What you can do with the UAR2045 solution NMR

Axel'One
Liquid polymer division

NMR	Probe	What you can do ?
400 MHz *(Free used)*	**5 mm BBFO +**	• Range temperature analysis (5 to 135°C) • Complete caracterisation (1D, 2D with ^{19}F and ^{31}P to ^{15}N) • DOSY NMR for small molecule in ^{1}H, ^{19}F, ^{7}Li and ^{31}P
	5 mm BBI Diff	• Range temperature analysis (5 to 135°C) • Complete caracterisation (1D, 2D with ^{19}F and ^{31}P to ^{15}N) • More efficient for $^{1}H/^{19}F$ 1D and $^{1}H/X$ 2D NMR • DOSY NMR for high molecule weight (>20 kDa) in ^{1}H, ^{7}Li, ^{19}F and ^{31}P
	10 mm SEL ^{29}Si	• Range temperature analysis (5 to 120°C) • 5 or 10 mm tube • ^{1}H and ^{29}Si analysis only • Optimized to supress ^{29}Si background spectrum
600 MHz ***Heated sample changer*** *(Free used)*	**10 mm Cryo probe**	• Range temperature analysis (5 to 135°C) • 5 or 10 mm tube • ^{1}H, ^{13}C, ^{15}N, ^{31}P and ^{29}Si nuclei • Very fast analysis • Dectection of small quantities • *^{13}C S/N three times better than the 500 MHz, four times better than 400 MHz, ten times better than 300 MHz for same quantities of matter!*

Lederer
Molecular chemistry division

NMR	Probe	What you can do ?
300 MHz *(Free used)*	**5 mm BBFO**	• Ambient temperature • Complete caracterisation (1D, 2D with ^{19}F and ^{31}P to ^{109}Ag) • Low S/N for low sensitivity nucleus
400 MHz *(On demand)*	**5 mm Royal HFX**	• High and low temperature analysis (-100°C to 150°C) • Complete caracterisation (3 channels ^{1}H-$^{19}F/X$; X=^{31}P to ^{109}Ag) • Young tube in automation • Low ^{19}F background
	5 mm Royal HPX	• High and low temperature analysis (-100°C to 150°C) • Complete caracterisation (3 channels ^{1}H-$^{31}P/X$; X=^{31}P to ^{15}N) • Young tube in automation
500 MHz ***Cooled sampler changer*** *(On demand)*	**5 mm BBFO**	• High and low temperature analysis (-100°C to 120°C) • Complete caracterisation (1D, 2D with ^{19}F and ^{31}P to ^{109}Ag) • Optimal for nucleus with low sensitivity • DOSY NMR for small molecule in ^{1}H, ^{19}F, ^{7}Li
	5 mm BBI	• 3 or 5 mm tubes for ^{1}H analysis • High and low temperature analysis (-100°C to 120°C) • More efficient for ^{1}H, ^{19}F 1D and $^{1}H/X$ 2D NMR • DOSY NMR for small molecule in ^{1}H, ^{19}F, ^{7}Li

Advise: Very low sensitivity and / or low amount of product and no sensitivity -> 600 MHz cryoprobe (Axel'One)
^{19}F or ^{13}C with ^{19}F or ^{31}P decoupling -> Jeol 400 MHz (Lederer)

What you can do with the UAR2045 MAS NMR

CPE
Organometallic Chemistry/Materials division

NMR	Probe	What you can do ?
400 MHz **(Free used)** **Limitation:** Field, rotation **and** ^{1}H excitation/decoupling (medium)	4mm MAS (usually 5-12.5kHz) 80 µL	• Spin ½ : **^{1}H, ^{19}F, ^{13}C, ^{29}Si, ^{31}P** • Spin quadripolar (possible) : **^{11}B, ^{27}Al** • Interaction through space (bonds + proximity in space): **2D ^{1}H-^{13}C, ^{19}F-^{13}C**
500 MHz (Free Used) **Limitation:** Field, rotation **No limitation** for ^{1}H excitation/decoupling	4mm MAS (usually 5-12.5kHz) 80 µL	• Spin ½ : **^{1}H, ^{19}F, ^{13}C, ^{29}Si, ^{31}P** • Spin quadripolar (recommended) : **^{2}H, ^{11}B, ^{27}Al, ^{71}Ga** • Interaction through space (bonds + proximity in space): **2D ^{1}H-^{13}C, ^{1}H-^{29}Si, ^{19}F-^{13}C, ^{19}F-^{29}Si** • ^{1}H spin counting until 3 protons **/** Interactions through space until 3 protons **(DQ/TQ ^{1}H-^{1}H)**

→ Other nuclei/experiments on demand