

# Potential Gonado-Protective Effect of *Cichorium endivia* and Its Major Phenolic Acids against Methotrexate-Induced Testicular Injury in Mice

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Figure No.	Title	Page
Figure S1:	<sup>1</sup> H NMR spectrum of compound (1) Stigmasterol.	4
Figure S2:	<sup>13</sup> C NMR spectrum of compound (1) Stigmasterol.	5
Figure S3:	<sup>1</sup> H NMR spectrum of compound (4) Azelaic acid.	6
Figure S4:	<sup>13</sup> C NMR spectrum of compound (4) Azelaic acid.	7
Figure S5:	<sup>1</sup> H NMR spectrum of compound (5) Vanillic acid.	8
Figure S6:	<sup>13</sup> C NMR spectrum of compound (5) Vanillic acid.	9
Figure S7:	<sup>13</sup> C NMR APT spectrum of compound (5) Vanillic acid.	10
Figure S8:	<sup>1</sup> H NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).	11
Figure S9:	<sup>13</sup> C NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).	12
Figure S10:	<sup>13</sup> C NMR APT spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).	13
Figure S11:	HSBC NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).	14
Figure S12:	HMBC NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).	15
Figure S13:	<sup>1</sup> H NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.	16
Figure S14:	<sup>13</sup> C NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.	17
Figure S15:	<sup>13</sup> C APT NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.	18
Figure S16:	<sup>1</sup> H NMR spectrum of compound (8) Vomifoliol.	19
Figure S17:	<sup>13</sup> C NMR spectrum of compound (8) Vomifoliol.	20

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Figure S18:	$^{13}\text{C}$ APT NMR spectrum of compound <b>(8)</b> Vomifoliol.	21
Figure S19:	HSBC NMR spectrum of compound <b>(8)</b> Vomifoliol.	22
Figure S20:	HMBC NMR spectrum of compound <b>(8)</b> Vomifoliol.	23
Figure S21:	$^1\text{H}$ NMR spectrum of compound <b>(9)</b> Ferulic acid.	24
Figure S22:	$^{13}\text{C}$ NMR spectrum of compound <b>(9)</b> Ferulic acid.	25
Figure S23:	$^{13}\text{C}$ NMR APT spectrum of compound <b>(9)</b> Ferulic acid.	26
Figure S24:	$^1\text{H}$ NMR spectrum of compound <b>(10)</b> Protocatechuic acid.	27
Figure S25:	$^{13}\text{C}$ NMR spectrum of compound <b>(10)</b> Protocatechuic acid.	28
Figure S26:	$^{13}\text{C}$ NMR APT spectrum of compound <b>(10)</b> Protocatechuic acid.	29
Figure S27:	HSBC NMR spectrum of compound <b>(10)</b> Protocatechuic acid.	30
Figure S28:	HMBC NMR spectrum of compound <b>(10)</b> Protocatechuic acid.	31
Figure S29:	$^1\text{H}$ NMR spectrum of compound <b>(12)</b> <i>p</i> - Coumaric acid.	32
Figure S30:	$^{13}\text{C}$ NMR spectrum of compound <b>(12)</b> <i>p</i> - Coumaric acid.	33
Figure S31:	$^{13}\text{C}$ APT NMR spectrum of compound <b>(12)</b> <i>p</i> - Coumaric acid.	34

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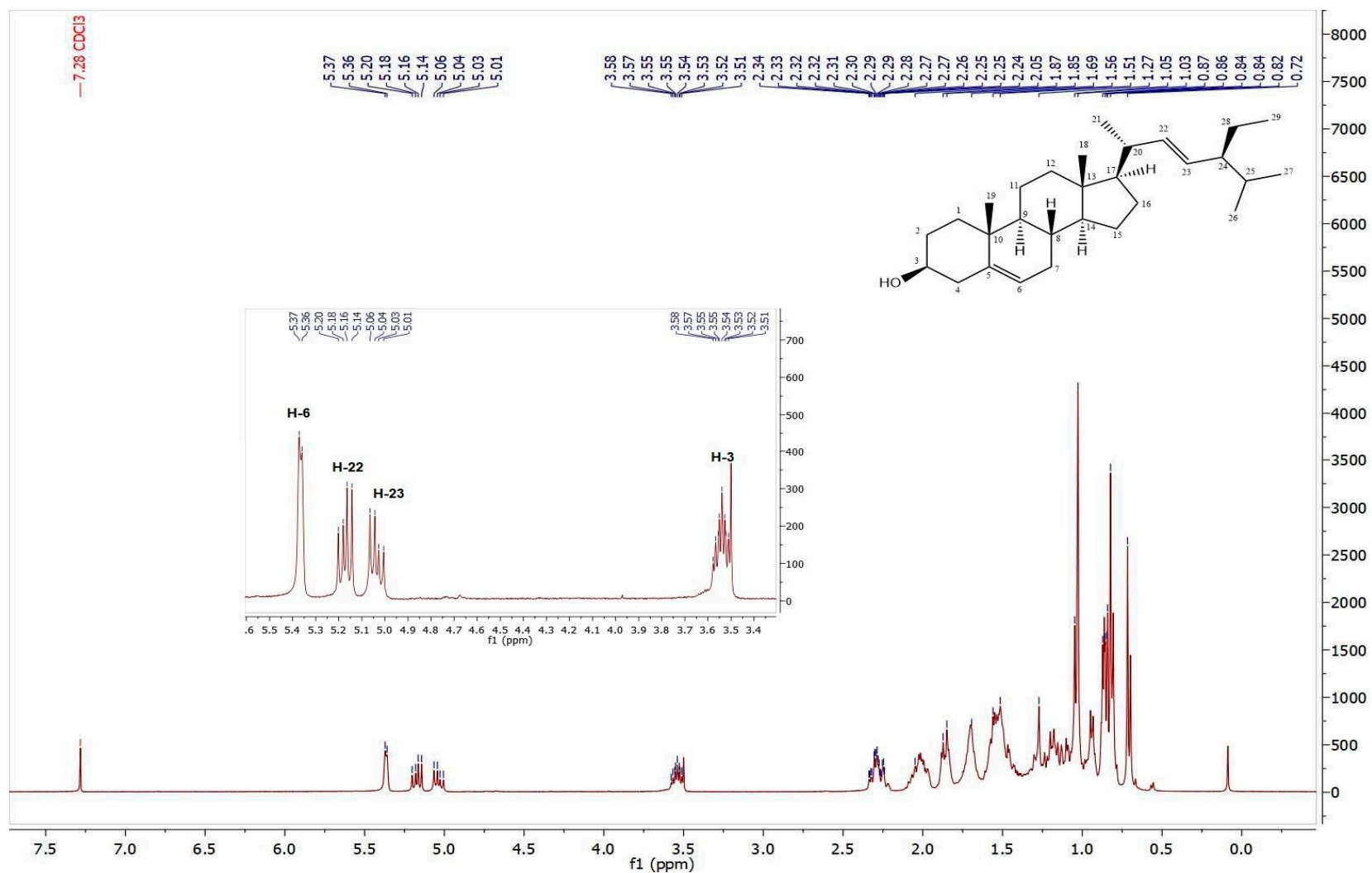


Figure S1: <sup>1</sup>H NMR spectrum of compound (1) Stigmasterol.

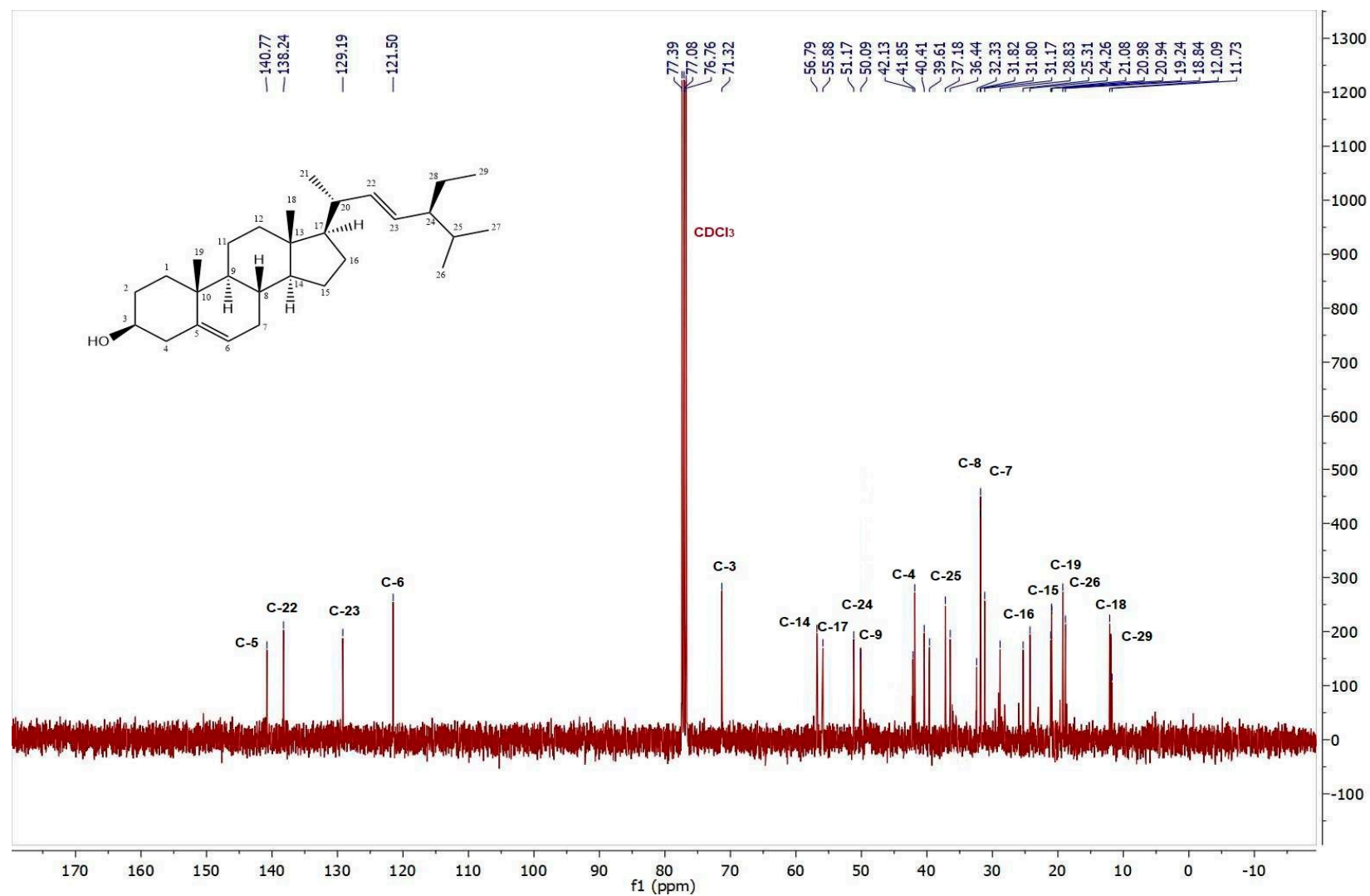


Figure S2:  $^{13}\text{C}$  NMR spectrum of compound (1) Stigmasterol.

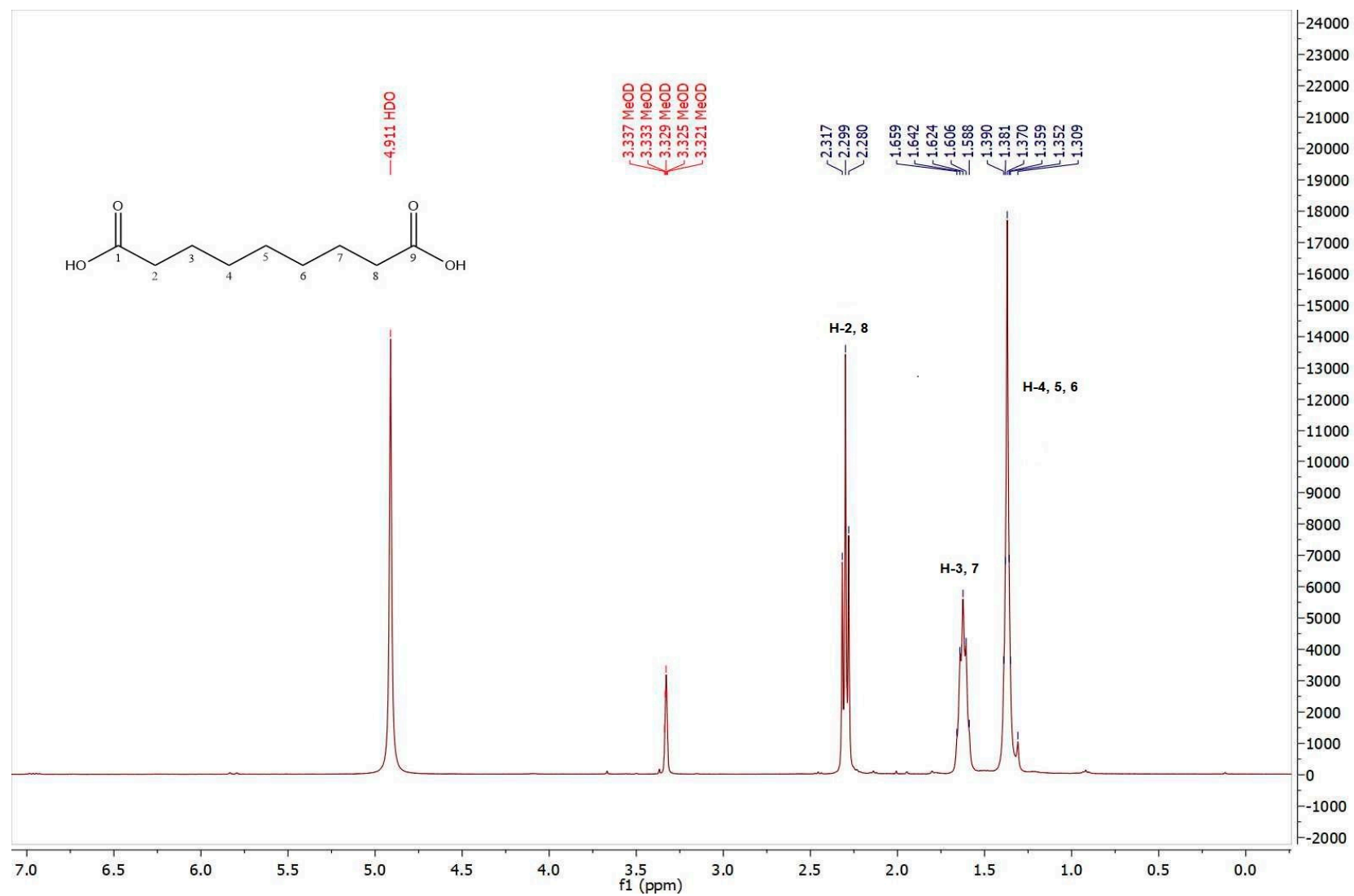
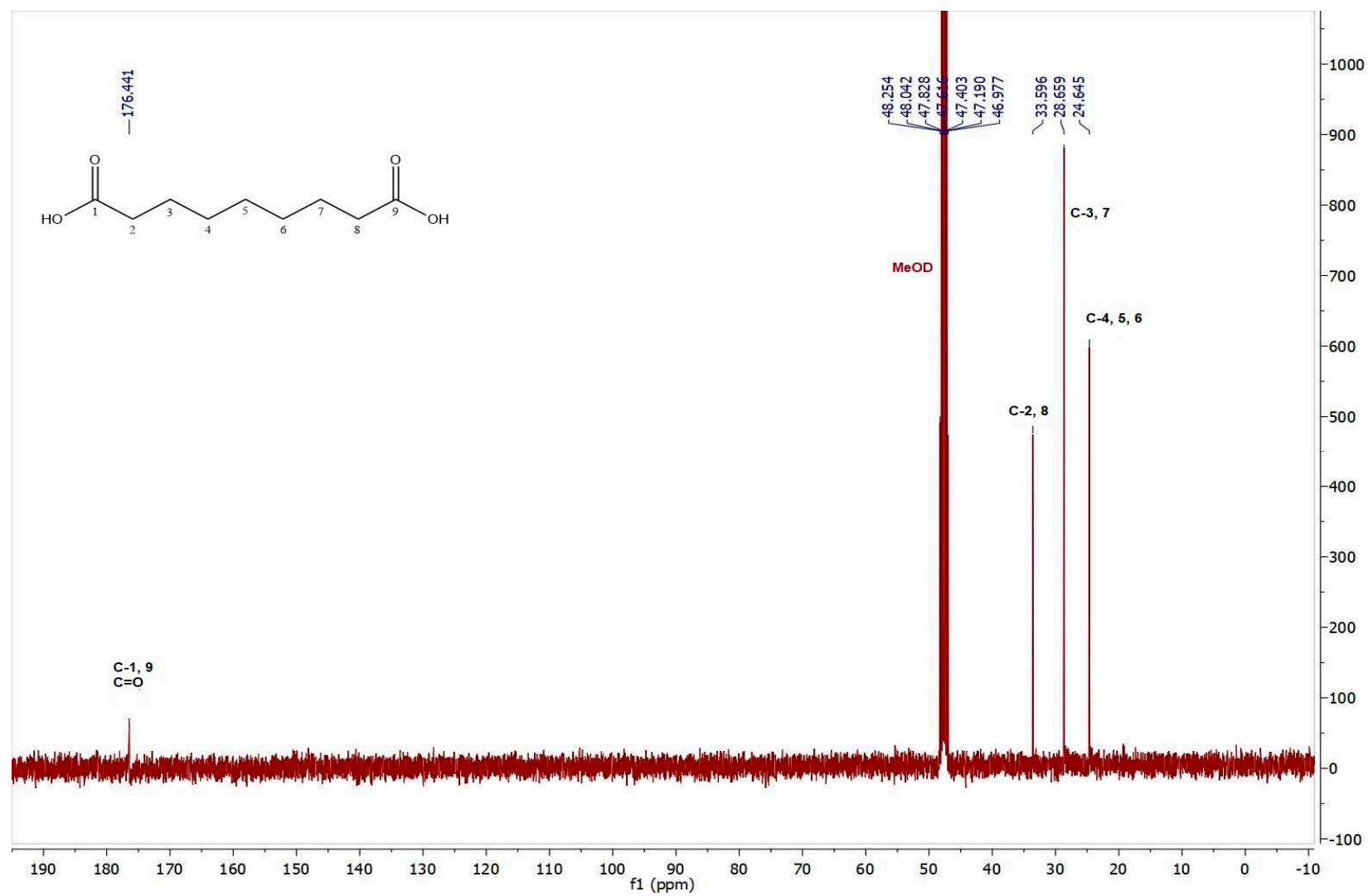


Figure S3: <sup>1</sup>H NMR spectrum of compound (4) Azelaic acid.



**Figure S4:**  $^{13}\text{C}$  NMR spectrum of compound (4) Azelaic acid.

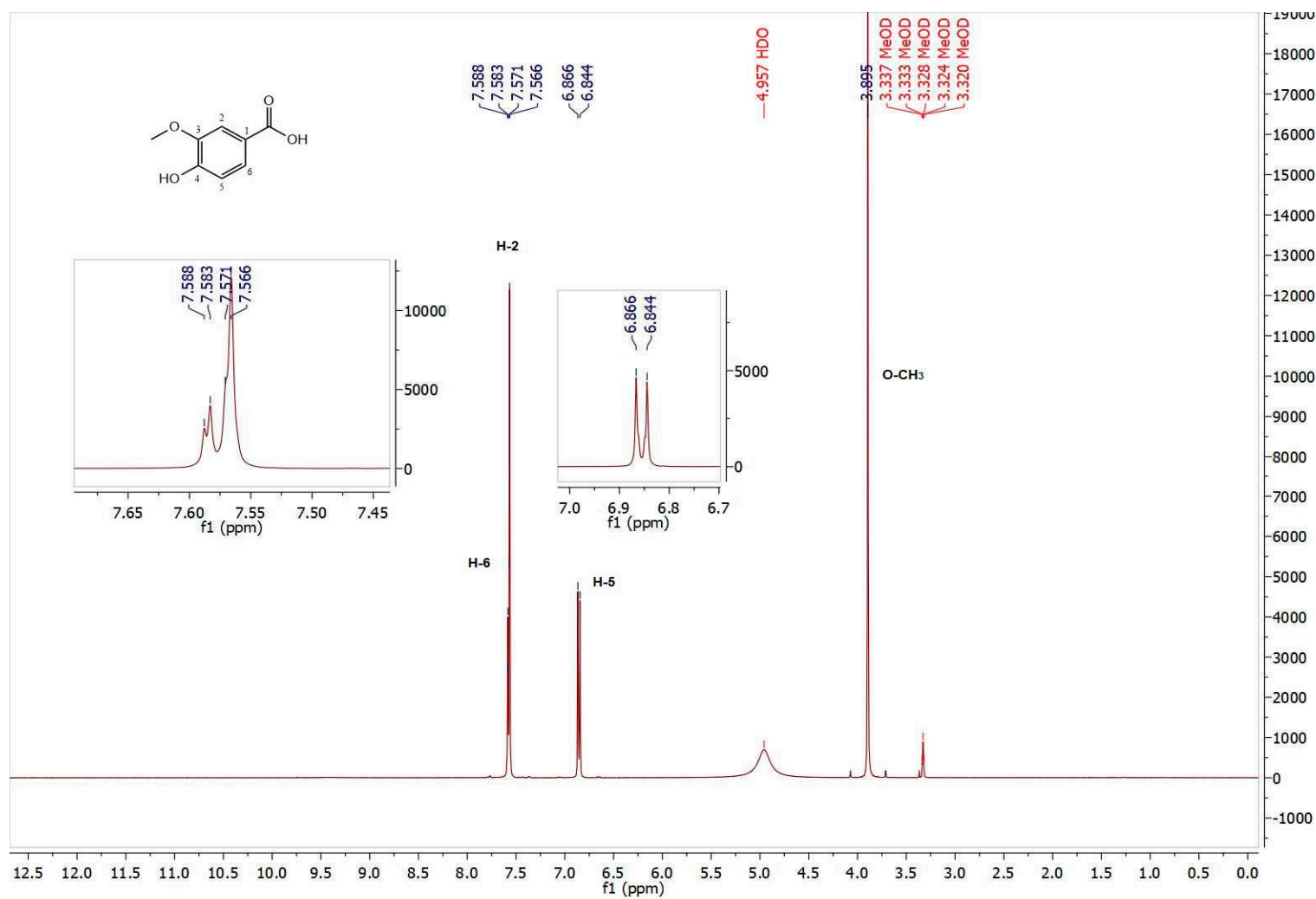
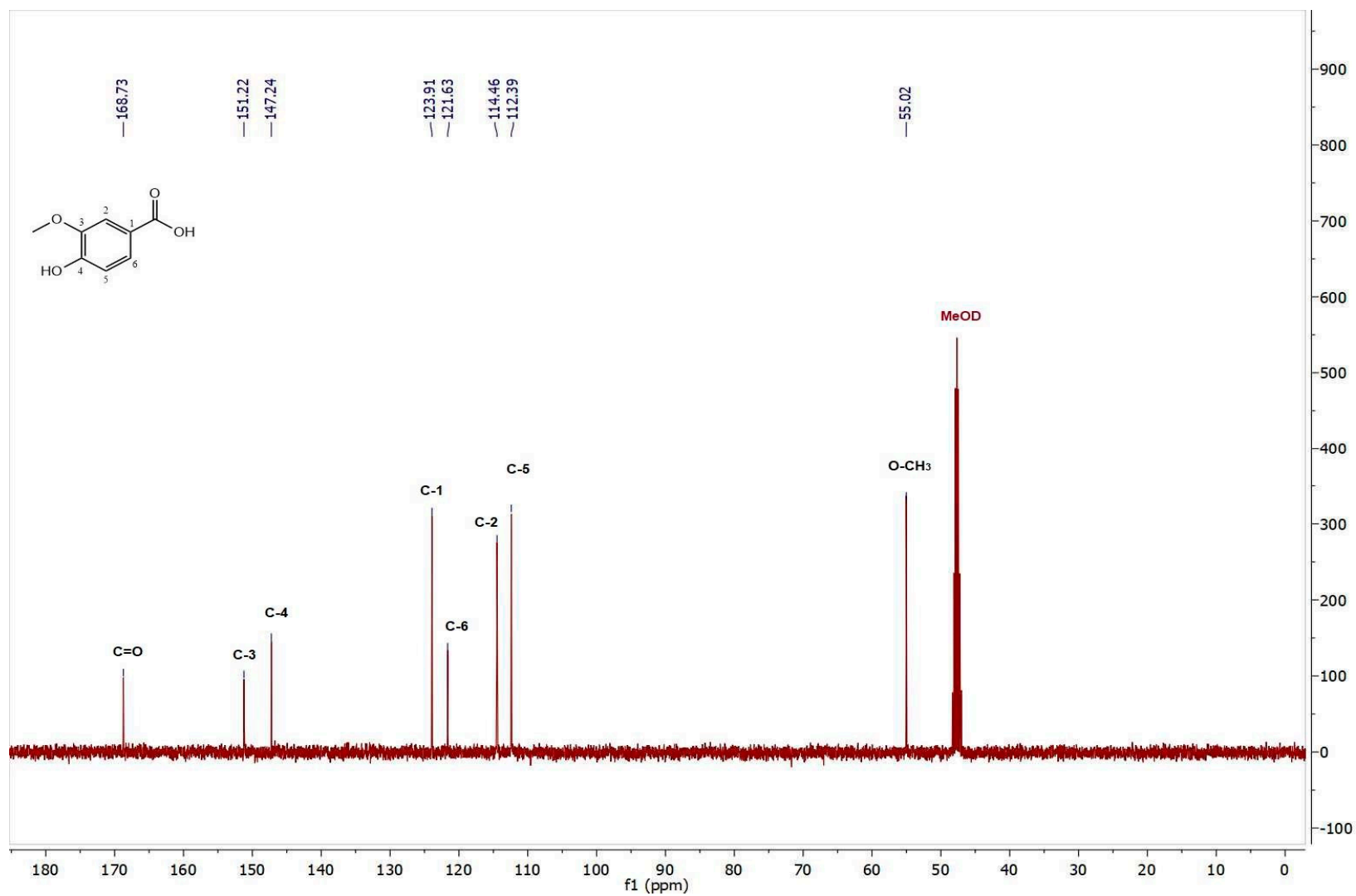
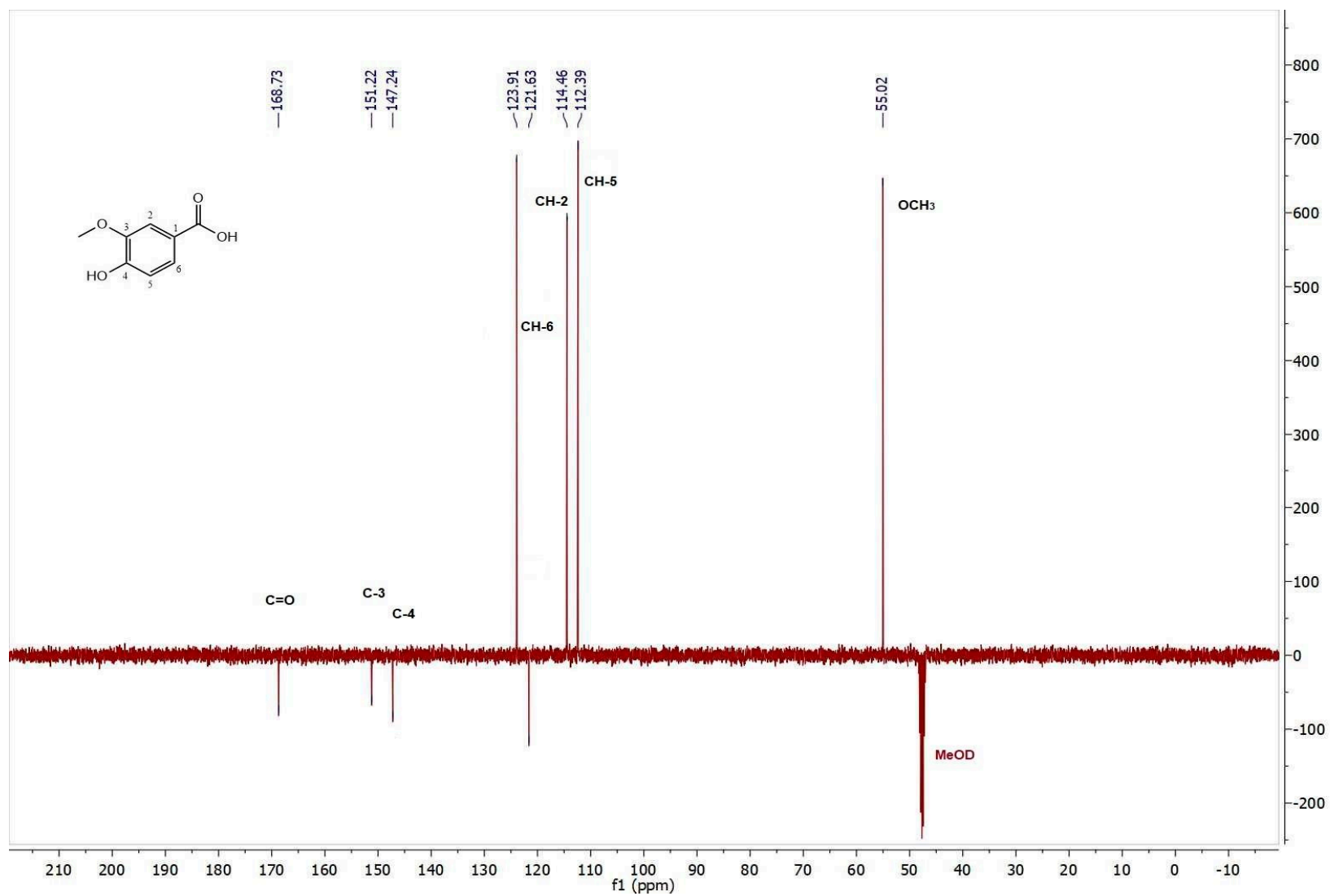


Figure S5: <sup>1</sup>H NMR spectrum of compound (5) Vanillic acid.

