

^1H NMR (400 MHz, DMSO- d_6) δ 8.59 (d, J = 4.7 Hz, 1H), 8.53 (d, J = 8.1 Hz, 1H), 7.85 – 7.78 (m, 1H), 7.57 (d, J = 8.8 Hz, 2H), 7.41 (dd, J = 10.5, 6.0 Hz, 3H).

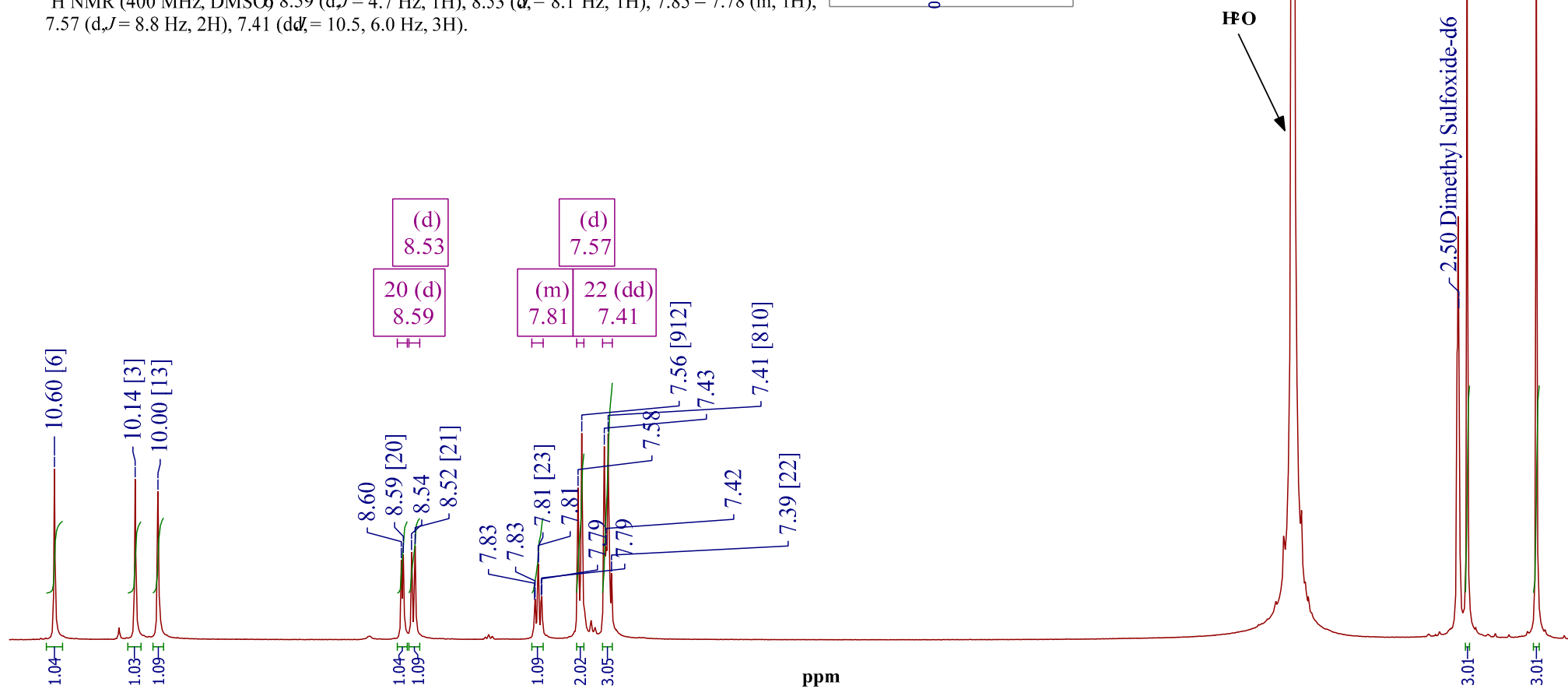
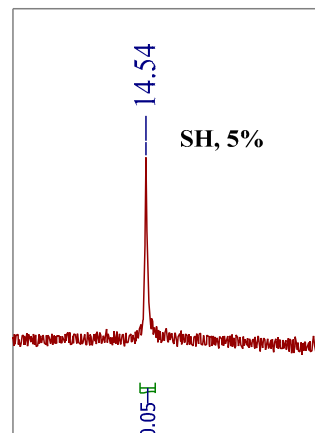


Figure S1. ^1H -NMR spectrum of thiosemicarbazone HL

^{13}C NMR (101 MHz, DMSO) 177.82, 168.79, 154.95, 149.50, 148.93, 137.36, 136.91, 134.56, 127.14, 124.60, 121.73, 119.14, 24.41, 12.91.

