

500 MHz Nuclear Magnetic Resonance Spectrometer



The ECZR Series 500 MHz NMR spectrometer is a highly sophisticated instrument that incorporates latest digital and high frequency technologies. The instrument is equipped with the following solution state probes and solid-state CP MAS probe.

- ✚ ROYALPROBE HFX Probe - A Multinuclear 5 mm double resonance Broadband Liquid Probe with high frequency coil to be dual-tuned to ^1H and ^{19}F , or single tuned to ^1H or ^{19}F . The probe allows advanced ^1H and ^{19}F NMR experiments including $^1\text{H}\{^{19}\text{F}\}$, $^{19}\text{F}\{^1\text{H}\}$, $\text{X}\{^1\text{H},^{19}\text{F}\}$, and many unique $\text{X}\{^1\text{H}, ^{19}\text{F}\}$ correlation experiments to simplify spectral assignments of modern complex fluorine containing compounds for the pharmaceutical and polymer industries. The probe can be attached with a variable temperature (VT) accessory for doing measurements between $-100\text{ }^\circ\text{C}$ to $+150\text{ }^\circ\text{C}$.
- ✚ 5mm HCN triple resonance probe: This 5 mm triple resonance probe is for ^1H , ^{13}C and ^{15}N . It is suitable for the analysis of biological samples (*e.g.*, protein solutions). This probe is therefore designed for ^1H observed measurements including inverse experiments.

- ✚ 3.2mm HXMAS probe: With high-speed magic angle spinning (MAS) up to 20kHz and for high sensitivity measurements. Used for standard ^{13}C measurements of organic materials, and for highly sensitive ^1H indirect detection utilizing high resolution ^1H NMR. Also suitable for ^{19}F measurements where spinning side bands are likely to appear and MQMAS measurements of quadrupole nucleus.
- ✚ Experiments: ^1H , ^{13}C , ^{15}N , ^{19}F , ^{31}P , ^{27}Al , ^{11}B , ^{77}Se , ^{125}Te , ^{95}Mo , ^{29}Si , NoD, DEPT, 2D-COSY, 2D-NOESY/ROESY, HMBC, HMQC, HSQC, Variable Temp. Experiments, Solid state experiments and all other common NMR experiments
- ✚ NMR Processing Software is Delta NMR Data Processing Software.

Contact details

- Instrument In-charge: Dr. Anuj A Vargeese
- Email ID: nmradmin@nitc.ac.in
- Contact No: 0495 228 5344 (NMR Facility)

Analysis Charges