

## Supplementary Information

**Figure S1.**  $^1\text{H}$  NMR spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

**Figure S2.**  $^{13}\text{C}$  NMR spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

**Figure S3.** HMBC spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

**Figure S4.** HMBC spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

**Figure S5.**  $^1\text{H}$  NMR spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

**Figure S6.**  $^{13}\text{C}$  NMR spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

**Figure S7.** HMQC spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

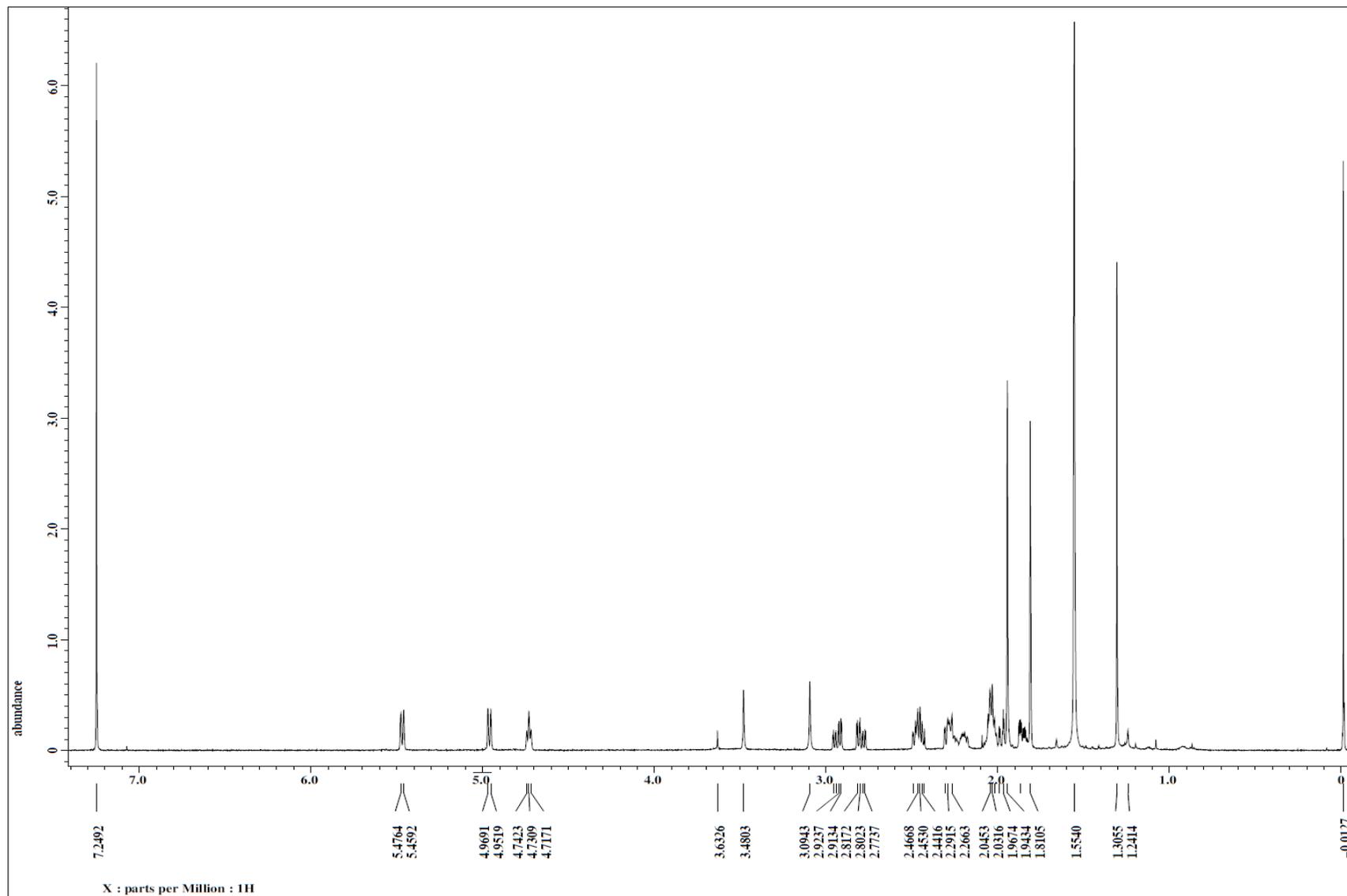
**Figure S8.** HMBC spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

