

1H-19F{15N-31P} 5 mm PFG AutoX Indirect Detection Probe, VT, 500 NB

Description: Probe of choice for automated indirect detection experiments of chemical or biomolecular samples. Capability for irradiation at frequencies within the range of 15N to 31P. Optimized for highest 1H and 19F sensitivity, This probe exhibits excellent RF homogeneity and salt tolerance. High power 2H lock for deuterium decoupling. High performance actively shielded z-axis gradient produces rectangular gradient without ECC for best dephasing per unit time.

Requires Pulsed Field Gradient Module for gradient capability, ID Filter Kit, and ProTune Accessory with two Dual Drive Modules for automatic tune and match of 1H-19F and 15N-31P probe channels.

Part Number: SN50P54P44

Specifications:

These specifications are valid only for a new Varian NMR System and new Varian Premium Shielded Magnets. Probe performance on older systems may be lower.

Resolution and Lineshape:

	spinning		non-spinning	
¹ H CHCl ₃	50%	≤ 0.45 Hz	50%	≤ 0.65 Hz
	.55%	≤ 5.0 Hz	.55%	≤ 6.0 Hz
	.11%	≤ 10.0 Hz	.11%	≤ 12.0 Hz
	Sidebands	≤ 1%		

Signal/Noise:

	Sample	Tube
¹ H Sensitivity ≥ 800:1	0.1% Ethylbenzene	Wilmad 535-PP
¹⁹ F Sensitivity ≥ 800:1	0.05% TFT	Wilmad 535-PP

Pulse Performance:

Channel	90° Pulse Width	RF Homogeneity		Sample
¹ H	≤ 7 μsec w/ 50W Amp	810°/90° ≥ 70%	450°/90° ≥ 80%	0.1% Ethylbenzene
¹⁹ F	≤ 7 μsec w/ 50W Amp			0.05% TFT
¹³ C	≤ 13 μsec w/ 300W Amp	720°/0° ≥ 70%	360°/0° ≥ 80%	1% ¹³ C-Iodomethane
¹⁵ N	≤ 28 μsec w/ 300W Amp	720°/0° ≥ 65%	360°/0° ≥ 70%	2% ¹⁵ N-Benzamide

Gradient Strength:

Maximum Z-gradient strength ≥ 60 G/cm utilizing Performa IV

Gradient Recovery:

≤ 50 μsec @ 30 G/cm

Variable Temperature Range:

-100° C to +130° C

Sample Volume:

600 μL (recommended) 330 μL (with susceptibility plugs or Shigemi tubes)