

Vol. EN04

SHIGEMI [®]

Symmetrical MICRO

&

Accessories

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Symmetrical MICRO NMR Tubes

These unique NMR microtubes are made out of a special type of hard glass with excellent chemical durability. They are magnetic susceptibility matched to each of the following solvents: CDCL₃, CD₃OD, D₂O, DMSO, ACETON-d₆

Therefore, the best resolution of a sample can be obtained in each of these solutions with minimal amounts of sample. Yet, the use of a small amount of solution will not affect the spectral resolution or the sideband.

How to use Symmetrical MICRO NMR Tubes

★ Do not spinning

★ We do not garanty auto shimming

When you first use the product, it is necessary to make a shim value for the Symmetrical Micro NMR Tube for each solvent.

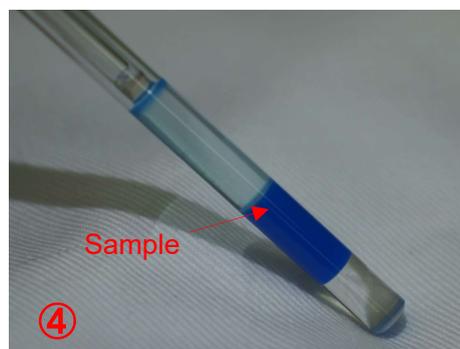
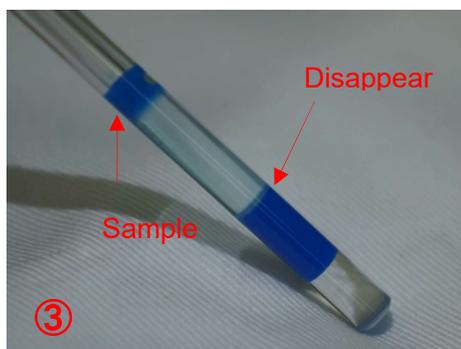
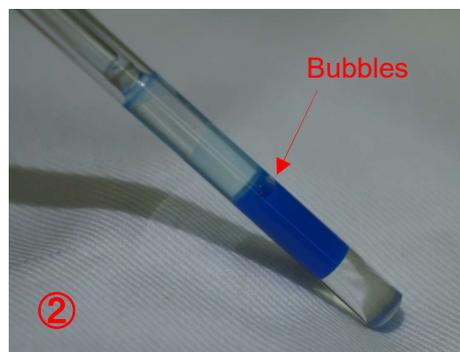
★ Please take out bables

① You turn in an inner tube slowly

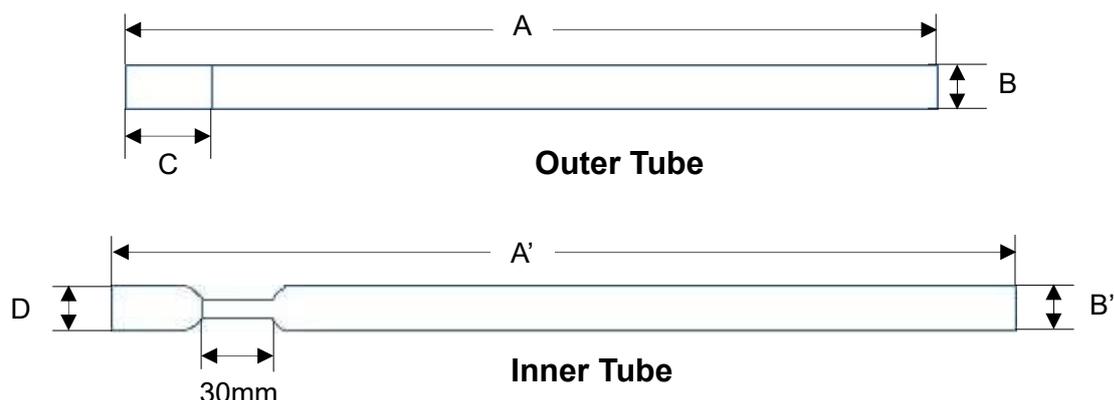
② Brief stop when an inner tube touch at sample surface

