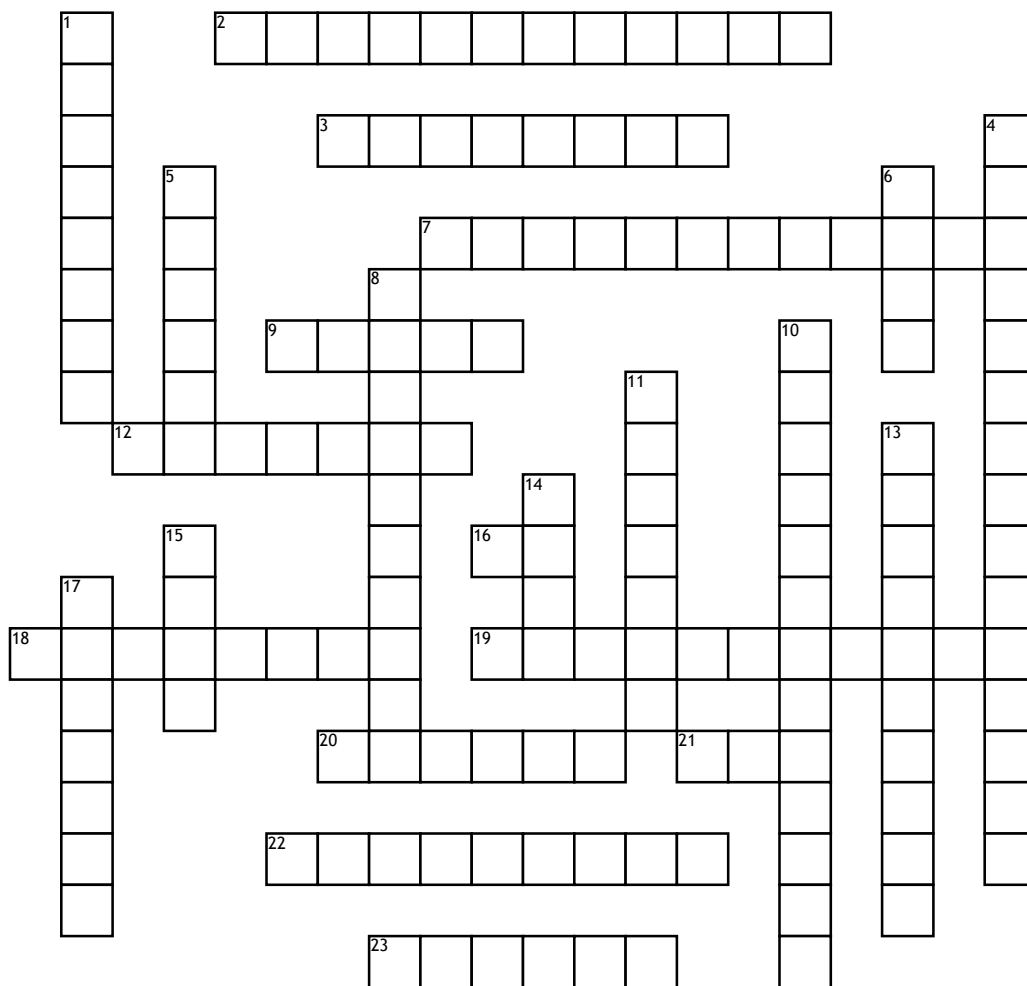


NMR Spectroscopy Crossword



Across

2. The shape of a signal is referred to as
 3. Which hydrogens have a low energy chemical shift value?
 7. ----- has 21 ¹³C signals
 9. For two adjacent H's attached to a double bond what type of geometric isomerism will produce a J value of 12-18 Hz?
 12. Which type of unsaturated hydrocarbons undergo shielding due to the induced magnetic field (Bi) opposing the applied magnetic field (Bo)?
 16. What field does shielded hydrogens are occasionally seen
 18. he size of the ----- will depend on the amount of bonds separating the two hydrogens of interest

19. This informs us the number of protons producing a signal
 20. A particle of light is called -----
 21. ----- is the international standard for any NMR with a chemical shift value of 0 ppm
 22. Which type of decoupler eliminates all 1H signals in its spectra?
 23. NMR use lower----- for its electromagnetic radiation

Down

1. What description is given to a H(hydrogen) directly attached to a C=C bond?
 4. Light is a form of energy known as ----- radiation
 5. Determination of multiplicity in proton NMR can be based off ----- triangle.

6. What field does de-shielded hydrogens appear. i.e., to the left of the TMS signal.
 8. NMR uses higher----- for it electromagnetic radiation
 10. The term used for signal positions.
 11. Signal made up of 4 lines, in a ratio of 1:3:3:1 is called -----
 13. ----- hydrogens, are those that require Bo to be reduced due to the field induced by the electrons (Bi).
 14. Nuclei of many atoms have a quantity known as a -----
 15. a method of the determining the presence of primary, secondary or tertiary carbon atoms in a ¹³C spectrum
 17. When the signal is made up of 2 lines in a ratio of 1:1 we have a -----

Word Bank

PASCAL	Alkynes	Spin	photon	Integration
Down	Progesterone	Energy	De-shielded	DEPT
Broadband	Olefinic	Quartet	Shielded	Trans
UP	Multiplicity	coupling	Wavelength	Chemical Shift
electromagnetic	TMS	DOUBLET		