

CHARACTERISTIC ABSORPTION BANDS IN IR SPECTROSCOPY

		4000	3500	3000	2500	2000	1500	1000	500	cm ⁻¹
Aliphatic	Methyl			$\overset{\text{v}}{\text{C-H}}$			$\overset{\delta}{\text{C-H}}$			
	Methylene			$\overset{\text{v}}{\text{C-H}}$			$\overset{\delta}{\text{C-H}}$		$-(\text{CH}_2)_n-$	
Unsaturated	Alkene			$\overset{\text{v}}{\text{C-H}}$			$\overset{\text{v}}{\text{C=C}}$			
	Alkyne		$\overset{\text{v}}{\text{C-H}}$			$\overset{\text{v}}{\text{C}\equiv\text{C}}$			$\overset{\delta}{\text{C-H}}$	
Aromatic	Aryl			$\overset{\text{v}}{\text{C-H}}$			„combi“ $\overset{\text{v}}{\text{C=C-C}}$	$\overset{\delta}{\text{C-H}}$	$\overset{\delta}{\text{C-H}}$	
Oxygen Group	Ether			$\overset{\text{v}}{\text{C-H}}$				$\overset{\text{v}}{\text{C-O-C}}$		
	Alcohol	$\overset{\text{v}}{\text{O-H}}$						$\overset{\text{v}}{\text{C-O}}$	$\overset{\delta}{\text{O-H}}$	
Carbonyl Group	Aldehyde			$\overset{\text{v}}{\text{C-H}}$ $\overset{\text{v}}{\text{C-H}}$			$\overset{\text{v}}{\text{C=O}}$ $\overset{\delta}{\text{C-H}}$			
	Ketone						$\overset{\text{v}}{\text{C=O}}$			
	Ester						$\overset{\text{v}}{\text{C=O}}$	$\overset{\text{v}}{\text{C-O-C}}$	$\overset{\delta}{\text{O-C-O}}$	
	Carboxylic acid		$\overset{\text{v}}{\text{O-H}}$				$\overset{\text{v}}{\text{C=O}}$			
Nitrogen Group	Amine	$\overset{\text{v}}{\text{N-H}}$					$\overset{\delta}{\text{N-H}}$ $\overset{\text{v}}{\text{C-N}}$			
	Amide	$\overset{\text{v}}{\text{N-H}}$					$\overset{\text{v}}{\text{C=O}}$ $\overset{\delta}{\text{N-H}}$			
	Nitrile					$\overset{\text{v}}{\text{C}\equiv\text{N}}$				
Halogenated	Fluoro						$\overset{\text{v}}{\text{C-F}}$			
	Chloro								$\overset{\text{v}}{\text{C-Cl}}$	
	Bromo								$\overset{\text{v}}{\text{C-Br}}$	

Key:

δ Bend
 v Stretch

NOTE: Despite careful research, we do not accept any liability for the correctness of the information provided. Liability claims based on the use of the information are excluded in principle.