③ You push an inner tube a little strongly and quickly

④ Bubbles were disappeared return an inner tube right position



Symmetrical MICRO NMR Tubes for D₂O

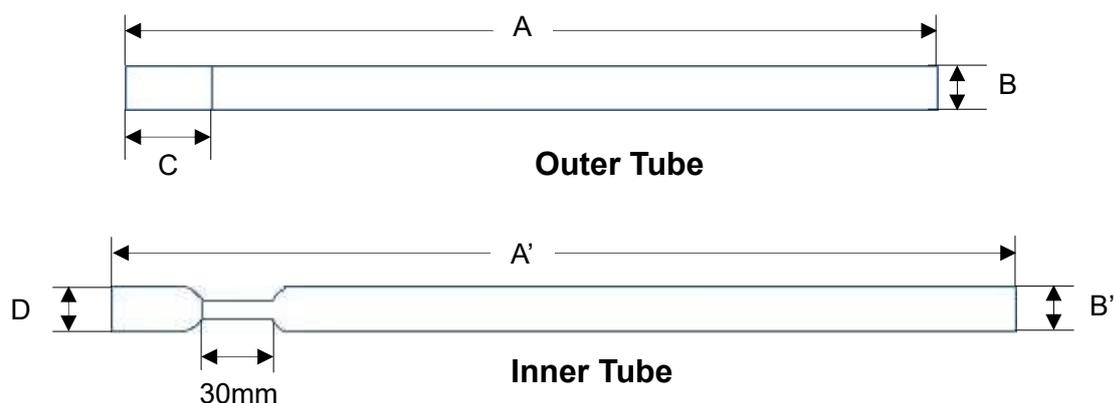


Parts N.O.		Outer Tube(mm)			Inner Tube(mm)			Price 1set = 1 outer tube and 1 inner tube JPY
		Length A	O.D B	Muched Glass C	Length A'	O.D. B'	Muched glass D	
2.5mmφ	BMS-0025	120	2.5 +0 -0.01	6	115	1.8	1.86 +0 -0.01	7,000
3mmφ	BMS-003	180	3.00 -0.01 -0.02	10	190	2.4	2.47 +0 -0.01	8,000
4mmφ	BMS-004B	180	4.000 +0.005 -0.010	8	190	3.1	3.16 +0 -0.01	9,000
	BMS-004J	180	4.000 +0.005 -0.010	12	190	3.1	3.16 +0 -0.01	9,000
	BMS-005V	180	4.000 +0.005 -0.010	15	190	3.1	3.16 +0 -0.01	9,000
5mmφ	BMS-005B	180	4.965 +0.005 -0.010	8	190	4.1	4.17 +0 -0.01	9,000
	BMS-005J	180	4.965 +0.005 -0.010	12	190	4.1	4.17 +0 -0.01	9,000
	BMS-005V	180	4.965 +0.005 -0.010	15	190	4.1	4.17 +0 -0.01	9,000
8mmφ	BMS-008BJ	190	7.98 ±0.01	10	200	6.9	6.97 +0 -0.01	18,000
	BMS-008V	190	7.98 ±0.01	15	200	6.9	6.97 +0 -0.01	20,000
10mmφ	BMS-010BJ	190	9.98 +0 -0.01	10	200	8.9	8.97 +0 -0.01	22,000
	BMS-010V	190	9.98 +0 -0.01	15	200	8.9	8.97 +0 -0.01	25,000

Part N.O. : The end character J and BJ is for JEOL, B and BJ is for Bruker, V is for Varian (Agilent).

BMS-0025 for Bruker and BMS-003 for every system.

