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2-[(2-Isopropyl-5-methylphenoxy)acetyl]-*N*-phenylhydrazine Carbothioamide

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: a_asiri@hotmail.com

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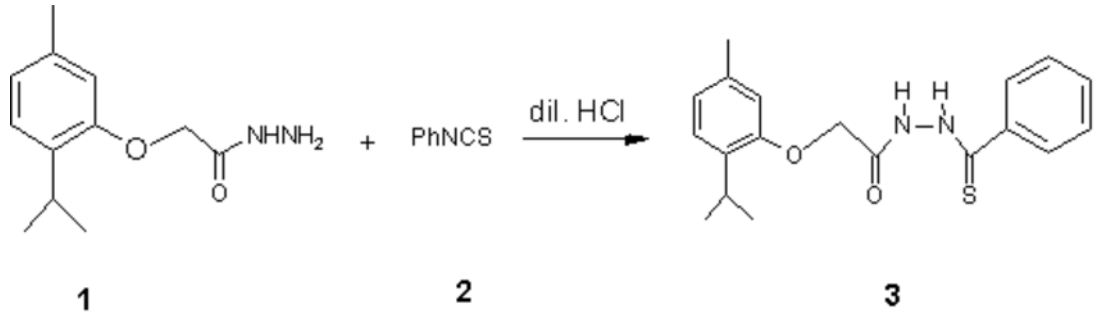

The phenylthiosemicarbazide derivative **3** was prepared from 2-isopropyl-5-methylphenoxyacyl hydrazide (**1**) and phenyl isothiocyanate (**2**) [1,2]. A mixture of **1** (0.5 g, 2.25 mmol) and **2** (0.30 g, 2.25 mmol) in aqueous hydrochloric acid (15 mL, 50%) was heated under reflux for 3 hours. The reaction mixture was cooled to room temperature and the precipitate thus formed was filtered, washed with copious amount of water and recristallized from ethanol to give **3** as white cristals. (0.71 g, 88%).

M.p. 156-158 ^{o}C (EtOH, uncorrected).

UV lmax (nm; Acetone)/e ($dm^3.mol^{-1}.cm^{-1}$) 274/17090, 355/4200.

IR nmax (cm^{-1}; KBr Disk) 3292, 3234 (NH), 2657 (SH), 1674 (C=O), 1553 (NH bending).

^{1}H-NMR (400 MHz; $CDCl_3$; Me_4Si) d_H 0.95 (6H, d, $2CH_3$), 2.03 (3H, s CH_3), 3.17 (1H, m, CH), 4.36 (2H, S, CH_2O), 6.40 (1H, s), 6.51 1H, d, *J* = 7.63 Hz), 6.83 (1H, d, *J* =7.73 Hz), 6.88 (1H, d, *J* =7.35 Hz), 7.05 (2H, t, *J* =7.85 Hz), 7.24 (2H, d, *J* =7.5 Hz).

^{13}C-NMR (d_C) 21.44, 23.24, 26.50, 67.15 (CH_2O), 112.5, 122.63, 124.0, 125.47, 126.3, 128.8,134.38, 136.7, 138.8154.58.

Elemental Analysis: Calculated for $C_{19}H_{23}N_3O_2S$ (357.22): C 63.88, H 6.44, N 11.77; found : C 63.67, H 6.56 , N 11.62.

References

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