

## Supporting Information

### **DNA Methyl Transferase Inhibiting Halogenated Monoterpenes from the Madagascar Red Marine Alga *Portieria hornemannii***

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#### **Spectral Data for Compound (2) in CDCl<sub>3</sub>**

**Figure S1.** 400 MHz <sup>1</sup>H NMR spectrum of compound (2) in CDCl<sub>3</sub>

**Figure S2.** 100 MHz <sup>13</sup>C NMR spectrum of compound (2) in CDCl<sub>3</sub>

**Figure S3.** 400 MHz <sup>1</sup>H-<sup>1</sup>H COSY spectrum of compound (2) in CDCl<sub>3</sub>

**Figure S4.** 400 MHz Multi-edited HSQC spectrum of compound (2) in CDCl<sub>3</sub>

**Figure S5.** 400 MHz HMBC spectrum (optimized for *J* = 8 Hz) of compound (2) in CDCl<sub>3</sub>

**Figure S6.** 400 MHz 1D NOE spectrum (irradiation of proton 6.25 ppm) of compound (2) in CDCl<sub>3</sub>

**Figure S7.** 400 MHz 1D NOE spectrum (irradiation of proton 2.62 ppm) of compound (2) in CDCl<sub>3</sub>

**Figure S8.** 400 MHz 1D NOE spectrum (irradiation of proton 5.68 ppm) of compound (2) in CDCl<sub>3</sub>

**Figure S9.** 400 MHz 1D NOE spectrum (irradiation of proton 5.48 ppm) of compound (2) in CDCl<sub>3</sub>

**Figure S10.** LRCI MS spectrum of compound (2)

### **Spectral Data for Compound (3) in CDCl<sub>3</sub>**

**Figure S11** 400 MHz <sup>1</sup>H NMR spectrum and 100 MHz <sup>13</sup>C spectrum of compound (3) in CDCl<sub>3</sub>

**Figure S12** 400 MHz <sup>1</sup>H-<sup>1</sup>H COSY spectrum of compound (3) in CDCl<sub>3</sub>

**Figure S13** 400 MHz Multi-edited HSQC spectrum of compound (3) in CDCl<sub>3</sub>

**Figure S14** 400 MHz HMBC spectrum (optimized for *J* = 8Hz ) of compound (3) in CDCl<sub>3</sub>

**Figure S15** 400 MHz 1D NOE spectrum (irradiation of proton 6.35 ppm) of compound (3) in CDCl<sub>3</sub>

**Figure S16** 400 MHz 1D NOE spectrum (irradiation of proton 5.69 ppm) of compound (3) in CDCl<sub>3</sub>

**Figure S17** 400 MHz 1D NOE spectrum (irradiation of proton 5.49 ppm) of compound (3) in CDCl<sub>3</sub>

**Figure S18** GC/MS spectrum of compound (3)

### **Spectral Data for Compound (4) in CDCl<sub>3</sub>**

**Figure S19** 400 MHz <sup>1</sup>H NMR spectrum of compound (4) in CDCl<sub>3</sub>

**Figure S20** 400 MHz <sup>1</sup>H-<sup>1</sup>H COSY spectrum of compound (4) in CDCl<sub>3</sub>

**Figure S21** 400 MHz HSQC spectrum of compound (4) in CDCl<sub>3</sub> (partial view of the signal belonging to the two methyl groups)

**Figure S22** 400 MHz HSQC spectrum of compound (4) in CDCl<sub>3</sub> (partial view of the signal belonging to the proton doublets at 5.53 and 5.70 ppm)

**Figure S23** 400 MHz HSQC spectrum of compound (4) in CDCl<sub>3</sub> (partial view of the signal belonging to the proton at 6.97 ppm)

**Figure S24** 400 MHz HMBC spectrum of compound (4) in CDCl<sub>3</sub> (observed signal from the two methyl groups)

**Figure S25** 400 MHz HMBC spectrum of compound (4) in CDCl<sub>3</sub> (observed signal from the proton doublets at 5.53 and 5.70 ppm)

**Figure S26** GC/MS spectrum of compound (4)

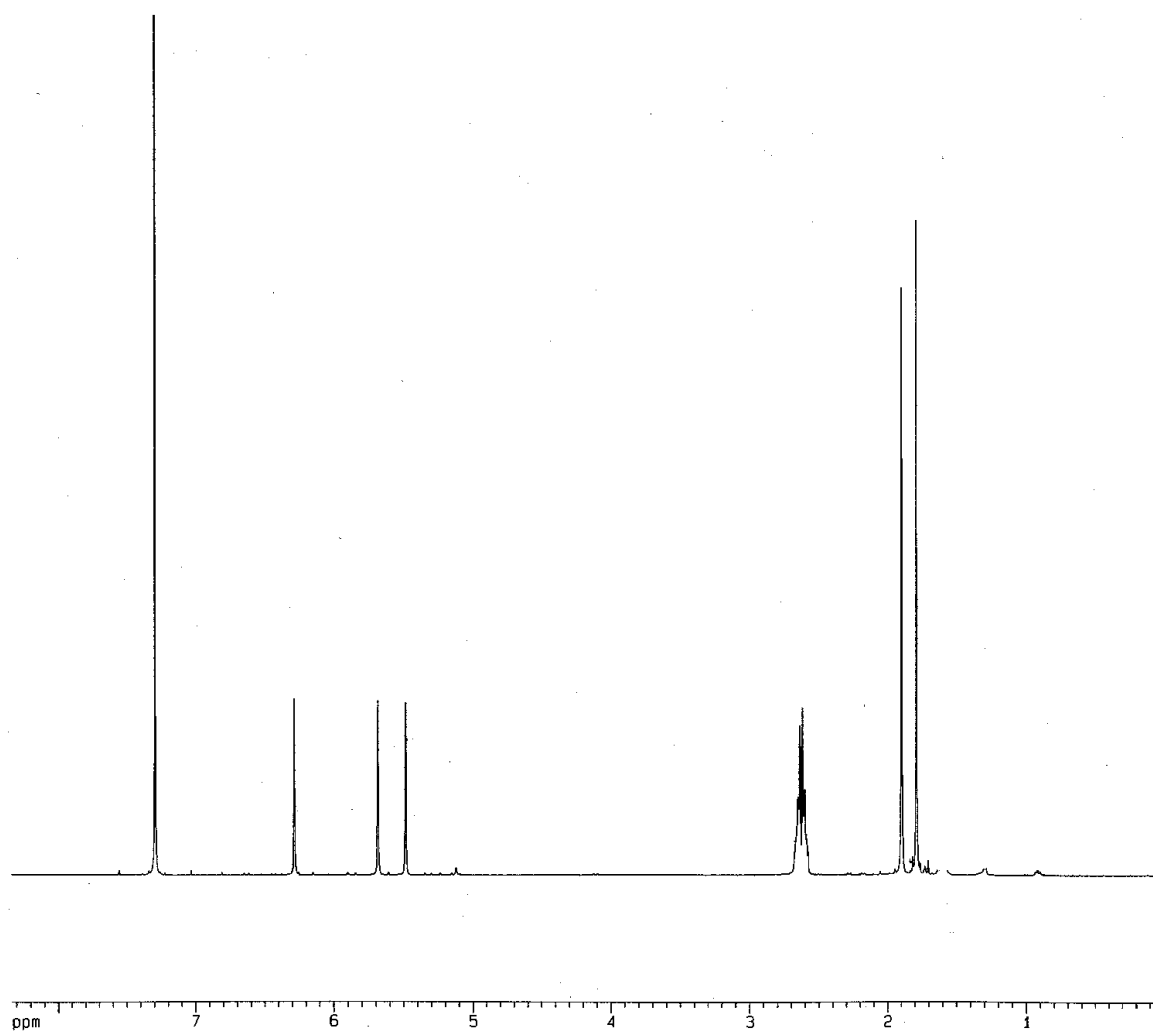
**Figure S27** LRCI MS spectrum of compound (4)

### **Data on Algal Sample and Collection Site**

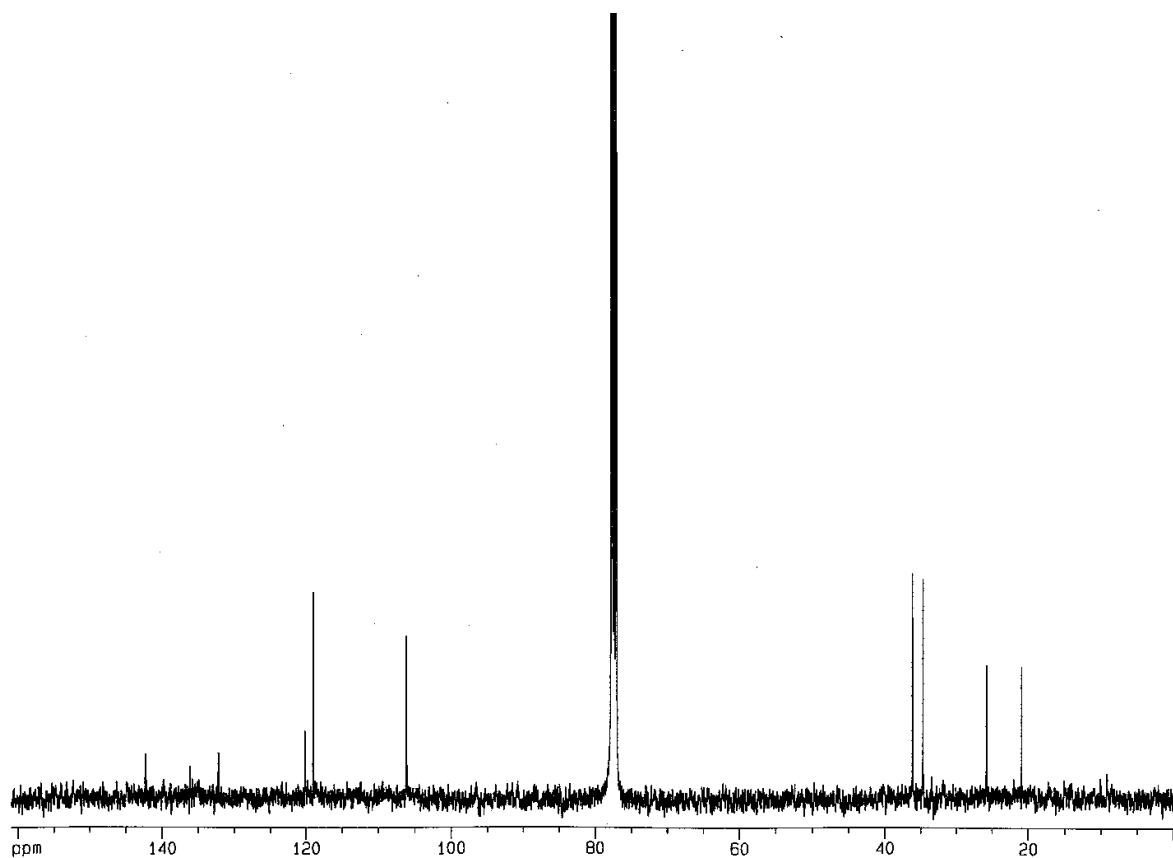
**Figure S28** Photo of the voucher sample

**Figure S29** Photo of the collection site

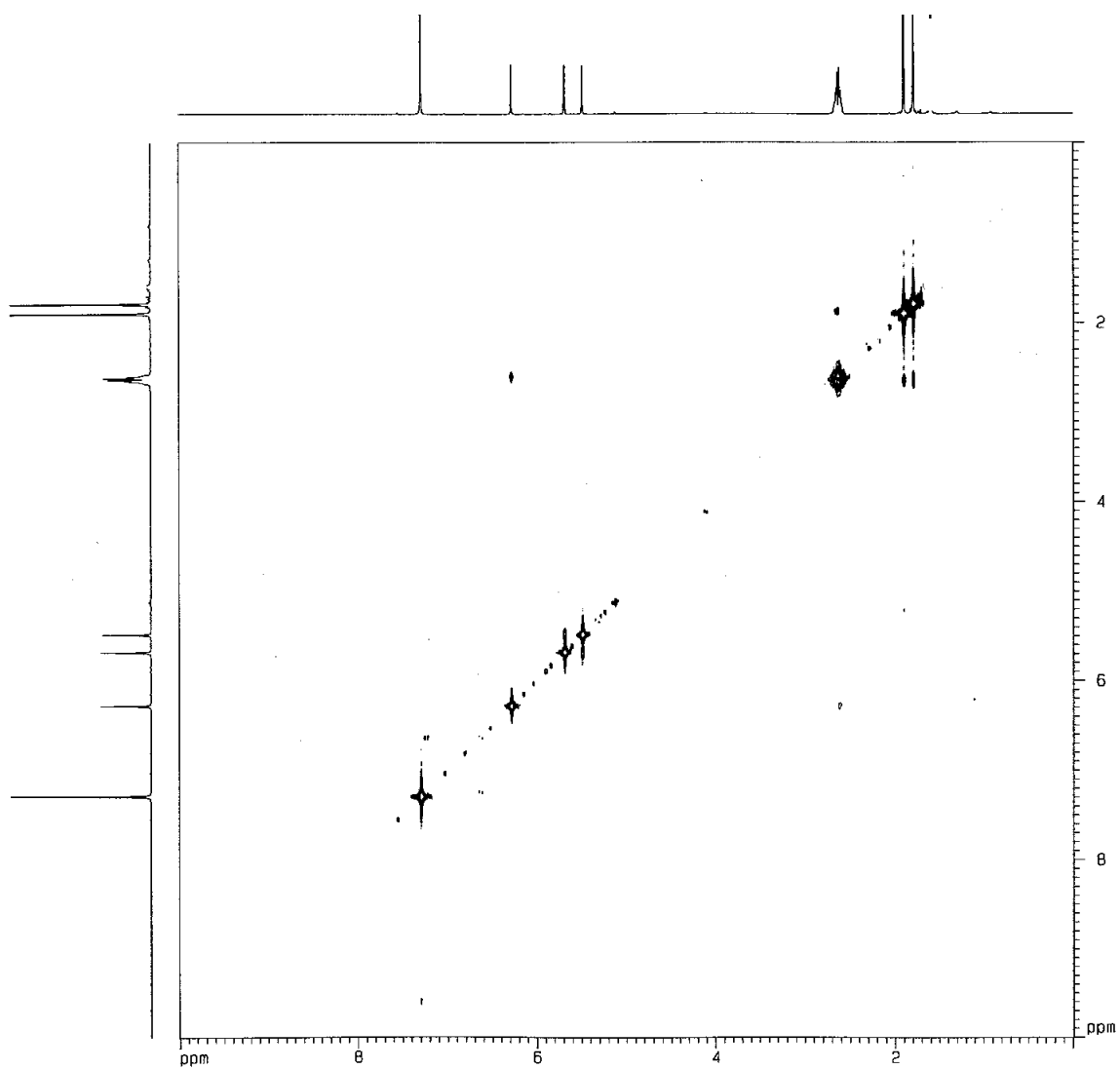
**Figure S1.** 400 MHz  $^1\text{H}$  NMR spectrum of compound (**2**) in  $\text{CDCl}_3$



