
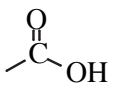





APPENDIX XIII: SELECTED ^{13}C NMR CORRELATIONS

structural type	chemical shift range (ppm)
cyclopropyl	- 10-10
$-\text{CH}_3$ (saturated)	10-30
$-\overset{ }{\text{C}}\text{H}_2$ (saturated)	10-55
$-\overset{ }{\text{C}}\text{H}$ (saturated)	25-55
$-\overset{ }{\text{C}}$ (saturated)	30-55
$-\overset{ }{\text{C}}-\text{I}$	- 10-45
$-\overset{ }{\text{C}}-\text{Br}$	25-65
$-\overset{ }{\text{C}}-\text{Cl}$	35-80
	20-50
$-\overset{ }{\text{C}}-\overset{ }{\text{N}}$	30-70
$-\overset{ }{\text{C}}-\text{O}-$	40-80
$-\text{C}\equiv\text{C}-$	65-85
$\text{C}=\text{C}$	100-150
$-\text{C}\equiv\text{N}$	110-125
ArH (Ar = aromatic ring)	110-160
 	155-185
 	190-210