

Portable Mass Spectrometers for UF₆ Analysis

- **Goal:** Develop portable mass spectrometers for UF₆ isotopic analysis at enrichment facilities.
- **Approach:** A van-portable instrument is being constructed from a ThermoFinnigan Polaris Q ion trap mass spectrometer. A battery-powered hand-portable unit is based on a 1-mm diameter micro ion trap.
- **Accomplishments:** The van-portable instrument has been tested at the ORNL UF₆ Test Loop Facility. Instrumental accuracy is sufficient to distinguish between natural and enriched uranium.
- **Future work:** Complete hand-portable unit
- **PIs:** W. B. Whitten and P. T. A. Reilly
- **Sponsor:** U.S. Dept. of Energy, Office of Nonproliferation Research and Engineering, and Office of International Safeguards



Hand-portable mass spectrometer