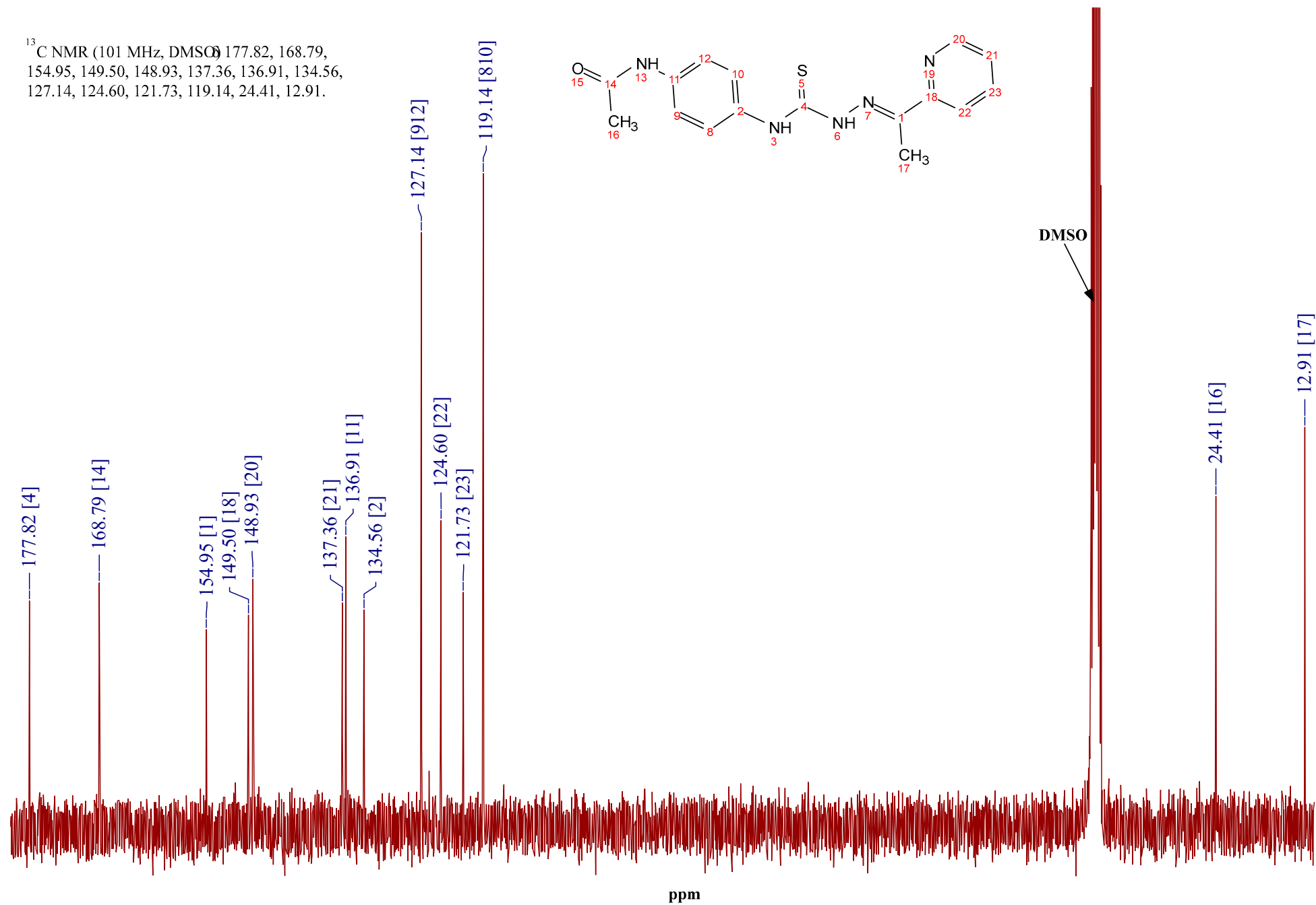


Figure S2. ^{13}C -NMR spectrum of thiosemicarbazone HL

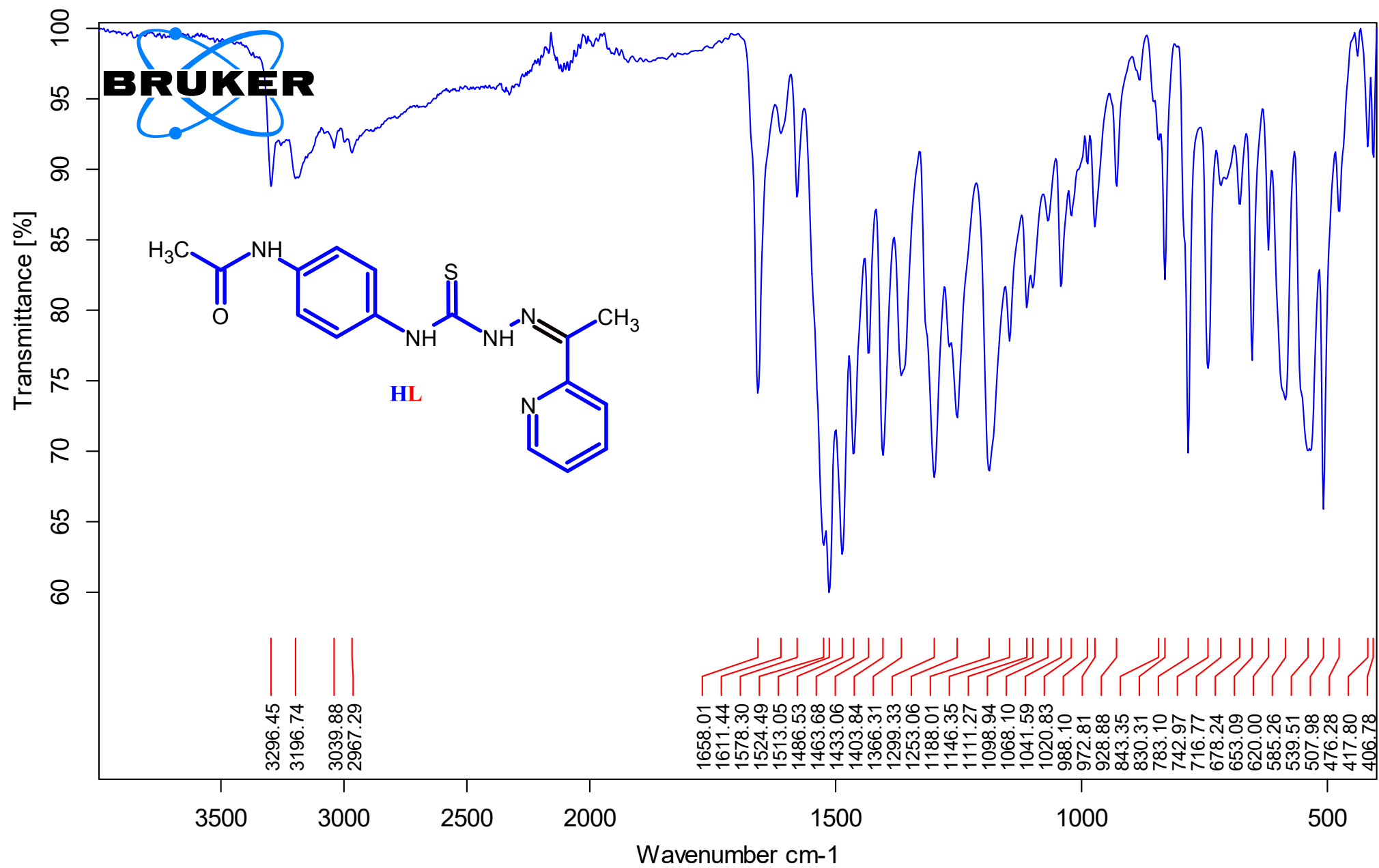


