Streamline Microparticle Sample Preparation

Sample preparation is a critical step in performing a precise analysis of microparticles from liquid samples. Researchers and lab technicians need sample preparation to be:

- Straight forward and easy to perform
- Optimized for specific analysis techniques

The Thermo Scientific™ Microparticle Preparation Starter and Consumables Kits provide the user with everything needed for microparticle separation and subsequent spectroscopic analysis. This separation set-up allows the user to quickly identify and measure what is in a sample and is perfect for analyzing multiple sample types. For example:

- Bottled water
- Food
- Environmental samples
- Pharmaceutical injectables

The kits provide a streamlined solution, when used with the dedicated particle analysis software for the Thermo Scientific™ Nicolet™ iN10 MX FTIR Microscope and/or the Thermo Scientific™ DXR2 Raman Microscope.

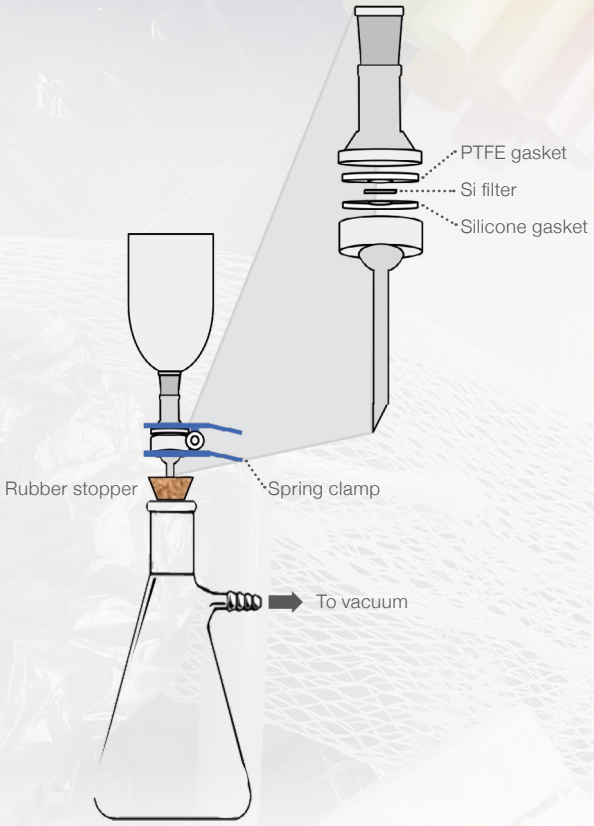

Figure 1: Vacuum filtration setup.

Available kits	
699-137200	**Microparticle Analysis Preparation Starter Kit** • Vacuum filtration setup, max Ø 13 mm filters • 50 silicon filters, square 10x10 mm^2, suitable for Raman and FTIR microscopy • 50 silicone gaskets, outer Ø 1 in, inner Ø 8 mm • 50 PTFE gaskets, outer Ø 1 in, inner Ø 8 mm • Tweezers
699-137300	**Microparticle Analysis Preparation Consumables Kit** • 250 silicon filters, square 1x1 mm^2, suitable for Raman and FTIR microscopy • 250 silicone gaskets, outer Ø 1 in, inner Ø 8 mm • 250 PTFE gaskets, outer Ø 1 in, inner Ø 8 mm

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Setup and application

1. Make sure the PTFE gasket is clean and free of any particles.

2. The silicon filter is centered over the hole in the silicone gasket. If using transmission FTIR, try to avoid any additional contact between the backside of the silicon filter and the silicone gasket to prevent leaving any residue on the backside of the filter where you are analyzing.

3. Carefully place the PTFE gasket on top of the silicon filter so the hole is centered with the hole in the silicone gasket and the silicon filter. The holes of the two gaskets around the filter should align, see figure 2A-C.

4. The top is positioned and the filter apparatus is fixed with a spring clamp, see figure 3 A–B. The spring clamp should be secure, but avoid excessive pressure that may lead to fracture of the silicon filter.

5. Connect the vacuum flask to a vacuum source (e.g., water aspirator), see figure 4.

6. Pour the sample into the top of the funnel to run through the silicon filter. Keep a loose cover on the top of the funnel to prevent air-born particles from being deposited on the filter.

Figure 2: Setup of the gasket-filter-gasket system.

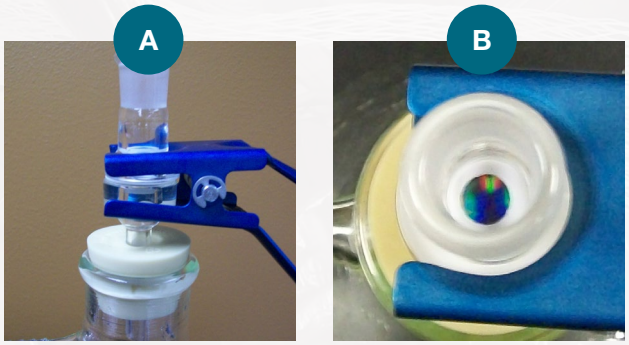

Figure 3: A spring clamp fixes the setup.

7. After the sample has been filtered, take the assembly apart and use the tweezers to position the filter on a sample holder.

8. The filter can be measured with the Nicolet iN10 MX FTIR Microscope (transmission or reflection) or the DXR2 Raman Microscope.

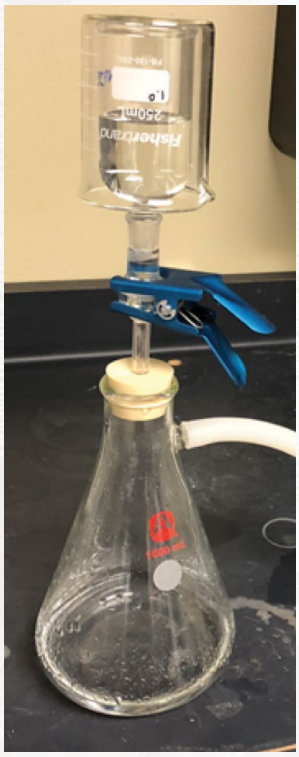

Figure 4: Finished vacuum filtration setup.

Find out more at **thermofisher.com/microparticleanalysis**

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