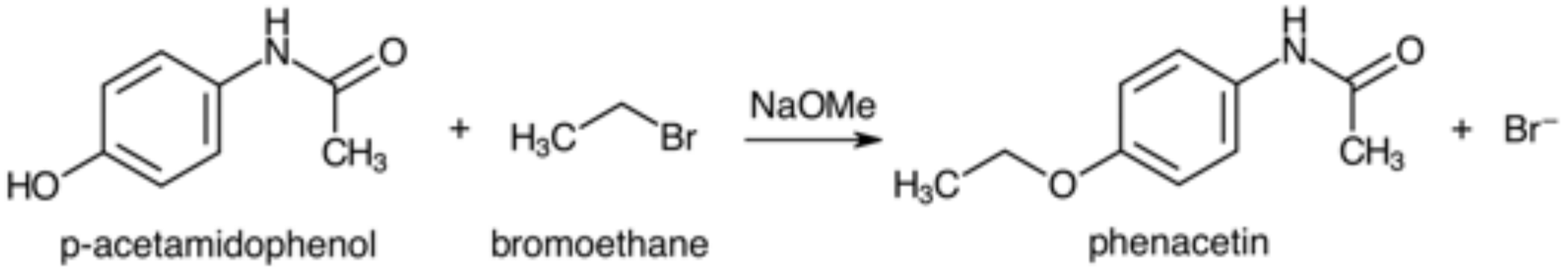
Williamson Ether Synthesis

Prelab Lecture

Reaction Equation



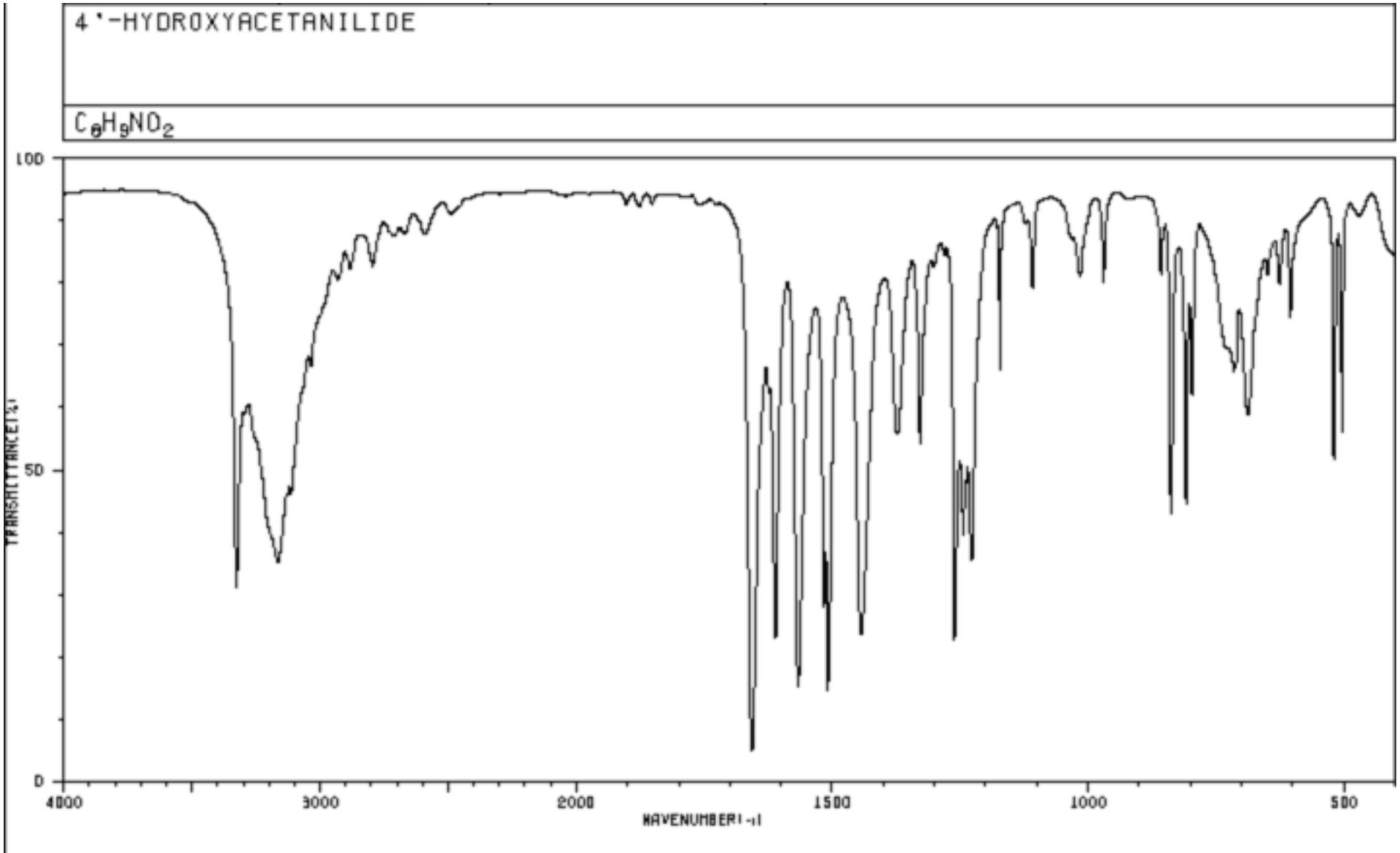
p-acetamidophenol bromoethane phenacetin

