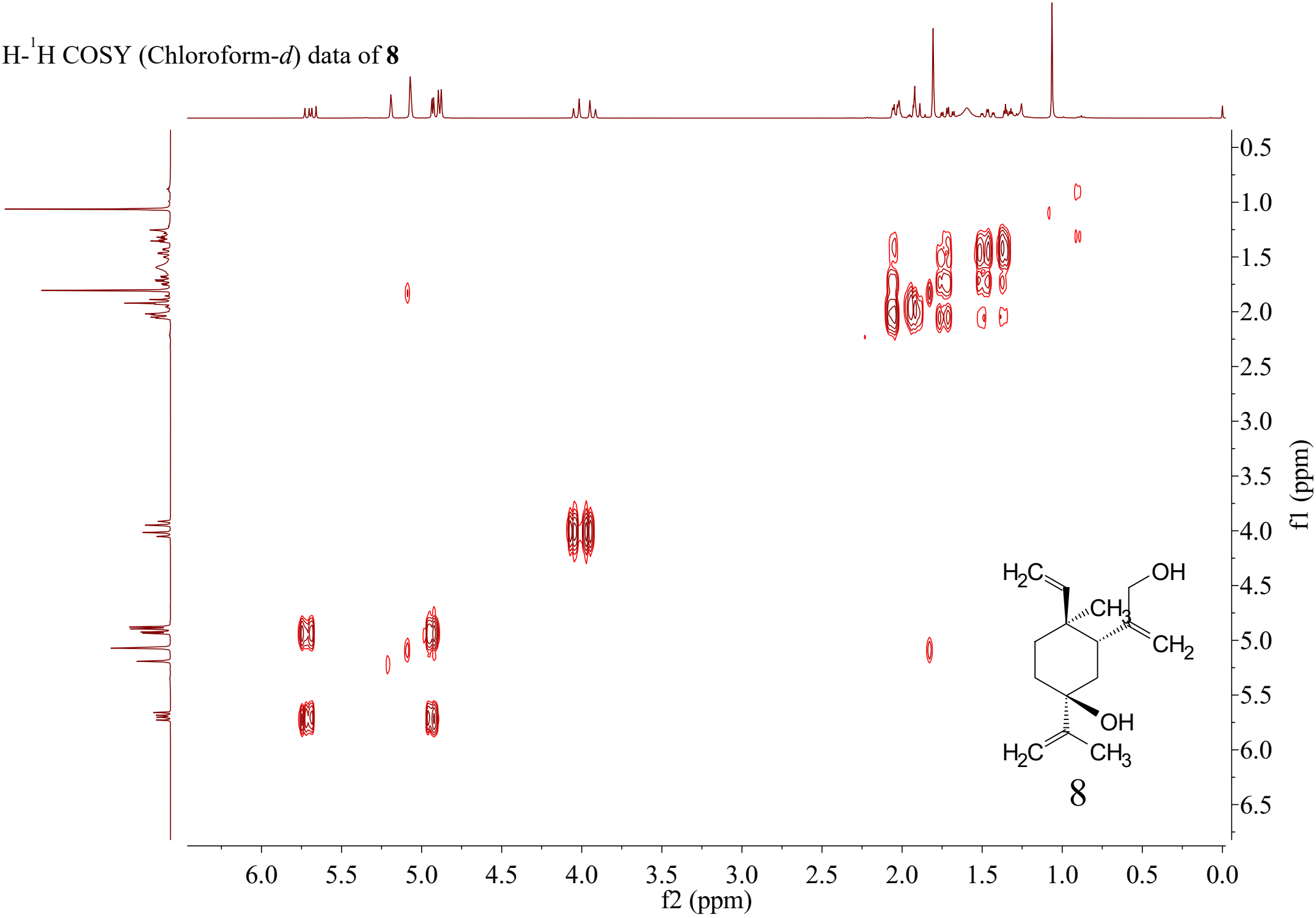
8

^{13}C NMR (126 MHz, Chloroform-*d*) data of **8**



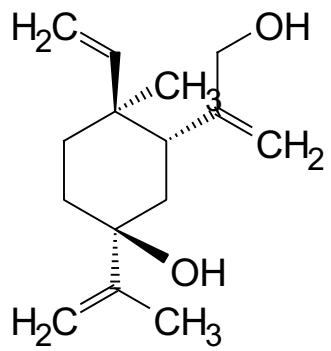
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^{1}H-^{1}H COSY (Chloroform-*d*) data of **8**



