



## Technical Bulletin D0610 - CapNMR™ Probe Offers Easy Use and Handling

The CapNMR probe provides high mass sensitivity in a robust design that is simple to use and does not require a dedicated magnet. Easy shimming makes the CapNMR probe readily set up, removed, and re-inserted into the magnet. Attention to a few straightforward procedural steps will ensure years of reliable operation.

All the equipment specified in the procedures below has been carefully selected and is provided at installation. For continuing use of the CapNMR probe, maintenance kits are also available. Rinsing devices are designed to exert pressure on the syringe plunger, so the user need not push continually to provide pressure and flow for large-volume rinsing (5 mL or 250  $\mu$ L syringes).

### Probe Insertion into the Magnet

When the probe is inserted into the magnet, it should be flushed with 50  $\mu$ L of acetone- $d_6$  using the 50  $\mu$ L syringe. Force air through the probe using the 5 mL syringe and clamp to remove the acetone- $d_6$ . Rinse the probe with a 50  $\mu$ L injection of the solvent that is planned for use in experimental analysis. Sample injection is then made into a probe that is already filled with the solvent into which the sample is dissolved.

### Probe Removal and Storage

To prepare the probe for storage, first use the 50  $\mu$ L syringe to rinse the probe with 50-100  $\mu$ L of the solvent used for the most recent sample injection. Using the 5 mL syringe, force air through the probe until solvent droplets cease to appear at the probe outlet. Using the 250  $\mu$ L syringe and vise, rinse the probe with approximately 200  $\mu$ L of acetone- $d_6$ . Finally, evacuate the acetone from the probe using forced air and the 5 mL syringe. These steps can be performed with the probe in the magnet, or the probe can be taken out and held vertically in a ring stand.

Always exercise care to ensure that the capillary feed lines are not damaged or scratched. Between uses, place the probe in its storage case. Pay particular attention to ensure that the feed capillary is not trapped in the hinge or seam of the case.