



# COC Biotechnology Program

## HPLC Post Lab Questions

1. What chemical characteristic is the separation of the different dyes based on?
2. The ratio of –OH (hydroxyl) groups to carbon atoms provides the basis for determining polarity of the molecules used in this lab.
  - a. What chemical property does the –OH group exhibit that accounts for this polarity?
  - b. What other atoms would also provide a strong polarity in relationship to carbon atoms? List four atoms.
  - c. Which Kool-Aid dye was more polar? Justify your answer.
3. Why is it HPLC a useful technique in science?
4. Rank the following in increasing order of polarity, methanol, water, isopropanol alcohol, and ethanol.
  - a. If you used the above solutions to separate several dyes, in which order would you add the solutions to the Sep-Pak?
5. Name two other physical or chemical characteristics that could be used to separate molecules in chromatography (the textbook is a good reference)?
6. Define the terms elute and eluant.