

ORGANIC CHEMISTRY 2 LECTURE GUIDE 2019

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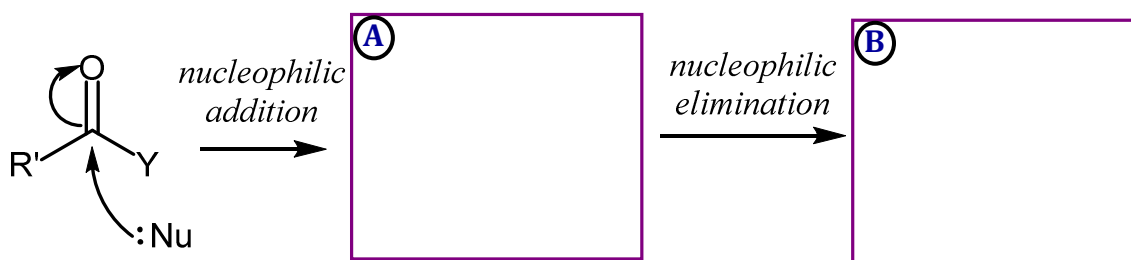
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Lesson VI.9. Nucleophilic Acyl Substitution of Acid Chlorides and Anhydrides
Carbonyl reaction Type B is the S_NAc reaction

One type of reaction that carbonyl functional groups can undergo consists of two steps: 1) *nucleophilic addition* then 2) *nucleophilic elimination*. These steps comprise **Nucleophilic Acyl Substitution (S_NAc)**. In this Lecture Guide, we also refer to these type of reactions as **carbonyl reaction type B**:

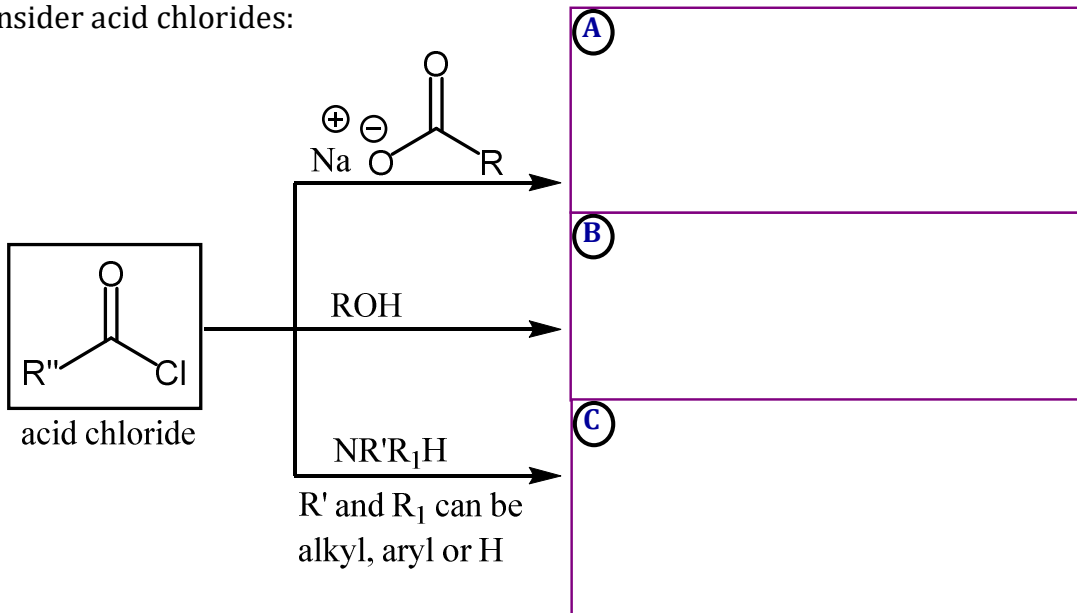


Type B reactions are possible for all of the carbonyl functional groups covered in this Lecture Guide, **except** aldehydes and ketones.

Notes

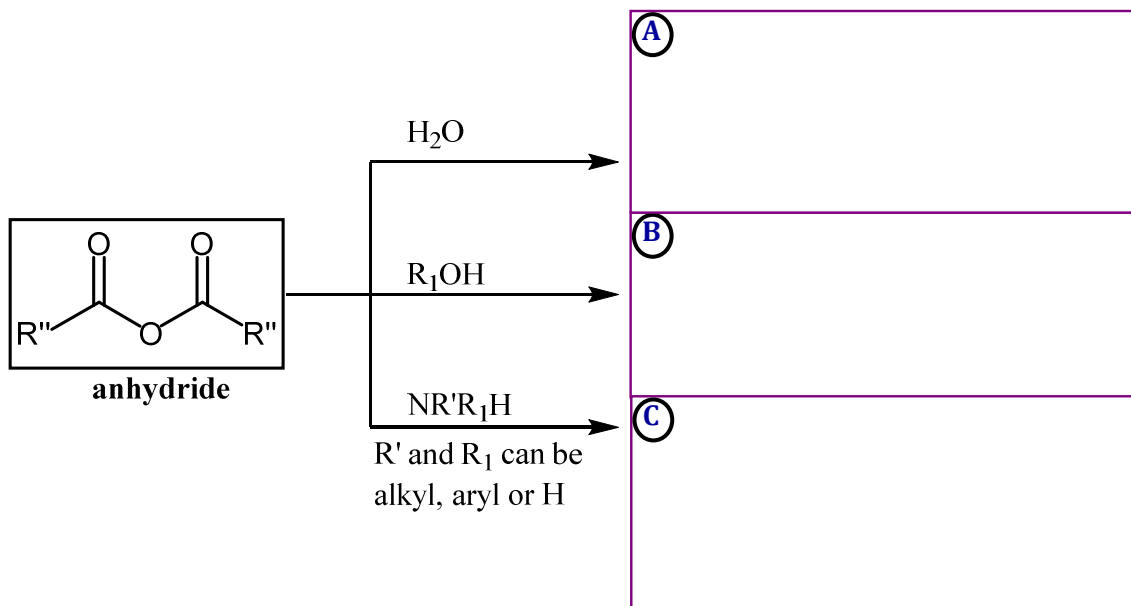
Lesson VI.9. Nucleophilic Acyl Substitution of Acid Chlorides and Anhydrides*Acid chlorides readily undergo S_NAc*

The situation is much simpler when nucleophiles react with acid chlorides or anhydrides. In these cases, there is already a good leaving group on the carbonyl carbon. A variety of nucleophiles react readily with these functional groups. Consider acid chlorides:

Notes

Lesson VI.9. Nucleophilic Acyl Substitution of Acid Chlorides and Anhydrides
Anhydrides readily undergo S_NAc

And anhydrides:



Notes