

Nyack College - Organic Chemistry II

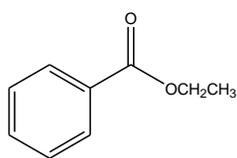
Spectra Analysis

Name: _____

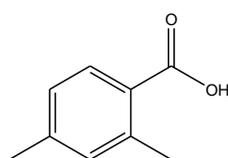
Date: _____

Solve the following four problems, and for each problem explain in detail on which characteristics of the spectra you based your choice.

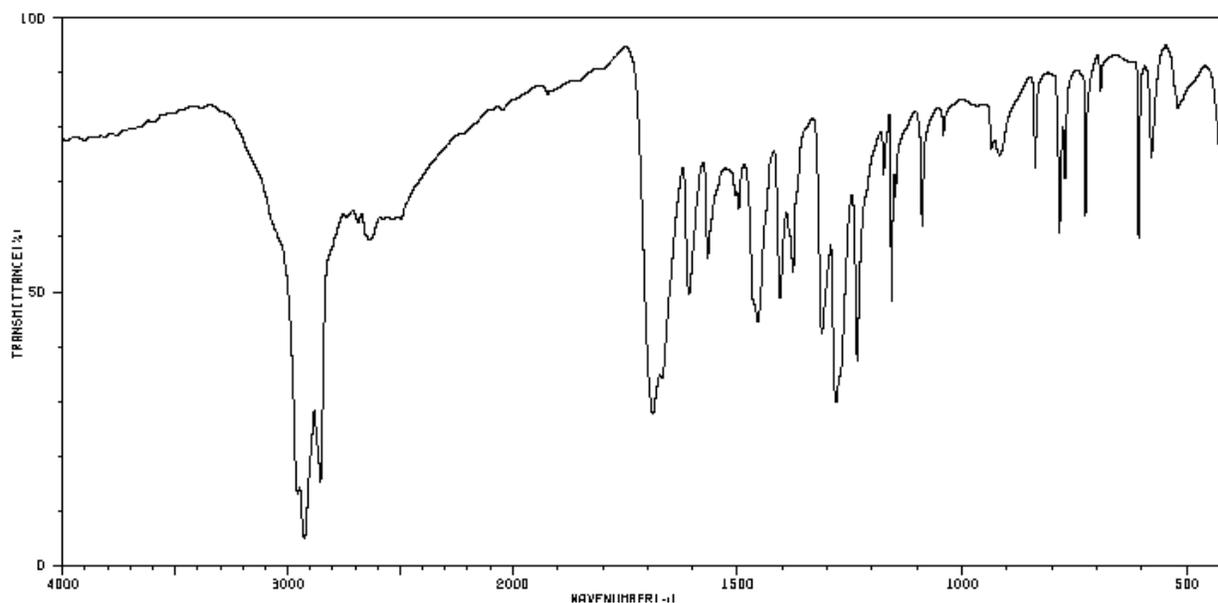
1. Which of these two $C_9H_{10}O_2$ isomers would give the IR spectrum shown below? Indicate and assign on the spectrum which signals are present (or absent) to support your choice.



