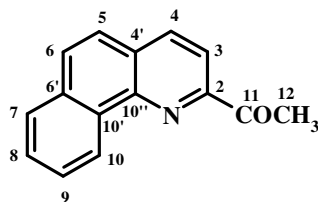


Synthesis of 2-acetylbenzo[*h*]- and 3-acetylbenzo[*f*]quinolines by the reaction of benzo[*h*]- and benzo[*f*]quinolines with C₂H₅OH and CCl₄ catalyzed by Cu-containing catalysts

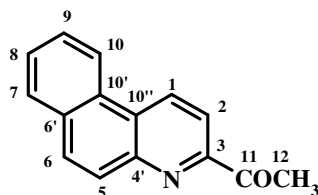
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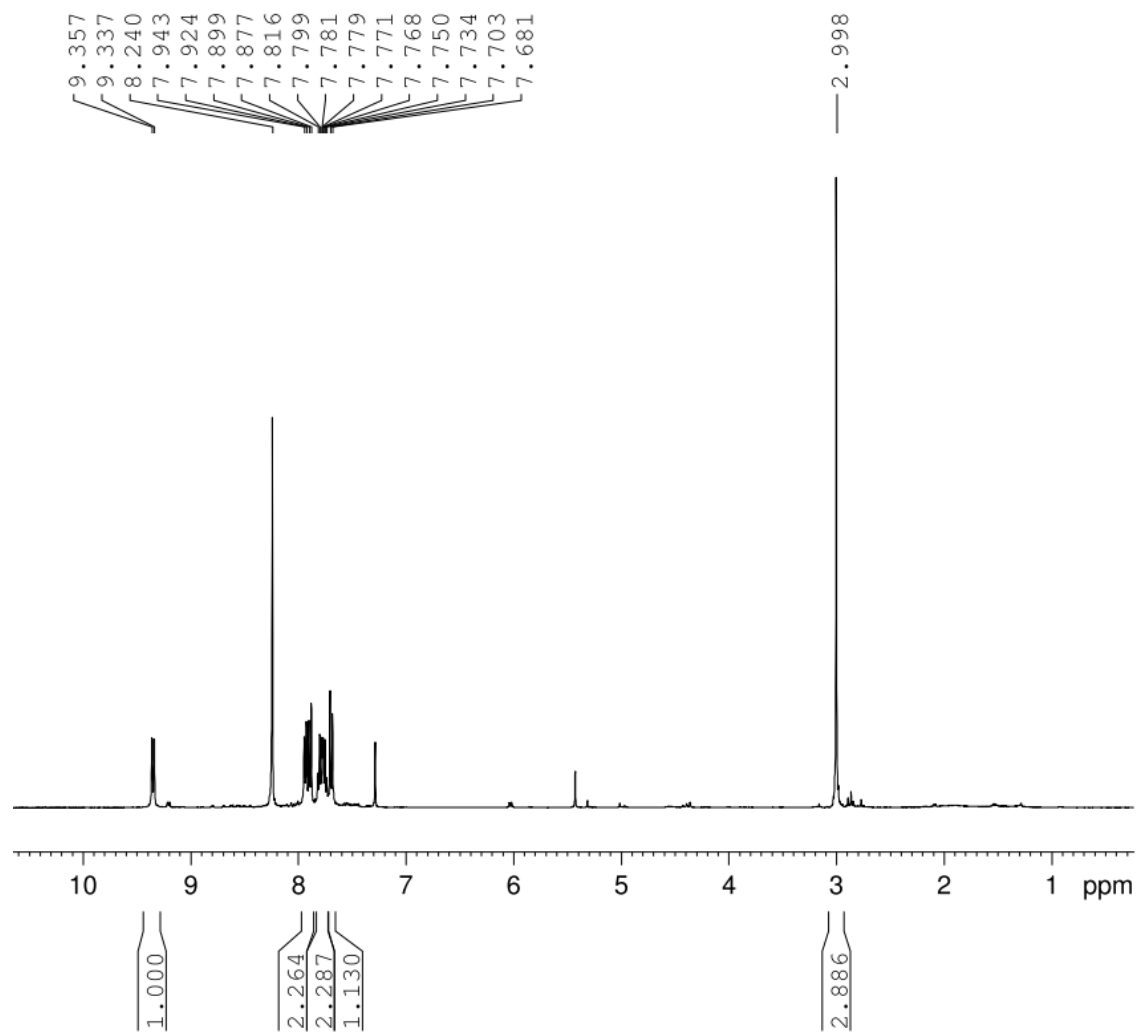


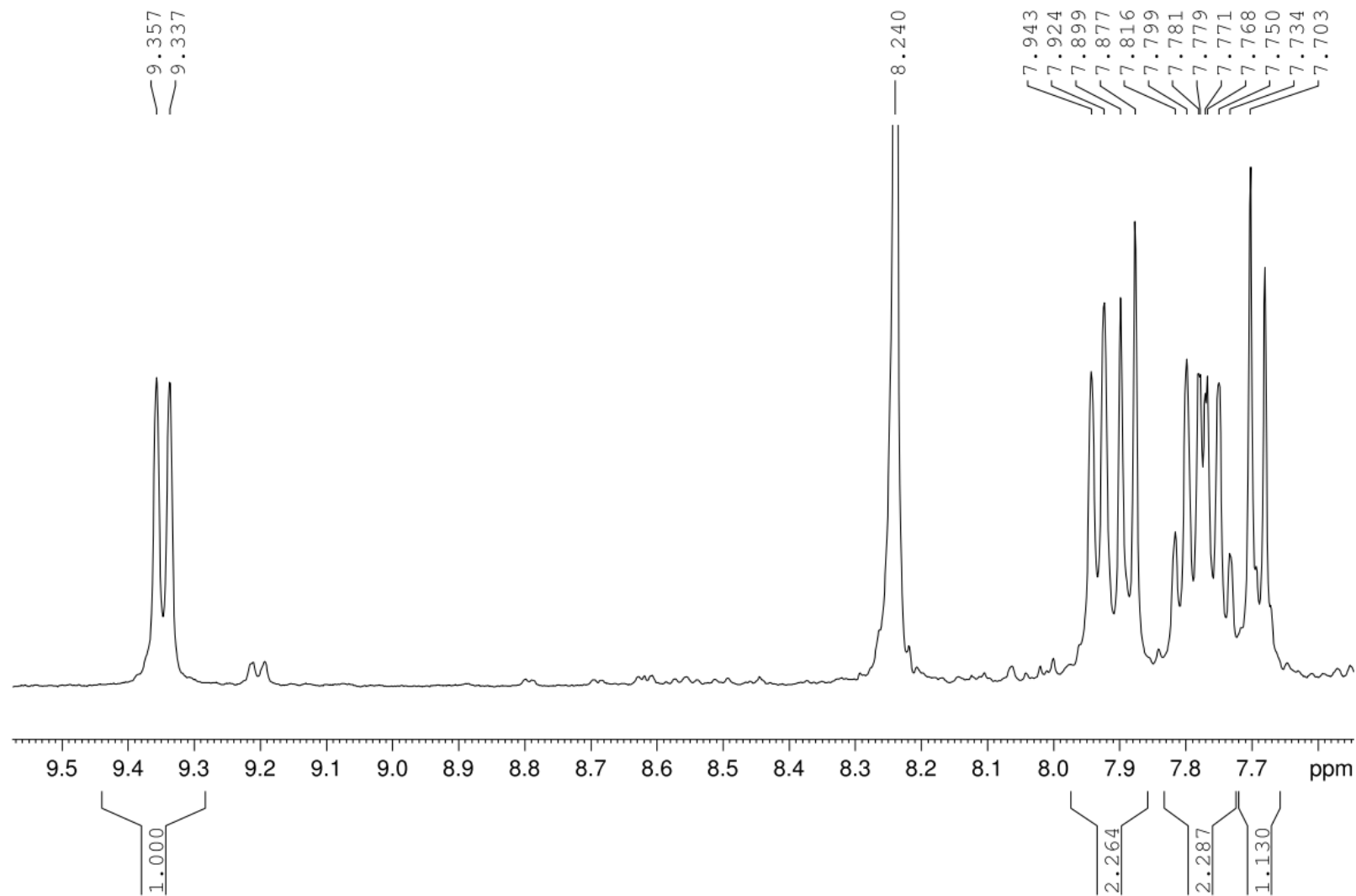
2-Acetylbenzo[*h*]quinoline 1. Yield 58%; m.p. 115-116 °C. ¹H NMR (400.13 MHz, CDCl₃): 3.00 s (3H, COCH₃), 7.69 d (1H, *J* = 9 Hz; C⁵H), 7.80 t (1H, 8 Hz; C⁹H), 7.77 t (1H, *J* = 8 Hz; C⁸H), 7.88 d (1H, *J* = 9 Hz; C⁶H), 7.93 d (1H, *J* = 8 Hz; C⁷H), 8.24 s (2H, C^{3,4}H), 9.35 d (1H, *J* = 8 Hz; C¹⁰H). ¹³C NMR (100.62 MHz, CDCl₃): 25.77 (C¹²), 118.87 (C³), 124.48 (C¹⁰), 124.92 (C⁵), 127.50 (C⁹), 127.97 (C⁷), 128.35 (C^{4'}), 128.63 (C⁸), 133.71 (C^{10'}), 130.00 (C⁶), 131.63 (C^{6'}), 136.49 (C⁴), 145.38 (C^{10''}), 151.60 (C²), 200.68 (C¹¹).

