

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).