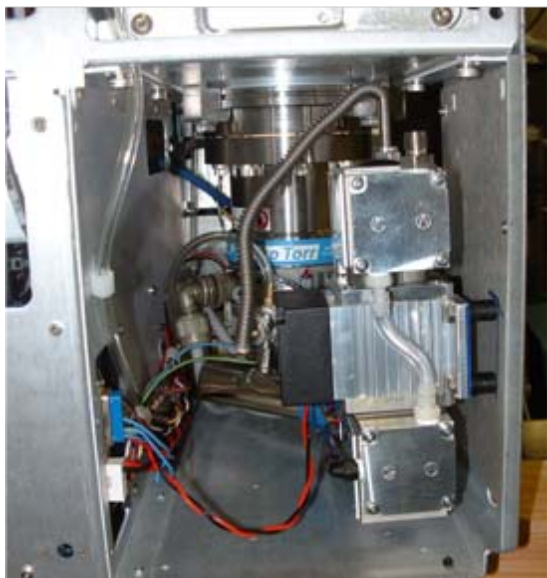


Mass Spectrometric Detection of Airborne Fluorocarbon Taggants

We have developed portable mass spectrometers for ultrasensitive detection of airborne fluorocarbon taggants. Both a van-portable unit based on a commercial PolarisQ ion trap mass spectrometer and a hand-portable mass spectrometer using an ORNL 1-mm ion trap mass analyzer are being developed. The van-portable unit has shown sub-ppb detection limits when a membrane inlet was employed.



View of modified PolarisQ ion trap mass spectrometer showing vacuum components for portable operation



Mass analyzer components for the hand-portable mass spectrometer