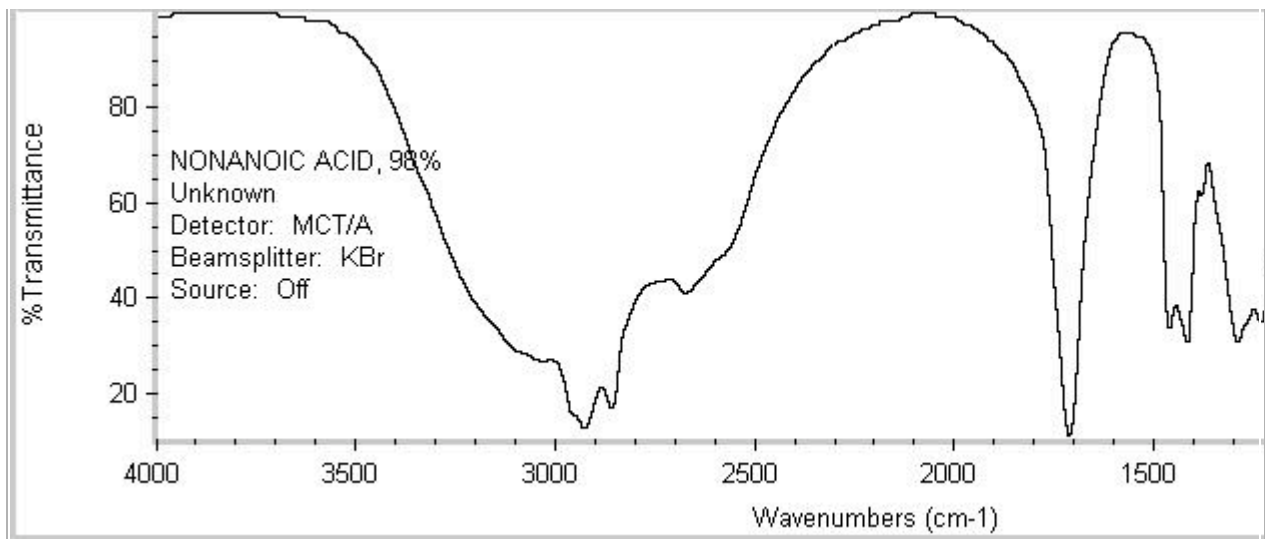


Group	Region	Examples of spectra. (Try to find the characteristic peaks.)
-H	3000-3100 $\text{cm}^{-1}$ ( $\text{sp}^2$ ) 2800-3000 $\text{cm}^{-1}$ ( $\text{sp}^3$ )	<p>1-HEXENE, 99% Unknown Detector: MCT/A Beamsplitter: KBr Source: Off</p> <p>% Transmittance</p> <p>Wavenumbers (<math>\text{cm}^{-1}</math>)</p>
=O	1600-1800 $\text{cm}^{-1}$ Acids: 1650-1700 Esters: 1740-1750 Aldehydes: 1720-1750 Ketones: 1720-1750 Amides: 1650-1715	<p>BENZALDEHYDE, 98+% Unknown Detector: MCT/A Beamsplitter: KBr Source: Off</p> <p>% Transmittance</p> <p>Wavenumbers (<math>\text{cm}^{-1}</math>)</p>
-H	Alcohols: 3300-3600 $\text{cm}^{-1}$ Monomeric forms: sharp. H-bonding leads to broadening.	<p>1,6-HEPTADIEN-4-OL, 97% Unknown Detector: MCT/A Beamsplitter: KBr Source: Off</p> <p>% Transmittance</p> <p>Wavenumbers (<math>\text{cm}^{-1}</math>)</p>

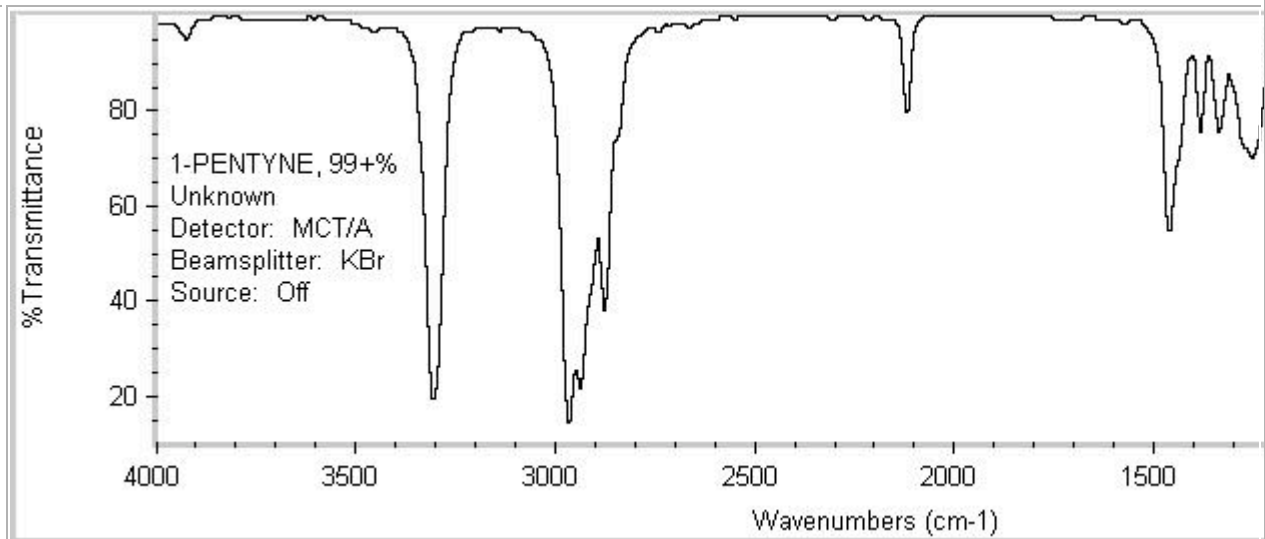
O-H

Carboxylic Acids:  
2400-3000  $\text{cm}^{-1}$   
Very broad, medium intensity



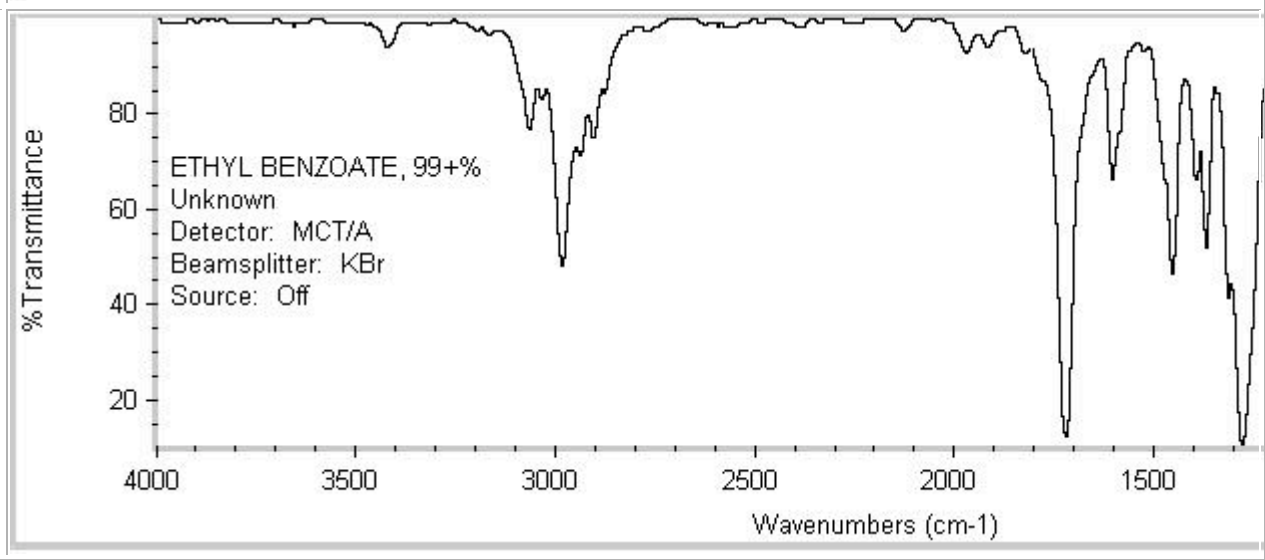
$\text{C}\equiv\text{C}$   
 $\text{C}\equiv\text{N}$

2200-2100  $\text{cm}^{-1}$   
Usually weak; maybe not visible in internal alkynes. Nitriles are quite strong.



C=O

1200-1300  $\text{cm}^{-1}$   
Often difficult to assign, depending on fingerprint region.



I-H

$3400\text{ cm}^{-1}$   
Usually sharper than  
O-H.

