

Characteristic Infrared Absorptions of Some Functional Groups

<i>Functional group class</i>	<i>Band position (cm⁻¹)</i>	<i>Intensity</i>
Alkanes, alkyl groups C-H	2850 – 2960	Medium to strong
Alkenes =C-H	3020 – 3100	Medium
C=C	1650 – 1670	Medium
Alkynes ≡C-H	3300	Strong
-C≡C-	2100 – 2260	Medium
Alkyl halides C-Cl	600 – 800	Strong
C-Br	500 – 600	Strong
C-I	500	Strong
Alcohols O-H	3400 – 3640	Strong, broad
C-O	1050 – 1150	Strong
Aromatics Ar-H	3030	Medium
C ₆ ring	1600, 1500	Strong
Amines N-H	3310 – 3500	Medium
C-N	1030, 1230	Medium
Carbonyl compounds C=O	1670 – 1780	Strong
Carboxylic acids O-H	2500 – 3100	Strong, very broad
Nitriles C≡N	2210 – 2260	Medium
Nitro compounds NO ₂	1540	Strong