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## **APPENDIX**



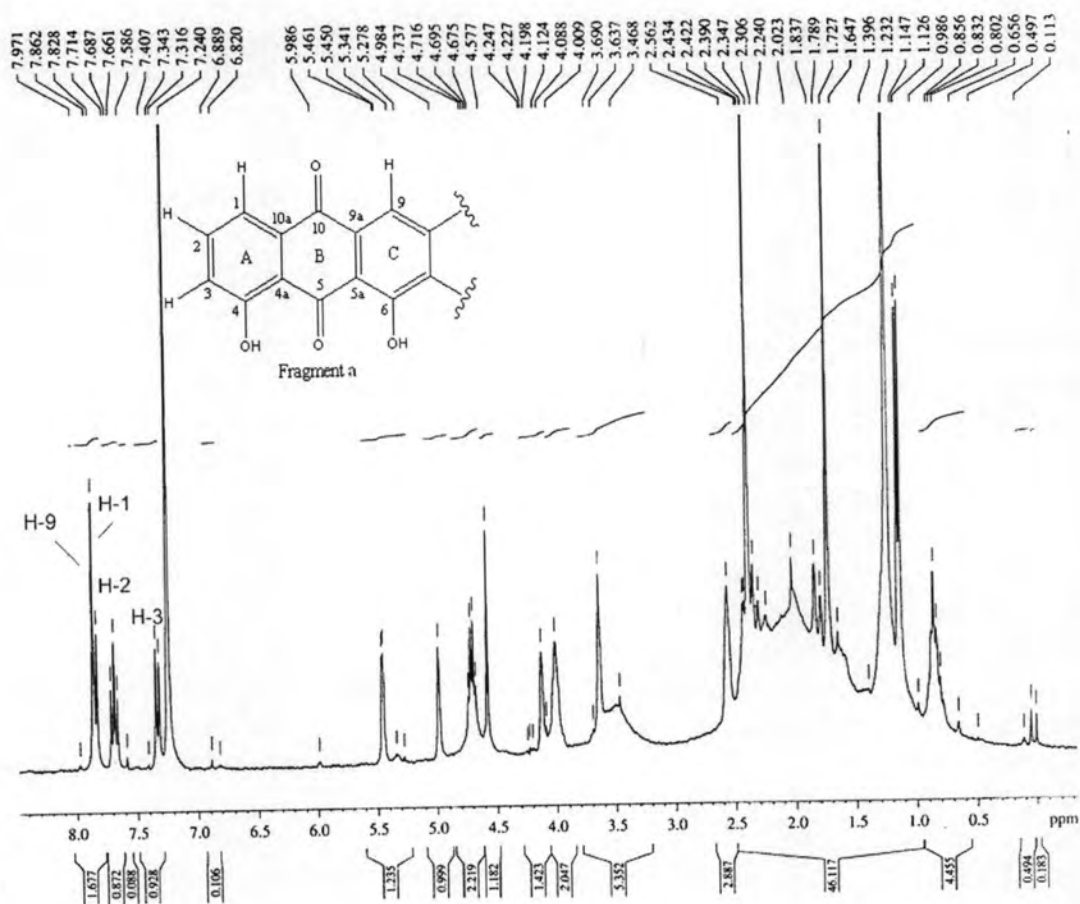


Figure 4.4 The 300 MHz  $^1\text{H-NMR}$  spectrum of M41332 in  $\text{CDCl}_3$

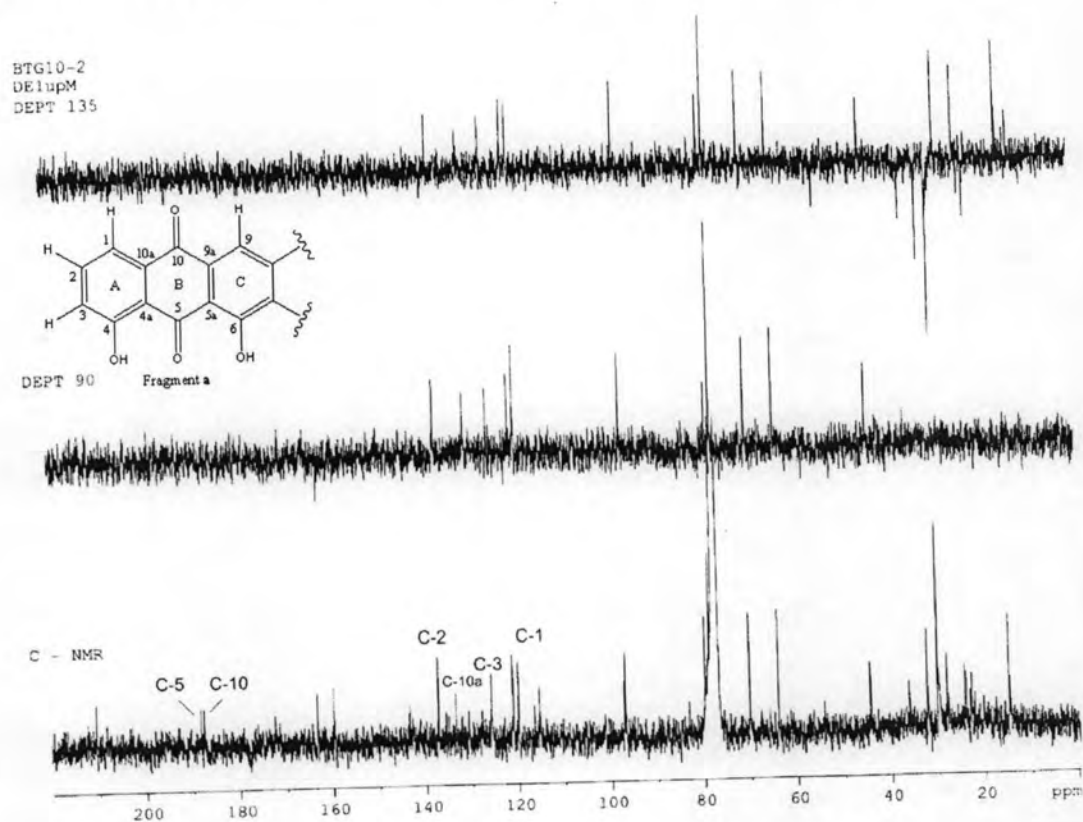
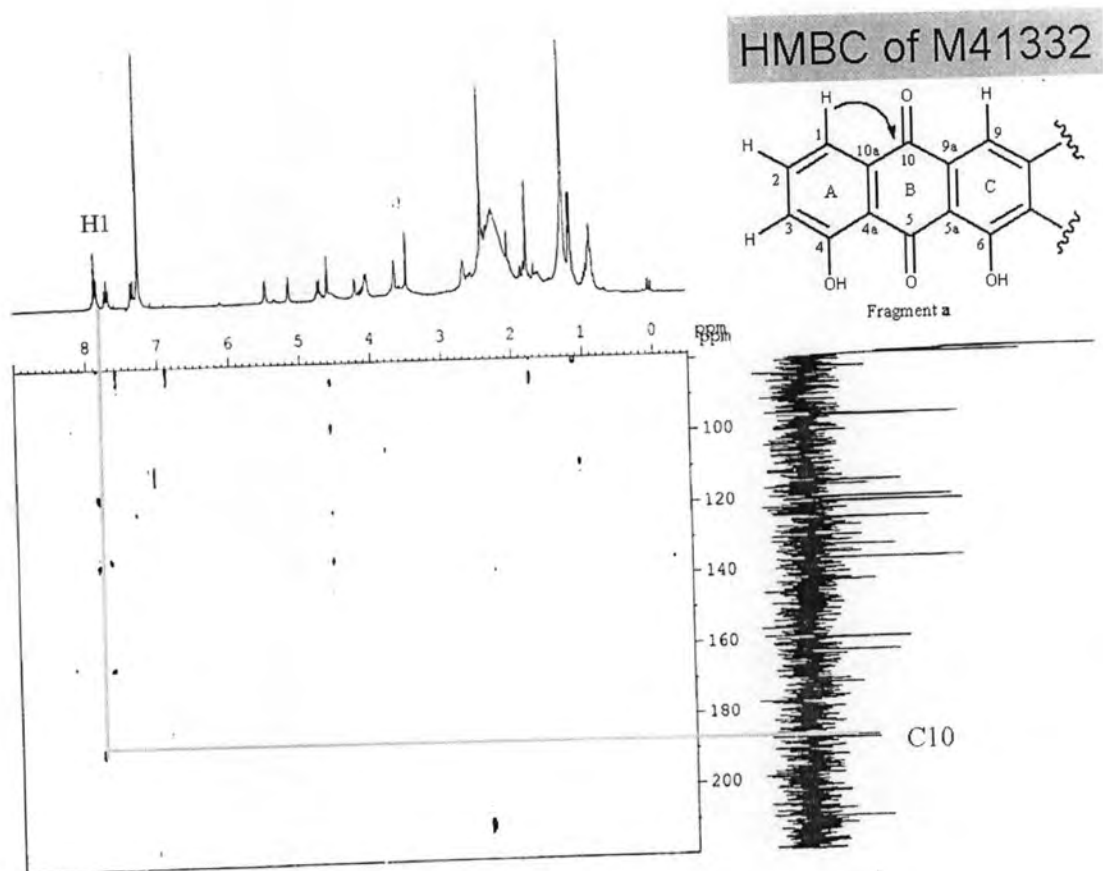
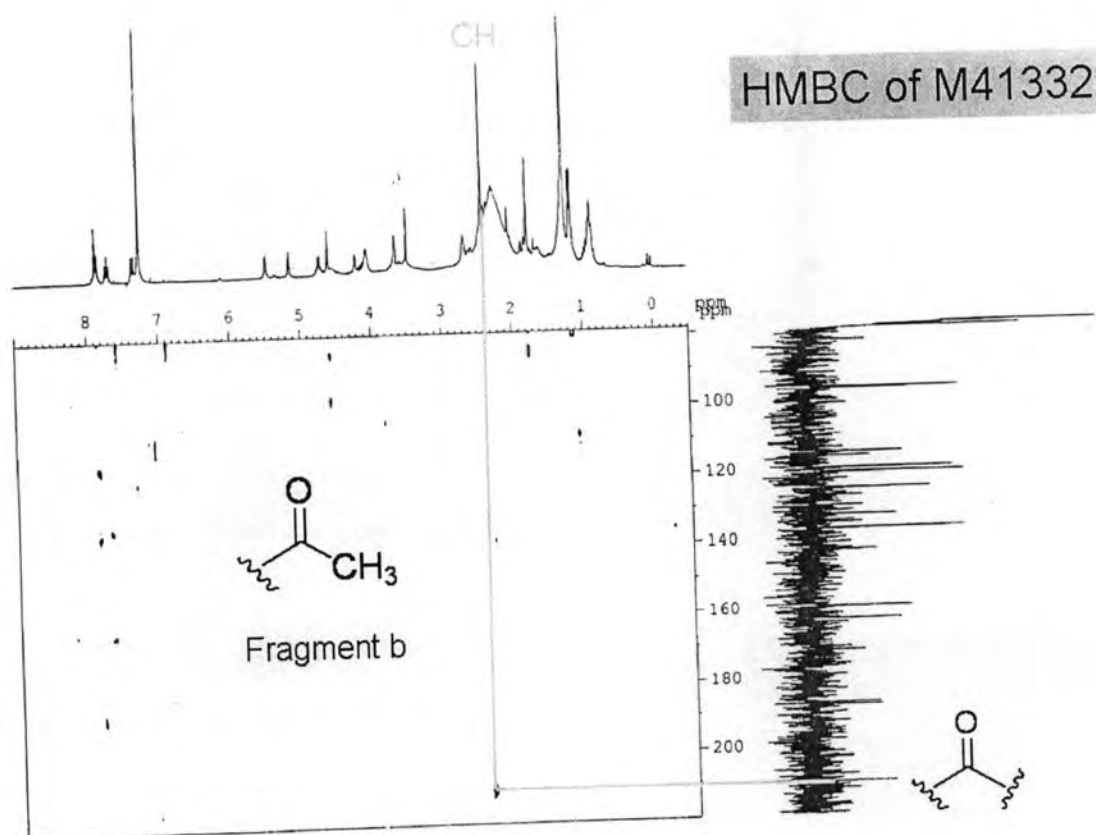


Figure 4.5 The 75 MHz  $^{13}\text{C-NMR}$ , DEPT 135, 90 of compound M41332 in  $\text{CDCl}_3$