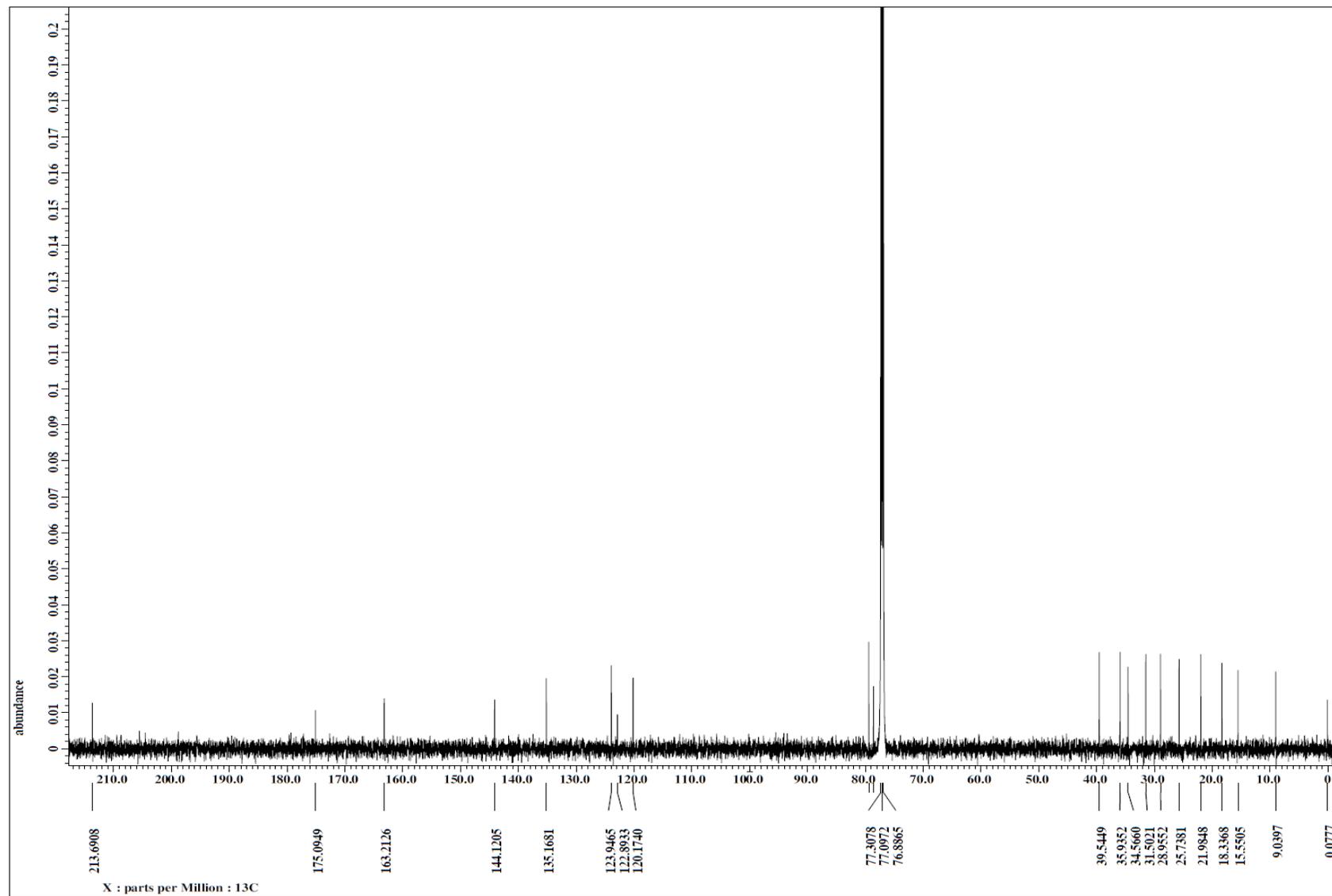
**Figure S9.**  $^1\text{H}$  NMR spectrum of (*E*)-Methyl-3-(5-butyl-1-hydroxy-2,3-dimethyl-4-oxocyclopent-2-enyl)acrylate (**3**) in  $\text{CDCl}_3$ .

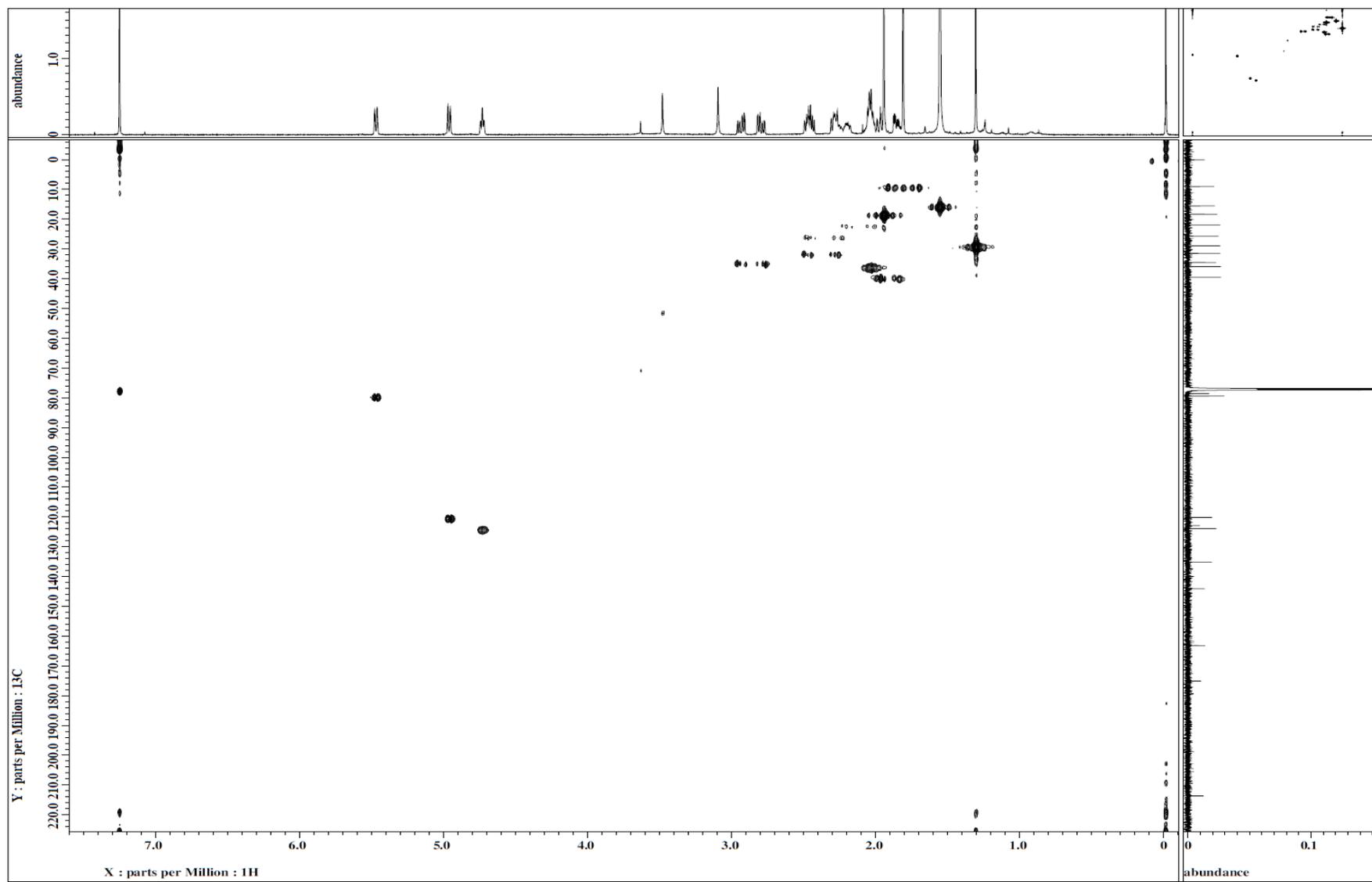
**Figure S10.**  $^{13}\text{C}$  NMR spectrum of (*E*)-Methyl-3-(5-butyl-1-hydroxy-2,3-dimethyl-4-oxocyclopent-2-enyl)acrylate (**3**) in  $\text{CDCl}_3$ .

