

## Supplementary Materials

Figure S1. IR spectrum of compound 2.

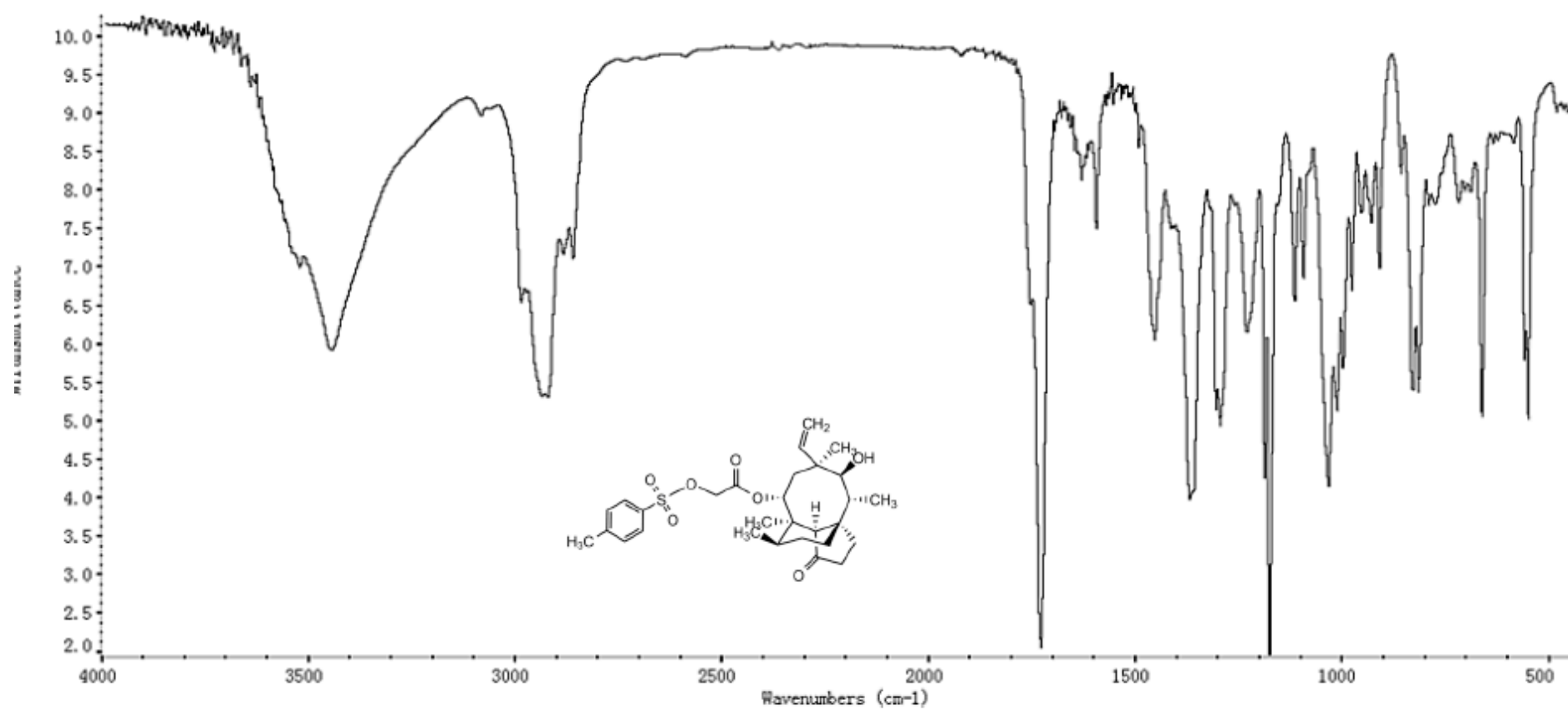


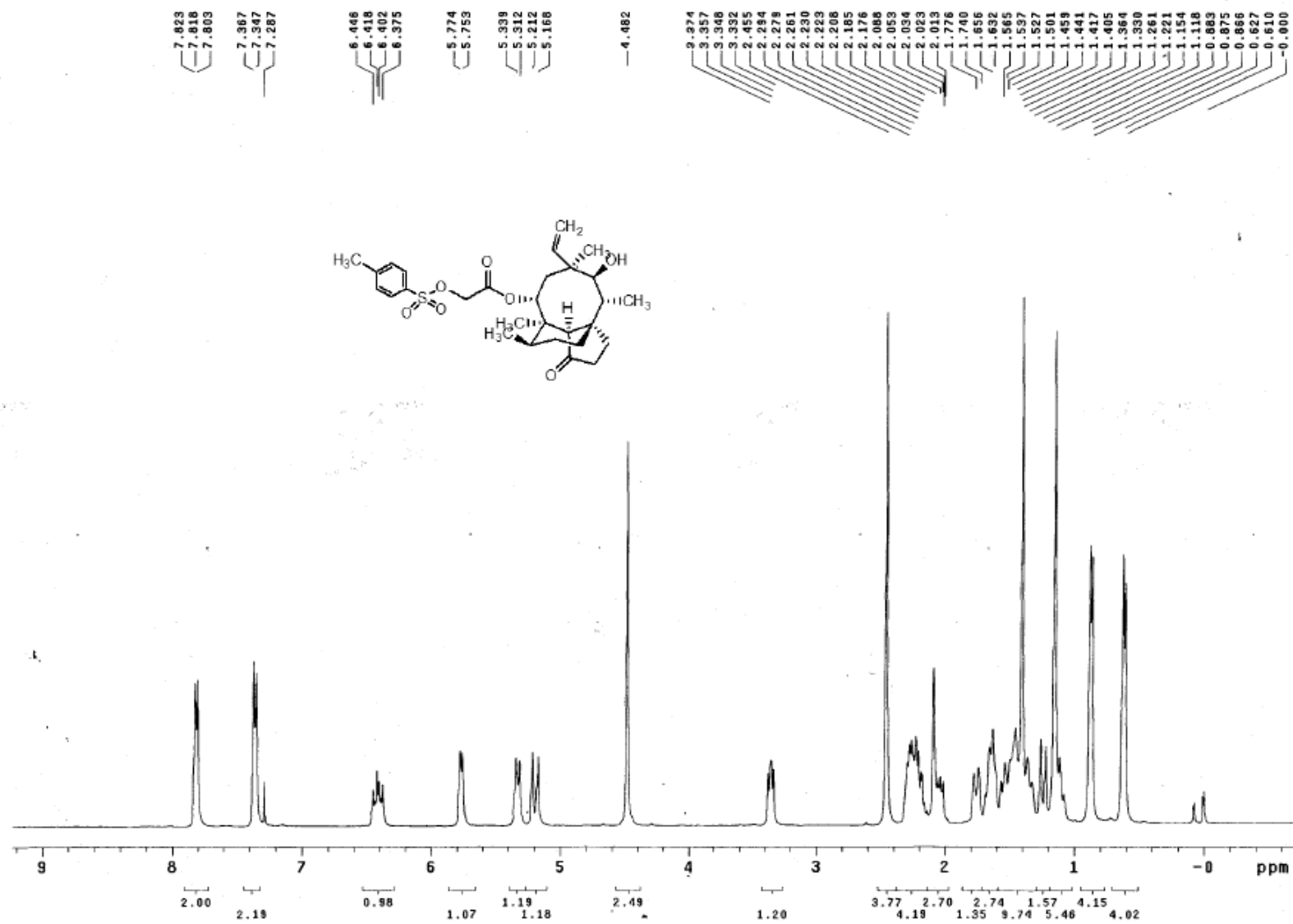
Figure S2. <sup>1</sup>H-NMR spectrum of compound 2.

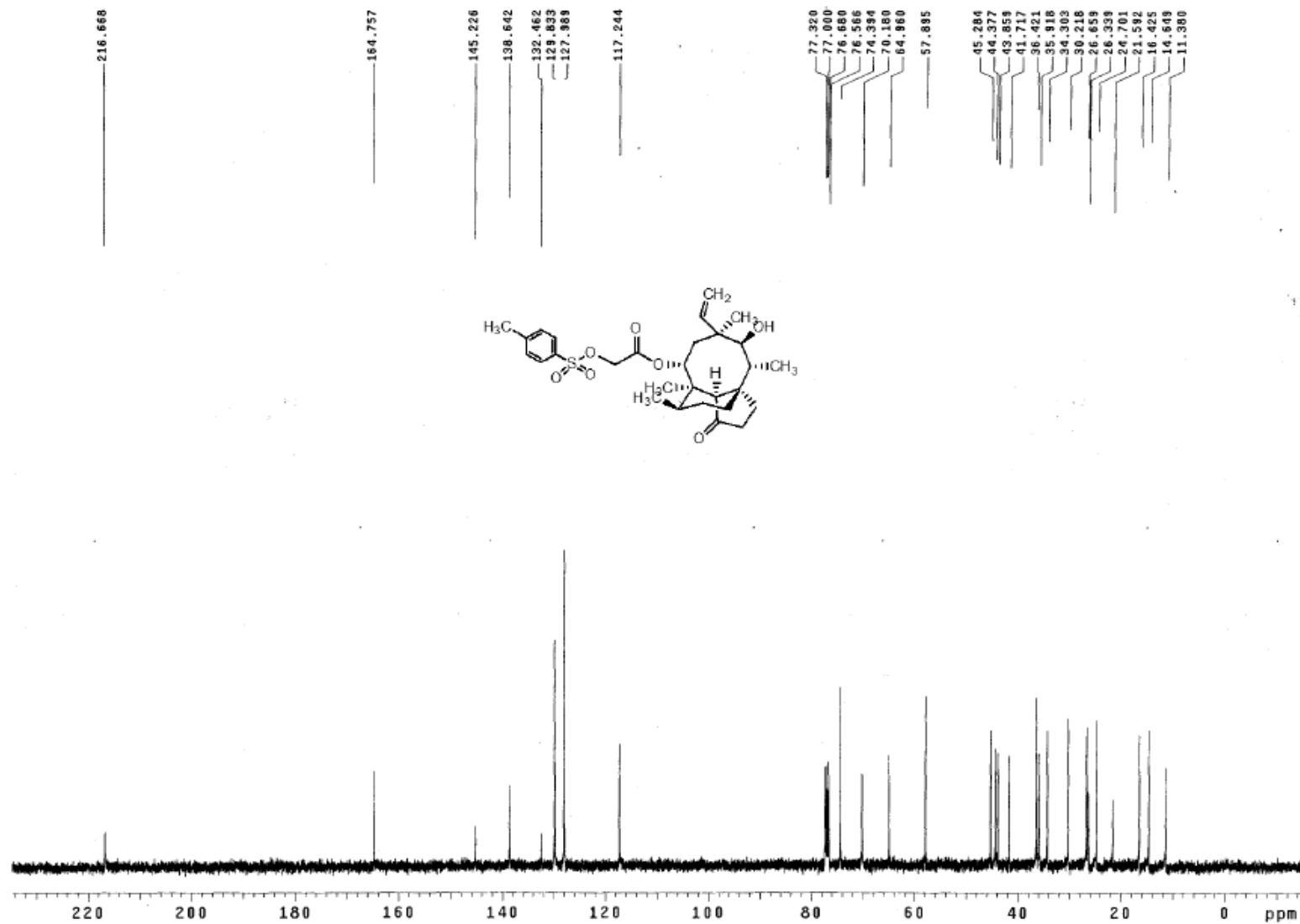
Figure S3.  $^{13}\text{C}$ -NMR spectrum of compound 2.

Figure S4. IR spectrum of compound 3.

