

Short Note

# Synthesis of N-Isopropylidene-N'-(3-Methyl-1-Phenyl-1H-Pyrazolo[4,3-e][1,2,4]Triazin-5-yl)-Hydrazine and N-Benzylidene-N'-(3-Methyl-1-Phenyl-1H-Pyrazolo[4,3-e][1,2,4]Triazin-5-yl)-Hydrazine

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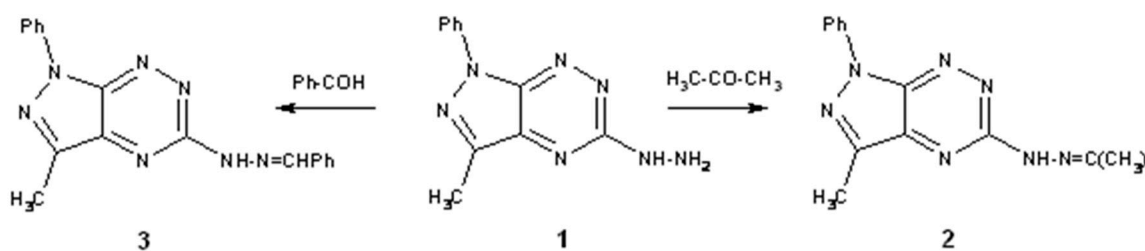
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As part of our ongoing research program on bicyclic heteroaromatics chemistry [1-4] we synthesised the title compounds with the goal of performing structure-activity relationship studies.



## N-Isopropylidene-N'-(3-methyl-1-phenyl-1H-pyrazolo[4,3-e][1,2,4]triazin-5-yl)-hydrazine (2)

5-Hydrazino-1H-pyrazolo[4,3-e][1,2,4]triazine **1** (120 mg, 0.5 mmol) was dissolved in 20 ml of acetone. The mixture was stirred at room temperature for 10 min. The precipitated solid was filtered off and recrystallized from ethanol to give **2** (126 mg, 0.45 mmol) in 90% yield.

Melting Point: 165 °C.

$^1\text{H-NMR}$  (200 MHz,  $\text{CDCl}_3$ ):  $\delta$ = 2.08 (s, 3H); 2.21 (s, 3H); 2.71 (s, 3H); 7.27-7.36 (m, 1H); 7.49-7.58 (m, 2H); 8.28-8.33 (m, 2H); 8.62 (s, 1H, NH).

$^{13}\text{C-NMR}$  (50 MHz,  $\text{CDCl}_3$ ):  $\delta$ = 11.27; 16.53; 25.65; 119.41; 125.99; 129.27; 136.74; 138.73; 141.93; 146.87; 151.65; 158.65.

IR (KBr,  $\text{cm}^{-1}$ ): 3378; 2997; 1505.

MS (EI, 70eV;  $m/z$ , %): 281 (12) [ $\text{M}^+$ ]; 266 (100); 226 (15); 129 (18); 104 (26); 94 (14); 77 (51).

HR-MS (EI, 70eV): Calcd. for  $\text{C}_{14}\text{H}_{15}\text{N}_7$ : 281.13889; Found: 281.13832.

### **N-Benzylidene-N'-(3-methyl-1-phenyl-1H-pyrazolo[4,3-e][1,2,4]triazin-5-yl)-hydrazine (3)**

To a solution of **1** (120 mg, 0.5 mmol) in methanol (30 ml) benzaldehyde (0.1 ml, 1 mmol) and 10% HCl (0.3 ml) were added. The mixture was refluxed for 5 min and then stirred at room temperature for 30 min. The solvent was removed *in vacuo* and the crude product was recrystallized from dioxane. Yield of **3** is 88% (145 mg, 0.44 mmol).

Melting Point: 283 °C.

$^1\text{H-NMR}$  (200 MHz, DMSO):  $\delta$ = 2.62 (s, 3H); 7.33-7.51 (m, 4H); 7.58-7.65 (m, 2H); 7.72-7.77 (m, 2H); 8.22 (s, 1H); 8.25-8.29 (m, 2H); 12.11 (s, 1H);

IR (KBr,  $\text{cm}^{-1}$ ): 3220; 1600; 1490; 750; 700.

HR-MS (ESI): Calcd for  $\text{C}_{18}\text{H}_{16}\text{N}_7$ : 330.1462; Found: 330.1458.

Elemental Analysis: Calculated for  $\text{C}_{18}\text{H}_{16}\text{N}_7 \cdot 0.25\text{H}_2\text{O}$ : C, 64.76%; H, 4.64%; N, 29.38%. Found: C, 64.82%; H, 4.68%; N, 29.38%.

### **References:**

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*Sample Availability:* Available from MDPI.