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Short Note

Synthesis of 5-benzyl-2,6-dimethylpyridazin-3(2*H*)-one

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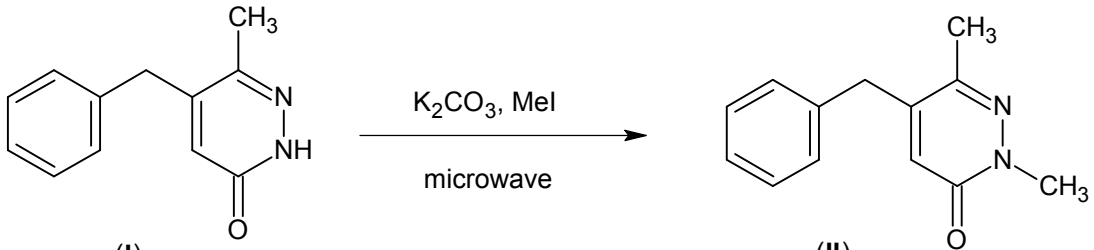
Recentely, Rubat *et al.* [1] synthesized a series of products by alkylation of pyridazines, the authors showed that these products are good analgesics and have a low toxicity. In our ongoing reseach program, we have synthesized compound (**II**); it will be subjected to further pharmacological investigations, especially tests of its anticancer activity.



(**I**) (**II**)

The product (**II**) was prepared from 5-benzyl-6-methylpyridazin-3(2*H*)-one (**I**) by solid-liquid PTC conditions without solvent [2]. To pyridazinone (**I**) (1.2 g, 5 mmol) were added potassium carbonate (0.692 g, 5 mmol), TBAB (0.3 g, 1 mmol) and methyl iodide (0.73 g, 5 mmol). The mixture was placed in a pyrex tube which was then introduced into a Maxidigest MX 350 Prolabo microwave monomode reactor, fitted with a rotational system. At the end of the irradiation time (10 min, 90 W irradiation power), the mixture was cooled to ambient temperature. The precipitate formed was filtered and washed with water, yield: 96% of (**II**).

Melting point: 89-93°C

IR (KBr): 1663 (CO), 1591 (C=N), 1430, 1495 (C=C).

^{1}H NMR (300.14 MHz, $CDCl_3$): δ (ppm) : 2.20 (s, 3H, CH_3), 3.72 (s, 3H, CH_3), 3.81 (s, 2H, CH_2), 6.53 (s, 1H, H-4), 7.25 (m, 5H, aromatic protons).

^{13}C NMR (75.48 MHz, $CDCl_3$): δ (ppm) 19.12 (CH_3), 35.85 (CH_2), 39.67 (NCH_3), 127.66 ($CH_{aromatic}$), 127.87 ($CH_{aromatic}$), 129.32 (2 $CH_{aromatic}$), 129.51 (2 $CH_{aromatic}$), 135.66, 145.25, 146.52, 160.63 (C=O).

Anal. Calcd for $C_{13}H_{14}N_2O$: %C: 72.89; %H: 6.54;; %N: 13.08. Found: %C: 72.47; %H: 6.43; %N: 12.72.

References

1. Rubat, C.G.; Coudert, P.; Couquelet, J.; Bastide, P.; Bastide, J. *Chem. Pharm. Bull.* **1988**, *36*, 1558.
2. De La Hoz, A.; Diaz-Ortiz, A.; Moreno, A. *Chem. Soc. Rev.* **2005**, *34*, 164.