Principle of Field Metal Spectrometer

How does mass spectrometry work? In a mass spectrometer a stream of positively charged ions is produced along with an associated magnetic field and their deflection in a controlled external ...

OverviewParts of a mass spectrometerHistory of the mass spectrometerCreating ionsMass selectionDetectorsTandem mass spectrometryCommon mass spectrometer configurations and techniquesA mass spectrometer consists of three components: an ion source, a mass analyzer, and a detector. The ionizer converts a portion of the sample into ions. There is a wide variety of ionization techniques, depending on the phase (solid, liquid, gas) of the sample and the efficiency of various ionization mechanisms for the unknown species. An extraction system removes ions from the sample, which are then targeted throug...

In field spectroscopy, and more generally in radiometry, the irradiance is the totality of the flux from the entire hemisphere that is received by the area. This, irradiance is properly defined as the flux per unit ...

With FD-MS, a desorption ionization method had become available that paved the road to the mass spectral analysis of larger molecules of low to high polarity and even of organic salts. In FD-MS, all of ...

Optical emission spectrometers (often called "OES or spark discharge spectrometers"), are used to evaluate metals to determine the chemical composition with very high accuracy. A spark is applied ...

Quadrupole Mass Spectrometer patially uniform magnetic fields, especially with permanent magnets. These difficulties can lead to degradation of the mass resolution and drifts in the calibration of the ...

The analyzer part of the spectrometer contains electric and magnetic fields, which exert forces on ions traveling through these fields. The speed of a charged particle may be increased or decreased while ...

Sector field mass spectrometry (SFMS) is defined as a mass analysis technique that utilizes a combination of static electric and magnetic sectors to focus and deflect ion beams for the ...

If you vary the magnetic field, you can bring each ion stream in turn on to the detector to produce a current which is proportional to the number of ions arriving. The mass of each ion being detected is ...

The spectrometer creates a powerful, controlled spark between an electrode and the metal sample"s surface. This spark is incredibly hot--thousands of degrees Celsius--and it vaporizes ...

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