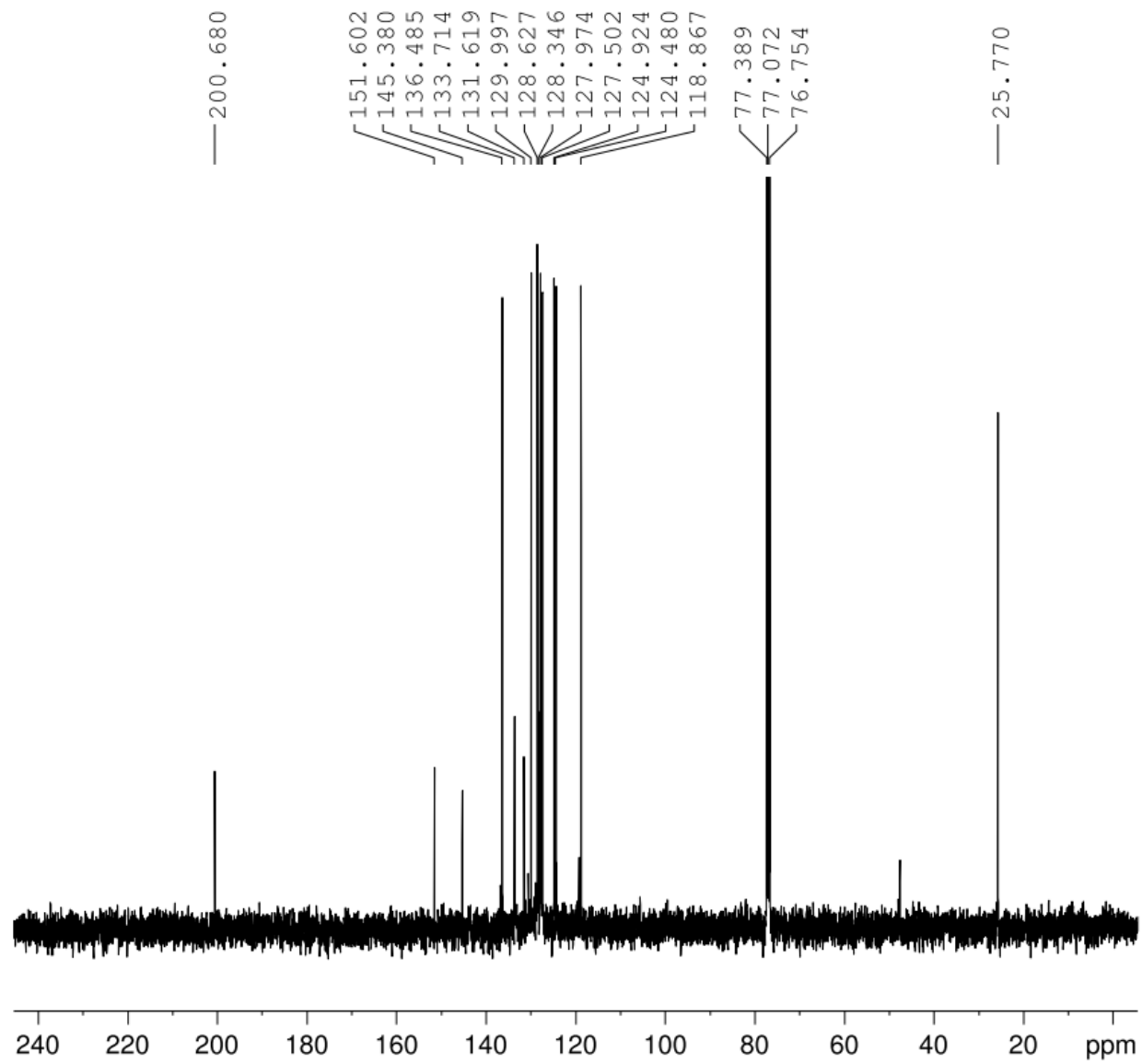


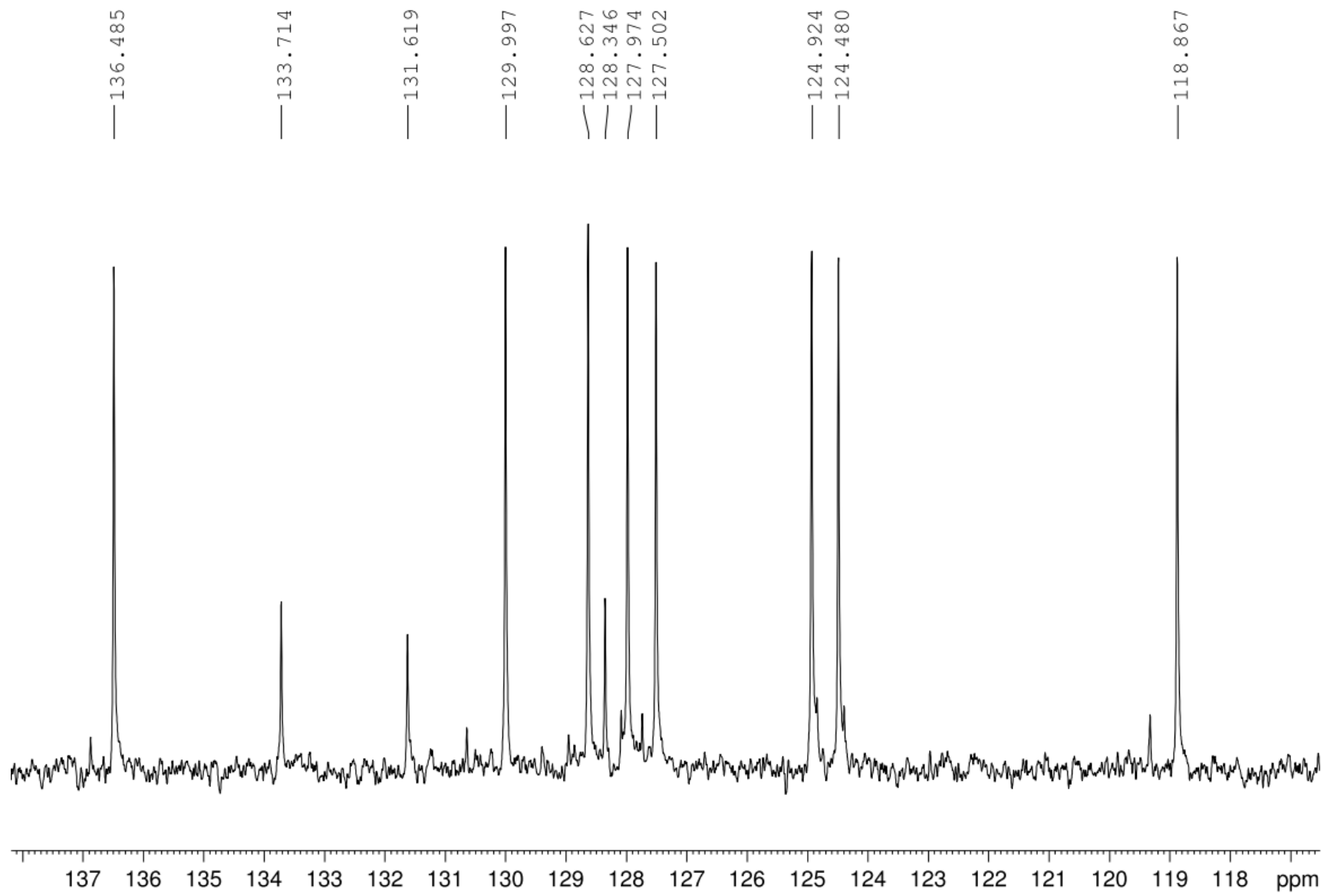
3-Acetylbenzo[*f*]quinoline 2. Yield 60%; m.p. 146 °C. ¹H NMR (400.13 MHz, CDCl₃): 2.91 s (3H, COCH₃), 7.71-8.61 m (4H), 8.01 s (2H), 8.25 d (1H, *J* = 8.6 Hz), 8.98 d (1H, *J* = 8.6 Hz). ¹³C NMR (100.62 MHz, CDCl₃): 25.66 (C¹²), 118.49 (C²), 123.24 (C¹⁰), 127.39 (C⁹), 127.43 (C^{10''}), 128.24 (C⁸), 128.48 (C⁶), 128.78 (C⁷), 129.17 (C^{10'}), 131.36 (C¹), 131.44 (C⁵), 132.47 (C^{6'}), 147.22 (C^{4'}), 152.63 (C³), 200.49 (C¹¹).

