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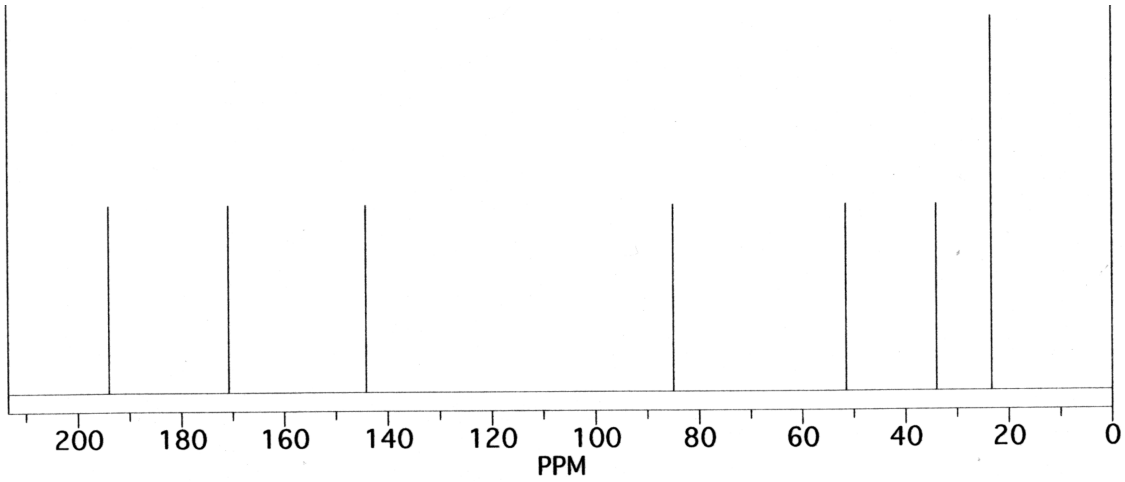
Introduction to ^{13}C NMR



- ^{13}C ("carbon-13") NMR spectra show one signal for each unique carbon
- chemical shifts ~0-220 ppm
- signals are all singlets (called proton-decoupled spectra)
- peak size is not quantitative, but C's without attached hydrogens are often small peaks
- # of hydrogens attached to each carbon can be determined by a DEPT experiment (DEPT differentiates between signals arising from C, CH, CH_2, and CH_3 carbons)
- ^{13}C isotope is only ~1% of carbons so ^{13}C NMR requires more sample and/or more scans