

# Synthesis of tumor selective indole and 8-hydroxyquinoline skeleton containing di-, or triarylmethanes with improved cytotoxic activity

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Ethyl 2-(1-hydroxynaphthalen-2-yl)-2-(1H-indol-3-yl)acetate (7)

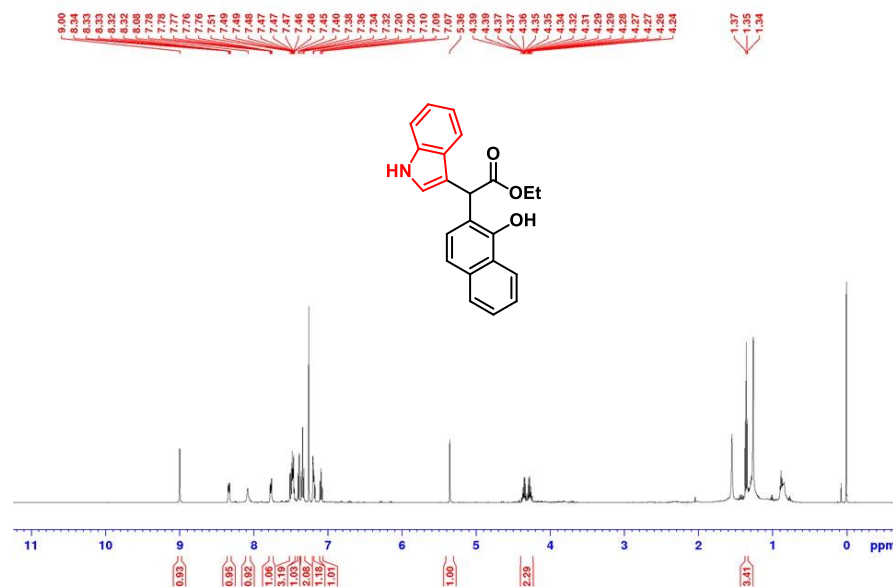
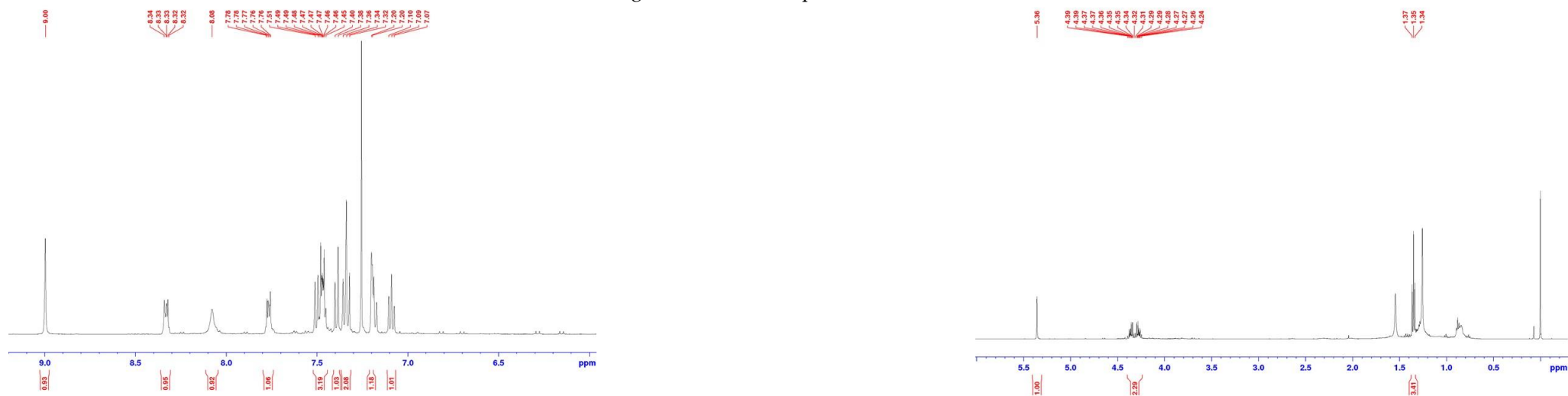


Figure S1. <sup>1</sup>H-NMR spectrum of 7.



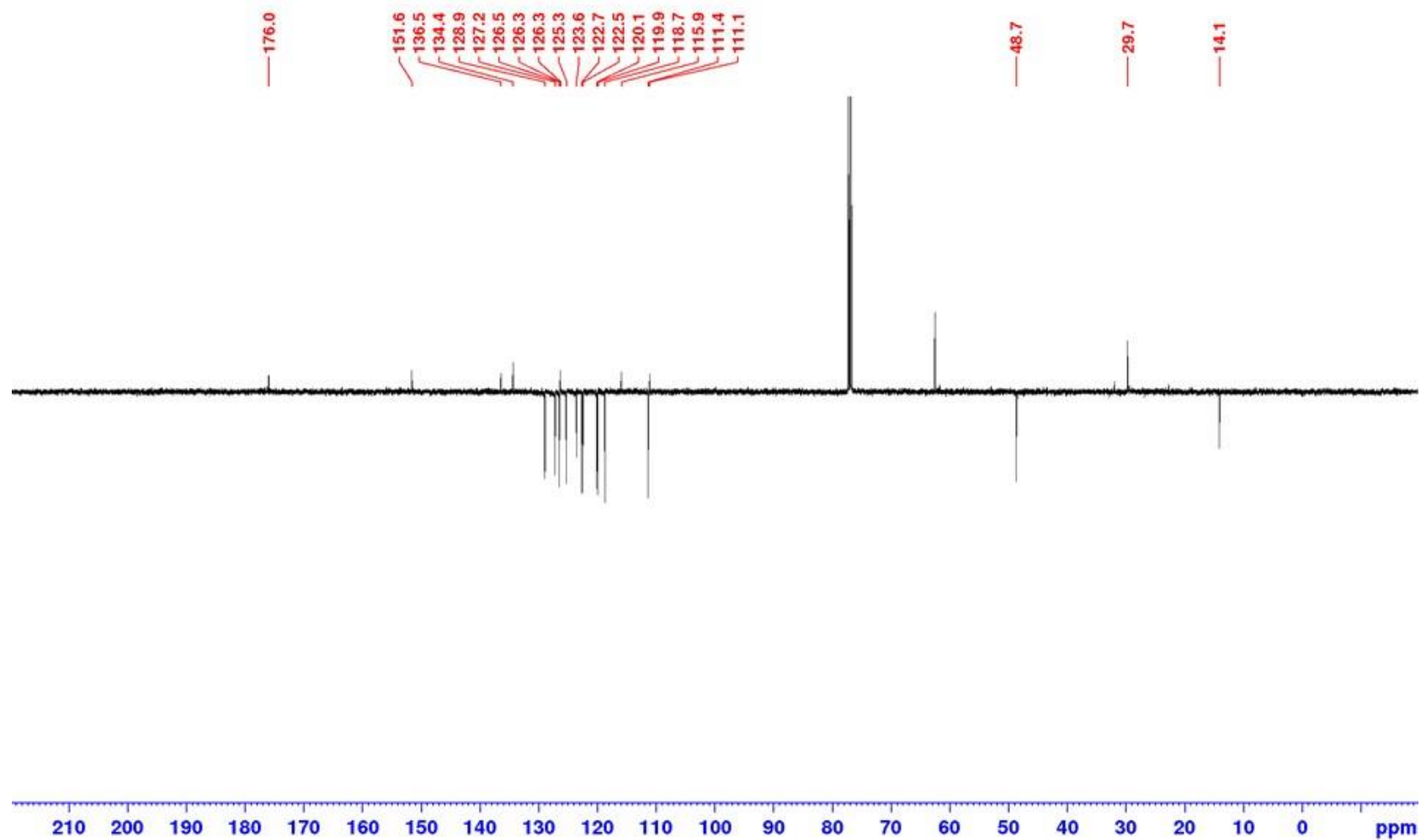


Figure S2. <sup>13</sup>C-NMR spectrum of 7.

20240410-1 #342-368 RT: 1.85-1.99 AV: 14 NL: 2.65E8  
T: FTMS - p ESI Full ms [100.0000-1000.0000]

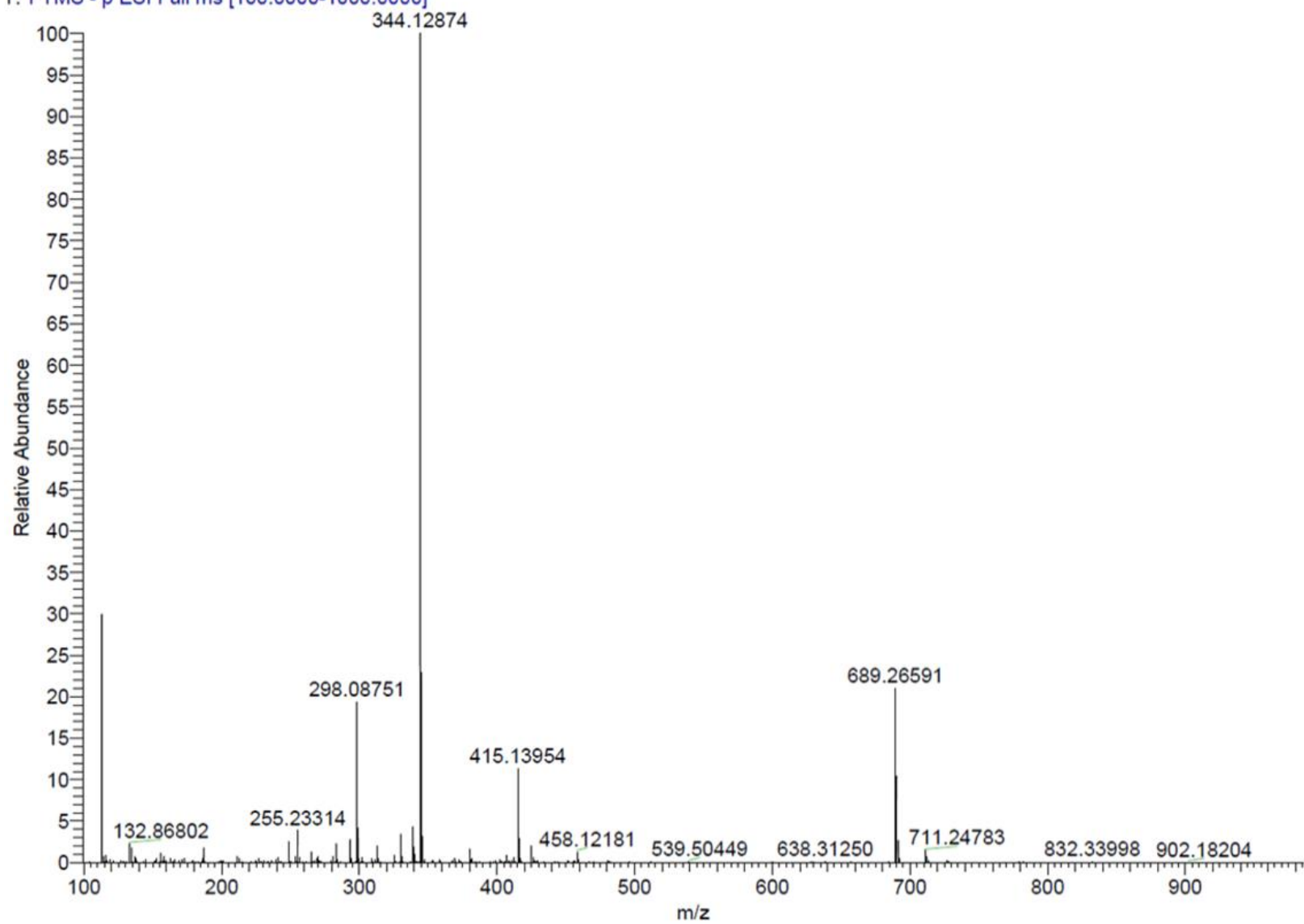


Figure S3. HRMS spectrum of 7 in negative mode.

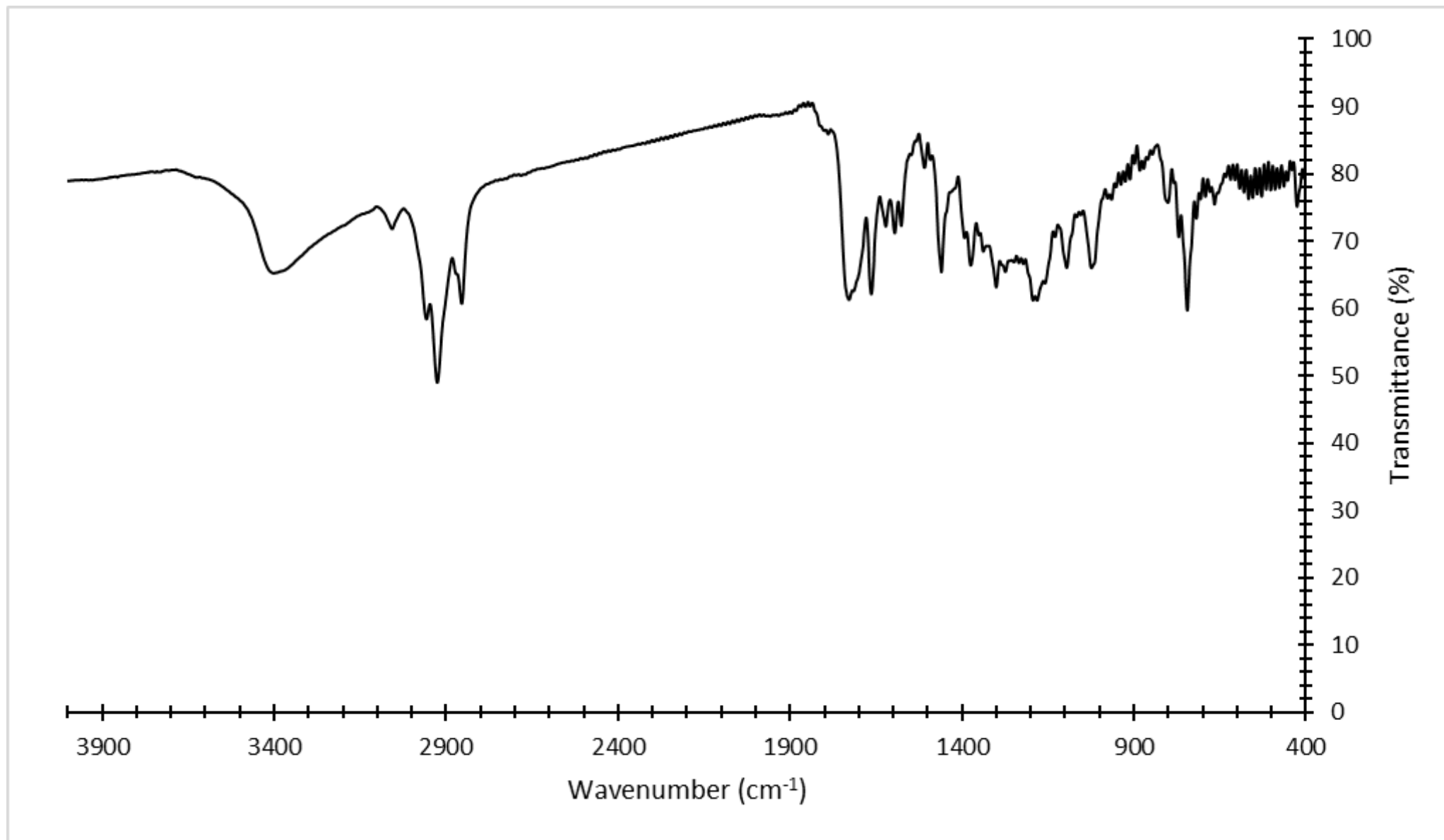


Figure S4. FTIR spectrum of 7.

