Synthesis of 5-(2-aminoethoxy)-3-methyl-1-phenyl-1H-pyrazolo[4,3-E][1,2,4]triazine

Mariusz Mojzych
Institute of Chemistry, University of Podlasie,
ul. 3 Maja 54, 08-110 Siedlce, Poland
e-mail: mojzych@ap.siedlce.pl

Received: 23 April 2004 / Accepted: 30 July 2004 / Published: 1 August 2005

Keywords: 1H-pyrazolo[4,3-e][1,2,4]triazine, 2-aminoethanol, nucleophilic substitution.

A variety of naturally occurring O- and N-derivatives of 1H-pyrazolo[4,3-e][1,2,4]triazine exhibit an interesting combination of biological activity [1-2]. As a part of our ongoing research programme [3-6] we have synthesised a novel 5-(2-aminoethoxy)-3-methyl-1-phenyl-1H-pyrazolo[4,3-E][1,2,4]triazine derivative of this ring system based on nucleophilic displacement of methylsulfonyl group [6].

![Reaction Scheme]

To a solution of sulfone 1 (145 mg, 0.5 mmol) in anhydrous DMF (5 ml) 2-aminoethanol (0.5 ml) was added and the resulting mixture was stirred at 80 °C for 2 h. After pouring onto cold water the precipitate was filtered off, washed with water and recrystallized from ethyl alcohol to give 5-(2-aminoethoxy)-3-methyl-1-phenyl-1H-pyrazolo[4,3-e][1,2,4]triazine (2) in 90% yield.

Melting Point: 164 °C.

\(^{1}\)H-NMR (200 MHz, CDCl\(_3\)): \(\delta = 2.61\) (s, 3H); 3.76-3.81 (m, 2H); 3.96 (t, 2H, J=6.0 Hz); 6.10 (s, 2H); 7.29-7.33 (m, 1H); 7.48-7.56 (m, 2H); 8.26-8.31 (m, 2H).

IR (KBr, cm\(^{-1}\)): 3243; 2948; 1580; 1540; 750; 689.

MS (EI, 70eV; \(m/z\), %): 270 (68) [M]\(^+\]; 242 (4); 211 (60); 184 (14); 131 (20); 104 (42); 77 (100).

Elemental Analysis: Calculated for C\(_{13}\)H\(_{14}\)N\(_6\)O: C, 57.77%; H, 5.18%; N, 31.11%. Found: C, 57.67%; H, 5.17%; N, 31.16%.

References:

Sample Availability: Available from MDPI.