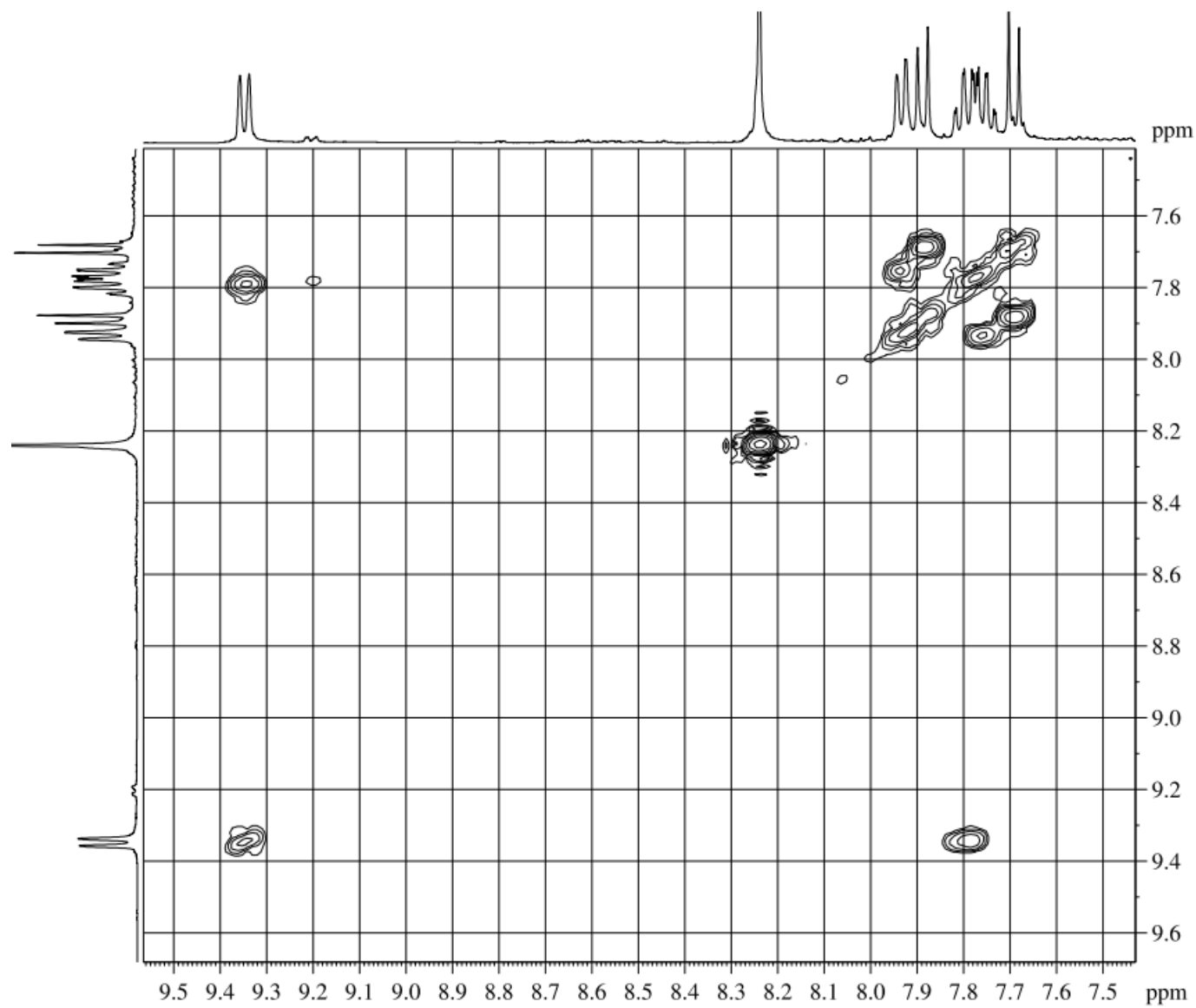
2-Acetylbenzo[*h*]quinoline 1