Ethyl 2-(5-chloro-8-hydroxyquinolin-7-yl)-2-morpholinoacetate (10)

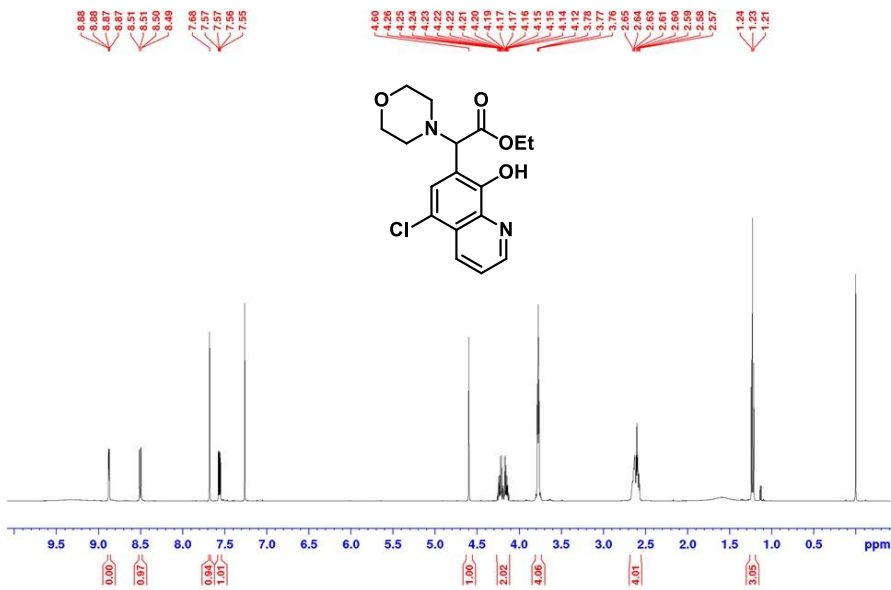
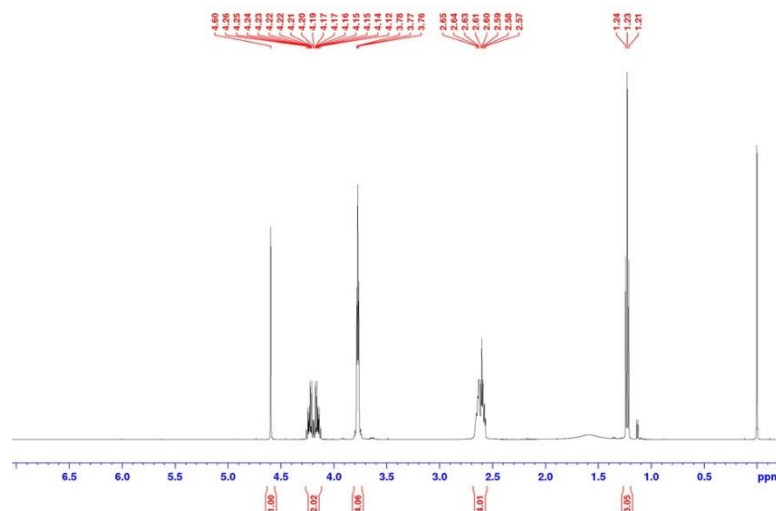
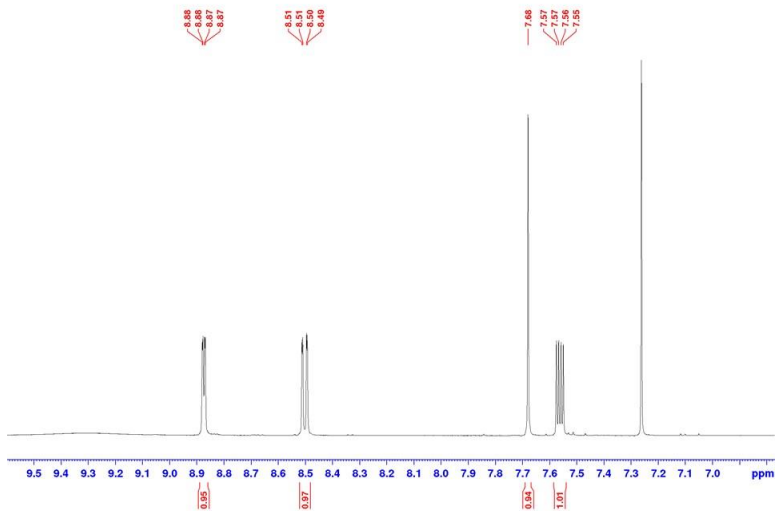


Figure S5. <sup>1</sup>H-NMR spectrum of 10.



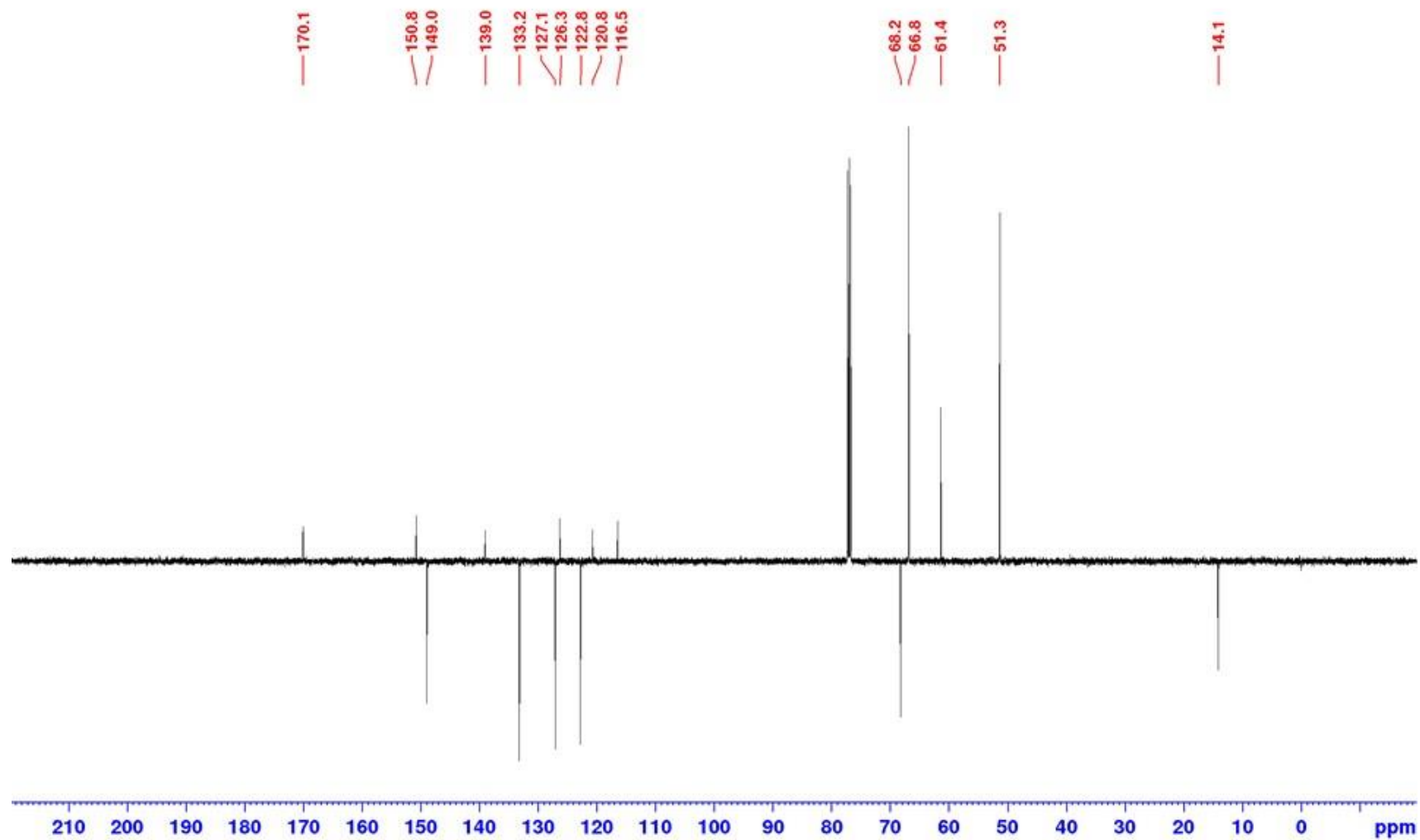


Figure S6. <sup>13</sup>C-NMR spectrum of **10**.

GYK-20230927 #25961-26053 RT: 57.60-57.80 AV: 93 NL: 6.97E8  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

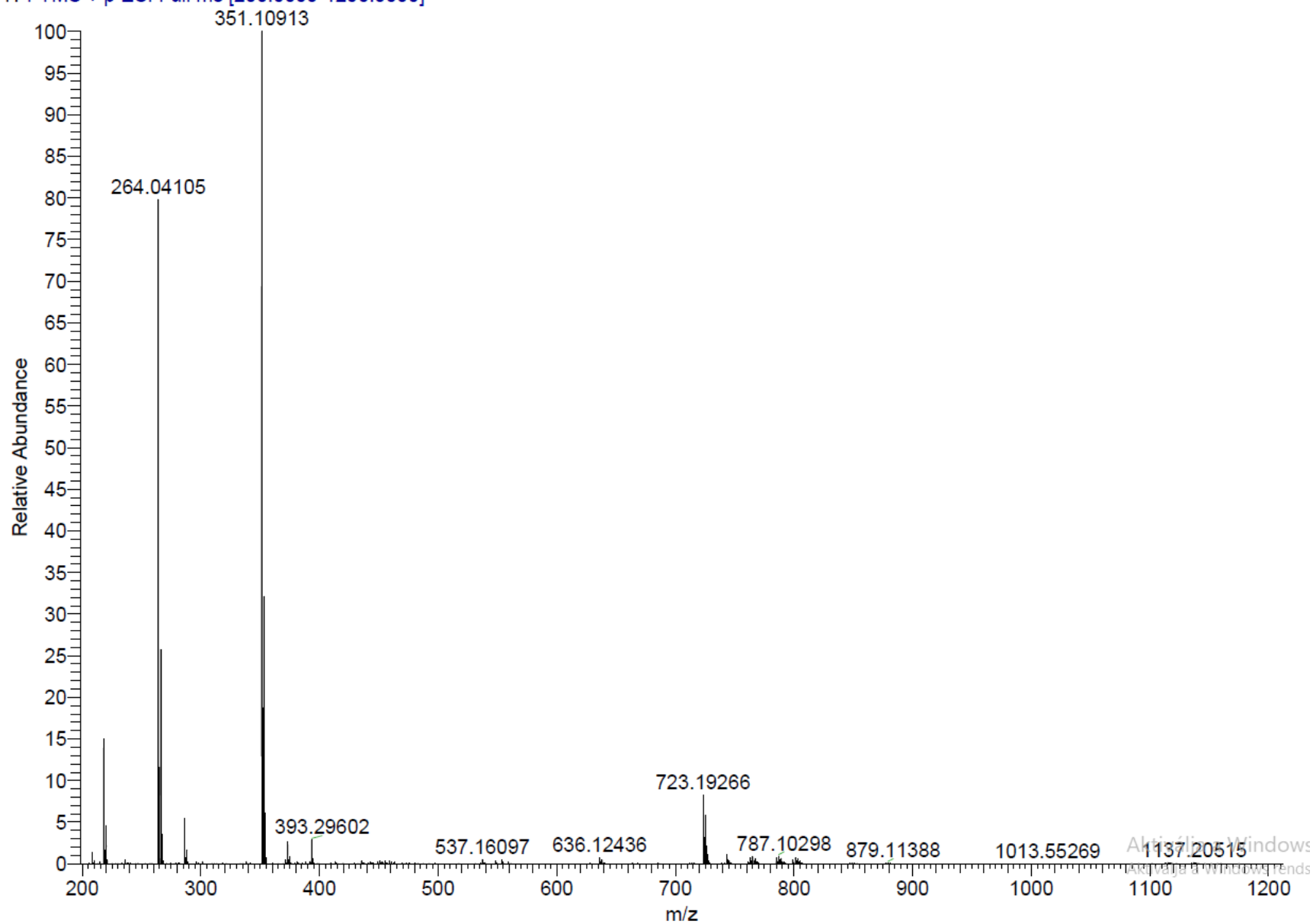


Figure S7. HRMS spectrum of **10** in positive mode.