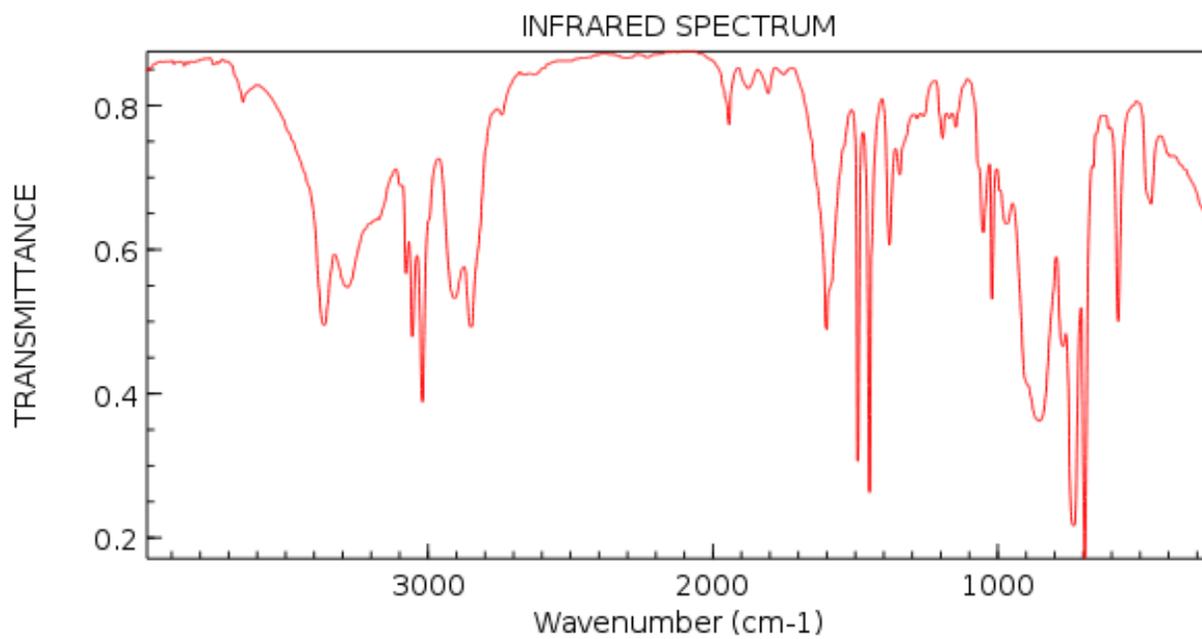
ethyl benzoate



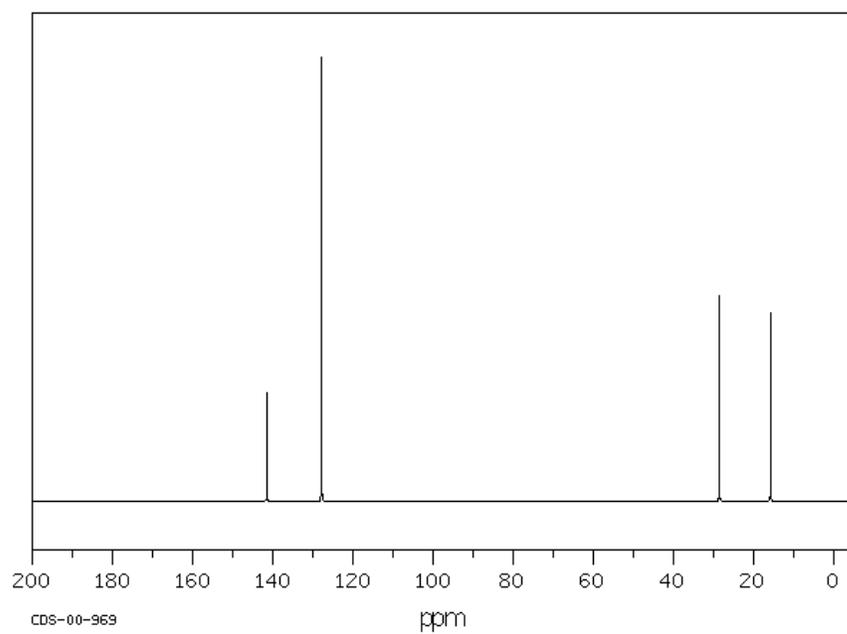
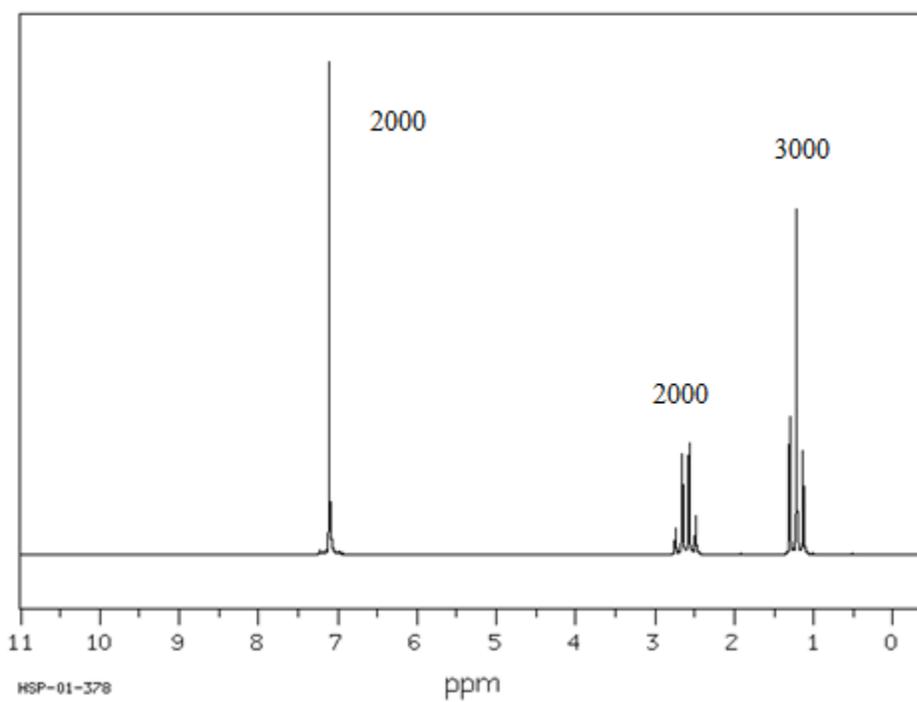
2,4-dimethylbenzoic acid