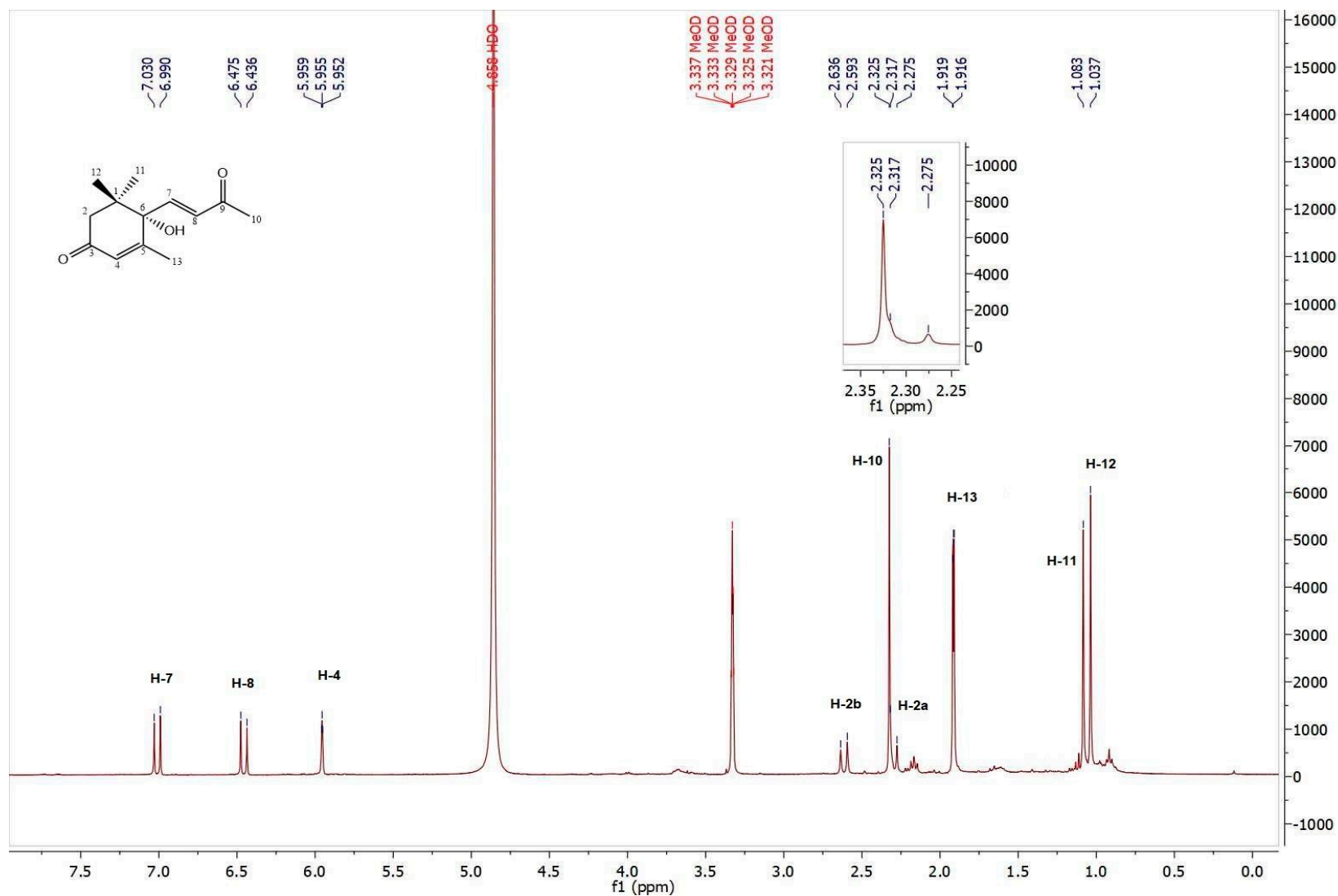




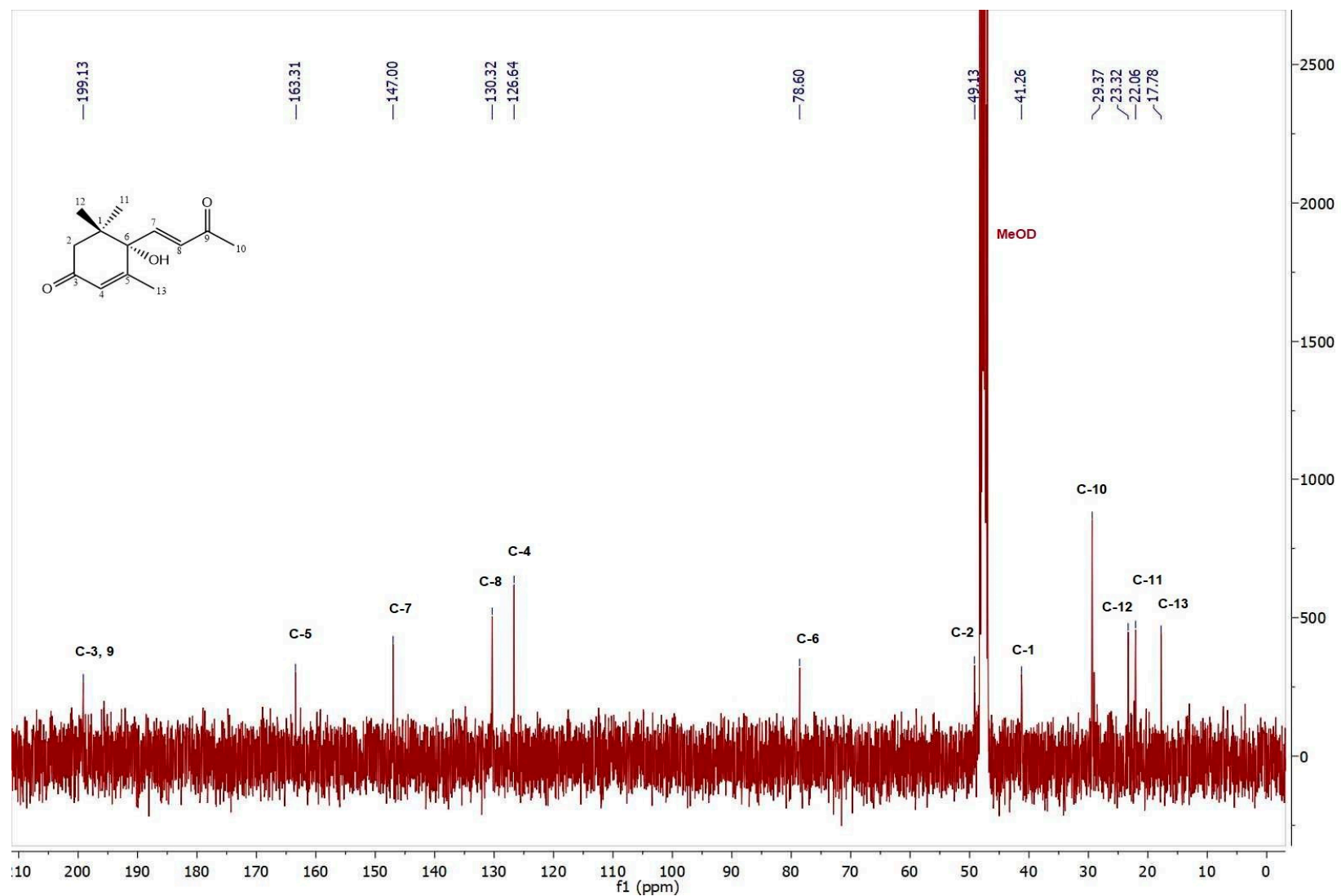
**Figure S6:**  $^{13}\text{C}$  NMR spectrum of compound (5) Vanillic acid.



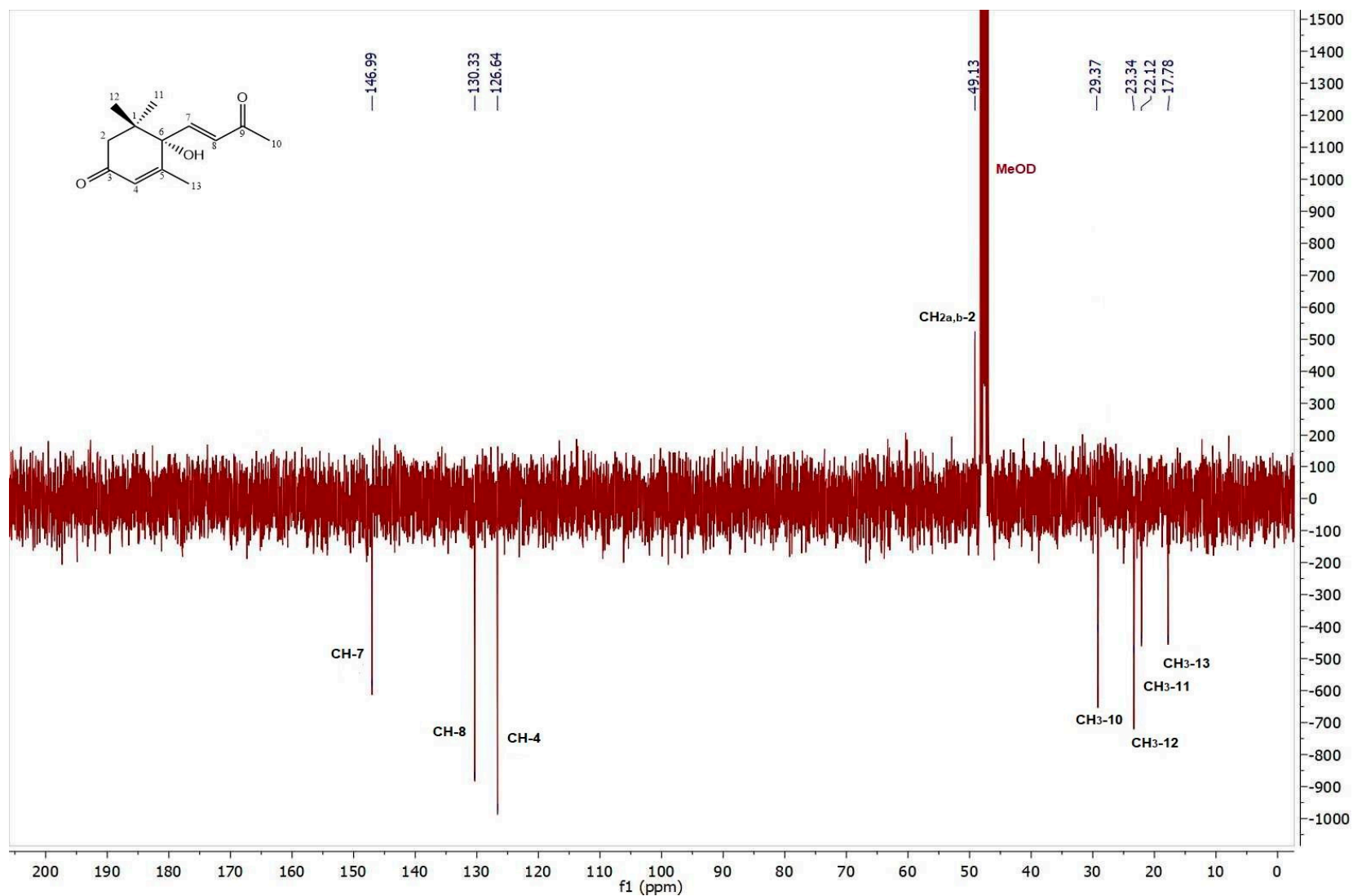
**Figure S7:** <sup>13</sup>C NMR APT spectrum of compound (5) Vanillic acid.



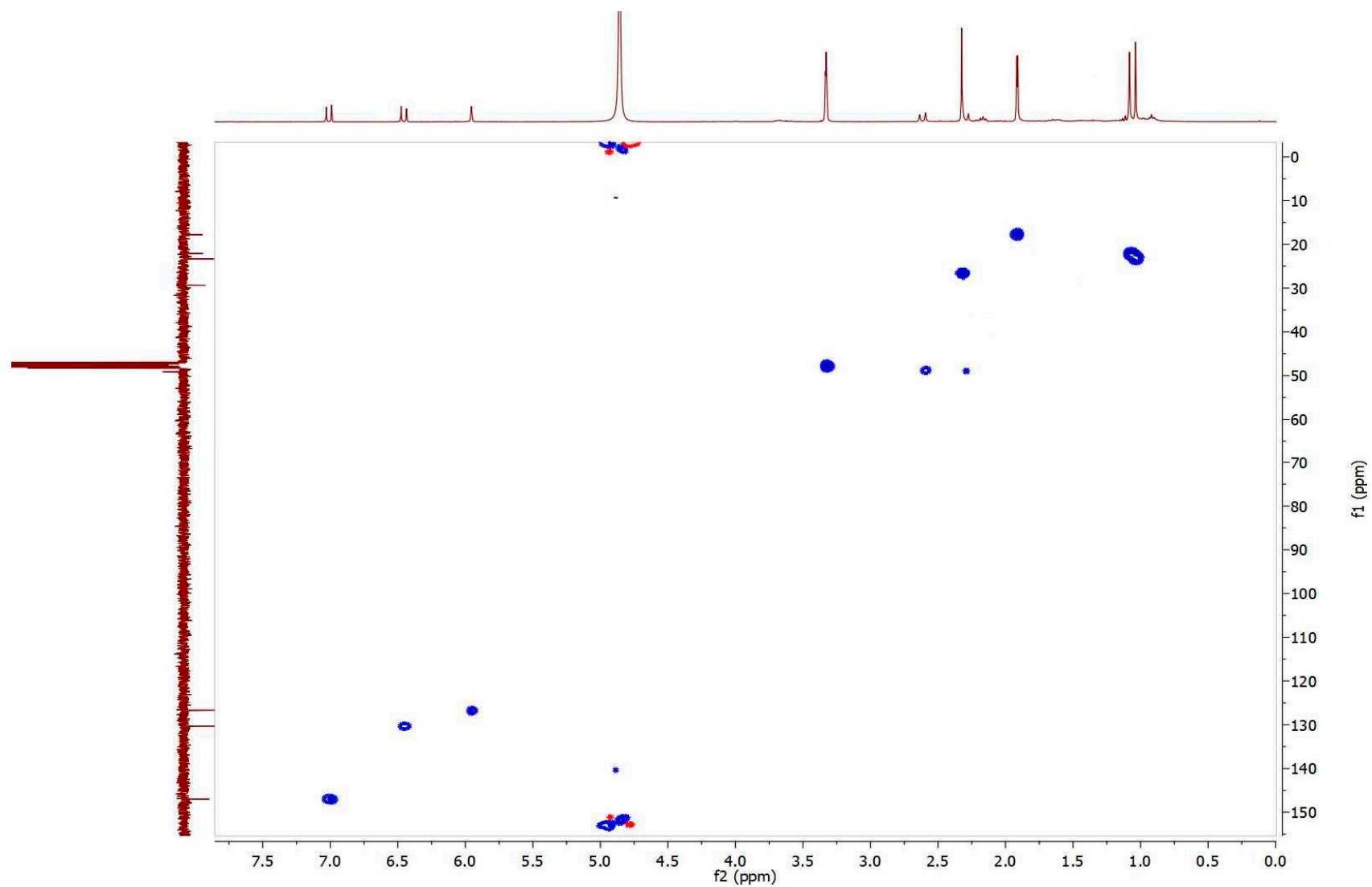
**Figure S8:** <sup>1</sup>H NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).



**Figure S9:** <sup>13</sup>C NMR spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).



**Figure S10:** <sup>13</sup>C NMR APT spectrum of compound (6) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).



**Figure S11:** HSBC NMR spectrum of compound (**6**) (6S, 7E)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydrovomifoliol).

