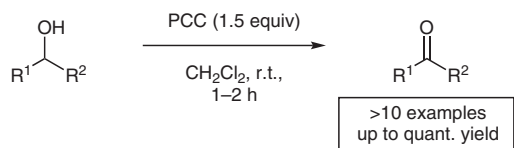


E. J. COREY, J. W. SUGGS (HARVARD UNIVERSITY, CAMBRIDGE, USA)

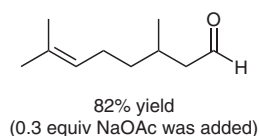
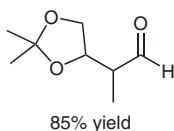
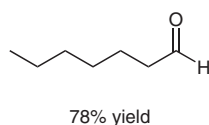
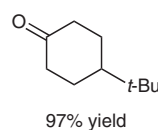
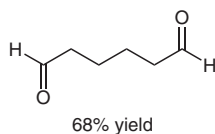
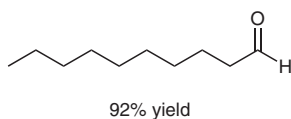
Pyridinium Chlorochromate. An Efficient Reagent for Oxidation of Primary and Secondary Alcohols to Carbonyl Compounds
Tetrahedron Lett. **1975**, *16*, 2647–2650.

Classic Oxidation of Alcohols Using Pyridinium Chlorochromate

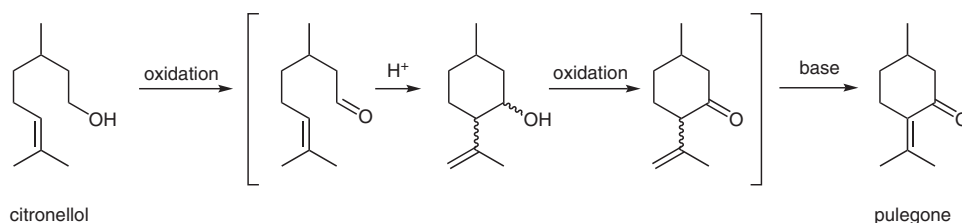


$\text{R}^1 = \text{Alk}; \text{R}^2 = \text{H, Alk}$

Selected examples:



one-pot reaction:



Significance: In 1975, Corey and Suggs developed the efficient oxidation of primary and secondary alcohols to the corresponding carbonyl compounds by treatment with pyridinium chlorochromate (PCC). The advantages of this method (also known as Corey–Suggs oxidation) are the simple procedure, efficiency, versatility and the prevention of over-oxidation. On the other hand, chromium(VI) compounds are toxic and must be handled with care.

Comment: Interestingly, the authors reported the preparation of pulegone in one step from citronellol using two subsequent oxidations.

Category

Metals in Synthesis

Key words

chromium compounds

oxidation

alcohols

aldehydes

ketones

Synfact
Classic

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