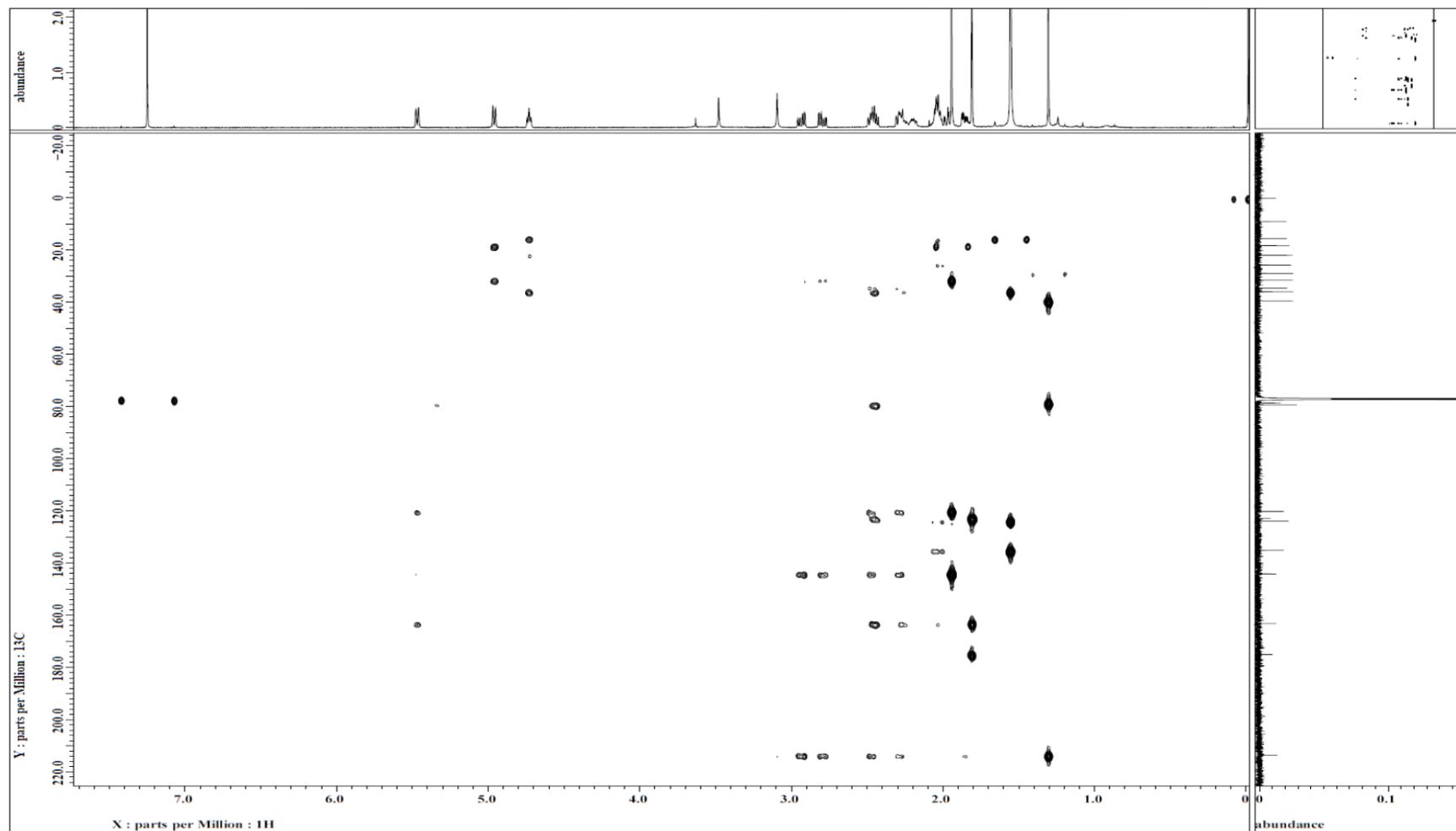
**Figure S11.** HMQC spectrum of (*E*)-Methyl-3-(5-butyl-1-hydroxy-2,3-dimethyl-4-oxocyclopent-2-enyl)acrylate (**3**) in  $\text{CDCl}_3$ .