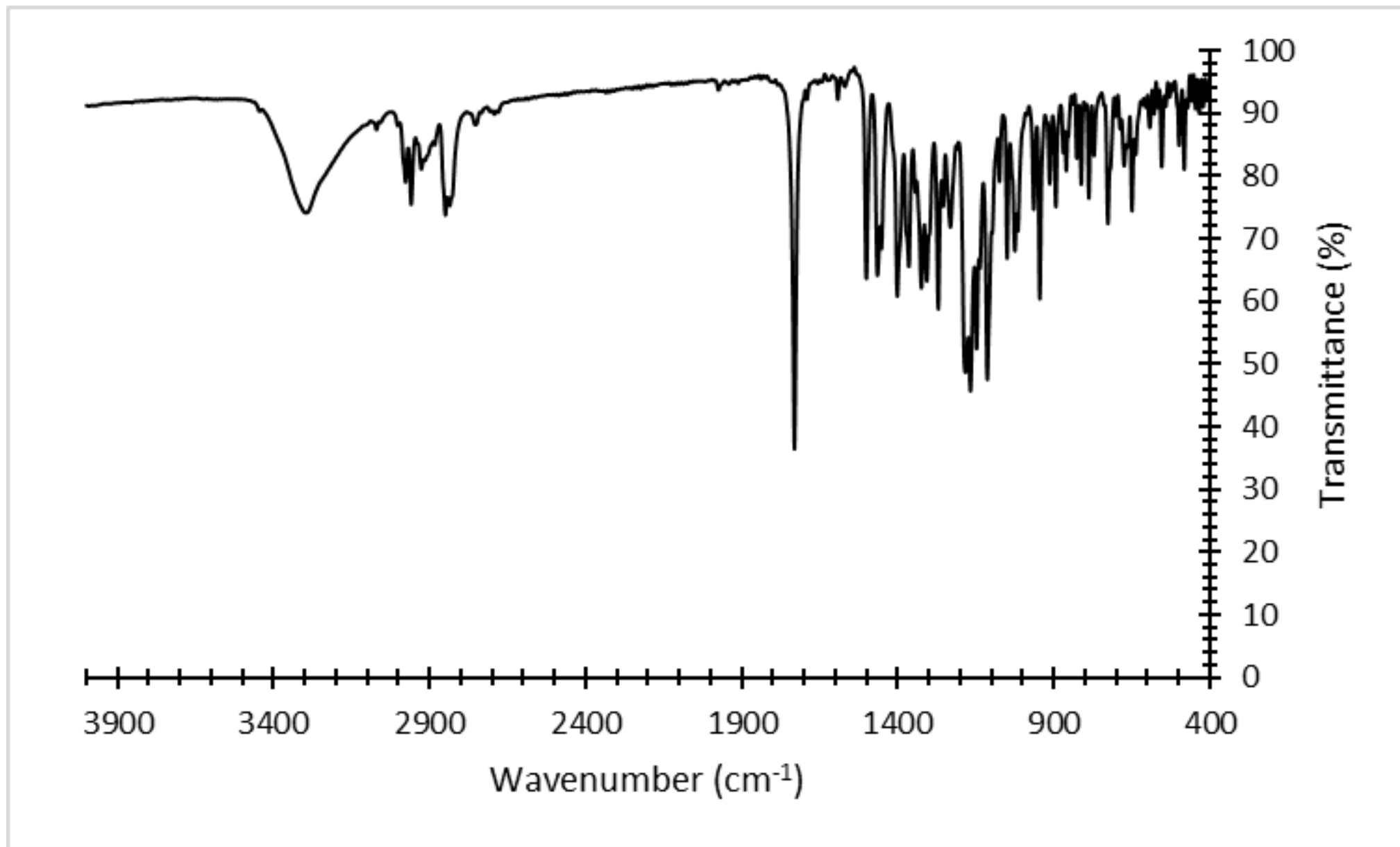


Figure S8. FTIR spectrum of **10**.

Melting point of **10**: 124-126 °C.

Ethyl 2-(5-chloro-8-hydroxyquinolin-7-yl)-2-(1H-indol-3-yl)acetate (11)

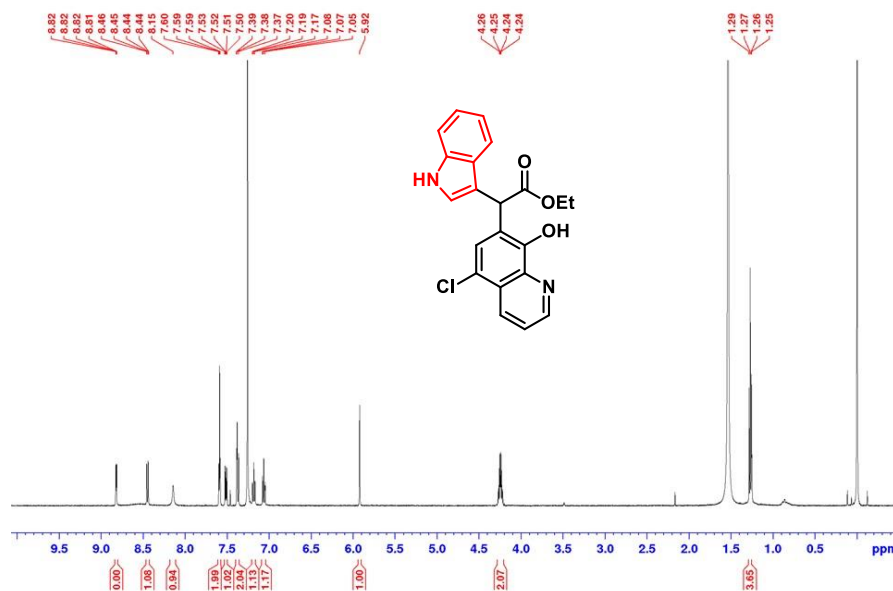
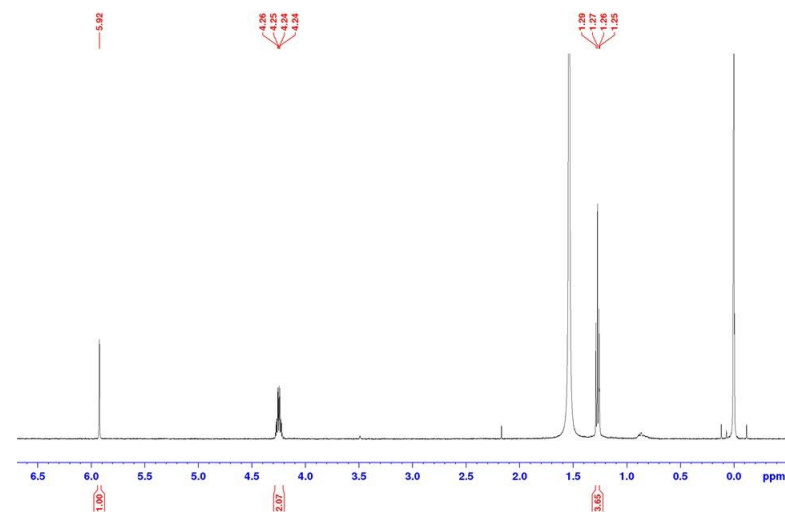
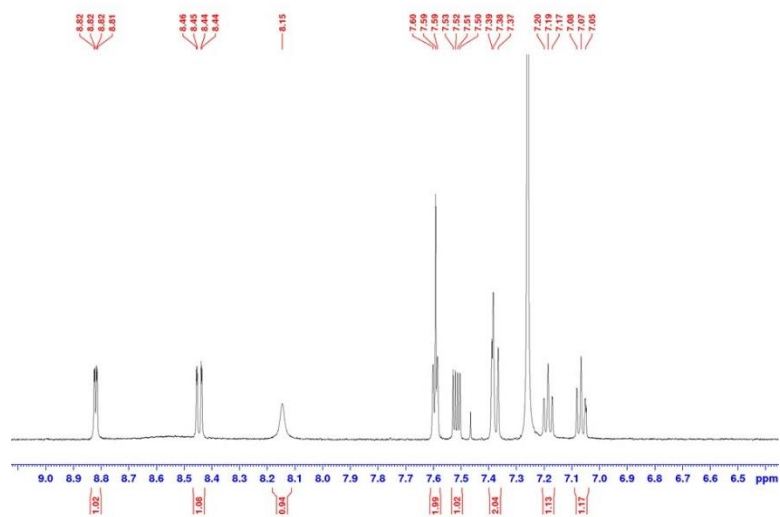


Figure S9. <sup>1</sup>H-NMR spectrum of 11.



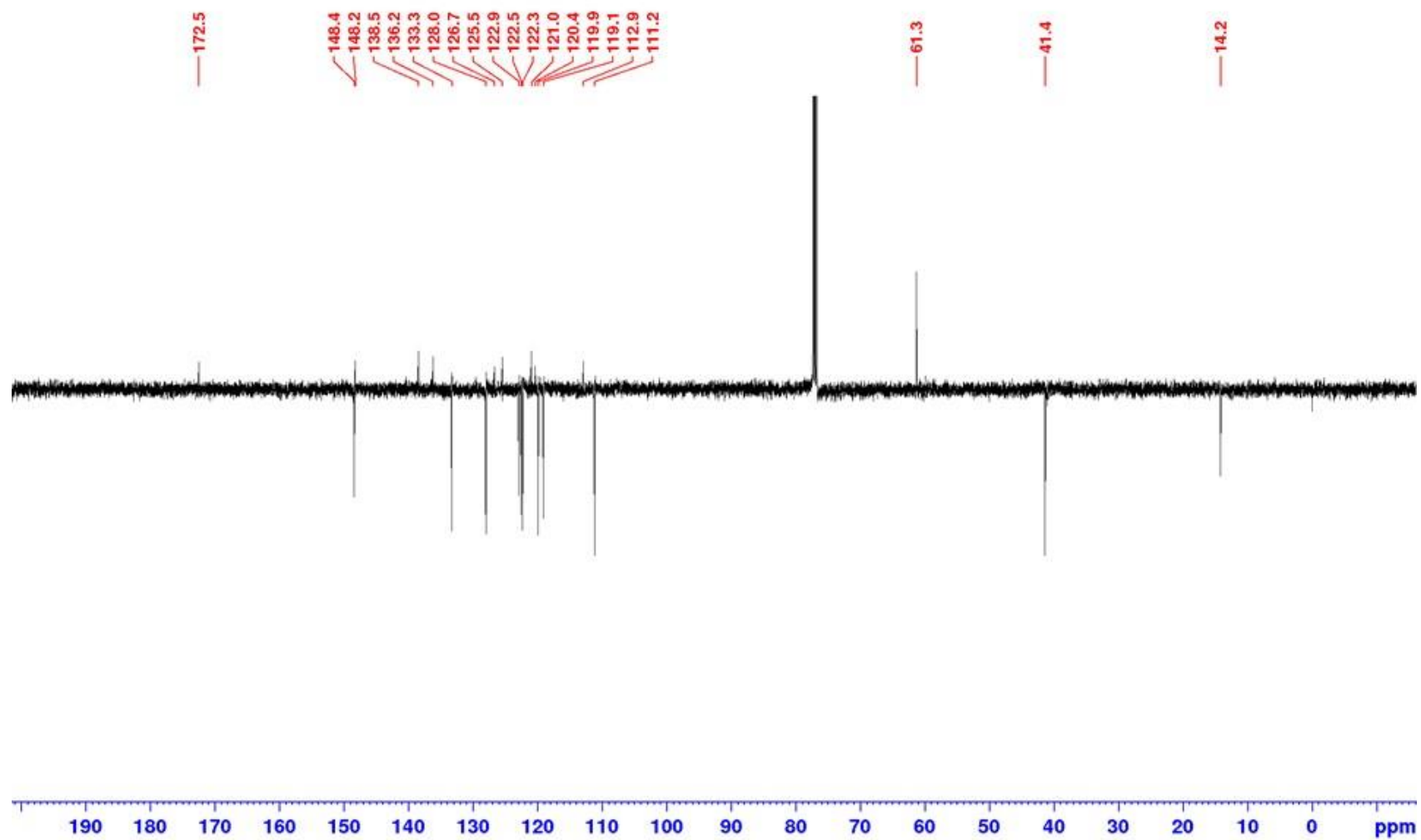


Figure S10.  $^{13}\text{C}$ -NMR spectrum of **11**.