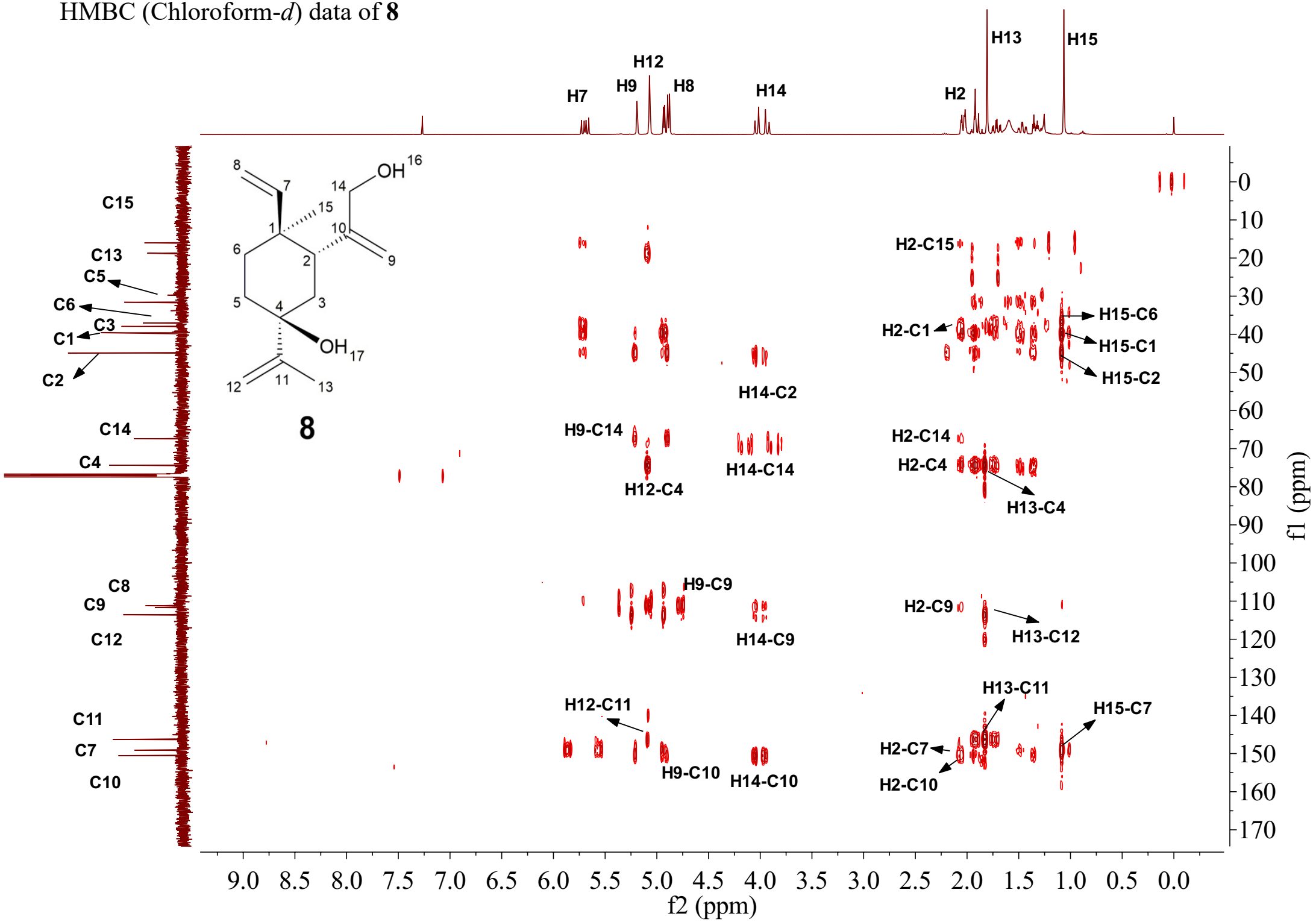
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HSQC (Chloroform-*d*) data of **8**

