SAMPLE VAULT™ SERIES NMR TUBES & CAPS

U.S. Patent No. 8,054,080

Sample Vault™ NMR Tubes

An Integrated Closure System • Now Available in Ultra-Thin Wall

Sample Vault™ Series NMR tubes with Sample Vault™ caps are engineered for high-throughput lab automation systems, including the Bruker SampleJet. The coded design works with 96-position carriers using either 103.5 mm (about 4") long NMR tubes with open port caps or 178 mm (7") long NMR tubes with closed port caps. Sample Vault™ caps have superior holding and sealing capabilities, which eliminate cap/tube failure in your instrument. Our patented design incorporates a white band positioned on the NMR tube that aligns with the base of the cap, indicating a properly locked position. Together, our Sample Vault™ caps and Sample Vault™ tubes form an integrated closure system for fail-safe delivery of your sample into the magnet. We offer Sample Vault™ tubes in 3 mm and 5 mm outer diameters for use up to 700 MHz and 950 MHz.

- Engineered for a new generation of high-throughput lab automation systems, such as the SampleJet™ system from Bruker
- Coded for Automated Systems
- Two precision types available for up to 700 MHz and 950 MHz spectrometers
- Superior Sample Vault™ cap (U.S. Patent No.8,054,080) attaches semi-permanently for multiple uses and for critical applications
- Choice of two Sample Vault™ cap styles: either closed port or open port, giving you the ultimate in choice of sample sealing
- Closures are available to seal the Sample Vault™ Open Port caps. They are made of a soft, resilient silicone rubber that forms a very effective seal, with a high degree of inertness, solvent resistance, and high temperature capability (up to 200°C). The closures are easily removed and may be trimmed to length with a knife blade or scissors
- Safe for cold refrigeration storage, works with cryo-probes and variable temperature studies



Sample Vault™ Series is now available in ***Ultra-Thin*** wall. Call **1-800-828-584-2600** or visit **www.nmrtubes.com/nmr-epr-tubes/sample-vault-tm-nmr-sample-tube-rack** to access our custom quote form.

NORELL® **TO ORDER CALL:** 1.828.584.2600 **FAX:** 1.828.584.2604

Sample Vault™ Series NMR Tubes & Caps Specifications

PACKED IN LOTS OF 96 WITH CAPS.

Item No.	MHz Rating	Cap Type	Cap Color	OD	Wall Size	Concentricity	Camber	Length
SVCP-3-103.5-96PK	Up to 700 MHz	Closed/Coded	Black	3 mm	0.38 mm	40 µm	60 µm	103.5 mm
SVCP-3-178-96PK	Up to 700 MHz	Closed/Coded	Black	3 mm	0.38 mm	40 µm	60 µm	178 mm
SVCP-5-103.5-96PK	Up to 700 MHz	Closed/Coded	Black	5 mm	0.38 mm	40 µm	60 µm	103.5 mm
SVCP-5-178-96PK	Up to 700 MHz	Closed/Coded	Black	5 mm	0.38 mm	40 µm	60 µm	178 mm
SVCP-Super-3-103.5-96PK	Up to 950 MHz	Closed/Coded	Black	3 mm	0.38 mm	20 µm	30 µm	103.5 mm
SVCP-Super-3-178-96PK	Up to 950 MHz	Closed/Coded	Black	3 mm	0.38 mm	20 µm	30 µm	178 mm
SVCP-Super-5-103.5-96PK	Up to 950 MHz	Closed/Coded	Black	5 mm	0.38 mm	20 µm	30 µm	178 mm
SVCP-Super-5-178-96PK	Up to 950 MHz	Closed/Coded	Black	5 mm	0.38 mm	20 µm	30 µm	178 mm

103.5 mm Medium Wall and Heavy Wall Sample Vault™ NMR Tubes

PACKED IN LOTS OF 5 WITH CODED CAPS. CHOOSE OPEN OR CLOSED PORT.

Item No.	MHz Rating	Cap Type	OD (mm)	ID (mm)	Wall (mm)	Length (mm)	Concentricity	Camber
SVCP-Super-5-MW-103.5-5	Up to 950 MHz	Closed	4.97 ± 0.013	3.43 ± 0.025	0.8	103.5	20 µm	30 µm
SVOP-Super-5-MW-103.5-5	Up to 950 MHz	Open	4.97 ± 0.013	3.43 ± 0.025	0.8	103.5	20 µm	30 µm
SVCP-Super-5-HW-103.5-5	Up to 950 MHz	Closed	4.97 ± 0.013	2.20 ± 0.025	1.4	103.5	20 µm	30 µm
SVOP-Super-5-HW-103.5-5	Up to 950 MHz	Open	4.97 ± 0.013	2.20 ± 0.025	1.4	103.5	20 µm	30 µm

178 mm Medium Wall and Heavy Wall Sample Vault™ NMR Tubes

PACKED IN LOTS OF 5 WITH CODED CAPS. CHOOSE OPEN OR CLOSED PORT.