- Molar mass of p-acetamidophenol = 151.16 g/mol
- Molar mass of bromoethane = 108.97 g/mol
- Molar mass of phenacetin = 179. 21 g/mol

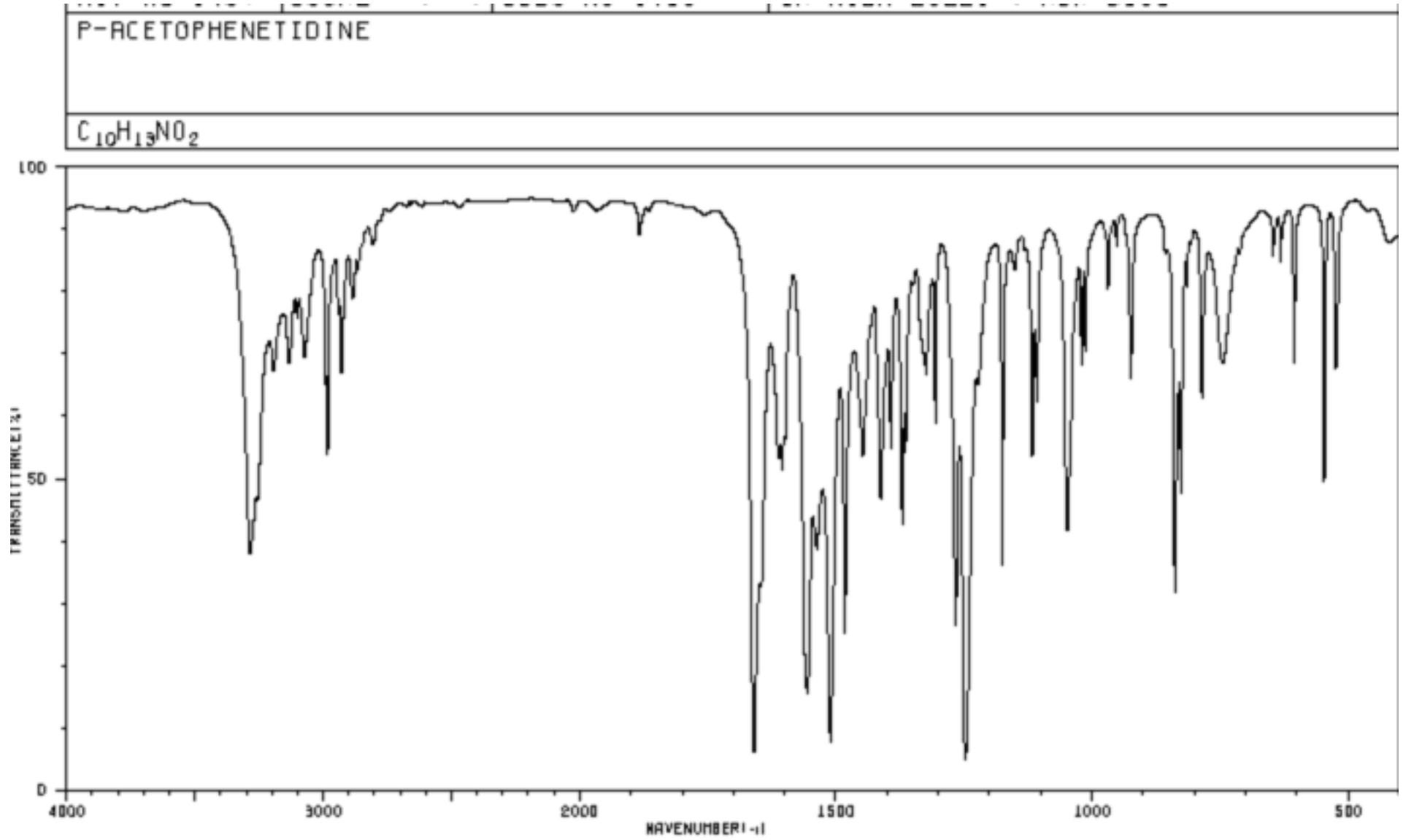
Calculate theoretical and percent yields.

