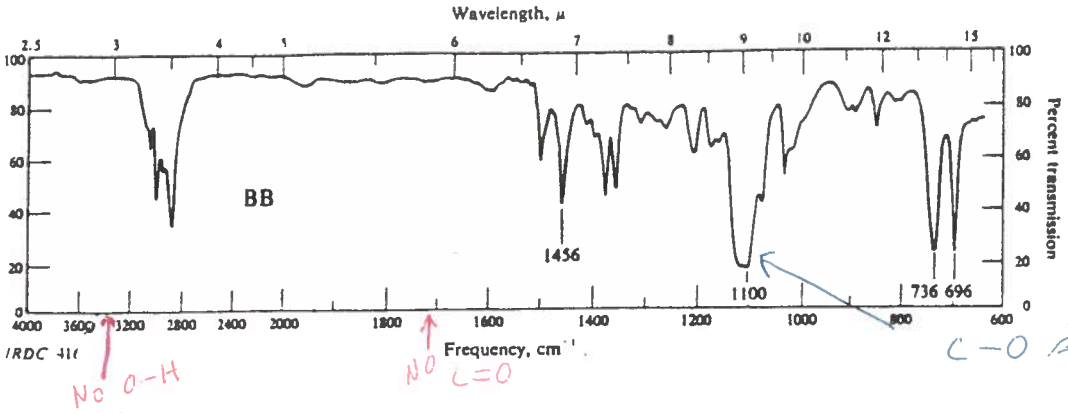
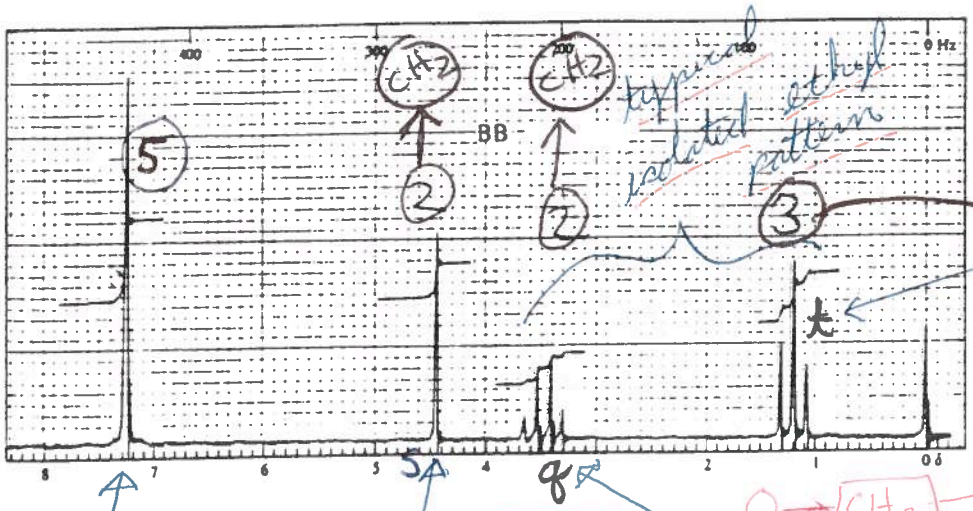
Mad Organic Chem. Minute # 8 (31)

Given the IR and ^{1}H NMR spectra below, determine the structure of the compound (formula $C_9H_{12}O$). → UN# = 4

no O–H
no –C(=O)– → must be ether



C–O stretch of ether

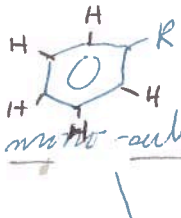


typical isolated ethyl pattern

CH_2–CH_3

CH_3 next to 2 H's because a triplet

Ar–H region



mono-subst.

CH_2 – next to zero hydrogens because a singlet (isolated)

(*) downfield → next to oxygen (next to ring?)

NOT –CH_2– NOT H (O)

O → CH_2 – CH_3

CH_2 – next to 3 H's because a quartet

also downfield → next to oxygen?

CH_2 – O – CH_2CH_3 ← fits

s q t

(*) EX of BAD choice:

CH_2CH_2–O–CH_3 ← does NOT fit

t t s