



Niton XL3t XRF Analyzer



The Niton XL3t 950 GOLDD+ handheld analyzer is a portable elemental analysis tool that will detect elements with an atomic number 12 or above and will present a spreadsheet with the measured elements in either parts per million (ppm) or as a percentage (%) of the material being tested.

The XRF analyzer uses an on-board X-Ray tube to excite the electron shell of atoms on the surface of the material being tested and a sensor to record any changes in movement of electrons from one shell to another. The information gathered by the sensor is then analyzed and the information presented as the amount of that element in the subject material's surface layer. Materials may be tested in-situ, or collected and

measured in a portable stand. The unit can be controlled by a trigger mechanism or remotely from a computer with the Windows operating system.

Uses:

Analysis of materials for determination of proper reclamation actions. The unit has been used for hard rock (uranium) and coal mine AML determinations as well as coal refuse analysis. The unit is capable of laboratory quality measurements, but is easily used as a screening tool in many applications.

Maintenance:

The handheld XRF analyzer is designed for field use, but requires special care due to the sensitive components. Radiation training is required for the operator before use, as well as licensing/registration from the state where the unit is used. Registration in some Mid-Continent Region states can become expensive.

Check out Contact information:

The XRF is kept at the Technical Services Branch of the Mid Continent Region of OSM in Alton, IL. Due to the excessive acquisition cost, operation of the XRF unit may only be done by authorized/trained personnel. The XRF is available for loan subject to the availability of MCR staff to accompany the equipment and train the user. It may be more effective to prepare samples of the material to be tested and have the analysis completed in the OSMRE-MCR office. Contact Brian Hicks at 618 463-6463 ext 5121 or at bhicks@osmre.gov for more information.