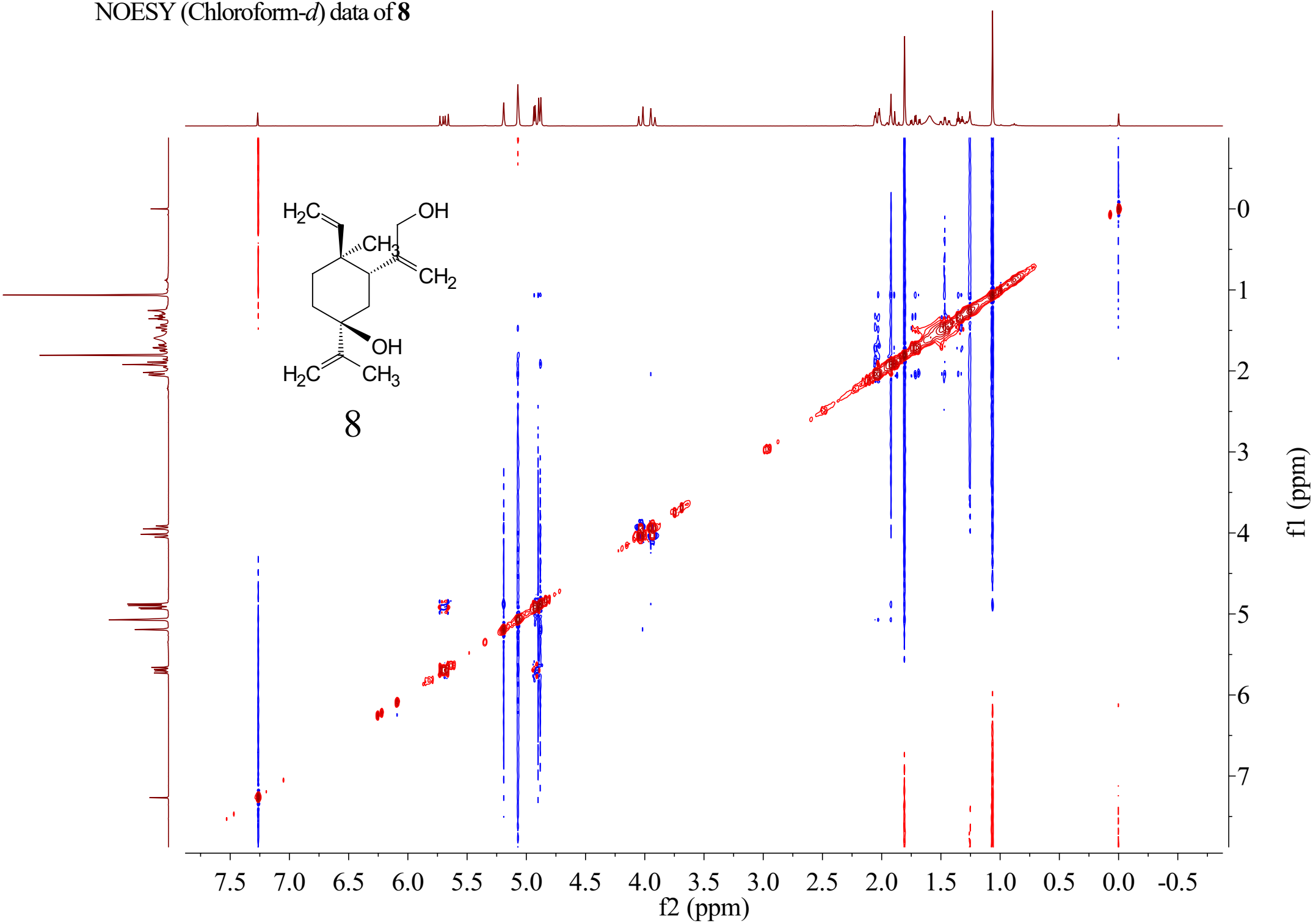


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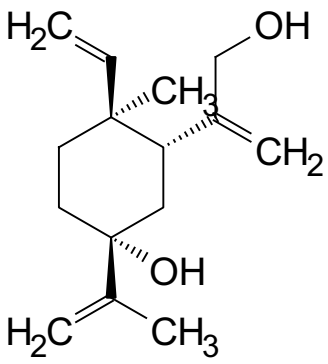
HMBC (Chloroform-*d*) data of **8**