**Figure 4.6(a)** The 300 MHz HMBC spectrum of M41332 in  $\text{CDCl}_3$



**Figure 4.6(b)** The 300 MHz HMBC spectrum of M41332 in  $\text{CDCl}_3$

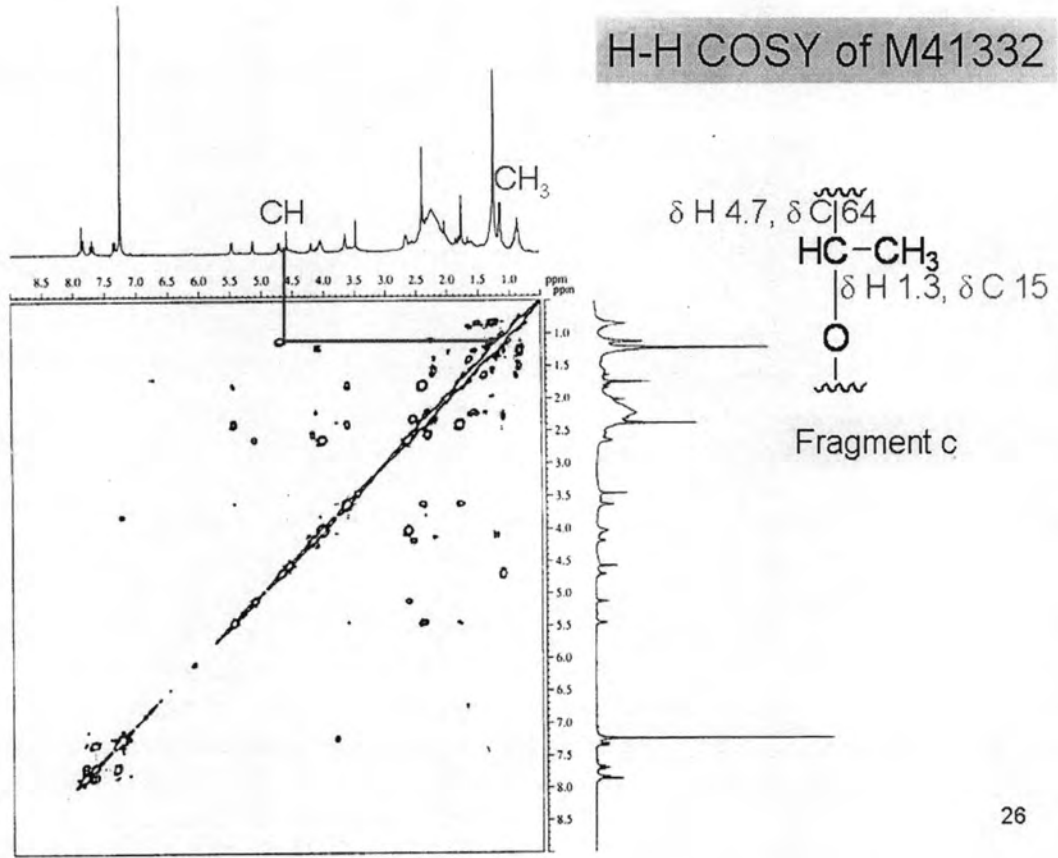


Figure 4.6(c) The 300 MHz  $^1H$ - $^1H$  COSY spectrum of M41332 in  $CDCl_3$

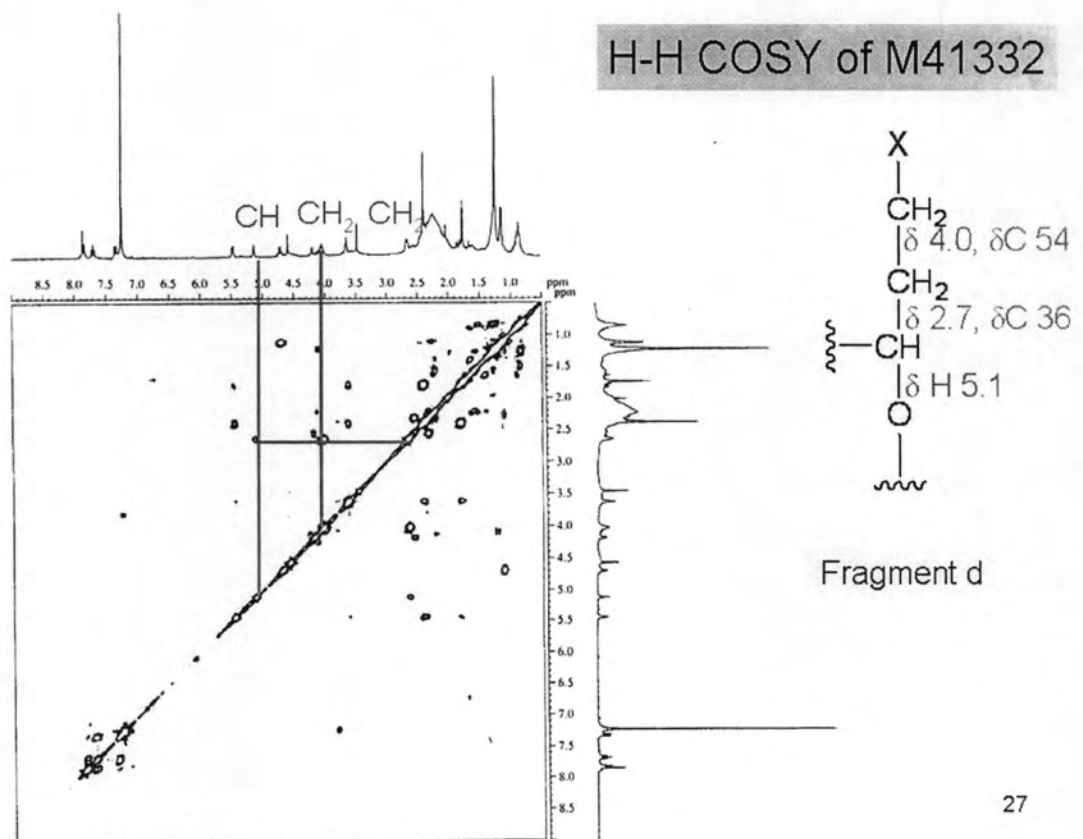


Figure 4.6(d) The 300 MHz  $^1H$ - $^1H$  COSY spectrum of M41332 in  $CDCl_3$

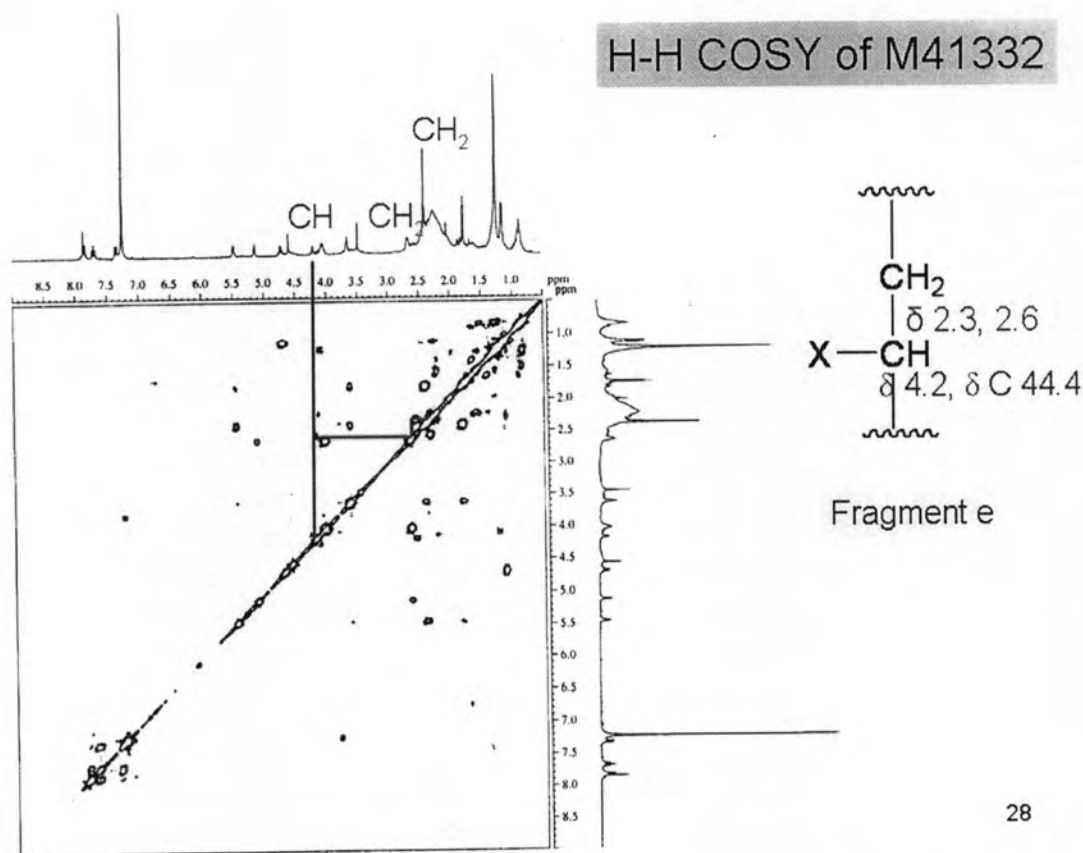


Figure 4.6(e) The 300 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of M41332 in  $\text{CDCl}_3$

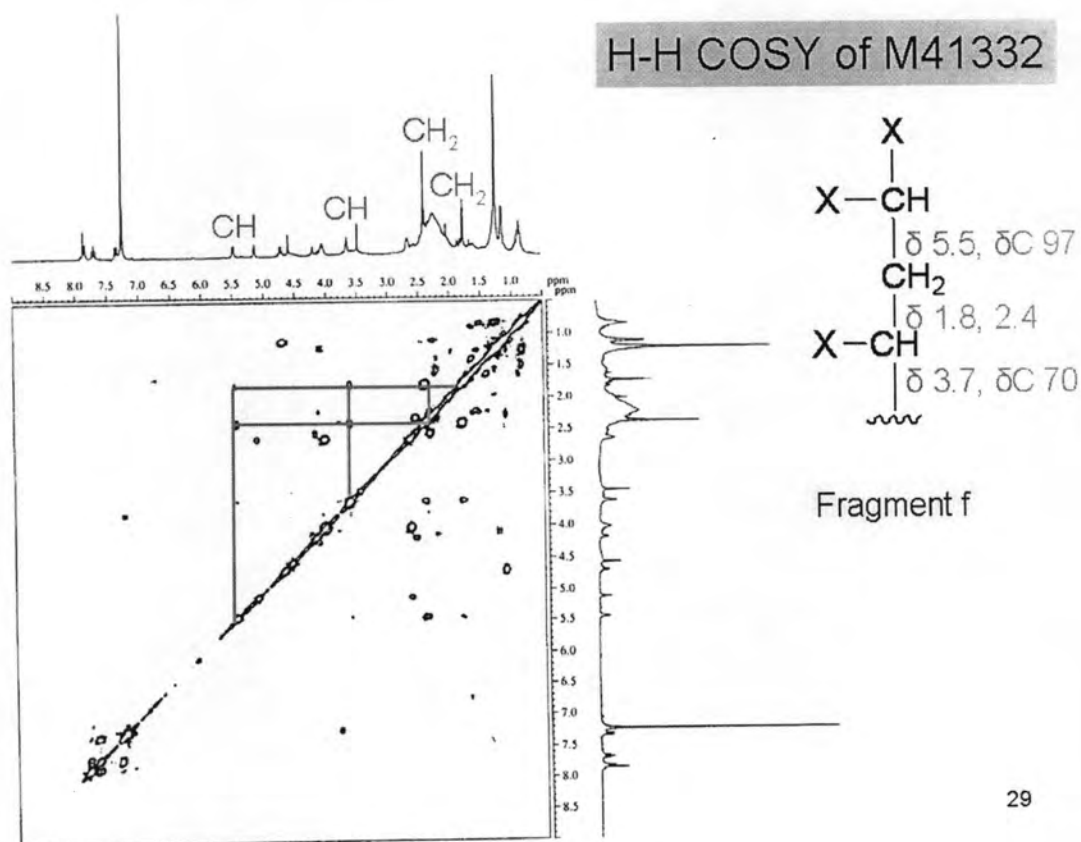


Figure 4.6(f) The 300 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of M41332 in  $\text{CDCl}_3$

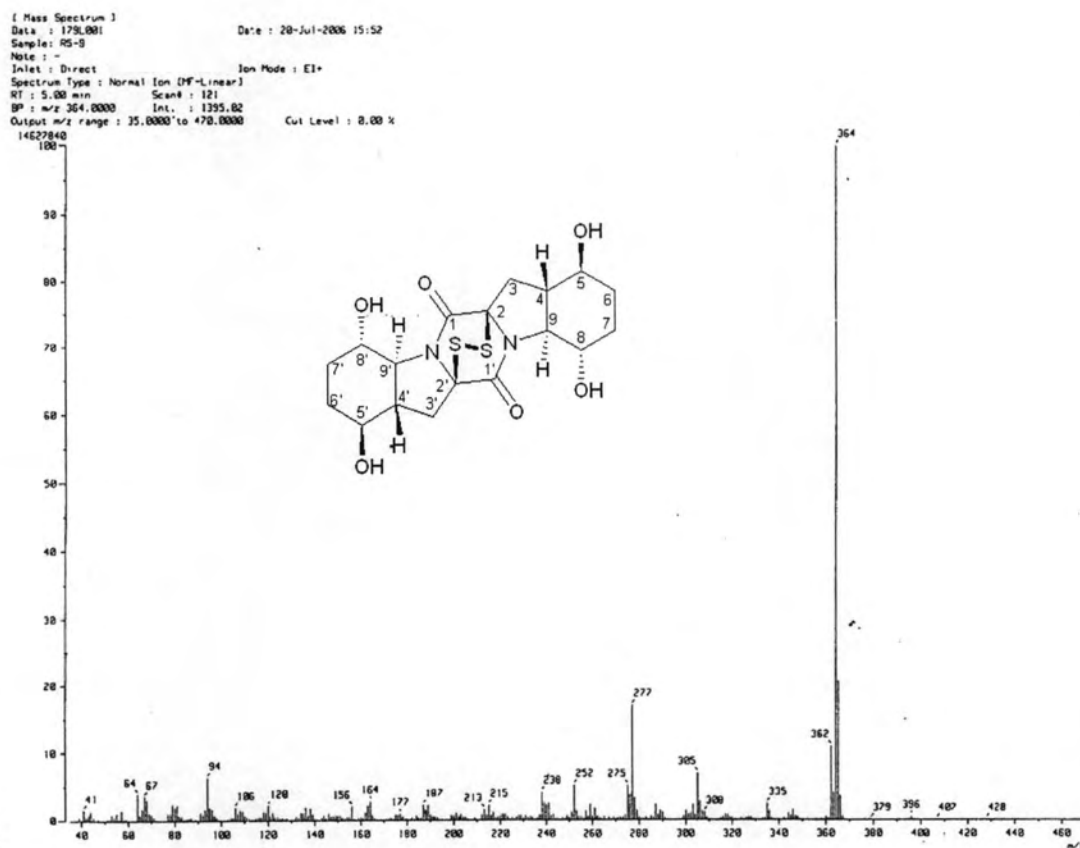


Figure 4.8 The EIMS spectrum of rostratin A (R5-9)

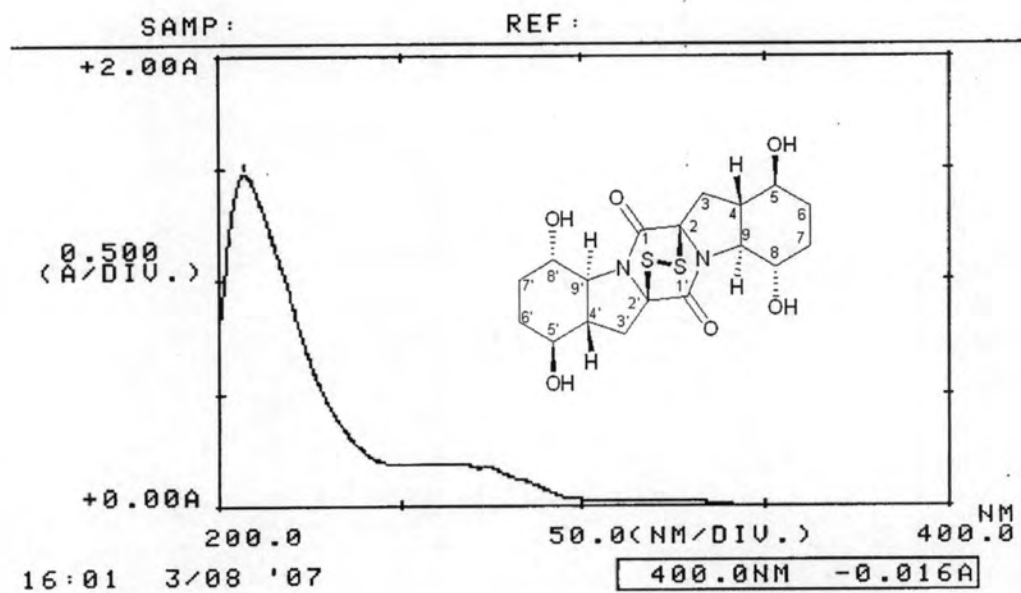


Figure 4.9 The UV spectrum of rostratin A (R5-9)

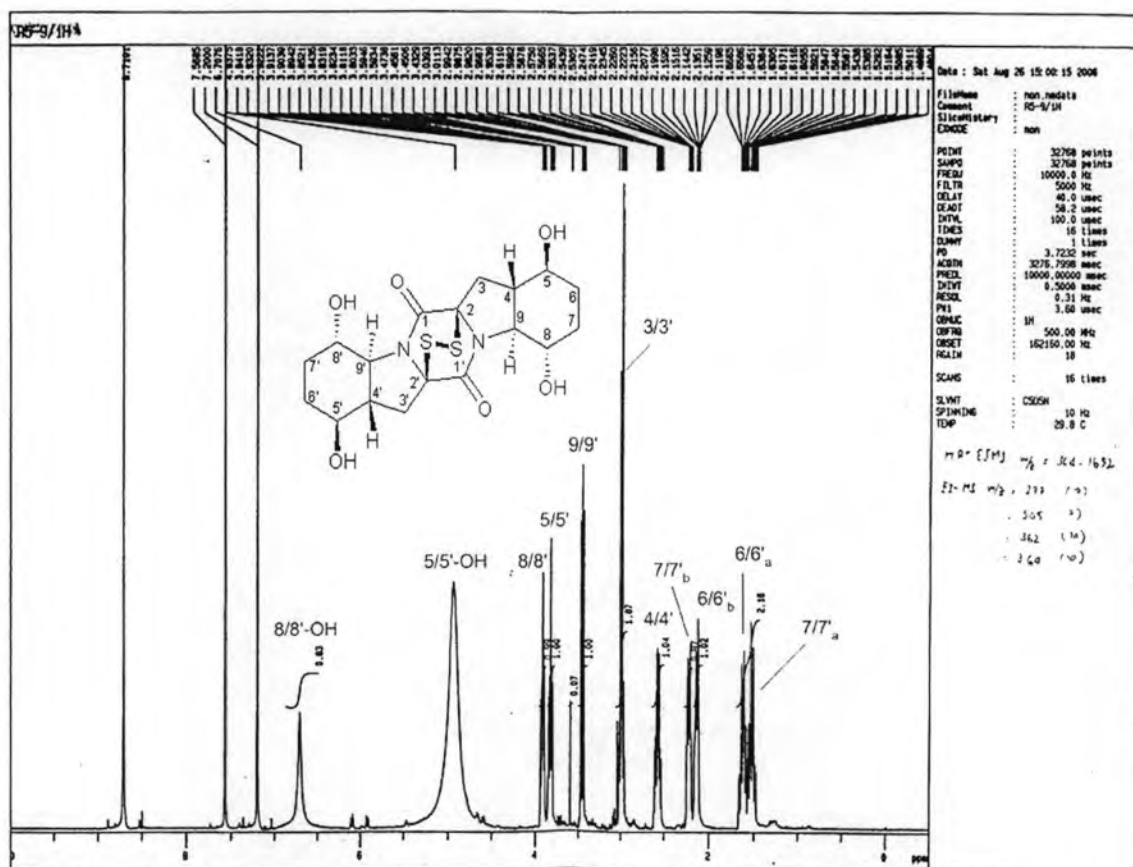


Figure 4.10 The 500 MHz  $^1\text{H-NMR}$  spectrum of rostratin A (R5-9) in pyridine- $d_6$

