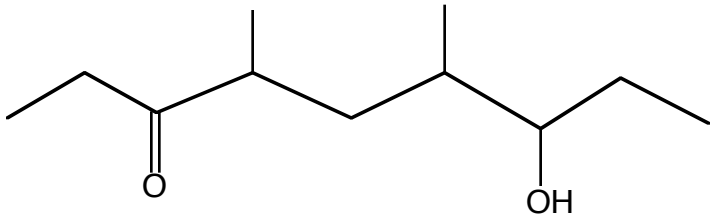
Problem 33, Chem 301X, 2006

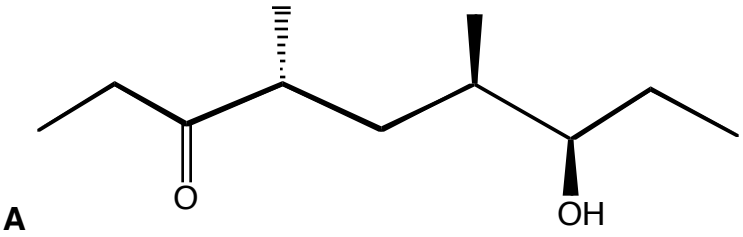
Serricornin, the female-produced sex pheromone of the cigarette beetle, whatever that is, has the following schematic structure.



(a) Point out with an * the stereogenic carbons

(b) What is the maximum number of possible stereoisomers?

(c) Draw the *S* configuration at each stereogenic carbon (the natural configuration). It is best to adopt a convention to do this. Use dashed wedges to represent retreating bonds and solid wedges to represent bonds coming forward. For example, one might write **A** to represent the *S,S,S* isomer, but, as a former US president once said, "That would be wrong." In fact, if you can decipher the R/S stereochemistry of **A**, you should be able to short-cut the construction of the *SSS* isomer.



A