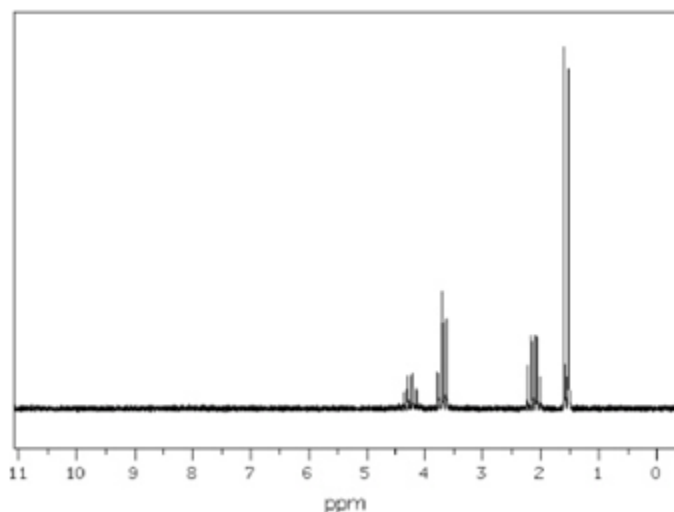


CONCEPT: ^1H NUCLEAR MAGNETIC RESONANCE- GENERAL FEATURES

^1H (Proton) NMR is a powerful instrumental method that identifies protons in slightly different electronic environments by inducing tiny magnetic fields in the electrons around the nucleus.

Downfield ←————→ Upfield
Deshielded ←————→ Shielded



General Spectrum:

- _____ is the standard reference point for NMR
- Electrons _____ protons from the effects of NMR
- The further downfield, the more _____ the proton
- There are 4 types of information we can gain from NMR spectra.

Four Types of Information

1. Total Number of Signals

- Describes how many *different types of hydrogens* are present

2. Chemical Shift

- Describes *how shielded or deshielded* the hydrogens are

3. Height of Signals (Integration)

- Describes the *relative ratios* of each type of hydrogen

4. Spin-Splitting (Multiplicity)

- Describes *how close or far* the different hydrogens are to each other