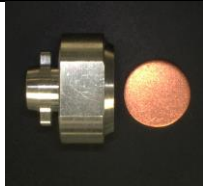


How to load a PAC can for a VISION experiment:

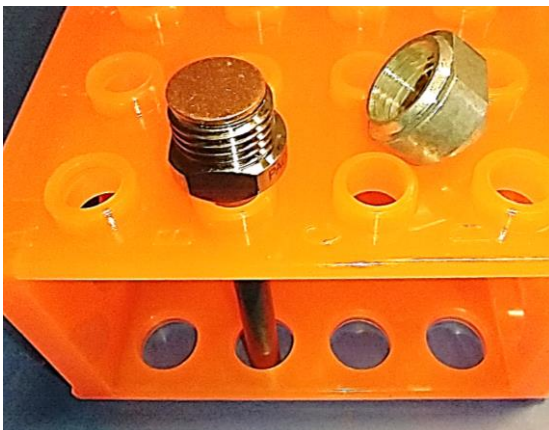
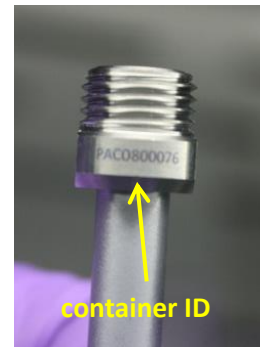
1. Vanadium PAC cans are available in nominal diameters of 6, 8 and 10 mm. The standard PAC cans use an Al lid with a bayonet interface. The VISION mail in program uses a Ti lid with a threaded 5/16-18 stud.

	Lid	Gasket	Interface
	Al PAC	Solid Cu	Bayonet
	Ti threaded	Solid Cu	5/16-18 stud

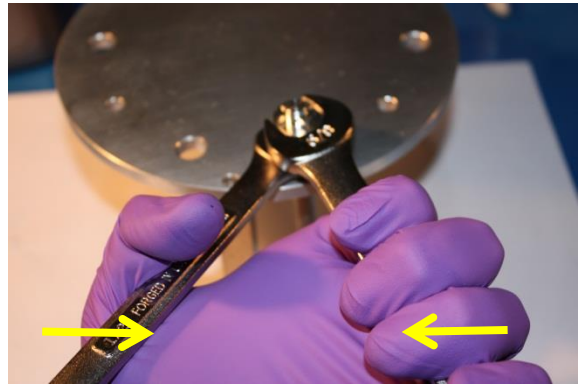
2. Cans should be received empty and clean; however, we recommend cleaning cans with alcohol.

Warning: Handle these vanadium cans carefully. They are easy to bend or otherwise damage.

3. On the loading sheet, record the Container ID (PACXX####) and Empty Container Weight (g), including the lid and gasket.
4. Support the can upright. Note: Upside-down funnels, sockets, and tube racks can work well as holders.
5. Pour sample powder into can.
6. Measure Sample Height (in mm) from the bottom of the can and log it on the loading sheet.
7. Place the gasket on top of the can or inside the lid. Make sure to carefully center the gasket. This is necessary for a proper seal to be made. A poorly centered gasket can lead to leaks.
8. Thread lid onto the can and hand tighten, enough that the lid will not easily loosen.

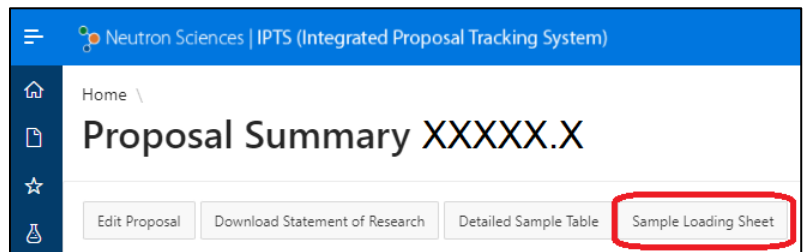


9. Tighten the lid using two wrenches (1/2" for the can collar and 5/8" for the lid).
 - a. Only use wrenches with flats. Using a wrench with teeth will damage the can and may compromise your experiment.
 - b. Sealing the cans requires approximately 100 in-lbs / 11 N·m of torque.



10. On the loading sheet, record the Full Container Weight (g) and calculate the Sample Weight (g).
11. Place each sealed can into a separate bag, labeled with the sample composition, IPTS number and PI name.
 - a. Do not put any tape or stickers directly on the can or lid. Parafilm or similar is okay to use.
 - b. Cans may be sent in vacuum-sealed bags if air-exposure is a concern.

12. Once all cans are filled, record the loading information (sample weight and height, etc.) in the online Sample Loading Sheet in IPTS. The online Sample Loading Sheet in IPTS must be filled out before shipping mail-in or remote samples to SNS.



- a. On the proposal summary page in IPTS, click the Sample Loading Sheet button.
 - b. Select loading conditions in top box and click the grey Save button.
 - c. Enter all Sample Information in table and click the blue Save button.
 - d. Once the form is complete, click the "Complete: Send form to sample team" button at the bottom.
13. When shipping the samples to SNS, pack them carefully to protect from bending or crushing forces. Refer to <https://neutrons.ornl.gov/users/shipping-guide> for the shipping address and further instructions.
14. For low temperature measurements, cans must be backfilled with helium to prevent the formation of ice. If you are unable to load the cans under helium, the cans will be backfilled with helium once they arrive at SNS.