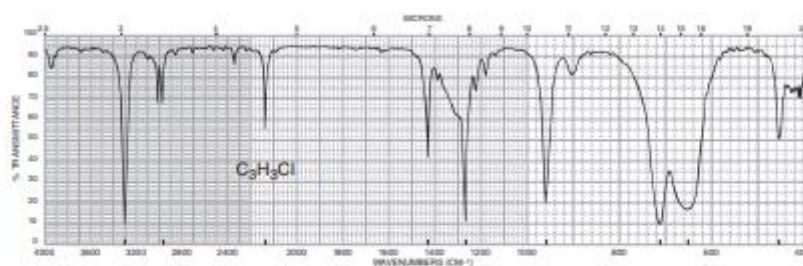


PROBLEMS

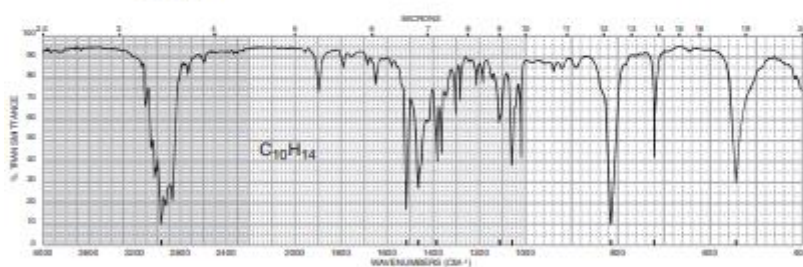
When a molecular formula is given, it is advisable to calculate an index of hydrogen deficiency (Section 1.4). The index often gives useful information about the functional group or groups that may be present in the molecule.

*1. In each of the following parts, a molecular formula is given. Deduce the structure that is consistent with the infrared spectrum. There may be more than one possible answer.

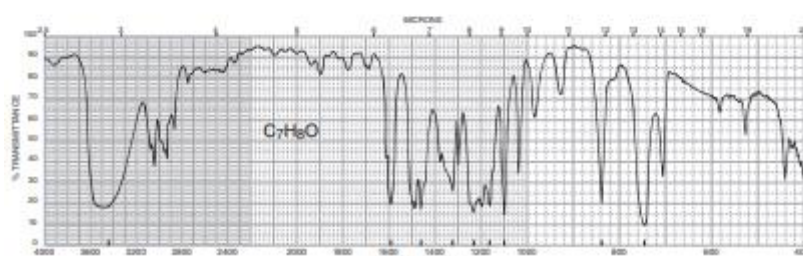
(a) C_7H_5Cl



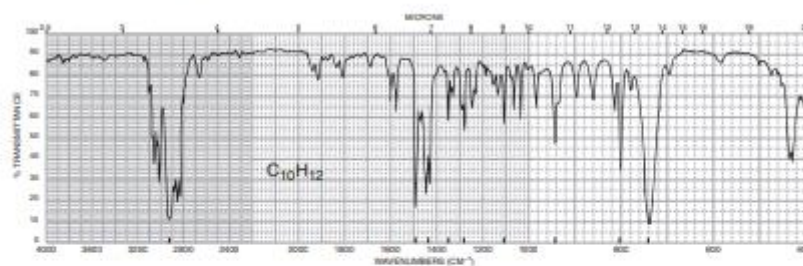
(b) $C_{10}H_{14}$



(c) C_7H_6O



(g) $C_{10}H_{12}$ (two six-membered rings)



(h) C_7H_6O

