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Enantioselective complexation of chiral lariat crown ethers and chiral primary alkylammonium perchlorates

Mehmet Zafer KÖYLÜ[1], Tarık ARAL[2], Mehmet KARAKAPLAN[2],
Şafak Özhan KOCAKAYA[2], Halil HOŞGÖREN[2]
[1]Department of Physics, Faculty of Science, Dicle University, Diyarbakır-TURKEY
e-mail: mkkaplan@dicle.edu.tr
[2]Department of Chemistry, Faculty of Science, Dicle University, Diyarbakır-TURKEY

Abstract: In order to investigate the enantiomeric recognition abilities toward 2 chiral alkylammonium perchlorates (AmI, AmII) by ^{1}H-NMR titration method in $CDCl_3$, 4 chiral lariat ethers 8-11 with a (p-methoxyphenoxy) methyl flexible side arm were used. The most effective enantiomeric recognition was obtained by LCEs 9 and 11 toward AmII, by K_R/K_S 6.58 and K_S/K_R 6.63, respectively. The effect of macroring size, subunit of macroring, and side arm appeared to have strong influence on the binding ability of these alkylammonium ions.

Key Words: Chiral lariat crown ethers, enantioselectivity, complexation properties, molecular recognition, NMR titration

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