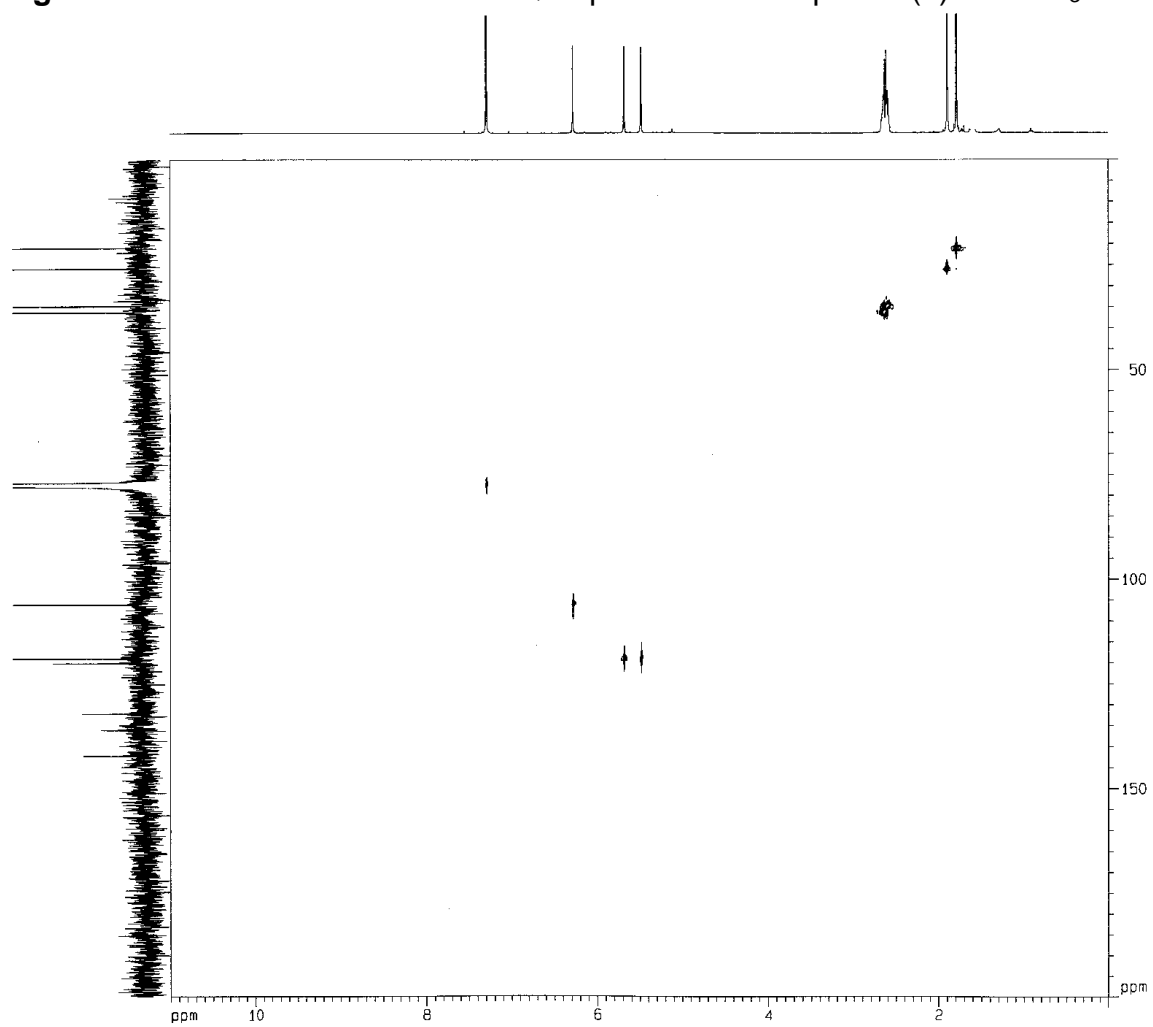
**Figure S2.** 100 MHz  $^{13}\text{C}$  NMR spectrum of compound (**2**) in  $\text{CDCl}_3$



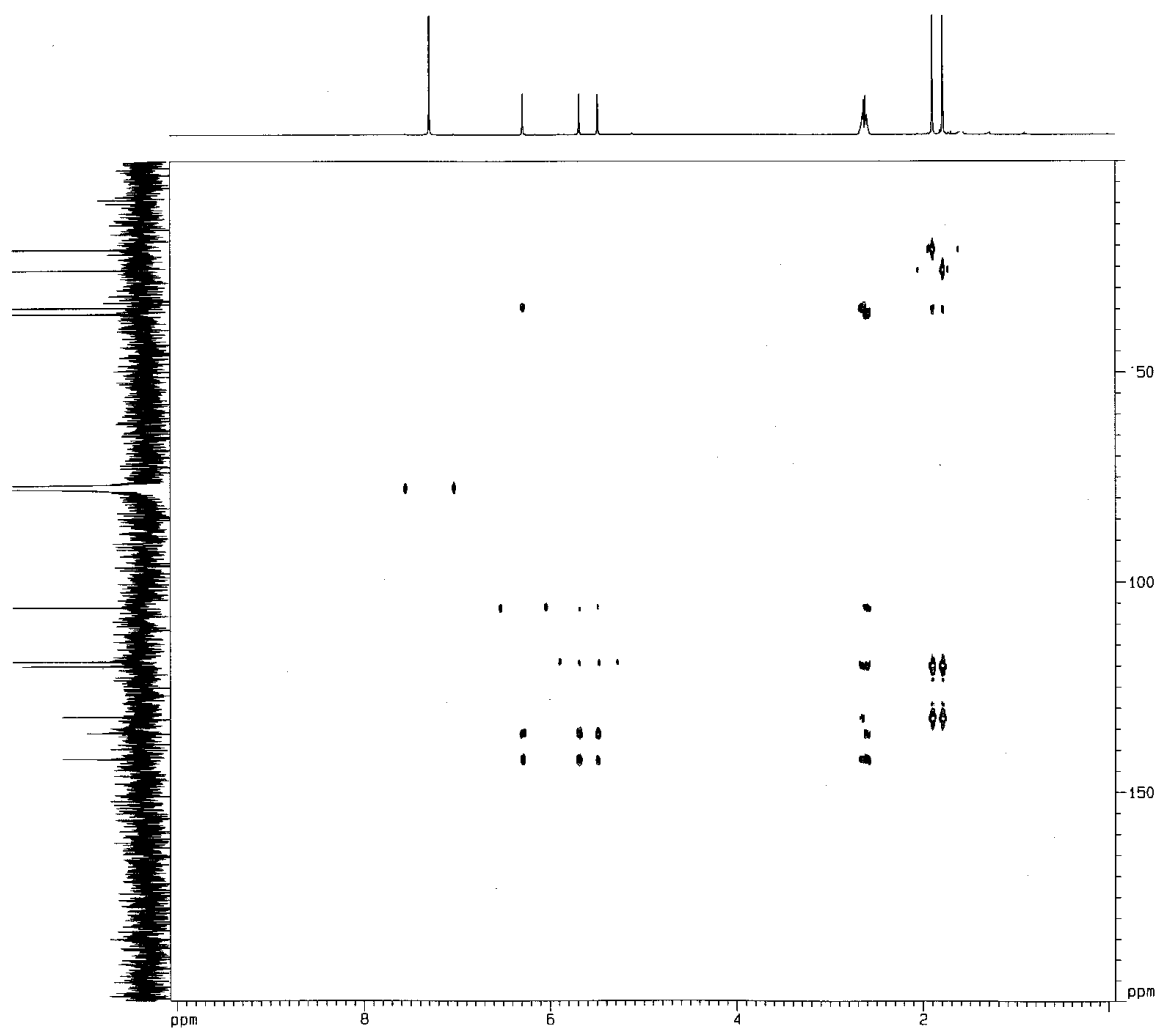
**Figure S3.** 400 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound (**2**) in  $\text{CDCl}_3$



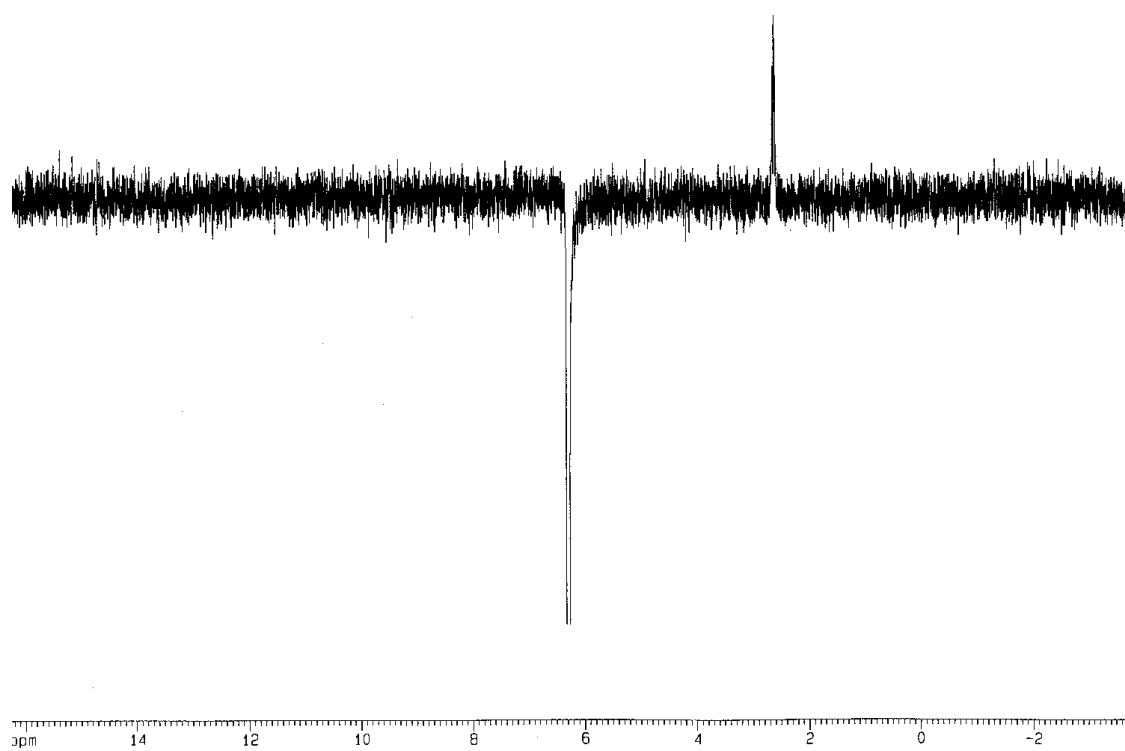
**Figure S4** 400 MHz Multi-edited HSQC spectrum of compound (**2**) in CDCl<sub>3</sub>



