

ORGANIC CHEMISTRY 1 LECTURE GUIDE 2019

BY RHETT C. SMITH

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By Rhett C. Smith, Ph.D.

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Organic Chemistry 1 Reactions and Practice Problems 2019

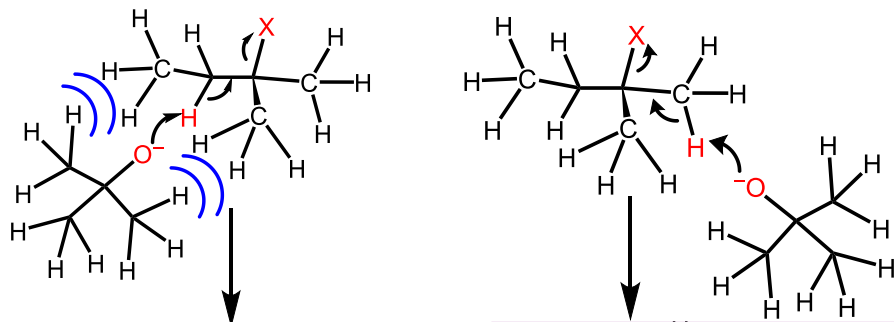
by Rhett C. Smith

Organic Chemistry 1 Primer 2019,

by Rhett C. Smith, Andrew G. Tennyson, and Tania Houjeiry

Lecture Topic II.9: Factors Leading to Non-Zaitsev Products in E2
Increasing the Amount of Non-Zaitsev Products

Steric hindrance to deprotonate a sterically-encumbered site increases as the base becomes bulkier:



A

B

As a result:

C

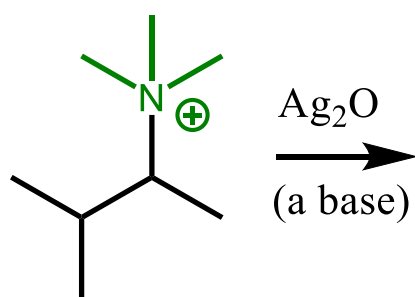
Notes

The less-substituted product (non-Zaitsev) is sometimes called the

(A)

This terminology came from a clever version of the E2 reaction in which the leaving group is a bulky amine. This variation is called the:

(B)



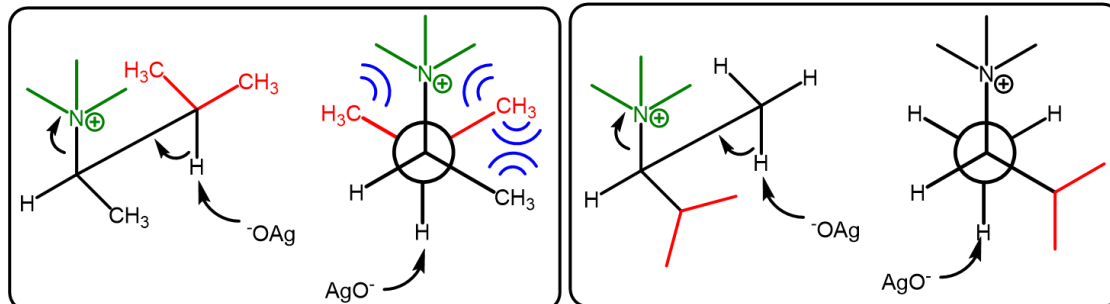
(C)

Conformational analysis may help us visualize and explain why the Hofmann product is favored...

Notes

Lecture Topic II.9: Factors Leading to Non-Zaitsev Products in E2
 Hofmann Elimination: non-Zaitsev is the Major Product

On the left is the conformation necessary to produce the Zaitsev Product.
 On the right is the conformation necessary to produce the Hofmann Product.



A Product:

Disfavored because:

B Product:

Favored because:

Notes