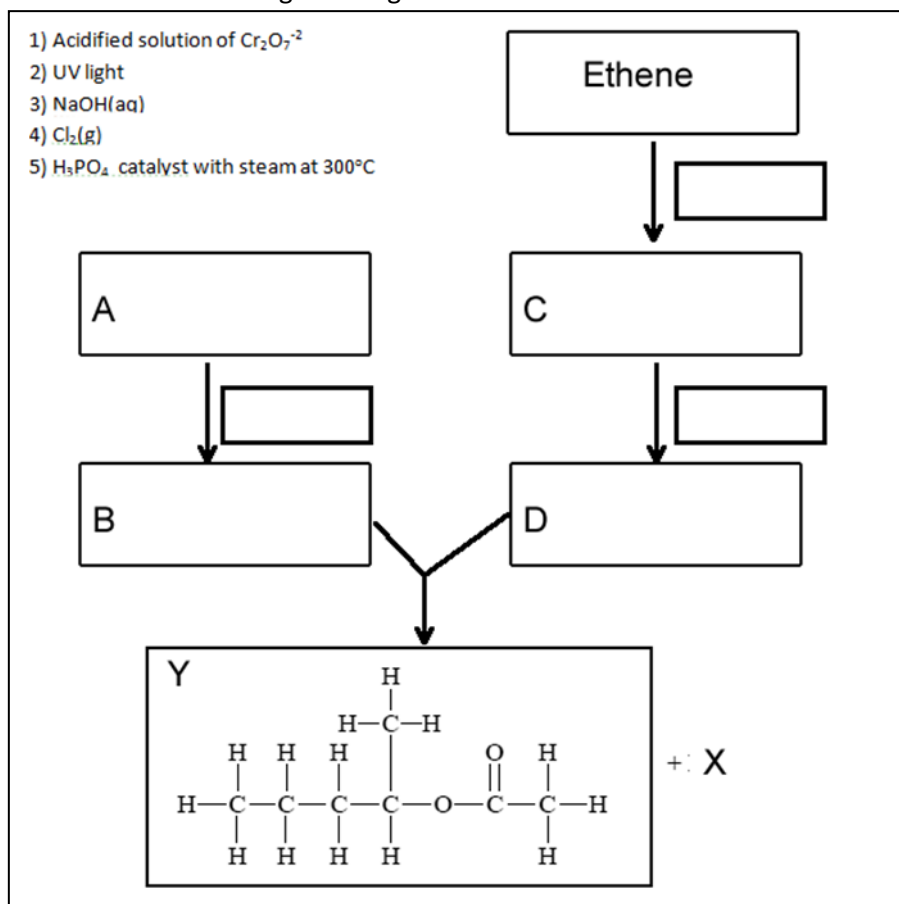


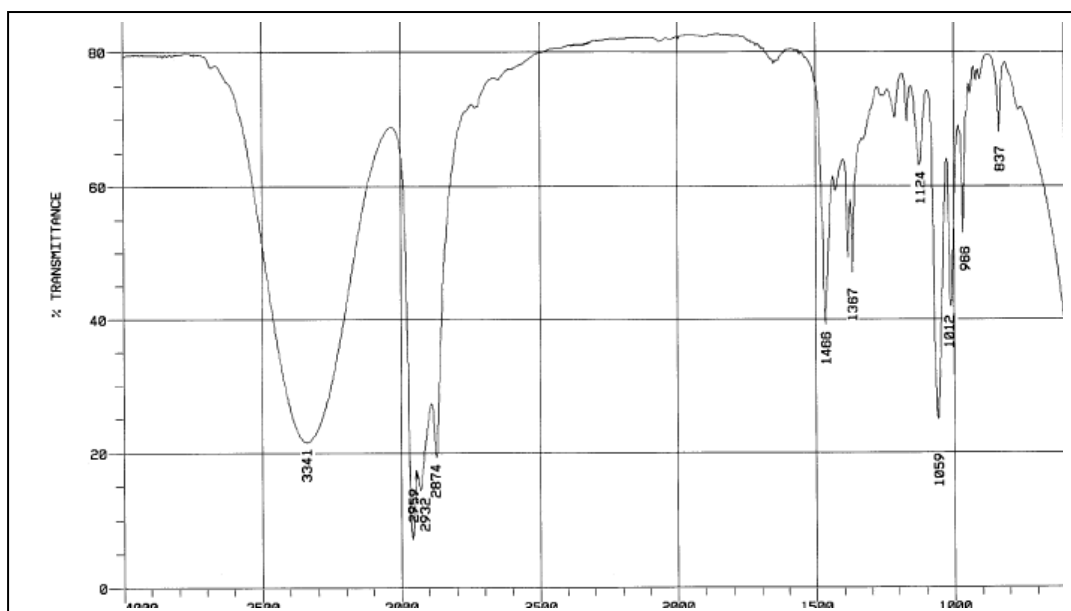
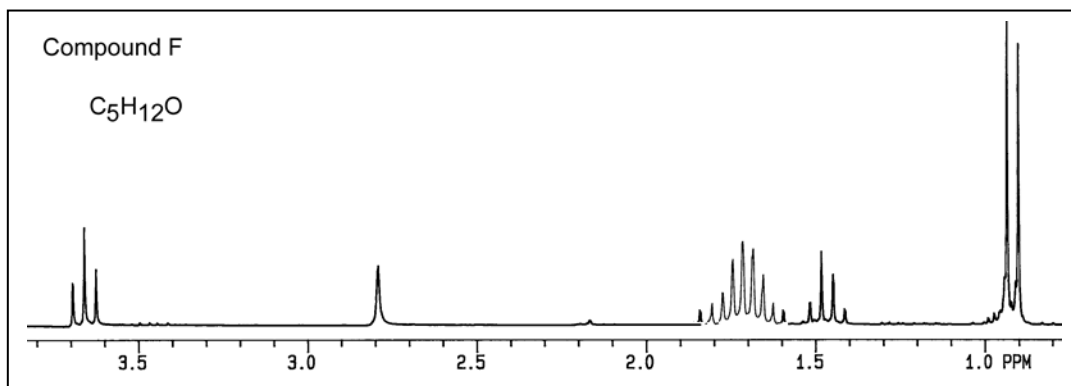
Friday Worksheet
Analytical chemistry revision 3

Name:

- 1) A reaction pathway is designed for the synthesis of the compound that has the structural formula shown below. Inorganic reagents used are also listed from 1 to 5.



2) Compound F and compound B, from Q1 above, have the same molecular formula. The ^1H NMR and IR spectra of compound F are shown below. A student suggested that compound B and compound F are the same compound. Using the information below argue for and against this suggestion.



3) A mixture of three compounds, propan-1-ol, pentan-1-ol and pentan-3-ol was placed in a HPLC column filled with beads covered with a non-polar substance. A polar solvent was used to move the mixture through the column. Given that secondary alcohols are less soluble in water than primary alcohols and alcohols with a small molar mass are more polar than alcohols with a larger molar mass, answer the questions below.

- Using the chromatogram, shown on the right, identify the substances A, B and C.
- What can you say about the amount of each substance present in the mixture?

