







NEW

Wilmad Sets the Standard

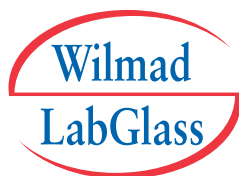
Doty Susceptibility Plugs

an alternative to Shigemi tubes

Advantages Over Shigemi Products

-  Match a wider range of solvents
-  Reduce experimental cost
-  Less fragile in variable temperature experiments
-  Use with Wilmad® 3 mm, 5 mm or 8 mm thin wall tubes
-  Easy sample loading
-  Fully compatible with Bruker®, Varian® and JEOL® NMR spectrometer/probe

Solvent	Doty Susceptibility Plugs	Shigemi Products
Acetone- d_6	X	
Benzene- d_6	X	
Carbon Tetrachloride	X	
Carbon Disulfide	X	
Chloroform- d	X	X
Deuterium Oxide	X	X
Diethyl Ether- d_{10}	X	
DMSO- d_6	X	X
Ethanol- d_5	X	
Glycerol- d_8	X	
Methanol- d_4	X	X
Toluene- d_8	X	



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in the USA
ISO 9001:2000 Certified
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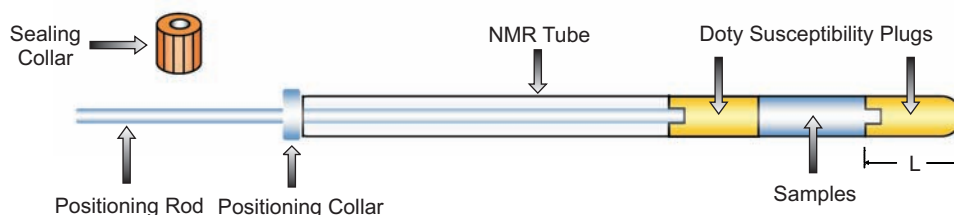
or 856-697-3000

Fax: 856-697-0536

On Line:

www.Wilmad-LabGlass.com

csvineland@wilmad-labglass.com



Note 1: L is the bottom length that should be chosen to most closely match your probe coil.

Properties of Plug Materials

Plug Material	Wideline NMR Backgrounds	H ₂ O Absorption (%)	Density (g/cc)	Maximum Temperature (K)	Chemical Resistance
Kel-F	F,Cl,C	0.02	2.1	423	Excellent
Aurum	H,C,N	0.8	1.42	513	Good
PPS	H,C,S	0.03	1.35	393	Good
Ultem	H,C,N	0.7	1.27	478	Good
Zirconia	Zr	0.01	5.7	973	Excellent
GFP	H,C,Al,Si,F	0.2	1.45	523	Poor for strong acids
G-10	H,C,Al,Si,F	0.15	1.88	433	Fair

Plugs for 3 mm Wilmad Thin Wall Tubes (L=8 mm)

Product No	Material	Solvents
SP-K-3 SP-KV-3	Kel-F	Glycerol
SP-A-3 SP-AV-3	Aurum	D ₂ O, Water
SP-PS-3 SP-PSV-3	PPS	Chloroform, Water
SP-U-3 SP-UV-3	Ultem	D ₂ O, Water
SP-Z-3 SP-ZV-3	Zirconia	D ₂ O, CCl ₄ , DMSO, Toluene, Benzene, Chloroform
SP-GP-3 SP-GPV-3	GFP	Methanol, Ethanol, Diethyl Ether
SP-G-3 SP-GV-3	G-10	Acetone, Methanol

Plugs for 5 mm and 8 mm Wilmad Thin Wall Tubes (L=14 mm)

Product No	Material	Solvents
SP-K-X SP-KV-X	Kel-F	Glycerol
SP-A-X SP-AV-X	Aurum	D ₂ O, Water
SP-PS-X SP-PSV-X	PPS	Chloroform, Water
SP-U-X SP-UV-X	Ultem	D ₂ O, Water
SP-Z-X SP-ZV-X	Zirconia	D ₂ O, CCl ₄ , DMSO, Toluene, Benzene, Chloroform
SP-GP-X SP-GPV-X	GFP	Methanol, Ethanol, Diethyl Ether
SP-G-X SP-GV-X	G-10	Acetone, Methanol

Plugs for 5 mm and 8 mm Wilmad Thin Wall Tubes (L=9 mm)

Product No	Material	Solvents
SP-KS-X SP-KSV-X	Kel-F	Glycerol
SP-AS-X SP-ASV-X	Aurum	D ₂ O, Water
SP-PSS-X SP-PSSV-X	PPS	Chloroform, Water
SP-US-X SP-USV-X	Ultem	D ₂ O, Water
SP-ZS-X SP-ZSV-X	Zirconia	D ₂ O, CCl ₄ , DMSO, Toluene, Benzene, Chloroform
SP-GPS-X SP-GPSV-X	GFP	Methanol, Ethanol, Diethyl Ether
SP-GS-X SP-GSV-X	G-10	Acetone, Methanol

Note 2: X = 5 or 8, which indicates the O.D. (unit in mm) of Wilmad NMR thin wall tubes compatible with this product. For example, SP-US-8 is the number for a plug set with the following properties: (1) plugs are made of Ultem; (2) the bottom length L (shown in the above picture) is 9 mm; (3) plugs fit Wilmad 8 mm O.D. NMR thin wall tubes.

Note 3: The Zirconia plugs are supplied with a tapered positioning rod and collar. The tapered end of the rod is pressed into the plug instead of screwing in place.

Note 4: Product with a "V" is designed to use with viscous samples/solvents by providing vent grooves along the outer surface.

Positioning Rod & Collar Set

Product No	Descriptions	Material
SP-PR-K-X	Positioning Rod with Collar	Kel-F
SP-PR-G-X	Positioning Rod with Collar	G-10
SP-PR-SC-X	Sealing Collar	-

Note 5: X = 3, 5 or 8, which indicates the O.D. (unit in mm) of the Wilmad NMR thin wall tube compatible with this product. For example, SP-PR-K-5 is the number for a position rod and collar set made of Kel-F for the Wilmad 5 mm O.D. NMR thin wall tubes.