

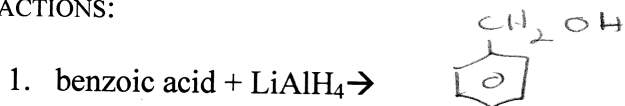
Chapter 19: Carboxylic Acids Worksheet

NOMENCLATURE:

Please name the following structures:

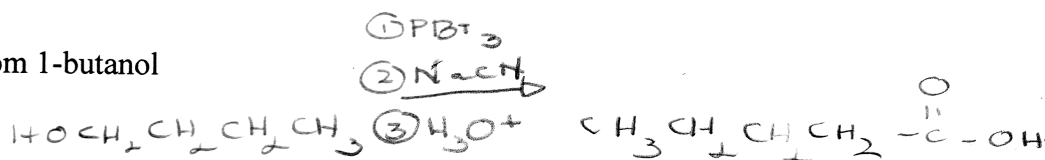
1. $\text{HO}_2\text{CCH}_2\text{CO}_2\text{H}$ 1,3-propanedioic acid OR malonic acid
2. $(\text{CH}_3)_2\text{CHCO}_2\text{H}$ 2-methylpropanoic acid

REACTIONS:

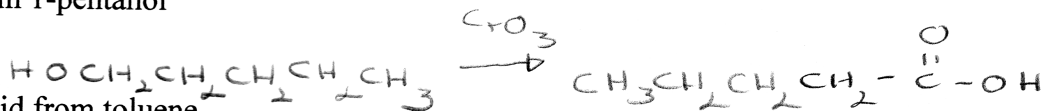


SYNTHESIS

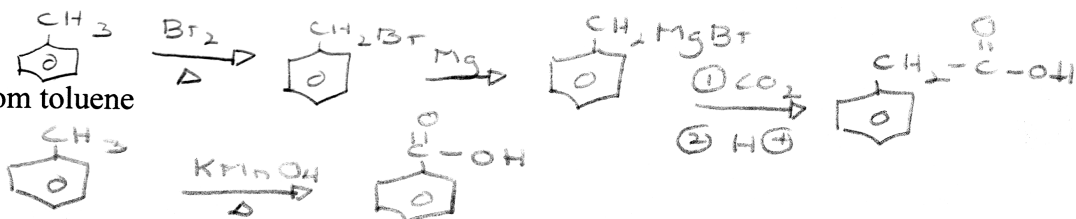
1. valeric acid from 1-butanol



2. valeric acid from 1-pentanol



3. phenylacetic acid from toluene



4. benzoic acid from toluene



ACIDITY

Number the following in decreasing order of acidity, letting #1 equal the most acidic.

benzoic acid

p-bromobenzoic acid

p-hydroxybenzoic acid

