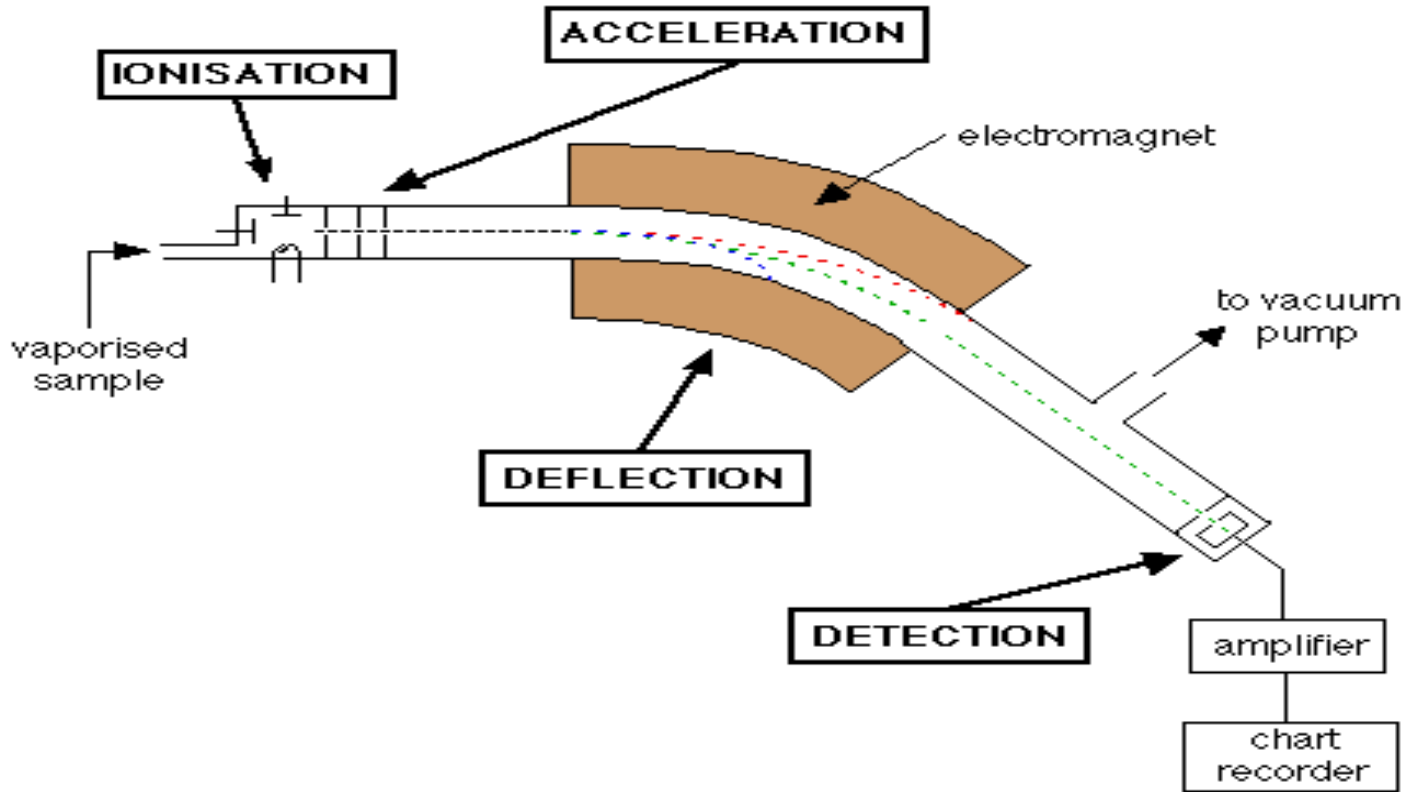


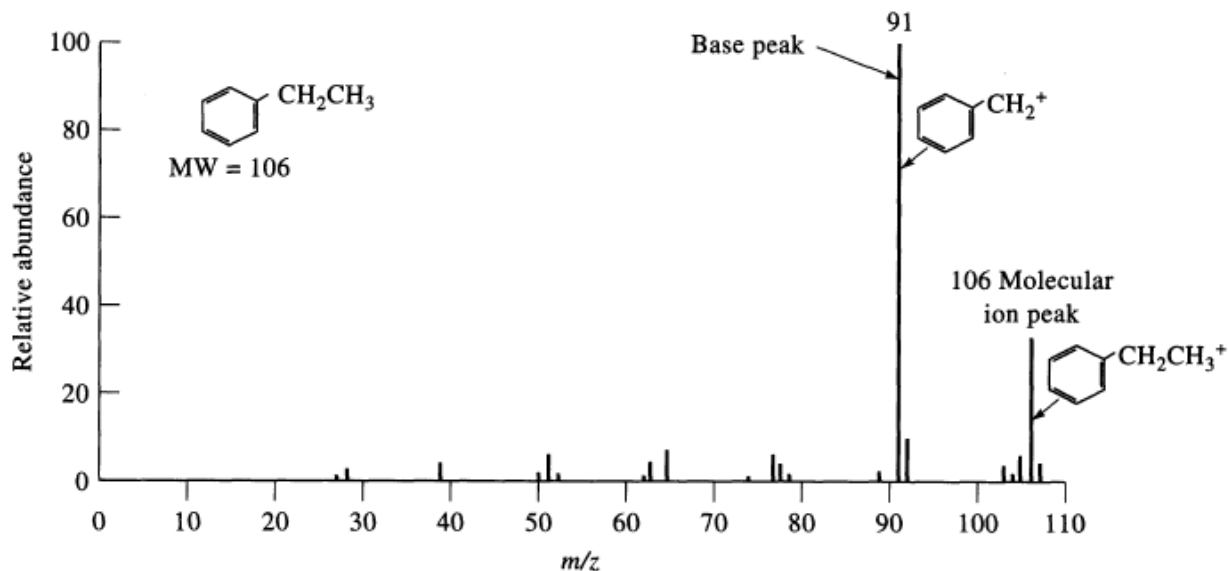
## Mass Spectrometer

The path of charged molecules (ions) is bent by an applied magnetic field.



The magnetic field is "tuned" to allow different ions through to the detector.

## Mass Spectrum



- The most intense peak in the spectrum is termed the **base peak** and all others are reported relative to its intensity.
- The highest molecular weight peak observed in a spectrum often does represent the parent molecule, minus an electron, and is termed the **molecular ion ( $M^+$ )**. But the base peak is not always the molecular ion as shown in the example for ethylbenzene.
- Generally, small peaks are also observed above the calculated molecular weight due to the natural isotopic abundance of  $^{13}\text{C}$ ,  $^2\text{H}$ , etc.

# Fragmentation of Sample