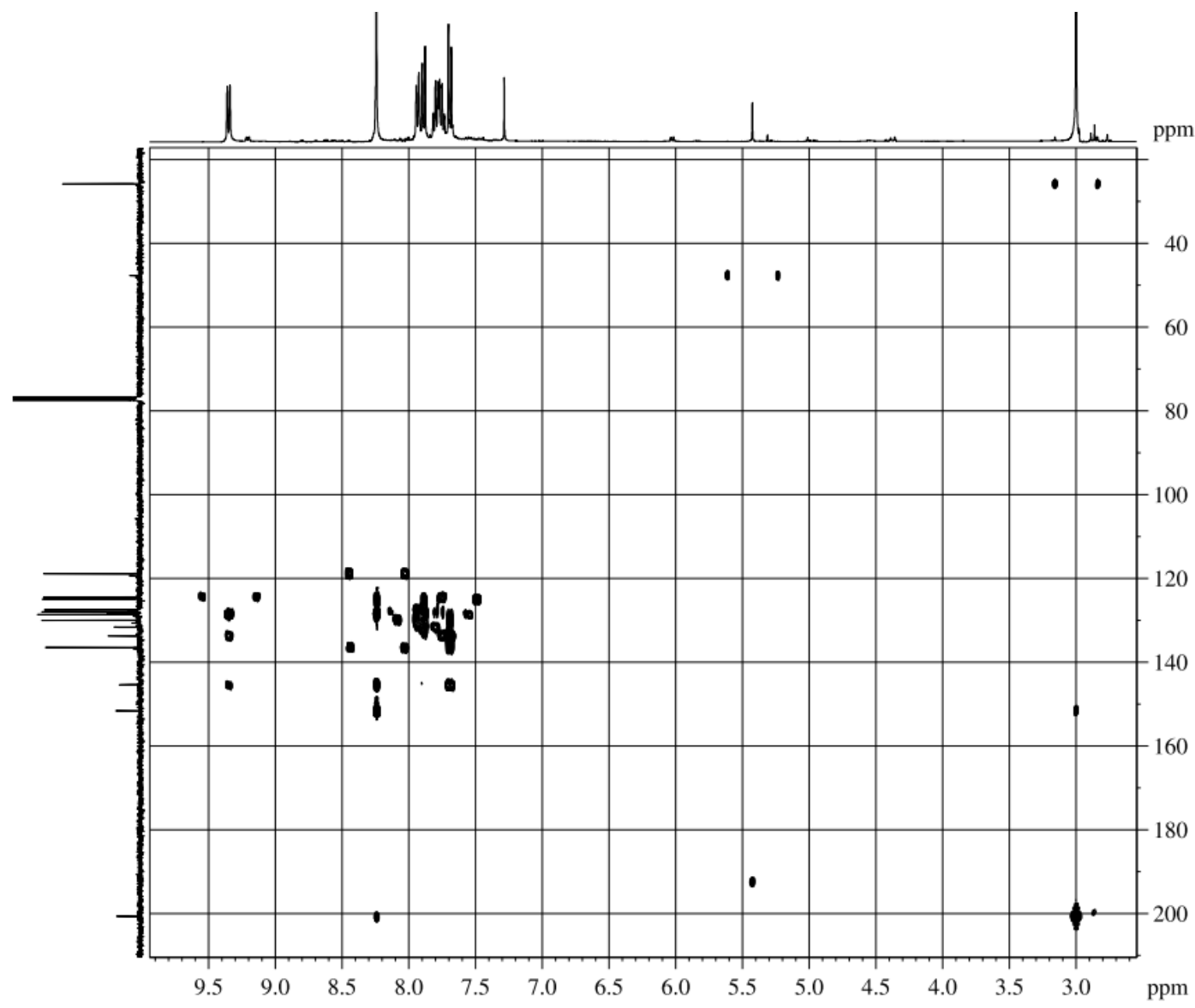


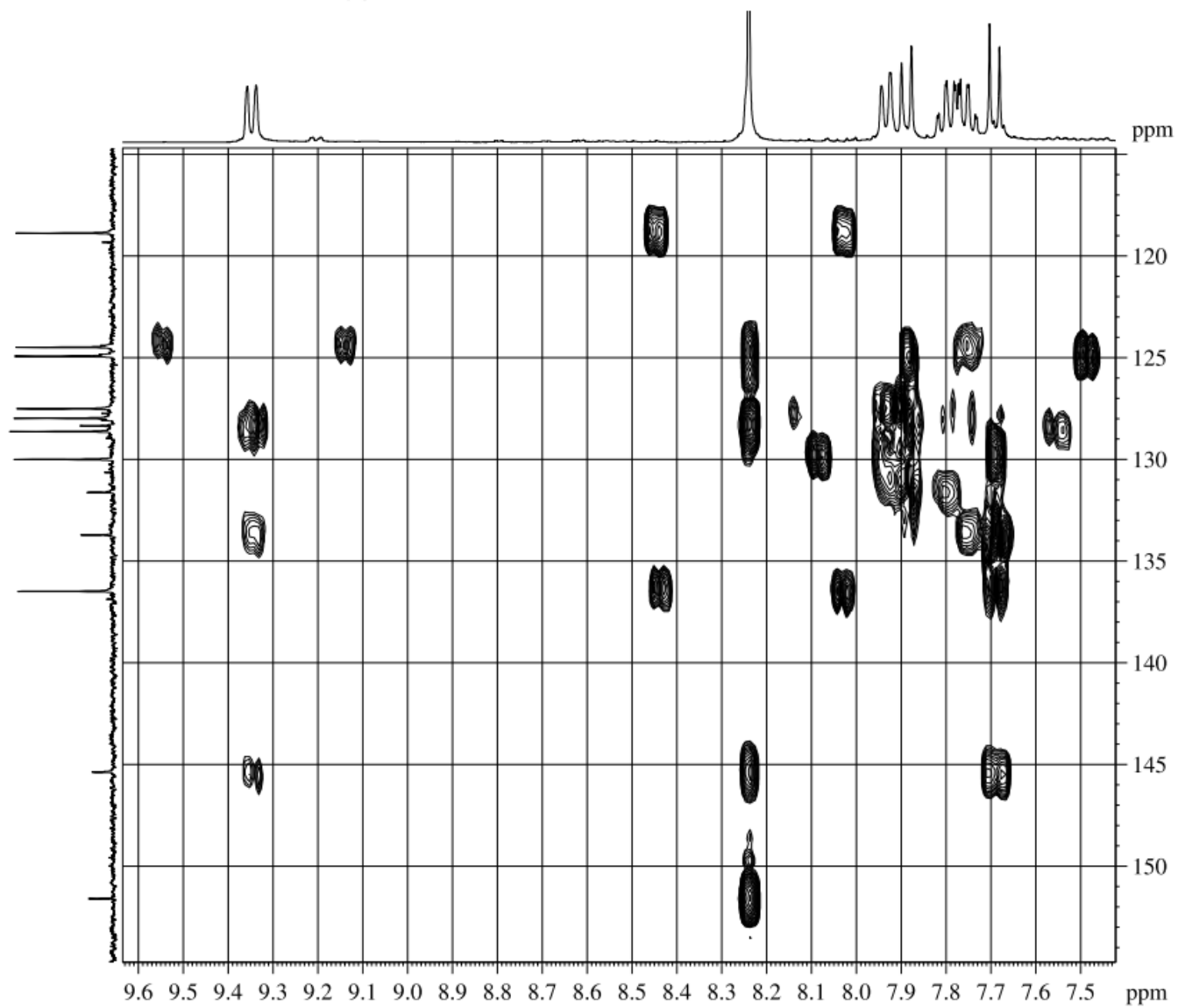