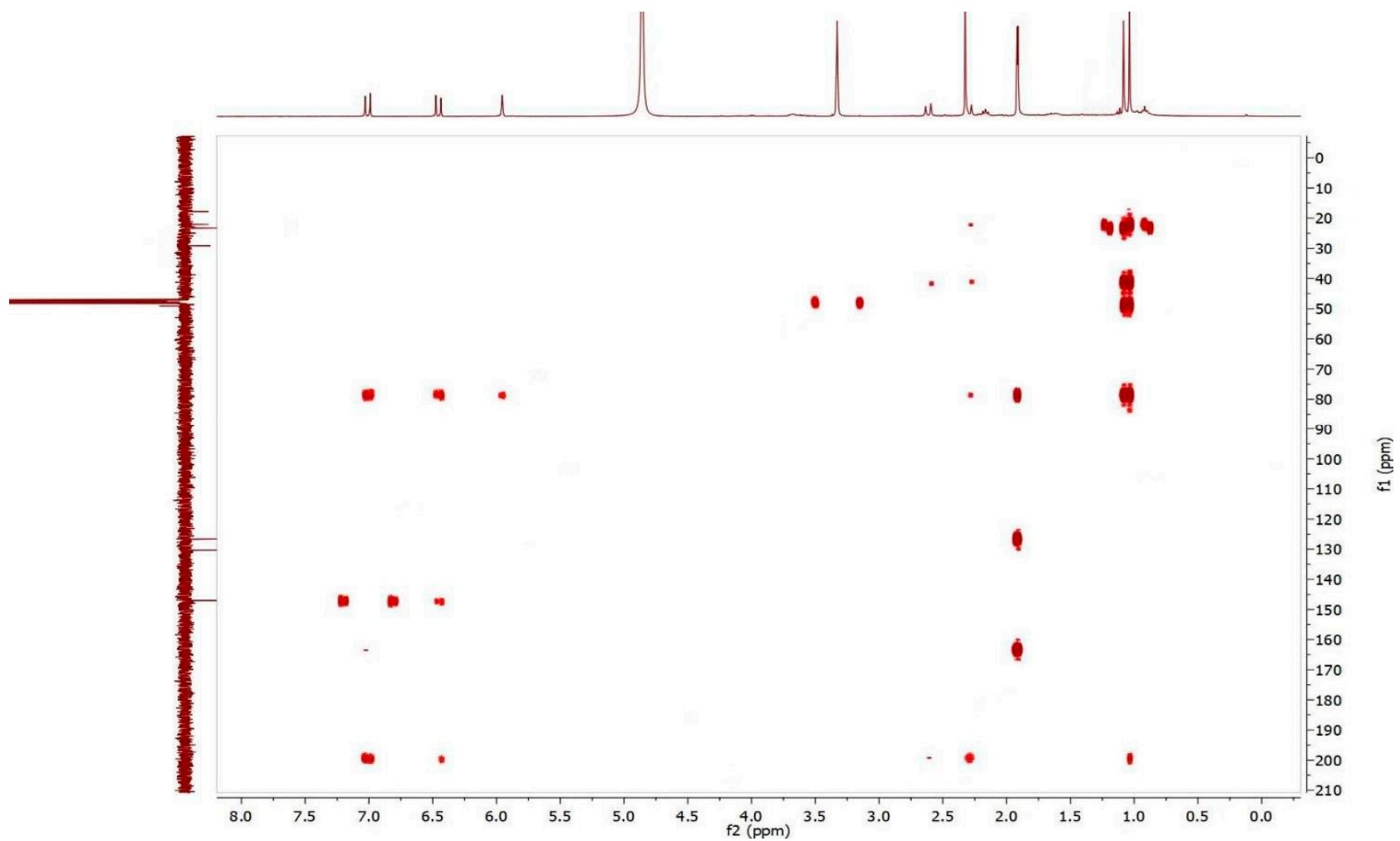


Figure S12: HMBC NMR spectrum of compound (6) (6*S*, 7*E*)-6-hydroxy-4,7-megastigmadien-3,9-dione (S(+)-dehydromifoliol).

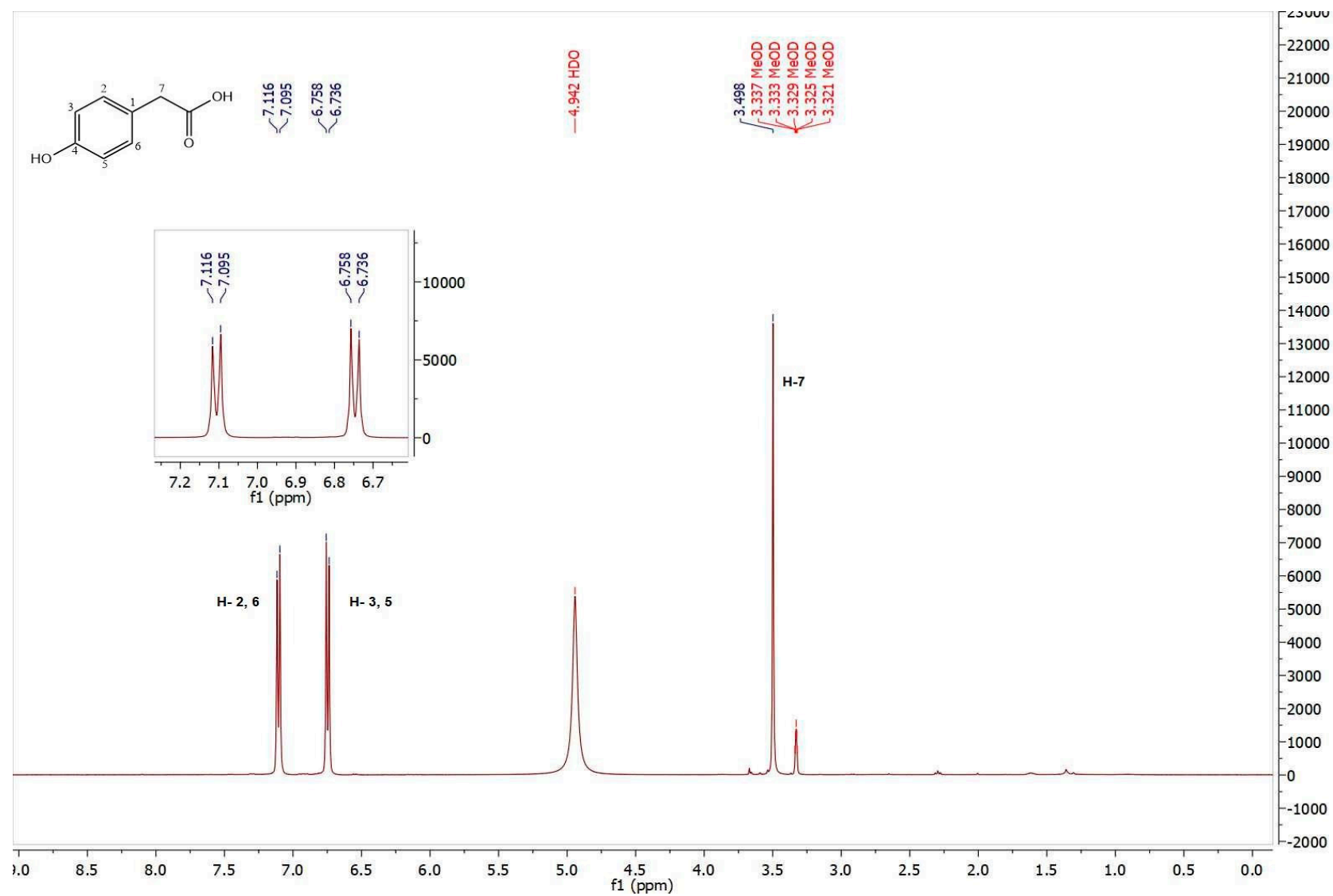
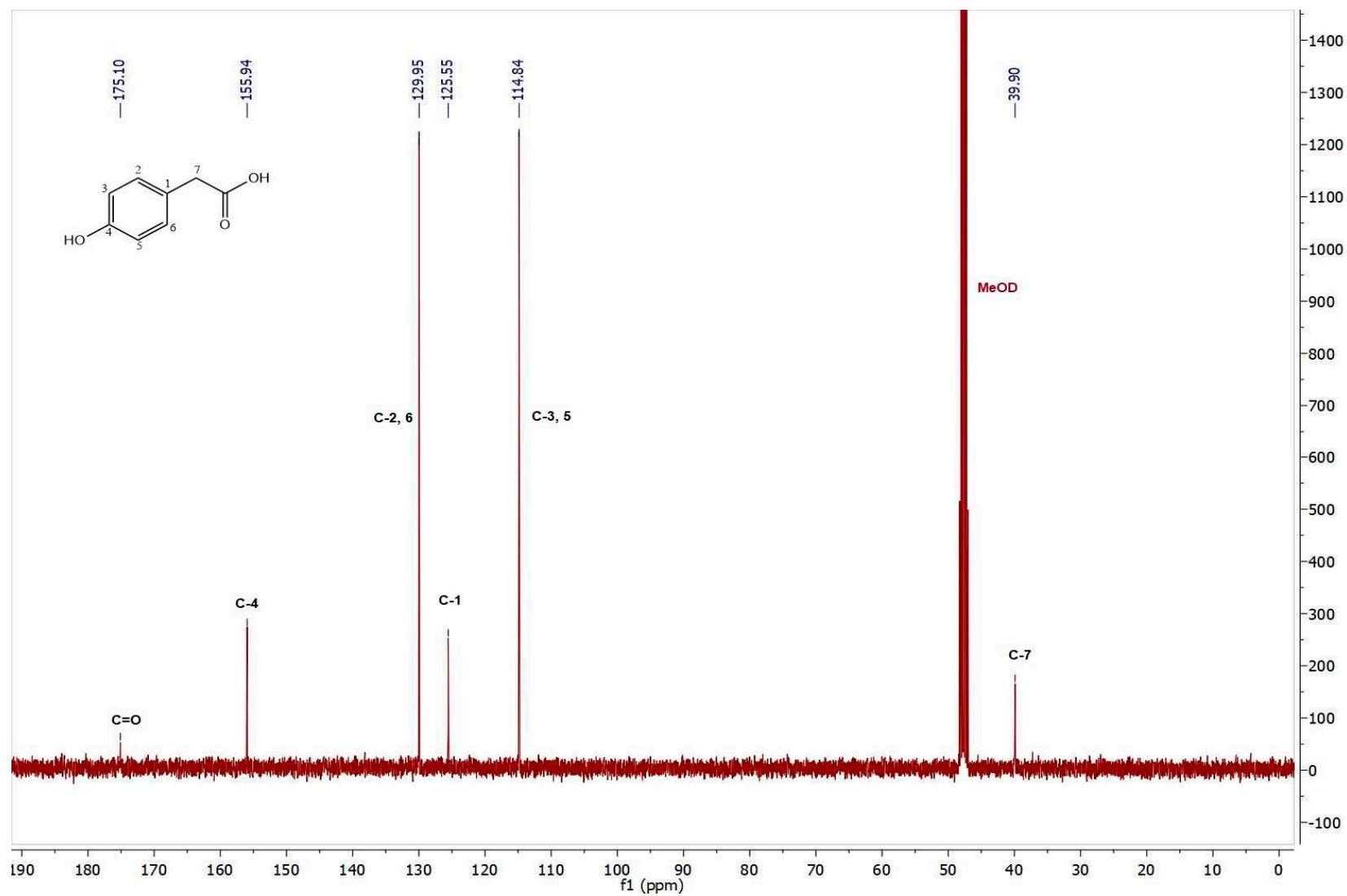


Figure S13: <sup>1</sup>H NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.





**Figure S14:**  $^{13}\text{C}$  NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.

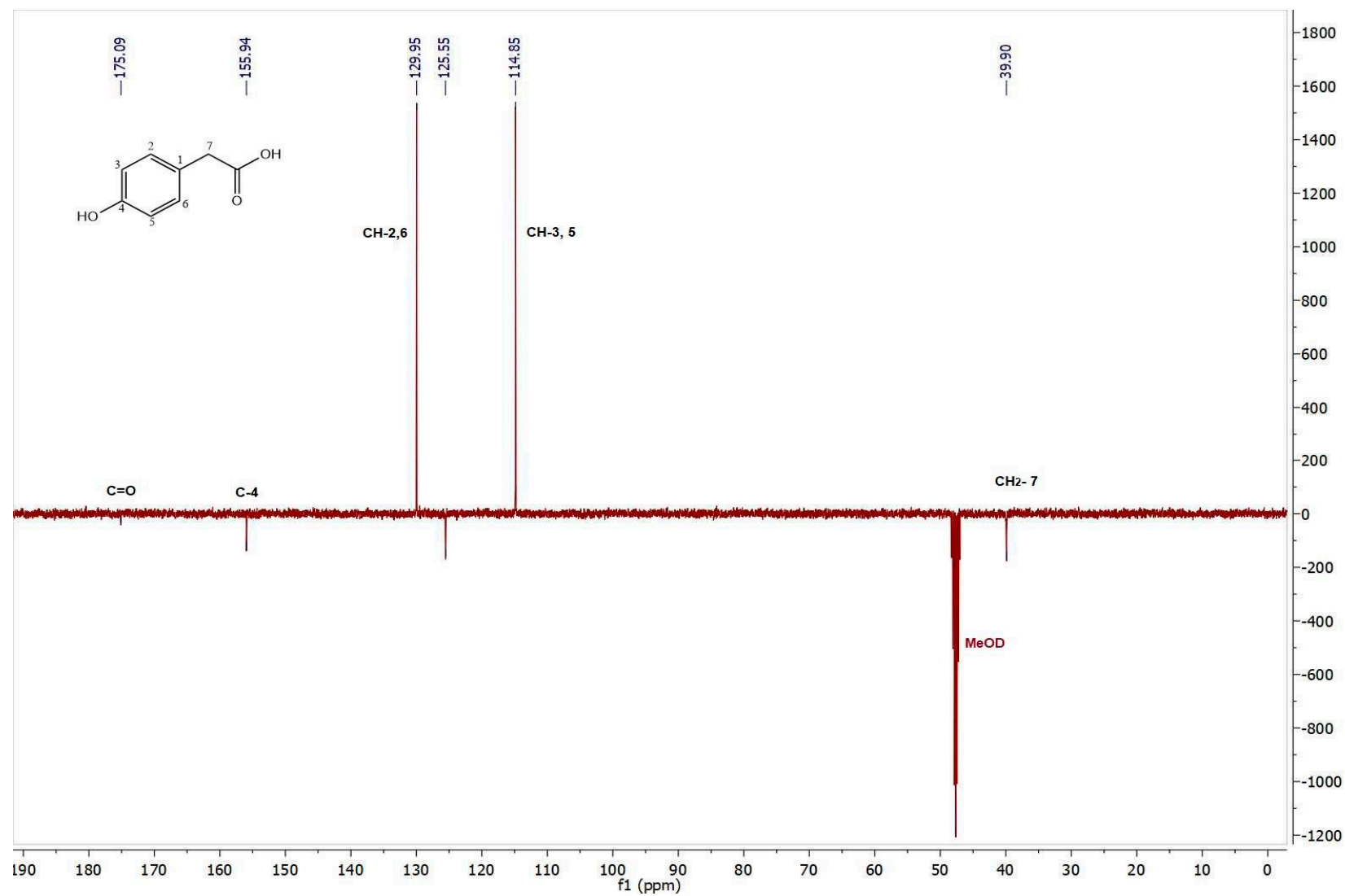
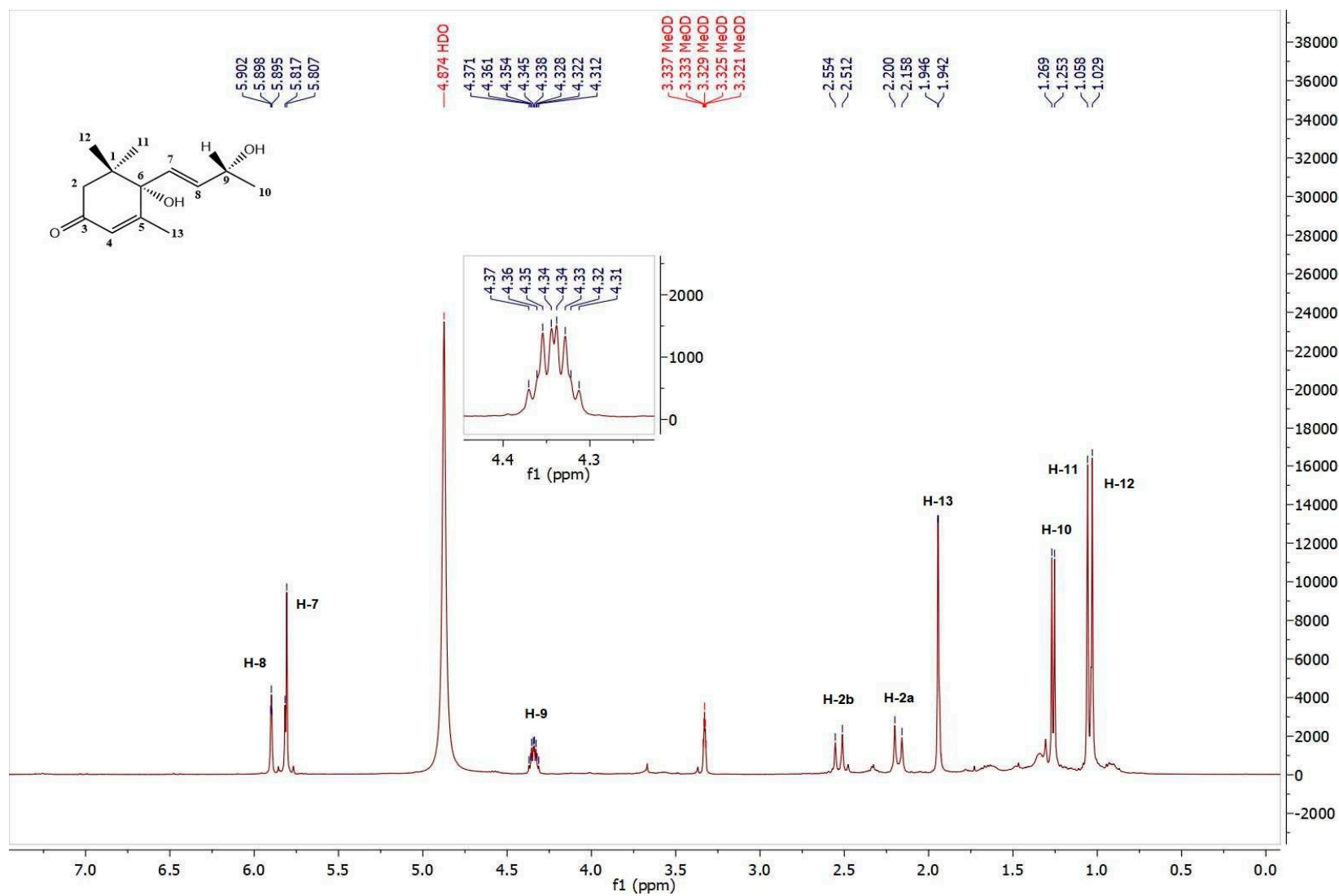