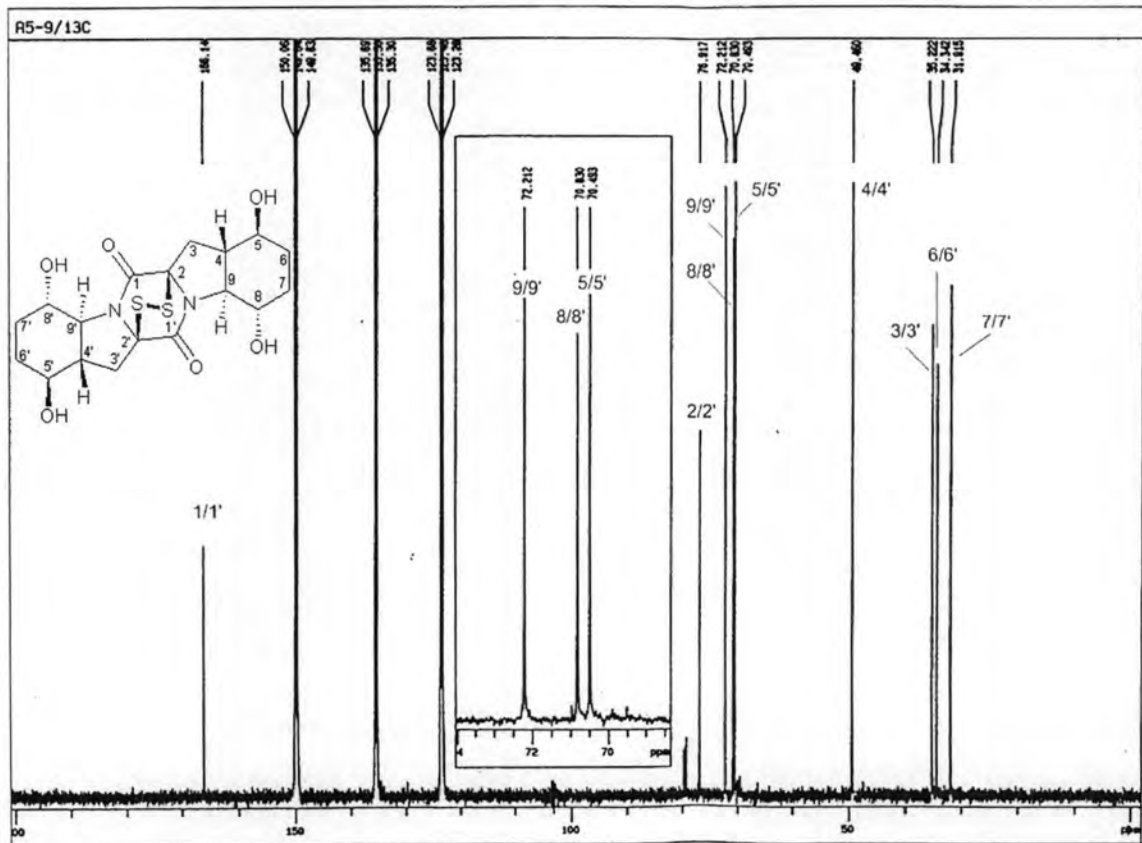
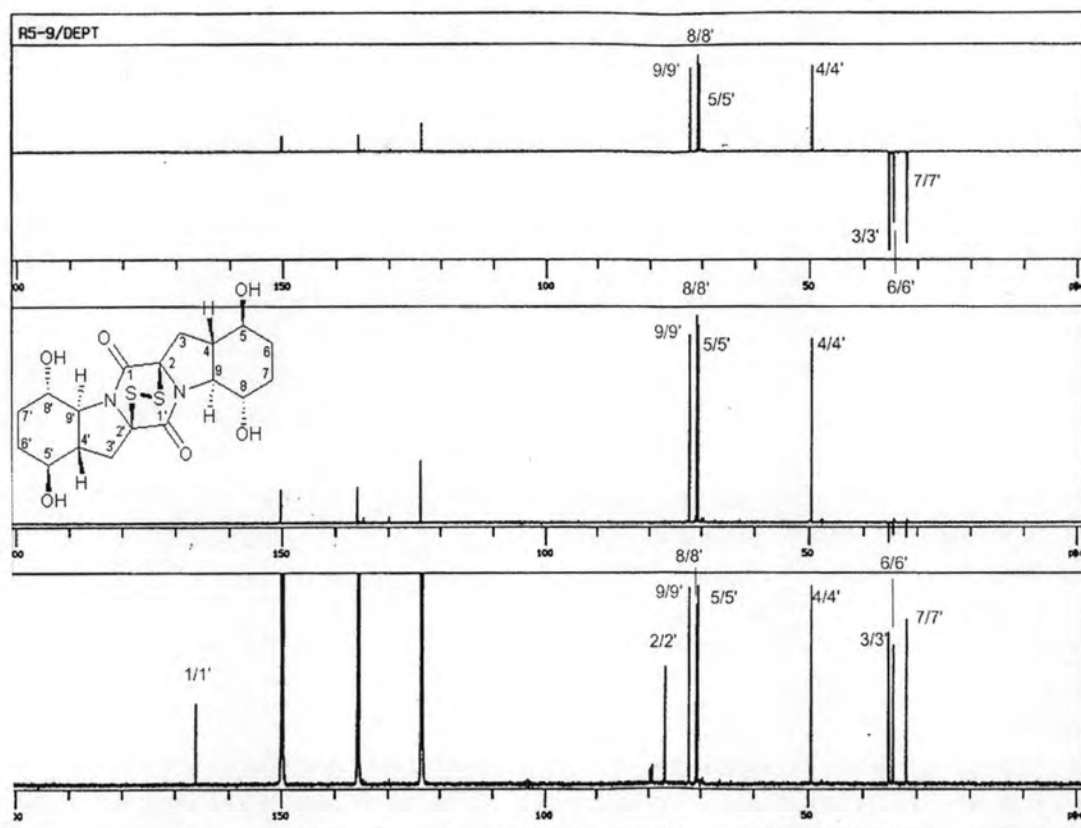
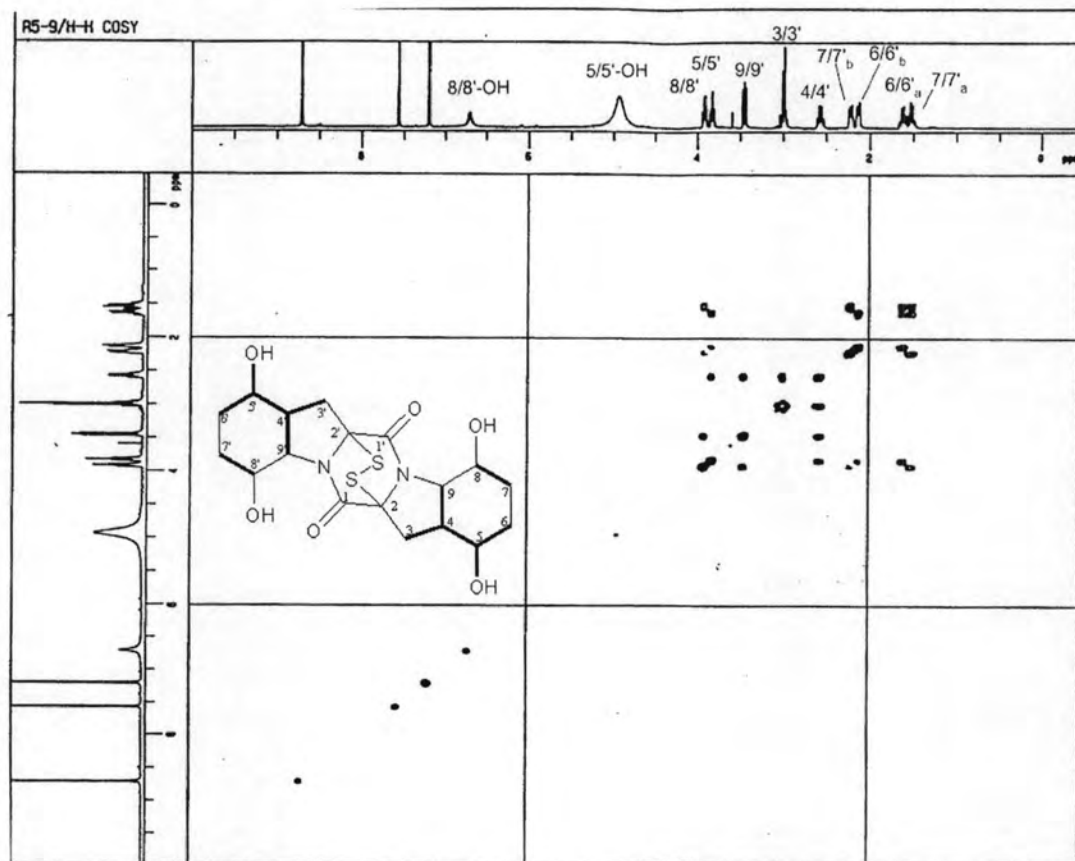


Figure 4.11 The 125 MHz  $^{13}\text{C-NMR}$  spectrum of rostratin A (R5-9) in pyridine- $d_6$





**Figure 4.12** The 125 MHz DEPT 135 and 90 spectrum of rostratin A (R5-9) in pyridine- $d_6$



**Figure 4.13** The 500 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of rostratin A (R5-9) in pyridine- $d_6$

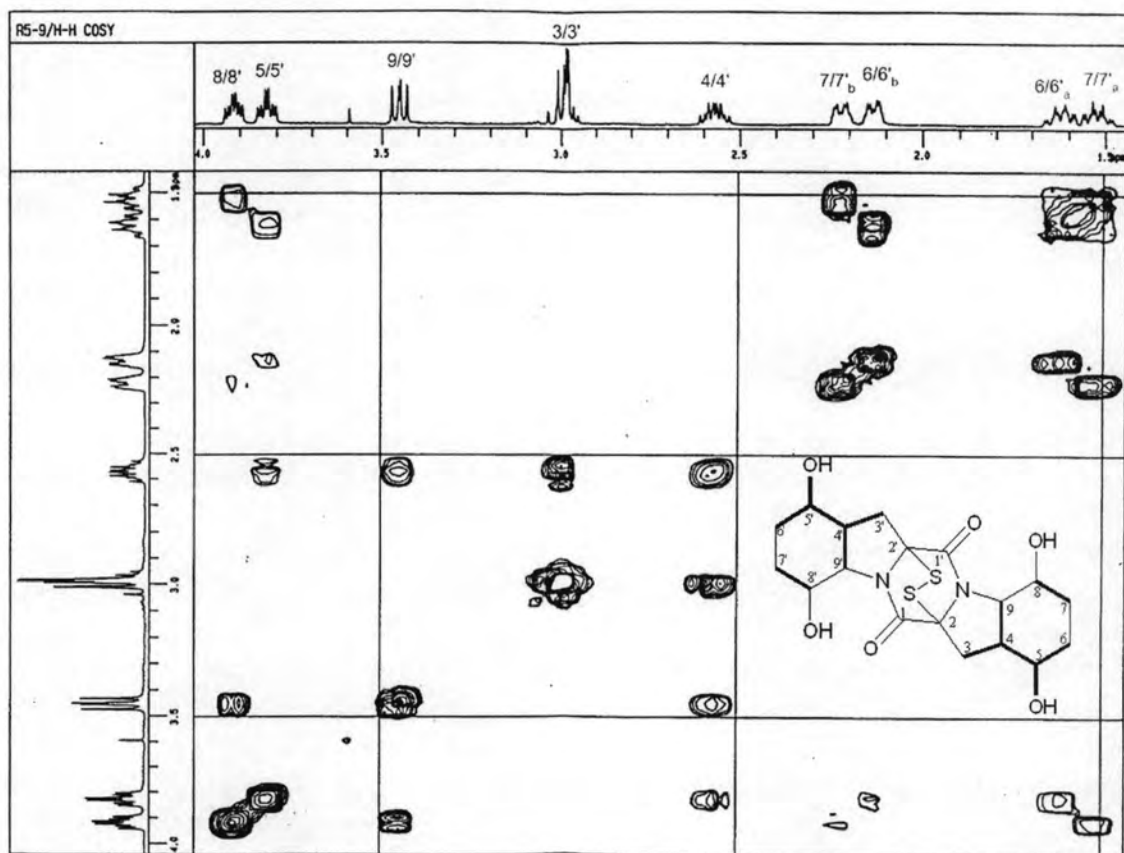


Figure 4.14 The 500 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of rostratin A (R5-9) in pyridine- $d_6$