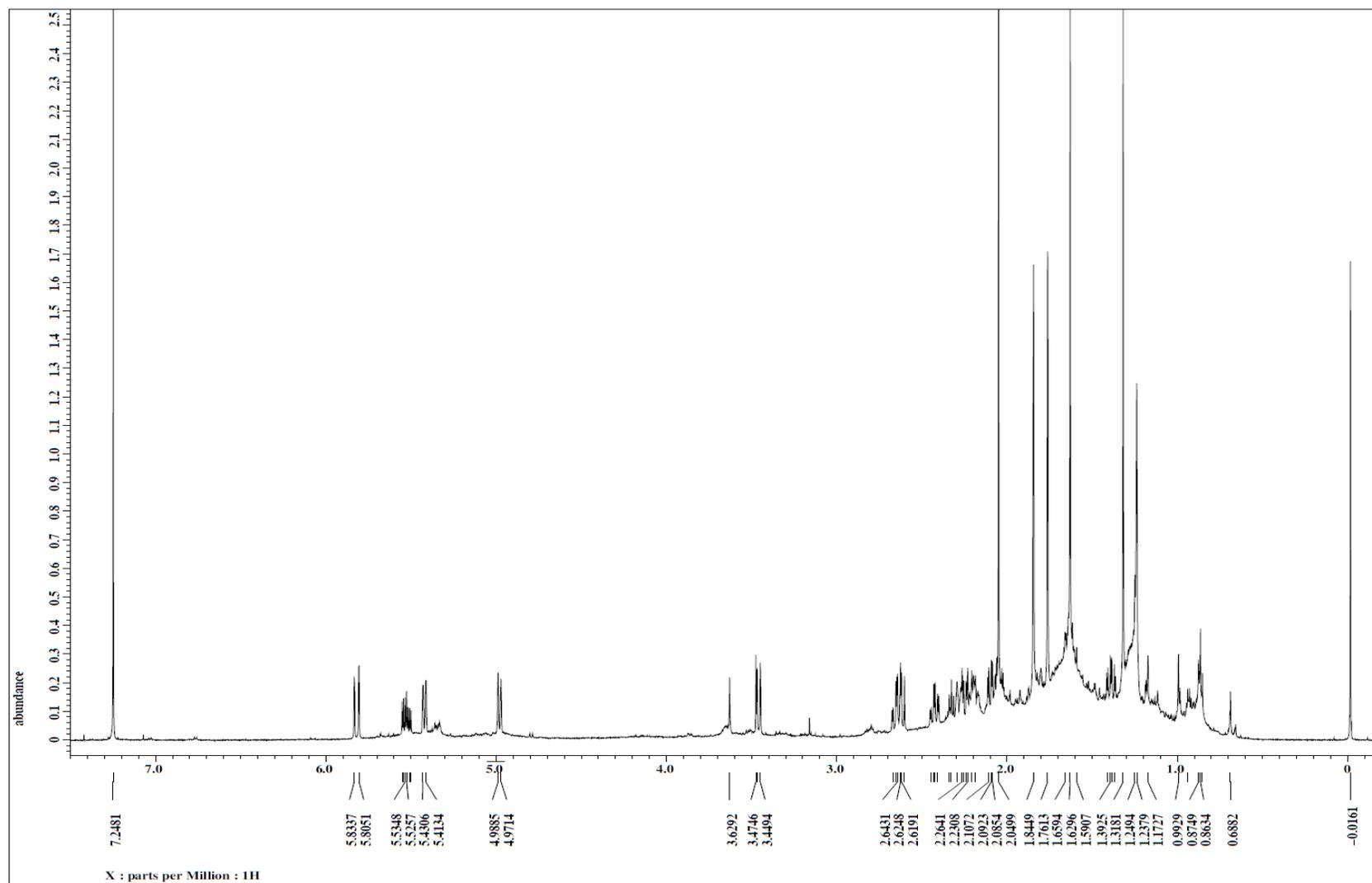
**Figure S12.** HMBC spectrum of (*E*)-Methyl-3-(5-butyl-1-hydroxy-2,3-dimethyl-4-oxocyclopent-2-enyl)acrylate (**3**) in  $\text{CDCl}_3$ .

