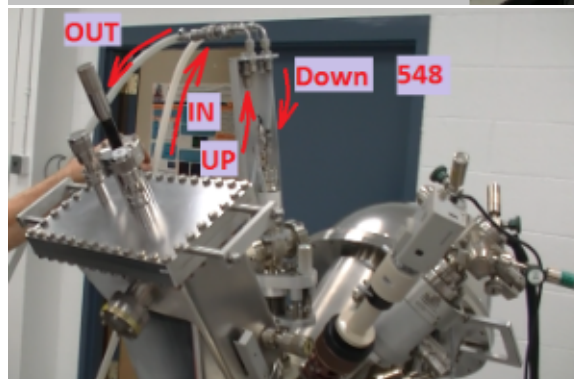
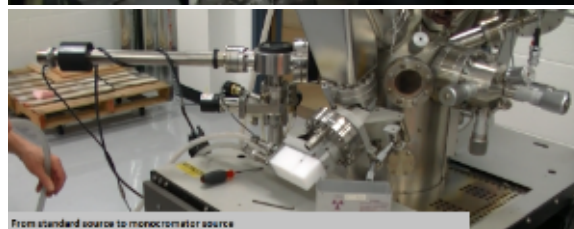
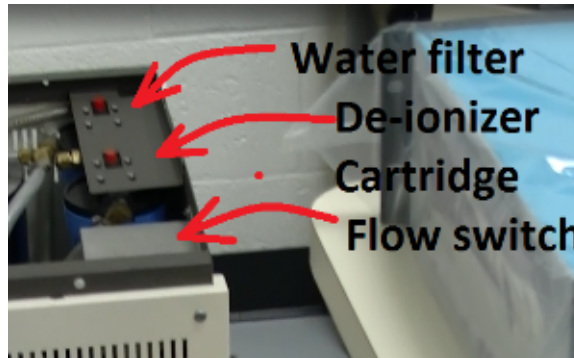


PHI 5600: COOLING SYSTEM

PHI 5600: COOLING SYSTEM

Description of cooling system,

- Heat Exchange system circulates water through both sources and it has a radiator to cool down the water.
- It has a water reservoir, a water filter, a de-ionizer cartridge and a flow switch.
- **The flow (hose loop) is from the Heat Exchange to the primary, to the secondary (monochromator) and back to the Heat Exchange.** The direction of flow is shown in the pictures.
- When turned on one should look for the direction of the flow to make sure it is correct, otherwise it does not cool appropriately.
- The de-ionizer operates continuously.
- There is electronic control of the pump from the X-ray Source Controller, (see pictures for position of cable for pump control, the cable is labelled A179J5 and A179).
- The Heat Exchange has a flow switch controlled by the X-ray Source Control to prevent the X-ray source from turning on if there is now flow of water (without cooling the anode would burn very quickly)
- Uses distilled water (3 gallons). When adding keep an eye on the water level indicator (see picture), it takes a little bit of time to fill up as water goes into the filter and ionizer.
- The filter and ionizer cartridge should be changed whenever the monochromator anode is replaced (if the monochromator is used a lot it must be replaced after one year, otherwise it can last several years < 7 yr.).
- It gets connected to 208V power strip.
- A description of the cooling of the x-rays source is shown in a video.





CONTACT: Jorge A. López (jorgelopez@utep.edu)

BACKTO [PHI 5600 XPS X-ray photoelectron Spectrometer](#)