Figure S3. FT-IR spectrum of **HL**

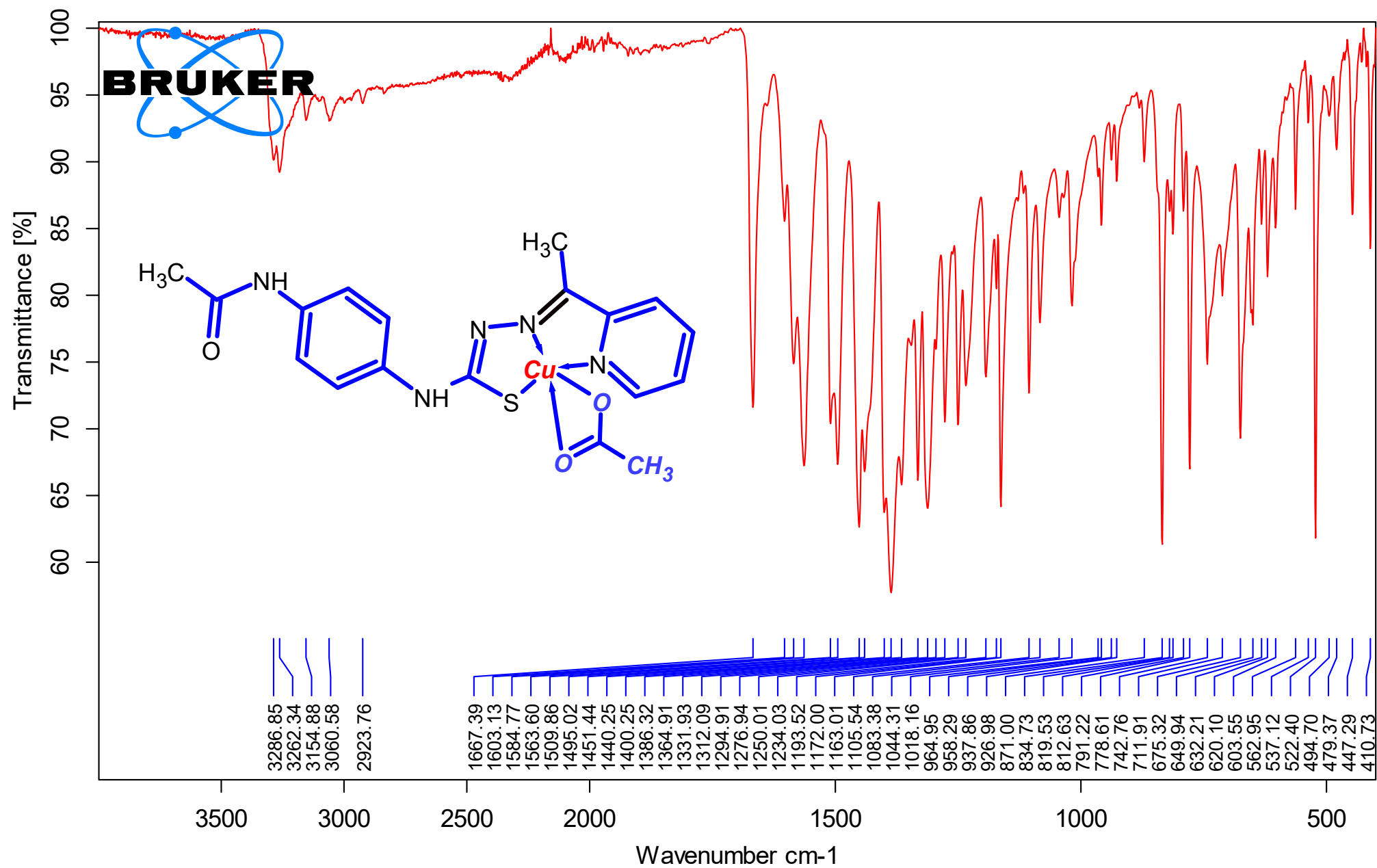


Figure S4. FT-IR spectrum of the coordination compound $[Cu(L)CH_3COO]$ (1)