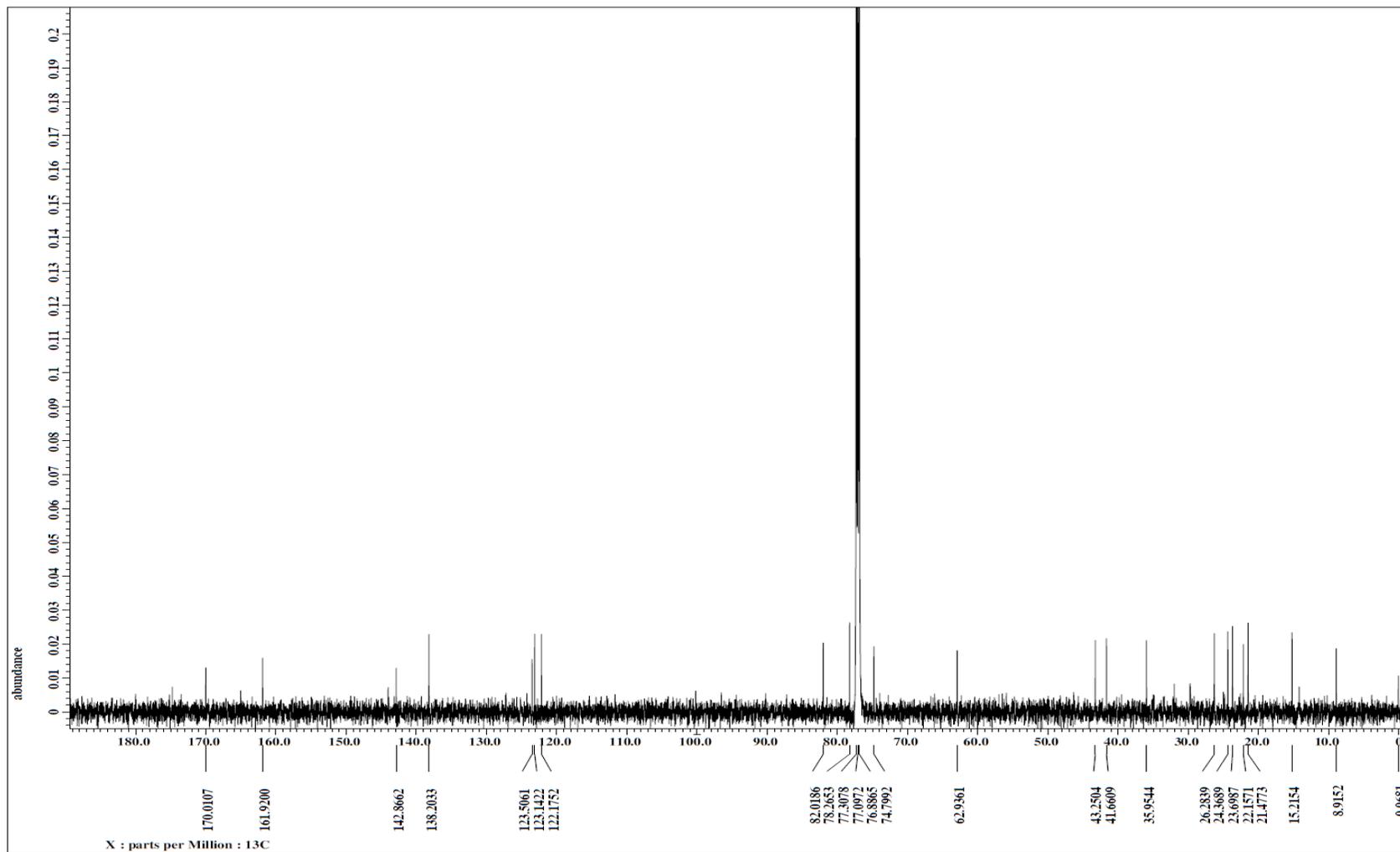
**Figure S1.**  $^1\text{H}$  NMR spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

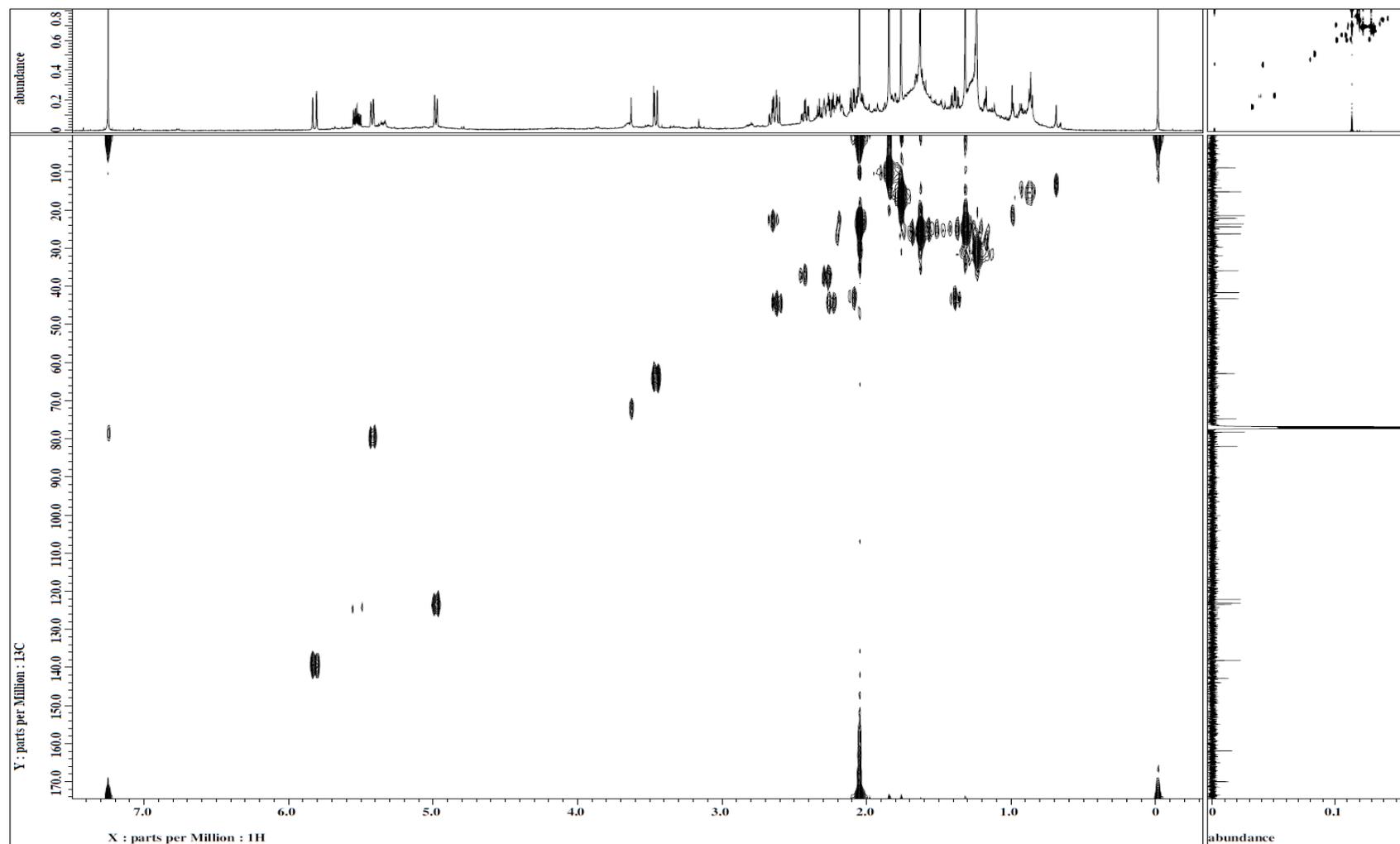
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of 7 Keto, 8 hydroxy sarcophine (1) in  $\text{CDCl}_3$ .

