

Spectro XEPOS X-ray Fluorescence Spectrometer

20190203

*If you encounter problems while running the instrument, please use submit an **Instrument Incident Report** with a description of your problem. For urgent problems please report to Al Fischer, NS 209, dfischer@wcu.edu, 227-2695!*

Safety

- X-ray radiation is harmful. Never operate the instrument without the cover in place.
- A **green X-Ray On** light indicates the X-ray source is turned off and it is safe to open the instrument.
- An **orange X-Ray On** light indicates the X-ray source is on. Opening the door at this stage could expose you to X-rays.

Load & Run Samples


1. Reserve time on the calendar if you have not already done so.
2. Prepare your samples in the dedicated XRF sample cups according to your lab SOP.
3. Slide the main cover of the instrument backwards to expose the sample wheel.
*Remember to check that the **X-Ray On** light is green!*
4. Load your sample(s) into the wheel and note their positions.
5. Close the top cover of the instrument.
6. Double click the **Routine Dialog** icon on the desktop to open the XRF software.
7. If you have loaded your samples and the lid is closed choose **Yes** to place the instrument in **Standby Mode**; otherwise, choose **No**.*
8. Enter a name for each of your samples in plate table.
9. Choose the correct method for your samples in the *Method* column.
 - For soil samples, use **SedXRF**.
 - If you require another method, please ask for method development help.
10. Enter a job name in the *Job* column. This will help locate your data files.
11. Press the **Start** button to begin analysis.
12. It is now safe to leave the instrument to run. Please retrieve your samples as soon as your run finishes.
The SedXRF method takes approximately 15 minutes per sample.
13. If you need to stop the instrument at anytime, press the **Abort** button.

Process & Export Data

View Processed Results

1. To view the processed results exported by your method, double click the **Results Folder Shortcut** on the desktop. You should transfer your files to NEON to retrieve them in the future.

View & Export Spectra

1. Click on the **Spectrum [Spectra Viewer] Icon** to open the data analysis software.
2. Click on the **Jobs Tab** and browse for your sample under the job you used. If you did not supply a job it will be saved under .
3. Expand the sample and click on the spectrum you wish to analyze.

4. Click the **Toolbox Icon** (4th from left) to open up the tools palette. You may use the various tools to zoom and explore peaks.
5. To export your spectrum, choose **Tools > Export ASCII File** and then choose a file location and name.

Shutdown

1. When your run finishes, press the **Standby** button to turn off the X-ray source.
2. Ensure the **X-Ray On** light is green. Open the door and remove your samples. Close the door when finished.
3. Close the software and clean up your work area.
4. Report any problems you encountered to the Instrumentation Specialist, listed above.