SYNTHESIS AND SOME CONVERSATIONS OF 2-AMINO-4-PHENYL SUBSTITUTED THIAZOLES

Abel Magerramov, Mirza Allakhverdiyev, Sevinc Sadigova

Baku State University, Faculty of Chemistry, Baku, AZERBAIJAN

Among heterocyclic compounds thiazoles and their derivatives play an important role. As it is known, among them have been found out antivirus, antiparasitic, febrifugal and antigelmintic preparations. It is enough to note, that norsulphazole, phtalazole and related compounds are thiazole’s derivatives and widely applied in medical practice. Compounds of the thiazole range are widely used as antioxidants of oil products, accelerators of vulcanization and photocromic compounds. Obtained on the base of the thiazoles Schiff bases, or azomethines, are ligands, which apply in analytical chemistry to definition of various transition metals.

Taking into account above-stated, it was rather important to carry out synthesis of some 2-amino-4-phenylsubstituted thiazoles and their various derivatives.

Interaction between various substituted acetophenones and thiourea (thiocarbamide) in the presence of iodine have been synthesized 2-amino-4-phenylsubstituted thiazoles (I-III):

\[
\begin{align*}
\text{R} & = \text{H, 2,5-} (\text{CH}_3\text{O})_2, \text{ 4-Cl} \\
\end{align*}
\]

For the first time have been investigated the interaction between 2-amino-4-phenylsubstituted thiazoles (I-III) and different aromatic aldehydes:

\[
\begin{align*}
\text{R'} & = \text{C}_6\text{H}_5, \text{ R} = \text{H (IV), 2,5-} (\text{CH}_3\text{O})_2 \text{ (V); R'} = 2-\text{HOC}_6\text{H}_4, \text{ R} = \text{H (VI), 2,5-} (\text{CH}_3\text{O})_2 \text{ (VII); R'} = 2-\text{HO-4-BrC}_6\text{H}_3, \text{ R} = \text{H (VIII), 2,5-} (\text{CH}_3\text{O})_2 \text{ (IX), 4-Cl (X)}
\end{align*}
\]

Compositions and structures of obtained thiazoles (I-III) and azomethines (IV-X) have been confirmed by IR and NMR spectroscopy, but purity was controlled by TLC (thin layer chromatography).