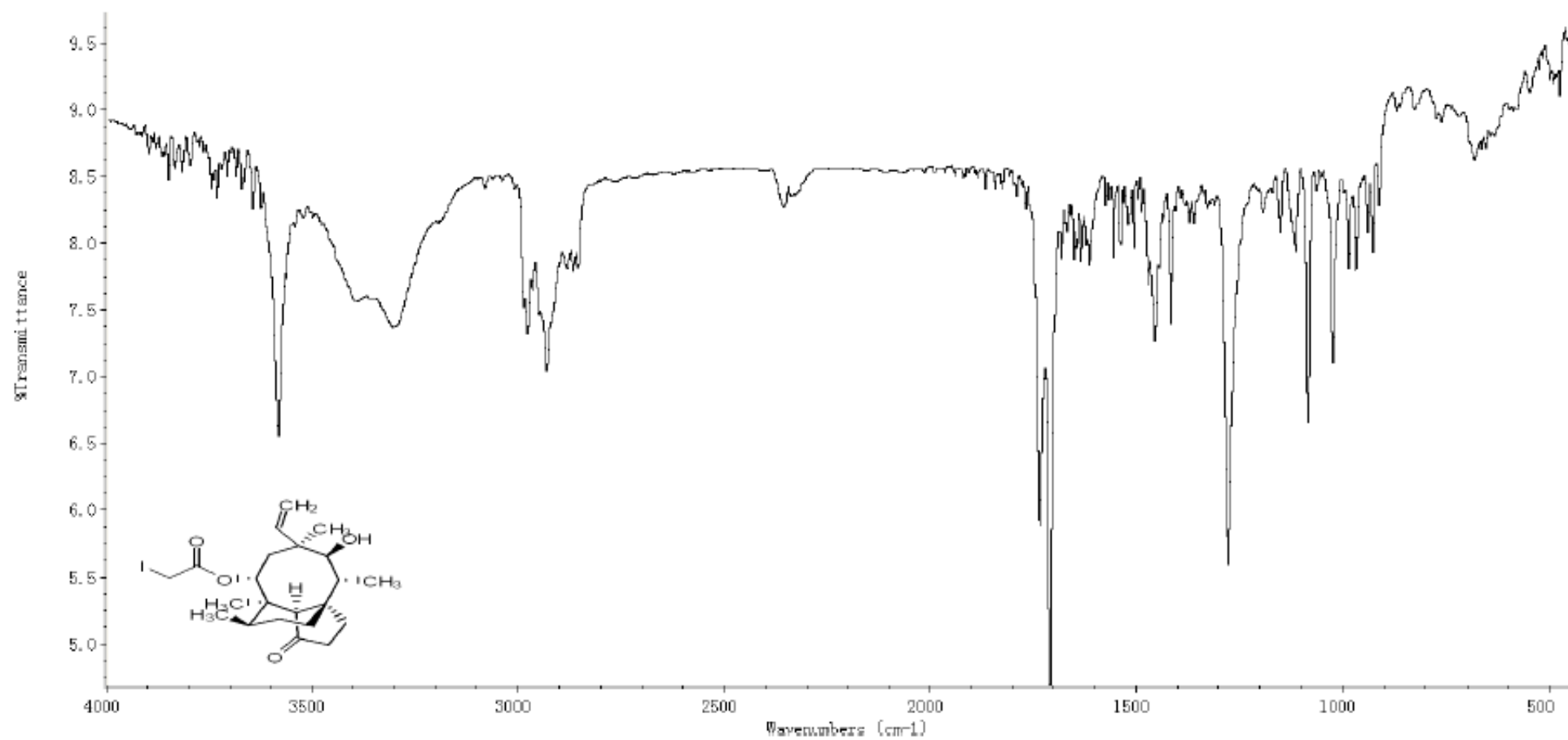


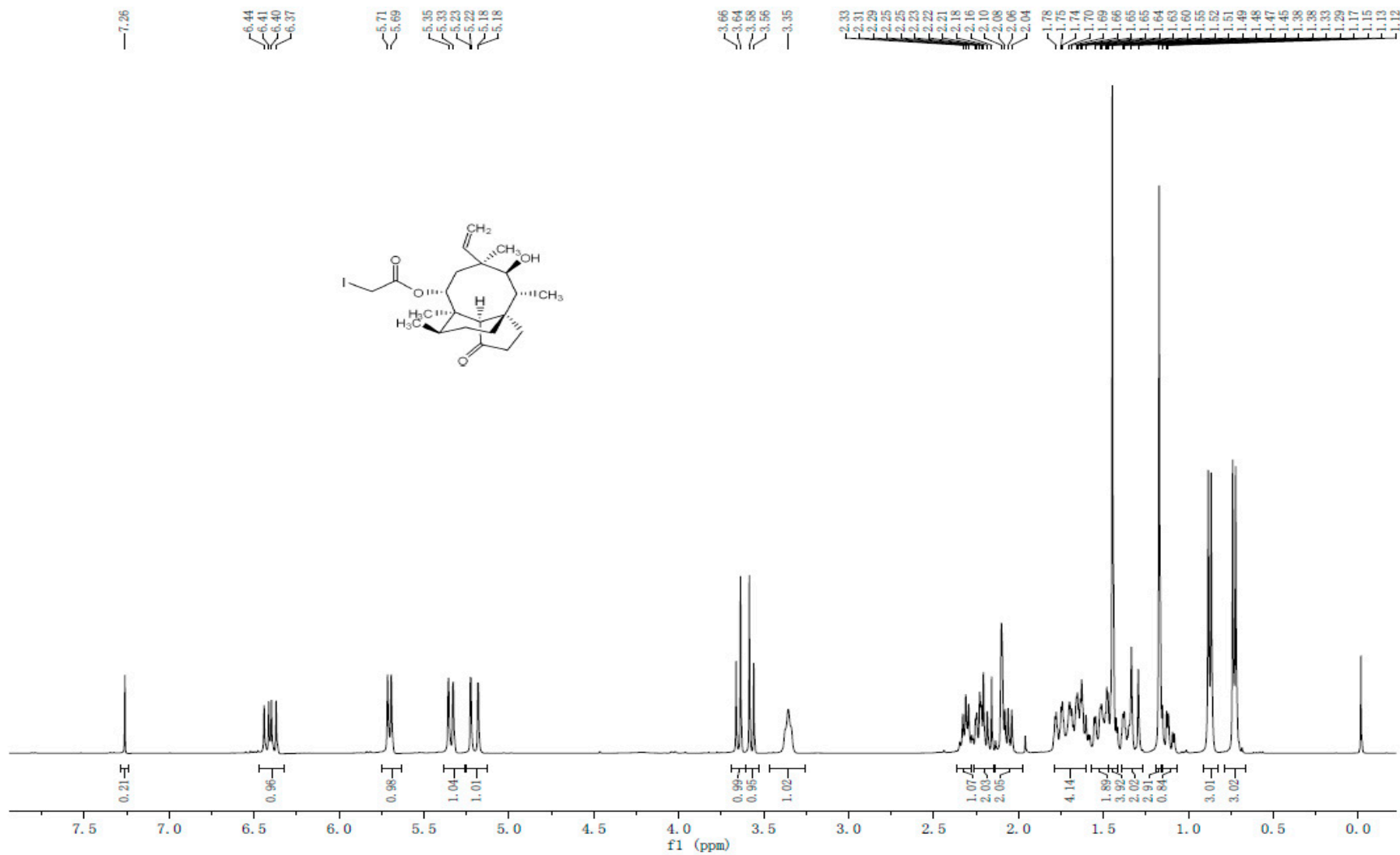
Figure S5.  $^1\text{H-NMR}$  spectrum of compound 3.

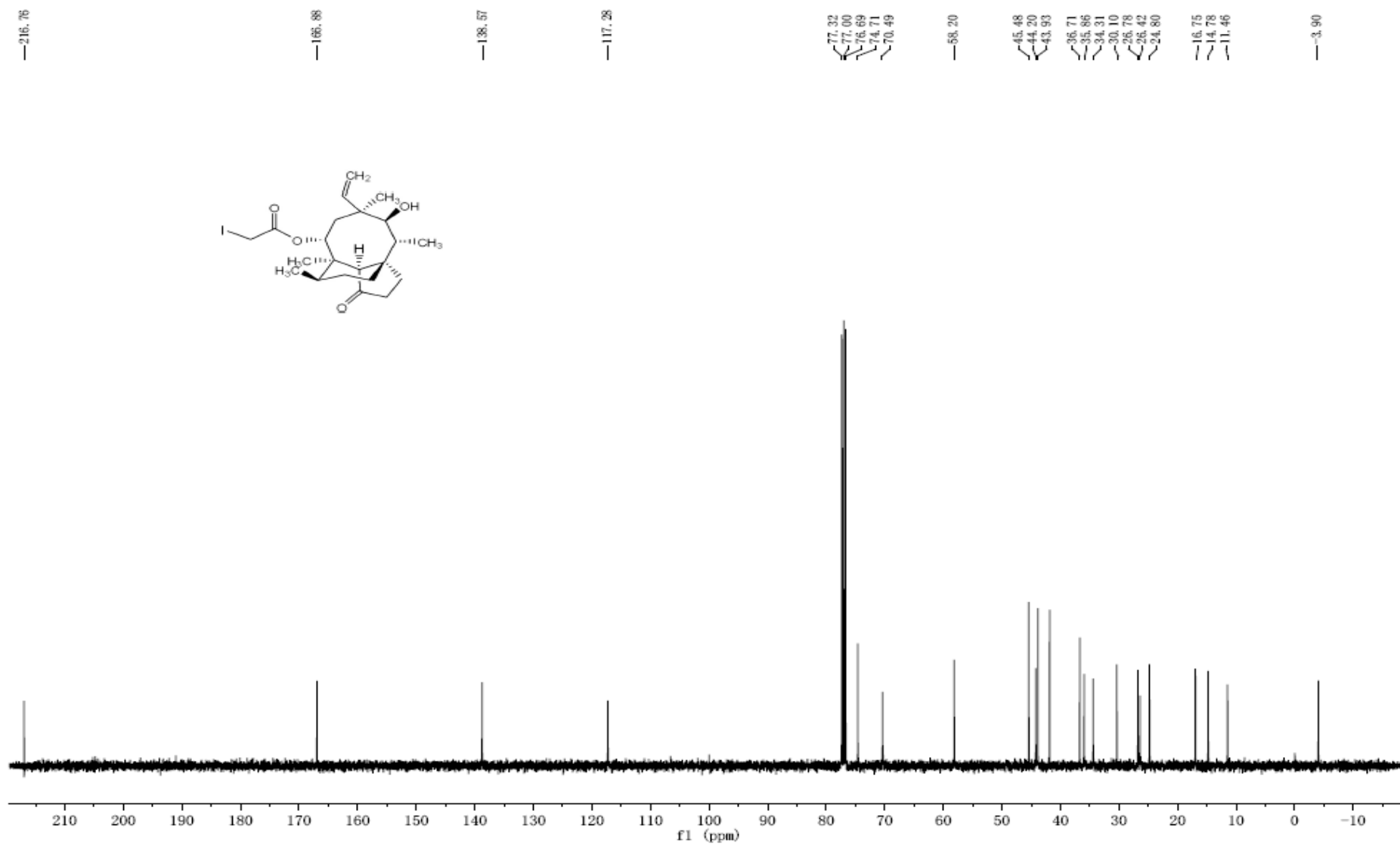
Figure S6.  $^{13}\text{C}$ -NMR spectrum of compound 3.

Figure S7. IR spectrum of compound 4.