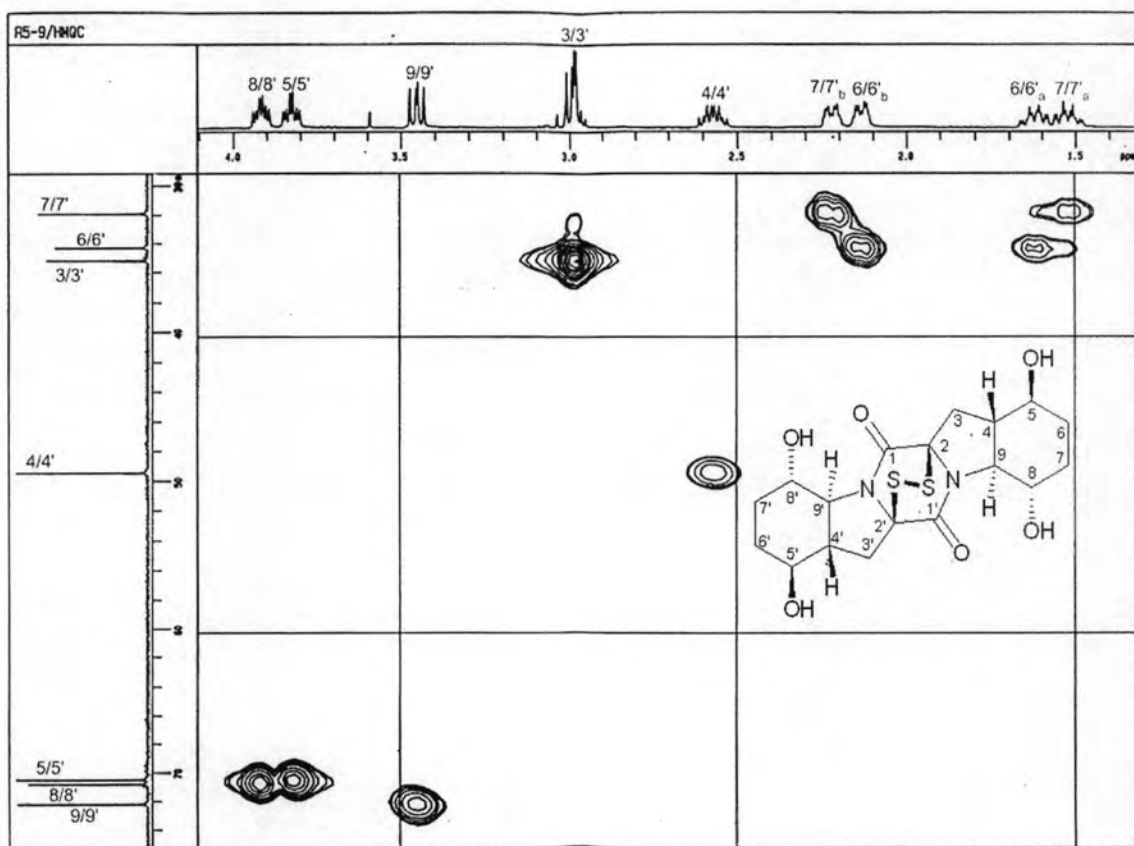


Figure 4.16 The 500 MHz HMQC spectrum of rostratin A (R5-9) in pyridine- $d_6$

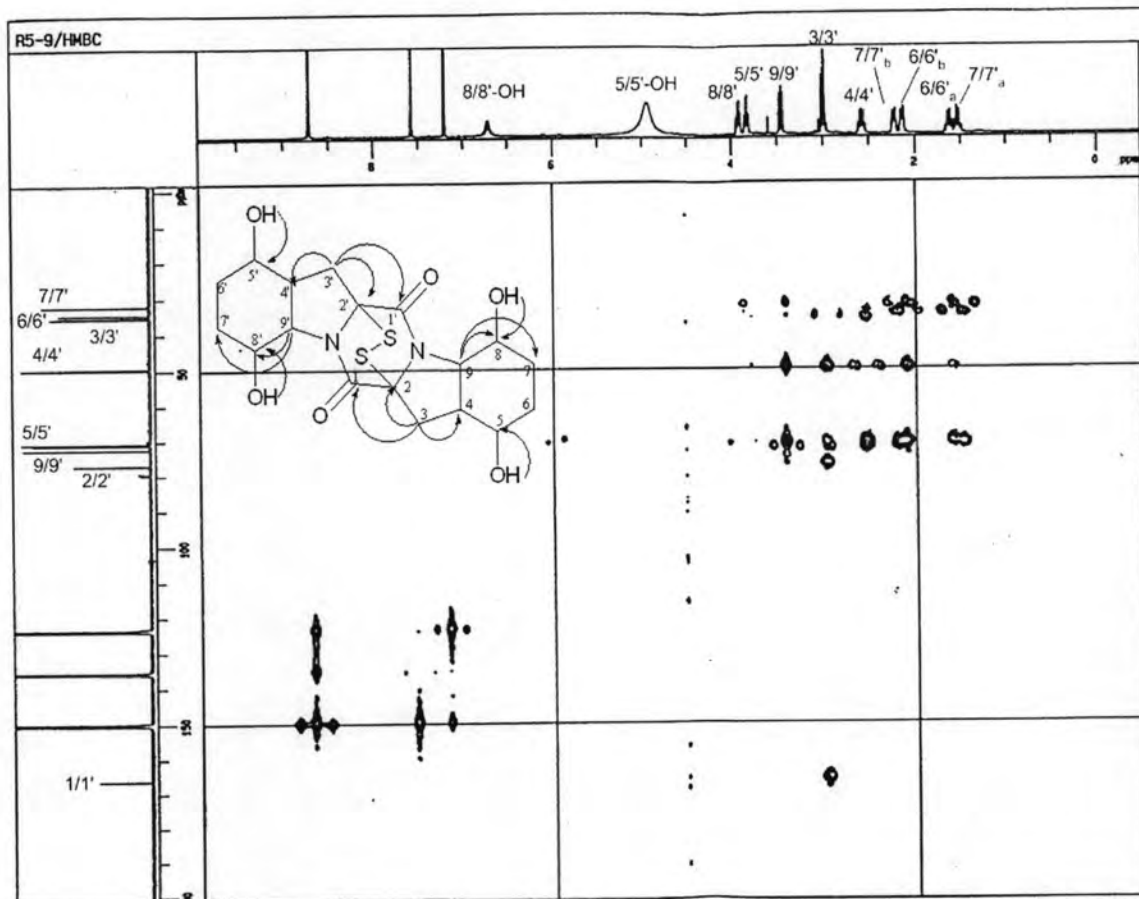


Figure 4.17 The 500 MHz HMBC spectrum of rostratin A (R5-9) in pyridine- $d_6$

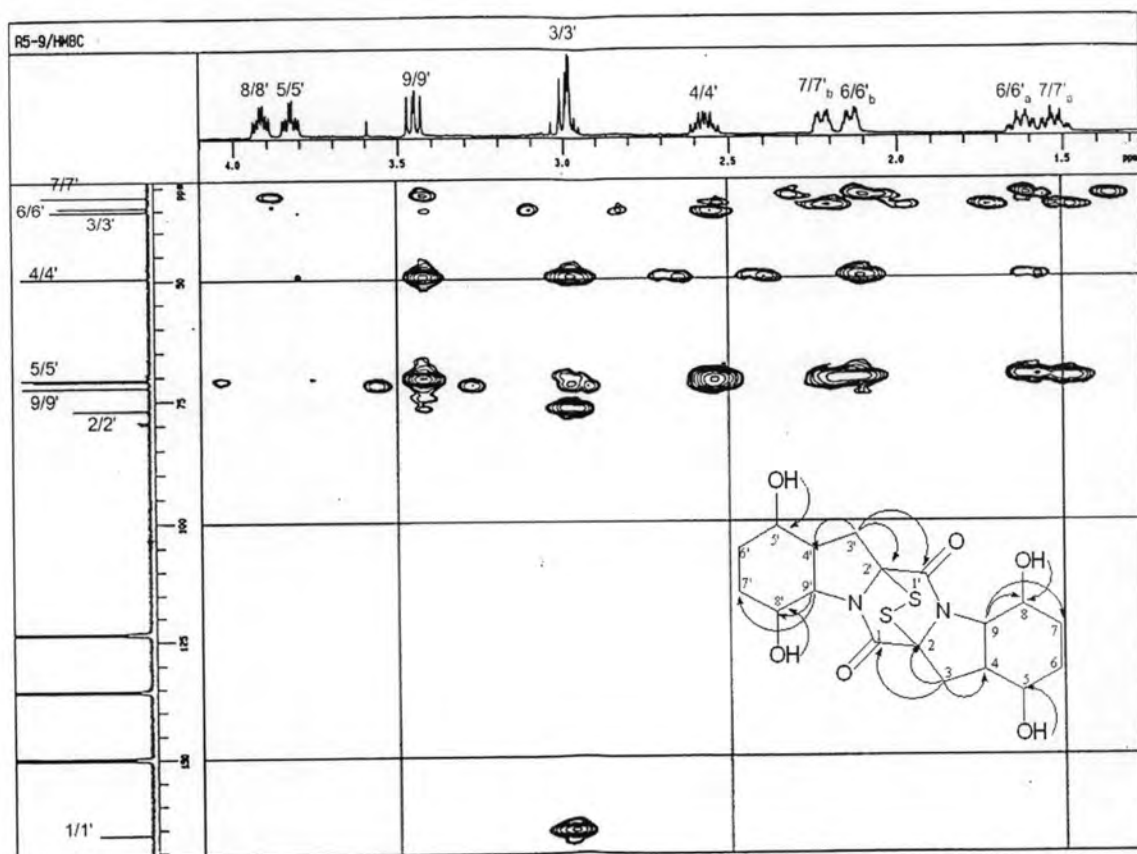


Figure 4.18 The 500 MHz HMBC spectrum of rostratin A (R5-9) in pyridine- $d_6$

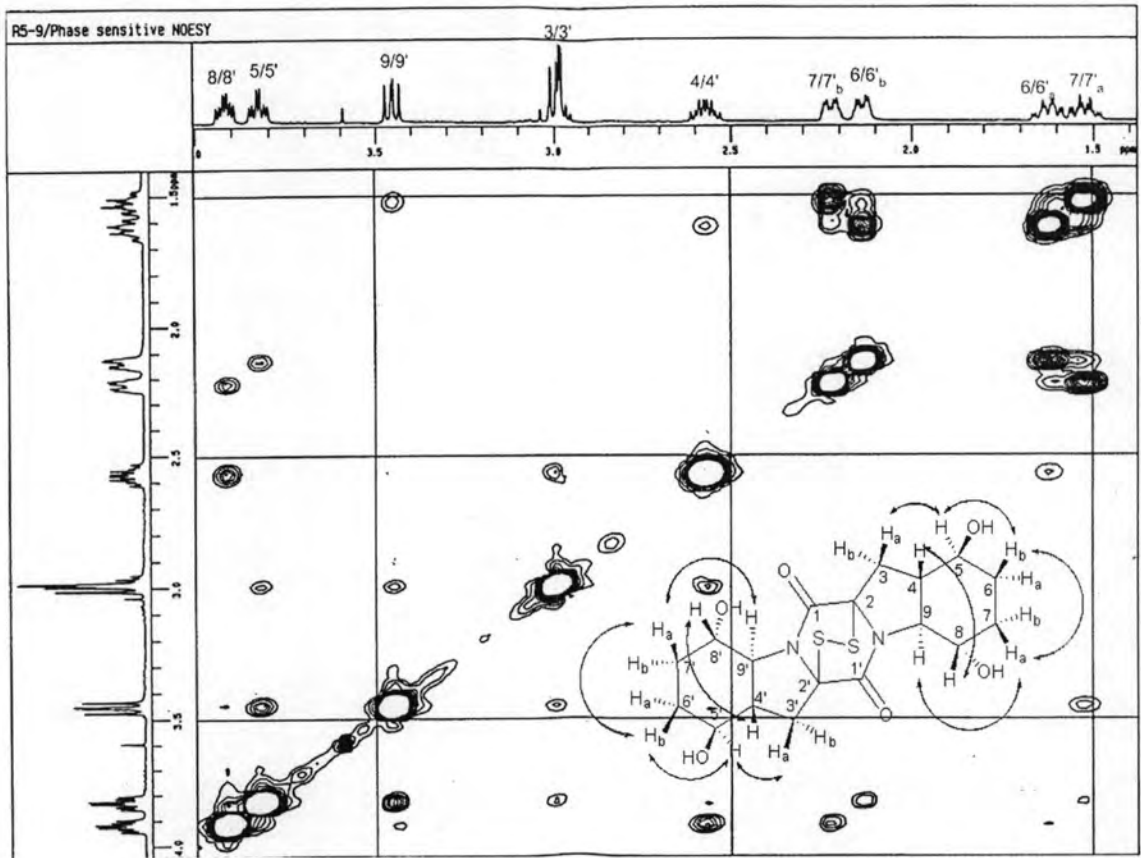


Figure 4.20 The 500 MHz NOESY spectrum of rostratin A (R5-9) in pyridine- $d_6$

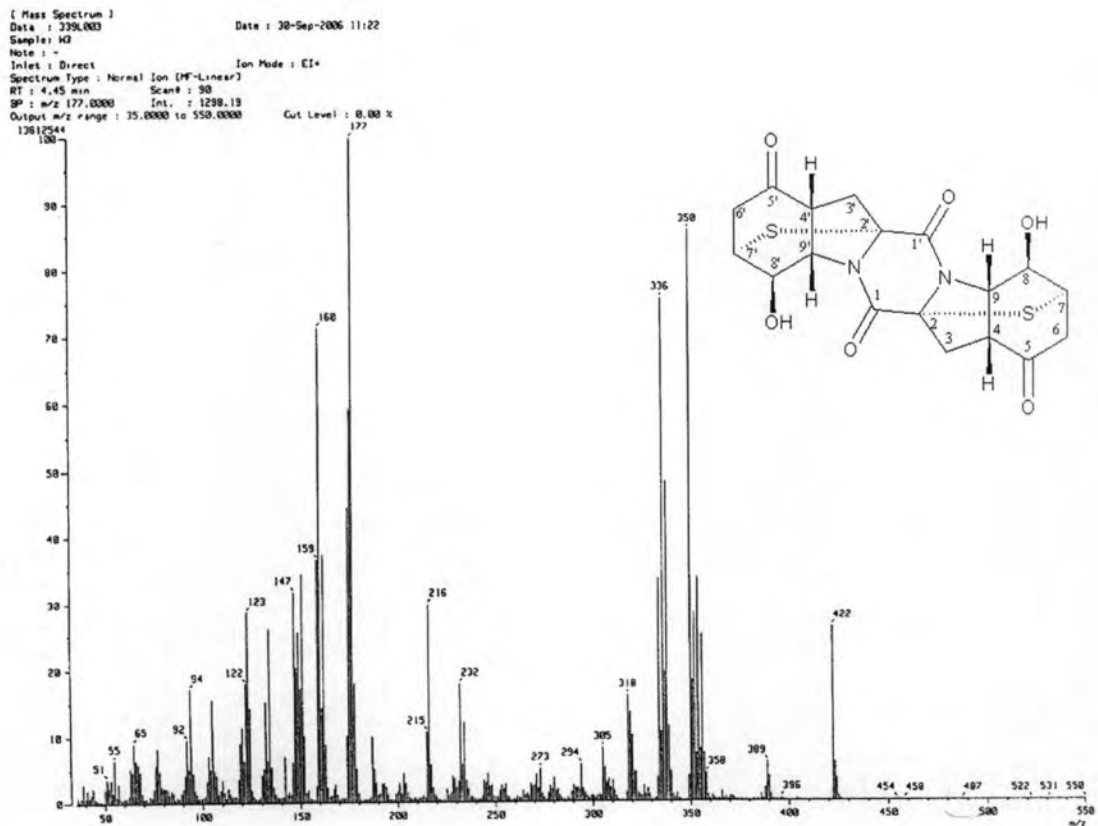


Figure 4.23 The EIMS spectrum of exserohilin A (W3)

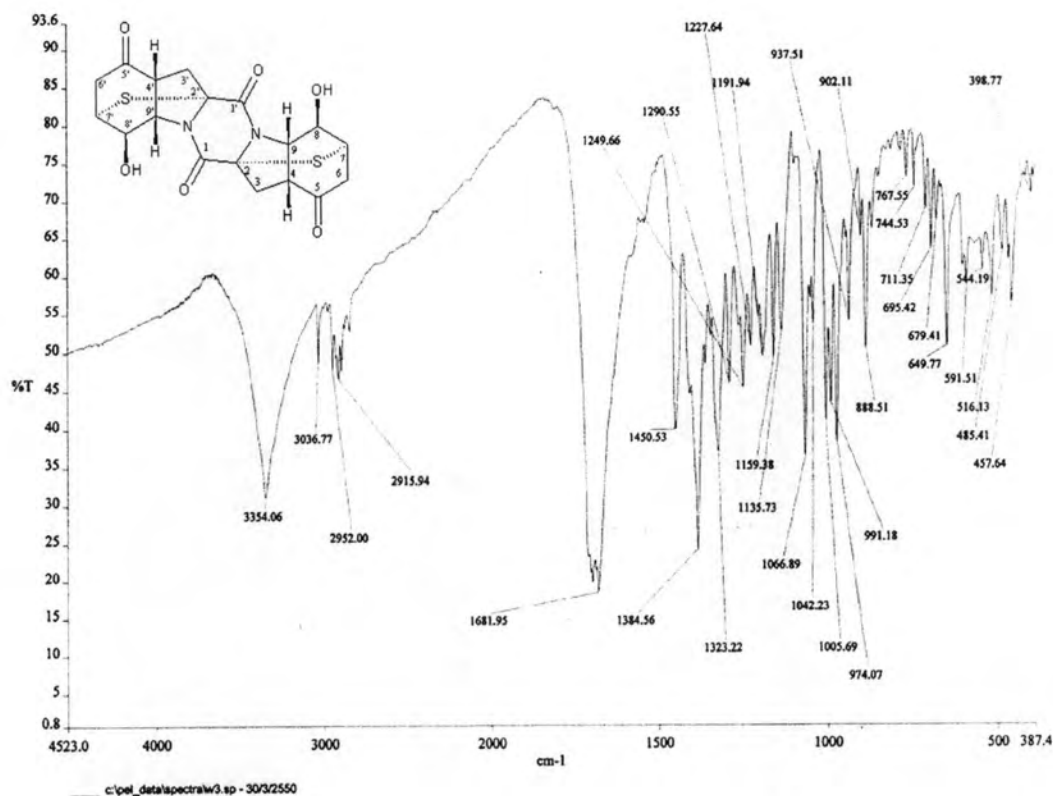


Figure 4.24 The IR spectrum of exserohilin A (W3)

