



Euroopa Liit
Euroopa Sotsiaalfond



Eesti tuleviku heaks

Toetab TÜ ja TTÜ doktorikool
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RESOLUTION OF STEREOISOMERS OF 2,2'-BIPIPERIDINE

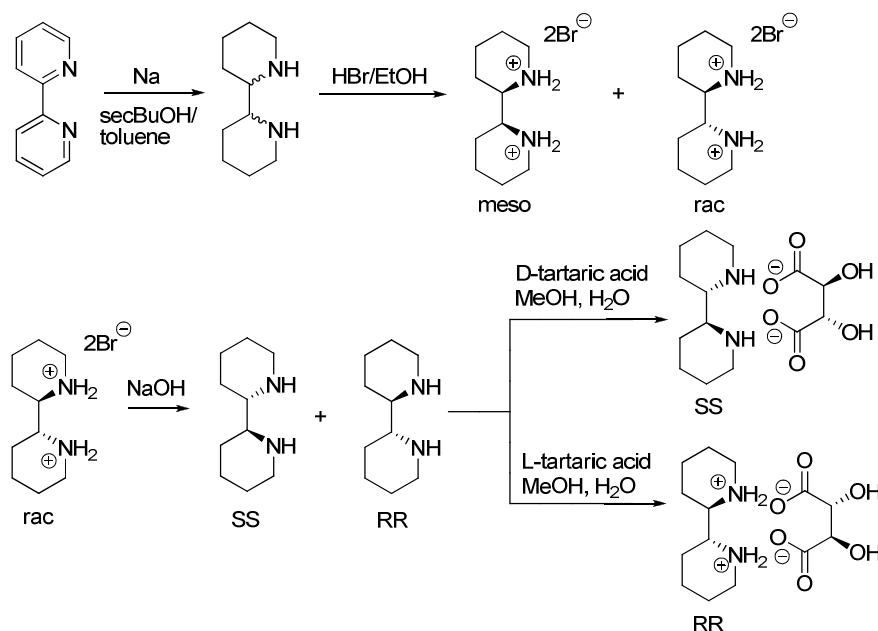
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Bipiperidine derivatives are very efficient and selective organocatalysts in several reactions (e.g. Michael addition, aldol reaction).^{1,2} Synthesis of 2,2'bipiperidine³ is a simple one step reaction. Birch reduction of bipyridyl results in a 1:1 mixture of meso (R,S) and racemic isomers (S,S and R,R) of bipiperidine. Racemic and meso bipiperidine were separated by crystallisation of the hydrobromic salt. After the formation of free racemic amine the enantiomers were resolved with tartaric acid.



References

1. Laars, M.; Ausmees, K.; Uudsemaa, M.; Tamm, T.; Kanger, T.; Lopp, M. *J.Org.Chem.*, **2009**, *74*, 3772-3775.
2. Laars, M.; Kriis, K.; Kailas, T.; Müürisepp, A.-M.; Pehk, T.; Kanger, T.; Lopp, M. *Tetrahedron: Asymmetry*, **2008**, *19*, 641-645.
3. Krumholz, P. *J.Am.Chem.Soc.*, **1953**, *75*, 2163-2166.