Symmetrical MICRO NMR Tubes for CDCl₃

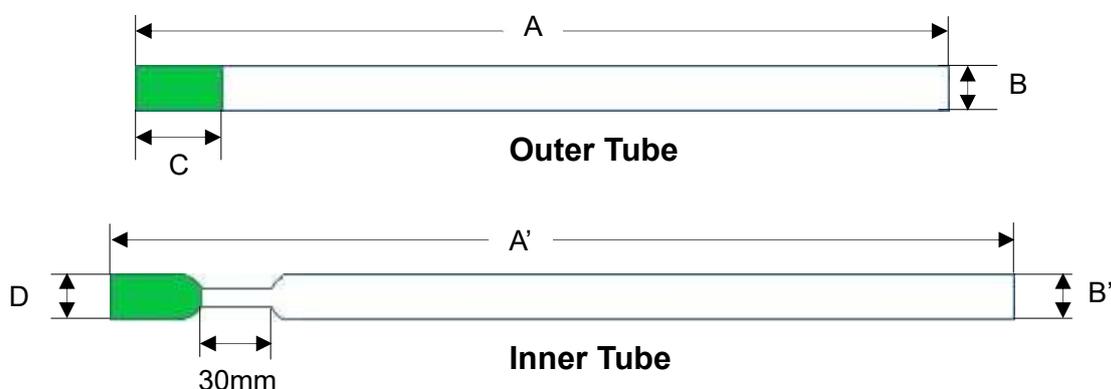


Parts N.O.		Outer Tube(mm)			Inner Tube(mm)			Price 1set = 1 outer tube and 1 inner tube JPY
		Length A	O.D B	Mached glass C	Length A'	O.D. B'	Mached glass D	
2.5mmφ	CMS-0025	120	2.5 +0 -0.01	6	115	1.8	1.86 +0 -0.01	7,000
3mmφ	CMS-003	180	3.00 -0.01 -0.02	10	190	2.4	2.47 +0 -0.01	8,000
5mmφ	CMS-005B	180	4.965 +0.005 -0.010	8	190	4.1	4.17 +0 -0.01	9,000
	CMS-005J	180	4.965 +0.005 -0.010	12	190	4.1	4.17 +0 -0.01	9,000
	CMS-005V	180	4.965 +0.005 -0.010	15	190	4.1	4.17 +0 -0.01	9,000
8mmφ	CMS-008BJ	190	7.98 ±0.01	10	200	6.9	6.97 +0 -0.01	16,000
	CMS-008V	190	7.98 ±0.01	15	200	6.9	6.97 +0 -0.01	18,000
10mmφ	CMS-010BJ	190	9.98 +0 -0.01	10	200	8.9	8.97 +0 -0.01	17,000
	CMS-010V	190	9.98 +0 -0.01	15	200	8.9	8.97 +0 -0.01	19,000

Part N.O. : The end character J and BJ is for JEOL, B and BJ is for Bruker, V is for Varian (Agilent).

CMS-0025 for Bruker and CMS-003 for every system.

Symmetrical MICRO NMR Tubes for DMSO (CD₃)₂SO, C₆D₆, C₅D₅N

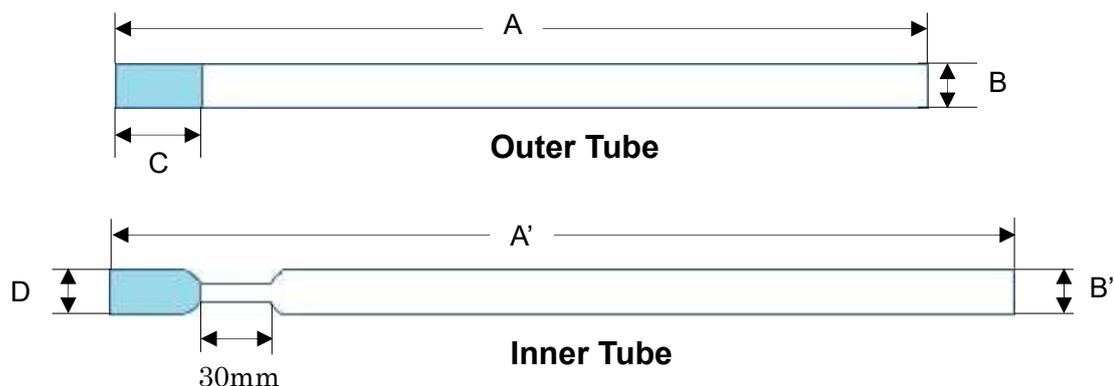


Parts N.O.		Outer Tube(mm)			Inner Tube(mm)			Price 1set = 1 outer tube and 1 inner tube JPY
		Length A	O.D B	Mached glass C	Length A'	O.D. B'	Mached glass D	
2.5mmφ	DMS-0025	120	2.5 +0 -0.01	6	115	1.8	1.86 +0 -0.01	7,000
3mmφ	DMS-003	180	3.00 -0.01 -0.02	10	190	2.4	2.47 +0 -0.01	8,000
5mmφ	DMS-005B	180	4.965 +0.005 -0.010	8	190	4.1	4.17 +0 -0.01	10,000
	DMS-005J	180	4.965 +0.005 -0.010	12	190	4.1	4.17 +0 -0.01	10,000
	DMS-005V	180	4.965 +0.005 -0.010	15	190	4.1	4.17 +0 -0.01	10,000
8mmφ	DMS-008BJ	190	7.98 ±0.01	10	200	6.9	6.97 +0 -0.01	16,000
	DMS-008V	190	7.98 ±0.01	15	200	6.9	6.97 +0 -0.01	18,000
10mmφ	DMS-010BJ	190	9.98 +0 -0.01	10	200	8.9	8.97 +0 -0.01	17,000
	DMS-010V	190	9.98 +0 -0.01	15	200	8.9	8.97 +0 -0.01	19,000

