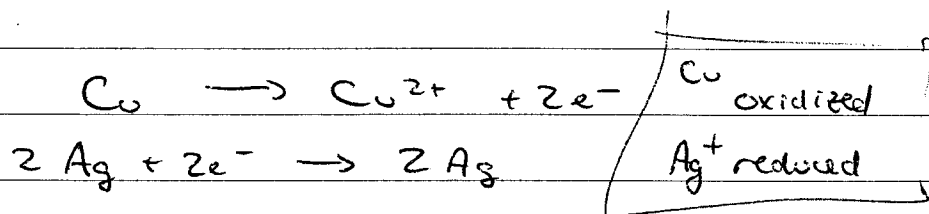
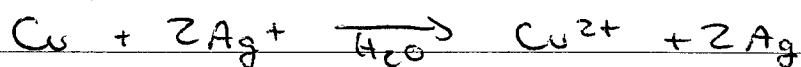


Ch 11 - Rxns of Alcohols

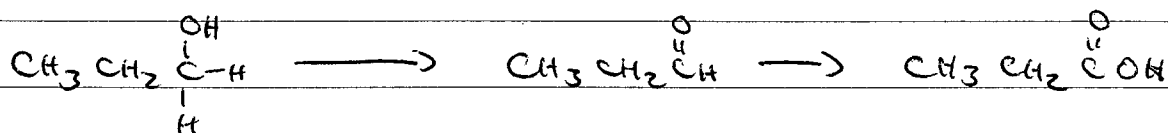


Not so straight forward w/ organics

Oxidation - loss of H_2 (also, Addn of $\text{O}, \text{O}_2, \text{X}_2$)

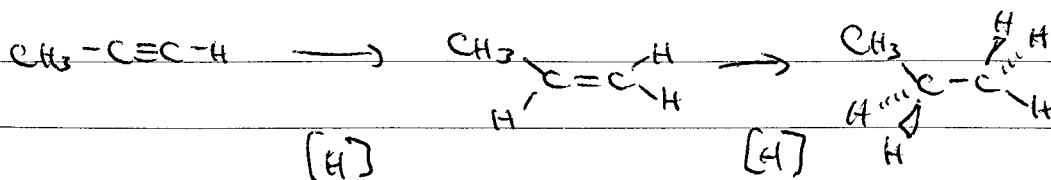
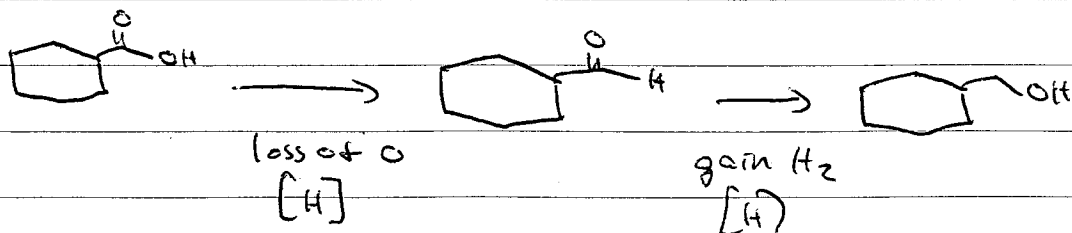
Reduction - addn of H_2 (also, loss of $\text{O}, \text{O}_2, \text{X}_2$)

Ex 1



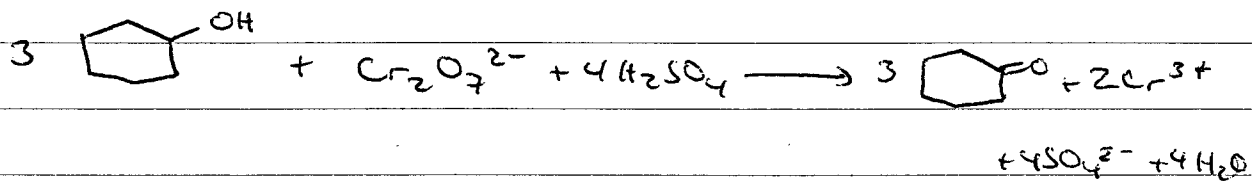
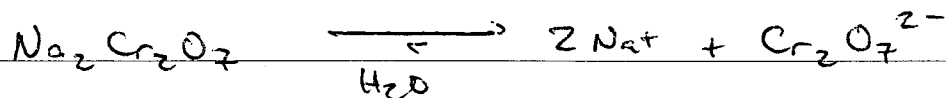
loss of H_2
[O]

addn of O
[O]

