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Studies on the Mechanism of Base-Catalyzed Decomposition of Bicyclic Endoperoxides

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**Abstract:** Kinetic studies were performed to clarify the Kornblum-Delamare reaction mechanism of bicyclic endoperoxides. Ascaridol and 1,4-diphenyl-2,3-dioxo-bicyclo[2.2.2]oct-5-ene, not having  $\alpha$  - protons, did not provide any reaction with bases. Reaction with different bases has revealed that reaction rates for the base-catalyzed decomposition of 2,3-dioxo-bicyclo[2.2.2]oct-5-ene depend strongly on the base strength. The stronger the base used, the faster the conversion rate. Reaction rate values  $k$  of endoperoxides with different skeletons were also studied with  $\text{NEt}_3$ . It has been noted that the strength of the base plays the dominant role in determining the rate of the reactions.

**Key Words:** Bicyclic endoperoxides, Kornblum-Delamare reaction, base-catalyzed decomposition, kinetic study

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