Percent Yield – Expected or not?

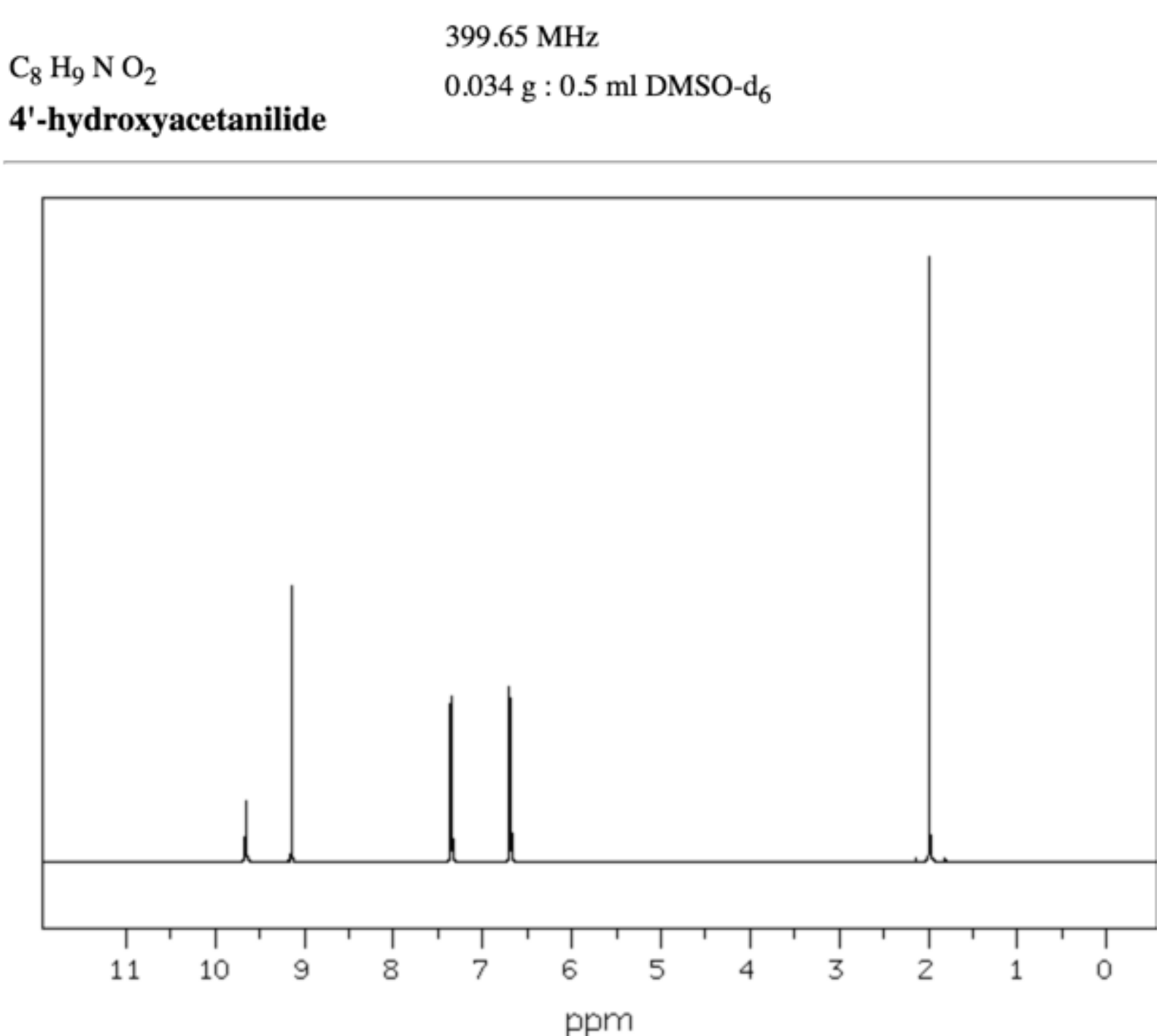
IR of p-acetamidophenol (reactant)



