

ORGANIC CHEMISTRY 2 LECTURE GUIDE 2019

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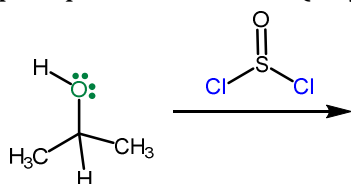
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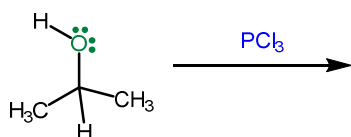
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Lesson VI.10. S_NAc of Carboxylic Acids*Activation of carboxylic acids*

Carboxylic acids are not very good substrates for S_NAr. This is because the -OH group is a bad leaving group. For alcohols, we converted the -OH into a good leaving group *before* we did a substitution by using Thionyl chloride (SOCl₂) or phosphorus trihalide (PX₃, X = Cl, Br).

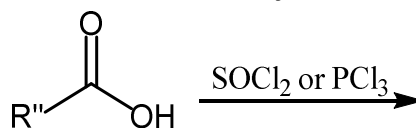


A



B

These reagents also work for carboxylic acids: C

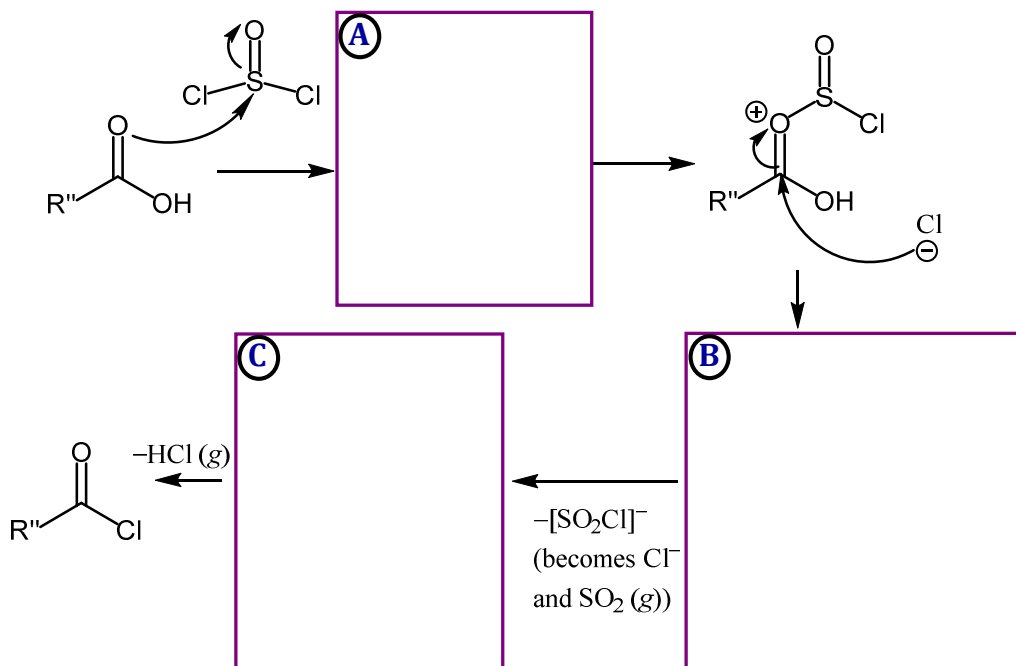


C

Notes

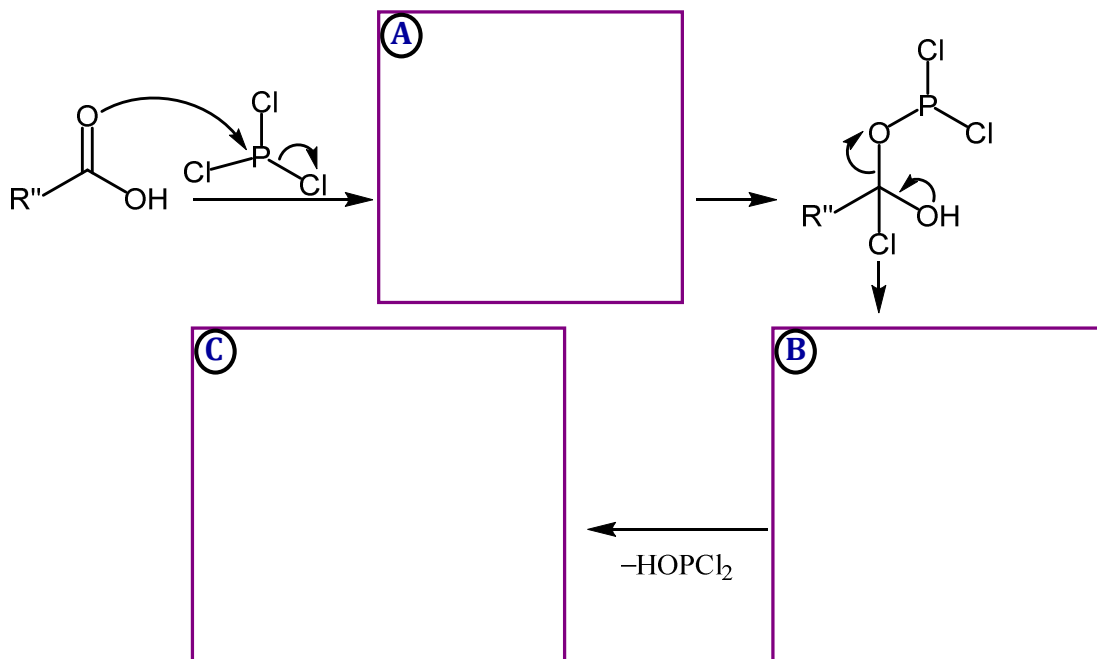
Lesson VI.10. S_NAc of Carboxylic Acids*Activation of carboxylic acids*

Here is the reaction mechanism for a carboxylic acid with thionyl chloride:

Notes

Lesson VI.10. S_NAc of Carboxylic Acids*Activation of carboxylic acids*

Here is the reaction mechanism for a carboxylic acid with phosphorus trichloride:



Notes