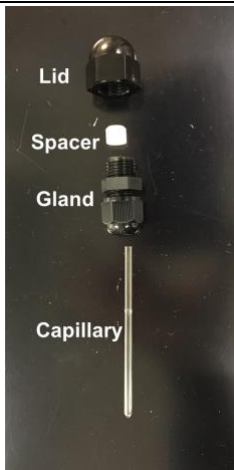



Loading a NOMAD Capillary Sample

<p>1. Capillaries are very fragile, please handle with extreme care.</p>	
<p>2. Log information in the provided spreadsheet. Clearly label each tube 1, 2, 3, etc. corresponding to the spreadsheet. The name written next to that number in the sample name column of the spreadsheet, will be the name seen in your IPTS data file to correspond with that sample.</p>	
<p>3. Be certain that the chemical formulas listed on the spreadsheet are accurate and match exactly the chemical formulas entered into IPTS. Samples that do not match will need to be re-entered and re-approved, sometimes causing considerable delay.</p>	
<p>4. There are four parts to the capillary set-up: Lid, Spacer, Gland, Capillary.</p>	
<p>5. Load the capillary by removing the lid and attaching the funnel (we suggest a thorough cleaning before use).</p> <p>Note: It is not recommended to remove the capillary from the gland. This sets the proper height for alignment with the neutron beam.</p>	

6. The beam height is typically set at NOMAD to illuminate approximately 1.5 cm at the sample position. The ideal height of sample in the capillary is 2 cm. In general, finely grinding your sample powders and gently tapping or sonicating them within the capillaries to increase the powder density of the sample column will increase the signal to background ratio of your measurement.



7. Record the height in centimeters (cm) of each sample in the spreadsheet.

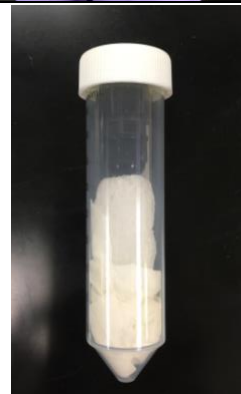
8. Record the weight in grams (g) of the amount of each sample loaded into the capillary in the spreadsheet (just the sample without the capillary/gland set-up).

9. Record the calculated mass density in g/cm^3 . It is needed (along with the two values above and the chemical composition) to generate absolutely normalized data for local structure studies. If this number is not provided we will apply a default value (and your data will not be absolutely normalized).

10. Use the included rubber stopper in the top of the capillary to prevent sample from coming out. For air sensitive samples measured ≤ 300 K, epoxy the stopper and capillary in place in the gland.



11. Replace the packing peanut on the capillary and place in the tube provided with the extra packing material in the bottom of the falcon tube.



12. For mail-in samples, ship samples, unused capillaries and cleaned loading funnel, along with the loading spreadsheet to the address found here <https://neutrons.ornl.gov/users/shipping>. To avoid delays and to ensure that your sample gets to the proper place on site use FedEx, UPS or DHL. The United States Post Office is NOT recommended.