NOESY (Chloroform-*d*) data of **8**

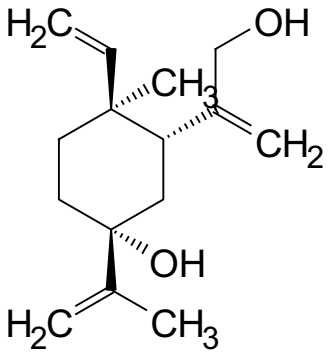


^{1}H NMR (400 MHz, Chloroform-*d*) data of **9**



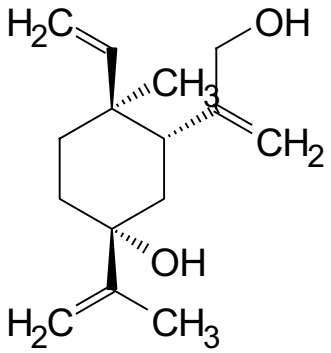
9

^{13}C NMR (126 MHz, Chloroform-*d*) data of **9**



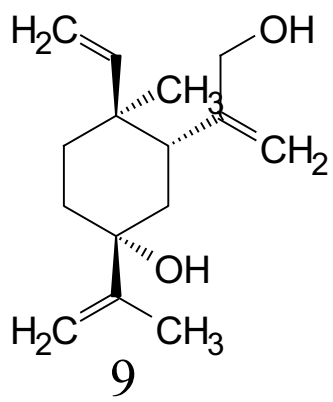
9