**Figure S5** 400 MHz HMBC spectrum (optimized for  $J = 8\text{Hz}$  ) of compound (**2**) in  $\text{CDCl}_3$

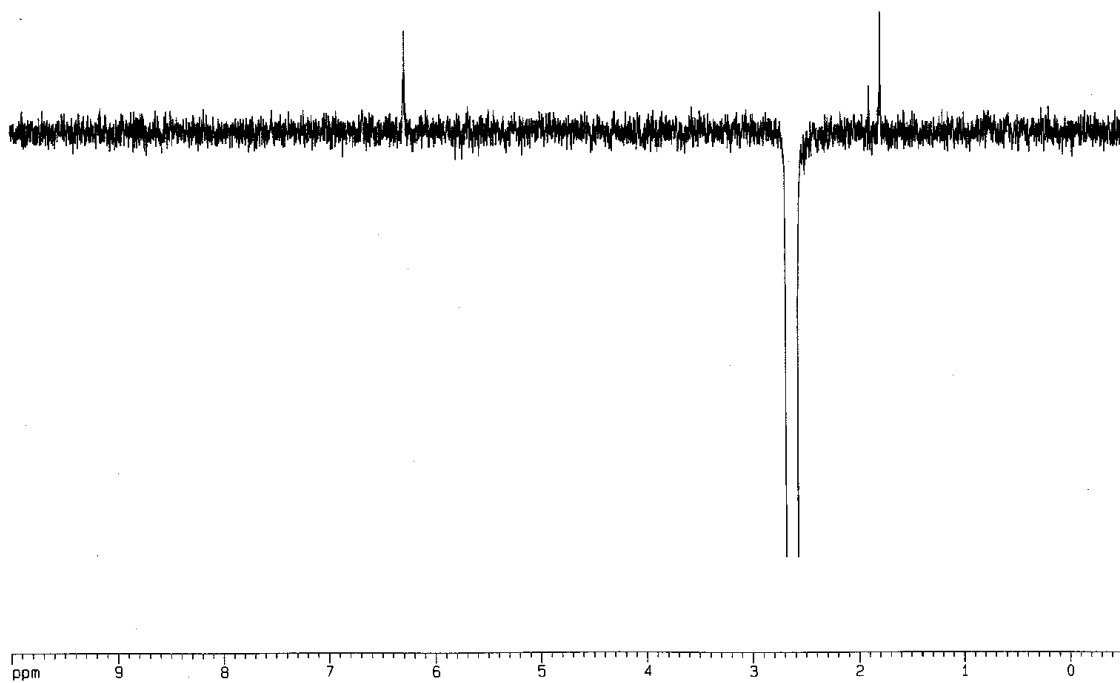


**Figure S6** 400 MHz 1D NOE spectrum (irradiation of proton 6.25 ppm) of compound (**2**) in CDCl<sub>3</sub>

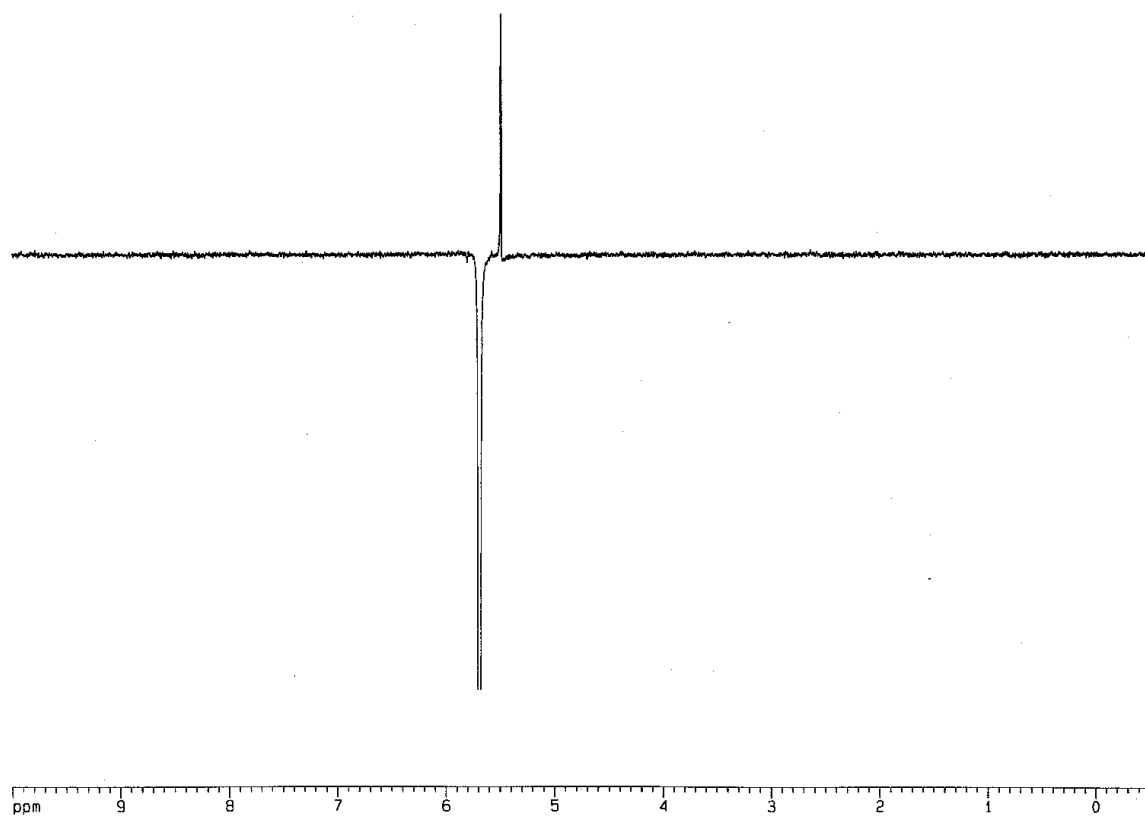




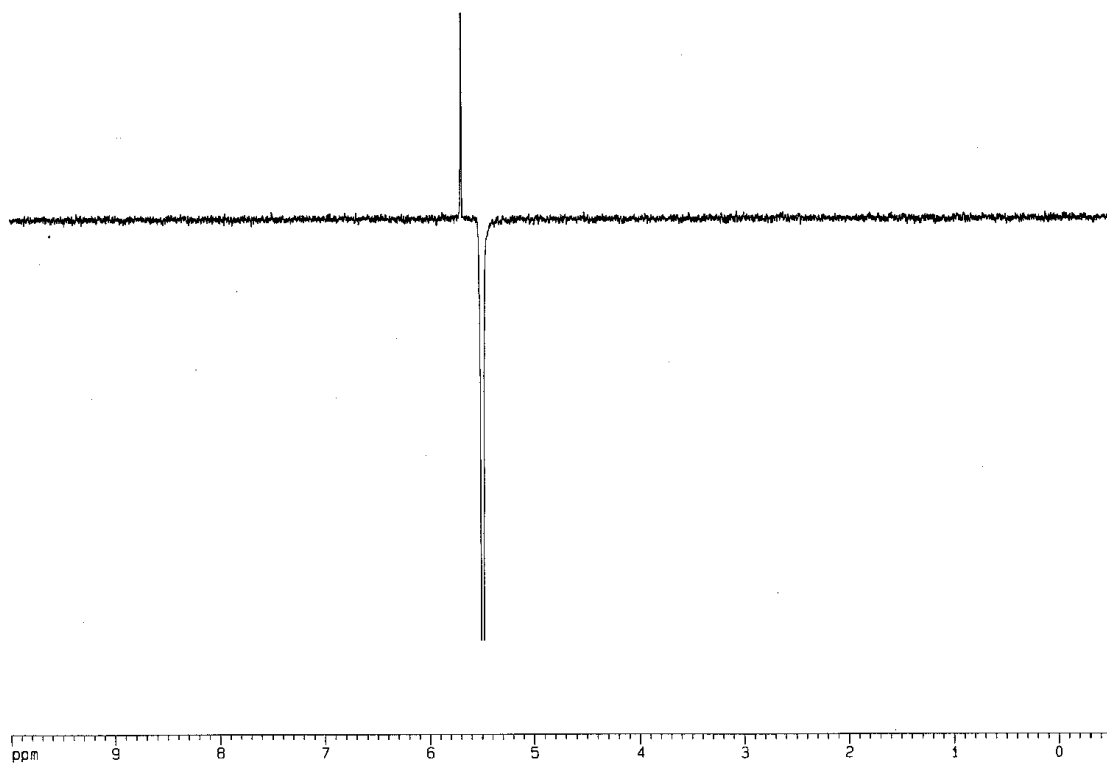
**Figure S7** 400 MHz 1D NOE spectrum (irradiation of proton 2.62 ppm) of compound (**2**) in CDCl<sub>3</sub>



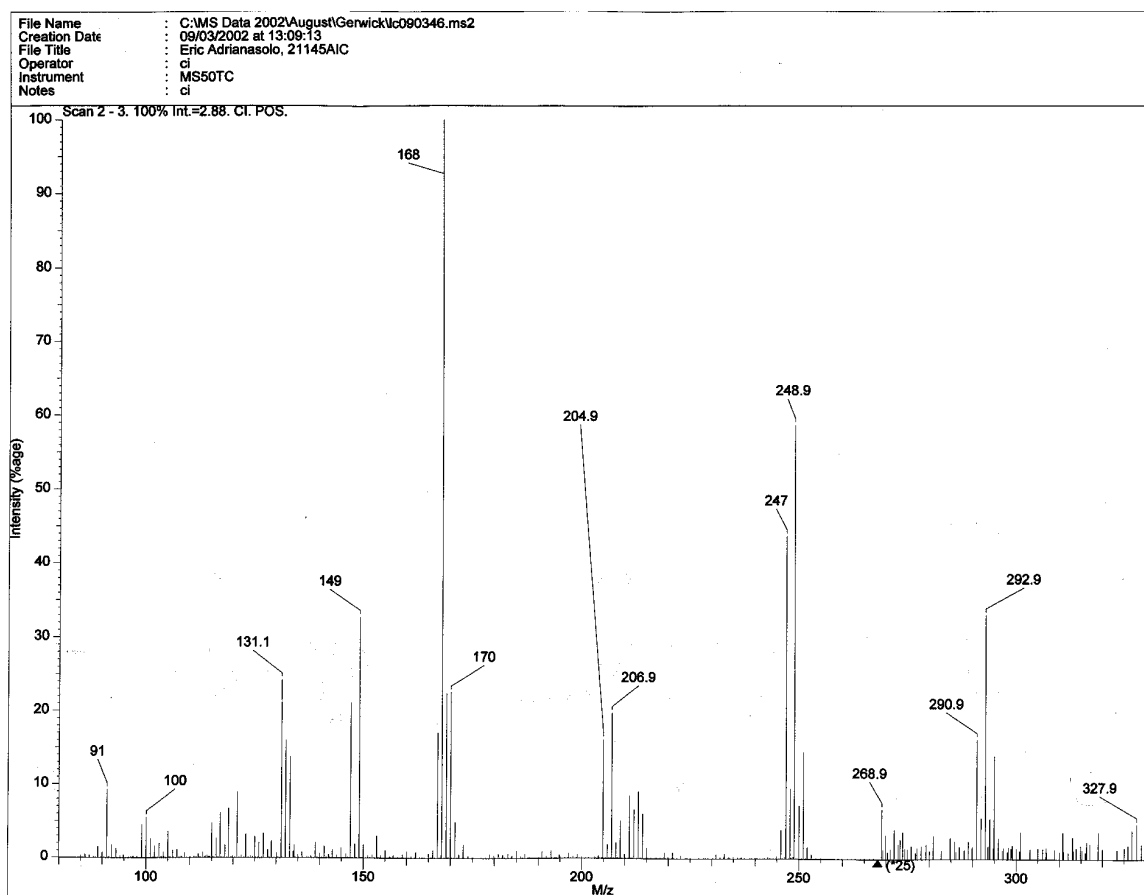
**Figure S8** 400 MHz 1D NOE spectrum (irradiation of proton 5.68 ppm) of compound (**2**) in CDCl<sub>3</sub>



