Laboratory Accessory Kit for 1/16-inch Fittings

Thank you for purchasing the Thermo Scientific™ picoSpin™ Laboratory Accessory Kit. This kit provides you with sample transfer accessories for use with the picoSpin NMR spectrometer. These instructions describe how to inject samples into the spectrometer using the accessories in this kit.

Conventions Used

Safety precautions and other important information use the following format:

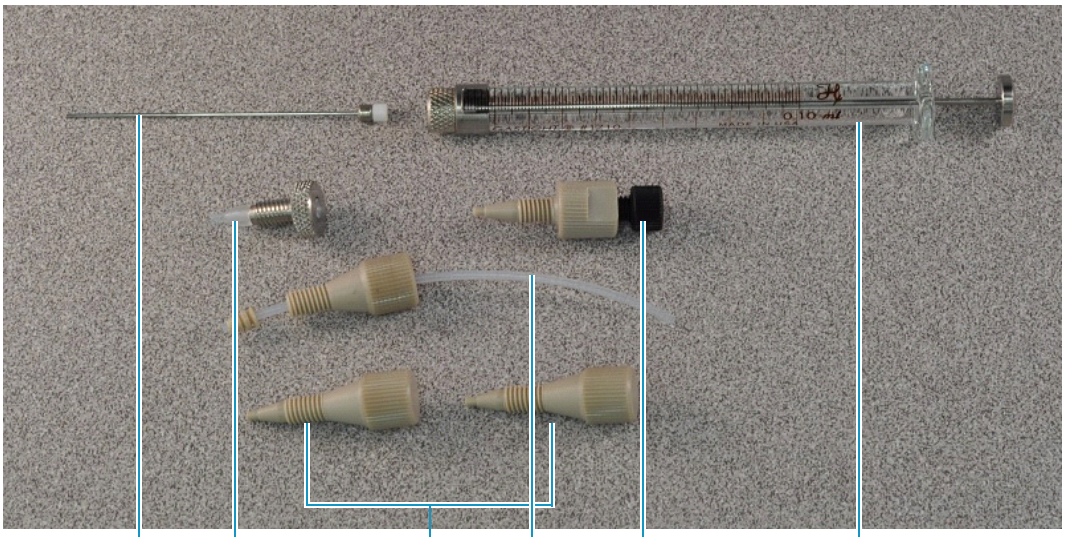
WARNING Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Follow instructions with this label to avoid damaging the system hardware or losing data.

What is in the Kit?

Figure 1. Laboratory Accessory Kit contents



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CAUTION Avoid personal injury.

- Wear eye protection at all times when handling liquid chemicals
- Do not breathe hazardous vapors
- Avoid skin contact with hazardous liquids and vapors

Getting Started

The PEEK ferrule and nut are supplied assembled with a length of tubing; this assembly is the "drain tube."

1. Insert the tip of the drain tube assembly into the outlet fitting located on the right side of the spectrometer cartridge sub-panel.
2. Using only gentle finger pressure, screw the PEEK nut of the drain tube assembly into the outlet fitting to secure it to the spectrometer.

Place the end of the drain tube into or above a small waste container to collect any overfilled or displaced sample, as shown in Figure 2.

Injecting a sample

❖ **To inject a sample**

1. Attach the needle and syringe port assembly to the syringe.
   a. If there is no inlet filter on the inlet fitting of your spectrometer, remove the shipping plug from the inlet filter supplied in the kit.
   b. Gently screw the filter into the inlet fitting.

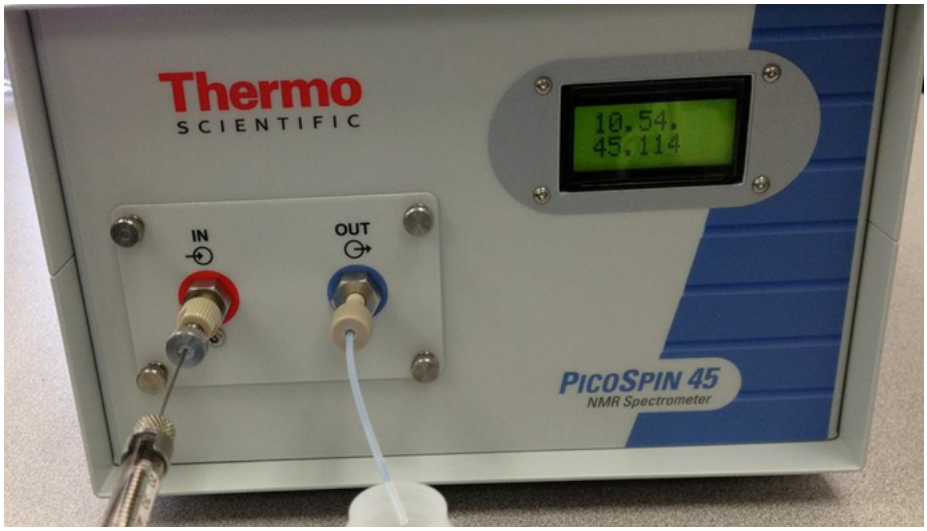
      Use of the inlet filter is optional if the sample is known to be free of particles that might clog the cartridge.
2. Carefully draw up about 40 - 50 µL of sample solution.

   Keeping the syringe on a slight angle and drawing up the sample slowly will help prevent bubbles from entering the syringe. If bubbles do appear in the syringe simply eject the bubbles and try again.

WARNING Avoid personal injury. Use a fume hood, if necessary, and wear appropriate protective equipment. Ejecting air bubbles from the syringe may eject a small volume of liquid that could be hazardous.

3. Gently insert the needle and syringe port into the inlet filter.
4. Using only gentle finger pressure, screw the syringe port into the inlet fitting to secure the syringe and needle to the spectrometer, as shown in Figure 2.

Figure 2. Injecting a sample



5. Gently press the syringe plunger while monitoring the drain tube to ensure the capillary is filled with the new sample and that any residual bubbles from the syringe have passed through the capillary and have been discharged from the drain tube to the waste container.

   It is very important that no bubbles remain in the capillary cartridge. If a bubble were to remain in the capillary near the location of the NMR RF coil the signal will be degraded, or it may be absent altogether.

   NOTICE Do not exceed the 100 psi (700 kPa) maximum pressure of the cartridge. This pressure corresponds to a very light force applied to the syringe plunger.

6. Remove the drain tube and the syringe port.
7. Plug the inlet filter and the outlet port using the included PEEK plugs.

   Acetone or another suitable solvent can then be used to flush the syringe assembly clean.

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