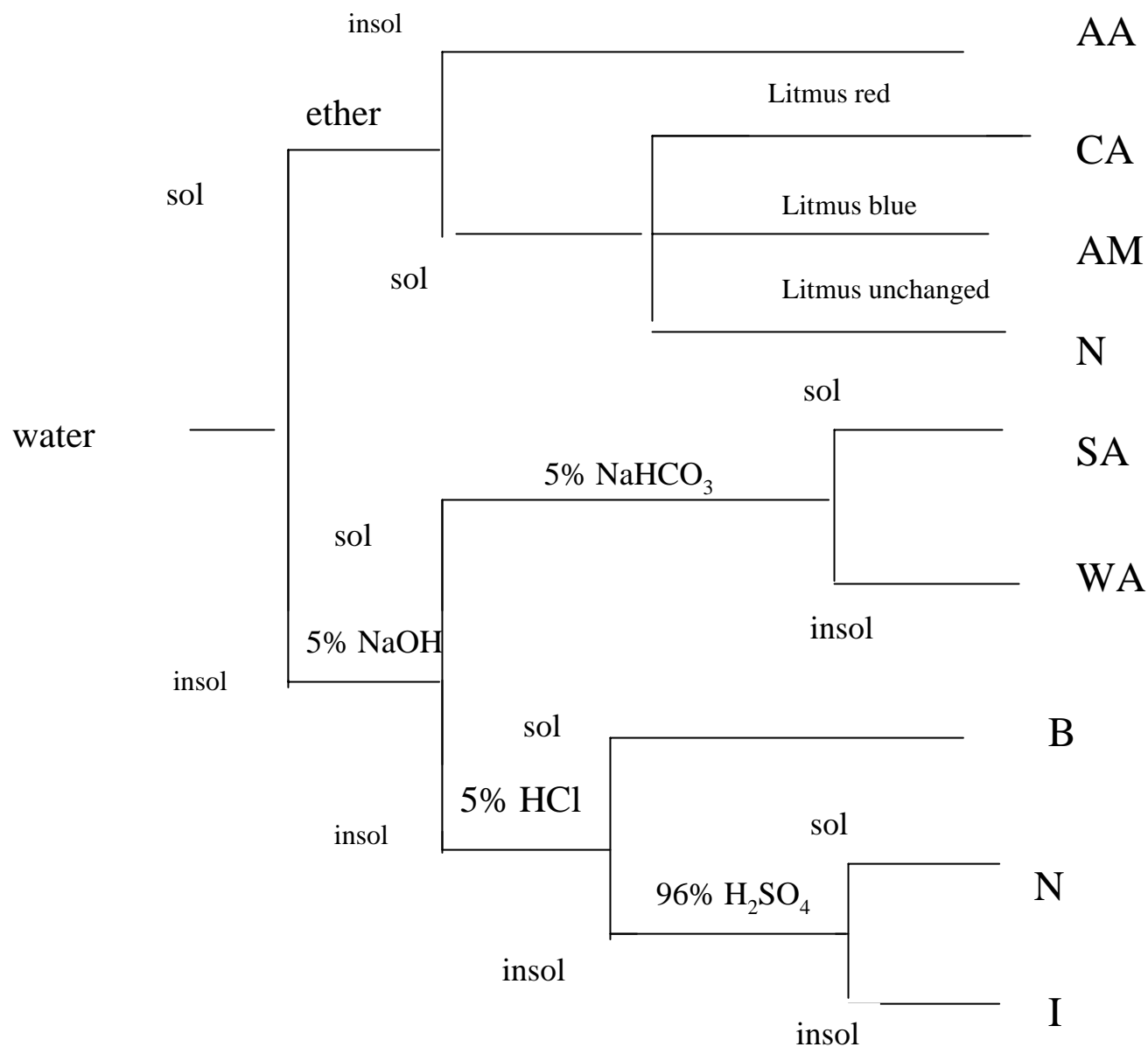
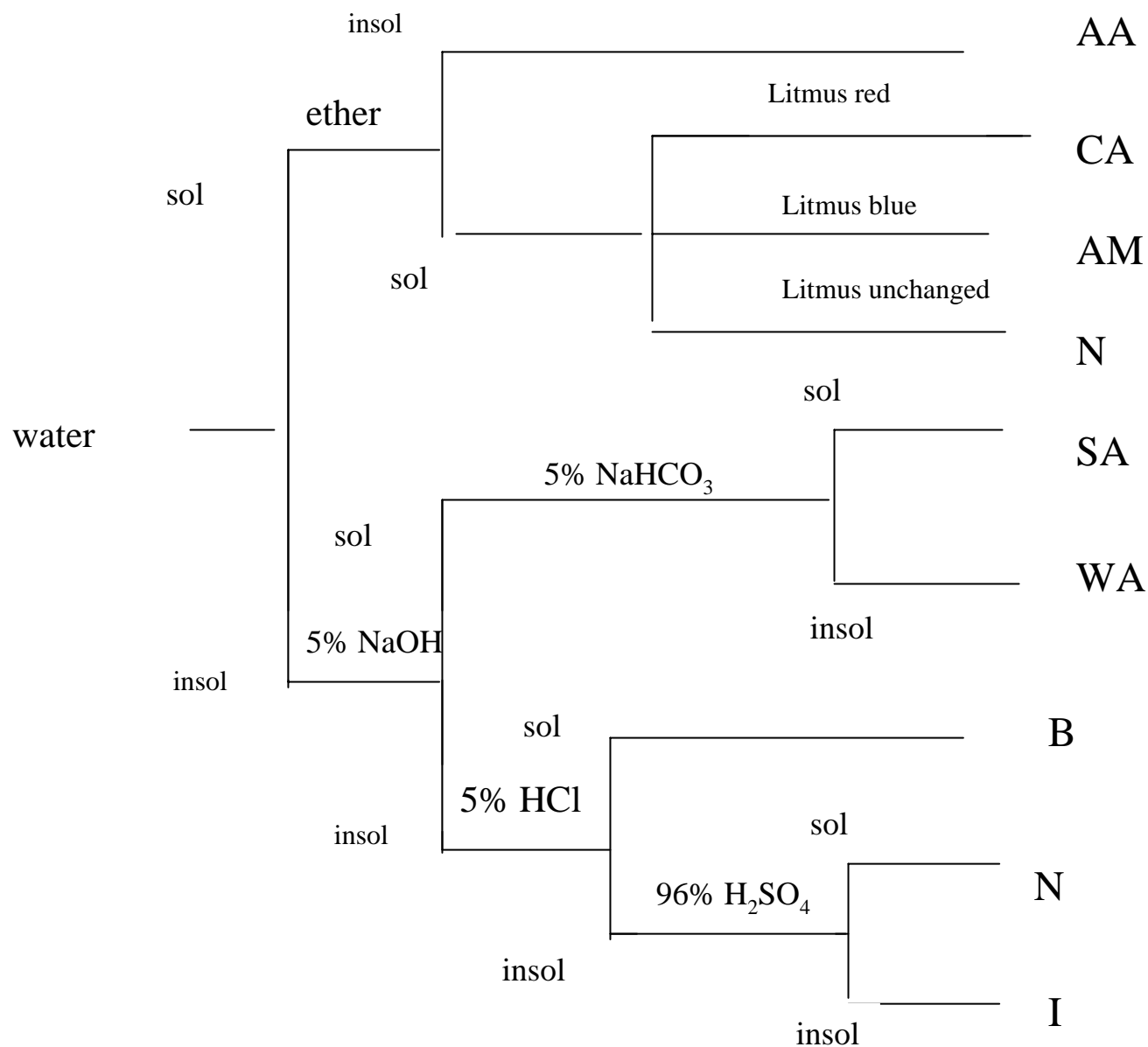