^{1}H NMR (500 MHz, DMSO-d_6) data of **9**



9

^{1}H-^{1}H COSY (Chloroform-*d*) data of **9**

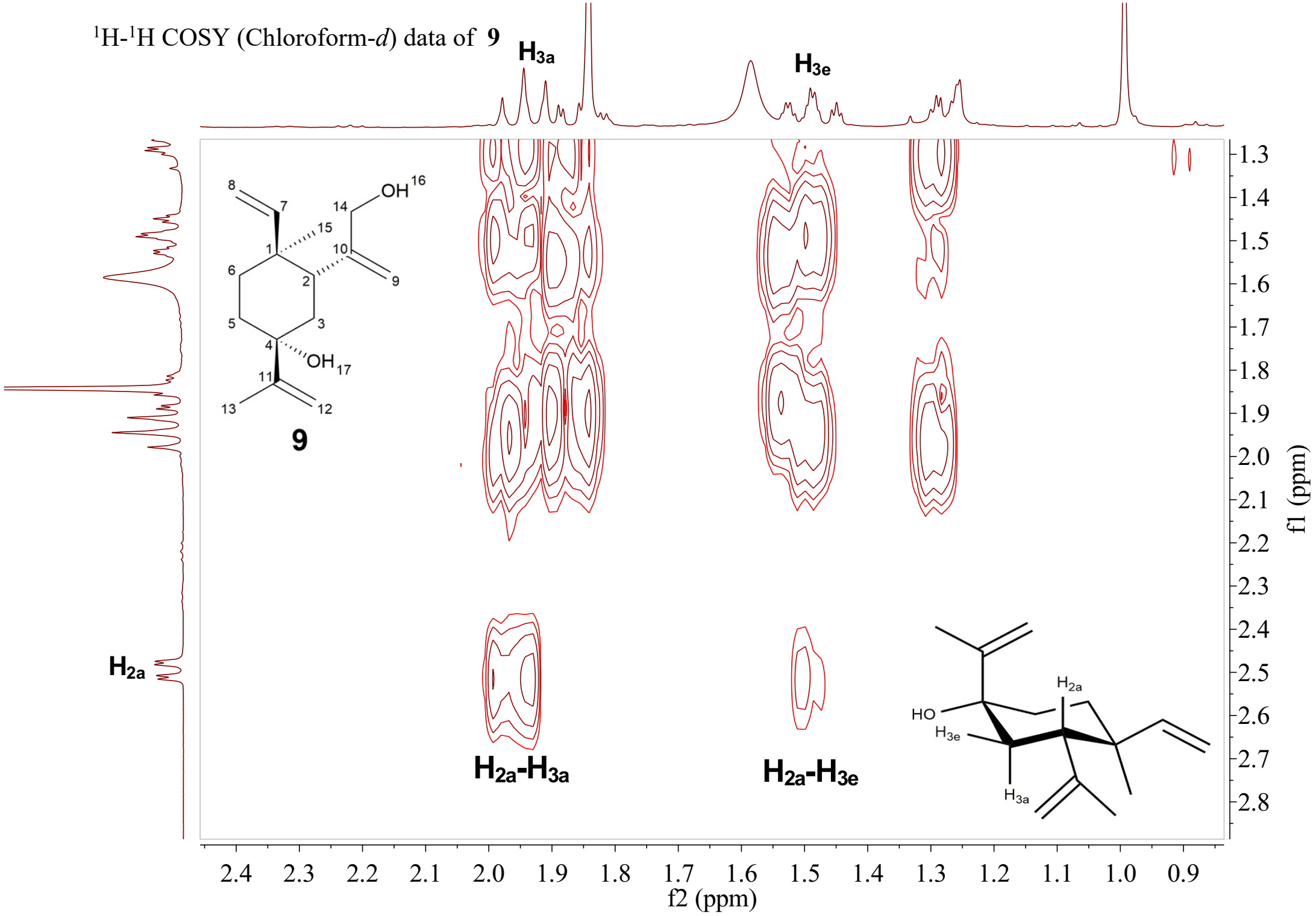


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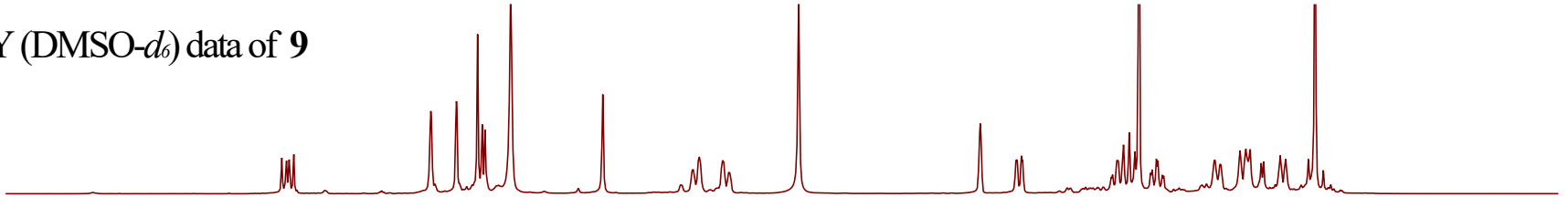
f2 (ppm)

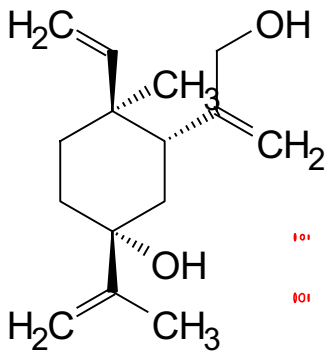
f1 (ppm)