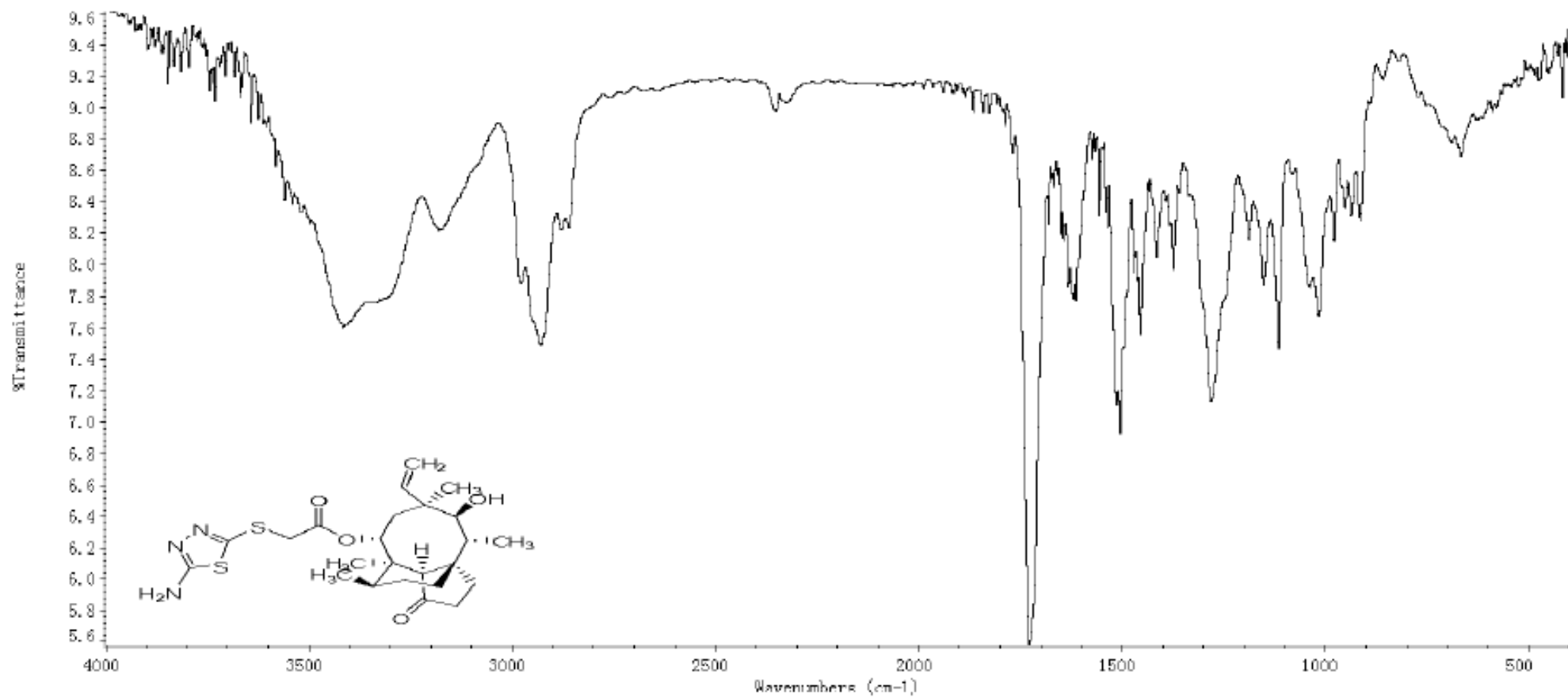


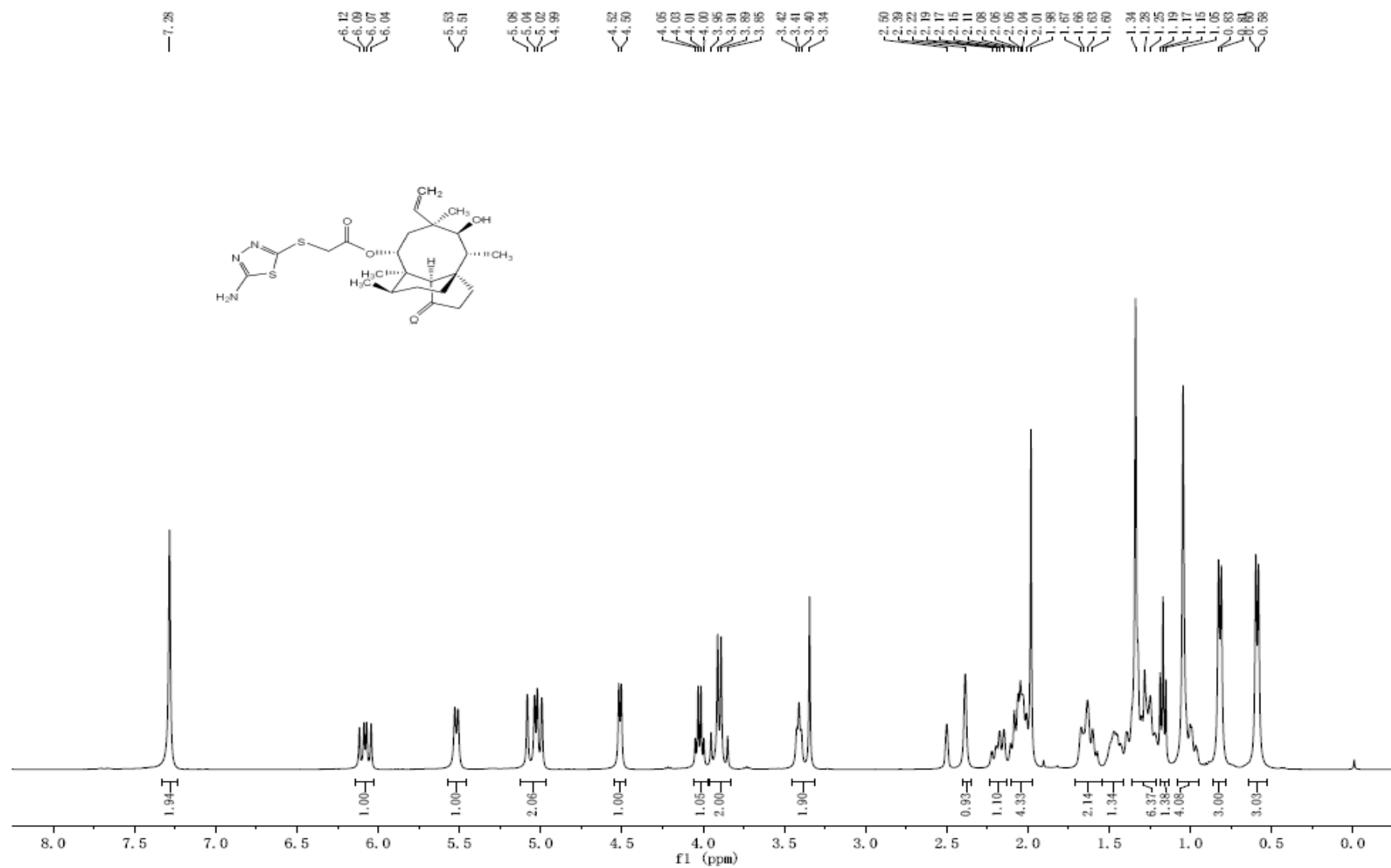
Figure S8.  $^1\text{H-NMR}$  spectrum of compound 4.



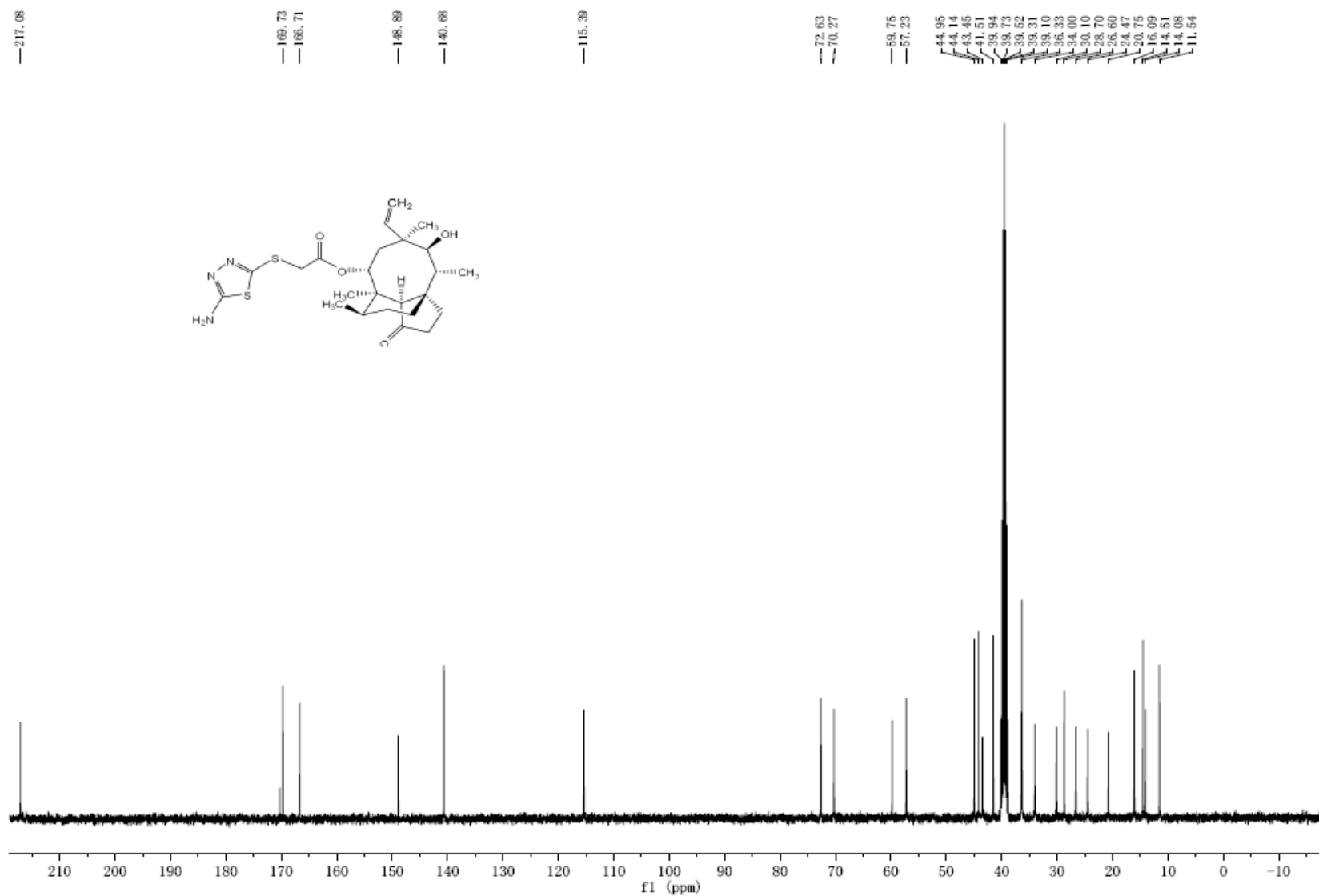
Figure S9.  $^{13}\text{C}$ -NMR spectrum of compound 4.

Figure S10. IR spectrum of compound 5a.

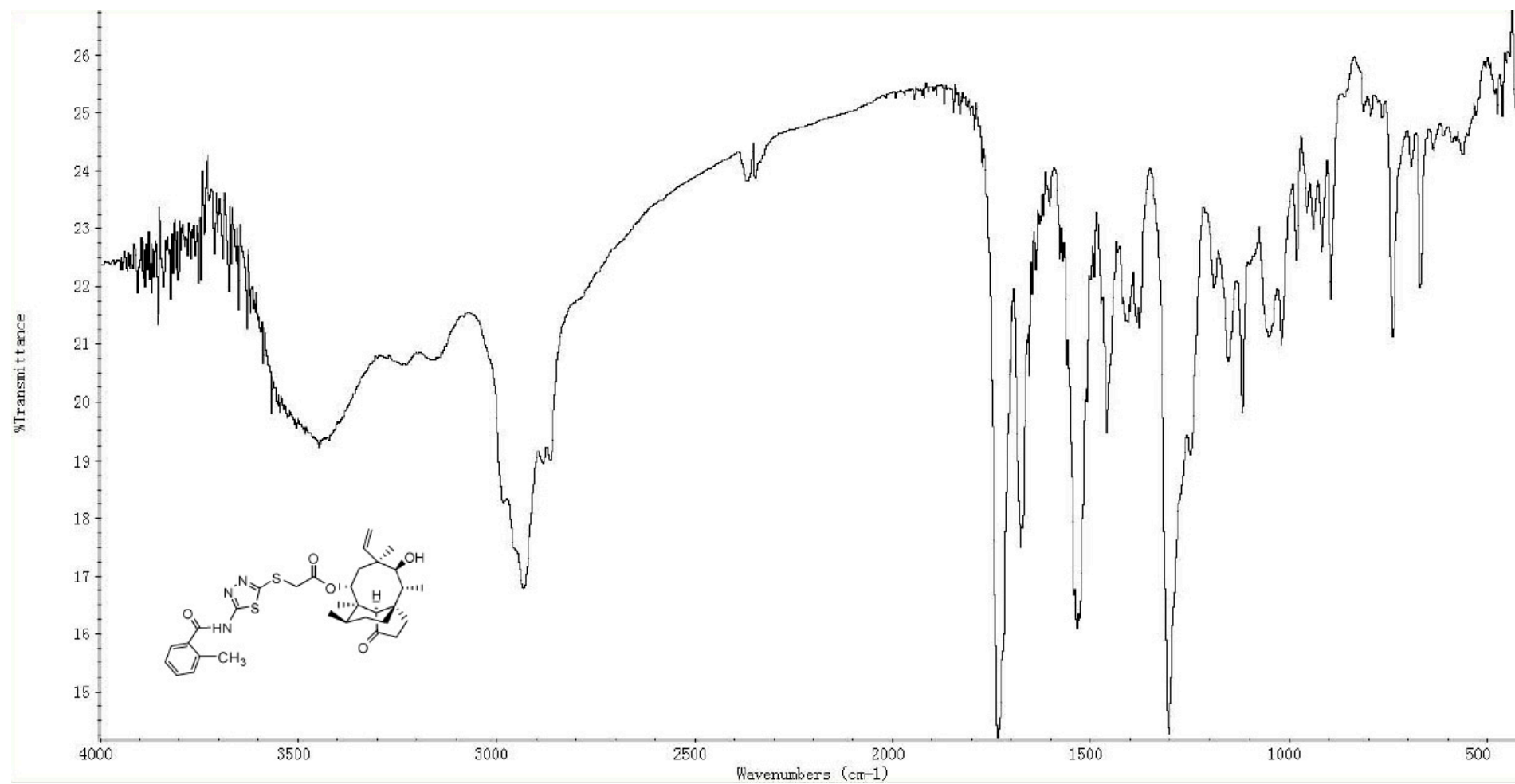


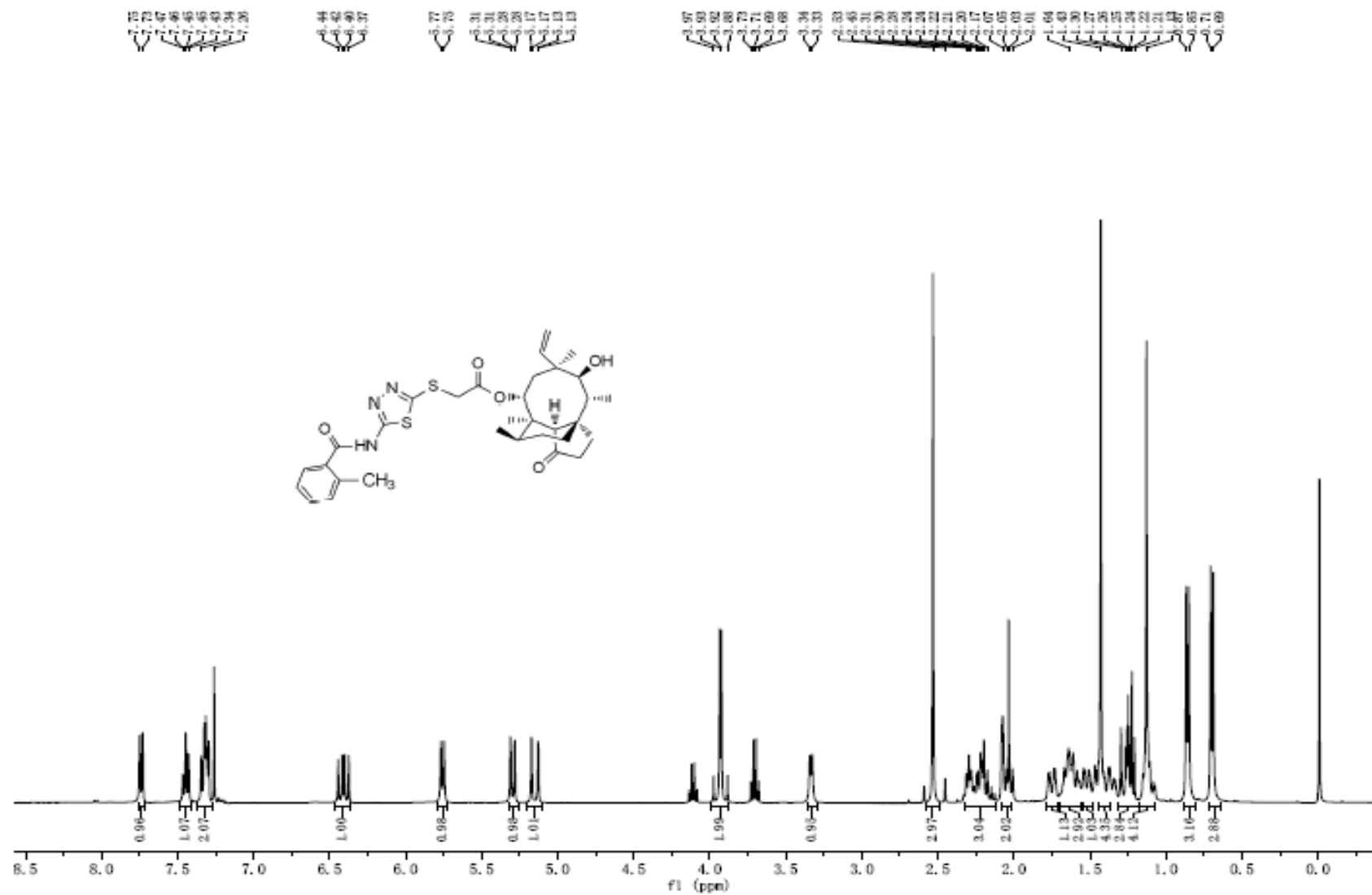
Figure S11.  $^1\text{H}$  NMR spectrum of compound 5a.