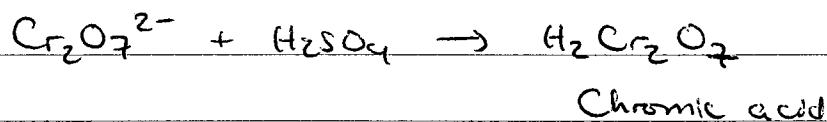


Oxidations $\text{Na}_2\text{Cr}_2\text{O}_7$

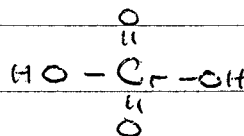
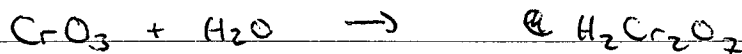
Recall



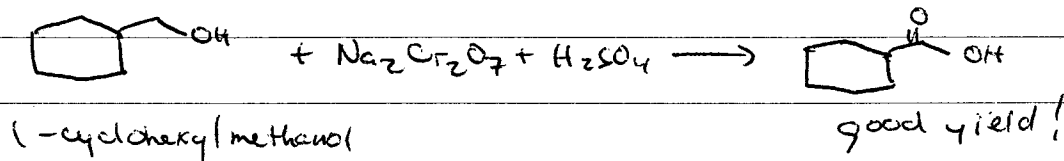
good yield



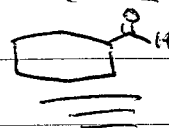
also,



But



BUT NOT

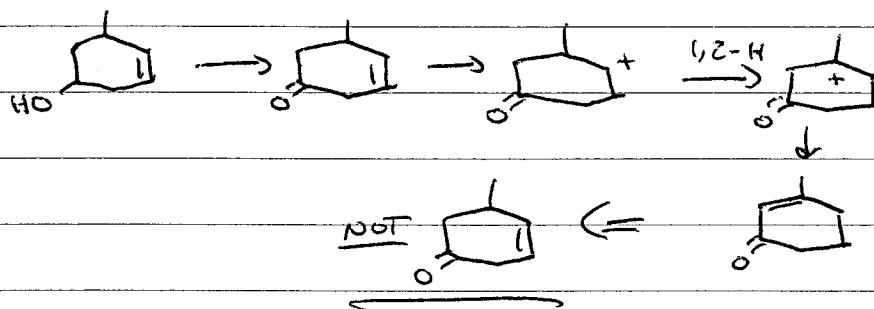


aldehyde!

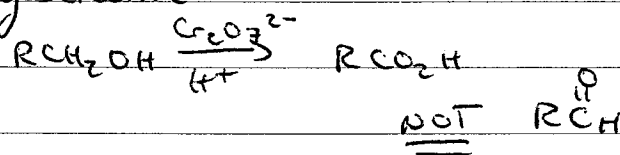
Pyridinium Chlorochromate (PCC)

Problems w/ ~~chromic acid~~ $\text{Na}_2\text{Cr}_2\text{O}_7 / \text{H}_2\text{SO}_4$

1) strong acid often reacts w/ other functional groups

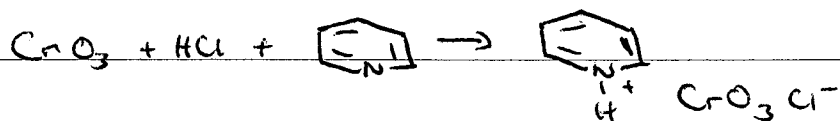


2) not very selective



3) Must be run in H_2O

Can instead use



use in organic solvents (ie., CH_2Cl_2)

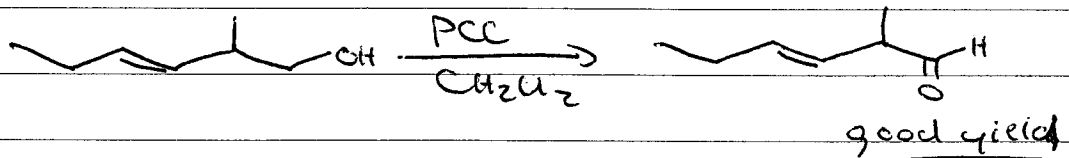
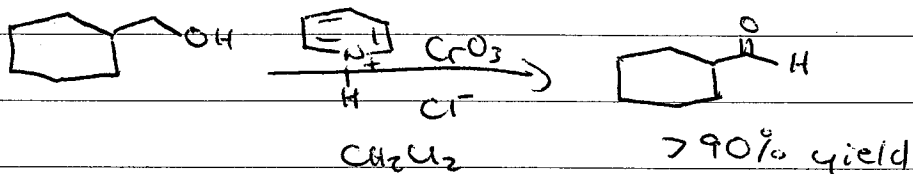
Thus

1) no strong acid

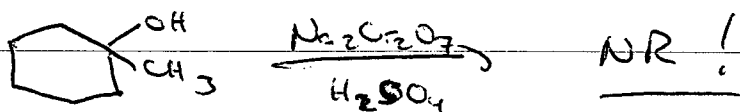
2) selective

3) organic solvents

And



3° Alcohol Oxidations



Reason

No H adjacent to -OH group!