

P/N: Z104450      S/N: 0412      Type: PA BBO 400S1 BBF-H-D-05 Z

### Declaration

The specified values listed on this page are valid in the context of the technical specification sheet of this probe. Bruker guarantees these values to be achievable on the customer instrument within the restriction mentioned.

### Pulse Specification

Nucleus	Sample	90° Pulse (in µs)	Achieved power (in W)	Maximum allowed peak power (in W)	Remarks
<sup>1</sup> H	Z10263	15	10	40	
<sup>13</sup> C	Z10263	10	43	100	
<sup>15</sup> N	Z10263	18	71	150	
<sup>19</sup> F	Z10234	15	14	50	
<sup>31</sup> P	Z10201	15	9.0	70	

### Sensitivities

Nucleus	Sample	Signal-to-Noise Ratio	Remarks
<sup>1</sup> H	Z10120	250	noise: 2 ppm variable, method: sino best
<sup>13</sup> C	Z10163	160	noise: 40 ppm variable, method: sino best
<sup>15</sup> N	Z10187	20	noise: 2 ppm variable, method: sino best, with <sup>1</sup> H decoupling during acquisition
<sup>19</sup> F	Z10234	250	noise: 1 ppm variable, method: sino best, with <sup>1</sup> H decoupling during acquisition
<sup>31</sup> P	Z10201	140	noise: 5 ppm variable, method: sino best

### Lineshape

Nucleus	Sample	50% (in Hz) <sup>1</sup>	0.55% (in Hz) <sup>1</sup>	0.11% (in Hz) <sup>1</sup>	Spinning side bands (in %)	Remarks
<sup>1</sup> H	Z10248	0.60	6.0	12.0	-	with sample rotation
<sup>13</sup> C	Z10163	0.20	2.0	4.0	1.0	with sample rotation, with <sup>1</sup> H decoupling during acquisition

### Samples

Sample	Description
Z10120	0.1% Ethylbenzene (EB) in Chloroform-D
Z10163	40% Dioxane in Benzene-D <sub>6</sub> (ASTM Test)
Z10187	90% Formamide (HCONH <sub>2</sub> ) in Dimethylsulfoxide-D <sub>6</sub> (DMSO)
Z10201	0.0485 M Triphenylphospate (TPP, [C <sub>6</sub> H <sub>5</sub> ] <sub>3</sub> PO <sub>4</sub> ) in Acetone-D <sub>6</sub>
Z10234	0.05% Trifluorotoluene (TFT, CF <sub>3</sub> C <sub>6</sub> H <sub>5</sub> ) in Chloroform-D
Z10248	1% Chloroform (CHCl <sub>3</sub> ) in Acetone-D <sub>6</sub>
Z10263	100 mM Urea- <sup>15</sup> N ([ <sup>15</sup> NH <sub>2</sub> ] <sub>2</sub> CO), 100 mM Methanol- <sup>13</sup> C ( <sup>13</sup> CH <sub>3</sub> OH) in Dimethylsulfoxide-D <sub>6</sub> (DMSO)

Test date: 2011-10-31

<sup>1</sup> Signal line width is measured relative to the total intensity of the signal of interest (chloroform or p-dioxane).

# TEST-DATA



SEL	SEI	SEF	SEX	DUL	DUX	BBO	BBI	QNP	QNI	QXI	TXO	TXD	TXI	TBI	TBO
						X									

Probehead No.	Z104450 / 412	EC	5.01	MHz	400	SB	X	WB	
---------------	---------------	----	------	-----	-----	----	---	----	--

Produktion	X	Sample Ø	1 mm		8 mm		Dual Flow Insert		
Repair			2.5 mm		10 mm				
Convert			3 mm		20 mm			Probe-Body SB	
			5 mm	X	.....			Probe-Body WB	

OPTIONS			
HT		ATM Acc.	X
LTA		.....	
LTB		.....	
Micro		.....	
Z-Grad.	X	.....	
XYZ-Grad.		.....	
LEAKPRF		.....	
BTO 2000		.....	

080.0000 = 12.3 MHz (-15dB)  
 799.0000 = 172 MHz  
 899.0000 = 386 MHz

VSP400				
Tuning-Card		Z104450 / 412		
Nuc.	Freq.	Tuning	Matching	Att.dB
19F	376.498	899.0055	99.0332	
31P	161.976	799.0080	99.0274	
87Rb	130.924	798.0106	99.0229	
13C	100.613	796.0201	98.0257	
17O	54.243	779.0172	87.0191	
15N	40.56	755.0162	82.0315	
14N	28.915	683.0128	74.0198	
109Ag	18.62	494.0246	48.0187	
		-	-	

Nuc. / Freq. (MHz)	forw. Pulse	forw. CW
1H 400.130	40 W	5 W
D 61.422	30 W	5 W
	W	W
X: 19F 376.498	50 W	W
X: 31P 161.976	70 W	W
X: 13C 100.613	100 W	W
X: 15N 40.560	150 W	W
	W	W
	W	W

Date: Wednesday, 26. October 2011

Signature: ELM