GYK-20230927 #26722-26775 RT: 59.29-59.41 AV: 54 NL: 1.37E9  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

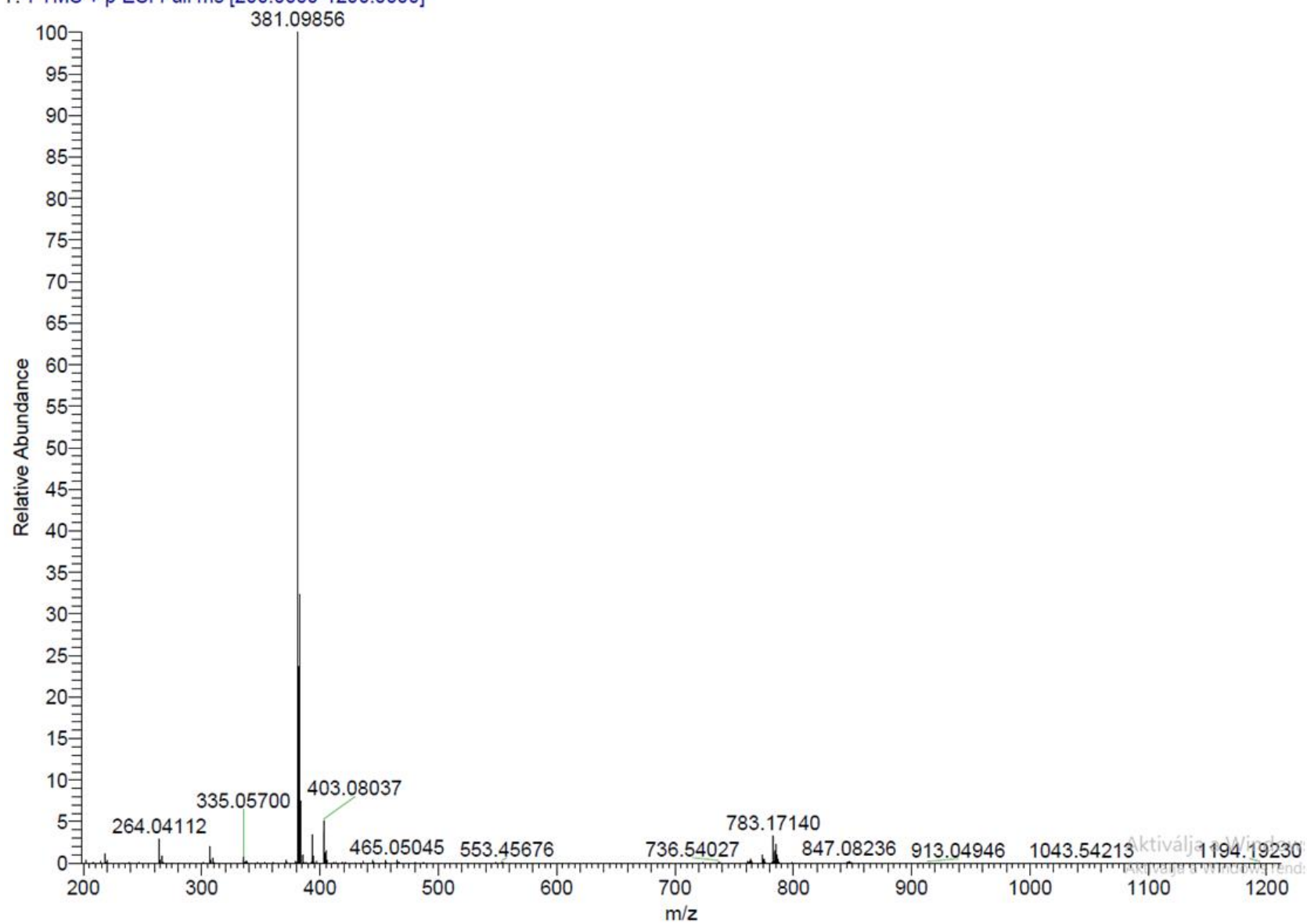


Figure S11. HRMS spectrum of **11** in positive mode.

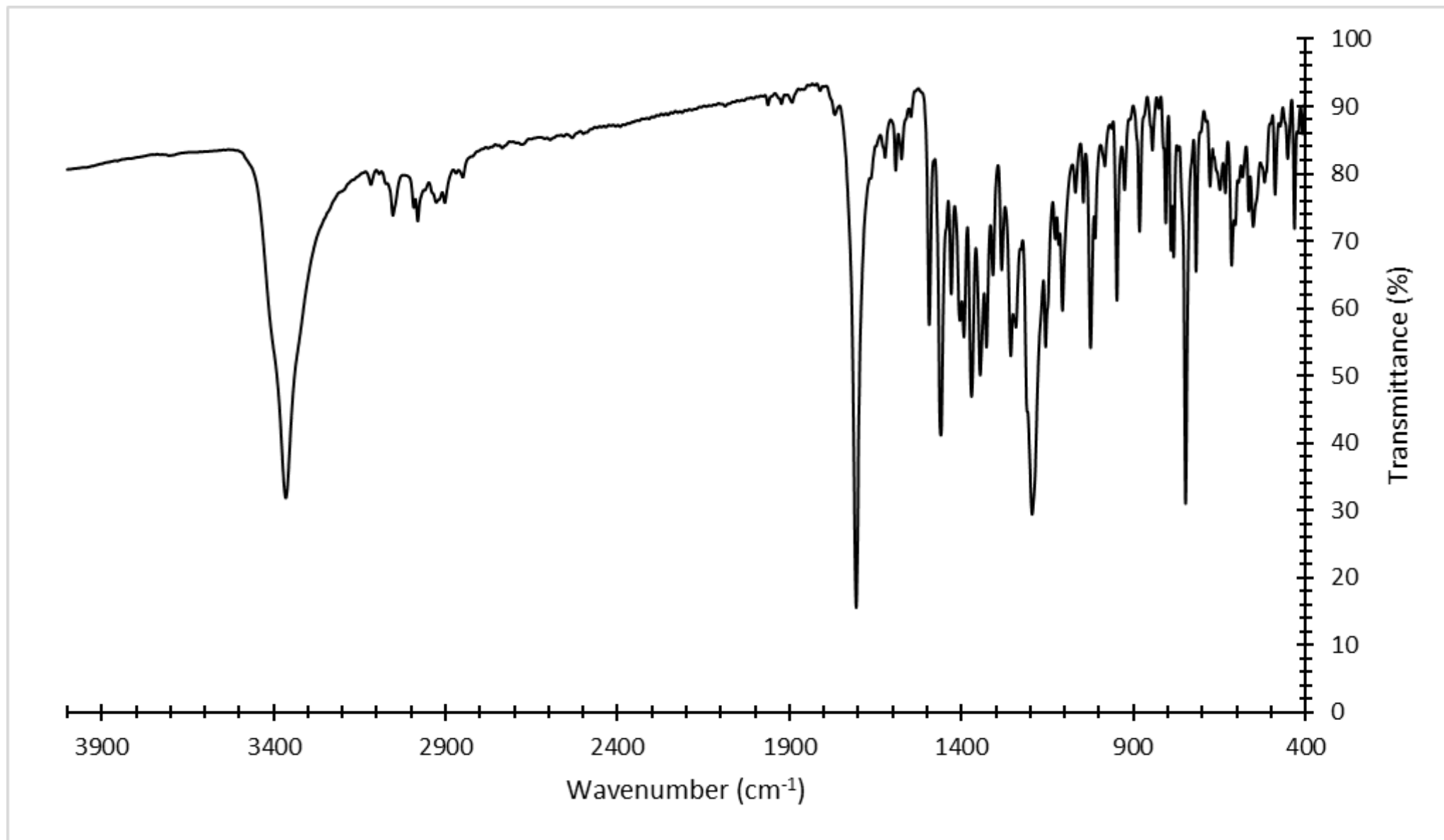


Figure S12. FTIR spectrum of **11**.

Ethyl 2-(5-chloro-8-hydroxyquinolin-7-yl)-2-(7-azaindole-3-yl)acetate (12)

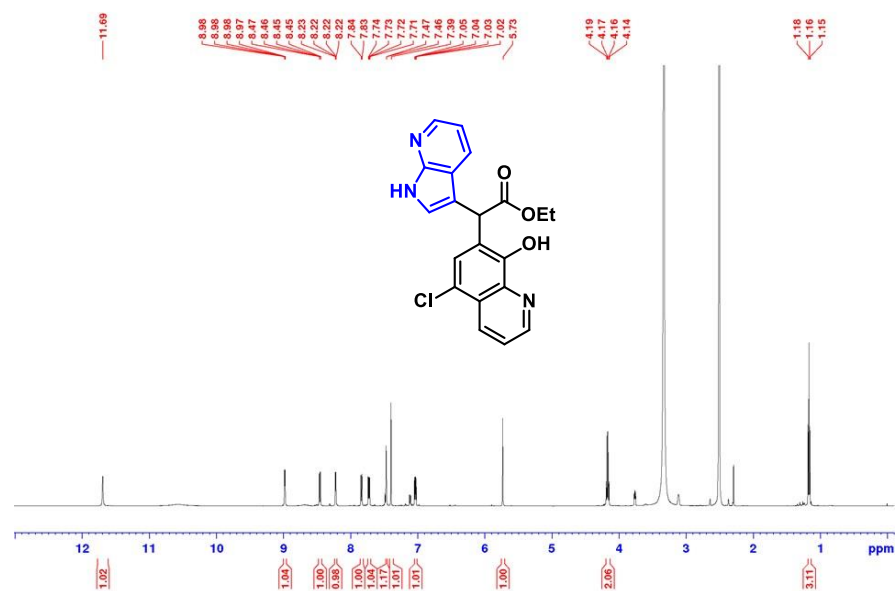
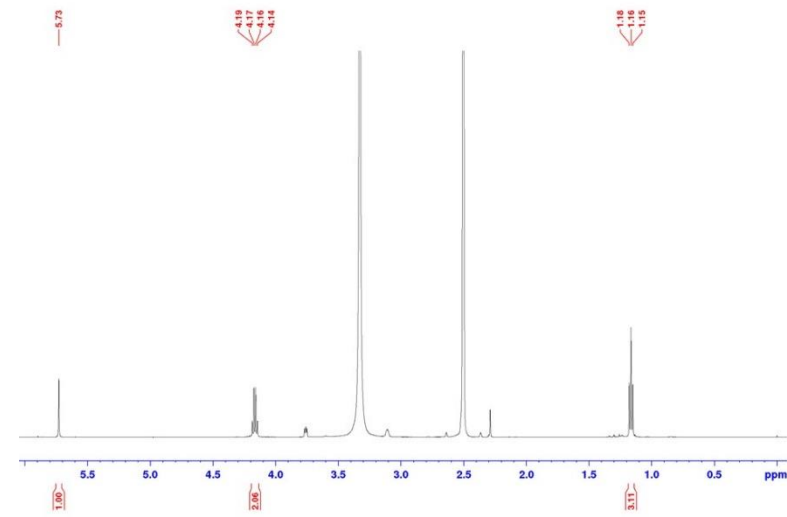
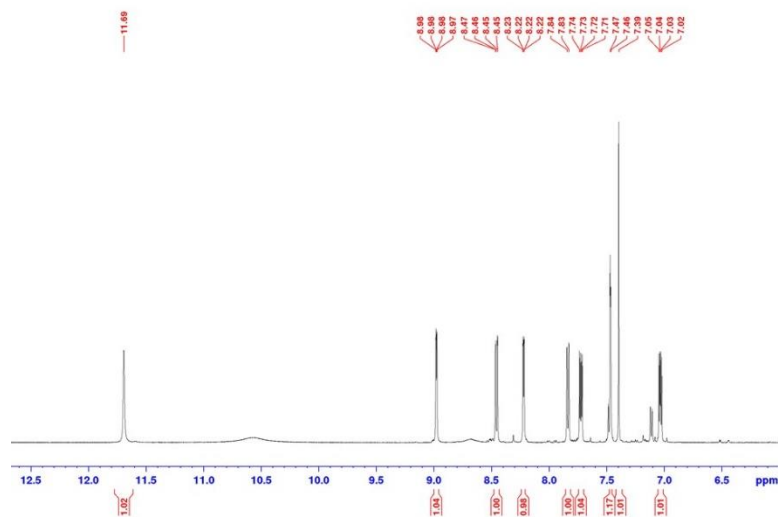


Figure S13. <sup>1</sup>H-NMR spectrum of 12.



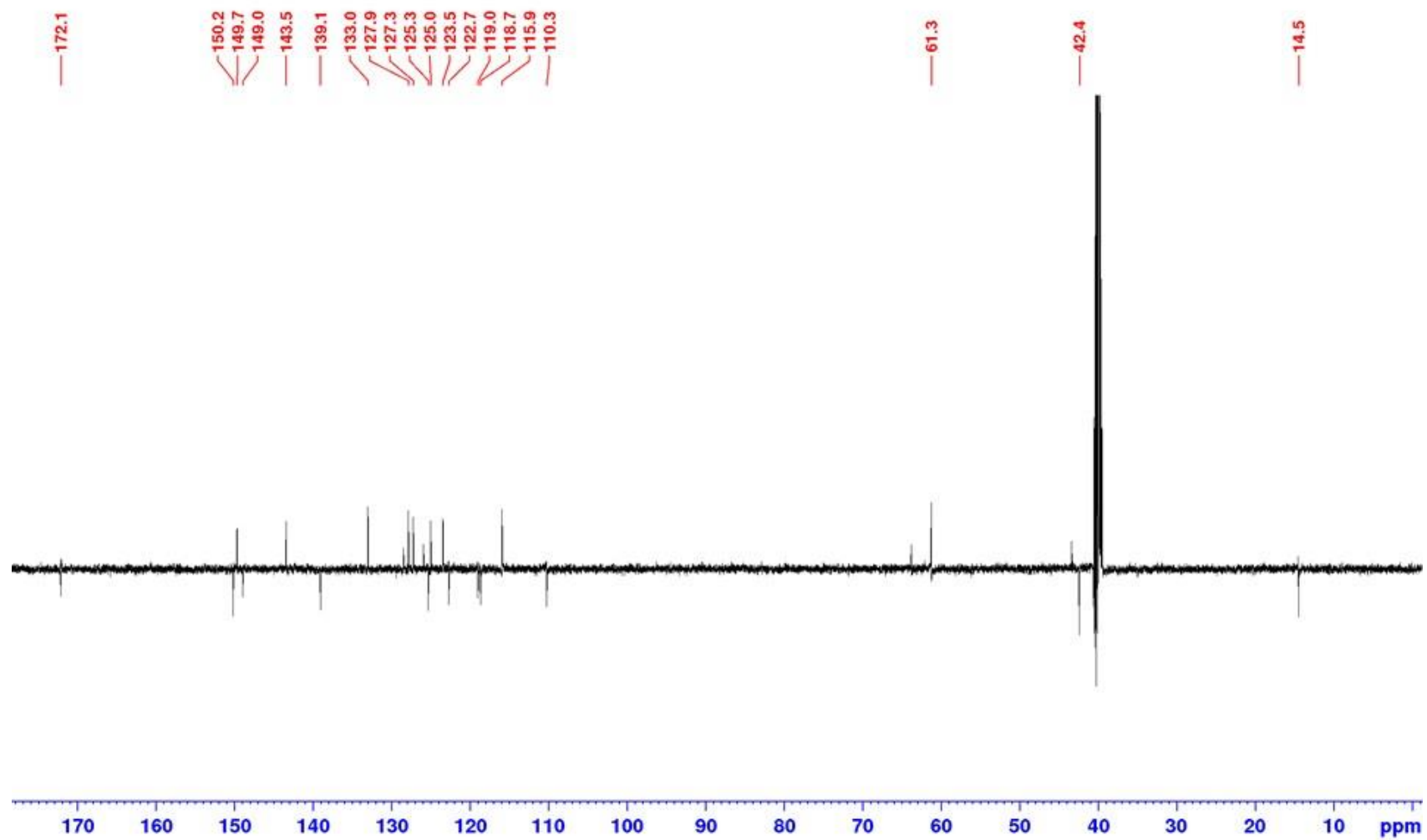


Figure S14. <sup>13</sup>C-NMR spectrum of **12**.

