

NMR SAMPLING ACCESSORIES

NMR SAMPLE TUBE WASHERS

The NE-231-RC tube washers consist of inert polymer and glass components only; all components are replaceable (see below). The unique non-breakable polymer solvent tube can accommodate both 7" and 8" length sample tubes. Simply insert the washer body into a vacuum flask, invert the sample tube over the polymer solvent capillary, securing the sample tube in place with the modified tube cap. Apply a vacuum and introduce solvent (squeeze bottle) into the reservoir until the tube is cleaned. Spent solvent is collected in the flask. Continued application of the vacuum will air-dry the tube once the solvent is depleted.

The tube washers fit standard vacuum flasks with a 24/40 joint. Made in 3mm, 5mm and 10mm versions.

Tube Washers and Flasks are sold separately.

NMR SAMPLE TUBE WASHERS

Catalog Number	Description	Price / each
NE-231-RC3	3mm NMR Tube Washer, Teflon	\$100.20
NE-231-RC5	5mm NMR Tube Washer, Teflon	102.25
NE-231-RC10	10mm NMR Tube Washer, Teflon	121.25
NE-240	Vacuum Flask, 500ml	44.30

Standard Components

Catalog Number	Description	Price / each
NE-231-B	Base only, PTFE	\$ 48.25
NE-231-R	Reservoir only, PTFE	29.25

3mm Components

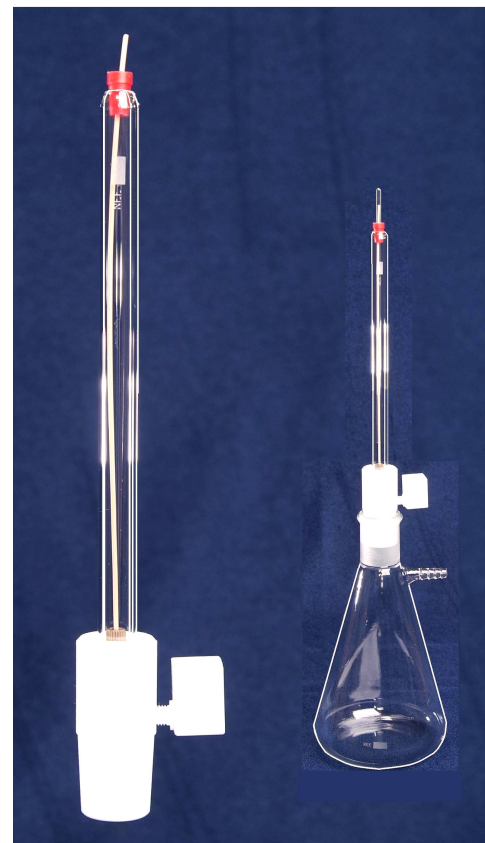
Catalog Number	Description	Price / each
NE-231-C3	Cap Gasket, 3mm, PE	\$ 1.30
NE-231-G	Glass Body only	8.85
NE-231-S3	Solvent Capillary, PEEK, 1/16"	5.00
NE-231-N3	Nut, PPS, 1/16"	5.25
NE-231-F3	Ferrule, ETFE, 1/16"	3.00

5mm Components

Catalog Number	Description	Price / each
NE-231-C5	Cap Gasket, 5mm, PE	\$ 1.30
NE-231-G	Glass Body only	8.85
NE-231-S5	Solvent Capillary, PEEK, 1/8"	7.25
NE-231-N5	Nut, PPS, 1/8"	5.25
NE-231-F5	Ferrule, ETFE, 1/8"	3.00

10mm Components

Catalog Number	Description	Price / each
NE-231-C10	Cap Gasket, 10mm, PE	\$ 1.55
NE-231-G10	Glass Body only	28.25
NE-231-S5	Solvent Capillary, PEEK, 1/8"	7.25
NE-231-N5	Nut, PPS, 1/8"	5.25
NE-231-F5	Ferrule, ETFE, 1/8"	3.00



PE = Polyethylene
 PPS = Polyphenylene Sulfide
 PEEK = Polyetheretherketone
 ETFE = Ethylenetrafluoroethylene
 PTFE = Polytetrafluoroethylene

NMR SAMPLING ACCESSORIES

SAMPLE TUBE CAPS

NMR sample tube caps fit tightly on the tube and provide adequate closure for many applications. To avoid cracking the tube, the cap should be eased off without twisting. Since these caps are disposable, they may be easily cut off. Long-term exposure to certain solvents may cause discoloration of the cap and leaching of plasticizers.

