Chem 31.1 notes

Enrico Miguel S. Dizon Date Performed: April 22, 2013 2012-58079 Experiment # 4 Paper Chromatography 1. Why is the chromatogram developed in an essentially closed system? - The chromatogram is developed in a closed system in order to prevent the solvent to evaporate. Most solvents used in the chromatograph are toxic and flammable. It is also put in a close system to reduce the chance of outside factors affect the chromatograph. 2. What is the main advantage of 2-dimensional paper chromatography over a 1-dimensional one? - The major advantage of 2-dimensional chromatography over 1-dimensional is that 2-dimensional can separate complex mixtures of similar compounds. In 1-dimensional chromatography it is hard to distinguish the similar compounds because only one solvent is used unlike in 2-dimensional where in 2 solvents are used to separate the compounds. 3. What are the considerations in choosing a chromatographic solvent? - One of the considerations of a chromatographic solvent is whether it will bring out different Rf values of the samples used. If all of the compounds have the same Rf values then the separation of pigments would have failed due to the fact that all of them are in the same spot. Another consideration is the polarity of the compounds that will be separated. 4. Compare and contrast between normal phase and reverse phase chromatography. - Normal phase chromatography is when the stationary phase is polar and the mobile phase is non-polar. Reverse chromatography is practically the same, it has a mobile and stationary phase except that that the stationary phase is non-polar, and the mobile phase is polar. Reference: