Preparation and Properties of 2-Methyl-4-tosyl-1,3-thiazole-5-sulfonyl Chloride

K. V. Turov, T. K. Vinogradova, and V. S. Brovarets

Institute of Bioorganic Chemistry and Petrochemistry, National Academy of Sciences of Ukraine, ul. Murmanskaya 1, Kiev, 02660 Ukraine
e-mail: brovarets@bpci.kiev.ua

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Abstract—Chlorination of readily available 2-methyl-5-methylsulfanyl-4-tosyl-1,3-thiazole has afforded 2-methyl-4-tosyl-1,3-thiazole-5-sulfonyl chloride. The latter can react with amines to build sulfonamides, efficient electrophilic reagents capable of undergoing nucleophilic substitution reactions. Regiochemistry of the described reactions depends strongly on the nature of nucleophiles, used for regioselective synthesis of some previously unknown trisubstituted 1,3-thiazoles.

Keywords: 1,3-thiazole-5-sulfonyl chloride, 1,3-thiazole-5-sulfonamide, sulfochlorination, regioselective synthesis, anticancer activity

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