

## Synthesis of N, N-Dimethyl-3-phenoxyquinoxalin-2-amine

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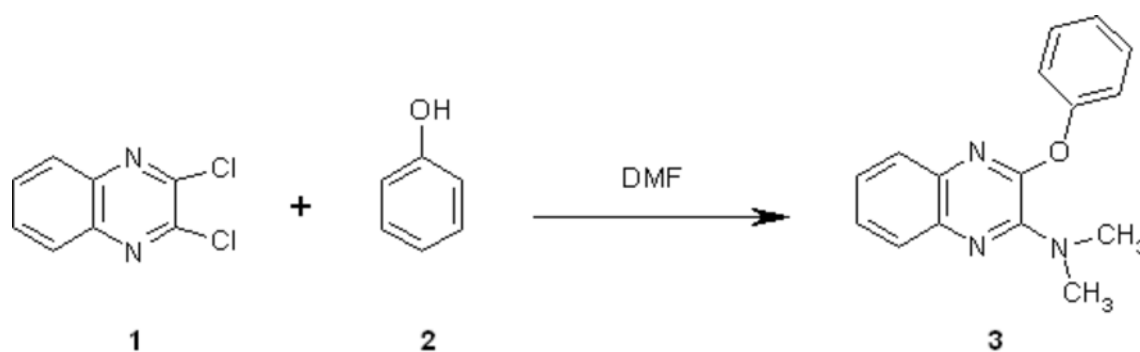
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The two chloro groups in 2,3-dichloroquinoxaline **1** can be displaced by nucleophiles, a process that may take place in a stepwise manner [1]. **1** was reacted with phenol **2** in dimethylformamide (DMF) to give N,N-dimethyl-3-phenoxyquinoxalin-2-amine **3**.



A mixture of 2,3-dichloroquinoxaline **1** (5.0 g, 25 mmol), phenol (1.2 g, 13 mmol) and Na<sub>2</sub>CO<sub>3</sub> (0.7 g, 7 mmol) in DMF (40 mL) was heated to reflux for 10 h. with magnetic stirring. The reaction mixture was cooled and poured into water (200 mL) to give a solid product. Flash vacuum column chromatography (silica gel, petroleum ether (b.p. 100°)/EtOH 100:1) gave pure N,N-dimethyl-3-phenoxyquinoxalin-2-amine **3** (2.1 g, 62%, based on phenol).

Melting point: 85 – 86°C.

IR ( $\nu_{\text{max}}$ , KBr, cm<sup>-1</sup>): 2940, 2880 (C-H), 1578 (C=C), 1516, 1196.

<sup>1</sup>H-NMR (400 MHz, CDCl<sub>3</sub>, d (ppm): 7.72 (d, 1H, J = 8.47 Hz, Ar-H), 7.52 (d, 1H, J = 9.25 Hz, Ar-H), 7.47 – 7.34 (m, 3H, Ar-H), 7.31 – 7.21 (m, 4H, Ar-H), 3.31 (s, 6H, 2 x CH<sub>3</sub>).

<sup>13</sup>C-NMR (100 MHz, CDCl<sub>3</sub>, d (ppm): 152.9, 149.6, 147.7, 139.5, 135.4, 129.5, 127.3, 126.6, 125.7, 125.0, 124.9, 121.6, 40.6.

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## Reference

1. C.A. Obafemi and W. Pfeleiderer *Molecules* **2004**, *9*, 229 – 237.

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