IR of Phenacetin (product)



H-NMR of p-acetamidophenol (reactant)



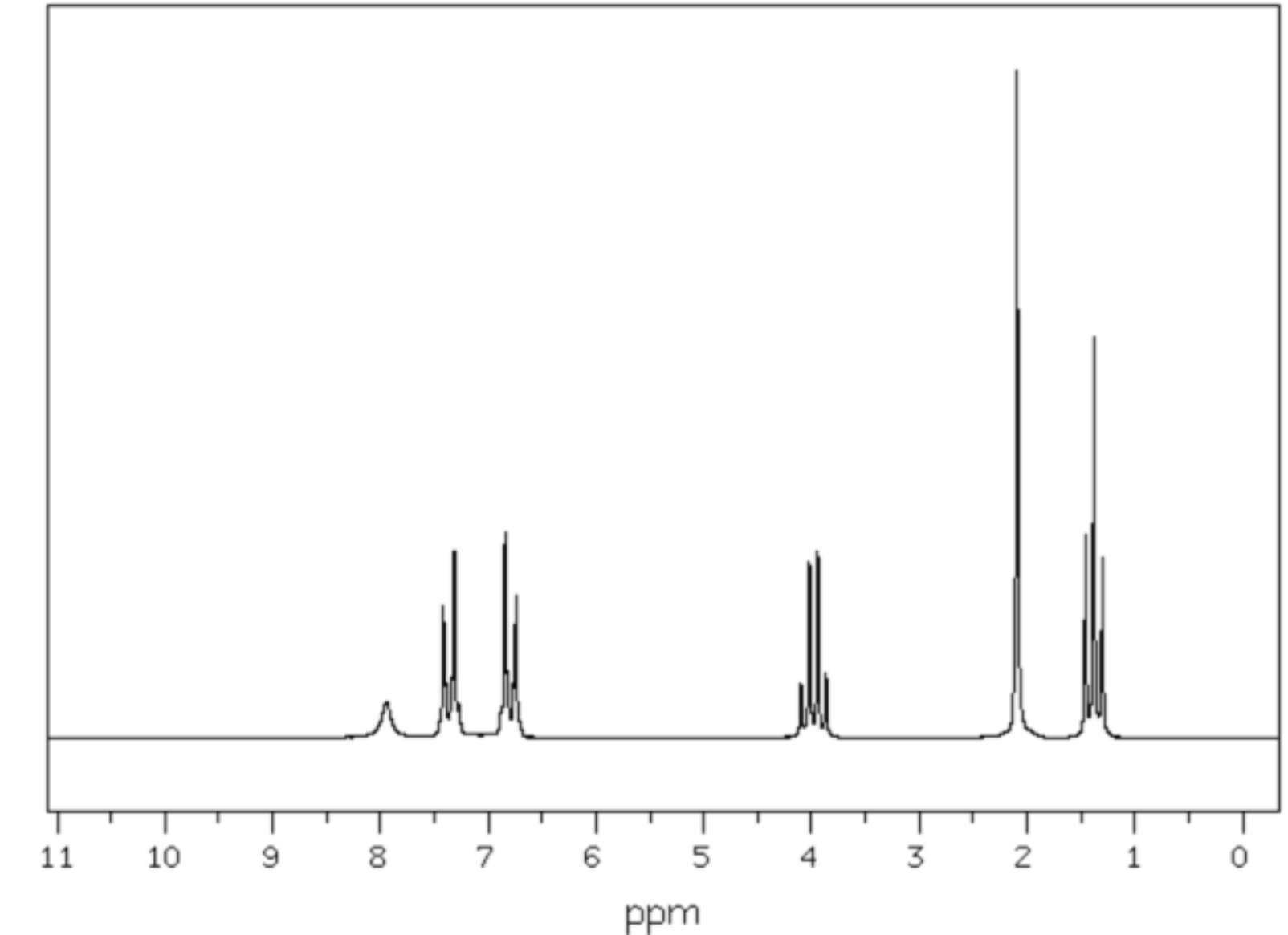
H-NMR of phenacetin (product)

