

Product: Bruker 4 mm TXI 600 MHz high resolution MAS probe with gradient and ATM (iProbe)

Description: A high resolution Magic-Angle Spinning probe fitted with a single axis gradient, oriented along the magic angle, for 600 MHz standard-bore magnets. The probe is optimized for ¹H observation with ¹³C and ¹⁵N decoupling but also has excellent sensitivity for direct observation of ¹³C and ¹⁵N. The probe is fitted with a ²H lock channel. It is equipped with automatic tuning and matching accessory (ATM), including automatic magic angle adjustment. An MAS pneumatic control unit is required for operation of the sample rotation as well as for the sample insertion and ejection. The recommended gas for operation of this probe is air. Sample volumes can be varied between 12 and 80 µl, using the appropriate sample inserts. The maximum rotation frequency is 15 kHz (Bruker rotors only).

Specification:

Signal/Noise		
¹ H sensitivity	≥ 150:1	(0.1% EB; 200 Hz noise; LB=1 Hz) ¹
	≥ 25:1	(Sucrose (10% D2O); 1.5 ppm; LB=0 Hz) ¹
¹³ C sensitivity	≥ 35:1	(ASTM; 40 ppm noise; LB=3.5 Hz) ¹
90° Pulse Widths		
¹ H pulse width	≤ 5 µs	(Urea sample)
¹³ C pulse width	≤ 7 µs	(Urea sample)
¹⁵ N pulse width	≤ 10 µs	(Urea sample)
Lineshape		
¹ H spinning lineshape	≤ 1.0/12/20 Hz	(50%/0.55%/0.11%, 1% CHCl ₃) ¹
Magic-angle-Gradient		
Gradient strength	≥ 55 G/cm	(@10 A) ²
Variable Temperature Range		
Standard Range	-30°C to +80°C ³	

Model: Z153476, PI HRMAS-600-S3-H/C/N/D-4.0-Z A (standard probe)

Specifications with a new Avance NEO spectrometer fitted with a BOSS3-SB shim system and 500 Watt X-transmitters and with the recommended gas for operation. Technical data and specifications subject to change without notice. 2019-04-01/FRT, Bruker BioSpin AG Probe Department.

1) All specifications for 50 µl inserts and 4 kHz MAS

2) Specifications verified at production, not at installation

3) The shim system temperature must not be allowed to exceed +80°C. At low temperatures, precautions must be taken to prevent the magnet dewar O-rings from freezing. Operation with the sample temperature below room temperature requires the use of a BCU. The BCU needs to be operated using dry gas.