

Group	Range (ppm)
CH <sub>3</sub> -C	0 - 30
CH <sub>3</sub> -N	10 - 50
CH <sub>3</sub> -O	50 - 60
CH <sub>2</sub> -C	20 - 45
Cyclopropyl carbons	0 - 10
CH <sub>2</sub> -Br	25 - 45
CH <sub>2</sub> -Cl	35 - 50
CH <sub>2</sub> -N	35 - 55
CH <sub>2</sub> -O	55 - 80
CH-C	30 - 55
CH-Br	45 - 60
CH-Cl	50 - 70
CH-N	50 - 75
CH-O	60 - 90
C-C	30 - 55
C-Br	60 - 75
C-Cl	70 - 85
C-N	55 - 75
C-O	70 - 90
C≡C	70 - 95
C≡N	110 - 130
C=C, benzenes; alkenes	105 - 150
C=C, heteroaromatics	105 - 150
C=N, heteroaromatics	145 - 150
C=O, anhydrides	150 - 175
C=O, esters	155 - 180
C=O, amides	160 - 180
C=O, acids	165 - 190
C=O, aldehydes	190 - 210
C=O, ketones	180 - 220