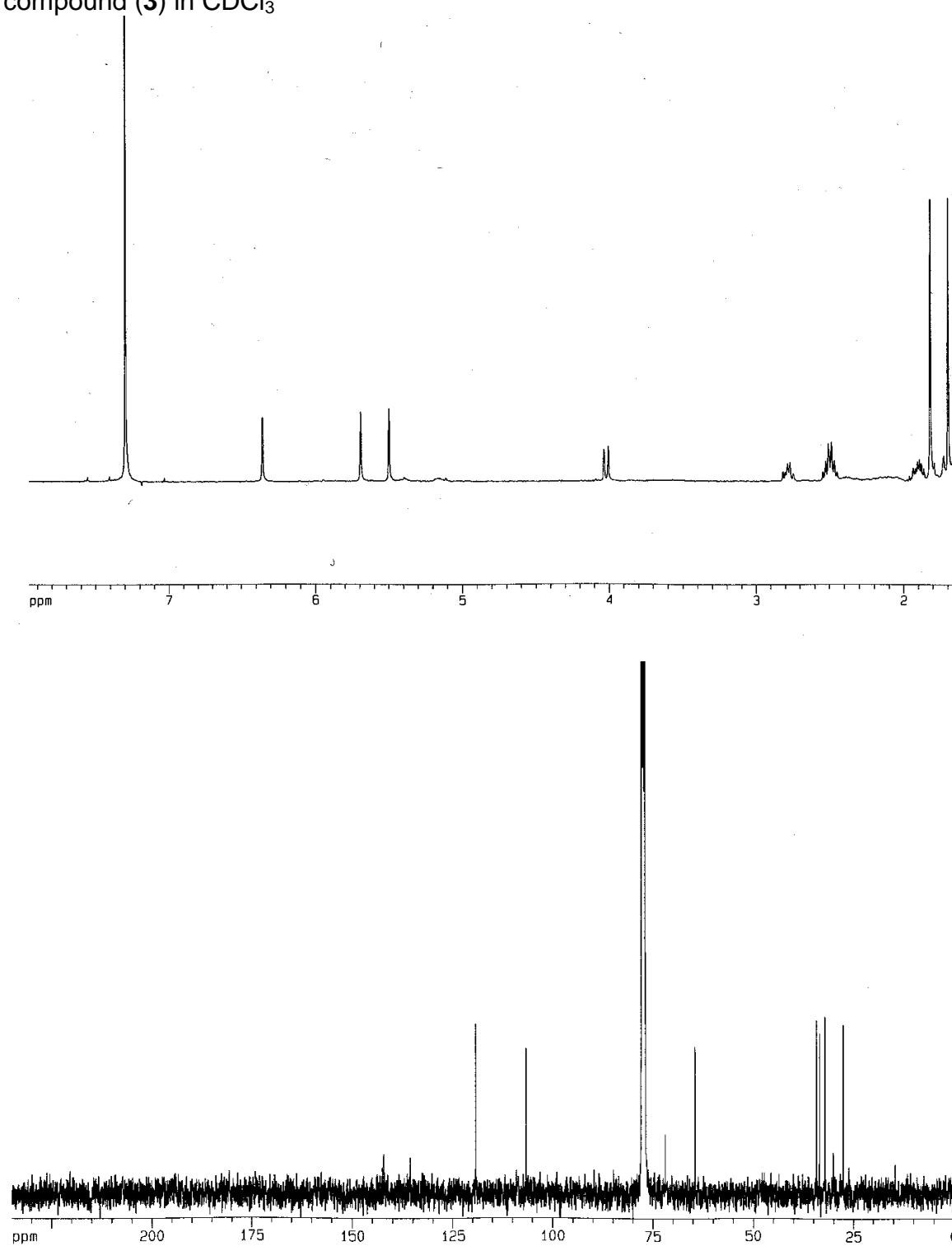
**Figure S9** 400 MHz 1D NOE spectrum (irradiation of proton 5.48 ppm) of compound (**2**) in CDCl<sub>3</sub>



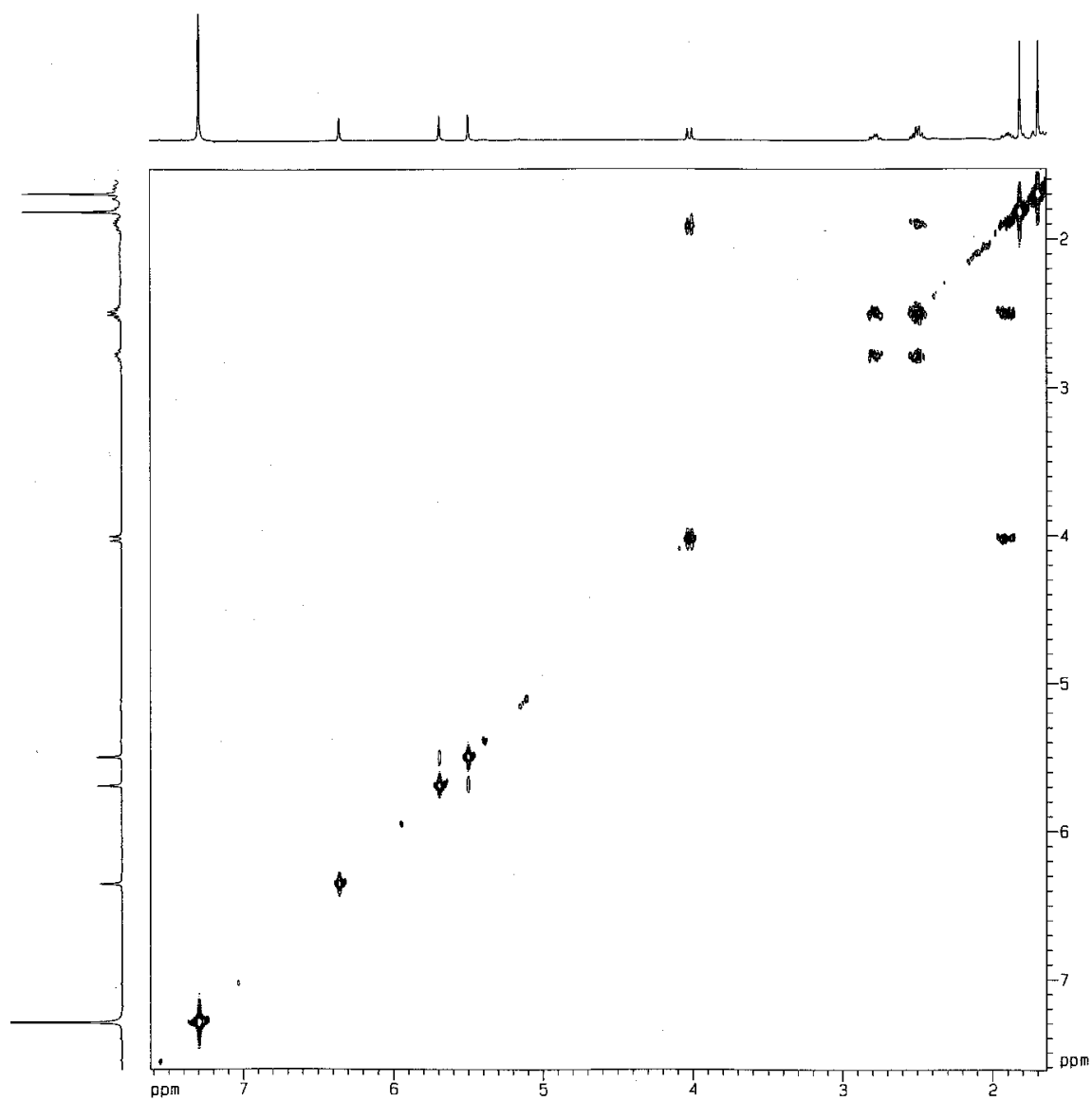
**Figure S10** LRCI MS spectrum of compound (**2**)



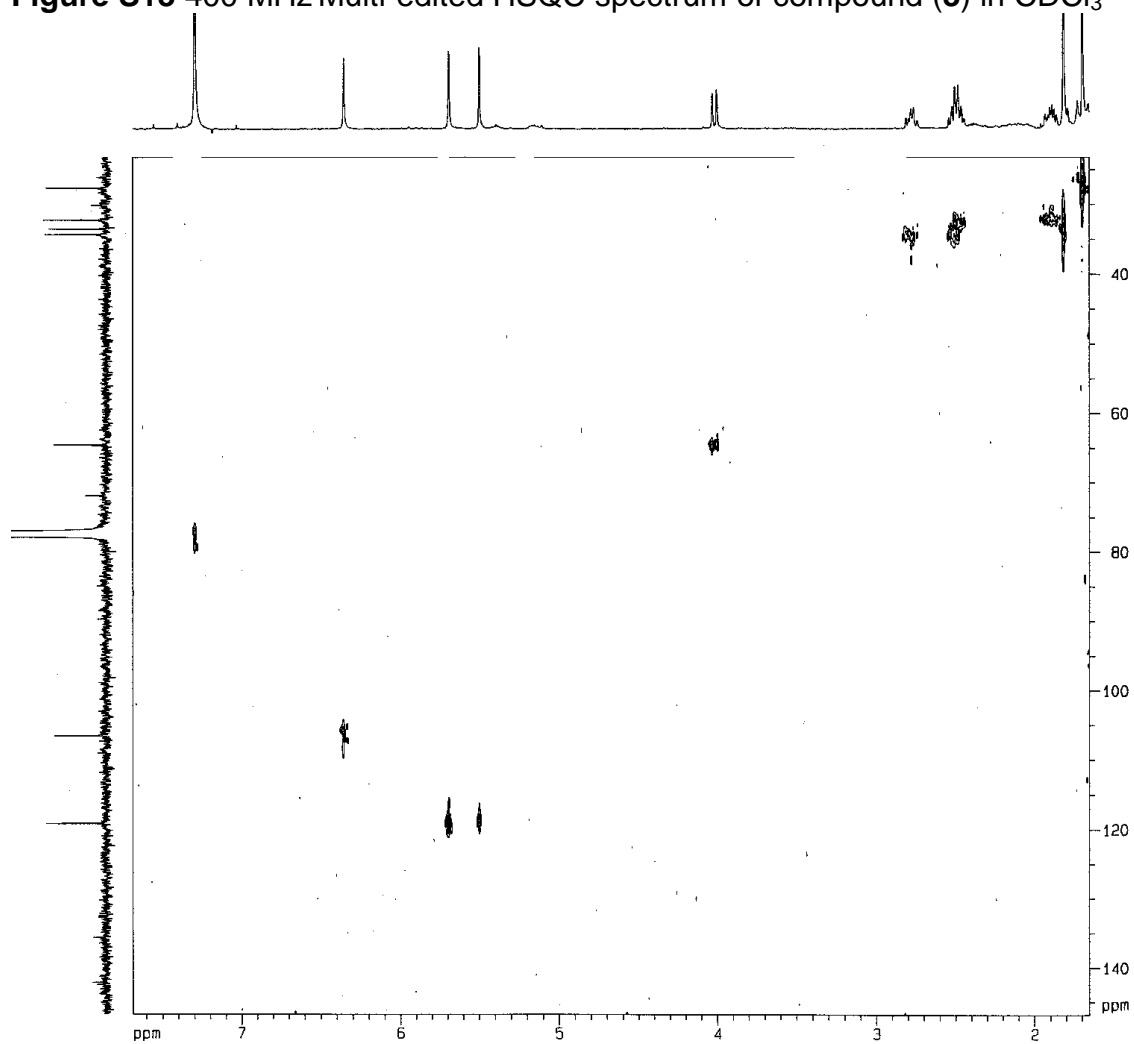
**Figure S11** 400 MHz  $^1\text{H}$  NMR spectrum and 100 MHz  $^{13}\text{C}$  spectrum of compound (**3**) in  $\text{CDCl}_3$



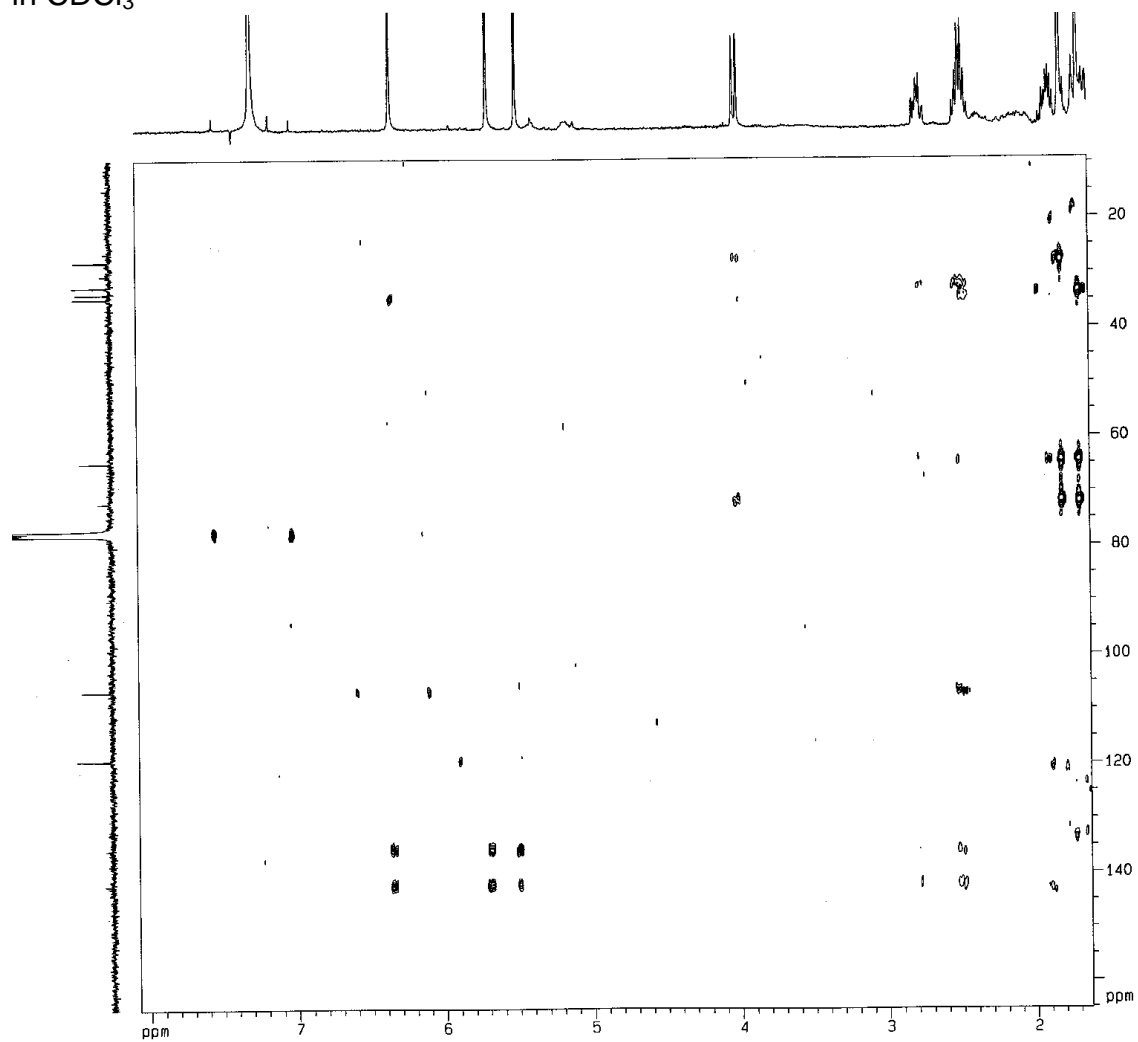
**Figure S12** 400 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound (**3**) in  $\text{CDCl}_3$