Item No.	MHz Rating	Cap Type	OD (mm)	ID (mm)	Wall (mm)	Length (mm)	Concentricity	Camber
SVCP-Super-5-MW-178-5PK	Up to 950 MHz	Closed	4.97 ± 0.013	3.43 ± 0.025	0.8	178	20 µm	30 µm
SVOP-SUPER-5-MW-178-5PK	Up to 950 MHz	Open	4.97 ± 0.013	3.43 ± 0.025	0.8	178	20 µm	30 µm
SVCP-SUPER-5-HW-178-5PK	Up to 950 MHz	Closed	4.97 ± 0.013	2.20 ± 0.025	1.4	178	20 µm	30 µm
SVOP-SUPER-5-HW-178-5PK	Up to 950 MHz	Open	4.97 ± 0.013	2.20 ± 0.025	1.4	178	20 µm	30 µm

Closed Port Sample Vault™ Caps

PACKED IN LOTS OF 96

Item No.	Cap Type	Cap Color	Size
SVCP-CC-SAMPLEVAULT-3-96PK-BO	Closed/Coded	Black	3 mm
SVCP-CC-SAMPLEVAULT-5-96PK-BO	Closed/Coded	Black	5 mm

SAMPLE VAULT™ SERIES NMR TUBES & CAPS

U.S. Patent No. 8,054,080

SAMPLE VAULT SERIES™

Coded Caps for Bruker SampleJet

Sample Vault™ NMR Sample Tube Rack

Engineered for Reliable Performance with Bruker SampleJet Systems

Our updated Sample Vault™ NMR Sample Tube Rack delivers dependable performance for high-throughput automation. Featuring an open-wall design, this rack has been laboratory tested to ensure seamless compatibility with Bruker SampleJet spectrometers.



Manufactured from high-strength, high-modulus biopolymer, the rack provides the durability and dimensional stability your automated workflows demand.

Key Features:

- Open-wall design provides a clear, 360° view of samples
- Laboratory tested for Bruker SampleJet compatibility
- High-strength, high-modulus biopolymer construction
- Available with coded, open-port Sample Vault™ tube caps
- Available with 1mm, 1.7mm, 3mm, and 5mm NMR sample tubes

SampleJet is a trademark of Bruker-Physik AG

1 mm, 1. 7mm, 3 mm & 5 mm Sample Vault™ Series NMR Tubes & Caps for Bruker SampleJet

PACKED IN LOTS OF 96 WITH OPEN PORT, CODED CAPS. SHIPS IN OUR COMPOSTABLE BIOPOLYMER TUBE RACK.

U.S. Patent No. 8,054,080

Item No.	MHz Rating	Cap Type	Cap Color	OD	Wall Size	Concentricity	Camber	Length
SVOP-5-103.5-96PK-O	Up to 900 MHz	Coded Open	Black	5 mm	0.38 mm	40 µm	60 µm	103.5 mm
SVOP-3-103.5-96PK-O	Up to 900 MHz	Coded Open	Black	3 mm	0.38 mm	40 µm	60 µm	103.5 mm
SVOP-1.7-103.5-96PK-O	Up to 900 MHz	Coded Open	Black	1.7 mm	0.20 mm	40 µm	60 µm	103.5 mm
SVOP-1-103.5-96PK-O	Up to 900 MHz	Coded Open	Black	1 mm	0.10 mm	40 µm	60 µm	103.5 mm

Spherical Closures to Seal the Sample Vault™ Open Port Caps

THIS CLOSURE WILL FIT THE 1 MM, 1.7 MM, 3 MM AND 5 MM SAMPLE VAULT™ OPEN PORT CAPS

Item No.	Description	Color	Packed in Lots of
OPC-100PK	Spherical Closure	White	100



Spherical Closure for Open Port Cap

Silicone Closures to Seal the Sample Vault™ Open Port Caps

THIS CLOSURE WILL FIT THE 1 MM, 1.7 MM, 3 MM AND 5 MM SAMPLE VAULT™ OPEN PORT CAPS

Item No.	Description	Color	Packed in Lots of
SVC-SAMPLEVAULT-SRS	Tapered Silicone Rubber Plug	Clear Translucent	50 100

- *Not for use in Bruker SampleJet*



Tapered Silicone
Closure for Open Port Cap

Sample Vault™ Series for Bruker SampleJet is now available in ***Ultra-Thin*** wall. Call **1-800-828-584-2600** or visit **www.nmrtubes.com/nmr-epr-tubes/sample-vault-tm-nmr-sample-tube-rack** to access our custom quote form.

SAMPLE VAULT™ SERIES NMR TUBES & CAPS

U.S. Patent No. 8,054,080

Sample Vault™ 1 mm & 1.7 mm NMR Sample Tubes & Caps for Bruker SampleJet

Our patented Sample Vault™ NMR tubes and caps use our proprietary heat sealing treatment to ensure permanent, slip-free sample containment. Three internal lobes are heat molded to our patented surface treatment on the NMR sample tube to form a secure bond between the cap and the NMR tube. 1 mm & 1.7 mm Sample Vault™ NMR tubes ship in our 96-position, biopolymer NMR sample tube rack for use in SampleJet systems.