EVA=Ethylene Vinyl Acetate



Catalog Number	Tube Size	Description	Price	
			Pk/100	Pk/1000
NE-310-3	3mm	LD Polyethylene, Red only	\$ 6.70	\$ 38.35
NE-310-5	5mm	EVA; Blue, Green, Red, Yellow, White, Black; specify color	7.25	49.00
NE-310-5S	5mm	Serum Stopper, sleeve type	39.25	-
NE-310-8	8mm	LD Polyethylene, Neutral only	11.85	64.20
NE-310-10	10mm	LD Polyethylene, Red only	11.85	64.20
NE-310-15	15mm	LD Polyethylene, Red only	21.30	128.70
NE-310-16	16mm	LD Polyethylene, Red only	21.30	128.70
NE-310-20	20mm	LD Polyethylene, Neutral only	21.30	128.70
NE-310-25	25mm	LD Polyethylene, Red only	21.30	128.70
NE-310-27	27mm	LD Polyethylene, Red only	21.30	128.70

5mm TEFLON SAMPLE TUBE CAPS

Made of PTFE, these caps are the most inert 5mm tube cap. The precision machined cylindrical design maintains good spinning quality. A snug push fit ensures solvent retention, and a circular external groove aids in removal. The easiest way to remove the cap is to grasp under the cap with your finger nails and pull straight up and off. Clean and reuse.



Application Note:

In experiments where D₂O solutions are heated to 90°C to speed up reaction times, the standard 5mm tube cap will “pop” off the tube. It is also difficult to secure it squarely to the tube. Alternatively, use of a 5mm Teflon cap and a few turns of parafilm form a secure, symmetrical closure that stays in place. When finished, cut the parafilm off and salvage the cap for reuse. Individual performance will vary with solvent and temperature parameters.

Catalog Number	Description	Price
NE-312-5-10	Cap, PTFE, 0.8mm wall x 15mm long with circular external groove	\$ 34.50 / Pk/10
NE-312-5-25		77.00 / Pk/25
NE-312-5-50		122.00 / Pk/50

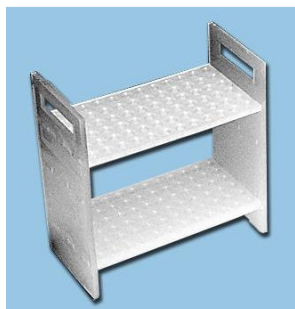
NMR SAMPLING ACCESSORIES



PIPETS / RUBBER BULBS

For easy sample transfer in 3mm and 5mm sample tubes. The long tips fit to the bottom of the sample tube. Avoid cross contamination by using these disposable pipets. Rubber pipet bulbs are also available.

Catalog Number	Description	Price
NE-201	Long Tip Pipet for 5mm x 7" tubes; 7.5" tip, 10.5" OAL, Bx/100	\$ 45.50 / Bx
NE-201-A	Extra Long Tip Pipet for 5mm x 8-9" tubes; 9.25" tip, 12.5" OAL, Bx/100	48.00 / Bx
NE-201-B	Long Tip Pipet for 3mm x 7" tubes; gaged to fit to the bottom of the tube; 7.5" tip 10.5" OAL, Bx/100	52.00 / Bx
NE-301-50	Rubber Bulbs, Pk/50	25.75 / Pk



SAMPLE TUBE HOLDER

This sturdy polypropylene tube holder is ideal for staging samples during preparation, in transporting samples between labs, and for sample storage. It is convenient for storing regularly used standards near the spectrometer. For 5mm OD sample tubes.

