

*Dedicated to Full Member of the Russian Academy of Sciences
B.A. Trofimov on the 65th Anniversary of His Birth*

Reactions of 1,2,3-Triazoles with Trifluoromethanesulfonyl Chloride and Trifluoromethanesulfonic Anhydride

V. I. Meshcheryakov, B. A. Shainyan, L. L. Tolstikova, and A. I. Albanov

*Favorskii Irkutsk Institute of Chemistry, Siberian Division, Russian Academy of Sciences,
ul. Favorskogo 1, Irkutsk, 664033 Russia
e-mail: bagrat@irioch.irk.ru*

Received May 28, 2003

Abstract - Reactions of 4,5-dibromo-1,2,3-triazole, 1*H*-1,2,3-benzotriazole, and 2-phenyl-2*H*-1,2,3-triazole-4-carbonyl chloride with trifluoromethanesulfonyl chloride and trifluoromethanesulfonic anhydride were studied. 4,5-Dibromo-1,2,3-triazole sodium salt reacted with $\text{CF}_3\text{SO}_2\text{Cl}$ in tetrahydrofuran to give 4,5-dibromo-2-(2-tetrahydrofuryl)-2*H*-1,2,3-triazole rather than expected 4,5-dibromo-2-trifluoromethylsulfonyl-2*H*-1,2,3-triazole. The latter was synthesized by treatment of 4,5-dibromo-1,2,3-triazole sodium salt with trifluoromethanesulfonic anhydride. The reaction of benzotriazole with $(\text{CF}_3\text{SO}_2)_2\text{O}$ afforded 1-trifluoromethylsulfonyl-1*H*-1,2,3-benzotriazole and 1,2,3-benzotriazolium trifluoromethanesulfonate. 2-Phenyl-2*H*-1,2,3-triazole-4-carbonyl chloride reacted with trifluoromethanesulfonamide sodium salt in DMF, yielding *N*-(dimethylaminomethylene)trifluoromethanesulfonamide. Possible ways for formation of the unexpected products were proposed.