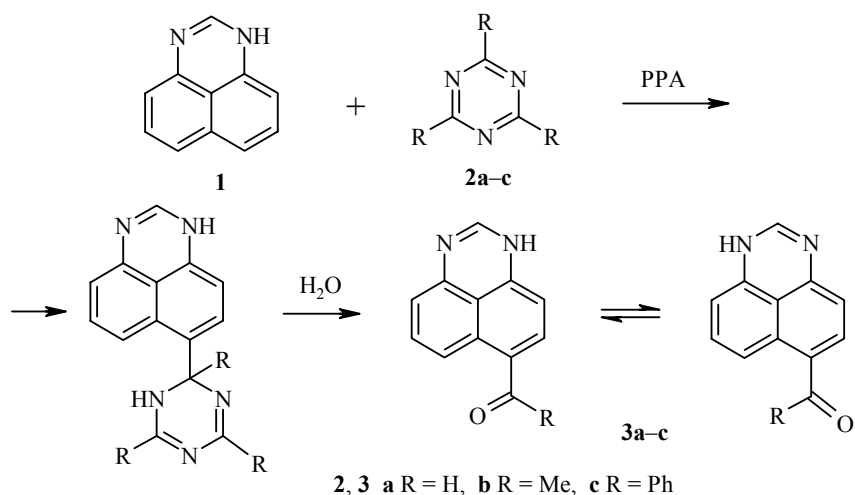


ACYLATION OF PERIMIDINE WITH 1,3,5-TRIAZINES IN POLYPHOSPHORIC ACID

A.V. Aksenov, I. V. Borovlev, A. S. Lyakhovnenko, and I. V. Aksenova

Keywords: perimidine, polyphosphoric acid (PPA). 1,3,5-triazines, acylation, formylation.

The use of 1,3,5-triazines **2** as formylating agents in the presence of a Lewis acid has been reported [1]. The use of substituted 1,3,5-triazines as acylating agent was not known. We have shown that formylation of perimidine **1** does not occur under these conditions. Formylation has been successfully carried out with a three-fold excess of 1,3,5-triazine **2** in 80% PPA (4 g per mmol of perimidine) at 55-60°C for 1 h. The yield of perimidine-6(7) carbaldehyde (**3a**) was 91% under these conditions. The compound was separated by pouring the reaction mixture into water with subsequent basification of the solution with ammonia and extraction with ethyl acetate. Compound **3a** was previously successfully obtained in a yield of less than 10% by the Vilsmeier reaction [2]. We have shown that by using substituted 1,3,5-triazine ketones **3b,c** can be obtained. In this case the reaction time is 2.5 h at a temperature of 80 and 110°C respectively.



Perimidine-6(7)-carbaldehyde (3a). Yield 91%; mp 212-214°C (from acetic acid) (mp 212-214°C [2]). A mixed melting point with a known sample gave no depression of the melting point. The 1H NMR spectrum coincided with that cited in [2].

6(7)-Acetylperimidine (3b). Yield 78%; mp 221-222°C (from aqueous ethanol) (mp 221-222°C [3]). A mixed melting point with a known sample gave no depression of the melting point.

Stavropol State University, Stavropol 355009, Russia; e-mail: k-biochem-org@stavsru.ru. Translated from *Khimiya Geterotsiklicheskikh Soedinenii*, No. 4, 629-630, April, 2007. Original article submitted April 2, 2007

6(7)-Benzoylperimidine (3c). Yield 64%; mp 227-229°C (from benzene) (mp 227-229°C [3]). A mixed melting point with a known sample gave no depression of the melting point.

REFERENCES

1. L. Fieser and M. Fieser, *Reagents for Organic Synthesis*. [Russian translation]. Mir, Moscow, Vol. 5, 430 (1971).
2. E. A. Filatova, I. V. Borovlev, A. F. Pozharskii, V. I. Goncharov, and O. P. Demidov, *Khim. Geterotsikl. Soed.*, 104 (2006). [*Chem. Heterocycl. Comp.*, **42**, 92 (2006)].
3. A. F. Pozharskii, I. V. Borovlev, and I. S. Kashparov, *Khim. Geterotsikl. Soedin.*, 543 (1975). [*Chem. Heterocycl. Comp.*, **11**, 480 (1975)].