Catalog Number	Size	Description	Price / each	
			1-4	5+
NE-330-5	8" x 4" x 9"	Sample Tube Holder, 5mm x 72 positions	\$ 33.20	\$ 30.70

CLEANING BRUSH

Clean your standard thin-wall 5mm sample tubes easily with this special brush. With its snug fit and bristles that reach to the bottom of the tube, it helps ensure that old samples are completely removed. Especially suited for students who need to reuse their sample tubes.

Catalog Number	Description	Price / each	
		1-4	5+
NE-343-5	Brush, for 5mm OD thin-wall tubes, 50mm of bristles, 240mm OAL	\$ 9.15	\$ 7.65



NMR SAMPLING ACCESSORIES

MICRO SPATULA

Made of stainless steel, the Micro Spatula is ideal for small powder samples introduction into 5mm OD NMR tubes. Since the very bottom of the tube can be reached, removing a sample becomes easy. The round end of the Micro Spatula is used as a scoop and the sharp-edged flat end can be used to pry stiff samples (round and flat ends are both ≈3mm wide). Samples can be freeze-dried in the tube and then removed easily.



Catalog Number	Description	Price / each
NE-342	Micro Spatula - Stainless Steel	\$ 22.45

SAMPLE TUBE LABELS

A self-adhesive **clear transparent** label ideally suited for labeling **5mm OD** NMR tubes. Furnished on a roll, the labels are convenient for hand-writing identification information. The label length allows for extra wrap-around to protect the descriptive information from rubbing off. Tube balance is also maintained for proper spinning quality.

The 1/2" width gives ample space for descriptive information.
There are 500 labels / roll.



Catalog Number	Description	Price / roll
NE-7407	NMR Tube Labels, Clear, for 5mm OD Tubes	\$ 35.60

MARKING PENS

Suitable for marking glass and most other materials. Quick drying, water resistant, and permanent. Not suitable for writing on wet surfaces. Suitable with above sample tube labels.

Catalog Number	Description	Price / each
NE-7301	Blue ink, fine point, fast drying	\$ 2.80
NE-7302	Black ink, fine point, fast drying	2.80
NE-7303	Red ink, fine point, fast drying	2.80
NE-7304	Green ink, fine point, fast drying	2.80



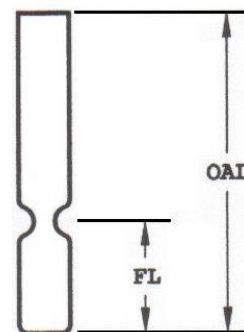
NMR SAMPLING ACCESSORIES

PYREX MASS ROTOR INSERTS

These precision Pyrex inserts are machined to fit closely into the rotor. A uniform and symmetrical constriction helps maintain spinning quality. For samples that cannot readily be contained in the rotor itself. Load the sample, seal with epoxy and cut through the constriction to obtain the desired finished length.

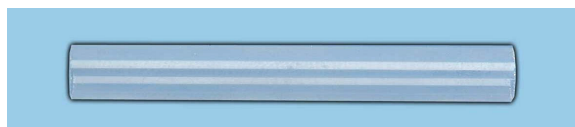
Some researchers choose to flame-seal the insert. In this case, samples are usually frozen and quickly sealed. If the seal is too long, it may be ground down, or in some cases, a hole is drilled in the center of the cap to accommodate the length. In any case, this method requires some practice to produce good seals.

The most common Bruker inserts are described below.



Catalog Number	Description	ID (mm)	OD (mm)	FL (mm)	OAL (mm)	Price / each	
						1-9	10+
NE-5001	Bruker 4mm Rotor, BN ₃ Cap	2.26	2.99	14	25	\$ 38.25	\$ 34.75
NE-5002	Bruker 4mm Rotor, Kel-F Cap	2.26	2.99	15	25	38.25	34.75
NE-5010	Bruker 7mm Rotor	4.57	5.59	13.2	68	38.25	34.75
NE-5012	Bruker 7mm MSL Rotor	5.01	5.59	13.2	68	61.25	55.25

QUARTZ PROBE INSERTS



PROBE INSERTS

Precision, thin wall replacement quartz inserts for high field and micro imaging spectrometers. Please inquire about other sizes that may be of interest to you.