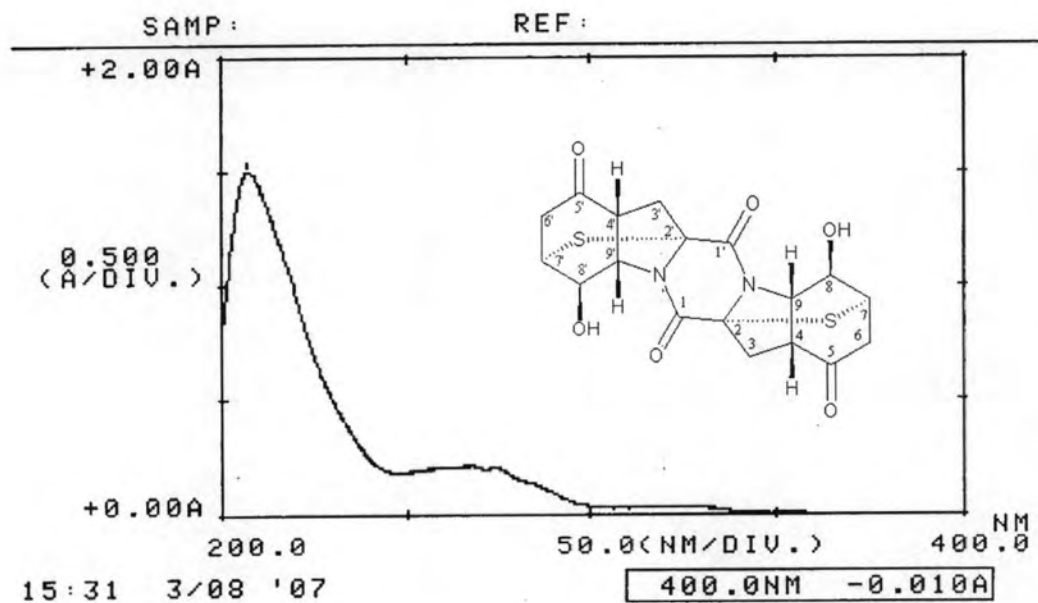
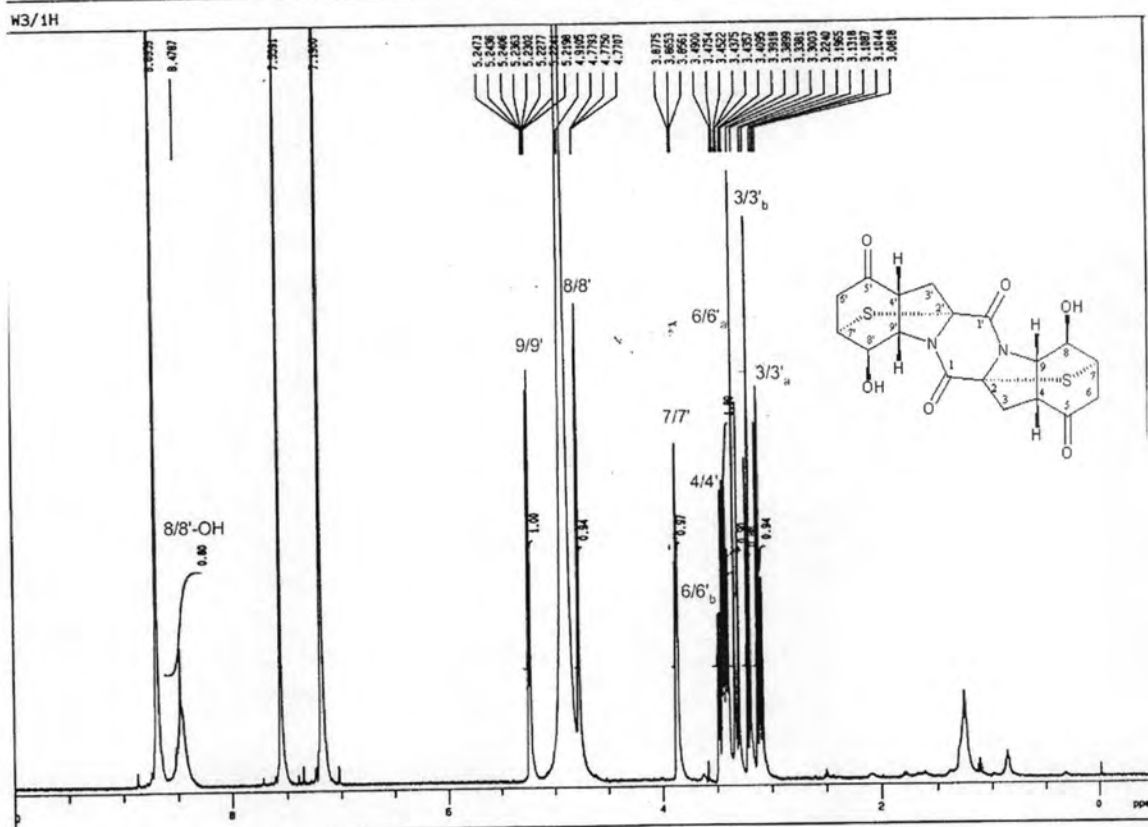
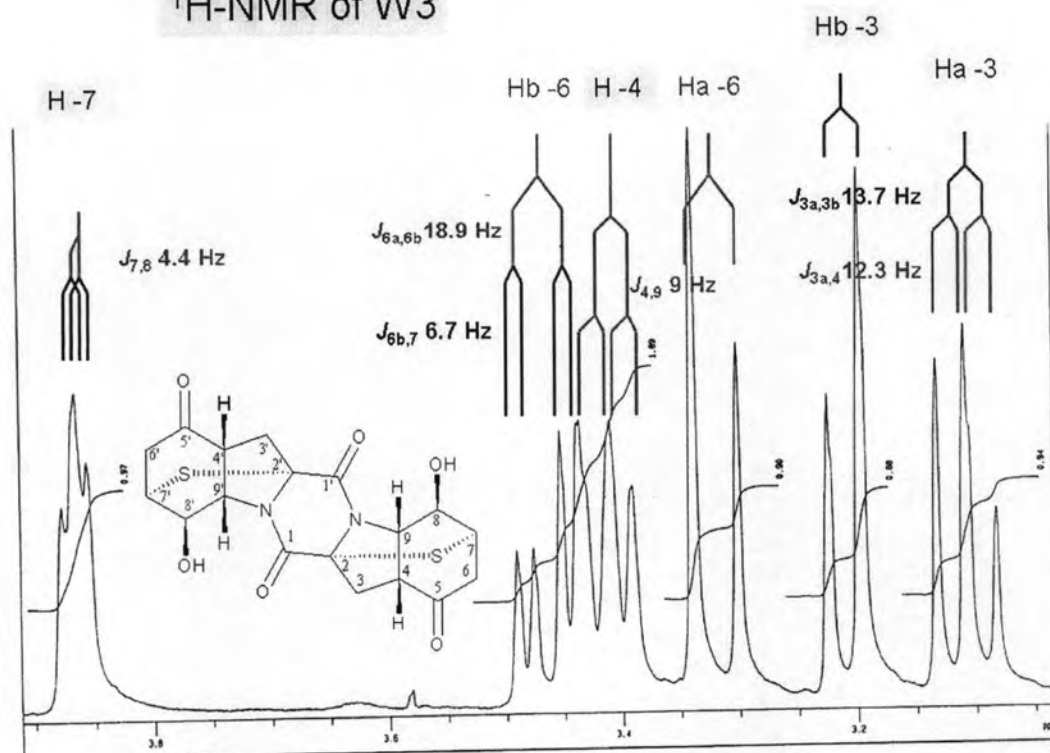


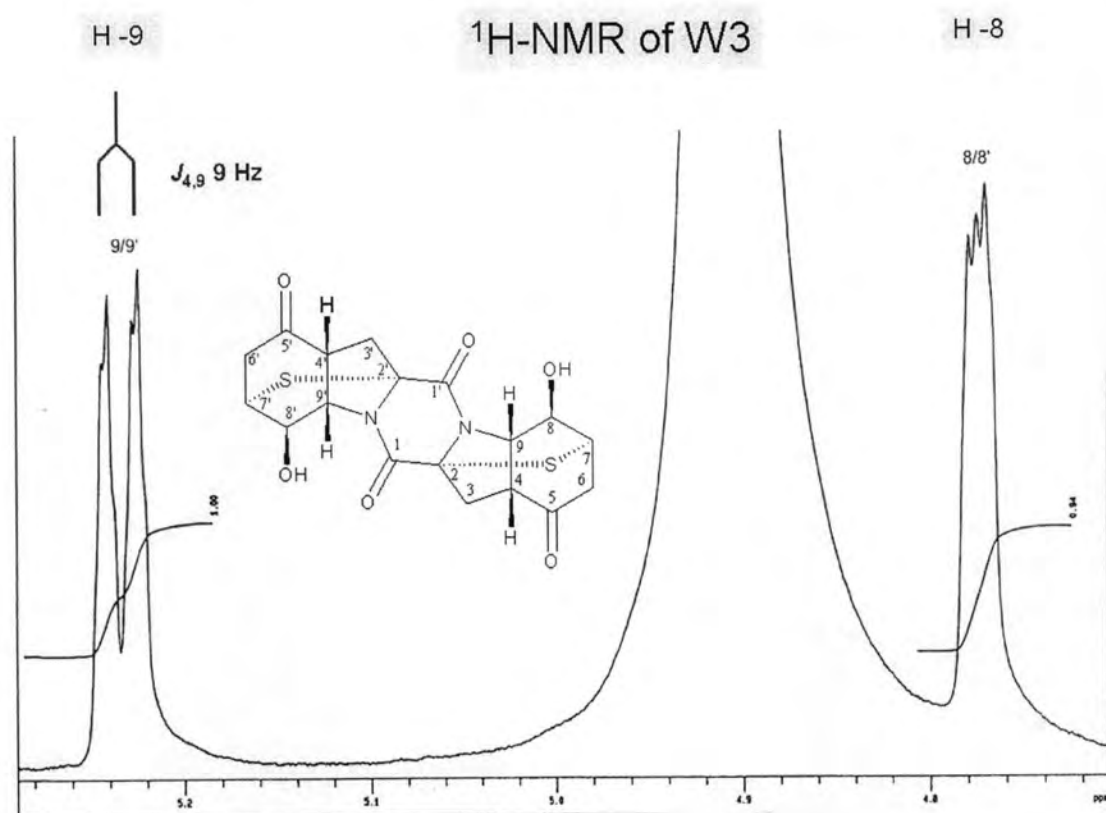
Figure 4.25 The UV spectrum of exserohilin A (W3)