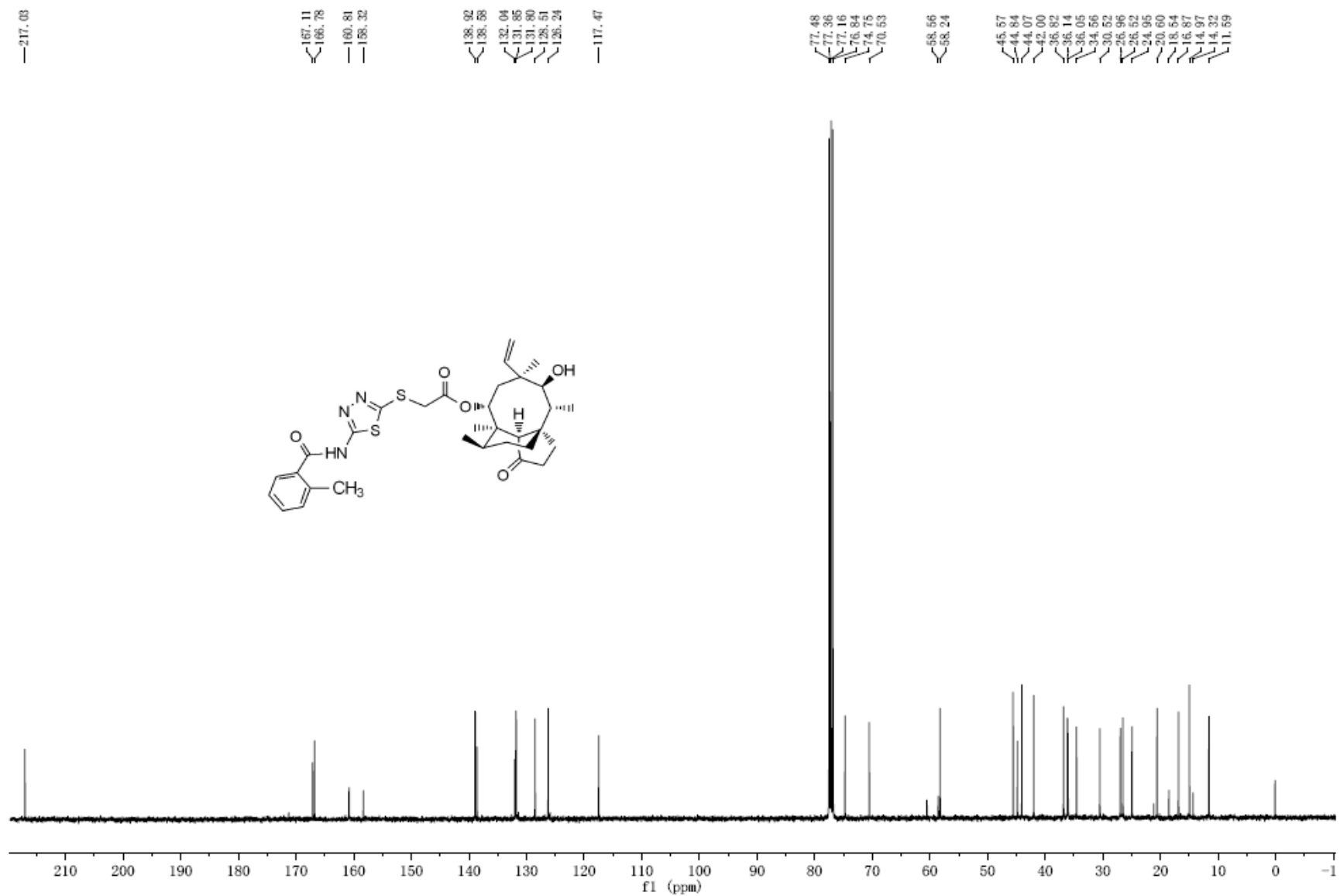
Figure S12.  $^{13}\text{C}$ -NMR spectrum of compound 5a.

Figure S13. IR spectrum of compound 5b.

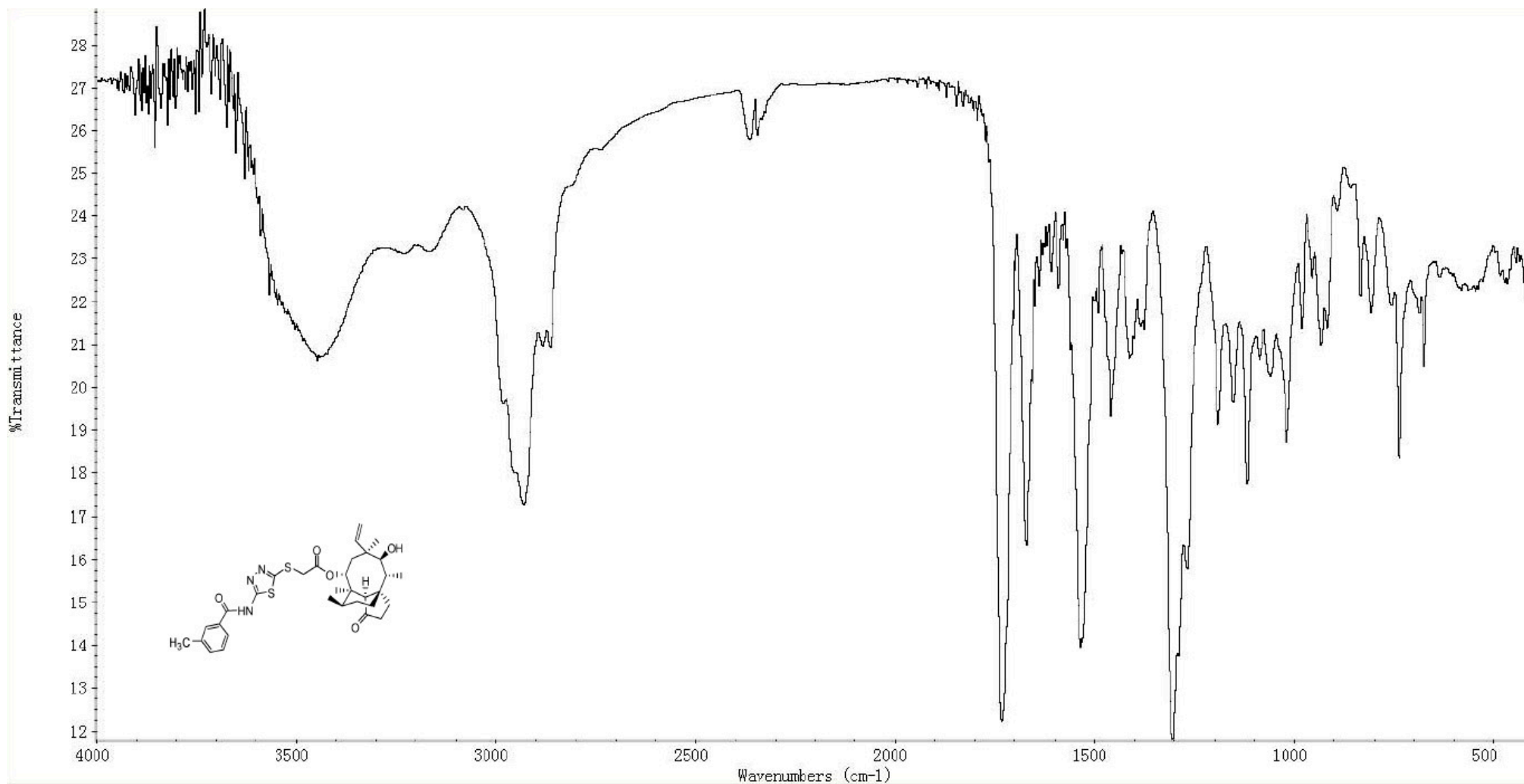


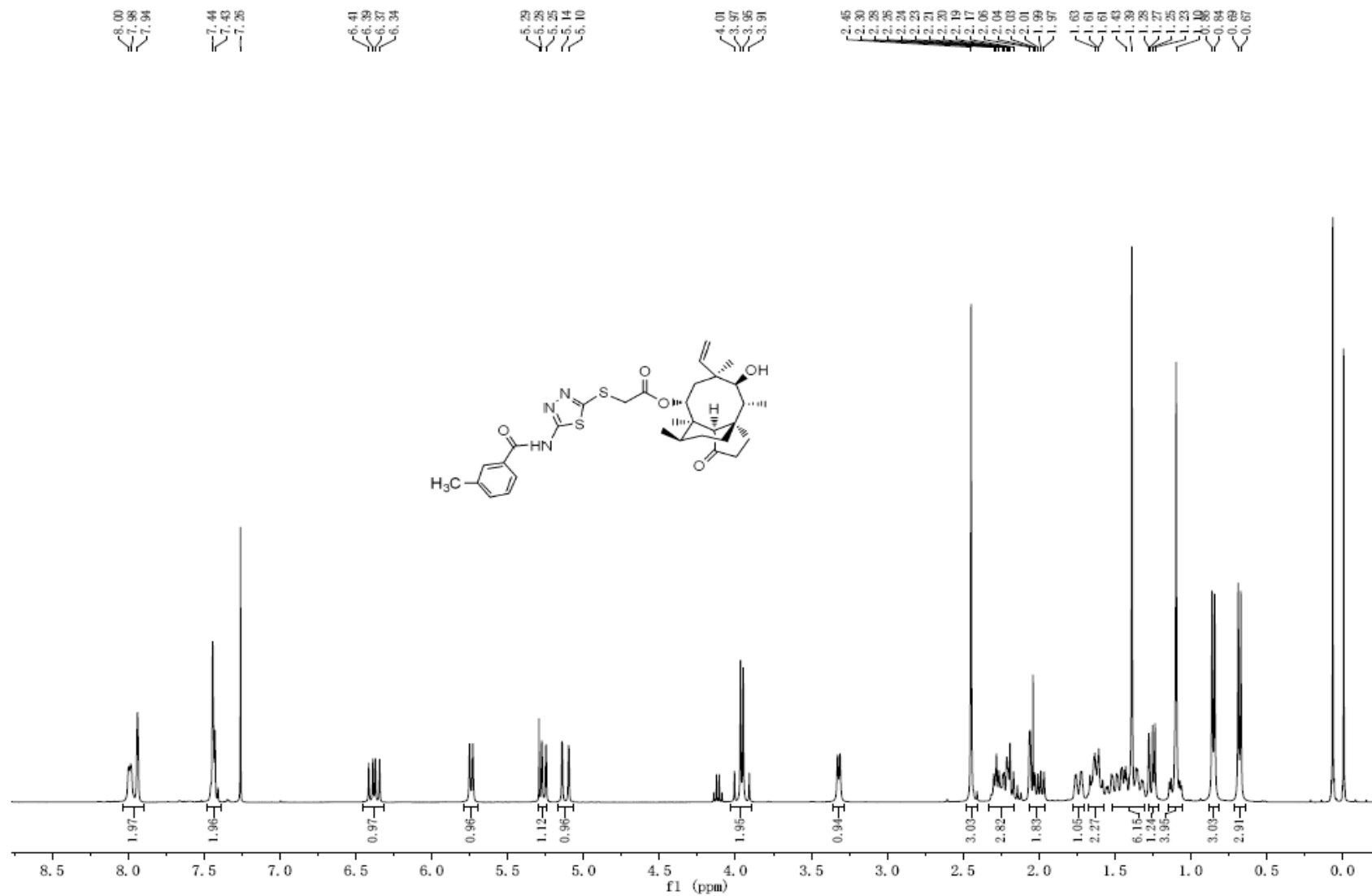
Figure S14. <sup>1</sup>H-NMR spectrum of compound 5b.8.00  
7.98  
7.947.44  
7.43  
7.266.41  
6.39  
6.37  
6.345.29  
5.28  
5.25  
5.14  
5.104.01  
3.97  
3.95  
3.912.45  
2.30  
2.28  
2.25  
2.24  
2.23  
2.21  
2.20  
2.19  
2.17  
2.06  
2.04  
2.03  
2.01  
1.99  
1.97  
1.63  
1.61  
1.61  
1.43  
1.28  
1.27  
1.25  
1.23  
1.19  
1.18  
0.84  
0.69  
0.67

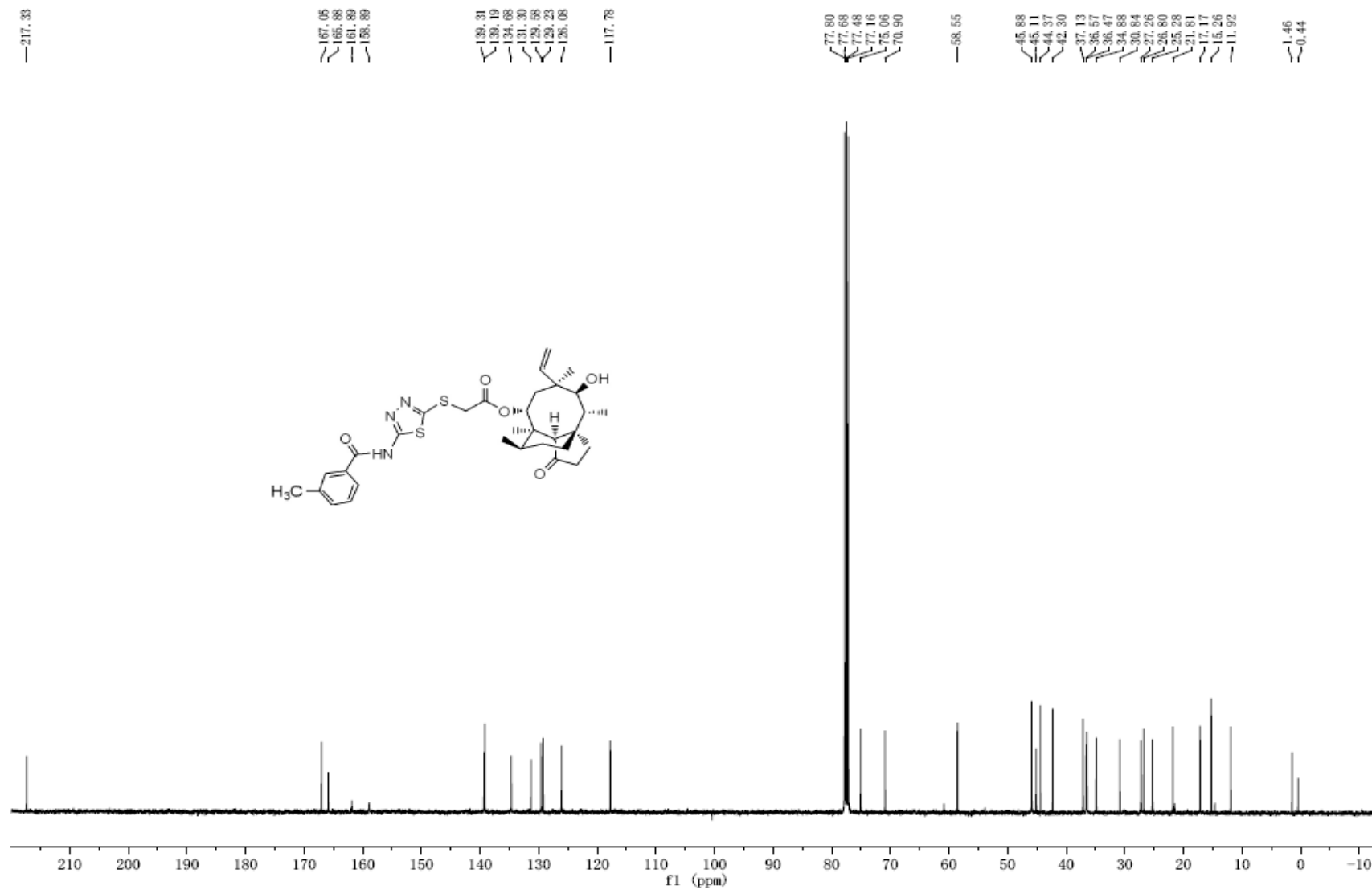
Figure S15.  $^{13}\text{C}$  NMR spectrum of compound 5b.