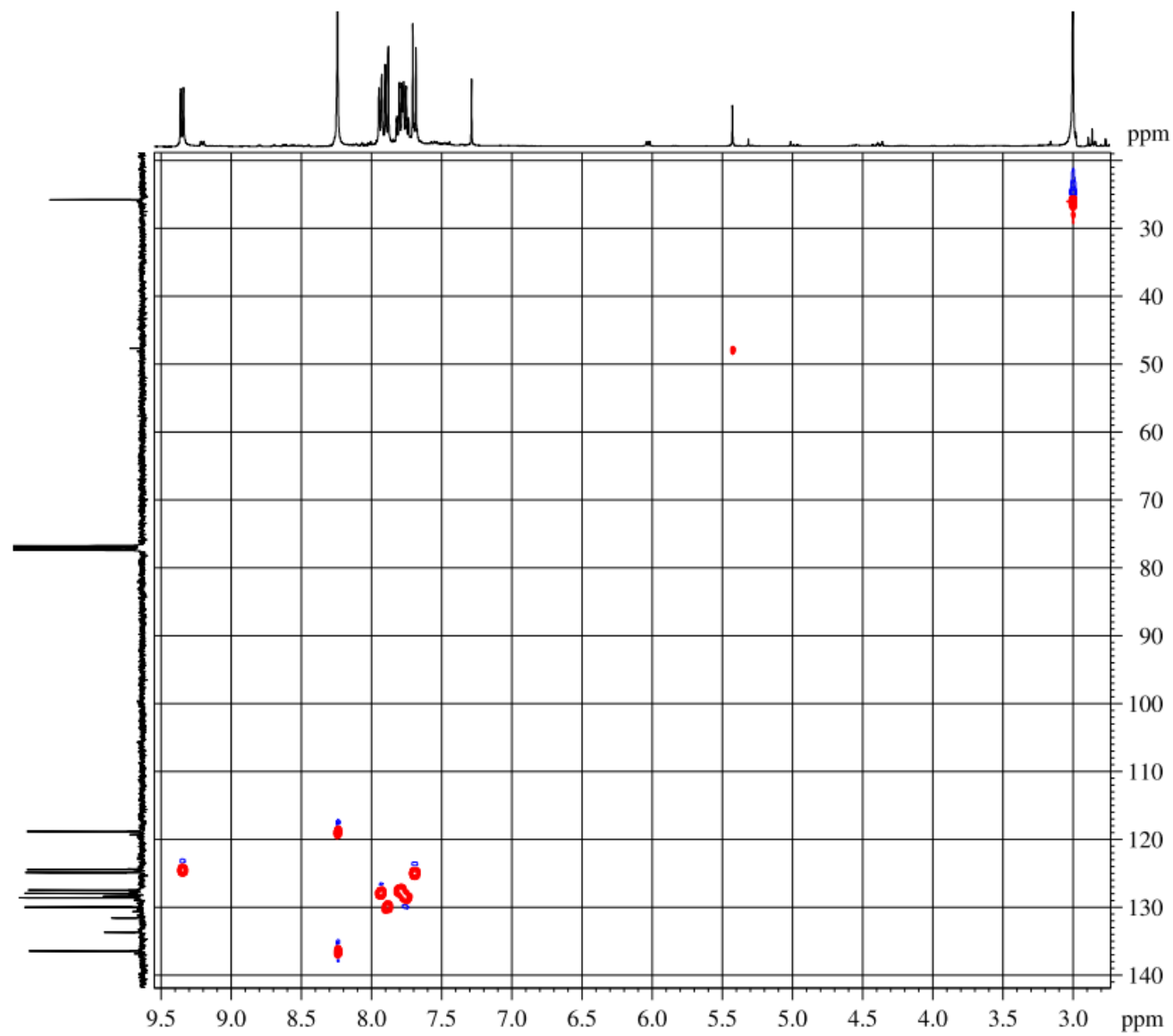