Part N.O. : The end character J and BJ is for JEOL, B and BJ is for Bruker, V is for Varian (Agilent).

DMS-0025 for Bruker and DMS-003 for every system.

Symmetrical MICRO NMR Tubes for CD₃OD, CD₃CN

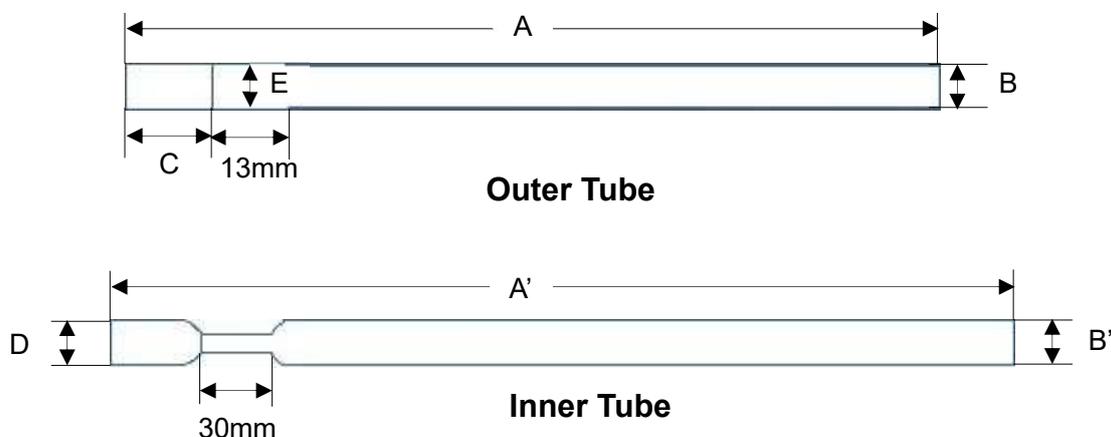


Parts N.O.		Outer Tube(mm)			Inner Tube(mm)			Price 1set = 1 outer tube and 1 inner tube JPY
		Length A	O.D. B	Mached glass C	Length A'	O.D. B'	Mached glass D	
2.5mmφ	MMS-0025	120	2.5 +0 -0.01	6	115	1.8	1.86 +0 -0.01	7,000
3mmφ	MMS-003	180	3.00 -0.01 -0.02	10	190	2.4	2.47 +0 -0.01	8,000
5mmφ	MMS-005B	180	4.965 +0.005 -0.010	8	190	4.1	4.17 +0 -0.01	10,000
	MMS-005J	180	4.965 +0.005 -0.010	12	190	4.1	4.17 +0 -0.01	10,000
	MMS-005V	180	4.965 +0.005 -0.010	15	190	4.1	4.17 +0 -0.01	10,000
8mmφ	MMS-008BJ	190	7.98 ±0.01	10	200	6.9	6.97 +0 -0.01	16,000
	MMS-008V	190	7.98 ±0.01	15	200	6.9	6.97 +0 -0.01	18,000
10mmφ	MMS-010BJ	190	9.98 +0 -0.01	10	200	8.9	8.97 +0 -0.01	17,000
	MMS-010V	190	9.98 +0 -0.01	15	200	8.9	8.97 +0 -0.01	19,000

Part N.O. : The end character J and BJ is for JEOL, B and BJ is for Bruker, V is for Varian (Agilent).

MMS-0025 for Bruker and MMS-003 for every system.

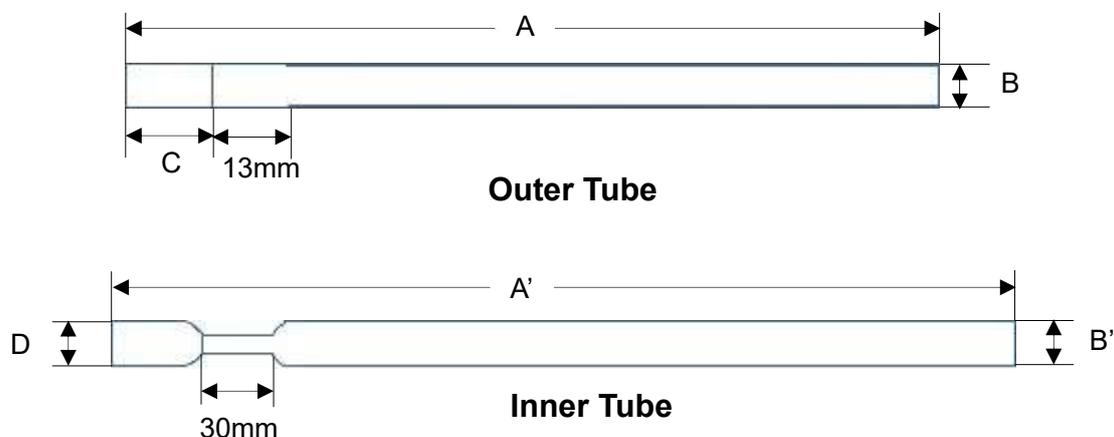
Thin wall Symmetrical MICRO NMR Tubes for D₂O



Parts N.O.		Outer Tube(mm)				Inner Tube(mm)			Price(JPY) 1set = 1 outer tube and 1 inner tube
		Length A	O.D. B	Mached Glass C	Thin Wall I.D. E	Length A'	O.D. B'	Mached Glass O.D. D	
5mmφ	BMS-005TB	180	4.965 +0.005 -0.010	8	4.52	190	4.1	4.17 +0 -0.01	10,000
	BMS-005TJ	180	4.965 +0.005 -0.010	12	4.52	190	4.1	4.17 +0 -0.01	10,000
	BMS-005TV	180	4.965 +0.005 -0.010	15	4.52	190	4.1	4.17 +0 -0.01	10,000

Part N.O. : The end character (J) is for JEOL, (B) is for Bruker, (V) is for Varian(Agilent)

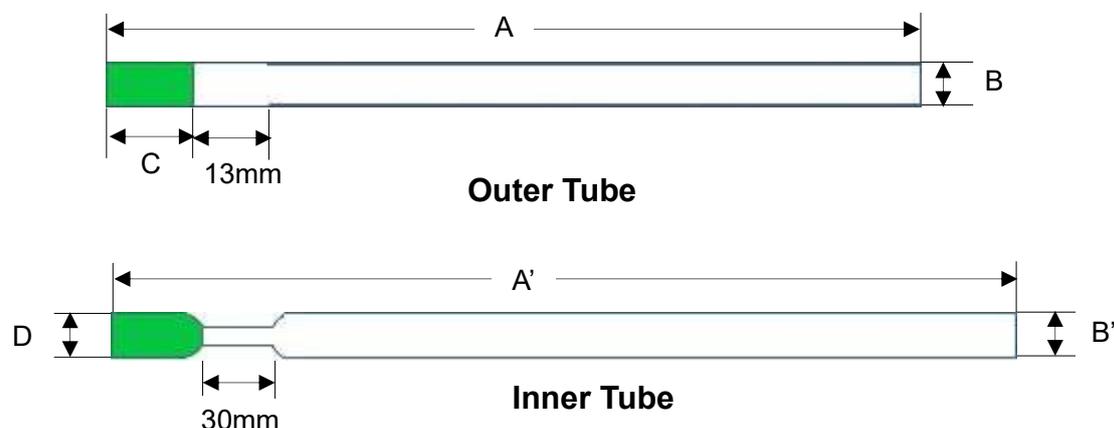
Thin wall Symmetrical MICRO NMR Tubes for CDCl_3



Parts N.O.		Outer Tube(mm)				Inner Tube(mm)			Price(JPY) 1set = 1 outer tube and 1 inner tube
		Length A	O.D. B	Mached Glass C	Thin Wall I.D. E	Length A'	O.D. B'	Mached Glass O.D. D	
5mmφ	CMS-005TB	180	4.965 +0.005 -0.010	8	4.52	190	4.1	4.17 +0 -0.01	10,000
	CMS-005TJ	180	4.965 +0.005 -0.010	12	4.52	190	4.1	4.17 +0 -0.01	10,000
	CMS-005TV	180	4.965 +0.005 -0.010	15	4.52	190	4.1	4.17 +0 -0.01	10,000