Figure S15: <sup>13</sup>C APT NMR spectrum of compound (7) 4-Hydroxy phenyl acetic acid.



**Figure S16:**  $^1\text{H}$  NMR spectrum of compound (8) Vomifoliol.

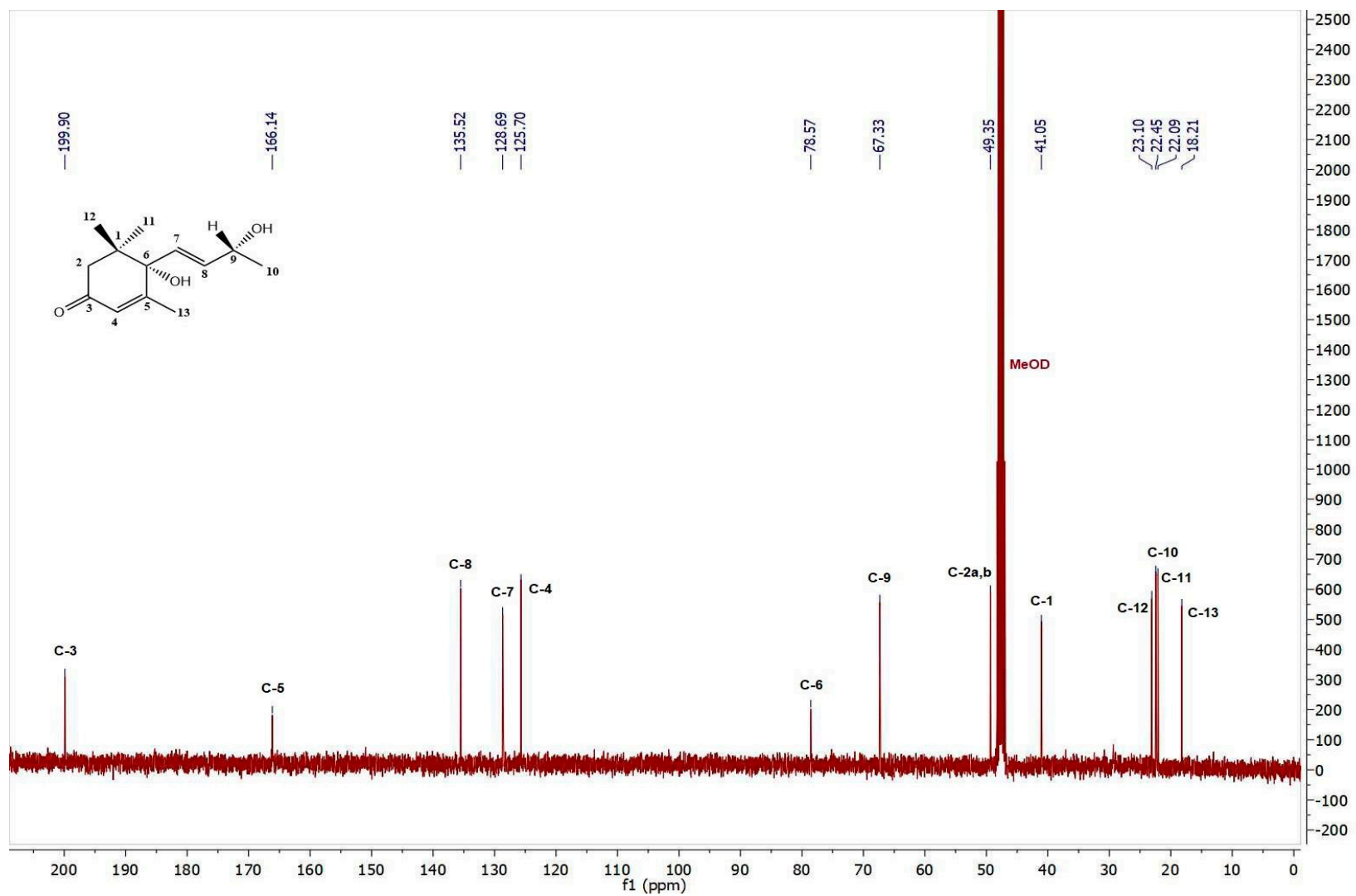


Figure S17:  $^{13}\text{C}$  NMR spectrum of compound (8) Vomifoliol.

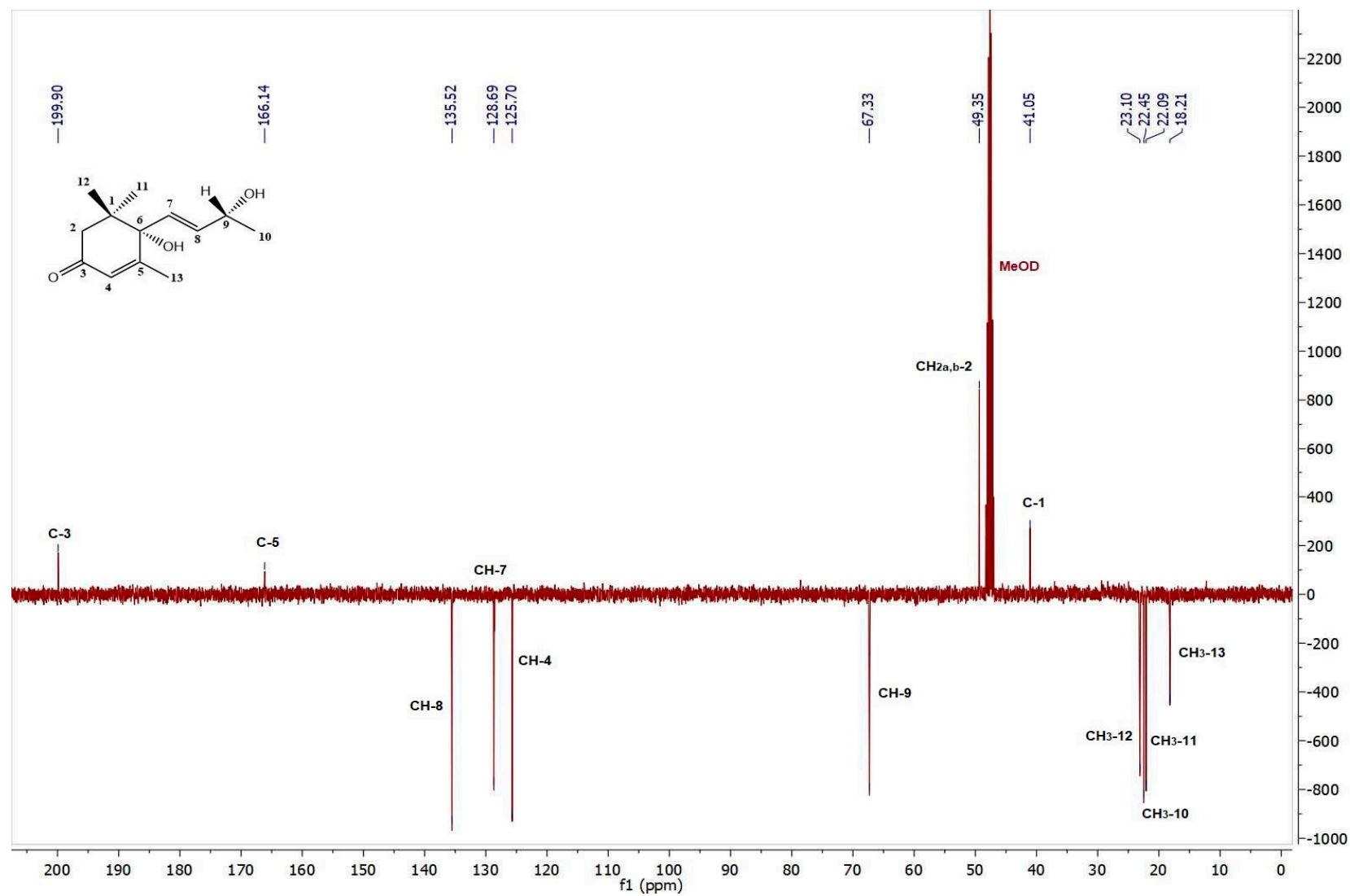
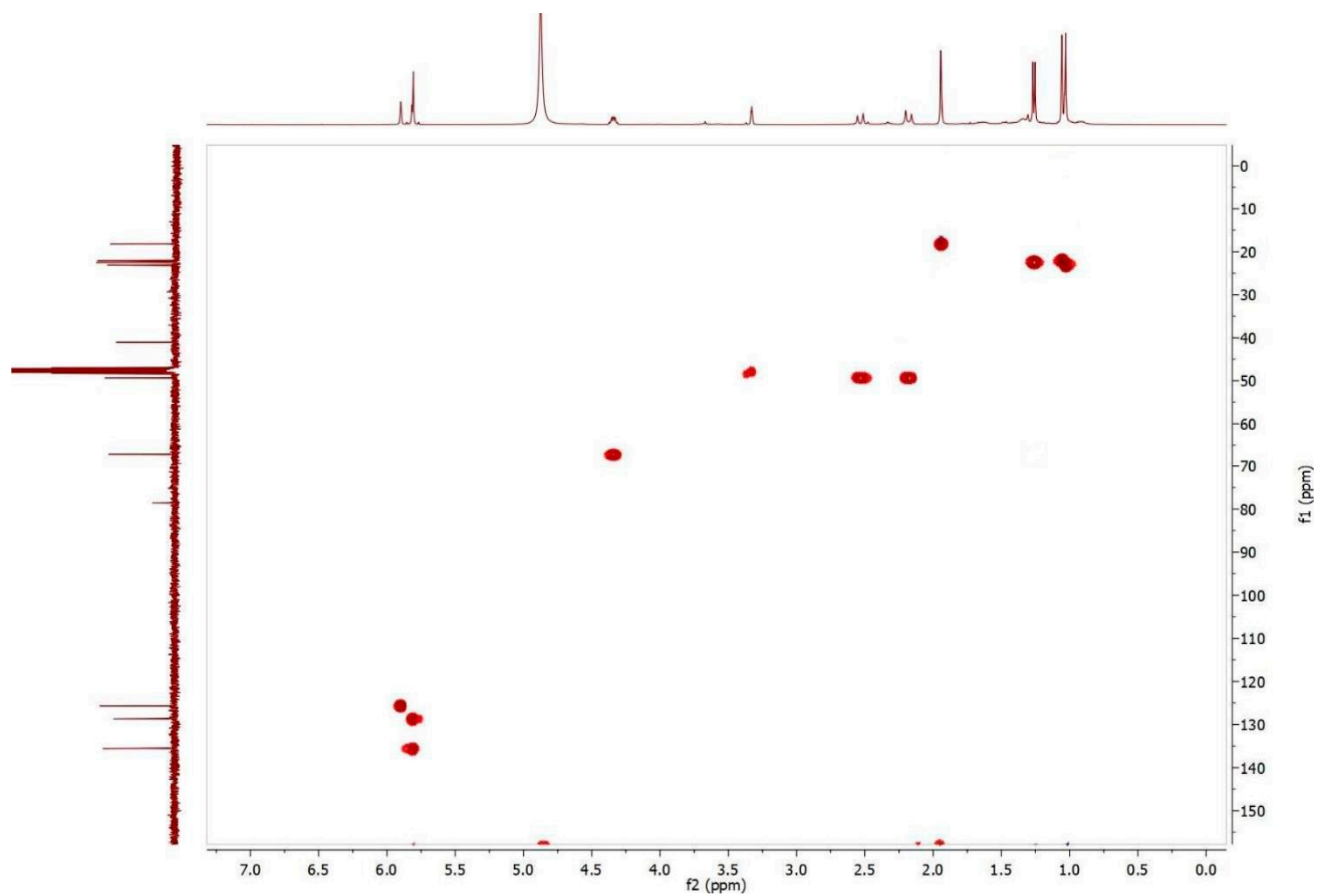


Figure S18:  $^{13}\text{C}$  APT NMR spectrum of compound (8) Vomifoliol.