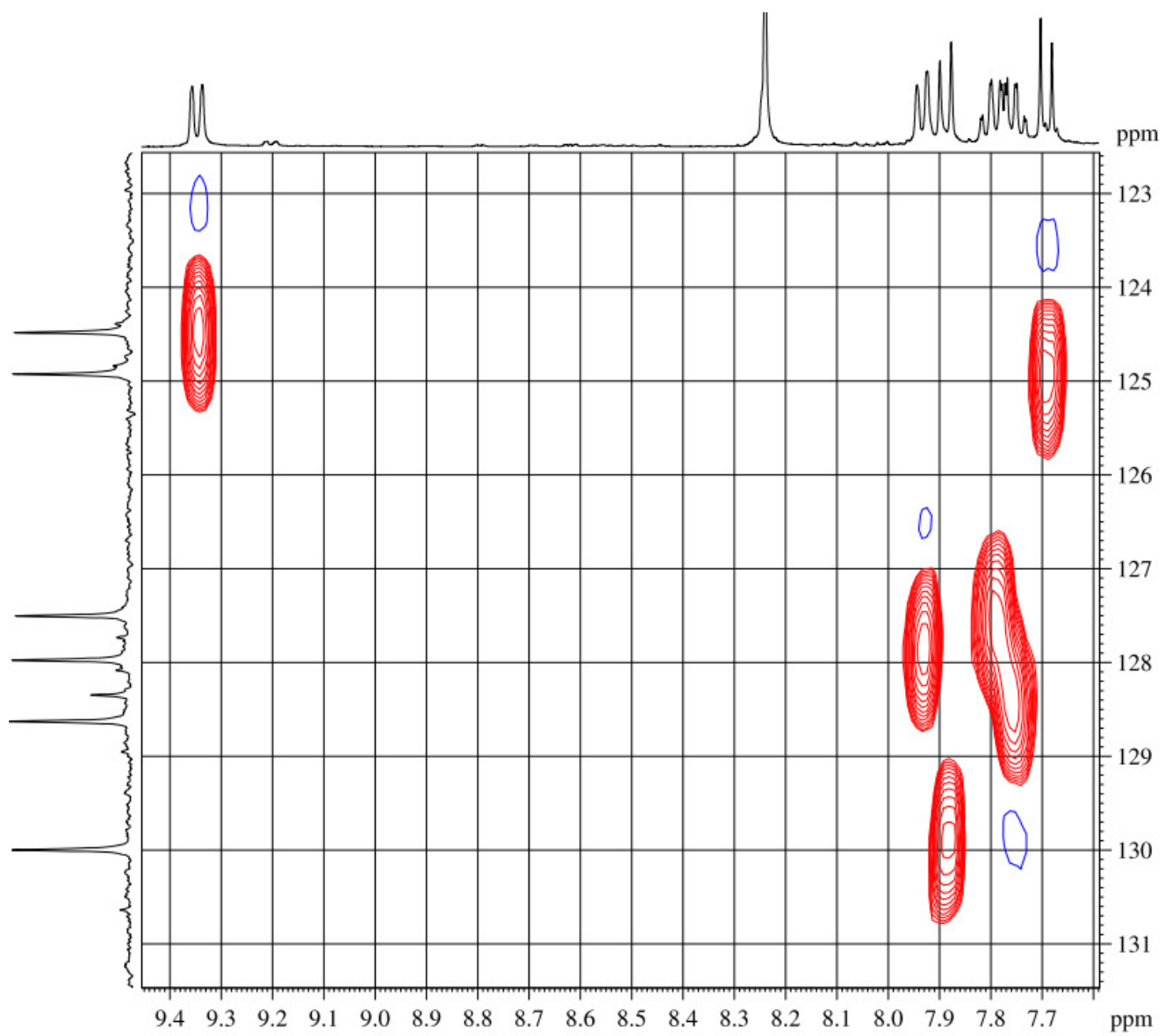












3-Acetylbenzo[f]quinoline 2