GYK-20230927 #27451-27477 RT: 60.91-60.96 AV: 27 NL: 1.33E9  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

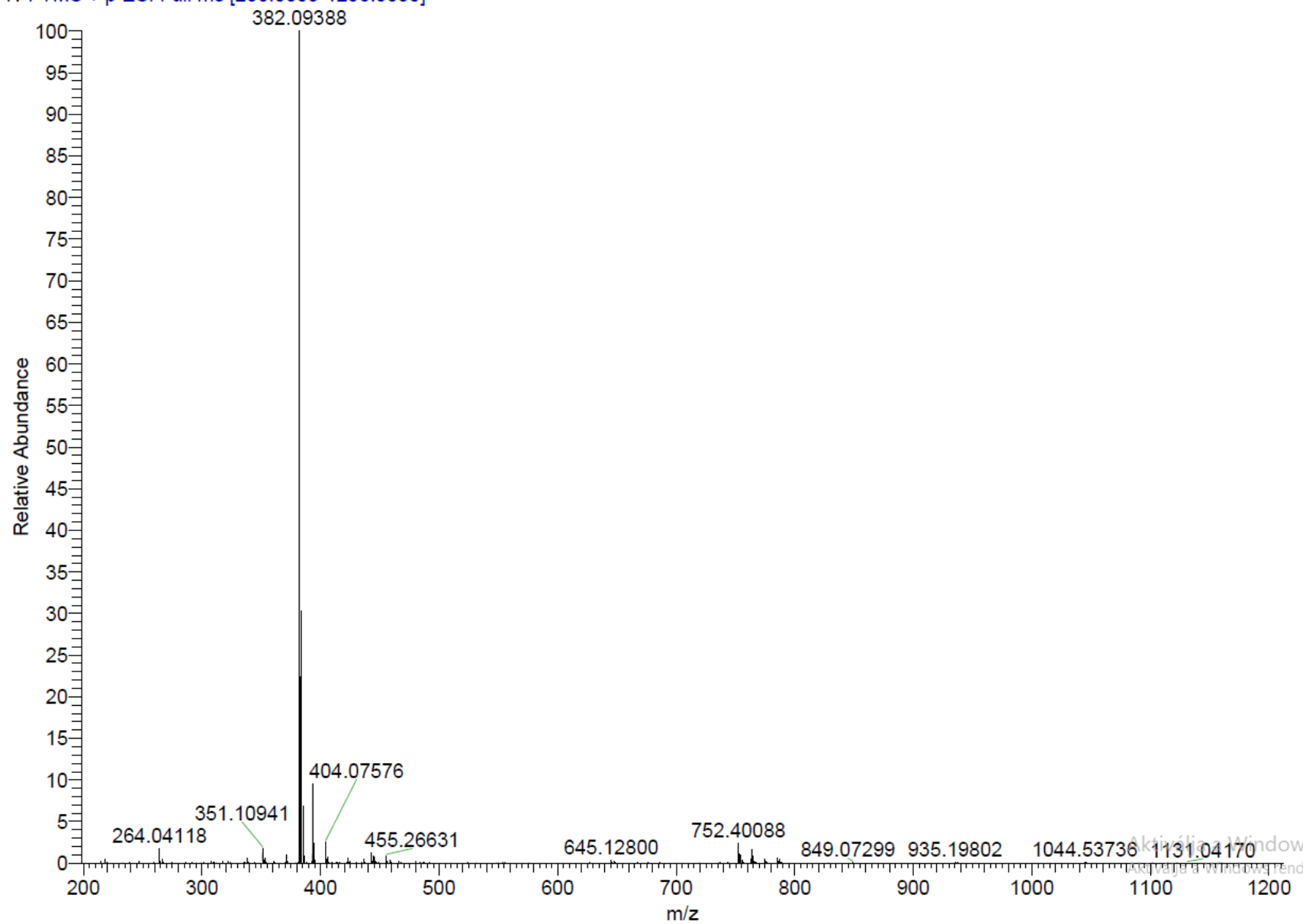


Figure S15. HRMS spectrum of **12** in positive mode.



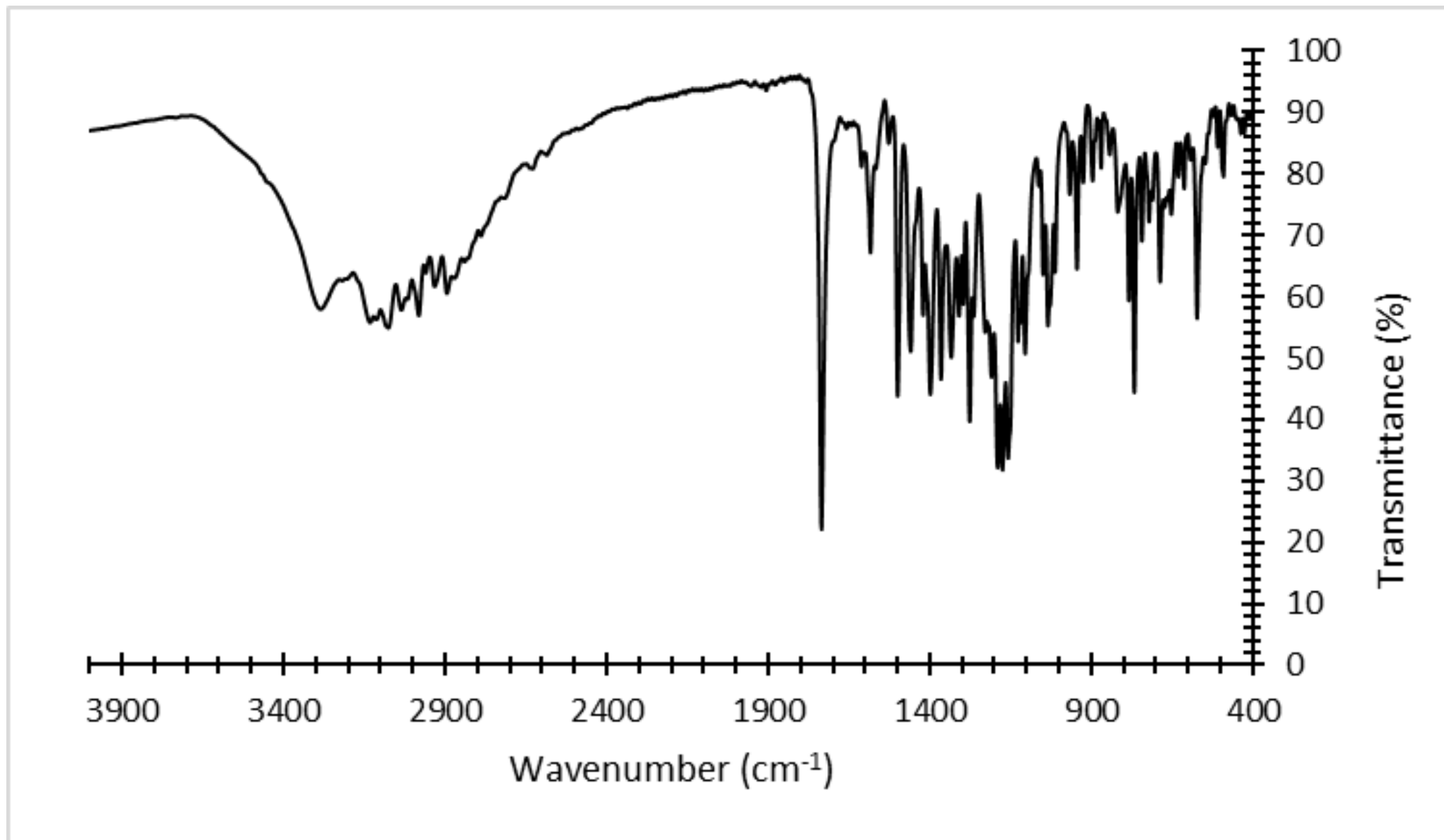


Figure S16. FTIR spectrum of **12**.

Melting point of **12**: 228-230 °C

7-((1*H*-indol-3-yl)(phenyl)methyl)-5-chloroquinolin-8-ol (**14**)

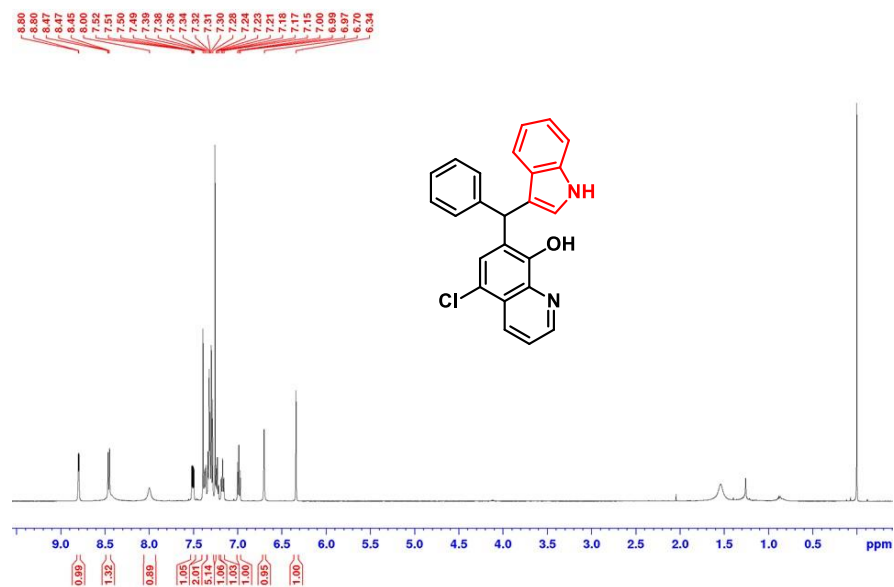
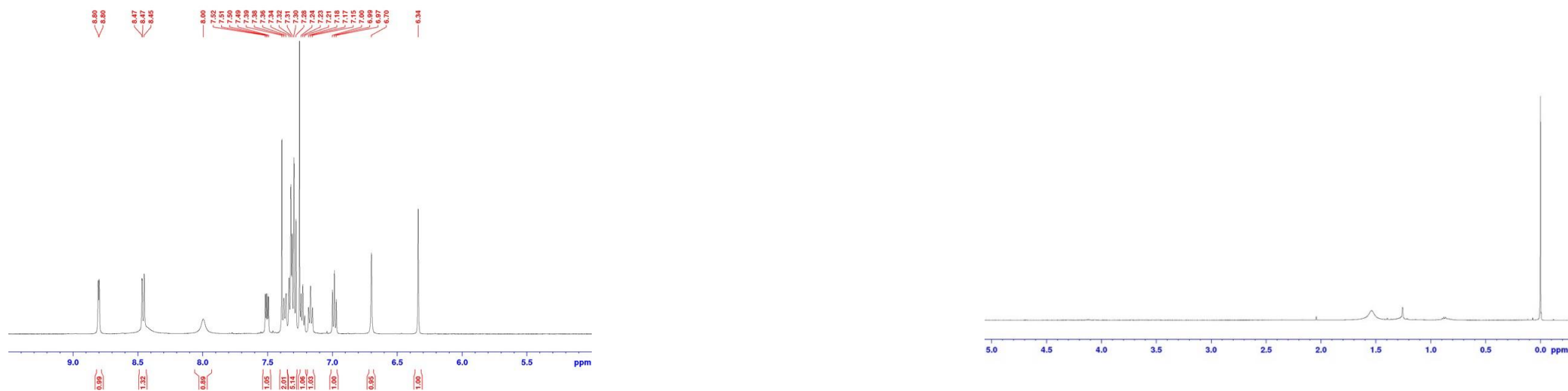


Figure S17. <sup>1</sup>H-NMR spectrum of **14**.