**Figure S19:** HSBC NMR spectrum of compound **(8)** Vomifoliol.

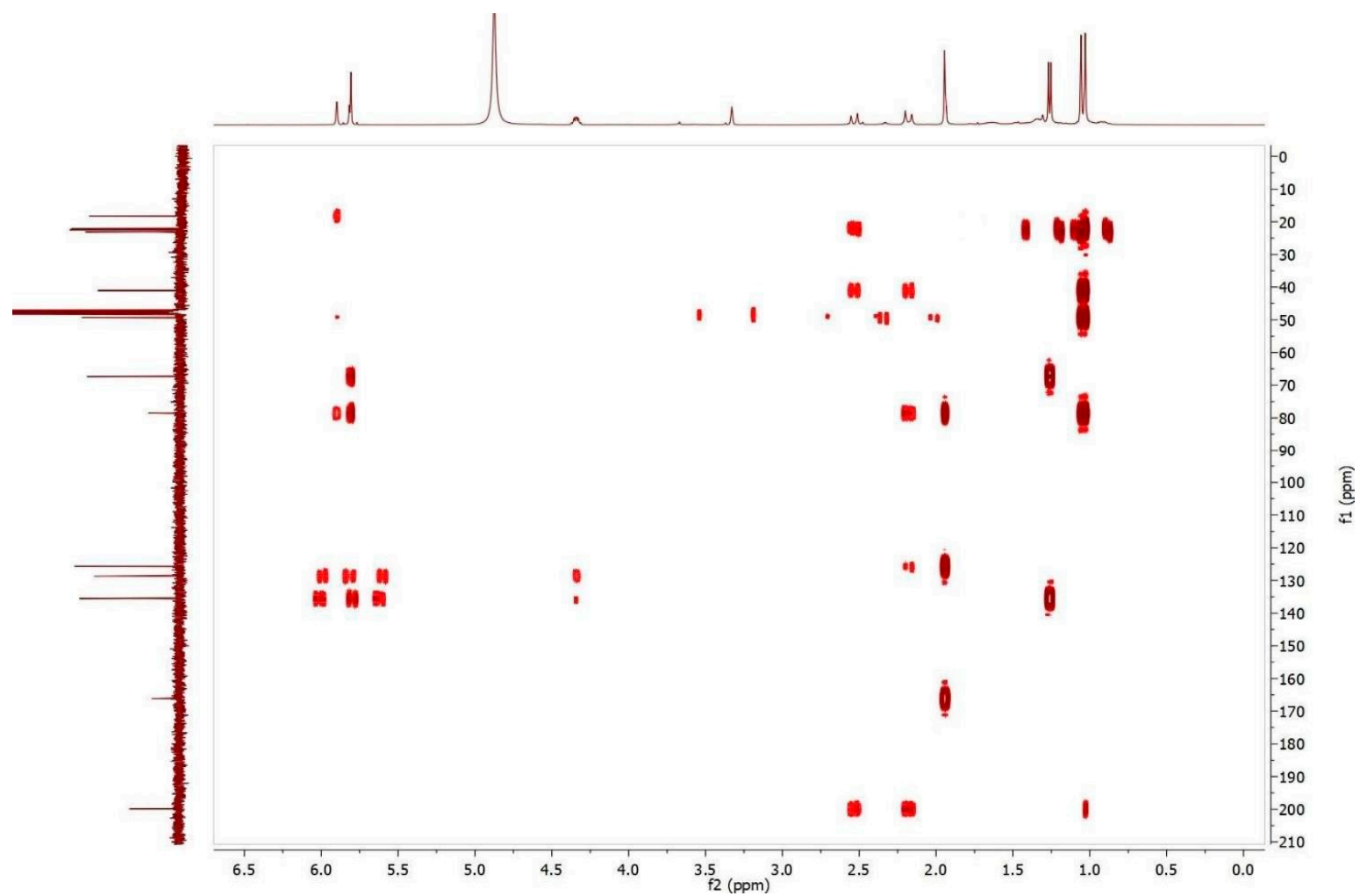


Figure S20: HMBC NMR spectrum of compound (8) Vomifoliol.

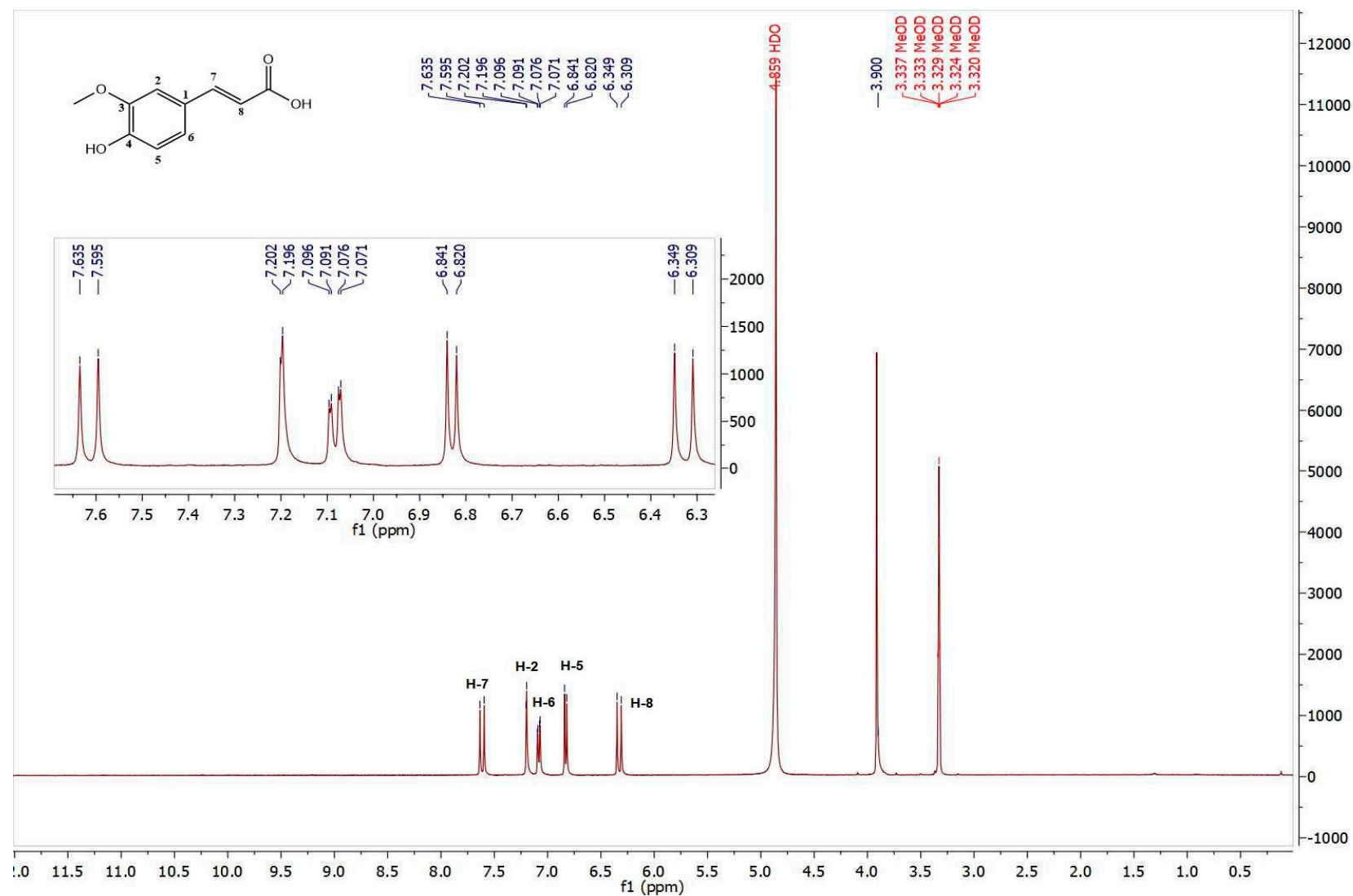


Figure S21:  $^1\text{H}$  NMR spectrum of compound (9) Ferulic acid.



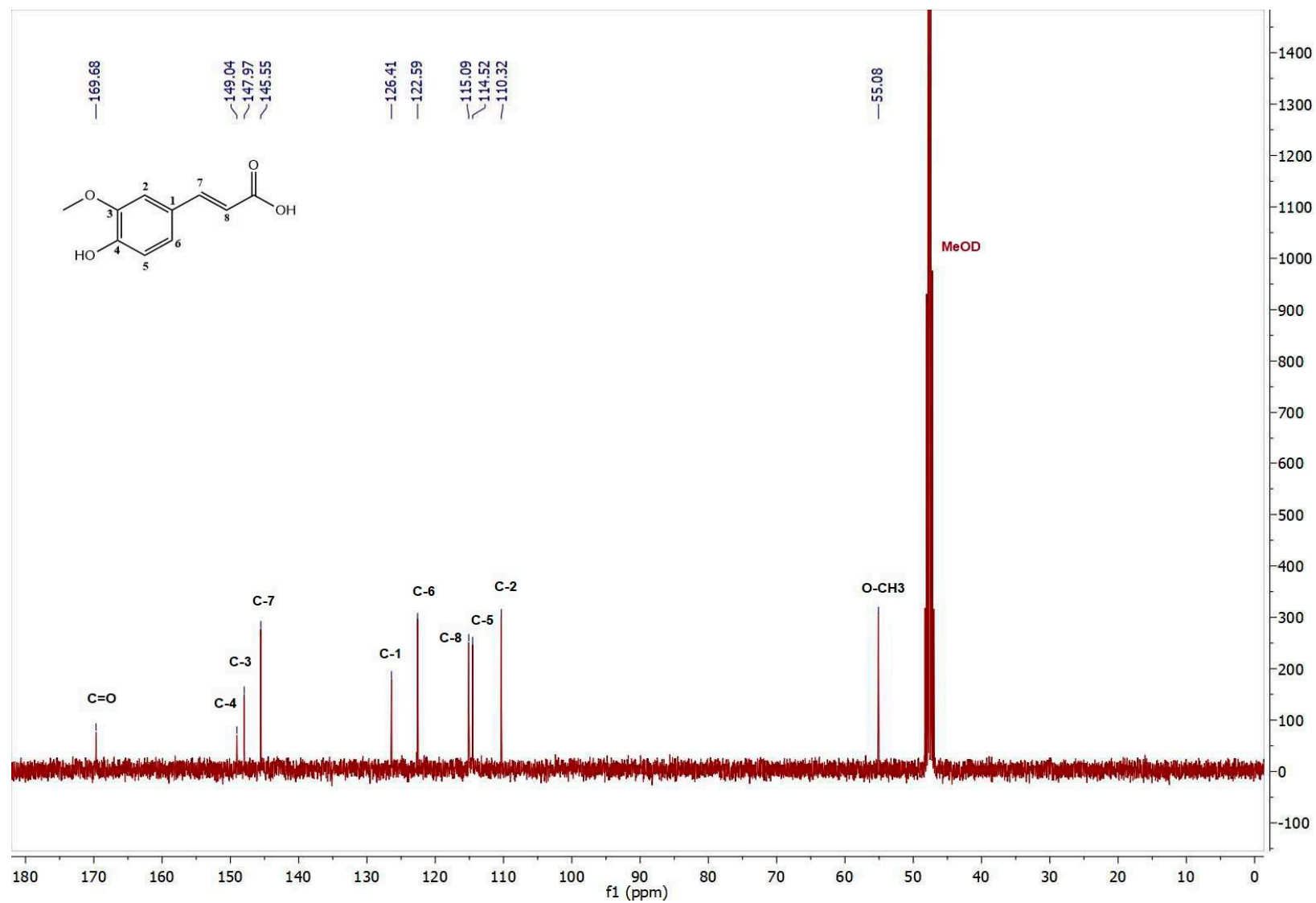


Figure S22: <sup>13</sup>C NMR spectrum of compound (9) Ferulic acid.

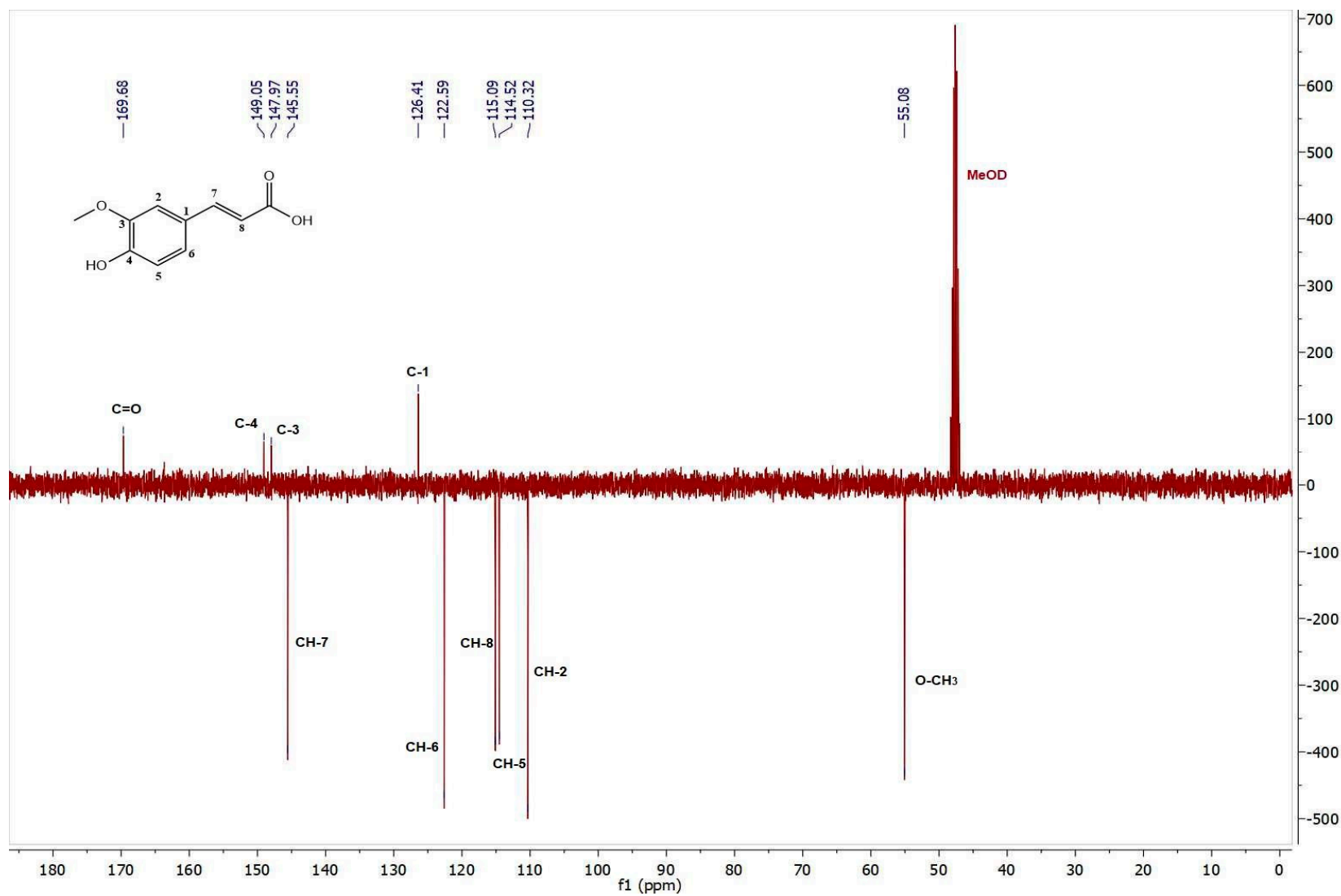


Figure S23:  $^{13}\text{C}$  NMR APT spectrum of compound (9) Ferulic acid.