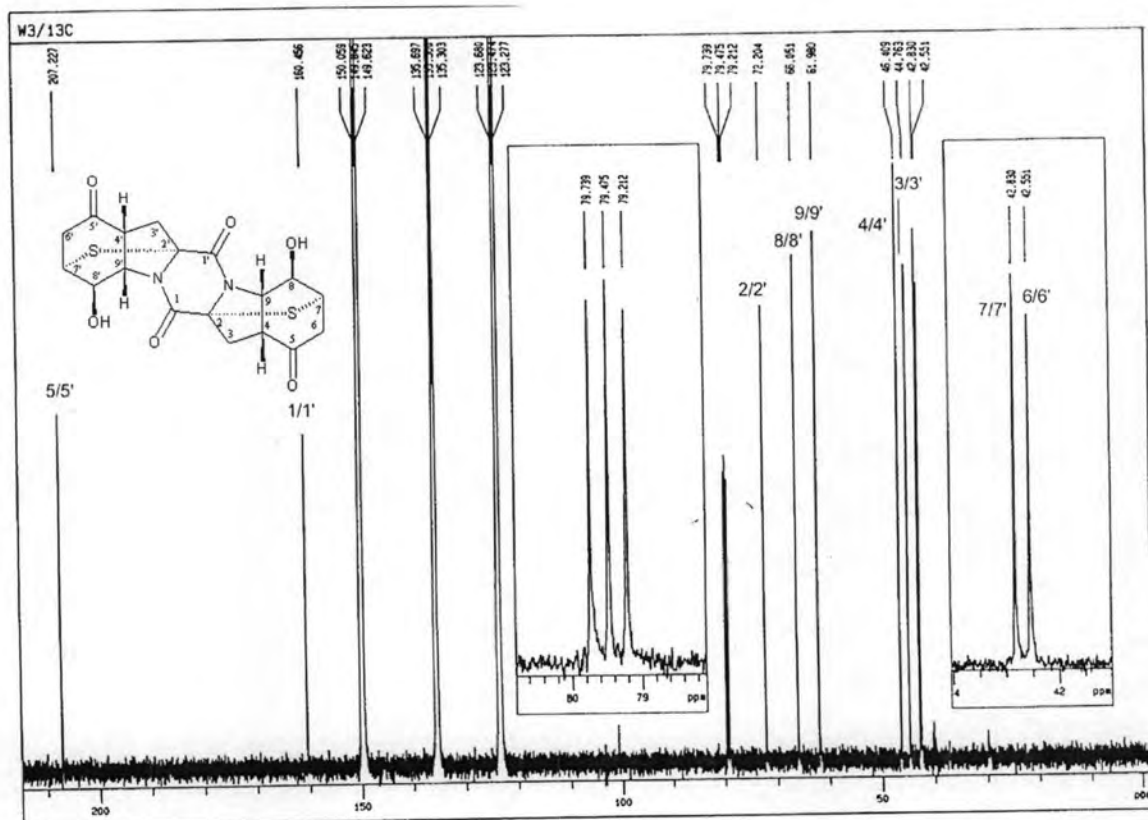
### $^1\text{H-NMR}$ of W3



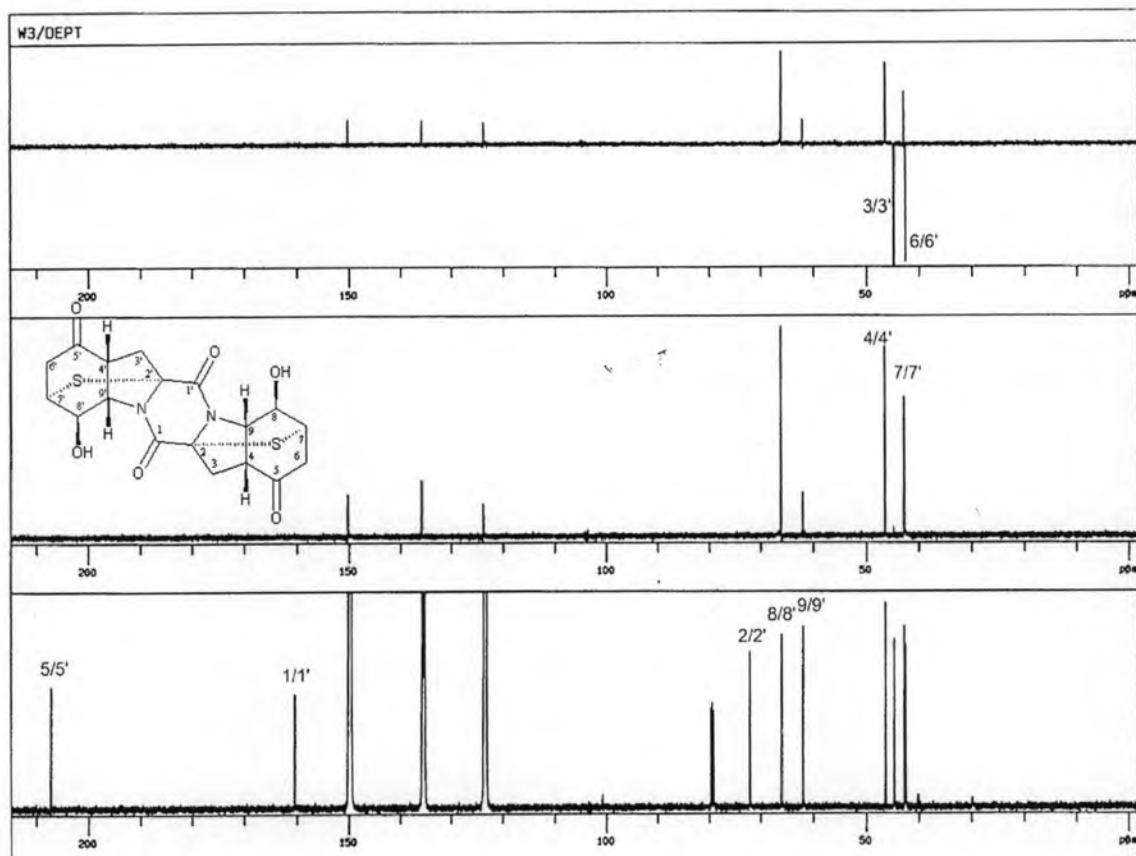




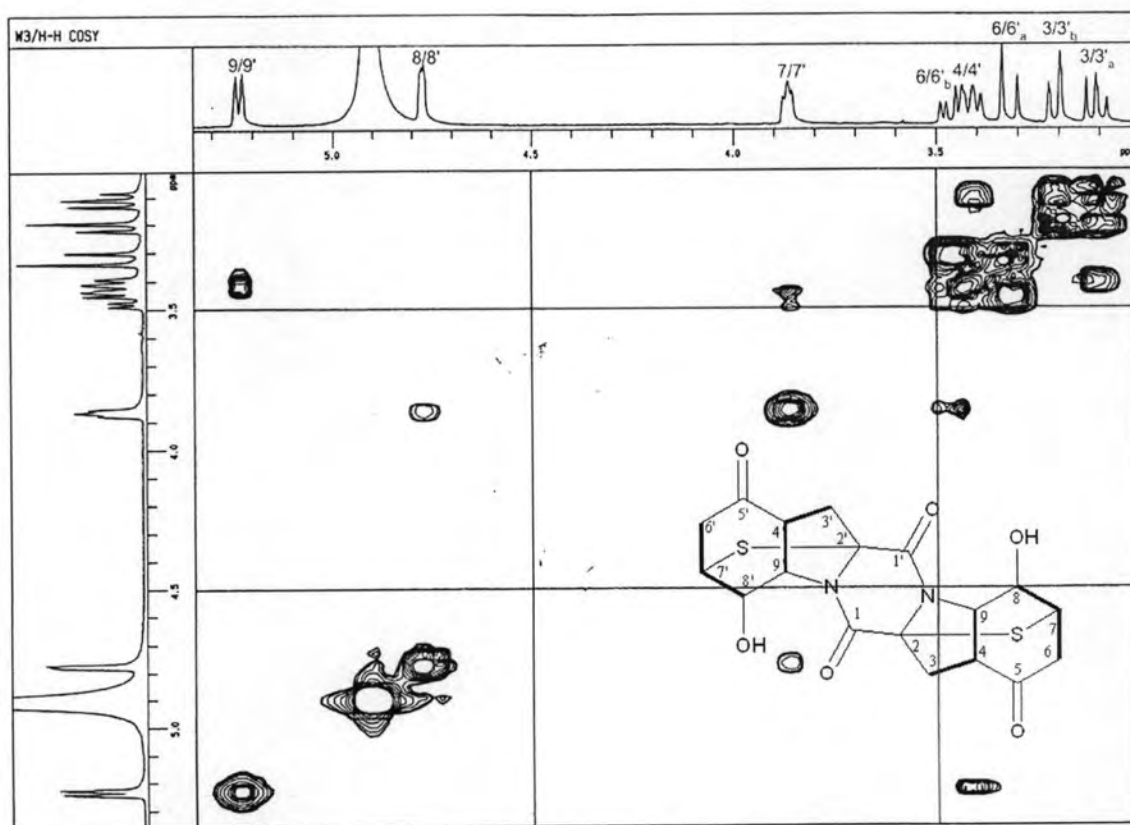
**Figure 4.26(b)** The 500 MHz <sup>1</sup>H-NMR spectrum of exserohilin A (W3) in pyridine-*d*<sub>6</sub> (expanded from 3.5-5.3 ppm with the coupling patterns and the coupling constants)



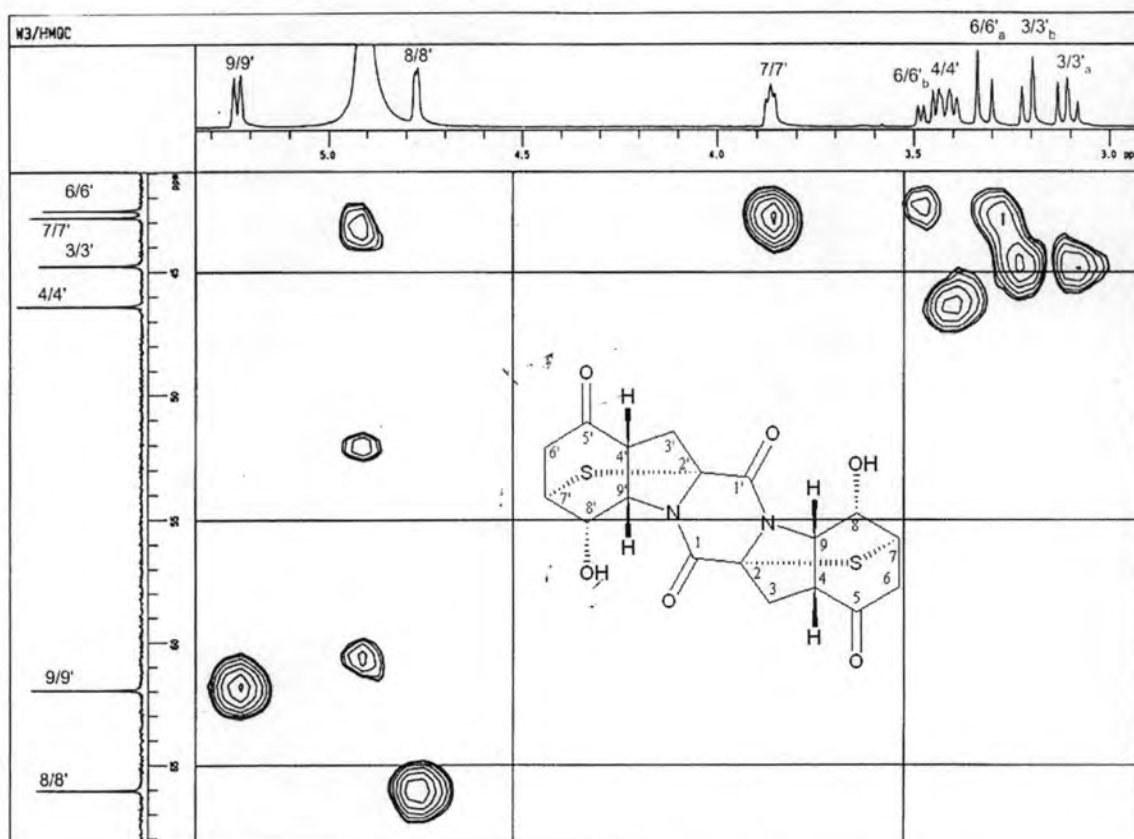
**Figure 4.27** The 125 MHz <sup>13</sup>C-NMR spectrum of exserohilin A (W3) in pyridine-*d*<sub>6</sub>



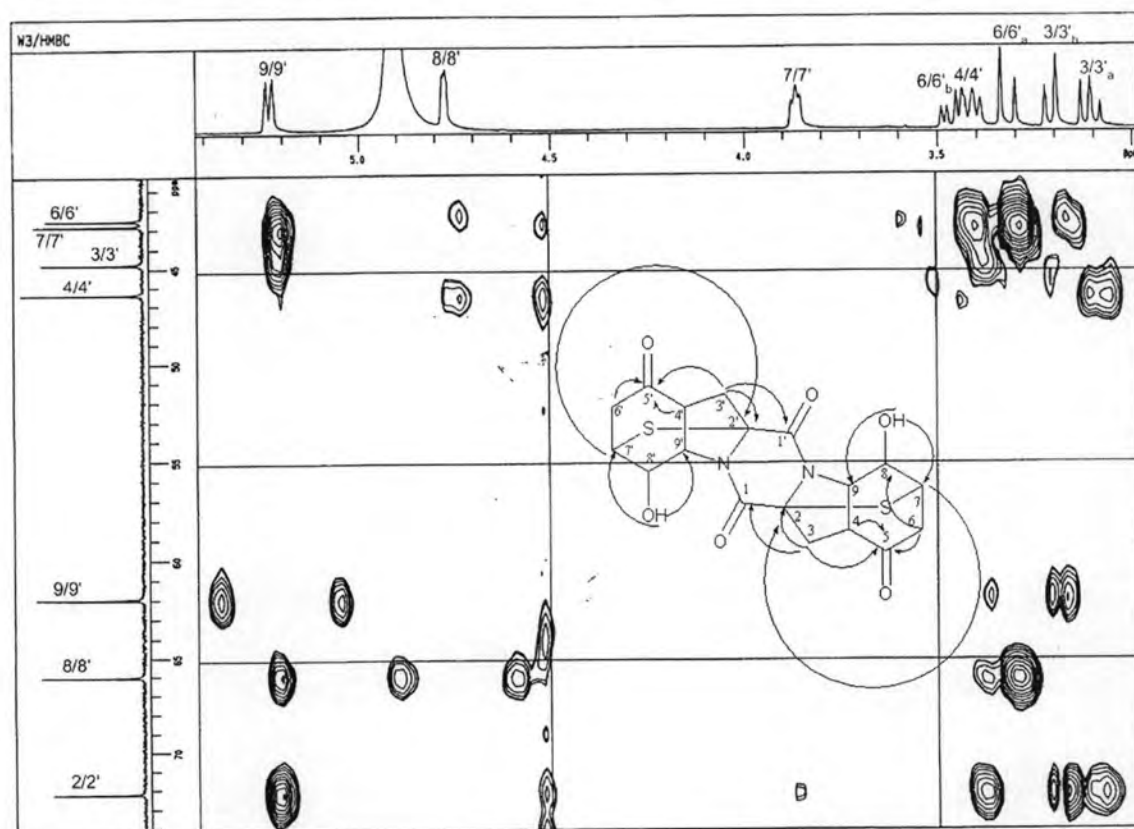
**Figure 4.28** The 125 MHz DEPT 135 and 90 spectrum of exserohilin A (W3) in pyridine- $d_6$



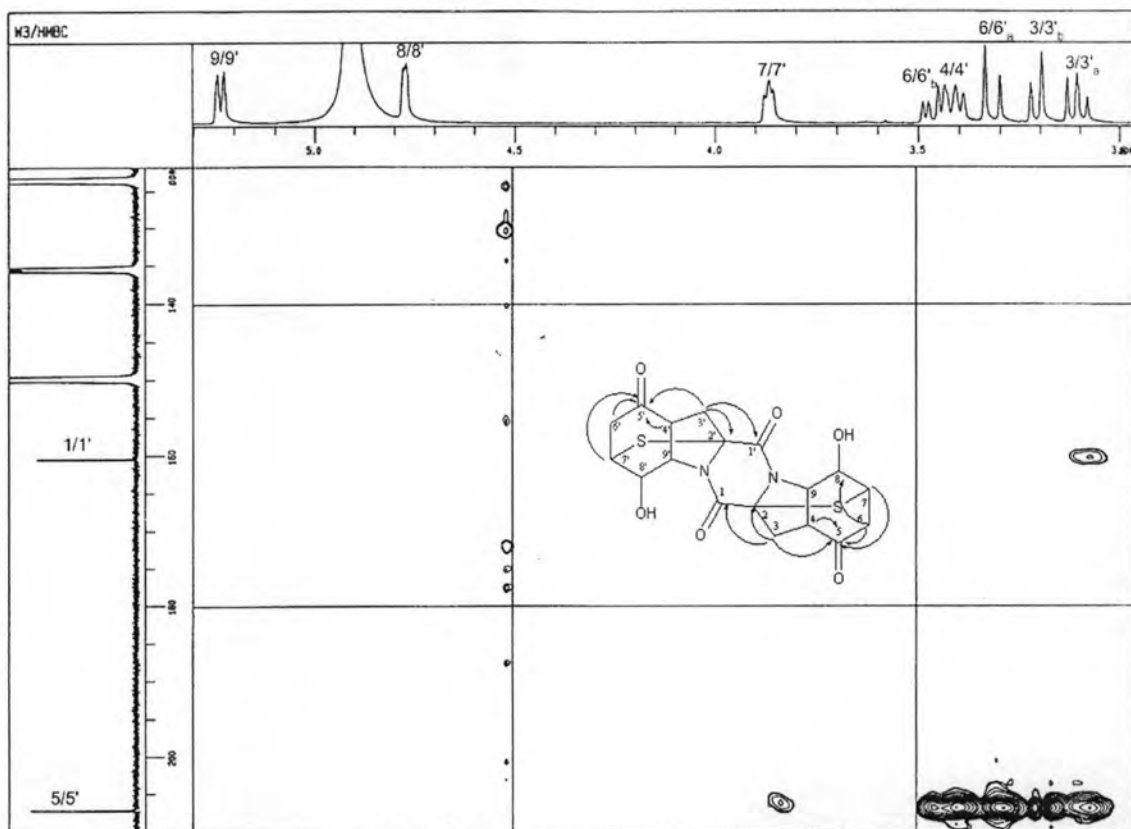
**Figure 4.29** The 500 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of exserohilin A (W3) in pyridine- $d_6$



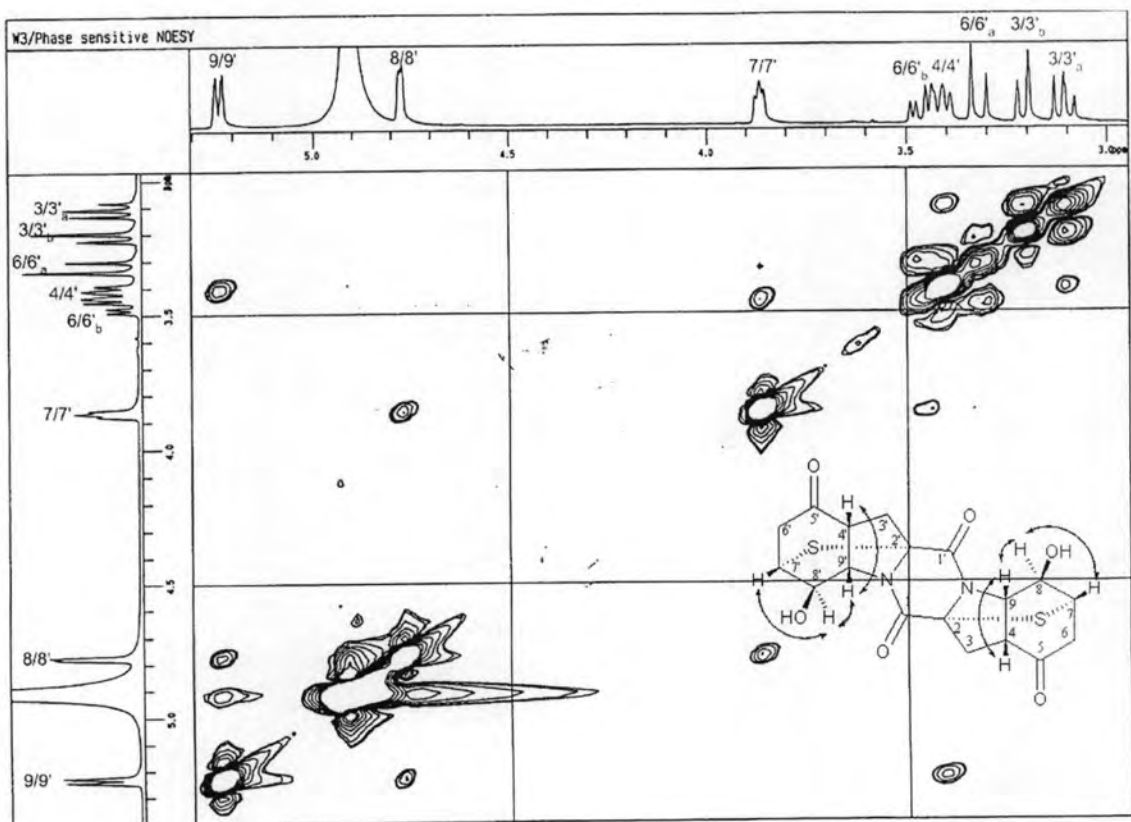
**Figure 4.31** The 500 MHz HMQC spectrum of exserohilin A (W3) in pyridine- $d_6$



