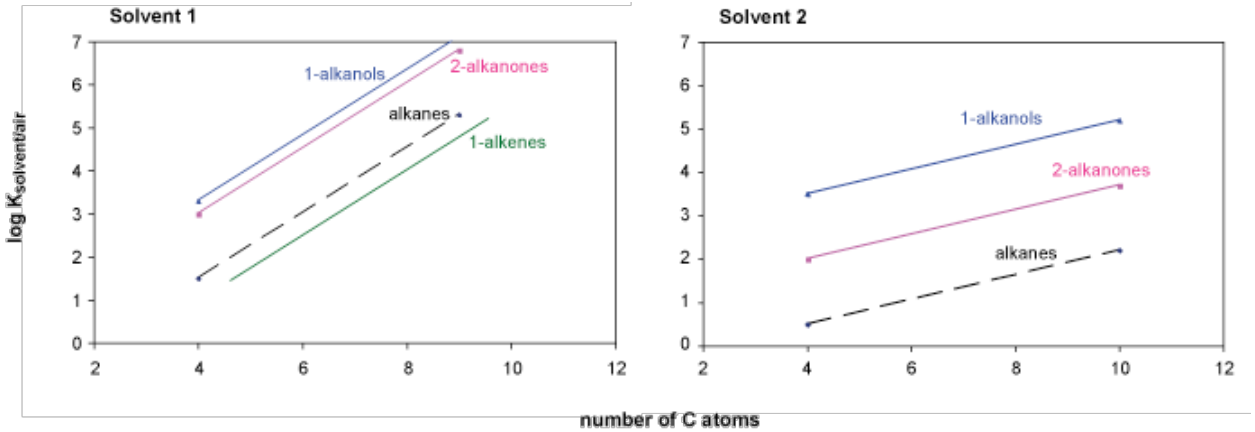
Problem 8

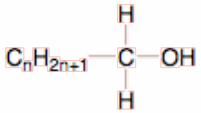
In the figures below you can see experimental data for the equilibrium partitioning of organic compounds from air to two solvents at 25°C (only the regression lines through the measured values are depicted, not the values themselves).

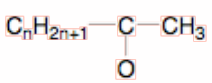


a) The measurements of the 1-alkenes in solvent 1 come from a different source than the rest of the data. Are they consistent with the rest of the data?

b) What can you say about the differences between the two solvents?

c) Mark where you would expect the experimental values for 1,4-butanediol and di-n-propylether in solvent 2. Explain your choice!

1-Alkanole: 

2-Alkanone: 

Alkane: C_nH_{2n+2}

1-Alkene: $C_nH_{2n}{=}CH_2$

Di-n-propylether: $C_3H_7{-}O{-}C_3H_7$

1,4-Butanediol: