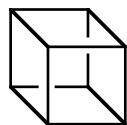


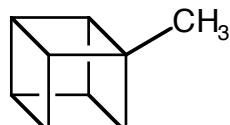
Problem 82, Chemistry 301X - 2006

(a) Show how you would use spectroscopy to assign structures to four unknown compounds sharing the following structures:

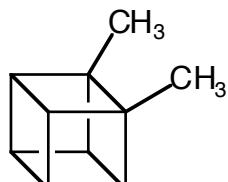
(a)



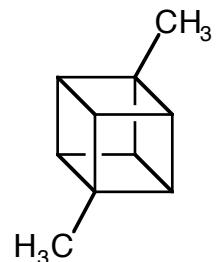
(b)



(c)

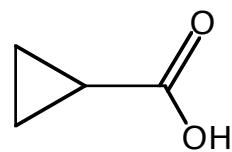
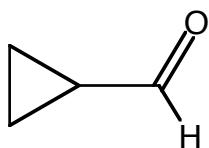


(d)



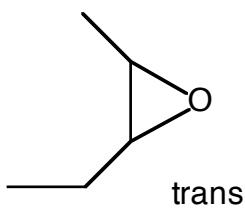
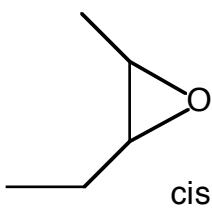
(b) Show how you would use the indicated spectroscopy to assign structures to the following three pairs of compounds:

(e)



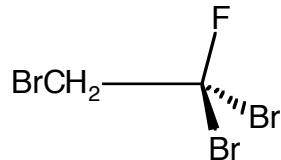
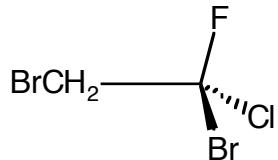
IR

(f)



¹H NMR

(g)



¹H NMR