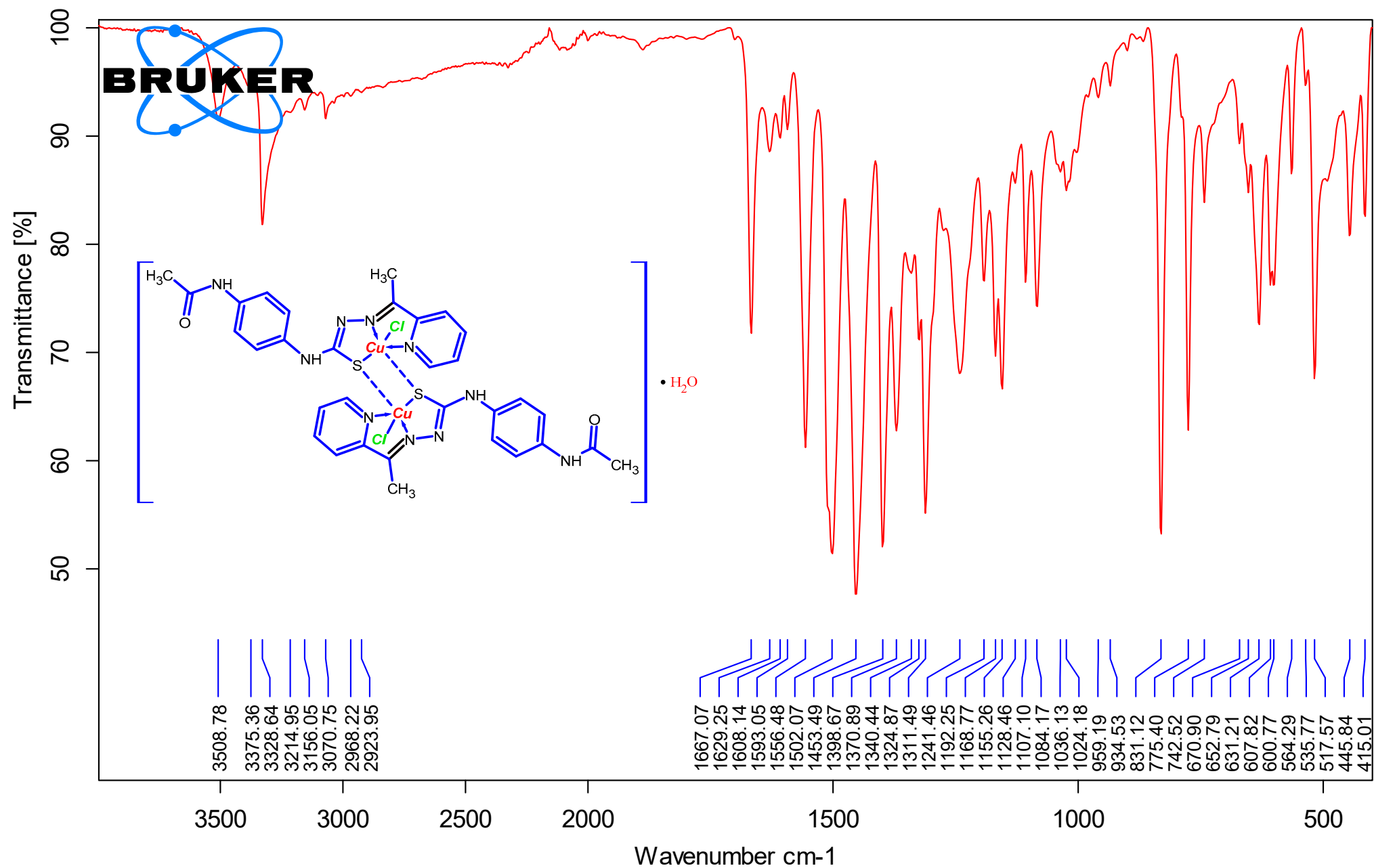


Figure S5. FT-IR spectrum of the coordination compound $[\text{Cu}(\text{L})\text{Cl}]_2 \cdot 2\text{H}_2\text{O}$ (2)