Part N.O. : The end character (J) is for JEOL, (B)is for Bruker, (V) is for Varian(Agilent)

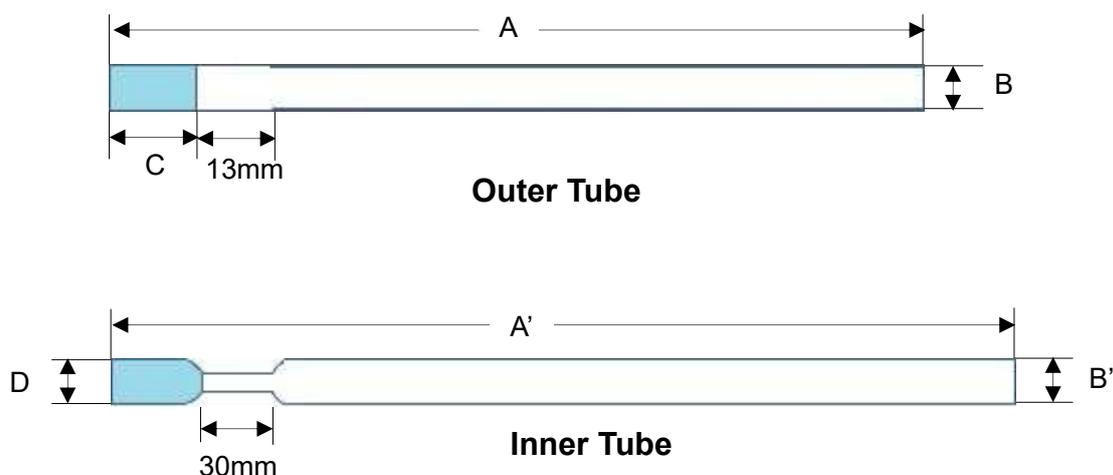
Thin wall Symmetrical MICRO NMR Tubes for DMSO (CD₃)₂SO , Benzene C₆D₆ , Pyridine C₅D₅N



Parts N.O.		Outer Tube(mm)				Inner Tube(mm)			Price(JPY) 1set = 1 outer tube and 1 inner tube
		Length A	O.D. B	Muched Glass C	Thin Wall I.D. E	Length A'	O.D. B'	Mached Glass O.D. D	
5mmφ	DMS-005TB	180	4.965 +0.005 -0.010	8	4.52	190	4.1	4.17 +0 -0.01	11,000
	DMS-005TJ	180	4.965 +0.005 -0.010	12	4.52	190	4.1	4.17 +0 -0.01	11,000
	DMS-005TV	180	4.965 +0.005 -0.010	15	4.52	190	4.1	4.17 +0 -0.01	11,000

Part N.O. : The end character (J) is for JEOL, (B)is for Bruker, (V) is for Varian(Agilent)

Thin wall Symmetrical MICRO NMR Tubes for Methanol CD₃OD, Acetonitrile CD₃CN



Parts N.O.		Outer Tube(mm)				Inner Tube(mm)			Price(JPY) 1set = 1 outer tube and 1 inner tube
		Length A	O.D. B	Muched Glass C	Thin Wall I.D. E	Lengt h A'	O.D. B'	Mached Glass O.D. D	
5mmφ	MMS-005TB	180	4.965 +0.005 -0.010	8	4.52	190	4.1	4.17 +0 -0.01	11,000
	MMS-005TJ	180	4.965 +0.005 -0.010	12	4.52	190	4.1	4.17 +0 -0.01	11,000
	MMS-005TV	180	4.965 +0.005 -0.010	15	4.52	190	4.1	4.17 +0 -0.01	11,000

Part N.O. : The end character (J) is for JEOL, (B)is for Bruker, (V) is for Varian(Agilent)

