Pacific Northwest NATIONAL LABORATORY

Proudly Operated by **Battelle** *Since 1965*

Battelle Number(s):

13170-E

Patent(s) Issued

Available for licensing in all fields

Awards Won:

R&D 100 Award - 2003

Available Technologies

Method for Increased Dynamic Range and Improved Ion Identification Using Mass Spectrometry

SUMMARY

This technology improves the dynamic range of a mass spectrometer by first passing a sample of ions through a mass spectrometer having a quadupole ion filter and measuring the intensities of the mass spectrum of the sample. From the first mass spectrum, ions are then identified for subsequent ejection using Rf voltages.

A second spectrum of the remaining ions is then generated. In this way, a higher population of desired ions may be collected for a longer period of time in an ion trap and the clarity of the spectrum for these desired ions is significantly improved. The invention is particularly useful for improving identification and characterization of potentially important low abundance ions that may be masked by the presence of high-abundance ions in an ion trap or Fourier transform ion cyclotron mass spectrometer when conventional analytical methods are used.

STATE OF DEVELOPMENT & AVAILABILITY

Available for non-exclusive licensing in all fields and for exclusive licensing in all fields except for use in conjunction with Fourier transform mass spectrometry instruments.

U.S. DEPARTMENT OF ENERGY

Patents & Intellectual Property

- Patent #: 6,787,760

Technology Portfolio(s)

- Mass Spectrometry Instrumentation

Potential Industry Applications

- Computers & Electronics
- Healthcare, Pharma, Biotech & Medical

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