**Figure S13** 400 MHz Multi-edited HSQC spectrum of compound (**3**) in CDCl<sub>3</sub>

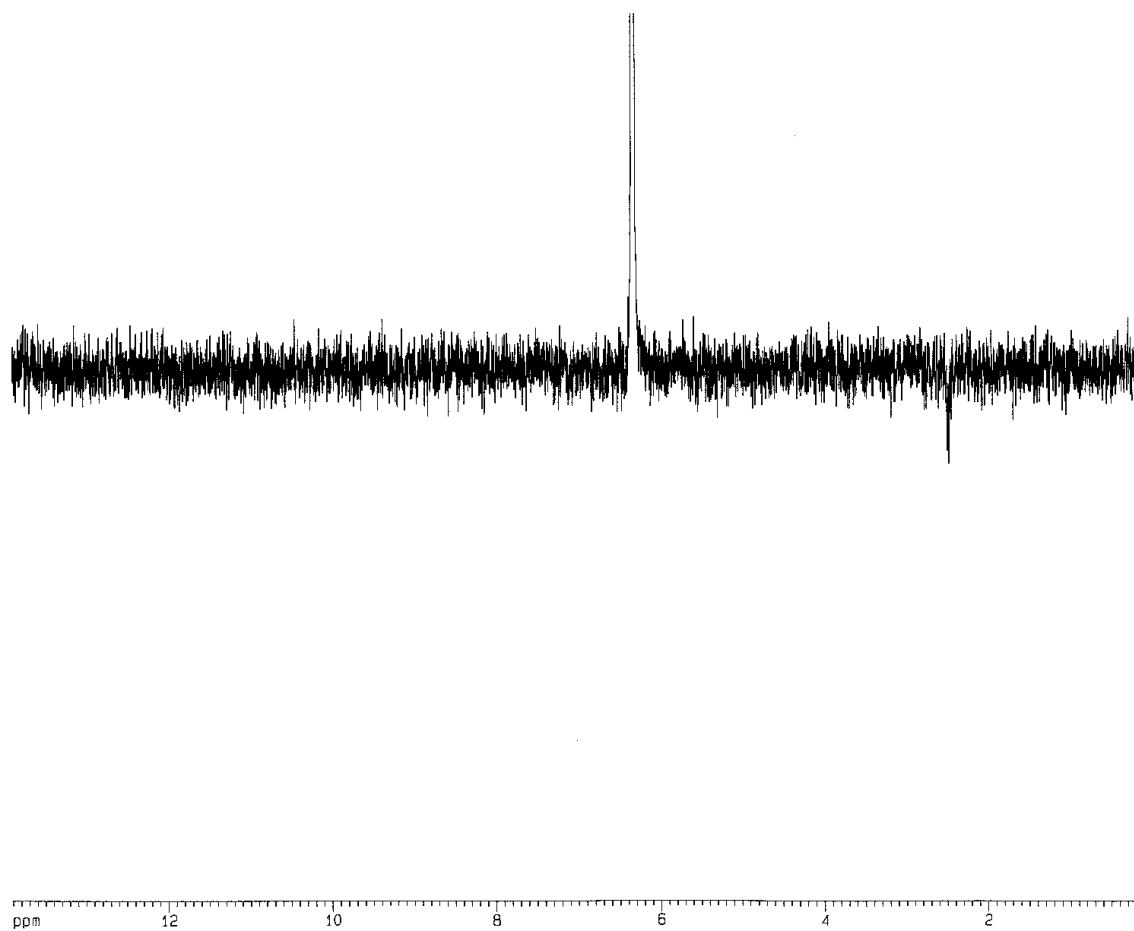


**Figure S14** 400 MHz HMBC spectrum (optimized for  $J = 8\text{Hz}$ ) of compound (**3**) in  $\text{CDCl}_3$

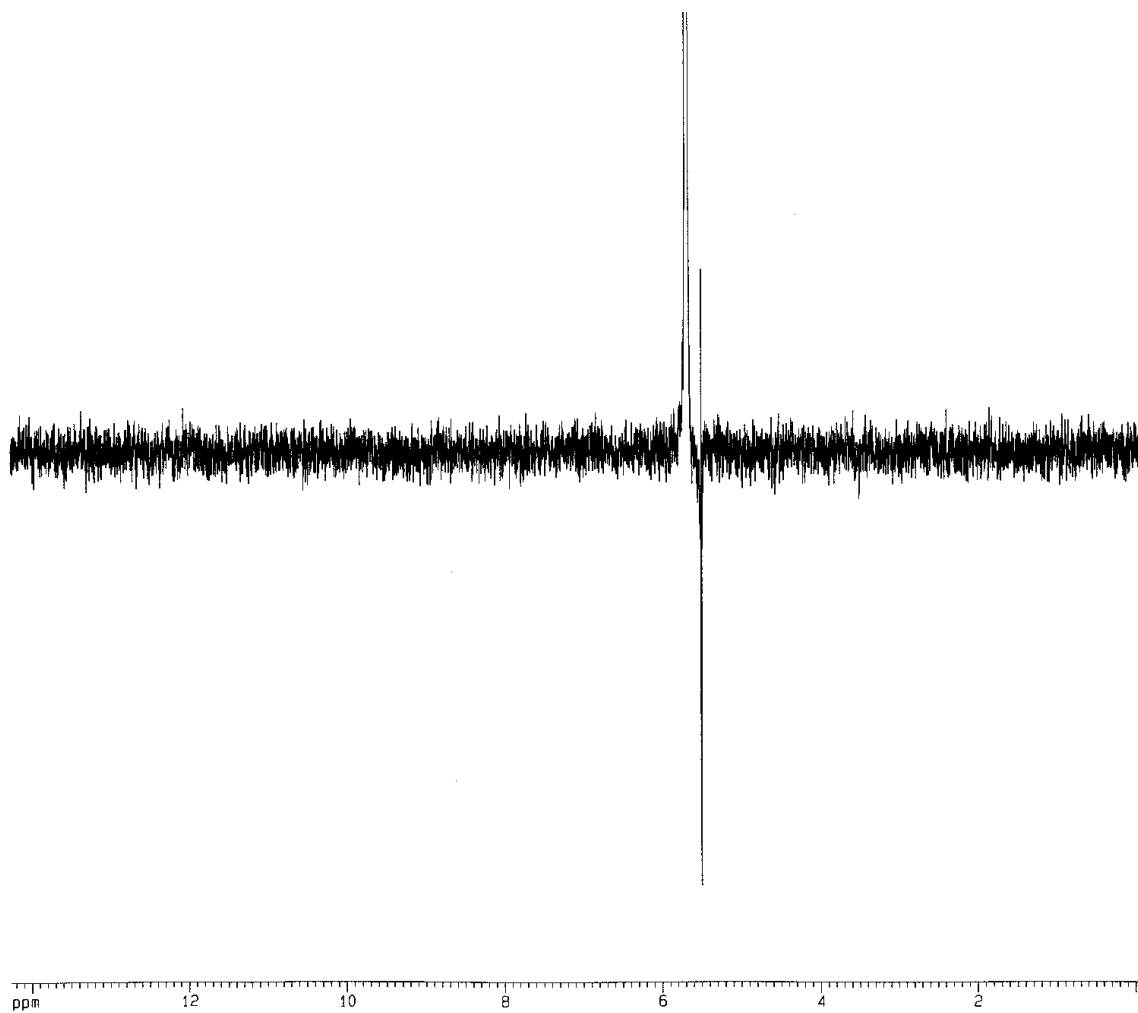




**Figure S15** 400 MHz 1D NOE spectrum (irradiation of proton 6.35 ppm) of compound (**3**) in CDCl<sub>3</sub>



**Figure S16** 400 MHz 1D NOE spectrum (irradiation of proton 5.69 ppm) of compound (**3**) in CDCl<sub>3</sub>



**Figure S17** 400 MHz 1D NOE spectrum (irradiation of proton 5.49 ppm) of compound (**3**) in CDCl<sub>3</sub>

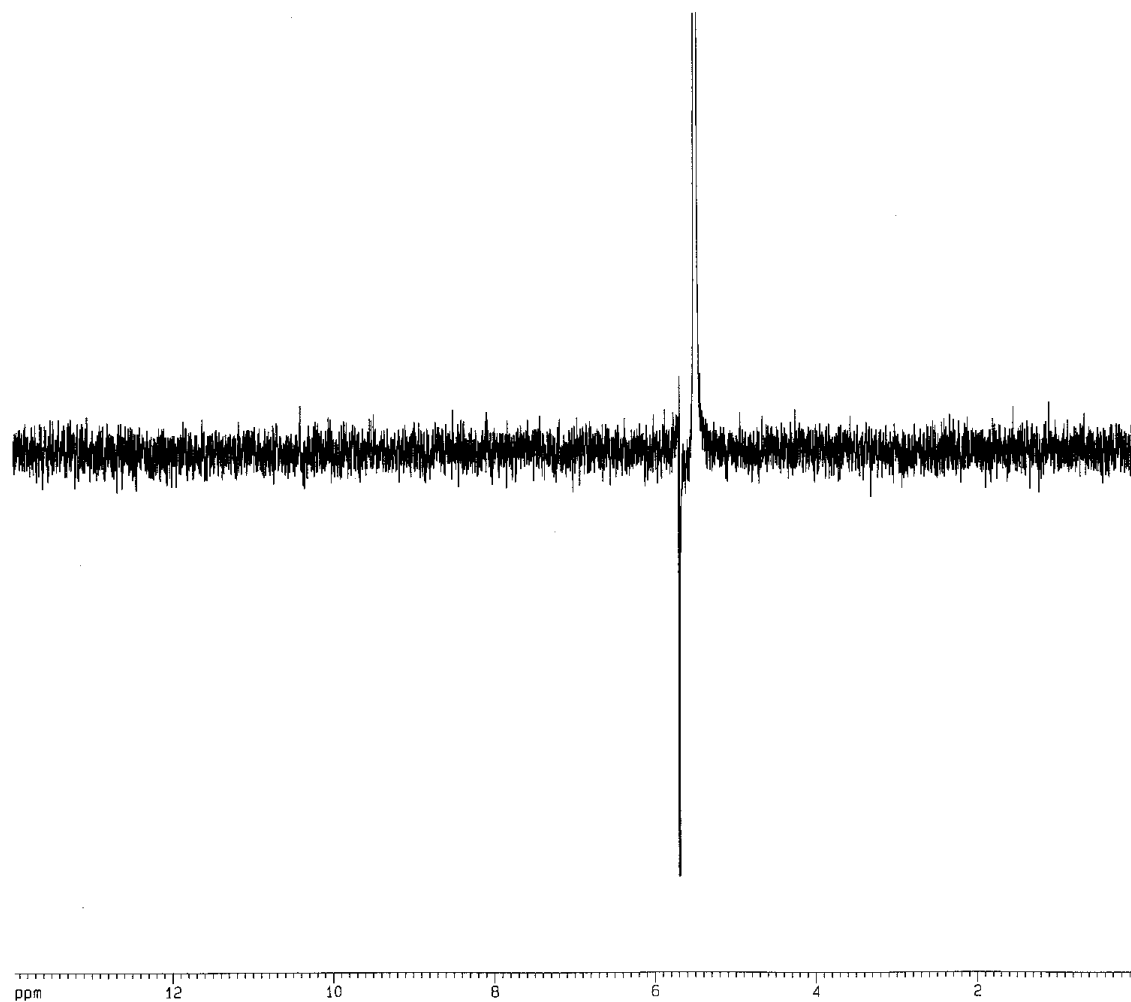