89.56 MHz

$C_{10}H_{13}NO_2$

0.045 g : 0.5 ml $CDCl_3$

p-acetophenetidine



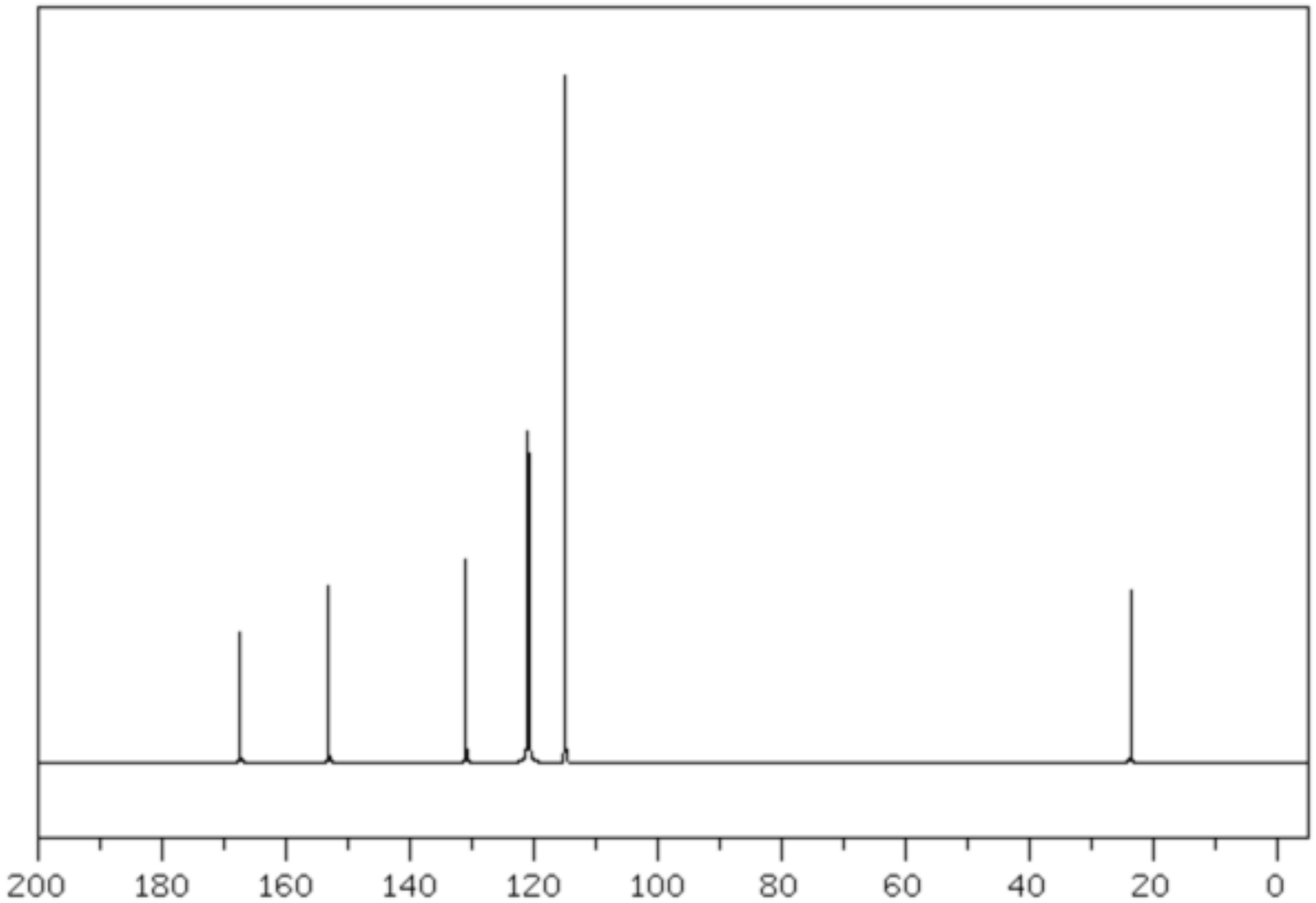
C-13 of p-acetamidophenol (reactant)

$C_8 H_9 N O_2$

4'-hydroxyacetanilide

22.53 MHz

0.034 g : 0.5 ml DMSO-d_6



C-13 of phenacetin (product)