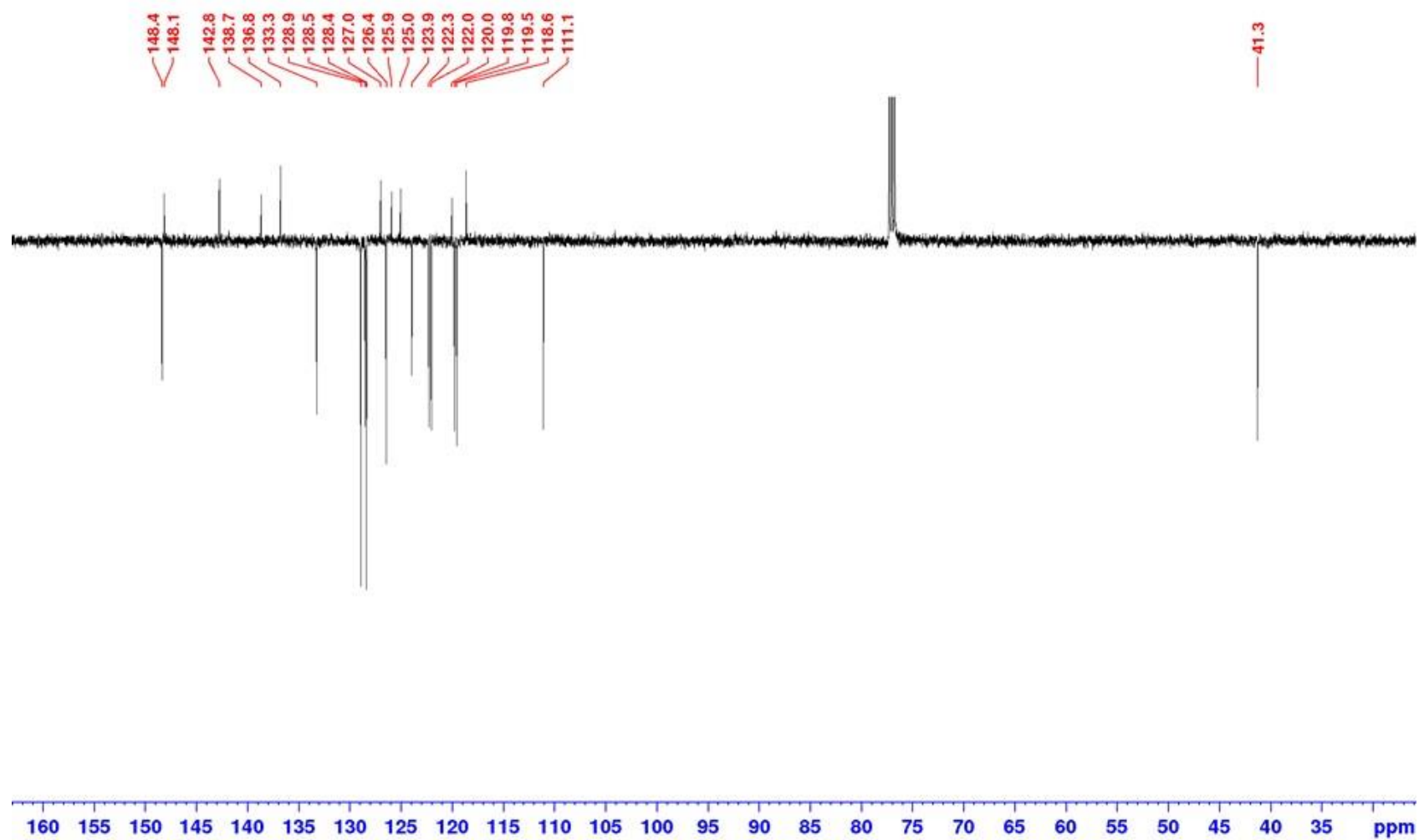


Figure S18. <sup>13</sup>C-NMR spectrum of **14**.

GYK-20230927 #28213-28265 RT: 62.60-62.71 AV: 53 NL: 8.69E8  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

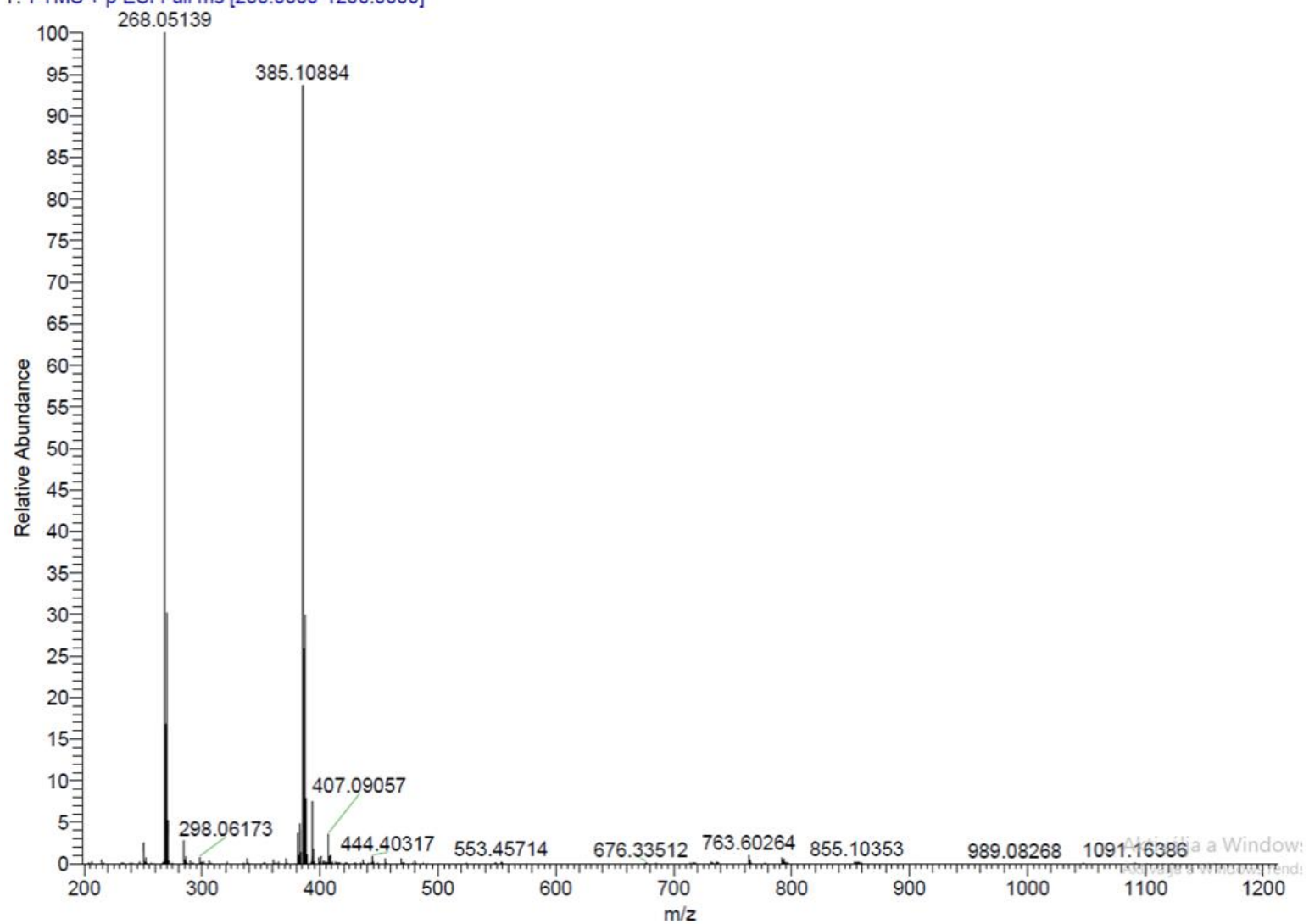


Figure S19. HRMS spectrum of **14** in positive mode.

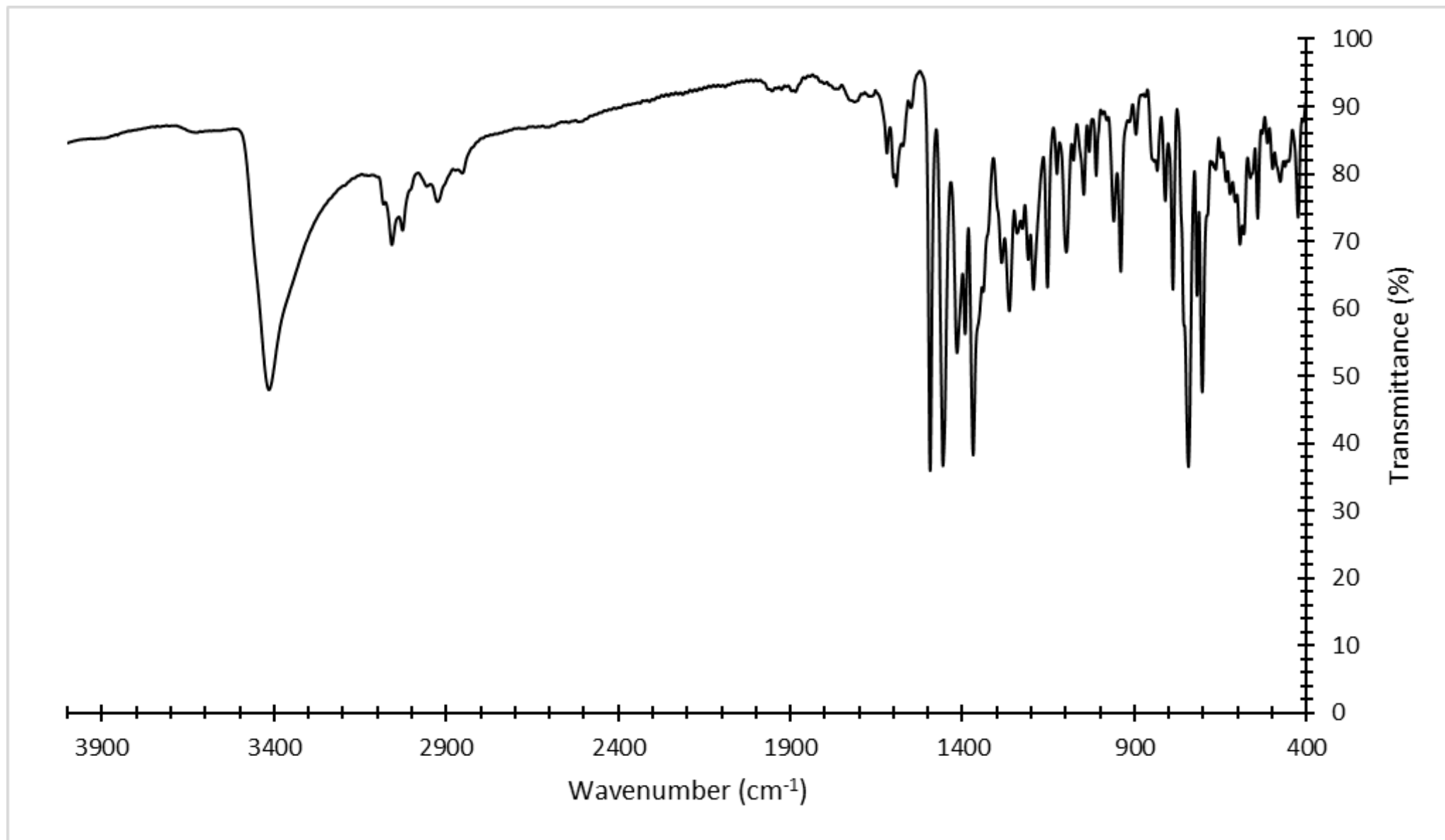


Figure S20. FTIR spectrum of **14**.

7-((1*H*-indol-3-yl)methyl)-5-chloroquinolin-8-ol (16)

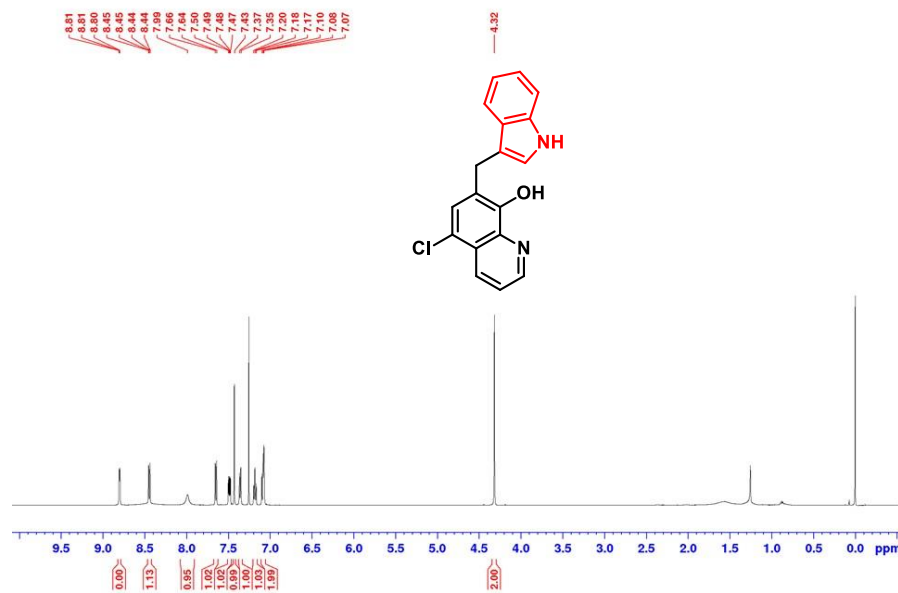
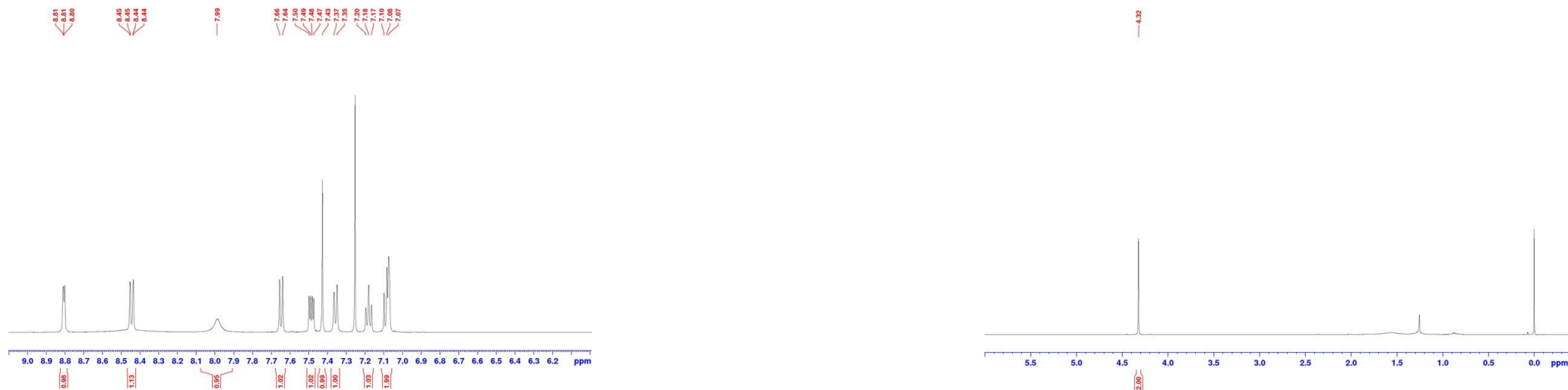


Figure S21. <sup>1</sup>H-NMR spectrum of 16.



