



ANASAZI NUCLEI SERIES

MULTINUCLEAR NMR NITROGEN-15

¹⁵N PROPERTIES

- 0.36% natural abundance
- Spin 1/2
- 1350 ppm range of chemical shifts

DID YOU KNOW?

Compounds that are isotopically enriched to 99% nitrogen-15 exhibit 6 times more receptivity than carbon-13 at natural abundance.

NMR spectroscopists enthusiastically study the nitrogen nuclei as it is one of the principal elements of life. Nitrogen NMR uncovers structure and bonding in peptides, DNA, enzymes, and other biomolecules. Nitrogen is interesting outside of biology as it can form a variety of bonds with almost all other elements. Nitrogen also exists in many coordination states, with or without a lone pair of electrons. The nitrogen nuclei exhibits sensitivity to all these variables, as well as concentration, pH, geometric configuration, and more.

If your material contains nitrogen, try exploiting nitrogen NMR as a tool to better understand it—especially if isotopic enrichment is an option.

¹⁵N PROPERTIES

SPIN:	$\frac{1}{2}$	FREQ EFT-90:	9.124 MHz
RECEPTIVITY TO ¹³ C:	2.19×10^{-2}	REFERENCE STANDARD:	CH₃NO_{2(l)} neat
GYROMAGNETIC RATIO γ :	-4.316 MHzT⁻¹		

R.K. Harris et.al. *Pure Appl. Chem.*, Vol. 73, No. 11, 2001

RECOMMENDED LITERATURE

J. Mason In *Encyclopedia of Nuclear Magnetic Resonance*, John Wiley & Sons, Inc., Chichester, 1996; Vol. 5, 3222-3251

G. J. Martin, M. L. Martin, and J.-P. Gouesnard, *NMR Basic Principles and Progress*, Vol. 18, Springer-Verlag, Berlin, 1981