Figure S16. IR spectrum of compound 5c.

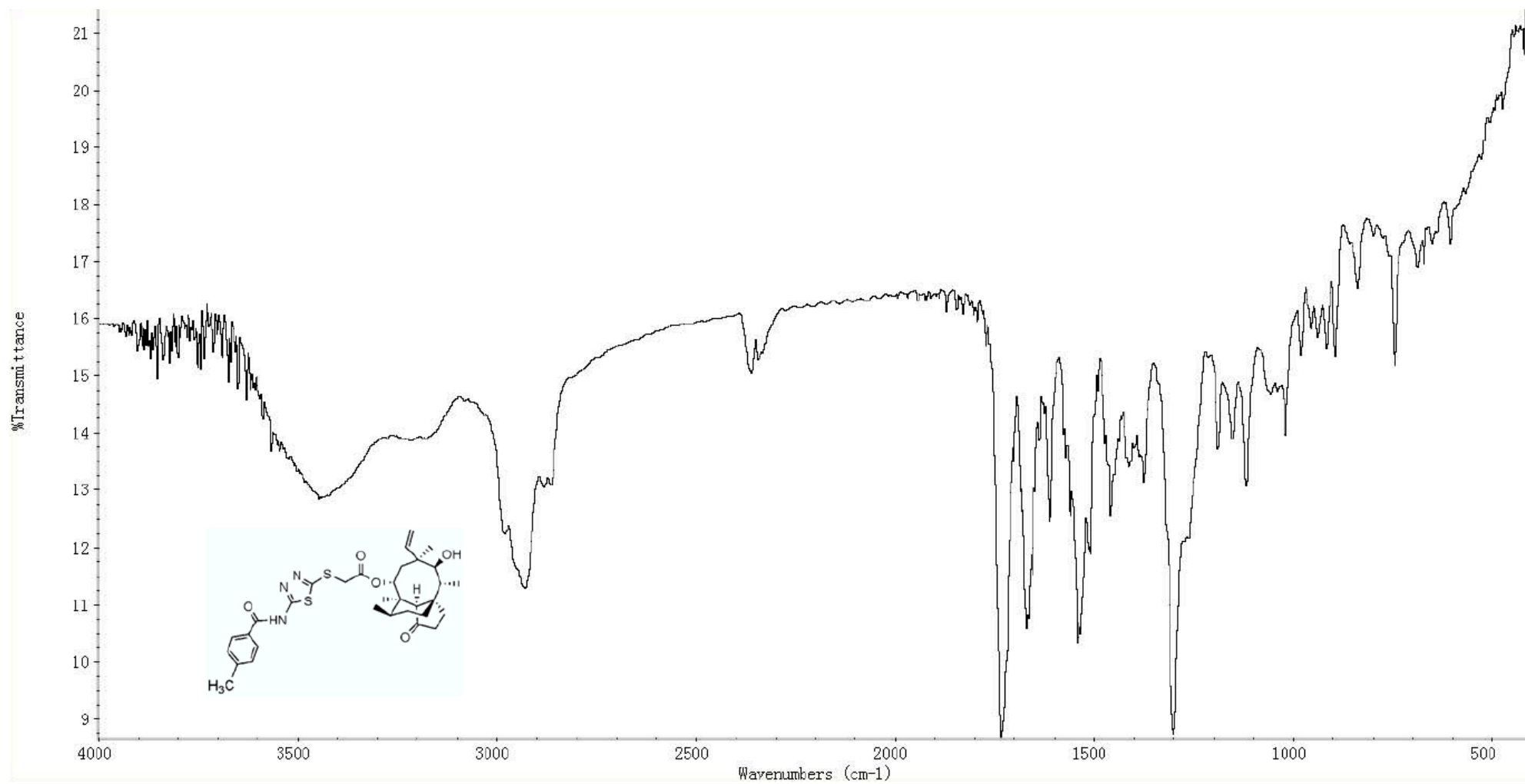




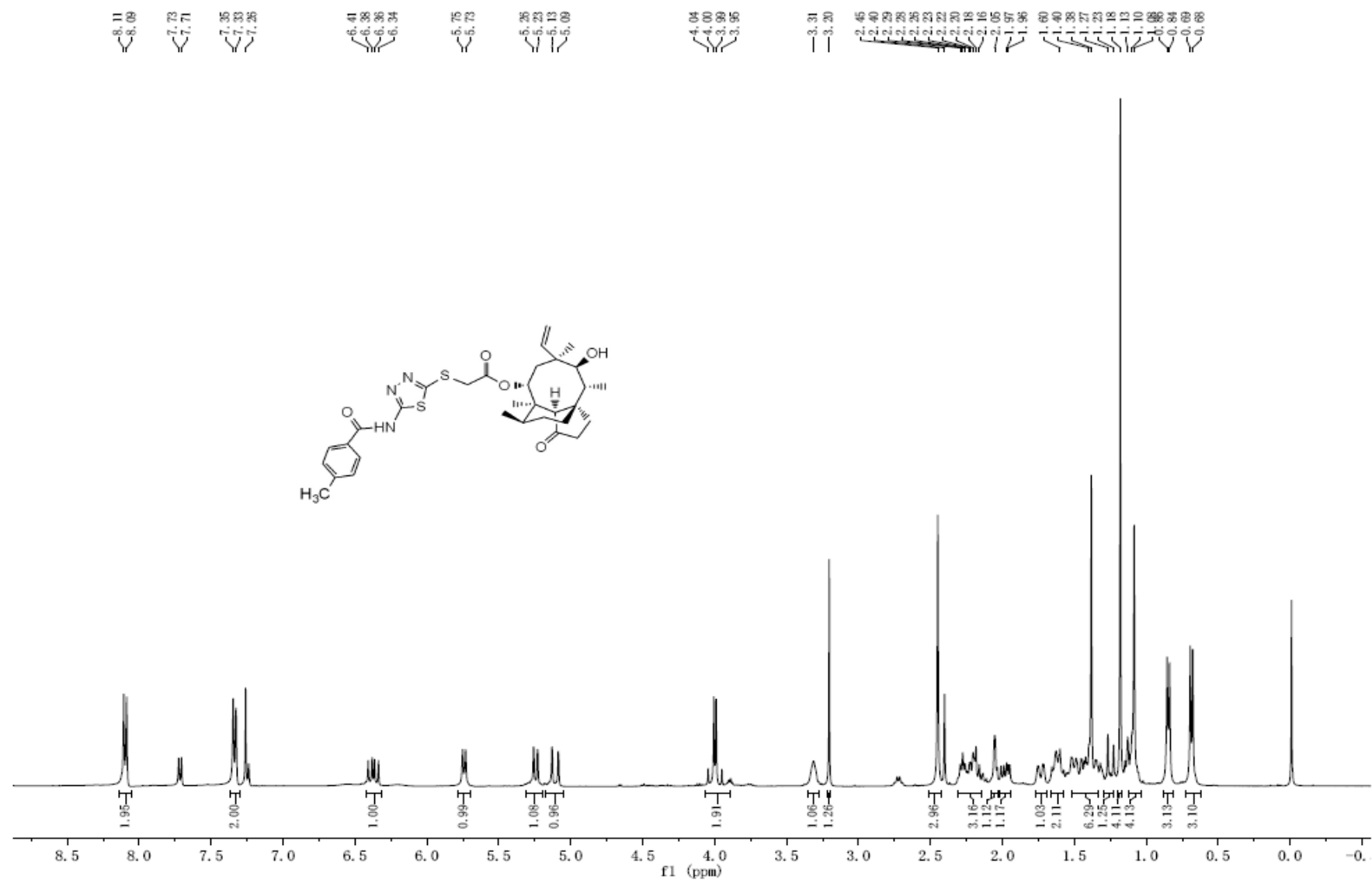
Figure S17. <sup>1</sup>H-NMR spectrum of compound 5c.

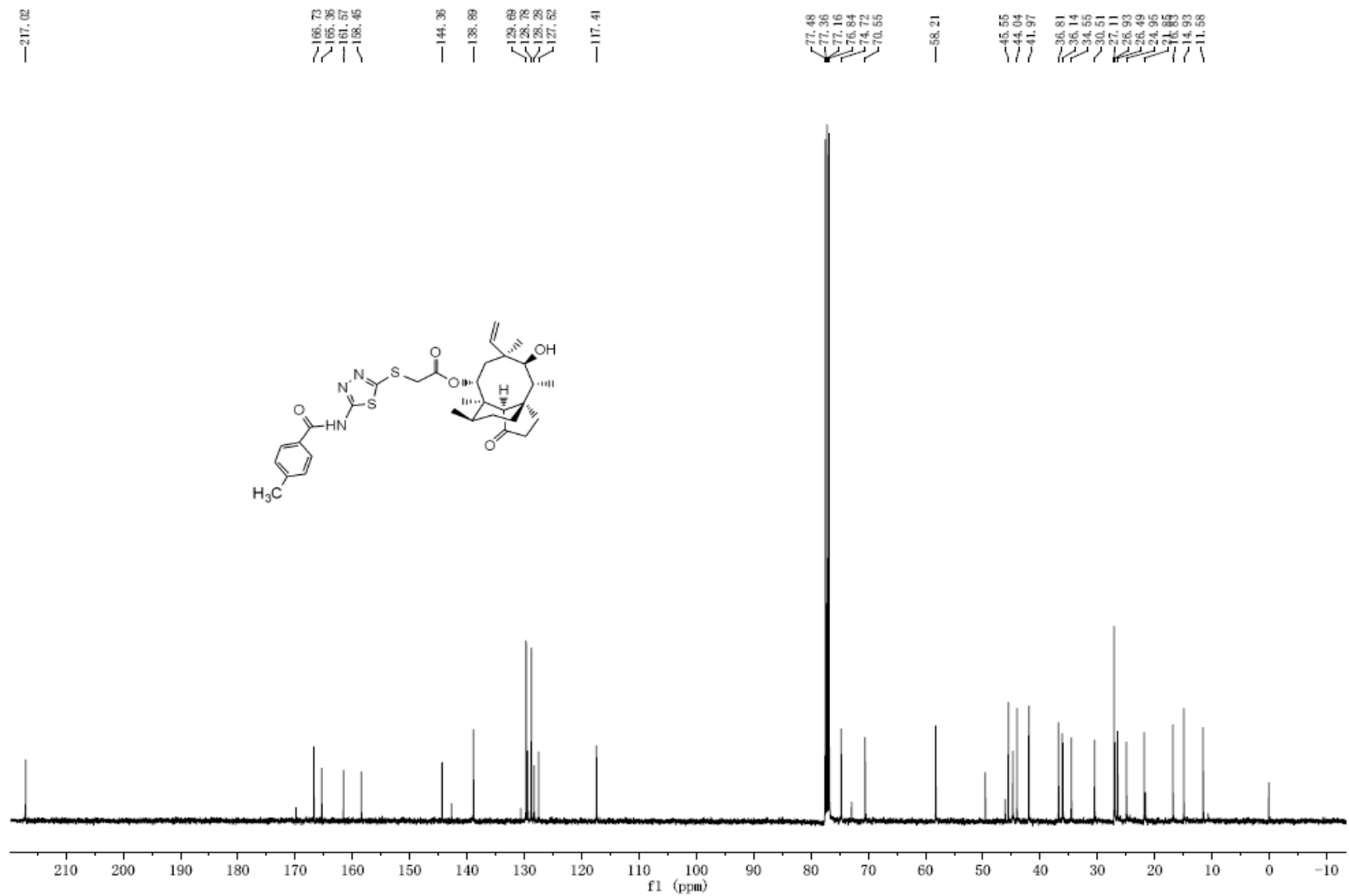
Figure S18.  $^{13}\text{C}$  NMR spectrum of compound 5c.

Figure S19. IR spectrum of compound 6a.

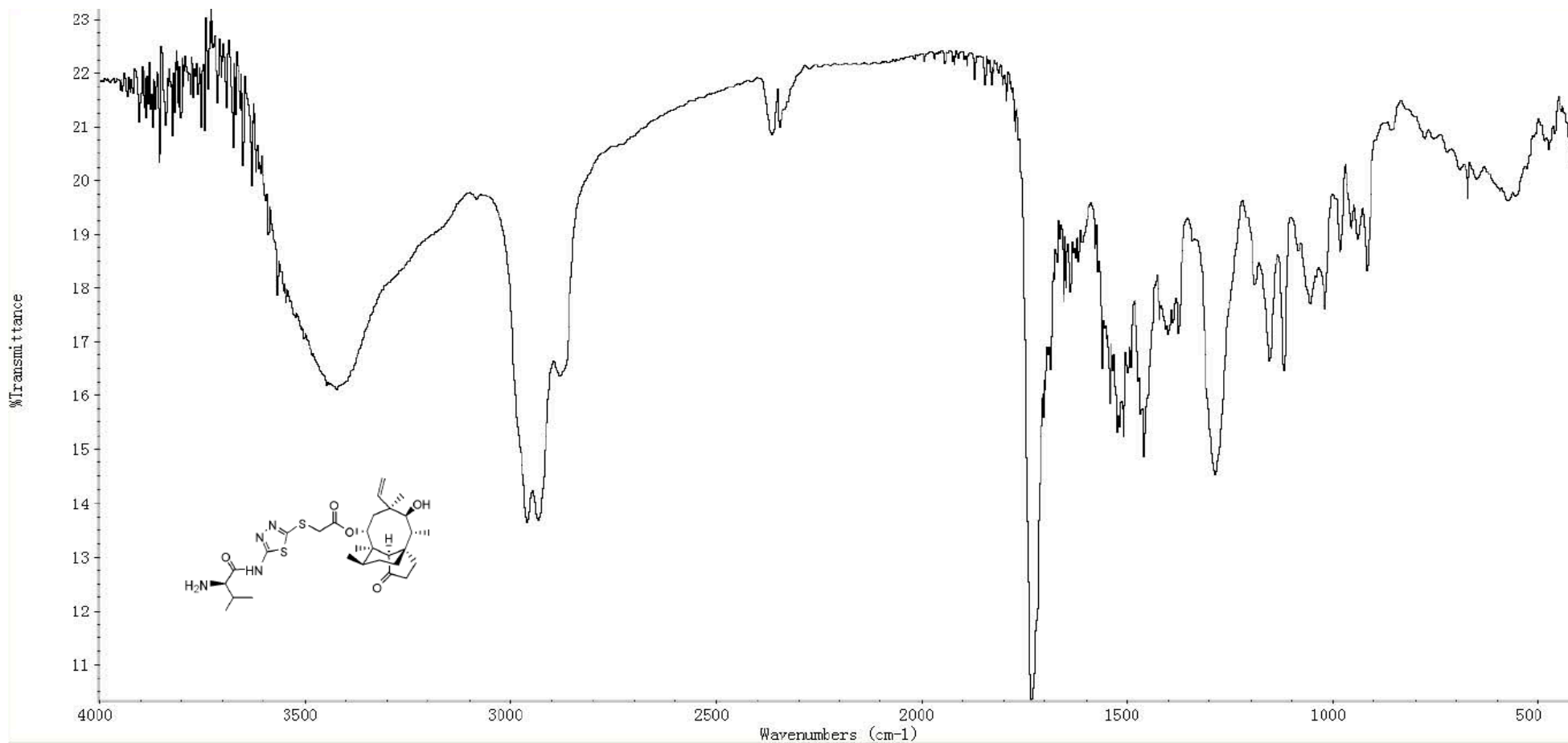


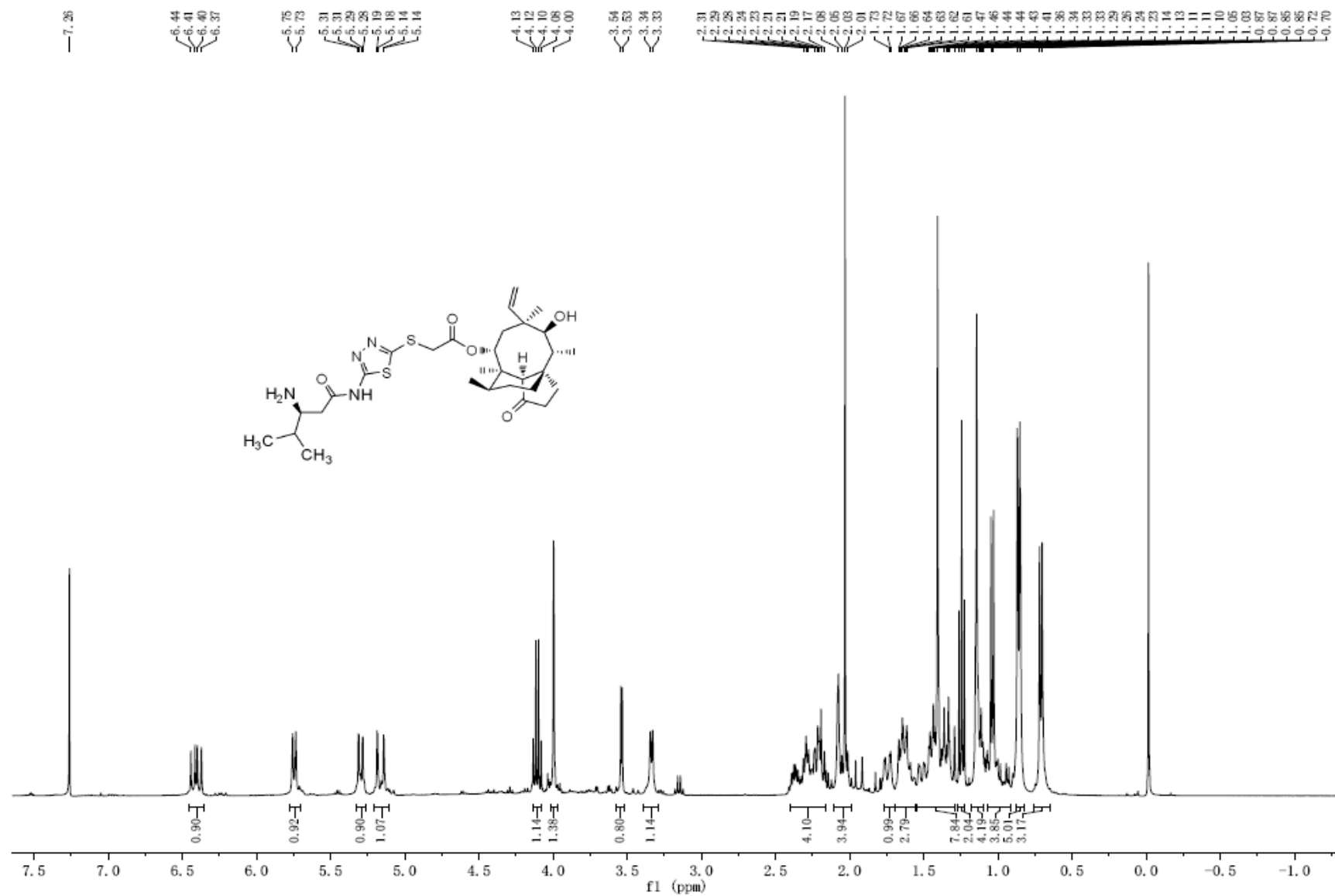
Figure S20. <sup>1</sup>H NMR spectrum of compound 6a.

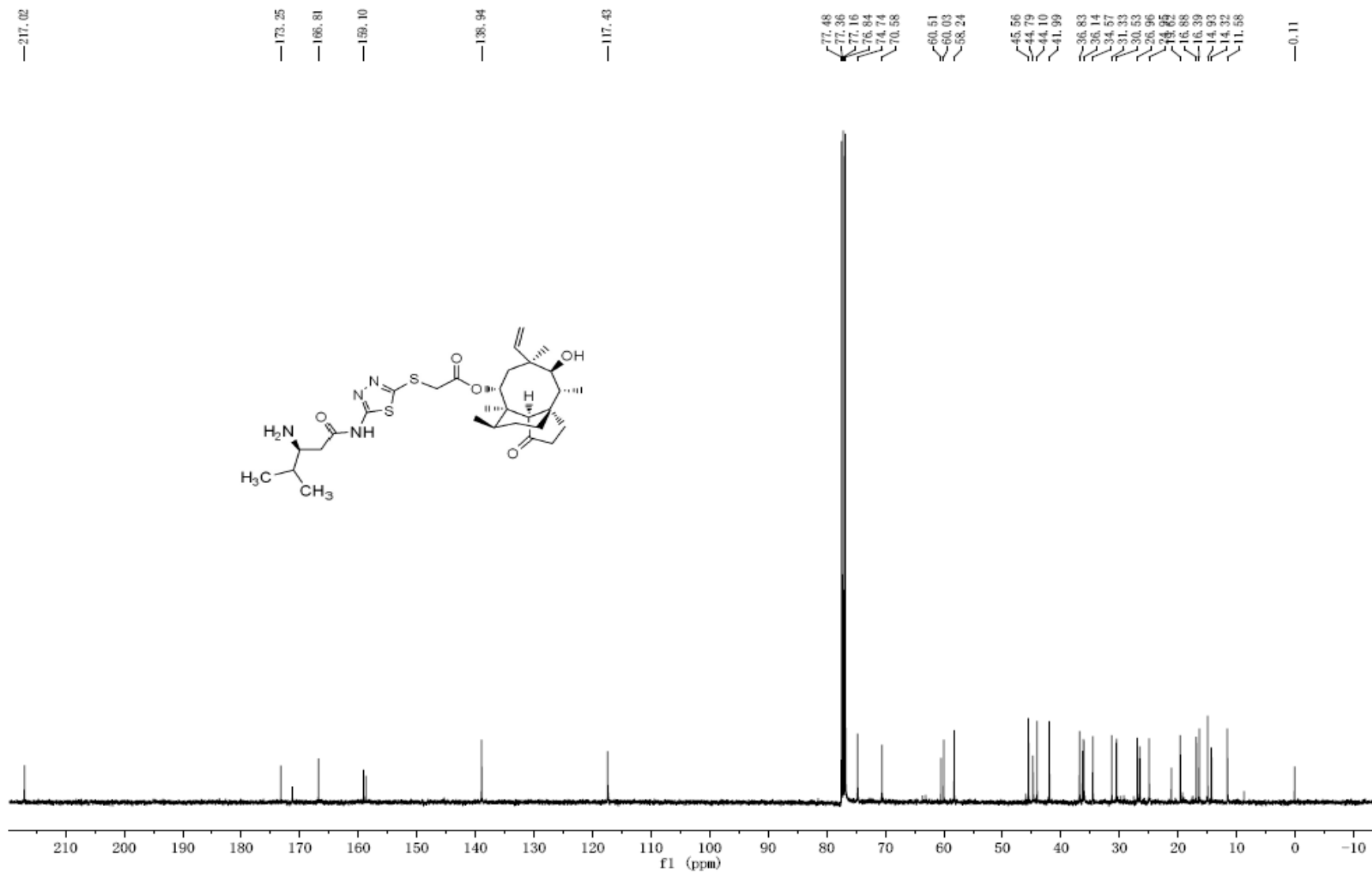
Figure S21.  $^{13}\text{C}$  NMR spectrum of compound 6a.

Figure S22. IR spectrum of compound 6b.