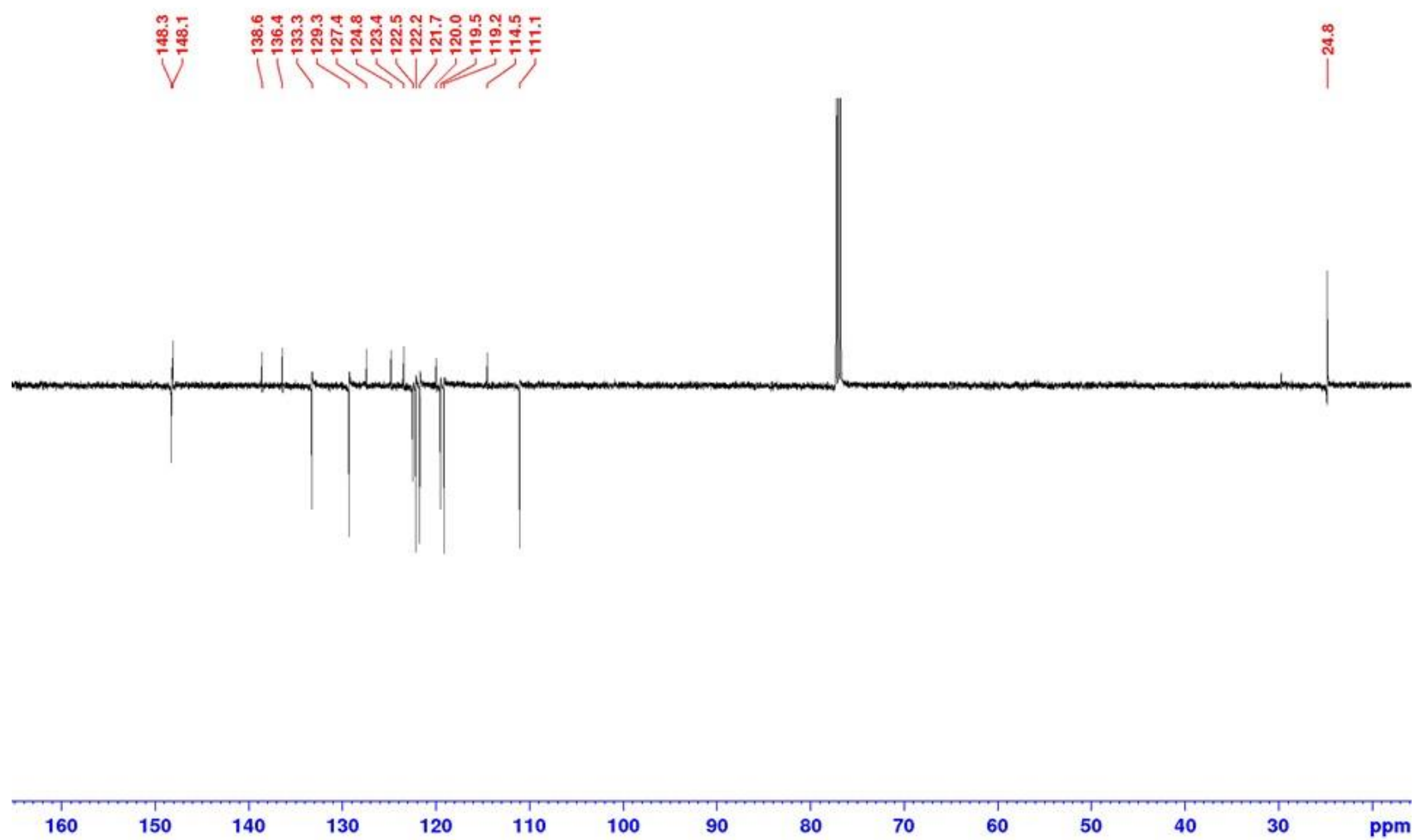


Figure S22. <sup>13</sup>C-NMR spectrum of **16**.

GYK-20230927 #28948-28994 RT: 64.23-64.33 AV: 47 NL: 2.33E8  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

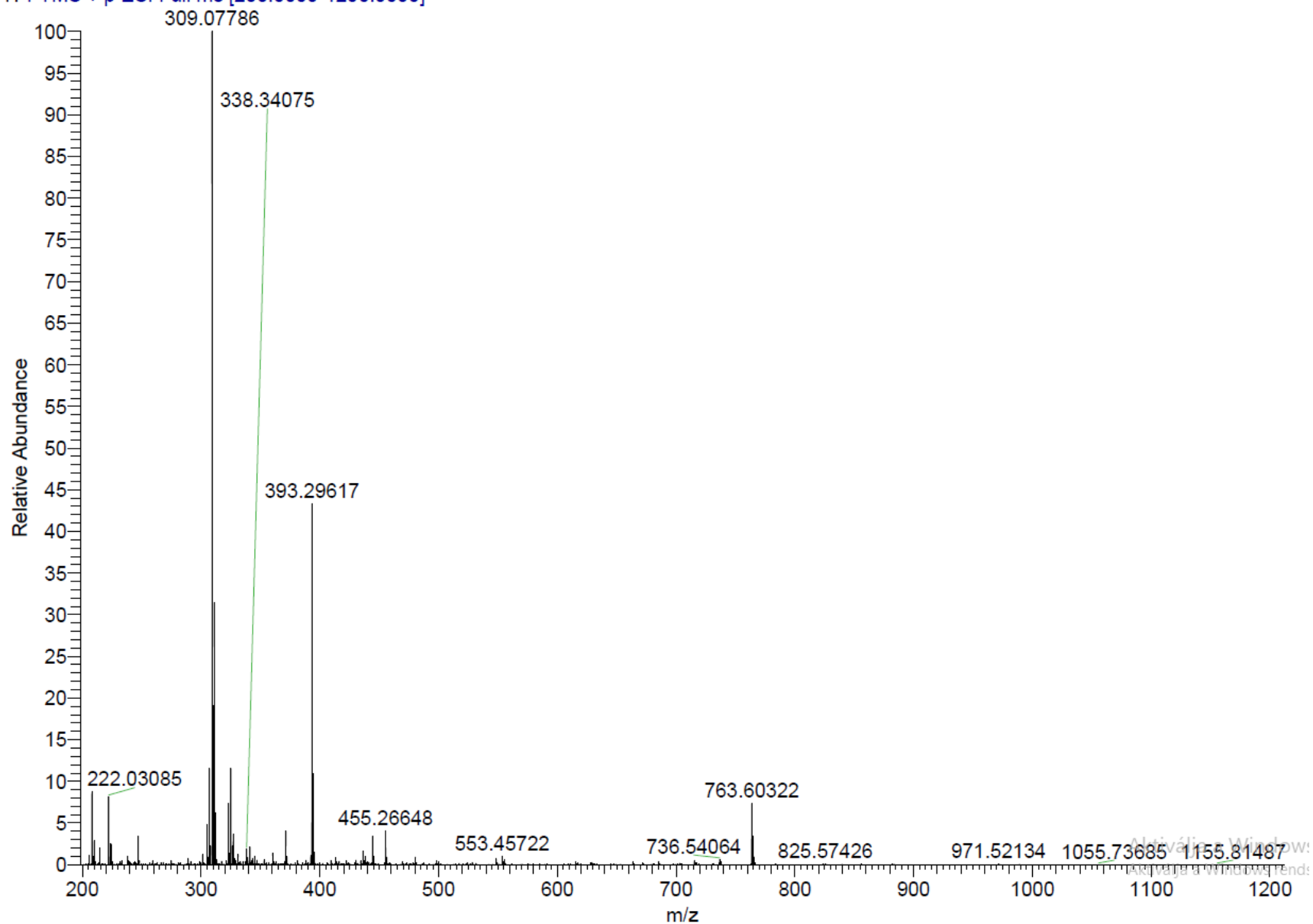


Figure S23. HRMS spectrum of **16** in positive mode.



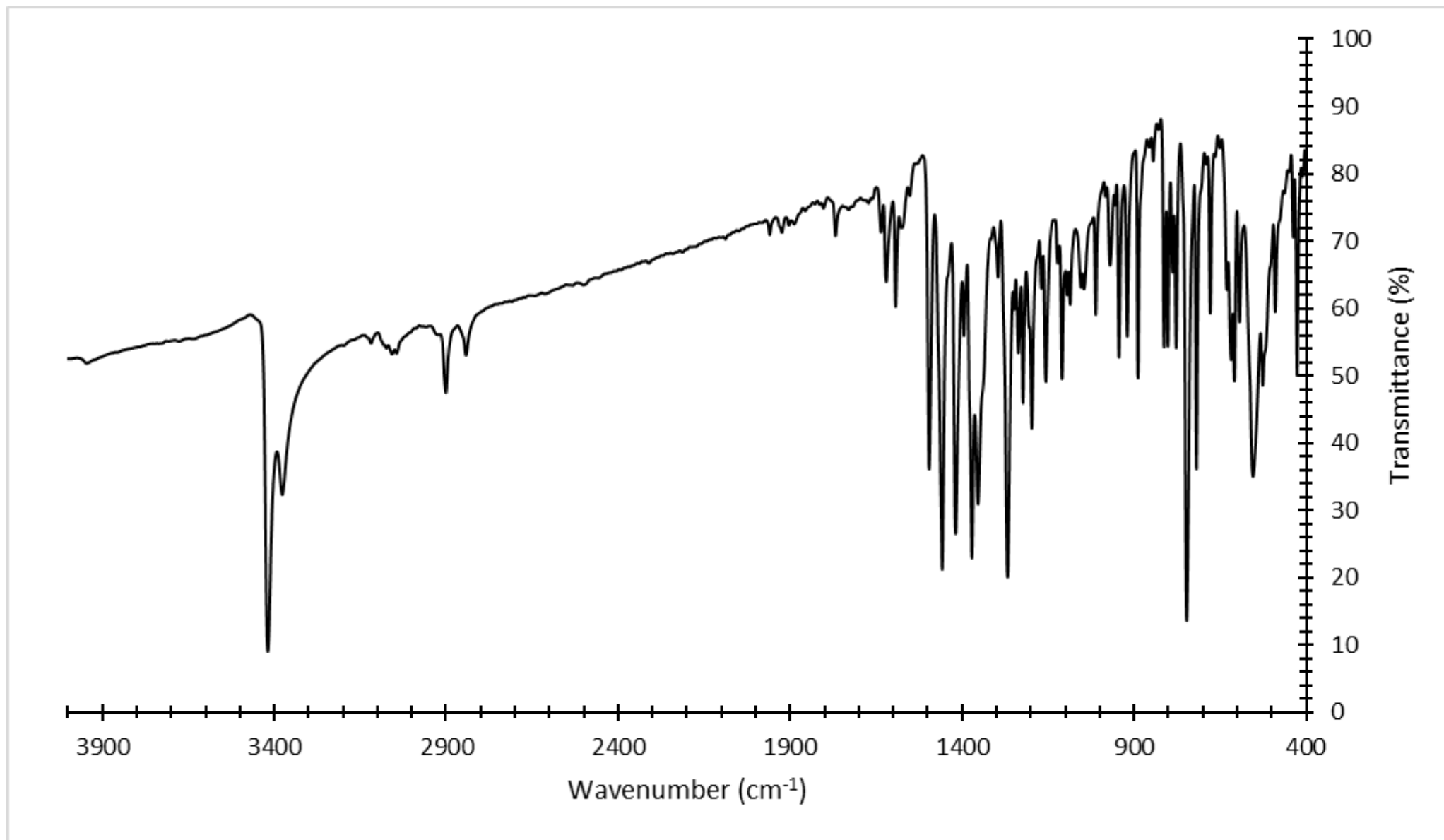


Figure S24. FTIR spectrum of **16**.