**Figure 4.32** The 500 MHz HMBC spectrum of exserohilin A (W3) in pyridine- $d_6$



**Figure 4.33** The 500 MHz HMBC spectrum of exserohilin A (W3) in pyridine- $d_6$



**Figure 4.35** The 500 MHz NOESY spectrum of exserohilin A (W3) in pyridine- $d_6$

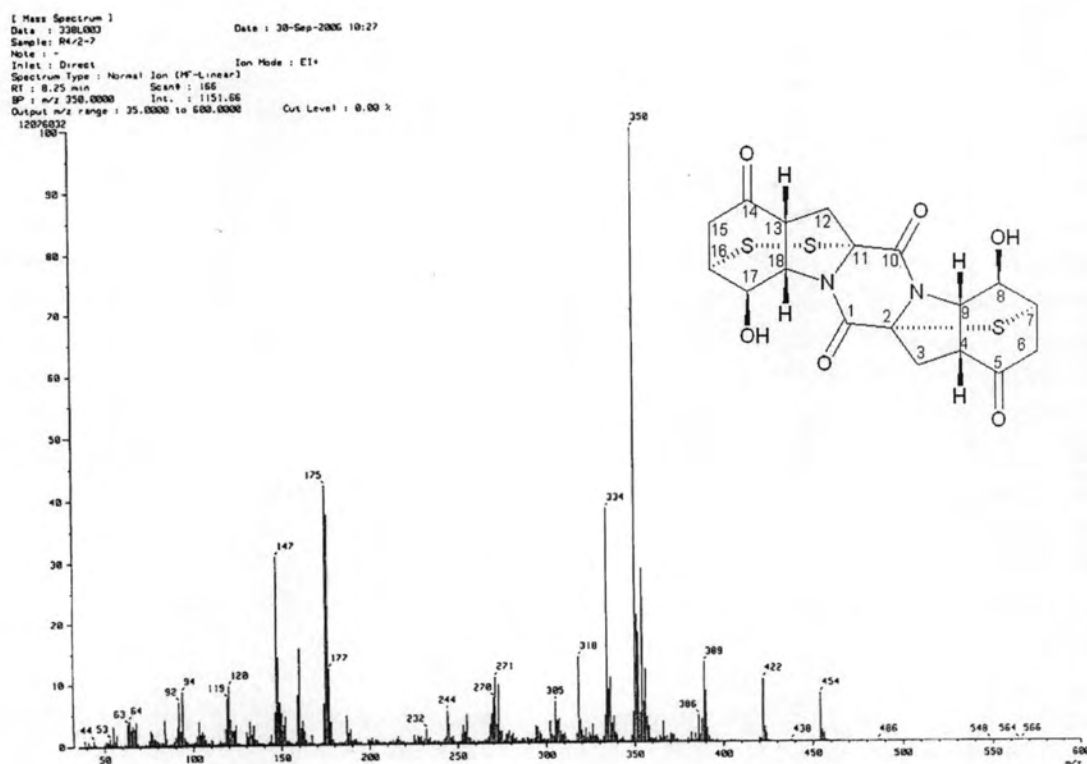


Figure 4.37 The EIMS spectrum of exserohilin B (R4/2-7)

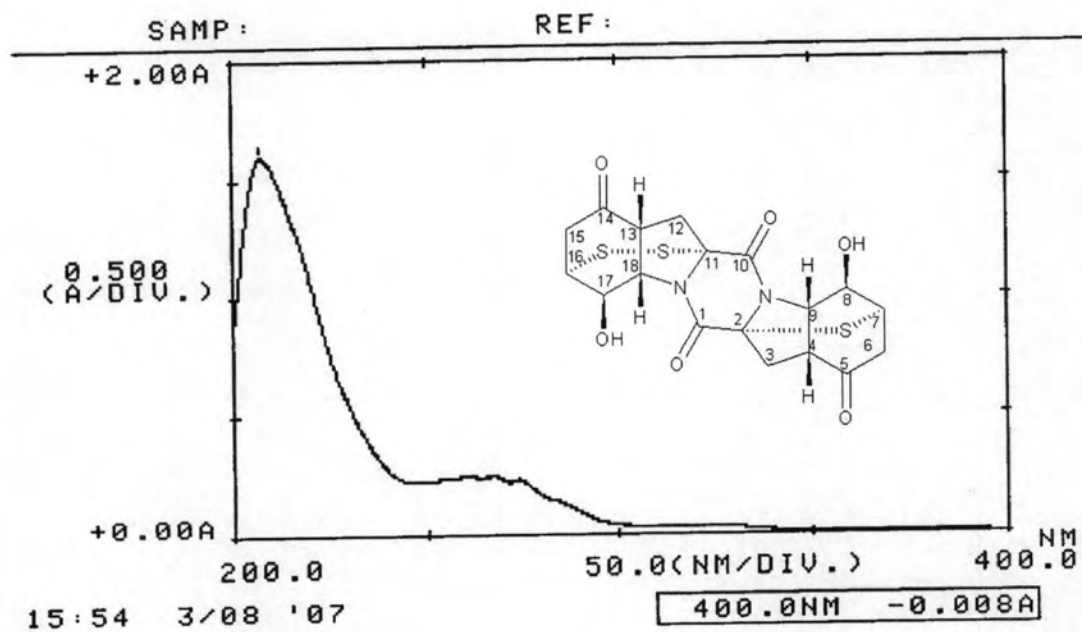


Figure 4.38 The UV spectrum of exserohilin B (R4/2-7)

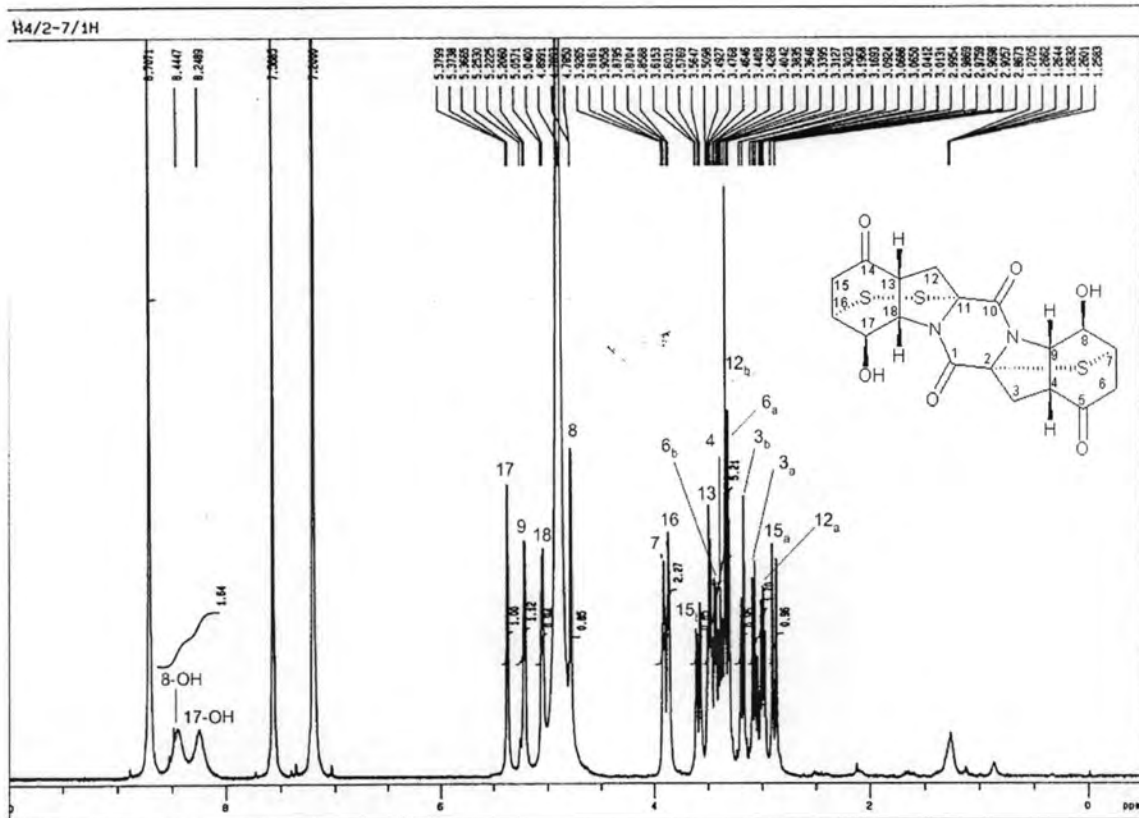


Figure 4.39 The 500 MHz  $^1\text{H-NMR}$  spectrum of exserohilin B (R4/2-7) in  $\text{pyridine-}d_6$

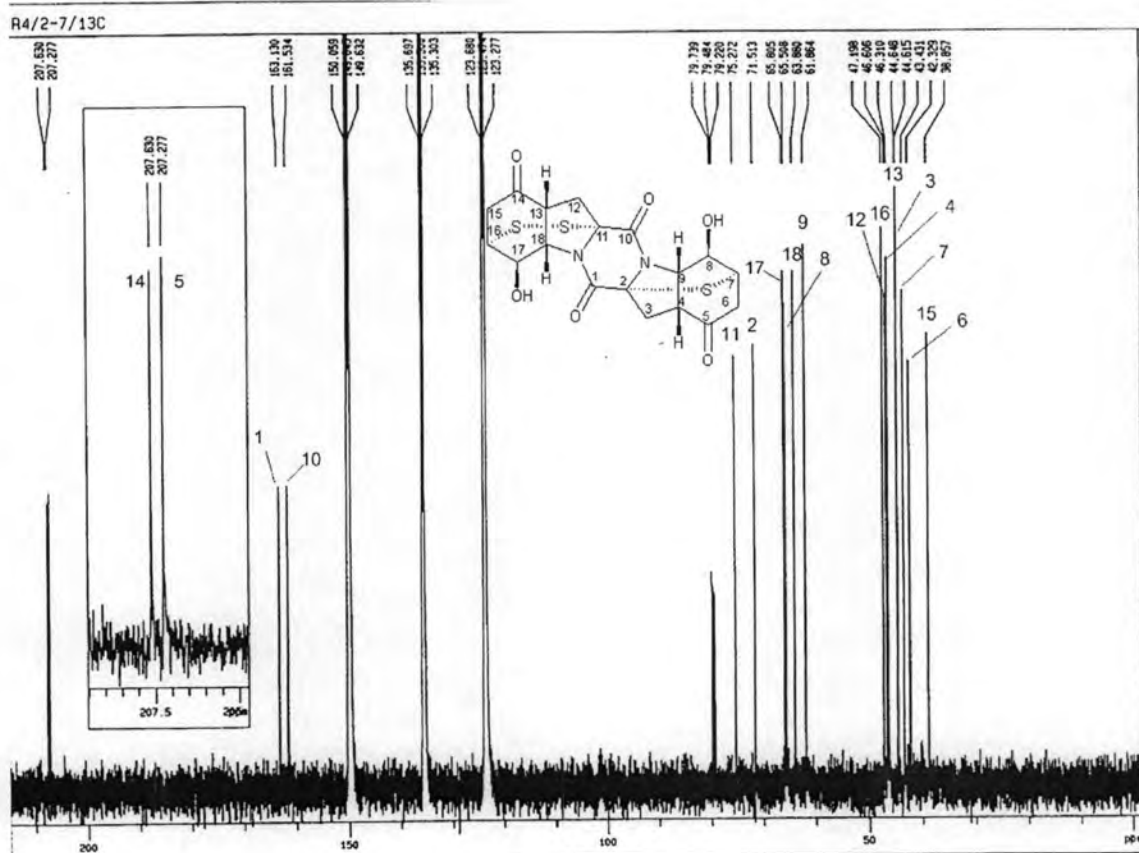
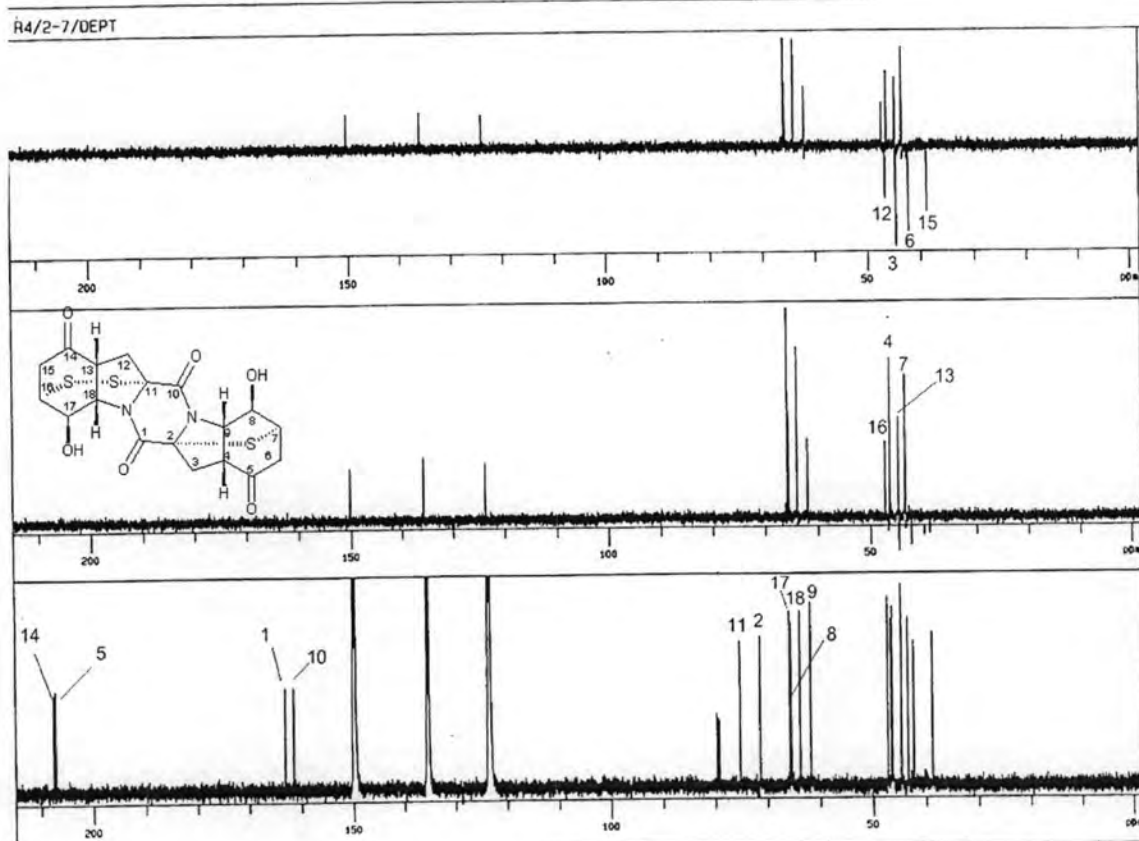
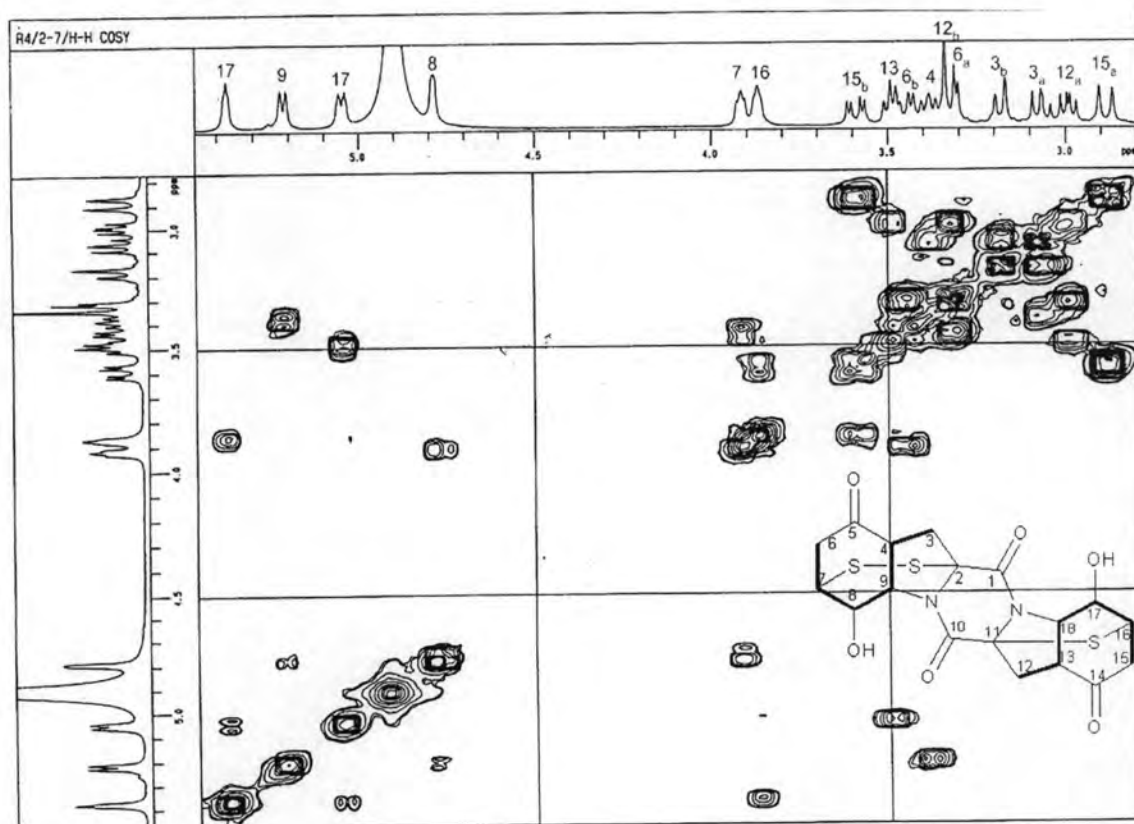