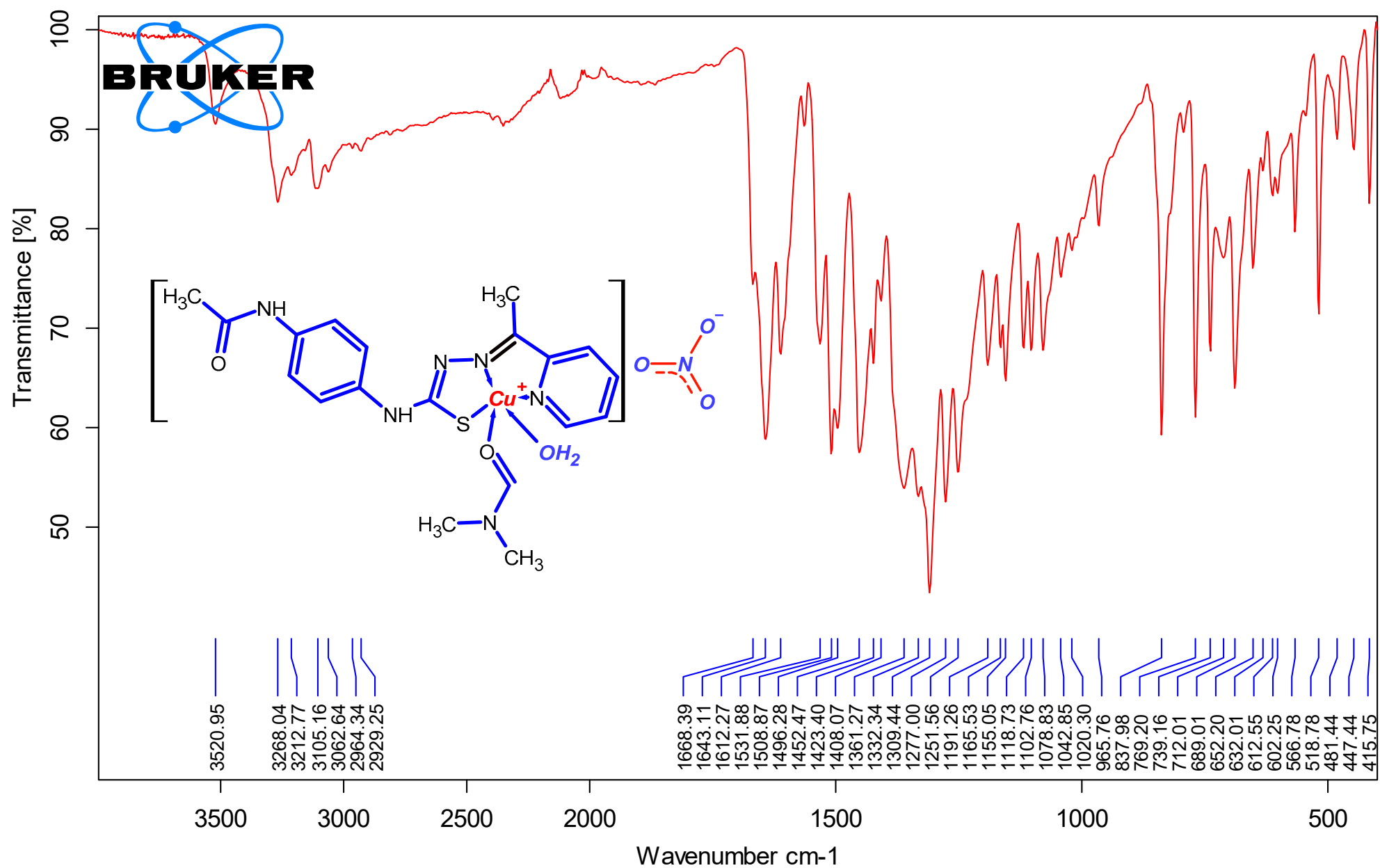


Figure S6. FT-IR spectrum of the coordination compound $[\text{Cu}(\text{L})(\text{H}_2\text{O})(\text{DMF})]\text{NO}_3$ (3)