7-((7-azaindole-3-yl)methyl)-5-chloroquinolin-8-ol (17)

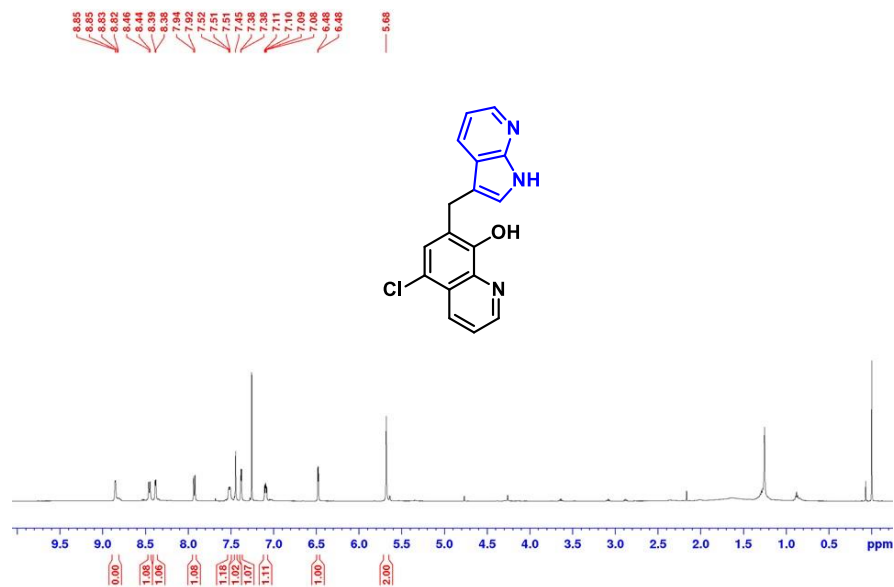
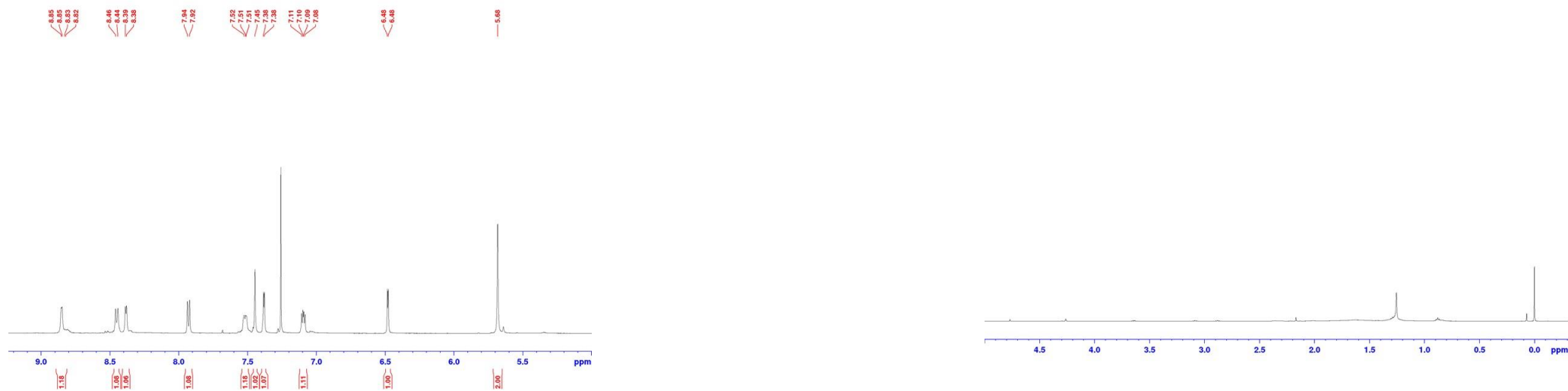


Figure S25. <sup>1</sup>H-NMR spectrum of 17.



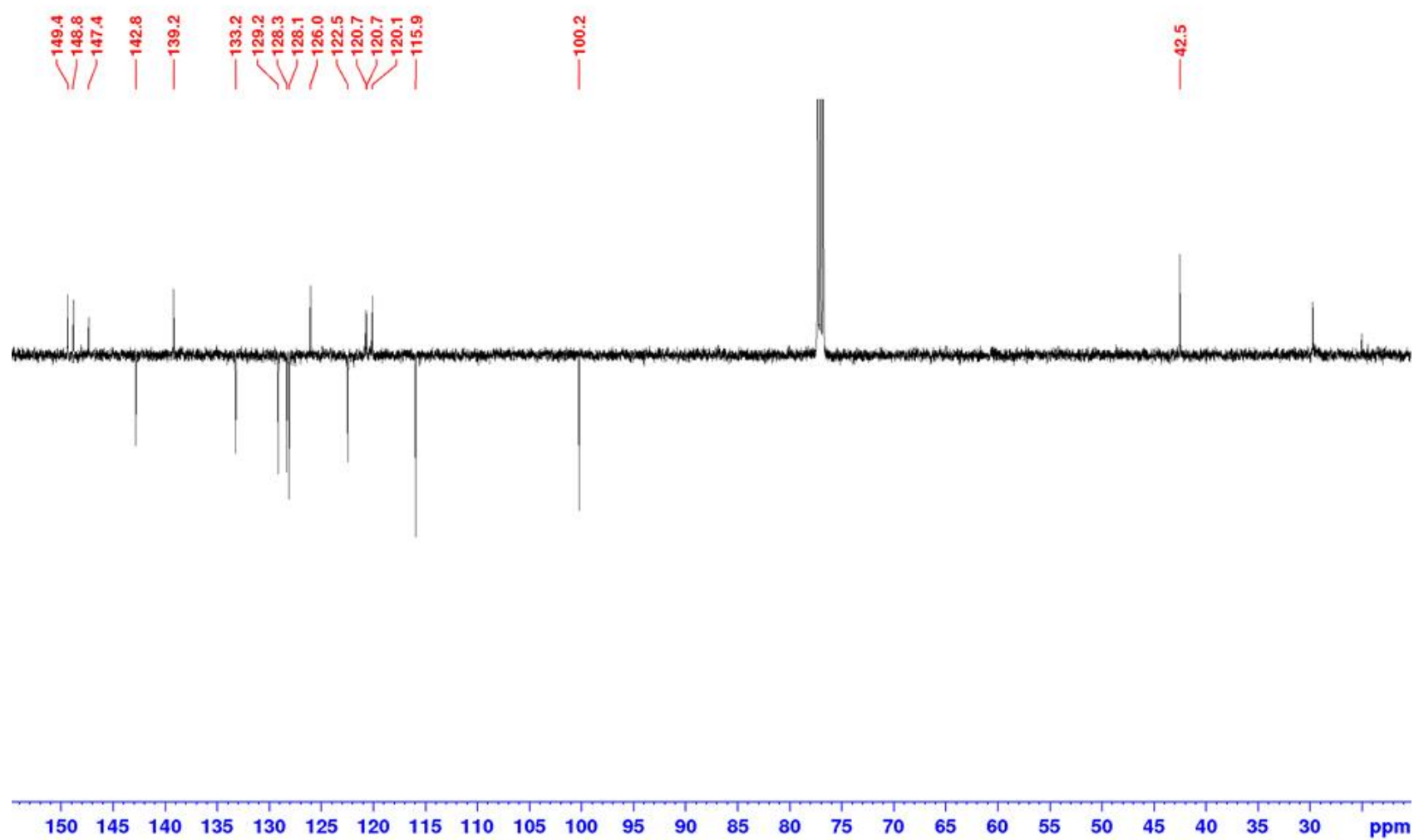


Figure S26. <sup>13</sup>C-NMR spectrum of 17.

GYK-20230927 #29690-29736 RT: 65.87-65.98 AV: 47 NL: 4.34E8  
T: FTMS + p ESI Full ms [200.0000-1200.0000]

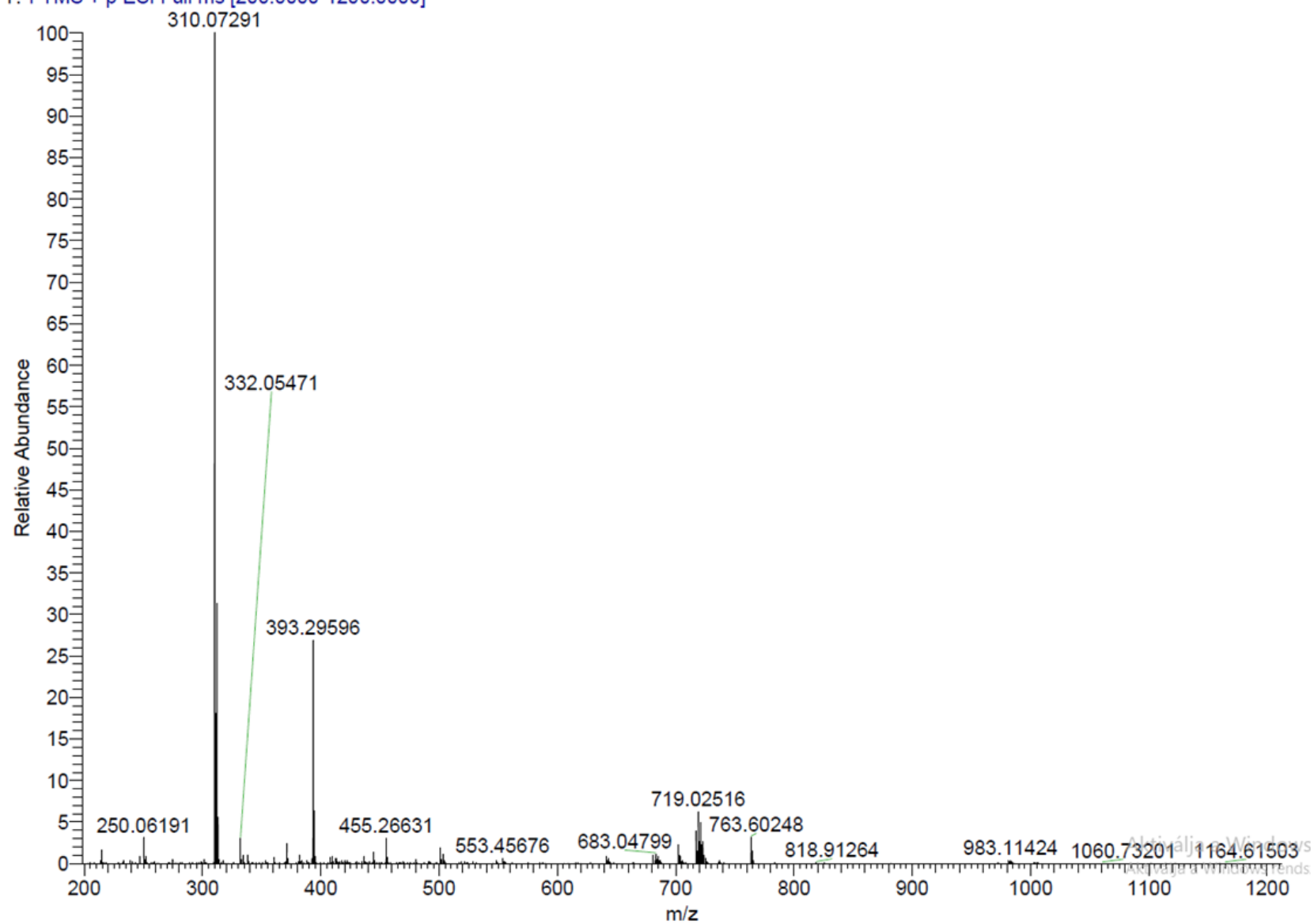


Figure S27. HRMS spectrum of 17 in positive mode.

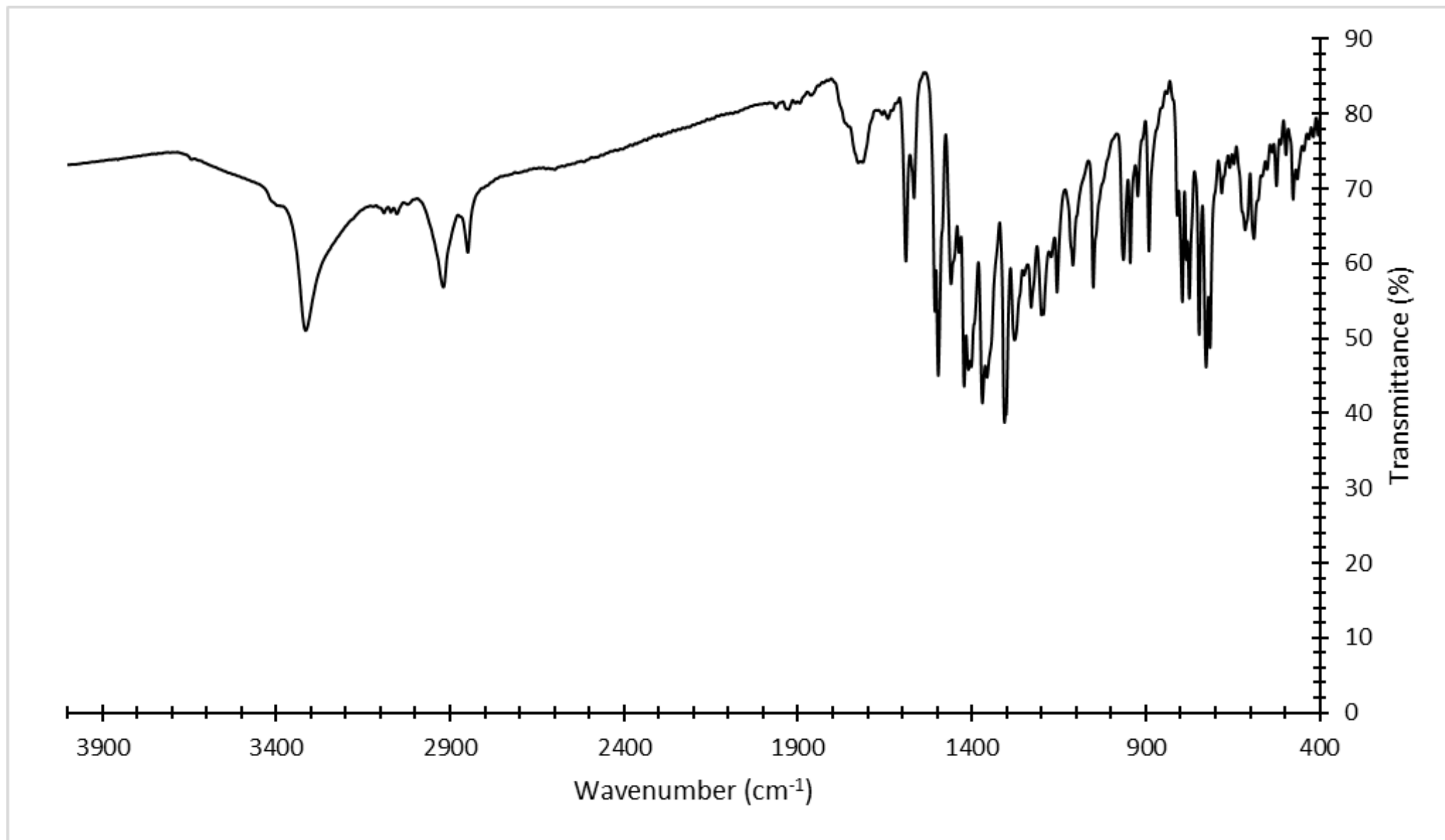


Figure S28. FTIR spectrum of **17**.