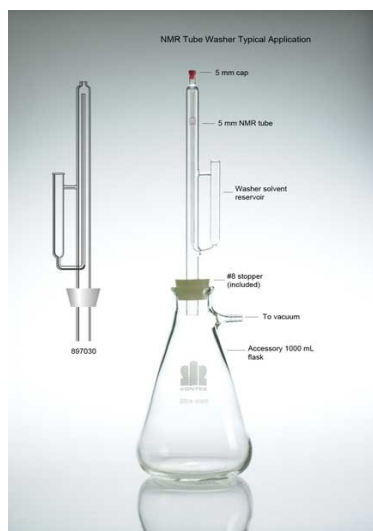


KIMBLE®

RECOMMENDATIONS FOR THE CARE AND USE OF NMR TUBES



Kimble Chase offers several styles of NMR tube washers:

897033-0003
5-place 3 mm Tube Washer

897033-0005
5-place 5 mm Tube Washer

897030-0005
Single-place 5 mm Tube Washer

459960-0000
Utility Washer

To Avoid Serious Personal Injury, Avoid Abrasions and Impacts

Abrasions reduce the strength of glass, making it more susceptible to breakage under impact and/or thermal shock. Thermal shock may result from sudden changes in temperature or use on either a burner or hot plate. Serious injuries could result if breakage occurs while glass holds heated and/or corrosive liquid. Glass will break as a result of impact. Use care when handling to avoid impacting hard objects, such as spigots, other glassware, counter tops, etc.

To Avoid Serious Personal Injury, Avoid Abrasions and Impacts

- Before use, rinse or clean the tube with distilled water and dry properly.
- Empty and rinse reusable tubes as soon as possible after use. Always properly discard disposable NMR tubes as soon as possible after use.
- Use of a fume hood is recommended when cleaning NMR tubes.
- Popular cleaning solutions include acetone, distilled water, and methanol or ethyl alcohol, as well as organic solvents. Difficult cleaning jobs may require the use of mineral acid or fuming nitric acid soaks. Final rinses of distilled water or acetone are recommended depending on the intended use.
- After cleaning, properly air dry or dry with a nitrogen gas stream.
- Inspect glassware before each use and discard if scratched, chipped, cracked or damaged in any way.
- Clean the outside of the tube in order to prevent dirt or impurities from being introduced to the probe or the internal mechanisms of the NMR machine.
- Always store NMR tubes in dry, particle free environments

WARNING:

- Never use chromic acid, or any caustic or alkaline solution, with an NMR tube.
- Never dry tubes in an oven for more than 30 minutes at 125 °C.
- Never store tubes in an oven. Excessive heat can cause warpage.
- Never use any tube that does not roll evenly on flat surfaces, or exhibits any physical abnormality.



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