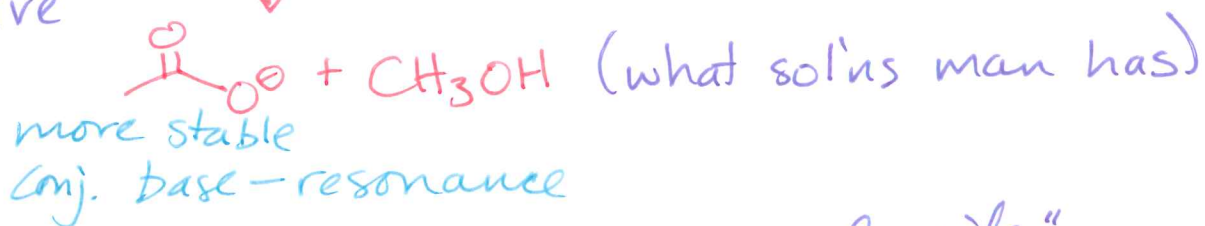


21.5

(a) OK to give  $\text{R-C(=O)OH}$  as product  
By-product  $\text{CH}_3\text{O}^-$  would like react  
to give



21.7 A few other examples of "mineral acids"

$\text{H}_2\text{SO}_4$ ;  $\text{H}_3\text{PO}_4$ ; also OK to use " $\text{H}^+$ "  
or " $\text{H}_3\text{O}^+$ "

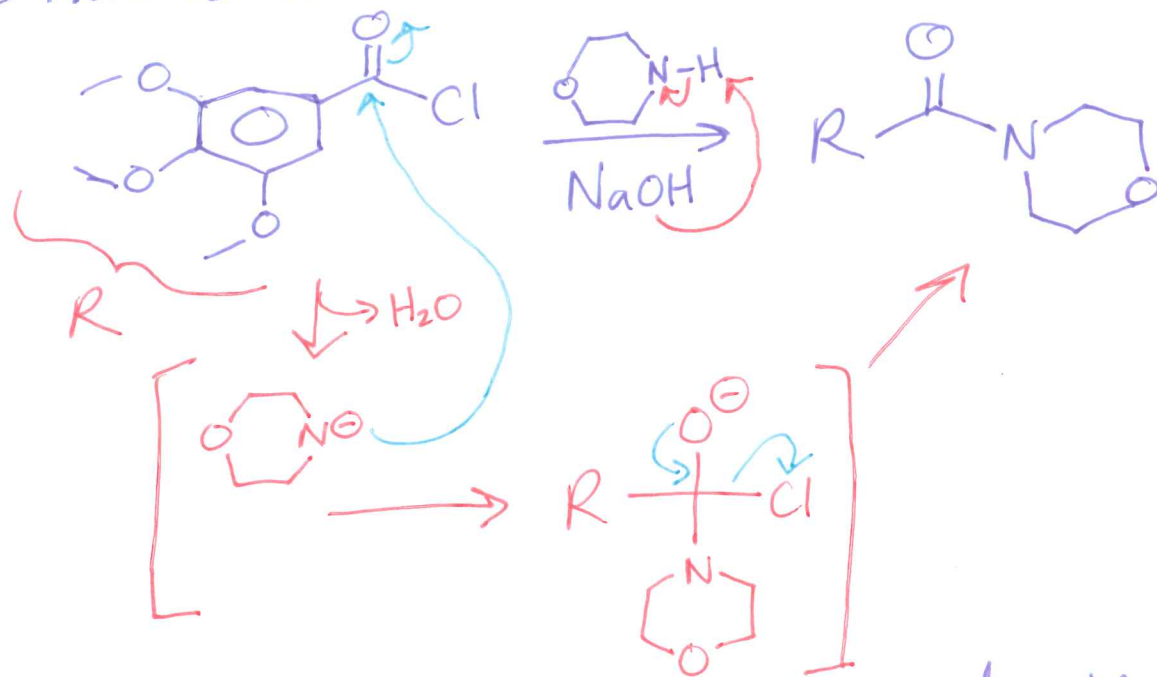
21.9 OK to do without pyridine!