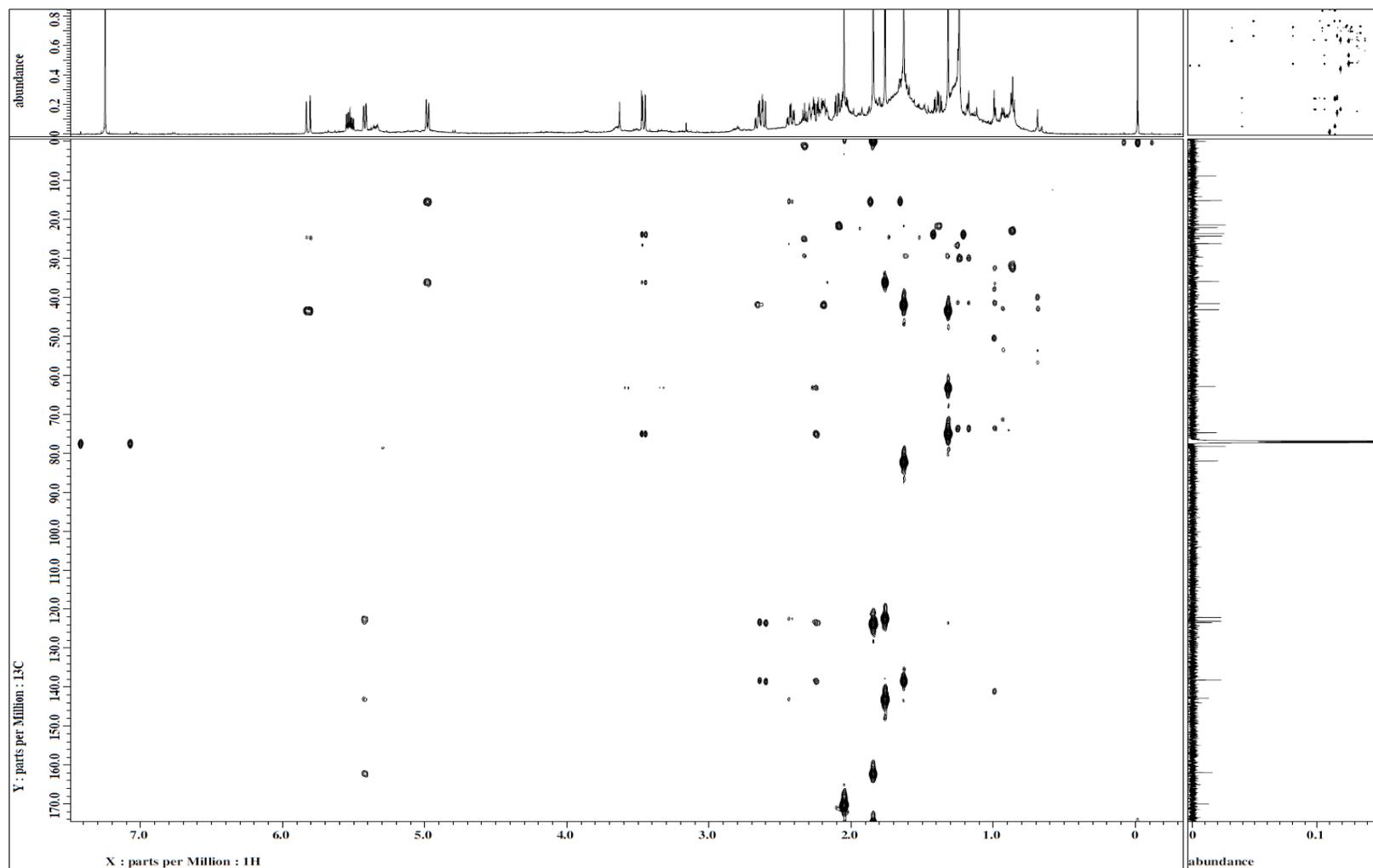
**Figure S3.** HMQC spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in  $\text{CDCl}_3$ .