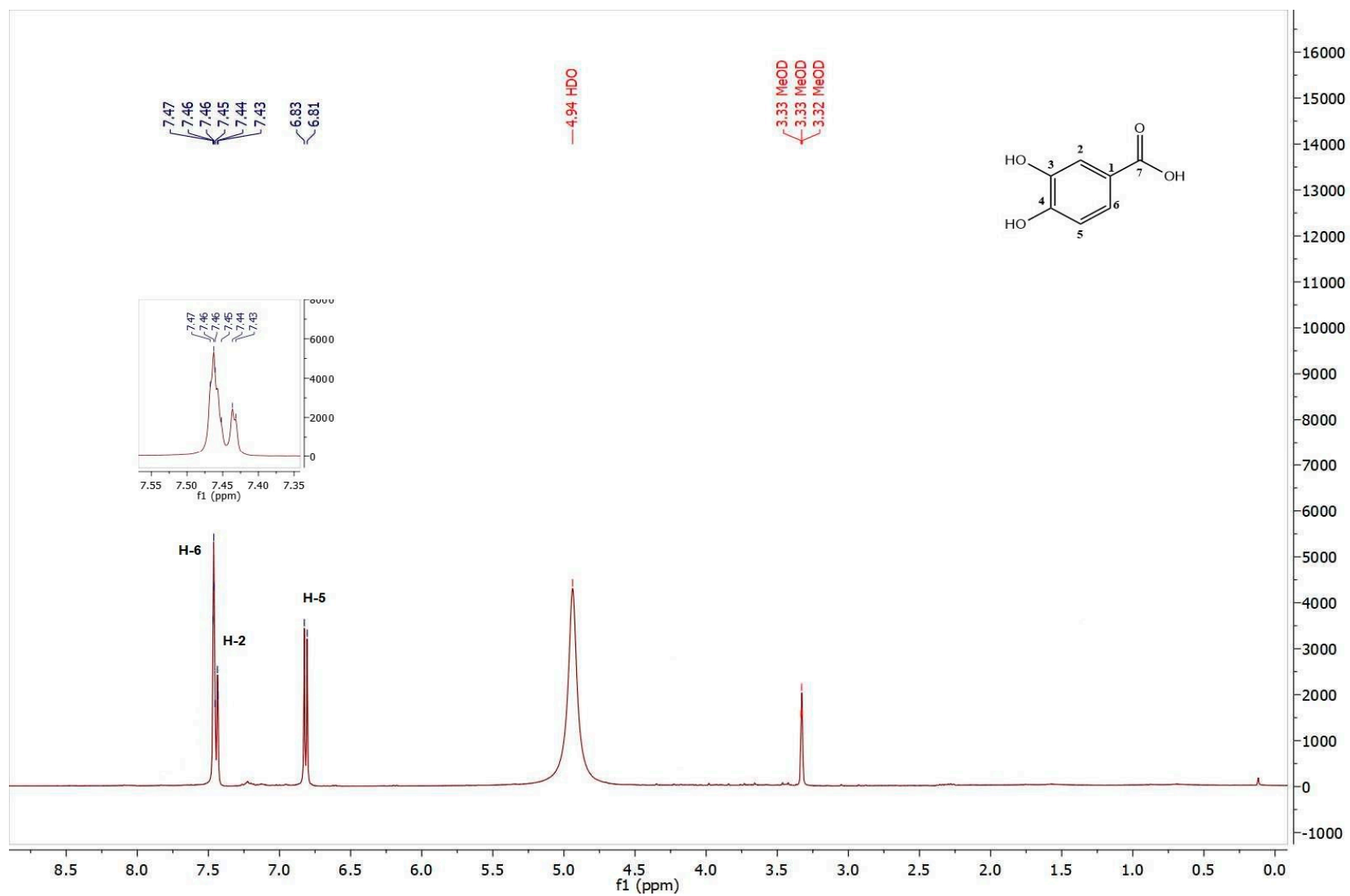


Figure S24:  $^1\text{H}$  NMR spectrum of compound (10) Protocatechuic acid.

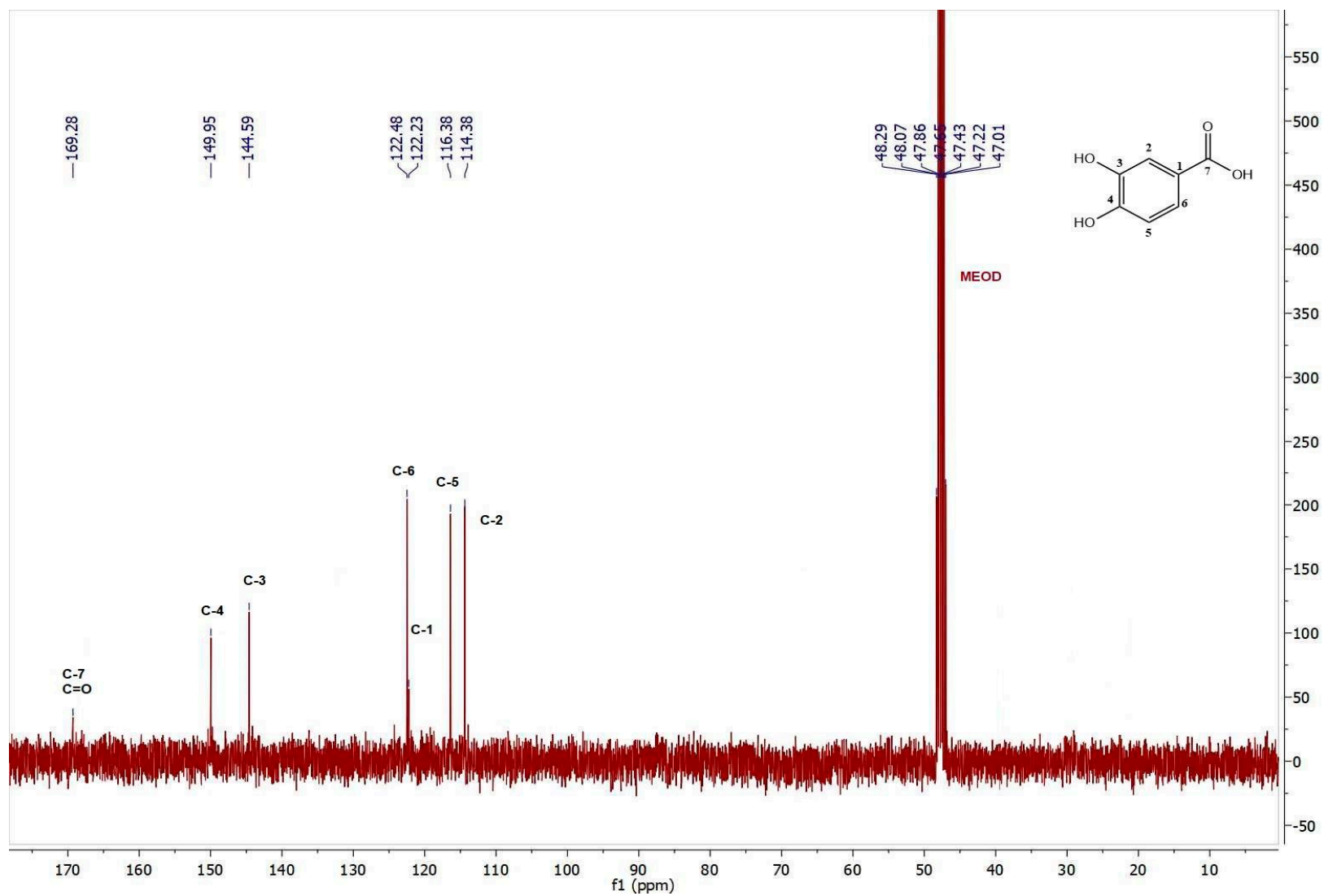


Figure S25:  $^{13}\text{C}$  NMR spectrum of compound (10) Protocatechuic acid.

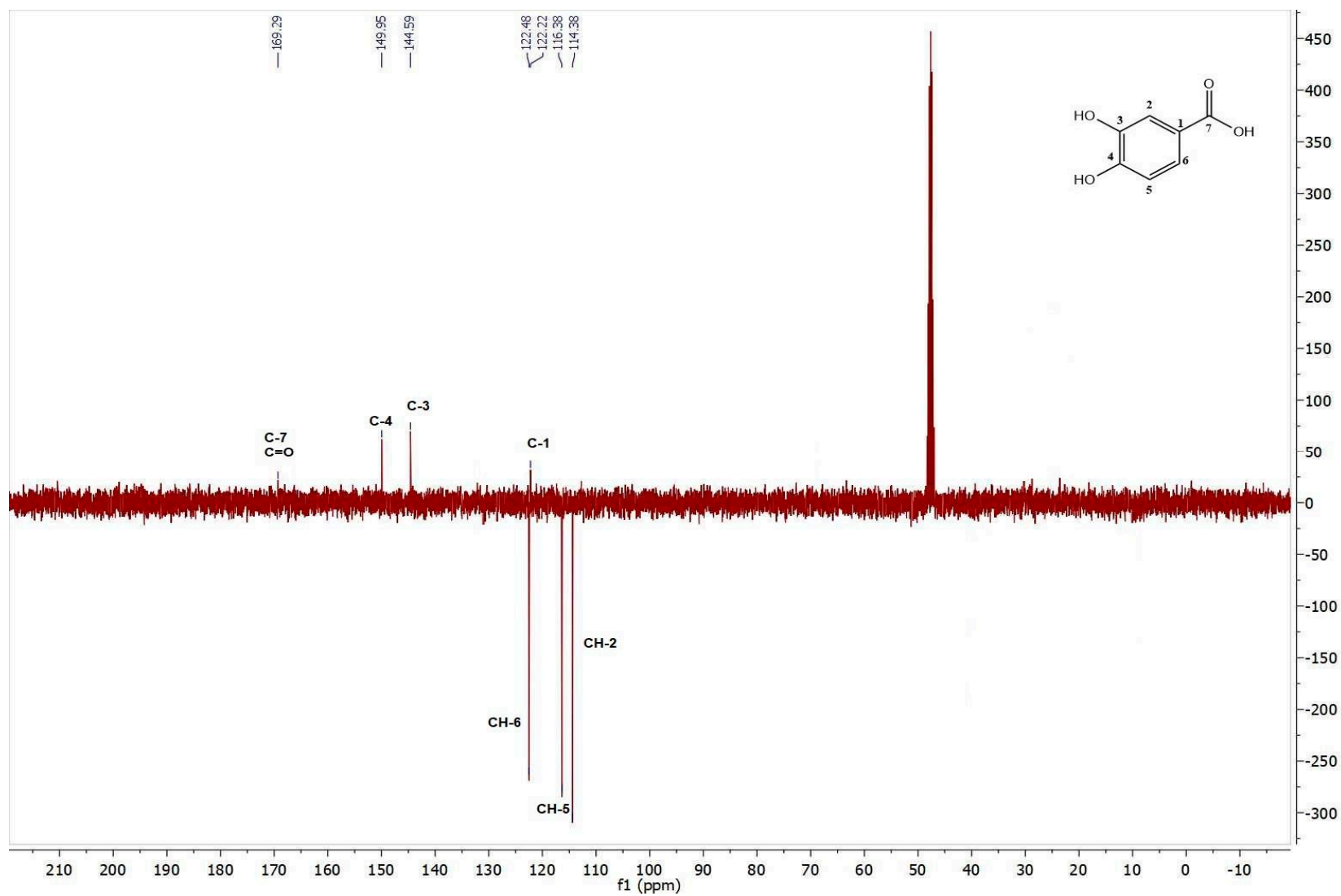
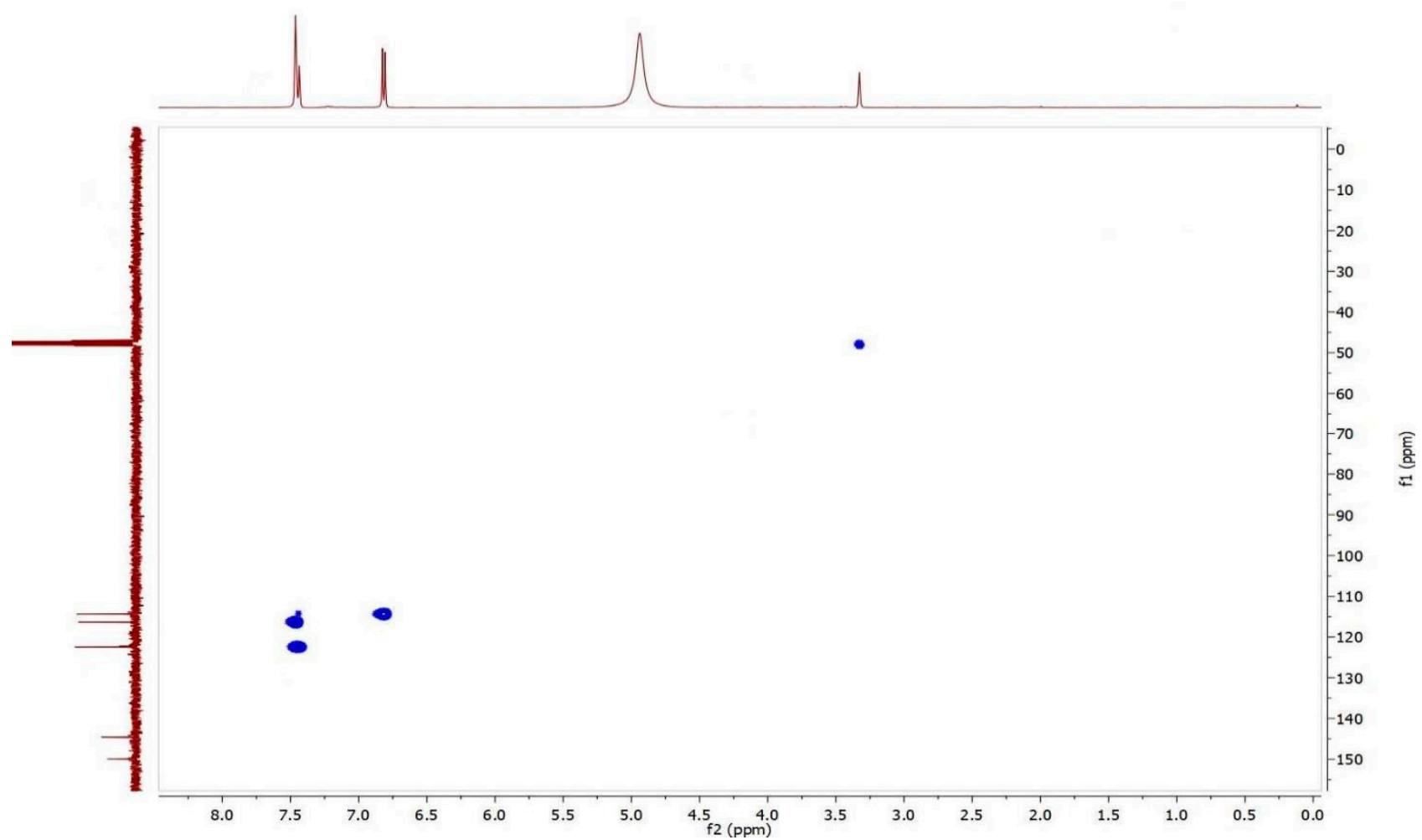
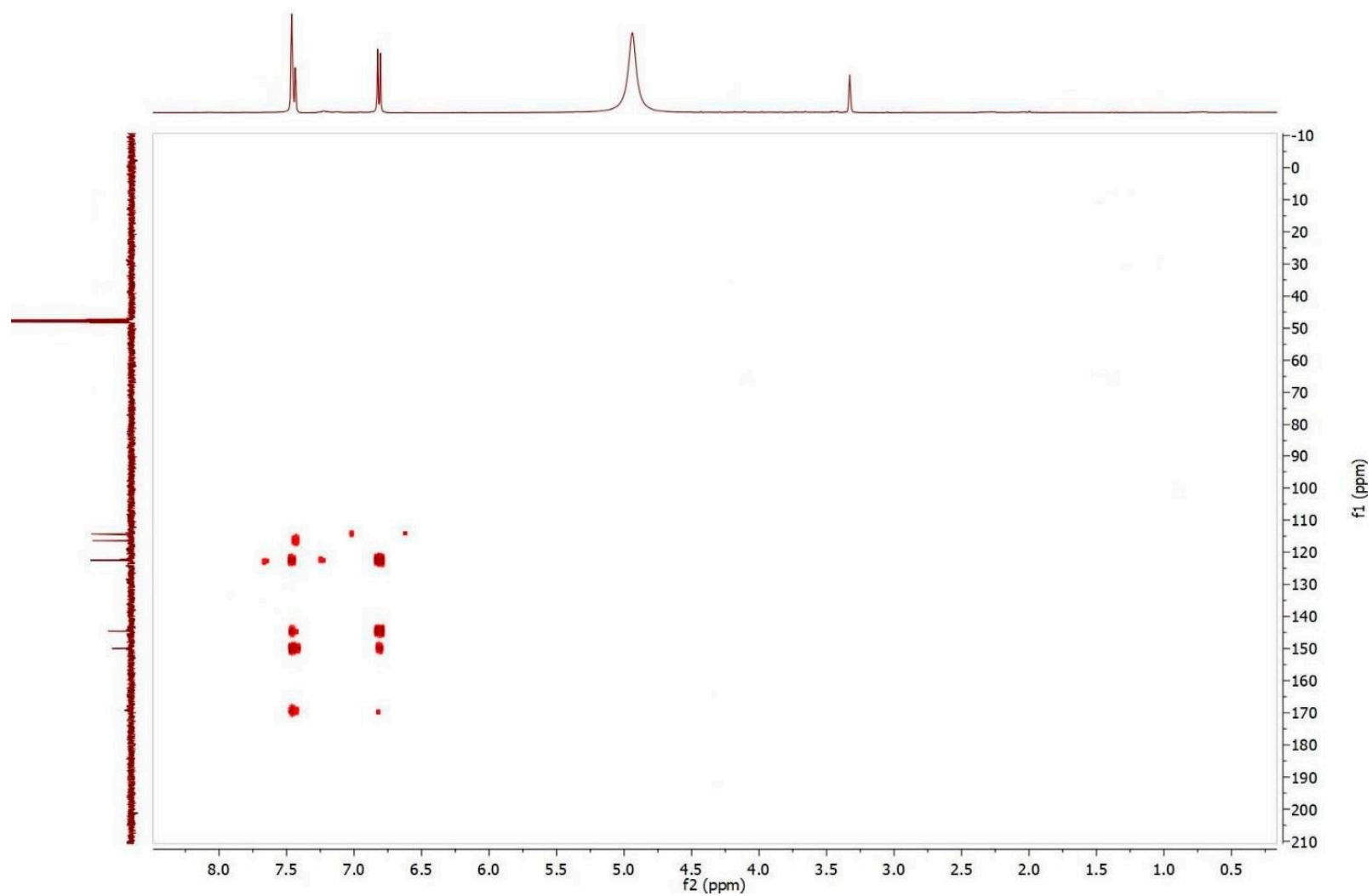


