

Due week of midterm exam, 2/28-3/1/07

Name _____

Section _____

Outline a synthesis route for

Benzocaine, starting from p-nitrotoluene

Phenacetin, starting from p-nitrophenol

Briefly explain why this synthesis is interesting and relevant to you

Summarize reactions involved with structures (may be handwritten)

Attach print outs of references used, papers, online articles.

You want to make 10 gm of final product. Assuming an 80% yield for each step, back calculate how much initial starting material is required and how much intermediate product is produced at each step in the synthesis.

Notes:

You may not find a single procedure giving all of the necessary steps. You may have to locate procedures for each step of the synthesis separately.

If you find a procedure with any prohibitive steps or reagents, eg. High temperatures $>200\text{ }^{\circ}\text{C}$, pyrophoric or carcinogenic reagents (eg. Na metal, H_2 gas, Cr^{+6} , LiAlH_4), expensive catalysts (eg. Pt, Pd, Ru), long reaction times (>3 hrs), which might rule out this procedure as suitable for lab, then you need to search for an alternative procedure.

There may be more than one acceptable route to the final product. You only need to show one, hopefully the quickest and easiest route.

Useful Information Sources:

SciFinder

Google

Organic Synthesis Online: <http://www.orgsyn.org/default.asp>

JChemEd <http://jchemed.chem.wisc.edu/Journal/Search/index.html>