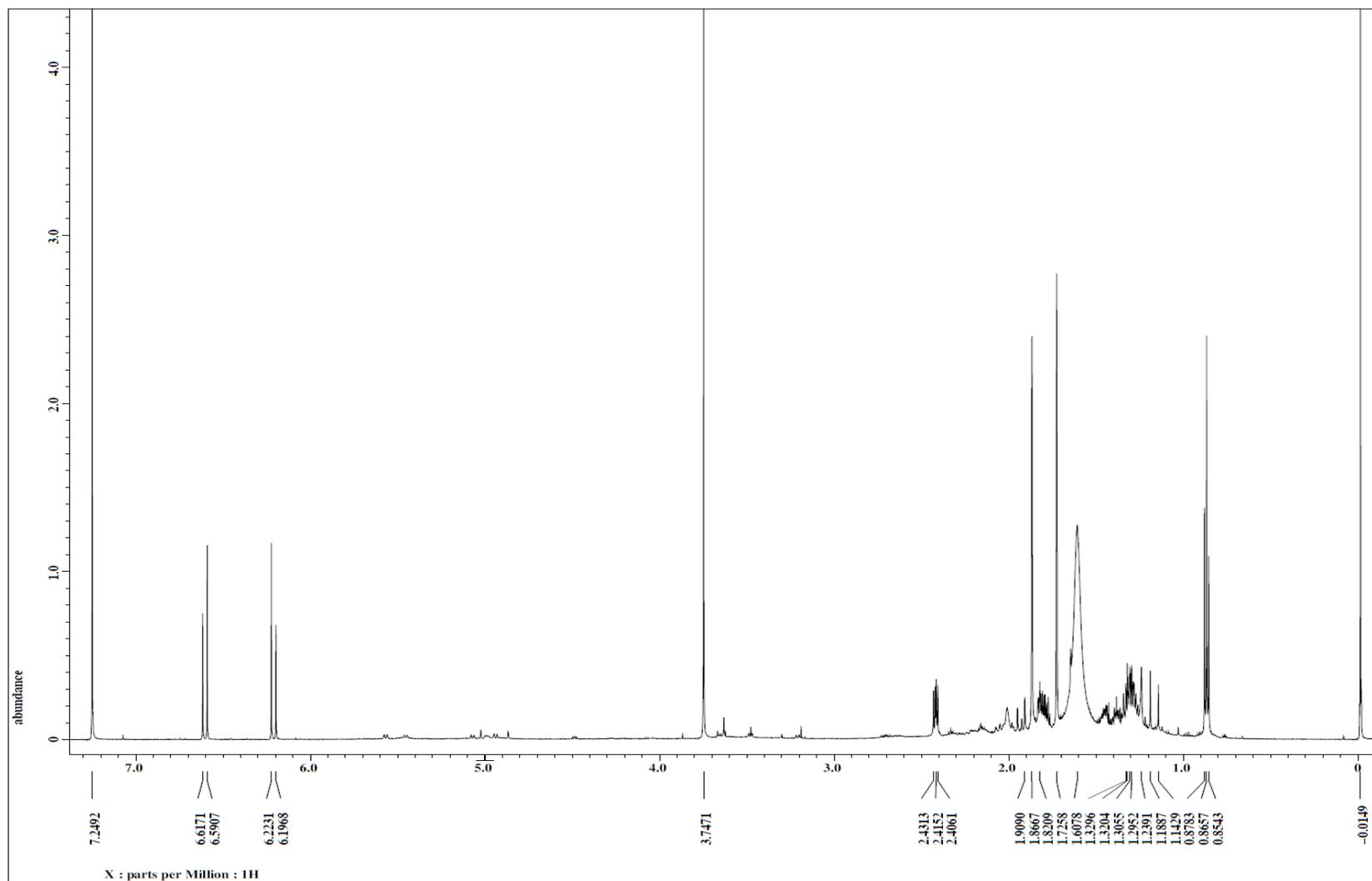
**Figure S4.** HMBC spectrum of 7 Keto, 8 hydroxy sarcophine (**1**) in CDCl<sub>3</sub>.

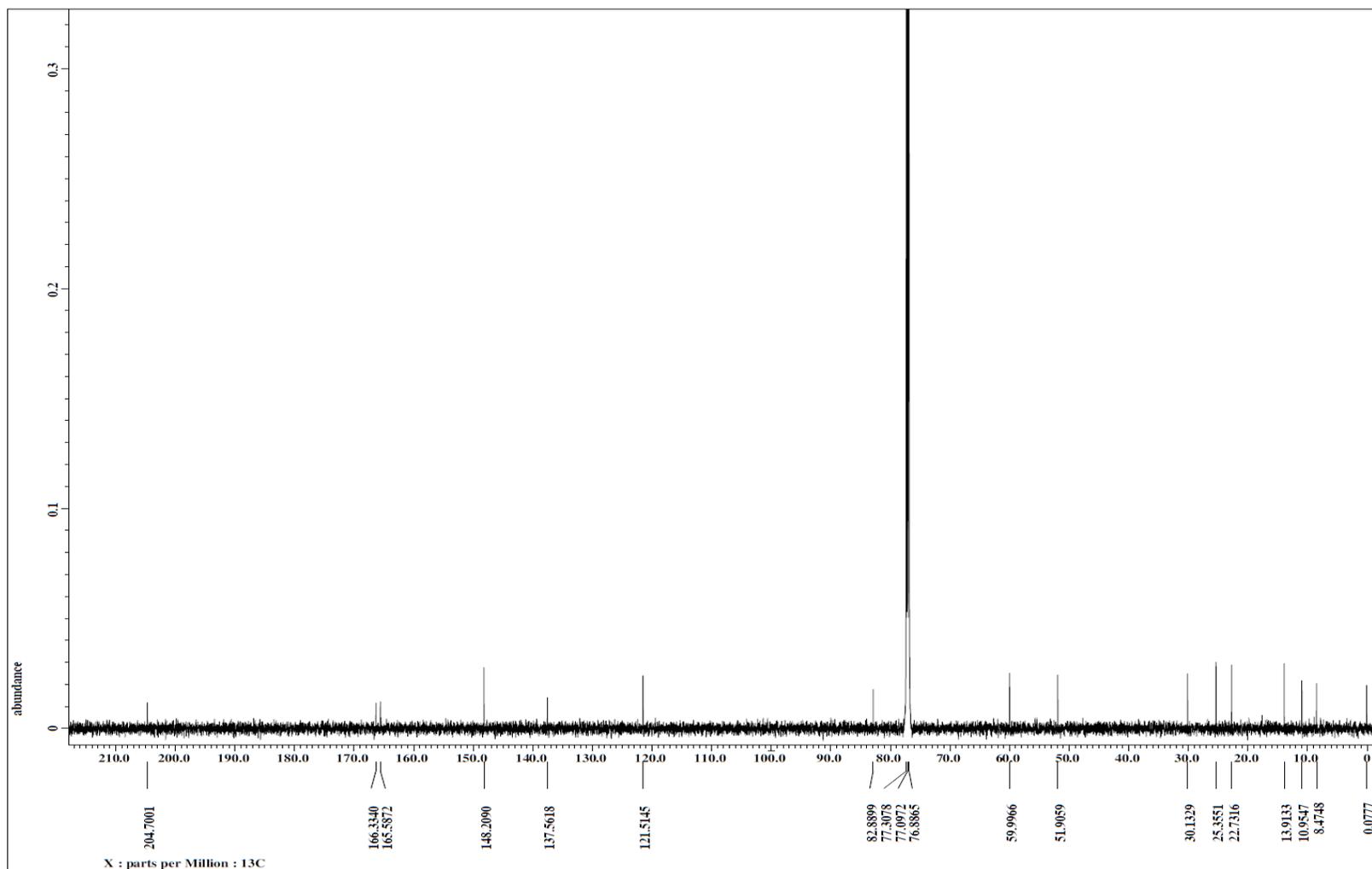
**Figure S5.**  $^1\text{H}$  NMR spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