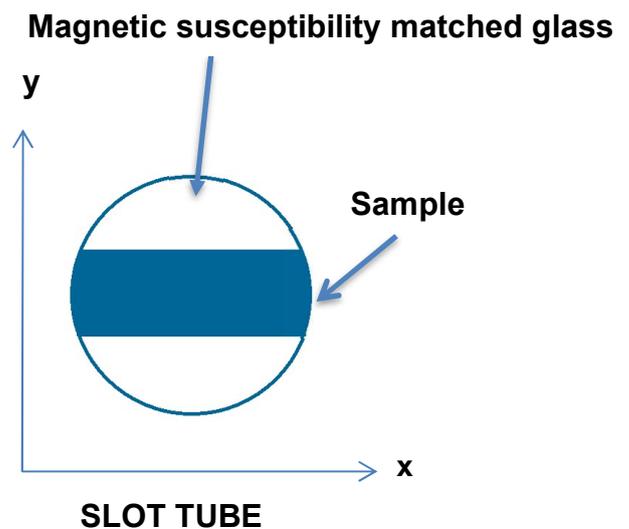
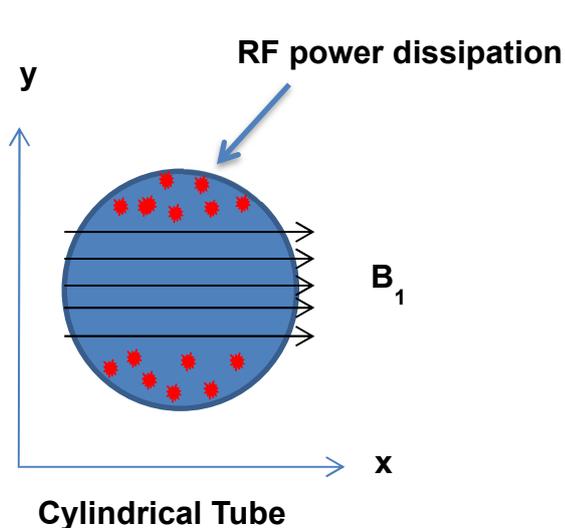
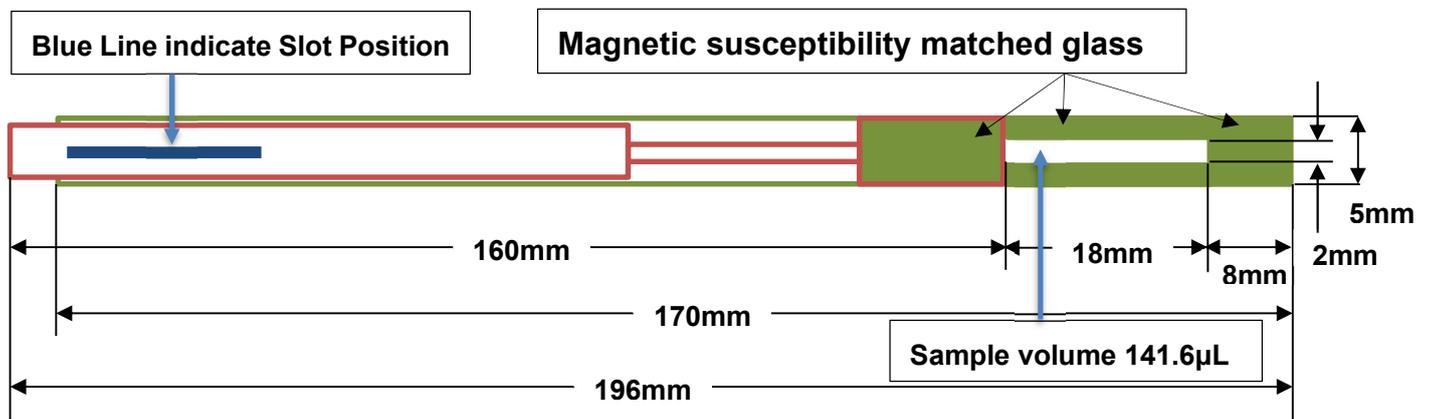
SLOT TUBE