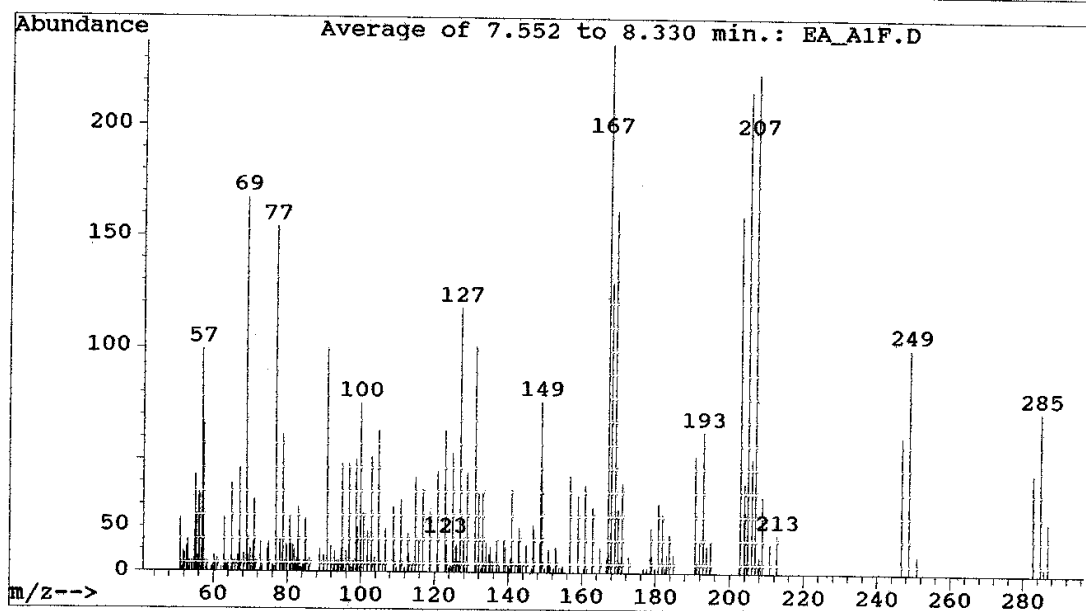
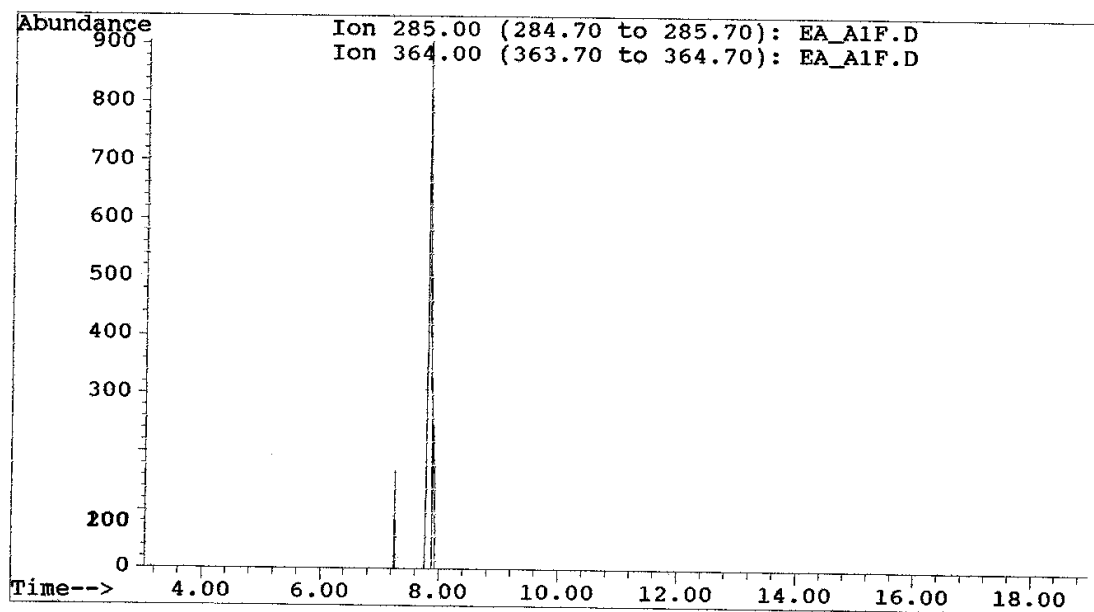
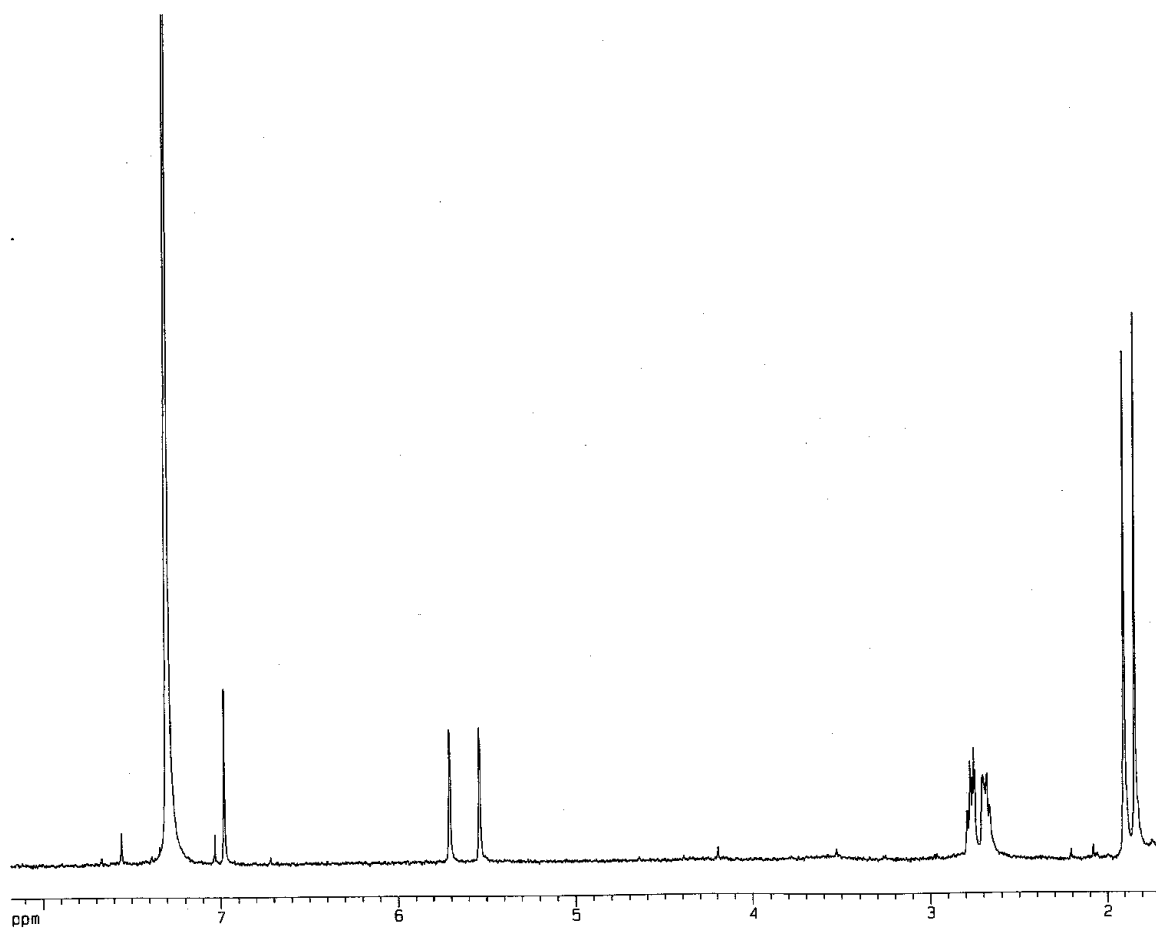


Figure S18 GC/MS spectrum of compound (3)

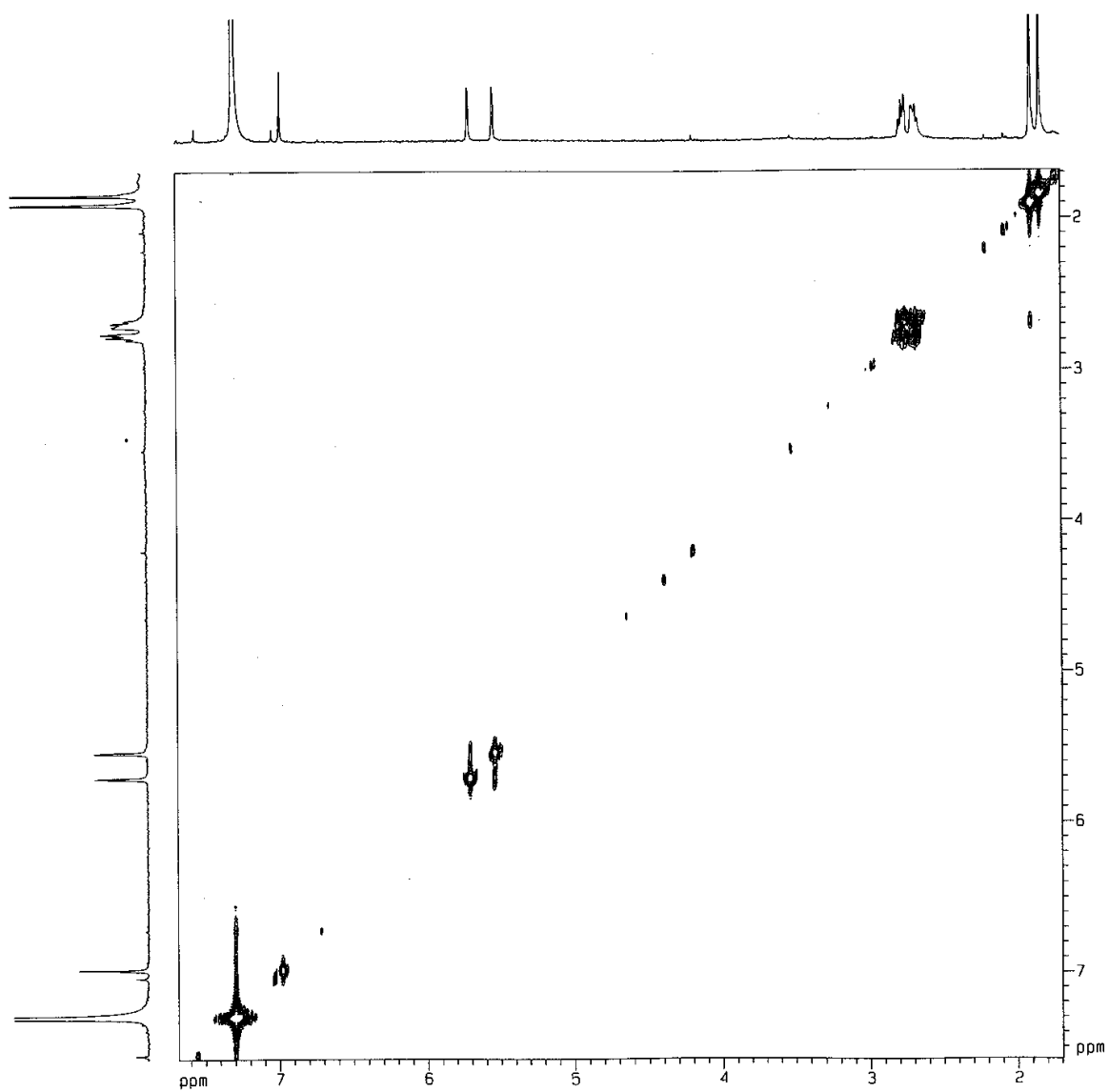
File : C:\HPCHEM\1\DATA\EA\_A1F.D  
Operator :  
Acquired : 8 Mar 104 2:08 pm using AcqMethod DEFAULT  
Instrument : 5971 - De  
Sample Name:  
Misc Info :  
Vial Number: 1



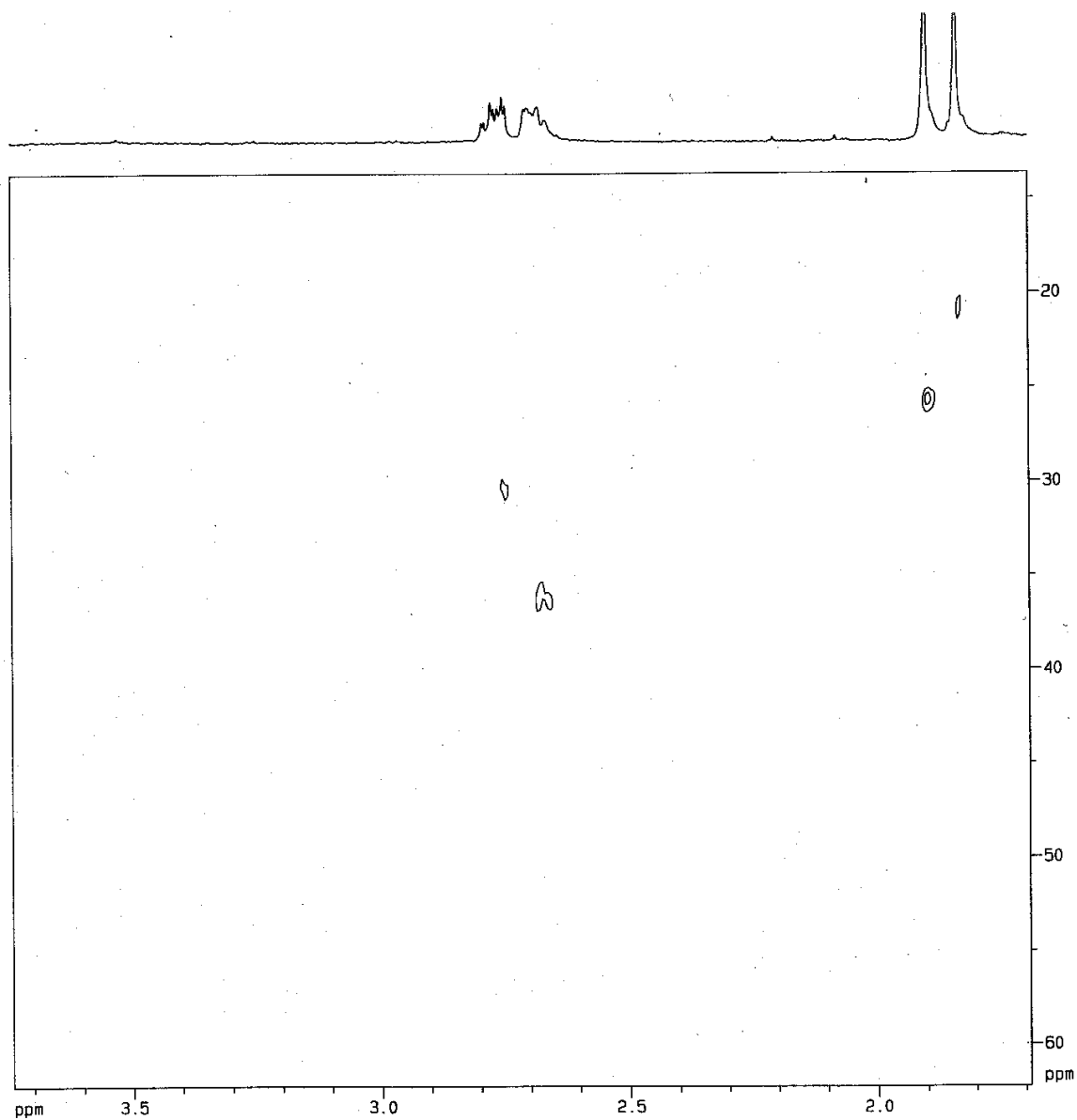
**Figure S19.** 400 MHz  $^1\text{H}$  NMR spectrum of compound (**4**) in  $\text{CDCl}_3$



