

Column Chromatography Quiz

- 1) In 1978, W. Clark Still developed "flash" column chromatography. How did it differ from the traditional columns run at that time? (what did he do differently and how was it better?)

- 2) What size silica gel (in μm) is ideal for flash column chromatography?

- 3) To what height should the column be packed with silica gel?

- 4) In what place(s) is sand used in the column?

- 5) You will be preparing your column by passing solvent through the silica gel. How do you know when it is done being packed?

- 6) What is an ideal flow rate of solvent?

- 7) What is an ideal R_f value for a compound that you want to purify by flash column?

- 8) We will be using a solvent mixture of ethyl acetate (EtOAc) and hexane. If you wanted your spots to have a higher R_f , how would you adjust your solvent mixture? i.e., would you add more ethyl acetate or more hexane? Explain.

- 9) Assuming you had a good separation between your two spots (e.g., R_f 0.2 and R_f 0.5 on a given TLC plate), what diameter column would you use for a 1 gram sample?

- 10) Your sample may be a solid or a liquid or an oil. How is it to be loaded onto the column?