

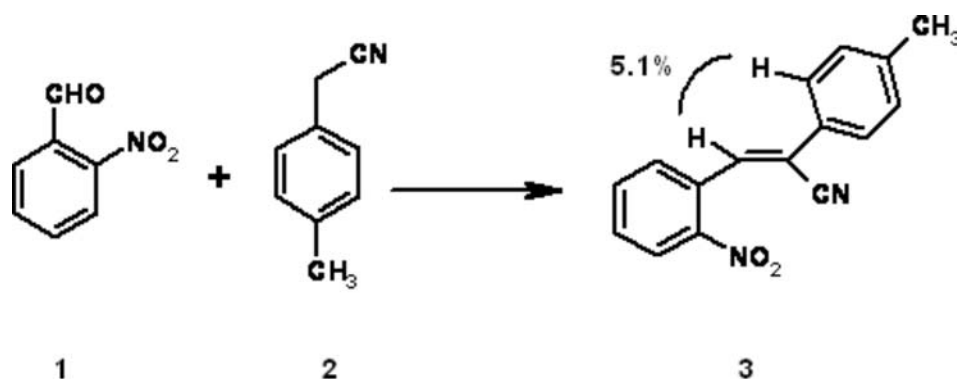
(Z)-3-(2-Nitrophenyl)-2-(4-methylphenyl)acrylonitrile**Abdullah Mohamed Asiri**

Chemistry Department, Faculty of Science, King Abdul-Aziz University, Jeddah 21589, P.O. Box 80203, Saudi Arabia,

Tel. (+966)-2-6952293, Fax (+966)-2-6952293

[E-mail: asiri2@kaau.edu.sa](mailto:asiri2@kaau.edu.sa)

Received: 4 February 2004 / Accepted: 28 February 2004 / Published: 29 March 2004

Keywords: acrylonitrile, 2-nitrobenzaldehyde, 4-methylphenylacetonitrile, Knoevenagel condensation

(Z)-3-(2-Nitrophenyl)-2-(4-methylphenyl)acrylonitrile (3) was prepared by Knoevenagel condensation of 2-nitrobenzaldehyde 1 and 4-methylphenylacetonitrile 2 in ethanol using KOH as a base [1,2]. 2-Nitrobenzaldehyde 1 (3.01 g, 0.02 mol) and 4-methylphenylacetonitrile 2 (3.32 g, 0.02 mol) in ethanol (35 mL) were heated under reflux for seven minutes. Potassium hydroxide (1.12 g, 0.02 mol) was added in one portion and the reflux was continued for two hours. The reaction mixture was cooled to room temperature and the solid formed was filtered, washed with water and finally with ethanol (2 x 30 mL) and dried. The product was recrystallized from ethanol as yellow crystals (2.63g, 95%).

M.p. 142-144 °C.

UV $I_{\max}$ (nm; EtOH)/ ϵ ($\text{dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$) 350/15500.IR (cm^{-1} ; KBr Disk) 2215 (CN), 1606 (C=C). $^1\text{H-NMR}$ (400 MHz; CDCl_3 , Me_4Si , d_{H}): 8.24 (1H, d, $J = 9.4$ Hz), 8.00 (1H, s, $\text{CH}=\text{C}$), 7.94 (1H, d, $J = 7.7$ Hz), 7.77 (1H, d), 7.64 (1H, dd), 7.60 (2H, d, 8.1 Hz), 7.28 (2H, d, 8.2 Hz), 2.38 (3H, s, MePh). $^{13}\text{C-NMR}$ (100 MHz; CDCl_3 , Me_4Si , d_{C}): 21.2, 108.6, 110.5, 110.8, 118.8, 124.2, 125.6, 126.8, 129.7, 131.9, 138.9, 141.1, 148.9 and 150.9.Elemental Analysis: Calculated for $\text{C}_{16}\text{H}_{12}\text{N}_2\text{O}_2$ (264.26): C 72.72, H 4.58, N 10.60; Found: C 72.61, H 4.76, N 10.45.**References**

1. Jones, G. *Org. React.* **1967**, *15*, 204-599.
2. Stewart, J. T.; Kim, M. *J. Chem. Eng. Data* **1987**, *32*, 387-389.