Catalog Number	Probe Size	Description	Price / each
NE-295-5	5mm	Precision, thin wall quartz sleeve, 5.8mm x 6.8mm x 64mm. Replacement for Bruker spectrometers. Conc.= 0.001" TIR.	\$ 59.50
NE-295-5A	5mm	Precision, thin wall quartz sleeve, 5.6mm x 6.1mm x 64mm. For late model Bruker probes. Conc.= 0.001" TIR.	62.50
NE-295-5B	5mm	Precision, thin wall quartz sleeve, 5.6mm x 6.1mm x 54.5mm. For Bruker dual flow probes. Conc.= 0.001" TIR.	62.50
NE-295-V-5	5mm	Precision, thin wall quartz sleeve, 5.5mm x 6.0mm x 58.6mm. For Varian probes. Conc.= 0.001" TIR.	62.50
NE-295-12	12mm	Precision, thin wall quartz sleeve, 11mm x 12mm x 75mm. For micro imaging systems.	49.10
NE-295-22.8	22.8mm	Precision, thin wall quartz sleeve, 21mm x 22.8mm x 75mm. For micro imaging systems.	68.10
NE-295-30	30mm	Precision, thin wall quartz sleeve, 28mm x 30mm x 75mm. Replacement for Bruker micro imaging spectrometers.	73.10

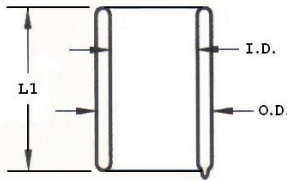
DEWARS FOR NMR APPLICATIONS

Production of custom and replacement dewars as well as dewar repairs are part of the special services that New Era provides to its NMR clients. Our dewars are made to established industry standards and are evacuated to 10^{-7} Torr, minimum.

Typical dewar designs are shown here, including basic dimensions that require consideration. We encourage your inquiries and are happy to suggest dewar designs to best suit your needs.

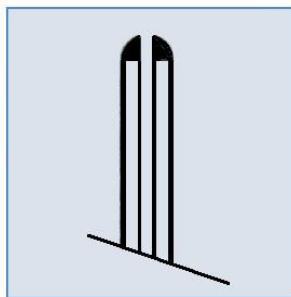
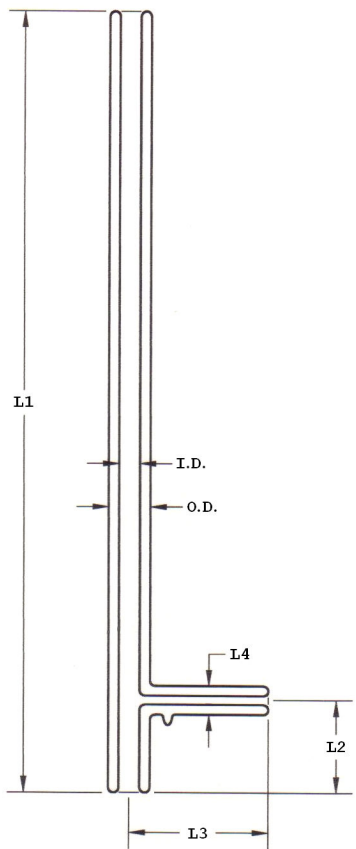
INSERT DEWARS

Made of Quartz or Pyrex, unsilvered. Consider special designs for solid state applications.



VT DEWARS

Made of Quartz or Pyrex, partially or fully silvered. Side arms may be plain or terminate with a 12/5 ball joint. For some heater applications, a special 10/18 outer joint is built into the bottom of the dewar.



OPTIONAL END DETAIL