acid chlorides  
very reactive

(on paper at least)

21.11 Better mechanism would avoid  $\oplus$  charges

b/c rxn is under basic cond's (NaOH)



21.12 OK to do this w/o NaOH or 2<sup>nd</sup> equiv. of amine  
an exams (without)

21.20

(b) 1. LAH  
2.  $H_3O^+$  must be used, not  $BH_3$

21.36

(c) to be clear, this should be "NIR"  
(not intended rxn)

$CH_3MgBr$  doesn't react  
w/ amide but instead reacts w/  $H_3O^+$  to give

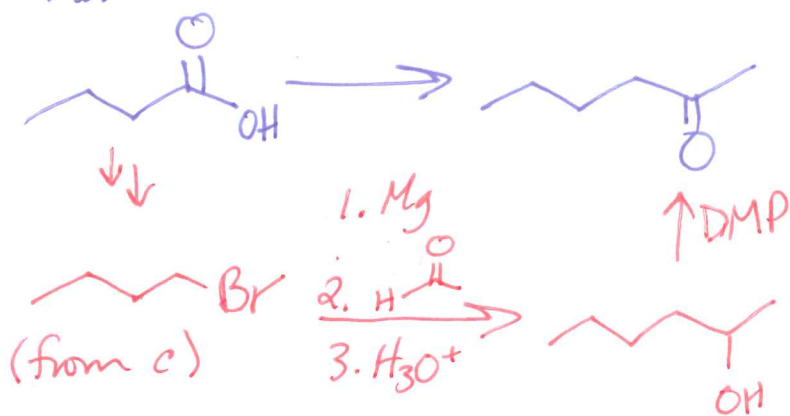


21.38

(a) LAH NOT  $BH_3$

(e) same note as 20.33(d) - a few pages back in  
this doc

(g) Alternate route

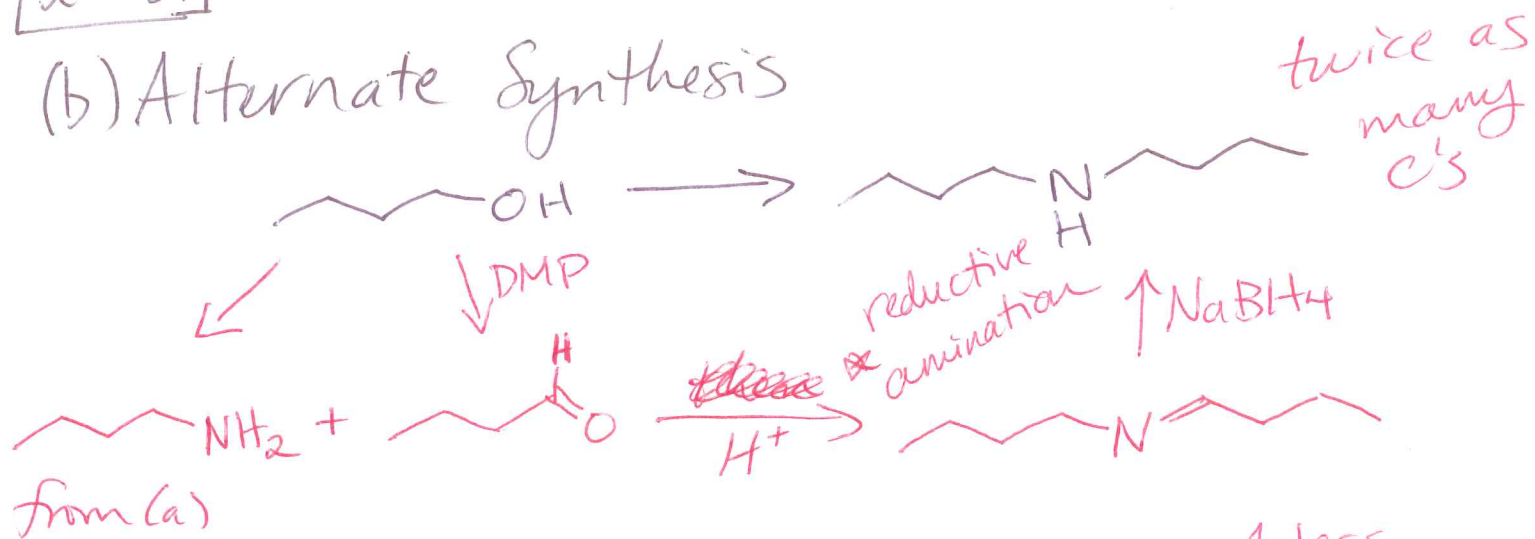


22.5 OK to use KOH instead of Py.,  $\Delta$

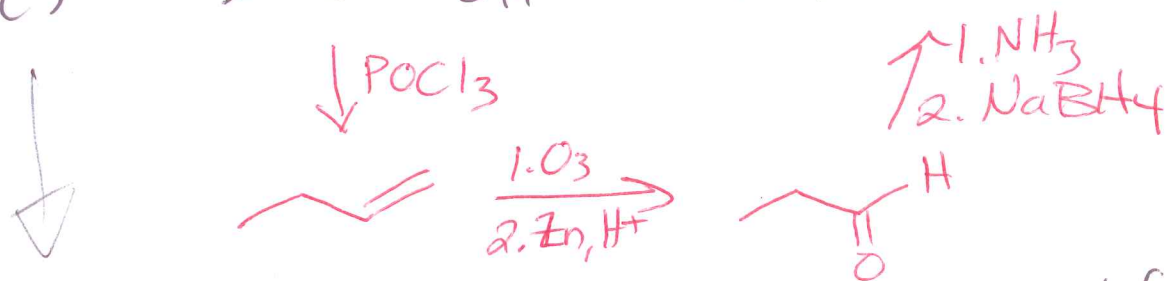
↑  
same for 22.45 (f)

24.36

### (b) Alternate Synthesis

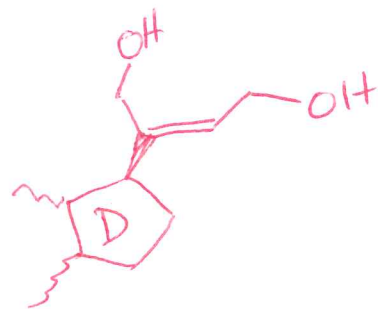
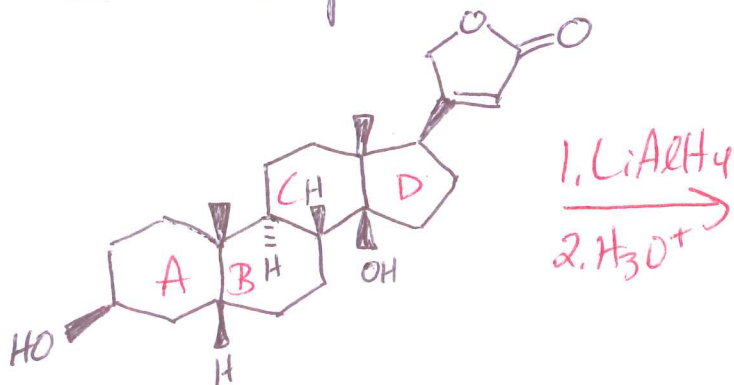


### (c) CCCCCOH $\rightarrow$ CCCCNH2 *1 less C*



\* sol'n manual for 24.36(c) uses Hofmann/Curtius RRGT to remove C, those rxns not covered in 8B. Use ozonolysis instead!

27.40 No need to draw chair/3D conformations for this problem!



oxidizes only 2° alcohol  
↓ DMP

everything same on A-D system. Only lactone (cyclic ester) is reduced

