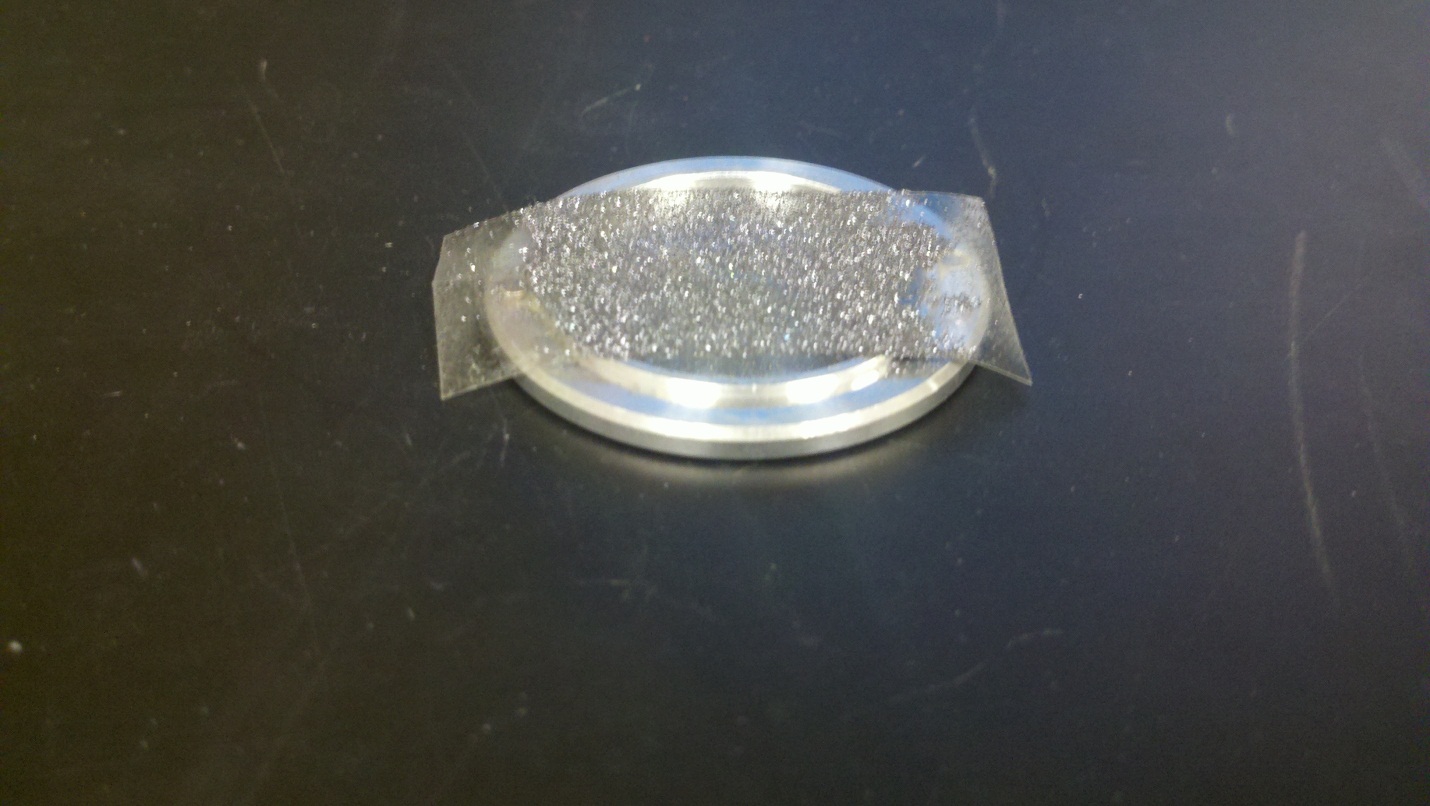
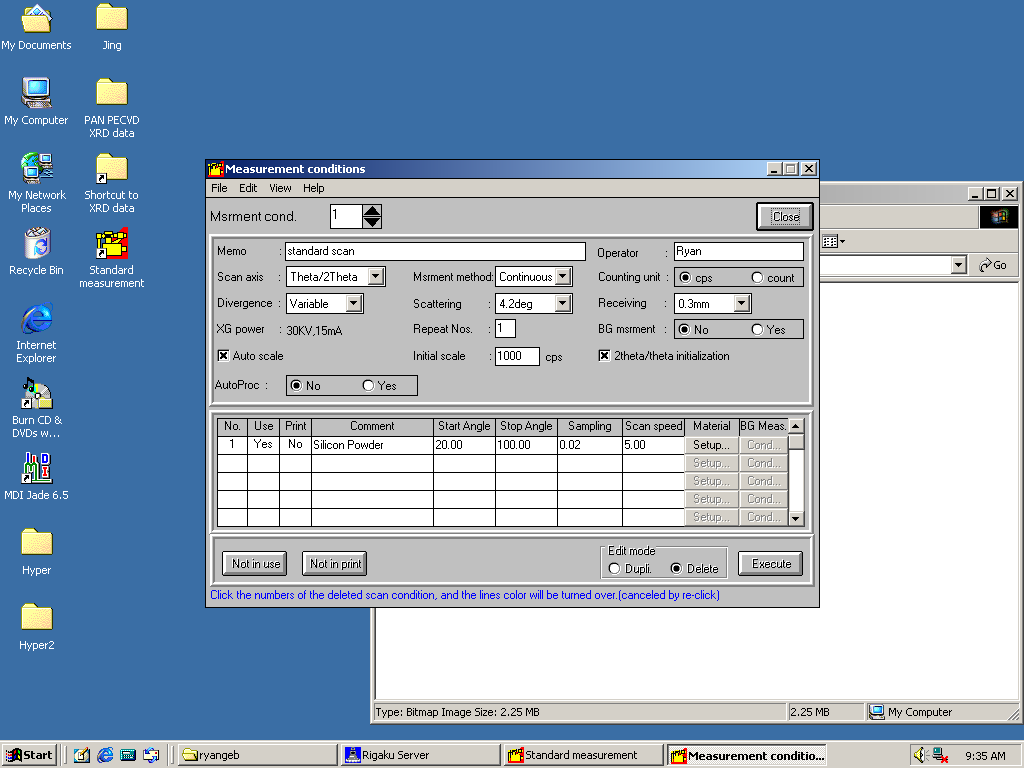
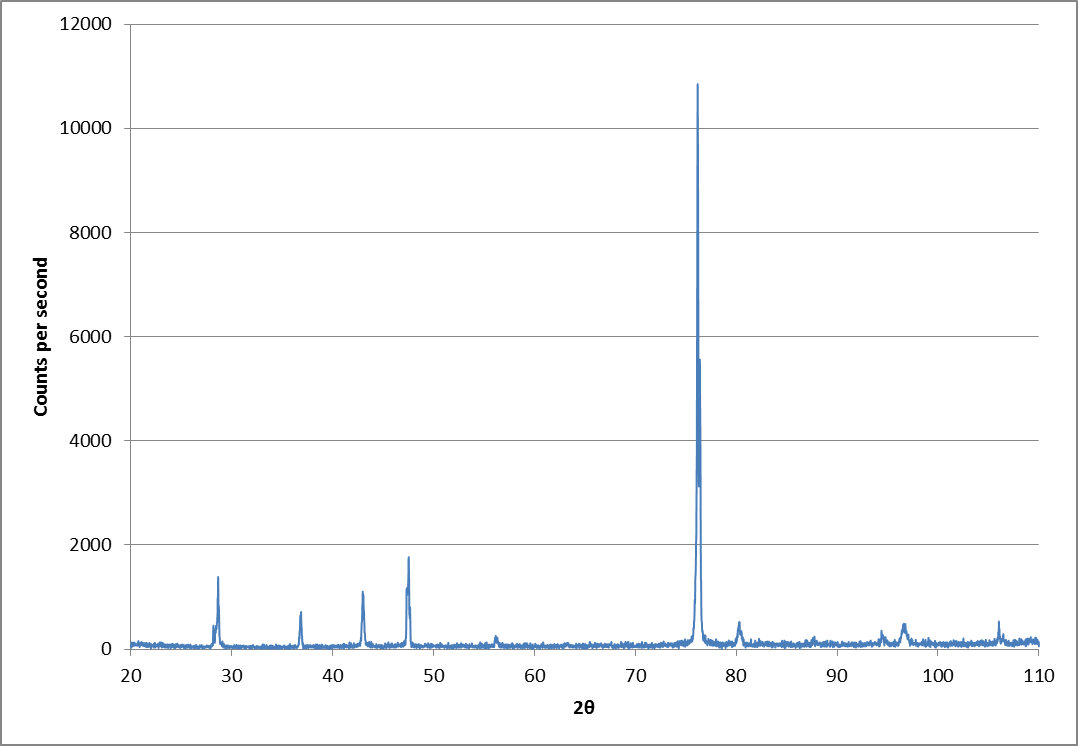
1. Wheel the table to the computer across from the Scintag XRD
2. Turn on the computer and log in
   1. Username: Administrator
   2. Password: rigakuisu
3. Load the sample before powering up the machine
4. If measuring powder, use double-sided tape to attach a thin film of powder to the sample holder. To prevent peaks from the sample holder itself, use one of the ring-shaped sample holders instead of a disk (a disk was used in the picture below and background peaks were found). **\*Sample prep can probably be improved\***
5. 
6. Plug in the power strip attached to the table
7. Turn on cooling system located on the bottom of the table
8. Attach cable from the computer to the back of the XRD system
9. Flip the switch on the back of the XRD up
10. Press power button, which is also located on the back (Make sure the emergency button on front is not depressed)
11. Open the Standard Measurement software
12. Click measurement conditions and set parameters such as start and stop angle, and also scan speed (measured in degrees/min)



1. Click close
2. Set directory, file, and sample name
3. Turn on the X-ray (button on front of machine)
4. Wait ~1 minute and then click start measurement
5. The scan will take some time depending on the angles scanned and scan speed
6. The data is automatically saved into a .raw file
   1. This needs to be opened in the Jade software, and can then be saved as a normal .txt file
      1. **Do not “delete” anything in the Jade software as it actually deletes the original file!!! It does not simply remove it from the program.**
7. Turn the X-ray off (button on front)
8. Flip the power switch in the back
9. Unplug from the computer
10. Let the cooling system run for a couple minutes after turning the X-ray off
11. Turn off the cooling system
12. Unplug the power strip and wheel the system back to its normal location
13. Shut down the computer
14. The spectrum acquired from the silicon on tape with a disk sample holder:The circled peaks are extra and not from Si. They are most likely from the sample holder. There is also a missing peak around 68 degrees which could be due to the thin layer of powder and possibly some preferred orientation of the powder.