Reference Object Identifier – ROI: jbc-02/15-42-4-25The article is published on materials of the report on "International Scientific ForumButlerov Heritage – 2015". http://foundation.butlerov.com/bh-2015/(English Preprint)Submitted on March 19, 2015.

Development of a synthesis method of arylaliphatic diamino alcohols. The influence of the solvent on the process regioselectivity.

© Alexander V. Krylov,^{1*+} Elena Ya. Borisova,^{2*} Alexandra I. Ivanova,² Dyk Quang Hoang,² and Nadejda Y. Borisova²

 ¹Y.K. Sirkin Department of Physical Chemistry. Lomonosov Moscow University of Fine Chemical Technology. Vernadskogo pr., 86. Moscow, 119571. Russia. Phone: +7 (495) 246-05-55 (916). E-mail: allyInmr@yandex.ru
²I.N. Nazarov Department of Organic Chemistry. Phone: +7 (495) 246-05-55 (908). E-mail: seacastle@mail.ru

*Supervising author; ⁺Corresponding author

Keywords: epoxide, ring opening, N-nucleophiles, regioselectivity.

Abstract

The synthesis method of arylaliphatic amino alcohols based on reaction of styrene oxide ring opening by diamines was developed. It is shown that in conditions of low polarizing ability of the solvent the formation of α -substituted products of normal structure is the main process direction. For *N*,*N*diethylethylenediamine the solvent influence on the reaction regioselectivity was investigated. It has been established that the ratio of the products is good correlated with the value of the dielectric constant for the mixed aqueous-organic solvents and with the polarity parameters $E_{\rm T}$ and AN for the pure solvents.