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Synthesis of (4-chlorobenzylidene)-(2-chloropyridi-3-yl)amine

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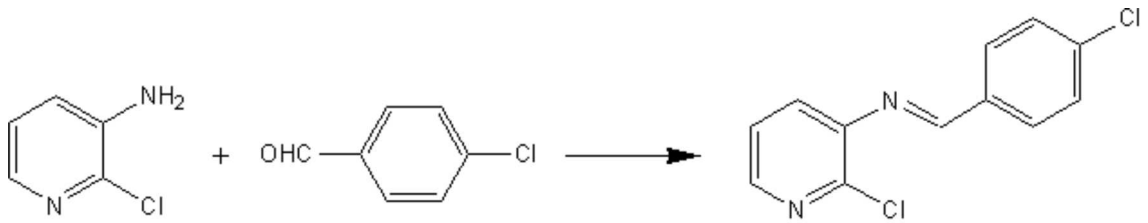
Schiff bases are widely in use for synthetic purposes both by organic and inorganic chemists.[1] They are used as biological, analytical, polymer and liquid crystalline materials.[2] Schiff bases are reported to show a variety of biological activities such as antibacterial[3-5], antifungal[6-7], anticancer [8-9] and herbicidal [10] activities . Pyridinium compounds have biological activities[11] such as antifungal[12] and antibacterial[12-13] activities. The presence of a chloro moiety in different types of compounds causes them to exhibit pesticidal activity.[10]



1 **2** **3**

A mixture of 3-amino-2-chloro pyridine **1** (1.28 g, 10 mmol), 4-chlorobenzaldehyde **2** (1.40 g, 10 mmol) and anhydrous sodium sulfate (4.00 g) in dry dichloromethane (40.00 mL) was stirred at room temperature for seven hours. The suspension was filtered and washed with dichloromethane. The solvent was evaporated and new schiff base **3** was formed, which was washed with 10 mL acetic acid 5%, 10 mL $NaHCO_3$ 5% and water, successively, (2.04 g, 82 %).

Melting point: 54-56^{o}C.

IR (KBr, cm^{-1}): 1600.1 (CH=N); 1624.0 (C=N pyridine ring).

^{1}H-NMR (250MHz, $CDCl_3$): δ= 6.97-8.17 (7H, m, 2 Ph); 8.31 (1H, s, HC=N).

^{13}C-NMR (62.9 MHz, $CDCl_3$): δ= 123.55-146.49 (aromatic carbons); 162.55 (HC=N).

MS (m/z, %): 251 ([M^{+}], 63.3); 250 (M-1, 100.0); 215 ($C_5H_3NClN{=}CC_6H_4$, 14.8); 139 ($C_5H_3NClN{=}C$, 15.4); 112 (C_5H_3NCl, 52.2), 89 (C_5H_3NN, 19.4); 77 (C_5H_3N, 15.1).

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Sample Availability: Available from MDPI.