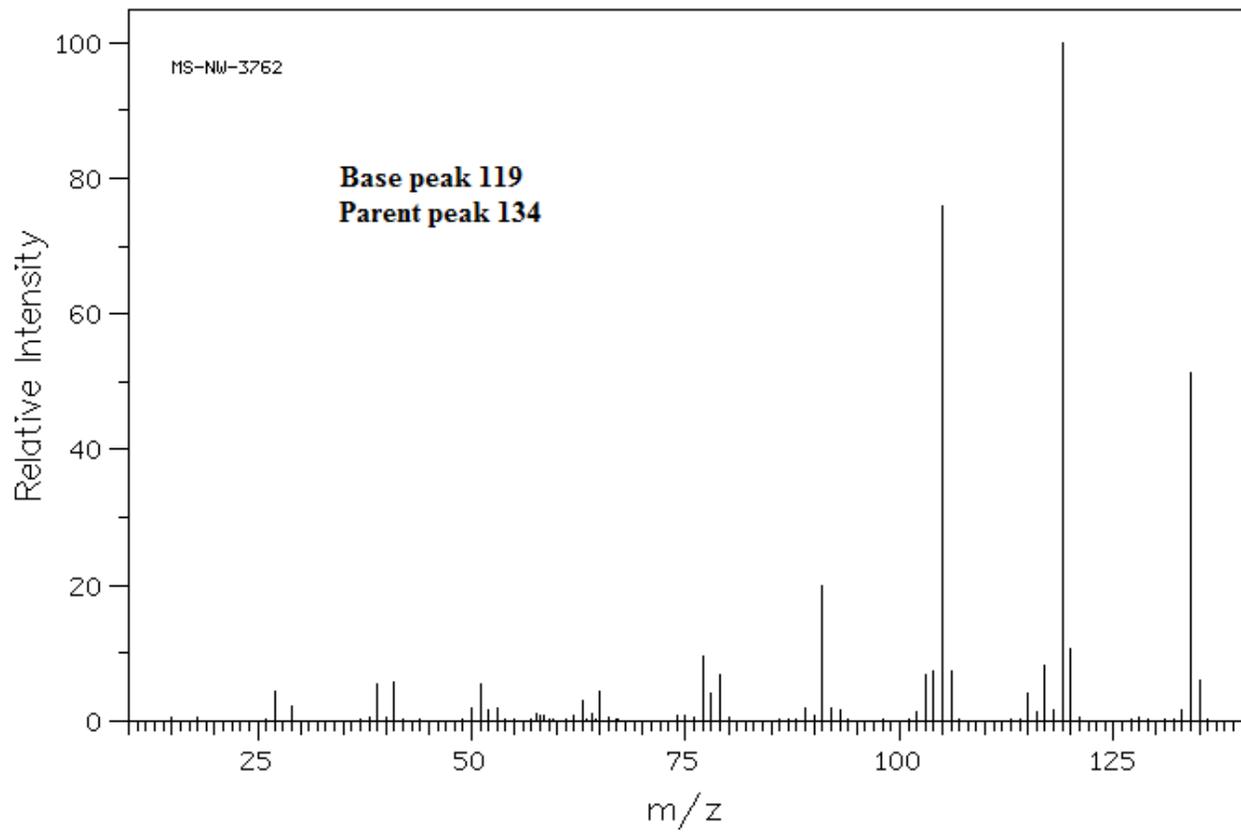


2. A compound has the molecular formula C_7H_9N . Determine its structure based on the following spectrum, explaining the reasons for your choice.



3. Identify this molecule from NMR, mass spectra





4. Identify this molecule from NMR and mass spectra