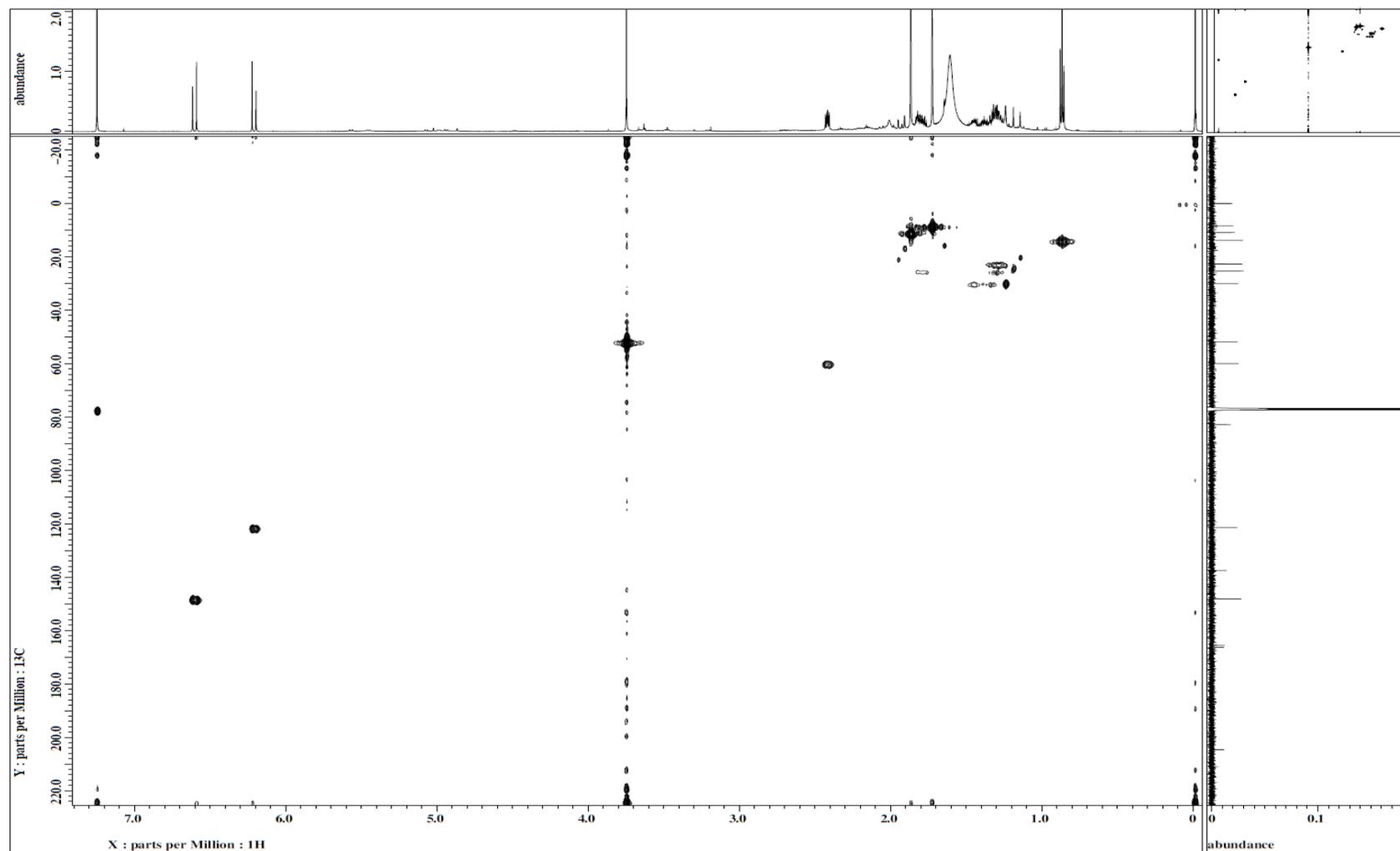
**Figure S6.**  $^{13}\text{C}$  NMR spectrum of  $7\beta$ -Chloro- $8\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in  $\text{CDCl}_3$ .

**Figure S7.** HMQC spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in CDCl<sub>3</sub>.

**Figure S8.** HMBC spectrum of 7 $\beta$ -Chloro-8 $\alpha$ -hydroxy-12-acetoxy-deepoxysarcophine (**2**) in CDCl<sub>3</sub>.

**Figure S9.**  $^1\text{H}$  NMR spectrum of (*E*)-Methyl-3-(5-butyl-1-hydroxy-2,3-dimethyl-4-oxocyclopent-2-enyl)acrylate (**3**) in  $\text{CDCl}_3$ .

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