

As shown in the Table, the azide attacked the less hindered carbon of the unsymmetrical epoxides. This implies that the regioselectivity is governed mainly by the steric factor rather than the electronic one. In the case of styrene oxide, however, the electronic factor dominated and 2-azido-2-phenylethanol was obtained in 72 % yield.

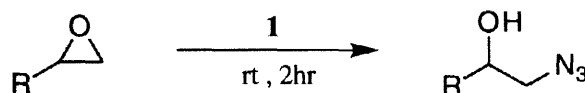


Table. Reaction of Epoxides with Lithium Azidohydridodiisobutylaluminat (1)

Entry	Description	Isolated Yield, %
1	R=CH ₂ CH ₃	70
2	R= <i>n</i> -Hexyl	78
3	R= <i>N</i> -CH ₂ -Phthalimide	76
4	R=CH ₂ OPh	75
5	R=(CH ₂) ₂ CH=CH ₂	78

In conclusion, it is demonstrated that lithium azidohydridodiisobutylaluminat (1), which can be so easily prepared as a solution in THF, has the ability to transfer the azide regardless of its potential hydride functionality and may thus be employed as one of the azide transferring reagents⁶. This is, to our knowledge, the first example of the ate complex that is derived from DIBAH but does not transfer the hydride.

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REFERENCES AND NOTES

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- Lithium azide or sodium azide did not form the ate complex with DIBAH in dichloromethane. Reaction of benzoyl chloride with the excess amounts of the resulting suspension produced benzyl alcohol only.
- Sodium azide, potassium azide, or cesium azide with DIBAH in THF, and potassium azide or cesium azide with DIBAH in dichloromethane also reacted with benzoyl chloride to afford benzoyl azide.
- Other acid chlorides such as phenacetyl chloride, cinnamoyl chloride, and *p*-chlorobenzoyl chloride also gave the corresponding acid azide in 93, 90, and 90 % yield, respectively.
- (a) Previous references are cited in ref. 2. (b) Saito, A.; Saito, K.; Tanaka, A.; Oritani, T. *Tetrahedron Lett.* **1997**, *38*, 3955-3958.