IR absorption frequencies		
Alkanes		
C-H stretching	2960 - 2850 cm^{-1}	Strong
C-H bending	1460, 1375 cm^{-1}	Strong - Medium
Alkenes		
C-H stretching	3080 - 3020 cm^{-1}	Strong
C=C stretching	1680 - 1640 cm^{-1}	Variable
C-H bending	1000 - 675 cm^{-1}	Strong
" " *trans*	965 - 957 cm^{-1}	Strong
" " *cis*	730 - 675 cm^{-1}	Variable
" " *geminal*	900 - 880 cm^{-1}	Strong
" " *mono substituted*	1000 - 990 cm^{-1} 920 - 910 cm^{-1}	Strong Strong
Aromatic		
C-H stretching	3100 - 3000 cm^{-1}	Medium
C=C stretching	1600, 1500 cm^{-1}	Variable
C-H bending	870 - 675 cm^{-1}	Strong
" " *mono substituted*	770 - 730 cm^{-1} 710 - 690 cm^{-1}	Strong Strong
" " *ortho*	770 - 735 cm^{-1}	Strong
" " *meta*	810 - 750 cm^{-1} 710 - 690 cm^{-1}	Strong Strong
" " *para*	840 - 810 cm^{-1}	Strong
Alkynes		
C-H stretching	3300 cm^{-1}	Strong
C≡C stretching	2260 - 2100 cm^{-1}	Variable
Alcohols		
O-H stretching	3600 -3200 cm^{-1}	Strong, Broad
C-O stretching	1050 -1150 cm^{-1}	Strong
Aldehydes and Ketones		
C=O stretching	1675 - 1725 cm^{-1}	Strong
Carboxylic Acids		
O-H stretching	3000 - 2500 cm^{-1}	Strong, Broad
C=O stretching	1725 - 1680 cm^{-1}	Strong
C-O stretching	1250 cm^{-1}	Strong
Esters		
C=O stretching	1740 - 1710 cm^{-1}	Strong
C-O stretching	1300 - 1050 cm^{-1}	Strong, two bands
Acid Halides		
C=O stretching	1810 - 1750 cm^{-1}	Strong
Amines		
N-H stretching - *primary - two bands; secondary - one band; tertiary - no bands*	3500 - 3200 cm^{-1}	Strong, Broad
Amides		
N-H stretching - *primary - two bands; secondary - one band; tertiary - no bands*	3550 - 3050 cm^{-1}	Strong, broad
Carbonyl C=O	1690 -1650 cm^{-1}	Strong