Identification of Unknowns

SOLUBILITY CLASSES



SOLUBILITY CLASSES



AA	amino acids
CA	carboxylic acids (5 carbons or less)
AM	amines (5 carbons or less)
N	alcohols, aldehydes, ketones, nitriles, amides (5 carbons or less)
SA	carboxylic acids, phenols with strong electron withdrawing groups (5 carbons or less)
WA	weak acids, phenols, enols, oximes, imides, 1,3-diones, nitro compounds
B	aliphatic amines, anilines
N	alcohols, aldehydes esters, ketones, ethers, alkynes, alkenes
I	saturated hydrocarbons, haloalkanes, aryl halides

Department of Chemistry
University of Missouri-St. Louis

Unknown
Preliminary Report Form

Chemistry 263
Name: _____

Date:

Unknown Number _____

Physical Properties

- a) appearance:
- b) melting point:
- c) boiling point:
- e) other properties you may have measured:

Solubility Tests (use +/- to indicate positive, negative tests)

H₂O: _____; 5% NaOH, _____; 5% NaHCO₃, _____; 5% HCl, _____ ;
H₂SO₄, _____.

pH(aqueous solution): _____

Please attach IR spectrum.

Following completion of the solubilities of your unknowns you will hand in a preliminary report. The properties you measured will be checked and if they are within the limits described below, the preliminary report will be returned along with a ^1H and ^{13}C NMR spectrum. If they do not fall within the limits described below you will be asked to repeat those measurements that are faulty. There is no penalty for faulty results.

Identification will be based on the following:

Solubility properties

Melting point within $\pm 4\text{ }^\circ\text{C}$; boiling point within $\pm 6\text{ }^\circ\text{C}$

Principle functional groups (IR spectroscopy)

NMR spectra ^1H and ^{13}C

Acid unknowns can be titrated

Note: All unknowns are listed in the back of your lab manual