^{1}H-^{1}H COSY (Chloroform-*d*) data of **9**

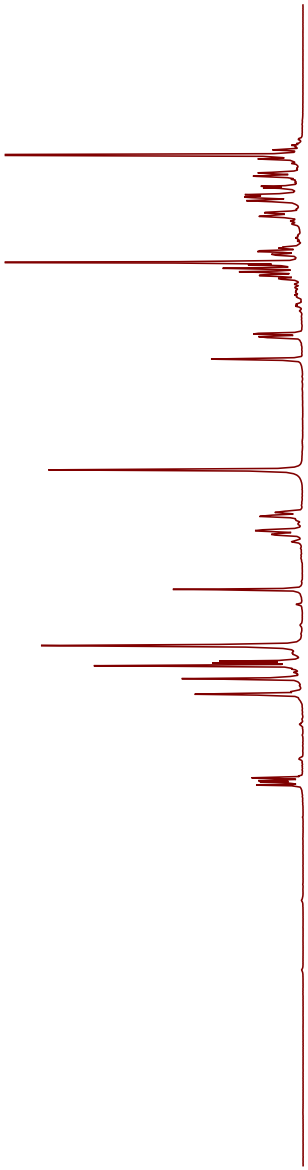


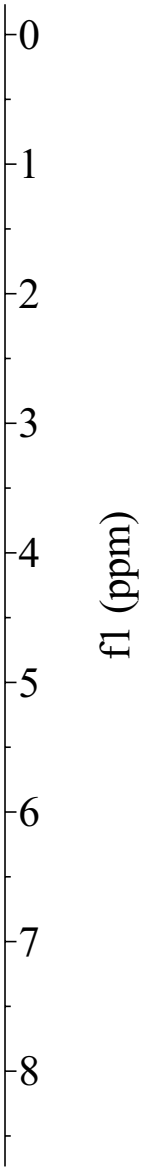
NOESY (DMSO-d_6) data of **9**

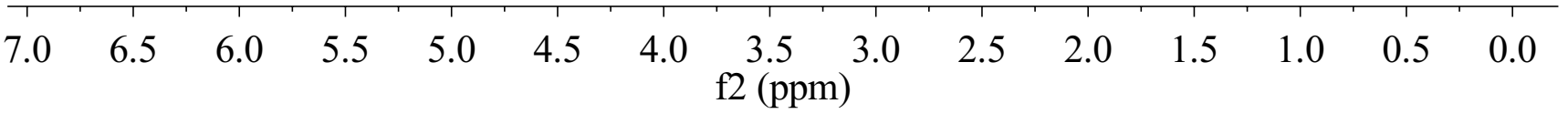


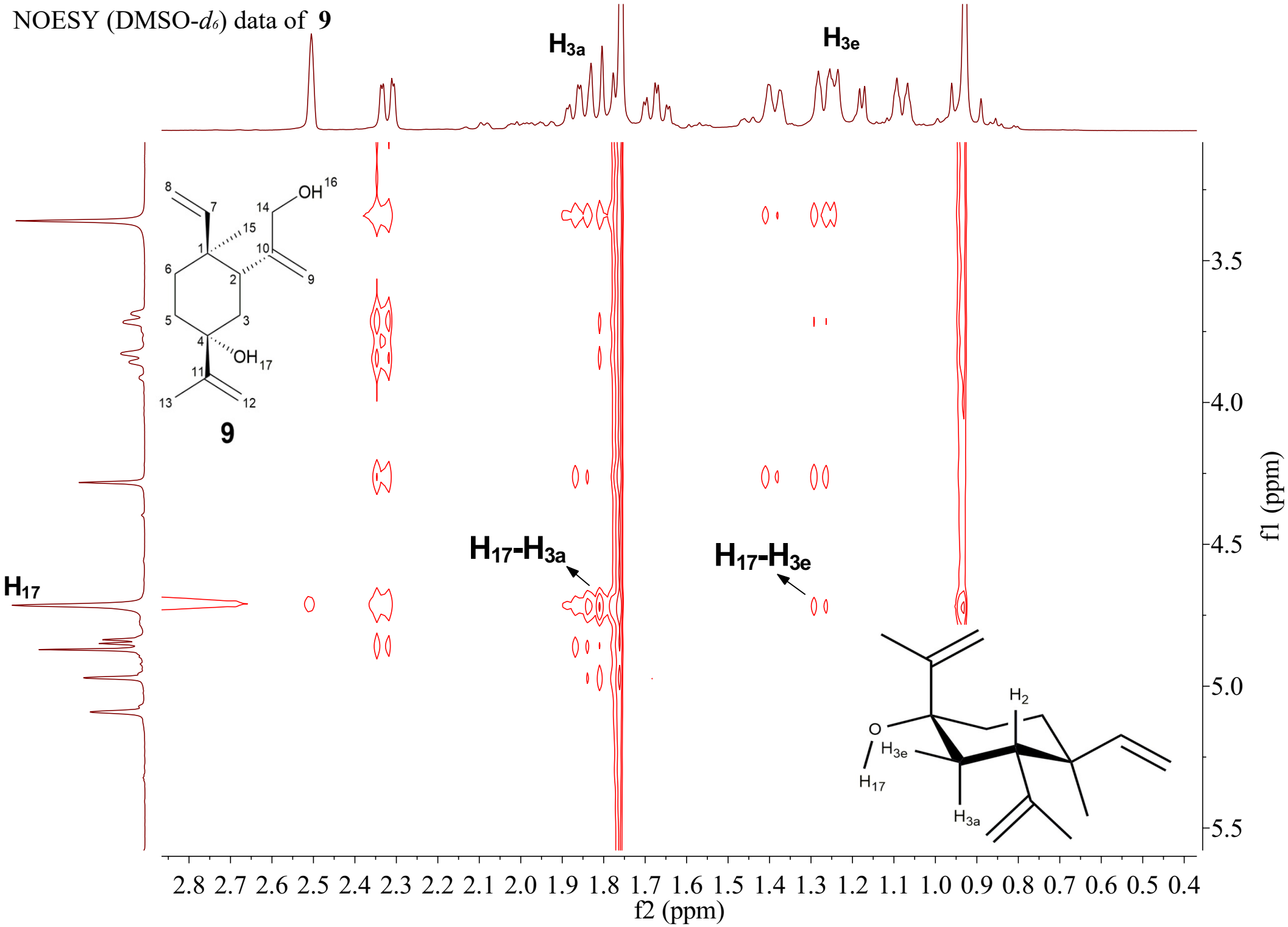


9

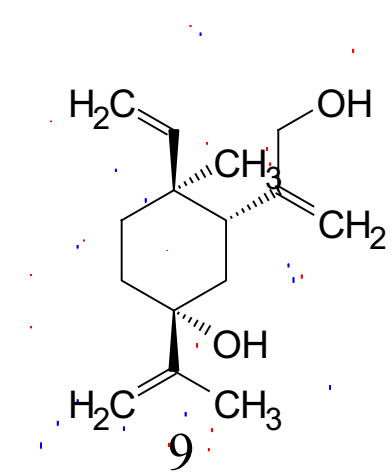







NOESY (DMSO-d_6) data of **9**
H_{3a}
H_{3e}
H_{17}
H_{17}-H_{3a}
H_{17}-H_{3e}
OH 16
OH 17
9
H_2
O
H_{3e}
H_{17}
H_{3a}
2.8 2.7 2.6 2.5 2.4 2.3 2.2 2.1 2.0 1.9 1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 1.0 0.9 0.8 0.7 0.6 0.5 0.4
f2 (ppm)
3.5
4.0
4.5
5.0
5.5
f1 (ppm)

HSQC (Chloroform-*d*) data of **9**



9

f2 (ppm)

f1 (ppm)

HMBC (Chloroform-*d*) data of **9**