1 mm & 1.7 mm Sample Vault™ NMR Tubes & Caps Anatomy

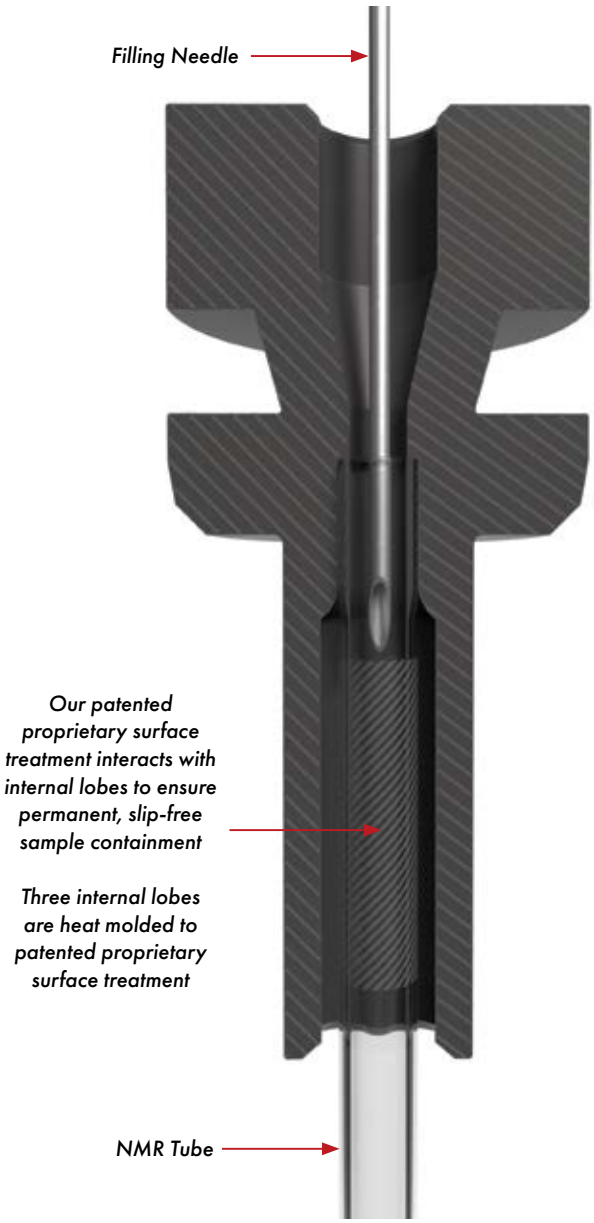


1 mm & 1.7 mm Sample Vault™ Series NMR Tubes & Caps for Bruker SampleJet

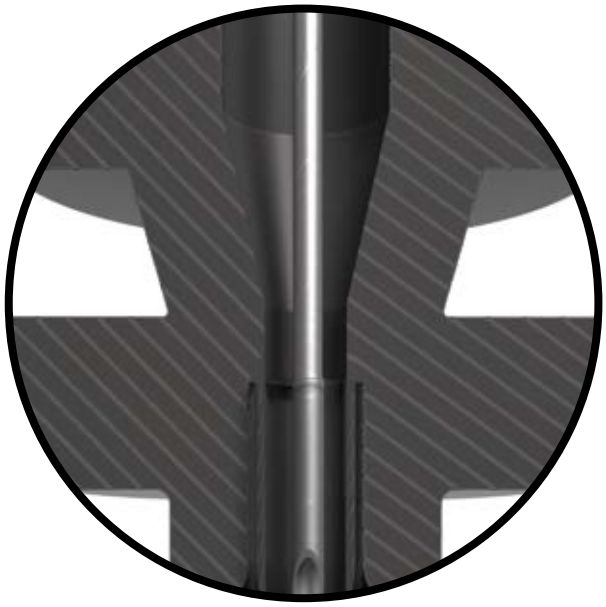
PACKED IN LOTS OF 96 WITH CAPS. SHIPS IN OUR COMPOSTABLE BIOPOLYMER TUBE RACK.

Item No.	MHz Rating	Cap Type	Cap Color	OD	Wall Size	Concentricity	Camber	Length
SVOP-1-103.5-96PK	Up to 900 MHz	Coded Open	Black	1 mm	0.38 mm	40 µm	60 µm	103.5 mm
SVOP-1.7-103.5-96PK	Up to 900 MHz	Coded Open	Gray	1.7 mm	0.38 mm	40 µm	60 µm	103.5 mm

1.7 mm Sample Vault Tube/Cap



The tapered channel guides the filling needle safely into the NMR tube without touching the tube



The anatomy of the 1 mm Sample Vault Cap is the same as the 1.7 mm but the inner channel is contricted to match the 1mm tube diameter.