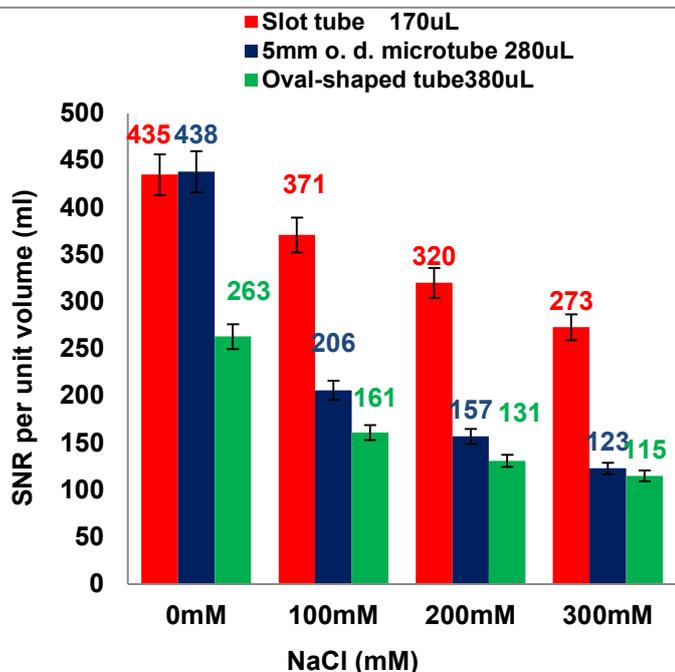
For High concentration electrolyte samples

The SHIGEMI Slot Tube provides the highest sensitivity and shortest 90 degree pulse width with any probes when working with lossy samples such as proteins in aqueous solutions containing high concentrations of electrolyte as salt.

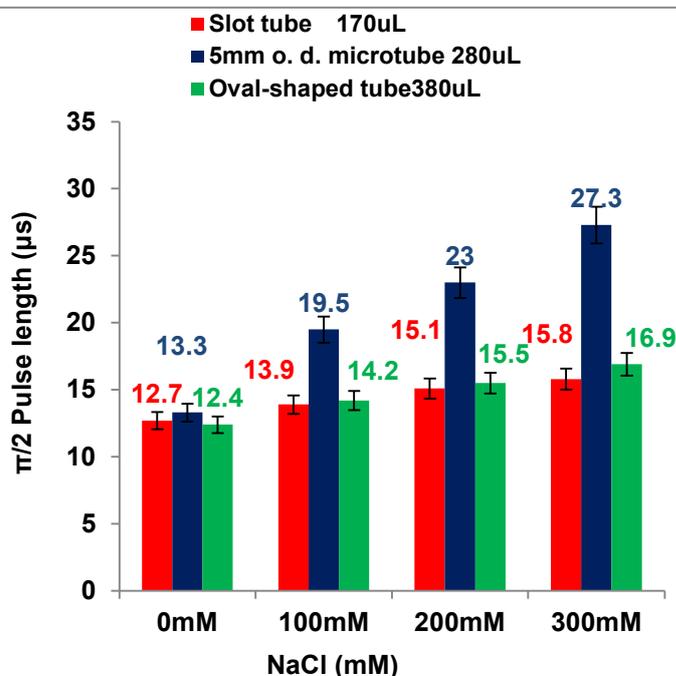
Benefit

- ★ Avoid the hot spot of RF power dissipation.
- ★ Able to obtain the best S/N ratio than any other NMR sample tubes.
- ★ Provide the shortest 90 degree pulse width than any NMR sample tubes.
- ★ Has already been confirmed working well with a Cryo™ probe (Bruker) 600, 950MHz and a Cold Probe (Varian/Agilent) 600MHz.





SNR per unit volume(ml) in different tubes
And salt concentrations



$\pi/2$ Pulse length (μ s) in different tubes
and salt concentrations

Data acquired at 14.1T (600 MHz CryoTMProbe) for the ubiquitin samples of 0.3mM of [¹³C/¹⁵N] containing 10mM sodium phosphate

SLOT TUBE

Magnetic susceptibility matched glass



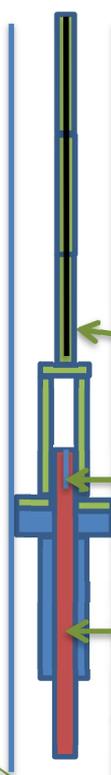
Slot for sample
144.6 μ L

SBMS 1 set 25,000JPY

Positioning tool

If you do not have "Bruker Shaped Shigemi Tube Shuttle (5mm)", you need this tool for fixing exact position. (shortest 90 degree puls width)

Do not use the air-lift function.



Black Line adjust with Blue Line
Blue Line
Spinner
SLOT TUBE
Upper Barrel

Positioning tool 1 set 150,000JPY

Accessories

FKM NMR Tube Caps for Symmetrical MICRO NMR Tubes

Parts N.O.	Description	Price/ a piece
CS-005	5mm	600JPY

