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Synthesis of 2-Chloro-3-(2-naphthyloxy)quinoxaline

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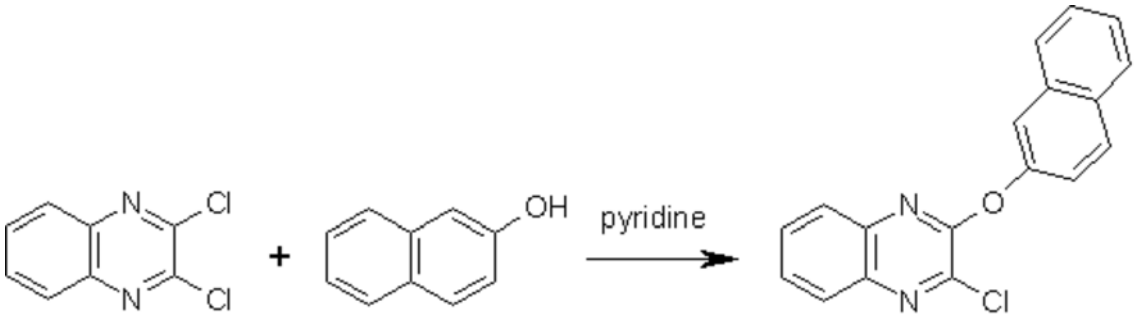

1 2 3

A mixture of 2,3-dichloroquinoxaline **1** [1] (1.0 g, 5 mmol) and 2-naphthol (0.72 g, 5 mmol) in pyridine (10 mL) was heated to 130°C for 3 h, with magnetic stirring, to give a dark-brown reaction mixture. The reaction mixture was allowed to cool and then poured into cold water (50 mL). The resulting solid was filtered, dried and purified by column chromatography on silica gel, eluting with petroleum ether (b.p. 100°) / ethanol (100:1) to afford 2-chloro-3-(2-naphthyloxy)quinoxaline **3** as colorless crystals (0.9 g, 58.0%).

Melting point: 163 – 165°C

^{1}H-NMR (400 MHz, DMSO-d_6, d (ppm): 8.10 – 7.90 (m, 5H, Ar-H), 7.76 – 7.67 (m, 3H, Ar-H), 7.62 – 7.54 (m, 3H, Ar-H).

^{13}C-NMR (100 MHz, DMSO-d_6, d (ppm): 152.8, 150.1, 138.8, 138.6, 133.5, 131.0, 130.8, 129.6, 128.5, 127.7, 127.6, 127.4, 126.8, 126.6, 125.8, 121.5, 118.1.

MS (m/z, %): 308 ($[M + 2]^+$ 31.8), 306 (M^+, 100), 278 ($[M-CO]^+$,19.0), 271 ($[M-Cl]^+$, 23.6), 243 ($[M-CO-Cl]^+$, 34.6), 163 ($[M-C_{10}H_7O]^+$, 8.6), 127 (17.3), 115 (50.3), 102 (45.6), 90 (12.0), 75 (22.2).

Acknowledgment

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Reference

1. C.A. Obafemi and Wolfgang Pfleiderer, *Helv. Chim. Acta* **1994**, 77, 1549 – 1556.