The ability of crown ethers to bind various substrates, such as cationic, anionic or molecular compounds depending on their structure, by formation of inclusion complexes has been extensively studied by different techniques. The attractive properties of synthetic macrocyclic receptors that are able to form complexes with various compounds by noncovalent interactions are used in understanding the phenomenon of biochemical specificity, especially in the area of molecular recognition. The chiral nature of crown ethers, rigidity of microenvironment of its cavity and the quality of the side arm are all expected to play an important role in enantiomeric recognition. Attachment of a side arm with potential cation coordination sites produces complexing agents as lariat ethers [1]. For some lariat ethers, presence of a flexible side arm with an electron donor site is well known to enhance the binding ability of the ligand by participation of this additional donor groups in the complexation, providing three dimensional cavities. Amino acids and their sodium and potassium salts have been transported enatioselectively through a liquid membrane by using chiral crown ether derived from methyl α-D-mannose [2], and chiral diaza-crown ethers having arene sidearm [3] respectively.

Chiral lariat crown ether (N18C6) employed in this study exhibited different selectivity relative to the amino acids and their sodium and potassium salts. The D/L selectivity strongly depends on the amino acids or their salts, and in some cases reverse selectivity has been obtained. The best selectivity was obtained in the case of tyrosine and its potassium salts.

![N18C6](image)

**References**