

Mass spectrometry

Essays

Physics period 11

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1 Introduction

According to my research on the network and book, like Wikipedia, atomic physics(Chinese book) and the other website and IB physics book support.I know that the mass spectrometry is the Atomic measurement equipment which ionize the atomic and add the speed, then it have some the kinetic energy , the it will spin in the magnetic field, and use the formula to calculate the mass of ions.

2 Mass spectrometry's theory

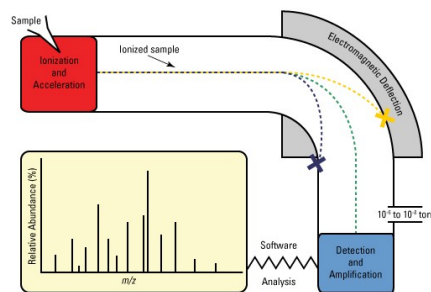
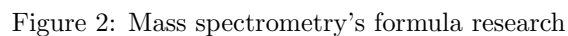


Figure 1: Mass spectrometry in begin

That is the Origin mass spectrometry, and it the mass spectrometry is the Atomic measurement equipment which ionize the atomic and add the speed,in this time it will sift the current which have the B to support it to go straight , then these current will be faster and faster in this system, then have enough

3 Mass spectrometry's formula


$$qB = m \frac{v}{r}$$

4 Mass spectrometry's application

Isotope ratio MS: isotope dating and tracing: specialization of mass spectrometry.

Trace gas analysis: variants of chemical ionization dedicated for trace gas analysis of air.

Atom probe: instrument to map the location of individual atoms.

Protein characterization: application of mass spectrometry to the study of proteins.

Space exploration: space missions to measure the composition of plasmas.