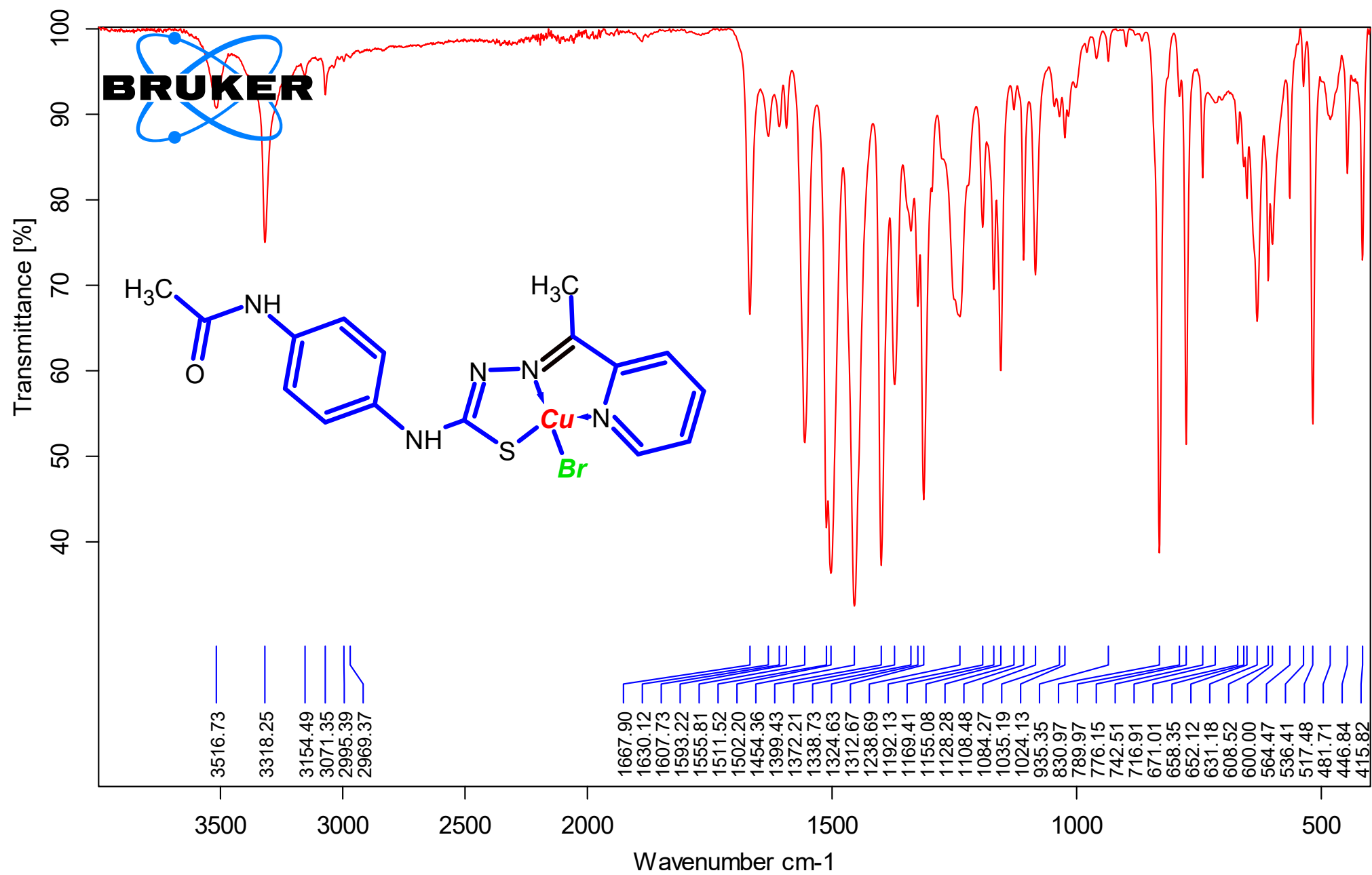


Figure S7. FT-IR spectrum of the coordination compound $[\text{Cu}(\text{L})\text{Br}]$ (4)

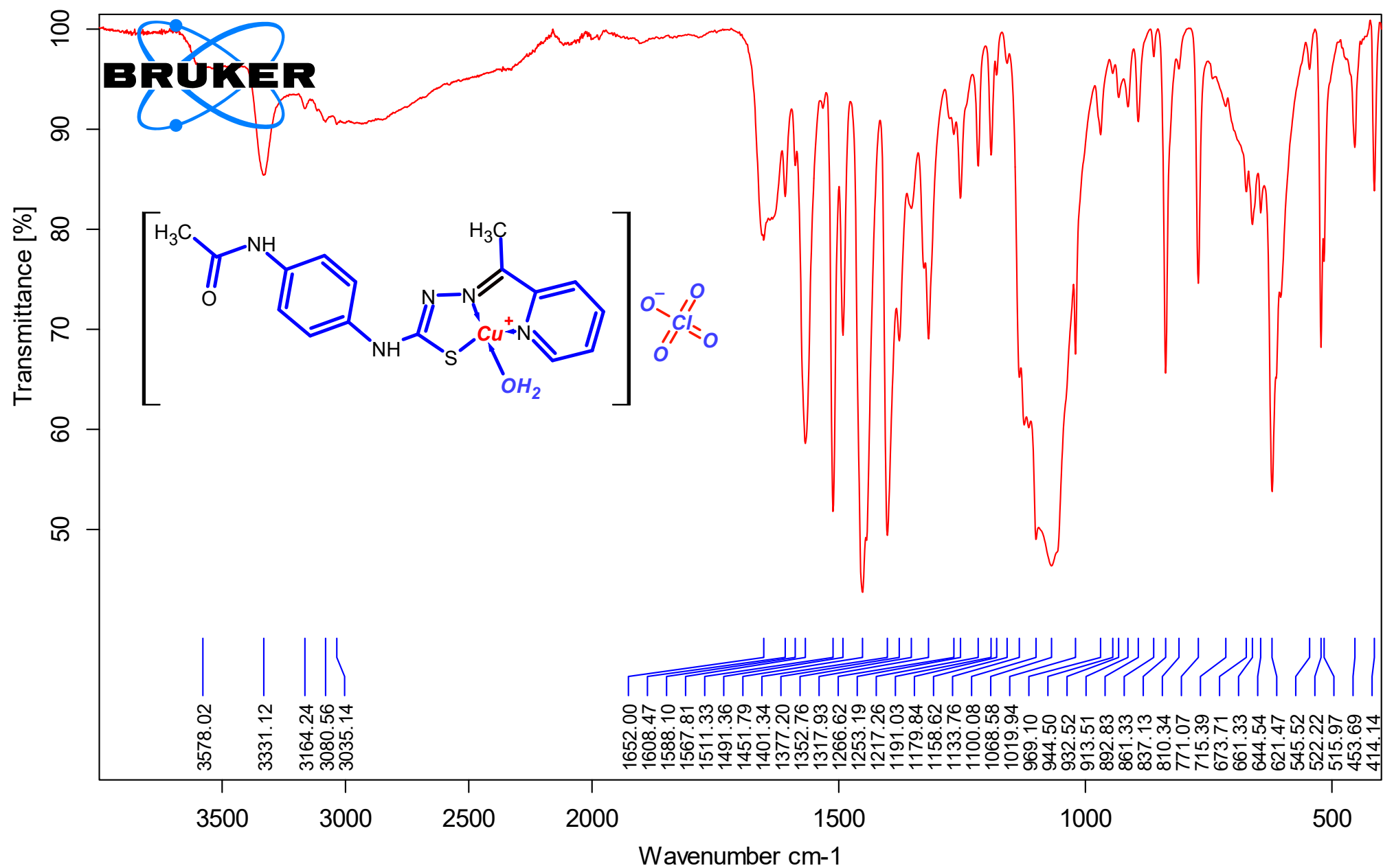


Figure S8. FT-IR spectrum of the coordination compound $[Cu(L)(H_2O)]ClO_4$ (5)