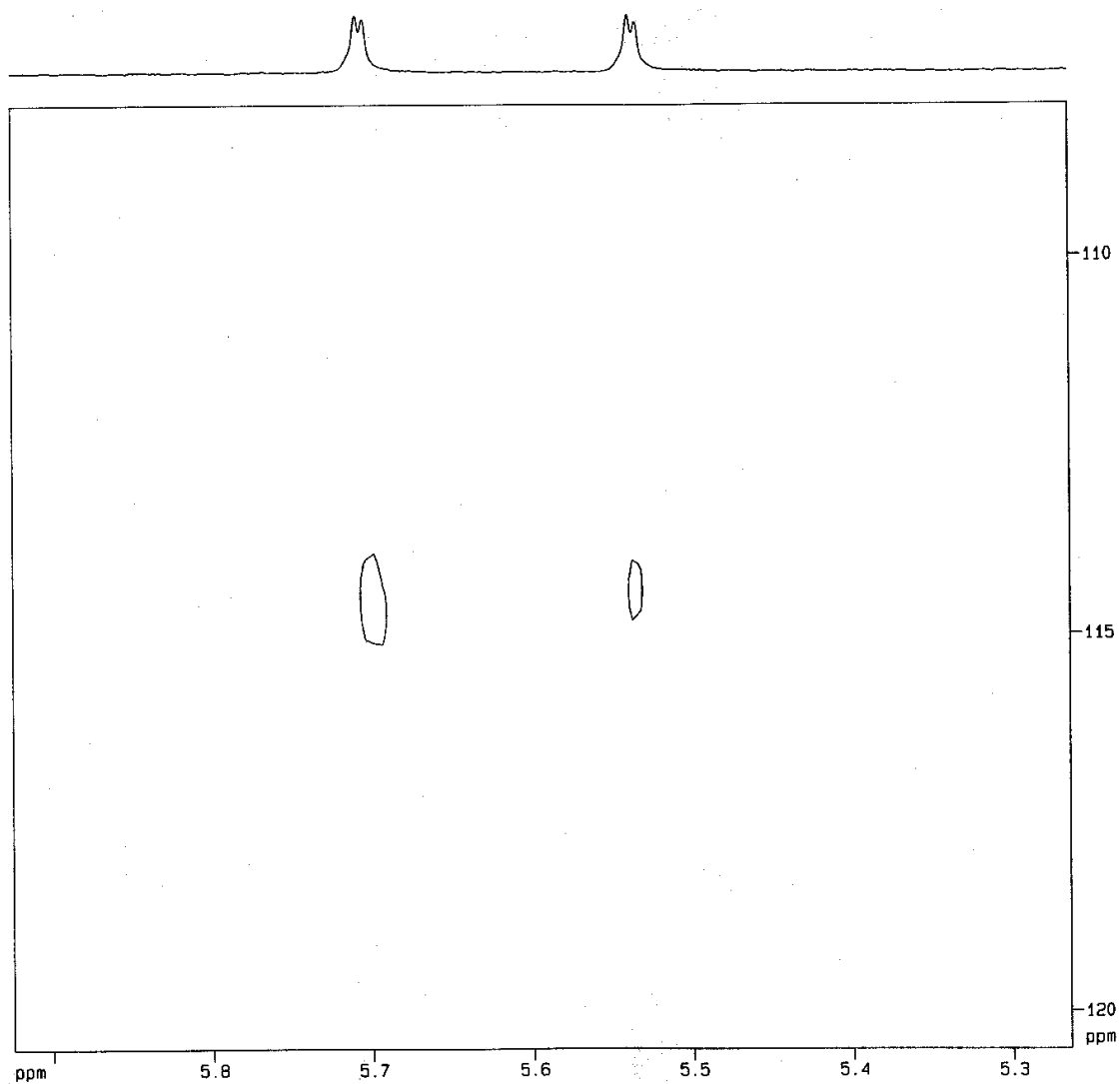
**Figure S20** 400 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of compound (**4**) in  $\text{CDCl}_3$



**Figure S21** 400 MHz HSQC spectrum of compound (**4**) in CDCl<sub>3</sub> (partial view of the signal belonging to the two methyl groups)

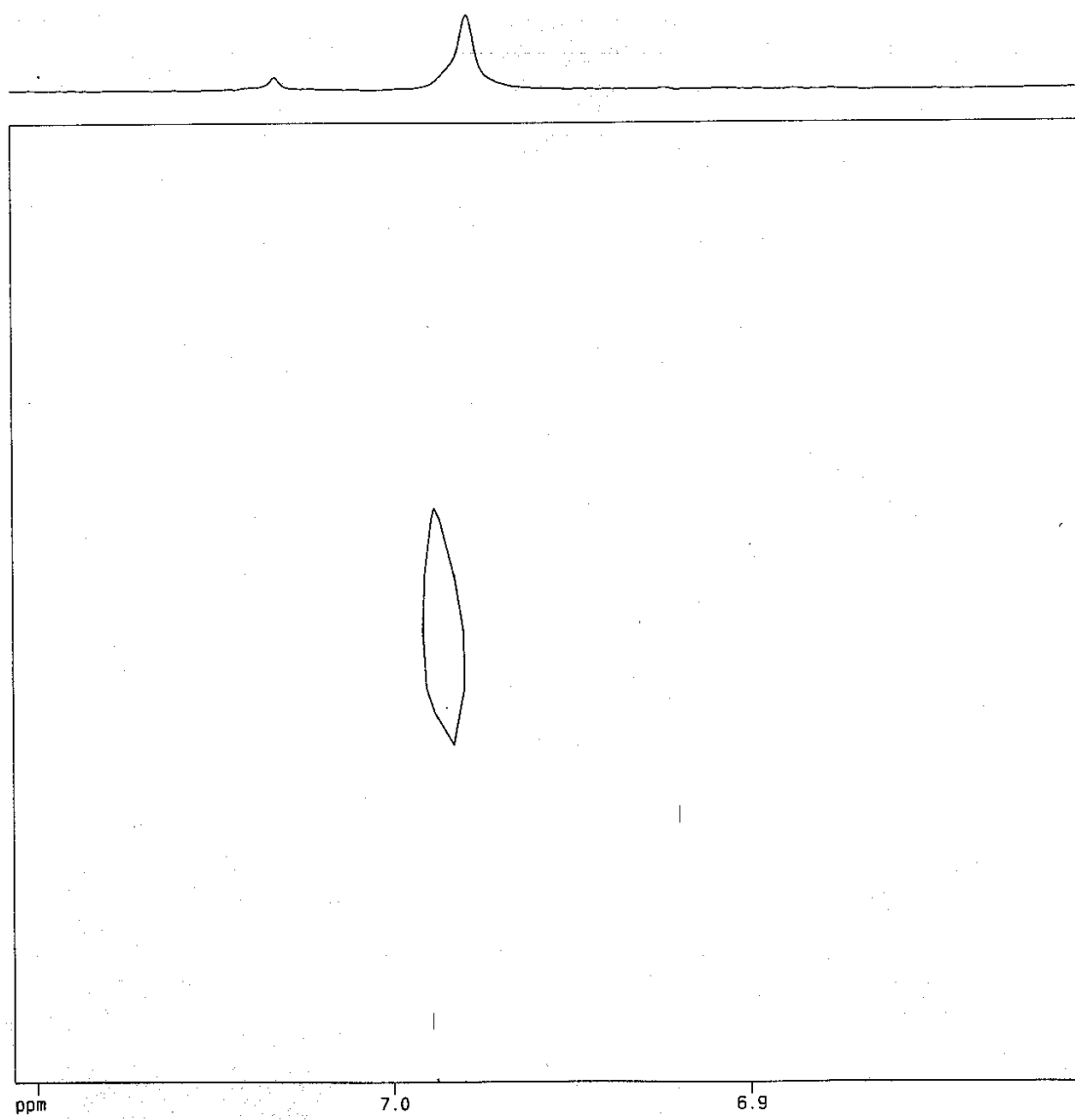


**Figure S22** 400 MHz HSQC spectrum of compound (**4**) in  $\text{CDCl}_3$  (partial view of the signal belonging to the proton doublets at 5.53 and 5.70 ppm)

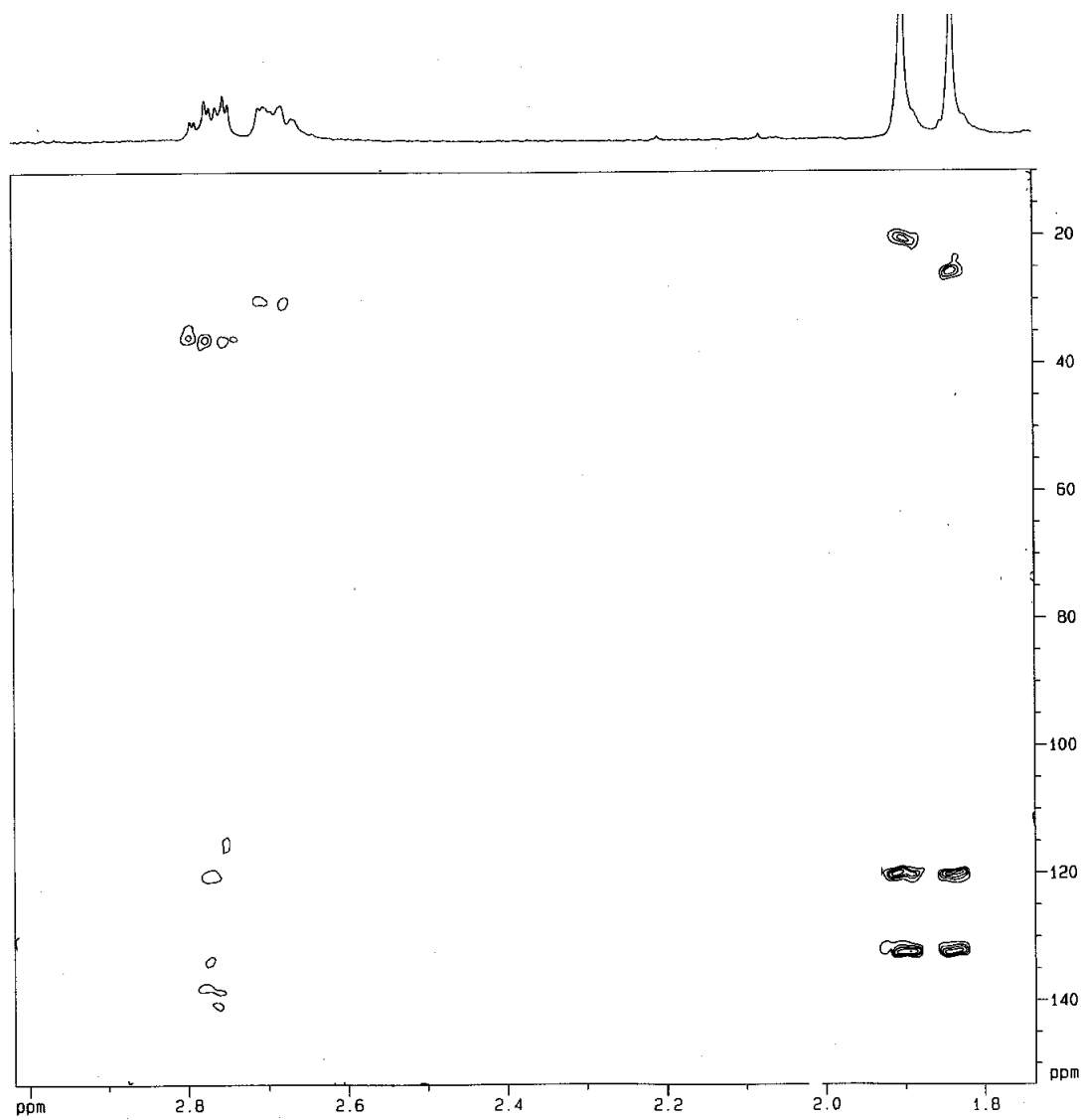




**Figure S23** 400 MHz HSQC spectrum of compound (**4**) in CDCl<sub>3</sub> (partial view of the signal belonging to the proton at 6.97 ppm)