Figure 4.40 The 125 MHz  $^{13}\text{C-NMR}$  spectrum of exserohilin B (R4/2-7) in  $\text{pyridine-}d_6$

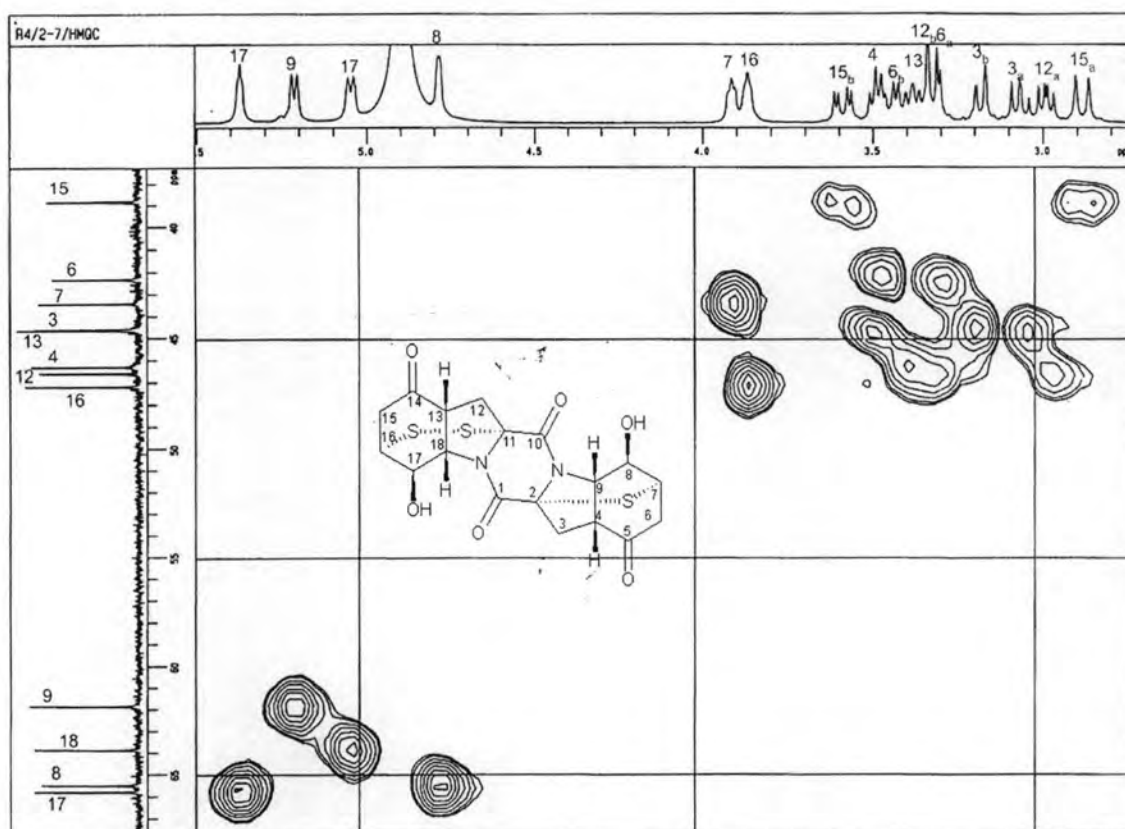




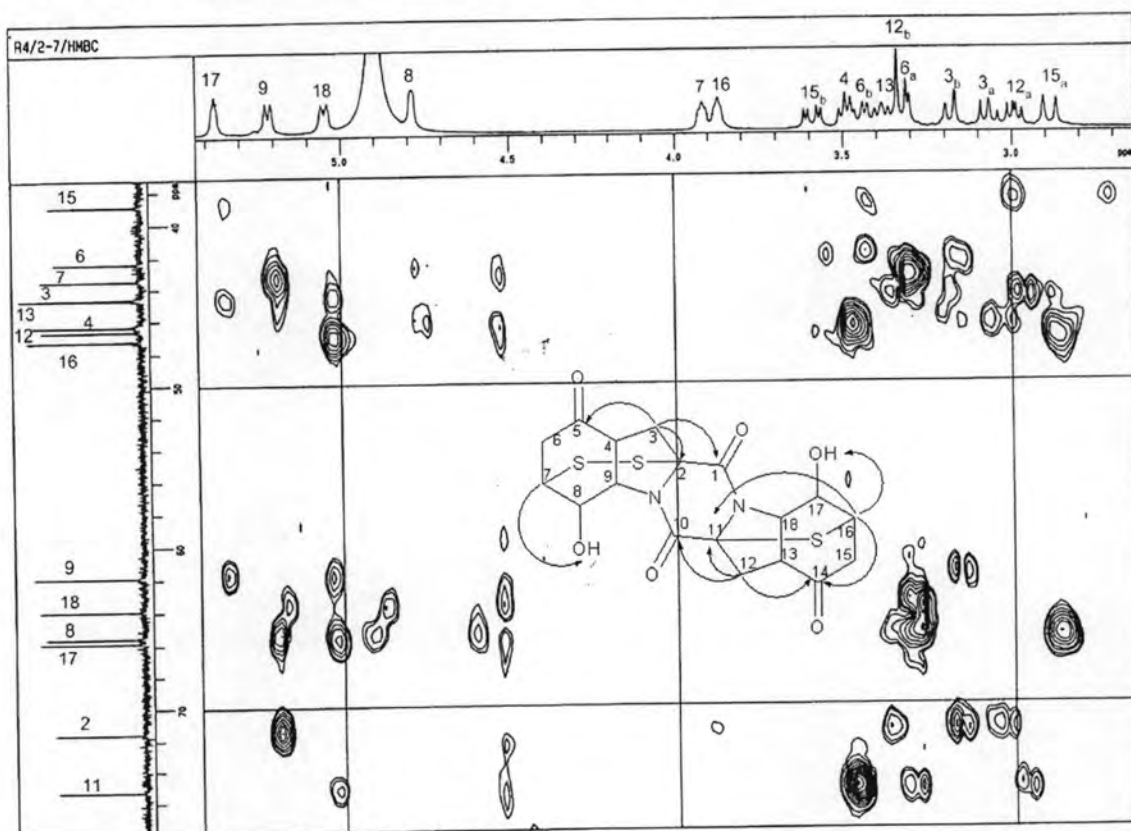
**Figure 4.41** The 125 MHz DEPT 135 and 90 spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$



**Figure 4.42** The 500 MHz  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$



**Figure 4.44** The 500 MHz HMQC spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$



**Figure 4.45** The 500 MHz HMBC spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$

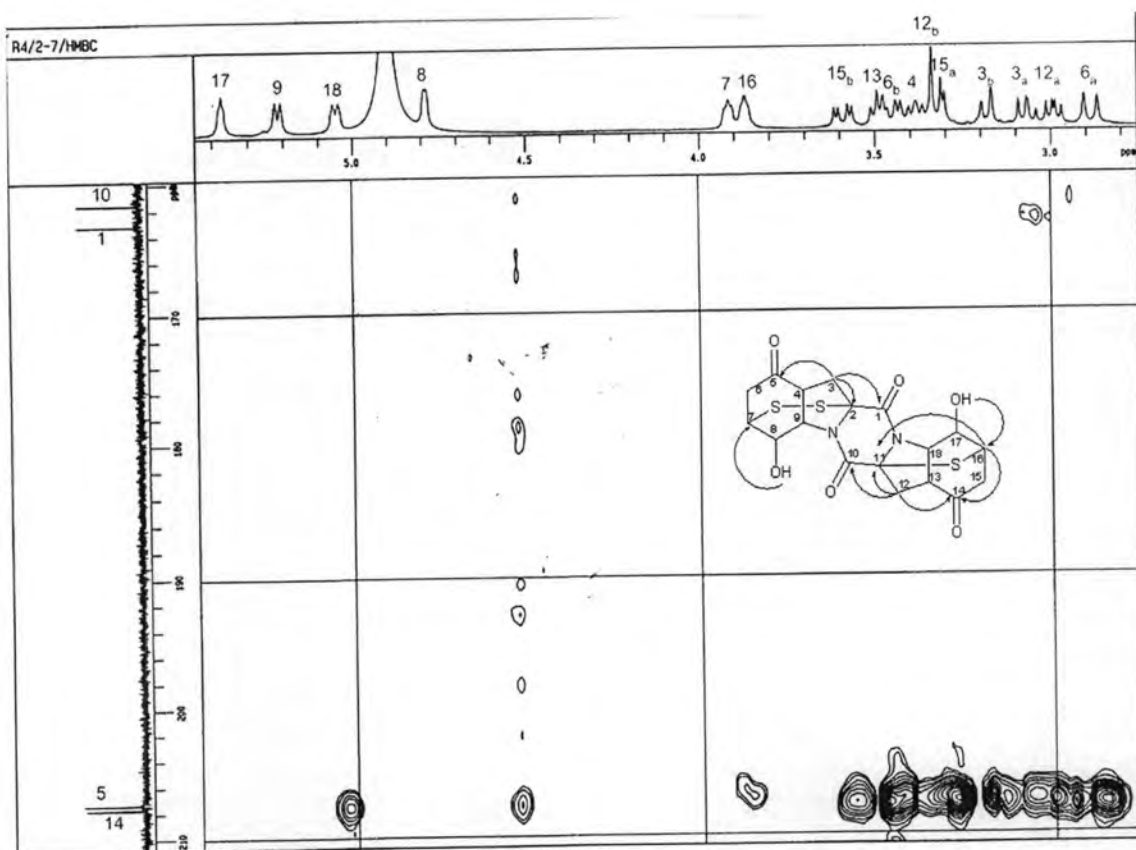


Figure 4.46 The 500 MHz HMBC spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$

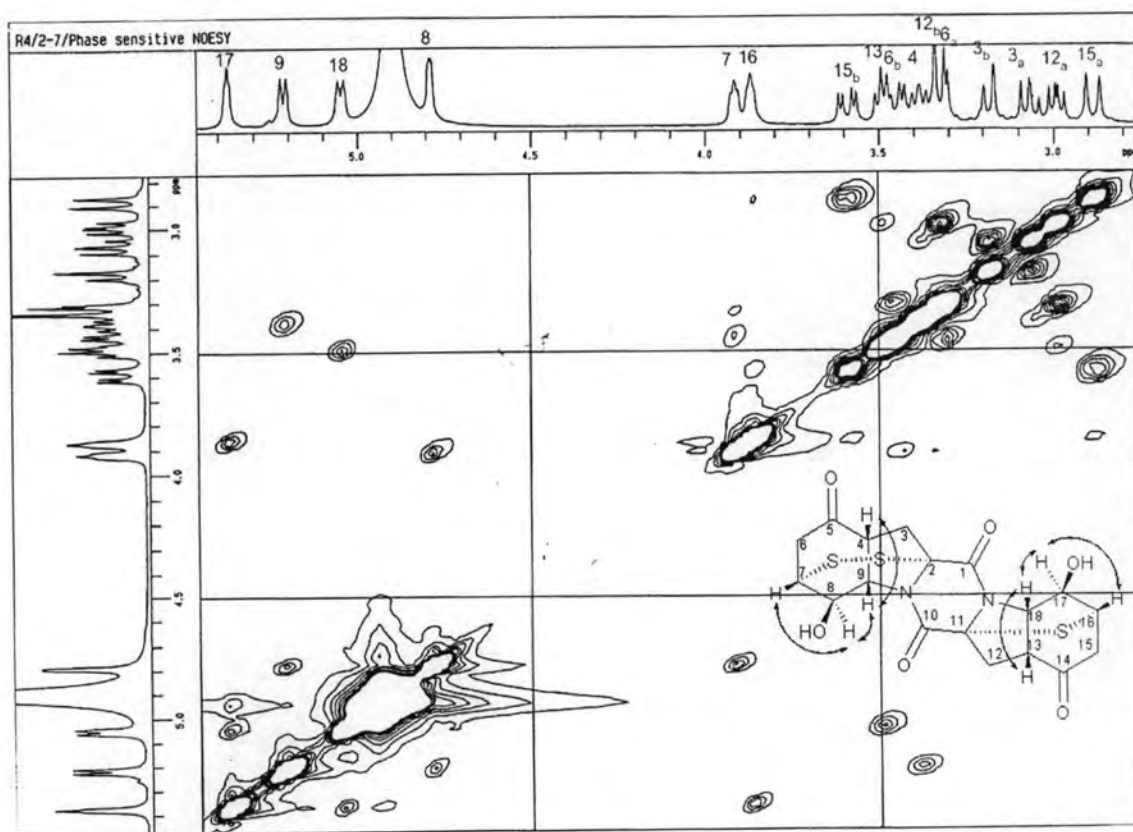


Figure 4.48 The 500 MHz NOESY spectrum of exserohilin B (R4/2-7) in pyridine- $d_6$

## MEDIA

### 1. Mueller-Hinton agar, MHA (Difco®)

Beef infusion form	30.0	g
Casamino acid, Technical	1.75	g
Starch	0.15	g
Agar	1.7	g
pH 7.3		

### 2. Sabouraud's dextrose agar, SDA (Difco®)

Neopeptone	10.0	g
Dextrose	40.0	g
Agar	15	g
Purified water	1000	ml
pH 5.60 ± 0.2		

No agar added for Sabouraud's dextrose broth (SDB)

### 3. Tryptic soy agar, TSA (Difco®)

Tryptone peptone	15.0	g
(Pancreatic digest of casein)		
Soytone peptone	5.0	g
(Peptic digest of soybean meal)		
NaCl	5.0	g
Agar	15.0	g
Distilled water	1,000	ml
pH 7.3 ± 0.2		

**4. Yeast extract-malt extract agar, YMA**

Yeast extract	4.0	g
Malt extract	10.0	g
Glucose	4.0	g
Water	1,000	ml
Agar	15	g

pH 7.3

No agar added for Yeast extract-malt extract broth (YM)

## VITA

Miss Napannop Boonthanom was born on April 21, 1980 in Bangkok, Thailand. She received her Bachelor's Degree of Science in Pharmacy in 2002 from the Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand. During her study, she received a Chula-Chiba student exchange scholarship from the Faculty of Pharmaceutical Sciences, Chulalongkorn University to study at Chiba University, Japan for one month. Now she is working as a hospital pharmacist at Rajawithee Hospital, Bangkok, Thailand. She has been assigned to work as an expert in the chemotherapy unit.