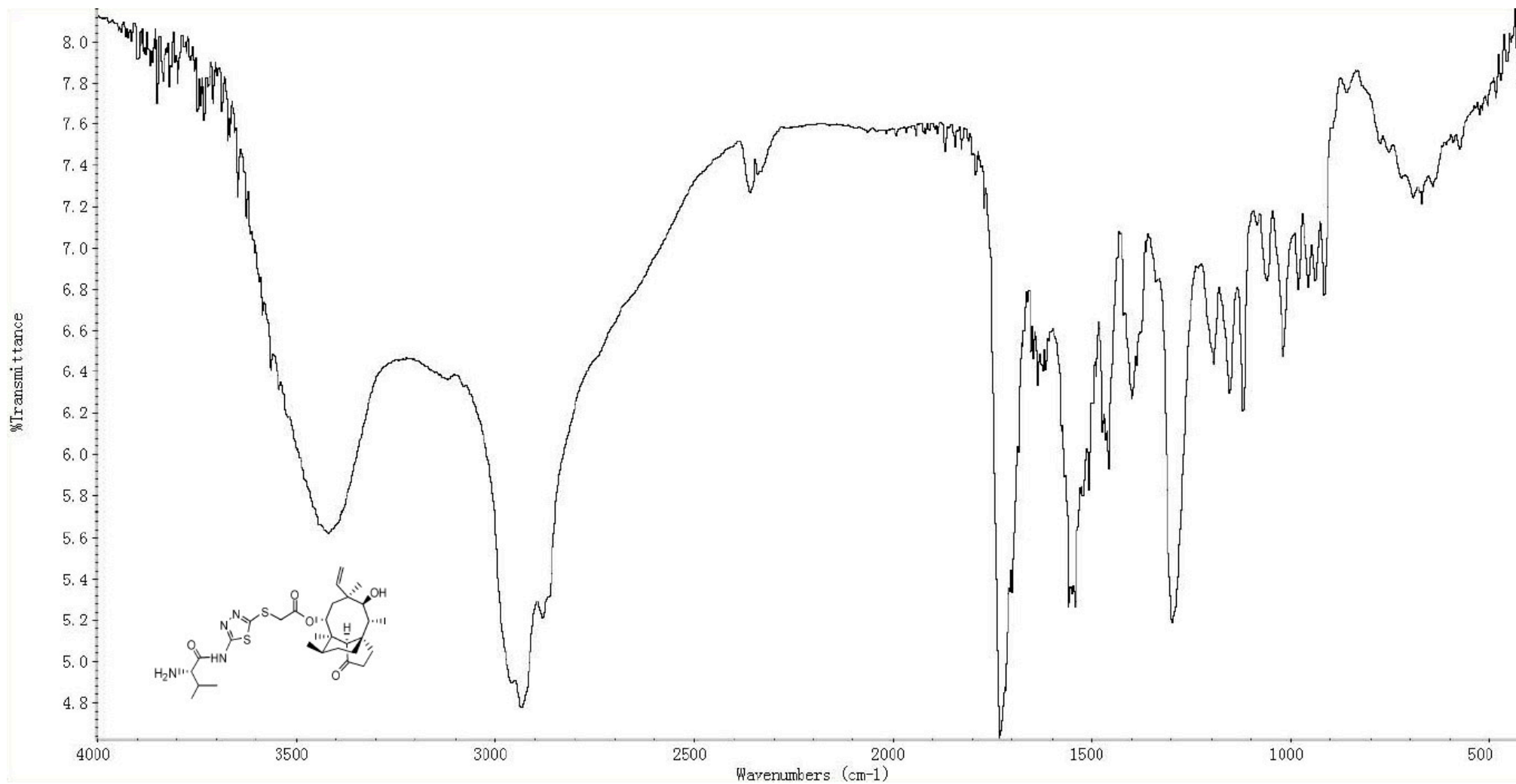


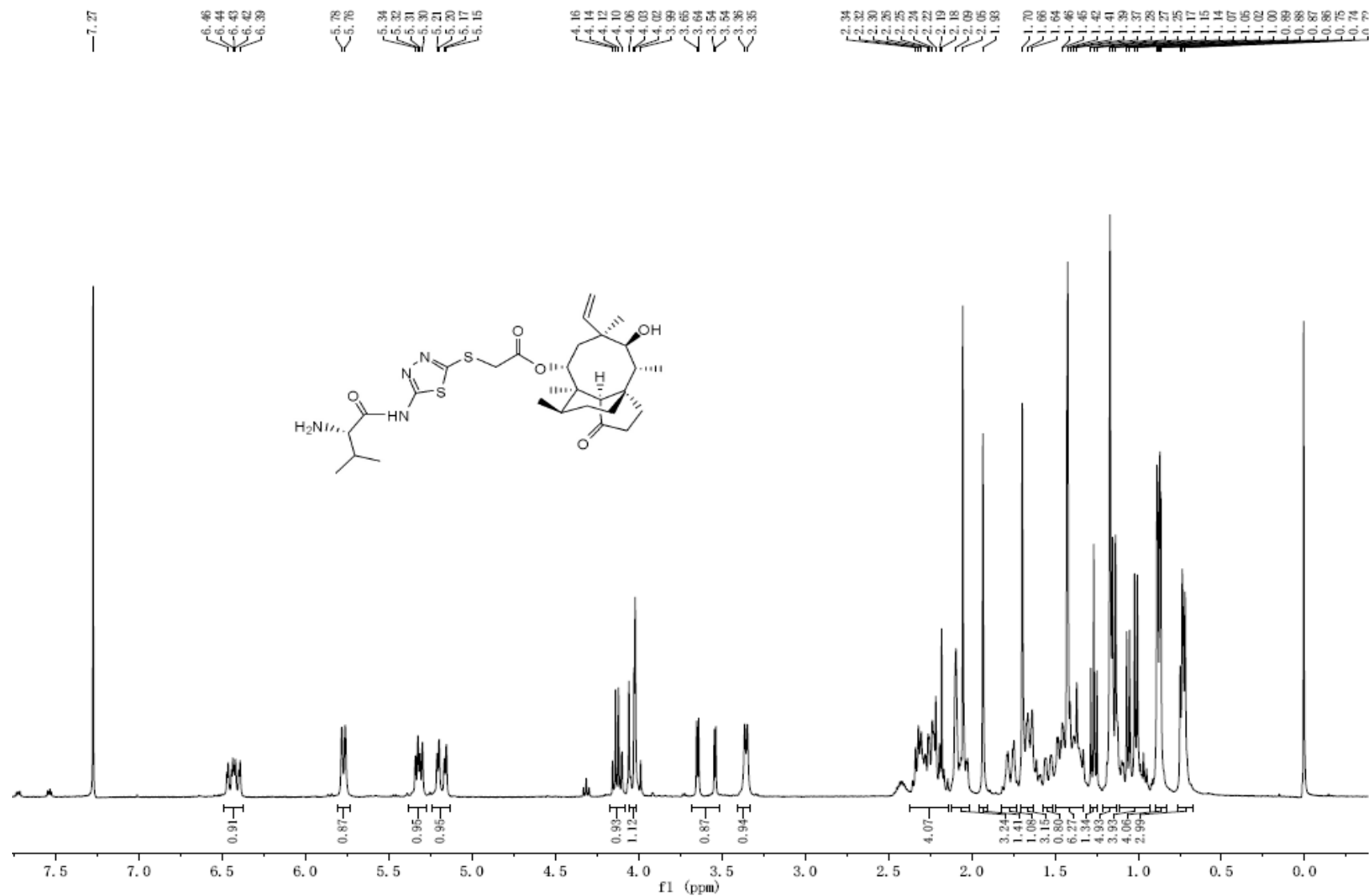
Figure S23. <sup>1</sup>H NMR spectrum of compound 6b.

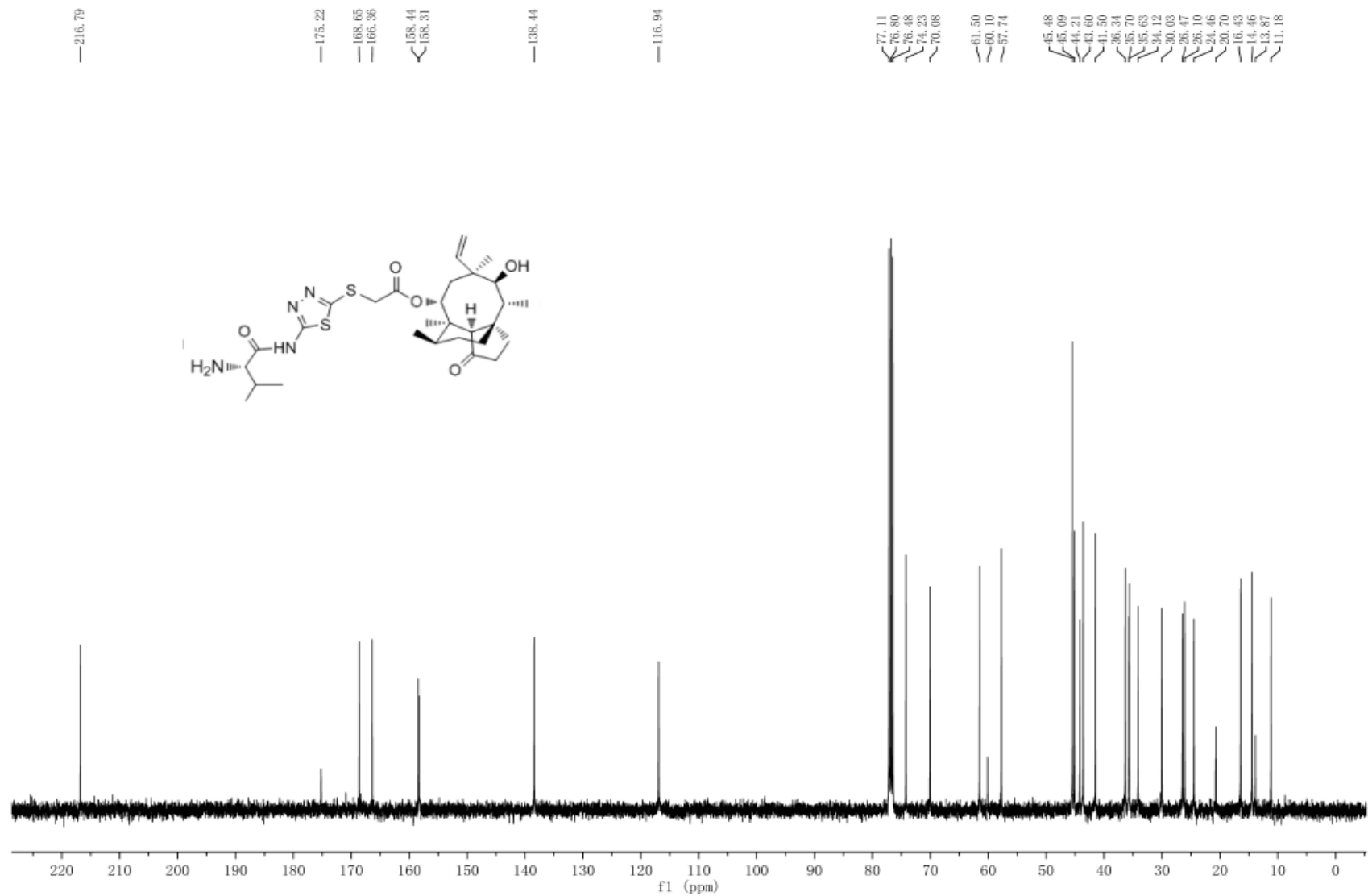
Figure S24.  $^{13}\text{C}$  NMR spectrum of compound 6b.



Figure S25. IR spectrum of compound 6c.

