

a TOF analyser to produce a hybrid quadrupole time-of-flight

(QTOF) mass spectrometer. (Chernushevich IV, 2001; Ens W, Standing KG, 2005).

### **Performance Monitoring and Practical Considerations**

Highly specific MS does not require any chromatographic separation, the injection of sample into the ion source will measure analytes in a complex matrix typically in less than two minutes but as with other analytical producers, LC-MS requires a number of specific conditions and protocols must be taken while handling each instrument or sample.

System protocols are held to detect any error other than normal performance.

#### **System protocols may include:**

sensitivity assurance; by checking the retention time and peak shape of internal standards.

Checking the ion optics and ion sources on regular bases.

Checking the internal standard response of each sample within a batch is a useful way to detect any default with individual samples.

Evaluation of solvents, chemicals used, tubes, bottles is necessary to minimize any interference that may occur. (Bob Morrison, 2011).