Frequency (cm-1)	Strength strong/mod	Functional Group	Typical Compound
3640–3610	s	O–H stretch, free hydroxyl	alcohols, phenols
3500–3200	s	O–H stretch, H–bonded	alcohols, phenols
3400–3250	m	N–H stretch	primary, secondary amines, amides
3300–2500	m	O–H stretch	carboxylic acids
3330–3270		–C(triple bond)C–H: C–H stretch	alkynes (terminal)
3100–3000	s	C–H stretch	aromatics
3100–3000	m	=C–H stretch	alkenes
3000–2850	m	C–H stretch	alkanes
2830–2695	m	H–C=O: C–H stretch	aldehydes
2260–2210		C(triple bond)N stretch	nitriles
2260–2100		–C(triple bond)C– stretch	alkynes
1760–1665	s	C=O stretch	carbonyls (general)
1760–1690	s	C=O stretch	carboxylic acids
1750–1735	s	C=O stretch	esters, saturated aliphatic
1740–1720	s	C=O stretch	aldehydes, saturated aliphatic
1730–1715	s	C=O stretch	alpha,beta–unsaturated esters
1715-1665	s	C=O stretch	ketones, saturated aliphatic
1710–1665	s	C=O stretch	alpha,beta–unsat. aldehydes, ketones
1680–1640	m	–C=C– stretch	alkenes
1650–1580	m	N–H bend	primary amines
1600–1585	m	C–C stretch (in–ring)	aromatics
1550–1475	s	N–O asymmetric stretch	nitro compounds
1500–1400	m	C–C stretch (in–ring)	aromatics
1470–1450	m	C–H bend	alkanes
1370–1350	m	C–H rock	alkanes
1360–1290	m	N–O symmetric stretch	nitro compounds
1335–1250	s	C–N stretch	aromatic amines
1320–1000	s	C–O stretch	alcohols, carb. acids, esters, ethers
1300–1150	m	C–H wag (–CH2X)	alkyl halides
1300–1150	m	C–H wag (–CH2X)	alkyl halides
1250–1020	m	C–N stretch	aliphatic amines
1000–650	s	=C–H bend	alkenes
950–910	m	O–H bend	carboxylic acids
910–665	s	N–H wag	primary, secondary amines
900–675	s	C–H "oop"	aromatics
850–550	m	C–Cl stretch	alkyl halides
725–720	m	C–H rock	alkanes
700–610	s	–C(triple bond)C–H: C–H bend	alkynes
690–515	m	C–Halide stretch	alkyl halides