

NMR Probe Specifications

Model	JEOL Resonance 10mm 400MHz Broadband Autotune Z-gradient High Resolution NMR probe (NM-03040T10)																															
Applicable Instrument	ECZ 400MHz NMR systems. For other models, please contact JEOL Resonance for specifications.																															
Description	Broadband observation high resolution NMR probe for 10mm sample tubes on 400MHz standard bore magnets. The inner coil may be tuned to observe any nucleus from ^{31}P to ^{17}O and ^{15}N . The outer coil can be tuned to ^1H . The probe is fitted with a ^2H lock. The probe is compatible with the JEOL Autotune accessory unit (NM-61160ATZ). The probe includes one (1) variable temperature compatible sample spinner.																															
Specifications	Signal-to-Noise <table> <tr> <td>^{13}C sensitivity</td><td>$\geq 400:1$</td><td>ASTM</td></tr> <tr> <td>^{13}C sensitivity</td><td>$\geq 400:1$</td><td>10% Ethyl Benzene</td></tr> <tr> <td>^{31}P sensitivity</td><td>$\geq 250:1$</td><td>1% trimethylphosphite</td></tr> <tr> <td>^{15}N sensitivity</td><td>$\geq 60:1$</td><td>90% formamide w/o NOE</td></tr> </table> Pulse Widths <table> <tr> <td>^1H pulse width</td><td>$\leq 25 \mu\text{s}$</td><td>@26W</td></tr> <tr> <td>^{13}C pulse width</td><td>$\leq 20 \mu\text{s}$</td><td>@150W</td></tr> <tr> <td>^{31}P pulse width</td><td>$\leq 30 \mu\text{s}$</td><td>@100W</td></tr> <tr> <td>^{15}N pulse width</td><td>$\leq 38 \mu\text{s}$</td><td>@150W</td></tr> </table> Lineshape <table> <tr> <td>^{13}C spinning lineshape</td><td>$\leq 3/5 \text{ Hz}$</td><td>ASTM (0.55%/0.11%)</td></tr> </table> Spinning Sidebands (SSB) $\leq 1\%$ Resolution <table> <tr> <td>^{13}C resolution</td><td>$\leq 0.2 \text{ Hz}$</td><td>ASTM</td></tr> </table> Variable Temperature Variable temperature range is -100°C to $+180^\circ\text{C}$		^{13}C sensitivity	$\geq 400:1$	ASTM	^{13}C sensitivity	$\geq 400:1$	10% Ethyl Benzene	^{31}P sensitivity	$\geq 250:1$	1% trimethylphosphite	^{15}N sensitivity	$\geq 60:1$	90% formamide w/o NOE	^1H pulse width	$\leq 25 \mu\text{s}$	@26W	^{13}C pulse width	$\leq 20 \mu\text{s}$	@150W	^{31}P pulse width	$\leq 30 \mu\text{s}$	@100W	^{15}N pulse width	$\leq 38 \mu\text{s}$	@150W	^{13}C spinning lineshape	$\leq 3/5 \text{ Hz}$	ASTM (0.55%/0.11%)	^{13}C resolution	$\leq 0.2 \text{ Hz}$	ASTM
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