**Figure S24** 400 MHz HMBC spectrum of compound (**4**) in CDCl<sub>3</sub> (observed signal from the two methyl groups)



**Figure S25** 400 MHz HMBC spectrum of compound (**4**) in  $\text{CDCl}_3$  (observed signal from the proton doublets at 5.53 and 5.70 ppm )

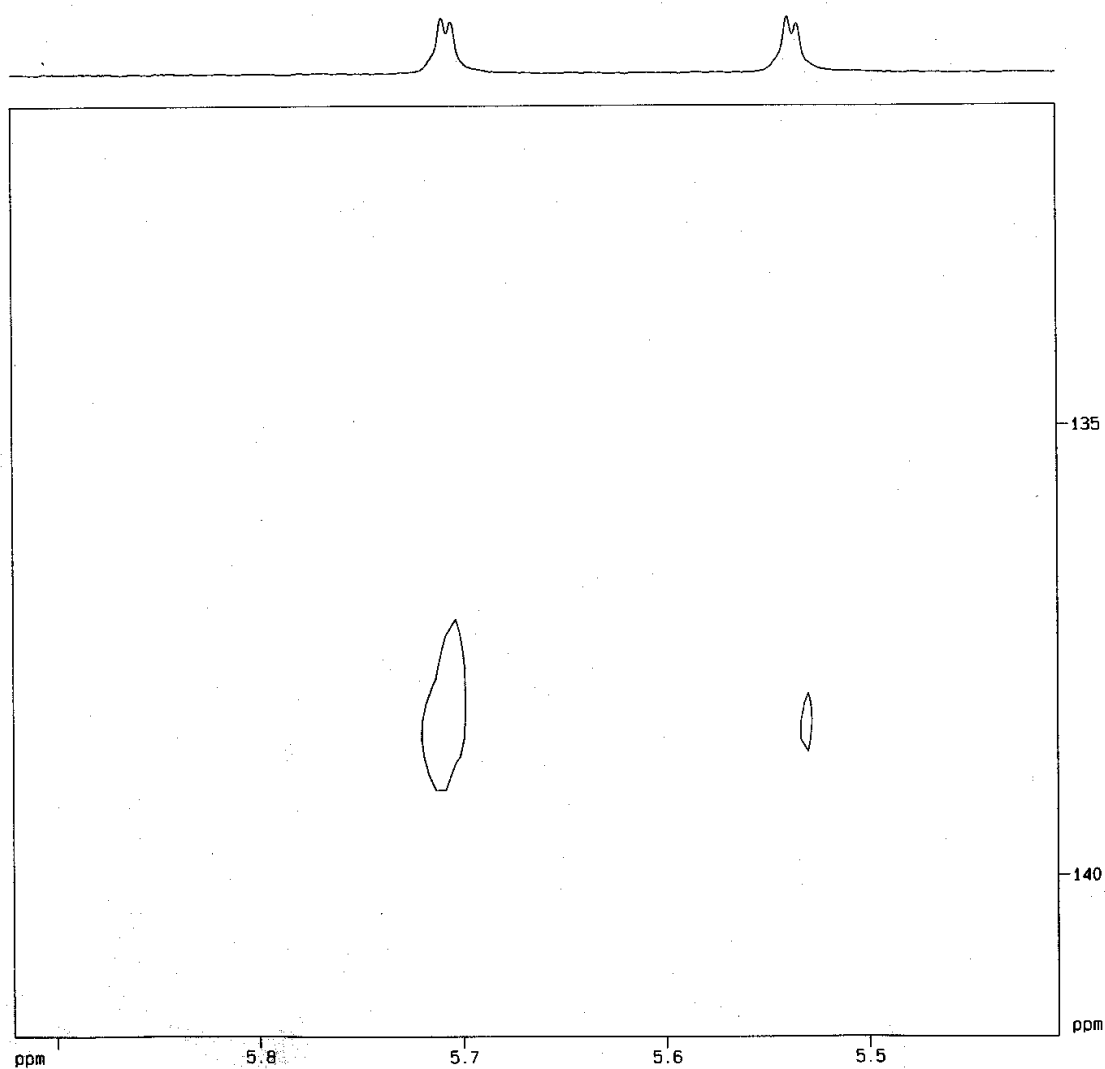
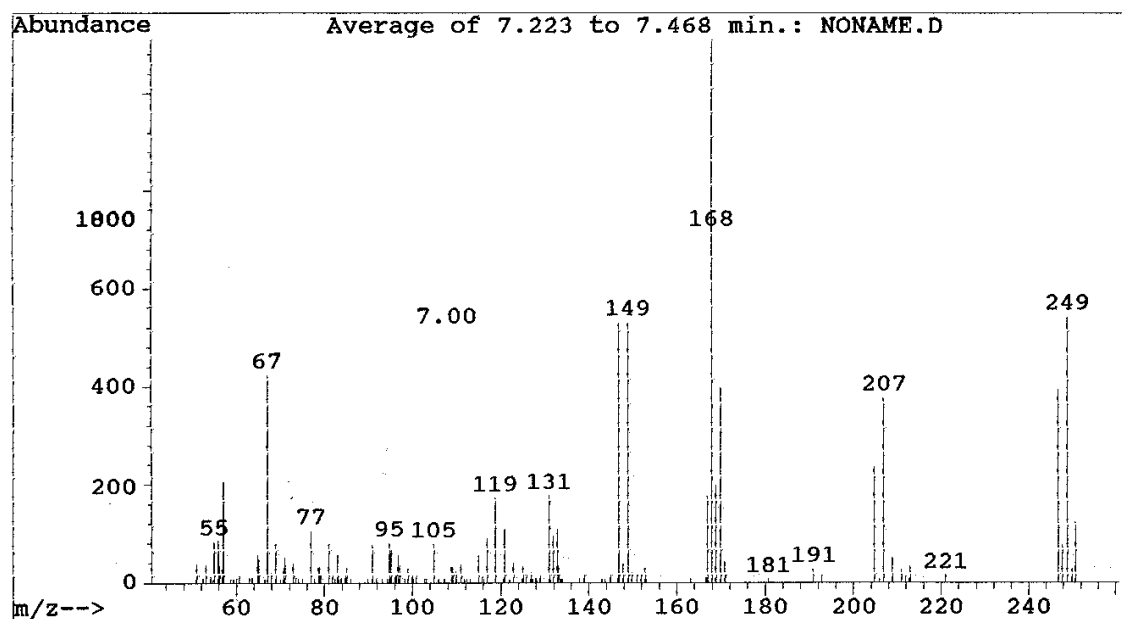
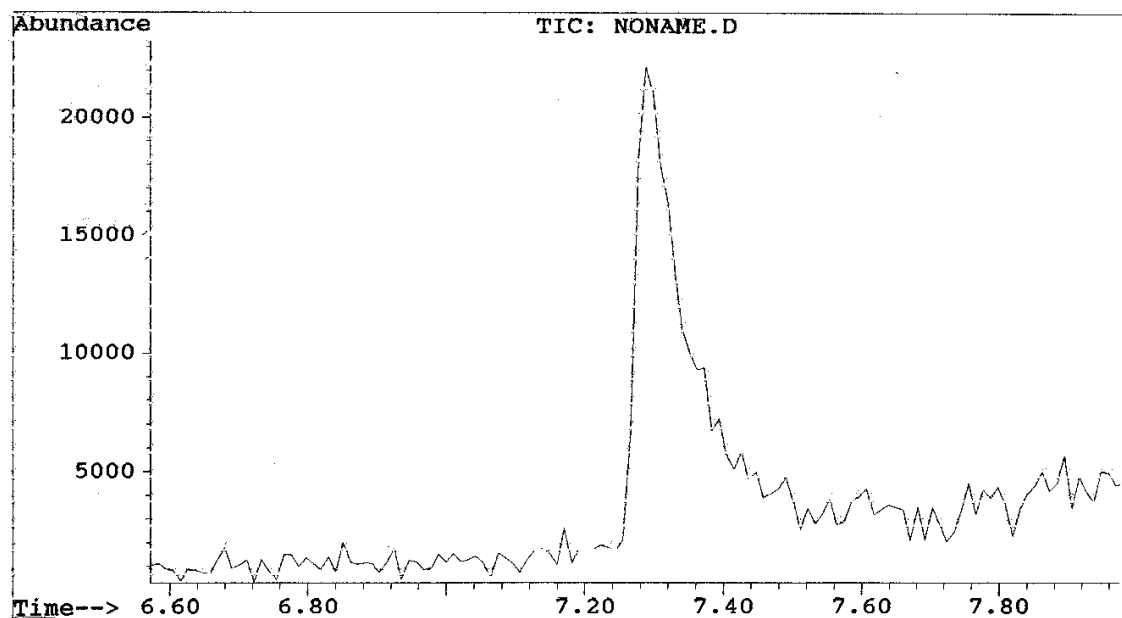
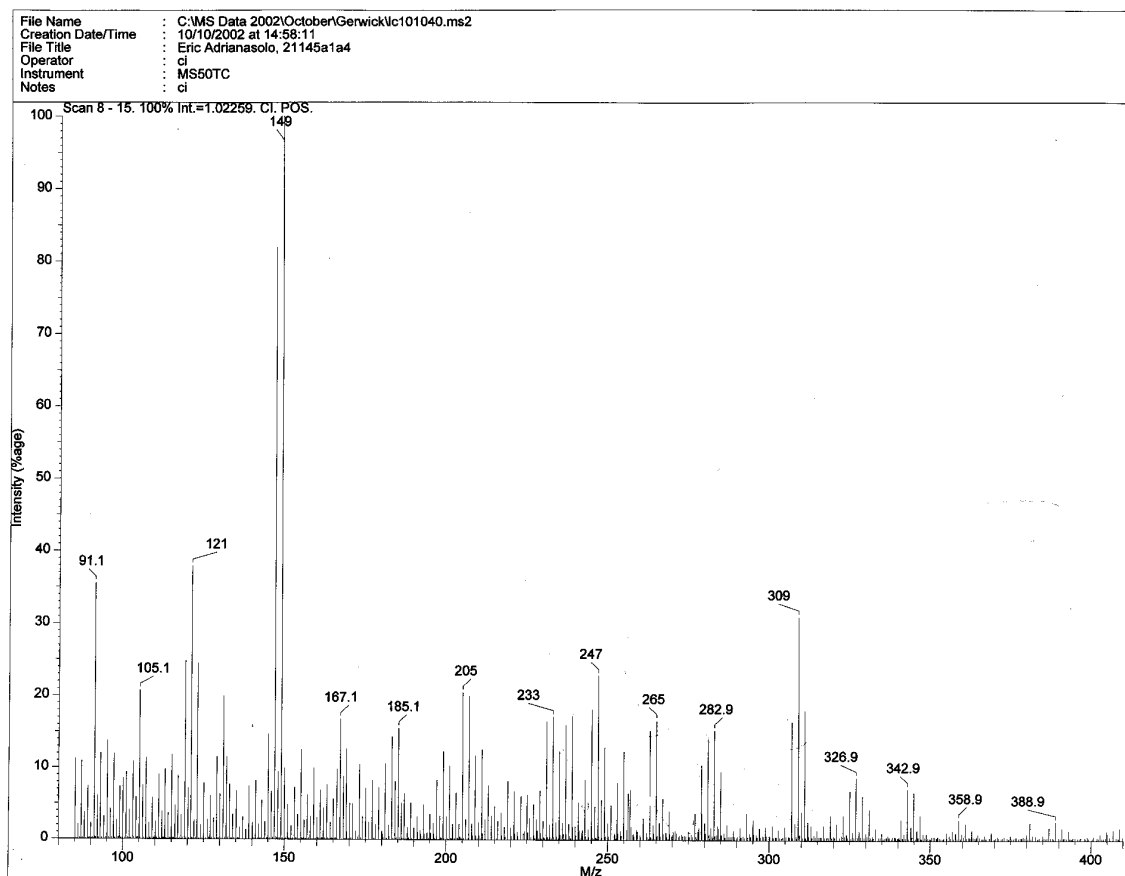


Figure S26 GC/MS spectrum of compound (4)

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Acquired : 8 Mar 104 10:00 am using AcqMethod DEFAULT  
Instrument : 5971 - De  
Sample Name: 21141a1a4  
Misc Info :  
Vial Number: 1



**Figure S27** LRCI MS spectrum of compound (**4**)



**Figure S28** Photo of the voucher sample



**Figure S29** Photo of the collection site

