

NMR Probe Specifications

Model: JEOL 5mm 700MHz inverse triple resonance Z-gradient high resolution NMR probe 70H5CN/FG (NM-03190HCN)

Description: Triple resonance inverse high resolution NMR probe fitted with an actively shielded Z-axis gradient for 5mm sample tubes on 700MHz standard bore magnets. The inner coil is tuned to observe ^1H . The outer coil is tuned to ^{13}C and ^{15}N . The probe is fitted with a ^2H lock. The probe includes one (1) variable temperature compatible sample spinner.

Specifications: Signal-to-Noise

^1H sensitivity	$\geq 1495:1$	0.1% ethyl benzene [†]
^1H sensitivity	$\geq 1300:1$	0.1% ethyl benzene [‡]

Pulse Widths

^1H pulse width	$\leq 8 \mu\text{s}$	@30W
^{13}C pulse width	$\leq 16 \mu\text{s}$	@200W(Std)
^{13}C pulse width	$\leq 13 \mu\text{s}$	@300W(HPL)
^{15}N pulse width	$\leq 45 \mu\text{s}$	@200W(Std)
^{15}N pulse width	$\leq 35 \mu\text{s}$	@300W(HPL)

Lineshape

^1H spinning lineshape	$\leq 6/12 \text{ Hz}$	1% chloroform (0.55%/0.11%)
^1H non-spinning lineshape	$\leq 7/14 \text{ Hz}$	1% chloroform (0.55%/0.11%)

Spinning Sidebands (SSB) $\leq 1\%$

Resolution

^1H resolution	$\leq 0.5 \text{ Hz}$	1% chloroform
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Z-gradient

The probe is fitted with an actively shielded single Z-axis gradient coil capable of 30G/cm with 10A current.

Variable Temperature

Variable temperature range is -20°C to +100°C

[†] Thin wall NMR sample tube, 0.24mm

[‡] Standard wall NMR sample tube, 0.38mm