

Shipping Checklist for Samples Containing Beryllium

Requirements for Shipping Powder Samples to SNS and HFIR

All powder samples containing Beryllium are required to be pre-loaded, sealed, and cleaned prior to shipping to ORNL.

1. Each sample container shall be in secondary containment (Ziploc style bag or similar).
2. Complete the sample questionnaire and list the chemical compounds of each sample. You will be prompted for this as part of proposal confirmation.
3. For Beryllium containing samples, sample management staff or beamline science staff will ship the user sample canisters, quartz tubes, or other containment devices to load the samples at their home institution.
4. The exterior of the container must be $<0.2 \text{ ug}/100\text{cm}^2$ Beryllium, which is the DOE receipt and release limit (10CFR850.31).
 - a. This can be completed by wiping with a damp Kimwipe or similar (water is best for Be salts)
 - b. If the container cannot be wiped and Beryllium contamination is suspected, the shipping party must perform a Beryllium smear, send to an American Industrial Hygiene Association (AIHA) accredited lab for analysis, and submit the results to Neutron Scattering Science Directorate Environmental Safety and Health before shipping.

Note: Any improperly loaded or leaking samples will be returned or wasted at the discretion of NScD ESH and Sample Management. Additional NScD ESH review is required to reload or reseal sample can.

Requirements for Shipping Single Crystal Samples to SNS and HFIR

All single crystal samples containing Beryllium are required to be covered in foil or other primary containment, and containment exterior cleaned prior to shipping to ORNL.

1. Each sample shall be in secondary containment (Ziploc style bag or similar).
2. Complete the sample questionnaire and list the chemical compounds of each sample. You will be prompted for this as part of proposal confirmation.
3. For Beryllium containing samples, sample management staff or beamline science staff will ship the user sample cannisters (if experiment requires the use of a can) to load at their home institution.
4. The exterior of the container must be $<0.2 \text{ ug}/100\text{cm}^2$ Beryllium, which is the DOE receipt and release limit (10CFR850.31).
 - a. This can be completed by wiping with a damp Kimwipe or similar (water is best for Be salts)
 - b. If the container cannot be wiped and Beryllium contamination is suspected, the shipping party must perform a Beryllium smear, send to an American Industrial Hygiene Association (AIHA) accredited lab for analysis, and submit the results to Neutron Scattering Science Directorate Environmental Safety and Health before shipping.

Note: Any improperly loaded or leaking samples will be returned or wasted at the discretion of NScD ESH and Sample Management. Additional NScD ESH review is required to reload or reseal sample can.