



# NMR Sampling Accessories

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The products shown here represent a small portion of the many items that can be found in our full NMR Catalog. Full product listings along with current prices may be viewed at [www.newera-spectro.com](http://www.newera-spectro.com).

## NMR Tube Washers – 3, 5 & 10 mm

- Inert Polymer and Glass Components
- All Components replaceable
- Non-breakable polymer solvent tube
- To wash, add solvent to reservoir
- Will air-dry once solvent is depleted
- Tube Washer fits standard vacuum flask with 24/40 outer joint

Tube Washer and Flask sold separately

Catalog Number	Description	Price Each
NE-231-RC3	3mm NMR Tube Washer, Teflon	\$142.84
NE-231-RC5	5mm NMR Tube Washer, Teflon	153.58
NE-231-RC10	10mm NMR Tube Washer, Teflon	157.17
NE-240	Vacuum Flask, 500ml	64.46



### Standard Components

Catalog Number	Description	Price Each
NE-231-B	Base only, PTFE	\$68.50
NE-231-R	Reservoir only, PTFE	43.61
NE-231-RAK	Reservoir Adapter Kit (1/4" Nut and Ferrule, 2' of 1/8" FEP Tubing Replaces Reservoir for direct feed from Bulk solvent container)	30.63

### 3mm Components

Catalog Number	Description	Price Each
NE-231-C3	Cap Gasket, 3mm, PE	\$1.75
NE-231-G	Glass Body only	11.63
NE-231-S3	Solvent Capillary, PEEK, 1/16"	12.08
NE-231-N3	Nut, PPS, 1/16"	6.88
NE-231-F3	Ferrule, ETFE, 1/16"	3.94



FEP = Fluorinated Ethylene Propylene    PE = Polyethylene  
 PPS = Polyphenylene Sulfide            PEEK = Polyetheretherketone  
 ETFE = Ethylenetetrafluoroethylene    PTFE = Polytetrafluoroethylene

### 5mm Components

Catalog Number	Description	Price Each
NE-231-C5	Cap Gasket, 5mm, PE	\$1.75
NE-231-G	Glass Body only	11.63
NE-231-S5	Solvent Capillary, PEEK, 1/8"	24.72
NE-231-N5	Nut, PPS, 1/8"	6.88
NE-231-F5	Ferrule, ETFE, 1/8"	3.94

### 10mm Components

Catalog Number	Description	Price Each
NE-231-C10	Cap Gasket, 10mm, PE	\$2.06
NE-231-G10	Glass Body only	37.09
NE-231-S5	Solvent Capillary, PEEK, 1/8"	24.72
NE-231-N5	Nut, PPS, 1/8"	6.88
NE-231-F5	Ferrule, ETFE, 1/8"	3.94

## CLEANING NMR SAMPLE TUBES

It is important to understand that NMR sample tubes are NOT laboratory glassware and should not be treated as such. Because of the precision tolerances and the very thin wall weights, conditions suitable for labware will adversely affect these tubes.

If one is not overly concerned with cross-contamination, NMR tubes may be soaked in a mild cleaning solution and rinsed with deionized water. Follow this with a rinse of clean methanol or acetone, after which they may be air dried. A basic tube washer, such as shown here, will help with this procedure.

If moisture presents a problem, the tubes may be placed in a vacuum oven on a very flat surface (never standing and only in one layer). Heating should not exceed 100°C and one hour duration. When dried, cap and store the tubes in a desiccator.

For samples that are most difficult to remove, it is safer and more efficient to avoid radical and extensive cleaning methods - use of strong acids, etc.. Discard the tube and avoid cross-contamination. This is most practical when standard 5mm tubes are used.

## VACUUM FLASK

A standard heavy-wall flask with hose connector and 24/40 outer joint.

Catalog Number	Description	Price Each
NE-240	Vacuum Flask, 500ml	\$ 64.46



## MULTIPLE SAMPLE TUBE WASHER, 3 and 5mm versions

Wash 5 thin wall sample tubes at once. Take up solvent directly from a bulk container for extended solvent capacity. The sturdy construction of the washer and the 1000ml heavy-wall vacuum flask add durability, while the PTFE, PFA, and Pyrex components make the system inert to most solvents. A special 3-way valve allows for evacuation of the chamber, washing and air drying with just a turn of the handle. Some assembly of components is required (no tools are needed). Furnished complete as shown, less sample tubes. Full details are available upon request.

Catalog Number	Description	Price Each
NE-232-3	3mm - 5 Tube Washer, complete	\$ 554.81
NE-232-5	5mm - 5 Tube Washer, complete	554.81

## 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	\$ 8.82	\$ 50.35
NE-310-4	4mm	LD Polyethylene, Blue only	8.82	50.35
NE-310-5	5mm	EVA; Blue, Green, Red, Yellow, White, Black, Orange or Purple	9.57	64.42
NE-310-5S	5mm	Serum Stopper, sleeve type	51.60	-
NE-310-8	8mm	LD Polyethylene, Neutral only	15.57	84.37
NE-310-10	10mm	LD Polyethylene, Red only	15.57	84.37
NE-310-15	15mm	LD Polyethylene, Red only	request	request
NE-310-16	16mm	LD Polyethylene, Red only	request	request
NE-310-20	20mm	LD Polyethylene, Neutral only	request	request
NE-310-25	25mm	LD Polyethylene, Red only	request	request
NE-310-27	27mm	LD Polyethylene, Red only	request	request

## 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 D<sub>2</sub>O 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 NE-312-5-25 NE-312-5-50	Cap, PTFE, 0.8mm wall x 15mm long with circular external groove	\$ 48.98 / Pk/10 110.61 / Pk/25 180.27 / Pk/50



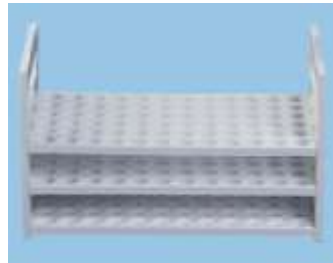
## PIPETS / RUBBER BULBS

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	\$ 83.76 / Bx
NE-201-A	Extra Long Tip Pipet for 5mm x 8-9" tubes; 9.25" tip, 12.5" OAL, Bx/100	87.11 / 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	87.11 / Bx
NE-301-50	Rubber Bulbs, Pk/50	33.77 / Pk



NE-330-5



NE-332-10

## SAMPLE TUBE HOLDERS

These sturdy polypropylene tube holders are 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. The 10mm version is suitable for water bath applications.

Available in 5mm OD and 10mm OD versions.

Catalog Number	Size	Description	Price Each
NE-330-5	8" x 4" x 9"	Sample Tube Holder, 5mm x 72 positions	\$ 44.33
NE-332-10	8" x 4" x 5"	Sample Tube Holder, 10mm x 72 positions	\$ 66.86

## 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
NE-343-5	Brush, for 5mm OD thin-wall tubes, 50mm of bristles, 240mm OAL	\$12.07