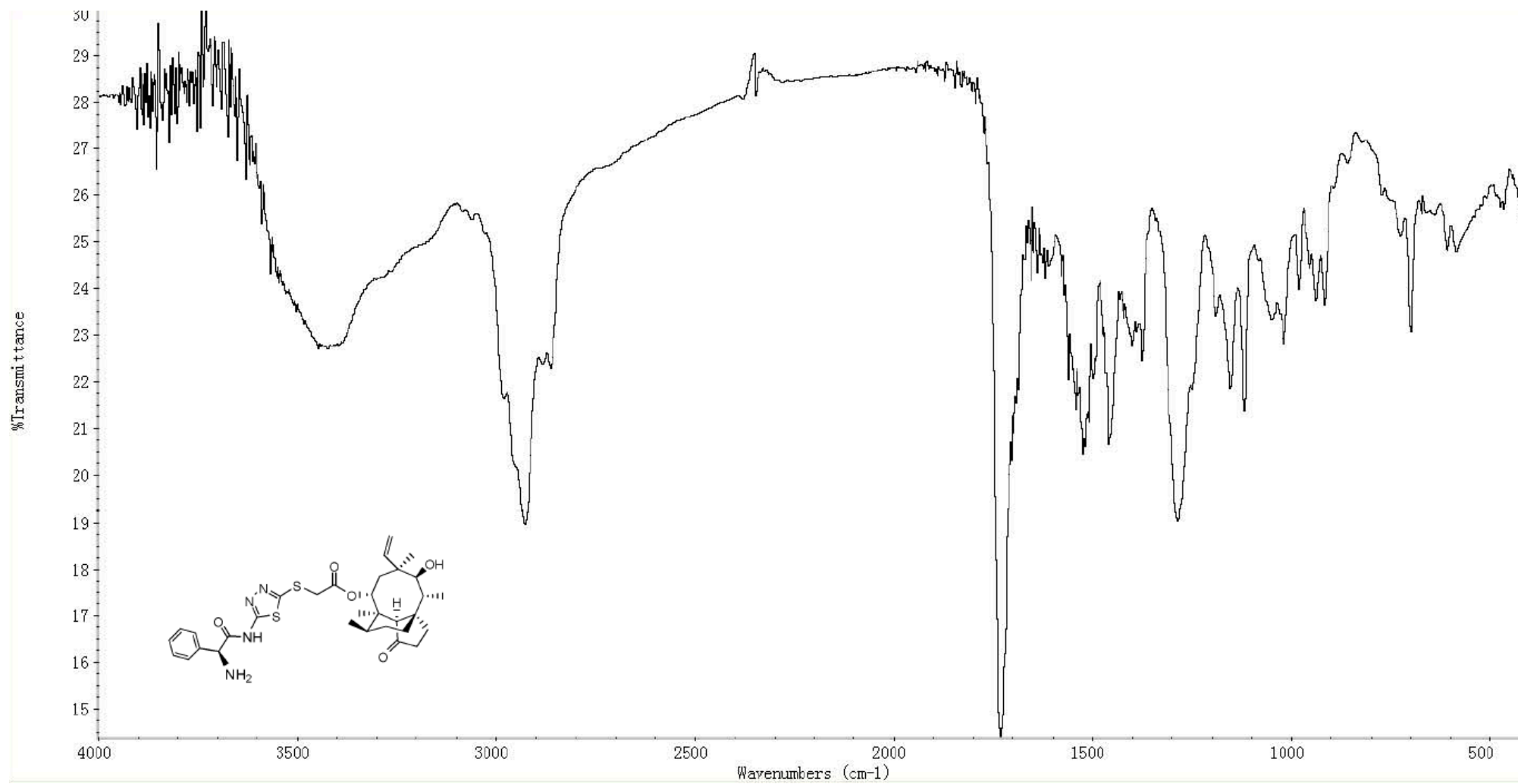


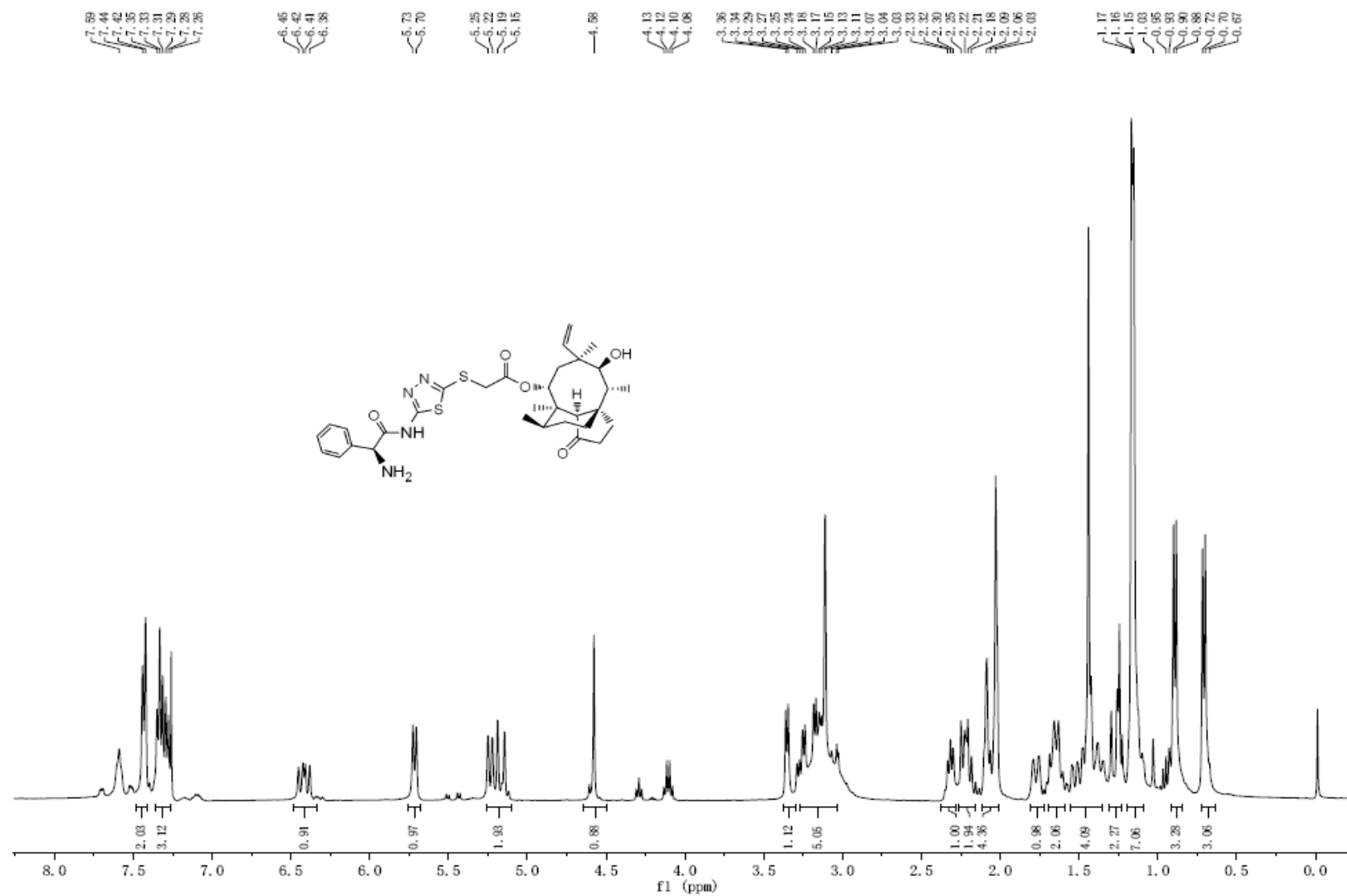
Figure S26.  $^1\text{H}$  NMR spectrum of compound 6c.

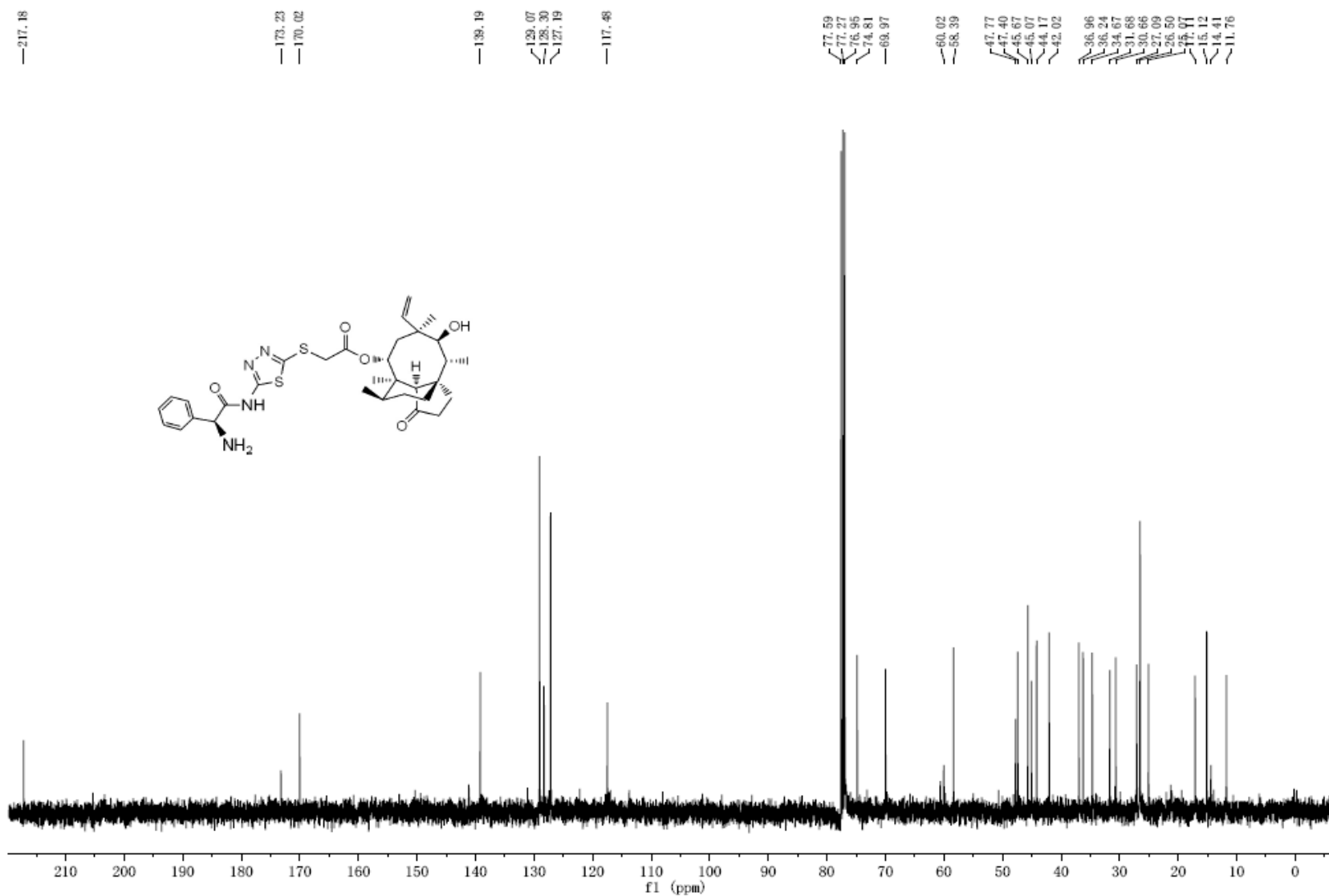
Figure S27.  $^{13}\text{C}$  NMR spectrum of compound 6c.

Figure S28. IR spectrum of compound 6d.

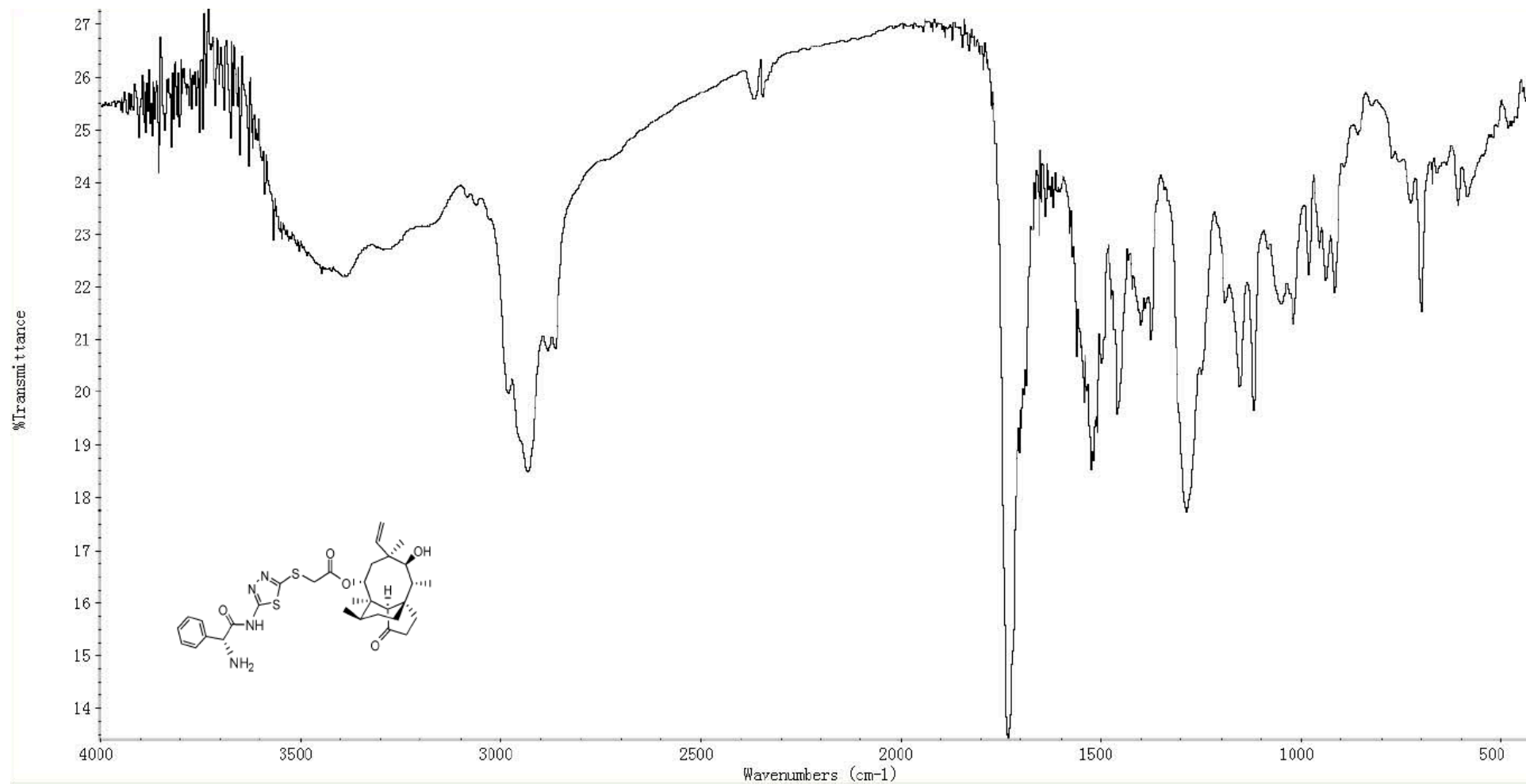


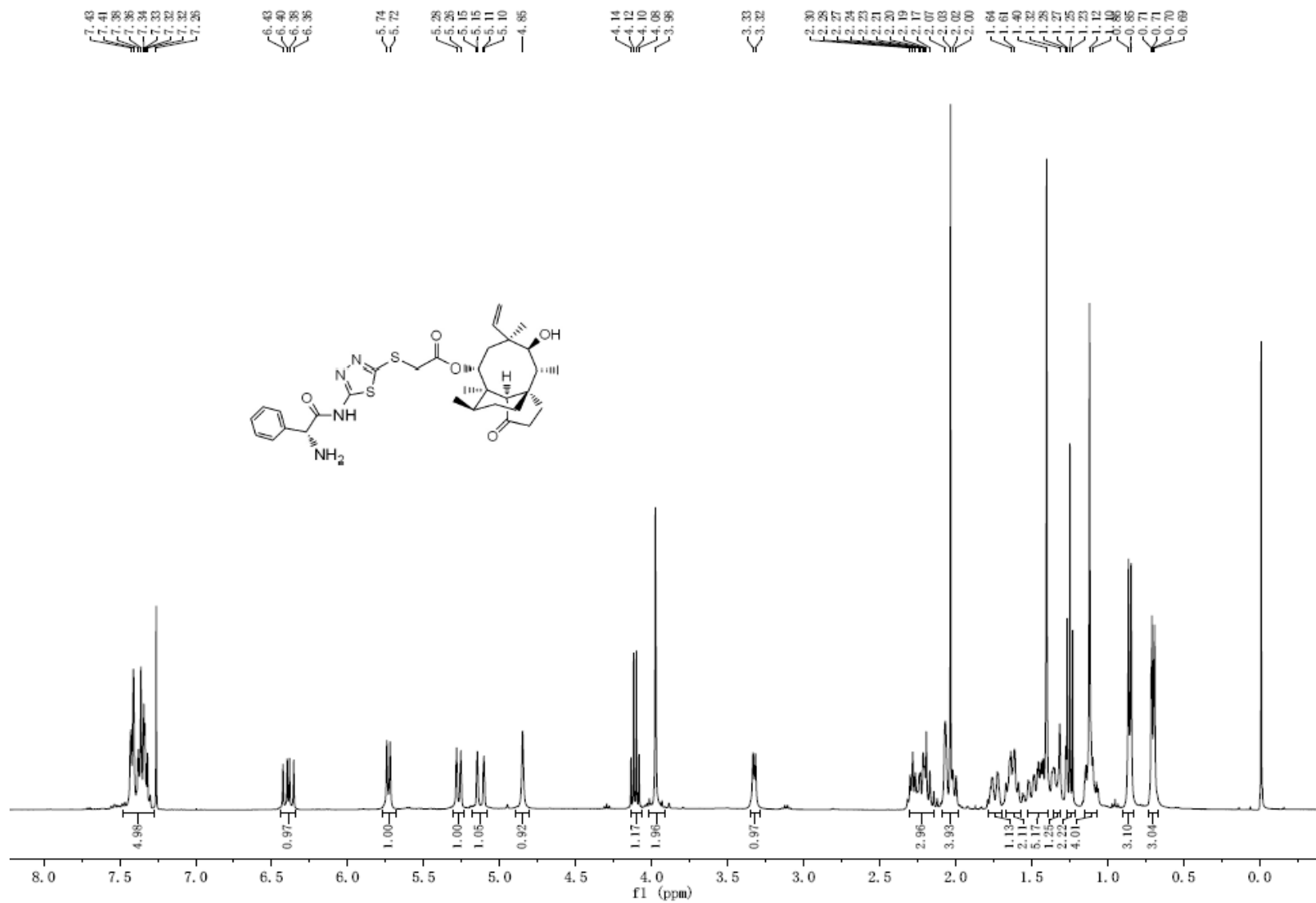
Figure S29.  $^1\text{H}$  NMR spectrum of compound 6d.

Figure S30.  $^{13}\text{C}$  NMR spectrum of compound 6d.