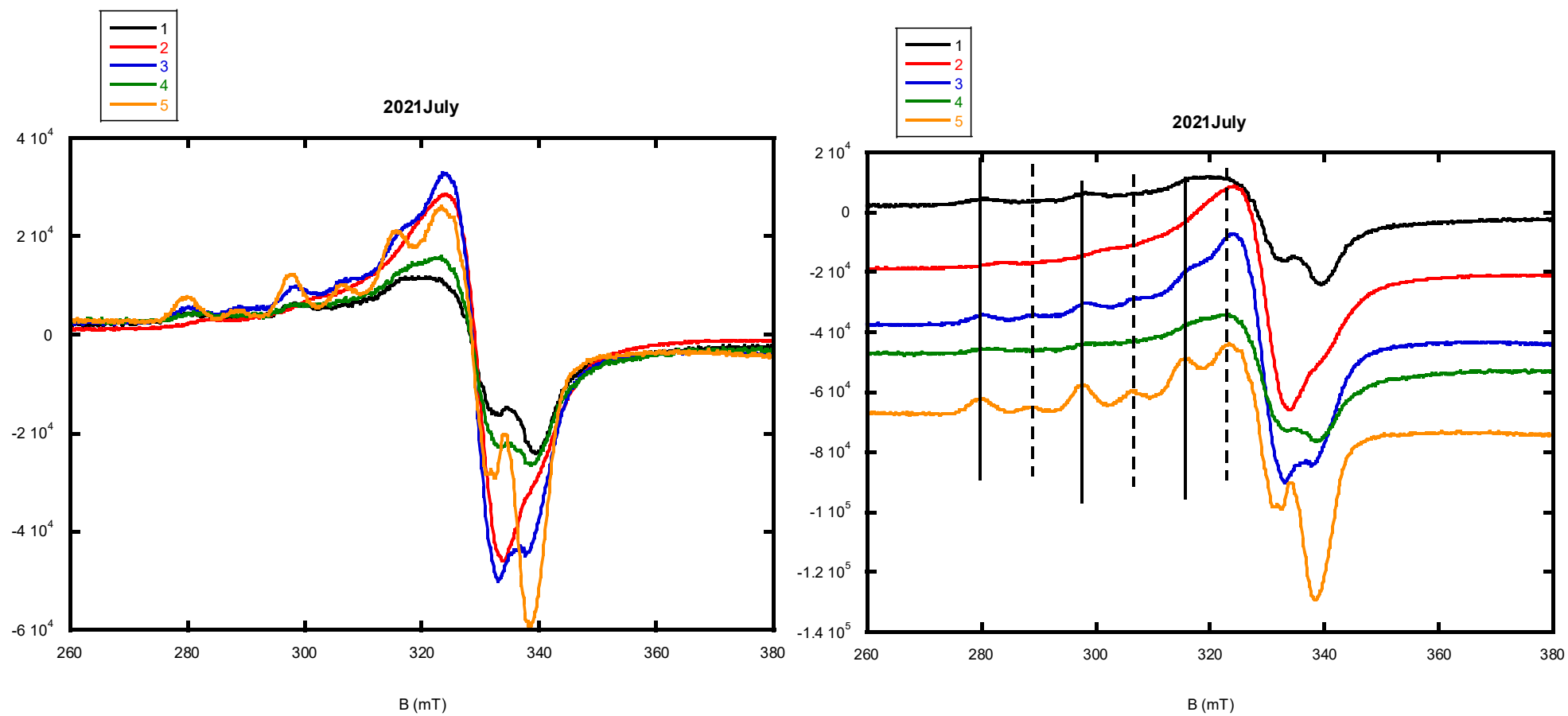


Figure S9. RES spectrum of the coordination compound (1-5)