

# 5 POSITION NMR TUBE CLEANER

## Operating Instructions

The U505 NMR Tube Cleaner quickly and easily cleans and rinses up to five NMR tubes of the same, or various, lengths and diameters, from 5mm through 10mm, and up to 9" long.

The U505 is made entirely from glass and PTFE fluoropolymer, making it impervious to all common cleaning solvents.

It is extremely portable, so it can be positioned at any convenient point of use. It functions well on a low vacuum source such as a water aspirator, as well as house vacuum, usually present on most laboratory benches, or with a small, dedicated rotary vacuum pump situated nearby.

Using a suitable apparatus clamp to stabilize the top, along with a support ring padded with rubber tubing or other soft material, support the bottom of the reservoir bottle of the U505 NMR Tube Cleaner on a ring stand or apparatus rack in a convenient spot, such as a fume hood.

Connect the serrated sidearm vacuum connector of the glass reservoir bottle to the vacuum source with rubber vacuum tubing. Adding a pinch clamp on the tubing allows the vacuum level to be easily controlled if no other means, such as a valve, are present in the system.

The PTFE fluoropolymer adapter holds five pieces of 1/8" O.D. flexible fluoropolymer tubing that can be adjusted for proper length by pulling and sliding up or down through the adapter. The tubing length should be adjusted to be 1 mm - 2mm less than the interior length of the NMR tubes when they are positioned within the adapter.

After adjusting the 1/8" fluoropolymer tubes to proper length, insert the tapered end of the PTFE adapter into the standard taper ground glass joint at the top of the reservoir bottle, to rest against the bottom surface of the adapter flange.

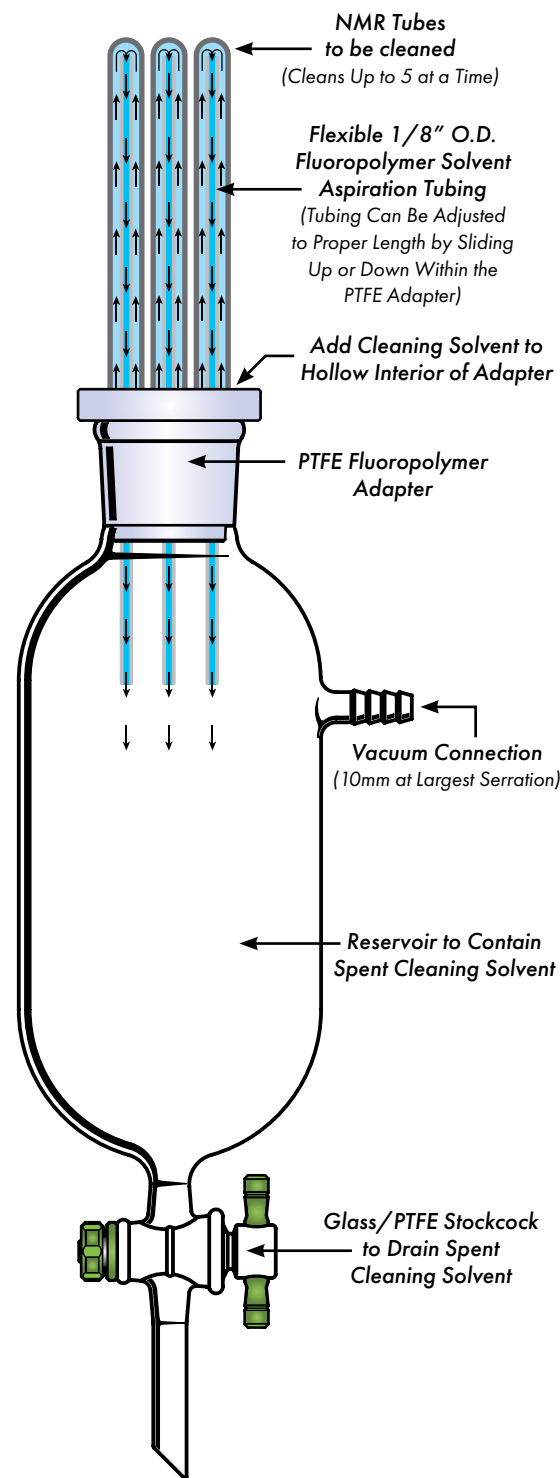
The adapter fits loosely in the standard taper ground glass joint of the reservoir to maintain the vacuum level within safe limits, and also to prevent joint seizure and permit easy disassembly.

To begin washing NMR tubes, first close the stopcock at the bottom of the reservoir, then slide an NMR tube over and down the 1/8" tubing, until the open end of the NMR tube rests on the bottom of the interior well of the adapter.

Add cleaning solvent, appropriate for the sample residue within the NMR tubes, to the hollow interior well of the adapter. Slowly open the vacuum control valve or tubing pinch clamp until solvent draws up from the adapter solvent well, through the entire length to the ends of the inverted NMR tubes, to drain through the 1/8" tubes and collect in the reservoir.

Upon completion of the washing operation, the NMR tubes should be air dried or oven dried at a low temperature to remove remaining traces of cleaning solvent, moisture and other protic materials that can cause spurious, unwanted NMR signals.

When tube washing is finished, close the valve to the vacuum source. The spent solvent collected in the reservoir can be drained and removed through the stopcock at the bottom of the reservoir.



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Comprised of an all glass and fluoropolymer design, the U505 will clean five NMR tubes of the same, or various, lengths and diameters. Fluoropolymer adapter has five positions with flexible 1/8" fluoropolymer tubing supplied in 9" lengths that can be cut to desired height. The NMR tube is placed over the tubing and seats in the adapter, leaving a small space between the end of the fluoropolymer tubing and the inside bottom of the NMR tube. With the stopcock in the closed position, the reservoir is connected to a low vacuum source. Cleaning solvent is added into the adapter followed by air drying to complete the process in seconds. Flexible tubing and adapter design reduces breakage. Stopcock permits easy draining of solvent. Hose connection is 10mm at the largest serration.

Item No.	Description
U505	for 5mm - 10mm NMR tubes