Figure S26:  $^{13}\text{C}$  NMR APT spectrum of compound (10) Protocatechuic acid.



**Figure S27:** HSBC NMR spectrum of compound **(10)** Protocatechuic acid.



**Figure S28:** HMBC NMR spectrum of compound (10) Protocatechuic acid.

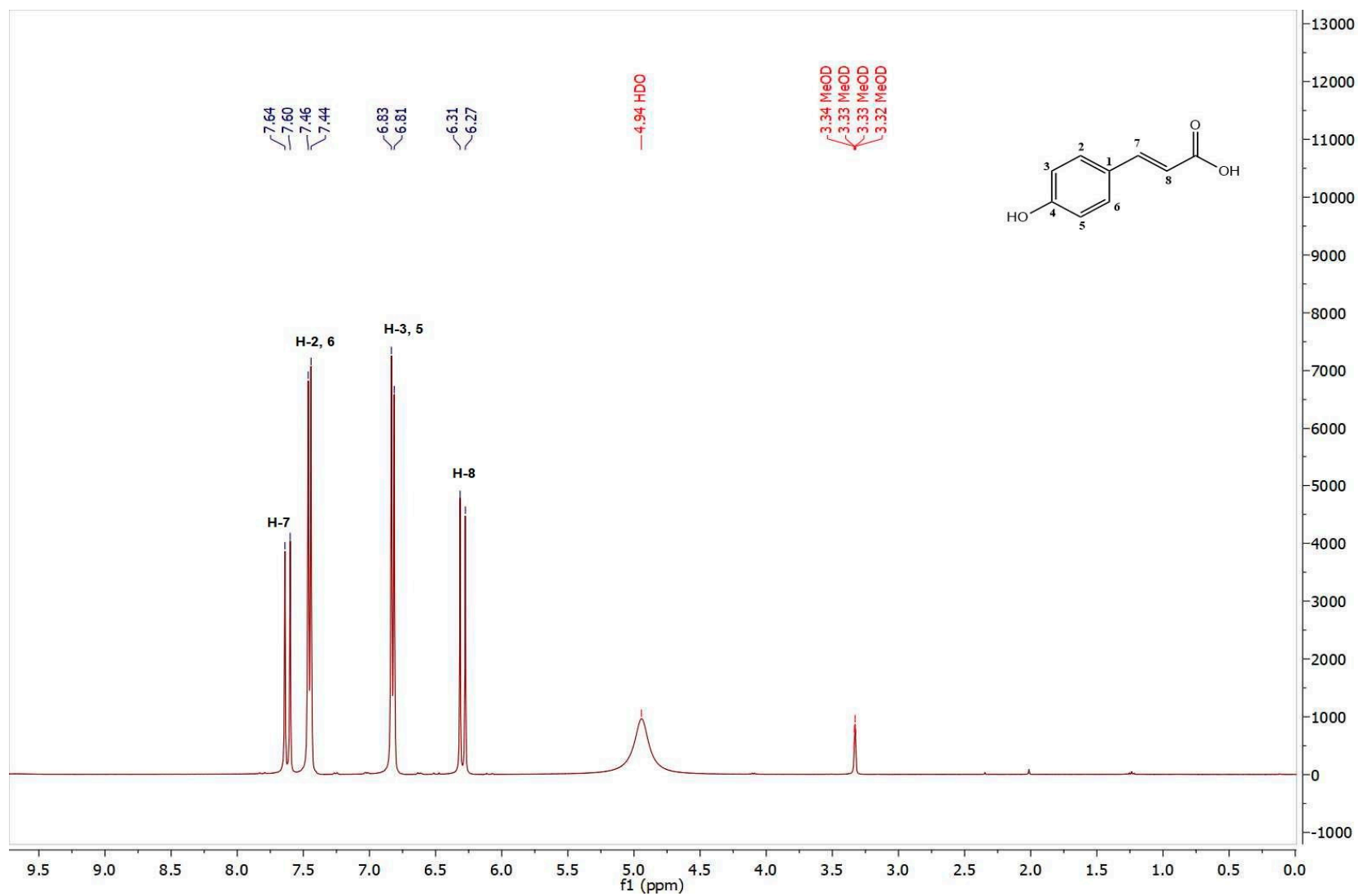


Figure S29:  $^1\text{H}$  NMR spectrum of compound (12) *p*-Coumaric acid.



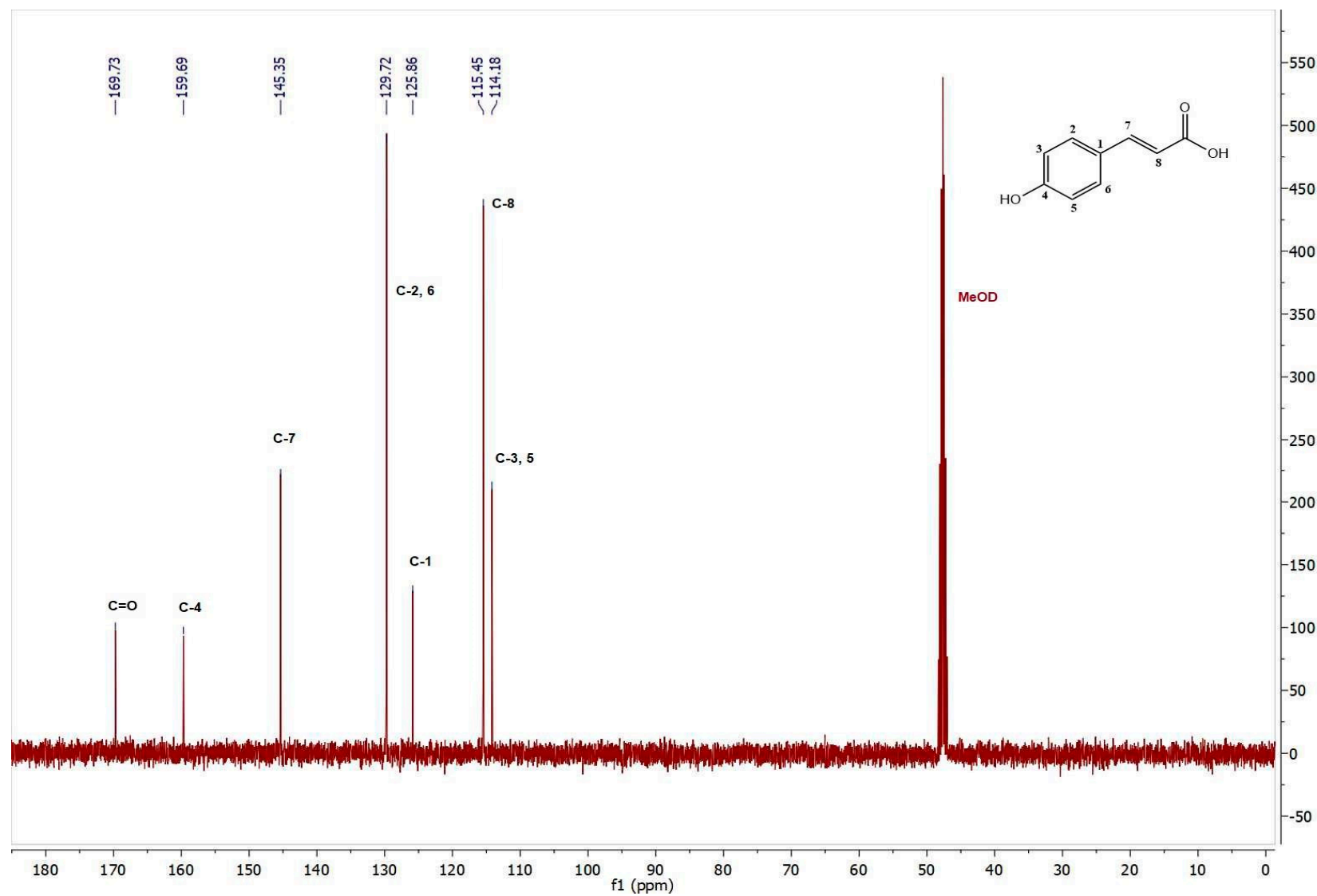


Figure S30: <sup>13</sup>C NMR spectrum of compound (12) *p*-Coumaric acid.

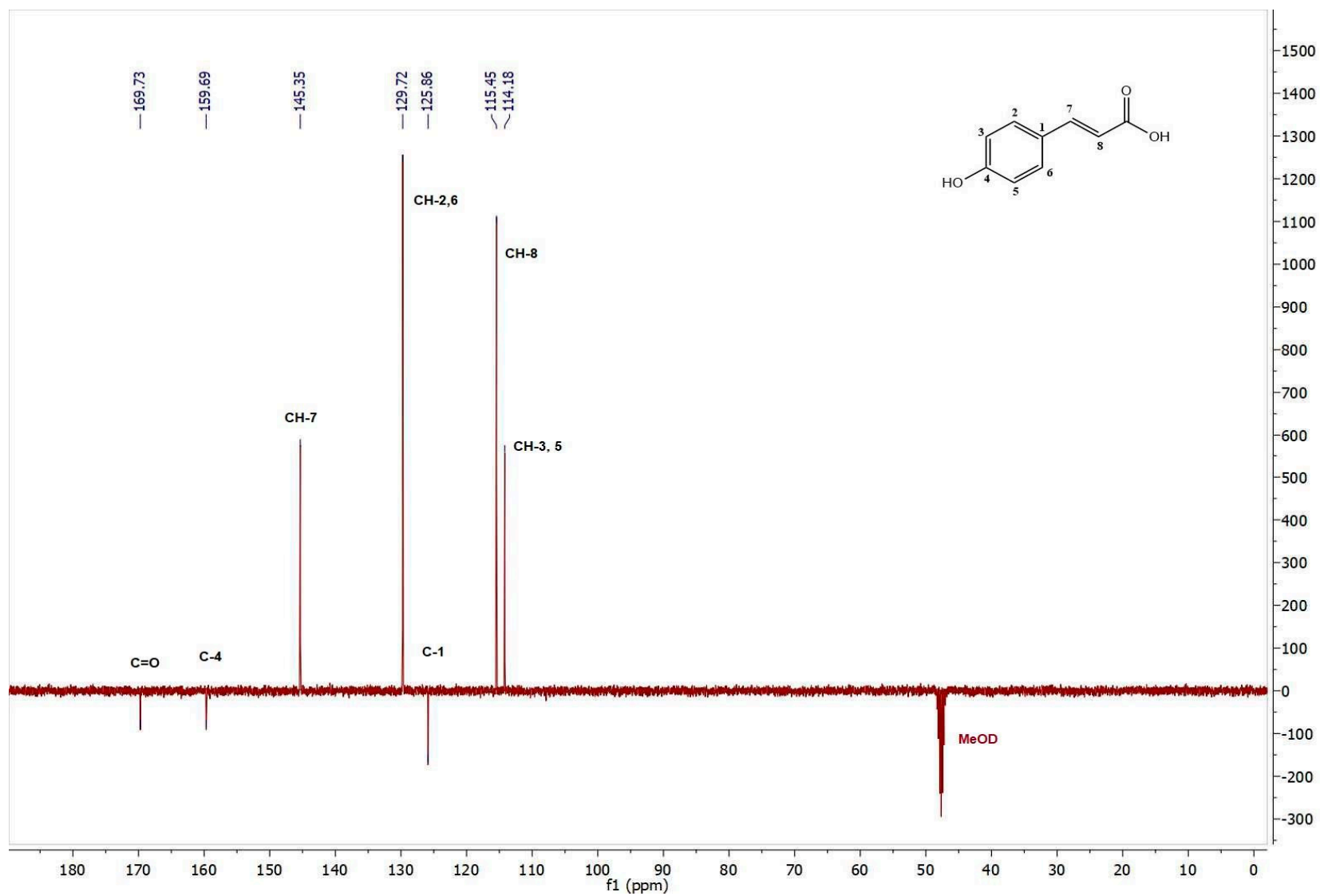


Figure S31:  $^{13}\text{C}$  APT NMR spectrum of compound (12) *p*-Coumaric acid.